

Features

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

Typical Applications

- n Inductive heating
- n Electronic welders
- n Self-commutated inverters

Part No. H100KKM-KT100cT

I_{T(AV)}	4300A
V_{DRM}, V_{RDM}	4500V 4800V
	5000V 5200V
t_q	60~150μs

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 _{RDM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	4500		5200	V
I _{DRM} I _{RDM}	Repetitive peak current	at V _{DRM} at V _{RDM}		125			500	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 _{RDM}					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		25			3.40	V
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 Single pulse		125			500	A/μs
Q _{rr}	Recovery charge	I _{TM} =2000A, tp=4000μs, di/dt=-20A/μs, V _R =100V		125		5000		μC
t _q	Circuit commutated turn-off time	I _{TM} =2000A, tp=4000μs, V _R =100V dv/dt=30V/μs ,di/dt=-20A/μs		125	60		150	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						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					0.005	°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							

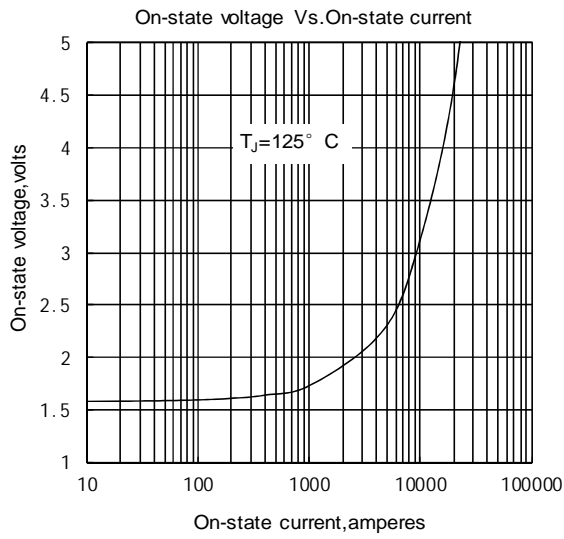


Fig. 1

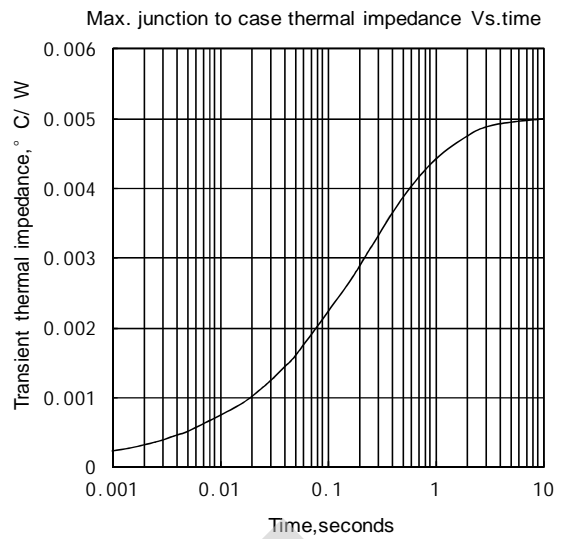


Fig. 2

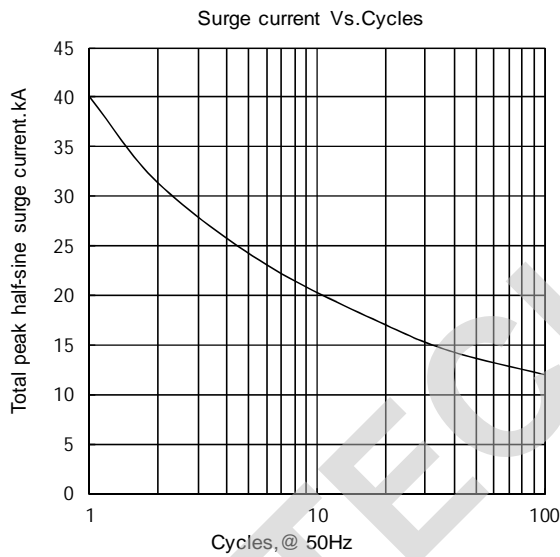


Fig. 3

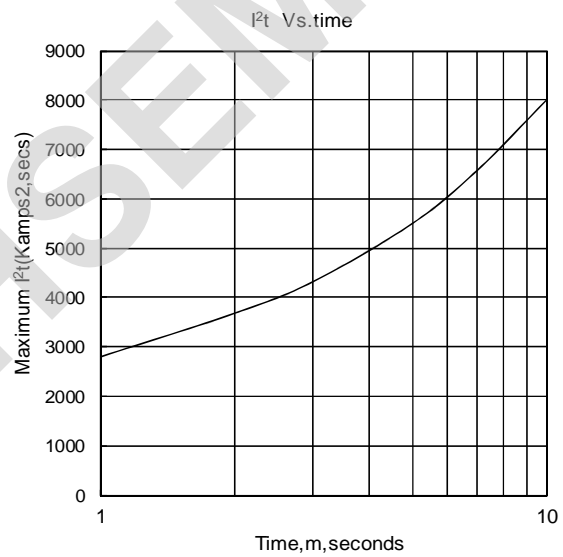


Fig. 4

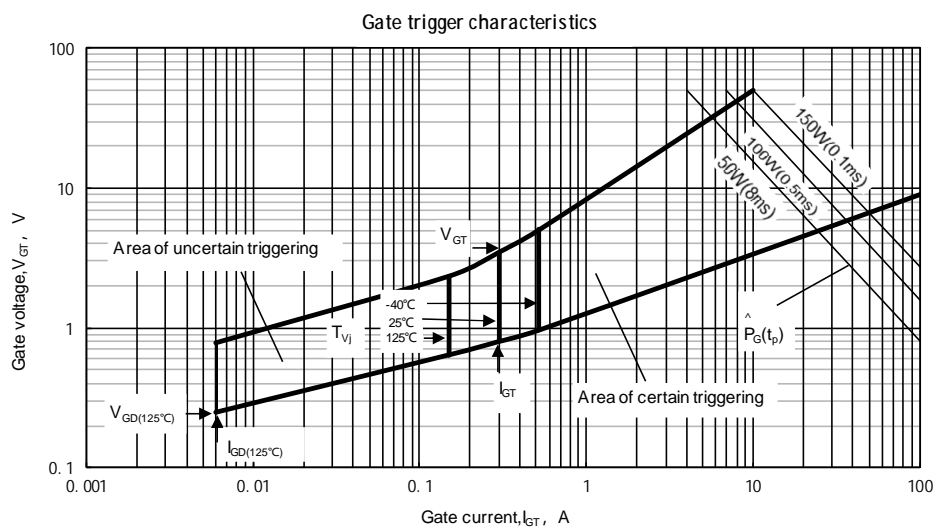
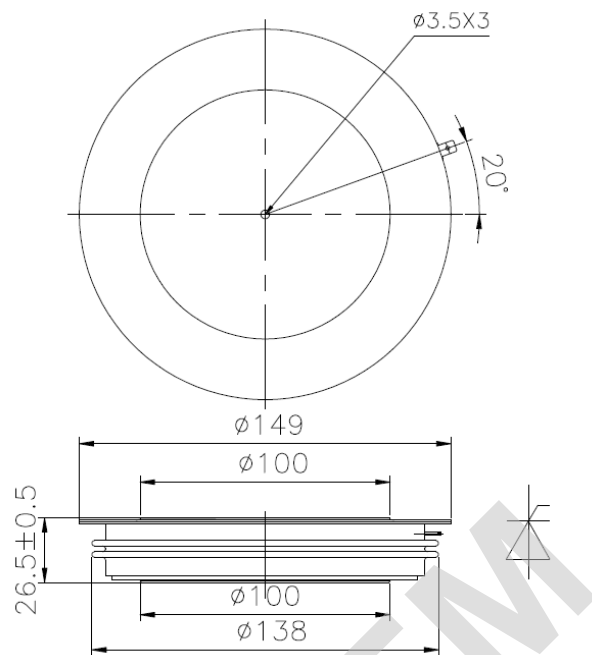


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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