

SPECIFICATION OF LTCC FILTER LF43B3500P34-N42

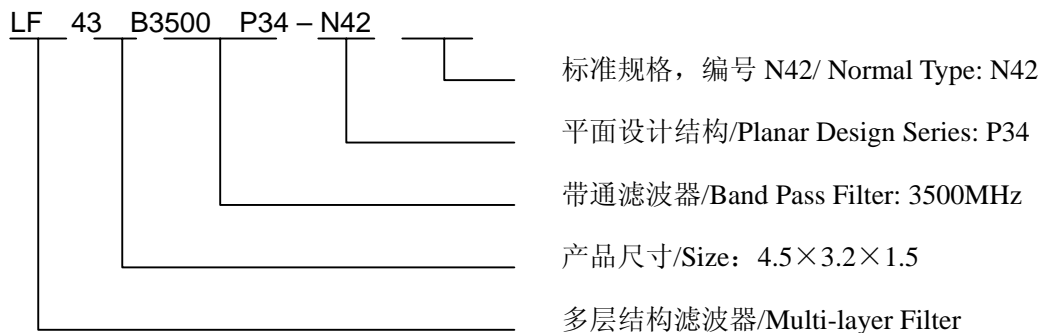
RoHS Compliant Parts

1. 概述 INTRODUCTION

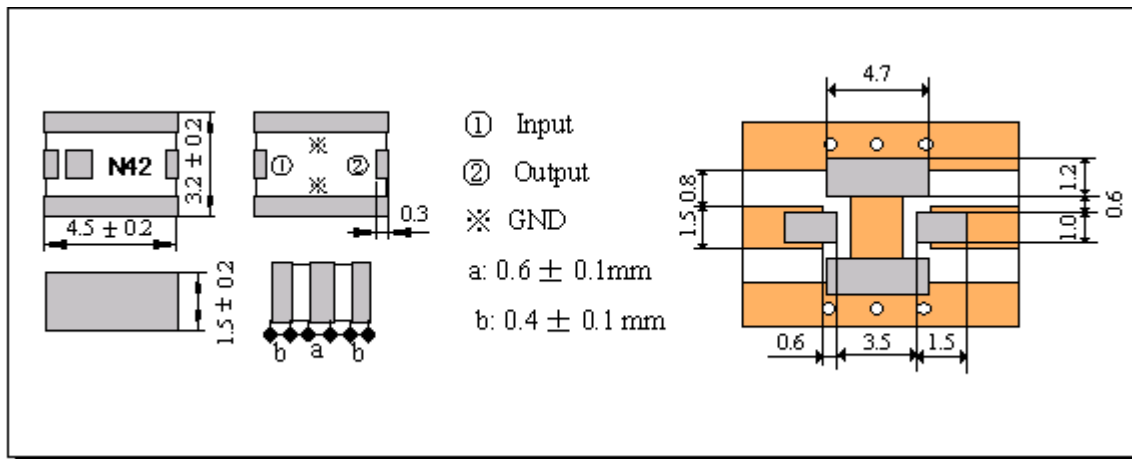
微波带通滤波器 LF 系列产品设计用于 WLAN、GSM、Bluetooth、PDA 和无绳电话机中，具有低的插入损耗、高的衰减和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

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



3. 外型尺寸 Dimensions (Unit: mm)



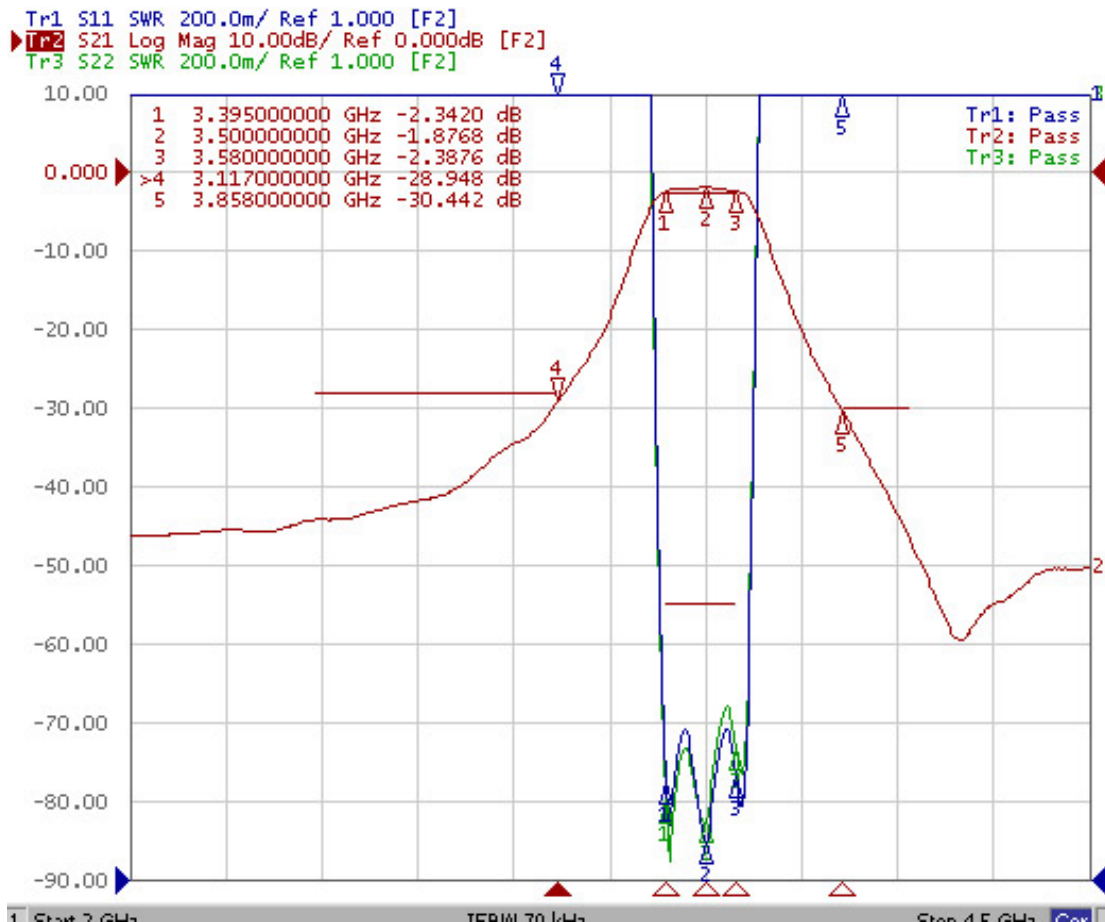
4. 结构及材料 Structure and Material

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)
5.1	Center Frequency 中心频率 fo	3500 MHz
5.2	Insertion Loss 插入损耗	≤2.7dB (at 25°C ±5°C)
		≤3.0dB (at -40°C ~85°C)
5.3	Band Width 通带宽度	3395~3580 MHz
5.4	Ripple (in BW) 通带波动	≤1.0 dB
5.5	V.S.W.R (in BW) 驻波比	≤2.0
5.6	Attenuation 阻带衰减	≥27dB (2484~3117MHz)
		≥30dB (3858~4033MHz)
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 环境试验后允许误差 Post Environmental Tolerance

经环境试验后允许比起始读数偏差见下表

Post Environmental Tolerance (Refer to the table)

No.	Item (项目)	Post Environmental Tolerance (环境试验后允许附加误差)
7.1	Center Frequency 中心频率 f_0	± 2.0 MHz
7.2	Insertion Loss 插入损耗	± 0.5 dB
7.3	Band Width 通带宽度	± 1.0 MHz
7.4	Ripple (in BW) 通带波动	± 0.5 dB
7.5	V.S.W.R (in BW) 驻波比	± 0.2
7.6	Attenuation 阻带损耗	± 2.0 dB

8 环境试验 Environmental Test

基准条件: 温度范围 Temperature range	$25 \pm 5^\circ\text{C}$
相对湿度范围 Relative Humidity range	55~75%RH
工作温度 Operating Temperature range	$-40^\circ\text{C} \sim +85^\circ\text{C}$
贮藏温度 Storage Temperature range	$-40^\circ\text{C} \sim +85^\circ\text{C}$

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 7.1~7.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 7.1~7.6 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 7.1~7.6 规定。

The device should satisfy the electrical characteristics specified in paragraph 7.1~7.6 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 $120 \sim 150^\circ\text{C}$ 的温度预热 120 秒后, 在 $255^\circ\text{C} + 10^\circ\text{C}$ 的焊锡浸 5 ± 0.5 秒。

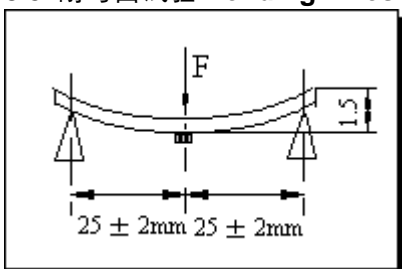
The device should be satisfied after preheating at $120^\circ\text{C} \sim 150^\circ\text{C}$ for 120 seconds and dipping in soldering Sn at $255^\circ\text{C} + 10^\circ\text{C}$ for 5 ± 0.5 seconds.

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 $1.6 \pm 0.2\text{mm}$ 的 PCB 板中间, 由箭头方向施力: 1mm/S, 弯曲距离: 1.5mm, 保持 $5 \pm 1\text{S}$, 产品金属层无脱落。

Weld the product to the center part of the PCB with the thickness $1.6 \pm 0.2\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S, and hold for $5 \pm 1\text{S}$ 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 $60 \pm 2^\circ\text{C}$, 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 7.1~7.6 规定。The device should satisfy the electrical characteristics specified in paragraph 7.1~7.6 after exposed to the temperature $60 \pm 2^\circ\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

8.7 高温特性 High Temperature Endurance

在温度为 $85 \pm 5^\circ\text{C}$ 的恒温箱中放置 96 ± 2 小时, 在常温中恢复 1~2 小时后测试。符合表 7.1~7.6 规定。The device should satisfy the electrical characteristics specified in paragraph 7.1~7.6 after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

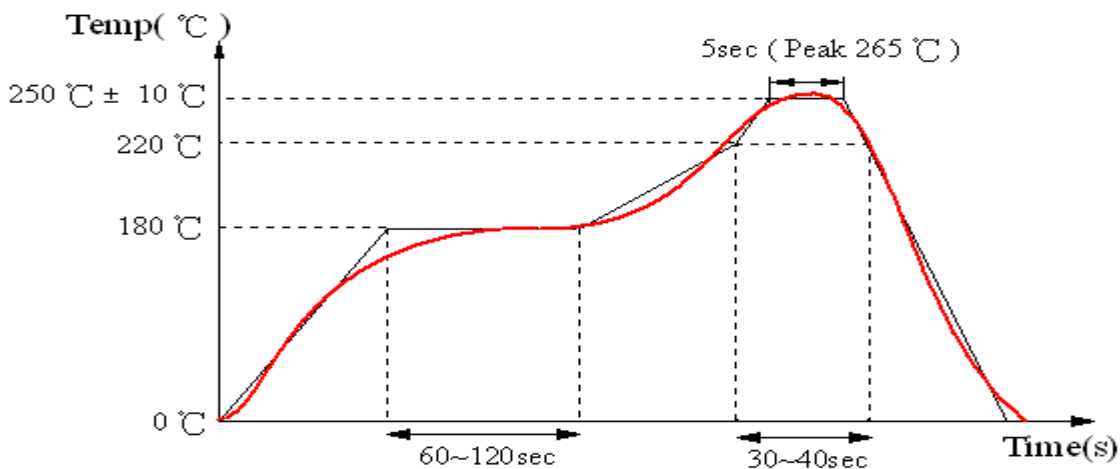
8.8 低温特性 Low Temperature Endurance

在温度为 $-40^\circ\text{C} \pm 5^\circ\text{C}$ 低温箱中放置 96 ± 2 小时后恢复 1~2 小时测试符合表 7.1~7.6 规定。The device should also satisfy the electrical characteristics specified in paragraph 7.1~7.6 after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

8.9 温度循环 Temperature Cycle Test

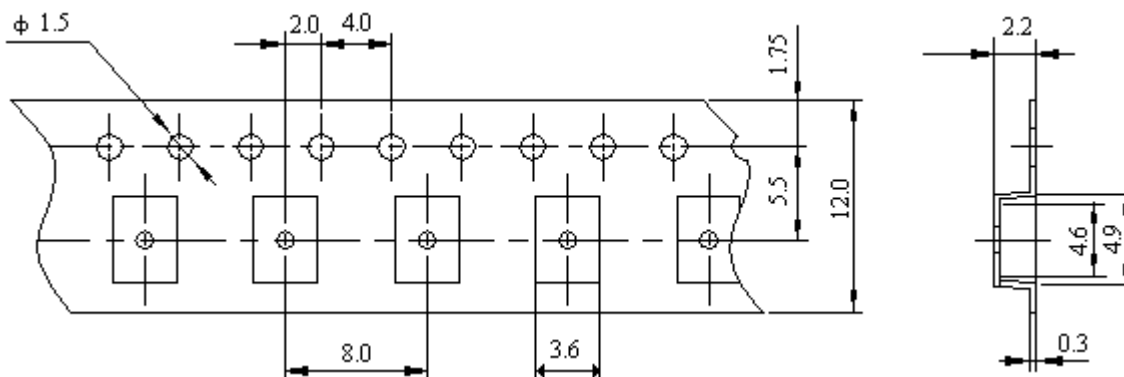
在 -40°C 温度中保持 30 分钟, 再在 $+85^\circ\text{C}$ 温度中保持 30 分钟, 共循环 5 次后在常温中恢复 1~2 小时后测试符合表 7.1~7.6 规定。The device should also satisfy the electrical characteristics specified in paragraph 7.1~7.6 after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles 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(4532) Packaging and Dimensions

10.1 Plastic Tape



包装说明: Remarks for Package

载带尾部空穴长度 150~200mm, 载带头部空穴长度 250~300mm, 头部的盖带加长 250mm。

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

10.2 Reel (1000 pcs/Reel)

