



## Bidirectional Surface Mount THYZORB® Thyristor Overvoltage Protectors

DO-214AC (SMA)

Symbol

**Breakdown Voltage** 62 to 270V  
**Breakover Voltage** 82 to 360V  
**Peak Pulse Current** 30A (10/1000µs)  
50A (8/20µs)  
**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 2026

High 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<sub>A</sub> = 25°C unless otherwise noted.

Parameter	Symbol	Value	Unit
Power Dissipation	$T_A = 50^\circ\text{C}$ P	3	W
Peak Pulse Current	10/1000µs 8/20µs I <sub>PP</sub>	30 50	A
Non-repetitive surge peak on-state current	$t_p = 20\text{ms}$ I <sub>TSM</sub>	15	A
Critical rate of rise of off-state voltage (V <sub>RM</sub> )	dV/dt	5	KV/µs
Storage temperature range	T <sub>stg</sub>	-55 to +150	°C
Maximum junction temperature	T <sub>j</sub>	150	°C
Thermal resistance junction to leads	R <sub>θJL</sub>	30	°C/W
Thermal resistance junction to ambient on P.C.B. with recommended pad layout	R <sub>θJA</sub>	120	°C/W

### I<sub>PP</sub> Ratings for the Following Surge Standards:

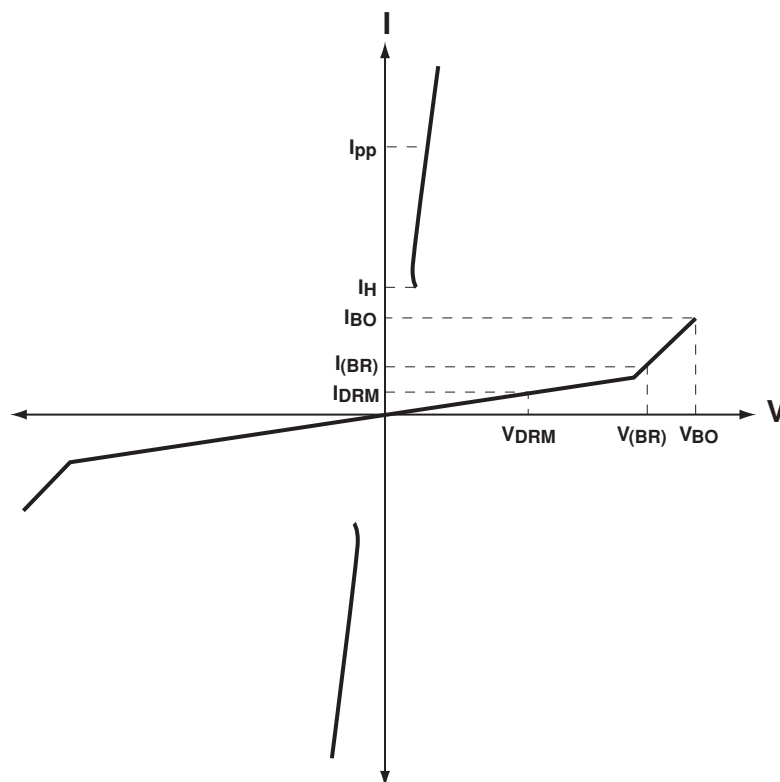
Standard	Waveform	I <sub>PP</sub>
GR-1089-CORE	2/10µs	150A <sup>+</sup>
IEC61000-4-5	8/20µs	120A <sup>+</sup>
FCC Part 68	10/160µs	65A <sup>+</sup>
ITU-TK20/21	10/700µs	45A <sup>+</sup>
FCC Part 68	10/560µs	35A
GR-1089-CORE	10/1000µs	30A

Values with + have improved I<sub>PP</sub> specs over equivalent competitor part numbers

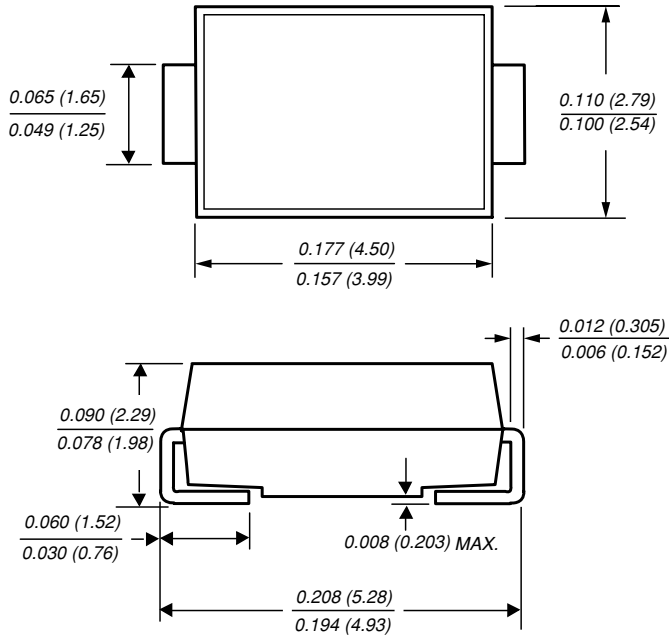
## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Type	Device Marking Code	Minimum Breakdown Voltage V <sub>(BR)</sub> (V)	Test Current I <sub>(BR)</sub> (μA)	Stand-off Voltage V <sub>DRM</sub> (V)	Max. Reverse Leakage at V <sub>DRM</sub> I <sub>DRM</sub> (μA)	Maximum Breakover Voltage V <sub>BO</sub> (V) <sup>(1)(3)</sup>	Maximum Breakover Current I <sub>BO</sub> (mA) <sup>(1)</sup>	Minimum Holding Current I <sub>H</sub> (mA)	Typical Capacitance C (pF) <sup>(2)</sup>
SMP30-62	QAA	62	50	56	2.0	80*	800	150	TBD
SMP30-68	QAB	68	50	61	2.0	90	800	150	TBD
SMP30-100	QAC	100	50	90	2.0	125*	800	150	TBD
SMP30-120	QAD	120	50	108	2.0	145*	800	150	TBD
SMP30-130	QAE	130	50	117	2.0	165*	800	150	TBD
SMP30-180	QAF	180	50	162	2.0	240	800	150	TBD
SMP30-200	QAG	200	50	180	2.0	265*	800	150	TBD
SMP30-220	QAH	220	50	198	2.0	290*	800	150	TBD
SMP30-240	QAI	240	50	216	2.0	320	800	150	TBD
SMP30-270	QAJ	270	50	243	2.0	350*	800	150	TBD

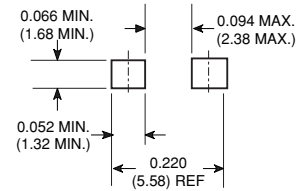
**Notes:** (1)  $dv/dt \leq 2V/\mu s$   
 (2)  $V_R = 1V$ ,  $f = 1MHz$   
 (3) Values with \* have improved V<sub>BO</sub> specs over equivalent competitor part numbers



## DO-214AC (SMA)



## Mounting Pad Layout



Dimensions in inches  
and (millimeters)