

MB14S~MB120S

Rev.A Dec.-2017

描述 / Descriptions

1.0A 表面贴装肖特基整流桥，MBS 封装。
1.0A Surface Mount Schottky Bridge Rectifier, MBS package.

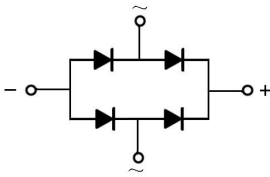
特征 / Features

玻璃钝化芯片，反向电压：40V~200V，正向电流：1.0A，浪涌电流大，适用于表面贴装。无卤产品。
Glass Passivated Chip Junction, Reverse Voltage:40to200V, Forward Current:1.0A, High Surge Current Capability, Designed for Surface Mount Application.Halogen free product.

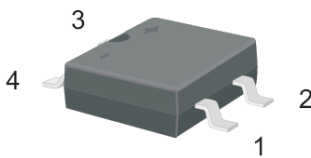
用途 / Applications

一般用途。
General purpose.

内部等效电路 / Equivalent Circuit

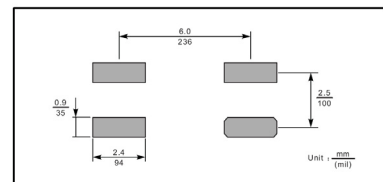


引脚排列 / Pinning



PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)

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
		MB14S	MB16S	MB18S	MB110S	MB115S	MB120S	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current at $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40			30			A
Typical Junction Capacitance ^(Note1)	C_j	110	80				pF	
Typical Thermal Resistance ^(Note2)	$R_{\theta JA}$	100						$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_j	-55~+125						$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150						$^\circ\text{C}$

Note:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. Mounted on glass epoxy PC board with $4 \times 1.5" \times 1.5"$ ($3.81 \times 3.81\text{cm}^2$) copper pad..

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

参数 Parameter	符号 Symbol	测试条件 Test condition	数值 Rating				单位 Unit
Max Instantaneous Forward Voltage	V_F	$I_F=1.0\text{A}$	0.55	0.70	0.85	0.90	V
Maximum DC Reverse Current at Rated DC Reverse Voltage	I_R	$T_a=25^\circ\text{C}$ $T_a=100^\circ\text{C}$	0.3 10		0.2 5	0.1 2	mA

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

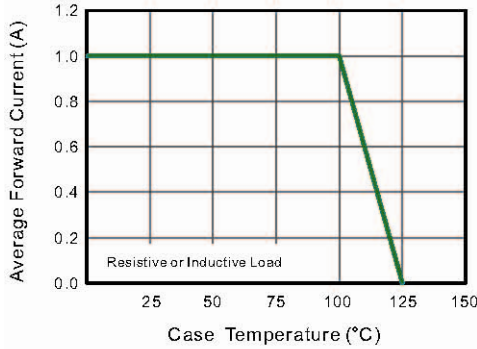


Fig.2 Typical Reverse Characteristics

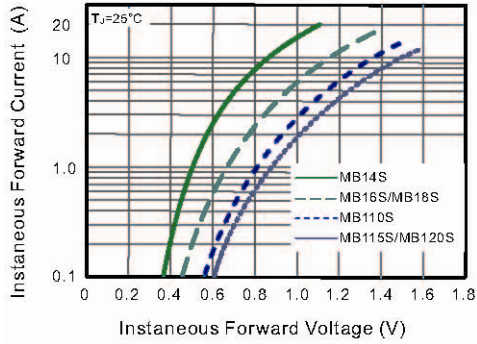
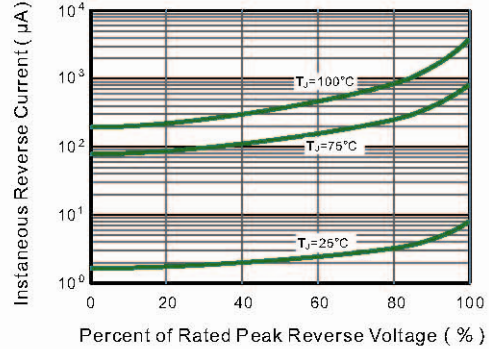


Fig.4 Typical Junction Capacitance

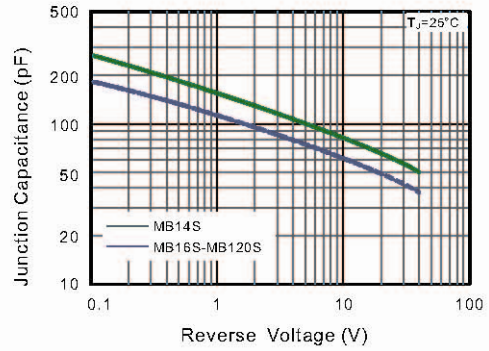


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

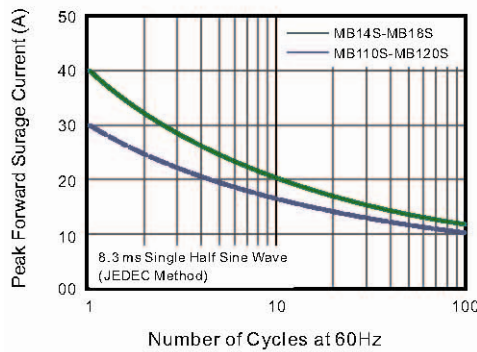
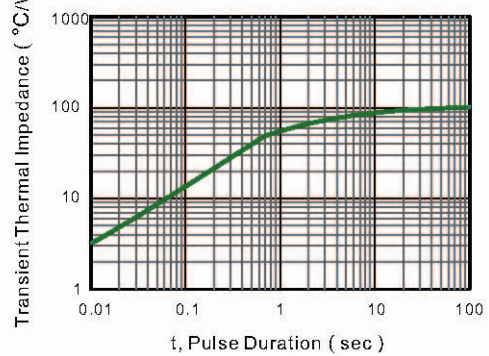
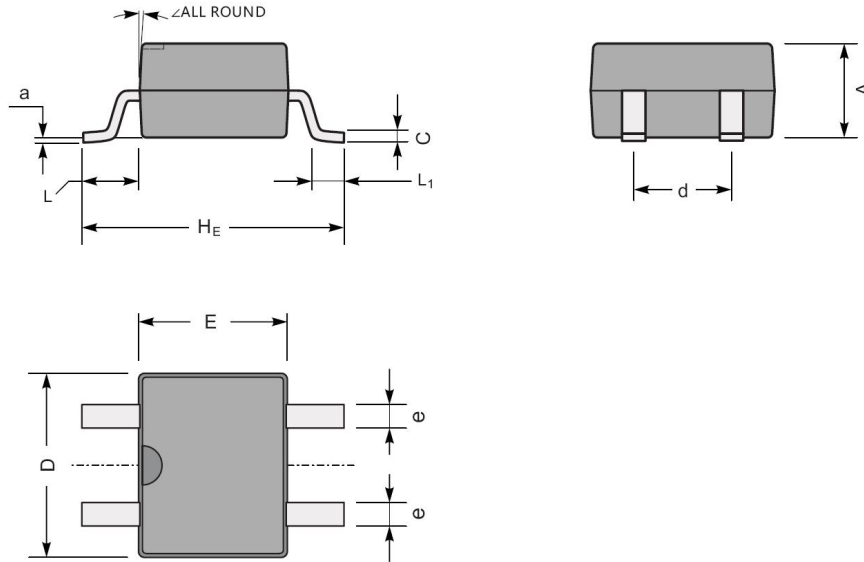


Fig.6 Typical Transient Thermal Impedance



外形尺寸图 / Package Dimensions

MBS




MBS mechanical data

UNIT		A	C	D	E	HE	d	e	L	L ₁	a	∠
mm	max	2.6	0.22	5.0	4.1	7.0	2.7	0.7	1.7	1.1	0.2	7°
	min	2.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	102	8.7	197	161	276	106	28	67	43	8	
	min	94	5.9	177	142	252	91	20	51	20	—	

Marking

Type number	Marking code
MB14S	MB14S
MB16S	MB16S
MB18S	MB18S
MB110S	MB110S
MB115S	MB115S
MB120S	MB120S



The diagram shows a rectangular component with four pins (two on top, two on bottom) and a semi-circular notch on the top edge. The marking "MBxxS" is printed in the center of the component.

印章说明 / Marking Instructions



说明：

MB14S： 为型号代码

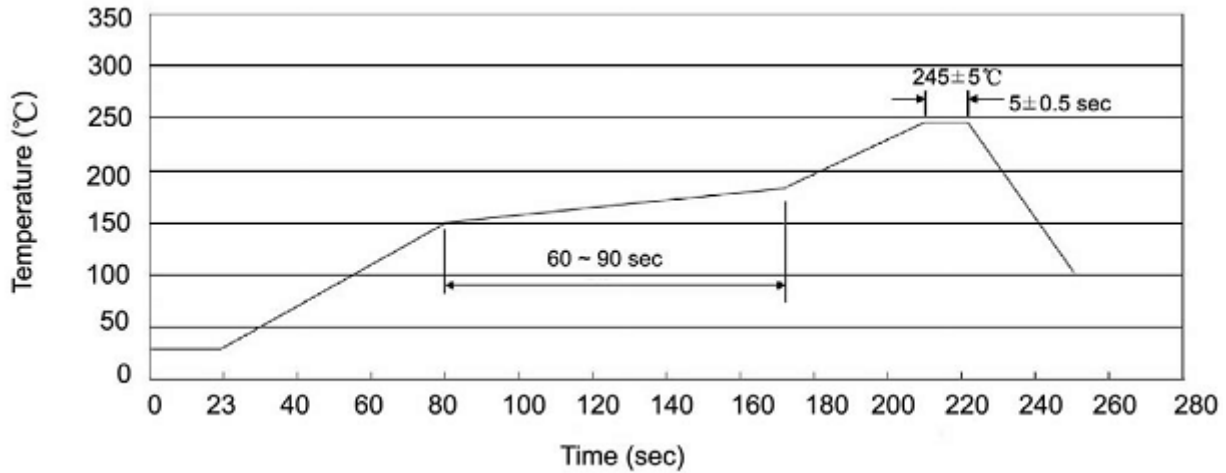
****： 为生产批号追溯码，第 1 个*为年月代码，后面 3 个*为当月小批号代码

Note:

MB14S： Product Type Code

****： Lot No. Code , The 1st * means:YM Code , The last 3 * means:little Lot
No 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 25 ~ 150°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:25~150°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
MBS	3000	2	6000	5	30000	13" × 15	336X336X40	380X335X366

使用说明 / Notices