



Features:

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control

Part No. Y45KAD-KT44cT

I_{T(AV)}	1050A
V_{DRM}, V_{RRM}	1200V 1400V
t_q	12~28μs

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _J (°C)	VALUE			UNIT	
					Min	Type	Max		
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T _C =55°C	125			1050	A	
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	1100		1400	V	
I _{DRM} I _{RRM}	Repetitive peak off-state current Repetitive peak reverse current	at V _{DRM} at V _{RRM}		125			60	mA	
I _{TSM}	Surge on-state current	10ms half sine wave V _R =0.6V _{RRM}		125			12	kA	
I ² t	I ² t for fusing coordination						720	A ² s*10 ³	
V _{TO}	Threshold voltage			125			1.61	V	
r _T	On-state slope resistance						0.45	mΩ	
V _{TM}	Peak on-state voltage	I _{TM} =1800A, F=21kN		25			3.20	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} to 1600A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125			1500	A/μs	
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-20A/μs, V _R =100V		125		83	100	μC	
t _q	Circuit commutated turn-off time	I _{TM} =1000A, tp=4000μs, V _R =100V dv/dt=30V/μs, di/dt=-20A/μs		125	12		28	μs	
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25			250	mA	
V _{GT}	Gate trigger voltage					0.8		3.0	V
I _H	Holding current					20		400	mA
I _L	Latching current							500	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° 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	Mounting force				18		25	kN	
T _{vj}	Junction temperature				-40		125	°C	
T _{stg}	Stored temperature				-40		140	°C	
W _t	Weight					380		g	
Outline	KT44cT								

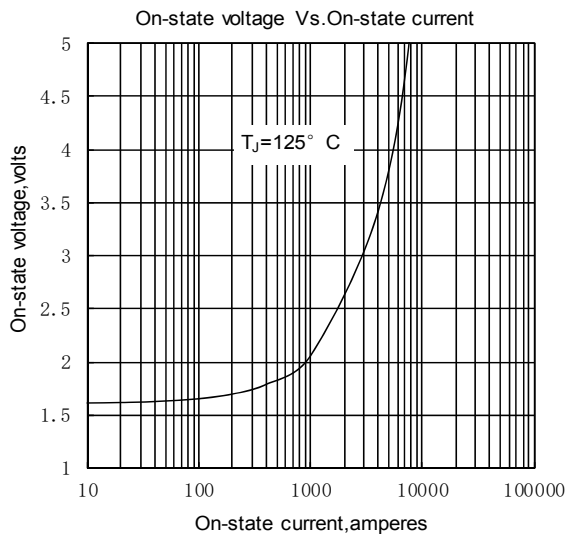


Fig. 1

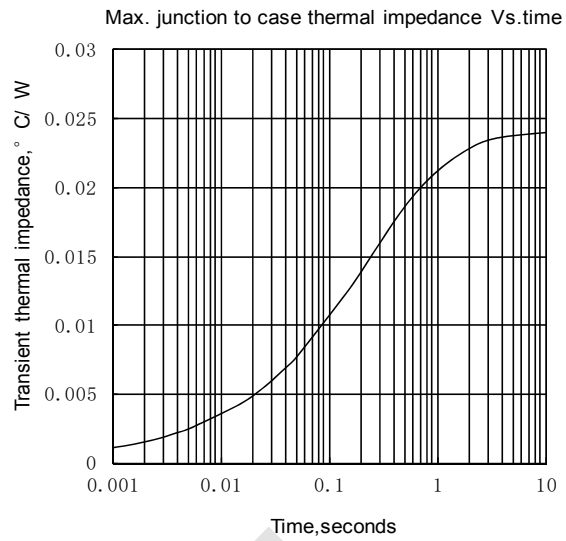


Fig. 2

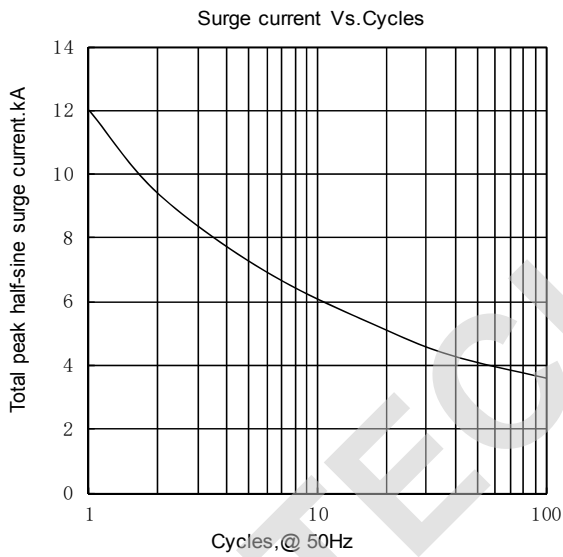


Fig. 3

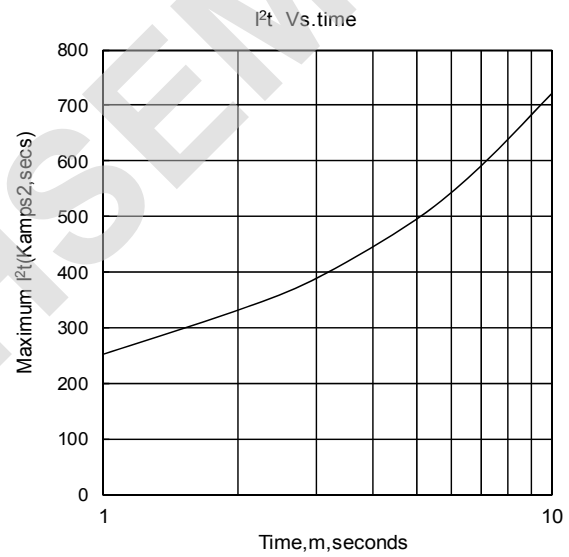


Fig. 4

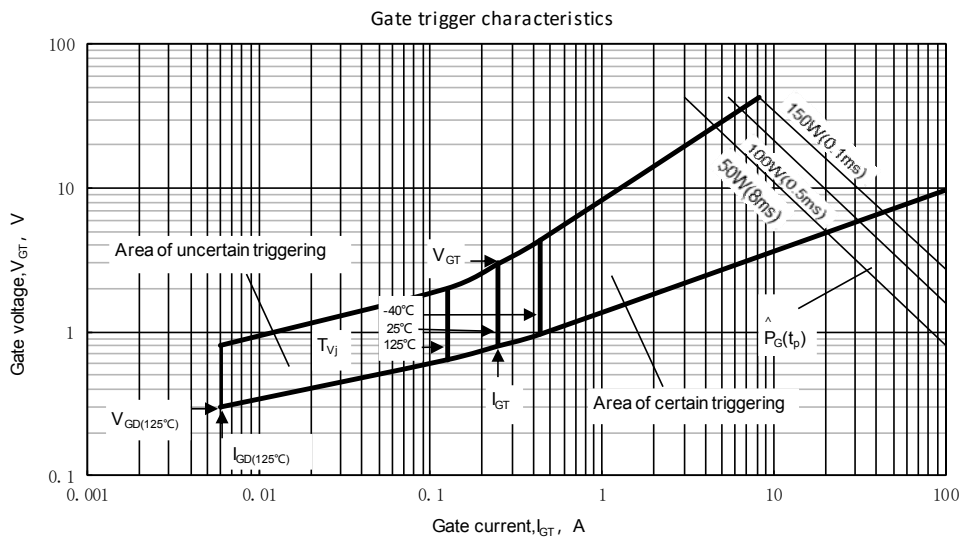
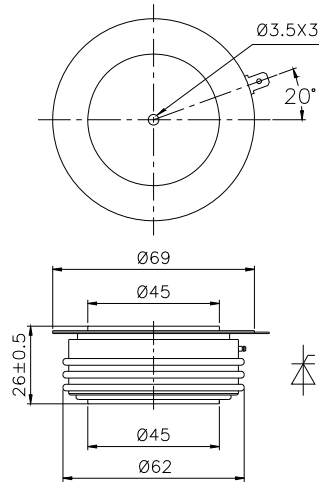


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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