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

$I_{T(AV)}$	**6000A**
V_{DRM}/V_{RRM}	**1600 ～ 2200V**
I_{TSM}	**80 kA**
I^2t	**32000 10^3A^2S**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(℃)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, T_C=70℃	125			6000	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			250	mA
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$	125			80	kA
I^2t	I^2t for fusing coordination					32000	10^3A^2s
V_{TO}	Threshold voltage		125			0.82	V
r_T	On-state slope resistance					0.07	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A, F=90kN	25			1.10	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}= 67%V_{DRM}	125			2000	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} Gate pulse t_r ≤0.5μs I_{GM}=1.5A	125			200	A/μs
Q_{rr}	Recovery charge	I_{TM}=2000A, tp=4000μs,di/dt=-20A/μs, V_R=100V	125		6000		μC
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	40		300	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			25		250	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.30	V
$R_{th(j-c)}$	Thermal resistance, Junction to case	D.C. Double side cooled Clamping force 90kN				0.005	℃/W
$R_{th(c-h)}$	Thermal resistance, case to heat sink					0.0015	
F_m	Mounting force			81		108	kN
T_{vj}	Junction temperature			-40		125	°C
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				1880		g
Outline	P21a						

On-state voltage Vs.on-state current

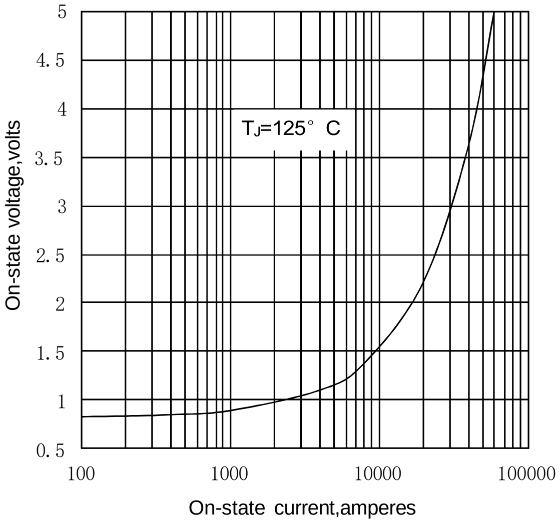

Fig.1

Max. junction to case thermal impedance Vs.time

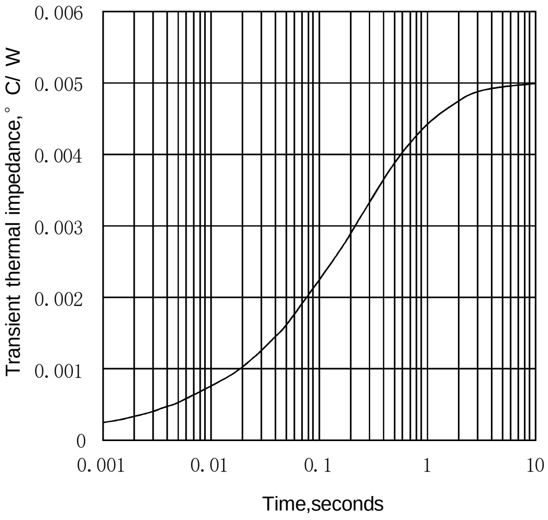

Fig.2

Max. power dissipation Vs.mean on-state current

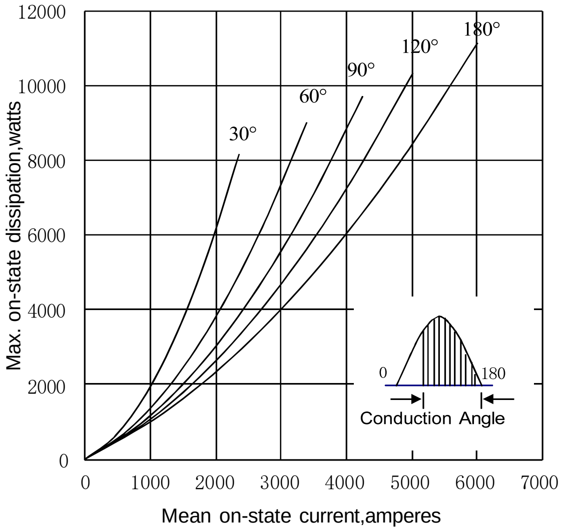

Fig.3

Max.case temperature Vs.mean on-state current

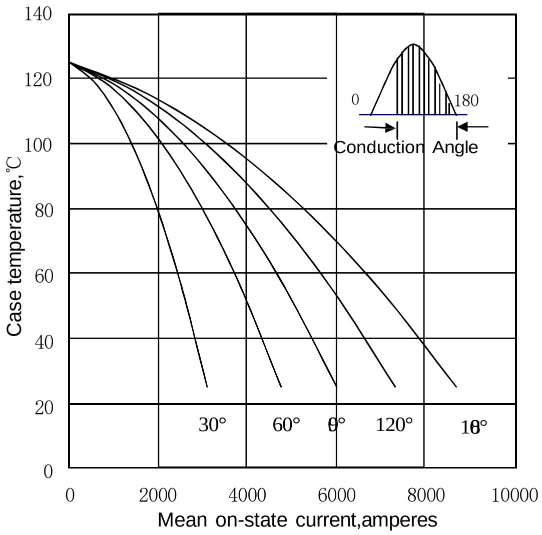

Fig.4

Max. power dissipation Vs.mean on-state current

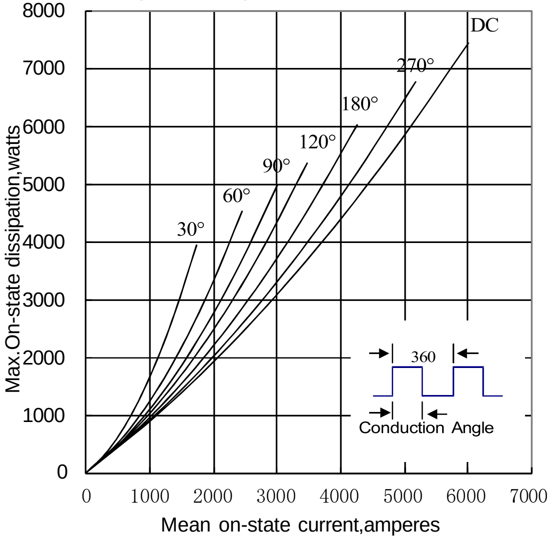

Fig.5

Max. case temperature Vs.mean on-state current

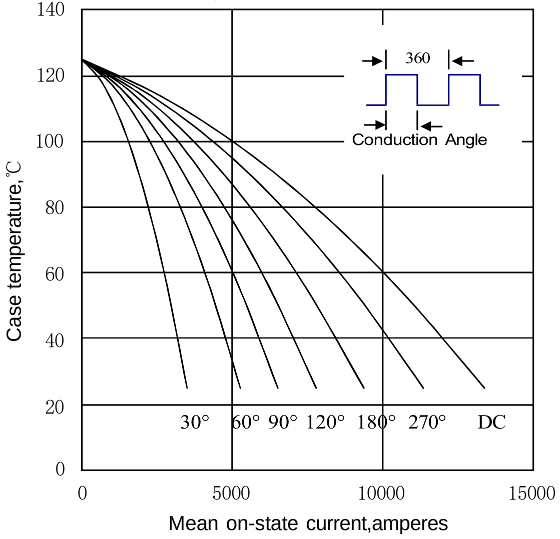

Fig.6

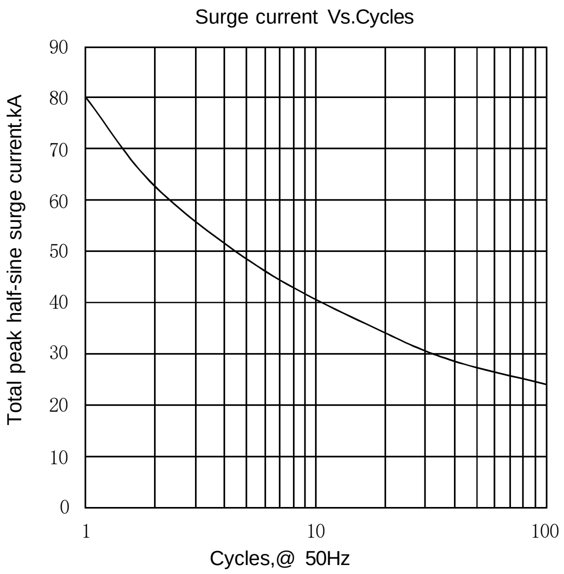

Fig.7

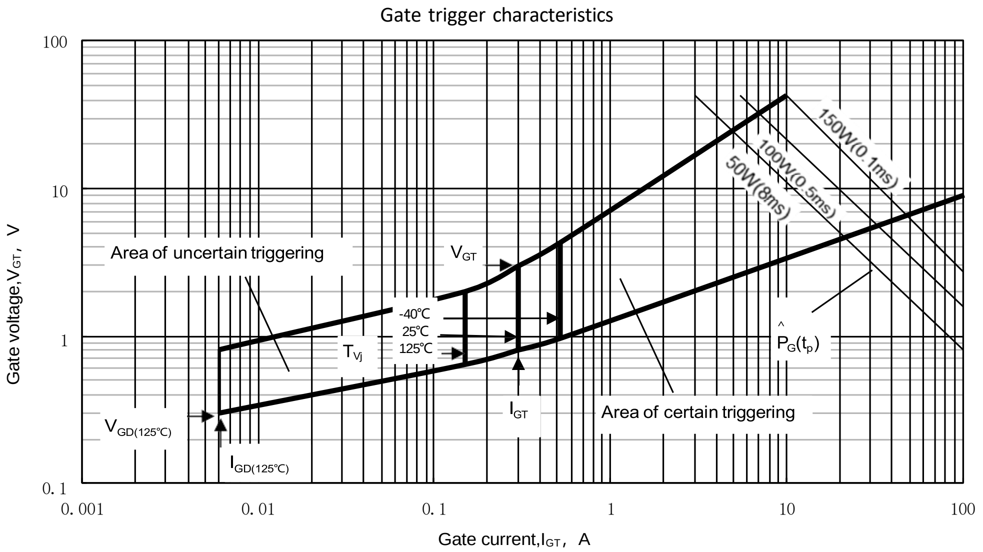

Fig.8

Outline: