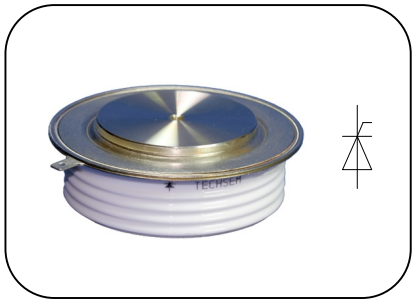

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

Part No. Y60KFE-KT54cT

$I_{T(AV)}$	**1600A**
V_{DRM}	**1200V~2000V**
V_{RRM}	**1000V~1800V**
t_q	**20~50μs**

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			1600	A
V_{DRM}	Repetitive peak off-state voltage	tp=10ms		125	1200		2000	V
V_{RRM}	Repetitive peak reverse voltage				1000		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			120	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			18	kA
I^2t	I^2t for fusing coordination						1620	10^3A^2s
V_{TO}	Threshold voltage			125			1.27	V
r_T	On-state slope resistance						0.22	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A, F=28kN	20≤tq≤28	25			2.20	V
			29≤tq≤50				2.00	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			1500	A/μs
Q_{rr}	Recovery charge	I_{TM}=1000A, tp=4000μs, di/dt=-20A/μs, V_R=100V		125		750		μC
tq	Circuit commutated turn-off time	I_{TM}=1000A ,tp=4000μs, V_R=100V dv/dt=30V/μs ,di/dt=-20A/μs		125	15		50	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		500	mA
I_L	Latching current						1000	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 32kN					0.016	C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink						0.004	
F_m	Mounting force				27		34	kN
T_{vj}	Junction temperature				-40		125	C
T_{stg}	Stored temperature				-40		140	C
W_t	Weight					640		g
Outline	KT54cT							

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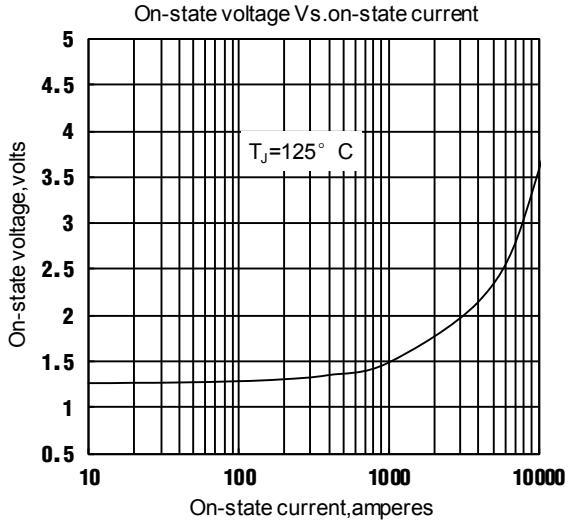

Fig.1

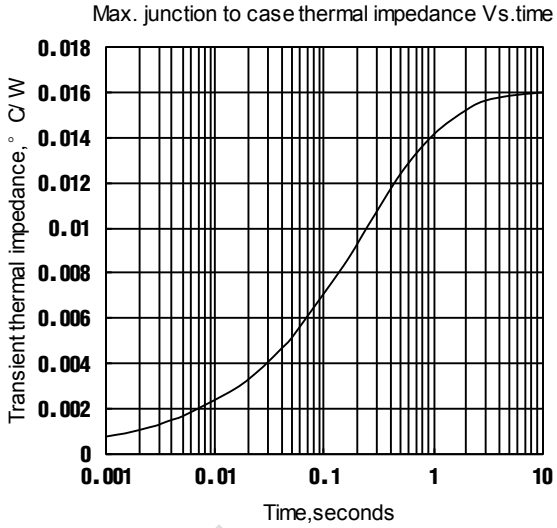

Fig.2

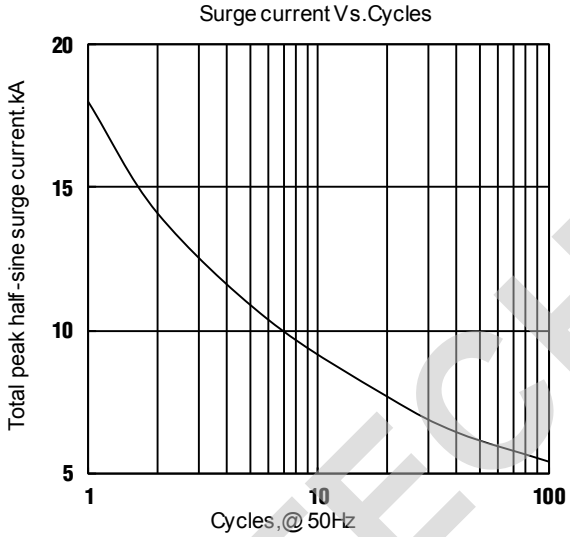

Fig.3

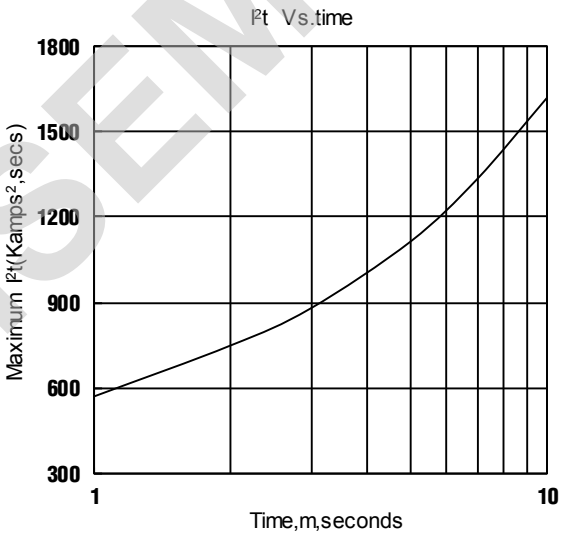

Fig.4

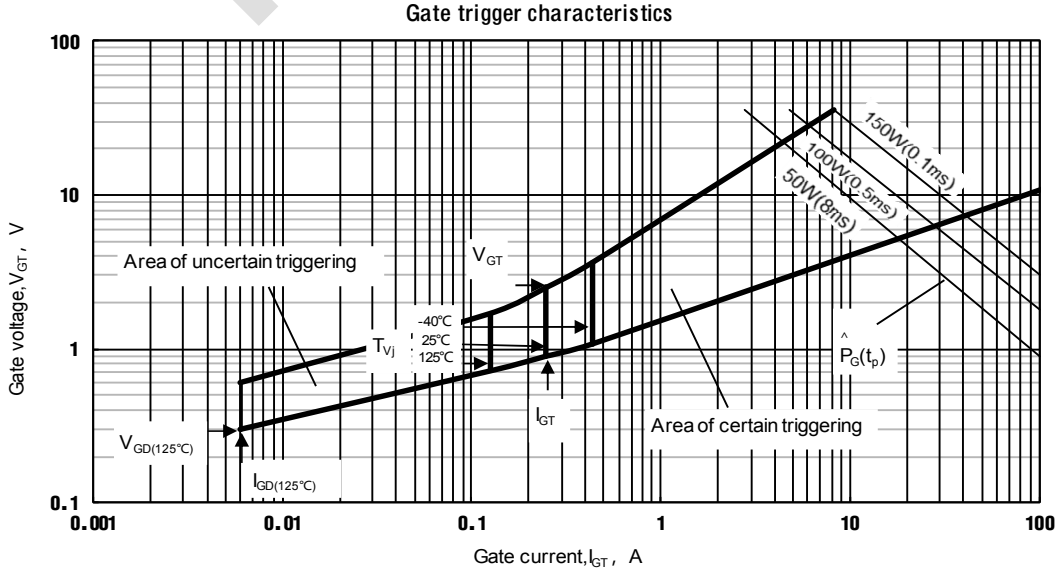

Fig.5

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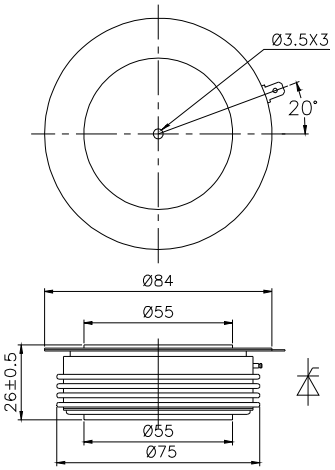
Outline:



TECHSEM reserves the right to change specifications without notice.

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