

Phase Control Thyristors

Features

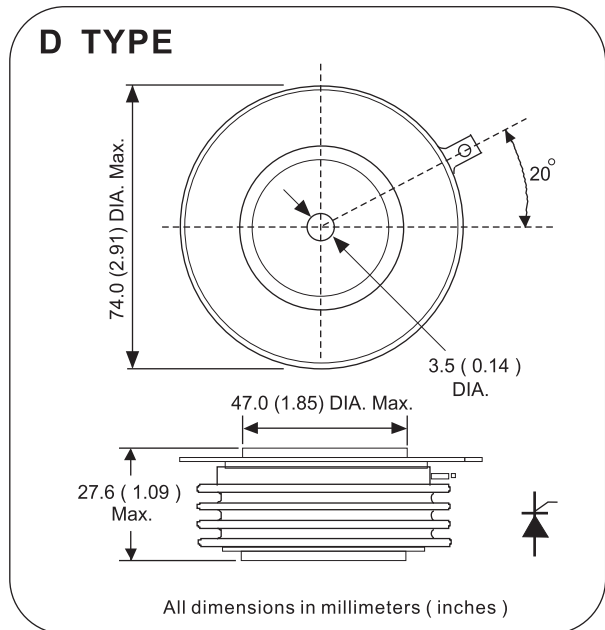
1. 2000PT series Thyristors are designed for various power controls
2. Voltage rating up to 1600V
3. Typical application
 - DC motor control
 - Controlled DC power supplies
 - AC controllers

Ordering code

2000	PT	xx	D	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
- (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 , $T_c = 85^\circ C$			2000	A
$I_T(RMS)$	Max. RMS on-state current	Double side cooled , $T_{hs} = 55^\circ C$			3175	A
V_{RRM} V_{DRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM} & V_{RRM} $t_p = 10ms$ V_{DSM} & $V_{RSM} = V_{DRM}$ & $V_{RRM} + 100V$	600		1600	V
I_{TSM}	Surge on-state current	10 ms half sine wave			35	KA
I_t^2	For fusing coordination	$V_R = 0.6V_{RRM}$			8200	$A^2s \times 10^3$
$V_{T(TO)}$	Threshold voltage				0.82	V
r_t	On-state slope resistance				0.08	mΩ
V_{TM}	Max. Forward voltage drop	$I_{TM} = 3000A$, $F = 24.0KN$			1.8	V
I_H	Holding current	$V_A = 12V$, $I_A = 1A$			300	mA
d_i/dt	Critical rate of rise of turned-on current	Gate drive 20V , 20Ω , $t_r \leq 0.5 \mu s$			300	A/ μs
t_q	Typical turn-time				200	μs
I_{RRM} I_{DRM}	Repetitive peak reverse current	$V_R = V_{RRM}$ $V_D = V_{DRM}$			200	mA
d_v/dt	Critical rate of rise of off-state voltage	$V_{DM} = 0.67 V_{DRM}$			300	V/ μs
P_G	Max. average gate power	Square wavepulse width 100 μs			2	W
P_{GM}	Max. peak gate power square				12.0	W
I_{GT}	Gate trigger current	$V_A = 12V$, $I_A = 1A$	40		300	mA
V_{GT}	Gate trigger voltage		0.8		3.0	V
V_{GD}	DC voltage notto trigger	At 76% V_{DRM} , $T_j = T_j MAX$			0.3	V
I_{FGM}	Max.peak positive gate current	$T_j = T_j max$, $t_p \leq 3s$			5	A
V_{FGM}	Max.peak positive gate current				30	V
V_{RGM}	Max.peak positive gate current				0.25	V
T_j	Max.operating temperaturerange		- 40		125	$^\circ C$
T_{stg}	Storage temperature		- 40		140	$^\circ C$
$R_{th(j-h)}$	Thermal resistance(junction to heatsink)	Double side cooled , clamping force 8.0 KN			0.011	$^\circ C/W$
F_m	Mounting force		19		26	KN
w_t	Approximate weight			425		g

