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NTE6088 Silicon Dual Schottky Rectifier

Description:

The NTE6086 is a silicon dual power rectifier in a TO220 type package designed using the Schottky Barrier principle with a platinum barrier metal.

Features:

- 20 Amps Total (10 Amps Pre Diode Leg)
- Guarding for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche

Absolute Maximum Ratings (Per Diode Leg):

| | |
|--|----------------|
| Peak Repetitive Reverse Voltage, V_{RRM} | 100V |
| Working Peak Reverse Voltage, V_{RWM} | 100V |
| DC Blocking Voltage, V_R | 100V |
| Average Rectified Forward Current ($V_R = 100V$, $T_C = +133^\circ C$), $I_{F(AV)}$ | 10A |
| Peak Repetitive Forward Current ($V_R = 100V$, 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 Current (2 μ s, 1kHz), I_{RRM} | 0.5A |
| Operating Junction Temperature Range, T_J | -65° to +150°C |
| Storage Temperature Range, T_{stg} | -65° to +175°C |
| Voltage Rate of Change ($V_R = 100V$), dv/dt | 1000V/ μ s |
| Thermal Resistance, Junction-to-Case, R_{thJC} | 2°C/W |
| Thermal Resistance, Junction-to-Ambient, R_{thJA} | 60°C/W |

Electrical Characteristics (Per Diode Leg): (Note 1)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------|--------|-------------------------------------|-----|-----|------|------|
| Instantaneous Forward Voltage | v_F | $i_F = 10A$, $T_C = +125^\circ C$ | - | - | 0.70 | V |
| | | $i_F = 10A$, $T_C = +25^\circ C$ | - | - | 0.80 | V |
| | | $i_F = 20A$, $T_C = +125^\circ C$ | - | - | 0.85 | V |
| | | $i_F = 20A$, $T_C = +25^\circ C$ | - | - | 0.95 | V |
| Instantaneous Reverse Current | i_R | $V_R = 100V$, $T_C = +125^\circ C$ | - | - | 150 | mA |
| | | $V_R = 100V$, $T_C = +25^\circ C$ | - | - | 0.15 | mA |

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

