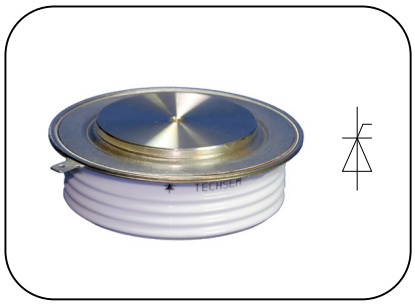


Features

- **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. Y89KPE-KT84dT

$I_{T(AV)}$	**4000A**	
V_{DRM},V_{RRM}	**1200V**	**1400V**
	1600V	**1800V**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T_j(℃)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T_C=70℃	125			4000	A
			T_C=85℃	125			3400	A
			T_C=55℃	125			4800	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	1200		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			250	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			64	kA
I^2t	I^2t for fusing coordination						20480	10^3A^2s
V_{TO}	Threshold voltage			125			0.83	V
r_T	On-state slope resistance						0.09	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=5000A, F=40kN		25			1.80	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}= 50%V_{DRM} 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	double side cooled Clamping force 40kN					0.007	℃/W
$R_{th(c-h)}$	Thermal resistance case to heatsink						0.003	
F_m	Mounting force				63		84	kN
T_{vj}	Junction temperature				-40		125	°C
T_{stg}	Stored temperature				-40		140	℃
W_t	Weight					1920		g
Outline	KT84dT							

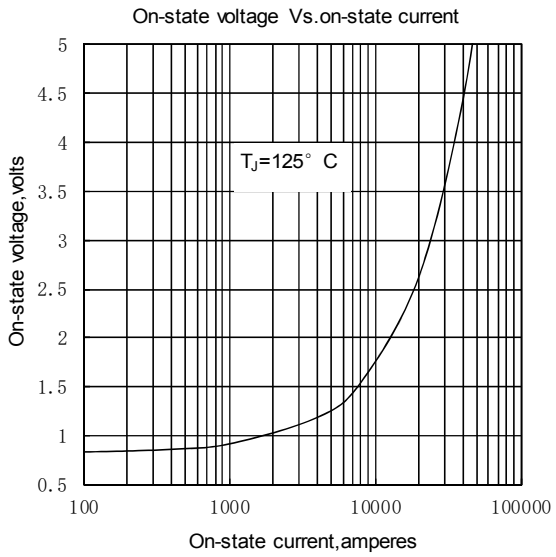


Fig.1

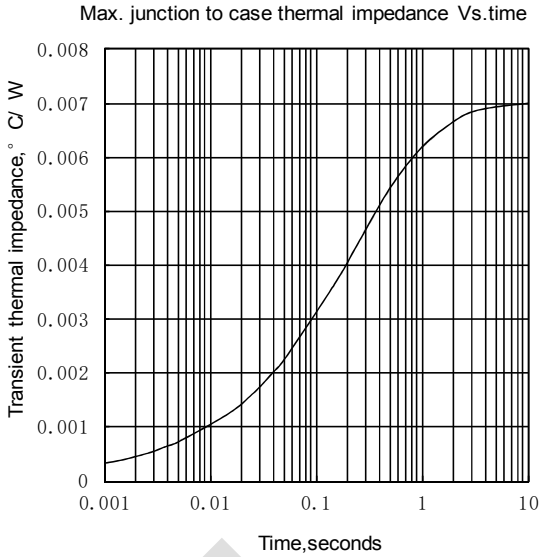


Fig.2

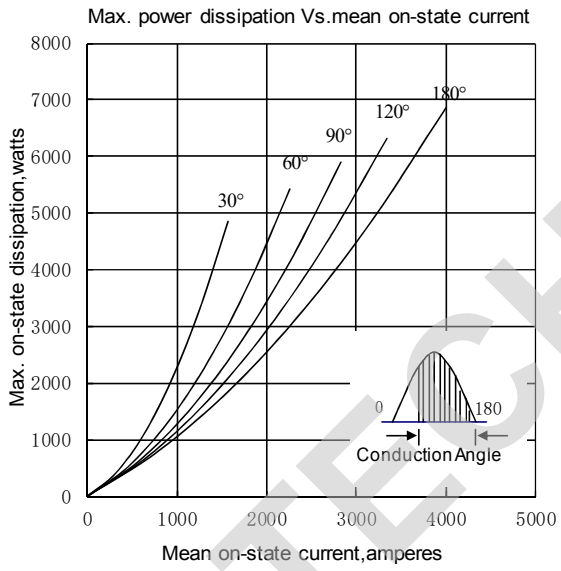


Fig.3

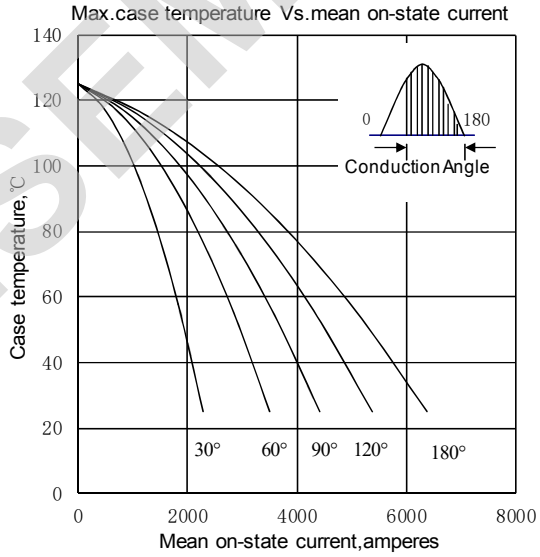


Fig.4

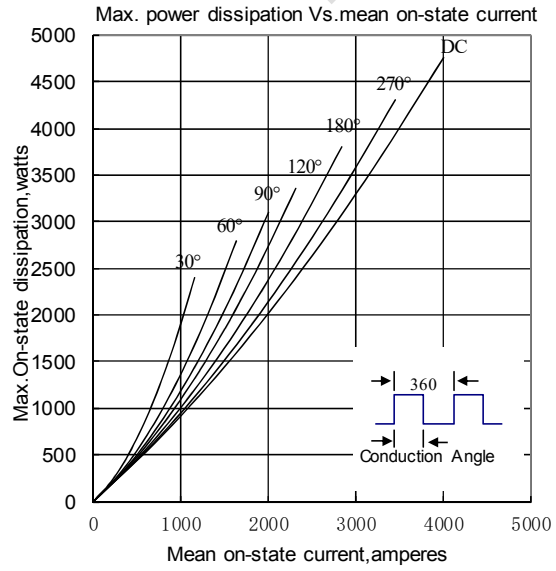


Fig.5

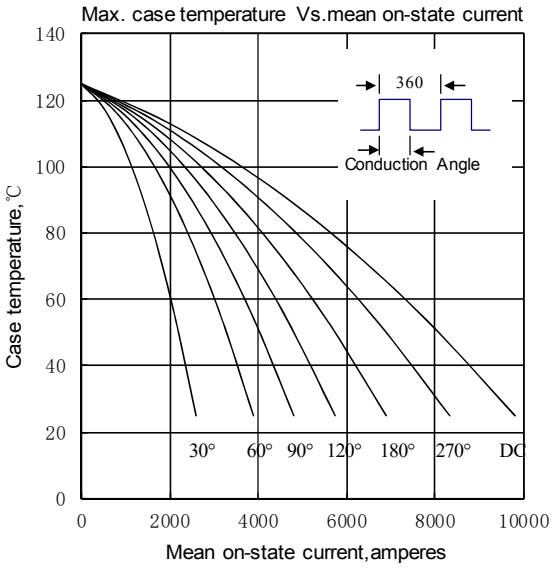


Fig.6

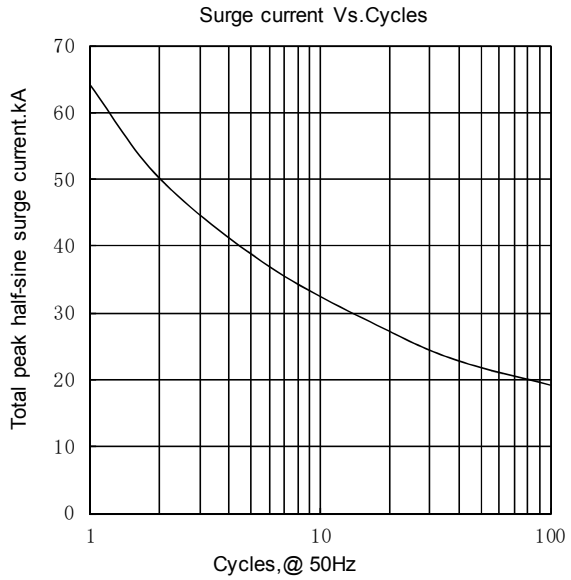


Fig.7

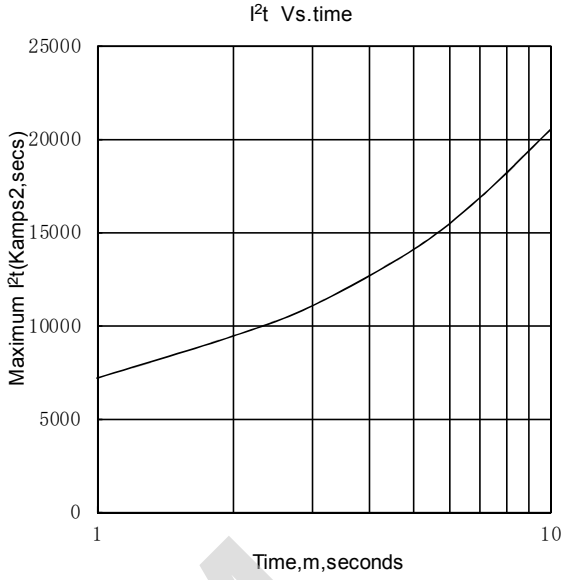


Fig.8

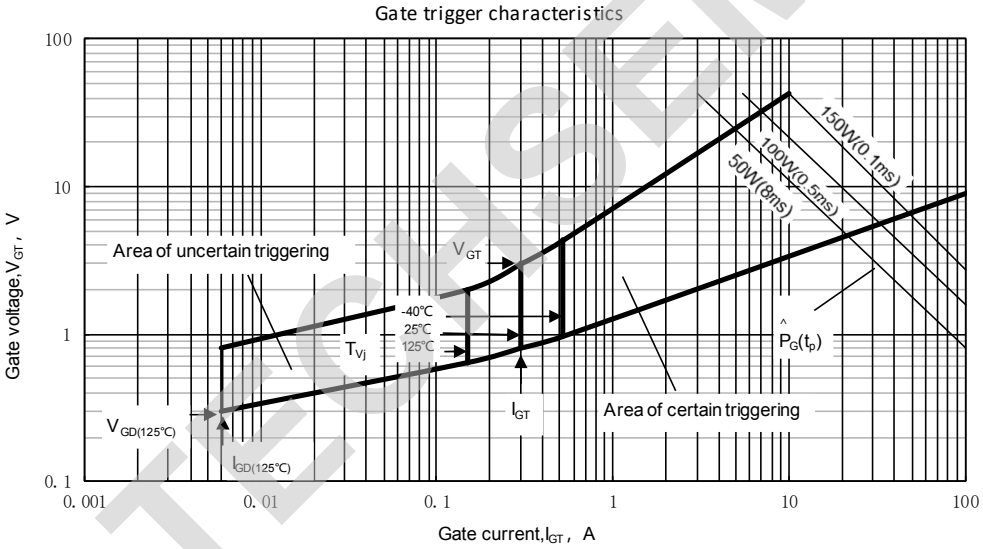
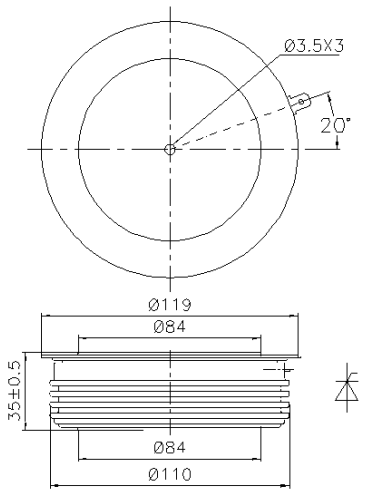


Fig.9

Outline:



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