NTE ELECTRONICS, INC.

NTE5580 thru NTE5585
Silicon Controlled Rectifier
for Phase Control Applications

Features:
- Center Fired Gate
- All Diffused Design
- Low Gate Current
- Low Thermal Impedance
- High Surge

Electrical Characteristics:

Repetitive Peak Off−State and Reverse Voltage, V_{DRM} & V_{RRM}
- NTE5580 . . . . . 200V
- NTE5582 . . . . . 600V
- NTE5584 . . . . . 1200V
- NTE5585 . . . . . 1600V

Maximum RMS On−State Current, $I_{T(RMS)}$ 275A

Maximum Average On−State Current, $I_{T(AV)}$
- T_C = +88°C, 180° conduction 150A
- T_C = +80°C, 3 phase conduction 135A

Maximum Peak One−Cycle, Non−Repetitive Surge Current, I_{TSM}
- 50Hz 3200A
- 60Hz 3500A

Maximum I^2t for Fusing (1.5msec), I^2t . . . . . 32,000A^2sec

Peak On−State Voltage (T_J = +25°C, 180° conduction, Rated $I_{T(AV)}$), V_{TM} 1.7V

Maximum Thermal Resistance, Junction−to−Case, R_{thJC} . . . . . 0.14°C/W

Typical Turn−Off Time (T_J = 125°C), t_q 250µs

Rate−of−Rise of Turned−On Current, di/dt 200A/µs

Operating Junction Temperature Range, T_J . . . . . −40° to +125°C

Maximum Reverse Recovered Charge (T_J = +25°C), Q_{RR} 200µc

Maximum Critical Rate−of−Rise of Off−State Voltage, dV/dt
- Exponential @ Max. Rated T_J 200V/µs

Maximum Required Gate Current to Trigger, I_{GT}
- T_J = −40°C 200mA
- T_J = +25°C 150mA

Maximum Required Gate Voltage to Trigger (T_J = −40° to +125°C), V_{GT} 3V

Peak On−State Voltage, V_F . . . . . Note 1

Maximum Stud Torque . . . . . 300 In−Lbs (33.9 N−M)

Note 1. $V_F = A + B \bullet L_N(I) + C \bullet I + D\sqrt{I}$

Where: I_{MIN} = 10A
I_{MAX} = 3000A
A = .523
B = .022
C = .0005
D = .038