

NTE584 Silicon Schottky Diode

Description:

The NTE584 is a metal to silicon junction diode in a DO35 type package featuring high breakdown, low turn-on voltage and ultrafast switching primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range.

Absolute Maximum Ratings: (Limiting Values)

Repetitive Peak Reverse Voltage, V_{RRM} 20V
 Forward Continuous Current ($T_A = +25^\circ\text{C}$, Note 1), I_F 35mA
 Surge Non-Repetitive Forward Current ($t_p \leq 1\text{s}$, Note 1), I_{FSM} 100mA
 Operating Junction Temperature Range, T_J -65° to $+200^\circ\text{C}$
 Storage Temperature Range, T_{stg} -65° to $+200^\circ\text{C}$
 Maximum Lead Temperature (During Soldering, 10s at 4mm from Case), T_L $+230^\circ\text{C}$
 Thermal Resistance, Junction-to-Ambient (Note 1), $R_{\theta JA}$ 400°C/W

Note 1. On infinite heat sink with 4mm lead length.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristic						
Breakdown Voltage	$V_{(BR)}$	$I_R = 10\mu\text{A}$	20	—	—	V
Forward Voltage	V_F	$I_F = 1\text{mA}$, Note 2	—	—	0.41	V
		$I_F = 35\text{mA}$, Note 2	—	—	1.0	V
Continuous Reverse Current	I_R	$V_R = 15\text{V}$, Note 2	—	—	0.1	μA
Dynamic Characteristic						
Overvoltage Coefficient	C	$V_R = 0\text{V}$, $f = 1\text{MHz}$	—	—	1.2	pF
Minority Carrier Life Time	τ	$I_F = 5\text{mA}$, Krakauer Method	—	—	100	ps

Note 2. Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty Cycle $< 2\%$.

