

**浙江正原电气股份有限公司**  
**ZHEJIANG ZHENYUAN ELECTRONIC CO., LTD**

**压电陶瓷滤波器**  
**PIEZO-CERAMIC FILTER**  
**技 术 条 件**  
**SPECIFICATION**

**产 品 型 号      LT455BU**  
**Part Number**



发送日期		拟 制	
发 送 人		审 核	
页 数		批 准	

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## 1、使用范围 SCOPE

本产品规格书适用于通讯设备用陶瓷滤波器 LT455BU。

This specification should cover the characteristics of the ceramic filter with 455kHz .

## 2、产品名称 PART NO : LT455BU

## 3、电气性能 ELECTRICAL CHARACTERIST

序号 NO.	项 目 Item	规 格 Value/Specifications
3.1	中心频率 Center Frequency (Fo)	455 ± 2.0kHz
3.2	6dB 带宽 Band Width at 6dB	± 15kHz min
3.3	40dB 带宽 Band Width at 40dB	± 30 kHz max
3.4	插入损耗 Insertion Loss	4dB max
3.5	通带波动 (fo ± 15kHz) Ripple in Bandwidth	2.0 dB max
3.6	阻带衰减 (fo ± 100kHz) Stop Band Attenuation (at fo ± 100kHz)	30dB min
3.7	中心频率温度特性(-25 ~+80 ) Temperature Coefficient of Center Frequency(-25 ~+80 )	50ppm/ max
3.8	群延迟 Group Delay Time Deviation	30 μ sec.max(455 ± 5 kHz)
3.9	耐电压 Dielectric withstanding Voltage	100V.DC(1 minute)
3.10	输入输出阻抗 Input/Output impedance	1.5k ± 10%
3.11	绝缘阻抗 (DV 10V) Insulation Resistance ( DV 10V )	100M min

注：中心频率是-6 dB 带宽处的中心值。

Note: Center frequency shall be defined as the center value of the bandwidth at 6dB.

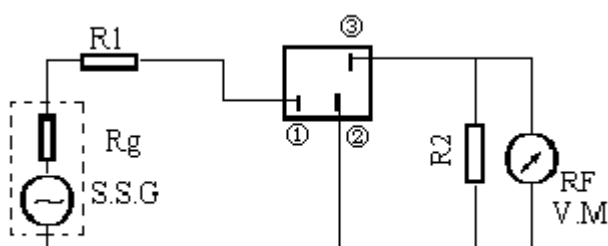
#### 4、测试 MEASUREMENT

##### 4.1 测试条件 Test Condition

基准测试温度为  $25 \pm 2$  。 常温测试为  $15 \sim 35$  。

Criteria test should be conducted at temperature of  $25 \pm 2$  , and ordinary temprature test at  $15 \sim 35$  。

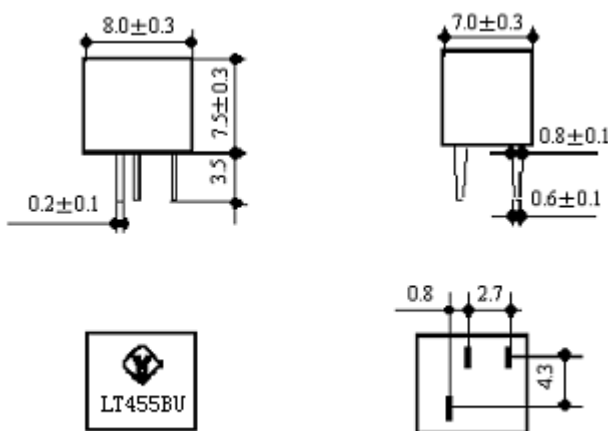
##### 4.2 测试线路 Test Circuit



输入 Input  
地 Ground  
输出 Output

$R_g + R_1 = R_2$  = 输入/输出阻抗 Input/Output Impedance

#### 5、外形尺寸 DIMENSIONS



单位 Unit: mm

标称公差:  $\pm 0.3$

Standard tolerance

#### ★材料 Material

序号No.	组成部分 Components	材料/规格 Material/Specifications
1	引出端子 Terminal	磷青铜/镀银 Phosphor bronze/silver-plating
2	绝缘树脂 Insulation resin	环氧树脂(黑色) Epoxy resin(black)
3	塑壳 Case	工程塑料 PBT

## 6、物理和环境特性 PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

序号 No.	试验项目 Item	试验条件 Condition of test	特性要求 performance Requirements
6.1	耐湿特性 Humidity	在温度为 $40 \pm 2$ ,湿度 90~95%RH 的恒温槽中放置 $96 \pm 4$ 小时后取出 ,在常温中保持 1 小时后测试。 Keep the filter at $40 \pm 2$ and 90~95%RH for $96 \pm 4$ hours,then release the filter into the room temperature for 1hour prior to the measurement.	符合表 1 规定 It should conform to the specifications in Table 1.
6.2	高温保持特性 High Temperature Exposure	在温度为 $80 \pm 5$ 的恒温槽中放置 $96 \pm 4$ 小时后取出 ,在常温中保持 1 小时后测试。 Subject the filter to $80 \pm 5$ for $96 \pm 4$ hours,then release the filter into room temperature for 1 hours prior to the measurement.	符合表 1 规定 It should conform to the specifications in Table 1.
6.3	低温保持特性 Low Temperature Exposure	在温度为 $-40 \pm 5$ 的恒温槽中放置 $96 \pm 4$ 小时后取出 ,在常温中保持 1 小时后测试 Subject the filter to $-40 \pm 5$ for $96 \pm 4$ hours,then release the filter into room temperature for 1 hours prior to the measurement.	符合表 1 规定 It should conform to the specifications in Table 1.
6.4	温度循环 Temperature Cycling	在 $-30$ 的温度中保持 30 分钟 ,再在 $+80$ 的温度中保持 30 分钟 ,循环 30 次后 ,在室温中保持 1 小时后测试。 Subject the filter to $-30$ for 30 minutes, followed by a high temperature of $+80$ for 30 minutes, Cycling shall be repeated 30 times, then release the filter into the room temperature for 1 hour prior to the measurement.	符合表 1 规定 It should conform to the specifications in Table 1.
6.5	耐振动性 Vibration	振动频率 10~55Hz ,振幅 1.5mm ,沿 X、Y、Z 方向各振动 2 小时后测试。 Subject the filter to Vibration for 2 hours each in X、 Y and Z axis with the amplitude of 1.5mm ,the frequency shall bevaried uniformly between the limites of 10~55Hz.	符合表 1 规定 It should conform to the specifications in Table 1.

续表 Continue Table

序号 No.	试验项目 Item	试验条件 Condition of test	特性要求 performance Requirements
6.6	耐跌落冲击 Mechanical shock	从 30cm 高度自由跌落水泥地面 3 次。 Drop the filter randomly onto the concrete floor from the height of 30cm 3 times.	符合表 1 规定 无机械损伤 It should conform to the specifications in Table 1. No mechanical damage.
6.7	耐焊接热 Resistance to Solder Heat	将引线离根部 2mm 位置处浸入 $260 \pm 5$ 的焊槽中保持 $10 \pm 1$ 秒。 Dip the filter terminals 2mm into the solder bath at $260 \pm 5$ for $10 \pm 1$ sec. Then release the filter into the room temperature for 1 hour prior the measurement.	符合表 1 规定 It should conform to the specifications in Table 1.
6.8	可焊性 Solder Ability	将引线离根部 2mm 位置处浸入 $235 \pm 5$ 的焊剂中保持 $3 \pm 1$ 秒。 Dip the filter terminals 2mm into the solder bath at $235 \pm 5$ for $3 \pm 1$ sec.	95% 以上的引线表面附有焊剂。 More than 95% of the terminal surface of the filter should be covered with fresh solder.
6.9	引线拉伸强度 Tensile strength 引线弯曲强度 Bending Resist	各引线轴方向上施加 1kg 静负荷 $10 \pm 1$ 秒。 Apply a 1kg tensile force to the terminals for $10 \pm 1$ sec. 在引线固定处向本体弯曲 $90^\circ$ ，再沿相反方向弯曲 $90^\circ$ ，1 次循环。 Lead should with stand against 90 degree bending at its stem. This operation shall be done towards both directions.	引线无缺陷和裂痕，电性能符合 3.1~3.7 规定。 No damage is detected and it should conform to the specifications in 3.1~3.7.

表 Table

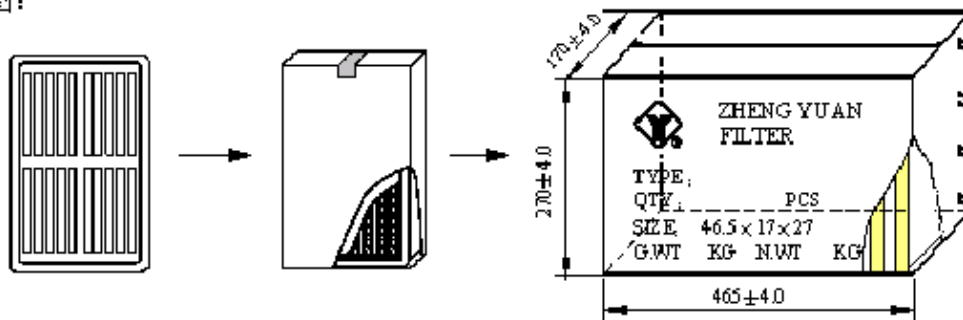
项 目 Item	规 格 Specifications
通带波动 Ripple ( $f_0 \pm 15\text{kHz}$ )	3dB max
中心频率 Center Frequency (6dB)	$\pm 1.5\text{kHz}$ max
6dB 带宽 Band Width at 6dB	$\pm 2.0\text{kHz}$ max
40dB 带宽 Band Width at 40dB	$\pm 2.0\text{kHz}$ max
插入损耗 Insertion loss	2.0dB max

## 7、运输与包装 TRANSPORTION AND PACKAGE

运输过程中不能损伤包装，每只包装箱注明产品名称、数量及合格证, 每只外包装箱装 7000 只滤波器 ,每只小包装盒装 280 只滤波器。

Please be careful not to damage the packing box during transportation。The name、quantity and certificate of the product are indicated on the box. One packing box contains 25 small box with 280 pcs of filters in each。

示意图：



## 8、注意事项 APPLICATION NOTES

当对产品规格书上内容有怀疑时，请与我们联系，达成一致。

If any doubt for the specifications, Please contact us directly for further agreements.