



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

FS4915MR

SOT-23-3L High Sensitivity Hall Switch 高灵敏度霍尔开关

■Features 特点

2.0V — 5.5V Battery Application 电池应用

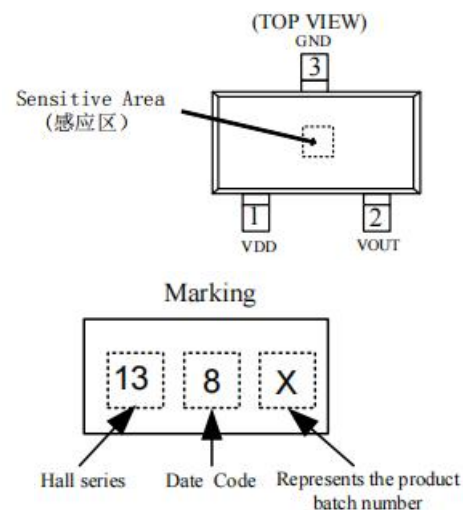
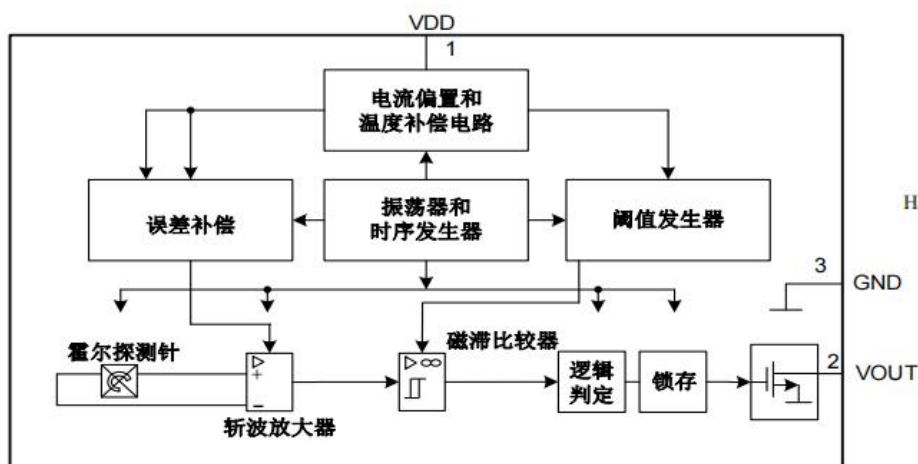
High Sensitivity High Reliability of Magnetic Switching

磁开关点的高灵敏度 高稳定性

Suit for Tamper Protection Switch

用于接近开关

■Internal Schematic Diagram 内部结构



■Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rating 额定值	Unit 单位
Operating voltage 工作电压	V_{DD}	2~6	V
Operating Current 工作电流	I_{DD}	-1~4.5	mA
Output voltage 输出电压	V_{OUT}	-0.3~6	V
Output Current 输出电流	I_{OUT}	-1~2	mA
ESD 参数		4000	V
Junction Temperature 结温	T_J	150	°C
Storage Temperature 储存温度	T_{stg}	-45~+150	°C



■Electrical Characteristics 电特性

(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

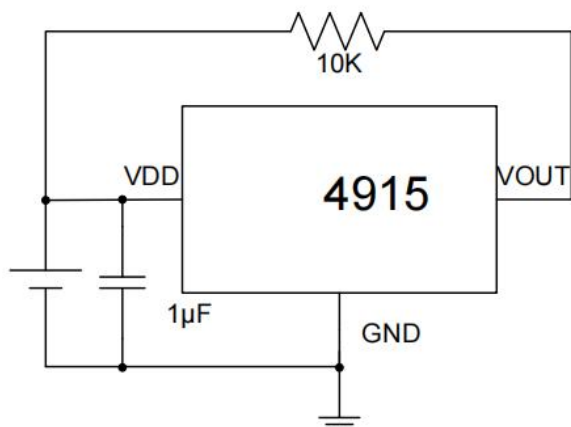
Characteristic(Test Condition) 特性参数(测试条件)	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Supply Voltage 供电电压(V _{DD} =3V)	V _{DD}	2.0	—	5.5	V
Average Supply Current 平均供电电流(V _{DD} =3V)	I _{SAVG}	1	3	10	μA
Operating Average Current 工作平均电流(V _{DD} =3V)	I _{SOPAVG}	0.5	2.0	3.5	mA
Operating Peak Current 工作峰值电流(V _{DD} =3V)	I _{SOPT}	—	—	4.5	mA
Standby Average Current 断态平均电流(V _{DD} =3V)	I _{SSTB}	1	1.9	8	μA
Output Saturation Voltage 输出饱和电压(I _{OUT} =1mA)	V _{OSAT}	—	0.13	0.4	V
Output Leakage Current 输出漏电流(V _{DD} =3V)	I _{OLEAK}	—	0.01	1	μA
Rise Time 输出上升沿时间(R _L =2.7KΩ, C _L =10pF)	t _r	—	0.5	1	μS
Fall Time 输出下降沿时间(R _L =2.7KΩ, C _L =10pF)	t _f	—	0.1	1	μS
Operating Time 工作时间	t _{op}	25	100	160	μS
Standby Time 断态工作时间	t _{stb}	60	140	240	mS
Duty Cycle 占空比	t _{op} /t _{stb}	—	0.071	—	%
Awake Time 芯片启动时间	t _{stu}	—	12	20	μS

■Magnetic Characteristics 磁特性

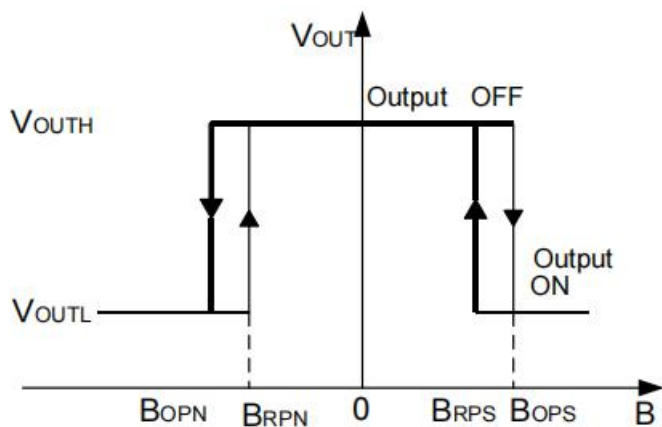
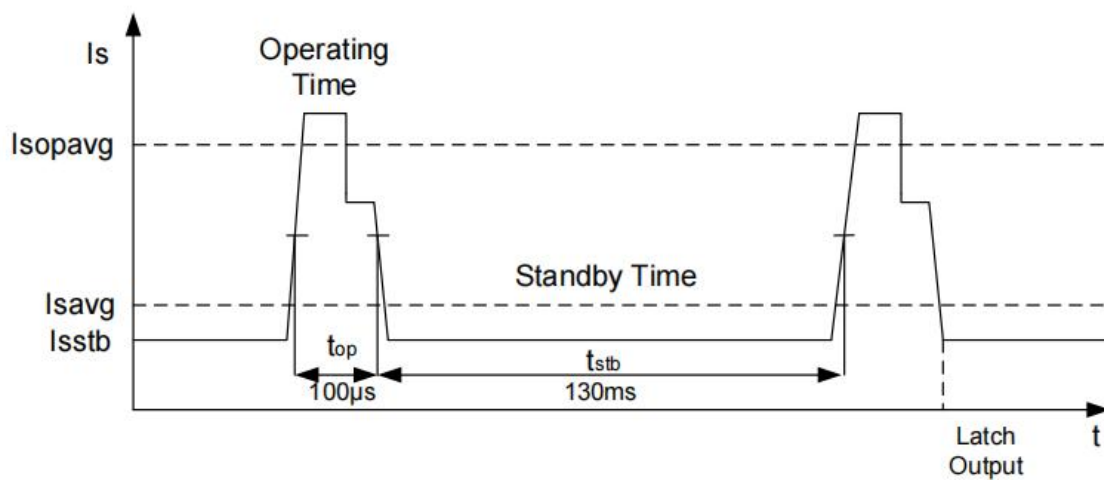
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
South pole to part marking side(Operation Point) 南极对字标面(工作点)	B _{OPS}	1	1.5	2	mT
North pole to part marking side(Operation Point) 北极对字标面(工作点)	B _{OPN}	-2	-1.5	-1	mT
South pole to part marking side(Release Point) 南极对字标面(释放点)	B _{RPS}	0.8	1.1	1.5	mT
North pole to part marking side(Release Point) 北极对字标面(释放点)	B _{RPN}	-1.8	-1.1	-0.8	mT
Hysteresis 磁滞(B _{OPS} -B _{RPS})	B _{HYS}	0.1	0.4	0.7	mT

■ Application Circuit 应用电路

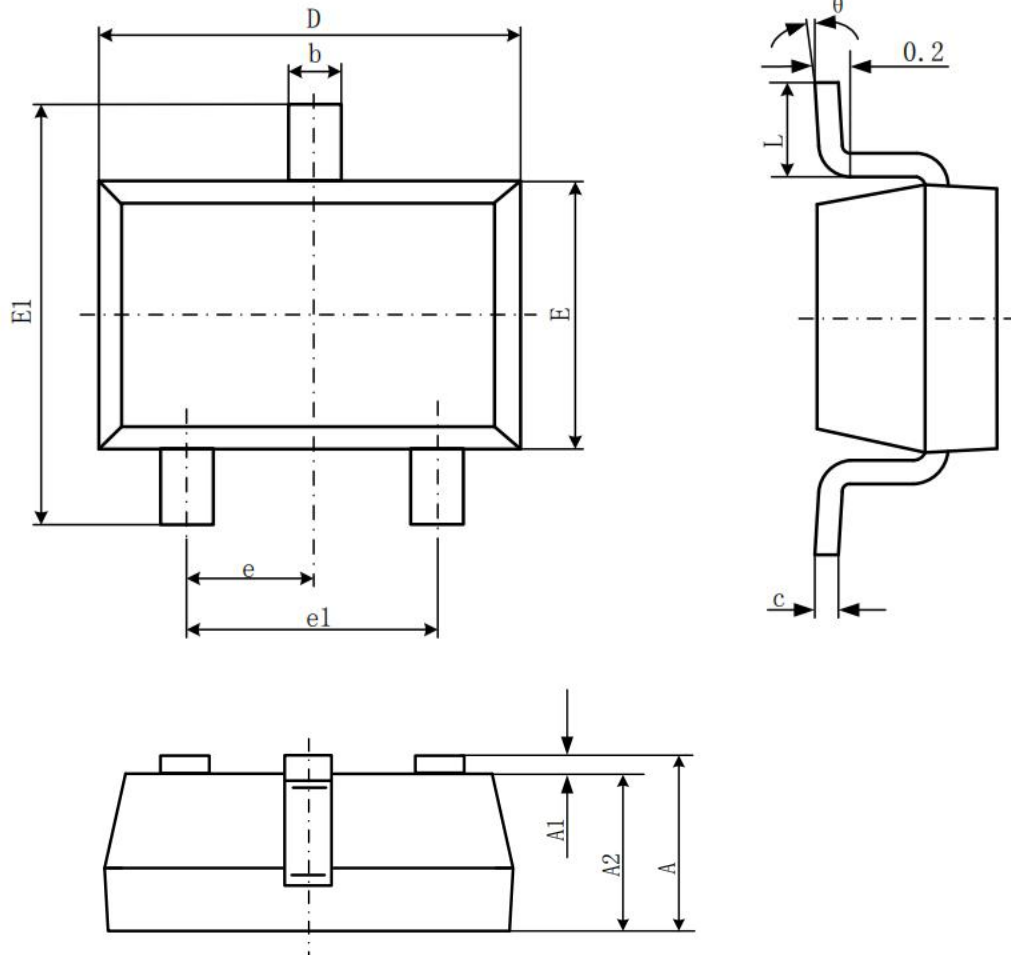


■ Typical Characteristic Curve 典型特性曲线



输出开关特性曲线

■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	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°