

Phase Control Thyristors

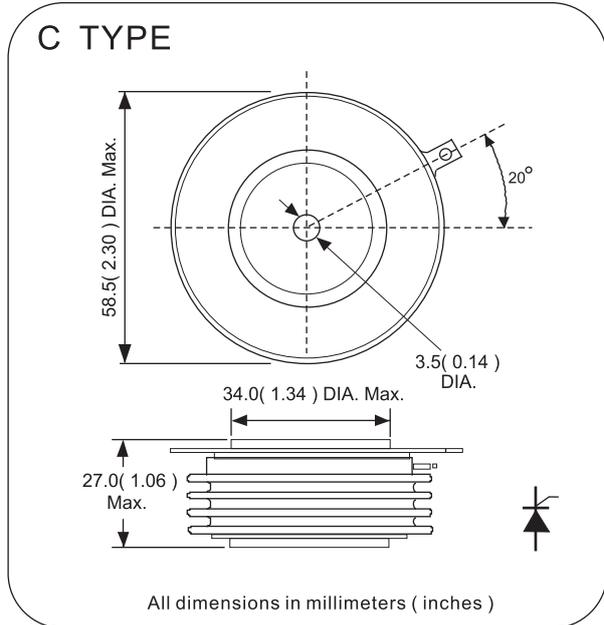
Features

1. 1150 PT series Thyristors are designed for various power controls
2. Voltage rating up to 2000 V.
3. Typical application
 - DC motor control
 - Controlled DC power supplies
 - AC controllers

Ordering code

1150	PT	XX	C	0
(1)	(2)	(3)	(4)	(5)

- (1) Maximum average on-state current , A
- (2) For Phase Control Thyristor
- (3) Voltage code , code x 100 = V_{RRM} / V_{DRM}
- (4) package style : A , B , C , D , E for Disc Type
- (5) Terminal types
0 - for eyelet



Electrical Characteristics

Symbol	Parameter	Condition	Value			Unit
			Min.	Type	Max.	
$I_T(AV)$	Mean on-state current	180° half sine wave , 50Hz Double side cooled , $T_C = 55^\circ C$			1150	A
$I_T(RMS)$	Max. RMS on-state current	Double side cooled , $T_{hs} = 25^\circ C$			2000	A
V_{RRM} V_{DRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM} \ t_p = 10ms$ $V_{DsM} \& V_{RsM} = V_{DRM} \& V_{RRM} + 100V$	1200		2000	V
I_{TSM}	Surge on-state current	10 ms half sine wave			19000	A
I_t^2	For fusing coordination	$V_R = 0.6V_{RRM}$			1.23×10^6	A^2s
$V_{T(TO)}$	Threshold voltage				1.11	V
r_t	On-state slope resistance				0.28	mΩ
V_{TM}	Max. Forward voltage drop				1.62	V
I_H	Holding current	$V_A = 12V , I_A = 1A$			600	mA
d_i/dt	Critical rate of rise of turned-on current	Gate drive 20V , 20Ω , $t_r \leq 0.5 \mu s$			1000	A/μs
t_q	Typical turn-off time	$I_{TM} = 400A , d_v/dt = 30V/\mu s$ $d_iRR/dt = -10 A/\mu s$			150	μs
d_v/dt	Critical rate of rise of off-state voltage	$V_{DM} = 0.67 V_{DRM}$			500	V/μs
P_G	Max. average gate power	Square wavepulse width 100 μs			2	W
P_{GM}	Max. peak gate power square				10	W
I_{GT}	Gate trigger current	$V_A = 12V , I_A = 1A$			300	mA
V_{GT}	Gate trigger voltage				3	V
T_j	Max. operating temperature range		- 40		125	°C
T_{stg}	Storage temperature		- 40		150	°C
$R_{th(j-h)}$	Thermal resistance(junction to heatsink)	Double side cooled , clamping force 8.0 KN			0.035	°C/W
F_m	Mounting force		10		20	KN
M_t	Approximate weight				255	g

