

### 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

$I_{T(AV)}$	<b>320A</b>
$V_{DRM}/V_{RRM}$	<b>6600~7200V</b>
$I_{TSM}$	<b>4.0 kA</b>
$I^2t$	<b>80 10<sup>3</sup>A<sup>2</sup>S</b>



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		320	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	6600		7200	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$	125			150	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			4.0	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=0.6V_{RRM}$				80	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage		125			1.13	V
$r_T$	On-state slope resistance					3.10	mΩ
$V_{TM}$	Peak on-state voltage	I <sub>TM</sub> =500A, F=15kN	25			2.90	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> to1300A, 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		2500		μC
$I_{GT}$	Gate trigger current			30		300	mA
$V_{GT}$	Gate trigger voltage	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	0.8		3.0	V
$I_H$	Holding current			20		200	mA
$V_{GD}$	Non-trigger gate voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	125	0.3			V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine double side cooled				0.045	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Clamping force15kN				0.008	°C /W
$F_m$	Mounting force			10	15	20	kN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>i</sub>	Weight				300		g
Outline	KT33dT						

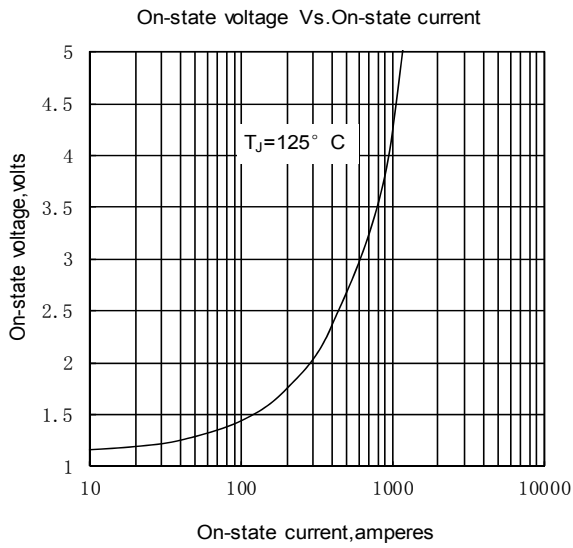


Fig.1

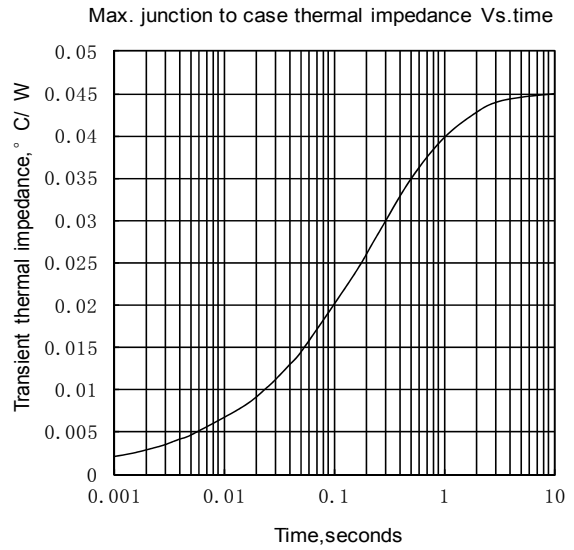


Fig.2

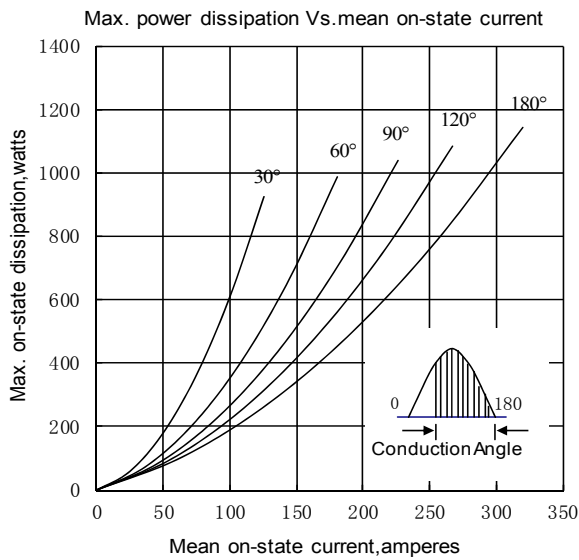


Fig.3

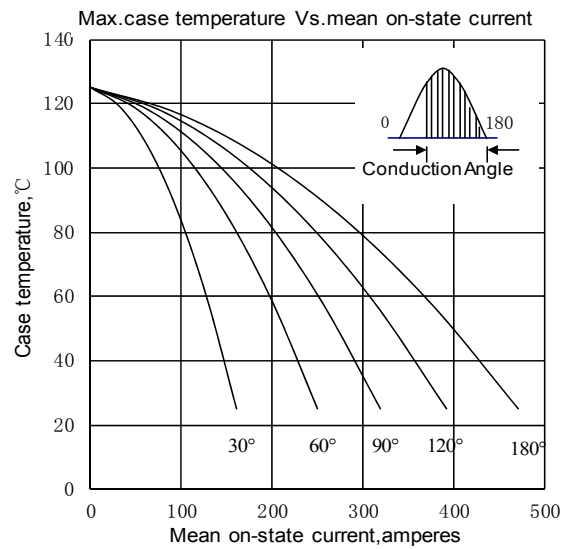


Fig.4

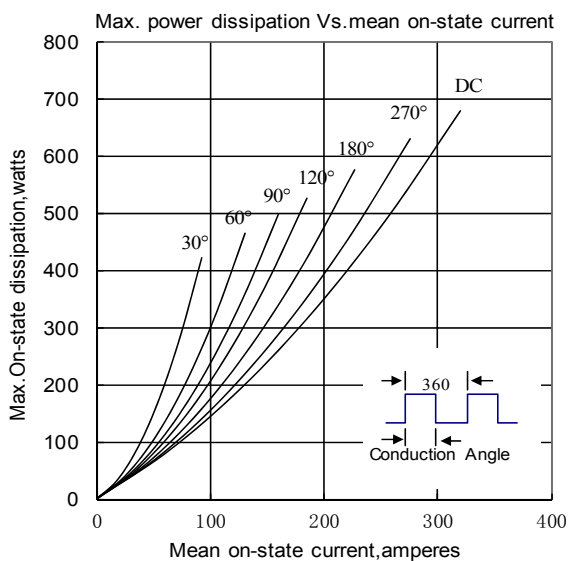


Fig5

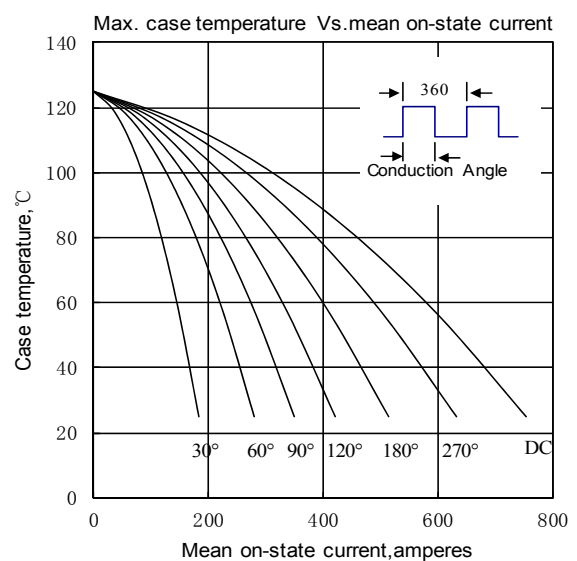


Fig6

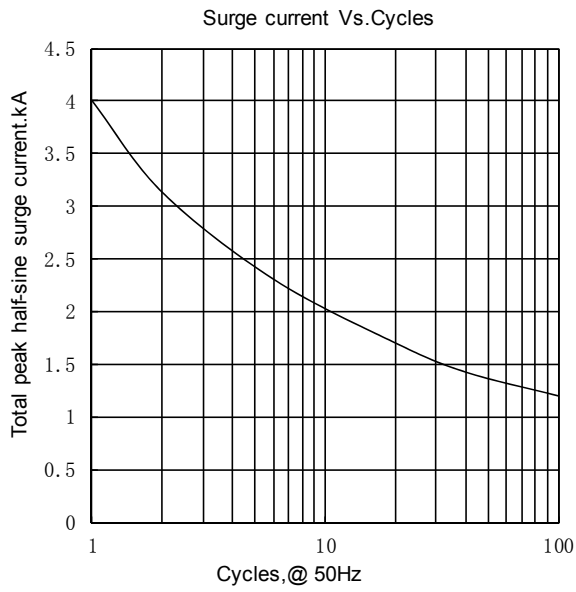


Fig. 7

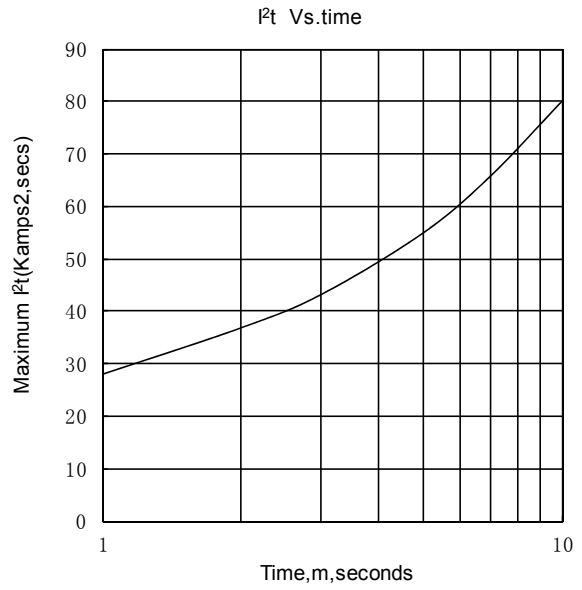


Fig. 8

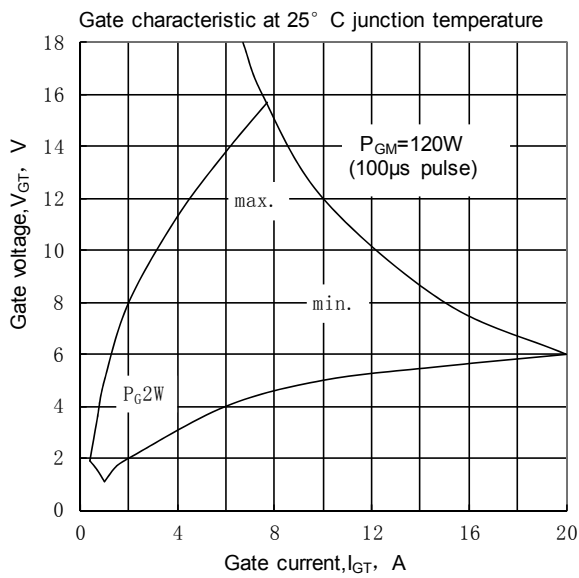


Fig. 9

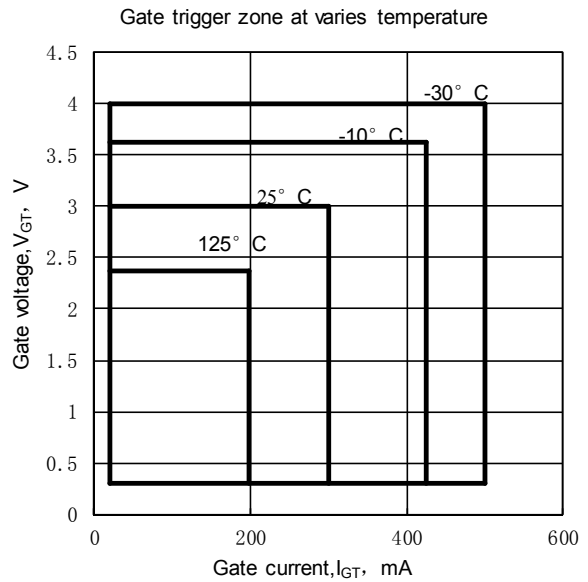


Fig. 10

Outline:

