

Features

- n Excellent dynamic characteristics
- n Fast turn-on and high di/dt
- n Low switching losses

Typical Applications

- n Design for inverter supply application

Part No. H100KFM-KT100cT

I_{T(AV)}	4500A
V_{DRM}	4000V~4500V
V_{RRM}	1000V~3000V
t_q	60~200μs

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		4500	A
			T _C =70°C	125		3800	A
V _{DRM}	Repetitive peak off-state voltage	tp=10ms	125	4000		4500	V
V _{RRM}	Repetitive peak reverse voltage		125	1000		3000	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			500	mA
I _{TSM}	Surge on-state current	10ms half sine wave	125			50	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					12500
V _{TO}	Threshold voltage		125			1.58	V
r _T	On-state slope resistance						0.15
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=70kN.	60<t _q ≤100 μ s	25		2.60	V
			101<t _q ≤200 μ s	25		2.00	
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}	125			1000	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=4000μs, di/dt=-5A/μs, V _R =100V	125		2500	4000	μC
t _q	Circuit commutated turn-off time	I _{TM} =2000A, tp=4000μs, V _R =100V dv/dt=30V/μs, di/dt=-5A/μs	125	60	100	200	μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A	25		50	300	mA
V _{GT}	Gate trigger voltage				0.8	3.5	V
I _H	Holding current				20	1000	mA
I _L	Latching current					1500	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	Double side cooled Clamping force 40kN				0.005	°C/W
R _{th(c-h)}	Thermal resistance case to heat sink					0.0015	
F _m	Mounting force			81		108	kN
T _{vj}	Junction temperature			-40		125	°C
T _{stg}	Stored temperature			-40		140	°C
W _t	Weight					1880	g
Outline	KT100cT						

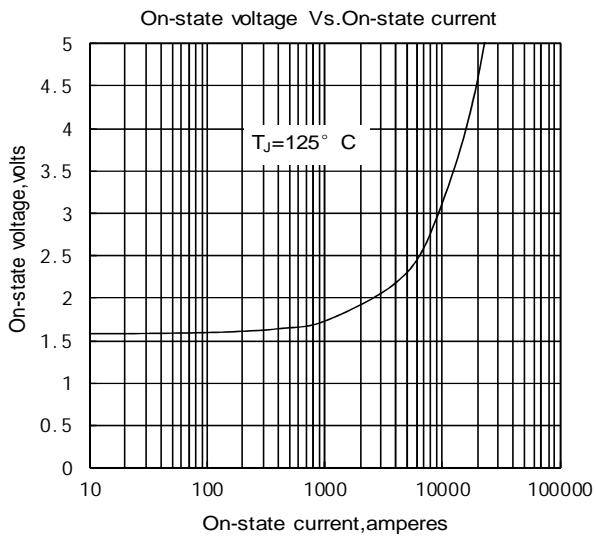


Fig.1

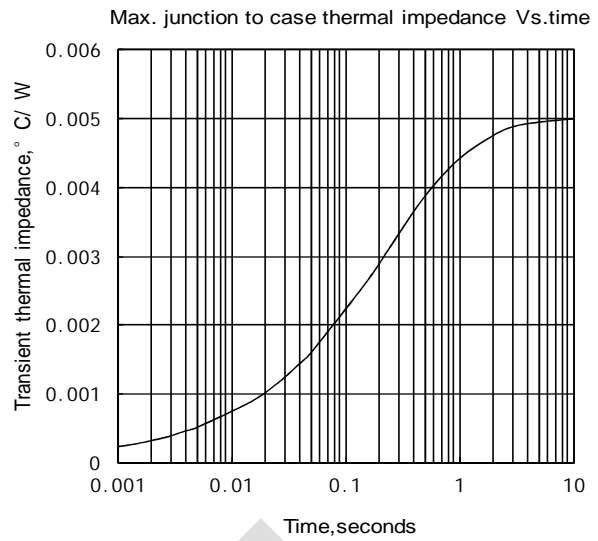


Fig.2

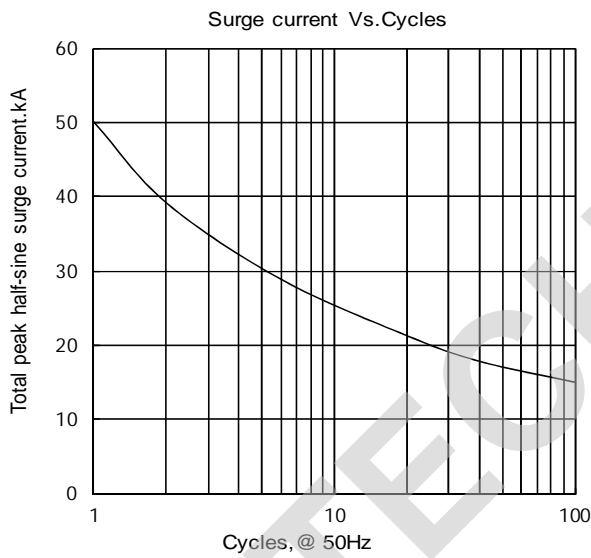


Fig.3

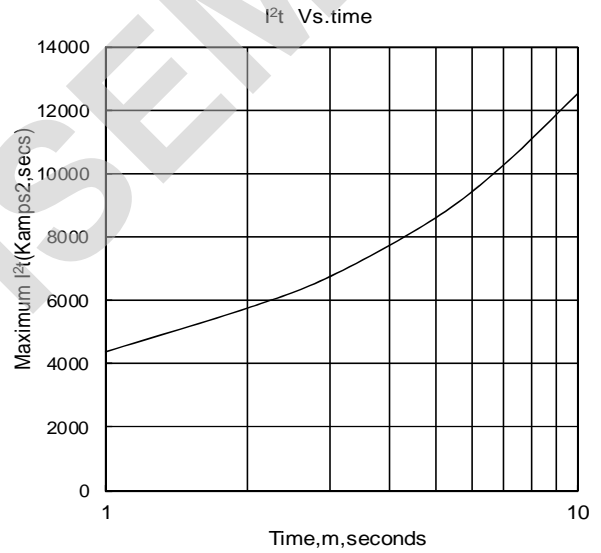


Fig.4

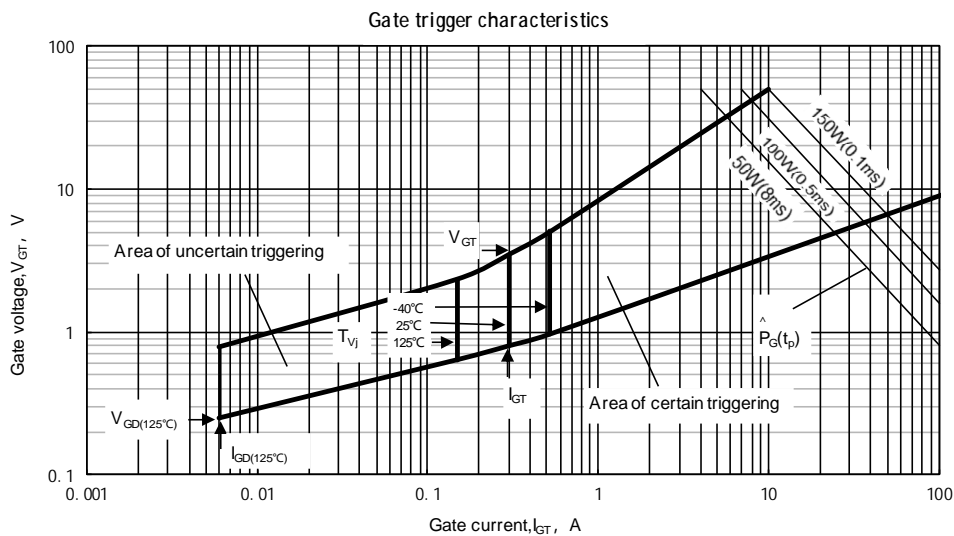
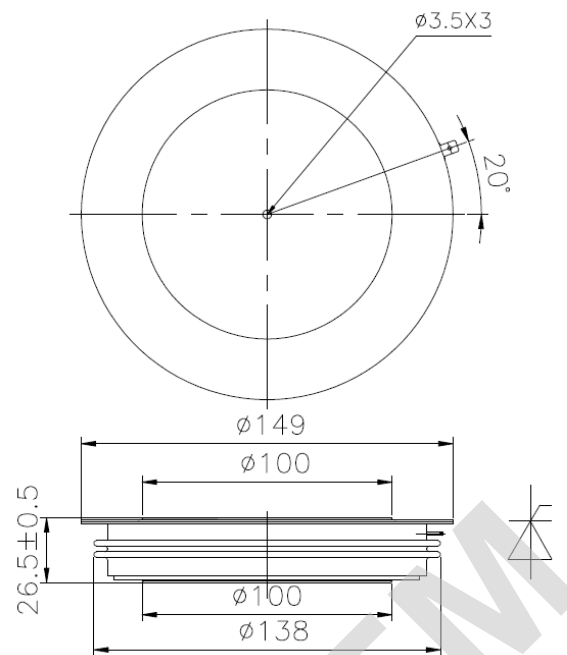


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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