ELECTRONICS, INC.
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NTE4900
Surge Clamping, Overvoltage Transient Suppressor, Unidirectional

Description:

The NTE4900 is a zener overvoltage transient suppressor in an axial lead type package designed to protect voltage sensitive components from high voltage, high energy transients. This device has excellent clamping capability, high surge capability, low zener impedance, and fast response time making the NTE4900 ideal for use in communication systems, numerical controls, process controls, medical equipment, business machines, power supplies and many other industrial/consumer applications, to protect CMOS, MOS and Bipolar integrated circuits.

Features:

- Peak Power: 1500W @ 1.0ms
- Maximum Clamp Voltage @ Peak Pulse Current
- Low Leakage: < 5.0μA Above 10V

Absolute Maximum Ratings:

Peak Power Dissipation (Non–Repetitive Current Pulse, $T_L \le +25°C$), P_{PK} 1500W
Steady State Power Dissipation ($T_L \le +75°C$, Lead length = 3/8”), P_D 5W
Derate Above $T_L = +75°C$ . . . . . 50mW/°C
Forward Curent Current ($T_A = +25°C$, Note 1), I_{FSM} 200A
Operating Junction Temperature Range, T_J . . . . . –65° to +175°C
Storage Temperature Range, T_{stg} . . . . . –65° to +175°C
Lead Temperature (During Soldering, 1/16” from case, 10sec), T_L . . . . . +230°C

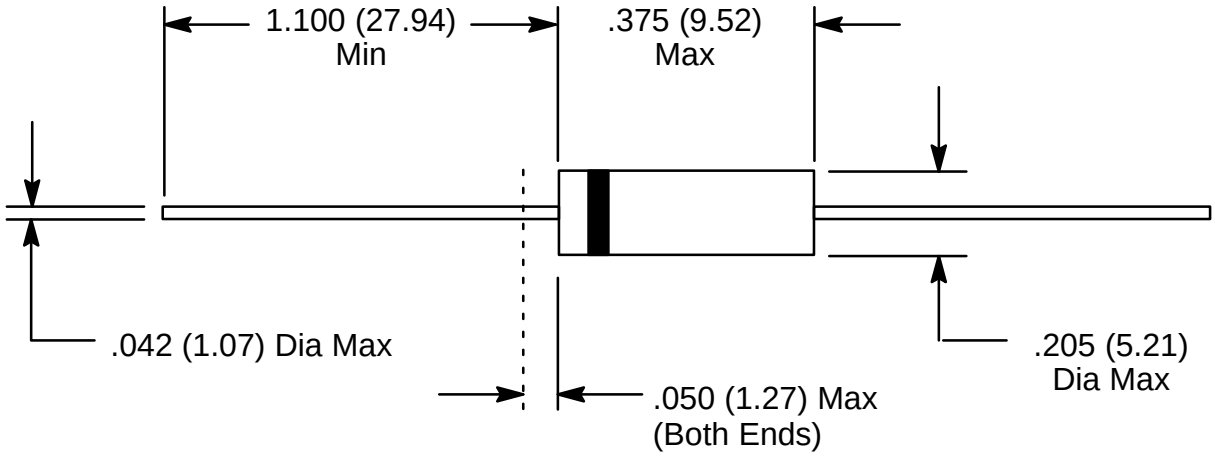
Note 1. 1/2 Square Wave (or equivalent), PW = 8.3ms, Duty Cycle = 4 Pulses per minute maximum.

Electrical Characteristics: ($T_A = +25°C$, $V_F = 3.5V$ Max, I_F(Note 1) = 100A unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown Voltage	V_{BR}	$I_T = 1mA$	6	–	–	V
Reverse Stand–Off Voltage	V_{RWM}	Note 2	–	–	5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$	–	–	300	μA
Reverse Voltage (Clamping Voltage	V_{RSM}	$I_{RSM} = 120A$	–	–	8.5	V
Clamping Voltage	V_C	$I_{PP} = 30A$	–	–	7.6	V
		$I_{PP} = 60A$	–	–	8.0	V

Note 1. 1/2 Square Wave (or equivalent), PW = 8.3ms, Duty Cycle = 4 Pulses per minute maximum.

Note 2. A Transient Suppressor is normally selected according to the maximum reverse stand–off voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.



Color Band Denotes Cathode
(Unidirectional ONLY. Bidirectional devices have NO band.)