

BRBAT46WSQ

Rev.A Jul.-2024

描述 / Descriptions

SOD-323 塑封封装 肖特基二极管。

Schottky Diode in a SOD-323 Plastic Package.

特征 / Features

高击穿电压，低正向压降，符合 AEC-Q101 标准高可靠性要求，无卤产品。

High Breakdown Voltage, Low Forward Voltage, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

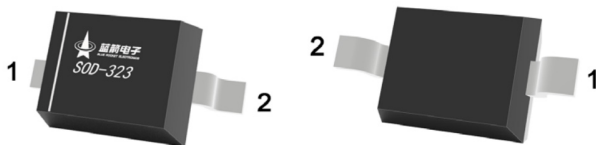
一般用途，满足汽车应用的严格要求。

General purpose, 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

Type	number
BRBAT46WSQ	QS9

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}	100	V
Continuous Forward Current	I_F	150	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0s$, Duty Cycle < 50%	I_{FRM}	350	mA
Non-reptitive Peak Forward Surge Current at 8.3ms	I_{FSM}	750	mA
Power Dissipation	P_D	200	mW
Thermal resistance junction to ambient air	R_{thJA}	500	°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	°C

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating	单位 Unit
Reverse Breakdown Voltage at $I_R=100\mu A$ (NOTE 2)	$V_{(BR)R}$	$I_R=100\mu A$	100	V
Maximum Forward Voltage (NOTE 2)	V_F	$I_F=0.1mA$	0.3	V
		$I_F=10mA$	0.45	
		$I_F=250mA$	1.0	
Peak Reverse Current	I_R	$V_R=1.5V$	0.3	μA
		$V_R=10V$	0.5	
		$V_R=50V$	1	
		$V_R=75V$	2	
Diodes Capacitance	C_T	$V_R=0, f=1MHZ$	20	pF
		$V_R=1V, f=1MHZ$	12	

NOTES:

- (1) Part mounted on FR-4 board with recommended pad layout.
 (2) Short duration pulse test used to minimize self-heating effect.

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Power Derating Curve

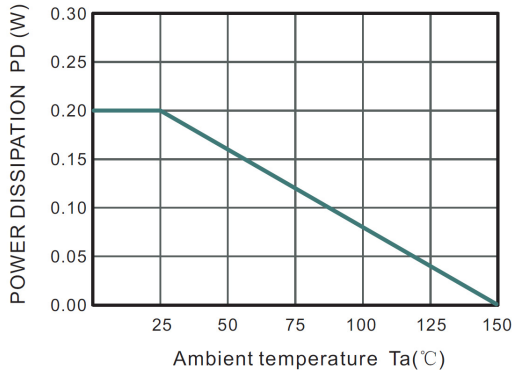


Fig.2 Typical Reverse Characteristics

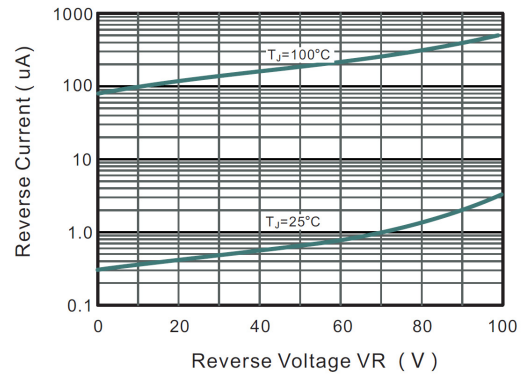


Fig.3 TYPICAL FORWARD VOLTAGE

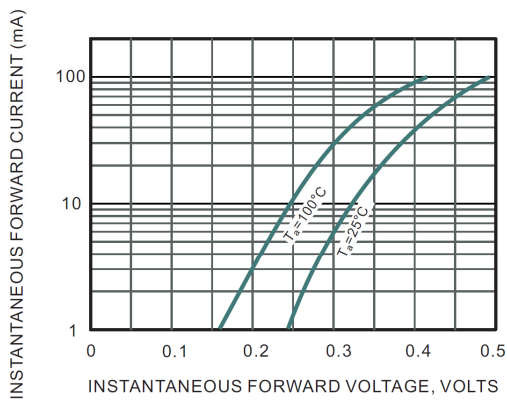
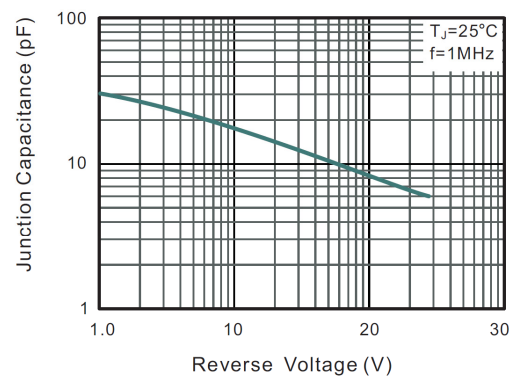
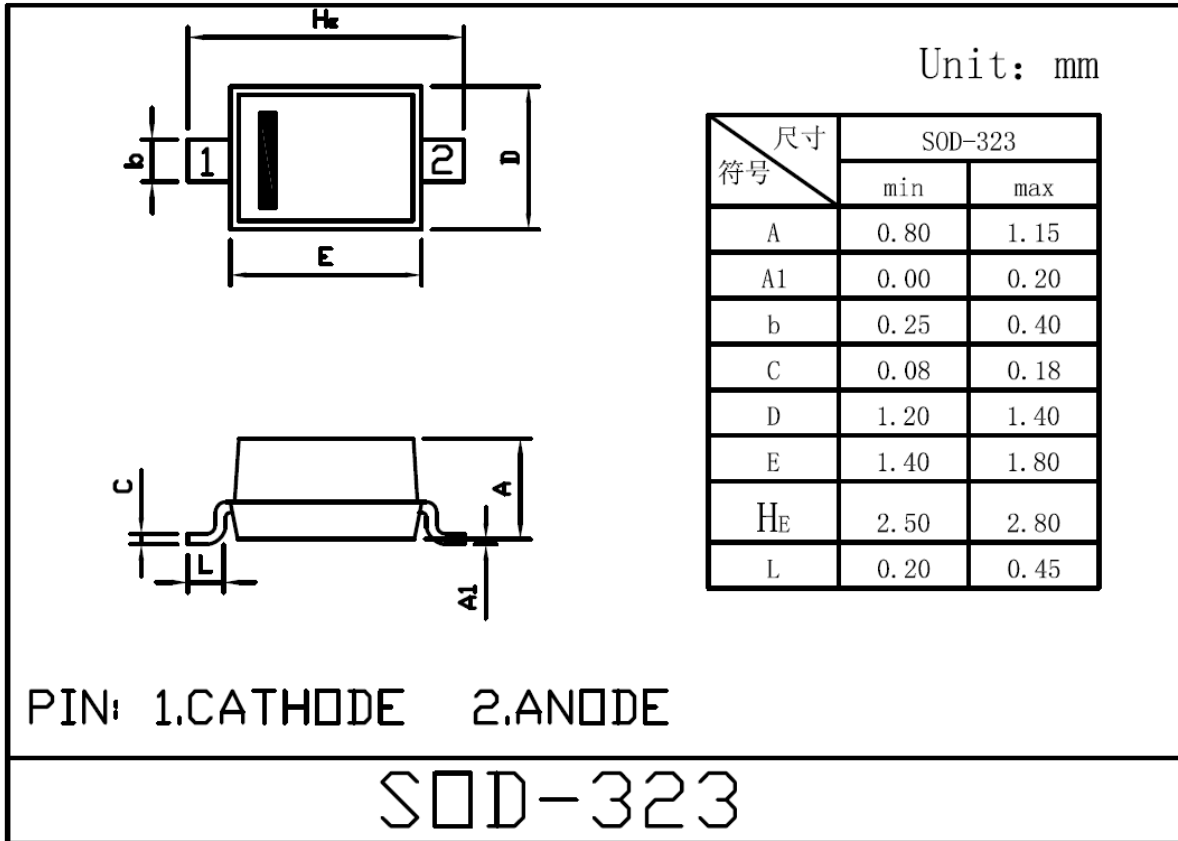


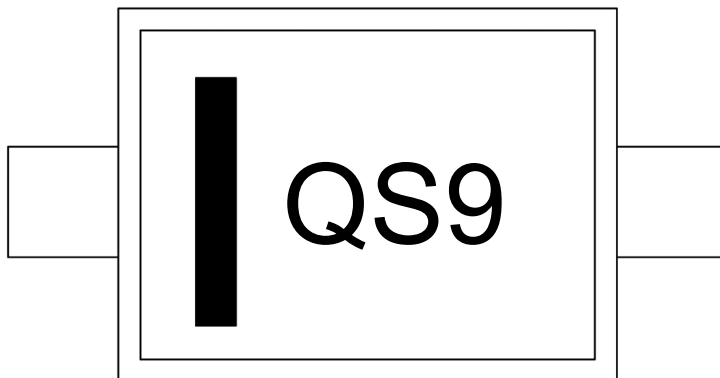
Fig.4 Typical Junction Capacitance



外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

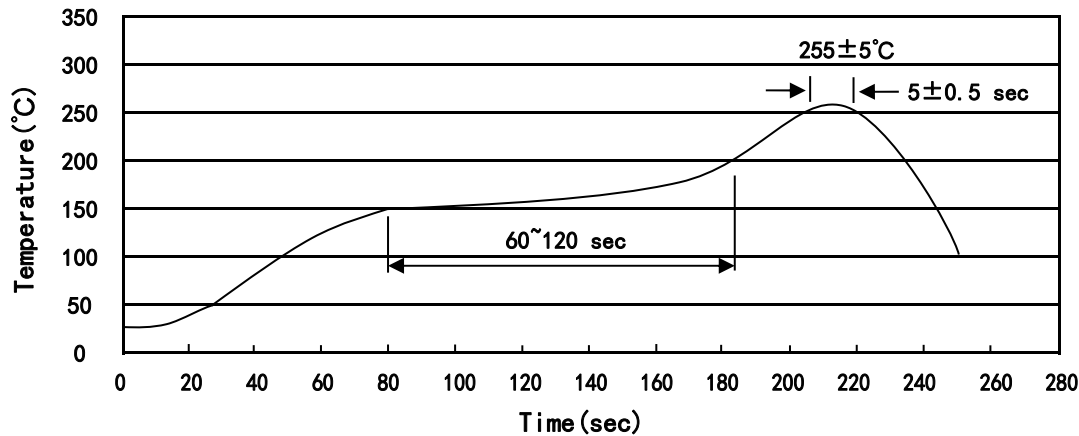
Q： 为汽车无卤产品标识

S9： 为型号代码

Note:

Q: Automobile halogen-free product Code

S9: Product Type Code

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-323	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices