

### 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

$I_{T(AV)}$       **440A**  
 $V_{DRM}/V_{RRM}$     **4600~5500V**  
 $I_{TSM}$             **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> =70°C	125			440	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	4600		5500	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>		125			150	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			1.08	V
r <sub>T</sub>	On-state slope resistance						1.92	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1000A, F=15kN		25			2.80	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>		125			2000	V/μs
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> = 67%V <sub>DRM</sub> to 1300A, 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> =1000A, tp=2000μs, di/dt=-5A/μs, V <sub>R</sub> =50V		125		2000		μC
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A		25	40		300	mA
V <sub>GT</sub>	Gate trigger voltage				0.8		3.0	V
I <sub>H</sub>	Holding current				25		200	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					0.035	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	Clamping force 15kN					0.008	°C /W
F <sub>m</sub>	Mounting force				10	15	20	kN
T <sub>stg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					240		g
Outline	KT33cT							

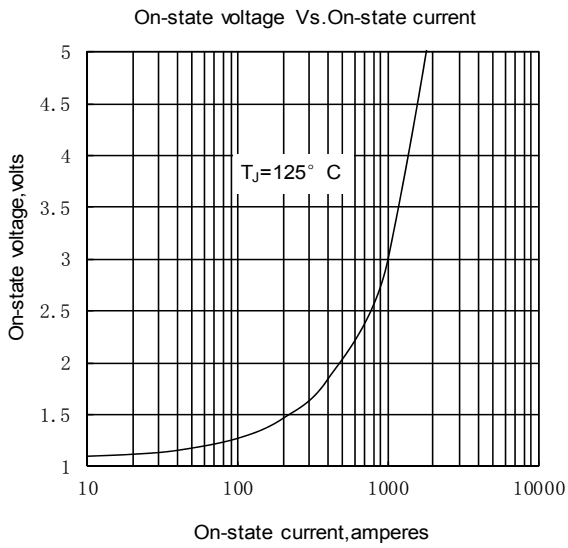


Fig.1

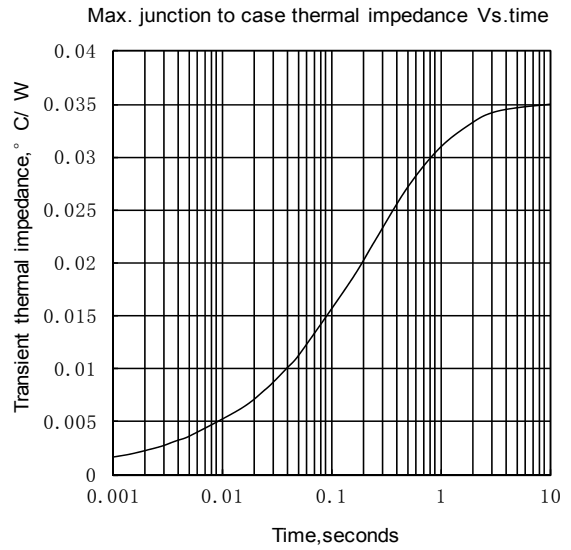


Fig.2

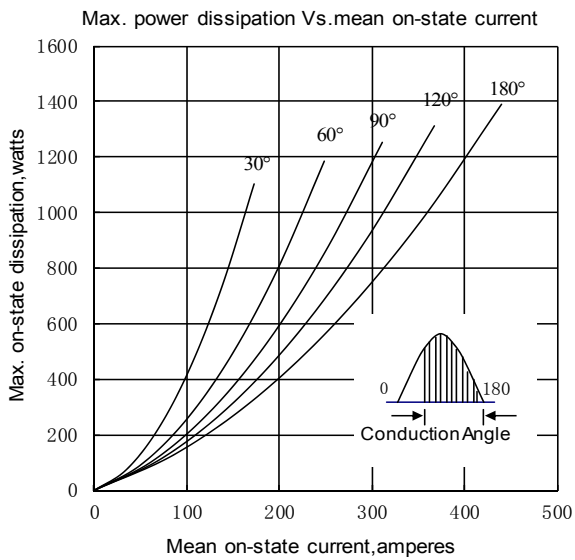


Fig.3

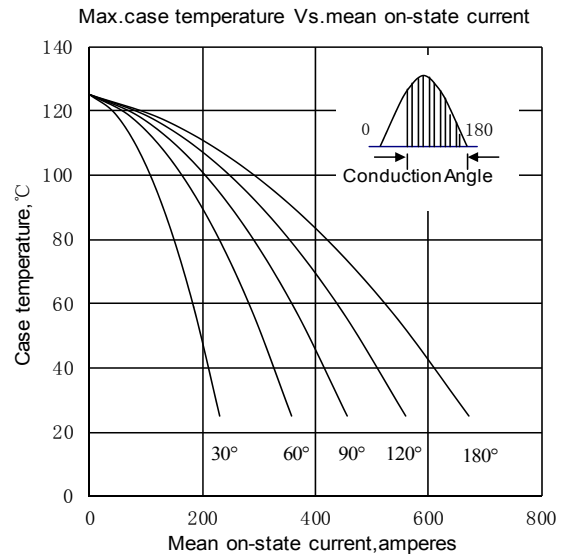


Fig.4

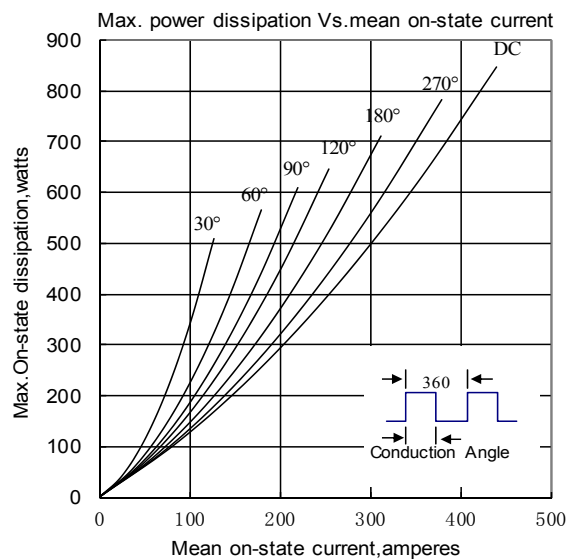


Fig.5

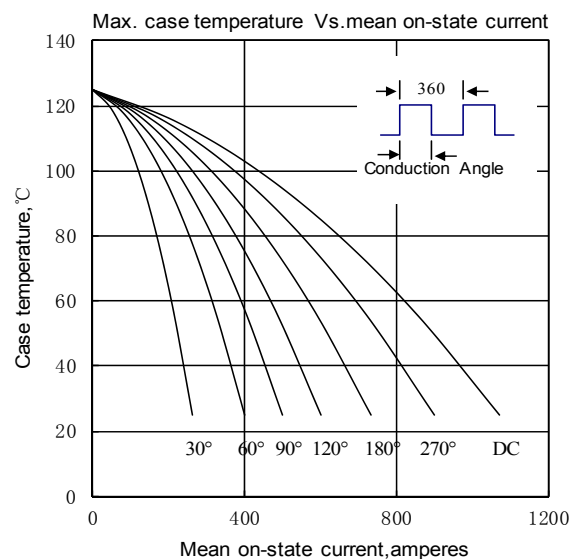


Fig.6

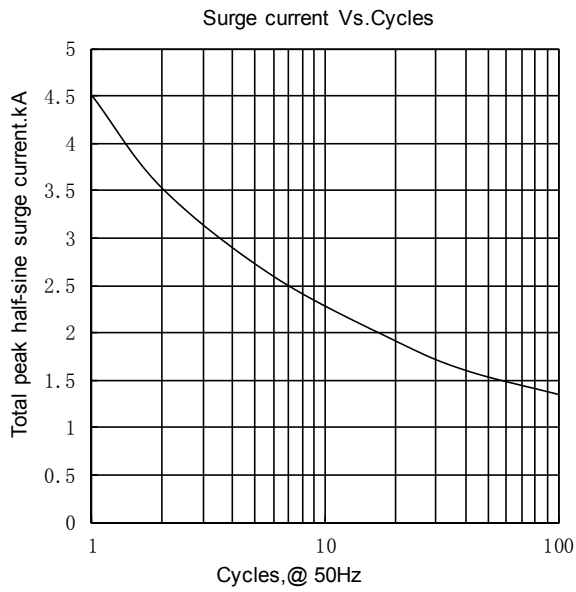


Fig.7

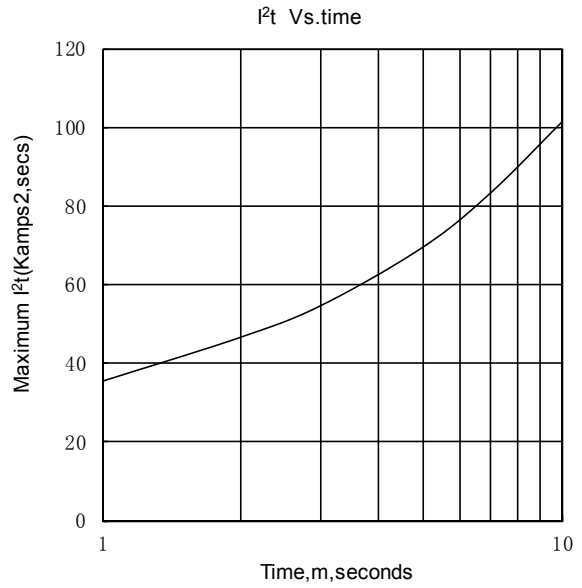


Fig.8

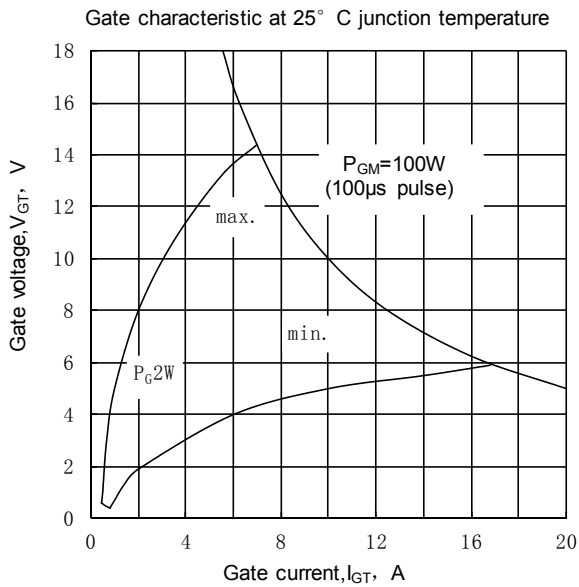


Fig.9

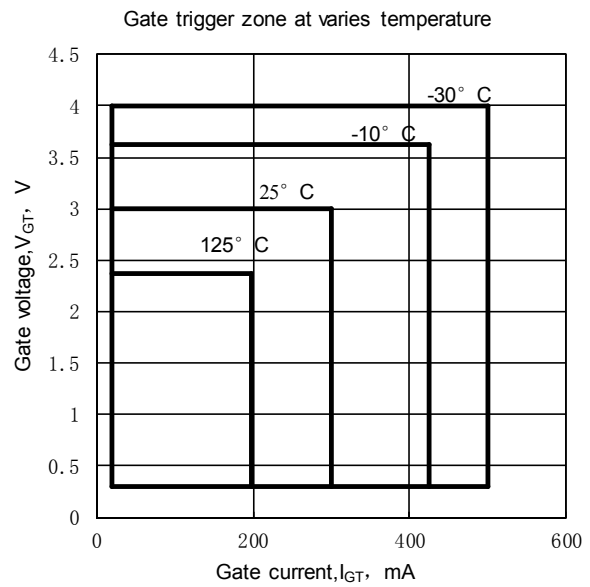


Fig.10

Outline:

