

## 产品规格书

### Specification of products

产品名称: 可控硅模块

产品型号: MT800E4Y12

浙江世菱半导体有限公司  
ZHEJIANG SHILING SEMICONDUCTOR CO., LTD.

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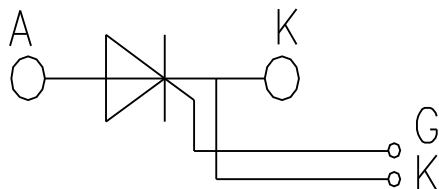
Http://www.smrshiling.com

拟制	审核	核准
林益龙	曹剑龙	宗瑞

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>j</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
V <sub>DRM</sub> V <sub>RDM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125		400	500	V
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side cooled, T <sub>c</sub> =85°C	125		800		A
I <sub>T(RMS)</sub>	RMS on-state current				1256		A
I <sub>DRM</sub> I <sub>RDM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RDM</sub>	125			35	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			13.6	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =60%V <sub>RDM</sub>				2420	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			0.80	V
r <sub>T</sub>	On-state slope resistance					0.20	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =2400A	25			1.20	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t <sub>r</sub> ≤ 0.5μs Repetitive	125			250	A/μs
Q <sub>rr</sub>	Recovery charge	I <sub>TM</sub> =1000A, tp=2000μs, di/dt=-60A/μs, V <sub>R</sub> =50V	125			650	μC
tq	Circuit commutated turn-off time	I <sub>TM</sub> =500A, tp=1000μs, V <sub>R</sub> =50V dv/dt=30V/μs, di/dt=-20A/μs	125		15		μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		200	mA
V <sub>GT</sub>	Gate trigger voltage			0.8		3.0	V
I <sub>H</sub>	Holding current			20		200	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125	0.2			V
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	Single side cooled per chip				0.042	°C/W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	Single side cooled per chip				0.020	°C/W
V <sub>iso</sub>	Isolation voltage	50Hz, R.M.S, t=1min, I <sub>iso</sub> :1mA(MAX)		3000			V
F <sub>m</sub>	Terminal connection torque(M10)				11.0		N·m
	Mounting torque(M6)				5.0		N·m
T <sub>vj</sub>	Junction temperature			-40		125	°C
T <sub>stg</sub>	Stored temperature			-40		125	°C
W <sub>t</sub>	Weight				785		g
Outline							

### OUTLINE DRAWING & CIRCUIT DIAGRAM

MT



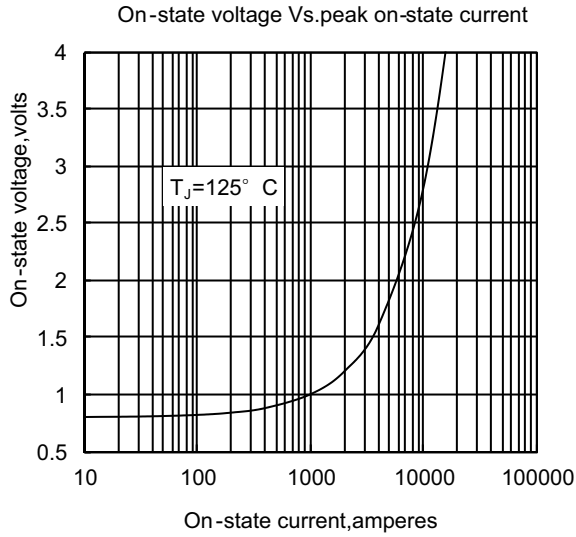


Fig1

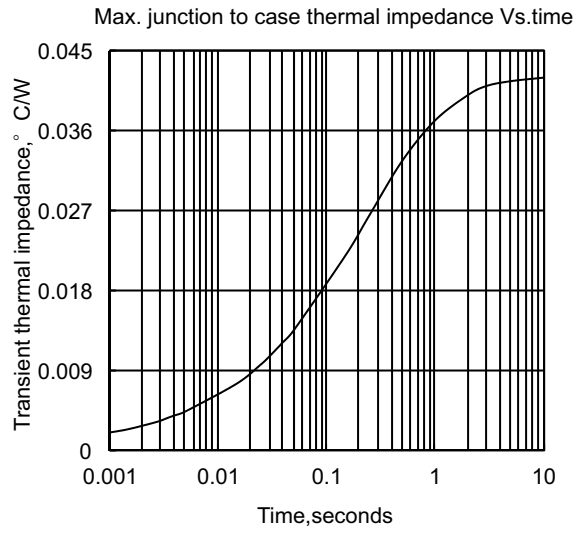


Fig2

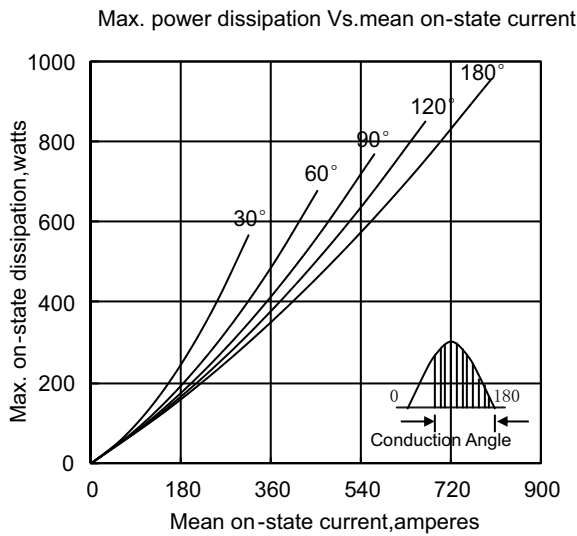


Fig3

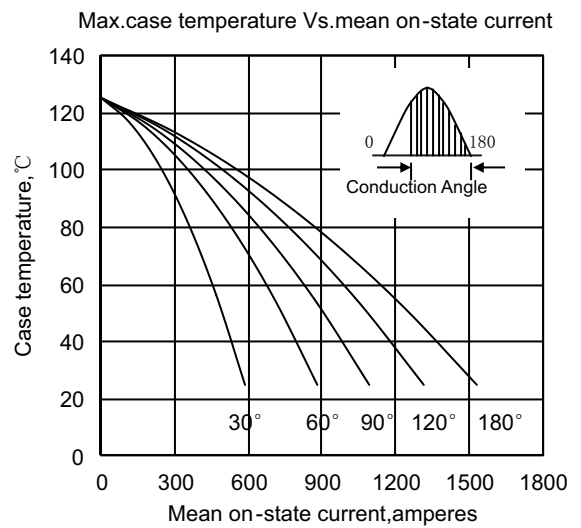


Fig4

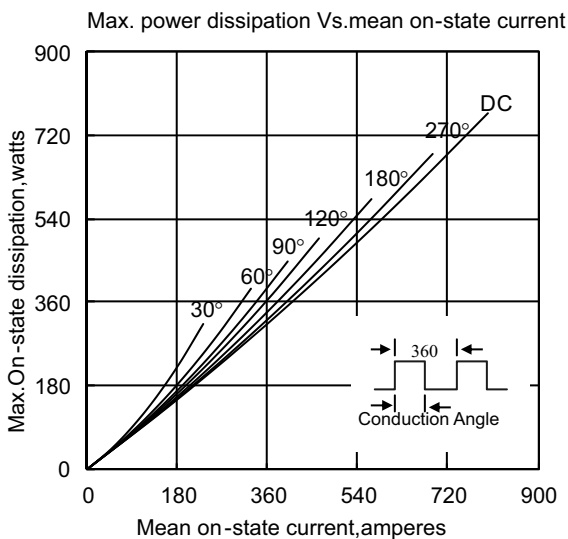


Fig5

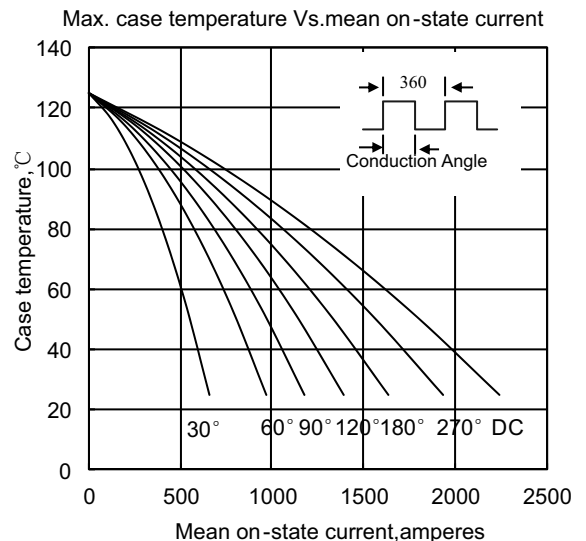


Fig6

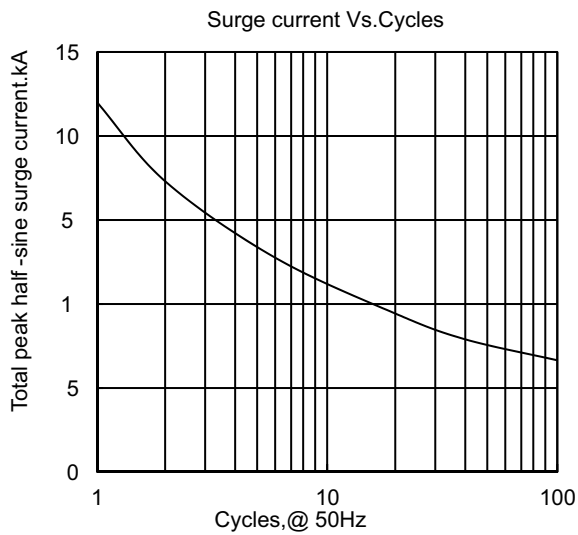


Fig7

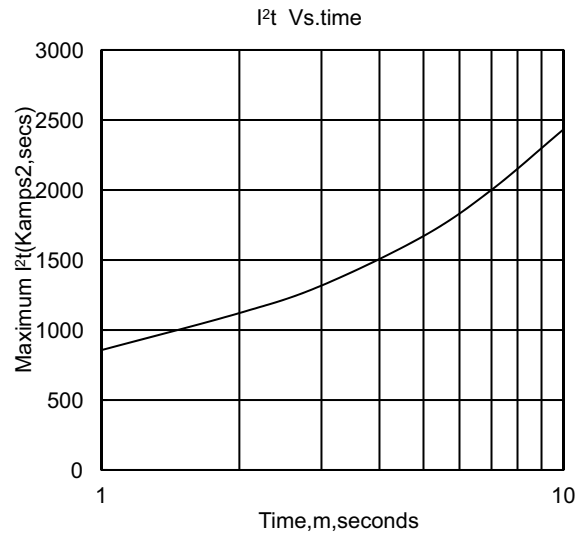


Fig8

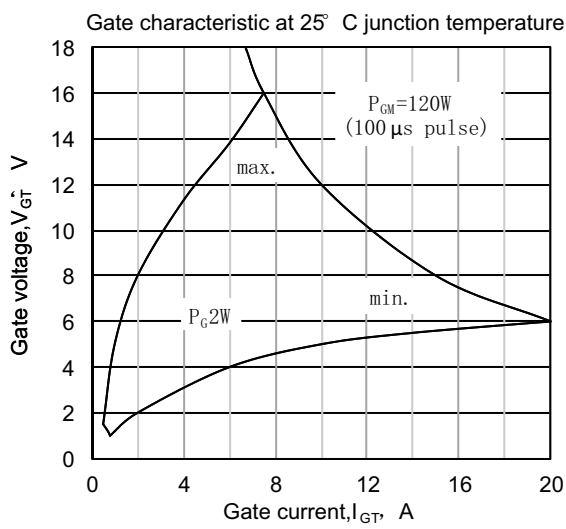


Fig9

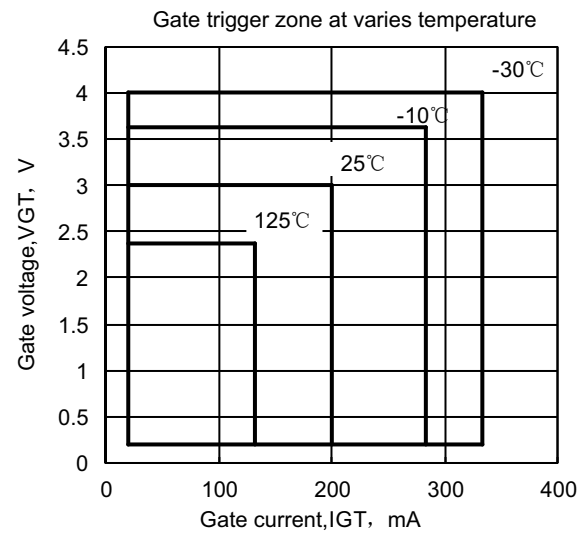


Fig10

## Outside Dimension

