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NTE6080 Silicon Schottky Barrier Rectifier

Description:

The NTE6080 is a silicon switchmode power rectifier using the Schottky Barrier principle with a platinum barrier metal.

Features:

- Guard-Ring for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Low Power Loss/High Efficiency
- High Surge Capacity
- Low Stored Charge Majority Carrier Conduction

Absolute Maximum Ratings:

Peak Repetitive Reverse Voltage, V_{RRM}	60V
Working Peak Reverse Voltage, V_{RWM}	60V
DC Blocking Voltage, V_R	60V
Average Rectified Forward Current ($V_R = 60V$, $T_C = +133^\circ C$), $I_{F(AV)}$	10A
Peak Repetitive Forward Current ($V_R = 60V$, Square Wave, 20kHz, $T_C = +133^\circ C$), I_{FRM}	20A
Non-Repetitive Peak Surge Current, I_{FSM} (Surge applied at rated load conditions halfwave, single phase, 60Hz)	150A
Peak Repetitive Reverse Surge Current (2.0 μs , 1.0kHz), I_{RRM}	500mA
Operating Junction Temperature Range, T_J	-65° to +150°C
Storage Temperature Range, T_{stg}	-65° to +175°C
Voltage Rate of Change ($V_R = 60V$), dv/dt	1000V/ μs
Maximum Thermal Resistance, Junction-to-Case, R_{thJC}	2.0°/W
Maximum Thermal Resistance, Junction-to-Ambient, R_{thJA}	60°/W

Electrical Characteristics: (Note 1)

Maximum Instantaneous Forward Voltage, v_F

$i_F = 10A$	
$T_C = +125^{\circ}C$	0.7V
$T_C = +25^{\circ}C$	0.8V
$i_F = 20A$	
$T_C = +125^{\circ}C$	0.85V
$T_C = +25^{\circ}C$	0.95V

Maximum Instantaneous Reverse Current (Rated DC Voltage), i_R

$T_C = +125^{\circ}C$	150mA
$T_C = +25^{\circ}C$	0.15mA

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

