

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

$I_{T(AV)}$	1500A
V_{DRM}/V_{RRM}	100-6500V
I_{TSM}	20KA
I^2t	3380 10^3a^2s

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		1500	A
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, THS=55°C	125		1815	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM}\&V_{RRM}$ tp=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		120	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125		20	KA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$			3380	A^2S^*10
V_{TO}	Threshold voltage		125		0.95	V
r_T	On-state slop resistance				0.18	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=4500A, F=15KN$	25		2.4	V
dv/dt	Critical rate of rise of-state voltage	$V_{DM}=0.67V_{DRM}$	125		1000	V/us
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ TO 1000A, Gate pulse $tr \leq 0.5us$ $I_{GM}=1.5A$	125		200	A/us
I_{TM}	Reverse recovery current	$I_{TM}=4500A, tq=1000us$ $Di/dt=-20A/us.$ $V_i=50V$	125		153	A
t_{rr}	Reverse recovery time				18.2	us
Q_{rr}	Recovery charge				1394	uC
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			20	300	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	At180° sine double side cooled Clamping force 5.0kn			0.017	°C/W
F_M	Mounting force			27	34	KN
T_{stq}	Stored temperature			-40	140	°C
W_t	Weight					g
Outline						

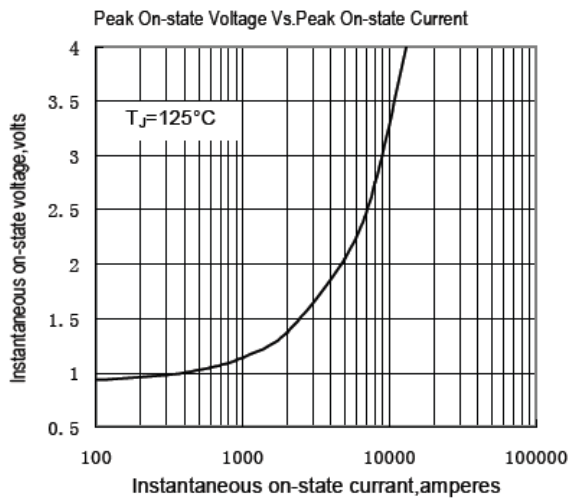


Fig.1

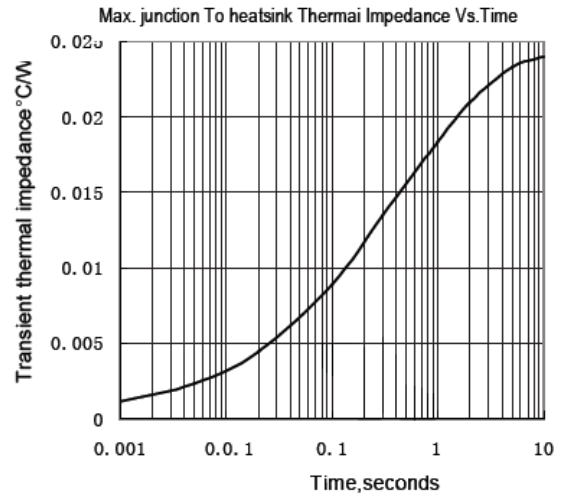


Fig.2

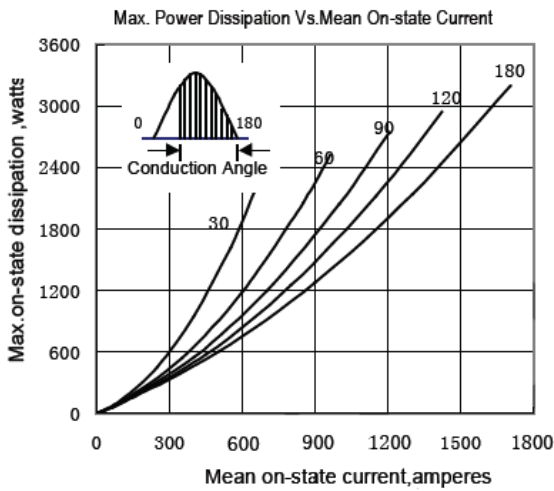


Fig.3

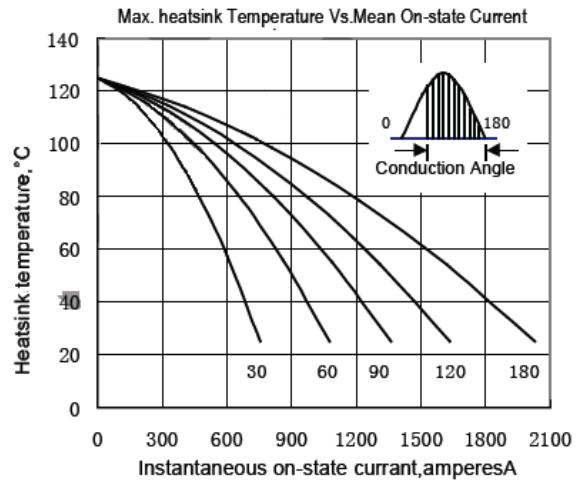


Fig.4

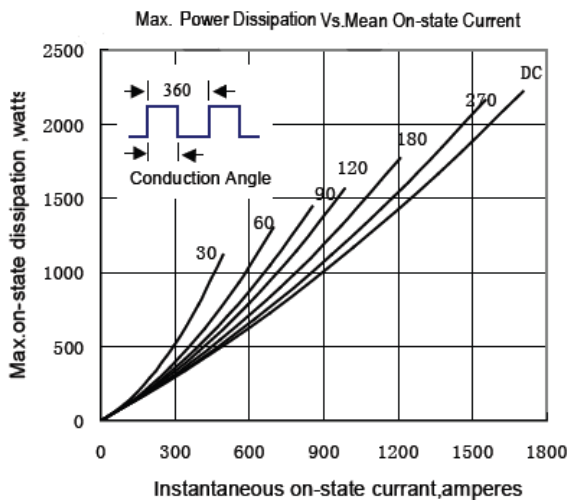


Fig.5

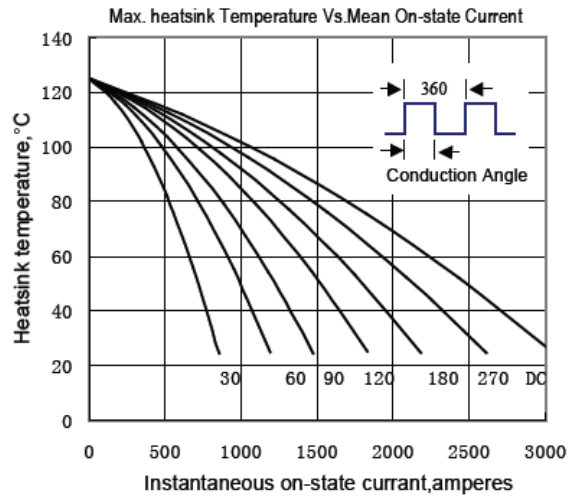


Fig.6

Surge Current Vs.Cycles

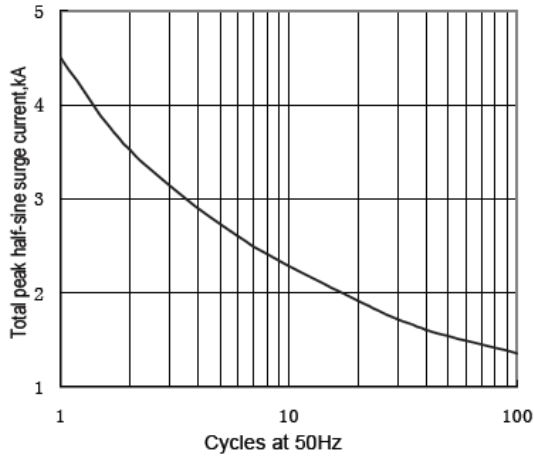


Fig.7

I^2t Vs.Time

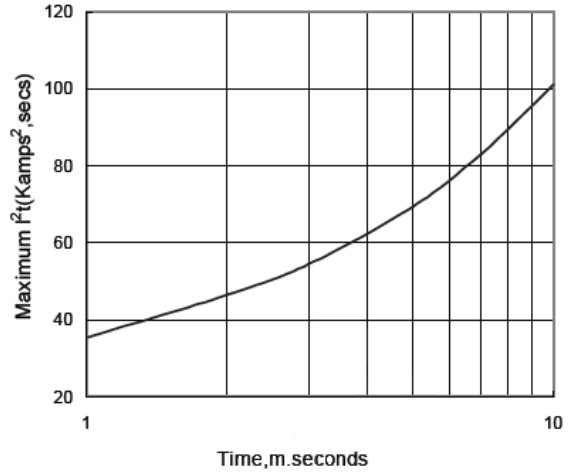


Fig.8

Gate characteristic at 25°C junction temperature

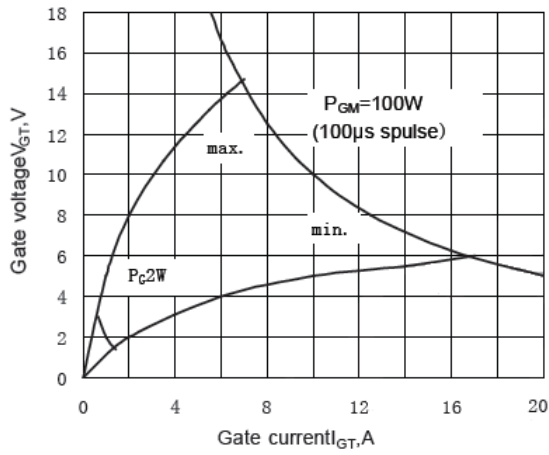


Fig.9

Gate Trigger Zone at varies temperature

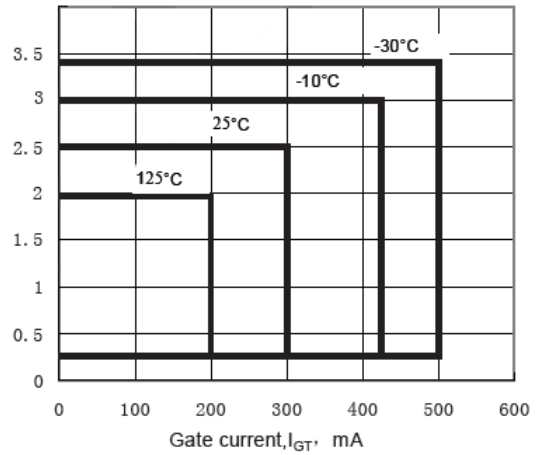
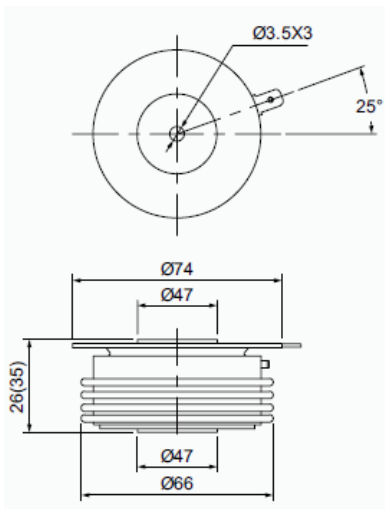
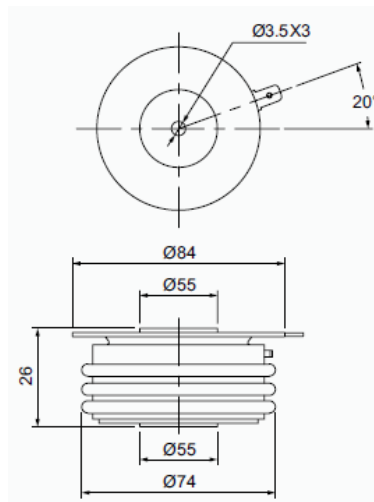


Fig.10

Outline:



1



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