

Y50KPR

PHASE CONTROL THYRISTO

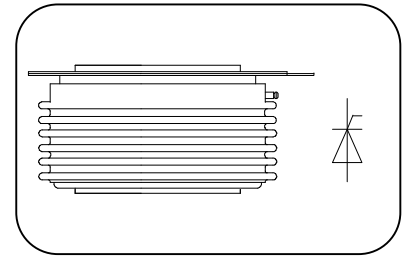
Features:

- n Center amplifying gate
- n Metal case with ceramic insulator
- n Low on-state and switching losses

Typical Applications

- n AC controllers
- n DC and AC motor control
- n Controlled rectifiers

$I_{T(AV)}$ **872 A**
 V_{DRM}/V_{RRM} **5600-6500V**
 I_{TSM} **10.5 KA**
 I^2t **551 10³A²S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _f (°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, T _{ns} =55°C	125			872	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM} & V_{RRM} tp=10ms V_{DSM} & V_{RSM} = V_{DRM} & V_{RRM} +100V	125	5600		6500	V
I_{DRM} I_{RRM}	Repetitive peak current	V_{DM} = V_{DRM} V_{RM} = V_{RRM}	125			200	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			10.5	KA
I^2t	I ² T for fusing coordination	V_R =0.6 V_{RRM}				551	A ² s*10 ³
V_{TO}	Threshold voltage		125			1.25	V
r_T	On-state slop resistance					1.045	m□
V_{TM}	Peak on-state voltage	I_{TM} =1000A, F=24KN	125			2.30	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM} =0.67 V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM} = 67% V_{DRM} to 1500A, Gate pulse tr ≤0.5μs IGM= 1.5A Repetitive	125			100	A/μs
I_{rm}	Reverse recovery current		125			178	A
t_{rr}	Reverse recovery time	I_{TM} =800A, tp=1000μs, di/dt=-20A/μs, V_r =50V				17.8	μs
Q_{rr}	Recovery charge					1588	μC
I_{GT}	Gate trigger current		25	40		300	mA
V_{GT}	Gate trigger voltage	V_A =12V, I_A =1A		0.8		3.0	V
I_H	Holding current			20		250	mA
V_{GD}	Non-trigger gate voltage	V_{DM} =0.67 V_{DRM}	125	0.3			V
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At 180° sine' double side cooled Clamping force 24.0KN				0.023	°C /W
F_m	Mounting force			19		26	KN
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				470		g
Outline	KT50dT						

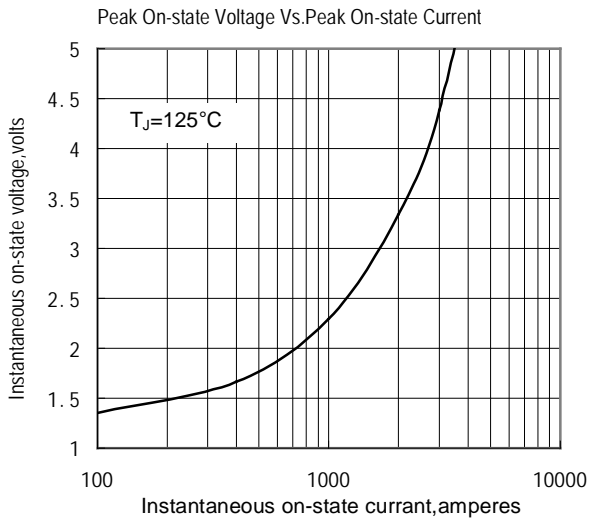


Fig.1

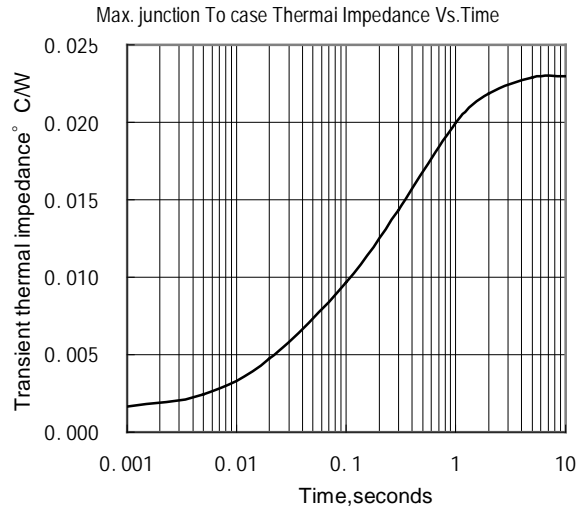


Fig.2

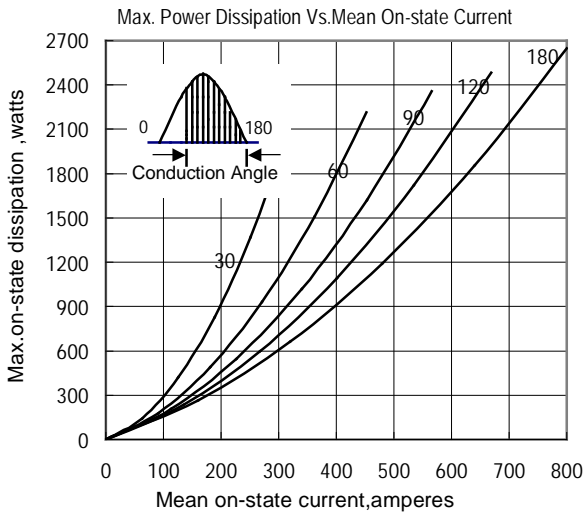


Fig.3

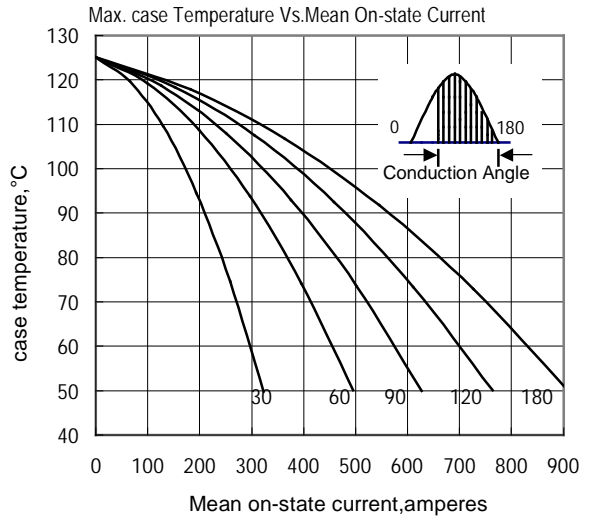


Fig.4

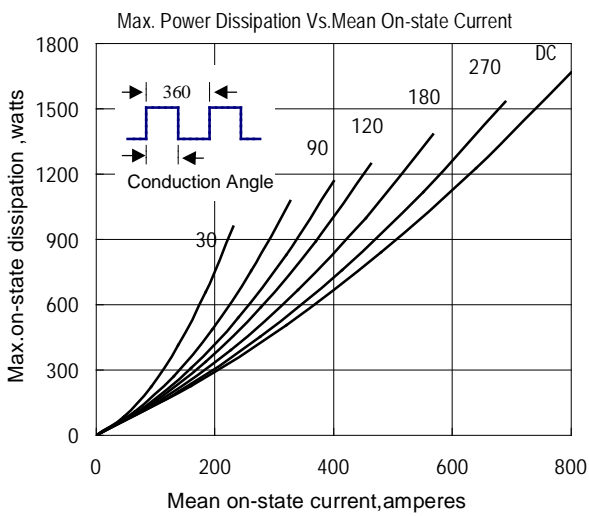


Fig.5

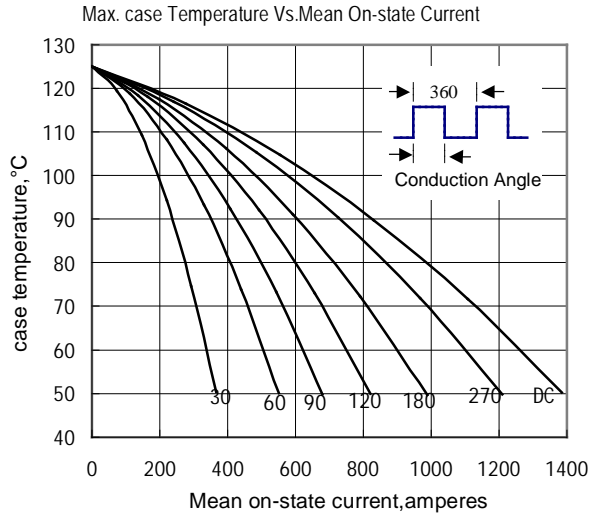


Fig.6

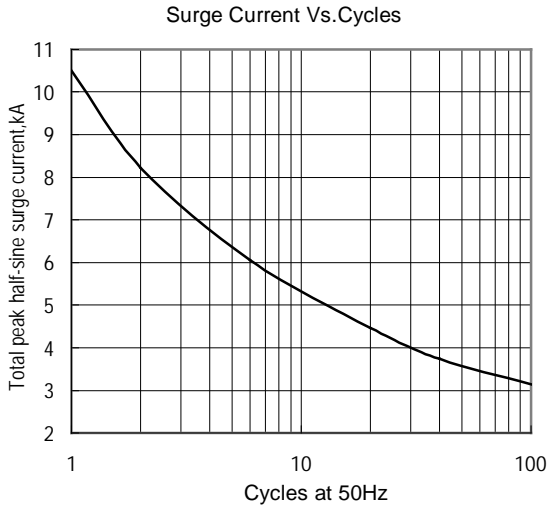


Fig.7

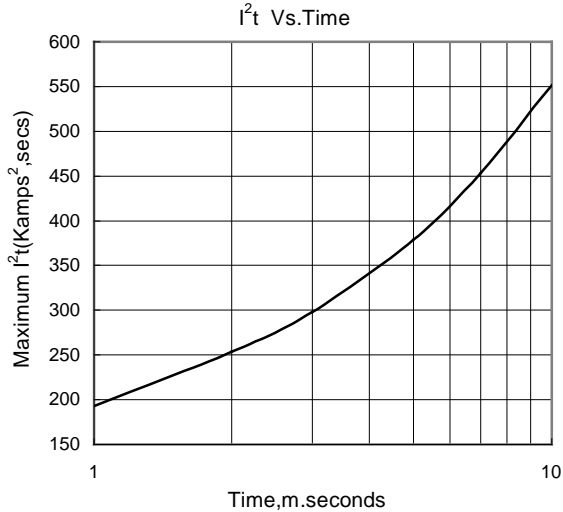


Fig.8

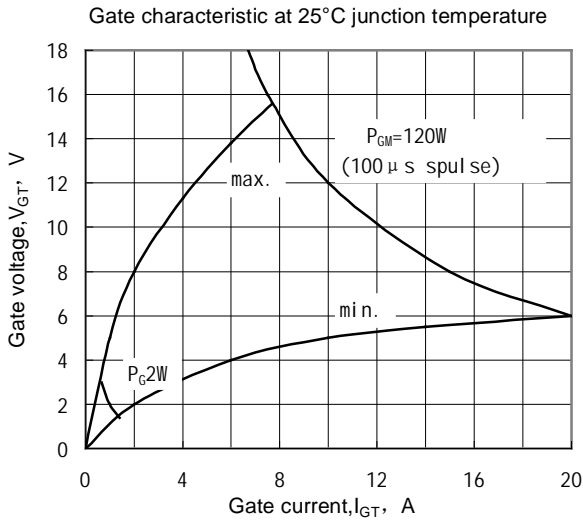


Fig.9

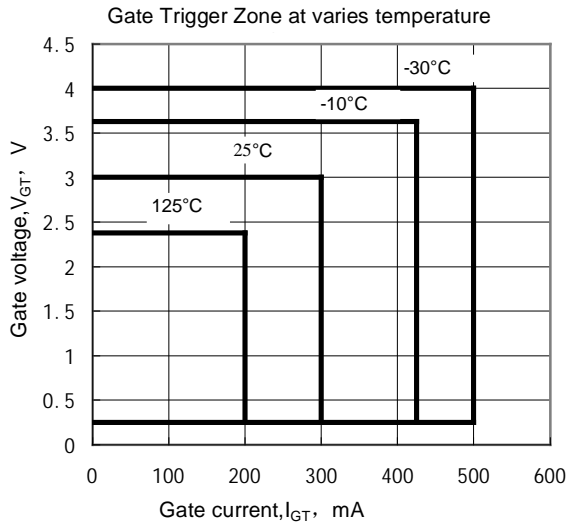


Fig.10

Outline:

