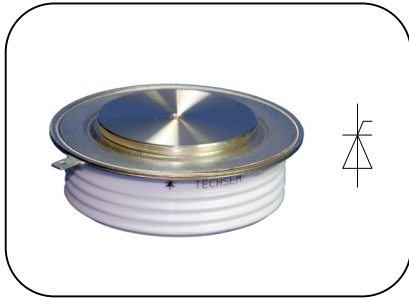


**Features**

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

Typical Applications

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

Part No. Y55KPJ-KT50cTD

$I_{T(AV)}$ 900A
 V_{DRM}, V_{RRM} 3200V, 3500V

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_J (C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180 half sine wave 50Hz	$T_C=88\text{ C}$	125		900	A
		Double side cooled,	$T_C=98\text{ C}$	125		800	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	3200		3500	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			120	mA
I_{TSM}	Surge on-state current		25			20	kA
I^2t	I^2t for fusing coordination	10ms half sine wave	125			2000	$A^2s \cdot 10^3$
I_{TSM}	Surge on-state current	$V_R=0$				18	kA
I^2t	I^2t for fusing coordination		125			1620	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			1.18	V
r_T	On-state slope resistance		125			0.36	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=2500A, F=26kN$	25			2.08	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	$V_{DM}=67\%V_{DRM}$	125			200	A/ μs
Q_{rr}	Recovery charge	$I_{TM}=800A, t_p=4000\mu s, di/dt=-20A/\mu s, V_R=100V$	125		1950		μC
I_{rM}	Recovery current				100		A
t_q	Circuit commutated turn-off time	$I_{TM}=800A, V_{DM}=67\%V_{DRM}, di/dt=-20A/\mu s, dv/dt=30V/\mu s, V_R=100V$			350		μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	90		250	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	-60			500	mA
V_{GT}	Gate trigger voltage					5.0	V
I_H	Holding current	$V_A=12V, I_A=1A$	25	20		300	mA
I_L	Latching current					1000	mA
t_{gt}	Turn-on time	$t_p \leq 200\mu s, I_A \geq 1A$	25		10		μs
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 24kN				0.018	C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.006	
F_m	Mounting force			21		30	kN
T_{vj}	Junction temperature			-60		125	C
T_{stg}	Stored temperature			-60		60	C
W_t	Weight				550		g
Outline	KT50cTD						

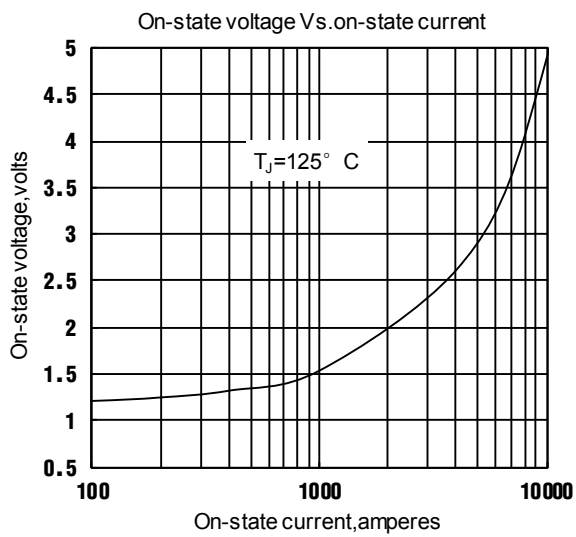


Fig.1

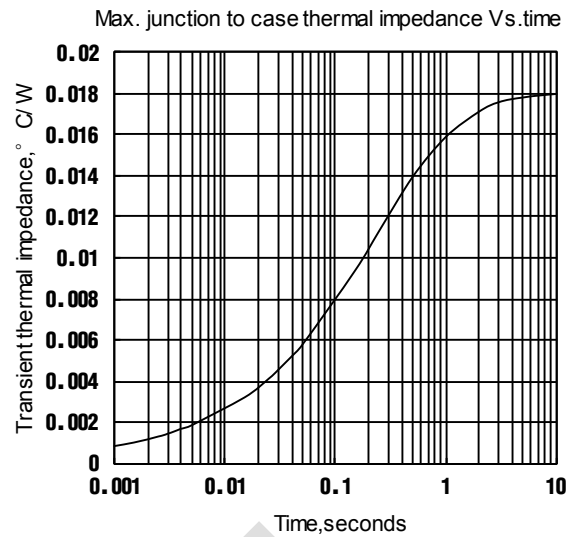


Fig.2

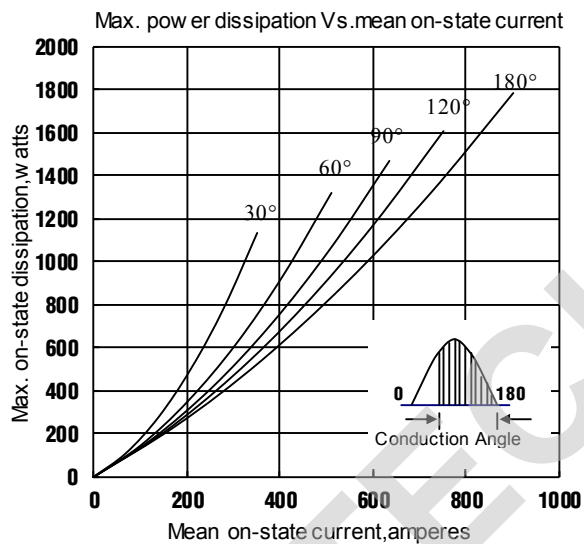


Fig.3

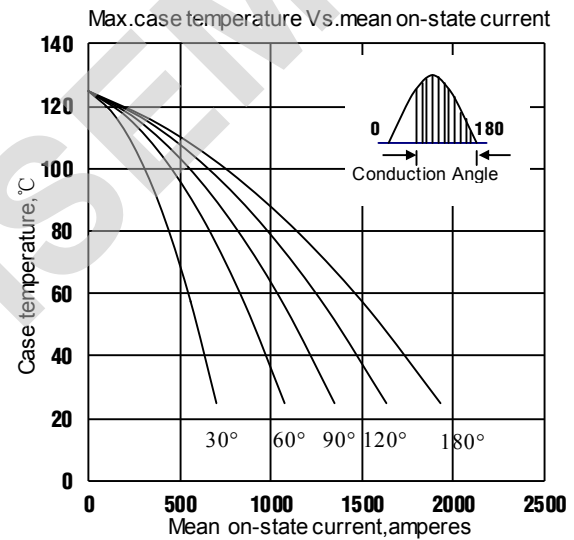


Fig.4

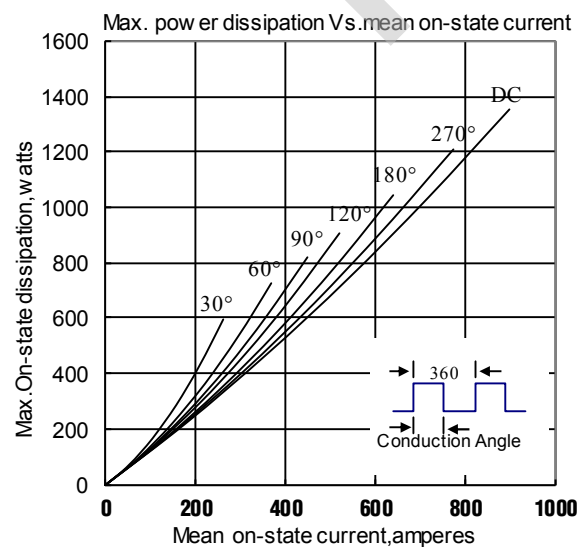


Fig.5

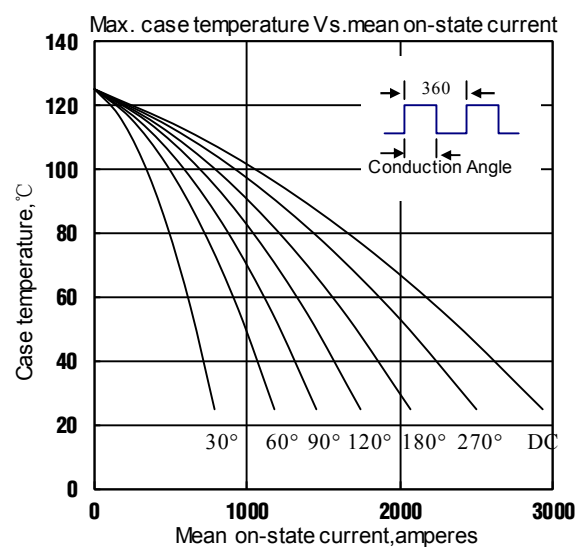


Fig.6

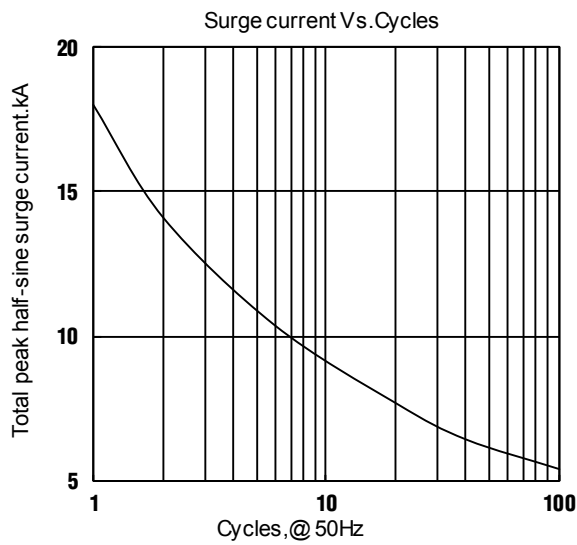


Fig.7

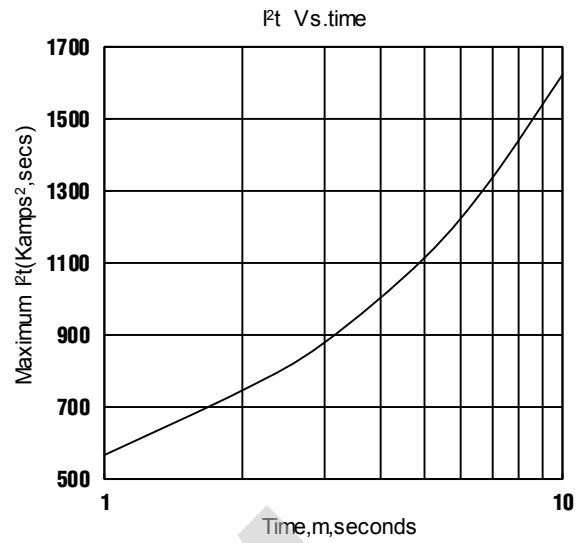


Fig.8

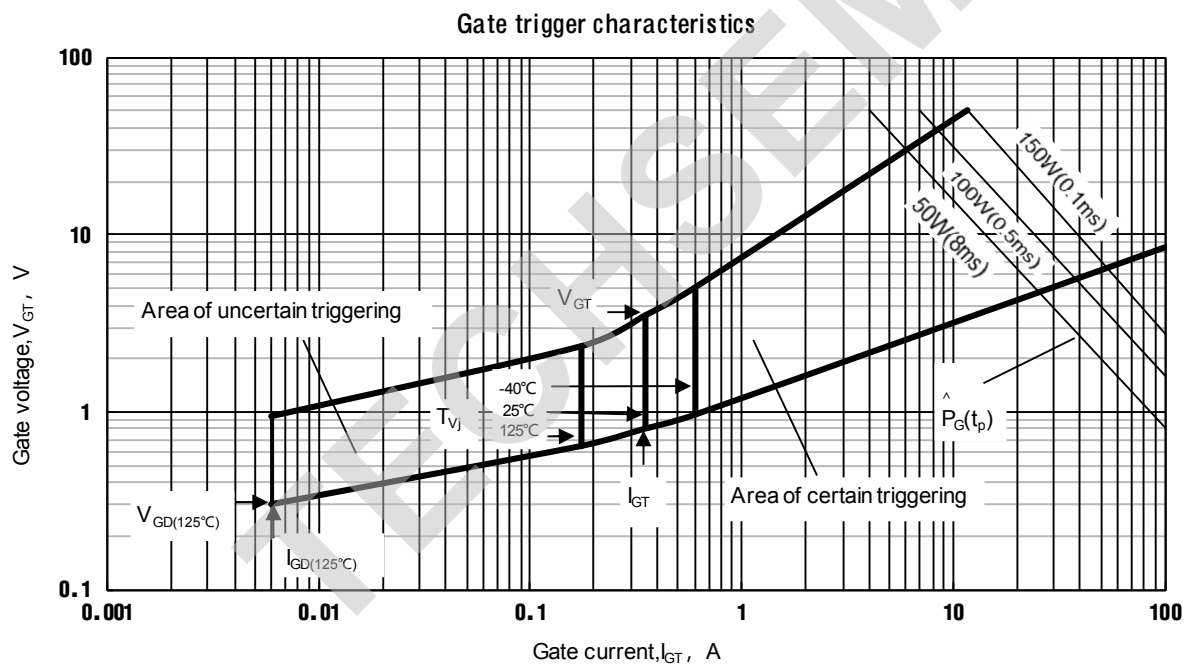
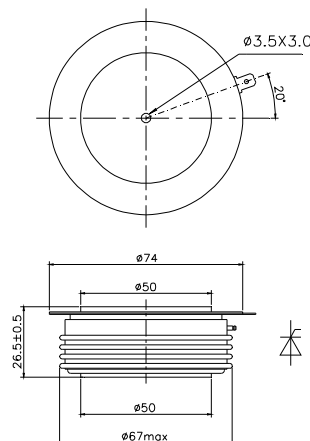


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.