

描述 / Descriptions

表面贴装整流二极管，反向电压：1000V，正向电流：1A，薄型 SOD-123FL 封装。

Surface Mount General Purpose Silicon Rectifiers, Reverse Voltage: 1000V, Forward Current: 1A, SOD-123FL thin package.

特征 / Features

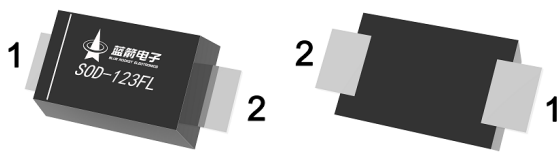
玻璃钝化芯片,适用于自动放置,铅符合欧盟 RoHS 指令 2011/65/EU,适用于表面贴装,符合 AEC-Q101 标准高可靠性要求,无卤产品。

Glass Passivated Chip Junction, Ideal for automated placement, 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

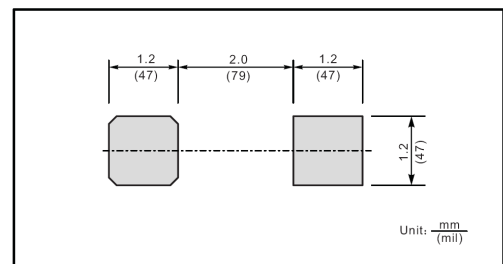
一般用途，满足汽车应用的严格要求。

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

The recommended mounting pad size

**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
		BR1N4007WQ	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current @ Fig.1	$I_F (AV)$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30	A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	60	A
I^2t Rating for fusing ($3ms \leq t \leq 8.3ms$)	I^2t	3.7	A ² S
Typical Junction Capacitance ⁽¹⁾	C_j	7	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	105	°C/W
	$R_{\theta JC}$	25	
	$R_{\theta JL}$	32	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

Note:

- 1) Measured at 1 MHz and applied reverse voltage of 4 V D.C
 2) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

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
			BR1N4007WQ	
Maximum Instantaneous Forward Voltage	V_F	$I_F=1.0A$	1.1	V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	$T_a=25^\circ C$	5	μA
		$T_a=125^\circ C$	100	μA

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

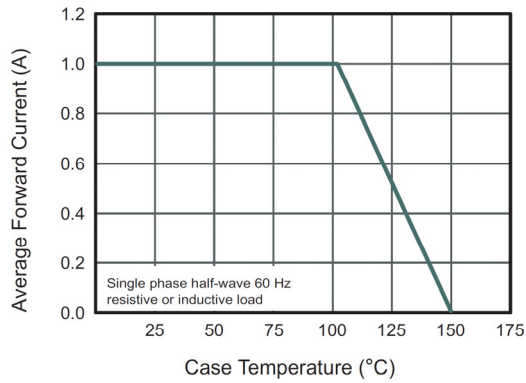


Fig.2 Typical Reverse Characteristics

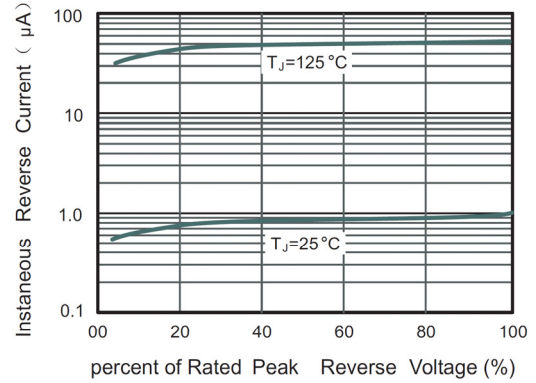


Fig.3 Typical Forward Characteristic

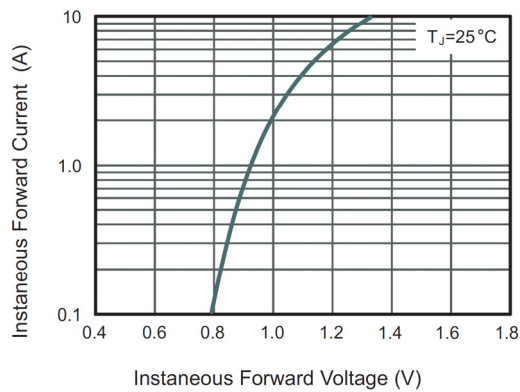


Fig.4 Typical Junction Capacitance

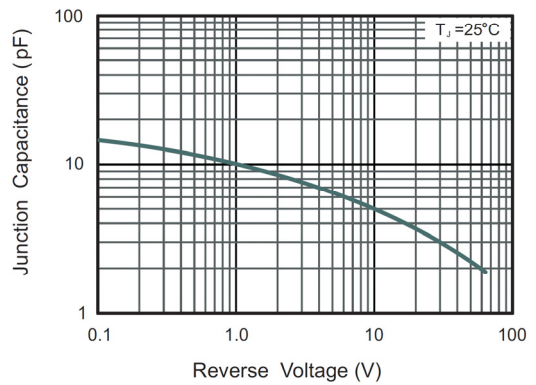
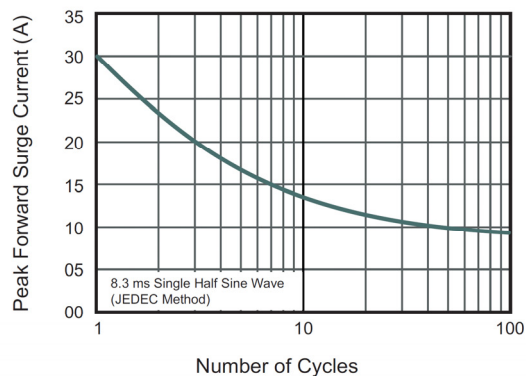
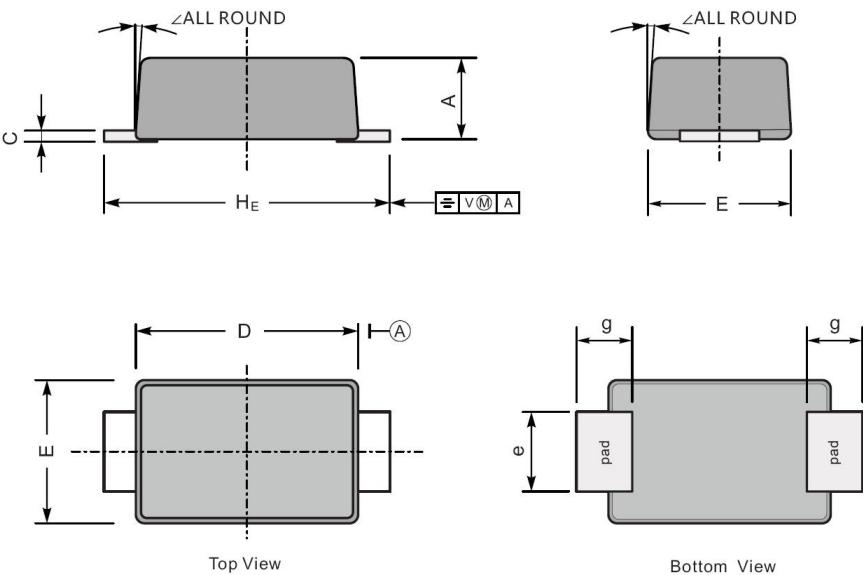


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



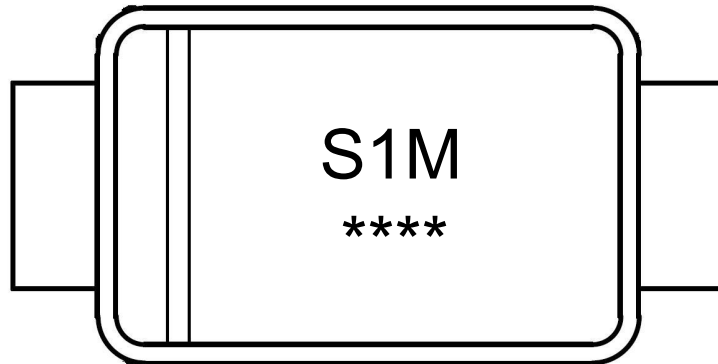
外形尺寸图 / Package Dimensions

SOD-123FL



UNIT		A	C	D	E	e	g	H _E	$\angle$
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

印章说明 / Marking Instructions



说明：

S1M： 为型号代码

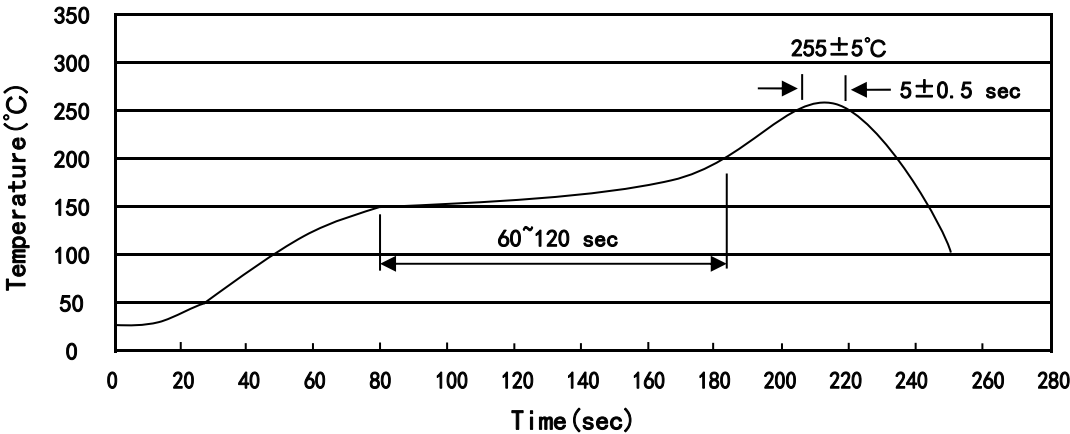
****： 为生产批号代码，随生产批号变化

Note:

S1M： Product Type Code

****： Lot No. Code, code change with Lot No

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℃ , 时间 60 ~ 120sec;
2、峰值温度 255±5℃ , 时间持续为 5±0.5sec;
3、焊接制程冷却速度为 2 ~ 10℃/sec.
- Note:
1.Preheating:150~200℃, Time:60~120sec.
2.Peak Temp.:255±5℃, Duration:5±0.5sec.
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-123FL	3,000	8	24,000	6	144,000	7" ×8	185×180×105	390×385×205

使用说明 / Notices