



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
DEVICE TYPE	DEVICE MARKING CODE		BREAKDOWN VOLTAGE V _{BR} AT I _T (1) (V)		TEST CURRENT I _T (mA)	STAND-OFF VOLTAGE V _{WM} (V)	MAXIMUM REVERSE LEAKAGE AT V _{WM} I _D (μA) (2)	MAXIMUM PEAK PULSE SURGE CURRENT I _{PPM} (A) (3)	MAXIMUM CLAMPING VOLTAGE AT I _{PPM} V _C (V)
	UNI	BI	MIN.	MAX.					
(+)SMBJ5.0D	6AA	6AA	6.50	6.97	10	5.0	500	65.9	9.1
(+)SMBJ6.0D	6AB	6AB	6.77	7.27	10	6.0	500	58.9	10.2
(+)SMBJ6.5D	6AC	6AC	7.33	7.87	10	6.5	300	54.5	11.0
(+)SMBJ7.0D	6AD	6AD	7.90	8.48	10	7.0	150	50.8	11.8
(+)SMBJ7.5D	6AE	6AE	8.46	9.08	1.0	7.5	75	47.2	12.7
(+)SMBJ8.0D	6AF	6AF	9.03	9.69	1.0	8.0	35	44.8	13.4
(+)SMBJ8.5D	6AG	6AG	9.57	10.3	1.0	8.5	15	42.2	14.3
(+)SMBJ9.0D	6AH	6AH	10.2	10.9	1.0	9.0	5.0	39.7	15.1
(+)SMBJ10D	6AK	6AK	11.3	12.1	1.0	10	2.0	35.9	16.7
(+)SMBJ11D	6AL	6AL	12.4	13.3	1.0	11	2.0	33.5	17.9
(+)SMBJ12D	6AM	6AM	13.5	14.5	1.0	12	2.0	30.6	19.6
(+)SMBJ13D	6AN	6AN	14.6	15.7	1.0	13	0.5	28.3	21.2
(+)SMBJ14D	6AP	6AP	15.8	17.0	1.0	14	0.5	26.2	22.9
(+)SMBJ15D	6AQ	6AQ	17.0	18.2	1.0	15	0.5	25.0	24.0
(+)SMBJ16D	6AR	6AR	18.1	19.4	1.0	16	0.5	23.4	25.6
(+)SMBJ17D	6AS	6AS	19.2	20.6	1.0	17	0.5	22.1	27.2
(+)SMBJ18D	6AT	6AT	20.3	21.8	1.0	18	0.5	20.8	28.8
(+)SMBJ20D	6AU	6AU	22.5	24.2	1.0	20	0.5	18.8	32.0
(+)SMBJ22D	6AV	6AV	24.8	26.6	1.0	22	0.5	17.1	35.1
(+)SMBJ24D	6AW	6AW	27.1	29.1	1.0	24	0.5	15.6	38.4
(+)SMBJ26D	6AX	6AX	29.3	31.5	1.0	26	0.5	14.5	41.6
(+)SMBJ28D	6AY	6AY	31.6	33.9	1.0	28	0.5	13.4	44.7
(+)SMBJ30D	6AZ	6AZ	33.8	36.3	1.0	30	0.5	12.6	47.7
(+)SMBJ33D	6BA	6BA	37.3	40.0	1.0	33	0.5	11.5	52.5
(+)SMBJ36D	6BB	6BB	40.6	43.6	1.0	36	0.5	10.5	57.3
(+)SMBJ40D	6BC	6BC	45.1	48.4	1.0	40	0.5	9.43	63.6
(+)SMBJ43D	6BD	6BD	48.5	52.1	1.0	43	0.5	8.76	68.5
(+)SMBJ45D	6BE	6BE	50.8	54.5	1.0	45	0.5	8.40	71.6
(+)SMBJ48D	6BF	6BF	54.1	58.1	1.0	48	0.5	7.90	76.3
(+)SMBJ51D	6BG	6BG	57.6	61.8	1.0	51	0.5	7.40	81.2
(+)SMBJ54D	6BH	6BH	60.9	65.4	1.0	54	0.5	7.00	85.9
(+)SMBJ58D	6BK	6BK	65.4	70.2	1.0	58	0.5	6.50	92.3
(+)SMBJ60D	6BL	6BL	67.7	72.7	1.0	60	0.5	6.28	95.5
(+)SMBJ64D	6BM	6BM	72.2	77.5	1.0	64	0.5	5.88	102
(+)SMBJ70D	6BN	6BN	79.0	84.8	1.0	70	0.5	5.40	111
(+)SMBJ75D	6BP	6BP	84.6	90.8	1.0	75	0.5	5.06	119
(+)SMBJ78D	6BQ	6BQ	88.1	94.4	1.0	78	0.5	4.86	124
(+)SMBJ85D	6BR	6BR	95.7	103	1.0	85	0.5	4.46	135
(+)SMBJ90D	6BS	6BS	102	109	1.0	90	0.5	4.17	144
(+)SMBJ100D	6BT	6BT	113	121	1.0	100	0.5	3.77	159
(+)SMBJ110D	6BU	6BU	124	133	1.0	110	0.5	3.45	174
(+)SMBJ120D	6BV	6BV	135	145	1.0	120	0.5	3.15	190
(+)SMBJ130D	6BW	-	146	157	1.0	130	0.5	2.94	206
(+)SMBJ150D	6BX	-	170	182	1.0	150	0.5	2.53	239
(+)SMBJ160D	6BY	-	181	194	1.0	160	0.5	2.34	256
(+)SMBJ170D	6BZ	-	192	206	1.0	170	0.5	2.23	270
SMBJ188D	6CA	-	212	228	1.0	188	0.5	2.03	301

Notes

- All terms and symbols are consistent with ANSI/IEEE C62.35
- (1) Pulse test: t_p ≤ 50 ms
- (2) For bi-directional types having V_{WM} of 12 V and less, the I_D limit is doubled
- (3) Surge current waveform per fig. 3 and derate per fig. 2
- (+) Underwriters Laboratory Recognition for the classification of protectors (QVGQ2) under the UL standard for safety 497B and file number E136766 for both uni-directional and bi-directional device



THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance, junction to ambient	R _{θJA} (1)	125	°C/W
	R _{θJA} (2)	100	
Typical thermal resistance, junction to mount	R _{θJM}	20	

Notes

- (1) Mounted on minimum recommended pad layout
- (2) Mounted on 5.0 mm x 5.0 mm copper pad area

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SMBJ5.0D-M3/H	0.096	H	750	7" diameter plastic tape and reel
SMBJ5.0D-M3/I	0.096	I	3200	13" diameter plastic tape and reel

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

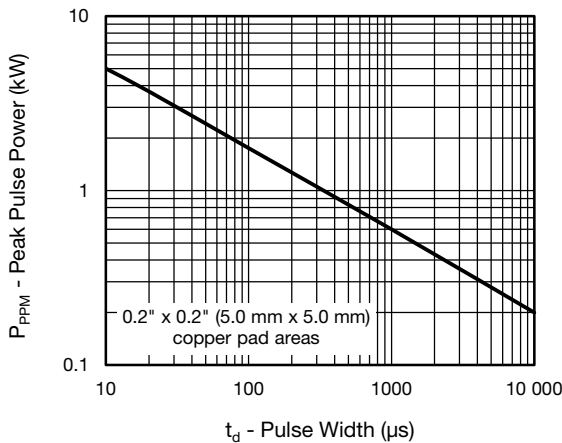


Fig. 1 - Peak Pulse Power Rating Curve

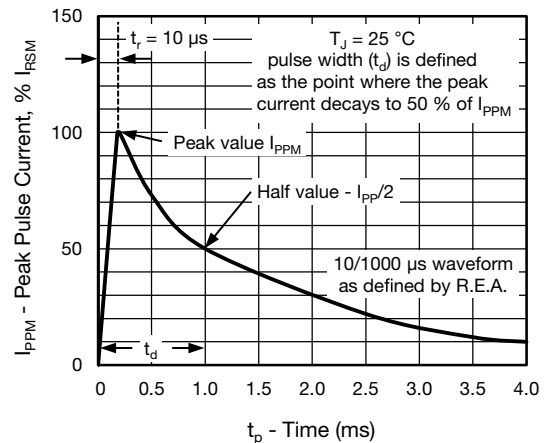


Fig. 3 - Pulse Waveform

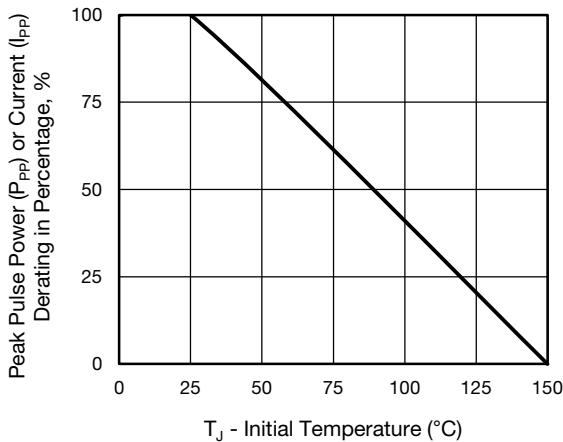


Fig. 2 - Pulse Power or Current vs. Initial Junction Temperature

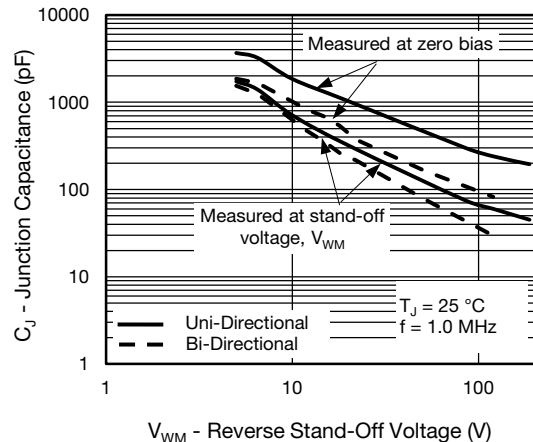


Fig. 4 - Typical Junction Capacitance

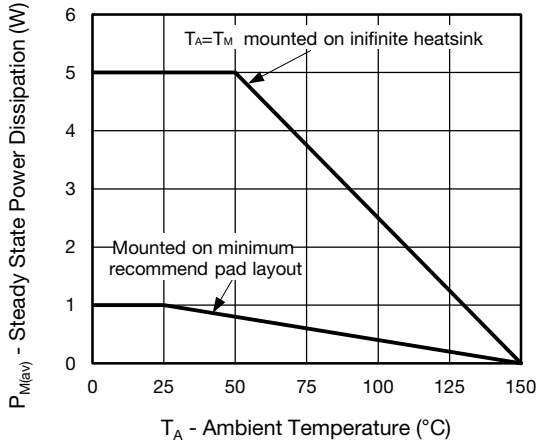


Fig. 5 - Power Dissipation Derating Curve

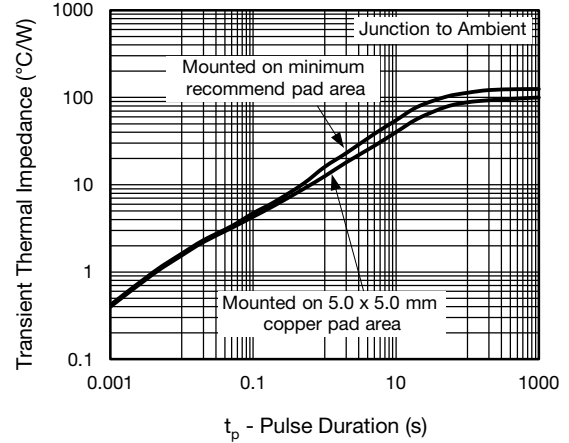
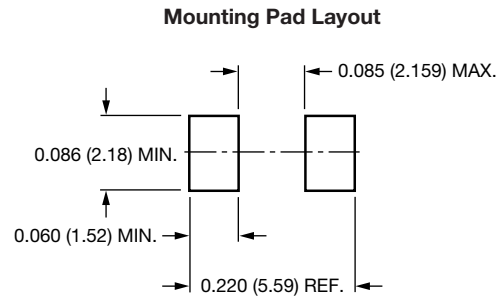
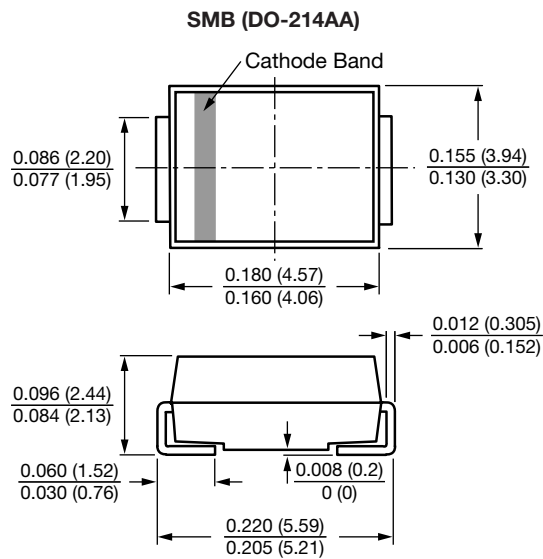


Fig. 6 - Typical Transient Thermal Impedance

Note

- Fig.1, 10 000 μ s P_{ppm} is actual test for $V_{WM} \leq 60$ V types, over 60 V types 10 000 μ s P_{ppm} is curve extensional value

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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