

BRDS14WQ~BRDS110WQ

Rev.A May.-2023

描述 / Descriptions

表面贴装肖特基整流二极管，反向电压：40~100V，正向电流：1.0A，薄型 SOD-123FL 封装。
Surface Mount Schottky Barrier Rectifier, Reverse Voltage: 40 to 100 V, Forward Current: 1.0A, SOD-123FL thin package。

特征 / Features

低功耗，高效率，高正向浪涌电流能力，无铅符合欧盟 RoHS 指令 2011/65/EU，适用表面贴装，符合 AEC-Q101 标准高可靠性要求，无卤产品。

Low power loss, high efficiency, High forward surge current capability, Lead free in comply with EU RoHS 2011/65/EU directives, For surface mounted applications, Qualified to AEC-Q101 Standards for High Reliability, HF product.

用途 / Applications

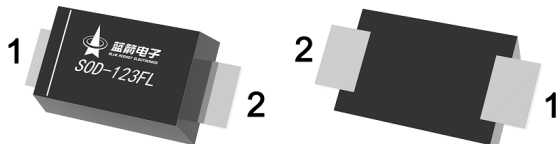
一般用途，满足汽车应用的严格要求。

General purpose, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

印章代码 / Marking

见印章说明。See Marking Instructions.

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

参数 Parameter	符号 Symbol	数值 Rating				单位 Unit
		BRDS14WQ	BRDS16WQ	BRDS18WQ	BRDS110WQ	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	40	60	80	100	V
Maximum RMS Voltage	V _{RMS}	28	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	40	60	80	100	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1.0				A
Peak Forward Surge Current,8.3ms Single Half sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30				A
Typical Junction Capacitance ¹⁾	C _i	51	34	28		pF
Typical Thermal Resistance ²⁾	R _{θJA}	100				°C/W
	R _{θJC}	20				
	R _{θJL}	20				
Operating Junction Temperature Range	T _j	-55~+125	-55~+150			°C
Storage Temperature Range	T _{stg}	-55~+150				°C

Note:

- 1) Measured at 1MHz and applied reverse voltage of 4 V D.C.
- 2) The thermal resistance from junction to ambient,case or lead,mounted on P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB

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
			BRDS14WQ	BRDS16WQ	BRDS18WQ	BRDS110WQ	
Max Instantaneous Forward Voltage	V _F	I _F =1.0A	0.50	0.70	0.81		V
Maximum DC Reverse Current at Rated DC Reverse Voltage	I _R	T _a =25°C	0.2		0.03		mA
		T _a =125°C	30	20			

电参数曲线图 / Electrical Characteristic Curve

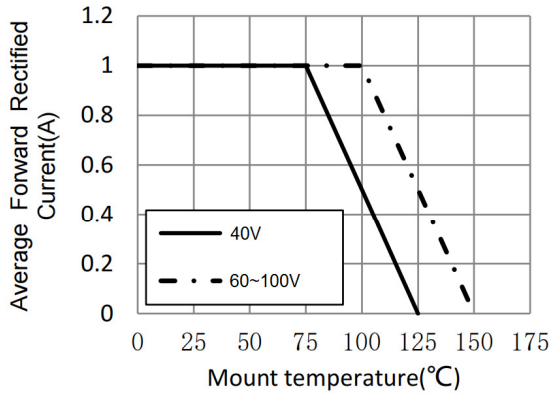


Figure 1. Forward Current Derating Curve

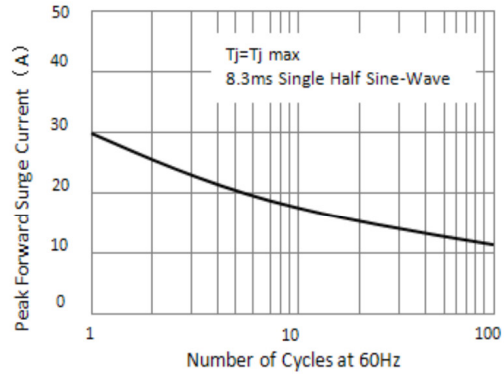


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

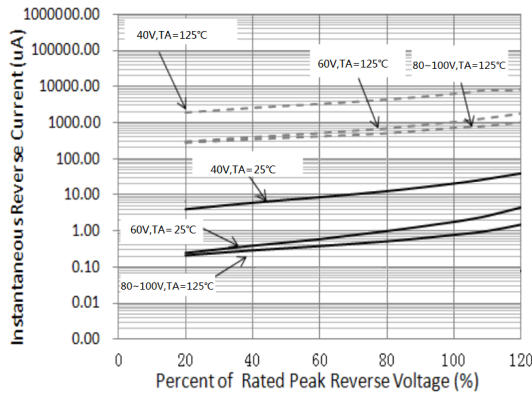


Figure 3. Typical Instantaneous Reverse Characteristics

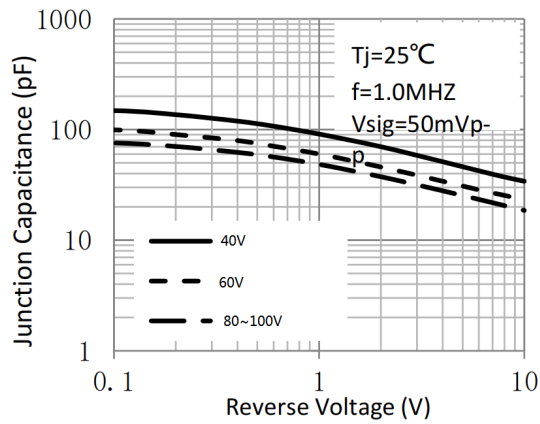


Figure 4. Typical Junction Capacitance

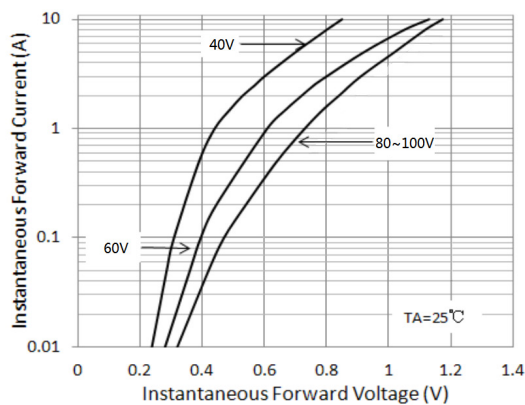
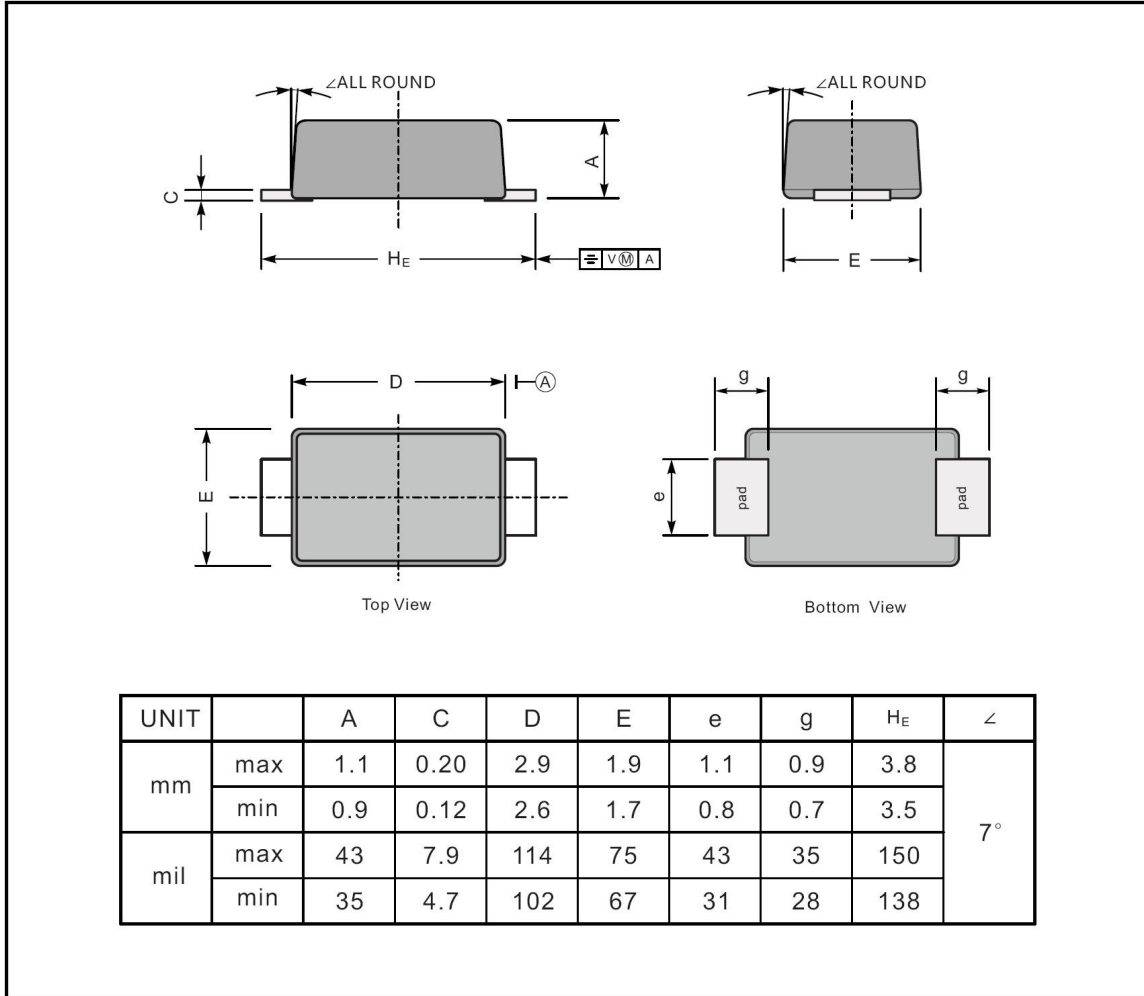


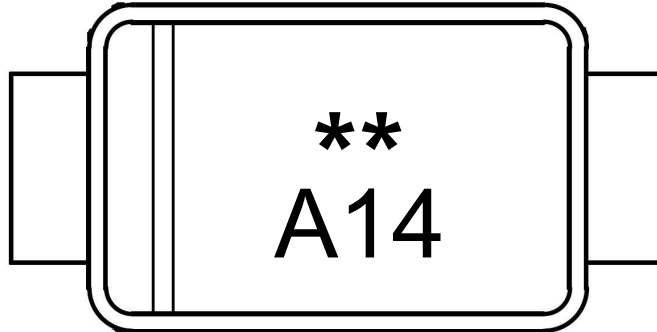
Figure 5. Typical Instantaneous Forward Characteristics

外形尺寸图 / Package Dimensions

SOD-123FL



印章说明 / Marking Instructions



说明：

A14： 为型号代码

**： 为生产批号追溯码，第1个*为年代码，后面1个*为月代码

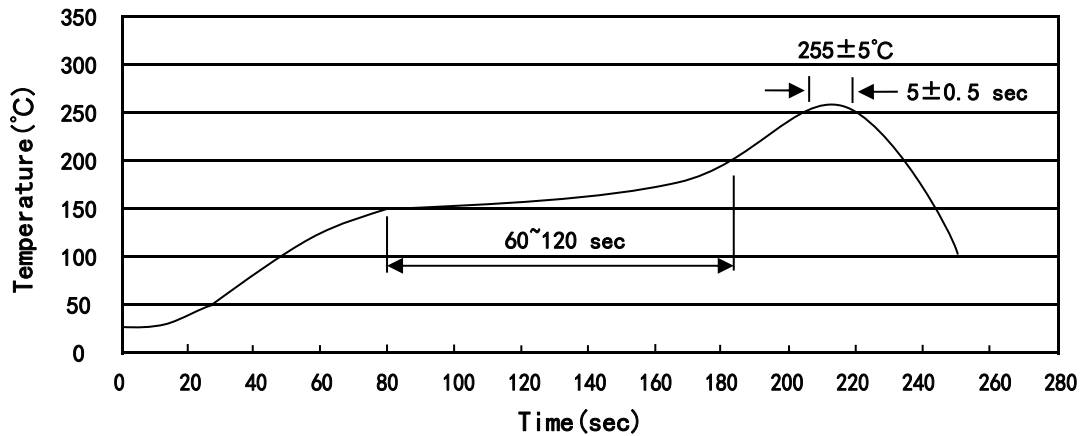
Note:

A14： Product Type Code

**： Lot No. Code , The 1st * means:Y Code , The last 1 * means:M Code

Marking

Type number	Marking code
BRDS14WQ	A14
BRDS16WQ	A16
BRDS18WQ	A18
BRDS110WQ	A1B

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-123FL	3000	8	24000	6	144000	7" ×8	185X180X105	390X385X205

使用说明 / Notices