

US3AB~US3MB

Rev.A Dec.-2017

描述 / Descriptions

超快恢复二极管，反向电压：50V~1000V，正向电流：3.0A，SMB封装。

Surface Mount Ultrafast Recovery Rectifier, Reverse Voltage: 50 to 1000V, Forward Current: 3.0A, SMB package.

特征 / Features

玻璃钝化芯片，效率高，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, High efficiency, Lead free in comply with EU R0HS 2011/65/EU directives, For surface mounted applications. Halogen free product.

用途 / Applications

一般用途。

General purpose.

内部等效电路 / Equivalent Circuit

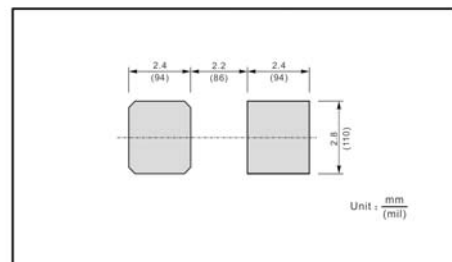


引脚排列 / Pinning



PIN	DESCRIPTION
1	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	参数符号 Symbol	数值 Rating							单位 Unit
		US3AB	US3BB	US3DB	US3GB	US3JB	US3KB	US3MB	
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	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	45							°C/W
	$R_{\theta JC}$	15							
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							°C

Note:

(1) P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areas .

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

参数 Parameter	参数符号 Symbol	测试条件 Test condition	数值 Rating						单位 Unit
			US3AB	US3BB	US3DB	US3GB	US3JB	US3KB	
Maximum Instantaneous Forward Voltage	V_F	$I_F=3.0A$	1.0			1.3	1.68		V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	$T_a=25^\circ C$	5.0						uA
		$T_a=125^\circ C$	100						
Maximum Reverse Recovery Time	T_{rr}	$I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$	50			75		ns	

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Maximum Average Forward Current Rating

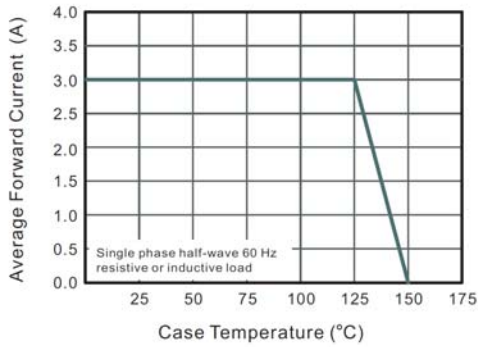


Fig.2 Typical Reverse Characteristics

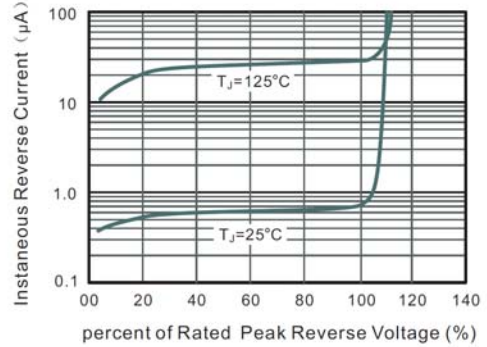


Fig.3 Typical Forward Characteristics

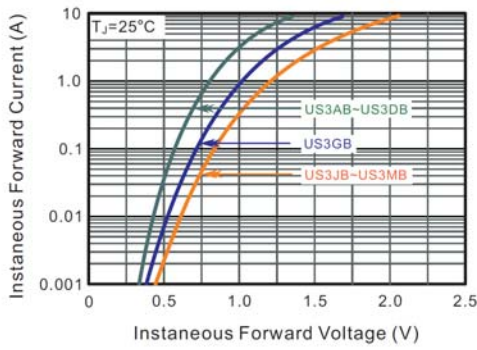
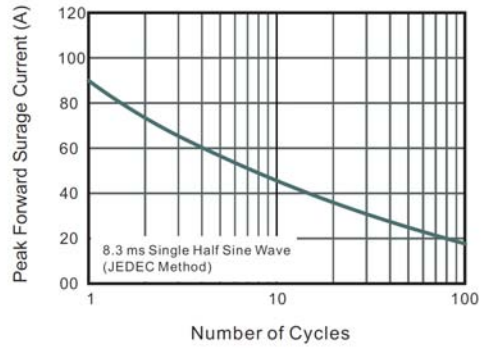
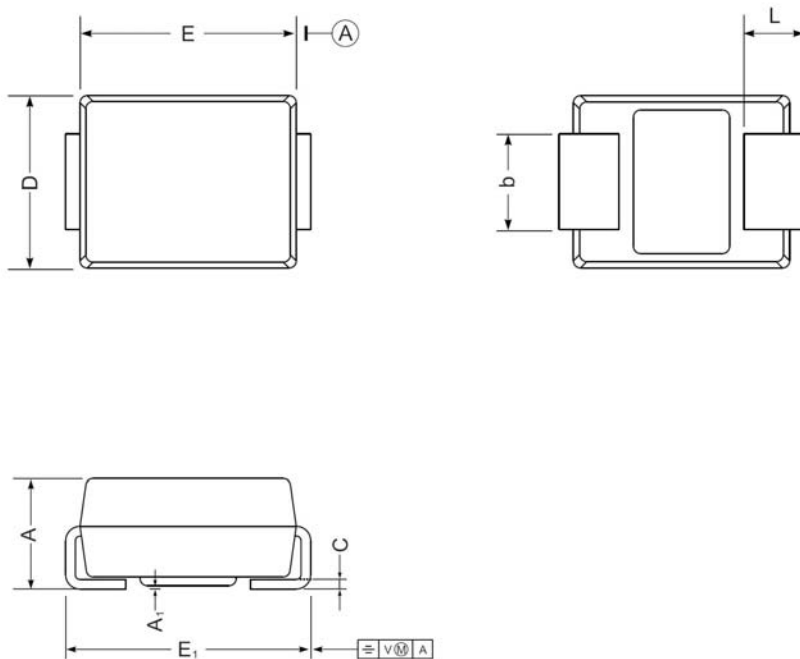


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



外形尺寸图 / Package Dimensions

SMB



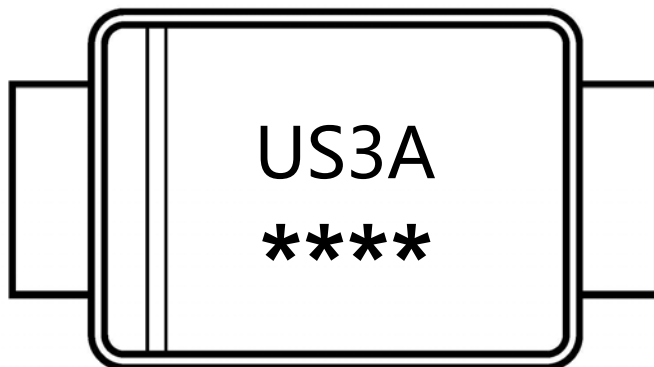
SMB mechanical data

UNIT		A	E	D	E_1	A_1	L	C	b
mm	max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.2
	min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.9
mil	max	96	185	155	220	7.9	59	12	87
	min	84	160	130	200	2.0	32	6	75

Marking

Type number	Marking code
US3AB	US3A
US3BB	US3B
US3DB	US3D
US3GB	US3G
US3JB	US3J
US3KB	US3K
US3MB	US3M

印章说明 / Marking Instructions



说明：

US3A：为型号代码

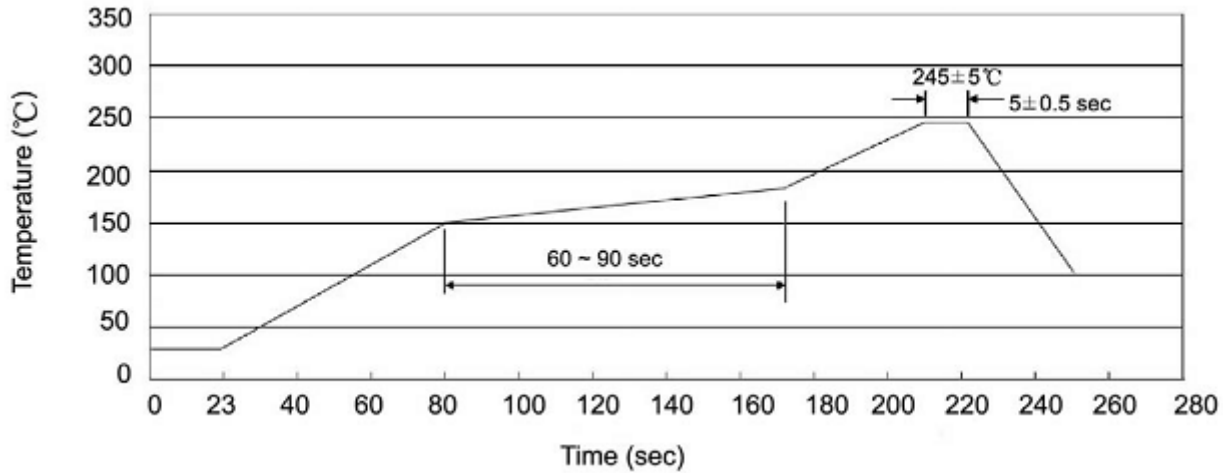
****：为生产批号追溯码，第1个*为年月代码，后面3个*为当月小批号代码

Note:

US3A：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
SMB	3000	5	15000	5	75000	7" ×11	185X180X105	390X385X205

使用说明 / Notices