

**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. Y60KPC-KT54cT

$I_{T(AV)}$	2160A
V_{DRM}, V_{RRM}	400V 600V
	800V 1000V

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, $T_C=70\text{ }^{\circ}\text{C}$				2160	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	400		1000	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	125			33	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				5445	$\text{A}^2\text{s}\cdot 10^3$
V_{TO}	Threshold voltage		125			0.95	V
r_T	On-state slope resistance					0.12	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=4000\text{A}$, $F=28\text{kN}$	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	$V_{DM}=67\%V_{DRM}$ to 3000A, Gate pulse $t_r\leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$	125			200	A/ μs
Q_{rr}	Recovery charge	$I_{TM}=2000\text{A}$, $t_p=4000\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}$, $V_R=100\text{V}$	125		1600		μC
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$	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 $^{\circ}$ sine double side cooled Clamping force 28kN				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						

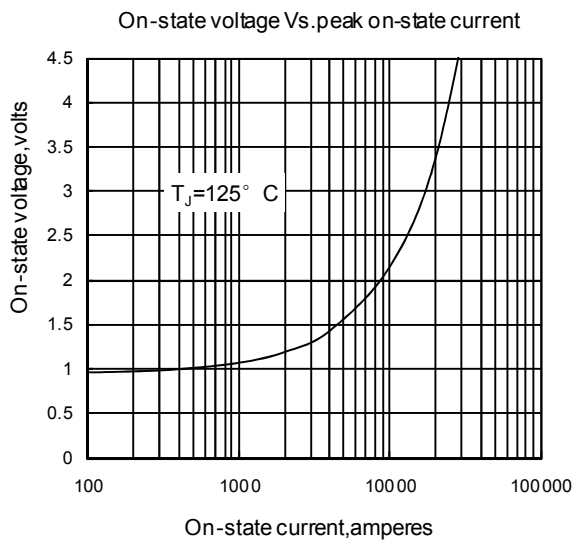


Fig1

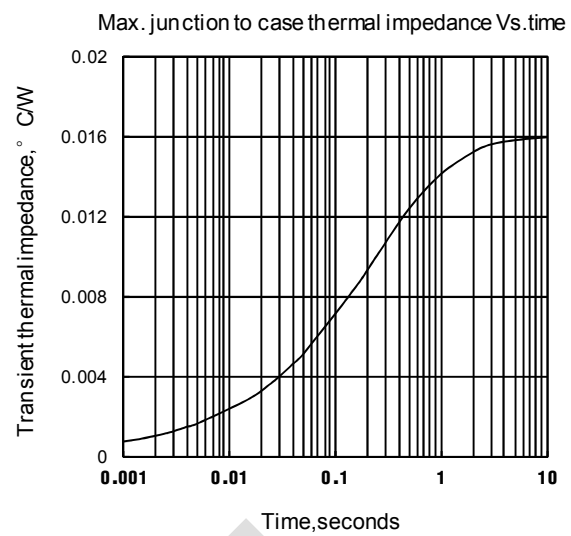


Fig2

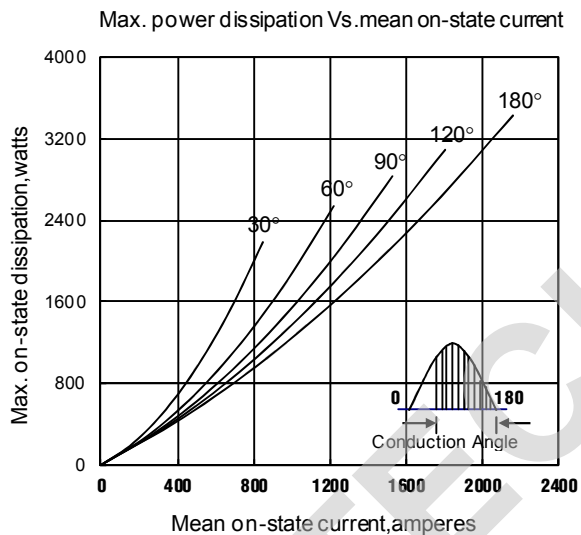


Fig3

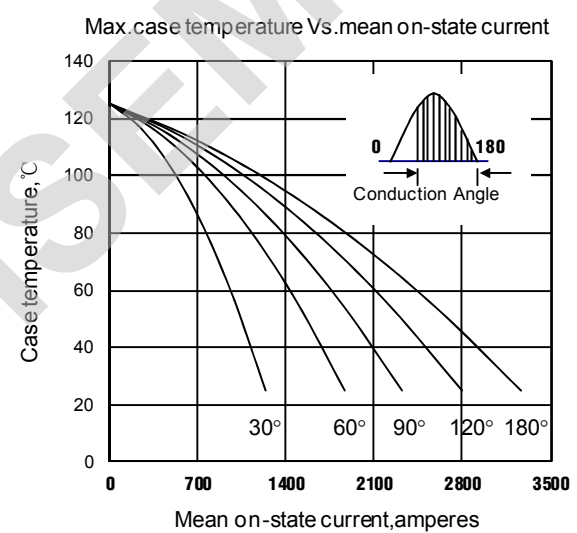


Fig4

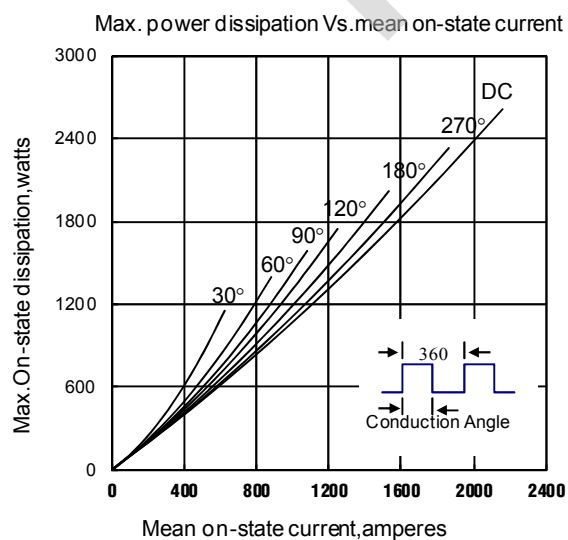


Fig5

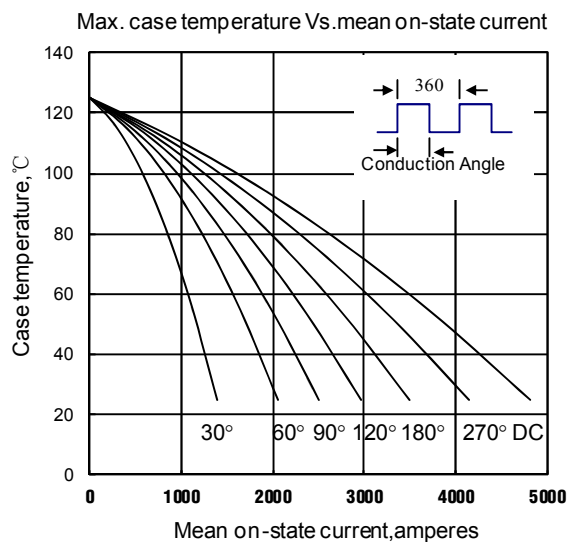


Fig6

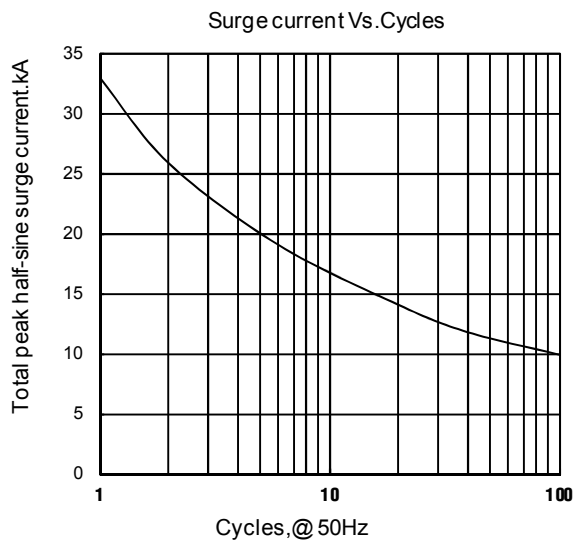


Fig7

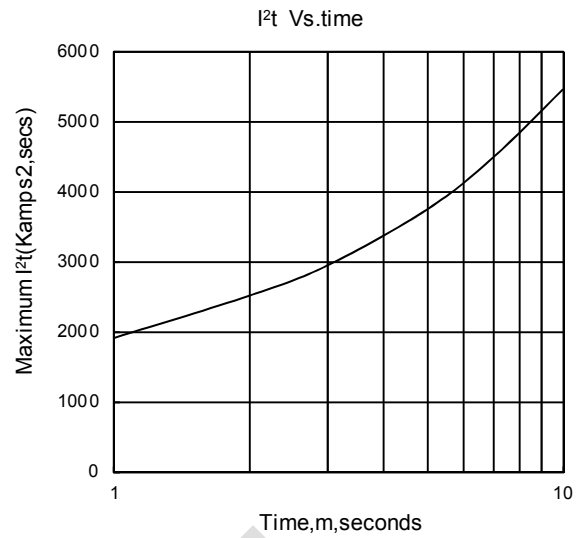


Fig8

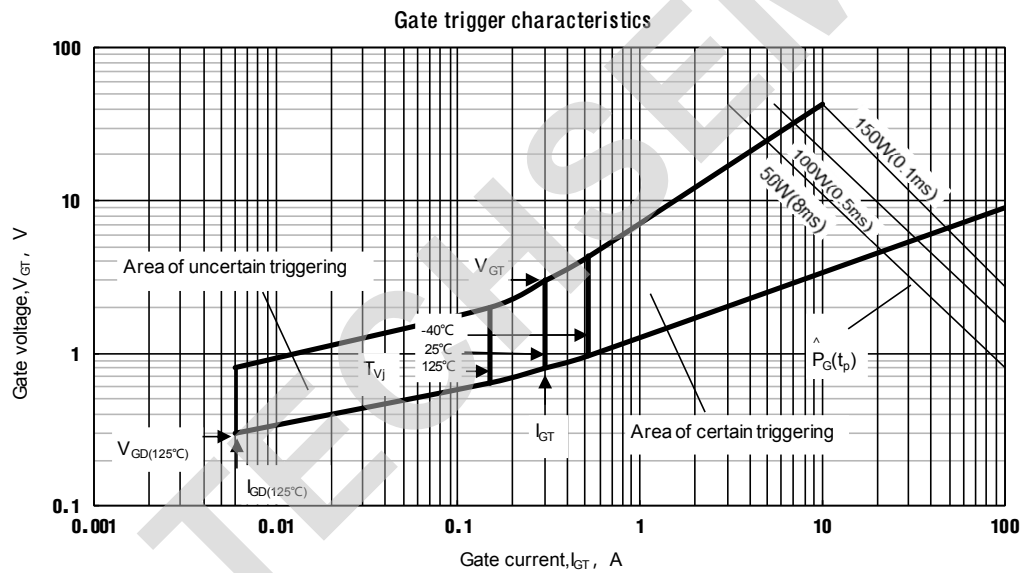
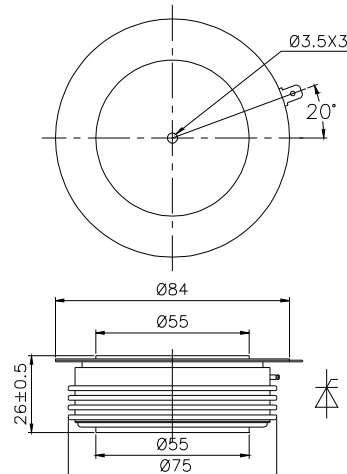


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.