ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE5517 thru NTE5519
Silicon Controlled Rectifier (SCR)

Absolute Maximum Ratings:

Repetitive Peak Off–State Voltage (T_J = +100°C), V_{DRM}
- NTE5517 . . . . . 200V
- NTE5518 . . . . . 400V
- NTE5519 . . . . . 600V

Repetitive Peak Reverse Voltage (T_J = +100°C), V_{RRM}
- NTE5517 . . . . . 200V
- NTE5518 . . . . . 400V
- NTE5519 . . . . . 600V

RMS On–State Current (T_C = +75°C), $I_{T(RMS)}$ 35A

Peak Surge (Non–Repetitive) On–State Current (One Cycle, 50Hz or 60Hz), I_{TSM} 350A

Peak Gate–Trigger Current (3µs Max), I_{GTM} 20A

Peak Gate–Power Dissipation ($I_{GT} \le I_{GTM}$ for 3µs Max), P_{GM} 20W

Average Gate–Power Dissipation, $P_{G(AV)}$ 0.5W

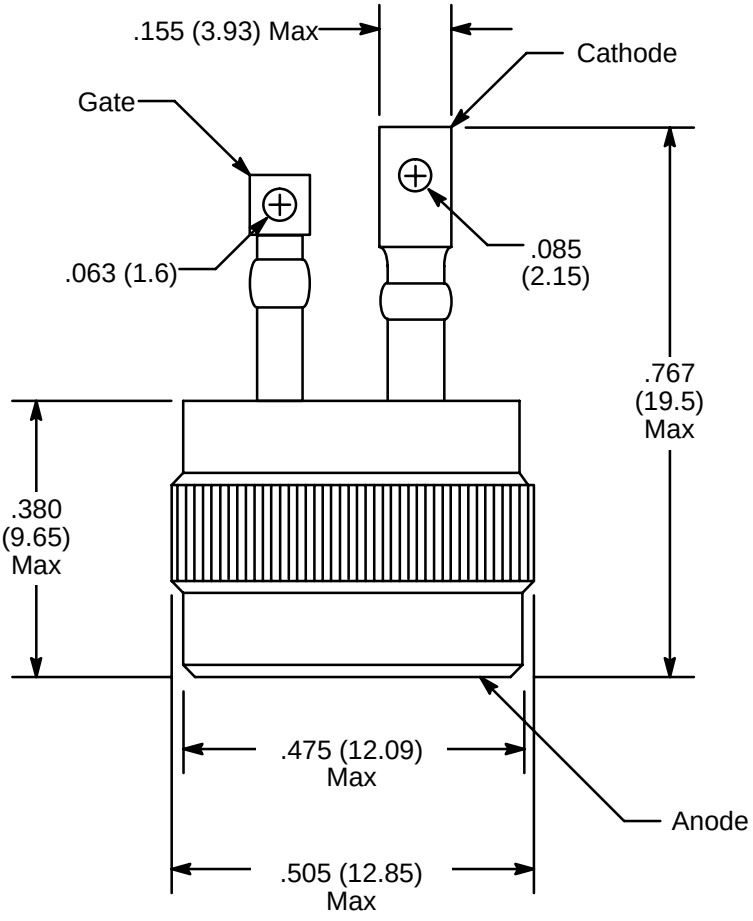
Operating Temperatue Range, T_{opr} . . . . . –40° to +150°C

Storage Temperature Range, T_{stg} . . . . . –40° to +100°C

Typical Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.9°C/W

Electrical Characteristics: (At Maximum Ratings and Specified Case Temperatures)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off–State Current	I_{DRM}, I_{RRM}	T_J = +100°C, Gate Open, V_{DRM} and V_{RRM} = Max. Rating	–	–	2.0	mA
Maximum On–State Voltage (Peak)	V_{TM}	T_C = +25°C	–	–	1.6	V
Peak On–State Current	I_{TM}		–	–	70	A
DC Holding Current	I_H	T_C = +25°C, Gate Open	–	–	50	mA
DC Gate–Trigger Current	I_{GT}	Anode Voltage = 12V, R_L = 30Ω, T_C = +25°C	–	–	25	mA
DC Gate–Trigger Voltage	V_{GT}	Anode Voltage = 12V, R_L = 30Ω, T_C = +25°C	–	–	2.0	V
Gate Controlled Turn–On Time	t_{gt}	$t_d + t_r$, I_{GT} = 150mA	–	2.5	–	µs
Critical Rate–of–Rise of Off–State Voltage	Critical dv/dt	T_C = +100°C, Gate Open	–	100	–	V/µs


.155 (3.93) Max
Cathode
Gate
.063 (1.6)
.085
(2.15)
.767
(19.5)
Max
.380
(9.65)
Max
.475 (12.09)
Max
Anode
.505 (12.85)
Max