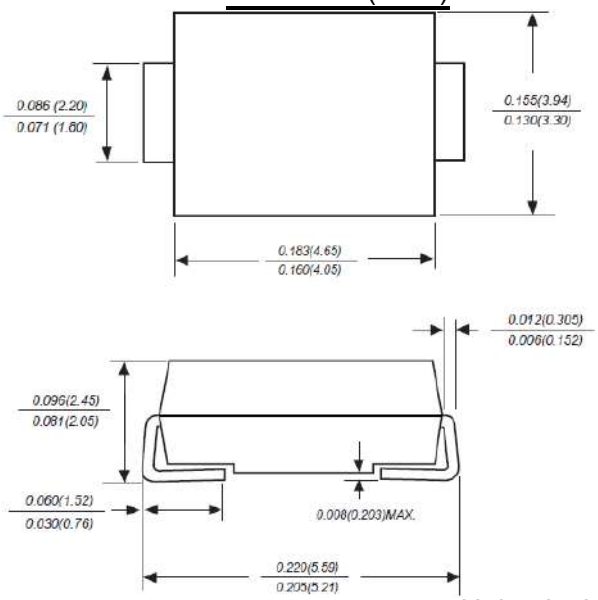
Surface Mount Transient Voltage Suppressor Rectifiers

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

DO214AA/(SMB)



Unit: inch (mm)

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 cthode end except Bipolar
- Mounting position: Any

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}	200	A
Maximum instantaneous forward voltage at 50 A for unidirectional only(3)	V_F	3.5/6.5	V
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +150	℃

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 ;

3)VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V。

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)
1.5SMB6.8A	1.5SMB6.8CA	K56V8A	K56V8C	5.8	6.45	7.14	10	10.5	97.50	1000
1.5SMB7.5A	1.5SMB7.5CA	K57V5A	K57V5C	6.4	7.13	7.88	10	11.3	90.75	500
1.5SMB8.2A	1.5SMB8.2CA	K58V2A	K58V2C	7.0	7.79	8.61	10	12.1	84.75	200
1.5SMB9.1A	1.5SMB9.1CA	K59V1A	K59V1C	7.8	8.65	9.55	1	13.4	76.50	50
1.5SMB10A	1.5SMB10CA	K510A	K510C	8.6	9.50	10.50	1	14.5	70.75	10
1.5SMB11A	1.5SMB11CA	K511A	K511C	9.4	10.50	11.60	1	15.6	65.75	5
1.5SMB12A	1.5SMB12CA	K512A	K512C	10.2	11.40	12.60	1	16.7	61.50	5
1.5SMB13A	1.5SMB13CA	K513A	K513C	11.1	12.40	13.70	1	18.2	56.25	1
1.5SMB15A	1.5SMB15CA	K515A	K515C	12.8	14.30	15.80	1	21.2	48.25	1
1.5SMB16A	1.5SMB16CA	K516A	K516C	13.6	15.20	16.80	1	22.5	45.50	1
1.5SMB18A	1.5SMB18CA	K518A	K518C	15.3	17.10	18.90	1	25.5	40.25	1
1.5SMB20A	1.5SMB20CA	K520A	K520C	17.1	19.00	21.00	1	27.7	37.00	1
1.5SMB22A	1.5SMB22CA	K522A	K522C	18.8	20.90	23.10	1	30.6	33.50	1
1.5SMB24A	1.5SMB24CA	K524A	K524C	20.5	22.80	25.20	1	33.2	30.75	1
1.5SMB27A	1.5SMB27CA	K527A	K527C	23.1	25.70	28.40	1	37.5	27.25	1
1.5SMB30A	1.5SMB30CA	K530A	K530C	25.6	28.50	31.50	1	41.4	24.75	1
1.5SMB33A	1.5SMB33CA	K533A	K533C	28.2	31.40	34.70	1	45.7	22.50	1
1.5SMB36A	1.5SMB36CA	K536A	K536C	30.8	34.20	37.80	1	49.9	20.50	1
1.5SMB39A	1.5SMB39CA	K539A	K539C	33.3	37.10	41.00	1	53.9	19.00	1
1.5SMB43A	1.5SMB43CA	K543A	K543C	36.8	40.90	45.20	1	59.3	17.25	1
1.5SMB47A	1.5SMB47CA	K547A	K547C	40.2	44.70	49.40	1	64.8	15.75	1
1.5SMB51A	1.5SMB51CA	K551A	K551C	43.6	48.50	53.60	1	70.1	14.50	1
1.5SMB56A	1.5SMB56CA	K556A	K556C	47.8	53.20	58.80	1	77.0	13.25	1
1.5SMB62A	1.5SMB62CA	K562A	K562C	53.0	58.90	65.10	1	85.0	12.00	1
1.5SMB68A	1.5SMB68CA	K568A	K568C	58.1	64.60	71.40	1	92.0	11.25	1
1.5SMB75A	1.5SMB75CA	K575A	K575C	64.1	71.30	78.80	1	103.0	10.00	1
1.5SMB82A	1.5SMB82CA	K582A	K582C	70.1	77.90	86.10	1	113.0	9.00	1
1.5SMB91A	1.5SMB91CA	K591A	K591C	77.8	86.50	95.50	1	125.0	8.25	1
1.5SMB100A	1.5SMB100CA	K5100A	K5100C	85.5	95.0	105.0	1	137.0	7.50	1
1.5SMB110A	1.5SMB110CA	K5110A	K5110C	94.0	105.0	116.0	1	152.0	6.75	1
1.5SMB120A	1.5SMB120CA	K5120A	K5120C	102.0	114.0	126.0	1	165.0	6.25	1
1.5SMB130A	1.5SMB130CA	K5130A	K5130C	111.0	124.0	137.0	1	179.0	5.75	1

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

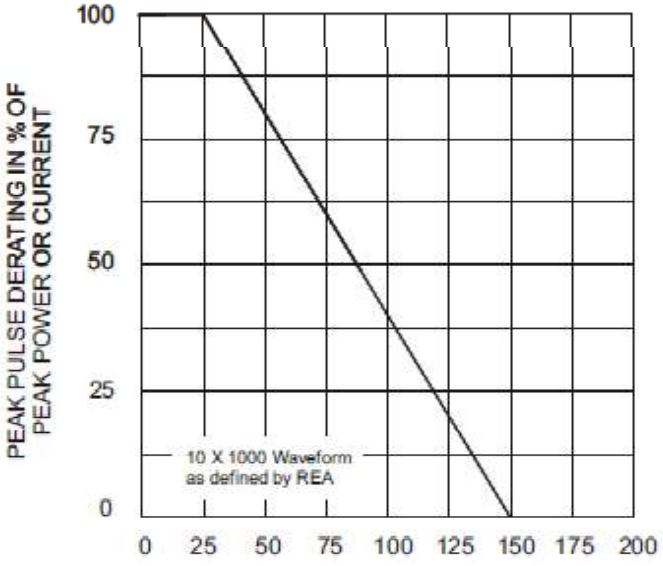


Fig. 1 - Pulse Derating Curve

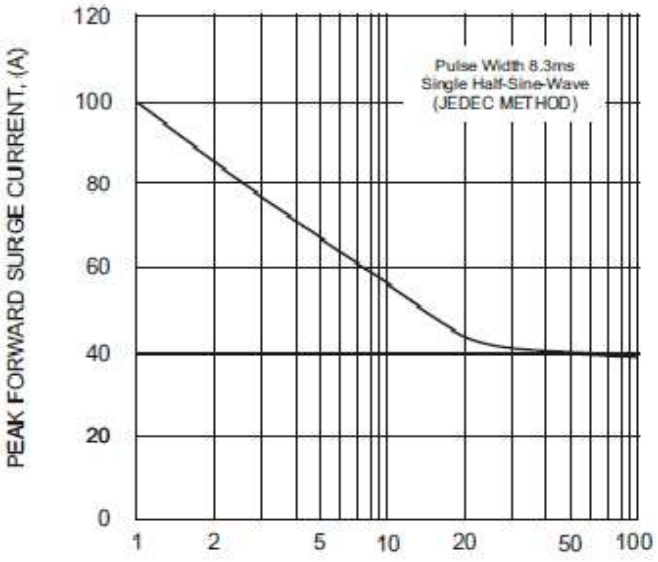


Fig. 2 - Maximum Non-Repetitive Surge Current

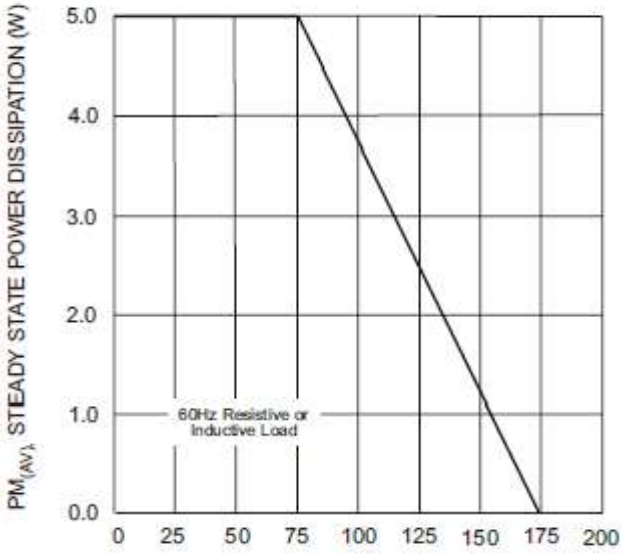


Fig. 3 - Steady State Power Derating Curve

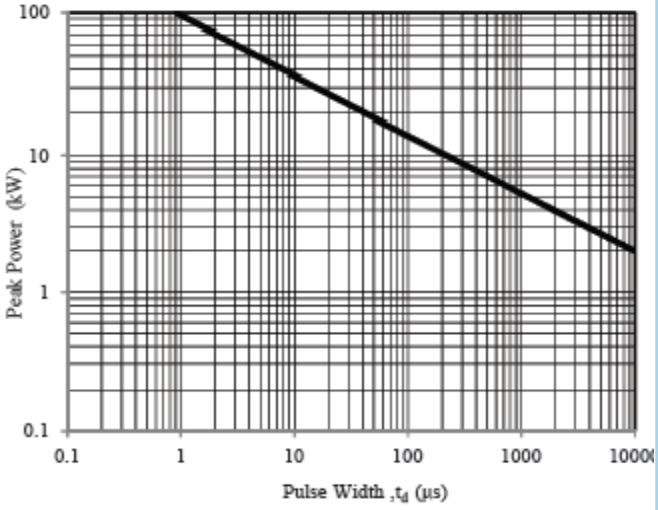


Fig. 4 - Peak Pulse Power Rating Curve

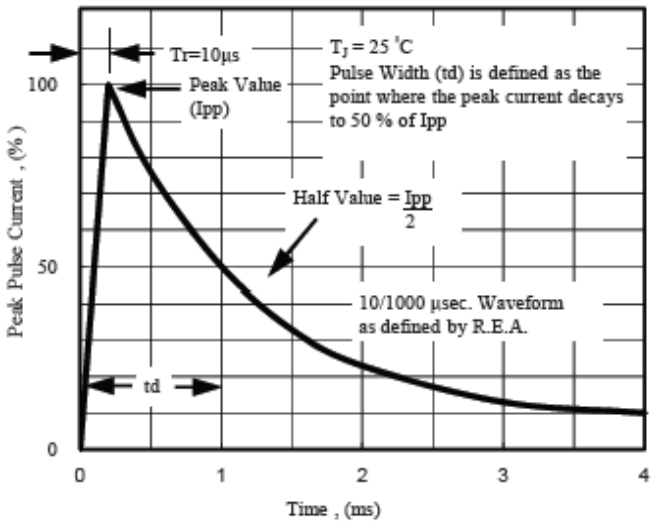


Fig. 5 - Pulse Waveform

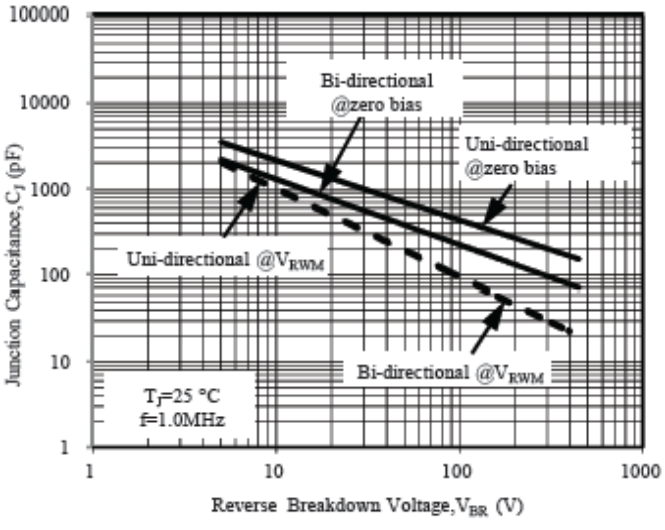


Fig. 6 - Typical Junction Capacitance