

FEATURES

- Low profile package with built-in strain relief for surface mounted applications
- Glass passivated junction
- Low incremental surge resistance
- Low inductance
- Excellent clamping capability
- 1500W peak pulse power capability with a 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Very fast response time
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case: JEDEC DO-214AB (SMC) molded plastic over passivated junction

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026. High temperature soldering: 250°C/10 seconds at terminals.

Polarity: For uni-directional types the band denotes the cathode, which is positive with respect to the anode under normal TVS operation.

Standard Packaging: 16mm tape (EIA STD RS-481)

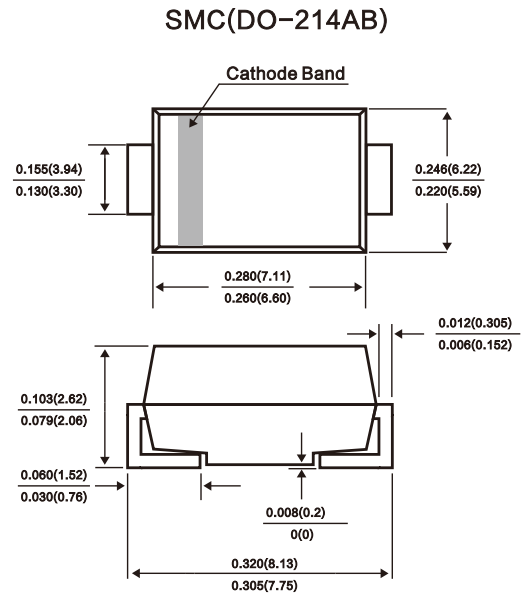
Weight: 0.007 oz., 0.21 g

Packaging Codes – Options (Antistatic):

51 – 1K per Bulk box, 10K/carton

57 – 850 per 7" plastic Reel (16mm tape), 8.5K/carton

9A – 3.5K per 13" plastic Reel (16mm tape), 35K/carton



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Parameter | Symbol | Value | Unit |
|--|-----------------------------------|-------------|-------|
| Peak power dissipation with a 10/1000 μ s waveform | PPPM | 1500 | W |
| Maximum Instantaneous Forward Voltage at 50.0A for Unidirectional Only | V _F | 3.5 | Volts |
| Power dissipation on infinite heatsink, T _A = 50°C | P _{M(AV)} | 6.5 | W |
| Peak forward surge current 8.3ms single half sine-wave uni-directional only ⁽²⁾ | I _{FSM} | 200 | A |
| Thermal resistance junction to ambient air ⁽³⁾ | R _{θJA} | 75 | °C/W |
| Thermal resistance junction to leads | R _{θJL} | 15 | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -65 to +150 | °C |

Notes: (1) Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2

(2) Mounted on 0.31 x 0.31" (8.0 x 8.0mm) copper pads to each terminal

(3) Mounted on minimum recommended pad layout

Electrical Characteristics

- Notes:** (1) Pulse test: $t_p \leq 50\text{ms}$
(2) Surge current waveform per Fig. 3 and derate per Fig. 2
(3) All terms and symbols are consistent with ANSI/IEEE CA62.35
(4) For bidirectional types with V_R 10 volts and less, the I_D limit is doubled

Fig. 1 – Peak Pulse Power Rating Curve

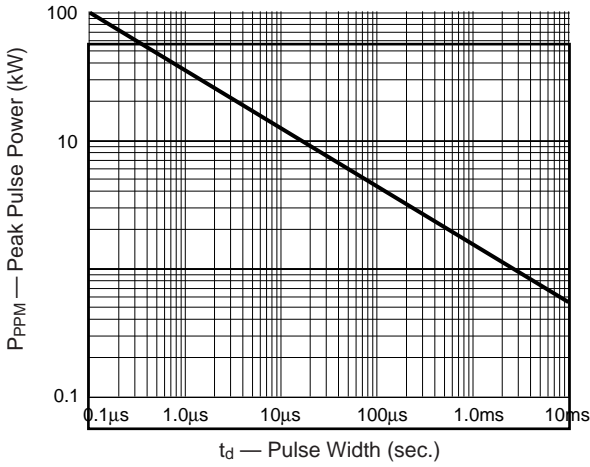


Fig. 2 – Pulse Derating Curve

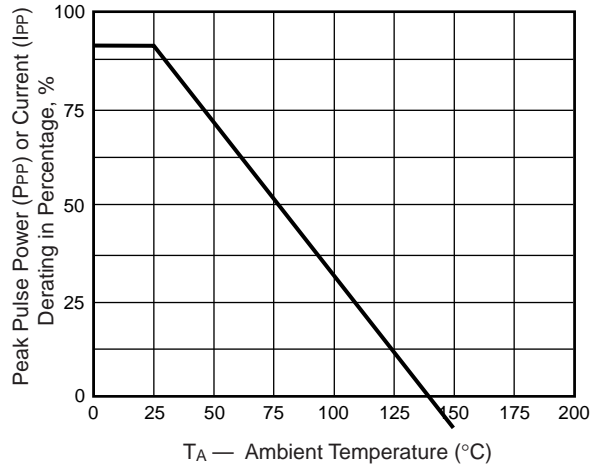


Fig. 3 – Pulse Waveform

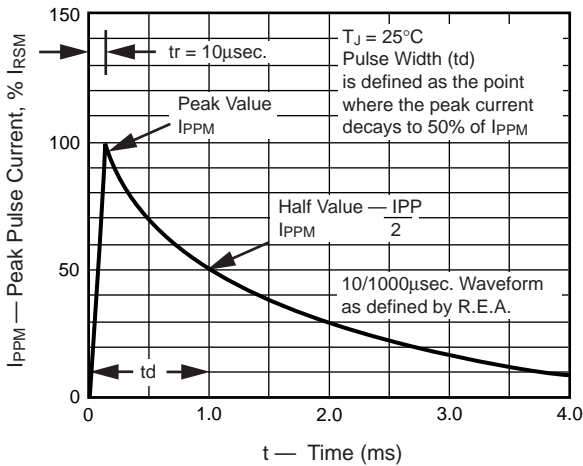


Fig. 4 – Typical Junction Capacitance Uni-Directional

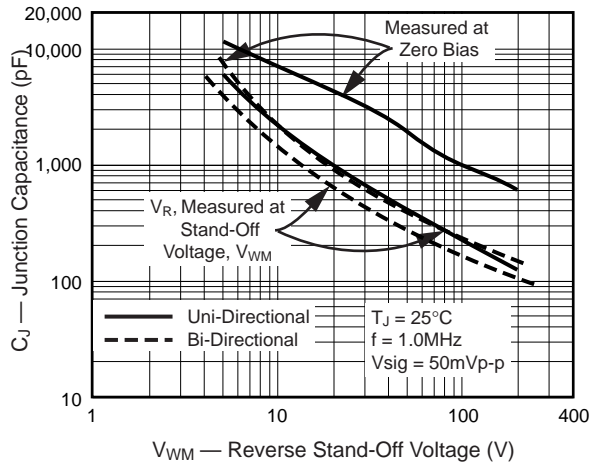


Fig. 5 – Typical Transient Thermal Impedance

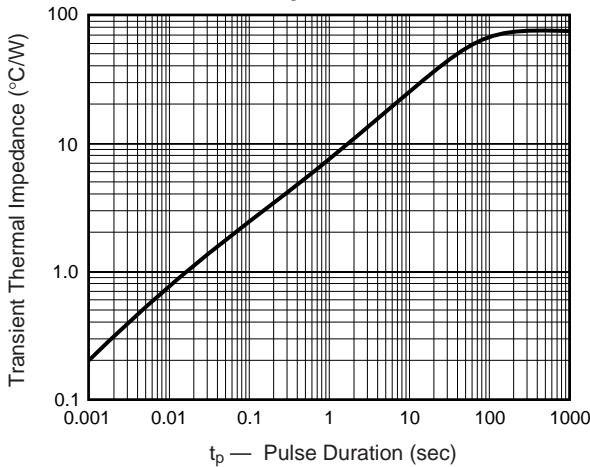
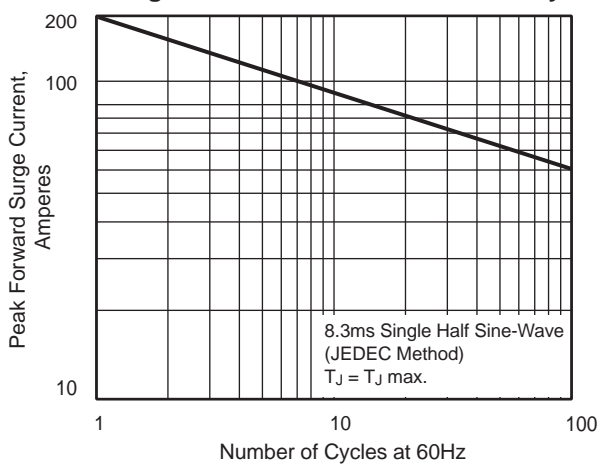


Fig. 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Use Only



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