

Surface Mount Transient Voltage Suppressors (TVS)

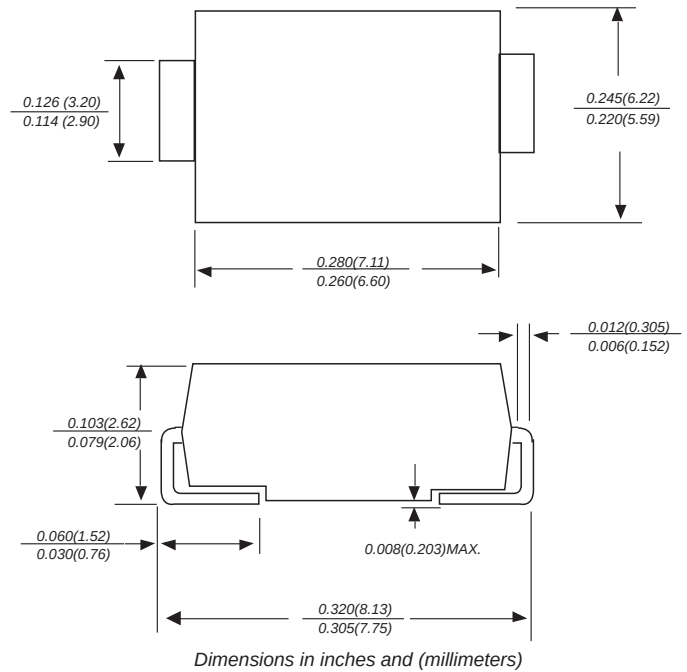
Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)

DO-214AB/SMC



Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$) (Note 1)	P_{PK}	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I_{FSM}	200	A
Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$	$PM_{(AV)}$	5.0	W
Instantaneous Forward Voltage @ $I_{PP} = 100\text{A}$ (Notes 1 & 3)	V_F	See Note 5	V
Operating Temperature Range	T_j	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$

NOTES:1. Non-repetitive current pulse ,per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 1.

2. Thermal Resistance junction to Lead.

3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$, continued

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @ I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}
(Uni)	(Bi)	$V_{RWM}(V)$	$V_{BR\ MIN}(V)$	$V_{BR\ MAX}(V)$	$I_T\ (mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SM15T6.8A	SM15T6.8CA	5.80	6.45	7.14	10	10.5	144.8	1000.0
SM15T7.5A	SM15T7.5CA	6.40	7.13	7.88	10	11.3	134.5	500.0
SM15T8.2A	SM15T8.2CA	7.02	7.79	8.61	10	12.1	125.6	200.0
SM15T9.1A	SM15T9.1CA	7.78	8.65	9.55	1.0	13.4	113.4	50.0
SM15T10A	SM15T10CA	8.55	9.50	10.5	1.0	14.5	104.8	10.0
SM15T11A	SM15T11CA	9.40	10.5	11.6	1.0	15.6	97.4	5.0
SM15T12A	SM15T12CA	10.2	11.4	12.6	1.0	16.7	91.0	5.0
SM15T13A	SM15T13CA	11.1	12.4	13.7	1.0	18.2	83.5	5.0
SM15T15A	SM15T15CA	12.8	14.3	15.8	1.0	21.2	71.7	5.0
SM15T16A	SM15T16CA	13.6	15.2	16.8	1.0	22.5	67.6	5.0
SM15T18A	SM15T18CA	15.3	17.1	18.9	1.0	25.2	60.3	5.0
SM15T20A	SM15T20CA	17.1	19.0	21.0	1.0	27.7	54.9	5.0
SM15T22A	SM15T22CA	18.8	20.9	23.1	1.0	30.6	49.7	5.0
SM15T24A	SM15T24CA	20.5	22.8	25.2	1.0	33.2	45.8	5.0
SM15T27A	SM15T27CA	23.1	25.7	28.4	1.0	37.5	40.5	5.0
SM15T30A	SM15T30CA	25.6	28.5	31.5	1.0	41.4	36.7	5.0
SM15T33A	SM15T33CA	28.2	31.4	34.7	1.0	45.7	33.3	5.0
SM15T36A	SM15T36CA	30.8	34.2	37.8	1.0	49.9	30.5	5.0
SM15T39A	SM15T39CA	33.3	37.1	41.0	1.0	53.9	28.2	5.0
SM15T43A	SM15T43CA	36.8	40.9	45.2	1.0	59.3	25.6	5.0
SM15T47A	SM15T47CA	40.2	44.7	49.4	1.0	64.8	23.5	5.0
SM15T51A	SM15T51CA	43.6	48.5	53.6	1.0	70.1	21.7	5.0
SM15T56A	SM15T56CA	47.8	53.2	58.8	1.0	77.0	19.7	5.0
SM15T62A	SM15T62CA	53.0	58.9	65.1	1.0	85.0	17.9	5.0
SM15T68A	SM15T68CA	58.1	64.6	71.4	1.0	92.0	16.5	5.0
SM15T75A	SM15T75CA	64.1	71.3	78.8	1.0	103	14.8	5.0
SM15T82A	SM15T82CA	70.1	77.9	86.1	1.0	113	13.5	5.0
SM15T91A	SM15T91CA	77.8	86.5	95.5	1.0	125	12.2	5.0
SM15T100A	SM15T100CA	85.5	95.0	105	1.0	137	11.1	5.0
SM15T110A	SM15T110CA	94.0	105	116	1.0	152	10.0	5.0
SM15T120A	SM15T120CA	102	114	126	1.0	165	9.2	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SM15T120A	SM15T120CA	102	114	126	1.0	165	9.2	5.0
SM15T130A	SM15T130CA	111	124	137	1.0	179	8.5	5.0
SM15T150A	SM15T150CA	128	143	158	1.0	207	7.3	5.0
SM15T170A	SM15T170CA	145	162	179	1.0	234	6.5	5.0
SM15T180A	SM15T180CA	154	171	189	1.0	246	6.2	5.0
SM15T200A	SM15T200CA	171	190	210	1.0	274	5.5	5.0
SM15T220A	SM15T220CA	185	209	231	1.0	328	4.6	5.0
SM15T250A	SM15T250CA	214	237	263	1.0	344	4.4	5.0
SM15T300A	SM15T300CA	256	285	315	1.0	414	3.7	5.0
SM15T350A	SM15T350CA	300	333	368	1.0	482	3.2	5.0
SM15T400A	SM15T400CA	342	380	420	1.0	548	2.8	5.0
SM15T440A	SM15T440CA	376	418	462	1.0	600	2.5	5.0

Characteristic Curves $T_A = 25^\circ\text{C}$ unless otherwise noted

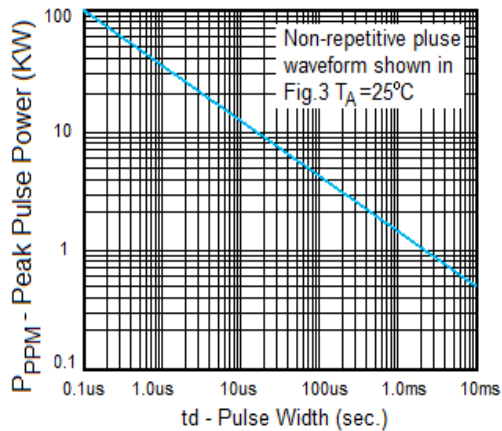


Fig. 1 Peak Pulse Power Rating

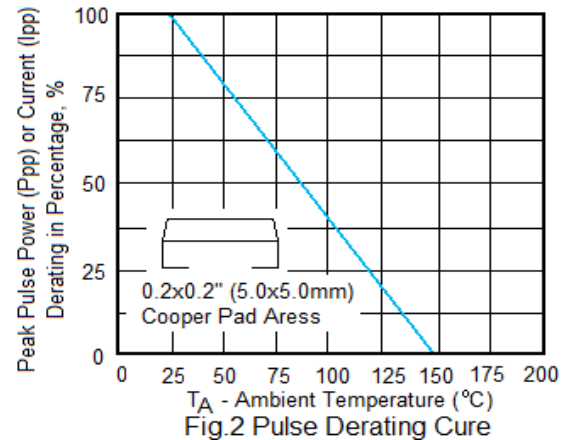


Fig.2 Pulse Derating Curve

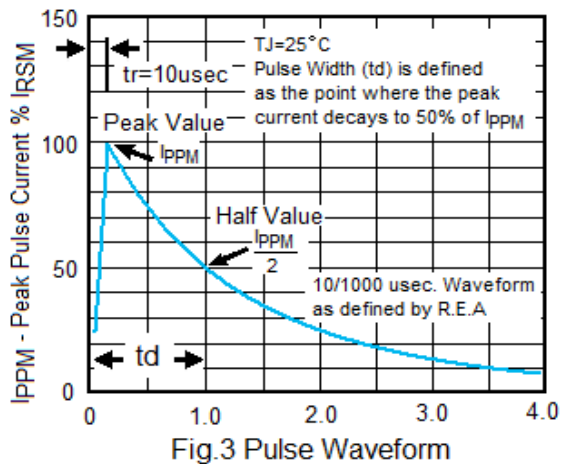


Fig.3 Pulse Waveform

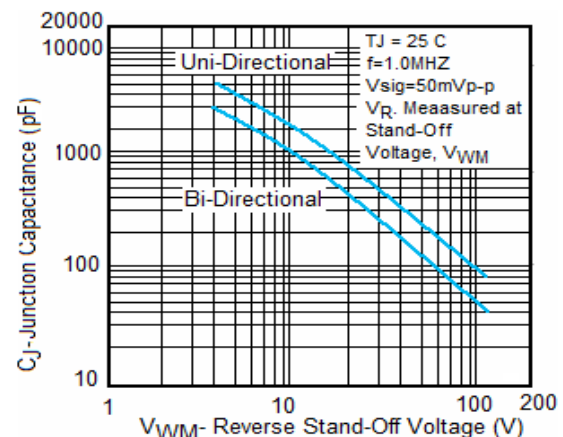


Fig. 4- Typical Junction Capacitance

Ordering Information

1500W SMC Series	SM15T	XX	C	A
		voltage	C: Bi-directional	5% VBR Voltage tolerance



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