



ELECTRONICS, INC.

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(973) 748-5089

NTE6246 & NTE6247 Ultrafast Switchmode Power Rectifier, 30 Amp

Features:

- Low Forward Drop
- Current Derating Specified at both Case and Ambient Temperatures

Applications:

- Switching Power Supplies
- Inverters
- For use as Free Wheeling Diodes

Absolute Maximum Ratings:

| | |
|--|-------------------------------|
| Peak Repetitive Reverse Voltage, V_{RRM} | |
| NTE6246 | 200V |
| NTE6247 | 600V |
| Working Peak Reverse Voltage, V_{RWM} | |
| NTE6246 | 200V |
| NTE6247 | 600V |
| DC Blocking Voltage, V_R | |
| NTE6246 | 200V |
| NTE6247 | 600V |
| Average Rectified Forward Current, (Rated V_R), $I_F(AV)$ | |
| Per Leg ($T_C = +150^\circ C$ (NTE6246), $T_C = +145^\circ C$ (NTE6247)) | 15A |
| Per Device ($T_C = +150^\circ C$ (NTE6246), $T_C = +145^\circ C$ (NTE6247)) | 30A |
| Peak Repetitive Forward Current, Per Leg, I_{FRM} | |
| (Rated V_R , Square Wave, 20kHz), $T_C = +150^\circ C$ (NTE6246), $T_C = +145^\circ C$ (NTE6247) . | 30A |
| Nonrepetitive Peak Surge Current, I_{FSM} | |
| (Surge applied at rated load conditions halfwave, single phase, 60Hz) Per Leg | |
| NTE6246 | 200A |
| NTE6247 | 150A |
| Operating Junction Temperature Range, T_J | -65° to $+175^\circ C$ |
| Storage Temperature Range, T_{stg} | -65° to $+175^\circ C$ |
| Maximum Thermal Resistance (Per Diode Leg) | |
| Junction-to-Case, R_{thJC} | $1.5^\circ C/W$ |
| Junction-to-Ambient, R_{thJA} | $40^\circ C/W$ |

Electrical Characteristics (Per Diode Leg):

Maximum Instantaneous Forward Voltage, v_F

($i_F = 15A$, $T_C = +150^\circ C$, Note 1)

NTE6246 0.85V

NTE6247 1.2V

($i_F = 15A$, $T_C = +25^\circ C$, Note 1)

NTE6246 1.05V

NTE6247 1.5V

Maximum Instantaneous Reverse Current, i_R

(Rated DC Voltage, $T_C = +150^\circ C$, Note 1)

NTE6246 500 μA

NTE6247 1000 μA

(Rated DC Voltage, $T_C = +25^\circ C$, Note 1) 10 μA

Maximum Reverse Recovery Time, t_{rr}

($I_F = 1A$, $di/dt = 50A/\mu s$)

NTE6246 35ns

NTE6247 60ns

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

