ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(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 Recitifed Forward Current, (Rated V_R), $I_F(AV)$
- Per Leg (T_C = +150°C (NTE6246), T_C = +145°C (NTE6247)) 15A
- Per Device (T_C = +150°C (NTE6246), T_C = +145°C (NTE6247)) 30A

Peak Repetitive Forward Current, Per Leg, I_{FRM}
- (Rated V_R, Square Wave, 20kHz), T_C = +150°C (NTE6246), T_C = +145°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°C

Storage Temperature Range, T_{stg} . . . . . –65° to +175°C

Maximum Thermal Resistance (Per Diode Leg)
- Junction–to–Case, R_{thJC} . . . . . 1.5°C/W
- Junction–to–Ambient, R_{thJA} . . . . . 40°C/W

Electrical Characteristics (Per Diode Leg):

Maximum Instantaneous Forward Voltage, v_F

(i_F = 15A, T_C = +150°C, Note 1)

NTE6246 . . . . . 0.85V

NTE6247 . . . . . 1.2V

(i_F = 15A, T_C = +25°C, Note 1)

NTE6246 . . . . . 1.05V

NTE6247 . . . . . 1.5V

Maximum Instantaneous Reverse Current, i_R

(Rated DC Voltage, T_C = +150°C, Note 1)

NTE6246 . . . . . 500µA

NTE6247 . . . . . 1000µA

(Rated DC Voltage, T_C = +25°C, Note 1) 10µA

Maximum Reverse Recovery Time, t_{rr}

(I_F = 1A, di/dt = 50A/µs)

NTE6246 . . . . . 35ns

NTE6247 . . . . . 60ns

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

