

#### Features:

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

$I_{T(AV)}$       **870A**  
 $V_{DRM}/V_{RRM}$     **800~1200V**  
 $t_q$                 **10~20μs**  
 $I_{TSM}$              **9kA**



#### Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control
- General power switching applications

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T <sub>j</sub> (°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			870	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=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			40	mA
$I_{T/f}$	High frequency on-state current	F=10KHz, $T_c=55^{\circ}C$					500	A
$I_{TSM}$	Surge on-state current	10ms half sine wave		125			9	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=0.6V_{RRM}$					405	$A^2s \times 10^3$
$V_{TO}$	Threshold voltage			125			1.55	V
$r_T$	On-state slope resistance						0.35	mΩ
$V_{TM}$	Peak on-state voltage	$I_{TM}=1200A, F=15kN$		125			1.97	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			200	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ , to 1400A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$		125			1500	A/μs
$Q_{rr}$	Recovery charge	$I_{TM}=1000A, tp=2000\mu s$ , $di/dt=-60A/\mu s, V_R=50V$		125		33		μC
tq	Circuit commutated turn-off time	$I_{TM}=1000A, tp=2000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-60A/\mu s$		125	10		20	μs
$I_{GT}$	Gate trigger current			25	30		250	mA
$V_{GT}$	Gate trigger voltage	$V_A=12V, I_A=1A$			0.8		3.0	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 15kN					0.035	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.008	
$F_m$	Mounting force				10		20	kN
$T_{stg}$	Stored temperature				-40		140	°C
$W_t$	Weight					240		g
Outline								

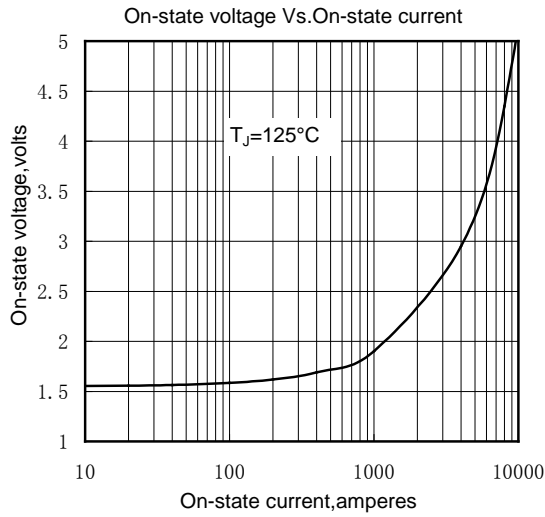


Fig. 1

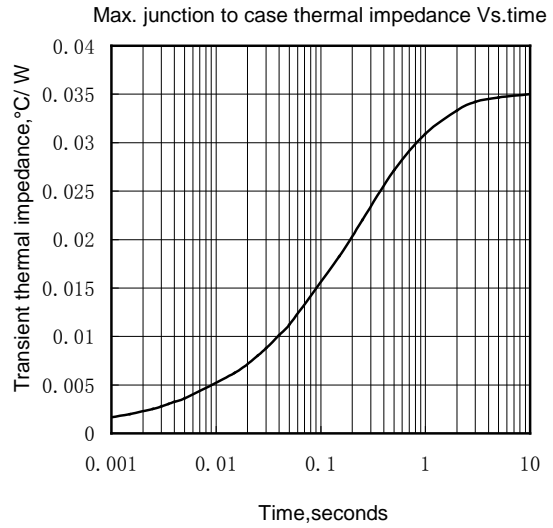


Fig. 2

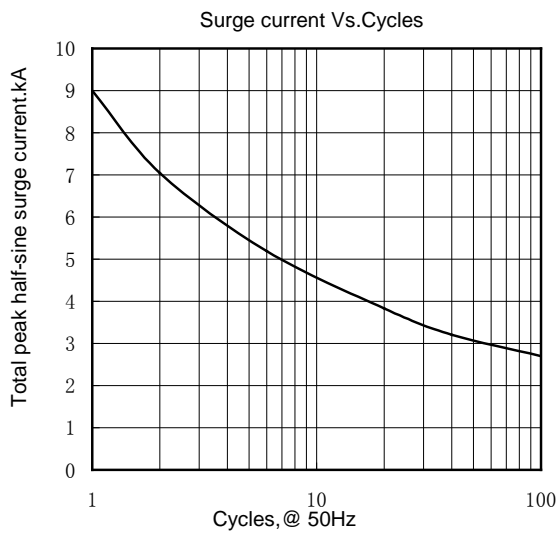


Fig. 3

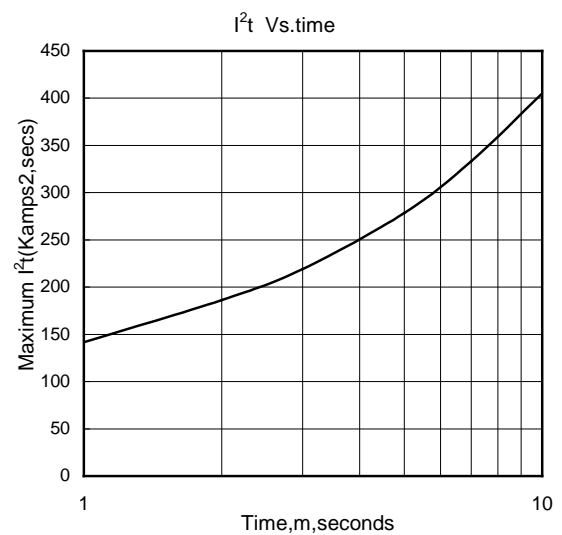


Fig. 4

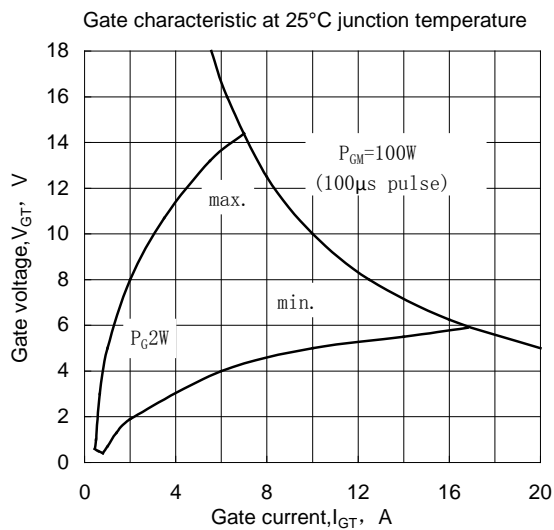


Fig. 5

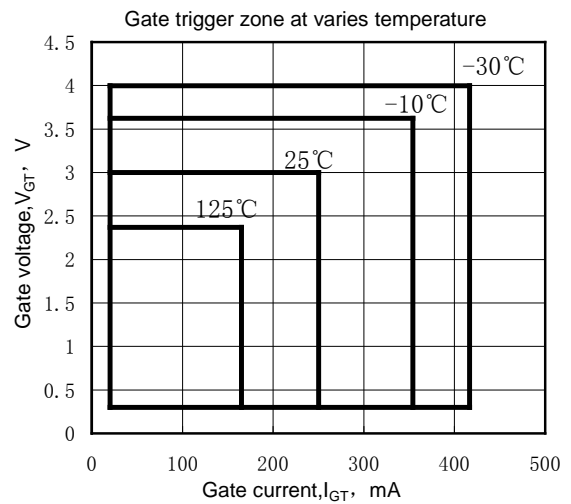


Fig. 6

**Outline:**

