

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

$I_{T(AV)}$ **860A**
 V_{DRM}/V_{RRM} **200~600V**
 I_{TSM} **12 kA**
 I^2t **720 10³A²S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _j (°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	$T_C=70^{\circ}\text{C}$				860	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	200		600	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			12	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$					720	A ² s*10 ³
V_{TO}	Threshold voltage			125			0.73	V
r_T	On-state slope resistance						0.33	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=1500\text{A}$, $F=7\text{kN}$		25			1.23	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			1000	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 1300A, Gate pulse $t_r \leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$		125			100	A/μs
Q_{rr}	Recovery charge	$I_{TM}=800\text{A}$, $t_p=2000\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}$, $V_R=50\text{V}$		125		800		μC
I_{GT}	Gate trigger current			25	35		250	mA
V_{GT}	Gate trigger voltage	$V_A=12\text{V}$, $I_A=1\text{A}$			0.8		2.5	V
I_H	Holding current				20		200	mA
V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$		125	0.3			V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 7kN					0.045	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.010	
F_m	Mounting force				5.3		10	kN
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					80		g
Outline	P02							

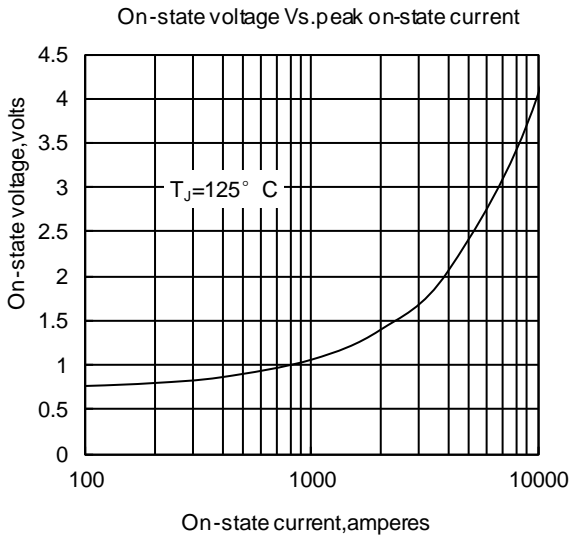


Fig1

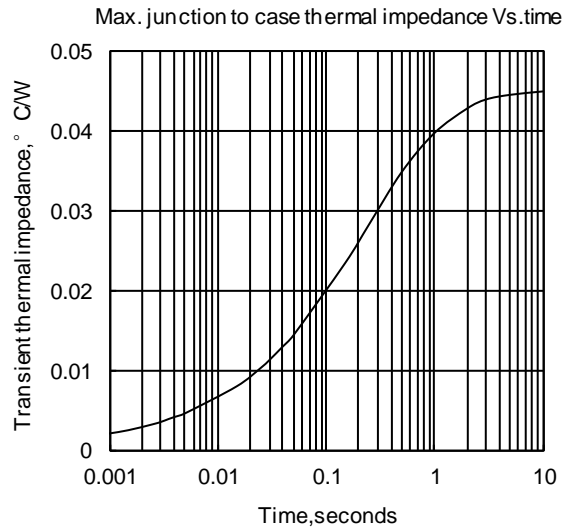


Fig2

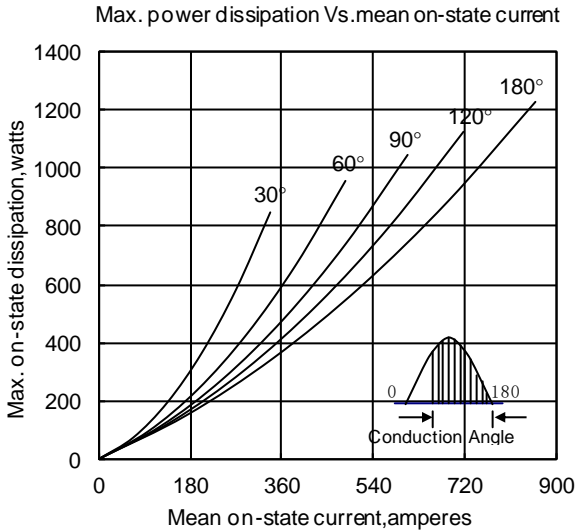


Fig3

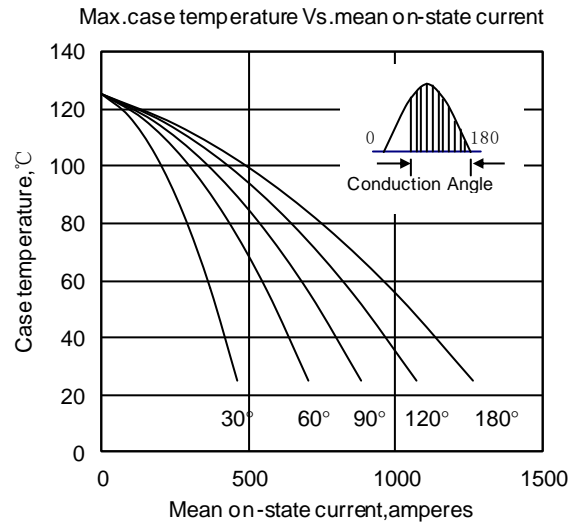


Fig4

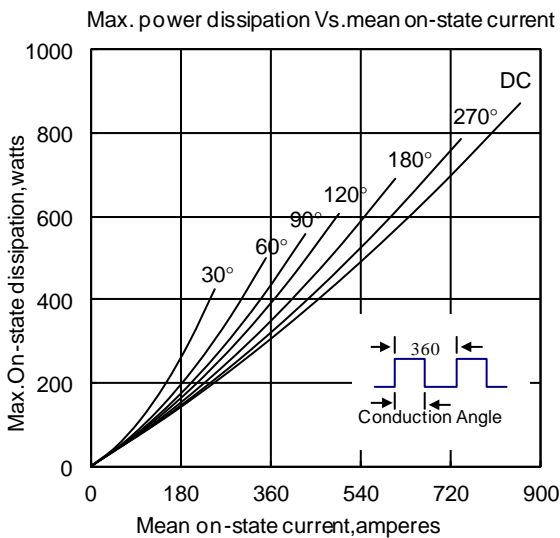


Fig5

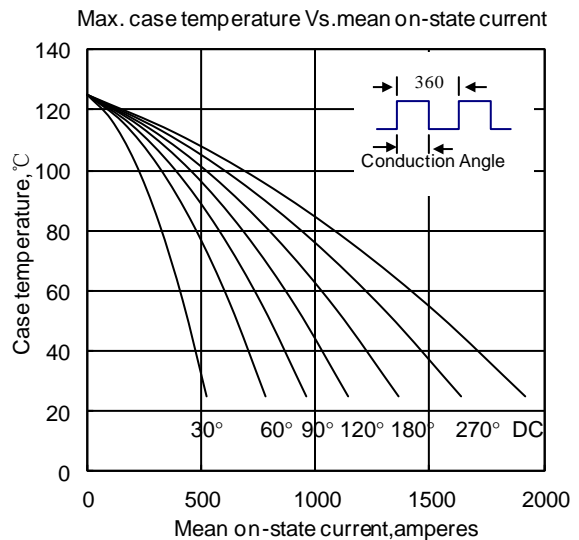


Fig6

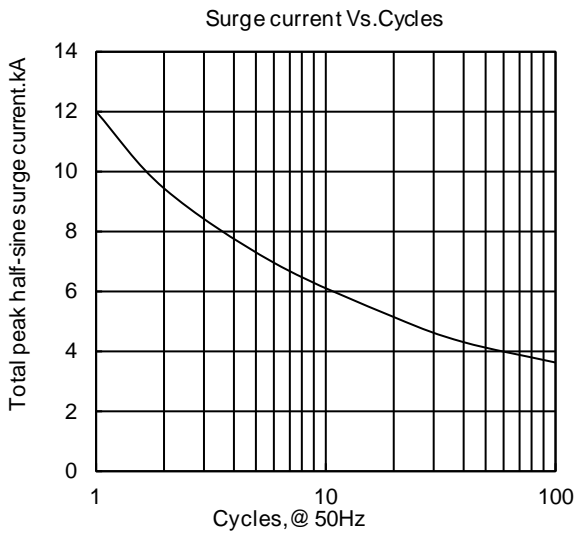


Fig7

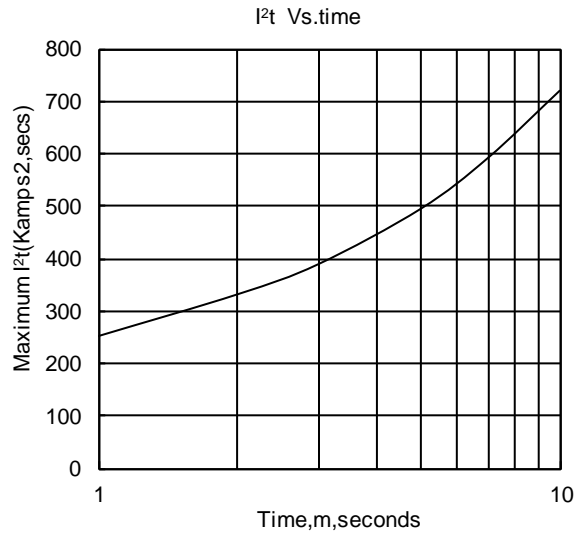


Fig8

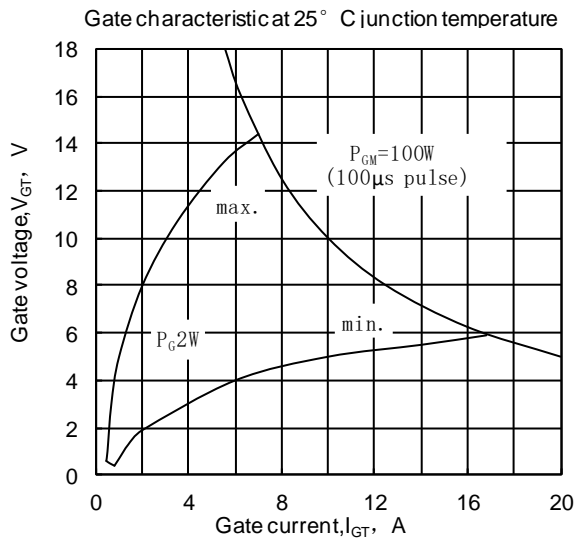


Fig9

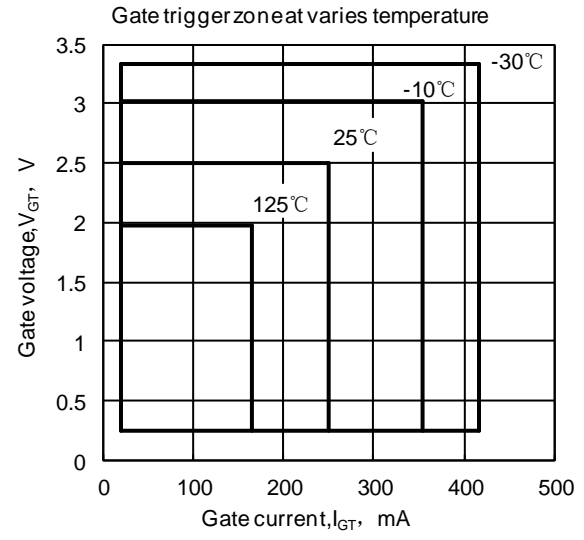


Fig10

