

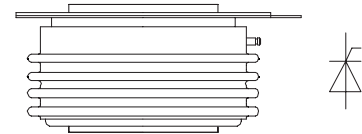
### FEATURES

- 1). Center amplifying gate
- 2). Metal case with ceramic insulator
- 3). Low on-state and switching losses

### TYPICAL APPLICATIONS

- 1). AC controllers
- 2). DC and AC motor control
- 3). Controlled rectifiers

$I_{T(AV)}$  449A  
 $V_{DRM}/V_{RRM}$  5600~6500V  
 $I_{TSM}$  4.5 KA  
 $I^2t$  101 10<sup>3</sup>A<sup>2</sup>S



### THE MAIN PARAMETERS

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 T <sub>hs</sub> =88°C	125			449 300	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	125	5600		6500	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak off-state current Repetitive peak reverse current	V <sub>D</sub> =V <sub>DRM</sub> V <sub>R</sub> =V <sub>RRM</sub>	125			200	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			4.5	KA
I <sup>2</sup> t	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				101	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.25	V
r <sub>T</sub>	On-state slop resistance					2.0	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1000A, F=15KN	125			3.25	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	125			2000	V/μs
di/dt	Critical rate of rise of on-state current	V <sub>DM</sub> =67%V <sub>DRM</sub> to1300A, Gate pulse t <sub>r</sub> ≤0.5μs I <sub>GM</sub> =1.5A	125			100	A/μs
I <sub>rm</sub>	Reverse recovery current	I <sub>TM</sub> =1000A, tp=1000μs, di/dt=-20A/μs, VR=50V	125			145	A
t <sub>rr</sub>	Reverse recovery time					15	μs
Q <sub>rr</sub>	Recovery charge					1087	μC
I <sub>GT</sub>	Gate trigger current			40		300	mA
V <sub>GT</sub>	Gate trigger voltage	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	0.8		3.0	V
I <sub>H</sub>	Holding current			20		250	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =0.67V <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				0.045	°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				300		g
Size	Package box size					95 × 95 × 50	mm

**PERFORMANCE CURVES FIGURE**

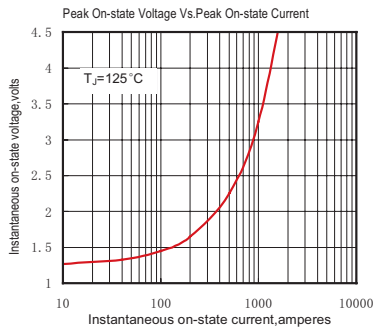


Fig.1

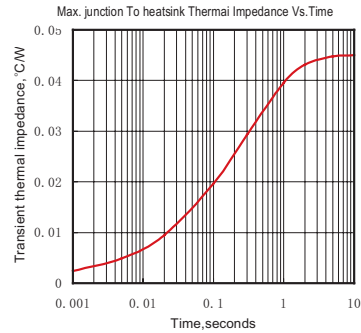


Fig.2

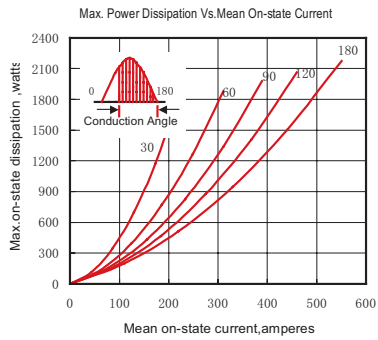


Fig.3

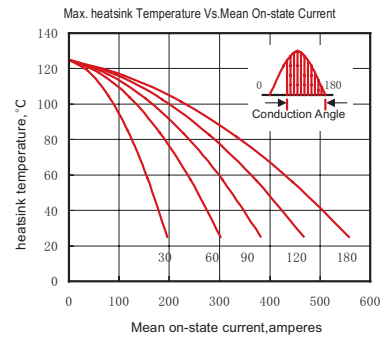


Fig.4

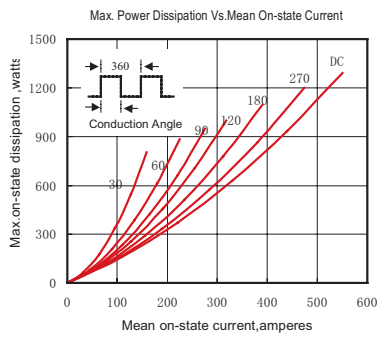


Fig.5

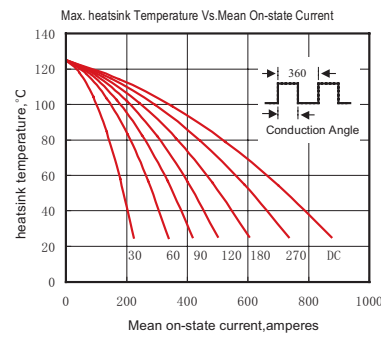


Fig.6

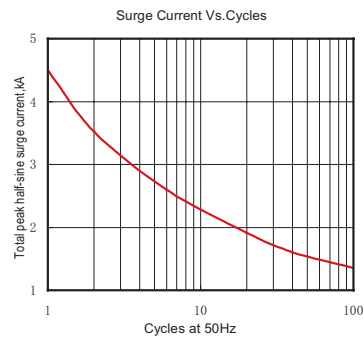


Fig.7

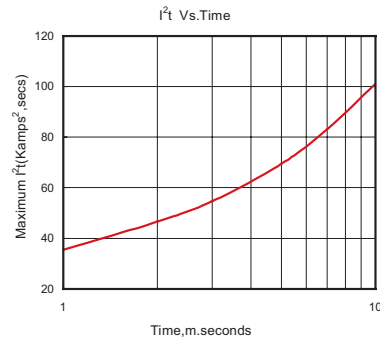


Fig.8

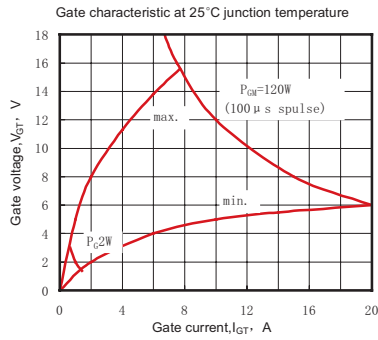


Fig.9

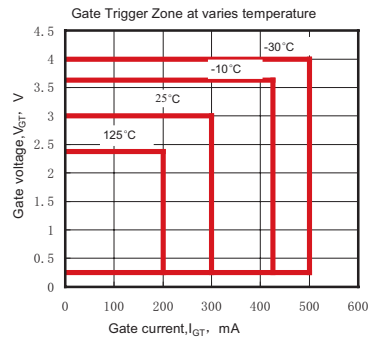
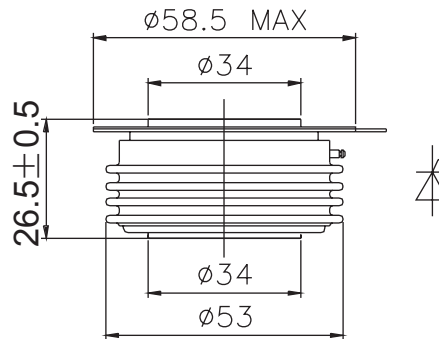
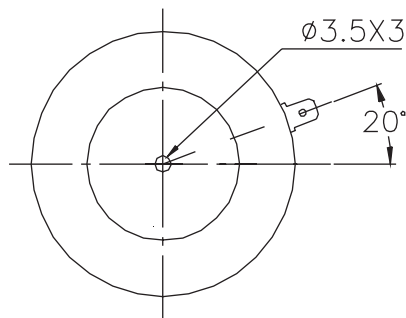


Fig.10

## OUTLINE



### YUEQING LIUJING RECTIFIER CO., LTD

Sale Department: Liujing Building, Yueqing City, Zhejiang Province

Add: Wanao Industrial Zone, Yueqing city, Zhejiang Province

Tel: 0086-577-62519692    0089-577-62519693

Fax: 0086-577-62518692

International Export: 0086-577-62571902

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