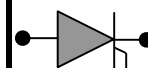


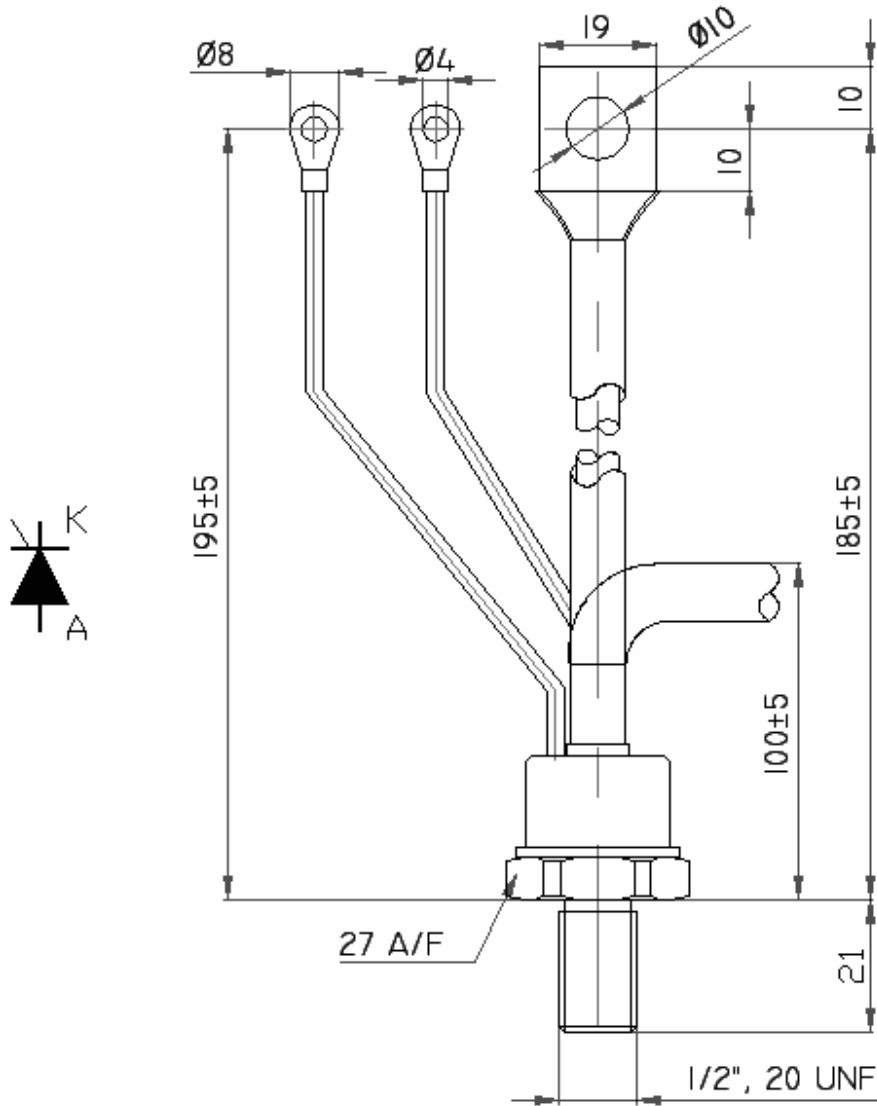
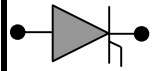
# PHASE CONTROL THYRISTOR H125TBXX



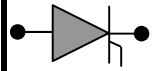
| Symbol                                     | Characteristics                             | Conditions                                    | $T_J$<br>( $^{\circ}\text{C}$ ) | Value     | Unit                        |
|--------------------------------------------|---------------------------------------------|-----------------------------------------------|---------------------------------|-----------|-----------------------------|
| <b>BLOCKING PARAMETERS</b>                 |                                             |                                               |                                 |           |                             |
| $V_{RRM}$                                  | Repetitive peak reverse voltage             |                                               | 125                             | 200-1600  | V                           |
| $V_{DRM}$                                  | Repetitive peak off-state voltage           |                                               | 125                             | 200-1600  | V                           |
| $I_{RRM}$                                  | Repetitive peak reverse current             | $V = V_{RRM}$                                 | 125                             | 25        | mA                          |
| $I_{DRM}$                                  | Repetitive peak off-state current           | $V = V_{RRM}$                                 | 125                             | 25        | mA                          |
| <b>CONDUCTING PARAMETERS</b>               |                                             |                                               |                                 |           |                             |
| $I_{F(AV)}$                                | Average on-state current                    | 180 sine, 50Hz,<br>$T_C = 70^{\circ}\text{C}$ |                                 | 125       | A                           |
| $I_{RMS}$                                  | RMS on-state current                        |                                               |                                 | 195       | A                           |
| $I_{TSM}$                                  | Surge on-state current                      | Sine wave,<br>10mS without<br>reverse voltage | 125                             | 2.50      | kA                          |
| $I^2t$                                     | $I^2t$                                      |                                               |                                 | 31        | $\text{kA}^2\text{S}$       |
| $V_T$                                      | Peak on-state voltage drop                  | On-state<br>current = 400A                    | 125                             | 2.00      | V                           |
| $V_0$                                      | Threshold voltage                           |                                               | 125                             | 1.20      | V                           |
| $R_0$                                      | On-state slope resistance                   |                                               | 125                             | 1.90      | $\text{m}\Omega$            |
| <b>TRIGGERING PARAMETERS</b>               |                                             |                                               |                                 |           |                             |
| $I_{GT}$                                   | Gate trigger current                        | $V_D = 5V$                                    | 25                              | 150       | mA                          |
| $V_{GT}$                                   | Gate trigger voltage                        |                                               | 25                              | 2.00      | V                           |
| $I_L$                                      | Latching Current                            | $V_D = 5V$                                    | 25                              | 600       | mA                          |
| $P_{G-PEAK}$                               | Maximum Peak Gate Power                     | Pulse width<br>100 $\mu\text{Sec}$            |                                 | 120       | W                           |
| di/dt                                      | Repetitive rate of rise of current          |                                               |                                 | 150       | $\text{A}/\mu\text{Sec}$    |
| $V_{FGM}$                                  | Maximum forward gate voltage                |                                               |                                 | 12        | V                           |
| $I_{FGM}$                                  | Maximum forward gate current                |                                               |                                 | 25        | A                           |
| <b>THERMAL &amp; MECHANICAL PARAMETERS</b> |                                             |                                               |                                 |           |                             |
| $R_{TH(J-C)}$                              | Thermal impedance, 180<br>conduction, Sine  | Junction to case                              |                                 | 0.245     | $^{\circ}\text{C}/\text{W}$ |
| $R_{TH(C-HK)}$                             | Thermal impedance                           | Case to<br>heatsink                           |                                 | 0.08      | $^{\circ}\text{C}/\text{W}$ |
| $T_J$                                      | Maximum Permissible junction<br>temperature |                                               |                                 | 125       | $^{\circ}\text{C}$          |
| $T_{STG}$                                  | Storage temperature range                   |                                               |                                 | -40 - 125 | $^{\circ}\text{C}$          |
| F                                          | Mounting Torque                             |                                               |                                 | 14        | NM                          |
| W                                          | Weight                                      |                                               |                                 | 200       | gms                         |



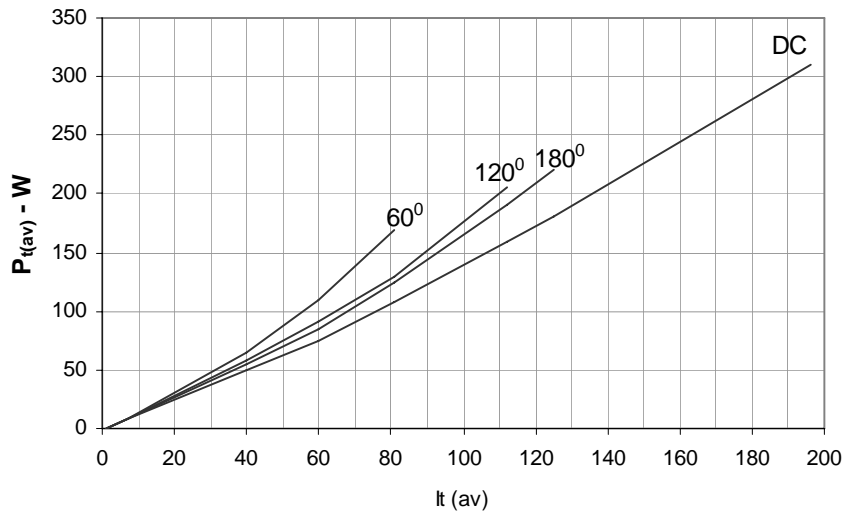
# PHASE CONTROL THYRISTOR H125TBXX



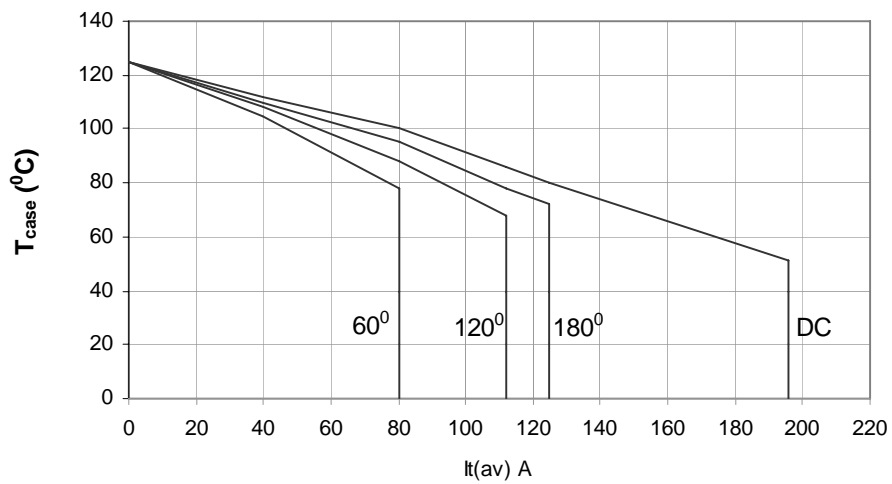
All dimensions in mm

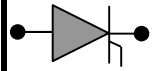


On State Power Loss

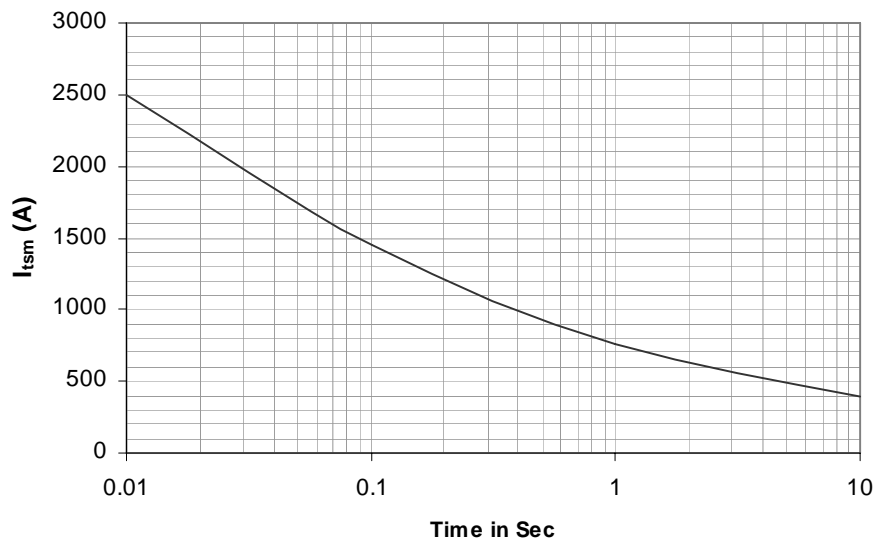


Maximum Permissible Case Temp

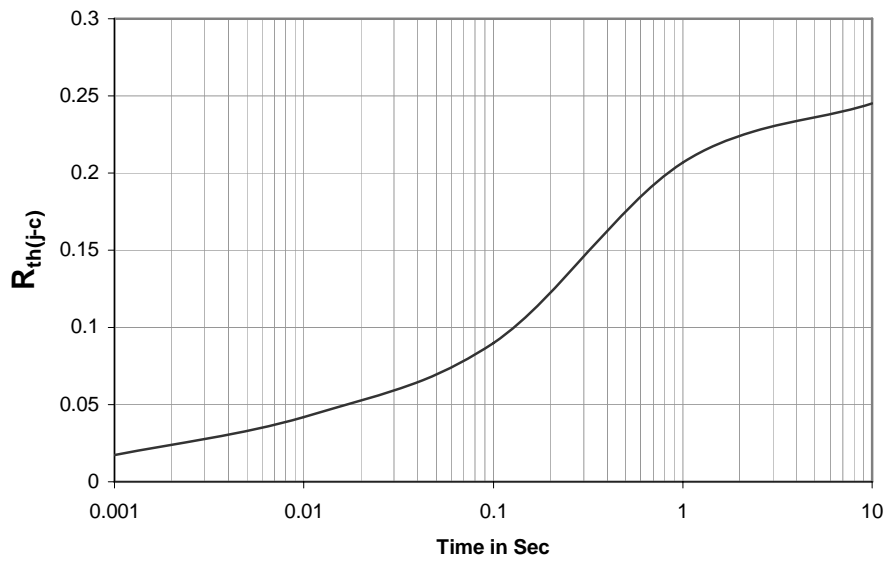


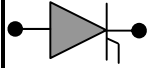


## Max non repetitive Surge Current

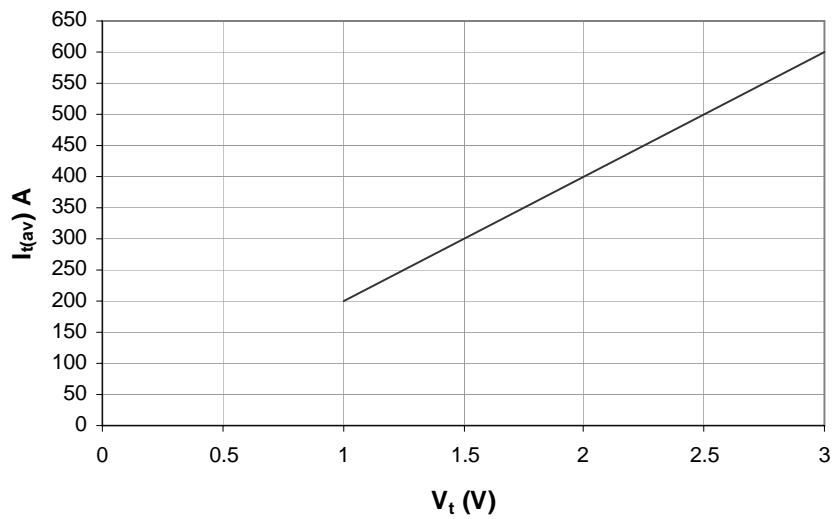


## Transient Thermal Impedance Junction to Case

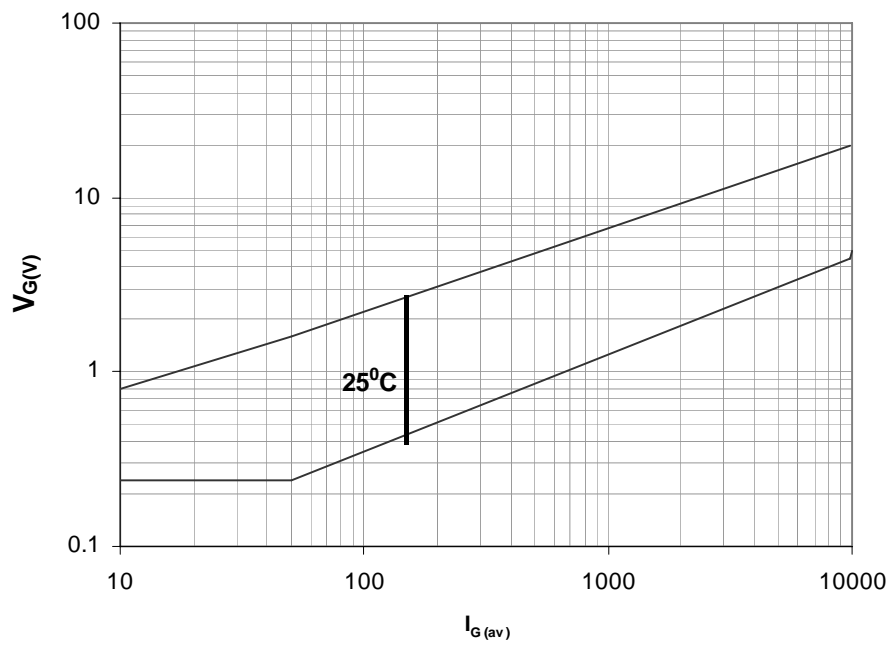




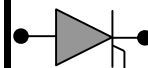
## On State Characteristics



## Gate Trigger Characteristics



## PHASE CONTROL THYRISTOR H125TBXX



### Ordering Information: -

| <b>H</b>              | <b>125</b>         | <b>TB</b>           | <b>XX</b>                                     |
|-----------------------|--------------------|---------------------|-----------------------------------------------|
| Hirect make Thyristor | $I_{F(AV)} = 125A$ | TB - with a Pigtail | $V_{RRM} = XX * 100$<br>e.g. 12 * 100 = 1200V |

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