TECHSEM

Y45KKD
HIGH F REQUENCY THYRISTOR

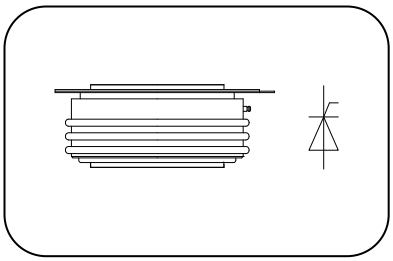
Features：

- Int erdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses
- Short turn-off time
- Hermetic metal cases with ceramic insulators

Typical Applications

- Ind uctive heating
- E lectronic welders
- S elf-commutated inverters
- AC motor speed control
- General power switching applications

$I_{T(AV)}$	**1010A**
V_{DRM}/V_{RRM}	**1200~1600V**
t_q	**18~36μs**
I_{TSM}	**11kA**



SYMBOL CHAR	ACTERISTIC	TEST CONDITIONS		T_j(°C)	VALUE			UNIT
					Min T	ype	Max	
$I_{T(AV)}$ Mean	on-state current	180° half sine wave 50Hz Double side cooled,	T_C=55°C	125			1010	A
			T_C=85°C				700	
			old model				600	
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		1600	V
I_{DRM} I_{RRM}	Repetitive peak off-state current Repetitive peak reverse current	V_D= V_{DRM} V_R= V_{RRM}		125			50	mA
I_{TSM} S	urge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			11	kA
I^2t I	^{2}T for fusing coordination						605	A^2s*10^3
V_{TO} Th	reshold voltage			125			1. 70	V
r_T	On-state slop resistance						0.48	mΩ
V_{TM} P	eak on-state voltage	I_{TM}=1800A, F=21kN		125			2.56	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM} 125					200	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} t o 1600A, Gate pulse t_r ≤0.5μs I_{GM}=1.5A		125			1500	A/μs
Q_{rr} R	ecovery charge	I_{TM}=1000A,tp=2000μs, di/dt=-60A/μs,V_R=50V		125	83		100	μC
tq	Circuit commutated turn-off time	I_{TM}=800A,tp=1000μs, V_R =50V dv/dt=30V/μs ,di/dt=-20A/μs		125	18		36	μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A 25			30		250	mA
V_{GT} Gate	trigger voltage				0.8		3.0	V
I_H H	olding current				20		400	mA
V_{GD} N	on-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 21kN					0.024	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.006	
F_m Moun	ting force				18		25	kN
T_{stg} S	tored temperature				-40		140	°C
W_t We	ight					3800		g
Outline	KT44cT							

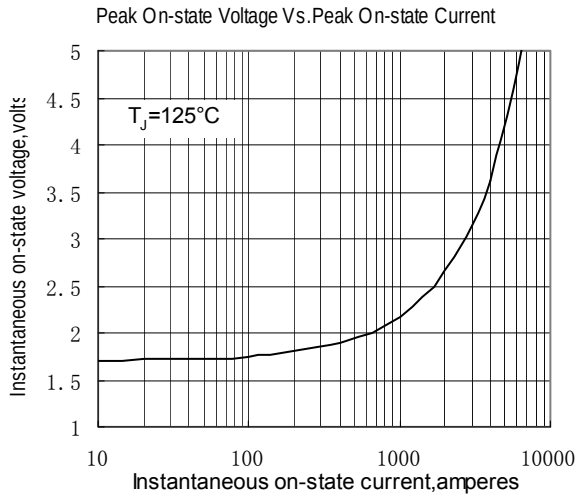


Fig.1

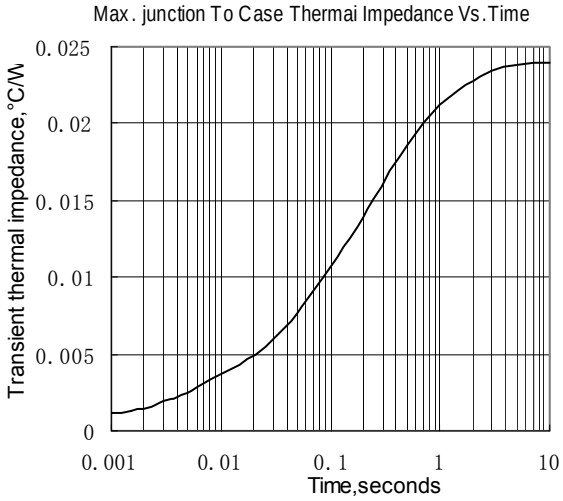


Fig.2

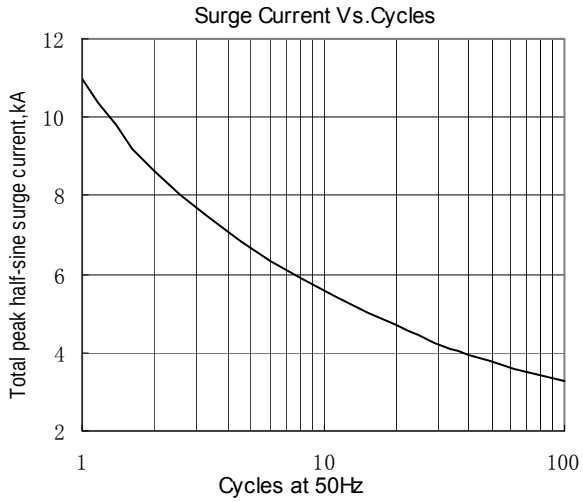


Fig.3

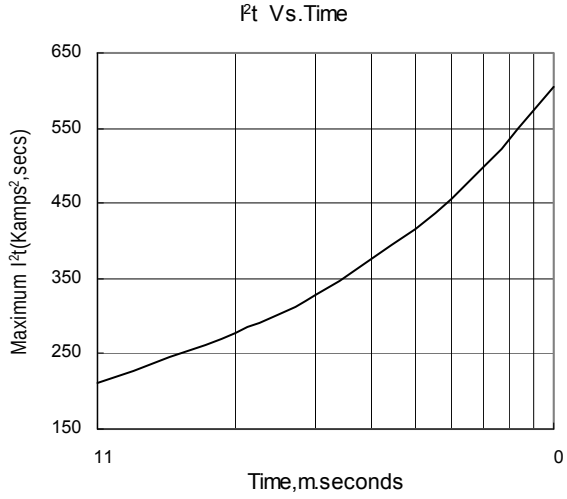


Fig.4

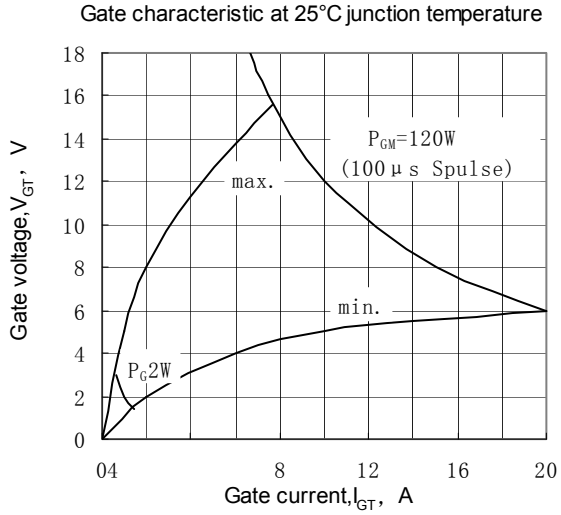


Fig.5

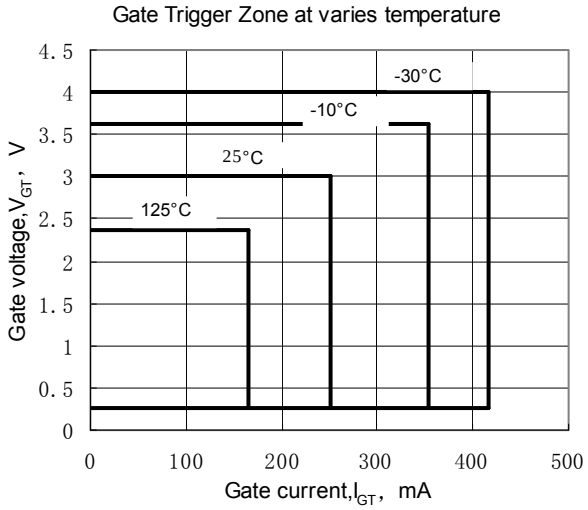


Fig.6

Outline: