



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
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NTE5517 thru NTE5519 Silicon Controlled Rectifier (SCR)

Absolute Maximum Ratings:

| | |
|--|------|
| Repetitive Peak Off-State Voltage ($T_J = +100^\circ\text{C}$), V_{DRM} | |
| NTE5517 | 200V |
| NTE5518 | 400V |
| NTE5519 | 600V |
| Repetitive Peak Reverse Voltage ($T_J = +100^\circ\text{C}$), V_{RRM} | |
| NTE5517 | 200V |
| NTE5518 | 400V |
| NTE5519 | 600V |
| RMS On-State Current ($T_C = +75^\circ\text{C}$), $I_{\text{T(RMS)}}$ | |
| 35A | |
| Peak Surge (Non-Repetitive) On-State Current (One Cycle, 50Hz or 60Hz), I_{TSM} | |
| 350A | |
| Peak Gate-Trigger Current ($3\mu\text{s}$ Max), I_{GTM} | |
| 20A | |
| Peak Gate-Power Dissipation ($I_{\text{GT}} \leq I_{\text{GTM}}$ for $3\mu\text{s}$ Max), P_{GM} | |
| 20W | |
| Average Gate-Power Dissipation, $P_{\text{G(AV)}}$ | |
| 0.5W | |
| Operating Temperature Range, T_{opr} | |
| -40° to $+150^\circ\text{C}$ | |
| Storage Temperature Range, T_{stg} | |
| -40° to $+100^\circ\text{C}$ | |
| 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} | $T_J = +100^\circ\text{C}$, Gate Open, V_{DRM} and $V_{\text{RRM}} = \text{Max. Rating}$ | - | - | 2.0 | mA |
| Maximum On-State Voltage (Peak) | V_{TM} | $T_C = +25^\circ\text{C}$ | - | - | 1.6 | V |
| Peak On-State Current | I_{TM} | | - | - | 70 | A |
| DC Holding Current | I_{H} | $T_C = +25^\circ\text{C}$, Gate Open | - | - | 50 | mA |
| DC Gate-Trigger Current | I_{GT} | Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^\circ\text{C}$ | - | - | 25 | mA |
| DC Gate-Trigger Voltage | V_{GT} | Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^\circ\text{C}$ | - | - | 2.0 | V |
| Gate Controlled Turn-On Time | t_{gt} | $t_d + t_r$, $I_{\text{GT}} = 150\text{mA}$ | - | 2.5 | - | μs |
| Critical Rate-of-Rise of Off-State Voltage | Critical dv/dt | $T_C = +100^\circ\text{C}$, Gate Open | - | 100 | - | $\text{V}/\mu\text{s}$ |

