

## NTE583 Silicon Rectifier Diode Schottky, RF Switch

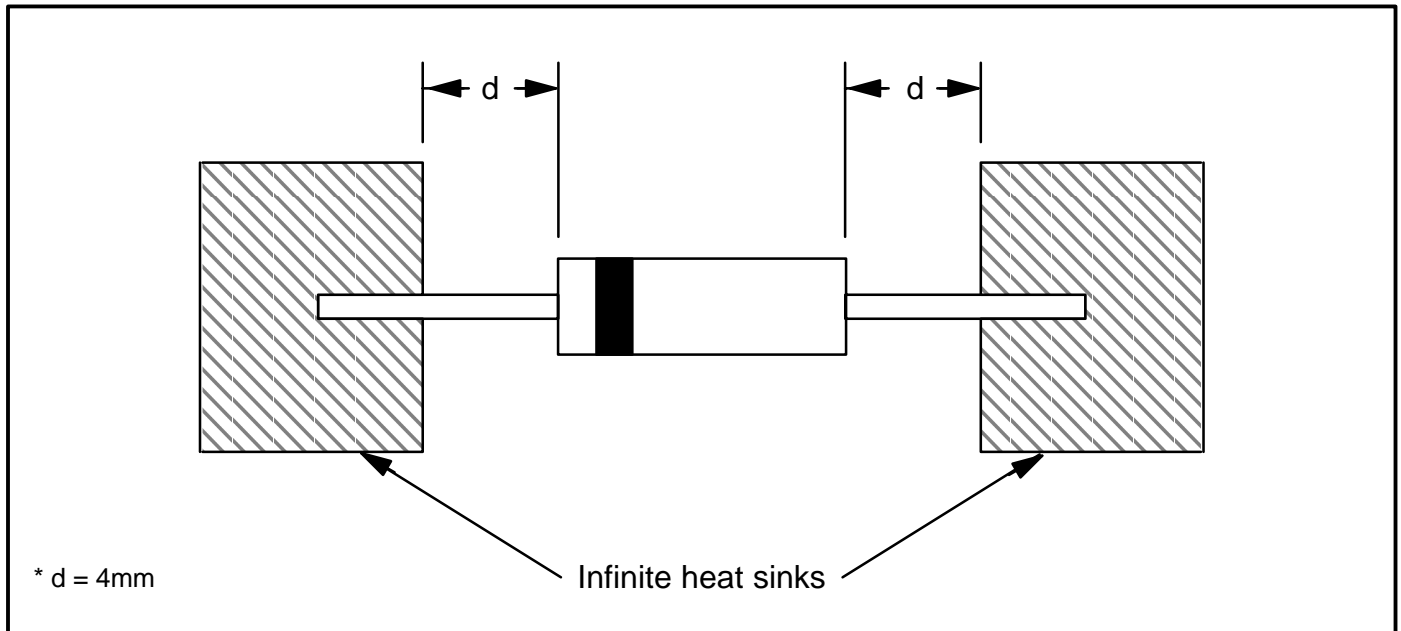
**Description:**

The NTE583 is a metal to silicon junction diode featuring high breakdown, low turn-on voltage and ultrafast switching. This device is primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range.

**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$ , Limiting Values)

Repetitive Peak Reverse Voltage, $V_{RRM}$ .....	70V
Forward Continuous Current (Figure 1), $I_F$ .....	15mA
Surge Non-Repetitive Forward Current ( $t_p \leq 1\text{s}$ , Figure 1), $I_{FSM}$ .....	50mA
Operating Junction Temperature Range, $T_J$ .....	$-65^\circ$ to $+200^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-65^\circ$ to $+200^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient (Figure 1), $R_{thJA}$ .....	$400^\circ\text{C/W}$

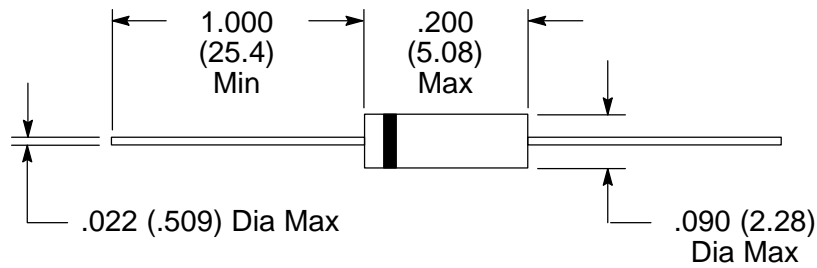
**Figure 1**



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
<b>Static Characteristics</b>						
Breakdown Voltage	$V_{(BR)}$	$I_R = 10\mu\text{A}$	70	–	–	V
Continuous Forward Voltage	$V_F(1)$	$I_F = 1\text{mA}$	–	–	0.41	V
		$I_F = 15\text{mA}$	–	–	1	V
Continuous Reverse Current	$I_R(1)$	$V_R = 50\text{V}$	–	–	0.2	$\mu\text{A}$
<b>Dynamic Characteristics</b>						
Small Signal Capacitance	C	$V_R = 0, f = 1\text{MHz}$	–	–	2	pF
Minority Carrier Life Time	$\tau$	$I_F = 5\text{mA}$ , Krakauer Method	–	–	100	ps

Note 1. Pulse Test  $t_p \leq 300\mu\text{s}$   $\delta < 2\%$



Color Band Denotes Cathode