

客户 CUSTOMER: _____

日期 DATE: _____

SPECIFICATION

产 品 名 称	PRODUCT NAME: Integrated Balun-Filter
贵 司 料 号	YOUR PART NO.:
敝 司 料 号	OUR PART NO.: SLMB18H2-1700B32
版 本 号	VERSION.: V1.0

接受 RECEPTION THE SPECIFICATION HAS BEEN ACCEPTED. 日期: DATE: 公司: COMPANY:		
批准 CFMD	审核 CHKD	接收 RCVD

CFMD. 批准	CHKD. 审核	DSGD. 担当

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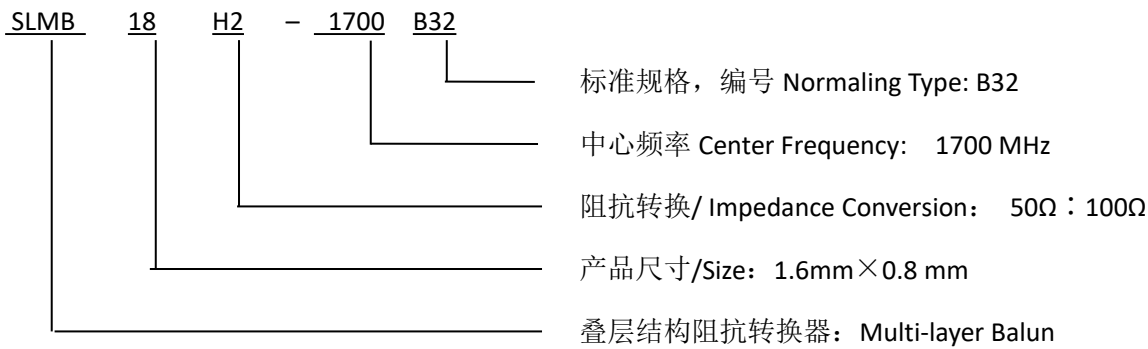
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1 适用范围 Scope

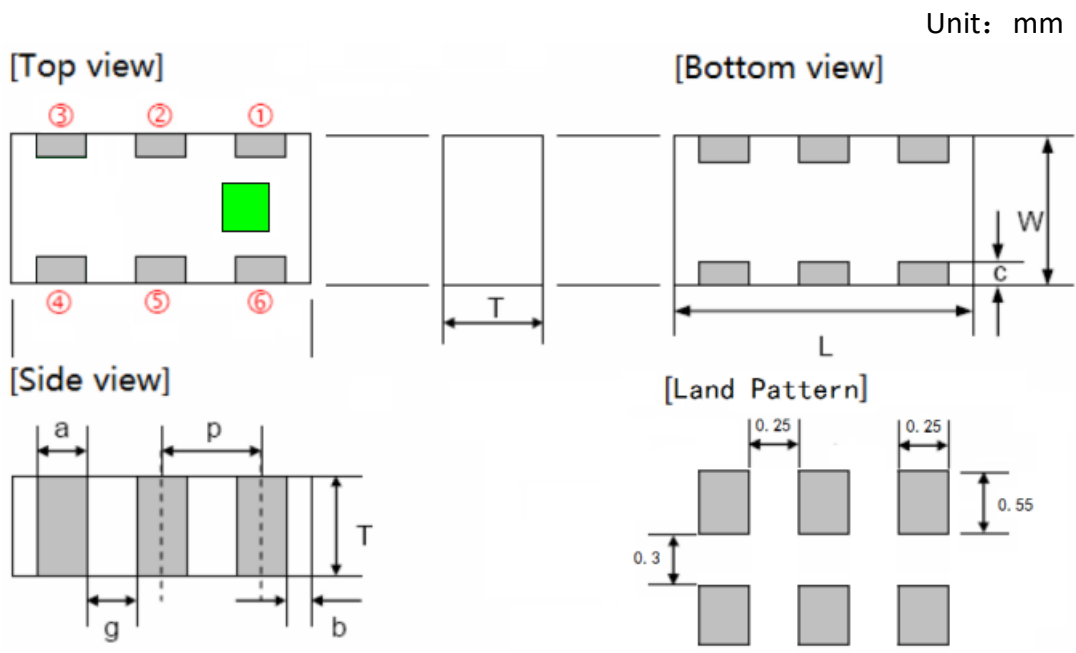
Shinhom Microwave Balun SLMB series are designed to be used in WLAN、GSM、Bluetooth、DVD & cordless phones with low insertion loss and small size SMD chip design , which can simplify your complex tuning and circuit design .

Shinhom微波阻抗转换器 SLMB系列产品设计用于WLAN、GSM、Bluetooth、DVD和无绳电话机中，具有低的插入损耗和小体积SMD片式设计，能减少复杂的调校工作，可以简化电路设计。

2 品名构成 Product Identification



3 形状和尺寸 Appearance and Dimensions



Dimensions

L	W	T	a	b	c	g	p
1.6±0.1	0.8±0.1	0.6±0.1	0.2±0.1	0.2±0.1	0.15±0.1	0.3±0.1	0.5±0.1

PIN Configuration

①	②	③	④	⑤	⑥
Unbalance Port (In)	GND	Balance Port (Out)	Balance Port (Out)	GND	NC

4 测试条件 Testing Conditions

除非另有规定，否则在以下条件下测试 <Unless otherwise specified>

- 温度 Temperature : Ordinary Temperature (5 to 35℃)
- 湿度 Humidity : Ordinary Humidity (25 to 85% RH)
- 大气压强 Atmospheric Pressure : 86 to 106 kPa

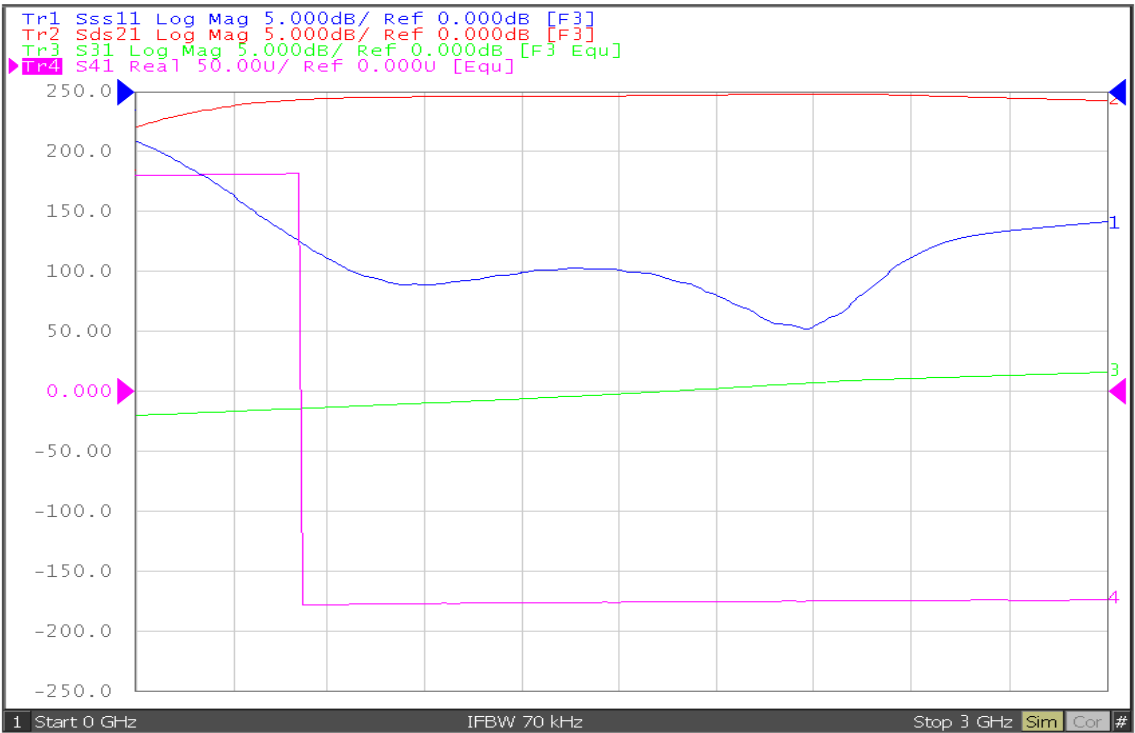
当对测量结果有疑问时<In case of doubt>

- 温度 Temperature : 20±2℃
- 湿度 Humidity : 60 to 75% RH
- 大气压强 Atmospheric Pressure : 86 to 106 kPa

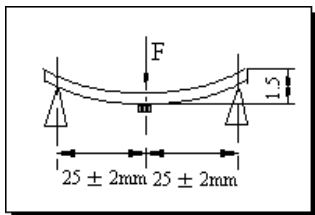
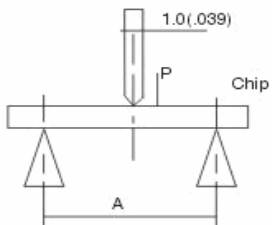
5 电气性能 Electrical Characteristics

- 操作温度范围 Operating Temperature Range : -40 to +85℃
- 保存温度范围 Storage Temperature Range : -40 to +85℃

Frequency Range (MHZ) 频率范围	Insertion Loss(dB) 插入损耗	Impedance (Ω) 阻抗	V.S.W.R (in BW) 驻波比	Amplitude difference (dB) 幅度差	Phase difference (Deg)相位差
599-699	≤1.7 @+25℃ ≤1.9 @-45~+85℃	50: 100	≤2.0	≤1.0	180±10
699-2700	≤1.3 @+25℃ ≤1.5 @-45~+85℃				
2700-2800	≤1.7 @+25℃ ≤1.9 @-45~+85℃				



6 信赖性试验 Reliable Performance

NO.	Item	Specifications	Test Methods							
6-1	Solder-Ability 可焊性	More than 90% of termination should be covered with new solder. 端电极焊锡覆盖率为90%以上。	焊锡 Solder:	无铅焊锡						
			焊锡温度 Temperature:	255℃+5℃/-0℃						
			助焊剂 Flux: 松香 rosin							
			浸渍时间 Duration:	5±0.5s						
6-2	Leaching Resistance 耐焊性	More than 75% of termination Should be covered with new solder. 端电极焊锡覆盖率为75%以上	焊锡 Solder:	无铅焊锡						
			焊锡温度 Temperature:	270℃+2℃/-0℃						
			助焊剂 Flux: 松香 rosin							
			浸渍时间 Duration:	10±0.5s						
6-3	Terminal Strength 端头强度	The terminal and body should be no damage 端头和瓷体不应见损伤	The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds. 在产品电极端子上或表面上应能承受 1kg 垂直拉力 10±1 秒							
6-4	Bending Strength 弯曲试验	No mechanical damage should be noticed 不应见机械损伤	Weld the product to the center part of the PCB with the thickness 1.6±0.2mm as the illustration shows, and keep exerting force arrow-ward on it at speed of: 1mm/S, and hold for 5±1S at the position of 1.5mm bending distance, so far, any peeling off of the product metal coating should not be detected. 将产品按图焊在 1.6±0.2mm 的 PCB 板中间，由箭头方向施力 1mm/S，弯曲距离 1.5mm，保持 5±1S，产品金属层无脱落。 							
6-5	Body Strength 抗压强度	The body should not be damaged 瓷体不应见损伤	Applied specified pull strength in axial direction 在轴向上施加压力如下： <table><tr><th>Size</th><th>A/mm</th><th>P/N</th></tr><tr><td>2012</td><td>1.4</td><td>9.8</td></tr></table> 		Size	A/mm	P/N	2012	1.4	9.8
Size	A/mm	P/N								
2012	1.4	9.8								

NO.	Item	Specifications	Test Methods
6-6	Drop 跌落	Post Environmental Tolerance (环境试验后允许附加误差) 1 Center Frequency 中心频率 fo: ± 5.0 MHz; 2 Insertion Loss 插入损耗: ± 0.5 dB; 3 Band Width 通带宽度: ± 5.0 MHz 4 V.S.W.R (in BW) 驻波比: ± 0.2 5 Attenuation 阻带衰耗: ± 2.0 dB 6 Phase difference 相位差: ± 5 Deg	Drop 10 times on a concrete floor from a height of 1m. 从距混凝土地面 1m 高度自由落下, 重复 3 次。
6-7	Vibration 振动		频率 Frequency: 10 to 55Hz 振幅 Amplitude: 1.5mm 方向及时间 Direction and time: X, Y and Z directions for 2 hours each.
6-8	Humidity resistance 耐潮湿		a. 试验条件 Test condition 温度 Temp.: $60\pm 2^{\circ}\text{C}$ 湿度 Humidity: 90%~95% 试验时间 Test time: 96 ± 2 h b. 测量条件 Measurement method: 试验后常温常湿环境中放置 (24 $\pm$ 2) 小时后测量。 The component should be stabilized at normal condition for (24 $\pm$ 2) hours before test.
6-9	High temperature resistance 耐高温		a. 试验条件 Test condition 施加额定电流 Applied rated current. 温度 Temp.: $+ 85\pm 2^{\circ}\text{C}$ 试验时间 Test time: 96 ± 2 h b. 测量条件 Measurement method: 试验后常温常湿环境中放置 (24 $\pm$ 2) 小时后测量。 The component should be stabilized at normal condition for (24 $\pm$ 2) hours before test.
6-10	Low temperature resistance 耐低温		a. 试验条件 Test condition 温度 Temp.: $-40\pm 2^{\circ}\text{C}$ 试验时间 Test time: 96 ± 2 h b. 测量条件 Measurement method: 试验后常温常湿环境中放置 (24 $\pm$ 2) 小时后测量。 The component should be stabilized at normal condition for (24 $\pm$ 2) hours before test.
6-11	Thermal shock (Temperature cycle) 热冲击 (温度循环)		a. 试验条件 Test condition 1) 温度 Temp.: -40°C , 时间 time: 30 ± 3 min 2) 温度 Temp.: $+85^{\circ}\text{C}$, 时间 time: 30 ± 3 min 5 cycles b. 测量条件 Measurement method: 试验后常温常湿环境中放置 (24 $\pm$ 2) 小时后测量。 The component should be stabilized at normal condition for (24 $\pm$ 2) hours before test.

7 焊接条件 Recommended Soldering Conditions

产品可用于回流焊

Product can be applied to reflow soldering.

(1) 焊剂 Flux, Solder

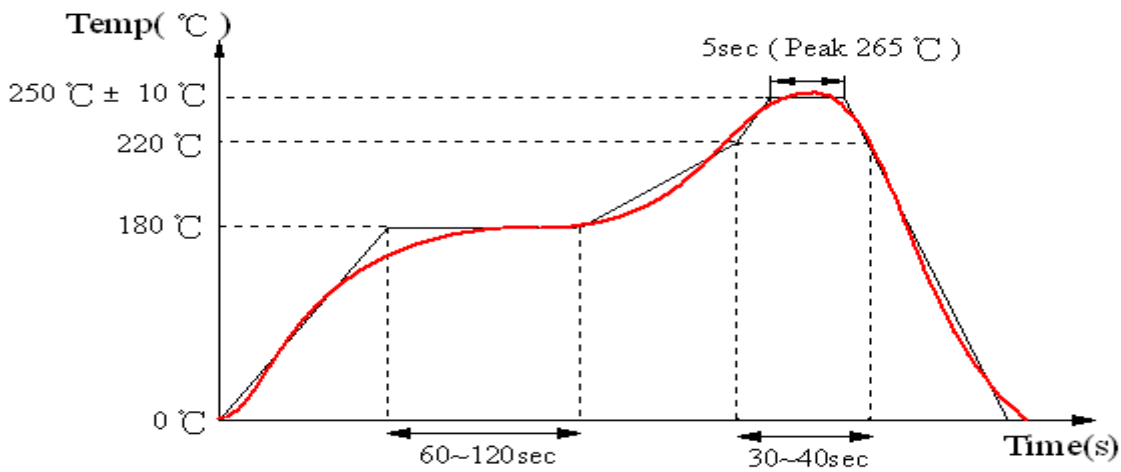
① 使用松香助焊剂，禁止使用卤化物含量超过 0.2wt%的强酸性助焊剂。

Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

② 使用纯锡焊料

Use Sn solder.

(2) 标准回流焊曲线 Standard soldering profile.



(3) 手工返工 Reworking with soldering iron

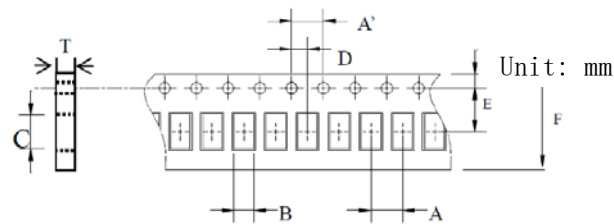
当使用电烙铁进行手工焊接时，以下条件必须严格遵守 The following conditions must be strictly followed when using a soldering iron.

预热 Pre-heating	150°C, 1 minute
尖端温度 Tip temperature	350°C max
输出功率 Soldering iron output	80w max
电烙铁头尖端尺寸 End of soldering iron	φ3mm max
焊接时间 Soldering time	3 seconds max

8 包装 Packaging

① 编带尺寸 Dimensions of Tape:

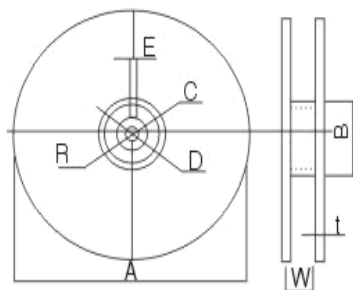
纸带 Paper carrier tape:



Type	A	A'	B	C	D	E	F	T	Tape Material
1608	4.0±0.1	4.0±0.1	1.1±0.1	1.9±0.1	2.0±0.1	3.5±0.1	8.0±0.1	0.75±0.05	Paper

② 带轮尺寸 Dimensions of Reel

Unit: mm

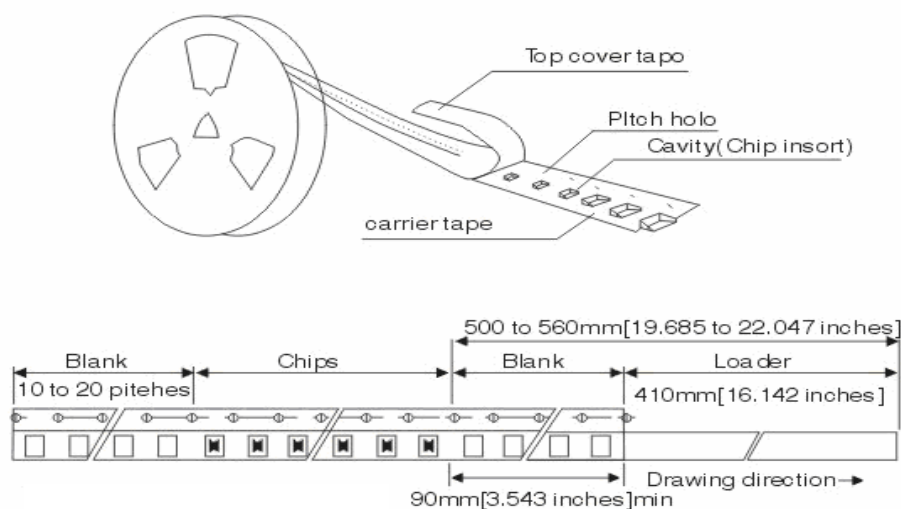


A	178±2
B	60±2
C	13.0±0.5
D	21.0±0.8
E	2.0±0.5
W	8.5±1.0
t	1.2±0.2
R	1.0±0.25

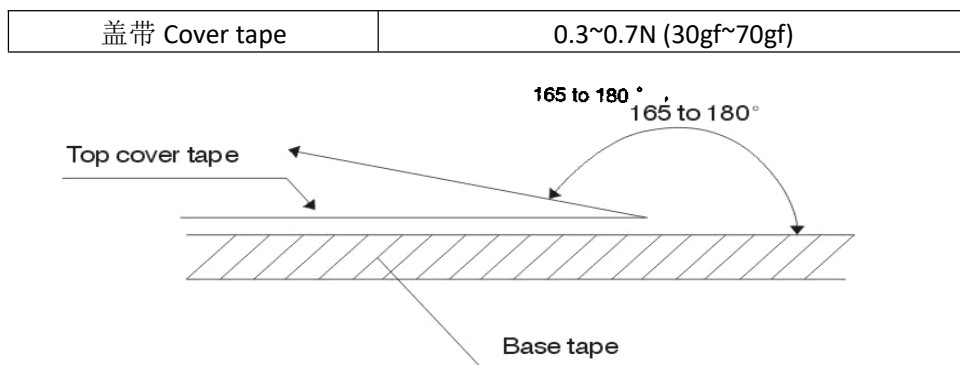
③ 编带抗拉强度 Pulling strength of tapes:

载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

④ 编带简图及拉伸方向 Taping figure and drawing direction:



⑤ 盖带的剥离强度 Peeling strength of cover tape:



测试条件 Test condition:

- 1) 剥离角度 peel angle: 165°~180° vs. carrier tape.
- 2) 剥离速度 peel speed: 300mm/min±10%.

⑦ 包装数量 Packaging quantities: 4000 PCS / Reel

9 装箱清单及标志 Packing documents and marking

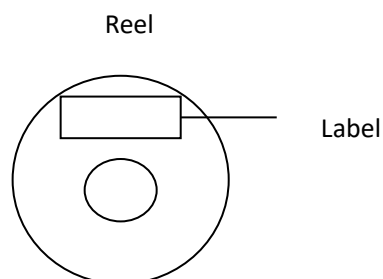
1. 包装文件 Packing documents

Packing includes the following:

- a. 装箱清单 Packing list.
- b. 合格证书 Certificate of compliance.

2. 盘上标记 Marking on reels:

- a 料号 Part No.
- b 生产批号 Lot number
- c 盘装数量 Quantity per reel
- d 检验员号 Inspector No.

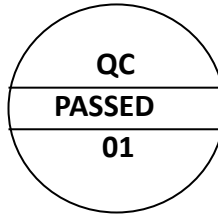


以上内容必须在标签上注明.All above shall be shown on marking label

标签如下所示: Marking label will be as following:

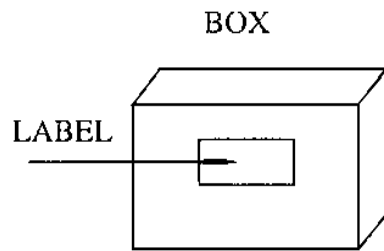
CUSTOMER:	P. O. NO	
CUSTOMER PART NO:	DATE CODE	LOT NO
PART NO:	QUANTITY	INSP. NO

检验合格后,检验员在标签上盖上合格章。合格章如下所示: The eligible reels will be pressed a mark onto the surface. The mark will be as following:



3. 内包装盒标记: Marking on inner box

- a. 型号 Part No.
- b. 每盒数量 Quantity per box
- c. 包装日期 Date



以上内容必须在标签上注明 (标签见 9.2 所示)。 Above shall be shown on marking label(The marking label is shown in item 9.2).

4. 外包装箱标记 Marking on outer case:

- 1) 制造商 Manufacturer: "Shinhom"①

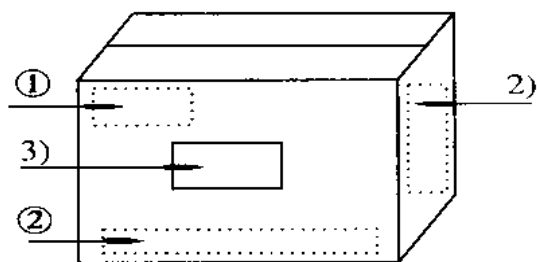
"中国制造" "Made in CHINA"②

- 2) 发运标记 Ship marking:

"向上" "UP", "小心轻放" "HAND CARE", "防潮" "MOISTURE-PROOF".

- 3) 包装标签包括以下内容 Packing label include the following:

- a. 型号 Part No
- b. 总数量 Total quantity per case
- c. 包装日期 Date;



以上内容必须在标签上注明。(参见 9.2 所示)

All above shall be shown on marking label.

(The marking label is shown in item 9.2)

10 保管 Storage

①. 保管期限 Storage period

距我司出厂检验时间六个月内，产品可以使用；检验时间可以通过包装外侧标记的检验号确认；若时间超出六个月，应检查焊接性能后方可使用。Products which inspected in Shinhom over 6 months ago should be examined and used, which can be confirmed with inspection No. marked on the container. Solder ability should be checked if this period is exceeded.

②. 保存条件 Storage conditions

●存放货物的库房应满足以下条件 Products should be storage in the warehouse on the following conditions

温度 Temperature:10~ 40℃

湿度 Humidity : 30~70% relative humidity

不允许温、湿度有极剧变化。No rapid change on temperature and humidity

●禁止将产品保管在腐蚀性物质中，例如硫磺、氯气或者酸，否则将引起端头氧化，导致降低焊接性。Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solder ability.

●为了避免受潮气、灰尘等物质的影响，产品应保管于货架上。Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.

●产品保管在库房中时，应避免热冲击，振动以及直接光照等等。Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.

●产品应密封包装 Products should be storage under the airtight packaged condition.