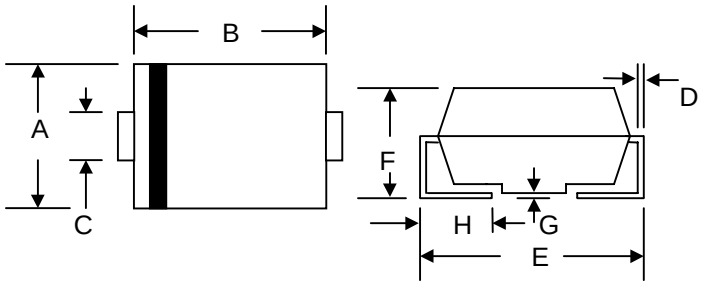
3.0SMCJ180 – 3.0SMCJ220CA

3000W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 180V – 220V 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°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation 10/1000µS Waveform (Note 1, 2) Figure 3	P_{PPM}	3000 Minimum	W
Peak Pulse Current on 10/1000µS Waveform (Note 1) Figure 4	I_{PPM}	See Table 1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3)	I_{FSM}	100	A
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Note: 1. Non-repetitive current pulse per Figure 4 and derated above T_A = 25°C 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.

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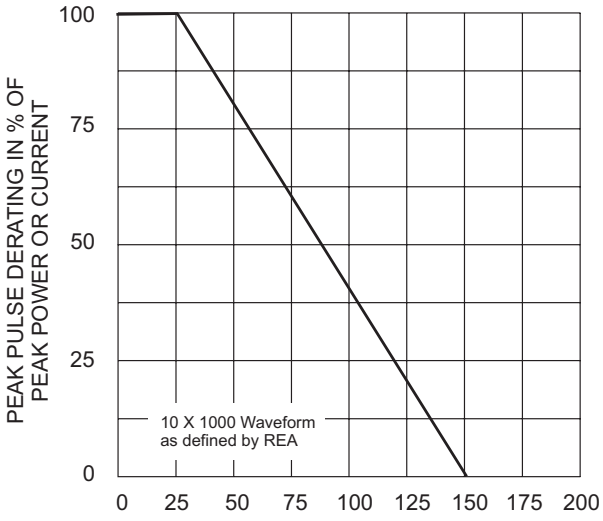

Fig. 1 Pulse Derating Curve

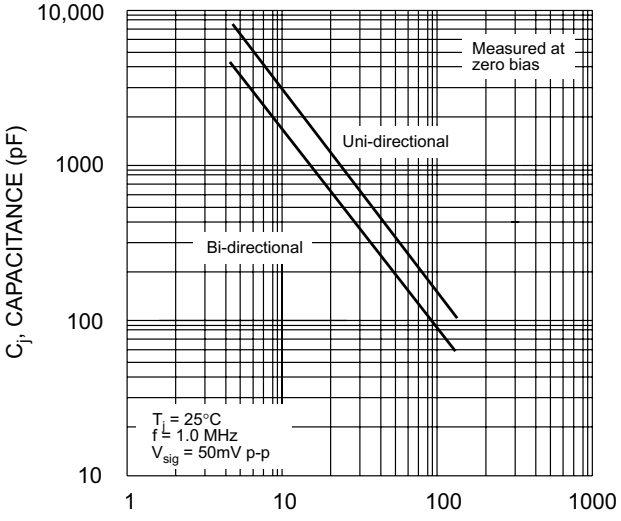

Fig. 2 Typical Junction Capacitance

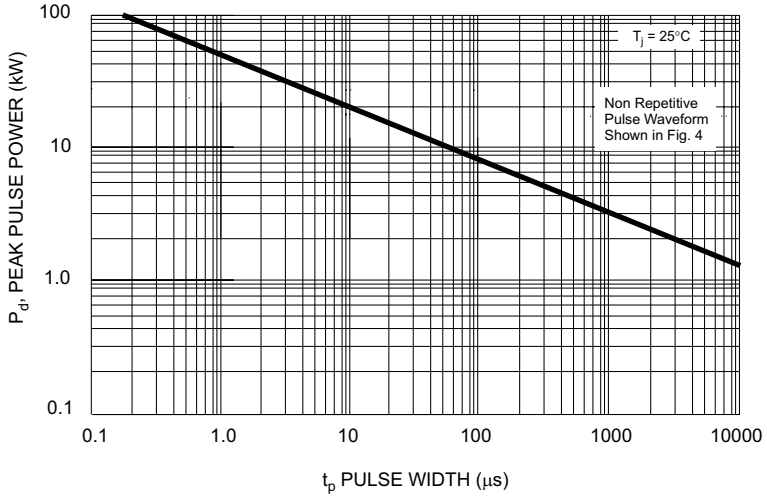

Fig. 3 Pulse Rating Curve

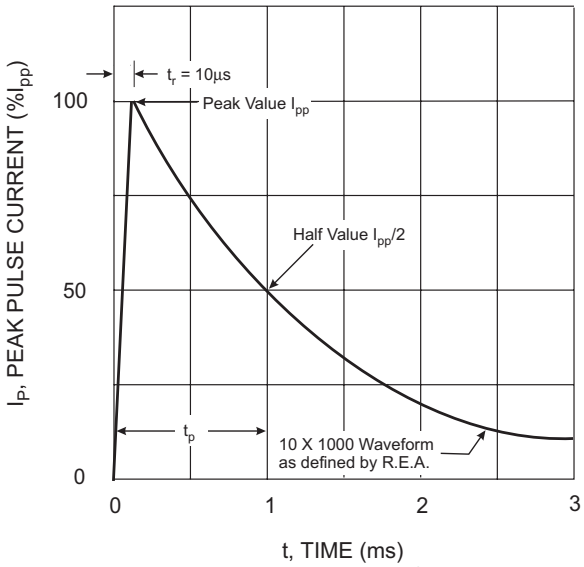

Fig. 4 Pulse Waveform

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UNI-DIRECTIONAL 3000 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)
3.0SMCJ180	HHS	180.00	198.00	253.80	1	322.0	9.3	5
3.0SMCJ180A	HHT	180.00	198.00	230.40	1	292.0	10.3	5
3.0SMCJ190	HHU	190.00	209.00	267.90	1	340.0	8.8	5
3.0SMCJ190A	HHV	190.00	209.00	243.20	1	308.0	9.7	5
3.0SMCJ200	HHW	200.00	220.00	282.00	1	358.0	8.4	5
3.0SMCJ200A	HHX	200.00	220.00	256.00	1	324.0	9.3	5
3.0SMCJ210	HHY	210.00	231.00	296.10	1	376.0	7.8	5
3.0SMCJ210A	HHZ	210.00	231.00	268.80	1	340.0	8.8	5
3.0SMCJ220	HID	220.00	242.00	310.20	1	394.0	7.6	5
3.0SMCJ220A	HIE	220.00	242.00	281.60	1	356.0	8.4	5

BI-DIRECTIONAL 3000 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)
3.0SMCJ180C	IHS	180.00	198.00	253.80	1	322.0	9.3	5
3.0SMCJ180CA	IHT	180.00	198.00	230.40	1	292.0	10.3	5
3.0SMCJ190C	IHU	190.00	209.00	267.90	1	340.0	8.8	5
3.0SMCJ190CA	IHV	190.00	209.00	243.20	1	308.0	9.7	5
3.0SMCJ200C	IHW	200.00	220.00	282.00	1	358.0	8.4	5
3.0SMCJ200CA	IHX	200.00	220.00	256.00	1	324.0	9.3	5
3.0SMCJ210C	IHY	210.00	231.00	296.10	1	376.0	7.8	5
3.0SMCJ210CA	IHZ	210.00	231.00	268.80	1	340.0	8.8	5
3.0SMCJ220C	IID	220.00	242.00	310.20	1	394.0	7.6	5
3.0SMCJ220CA	IIE	220.00	242.00	281.60	1	356.0	8.4	5

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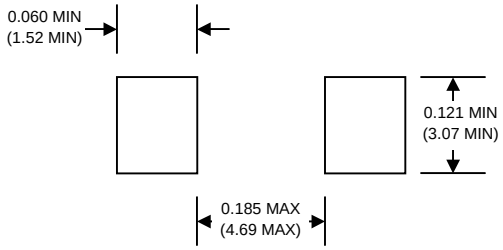
MARKING INFORMATION



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

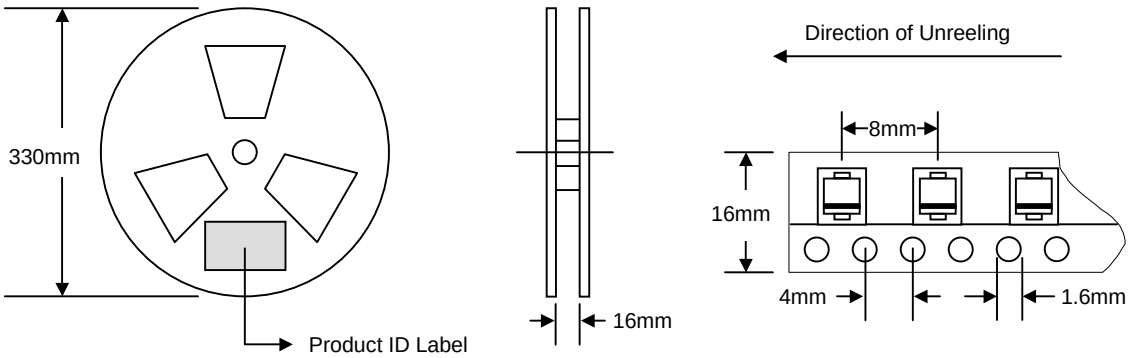
RECOMMENDED FOOTPRINT



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.

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ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
3.0SMCJxx-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, 3.0SMCJ180-T3-LF**.

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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