

## NTE5562, NTE5564, NTE5566

### Silicon Controlled Rectifiers (SCR's)

#### **Description:**

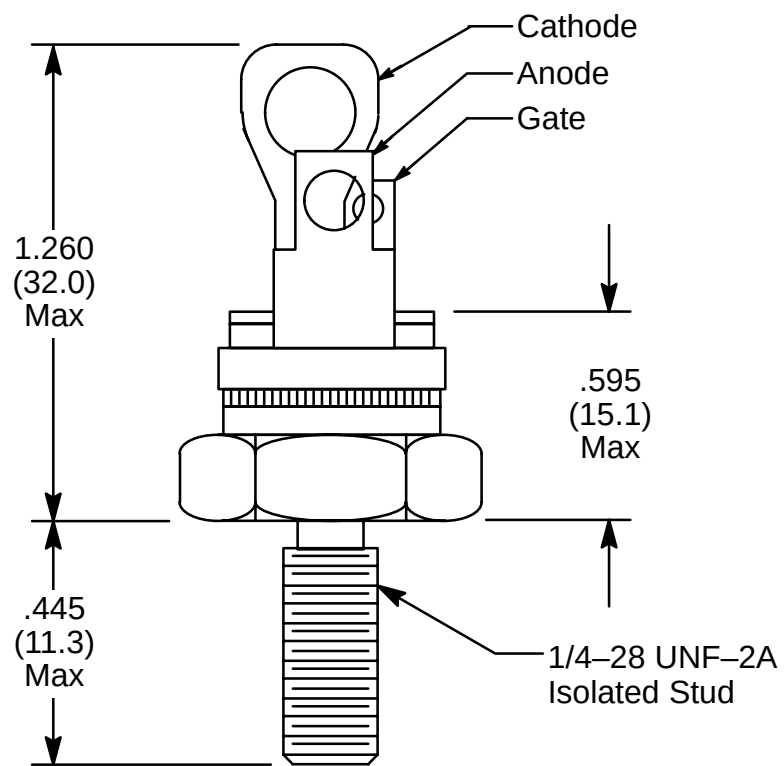
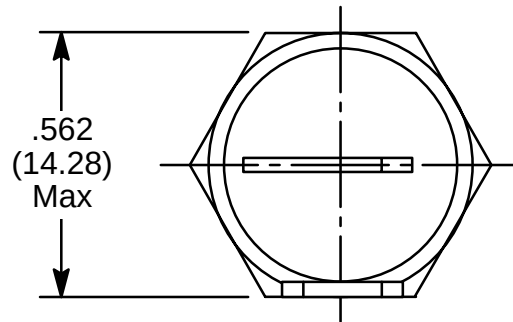
The NTE5562, NTE5564 and NTE5566 are silicon controlled rectifiers in a TO-48 isolated stud TO-48 type package designed for industrial and consumer applications such as power supplies, battery chargers, temperature, motor, light and welder controls.

#### **Absolute Maximum Ratings:**

|                                                                                                                         |       |                                     |
|-------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------|
| Repetitive Peak Off-State Voltage & Reverse Voltage ( $T_J = +100^\circ\text{C}$ ), $V_{\text{DRM}}$ , $V_{\text{RRM}}$ |       |                                     |
| NTE5562                                                                                                                 | ..... | 200                                 |
| NTE5564                                                                                                                 | ..... | 400V                                |
| NTE5566                                                                                                                 | ..... | 600V                                |
| RMS On-State Current ( $T_C = +75^\circ\text{C}$ ), $I_{\text{T(RMS)}}$                                                 |       | 35A                                 |
| Peak Surge (Non-Repetitive) On-State Current, $I_{\text{TSM}}$                                                          |       | 300A                                |
| Peak Gate-Trigger Current ( $3\mu\text{s Max}$ ), $I_{\text{GTM}}$                                                      |       | 20                                  |
| Peak Gate-Power Dissipation ( $I_{\text{GT}} \leq \text{for } 3\mu\text{s Max}$ ), $P_{\text{GM}}$                      |       | 20W                                 |
| Average Gate Power Dissipation, $P_{\text{G(AV)}}$                                                                      |       | 20W                                 |
| Operating Temperature Range, $T_{\text{oper}}$                                                                          |       | $-40^\circ$ to $+150^\circ\text{C}$ |
| Storage Temperature Range, $T_{\text{stg}}$                                                                             |       | $-40^\circ$ to $+150^\circ\text{C}$ |
| Typical Thermal Resistance, Junction-to-Case, $R_{\text{thJC}}$                                                         |       | 1.6/W                               |

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

| Parameter                                  | Symbol                                 | Test Conditions                                                             | Min | Typ | Max | Unit             |
|--------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|-----|-----|-----|------------------|
| Peak Off-State Current                     | $I_{\text{DRM}}$ ,<br>$I_{\text{RRM}}$ | $T_J = +100^\circ\text{C}$ , Gate Open, $V_{\text{DRM}}$ & $V_{\text{RRM}}$ | —   | —   | 2.0 | mA               |
| Maximum On-State Voltage (Peak)            | $V_{\text{TM}}$                        | $T_C = +25^\circ\text{C}$                                                   | —   | —   | 1.6 | V                |
| DC Holding Current                         | $I_{\text{HO}}$                        | $T_C = +25^\circ\text{C}$ , Gate Open                                       | —   | —   | 50  | mA               |
| DC Gate Trigger Current                    | $I_{\text{GT}}$                        | Anode Voltage = 12Vdc, $R_L = 30\Omega$ ,<br>$T_C = +25^\circ\text{C}$      | —   | —   | 30  | mA               |
| DC Gate Controlled Turn-On Time            | $T_{\text{GT}}$                        | $I_{\text{GT}} = 150\text{mA}$ , $t_D + t_R$                                | —   | 2.5 | —   | $\mu\text{s}$    |
| Critical Rate of Rise of Off-State Voltage | Critical<br>$dv/dt$                    | $T_C = +100^\circ\text{C}$ , Gate Open                                      | —   | 100 | —   | V/ $\mu\text{s}$ |



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Datasheets for electronics components.