

**Features**

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

**Typical Applications**

- Inductive heating
- Electronic welders
- Self-commutated inverters

**Part No. Y100KKG-KT100cT**

<b>I<sub>T(AV)</sub></b>	<b>4890A</b>
<b>V<sub>DRM</sub>, V<sub>RDM</sub></b>	<b>2000V 2200V</b>
	<b>2500V 2800V</b>
	<b>3000V</b>
<b>t<sub>q</sub></b>	<b>40~130μs</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			4890	A
V <sub>DRM</sub> V <sub>RDM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	1900		3000	V
I <sub>DRM</sub> I <sub>RDM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RDM</sub>	125			250	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			62	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RDM</sub>	125			19220	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.30	V
r <sub>T</sub>	On-state slope resistance		125			0.28	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =5000A, F=90kN	25			2.90	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> to4000A Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A Single pulse	125			1200	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		2400		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	40		130	μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	40		450	mA
V <sub>GT</sub>	Gate trigger voltage			0.9		4.5	V
I <sub>H</sub>	Holding current			20		1000	mA
I <sub>L</sub>	Latching current					1000	mA
V <sub>GD</sub>	Non-trigger gate voltage			V <sub>DM</sub> =67%V <sub>DRM</sub>	125		
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	At 180° sine- double side cooled Clamping force 90kN				0.005	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink					0.0015	
F <sub>m</sub>	Mounting force			81		108	kN
T <sub>vj</sub>	Junction temperature			-40		125	°C
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				2000		g
Outline	KT100cT						

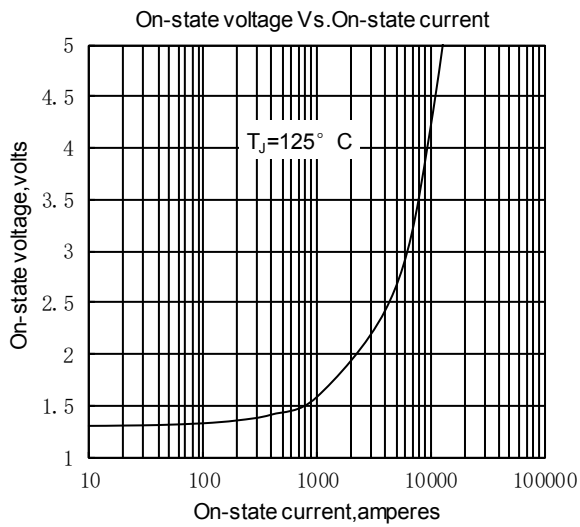


Fig.1

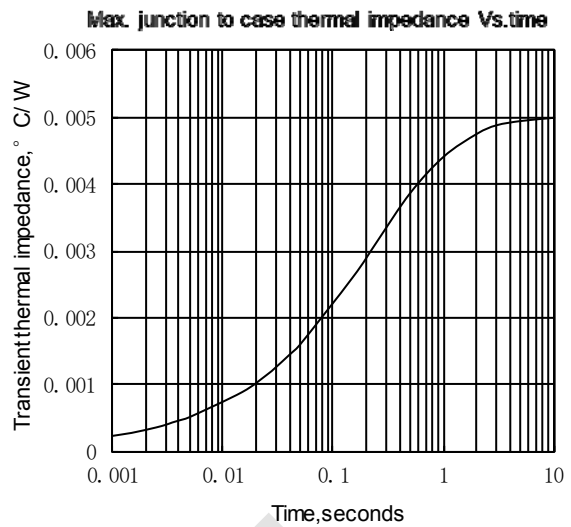


Fig.2

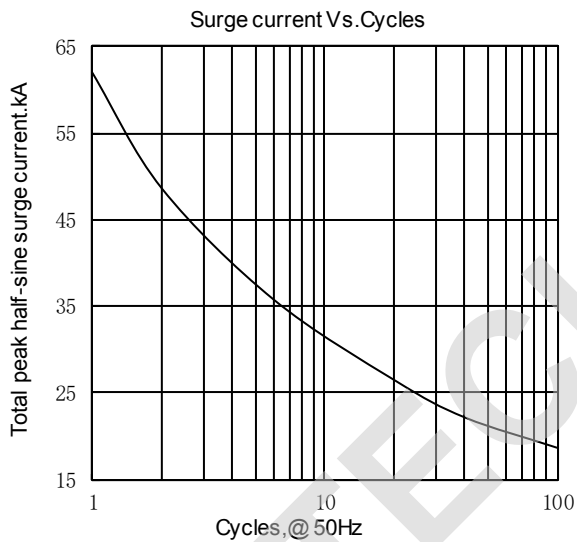


Fig.3

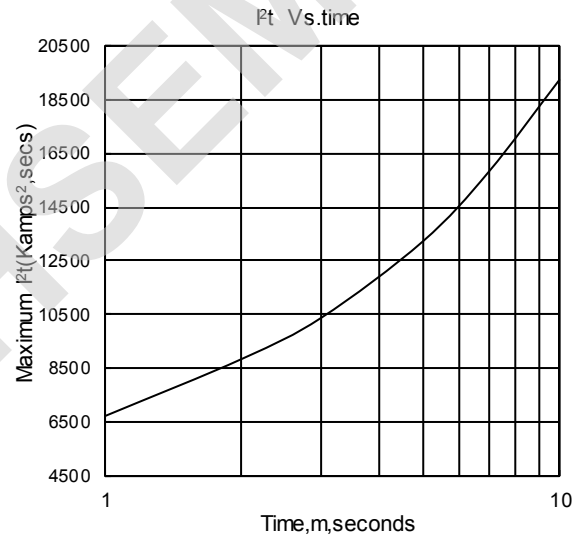


Fig.4

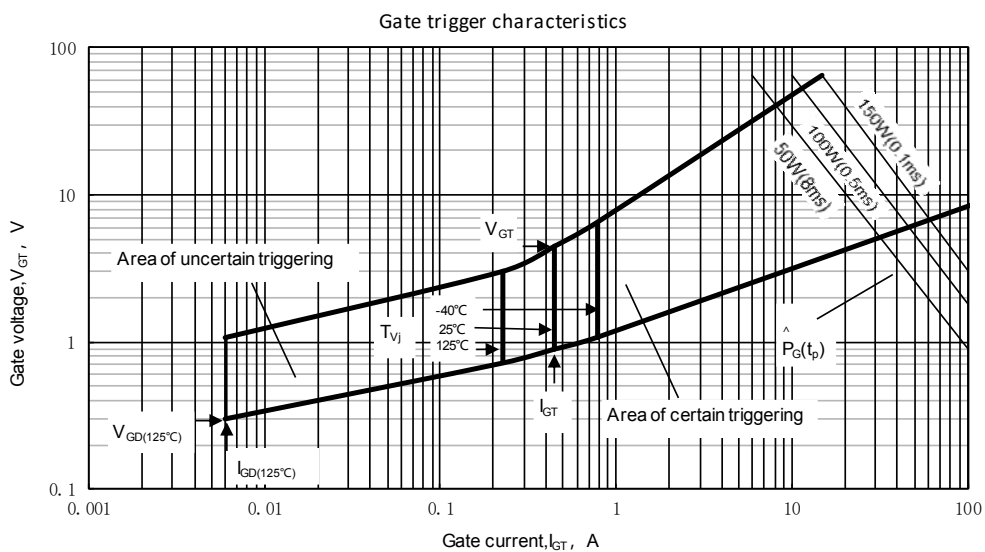
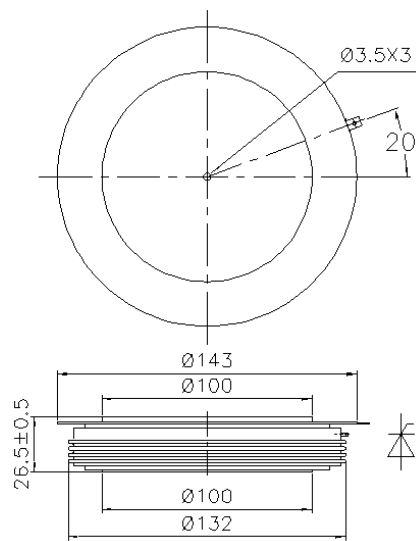


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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