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

# NTE5427 thru NTE5429
# Silicon Controlled Rectifier (SCR)
# 7 Amp

**Absolute Maximum Ratings:**

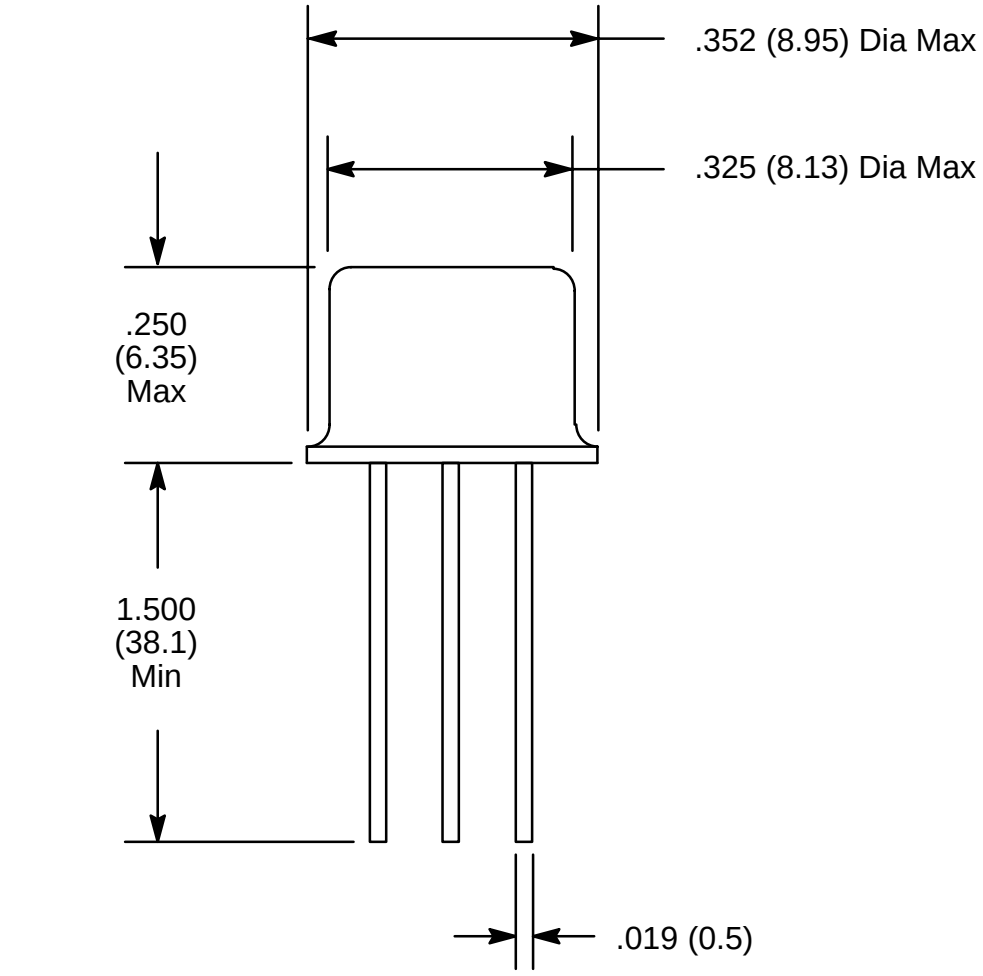
Repetitive Peak Reverse Voltage ($T_C$ = +110°C), $V_{RRM}$
- NTE5427 . . . . . 200V
- NTE5428 . . . . . 400V
- NTE5429 . . . . . 600V

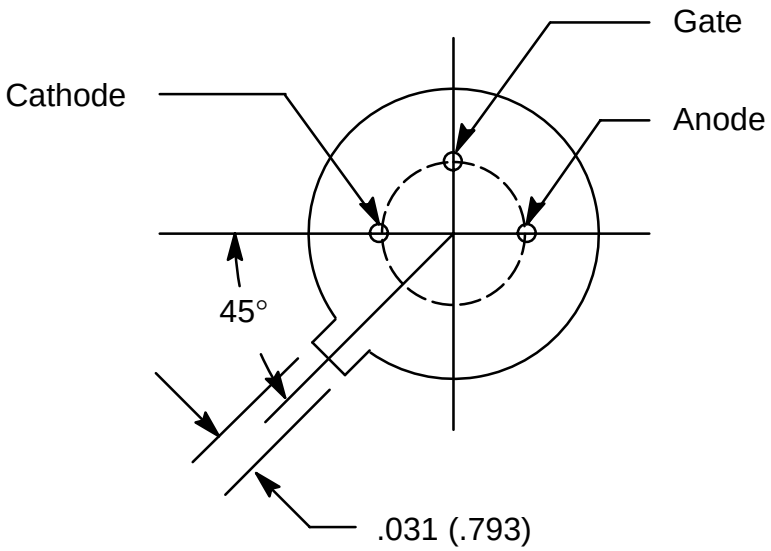
Repetitive Peak Off–State Voltage ($T_C$ = +110°C), $V_{DRM}$
- NTE5427 . . . . . 200V
- NTE5428 . . . . . 400V
- NTE5429 . . . . . 600V

RMS On–State Current ($T_C$ = +80°C, Conduction Angle of 180°), $I_{T(RMS)}$ . . . . . 7A
Peak Surge (Non–Repetitive) On–State Current (One Cycle at 50 or 60Hz), $I_{TSM}$ . . . . . 80A
Peak Gate–Trigger Current (3μs Max), $I_{GTM}$ . . . . . 1A
Peak Gate–Power Dissipation ($I_{GT} \le I_{GTM}$), $P_{GM}$ . . . . . 20W
Average Gate Power Dissipation, $P_{G(AV)}$ . . . . . 500mW
Operating Temperature Range, $T_{opr}$ . . . . . –40° to +110°C
Storage Temperature Range, $T_{stg}$ . . . . . –40° to +150°C
Typical Thermal Resistance, Junction–to–Case, $R_{thJC}$ . . . . . 2.5°C/W

**Electrical Characteristics:** ($T_C$ = +25°C unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Peak Off–State Current | $I_{RRM}$ | $V_{RRM}$ = Max, $V_{DRM}$ = Max, $T_C$ = +110°C, $R_{GK}$ = 1kΩ | – | – | 1 | mA |
| | $I_{DRM}$ | | – | – | 1 | mA |
| Maximum On–State Voltage | $V_{TM}$ | $I_T$ = 7A | – | – | 2 | V |
| DC Holding Current | $I_{HOLD}$ | | – | – | 50 | mA |
| DC Gate–Trigger Current | $I_{GT}$ | $V_D$ = 6VDC, $R_L$ = 100Ω | – | – | 25 | mA |
| DC Gate–Trigger Voltage | $V_{GT}$ | $V_D$ = 6VDC, $R_L$ = 100Ω | – | – | 1.5 | V |
| Gate Controlled Turn–On Time | $t_{gt}$ | $I_G$ x $3_{GT}$ | – | 2 | – | μs |
| $I^2t$ for Fusing Reference | $I^2t$ | For SCR Protection | – | – | 2.6 | $A^2$sec |
| Critical Rate of Off–State Voltage | dv/dt (critical) | Gate Open, $T_C$ = +100°C | – | 100 | – | V/μs |


.352 (8.95) Dia Max
.325 (8.13) Dia Max
.250
(6.35)
Max
1.500
(38.1)
Min
.019 (0.5)


Gate
Cathode
Anode
45°
.031 (.793)