



ELECTRONICS, INC.
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NTE5580 thru NTE5585 Silicon Controlled Rectifier (SCR) 275 Amp, TO93

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, $I_{T(AV)}$	
$T_C = +88^\circ\text{C}$, 180° conduction	150A
$T_C = +80^\circ\text{C}$, 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 ² sec
Peak On-State Voltage ($T_J = +25^\circ\text{C}$, 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 ($T_J = 125^\circ\text{C}$), 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 ($T_J = +25^\circ\text{C}$), 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}	
$T_J = -40^\circ\text{C}$	200mA
$T_J = +25^\circ\text{C}$	150mA
Maximum Required Gate Voltage to Trigger ($T_J = -40^\circ$ to $+125^\circ\text{C}$), V_{GT}	3V
Peak On-State Voltage, V_F	Note 1
Maximum Stud Torque	300 In-Lbs (33.9 N-M)

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

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

