



Features

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

Typical Applications

- Design for inverter supply application

Part No. H38KFM-KT33cT	
I_{T(AV)}	350A
V_{DRM}	4000V~4500V
V_{R(RM)}	1000V~3000V
t_q	50~120μs

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			350	A
V _{DRM}	Repetitive peak off-state voltage	tp=10ms		125	4000		4500	V
V _{R(RM)}	Repetitive peak reverse voltage			125	1000		3000	V
I _{DRM} I _{R(RM)}	Repetitive peak current	at V _{DRM} at V _{R(RM)}		125			60	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			5.0	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{R(RM)}					125	A ² s*10 ³
V _{TO}	Threshold voltage			125			1.48	V
r _T	On-state slope resistance						2.00	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =1000A, F=15kN	50 ≤ tq ≤ 60	25			3.60	V
			61 ≤ tq ≤ 120				2.80	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} to 1000A, Gate pulse t _r ≤ 0.5μs I _{GM} =1.5A		125			1200	A/μs
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-5A/μs, V _R =100V		125		350		μC
t _q	Circuit commutated turn-off time	I _{TM} =1000A, tp=4000μs, V _R =100V dv/dt=30V/μs, di/dt=-5A/μs		125	50		120	μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	40		250	mA
V _{GT}	Gate trigger voltage				0.9		2.5	V
I _H	Holding current				20		400	mA
I _L	Latching current						500	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 15kN					0.035	°C /W
R _{th(c-h)}	Thermal resistance case to heat sink						0.008	
F _m	Mounting force				10		20	kN
T _{vj}	Junction temperature				-40		125	°C
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					250		g
Outline	KT33cT							

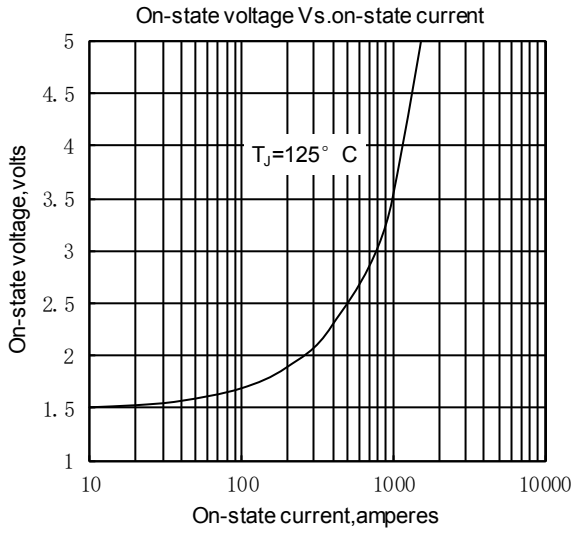


Fig.1

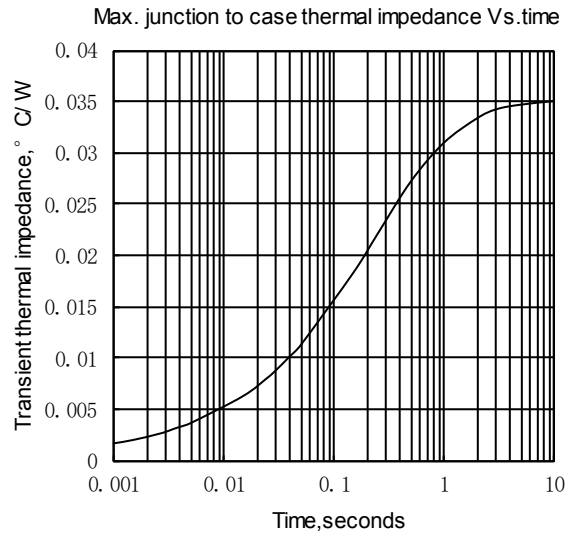


Fig.2

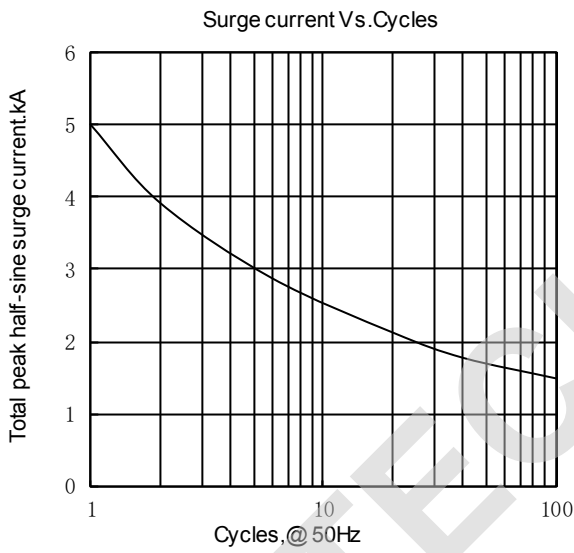


Fig.3

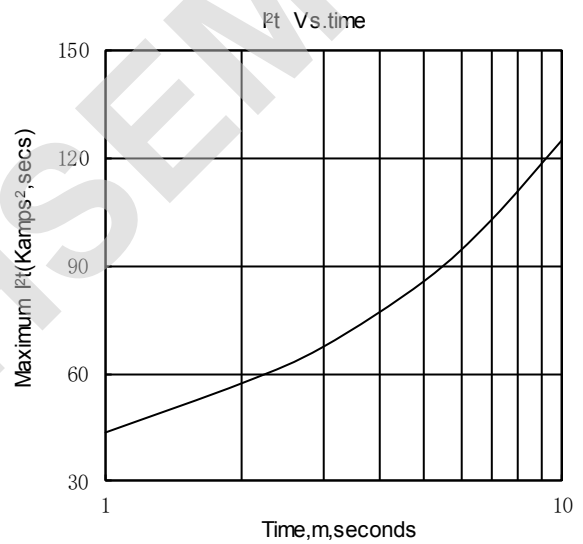


Fig.4

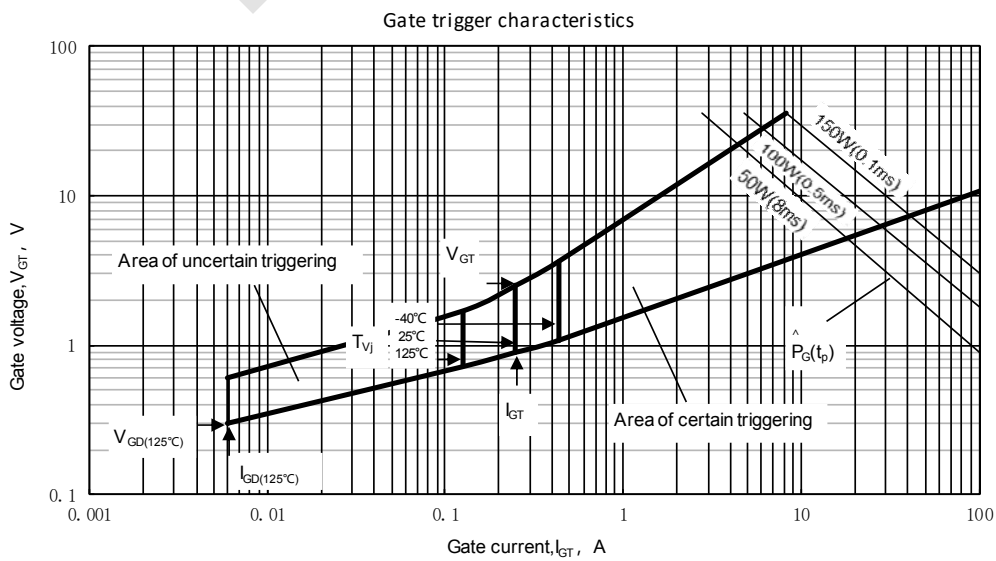
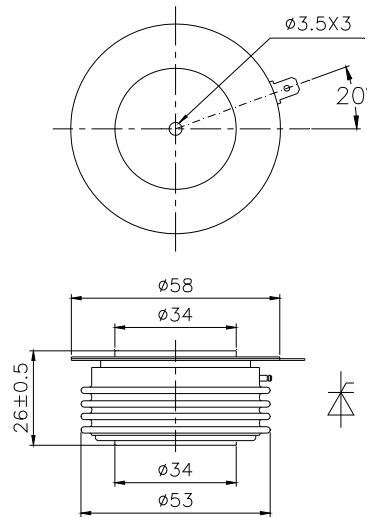


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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