



Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

Part No. Y50KKJ-KT50cT

I_{T(AV)}	1250A
V_{DRM}, V_{RRM}	3200V 3400V
	3600V
t_q	40~80μs

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			1250	A
			T _c =70°C	125			1000	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	3100		3600	V	
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			160	mA	
I _{TSM}	Surge on-state current	10ms half sine wave	125			13	kA	
I ² t	I ² t for fusing coordination					845	10 ³ A ² s	
V _{TO}	Threshold voltage		125			2.70	V	
r _T	On-state slope resistance					0.26	mΩ	
V _{TM}	Peak on-state voltage	I _{TM} =1500A, F=24kN	25			3.09	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} Gate pulse t _r ≤0.5μs I _{GM} =1.5A Single pulse	125			800	A/μs	
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-20A/μs, V _R =100V	125		2200		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	40		80	μs	
I _{GT}	Gate trigger current	V _A =12V, I _A =1A	25	40		300	mA	
V _{GT}	Gate trigger voltage			0.9		3.0	V	
I _H	Holding current			20		1000	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	Double side cooled Clamping force 24kN				0.016	°C /W	
R _{th(c-h)}	Thermal resistance case to heat sink					0.005		
F _m	Mounting force			19		26	kN	
T _{vj}	Junction temperature			-40		125	°C	
T _{stg}	Stored temperature			-40		140	°C	
W _t	Weight					440	g	
Outline	KT50cT							

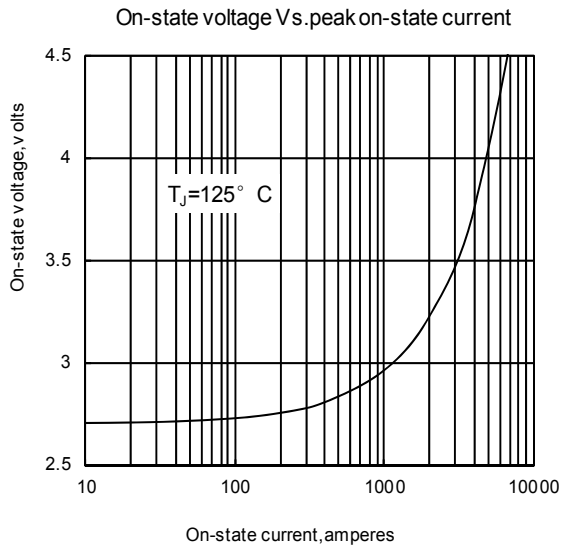


Fig1

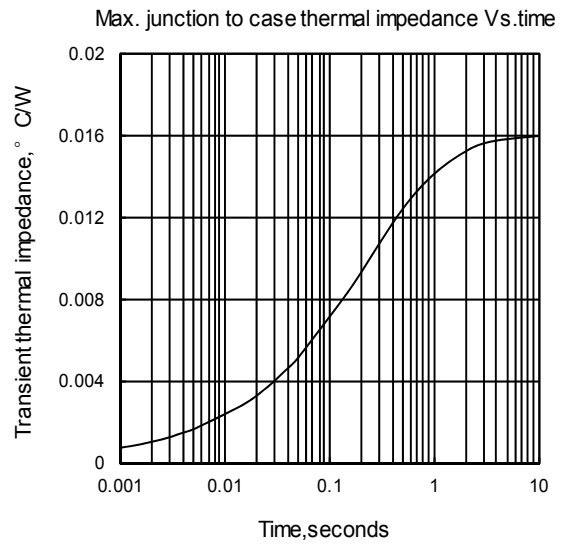


Fig2

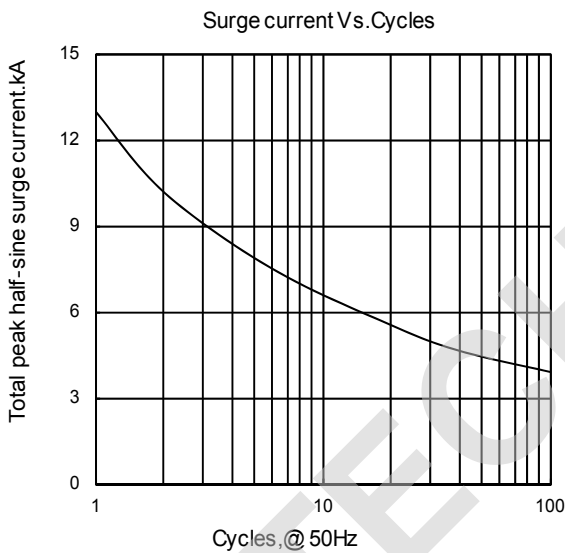


Fig3

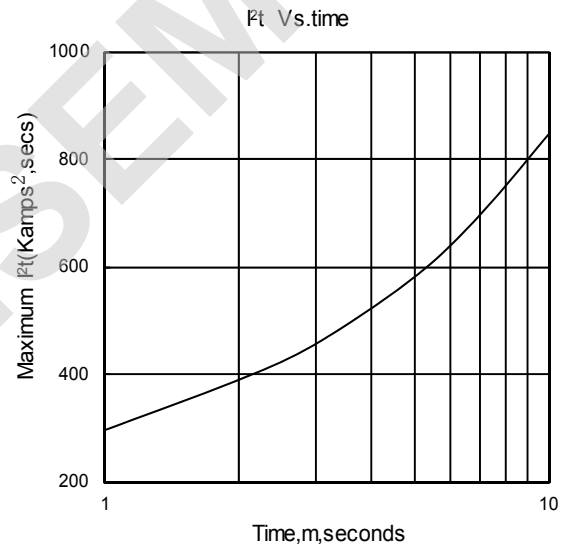


Fig4

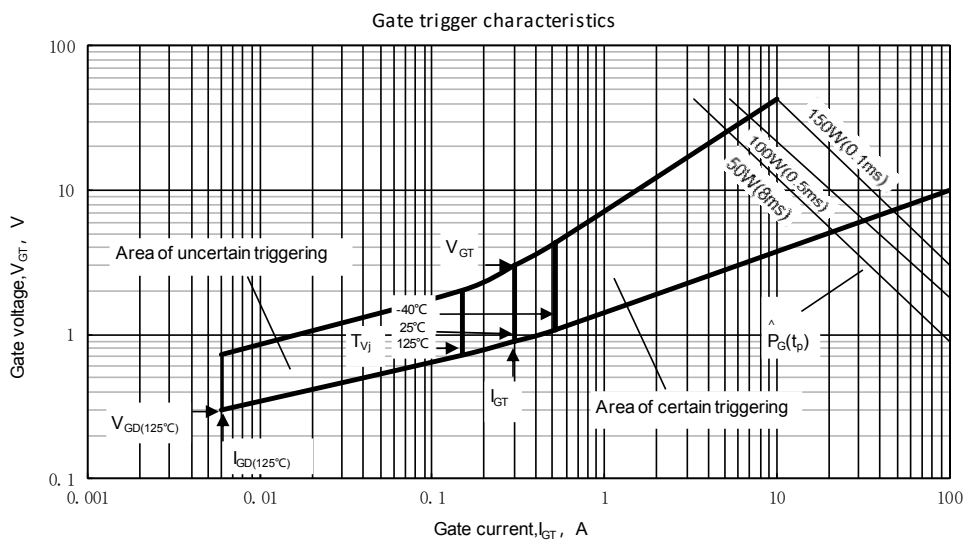
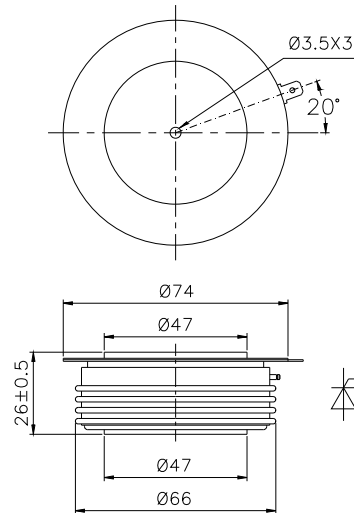


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

TECHSEM