

**Bidirectional Surface Mount THYZORB®**
Thyristor Overvoltage Protectors**DO-214AA (SMB)****Symbol****Stand-off Voltage** 55 to 230V
Breakover Voltage 80 to 350V
Peak Pulse Current 100A (10/1000 μ s)
300A (8/20 μ s)
Holding Current 150mA minimum**Mechanical Data****Case:** JEDEC DO-214AA 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:** 0.003 ounces, 0.093 gram**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

Maximum Ratings and Thermal Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted.

Parameter		Symbol	Value	Unit
Power Dissipation	$T_L = 50^\circ\text{C}$	P	5	W
Peak Pulse Current	10/1000 μ s 8/20 μ s	I _{PP}	100 300	A
Non-repetitive surge peak on-state current	t _p = 20ms	I _{TSM}	55	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}	100	°C/W
Thermal resistance junction to ambient on P.C.B. with recommended pad layout		R _{θJA}	20	°C/W

I_{PP} Ratings for the Following Surge Standards:

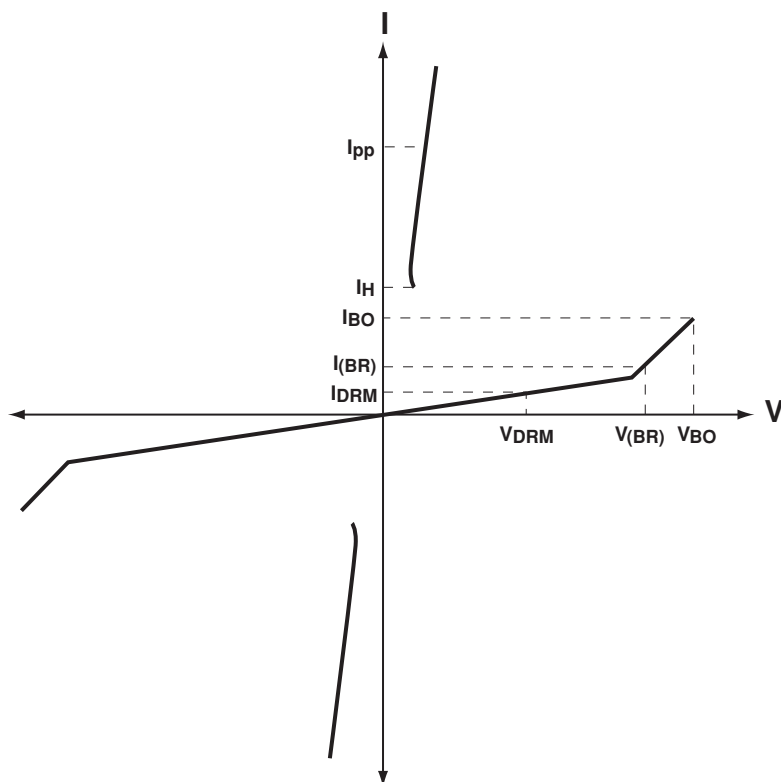
Standard	Waveform	I _{PP}
GR-1089-CORE	2/10 μ s	500A
IEC61000-4-5	8/20 μ s	300A ⁺
FCC Part 68	10/160 μ s	250A ⁺
ITU-TK20/21	10/700 μ s	200A ⁺
FCC Part 68	10/560 μ s	160A ⁺
GR-1089-CORE	10/1000 μ s	100A

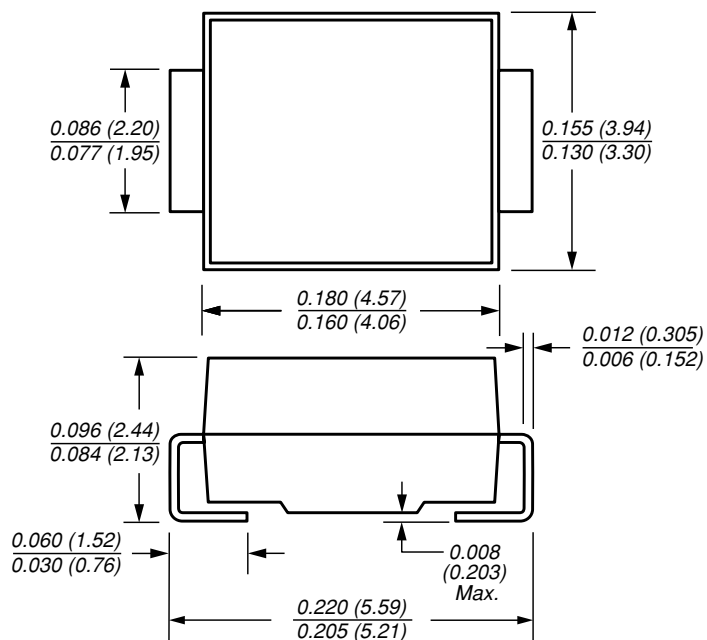
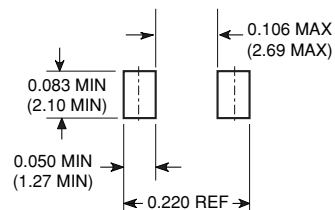
Values with ⁺ have improved I_{PP} specs over equivalent competitor part numbers

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⁾
SMP100LC-65	L06	50	65	55	2.0	80*	800	150	120
SMP100LC-90	L09	50	90	81	2.0	115*	800	150	76
SMP100LC-120	L12	50	120	108	2.0	145*	800	150	70
SMP100LC-130	L13	50	130	117	2.0	165*	800	150	70
SMP100LC-140	L14	50	140	120	2.0	180*	800	150	65
SMP100LC-160	L16	50	160	144	2.0	220	800	150	65
SMP100LC-200	L20	50	200	170	2.0	265*	800	150	65
SMP100LC-230	L23	50	230	200	2.0	300*	800	150	60
SMP100LC-270	L27	50	262	230	2.0	350*	800	150	60

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-214AA (SMB)

Mounting Pad Layout


Dimensions in inches
and (millimeters)