

Features:

- n Center amplifying gate
- n Metal case with ceramic insulator
- n Low on-state and switching losses

Typical Applications:

- n AC controllers
- n DC and AC motor control
- n Controlled rectifiers

Part No. H38KPJ-KT33cT

I_{T(AV)}	520A
V_{DRM}, V_{RRM}	3600V 3800V
	4000V 4200V
	4500V

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _i (°C)	VALUE			UNIT
				Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz Double side cooled	T _C =70°C	125		520	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	3600	4500	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}		125		100	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125		6	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}				180	10 ³ A ² s
V _{TO}	Threshold voltage			125		1.10	V
r _T	On-state slope resistance					1.30	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =1000A, F=15kN		25		2.40	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} , Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125		100	A/μs
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-5A/μs, V _R =100V		125	1800		μC
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	40	300	mA
V _{GT}	Gate trigger voltage				0.8	3.0	V
I _H	Holding current				25	200	mA
I _L	Latching current					1500	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	Double side cooled Clamping force 24kN				0.035	°C/W
R _{th(c-h)}	Thermal resistance case to heatsink					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					240	g
Outline	KT33cT						

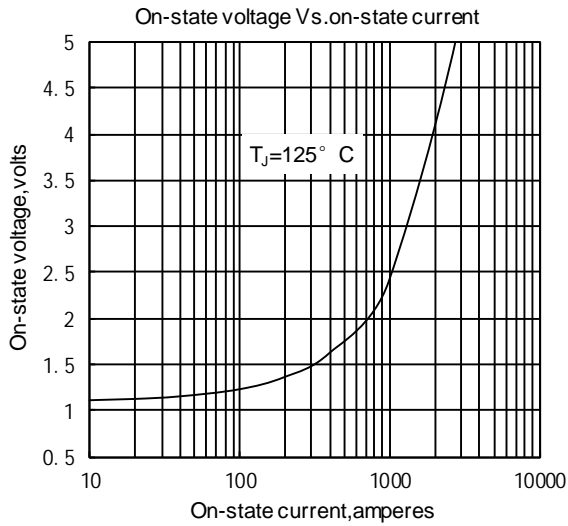


Fig.1

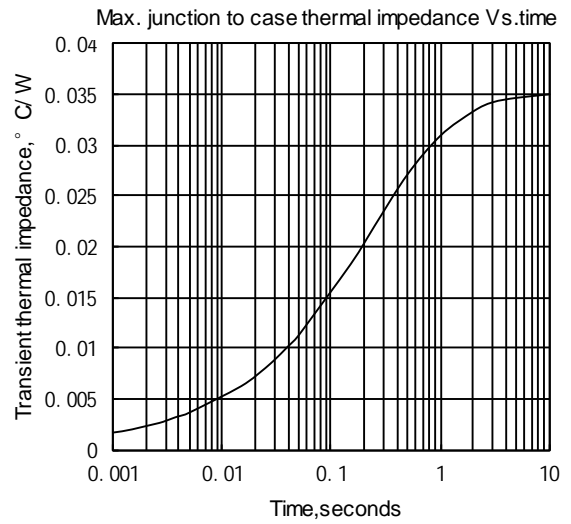


Fig.2

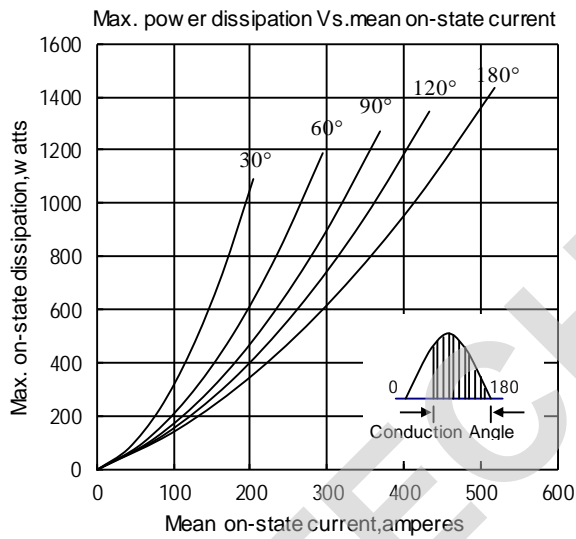


Fig.3

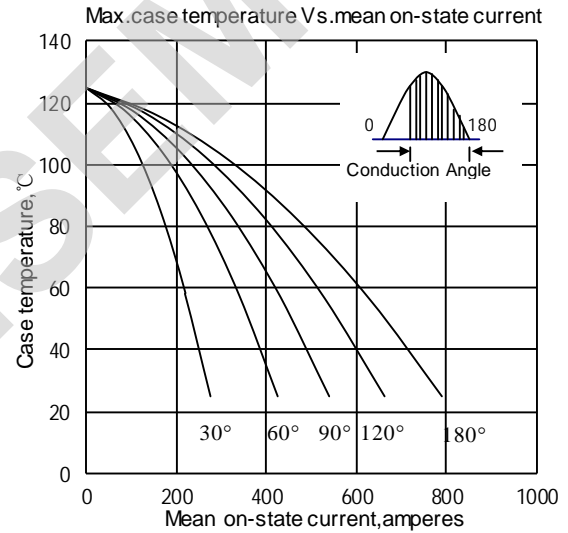


Fig.4

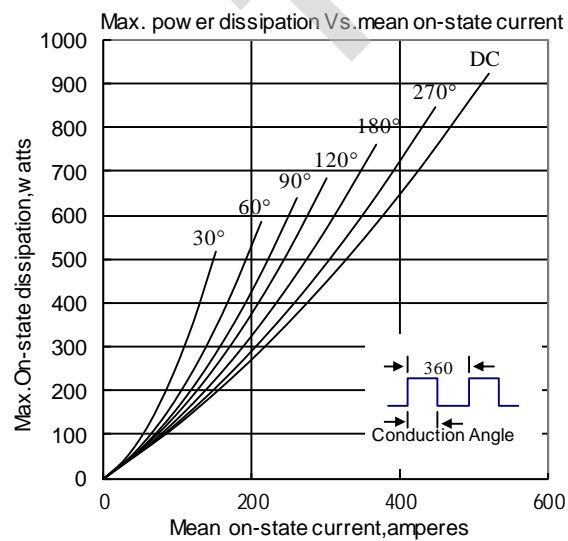


Fig.5

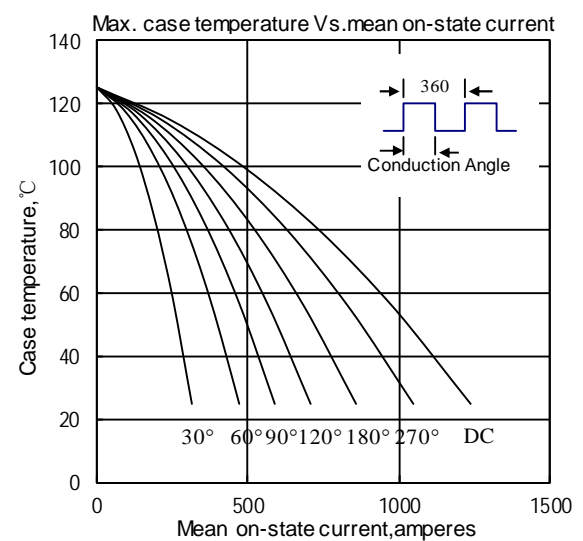


Fig.6

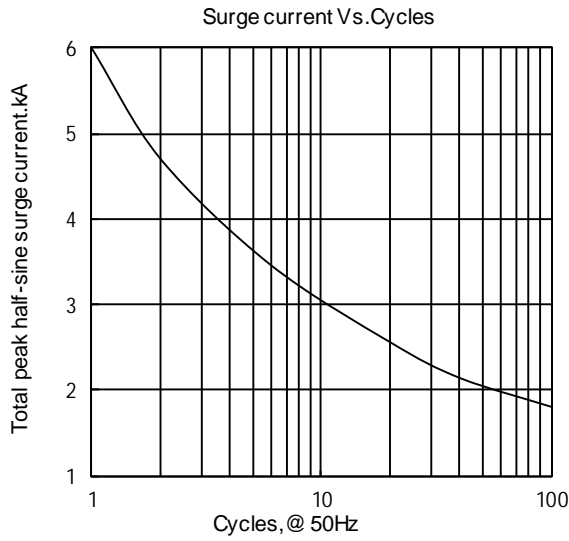


Fig.7

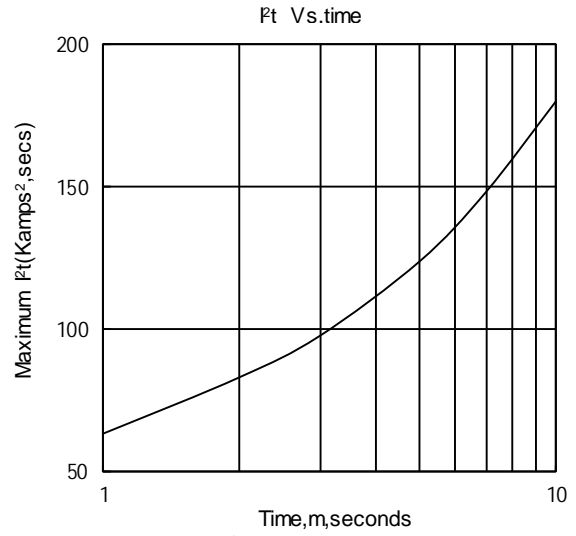


Fig.8

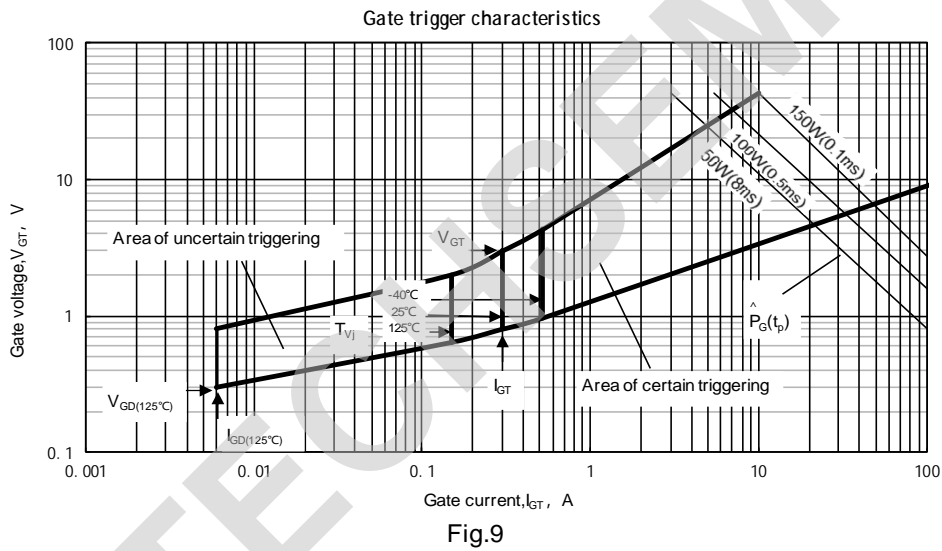
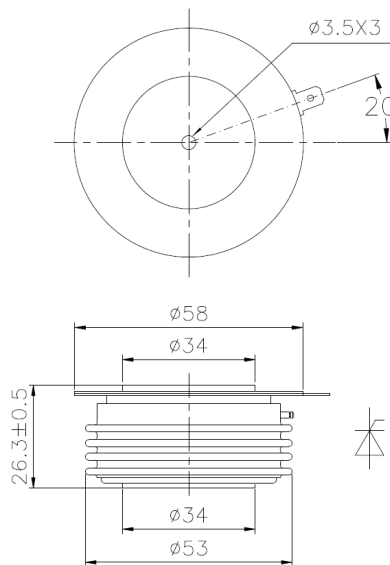


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.