

**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

**$I_{T(AV)}$  2800A**  
 **$V_{DRM}/V_{RRM}$  5600 ~ 6500V**  
 **$I_{TSM}$  45 kA**  
 **$I^2t$  10130 10<sup>3</sup>A<sup>2</sup>s**

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>C</sub> =70°C	125			2800	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	5600		6500	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$		125			600	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave		125			45	kA
$I^2t$	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>					10130	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage			125			1.14	V
$r_T$	On-state slope resistance						0.27	mΩ
$V_{TM}$	Peak on-state voltage	I <sub>TM</sub> =3000A, F=90kN		125			2.0	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 3000A, Gate pulse tr ≤0.5μs IGM=1.5A		125			250	A/μs
Q <sub>r</sub>	Recovery charge	I <sub>TM</sub> =2000A, tp=4000μs, di/dt=-5A/μs, V <sub>R</sub> =100V		125		5000		μC
$I_{GT}$	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A		25	40		300	mA
$V_{GT}$	Gate trigger voltage				0.8		3.0	V
$I_H$	Holding current				25		250	mA
$I_L$	Latching current						1000	mA
$V_{GD}$	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>		125			0.3	V
$R_{th(j-c)}$	Thermal resistance Junction to case	D.C. double side cooled Clamping force 90kN					0.0057	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink						0.0015	°C/W
$F_m$	Mounting force				81	90	108	kN
T <sub>vj</sub>	Junction temperature				-40		125	°C
T <sub>stg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					2500		g
Outline	P30							

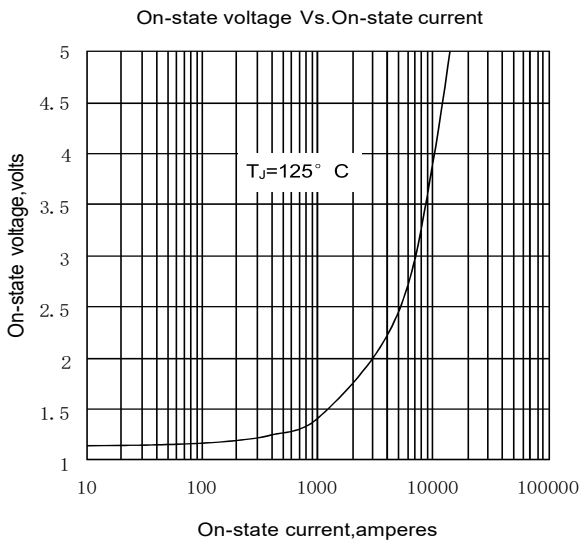


Fig.1

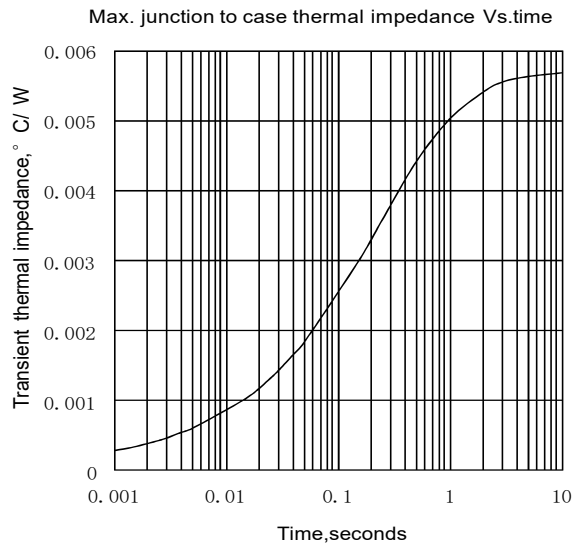


Fig.2

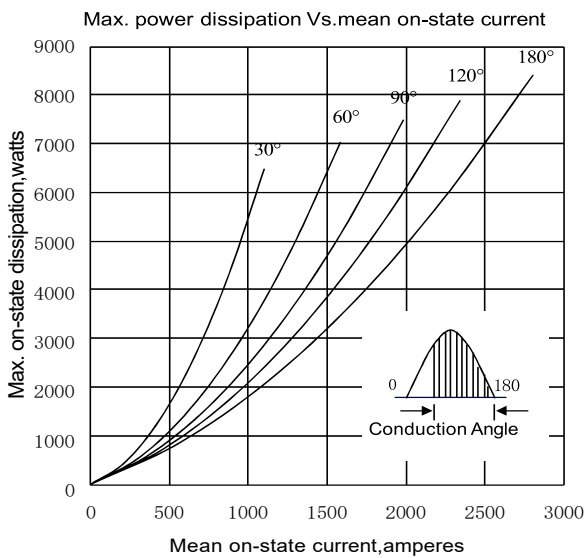


Fig.3

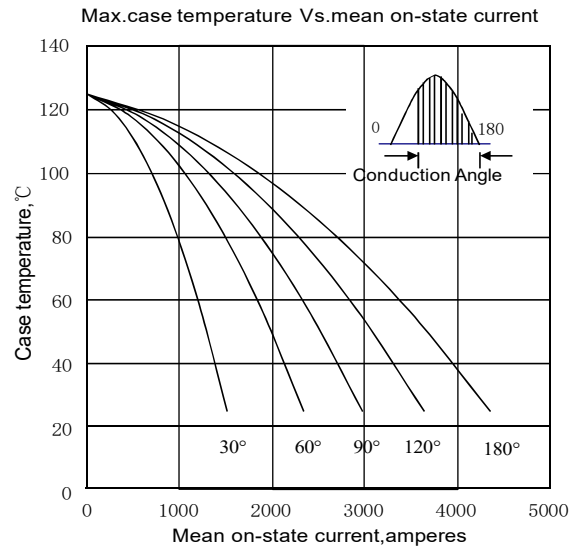


Fig.4

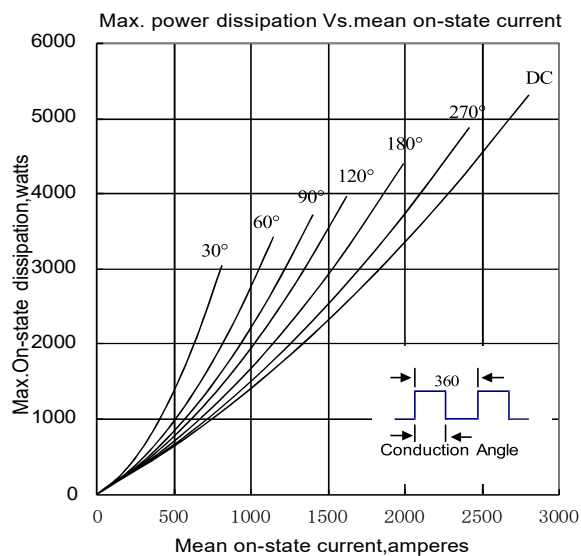


Fig.5

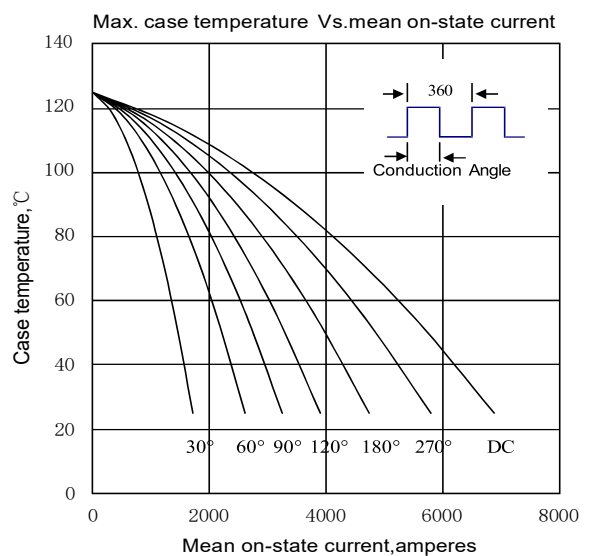


Fig.6

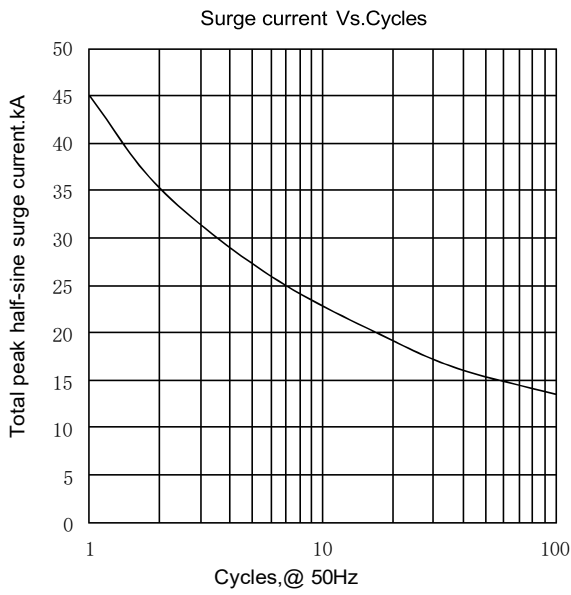


Fig.7

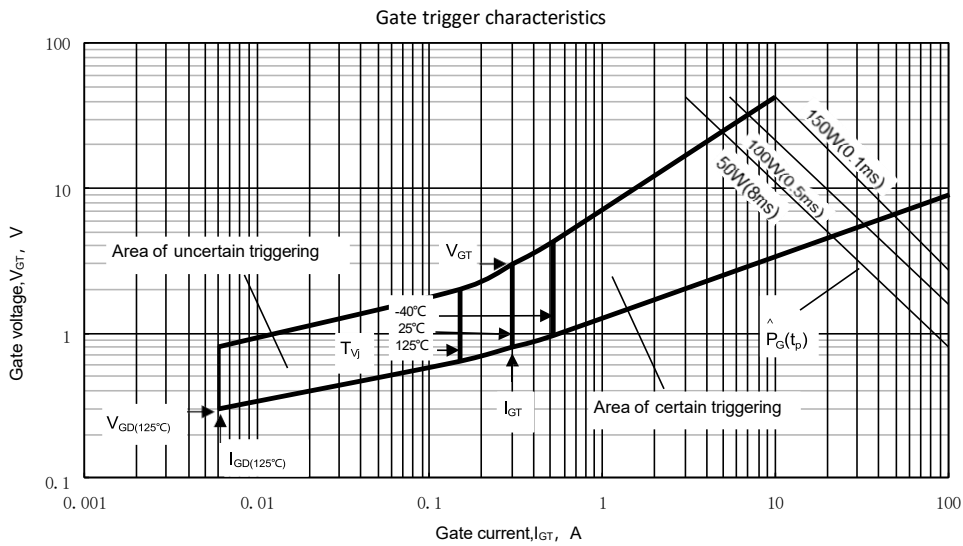


Fig.8

Outline:

