

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$ **4300A**
 V_{DRM}/V_{RRM} **4500~5200V**
 t_q **60~150μs**
 I_{TSM} **40 kA**
 I^2t **8000 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 =55°C	125			4300	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	4500		5200	V
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		125			40	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					8000	A ² s*10 ³
V _{TO}	Threshold voltage			125			1.58	V
r _T	On-state slope resistance						0.15	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =2500A, F=70kN		125			3.40	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}		125			500	V/μs
di/dt	Critical rate of rise of on-state current	V _{DM} = 67%V _{DRM} ,to 4000A Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125			1200	A/μs
Q _{rr}	Recovery charge	I _{TM} =2000A, tp=2000μs, di/dt=-60A/μs, V _R =50V		125		5000		μC
t _q	Circuit commutated turn-off time	I _{TM} =2000A, tp=2000μs, V _R =50V dv/dt=30V/μs ,di/dt=-60A/μs		125	60		150	μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	40		450	mA
V _{GT}	Gate trigger voltage				0.9		4.5	V
I _H	Holding current				20		1000	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}		125	0.25			V
R _{th(j-c)}	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 40 kN					0.0050	°C/W
R _{th(c-h)}	Thermal resistance case to heat sink						0.0015	
F _m	Mounting force				81		108	kN
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					1880		g
Outline								

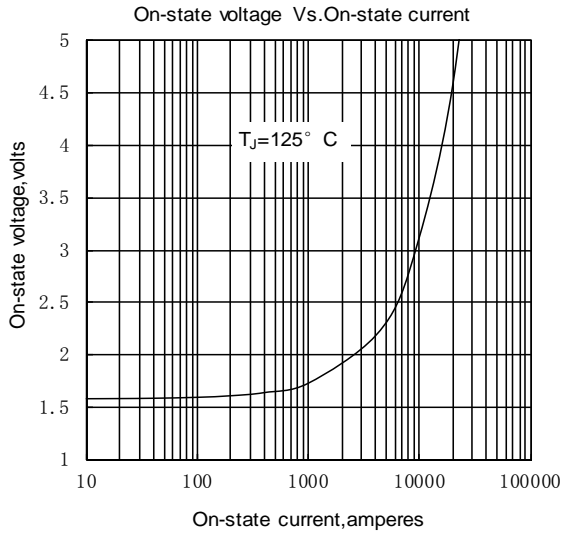


Fig. 1

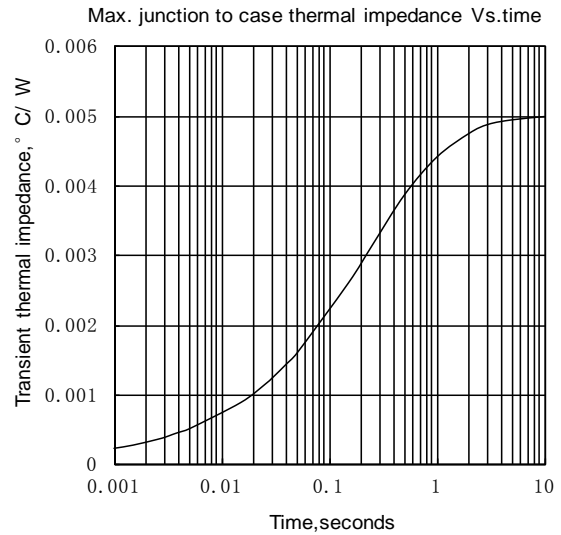


Fig. 2

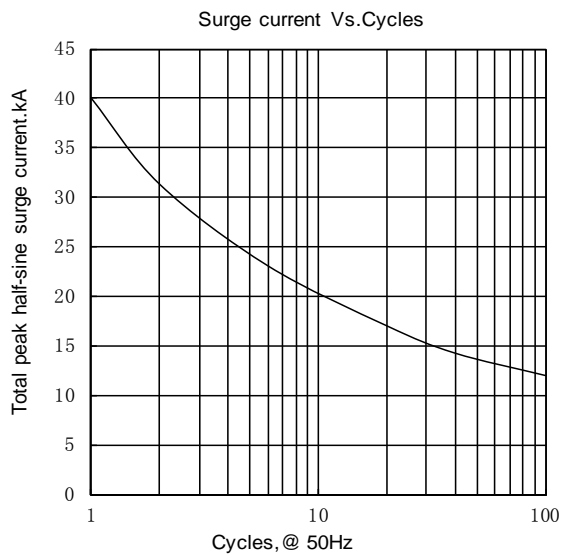


Fig. 3

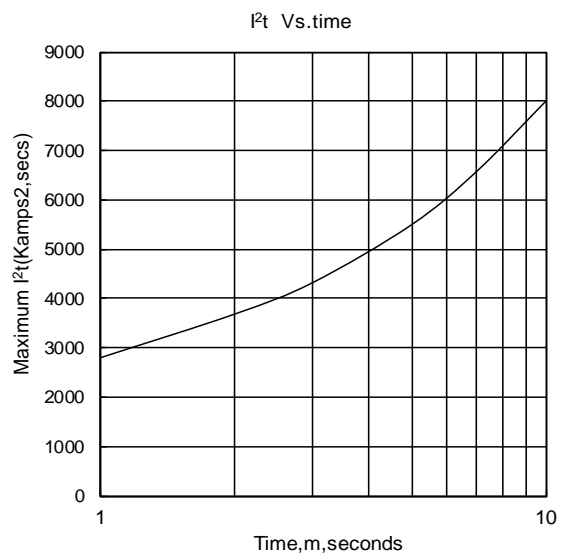


Fig. 4

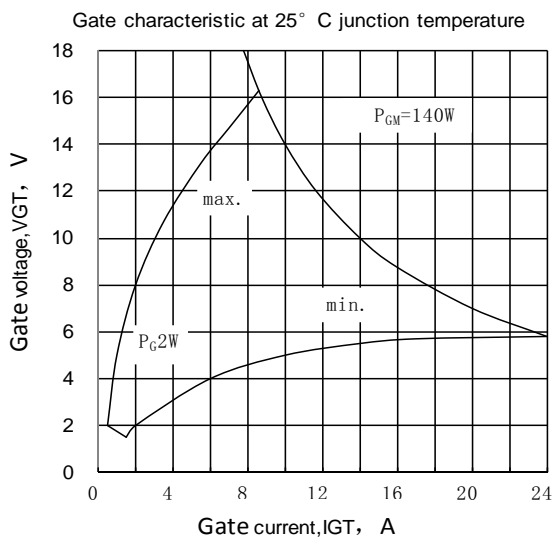


Fig. 5

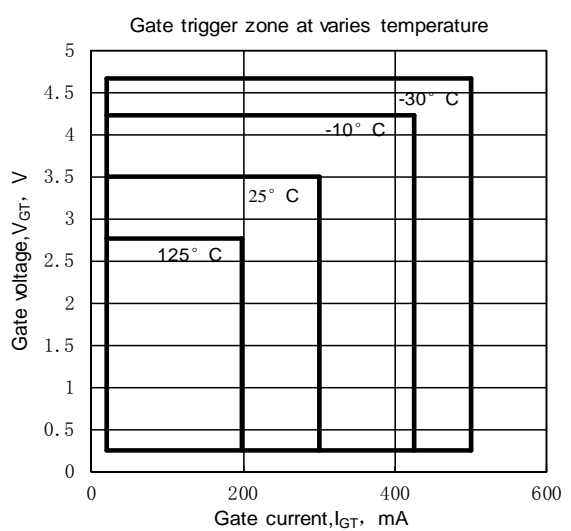


Fig. 6

Outline:

