

Ref. No.	ETB160120
Total pages	5

# TEST REPORT

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Sample Description: Low permittivity supporting material

Style / Item No.: LF125/LF225/LF525

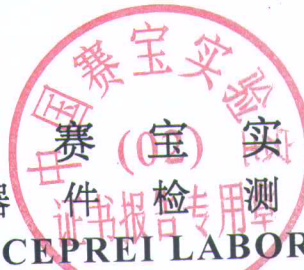
Test Category: Commission Test

Manufacturer: Guangzhou CHANGEN Electronic Technology Co., Ltd.

Client: Guangzhou CHANGEN Electronic Technology Co., Ltd.



中国赛宝实验室  
元器件检测中心  
CHINA CEPREI LABORATORIES  
CEPREI The Electronic Component Testing Center



## POINTS FOR ATTENTION

1. The Test Report is invalid without Special Seal for Testing or the official seal of Test Center.
2. The duplicated report is invalid without Special Seal for Testing or the official seal of Test Center again.
3. The Test Report is invalid without signature of the final approval.
4. The Test Report is invalid if being altered.
5. Any objections must be raised against to Test Center within 15 days since the date the report is received. It will not be taken into consideration beyond this limit.
6. Generally, for commission test we are only responsible for the submitted samples.

Address: No.110, Dongguan Zhuang Road, Tianhe District, Guangzhou, Guangdong Province,  
P.R. China

Post Address: P.O.Box 1501 Guangzhou P.R. China

Post Code: 510610

Tel: 0086-20-87237292、87236657


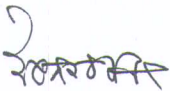


Complain Tel: 0086-20-87237255, 87236789

Fax: 0086-20-87237149、87237181

Website:<http://www.test.ceprei.com>

E-mail:[component@ceprei.com](mailto:component@ceprei.com)

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(0  
书报)

Sample Description	Low permittivity supporting material	Style / Item No.	LF125/LF225/LF525
Manufacturer	Guangzhou CHANGEN Electronic Technology Co., Ltd.		
Manufacturer Address	Rm 318,Bldg G5,NO.31,KeFeng Rd, Guangzhou Hi-tech Industrial Development Zone,Guangdong,P.R.China		
Client	Guangzhou CHANGEN Electronic Technology Co., Ltd.		
Client Address	Rm 318,Bldg G5,NO.31,KeFeng Rd, Guangzhou Hi-tech Industrial Development Zone,Guangdong,P.R.China		
Place of sampling: /	Production Date / Lot: 201608		
Sample Quantity: 2 Pcs	Sample No.: 1# ~ 2#		
Sampling method: Submitted by Guangzhou CHANGEN Electronic Technology Co., Ltd.			
Date of Submitting Samples: 2016.08.19	Date of Testing: 2016.08.26 ~ 2016.08.30		
<p>Qualification in accordance with:</p> <ol style="list-style-type: none"> <li>1. GB/T 1409-2006 Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including meter wavelengths</li> <li>2. Requirements of the Client</li> </ol>			
Test Item	Relative permittivity, Relative permeability		
Conclusion	The test result that the samples submitted by Guangzhou CHANGEN Electronic Technology Co., Ltd. refers to the test logbook.		
Signature:			
Responsible Engineer:		Date:	2016.08.30
Author:		Date:	2016.08.30
Approver:		Date:	2016.08.31
(Director/Vice Director)			
			

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TABLE WITH TEST RESULTS

No.	Test Item	Description	Requirements	Samples/ No.	Accept criterion	Failure	Result
1	Relative permittivity	In accordance with GB/T 1409-2006 and the requirements of the client Oscillator Level:100mV. Frequency:10MHz~1GHz. Measure the thickness(t) of sample. Record the measured values at 10MHz, 30MHz, 50MHz, 100MHz,300MHz, 500MHz, 1GHz.	Record the measured values	1pcs/1 <sup>#</sup>	/	/	/
2	Relative permeability	In accordance with the requirements of the client Oscillator Level:2mA. Frequency:10MHz~1GHz. Measure the inner diameter (d), outter diameter(D) and height (H) of sample. Record the measured values at 10MHz, 30MHz, 50MHz, 100MHz,300MHz, 500MHz, 1GHz.	Record the measured values	1pcs/2 <sup>#</sup>	/	/	/
<b>Remark:</b>							

檢出用章



Main instruments used for this test			
No.	Description	Model	Cal. Date ~ Cal. due date
1	RF Impedance/Material Analyzer	E4991A	2016.07.04~2017.07.03
2	Vernier caliper	0~200mm	2015.12.18~2016.12.17
/	/	/	/
Environmental conditions			
Field	Temperature(°C)	RH(%)	Atm. (kPa)
For testing	15 ~ 35	45 ~ 75	86 ~ 106
For measurement	23 ± 2	50 ± 5	86 ~ 106
<b>Remark: All the tests are operated before the due date of calibration.</b>			

---END OF THE TEST REPORT---

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# TEST LOGBOOK

Sample Description: Low permittivity  
supporting material

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Style / Item No.: LF125/LF225/LF525

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Test Category: Commission Test

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Manufacturer: Guangzhou CHANGEN Electronic  
Technology Co., Ltd.

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Client: Guangzhou CHANGEN Electronic  
Technology Co., Ltd.

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中国赛宝实验中心  
元器件检测中心  
CHINA CEPREI LABORATORIES  
The Electronic Component Testing Center

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### TEST RECORD

**Manufacturer:** Guangzhou CHANGEN Electronic Technology Co., Ltd.

**Quantity :** 1 pcs

<b>Product name and type</b>	Low permittivity supporting material LF125/LF225/LF525	<b>Group</b>	/
<b>Test Instrument</b>	E4991A RF Impedance/Material Analyzer	<b>Cal. Date ~ Cal. due date</b>	2016.07.04~2017.07.03
	0~200mm Vernier Calliper		2015.12.18~2016.12.17
<b>Test Item</b>	Relative Permittivity $\epsilon_r$		
<b>Test Conditions</b>	In accordance with GB/T 1409-2006 and the requirements of the client Oscillator Level:100mV. Frequency:10MHz~1GHz. Measure the thickness(t) of sample. Record the measured values at 10MHz, 30MHz, 50MHz, 100MHz,300MHz, 500MHz, 1GHz.		
<b>Requirement</b>	Record the measured values		
<b>Sample No.</b>	<b>Test Result</b>		
1#	See attached figure		

 泰生  
 正书

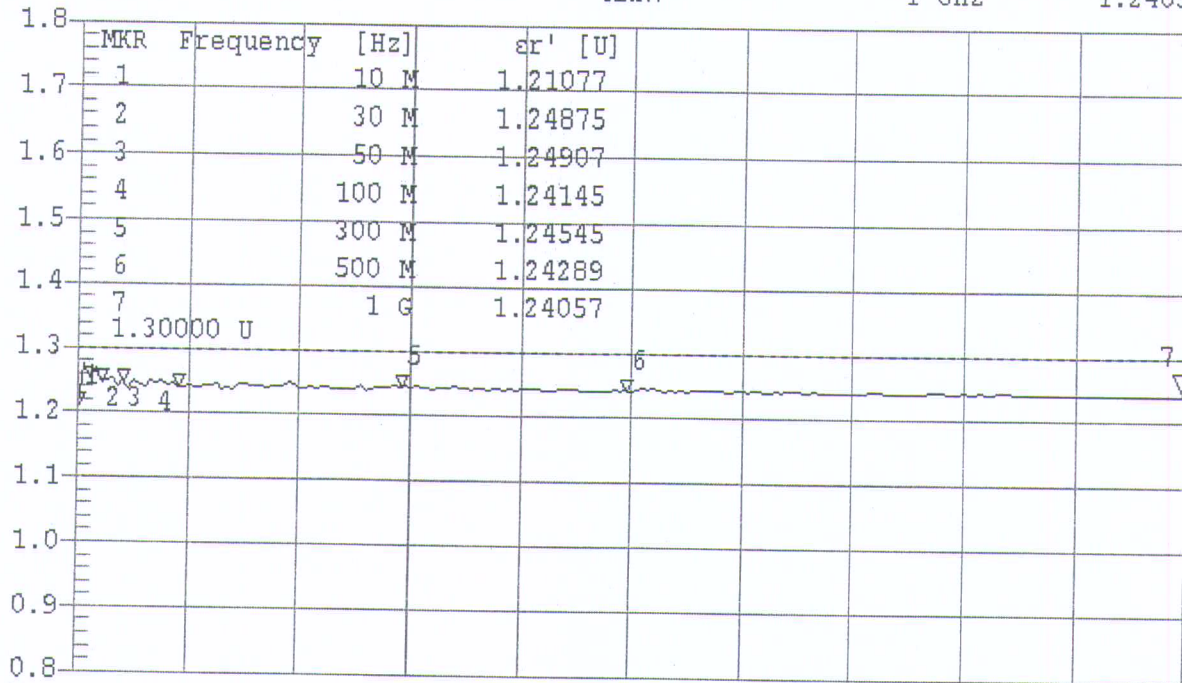
 Tested by: 水春生      Date: 2016.08.26      Checked by: 曾书      Date: 2016.8.26

\*1:  $\epsilon_r'$  [U]

MKR7

1 GHz

1.24057 U



OSC 100.00 mV

START 10 MHz

SAvg OFF

BIAS OFF

STOP 1 GHz

1#(t=1.85mm)

Tested by: 李春生 Date: 2016.08.26 Checked by: 李春生 Date: 2016.08.26

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**TEST RECORD****Manufacturer:** Guangzhou CHANGEN Electronic Technology Co., Ltd.**Quantity :** 1 pcs

<b>Product name and type</b>	Low permittivity supporting material LF125/LF225/LF525	<b>Group</b>	/
<b>Test Instrument</b>	E4991A RF Impedance/Material Analyzer	<b>Cal. Date~ Cal. due date</b>	2016.07.04~2017.07.03
	0~200mm Vernier Calliper		2015.12.18~2016.12.17
<b>Test Item</b>	Relative Permeability $\mu_r$		
<b>Test Conditions</b>	In accordance with the requirements of the client Oscillator Level:2mA. Frequency:10MHz~1GHz. Measure the inner diameter (d), outter diameter(D) and height (H) of sample. Record the measured values at 10MHz, 30MHz, 50MHz, 100MHz,300MHz, 500MHz, 1GHz.		
<b>Requirement</b>	Record the measured values		
<b>Sample No.</b>	<b>Test Result</b>		
2#	See attached figure		

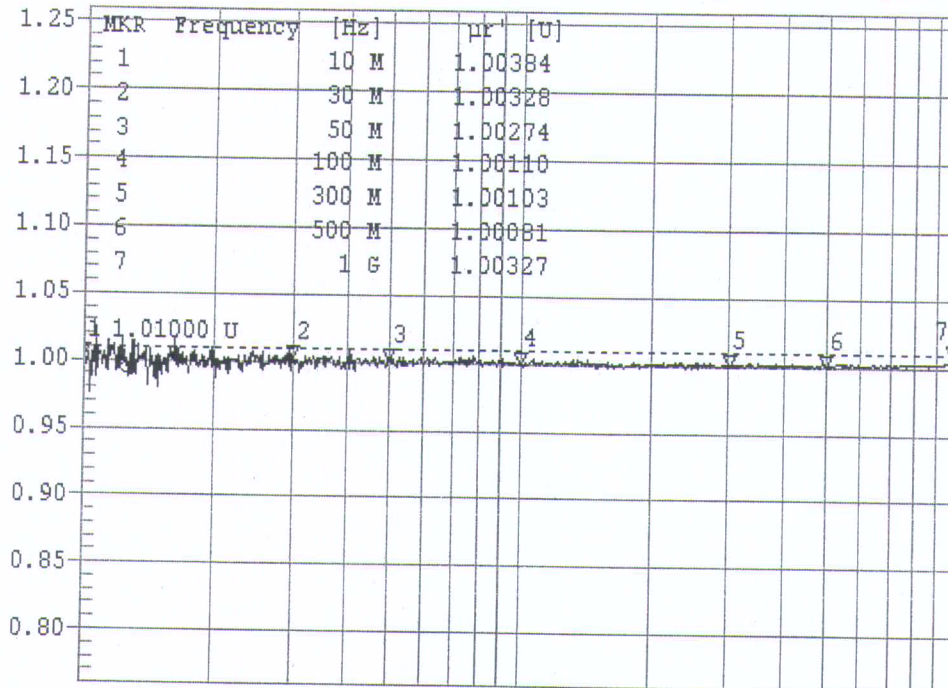
Tested by: 李青生 Date: 2016.08.30 Checked by: 李青生 Date: 2016.08.30

\*1:  $\mu r'$  [U]

MKR7

1 GHz

1.00327 U



OSC 2.0000 mA  
START 10 MHz

SAvg OFF

BIAS OFF  
STOP 1 GHz

2#( d=7.85mm, D=15.82mm, H=8.21mm)

Tested by: 李青生 Date: 2016.08.30 Checked by: 李青生 Date: 2016.08.30

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