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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:

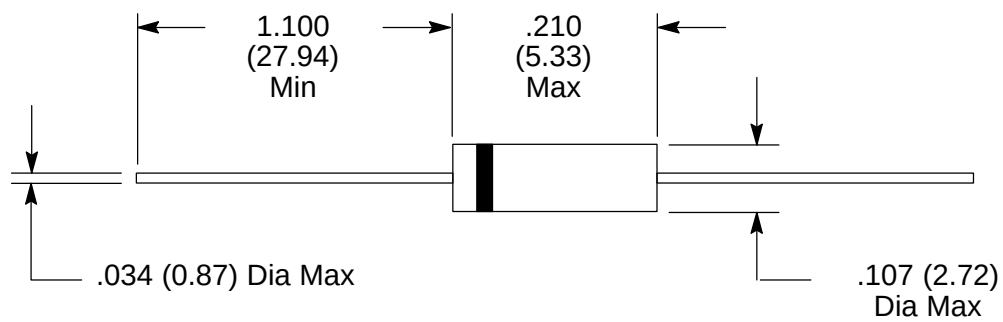
Peak Repetitive Reverse Voltage, V_{RRM}	90V
Working Peak Reverse Voltage, V_{RWM}	90V
DC Blocking Voltage, V_R	90V
Average Rectified Forward Current, I_O (V_R (equiv) $\leq 0.2V_R$ (dc), $R_{\theta JA} = 50^\circ\text{C/W}$, P.C. Board Mounting, $T_A = +120^\circ\text{C}$)	1A
Nonrepetitive Peak Surge Current, I_{FSM} (Surge applied at rated load conditions, half-wave single phase, 60Hz)	25A
Operating Junction Temperature Range, T_J	-65° to $+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ\text{C}$
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	—	—	0.6	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 μs , Duty Cycle $\leq 2.0\%$.





Color Band Denotes Cathode