

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			490	A
			T _C =85°C			330	
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	800		1600	V
I_{DRM} I_{RRM}	Repetitive peak current	$V_D=V_{DRM}$ $V_R=V_{RRM}$	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			4.3	kA
I^2t	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 slop resistance					1.32	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=1000A, F=7.0kN$	125			2.92	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			500	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 _{slg}	Stored temperature			-40		140	°C
W _t	Weight				80		g
Outline	KT25aT						

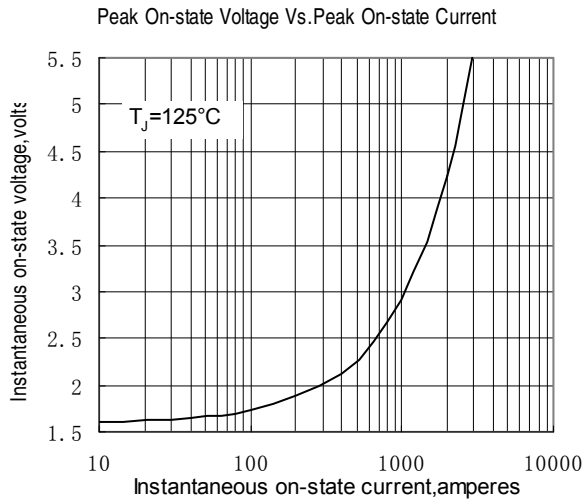


Fig.1

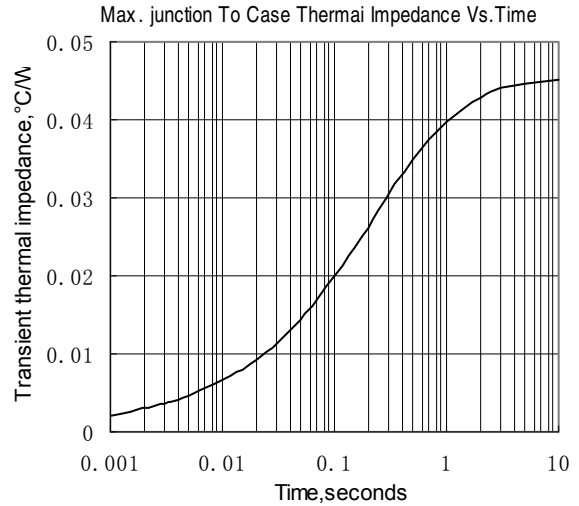


Fig.2

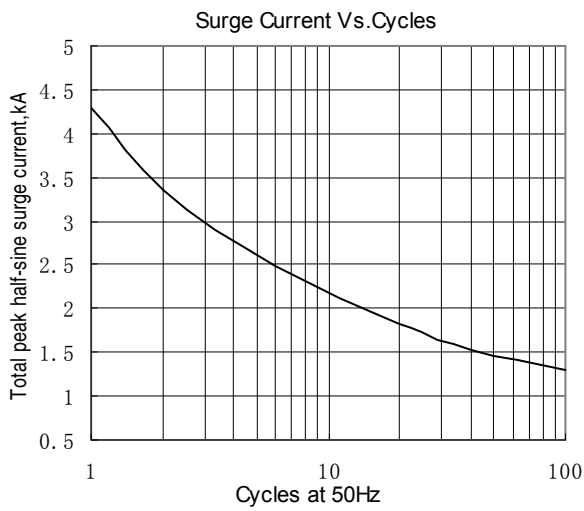


Fig.3

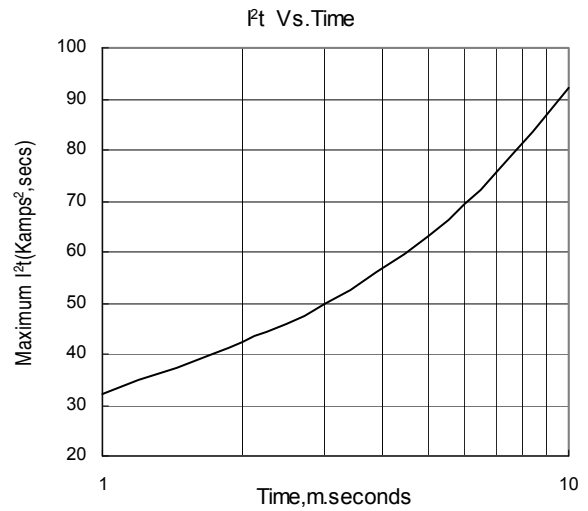


Fig.4

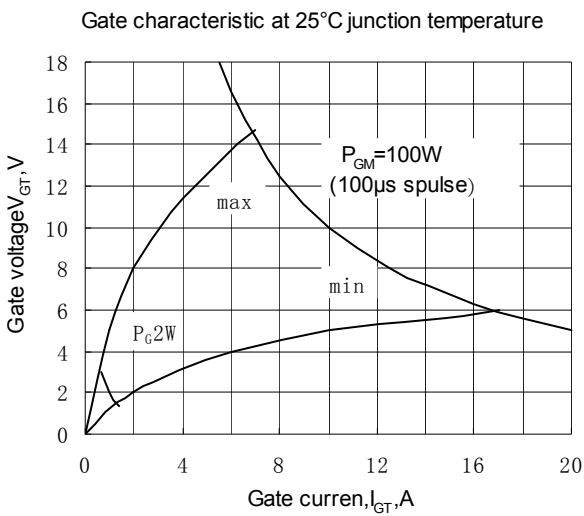


Fig.5

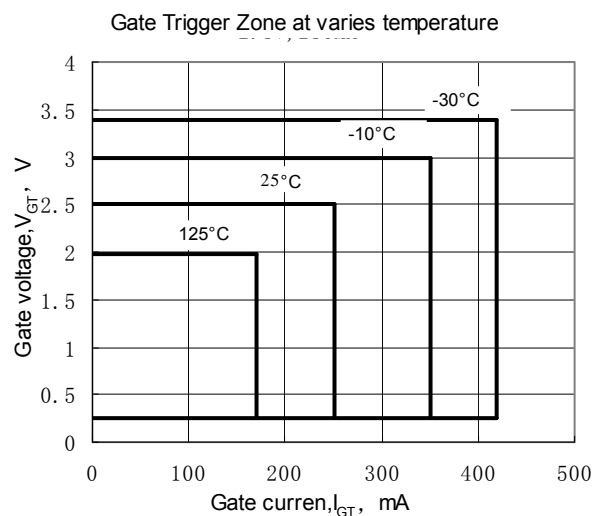


Fig.6

Outline:

