



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

## NTE6080 Silicon Schottky Barrier Rectifier 60V, 10 Amp, 2-Lead TO220

**Description:**

The NTE6080 is a silicon switchmode power rectifier using the Schottky Barrier principle with a platinum barrier metal.

**Features:**

- Guard-Ring for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Low Power Loss/High Efficiency
- High Surge Capacity
- Low Stored Charge Majority Carrier Conduction

**Absolute Maximum Ratings:**

Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	60V
Working Peak Reverse Voltage, $V_{RWM}$ .....	60V
DC Blocking Voltage, $V_R$ .....	60V
Average Rectified Forward Current ( $V_R = 60V$ , $T_C = +133^\circ C$ ), $I_{F(AV)}$ .....	10A
Peak Repetitive Forward Current ( $V_R = 60V$ , 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 Surge Current (2.0 $\mu$ s, 1.0kHz), $I_{RRM}$ .....	500mA
Operating Junction Temperature Range, $T_J$ .....	-65° to +150°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +175°C
Voltage Rate of Change ( $V_R = 60V$ ), $dv/dt$ .....	1000V/ $\mu$ s
Maximum Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	2.0°/W
Maximum Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	60°/W

**Electrical Characteristics:** (Note 1)

Maximum Instantaneous Forward Voltage,  $v_F$

$i_F = 10A$

$T_C = +125^\circ C$  ..... 0.7V

$T_C = +25^\circ C$  ..... 0.8V

$i_F = 20A$

$T_C = +125^\circ C$  ..... 0.85V

$T_C = +25^\circ C$  ..... 0.95V

Maximum Instantaneous Reverse Current (Rated DC Voltage),  $i_R$

$T_C = +125^\circ C$  ..... 150mA

$T_C = +25^\circ C$  ..... 0.15mA

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

