Approved by:
Checked by:
Issued by:

SPECIFICATION

PRODUCT: CERAMIC FILTER

MODEL: LTCV10.7MS3

SHOULDER 好达电子

SHOULDER ELECTRONICS LIMITED

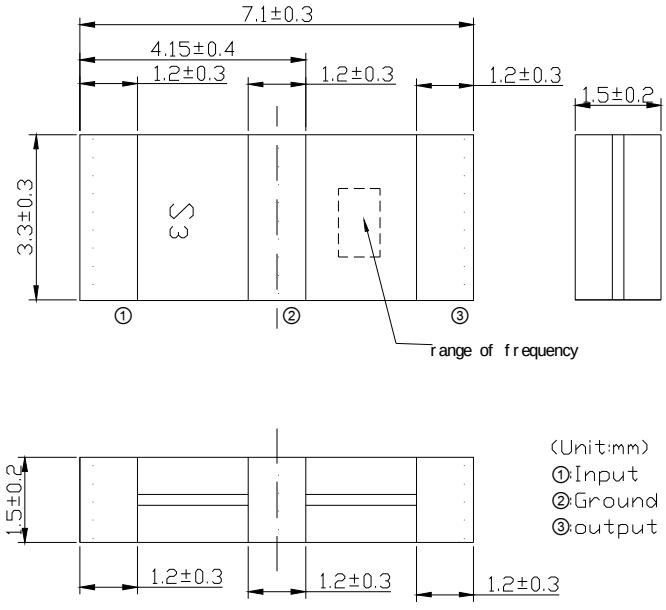
1.Features and Applications

The LTCV10.7MS$_3$ filters are small, high performance and very thin (1.5mm) chip devices consisting of 2 ceramic elements for communication equipment. They are designed on $MgTiO_3$ 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. Appearances and Dimensions

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

2.2 Dimensions: According to Figure 1.



3.Electrical Characteristics

Items		Requirements
Center Frequency(f_0)	A:10.700MHz±30kHz B:10.670MHz±30kHz C:10.730MHz±30kHz D:10.640MHz±30kHz E:10.760MHz±30kHz 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.
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		330Ω

4. Rating

	Items	Spec
4.1	Withstanding Voltage	DC 50V 1 minutes max.

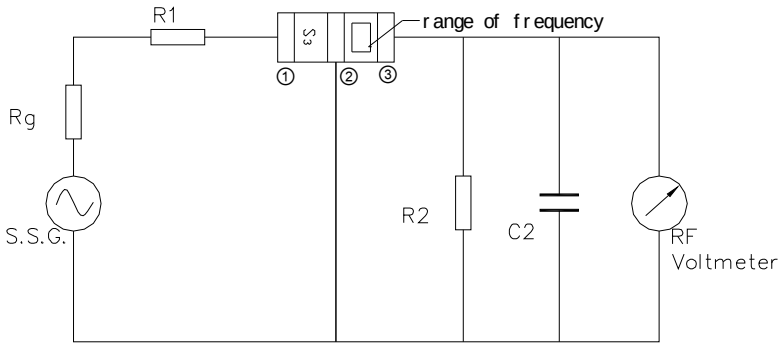
4.2	Insulation Resistance	100 MΩ min.(DC 10V)
4.3	Operating temperature range	-25 ~ +85℃
4.4	Storage temperature range	-40 ~ +85℃

5.Measuring method

5.1 Measuring Condition

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

5.2 Measuring circuit



R1=280Ω±5%,R2=330Ω±5%,Rg=50Ω ①:Input

C2=10pF(Including stray capacitance ②:Ground

and capacitance of RF Voltmeter) ③:Output

6. Reliability Specifications

	Item	Test Condition	Spec.
6.1	Low Temp	Stored in -40±3℃ for 96 hours，and left at room	Meet Table 1

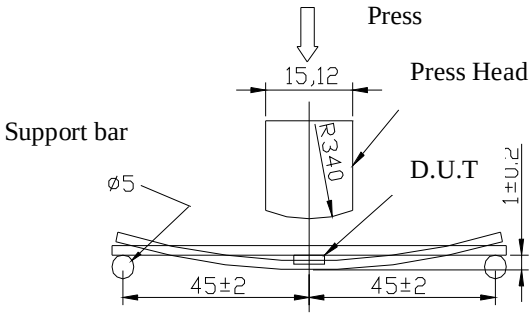
	Storage	temp. for 1 hour before measurement.	
6.2	High Temp Storage	Stored in 85±2℃ for 96 hours，and left at room temp. for 1 hour before measurement.	Meet Table 1
6.3	Humidity Test	Stored at 40±2℃，in 90～95%R.H. for 96 hours, and left at room temp. for 1 hour before measurement.。	Meet Table 1
6.4	Thermal Shock	After temp. cycling of -40℃(30 minutes) to +85℃ (30 minutes) was performed 5 times, filter shall be measured after being placed in natural condition for 1 hour .	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 24 hours before measurement. Temp. at the surface of the substrate / Time Preheat 150±5℃ / 60～100 sec Peak 235±5℃ / Less than 10 sec	Meet Table 1
6.6	Solderability	Dipped in 235±5℃ solder bath for 3±0.5 seconds with rosin flux.	The terminals shall be at least 95% covered by solder
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 2 hours 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 5 seconds. 	Mechanical damage such as break shall not occur

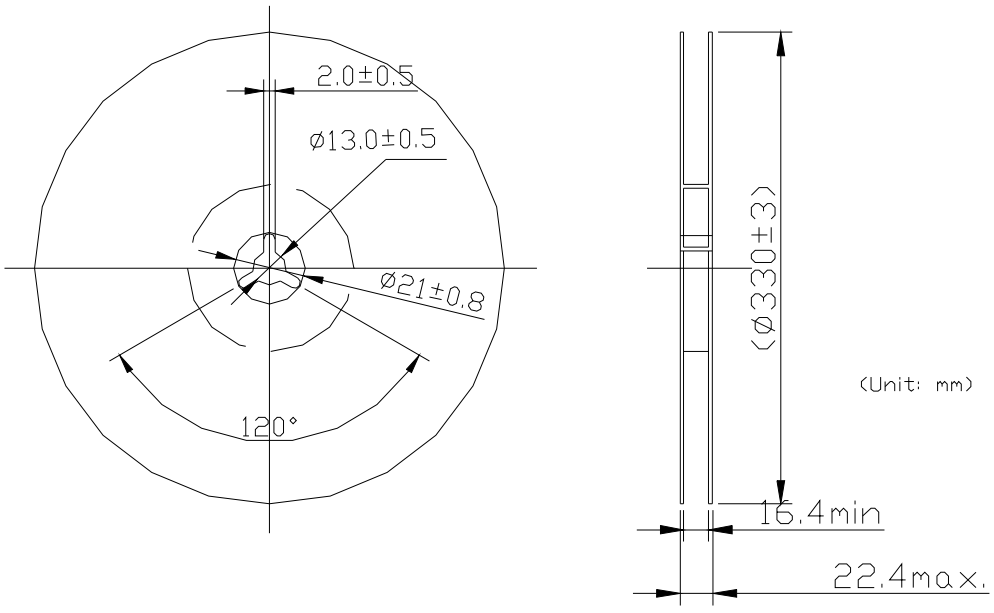
Table1 Characteristics change limit in reliability test

Characteristics	Change limit
Insertion Loss	±2 dB max.

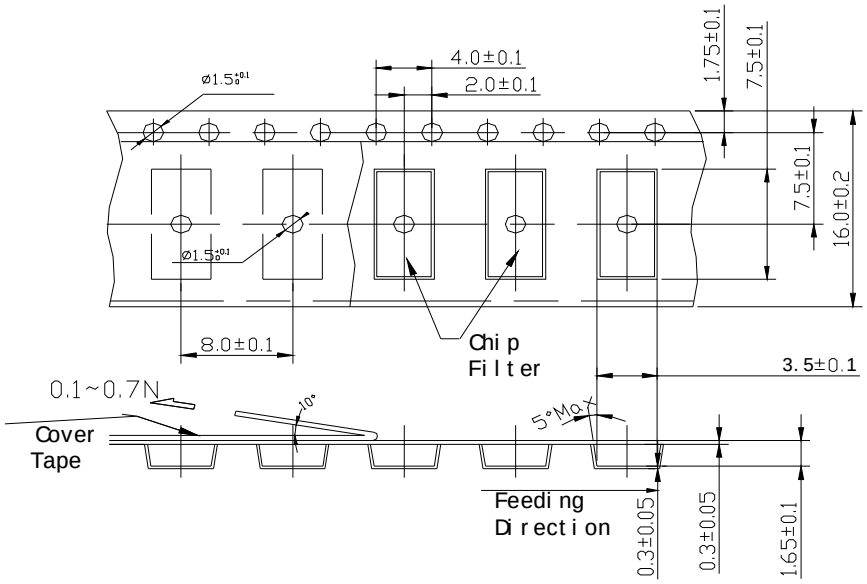
3dB Bandwidth	±25kHz max.
20dB Bandwidth	±60kHz max.

7.Packaging

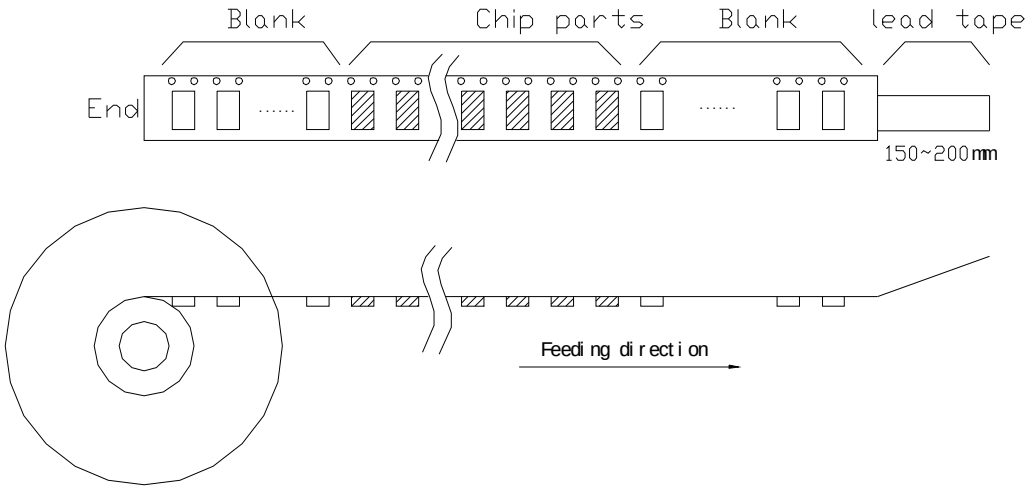
7.1 Reel Dimensions



7.2 Taping Dimensions



7.3 Tape Characteristics



7.4 Reel Quantity: 4000 pcs/reel or 1000 pcs/reel.

7.5 Every reel is vacuum packed.(at 300 Torr of vacuum rate).

8. Notices

8.1 Please avoid cleaning this chip ceramic filter.

8.2 Please contact us if you want to use the product in special occasion.