

BRES24V0M2B3MA

Rev.B Apr.-2024

描述 / Descriptions

SOT-23 塑封封装 TVS 二极管。

TVS Array in a SOT23 Plastic Package.

特征 / Features

小封装，正常响应时间小于 1ns，防静电等级达到 30KV 以上，符合 IEC61000-4-2 的 4 级 ESD 保护项目，无卤产品。

Small package, Response Time is Typically < 1 ns, ESD > 30 kV per Human Body Model, IEC61000-4-2 Level 4 ESD Protection, HF Product.

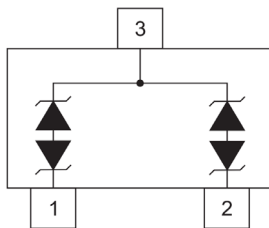
用途 / Applications

用于高速数据线 ESD 保护，如 USB 2.0、机顶盒、显示器等。按 IEC 61000-4-2(ESD)标准：±30kV (空气放电)，±30kV (接触放电)。

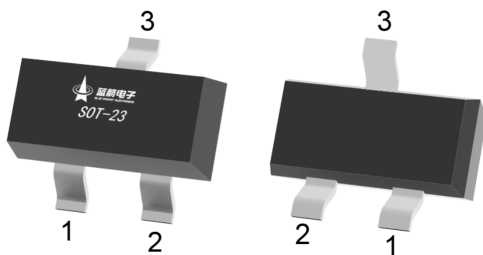
ESD protection for high-speed data lines, such as USB 2.0, set-top boxes, monitors and so on.

According to IEC 61000-4-2 (ESD) Standard: ± 30kV (air discharge), ± 30kV (contact discharge).

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN: See Equivalent Circuit.

印章代码 / Marking

见印章说明。

See Marking Instructions.

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DATA SHEET

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Power (tp = 8/20μs)	PP	350	W
Peak Pulse Current (tp = 8/20μs)	IPP	8.0	A
ESD per IEC 61000-4-2 (Air)	VESD1	±30	kV
ESD per IEC 61000-4-2 (Contact)	VESD2	±30	kV
Operating Temperature	TOPR	-55 to +150	°C
Storage Temperature	TSTG	-55 to +150	°C

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse Stand-Off Voltage	VRWM				24	V
Reverse Breakdown Voltage	VBR	It=1mA	26.7			V
Reverse Leakage Current	IR	VRWM=24V T=25°C			1	μA
Clamping Voltage	VC	IPP =1.0A tp=8/20μS			33	V
	VC	IPP =8.0A tp=8/20μS			44	V
Capacitance. Any I/O pin to GND	CJ	VR=0V f=1MHz		25	30	pF

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Non-Repetitive Pulse Power vs.Pulse Time

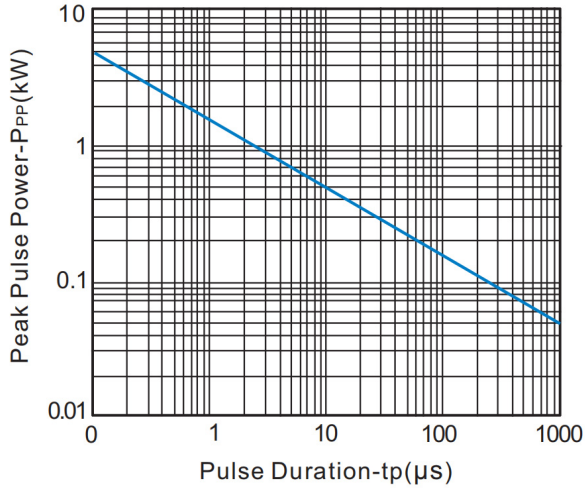
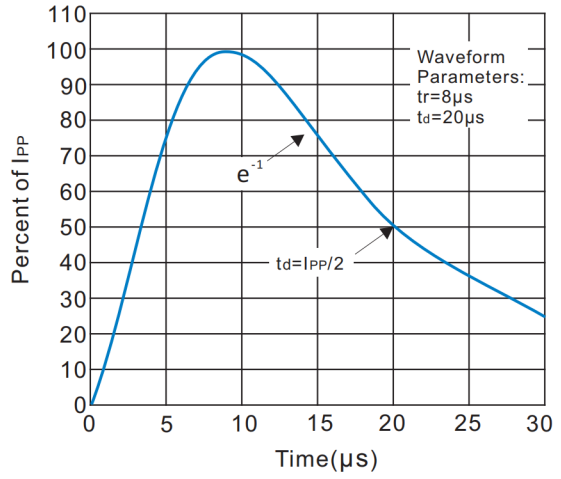


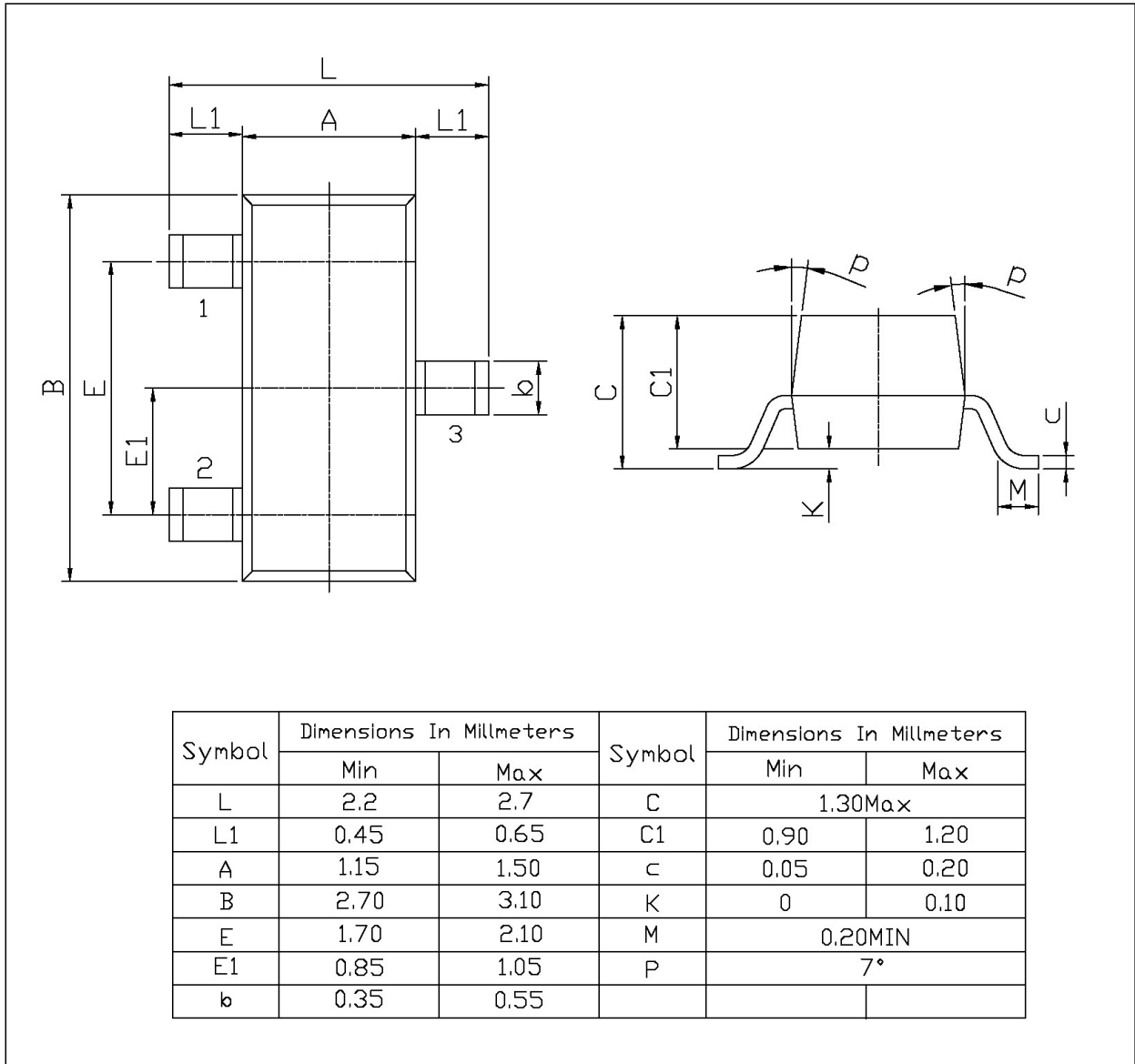
Fig.2 Pulse Waveform



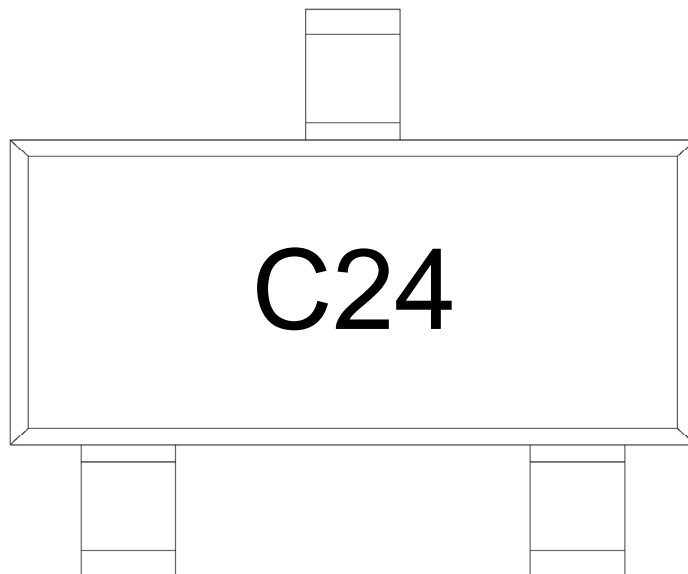
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



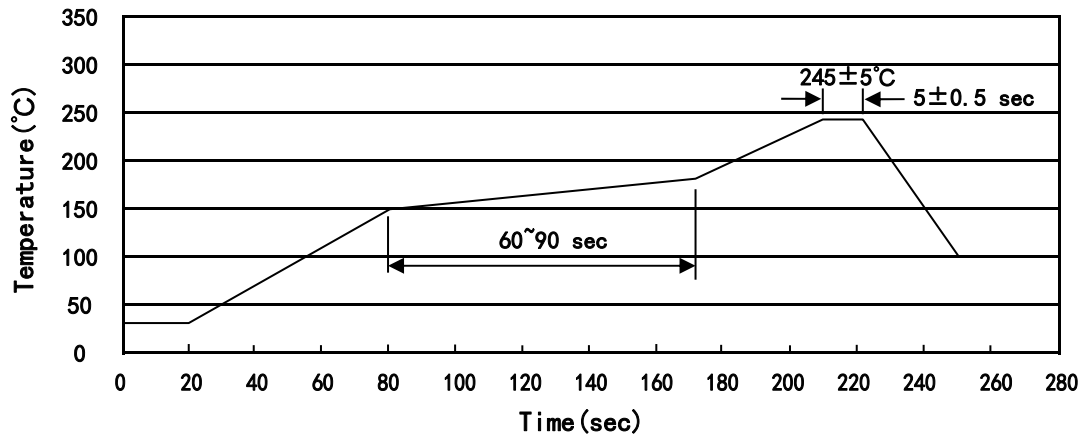
说明：

C24： 为型号代码

Note:

C24: 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 150~180°C，时间 60~90sec;
- 2、峰值温度 245±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:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±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
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices