



**Features**

- Excellent dynamic characteristics
- Fast turn-on and high di/dt
- Low switching losses

**Typical Applications**

- Design for inverter supply application

**Part No. Y80KFG-KT75cT**

<b>I<sub>T(AV)</sub></b>	<b>3354A</b>
<b>V<sub>DRM</sub></b>	<b>2000~3000V</b>
<b>V<sub>R RM</sub></b>	<b>1000~2500V</b>
<b>t<sub>q</sub></b>	<b>45~100μs</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	T <sub>C</sub> =55°C	125			3354	A
V <sub>DRM</sub>	Repetitive peak off-state voltage	tp=10ms		125	2000		3000	V
V <sub>R RM</sub>	Repetitive peak reverse voltage				1000		2500	
I <sub>DRM</sub> I <sub>R RM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>R RM</sub>		125			250	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave		125			40	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>R RM</sub>						8000
V <sub>TO</sub>	Threshold voltage			125			1.30	V
r <sub>T</sub>	On-state slope resistance							0.14
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =5000A, F=70kN	45μs ≤ tq ≤ 75μs	25			2.00	V
			76μs ≤ tq ≤ 100μs				1.80	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 (Non-repetitive)	V <sub>DM</sub> = 67%V <sub>DRM</sub> , 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> =2000A, tp=4000μs, di/dt=-20A/μs, V <sub>R</sub> =100V		125		1000		μC
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> =2000A, tp=4000μs, V <sub>R</sub> =100V dv/dt=30V/μs, di/dt=-20A/μs		125	45		100	μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A		25	40		250	mA
V <sub>GT</sub>	Gate trigger voltage				0.9		2.5	V
I <sub>H</sub>	Holding current				20		1000	mA
I <sub>L</sub>	Latching current						1500	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 70kN					0.0085	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink						0.0020	
F <sub>m</sub>	Mounting force				63		84	kN
T <sub>vj</sub>	Junction temperature				-40		125	°C
T <sub>slg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					1230		g
Outline	KT75cT							

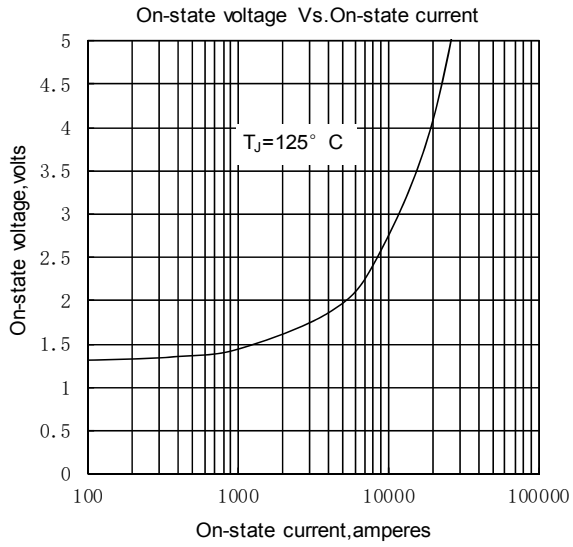


Fig.1

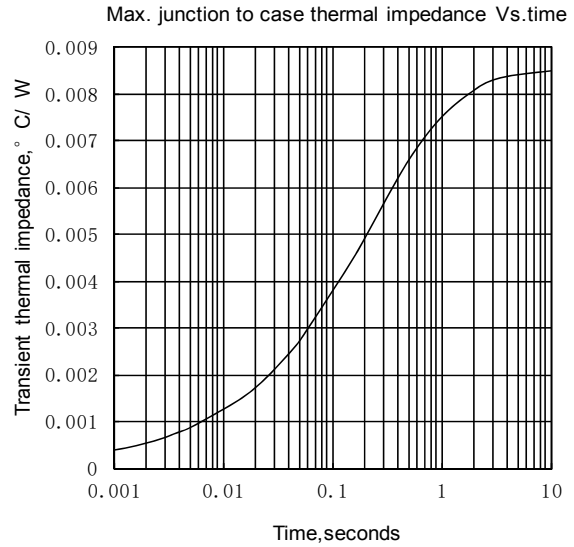


Fig.2

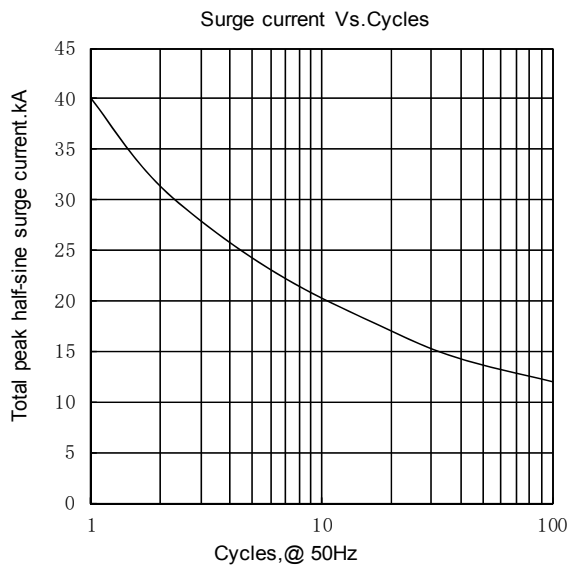


Fig.3

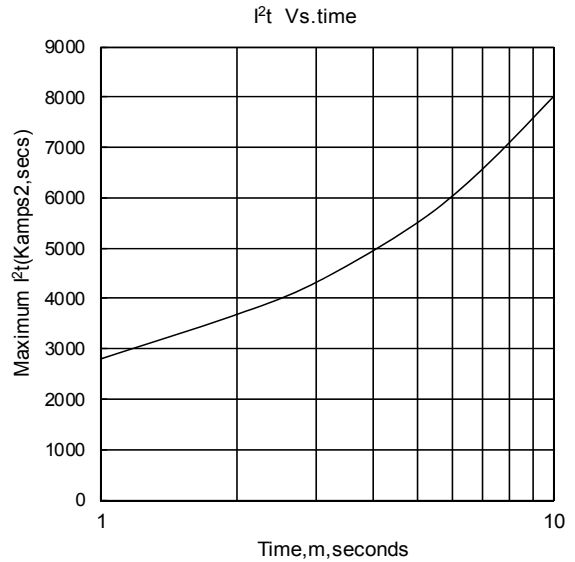


Fig.4

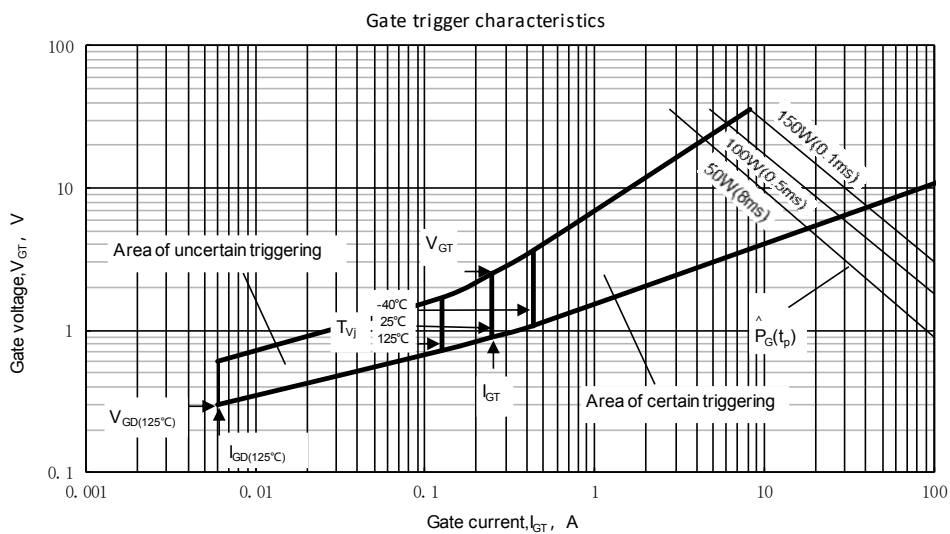
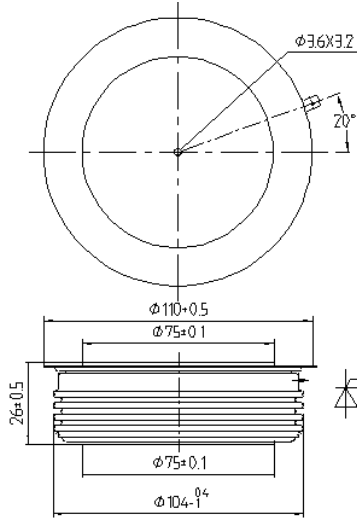


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.