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NTE5010T1 thru NTE5021T1 Zener Diode, 500mW $\pm 1\%$ Tolerance

Features:

- Zener Voltage 5.1V to 12V
- Constructed with an Oxide Passivated All Diffused Die
- DO35 Type Axial Lead Package

Absolute Maximum Ratings:

Forward Voltage ($I_F = 100\text{mA}$, $T_L = +30^\circ\text{C}$, Lead Length = 3/8"), V_F	1.5V
DC Power Dissipation ($T_L \leq +50^\circ\text{C}$, Lead length = 3/8"), P_D	500mW
Derate Above 50°C	$3.33\text{mW}/^\circ\text{C}$
Operating Temperature Range, T_{opr}	-65°C to $+200^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65°C to $+200^\circ\text{C}$

Electrical Characteristics: ($T_L = +30^\circ\text{C}$, Lead Length = 3/8" unless otherwise specified)

NTE Type Number	Nom Zener Voltage (Note 1) $V_z @ I_{zt}$	Zener Test Current (I_{zt})	Max DC Zener Current (Note 2) (I_{zm})	Max Zener Impedance (Note 3)		Typical Temperature Coefficient α_{vz}	Max Leakage Current $I_R @ V_R$	
				$Z_{zt} @ I_{zt}$	$Z_{zk} @ 0.25\text{mA} (I_{zk})$		μA	Volts
5010T1	5.1	5	98	50	2050	+0.025	2.0	2.0
5011T1	5.6	5	89	25	1800	+0.035	2.0	3.0
5013T1	6.2	5	81	10	1300	+0.040	1.0	4.0
5019T1	10.0	5	50	15	600	+0.065	0.1	8.0
5021T1	12.0	5	42	22	600	+0.073	0.1	9.1

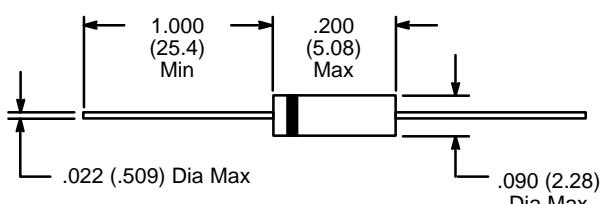
Note 1. Voltage measurement to be performed 20 seconds after application of the DC test current.

Note 2. The maximum zener current (I_{zm}) shown is for the nominal voltages. The following formula can be used to determine the worst case current for any tolerance device:

$$I_{zm} = \frac{P}{V_{zm}}$$

Where V_{zm} is the high end of the tolerance specified and P is the rated power of the device.

Note 3. Zener impedance is derived from the 1kHz AC voltage which results when an AC current having an RMS value equal to 10% of DC zener current (I_{zt} or I_{zk}) is superimposed on I_{zt} or I_{zk} .



Color Band Denotes Cathode