# Phase Control Thyristors, 125A

## Features

- Improved glass passivation for high reliability
- Exceptional stability at high temperatures
- High di/dt and dv/dt capabilities
- Metric thread type available
- Low thermal resistance

**TO-209AC (TO-94)**

| **Voltage Ratings** ($T_J$ = 25°C, unless otherwise noted) | | | | |
|---|---|---|---|---|
| **Type number** | **Voltage Code** | **$V_{DRM}/V_{RRM}$, Maximum repetitive peak and off-state voltage (V)** | **$V_{RSM}$, Maximum non-repetitive peak voltage (V)** | **$I_{DRM}/I_{RRM}$, Maximum at $T_J$=$T_J$ Maximum (mA)** |
| 125NT | 20 | 200 | 300 | 20 |
| | 40 | 400 | 500 | |
| | 60 | 600 | 700 | |
| | 80 | 800 | 900 | |
| | 100 | 1000 | 1100 | |
| | 120 | 1200 | 1300 | |
| | 160 | 1600 | 1700 | |

| **Electrical Ratings** ($T_J$ = 25°C, unless otherwise noted) | | | | |
|---|---|---|---|---|
| **Parameters** | | **Symbol** | **Values** | **Units** |
| Maximum on-state average current | $T_J$ = 85°C | $I_{T(AV)}$ | 125 | A |
| Maximum RMS on-state current | | $I_{T(RMS)}$ | 196 | A |
| Maximum peak, one cycle non-repetitive surge current | $T_J$ = 25°C, 10 ms | $I_{TSM}$ | 3500 | A |
| | $T_J$ = 130°C, 10 ms | | 3000 | |
| Maximum $I^2t$ for fusing | $T_J$ = 25°C, 10 ms | $I^2t$ | 61250 | $A^2s$ |
| | $T_J$ = 130°C, 10 ms | | 45000 | |
| Maximum peak on-state voltage | $T_J$ = 25°C | $V_{TM}$ | 1.9 | V |
| Maximum holding current | $T_J$ = 25°C | $I_H$ | 200 | mA |
| Maximum latching current | $T_J$ = 25°C | $I_L$ | 400 | mA |
| Maximum rate of rise of turn-on current | $T_J$ = $T_J$ max. | di/dt | 150 | A/µs |
| Maximum critical rate of rise of off-state voltage | $T_J$ = $T_J$ max. | dv/dt | 500 | V/µs |
| Maximum gate current required to trigger | $T_J$ = 25°C | $I_{GT}$ | 200 | mA |
| Maximum gate voltage required to trigger | $T_J$ = 25°C | $V_{GT}$ | 3 | V |

| **Thermal and Mechanical Specifications** ($T_J$ = 25°C, unless otherwise noted) | | | |
|---|---|---|---|
| **Parameters** | **Symbol** | **Values** | **Units** |
| Maximum operating junction temperature range | $T_J$ | - 40 to +130 | °C |
| Maximum storage temperature range | $T_{Stg}$ | - 50 to +150 | °C |
| Maximum thermal resistance, junction to case | $R_{th(JC)}$ | 0.18 | °C/W |
| Mounting torque | F | 25 | Nm |
| Approximate weight | W | 250 | g |


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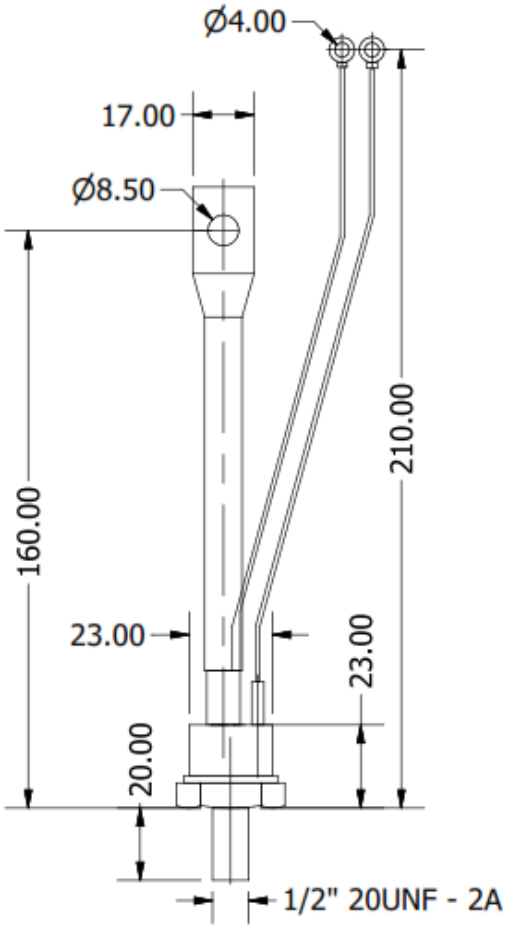
## Package Outline

*(All dimensions in mm)*




## Ordering Table

| *125* | *NT* | *120* |
|---|---|---|
| **1** | 2 | 3 |

1 – Current Rating = $I_{F\ (AV)}$
2 – Phase Controlled Thyristor (SCR)
3 – Voltage x 10 = $V_{RRM}$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