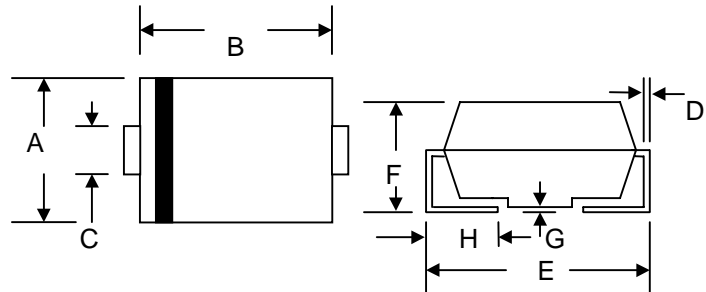


P4SMAJ180 – P4SMAJ220CA

400W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS

Features

- Glass Passivated Die Construction
- 400W 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: JEDEC DO-214AC Low Profile Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking:
 Unidirectional – Device Code and Cathode Band
 Bidirectional – Device Code Only
- Weight: 0.064 grams (approx.)

SMA/DO-214AC		
Dim	Min	Max
A	2.50	2.90
B	4.00	4.60
C	1.40	1.60
D	0.152	0.305
E	4.80	5.28
F	2.00	2.44
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

Datasheet.Directory

"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 at T _A = 25°C (Note 1, 2, 5) Figure 3	PPPM	400 Minimum	W
Peak Forward Surge Current (Note 3)	IFSM	40	A
Peak Pulse Current on 10/1000µS Waveform (Note 1) Figure 4	IPPM	See Table 1	A
Steady State Power Dissipation (Note 4)	PM(AV)	1.0	W
Operating and Storage Temperature Range	T _i , 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 5.0mm² copper pads to each terminal .
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
 4. Lead temperature at 75°C = T_L.
 5. Peak pulse power waveform is 10/1000µS.



Fig. 1 Pulse Derating Curve

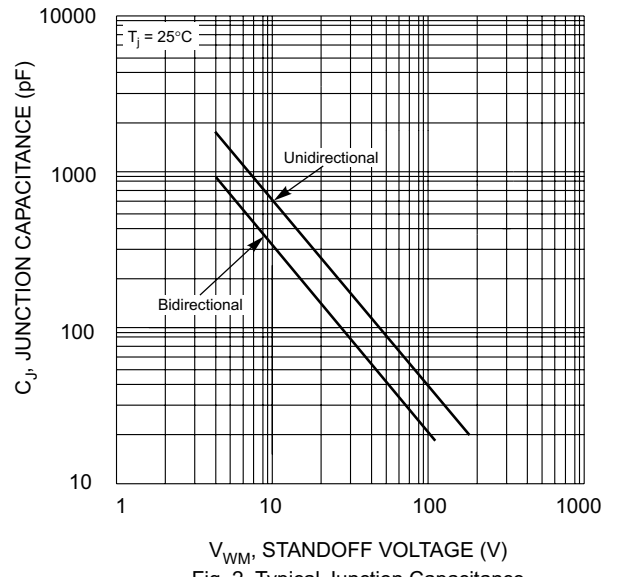


Fig. 2 Typical Junction Capacitance

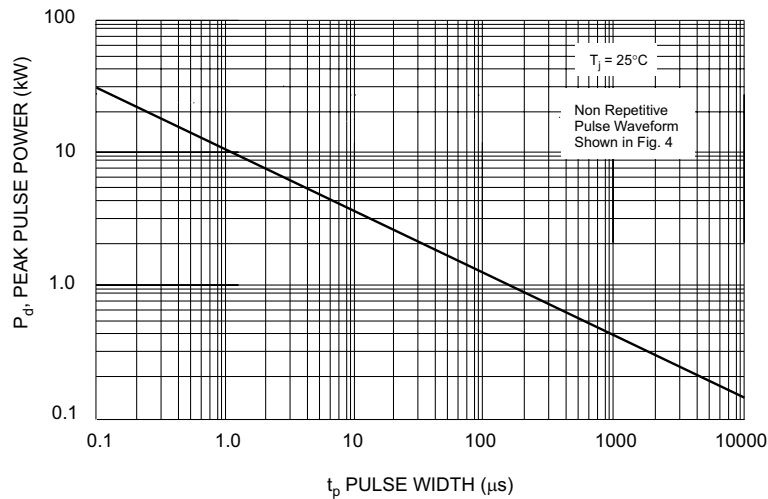


Fig. 3 Pulse Rating Curve

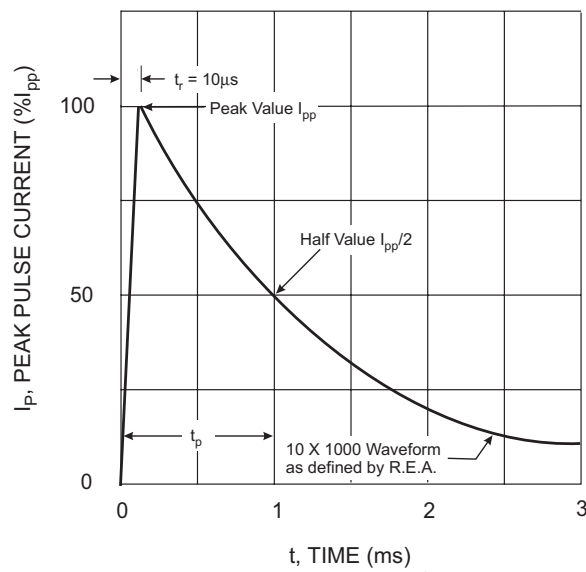


Fig. 4 Pulse Waveform

UNI-DIRECTIONAL 400 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)
P4SMAJ180	SS	180.00	198.00	253.80	1	322.0	1.2	5
P4SMAJ180A	ST	180.00	198.00	230.40	1	292.0	1.3	5
P4SMAJ190	SU	190.00	209.00	267.90	1	340.0	1.2	5
P4SMAJ190A	SV	190.00	209.00	243.20	1	308.0	1.3	5
P4SMAJ200	SW	200.00	220.00	282.00	1	358.0	1.1	5
P4SMAJ200A	SX	200.00	220.00	256.00	1	324.0	1.2	5
P4SMAJ210	SY	210.00	231.00	296.10	1	376.0	1.1	5
P4SMAJ210A	SZ	210.00	231.00	268.80	1	340.0	1.2	5
P4SMAJ220	GD	220.00	242.00	310.20	1	394.0	1.0	5
P4SMAJ220A	GE	220.00	242.00	281.60	1	356.0	1.1	5

BI-DIRECTIONAL 400 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)
P4SMAJ180C	YS	180.00	198.00	253.80	1	322.0	1.2	5
P4SMAJ180CA	YT	180.00	198.00	230.40	1	292.0	1.3	5
P4SMAJ190C	YU	190.00	209.00	267.90	1	340.0	1.2	5
P4SMAJ190CA	YV	190.00	209.00	243.20	1	308.0	1.3	5
P4SMAJ200C	YW	200.00	220.00	282.00	1	358.0	1.1	5
P4SMAJ200CA	YX	200.00	220.00	256.00	1	324.0	1.2	5
P4SMAJ210C	YY	210.00	231.00	296.10	1	376.0	1.1	5
P4SMAJ210CA	YZ	210.00	231.00	268.80	1	340.0	1.2	5
P4SMAJ220C	ZD	220.00	242.00	310.20	1	394.0	1.0	5
P4SMAJ220CA	ZE	220.00	242.00	281.60	1	356.0	1.1	5

ORDERING INFORMATION

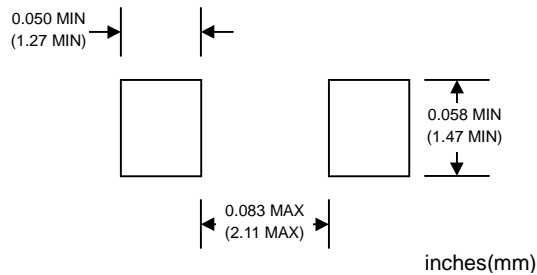
Product No.♦	Package Type	Shipping Quantity
P4SMAJxx-T1	SMA	1800/Tape & Reel
P4SMAJxx-T3	SMA	7500/Tape & Reel
P4SMAJxxA-T1	SMA	1800/Tape & Reel
P4SMAJxxA-T3	SMA	7500/Tape & Reel
P4SMAJxxC-T1	SMA	1800/Tape & Reel
P4SMAJxxC-T3	SMA	7500/Tape & Reel
P4SMAJxxCA-T1	SMA	1800/Tape & Reel
P4SMAJxxCA-T3	SMA	7500/Tape & Reel

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

RECOMMENDED FOOTPRINT



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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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We power your everyday.