SMC



Bi-directional

Uni-direction

Features

- P_{PP} 3000W
- V_{RWM} 5.0V- 440V
- Glass passivated chip

Limiting values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	3000
Peak pulse current (1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Peak forward surge current(2)	I_{FSM}	A	8.3 ms single half sine-wave unidirectional only	300
Power dissipation	P_D	W	On infinite heat sink at T_L=73℃	6.5
Operatingjunction and storage temperature range	T_J,T_{STG}	℃		-55 to +150

Electrical Characteristics (T_A=25℃unless otherwise noted)

Number A(UNI) For CA(BI)			Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Reverse Leakage @ V_{RWM}	Clamping Voltage @ I_{pp}	Peak Pulse Current Ipp
			V_{RWM} (V)	Min (V)	Max (V)	I_T(mA)	I_R (μA)	V_C (V)	(A)
SMDJ5.0(C)A	RDE	DDE	5.0	6.40	7.00	10	800	9.2	326.09
SMDJ6.0(C)A	RDG	DDG	6.0	6.67	7.37	10	800	10.3	291.26
SMDJ6.5(C)A	RDK	DDK	6.5	7.22	7.98	10	500	11.2	267.86
SMDJ7.0(C)A	PDM	DDM	7.0	7.78	8.60	10	200	12.0	250.00
SMDJ7.5(C)A	PDP	DDP	7.5	8.33	9.21	1.0	100	12.9	232.56
SMDJ8.0(C)A	PDR	DDR	8.0	8.89	9.83	1.0	50	13.6	220.59
SMDJ8.5(C)A	PDT	DDT	8.5	9.44	10.40	1.0	20	14.4	208.33
SMDJ9.0(C)A	PDV	DDV	9.0	10.00	11.10	1.0	10	15.4	194.81
SMDJ10(C)A	PDX	DDX	10.0	11.10	12.30	1.0	5.0	17.0	176.47
SMDJ11(C)A	PDZ	DDZ	11.0	12.20	13.50	1.0	5.0	18.2	164.84
SMDJ12(C)A	PEE	DEE	12.0	13.30	14.70	1.0	2.0	19.9	150.75
SMDJ13(C)A	PEG	DEG	13.0	14.40	15.90	1.0	2.0	21.5	139.53
SMDJ14(C)A	PEK	DEK	14.0	15.60	17.20	1.0	2.0	23.2	129.31
SMDJ15(C)A	PEM	DEM	15.0	16.70	18.50	1.0	1.0	24.4	122.95
SMDJ16(C)A	PEP	DEP	16.0	17.80	19.70	1.0	1.0	26.0	115.38
SMDJ17(C)A	PER	DER	17.0	18.90	20.90	1.0	1.0	27.6	108.70
SMDJ18(C)A	PET	DET	18.0	20.00	22.10	1.0	1.0	29.2	102.74
SMDJ20(C)A	PEV	DEV	20.0	22.20	24.50	1.0	1.0	32.4	92.59
SMDJ22(C)A	PEX	DEX	22.0	24.40	26.90	1.0	1.0	35.5	84.51
SMDJ24(C)A	PEZ	DEZ	24.0	26.70	29.50	1.0	1.0	38.9	77.12
SMDJ26(C)A	PFE	DFE	26.0	28.90	31.90	1.0	1.0	42.1	71.26
SMDJ28(C)A	PFG	DFG	28.0	31.10	34.40	1.0	1.0	45.4	66.08
SMDJ30(C)A	PFK	DFK	30.0	33.30	36.80	1.0	1.0	48.4	61.98
SMDJ33(C)A	PFM	DFM	33.0	36.70	40.60	1.0	1.0	53.3	56.29
SMDJ36(C)A	PFP	DFP	36.0	40.00	44.20	1.0	1.0	58.1	51.64
SMDJ40(C)A	PFR	DFR	40.0	44.40	49.10	1.0	1.0	64.5	46.51
SMDJ43(C)A	PFT	DFT	43.0	47.80	52.80	1.0	1.0	69.4	43.23
SMDJ45(C)A	PFV	DFV	45.0	50.00	55.30	1.0	1.0	72.7	41.27
SMDJ48(C)A	PFX	DFX	48.0	53.30	58.90	1.0	1.0	77.4	38.76
SMDJ51(C)A	PFZ	DFZ	51.0	56.70	62.70	1.0	1.0	82.4	36.41
SMDJ54(C)A	RGE	DGE	54.0	60.00	66.30	1.0	1.0	87.1	34.44
SMDJ58(C)A	PGG	DGG	58.0	64.40	71.20	1.0	1.0	93.6	32.05
SMDJ60(C)A	PGK	DGK	60.0	66.70	73.70	1.0	1.0	96.8	30.99
SMDJ64(C)A	PGM	DGM	64.0	71.10	78.60	1.0	1.0	103.0	29.13
SMDJ70(C)A	PGP	DGP	70.0	77.80	86.00	1.0	1.0	113.0	26.55
SMDJ75(C)A	PGR	DGR	75.0	83.30	92.10	1.0	1.0	121.0	24.79

Electrical Characteristics (T_A=25℃unless otherwise noted)

Number A(UNI) For CA(BI)			Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Reverse Leakage @ V_{RWM}	Clamping Voltage @ I_{pp}	Peak Pulse Current Ipp
			V_{RWM} (V)	Min (V)	Max (V)	I_T(mA)	I_R (μA)	V_C (V)	(A)
SMDJ78(C)A	PGT	DGT	78.0	86.70	95.80	1.0	1.0	126.0	23.81
SMDJ85(C)A	PGV	DGV	85.0	94.40	104.00	1.0	1.0	137.0	21.90
SMDJ90(C)A	PGX	DGX	90.0	100.0	111.00	1.0	1.0	146.0	20.55
SMDJ100(C)A	PGZ	DGZ	100.0	111.0	123.00	1.0	1.0	162.0	18.52
SMDJ110(C)A	PHE	DHE	110.0	122.0	135.00	1.0	1.0	177.0	16.95
SMDJ120(C)A	PHG	DHG	120.0	133.0	147.00	1.0	1.0	193.0	15.54
SMDJ130(C)A	PHK	DHK	130.0	144.0	159.00	1.0	1.0	209.0	14.35
SMDJ150(C)A	PHM	DHM	150.0	167.0	185.00	1.0	1.0	243.0	12.35
SMDJ160(C)A	PHP	DHP	160.0	178.0	197.00	1.0	1.0	259.0	11.58
SMDJ170(C)A	PHR	DHR	170.0	189.0	209.00	1.0	1.0	275.0	10.91
SMDJ180(C)A	PHT	DHT	180.0	200.0	220.00	1.0	1.0	291.6	10.29
SMDJ190(C)A	PHV	DHV	190.0	211.0	232.00	1.0	1.0	307.8	9.75
SMDJ200(C)A	PHX	DHX	200.0	224.0	247.00	1.0	1.0	324.0	9.26
SMDJ220(C)A	PHZ	DHZ	220.0	246.0	272.00	1.0	1.0	356.0	8.43

Typical Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

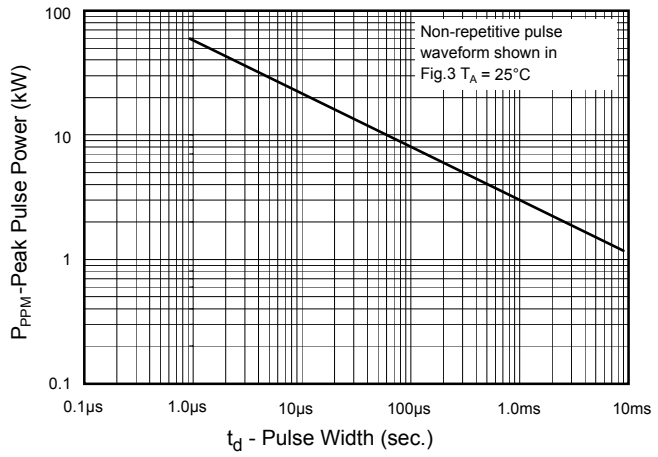


Fig.2 - Pulse Derating Curve

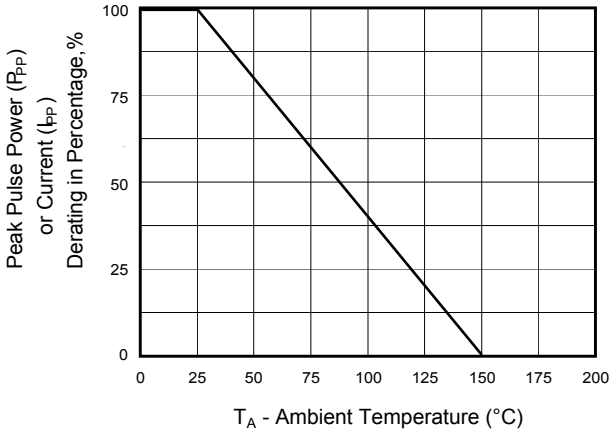


Fig.3 - Pulse Waveform

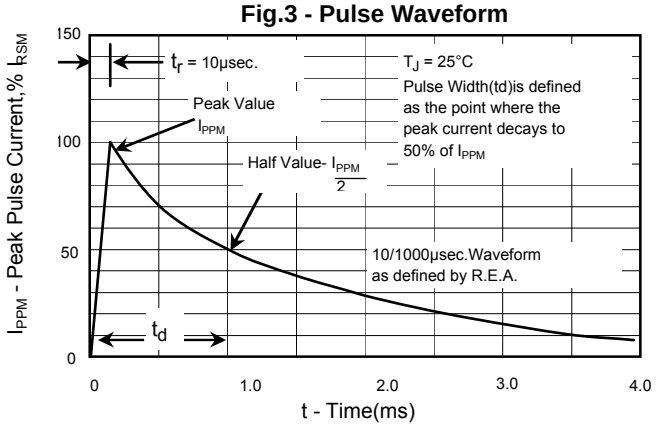


Fig. 4 - Typical Junction Capacitance

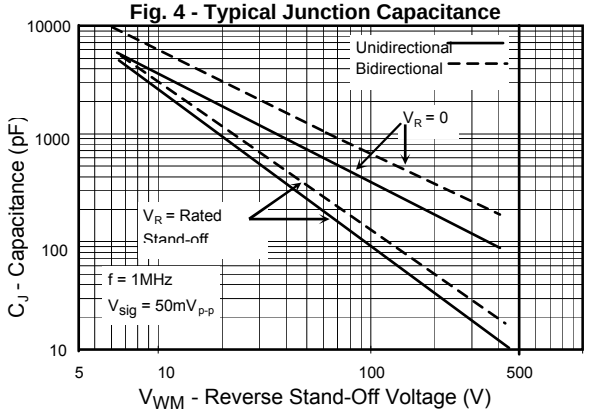


Fig. 5 - Steady State Power Derating Curve

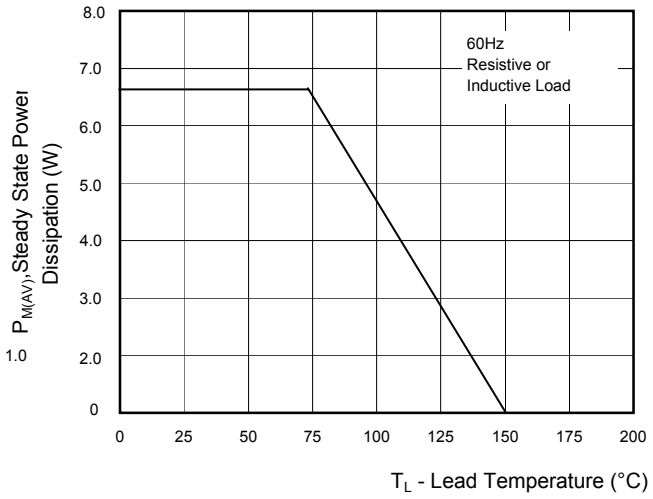
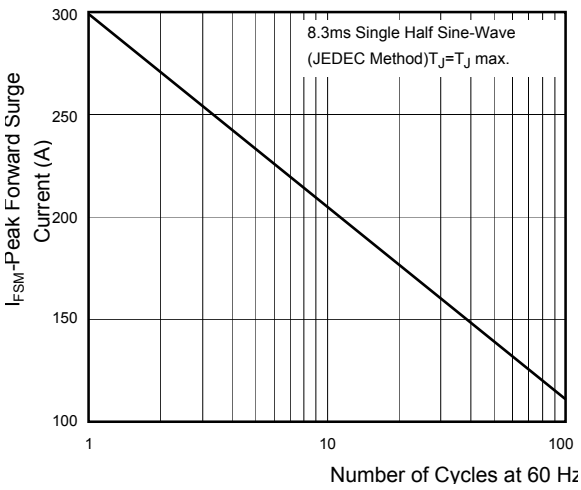
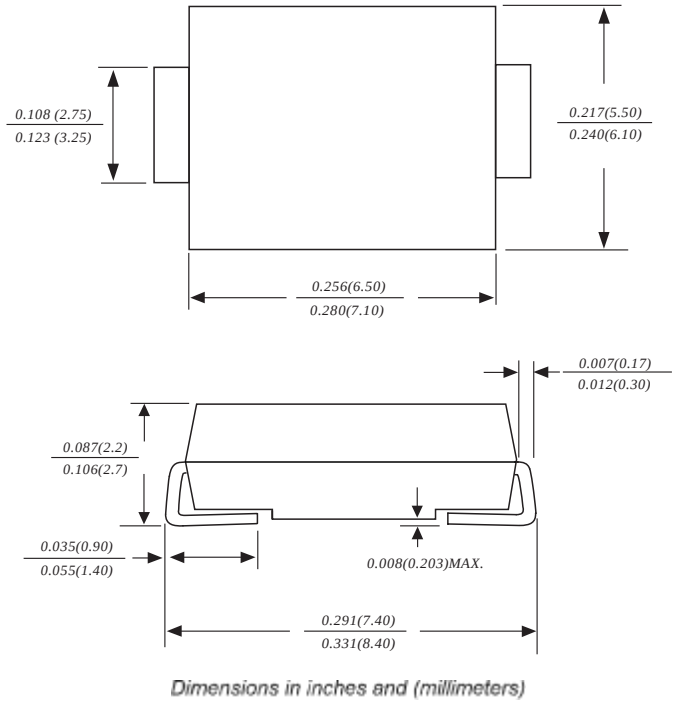


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

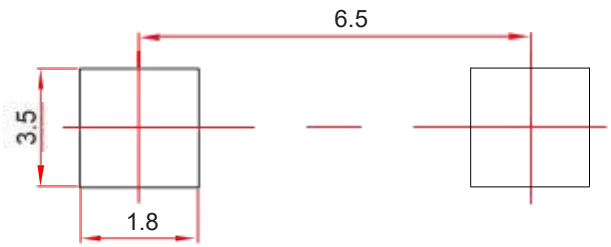


SMC Package outline Dimensions



Dimensions in inches and (millimeters)

SMC Suggested pad Layout



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.