



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：MTG50A-T20

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

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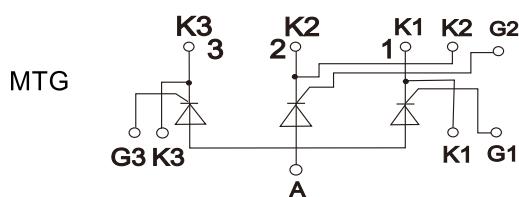
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拟制	审核	核准
林益龙	曹剑龙	宗瑞

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, $T_c=90^\circ C$	125			50	A
$I_{T(RMS)}$	RMS on-state current	Single side cooled, $T_c=90^\circ C$	125			79	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM}$ tp=10ms $V_{DsM} \& V_{RsM} = V_{DRM} \& V_{RRM} + 200V$ respectively	125	800		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 $V_R=60\%V_{RRM}$	125			1.60	KA
$I^2t$	$I^2T$ for fusing coordination					13.0	$A^2s * 10^3$
$V_{TO}$	Threshold voltage		125			0.80	V
$r_T$	On-state slop resistance					5.41	$m\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=150A$	125			1.4	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	V/ $\mu$ s
$di/dt$	Critical rate of rise of on-state current	From 67% $V_{DRM}$ to 150A, Gate source 1.5A $t \leq 0.5\mu s$ Repetitive	125			100	A/ $\mu$ s
$I_{GT}$	Gate trigger current	$V_A=12V, I_A=1A$	25	30		100	mA
$V_{GT}$	Gate trigger voltage			0.8		2.0	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	Single side cooled				0.480	$^\circ C / W$
$F_m$	Thermal connection torque(M5)				4.0		N.m
	Mounting torque(M6)				5.0		N.m
$T_{stg}$	Stored temperature			-40		140	$^\circ C$
$W_t$	Weight				150		g
Outline							

#### OUTLINE DRAWING & CIRCUIT DIAGRAM



## Rating and Characteristic

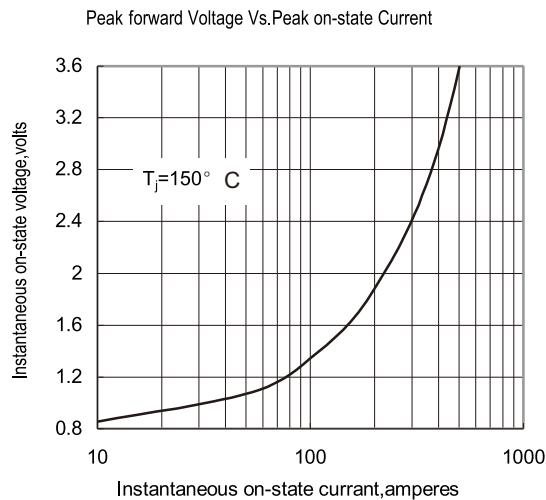


Fig.1

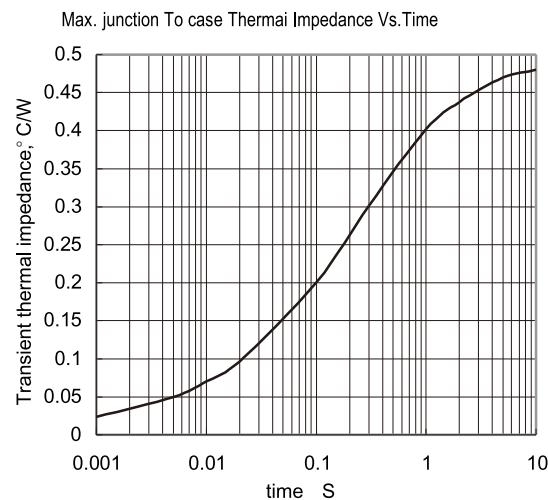


Fig.2

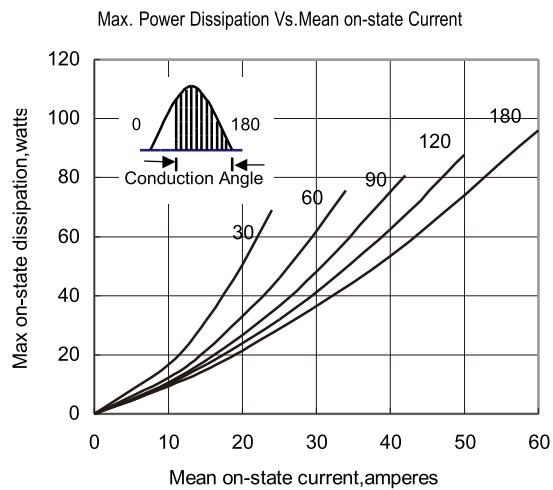


Fig.3

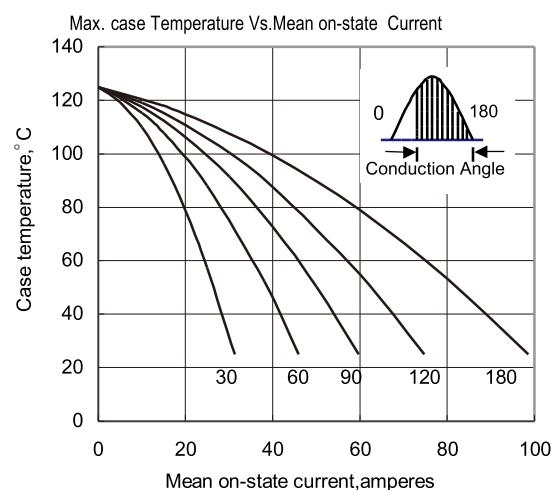


Fig.4

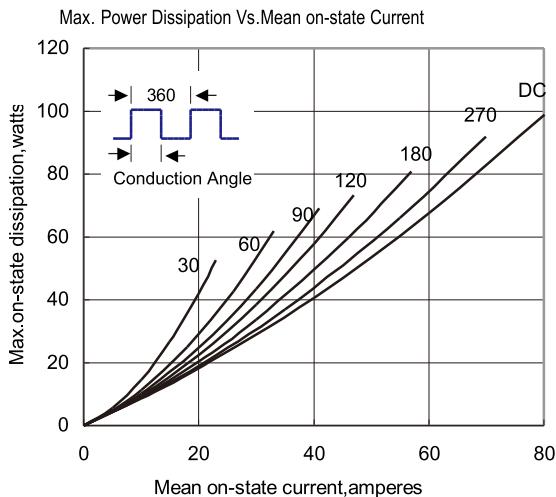


Fig.5

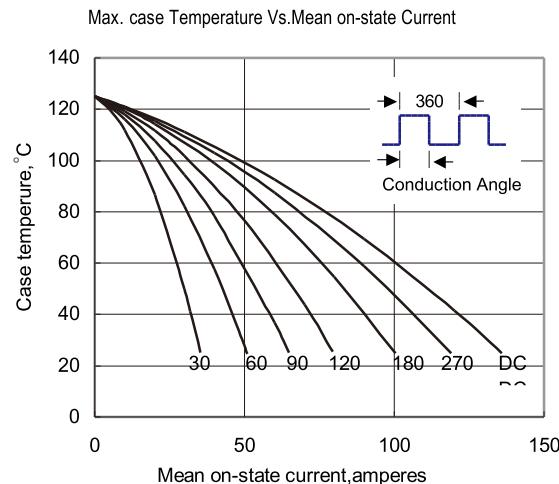


Fig.6

## Outside Dimension

3-M5

