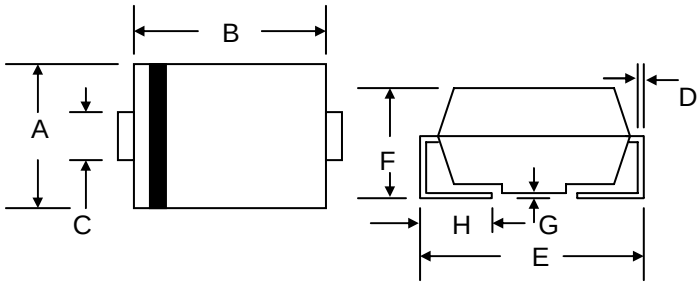
1.5SMCJ180 – 1.5SMCJ440CA

1500W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- 180V – 440V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Device Code
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 5**

SMC/DO-214AB		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.25
D	0.152	0.305
E	7.75	8.13
F	2.00	2.62
G	0.051	0.203
H	0.76	1.27
All Dimensions in mm		

"C" Suffix Designates Bi-directional Devices
"A" Suffix Designates 5% Tolerance Devices
No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @T_A=25℃ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation 10/1000μS Waveform (Note 1, 2) Figure 3	P_{PPM}	1500 Minimum	W
Peak Pulse Current on 10/1000μS Waveform (Note 1) Figure 4	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 4)	$P_{M(AV)}$	6.5	W
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3)	I_{FSM}	200	A
Typical Thermal Resistance ,Junction to Lead (Note 5)	$R_{\theta JL}$	15	℃/W
Typical Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	90	℃/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	℃

Note: 1. Non-repetitive current pulse per Figure 4 and derated above T_A = 25℃ per Figure 1.
2. Mounted on 8.0mm^2 copper pad to each terminal.
3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75℃.
5. Mounted on minimum recommended pad layout.

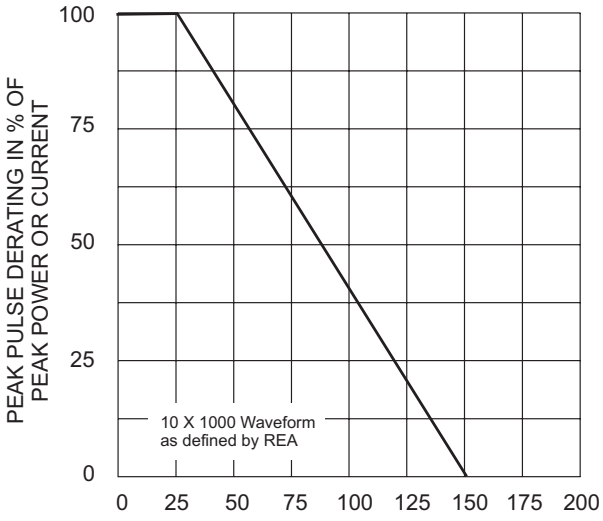


Fig. 1 Pulse Derating Curve

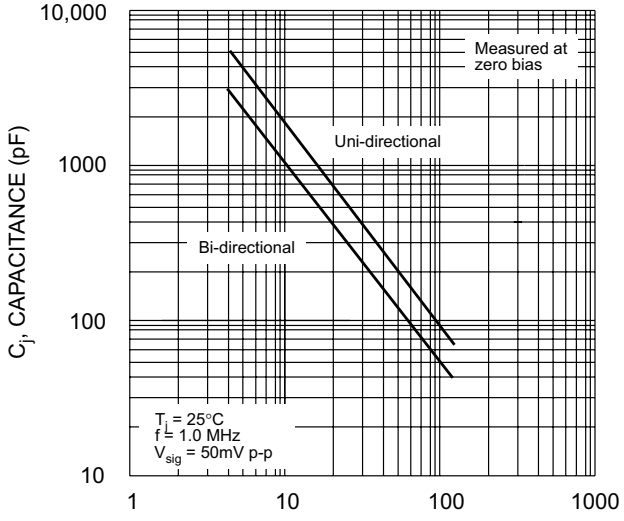


Fig. 2 Typical Junction Capacitance

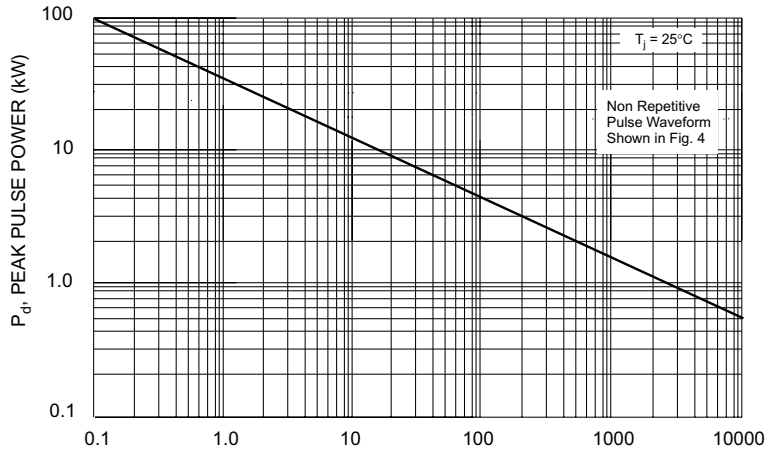


Fig. 3 Pulse Rating Curve

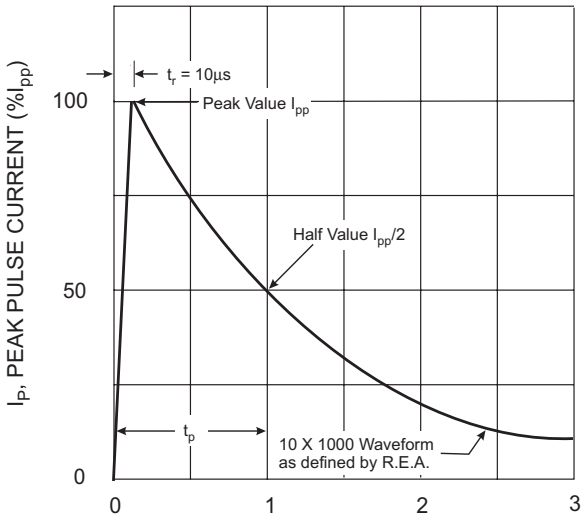


Fig. 4 Pulse Waveform

UNI-DIRECTIONAL 1500 WATT SURFACE MOUNT TVS

UNI-DIRECTIONAL PART NO.	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)
1.5SMCJ180	GHS	180.00	200.00	244.80	1	322.0	4.66	1
1.5SMCJ180A	GHT	180.00	200.00	220.00	1	292.0	5.14	1
1.5SMCJ190	GHU	190.00	211.00	258.40	1	340.0	4.41	1
1.5SMCJ190A	GHV	190.00	211.00	232.00	1	308.0	4.87	1
1.5SMCJ200A	GHX	200.00	224.00	247.00	1	324.0	4.63	1
1.5SMCJ220A	GIE	220.00	246.00	272.00	1	356.0	4.21	1
1.5SMCJ250A	GIF	250.00	279.00	309.00	1	405.0	3.70	1
1.5SMCJ300A	GIG	300.00	335.00	371.00	1	486.0	3.09	1
1.5SMCJ350A	GIH	350.00	391.00	432.00	1	567.0	2.65	1
1.5SMCJ400A	GIK	400.00	447.00	494.00	1	648.0	2.31	1
1.5SMCJ440A	GIL	440.00	492.00	543.00	1	713.0	2.10	1

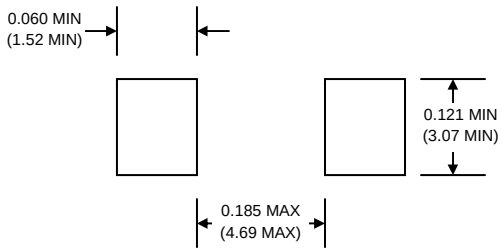
BI-DIRECTIONAL 1500 WATT SURFACE MOUNT TVS

BI-DIRECTIONAL PART NO.	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)
1.5SMCJ180C	BHS	180.00	200.00	244.80	1	322.0	4.66	1
1.5SMCJ180CA	BHT	180.00	200.00	220.00	1	292.0	5.14	1
1.5SMCJ190C	BHU	190.00	211.00	258.40	1	340.0	4.41	1
1.5SMCJ190CA	BHV	190.00	211.00	232.00	1	308.0	4.87	1
1.5SMCJ200CA	BHX	200.00	224.00	247.00	1	324.0	4.63	1
1.5SMCJ220CA	BIE	220.00	246.00	272.00	1	356.0	4.21	1
1.5SMCJ250CA	BIF	250.00	279.00	309.00	1	405.0	3.70	1
1.5SMCJ300CA	BIG	300.00	335.00	371.00	1	486.0	3.09	1
1.5SMCJ350CA	BIH	350.00	391.00	432.00	1	567.0	2.65	1
1.5SMCJ400CA	BIK	400.00	447.00	494.00	1	648.0	2.31	1
1.5SMCJ440CA	BIL	440.00	492.00	543.00	1	713.0	2.10	1

MARKING INFORMATION

Cathode = Polarity Band Except Bi-Directional Types
WTE = Manufacturer's Logo
xxx = Device Code, See Page 3

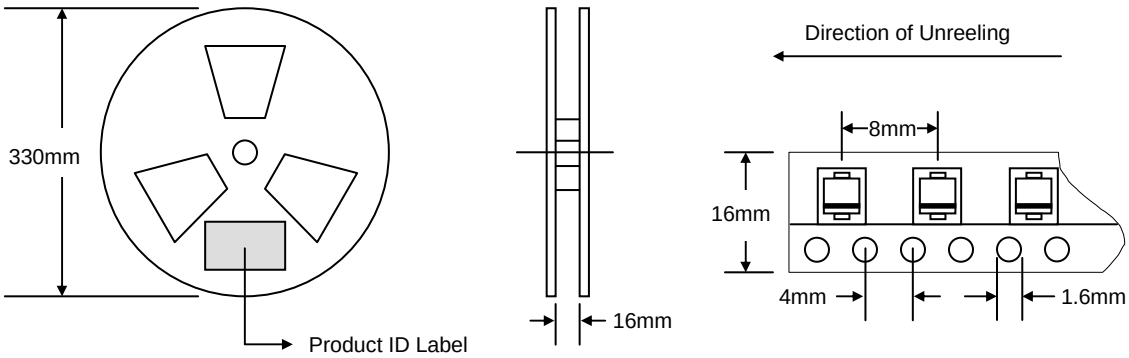
RECOMMENDED FOOTPRINT



inches(mm)

PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	3,000	340 x 337 x 45	6,000	370 x 370 x 420	48,000	19.0

Note: 1. Paper reel, white or gray color.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
1.5SMCJxx-T3	SMC	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version, add "-LF" suffix to part number above. For example, 1.5SMCJ180-T3-LF**.

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