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## NTE6013 Silicon Industrial Rectifier 20 Amp

### **Description:**

The NTE6013 is a 20 Ampere (RMS) silicon rectifier in an electrically isolated TO220 type package with a voltage rating of 600V for use in common anode or common cathode circuits. This device features a glass-passivated junction to ensure long term reliability and stability. In addition, glass offers a rugged, reliable barrier against junction contamination.

### **Features:**

- Electrically-Isolated Package
- High Voltage Capabilities:  $V_{RRM} = 600V$
- High Surge Capabilities (Up to 300 Amps)
- Glass-Passivated Junction

### **Electrical Specifications:** (Note 1)

Minimum Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	600V
Minimum DC Blocking Voltage, $V_R$ .....	600V
Maximum Average Forward Current, $I_{F(AV)}$ .....	12.7A
Maximum RMS Forward Current, $I_{F(RMS)}$ .....	20A
Peak One Cycle Surge Current, $I_{FSM}$	
60Hz .....	300A
50Hz .....	255A
Maximum Peak Reverse Current, $I_{RM}$	
$T_C = +25^\circ C$ .....	0.1mA
$T_C = +100^\circ C$ .....	0.5mA
$T_C = +125^\circ C$ .....	1.0mA
Maximum Peak Forward Voltage ( $V_{RRM} = 600V$ , $T_C = +25^\circ C$ ), $V_{FM}$ .....	1.6V
RMS Surge (Non-Repetitive) Forward Current for 8.3mS for Fusing, $I^2t$ .....	374A <sup>2</sup> Sec
Operating Temperature Range, $T_{opr}$ .....	-40° to +125°C
Storage Temperature Range, $T_{stg}$ .....	-40° to +125°C
Lead Temperature (During Soldering, 1/16" from case for 10sec), $T_L$ .....	+230°C
Typical Thermal Resistance (Steady State), Junction-to-Case, $R_{thJC}$ .....	2.5°C/W

Note 1.  $T_C = T_J$  for test conditions.

Note 2. Electrically isolated TO220 devices will withstand a high potential test of 2500VAC RMS from leads to case over the operating temperature range.

