

NTE583 Silicon Rectifier Diode Schottky, RF Switch

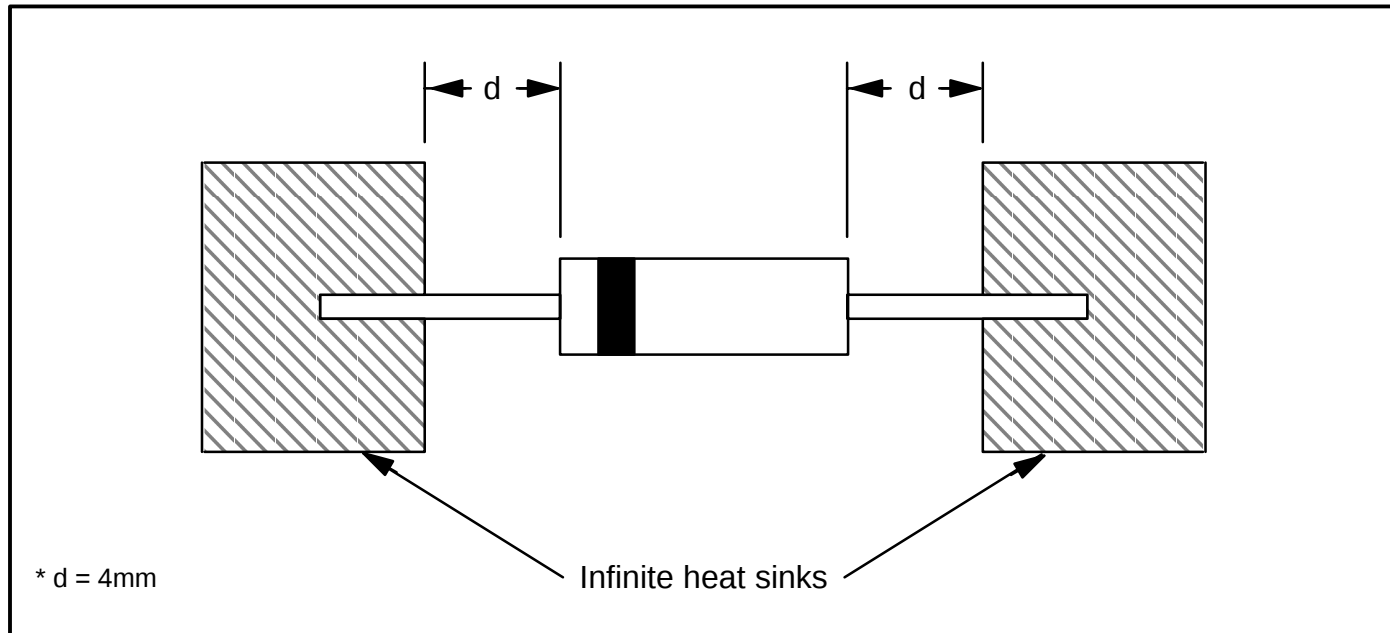
Description:

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° to $+200^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+200^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient (Figure 1), R_{thJA}	400°C/W

Figure 1



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Static Characteristics						
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	μA
Dynamic Characteristics						
Small Signal Capacitance	C	$V_R = 0, f = 1\text{MHz}$	—	—	2	pF
Minority Carrier Life Time	τ	$I_F = 5\text{mA}$, Krakauer Method	—	—	100	ps

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

