

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
- General power switching applications

$I_{T(AV)}$ **580A**
 V_{DRM}/V_{RRM} **800~1200V**
 t_q **8~20μs**
 I_{TSM} **5.4kA**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, $T_C=55^{\circ}C$	125			580	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10ms$	125	800		1200	V
I_{DRM} I_{RRM}	Repetitive peak off-state current Repetitive peak reverse current	at V_{DRM} at V_{RRM}	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			5.4	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				146	$A^2s \cdot 10^{-3}$
V_{TO}	Threshold voltage		125			1.45	V
r_T	On-state slope resistance					0.85	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=600A$, $F=7.0kN$	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 1000 Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$	125			1500	A/μs
Q_{rr}	Recovery charge	$I_{TM}=500A$, $t_p=2000\mu s$, $di/dt=-60A/\mu s$, $V_R=50V$	125		25	50	μC
t_q	Circuit commutated turn-off time	$I_{TM}=500A$, $t_p=1000\mu s$, $V_R=50V$ $dv/dt=30V/\mu s$, $di/dt=-20A/\mu s$	125	8		20	μs
I_{GT}	Gate trigger current	$V_A=12V$, $I_A=1A$	125	30		200	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		250	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	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.010	
F_m	Mounting force			5.3		10	kN
T_{stg}	Stored temperature			-40		140	$^{\circ}C$
W_t	Weight				80		g
Outline	KT25aT						

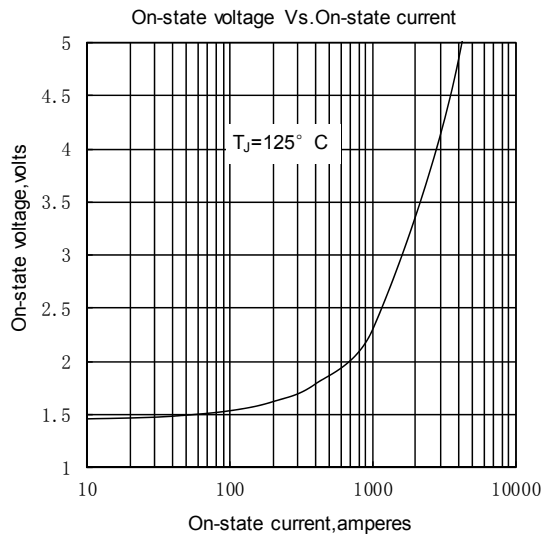


Fig. 1

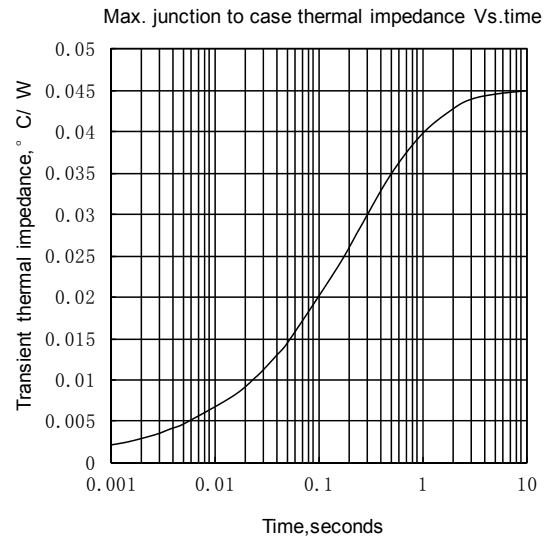


Fig. 2

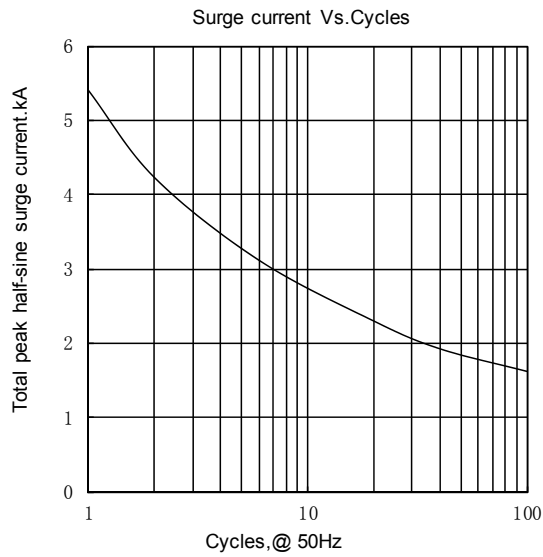


Fig. 3

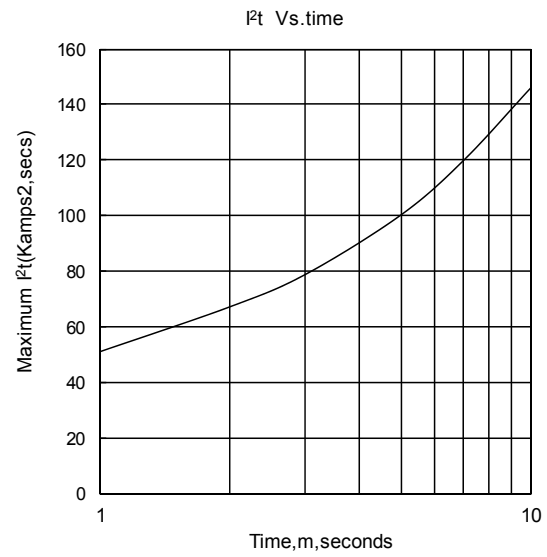


Fig. 4

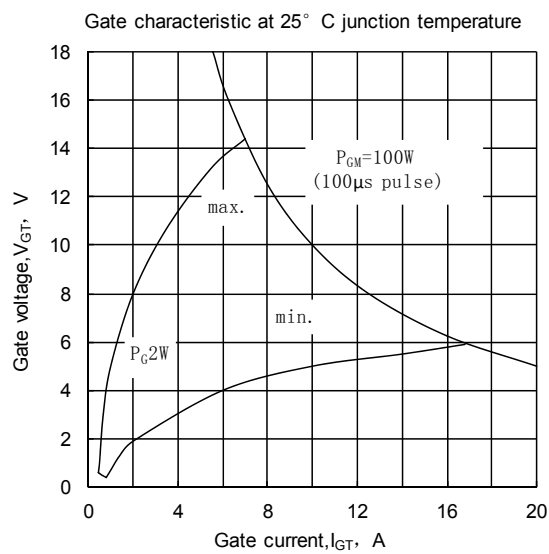


Fig. 5

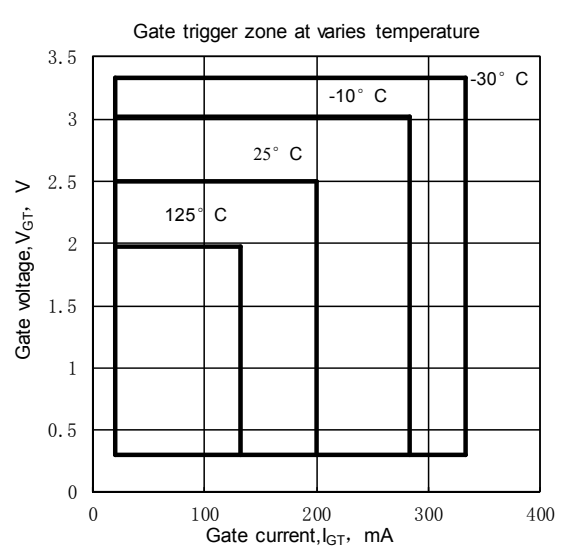


Fig. 6

Outline:

