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

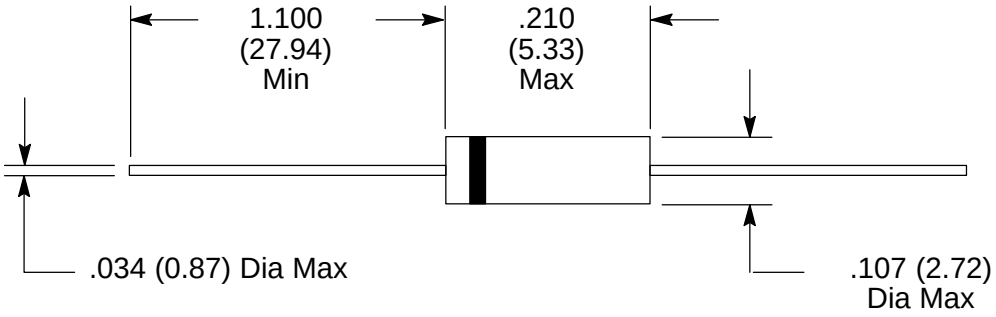
Absolute Maximum Ratings:

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) ≤ 0.2V_R(dc), $R_{\theta JA}$ = 50°C/W, P.C. Board Mounting, T_A = +120°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°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum Instanteous Forward Voltage	V_F	I_F = 1A, Note 1	−	−	0.79	V
Maximum Instanteous Reverse Current	I_R	V_R = 90V, T_L = +25°C	−	−	0.5	mA
		V_R = 90V, T_L = +100°C	−	−	5.0	mA

Note 1. Pulse test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.



Color Band Denotes Cathode