

### 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

$I_{T(AV)}$       **590A**  
 $V_{DRM}/V_{RRM}$     **3100~4200V**  
 $I_{TSM}$             **7 kA**  
 $I^2t$                 **245 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> =70°C	125			590	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	3100		4200	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>		125			50	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave		125			7	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>						245
V <sub>TO</sub>	Threshold voltage			125			1.18	V
r <sub>T</sub>	On-state slope resistance							1.00
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1000A, F=15kN		25			3.00	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=1000μs, 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>stg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					240		g
Outline	KT33cT							

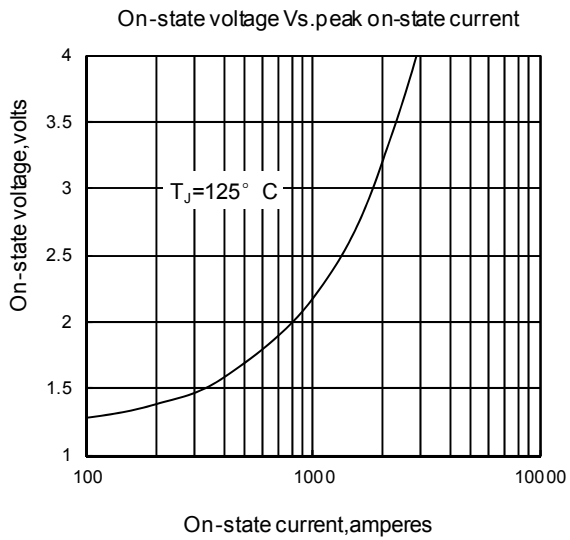


Fig1

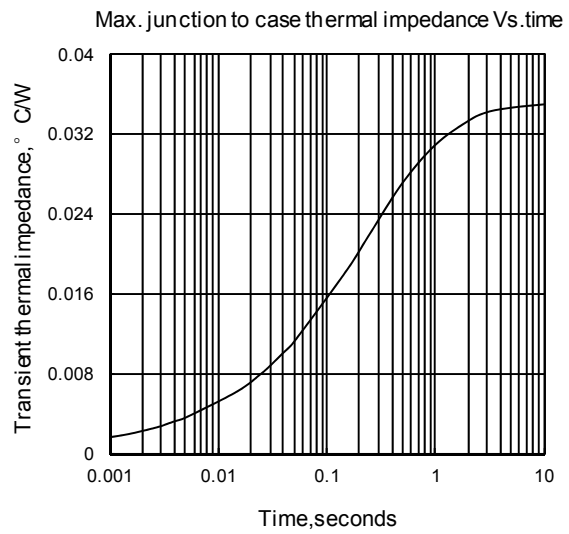


Fig2

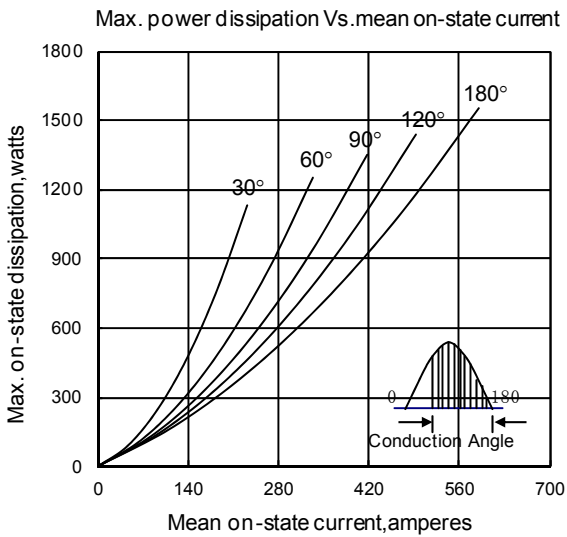


Fig3

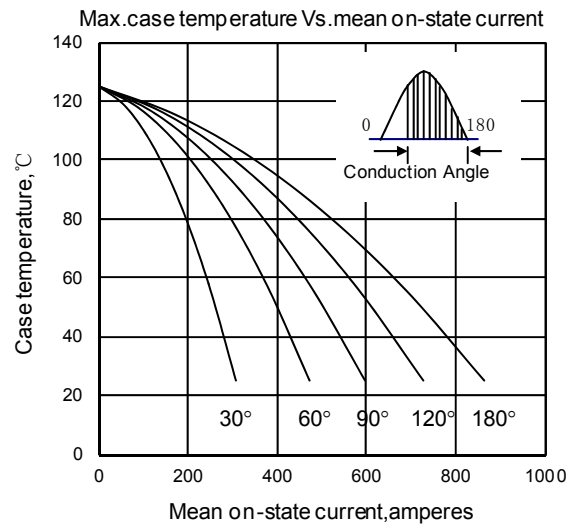


Fig4

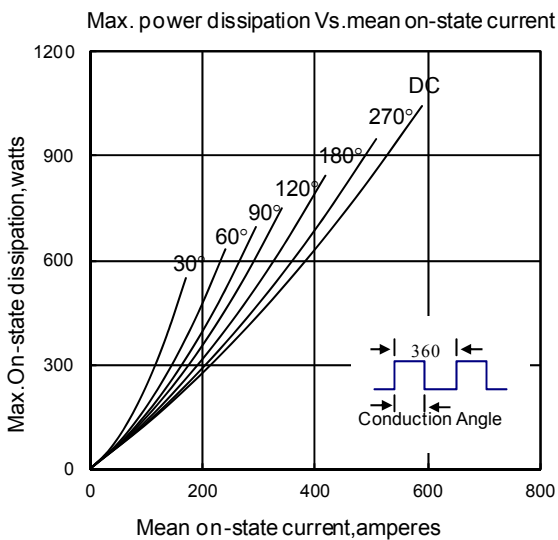


Fig5

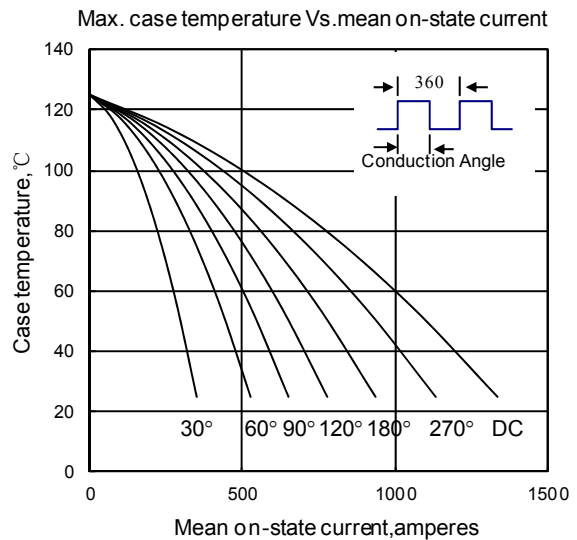


Fig6

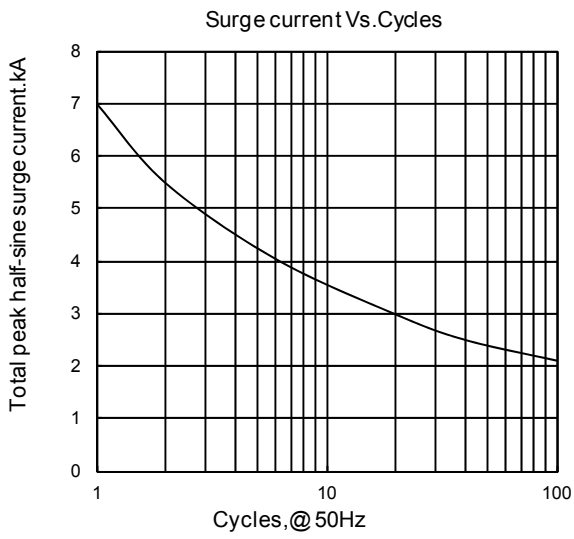


Fig7

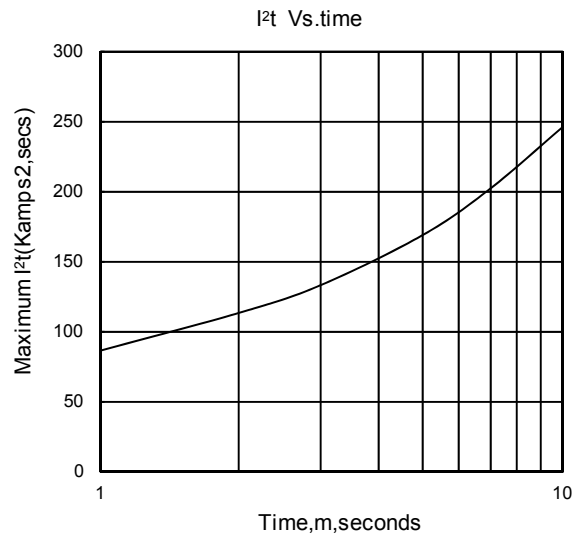


Fig8

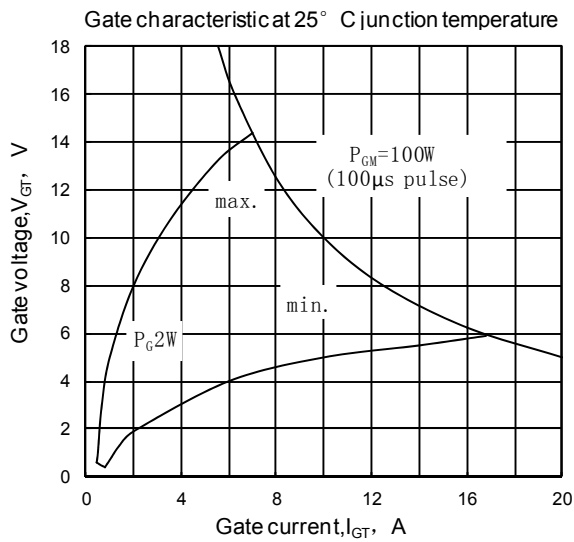


Fig9

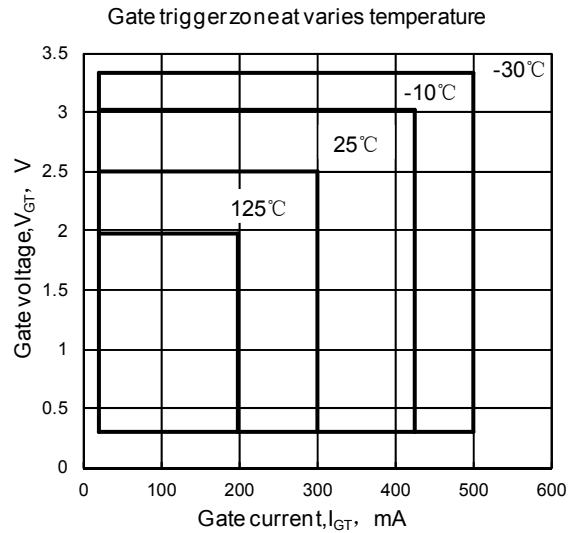


Fig10

Outline:

