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NTE583
Silicon Rectifier Diode
Schottky, RF Switch

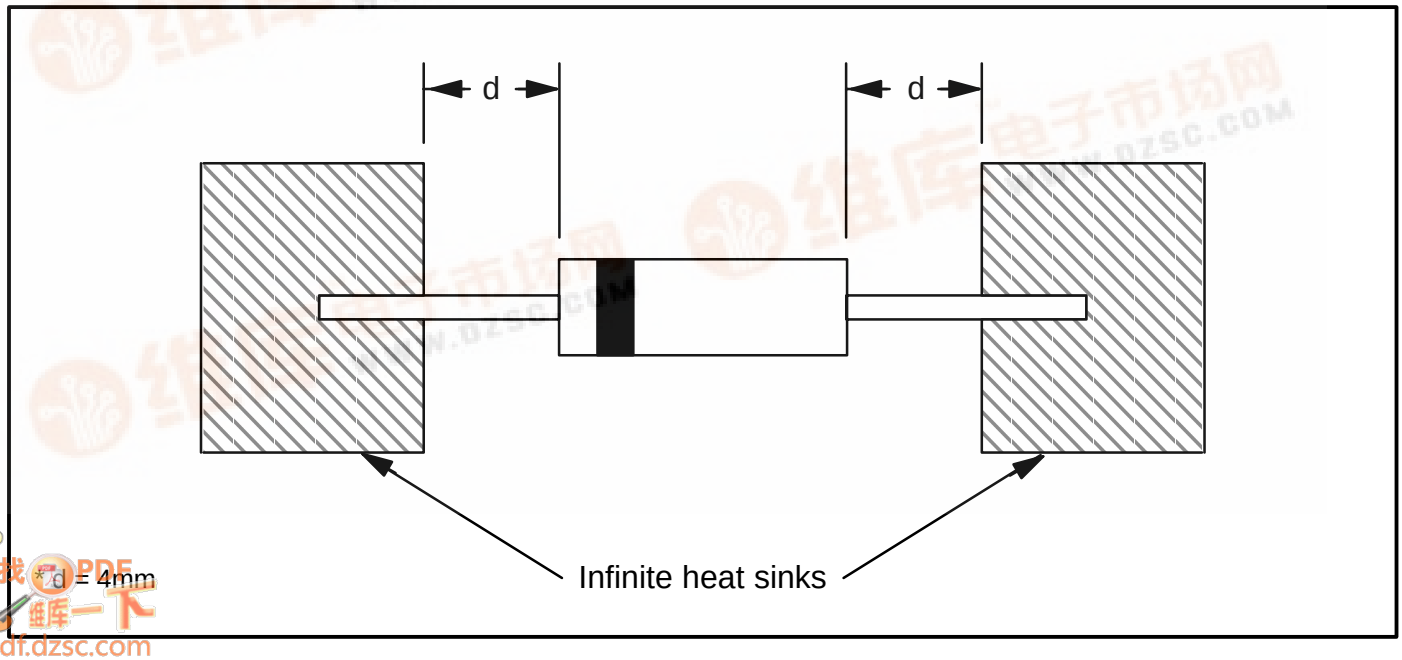
Description:

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

Absolute Maximum Ratings: (T_A = +25°C, Limiting Values)

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

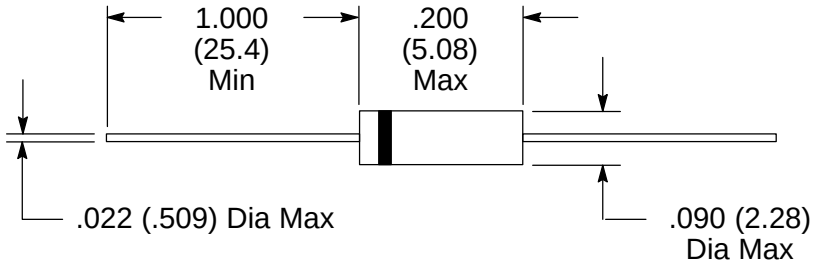
Figure 1



Electrical Characteristics: (T_A = +25°C unless otherwise specified)

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

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



Color Band Denotes Cathode