

### Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

### Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

$I_{T(AV)}$       **450A**  
 $V_{DRM}/V_{RRM}$     **400~1000V**  
 $I_{TSM}$             **5.0 kA**  
 $I^2t$                 **125 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	125			530	A
						T <sub>C</sub> =55°C	
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms V <sub>DSM</sub> &V <sub>RSM</sub> = V <sub>DRM</sub> &V <sub>RRM</sub> +100V	125	400		1000	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	V <sub>DM</sub> = V <sub>DRM</sub> V <sub>RM</sub> = V <sub>RRM</sub>	125			16	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			5	kA
I <sup>2</sup> t	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				125	
V <sub>TO</sub>	Threshold voltage		125			0.75	V
r <sub>T</sub>	On-state slop resistance					0.7	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =770A, F=5.0kN	125			1.29	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	125			1000	V/μs
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> = 67%V <sub>DRM</sub> to 800A, Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A	125			100	A/μs
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =500A, tp=2000μs, di/dt=-20A/μs, V <sub>R</sub> =50V	125		800		μC
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		200	mA
V <sub>GT</sub>	Gate trigger voltage			0.8		2.0	V
I <sub>H</sub>	Holding current			20		150	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 5.0kN				0.080	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink					0.020	
F <sub>m</sub>	Mounting force			3.3		5.5	kN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				60		g
Outline	KT19aT						

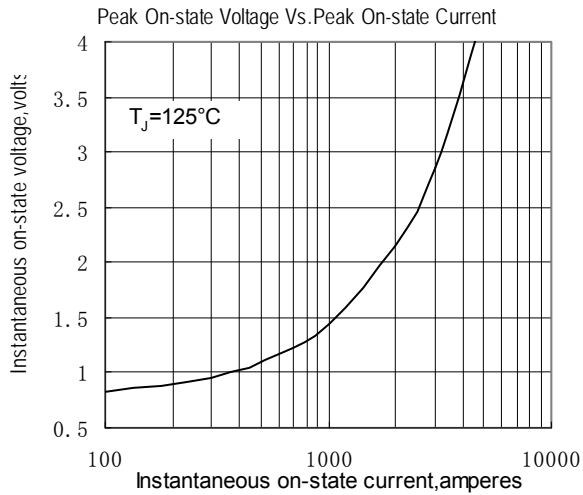


Fig.1

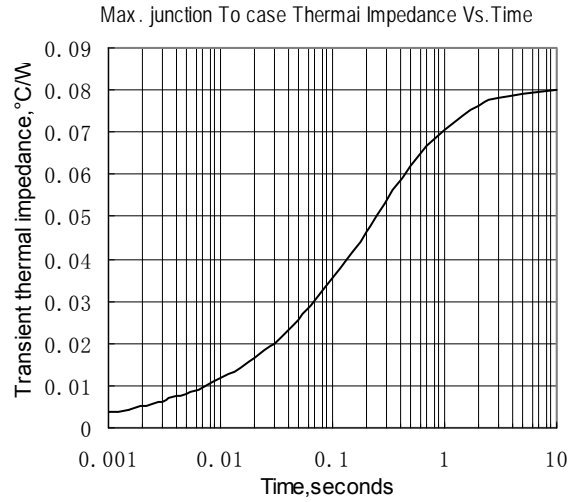


Fig.2

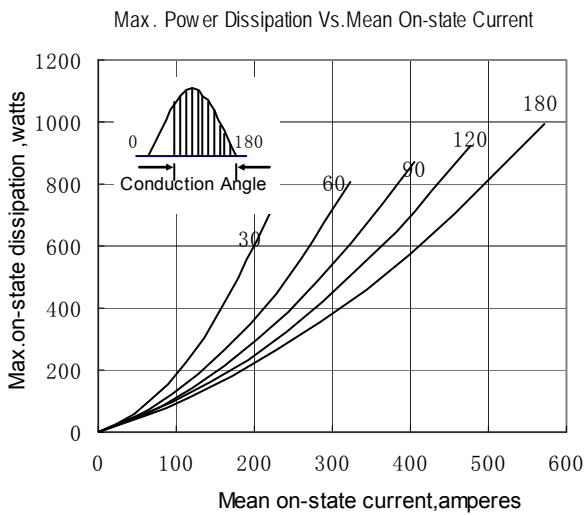


Fig.3

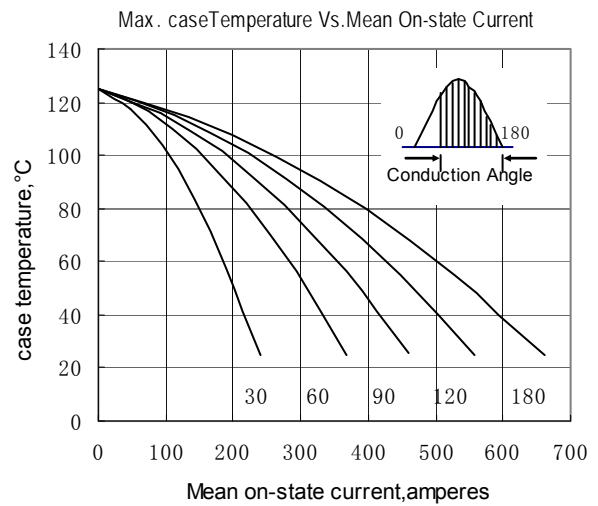


Fig.4

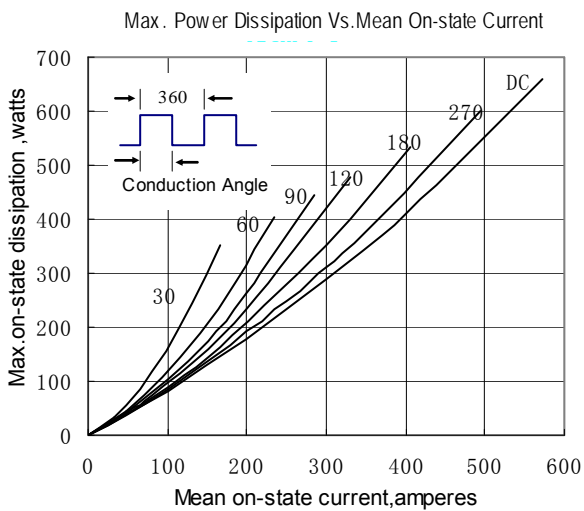


Fig.5

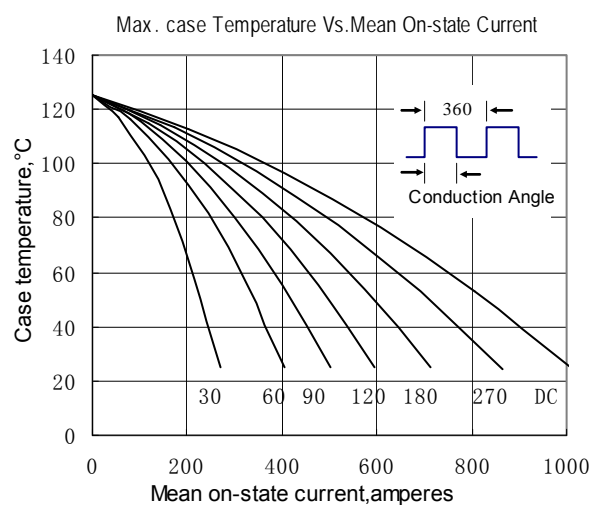


Fig.6

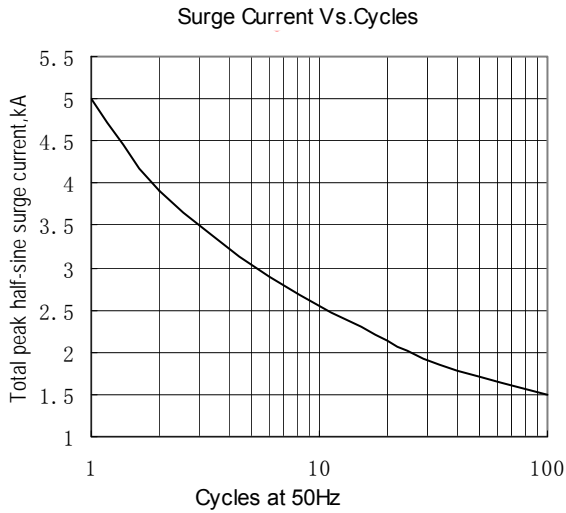


Fig.7

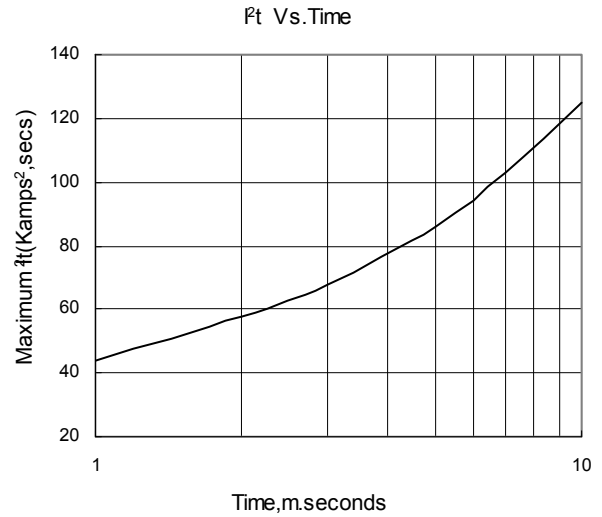


Fig.8

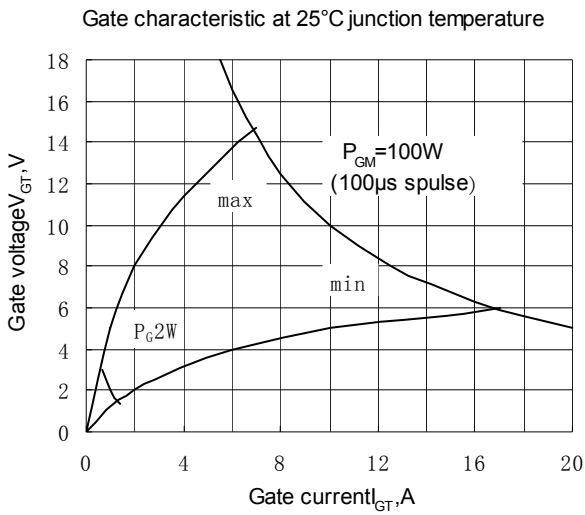


Fig.9

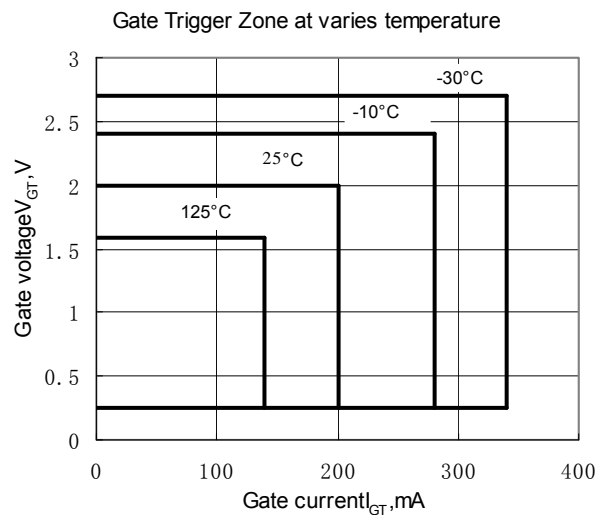


Fig.10

Outline:

