1 SCOPE

This specification shall cover the characteristics of the ceramic fliter with the type LTCV10.7MS3. The LTCV10.7MS3 filters are small, high performance and very thin (1.5mm) chip devices consisting of 2 ceramic elements for communication equipment. They are designed on MgTiO3 ceramic cap package.

2 PART NO.

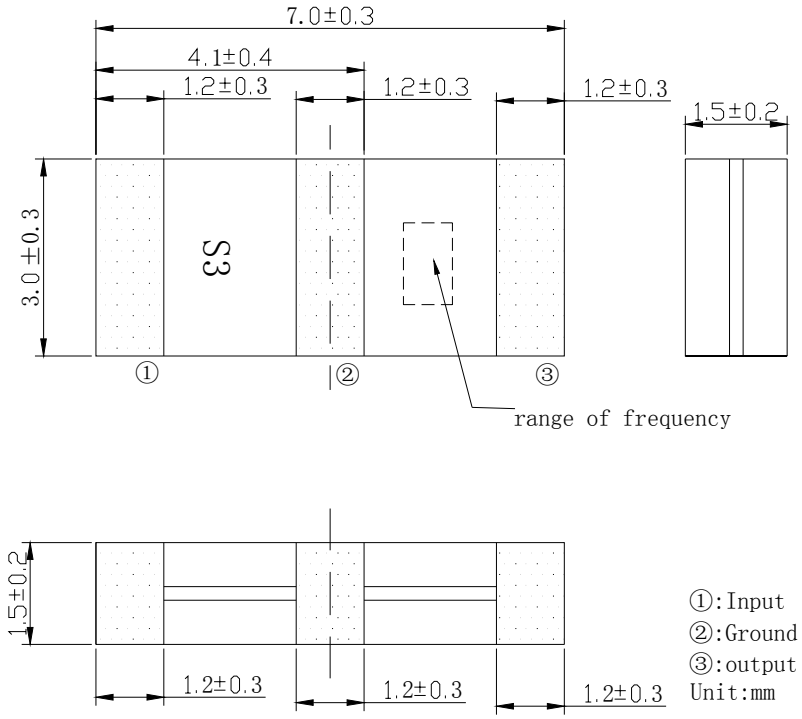
PART NUMBER	CUSTOMER PART NO.	SPECIFICATION NO.
LTCV10.7MS3		

3 OUTLINE DRAWING AND STRUCTURE

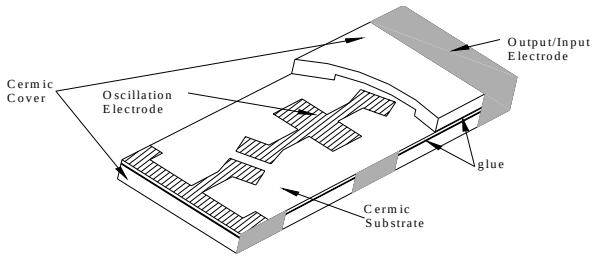
3.1 Appearance

No visible damage and dirt.

3.2 Dimensions



3.3 STRUCTURE



4 ELECTRICAL SPECIFICATIONS

4.1 RATING

Items	Content
Withstanding Voltage (V)	50 (DC，1min)
Insulation Resistance Ri,（MΩ） min.	100 （100V，1min）
Operating Temperature Range (℃)	-25～+85
Storage Temperature Range (℃)	-40～+85

4.2 ELECTRICAL SPECIFICATIONS

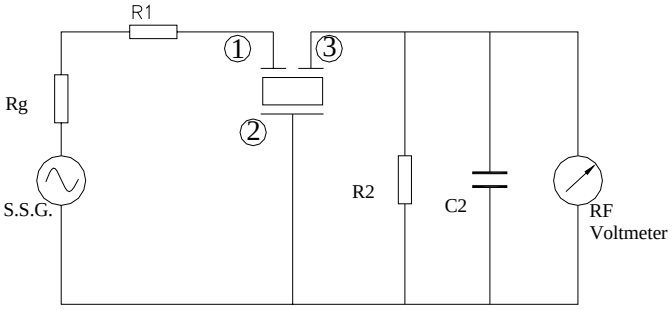
Items	Content
Center Frequency(fo)(MHz) The center point of 3dB band width is defined as the center frequency and identified by the letters:A,B,C,D or E.	A:10.700±0.030 B:10.670±0.030 C:10.730±0.030 D:10.640±0.030 E:10.760±0.030
3dB Bandwidth(kHz)	180±40
20dB Bandwidth(kHz) max	470
Insertion Loss (dB)	4.0±2.0 (at minimum loss point)
Ripple (dB) max	1.0 (within 3dB Bandwidth)
Spurious Response (dB) min	35 (9MHz-12MHz)
Input/Output Impedance(Ω)	330

5 TEST

5.1 Test Conditions

Parts shall be tested under a condition (Temperature:+20℃±15℃, Humidity:65%±20%R.H.)unless the standard condition(Temperature:+25℃±3℃,Humidity:65%±5% R.H.) is regulated to test.

5.2 Test Circuit:



R1=280Ω ±5%,R2=330Ω±5%,Rg=50Ω
C2=10 Pf (Including stray capacitance and capacitance of RF Voltmeter)

S.S.G:Output Voltmeter

①:Input

②:Ground

③:Output

6 PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

NO.	Item	Condition of Test		Performance Requirment
6.1	Low Temp Storage	Stored in -40℃±3℃ for 96h，and left at room temp. for 1h before measurement.		Meet Table 1
6.2	High Temp Storage	Stored in 85℃±2℃ for 96h，and left at room temp. for 1h before measurement.		Meet Table 1
6.3	Humidity	Stored at 40℃±2℃，in 90%～95%R.H. for 96h, and left at room temp. for 1h before measurement		Meet Table 1
6.4	Thermal Shock	After temp. cycling of -40℃(30 minutes) to +85℃ (30min) was performed 5 times, filter shall be measured after being placed in natural condition for 1h.		Meet Table 1
6.5	Soldering Test	Passed through the reflow oven under the following condition for 2 times, and left at room temp. for 24h before measurement.		Meet Table 1
6.6	Solderability	Dipped in 235℃±5℃ solder bath for 3s±0.5s with rosin flux.		The terminals shall be at least 95% covered by solder
		Temp. at the surface of the substrate	Time	
		Preheat 150℃±5℃	60s±10s	
		Peak 235℃±5℃	10s±3s	

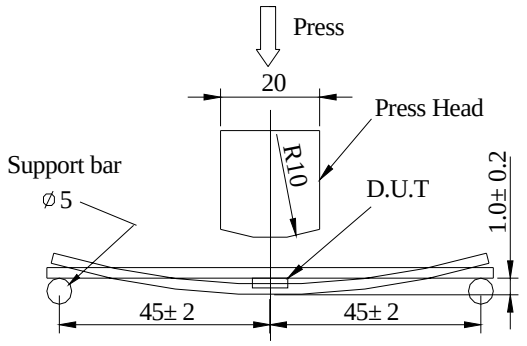
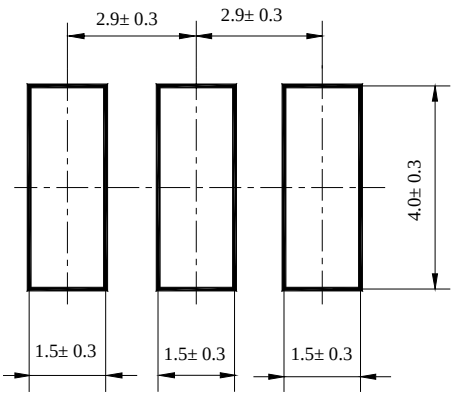
6.7	Drop test	Free drop to the wood plate from the height of 70 cm for 3 times.	Meet Table 1
6.8	Vibration	Apply the vibration of sweep frequency 10 to 55Hz/minutes, amplitude 1.5mm, duration 2h in each direction of 3 planes.	Meet Table 1
6.9	Board Bending	Mount on a glass-epoxy board(width=50 mm, thickness=1.6mm),then bend it to 1mm displacement(velocity 1mm/sec) and keep it for 5s. 	Mechanical damage such as break shall not occur

TABLE 1 SPECIFICATION AFTER TEST ABOUT CHARACTERISTICS

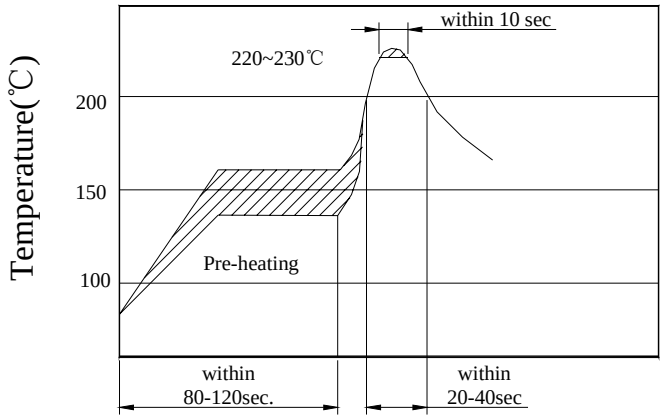
Item	Specification after test
Insertion Loss Drift (dB) max	±2
3dB Bandwidth Drift (kHz) max	±25
20dB Bandwidth Drift (kHz) max	±60
Note ： The limits in the above table are referenced to the initial measurements.	

7 RECOMMENDED LAND PATTERN AND REFLOW SOLDERING STANDARD CONDITIONS

7.1Recommended land pattern



7.2Recommended reflow soldering standard conditions



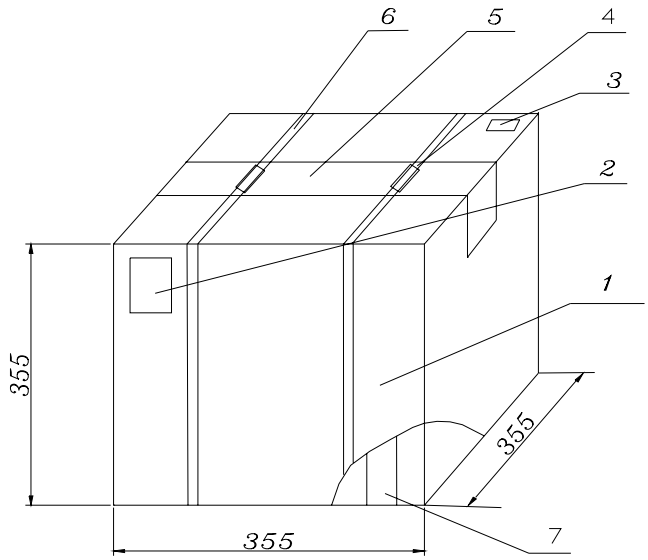
8 PACKAGE

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.

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	Package	1	
2	Certificate of approval	1	
3	Label	1	
4	Tying	2	
5	Adhesive tape	1.2m	
6	Belt	2.9m	
7	Inner Box	10	

Section of package

Package is made of corrugated paper with thickness of 0.8cm.Package has 10 inner boxes, each box has 1 reels, every reel is vacuum packed for plastic bag (at 300 Torr of vacuum rate).

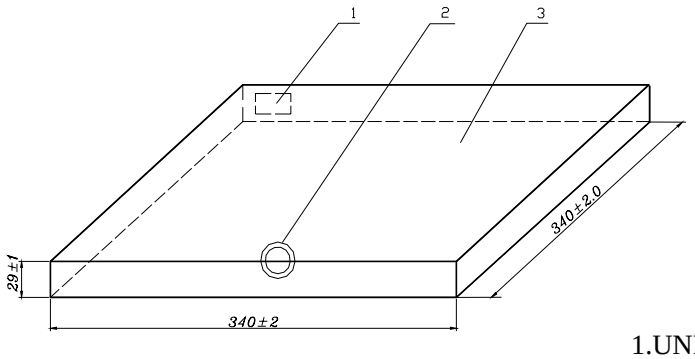
Quantity of package

Per plastic reel 4000 pieces of piezoelectric ceramic part

Per inner box 1 reels

Per package 10 inner boxes（40000 pieces of piezoelectric ceramic part ）

Inner Packing Dimensions

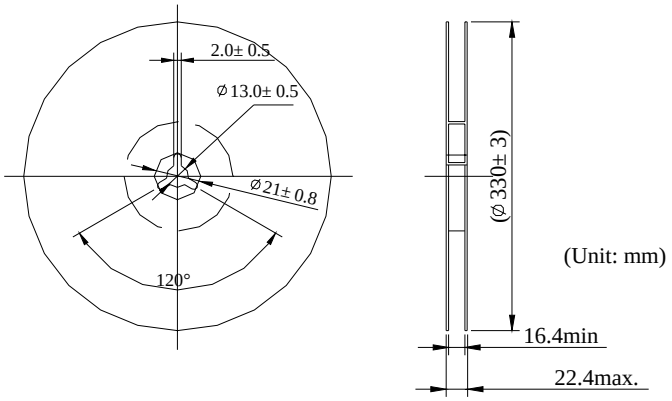


1.UNIT: mm

1	Label
2	QC Label
3	Inner Box

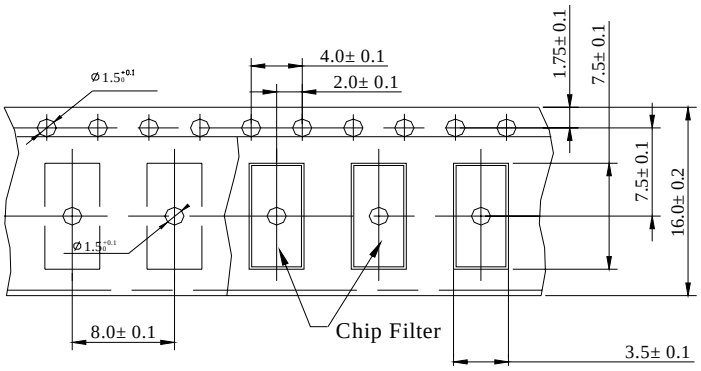
Pars shall be packaged in box with hold down tape upside. Part No., quantity and lot No.

8.5Reel



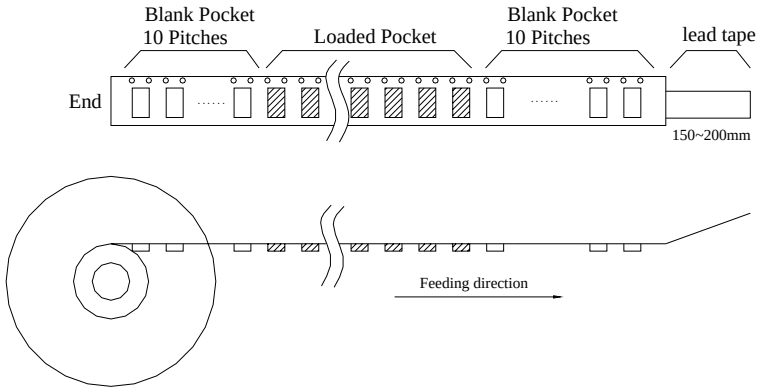
(Unit: mm)

8.6Taping Dimensions

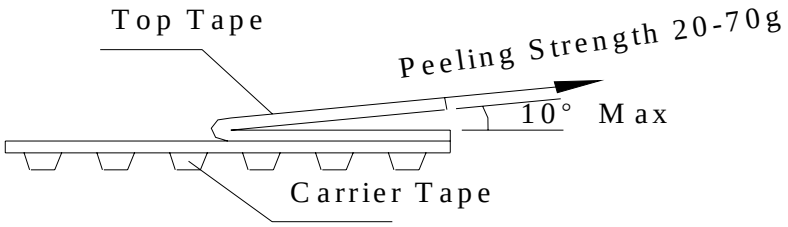


(Unit:mm)

8.7Tape Characteristics



8.8Test Condition Of Peeling Strength



9 OTHER

9.1 Caution of use

9.1.1 Do not use this product with bend. Please don't apply excess mechanical stress to the component and terminals at soldering.

9.1.2 The component may be damaged when an excess stress will be applied.

9.1.3 This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit.

9.2 Notice

9.2.1 Please return one of this specification after your signature of acceptance.

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