

#### Features:

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

$I_{T(AV)}$       **750A**  
 $V_{DRM}/V_{RRM}$     **600~900V**  
 $t_q$               **5~7μs**  
 $I_{TSM}$             **8.0kA**



#### 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 <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T <sub>c</sub> =55°C	125			750	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	600		900	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak off-state current Repetitive peak reverse current	at V <sub>DRM</sub> at V <sub>RRM</sub>		125			40	mA
I <sub>TH/f</sub>	High frequency on-state current	F=12KHz, T <sub>c</sub> =55°C					500	A
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave		125			8.0	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>						320
V <sub>TO</sub>	Threshold voltage			125			1.80	V
r <sub>T</sub>	On-state slope resistance							0.48
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1400A, F=15kN		125			2.47	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>		125			200	V/μs
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> = 67%V <sub>DRM</sub> to1500A Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A		125			1500	A/μs
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =1000A, tp=2000μs, di/dt=-60A/μs, V <sub>R</sub> =50V		125		33		μC
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> =1000A, tp=2000μs, V <sub>R</sub> =50V dv/dt=30V/μs ,di/dt=-60A/μs		125	5		7	μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A		25	30		250	mA
V <sub>GT</sub>	Gate trigger voltage				0.8		3.0	V
I <sub>H</sub>	Holding current				20		400	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>		125	0.3			V
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 15kN					0.035	°C/W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink						0.008	
F <sub>m</sub>	Mounting force				10		20	kN
T <sub>stg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					240		g
<b>Outline</b>								

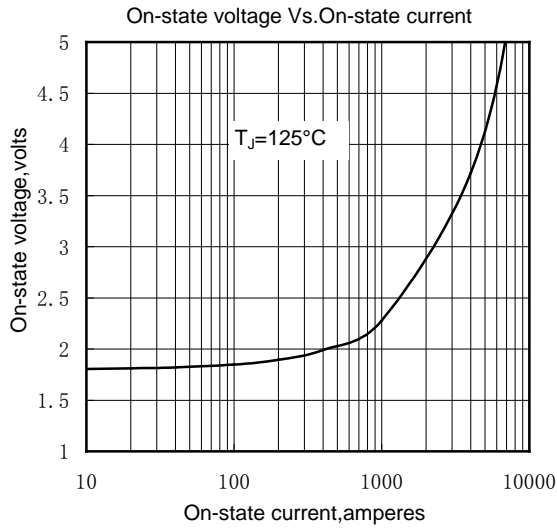


Fig. 1

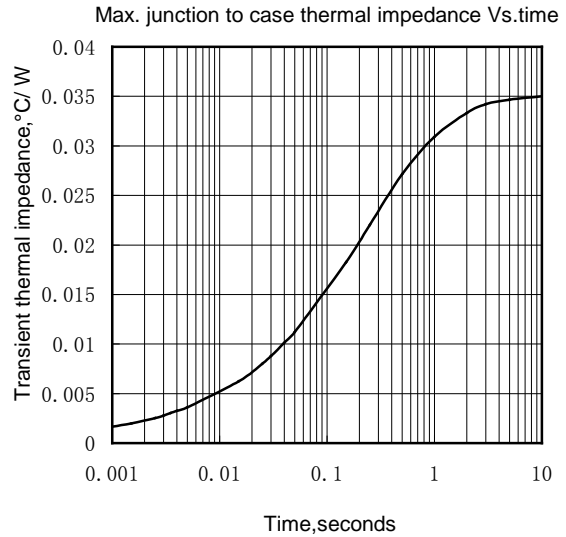


Fig. 2

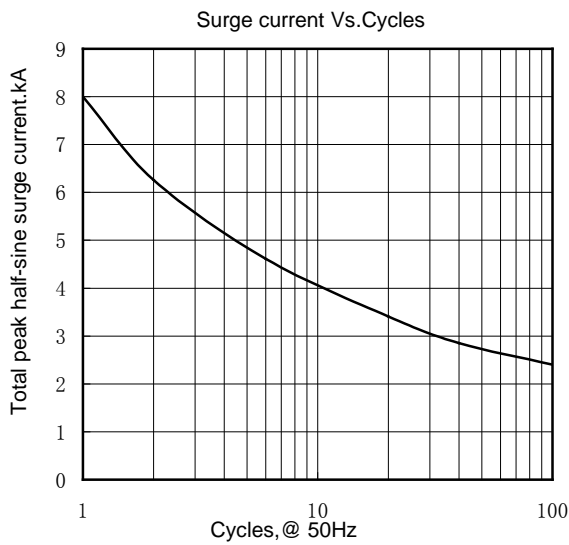


Fig. 3

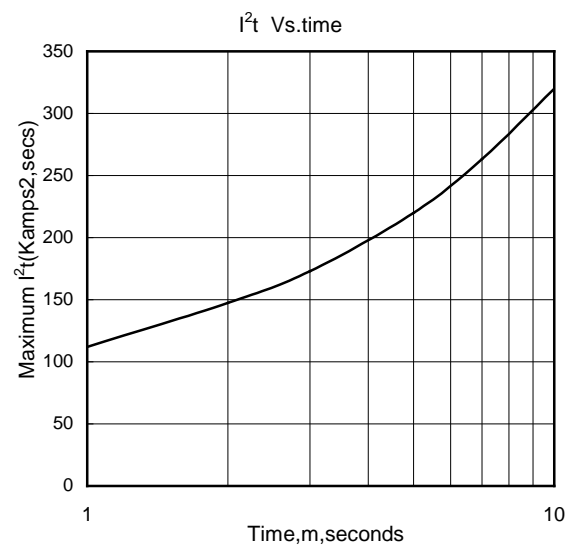


Fig. 4

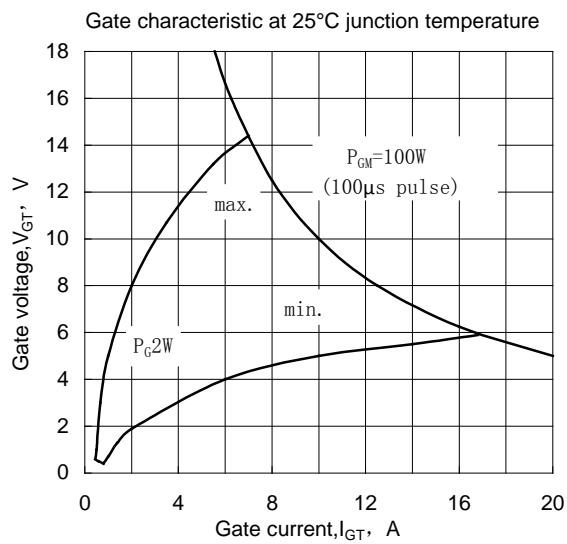


Fig. 5

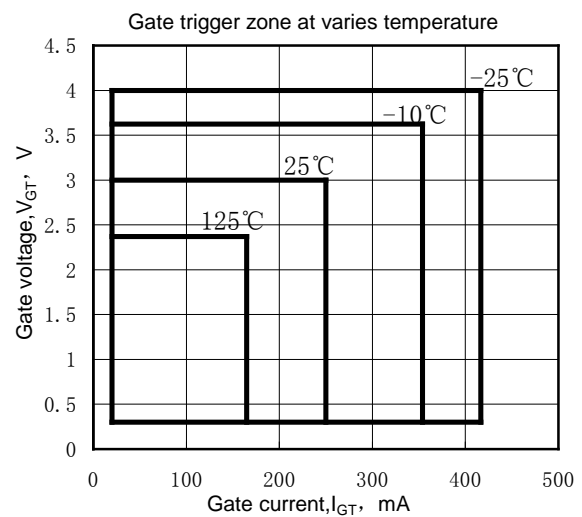


Fig. 6

**Outline:**

