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NTE6083

Schottky Barrier Rectifier

45V, 10 Amp, 2-Lead TO220

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 μ s, 1kHz), I_{RSM}	1A
Voltage Rate of Change, dv/dt (Rated V_R), dv/dt	1000V/ μ 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°C/W
Maximum Operating Junction Temperature, T_J	-65° to +150°C
Maximum Storage Temperature, T_{stg}	-65° to +175°C

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

