



**Features:**

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

**Typical Applications**

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

<b>Part No. Y30KAC-KT25aT</b>		
<b>I<sub>T(AV)</sub></b>	<b>580A</b>	
<b>V<sub>DRM</sub>, V<sub>RRM</sub></b>	<b>800V</b>	<b>1000V</b>
	<b>1200V</b>	
<b>t<sub>q</sub></b>	<b>8~20μs</b>	

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T <sub>j</sub> (°C)	VALUE			UNIT	
					Min	Type	Max		
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T <sub>C</sub> =55°C	125			580	A	
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	800		1200	V	
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak off-state current Repetitive peak reverse current	at V <sub>DRM</sub> at V <sub>RRM</sub>		125			30	mA	
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave		125			5.4	kA	
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>					146	A <sup>2</sup> s*10 <sup>3</sup>	
V <sub>TO</sub>	Threshold voltage			125			1.45	V	
r <sub>T</sub>	On-state slope resistance						0.85	mΩ	
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =600A, F=7.0kN		25			3.20	V	
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>		125			1000	V/μs	
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> = 67%V <sub>DRM</sub> to1000 Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A		125			1500	A/μs	
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =1000A, tp=4000μs, di/dt=-20A/μs, V <sub>R</sub> =100V		125		25	50	μC	
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> =1000A, tp=4000μs, V <sub>R</sub> =100V dv/dt=30V/μs, di/dt=-20A/μs		125	8		20	μs	
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A		125			30	mA	
V <sub>GT</sub>	Gate trigger voltage						0.8	2.5	V
I <sub>H</sub>	Holding current						20	250	mA
I <sub>L</sub>	Latching current							500	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>		125			0.3	V	
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	At 180° sine- double side cooled Clamping force 7.0kN					0.045	°C /W	
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink						0.010		
F <sub>m</sub>	Mounting force				5.3		10	kN	
T <sub>vj</sub>	Junction temperature				-40		125	°C	
T <sub>stg</sub>	Stored temperature				-40		140	°C	
W <sub>t</sub>	Weight					80		g	
Outline	KT25aT								

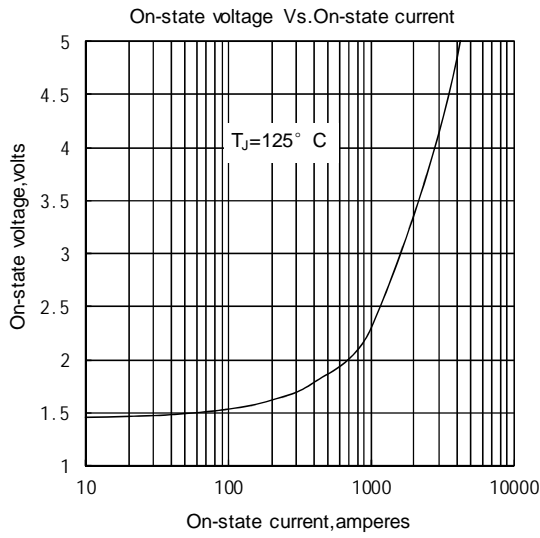


Fig. 1

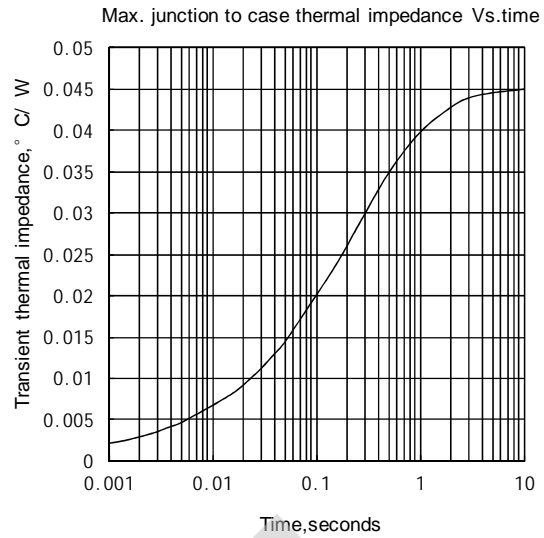


Fig. 2

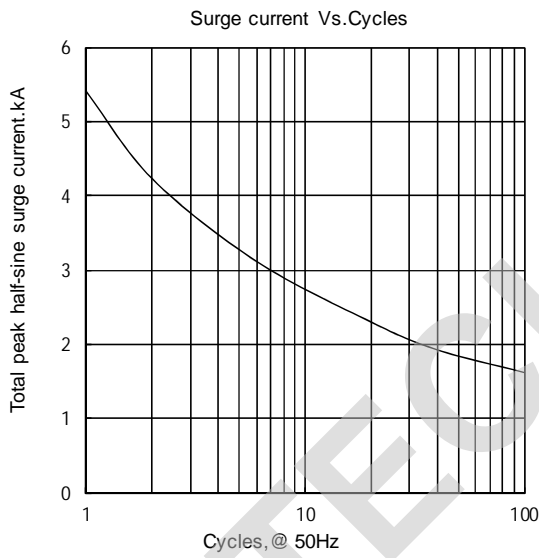


Fig. 3

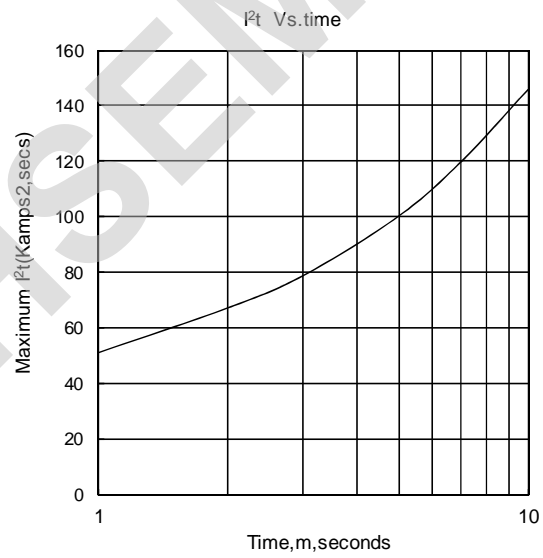


Fig. 4

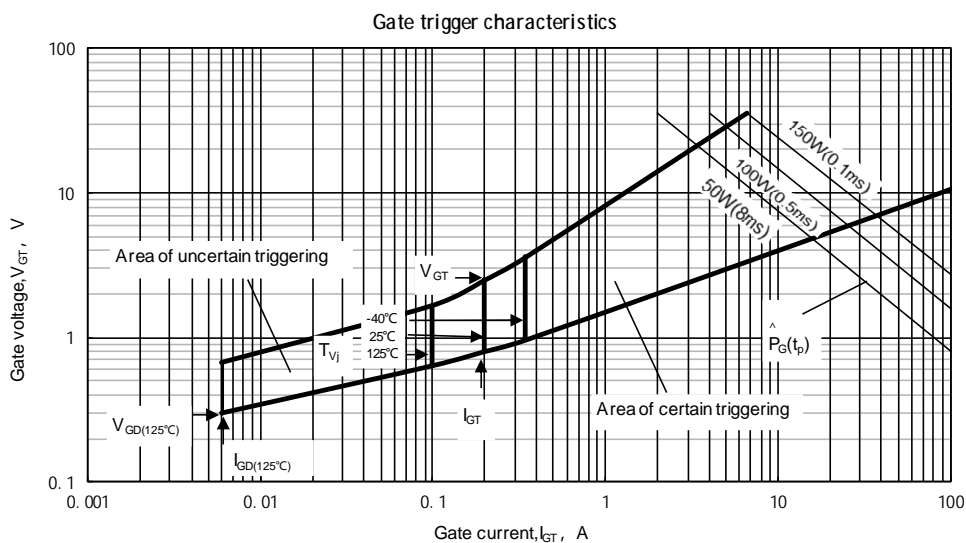
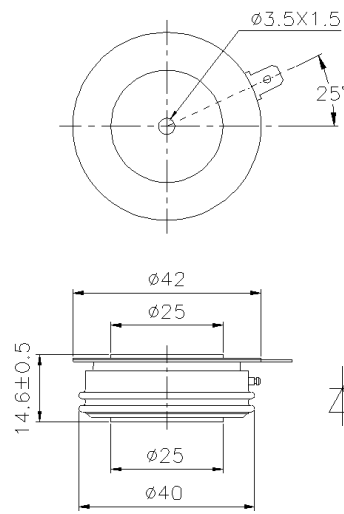


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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