



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

## 产品规格书

Specification of products

产品名称：可控硅模块

产品型号：MTC55A-T02

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

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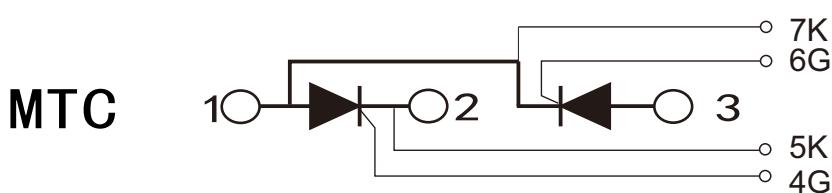
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拟制	审核	核准
林益龙	曹剑龙	宗瑞

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_J$ (°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_C=85^\circ\text{C}$	125			55	A
$I_{T(RMS)}$	RMS on-state current	Single side cooled, $T_C=85^\circ\text{C}$	125			86	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM}$ tp=10ms $V_{DsM} \& V_{RsM} = V_{DRM} \& V_{RRM} + 200\text{V}$ respectively	125	600		1800	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$	125			8	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			1.25	KA
$I^2t$	$I^2T$ for fusing coordination	$V_R=60\%V_{RRM}$				7.90 $\text{A}^2\text{s} * 10^3$	
$V_{TO}$	Threshold voltage		125			0.85	V
$r_T$	On-state slop resistance					3.47	$\text{m}\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=165\text{A}$	125			1.40	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			500	$\text{V}/\mu\text{s}$
$di/dt$	Critical rate of rise of on-state current	From 67% $V_{DRM}$ to 165A, Gate source 1.5A $t_r \leq 0.5 \mu\text{s}$ Repetitive	125			50	$\text{A}/\mu\text{s}$
$I_{GT}$	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25	30		80	mA
$V_{GT}$	Gate trigger voltage			0.7		1.5	V
$I_H$	Holding current			20		100	mA
$V_{GD}$	Non-trigger gate voltage	At 67% $V_{DRM}$	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to heatsink	At 180° sine Single side cooled				0.530	$^\circ\text{C}/\text{W}$
$V_{iso}$	Isolation voltage	50Hz, RM. S, t=1min, $I_{iso} : 1\text{mA MAX}$		2500			V
$F_m$	Thermal connection torque( M5)				4.0		5.0 N.m
	Mounting torque( M6)				5.0		6.0 N.m
$T_{stg}$	Stored temperature			-40		140	$^\circ\text{C}$
$W_t$	Weight				154		g
Outline							

## OUTLINE DRAWING & CIRCUIT DIAGRAM



## Rating and Characteristic

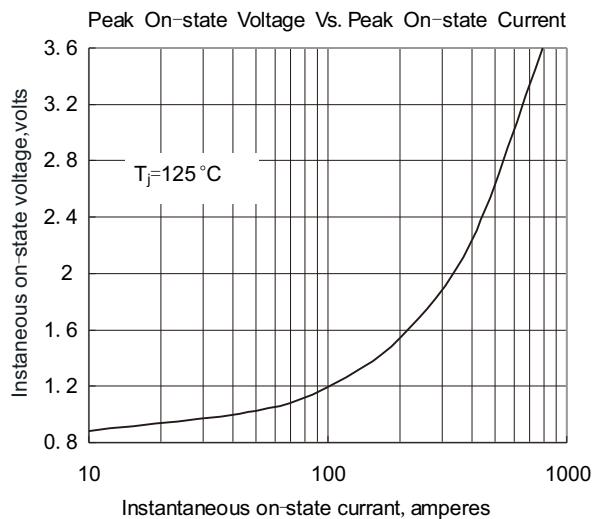


Fig.1

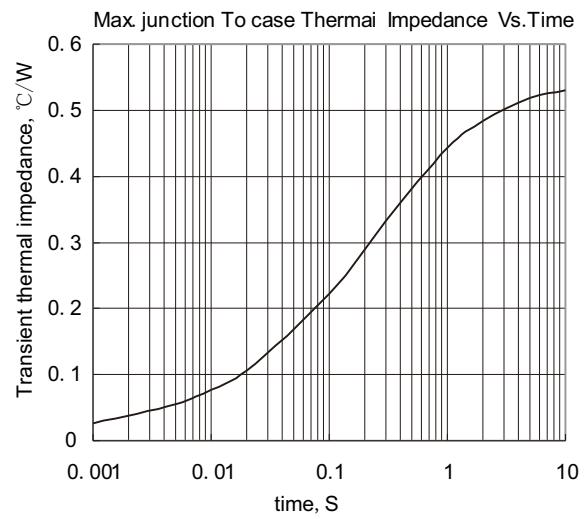


Fig. 2

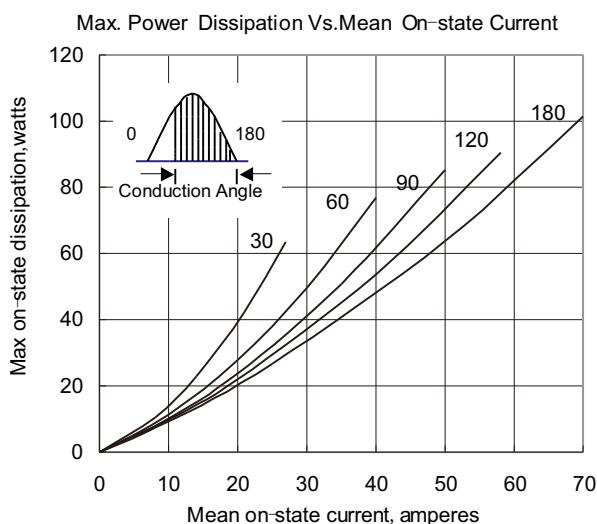


Fig.3

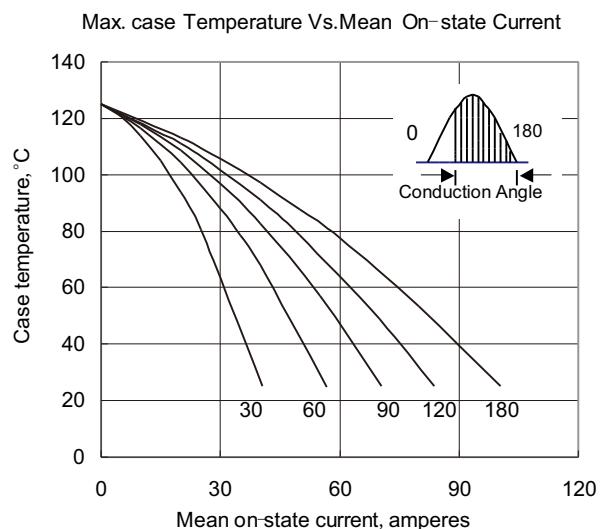


Fig.4

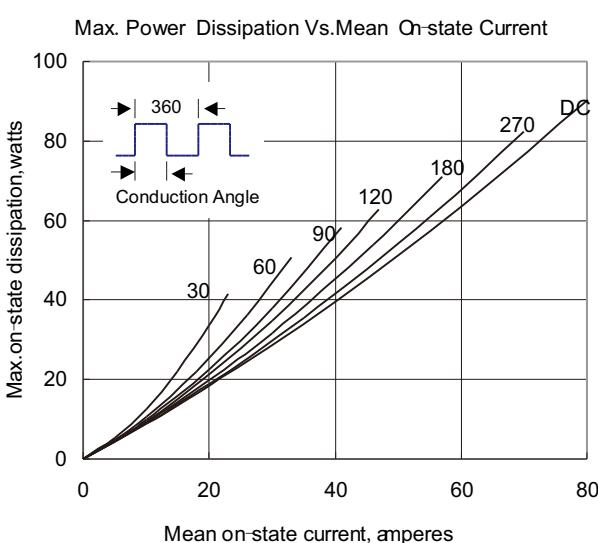


Fig.5

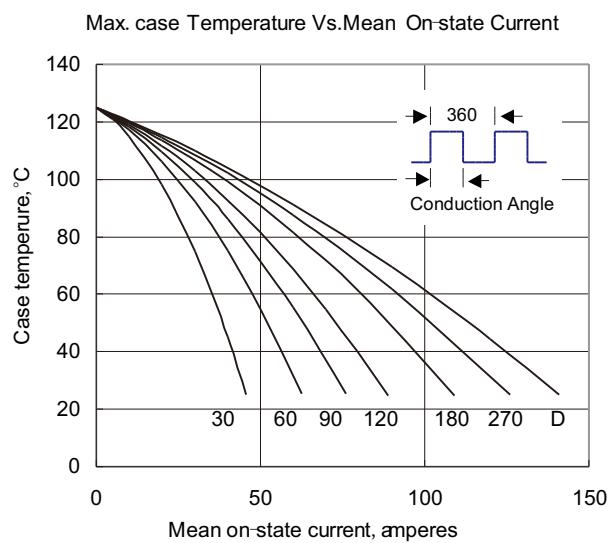


Fig.6

## Rating and Characteristic

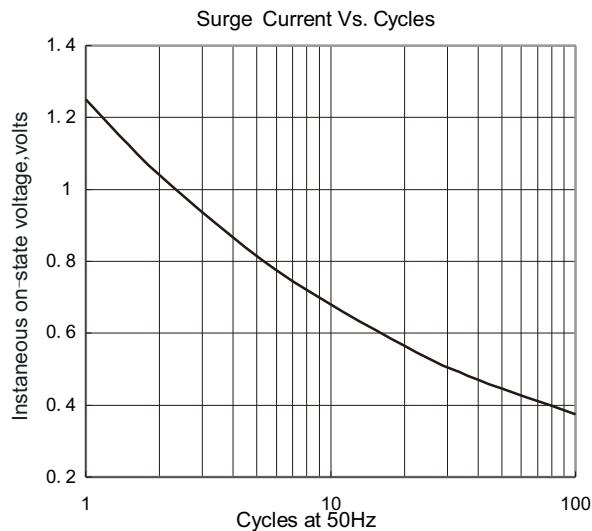


Fig. 7

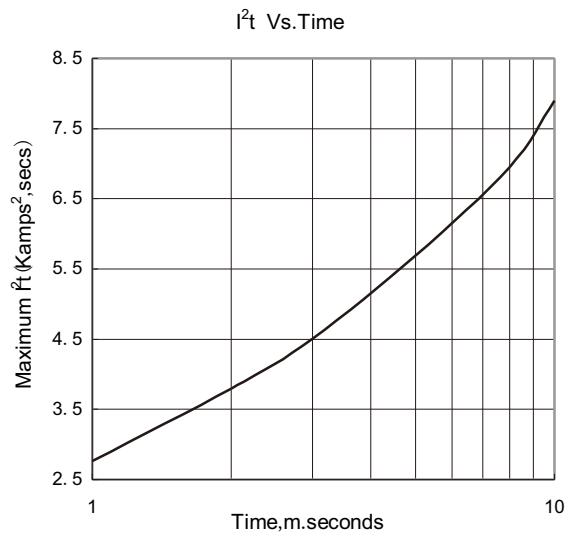


Fig. 8

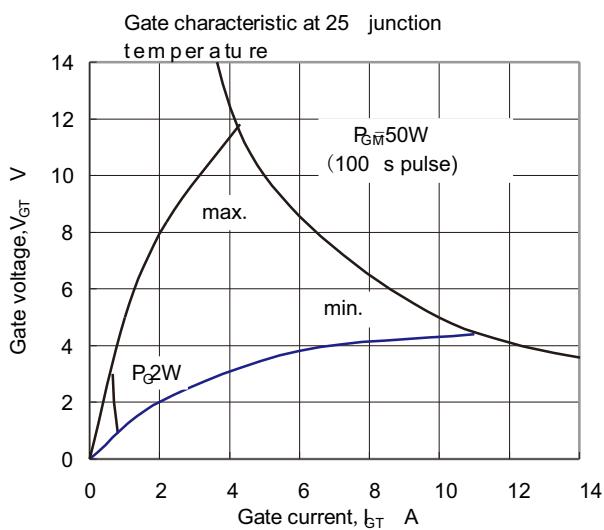


Fig. 9

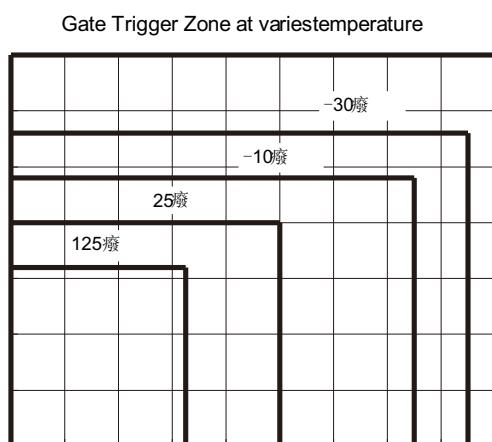


Fig. 10

## Outside Dimension

