

## Capsule Type Rectifier Diode SHXXC450

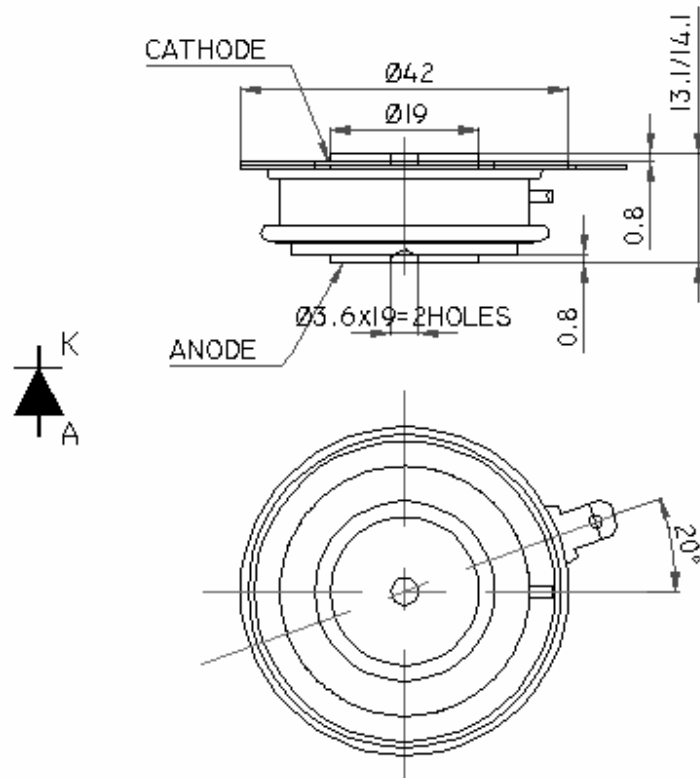
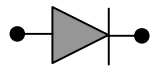


Symbol	Characteristics	Conditions	$T_J(^{\circ}\text{C})$	Value	Unit
<b>BLOCKING PARAMETERS</b>					
$V_{RRM}$	Repetitive peak reverse voltage		170	200-1800	V
$I_{RRM}$	Repetitive peak reverse current	$V = V_{RRM}$	170	20	mA
<b>CONDUCTING PARAMETERS</b>					
$I_{F(AV)}$	Average on-state current	180 sine, 50Hz, $T_C = 95^{\circ}\text{C}$		450	A
$I_{RMS}$	RMS on-state current			700	A
$I_{FSM}$	Non repetitive peak surge on-state current	Sine wave, 10mS without reverse voltage	170	4900	A
$I^2t$	Permissible surge energy			120	KA <sup>2</sup> S
$V_{FM}$	Peak on-state voltage drop	On-state current = 1500A	170	1.52	V
$V_0$	Typical forward conduction 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> 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 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



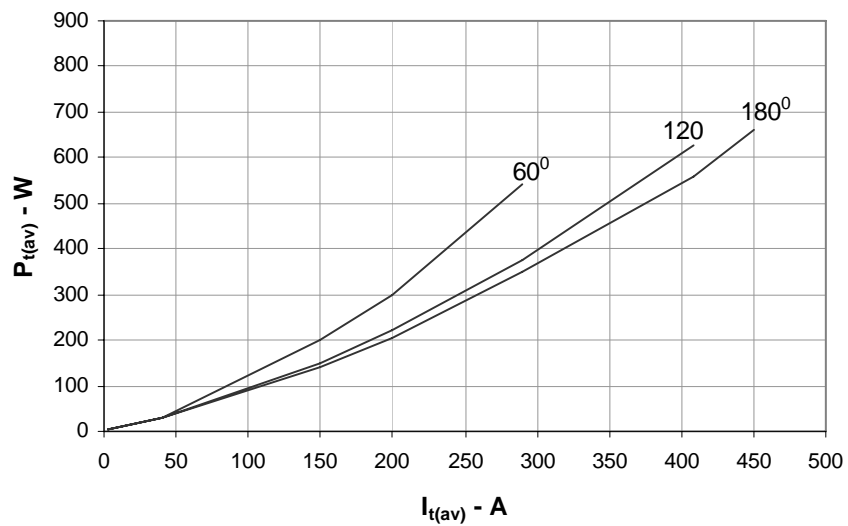
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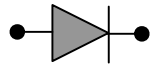


All dimensions in mm

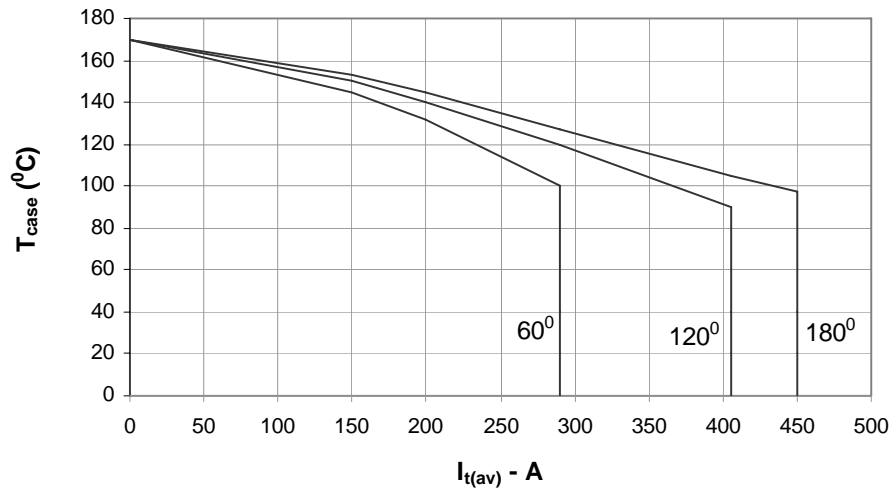
## On State Power Loss



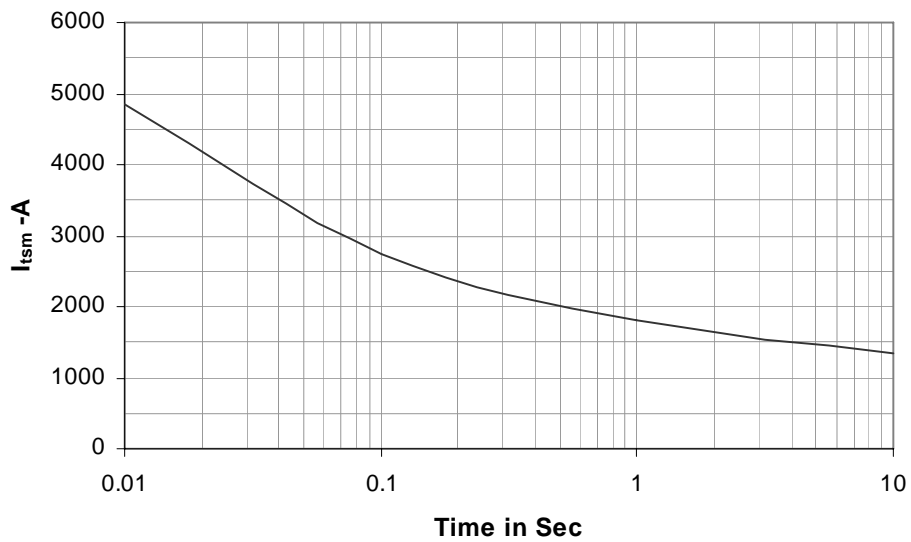
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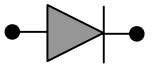


Maximum Permissible Case Temp

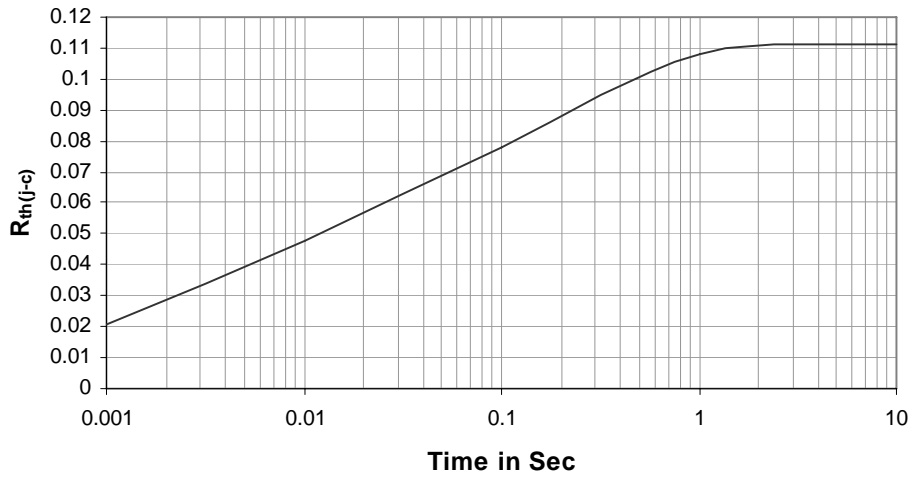


Max non repetitive Surge Current

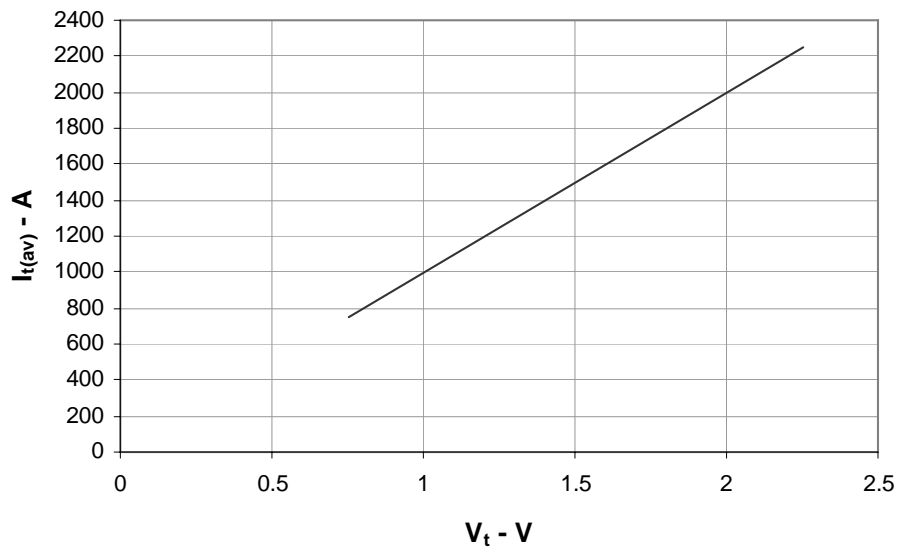




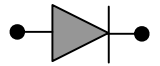
## Transient Thermal Impedance Junction to Case



## On State Characteristics



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### Ordering Information: -

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

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