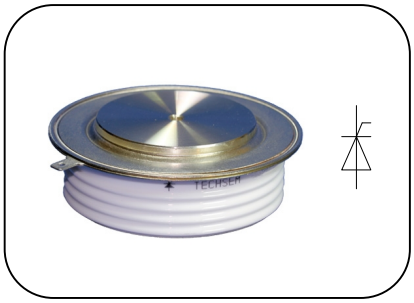


Features

- **n** Center amplifying gate
- **n** Metal case with ceramic insulator
- **n** Low on-state and switching losses

Typical Applications

- **n** AC controllers
- **n** DC and AC motor control
- **n** Controlled rectifiers

Part No. Y60KPE-KT54cT

$I_{T(AV)}$	2000A		
V_{DRM},V_{RRM}	1200V	1400V	
	1600V	1800V	

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=70°C	125			2000	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	1100		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			30	kA
I^2t	I^2t for fusing coordination					4500	A^2s*10^3
V_{TO}	Threshold voltage		125			0.98	V
r_T	On-state slope resistance					0.15	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=4000A, F=28kN	25			2.10	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} to2500A, Gate pulse t_r ≤0.5μs I_{GM}=1.5A	125			200	A/μs
Q_{rr}	Recovery charge	I_{TM}=2000A, tp=4000μs, di/dt=-20A/μs, V_R=100V	125		1600		μC
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	40		300	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		300	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 28.0kN				0.016	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink					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				640		g
Outline	KT54cT						

On-state voltage Vs.peak on-state current

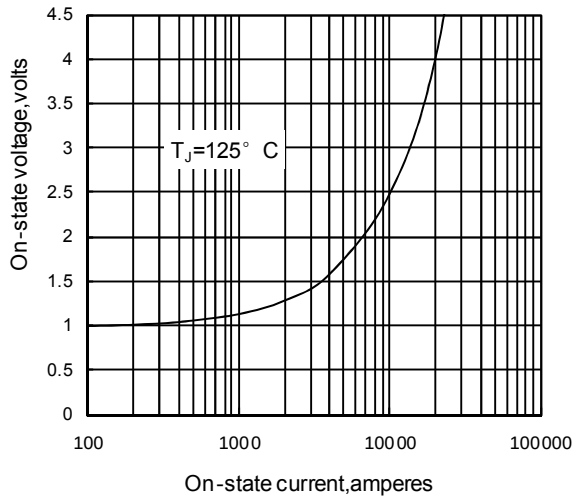


Fig1

Max. junction to case thermal impedance Vs.time

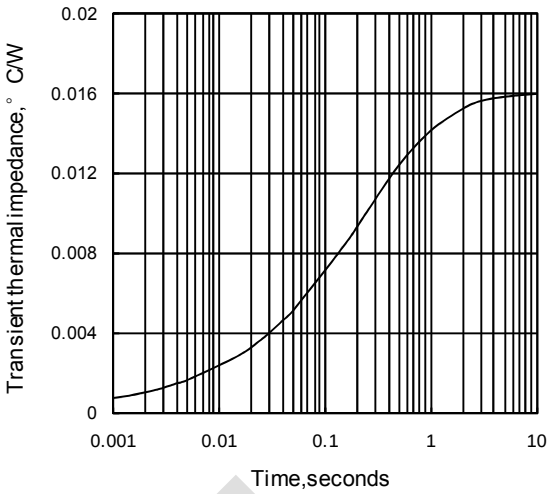


Fig2

Max. power dissipation Vs.mean on-state current

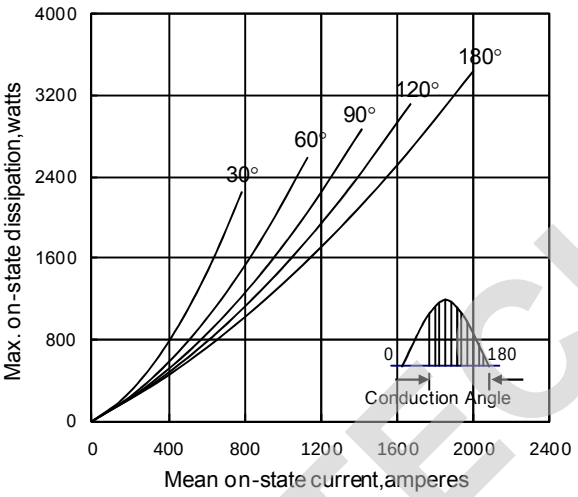


Fig3

Max.case temperature Vs.mean on-state current

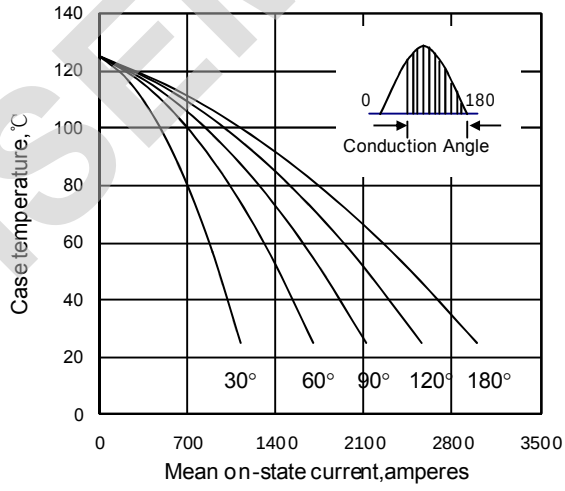


Fig4

Max. power dissipation Vs.mean on-state current

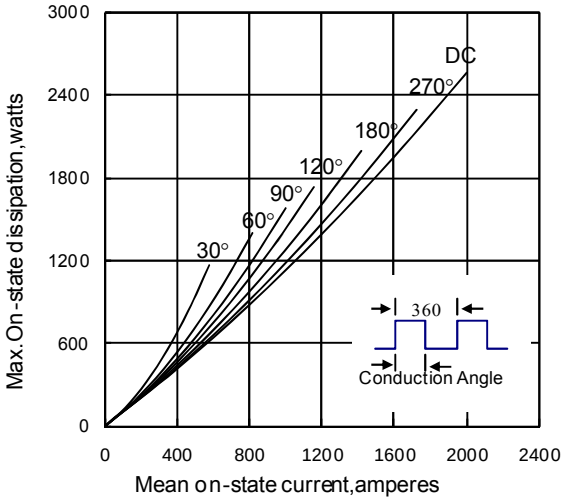


Fig5

Max. case temperature Vs.mean on-state current

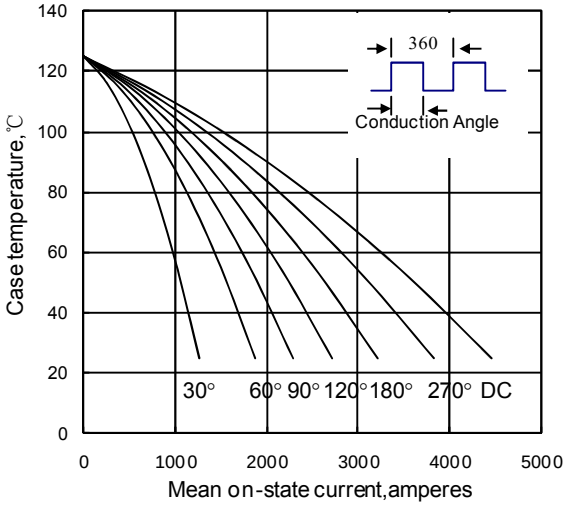


Fig6

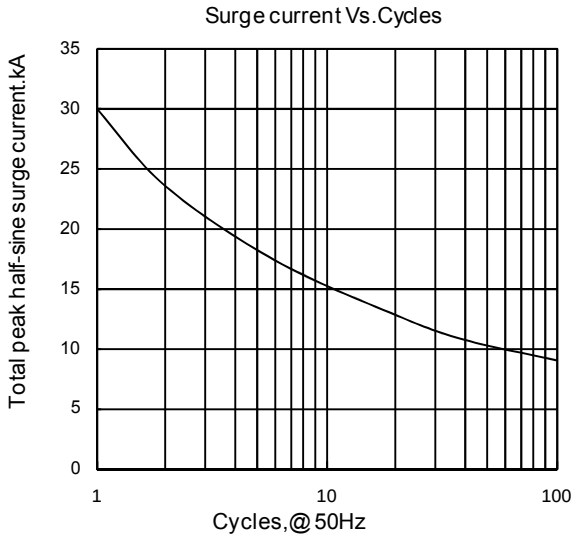


Fig7

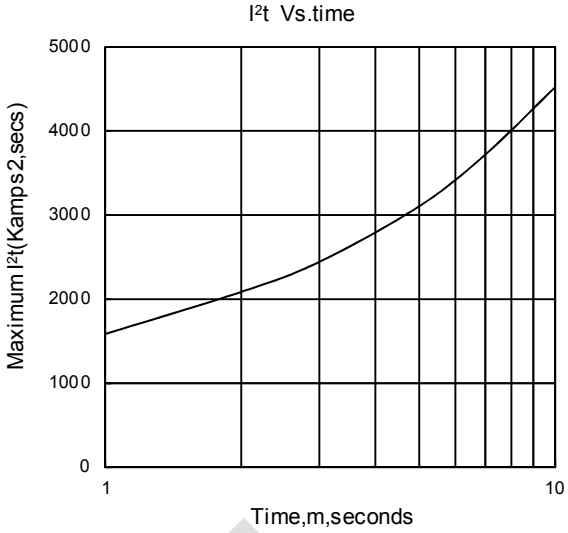


Fig8

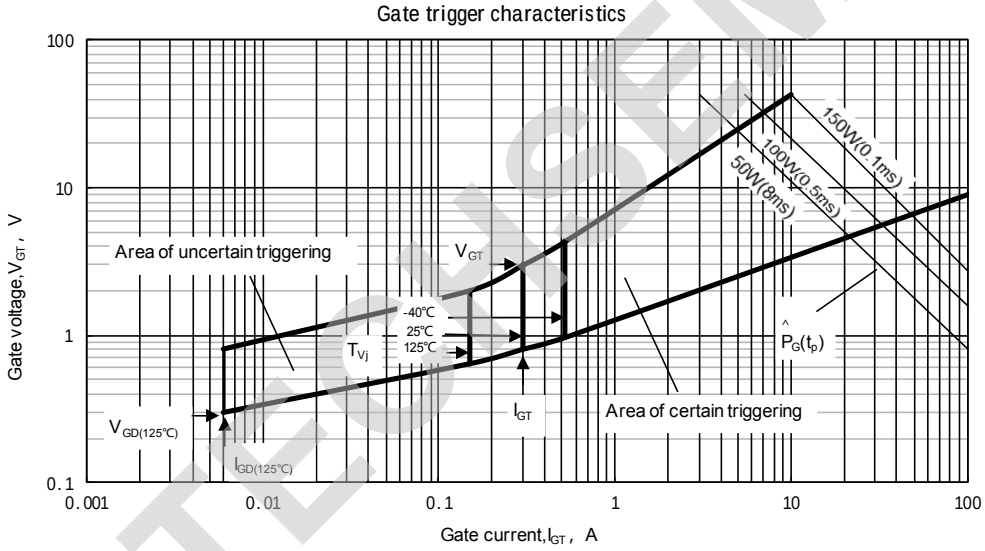
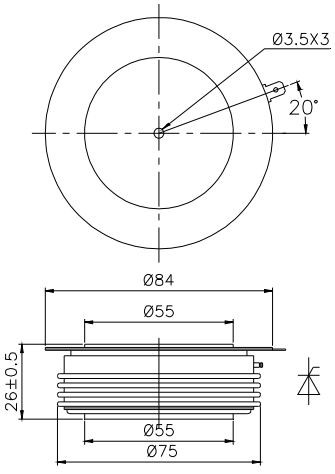


Fig.9

Outline:



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