

Features :

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

$I_{T(AV)}$	480A
V_{DRM}/V_{RRM}	1100~1400V
t_q	12~24μs
I_{TSM}	5.8kA

**Typical Applications**

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

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			480	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10ms$	125	1100		1400	V
I_{DRM} I_{RRM}	Repetitive peak off-state current Repetitive peak reverse current	at V_{DRM} at V_{RRM}	125			30	mA
I_T/f	High frequency on-state current	$F=6KHz, T_c=55^{\circ}C$				200	A
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$	125			5.8	kA
I^2t	I^2t for fusing coordination					168	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			1.67	V
r_T	On-state slope resistance					1.32	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=600A, F=7.0kN$	125			2.46	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			200	V/ μ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 800A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$	125			1500	A/ μ s
Q_{rr}	Recovery charge	$I_{TM}=500A, t_p=2000\mu s,$ $di/dt=-60A/\mu s, V_R=50V$	125		38		μC
t_q	Circuit commutated turn-off time	$I_{TM}=500A, t_p=2000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-60A/\mu s$	125	12		24	μs
I_{GT}	Gate trigger current			30		200	mA
V_{GT}	Gate trigger voltage	$V_A=12V, I_A=1A$	25	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	DC: 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	P02						

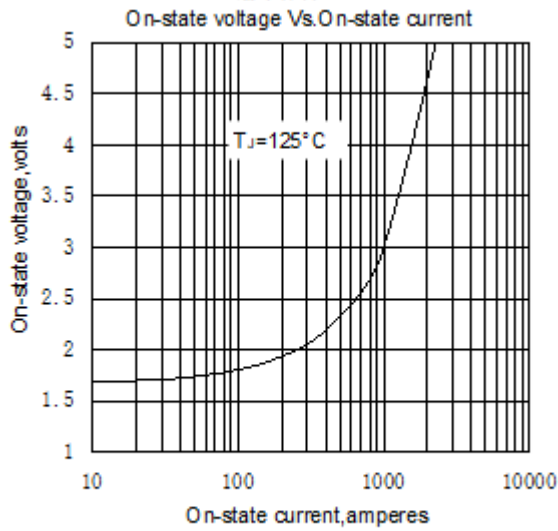


Fig. 1

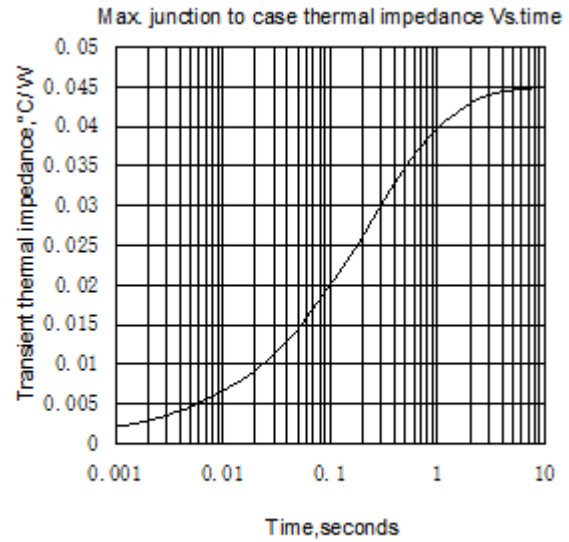


Fig. 2

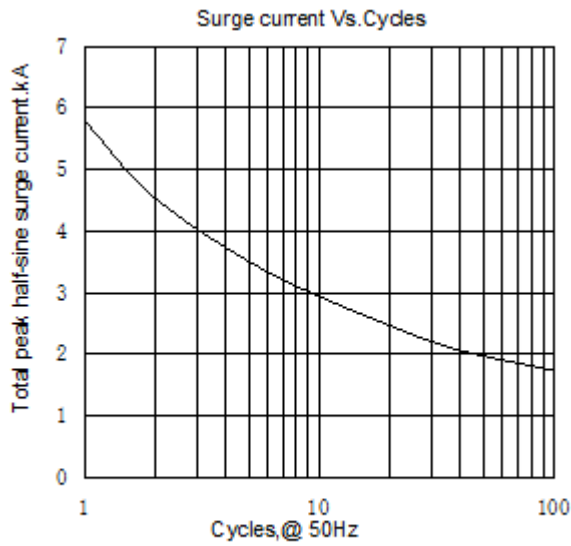


Fig. 3

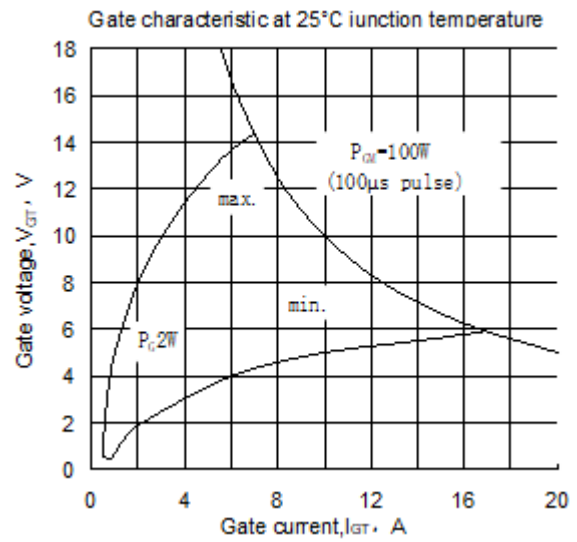


Fig. 4

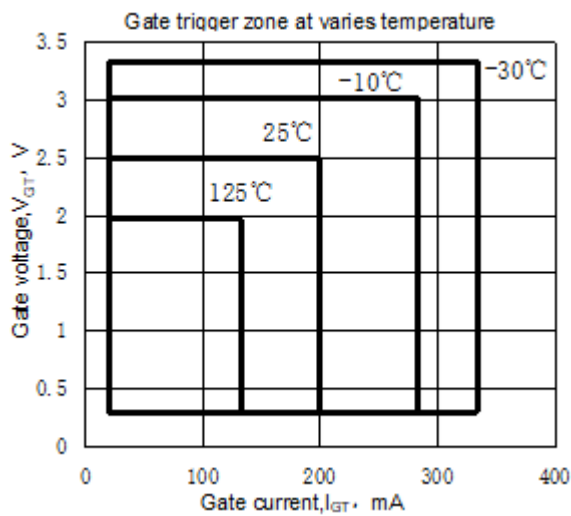
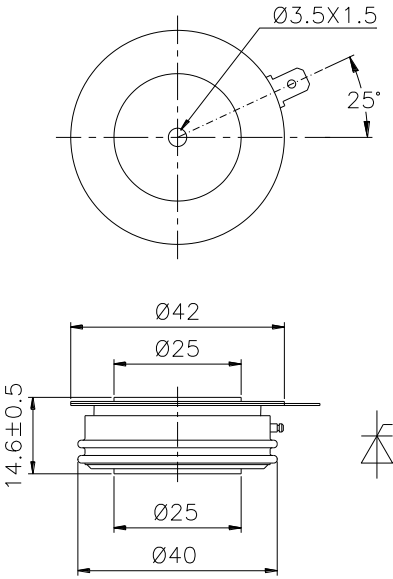


Fig. 5



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