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

产品规格书

Specifcation of products

产品名称:单项可控桥式模块

产品型号:MFQ100A-T12

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

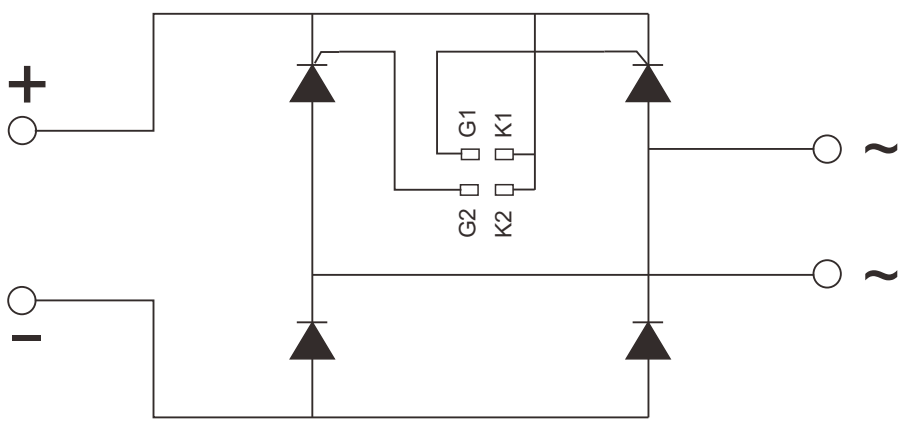
地址:浙江省 丽水市 莲都区
电话:(0578)3012571 3615078
传真:(0578)3611180
邮编: 323000
E-mail:smrshiling01@163.com
Http//www.smrshiling.com

拟制	审核	核准
林益龙	曹剑龙	宗瑞

版本号:05 更新日期:2023.8

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j (℃)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, T_C=85°C	125			100	A
$I_{T(RMS)}$	RMS on-state current	Single side cooled, T_C=85°C	125			157	A
V_{DRM} V_{RRM}	Repetitive peak o ff-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		2000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			5	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2. 10	KA
I^2t	I^2T for fusing coordination					12. 20	A^2s*10^3
V_{TO}	Threshold voltage		125			0. 85	V
r_T	On-state slop resistance					5. 57	mΩ
V_{FM}	Peak forward voltage	I_{FM}=100A	25			1.10	V
V_{TM}	Peak on-state voltage	I_{TM}= 100A	25			1.40	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			700	V/μs
di/dt	Critical rate of rise of on-state current	From 67%V_{DRM} to 120A, Gate source 1.5A t_r ≤0. 5 μs Repetitive	125			100	A/ μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		80	mA
V_{GT}	Gate trigger voltage			0.7		1. 5	V
I_H	Holding current			20		100	mA
$R_{th(j-c)}$	Junction to heatsink	Single side cooled				0. 75	°C /W
V_{iso}	Isolation voltage	50Hz, RM. S, t=1min, I_{iso}: 1mA (max)		2500			V
F_m	Terminal connection torque (M5)					4.0	N.m
	Mounting torque(M6)					5.0	N.m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g
Outline							

OUTLINE DR AWING & CIRCUIT DIAGRA M



Rating and Characteristic

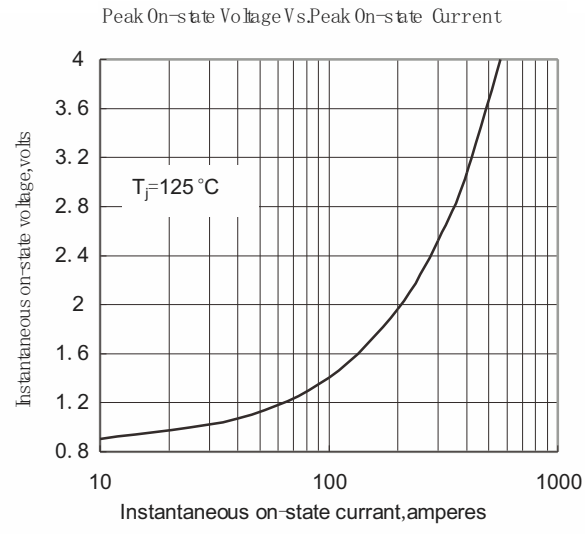


Fig. 1

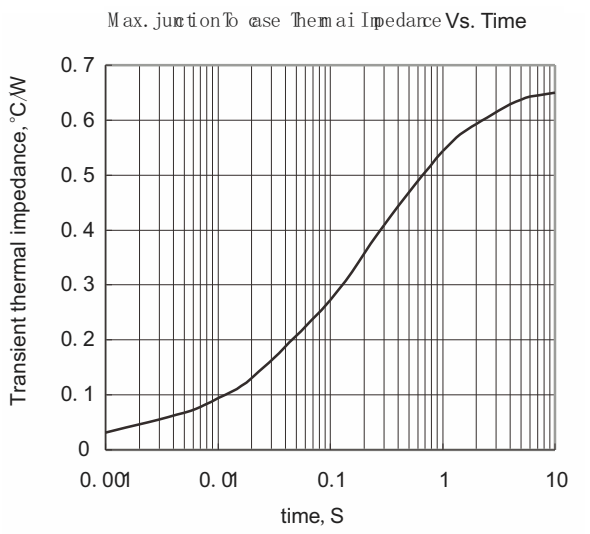


Fig. 2

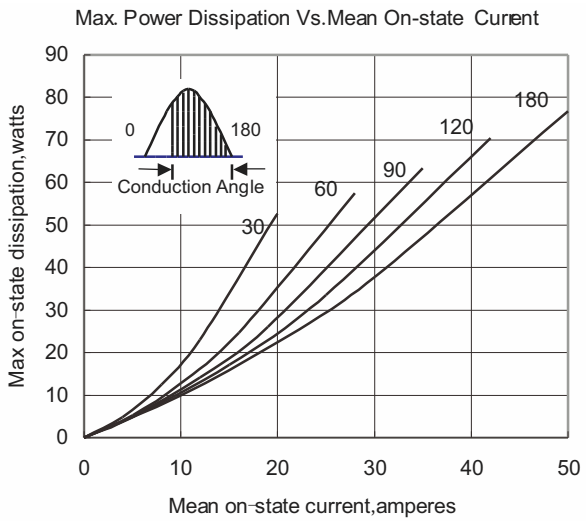


Fig. 3

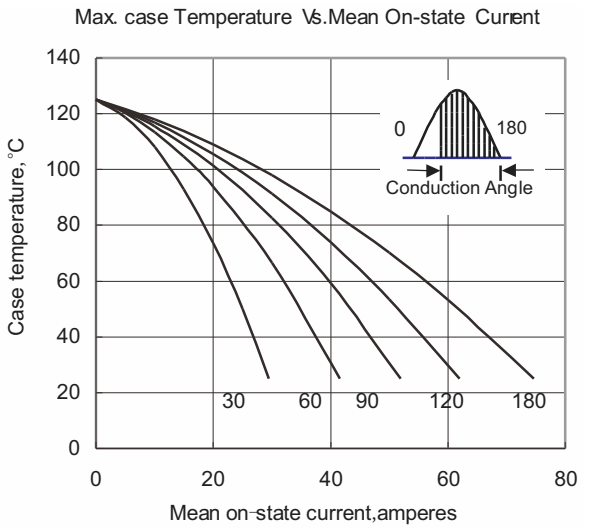


Fig. 4

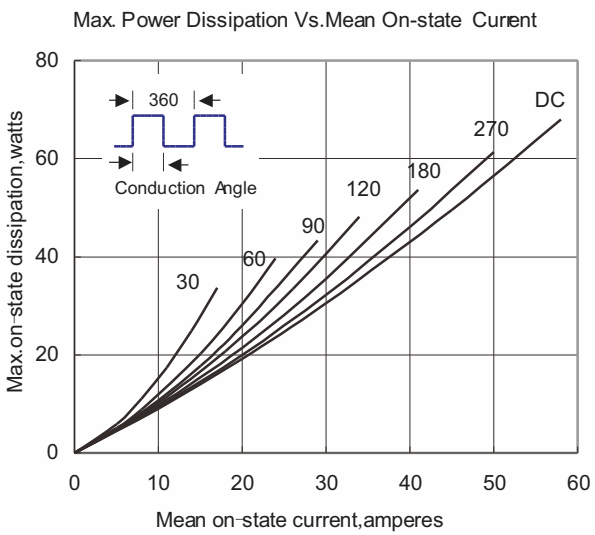


Fig. 5

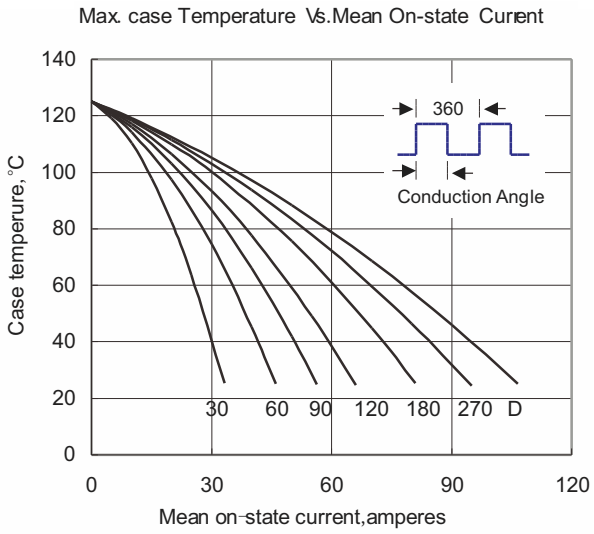


Fig. 6

Rating and Characteristic

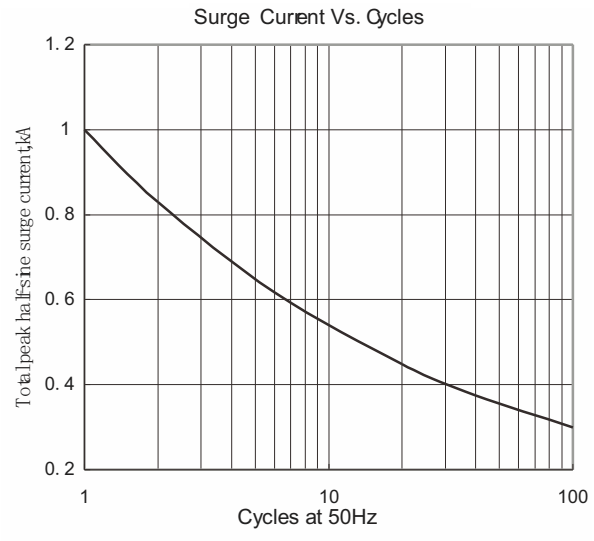


Fig. 7

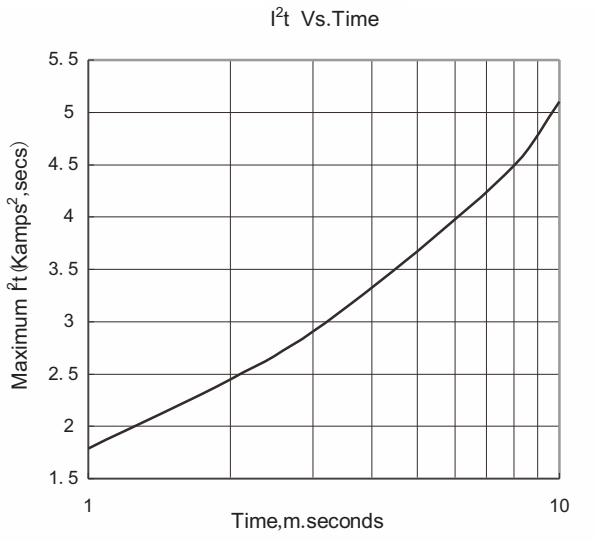


Fig. 8

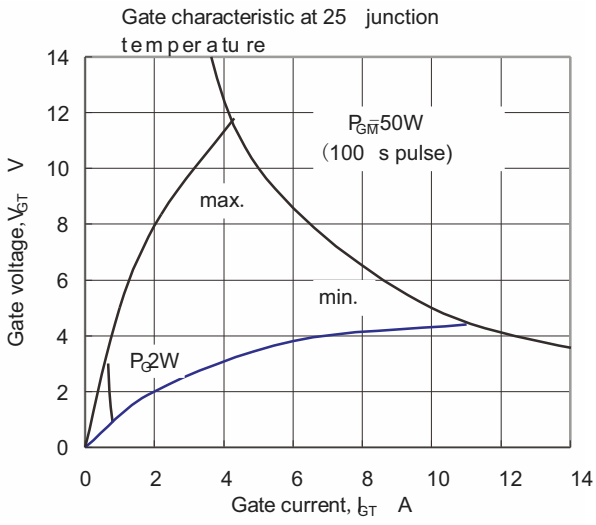


Fig. 9

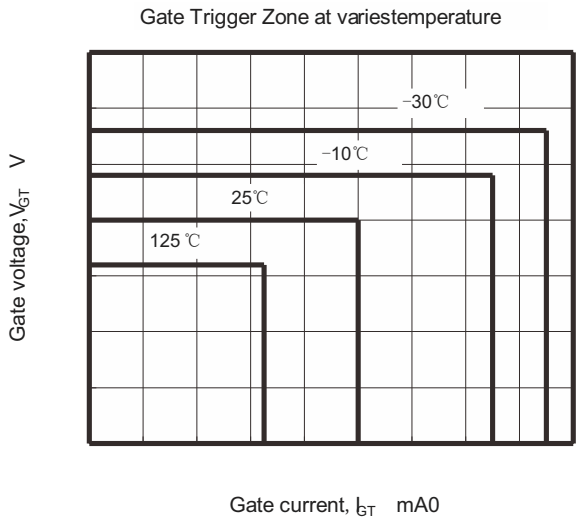


Fig. 10

Outside Dimension