



CHEQUERS ELECTRONIC (CHINA) LIMITED

捷嘉電子(中國)有限公司

CERAMIC FILTER SPECIFICATION

PART NO.: LTS6.5MCB

SPEC NO.: 2.832.130.15F.11

<This Product is RoHS and REACH Compliant>

Part no.	: LTS6.5MCB
Printed on	: 7-Dec-12
Prepared	: Frankie
Ver. Ctrl.	: 220911/F
Page	: 1 of 4

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1. Scope

This specification shall cover the characteristics of the ceramic filter that used in audio IF circuit.

2. Specification no.: 2.832.130.13F.11

3. Part no.: LTS6.5MCB

4. Electrical specification

4-1	Nominal frequency	6.500MHz
4-2	3dB bandwidth	±70KHz Min.
4-3	Insertion loss	6.0dB Max.
4-4	20dB bandwidth	650KHz Max.
4-5	Spurious loss	0 ~ 6.50MHz 30dB Min.
		6.5 ~ 8.0MHz 15dB Min.
		8.0 ~ 10.0MHz 30dB Min.
4-6	Rated voltage	DC 50V (1 minute)
4-7	Insulation resistance	100MΩ Min.
4-8	Temperature characteristics (-25°C ~ +85°C)	±100ppm/°C Max.
4-9	Storage temperature	-40°C~+85°C
4-10	Input / output impedance	470Ω

5. Physical characteristics

	Test item	Condition of test	Performance requirement
5-1	Random drop	Filter shall be measured after 3 times of random drops from the height of 1.0 meter on concrete floor.	No visible damage and the measured values shall meet Table 1.
5-2	Vibration	Filter shall be measured after being applied with vibration (amplitude: 1.5mm, frequency: 10Hz to 55Hz) for 2 hours in each of the 3 perpendicular directions.	The measured values shall meet Table 1.
5-3	Resistance to soldering heat	Lead terminals are immersed up to 2.0mm from the filter's body in solder bath (350°C ± 10°C for 5 ± 0.5 second. Then the filter shall be measured after being placed in room temperature for 1 hour.	
5-4	Solderability	Lead terminals are immersed in resin for 5 seconds and then immersed in soldering bath of 250°C ± 5°C for 3 seconds ± 0.5 second.	Min. 95% of lead terminals' surface shall be covered with solder.
5-5	Terminal strength	<p>1. After a weight of 1 Kg is applied to each terminal in axial direction for 10 seconds, the filter shall be measured.</p> <p>2. After lead terminals are fixed at 2mm from the filter's body. They shall be folded up to 90° from their axial direction and folded back to -90°, then folded back to their axial direction. The speed of folding shall be 3 seconds.</p>	<p>No visible damage and the measured values shall meet Table 1.</p> <p>No cutting off shall be visible.</p>

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6. Environmental characteristics

	Test item	Condition of test	Performance requirement
6-1	High temperature	After being placed in a chamber (+85°C ± 2°C) for 96 hours, the filter is measured after being placed in room temperature for 1 hour.	The measured values shall meet Table 1.
6-2	Low temperature	After being placed in a chamber (-25°C ± 2°C) for 96 hours, the filter is measured after being placed in room temperature for 1 hour.	The measured values shall meet Table 1.
6-3	Humidity	After being placed in a chamber with a humidity of 90% to 95% RH and a temperature of +40°C ± 2°C for 96 hours, the filter is measured after being placed in room temperature for 1 hour.	The measured values shall meet Table 1.
6-4	Heat shock	After being kept at room temperature, filter shall be placed at a temperature of -25°C. After 30 minutes at this temperature, the filter is immediately placed at a temperature of 85°C. After another 30 minutes at this temperature, the filter is placed under -25°C again. The above processes are counted as 1 cycle. After 5 cycles, the filter shall be measured after being placed in room temperature for 1 hour.	The measured values shall meet Table 1.

Table 1

Measurements	Requirements
	*Referenced from initial measurements
3dB bandwidth variation	±25KHz Max.
20dB bandwidth variation	±40KHz Max.
Insertion loss variation	±2dB Max.

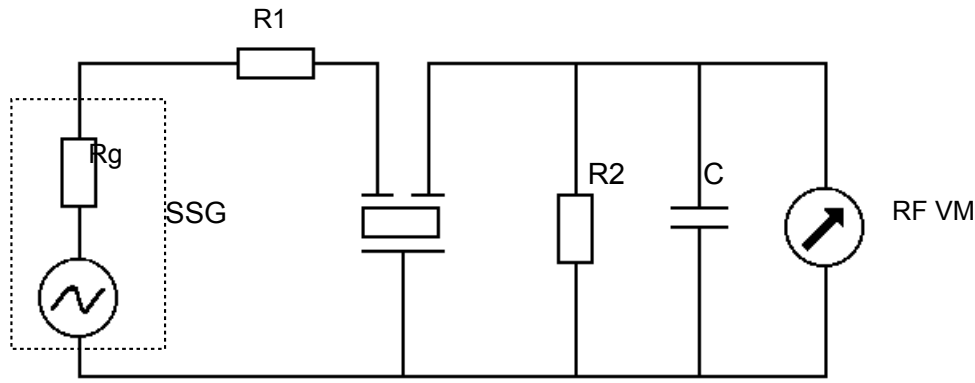
7. Packing information

	Quantity	Dimension
Plastic bag	500pcs.	-
Inner box	3 x plastic bag (1, 500pcs.)	150x80x52mm
Inner carton	20 x inner box (30, 000pcs.)	420x320x140mm
Carton Box	2 x Inner carton (60,000pcs.)	450x350x320mm

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8. Test circuit

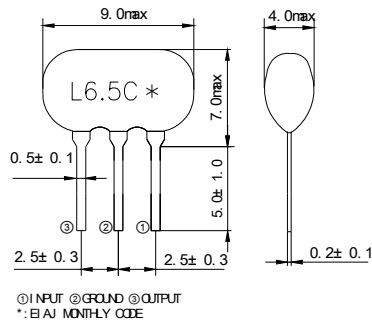
- 8-1 Oscillating frequency : See Figure 2.
- 8-2 Equivalent circuit constants : Network Analyzer HP87510A or equivalent
- 8-3 Measuring condition : Temperature: 25°C ± 2°C
Humidity: 55% ± 5% RH
- If require : Temperature: 5°C to 35°C
Humidity: 45% to 65% RH



Fo	R2
4.5MHz	1K Ω
5.5MHz	600 Ω
6.0MHz	470 Ω
6.5MHz	

Rg + R1 = R2
 C = 10pF (including stray capacitance of RF VM)

9. Dimension of LTS6.5MCB



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Unit: mm