



**ELECTRONICS, INC.**  
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## NTE6083 Schottky Barrier Rectifier

**Features:**

- Low Power Loss, High Efficiency
- High Current Capability, Low  $V_F$
- High Surge Capacity

**Applications:**

- Low Voltage, High Frequency Inverters
- Free Wheeling Applications
- Polarity Protection Applications

**Maximum Ratings and Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified. Resistive or Inductive load. For capacitive load, derate current by 20%)

Maximum Recurrent Peak Reverse Voltage, $V_{RRM}$ .....	45V
Working Peak Reverse Voltage, $V_{RWM}$ .....	45V
DC Blocking Voltage, $V_{DC}$ .....	45V
Maximum Average Forward Rectified Current, $I_O$ (AV) .....	10A
Peak Repetitive Forward Current, $I_{FSM}$ (Square Wave 20kHz, $T_C = +135^\circ\text{C}$ ) .....	20A
Peak Forward Surge Current, $I_{FSM}$ (8.3ms single half sine-wave superimposed on rated load) .....	150A
Peak Repetitive Reverse Surge Current (2.0 $\mu\text{s}$ , 1kHz), $I_{RSM}$ .....	1A
Voltage Rate of Change, $dv/dt$ (Rated $V_R$ ), $dv/dt$ .....	1000V/ $\mu\text{s}$
Maximum Forward Voltage (Note 1), $V_F$	
( $I_F = 10\text{A}$ , $T_C = +125^\circ\text{C}$ ) .....	0.57V
( $I_F = 20\text{A}$ , $T_C = +125^\circ\text{C}$ ) .....	0.72V
( $I_F = 20\text{A}$ , $T_C = +25^\circ\text{C}$ ) .....	0.84V
Maximum Instantaneous Reverse Current, $I_R$ (at Peak Reverse Voltage, $T_C = +125^\circ\text{C}$ , Note 1) .....	15mA
Maximum Instantaneous Reverse Current, $I_R$ (at Peak Reverse Voltage, $T_C = +25^\circ\text{C}$ ) .....	0.1mA
Maximum Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	2 $^\circ\text{C}/\text{W}$
Maximum Operating Junction Temperature, $T_J$ .....	-65 $^\circ$ to +150 $^\circ\text{C}$
Maximum Storage Temperature, $T_{stg}$ .....	-65 $^\circ$ to +175 $^\circ\text{C}$

Note 1. Pulse Test: Pulse Width 300 $\mu\text{s}$ , Duty Cycle 2%

