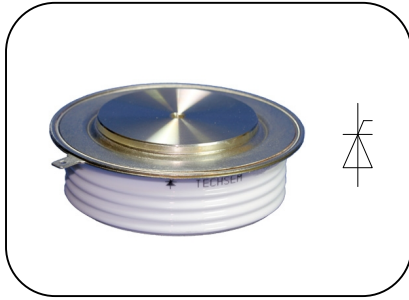


**Features**

Interdigitated amplifying gates
Fast turn-on and high di/dt
Low switching losses
Short turn-off time
Hermetic metal cases with ceramic insulators

Typical Applications

Inductive heating
Electronic welders
Self-commutated inverters
AC motor speed control
General power switching applications

Part No. Y55KAD-KT54cT

$I_{T(AV)}$	1520A
V_{DRM}, V_{RRM}	1200V 1400V
t_q	12~28μs

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,	$T_c=55\text{ C}$	125			1520	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$		125	1100		1400	V
I_{DRM} I_{RRM}	Repetitive peak off-state current Repetitive peak reverse current	at V_{DRM} at V_{RRM}		125			100	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			18	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$		125			1620	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage			125			1.63	V
r_T	On-state slope resistance			125			0.25	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=26kN$		25			3.20	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 2500A Gate pulse $t_r \leq 0.5\mu s, I_{GM}=1.5A$		125			1500	A/μs
Q_{rr}	Recovery charge	$I_{TM}=1000A, t_p=4000\mu s,$ $di/dt=-20A/\mu s, V_R=100V$		125		105	120	μC
t_q	Circuit commutated turn-off time	$I_{TM}=1000A, t_p=4000\mu s, V_R=100V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$		125	12		28	μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25		30		300	mA
V_{GT}	Gate trigger voltage				0.8		3.0	V
I_H	Holding current				20		400	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 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							

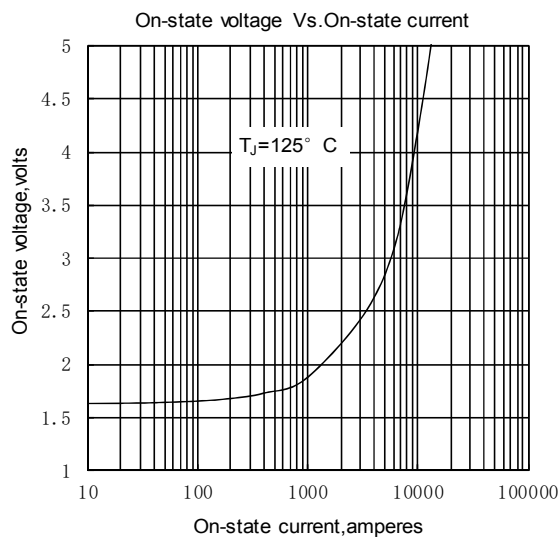


Fig. 1

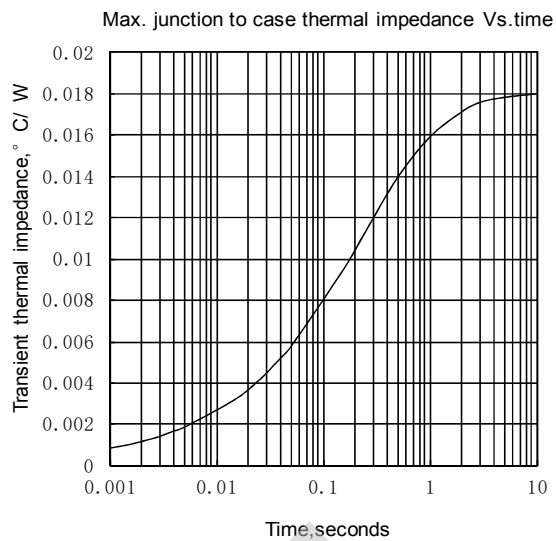


Fig. 2

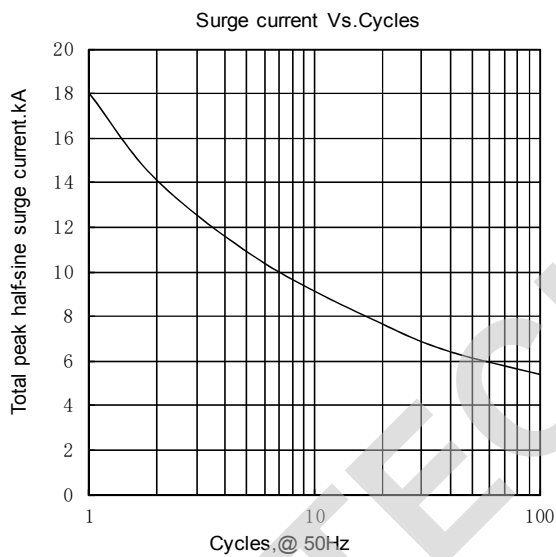


Fig. 3

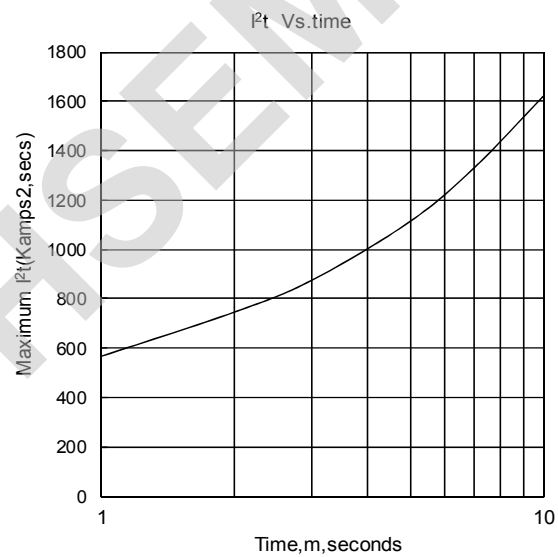


Fig. 4

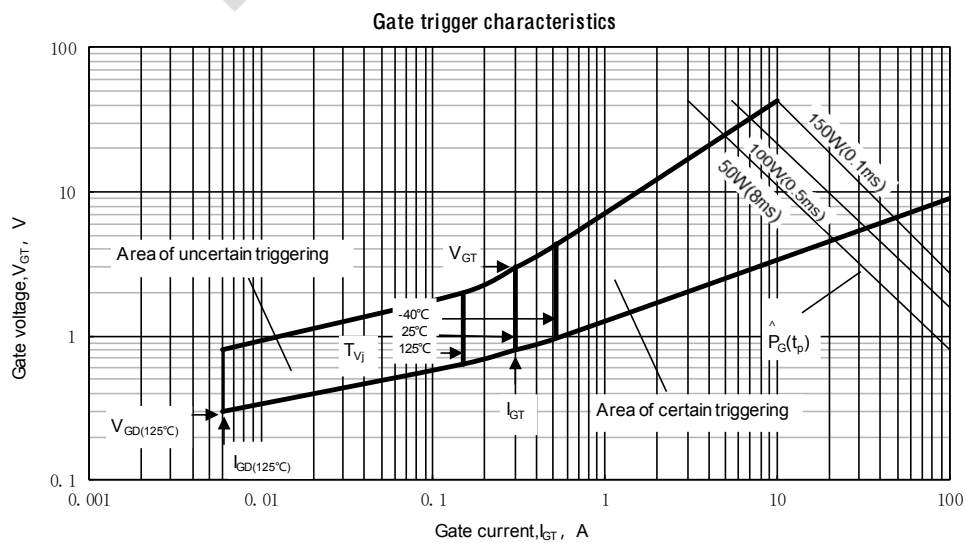
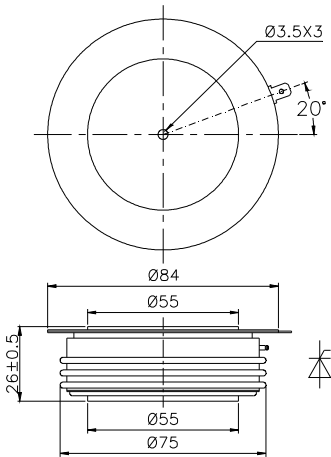


Fig. 5

Outline:



TECHSEM reserves the right to change specifications without notice.