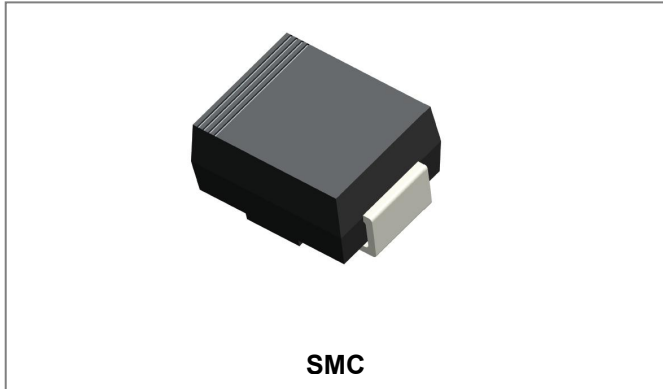


SMCJ180A THRU SMCJ440CA SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR



Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

Circuit Diagram



Unipolar



Bipolar

Mechanical Data

- Case: SMC Low Profile Molded Plastic
- Terminals: Solder Plated , Solderable per MIL-STD 750, Method 2026
- Polarity: Color band denoted positive end (cathode) except Bidirectional
- Weight:0.21 grams(approx.)

Maximum Ratings and Thermal Characteristics@T_A=25°C unless otherwise specified

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000 us waveform (NOTE 1, 2, Fig.1)	P _{PPM}	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 2),(Note 3)	I _{FSM}	200	A
Maximum Instantaneous Forward Voltage at 100A for Unidirectional only(Note 4)	V _F	3.5/5.0	V
Typical Thermal Resistance Junction to Lead	R _{θJL}	15	°C/W
Typical Thermal Resistance Junction to Ambient	R _{θJA}	75	°C/W
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-55 to 150	°C

- Notes:**
1. Non-repetitive current pulse , per Fig. 3 and derated above TA = 25°C per Fig. 2.
 2. Mounted on 8.0x8.0mm Copper Pads to each terminal.
 3. Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4pulses per minute maximum.
 4. V_F < 3.5V for V_{BR} ≤ 200V and V_F < 5.0V for V_{BR} ≥ 201V.

Electrical Characteristics @T_A=25°C unless otherwise specified

UNI-POLAR	BI-POLAR	DEVICE MARKING CODE		REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT(MA)	MAXIMUM CLAMPING VOLTAGE @IPP VC(V)	PEAK PULSE CURRENT IPP(A)	REVERSE LEAKAGE @VRWM IR(uA)
		UNI	BI							
SMCJ180A	SMCJ180CA	GHT	BHT	180	201	222	1	292	5.1	1
SMCJ190A	SMCJ190CA	GHU	BHU	190	209	243	1	308	4.8	1
SMCJ200A	SMCJ200CA	GHV	BHV	200	224	247	1	324	4.6	1
SMCJ220A	SMCJ220CA	GHX	BHX	220	246	272	1	356	4.2	1
SMCJ250A	SMCJ250CA	GHZ	BHZ	250	279	309	1	405	3.7	1
SMCJ300A	SMCJ300CA	GJE	BJE	300	335	371	1	486	3.1	1
SMCJ350A	SMCJ350CA	GJG	BJG	350	391	432	1	567	2.6	1
SMCJ400A	SMCJ400CA	GJK	BJK	400	447	494	1	648	2.3	1
SMCJ440A	SMCJ440CA	GJM	BJM	440	492	543	1	713	2.1	1

Ratings and Characteristics Curves

Figure 1 - Peak Pulse Power Rating Curve

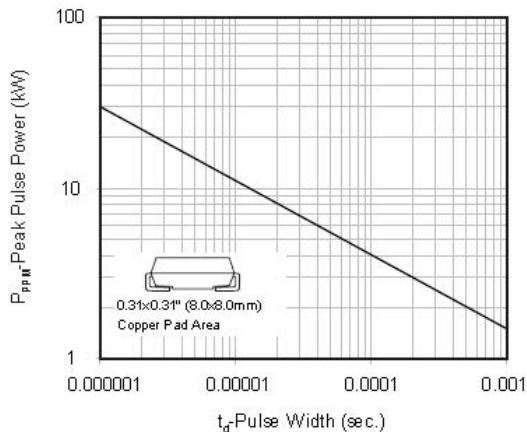


Figure 3 - Pulse Waveform

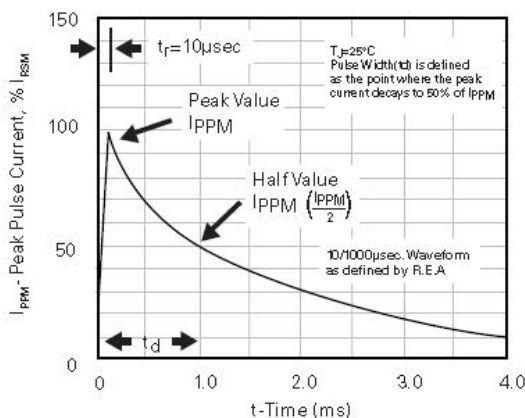


Figure 2 - Pulse Derating Curve

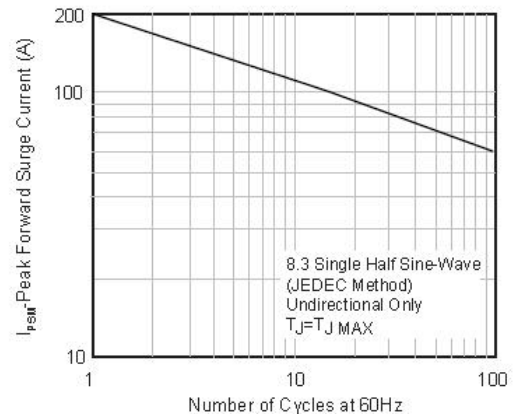


Figure 4 - Typical Junction Capacitance

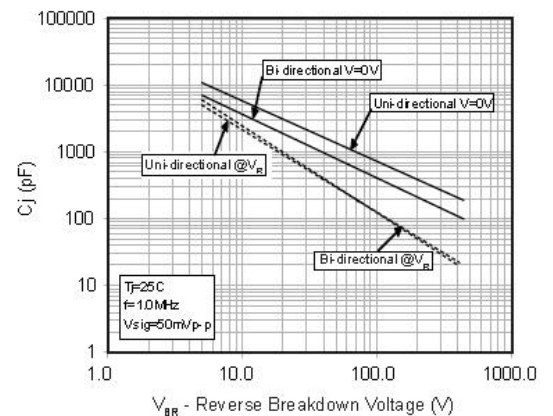
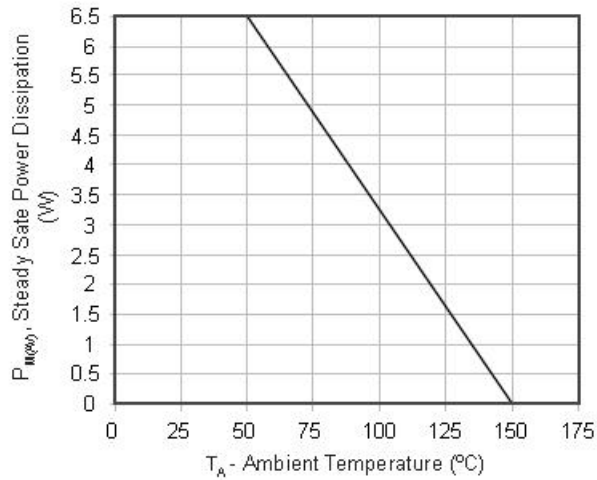


Figure 5 - Steady State Power Dissipation Derating Curve

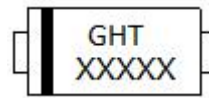


Ordering Information

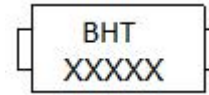
Device	Package	Shipping
SMCJ180A THRU SMCJ440CA	SMC (Pb-Free)	3000pcs / reel
SMCJ180ATR THRU SMCJ440CATR	SMC (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



SMCJ180A



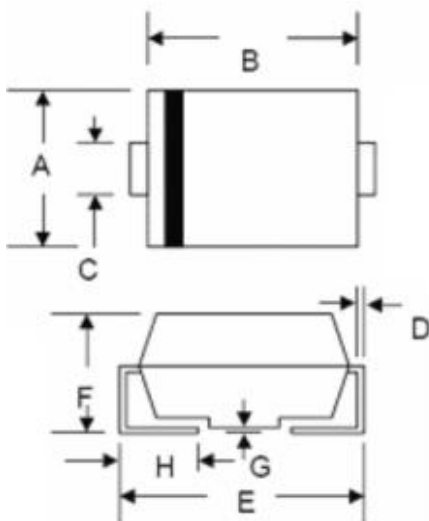
SMCJ180CA

Where XXXXX is YYWWL

GHT/BHT = Marking code
YY = Year
WW = Week
L = Lot Number

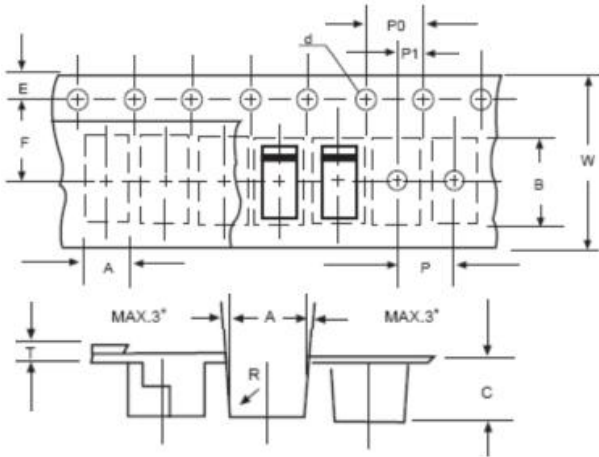
Cautions: Molding resin
Epoxy resin UL:94V-0

Mechanical Dimensions SMC



Dim.	SMC/DO-214AB			
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.90	3.20	0.114	0.126
D	0.152	0.305	0.006	0.012
E	7.75	8.13	0.305	0.320
F	2.00	2.95	0.079	0.116
G	-	0.203	-	0.008
H	0.76	1.52	0.030	0.060
	In Millimeters		In inches	

Carrier Tape Specification SMC



SYMBOL	Millimeters	
	Min.	Max.
A	5.90	6.10
B	8.20	8.40
C	2.40	2.60
d	1.40	1.60
E	1.40	1.60
F	7.60	7.70
P	7.90	8.10
P0	3.90	4.10
P1	3.90	4.10
T	-	0.600
W	15.80	16.20

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