New Jersey Semi-Conductor Products, Inc.

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1N5555	1N5556
1N5557	1N5558

# 1500 WATT UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

### FEATURES

- PROTECTS CIRCUITS FROM HARMFUL TRANSIENTS
- ABSORBS TRANSIENTS UP TO 1500 WATTS FOR 1MS
- CLAMPING RESPONSE TIME OF 1 PICO SECOND
- 1 WATT CONTINUOUS POWER DISSIPATION
- WORKING VOLTAGE RANGE FROM 30.5 V TO 175 V
- . HERMETIC SEALED DD-13 METAL PACKAGE

### DESCRIPTION

Transient Absorption Zeners are PN silicon junction zeners. Unlike the voltage regulation characteristics of a zener diode, the TAZ is designed for transient voltage suppression. Due to the TAZ's fast response time, protection level, and high discharge capability, its application area is very wide for protection against induced lighting, inductive and switching type transients, and can protect any kind of transient sensitive component/equipment, i.e., integrated circuits including secondary protection device in connection with SVP's in telecommunication applications. The use of TAZ devices in alrborne avionics and electrical systems has proven to be highly effective.

## MAXIMUM RATINGS

1500 Watts for 1 ms at Lead Temperature (TZ) 25°C

Operating and Storage Temperatures:  $-65^{\circ}$  to  $+175^{\circ}$ C D.C. Power Dissipation: 1 Watt at TZ =  $+25^{\circ}$ C 3/8" from body Forward Surge Rating: 200 Amps for 8.3 ms at TA =  $+25^{\circ}$ C Duty Cycle of 4 pulses per minute maximum.

### 235 ma) 537 UA 537 UA 1.290 0.210 31.750 5.334 MiN. MAX. 0.090 MAX. 2.205 DIA. 0.090 MAX. 2.205 DIA. 0.090 MAX. 2.205 DIA. 1.250 0.508/0.762 DIA. 1.250 0.090 MAX. 1.250 0.090 MAX. 1.250 0.1750 0.090 MAX. 1.250 0.1750 0.090 MAX. 1.250 0.1750 0.090 MAX. 1.250 0.000 MAX. 1.250 0.1750 0.090 MAX. 1.250 0.1750 0.000 MAX. 1.250 0.000 MAX. 1.250 0.150 MAX. 1.250 0.508 MAX. 1.250 0.150 MAX. 1.250 0.150 MAX. 1.250 0.150 MAX. 1.250 0.508 MAX. 1.250 0.150 MAX. 1.750 0.508 MAX. 1.750 0.508 MAX. 1.750 0.508 MAX. 1.750 0.1752 DIA. 1.250 0.150 MAX. 1.250 0.150 MAX. 1.250 MAX. 1.250

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### MECHANICAL CHARACTERISTICS

CASE: DO-13 (DO-202AA), welded, hermetically sealed metal and glass.

FINISH: All external surfaces are corrosion resistant and leads solderable.

THERMAL RESISTANCE: 100°C/W (Typical) junction to ambient.

POLARITY: Cathode connected to case and marked.

WEIGHT: 1.4 grams.

MOUNTING POSITION: Any.

# ELECTRICAL CHARACTERISTICS

Jedec Type No.	Minimum Breakdown Voltage Ven at 1 <sub>7</sub>	Test Current (I <sub>t</sub> )	Rated Standoff Voltage (Vww)	Maximum (RMS) Reverse Voltage V <sub>rwm</sub>	Maximum Reverse Leakage Current ( <sup>1</sup> D) at VwM	Maximum Peak Reverse Voltage (VC Max.) at Ipp	Maximum Reverse Surge Current (I <sub>pp</sub> )	Maximum Temperature Coefficient of V(an) $\alpha_{VZ}$ (T <sub>A</sub> ) -55°C to 100°C at 1.0 mAdc
	ναϊ	mAdc	Vdc	Vrms	μAdc	V	A	%/°C
1N5555 1N5556 1N5557 1N5558	33.0 43.7 54.0 191.0	1.0 1.0 1.0 1.0	30.5 40.3 49.3 175.0	21.5 28.5 34.5 124.0	5 5 5 5	47.5 63.5 78.5 265.0	32 24 19 5.7	+ .093 + .094 + .096 + .100



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# **Quality Semi-Conductors**