

RS5ABF~RS5MBF

Rev.A Jan.-2024

描述 / Descriptions

超快恢复二极管，反向电压：50V~1000V，正向电流：5A，薄型 SMBF 封装。

Surface Mount Superfast Recovery Rectifier, Reverse Voltage: 50 to 1000V, Forward Current: 5A, SMBF thin package.

特征 / Features

玻璃钝化芯片，反向恢复时间快，无铅符合欧盟 RoHS 指令 2011/65/EU，适用于表面贴装，无卤产品。

Glass Passivated Chip Junction, Fast reverse recovery time, Lead free in comply with EU ROHS 2011/65/EU directives, For surface mounted applications, HF Product.

用途 / Applications

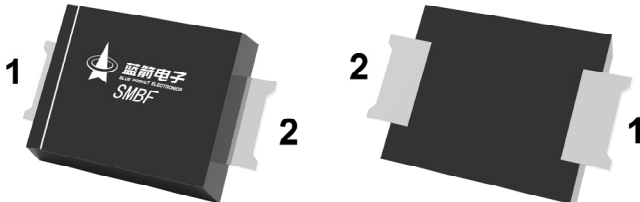
一般用途。

General purpose.

内部等效电路 / Equivalent Circuit

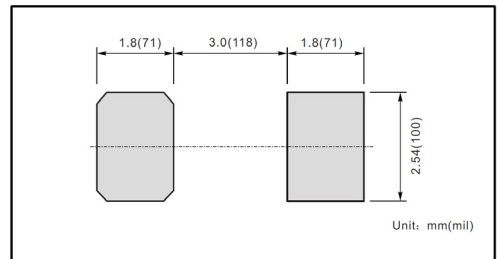


引脚排列 / Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



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
		RS5ABF	RS5BBF	RS5DBF	RS5GBF	RS5JBF	RS5KBF	RS5MBF	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ Fig.1	I _{F(AV)}	5							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150							A
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	300							A
I ² t Rating for fusing (3ms≤t≤8.3ms)	I ² t	93.3							A ² s
Typical Junction Capacitance ⁽¹⁾	C _j	38					70		pF
Typical Thermal Resistance ⁽²⁾	R _{θJA} R _{θJC} R _{θJL}	42 10 15							°C/W
Operating and Storage Temperature Range	T _j ,T _{stg}	-55~+150							°C

Note:

- 1) Measured at 1 MHz and applied reverse voltage of 4V D.C
- 2) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) 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
			RS5ABF	RS5BBF	RS5DBF	RS5GBF	RS5JBF	RS5KBF	
Maximum Forward Voltage	V _F	I _F =5A	1.3						V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _a =25°C	10						μA
		T _a =125°C	150						μA
Maximum Reverse Recovery Time	t _{rr}	I _F =0.5A I _R =1A I _{rr} =0.25A	150			250	500		ns

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Maximum Average Forward Current Rating

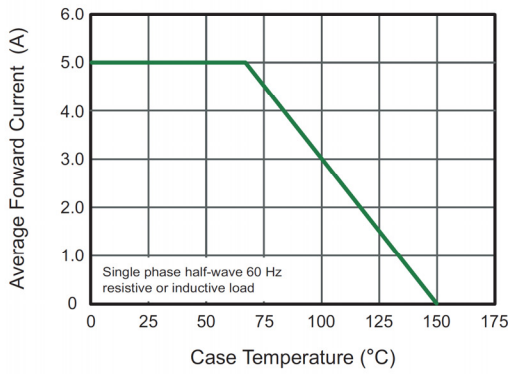


Fig.2 Typical Reverse Characteristics

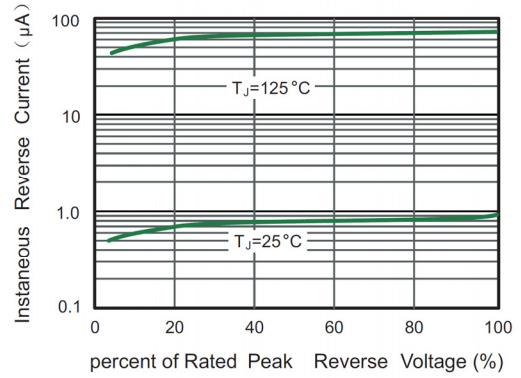


Fig.3 Typical Instantaneous Forward Characteristics

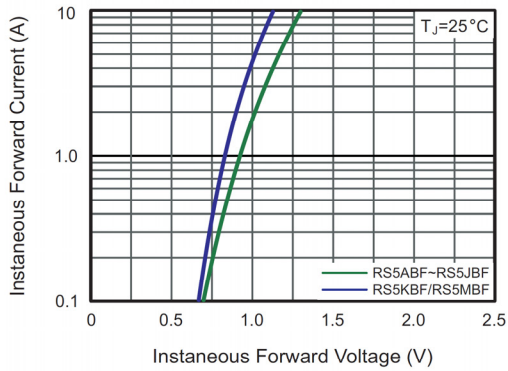


Fig.4 Typical Junction Capacitance

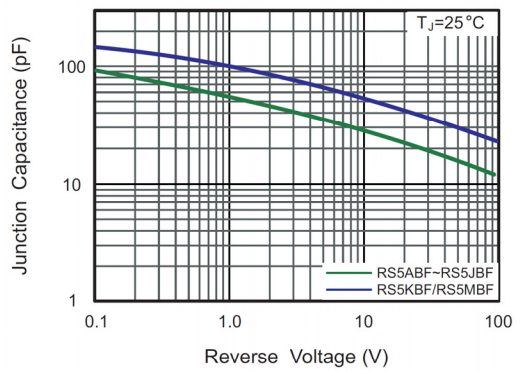
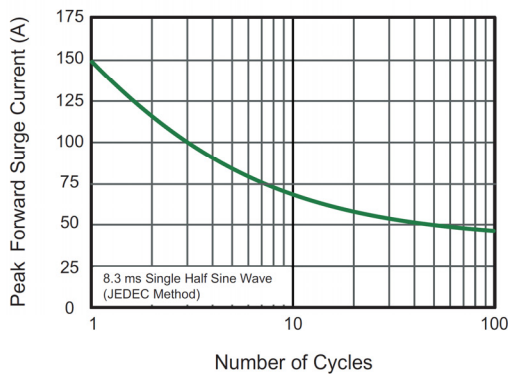


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

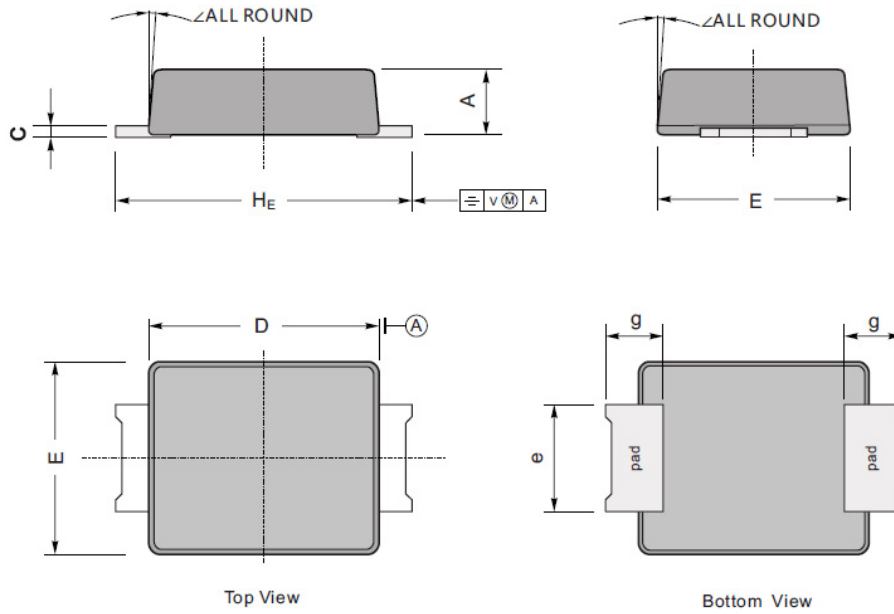


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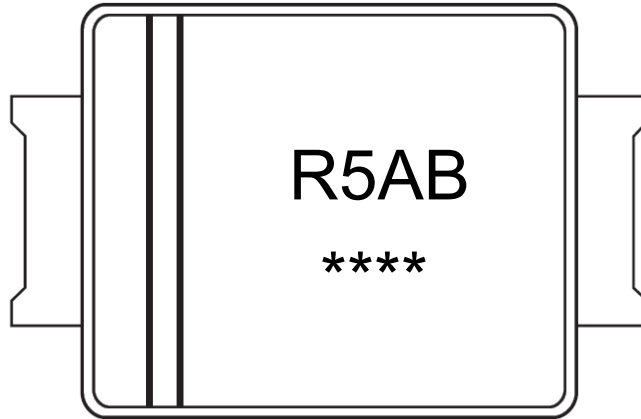
外形尺寸图 / Package Dimensions

SMBF



UNIT		A	C	D	E	H_E	e	g	\angle
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

印章说明 / Marking Instructions



说明：

R5AB： 为型号代码

****： 为生产批号代码，随生产批号变化

Note:

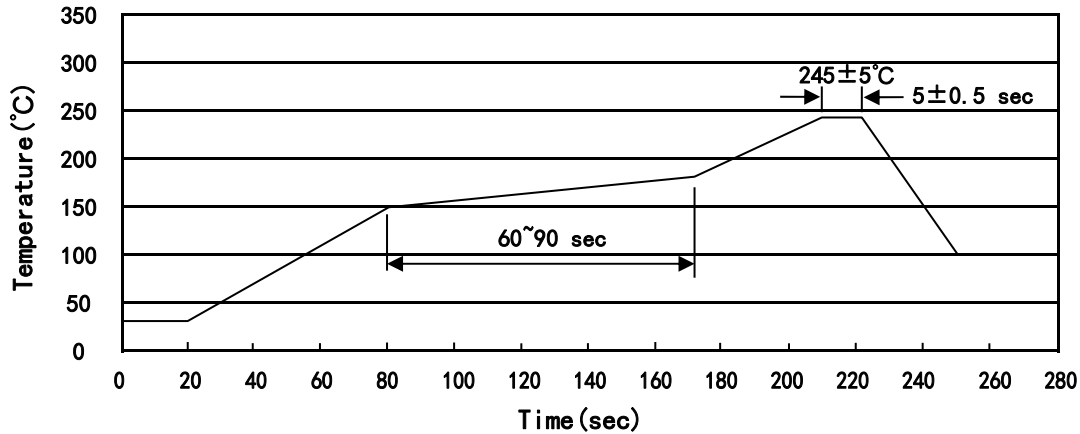
R5AB： Product Type Code

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

Marking

Type number	Marking code
RS5ABF	R5AB
RS5BBF	R5BB
RS5DBF	R5DB
RS5GBF	R5GB
RS5JBF	R5JB
RS5KBF	R5KB
RS5MBF	R5MB

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
SMBF	5,000	2	10,000	7	70,000	13" ×12	336X336X40	380X335X366

使用说明 / Notices