

Features

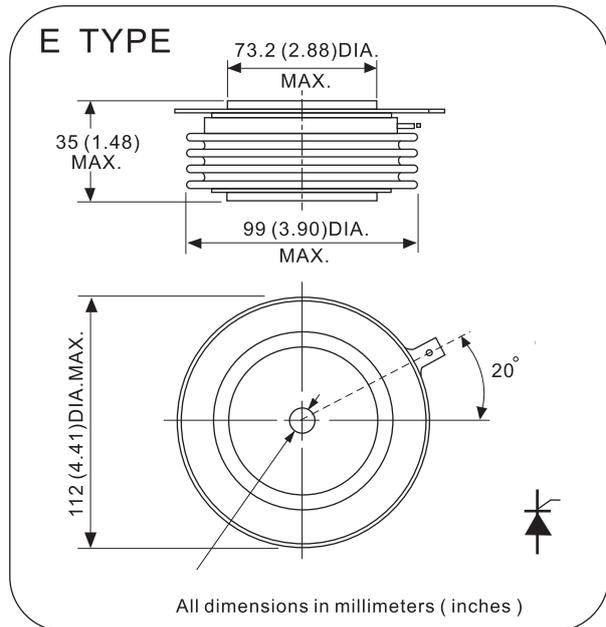
1. Center amplifying gate.
2. Metal Case With Ceramic insulator.
3. Typical application
 - DC motor control
 - Controlled DC power supplies
 - AC controllers

Ordering code

3000	PT	xx	E	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 ,EX for Disc Type
 (5) Terminal types
 0 - for eyelet

Phase Control Thyristors



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 , $T_C = 75^\circ C$			3000	A
$I_T(RMS)$	Max. RMS on-state current	Double side cooled , $T_{hs} = 55^\circ C$			3790	A
V_{RRM} V_{DRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM} t_p = 10ms$ $V_{DsM} \& V_{RsM} = V_{DRM} \& V_{RRM} + 100V$	400		2000	V
I_{TSM}	Surge on-state current	10 ms half sine wave			49.9	KA
I_t^2	For fusing coordination	$V_R = 0.6V_{RRM}$			12428	KA ² s
$V_{T(0)}$	Threshold voltage				0.84	V
r_t	On-state slope resistance				0.08	mΩ
V_{TM}	Max. Forward voltage drop	$I_{TM} = 5000A$, $F = 35KN$			2.2	V
I_H	Holding current	$V_A = 12V$, $I_A = 1A$	20		300	mA
d_i/dt	Critical rate of rise of turned-on current	Gate drive 20V , 20Ω , $t_r \leq 0.5 \mu s$			400	A/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	$V_{DM} = 0.67 V_{DRM}$	200		500	V/μs
P_G	Max. average gate power	Square wavepulse width 100 μs			10	W
P_{GM}	Max. peak gate power square				150	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 not to trigger	At 67% 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	mA
V_{FGM}	Max. peak positive gate voltage				30	V
V_{RGM}	Max. peak negative gate voltage				0.25	V
T_j	Max. operating temperature range				125	°C
T_{stg}	Storage temperature		- 40		140	°C
$R_{th(j-h)}$	Thermal resistance(junction to heatsink)	Double side cooled , clamping force 35 KN			0.011	°C/W
F_m	Mounting force		35		47	KN
W_t	Approximate weight				1100	g
t_q	Typical turn-off time	$I_{TM} = 800A$, $d_v/dt = 30V/\mu s$, $d_i/dt = -10 A/\mu s$	300		500	μs

