**Features**

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

Typical Applications

- Design for inverter supply application

Part No. Y50KFG-KT50cT

$I_{T(AV)}$	1200A
V_{DRM}	2000V~3000V
V_{RRM}	1000V~2500V
t_q	20~75μs

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		$T_j(^{\circ}C)$	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	$T_c=55^{\circ}C$	125			1200	A
			$T_c=70^{\circ}C$	125			1000	A
V_{DRM}	Repetitive peak off-state voltage	tp=10ms		125	2000		3000	V
V_{RRM}	Repetitive peak reverse voltage				1000		2500	
I_{DRM}/I_{RRM}	Repetitive peak current	at V_{DRM}/V_{RRM}		125			80	mA
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$		125			16	kA
I^2t	I^2t for fusing coordination						1280	10^3A^2s
V_{TO}	Threshold voltage			125			1.55	V
r_T	On-state slope resistance						0.40	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=24kN$	$20 \leq t_q \leq 35$	25			2.80	V
			$36 \leq t_q \leq 60$				2.60	V
			$61 \leq t_q \leq 75$				2.40	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			1000	V/ μ s
di/dt	Critical rate of rise of on-state current (Non-repetitive)	$V_{DM}=67\%V_{DRM}$ to 1600A, Gate pulse $t_r \leq 0.5\mu s, I_{GM}=1.5A$		125			1500	A/ μ s
Q_{rr}	Recovery charge	$I_{TM}=1000A, t_p=4000\mu s, di/dt=-20A/\mu s,$ $V_R=100V$		125		750		μC
t_q	Circuit commutated turn-off time	$I_{TM}=1000A, t_p=4000\mu s, V_R=100V$ dv/dt=30V/ μ s, di/dt=-20A/ μ s		100	20		75	μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$		25	40		300	mA
V_{GT}	Gate trigger voltage				0.9		3.0	V
I_H	Holding current				20		500	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	double side cooled Clamping force 24kN					0.020	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.005	
F_m	Mounting force				19		26	kN
T_{vj}	Junction temperature				-40		125	$^{\circ}C$
T_{stg}	Stored temperature				-40		140	$^{\circ}C$
W_t	Weight					440		g
Outline	KT50cT							

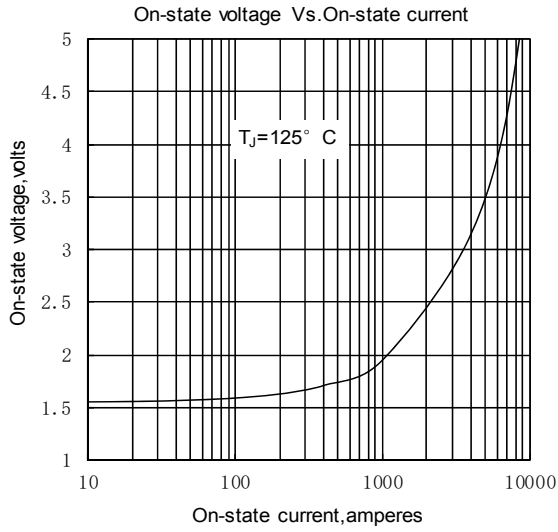


Fig. 1

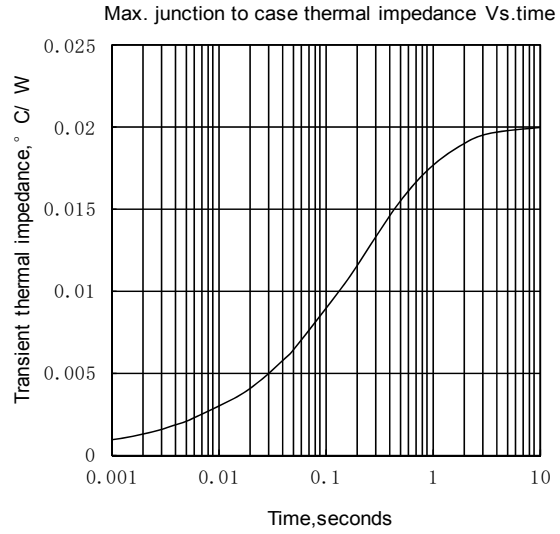


Fig.2

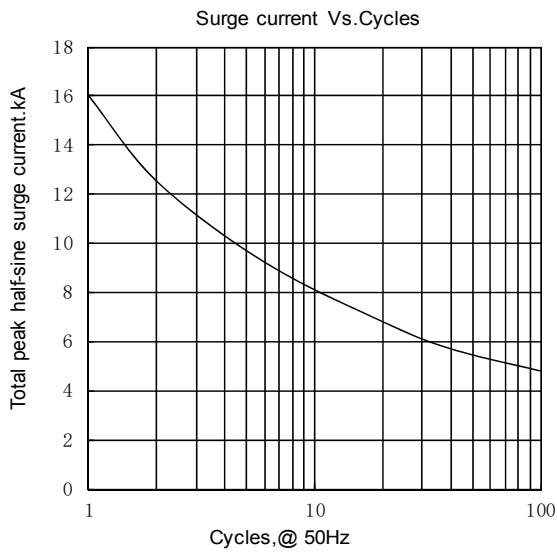


Fig. 3

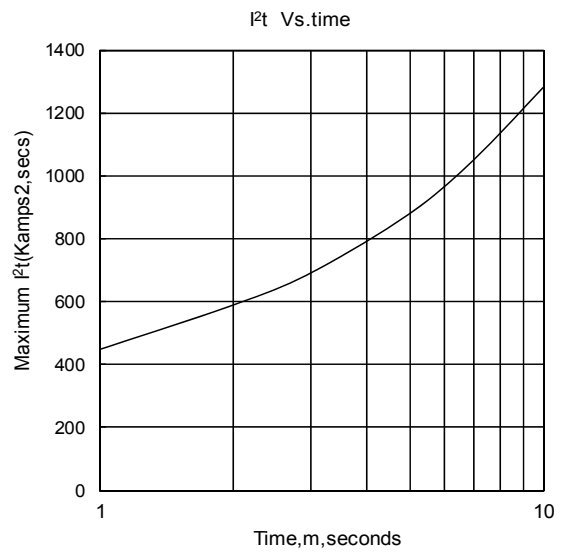


Fig. 4

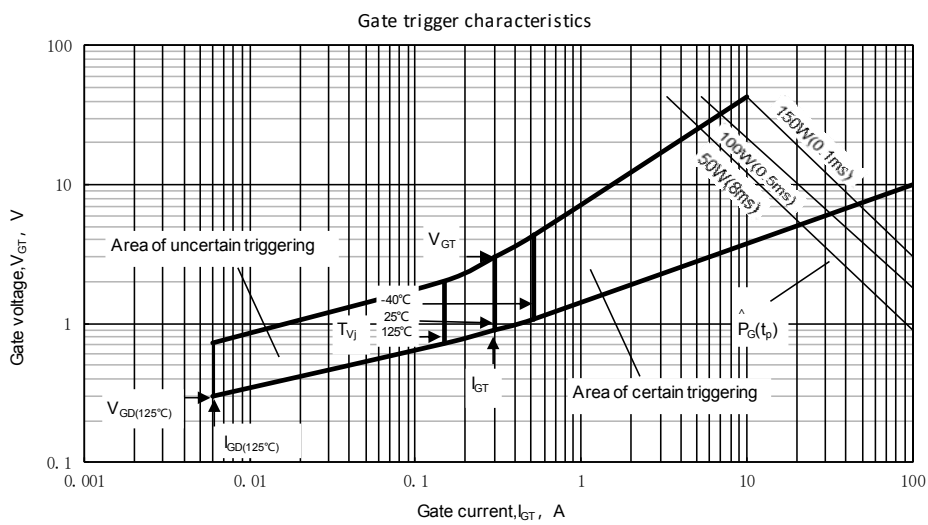
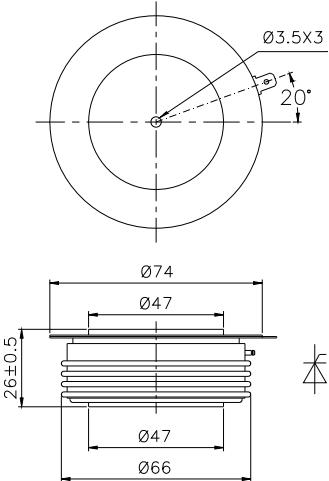


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.