

Y100KPH

PHASE CONTROL THYRISTOR

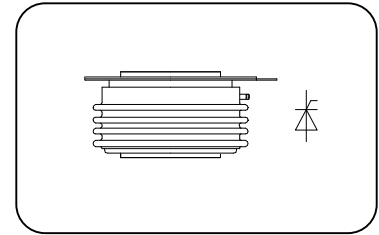
Features:

- 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

$I_{T(AV)}$ **4755 A**
 V_{DRM}/V_{RRM} **1900-3000V**
 I_{TSM} **57 KA**
 I^2t **16245 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			4755	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	1900		3000	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			57	KA
I^2t	I ² T for fusing coordination	V_R =0.6V _{RRM}				16245	A ² s*10 ³
V_{TO}	Threshold voltage		125			0.91	V
r_T	On-state slop resistance					0.09	mW
V_{TM}	Peak on-state voltage	I_{TM} =5000A, F=40KN	125			1.36	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM} =0.67V _{DRM}	125			500	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM} = 67%V _{DRM} to 4000A, Gate pulse t _r ≤0.5 μ s I _{GM} =1.5A Repetitive	125			250	A/μs
I_{rm}	Reverse recovery current	I_{TM} =2000A, tp=1000μs, di/dt=-20A/μs, V_R =50V	125			250	A
t_{rr}	Reverse recovery time					26	μs
Q_{rr}	Recovery charge					3250	μC
I_{GT}	Gate trigger current	V_A =12V, I _A =1A	25	40		450	mA
V_{GT}	Gate trigger voltage			0.9		3.5	V
I_H	Holding current			20		1000	mA
V_{GD}	Non-trigger gate voltage	V_{DM} =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 106KN				0.0075	°C /W
F_m	Mounting force			98		113	KN
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				1100		g
Outline	KT100cT						

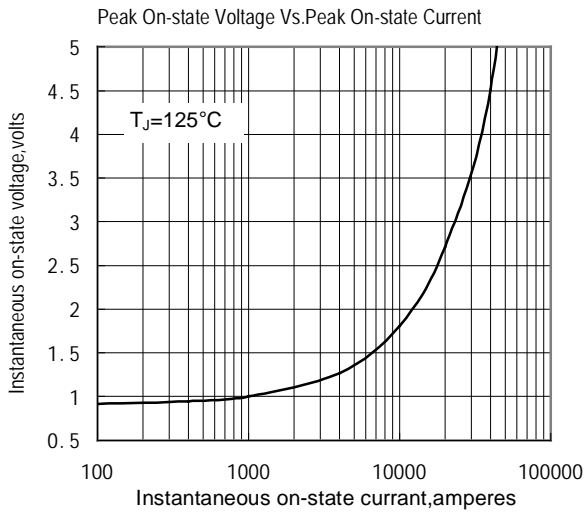


Fig.1

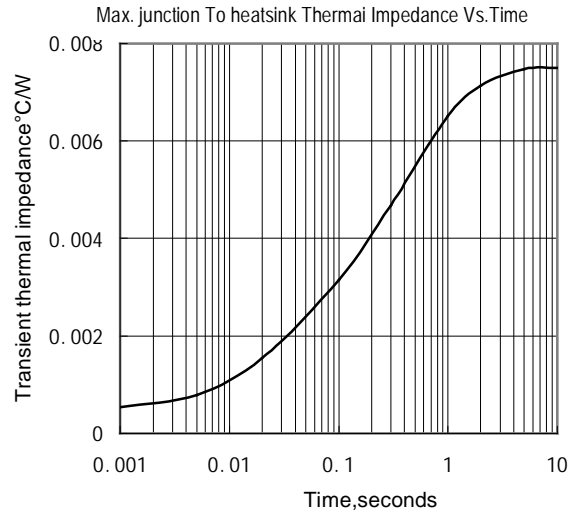


Fig.2

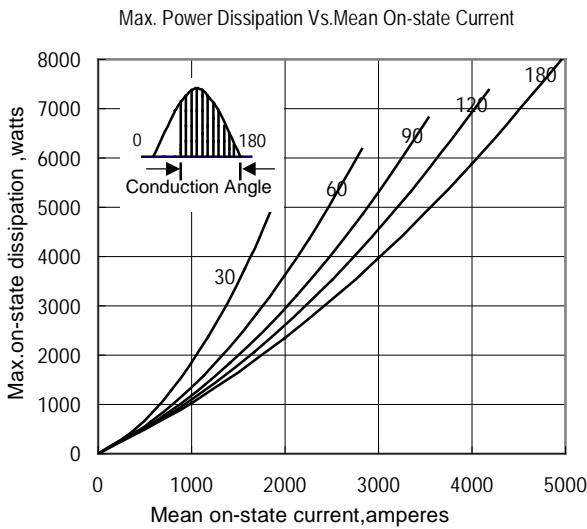


Fig.3

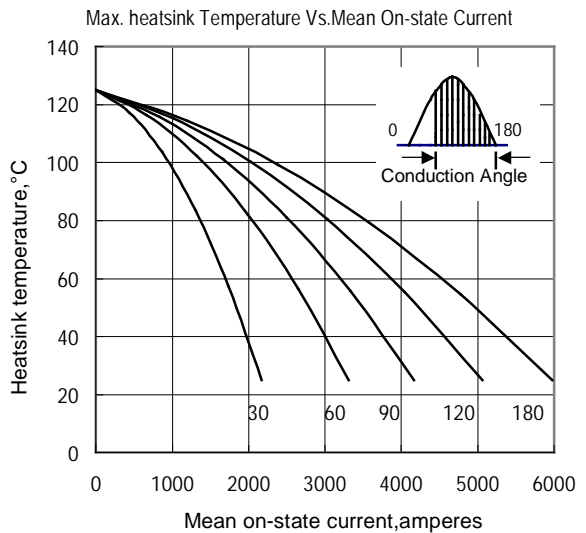


Fig.4

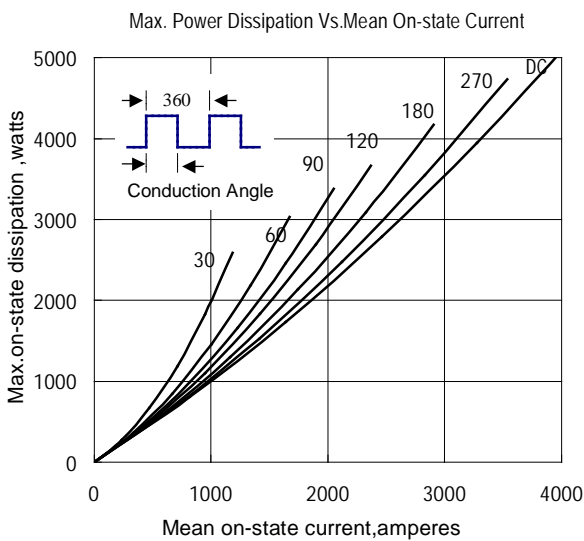


Fig.5

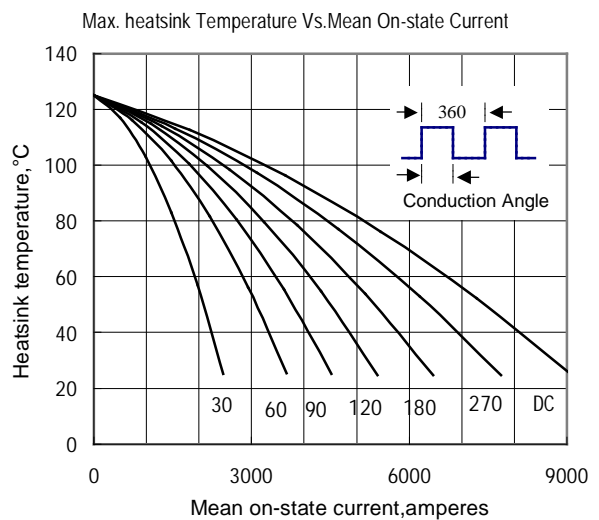


Fig.6

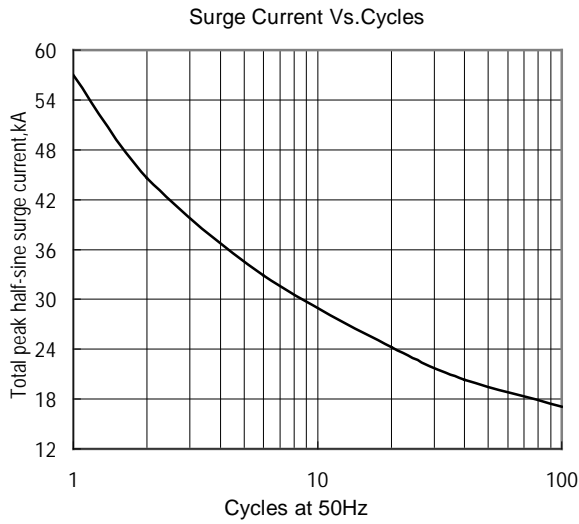


Fig.7

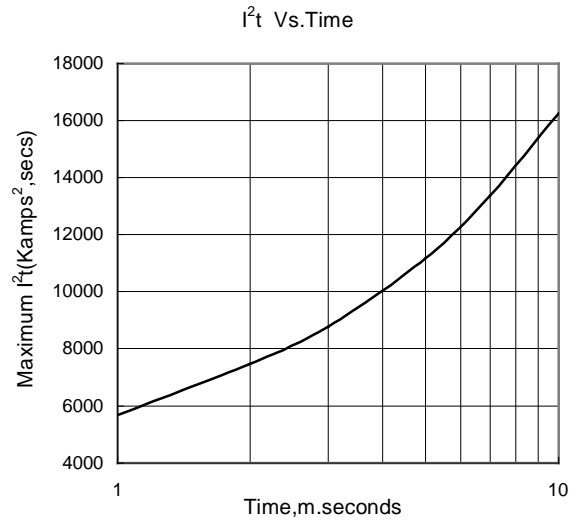


Fig.8

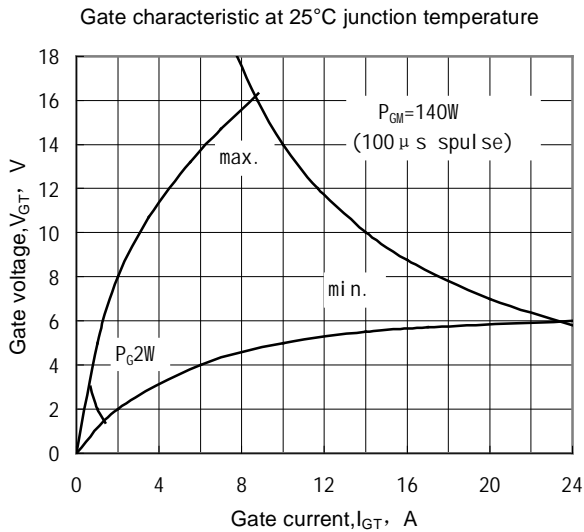


Fig.9

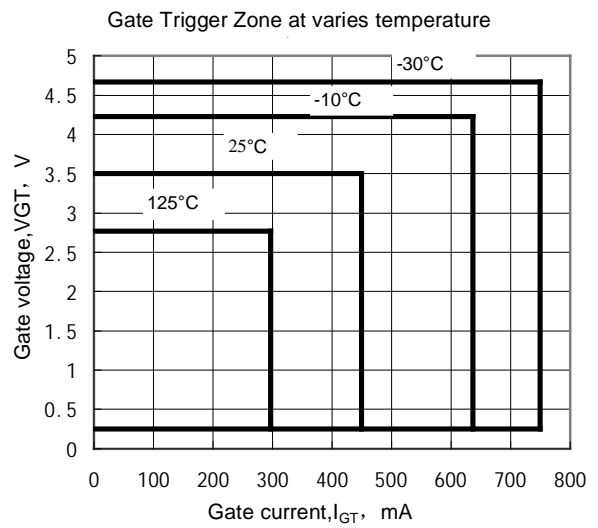


Fig.10

Outline:

