BAT46W

Rev.A Feb.-2025

DATA SHEET

描述 / Descriptions

SOD-123 塑封封装 肖特基二极管。

Schottky Diode in a SOD-123 Plastic Package.

特征 / Features

高击穿电压，低正向压降，无卤产品。

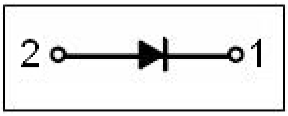
High Breakdown Voltage,Low Forward Voltage,HF Product.

用途 / Applications

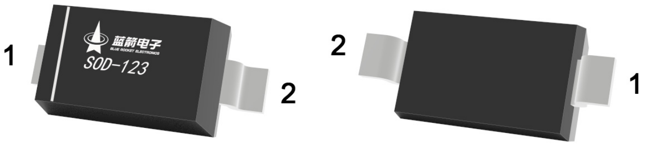
一般用途。

General purpose.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1:Cathode PIN2:Anode

印章代码 / Marking

Type	number
BAT46W	HS9

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

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) @ tp < 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	℃/W
Operating and Storage Temperature Range	T_J,T_{stg}	-55 ~ +150	℃

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
Reverse BreakdownVoltage at IR=100μA(NOTE 2)	$V_{(BR)R}$	I_R=100μA	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

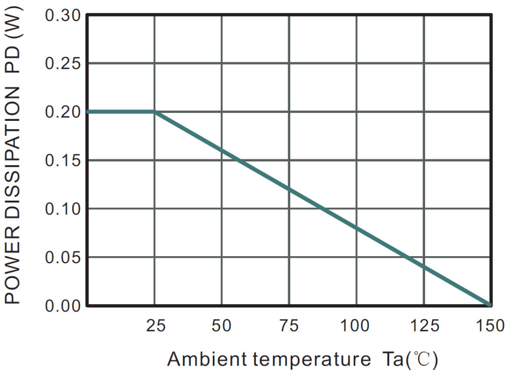


Fig.2 Typical Reverse Characteristics

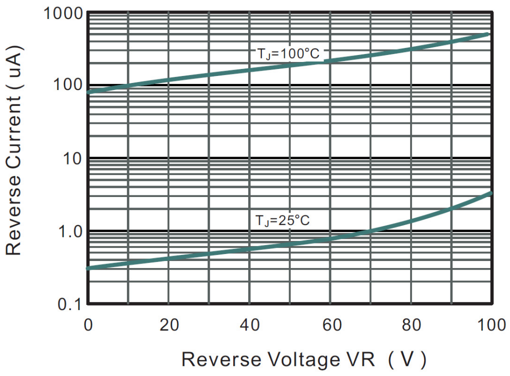


Fig.3 TYPICAL FORWARD VOLTAGE

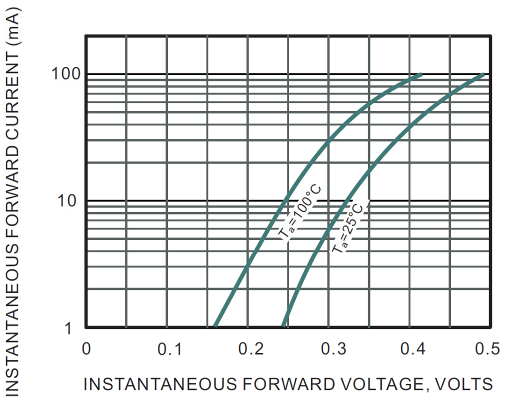
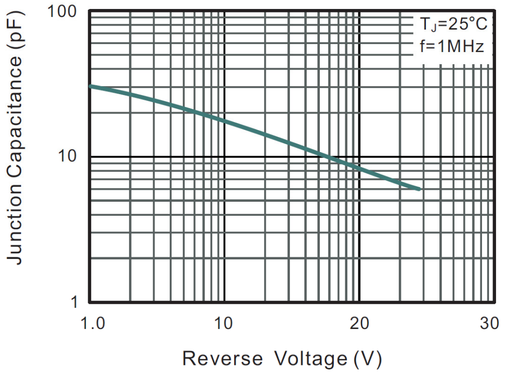
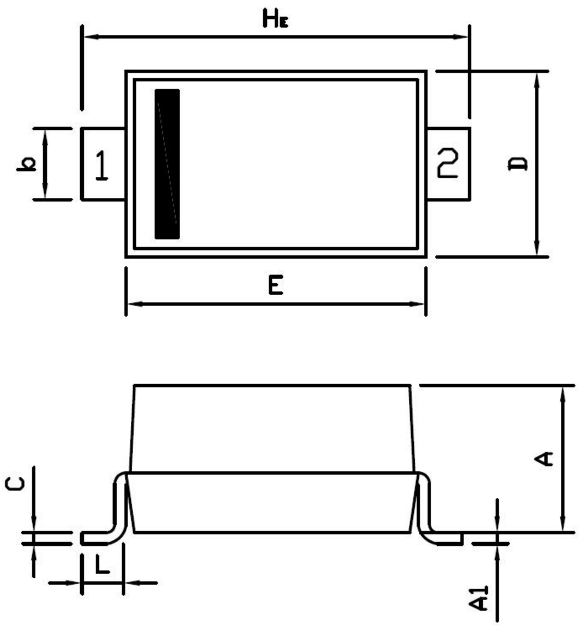


Fig.4 Typical Junction Capacitance



外形尺寸图 / Package Dimensions

Unit: mm



尺寸 符号	SOD-123	
	min	max
A	0.90	1.30
A1	0.01	0.20
b	0.45	0.70
C	0.09	0.22
D	1.50	1.80
E	2.50	2.80
HE	3.45	3.95
L	0.20	0.50

PIN: 1.CATHODE 2.ANODE

SOD-123

印章说明 / Marking Instructions

说明：

H：　为公司代码

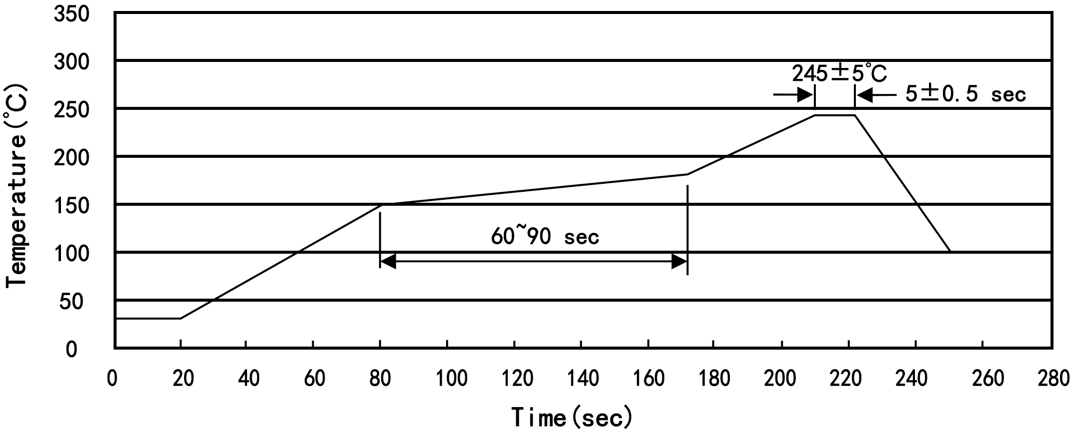
S9：　为型号代码

Note:

H:　Company 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：	Note:
1、预热温度 150～180℃，时间 60～90sec;	1.Preheating:150~180℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±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-123	3,000	10	30,000	6	180,000	7″ ×8	180×120×180	390×385×205

使用说明 / Notices