



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>

## NTE6086 Silicon Dual Schottky Rectifier 100V, 10 Amp, TO220

### **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 $\mu$ 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/ $\mu$ 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 $\mu$ s, Duty Cycle  $\leq$  2%.

