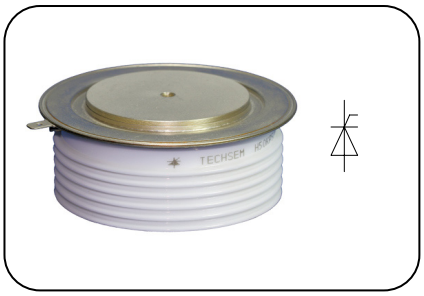
TECHSEM

H50KPS
PHASE CONTROL THYRISTOR

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

Typical Applications
- AC controllers
- DC and AC motor control
- Controlled rectifiers

$I_{T(AV)}$	650 A
V_{DRM}/V_{RRM}	6600-7200V
I_{TSM}	6.4 kA
I^2t	205 10^3A^2S



SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T_j(°C)	VALUE			UNIT
					Min		Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled	T_C=70°C	125			650	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	6600		7200	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			200	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			6.4	kA
I^2t	I^2t for fusing coordination						205	A^2s*10^3
V_{TO}	Threshold voltage			125			1.28	V
r_T	On-state slope resistance						1.32	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1000A, F=24kN		25			2.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM}		125			2000	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} to 2000A, Gate pulse t_r ≤0.5μs I_{GM}=1.5A		125			100	A/μs
Q_{rr}	Recovery charge	I_{TM}=2000A, tp=2000μs, di/dt=-5A/μs, V_R =50V		125		2900		μC
I_{GT}	Gate trigger current	V_A=12V, I_A=1A		25	30		300	mA
V_{GT}	Gate trigger voltage				0.8		3.0	V
I_H	Holding current				25		200	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=0.67V_{DRM}		125	0.3			V
$R_{th(j-C)}$	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 24kN					0.022	°C /W
$R_{th(C-h)}$	Thermal resistance case to heatsink						0.005	°C /W
F_m	Mounting force				19	24	26	kN
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					560		g
Outline	KT50dT							

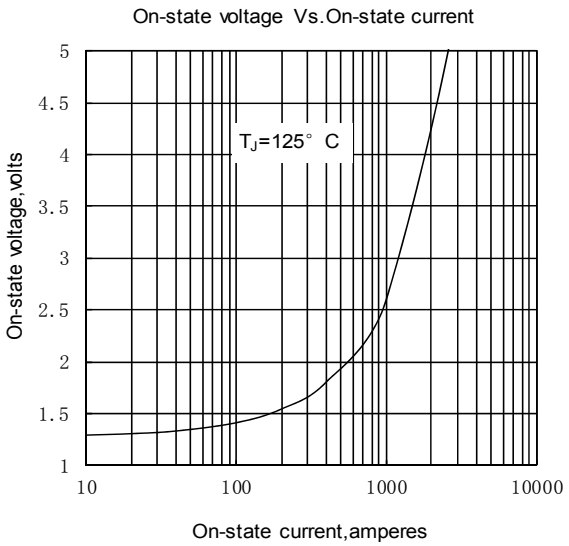


Fig.1

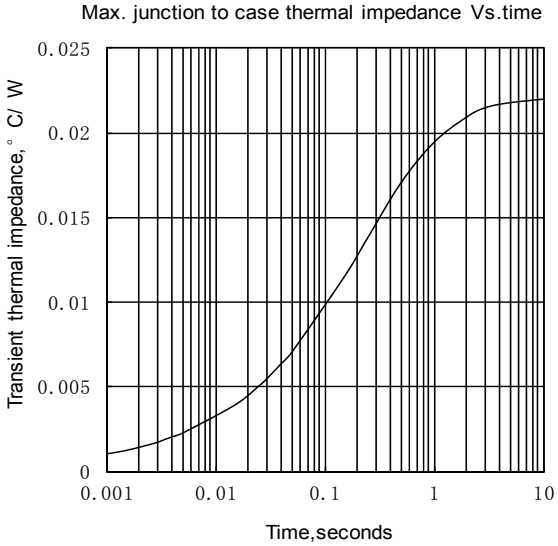


Fig.2

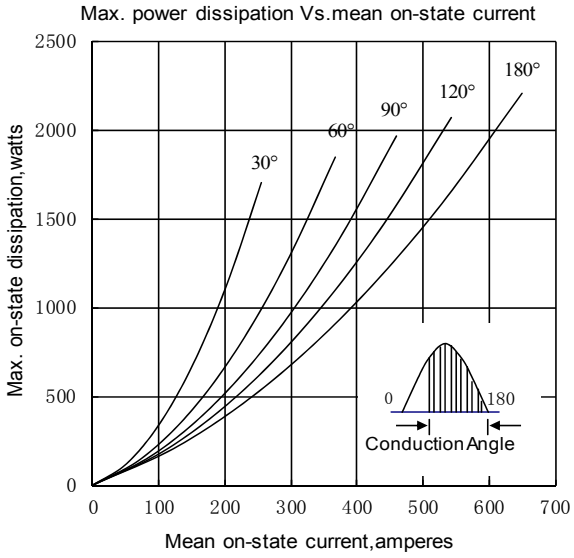


Fig.3

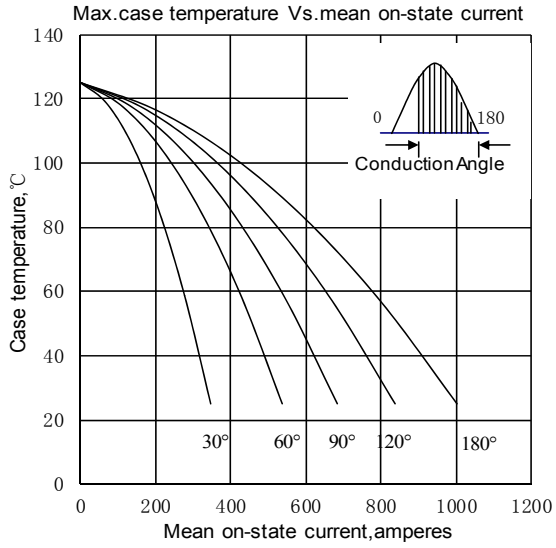


Fig.4

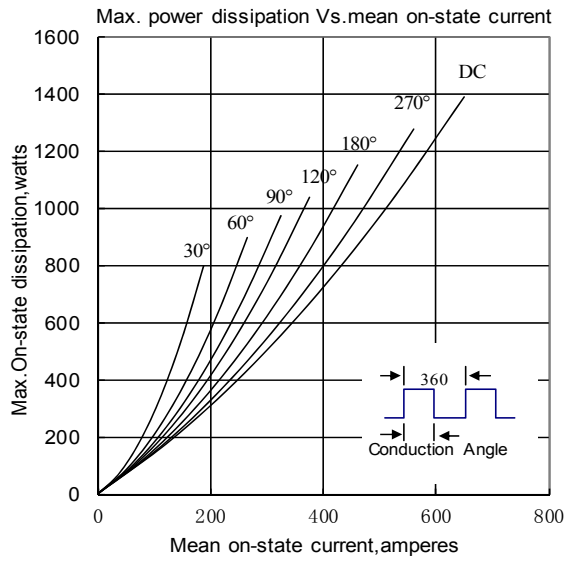


Fig5

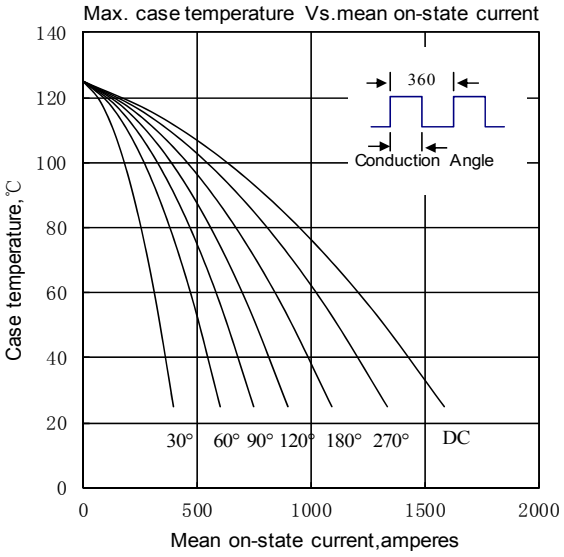


Fig6

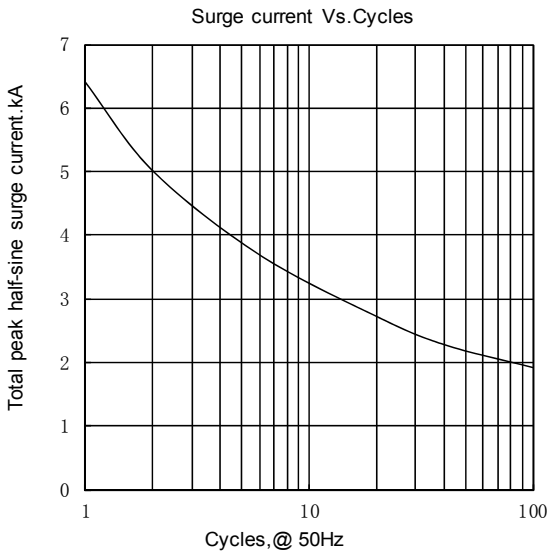


Fig.7

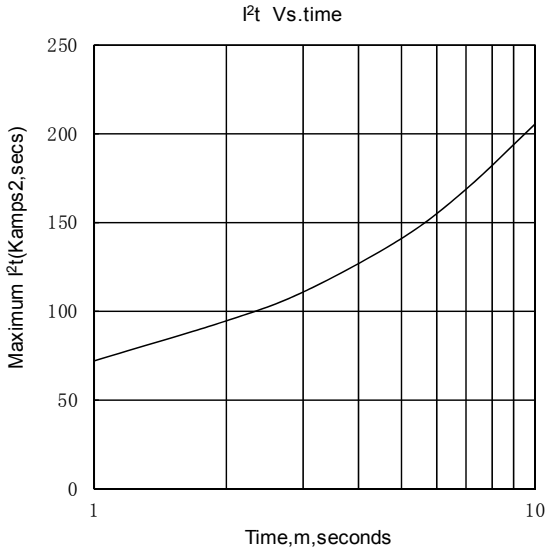


Fig.8

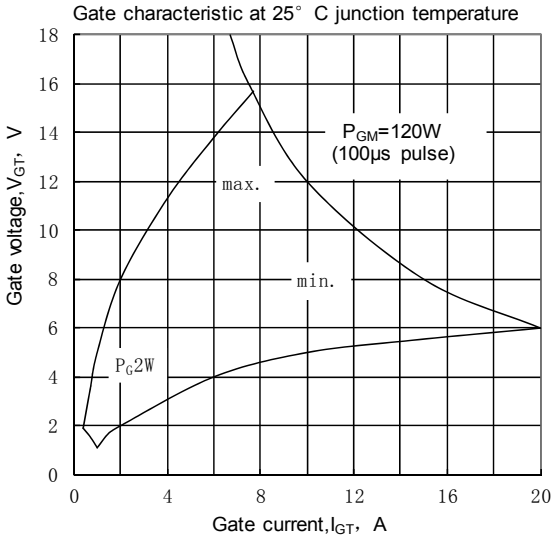


Fig.9

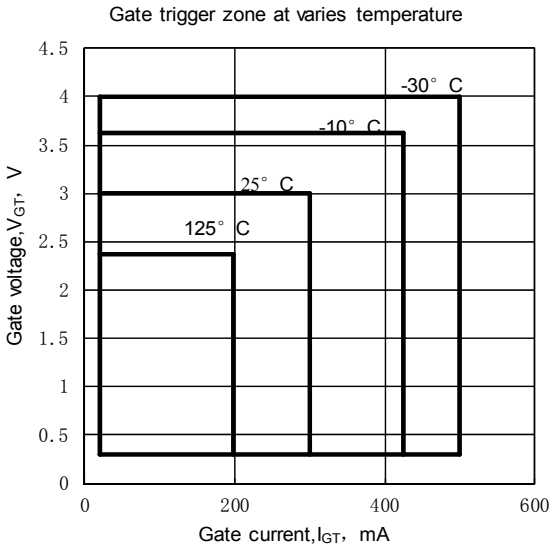


Fig.10

Outline: