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NTE644 & NTE645 Silicon Rectifier Fast Recovery, Dual, Common Anode TO220 Type Package

Description:

The NTE644 and NTE645 are dual, fast recovery, common anode silicon rectifiers in a TO220 type package designed for special applications such as DC power supplies, inverters, converters, ultra-sonic systems, choppers and low RF interference.

Features:

- Low Forward Voltage
- High Current Capability
- Fast Switching for High Efficiency
- High Surge Capacity
- Glass Passivated Chip Junction

Absolute Maximum Ratings:

| | |
|--|-------------------------------------|
| Peak Repetitive Reverse Voltage, V_{RRM} | |
| NTE644 | 400V |
| NTE645 | 600V |
| Working Peak Reverse Voltage, V_{RWM} | |
| NTE644 | 400V |
| NTE645 | 600V |
| DC Blocking Voltage, V_R | |
| NTE644 | 400V |
| NTE645 | 600V |
| RMS Reverse Voltage, $V_{R(RMS)}$ | |
| NTE629 | 140V |
| NTE630 | 420V |
| Average Rectifier Forward Current (Rated V_R , $T_C = +150^\circ\text{C}$), $I_{F(AV)}$ | |
| Per Diode | 8A |
| Total Device | 16A |
| Non-Repertitive Peak Surge Current, I_{FSM} | |
| (8.3ms Single Half Sine-Wave Superimposed on Rated Load) | 250A |
| Operating Junction Temperature Range (Reverse Voltage Applied), T_J | -65° to $+175^\circ\text{C}$ |
| Storage Temperature Range (Reverse Voltage Applied), T_{stg} | -65° to $+175^\circ\text{C}$ |

Electrical Characteristics:

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------------|----------|--|--------|-----|-----|------------|
| Instantaneous Forward Voltage | V_F | $I_F = 8A$ | - | - | 1.3 | V |
| Instantaneous Reverse Current | I_R | At Rated V_R , $T_C = +25^\circ C$ | - | - | 10 | $^\circ A$ |
| | | At Rated V_R , $T_C = +100^\circ C$ | - | - | 250 | $^\circ A$ |
| Junction Capacitance | C_P | Note 1 | - | 50 | - | pF |
| Reverse Recovery Time NTE644 | t_{rr} | $I_F = 0.5A, I_R = 1A, i_{rr} = 0.25A$ | - | - | 150 | ns |
| | | | NTE645 | - | - | 250 |

Note 1. Measured at 1MHz and applied reverse voltage of 4V.

