

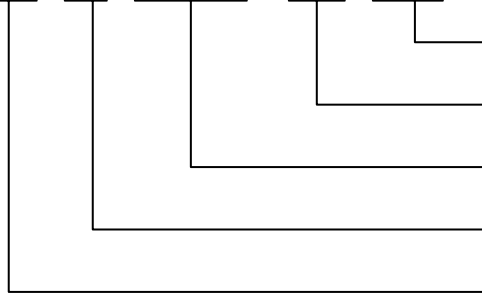
1. 概述 INTRODUCTION

微波带通滤波器 LF 系列产品设计用于 WLAN、GSM、Bluetooth、PDA 和无绳电话机中，具有低的插入损耗、高的衰减和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

Microwave Band-Pass filter LF series are designed to be used in WLAN、GSM、Bluetooth、PDA & cordless phones with low insertion loss and high attenuation as well as small size SMD chip design , which can simplify your complex tuning and circuit design .

2. 型号 Part Number

LF 31 B5800 P36 - N20



标准规格，编号 N20/Normaling Type: N20

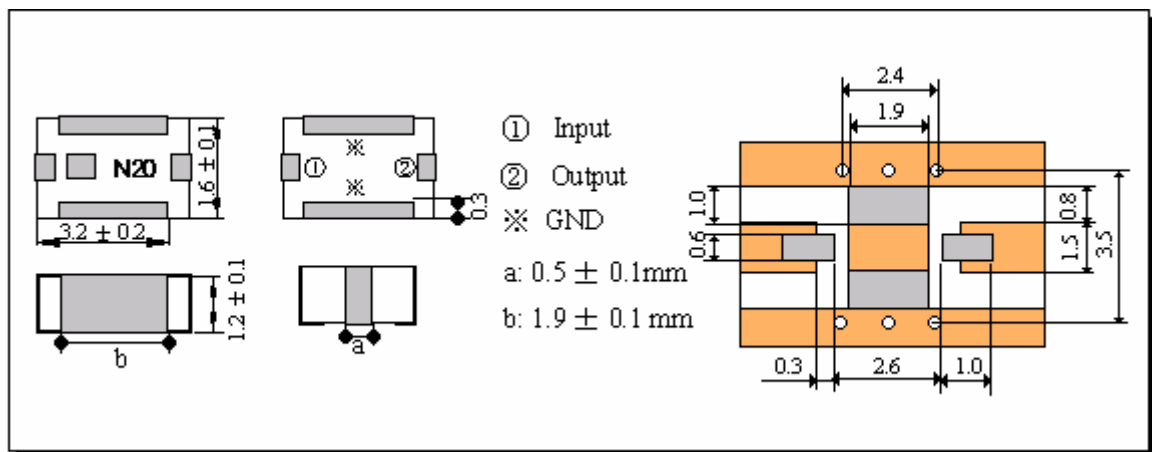
平面设计结构/Planar Design Series: P36

带通滤波器/Band Pass Filter: 5800MHz

产品尺寸/Size: 3.2×1.6×1.2

多层结构滤波器/Multi-layer Filter

3. 外型尺寸 Dimensions (Unit: mm)



4. 结构及材料 Structure and Material

No	Part Name	名称	Structure and Material	结构及材料
4.1	Resonator	谐振体	Dielectric Material	LTCC 介质材料
4.2	In/Output Terminals	输入/输出	Ag	银
4.3	Ground Base	接地面	Ag	银

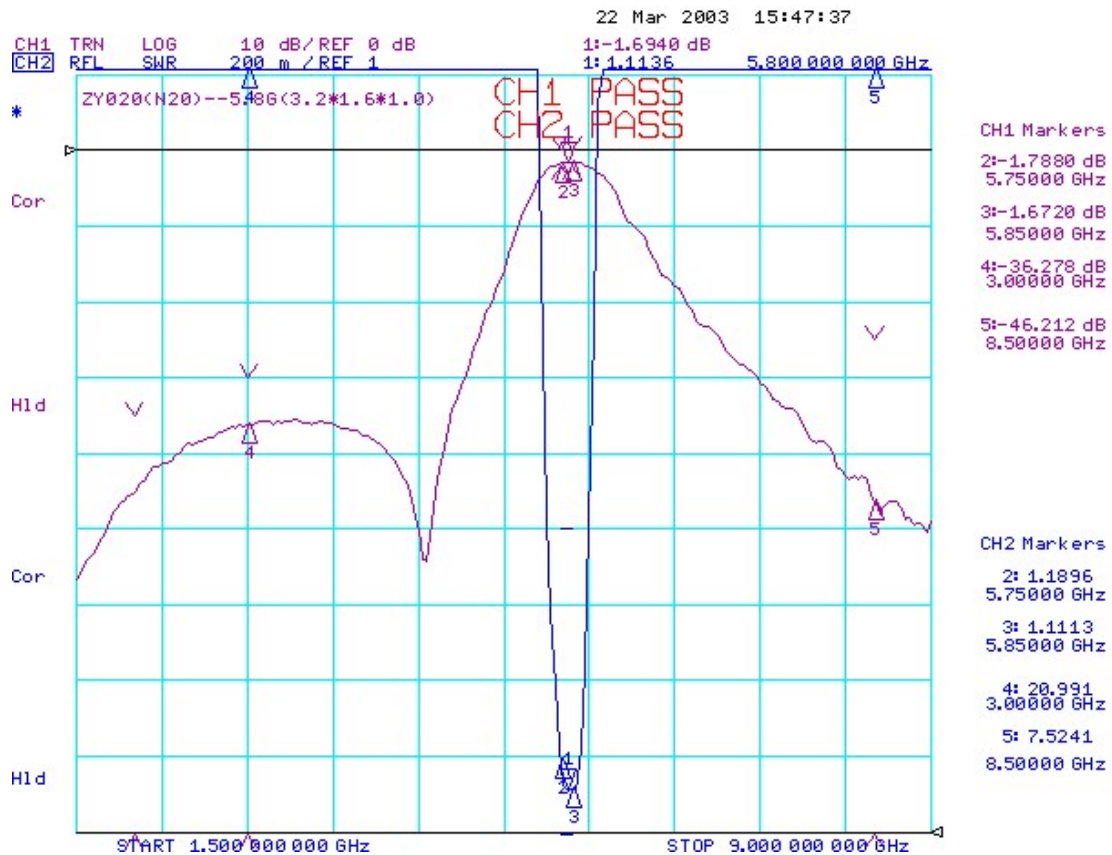
5. 电气性能

Electrical Characteristics

No.	Item (项目)	Specifications (特性)	Post Environmental Tolerance (环境试验后允许附加误差)
5.1	Center Frequency 中心频率 f_0	5800.0 MHz	± 2.0 MHz
5.2	Insertion Loss 插入损耗	≤ 2.0 dB (at $25^\circ\text{C} \pm 5^\circ\text{C}$)	± 0.5 dB
		≤ 2.5 dB (at $-40^\circ\text{C} \sim 85^\circ\text{C}$)	
5.3	Band Width 通带宽度	$f_0 \pm 50$ MHz	± 1.0 MHz
5.4	Ripple (in BW) 通带波动	≤ 1.0 dB	± 0.5 dB
5.5	V.S.W.R (in BW) 驻波比	≤ 2.0	± 0.2
5.6	Attenuation 阻带衰减	≥ 35 dB (at 2000MHz)	± 2.0 dB
		≥ 30 dB (at 3000MHz)	
		≥ 25 dB (8500~9000MHz)	
5.7	Permissible Input Power 输入功率 (MAX)	1 W	—
5.8	In/Output Impedance 输入/输出阻抗	50 Ω	—

6. 特性曲线

Characteristic curve



7. 可靠性 **Reliability:** MTBF=1×10⁶/pc.hr

试验条件: 温度 Temperature: 40°C±5°C
负荷 Load: DC=5V±0.5V
数量 Quantity: 2000 pcs
持续时间 Sustained Time: 480 h

8. 环境试验 **Environmental Test**

经环境试验后允许比起始读数偏差见表 2

Post Environmental Tolerance (Refer to the table 2)

基准条件: 温度范围 Temperature range 25 ± 5°C
相对湿度范围 Relative Humidity range 55~75%RH
工作温度 Operating Temperature range -40°C~+85°C
贮藏温度 Storage Temperature range -40°C~+85°C

8.1 耐振动 **Vibration Resist**

在振动频率为 10~55Hz 振幅为 1.5mm 沿 X.Y.Z 方向各振动 2 小时后测试符合表 5.1~5.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 5.1~5.6 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

8.2 耐跌落冲击 **Drop Shock**

在 100cm 高度处按 X, Y, Z 三个面分别自由跌落在木制地板上共 3 次后测试符合表 5.1~5.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 5.1~5.6 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

8.3 耐焊接热 **Solder Heat Proof**

能承受经 120~150°C 的温度预热 120 秒后, 在 230°C+10°C 的焊锡浸 5 ± 0.5 秒。

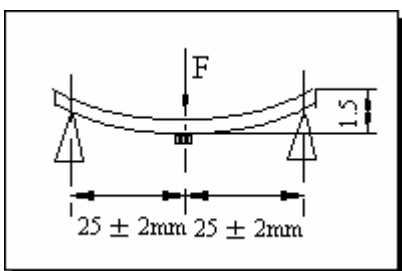
The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 230°C+5°C for 5 ± 0.5 seconds.

8.4 结合力试验 **Tensile Strength of Terminal**

在产品电极端子上或表面上应能承受 1kg 垂直拉力 10 ± 1 秒。

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.

8.5 耐弯曲试验 **Bending Resist Test**



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。

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 $5 \pm 1S$ at the position of 1.5mm bending distance , so far , any peeling off of the product metal coating should not be detected .

8.6 耐湿热特性 **Moisture Proof**

在温度为 $60 \pm 2^{\circ}C$, 相对湿度 90~95%的恒温湿箱中放置 96 小时, 在常温中恢复 1~2 小时后测试, 符合表 5.1~5.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 5.1~5.6 after exposed to the temperature $60 \pm 2^{\circ}C$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condllition.

8.7 高温特性 **High Temperature Endurance**

在温度为 $85 \pm 5^{\circ}C$ 的恒温箱中放置 24 ± 2 小时, 在常温中恢复 1~2 小时后测试。符合表 5.1~5.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 5.1~5.6 after exposed to temperature $85 \pm 5^{\circ}C$ for 24 ± 2 hours and 1~2 hours recovery time under normal temperature.

8.8 低温特性 **Low Temperature Endurance**

在温度为 $-40^{\circ}C \pm 5^{\circ}C$ 低温箱中放置 24 ± 2 小时后恢复 1~2 小时测试符合表 5.1~5.6 规定。

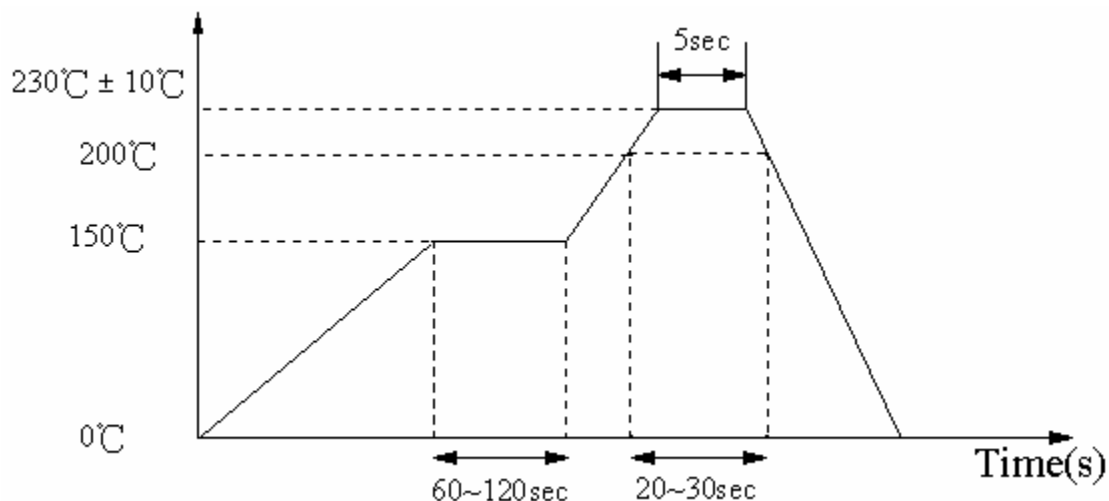
The device should also satisfy the electrical characteristics specified in paragraph 5.1~5.6 after exposed to the temperature $-40^{\circ}C \pm 5^{\circ}C$ for 24 ± 2 hours and to 2 hours recovery time under normal temperature.

8.9 温度循环 **Temperature Cycle Test**

在 $-25^{\circ}C$ 温度中保持 30 分钟, 再在 $+85^{\circ}C$ 温度中保持 30 分钟, 共循环 5 次后在常温中恢复 1~2 小时后测试符合表 5.1~5.6 规定。

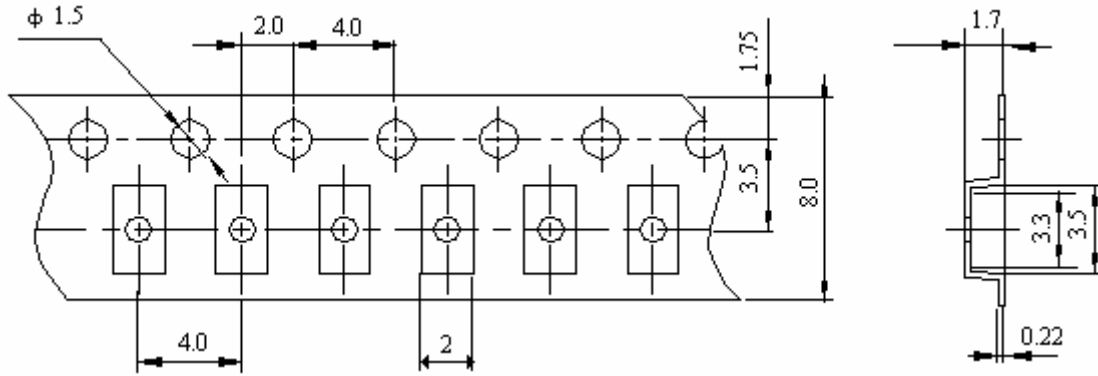
The device should also satisfy the electrical characteractics specified in paragraph 5.1~5.6 after exposed to the low temperature $-25^{\circ}C$ and high temperature $+85^{\circ}C$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

9. 回流焊温度 **Reflow Soldering Standard Condition**



10 包装尺寸 (3216) Packaging and Dimensions

● Plastic Tape



● Reel (2000 pcs/Reel)

