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NTE6086 Silicon Dual Schottky Rectifier

Description:

The NTE6086 is a silicon dual power rectifier in a TO220 type package designed using the Schottky Barrier principle with a platinum barrier metal.

Features:

- 20 Amps Total (10 Amps Pre Diode Leg)
- Guarding for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche

Absolute Maximum Ratings (Per Diode Leg):

Peak Repetitive Reverse Voltage, V_{RRM}	100V
Working Peak Reverse Voltage, V_{RWM}	100V
DC Blocking Voltage, V_R	100V
Average Rectified Forward Current ($V_R = 100V$, $T_C = +133^\circ C$), $I_{F(AV)}$	10A
Peak Repetitive Forward Current ($V_R = 100V$, Square Wave, 20kHz, $T_C = +133^\circ C$), I_{FRM}	20A
Non-Repetitive Peak Surge Current, I_{FSM} (Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60Hz)	150A
Peak Repetitive Reverse Current (2 μ s, 1kHz), I_{RRM}	0.5A
Operating Junction Temperature Range, T_J	-65° to +150°C
Storage Temperature Range, T_{stg}	-65° to +175°C
Voltage Rate of Change ($V_R = 100V$), dv/dt	1000V/ μ s
Thermal Resistance, Junction-to-Case, R_{thJC}	2°C/W
Thermal Resistance, Junction-to-Ambient, R_{thJA}	60°C/W

Electrical Characteristics (Per Diode Leg): (Note 1)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Instantaneous Forward Voltage	v_F	$i_F = 10A$, $T_C = +125^\circ C$	-	-	0.70	V
		$i_F = 10A$, $T_C = +25^\circ C$	-	-	0.80	V
		$i_F = 20A$, $T_C = +125^\circ C$	-	-	0.85	V
		$i_F = 20A$, $T_C = +25^\circ C$	-	-	0.95	V
Instantaneous Reverse Current	i_R	$V_R = 100V$, $T_C = +125^\circ C$	-	-	150	mA
		$V_R = 100V$, $T_C = +25^\circ C$	-	-	0.15	mA

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

