INTERQUIP ELECTRONICS CO., LIMITED

SPECIFICATION OF
CHIP PIEZOELECTRIC CERAMIC FILTERS

PART NUMBER : 118-LTCV10.7MS3-A

CUSTOMER NO. : N/A

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1. FEATURES AND APPLICATIONS

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. The filters exhibit flat GDT characteristic in pass band. The filters are recommended for digital communication applications and are perfect in hand held cellular phones, pocket cordless phones, etc.

2. PART NO. : 118-LTCV10.7MS3-A

3. ELECTRICAL CHARACTERISTICS

Items		Requirements
Center Frequency (f0)	A: 10.700MHz±30KHz max. B: 10.670MHz±30KHz max.	
	C: 10.730MHz±30KHz max. D: 10.640MHz±30KHz max.	
	E : 10.760MHz±30KHz max.	
	The center point of 3dB band width is defined as the center frequency and identified by the letters: A,B,C,D or E.	
3dB Bandwidth		180±40KHz min.
20dB Bandwidth		470KHz max.
Insertion Loss (at fn)		4.0±2.0dB
Ripple (within 3dB Bandwidth)		1.0dB max.
Spurious Response (9MHz-12MHz)		35dB min.
Input/Output Impedance		330

4. RATING

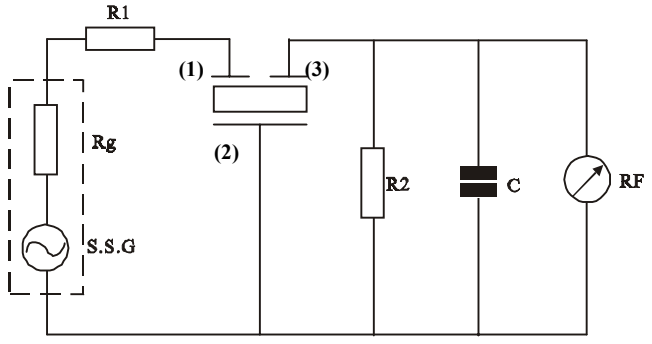
	Items	Spec.
4.1	Withstanding Voltage	DC 50V 1 minutes max.
4.2	Insulation Resistance	100M min. (DC 10V)
4.3	Operating temperature range	-25~ +85°C
4.4	Storage temperature range	-40~ +85°C

5. MEASURING METHOD

5.1 Measuring Condition

Parts shall be measured under a condition (Temperature: 25±3°C, humidity: 65±5% R.H.) unless the standard condition (Temperature: 20±15°C, humidity: 65±20% R.H.) is regulated to measure.

5.2 Measurement Circuit



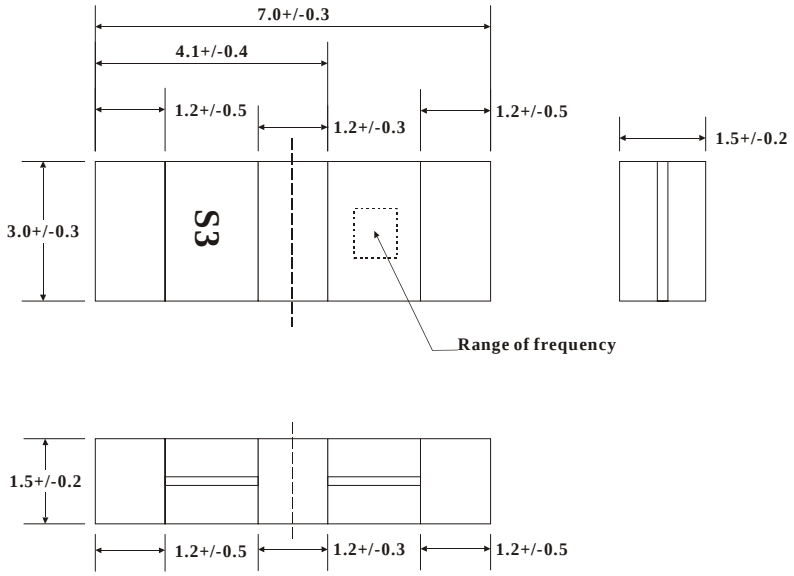
1. Input
2. Ground
3. Output

R1=280 ±5%, R2=330 ±5%, Rg=50
C2=10pF
(Including Stray capacitance and input capacitance of RF voltmeter)
S.S.G.: Output Voltmeter

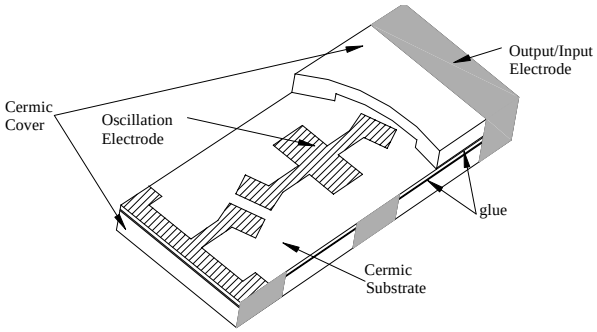
6. APPEARANCES AND DIMENSIONS

6.1 Appearances: Smooth surface and clear mark. No visible damage and dirt.

6.2 Dimension: According to Figure 1.



7. STRUCTURE



8. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

NO.	Item	Condition of Test	Performance Requirement
8.1	Low Temp Storage	Stored in –40±3°C for 96 hours, and left at room temp. for 1 hour before measurement.	Meet Table 1
8.2	High Temp Storage	Stored in 85±2°C for 96 hours, and left at room temp. for 1 hour before measurement.	Meet Table 1
8.3	Humidity	Stored at 40±2°C, in 90～95%R.H. for 96 hours, and left at room temp. for 1 hour before measurement.。	Meet Table 1
8.4	Thermal Shock	After temp. cycling of -40°C (30 minutes) to +85°C (30 minutes) was performed 5 times, filter shall be measured after being placed in natural condition for 1 hour .	Meet Table 1
8.5	Soldering Test	Passed through the re-flow oven under the following condition for 2 times, and left at room temp. for 24 hours before measurement.	Meet Table 1

8. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS (Con't)

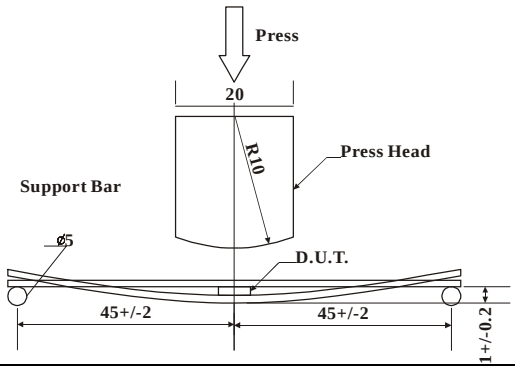
8.6	Solderability	Dipped in 235±5°C solder bath for 3±0.5 seconds with rosin flux. Temp. at the surface of the substrate: Time Preheat 150±5°C: 60±10 sec Peak 250~260°C: 5±1sec	The terminals shall be at least 95% covered by solder
8.7	Drop test	Free drop to the wood plate from the height of 70 cm for 3 times.	Meet Table 1
8.8	Vibration	Apply the vibration of sweep frequency 10 to 55Hz/minutes, amplitude 1.5mm, duration 2 hours in each direction of 3 planes.	Meet Table 1
8.9	Board Bending	Mount on a glass-epoxy board (width=50mm, thickness =1.6mm), then bend it to 1mm displacement (velocity 1mm/sec) and keep it for 5 seconds 	Mechanical damage such as break shall not occur.

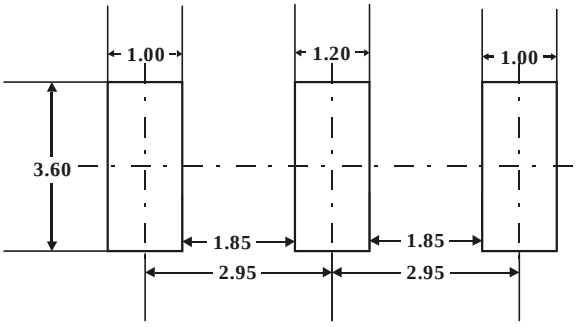
TABLE 1.

Item	Specification
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

9. RECOMMENDED LAND PATTERN AND REFLOW SOLDERING STANDARD CONDITIONS

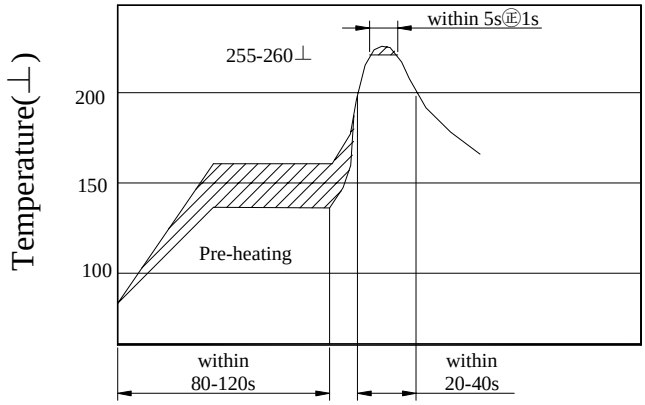
9.1 Recommended Land Pattern



Unit: mm

All Dimension Tol.: ±0.3mm

9.2 Recommended Re-flow Soldering Standard Conditions.

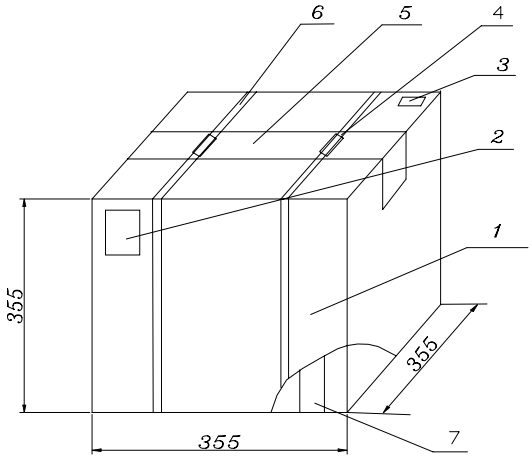


10. PACKAGE

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.

10.1 Dimension and Mark

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



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	

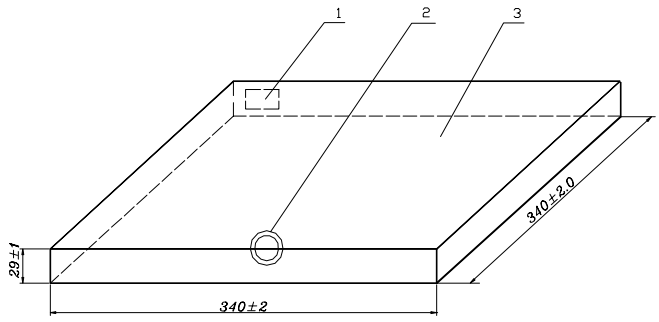
10.2 Section of package

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

10.3 Quantity of package

Per Plastic Reel: 4K pieces of piezoelectric ceramic part
Per inner box: 1 reels
Per package: 10 inner boxes (40K pieces of piezoelectric ceramic part)

10.4 Inner Packing Dimensions



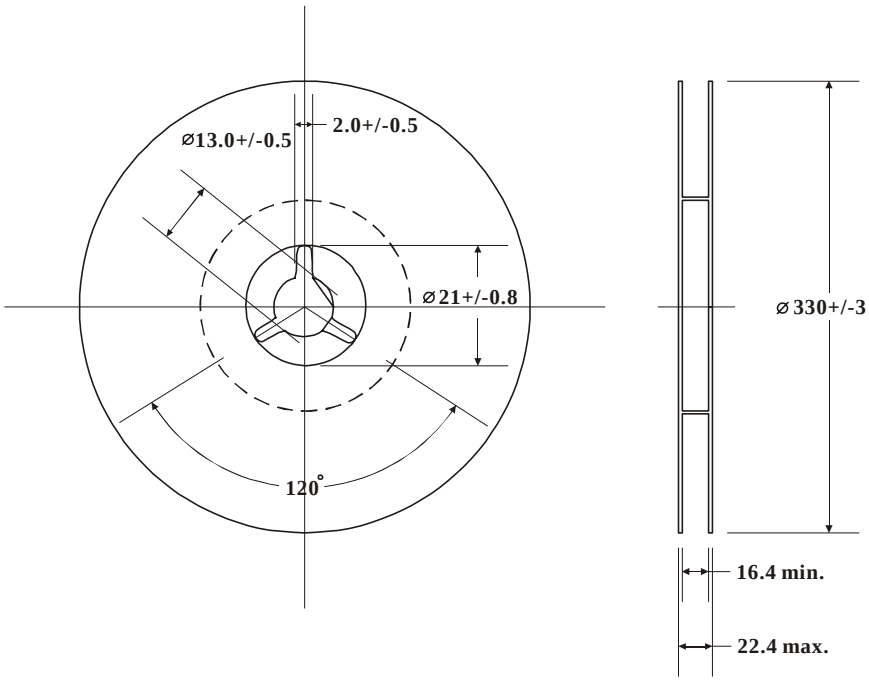
1	Label
2	QC Label
3	Inner Box

Unit: mm

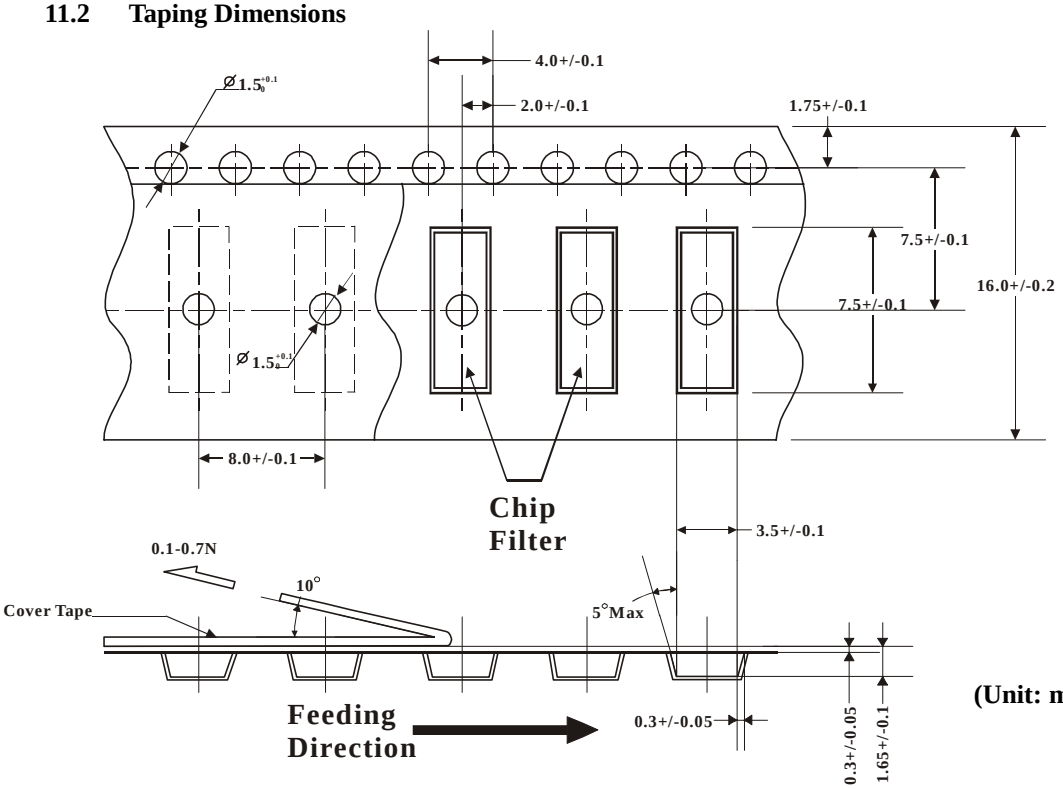
Parts shall be packaged in box with hold down tape upside. Part No., quantity and lot No.

11. Packaging

11.1 Reel Dimensions

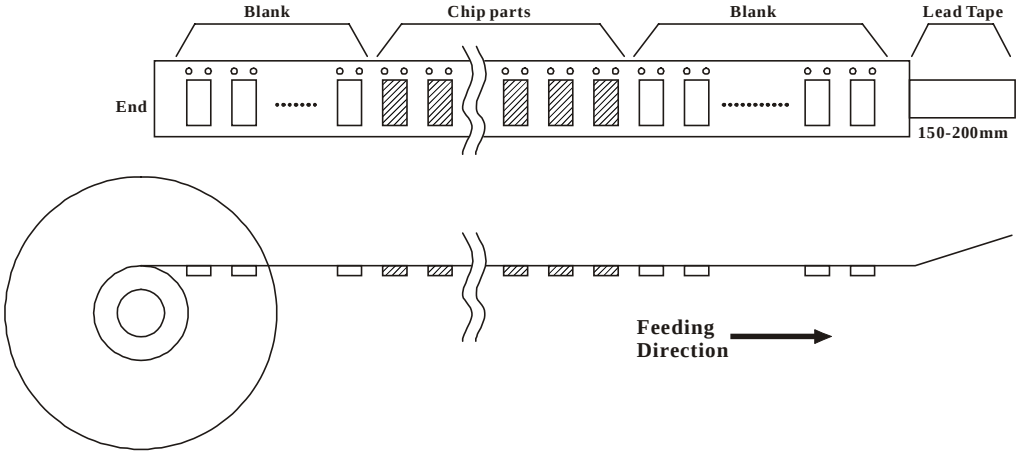


11.2 Taping Dimensions



(Unit: mm)

11.3 Tape Characteristics



12. Notices

12.1 Please avoid cleaning this chip ceramic filter

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