

RoHS Compliant Product
A suffix of "-C" specifies halogen-free and lead-free

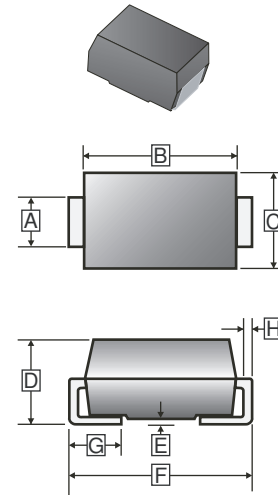
FEATURES

- Available in uni-directional polarity only
- Excellent clamping capability and Fast response time
- Moisture sensitivity: level 1, per J-STD-020
- 5000W peak pulse power capability with a 10/1000µs waveform
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Lead free Plating (Tin Finish) Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting position: Any

SMC



PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.75	3.27	E	-	0.20
B	6.52	7.11	F	7.64	8.17
C	5.50	6.22	G	0.75	1.52
D	1.98	2.62	H	0.23 TYP	

ORDER INFORMATION

Part Number	Type
5SMDJ Series-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Ratings	Unit
Peak Pulse Power Dissipation ¹ @10/1000us waveform	P _{PP}	5000	W
Peak Pulsed Current ¹ @10/1000us waveform	I _{PP}	(See next table.)	A
Operating and Storage Temperature Range	T _J , T _{STG}	-55~150	°C
Thermal Resistance Ratings			
Thermal Resistance Junction-Ambient ²	R _{θJA}	100	°C/W
Thermal Resistance Junction-Mount ³	R _{θJM}	20.8	

Notes:

1. Non-repetitive current pulse, on Fig. 3 and derated above T_A=25°C per Fig. 2
2. Mounted on recommended pad layout.
3. Mounted on infinite heat sink.

ELECTRICAL RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Clamping Voltage	Peak Pulse Current	Max Reverse Leakage Current
			$V_{BR} @ I_T$					
		V_{RWM}	Min.	Max.	I_T	$V_C @ I_{PP}$	I_{PP}	$I_R @ V_{RWM}$
Uni-direction	Bi-direction	V	V		mA	V	A	μA
5SMDJ11A-C	5SMDJ11CA-C	11	12.2	13.5	10	18.2	274.7	800
5SMDJ12A-C	5SMDJ12CA-C	12	13.3	14.7	10	19.9	252	800
5SMDJ13A-C	5SMDJ13CA-C	13	14.4	15.9	10	21.5	233	500
5SMDJ14A-C	5SMDJ14CA-C	14	15.6	17.2	10	23.2	216	200
5SMDJ15A-C	5SMDJ15CA-C	15	16.7	18.5	1	24.4	205	100
5SMDJ16A-C	5SMDJ16CA-C	16	17.8	19.7	1	26	193	50
5SMDJ17A-C	5SMDJ17CA-C	17	18.9	20.9	1	27.6	181	20
5SMDJ18A-C	5SMDJ18CA-C	18	20	22.1	1	29.2	172	10
5SMDJ20A-C	5SMDJ20CA-C	20	22.2	24.5	1	32.4	155	5
5SMDJ22A-C	5SMDJ22CA-C	22	24.4	26.9	1	35.5	141	5
5SMDJ24A-C	5SMDJ24CA-C	24	26.7	29.5	1	38.9	129	5
5SMDJ26A-C	5SMDJ26CA-C	26	28.9	31.9	1	42.1	119	5
5SMDJ28A-C	5SMDJ28CA-C	28	31.1	34.4	1	45.4	110	5
5SMDJ30A-C	5SMDJ30CA-C	30	33.3	36.8	1	48.4	103	5
5SMDJ33A-C	5SMDJ33CA-C	33	36.7	40.6	1	53.3	93.9	5
5SMDJ36A-C	5SMDJ36CA-C	36	40	44.2	1	58.1	86.1	5
5SMDJ40A-C	5SMDJ40CA-C	40	44.4	49.1	1	64.5	77.6	5
5SMDJ43A-C	5SMDJ43CA-C	43	47.8	52.8	1	69.4	72.1	5
5SMDJ45A-C	5SMDJ45CA-C	45	50	55.3	1	72.7	68.8	5
5SMDJ48A-C	5SMDJ48CA-C	48	53.3	58.9	1	77.4	64.6	5
5SMDJ51A-C	5SMDJ51CA-C	51	56.7	62.7	1	82.4	60.7	5
5SMDJ54A-C	5SMDJ54CA-C	54	60	66.3	1	87.1	57.4	5
5SMDJ58A-C	5SMDJ58CA-C	58	64.4	71.2	1	93.6	53.5	5
5SMDJ60A-C	5SMDJ60CA-C	60	66.7	73.7	1	96.8	51.7	5
5SMDJ64A-C	5SMDJ64CA-C	64	71.1	78.6	1	103	48.6	5
5SMDJ70A-C	5SMDJ70CA-C	70	77.8	86	1	113	44.3	5
5SMDJ75A-C	5SMDJ75CA-C	75	83.3	92.1	1	121	41.3	5
5SMDJ78A-C	5SMDJ78CA-C	78	86.7	95.8	1	126	39.7	5
5SMDJ85A-C	5SMDJ85CA-C	85	94.4	104	1	137	36.5	5
5SMDJ90A-C	5SMDJ90CA-C	90	100	111	1	146	34.3	5

ELECTRICAL RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Clamping Voltage	Peak Pulse Current	Max Reverse Leakage Current
			V_{RWM}	$V_{BR} @ I_T$				
				Min.	Max.	I_T	$V_C @ I_{PP}$	I_{PP}
Uni-direction	Bi-direction	V	V		mA	V	A	μA
5SMDJ100A-C	5SMDJ100CA-C	100	111	123	1	162	30.9	5
5SMDJ110A-C	5SMDJ110CA-C	110	122	135	1	177	28.3	5
5SMDJ120A-C	5SMDJ120CA-C	120	133	147	1	193	25.9	5
5SMDJ130A-C	5SMDJ130CA-C	130	144	159	1	209	23.9	5
5SMDJ150A-C	5SMDJ150CA-C	150	167	185	1	243	20.6	5
5SMDJ160A-C	5SMDJ160CA-C	160	178	197	1	259	19.3	5
5SMDJ170A-C	5SMDJ170CA-C	170	189	209	1	275	18.2	5
5SMDJ180A-C	5SMDJ180CA-C	180	201	222	1	292	17.1	5
5SMDJ200A-C	5SMDJ200CA-C	200	224	247	1	324	15.4	5
5SMDJ220A-C	5SMDJ220CA-C	220	246	272	1	356	14.1	5
5SMDJ250A-C	5SMDJ250CA-C	250	279	309	1	405	12.4	5
5SMDJ300A-C	5SMDJ300CA-C	300	335	371	1	486	10.3	5
5SMDJ350A-C	5SMDJ350CA-C	350	391	432	1	567	8.8	5
5SMDJ400A-C	5SMDJ400CA-C	400	447	494	1	648	7.7	5
5SMDJ440A-C	5SMDJ440CA-C	440	492	543	1	713	7.0	5

CHARACTERISTIC CURVE

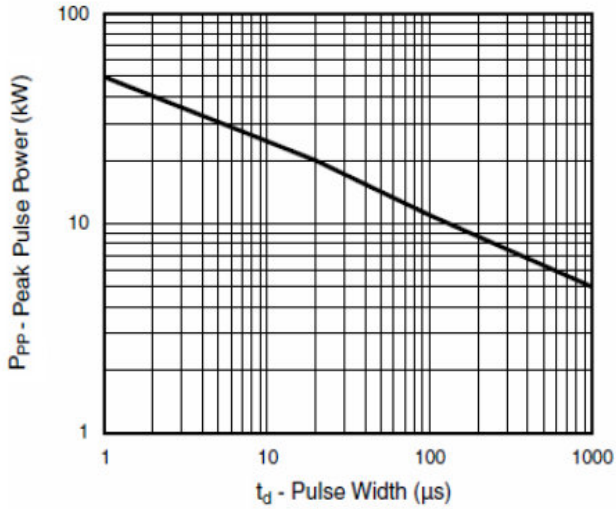


Fig. 1 - Peak Pulse Power Rating Curve

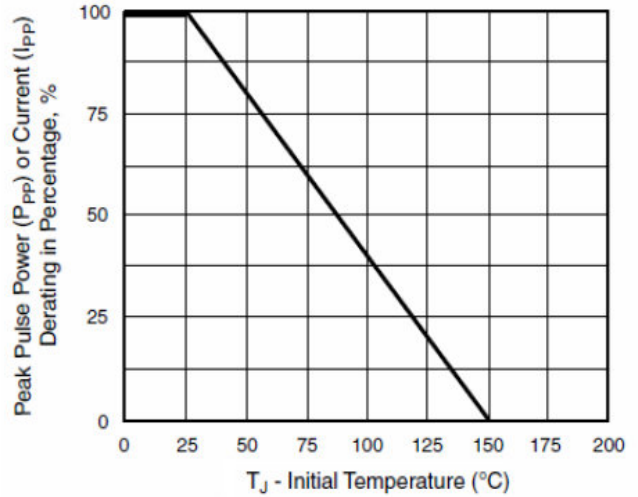


Fig. 2 - Pulse Power or Current vs. Initial Junction Temperature

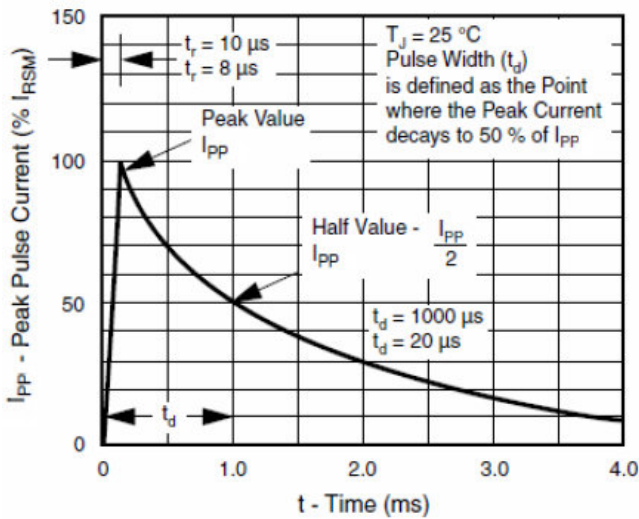


Fig. 3 - Pulse Waveform

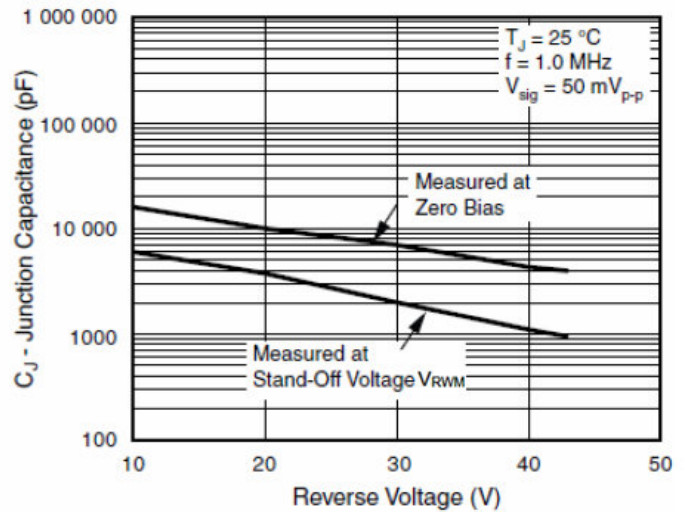


Fig. 4 - Typical Junction Capacitance