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NTE5830 thru NTE5849 Stud Mount Standard Recovery Silicon Rectifiers, 3 Amp, DO4

Description:

The NTE5830 through NTE5849 are silicon rectifiers in a DO4 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° to $+175^\circ\text{C}$

Storage Junction Temperature Range, T_{stg} -65° 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°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	μA
DC Reverse Current	I_R	$T_C = +25^\circ C$	-	-	10	μA
		$T_C = +150^\circ C$			500	μA
Operating Frequency			-	-	50	kHz

