

Features

- Peak power dissipation 1500W@10 x 1000 us Pulse
- Low incremental surge resistance
- Excellent clamping capability
- Glass passivated junction
- Fast response time
- Typical IR less than 1uA above 10V
- Halogen free and RoHS compliant



SMC top view



Bi-directional



Uni-direction

Mechanical Data

- CASE: SMCJ(DO-214AB) Molded Plastic
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device
- Mounting Position: Any



Halogen-Free

Maximum Ratings ($T_a = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
P_{PPM}	Peak Pulse Power Dissipation on 10/1000 us Waveform (Note1,2,FIG.1)	1500	W
P_D	Power Dissipation on Infinite Heat Sink at $T_L = 50^\circ\text{C}$	6.5	W
I_{PPM}	Peak Pulse Current of on 10/1000 us Waveform (Note1,FIG.3)	See Table1	A
I_{FSM}	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note2.3)	200	A
T_J	Operating Junction Temperature Range	$-55 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	$-55 \sim +150$	$^\circ\text{C}$

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig.2.

2. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

**MLSM****MICROELECTRONICS****SMCJ Series****1500W Surface Mount Transient Voltage Suppression****T_a=25°C unless otherwise specified**

Typ Number		Marking		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 _{RMW}
Uni	Bi	Uni	Bi	V _{RMW} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMCJ5.0A	SMCJ5.0CA	GDE	GDE	5.0	6.40	7.00	10	9.2	163.0	1000
SMCJ6.0A	SMCJ6.0CA	GDG	GDG	6.0	6.67	7.37	10	10.3	145.6	1000
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	133.9	500
SMCJ7.0A	SMCJ7.0CA	GDM	GDM	7.0	7.78	8.60	10	12.0	125.0	200
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.40	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9.0	10.0	11.1	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	GDX	BDX	10.0	11.1	12.3	1	17.0	88.2	5
SMCJ11A	SMCJ11CA	GDZ	GDZ	11.0	12.2	13.5	1	18.2	82.4	5
SMCJ12A	SMCJ12CA	GEE	BEE	12.0	13.3	14.7	1	19.9	75.4	5
SMCJ13A	SMCJ13CA	GEG	GEG	13.0	14.4	15.9	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	GEK	BEK	14.0	15.6	17.2	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	GEM	BEM	15.0	16.7	18.5	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	GEP	GEP	16.0	17.8	19.7	1	26.0	57.7	1
SMCJ17A	SMCJ17CA	GER	GER	17.0	18.9	20.9	1	27.6	54.3	1
SMCJ18A	SMCJ18CA	GET	BET	18.0	20.0	22.1	1	29.2	51.4	1
SMCJ20A	SMCJ20CA	GEV	BEV	20	22.2	24.5	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	GEX	BEX	22	24.4	26.9	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	GEZ	BEZ	24	26.7	29.5	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	GFE	BFE	26	28.9	31.9	1	42.1	35.6	1
SMCJ28A	SMCJ28CA	GFG	BFG	28	31.1	34.4	1	45.4	33.0	1
SMCJ30A	SMCJ30CA	GFK	BFK	30	33.3	36.8	1	48.4	31.0	1
SMCJ33A	SMCJ33CA	GFM	BFM	33	36.7	40.6	1	53.3	28.1	1
SMCJ36A	SMCJ36CA	GFP	BFP	36	40.0	44.2	1	58.1	25.8	1
SMCJ40A	SMCJ40CA	GFR	BFR	40	44.4	49.1	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	GFT	BFT	43	47.8	52.8	1	69.4	21.6	1
SMCJ45A	SMCJ45CA	GFV	GFV	45	50.0	55.3	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	GFX	GFX	48	53.3	58.9	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	GFZ	GFZ	51	56.7	62.7	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	GGE	GGE	54	60.0	66.3	1	87.1	17.2	1
SMCJ58A	SMCJ58CA	GGG	GGG	58	64.4	71.2	1	93.6	16.0	1
SMCJ60A	SMCJ60CA	GGK	GGK	60	66.7	73.7	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	GGM	GGM	64	71.1	78.6	1	103.0	14.6	1
SMCJ70A	SMCJ70CA	GGP	GGP	70	77.8	86.0	1	113.0	13.3	1
SMCJ75A	SMCJ75CA	GGR	GGR	75	83.3	92.1	1	121.0	12.4	1
SMCJ78A	SMCJ78CA	GGT	GGT	78	86.7	95.8	1	126.0	11.9	1
SMCJ85A	SMCJ85CA	GGV	GGV	85	94.4	104	1	137.0	10.9	1
SMCJ90A	SMCJ90CA	GGX	GGX	90	100	111	1	146.0	10.3	1
SMCJ100A	SMCJ100CA	GGZ	GGZ	100	111	123	1	162.0	9.3	1
SMCJ110A	SMCJ110CA	GHE	GHE	110	122	135	1	177.0	8.5	1
SMCJ120A	SMCJ120CA	GHG	GHG	120	133	147	1	193.0	7.8	1
SMCJ130A	SMCJ130CA	GHK	GHK	130	144	159	1	209.0	7.2	1
SMCJ150A	SMCJ150CA	GHM	GHM	150	167	185	1	243.0	6.2	1
SMCJ160A	SMCJ160CA	GHP	GHP	160	178	197	1	259.0	5.8	1
SMCJ170A	SMCJ170CA	GHR	GHR	170	189	209	1	275.0	5.5	1
SMCJ188A	SMCJ188CA	GHS	GHS	188	209	231	1	328.0	4.6	1

Notes: 1. For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double.
2. For parts without A, the VBR is $\pm 10\%$ and VC is 5% higher than with A parts.



Typical Characteristics

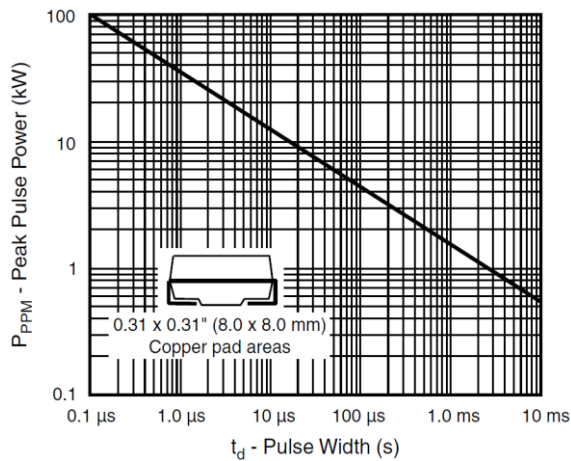


Fig. 1 - Peak Pulse Power Rating Curve

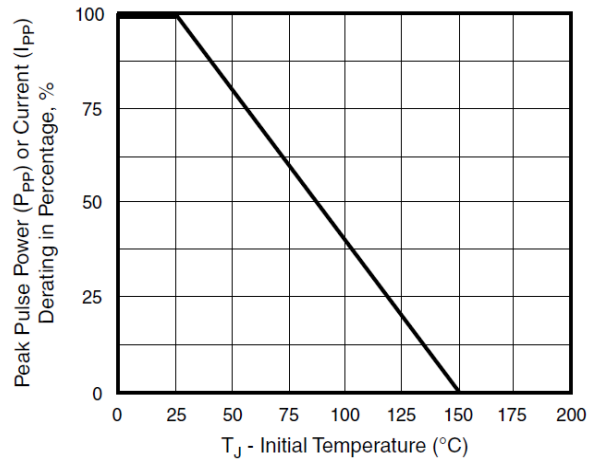


Fig. 2 - Pulse Power or Current vs. Initial Junction Temperature

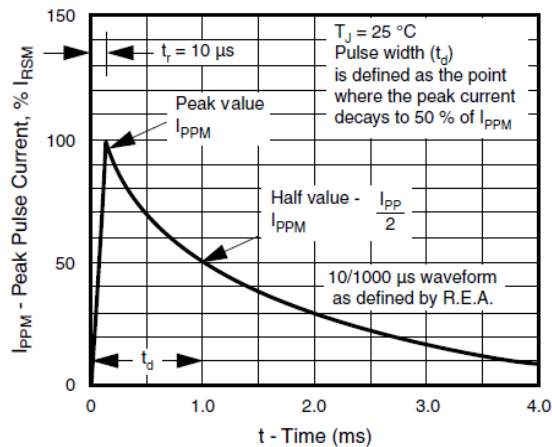


Fig. 3 - Pulse Waveform

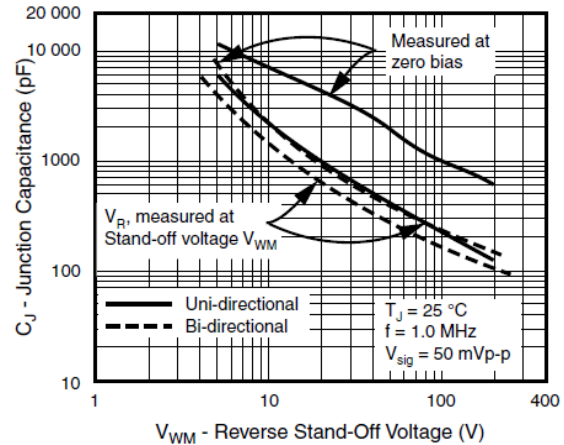
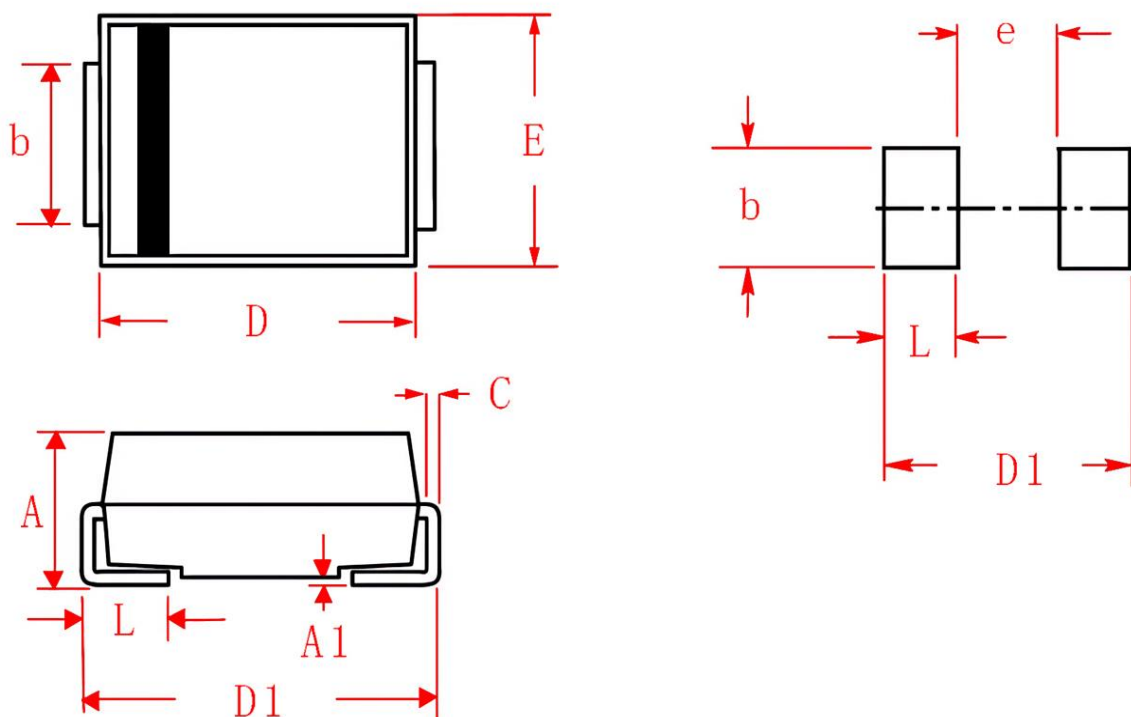


Fig. 4 - Typical Junction Capacitance Uni-Directional

SMC Package information

SMC (DO-214AB)



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	2.000	2.620	0.079	0.103
A1	0.050	0.210	0.002	0.008
b	2.750	3.250	0.108	0.128
C	0.150	0.310	0.006	0.012
D	6.500	7.000	0.256	0.275
D1	7.600	8.000	0.299	0.315
E	5.600	6.200	0.220	0.244
e	-	4.690	-	0.185
L	0.900	1.600	0.035	0.063