BRRB551VQ-30

Rev.A Jun.-2025

蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

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

低正向压降，快速切换时间，符合AEC-Q101标准高可靠性要求，无卤产品。

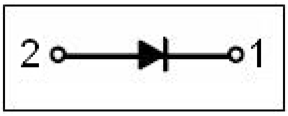
Low forward voltage drop,Fast Switching Time,Qualified to AEC-Q101 Standards for High Reliability,HF Product.

用途 / Applications

一般用途。

General purpose.

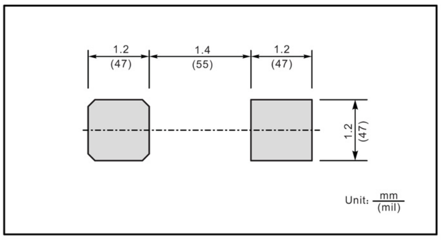
内部等效电路 / Equivalent Circuit



引脚排列 / Pinning

PIN1:Cathode　　PIN2:Anode

The recommended mounting pad size



印章代码 / Marking

Model	BRRB551VQ-30
Marking	551Q

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Reverse Voltage	V_{RM}	30	V
Forward Continuous Current	I_F	0.5	A
Non-Repetitive Peak Forward Surge Current @t = 8.3ms	I_{FSM}	15	A
Power dissipation	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (NOTE 1)	$R_{\theta JA}$	500	K/W
Junction Temperature	T_j	125	℃
Storage Temperature	T_{stg}	-55 ~ +150	℃

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating	单位 Unit
DC Reverse Voltage	V_R	I_R=100uA	20	V
Maximum Instantaneous Forward Voltage	V_F	I_F=1.0mA	0.37	V
		I_F=500mA	0.47	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	V_R=20V	100	uA
Typical Junction Capacitance	C_T	V_R=4V f=1MHz	50(Typ)	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=1mA I_{rr}=1mA R_L=100Ω	30	nS

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Power Derating Curve

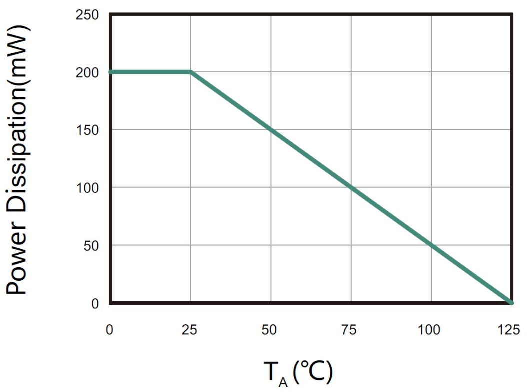


Fig.2 Typical Capacitance Characteristics

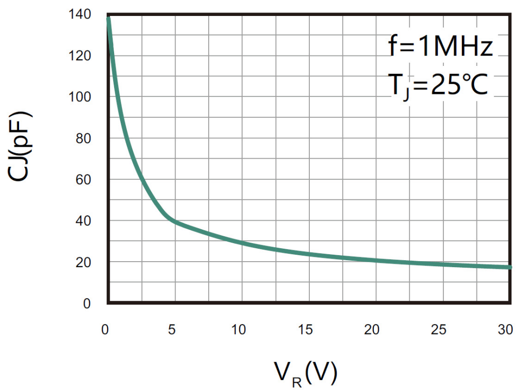


Fig.3 Typical Forward Characteristics

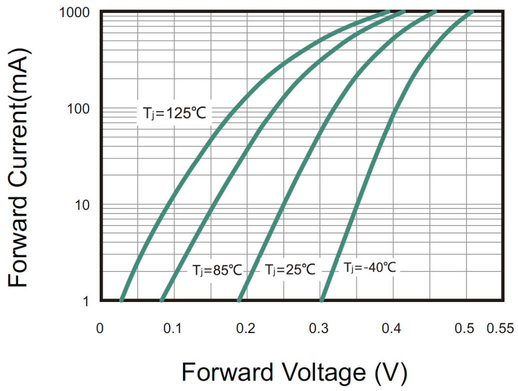
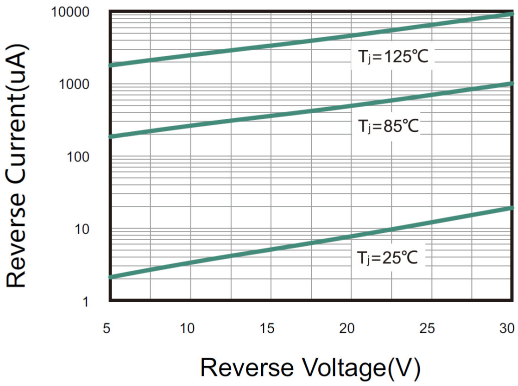
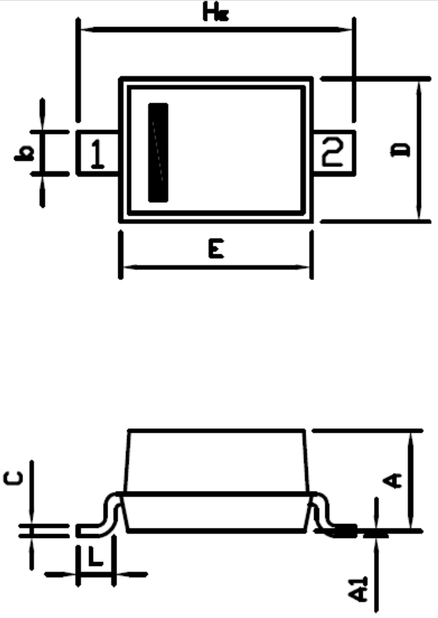


Fig.4 Typical Reverse Characteristics



外形尺寸图 / Package Dimensions



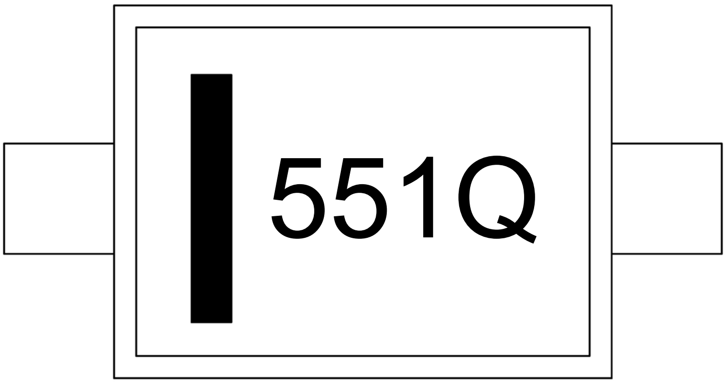
Unit: mm

尺寸 符号	SOD-323	
	min	max
A	0.80	1.15
A1	0.00	0.20
b	0.25	0.40
C	0.08	0.18
D	1.20	1.40
E	1.40	1.80
H_E	2.50	2.80
L	0.20	0.45

PIN: 1.CATHODE 2.ANODE

SOD-323

印章说明 / Marking Instructions



说明：

551： 为型号代码

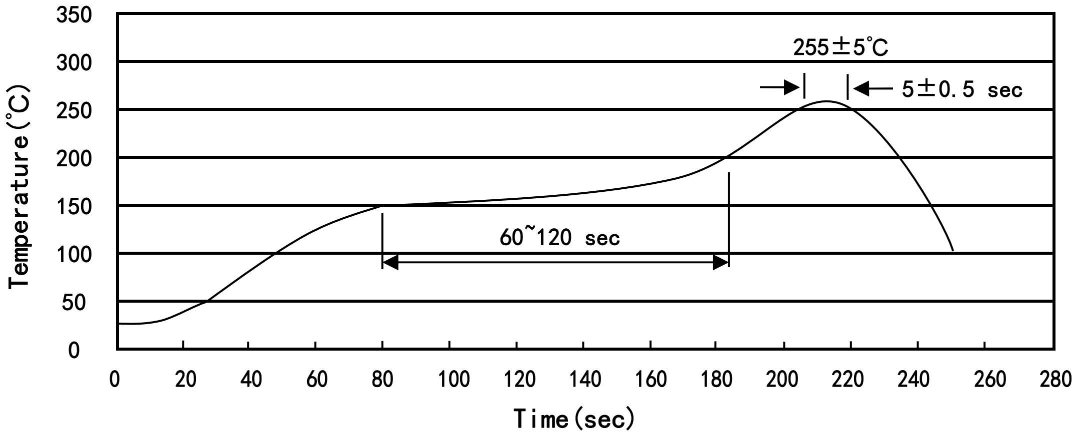
Q： 为汽车无卤产品标识

Note:

551： Product Type Code

Q: Automobile halogen-free product Code

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



说明：	Note:
1、预热温度 150～200℃，时间 60～120sec;	1.Preheating:150~200℃, Time:60~120sec.
2、峰值温度 255±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:255±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2～10℃/sec.	3. Cooling Speed: 2~10℃/sec.

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

温度：260±5℃　　时间：10±1 sec.　　Temp.:260±5℃　　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