



ELECTRONICS, INC.

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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 $\leq 2\%$.

