

Feature

- Full diffusion process, Distributed extension to amplify the gate structure
- Low switching Loss, Excellent dynamic characteristic
- Excellent high frequency performances, applicable frequency 2.5-10KHz
- Capsule type ceramic package, Double-sided cooling

Typical Application

- Inverter, Electric welder
- Chopper, Inductor
- Various types of forced converter

$I_{T(AV)}$	1200A
V_{DRM}/V_{RRM}	800-2500V
T_q	8-15us
I_{TSM}	14KA

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=55°C	125		1200	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	800	2500	V	
I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$	125		100	mA	
I_{TSM}	Surge on-state current	10ms half sine wave	125		14	KA	
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$			1445	A^{2S*1}	
V_{TO}	Threshold voltage		125		1.27	V	
r_T	On-state slop resistance				0.23	mΩ	
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=15KN$	25		3.2	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 $t_r \leq 0.5us$ $I_{GM}=1.5A$	125		200	A/us	
I_{TM}	Reverse recovery current	$I_{TM}=3000A, t_q=1000us$ $Di/dt=-20A/us.$ $V_f=50V$	125		60	137	A
t_{rr}	Reverse recovery time				3.0	15	us
Q_{rr}	Recovery charge				90	110	uC
t_q	Circuit commutated turn-off time	$I_{TM}=3000A, t_q=1000us,$ $di/dt=20a/us V_R=50V$	125	8	15	us	
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25		30	300	mA
V_{GT}	Gate trigger voltage				0.8	3.0	V
I_H	Holding current				20	400	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			0.022	°C/W	
F_M	Mounting force			21	30	KN	
T_{stq}	Stored temperature			-40	140	°C	
W_t	Weight					g	
Outline							

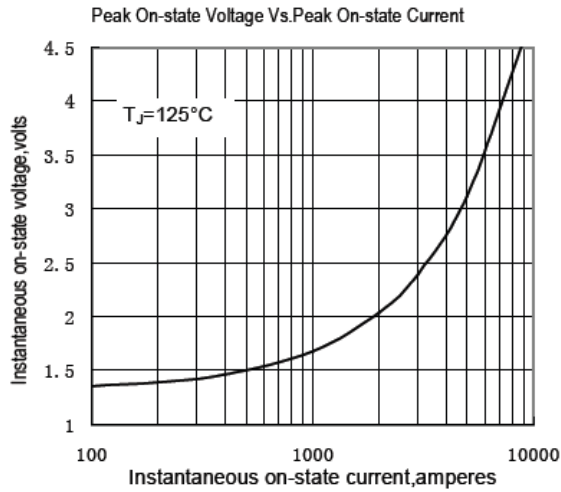


Fig.1

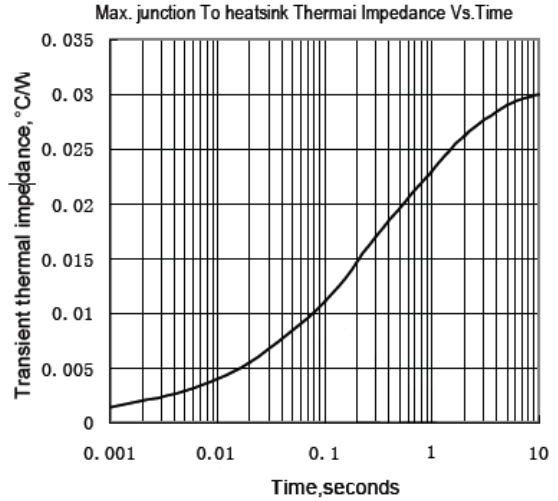


Fig.2

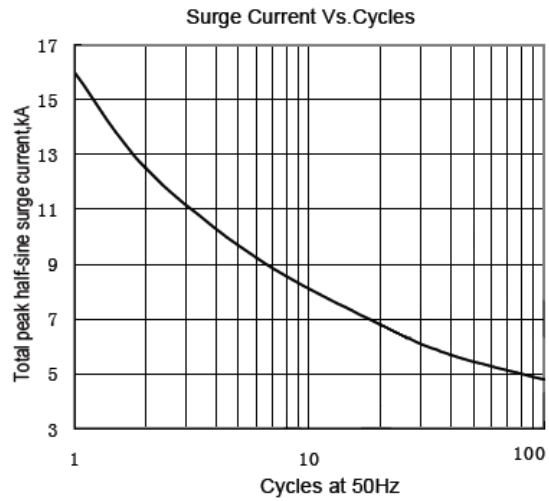


Fig.3

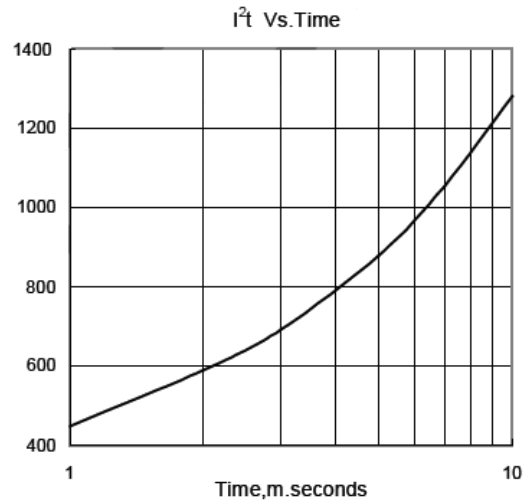


Fig.4

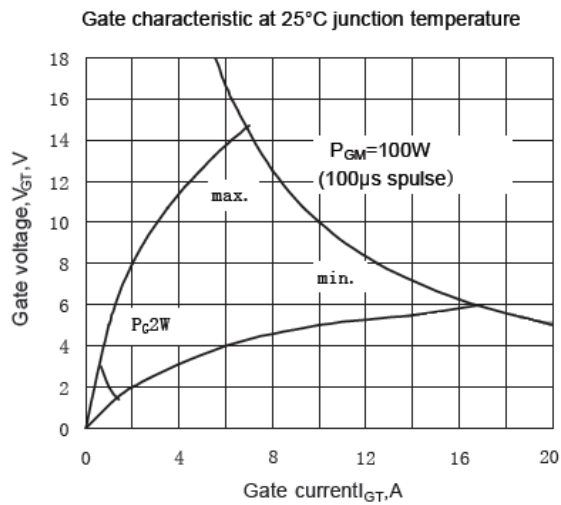


Fig.5

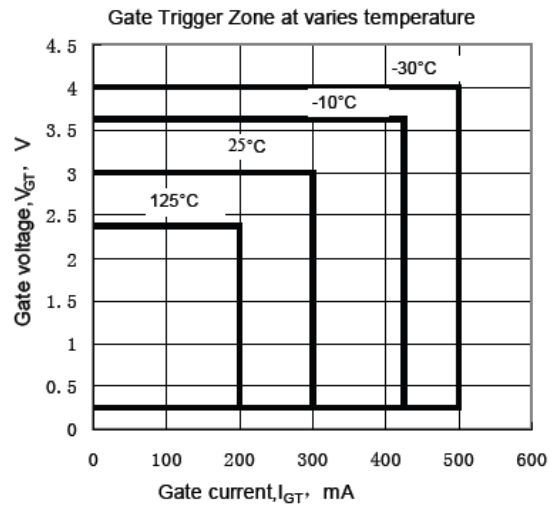
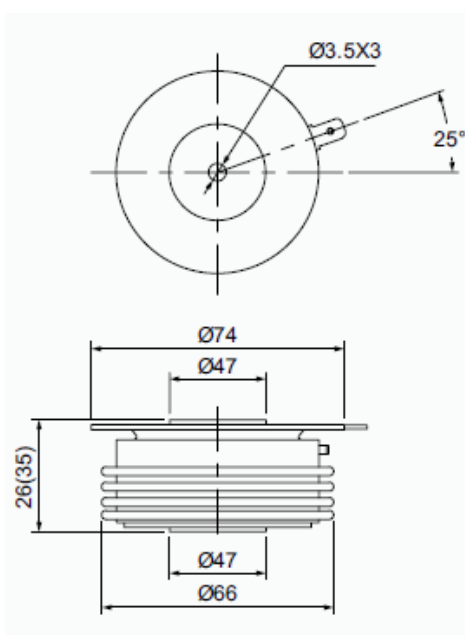
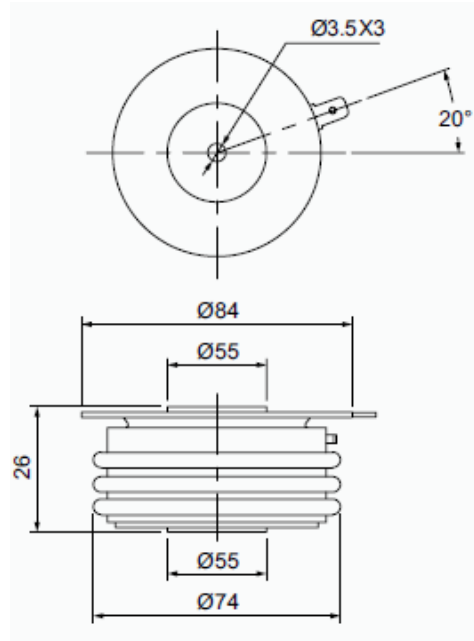


Fig.6

Outline:



1



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