

NTE112

Silicon Small Signal Schottky Diode

Description:

The NTE112 is a metal-to-silicon junction diode in a DO35 type package primarily intended for UHF mixers and ultrafast switching applications.

Absolute Maximum Ratings:

Peak Repetitive Reverse Voltage, V_{RRM}	5V
Forward Continuous Current ($T_A = +25^\circ\text{C}$, Note 1), I_F	30mA
Surge Non-Repetitive Forward Current ($t_p \leq 1\text{s}$, Note 1), I_{FSM}	60mA
Operating Junction Temperature, T_J	+125°C
Storage Temperature Range, T_{stg}	-65° to +150°C
Thermal Resistance, Junction-to-Ambient (Note 1), R_{thJA}	400°C/W
Lead Temperature (During Soldering, 4mm from case, 10sec), T_L	+230°C

Note 1. On infinite heatsink with 4mm lead length.

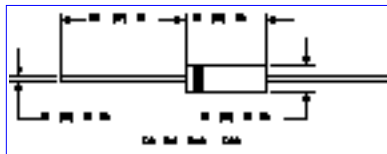
Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Breakdown Voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	5	-	-	V
Forward Voltage Drop	V_F	$I_F = 10\text{mA}$, Note 2	-	-	0.55	V
Reverse Current	I_R	$V_R = 1\text{V}$, Note 2	-	-	0.55	μA
Dynamic Characteristics						
Capacitance	C	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	-	1	pF
Stored Charge	Q_S	$I_F = 10\text{mA}$, Note 3	-	-	3	pC
Frequency	F	$f = 1\text{GHz}$, Note 4	-	6	7	dB

Note 2. Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

Note 3. Measured on a B-Line Electronics QS-3 stroed charge meter.

Note 4. Noise Figure Test: Diode is inserted in a tuned stripline circuit. Local oscillator frequency 1GHz. Local oscillator power 1mW. Intermediate frequency amplifier, tuned on 30MHz, has a noise figure, 1.5dB.



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