



1. SCOPE

This specification shall cover the characteristics of the ceramic filter with the type LT10.7MA5.

2. PART NO.:

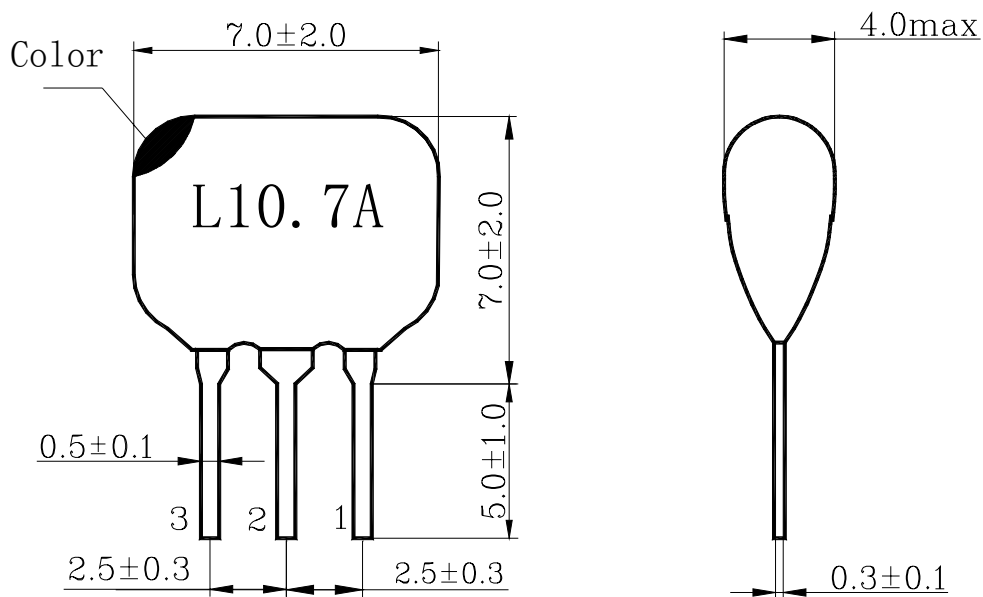
PART NUMBER	CUSTOMER PART NO	SPECIFICATION NO
LT10.7MA5		

3. OUTLINE DRAWING AND DIMENSIONS:

Appearance: No visible damage and dirt.

Construction: Leads are soldered on electrode and body is molded by resin.

Dimensions:



UNIT: mm

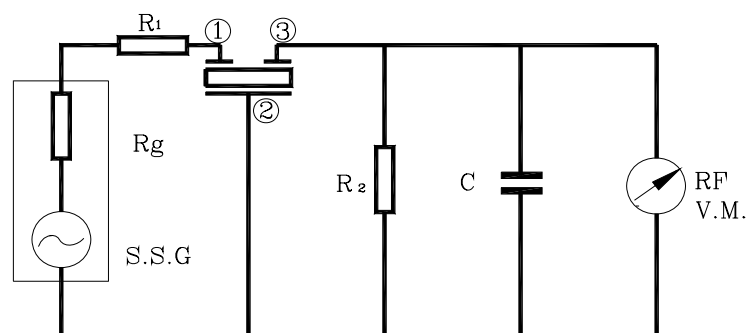
4. ELECTRICAL SPECIFICATIONS:

No	Item	Requirements
4.1	Center Frequency f_0 (MHz)	10.700 ± 0.030 (RED)
4.2	3dB Band Width (kHz)	280 ± 50
4.3	20dB Band Width (kHz) max	630
4.4	Insertion Loss (dB) max	6.0
4.5	Spurious Response (dB) min	30 (9—12MHz)
4.6	Input/Output Impedance (Ω)	330
4.7	Temp. Coefficient of Frequency (%) max	± 0.5 (Center Frequency drift, $-20^\circ\text{C} \sim +80^\circ\text{C}$)
4.8	Insulation Resistance R_i ($M \Omega$) min	100 (100V, 1min)
4.9	Withstanding Voltage	50VDC, 1min

5. MEASUREMENT:

Measurement Conditions: Parts shall be measured under a condition (Temp.: $20 \pm 15^\circ\text{C}$, Humidity : $65 \pm 20\%$ R.H.) unless the standard condition (Temp.: $25 \pm 2^\circ\text{C}$, Humidity : $65 \pm 5\%$ R.H.) is regulated to measure.

Test Circuit:



$$R_g + R_1 = R_2 = 330 \Omega$$

$$C = 10 \text{ pF (Including stray capacitance and input capacitance of RF voltmeter)}$$



6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No	Item	Condition of Test	Performance Requirements
6.1	Humidity	Subject the filter at $+40 \pm 2 \text{ }^{\circ}\text{C}$ and 90%-95% R.H. for 100 hours, filter shall be measured after being placed in natural conditions for 1 hour.	It shall fulfill the specifications in Table 1.
6.2	High Temperature Exposure	Subject the filter to $+85 \pm 5 \text{ }^{\circ}\text{C}$ for 100 hours, filter shall be measured after being placed in natural conditions for 1 hour.	It shall fulfill the specifications in Table 1.
6.3	Low Temperature Exposure	Subject the filter to $-25 \pm 5 \text{ }^{\circ}\text{C}$ for 100 hours, filter shall be measured after being placed in natural conditions for 1 hour.	It shall fulfill the specifications in Table 1.
6.4	Temperature Cycling	Subject the filter to $-25 \text{ }^{\circ}\text{C}$ for 30 min. followed by a high temperature of $+85 \text{ }^{\circ}\text{C}$ for 30 min. Cycling shall be repeated 5 times. Filter shall be measured after being placed in natural conditions for 1 hour.	It shall fulfill the specifications in Table 1.
6.5	Vibration	Subject the filter to vibration for 2 hours each in x y and z axis with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10Hz-55Hz and then filter shall be measured.	It shall fulfill the specifications in Table 1.
6.6	Mechanical Shock	Filter shall be measured after 3 times' random dropping from the height of 100cm on concrete floor.	No visible damage and it shall fulfill the specifications in Table 1.
6.7	Resistance to Soldering Heat	(1) Lead terminals are immersed up to 2 mm from filter's body in soldering bath of $260 \pm 5 \text{ }^{\circ}\text{C}$ for 5 ± 1 seconds and then filter shall be measured after being placed in natural conditions for 1 hour. (2) Lead terminals is directly contacted with the tip of soldering iron of $350 \pm 5 \text{ }^{\circ}\text{C}$ for 5.0 ± 0.5 seconds and then filter shall be measured after being placed in natural conditions for 1 hour.	It shall fulfill the specifications in Table 1.



6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

(Continued from the preceding page)

No	Item	Condition of Test	Performance Requirements
6.8	Solderability	Lead terminals are immersed up to 2mm from filter's body in soldering bath of 250 ±5°C for 2±0.5 sec.	More than 95% of the terminal surface of the filter shall be covered with fresh solder.
6.9	Terminal Strength	Force of 5N is applied to each lead in axial direction for 10±1 sec. When force of 5N is applied to each lead in axial direction, the lead shall folded up 90° from the axial direction and folded back to the axial direction. The speed of folding shall be each 3 seconds.	No visible damage and it shall fulfill the specifications in Table 1.
6.9.1	Terminal Pulling		
6.9.2	Terminal Bending		

Table 1

Item	Specification after test
Center Frequency drift	± 30kHz max
Insertion Loss drift	± 2dB max.
3dB Band Width drift	± 20kHz max.
20dB Band Width drift	± 30kHz max.
Spurious Response	30 dB min

Note : The limits in the above table are referenced to the initial measurements.

7. REVIEW OF SPECIFICATIONS

When something gets doubtful with this specifications, we shall jointly work to get an agreement.

SHENZHEN LUGUANG ELECTRONIC TECHNOLOGY CO.,LTD.

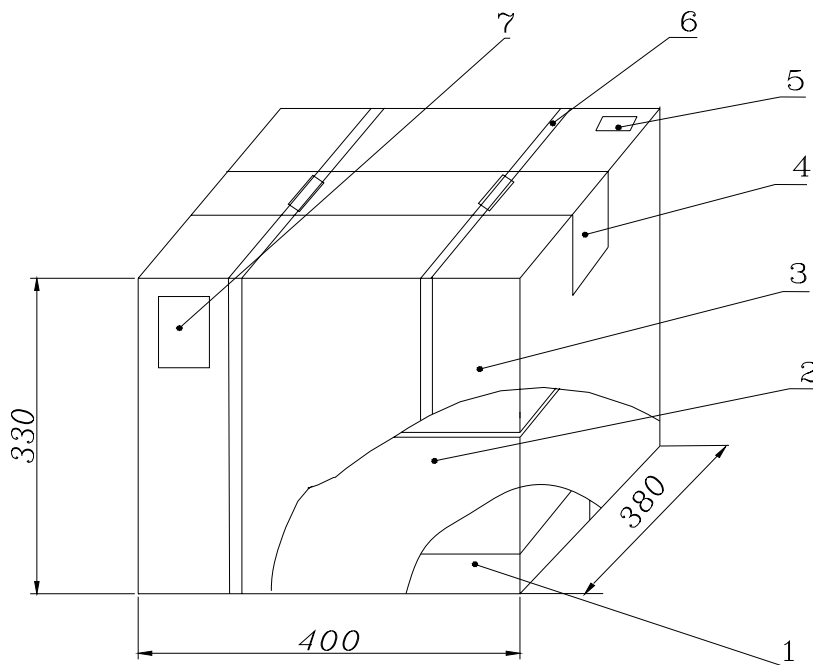
8. PACKAGE

To protect the products in storage and transportation, it is necessary to pack them (outer and inner package). On paper pack, the following requirements are requested.

8.1 Dimensions and Mark

At the end of package, the warning (moisture proof, upward put) should be stick to it.

Dimensions and Mark (see below)



NO.	Name	Quantity	Notes
1	Inner Box	40	
2	Box	2	
3	Package	1	
4	Adhesive tape	1.2m	
5	Label	1	
6	Belt	2.9m	
7	Certificate of approval	1	

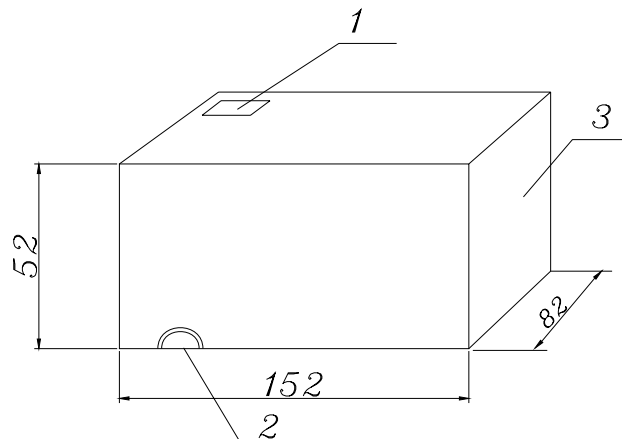
8.2 Section of package

Package is made of corrugated paper with thickness of 0.8cm. Package has 2 inner boxes, each has 20 inner boxes (each box for plastic bag).

8.3 Quantity of package

Per plastic bag 500 pieces
 Per inner box 3 plastic bag
 Per package 40 inner boxes (60000 pieces of piezoelectric ceramic part)

8.4 Inner box Dimensions



1.UNIT: mm

1	Label
2	QC Label
3	Inner Box

Pars shall be packaged in box with hold down tape upside. Part No., quantity and lot No.