

3000W SURFACE MOUNT TVS

Features

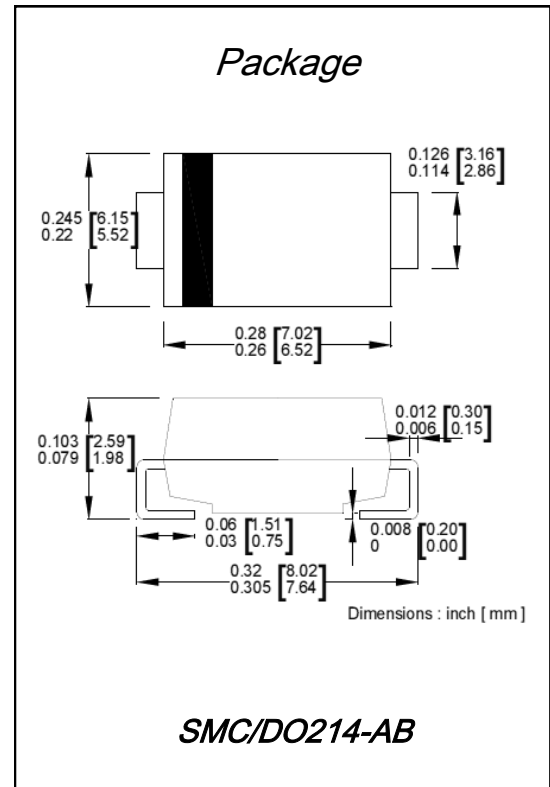
- ◆ Glass Passivated Chip
- ◆ Low Leakage
- ◆ Uni and Bidirectional Unit
- ◆ Excellent Clamping Capability
- ◆ Very Fast Response Time
- ◆ RoHS Compliant
- ◆ 3000 W peak pulse power capability with 10/1000us waveform, repetitive rate (duty cycle): 0.01 %

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



Packing Info	
Reel Size	13"
Qty / Reel	3000
Reel / Box	2
Box / Carton	8

DEVICE CHARACTERISTICS

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Power Dissipation With 10/1000us Waveform	P _{PP}	3000	Watt
Peak Pulse Current With 10/1000us Waveform	I _{PP}	-	A
Power Dissipation On Infinite Heatsink @ T _L = 75°C	P _D	6	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}	V _{RWM}	I _{PP}	V _C @ I _{PP}
		Uni	Bi	Min (V)	Max (V)	IT (mA)	(uA)	(V)	(A)	(V)
SMDJ5.0A	SMDJ5.0CA	RDE	DDE	6.4	7	10	1000	5	326	9.2
SMDJ6.0A	SMDJ6.0CA	RDG	DDG	6.67	7.37	10	1000	6	291.3	10.3
SMDJ6.5A	SMDJ6.5CA	RDK	DDK	7.22	7.98	10	500	6.5	267.9	11.2
SMDJ7.0A	SMDJ7.0CA	PDM	DDM	7.78	8.6	10	200	7	250	12
SMDJ7.5A	SMDJ7.5CA	PDP	DDP	8.33	9.21	1	100	7.5	232.6	12.9
SMDJ8.0A	SMDJ8.0CA	PDR	DDR	8.89	9.83	1	50	8	220.6	13.6
SMDJ8.5A	SMDJ8.5CA	PDT	DDT	9.44	10.4	1	25	8.5	208.4	14.4
SMDJ9.0A	SMDJ9.0CA	PDV	DDV	10	11.1	1	10	9	194.8	15.4
SMDJ10A	SMDJ10CA	PDX	DDX	11.1	12.3	1	5	10	176.4	17
SMDJ11A	SMDJ11CA	PDZ	DDZ	12.2	13.5	1	5	11	184.8	18.2
SMDJ12A	SMDJ12CA	PEE	DEE	13.3	14.7	1	5	12	150.6	19.9
SMDJ13A	SMDJ13CA	PEG	DEG	14.4	15.9	1	5	13	139.4	21.5
SMDJ14A	SMDJ14CA	PEK	DEK	15.6	17.2	1	5	14	129.4	23.2
SMDJ15A	SMDJ15CA	PEM	DEM	16.7	18.5	1	5	15	123	24.4
SMDJ16A	SMDJ16CA	PEP	DEP	17.8	19.7	1	5	16	115.4	26
SMDJ17A	SMDJ17CA	PER	DER	18.9	20.9	1	5	17	106.6	27.6
SMDJ18A	SMDJ18CA	PET	DET	20	22.1	1	5	18	102.8	29.2
SMDJ20A	SMDJ20CA	PEV	DEV	22.2	23.3	1	5	20	92.6	32.4
SMDJ22A	SMDJ22CA	PEX	DEX	24.4	26.9	1	5	22	84.4	35.5
SMDJ24A	SMDJ24CA	PEZ	DEZ	26.7	29.5	1	5	24	77.2	38.9
SMDJ26A	SMDJ26CA	PFE	DFE	28.9	31.9	1	5	26	71.2	42.1

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)
SMDJ28A	SMDJ28CA	PFG	DFG	31.1	34.4	1	5	28	66	45.4
SMDJ30A	SMDJ30CA	PFK	DFK	33.3	36.8	1	5	30	62	48.4
SMDJ33A	SMDJ33CA	PFM	DFM	36.7	40.6	1	5	33	56.2	53.3
SMDJ36A	SMDJ36CA	PFP	DFP	40	44.2	1	5	36	51.6	58.1
SMDJ40A	SMDJ40CA	PFR	DFR	44.4	49.1	1	5	40	46.4	64.5
SMDJ43A	SMDJ43CA	PFT	DFT	47.8	52.8	1	5	43	43.2	69.4
SMDJ45A	SMDJ45CA	PFV	DFV	50	55.3	1	5	45	41.2	72.7
SMDJ48A	SMDJ48CA	PFX	DFX	53.3	58.9	1	5	48	38.8	77.4
SMDJ51A	SMDJ51CA	PFZ	DFZ	56.7	62.7	1	5	51	36.4	82.4
SMDJ54A	SMDJ54CA	RGE	DGE	60	66.3	1	5	54	34.4	87.1
SMDJ58A	SMDJ58CA	PGG	DGG	64.4	71.2	1	5	58	32	93.6
SMDJ60A	SMDJ60CA	PGK	DGK	66.7	73.7	1	5	60	31	96.8
SMDJ64A	SMDJ64CA	PGM	DGM	71.1	78.6	1	5	64	29.2	103
SMDJ70A	SMDJ70CA	PGP	DGP	77.8	86	1	5	70	26.6	113
SMDJ75A	SMDJ75CA	PGR	DGR	83.3	92.1	1	5	75	24.8	121
SMDJ78A	SMDJ78CA	PGT	DGT	86.7	95.8	1	5	78	22.8	126
SMDJ85A	SMDJ85CA	PGV	DGV	94.4	104	1	5	85	20.8	137
SMDJ90A	SMDJ90CA	PGX	DGX	100	111	1	5	90	20.6	146
SMDJ100A	SMDJ100CA	PGZ	DGZ	111	123	1	5	100	18.6	162
SMDJ110A	SMDJ110CA	PHE	DHE	122	135	1	5	110	16.8	177
SMDJ120A	SMDJ120CA	PHG	DHG	133	147	1	5	120	15.6	193
SMDJ130A	SMDJ130CA	PHK	DHK	144	159	1	5	130	14.4	209
SMDJ150A	SMDJ150CA	PHM	DHM	167	185	1	5	150	12.4	243
SMDJ160A	SMDJ160CA	PHP	DHP	178	197	1	5	160	11.6	259
SMDJ170A	SMDJ170CA	PHR	DHR	189	209	1	5	170	10.9	275
SMDJ180A	SMDJ180CA	PHT	DHT	200	220	1	5	180	10.2	292
SMDJ190A	SMDJ190CA	PHV	DHV	211	232	1	5	190	9.7	308
SMDJ200A	SMDJ200CA	PHW	DHW	224	247	1	5	200	9.2	324
SMDJ220A	SMDJ220CA	PHX	DHX	246	272	1	5	220	8.4	356
SMDJ250A	SMDJ250CA	PHZ	DHZ	279	309	1	5	250	7.4	405
SMDJ300A	SMDJ300CA	PJE	DJE	335	371	1	5	300	6.1	486
SMDJ350A	SMDJ350CA	PJG	DJG	391	432	1	5	350	5.2	567
SMDJ400A	SMDJ400CA	PJK	DJK	447	494	1	5	400	4.6	648
SMDJ440A	SMDJ440CA	PJM	DJM	492	543	1	5	440	4.2	713

RATING CURVES

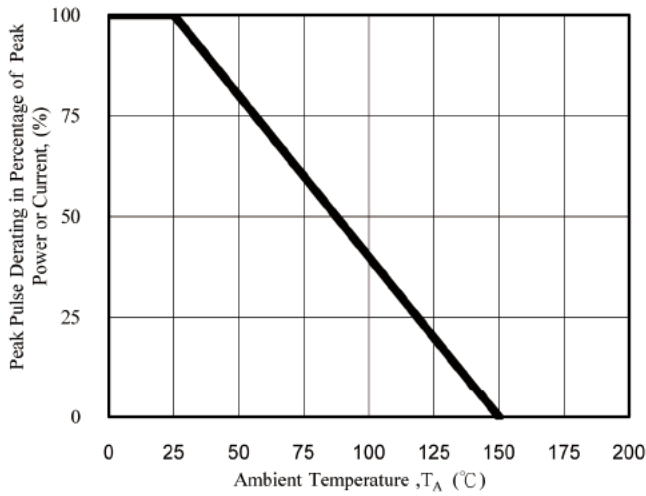


Fig. 1 - Pulse Derating Curve

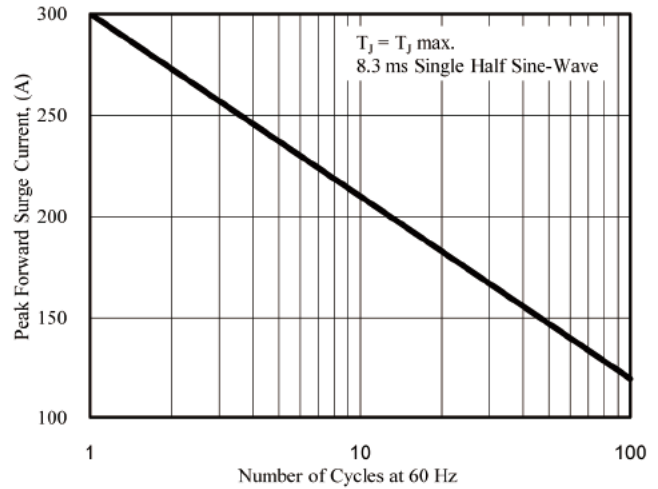


Fig. 2 - Maximum Non-Repetitive Surge Current

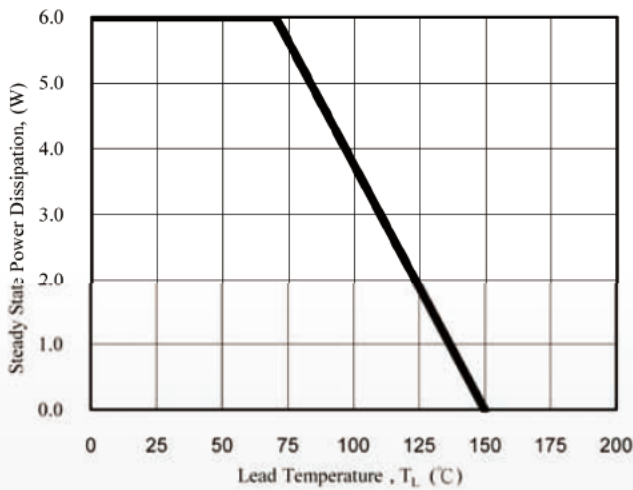


Fig. 3 - Steady State Power Derating Curve

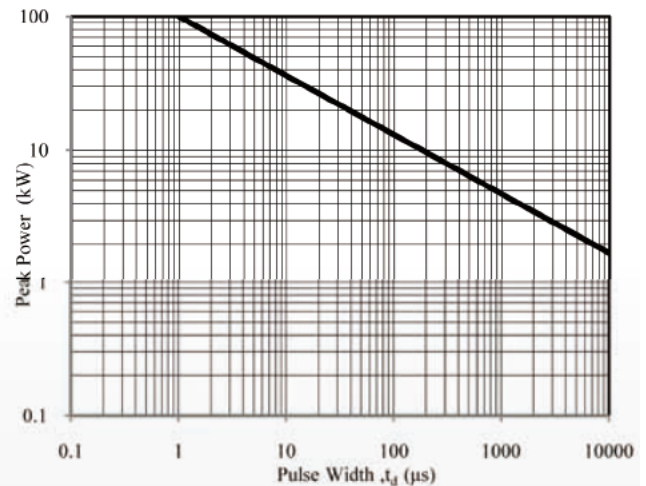


Fig. 4 - Peak Pulse Power Rating Curve

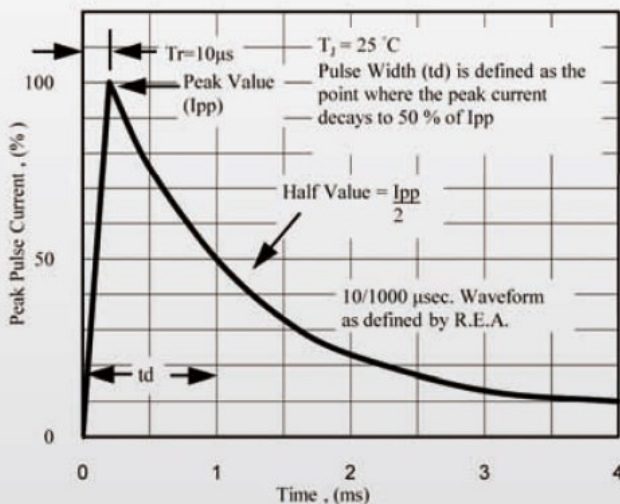


Fig. 5 - Pulse Waveform

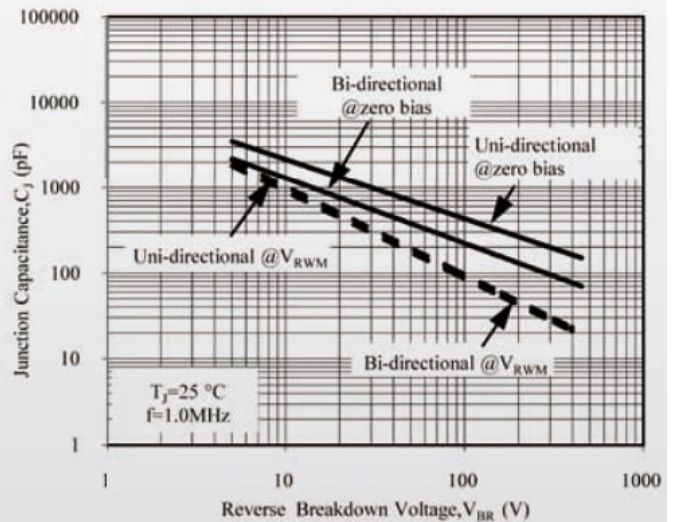


Fig. 6 - Typical Junction Capacitance

REFERENCE

Revision History	Modification Description
Rev.1.0	Initial Release
Rev.1.01	Edit Document Layout