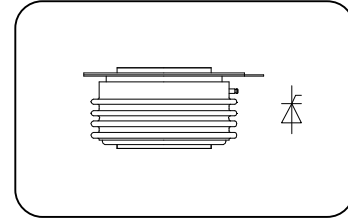




**Features:**

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

$I_{T(AV)}$       **820A**  
 $V_{DRM}/V_{RRM}$     **1200~1600V**  
 $t_q$               **24~36μs**  
 $I_{TSM}$           **10KA**



**Typical Applications**

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

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>ns</sub> =55°C	125			820	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM}&V_{RRM}, tp=10ms$ $V_{DSM}&V_{RSM}=V_{DRM}&V_{RRM}+100V$	125	1200		1600	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak off-state current Repetitive peak reverse current	$V_D=V_{DRM}$ $V_R=V_{RRM}$	125			50	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			10	KA
$I^2t$	I <sup>2</sup> T for fusing coordination	$V_R=0.6V_{RRM}$				500	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage		125			1.70	V
$r_T$	On-state slop resistance					0.48	mW
$V_{TM}$	Peak on-state voltage	$I_{TM}=1500A, F=18KN$	125			2.56	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			200	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to1600A Gate pulse t <sub>r</sub> ≤0.5 μ s I <sub>GM</sub> =1.5A	125			1500	A/μs
$I_{rm}$	Reverse recovery current	$I_{TM}=800A, tp=1000μs, di/dt=-20A/μs,$ $V_R=50V$	125			30	A
t <sub>rr</sub>	Reverse recovery time					2.2	μs
Q <sub>rr</sub>	Recovery charge					33	50
t <sub>q</sub>	Circuit commutated turn-off time	$I_{TM}=800A, tp=1000μs, V_R=50V$ $dv/dt=30V/μs, di/dt=-20A/μs$	125	24		36	μs
$I_{GT}$	Gate trigger current	$V_A=12V, I_A=1A$	25	30		250	mA
$V_{GT}$	Gate trigger voltage			0.8		3.0	V
$I_H$	Holding current			20		400	mA
$V_{GD}$	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	125	0.3			V
R <sub>th(j-h)</sub>	Thermal resistance Junction to heat sink	At 180° sine double side cooled Clamping force 18KN				0.035	°C/W
F <sub>m</sub>	Mounting force			15		20	KN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight					360	g
Outline	T 9						

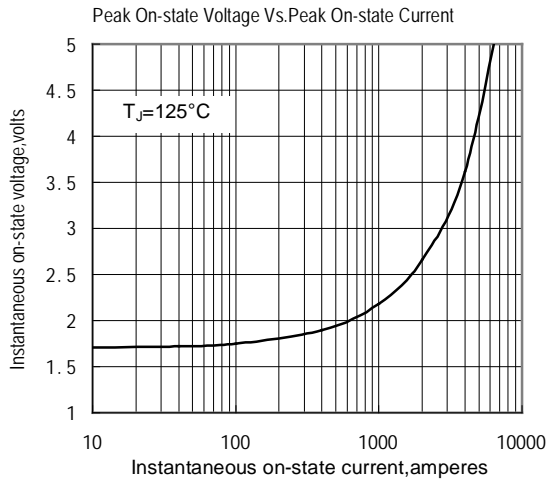


Fig.1

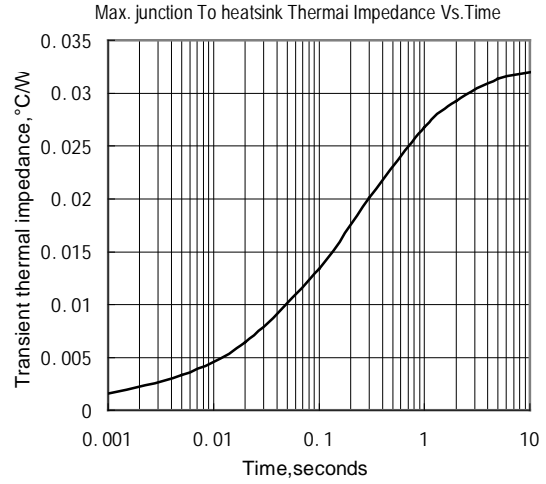


Fig.2

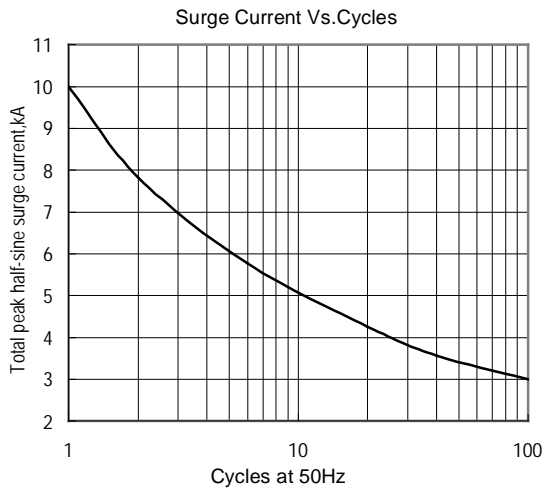


Fig.3

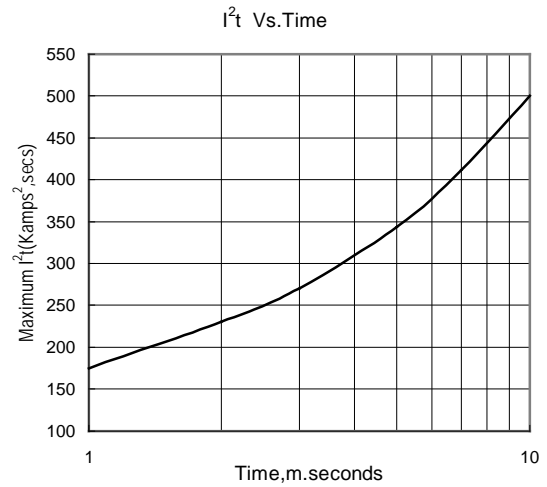


Fig.4

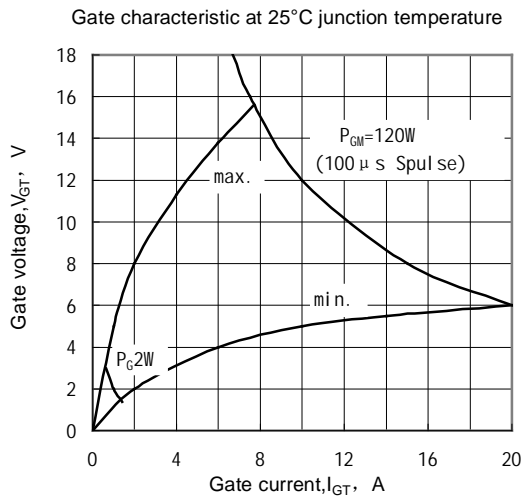


Fig.5

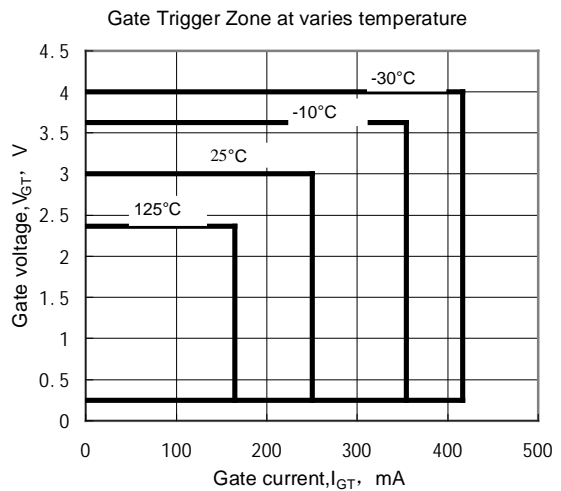
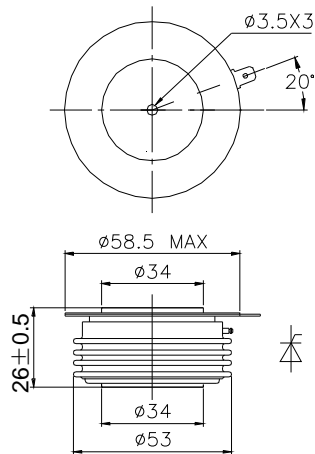


Fig.6

Outline:



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