

NTE6084 Silicon Rectifier Schottky Barrier

Description:

The NTE6084 is a silicon power rectifier in a DO4 type package designed using the Schottky Barrier principle with a platinum barrier metal.

Features:

- Guardring for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature Capability
- Guaranteed Reverse Avalanche

Absolute Maximum Ratings:

Peak Repetitive Reverse Voltage, V_{RRM}	45V
Working Peak Reverse Voltage, V_{RWM}	35V
DC Blocking Voltage, V_R	45V
Average Rectified Forward Current ($V_R = 45V$, $T_C = +105^\circ C$), I_O	30A
Non-Repetitive Peak Surge Current, I_{FSM} (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz)	600A
Peak Repetitive Reverse Surge Current (2.0 μ s, 1.0kHz), I_{RRM}	2A
Voltage Rate of Change ($V_R = 45V$), dv/dt	700V/ μ s
Peak Operating Junction Temperature (Forward Current Applied), $T_{J(pk)}$	+150°C
Operating Junction Temperature Range, T_J	-55° to +150°C
Storage Temperature Range, T_{stg}	-55° to +150°C
Maximum Thermal Resistance, Junction-to-Case, R_{thJC}	2.0°C/W

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum Instantaneous Forward Voltage	V_F	$i_F = 30A$, $T_C = +125^\circ C$, Note 1	—	—	0.55	V
Maximum Instantaneous Reverse Current	i_R	$V_R = 35V$, $T_C = +125^\circ C$, Note 1	—	—	125	mA
Capacitance	C_t	$V_R = 5V$, $100kHz \leq f \leq 1MHz$	—	—	2000	pF

Note 1. Pulse Test: Pulse Width = 300 μ s, Duty Cycle $\leq$ 2%.

