

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses
- Short turn-off time
- Hermetic metal cases with ceramic insulators

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control
- General power switching applications

$I_{T(AV)}$ **1520A**
 V_{DRM}/V_{RRM} **800~1400V**
 t_q **15~28μs**
 I_{TSM} **18kA**



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			1520	A
			T _C =85°C				990	
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V _{DRM} &V _{RRM} , tp=10ms V _D & V _R = V _{DRM} & V _{RRM} + 100V		125	800		1400	V
I _{DRM} I _{RRM}	Repetitive peak off-state current Repetitive peak reverse current	V _D = V _{DRM} V _R = V _{RRM}		125			100	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			18	kA
I ² t	I ² T for fusing coordination	V _R =0.6V _{RRM}					1620	A ² s*10 ³
V _{TO}	Threshold voltage			125			1.63	V
r _T	On-state slop resistance						0.25	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =3000A, F=26kN		125			2.38	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}		125			200	V/μs
di/dt	Critical rate of rise of on-state current	V _{DM} = 67%V _{DRM} to2500A Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125			1500	A/μs
Q _{rr}	Recovery charge	I _{TM} =2000A, tp=2000μs, di/dt=-60A/μs, V _R =50V		125		105	120	μC
t _q	Circuit commutated turn-off time	I _{TM} =1300A, tp=1000μs, V _R =50V dv/dt=30V/μs , di/dt=-20A/μs		125	15		28	μs
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}	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 26kN					0.018	°C /W
R _{th(c-h)}	Thermal resistance case to heat sink						0.004	
F _m	Mounting force				21		30	kN
T _{stg}	Stored temperature				-40		140	°C
W _i	Weight					590		g
Outline	KT54cT55							

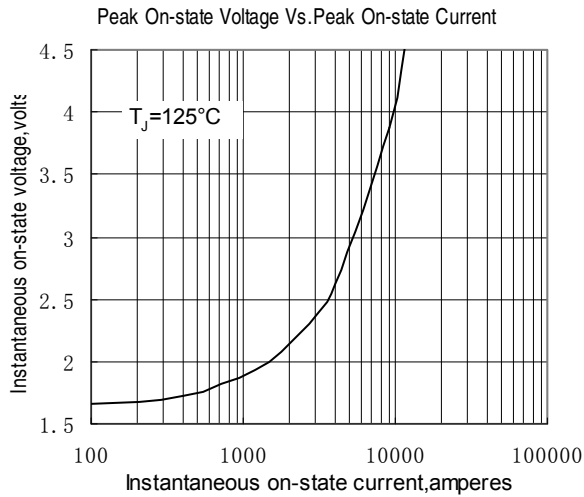


Fig.1

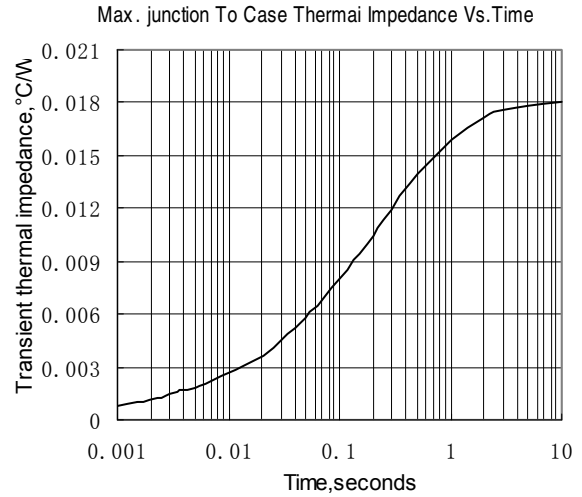


Fig.2

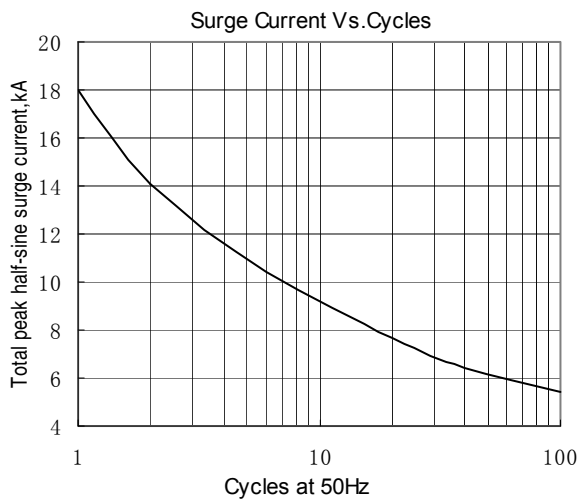


Fig.3

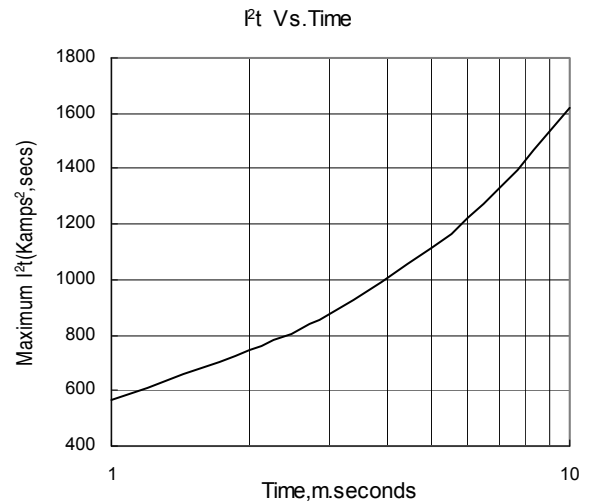


Fig.4

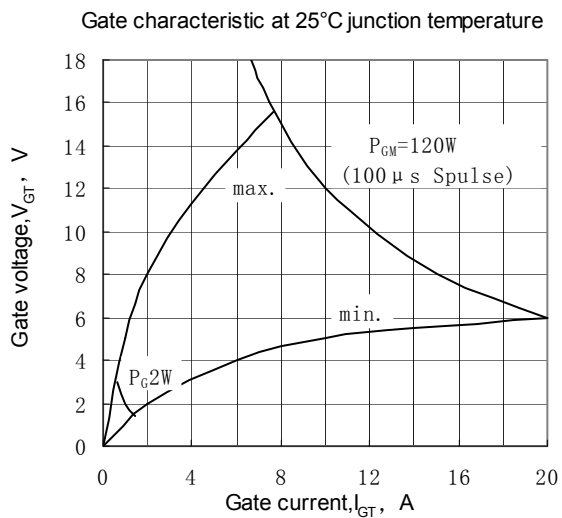


Fig.5

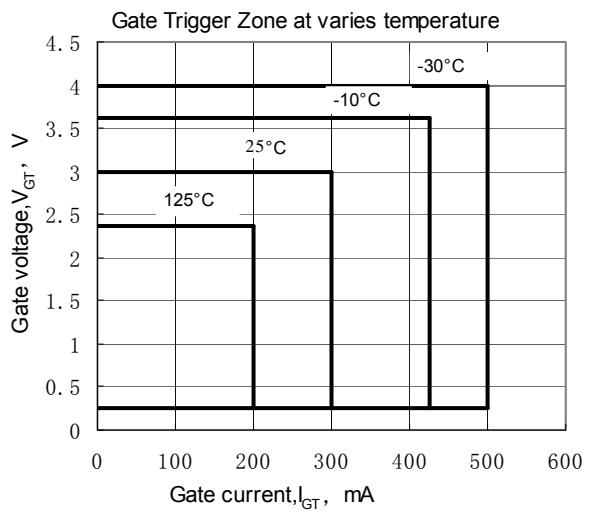


Fig.6

Outline:

