

NTE555 Silicon Pin Diode UHF/VHF Detector

Description:

The NTE555 is designed primarily for high-efficiency UHF and VHF detector applications. It is readily adaptable to many other fast switching RF and digital applications.

Features:

- Schottky Barrier Construction Provides Stable Characteristics by Eliminating the “Cat-Whisker” or “S-Bend” Contact
- Very Low Capacitance: 1.0pF
- Extremely Low Minority Carrier Lifetime: 100ps (Max)
- High Reverse Voltage: $V_R = 50V$
- Low Reverse Leakage Current: $I_R = 200nA$ (Max)

Absolute Maximum Ratings: ($T_J = +125^\circ C$, unless otherwise indicated)

Reverse Voltage, V_R	50V
Forward Power Dissipation ($T_A = 25^\circ C$), P_F	400mW
Derate Above $25^\circ C$	4mW/ $^\circ C$
Operating Junction Temperature Range, T_J	-55° to $+125^\circ C$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ C$

Electrical Characteristics: ($T_A = +25^\circ C$, unless otherwise indicated)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu A$	50	–	–	V
Diode Capacitance	C_T	$V_R = 20V, f = 1MHz$	–	0.48	1.0	pF
Minority Carrier Lifetime	τ	$I_F = 5mA$, Krakauer Method	–	15	100	ps
Reverse Leakage Current	I_R	$V_R = 25V$	–	7	200	nA
Forward Voltage	V_F	$I_F = 10mA$	–	1.0	1.2	V
Case Capacitance	C_C	$f = 1MHz$	–	0.1	–	pF

