



SENSONETICS

Sensing today...with tomorrow's technology

POWER SURGE SUPPRESSORS

500 Joule Surge Capacity - Zener Type



Sensonetics Zener-Type Arc Suppressors are used in high energy applications such as voltage clippers, regulators and surge suppressors. Unlike other methods of surge suppression, Sensonetics zeners have a better clamping factor and they operate in a few nano-seconds. The PRZ300ZE34 is approved for military applications and will suppress transients outlined in MIL STD-1275A. Sensonetics surge suppressors are ideally suited for aircraft, marine, military and commercial applications where communication systems and other electronic equipment must be protected against catastrophic failure due to power surges from lightning, alternator load dumps, field decay transients and other external sources. Contact Sensonetics for other package sizes and higher surge capacities.

- **PRZ300ZE34 conforms to MIL STD-1275A for transient suppressors.**
- **Hermetically sealed JEDEC modified DO-9 package**
- **Dielectrically isolated and passivated junctions to withstand unusually high surges at high temperatures**

ELECTRICAL SPECIFICATIONS (@ 25°C unless otherwise specified)

SPECIFICATIONS	SY MB OL	UNIT	TYPE											
			300ZE8		300ZE26		300ZE34		300ZE50		300ZE75		300ZE100	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Reverse Stand Off Voltage	V_R	Volts	—	6	—	20	—	28	—	40	—	60	—	85
Reverse Leakage at stand off voltage	I_R	μ A	—	10	—	10	—	10	—	10	—	10	—	10
Breakdown Voltage @ $I_B=40$ mA	V_B	Volts	7.5	8.5	19	21	32	36	47	53	71	79	95	105
Peak Pulse Current @ 50ms, 10 sec interval	I_P	Amps	—	120	—	120	—	120	—	120	—	120	—	120
Reverse Current Surge (see note 1)	I_Z	Amps	—	85	—	26	—	26	—	13	—	9	—	6
Peak load Dump (0.80 ms capacitive discharge time constant)	I_D	Amps	—	950	—	300	—	300	—	150	—	100	—	75
Surge Carrying Capacity (8 ms capacitive discharge time constant)	I_J	Amps	—	500	—	500	—	500	—	500	—	500	—	500
Clamping Voltage @ I_P	V_C	Volts	—	10	—	25	—	43	—	63	—	94	—	125

NOTE 1: I_Z to be applied until TC reaches 100 C, or for a maximum period of 5 minutes, whichever occurs earlier.

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

SPECIFICATION	SYMBOL	UNIT	LIMIT
Power Dissipation $T_J = 25\text{ C}$ $T_J = 150\text{ C}$	P_D	Watts	300 130
Thermal Impedance (junction to case)	R_{JC}	°C/Watts	0.2 typical
Operating Junction Temperature	T_J	°C	-65 to +120
Storage Temperature	T_S	°C	-65 to +200
Response Time (from stand off voltage to clamp voltage)	t_r	sec	10^{-12}

MECHANICAL SPECIFICATIONS

Package	JEDEC modified DO-9 package
Polarity	Anode to case (negative ground system)
Weight	175 grams

