

5000W SURFACE MOUNT TVS

Features

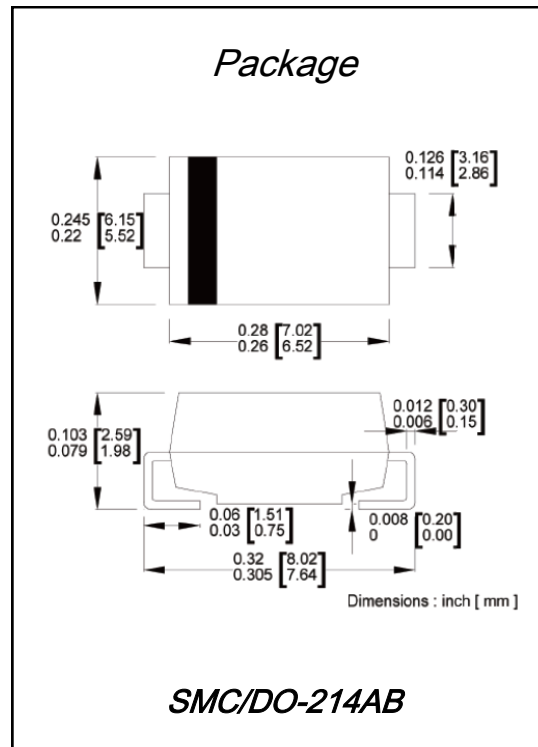
- ◆ Glass Passivated Chip
- ◆ Low Leakage
- ◆ Uni and Bidirectional Unit
- ◆ Excellent Clamping Capability
- ◆ Very Fast Response Time
- ◆ RoHS Compliant
- ◆ 5000 W peak pulse power capability with a10/1000 us waveform, repetitive rate (duty cycle):0.01 %

Application

- ◆ IPC
- ◆ Car Electronics
- ◆ Power Supply
- ◆ Smart Meters

Mechanical Characteristics

- ◆ Case: Molded Plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end except Bi-directional parts
- ◆ Mounting position: Any





5.0SMDJ Series

DEVICE CHARACTERISTICS

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Power Dissipation With 10/1000us Waveform	P _{PP}	5000	Watt
Peak Pulse Current With 10/1000us Waveform	I _{PP}	-	A
Power Dissipation On Infinite Heatsink @ T _L = 75°C	P _D	6.5	Watt
Peak Forward Surge Current	I _{FSM}	300	A
Maximum Instantaneous Forward Voltage @ 50 A	V _F	3.5/5	V
Operating Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V _{RWM} (uA)	V _{RWM} (V)	I _{PP} (A)	V _C @ I _{PP} (V)
		Uni	Bi	Min (V)	Max (V)	IT (mA)				
5.0SMDJ11A	5.0SMDJ11CA	5PDX	5BDX	12.2	13.5	1	800	11	277.4	18.2
5.0SMDJ12A	5.0SMDJ12CA	5PDZ	5BDZ	13.3	14.7	1	800	12	253.7	19.9
5.0SMDJ13A	5.0SMDJ13CA	5PEE	5BEE	14.4	15.9	1	500	13	234.8	21.5
5.0SMDJ14A	5.0SMDJ14CA	5PEG	5BEG	15.6	17.2	1	200	14	217.6	23.2
5.0SMDJ15A	5.0SMDJ15CA	5PEK	5BEK	16.7	18.5	1	100	15	206.9	24.4
5.0SMDJ16A	5.0SMDJ16CA	5PEM	5BEM	17.8	19.7	1	50	16	194.2	26
5.0SMDJ17A	5.0SMDJ17CA	5PEP	5BEP	18.9	20.9	1	20	17	182.9	27.6
5.0SMDJ18A	5.0SMDJ18CA	5PER	5BER	20	22.1	1	10	18	172.9	29.2
5.0SMDJ19A	5.0SMDJ19CA	5PET	5BET	21.1	23.3	1	10	19	164	30.8
5.0SMDJ20A	5.0SMDJ20CA	5PEV	5BEV	22.2	24.5	1	5	20	155.8	32.4
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	24.4	26.9	1	5	22	142.2	35.5
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	26.7	29.5	1	5	24	129.8	38.9
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	28.9	31.9	1	5	26	119.9	42.1
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	31.1	34.4	1	5	28	111.2	45.4
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	33.3	36.8	1	5	30	104.3	48.4
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	36.7	40.6	1	5	33	94.7	53.3
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	40	44.2	1	5	36	86.9	58.1



5.0SMDJ Series

DEVICE CHARACTERISTICS

ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V _{RWM}	V _{RWM}	I _{PP}	V _C @ I _{PP}
		Uni	Bi	Min (V)	Max (V)	IT (mA)	(μ A)	(V)	(A)	(V)
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	44.4	49.1	1	5	40	78.2	64.5
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	47.8	52.8	1	5	43	72.7	69.4
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	50	55.3	1	5	45	69.4	72.7
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	53.3	58.9	1	5	48	65.2	77.4
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	56.7	62.7	1	5	51	61.2	82.4
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	60	66.3	1	5	54	57.9	87.1
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	64.4	71.2	1	5	58	53.9	93.6
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	66.7	73.7	1	5	60	52.1	96.8
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	71.1	78.6	1	5	64	49	103
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	77.8	86	1	5	70	44.6	113
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	83.3	92.1	1	5	75	41.7	121
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	86.7	95.8	1	5	78	40	126
5.0SMDJ80A	5.0SMDJ80CA	5PGB	5BGB	88.8	97.6	1	5	80	38.9	129.6
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	94.4	104	1	5	85	36.8	137
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	100	111	1	5	90	34.5	146
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	111	123	1	5	100	31.1	162
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	122	135	1	5	110	28.5	177
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	133	147	1	5	120	26.1	193
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	144	159	1	5	130	24.1	209
5.0SMDJ140A	5.0SMDJ140CA	5PHB	5BHB	155	171	1	5	140	22.2	226.8
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	167	185	1	5	150	20.7	243
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	178	197	1	5	160	19.5	259
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	189	209	1	5	170	18.3	275
5.0SMDJ180A	5.0SMDJ180CA	5PHT	5BHT	200	220	1	5	180	17.3	291.6
5.0SMDJ190A	5.0SMDJ190CA	5PHV	5BHV	211	232	1	5	190	16.4	307.8
5.0SMDJ200A	5.0SMDJ200CA	5PHW	5BHW	224	247	1	5	200	15.4	324
5.0SMDJ220A	5.0SMDJ220CA	5PHX	5BHx	246	272	1	5	220	14	356
5.0SMDJ250A	5.0SMDJ250CA	5PHZ	5BHZ	279	309	1	5	250	12.3	405
5.0SMDJ300A	5.0SMDJ300CA	5PJE	5BJE	335	371	1	5	300	10.2	486
5.0SMDJ350A	5.0SMDJ350CA	5PJG	5BJG	391	432	1	5	350	8.8	567
5.0SMDJ400A	5.0SMDJ400CA	5PJK	5BJK	447	494	1	5	400	7.7	648
5.0SMDJ440A	5.0SMDJ440CA	5PJM	5BJM	492	543	1	5	440	7	713

RATING CURVES

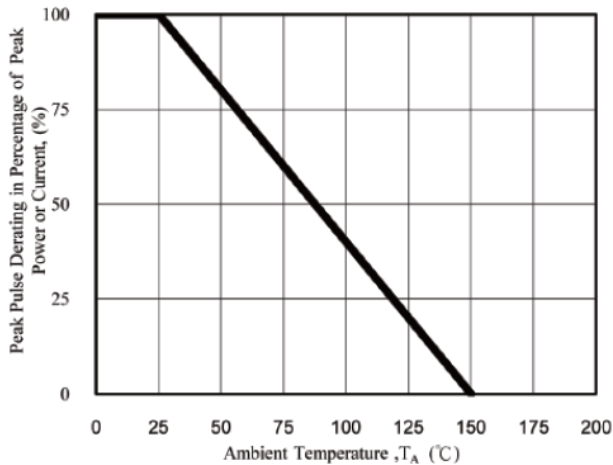


Fig. 1 - Pulse Derating Curve

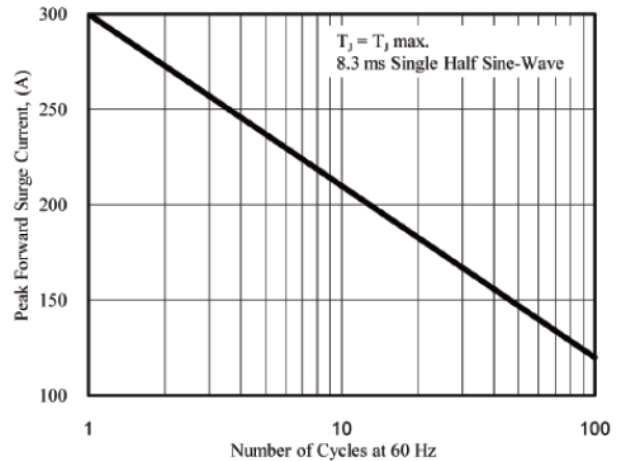


Fig. 2 - Maximum Non-Repetitive Surge Current

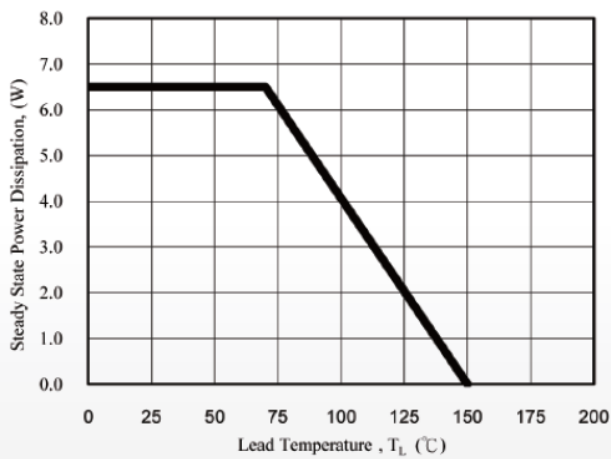


Fig. 3 - Steady State Power Derating Curve

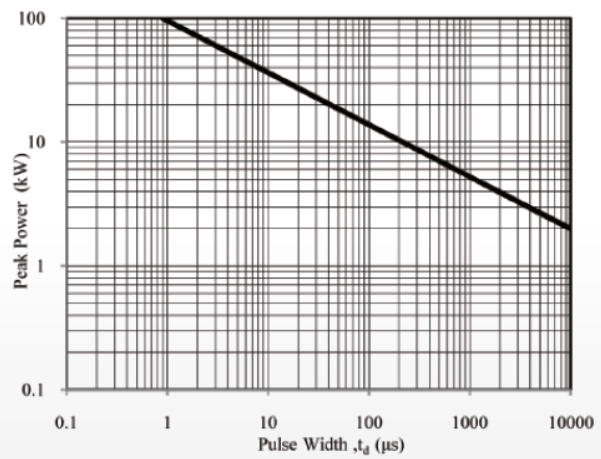


Fig. 4 - Peak Pulse Power Rating Curve

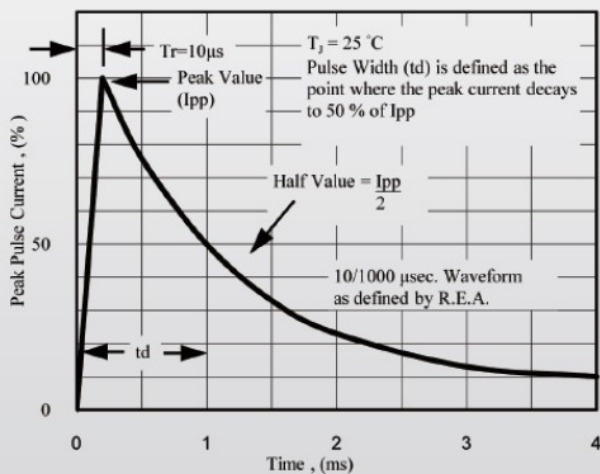


Fig. 5 - Pulse Waveform

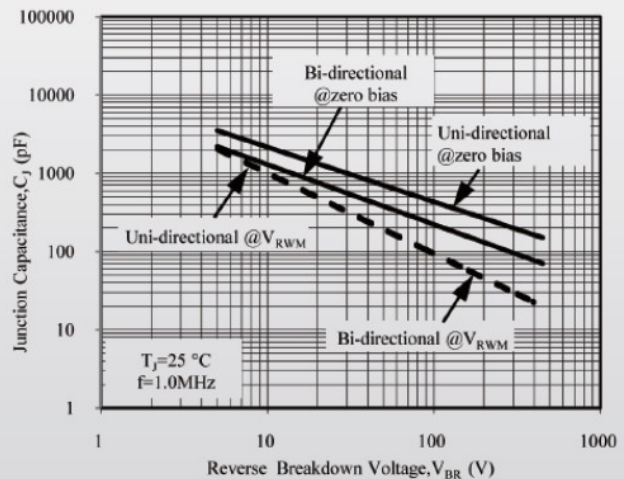


Fig. 6 - Typical Junction Capacitance



5.0SMDJ Series

REFERENCE

Revision History	Modification Description
Rev.1.0	Initial Release