

**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	$T_j(^{\circ}C)$	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		4890	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} $t_p=10ms$ at V_{RRM} $t_p=10ms$		125		250	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125		63	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$		125		19845	10^3A^2s
V_{TO}	Threshold voltage			125		1.30	V
r_T	On-state slope resistance			125		0.13	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=5000A$, $F=90kN$	25	$25\mu s \leq t_q \leq 45\mu s$		2.50	V
				$46\mu s \leq t_q \leq 75\mu s$		1.80	V
				$76\mu s \leq t_q \leq 100\mu s$		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 $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$		125		1200	A/ μs
Q_{rr}	Recovery charge	$I_{TM}=2000A$, $t_p=4000\mu s$, $di/dt=-20A/\mu s$, $V_R=100V$		125		2100	μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000A$, $t_p=4000\mu s$, $V_R=100V$ $dv/dt=30V/\mu s$, $di/dt=-20A/\mu s$		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	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.0015	
F_m	Mounting force				81	108	kN
T_{vj}	Junction temperature				-40	125	$^{\circ}C$
T_{stg}	Stored temperature				-40	140	$^{\circ}C$
W_t	Weight					2000/ 2500	g
Outline	KT100cT/ KT100dT						

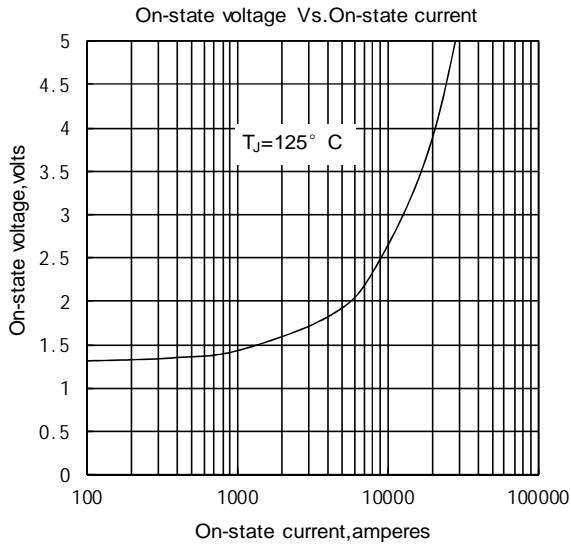


Fig.1

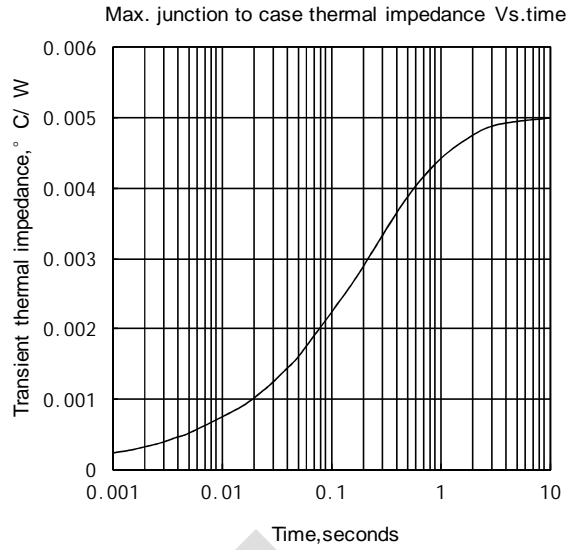


Fig.2

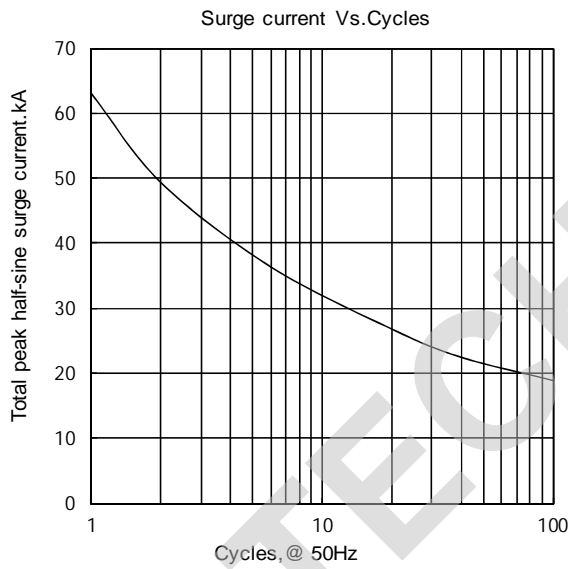


Fig.3

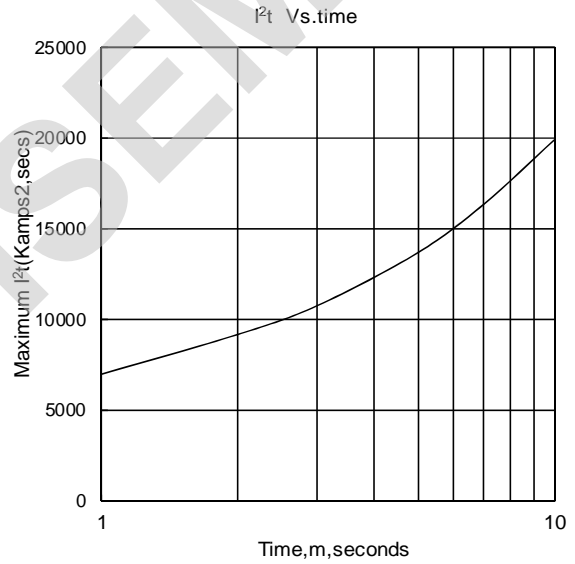


Fig.4

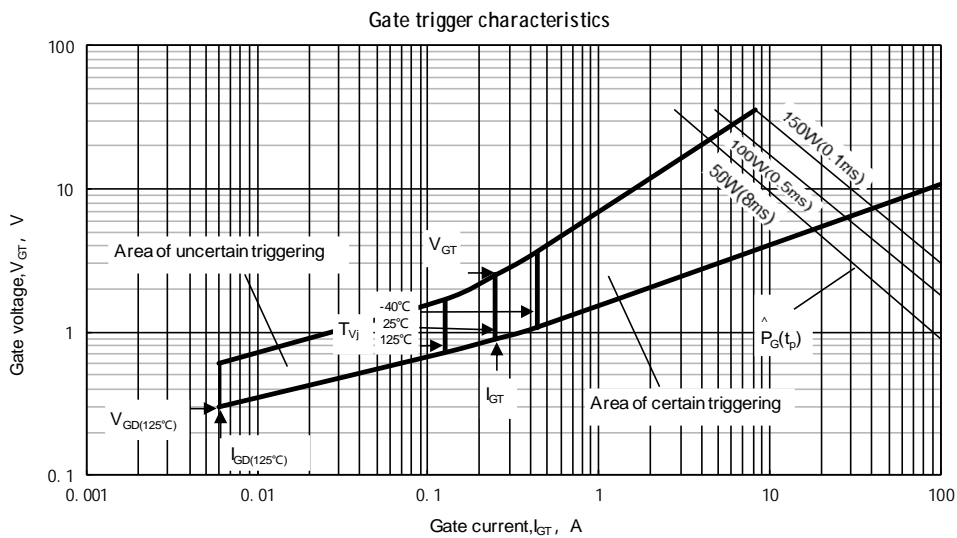
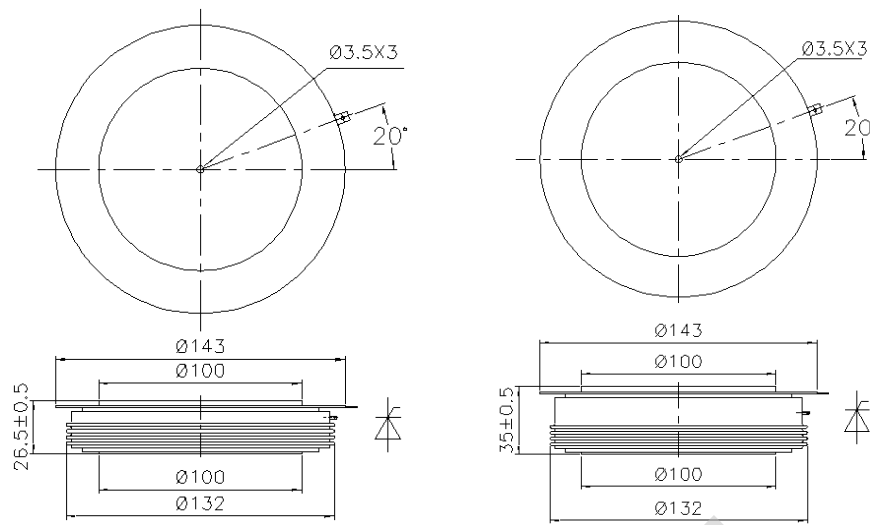


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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