



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

MCR100-4/-6/-8

## SOT-23-3L SCR 可控硅

### ■ Features 特点

PNPN Silicon Controllable rectifier 硅可控整流器

Sensitive Gate Trigger 灵敏的门极触发

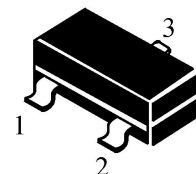
Glass passivated Process 玻璃钝化工艺

SOT-23-3L

1. Cathod(K)

2. Gate (G)

3. Anode (A)



### ■ Applications 应用

General Purpose Switching 通用开关

Solid State Relay 固态继电器

Phase Control 相位控制

### ■ Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Value 额定值	Unit 单位
Peak Repetitive Off-State Voltage (T <sub>J</sub> =-40°C to 110°C, Sine Wave, 50 to 60 Hz, Gate Open) 峰值可重复断态耐压	V <sub>DRM</sub> , V <sub>RRM</sub>	MCR100-4 200 MCR100-6 400 MCR100-8 600	V
On-State RMS Current 通态均方根电流	I <sub>T(RMS)</sub>	0.8	A
On-State Average Current 通态平均电流	I <sub>T(AV)</sub>	0.5	A
Peak Non-Repetitive Surge Current @25°C 峰值不可重复浪涌电流	I <sub>TSM</sub>	9	A
Circuit Fusing Considerations(t=10ms) 电路保险指数	I <sup>2</sup> t	0.35	A <sup>2</sup> s
Peak Gate Current-Forward (Pulse Width ≤ 1 us) 正向门极峰值电流	I <sub>GM</sub>	1	A
Peak Gate Voltage-Reverse (Pulse Width ≤ 1 μs) 反向门极峰值电压	V <sub>GRM</sub>	5	V
Forward Peak Gate Power (Pulse Width ≤ 1 μs) 正向门极峰值功率	P <sub>GM</sub>	0.1	W
Forward Average Gate Power (t=8.3ms) 正向门极平均功率	P <sub>G(AV)</sub>	0.1	W
Operating Junction/Storage Temperature 结温和储存温度	T <sub>stg</sub>	-40~125	°C



## ■ Electrical Characteristics 电特性

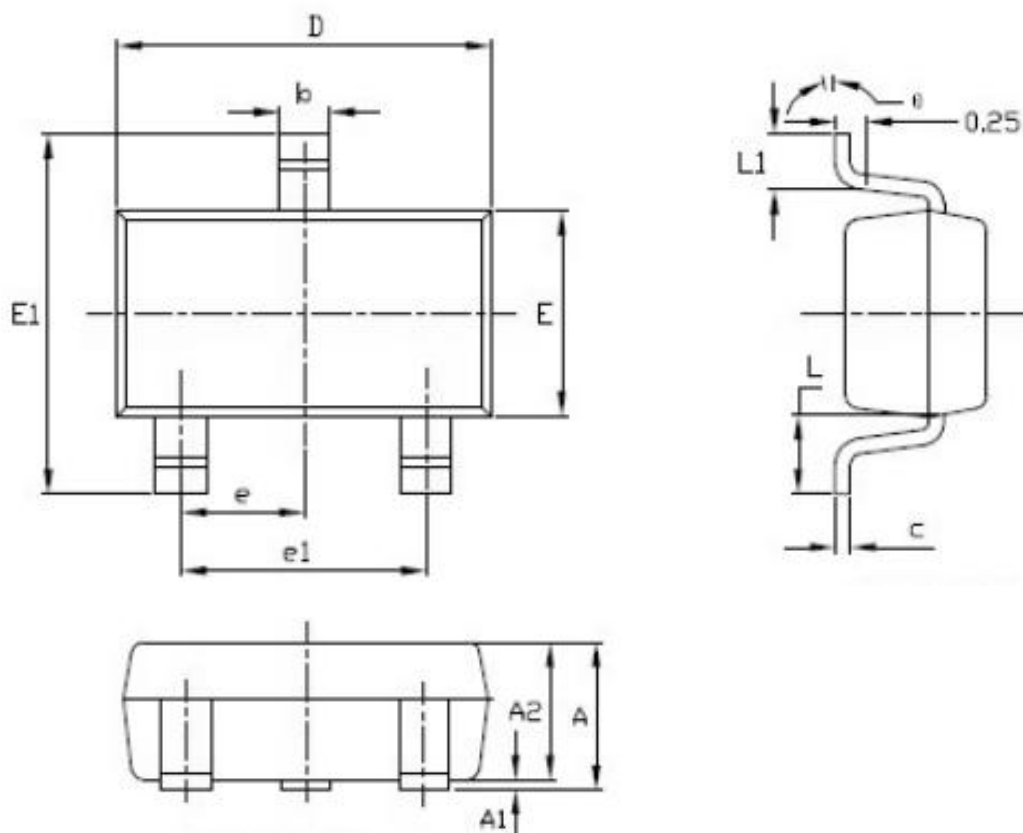
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

Characteristic Parameters 特性参数	Symbol 符号	Min 最小值	Max 最大值	Unit 单位	Condition 条件
Peak Forward Blocking Current 峰值正向漏电流	$I_{DRM}$	$T_c=25^{\circ}\text{C}$ $T_c=110^{\circ}\text{C}$	5 100	$\mu\text{A}$	$V_D=V_{DRM}$
Peak Reverse Blocking Current 峰值反向漏电流	$I_{RRM}$	$T_c=25^{\circ}\text{C}$ $T_c=110^{\circ}\text{C}$	5 100	$\mu\text{A}$	$V_R=V_{RRM}$
Peak Forward On-State Voltage 峰值正向通态电压	$V_{TM}$		1.6	V	$I_{TM}=1\text{A}$
Gate Trigger Current 触发电流	$I_{GT}$		200	$\mu\text{A}$	$V_{AK}=7\text{V}$
Gate Trigger Voltage 触发电压	$V_{GT}$		0.8	V	$I_{TM}=0.8\text{A}$
Holding Current 维持电流	$I_H$		3	mA	$I_T=50\text{mA}$
Latch Current 擎住电流	$I_L$		5	mA	$I_G=1.2I_{GT}$
Off-state Voltage Change 断态电压临界上升率	dv/dt	10		V/ $\mu\text{S}$	$V_D=2/3V_{DRM}$
Gate Nun Trigger Voltage 门极不触发电压	$V_{GD}$	0.1		V	$V_D=V_{DRM}$

## ■ Device Marking 产品打标

Type	MCR100-4	MCR100-6	MCR100-8
Mark	100-4	100-6	100-8

## Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.600REF		0.024REF	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°