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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°C), $I_{F(AV)}$ 10A
Peak Repetitive Forward Current (V_R = 60V, Square Wave, 20kHz, T_C = +133°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 (2.0μs, 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°C 0.7V

T_C = +25°C 0.8V

i_F = 20A

T_C = +125°C 0.85V

T_C = +25°C 0.95V

Maximum Instantaneous Reverse Current (Rated DC Voltage), i_R

T_C = +125°C 150mA

T_C = +25°C 0.15mA

Note 1. Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2%.

