KK2000A/1200-1800V
FAST TURN-OFF THYRISTOR

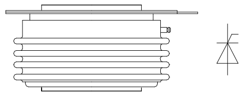
Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	**2000A**
V_{DRM}/V_{RRM}	**1200~1800V**
t_q	**18~37μs**
I_{TSM}	**23 kA**
I^2t	**2645 10^3A^2S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE Min	Type	Max	UNIT
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, T_C=55°C	125		2000	2240	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	1200		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	V_D= V_{DRM} V_R= V_{RRM}	125			160	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			23	kA
I^2t	I^2T for fusing coordination					2645	A^2s*10^3
V_{TO}	Threshold voltage		125			1.45	V
r_T	On-state slop resistance					0.21	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=4000A, F=35kN	25			3.15	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM}	125			1000	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} , ITM=(2-3)IT(AV),t=5s , Gate pulse t_r ≤0.5μs I_{GM}=1.5A f=50Hz	125			600	A/μs
Q_{rr}	Recovery charge	I_{TM}=2000A,tp=1000μs, di/dt=-20A/μs,V_R=100V	125		900		μC
tq	Circuit commutated turn-off time	I_{TM}=2000A,tp=1000μs, V_R =100V dv/dt=30V/μs ,di/dt=-20A/μs	125	18		37	μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	40		250	mA
V_{GT}	Gate trigger voltage			0.9		2.5	V
I_H	Holding current			20		400	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.3	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180^0 sine, double side cooled Clamping force 35kN				0.012	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.003	
F_m	Mounting force			30		40	kN
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				900/1190		g
Outline	KT75cT/dT						

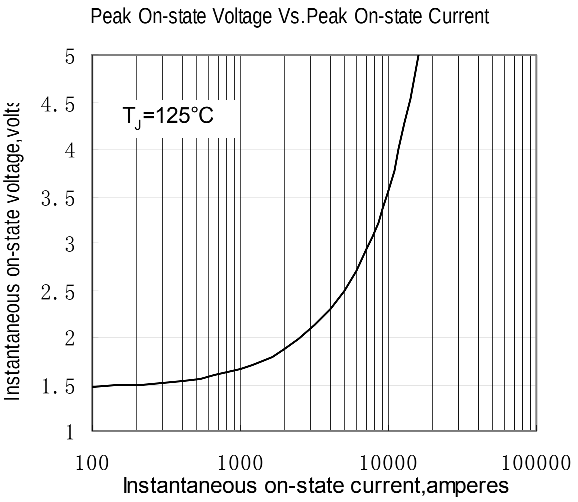


Fig.1

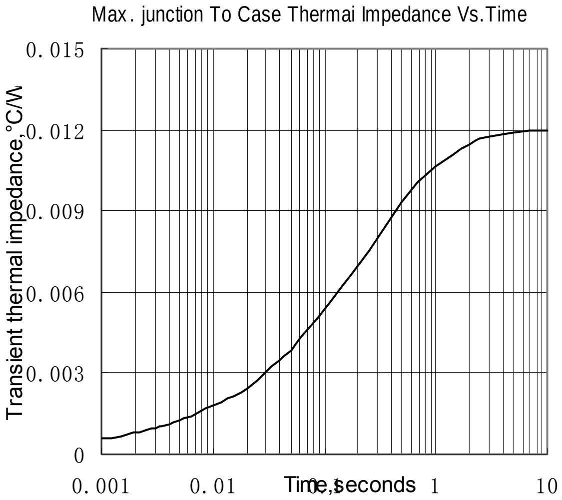


Fig.2

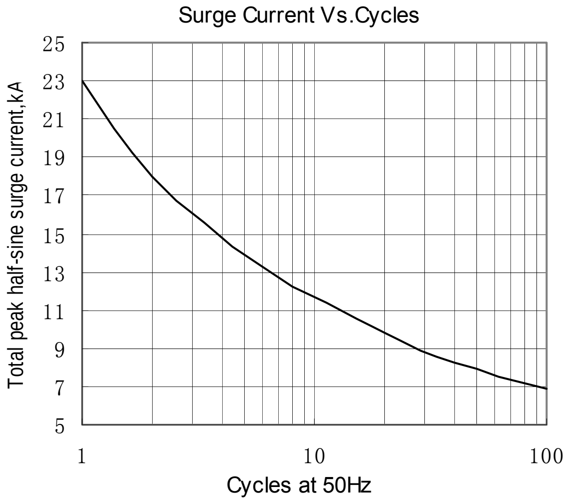


Fig.3

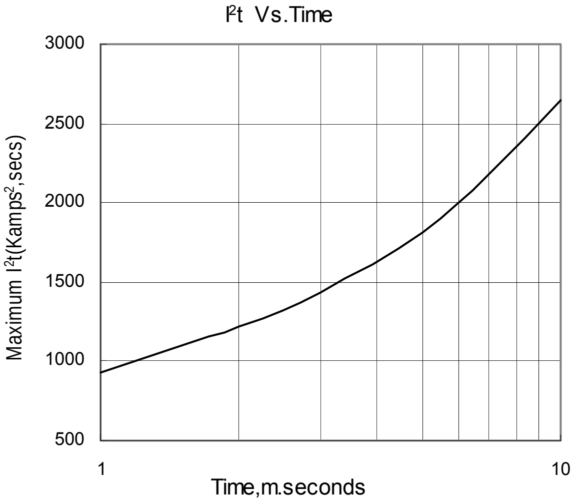


Fig.4

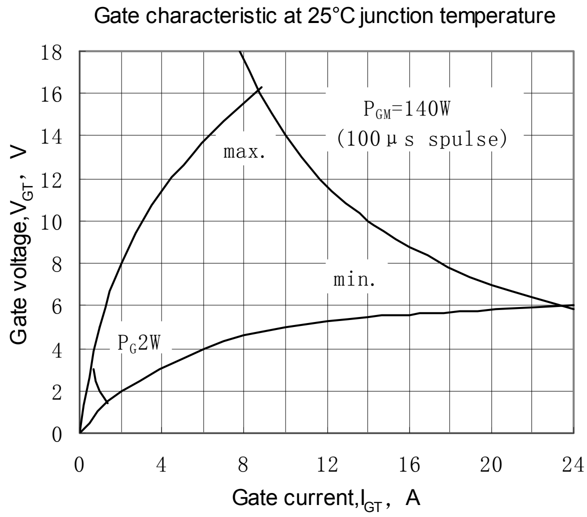


Fig.5

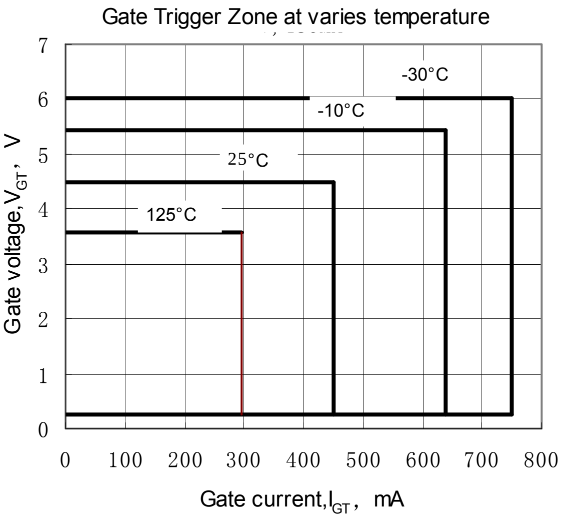


Fig.6

Outline:

图14-KT75cT

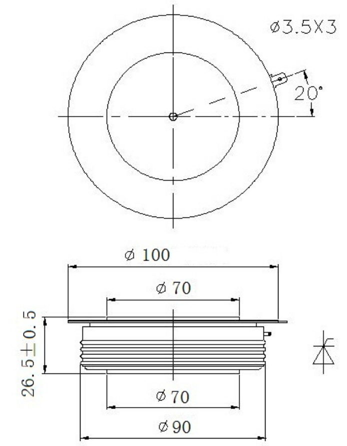


图15-KT75dT