

### 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

$I_{T(AV)}$       **530A**  
 $V_{DRM}/V_{RRM}$     **4300~5200V**  
 $I_{TSM}$             **4.5 kA**  
 $I^2t$                 **101 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,	T <sub>C</sub> =55°C			620	A
			T <sub>C</sub> =70°C			530	
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	4300		5200	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			50	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			4.5	kA
I <sup>2</sup> t	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				101	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.45	V
r <sub>T</sub>	On-state slop resistance					1.15	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1200A, F=15kN	125			2.83	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> to800A, 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> =800A,tp=2000μs, di/dt=-20A/μs, V <sub>R</sub> =50V	125		1400		μC
I <sub>GT</sub>	Gate trigger current		25	35		300	mA
V <sub>GT</sub>	Gate trigger voltage	V <sub>A</sub> =12V, I <sub>A</sub> =1A		0.8		2.5	V
I <sub>H</sub>	Holding current			20		250	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =0.67V <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 force15kN				0.035	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink					0.008	
F <sub>m</sub>	Mounting force			10		20	kN
T <sub>slg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				250		g
Outline	KT33cT						

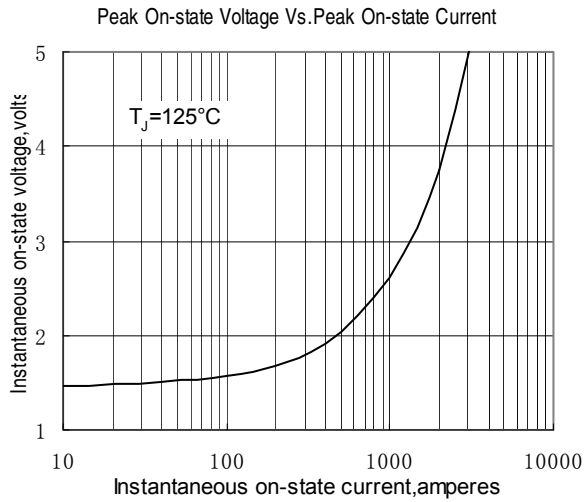


Fig.1

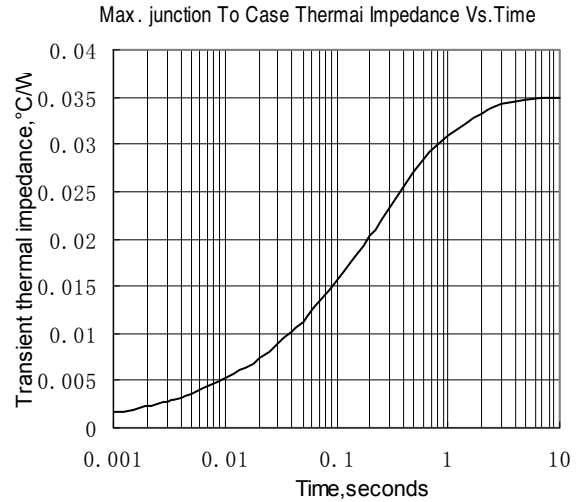


Fig.2

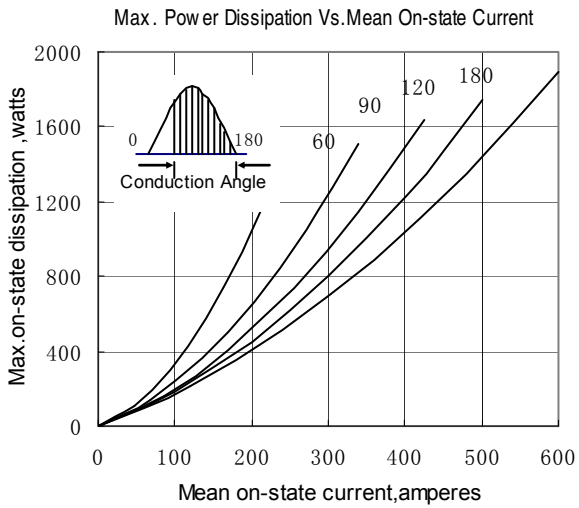


Fig.3

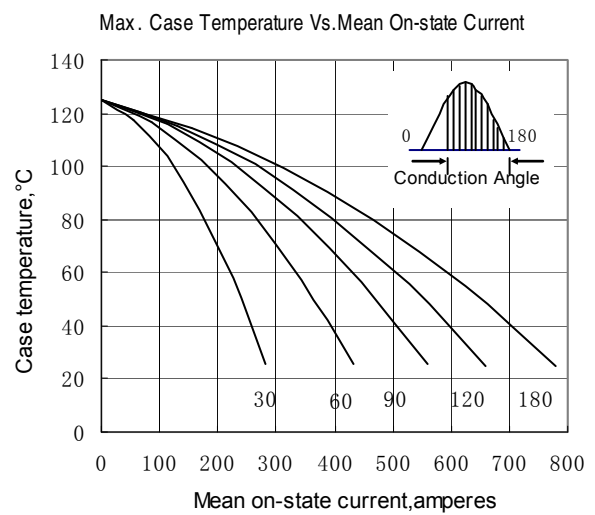


Fig.4

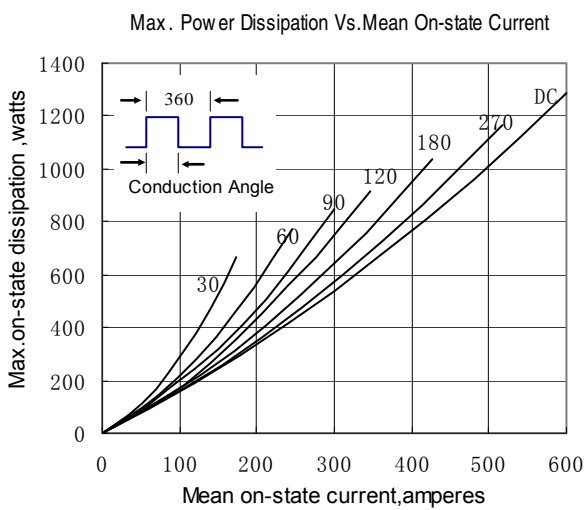


Fig.5

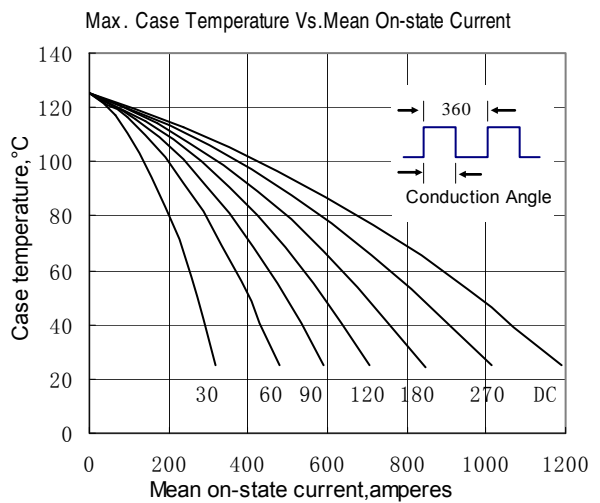


Fig.6

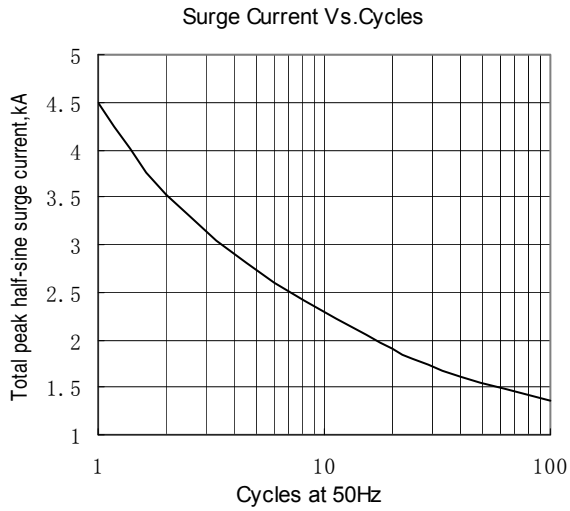


Fig.7

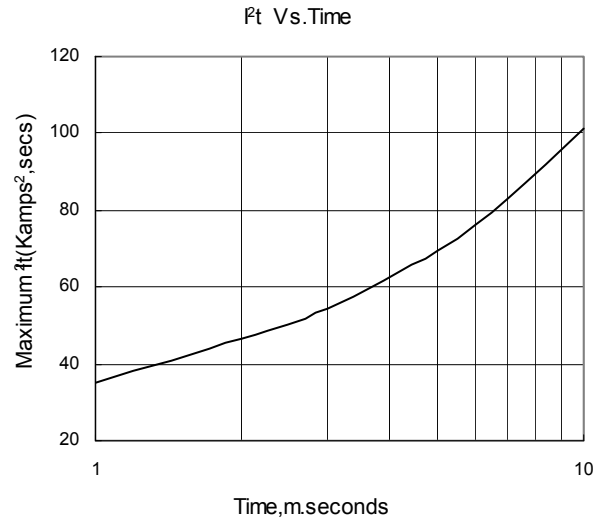


Fig.8

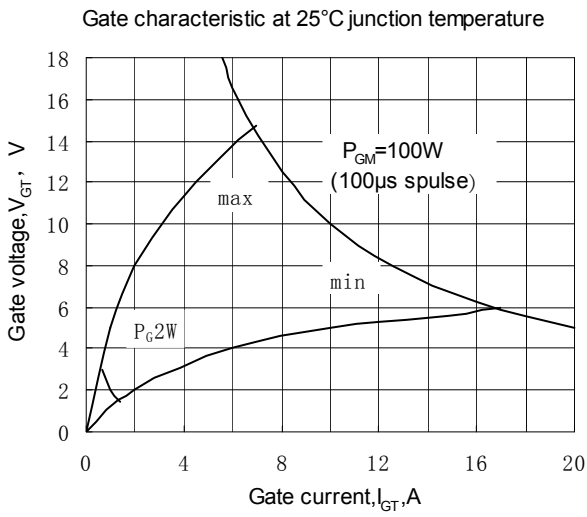


Fig.9

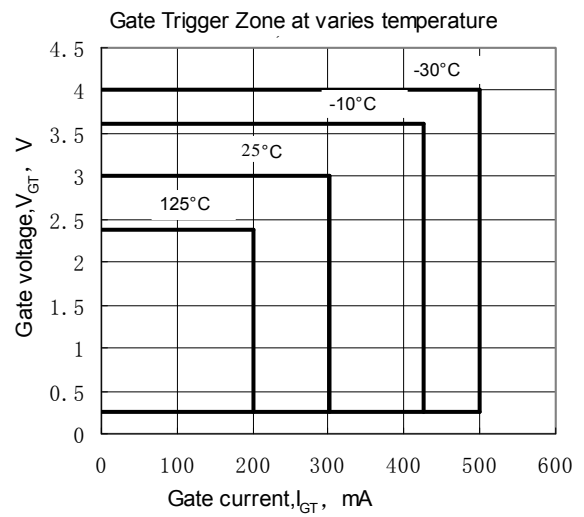


Fig.10

Outline:

