LITE-ON Semiconductors

A powerful force in your future

As one of the world's largest independent manufacturers of power semiconductor devices, Lite-On Semiconductor offers a comprehensive-range of reliable and economical power semiconductor design solutions. The company manufactures high-quality silicon and glass passivated standard and fast recovery diodes, and Schottky barrier diodes, including SMD and bridge rectifiers. All its bridge rectifiers utilize GPP structure technology, which has been proven superior to standard diode assembled or etching-dice bridges in terms of thermal performance.

Lite-On Semiconductor operates highly automated production facilities in Taiwan and Mainland China, which have been awarded the internationally recognized ISO-9001 / QS-9000 / ISO/TS 16949: 2002/ ISO-14000: 2004 certification. All the company's plants utilize the very latest in automated production and testing equipment, much of which was custom-designed by its own engineers to maximize manufacturing capacity and ensure truly world class levels of product quality.

After years of experience in meeting the stringent technology and quality requirements of its prestigious customers, the company complements its complete range of high-performance power semiconductor products with superior manufacturing flexibility, short delivery lead times, economical pricing and personalized after-sales support.

In addition, the company has the necessary experience and experience for providing customer design solutions to meet the special needs of its customers, and has also built up an extensive worldwide manufacturing, service and distribution.

The completion of manufacturing facility in China, has allowed Lite-On Semiconductor to more than double its production capacity while maintaining the same high standards of product reliability and performance. As a further step in its expansion, the company acquired an advanced EPI fabrication facility in Kansas, City, Missouri, from AT&T Microelectronics in February 1996, and established Fabtech, Inc., a major owned subsidiary. The plant manufactures a full range of schottky diodes.

These steps have also enabled the company to install state-of-the-art SMD production lines in China for manufacturing its high-end products. As a result, Lite-On Semiconductor now possesses the capacity technology and product line to further strengthen its partnerships with its customers.

CONTENT

TRIAC / SCR / SIDAC

Silicon Controlled Rectifier, SCR(單向可控硅)

單向可控硅是PNPN四層結構，形成三個PN結，可以等效為PNP、NPN兩電晶體組成的複合管，具有三個外電極：陽極A(Anode)，陰極K(Cathode)和控制極G(Gate)。在A、K之間加上正電壓後，管子並不導通；當控制極G加上正電壓(相對於陰極K而言)後才導通；此時再去掉控制極的電壓，管子依然能夠保持導通。 主要應用在交流電路中，需要高阻斷電壓的應用，例如漏電保護開關。

TO-92

TO-220AB

TO-126

I_T (RMS)	V_{DRM} V_{RRM}	Part Number	Electrical Characteristics							dv/dt	Package
			I_{TSM}	I_{GT}	I_H	I_{DRM} @ V_{DRM} I_{RRM} @ V_{RRM} Tj		V_{TM} at I_{TM}			
				max	max	25 ℃	125 ℃				
A	V		A	(mA)	(mA)	uA	mA	V	A	(Typ) V/us	
0.8	400	MCR100-6	10	0.05	5	10	0.1 1)	1.7	1.6	20 (min)	TO-92
0.8	600	*MCR100-8	10	0.2	5	10	0.1 1)	1.7	1.6	20 (min)	SOT-23
0.8	600	S08U25600A	10	0.025	5	10	0.1 1)	1.7	1.6	20 (min)	TO-92
0.8	600	S08U50600A	10	0.05	5	10	0.1 1)	1.7	1.6	20 (min)	TO-92
0.8	600	S08M02600A	10	0.2	5	10	0.1 1)	1.7	1.6	20 (min)	TO-92
1	700	S1U50700A	10	0.05	5	10	0.1 1)	1.7	1	35	TO-92
1	600	R1U50600A	10	0.05	1	10	0.1 1)	1.7	1	35	TO-92
1.5	600	S1VM02600A	15	0.2	5	10	0.2 1)	1.7	3	25	TO-92
4	600	S4M02600F	25	0.2	5	10	0.2 1)	2.2	8.2	10	TO-126
8	600	S8M02600B	80	0.2	6	10	0.5 1)	1.8	16	15	TO-220AB
8	600	S8M15600B	80	15	30	10	2.0	1.8	16	250	TO-220AB
12	600	S12M8600B	100	8	20	10	2.0	2.2	24	250	TO-220AB
12	600	S12M15600B	125	15	40	10	2.0	2.2	24	250	TO-220AB

1) Tj=110 ℃

Mark " * " denote under development device

Triode for Alternating Current, TRIAC(雙向可控硅)

單向可控硅是PNPN四層結構，形成三個PN結，可以等效為PNP、NPN兩電晶體組成的複合管，具有三個外電極：陽極A(Anode)，陰極K(Cathode)和控制極G(Gate)。在A、K之間加上正電壓後，管子並不導通；當控制極G加上正電壓(相對於陰極K而言)後才導通；此時再去掉控制極的電壓，管子依然能夠保持導通。 主要應用在交流電路中，需要高阻斷電壓的應用，例如漏電保護開關。

TO-92

TO-220AB

I_T (RMS)	V_{DRM} V_{RRM}	Part Number	Electrical Characteristics								dv/dt	Package
			I_{TSM}	I_{GT}		I_H	I_{DRM} @ V_{DRM} I_{RRM} @ V_{RRM} Tj		V_{TM} at I_{TM}			
				(Ⅰ~Ⅲ)	(Ⅳ)	max	25℃	125℃				
A	V		A	(max) mA		(mA)	uA	mA	V	A	(Typ) V/us	
0.8	600	97A8	9	5	7	10	10	0.1 1)	1.9	1.0	60	TO-92
1.0	600	T1M5F600A	10	5	7	10	10	0.1 1)	1.9	1.0	60	TO-92
1.0	600	T1M5F600AL	12	5	7	10	10	0.1 1)	1.9	1.0	210	TO-92
4.0	600	T4M3F600B	40	3	5	15	10	2 1)	1.6	6	5 (min)	TO-220AB
4.0	600	T4M10T600B	40	10	----	15	10	2	1.6	6	150	TO-220AB
4.0	600	T4M35T600B	40	35	----	35	10	2	1.6	6	1500	TO-220AB
4.0	600	*T4M10T600F	40	10	----	----	10	2 1)	1.6	6	---	TO-126
6.0	600	T6M10F600B	60	10	20	15	10	2	1.6	8.5	50	TO-220AB
8.0	600	T8M5T600B	70	5	----	10	10	2 1)	1.85	11	75	TO-220AB
8.0	600	T8M5F600B	80	5	10	10	10	2 1)	1.65	11	25	TO-220AB
8.0	600	T8M10F600B	80	10	20	15	10	2	1.8	11	50	TO-220AB
8.0	600	T8M25F600B	100	25 3)	60	30	10	2 2)	2.0	12	60 (min)	TO-220AB
8.0	600	T8M35T600B	80	35	----	40	10	2	1.6	11	400 (min)	TO-220AB
8.0	600	T8M50T600B	80	50	----	50	10	2	1.6	11	500 (min)	TO-220AB
8.0	600	T8M50F600B	100	50 4)	75	40	10	2 2)	1.55	11	---	TO-220AB
12	600	T12M5T600B	90	5	----	10	10	2 1)	1.85	17	40	TO-220AB
12	600	T12M25F600B	100	25 3)	60	30	10	2 2)	2.0	17	60 (min)	TO-220AB
12	600	T12M35T600B	100	35	----	40	10	2	1.85	17	400 (min)	TO-220AB
12	600	T12M50F600B	100	50	75	50	10	2	1.75	17	100	TO-220AB
12	600	T12M50T600B	100	50	----	60	10	2	1.85	17	600 (min)	TO-220AB
16	600	T16M5T600B	120	5	----	10	10	2 1)	1.8	21	75	TO-220AB
16	600	T16M25F600B	150	25	50	30	10	2	1.6	21	250 (min)	TO-220AB
16	600	T16M35T600B	150	35	----	50	10	2	1.6	21	600 (min)	TO-220AB
16	600	T16M50T600B	150	50	----	50	10	2	1.6	21	500 (min)	TO-220AB

1)Tj=110℃ 2)Tj=100℃ 3) = IGT(Ⅱ) = 60mA 4) = IGT(Ⅱ) = 75mA

Mark " * " denote under development device

Silicon Diode for Alternating Current, SIDAC(高壓觸發二極體)

高壓觸發管SIDAC，雙向晶閘管導通的二極管，或更簡單地為雙向晶閘管二極管，它在技術上是指定作為雙邊電壓觸發開關。在DIAC它的操作是類似的，但鎖存導通狀態與低電壓下降，SIDAC始終是一個5層的設備，更像無柵極電壓觸發雙向可控矽。在一般情況下，SIDACs具有較高的比兩端交流開關元件的導通電壓和電流處理能力，所以它們可以被直接使用，用於切換和不只是用於觸發另一個交換裝置。

SIDAC的操作的功能是類似的火花間隙。直到所施加的電壓達到或超過其額定擊穿電壓，的SIDAC仍然不導電。一旦進入這種導電狀態，通過負的動態阻力區域，SIDAC繼續進行，無論電壓，直到所施加的電流低於其額定控股的電流。此時，SIDAC返回到其初始的非導通狀態，以再次開始循環。 主要應用在脈衝產生的電路中，例如高壓金屬燈的觸發器，瓦斯點火器及負離子產生器等。

SOD-123

T-1

DO-41

DO-15

DO-201AD

I_T (RMS)	V_{DRM} V_{RRM}	Part Number	Electrical Characteristics									di/dt	Package
			I_{TSM}	V_{BO} at I_{BO}			I_H	I_{DRM} @ V_{DRM}	V_{TM} at I_{TM}				
				min	max	max	max	Tj = 25 ℃					
+/- A	+/ -V		+/- A	(v)	(v)	(uA)	(mA)	uA	V	A		(Typ) V/us	
0.2	90	*H105C	1.5	95	110	35	50	5	1.2	0.3		60	SOT-23
0.3	90	H105H	2	95	110	35	50	5	1.4	0.3		80	SOD-123
0.3	180	H220H	2	220	250	35	50	5	1.4	0.3		80	SOD-123
0.6	90	H105D	3	95	110	35	100	5	1.5	0.6		120	T-1
0.6	90	H120D	3	110	130	35	100	5	1.5	0.6		120	T-1
0.6	90	H160D	3	150	170	35	100	5	1.5	0.6		120	T-1
0.6	180	H220D	3	210	230	35	100	5	1.5	0.6		120	T-1
0.6	180	H240D	3	220	250	35	100	5	1.5	0.6		120	T-1
0.9	90	SD09A105D	4	95	110	35	100	5	1.5	0.9		120	T-1
0.9	90	SD09A120D	4	110	130	35	100	5	1.5	0.9		120	T-1
0.9	90	SD09A130D	4	120	140	35	100	5	1.5	0.9		120	T-1
0.9	90	SD09A160D	4	150	170	35	100	5	1.5	0.9		120	T-1
0.9	180	SD09A220D	4	210	230	35	100	5	1.5	0.9		120	T-1
0.9	180	SD09A240D	4	220	250	35	100	5	1.5	0.9		120	T-1
0.9	90	SD09A105E	4	95	110	35	100	5	1.5	0.9		120	DO-41
0.9	90	SD09A120E	4	110	130	35	100	5	1.5	0.9		120	DO-41
0.9	90	SD09A130E	4	120	140	35	100	5	1.5	0.9		120	DO-41
0.9	90	SD09A160E	4	150	170	35	100	5	1.5	0.9		120	DO-41
0.9	180	SD09A220E	4	210	230	35	100	5	1.5	0.9		120	DO-41
0.9	180	SD09A240E	4	220	250	35	100	5	1.5	0.9		120	DO-41
1	90	SD1A120F	20	110	130	35	100	10	1.5	1.0		120	DO-201AD
1	180	SD1A220F	20	210	230	35	100	10	1.5	1.0		120	DO-201AD
1	180	SD1A240F	20	220	250	35	100	10	1.5	1.0		120	DO-201AD
1	180	SD1A210GW	16	201	219	500	65	10	3	1.0		80	DO-15
1	180	SD1A240GW	20	216	234	500	65	5	3	1.0		80	DO-15
1	180	SD1A220HG	20	210	230	200	50	10	1.5	1.0		180	DO-15

Mark " * " denote under development device

THYRISTOR SURGE PROTECTIVE DEVICE

Transient Surge Protection Devices, TSPD(晶閘管浪涌保護器)

浪湧保護硅管 主要應用於浪湧保護電路。TSPD， 這些晶閘管系列器件可以被看作具有特性很像火花間隙或一個GDT（Gas discharge tube），但可以操作快得多。他們是相關的TVS二極管，但可以“轉折”，類似的離子化，並進行火花間隙低箝位電壓。觸發後，低箝位電壓允許大浪湧電流的流動，同時限制在設備的散熱。

SMA

U.L. RECOGNIZED
FILE# E219635

Surface Mount Thyristor Surge Protective Device

Part Number	Rated Repetitive Off-State Voltage	Off-State Leakage Current @V_{DRM}	Breakover Voltage	On-State Voltage @ I_T=1A	Non-repetitive Peak impulse current @10/1000us	Non-repetitive peak On-state current @8.3ms (one-half cycle)	Breakover Current		Holding Current		Package
	V_{DRM}	I_{DRM}	V_{BO}	V_T	I_{PP}	I_{TSM}	I_{BO}		I_H		
	Min (V)	Max (uA)	Max (V)	Max. (V)	(A)	(A)	Min (mA)	Max (mA)	Min (mA)	Max (mA)	
TA0640L	58	5	77	3.5	50	25	50	800	150	800	SMA
TA0720L	65	5	88	3.5	50	25	50	800	150	800	SMA
TA0900L	75	5	98	3.5	50	25	50	800	150	800	SMA
TA1100L	90	5	130	3.5	50	25	50	800	150	800	SMA
TA1300L	120	5	160	3.5	50	25	50	800	150	800	SMA
TA1500L	140	5	180	3.5	50	25	50	800	150	800	SMA
TA1800L	160	5	220	3.5	50	25	50	800	150	800	SMA
TA2300L	190	5	265	3.5	50	25	50	800	150	800	SMA
TA2600L	220	5	300	3.5	50	25	50	800	150	800	SMA
TA3100L	275	5	350	3.5	50	25	50	800	150	800	SMA
TA3500L	320	5	400	3.5	50	25	50	800	150	800	SMA
TA4000L	360	5	450	3.5	50	25	50	800	150	800	SMA

SMB

U.L. RECOGNIZED
FILE# E219635

Surface Mount Thyristor Surge Protective Device

Part Number	Rated Repetitive Off-State Voltage	Off-State Leakage Current @V_{DRM}	Breakover Voltage	On-State Voltage @ I_T=1A	Non-repetitive Peak impulse current @10/1000us	Non-repetitive peak On-state current @8.3ms (one-half cycle)	Breakover Current		Holding Current		Package
	V_{DRM}	I_{DRM}	V_{BO}	V_T	I_{PP}	I_{TSM}	I_{BO}		I_H		
	Min (V)	Max (uA)	Max (V)	Max. (V)	(A)	(A)	Min (mA)	Max (mA)	Min (mA)	Max (mA)	
TB0640L	58	5	77	3.5	50	25	50	800	150	800	SMB
TB0720L	65	5	88	3.5	50	25	50	800	150	800	SMB
TB0900L	75	5	98	3.5	50	25	50	800	150	800	SMB
TB1100L	90	5	130	3.5	50	25	50	800	150	800	SMB
TB1300L	120	5	160	3.5	50	25	50	800	150	800	SMB
TB1500L	140	5	180	3.5	50	25	50	800	150	800	SMB
TB1800L	160	5	220	3.5	50	25	50	800	150	800	SMB
*TB2100L	180	5	240	3.5	50	25	50	800	150	800	SMB
TB2300L	190	5	265	3.5	50	25	50	800	150	800	SMB
TB2600L	220	5	300	3.5	50	25	50	800	150	800	SMB
TB3100L	275	5	350	3.5	50	25	50	800	150	800	SMB
TB3500L	320	5	400	3.5	50	25	50	800	150	800	SMB
TB4000L	360	5	450	3.5	50	25	50	800	150	800	SMB
TB0640M	58	5	77	3.5	80	40	50	800	150	800	SMB
TB0720M	65	5	88	3.5	80	40	50	800	150	800	SMB
TB0900M	75	5	98	3.5	80	40	50	800	150	800	SMB
TB1100M	90	5	130	3.5	80	40	50	800	150	800	SMB
TB1300M	120	5	160	3.5	80	40	50	800	150	800	SMB
TB1500M	140	5	180	3.5	80	40	50	800	150	800	SMB
TB1800M	160	5	220	3.5	80	40	50	800	150	800	SMB
TB2300M	190	5	265	3.5	80	40	50	800	150	800	SMB
TB2600M	220	5	300	3.5	80	40	50	800	150	800	SMB
TB3100M	275	5	350	3.5	80	40	50	800	150	800	SMB
TB3500M	320	5	400	3.5	80	40	50	800	150	800	SMB
TB4000M	360	5	450	3.5	80	40	50	800	150	800	SMB
TB0640H	58	5	77	3.5	100	50	50	800	150	800	SMB
TB0720H	65	5	88	3.5	100	50	50	800	150	800	SMB
TB0900H	75	5	98	3.5	100	50	50	800	150	800	SMB
TB1100H	90	5	130	3.5	100	50	50	800	150	800	SMB
TB1300H	120	5	160	3.5	100	50	50	800	150	800	SMB
TB1500H	140	5	180	3.5	100	50	50	800	150	800	SMB
TB1800H	160	5	220	3.5	100	50	50	800	150	800	SMB
TB2300H	190	5	265	3.5	100	50	50	800	150	800	SMB
TB2600H	220	5	300	3.5	100	50	50	800	150	800	SMB
TB3100H	275	5	350	3.5	100	50	50	800	150	800	SMB
TB3500H	320	5	400	3.5	100	50	50	800	150	800	SMB
TB4000H	360	5	450	3.5	100	50	50	800	150	800	SMB

Mark"*" denote under development device.

TRANSIENT VOLTAGE SUPPRESSOR

Transient Voltage Suppressor, TVS(暫態電壓抑制器)

瞬態電壓抑制器（Transient Voltage Suppressor）簡稱TVS，是一種二極管形式的高效能保護器件。 当TVS二极管的两极受到反向瞬态高能量冲击时，它能以10-12秒量级的速度，将其两极间的高阻抗变为低阻抗，吸收高达数千瓦的浪涌功率，使两极间的电压箝位于一个预定值，有效地保护电子线路中的精密元器件，免受各种浪涌脉冲的损坏。當TVS二極管的兩極受到反向瞬態高能量衝擊時，它能以10-12秒量級的速度，將其兩極間的高阻抗變為低阻抗，吸收高達數千瓦的浪湧功率，使兩極間的電壓箝位於一個預定值，有效地保護電子線路中的精密元器件，免受各種浪湧脈衝的損壞。 由于它具有响应时间快、瞬态功率大、漏电流低、击穿电压偏差小、箝位电压较易控制、无损坏极限、体积小等优点。由於它具有響應時間快、瞬態功率大、漏電流低、擊穿電壓偏差小、箝位電壓較易控制、無損壞極限、體積小等優點。

DO-216AA

DO-222AA

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)	Package
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)	
LT2M5.0A		5.0	6.40	7.07	10	50	21.7	9.2	DO-216AA
LT2M12A		12.0	13.30	14.70	1	1	10.1	19.9	DO-216AA
LT2M16A		16.0	17.10	18.90	1	1	7.7	26.0	DO-216AA
LT2M24A		24.0	25.7	28.4	1	1	5.1	38.9	DO-216AA
LT2MF5.0A		5.0	6.4	7.07	10	50	21.7	9.2	DO-222AA
LT2MF6.0A		6.0	6.7	7.4	10	50	19.4	10.3	DO-222AA
LT2MF8.5A		8.5	9.4	10.4	1	10	13.9	14.4	DO-222AA
LT2MF10A		10.0	11.1	12.3	1	5	11.8	17.0	DO-222AA
LT2MF12A		12.0	13.3	14.7	1.0	1.0	10.1	19.9	DO-222AA
LT2MF13A		13.0	14.4	15.9	1.0	1.0	9.3	21.5	DO-222AA
LT2MF15A		15.0	16.7	18.5	1.0	1.0	8.2	24.4	DO-222AA
LT2MF16A		16.0	17.1	18.9	1.0	1.0	7.7	26.0	DO-222AA
LT2MF18A		18.0	20.0	22.1	1.0	1.0	6.9	29.2	DO-222AA
LT2MF20A		20.0	22.2	24.5	1.0	1.0	6.2	32.4	DO-222AA
LT2MF22A		22.0	24.4	27.0	1.0	1.0	5.6	35.5	DO-222AA
LT2MF24A		24.0	25.7	28.4	1.0	1.0	5.1	38.9	DO-222AA
LT2MF26A		26.0	28.9	31.9	1.0	1.0	4.8	42.1	DO-222AA
LT2MF28A		28.0	31.1	34.4	1.0	1.0	4.4	45.4	DO-222AA
LT2MF30A		30.0	33.3	36.8	1.0	1.0	4.1	48.4	DO-222AA
LT2MF36A		36.0	40.0	44.2	1.0	1.0	3.4	58.1	DO-222AA
LT2MF40A		40.0	44.4	49.1	1.0	1.0	3.1	64.5	DO-222AA

SMA

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)
SMAJ4.0		4.0	5.40	6.50	10	1000	46.5	8.6
SMAJ5.0A	SMAJ5.0CA	5.0	6.40	7.07	10	800	43.5	9.2
SMAJ6.0A	SMAJ6.0CA	6.0	6.67	7.37	10	800	38.8	10.3
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	500	35.7	11.2
SMAJ7.0A	SMAJ7.0CA	7.0	7.78	8.60	10	200	33.3	12.0
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.21	1	100	31.0	12.9
SMAJ8.0A	SMAJ8.0CA	8.0	8.89	9.83	1	50	29.4	13.6
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.43	1	10	27.8	14.4
SMAJ9.0A	SMAJ9.0CA	9.0	10.0	11.1	1	5	26.0	15.4
SMAJ10A	SMAJ10CA	10.0	11.1	12.3	1	5	23.5	17.0
SMAJ11A	SMAJ11CA	11.0	12.2	13.5	1	0.5	22.0	18.2
SMAJ12A	SMAJ12CA	12.0	13.3	14.7	1	0.5	20.1	19.9
SMAJ13A	SMAJ13CA	13.0	14.4	15.9	1	0.5	18.6	21.5
SMAJ14A	SMAJ14CA	14.0	15.6	17.2	1	0.5	17.2	23.2
SMAJ15A	SMAJ15CA	15.0	16.7	18.5	1	0.5	16.4	24.4
SMAJ16A	SMAJ16CA	16.0	17.8	19.7	1	0.5	15.4	26.0
SMAJ17A	SMAJ17CA	17.0	18.9	20.9	1	0.5	14.5	27.6
SMAJ18A	SMAJ18CA	18.0	20.0	22.1	1	0.5	13.7	29.2
SMAJ20A	SMAJ20CA	20.0	22.2	24.5	1	0.5	12.3	32.4
SMAJ22A	SMAJ22CA	22.0	24.4	27.0	1	0.5	11.3	35.5
SMAJ24A	SMAJ24CA	24.0	26.7	29.5	1	0.5	10.3	38.9
SMAJ26A	SMAJ26CA	26.0	28.9	31.9	1	0.5	9.5	42.1
SMAJ28A	SMAJ28CA	28.0	31.1	34.4	1	0.5	8.8	45.4
SMAJ30A	SMAJ30CA	30.0	33.3	36.8	1	0.5	8.3	48.4
SMAJ33A	SMAJ33CA	33.0	36.7	40.6	1	0.5	7.5	53.3
SMAJ36A	SMAJ36CA	36.0	40.0	44.2	1	0.5	6.9	58.1
SMAJ40A	SMAJ40CA	40.0	44.4	49.1	1	0.5	6.2	64.5
SMAJ43A	SMAJ43CA	43.0	47.8	52.8	1	0.5	5.8	69.4
SMAJ45A	SMAJ45CA	45.0	50.0	55.3	1	0.5	5.5	72.7
SMAJ48A	SMAJ48CA	48.0	53.3	58.9	1	0.5	5.2	77.4
SMAJ51A	SMAJ51CA	51.0	56.7	62.7	1	0.5	4.9	82.4
SMAJ54A	SMAJ54CA	54.0	60.0	66.3	1	0.5	4.6	87.1
SMAJ58A	SMAJ58CA	58.0	64.4	71.2	1	0.5	4.3	93.6
SMAJ60A	SMAJ60CA	60.0	66.7	73.7	1	0.5	4.1	96.8
SMAJ64A	SMAJ64CA	64.0	71.1	78.6	1	0.5	3.9	103.0
SMAJ70A	SMAJ70CA	70.0	77.8	86.0	1	0.5	3.5	113.0
SMAJ75A	SMAJ75CA	75.0	83.3	92.1	1	0.5	3.3	121.0
SMAJ78A	SMAJ78CA	78.0	86.7	95.8	1	0.5	3.2	126.0
SMAJ85A	SMAJ85CA	85.0	94.4	104.3	1	0.5	2.9	137.0
SMAJ90A	SMAJ90CA	90.0	100.0	110.5	1	0.5	2.7	146.0
SMAJ100A	SMAJ100CA	100.0	111.0	122.7	1	0.5	2.5	162.0

SMA

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)
SMAJ110A	SMAJ110CA	110.0	122.0	134.8	1	0.5	2.3	177.0
SMAJ120A	SMAJ120CA	120.0	133.0	147.0	1	0.5	2.1	193.0
SMAJ130A	SMAJ130CA	130.0	144.0	159.2	1	0.5	1.9	209.0
SMAJ150A	SMAJ150CA	150.0	167.0	184.6	1	0.5	1.6	243.0
SMAJ160A	SMAJ160CA	160.0	178.0	196.7	1	0.5	1.5	259.0
SMAJ170A	SMAJ170CA	170.0	189.0	208.9	1	0.5	1.5	275.0
SMAJ188A	SMAJ188CA	188.0	209.0	231.0	1	0.5	1.2	328.0
SMAJ200A	SMAJ200CA	200.0	224.0	248	1	0.5	1.2	324.0
* SMAJ220A	* SMAJ220CA	220.0	246.0	272	1	0.5	1.1	356.0
* SMAJ250A	* SMAJ250CA	250.0	279.0	308	1	0.5	1.0	405.0
* SMAJ300A	* SMAJ300CA	300.0	335.0	370	1	0.5	0.8	486.0
* SMAJ350A	* SMAJ350CA	350.0	391.0	432	1	0.5	0.7	567.0

NOTE :

1) Suffix 'A ' denotes 5% tolerance device,no suffix denotes 10 % tolerance device.

2) Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.

3) For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .

4) Mark " * " denote under development device

SMB

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at VRWM	Maximum Reverse Surge Current	Maximum Reverse Voltage at IRSM (Clamping Voltage)
		VRWM(Volts)	Min.	Max.	@IT(mA)	IR (uA)	IRSM(Amps)	VRSM(Volts)
SMBJ5.0A	SMBJ5.0CA	5.0	6.40	7.07	10	800	65.2	9.2
SMBJ6.0A	SMBJ6.0CA	6.0	6.67	7.37	10	800	58.3	10.3
SMBJ6.5A	SMBJ6.5CA	6.5	7.22	7.98	10	500	53.6	11.2
SMBJ7.0A	SMBJ7.0CA	7.0	7.78	8.60	10	200	50.0	12.0
SMBJ7.5A	SMBJ7.5CA	7.5	8.33	9.21	1	100	46.5	12.9
SMBJ8.0A	SMBJ8.0CA	8.0	8.89	9.83	1	50	44.1	13.6
SMBJ8.5A	SMBJ8.5CA	8.5	9.44	10.43	1	20	41.7	14.4
SMBJ9.0A	SMBJ9.0CA	9.0	10.0	11.1	1	10	39.0	15.4
SMBJ10A	SMBJ10CA	10.0	11.1	12.3	1	5	35.3	17.0
SMBJ11A	SMBJ11CA	11.0	12.2	13.5	1	0.5	33.0	18.2
SMBJ12A	SMBJ12CA	12.0	13.3	14.7	1	0.5	30.2	19.9
SMBJ13A	SMBJ13CA	13.0	14.4	15.9	1	0.5	27.9	21.5
SMBJ14A	SMBJ14CA	14.0	15.6	17.2	1	0.5	25.9	23.2
SMBJ15A	SMBJ15CA	15.0	16.7	18.5	1	0.5	24.6	24.4
SMBJ16A	SMBJ16CA	16.0	17.8	19.7	1	0.5	23.1	26.0
SMBJ17A	SMBJ17CA	17.0	18.9	20.9	1	0.5	21.7	27.6
SMBJ18A	SMBJ18CA	18.0	20.0	22.1	1	0.5	20.5	29.2
SMBJ20A	SMBJ20CA	20.0	22.2	24.5	1	0.5	18.5	32.4
SMBJ22A	SMBJ22CA	22.0	24.4	27.0	1	0.5	16.9	35.5
SMBJ24A	SMBJ24CA	24.0	26.7	29.5	1	0.5	15.4	38.9
SMBJ26A	SMBJ26CA	26.0	28.9	31.9	1	0.5	14.3	42.1
SMBJ28A	SMBJ28CA	28.0	31.1	34.4	1	0.5	13.2	45.4
SMBJ30A	SMBJ30CA	30.0	33.3	36.8	1	0.5	12.4	48.4
SMBJ33A	SMBJ33CA	33.0	36.7	40.6	1	0.5	11.3	53.3
SMBJ36A	SMBJ36CA	36.0	40.0	44.2	1	0.5	10.3	58.1
SMBJ40A	SMBJ40CA	40.0	44.4	49.1	1	0.5	9.3	64.5
SMBJ43A	SMBJ43CA	43.0	47.8	52.8	1	0.5	8.6	69.4
SMBJ45A	SMBJ45CA	45.0	50.0	55.3	1	0.5	8.3	72.7
SMBJ48A	SMBJ48CA	48.0	53.3	58.9	1	0.5	7.8	77.4
SMBJ51A	SMBJ51CA	51.0	56.7	62.7	1	0.5	7.3	82.4
SMBJ54A	SMBJ54CA	54.0	60.0	66.3	1	0.5	6.9	87.1
SMBJ58A	SMBJ58CA	58.0	64.4	71.2	1	0.5	6.4	93.6
SMBJ60A	SMBJ60CA	60.0	66.7	73.7	1	0.5	6.2	96.8
SMBJ64A	SMBJ64CA	64.0	71.1	78.6	1	0.5	5.8	103.0
SMBJ70A	SMBJ70CA	70.0	77.8	86.0	1	0.5	5.3	113.0
SMBJ75A	SMBJ75CA	75.0	83.3	92.1	1	0.5	5.0	121.0
SMBJ78A	SMBJ78CA	78.0	86.7	95.8	1	0.5	4.8	126.0
SMBJ85A	SMBJ85CA	85.0	94.4	104.3	1	0.5	4.4	137.0
SMBJ90A	SMBJ90CA	90.0	100.0	110.5	1	0.5	4.1	146.0
SMBJ100A	SMBJ100CA	100.0	111.0	122.7	1	0.5	3.7	162.0

SMB

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)
SMBJ110A	SMBJ110CA	110.0	122.0	134.8	1	0.5	3.4	177.0
SMBJ120A	SMBJ120CA	120.0	133.0	147.0	1	0.5	3.1	193.0
SMBJ130A	SMBJ130CA	130.0	144.0	159.2	1	0.5	2.9	209.0
SMBJ150A	SMBJ150CA	150.0	167.0	184.6	1	0.5	2.5	243.0
SMBJ160A	SMBJ160CA	160.0	178.0	196.7	1	0.5	2.3	259.0
SMBJ170A	SMBJ170CA	170.0	189.0	209	1	0.5	2.2	275.0
SMBJ188A	SMBJ188CA	188	209	231	1	0.5	1.83	328.0
SMBJ200A	SMBJ200CA	200	224	247	1	0.5	1.9	324.0
SMBJ220A	SMBJ220CA	220	246	272	1	0.5	1.7	356.0
* SMBJ250A	* SMBJ250CA	250	279	309	1	0.5	1.5	405.0
* SMBJ300A	* SMBJ300CA	300	335	371	1	0.5	1.3	486.0
SMBJ350A	* SMBJ350CA	350	391	432	1	0.5	1.1	567.0

NOTE :

1) Suffix 'A ' denotes 5% tolerance device.

2) Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.

3) For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .

4) Mark " * " denote under development device

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at VRWM	Maximum Reverse Surge Current	Maximum Reverse Voltage at IRSM (Clamping Voltage)
		VRWM(Volts)	Min.	Max.	@IT(mA)	IR (uA)	IRSM(Amps)	VRSM(Volts)
SMCJ5.0A	SMCJ5.0CA	5.0	6.40	7.07	10	1000	163.0	9.2
SMCJ6.0A	SMCJ6.0CA	6.0	6.67	7.37	10	1000	145.6	10.3
SMCJ6.5A	SMCJ6.5CA	6.5	7.22	7.98	10	500	133.9	11.2
SMCJ7.0A	SMCJ7.0CA	7.0	7.78	8.60	10	200	125.0	12.0
SMCJ7.5A	SMCJ7.5CA	7.5	8.33	9.21	1	100	116.3	12.9
SMCJ8.0A	SMCJ8.0CA	8.0	8.89	9.83	1	50	110.3	13.6
SMCJ8.5A	SMCJ8.5CA	8.5	9.44	10.43	1	20	104.2	14.4
SMCJ9.0A	SMCJ9.0CA	9.0	10.0	11.1	1	10	97.4	15.4
SMCJ10A	SMCJ10CA	10.0	11.1	12.3	1	5	88.2	17.0
SMCJ11A	SMCJ11CA	11.0	12.2	13.5	1	0.5	82.4	18.2
SMCJ12A	SMCJ12CA	12.0	13.3	14.7	1	0.5	75.4	19.9
SMCJ13A	SMCJ13CA	13.0	14.4	15.9	1	0.5	69.8	21.5
SMCJ14A	SMCJ14CA	14.0	15.6	17.2	1	0.5	64.7	23.2
SMCJ15A	SMCJ15CA	15.0	16.7	18.5	1	0.5	61.5	24.4
SMCJ16A	SMCJ16CA	16.0	17.8	19.7	1	0.5	57.7	26.0
SMCJ17A	SMCJ17CA	17.0	18.9	20.9	1	0.5	54.3	27.6
SMCJ18A	SMCJ18CA	18.0	20.0	22.1	1	0.5	51.4	29.2
SMCJ20A	SMCJ20CA	20.0	22.2	24.5	1	0.5	46.3	32.4
SMCJ20A4	N/A	20.0	22.2	24.5	1	0.5	63.0	32.4
SMCJ22A	SMCJ22CA	22.0	24.4	27.0	1	0.5	42.3	35.5
SMCJ24A	SMCJ24CA	24.0	26.7	29.5	1	0.5	38.6	38.9
SMCJ24A4	N/A	24.0	26.7	29.5	1	0.5	60.0	38.9
SMCJ26A	SMCJ26CA	26.0	28.9	31.9	1	0.5	35.6	42.1
SMCJ28A	SMCJ28CA	28.0	31.1	34.4	1	0.5	33.0	45.4
SMCJ28A4	N/A	28.0	31.1	34.4	1	0.5	49.0	45.4
SMCJ30A	SMCJ30CA	30.0	33.3	36.8	1	0.5	31.0	48.4
SMCJ33A	SMCJ33CA	33.0	36.7	40.6	1	0.5	28.1	53.3
SMCJ36A	SMCJ36CA	36.0	40.0	44.2	1	0.5	25.8	58.1
SMCJ36A4	N/A	36.0	40.0	44.2	1	0.5	28.0	58.1
SMCJ40A	SMCJ40CA	40.0	44.4	49.1	1	0.5	23.3	64.5
SMCJ43A	SMCJ43CA	43.0	47.8	52.8	1	0.5	21.6	69.4
SMCJ45A	SMCJ45CA	45.0	50.0	55.3	1	0.5	20.6	72.7
SMCJ48A	SMCJ48CA	48.0	53.3	58.9	1	0.5	19.4	77.4
SMCJ51A	SMCJ51CA	51.0	56.7	62.7	1	0.5	18.2	82.4
SMCJ54A	SMCJ54CA	54.0	60.0	66.3	1	0.5	17.2	87.1
SMCJ58A	SMCJ58CA	58.0	64.4	71.2	1	0.5	16.0	93.6
SMCJ60A	SMCJ60CA	60.0	66.7	73.7	1	0.5	15.5	96.8
SMCJ64A	SMCJ64CA	64.0	71.1	78.6	1	0.5	14.6	103.0
SMCJ70A	SMCJ70CA	70.0	77.8	86.0	1	0.5	13.3	113.0
SMCJ75A	SMCJ75CA	75.0	83.3	92.1	1	0.5	12.4	121.0

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdown voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)
SMCJ78A	SMCJ78CA	78.0	86.7	95.8	1	0.5	11.9	126.0
SMCJ85A	SMCJ85CA	85.0	94.4	104.3	1	0.5	10.9	137.0
SMCJ90A	SMCJ90CA	90.0	100.0	110.5	1	0.5	10.3	146.0
SMCJ100A	SMCJ100CA	100.0	111.0	122.7	1	0.5	9.3	162.0
SMCJ110A	SMCJ110CA	110.0	122.0	134.8	1	0.5	8.5	177.0
SMCJ120A	SMCJ120CA	120.0	133.0	147.0	1	0.5	7.8	193.0
SMCJ130A	SMCJ130CA	130.0	144.0	159.2	1	0.5	7.2	209.0
SMCJ150A	SMCJ150CA	150.0	167.0	184.6	1	0.5	6.2	243.0
SMCJ160A	SMCJ160CA	160.0	178.0	196.7	1	0.5	5.8	259.0
SMCJ170A	SMCJ170CA	170.0	189.0	208.9	1	0.5	5.5	275.0
SMCJ188A	SMCJ188CA	188.0	209.0	220.0	1	0.5	4.6	328.0
SMCJ200A	SMCJ200CA	200.0	224.0	247.0	1	0.5	4.6	324.0
SMCJ220A	SMCJ220CA	220.0	246.0	272.0	1	0.5	4.2	356.0

NOTE :

1) Suffix 'A ' denotes 5% tolerance device.

2) Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.

3) For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .

SMA

Transient Voltage Suppressor

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
PSMAJ6.8A	PSMAJ6.8CA	5.80	6.45	7.13	10	1000	10.5	38.1
PSMAJ7.5A	PSMAJ7.5CA	6.40	7.13	7.88	10	500	11.3	35.4
PSMAJ8.2A	PSMAJ8.2CA	7.02	7.79	8.61	10	200	12.1	33.1
PSMAJ9.1A	PSMAJ9.1CA	7.78	8.65	9.56	1	50	13.4	29.9
PSMAJ10A	PSMAJ10CA	8.55	9.50	10.50	1	10	14.5	27.6
PSMAJ11A	PSMAJ11CA	9.40	10.5	11.6	1	5	15.6	25.6
PSMAJ12A	PSMAJ12CA	10.20	11.40	12.6	1	0.5	16.7	24.0
PSMAJ13A	PSMAJ13CA	11.1	12.4	13.7	1	0.5	18.2	22.0
PSMAJ15A	PSMAJ15CA	12.8	14.3	15.8	1	0.5	21.2	18.9
PSMAJ16A	PSMAJ16CA	13.6	15.2	16.8	1	0.5	22.5	17.8
PSMAJ18A	PSMAJ18CA	15.3	17.1	18.9	1	0.5	25.2	15.9
PSMAJ20A	PSMAJ20CA	17.1	19.0	21.0	1	0.5	27.7	14.4
PSMAJ22A	PSMAJ22CA	18.8	20.9	23.1	1	0.5	30.6	13.1
PSMAJ24A	PSMAJ24CA	20.5	22.8	25.2	1	0.5	33.2	12.0
PSMAJ27A	PSMAJ27CA	23.1	25.7	28.4	1	0.5	37.5	10.7
PSMAJ30A	PSMAJ30CA	25.6	28.5	31.5	1	0.5	41.4	9.7
PSMAJ33A	PSMAJ33CA	28.2	31.4	34.7	1	0.5	45.7	8.8
PSMAJ36A	PSMAJ36CA	30.8	34.2	37.8	1	0.5	49.9	8.0
PSMAJ39A	PSMAJ39CA	33.3	37.1	41.0	1	0.5	53.9	7.4
PSMAJ43A	PSMAJ43CA	36.8	40.9	45.2	1	0.5	59.3	6.7
PSMAJ47A	PSMAJ47CA	40.2	44.7	49.4	1	0.5	64.8	6.2
PSMAJ51A	PSMAJ51CA	43.6	48.5	53.6	1	0.5	70.1	5.7
PSMAJ56A	PSMAJ56CA	47.8	53.2	58.8	1	0.5	77.0	5.2
PSMAJ62A	PSMAJ62CA	53.0	58.9	65.1	1	0.5	85.0	4.7
PSMAJ68A	PSMAJ68CA	58.1	64.6	71.4	1	0.5	92.0	4.3
PSMAJ75A	PSMAJ75CA	64.7	71.3	78.8	1	0.5	103.0	3.9
PSMAJ82A	PSMAJ82CA	70.1	77.9	86.1	1	0.5	113.0	3.5
PSMAJ91A	PSMAJ91CA	77.8	86.5	95.6	1	0.5	125.0	3.2
PSMAJ100A	PSMAJ100CA	85.5	95.0	105.0	1	0.5	137.0	2.9
PSMAJ110A	PSMAJ110CA	94.0	105.0	116.1	1	0.5	152.0	2.6
PSMAJ120A	PSMAJ120CA	102.0	114.0	126.0	1	0.5	165.0	2.4
PSMAJ130A	PSMAJ130CA	111.0	124.0	137.1	1	0.5	179.0	2.2
PSMAJ150A	PSMAJ150CA	128.0	143.0	158.1	1	0.5	207.0	1.9
PSMAJ160A	PSMAJ160CA	136.0	152.0	168.0	1	0.5	219.0	1.8
PSMAJ170A	PSMAJ170CA	145.0	162.0	179.1	1	0.5	234.0	1.7
PSMAJ180A	PSMAJ180CA	154.0	171.0	189.0	1	0.5	246.0	1.6
PSMAJ200A	PSMAJ200CA	171.0	190.0	210.0	1	0.5	274.0	1.5

SMA

Transient Voltage Suppressor

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
PSMAJ220A	*PSMAJ220CA	185.0	209.0	231.0	1	0.5	328.0	1.2
PSMAJ250A	*PSMAJ250CA	214.0	237.0	262.0	1	0.5	344.0	1.2
PSMAJ300A	PSMAJ300CA	256.0	285.0	315.0	1	0.5	414.0	1.0
PSMAJ350A	PSMAJ350CA	300.0	332.0	367.0	1	0.5	482.0	0.83
PSMAJ400A	PSMAJ400CA	342.0	380.0	420.0	1	0.5	548.0	0.73
PSMAJ440A	PSMAJ440CA	376.0	418.0	462.0	1	0.5	600.0	0.67

NOTE :

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .
2. For unidirectional devices PSMAJ6.8 to PSMAJ200A, VFmax = 3.5V at IF=25A 300us square wave pulse.
   For unidirectional devices PSMAJ220 to PSMAJ400A, VFmax = 5.0V at IF=25A 300us square wave pulse.
3. Mark " * " denote under development device

SMB

Transient Voltage Suppressor

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
PSMBJ6.8A	PSMBJ6.8CA	5.8	6.45	7.13	10	1000	57.1	10.5
PSMBJ7.5A	PSMBJ7.5CA	6.4	7.13	7.88	10	500	53.1	11.3
PSMBJ8.2A	PSMBJ8.2CA	7.0	7.79	8.61	10	200	49.6	12.1
PSMBJ9.1A	PSMBJ9.1CA	7.8	8.65	9.56	1	50	44.8	13.4
PSMBJ10A	PSMBJ10CA	8.6	9.50	10.50	1	10	41.4	14.5
PSMBJ11A	PSMBJ11CA	9.4	10.5	11.6	1	5	38.5	15.6
PSMBJ12A	PSMBJ12CA	10.2	11.4	12.6	1	0.5	35.9	16.7
PSMBJ13A	PSMBJ13CA	11.1	12.4	13.7	1	0.5	33.0	18.2
PSMBJ15A	PSMBJ15CA	12.8	14.3	15.8	1	0.5	28.3	21.2
PSMBJ16A	PSMBJ16CA	13.6	15.2	16.8	1	0.5	26.7	22.5
PSMBJ18A	PSMBJ18CA	15.3	17.1	18.9	1	0.5	23.8	25.2
PSMBJ20A	PSMBJ20CA	17.1	19.0	21.0	1	0.5	21.7	27.7
PSMBJ22A	PSMBJ22CA	18.8	20.9	23.1	1	0.5	19.6	30.6
PSMBJ24A	PSMBJ24CA	20.5	22.8	25.2	1	0.5	18.1	33.2
PSMBJ27A	PSMBJ27CA	23.1	25.7	28.4	1	0.5	16.0	37.5
PSMBJ30A	PSMBJ30CA	25.6	28.5	31.5	1	0.5	14.5	41.4
PSMBJ33A	PSMBJ33CA	28.2	31.4	34.7	1	0.5	13.1	45.7
PSMBJ36A	PSMBJ36CA	30.8	34.2	37.8	1	0.5	12.0	49.9
PSMBJ39A	PSMBJ39CA	33.3	37.1	41.0	1	0.5	11.1	53.9
PSMBJ43A	PSMBJ43CA	36.8	40.9	45.2	1	0.5	10.1	59.3
PSMBJ47A	PSMBJ47CA	40.2	44.7	49.4	1	0.5	9.3	64.8
PSMBJ51A	PSMBJ51CA	43.6	48.5	53.6	1	0.5	8.6	70.1
PSMBJ56A	PSMBJ56CA	47.8	53.2	58.8	1	0.5	7.8	77.0
PSMBJ62A	PSMBJ62CA	53.0	58.9	65.1	1	0.5	7.1	85.0
PSMBJ68A	PSMBJ68CA	58.1	64.6	71.4	1	0.5	6.5	92.0
PSMBJ75A	PSMBJ75CA	64.7	71.3	78.8	1	0.5	5.8	103.0
PSMBJ82A	PSMBJ82CA	70.1	77.9	86.1	1	0.5	5.3	113.0
PSMBJ91A	PSMBJ91CA	77.8	86.5	95.6	1	0.5	4.8	125.0
PSMBJ100A	PSMBJ100CA	85.5	95.0	105.0	1	0.5	4.4	137.0
PSMBJ110A	PSMBJ110CA	94.0	105.0	116.1	1	0.5	3.9	152.0
PSMBJ120A	PSMBJ120CA	102.0	114.0	126.0	1	0.5	3.6	165.0
PSMBJ130A	PSMBJ130CA	111.0	124.0	137.1	1	0.5	3.4	179.0
PSMBJ150A	PSMBJ150CA	128.0	143.0	158.1	1	0.5	2.9	207.0
PSMBJ160A	PSMBJ160CA	136.0	152.0	168.0	1	0.5	2.7	219.0
PSMBJ170A	PSMBJ170CA	145.0	162.0	179.1	1	0.5	2.6	234.0
PSMBJ180A	PSMBJ180CA	154.0	171.0	189.0	1	0.5	2.4	246.0
PSMBJ200A	PSMBJ200CA	171.0	190.0	210.0	1	0.5	2.2	274.0
PSMBJ220A	*PSMBJ220CA	185.0	209.0	231.0	1	0.5	1.8	328.0
PSMBJ250A	*PSMBJ250CA	214.0	237.0	262.0	1	0.5	1.7	344.0
PSMBJ300A	PSMBJ300CA	256.0	285.0	315.0	1	0.5	1.4	414.0
PSMBJ350A	PSMBJ350CA	300.0	332.0	367.0	1	0.5	1.2	482.0
PSMBJ400A	PSMBJ400CA	342.0	380.0	420.0	1	0.5	1.1	548.0
PSMBJ440A	PSMBJ440CA	376.0	418.0	462.0	1	0.5	1.0	600.0

NOTE :

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .
2. Mark " * " denote under development device

SMC

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
PSMCJ6.8A	PSMCJ6.8CA	5.8	6.45	7.13	10	1000	142.9	10.5
PSMCJ7.5A	PSMCJ7.5CA	6.4	7.13	7.88	10	500	132.7	11.3
PSMCJ8.2A	PSMCJ8.2CA	7.0	7.79	8.61	10	200	124.0	12.1
PSMCJ9.1A	PSMCJ9.1CA	7.8	8.65	9.56	1	50	111.9	13.4
PSMCJ10A	PSMCJ10CA	8.6	9.50	10.50	1	10	103.4	14.5
PSMCJ11A	PSMCJ11CA	9.4	10.5	11.6	1	5	96.2	15.6
PSMCJ12A	PSMCJ12CA	10.2	11.4	12.6	1	0.5	89.8	16.7
PSMCJ13A	PSMCJ13CA	11.1	12.4	13.7	1	0.5	82.4	18.2
PSMCJ15A	PSMCJ15CA	12.8	14.3	15.8	1	0.5	70.8	21.2
PSMCJ16A	PSMCJ16CA	13.6	15.2	16.8	1	0.5	66.7	22.5
PSMCJ18A	PSMCJ18CA	15.3	17.1	18.9	1	0.5	59.5	25.2
PSMCJ20A	PSMCJ20CA	17.1	19.0	21.0	1	0.5	54.2	27.7
PSMCJ22A	PSMCJ22CA	18.8	20.9	23.1	1	0.5	49.0	30.6
PSMCJ24A	PSMCJ24CA	20.5	22.8	25.2	1	0.5	45.2	33.2
PSMCJ27A	PSMCJ27CA	23.1	25.7	28.4	1	0.5	40.0	37.5
PSMCJ30A	PSMCJ30CA	25.6	28.5	31.5	1	0.5	36.2	41.4
PSMCJ33A	PSMCJ33CA	28.2	31.4	34.7	1	0.5	32.8	45.7
PSMCJ36A	PSMCJ36CA	30.8	34.2	37.8	1	0.5	30.1	49.9
PSMCJ39A	PSMCJ39CA	33.3	37.1	41.0	1	0.5	27.8	53.9
PSMCJ43A	PSMCJ43CA	36.8	40.9	45.2	1	0.5	25.3	59.3
PSMCJ47A	PSMCJ47CA	40.2	44.7	49.4	1	0.5	23.1	64.8
PSMCJ51A	PSMCJ51CA	43.6	48.5	53.6	1	0.5	21.4	70.1
PSMCJ56A	PSMCJ56CA	47.8	53.2	58.8	1	0.5	19.5	77.0
PSMCJ62A	PSMCJ62CA	53.0	58.9	65.1	1	0.5	17.6	85.0
PSMCJ68A	PSMCJ68CA	58.1	64.6	71.4	1	0.5	16.3	92.0
PSMCJ75A	PSMCJ75CA	64.7	71.3	78.8	1	0.5	14.6	103.0
PSMCJ82A	PSMCJ82CA	70.1	77.9	86.1	1	0.5	13.3	113.0
PSMCJ91A	PSMCJ91CA	77.8	86.5	95.6	1	0.5	12.0	125.0
PSMCJ100A	PSMCJ100CA	85.5	95.0	105.0	1	0.5	10.9	137.0
PSMCJ110A	PSMCJ110CA	94.0	105.0	116.1	1	0.5	9.9	152.0
PSMCJ120A	PSMCJ120CA	102.0	114.0	126.0	1	0.5	9.1	165.0
PSMCJ130A	PSMCJ130CA	111.0	124.0	137.1	1	0.5	8.4	179.0
PSMCJ150A	PSMCJ150CA	128.0	143.0	158.1	1	0.5	7.2	207.0
PSMCJ160A	PSMCJ160CA	136.0	152.0	168.0	1	0.5	6.8	219.0
PSMCJ170A	PSMCJ170CA	145.0	162.0	179.1	1	0.5	6.4	234.0
PSMCJ180A	PSMCJ180CA	154.0	171.0	189.0	1	0.5	6.1	246.0
PSMCJ200A	PSMCJ200CA	171.0	190.0	210.0	1	0.5	5.5	274.0
PSMCJ220A	*PSMCJ220CA	185.0	209.0	231.0	1	0.5	4.6	328.0
PSMCJ250A	*'PSMCJ250CA	214.0	237.0	262.0	1	0.5	4.4	344.0
* PSMCJ300A	* PSMCJ300CA	256.0	285.0	315.0	1	0.5	3.6	414.0
* PSMCJ350A	* PSMCJ350CA	300.0	332.0	367.0	1	0.5	3.1	482.0
* PSMCJ400A	* PSMCJ400CA	342.0	380.0	420.0	1	0.5	2.7	548.0
* PSMCJ440A	* PSMCJ440CA	376.0	418.0	462.0	1	0.5	2.5	600.0

NOTES: 'Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .
2. For unidirectional devices PSMCJ6.8A to PSMCJ200A, VFmax = 3.5V at IF = 100A 300us square wave pulse.
3. Mark " * " denote under development device

SMB

Transient Voltage Suppressor

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
ESMBJ6.8A	ESMBJ6.8CA	5.8	6.45	7.13	10	1000	57.1	10.5
ESMBJ7.5A	ESMBJ7.5CA	6.4	7.13	7.88	10	500	53.1	11.3
ESMBJ8.2A	ESMBJ8.2CA	7.0	7.79	8.61	10	200	49.6	12.1
ESMBJ9.1A	ESMBJ9.1CA	7.8	8.65	9.56	1	50	44.8	13.4
ESMBJ10A	ESMBJ10CA	8.6	9.50	10.50	1	10	41.4	14.5
ESMBJ11A	ESMBJ11CA	9.4	10.5	11.6	1	5	38.5	15.6
ESMBJ12A	ESMBJ12CA	10.2	11.4	12.6	1	0.5	35.9	16.7
ESMBJ13A	ESMBJ13CA	11.1	12.4	13.7	1	0.5	33.0	18.2
ESMBJ15A	ESMBJ15CA	12.8	14.3	15.8	1	0.5	28.3	21.2
ESMBJ16A	ESMBJ16CA	13.6	15.2	16.8	1	0.5	26.7	22.5
ESMBJ18A	ESMBJ18CA	15.3	17.1	18.9	1	0.5	23.8	25.2
ESMBJ20A	ESMBJ20CA	17.1	19.0	21.0	1	0.5	21.7	27.7
ESMBJ22A	ESMBJ22CA	18.8	20.9	23.1	1	0.5	19.6	30.6
ESMBJ24A	ESMBJ24CA	20.5	22.8	25.2	1	0.5	18.1	33.2
ESMBJ27A	ESMBJ27CA	23.1	25.7	28.4	1	0.5	16.0	37.5
ESMBJ30A	ESMBJ30CA	25.6	28.5	31.5	1	0.5	14.5	41.4
ESMBJ33A	ESMBJ33CA	28.2	31.4	34.7	1	0.5	13.1	45.7
ESMBJ36A	ESMBJ36CA	30.8	34.2	37.8	1	0.5	12.0	49.9
ESMBJ39A	ESMBJ39CA	33.3	37.1	41.0	1	0.5	11.1	53.9
ESMBJ43A	ESMBJ43CA	36.8	40.9	45.2	1	0.5	10.1	59.3
ESMBJ47A	ESMBJ47CA	40.2	44.7	49.4	1	0.5	9.3	64.8
ESMBJ51A	ESMBJ51CA	43.6	48.5	53.6	1	0.5	8.6	70.1
ESMBJ56A	ESMBJ56CA	47.8	53.2	58.8	1	0.5	7.8	77.0
ESMBJ62A	ESMBJ62CA	53.0	58.9	65.1	1	0.5	7.1	85.0
ESMBJ68A	ESMBJ68CA	58.1	64.6	71.4	1	0.5	6.5	92.0
ESMBJ75A	ESMBJ75CA	64.7	71.3	78.8	1	0.5	5.8	103.0
ESMBJ82A	ESMBJ82CA	70.1	77.9	86.1	1	0.5	5.3	113.0
ESMBJ91A	ESMBJ91CA	77.8	86.5	95.6	1	0.5	4.8	125.0
ESMBJ100A	ESMBJ100CA	85.5	95.0	105.0	1	0.5	4.4	137.0
ESMBJ110A	ESMBJ110CA	94.0	105.0	116.1	1	0.5	3.9	152.0
ESMBJ120A	ESMBJ120CA	102.0	114.0	126.0	1	0.5	3.6	165.0
ESMBJ130A	ESMBJ130CA	111.0	124.0	137.1	1	0.5	3.4	179.0
ESMBJ150A	ESMBJ150CA	128.0	143.0	158.1	1	0.5	2.9	207.0
ESMBJ160A	ESMBJ160CA	136.0	152.0	168.0	1	0.5	2.7	219.0
ESMBJ170A	ESMBJ170CA	145.0	162.0	179.1	1	0.5	2.6	234.0
ESMBJ180A	ESMBJ180CA	154.0	171.0	189.0	1	0.5	2.4	246.0
ESMBJ200A	ESMBJ200CA	171.0	190.0	210.0	1	0.5	2.2	274.0

NOTE :

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3.0SMCJ5.0	3.0SMCJ5.0C	5.0	6.40	7.82	10	1000	312.5	9.6
3.0SMCJ5.0A	3.0SMCJ5.0CA	5.0	6.40	7.07	10	1000	326.1	9.2
3.0SMCJ5.0A6*	N/A	5.0	6.40	7.07	10	1000	326.1	9.2
3.0SMCJ6.0	3.0SMCJ6.0C	6.0	6.67	8.15	10	1000	263.2	11.4
3.0SMCJ6.0A	3.0SMCJ6.0CA	6.0	6.67	7.37	10	1000	291.3	10.3
3.0SMCJ6.5	3.0SMCJ6.5C	6.5	7.22	8.82	10	500	243.9	12.3
3.0SMCJ6.5A	3.0SMCJ6.5CA	6.5	7.22	7.98	10	500	267.9	11.2
3.0SMCJ7.0	3.0SMCJ7.0C	7.0	7.78	9.51	10	200	225.6	13.3
3.0SMCJ7.0A	3.0SMCJ7.0CA	7.0	7.78	8.60	10	200	250.0	12.0
3.0SMCJ7.5	3.0SMCJ7.5C	7.5	8.33	10.18	1	100	209.8	14.3
3.0SMCJ7.5A	3.0SMCJ7.5CA	7.5	8.33	9.21	1	100	232.6	12.9
3.0SMCJ8.0	3.0SMCJ8.0C	8.0	8.89	10.86	1	50	200.0	15.0
3.0SMCJ8.0A	3.0SMCJ8.0CA	8.0	8.89	9.83	1	50	220.6	13.6
3.0SMCJ8.5	3.0SMCJ8.5C	8.5	9.44	11.54	1	25	188.7	15.9
3.0SMCJ8.5A	3.0SMCJ8.5CA	8.5	9.44	10.43	1	25	208.3	14.4
3.0SMCJ9.0	3.0SMCJ9.0C	9.0	10.00	12.22	1	10	177.5	16.9
3.0SMCJ9.0A	3.0SMCJ9.0CA	9.0	10.00	11.05	1	10	194.8	15.4
3.0SMCJ10	3.0SMCJ10C	10.0	11.10	13.56	1	2	159.6	18.8
3.0SMCJ10A	3.0SMCJ10CA	10.0	11.10	12.27	1	2	176.5	17.0
3.0SMCJ11	3.0SMCJ11C	11.0	12.2	14.9	1	2	149.3	20.1
3.0SMCJ11A	3.0SMCJ11CA	11.0	12.2	13.5	1	2	164.8	18.2
3.0SMCJ12	3.0SMCJ12C	12.0	13.3	16.3	1	2	136.4	22.0
3.0SMCJ12A	3.0SMCJ12CA	12.0	13.3	14.7	1	2	150.8	19.9
3.0SMCJ13	3.0SMCJ13C	13.0	14.4	17.6	1	2	126.1	23.8
3.0SMCJ13A	3.0SMCJ13CA	13.0	14.4	15.9	1	2	139.5	21.5
3.0SMCJ14	3.0SMCJ14C	14.0	15.6	19.1	1	2	116.3	25.8
3.0SMCJ14A	3.0SMCJ14CA	14.0	15.6	17.2	1	2	129.3	23.2
3.0SMCJ15	3.0SMCJ15C	15.0	16.7	20.4	1	2	111.5	26.9
3.0SMCJ15A	3.0SMCJ15CA	15.0	16.7	18.5	1	2	124.0	24.2
3.0SMCJ16	3.0SMCJ16C	16.0	17.8	21.8	1	2	104.2	28.8
3.0SMCJ16A	3.0SMCJ16CA	16.0	17.8	19.7	1	2	115.4	26.0
3.0SMCJ17	3.0SMCJ17C	17.0	18.9	23.1	1	2	98.4	30.5
3.0SMCJ17A	3.0SMCJ17CA	17.0	18.9	20.9	1	2	108.7	27.6
3.0SMCJ18	3.0SMCJ18C	18.0	20.0	24.4	1	2	93.2	32.2
3.0SMCJ18A	3.0SMCJ18CA	18.0	20.0	22.1	1	2	102.7	29.2
3.0SMCJ20	3.0SMCJ20C	20.0	22.2	27.1	1	2	83.8	35.8
3.0SMCJ20A	3.0SMCJ20CA	20.0	22.2	24.5	1	2	92.6	32.4
3.0SMCJ20A6*	N/A	20.0	22.2	24.5	1	2	92.6	32.4
3.0SMCJ22	3.0SMCJ22C	22.0	24.4	29.8	1	2	76.1	39.4
3.0SMCJ22A	3.0SMCJ22CA	22.0	24.4	27.0	1	2	84.5	35.5
3.0SMCJ24	3.0SMCJ24C	24.0	26.7	32.6	1	2	69.8	43.0

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3.0SMCJ24A	3.0SMCJ24CA	24.0	26.7	29.5	1	2	77.1	38.9
3.0SMCJ24A6*	N/A	24.0	26.7	29.5	1	2	77.1	38.9
3.0SMCJ26	3.0SMCJ26C	26.0	28.9	35.3	1	2	64.4	46.6
3.0SMCJ26A	3.0SMCJ26CA	26.0	28.9	31.9	1	2	71.3	42.1
3.0SMCJ28	3.0SMCJ28C	28.0	31.1	38.0	1	2	60.0	50.0
3.0SMCJ28A	3.0SMCJ28CA	28.0	31.1	34.4	1	2	66.1	45.4
3.0SMCJ28A6*	N/A	28.0	31.1	34.4	1	2	66.1	45.4
3.0SMCJ30	3.0SMCJ30C	30.0	33.3	40.7	1	2	56.1	53.5
3.0SMCJ30A	3.0SMCJ30CA	30.0	33.3	36.8	1	2	62.0	48.4
3.0SMCJ33	3.0SMCJ33C	33.0	36.7	44.8	1	2	50.8	59.0
3.0SMCJ33A	3.0SMCJ33CA	33.0	36.7	40.6	1	2	56.3	53.3
3.0SMCJ36	3.0SMCJ36C	36.0	40.0	48.9	1	2	46.7	64.3
3.0SMCJ36A	3.0SMCJ36CA	36.0	40.0	44.2	1	2	51.6	58.1
3.0SMCJ40	3.0SMCJ40C	40.0	44.4	54.3	1	2	42.0	71.4
3.0SMCJ40A	3.0SMCJ40CA	40.0	44.4	49.1	1	2	46.5	64.5
3.0SMCJ43	3.0SMCJ43C	43.0	47.8	58.4	1	2	39.1	76.7
3.0SMCJ43A	3.0SMCJ43CA	43.0	47.8	52.8	1	2	43.2	69.4
3.0SMCJ45	3.0SMCJ45C	45.0	50.0	61.1	1	2	37.4	80.3
3.0SMCJ45A	3.0SMCJ45CA	45.0	50.0	55.3	1	2	41.3	72.7
3.0SMCJ48	3.0SMCJ48C	48.0	53.3	65.1	1	2	35.1	85.5
3.0SMCJ48A	3.0SMCJ48CA	48.0	53.3	58.9	1	2	38.8	77.4
3.0SMCJ51	3.0SMCJ51C	51.0	56.7	69.3	1	2	32.9	91.1
3.0SMCJ51A	3.0SMCJ51CA	51.0	56.7	62.7	1	2	36.4	82.4
3.0SMCJ54	3.0SMCJ54C	54.0	60.0	73.3	1	2	31.2	96.3
3.0SMCJ54A	3.0SMCJ54CA	54.0	60.0	66.3	1	2	34.4	87.1
3.0SMCJ58	3.0SMCJ58C	58.0	64.4	78.7	1	2	29.1	103.0
3.0SMCJ58A	3.0SMCJ58CA	58.0	64.4	71.2	1	2	32.1	93.6
3.0SMCJ60	3.0SMCJ60C	60.0	66.7	81.5	1	2	28.0	107.0
3.0SMCJ60A	3.0SMCJ60CA	60.0	66.7	73.7	1	2	31.0	96.8
3.0SMCJ64	3.0SMCJ64C	64.0	71.1	86.9	1	2	26.3	114.0
3.0SMCJ64A	3.0SMCJ64CA	64.0	71.1	78.6	1	2	29.1	103.0
3.0SMCJ70	3.0SMCJ70C	70.0	77.8	95.1	1	2	24.0	125.0
3.0SMCJ70A	3.0SMCJ70CA	70.0	77.8	86.0	1	2	26.5	113.0
3.0SMCJ75	3.0SMCJ75C	75.0	83.3	101.8	1	2	22.4	134.0
3.0SMCJ75A	3.0SMCJ75CA	75.0	83.3	92.1	1	2	24.8	121.0
3.0SMCJ78	3.0SMCJ78C	78.0	86.7	105.9	1	2	21.6	139.0
3.0SMCJ78A	3.0SMCJ78CA	78.0	86.7	95.8	1	2	23.8	126.0
3.0SMCJ85	3.0SMCJ85C	85.0	94.4	115.4	1	2	19.9	151.0
3.0SMCJ85A	3.0SMCJ85CA	85.0	94.4	104.3	1	2	21.9	137.0
3.0SMCJ90	3.0SMCJ90C	90.0	100.0	122.2	1	2	18.8	160.0
3.0SMCJ90A	3.0SMCJ90CA	90.0	100.0	110.5	1	2	20.5	146.0
3.0SMCJ100	3.0SMCJ100C	100.0	111.0	135.6	1	2	16.8	179.0

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3.0SMCJ100A	3.0SMCJ100CA	100.0	111.0	122.7	1	2	18.5	162.0
3.0SMCJ110	3.0SMCJ110C	110.0	122.0	149.1	1	2	15.3	196.0
3.0SMCJ110A	3.0SMCJ110CA	110.0	122.0	134.8	1	2	16.9	177.0
3.0SMCJ120	3.0SMCJ120C	120.0	133.0	162.5	1	2	14.0	214.0
3.0SMCJ120A	3.0SMCJ120CA	120.0	133.0	147.0	1	2	15.5	193.0
3.0SMCJ130	3.0SMCJ130C	130.0	144.0	176.0	1	2	13.0	231.0
3.0SMCJ130A	3.0SMCJ130CA	130.0	144.0	159.2	1	2	14.4	209.0
3.0SMCJ150	3.0SMCJ150C	150.0	167.0	204.1	1	2	11.2	268.0
3.0SMCJ150A	3.0SMCJ150CA	150.0	167.0	184.6	1	2	12.3	243.0
3.0SMCJ160	3.0SMCJ160C	160.0	178.0	217.5	1	2	10.5	287.0
3.0SMCJ160A	3.0SMCJ160CA	160.0	178.0	196.7	1	2	11.6	259.0
3.0SMCJ170	3.0SMCJ170C	170.0	189.0	231.0	1	2	9.9	304.0
3.0SMCJ170A	3.0SMCJ170CA	170.0	189.0	208.9	1	2	10.9	275.0
3.0SMCJ180	3.0SMCJ180A	180.0	198.0	242.0	1	2	9.3	322.0
3.0SMCJ180A	3.0SMCJ180CA	180.0	198.0	218.8	1	2	10.3	292.0
3.0SMCJ190	3.0SMCJ190C	190.0	209.0	255.4	1	2	8.8	340.0
3.0SMCJ190A	3.0SMCJ190CA	190.0	209.0	231.0	1	2	9.7	308.0
3.0SMCJ200	3.0SMCJ200C	200.0	220.0	268.8	1	2	8.4	358.0
3.0SMCJ200A	3.0SMCJ200CA	200.0	220.0	243.2	1	2	9.3	324.0
3.0SMCJ210	3.0SMCJ210C	210.0	231.0	282.3	1	2	8.0	376.0
3.0SMCJ210A	3.0SMCJ210CA	210.0	231.0	255.3	1	2	8.8	340.0
3.0SMCJ220	3.0SMCJ220C	220.0	242.0	295.7	1	2	7.6	394.0
3.0SMCJ220A	3.0SMCJ220CA	220.0	242.0	267.5	1	2	8.4	356.0

NOTES:

1) Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

2) For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

3) Mark "*" denote that comply IEC 61000-4-5 Severity levels, 6KV. For data lines requiring a 42Ω source impedance, the short-circuit current waveform is defind as 8/20us.

SMC

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
5.0SMCJ18	---	18.0	20.0	24.4	1	5	155.3	32.2
5.0SMCJ18A	---	18.0	20.0	22.1	1	5	171.2	29.2
5.0SMCJ20	---	20.0	22.2	27.1	1	5	139.7	35.8
5.0SMCJ20A	---	20.0	22.2	24.5	1	5	154.3	32.4
5.0SMCJ22	---	22.0	24.4	29.8	1	5	126.9	39.4
5.0SMCJ22A	---	22.0	24.4	27.0	1	5	140.8	35.5
5.0SMCJ24	---	24.0	26.7	32.6	1	5	116.3	43.0
5.0SMCJ24A	---	24.0	26.7	29.5	1	5	128.5	38.9
5.0SMCJ26	---	26.0	28.9	35.3	1	5	107.3	46.6
5.0SMCJ26A	---	26.0	28.9	31.9	1	5	118.8	42.1
5.0SMCJ28	---	28.0	31.1	38.0	1	5	100.0	50.0
5.0SMCJ28A	---	28.0	31.1	34.4	1	5	110.1	45.4
5.0SMCJ30	---	30.0	33.3	40.7	1	5	93.5	53.5
5.0SMCJ30A	---	30.0	33.3	36.8	1	5	103.3	48.4
5.0SMCJ33	---	33.0	36.7	44.8	1	5	84.7	59.0
5.0SMCJ33A	---	33.0	36.7	40.6	1	5	93.8	53.3
5.0SMCJ36	---	36.0	40.0	48.9	1	5	77.8	64.3
5.0SMCJ36A	---	36.0	40.0	44.2	1	5	86.1	58.1

NOTES:

Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

SMB FLAT

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Working Peak Reverse Voltage	Breakdowm voltage VBR Volts			Maximum Reverse Leakage at V_{RWM}	Maximum Reverse Surge Current	Maximum Reverse Voltage at I_{RSM} (Clamping Voltage)
		V_{RWM}(Volts)	Min.	Max.	@IT(mA)	IR (uA)	I_{RSM}(Amps)	V_{RSM}(Volts)
SMBT5.0A	N/A	5.0	6.4	7.1	10	800	65.2	9.2
SMBT12A	N/A	12.0	13.3	14.7	1	5	30.2	19.9
SMBT16A	N/A	16.0	17.8	19.7	1	5	23.1	26.0
SMBT24A	N/A	24.0	26.7	29.5	1	5	15.4	38.9

DO-41

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
AXIAL LEAD TVS								
P4KE6.8A	P4KE6.8CA	5.8	6.45	7.13	10	1000	38.1	10.5
P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10	500	35.4	11.3
P4KE8.2A	P4KE8.2CA	7.0	7.79	8.61	10	200	33.1	12.1
P4KE9.1A	P4KE9.1CA	7.8	8.65	9.56	1	50	29.9	13.4
P4KE10A	P4KE10CA	8.6	9.50	10.50	1	10	27.6	14.5
P4KE11A	P4KE11CA	9.4	10.5	11.6	1	5	25.6	15.6
P4KE12A	P4KE12CA	10.2	11.4	12.6	1	0.5	24.0	16.7
P4KE13A	P4KE13CA	11.1	12.4	13.7	1	0.5	22.0	18.2
P4KE15A	P4KE15CA	12.8	14.3	15.8	1	0.5	18.9	21.2
P4KE16A	P4KE16CA	13.6	15.2	16.8	1	0.5	17.8	22.5
P4KE18A	P4KE18CA	15.3	17.1	18.9	1	0.5	15.9	25.2
P4KE20A	P4KE20CA	17.1	19.0	21.0	1	0.5	14.4	27.7
P4KE22A	P4KE22CA	18.8	20.9	23.1	1	0.5	13.1	30.6
P4KE24A	P4KE24CA	20.5	22.8	25.2	1	0.5	12.0	33.2
P4KE27A	P4KE27CA	23.1	25.7	28.4	1	0.5	10.7	37.5
P4KE30A	P4KE30CA	25.6	28.5	31.5	1	0.5	9.7	41.4
P4KE33A	P4KE33CA	28.2	31.4	34.7	1	0.5	8.8	45.7
P4KE36A	P4KE36CA	30.8	34.2	37.8	1	0.5	8.0	49.9
P4KE39A	P4KE39CA	33.3	37.1	41.0	1	0.5	7.4	53.9
P4KE43A	P4KE43CA	36.8	40.9	45.2	1	0.5	6.7	59.3
P4KE47A	P4KE47CA	40.2	44.7	49.4	1	0.5	6.2	64.8
P4KE51A	P4KE51CA	43.6	48.5	53.6	1	0.5	5.7	70.1
P4KE56A	P4KE56CA	47.8	53.2	58.8	1	0.5	5.2	77.0
P4KE62A	P4KE62CA	53.0	58.9	65.1	1	0.5	4.7	85.0
P4KE68A	P4KE68CA	58.1	64.6	71.4	1	0.5	4.3	92.0
P4KE75A	P4KE75CA	64.7	71.3	78.8	1	0.5	3.9	103.0
P4KE82A	P4KE82CA	70.1	77.9	86.1	1	0.5	3.5	113.0
P4KE91A	P4KE91CA	77.8	86.5	95.6	1	0.5	3.2	125.0
P4KE100A	P4KE100CA	85.5	95.0	105.0	1	0.5	2.9	137.0
P4KE110A	P4KE110CA	94.0	105.0	116.1	1	0.5	2.6	152.0
P4KE120A	P4KE120CA	102.0	114.0	126.0	1	0.5	2.4	165.0
P4KE130A	P4KE130CA	111.0	124.0	137.1	1	0.5	2.2	179.0
P4KE150A	P4KE150CA	128.0	143.0	158.1	1	0.5	1.9	207.0
P4KE160A	P4KE160CA	136.0	152.0	168.0	1	0.5	1.8	219.0
P4KE170A	P4KE170CA	145.0	162.0	179.1	1	0.5	1.7	234.0
P4KE180A	P4KE180CA	154.0	171.0	189.0	1	0.5	1.6	246.0
P4KE200A	P4KE200CA	171.0	190.0	210.0	1	0.5	1.5	274.0
P4KE220A	P4KE220CA	185.0	209.0	231.0	1	0.5	1.3	328.0
P4KE250A	P4KE250CA	214.0	237.0	262.0	1	0.5	1.2	344.0

DO-41

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
P4KE300A	P4KE300CA	256.0	285.0	315.0	1	0.5	1.0	414.0
P4KE350A	P4KE350CA	300.0	332.0	367.0	1	0.5	0.83	482.0
P4KE400A	P4KE400CA	342.0	380.0	420.0	1	0.5	0.73	548.0
P4KE440A	P4KE440CA	376.0	418.0	462.0	1	0.5	0.67	600.0

NOTE:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
SA5.0A	SA5.0CA	5.0	6.40	7.07	10	600	54.3	9.2
SA6.0A	SA6.0CA	6.0	6.67	7.37	10	600	48.5	10.3
SA6.5A	SA6.5CA	6.5	7.22	7.98	10	400	44.6	11.2
SA7.0A	SA7.0CA	7.0	7.78	8.60	10	150	41.7	12.0
SA7.5A	SA7.5CA	7.5	8.33	9.21	1	50	38.8	12.9
SA8.0A	SA8.0CA	8.0	8.89	9.83	1	25	36.8	13.6
SA8.5A	SA8.5CA	8.5	9.44	10.43	1	10	34.7	14.4
SA9.0A	SA9.0CA	9.0	10.0	11.1	1	5	32.5	15.4
SA10A	SA10CA	10.0	11.1	12.3	1	3	29.4	17.0
SA11A	SA11CA	11.0	12.2	13.5	1	3	27.5	18.2
SA12A	SA12CA	12.0	13.3	14.7	1	3	25.1	19.9
SA13A	SA13CA	13.0	14.4	15.9	1	3	23.3	21.5
SA14A	SA14CA	14.0	15.6	17.2	1	3	21.6	23.2
SA15A	SA15CA	15.0	16.7	18.5	1	3	20.5	24.4
SA16A	SA16CA	16.0	17.8	19.7	1	3	19.2	26.0
SA17A	SA17CA	17.0	18.9	20.9	1	3	18.1	27.6
SA18A	SA18CA	18.0	20.0	22.1	1	3	17.1	29.2
SA20A	SA20CA	20.0	22.2	24.5	1	3	15.4	32.4
SA22A	SA22CA	22.0	24.4	27.0	1	3	14.1	35.5
SA24A	SA24CA	24.0	26.7	29.5	1	3	12.9	38.9
SA26A	SA26CA	26.0	28.9	31.9	1	3	11.9	42.1
SA28A	SA28CA	28.0	31.1	34.4	1	3	11.0	45.4
SA30A	SA30CA	30.0	33.3	36.8	1	3	10.3	48.4
SA33A	SA33CA	33.0	36.7	40.6	1	3	9.4	53.3
SA36A	SA36CA	36.0	40.0	44.2	1	3	8.6	58.1
SA40A	SA40CA	40.0	44.4	49.1	1	3	7.8	64.5
SA43A	SA43CA	43.0	47.8	52.8	1	3	7.2	69.4
SA45A	SA45CA	45.0	50.0	55.3	1	3	6.9	72.7
SA48A	SA48CA	48.0	53.3	58.9	1	3	6.5	77.4
SA51A	SA51CA	51.0	56.7	62.7	1	3	6.1	82.4
SA54A	SA54CA	54.0	60.0	66.3	1	3	5.7	87.1
SA58A	SA58CA	58.0	64.4	71.2	1	3	5.3	93.6
SA60A	SA60CA	60.0	66.7	73.7	1	3	5.2	96.8
SA64A	SA64CA	64.0	71.1	78.6	1	3	4.9	103.0
SA70A	SA70CA	70.0	77.8	86.0	1	3	4.4	113.0
SA75A	SA75CA	75.0	83.3	92.1	1	3	4.1	121.0
SA78A	SA78CA	78.0	86.7	95.8	1	3	4.0	126.0
SA85A	SA85CA	85.0	94.4	104.3	1	3	3.6	137.0
SA90A	SA90CA	90.0	100.0	110.5	1	3	3.4	146.0
SA100A	SA100CA	100.0	111.0	122.7	1	3	3.1	162.0

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
SA110A	SA110CA	110.0	122.0	134.8	1	3	2.8	177.0
SA120A	SA120CA	120.0	133.0	147.0	1	3	2.6	193.0
SA130A	SA130CA	130.0	144.0	159.2	1	3	2.4	209.0
SA150A	SA150CA	150.0	167.0	184.6	1	3	2.1	243.0
SA160A	SA160CA	160.0	178.0	196.7	1	3	1.9	259.0
SA170A	SA170CA	170.0	189.0	208.9	1	3	1.8	275.0

NOTE:

Suffix'C' denotes Bi-directional device. Suffix'A' denotes 5% tolerance device .

For Bi-directional devices having VR of 10 volts and under,the IR limit is doubled .

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
P6KE6.8A	P6KE6.8CA	5.8	6.45	7.13	10	1000	57.1	10.5
P6KE7.5A	P6KE7.5CA	6.4	7.13	7.88	10	500	53.1	11.3
P6KE8.2A	P6KE8.2CA	7.0	7.79	8.61	10	200	49.6	12.1
P6KE9.1A	P6KE9.1CA	7.8	8.65	9.56	1	50	44.8	13.4
P6KE10A	P6KE10CA	8.6	9.50	10.50	1	10	41.4	14.5
P6KE11A	P6KE11CA	9.4	10.5	11.6	1	0.5	38.5	15.6
P6KE12A	P6KE12CA	10.2	11.4	12.6	1	0.5	35.9	16.7
P6KE13A	P6KE13CA	11.1	12.4	13.7	1	0.5	33.0	18.2
P6KE15A	P6KE15CA	12.8	14.3	15.8	1	0.5	28.3	21.2
P6KE16A	P6KE16CA	13.6	15.2	16.8	1	0.5	26.7	22.5
P6KE18A	P6KE18CA	15.3	17.1	18.9	1	0.5	23.8	25.2
P6KE20A	P6KE20CA	17.1	19.0	21.0	1	0.5	21.7	27.7
P6KE22A	P6KE22CA	18.8	20.9	23.1	1	0.5	19.6	30.6
P6KE24A	P6KE24CA	20.5	22.8	25.2	1	0.5	18.1	33.2
P6KE27A	P6KE27CA	23.1	25.7	28.4	1	0.5	16.0	37.5
P6KE30A	P6KE30CA	25.6	28.5	31.5	1	0.5	14.5	41.4
P6KE33A	P6KE33CA	28.2	31.4	34.7	1	0.5	13.1	45.7
P6KE36A	P6KE36CA	30.8	34.2	37.8	1	0.5	12.0	49.9
P6KE39A	P6KE39CA	33.3	37.1	41.0	1	0.5	11.1	53.9
P6KE43A	P6KE43CA	36.8	40.9	45.2	1	0.5	10.1	59.3
P6KE47A	P6KE47CA	40.2	44.7	49.4	1	0.5	9.3	64.8
P6KE51A	P6KE51CA	43.6	48.5	53.6	1	0.5	8.6	70.1
P6KE56A	P6KE56CA	47.8	53.2	58.8	1	0.5	7.8	77.0
P6KE62A	P6KE62CA	53.0	58.9	65.1	1	0.5	7.1	85.0
P6KE68A	P6KE68CA	58.1	64.6	71.4	1	0.5	6.5	92.0
P6KE75A	P6KE75CA	64.7	71.3	78.8	1	0.5	5.8	103.0
P6KE82A	P6KE82CA	70.1	77.9	86.1	1	0.5	5.3	113.0
P6KE91A	P6KE91CA	77.8	86.5	95.6	1	0.5	4.8	125.0
P6KE100A	P6KE100CA	85.5	95.0	105.0	1	0.5	4.4	137.0
P6KE110A	P6KE110CA	94.0	105.0	116.1	1	0.5	3.9	152.0
P6KE120A	P6KE120CA	102.0	114.0	126.0	1	0.5	3.6	165.0
P6KE130A	P6KE130CA	111.0	124.0	137.1	1	0.5	3.4	179.0
P6KE150A	P6KE150CA	128.0	143.0	158.1	1	0.5	2.9	207.0
P6KE160A	P6KE160CA	136.0	152.0	168.0	1	0.5	2.7	219.0
P6KE170A	P6KE170CA	145.0	162.0	179.1	1	0.5	2.6	234.0
P6KE180A	P6KE180CA	154.0	171.0	189.0	1	0.5	2.4	246.0
P6KE200A	P6KE200CA	171.0	190.0	210.0	1	0.5	2.2	274.0
P6KE220A	P6KE220CA	185.0	209.0	231.0	1	0.5	1.8	328.0
P6KE250A	P6KE250CA	214.0	237.0	262.0	1	0.5	1.7	344.0
P6KE300A	P6KE300CA	256.0	285.0	315.0	1	0.5	1.4	414.0

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
P6KE350A	P6KE350CA	300.0	332.0	367.0	1	0.5	1.2	482.0
P6KE400A	P6KE400CA	342.0	380.0	420.0	1	0.5	1.1	548.0
P6KE440A	P6KE440CA	376.0	418.0	462.0	1	0.5	1.0	600.0
P6KE550A	P6KE550CA	467.5	522.5	577.5	1	0.5	0.80	753.5

NOTE:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
EP6KE6.8A	EP6KE6.8CA	5.8	6.45	7.13	10	1000	57.1	10.5
EP6KE7.5A	EP6KE7.5CA	6.4	7.13	7.88	10	500	53.1	11.3
EP6KE8.2A	EP6KE8.2CA	7.0	7.79	8.61	10	200	49.6	12.1
EP6KE9.1A	EP6KE9.1CA	7.8	8.65	9.56	1	50	44.8	13.4
EP6KE10A	EP6KE10CA	8.6	9.50	10.50	1	10	41.4	14.5
EP6KE11A	EP6KE11CA	9.4	10.5	11.6	1	5	38.5	15.6
EP6KE12A	EP6KE12CA	10.2	11.4	12.6	1	0.5	35.9	16.7
EP6KE13A	EP6KE13CA	11.1	12.4	13.7	1	0.5	33.0	18.2
EP6KE15A	EP6KE15CA	12.8	14.3	15.8	1	0.5	28.3	21.2
EP6KE16A	EP6KE16CA	13.6	15.2	16.8	1	0.5	26.7	22.5
EP6KE18A	EP6KE18CA	15.3	17.1	18.9	1	0.5	23.8	25.2
EP6KE20A	EP6KE20CA	17.1	19.0	21.0	1	0.5	21.7	27.7
EP6KE22A	EP6KE22CA	18.8	20.9	23.1	1	0.5	19.6	30.6
EP6KE24A	EP6KE24CA	20.5	22.8	25.2	1	0.5	18.1	33.2
EP6KE27A	EP6KE27CA	23.1	25.7	28.4	1	0.5	16.0	37.5
EP6KE30A	EP6KE30CA	25.6	28.5	31.5	1	0.5	14.5	41.4
EP6KE33A	EP6KE33CA	28.2	31.4	34.7	1	0.5	13.1	45.7
EP6KE36A	EP6KE36CA	30.8	34.2	37.8	1	0.5	12.0	49.9
EP6KE39A	EP6KE39CA	33.3	37.1	41.0	1	0.5	11.1	53.9
EP6KE43A	EP6KE43CA	36.8	40.9	45.2	1	0.5	10.1	59.3
EP6KE47A	EP6KE47CA	40.2	44.7	49.4	1	0.5	9.3	64.8
EP6KE51A	EP6KE51CA	43.6	48.5	53.6	1	0.5	8.6	70.1
EP6KE56A	EP6KE56CA	47.8	53.2	58.8	1	0.5	7.8	77.0
EP6KE62A	EP6KE62CA	53.0	58.9	65.1	1	0.5	7.1	85.0
EP6KE68A	EP6KE68CA	58.1	64.6	71.4	1	0.5	6.5	92.0
EP6KE75A	EP6KE75CA	64.7	71.3	78.8	1	0.5	5.8	103.0
EP6KE82A	EP6KE82CA	70.1	77.9	86.1	1	0.5	5.3	113.0
EP6KE91A	EP6KE91CA	77.8	86.5	95.6	1	0.5	4.8	125.0
EP6KE100A	EP6KE100CA	85.5	95.0	105.0	1	0.5	4.4	137.0
EP6KE110A	EP6KE110CA	94.0	105.0	116.1	1	0.5	3.9	152.0
EP6KE120A	EP6KE120CA	102.0	114.0	126.0	1	0.5	3.6	165.0
EP6KE130A	EP6KE130CA	111.0	124.0	137.1	1	0.5	3.4	179.0
EP6KE150A	EP6KE150CA	128.0	143.0	158.1	1	0.5	2.9	207.0
EP6KE160A	EP6KE160CA	136.0	152.0	168.0	1	0.5	2.7	219.0
EP6KE170A	EP6KE170CA	145.0	162.0	179.1	1	0.5	2.6	234.0
EP6KE180A	EP6KE180CA	154.0	171.0	189.0	1	0.5	2.4	246.0
EP6KE200A	EP6KE200CA	171.0	190.0	210.0	1	0.5	2.2	274.0
EP6KE220A	EP6KE220CA	185.0	209.0	231.0	1	0.5	1.8	328.0
EP6KE250A	EP6KE250CA	214.0	237.0	262.0	1	0.5	1.7	344.0
EP6KE300A	EP6KE300CA	256.0	285.0	315.0	1	0.5	1.4	414.0

DO-15

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
EP6KE350A	EP6KE350CA	300.0	332.0	367.0	1	0.5	1.2	482.0
EP6KE400A	EP6KE400CA	342.0	380.0	420.0	1	0.5	1.1	548.0
EP6KE440A	EP6KE440CA	376.0	418.0	462.0	1	0.5	1.0	600.0

NOTE:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

DO-201

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
1.5KE6.8A	1.5KE6.8CA	5.8	6.45	7.13	10	1000	142.9	10.5
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	500	132.7	11.3
1.5KE8.2A	1.5KE8.2CA	7.0	7.79	8.61	10	200	124.0	12.1
1.5KE9.1A	1.5KE9.1CA	7.8	8.65	9.56	1	50	111.9	13.4
1.5KE10A	1.5KE10CA	8.6	9.50	10.50	1	10	103.4	14.5
1.5KE11A	1.5KE11CA	9.4	10.5	11.6	1	5	96.2	15.6
1.5KE12A	1.5KE12CA	10.2	11.4	12.6	1	0.5	89.8	16.7
1.5KE13A	1.5KE13CA	11.1	12.4	13.7	1	0.5	82.4	18.2
1.5KE15A	1.5KE15CA	12.8	14.3	15.8	1	0.5	70.8	21.2
1.5KE16A	1.5KE16CA	13.6	15.2	16.8	1	0.5	66.7	22.5
1.5KE18A	1.5KE18CA	15.3	17.1	18.9	1	0.5	59.5	25.2
1.5KE20A	1.5KE20CA	17.1	19.0	21.0	1	0.5	54.2	27.7
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1	0.5	49.0	30.6
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1	0.5	45.2	33.2
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1	0.5	40.0	37.5
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1	0.5	36.2	41.4
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1	0.5	32.8	45.7
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1	0.5	30.1	49.9
1.5KE39A	1.5KE39CA	33.3	37.1	41.0	1	0.5	27.8	53.9
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1	0.5	25.3	59.3
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1	0.5	23.1	64.8
1.5KE51A	1.5KE51CA	43.6	48.5	53.6	1	0.5	21.4	70.1
1.5KE56A	1.5KE56CA	47.8	53.2	58.8	1	0.5	19.5	77.0
1.5KE62A	1.5KE62CA	53.0	58.9	65.1	1	0.5	17.6	85.0
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1	0.5	16.3	92.0
1.5KE75A	1.5KE75CA	64.7	71.3	78.8	1	0.5	14.6	103.0
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1	0.5	13.3	113.0
1.5KE91A	1.5KE91CA	77.8	86.5	95.6	1	0.5	12.0	125.0
1.5KE100A	1.5KE100CA	85.5	95.0	105.0	1	0.5	10.9	137.0
1.5KE110A	1.5KE110CA	94.0	105.0	116.1	1	0.5	9.9	152.0
1.5KE120A	1.5KE120CA	102.0	114.0	126.0	1	0.5	9.1	165.0
1.5KE130A	1.5KE130CA	111.0	124.0	137.1	1	0.5	8.4	179.0
1.5KE150A	1.5KE150CA	128.0	143.0	158.1	1	0.5	7.2	207.0
1.5KE160A	1.5KE160CA	136.0	152.0	168.0	1	0.5	6.8	219.0
1.5KE170A	1.5KE170CA	145.0	162.0	179.1	1	0.5	6.4	234.0
1.5KE180A	1.5KE180CA	154.0	171.0	189.0	1	0.5	6.1	246.0
1.5KE200A	1.5KE200CA	171.0	190.0	210.0	1	0.5	5.5	274.0
1.5KE220A	1.5KE220CA	185.0	209.0	231.0	1	0.5	4.6	328.0
1.5KE250A	1.5KE250CA	214.0	237.0	262.0	1	0.5	4.4	344.0
1.5KE300A	1.5KE300CA	256.0	285.0	315.0	1	0.5	3.6	414.0

DO-201

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
1.5KE350A	1.5KE350CA	300.0	332.0	367.0	1	0.5	3.1	482.0
1.5KE400A	1.5KE400CA	342.0	380.0	420.0	1	0.5	2.7	548.0
1.5KE440A	1.5KE440CA	376.0	418.0	462.0	1	0.5	2.5	600.0

NOTES:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3KP5.0	3KP5.0C	5.0	6.40	7.82	10	1000	312.5	9.6
3KP5.0A	3KP5.0CA	5.0	6.40	7.07	10	1000	326.1	9.2
3KP6.0	3KP6.0C	6.0	6.67	8.15	10	1000	263.2	11.4
3KP6.0A	3KP6.0CA	6.0	6.67	7.37	10	1000	291.3	10.3
3KP6.5	3KP6.5C	6.5	7.22	8.82	10	500	243.9	12.3
3KP6.5A	3KP6.5CA	6.5	7.22	7.98	10	500	267.9	11.2
3KP7.0	3KP7.0C	7.0	7.78	9.51	10	200	225.6	13.3
3KP7.0A	3KP7.0CA	7.0	7.78	8.60	10	200	250.0	12.0
3KP7.5	3KP7.5C	7.5	8.33	10.18	1	100	209.8	14.3
3KP7.5A	3KP7.5CA	7.5	8.33	9.21	1	100	232.6	12.9
3KP8.0	3KP8.0C	8.0	8.89	10.86	1	50	200.0	15.0
3KP8.0A	3KP8.0CA	8.0	8.89	9.83	1	50	220.6	13.6
3KP8.5	3KP8.5C	8.5	9.44	11.54	1	25	188.7	15.9
3KP8.5A	3KP8.5CA	8.5	9.44	10.43	1	25	208.3	14.4
3KP9.0	3KP9.0C	9.0	10.00	12.22	1	10	177.5	16.9
3KP9.0A	3KP9.0CA	9.0	10.00	11.05	1	10	194.8	15.4
3KP10	3KP10C	10.0	11.10	13.56	1	2	159.6	18.8
3KP10A	3KP10CA	10.0	11.10	12.27	1	2	176.5	17.0
3KP11	3KP11C	11.0	12.2	14.9	1	2	149.3	20.1
3KP11A	3KP11CA	11.0	12.2	13.5	1	2	164.8	18.2
3KP12	3KP12C	12.0	13.3	16.3	1	2	136.4	22.0
3KP12A	3KP12CA	12.0	13.3	14.7	1	2	150.8	19.9
3KP13	3KP13C	13.0	14.4	17.6	1	2	126.1	23.8
3KP13A	3KP13CA	13.0	14.4	15.9	1	2	139.5	21.5
3KP14	3KP14C	14.0	15.6	19.1	1	2	116.3	25.8
3KP14A	3KP14CA	14.0	15.6	17.2	1	2	129.3	23.2
3KP15	3KP15C	15.0	16.7	20.4	1	2	111.5	26.9
3KP15A	3KP15CA	15.0	16.7	18.5	1	2	124.0	24.2
3KP16	3KP16C	16.0	17.8	21.8	1	2	104.2	28.8
3KP16A	3KP16CA	16.0	17.8	19.7	1	2	115.4	26.0
3KP17	3KP17C	17.0	18.9	23.1	1	2	98.4	30.5
3KP17A	3KP17CA	17.0	18.9	20.9	1	2	108.7	27.6
3KP18	3KP18C	18.0	20.0	24.4	1	2	93.2	32.2
3KP18A	3KP18CA	18.0	20.0	22.1	1	2	102.7	29.2
3KP20	3KP20C	20.0	22.2	27.1	1	2	83.8	35.8
3KP20A	3KP20CA	20.0	22.2	24.5	1	2	92.6	32.4
3KP22	3KP22C	22.0	24.4	29.8	1	2	76.1	39.4
3KP22A	3KP22CA	22.0	24.4	27.0	1	2	84.5	35.5
3KP24	3KP24C	24.0	26.7	32.6	1	2	69.8	43.0
3KP24A	3KP24CA	24.0	26.7	29.5	1	2	77.1	38.9

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3KP26	3KP26C	26.0	28.9	35.3	1	2	64.4	46.6
3KP26A	3KP26CA	26.0	28.9	31.9	1	2	71.3	42.1
3KP28	3KP28C	28.0	31.1	38.0	1	2	60.0	50.0
3KP28A	3KP28CA	28.0	31.1	34.4	1	2	66.1	45.4
3KP30	3KP30C	30.0	33.3	40.7	1	2	56.1	53.5
3KP30A	3KP30CA	30.0	33.3	36.8	1	2	62.0	48.4
3KP33	3KP33C	33.0	36.7	44.8	1	2	50.8	59.0
3KP33A	3KP33CA	33.0	36.7	40.6	1	2	56.3	53.3
3KP36	3KP36C	36.0	40.0	48.9	1	2	46.7	64.3
3KP36A	3KP36CA	36.0	40.0	44.2	1	2	51.6	58.1
3KP40	3KP40C	40.0	44.4	54.3	1	2	42.0	71.4
3KP40A	3KP40CA	40.0	44.4	49.1	1	2	46.5	64.5
3KP43	3KP43C	43.0	47.8	58.4	1	2	39.1	76.7
3KP43A	3KP43CA	43.0	47.8	52.8	1	2	43.2	69.4
3KP45	3KP45C	45.0	50.0	61.1	1	2	37.4	80.3
3KP45A	3KP45CA	45.0	50.0	55.3	1	2	41.3	72.7
3KP48	3KP48C	48.0	53.3	65.1	1	2	35.1	85.5
3KP48A	3KP48CA	48.0	53.3	58.9	1	2	38.8	77.4
3KP51	3KP51C	51.0	56.7	69.3	1	2	32.9	91.1
3KP51A	3KP51CA	51.0	56.7	62.7	1	2	36.4	82.4
3KP54	3KP54C	54.0	60.0	73.3	1	2	31.2	96.3
3KP54A	3KP54CA	54.0	60.0	66.3	1	2	34.4	87.1
3KP58	3KP58C	58.0	64.4	78.7	1	2	29.1	103.0
3KP58A	3KP58CA	58.0	64.4	71.2	1	2	32.1	93.6
3KP60	3KP60C	60.0	66.7	81.5	1	2	28.0	107.0
3KP60A	3KP60CA	60.0	66.7	73.7	1	2	31.0	96.8
3KP64	3KP64C	64.0	71.1	86.9	1	2	26.3	114.0
3KP64A	3KP64CA	64.0	71.1	78.6	1	2	29.1	103.0
3KP70	3KP70C	70.0	77.8	95.1	1	2	24.0	125.0
3KP70A	3KP70CA	70.0	77.8	86.0	1	2	26.5	113.0
3KP75	3KP75C	75.0	83.3	101.8	1	2	22.4	134.0
3KP75A	3KP75CA	75.0	83.3	92.1	1	2	24.8	121.0
3KP78	3KP78C	78.0	86.7	105.9	1	2	21.6	139.0
3KP78A	3KP78CA	78.0	86.7	95.8	1	2	23.8	126.0
3KP85	3KP85C	85.0	94.4	115.4	1	2	19.9	151.0
3KP85A	3KP85CA	85.0	94.4	104.3	1	2	21.9	137.0
3KP90	3KP90C	90.0	100.0	122.2	1	2	18.8	160.0
3KP90A	3KP90CA	90.0	100.0	110.5	1	2	20.5	146.0
3KP100	3KP100C	100.0	111.0	135.6	1	2	16.8	179.0
3KP100A	3KP100CA	100.0	111.0	122.7	1	2	18.5	162.0

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
3KP110	3KP110C	110.0	122.0	149.1	1	2	15.3	196.0
3KP110A	3KP110CA	110.0	122.0	134.8	1	2	16.9	177.0
3KP120	3KP120C	120.0	133.0	162.5	1	2	14.0	214.0
3KP120A	3KP120CA	120.0	133.0	147.0	1	2	15.5	193.0
3KP130	3KP130C	130.0	144.0	176.0	1	2	13.0	231.0
3KP130A	3KP130CA	130.0	144.0	159.2	1	2	14.4	209.0
3KP150	3KP150C	150.0	167.0	204.1	1	2	11.2	268.0
3KP150A	3KP150CA	150.0	167.0	184.6	1	2	12.3	243.0
3KP160	3KP160C	160.0	178.0	217.5	1	2	10.5	287.0
3KP160A	3KP160CA	160.0	178.0	196.7	1	2	11.6	259.0
3KP170	3KP170C	170.0	189.0	231.0	1	2	9.9	304.0
3KP170A	3KP170CA	170.0	189.0	208.9	1	2	10.9	275.0
3KP180	3KP180C	180.0	198.0	242.0	1	2	9.3	322.0
3KP180A	3KP180CA	180.0	198.0	218.8	1	2	10.3	292.0
3KP190	3KP190C	190.0	209.0	255.4	1	2	8.8	340.0
3KP190A	3KP190CA	190.0	209.0	231.0	1	2	9.7	308.0
3KP200	3KP200C	200.0	220.0	268.8	1	2	8.4	358.0
3KP200A	3KP200CA	200.0	220.0	243.2	1	2	9.3	324.0
3KP210	3KP210C	210.0	231.0	282.3	1	2	8.0	376.0
3KP210A	3KP210CA	210.0	231.0	255.3	1	2	8.8	340.0
3KP220	3KP220C	220.0	242.0	295.7	1	2	7.6	394.0
3KP220A	3KP220CA	220.0	242.0	267.5	1	2	8.4	356.0

NOTES:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
5KP5.0	5KP5.0C	5.0	6.40	7.82	50	5000	520.8	9.6
5KP5.0A	5KP5.0CA	5.0	6.40	7.07	50	5000	543.5	9.2
5KP6.0	5KP6.0C	6.0	6.67	8.15	50	5000	438.6	11.4
5KP6.0A	5KP6.0CA	6.0	6.67	7.37	50	5000	485.4	10.3
5KP6.5	5KP6.5C	6.5	7.22	8.82	50	2000	406.5	12.3
5KP6.5A	5KP6.5CA	6.5	7.22	7.98	50	2000	446.4	11.2
5KP7.0	5KP7.0C	7.0	7.78	9.51	50	1000	375.9	13.3
5KP7.0A	5KP7.0CA	7.0	7.78	8.60	50	1000	416.7	12.0
5KP7.5	5KP7.5C	7.5	8.33	10.18	5.0	250	349.7	14.3
5KP7.5A	5KP7.5CA	7.5	8.33	9.21	5.0	250	387.6	12.9
5KP8.0	5KP8.0C	8.0	8.89	10.86	5.0	150	333.3	15.0
5KP8.0A	5KP8.0CA	8.0	8.89	9.83	5.0	150	367.6	13.6
5KP8.5	5KP8.5C	8.5	9.44	11.54	5.0	50	314.5	15.9
5KP8.5A	5KP8.5CA	8.5	9.44	10.43	5.0	50	347.2	14.4
5KP9.0	5KP9.0C	9.0	10.00	12.22	5.0	20	295.9	16.9
5KP9.0A	5KP9.0CA	9.0	10.00	11.05	5.0	20	324.7	15.4
5KP10	5KP10C	10.0	11.10	13.56	5.0	15	266.0	18.8
5KP10A	5KP10CA	10.0	11.10	12.27	5.0	15	294.1	17.0
5KP11	5KP11C	11.0	12.2	14.9	5.0	10	248.8	20.1
5KP11A	5KP11 CA	11.0	12.2	13.5	5.0	10	274.7	18.2
5KP12	5KP12C	12.0	13.3	16.3	5.0	10	227.3	22.0
5KP12A	5KP12CA	12.0	13.3	14.7	5.0	10	251.3	19.9
5KP13	5KP13C	13.0	14.4	17.6	5.0	10	210.1	23.8
5KP13A	5KP13CA	13.0	14.4	15.9	5.0	10	232.6	21.5
5KP14	5KP14C	14.0	15.6	19.1	5.0	10	193.8	25.8
5KP14A	5KP14CA	14.0	15.6	17.2	5.0	10	215.5	23.2
5KP15	5KP15C	15.0	16.7	20.4	5.0	10	185.9	26.9
5KP15A	5KP15CA	15.0	16.7	18.5	5.0	10	206.6	24.2
5KP16	5KP16C	16.0	17.8	21.8	5.0	10	173.6	28.8
5KP16A	5KP16CA	16.0	17.8	19.7	5.0	10	192.3	26.0
5KP17	5KP17C	17.0	18.9	23.1	5.0	10	163.9	30.5
5KP17A	5KP17CA	17.0	18.9	20.9	5.0	10	181.2	27.6
5KP18	5KP18C	18.0	20.0	24.4	5.0	10	155.3	32.2
5KP18A	5KP18CA	18.0	20.0	22.1	5.0	10	171.2	29.2
5KP20	5KP20C	20.0	22.2	27.1	5.0	10	139.7	35.8
5KP20A	5KP20CA	20.0	22.2	24.5	5.0	10	154.3	32.4
5KP22	5KP22C	22.0	24.4	29.8	5.0	10	126.9	39.4
5KP22A	5KP22CA	22.0	24.4	27.0	5.0	10	140.8	35.5
5KP24	5KP24C	24.0	26.7	32.6	5.0	10	116.3	43.0
5KP24A	5KP24CA	24.0	26.7	29.5	5.0	10	128.5	38.9

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
5KP26	5KP26C	26.0	28.9	35.3	5.0	10	107.3	46.6
5KP26A	5KP26CA	26.0	28.9	31.9	5.0	10	118.8	42.1
5KP28	5KP28C	28.0	31.1	38.0	5.0	10	100.0	50.0
5KP28A	5KP28CA	28.0	31.1	34.4	5.0	10	110.1	45.4
5KP30	5KP30C	30.0	33.3	40.7	5.0	10	93.5	53.5
5KP30A	5KP30CA	30.0	33.3	36.8	5.0	10	103.3	48.4
5KP33	5KP33C	33.0	36.7	44.8	5.0	10	84.7	59.0
5KP33A	5KP33CA	33.0	36.7	40.6	5.0	10	93.8	53.3
5KP36	5KP36C	36.0	40.0	48.9	5.0	10	77.8	64.3
5KP36A	5KP36CA	36.0	40.0	44.2	5.0	10	86.1	58.1
5KP40	5KP40C	40.0	44.4	54.3	5.0	10	70.0	71.4
5KP40A	5KP40CA	40.0	44.4	49.1	5.0	10	77.5	64.5
5KP43	5KP43C	43.0	47.8	58.4	5.0	10	65.2	76.7
5KP43A	5KP43CA	43.0	47.8	52.8	5.0	10	72.0	69.4
5KP45	5KP45C	45.0	50.0	61.1	5.0	10	62.3	80.3
5KP45A	5KP45CA	45.0	50.0	55.3	5.0	10	68.8	72.7
5KP48	5KP48C	48.0	53.3	65.1	5.0	10	58.5	85.5
5KP48A	5KP48CA	48.0	53.3	58.9	5.0	10	64.6	77.4
5KP51	5KP51 C	51.0	56.7	69.3	5.0	10	54.9	91.1
5KP51A	5KP51 CA	51.0	56.7	62.7	5.0	10	60.7	82.4
5KP54	5KP54C	54.0	60.0	73.3	5.0	10	51.9	96.3
5KP54A	5KP54CA	54.0	60.0	66.3	5.0	10	57.4	87.1
5KP58	5KP58C	58.0	64.4	78.7	5.0	10	48.5	103.0
5KP58A	5KP58CA	58.0	64.4	71.2	5.0	10	53.4	93.6
5KP60	5KP60C	60.0	66.7	81.5	5.0	10	46.7	107.0
5KP60A	5KP60CA	60.0	66.7	73.7	5.0	10	51.7	96.8
5KP64	5KP64C	64.0	71.1	86.9	5.0	10	43.9	114.0
5KP64A	5KP64CA	64.0	71.1	78.6	5.0	10	48.5	103.0
5KP70	5KP70C	70.0	77.8	95.1	5.0	10	40.0	125.0
5KP70A	5KP70CA	70.0	77.8	86.0	5.0	10	44.2	113.0
5KP75	5KP75C	75.0	83.3	101.8	5.0	10	37.3	134.0
5KP75A	5KP75A	75.0	83.3	92.1	5.0	10	41.3	121.0
5KP78	5KP78C	78.0	86.7	105.9	5.0	10	36.0	139.0
5KP78A	5KP78CA	78.0	86.7	95.8	5.0	10	39.7	126.0
5KP85	5KP85C	85.0	94.4	115.4	5.0	10	33.1	151.0
5KP85A	5KP85CA	85.0	94.4	104.3	5.0	10	36.5	137.0
5KP90	5KP90C	90.0	100.0	122.2	5.0	10	31.3	160.0
5KP90A	5KP90CA	90.0	100.0	110.5	5.0	10	34.2	146.0
5KP100	5KP100C	100.0	111.0	135.6	5.0	10	27.9	179.0
5KP110	5KP110C	110.0	122.0	149.1	5.0	10	25.5	196.0

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	I_R (uA)	Ipp (A)	Vc (V)
5KP120	5KP120C	120.0	133.0	162.5	5.0	10	23.4	214.0
5KP150	5KP150C	150.0	167.0	204.1	5.0	10	18.7	268.0
5KP180	N/A	180.0	198.0	242.0	5.0	10	15.5	322.0

NOTES:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
15KP17A	15KP17CA	17.0	18.9	20.9	50	5000	511.9	29.3
15KP18A	15KP18CA	18.0	20.0	22.1	50	5000	485.4	30.9
15KP20A	15KP20CA	20.0	22.2	24.5	20	1500	437.3	34.3
15KP22A	15KP22CA	22.0	24.4	27.0	10	500	404.3	37.1
15KP24A	15KP24CA	24.0	26.7	29.5	5	150	370.4	40.5
15KP26A	15KP26CA	26.0	28.9	31.9	5	50	340.9	44.0
15KP28A	15KP28CA	28.0	31.1	34.4	5	25	315.8	47.5
15KP30	15KP30C	30.0	33.3	40.7	5	15	280.4	53.5
15KP30A	15KP30CA	30.0	33.3	36.8	5	15	309.9	48.4
15KP33	15KP33C	33.0	36.7	44.8	5	10	247.5	60.6
15KP33A	15KP33CA	33.0	36.7	40.6	5	10	273.7	54.8
15KP36	15KP36C	36.0	40.0	48.9	5	10	233.3	64.3
15KP36A	15KP36CA	36.0	40.0	44.2	5	10	258.2	58.1
15KP40	15KP40C	40.0	44.4	54.3	5	10	210.1	71.4
15KP40A	15KP40CA	40.0	44.4	49.1	5	10	232.6	64.5
15KP43	15KP43C	43.0	47.8	58.4	5	10	195.6	76.7
15KP43A	15KP43CA	43.0	47.8	52.8	5	10	216.1	69.4
15KP45	15KP45C	45.0	50.0	61.1	5	10	186.8	80.3
15KP45A	15KP45CA	45.0	50.0	55.3	5	10	206.3	72.7
15KP48	15KP48	48.0	53.3	65.1	5	10	175.4	85.5
15KP48A	15KP48CA	48.0	53.3	58.9	5	10	193.8	77.4
15KP51	15KP51	51.0	56.7	69.3	5	10	164.7	91.1
15KP51A	15KP51CA	51.0	56.7	62.7	5	10	182.0	82.4
15KP54	15KP54C	54.0	60.0	73.3	5	10	155.8	96.3
15KP54A	15KP54CA	54.0	60.0	66.3	5	10	172.2	87.1
15KP58	15KP58C	58.0	64.4	78.7	5	10	145.6	103.0
15KP58A	15KP58CA	58.0	64.4	71.2	5	10	160.3	93.6
15KP60	15KP60C	60.0	66.7	81.5	5	10	140.2	107.0
15KP60A	15KP60CA	60.0	66.7	73.7	5	10	155.0	96.8
15KP64	15KP64C	64.0	71.1	86.9	5	10	131.6	114.0
15KP64A	15KP64CA	64.0	71.1	78.6	5	10	145.6	103.0
15KP70	15KP70C	70.0	77.8	95.1	5	10	120.0	125.0
15KP70A	15KP70CA	70.0	77.8	86.0	5	10	132.7	113.0
15KP75	15KP75C	75.0	83.3	101.8	5	10	111.9	134.0
15KP75A	15KP75CA	75.0	83.3	92.1	5	10	124.0	121.0
15KP78	15KP78C	78.0	86.7	105.9	5	10	107.9	139.0
15KP78A	15KP78CA	78.0	86.7	95.8	5	10	119.0	126.0
15KP85	15KP85C	85.0	94.4	115.4	5	10	99.3	151.0
15KP85A	15KP85CA	85.0	94.4	104.3	5	10	109.5	137.0
15KP90	15KP90C	90.0	100.0	122.2	5	10	93.8	160.0
15KP90A	15KP90CA	90.0	100.0	110.5	5	10	102.7	146.0

R-6

U.L. RECOGNIZED
FILE# E219635

Transient Voltage Suppressor (Continue)

Device Uni-directional	Device Bi-directional	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		V_R (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)
15KP100	15KP100C	100.0	111.0	135.6	5	10	83.8	179.0
15KP110	15KP110C	110.0	122.0	149.1	5	10	76.5	196.0
15KP120	15KP120C	120.0	133.0	162.5	5	10	70.1	214.0
15KP130	15KP130C	130.0	144.0	176.0	5	10	64.9	231.0
15KP150	15KP150C	150.0	167.0	204.1	5	10	56.0	268.0
15KP160	*15KP160C	160.0	178.0	217.5	5	10	52.3	287.0
15KP170	*15KP170C	170.0	189.0	231.0	5	10	49.3	304.0
15KP180	*15KP180C	180.0	200.0	244.4	5	10	46.7	321.0
15KP200	*15KP200C	200.0	222.0	271.3	5	10	42.1	356.0

NOTES:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

Mark " * " denote under development device

ESD PROTECTION DEVICE

ESD Protection Device

ESD是代表英文ElectroStatic Discharge即"靜電放電"的意思。ESD是本世紀中期以來形成的以研究靜電的產生與 衰減、靜電放電模型、靜電放電效應如電流熱（火花）效應（如靜電引起的著火與爆炸）及和電磁效應（如電磁干擾）等的學科。近年來隨著科學技術的飛速發展、 微電子技術的廣泛應用及電磁環境越來越複雜，對靜電放電的電磁場效應如電磁干擾（EMI）及電磁相容性（EMC）問題越來越重視, 靜電放電(ESD)保護需求正隨著若干關鍵技術趨勢而改變。例如高速介面會影響訊號完整性；而微縮的製程也會使下一

SLP1006P3

SOT-523

SOD-523

SOD-882

SOD-923

SOT-23

SLP0603P2

SOT-353

SOT-363

SOT-563

SLP2510P8

Surface Mount ESD Protection Device

Part Number	Peak Power Dissipation 8x20μs	Reverse standoff voltage	Max Reverse Leakage @ VR	Max Clamping Voltage @8x20μs	Peak Pulse Current 8x20μs	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	Vc	Ipp	Co	
	W	V	uA	V	A	pF	
L02ESD5V0E3	25	5	0.25	12.5	2	10	SLP1006P3
L02ESD5V0D5-4	25	5.25	1	13	2	9.5	SOT-353
L02ESD5V0D6-5	25	5	0.025	12	2.5	19	SOT-363
L02ESD5V0F6-5	25	5	0.025	12	2.5	19	SOT-563
L03ESDL5V0CC3-2	30	5	0.1	15	2	3.5	SOT-23
L03ESDL5V0CP2	30	5	0.1	15	2	3.5	SOD-923
L03ESDL5V0CQ2	30	5	0.1	15	2	3.5	SLP0603P2
L03ESDL5V0CG3-2	30	5	0.1	15	2	3.5	SOT-523
L03ESDL5V0CA2	30	5	0.1	15	2	3.5	SOD-523
L03ESDL5V0CE2	30	5	0.1	15	2	3.5	SOD-882
L04ESD5V0CP2	40	5	0.1	12.5	3.5	4.5	SOD-923
L05ESDL5V0NA-4	50	5	1	10	4.5	0.8	SLP2510P8

SOT-143

SOD-323

SOD-523

SOT-23

SOT-23-6L

SOD-882

SOD-923

SOT-323

SOT-563

SOT-23-5L

SLP5020P8

SLP2510P8

SLP1210P6

SOT-523

SOT-363

Surface Mount ESD/EMI Filter Protection Device (continued)

Part Number	Peak Power Dissipation 8x20μs	Reverse standoff voltage	Max Reverse Leakage @ VR	Max Clamping Voltage @8x20μs	Peak Pulse Current 8x20μs	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	Vc	Ipp	Co	
	W	V	uA	V	A	pF	
L05ESDL5V0D3-2	50	5	1	20	2.5	0.8	SOT-323
L05ESDL5V0F6-2	50	5	1	16	3	0.9	SOT-563
L05ESDU5V0CE2	50	5	1	12.5	4	0.6	SOD-882
*L05ESDU5V0CN8-	50	5	1	16	3	0.4	SLP5020P8
L05U3V3CN8-6	50	3.3	1	16	3	0.4	SLP5020P8
L06ESDU6V5N6-2	60	5	1	24	2.5	0.5	SLP1210P6
L06ESDU5V0CE2	60	5	1	25	2.5	0.5	SOD-882
L06ESDL5V0H4-2	60	5	1	24	2.5	1	SOT-143
*L06ESDL5V0CN8-	60	5	1	15	4	0.8	SLP5020P8
L07ESDL5V0C3-2	70	5	1	16	4.5	1	SOT-23
L09ESD3V3CP2	90	3.3	0.5	18	5	15	SOD-923
L09ESD3V3CB2	90	3.3	0.5	18	5	15	SOD-323
L09ESD3V3CA2	90	3.3	0.5	18	5	15	SOD-523
L09ESD3V3CE2	90	3.3	0.5	18	5	15	SOD-882
*L09U5V0NA-4	90	5	1	22	4	0.5	SLP2510P8
L10ESD5V0CF6-5	100	5	1	12	7	40	SOT-563
L12ESDL5V0C6-4	120	5	1	24	5	0.8	SOT23-6L
L12ESDL5V0G3-2	120	5	1	30	4	1	SOT-523
L13ESD5V0CC5-4	130	5	0.1	13	10	15	SOT23-5L
L13ESD5V0CB2	130	5	0.1	14	12	45	SOD-323
L13ESD5V0CA2	130	5	0.1	14	12	45	SOD-523
L13ESD5V0CE2	130	5	0.1	14	12	45	SOD-882
L14ESD12VP2	140	12	0.5	24	6	40	SOD-923
L14ESD24VP2	140	24	0.05	48	3	30	SOD-923
L15ESDL5V0NA-4	150	5	1	15	5	0.8	SLP2510P8
L15ESDL5V0C6-4	150	5	1	30	5	0.8	SOT23-6L
L15ESD12VE2	150	12	0.05	25	6	75	SOD-882
L15ESD24VE2	150	24	0.05	50	3	50	SOD-882

Mark " * " denote under development device


SOD-323


SOT-143


SOT23-6L


SOT-23


SOD-523


POWER56


SLP1610P4


SLP1616P6


SLP2626P10

Surface Mount ESD/EMI Filter Protection Device (continued)

Part Number	Peak Power Dissipation 8x20μs	Reverse standoff voltage	Max Reverse Leakage @ VR	Max Clamping Voltage @8x20μs	Peak Pulse Current 8x20μs	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	Vc	Ipp	Co	
	W	V	uA	V	A	pF	
L15ESDL3V3H4-2	150	3.3	1	15	10	3	SOT-143
L15ESDL5V0N6-2	150	5	1	15	5	0.4	SLP1610P4
L16ESD24VA2	160	24	0.05	55	3	35	SOD-523
L18ESD12VA2	180	12	0.05	30	6	75	SOD-523
L18ESD5V0C3-2	180	5	1	15	12	140	SOT-23
L18ESD5V0C6-4	180	5	0.7	12	15	200	SOT23-6L
L20ESDL3V3C6-4	200	3.3	0.5	8.7	12	40	SOT23-6L
*L25L5V0CB2	250	5	5	21	17	3	SOD-323
L26ESD5V0A2	260	5	1	17	15	140	SOD-523
L30ESD24VC3-2	300	24	1	43	4	60	SOT-23
L30ESD5V0C3-2	300	5	1	20	15	160	SOT-23
L30ESD5V0AC3-2	300	5	1	20	15	160	SOT-23
L30ESD12VC3-2	300	12	1	25	12	100	SOT-23
L30ESDL5V0C3-1	300	5	1	11	5	5	SOT-23
L30ESDL5V0C6-4	300	5	5	25	12	5	SOT23-6L
L30ESDL5V0C3-2	340	5	5	20	17	1.2	SOT-23
L35ESD5V0CB2	350	5	10	14.5	24	200	SOD-323
L35ESD12VCB2	350	12	1	24	15	100	SOD-323
L40ESDL5V0C6-4	400	5	5	28.5	14	5	SOT23-6L
L50ESDL12VH4-2	500	12	1	31	16	10	SOT-143
L50ESDL5V0H4-2	500	5	5	20	25	10	SOT-143
*L60L2V8K8-4	600	2.8	1	17	30	3	POWER56
L2KESD3V3MA-2	2500	3.3	1	25	100	25	SLP2626P10
*L2KE3V3K8-2	2400	3.3	1	24	100	12	POWER56

Mark " * " denote under development device

SOT-563

SOT-143

SLP3016P12

SLP4016P16

SLP2116P8

SLP2513P12

SLP3313P16

Surface Mount ESD/EMI Filter Protection Device (continued)

Part Number	Peak Power Dissipation 8x20μs	Reverse standoff voltage	Max Reverse Leakage @ VR	Resistance	Off-State Capacitance 0MHz 2.5V DC Bias	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	R	Co	Co	
	W	V	uA	Ohm	pF	pF	
LESD70VH4-2	---	70	0.5	7	24	10	SOT-143
LEF10003M8-4	----	5	0.1 @ 3V	100	20	----	SLP2116P8
LEF10001M8-4	----	5	0.5 @ 3V	100	11	20	SLP2116P8
LEF20003MC-6	---	5	0.5 @ 3V	200	24	----	SLP3016P12
LEF10001MC-6	-----	5	0.5 @ 3V	100	11	20	SLP3016P12
LEF10001MG-8	-----	5	0.5 @ 3V	100	11	20	SLP4016P16
LEF01016F6-2	----	5	5	10	----	160	SOT-563
LEF03216F6-2	-----	5	5	32	-----	160	SOT-563
LEFH1701TG-8	-----	5	1 @ 3.3V	17 nH	23.5	----	SLP3313P16
LEFH1701TC-6	-----	5	1 @ 3.3V	17 nH	23.5	----	SLP2513P12

SCHOTTKY RECTIFIERS

Schottky Rectifier(蕭特基二極體)

一種導通電壓降較低、允許高速切換的二極體，是利用蕭特基勢壘特性而產生的電子元件,蕭特基二極體的導通電壓非常低。一般的二極體在電流流過時，會產生約 0.7-1.7 伏特的電壓降，不過蕭特基二極體的電壓降只有 0.15-0.45 伏特，因此可以提昇系統的效率。蕭特基二極體是利用金屬-半導體接面作為蕭特基勢壘，以產生整流的效果，和一般二極體中由半導體-半導體接面產生的P-N接面不同。蕭特基勢壘的特性使得蕭特基二極體的導通電壓降較低，而且可以提高切換的速度。


DO-216AA


DO-222AA


DO-214AC


DO-221AC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25°C	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 1A							
MB120L	20	1	50	0.40	0.45	1	DO-216AA
MB120E	20	1	50	0.01	0.53	1	DO-216AA
MB130L	30	1	50	0.41	0.38	1	DO-216AA
MB140	40	1	40	0.50	0.55	1	DO-216AA
FB120M	20	1	50	0.20	0.46	1	DO-222AA (F1)
FB120LM	20	1	50	0.40	0.38	1	DO-222AA (F1)
FB130M	30	1	50	0.20	0.46	1	DO-222AA (F1)
FB130LM	30	1	50	0.40	0.38	1	DO-222AA (F1)
FB140MZ	40	1	30	0.50	0.50	1	DO-222AA (F1)
FB140LM	40	1	25	1.00	0.45	1	DO-222AA (F1)
FB150LM	50	1	30	0.50	0.50	1	DO-222AA (F1)
FB160LM	60	1	50	0.10	0.50	1	DO-222AA (F1)
FB1100M	100	1	40	0.01	0.77	1	DO-222AA (F1)
B120	20	1	30	0.10	0.50	1	DO-214AC (SMA)
B120L	20	1	25	1	0.41	1	DO-214AC (SMA)
B130	30	1	30	0.10	0.50	1	DO-214AC (SMA)
B130L	30	1	25	1.00	0.41	1	DO-214AC (SMA)
B140	40	1	30	0.10	0.50	1	DO-214AC (SMA)
B140Z	40	1	30	0.50	0.50	1	DO-214AC (SMA)
B140L	40	1	30	1.00	0.45	1	DO-214AC (SMA)
B150	50	1	30	0.05	0.70	1	DO-214AC (SMA)
B160	60	1	30	0.05	0.70	1	DO-214AC (SMA)
B170	70	1	30	0.02	0.79	1	DO-214AC (SMA)
B180	80	1	30	0.02	0.79	1	DO-214AC (SMA)
B190	90	1	30	0.02	0.79	1	DO-214AC (SMA)

Schottky Rectifiers


DO-41


DO-15


SMB


DO-214AC


DO-221AC


DO-221AC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} =1A							
B1100	100	1	30	0.02	0.79	1	DO-214AC (SMA)
FB130A	30	1	50	1.00	0.46	1	DO-221AC (F3)
FB140A	40	1	50	1.00	0.46	1	DO-221AC (F3)
FB140AZ	40	1	30	0.50	0.50	1	DO-221AC (F3)
FB140LA	40	1	30	1.00	0.45	1	DO-221AC (F3)
B120B	20	1	30	0.10	0.5	1	SMB
B130B	30	1	30	0.10	0.5	1	SMB
B130LB	30	1	40	1.00	0.395	1	SMB
B140B	40	1	30	0.10	0.50	1	SMB
B140HB	40	1	45	0.10	0.53	1	SMB
B150B	50	1	30	0.50	0.70	1	SMB
B160B	60	1	30	0.50	0.70	1	SMB
B170LB	70	1	50	0.50	0.75	1	SMB
B180LB	80	1	50	0.50	0.75	1	SMB
B190LB	90	1	50	0.50	0.75	1	SMB
B1100LB	100	1	50	0.50	0.75	1	SMB
SB120	20	1	40	0.10	0.50	1	DO-41
SB130	30	1	40	0.10	0.50	1	DO-41
SB140	40	1	40	0.10	0.50	1	DO-41
SB150	50	1	40	0.05	0.70	1	DO-41
SB160	60	1	40	0.05	0.70	1	DO-41
SB170	70	1	40	0.02	0.79	1	DO-41
SB180	80	1	40	0.02	0.79	1	DO-41
SB190	90	1	40	0.02	0.79	1	DO-41
SB1100	100	1	40	0.02	0.79	1	DO-41
I_{FAV} = 2A							
SB220	20	2	60	0.15	0.55	2	DO-15
SB230	30	2	60	0.15	0.55	2	DO-15
SB240	40	2	60	0.15	0.55	2	DO-15
SB250	50	2	60	0.05	0.70	2	DO-15
SB260	60	2	60	0.05	0.70	2	DO-15
SB270	70	2	60	0.01	0.79	2	DO-15
SB280	80	2	60	0.01	0.79	2	DO-15
SB290	90	2	60	0.01	0.79	2	DO-15
SB2100	100	2	60	0.01	0.79	2	DO-15
FB240A	40	2	50	0.5	0.5	2	DO-221AC (F3)
FB240LA	40	2	50	0.50	0.44	2	DO-221AC (F3)

Schottky Rectifiers

DO-222AA

DO-214AC

SMB

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 2A							
FB220M	20	2	50	0.20	0.50	2	DO-222AA (F1)
FB220LM	20	2	50	0.40	0.44	2	DO-222AA (F1)
FB230M	30	2	50	0.20	0.50	2	DO-222AA (F1)
FB230LM	30	2	50	0.40	0.44	2	DO-222AA (F1)
FB240M	40	2	50	0.20	0.50	2	DO-222AA (F1)
FB240LM	40	2	50	0.50	0.44	2	DO-222AA (F1)
FB250M	50	2	50	0.10	0.7	2	DO-222AA (F1)
FB260M	60	2	50	0.10	0.7	2	DO-222AA (F1)
FB2100M	100	2	50	0.001	0.8	2	DO-222AA (F1)
B220A	20	2	50	0.15	0.5	2	DO-214AC (SMA)
B230A	30	2	50	0.15	0.5	2	DO-214AC (SMA)
B230LHA	30	2	75	0.20	0.45	2	DO-214AC (SMA)
B240A	40	2	50	0.15	0.5	2	DO-214AC (SMA)
B240AZ	40	2	25	2.00	0.5	2	DO-214AC (SMA)
B240LA	40	2	25	2.00	0.43	2	DO-214AC (SMA)
B240LAZ	40	2	25	2.00	0.48	2	DO-214AC (SMA)
B250A	50	2	50	0.05	0.7	2	DO-214AC (SMA)
B260A	60	2	50	0.05	0.7	2	DO-214AC (SMA)
B2150A	150	2	60	0.0015	0.82	2	DO-214AC (SMA)
B2100A	100	2	50	0.02	0.79	2	DO-214AC (SMA)
B220	20	2	50	0.15	0.5	2	SMB
B230	30	2	50	0.15	0.5	2	SMB
B240	40	2	50	0.15	0.5	2	SMB
B240L	40	2	25	2.00	0.43	2	SMB
B250	50	2	50	0.05	0.7	2	SMB
B260	60	2	50	0.05	0.7	2	SMB
B270	70	2	50	0.01	0.79	2	SMB
B280	80	2	50	0.01	0.79	2	SMB
B290	90	2	50	0.01	0.79	2	SMB
B2100	100	2	50	0.007	0.79	2	SMB

Schottky Rectifiers


DO-222AA


DO-214AC


DO-221AC


SMB

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 3A							
FB330M	30	3	50	0.20	0.58	3	DO-222AA (F1)
FB340M	40	3	50	0.20	0.58	3	DO-222AA (F1)
FB340LM	40	3	75	0.40	0.47	3	DO-222AA (F1)
B320A	20	3	100	0.15	0.50	3	DO-214AC (SMA)
B330A	30	3	100	0.15	0.50	3	DO-214AC (SMA)
B340A	40	3	100	0.15	0.50	3	DO-214AC (SMA)
B340AZ	40	3	25	2.00	0.55	3	DO-214AC (SMA)
B340LA	40	3	70	1.00	0.45	3	DO-214AC (SMA)
B340HA	40	3	80	0.50	0.50	3	DO-214AC (SMA)
B340LAZ	40	3	25	2.00	0.48	3	DO-214AC (SMA)
B345A	45	3	80	0.15	0.55	3	DO-214AC (SMA)
B350A	50	3	100	0.05	0.70	3	DO-214AC (SMA)
B360A	60	3	100	0.05	0.70	3	DO-214AC (SMA)
FB320LA	20	3	50	0.50	0.40	3	DO-221AC (F3)
FB330LA	30	3	50	0.50	0.40	3	DO-221AC (F3)
FB340A	40	3	70	0.50	0.55	3	DO-221AC (F3)
FB340LAZ	40	3	70	0.50	0.48	3	DO-221AC (F3)
FB340LA	40	3	50	0.50	0.40	3	DO-221AC (F3)
B320B	20	3	100	0.15	0.50	3	SMB
B330B	30	3	100	0.15	0.50	3	SMB
B340B	40	3	100	0.15	0.50	3	SMB
B340HB	40	3	100	0.50	0.50	3	SMB
B340LB	40	3	70	1.00	0.45	3	SMB
B350B	50	3	100	0.05	0.70	3	SMB
B360B	60	3	100	0.05	0.70	3	SMB
B370B	70	3	100	0.50	0.79	3	SMB
B380B	80	3	100	0.50	0.79	3	SMB
B390B	90	3	100	0.50	0.79	3	SMB
B3100B	100	3	100	0.01	0.79	3	SMB
B3200B	200	3	80	0.20	0.90	3	SMB

Schottky Rectifiers

DO-221AA

SMC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 3A							
FB360B	60	3	100	0.05	0.70	3	DO-221AA
B320	20	3	100	0.15	0.50	3	SMC
B330	30	3	100	0.15	0.50	3	SMC
B340	40	3	100	0.15	0.50	3	SMC
B350	50	3	100	0.05	0.70	3	SMC
B360	60	3	100	0.05	0.70	3	SMC
B370	70	3	100	0.02	0.79	3	SMC
B380	80	3	100	0.02	0.79	3	SMC
B390	90	3	100	0.02	0.79	3	SMC
B3100	100	3	100	0.02	0.79	3	SMC
SB320	20	3	80	0.15	0.50	3	DO-201AD
1N5820	20	3	80	0.15	0.475	3	DO-201AD
SB330	30	3	80	0.15	0.50	3	DO-201AD
1N5821	30	3	80	0.15	0.50	3	DO-201AD
SB340	40	3	80	0.15	0.50	3	DO-201AD
1N5822	40	3	80	0.15	0.525	3	DO-201AD
SB350	50	3	80	0.05	0.70	3	DO-201AD
SB360	60	3	80	0.05	0.70	3	DO-201AD
SB370	70	3	80	0.02	0.79	3	DO-201AD
SB380	80	3	80	0.02	0.79	3	DO-201AD
SB390	90	3	80	0.02	0.79	3	DO-201AD
SB3100	100	3	80	0.02	0.79	3	DO-201AD
SB3150	150	3	150	0.01	0.95	3	DO-201AD

Schottky Rectifiers


SMC


DO-201AD


TO-220AC


ITO-220AC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 5A							
B520C	20	5	125	0.15	0.55	5	SMC
B530C	30	5	125	0.15	0.55	5	SMC
B540C	40	5	125	0.15	0.55	5	SMC
B540HC	40	5	125	0.50	0.55	5	SMC
B550C	50	5	125	0.25	0.70	5	SMC
B560C	60	5	125	0.25	0.70	5	SMC
B5100C	100	5	100	0.02	0.85	5	SMC
B5150C	150	5	125	0.008	0.92	5	SMC
SB520	20	5	150	0.15	0.55	5	DO-201AD
SB530	30	5	150	0.15	0.55	5	DO-201AD
SB540	40	5	150	0.15	0.55	5	DO-201AD
SB550	50	5	150	0.20	0.70	5	DO-201AD
SB560	60	5	150	0.10	0.70	5	DO-201AD
SB560L	60	5	150	0.10	0.55	5	DO-201AD
SB570	70	5	125	0.02	0.85	5	DO-201AD
SB580	80	5	125	0.02	0.85	5	DO-201AD
SB590	90	5	125	0.02	0.85	5	DO-201AD
SB5100	100	5	125	0.02	0.85	5	DO-201AD
SB5150	150	5	125	0.008	0.92	5	DO-201AD
SB5120	120	5	150	0.008	0.86	5	DO-201AD
SBL530	30	5	175	0.50	0.55	5	TO-220AC
SBL535	35	5	175	0.50	0.55	5	TO-220AC
SBL540	40	5	175	0.50	0.55	5	TO-220AC
SBL545	45	5	175	0.50	0.55	5	TO-220AC
SBL550	50	5	175	0.50	0.70	5	TO-220AC
SBL560	60	5	175	0.50	0.70	5	TO-220AC
SBL560L	60	5	150	0.10	0.55	5	TO-220AC
SBF530	30	5	150	0.50	0.55	5	ITO-220AC
SBF535	35	5	150	0.50	0.55	5	ITO-220AC
SBF540	40	5	150	0.50	0.55	5	ITO-220AC
SBF545	45	5	150	0.50	0.55	5	ITO-220AC

Schottky Rectifiers


SMC


DO-201AD


TO-220AC


ITO-220AC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 7.5A							
MBR730	30	7.5	150	0.10	0.84	15	TO-220AC
MBR735	35	7.5	150	0.10	0.84	15	TO-220AC
MBR740	40	7.5	150	0.10	0.84	15	TO-220AC
MBR745	45	7.5	150	0.10	0.84	15	TO-220AC
MBR750	50	7.5	150	0.50	0.75	7.5	TO-220AC
MBR760	60	7.5	150	0.50	0.75	7.5	TO-220AC
I_{FAV} = 8A							
B860C	60	8	175	0.10	0.70	8	SMC
B8150C	150	8	150	0.010	1.02	8	SMC
SB830	30	8	175	0.50	0.55	8	DO-201AD
SB840	40	8	175	0.50	0.55	8	DO-201AD
SB845	45	8	175	0.50	0.55	8	DO-201AD
SB8100	100	8	150	0.02	0.92	8	DO-201AD
SB8150	150	8	150	0.01	1.02	8	DO-201AD
SBL830	30	8	175	0.50	0.55	8	TO-220AC
SBL835	35	8	175	0.50	0.55	8	TO-220AC
SBL840	40	8	175	0.50	0.55	8	TO-220AC
SBL845	45	8	175	0.50	0.55	8	TO-220AC
SBL850	50	8	175	0.50	0.70	8	TO-220AC
SBL860	60	8	175	0.50	0.70	8	TO-220AC
MBR830	30	8	150	0.10	0.70	8	TO-220AC
MBR835	35	8	150	0.10	0.70	8	TO-220AC
MBR840	40	8	150	0.10	0.70	8	TO-220AC
MBR845	45	8	150	0.10	0.70	8	TO-220AC
MBR850	50	8	150	0.10	0.80	8	TO-220AC
MBR860	60	8	150	0.10	0.80	8	TO-220AC
MBR870	70	8	125	0.55	0.85	8	TO-220AC
MBR870L	70	8	230	0.55	0.72	8	TO-220AC
MBR880	80	8	125	0.55	0.85	8	TO-220AC
MBR880L	80	8	230	0.55	0.72	8	TO-220AC
MBR890	90	8	125	0.55	0.85	8	TO-220AC
MBR890L	90	8	230	0.55	0.72	8	TO-220AC
MBR8100	100	8	125	0.55	0.85	8	TO-220AC
MBR8100L	100	8	230	0.55	0.72	8	TO-220AC
MBRF845	45	8	150	0.10	0.70	8	ITO-220AC
MBRF8100	100	8	125	0.10	0.85	8	ITO-220AC

Schottky Rectifiers


TO-220AB


TO-220AC

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 10A							
SBL1025L	25	10	200	0.80	0.45	10	TO-220AC
SBL1030	30	10	250	1.00	0.6	10	TO-220AC
SBL1030L	30	10	200	0.80	0.45	10	TO-220AC
SBL1035	35	10	250	1.00	0.60	10	TO-220AC
SBL1040	40	10	250	1.00	0.60	10	TO-220AC
SBL1045	45	10	250	1.00	0.60	10	TO-220AC
SBL1050	50	10	250	1.00	0.75	10	TO-220AC
SBL1060	60	10	250	1.00	0.75	10	TO-220AC
MBR1030	30	10	150	0.02	0.84	20	TO-220AC
MBR1035	35	10	150	0.02	0.84	20	TO-220AC
MBR1040	40	10	150	0.02	0.84	20	TO-220AC
MBR1045	45	10	150	0.02	0.84	20	TO-220AC
MBR1050	50	10	150	0.02	0.95	20	TO-220AC
MBR1060	60	10	150	0.02	0.95	20	TO-220AC
MBR1070	70	10	150	0.10	0.85	10	TO-220AC
MBR1080	80	10	150	0.10	0.85	10	TO-220AC
MBR1090	90	10	150	0.10	0.85	10	TO-220AC
MBR10100	100	10	150	0.10	0.85	10	TO-220AC
SBL1040CTW	40	10	125	0.20	0.55	5	TO-220AB
SBL1045CTW	45	10	125	0.20	0.55	5	TO-220AB
SBL1060CTW	60	10	125	0.30	0.70	5	TO-220AB
SBL10H60CT	60	10	125	0.50	0.70	5	TO-220AB
MBR1030CT	30	10	125	0.10	0.70	5	TO-220AB
MBR1035CT	35	10	125	0.10	0.70	5	TO-220AB
MBR1040CT	40	10	125	0.10	0.70	5	TO-220AB
MBR1045CT	45	10	125	0.10	0.70	5	TO-220AB
MBR1050CT	50	10	125	0.10	0.80	5	TO-220AB
MBR1060CT	60	10	125	0.10	0.80	5	TO-220AB
MBR1070CT	70	10	120	0.01	0.85	5	TO-220AB
MBR1080CT	80	10	120	0.01	0.85	5	TO-220AB
MBR1090CT	90	10	120	0.01	0.85	5	TO-220AB
MBR10100CT	100	10	120	0.01	0.85	5	TO-220AB
MBR10100CTW	100	10	150	0.01	0.95	10	TO-220AB
MBR10125CT	125	10	120	0.008	0.92	5	TO-220AB
MBR10150CT	150	10	120	0.008	0.92	5	TO-220AB
MBR10150CTW	150	10	180	0.008	1.00	10	TO-220AB
MBR10200CT	200	10	120	0.008	0.92	5	TO-220AB

Schottky Rectifiers

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 10A							
SBL1040CK	40	10	100	0.20	0.55	5	IPAK
SBL1045CK	45	10	100	0.20	0.55	5	IPAK
SBL1060CK	60	10	100	0.20	0.75	5	IPAK
SBF1030CT	30	10	150	0.20	0.55	5	ITO-220AB
SBF1035CT	35	10	150	0.20	0.55	5	ITO-220AB
SBF1040CT	40	10	150	0.20	0.55	5	ITO-220AB
SBF1045CT	45	10	150	0.20	0.55	5	ITO-220AB
SBF1050CT	50	10	150	0.30	0.70	5	ITO-220AB
SBF1060CT	60	10	150	0.30	0.70	5	ITO-220AB
SBF20V40CTL	40	10	180	0.50	0.50	10	ITO-220AB
SBF20V60CTL	60	10	200	0.10	0.60	10	ITO-220AB
MBRF1030CT	30	10	125	0.10	0.70	5	ITO-220AB
MBRF1040CT	40	10	125	0.10	0.70	5	ITO-220AB
MBRF1045CT	45	10	125	0.10	0.70	5	ITO-220AB
MBRF1060CT	60	10	125	0.02	0.80	5	ITO-220AB
MBRF10100CT	100	10	120	0.01	0.95	10	ITO-220AB
MBRF10100CTW	100	10	150	0.01	0.95	10	ITO-220AB
MBRF10150CT	150	10	120	0.008	1	10	ITO-220AB
MBRF10200CT	200	10	120	0.008	1	10	ITO-220AB
SBF1040	40	10	250	1.00	0.60	10	ITO-220AC
SBF1060	60	10	250	1.00	0.75	10	ITO-220AC
MBRF1045	45	10	150	0.10	0.57	10	ITO-220AC
MBRF1060	60	10	150	0.10	0.65	10	ITO-220AC
MBRF10100	100	10	150	0.10	0.85	10	ITO-220AC
MBR10100CE	100	10	120	0.01	0.95	10	I2PAK
G1030P5	30	10	180	0.45	0.55	10	POWER56
G1045P5	45	10	180	0.45	0.55	10	POWER56
G10U45P5	45	10	275	0.20	0.47	10	POWER56
G1060P5	60	10	180	0.45	0.60	10	POWER56
MBR10100CD	100	10	150	0.01	0.85	5	DPAK
*G10U45F4	45	10	275	0.20	0.47	10	F4
10SQ050	50	10	250	0.05	0.55	10	R6

Mark " * " denote under development device

Schottky Rectifiers


TO-220AB


R6


Power56

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 15A							
MBR1530CT	30	15	150	0.10	0.84	15	TO-220AB
MBR1535CT	35	15	150	0.10	0.84	15	TO-220AB
MBR1540CT	40	15	150	0.10	0.84	15	TO-220AB
MBR1545CT	45	15	150	0.10	0.84	15	TO-220AB
MBR1550CT	50	15	150	1.00	0.90	15	TO-220AB
MBR1560CT	60	15	150	1.00	0.90	15	TO-220AB
15SQ045	45	15	275	1.00	0.55	15	R6
*G15U50F4	50	15	150	0.10	0.49	15	F4
*G15U50P5	50	15	150	0.10	0.49	15	POWER56

Mark " * " denote under development device

Schottky Rectifiers

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 16A							
SBL1630	30	16	275	1.00	0.57	16	TO-220AC
SBL1635	35	16	275	1.00	0.57	16	TO-220AC
SBL1640	40	16	275	1.00	0.57	16	TO-220AC
SBL1645	45	16	275	1.00	0.57	16	TO-220AC
SBL1650	50	16	275	1.00	0.75	16	TO-220AC
SBL1660	60	16	275	1.00	0.75	16	TO-220AC
MBR1630	30	16	150	0.20	0.63	16	TO-220AC
MBR1635	35	16	150	0.20	0.63	16	TO-220AC
MBR1640	40	16	150	0.20	0.63	16	TO-220AC
MBR1645	45	16	150	0.20	0.63	16	TO-220AC
MBR1650	50	16	150	1.00	0.75	16	TO-220AC
MBR1660	60	16	150	1.00	0.75	16	TO-220AC
SBL1630CT	30	16	175	0.15	0.55	8	TO-220AB
SBL1635CT	35	16	175	0.15	0.55	8	TO-220AB
SBL1640CT	40	16	175	0.15	0.55	8	TO-220AB
SBL1645CT	45	16	175	0.15	0.55	8	TO-220AB
SBL1650CT	50	16	175	0.15	0.70	8	TO-220AB
SBL1660CT	60	16	175	0.15	0.70	8	TO-220AB
MBR1670CT	70	16	125	0.10	0.85	8	TO-220AB
MBR1680CT	80	16	125	0.10	0.85	8	TO-220AB
MBR1690CT	90	16	125	0.10	0.85	8	TO-220AB
MBR16100CT	100	16	125	0.10	0.85	8	TO-220AB
SBF1630CT	30	16	175	0.50	0.55	8	ITO-220AB
SBF1635CT	35	16	175	0.50	0.55	8	ITO-220AB
SBF1640CT	40	16	175	0.50	0.55	8	ITO-220AB
SBF1645CT	45	16	175	0.50	0.55	8	ITO-220AB
SBF1650CT	50	16	175	0.10	0.70	8	ITO-220AB
SBF1660CT	60	16	175	0.10	0.70	8	ITO-220AB
MBRF16100CT	100	16	125	0.10	0.95	16	ITO-220AB
SBL1630PT	30	16	175	0.50	0.55	8	TO-3P
SBL1635PT	35	16	175	0.50	0.55	8	TO-3P
SBL1640PT	40	16	175	0.50	0.55	8	TO-3P
SBL1645PT	45	16	175	0.50	0.55	8	TO-3P
SBL1650PT	50	16	175	0.50	0.70	8	TO-3P
SBL1660PT	60	16	175	0.50	0.70	8	TO-3P
SBL16V40CG	40	16	250	0.50	0.50	8	D2PAK

Schottky Rectifiers

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 20A							
SBL2040CTW	40	20	225	0.40	0.55	10	TO-220AB
SBL2045CTW	45	20	225	0.40	0.55	10	TO-220AB
SBL2050CT	50	20	225	0.10	0.75	10	TO-220AB
SBL2060CT	60	20	225	0.10	0.75	10	TO-220AB
SBL20V60CT	60	20	200	0.10	0.6	10	TO-220AB
SBL20V100CT	100	20	180	0.10	0.78	10	TO-220AB
MBRH2045CT	45	20	150	0.01	0.84	20	TO-220AB
MBR2045CTW	45	20	150	0.02	0.65	10	TO-220AB
MBR2070CT	70	20	150	0.01	0.95	20	TO-220AB
MBR2080CT	80	20	150	0.01	0.95	20	TO-220AB
MBR2090CT	90	20	150	0.01	0.95	20	TO-220AB
MBR20100CT	100	20	150	0.01	0.95	20	TO-220AB
MBR20H100CT	100	20	250	0.005	0.88	20	TO-220AB
MBR20150CT	150	20	180	0.008	1.00	20	TO-220AB
MBR20200CT	200	20	180	0.008	1.00	20	TO-220AB
MBR20100CTW	100	20	150	0.01	0.85	10	TO-220AB
MBR20120CTW	120	20	120	0.01	0.90	10	TO-220AB
MBR20150CTW	150	20	180	0.008	1.00	20	TO-220AB
G20200CTW	200	20	120	0.15	1.60	10	TO-220AB
G2045CTW	45	20	180	0.50	0.50	10	TO-220AB
G2060CTW	60	20	200	0.50	0.55	10	TO-220AB
G20100CTW	100	20	200	0.15	0.71	10	TO-220AB
G20120CTW	120	20	200	0.15	0.87	10	TO-220AB
*G20150CTW	150	20	120	0.15	1.20	10	TO-220AB
SBF2030CT	30	20	225	0.40	0.55	10	ITO-220AB
SBF2035CT	35	20	225	0.40	0.55	10	ITO-220AB
SBF2040CT	40	20	225	0.40	0.55	10	ITO-220AB
SBF2045CT	45	20	225	0.40	0.55	10	ITO-220AB
SBF2050CT	50	20	225	0.10	0.75	10	ITO-220AB
SBF2060CT	60	20	225	0.10	0.75	10	ITO-220AB
MBRF2030CT	30	20	150	0.02	0.84	20	ITO-220AB
MBRF2040CT	40	20	150	0.02	0.84	20	ITO-220AB
MBRF2045CT	45	20	150	0.02	0.84	20	ITO-220AB
MBRF2060CT	60	20	150	0.02	0.95	20	ITO-220AB
MBRF2070CT	70	20	150	0.01	0.95	20	ITO-220AB
MBRF2080CT	80	20	150	0.01	0.95	20	ITO-220AB

Mark " * " denote under development device

Schottky Rectifiers

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 20A							
MBRF2090CT	90	20	150	0.10	0.95	20	ITO-220AB
MBRF20100CT	100	20	150	0.01	0.95	20	ITO-220AB
MBRF20150CT	150	20	180	0.008	1.00	20	ITO-220AB
MBRF20200CT	200	20	180	0.008	1.00	20	ITO-220AB
MBRF20100CTW	100	20	150	0.010	0.85	20	ITO-220AB
MBRF20120CTW	120	20	120	0.70	0.90	10	ITO-220AB
G2045CTFW	45	20	180	0.50	0.50	10	ITO-220AB
*G2060CTFW	60	20	200	0.50	0.55	10	ITO-220AB
*G20100CTFW	100	20	200	0.15	0.71	10	ITO-220AB
*G20120CTFW	120	20	200	0.15	0.87	10	ITO-220AB
*G20150CTFW	150	20	120	0.15	1.20	10	ITO-220AB
SBL2030PT	30	20	250	0.50	0.55	10	TO-3P
SBL2035PT	35	20	250	0.50	0.55	10	TO-3P
SBL2040PT	40	20	250	0.50	0.55	10	TO-3P
SBL2045PT	45	20	250	0.50	0.55	10	TO-3P
SBL2050PT	50	20	250	0.50	0.75	10	TO-3P
SBL2060PT	60	20	250	0.50	0.75	10	TO-3P
MBR20100CE	100	20	150	0.80	0.79	10	I2PAK
MBR20120CE	120	20	120	0.70	0.90	10	I2PAK
20SQ040	40	20	275	1.00	0.55	20	R6
20SQ045	45	20	275	1.00	0.55	20	R6
20SQ045CG	45	20	275	1.00	0.55	20	D2PAK
SBL20V60CG	60	20	200	0.10	0.60	10	D2PAK
MBR20100CG	100	20	150	0.01	0.85	10	D2PAK
I_{FAV} = 25A							
MBR2530CT	30	25	150	0.20	0.82	30	TO-220AB

Mark " * " denote under development device

Schottky Rectifiers


TO-220AB


TO-3P


ITO-220AB


I2PAK

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 30A							
SBL3030CT	30	30	250	0.50	0.55	15	TO-220AB
SBL3040CT	40	30	250	0.50	0.55	15	TO-220AB
SBL3045CT	45	30	250	0.50	0.55	15	TO-220AB
SBL3050CT	50	30	250	1.00	0.70	15	TO-220AB
G3030CTW	30	30	280	1.50	0.45	15	TO-220AB
G3045CTW	45	30	250	0.50	0.50	15	TO-220AB
G3060CTW	60	30	250	0.50	0.60	15	TO-220AB
SBL3060CT	60	30	250	1.00	0.70	15	TO-220AB
SBL30V100CT	100	30	250	0.20	0.79	15	TO-220AB
MBR2535CT	35	30	150	0.20	0.82	30	TO-220AB
MBR2540CT	40	30	150	0.20	0.82	30	TO-220AB
MBR2545CT	45	30	150	1.00	0.75	15	TO-220AB
MBRH3045CT	45	30	200	0.01	0.7	15	TO-220AB
MBR3045CTW	45	30	200	0.02	0.70	15	TO-220AB
MBR2550CT	50	30	150	1.00	0.65	15	TO-220AB
MBR2560CT	60	30	150	1.00	0.75	15	TO-220AB
MBR30100CT	100	30	250	0.10	0.8	15	TO-220AB
MBR30H100CT	100	30	250	0.005	0.8	15	TO-220AB
MBRF30100CT	100	30	250	0.10	0.80	15	ITO-220AB
SBL3030PT	30	30	275	0.50	0.55	15	TO-3P
SBL3035PT	35	30	275	0.50	0.55	15	TO-3P
SBL3040PT	40	30	275	0.50	0.55	15	TO-3P
SBL3045PT	45	30	275	0.50	0.55	15	TO-3P
SBL3050PT	50	30	275	0.20	0.70	15	TO-3P
SBL3060PT	60	30	275	0.20	0.70	15	TO-3P
MBR3030PT	30	30	200	0.02	0.76	30	TO-3P
MBR3035PT	35	30	200	0.02	0.76	30	TO-3P
MBR3040PT	40	30	200	0.02	0.76	30	TO-3P
MBR3045PT	45	30	200	0.02	0.76	30	TO-3P
MBR3050PT	50	30	200	5.00	0.80	30	TO-3P
MBR3060PT	60	30	200	5.00	0.80	30	TO-3P
MBR30100PT	100	30	250	0.10	0.93	30	TO-3P
MBR30100CE	100	30	160	0.50	0.80	15	I2PAK
MBR30120CE	120	30	150	0.80	0.97	15	I2PAK

Schottky Rectifiers

Part Number	Electrical Characteristics						Package
	V_{RRM}	I_{FAV}	I_{FSM} (8.3ms)	IR at VR 25℃	V_{Fmax} at IF 25°C		
	V	A	A	mA	V	A	
I_{FAV} = 40A							
SBL40V100CT	100	40	280	0.20	0.84	20	TO-220AB
SBL4030PT	30	40	375	0.50	0.58	20	TO-3P
SBL4035PT	35	40	375	0.50	0.58	20	TO-3P
SBL4040PT	40	40	375	0.50	0.58	20	TO-3P
SBL4045PT	45	40	375	0.50	0.58	20	TO-3P
SBL4050PT	50	40	375	0.20	0.70	20	TO-3P
SBL4060PT	60	40	375	0.20	0.70	20	TO-3P
MBR4030PT	30	40	400	0.10	0.70	20	TO-3P
MBR4035PT	35	40	400	0.10	0.70	20	TO-3P
MBR4040PT	40	40	400	0.10	0.70	20	TO-3P
MBR4045PT	45	40	400	0.10	0.70	20	TO-3P
MBR4050PT	50	40	400	0.10	0.80	20	TO-3P
MBR4060PT	60	40	400	0.10	0.8	20	TO-3P
I_{FAV} = 60A							
SBL6030PT	30	60	450	10.00	0.55	30	TO-3P
SBL6040PT	40	60	450	10.00	0.55	30	TO-3P
SBL6045PT	45	60	450	10.00	0.55	30	TO-3P
SBL6050PT	50	60	450	10.00	0.70	30	TO-3P
SBL6060PT	60	60	450	10.00	0.70	30	TO-3P
MBR6030PT	30	60	450	1.00	0.62	30	TO-3P
MBR6035PT	35	60	450	1.00	0.62	30	TO-3P
MBR6040PT	40	60	450	1.00	0.62	30	TO-3P
MBR6045PT	45	60	450	1.00	0.62	30	TO-3P
MBR6050PT	50	60	450	1.00	0.62	30	TO-3P
MBR6060PT	60	60	450	1.00	0.62	30	TO-3P

SUPER FAST & ULTRA FAST RECTIFIERS

Super Fast & Ultra Fast Recovery Rectifiers
(超快速整流器二極體 & 高效整流器二極體)

整流二極管因單邊導通特性，所以被用在把交流電轉為直流電的線路上。當整流二極管順向電流停止時，將會產生一短暫時間的逆向電流，從順向電流停止到逆向電流降為零的這段時間稱為逆向回覆時間,依逆向回覆時間 高效整流器二極體大約50~100 ns、超快速整流器二極體大約50ns 以下。 高效整流器二極體&超快速整流器二極體提供降低功耗和最小的反向恢復特性。

DO-221AC

SMA

SMB

SMC

Part Number	Electrical Characteristics								Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Surface Mount Rectifiers (Glass Passivated)									
FU1AA	50	1.0	30	5	100 1)	1.1	1	50	DO-221AC
FU1BA	100	1.0	30	5	100 1)	1.1	1	50	DO-221AC
FG1DA	200	1.0	30	5	100 1)	1.1	1	50	DO-221AC
FG1GA	400	1.0	30	5	100 1)	1.3	1	50	DO-221AC
FG1JA	600	1.0	30	5	100 1)	1.7	1	75	DO-221AC
FG1KA	800	1.0	30	5	100 1)	1.7	1	75	DO-221AC
FG1MA	1000	1.0	30	5	100 1)	1.7	1	75	DO-221AC
US1D	200	1.0	30	5	100	1.0	1	50	SMA
US1G	400	1.0	30	5	100	1.3	1	50	SMA
US1J	600	1.0	30	5	100	1.7	1	75	SMA
US1K	800	1.0	30	5	100	1.7	1	75	SMA
US1M	1000	1.0	30	5	100	1.7	1	75	SMA
ES1D	200	1.0	30	5	200 1)	0.92	1	25	SMA
ES1G	400	1.0	30	5	200 1)	1.25	1	25	SMA
ES1J	600	1.0	30	5	200 1)	1.3	1	35	SMA
ES1DB	200	1.0	30	5	200 1)	0.92	1	25	SMB
ES1GB	400	1.0	30	5	200 1)	1.25	1	25	SMB
ES1JB	600	1.0	30	5	200 1)	1.3	1	35	SMB
US2A	50	2.0	50	5	100 1)	1.0	2	50	SMB
US2B	100	2.0	50	5	100 1)	1.0	2	50	SMB
US2D	200	2.0	50	5	100 1)	1.0	2	50	SMB
US2G	400	2.0	50	5	100 1)	1.3	2	50	SMB
US2J	600	2.0	50	5	100 1)	1.7	2	75	SMB
US2K	800	2.0	50	5	100 1)	1.7	2	75	SMB
US2M	1000	2.0	50	5	100 1)	1.7	2	75	SMB
ES2D	200	2.0	50	5	350 1)	0.92	2	25	SMB
ES2G	400	2.0	50	5	350 1)	1.25	2	25	SMB
ES2J	600	2.0	50	5	350 1)	1.3	2	35	SMB
ES2DA	200	2.0	50	5	350 1)	0.92	2	25	SMA
ES2GA	400	2.0	50	5	350 1)	1.25	2	25	SMA
ES2JA	600	2.0	50	5	351 1)	1.3	2	35	SMA

1) Tj=125 ℃ 2) Tj=150℃

SMB

SMC

Super-Fast & Ultra-Fast Recovery Rectifiers

Part Number	Electrical Characteristics								Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Surface Mount Rectifiers (Glass Passivated)									
ES3D	200	3.0	100	10	500 1)	0.92	3	25	SMC
ES3G	400	3.0	100	10	500 1)	1.25	3	25	SMC
ES3J	600	3.0	100	10	500 1)	1.3	3	35	SMC
ES3DB	200	3.0	100	10	500 1)	0.92	3	25	SMB
ES3GB	400	3.0	100	10	500 1)	1.25	3	25	SMB
ES3JB	600	3.0	100	10	500 1)	1.3	3	35	SMB
MURS120	200	1.0	40	2	50 2)	0.875	1	25	SMB
MURS140	400	1.0	35	5	150 2)	1.25	1	50	SMB
MURS160	600	1.0	35	5	150 2)	1.25	1	50	SMB
MURS360B	600	3.0	100	3	150 2)	1.25	3	50	SMB
MURS320	200	3.0	75	5	100 2)	0.875	3	25	SMC
MURS360	600	3.0	100	3	150 2)	1.25	3	50	SMC
MURS460C	600	4.0	110	3	250 2)	1.25	4	50	SMC

1) Tj=125 ℃ 2) Tj=150℃

T-1

DO-41

DO-15

Super-Fast & Ultra-Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Leaded Rectifiers - Open Junction									
UF1003	200	1.0	30	5	100	1	1	50	DO-41
UF1004	400	1.0	30	5	100	1.3	1	50	DO-41
UF1005	600	1.0	30	5	100	1.7	1	75	DO-41
UF1006	800	1.0	30	5	100	1.7	1	75	DO-41
UF1007	1000	1.0	30	5	100	1.7	1	75	DO-41
UF1503S	200	1.5	50	5	100	1	1.5	50	DO-41
UF1504S	400	1.5	50	5	100	1.3	1.5	50	DO-41
UF1505S	600	1.5	50	5	100	1.7	1.5	75	DO-41
UF1506S	800	1.5	50	5	100	1.7	1.5	75	DO-41
UF1507S	1000	1.5	50	5	100	1.7	1.5	75	DO-41
UF2003	200	2.0	60	5	100	1	2	50	DO-15
UF2004	400	2.0	60	5	100	1.3	2	50	DO-15
UF3003	200	3.0	150	5	100	1	3	50	DO-201AD
UF3004	400	3.0	150	5	100	1.3	3	50	DO-201AD
Leaded Rectifiers - Glass Passivated									
SD3G	200	1.0	30	5	100	0.95	1.0	35	T-1
SD4G	400	1.0	30	5	100	1.25	1.0	40	T-1
UD3G	200	1.0	30	5	100	1.0	1.0	50	T-1
UD4G	400	1.0	30	5	100	1.3	1.0	50	T-1
UD5G	600	1.0	30	5	100	1.7	1.0	75	T-1
UD6G	800	1.0	30	5	100	1.7	1.0	75	T-1
UD7G	1000	1.0	30	5	100	1.7	1.0	75	T-1

1) Tj=125 ℃ 2) Tj=150℃

DO-41

DO-15

DO-201

Super-Fast & Ultra-Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
UG1003	200	1.0	30	5	100	1	1	50	DO-41
UG1004	400	1.0	30	5	100	1.3	1	50	DO-41
UG1005	600	1.0	30	5	100	1.7	1	75	DO-41
UG1006	800	1.0	30	5	100	1.7	1	75	DO-41
UG1007	1000	1.0	30	5	100	1.7	1	75	DO-41
SF10DG	200	1.0	30	5	100	0.95	1	35	DO-41
SF10GG	400	1.0	30	5	100	1.25	1	40	DO-41
SF10JG	600	1.0	30	5	100	1.3	1	50	DO-41
MUR120	200	1.0	35	2	50 2)	0.875	1	25	DO-41
MUR140	400	1.0	35	5	150 2)	1.25	1	50	DO-41
MUR160	600	1.0	35	5	150 2)	1.25	1	50	DO-41
UG2003	200	2.0	60	5	100	1	2	50	DO-15
UG2004	400	2.0	60	5	100	1.3	2	50	DO-15
UG2005	600	2.0	60	5	100	1.7	2	75	DO-15
UG2006	800	2.0	60	5	100	1.7	2	75	DO-15
UG2007	1000	2.0	60	5	100	1.7	2	75	DO-15
SF20DG	200	2.0	60	5	100	0.95	2	35	DO-15
SF20GG	400	2.0	60	5	100	1.25	2	40	DO-15
SF20JG	600	2.0	60	5	100	1.3	2	50	DO-15
UG5402	200	3.0	125	5	100	1.0	3.0	50	DO-201

1) Tj=125 ℃ 2) Tj=150℃

DO-201AD

TO-220AC

ITO-220AC

Super-Fast & Ultra-Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
UG3003	200	3.0	125	5	100	1.0	3	50	DO-201AD
UG3004	400	3.0	125	5	100	1.3	3	50	DO-201AD
UG3005	600	3.0	125	5	100	1.7	3	75	DO-201AD
UG3006	800	3.0	125	5	100	1.7	3	75	DO-201AD
UG3007	1000	3.0	125	5	100	1.7	3	75	DO-201AD
SF30DG	200	3.0	125	5	100	0.95	3	35	DO-201AD
SF30GG	400	3.0	125	5	100	1.25	3	40	DO-201AD
SF30JG	600	3.0	125	5	100	1.3	3	50	DO-201AD
SF40DG	200	4.0	150	5	100	0.95	4	35	DO-201AD
SF40GG	400	4.0	150	5	100	1.25	4	40	DO-201AD
SF40JG	600	4.0	150	5	100	1.3	4	50	DO-201AD
MUR460	600	4.0	110	10	250 2)	1.28	4	50	DO-201AD
SF50DG	200	5.0	150	5	300	0.95	5	35	DO-201AD
SF50GG	400	5.0	150	5	300	1.25	5	40	DO-201AD
SF50JG	600	5.0	150	5	300	1.3	5	50	DO-201AD
STPR506D	600	5.0	60	50	2000 1)	1.75	5	25	TO-220AC
STPR520D	200	5.0	55	10	500 1)	1.1	5	30	TO-220AC
STPR540D	400	5.0	55	10	500 1)	1.3	5	35	TO-220AC
STPR560D	600	5.0	55	10	500 1)	1.5	5	50	TO-220AC
STPF520D	200	5.0	55	10	500 1)	1.1	5	30	ITO-220AC
STPR620D	200	6.0	60	10	500 1)	1.1	6	30	TO-220AC
STPR640D	400	6.0	60	10	500 1)	1.3	6	35	TO-220AC
STPR660D	600	6.0	60	10	500 1)	1.5	6	50	TO-220AC
LTTH806SD	600	8.0	60	15	200 1)	3.4	8	18	TO-220AC
LTTH806SDF	600	8.0	60	15	200 1)	3.4	8	18	ITO-220AC
LTTH806L	600	8.0	120	8	200 2)	1.30	8	70	TO-220AC
LTTH806LF	600	8.0	120	8	200 2)	1.30	8	70	ITO-220AC
STPR820D	200	8.0	90	10	1000 1)	1.1	8	30	TO-220AC
STPR840D	400	8.0	90	10	1000 1)	1.3	8	35	TO-220AC
STPR860D	600	8.0	90	10	1000 1)	1.5	8	50	TO-220AC
STPF820D	200	8.0	90	10	500	1.1	8	30	ITO-220AC
STPF860D	600	8	90	10	1000 1)	1.5	8	50	ITO-220AC
STPR1020D	200	10.0	125	10	1000 1)	1.1	10	30	TO-220AC
STPR1040D	400	10.0	125	10	1000 1)	1.3	10	35	TO-220AC
STPR1060D	600	10.0	125	10	1000 1)	1.5	10	50	TO-220AC

1) Tj=125 ℃ 2) Tj=150 ℃


TO-220AC


TO-220AB


ITO-220AC


ITO-220AB

Super-Fast & Ultra-Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
LTTH806SDFW	600	8.0	70	15	200 1)	3.4	8	18	ITO-220AC
LTTH806SDW	600	8.0	70	15	200 1)	3.4	8	18	TO-220AC
LTTH806RW	600	8.0	80	30	400 1)	2.9	8	25	TO-220AC
LTTH806RFW	600	8.0	80	30	400 1)	2.9	8	25	ITO-220AC
STPF1020D	200	10.0	125	10	500	1.1	10	30	ITO-220AC
STPR1020CTW	200	10.0	80	10	250	1.25	10	30	TO-220AB
STPR1040CTW	400	10.0	80	10	250	1.50	10	35	TO-220AB
STPR1020CT	200	10.0	55	10	250	1.25	10	30	TO-220AB
STPR1040CT	400	10.0	55	10	250	1.50	10	35	TO-220AB
STPR1060CT	600	10.0	55	10	250	1.70	10	50	TO-220AB
STPF1020CT	200	10.0	55	10	250	1.25	10	30	ITO-220AB
STPF1060CT	600	10.0	130	10	250	1.70	10	50	ITO-220AB
STPR1220CTW	200	12.0	90	10	250	1.25	12	30	TO-220AB
STPR1240CTW	400	12.0	90	10	250	1.50	12	35	TO-220AB
STPR1220CT	200	12.0	60	10	250	1.25	12	30	TO-220AB
STPR1240CT	400	12.0	60	10	250	1.50	12	35	TO-220AB
STPR1260CT	600	12.0	60	10	250	1.70	12	50	TO-220AB
LTTH1206D	600	12.0	120	45	600 1)	2.90	12	25	TO-220AC
LTTH1206DF	600	12.0	120	45	600 1)	2.90	12	25	ITO-220AC
LTTH1506D	600	15.0	120	60	800 1)	2.90	15	30	TO-220AC
LTTH1506DF	600	15.0	120	60	800 1)	2.90	15	30	ITO-220AC
STPR1620CTW	200	16.0	90	10	500	1.25	16	30	TO-220AB
STPR1620CT	200	16.0	90	10	500	1.25	16	30	TO-220AB
STPR1640CT	400	16.0	90	10	500	1.50	16	35	TO-220AB
STPR1660CT	600	16.0	90	10	500	1.70	16	50	TO-220AB
STPF1620CT	200	16.0	90	10	500	1.25	16	30	ITO-220AB
STPF1660CT	600	16.0	90	10	500	1.70	16	50	ITO-220AB
STPR2020CTW	200	20.0	125	10	500	1.25	20	30	TO-220AB
STPR2020CT	200	20.0	125	10	500	1.25	20	30	TO-220AB
STPR2040CT	400	20.0	125	10	500	1.50	20	35	TO-220AB
STPR2060CT	600	20.0	125	10	500	1.70	20	50	TO-220AB
STPF2020CT	200	20.0	125	10	500 1)	1.25	20	30	ITO-220AB

1) Tj=125 ℃ 2) Tj=150℃

BRIDGE RECTIFIERS

Bridge Rectifiers

橋式整流可以把完整的輸入波形轉成同一極性來輸出。由於充份利用到原交流波形的正、負兩部份，轉成直流, 使用四個二極體做全波整流, 令峰值電壓為 Vm ，未做濾波時的平均 Vdc=0.636Vm，頻率為原來 AC 頻率的 2 倍，每個二極體所承受的逆向峰值電壓(PIV, Peak Inverse Voltage)值是Vm. 這四個二極體合稱為橋式整流器.

MSB

TT

TD

HDDF

DF-S

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Surface Mount Rectifiers (Glass Passivated)								
*MSB05M	1000	0.5	20 (25"C)	5	500 1)	1.02	0.5	MSB
*MSB08M	1000	0.8	30 (25"C)	5	500 1)	1.02	0.8	MSB
*MSB10M	1000	1.0	35 (25"C)	5	500 1)	1.02	0.8	MSB
*MSB12M	1000	1.2	45 (25"C)	5	500 1)	1.02	0.8	MSB
*MSK140	40	1.0	25	1000	100000	0.43	1	MSB
HD05JN	600	0.5	20 (25"C)	2	200 1)	1.0	0.5	HDDF
HD05K	800	0.5	20 (25"C)	5	500 1)	1.0	0.5	HDDF
HD05M	1000	0.5	20 (25"C)	5	500 1)	1.0	0.5	HDDF
HD06	600	0.8	30	5	500 1)	1.0	0.4	HDDF
HD08	800	0.8	30	5	500 1)	1.0	0.4	HDDF
HD10	1000	0.8	30	5	500 1)	1.0	0.4	HDDF
TD05K	800	0.5	20 (25"C)	10	150 1)	0.95	0.25	TD
TD05M	1000	0.5	20 (25"C)	10	150 1)	0.95	0.25	TD
TD10JN	600	1.0	30 (25"C)	2	150 1)	0.95	0.5	TD
TD10KN	800	1.0	30 (25"C)	2	150 1)	0.95	0.5	TD
TD10M	1000	1.0	30 (25"C)	10	150 1)	0.95	0.5	TD
DF06S	600	1.0	50	10	500 1)	1.1	1	DF-S
DF08S	800	1.0	50	10	500 1)	1.1	1	DF-S
DF10S	1000	1.0	50	10	500 1)	1.1	1	DF-S
DF06SH	600	1.0	60	10	500 1)	1.1	1	DF-S
DF08SH	800	1.0	60	10	500 1)	1.1	1	DF-S
DF10SH	1000	1.0	60	10	500 1)	1.1	1	DF-S
DF1506S	600	1.5	50	10	500 1)	1.1	1.5	DF-S
DF1508S	800	1.5	50	10	500 1)	1.1	1.5	DF-S
DF1510S	1000	1.5	50	10	500 1)	1.1	1.5	DF-S
DF1512S	1200	1.5	50	10	500 1)	1.1	1.5	DF-S
TT206	600	2.0	60 (25"C)	5	500 1)	1.1	2	TT
TT208	800	2.0	60 (25"C)	5	500 1)	1.1	2	TT
TT210	1000	2.0	60 (25"C)	5	500 1)	1.1	2	TT

Mark " * " denote under development device

1) Tj=125 ℃


DF-M


KBP


GBP


GBL

Bridge Rectifiers (continued)

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Leaded Rectifiers - Glass Passivated								
DF06M	600	1.0	50	10	500 1)	1.1	1	DFM
DF08M	800	1.0	50	10	500 1)	1.1	1	DFM
DF10M	1000	1.0	50	10	500 1)	1.1	1	DFM
DF06MH	600	1.0	60	10	500 1)	1.1	1	DFM
DF08MH	800	1.0	60	10	500 1)	1.1	1	DFM
DF10MH	1000	1.0	60	10	500 1)	1.1	1	DFM
DF1506M	600	1.5	50	10	500 1)	1.1	1.5	DFM
DF1508M	800	1.5	50	10	500 1)	1.1	1.5	DFM
DF1510M	1000	1.5	50	10	500 1)	1.1	1.5	DFM
KBP06G	600	1.5	40	5	500 1)	1.1	1.5	KBP
KBP08G	800	1.5	40	5	500 1)	1.1	1.5	KBP
KBP10G	1000	1.5	40	5	500 1)	1.1	1.5	KBP
KBP206G	600	2.0	65	5	500 1)	1.1	2	KBP
KBP208G	800	2.0	65	5	500 1)	1.1	2	KBP
KBP210G	1000	2.0	65	5	500 1)	1.1	2	KBP
KBP306G	600	3.0	80	5	500 1)	1.1	3	KBP
KBP308G	800	3.0	80	5	500 1)	1.1	3	KBP
KBP310G	1000	3.0	80	5	500 1)	1.1	3	KBP
KBP406G	600	4.0	110	5	500 1)	1.1	4	KBP
KBP408G	800	4.0	110	5	500 1)	1.1	4	KBP
KBP410G	1000	4.0	110	5	500 1)	1.1	4	KBP
GBL206	600	2.0	120	5	500 1)	0.95	1	GBL
GBL208	800	2.0	120	5	500 1)	0.95	1	GBL
GBL210	1000	2.0	120	5	500 1)	0.95	1	GBL
GBL406	600	4.0	135	5	500 1)	1.0	2	GBL
GBL408	800	4.0	135	5	500 1)	1.0	2	GBL
GBL410	1000	4.0	135	5	500 1)	1.0	2	GBL
GBP206	600	2.0	65	5	500 1)	1.05	1	GBP
GBP208	800	2.0	65	5	500 1)	1.05	1	GBP
GBP210	1000	2.0	65	5	500 1)	1.05	1	GBP
GBP306	600	3.0	72	5	500 1)	1.05	1.5	GBP
GBP308	800	3.0	72	5	500 1)	1.05	1.5	GBP
GBP310	1000	3.0	72	5	500 1)	1.05	1.5	GBP
GBP406	600	4.0	120	5	500 1)	1.0	2	GBP
GBP408	800	4.0	120	5	500 1)	1.0	2	GBP
GBP410	1000	4.0	120	5	500 1)	1.0	2	GBP

1) Tj=125 ℃




GBU **GBP** **GBJ** **KBJ**

Bridge Rectifiers

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Leaded Rectifiers - Glass Passivated								
*GBP406N	600	4.0	120	1	100 1)	1.0	2	GBP
*GBP408N	800	4.0	120	1	100 1)	1.0	2	GBP
*GBP808N	800	8.0	165	1	100 1)	1.05	4	GBP
GBU406	600	4.0	150	5	500 1)	1.0	2	GBU
GBU408	800	4.0	150	5	500 1)	1.0	2	GBU
GBU410	1000	4.0	150	5	500 1)	1.0	2	GBU
GBU606	600	6.0	175	5	500 1)	1.0	3	GBU
GBU608	800	6.0	175	5	500 1)	1.0	3	GBU
GBU610	1000	6.0	175	5	500 1)	1.0	3	GBU
GBU806	600	8.0	200	5	500 1)	1.0	4	GBU
GBU808	800	8.0	200	5	500 1)	1.0	4	GBU
GBU810	1000	8.0	200	5	500 1)	1.0	4	GBU
GBU1006	600	10	220	5	500 1)	1.0	5	GBU
GBU1008	800	10	220	5	500 1)	1.0	5	GBU
GBU1010	1000	10	220	5	500 1)	1.0	5	GBU
*GBU10V06	600	10	250	5	-	0.92	5	GBU
*GBU10V08	800	10	250	5	-	0.92	5	GBU
GBU1506	600	15	220	5	500 1)	1.1	7.5	GBU
GBU1508	800	15	220	5	500 1)	1.1	7.5	GBU
GBU1510	1000	15	220	5	500 1)	1.1	7.5	GBU
*GBU15L06	600	15	170	10	-	0.86	7.5	GBU
KBJ406G	600	4.0	120	5	500 1)	1.0	2	KBJ
KBJ408G	800	4.0	120	5	500 1)	1.0	2	KBJ
KBJ410G	1000	4.0	120	5	500 1)	1.0	2	KBJ
KBJ606G	600	6.0	170	5	500 1)	1.0	3	KBJ
KBJ608G	800	6.0	170	5	500 1)	1.0	3	KBJ
KBJ610G	1000	6.0	170	5	500 1)	1.0	3	KBJ
KBJ1006G	600	10	170	5	500 1)	1.1	5	KBJ
KBJ1008G	800	10	170	5	500 1)	1.1	5	KBJ
KBJ1010G	1000	10	170	5	500 1)	1.1	5	KBJ
KBJ2006G	600	20	200	5	500 1)	1.10	10	KBJ
KBJ2008G	800	20	200	5	500 1)	1.10	10	KBJ
GBJ606	600	6.0	170	5	500 1)	1.0	3	GBJ
GBJ608	800	6.0	170	5	500 1)	1.0	3	GBJ
GBJ610	1000	6.0	170	5	500 1)	1.0	3	GBJ
*GBJ25L06	600	25	320	10	-	0.87	12.5	GBJ

Mark " * " denote under development device

1) Tj=125 ℃

GBJ

Bridge Rectifiers (continued)

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
GBJ806	600	8.0	170	5	500 1)	1.0	4	GBJ
GBJ808	800	8.0	170	5	500 1)	1.0	4	GBJ
GBJ810	1000	8.0	170	5	500 1)	1.0	4	GBJ
GBJ1006	600	10	170	10	500 1)	1.05	5	GBJ
GBJ1008	800	10	170	10	500 1)	1.05	5	GBJ
GBJ1010	1000	10	170	10	500 1)	1.05	5	GBJ
*GBJ15L06	600	15	200	10	-	0.86	7.5	GBJ
GBJ1506	600	15	240	10	500 1)	1.05	7.5	GBJ
GBJ1508	800	15	240	10	500 1)	1.05	7.5	GBJ
GBJ1510	1000	15	240	10	500 1)	1.05	7.5	GBJ
GBJ2006	600	20	240	10	500 1)	1.05	10	GBJ
GBJ2008	800	20	240	10	500 1)	1.05	10	GBJ
GBJ2010	1000	20	240	10	500 1)	1.05	10	GBJ
GBJ2506	600	25	350	10	500 1)	1.05	12.5	GBJ
GBJ2508	800	25	350	10	500 1)	1.05	12.5	GBJ
GBJ2510	1000	25	350	10	500 1)	1.05	12.5	GBJ

Mark " * " denote under development device

1) Tj=125 ℃

FAST RECOVERY RECTIFIERS

Fast Recovery Rectifiers(快速恢復整流器)

整流二極管因單邊導通特性，所以被用在把交流電轉為直流電的線路上. 當整流二極管順向電流停止時，將會產生一短暫時間的逆向電流，從順向電流停止到逆向電流降為零的這段時間稱為逆向回覆時間,逆向回覆時間 快速恢復整流器大約100ns 以上。


DO-222AA


DO-221AC


SMA


SMB


SMC

Part Number	Electrical Characteristics								Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Surface Mount Rectifiers (Glass Passivated)									
FR1AA	50	1.0	30	5	100 1)	1.3	1	150	DO-221AC
FR1BA	100	1.0	30	5	100 1)	1.3	1	150	DO-221AC
FR1DA	200	1.0	30	5	100 1)	1.3	1	150	DO-221AC
FR1GA	400	1.0	30	5	100 1)	1.3	1	150	DO-221AC
FR1JA	600	1.0	30	5	100 1)	1.3	1	250	DO-221AC
FR1KA	800	1.0	30	5	100 1)	1.3	1	500	DO-221AC
FR1MA	1000	1.0	30	5	100 1)	1.3	1	500	DO-221AC
RS1G	400	1.0	30	5	200 1)	1.3	1	150	SMA
RS1J	600	1.0	30	5	200 1)	1.3	1	250	SMA
RS1K	800	1.0	30	5	200 1)	1.3	1	500	SMA
RS1M	1000	1.0	30	5	200 1)	1.3	1	500	SMA
FRS1MM	1000	1.0	30	5	200 1)	1.3	1	500	DO-222AA
RS1GB	400	1.0	30	5	200 1)	1.3	1	150	SMB
RS1JB	600	1.0	30	5	200 1)	1.3	1	250	SMB
RS1KB	800	1.0	30	5	200 1)	1.3	1	500	SMB
RS1MB	1000	1.0	30	5	200 1)	1.3	1	500	SMB
RS2G	400	1.5	50	5	200 1)	1.3	1.5	150	SMB
RS2J	600	1.5	50	5	200 1)	1.3	1.5	250	SMB
RS2K	800	1.5	50	5	200 1)	1.3	1.5	500	SMB
RS2M	1000	1.5	50	5	200 1)	1.3	1.5	500	SMB
RS2GA	400	1.5	50	5	200 1)	1.3	1.5	150	SMA
RS2JA	600	1.5	50	5	200 1)	1.3	1.5	250	SMA
RS2KA	800	1.5	50	5	200 1)	1.3	1.5	500	SMA
RS2MA	1000	1.5	50	5	200 1)	1.3	1.5	500	SMA
RS3G	400	3.0	100	5	250 1)	1.3	3	150	SMC
RS3J	600	3.0	100	5	250 1)	1.3	3	250	SMC
RS3K	800	3.0	100	5	250 1)	1.3	3	500	SMC
RS3M	1000	3.0	100	5	250 1)	1.3	3	500	SMC
RS3GB	400	3.0	100	5	250 1)	1.3	3	150	SMB
RS3JB	600	3.0	100	5	250 1)	1.3	3	250	SMB
RS3KB	800	3.0	100	5	250 1)	1.3	3	500	SMB
RS3MB	1000	3.0	100	5	250 1)	1.3	3	500	SMB

1) Tj=125 ℃ 2) Tj=150℃





DO-15 **DO-41** **A-405** **DO-201AD** **R6**

Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Leaded Rectifiers - Open Junction									
1N4936	400	1.0	30	5	100	1.2	1	130	DO-41
1N4937	600	1.0	30	5	100	1.2	1	130	DO-41
1N4936L	400	1.0	30	5	100	1.2	1	130	A-405
1N4937L	600	1.0	30	5	100	1.2	1	130	A-405
PR1004	400	1.0	30	5	100	1.2	1	150	DO-41
PR1005	600	1.0	30	5	100	1.2	1	250	DO-41
PR1006	800	1.0	30	5	100	1.2	1	500	DO-41
PR1007	1000	1.0	30	5	100	1.2	1	500	DO-41
PR1004L	400	1.0	30	5	100	1.2	1	150	A-405
PR1005L	600	1.0	30	5	100	1.2	1	250	A-405
PR1006L	800	1.0	30	5	100	1.2	1	500	A-405
PR1007L	1000	1.0	30	5	100	1.2	1	500	A-405
PR1504	400	1.5	50	5	100	1.2	1.5	150	DO-15
PR1505	600	1.5	50	5	100	1.2	1.5	250	DO-15
PR1506	800	1.5	50	5	100	1.2	1.5	500	DO-15
PR1507	1000	1.5	50	5	100	1.2	1.5	500	DO-15
PR1504S	400	1.5	50	5	100	1.2	1.5	150	DO-41
PR1505S	600	1.5	50	5	100	1.2	1.5	250	DO-41
PR1506S	800	1.5	50	5	100	1.2	1.5	500	DO-41
PR1507S	1000	1.5	50	5	100	1.2	1.5	500	DO-41
PR2004	400	2.0	50	5	100	1.2	2	150	DO-15
PR2005	600	2.0	50	5	100	1.2	2	250	DO-15
PR2006	800	2.0	50	5	100	1.2	2	500	DO-15
PR2007	1000	2.0	50	5	100	1.2	2	500	DO-15
PR3004	400	3.0	150	5	100	1.2	3	300	DO-201AD
PR3005	600	3.0	150	5	100	1.2	3	400	DO-201AD
PR3006	800	3.0	150	5	100	1.2	3	500	DO-201AD
PR3007	1000	3.0	150	5	100	1.2	3	500	DO-201AD
PR6004	400	6.0	300	10	150 1)	1.2	6	150	R6
PR6005	600	6.0	300	10	150 1)	1.2	6	250	R6
PR6006	800	6.0	300	10	150 1)	1.2	6	500	R6
PR6007	1000	6.0	300	10	150 1)	1.2	6	500	R6

1) Tj=125 ℃ 2) Tj=150 ℃

DO-41

DO-15

DO-201AD

Fast Recovery Rectifiers (continued)

Part Number	Electrical Characteristics								Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		Trr (max) @RG1 CKT	
	V	A	A	uA	uA	V	A	nS	
Leaded Rectifiers - Glass Passivated									
1N4936G	400	1.0	30	5	50	1.3	1	130	DO-41
1N4937G	600	1.0	30	5	50	1.3	1	130	DO-41
PR1004G	400	1.0	30	5	50	1.3	1	150	DO-41
PR1005G	600	1.0	30	5	50	1.3	1	250	DO-41
PR1006G	800	1.0	30	5	50	1.3	1	500	DO-41
PR1007G	1000	1.0	30	5	50	1.3	1	500	DO-41
PR1006R	800	1.0	30	5	50	1.3	1	300	DO-41
PR1007R	1000	1.0	30	5	50	1.3	1	300	DO-41
PR1504G	400	1.5	50	5	100 1)	1.3	1.5	150	DO-15
PR1505G	600	1.5	50	5	100 1)	1.3	1.5	250	DO-15
PR1506G	800	1.5	50	5	100 1)	1.3	1.5	500	DO-15
PR1507G	1000	1.5	50	5	100 1)	1.3	1.5	500	DO-15
PR1504GS	400	1.5	50	5	100 1)	1.3	1.5	150	DO-41
PR1505GS	600	1.5	50	5	100 1)	1.3	1.5	250	DO-41
PR1506GS	800	1.5	50	5	100 1)	1.3	1.5	500	DO-41
PR1507GS	1000	1.5	50	5	100 1)	1.3	1.5	500	DO-41
PR2004G	400	2.0	80	5	100 1)	1.3	2	150	DO-15
PR2005G	600	2.0	80	5	100 1)	1.3	2	250	DO-15
PR2006G	800	2.0	80	5	100 1)	1.3	2	500	DO-15
PR2007G	1000	2.0	80	5	100 1)	1.3	2	500	DO-15
PR3004G	400	3.0	125	5	100 1)	1.3	3	150	DO-201AD
PR3005G	600	3.0	125	5	100 1)	1.3	3	250	DO-201AD
PR3006G	800	3.0	125	5	100 1)	1.3	3	500	DO-201AD
PR3007G	1000	3.0	125	5	100 1)	1.3	3	500	DO-201AD

1) Tj=125 ℃ 2) Tj=150℃

STANDARD RECOVERY RECTIFIERS

Standard Recovery Rectifiers(標準回覆整流器)

整流二極管因單邊導通特性，所以被用在把交流電轉為直流電的線路上. 當整流二極管順向電流停止時，將會產生一短暫時間的逆向電流，從順向電流停止到逆向電流降為零的這段時間稱為逆向回覆時間,逆向回覆時間 快速恢復整流器大約1000ns 以上。

SMA

SMB

SMC

DO-221AC

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Surface Mount Rectifiers (Glass Passivated)								
FG1AA	50	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1BA	100	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1DA	200	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1GA	400	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1JA	600	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1KA	800	1.0	30	5	100 1)	1.1	1	DO-221AC
FG1MA	1000	1.0	30	5	100 1)	1.1	1	DO-221AC
S1G	400	1.0	30	5	100 1)	1.1	1	SMA
S1J	600	1.0	30	5	100 1)	1.1	1	SMA
S1K	800	1.0	30	5	100 1)	1.1	1	SMA
S1M	1000	1.0	30	5	100 1)	1.1	1	SMA
S1GB	400	1.0	30	5	100 1)	1.1	1	SMB
S1JB	600	1.0	30	5	100 1)	1.1	1	SMB
S1KB	800	1.0	30	5	100 1)	1.1	1	SMB
S1MB	1000	1.0	30	5	100 1)	1.1	1	SMB
S2G	400	1.5	50	5	125 1)	1.15	1.5	SMB
S2J	600	1.5	50	5	125 1)	1.15	1.5	SMB
S2K	800	1.5	50	5	125 1)	1.15	1.5	SMB
S2M	1000	1.5	50	5	125 1)	1.15	1.5	SMB
S2GA	400	1.5	50	5	125 1)	1.15	1.5	SMA
S2JA	600	1.5	50	5	125 1)	1.15	1.5	SMA
S2KA	800	1.5	50	5	125 1)	1.15	1.5	SMA
S2MA	1000	1.5	50	5	125 1)	1.15	1.5	SMA
S2GHA	400	2.0	50	5	125 1)	1.15	2.0	SMA
S2JHA	600	2.0	50	5	125 1)	1.15	2.0	SMA
S2KMA	800	2.0	50	5	125 1)	1.15	2.0	SMA
S2MHA	1000	2.0	50	5	125 1)	1.15	2.0	SMA
S2GH	400	2.0	50	5	125 1)	1.15	2.0	SMB
S2JH	600	2.0	50	5	125 1)	1.15	2.0	SMB
S2KM	800	2.0	50	5	125 1)	1.15	2.0	SMB
S2MH	1000	2.0	50	5	125 1)	1.15	2.0	SMB

1) Tj=125 ℃ 2) Tj=150 ℃

SMB

SMC

Standard Recovery Rectifiers

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Surface Mount Rectifiers (Glass Passivated)								
S3G	400	3.0	100	10	250 1)	1.15	3	SMC
S3J	600	3.0	100	10	250 1)	1.15	3	SMC
S3K	800	3.0	100	10	250 1)	1.15	3	SMC
S3M	1000	3.0	100	10	250 1)	1.15	3	SMC
S3GB	400	3.0	100	10	250 1)	1.15	3	SMB
S3JB	600	3.0	100	10	250 1)	1.15	3	SMB
S3KB	800	3.0	100	10	250 1)	1.15	3	SMB
S3MB	1000	3.0	100	10	250 1)	1.15	3	SMB
S5GC	400	5.0	100	10	250 1)	1.15	5	SMC
S5JC	600	5.0	100	10	250 1)	1.15	5	SMC
S5KC	800	5.0	100	10	250 1)	1.15	5	SMC
S5MC	1000	5.0	100	10	250 1)	1.15	5	SMC
S8GC	400	8.0	200	10	250 1)	0.985	8.0	SMC
S8JC	600	8.0	200	10	250 1)	0.985	8.0	SMC
S8KC	800	8.0	200	10	250 1)	0.985	8.0	SMC
S8MC	1000	8.0	200	10	250 1)	0.985	8.0	SMC

1) Tj=125 ℃ 2) Tj=150℃






DO-41 **A-405** **DO-15** **DO-201AD** **R6** **T-1**

Standard Recovery Rectifiers (continued)

Part Number	Electrical Characteristics							Package
	VR =V_{RRM}	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Leaded Rectifiers - Open Junction								
1N4004	400	1.0	30	5	50	1.0	1	DO-41
1N4005	600	1.0	30	5	50	1.0	1	DO-41
1N4006	800	1.0	30	5	50	1.0	1	DO-41
1N4007	1000	1.0	30	5	50	1.0	1	DO-41
1N4004L	400	1.0	30	5	50	1.0	1	A-405
1N4005L	600	1.0	30	5	50	1.0	1	A-405
1N4006L	800	1.0	30	5	50	1.0	1	A-405
1N4007L	1000	1.0	30	5	50	1.0	1	A-405
1N5395	400	1.5	50	5	50	1.1	1.5	DO-15
1N5397	600	1.5	50	5	50	1.1	1.5	DO-15
1N5398	800	1.5	50	5	50	1.1	1.5	DO-15
1N5399	1000	1.5	50	5	50	1.1	1.5	DO-15
1N5395S	400	1.5	50	5	50	1.1	1.5	DO-41
1N5397S	600	1.5	50	5	50	1.1	1.5	DO-41
1N5398S	800	1.5	50	5	50	1.1	1.5	DO-41
1N5399S	1000	1.5	50	5	50	1.1	1.5	DO-41
LT1504	400	1.5	60	5	50	1.0	1.5	DO-15
LT1505	600	1.5	60	5	50	1.0	1.5	DO-15
LT1506	800	1.5	60	5	50	1.0	1.5	DO-15
LT1507	1000	1.5	60	5	50	1.0	1.5	DO-15
LT2A04	400	2.0	70	5	50	1.1	2	DO-15
LT2A05	600	2.0	70	5	50	1.1	2	DO-15
LT2A06	800	2.0	70	5	50	1.1	2	DO-15
LT2A07	1000	2.0	70	5	50	1.1	2	DO-15
1N5404	400	3.0	200	10	50	1.0	3	DO-201AD
1N5406	600	3.0	200	10	50	1.0	3	DO-201AD
1N5407	800	3.0	200	10	50	1.0	3	DO-201AD
1N5408	1000	3.0	200	10	50	1.0	3	DO-201AD
LT6A04	400	6.0	400	10	100	1.0	6	R6
LT6A05	600	6.0	400	10	100	1.0	6	R6
LT6A06	800	6.0	400	10	100	1.0	6	R6
LT6A07	1000	6.0	400	10	100	1.0	6	R6
LT10A04	400	10	600	10	100	1.0	10	R6
LT10A05	600	10	600	10	100	1.0	10	R6
LT10A06	800	10	600	10	100	1.0	10	R6
LT10A07	1000	10	600	10	100	1.0	10	R6

1) Tj=125 ℃ 2) Tj=150 ℃





T-1 DO-41 A-405 DO-15 DO-201AD

Standard Recovery Rectifiers (continued)

Part Number	Electrical Characteristics							Package
	VR $=V_{RRM}$	I_{FAV}	I_{FSM}	IR at VR=VRRM Tj) 25 ℃	100 ℃	V_{Fmax} at IF		
	V	A	A	uA	uA	V	A	
Leaded Rectifiers - Glass Passivated								
D4G	400	1.0	30	5	50	1.0	1	T1
D5G	600	1.0	30	5	50	1.0	1	T1
D6G	800	1.0	30	5	50	1.0	1	T1
D7G	1000	1.0	30	5	50	1.0	1	T1
1N4004G	400	1.0	30	5	50 1)	1.1	1	DO-41
1N4005G	600	1.0	30	5	50 1)	1.1	1	DO-41
1N4006G	800	1.0	30	5	50 1)	1.1	1	DO-41
1N4007G	1000	1.0	30	5	50 1)	1.1	1	DO-41
LT1504G	400	1.5	50	5	200 1)	1.1	1.5	DO-15
LT1505G	600	1.5	50	5	200 1)	1.1	1.5	DO-15
LT1506G	800	1.5	50	5	200 1)	1.1	1.5	DO-15
LT1507G	1000	1.5	50	5	200 1)	1.1	1.5	DO-15
LT2A04G	400	2.0	65	5	200 1)	1.1	2	DO-15
LT2A05G	600	2.0	65	5	200 1)	1.1	2	DO-15
LT2A06G	800	2.0	65	5	200 1)	1.1	2	DO-15
LT2A07G	1000	2.0	65	5	200 1)	1.1	2	DO-15
1N5404G	400	3.0	125	5	100 1)	1.1	3	DO-201AD
1N5406G	600	3.0	125	5	100 1)	1.1	3	DO-201AD
1N5407G	800	3.0	125	5	100 1)	1.1	3	DO-201AD
1N5408G	1000	3.0	125	5	100 1)	1.1	3	DO-201AD

1) Tj=125 ℃ 2) Tj=150 ℃

SWITCHING DIODE
SCHOTTKY DIODE
ZENER DIODE
TRANSISTOR

Small Single Switching Diode(小訊號開關二極體)

整流二極管因單邊導通特性，所以被用在把交流電轉爲直流電的線路上. 當整流二極管順向電流停.
將會產生一短暫時間的逆向電流，從順向電流停止到逆向電流降爲零的這段時間稱爲逆向回覆時間
逆向回覆時間 快速恢復整流器大約1000ns 以上, 電流在0.5A以下。

SOT-23 SOT-323 SOT-523 SOD-123F SOD-323F SOD-123 SOD-323 SOD-523

Switching Diode

Part Number	Electrical Characterisitcs								Package	Equivalent Circuit Diagram
	Max Average Rectifier Current	Min Peak Repetitive Reverse Voltage	Max Peak Forward Surge Current	Max Forward Voltage		Max Reverse Current		Reverse Breakdown Voltage		
	I_{FAV}	VRRM	I_{FSM}	V_{Fmax} at IF		IR at VR		VBR		
	mA	V	mA	V	mA	uA	V	V		
1N4148W	150	100	2000	1.25	150	1	75	75	SOD-123	
1N4148WF	150	75	---	1.0	10	5	75	75	SOD-123F	--
1N4148WSF	150	75	---	1.0	10	5	75	75	SOD-323F	--
1N4448W	250	100	4000	1.25	150	2.5	75	75	SOD-123	--
1N4448WF	150	75	---	1.0	100	5	75	75	SOD-123F	
1N4448WSF	150	75	---	1.0	100	5	75	75	SOD-323F	
1SS355	225	90	500	1.20	100	0.1	80	80	SOD-323	--
1SS400	225	90	500	1.20	100	0.1	80	80	SOD-523	--
BAS16W	150	100	2000	1.25	150	1.0	75	75	SOT-323	3.1
BAS21	200	250	2500	1.25	200	1.0	200	250	SOT-23	3.1
BAS21A	200	250	2500	1.25	200	1.0	200	250	SOT-23	3.2
BAS21C	200	250	2500	1.25	200	1.0	200	250	SOT-23	3.3
BAS21S	200	250	2500	1.25	200	1.0	200	250	SOT-23	3.4
BAV21WF	200	250	---	1.25	200	0.1	200	250	SOD-123F	--
BAV70	200	70	500	1.25	150	2.5	75	70	SOT-23	3.3
BAV70T	75	85		1.25	150	2.0	75	85	SOT-523	3.3
BAV70W	150	100	2000	1.25	150	2.5	75	75	SOT-323	3.3
BAV99	200	70	500	1.25	150	2.5	75	70	SOT-23	3.4
BAV99W	150	100	2000	1.25	150	2.5	75	75	SOT-323	3.4
BAW56	200	70	500	1.25	150	2.5	75	70	SOT-23	3.2
MMBD7000	200	100		1.10	100	1.0	50	50	SOT-23	3.4

Equivalent Circuit Diagram : SOT-23 / SOT-323 / SOT-523

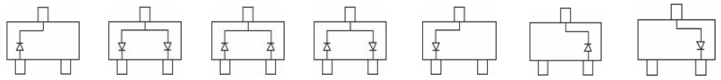


Figure 3.1 Single | Figure 3.2 Com. Anode | Figure 3.3 Com. Cathode | Figure 3.4 Series | Figure 3.5 Single | Figure 3.6 Single | Figure 3.7 Single


SOD-323F


SOD-523F


LL-34


DO-35

Switching Diode (continued)

Part Number	Electrical Characterisitcs								Package	Equivalent Circuit Diagram
	Max Average Rectifier Current	Min Peak Repetitive Reverse Voltage	Max Peak Forward Surge Current	Max Forward Voltage		Max Reverse Current		Reverse Breakdown Voltage		
	I_{FAV}	VRRM	I_{FSM}	V_{Fmax} at IF		IR at VR		VBR		
	mA	V	mA	V	mA	uA	V	V		
1N4148	150	100	2000	1.25	150	1.0	75	75	DO-35	--
1N4148WTF	150	75	---	1.0	10	5	75	75	SOD-523F	--
1N4448WTF	150	75	---	1.0	100	5	75	75	SOD-523F	
1SS355F	150	80	---	1.2	100	0.1	80	80	SOD-323F	--
1SS400F	200	100	---	1.2	100	0.1	80	100	SOD-523F	--
BAS16F	200	75	---	1.3	100	1	75	75	SOD-523F	--
BAV21WSF	200	250	---	1.2	200	0.1	200	250	SOD-323F	--
LL4148	150	100	2000	1.0	10	1	100	100	LL-34	--

Equivalent Circuit Diagram : SOT-23 / SOT-323 / SOT-523


Figure 3.1
Single


Figure 3.2
Com. Anode


Figure 3.3
Com. Cathode


Figure 3.4
Series


Figure 3.5
Single


Figure 3.6
Single


Figure 3.7
Single

Small Single Schottky Diode(小訊號蕭特基二極體)

一種導通電壓降較低、允許高速切換的二極體，是利用蕭特基勢壘特性而產生的電子元件，蕭特基二極體的導通電壓非常低。一般的二極體在電流流過時，會產生約 0.7-1.7 伏特的電壓降，不過蕭特基二極體的電壓降只有 0.15-0.45 伏特，因此可以提昇系統的效率。蕭特基二極體是利用金屬-蕭特基勢壘的特性使得蕭特基二極體的導通電壓降較低，而且可以提高切換的速度。


SOD-123


SOD-323


SOD-523


SOT-23


SOT-323

Part Number	Electrical Characterisitcs								Package	Equivalent Circuit Diagram
	Max Average Rectifier Current	Min Peak Repetitive Reverse Voltage	Max Peak Forward Surge Current	Max Forward Voltage		Max Reverse Current		Reverse Breakdown Voltage		
	I_{FAV}	VRRM	I_{FSM}	V_{Fmax} at IF		IR at VR		VBR		
	mA	V	mA	V	mA	uA	V	V		
BAT54	200	30	---	1	100	2	25	30	SOT-23	3.1
BAT54A	200	30	---	1	100	2	25	30	SOT-23	3.2
BAT54C	200	30	---	1	100	2	25	30	SOT-23	3.3
BAT54S	200	30	---	1	100	2	25	30	SOT-23	3.4
BAS40	200	40	---	1	40	0.2	30	40	SOT-23	3.1
BAS40-04	200	40	---	1	40	0.2	30	40	SOT-23	3.4
BAS40-05	200	40	---	1	40	0.2	30	40	SOT-23	3.3
BAS40-06	200	40	---	1	40	0.2	30	40	SOT-23	3.2
BAT54X	200	30	600	1	100	2	25	21	SOD-523	--
BAT54WS	200	30	600	1	100	2	25	21	SOD-323	--
SD103AW	350	40	---	0.6	200	5	30	28	SOD-123	--
SD103BW	350	30	---	0.6	200	5	20	21	SOD-123	--
SD103CW	350	20	---	0.6	200	5	10	14	SOD-123	--
BAT54AW	200	30	---	1	100	2	25	30	SOT-323	3.2
BAT54CW	200	30	---	1	100	2	25	30	SOT-323	3.3
BAT54SW	200	30	---	1	100	2	25	30	SOT-323	3.4
BAT54W	200	30	---	1	100	2	25	30	SOT-323	3.1
RB715F	30	40	200	0.37	1	1	10	40	SOT-323	3.3

Equialent Circuit Diagram : SOT-23 / SOT-323 / SOT-523


Figure 3.1 Single


Figure 3.2 Com. Anode


Figure 3.3 Com. Cathode


Figure 3.4 Series


Figure 3.5 Single


Figure 3.6 Single


Figure 3.7 Single

SOD-123F

SOD-323F

SOD-523F

Schottky Diode (continued)

Part Number	Electrical Characterisitcs								Package	Equivalent Circuit Diagram
	Max Average Rectifier Current	Min Peak Repetitive Reverse Voltage	Max Peak Forward Surge Current	Max Forward Voltage		Max Reverse Current		Reverse Breakdown Voltage		
	I_{FAV}	VRRM	I_{FSM}	V_{Fmax} at IF		IR at VR		VBR		
	mA	V	mA	V	mA	uA	V	V		
RB551V-30F	500	30	5000	0.47	500	100	20	30	SOD-323F	--
RB501V-40F	100	40	1000	0.55	100	30	10	42	SOD-323F	--
RB751V-40F	30	30	---	0.37	1	0.5	30	30	SOD-323F	--
RB520S-30F	200	30	---	0.6	200	1	10	30	SOD-523F	--
RB520S-40F	200	40	---	0.6	200	1	10	40	SOD-523F	--
RB521S-30F	200	30	---	0.5	200	30	10	30	SOD-523F	--
RB751S-40F	30	30	---	0.37	1	0.5	30	30	SOD-523F	--
SD103AWF	200	40	---	0.6	200	5	30	40	SOD-123F	--
SD103AWSF	200	40	---	0.6	200	5	30	40	SOD-323F	--

Zener Diode(穩壓二極體)

齊納二極體，是利用二極體在逆向電壓作用下的稽納擊穿（崩潰）效應，製造而成的一種具有穩定電壓功能的電子技術元件，因此又稱為「穩壓管」。

SOD-123F

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MMSZ5221BF	500	2.28	2.4	2.52	20	100	1	SOD-123F
MMSZ5222BF	500	2.38	2.5	2.63	20	100	1	SOD-123F
MMSZ5223BF	500	2.57	2.7	2.84	20	75	1	SOD-123F
MMSZ5224BF	500	2.66	2.8	2.94	20	75	1	SOD-123F
MMSZ5225BF	500	2.85	3	3.15	20	50	1	SOD-123F
MMSZ5226BF	500	3.14	3.3	3.47	20	25	1	SOD-123F
MMSZ5227BF	500	3.42	3.6	3.78	20	15	1	SOD-123F
MMSZ5228BF	500	3.71	3.9	4.1	20	10	1	SOD-123F
MMSZ5229BF	500	4.09	4.3	4.52	20	5	1	SOD-123F
MMSZ5230BF	500	4.47	4.7	4.94	20	5	2	SOD-123F
MMSZ5231BF	500	4.85	5.1	5.36	20	5	2	SOD-123F
MMSZ5232BF	500	5.32	5.6	5.88	20	5	3	SOD-123F
MMSZ5233BF	500	5.7	6	6.3	20	5	3.5	SOD-123F
MMSZ5234BF	500	5.89	6.2	6.51	20	5	4	SOD-123F
MMSZ5235BF	500	6.46	6.8	7.14	20	3	5	SOD-123F
MMSZ5236BF	500	7.13	7.5	7.88	20	3	6	SOD-123F
MMSZ5237BF	500	7.79	8.2	8.61	20	3	6.5	SOD-123F
MMSZ5238BF	500	8.27	8.7	9.14	20	3	6.5	SOD-123F
MMSZ5239BF	500	8.65	9.1	9.56	20	3	7	SOD-123F
MMSZ5240BF	500	9.5	10	10.5	20	3	8	SOD-123F
MMSZ5241BF	500	10.45	11	11.55	20	2	8.4	SOD-123F
MMSZ5242BF	500	11.4	12	12.6	20	1	9.1	SOD-123F
MMSZ5243BF	500	12.35	13	13.65	9.5	0.5	9.9	SOD-123F
MMSZ5244BF	500	13.3	14	14.7	9	0.1	10	SOD-123F
MMSZ5245BF	500	14.25	15	15.75	8.5	0.1	11	SOD-123F
MMSZ5246BF	500	15.2	16	16.8	7.8	0.1	12	SOD-123F
MMSZ5247BF	500	16.15	17	17.85	7.4	0.1	13	SOD-123F
MMSZ5248BF	500	17.1	18	18.9	7	0.1	14	SOD-123F
MMSZ5249BF	500	18.05	19	19.95	6.6	0.1	14	SOD-123F
MMSZ5250BF	500	19	20	21	6.2	0.1	15	SOD-123F
MMSZ5251BF	500	20.9	22	23.1	5.6	0.1	17	SOD-123F
MMSZ5252BF	500	22.8	24	25.2	5.2	0.1	18	SOD-123F
MMSZ5253BF	500	23.75	25	26.25	5	0.1	19	SOD-123F
MMSZ5254BF	500	25.65	27	28.35	4.6	0.1	21	SOD-123F
MMSZ5255BF	500	26.6	28	29.4	4.5	0.1	21	SOD-123F
MMSZ5256BF	500	28.5	30	31.5	4.2	0.1	23	SOD-123F
MMSZ5257BF	500	31.35	33	34.65	3.8	0.1	25	SOD-123F
MMSZ5258BF	500	34.2	36	37.8	3.4	0.1	27	SOD-123F
MMSZ5259BF	500	37.05	39	40.95	3.2	0.1	30	SOD-123F
MMSZ5260BF	500	40.85	43	45.15	3	0.1	33	SOD-123F
MMSZ5261BF	500	44.65	47	49.35	2.7	0.1	36	SOD-123F
MMSZ5262BF	500	48.45	51	53.55	2.5	0.1	39	SOD-123F
MMSZ5263BF	500	53.2	56	58.8	2.2	0.1	43	SOD-123F
MMSZ5264BF	500	57	60	63	2.1	0.1	46	SOD-123F
MMSZ5265BF	500	58.9	62	65.1	2	0.1	47	SOD-123F
MMSZ5266BF	500	64.6	68	71.4	1.8	0.1	52	SOD-123F
MMSZ5267BF	500	71.25	75	78.75	1.7	0.1	56	SOD-123F

SOD-123F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @VR		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MMSZ2V4BWF	200	2.35	2.4	2.45	5	45	1	SOD-123F
MMSZ2V7BWF	200	2.65	2.7	2.75	5	18	1	SOD-123F
MMSZ3V0BWF	200	2.94	3.0	3.06	5	8	1	SOD-123F
MMSZ3V3BWF	200	3.23	3.3	3.37	5	4.5	1	SOD-123F
MMSZ3V6BWF	200	3.53	3.6	3.67	5	4.5	1	SOD-123F
MMSZ3V9BWF	200	3.82	3.9	3.98	5	2.7	1	SOD-123F
MMSZ4V3BWF	200	4.21	4.3	4.39	5	2.7	1	SOD-123F
MMSZ4V7BWF	200	4.61	4.7	4.79	5	2.7	2	SOD-123F
MMSZ5V1BWF	200	5.0	5.1	5.2	5	1.8	2	SOD-123F
MMSZ5V6BWF	200	5.49	5.6	5.71	5	0.9	2	SOD-123F
MMSZ6V2BWF	200	6.08	6.2	6.32	5	2,7	4	SOD-123F
MMSZ6V8BWF	200	6.66	6.8	6.94	5	1.8	4	SOD-123F
MMSZ7V5BWF	200	7.35	7.5	7.65	5	0.9	5	SOD-123F
MMSZ8V2BWF	200	8.04	8.2	8.36	5	0.63	5	SOD-123F
MMSZ9V1BWF	200	8.92	9.1	9.28	5	0.45	6	SOD-123F
MMSZ10VBWF	200	9.8	10	10.2	5	0.18	7	SOD-123F
MMSZ11VBWF	200	10.78	11	11.22	5	0.09	8	SOD-123F
MMSZ12VBWF	200	11.76	12	12.24	5	0.09	8	SOD-123F
MMSZ13VBWF	200	12.74	13	13.26	5	0.09	8	SOD-123F
MMSZ15VBWF	200	14.7	15	15.3	5	0.045	10.5	SOD-123F
MMSZ16VBWF	200	15.68	16	16.32	5	0.045	11.2	SOD-123F
MMSZ18VBWF	200	17.64	18	18.36	5	0.045	12.6	SOD-123F
MMSZ20VBWF	200	19.6	20	20.4	5	0.045	14.0	SOD-123F
MMSZ22VBWF	200	21.56	22	22.44	5	0.045	15.4	SOD-123F
MMSZ24VBWF	200	23.52	24	24.48	5	0.045	16.8	SOD-123F
MMSZ27VBWF	200	26.46	27	27.54	5	0.045	18.9	SOD-123F
MMSZ30VBWF	200	29.4	30	30.6	5	0.045	21.0	SOD-123F
MMSZ33VBWF	200	32.34	33	33.66	5	0.045	23.0	SOD-123F
MMSZ36VBWF	200	35.28	36	36.72	5	0.045	25.2	SOD-123F
MMSZ39VBWF	200	38.22	39	39.78	5	0.045	27.3	SOD-123F
MMSZ43VBWF	200	42.14	43	43.86	5	0.045	30.1	SOD-123F
MMSZ47VBWF	200	46.06	47	47.94	5	0.045	33.0	SOD-123F
MMSZ51VBWF	200	49.98	51	52.02	5	0.045	35.7	SOD-123F
MMSZ56VBWF	200	54.88	56	57.12	5	0.045	39.2	SOD-123F
MMSZ62VBWF	200	60.76	62	63.24	5	0.045	43.4	SOD-123F
MMSZ68VBWF	200	66.64	68	69.36	5	0.045	47.6	SOD-123F
MMSZ75VBWF	200	73.5	75	76.5	5	0.045	52.5	SOD-123F

SOD-123F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MMSZ2V4CWF	500	2.28	2.4	2.52	5	45	1	SOD-123F
MMSZ2V7CWF	500	2.57	2.7	2.84	5	18	1	SOD-123F
MMSZ3V0CWF	500	2.85	3	3.15	5	9	1	SOD-123F
MMSZ3V3CWF	500	3.14	3.3	3.47	5	4.5	1	SOD-123F
MMSZ3V6CWF	500	3.42	3.6	3.78	5	4.5	1	SOD-123F
MMSZ3V9CWF	500	3.71	3.9	4.1	5	2.7	1	SOD-123F
MMSZ4V3CWF	500	4.09	4.3	4.52	5	2.7	1	SOD-123F
MMSZ4V7CWF	500	4.47	4.7	4.94	5	2.7	2	SOD-123F
MMSZ5V1CWF	500	4.85	5.1	5.36	5	1.8	2	SOD-123F
MMSZ5V6CWF	500	5.32	5.6	5.88	5	0.9	2	SOD-123F
MMSZ6V2CWF	500	5.89	6.2	6.51	5	2.7	4	SOD-123F
MMSZ6V8CWF	500	6.46	6.8	7.14	5	1.8	4	SOD-123F
MMSZ7V5CWF	500	7.11	7.5	7.86	5	0.9	5	SOD-123F
MMSZ8V2CWF	500	7.79	8.2	8.61	5	0.63	5	SOD-123F
MMSZ9V1CWF	500	8.65	9.1	9.56	5	0.45	6	SOD-123F
MMSZ10VCWF	500	9.5	10	10.5	5	0.18	7	SOD-123F
MMSZ11VCWF	500	10.45	11	11.55	5	0.09	8	SOD-123F
MMSZ12VCWF	500	11.4	12	12.6	5	0.09	8	SOD-123F
MMSZ13VCWF	500	12.35	13	13.65	5	0.09	8	SOD-123F
MMSZ15VCWF	500	14.25	15	15.75	5	0.045	10.5	SOD-123F
MMSZ16VCWF	500	15.2	16	16.8	5	0.045	11.2	SOD-123F
MMSZ18VCWF	500	17.1	18	18.9	5	0.045	12.6	SOD-123F
MMSZ20VCWF	500	19	20	21	5	0.045	14	SOD-123F
MMSZ22VCWF	500	20.9	22	23.1	5	0.045	15.4	SOD-123F
MMSZ24VCWF	500	22.8	24	25.2	5	0.045	16.8	SOD-123F
MMSZ27VCWF	500	25.65	27	28.35	2	0.045	18.9	SOD-123F
MMSZ30VCWF	500	28.5	30	31.5	2	0.045	21	SOD-123F
MMSZ33VCWF	500	31.35	33	34.65	2	0.045	23	SOD-123F
MMSZ36VCWF	500	34.2	36	37.8	2	0.045	25.2	SOD-123F
MMSZ39VCWF	500	37.05	39	40.95	2	0.045	27.3	SOD-123F
MMSZ43VCWF	500	40.85	43	45.15	2	0.045	30.1	SOD-123F
MMSZ47VCWF	500	44.65	47	49.35	2	0.045	33	SOD-123F
MMSZ51VCWF	500	48.45	51	53.55	2	0.045	35.7	SOD-123F
MMSZ56VCWF	500	53.2	56	58.8	2	0.045	39.2	SOD-123F
MMSZ62VCWF	500	58.9	62	65.1	2	0.045	43.4	SOD-123F
MMSZ68VCWF	500	64.6	68	71.4	2	0.045	47.6	SOD-123F
MMSZ75VCWF	500	71.25	75	78.75	2	0.045	52.5	SOD-123F

SOD-323F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MM3Z2V4CWF	200	2.28	2.4	2.52	5	45	1	SOD-323F
MM3Z2V7CWF	200	2.57	2.7	2.84	5	18	1	SOD-323F
MM3Z3V0CWF	200	2.85	3	3.15	5	9	1	SOD-323F
MM3Z3V3CWF	200	3.14	3.3	3.47	5	4.5	1	SOD-323F
MM3Z3V6CWF	200	3.42	3.6	3.78	5	4.5	1	SOD-323F
MM3Z3V9CWF	200	3.71	3.9	4.1	5	2.7	1	SOD-323F
MM3Z4V3CWF	200	4.09	4.3	4.52	5	2.7	1	SOD-323F
MM3Z4V7CWF	200	4.47	4.7	4.94	5	2.7	2	SOD-323F
MM3Z5V1CWF	200	4.85	5.1	5.36	5	1.8	2	SOD-323F
MM3Z5V6CWF	200	5.32	5.6	5.88	5	0.9	2	SOD-323F
MM3Z6V2CWF	200	5.89	6.2	6.51	5	2.7	4	SOD-323F
MM3Z6V8CWF	200	6.46	6.8	7.14	5	1.8	4	SOD-323F
MM3Z7V5CWF	200	7.11	7.5	7.86	5	0.9	5	SOD-323F
MM3Z8V2CWF	200	7.79	8.2	8.61	5	0.63	5	SOD-323F
MM3Z9V1CWF	200	8.65	9.1	9.56	5	0.45	6	SOD-323F
MM3Z10VCWF	200	9.5	10	10.5	5	0.18	7	SOD-323F
MM3Z11VCWF	200	10.45	11	11.55	5	0.09	8	SOD-323F
MM3Z12VCWF	200	11.4	12	12.6	5	0.09	8	SOD-323F
MM3Z13VCWF	200	12.35	13	13.65	5	0.09	8	SOD-323F
MM3Z15VCWF	200	14.25	15	15.75	5	0.045	10.5	SOD-323F
MM3Z16VCWF	200	15.2	16	16.8	5	0.045	11.2	SOD-323F
MM3Z18VCWF	200	17.1	18	18.9	5	0.045	12.6	SOD-323F
MM3Z20VCWF	200	19	20	21	5	0.045	14	SOD-323F
MM3Z22VCWF	200	20.9	22	23.1	5	0.045	15.4	SOD-323F
MM3Z24VCWF	200	22.8	24	25.2	5	0.045	16.8	SOD-323F
MM3Z27VCWF	200	25.65	27	28.35	2	0.045	18.9	SOD-323F
MM3Z30VCWF	200	28.5	30	31.5	2	0.045	21	SOD-323F
MM3Z33VCWF	200	31.35	33	34.65	2	0.045	23	SOD-323F
MM3Z36VCWF	200	34.2	36	37.8	2	0.045	25.2	SOD-323F
MM3Z39VCWF	200	37.05	39	40.95	2	0.045	27.3	SOD-323F
MM3Z43VCWF	200	40.85	43	45.15	2	0.045	30.1	SOD-323F
MM3Z47VCWF	200	44.65	47	49.35	2	0.045	33	SOD-323F
MM3Z51VCWF	200	48.45	51	53.55	2	0.045	35.7	SOD-323F
MM3Z56VCWF	200	53.2	56	58.8	2	0.045	39.2	SOD-323F
MM3Z62VCWF	200	58.9	62	65.1	2	0.045	43.4	SOD-323F
MM3Z68VCWF	200	64.6	68	71.4	2	0.045	47.6	SOD-323F
MM3Z75VCWF	200	71.25	75	78.75	2	0.045	52.5	SOD-323F

SOD-323F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MMSZ5229CSF	200	4.214	4.3	4.386	20	5	1	SOD-323F
MMSZ5230CSF	200	4.606	4.7	4.794	20	5	2	SOD-323F
MMSZ5231CSF	200	4.998	5.1	5.202	20	5	2	SOD-323F
MMSZ5232CSF	200	5.488	5.6	5.712	20	5	3	SOD-323F
MMSZ5233CSF	200	5.88	6	6.12	20	5	3.5	SOD-323F
MMSZ5234CSF	200	6.076	6.2	6.324	20	5	4	SOD-323F
MMSZ5235CSF	200	6.664	6.8	6.936	20	3	5	SOD-323F
MMSZ5236CSF	200	7.35	7.5	7.65	20	3	6	SOD-323F
MMSZ5237CSF	200	8.036	8.2	8.364	20	3	6.5	SOD-323F
MMSZ5238CSF	200	8.526	8.7	8.874	20	3	6.5	SOD-323F
MMSZ5239CSF	200	8.918	9.1	9.282	20	3	7	SOD-323F
MMSZ5240CSF	200	9.8	10	10.2	20	3	8	SOD-323F
MMSZ5241CSF	200	10.78	11	11.22	20	2	8.4	SOD-323F
MMSZ5242CSF	200	11.76	12	12.24	20	1	9.1	SOD-323F
MMSZ5243CSF	200	12.74	13	13.26	9.5	0.5	9.9	SOD-323F
MMSZ5244CSF	200	13.72	14	14.28	9	0.1	10	SOD-323F
MMSZ5245CSF	200	14.7	15	15.3	8.5	0.1	11	SOD-323F
MMSZ5246CSF	200	15.68	16	16.32	7.8	0.1	12	SOD-323F
MMSZ5247CSF	200	16.66	17	17.34	7.4	0.1	13	SOD-323F
MMSZ5248CSF	200	17.64	18	18.36	7	0.1	14	SOD-323F
MMSZ5249CSF	200	18.62	19	19.38	6.6	0.1	14	SOD-323F
MMSZ5250CSF	200	19.6	20	20.4	6.2	0.1	15	SOD-323F
MMSZ5251CSF	200	21.56	22	22.44	5.6	0.1	17	SOD-323F
MMSZ5252CSF	200	23.52	24	24.48	5.2	0.1	18	SOD-323F
MMSZ5253CSF	200	24.5	25	25.5	5	0.1	19	SOD-323F
MMSZ5254CSF	200	26.46	27	27.54	4.6	0.1	21	SOD-323F
MMSZ5255CSF	200	27.44	28	28.56	4.5	0.1	21	SOD-323F
MMSZ5256CSF	200	29.4	30	30.6	4.2	0.1	23	SOD-323F
MMSZ5257CSF	200	32.34	33	33.66	3.8	0.1	25	SOD-323F
MMSZ5258CSF	200	35.28	36	36.72	3.4	0.1	27	SOD-323F
MMSZ5259CSF	200	38.22	39	39.78	3.2	0.1	30	SOD-323F
MMSZ5260CSF	200	42.14	43	43.86	3	0.1	33	SOD-323F
MMSZ5261CSF	200	46.06	47	47.94	2.7	0.1	36	SOD-323F
MMSZ5262CSF	200	49.98	51	52.02	2.5	0.1	39	SOD-323F
MMSZ5263CSF	200	54.88	56	57.12	2.2	0.1	43	SOD-323F
MMSZ5264CSF	200	58.8	60	61.2	2.1	0.1	46	SOD-323F
MMSZ5265CSF	200	60.76	62	63.24	2	0.1	47	SOD-323F
MMSZ5266CSF	200	66.64	68	69.36	1.8	0.1	52	SOD-323F
MMSZ5267CSF	200	73.5	75	76.5	1.7	0.1	56	SOD-323F

SOD-323F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
UDZS2V4BWF	200	2.43	---	2.63	5	120	1	SOD-323F
UDZS2V7BWF	200	2.69	---	2.91	5	100	1	SOD-323F
UDZS3V0BWF	200	3.01	---	3.22	5	50	1	SOD-323F
UDZS3V3BWF	200	3.32	---	3.53	5	20	1	SOD-323F
UDZS3V6BWF	200	3.6	---	3.85	5	4.5	1	SOD-323F
UDZS3V9BWF	200	3.89	---	4.16	5	2.7	1	SOD-323F
UDZS4V3BWF	200	4.17	---	4.43	5	2.7	1	SOD-323F
UDZS4V7BWF	200	4.55	---	4.75	5	2.7	2	SOD-323F
UDZS5V1BWF	200	4.98	---	5.2	5	1.8	2	SOD-323F
UDZS5V6BWF	200	5.49	---	5.73	5	0.9	2	SOD-323F
UDZS6V2BWF	200	6.06	---	6.33	5	2.7	4	SOD-323F
UDZS6V8BWF	200	6.65	---	6.93	5	1.8	4	SOD-323F
UDZS7V5BWF	200	7.28	---	7.6	5	0.9	5	SOD-323F
UDZS8V2BWF	200	8.02	---	8.36	5	0.63	5	SOD-323F
UDZS9V1BWF	200	8.85	---	9.23	5	0.45	6	SOD-323F
UDZS10VBWF	200	9.77	---	10.21	5	0.18	7	SOD-323F
UDZS11VBWF	200	10.76	---	11.22	5	0.09	8	SOD-323F
UDZS12VBWF	200	11.74	---	12.24	5	0.09	8	SOD-323F
UDZS13VBWF	200	12.91	---	13.49	5	0.09	8	SOD-323F
UDZS15VBWF	200	14.34	---	14.98	5	0.045	10.5	SOD-323F
UDZS16VBWF	200	15.85	---	16.51	5	0.045	11.2	SOD-323F
UDZS18VBWF	200	17.56	---	18.35	5	0.045	12.6	SOD-323F
UDZS20VBWF	200	19.52	---	20.39	5	0.045	14	SOD-323F
UDZS22VBWF	200	21.54	---	22.47	5	0.045	15.4	SOD-323F
UDZS24VBWF	200	23.72	---	24.78	5	0.045	16.8	SOD-323F
UDZS27VBWF	200	26.19	---	27.53	5	0.045	18.9	SOD-323F
UDZS30VBWF	200	29.19	---	30.69	5	0.045	21	SOD-323F
UDZS33VBWF	200	32.15	---	33.79	5	0.045	23	SOD-323F
UDZS36VBWF	200	35.07	---	36.87	5	0.045	25.2	SOD-323F

SOD-523F

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
MM5Z2V4CF	200	2.35	2.4	2.45	5	45	1	SOD-523F
MM5Z2V7CF	200	2.65	2.7	2.75	5	18	1	SOD-523F
MM5Z3V0CF	200	2.94	3	3.06	5	9	1	SOD-523F
MM5Z3V3CF	200	3.23	3.3	3.37	5	4.5	1	SOD-523F
MM5Z3V6CF	200	3.53	3.6	3.67	5	4.5	1	SOD-523F
MM5Z3V9CF	200	3.82	3.9	3.98	5	2.7	1	SOD-523F
MM5Z4V3CF	200	4.21	4.3	4.39	5	2.7	1	SOD-523F
MM5Z4V7CF	200	4.61	4.7	4.79	5	2.7	2	SOD-523F
MM5Z5V1CF	200	5	5.1	5.2	5	1.8	2	SOD-523F
MM5Z5V6CF	200	5.49	5.6	5.71	5	0.9	2	SOD-523F
MM5Z6V2CF	200	6.08	6.2	6.32	5	2.7	4	SOD-523F
MM5Z6V8CF	200	6.66	6.8	6.94	5	1.8	4	SOD-523F
MM5Z7V5CF	200	7.35	7.5	7.65	5	0.9	5	SOD-523F
MM5Z8V2CF	200	8.04	8.2	8.36	5	0.63	5	SOD-523F
MM5Z9V1CF	200	8.92	9.1	9.28	5	0.45	6	SOD-523F
MM5Z10VCF	200	9.8	10	10.2	5	0.18	7	SOD-523F
MM5Z11VCF	200	10.78	11	11.22	5	0.09	8	SOD-523F
MM5Z12VCF	200	11.76	12	12.24	5	0.09	8	SOD-523F
MM5Z13VCF	200	12.74	13	13.26	5	0.09	8	SOD-523F
MM5Z15VCF	200	14.7	15	15.3	5	0.045	10.5	SOD-523F
MM5Z16VCF	200	15.68	16	16.32	5	0.045	11.2	SOD-523F
MM5Z18VCF	200	17.64	18	18.36	5	0.045	12.6	SOD-523F
MM5Z20VCF	200	19.6	20	20.4	5	0.045	14	SOD-523F
MM5Z22VCF	200	21.56	22	22.44	5	0.045	15.4	SOD-523F
MM5Z24VCF	200	23.52	24	24.48	5	0.045	16.8	SOD-523F
MM5Z27VCF	200	26.46	27	27.54	2	0.045	18.9	SOD-523F
MM5Z30VCF	200	29.4	30	30.6	2	0.045	21	SOD-523F
MM5Z33VCF	200	32.34	33	33.66	2	0.045	23	SOD-523F
MM5Z36VCF	200	35.28	36	36.72	2	0.045	25.2	SOD-523F
MM5Z39VCF	200	38.22	39	39.78	2	0.045	27.3	SOD-523F
MM5Z43VCF	200	42.14	43	43.86	2	0.045	30.1	SOD-523F
MM5Z47VCF	200	46.06	47	47.94	2	0.045	33	SOD-523F
MM5Z51VCF	200	49.98	51	52.02	2	0.045	35.7	SOD-523F
MM5Z56VCF	200	54.88	56	57.12	2	0.045	39.2	SOD-523F
MM5Z62VCF	200	60.76	62	63.24	2	0.045	43.4	SOD-523F
MM5Z68VCF	200	66.64	68	69.36	2	0.045	47.6	SOD-523F
MM5Z75VCF	200	73.5	75	76.5	2	0.045	52.5	SOD-523F

DO-35

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
BZX55B 2V4	500	2.35	---	2.45	5	50	1	DO-35
BZX55B 2V7	500	2.65	---	2.75	5	10	1	DO-35
BZX55B 3V0	500	2.94	---	3.06	5	4	1	DO-35
BZX55B 3V3	500	3.23	---	3.37	5	2	1	DO-35
BZX55B 3V6	500	3.53	---	3.67	5	2	1	DO-35
BZX55B 3V9	500	3.82	---	3.98	5	2	1	DO-35
BZX55B 4V3	500	4.21	---	4.39	5	1	1	DO-35
BZX55B 4V7	500	4.61	---	4.79	5	0.5	1	DO-35
BZX55B 5V1	500	5	---	5.2	5	0.1	1	DO-35
BZX55B 5V6	500	5.49	---	5.71	5	0.1	1	DO-35
BZX55B 6V2	500	6.08	---	6.32	5	0.1	2	DO-35
BZX55B 6V8	500	6.66	---	6.94	5	0.1	3	DO-35
BZX55B 7V5	500	7.33	---	7.63	5	0.1	5	DO-35
BZX55B 8V2	500	8.04	---	8.36	5	0.1	6.2	DO-35
BZX55B 9V1	500	8.92	---	9.28	5	0.1	6.8	DO-35
BZX55B 10	500	9.8	---	10.2	5	0.1	7.5	DO-35
BZX55B 11	500	10.78	---	11.22	5	0.1	8.2	DO-35
BZX55B 12	500	11.76	---	12.24	5	0.1	9.1	DO-35
BZX55B 13	500	12.74	---	13.26	5	0.1	10	DO-35
BZX55B 15	500	14.7	---	15.3	5	0.1	11	DO-35
BZX55B 16	500	15.68	---	16.32	5	0.1	12	DO-35
BZX55B 18	500	17.64	---	18.36	5	0.1	13	DO-35
BZX55B 20	500	19.6	---	20.4	5	0.1	15	DO-35
BZX55B 22	500	21.56	---	22.44	5	0.1	16	DO-35
BZX55B 24	500	23.52	---	24.48	5	0.1	18	DO-35
BZX55B 27	500	26.46	---	27.54	5	0.1	20	DO-35
BZX55B 30	500	29.4	---	30.6	5	0.1	22	DO-35
BZX55B 33	500	32.34	---	33.66	5	0.1	24	DO-35
BZX55B 36	500	35.28	---	36.72	5	0.1	27	DO-35
BZX55B 39	500	38.22	---	39.78	2.5	0.1	28	DO-35
BZX55B 43	500	42.14	---	43.86	2.5	0.1	32	DO-35
BZX55B 47	500	46.06	---	47.94	2.5	0.1	35	DO-35
BZX55B 51	500	49.98	---	52.02	2.5	0.1	38	DO-35
BZX55B 56	500	54.88	---	57.12	2.5	0.1	42	DO-35
BZX55B 62	500	60.76	---	63.24	2.5	0.1	47	DO-35
BZX55B 68	500	66.64	---	69.36	2.5	0.1	51	DO-35
BZX55B 75	500	73.5	---	76.5	2.5	0.1	56	DO-35

DO-35

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang			Test Current	Maximum Reverse Current		Package
	Pd	Vz @Izt			Izt	Ir @Vr		
	mW	Min (V)	Nom (V)	Max (V)	mA	μA	V	
BZX55C 2V0	500	1.88	---	2.11	5	100	1	DO-35
BZX55C 2V2	500	2.08	---	2.33	5	100	1	DO-35
BZX55C 2V4	500	2.28	---	2.56	5	50	1	DO-35
BZX55C 2V7	500	2.51	---	2.89	5	10	1	DO-35
BZX55C 3V0	500	2.8	---	3.2	5	4	1	DO-35
BZX55C 3V3	500	3.1	---	3.5	5	2	1	DO-35
BZX55C 3V6	500	3.4	---	3.8	5	2	1	DO-35
BZX55C 3V9	500	3.7	---	4.1	5	2	1	DO-35
BZX55C 4V3	500	4	---	4.6	5	1	1	DO-35
BZX55C 4V7	500	4.4	---	5	5	0.5	1	DO-35
BZX55C 5V1	500	4.8	---	5.4	5	0.1	1	DO-35
BZX55C 5V6	500	5.2	---	6	5	0.1	1	DO-35
BZX55C 6V2	500	5.8	---	6.6	5	0.1	2	DO-35
BZX55C 6V8	500	6.4	---	7.2	5	0.1	3	DO-35
BZX55C 7V5	500	7	---	7.9	5	0.1	5	DO-35
BZX55C 8V2	500	7.7	---	8.7	5	0.1	6.2	DO-35
BZX55C 9V1	500	8.5	---	9.6	5	0.1	6.8	DO-35
BZX55C 10	500	9.4	---	10.6	5	0.1	7.5	DO-35
BZX55C 11	500	10.4	---	11.6	5	0.1	8.2	DO-35
BZX55C 12	500	11.4	---	12.7	5	0.1	9.1	DO-35
BZX55C 13	500	12.4	---	14.1	5	0.1	10	DO-35
BZX55C 15	500	13.8	---	15.6	5	0.1	11	DO-35
BZX55C 16	500	15.3	---	17.1	5	0.1	12	DO-35
BZX55C 18	500	16.8	---	19.1	5	0.1	13	DO-35
BZX55C 20	500	18.8	---	21.1	5	0.1	15	DO-35
BZX55C 22	500	20.8	---	23.3	5	0.1	16	DO-35
BZX55C 24	500	22.8	---	25.6	5	0.1	18	DO-35
BZX55C 27	500	25.1	---	28.9	5	0.1	20	DO-35
BZX55C 30	500	28	---	32	5	0.1	22	DO-35
BZX55C 33	500	31	---	35	5	0.1	24	DO-35
BZX55C 36	500	34	---	38	5	0.1	27	DO-35
BZX55C 39	500	37	---	41	2.5	0.1	28	DO-35
BZX55C 43	500	40	---	46	2.5	0.1	32	DO-35
BZX55C 47	500	44	---	50	2.5	0.1	35	DO-35
BZX55C 51	500	48	---	54	2.5	0.1	38	DO-35
BZX55C 56	500	52	---	60	2.5	0.1	42	DO-35
BZX55C 62	500	58	---	66	2.5	0.1	47	DO-35
BZX55C 68	500	64	---	72	2.5	0.1	51	DO-35
BZX55C 75	500	70	---	80	2.5	0.1	56	DO-35

DO-35

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang	Test Current	Maximum Zener Impedance		Maximum Reverse Current		Package
	Pd	V_Z @I_{ZT}	I_{ZT}	ZZT @IZT	ZZK @IZK= 0.25mA	I_R @V_R		
	mW	Nom (V)	mA	Ω	Ω	μA	V	
1N5221B	500	2.4	20	30	1200	100	1	DO-35
1N5222B	500	2.5	20	30	1250	100	1	DO-35
1N5223B	500	2.7	20	30	1300	75	1	DO-35
1N5224B	500	2.8	20	30	1400	75	1	DO-35
1N5225B	500	3	20	29	1600	50	1	DO-35
1N5226B	500	3.3	20	28	1600	25	1	DO-35
1N5227B	500	3.6	20	24	1700	15	1	DO-35
1N5228B	500	3.9	20	23	1900	10	1	DO-35
1N5229B	500	4.3	20	22	2000	5	1	DO-35
1N5230B	500	4.7	20	19	1900	5	2	DO-35
1N5231B	500	5.1	20	17	1600	5	2	DO-35
1N5232B	500	5.6	20	11	1600	5	3	DO-35
1N5233B	500	6	20	7	1600	5	3.5	DO-35
1N5234B	500	6.2	20	7	1000	5	4	DO-35
1N5235B	500	6.8	20	5	750	3	5	DO-35
1N5236B	500	7.5	20	6	500	3	6	DO-35
1N5237B	500	8.2	20	8	500	3	6.5	DO-35
1N5238B	500	8.7	20	8	600	3	6.5	DO-35
1N5239B	500	9.1	20	10	600	3	7	DO-35
1N5240B	500	10	20	17	600	3	8	DO-35
1N5241B	500	11	20	22	600	2	8.4	DO-35
1N5242B	500	12	20	30	600	1	9.1	DO-35
1N5243B	500	13	9.5	13	600	0.5	9.9	DO-35
1N5244B	500	14	9	15	600	0.1	10	DO-35
1N5245B	500	15	8.5	16	600	0.1	11	DO-35
1N5246B	500	16	7.8	17	600	0.1	12	DO-35
1N5247B	500	17	7.4	19	600	0.1	13	DO-35
1N5248B	500	18	7	21	600	0.1	14	DO-35
1N5249B	500	19	6.6	23	600	0.1	14	DO-35
1N5250B	500	20	6.2	25	600	0.1	15	DO-35
1N5251B	500	22	5.6	29	600	0.1	17	DO-35
1N5252B	500	24	5.2	33	600	0.1	18	DO-35
1N5253B	500	25	5	35	600	0.1	19	DO-35
1N5254B	500	27	4.6	41	600	0.1	21	DO-35
1N5255B	500	28	4.5	44	600	0.1	21	DO-35
1N5256B	500	30	4.2	49	600	0.1	23	DO-35
1N5257B	500	33	3.8	58	700	0.1	25	DO-35
1N5258B	500	36	3.4	70	700	0.1	27	DO-35
1N5259B	500	39	3.2	80	800	0.1	30	DO-35
1N5260B	500	43	3	93	900	0.1	33	DO-35
1N5261B	500	47	2.7	105	1000	0.1	36	DO-35
1N5262B	500	51	2.5	125	1100	0.1	39	DO-35
1N5263B	500	56	2.2	150	1300	0.1	43	DO-35

DO-41

Zener Diode (continued)

Type Number	Power Rating	Zener Voltage Rang	Test Current	Maximum Zener Impedance		Maximum Reverse Current		Package
	Pd	V_Z @I_{ZT}	I_{ZT}	ZZT @IZT	ZZK @IZK	I_R @V_R		
	mW	Nom (V)	mA	Ω	Ω	μA	V	
1N4728A	1000	3.3	76	10	400 1)	100	1	DO-41
1N4729A	1000	3.6	69	10	400 1)	100	1	DO-41
1N4730A	1000	3.9	64	9	400 1)	50	1	DO-41
1N4731A	1000	4.3	58	9	400 1)	10	1	DO-41
1N4732A	1000	4.7	53	8	500 1)	10	1	DO-41
1N4733A	1000	5.1	49	7	550 1)	10	1	DO-41
1N4734A	1000	5.6	45	5	600 1)	10	2	DO-41
1N4735A	1000	6.2	41	2	700 1)	10	3	DO-41
1N4736A	1000	6.8	37	3.5	700 1)	10	4	DO-41
1N4737A	1000	7.5	34	4	700 2)	10	5	DO-41
1N4738A	1000	8.2	31	4.5	700 2)	10	6	DO-41
1N4739A	1000	9.1	28	5	700 2)	10	7	DO-41
1N4740A	1000	10	25	7	700 3)	10	7.6	DO-41
1N4741A	1000	11	23	8	700 3)	5	8.4	DO-41
1N4742A	1000	12	21	9	700 3)	5	9.1	DO-41
1N4743A	1000	13	19	10	700 3)	5	9.9	DO-41
1N4744A	1000	15	17	14	700 3)	5	11.4	DO-41
1N4745A	1000	16	15.5	16	700 3)	5	12.2	DO-41
1N4746A	1000	18	14	20	700 3)	5	13.7	DO-41
1N4747A	1000	20	12.5	22	750 3)	5	15.2	DO-41
1N4748A	1000	22	11.5	23	750 3)	5	16.7	DO-41
1N4749A	1000	24	10.5	25	750 3)	5	18.2	DO-41
1N4750A	1000	27	9.5	35	750 3)	5	20.6	DO-41
1N4751A	1000	30	8.5	40	1000 3)	5	22.8	DO-41
1N4752A	1000	33	7.5	45	1000 3)	5	25.1	DO-41
1N4753A	1000	36	7	50	1000 3)	5	27.4	DO-41
1N4754A	1000	39	6.5	60	1000 3)	5	29.7	DO-41
1N4755A	1000	43	6	70	1500 3)	5	32.7	DO-41
1N4756A	1000	47	5.5	80	1500 3)	5	35.8	DO-41
1N4757A	1000	51	5	95	1500 3)	5	38.8	DO-41
1N4758A	1000	56	4.5	110	2000 3)	5	42.6	DO-41

1) IZK=1mA

2) IZK=0.5mA

3) IZK=0.25mA

Small Single Transistor (小訊號電晶體)

場效應電晶體（field-effect transistor，縮寫：FET）是一種通過電場效應控制電流的電子元件。它依靠電場去控制導電通道形狀，因此能控制半導體材料中某種類型載子的通道的導電性。場效應電晶體有時被稱為單極性電晶體，以它的單載子型作用對比雙極性電晶體（bipolar junction transistors，縮寫：BJT）。

SOT-23

SOT-323

SOT-363

Part Number	Configuration	Type	P_D	V_{CEO}	I_C	hfe		V_{CE}(sat)	F_T	Package
			mW	Volts	mA	Min (Volts)	Max (Volts)	Volts	MHz	
MMBT3904	Single	NPN	200	40	200	100	400	0.3	300	SOT-23
MMBT3906	Single	PNP	200	-40	-200	100	300	-0.4	300	SOT-23
MMBT2222A	Single	NPN	250	40	600	100	300	0.3	300	SOT-23
MMBT2907A	Single	PNP	250	-60	-600	100	300	-0.4	200	SOT-23
MMBT4401	Single	NPN	300	40	600	100	300	0.4	250	SOT-23
MMBT4403	Single	PNP	300	-40	-600	100	300	-0.4	200	SOT-23
MMBT5551	Single	NPN	300	160	600	100	300	0.15	100	SOT-23
MMDT3904	Multi-Chip	NPN/NPN	200	40	200	100	300	0.2	300	SOT-363
MMDT3906	Multi-Chip	PNP/PNP	200	-40	-200	100	300	-0.25	250	SOT-363
MMDT5401	Multi-Chip	PNP/PNP	200	-150	-200	100	300	-0.2	100	SOT-363
MMDT5551	Multi-Chip	NPN/NPN	200	160	200	100	300	0.15	100	SOT-363
MMDT5541	Multi-Chip	NPN/NPN	225	140	600	80	250	0.2	100	SOT-363
MMST3904	Single	NPN	200	40	200	100	400	0.3	300	SOT-323
MMST3906	Single	PNP	200	-40	-200	100	300	-0.4	300	SOT-323
MMST2222A	Single	NPN	200	40	600	100	300	0.3	300	SOT-323
MMST2907A	Single	PNP	200	-60	-600	100	300	-0.4	200	SOT-323
MMST4401	Single	NPN	300	40	600	100	300	0.4	250	SOT-323
MMST4403	Single	PNP	300	-40	-600	100	300	-0.4	200	SOT-323
MMDT2222A	Single	NPN	250	40	600	100	300	0.3	300	SOT-363
MMDT2907A	Multi-Chip	PNP/PNP	200	-60	-200	100	300	-0.4	200	SOT-363
MMDT4401	Multi-Chip	NPN/NPN	200	40	600	100	300	0.4	250	SOT-363
MMDT4403	Multi-Chip	PNP/PNP	200	-40	-600	100	300	-0.4	200	SOT-363

MOSFET

SOT-23

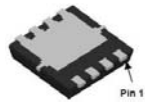
SOT-323

SOT-363

SOT-23-6

MOSFET

Part Number	Package	Type	ESD Diode	V_{DS} (V)	V_{GS} (±V)	I_D (A)	$R_{DS(ON)}$ (Ω max) at V_{GS}=				Vth		
						25°C	10V	4.5V	2.5V	1.8V	Min	Typ	Max
LTC8205A	SOT23-6	N		20	10	6		0.0245	0.038		0.5	0.7	1
LTC8205K	SOT23-6	N	V	20	12	6		0.02	0.035		0.5		1
BSS84	SOT-23	P		-50	20	0.13		10			0.8		2.0
LTC2305	SOT-23	P		-30	12	4.2	0.07	0.08	0.12		-0.7	-1.0	-1.3
LTC2301	SOT-23	P		-20	8	2.3		0.1	0.15		-0.4		-0.9
LTC2303	SOT-23	P		-20	12	4.7		0.07	0.11		-0.6	-0.9	-1.4
LTC2312	SOT-23	N		20	8	4.9		0.041	0.047	0.057	0.4	0.6	1.0
LTC2302	SOT-23	N		20	8	2.3		0.06	0.115		0.6	1.0	1.2
LTC2306	SOT-23	N		30	12	5.8	0.038	0.043	0.062		0.7		1.4
BSS138	SOT-23	N		50	20	0.20		3.5			0.5		1.5
BSS138K	SOT-23	N	V	50	20	0.20		3.5			0.5		1.5
2N7002K	SOT-23	N	V	60	20	0.115	7.5	7.5			1.0		2.5
2N7002E	SOT-23	N	V	60	20	0.43	3	4			1.0		2.5
2N7002AK	SOT-23	N	V	60	20	0.115	7.5	7.5			1.0		2.0
BSS123	SOT-23	N		100	20	0.170	6				0.8		2.8
BSS84W	SOT-323	P		-50	20	0.13		10			0.8		2.0
LTC3018KW	SOT-323	N		30	20	0.1		8	13		0.8		1.5
BSS138W	SOT-323	N		50	20	0.20		3.5			0.5		1.5
2N7002KW	SOT-323	N	V	60	20	0.115	7.5	7.5			1.0		2.5
BSS84DW	SOT-363	P		-50	20	0.13		10			0.8		2.0
BSS138DW	SOT-363	N		50	20	0.20		3.5			0.5		1.5
2N7002KDW	SOT-363	N	V	60	20	0.115	7.5	7.5			1.0		2.0
BSS8402DW	SOT-363	N+P		60/-50	20	0.115/-0.13		7.5/10			1/-0.8		2.5/-2



DFN 3X3

MOSFET

Part Number	Package	Type	V_{DS} (V)	V_{GS} (±V)	I_D (A)	$R_{DS(ON)}$ (Ω max) at V_{GS}=				Vth		
					25°C	10V	4.5V	2.5V	1.8V	Min	Typ	Max
LTM8304	DFN33	N	30	20	36	0.0056	0.0091			1.3		2.3
LTM8306	DFN33	N	30	20	25	0.0084	0.015			1.3		2.3
LTM8308	DFN33	N	30	20	9	0.012	0.021			1.3		2.3
LTM8310	DFN33	N	30	20	10	0.0077	0.012			1.3		2.3

TO-220

TO-220F

MOSFET

Part Number	Package	Type	V_{DS} (V)	V_{GS} (±V)	I_D (A)	$R_{DS(ON)}$ (Ω max) at V_{GS}=				Vth		
					25°C	10V	4.5V	2.5V	1.8V	Min	Typ	Max
LTP85N03	TO-220	N	30	20	89	0.004				1		3
LTP85N07	TO-220	N	75	20	85	0.0085				2		4
LZP3705	TO-220	N	75	20	89	0.01				2		4
LZP3205	TO-220	N	55	20	110	0.008				2		4
LZP1004	TO-220	N	40	20	130	0.006				2		4
LZP1404	TO-220	N	40	20	200	0.004				2		4
LZP1404	TO-220	N	40	20	200	0.004				3		5
LZP44V	TO-220	N	60	20	55	0.0165				2		4
LZP2807	TO-220	N	75	20	80	0.011				2		4
LZP75N75	TO-220	N	75	20	80	0.011				2		4
LZP1010E	TO-220	N	60	20	85	0.012				2		4
LZP5N50	TO-220	N	500	20	5	1.4				2		4
LVP640P	TO-220	N	200	25	18	0.018				2		4
LZPF4N60	TO-220F	N	600	20	4	2				2		4
LZPF5N50	TO-220F	N	500	20	5	1.4				2		4

TO-251

TO-252

TO-263

MOSFET

Part Number	Package	Type	V_{DS} (V)	V_{GS} (±V)	I_D (A)	$R_{DS(ON)}$ (Ω max) at V_{GS}=				Vth		
					25°C	10V	4.5V	2.5V	1.8V	Min	Typ	Max
LZU2N60	TO-251	N	600	20	2	4.5				2		4
LZU4N60	TO-251	N	600	20	4	2				2		4
LZU5N50	TO-251	N	500	20	5	1.4				2		4
LZD2N60	TO-252	N	600	20	2	4.5				2		4
LZD4N60	TO-252	N	600	20	4	2				2		4
LZD5N50	TO-252	N	500	20	5	1.4				2		4
LTB85N03	TO-263	N	30	20	89	0.004				1		3
LZB3205	TO-263	N	55	20	110	0.008				2		4
LZB1404	TO-263	N	40	20	200	0.004				2		4

MOSFET

Part Number	Package	Type	V_{DS} (V)	V_{GS} (±V)	I_D (A)	$R_{DS(ON)}$ (Ω max) at V_{GS}=				Vth		
					25°C	10V	4.5V	2.5V	1.8V	Min	Typ	Max
*LZP540N	TO-220	N	100	20	33	0.044				2		4
*LZP640N	TO-220	N	200	20	18	0.018				2		4
*LZG260N	TO-247	N	200	20	50	0.04				2		4
*LZPF7N60	TO-220F	N	600	20	7	1.2				2		4
*LZPF8N50	TO-220F	N	500	20	8	0.85				2		4
*LZPF10N60	TO-220F	N	600	20	10	0.7				2		4
*LZPF12N60	TO-220F	N	600	20	12	0.55				2		4
*LZPF13N50	TO-220F	N	500	20	13	0.5				2		4
*LZU7N60	TO-251	N	600	20	7	1.2				2		4
*LZU8N50	TO-251	N	500	20	8	0.85				2		4
*LZD7N60	TO-252	N	600	20	7	1.2				2		4

Mark * denote under development device

APPENDIX

Application Note ---

Bending Terminal Leads

When bending the leads, in order to avoid excessive extend in the area where the leads enter the resinous body, use a tool that clamps the point between the package and the bending point. Improper bending will damage the die or separate the resin from the mounting frame, resulting in a degradation in electrical characteristics or a reliability problem such as poor resistance to moisture.

The leads must be bent only once and they should not be bent at an angle of more than 90°. Leads must be formed before fixing them to a printed circuit board or to a heatsink. Never form the leads after soldering.

The load shall be restricted such that the bend starts recommended distance (X) from the body of the component part.

X=2 mm for T-1, DO-41 Mini, DO-41, DO-15 CASE.
X=3 mm for DO-201AD CASE.
X=4 mm for R-6 CASE.

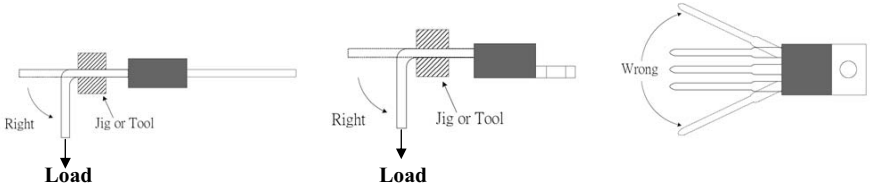


Figure 1. Bending Terminal Leads

Mounting to Heatsink

The mounting surface of a heatsink should be free from foreign materials and metallic filings, and have enough flatness and finish comparable to that of the back of diode package. Don't screw up the unit from backside (heat sink) and please face the marking surface of unit (front side) while screwing up the unit. Be sure, when mounting devices to a heatsink, that excessive torque may cause a mechanical failure of the device or a reliability problem. (ex. electrical degrade….). Also note, insufficient torque results in poorer heat transmission.

Recommended mounting hole, screw and mounting torque corresponding to our packages are shown in Table.

Package	Mounting hole (ψ= mm)	Screw	Torque (N*m /kgf*cm)
TO-220	3.81	M3	0.50 / 5.1
TO-3P	3.05		
BRIDGE	---	M3/M5	0.50 / 5.1
ITO-220	3.18	M3	0.50 / 5.1
TO-126F	2.92	M2.5	0.50 / 5.1

Thermal compounds (greases) facilitate interface thermal conduction between device and heatsink. Recommended compounds are hydrophilic oil based. When applied, compounds should be spread evenly in a very thin layer over the whole contact area.
The contact thermal resistance Rth j-c in our data sheets are defined with the recommended mounting torque and with the thermal compound.

Soldering of Through-hole Mounting Devices

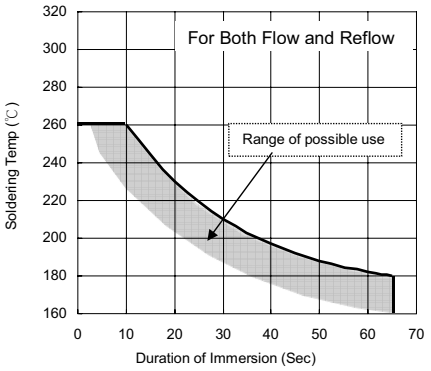
Resistance to soldering heat test is carried out under the condition shown below. Soldering should be completed at a lowest possible temperature for a shortest period.

Temp. 260± 5℃
Duration 10± 1s

Figure 12 shows the Dip duration vs. Solder Temperature Rating for plastic diodes.

General requirements for manual soldering are as follows:
1. Use a soldering iron of 30 watts maximum, that is grounded or with a high insulation resistance.
2. The iron tip is kept away from any resinous body.
3. Attachment should be achieved in not more than 3 seconds.

Be sure again not to put an excessive mechanical stress on devices, such as a rough insertion of device into a through-hole, or manual reforming of leads after soldering.



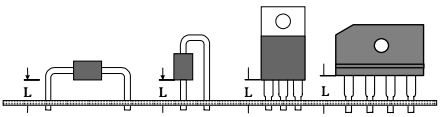


Figure 2. Rated Duration of Immersion vs. Solder Temperature

Recommended Soldering Techniques

Introduction

The soldering process is the means by which electronic components are mechanically and electrically connected into the circuit assembly. Adhering to good soldering practices will preserve the inherent reliability of the original components and ensure a good, reliable connection of the component into the circuit assembly.

Soldering Considerations

Substrates : A substrate is a material which constitutes a printed circuit board, commonly called a PCB.

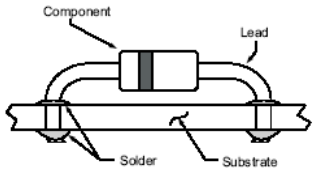


Fig. 1 Axial-Leaded Components

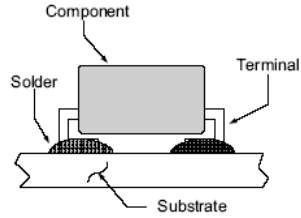


Fig. 2 Surface Mount Components

There are many different types of PCB substrate materials. Among the most common are the following:

Substrate	Advantages	Disadvantages
Phenolic	Very inexpensive, easy to punch and drill.	Poor resistance to vibration and mechanical shock.
FR-4	Inexpensive, moderately easy to drill.	Cannot be punched, heavy components need mechanical support.
Alumina	Good resistance to mechanical shock.	Expensive, poor coefficient of expansion match to glass.

To select the most appropriate substrate material for the application, the designer of the circuit assembly must weigh these five factors:

1. coefficients of expansion for all the components which will be soldered onto the PCB,
2. coefficient of expansion for the substrate,
3. cost of the substrate,
3. cost of any secondary operations to the substrate, such as the drilling of “through-holes”, and
5. application-specific issues, such as vibration resistance and weight.

It is important to match the coefficients of expansion for the components to those for the PC board. When a PCB assembly is soldered and the coefficients of expansion for the components and the PC board are not matched, the solder joints may crack or the bodies of the parts may crack or shatter as the assembly cools.

PCB Pad Layout and Solder Paste Thickness: It is important to use proper layout patterns in order to ensure good solder connections, especially for surface mount components soldered by a reflow process. Many surface mount components have more than three terminals which form the "footprint" for the devices. Ideally, every terminal of the device would be formed to create a perfect mounting plane. In the real world, there is a tolerance associated with how close each lead comes to meeting the intended plane. A measure of this characteristic is called coplanarity. In most cases, some of the terminals of a device will not be perfectly aligned with the intended mounting plane. In an infrared reflow solder process, the PCB pads are coated with a solder paste (Figure 3). When the assembly is heated in an oven, the solder paste warms and reflows. As the solder paste liquefies, it forms an apex at the center of the PCB pad. This apex must contact the terminal of the device in order to make contact. When using an IR reflow process, the solder process engineer must take into account the pad layout and the coplanarity of the devices when determining the solder paste thickness. Figure 4 shows a failure mode where the device has poor coplanarity and the solder paste thickness is insufficient for the apex of the liquefied solder to contact the poorly formed terminal.

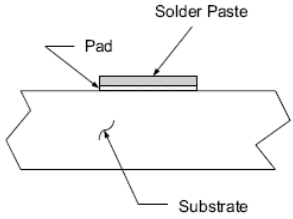


Fig. 3 PCB With Solder Paste Before

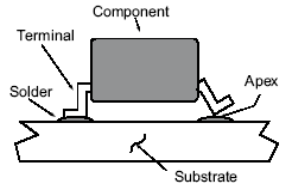


Fig. 4 Device Exhibiting Poor Coplanarity

Component Insertion and Reflow

Care must also be taken not to use too much solder paste. Excessive solder paste will result in too much solder on the pad. The terminals of many surface mount components are designed to flex, which allows the terminals of the component to withstand mechanical and thermal stress without fracturing. When excessive solder is applied, the terminals become captivated within the solder and force is transferred away from the terminals and into the internal structure of the device. This can lead to immediate or latent failures. Figure 5 shows a solder connection with the proper amount of solder and figure 6 shows excessive solder.

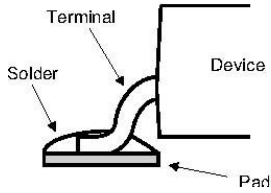


Fig. 5 A Good Solder Connection

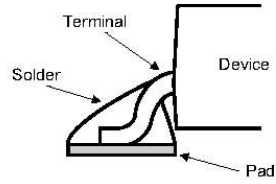


Fig. 6 Excessive Solder

Fluxing and Cleaning: Another major consideration in soldering is fluxing. Flux, used in conjunction with solder during the soldering process, is the material that aids the solder in flowing. The selection of the proper flux and its correct application are essential to proper soldering. Fluxes have differing levels of activity, or abilities to remove contaminants from the device terminals and PCB pads.

A key characteristic of fluxes is their solubility. The solubility of the flux determines which wash processes can be used to remove the flux. In the past, many circuit assembly facilities used active, non-water soluble fluxes. Active fluxes are able to remove surface oxides from the leads or terminals of the devices and result in even, smooth solder joints with excellent wettability. However, active fluxes are highly corrosive. When active fluxes are not completely removed, the solder joints are more likely to corrode and the long-term reliability of the assembly may be degraded. Active fluxes must be removed from the PCB. The removal process is called cleaning or washing. Many materials which are highly effective at removing flux (such as freon and trichloroethane) became subject to environmental legislation several years ago, and they are now illegal in environmentally-conscious countries. As a result of these concerns, the following two trends have emerged:

1. Some circuit assemblers have migrated to low activity fluxes. Fluxes are available now which have such low activity levels that it is not necessary to remove them from the PCB. Such fluxes are commonly referred to as “no-wash” “ leave-on” fluxes. However, low activity fluxes frequently lead to wettability problems. Wettability is a measure of how well the solder joins the device lead or terminal to the PC board (Figure 7). Two important factors in a low-activity flux process are the cleanliness of the device leads or terminals, and the plating thickness of the leads or terminals. If the terminals of a device are not sufficiently clean, de-wetting can occur. If the plating thickness of the device terminals is insufficient, non-wetting can occur.

- De-wetting: Fluxes with low activity levels are not as effective at removing oxides and contaminants from device leads or terminals as active fluxes. When contaminants are not properly removed from the pads and/or the leads of the devices, de-wetting can occur. De-wetting is characterized by irregular and dispersed solder droplets on the joint surface, often separated by a thin layer of solder between them.

- Non-wetting: Solder may not adhere to the leads or terminals of a device if the plating thickness is too thin. This problem especially applies to axial-leaded devices since the solder must bridge across the through-hole from the pad to the lead (Figure 8)

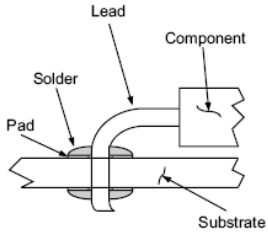


Fig. 7 A Solder Joint Exhibiting Good Wetting

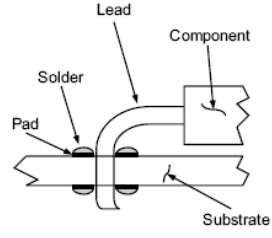


Fig. 8 Non-wetting Solder Joint

2. Due to the aforementioned concerns pertaining to low activity fluxes, the electronics industry has developed highly active fluxes which are water soluble. These new types of fluxes offer the effectiveness of a highly active flux in conjunction with water-solubility for ease of cleaning.

Plating Composition: The leads or terminals of components usually consist of either copper, a copper alloy, or other alloys such as dumet. The leads are plated with one or more other metals. Three common plating materials are tin, lead, and silver. The composition of the plating material directly affects the solderability of the device. When an alloy is used for plating, the temperature at which it transitions from its solid to liquid state is called the eutectic temperature. Many axial-leaded components are plated with either 100% Tin (Sn), or 90% Tin (Sn)/10% Lead (Pb). 100% Tin has a melting point of approximately 232°C, and 90Sn/10Pb has a eutectic temperature of approximately 216°C. Many surface mount components are plated with an alloy of 60% Tin, 40% Lead (Pb), which is eutectic at approximately 190°C. The eutectic temperature of the plating alloy determines the minimum limit of the soldering process temperature in order to reflow the plating on the device's leads or terminals.

Body Composition: The body composition of the devices is also pertinent to the soldering process. The body material of many components consists of plastic epoxies, which can be grouped into two main categories:

- Thermoplastics: Thermoplastics can be melted and remolded more than once. One such body material is called Thermoplastics, which melts at around 280°C. Thermoplastics has a melting temperature which is relatively close to the eutectic point of the plating on their leads or terminals. Solder process engineers should make sure that the peak soldering temperature does not exceed the melting temperature of any thermoplastic-bodied devices.

- Thermosetting plastics: In contrast to thermoplastics, thermosetting plastics, such as Duroplast, are formed only once. Subsequent exposures to high temperatures (such as those in the range of most solder processes) cause the material to harden instead of soften. Exposure to excessively high heat causes a thermosetting plastic to crack or crumble.

Soldering Methods and Process Stages

Soldering methods commonly used today include:

- Wave soldering: Wave soldering is still widely employed for axial leaded devices and for mixed technology boards. Surface mount components can be wave soldered successfully if the recommendations in this document are followed. Surface mount components must first be mounted to the PCB with an adhesive before they can pass through the solder wave.

- Reflow soldering: Most surface mount components are reflow soldered. The two major types of reflow processes are:
  1. Infrared reflow- the most common type of reflow process.
  2. Vapor phase reflow- rapidly disappearing due to environmental restrictions on fluorocarbons.

There are four process stages in soldering:

1. Preheat: The preheat process is very important in any kind of soldering process. To avoid thermally shocking the components, PCB assemblies must be preheated. Immediate or latent damage can occur to the components if they are not preheated properly.
2. Soak: A soak period is advisable so that components of differing thermal mass will approach a similar temperature prior to the peak stage. During reflow soldering, this is the period where the flux begins to break down the oxides which would inhibit solder adhesion.

Soldering Methods and Process Stages (continued)

3. Peak/Reflow:
   - Temperature: The range of the peak soldering temperature depends on several factors, two of which have been described in previous sections: plating and body compositions. The minimum soldering temperature range should be at least 5-10°C higher than the eutectic temperature of the plating alloy. The maximum soldering temperature should be at least 5-10°C lower than the melting temperature of any thermoplastic components (if used).
   - Time: The devices must be held at the peak soldering temperature long enough to ensure the proper wetting of the solder connections. However, keeping the peak soldering time to a minimum to avoid the possibility of damage to the devices and to increase throughput, is recommended.

4. Cool down: After the devices are exposed to the peak soldering temperature, they go through a cool down process. Although some manufacturers cool their PCB assemblies in free air, it is better to use a controlled temperature chamber for superior control of the thermal gradient.

Suggested Thermal Profiles for Soldering Processes

LSC presents the following general thermal profiles for soldering processes (Figures 9 and 10) as examples only. The solder process engineer should always optimize the thermal profile for each circuit assembly based on its specific requirements.

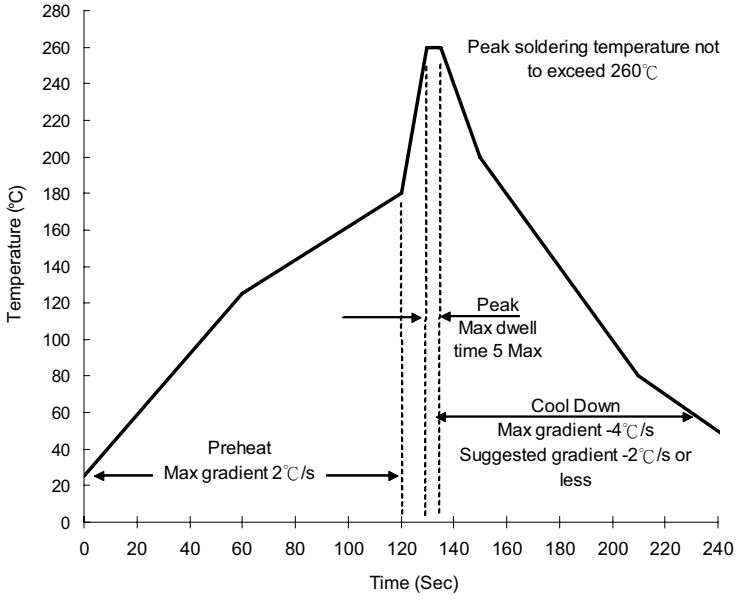


Fig. 9 Typical Wave Soldering Thermal Profile

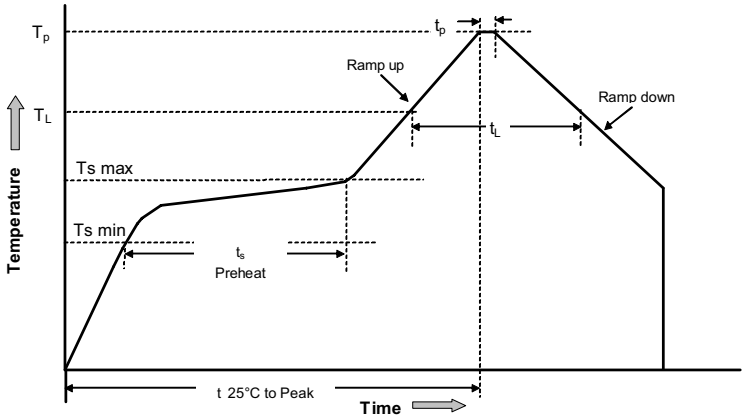


Fig. 10 Typical IR Reflow Soldering Thermal Profile

Table 1- Reflow profile

Reflow condition	Sn-Pb assembly	Pb-free assembly
Average ramp-up rate (Liquidus Temperautre (TL) to Peak)	3 °C/second max.	3 °C/second max.
Preheat --Tempautre Min, Ts (Min) --Temperature Max, Ts (Max) --Time (min to max, ts)	 100 °C 150 °C 60-120 seconds	 150 °C 200 °C 60-180 seconds
Ts(max) to TL - Ramp-up Rate		3 °C/second max.
Time maintained above: --Temperature(TL) --Time(tL)	 183 °C 60-150 seconds	 217 °C 60-150 seconds
Peak Temperature (Tp)	240 +0/-5 °C	260 +0/-5 °C
Time within 5 °C of actual Peak Temperature(tp)	10-30 seconds	20-40 seconds
Ramp-down Rate	6 °C/second max.	6 °C/second max.
Time 25 °C to Peak Temperature.	6 minutes max.	8 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

Soldering Process Suggestions

1. Due to the differing thermal capacities of large and small components and equipment wear, localized “hot spots” and “cold spots” may be generated during reflow soldering. Special care should be taken to avoid the damage of small components in “hot spots” and de-wetting or non-wetting of larger components in “cold spots”. A good practice is to mount miniature thermocouples in several locations on the PCB which are suspected to be hot and cold spots. The reflow solder profile can then be adjusted accordingly to result in optimal soldering. A good practice is to place the PCB assemblies at regular, repeated positions on the conveyor system to achieve uniform soldering on successive assemblies.

Soldering Process Suggestions (continued)

2. The leads on most LSC. RoHS compliant (Pb-free) devices have a Matte Tin (Sn) plating finish over an ALLOY 42 Lead Frame. Some devices have silver (Ag) plating. The Matte Tin finish requires a higher solder temperature (235-255°C) than our standard products (217-235°C), which have an tin/lead (Sn-Pb) finish.

3. IPC/JEDEC document J-STD-020C provides a reflow profile applicable to both Sn-Pb and Pb-free devices. This profile is not a recommendation for reflow soldering. Rather, it is a temperature vs. time profile that a device must withstand without failure in order to maintain a desired moisture sensitivity level. In that sense, it represents the maximum stress to which a device should be subjected.

4. LSC. soldering recommendations are within the JEDEC profile and should be considered a reasonable starting point in developing a profile for reflow soldering. Actual temperatures will depend on your soldering alloy, PCB layout, weight of copper, pad sizes, and other variables. In any event, temperatures in excess of 260°C violate LSC. specifications.

Recommendations for Rework

Hot Gas Pencils: Hot gas pencils should be set up to limit the gas temperature to a maximum of 300°C at a distance of 3mm from the nozzle tip.

Soldering Irons:

1. Only thermostatically-controlled irons should be used. The bit should have a diameter not exceeding 1mm and should be set so that its maximum temperature never exceeds 300°C.

2. The bit must not touch the component body. Contact should only be with the component leads or the land pads on the printed circuit board (Figure 11).

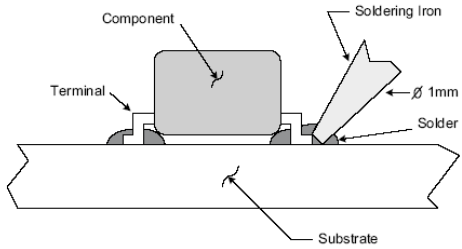


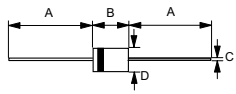
Fig. 11 Rework by Soldering Iron

3. The maximum permitted temperature-time combination on the component lead is 300°C for 10 sec.

Attention: The Maximum number of Heat treatment (reflow or rework) is 3 times for Sn-Pb or Pb-free soldering.

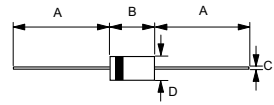
OUTLINE DIMENSIONS

T-1



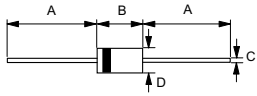
T-1		
Dim.	Min.	Max.
A	25.4	-
B	2.60	3.20
C	0.53 Ø	0.64 Ø
D	2.20 Ø	2.60 Ø
All Dimensions in millimeter		

A- 405



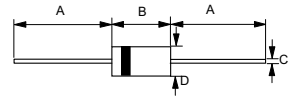
A-405		
Dim.	Min.	Max.
A	25.4	-
B	4.10	5.20
C	0.53 Ø	0.64 Ø
D	2.00 Ø	2.70 Ø
All Dimensions in millimeter		

DO-41



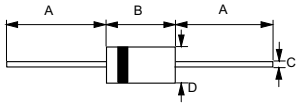
DO-41		
Dim.	Min.	Max.
A	25.4	-
B	4.10	5.20
C	0.71 Ø	0.86Ø
D	2.00 Ø	2.70Ø
All Dimensions in millimeter		

DO-15



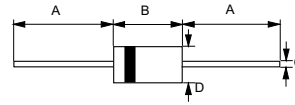
DO-15		
Dim.	Min.	Max.
A	25.4	-
B	5.80	7.60
C	0.71 Ø	0.86 Ø
D	2.60 Ø	3.60 Ø
All Dimensions in millimeter		

DO-201AD



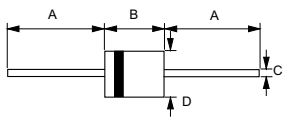
DO-201AD		
Dim.	Min.	Max.
A	25.4	-
B	7.30	9.50
C	1.20 Ø	1.30 Ø
D	4.80 Ø	5.30 Ø
All Dimensions in millimeter		

DO-201



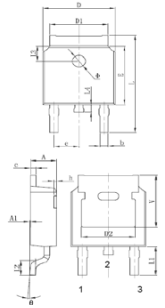
DO-201		
Dim.	Min.	Max.
A	25.4	-
B	8.50	9.50
C	0.96 Ø	1.06 Ø
D	4.80 Ø	5.30 Ø
All Dimensions in millimeter		

R-6



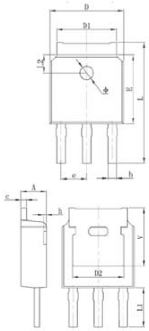
R-6		
Dim.	Min.	Max.
A	25.4	-
B	8.60	9.10
C	1.20 Ø	1.30 Ø
D	8.60 Ø	9.10 Ø
All Dimensions in millimeter		

DPAK



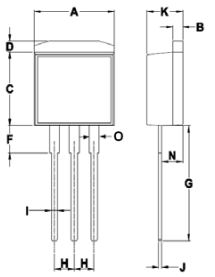
DPAK		
DIM	MIN.	MAX.
A	2.20	2.40
A1	0.00	0.13
b	0.66	0.86
c	0.46	0.58
D	6.50	6.70
D1	5.10	5.46
D2	4.83 REF.	
E	6.00	6.20
e	2.19	2.39
L	9.80	10.40
L1	2.90 REF.	
L2	1.40	1.70
L3	1.6 REF.	
L4	0.60	1.00
Φ	1.10	1.30
θ	0°	8°
h	0.00	0.30
V	5.35 REF.	
All Dimension in millimeter		

IPAK-S



IPAK-S		
Dim	Min.	Max.
A	2.2	2.4
b	0.66	0.86
c	0.46	0.58
D	6.5	6.7
D1	5.1	5.46
D2	4.830 REF.	
E	6	6.2
e	2.186	2.386
L	10.4	11
L1	3.500 REF.	
L2	1.600 REF	
Φ	1.1	1.3
h	0	0.3
V	5.350 REF.	
All Dimensions in millimeter		

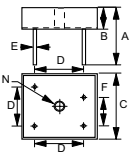
I2PAK



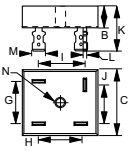
I²PAK		
DIM.	MIN.	MAX.
A	9.65	10.69
B	1.14	1.40
C	8.25	9.25
D	-	1.40
F	-	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.3	0.64
K	3.56	4.83
N	2.03	2.92
O	1.14	1.70
All Dimensions in millimeter		

KBPC-G

KBPC-GW (Wire)

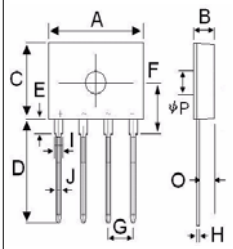


KBPC-G (Terminal)



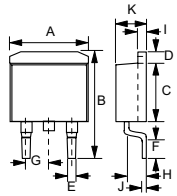
KBPC-G / KBPC-GW		
DIM.	MIN.	MAX.
A	31.80	-
B	7.90	8.40
C	28.30	28.80
D	17.60	18.60
E	0.97	1.07
F	10.90	11.90
G	17.60	18.60
H	13.80	14.80
I	16.10	17.10
J	16.10	17.10
K	18.80	21.30
L	0.76	0.86
M	6.30	6.50
N	HOLE FOR NO. 10 SCREW	
	5.08	5.59
All Dimensions in millimeter		

GBP



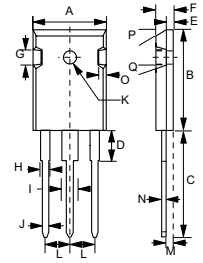
GBP		
Dim.	Min.	Max.
A	14.2	14.7
B	2.9	3.3
C	10.1	10.7
D	13.8	14.4
E	1.8	2.2
F	6.65	7.25
G	3.71	3.91
H	0.4	0.6
I	1.20	1.40
J	0.64	0.84
O	1.8	2.4
P	3.1 ϕ	3.3 ϕ
All Dimensions in millimeter		

D^2 PAK



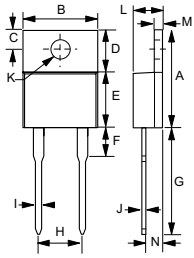
D^2-PAK		
DIM.	MIN.	MAX.
A	9.65	10.69
B	14.60	15.88
C	8.25	9.25
D	----	1.67
E	0.51	1.14
F	2.29	2.79
G	2.29	2.79
H	2.03	2.92
I	1.14	1.40
J	0.30	0.64
K	4.37	4.83
All Dimensions in millimeter		

TO-3P



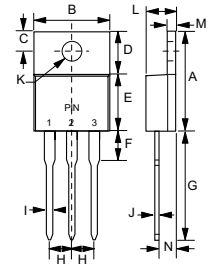
TO-3P		
DIM.	MIN.	MAX.
A	15.75	16.25
B	21.25	21.75
C	19.60	20.10
D	3.78	4.38
E	1.88	2.08
F	4.87	5.13
G	-	4.40
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90⌀	3.20⌀
L	5.20	5.70
M	2.10	2.40
N	0.51	0.76
O	1.93	2.18
P	-	20°
Q	-	10°
All Dimensions in millimeter		

TO- 220AC



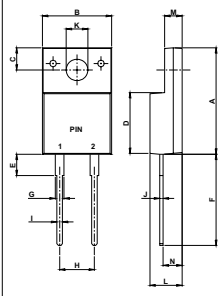
TO- 220AC		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	4.83	5.33
I	0.51	1.14
J	0.30	0.64
K	3.53 ⌀	4.09 ⌀
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
All Dimensions in millimeter		

TO-220AB



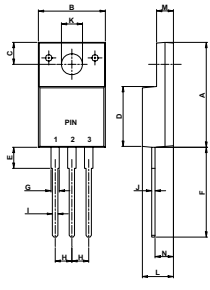
TO-220AB		
DIM.	MIN.	MAX.
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.30	0.64
K	3.53 ⌀	4.09 ⌀
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
All Dimensions in millimeter		

ITO-220AC



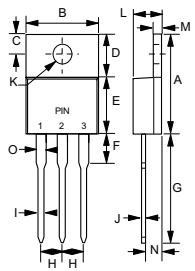
ITO-220AB		
DIM.	MIN.	MAX.
A	15.50	16.20
B	10.0	10.40
C	3.00	3.50
D	9.00	9.30
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	4.83	5.33
I	0.75	1.00
J	0.45	0.70
K	3.00 ⌀	3.30 ⌀
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80
All Dimensions in millimeter		

ITO-220AB



ITO-220AB		
DIM.	MIN.	MAX.
A	15.50	16.50
B	10.0	10.40
C	3.00	3.50
D	9.00	9.30
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	2.40	2.70
I	0.75	1.00
J	0.45	0.70
K	3.00 ⌀	3.30 ⌀
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80
All Dimensions in millimeter		

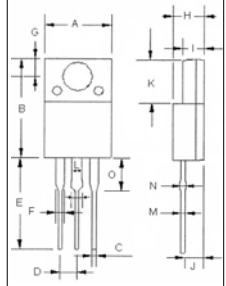
TO-220AB



* Only for Thyristor Device (Triac & SCR)

TO-220AB		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.40	0.67
K	3.53 ⌀	4.09 ⌀
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.17	1.37
All Dimensions in millimeter		

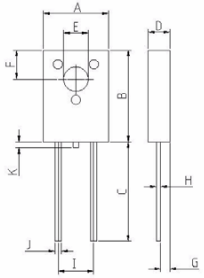
TO-220FP



* Only for Thyristor Device (Triac & SCR)

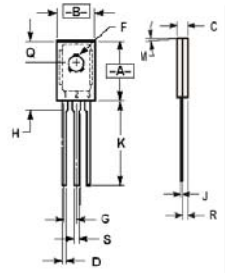
TO-220FP		
DIM.	MIN.	MAX.
A	9.95	10.10
B	15.00	15.30
C	0.55	0.70
D	2.35	2.73
E	13.35	13.55
F	1.11	1.45
G	2.60	2.83
H	4.49	4.50
I	3.10	3.25
J	2.60	2.80
K	6.80	7.10
L	1.48	1.66
M	0.60	0.68
N	0.62	0.78
O	3.60	3.90
P	3.00 ⌀	3.20 ⌀
All Dimensions in millimeter		

TO-126F



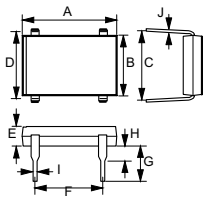
TO-126F		
DIM.	MIN.	MAX.
A	7.12	8.36
B	10.16	11.43
C	14.48	16.63
D	2.85	3.65
E	3.00 ⌀	3.30 ⌀
F	3.31	4.44
G	1.75	2.35
H	0.39	0.63
I	4.07	5.08
J	0.65	0.85
K	-----	1.20
All Dimensions in millimeter		

TO-126



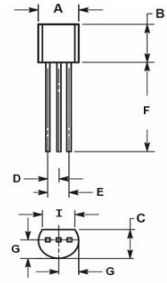
TO-126		
DIM.	MIN.	MAX.
A	10.16	11.43
B	7.12	8.38
C	2.29	3.04
D	0.64	0.88
F	2.54	3.3
G	2.04	2.54
H	-	2.54
J	0.39	0.63
K	15.12	16.63
M	3° TYP	
Q	3.31	4.44
R	0.89	1.65
S	0.64	0.88
All Dimensions in millimeter		

DF-M



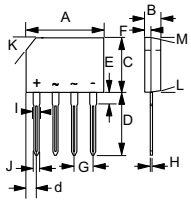
DF		
DIM.	MIN.	MAX.
A	8.20	8.50
B	6.20	6.50
C	7.60	8.90
D	7.40	7.60
E	2.40	2.60
F	5.00	5.20
G	4.10	4.60
H	1.27	2.03
I	0.41	0.51
J	0.22	0.30
All Dimensions in millimeter		

TO-92 (TO-226AA)



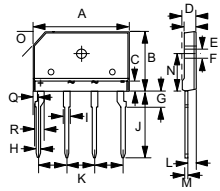
TO-92		
DIM.	MIN.	MAX.
A	4.45	4.70
B	4.32	5.33
C	3.18	4.19
D	1.15	1.39
E	2.42	2.66
F	12.7	------
G	2.04	2.66
I	3.43	-----
All Dimensions in millimeter		

KBP



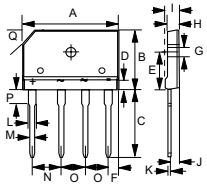
KBP		
DIM.	MIN.	MAX.
A	14.25	14.75
B	3.35	3.65
C	10.20	10.60
D	14.25	14.73
d	1.40	1.70
E	1.80	2.20
F	0.80	1.10
G	3.56	4.06
H	0.35	0.55
I	1.22	1.42
J	0.76	0.86
K	2.7 x 45°(Typ.)	
L	-	3°
M	-	2°
All Dimensions in millimeter		

KBJ



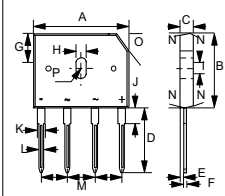
KBJ		
DIM.	MIN.	MAX.
A	24.80	25.20
B	14.70	15.30
C	3.90	4.10
D	4.40	4.80
E	3.40	3.80
F	3.10 ⌀	3.40 ⌀
G	3.30	3.70
H	0.90	1.10
I	1.50	1.90
J	17.2	17.80
K	7.30	7.70
L	2.50	2.90
M	0.60	0.80
N	9.30	9.70
O	3.0 x 45°	
Q	1.05	1.45
R	1.70	2.10
All Dimensions in millimeter		

GBJ



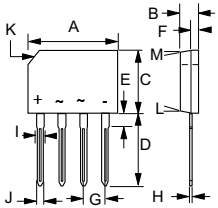
GBJ		
DIM.	MIN.	MAX.
A	29.70	30.30
B	19.70	20.30
C	17.00	18.00
D	4.70	4.90
E	10.80	11.20
F	2.30	2.70
G	3.10⌀	3.40 ⌀
H	3.40	3.80
I	4.40	4.80
J	2.50	2.90
K	0.60	0.80
L	2.00	2.40
M	0.90	1.10
N	9.80	10.20
O	7.30	7.70
P	3.80	4.20
Q	(3.0) x 45°	
All Dimensions in millimeter		

GBU



GBU		
DIM.	MIN.	MAX.
A	21.80	22.30
B	18.30	18.80
C	3.30	3.56
D	17.50	18.00
E	0.76	1.00
F	0.46	0.56
G	7.40	7.90
H	3.50	4.10
I	1.65	2.16
J	2.25	2.75
K	1.95	2.35
L	1.02	1.27
M	4.83	5.33
N	7.0° TYPICAL	
O	3.2 x 45°	
P	1.90 RADIUS	
All Dimensions in millimeter		

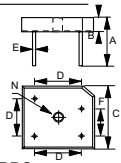
GBL



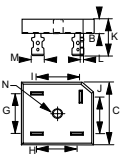
GBL		
DIM.	MIN.	MAX.
A	20.2	20.8
B	3.30	3.70
C	10.70	11.30
D	17.50	18.00
E	2.30	2.70
F	0.80	1.20
G	4.83	5.33
H	0.40	0.60
I	1.95	2.35
J	1.02	1.27
K	3.5 Typ.	
L	-	5°
M	-	5°
All Dimensions in millimeter		

GBPC

GBPC-W (Wire)

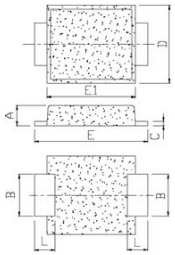


GBPC (Terminal)



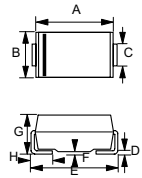
GBPC/GBPC-W		
DIM.	MIN.	MAX.
A	31.80	-
B	7.40	8.00
C	28.30	28.80
D	17.60	18.60
E	0.97	1.07
F	10.90	11.90
G	17.60	18.60
H	13.80	14.80
I	16.10	17.10
J	16.10	17.10
K	18.80	21.30
L	0.76	0.86
M	6.30	6.50
N	HOLE FOR NO. 10 SCREW	
	5.08	5.59
All Dimensions in millimeter		

DO-221AC



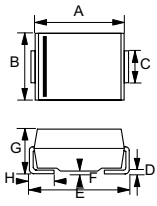
DO-221AC		
DIM.	MIN.	MAX.
A	0.90	1.10
B	1.25	1.65
C	0.15	0.40
D	2.25	2.95
E	4.80	5.60
E1	3.95	4.60
L	0.75	1.50
All dimension in millimeter		

SMA



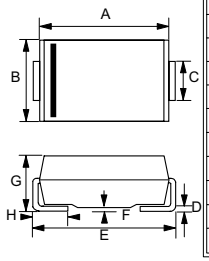
SMA		
DIM.	MIN.	MAX.
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	1.96	2.40
H	0.76	1.52
All Dimensions in millimeter		

SMB



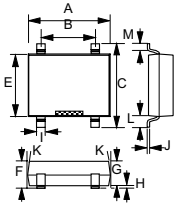
SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52
All Dimensions in millimeter		

SMC



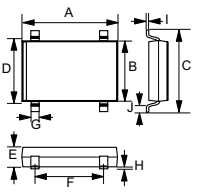
SMC		
DIM.	MIN.	MAX.
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52
All Dimensions in millimeter		

HDDF



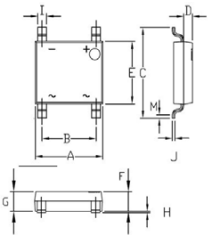
HDDF		
DIM.	MIN.	MAX.
A	4.50	4.90
B	2.30	2.70
C	–	7.00
E	3.60	4.00
F	–	3.00
G	2.30	2.70
H	–	0.20
I	0.50	0.80
J	0.15	0.35
K	5° TYPICAL	
L	1.30	1.70
M	0.70	1.10
All Dimensions in millimeter		

DF-S



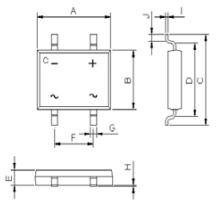
DF-S		
DIM.	MIN.	MAX.
A	8.20	8.50
B	6.20	6.50
C	-	10.30
D	7.40	7.90
E	2.40	2.60
F	5.00	5.20
G	1.00	–
H	.076	.330
I	.220	.300
J	1.02	1.53
All Dimensions in millimeter		

TD



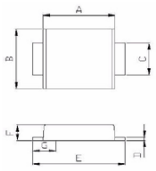
DIM.	MIN.	MAX.
A	4.90	5.10
B	3.95	4.05
C	6.30	6.45
D	0.60	0.70
E	4.30	4.5
F	1.4	1.6
G	1.35	1.45
H	0.05	0.15
I	0.60	0.70
J	0.15	0.25
M	0.30	0.60
All dimensions in mm.		

TT



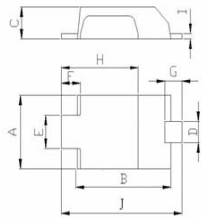
TT		
DIM	MIN	MAX
A	9.45	9.75
B	6.30	6.75
C	9.75	10.05
D	7.85	8.15
E	1.4	1.6
F	4.9	5.1
G	0.7	0.9
H	0.1	0.2
I	0.15	0.35
J	0.45	0.95
All Dimensions in millimeter		

DO-221AA



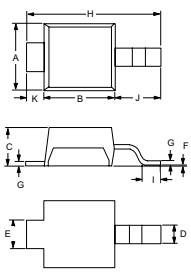
SMB FLAT		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.90	1.05
G	0.76	1.52
All Dimensions in millimeter		

DO-222AA



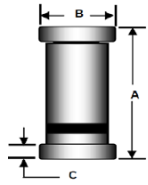
DO-222AA		
DIM.	MIN.	MAX.
A	1.75	2.05
B	2.80	3.10
C	0.80	0.95
D	0.40	0.65
E	0.70	1.00
F	0.45	0.75
G	0.50	0.80
H	2.10	2.60
I	0.10	0.25
J	3.60	3.90
All Dimensions in millimeter		

DO-216AA



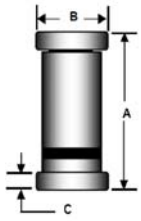
DO216AA		
DIM.	MIN.	MAX.
A	1.75	2.05
B	1.80	2.20
C	0.95	1.25
D	0.42	0.68
E	0.70	1.00
F	-0.05	+0.10
G	0.10	0.25
H	3.65	3.95
I	0.40	0.70
J	1.10	1.50
K	0.20	0.80
All Dimensions in millimeter		

LL-34



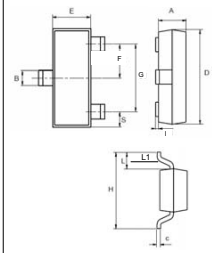
LL-34		
DIM.	MIN.	MAX.
A	3.30	3.60
B	1.40	1.50
C	0.35	0.5
All Dimensions in millimeter		

LL41



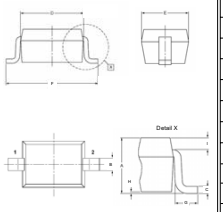
LL-41		
DIM.	MIN.	MAX.
A	4.80	5.20
B	2.39	2.66
C	0.41	0.55
All Dimensions in millimeter		

SOT23



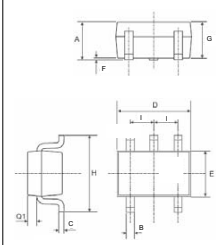
SOT23		
DIM.	MIN.	MAX.
A	0.89	1.20
B	0.30	0.51
C	0.085	0.18
D	2.75	3.04
E	1.20	1.60
F	0.85	1.05
G	1.70	2.10
H	2.10	2.75
I	0.0	0.1
L	0.6 typ.	
L1	0.30	0.65
S	0.35	0.65
All Dimensions in millimeter		

SOD323



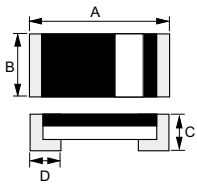
SOD323		
DIM.	MIN.	MAX.
A	0.80	1.10
B	0.25	0.40
C	0.10	0.25
D	1.60	1.80
E	1.15	1.35
F	2.30	2.70
G	0.15	0.45
H	-----	0.05
I	0.15	0.25
All Dimensions in millimeter		

SOT353



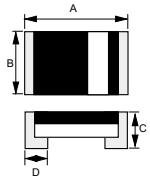
SOT353		
DIM.	MIN.	MAX.
A	0.80	1.10
B	0.15	0.30
C	0.10	0.18
D	1,80	2.20
E	1.15	1.35
F	0	0.1
G	0.80	1.00
H	1.80	2.40
I	0.65 typ.	
Q1	0.1	0.4
All Dimensions in millimeter		

0603



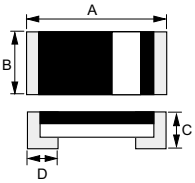
0603		
Dim.	Min.	Max.
A	1.45	1.65
B	0.70	0.90
C	0.55	0.75
D	0.25	0.45
All Dimensions in millimeter		

0805



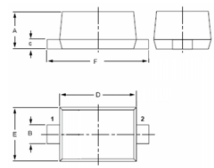
0805		
Dim.	Min.	Max.
A	1.80	2.20
B	1.05	1.45
C	0.75	0.95
D	0.25	0.65
All Dimensions in millimeter		

1206



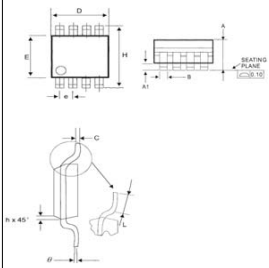
1206		
Dim.	Min.	Max.
A	3.00	3.40
B	1.30	1.70
C	0.75	0.95
D	0.35	0.75
All Dimensions in millimeter		

SOD-523



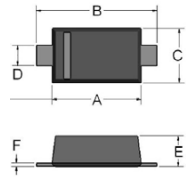
SOD-523		
DIM.	MIN.	MAX.
A	0.51	0.77
B	0.25	0.35
C	0.08	0.15
D	1.10	1.30
E	0.75	0.85
F	1.50	1.70
All Dimensions in millimeter		

SOP-8



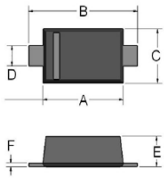
DIM	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
C	0.18	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
h	0.25	0.50
L	0.40	1.25
θ	0°	7°

SOD-523F



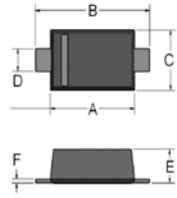
SOD-523F		
DIM.	MIN.	MAX.
A	1.10	1.30
B	1.50	1.70
C	0.7	0.9
D	0.25	0.35
E	0.50	0.70
F	0.05	0.20
All Dimensions in millimeter		

SOD-323F



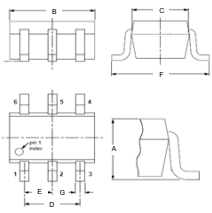
SOD-323F		
DIM.	MIN.	MAX.
A	1.60	1.80
B	2.30	2.70
C	1.15	1.35
D	0.25	0.40
E	0.80	1.00
F	0.05	0.25
All Dimensions in millimeter		

SOD-123F



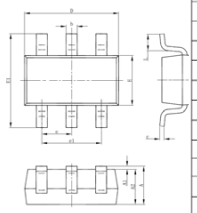
SOD-123F		
DIM.	MIN.	MAX.
A	2.50	2.70
B	3.30	3.70
C	1.50	1.70
D	0.50	0.70
E	0.80	1.00
F	0.05	0.20
All Dimensions in millimeter		

SOT-363



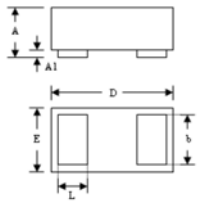
SOT363		
DIM.	MIN.	MAX.
A	0.80	1.10
B	1.80	2.20
C	1.15	1.40
D	1.30 (Typ.)	
E	0.65 (Typ.)	
F	2.00	2.45
G	0.15	0.35
All Dimensions in millimeter		

SOT23-6L



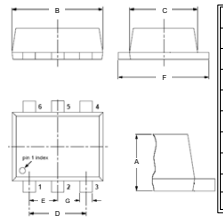
SOT23-6L		
DIM.	MIN.	MAX.
A	0.90	1.45
A1	0.00	0.15
A2	0.90	1.30
b	0.30	0.50
c	0.08	0.22
D	2.45	3.00
E	1.50	1.75
E1	2.65	2.95
e	0.95 typ.	
e1	1.90 typ.	
L	0.30	0.60
All Dimensions in millimeter		

SOD-882



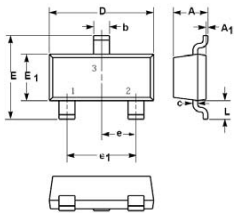
SOD-882		
DIM.	MIN.	MAX.
A	0.47	0.53
A1	0.00	0.05
b	0.25	0.55
D	0.95	1.075
E	0.55	0.675
L	0.20	0.45
All Dimensions in millimeter		

SOT-563



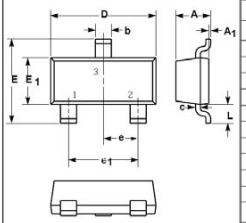
SOT563		
DIM.	MIN.	MAX.
A	0.50	0.60
B	1.50	1.70
C	1.10	1.30
D	1.00 (Typ.)	
E	0.50 (Typ.)	
F	1.50	1.70
G	0.17	0.27
All Dimensions in millimeter		

SOT-323



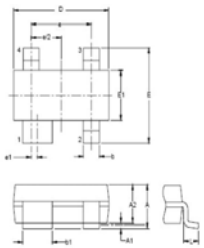
SOT-323		
Dim.	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	2.15	2.45
E1	1.15	1.35
e	0.65 Typ.	
e1	1.20	1.40
L	0.525 Ref.	
Dimensions in millimeter		

SOT-523



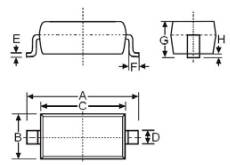
SOT-523		
Dim.	Min.	Max.
A	0.70	0.90
A1	0.00	0.10
b	0.25	0.325
c	0.10	0.20
D	1.50	1.70
E	1.45	1.75
E1	0.75	0.85
e	0.50 Typ.	
e1	0.90	1.10
L	0.55 Ref.	
Dimensions in millimeter		

SOT-143



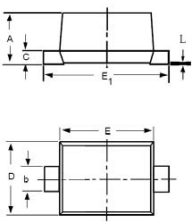
SOT-143		
DIM.	MIN.	MAX.
A	0.80	1.22
A1	0.013	0.15
A2	0.75	1.07
b	0.30	0.51
b1	0.76	0.94
D	2.80	3.04
E	2.10	2.64
E1	1.20	1.4
e	1.92 BSC	
e1	0.20 BSC	
L	0.40	0.60
All Dimensions in millimeter		

SOD-123



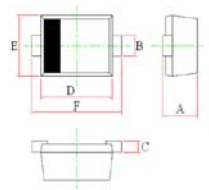
SOD-123		
Dim.	Min.	Max.
A	3.55	3.85
B	1.50	1.70
C	2.60	2.80
D	0.45	0.65
E	0.08	0.15
F	0.25	0.45
G	1.05	1.25
H	0.00	0.10
Dimensions in millimeter		

SOD-723



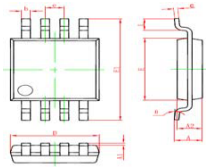
SOD-723		
Dim.	Min.	Max.
A	0.525	0.65
b	0.25	0.35
C	0.08	0.15
D	0.55	0.65
E	0.90	1.10
E1	1.30	1.50
L	0.01	0.07
Dimensions in millimeter		

SOD-923



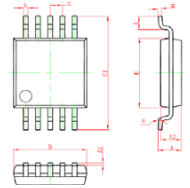
SOD-923		
DIM.	MIN.	MAX.
A	0.36	0.41
B	0.18	0.26
C	0.08	0.14
D	0.76	0.84
E	0.56	0.64
F	0.92	1.08
All Dimensions in millimeter		

MSOP-8L



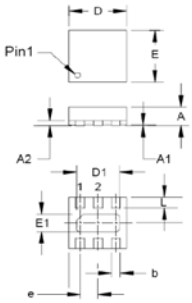
MOSP-8L		
DIM.	MIN.	MAX.
A	0.82	1.10
A1	0.02	0.15
A2	0.75	0.95
b	0.25	0.38
c	0.09	0.23
D	2.90	3.10
e	0.65 BSC	
E	2.90	3.10
E1	4.75	5.05
L	0.40	0.80
All Dimensions in millimeter		

MSOP-10L



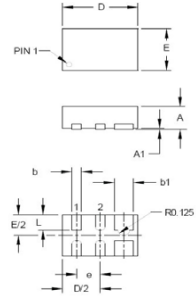
MSOP-10L		
DIM.	MIN.	MAX.
A	0.82	1.10
A1	0.02	0.15
A2	0.75	0.95
b	0.18	0.28
c	0.09	0.23
D	2.90	3.10
e	0.50 BSC	
E	2.90	3.10
E1	4.75	5.05
L	0.40	0.80
θ	0	6
All Dimensions in millimeter		

SLP1616P6



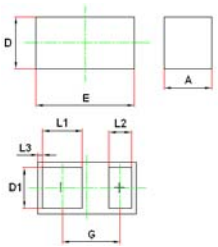
SLP1616P6		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
A2	0.15	
b	0.20	0.30
D	1.50	1.70
D1	1.05	1.30
E	1.50	1.70
E1	0.40	0.65
e	0.50 BSC	
L	0.25	0.40
All Dimensions in millimeter		

SLP1610P4



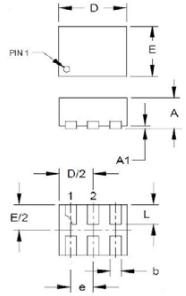
SLP1610P4		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
b	0.15	0.25
b1	0.35	0.45
D	1.50	1.70
E	0.90	1.10
e	0.50 BSC	
L	0.30	0.43
All Dimensions in millimeter		

SLP0603P2



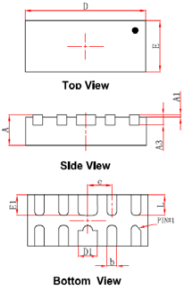
SLP0603P2		
DIM.	MIN.	MAX.
A	0.25	0.35
D	0.26	0.38
E	0.57	0.67
D1	0.215	0.285
L1	0.215	0.285
L2	0.105	0.175
L3	0.03 REF.	
G	0.33	0.4
All Dimensions in millimeter		

SLP1210P6



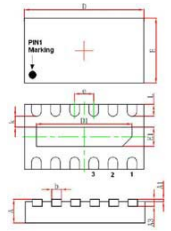
SLP1210P6		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
b	0.20	0.25
D	1.10	1.30
E	0.90	1.10
e	0.40 BSC	
L	0.30	0.43
All Dimensions in millimeter		

SLP2510P8



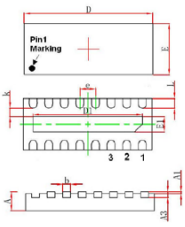
SLP2510P8		
DIM.	MIN.	MAX.
A	0.45	0.55
A1	0.00	0.05
A3	0.152 REF.	
D	2.45	2.55
E	0.95	1.05
D1	0.35	0.45
E1	0.35	0.45
b	0.15	0.25
e	0.50 BSC	
L	0.35	0.45
All Dimensions in millimeter		

SLP2513P12



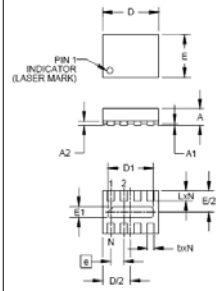
SLP2513P12		
DIM.	MIN.	MAX.
A	0.45	0.65
A1	0.00	0.05
A3	0.15 REF	
D	2.42	2.58
E	1.27	1.43
D1	1.9	2.1
E1	0.3	0.5
K	0.2 MIN	
b	0.15	0/25
e	0.4 TYP	
L	0.17	0.33
All Dimensions in millimeter		

SLP3313P16



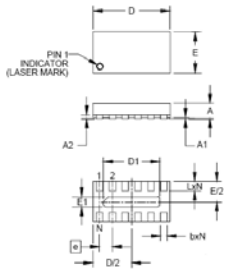
SLP3313P16		
DIM.	MIN.	MAX.
A	0.45	0.65
A1	0.00	0.05
A3	0.15 REF	
D	3.22	3.38
E	1.27	1.43
D1	2.7	2.9
E1	0.3	0.5
K	0.2 MIN	
b	0.15	0/25
e	0.4 TYP	
L	0.17	0.33
All Dimensions in millimeter		

SLP2116P8



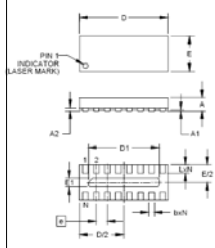
SLP2116P8		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
A2	(0.15)	
b	0.20	0.30
D	2.00	2.20
D1	1.55	1.80
E	1.50	1.70
E1	0.25	0.50
e	0.50 BSC	
L	0.28	0.38
All Dimensions in millimeter		

SLP3016P12



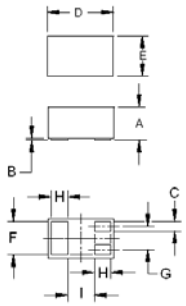
SLP3016P12		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
A2	(0.15)	
b	0.20	0.30
D	2.90	3.10
D1	2.10	2.30
E	1.50	1.70
E1	0.25	0.50
e	0.50 BSC	
L	0.28	0.38
All Dimensions in millimeter		

SLP4016P16



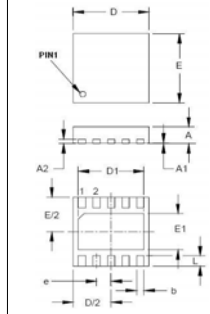
SLP4016P16		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
A2	(0.13)	
b	0.20	0.30
D	3.90	4.10
D1	3.10	3.30
E	1.50	1.70
E1	0.25	0.50
e	0.50 BSC	
L	0.28	0.38
All Dimensions in millimeter		

SLP1006P3



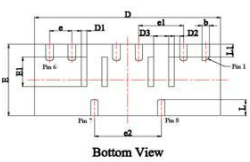
SLP1006P3		
DIM.	MIN.	MAX.
A	0.40	0.55
B	0.00	0.05
C	0.10	0.20
D	0.90	1.10
E	0.50	0.70
F	0.45	0.55
G	0.35 Typ.	
H	0.20	0.30
I	0.40 Typ.	
All Dimensions in millimeter		

SLP2626P10



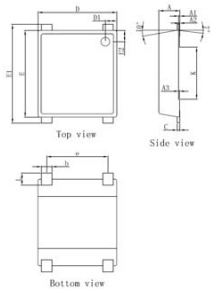
SLP2626P10		
DIM.	MIN.	MAX.
A	0.50	0.65
A1	0.00	0.05
A2	0.17 Typ.	
b	0.20	0.30
D	2.50	2.70
D1	2.00	2.25
E	2.50	2.70
E1	1.11	1.36
e	0.5 Typ.	
L	0.30	0.40
All Dimensions in millimeter		

SLP5020P8



SLP5020P8		
DIM.	MIN.	MAX.
A	0.45	0.55
A1	0.00	0.05
A2	0.152 REF.	
D	4.95	5.05
D1	0.10	0.20
D2	0.10	0.20
D3	0.35	0.45
E	1.95	2.05
E1	0.75	0.90
b	0.15	0.25
e	0.60 BSC	
e1	1.20 BSC	
e2	1.80 BSC	
L	0.40	0.50
L1	0.30	0.45
All Dimensions in millimeter		

MSB

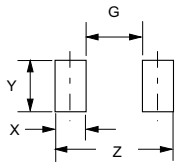


MSB1			
Dim.	Min.	Typ.	Max.
A	1.10	1.20	1.30
A1	0.05	---	0.08
A2	0.00	0.02	0.05
A3	0.03	0.05	0.08
C	0.12	0.15	0.18
D	4.40	4.5	4.60
D1	0.60	0.65	0.70
E	4.90	5.00	5.10
E1	5.60	5.70	5.80
E2	0.60	0.65	0.70
L	0.65	0.70	0.75
b	0.55	0.60	0.70
e	3.45	3.50	3.55
K	2.95	3.00	3.05
All dimensions in millimeter			

SUGGESTED PAD LAYOUT

FIG.1

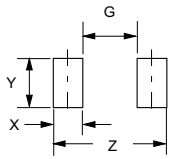
0603 / 0805 / 1206 / SMA / SMB / SMC



Dim.	All Dimensions in Millimeters					
	0603	0805	1206	SMA	SMB	SMC
G	0.85	1.22	2.16	2.90	2.90	5.60
X	0.51	0.51	0.64	2.30	2.30	2.30
Y	1.00	1.40	1.70	2.40	3.00	4.00
Z	1.87	2.24	3.43	7.50	7.50	10.20

FIG.2

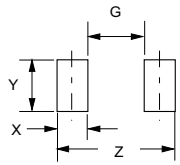
DO-221AA / DO-221AC / LL34 / SOD-123 / SOD-123F / DFN1006-2PIN



Dim.	All Dimensions in Millimeters					
	DO-221AA	DO-221AC	LL34	SOD-123	SOD-123F	DFN1006-2PIN
G	2.90	2.90	2.20	2.45	1.70	0.20
X	2.30	2.30	1.40	1.25	1.80	0.50
Y	3.00	2.40	1.60	1.00	1.10	0.50
Z	7.50	7.50	5.00	4.95	5.30	1.20

FIG.3

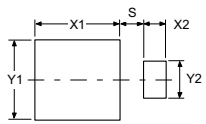
SLP0603P2 / SOD-323 / SOD-323F / SOD-523 / SOD-523F
SOD-723 / SOD-882 / SOD-923



Dim.	All Dimensions in Millimeters					
	SLP0603P2	SOD-323 SOD-323F	SOD-523 SOD-523F	SOD-723	SOD-882	SOD-923
G	0.15	1.25	0.70	0.40	0.30	0.60
X	0.30	0.90	0.80	1.00	0.55	0.30
Y	0.35	0.70	0.60	0.80	0.60	0.40
Z	0.75	3.05	2.30	2.40	1.40	1.20

FIG.4

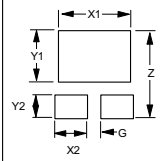
DO-216AA / DO-222AA



Dim.	Millimeters
	DO-216AA
	DO-222AA
S	0.625
X1	2.67
X2	0.762
Y1	2.54
Y2	1.27

FIG.5

DFN1212-3PIN / SLP1006P3

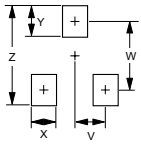


Dim.	Millimeters	
	DFN1212-3PIN	SLP1006P3
G	0.30	0.20
X1	1.00	0.60
X2	0.45	0.18
Y1	0.65	0.30
Y2	0.30	0.30
Z	1.20	1.00

SUGGESTED PAD LAYOUT

FIG.6

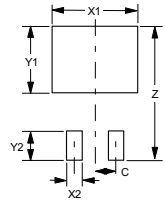
SOT-23 / SOT-323 / SOT-523



Dim.	Millimeters		
	SOT-23	SOT-323	SOT-523
Z	3.20	2.80	2.20
X	0.80	0.70	0.40
W	2.60	1.90	1.40
Y	1.00	0.90	0.80
V	0.95	1.00	0.50

FIG.7

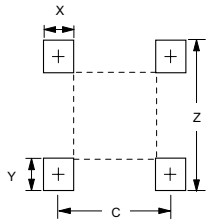
D2PAK



Dim.	Millimeters
C	(2.54)
X1	11.43
X2	2.06
Y1	8.89
Y2	3.81
Z	17.76

FIG.8

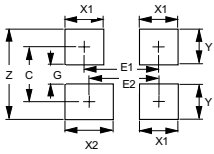
DF-S / HDDF / TD / TT



Dim.	All Dimensions in Millimeters			
	DF-S	HDDF	TD	TT
C	(5.10)	(2.50)	(4.00)	(5.00)
X	2.00	1.65	1.65	1.80
Y	2.55	1.80	1.80	2.10
Z	10.20	6.80	6.80	11.70

FIG.9

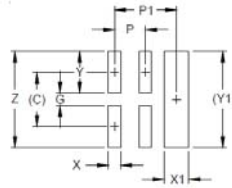
SOT-143



Dim.	Millimeters
C	(2.20)
E1	1.92
E2	1.72
G	0.80
X1	1.00
X2	1.20
Y	1.40
Z	3.60

FIG.10

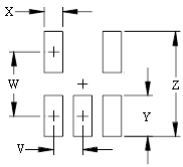
SLP1610P4



Dim.	Millimeters
C	(0.87)
G	0.19
P	0.50
P1	1.00
X	0.20
X1	0.40
Y	0.68
Y1	1.55
Z	1.55

FIG.11

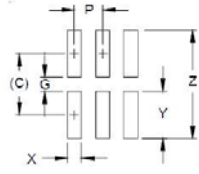
SOT-353



Dim.	Millimeters
Z	2.70
X	0.40
W	1.85
Y	0.85
V	0.65

FIG.12

SLP1210P6

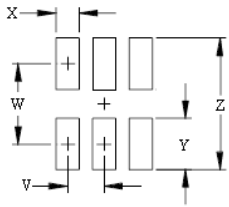


Dim.	Millimeters
C	(0.875)
G	0.20
P	0.40
X	0.20
Y	0.675
Z	1.55

SUGGESTED PAD LAYOUT

FIG.13

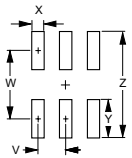
SOT-23 6L / SOT-363 / SOT-563



Dim.	Millimeters		
	SOT-23 6L	SOT-363	SOT-563
Z	3.60	2.70	2.30
X	0.80	0.40	0.30
W	2.60	1.85	1.45
Y	1.00	0.85	0.85
V	0.95	0.65	0.50

FIG.14

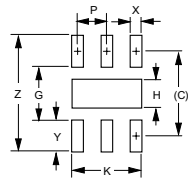
TSOP-6



Dim.	Millimeters
Z	3.70
X	0.45
W	2.35
Y	1.35
V	0.98

FIG.15

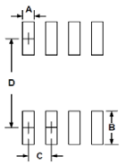
SLP1616P6



Dim.	Millimeters
C	(1.45)
G	0.90
H	0.50
K	1.25
P	0.50
X	0.25
Y	0.55
Z	2.00

FIG.16

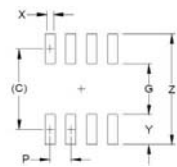
MSOP-8L



Dim.	Millimeters
A	0.41
B	1.02
C	0.65
D	4.80

FIG.17

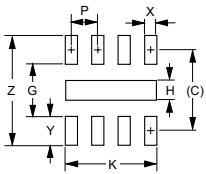
SOP- 8



Dim.	Millimeters
C	(5.20)
G	3.00
P	1.27
X	0.60
Y	2.20
Z	7.40

FIG.18

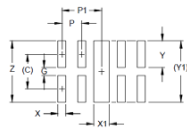
SLP2116P8



Dim.	Millimeters
C	(1.54)
G	0.98
H	0.38
K	1.75
P	0.50
X	0.25
Y	0.56
Z	2.10

FIG.19

SLP2510P8

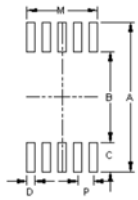


Dim.	Millimeters
C	(0.875)
G	0.20
P	0.50
P1	1.00
X	0.20
X1	0.40
Y	0.68
Y1	1.550
Z	1.55

SUGGESTED PAD LAYOUT

FIG.20

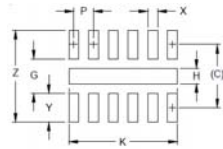
MSOP-10L



Dim.	Millimeters
A	5.80
B	3.60
C	1.10
D	0.25
M	2.25
P	0.50

FIG.21

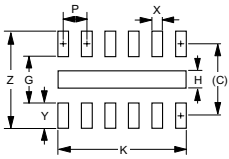
SLP2513P12



Dim.	Millimeters
C	(1.27)
G	0.69
H	0.30
K	2.20
P	0.40
X	0.20
Y	0.58
Z	1.85

FIG.22

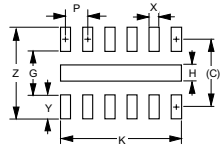
SLP3016P12



Dim.	Millimeters
C	(1.54)
G	0.98
H	0.38
K	2.75
P	0.50
X	0.25
Y	0.56
Z	2.10

FIG.23

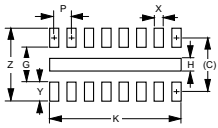
SLP3313P16



Dim.	Millimeters
C	(1.27)
G	0.69
H	0.30
K	3.00
P	0.40
X	0.20
Y	0.58
Z	1.85

FIG.24

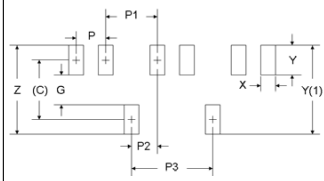
SLP4016P16



Dim.	Millimeters
C	(1.54)
G	0.98
H	0.38
K	3.75
P	0.50
X	0.25
Y	0.56
Z	2.10

FIG.25

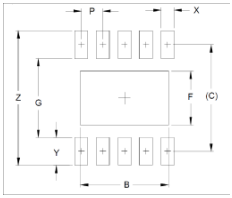
SLP5020P8



Dim.	Millimeters
C	(1.55)
G	0.85
P	0.60
P1	1.20
P2	0.60
P3	1.80
X	0.20
Y	0.70
Y1	(2.25)
Z	2.25

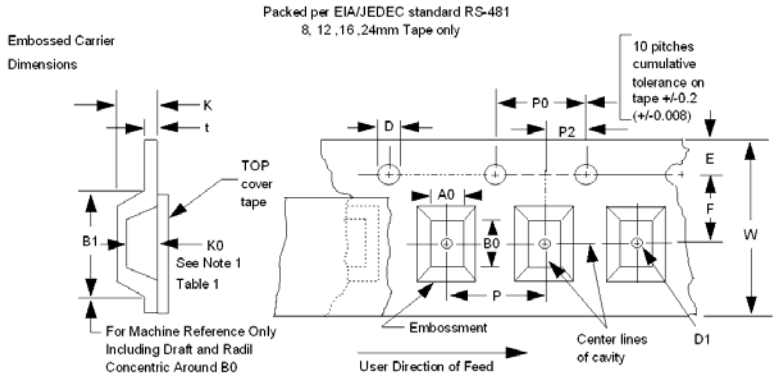
FIG.26

SLP2626P10



Dim.	Millimeters
B	2.05
(C)	(2.50)
F	1.26
G	1.85
P3	0.50
X	0.30
Y	0.65
Z	3.15

SURFACE MOUNT PACKAGING



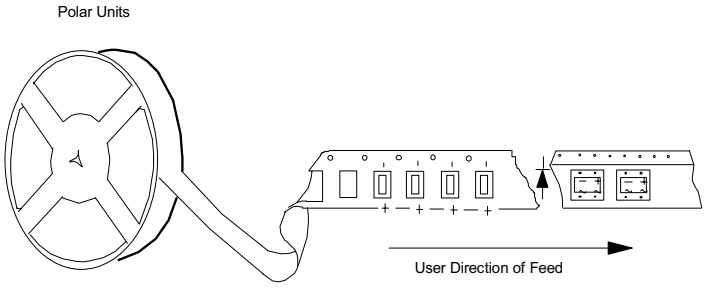
EMBOSSED TAPE ALL DIMENSION IN MILLIMETERS

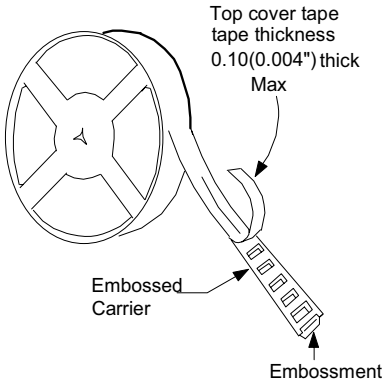
TAPE SIZE	D	E	PO	t (MAX)	A0B0K0	CONSTANT DIMENSION
8mm/ 12mm 16mm/ 24mm	1.55+0.10/-0.0	1.75+/-0.10	4.0+/-0.10	0.4	SEE NOTE 1	

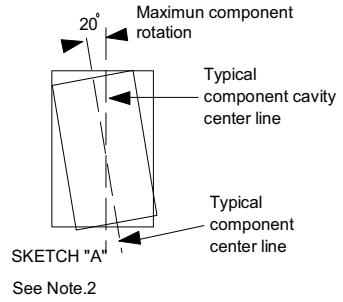
PRODUCT TYPE	TAPE SIZE	B1 MAX	D1 MIN	F	K MAX	P2	W	P	
SOT Series SOD-123 SOD-323 SLP1006P3 SLP1610P4 SLP1616P6 SLP2510P8 SLP2626P10 SLP2513P12 SLP3016P12 FBP-02C FBP-03B LL-34	8mm	4.5	1.0	3.5+/-0.05	2.4	2.0+/-0.05	8.0+/-.030	4.0+/-.10	VARIABLE DIMENSIONS
SOD-523 SOD-723 SOD-882 SOD-923								2.0+/-.05	
SOD-123F								4.0+/-.10	
SOD-323F SLP2116P8			0.75						
SLP1210P6			0.55						
SOD-523F			0.4					2.0+/-.05	
SLP5020P8	12mm	6.0	1.0	5.5+/-0.1	1.2	2.0+/-0.05	12.0+/-.30	4.0+/-.10	
SLP4016P16		5.0							
SLP3313P16		4.2							
LL-41		5.4	1.5		3.4			8.0+/-.10	
SOP-8					2.4				
MSOP-10L		4.0			1.65			4.0+/-.10	
DO-222AA		5.0							
DO-221AC		6.5							
DO-216AA		5.3			1.37				
SMA SMB HDDF/ TD/ MSB1		8.2			4.5			8.0+/-.10	
SOT-223									
SMC	16mm	12.1		7.5+/-0.10	3.29	2.0+/-0.1	16.0+/-.30	8.0+/-.10	
DF-S / TT					3.7	2.0+/-0.1		12.0+/-.10	
D2PAK	24mm	20.1		11.5+/-0.10	6.5	2.0+/-0.1	24.0+/-.30	16.0+/-.10	

Note 1:
A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05 min. to 0.50 max. for 8 mm tape. 0.05 min. to 0.65 max. for 12mm tape. 0.15 min. to 0.90 max. for 16mm tape and 0.05 min. to 1.00 max. for 24 mm tape and larger.

SURFACE MOUNT PACKAGING

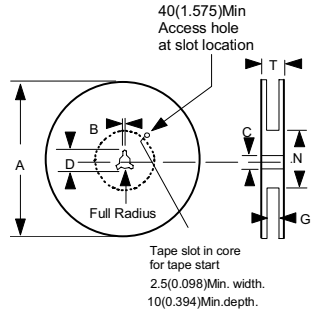






NOTE 2: The component can not rotate more than 20° within the determined cavity, see sketch "A" below

SURFACE MOUNT PACKAGING



REEL DIMENSIONS

Unit: mm

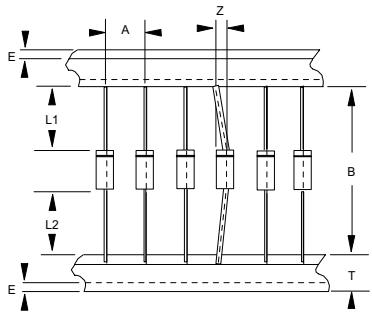
TAPE SIZE	A MAX.	B MAX.	C	D MIN.	N MIN.	G	T MAX.
8mm	178	1.5	13.0+/-0.5	20.2	75	8.4+1.5/-0.0	14.4
12mm	178 / 330					12.4+2.0/-0.0	18.4
16mm						12.4+2.0/-0.0	22.4
4mm						12.4+2.0/-0.0	30.4

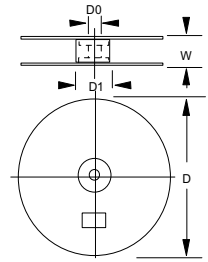
DEVICE TYPE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)
SMA	5000	330	334x334x21	5000	350x350x340	60000
SMB	3000			3000		36000
HDDF/ TD / MSB1						
SMC			338x338x26			
MSOP-10L/SOP-8			336x336x48	6000	365x355x445	48000
TT	2000			2000	350x350x340	20000
DF-S	1500		338x338x26	1500		15000
D2PAK	800			800		6400
DO-222A/DO-216AA	12000		334x334x21	12000		144000
DO-221AC	10000			10000		120000
SOT-223	2500		353x347x50	5000	360x360x315	30000
DO-222A/DO-216AA	3000	178	184x184x72	12000	380x380x360	192000
DO-221AC						
SMA	1500			6000		96000
SMB	500			2000		32000
SMC			184x184x88			
SOT SERIES SOD-123/323/523/723 FBP-02C/03B SLP1006P3, SLP1610P4 SLP1616P6, SLP2510P8 , SLP2116P8, SLP2626P10, SLP2513P12, SLP3016P12, SLP1210P6	3000		206x207x203	45000	438x438x241	90000 /180000
SLP4016P16, SLP3313P16				36000		72000
SLP5020P8				30000		60000 / 120000
SOD-882	10000			150000		300000
SOD-923	8000			120000		480000
LL-34	2500		188x183x80	15000	386x265x215	90000
LL-41	1500			9000		54000
SOD-123F SOD-323F/ SOD-523F	3000			18000		108000

REEL PACKAGING

Axial devices are packed in accordance with EIA standard RS-296-D and specification.

COMPONENT OUTLINE	COMPONENT PITCH A	COMPONENT PITCH B	CUMULATIVE PITCH TOLERANCE	Q'TY PER REEL	Q'TY PER CARTON	Carton Dimension
T-1	5.0 mm	52.4mm	2.0mm/10 pitch	5000	20K	340x340x340 mm
DO-41				5000	20K	
DO-15				4000	16K	
DO-201/DO-201AD	10 mm			1200	4.8K	
R-6				700	2.8K	

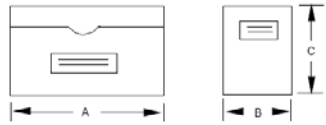




ITEM	SYMBOL	SPECIFICAITON (mm)
Component alignment	Z	1.2 Max.
Tape width	T	6.0 +/-0.4
Exposed adhesive	E	0.8 Max.
Body eccentricity	|L1-L2|	1.0 Max
Reel outside diameter	D	330
Reel inner diameter	D1	85.7+/-0.3
Feed hole diameter	D0	16.6+/-0.4
Reel width (Note 1)	W	79+-/1.0

NOTE: 1. The reel width 'W' for 26 mm taping is 50.0 +/- 1.0 mm (1.97" +/- 0.040")

AMMO BOX PACKAGING



BOX SIZE Unit: mm

Packaging	Products Outline	Dimension "A"	Dimension "B"	Dimension "C"	Q'TY per BOX
26mm Horizontal Ammo Pack	T-1, A-405, DO-41 DO-15	255 ~ 259	50 ~ 54	107 ~ 113	3K 2K
52mm Horizontal Ammo Pack	DO-15	259	83	113	2K
	T-1, A-405, DO-41				3K
	DO-201, DO-201AD				1K
	DO-34 (Glass Seal)	250 ~ 265	76 ~ 80	80 ~ 122	5K/10K
	DO-35 (Glass Seal)				
	DO-41 (Glass Seal)	250	80	80	3K

CARTON SIZE

Packaging	Products Outline	Dimension Length	Dimension Width	Dimension Height	Q'TY per Carton
26mm Horizontal Ammo Pack	T-1, A-405, DO-41	530	300	280	54K
	DO-15				36K
52mm Horizontal Ammo Pack	DO-15	545	300	280	24K
	T-1, A-405, DO-41				36K
	DO-201, DO-201AD				12K
	DO-34 (Glass Seal)	405 ~ 430	270 ~ 275	270 ~ 340	100K
	DO-35 (Glass Seal)				
	DO-41 (Glass Seal)	430	270	340	60K

BULK PACKAGING

BOX:

DEVICE TYPE	PACKAGING SIZE (m.m.)		QUANTITY (EA)		APPROX GROSS WEIGHT(KG)	
	BOX	CARTON	BOX	CARTON	BOX	CARTON
A-405	196x84x20	450x210x250	1000	50K	0.29	15.8
DO-41	196x84x20	450x210x250	1000	50K	0.38	20
DO-15	196x84x20	450x210x250	800	40K	0.38	20
DO-201/DO-201AD	305x93x59	395x315x340	1000	20K	1.2	25
R-6	305x93x59	395x315x340	500	10K	1.15	23.6
WOG	----------	----------	1000	10K	1.6	18

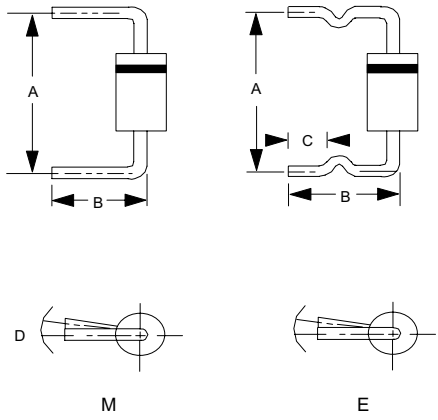
TUBE:

DEVICE TYPE	PACKAGING SIZE (m.m.)			QUANTITY (EA)			APPROX GROSS WEIGHT(KG)		
	TUBE	BOX	CARTON	TUBE	BOX	CARTON	TUBE	BOX	CARTON
DF	444x15x13.3	490x155x145	510x330x275	50	4000	16K	0.04	3.5	14
TO-220	537x34x 6.0	555x165x95	575x179x225	50	2000	4K	0.14	5.8	14.9
TO-3P	502x46x 8.0	550x150x125	575x180x275	30	840	1.68K	0.24	7.1	15.1
DF-S	444x15x5.9	490x155x145	350x350x340	50	4000	16K	0.03	6.8	14
KBJ	525x37.3x7.1	550x200x110	580x230x270	20	1000	2K	0.16	7.4	15
KBP /GBP	531x29.6x6.2	550x200x122	580x230x270	35	2800	5.6K	0.09	7.3	15.4
GBU	465x41.5x6.2	500x200x120	520x210x265	20	1000	2K	0.132	6.6	14.2
GBJ	475x42.5x7.2	500x200x120	520x210x265	15	600	1.2K	0.16	7.5	17
GBL	535x35x6.5	550x200x122	580x220x260	25	1500	3K	0.095	6.1	13.2

TRAY:

DEVICE TYPE	PACKAGING SIZE (m.m.)		QUANTITY (EA)		APPROX GROSS WEIGHT(KG)	
	TRAY	CARTON	TRAY	CARTON	TRAY	CARTON
KBPC-G	320x280x30	330x290x210	100	0.5K	2.4	13
KBPC-GW	320x280x30	330x290x210	100	0.5K	2.1	11.5
GBPC	320x280x30	330x290x210	100	0.5K	1.98	11
GBPC-W	320x280x30	330x290x210	100	0.5K	1.70	9.5

PREFORMED LEAD DRAWING

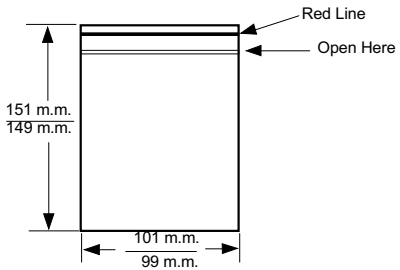


Case type	Preformed type	A (mm)		B (mm)		C (mm)		D (mm)		R (mm)	
		Range	Tolerance	Range	Tolerance	Range	Tolerance	Range	Tolerance	Range	Tolerance
DO-41	M	11.0-20.0	+/-0.5	8.0-20.0	+/-0.5	----	----	1.5	max	----	----
A-405	E	11.0-20.0	+/-0.5	11.0-16.0	+/-1.0	4.0-5.0	+/-0.5	1.5	max	----	----
DO-15	M	13.0-20.0	+/-0.5	8.0-22.0	+/-0.5	----	----	1.5	max	----	----
	E	13.0-20.0	+/-0.5	11.0-16.0	+/-1.0	4.0-5.0	+/-0.5	1.5	max	----	----
DO-201 DO-201AD	M	15.0-20.0	+/-1.0	8.0-22.0	+/-1.0	----	----	2.0	max	----	----
	E	15.0-20.0	+/-1.0	10.0-22.0	+/-1.0	3.0-5.0	+/-0.5	2.0	max	----	----
R-6	M	15.0-20.0	+/-1.0	8.0-22.0	+/-1.0	----	----	2.0	max	----	----

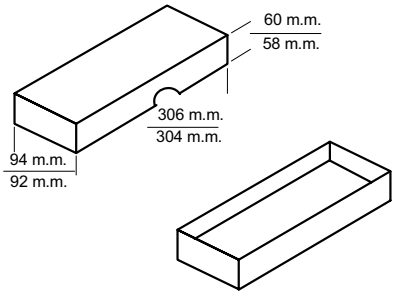
● Press Forming Also Available

PACKAGE OF PREFORMED DIODE

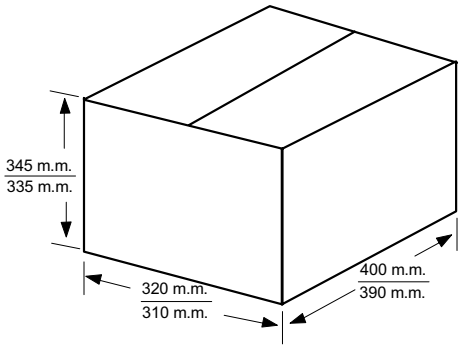
A. PLASTIC BAG



B. BOX



C. CARTON

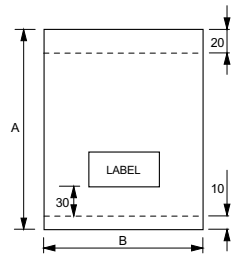


Case Type	Preformed Type		Q'TY/Plastic Bag	Q'TY/Box	Q'TY/Carton
DO-41 DO-41L	M	Short Type	400	2K	40K
		Long Type	250	1.25K	25K
	E		500	2.5K	50K
	B		250	1.25K	25K
	C		500	2.5K	50K
DO-15	M		400	2K	40K
	E		400	2K	40K
DO-201 DO-201AD	M		100	500	10K
	E		100	500	10K
R-6	M		100	500	10K

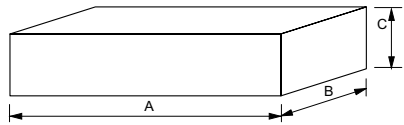
* Preformed Type see front page. (Unit : PCS)

PACKAGE OF TO-92 SERIES

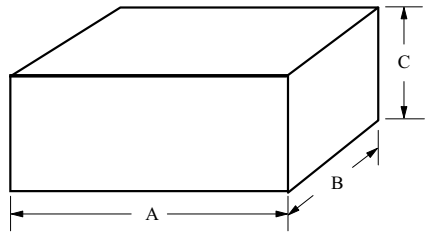
1. Plastic Bag



2. Inner Box



3. Carton



BULK PACKAGING

Unit: mm

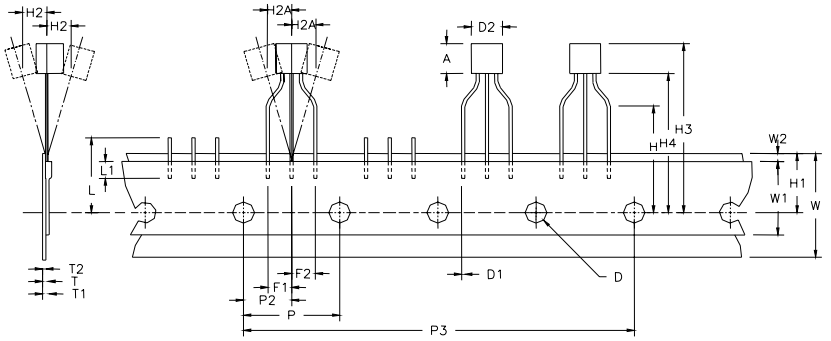
P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
PLASTIC BAG	185	125		1K	
INNER BOX	242	170	100	10K	1 0 PAG
CARTON	520	360	270	100K	10 INNER BOX

TAPPING PACKAGING

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
INNER BOX	330	200	41	2K	1 PACK
CARTON	430	360	280	20K	10 INNER BOX

PACKAGE OF TO-92 SERIES

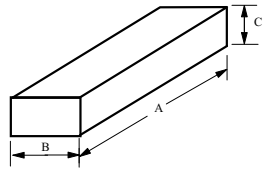
Tape reel packing :



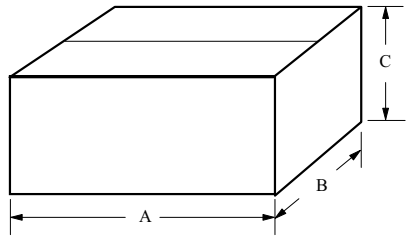
SYMBOL	ITEM	Metric system	Dimensions in inch
A	Body height	4.4-4.8	0.173-0.189
D	Sprocket hole diameter	4.0±0.2	0.158±0.008
D1	Lead-wire diameter	0.45-0.55	0.018-0.022
D2	Body diameter	4.4-4.8	0.173-0.189
F1.F2	Compoment lead spacing	2.5+0.4. -0.1	0.1+0.015. -0.004
H	Lead wire clinch height	16±0.5	0.63±0.02
H1	Sprocket hole position	9±0.5	0.354±0.02
H2	Body shift	1MAX	0.04MAX
H3	Overall height above abscissa	32.0MAX	1.26MAX
H4	Height of component from tape	21.0MAX	0.827MAX
P	Sprocket hole pitch	12.7±0.2	0.5±0.008
P2	Sprocket hole center to lead	6.35±0.4	0.25±0.018
P3	4 Sprocket holes pitch	50.8±0.5	2.0±0.02
T	Total tape thickness	0.55MAX	0.022MAX
W	Total tape width	17.5-19	0.689-0.748
W1	Carrier tape width	5.0-7.0	0.197-0.276
W2	Sprocket hole position	0.5MAX	0.02MAX
—	20 Sprocket holes pitch	254.0±1	10±0.04

PACKAGE OF TO-220 (SCR/TRIAC/MOSFET)

1. INNER BOX



2. CARTON



Unit: mm

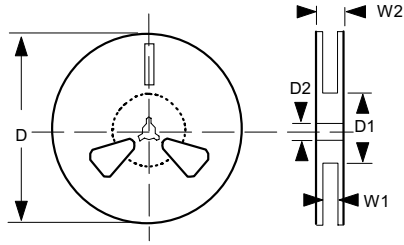
P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
TUBE	537	34	6	50	
INNER BOX	575	150	50	1K	20 TUBE / 5 FLOORS
CARTON	595	270	170	5K	5 INNER BOX

PACKAGE OF TO-3P (MOSFET)

Unit: mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
TUBE	507	48	8	30	
INNER BOX	555	160	130	840	28TUBES
CARTON	565	170	270	1680	2 INNER BOXS

SWITCHING DIODE REEL PACKAGING



Reel Dimension

Unit: mm (inch)

Item	Symbol	Dimension
Feed hold diameter	D2	13.0+/-0.2 (0.512+/-0.008)
Reel inner diameter	D1	60.0+/-0.5 (2.36+/-0.02)
Reel outside dimameter	D	178.0+/-1.0 (7.008+/-0.04)
Reel inner width	W1	9.0+/-0.5 (0.354+/-0.02)
Reel ouside width	W2	12.0+/-0.15 (0.472+/-0.006)

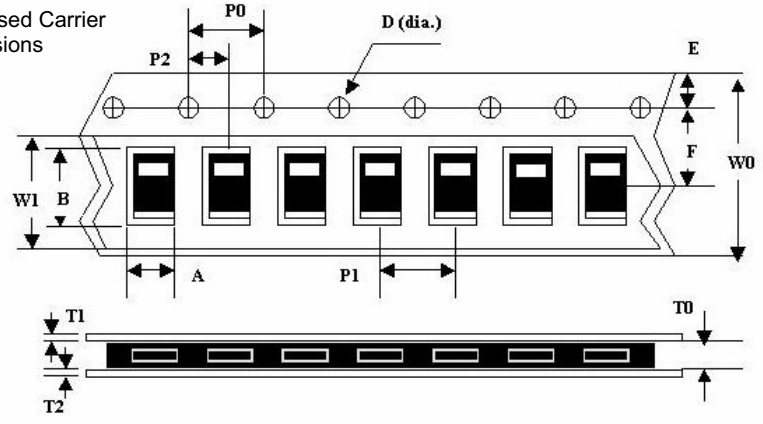
PACKING

Unit: mm

DEVICE TYPE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)
1206	5000	178	181x181x74	30000	393x367x189	300000
0805						
0603						

SWITCHING DIODE REEL PACKAGING

Embossed Carrier Dimensions



EMBOSSED TAPE

Unit: mm

Item		Symbol	Dimension
Punch hole idth	1206	A	2.00+/-0.2 (0.079+/-0.008)
	805		1.65+/-0.2 (0.065+/-0.008)
	603		1.20+/-0.2 (0.047+/-0.008)
Punch hole length	1206	B	3.50+/-0.2 (0.138+/-0.008)
	805		2.40+/-0.2 (0.094+/-0.008)
	603		1.90+/-0.2 (0.075+/-0.008)
Sprocket hole		D	1.60+/-0.05 (0.063+/-0.002)
Sprocket hole position		E	1.75+/-0.10 (0.070+/-0.004)
Punch hole position		F	3.50+/-0.05 (0.140+/-0.002)
Sprocket hole pitch		P0	4.00+/-0.10 (0.160+/-0.004)
Punch hole pitch		P1	4.00+/-0.10 (0.160+/-0.004)
Punch hole center		P2	2.00+/-0.05 (0.08+/-0.002)
Base tape width		W0	8.00+/-0.20 (0.320+/-0.008)
Top/Bottom seal tape width		W1	5.25+/-0.05 (0.210+/-0.002)
Base tape thickness		T0	0.95+/-0.02 (0.038+/-0.008)
Top seal tape thickness		T1	0.0054+/-0.005 (0.002+/-0.0002)
Bottom seal tape thickness		T2	0.042+/-0.05 (0.0016+/-0.0002)

PRODUCT INDEX

PN	page	PN	page	PN	page
1N4735A	117	1N5250B	116	3.0SMCJ130A	29
1N4736A	117	1N5251B	116	3.0SMCJ13A	27
1N4737A	117	1N5252B	116	3.0SMCJ14	27
1N4738A	117	1N5253B	116	3.0SMCJ14A	27
1N4739A	117	1N5254B	116	3.0SMCJ15	27
1N4740A	117	1N5255B	116	3.0SMCJ150	29
1N4741A	117	1N5256B	116	3.0SMCJ150A	29
1N4742A	117	1N5257B	116	3.0SMCJ15A	27
1N4743A	117	1N5258B	116	3.0SMCJ16	27
1N4744A	117	1N5259B	116	3.0SMCJ160	29
1N4745A	117	1N5260B	116	3.0SMCJ160A	29
1N4746A	117	1N5261B	116	3.0SMCJ16A	27
1N4747A	117	1N5262B	116	3.0SMCJ17	27
1N4748A	117	1N5263B	116	3.0SMCJ170	29
1N4749A	117	1N5395	99	3.0SMCJ170A	29
1N4750A	117	1N5395S	99	3.0SMCJ17A	27
1N4751A	117	1N5397	99	3.0SMCJ18	27
1N4752A	117	1N5397S	99	3.0SMCJ180	29
1N4753A	117	1N5398	99	3.0SMCJ180A	29
1N4754A	117	1N5398S	99	3.0SMCJ18A	27
1N4755A	117	1N5399	99	3.0SMCJ190	29
1N4756A	117	1N5399S	99	3.0SMCJ190A	29
1N4757A	117	1N5404	99	3.0SMCJ20	27
1N4758A	117	1N5404G	100	3.0SMCJ200	29
1N4936	92	1N5406	99	3.0SMCJ200A	29
1N4936G	93	1N5406G	100	3.0SMCJ20A	27
1N4936L	92	1N5407	99	3.0SMCJ20A6*	27
1N4937	92	1N5407G	100	3.0SMCJ210	29
1N4937G	93	1N5408	99	3.0SMCJ210A	29
1N4937L	92	1N5408G	100	3.0SMCJ22	27
1N5221B	116	1N5820	63	3.0SMCJ220	29
1N5222B	116	1N5821	63	3.0SMCJ220A	29
1N5223B	116	1N5822	63	3.0SMCJ22A	27
1N5224B	116	1SS355	103	3.0SMCJ24	27
1N5225B	116	1SS355F	104	3.0SMCJ24A	28
1N5226B	116	1SS400	103	3.0SMCJ24A6*	28
1N5227B	116	1SS400F	104	3.0SMCJ26	28
1N5228B	116	20SQ040	71	3.0SMCJ26A	28
1N5229B	116	20SQ045	71	3.0SMCJ28	28
1N5230B	116	20SQ045CG	71	3.0SMCJ28A	28
1N5231B	116	2N7002AK	121	3.0SMCJ28A6*	28
1N5232B	116	2N7002E	121	3.0SMCJ30	28
1N5233B	116	2N7002K	121	3.0SMCJ30A	28
1N5234B	116	2N7002KDW	121	3.0SMCJ33	28
1N5235B	116	2N7002KW	121	3.0SMCJ33A	28
1N5236B	116	3.0SMCJ10	27	3.0SMCJ36	28
1N5237B	116	3.0SMCJ100	28	3.0SMCJ36A	28
1N5238B	116	3.0SMCJ100A	29	3.0SMCJ40	28
1N5239B	116	3.0SMCJ10A	27	3.0SMCJ40A	28
1N5240B	116	3.0SMCJ11	27	3.0SMCJ43	28
1N5241B	116	3.0SMCJ110	29	3.0SMCJ43A	28
1N5242B	116	3.0SMCJ110A	29	3.0SMCJ45	28
1N5243B	116	3.0SMCJ11A	27	3.0SMCJ45A	28
1N5244B	116	3.0SMCJ12	27	3.0SMCJ48	28
1N5245B	116	3.0SMCJ120	29	3.0SMCJ48A	28
1N5246B	116	3.0SMCJ120A	29	3.0SMCJ5.0	27
1N5247B	116	3.0SMCJ12A	27	3.0SMCJ5.0A	27
1N5248B	116	3.0SMCJ13	27	3.0SMCJ5.0A6*	27
1N5249B	116	3.0SMCJ130	29	3.0SMCJ51	28

PN	page	PN	page	PN	page
MM5Z2V7CF	113	MMSZ16VCWF	109	MMSZ5234BF	107
MM5Z30VCF	113	MMSZ18VBWF	108	MMSZ5234CSF	111
MM5Z33VCF	113	MMSZ18VCWF	109	MMSZ5235BF	107
MM5Z36VCF	113	MMSZ20VBWF	108	MMSZ5235CSF	111
MM5Z39VCF	113	MMSZ20VCWF	109	MMSZ5236BF	107
MM5Z3V0CF	113	MMSZ22VBWF	108	MMSZ5236CSF	111
MM5Z3V3CF	113	MMSZ22VCWF	109	MMSZ5237BF	107
MM5Z3V6CF	113	MMSZ24VBWF	108	MMSZ5237CSF	111
MM5Z3V9CF	113	MMSZ24VCWF	109	MMSZ5238BF	107
MM5Z43VCF	113	MMSZ27VBWF	108	MMSZ5238CSF	111
MM5Z47VCF	113	MMSZ27VCWF	109	MMSZ5239BF	107
MM5Z4V3CF	113	MMSZ2V4BWF	108	MMSZ5239CSF	111
MM5Z4V7CF	113	MMSZ2V4CWF	109	MMSZ5240BF	107
MM5Z51VCF	113	MMSZ2V7BWF	108	MMSZ5240CSF	111
MM5Z56VCF	113	MMSZ2V7CWF	109	MMSZ5241BF	107
MM5Z5V1CF	113	MMSZ30VBWF	108	MMSZ5241CSF	111
MM5Z5V6CF	113	MMSZ30VCWF	109	MMSZ5242BF	107
MM5Z62VCF	113	MMSZ33VBWF	108	MMSZ5242CSF	111
MM5Z68VCF	113	MMSZ33VCWF	109	MMSZ5243BF	107
MM5Z6V2CF	113	MMSZ36VBWF	108	MMSZ5243CSF	111
MM5Z6V8CF	113	MMSZ36VCWF	109	MMSZ5244BF	107
MM5Z75VCF	113	MMSZ39VBWF	108	MMSZ5244CSF	111
MM5Z7V5CF	113	MMSZ39VCWF	109	MMSZ5245BF	107
MM5Z8V2CF	113	MMSZ3V0BWF	108	MMSZ5245CSF	111
MM5Z9V1CF	113	MMSZ3V0CWF	109	MMSZ5246BF	107
MMBD7000	103	MMSZ3V3BWF	108	MMSZ5246CSF	111
MMBT2222A	118	MMSZ3V3CWF	109	MMSZ5247BF	107
MMBT2907A	118	MMSZ3V6BWF	108	MMSZ5247CSF	111
MMBT3904	118	MMSZ3V6CWF	109	MMSZ5248BF	107
MMBT3906	118	MMSZ3V9BWF	108	MMSZ5248CSF	111
MMBT4401	118	MMSZ3V9CWF	109	MMSZ5249BF	107
MMBT4403	118	MMSZ43VBWF	108	MMSZ5249CSF	111
MMBT5551	118	MMSZ43VCWF	109	MMSZ5250BF	107
MMDT2222A	118	MMSZ47VBWF	108	MMSZ5250CSF	111
MMDT2907A	118	MMSZ47VCWF	109	MMSZ5251BF	107
MMDT3904	118	MMSZ4V3BWF	108	MMSZ5251CSF	111
MMDT3906	118	MMSZ4V3CWF	109	MMSZ5252BF	107
MMDT4401	118	MMSZ4V7BWF	108	MMSZ5252CSF	111
MMDT4403	118	MMSZ4V7CWF	109	MMSZ5253BF	107
MMDT5401	118	MMSZ51VBWF	108	MMSZ5253CSF	111
MMDT5541	118	MMSZ51VCWF	109	MMSZ5254BF	107
MMDT5551	118	MMSZ5221BF	107	MMSZ5254CSF	111
MMST2222A	118	MMSZ5222BF	107	MMSZ5255BF	107
MMST2907A	118	MMSZ5223BF	107	MMSZ5255CSF	111
MMST3904	118	MMSZ5224BF	107	MMSZ5256BF	107
MMST3906	118	MMSZ5225BF	107	MMSZ5256CSF	111
MMST4401	118	MMSZ5226BF	107	MMSZ5257BF	107
MMST4403	118	MMSZ5227BF	107	MMSZ5257CSF	111
MMSZ10VBWF	108	MMSZ5228BF	107	MMSZ5258BF	107
MMSZ10VCWF	109	MMSZ5229BF	107	MMSZ5258CSF	111
MMSZ11VBWF	108	MMSZ5229CSF	111	MMSZ5259BF	107
MMSZ11VCWF	109	MMSZ5230BF	107	MMSZ5259CSF	111
MMSZ12VBWF	108	MMSZ5230CSF	111	MMSZ5260BF	107
MMSZ12VCWF	109	MMSZ5231BF	107	MMSZ5260CSF	111
MMSZ13VBWF	108	MMSZ5231CSF	111	MMSZ5261BF	107
MMSZ13VCWF	109	MMSZ5232BF	107	MMSZ5261CSF	111
MMSZ15VBWF	108	MMSZ5232CSF	111	MMSZ5262BF	107
MMSZ15VCWF	109	MMSZ5233BF	107	MMSZ5262CSF	111
MMSZ16VBWF	108	MMSZ5233CSF	111	MMSZ5263BF	107

PN	page	PN	page	PN	page
PR6006	92	PSMBJ200A	24	PSMCJ62A	25
PR6007	92	PSMBJ20A	24	PSMCJ68A	25
PSMAJ100A	22	PSMBJ220A	24	PSMCJ7.5A	25
PSMAJ10A	22	PSMBJ22A	24	PSMCJ75A	25
PSMAJ110A	22	PSMBJ24A	24	PSMCJ8.2A	25
PSMAJ11A	22	PSMBJ250A	24	PSMCJ82A	25
PSMAJ120A	22	PSMBJ27A	24	PSMCJ9.1A	25
PSMAJ12A	22	PSMBJ300A	24	PSMCJ91A	25
PSMAJ130A	22	PSMBJ30A	24	R1U50600A	5
PSMAJ13A	22	PSMBJ33A	24	RB501V-40F	106
PSMAJ150A	22	PSMBJ350A	24	RB520S-30F	106
PSMAJ15A	22	PSMBJ36A	24	RB520S-40F	106
PSMAJ160A	22	PSMBJ39A	24	RB521S-30F	106
PSMAJ16A	22	PSMBJ400A	24	RB551V-30F	106
PSMAJ170A	22	PSMBJ43A	24	RB715F	105
PSMAJ180A	22	PSMBJ440A	24	RB751S-40F	106
PSMAJ18A	22	PSMBJ47A	24	RB751V-40F	106
PSMAJ200A	22	PSMBJ51A	24	RS1G	91
PSMAJ20A	22	PSMBJ56A	24	RS1GB	91
PSMAJ220A	23	PSMBJ6.8A	24	RS1J	91
PSMAJ22A	22	PSMBJ62A	24	RS1JB	91
PSMAJ24A	22	PSMBJ68A	24	RS1K	91
PSMAJ250A	23	PSMBJ7.5A	24	RS1KB	91
PSMAJ27A	22	PSMBJ75A	24	RS1M	91
PSMAJ300A	23	PSMBJ8.2A	24	RS1MB	91
PSMAJ30A	22	PSMBJ82A	24	RS2G	91
PSMAJ33A	22	PSMBJ9.1A	24	RS2GA	91
PSMAJ350A	23	PSMBJ91A	24	RS2J	91
PSMAJ36A	22	PSMCJ100A	25	RS2JA	91
PSMAJ39A	22	PSMCJ10A	25	RS2K	91
PSMAJ400A	23	PSMCJ110A	25	RS2KA	91
PSMAJ43A	22	PSMCJ11A	25	RS2M	91
PSMAJ47A	22	PSMCJ120A	25	RS2MA	91
PSMAJ51A	22	PSMCJ12A	25	RS3G	91
PSMAJ56A	22	PSMCJ130A	25	RS3GB	91
PSMAJ6.8A	22	PSMCJ13A	25	RS3J	91
PSMAJ62A	22	PSMCJ150A	25	RS3JB	91
PSMAJ68A	22	PSMCJ15A	25	RS3K	91
PSMAJ7.5A	22	PSMCJ160A	25	RS3KB	91
PSMAJ75A	22	PSMCJ16A	25	RS3M	91
PSMAJ8.2A	22	PSMCJ170A	25	RS3MB	91
PSMAJ82A	22	PSMCJ180A	25	S08M02600A	5
PSMAJ9.1A	22	PSMCJ18A	25	S08U25600A	5
PSMAJ91A	22	PSMCJ200A	25	S08U50600A	5
PSMBJ100A	24	PSMCJ20A	25	S12M15600B	5
PSMBJ10A	24	PSMCJ220A	25	S12M8600B	5
PSMBJ110A	24	PSMCJ22A	25	S1G	97
PSMBJ11A	24	PSMCJ24A	25	S1GB	97
PSMBJ120A	24	PSMCJ250A	25	S1J	97
PSMBJ12A	24	PSMCJ27A	25	S1JB	97
PSMBJ130A	24	PSMCJ30A	25	S1K	97
PSMBJ13A	24	PSMCJ33A	25	S1KB	97
PSMBJ150A	24	PSMCJ36A	25	S1M	97
PSMBJ15A	24	PSMCJ39A	25	S1MB	97
PSMBJ160A	24	PSMCJ43A	25	S1U50700A	5
PSMBJ16A	24	PSMCJ47A	25	S1VM02600A	5
PSMBJ170A	24	PSMCJ51A	25	S2G	97
PSMBJ180A	24	PSMCJ56A	25	S2GA	97
PSMBJ18A	24	PSMCJ6.8A	25	S2GH	97