

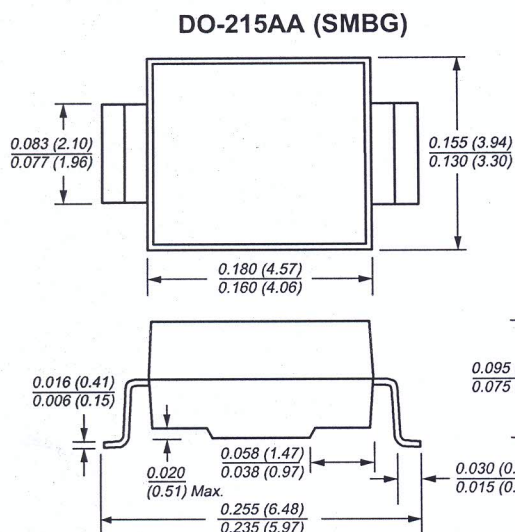


SMBG5.0 thru 188CA

Vishay Semiconductors
formerly General Semiconductor

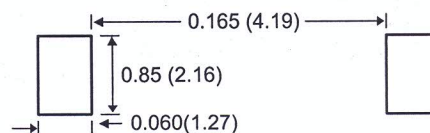
Surface Mount TRANSZORB[®] Transient Voltage Suppressors

Stand-off Voltage 5.0 to 188V
Peak Pulse Power 600W



Extended
Voltage Range

Mounting Pad Layout



Features

- Underwriters Laboratory Recognition under UL standard for safety 497B: Isolated Loop Circuit Protection
- Low profile package with built-in strain relief for surface mounted applications
- Glass passivated junction
- Low incremental surge resistance, excellent clamping capability
- 600W peak pulse power capability with a 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Very fast response time
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

Case: JEDEC DO-215AA molded plastic over passivated junction

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

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

Weight: 0.003 oz., 0.093 g

Flammability: Epoxy is rated UL 94V-0

Packaging Codes – Options (Antistatic):

51 – 2K per Bulk box, 20K/carton

52 – 750 per 7" plastic Reel (12mm tape), 15K/carton

5B – 3.2K per 13" plastic Reel (12mm tape), 32K/carton

Devices for Bidirectional Applications

For bi-directional devices, use suffix C or CA (e.g. SMBJ10C, SMBJ10CA). Electrical characteristics apply in both directions.

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000 μ s waveform ⁽¹⁾⁽²⁾ (Fig. 1)	PPPM	Minimum 600	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I _{PPM}	See Table Below	A
Peak forward surge current 8.3ms single half sine-wave uni-directional only ⁽²⁾	I _{FSM}	100	A
Typical thermal resistance, junction to ambient ⁽⁴⁾	R _{θJA}	100	°C/W
Typical thermal resistance, junction to lead	R _{θJL}	20	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 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 0.2 x 0.2" (5.0 x 5.0mm) copper pads to each terminal

(3) Mounted on minimum recommended pad layout

