



ELECTRONICS, INC.

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## NTE578 Silicon Rectifier Schottky Barrier, General Purpose

### Description:

The NTE578 is a general purpose rectifier employing the Schottky Barrier principle in a large area metal-to-silicon power diode. State-of-the art geometry features epitaxial construction with oxide passivation and metal overlap contact. Ideally suited for use as rectifiers in low-voltage, high-frequency inverters, free wheeling diodes, and polarity protection diodes.

### Features:

- Low Reverse Current
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss/High Efficiency
- Highly Stable Oxide Passivated Junction
- Guard-Ring for Stress Protection
- Low Forward Voltage
- 150°C Operating Junction Temperature
- High Surge Capacity

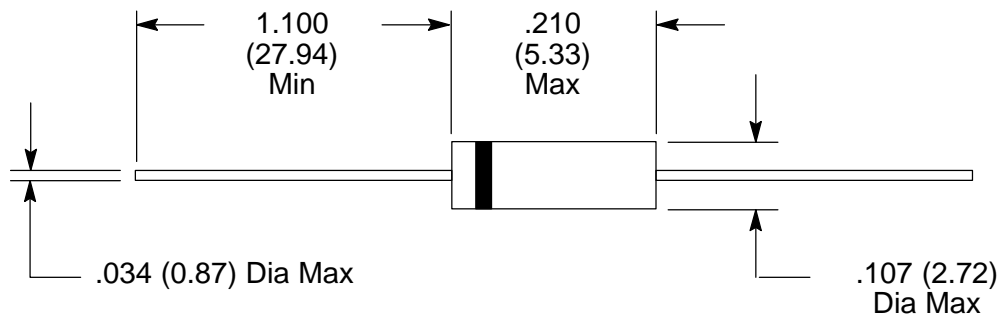
### Absolute Maximum Ratings:

Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	90V
Working Peak Reverse Voltage, $V_{RWM}$ .....	90V
DC Blocking Voltage, $V_R$ .....	90V
Average Rectified Forward Current, $I_O$ ( $V_R$ (equiv) $\leq 0.2V_R$ (dc), $R_{\theta JA} = 50^\circ\text{C/W}$ , P.C. Board Mounting, $T_A = +120^\circ\text{C}$ ) .....	1A
Nonrepetitive Peak Surge Current, $I_{FSM}$ (Surge applied at rated load conditions, half-wave single phase, 60Hz) .....	25A
Operating Junction Temperature Range, $T_J$ .....	-65° to +150°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +150°C
Voltage Rate of Change (Rated $V_R$ ), $dv/dt$ .....	10V/ns
Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	1°C/W

### Electrical Characteristics: ( $T_L = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum Instantaneous Forward Voltage	$V_F$	$I_F = 1\text{A}$ , Note 1	-	-	0.79	V
Maximum Instantaneous Reverse Current	$I_R$	$V_R = 90\text{V}$ , $T_L = +25^\circ\text{C}$	-	-	0.5	mA
		$V_R = 90\text{V}$ , $T_L = +100^\circ\text{C}$	-	-	5.0	mA

Note 1. Pulse test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .



Color Band Denotes Cathode