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

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°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°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 = 6A), V_F 1.3V
Maximum DC Reverse Current (V_{DC} = 400V), I_R
T_A = +25°C 10μA
T_A = +100°C 1.0mA
Maximum Reverse Recovery Time (T_J = +25°C, Note 2), t_{rr} 150ns
Typical Junction Capacitance (T_J = +25°C, Note 3), C_J 300pF
Typical Thermal Resistance, Junction–to–Ambient (Note 4), R_{thJA} . . . . . 10°C/W
Operating Junction Temperature Range, T_J . . . . . –50° to +125°C
Storage Temperature Range, T_{stg} . . . . . –50° to +150°C

Note 1. Resistive or inductive load. For capacitive load, derate current by 20%.
Note 2. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.
Note 3. Measured at 1MHz and applied reverse voltage of 4 volts.
Note 4. Thermal Resistance from Junction to Ambient at .376" (9.5mm) lead lengths, with both leads to heat sink.