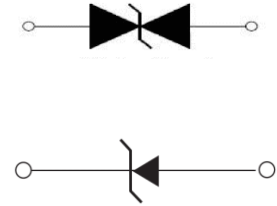


Features

- Peak power dissipation 5000W@10 x 1000 us Pulse
- Low incremental surge resistance
- Excellent clamping capability
- Glass passivated junction
- Fast response time
- Low leakage current
- Halogen free and RoHS compliant



SMC top view



Schematic diagram

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



Pb-Free


RoHS

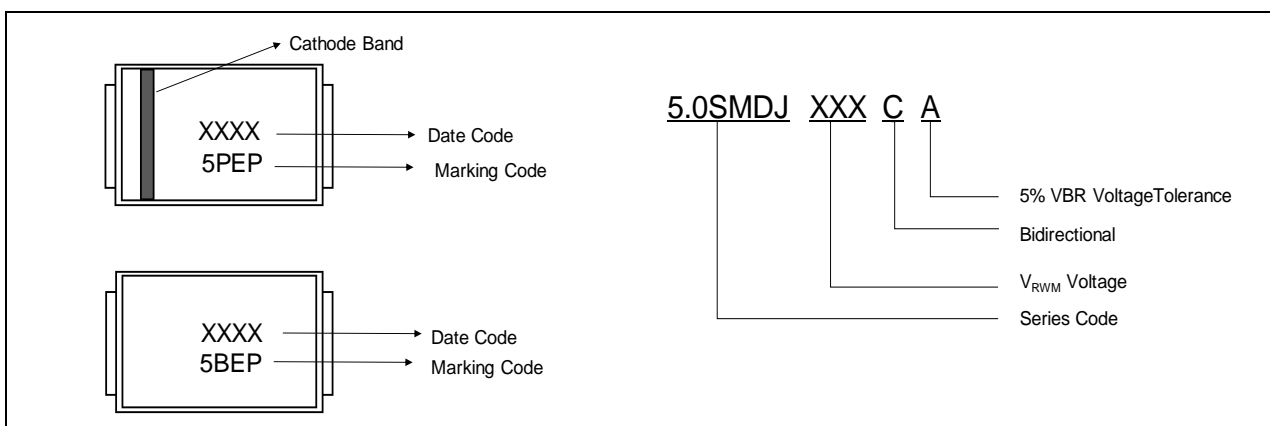
Halogen-Free

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)	5000	W
P_D	Steady State Power Dissipation (Note3)	6.5	W
I_{FSM}	Peak Forward Surge Current (Note4)	300	A
V_{FM}	Maximum Instantaneous Forward Voltage at 100A (Note5)	5	V
$R_{\theta JL}$	Typical Thermal Resistance Junction to Lead	15	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Typical Thermal Resistance Junction to Ambient	75	$^{\circ}\text{C}/\text{W}$
T_J	Operating Junction Temperature Range	-55~+150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

- Notes: 1. Non-repetitive current pulse , 10/1000us Waveform.
 2: Mounted on copper pad area of $8 \times 8\text{mm}$ to each terminal.
 3: Infinite Heat Sink at $T_A=50^{\circ}\text{C}$
 4: Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4 per minute maximum.
 5: For Unidirectional Only, $V_{FM}<3.5\text{V}$ for $V_{BR} \leq 200\text{V}$ and $V_{FM}<5.0\text{V}$ for $V_{BR} \geq 201\text{V}$.

Making Code & information



T_a=25°C unless otherwise specified

Typt 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 (μ A)
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	12	13.30	14.70	10	19.9	252.0	800
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	13	14.40	15.90	10	21.5	233.0	500
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	14	15.60	17.20	10	23.2	216.0	200
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	15	16.70	18.50	1	24.4	205.0	100
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	16	17.80	19.70	1	26.0	193.0	50
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	17	18.90	20.90	1	27.6	181.0	20
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	18	20.00	22.10	1	29.2	172.0	10
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	20	22.20	24.50	1	32.4	155.0	5
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.40	26.90	1	35.5	141.0	5
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.70	29.50	1	38.9	129.0	5
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.90	31.90	1	42.1	119.0	5
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.10	34.40	1	45.4	110.0	5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.30	36.80	1	48.4	130.0	5
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.70	40.60	1	53.3	93.9	5
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40.00	44.20	1	58.1	86.1	5
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.40	49.10	1	64.5	77.6	5
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.80	52.80	1	69.4	72.1	5
5.0SMDJ45A	5.0SMDJ45CA	5PTV	5BTV	45	50.00	55.30	1	72.7	68.8	5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.30	58.90	1	77.4	64.7	5
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.70	62.70	1	82.4	60.7	5
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60.00	66.30	1	87.1	57.5	5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.40	71.20	1	93.6	53.7	5
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.70	73.70	1	96.8	51.7	5
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.10	78.60	1	103.0	48.6	5
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.80	86.00	1	113.0	44.3	5
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.30	92.10	1	121.0	41.4	5
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.70	95.80	1	126.0	39.7	5
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.40	104.00	1	137.0	36.5	5
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100.00	111.00	1	146.0	34.3	5
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111.00	123.00	1	162.0	30.9	5
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110	122.00	135.00	1	177.0	28.3	5
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120	133.00	147.00	1	193.0	26.0	5
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130	144.00	159.00	1	209.0	24.0	5
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150	167.00	185.00	1	243.0	20.6	5
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	160	178.00	197.00	1	259.0	19.3	5
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170	189.00	209.00	1	275.0	18.2	5

Typical Characteristics

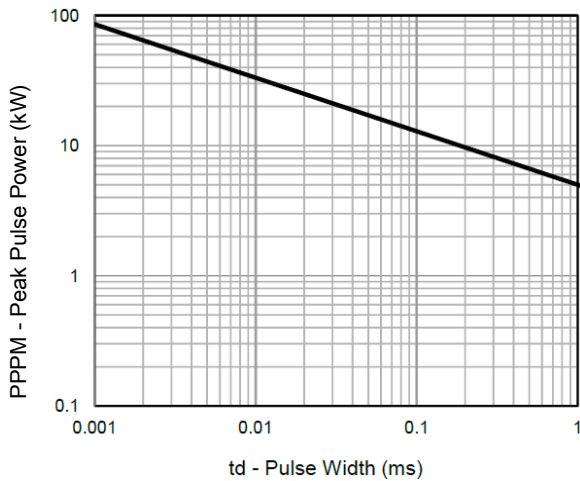


Fig.1 - Peak Pulse Power Rating

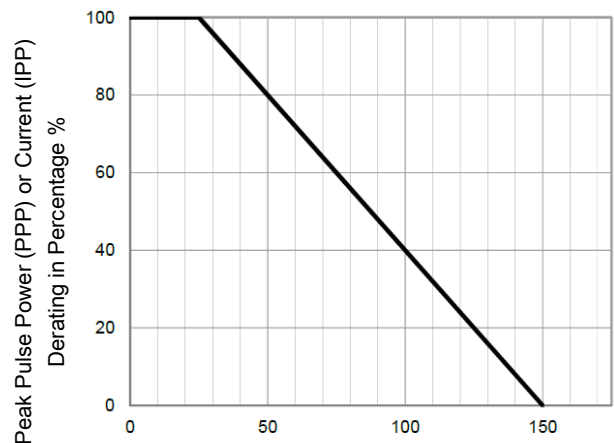


Fig.2 - Pulse Derating Curve

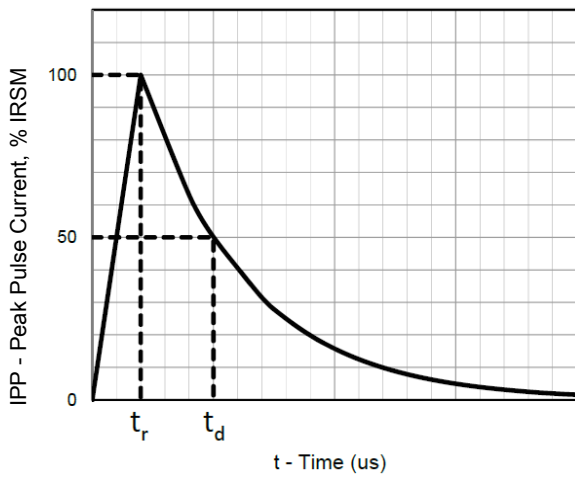


Fig.3 - Pulse Waveform

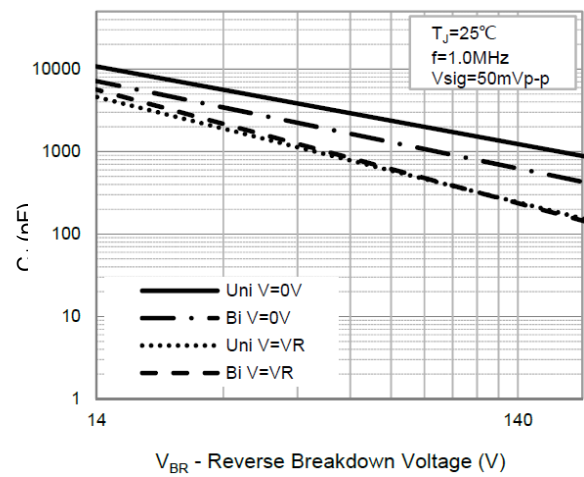
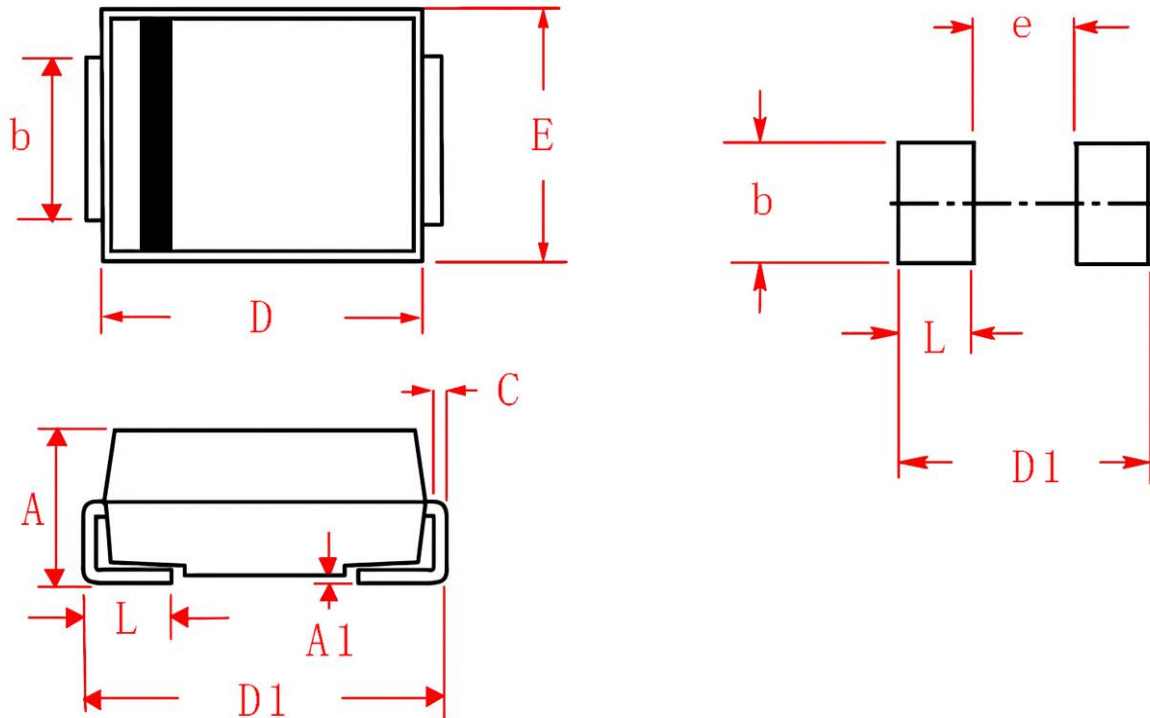


Fig.4 - Typical Junction Capacitance

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