

**Bidirectional Surface Mount THYZORB®
Thyristor Overvoltage Protectors****DO-214AC (SMA)****Symbol****Stand-off Voltage** 56 to 243V
Breakover Voltage 80 to 350V
Peak Pulse Current 50A (10/1000 μ s)
Holding Current 150mA minimum**Features**

- Bidirectional crowbar protection
- Complies with Bellcore TR-NWT-001089, and IEC-1000-4-5 standards
- Series is designed to protect telecommunication equipment against lightening and AC induced transients
- Plastic package has UL Flammability Classification 94V-0
- Low profile package with built-in strain relief for surface mounted applications

Mechanical Data**Case:** JEDEC DO-214AC molded plastic body over passivated junction**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026High temperature soldering guaranteed:
250°C/10 seconds at terminals**Mounting Position:** Any**Weight:** 0.002 ounces, 0.064 gram**Maximum Ratings and Thermal Characteristics** $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Parameter | Symbol | Value | Unit |
|--|---|-------------|--------------------|
| Power Dissipation | $T_A = 50^\circ\text{C}$ P | 3 | W |
| Peak Pulse Current | 10/1000 μ s 8/20 μ s I_{PP} | 50 200 | A |
| Non-repetitive surge peak on-state current | $t_p = 20\text{ms}$ I_{TSM} | 25 | A |
| Critical rate of rise of off-state voltage (V_{RM}) | dV/dt | 5 | KV/ μ s |
| Storage temperature range | T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| Maximum junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Thermal resistance junction to leads | $R_{\theta JL}$ | 30 | $^\circ\text{C/W}$ |
| Thermal resistance junction to ambient on P.C.B. with recommended pad layout | $R_{\theta JA}$ | 120 | $^\circ\text{C/W}$ |

 I_{PP} Ratings for the Following Surge Standards:

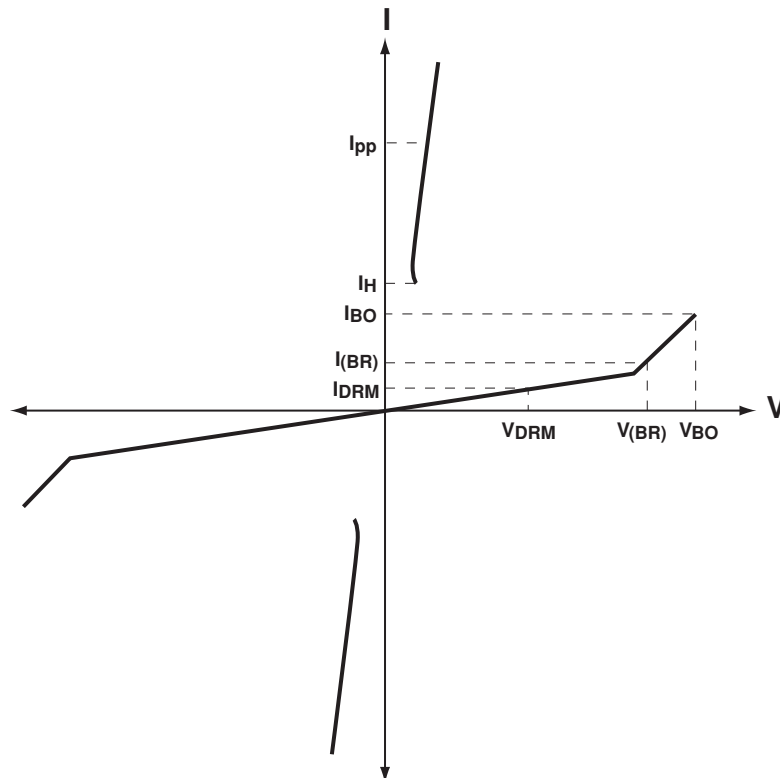
| Standard | Waveform | I_{PP} |
|--------------|-----------------|-------------------|
| GR-1089-CORE | 2/10 μ s | 300A ⁺ |
| IEC61000-4-5 | 8/20 μ s | 200A ⁺ |
| FCC Part 68 | 10/160 μ s | 120A ⁺ |
| ITU-TK20/21 | 10/700 μ s | 100A ⁺ |
| FCC Part 68 | 10/560 μ s | 75A ⁺ |
| GR-1089-CORE | 10/1000 μ s | 50A |

Values with ⁺ have improved I_{PP} specs over equivalent competitor part numbers

Electrical Characteristics (T_A = 25°C unless otherwise noted)

| Type | Device Marking Code | Maximum I _R @ V _R | V _R | Stand-off Voltage V _{DRM} (V) | Max. Reverse Leakage at V _{DRM} I _{DRM} (μA) | Maximum Breakover Voltage V _{BO} (V) ⁽¹⁾⁽³⁾ | Maximum Breakover Current I _{BO} (mA) ⁽¹⁾ | Minimum Holding Current I _H (mA) | Typical Capacitance C (pF) ⁽²⁾ |
|-----------|---------------------|---|----------------|--|--|---|---|---|---|
| SMP50-62 | V06 | 50 | 62 | 56 | 2.0 | 80* | 800 | 150 | 70 |
| SMP50-68 | V07 | 50 | 68 | 61 | 2.0 | 90 | 800 | 150 | 68 |
| SMP50-100 | V10 | 50 | 100 | 90 | 2.0 | 125* | 800 | 150 | 55 |
| SMP50-120 | V12 | 50 | 120 | 108 | 2.0 | 145* | 800 | 150 | 50 |
| SMP50-130 | V13 | 50 | 130 | 117 | 2.0 | 165* | 800 | 150 | 50 |
| SMP50-180 | V18 | 50 | 180 | 162 | 2.0 | 240 | 800 | 150 | 44 |
| SMP50-200 | V20 | 50 | 200 | 180 | 2.0 | 265* | 800 | 150 | 40 |
| SMP50-220 | V22 | 50 | 220 | 198 | 2.0 | 290* | 800 | 150 | 40 |
| SMP50-240 | V24 | 50 | 240 | 216 | 2.0 | 320 | 800 | 150 | 40 |
| SMP50-270 | V27 | 50 | 270 | 243 | 2.0 | 350* | 800 | 150 | 40 |

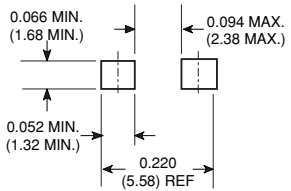
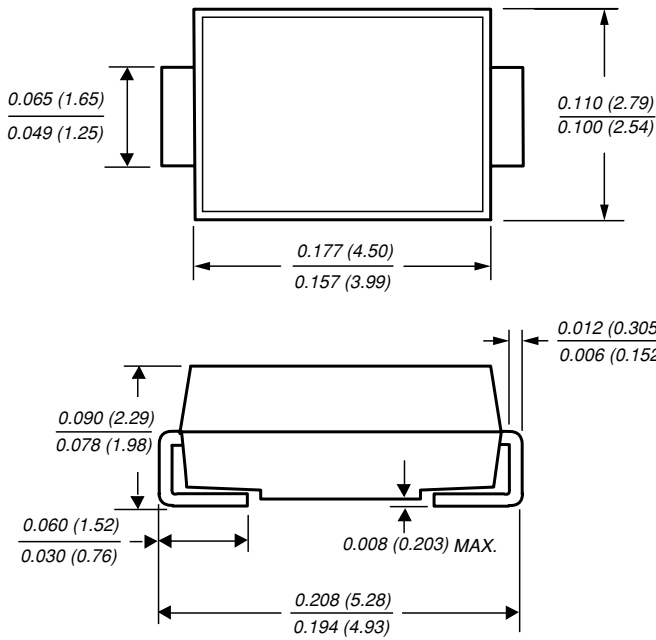
- Notes:** (1) $dv/dt \leq 2V/\mu s$
 (2) $V_R = 2V, f = 1MHz$
 (3) Values with * have improved V_{BO} specs over equivalent competitor part numbers





DO-214AC (SMA)

Mounting Pad Layout



Dimensions in inches
and (millimeters)



Disclaimer

All product specifications and data are subject to change without notice.

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