



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°C unless otherwise noted.

Parameter		Symbol	Value	Unit
Power Dissipation	T _A = 50°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 = 20ms	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	°C
Maximum junction temperature		T _j	150	°C
Thermal resistance junction to leads		R _{θJL}	30	°C/W
Thermal resistance junction to ambient on P.C.B. with recommended pad layout		R _{θJA}	120	°C/W

I_{PP} Ratings for the Following Surge Standards:

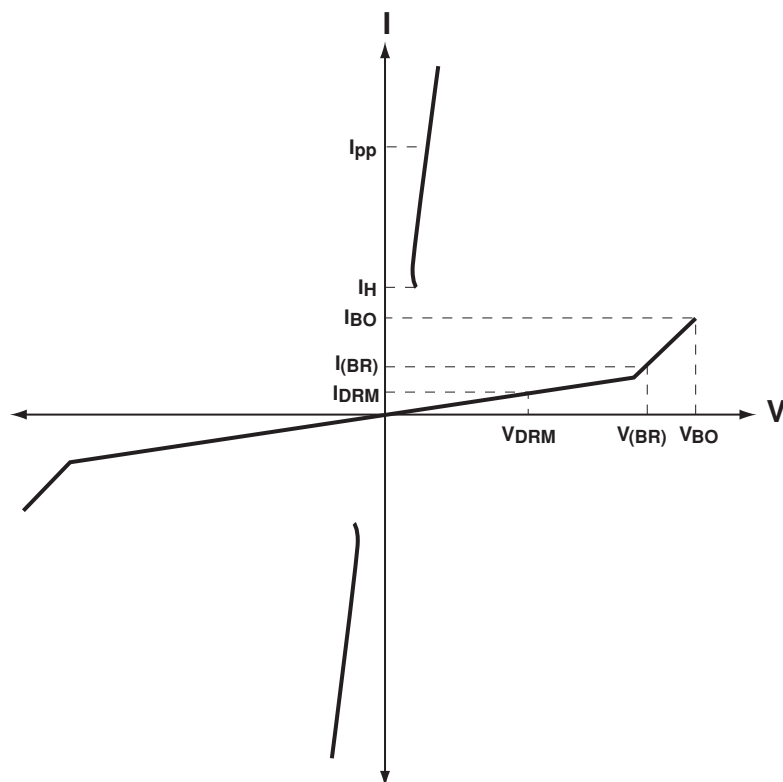
Standard	Waveform	I _{PP}
GR-1089-CORE	2/10 μ s	300A ⁺
IEC61000-4-5	8/20 μ s	200A ⁺
FCC Part 68	10/160 μ s	120A ⁺
ITU-TK20/21	10/700 μ s	100A ⁺
FCC Part 68	10/560 μ s	75A ⁺
GR-1089-CORE	10/1000 μ s	50A

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

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

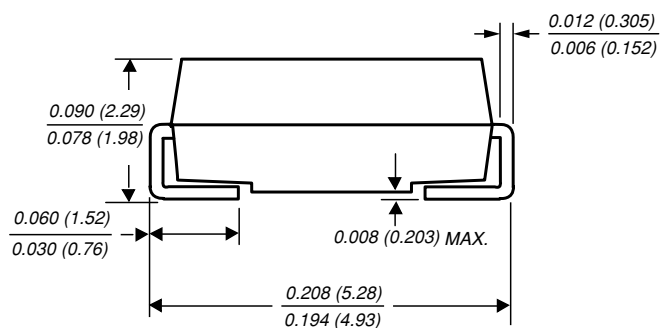
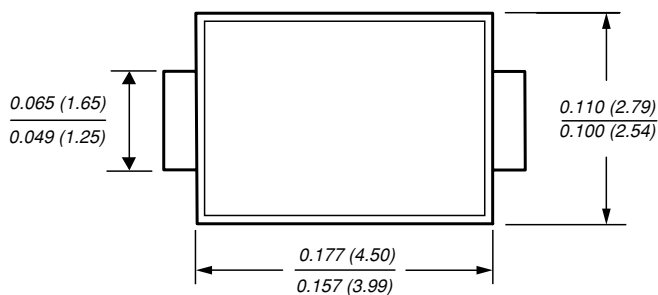
Type	Device Marking Code	Maximum I _R @ V _R	V _R	Stand-off Voltage V _{DRM} (V)	Max. Reverse Leakage at V _{DRM} I _{DRM} (μA)	Maximum Breakover Voltage V _{BO} (V) ⁽¹⁾⁽³⁾	Maximum Breakover Current I _{BO} (mA) ⁽¹⁾	Minimum Holding Current I _H (mA)	Typical Capacitance C (pF) ⁽²⁾
SMP50-62	V06	50	62	56	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)



Dimensions in inches
and (millimeters)

Mounting Pad Layout

