

**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. Y100KFG-KT100c(d)T

I_{T(AV)}	4890A
V_{DRM}	2000~3000V
V_{RRM}	1000~2500V
t_q	25~100μs

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		4890	A
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} tp=10ms at V _{RRM} tp=10ms		125		250	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125		63	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}		125		19845	10 ³ A ² s
V _{TO}	Threshold voltage			125		1.30	V
r _T	On-state slope resistance			125		0.13	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=90kN	25	25μs ≤ t _q ≤ 45μs		2.50	V
				46μs ≤ t _q ≤ 75μs		1.80	V
				76μs ≤ t _q ≤ 100μs		1.60	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 (Non-repetitive)	V _{DM} = 67%V _{DRM} , 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=-20A/μs, V _R =100V		125	2100		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	25	100	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	1000	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	At 180° sine double side cooled Clamping force 90kN				0.0050	°C/W
R _{th(c-h)}	Thermal resistance case to heatsink					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					2000/ 2500	g
Outline	KT100cT/ KT100dT						

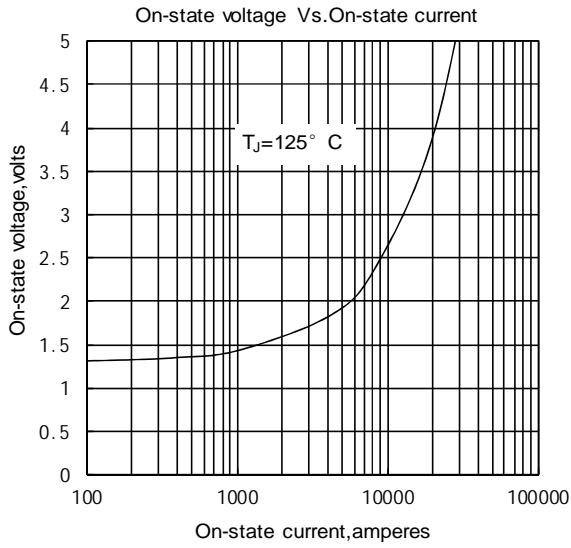


Fig.1

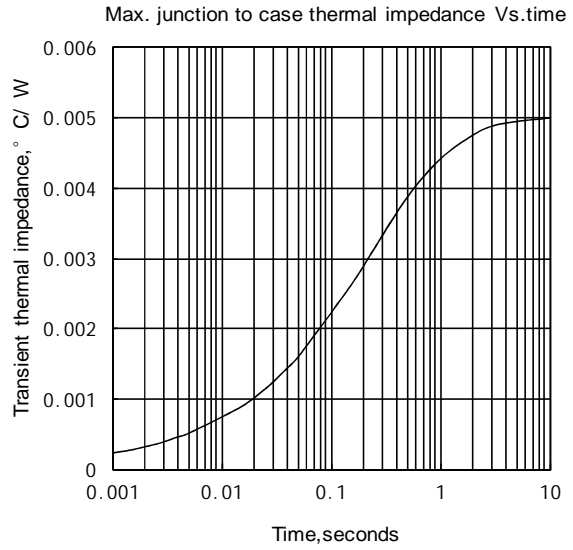


Fig.2

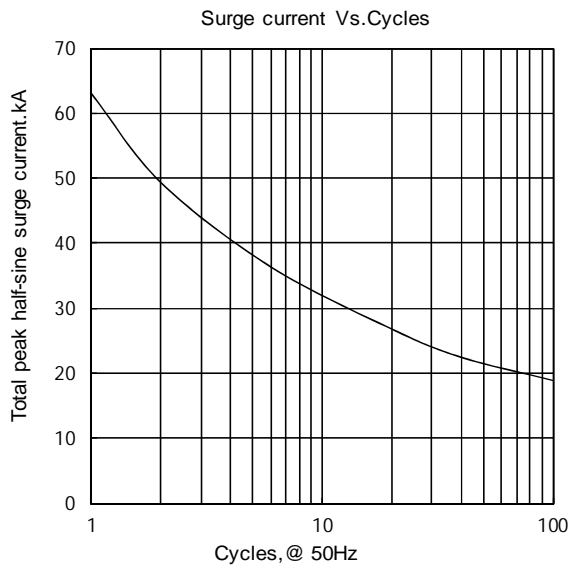


Fig.3

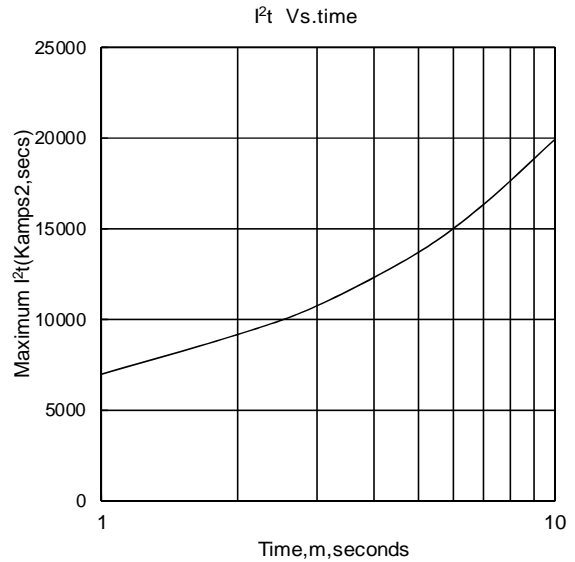


Fig.4

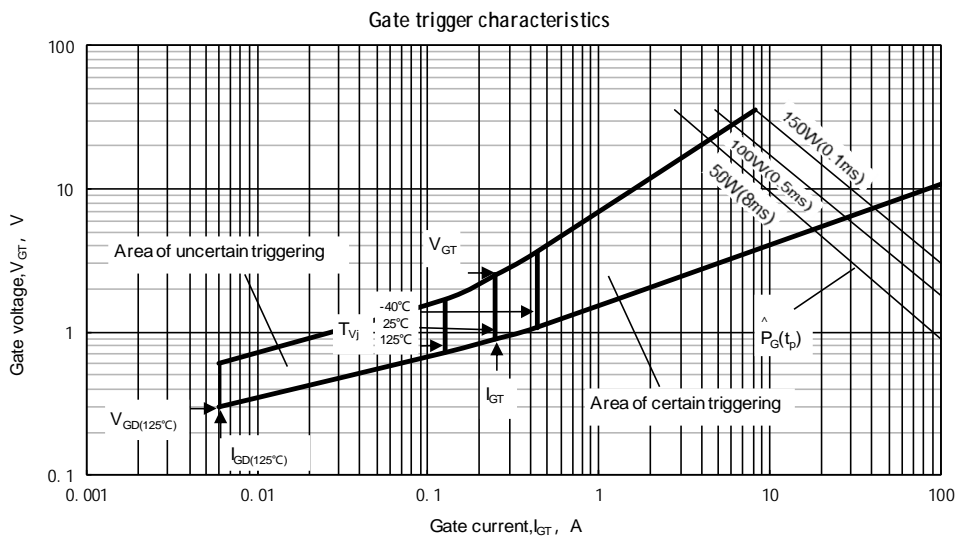
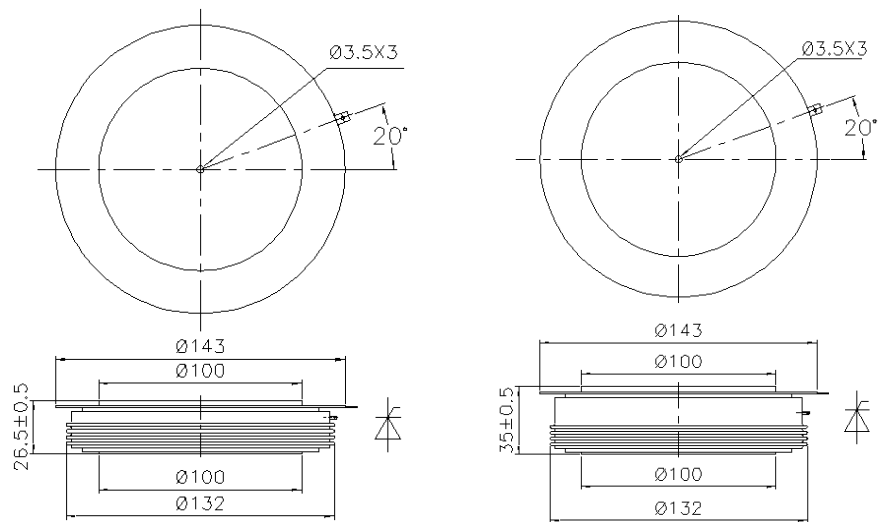


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.