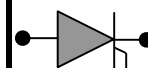
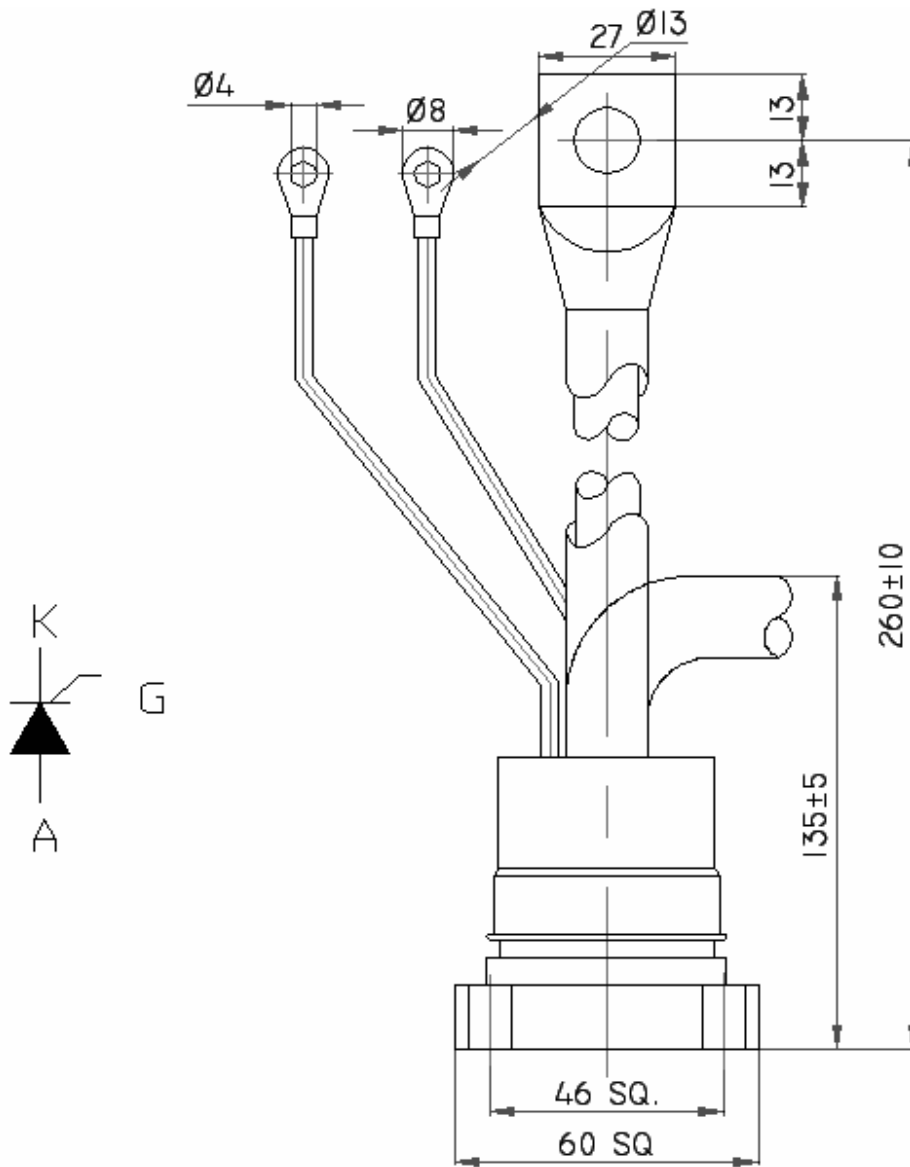
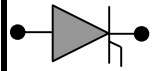


# PHASE CONTROL THYRISTOR H650TBXX

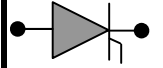


Symbol	Characteristics	Conditions	$T_J$ ( $^{\circ}\text{C}$ )	Value	Unit
<b>BLOCKING PARAMETERS</b>					
$V_{RRM}$	Repetitive peak reverse voltage		125	200-600	V
$V_{DRM}$	Repetitive peak off-stage voltage		125	200-600	V
$I_{RRM}$	Repetitive peak reverse current	$V = V_{RRM}$	125	40	mA
$I_{DRM}$	Repetitive peak off-state current	$V = V_{RRM}$	125	40	mA
<b>CONDUCTING PARAMETERS</b>					
$I_{F(AV)}$	Average on-state current	180 sine, 50Hz, $T_C = 70^{\circ}\text{C}$		650	A
$I_{RMS}$	RMS on-state current			1020	A
$I_{TSM}$	Surge on-state current	Sine wave, 10mS without reverse voltage	125	14	kA
$I^2t$	$I^2t$			980	$\text{kA}^2\text{S}$
$V_T$	Peak on-state voltage drop	On-state current = 2 kA	125	1.35	V
$V_0$	Threshold voltage		125	1.00	V
$R_0$	On-state slope resistance		125	0.12	$\text{m}\Omega$
<b>TRIGGERING PARAMETERS</b>					
$I_{GT}$	Gate trigger current	$V_D = 5V$	25	300	mA
$V_{GT}$	Gate trigger voltage		25	2.00	V
$I_L$	Latching Current	$V_D = 5V$	25	1000	mA
$P_{G-PEAK}$	Maximum Peak Gate Power	Pulse width 100 $\mu\text{Sec}$		160	W
di/dt	Repetitive rate of rise of current			120	$\text{A}/\mu\text{Sec}$
$V_{FGM}$	Maximum forward gate voltage			12	V
$I_{FGM}$	Maximum forward gate current			40	A
<b>THERMAL &amp; MECHANICAL PARAMETERS</b>					
$R_{TH(J-C)}$	Thermal impedance, 180 conduction, Sine	Junction to case		0.070	$^{\circ}\text{C}/\text{W}$
$R_{TH(C-HK)}$	Thermal impedance	Case to heatsink		0.015	$^{\circ}\text{C}/\text{W}$
$T_J$	Maximum Permissible junction temperature			125	$^{\circ}\text{C}$
$T_{STG}$	Storage temperature range			-40 - 125	$^{\circ}\text{C}$
F	Mounting Torque			18	NM
W	Weight			875	gms

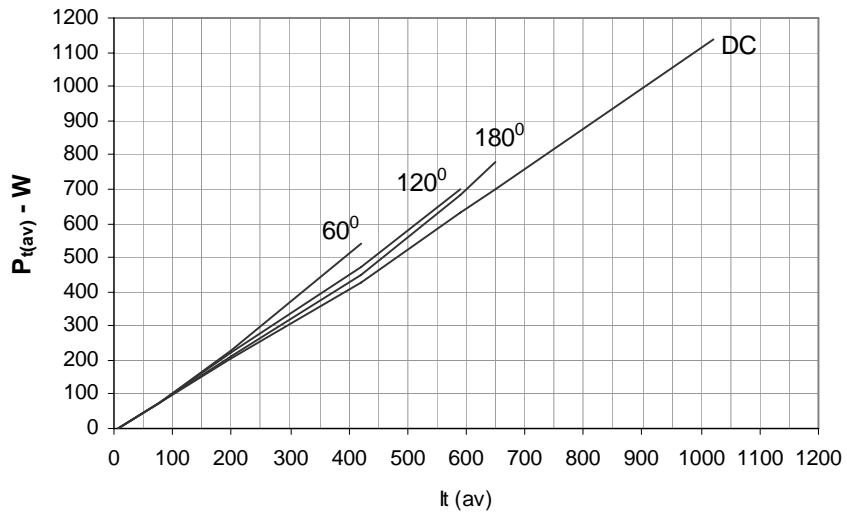
# PHASE CONTROL THYRISTOR H650TBXX



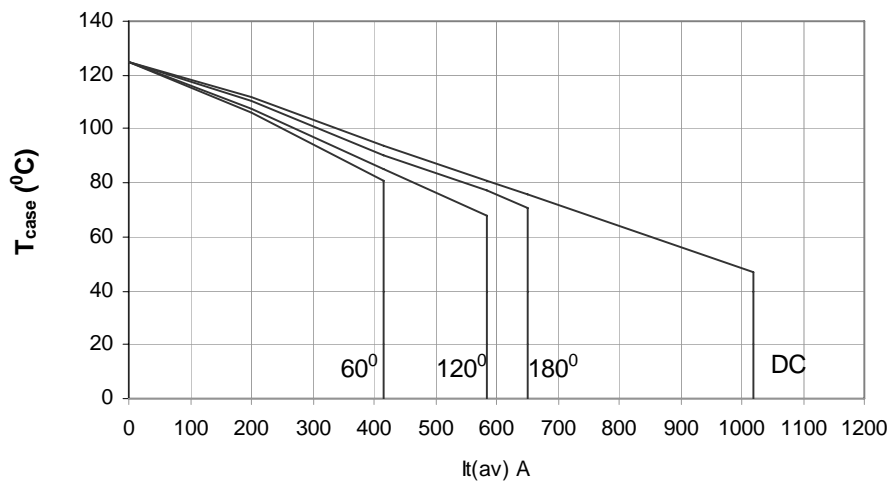
All dimensions in mm

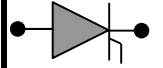


On State Power Loss

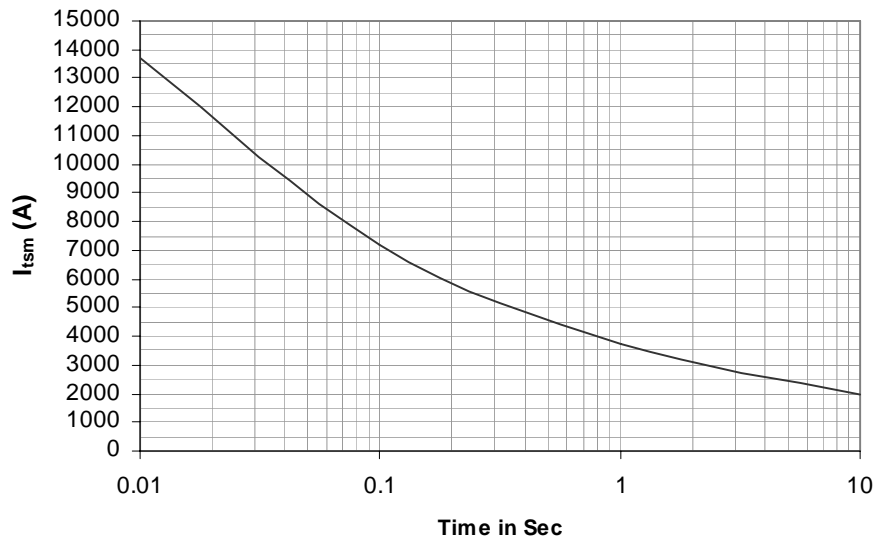


Maximum Permissible Case Temp

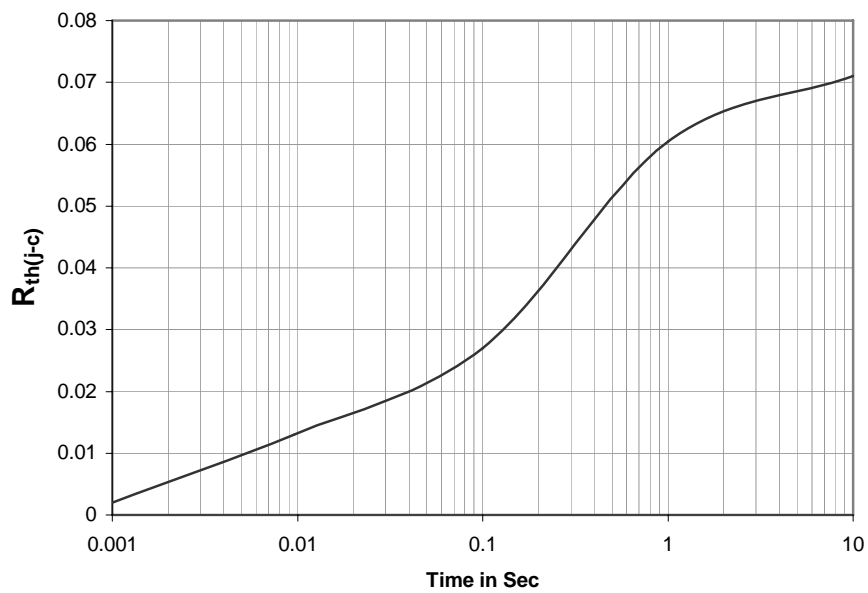


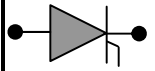


## Max non repetitive Surge Current

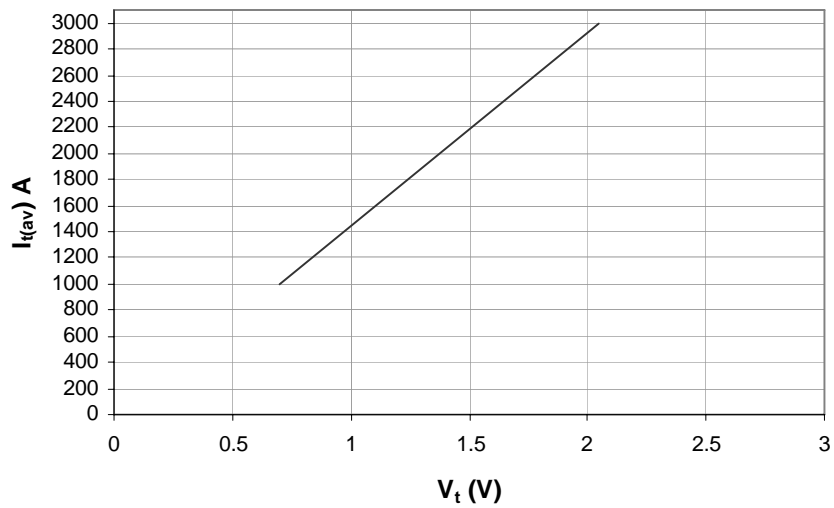


## Transient Thermal Impedance Junction to Case

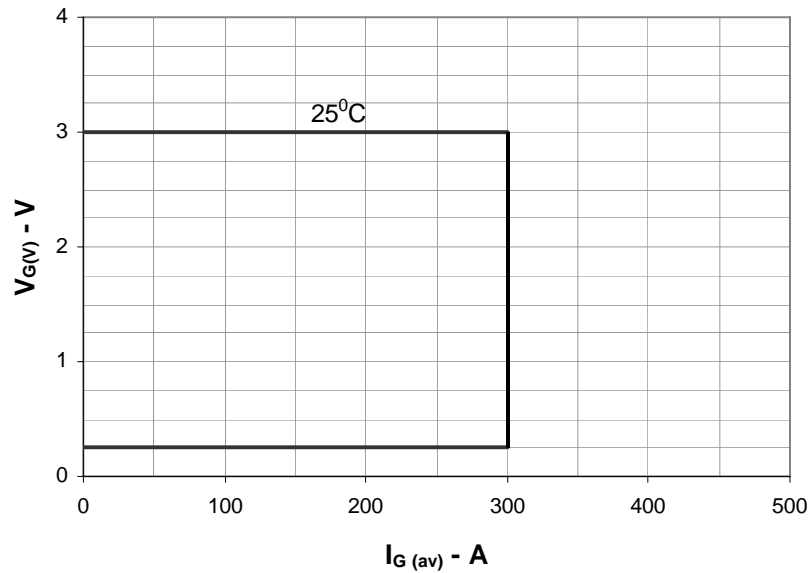




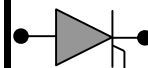
## On State Characteristics



## Gate Trigger Characteristics



## PHASE CONTROL THYRISTOR H650TBXX



### Ordering Information: -

H	650	TB	XX
Hirect make Thyristor	$I_{F(AV)} = 650A$	TB – with a Pigtail	$V_{RRM} = XX * 100$ e.g.12 * 100 =1200V

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

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