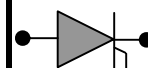


## PHASE CONTROL THYRISTOR H45TBXX



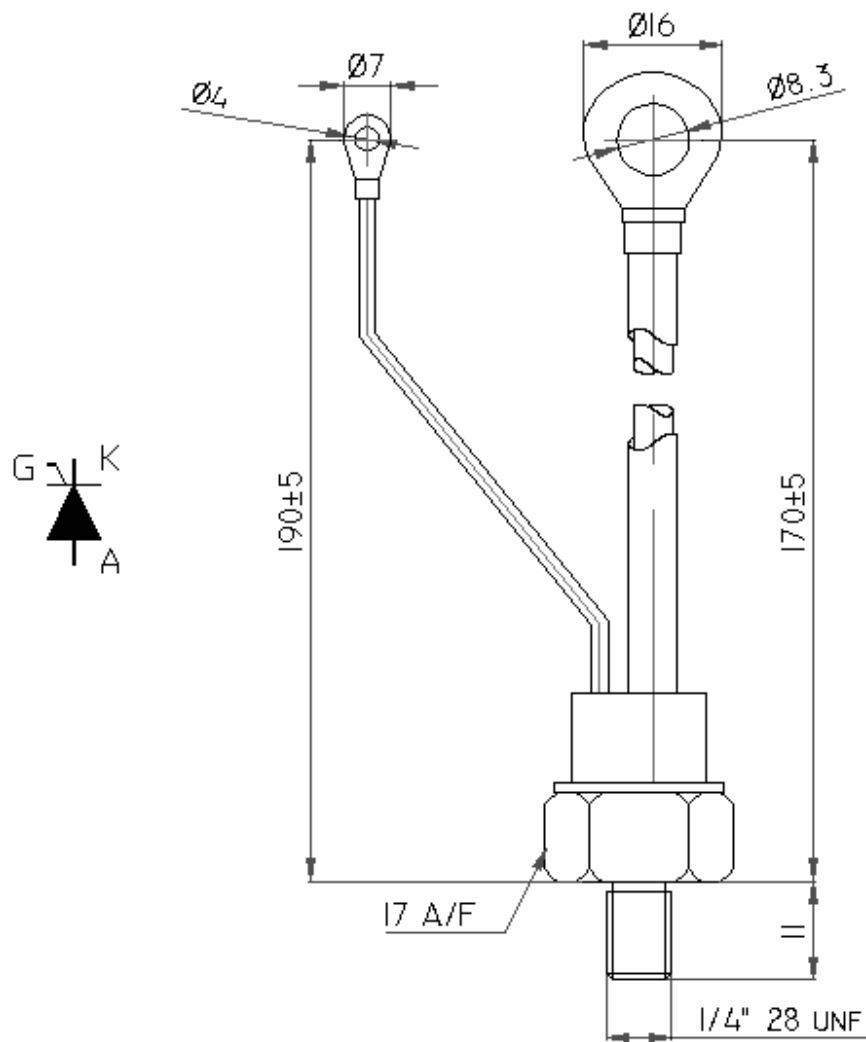
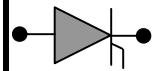
Symbol	Characteristics	Conditions	$T_J$ ( $^{\circ}\text{C}$ )	Value	Unit
<b>BLOCKING PARAMETERS</b>					
$V_{RRM}$	Repetitive peak reverse voltage		125	200-1600	V
$V_{DRM}$	Repetitive peak off-stage voltage		125	200-1600	V
$I_{RRM}$	Repetitive peak reverse current	$V = V_{RRM}$	125	10	mA
$I_{DRM}$	Repetitive peak off-state current	$V = V_{RRM}$	125	10	mA
$dV/dT$	Rep. rate of change of voltage	@ 67% $V_{DRM}$	125	600	V/ $\mu\text{S}$
<b>CONDUCTING PARAMETERS</b>					
$I_{F(AV)}$	Average on-state current	180 sine, 50Hz, $T_C = 85^{\circ}\text{C}$		45	A
$I_{RMS}$	RMS on-state current			70	A
$I_{TSM}$	Surge on-state current	Sine wave, 10mS without reverse voltage	125	800	A
$I^2t$	$I^2t$			3200	$\text{A}^2\text{S}$
$V_T$	Peak on-state voltage drop	On-state current = 150A	125	1.72	V
$V_0$	Threshold voltage		125	0.95	V
$R_0$	On-state slope resistance		125	4.50	$\text{m}\Omega$
$di/dt$	Repetitive rate of rise of current	$dI_G/dT = 1\text{A}/\mu\text{S}$ $V_{GK} = 1\text{V}$	125	120	$\text{A}/\mu\text{S}$
<b>TRIGGERING PARAMETERS</b>					
$I_{GT}$	Gate trigger current	$V_D = 5\text{V}$	25	150	mA
$V_{GT}$	Gate trigger voltage		25	2.50	V
$I_L$	Latching Current	$V_D = 5\text{V}$	25	400	mA
$I_H$	Holding Current	$V_D = 5\text{V}$	25	300	mA
$P_{G-PEAK}$	Maximum Peak Gate Power	Pulse width 100 $\mu\text{Sec}$		30	W
$di/dt$	Repetitive rate of rise of current			120	$\text{A}/\mu\text{S}$
$V_{FGM}$	Maximum forward gate voltage			12	V
$I_{FGM}$	Maximum forward gate current			10	A
<b>THERMAL &amp; MECHANICAL PARAMETERS</b>					
$R_{TH(J-C)}$	Thermal impedance, 180 conduction, Sine	Junction to case		0.60	$^{\circ}\text{C}/\text{W}$
$R_{TH(C-HK)}$	Thermal impedance	Case to heatsink		0.20	$^{\circ}\text{C}/\text{W}$
$T_J$	Maximum Permissible junction temperature			125	$^{\circ}\text{C}$
$T_{STG}$	Storage temperature range			-40 - 125	$^{\circ}\text{C}$
F	Mounting Torque			4	NM
W	Weight			45	gms



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# PHASE CONTROL THYRISTOR H45TBXX

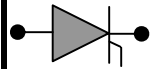


All dimensions in mm

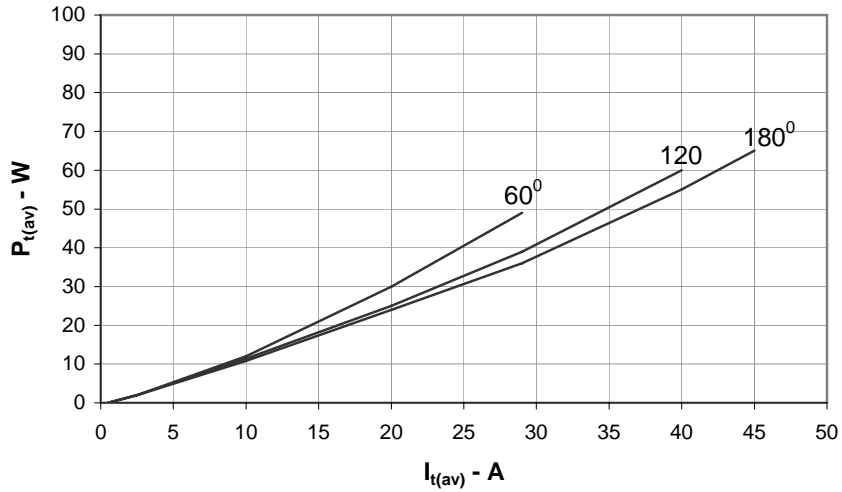


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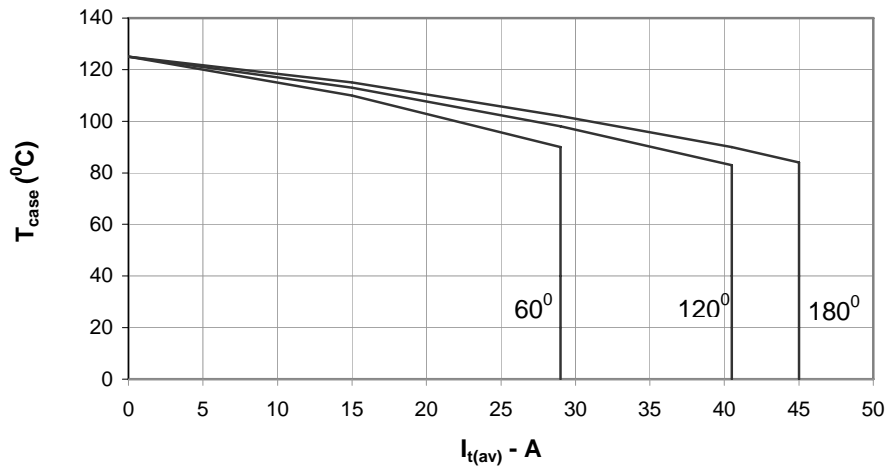
# PHASE CONTROL THYRISTOR H45TBXX



## On State Power Loss

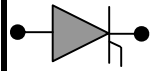


## Maximum Permissible Case Temp

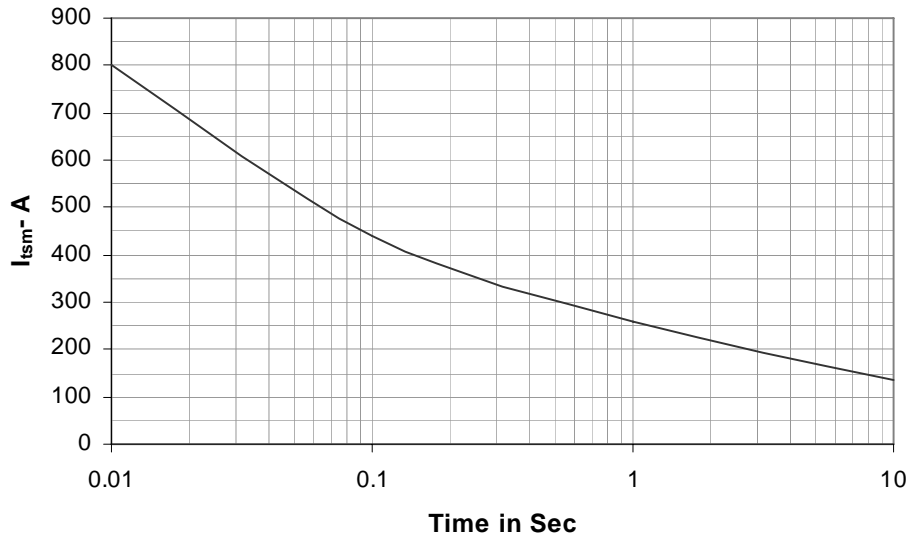


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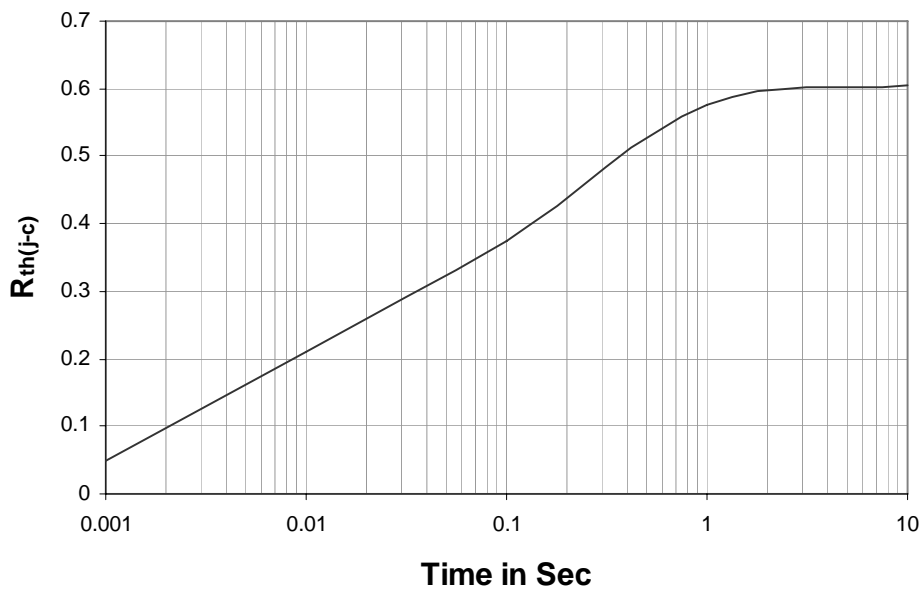
# PHASE CONTROL THYRISTOR H45TBXX



## Max non repetitive Surge Current

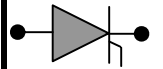


## Transient Thermal Impedance Junction to Case

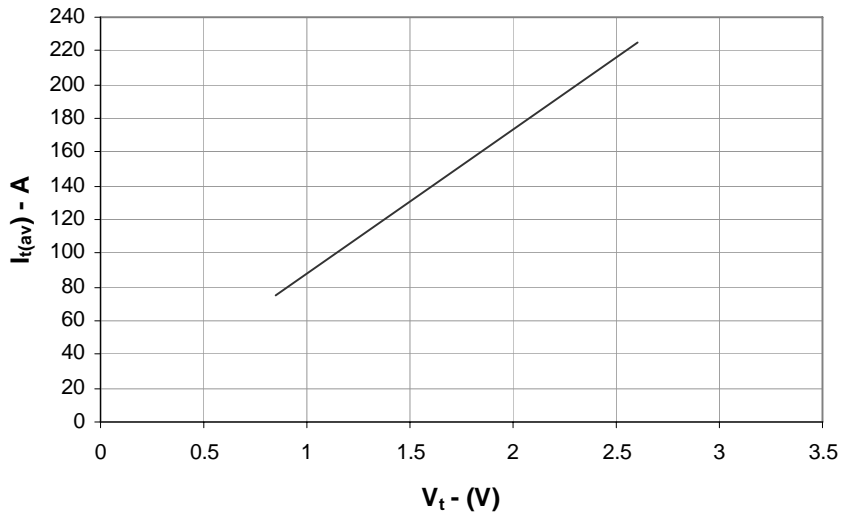


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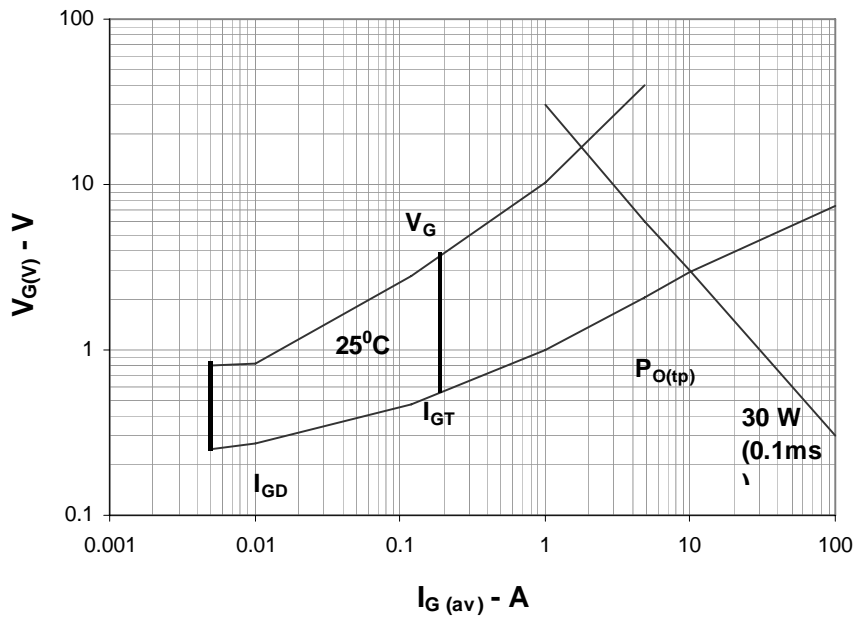
# PHASE CONTROL THYRISTOR H45TBXX



## On State Characteristics

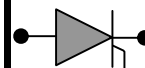


## Gate Trigger Characteristics



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## PHASE CONTROL THYRISTOR H45TBXX



### Ordering Information: -

H	45	TB	XX
Hirect make Thyristor	$I_{F(AV)} = 45A$	TB – with a Pigtail	$V_{RRM} = XX \times 100$ e.g. $12 * 100 = 1200V$

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

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