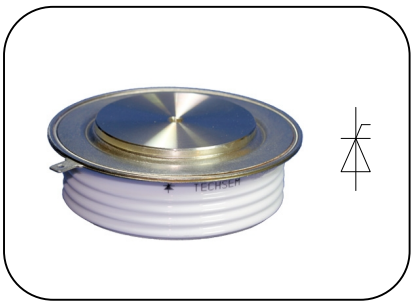


Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

Part No. Y55KKE-KT54cT

$I_{T(AV)}$	1460A
V_{DRM},V_{RRM}	800V 1000V 1200V 1400V 1600V 1800V
t_q	18~50μs

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			1460	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	800		1800	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 V_R=0.6V_{RRM}		125			16	kA
I^2t	I^2t for fusing coordination						1280	A^2s*10^3
V_{TO}	Threshold voltage			125			1.51	V
r_T	On-state slope resistance						0.32	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A, F=26kN		25			3.15	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} to 2000A, Gate pulse t_r ≤0.5μs I_{GM}=1.5A Single pulse		125			1200	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	18		50	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						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 180^0 sine double side cooled Clamping force 26kN					0.018	C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.004	
F_m	Mounting force				21		30	kN
T_{vj}	Junction temperature				-40		125	C
T_{stg}	Stored temperature				-40		140	C
W_t	Weight					590		g
Outline	KT54cT							

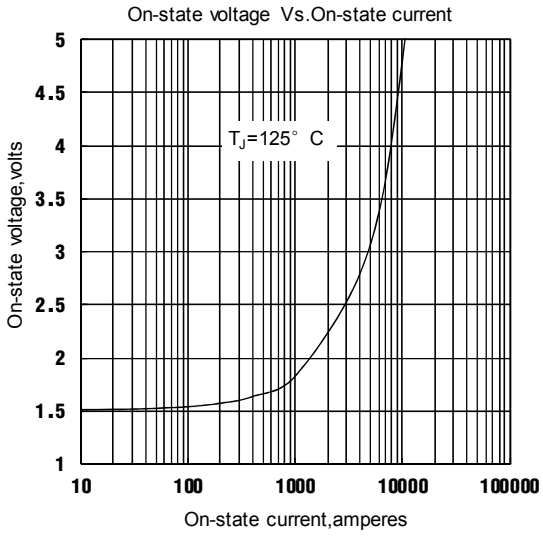


Fig.1

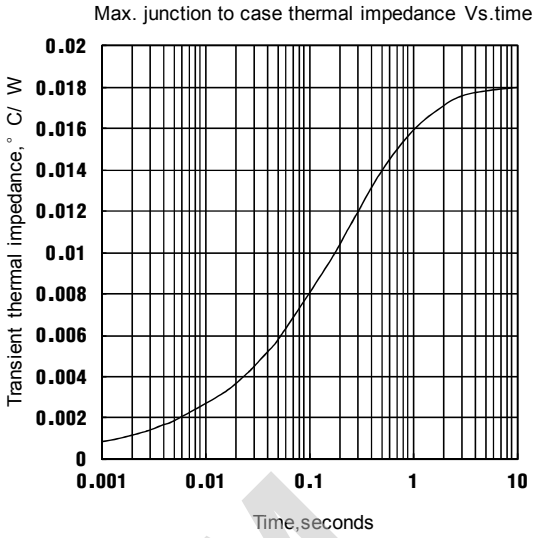


Fig.2

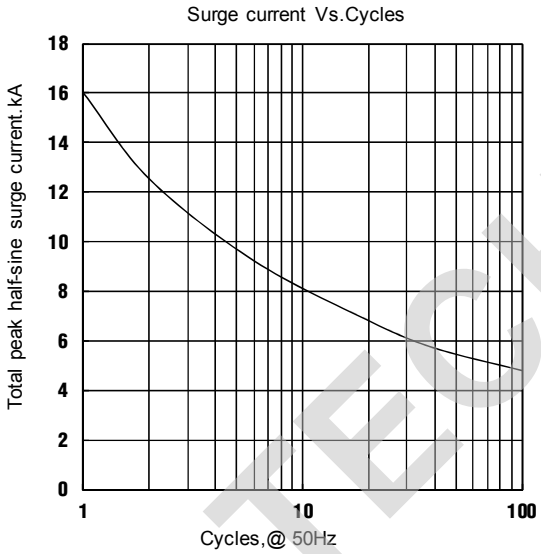


Fig.3

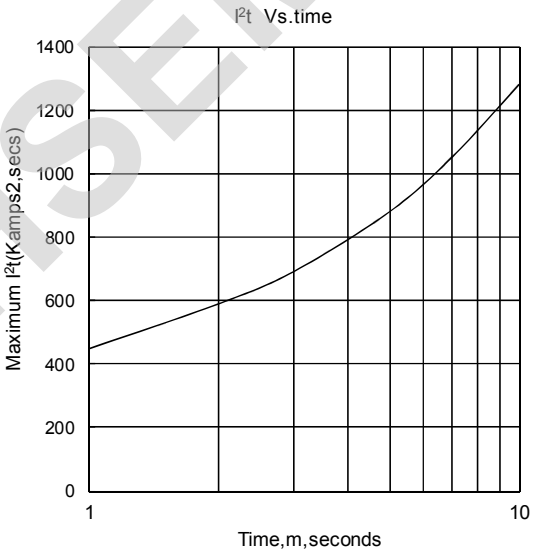


Fig.4

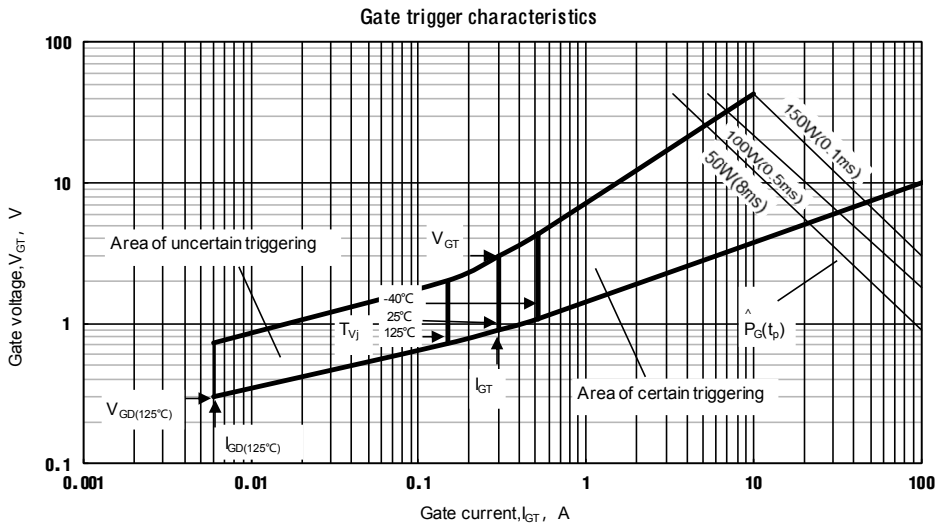
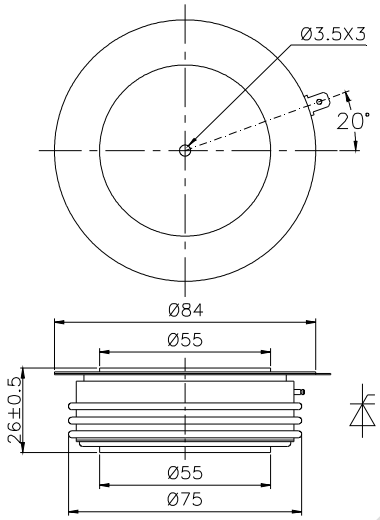


Fig.5

Outline:



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