



**ELECTRONICS, INC.**  
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## NTE5830 thru NTE5849 Stud Mount Standard Recovery Silicon Rectifiers, 3 Amp

**Description:**

The NTE5830 through NTE5849 are silicon rectifiers in a D04 type package designed for use in power supplies and other applications having need of a device with the following features:

- High Current to Small Size
- High Surge Current Capability
- Low Forward Voltage Drop

**Absolute Maximum Ratings:**

Peak Repetitive Reverse Voltage,  $V_{RRM}$

DC Blocking Voltage,  $V_R$

NTE5830, NTE5831*	50V
NTE5832, NTE5833*	100V
NTE5834, NTE5835*	200V
NTE5836, NTE5837*	300V
NTE5838, NTE5839*	400V
NTE5840, NTE5041*	500V
NTE5842, NTE5843*	600V
NTE5846, NTE5847*	800V
NTE5848, NTE5849*	1000V

Average Rectified Forward Current,  $I_O$

1 Phase Operation, $T_C = +140^\circ\text{C}$	3.0A
1 Phase Operation, $T_C = +150^\circ\text{C}$	2.2A

Non-Repetitive Peak Surge Current,  $I_{FSM}$

(Surge Applied at Rated Load Conditions, 60Hz Half Sine Wave) . . . . . 40A

Operating Junction Temperature Range,  $T_J$  . . . . .  $-65^\circ$  to  $+175^\circ\text{C}$

Storage Junction Temperature Range,  $T_{stg}$  . . . . .  $-65^\circ$  to  $+175^\circ\text{C}$

Thermal Resistance, Junction-to-Case (DC Operation),  $R_{thJC}$  . . . . .  $+5^\circ\text{C/W}$

Thermal Resistance, Case-to-Sink,  $R_{thCS}$

(Mounting Surface Flat, Smooth, and Greased) . . . . .  $0.50^\circ\text{C/W}$

Mounting Torque (Non-Lubricated Threads)

Minimum . . . . .	12 in. lb.
Maximum . . . . .	15 in. lb.

Note 1. Cathode to case is standard polarity, (\*) indicates anode to case polarity.

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Forward Voltage Drop	$V_{FM}$	$I_O = 3A$ (9.4A Peak), $T_C = +25^\circ C$	-	-	1.2	V
Average Reverse Current	$I_{R(AV)}$	$I_O = 3A$ , $V_{RRM} = \text{Max Rated}$ , $T_C = +140^\circ C$	-	-	300	$\mu A$
DC Reverse Current	$I_R$	$T_C = +25^\circ C$	-	-	10	$\mu A$
		$T_C = +150^\circ C$			500	$\mu A$
Operating Frequency			-	-	50	kHz

