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NTE589 Silicon Rectifier General Purpose, Fast Recovery

Features:

- High Surge Current Capability
- High Current Operation
- Fast Switching for High Efficiency

Maximum Ratings and Electrical Characteristics: ($T_A = +25^\circ\text{C}$, Note 1 unless otherwise specified)

Maximum Recurrent Peak Reverse Voltage, V_{RRM}	400V
Maximum RMS Voltage, V_{RMS}	280V
Maximum DC Blocking Voltage, V_{DC}	400V
Maximum Average Forward Rectified Current ($T_A = +55^\circ\text{C}$, .375" lead length), $I_{F(AV)}$	6A
Peak Forward Surge Current, I_{FSM} (8.3ms single half sine-wave superimposed on rated load)	300A
Maximum Instantaneous Forward Voltage ($I_F = 6\text{A}$), V_F	1.3V
Maximum DC Reverse Current ($V_{DC} = 400\text{V}$), I_R	
$T_A = +25^\circ\text{C}$	10 μA
$T_A = +100^\circ\text{C}$	1.0mA
Maximum Reverse Recovery Time ($T_J = +25^\circ\text{C}$, Note 2), t_{rr}	150ns
Typical Junction Capacitance ($T_J = +25^\circ\text{C}$, Note 3), C_J	300pF
Typical Thermal Resistance, Junction-to-Ambient (Note 4), R_{thJA}	10 $^\circ\text{C/W}$
Operating Junction Temperature Range, T_J	-50 $^\circ$ to +125 $^\circ\text{C}$
Storage Temperature Range, T_{stg}	-50 $^\circ$ to +150 $^\circ\text{C}$

Note 1. Resistive or inductive load. For capacitive load, derate current by 20%.

Note 2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.

Note 3. Measured at 1MHz and applied reverse voltage of 4 volts.

Note 4. Thermal Resistance from Junction to Ambient at .375" (9.5mm) lead lengths, with both leads to heat sink.

