

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$ **490A**
 V_{DRM}/V_{RRM} **800~1600V**
 t_q **18~50μs**
 I_{TSM} **4.3 kA**
 I^2t **92 10³A²S**



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			490	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	800		1600	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}		125			30	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			4.3	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					92	A ² s*10 ³
V _{TO}	Threshold voltage			125			1.60	V
r _T	On-state slope resistance						1.32	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =900A, F=7.0kN		25			3.00	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 800A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A f=1Hz		125			1200	A/μs
Q _{rr}	Recovery charge	I _{TM} =1000A,tp=2000μs, di/dt=-60A/μs,V _R =50V		125		350		μC
t _q	Circuit commutated turn-off time	I _{TM} =500A,tp=1000μs, V _R =50V dv/dt=30V/μs ,di/dt=-20A/μs		125	18		50	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° sine double side cooled Clamping force 7.0kN					0.045	°C /W
R _{th(c-h)}	Thermal resistance case to heat sink						0.010	
F _m	Mounting force				5.3		10	kN
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					80		g
Outline	KT25aT							

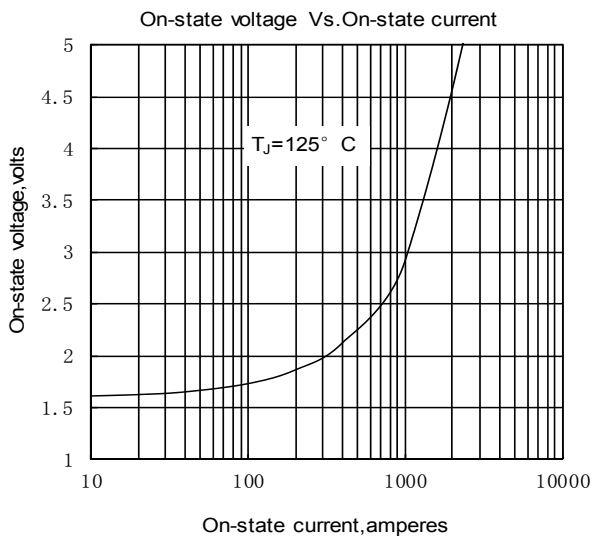


Fig. 1

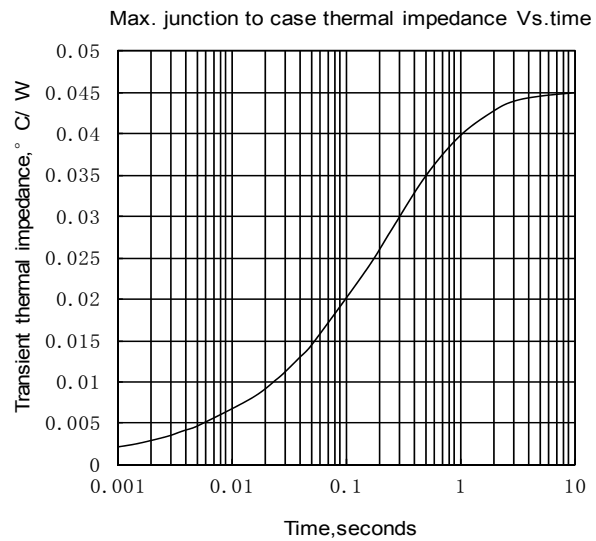


Fig. 2

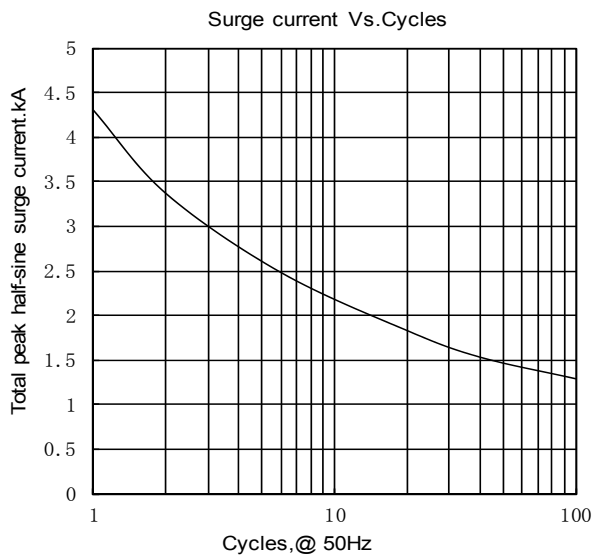


Fig. 3

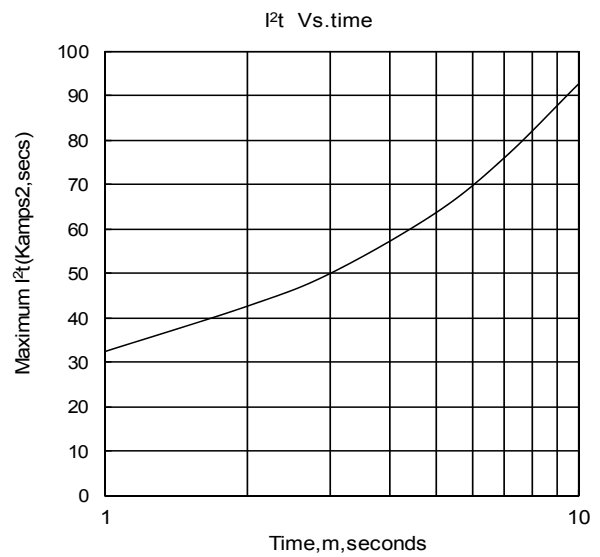


Fig. 4

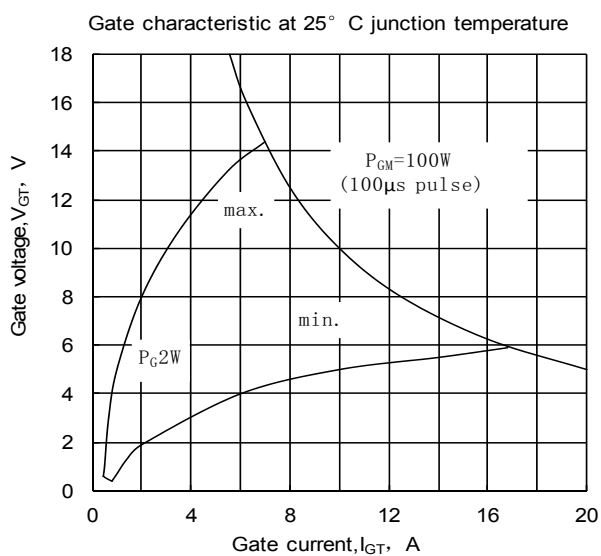


Fig. 5

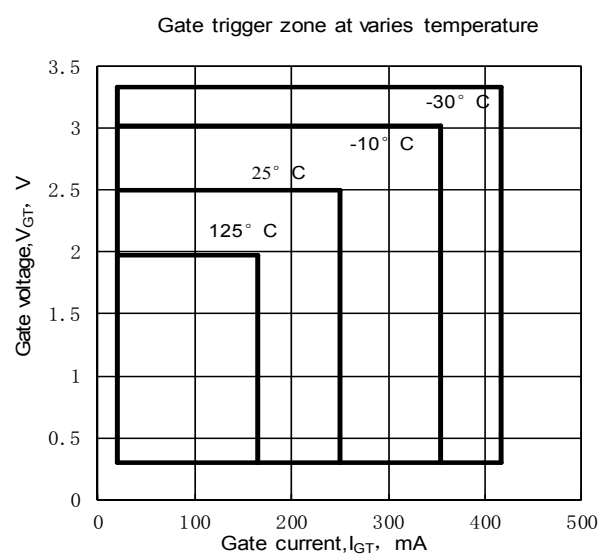


Fig. 6

Outline:

