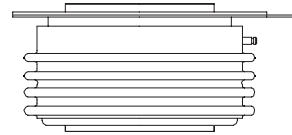


### FEATURES

- |  |                   |               |
|--|-------------------|---------------|
| 1). Interdigitated amplifying gates              | $I_{T(AV)}$       | 507A          |
| 2). Fast turn-on and high di/dt                  | $V_{DRM}/V_{RRM}$ | 800~1200V     |
| 3). Low switching losses                         | $t_q$             | 12~20 $\mu$ s |
| 4). Short turn-off time                          | $I_{TSM}$         | 5.4KA         |
| 5). Hermetic metal cases with ceramic insulators |                   |               |



### TYPICAL APPLICATIONS

- |                               |  |
|-------------------------------|--|
| 1). Inductive heating         | 4). AC motor speed control               |
| 2). Electronic welders        | 5). General power switching applications |
| 3). Self-commutated inverters |  |

### THE MAIN PARAMETERS

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean forward current	180° half sine wave 50Hz Double side cooled, $T_{hs}=55^{\circ}C$	125			507	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM}, t_p=10ms$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$	125	800		1200	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak off-state current Repetitive peak reverse current	$V_D = V_{DRM}$ $V_R = V_{RRM}$	125			30	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			5.4	KA
$I^2t$	$I^2T$ for fusing coordination	$V_R = 0.6V_{RRM}$				146	$A^2s \cdot 10^3$
$V_{TO}$	Threshold voltage		125			1.45	V
$r_T$	On-state slop resistance					0.85	$m\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=1000A, F=7.0KN$	125			2.30	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			200	$V/\mu s$
di/dt	Critical rate of rise of on-state current	$V_{DM} = 67\%V_{DRM}$ to 1000A, Gate pulse $t_r \leq 0.5 \mu s, I_{GM}=1.5A$	125			1500	$A/\mu s$
$I_m$	Reverse recovery current	$I_{TM}=500A, t_p=1000 \mu s,$ $di/dt=-20A/\mu s,$ $VR=50V$	125		25		A
$t_{rr}$	Reverse recovery time				2.0		$\mu s$
$Q_{rr}$	Recovery charge				25	50	$\mu C$
tq	Circuit commutated turn-off time	$I_{TM}=500A, t_p=1000 \mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$	125	12		20	$\mu s$
$I_{GT}$	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
$R_{th(j-h)}$	Thermal resistance Junction to heatsink	At 180° sine, double side cooled Clamping force 7.0KN				0.055	$^{\circ}C/W$
$F_m$	Mounting force			5.3		10	KN
$T_{stg}$	Stored temperature			-40		140	$^{\circ}C$
$W_t$	Weight				80		g
Size	Package box size						mm

**PERFORMANCE CURVES FIGURE**

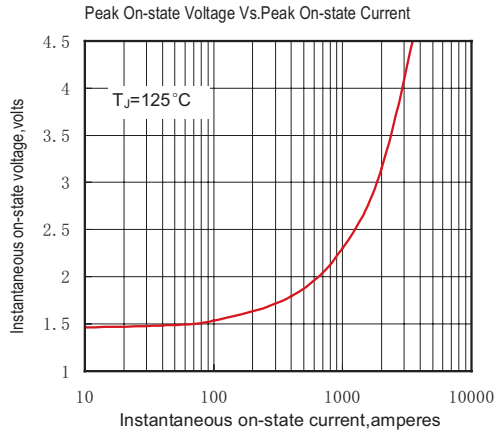


Fig.1

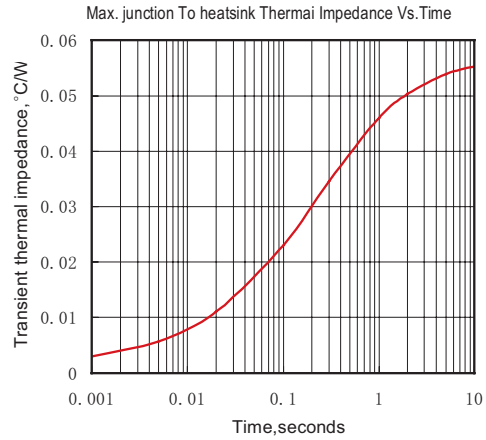


Fig.2

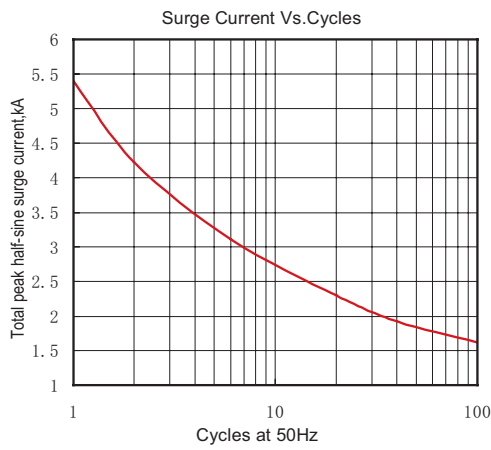


Fig.3

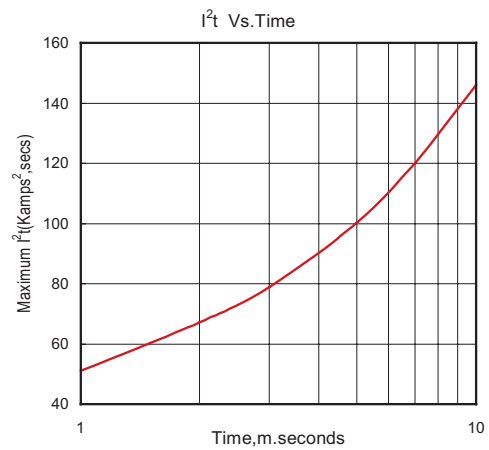


Fig.4

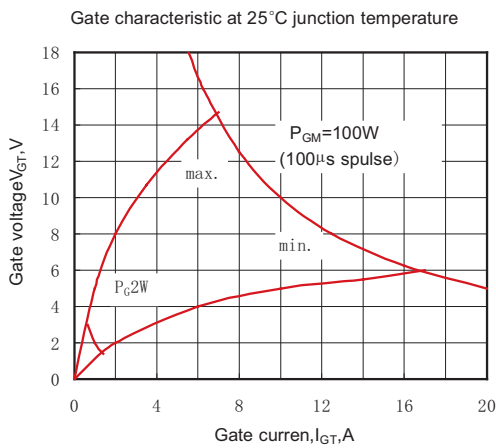


Fig.5

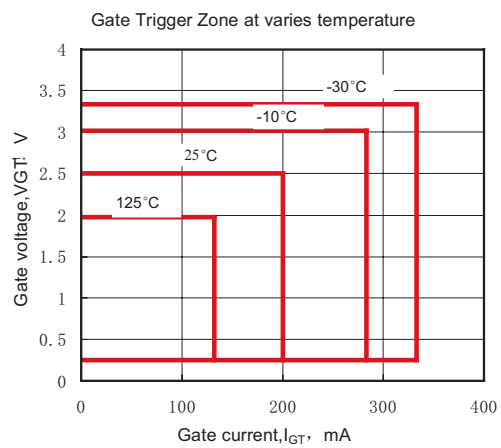
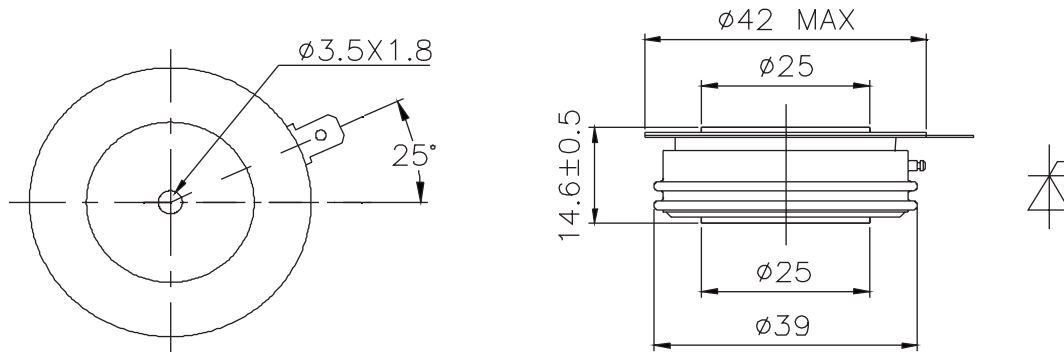


Fig.6

**OUTLINE**



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