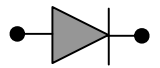


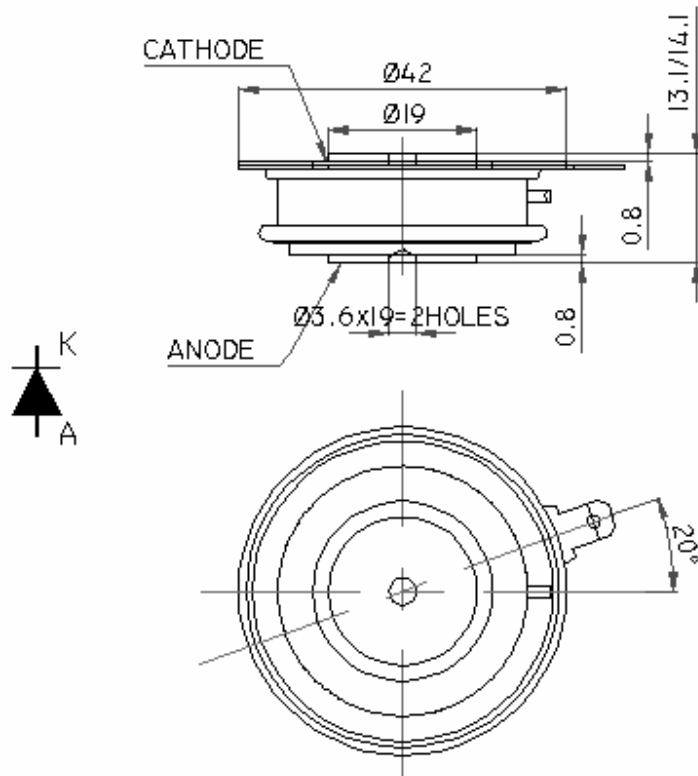
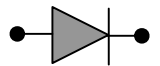
## Capsule Type Rectifier Diode SHXXC450



| Symbol                                     | Characteristics   | Conditions                                    | $T_J(^{\circ}\text{C})$ | Value     | Unit              |
|--|---|---|-------------------------|-----------|-------------------|
| <b>BLOCKING PARAMETERS</b>                 |   |   |                         |           |                   |
| $V_{RRM}$                                  | Repetitive peak reverse voltage                         |   | 170                     | 200-1800  | V                 |
| $I_{RRM}$                                  | Repetitive peak reverse current                         | $V = V_{RRM}$                                 | 170                     | 20        | mA                |
| <b>CONDUCTING PARAMETERS</b>               |   |   |                         |           |                   |
| $I_{F(AV)}$                                | Average on-state current                                | 180 sine, 50Hz,<br>$T_C = 95^{\circ}\text{C}$ |                         | 450       | A                 |
| $I_{RMS}$                                  | RMS on-state current                                    |   |                         | 700       | A                 |
| $I_{FSM}$                                  | Non repetitive peak surge on-state current              | Sine wave, 10mS<br>without reverse<br>voltage | 170                     | 4900      | A                 |
| $I^2t$                                     | Permissible surge energy                                |   |                         | 120       | KA <sup>2</sup> S |
| $V_{FM}$                                   | Peak on-state voltage drop                              | On-state<br>current = 1500A                   | 170                     | 1.52      | V                 |
| $V_0$                                      | Typical forward conduction<br>Threshold voltage         |   | 170                     | 0.70      | V                 |
| $r_0$                                      | Typical forward slope resistance                        |   | 170                     | 0.70      | m $\Omega$        |
| <b>THERMAL &amp; MECHANICAL PARAMETERS</b> |   |   |                         |           |                   |
| $R_{TH(J-C)}$                              | Thermal impedance, 180 <sup>o</sup><br>conduction, Sine | Junction to case                              |                         | 0.112     | <sup>o</sup> C/W  |
| $R_{TH(C-HK)}$                             | Thermal impedance                                       | Case to heatsink                              |                         | 0.015     | <sup>o</sup> C/W  |
| $T_J$                                      | Maximum Permissible junction<br>temperature             |   |                         | 170       | <sup>o</sup> C    |
| $T_{STG}$                                  | Storage temperature range                               |   |                         | -40 – 170 | <sup>o</sup> C    |
| F  | Mounting Torque   |   |                         | 6.5       | KN                |
| W  | Weight  |   |                         | 70        | gms               |

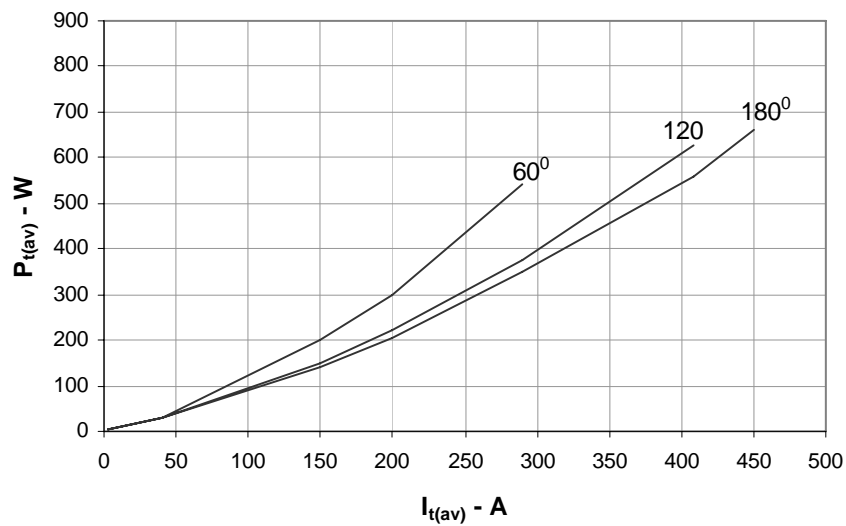
**HIND RECTIFIERS LTD**

# Capsule Type Rectifier Diode SHXXC450



All dimensions in mm

## On State Power Loss

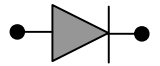


www.DataSheet4U.com

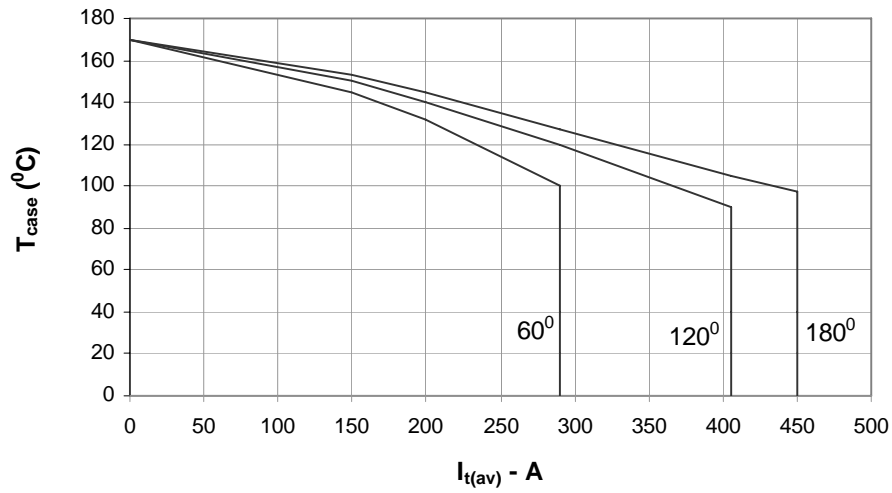


**HIND RECTIFIERS LTD**

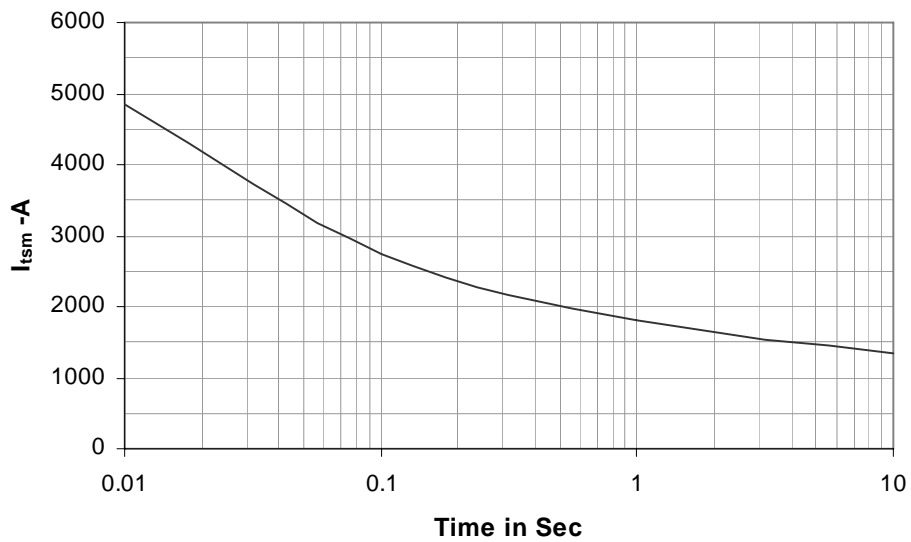
# Capsule Type Rectifier Diode SHXXC450



## Maximum Permissible Case Temp



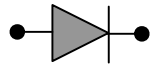
## Max non repetitive Surge Current



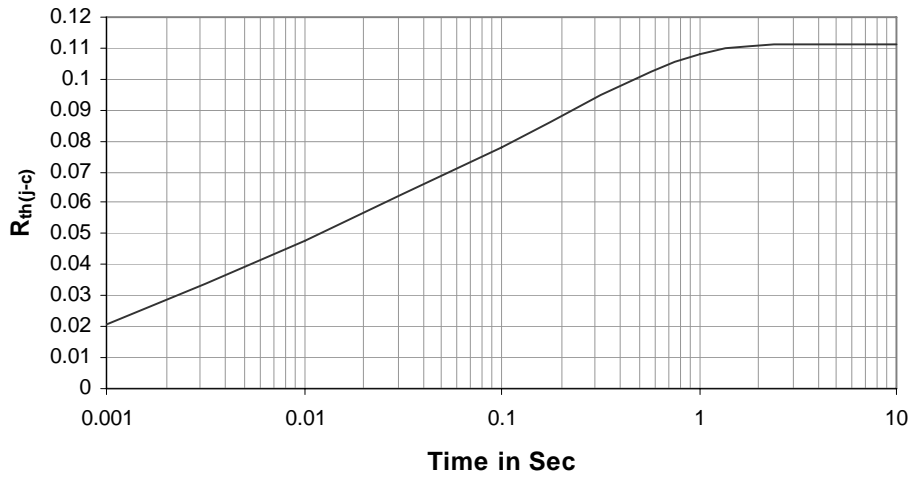
www.DataSheet4U.com



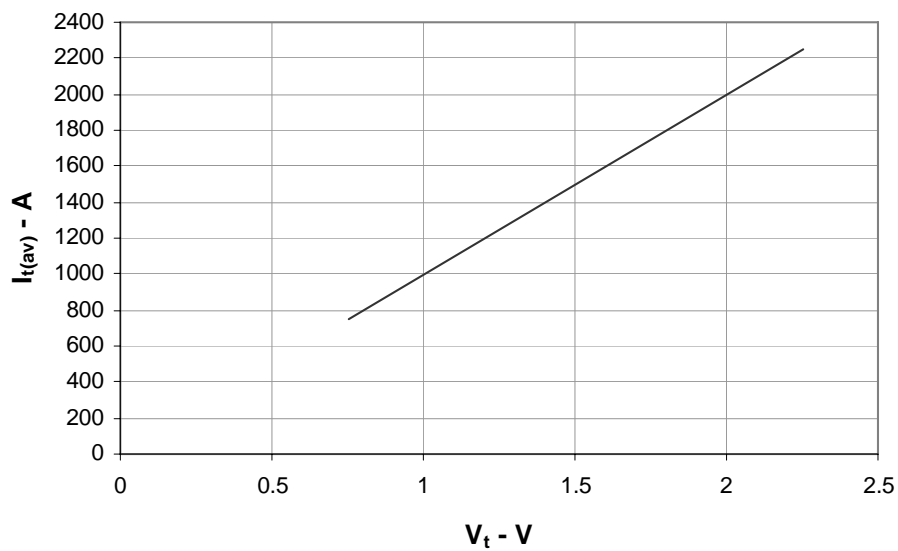
# Capsule Type Rectifier Diode SHXXC450



**Transient Thermal Impedance Junction to Case**



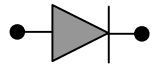
**On State Characteristics**



www.DataSheet4U.com



## Capsule Type Rectifier Diode SHXXC450



## Ordering Information: -

|                              |   |               |                    |
|------------------------------|---|---------------|--------------------|
| <b>SH</b>                    | <b>XX</b>                                   | <b>C</b>      | <b>450</b>         |
| Hirect make<br>Capsule Diode | $V_{RRM} = XX * 100$<br>e.g.12 * 100 =1200V | Capsule Diode | $I_{F(AV)} = 450A$ |

Hind Rectifiers Ltd reserves the right to change the specifications without notice.

This datasheet specifies technical information for semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

Hind Rectifiers Ltd

Lake Road

Bhandup (West)

Mumbai – 400 078

Tel: - +91 22 2596 8027/28/29/31

Fax: - +91 22 2596 4114

E-mail: - [marketing@hirect.com](mailto:marketing@hirect.com)

Website: - [www.hirect.com](http://www.hirect.com)

June-2008



**HIND RECTIFIERS LTD**

5 of 5