Surface Mount Transient Voltage Suppressor Rectifiers

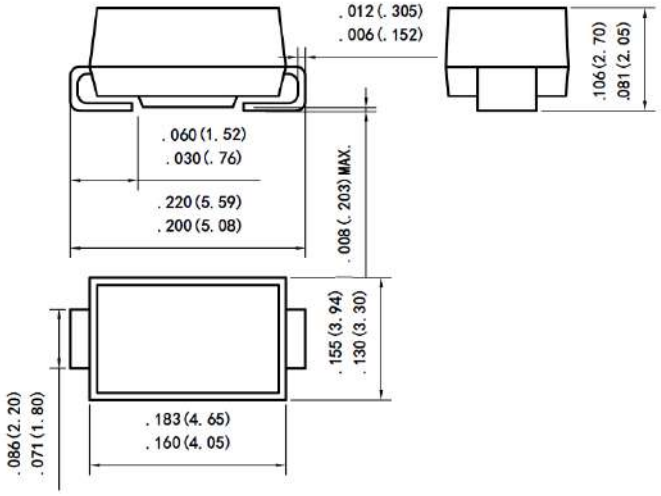
Features:

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data:

- Case: DO214AA/(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

DO214AA/(SMB)



Unit: inch (mm)

Maximum Ratings & Characteristics Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform(1)	P_{PP}	1500	W
Peak pulse current wih a 10/1000 us waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P_D	5.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I_{FSM}	100	A
Maximum instantaneous forward voltage at 50 A for unidirectional only(3)	V_F	3.5	V
Operating junction	T_J	-55 to +175	℃
Storage temperature range	T_{STG}	-55 to +175	℃

Note:

1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1 ;

2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V_{RWM}(V)	Min.(V)	Max.(V)	I_T(mA)	$V_{C\ MAX.}$(V)	I_{PP}(A)	I_R(uA)
SMB15J12A	SMB15J12CA	GEE	BEE	12.0	13.30	14.70	1	19.9	75.4	1
SMB15J13A	SMB15J13CA	GEG	BEG	13.0	14.40	15.90	1	21.5	69.8	1
SMB15J14A	SMB15J14CA	GEK	BEK	14.0	15.60	17.20	1	23.2	64.7	1
SMB15J15A	SMB15J15CA	GEM	BEM	15.0	16.70	18.50	1	24.4	61.5	1
SMB15J16A	SMB15J16CA	GEP	BEP	16.0	17.80	19.70	1	26.0	57.7	1
SMB15J17A	SMB15J17CA	GER	BER	17.0	18.90	20.90	1	27.6	54.4	1
SMB15J18A	SMB15J18CA	GET	BET	18.0	20.00	22.10	1	29.2	51.4	1
SMB15J20A	SMB15J20CA	GEV	BEV	20.0	22.20	24.50	1	32.4	46.3	1
SMB15J22A	SMB15J22CA	GEX	BEX	22.0	24.40	26.90	1	35.5	42.3	1
SMB15J24A	SMB15J24CA	GEZ	BEZ	24.0	26.70	29.50	1	38.9	38.6	1
SMB15J26A	SMB15J26CA	GFE	BFE	26.0	28.90	31.90	1	42.1	35.7	1
SMB15J28A	SMB15J28CA	GFG	BFG	28.0	31.10	34.40	1	45.4	33.1	1
SMB15J30A	SMB15J30CA	GFK	BFK	30.0	33.50	36.80	1	48.4	31.0	1
SMB15J33A	SMB15J33CA	GFM	BFM	33.0	36.70	40.60	1	53.3	28.2	1
SMB15J36A	SMB15J36CA	GFP	BFP	36.0	40.00	44.20	1	58.1	25.9	1
SMB15J40A	SMB15J40CA	GFR	BFR	40.0	44.40	49.10	1	64.5	23.3	1
SMB15J43A	SMB15J43CA	GFT	BFT	43.0	47.80	52.80	1	69.4	21.7	1
SMB15J45A	SMB15J45CA	GFV	BFV	45.0	50.00	55.30	1	72.7	20.6	1
SMB15J48A	SMB15J48CA	GFX	BFX	48.0	53.30	58.90	1	77.4	19.4	1
SMB15J51A	SMB15J51CA	GFZ	BFZ	51.0	56.70	62.70	1	82.4	18.2	1
SMB15J54A	SMB15J54CA	GGE	BGE	54.0	60.00	66.30	1	87.1	17.3	1
SMB15J58A	SMB15J58CA	GGG	BGG	58.0	64.40	71.20	1	93.6	16.1	1
SMB15J60A	SMB15J60CA	GGK	BGK	60.0	66.70	73.70	1	96.8	15.5	1
SMB15J64A	SMB15J64CA	GGM	BGM	64.0	71.10	78.60	1	103.0	14.6	1

Ratings and Characteristics Curves (TA=25℃ unless otherwise noted)

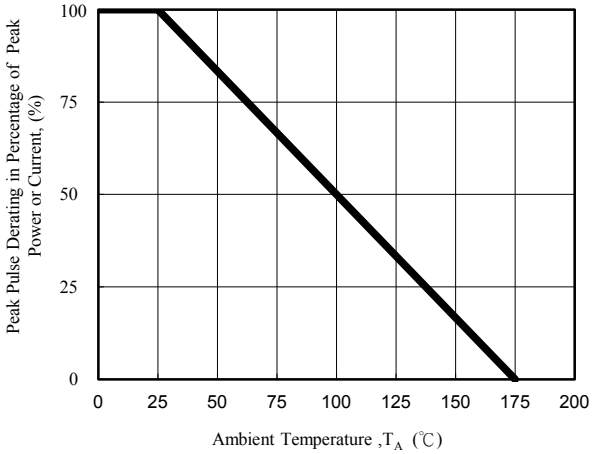


Fig. 1 - Pulse Derating Curve

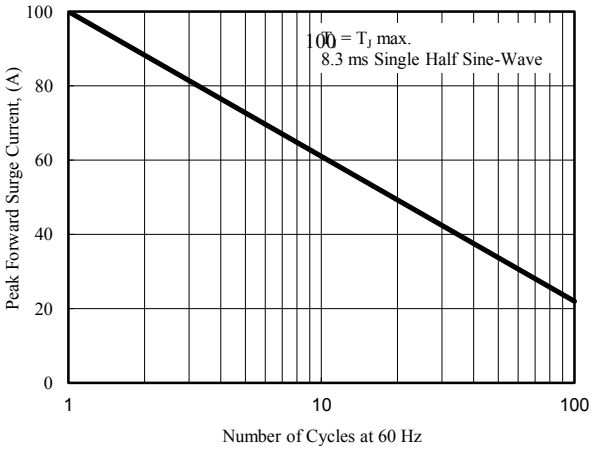


Fig. 2 - Maximum Non-Repetitive Surge Current

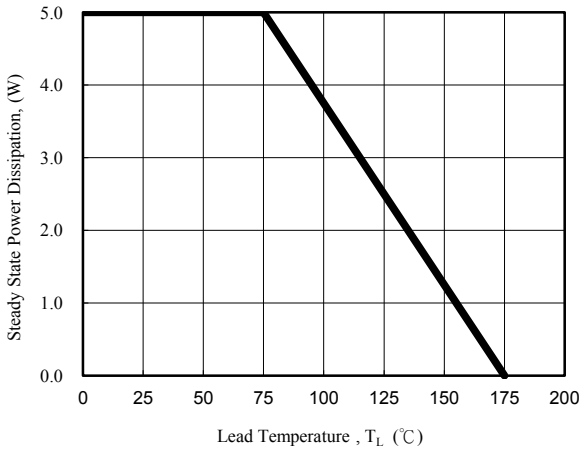


Fig. 3 - Steady State Power Derating Curve

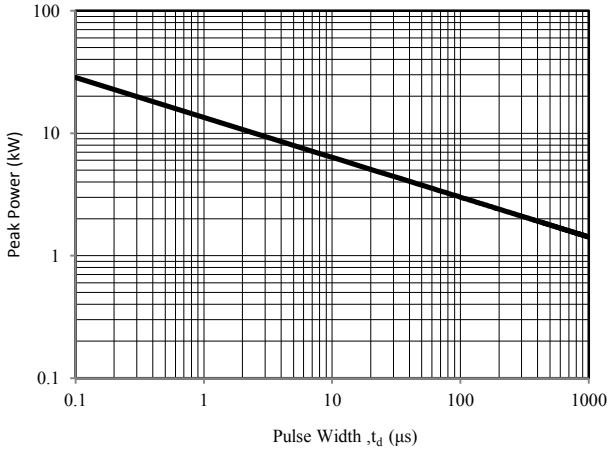


Fig. 4 - Peak Pulse Power Rating Curve

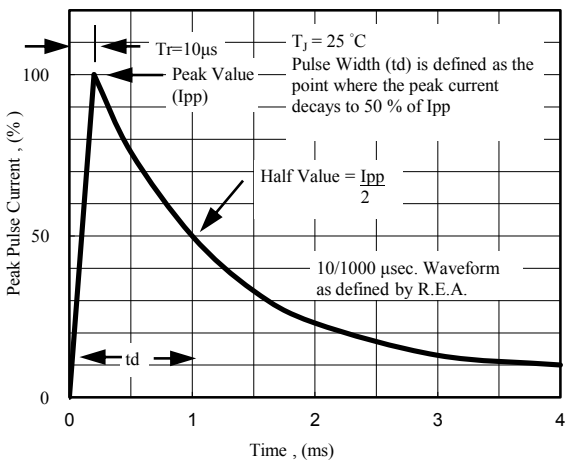


Fig. 5 - Pulse Waveform

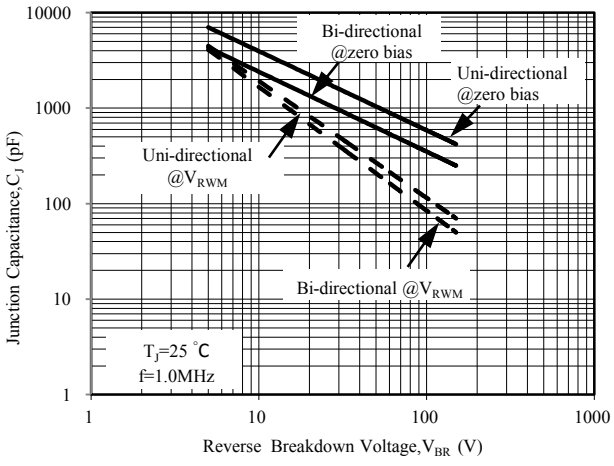


Fig. 6 - Typical Junction Capacitance