

#### Features

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

#### Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$       **1770A**  
 $V_{DRM}/V_{RRM}$     **3100~4000V**  
 $t_q$               **50~100μs**  
 $I_{TSM}$            **18 kA**  
 $I^2t$               **1620 10<sup>3</sup>A<sup>2</sup>S**



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			1770	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	3100		4000	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			160	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			18	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination					1620	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.65	V
r <sub>T</sub>	On-state slope resistance					0.38	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =2000A, F=35kN	125			3.40	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	125			500	V/μs
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> = 67%V <sub>DRM</sub> to3000A Gate pulse t <sub>g</sub> ≤0.5μs I <sub>GM</sub> =1.5A	125			1200	A/μs
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =2000A, tp=2000μs, di/dt=-60A/μs, V <sub>R</sub> =50V	125		2200		μC
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> =2000A, tp=2000μs, V <sub>R</sub> =50V dv/dt=30V/μs ,di/dt=-60A/μs	125	50		100	μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	40		450	mA
V <sub>GT</sub>	Gate trigger voltage			0.9		4.5	V
I <sub>H</sub>	Holding current			20		1000	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 35kN				0.012	°C/W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink					0.003	
F <sub>m</sub>	Mounting force			30		40	kN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				880		g
Outline							

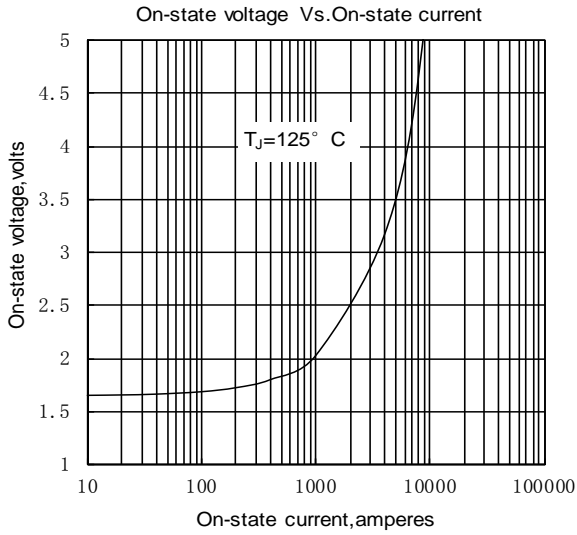


Fig. 1

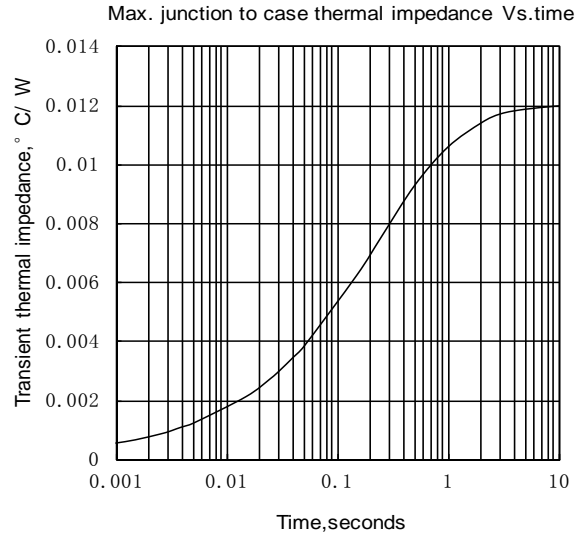


Fig. 2

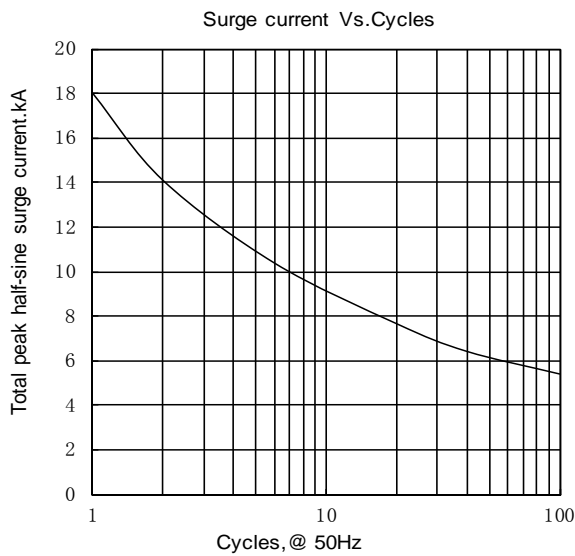


Fig. 3

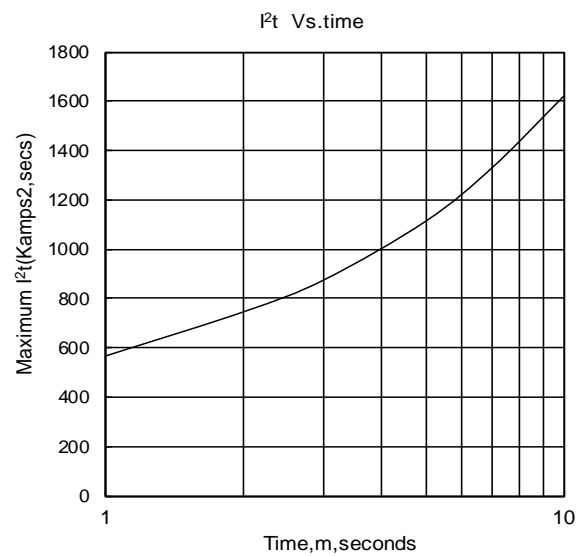


Fig. 4

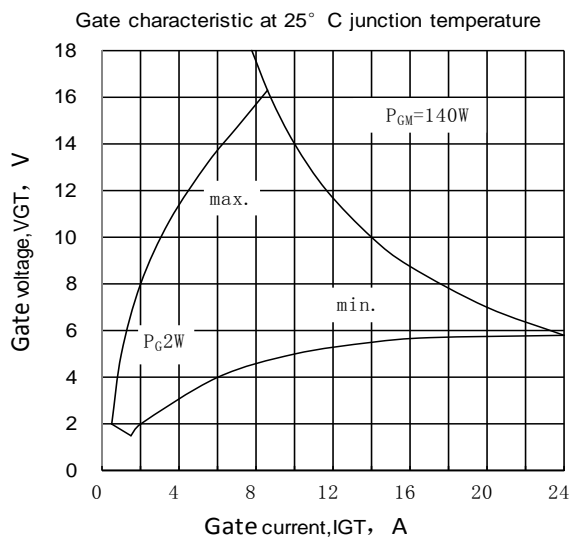


Fig. 5

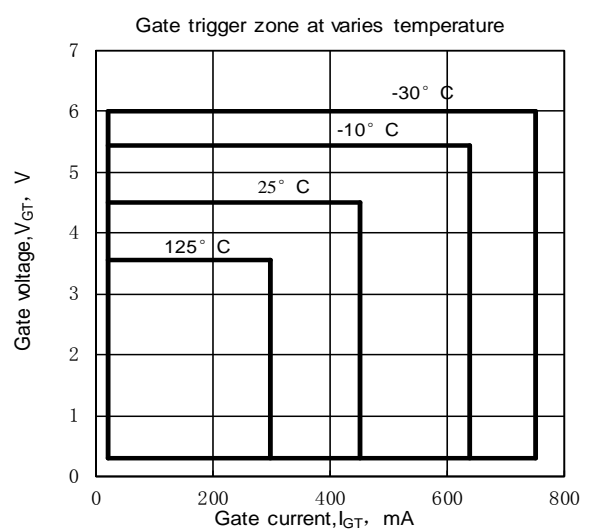


Fig. 6

Outline:

