



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 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

■ Applications 应用

General Purpose Switching 通用开关

Solid State Relay 固态继电器

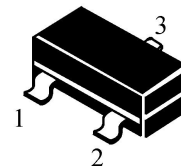
Phase Control 相位控制

SOT-23

1. Cathod (K)

2. Gate (G)

3. Anode (A)



■ 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 ($T_J = -40^\circ\text{C}$ to 110°C , Sine Wave, 50 to 60 Hz, Gate Open) 峰值可重复断态耐压	$V_{\text{DRM}}, V_{\text{RRM}}$	MCR100-4 200 MCR100-6 400 MCR100-8 600	V
On-State RMS Current 通态均方根电流	$I_{\text{T(RMS)}}$	0.8	A
On-State Average Current 通态平均电流	$I_{\text{T(AV)}}$	0.5	A
Peak Non-Repetitive Surge Current @25°C 峰值不可重复浪涌电流	I_{TSM}	8	A
Circuit Fusing Considerations (t=10ms) 电路保险指数	I^2t	0.35	A ² s
Peak Gate Current-Forward (Pulse Width ≤ 1 us) 正向门极峰值电流	I_{GM}	1	A
Peak Gate Voltage-Reverse (Pulse Width ≤ 1 μs) 反向门极峰值电压	V_{GRM}	5	V
Forward Peak Gate Power (Pulse Width ≤ 1 μs) 正向门极峰值功率	P_{GM}	0.1	W
Forward Average Gate Power (t=8.3ms) 正向门极平均功率	$P_{\text{G(AV)}}$	0.1	W
Operating Junction/Storage Temperature 结温和储存温度	T_{stg}	-40~125	°C



■ Electrical Characteristics 电特性

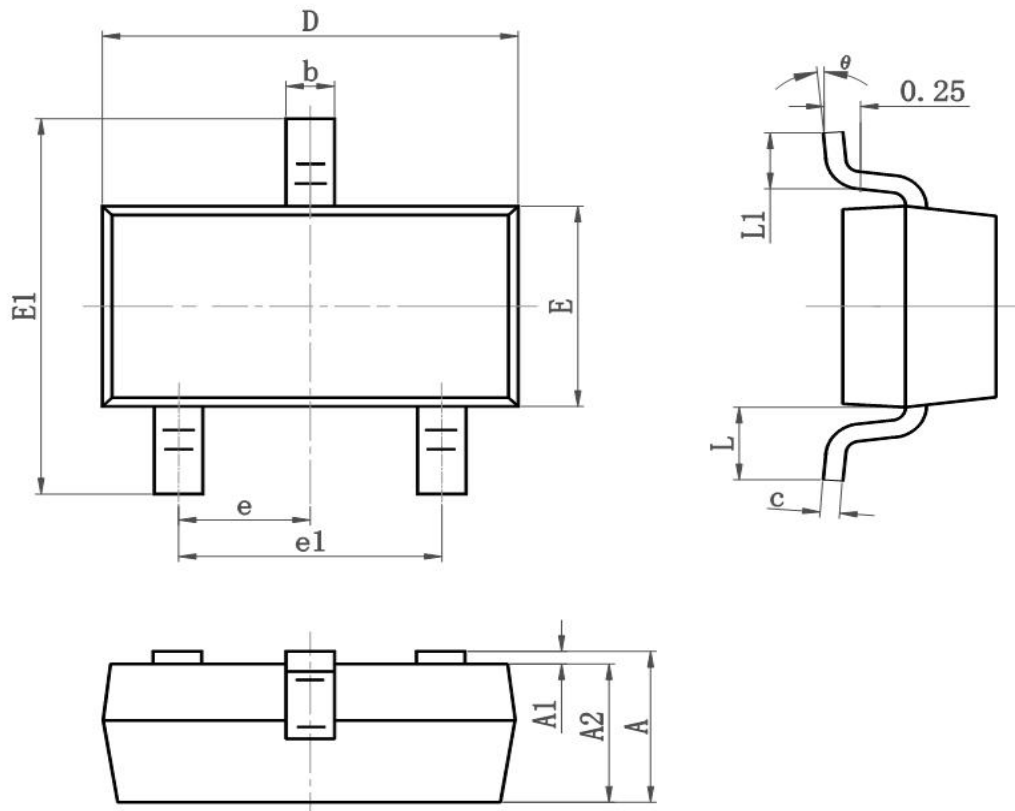
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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	μA	$V_D=V_{DRM}$
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	μA	$V_R=V_{RRM}$
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	μA	$V_{AK}=7\text{V}$
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/ μS	$V_D=2/3V_{DRM}$
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	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°