

BR1N4148WQ

Rev.A Mar.-2022

描述 / Descriptions

SOD-123 塑封封装 硅半导体二极管。
Silicon Diode in a SOD-123 Plastic Package.

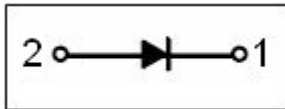
特征 / Features

开关速度快，符合 AEC-Q101 标准高可靠性要求，无卤产品。
Fast switching diodes, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

用于小信号处理，满足汽车应用的严格要求。
Small signal diode, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1:Cathode

PIN2:Anode

印章代码 / Marking

Marking	QA2
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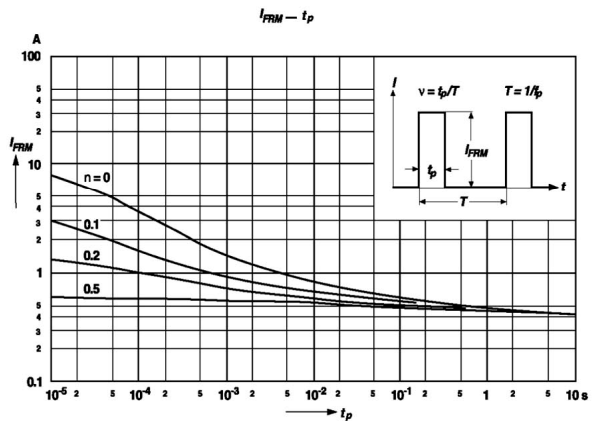
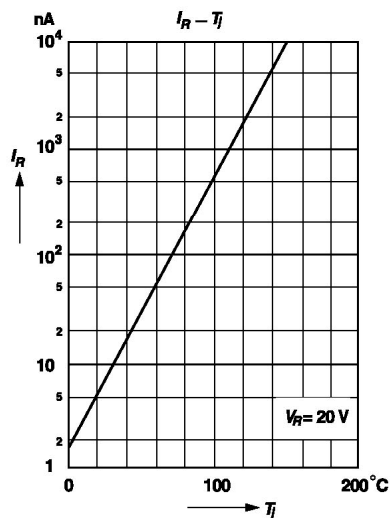
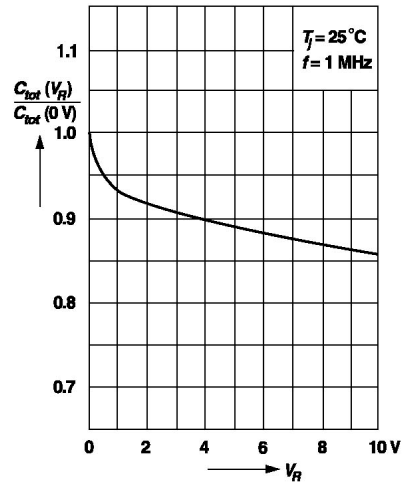
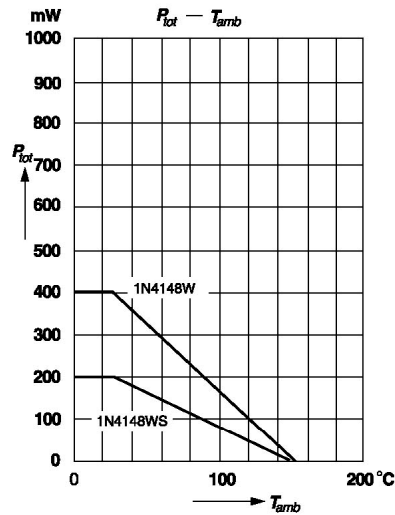
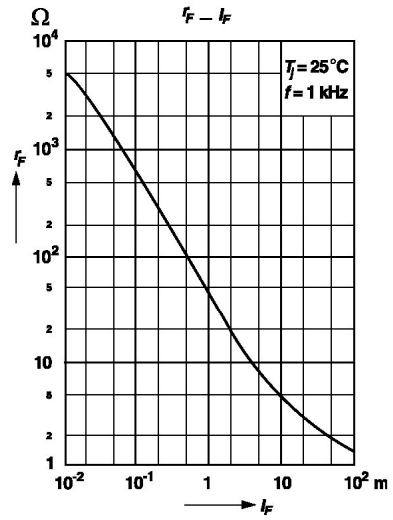
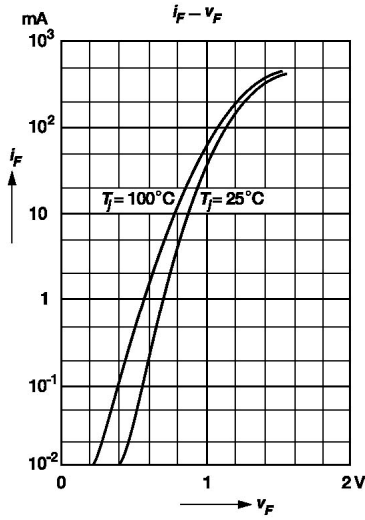
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Rectified Current (Average)	I_O	150	mA
Forward Continuous Current	I_{FM}	300	mA
Surge Forward Current	I_{FSM} (t=1.0μs)	2.0	A
	I_{FSM} (t=1.0s)	1.0	A
Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	450	°C/W

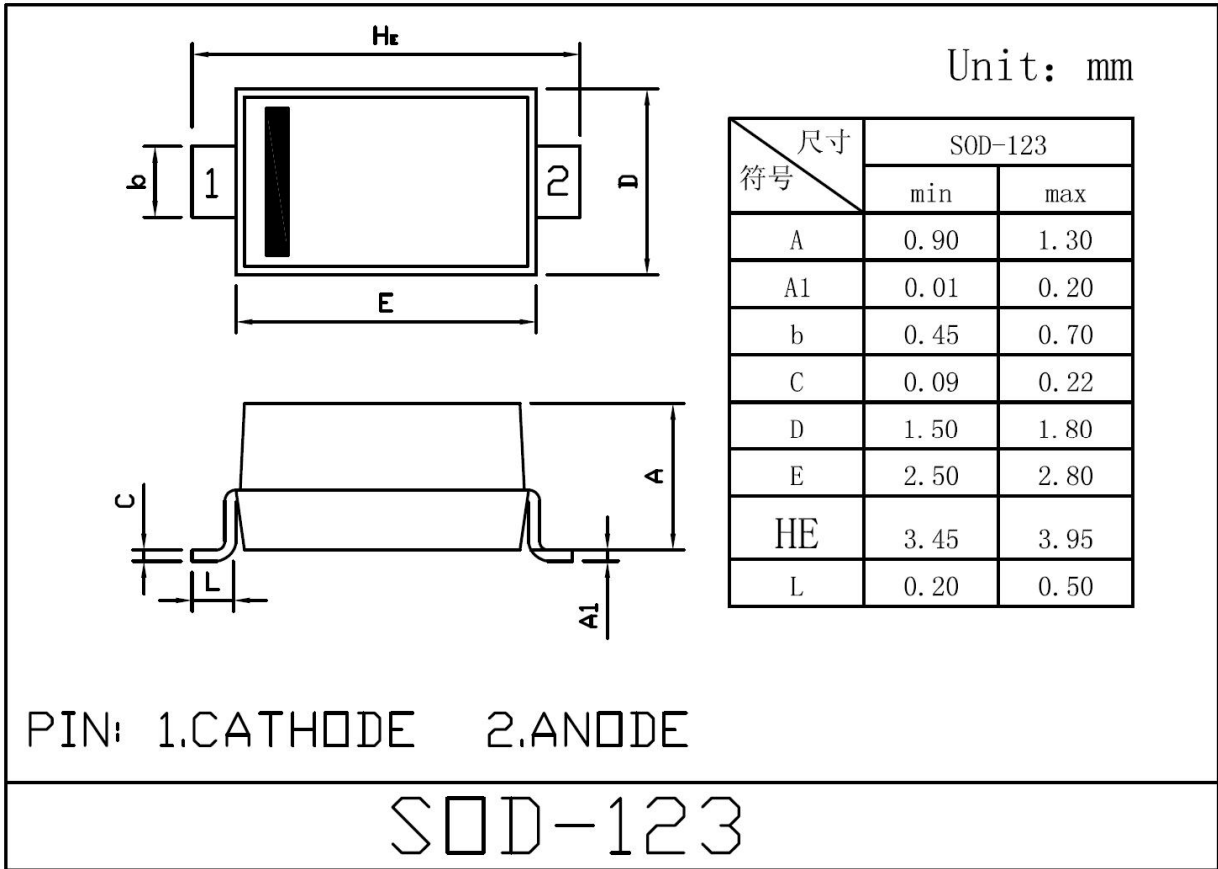
电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Forward Voltage	V_F	$I_F=10mA$			1.0	V
Instantaneous Reverse Current	I_R	$V_R=20V$			25	nA
		$V_R=75V$			5	μA
		$V_R=20V$ $T_j=150^\circ C$			50	μA
Capacitance	C_{tot}	$V_F=V_R=0V$			4	pF
Reverse Recovery Time	t_{rr}	$I_F=10mA$ $V_R=6.0V$ $I_R=1mA$ $R_L=100\Omega$			4	ns
Voltage Rise when Switching On tested	V_{fr}	$t_p=0.1\mu s$ $f_p=5to100kHz$ Time<30ns			2.5	V
Total Capacitance	C_T	$V_R=0$ $f=1.0MHz$			5.0	pF

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

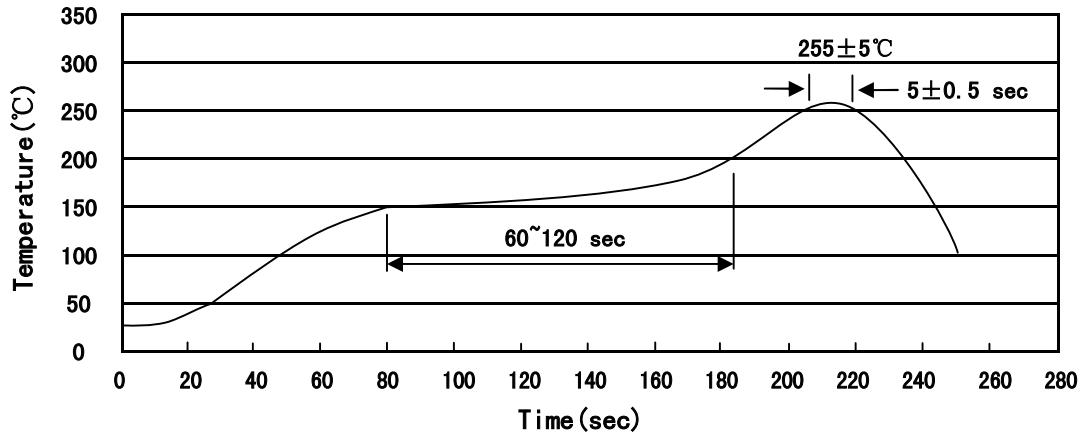
A2： 为型号代码

Note:

Q: Automobile halogen-free product Code

A2: Product Type

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150 ~ 200°C，时间 60 ~ 120sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOD-123	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices