KG300A High Frequency Thyhristor

Feature

- Full diffusion process,Distributed extension to amplify the gate structure
- Low switching Loss,Excellent dynamic characteristic
- Excellent high frequency performances,applicable frequency 2.5-10KHz
- Capsule type ceramic package, Double-sided cooling

Typical Application

- Inverter,Electric welder
- Chopper,Inductor
- Various types of forced converter

$I_{T(AV)}$	300A
V_{DRM}/V_{RRM}	800-2500V
Tq	10-16us
I_{TSM}	3.6KA

SYMBOL	CHARCTERISTIC	TEST CONDITIONS	T_J (℃)	VALUE		UNIT
				Min	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wawe 50Hz Double side cooled, THS=55℃	125		300	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repettive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}=V_{DRM}&$V_{RRM+100V}$	125	800	2500	V
I_{DRM} I_{RRM}	Repetitive peak current	V_{DM}=V_{DRM} V_{RM}=V_{RRM}	125		40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}	125		3.6	KA
I^2t	I^2t for fusing coordination				168	A^{2S}*10
V_{TO}	Threshold voltage		125		1.67	V
r_T	On-state slop resistance				1.32	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A,F=15KN	25		3.2	V
dv/dt	Critical rate of rise of-state voltage	V_{DM}=0.67V_{DRM}	125		500	V/us
di/dt	Critical rate of rise of on-state current	V_{DM}=67%V_{DRM} TO 1000A, Gate pulse tr≤0.5us I_{GM}=1.5A	125		200	A/us
I_{TM}	Reverse recovery current	I_{TM}=900A，tq=1000us Di/dt=-20A/us. V_r=50V	125	30		A
t_{rr}	Reverse recovery time			2.5		us
Q_{rr}	Recovery charge			38	50	uC
tq	Circuit commutated turn-off time	I_{TM}=900A,tq=1000us, di/dt=20a/us V_R=50V	125	10	16	us
I_{GT}	Gate trigger current	V_A=12V,I_A=1A	25	30	250	mA
V_{GT}	Gate trigger voltage			0.8	2.5	V
I_H	Holding current			20	400	mA
V_{GD}	Npn-trigger gate voltage	V_{DM}=0.67V_{DRM}	125	0.3		V
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At180° sine double side cooled Clamping force 5.0kn			0.035	℃/W
F_M	Mounting force			10	20	KN
T_{stq}	Stored temperature			-40	140	℃
W_t	Weight					g
Outline						

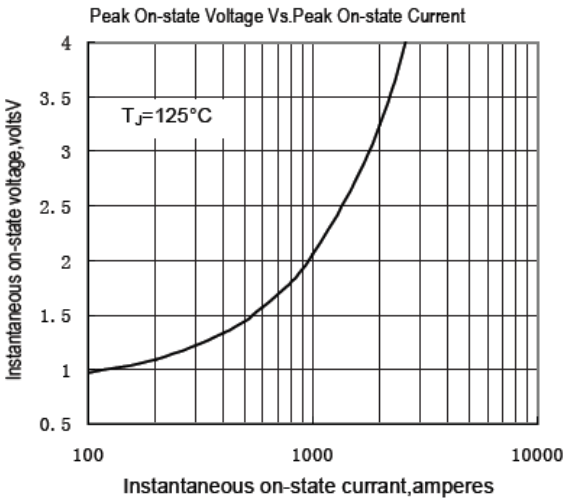


Fig.1

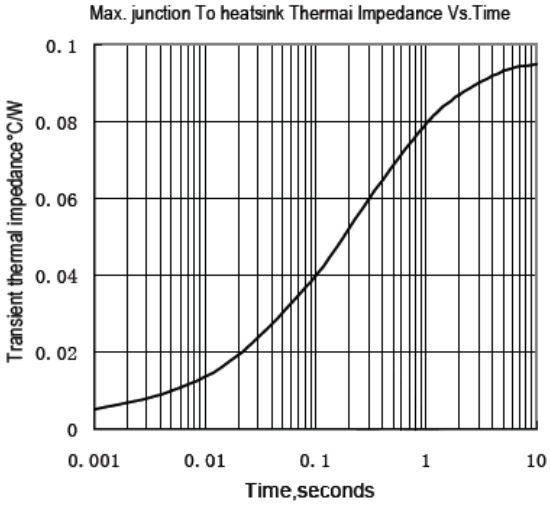


Fig.2

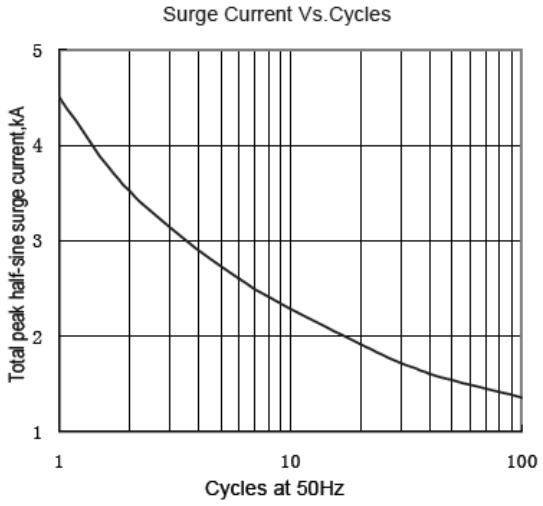


Fig.3

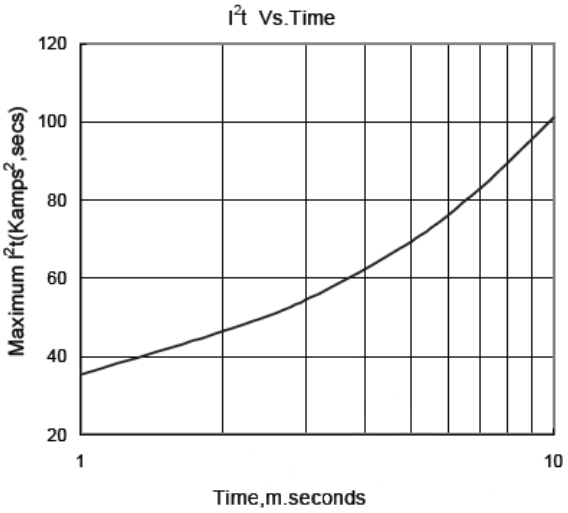


Fig.4

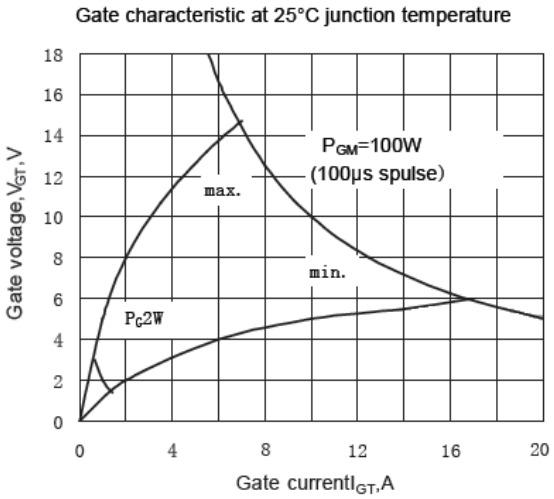


Fig.5

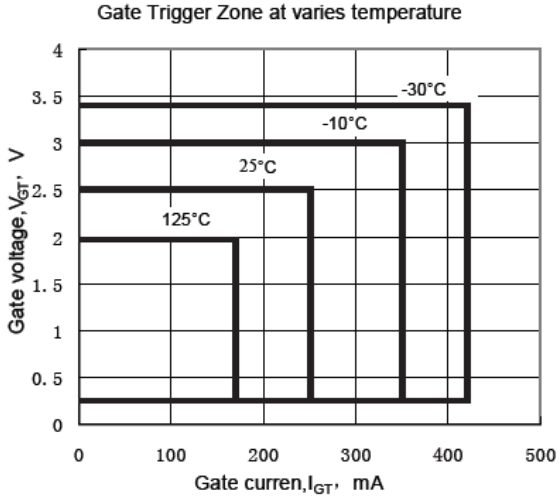
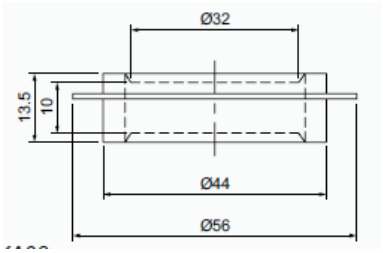
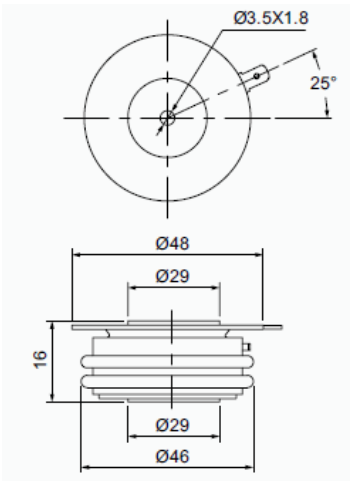


Fig.6

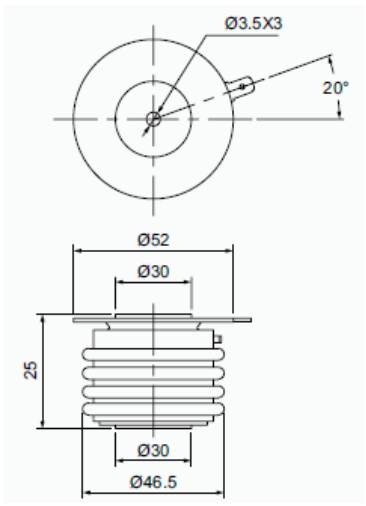
Outline:


Ø32
13.5
10
Ø44
Ø56

1


Ø3.5X1.8
25°
Ø48
Ø29
16
Ø29
Ø46

2


Ø3.5X3
20°
Ø52
Ø30
25
Ø30
Ø46.5

3