

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$ **4240A**
 V_{DRM}/V_{RRM} **800~1800V**
 t_q **30~60μs**
 I_{TSM} **45 kA**
 I^2t **10125 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			4240	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	800		1800	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 V _R =0.6V _{RRM}	125			45	kA
I ² t	I ² t for fusing coordination					10125	A ² s*10 ³
V _{TO}	Threshold voltage		125			1.11	V
r _T	On-state slope resistance					0.12	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=70kN	125			1.71	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} ,to4000A 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		1100		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	30		60	μs
I _{GT}	Gate trigger current			40		450	mA
V _{GT}	Gate trigger voltage	V _A =12V, I _A =1A	25	0.9		4.5	V
I _H	Holding current			20		1000	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	125	0.3			V
R _{th(j-c)}	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 70 kN				0.007	°C/W
R _{th(c-h)}	Thermal resistance case to heat sink					0.002	
F _m	Mounting force			63		84	kN
T _{stg}	Stored temperature			-40		140	°C
W _t	Weight				1390		g
Outline							

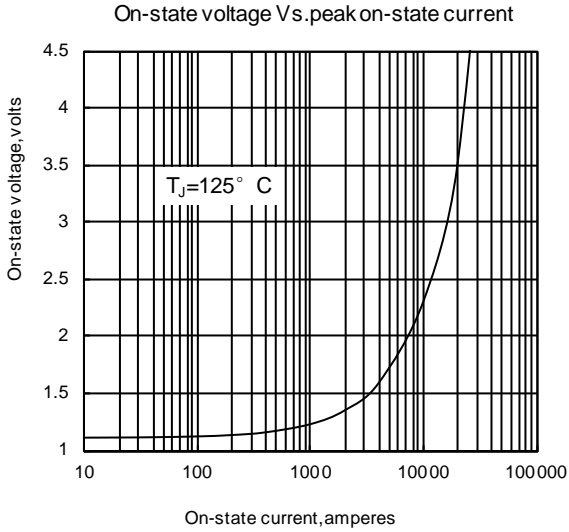


Fig1

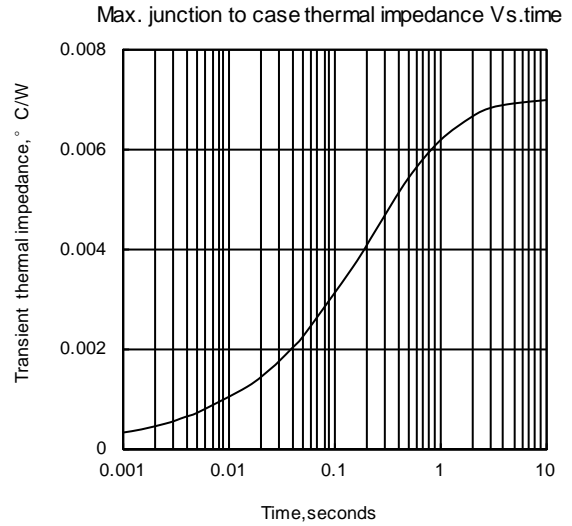


Fig2

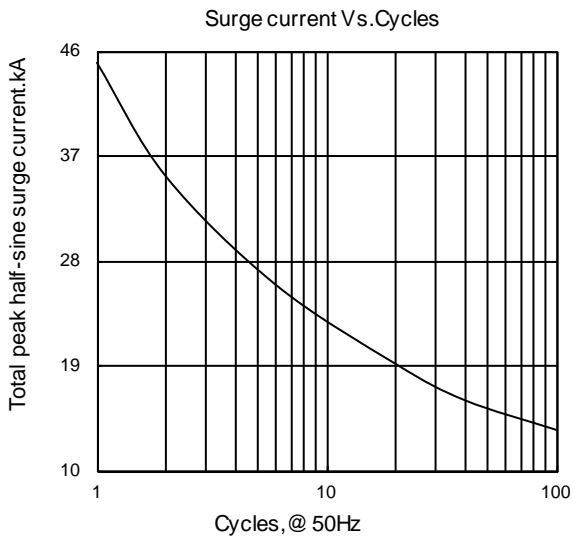


Fig3

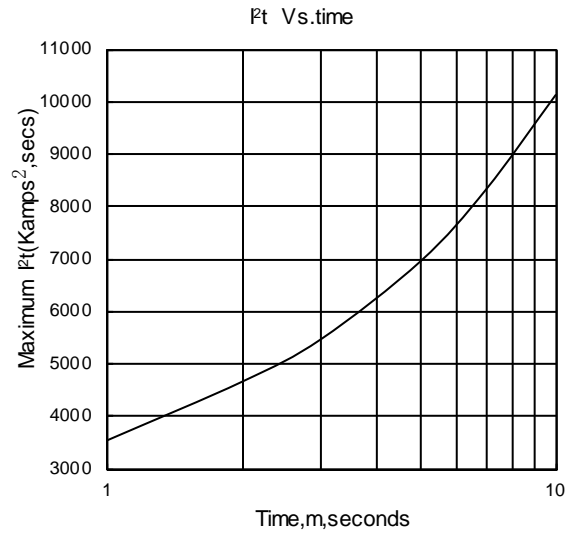


Fig4

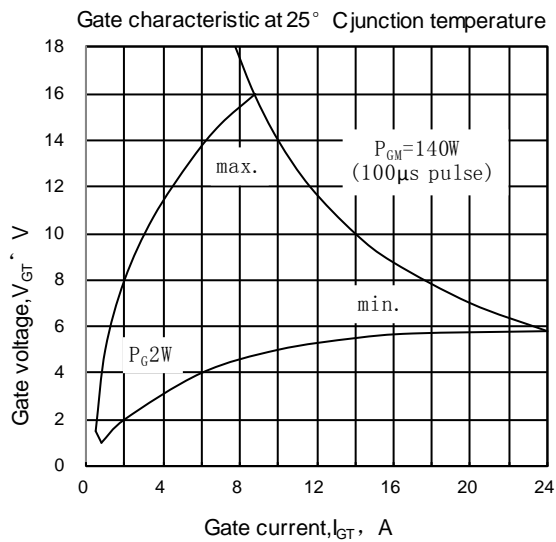


Fig5

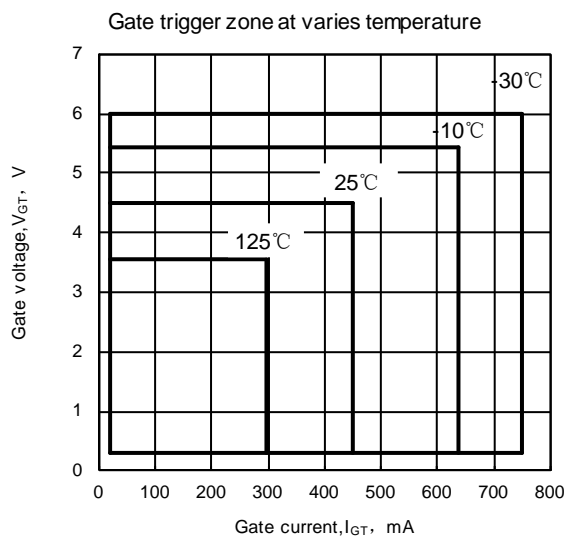


Fig6

Outline:

