

Feature

- Full diffusion process, capsule type ceramic package
- Amplifying gates
- Double sided cooling

Typical Application

- High power transmission
- DC and AC motor control, Controlled rectifier
- AC DC switch, phase-controlled rectifying
- Active and reactive invresion

$I_{T(AV)}$	100A
V_{DRM}/V_{RRM}	100-6500V
I_{TSM}	2.5KA
I^2t	$32 \cdot 10^3 a^2 \cdot s$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_J (°C)	VALUE		UNIT
				Min	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, THS=97°C	125		100	A
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, THS=55°C	125		487	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM} t_p = 10ms$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$	125	100	6500	V
I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$	125		30	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125		2.5	KA
I^2t	I^2t for fusing coordination	$V_R = 0.6V_{RRM}$			32	$A^2S \cdot 10$
V_{TO}	Threshold voltage		125		0.89	V
r_T	On-state slop resistance				1.10	mΩ
V_{TM}	Peak on-state voltage	$I_{TM} = 314A, F = 15KN$	25		2.40	V
dv/dt	Critical rate of rise of-state voltage	$V_{DM} = 0.67V_{DRM}$	125		300	V/us
di/dt	Critical rate of rise of on-state current	$V_{DM} = 67\% V_{DRM}$ TO 1000A, Gate pulse $t_r \leq 0.5us$ $I_{GM} = 1.5A$	125		100	A/us
I_{TM}	Reverse recovery current	$I_{TM} = 314A, t_q = 1000us$ $Di/dt = -20A/us.$ $V_i = 50V$	125		100	A
t_{rr}	Reverse recovery time				12	us
Q_{rr}	Recovery charge				600	uC
I_{GT}	Gate trigger current	$V_A = 12V, I_A = 1A$	25	35	250	mA
V_{GT}	Gate trigger voltage			0.8	2.0	V
I_H	Holding current			20	150	mA
V_{GD}	Npn-trigger gate voltage	$V_{DM} = 0.67V_{DRM}$	125	0.3		V
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At 180° sine double side cooled Clamping force 5.0kn			0.065	°C/W
F_M	Mounting force			5.3	10	KN
T_{stq}	Stored temperature			-40	140	°C
W_t	Weight					g
Outline						

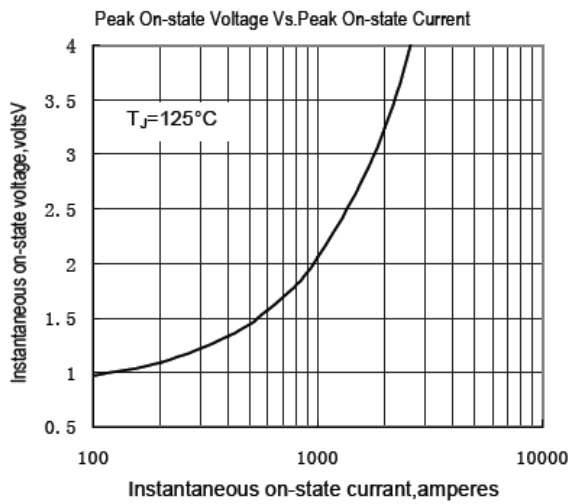


Fig.1

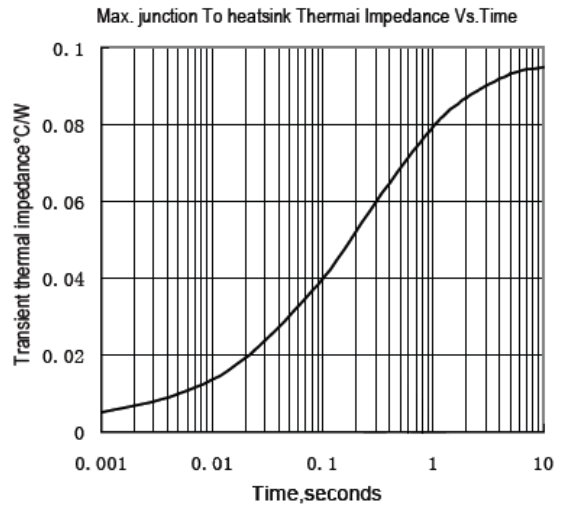


Fig.2

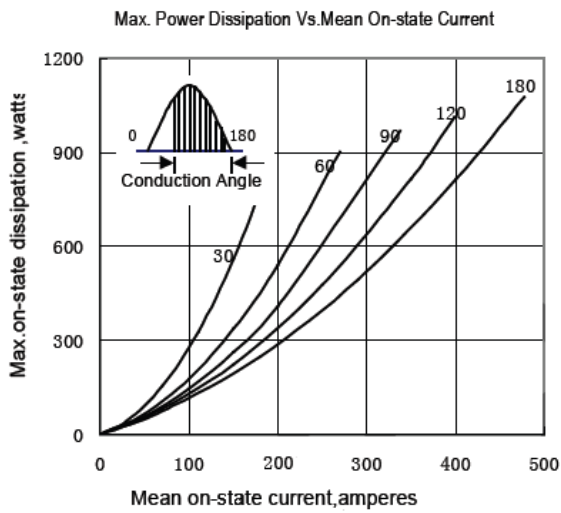


Fig.3

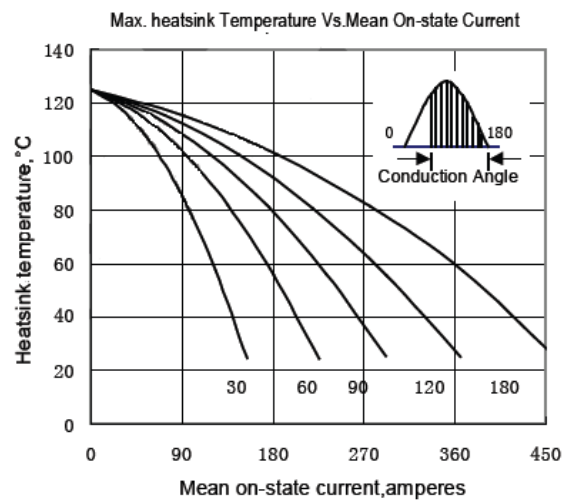


Fig.4

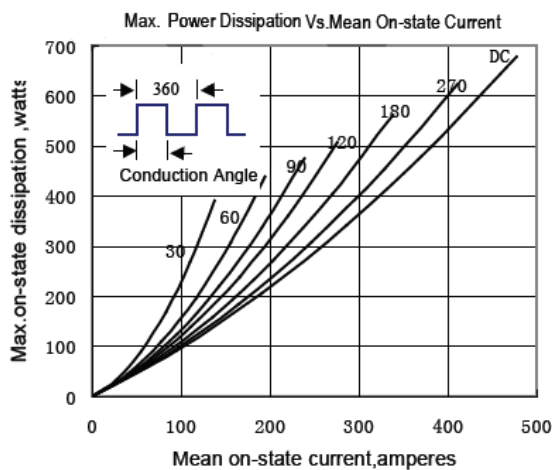


Fig.5

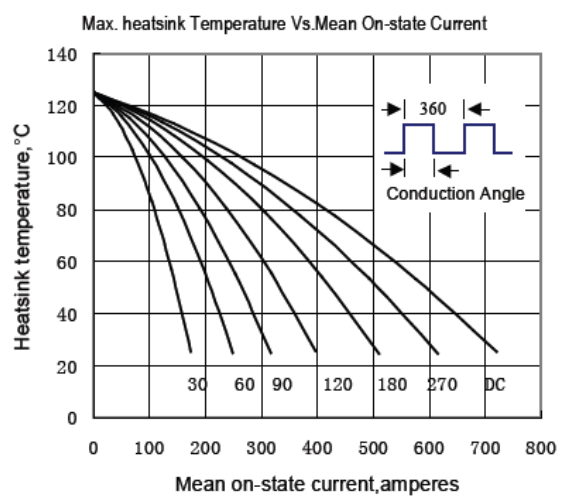


Fig.6

Surge Current Vs.Cycles

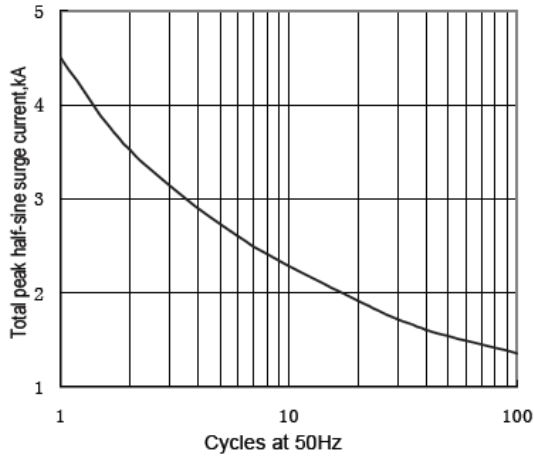


Fig.7

I^2t Vs.Time

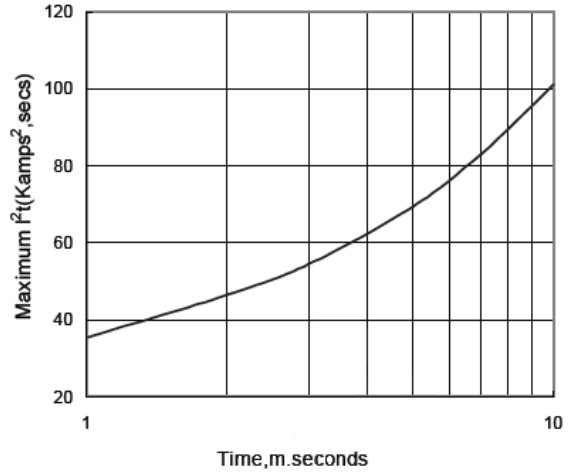


Fig.8

Gate characteristic at 25°C junction temperature

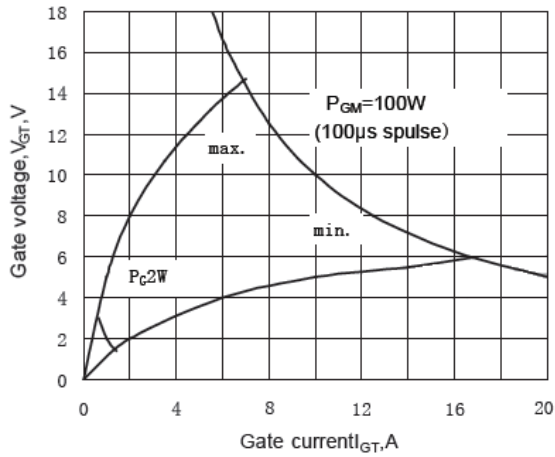


Fig.9

Gate Trigger Zone at varies temperature

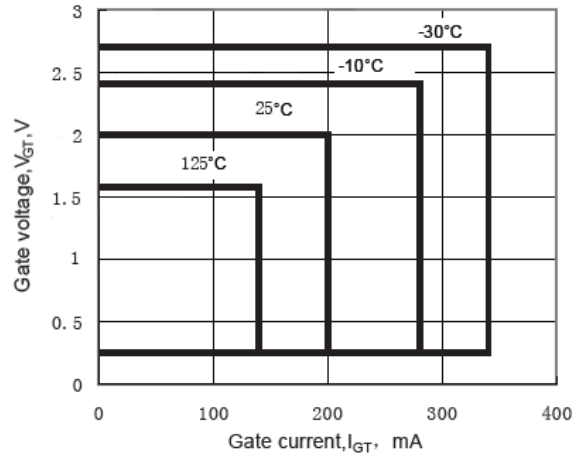


Fig.10

Outline:

