



**Features:**

- n Center amplifying gate
- n Metal case with ceramic insulator
- n Low on-state and switching losses

**Typical Applications:**

- n AC controllers
- n DC and AC motor control
- n Controlled rectifiers

**Part No. H50KPJ-KT50dT**

<b>I<sub>T(AV)</sub></b>	<b>1050A</b>
<b>V<sub>DRM</sub>, V<sub>RRM</sub></b>	<b>3600V 3800V</b>
	<b>4000V 4200V</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> =70°C	125		1050	A
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> t <sub>p</sub> =10ms at V <sub>RRM</sub> t <sub>p</sub> =10ms		125		200	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave		125		15	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				1125	10 <sup>3</sup> A <sup>2</sup> s
V <sub>TO</sub>	Threshold voltage			125		1.0	V
r <sub>T</sub>	On-state slope resistance					0.5	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1500A, F=24kN		25		1.75	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> , Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A		125		100	A/μs
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =2000A, t <sub>p</sub> =4000μs, di/dt=-20A/μs, V <sub>R</sub> =50V		125		1800	μC
I <sub>GT</sub>	Gate trigger current			25	40	300	mA
V <sub>GT</sub>	Gate trigger voltage				0.8	3.0	V
I <sub>H</sub>	Holding current	V <sub>A</sub> =12V, I <sub>A</sub> =1A			25	200	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	Double side cooled				0.022	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	Clamping force 24kN				0.006	
F <sub>m</sub>	Mounting force				19	26	kN
T <sub>vj</sub>	Junction temperature				-40	125	°C
T <sub>stg</sub>	Stored temperature				-40	140	°C
W <sub>t</sub>	Weight					560	g
Outline	KT50dT						

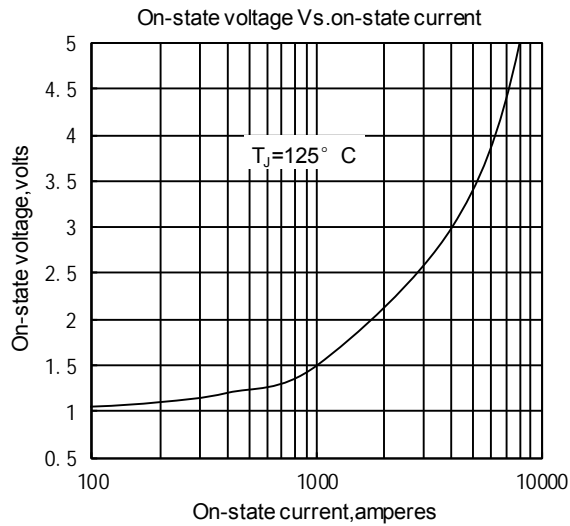


Fig.1

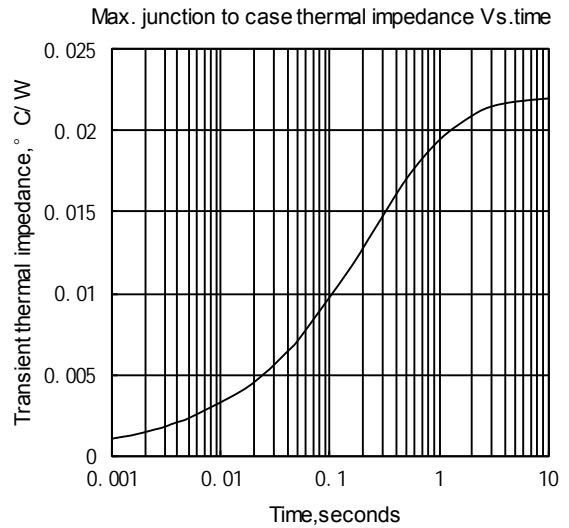


Fig.2

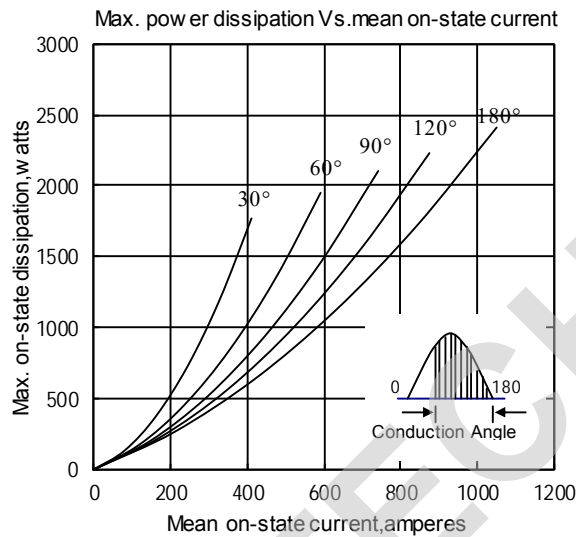


Fig.3

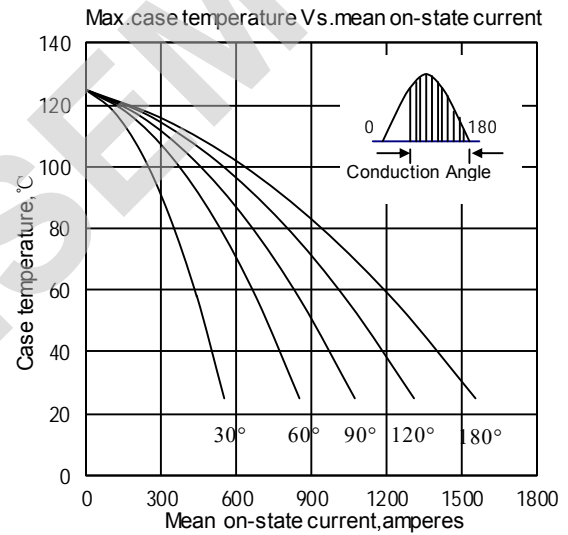


Fig.4

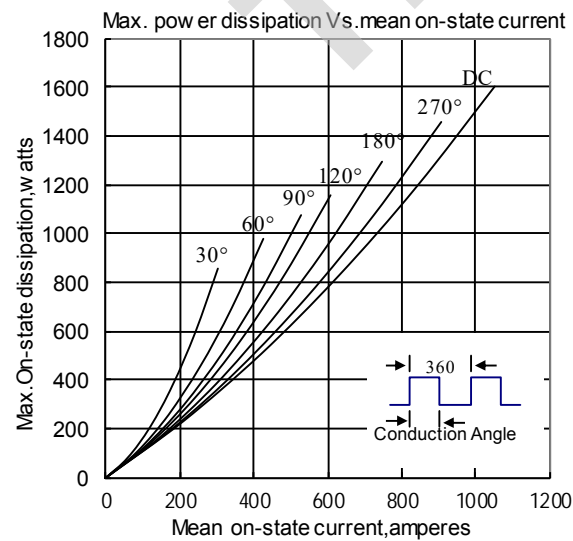


Fig.5

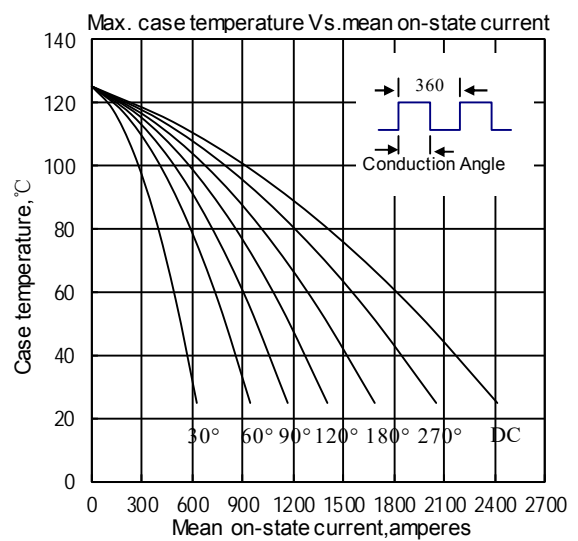


Fig.6

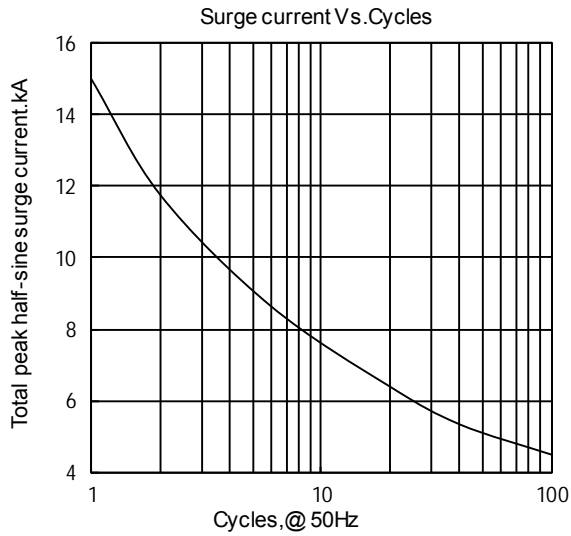


Fig.7

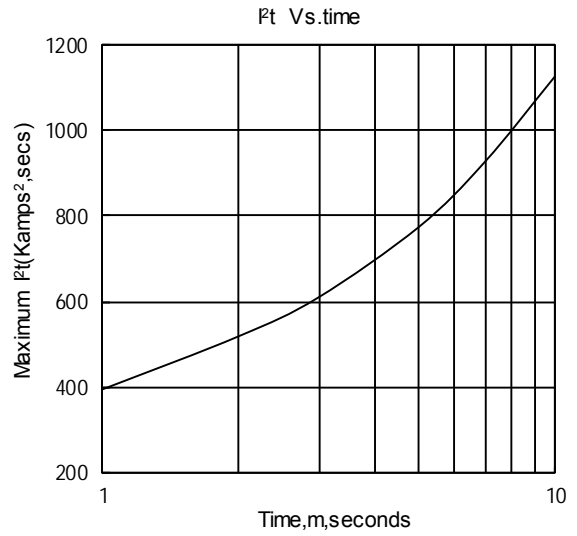


Fig.8

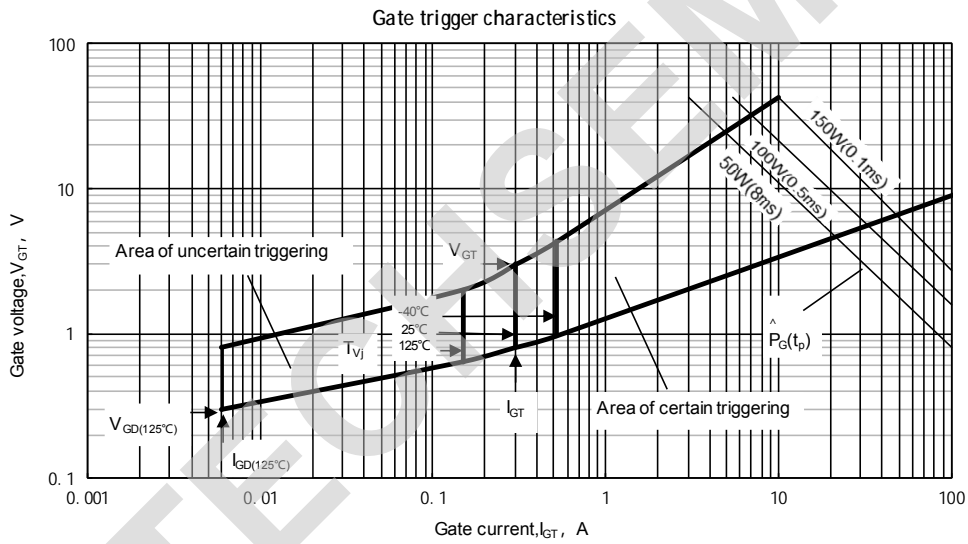
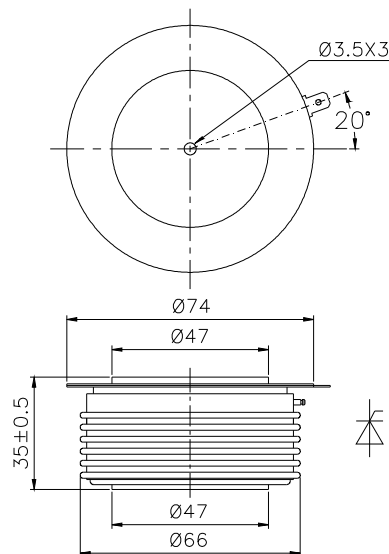


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.