P4SMA12(C)A-E3/61

Transient Voltage Suppressor

Features

- 400W Peak Pulse Power Dissipation
- 6.8V - 550V Standoff Voltages
- Uni- and Bi-Directional Versions Available Excellent Clamping Capability
- Glass Passivated Die Construction
- Low inductance
- Fast Response Time
- Plastic Material: UL Flammability Classification Rating 94V-0



SMA

(DO-214AC)

Mechanical Data

- Case: SMA Molded plastic body
- Terminals: Solderable per MIL-STD-750,Method 2026
- PolarityIndicator: Cathode Band(Note:Bi-directional deviced have no polarity indicator)
- Making: Data Code and Marking Code
- Weight: 0.00095ounce, 0.027grams

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

Maximum Ratings (Ta=25°C unless otherwise noted)

Peak pulse power dissipation at 10/1000μs waveform (Note1, Note2, Fig.1)	P_{PPM}	400	W
Peak pulse current of at 10/1000μs waveform (Note 1, Fig.3)	I_{PPM}	24.6	A
Steady state power dissipation at T_A=50℃ (Fig.5)	$P_{M(AV)}$	3.3	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I_{FSM}	60	A
Operating junction and Storage Temperature Range.	T_J,T_{STG}	-65 to +150	°C
Typical thermal resistance junction to lead	$R_{\theta JL}$	30	°C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	100	°C/W

Notes:1. Non-repetitive current pulse, per Fig.3 and derated above TA=25℃ per Fig.2.
2. Mounted on 5.0mm×5.0mm (0.03mm thick) copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (Ta=25°C)

Part Number		Device Marking Code		Reverse Stand- Off Voltage	Breakdown Voltage @I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
Unidirectional	Bidirectional	UNI	BI	V_{RWM}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
P4SMA12A-E3/61	P4SMA12CA-E3/61	12A	12C	10.20	11.40-12.60	1	16.7	24.6	5

Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

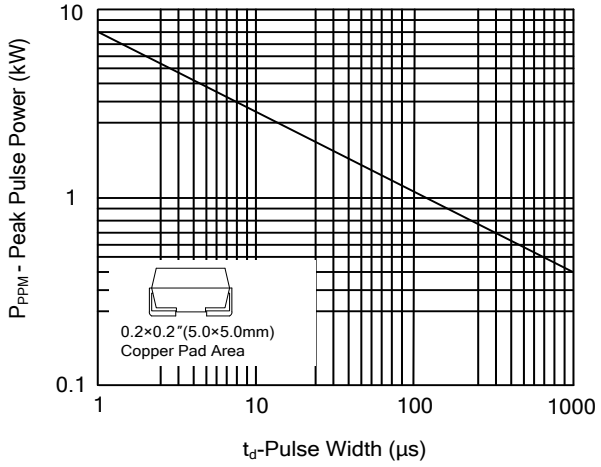


Figure 2. Pulse Derating Curve

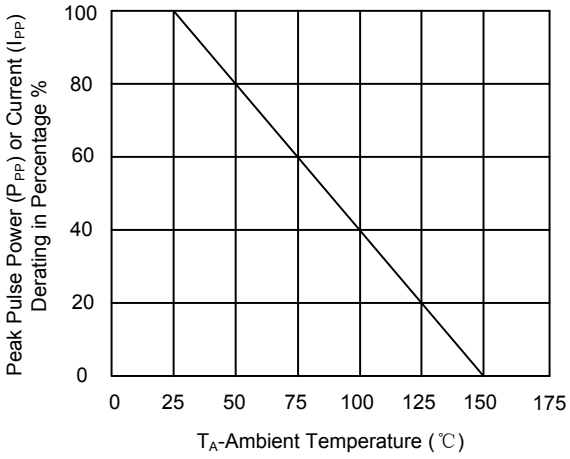


Figure 3. Pulse Waveform

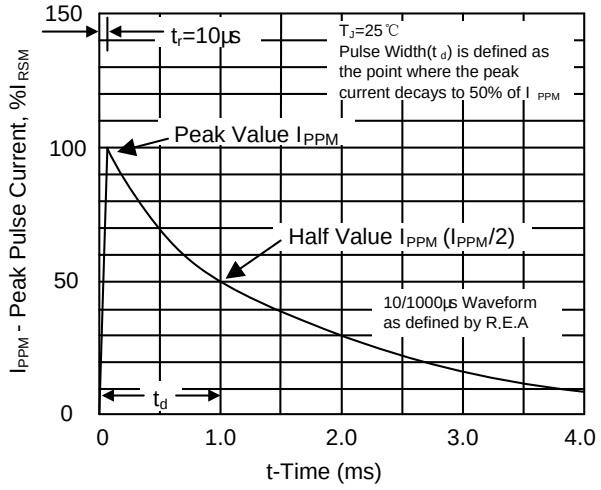


Figure 4. Typical Junction Capacitance

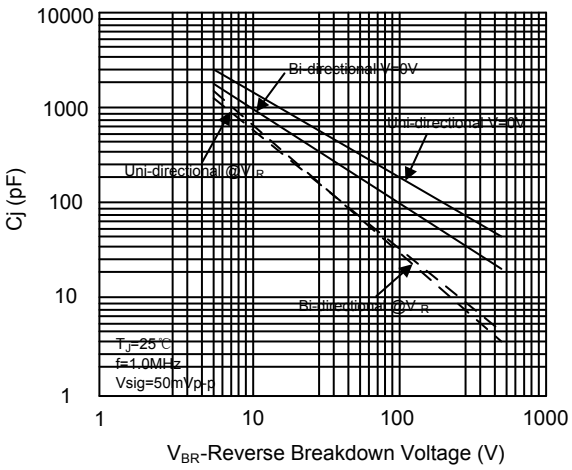


Figure 5. Steady State Power Dissipation Derating Curve

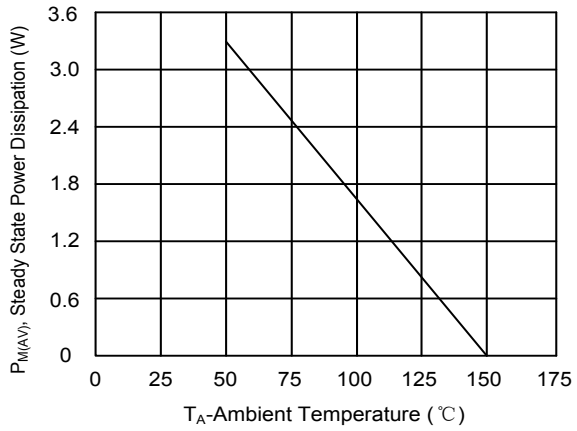
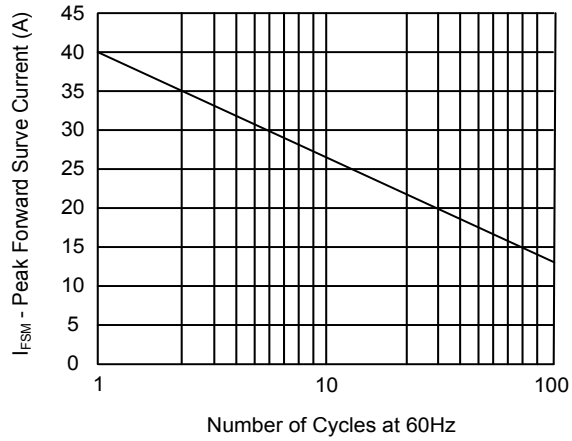
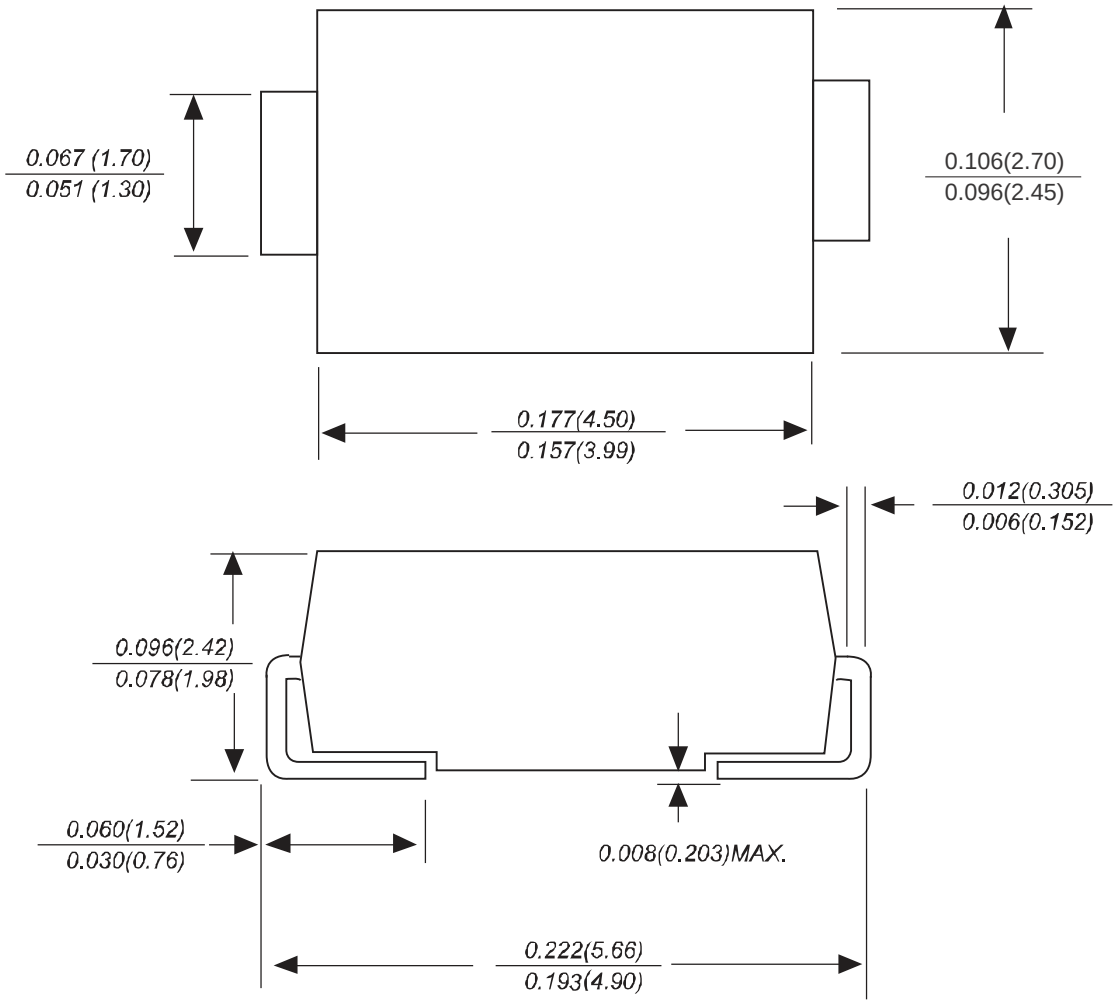


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



Package Outline Dimensions

SMA(DO-214AC)



Dimensions in inches and (millimeters)

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