

#### Features

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

#### Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	<b>1840A</b>
$V_{DRM}/V_{RRM}$	<b>3100~4000V</b>
$t_q$	<b>50~100μs</b>
$I_{TSM}$	<b>23 kA</b>
$I^2t$	<b>2645 10<sup>3</sup>A<sup>2</sup>S</b>



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 <sub>c</sub> =55°C	125			1840	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	3100		4000	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$	125			200	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			23	kA
$I^2t$	I <sup>2</sup> t for fusing coordination					2645	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage		125			1.89	V
$r_T$	On-state slope resistance					0.42	mΩ
$V_{TM}$	Peak on-state voltage	I <sub>TM</sub> =2000A, F=40kN	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> to 3000A Gate pulse t <sub>r</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
$I_{GT}$	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	40		450	mA
$V_{GT}$	Gate trigger voltage			0.9		4.5	V
$I_H$	Holding current			20		1000	mA
$V_{GD}$	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125	0.3			V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine double side cooled				0.010	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Clamping force 40kN				0.003	
$F_m$	Mounting force			35		47	kN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				1100		g
Outline							

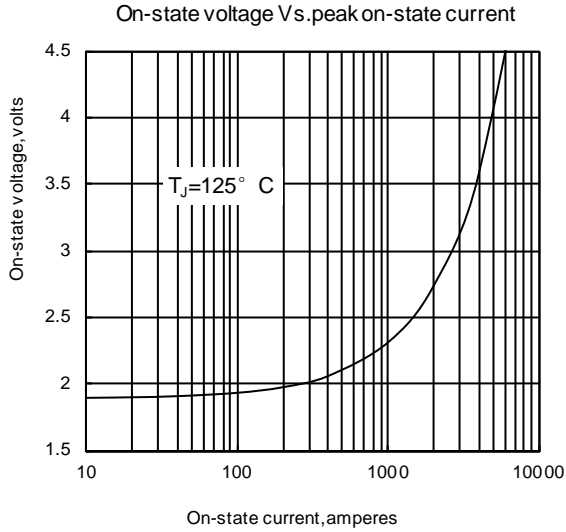


Fig1

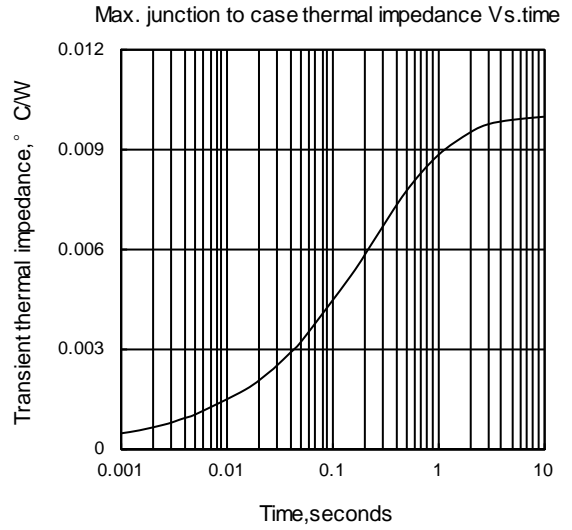


Fig2

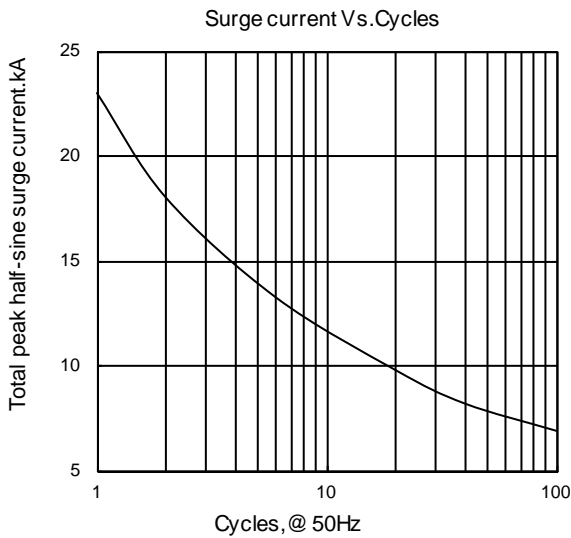


Fig3

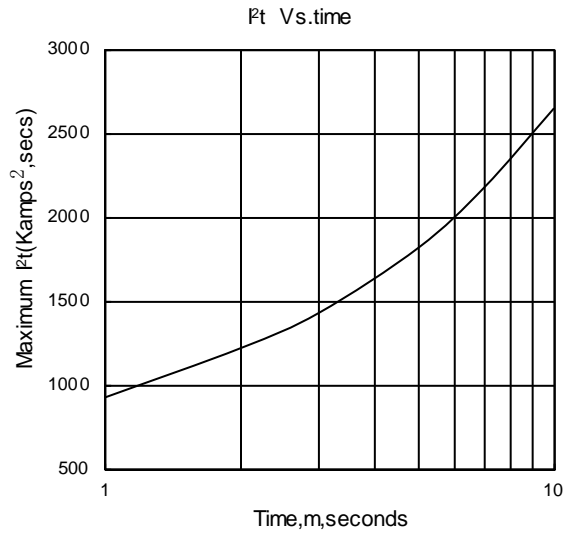


Fig4

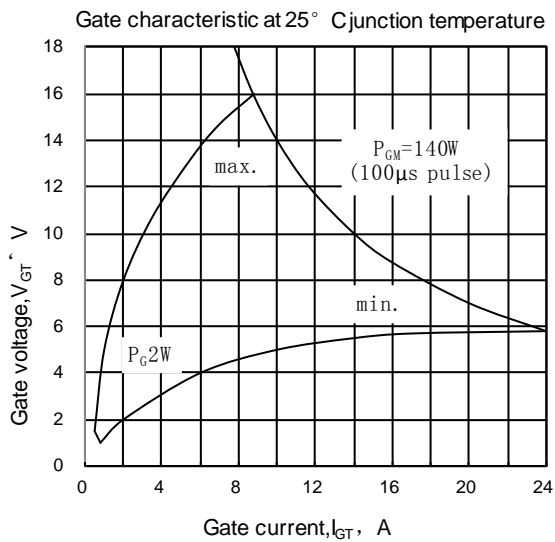


Fig5

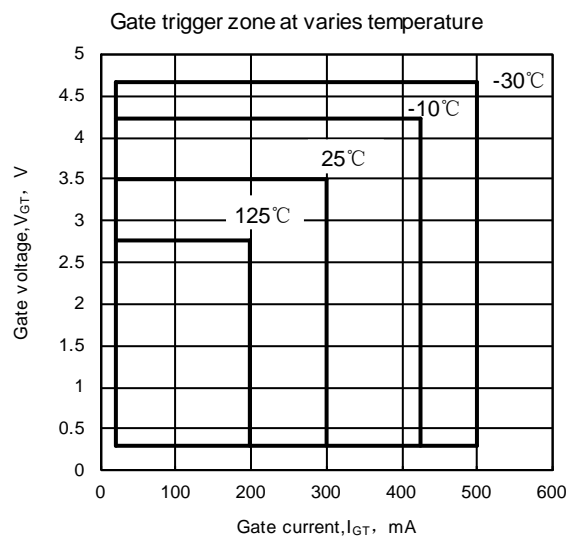


Fig6

**Outline:**

