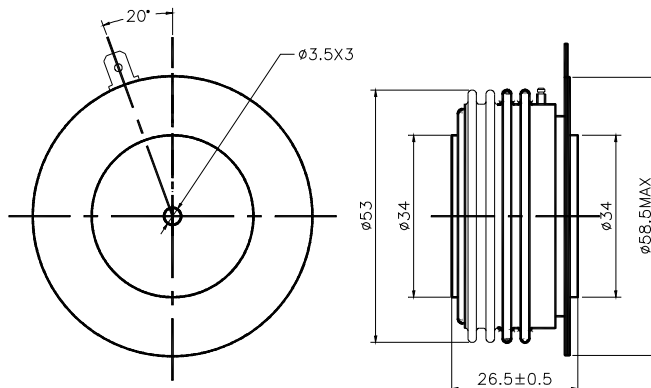


T04-XX00  
PHASE CONTROL  
THYRISTOR

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>hs</sub> =55°C	125			855	A
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Double side cooled, T <sub>hs</sub> =80°C	125			646	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms V <sub>Dsm</sub> &V <sub>Rsm</sub> = V <sub>DRM</sub> &V <sub>RRM</sub> +100V respectively	125	800		1800	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			40	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			9.2	KA
I <sup>2</sup> T	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				423	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			0.91	V
r <sub>T</sub>	On-state slop resistance					0.68	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1700A, F=15KN	125			2.07	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	125			300	V/μs
di/dt	Critical rate of rise of on-state current	From 67%V <sub>DRM</sub> to 1000A, Gate source 1.5A t <sub>r</sub> ≤0.5μs Repetitive	125			300	A/μs
I <sub>rm</sub>	Reverse recovery current	I <sub>TM</sub> =500A, tp=1000μs, di/dt=-20A/μs, V <sub>i</sub> =50V	125			140	A
t <sub>rr</sub>	Reverse recovery time					15	μs
Q <sub>rr</sub>	Recovery charge					1050	μC
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	35		250	mA
V <sub>GT</sub>	Gate trigger voltage			0.8		2.5	V
I <sub>H</sub>	Holding current			20		200	mA
V <sub>GD</sub>	Non-trigger gate voltage	At 67%V <sub>DRM</sub>	125			0.3	V
R <sub>th(j-h)</sub>	Thermal resistance Junction to heatsink	At 180° sine double side cooled Clamping force 15KN				0.035	°C /W
F <sub>m</sub>	Mounting force			10		20	KN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				270		g
Outline	KT33cT						

Outline



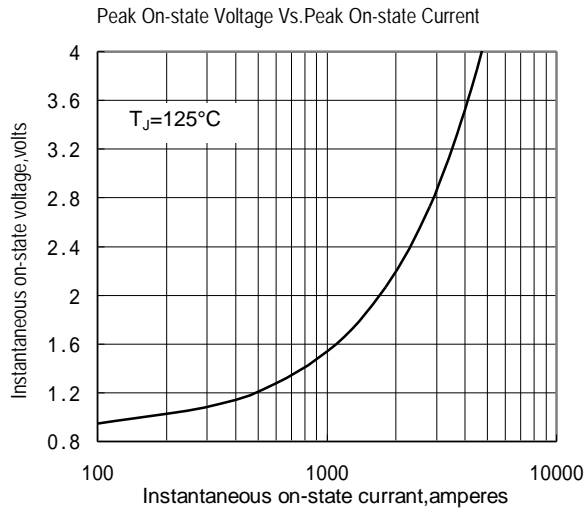


Fig.1

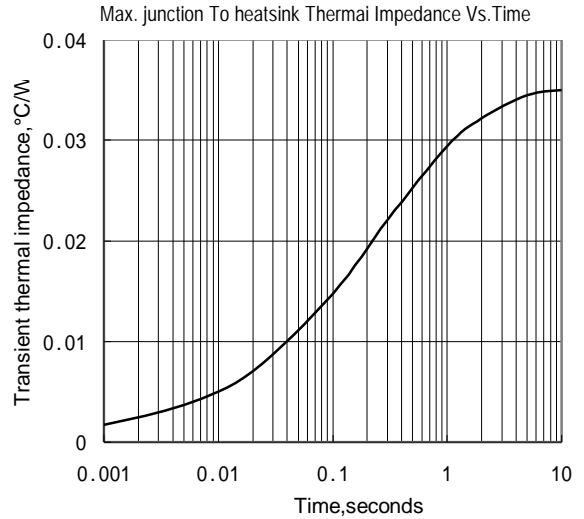


Fig.2

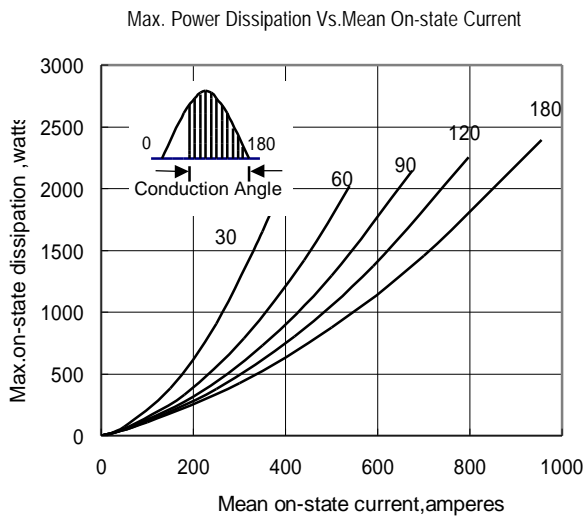


Fig.3

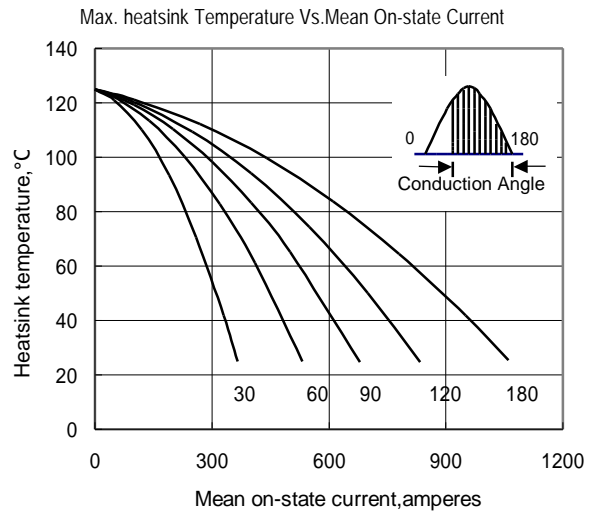


Fig.4

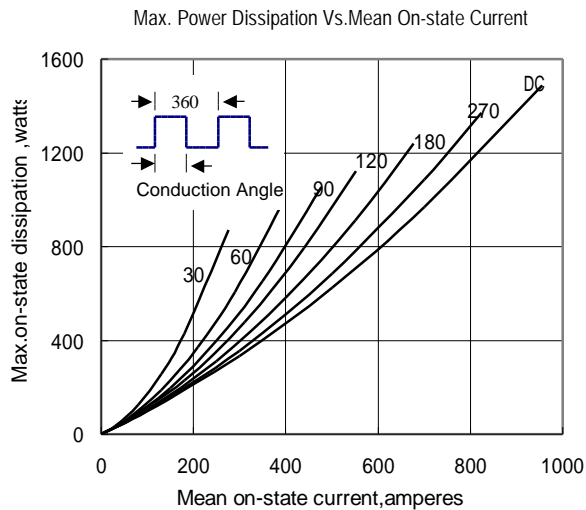


Fig.5

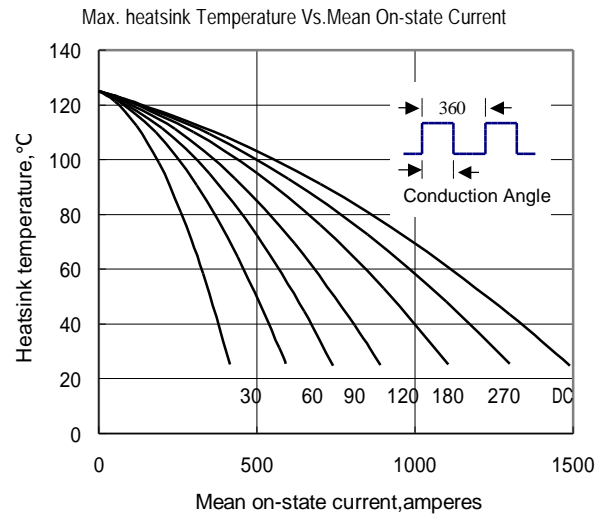


Fig.6

Surge Current Vs.Cycles

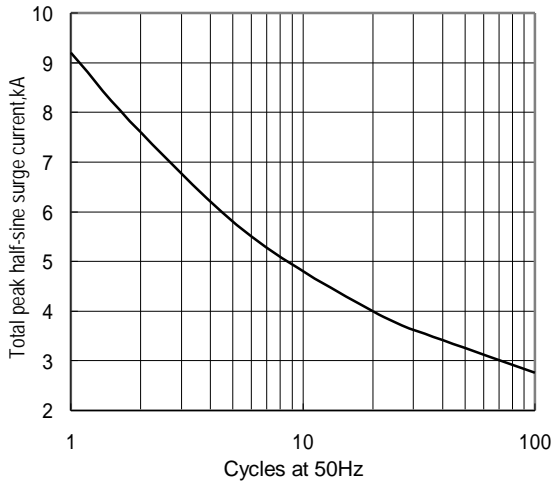


Fig.7

$I^2t$  Vs.Time

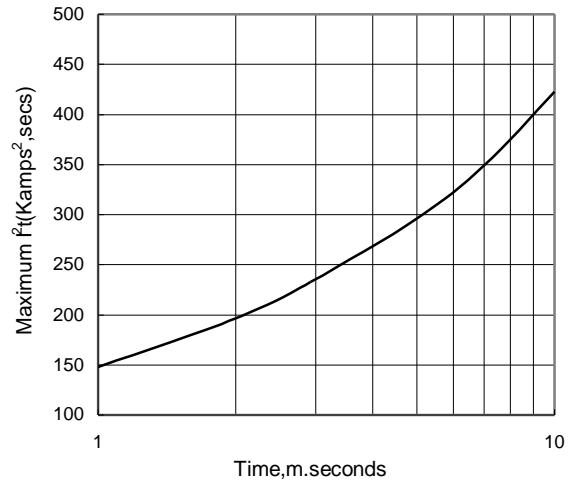


Fig.8

Gate characteristic at 25°C junction

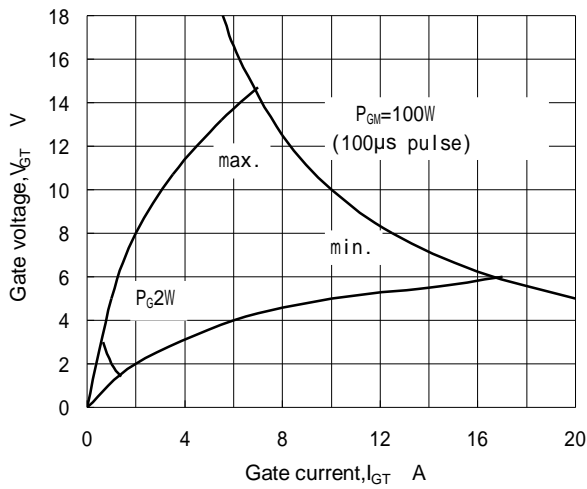


Fig.9

Gate Trigger Zone at varies

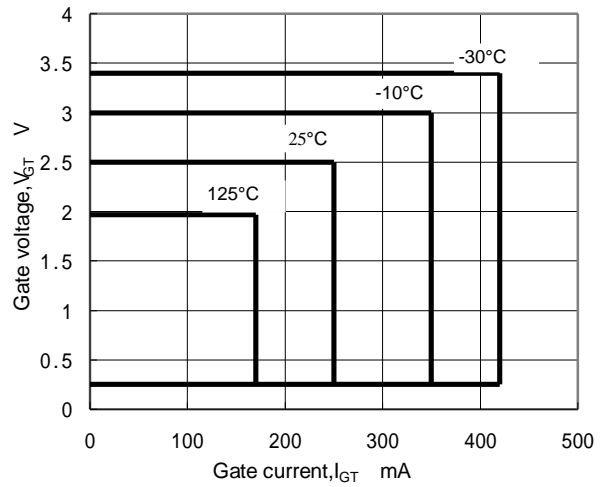


Fig.10