

EMI TEST REPORT

On Model Name: Sip Deskphone

Model Number: E129 Sip Deskphone

Brand Name: AVAYA

Prepared for AVAYA


FCC ID Number: TYM-E129V13

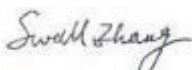
FCC Rule Part(s): FCC 47 CFR Part 15, Subpart B

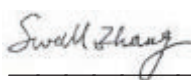
FCC Test Procedure(s): ANSI C63.4-2014

Test Report #: SHE-1510-11374-FCC ID

Prepared by:  ECMG
Alex Yu / EMC Engineer Company Name

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Swall Zhang / QC Manager Company Name

Test Report Released by:  October 18th, 2015
Swall Zhang Date

Test Location

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location: CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.

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Accreditation Bodies

The test facility was recognized, certified, or accredited by the following organizations:

- *CNAL- LAB Code: L1659
CCIC-SET EMC Laboratory has been assessed and in compliance with CNAL/ AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.*
- *CCIC-SET is a FCC registered (Reg. No. 406086) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.*

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List Attached Files

<i>Exhibit Type</i>	<i>File Description</i>	<i>File Name</i>
<i>Test Report</i>	<i>Test Report</i>	<i>TYM-E129V13 _Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>TYM-E129V13_Operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>TYM-E129V13_External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>TYM-E129V13_Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>TYM-E129V13_Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>TYM-E129V13 _Schematics.pdf</i>
<i>ID Label/Location</i>	<i>Label and Location</i>	<i>TYM-E129V13_Label & Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>TYM-E129V13 _User Manual.pdf</i>
<i>Test set-up photos</i>	<i>Test set-up photos</i>	<i>TYM-E129V13 _Test Set-up Photos</i>

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Electronic Technical Testing Corp (Shenzhen) Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.

Statement of Measurement Uncertainty

The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

Administrative Data

Test Sample : *Sip Deskphone*

Model Numbers : *E129 Sip Deskphone*

Model Tested : *E129 Sip Deskphone*

Receipt Date : *October 8th , 2015*

Date Tested : *October 14th , 2015*

Applicant : *AVAYA*

Address : *250 Sidney Street Belleville, Ontario,
k8P 3Z3 Canada.*

Telephone : *613-967-5545*

Fax : *613-967-5417*

Manufacturer : *AVAYA*

Address : *250 Sidney Street Belleville, Ontario,
k8P 3Z3 Canada.*

Telephone : *613-967-5545*

Fax : *613-967-5417*

Factory : *Grandstream Networks, Inc.*

Address : *4th Floor, Rainbow Technology Tower #16
New West Road, Nanshan Science
Park(Central) Shenzhen, China 518057.*

Telephone : *(86)-755-26014600*

Fax : *(86)-755-26014601*

EUT Description

AVAYA model tested E129 Sip Deskphone(referred to as the EUT in this report) is an Sip Deskphone.

Technical specifications of the EUT are as bellows:

Parameter		Range
Basic parameters	Rated voltage	+5VDC or powered by DC 48V PoE
	Rated Current	0.8A
I/O Ports	PC Port	10/100Mbps RJ-45 port for PC connection
	LAN Port	10/100Mbps RJ-45 port connecting to Ethernet, integrated PoE
	5VDC Power Supply Interface	5V DC Power connector port
	Headset Jack	RJ9, supporting Electronic Hook Switch (EHS) with Plantronics headsets
	Handset Port	RJ9 handset connector port
Power Adapter	Input& Output	100-240VAC ,50/60Hz &5VDC,0.8A
	Model	SCF0500080A1BA
	Brand name	Mass power
	Input& Output	100-240VAC ,50/60Hz &5VDC,0.8A
	Model	NBSS05B050080VU
	Brand name	Mass power
	Input& Output	100-240VAC ,50/60Hz &5VDC,0.8A
	Model	UE05L5-050080SPAU
	Brand name	DONGGUAN SHILONG FUHUA ELECTRONIC CO LTD
	Input& Output	100-240VAC ,50/60Hz &5VDC,0.8A
	Model	R60UC0500080B
	Brand name	Sunlight

Note: For more detailed informations or features please refer to user's manual of EUT.

Test Summary

The Electromagnetic Compatibility requirements on model E129 Sip Deskphone for this test are stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

Emission Tests				
Specifications	Description	Test Results	Test Point	Remark
<i>FCC Part 15.107 ANSI C63.4-2014</i>	<i>Conducted Emission</i>	<i>Passed</i>	<i>AC Input Port</i>	<i>Attachment 1</i>
<i>FCC Part 15.109 ANSI C63.4-2014</i>	<i>Radiated Emission</i>	<i>Passed</i>	<i>Enclosure</i>	<i>Attachment 2</i>

Test Mode Justification

Pre-Scan has been conducted to determine the worst-case from all possible combination between available operation mode .Following mode(s) was (were) selected for the final test as listed below:

Pre-Test Mode	
EMI Test Mode	<i>Mode 1: Communication with an IP Phone and notebook PC+ Mass Power(Model: SCF0500080A1BA)</i>
	<i>Mode 2: Communication with an IP Phone and notebook PC+ Power adapter(Model: UE05L5-050080SPAU)</i>
	<i>Mode 3: Communication with an IP Phone and notebook PC+ Mass Power(Model: NBSS05B050080VU)</i>
	<i>Mode 4: Communication with an IP Phone and notebook PC+ Sunlight Power(Model: R60UC0500080B)</i>
	<i>Mode 5: PoE mode powered by DC 48V</i>
Final Test Mode: <i>Mode 1,Mode 2,Mode 3,Mode 4 and Mode 5</i>	

EUT Exercise Software

No exercise software support this test.

Equipment Modification

Any modifications installed previous to testing by AVAYA will be incorporated in each production model sold or leased in United States.

There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.

§15.33 Frequency range of radiated measurements

(b) For unintentional radiators:

(1) Except as otherwise indicated in paragraphs (b)(2) or (b)(3) of this section, for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

<i>Highest frequency generated or used in the device or on which the device operates or tunes (MHz)</i>	<i>Upper frequency of measurement range (MHz)</i>
<i>Below 1.705</i>	<i>30.</i>
<i>1.705-108</i>	<i>1000.</i>
<i>108-500</i>	<i>2000.</i>
<i>500-1000</i>	<i>5000.</i>
<i>Above 1000</i>	<i>5th harmonic of the highest frequency or 40 GHz, whichever is lower.</i>

Note: *As the highest frequency operated of the EUT is 207MHz, so upper frequency of radiated emission test is up to 2GHz as per §15.33(b)(1).*

EUT Sample Photos for model E1 29 Sip Deskphone



EUT- Front View



EUT- Rear View

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Prepared by ECMG Electronic Technical Testing Corp (Shenzhen)

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EUT- Top View



EUT- Bottom View



EUT- Left Side View



EUT- Right Side View



Power Adaptor View (Manufacturer: Mass Power)



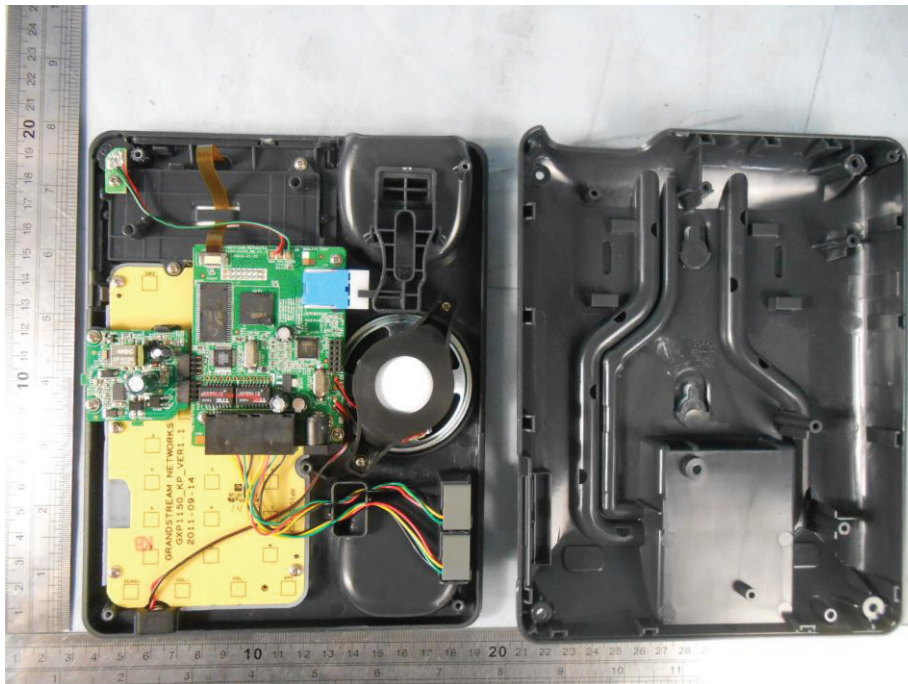
Power Adaptor View (Manufacturer: SHILONG)



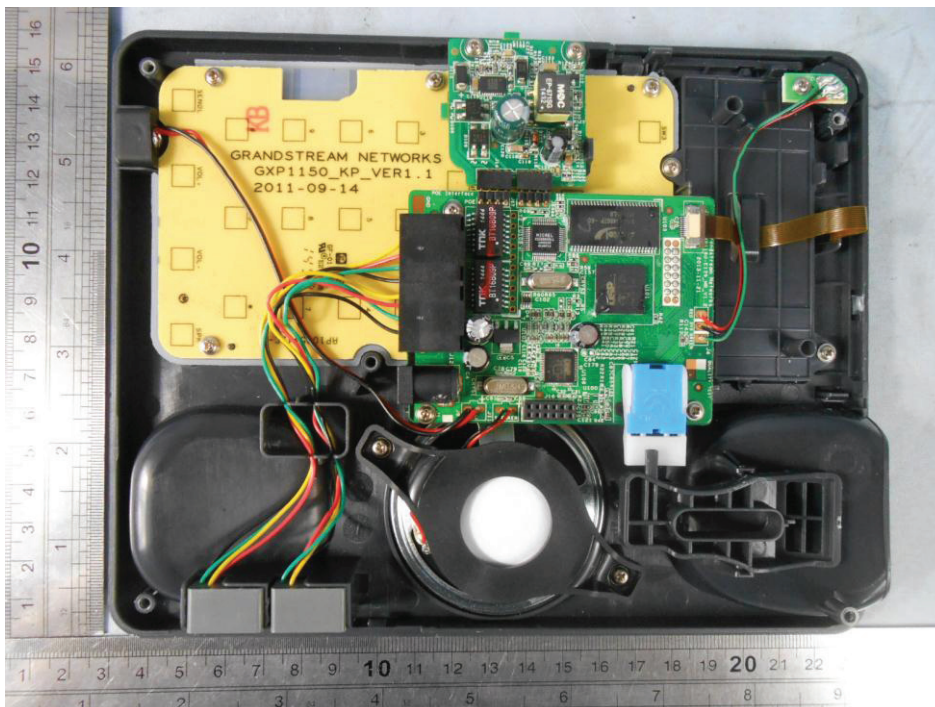
Power Adaptor View (Manufacturer: Mass Power)



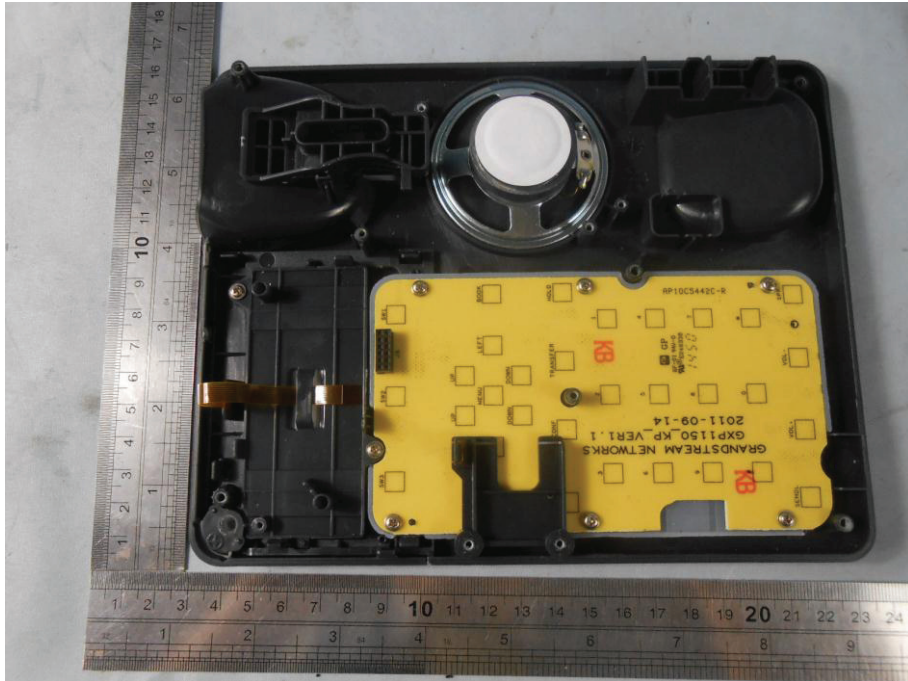
Power Adaptor View (Manufacturer: Sunlight)



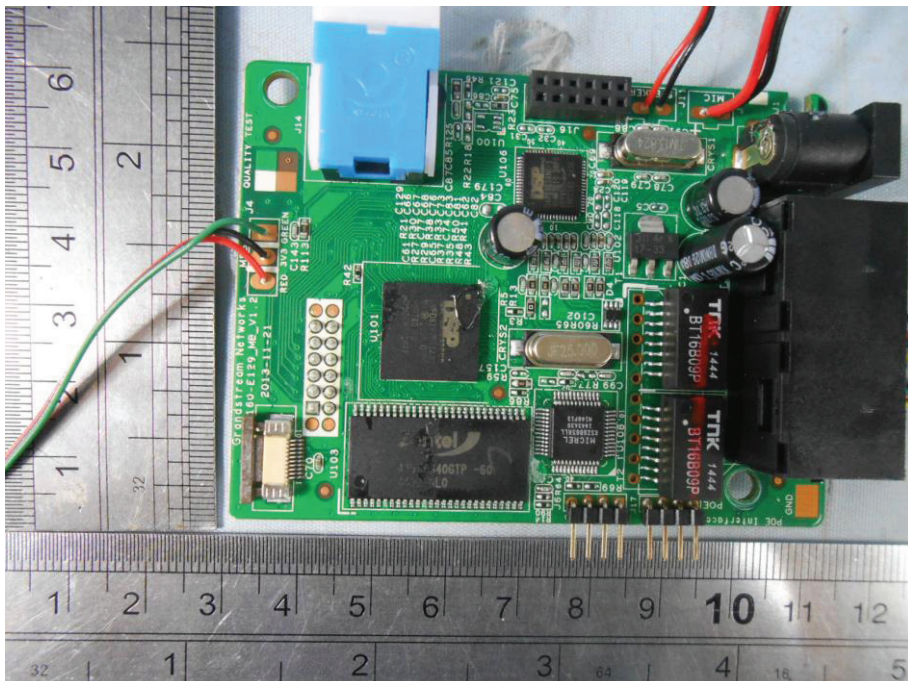
EUT-Uncovered View #1



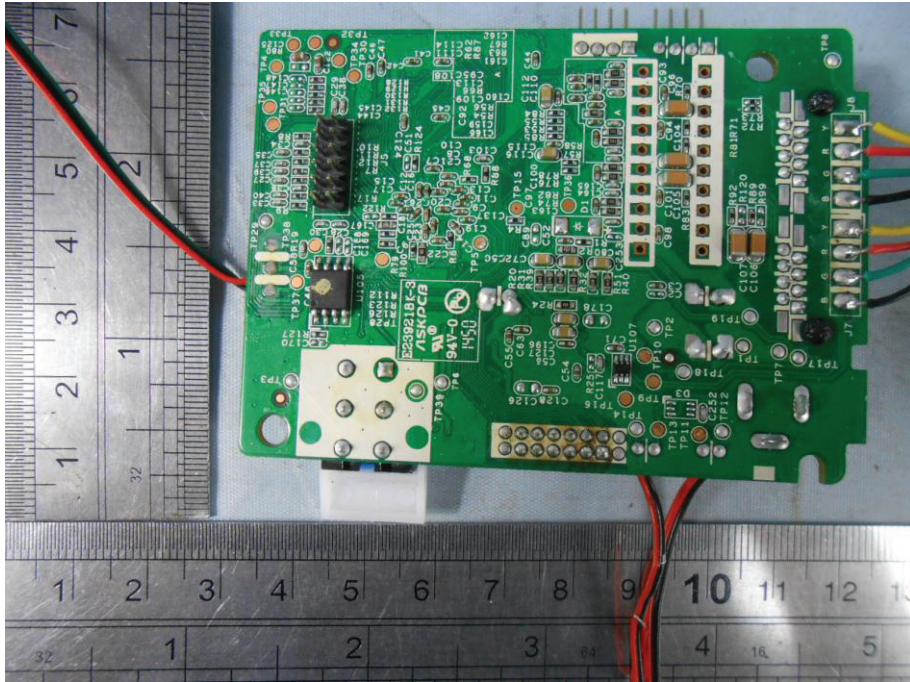
EUT-Uncovered View #2



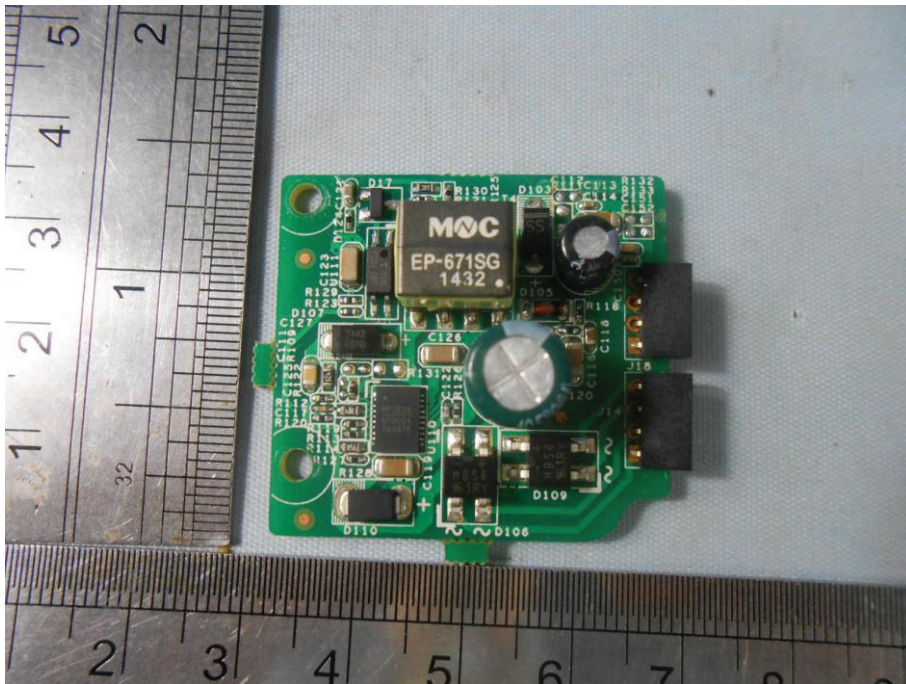
EUT-Uncovered View #3



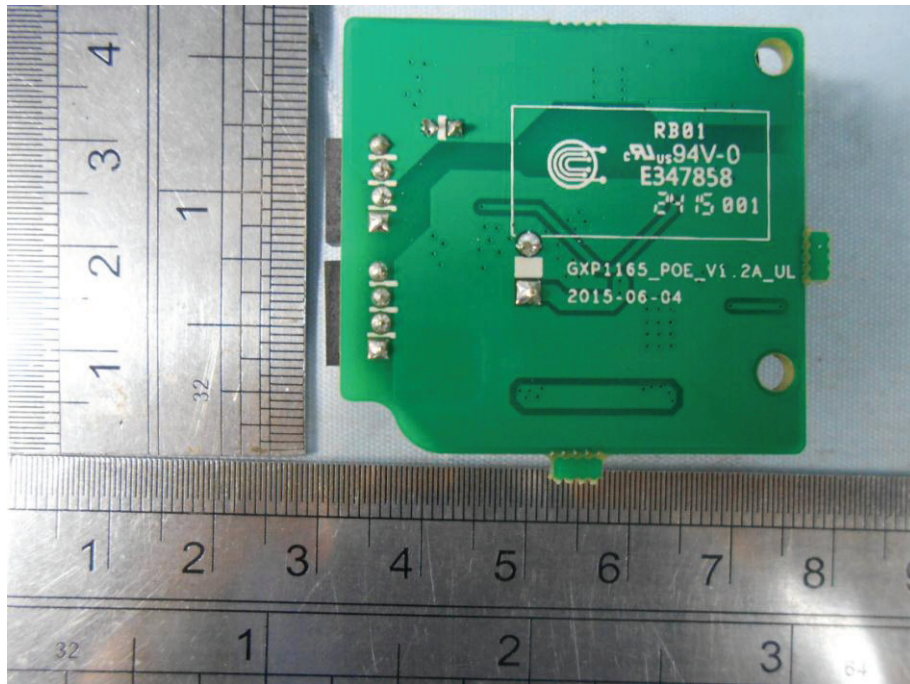
Main board- Top View



Main board- Bottom View



PoE board- Top View



PoE board- Bottom View

Test System Details

EUT	
Model Number:	E129 SIP DESKPHONE
Model Tested:	E129 SIP DESKPHONE
Description:	SIP DESKPHONE
Input:	AC 120V/60Hz
Manufacturer:	AVAYA

Cable Description:

Signal Cable Type		Signal Cable Description
A	Network Cable	Un-Shielding, 1.5m
B	VGA Cable	Shielding, 1.5m
C	Network Cable	Un-Shielding, 5.0m
D	Mouse Cable	Un-Shielding, 1.5m
E	Power Cable	Un-Shielding, 1.5m

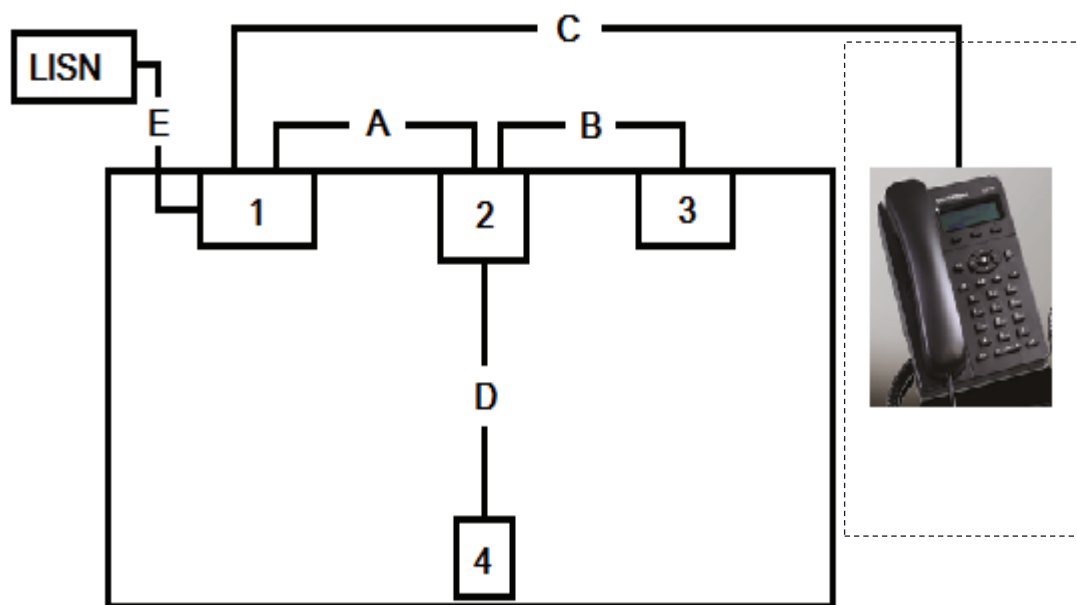
Support Device:

Product		Manufacturer	Model No.	Power Cord
1	EUT	AVAYA	E129 Sip Deskphone	Non-Shielding, 1.5m
2	Notebook PC	IBM	T43	Non-Shielding, 1.5m
3	Monitor	PHILIPS	220T1	Non-Shielding, 1.8m
4	Mouse	Lenovo	44AC107	Non-Shielding, 1.5m

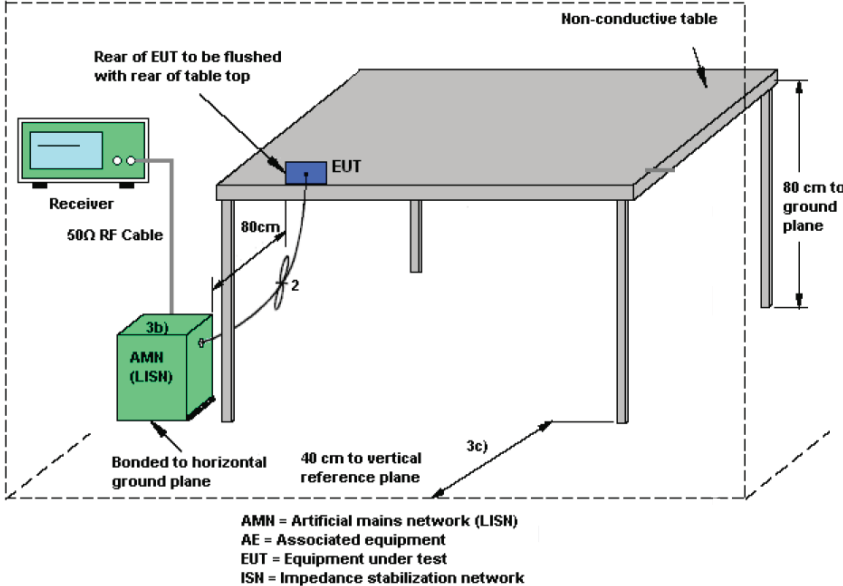
Note 1: The EUT has been tested as an independent unit together with other necessary accessories or support units. The above support units or accessories were used to form a representative test configuration during the test tests.

Note 2: All support device list above (except for EUT) have been approved by FCC DoC.

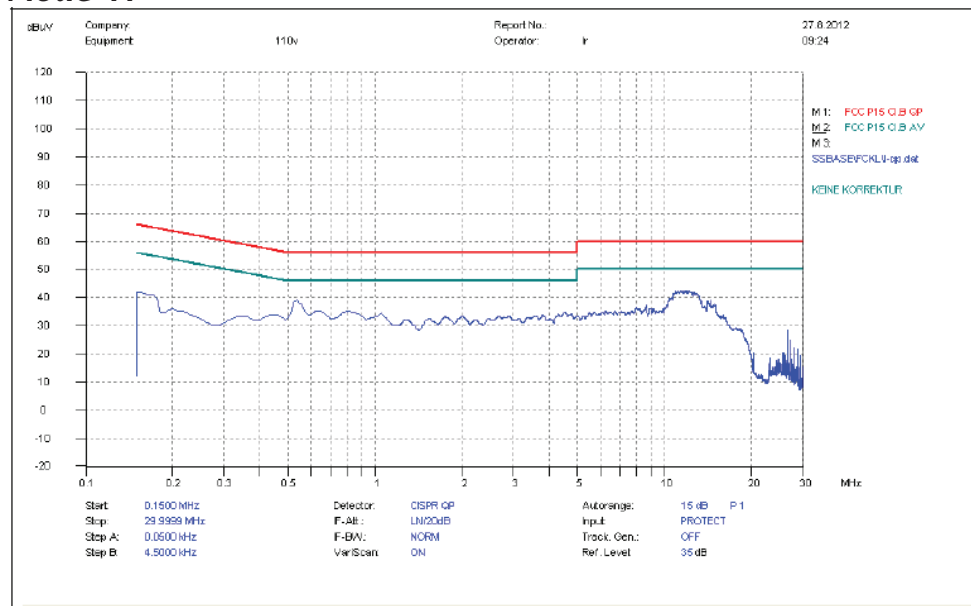
Configuration of Tested System



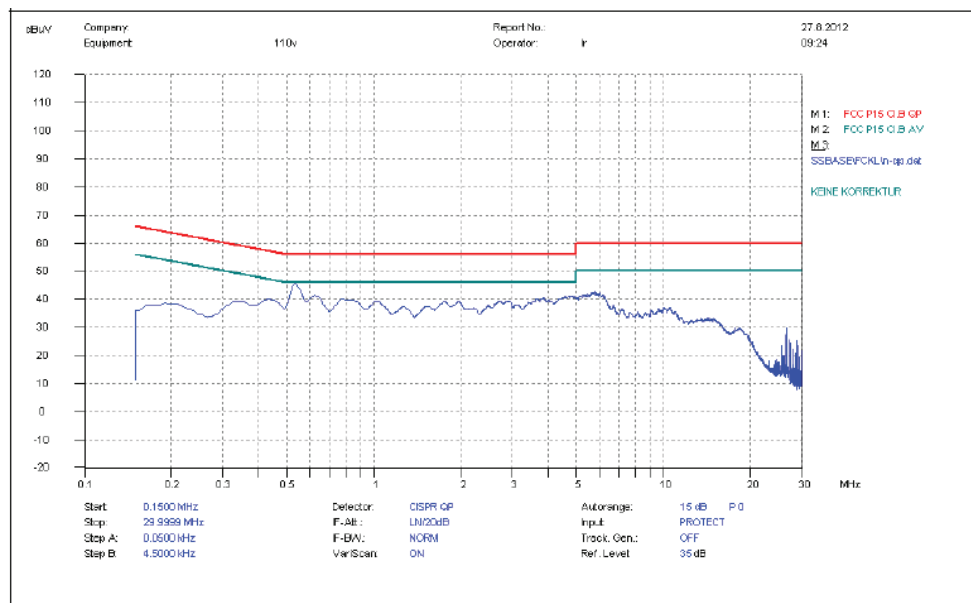
ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	AVAYA	TEST STANDERD:	FCC Part 15, Subpart B, Section 15.107
MODEL NUMBERS:	E129 Sip Deskphone	PRODUCT:	Sip Deskphone
MODEL TESTED:	E129 Sip Deskphone	EUT DESIGNATION:	Home or Office
TEMPERATURE:	23°C	HUMIDITY:	51%
ATM PRESSURE:	103kPa	GROUNDING:	None
TESTED BY:	Alex Yu	DATE OF TEST:	Oct. 14 th , 2015
TEST REFERENCE:	ANSI C63.4-2014		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4-2014 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150KHz to 30MHz.		
TEST MODE:	Mode 1,Mode 2,Mode 3,Mode 4		
TEST SET UP:	 <p>Non-conductive table</p> <p>Rear of EUT to be flushed with rear of table top</p> <p>Receiver</p> <p>50Ω RF Cable</p> <p>80cm</p> <p>2</p> <p>3b)</p> <p>AMN (LISH)</p> <p>Bonded to horizontal ground plane</p> <p>40 cm to vertical reference plane</p> <p>3c)</p> <p>80 cm to ground plane</p> <p>EUT</p> <p>AMN = Artificial mains network (LISH) AE = Associated equipment EUT = Equipment under test ISN = Impedance stabilization network</p>		
TESTED RANGE:	150kHz to 30MHz		
TEST VOLTAGE:	AC 120V/60Hz		
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions. The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). test personnel.		
M. UNCERTAINTY:	Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 150kHz~30MHz: 2.60dB		

Mode 1:

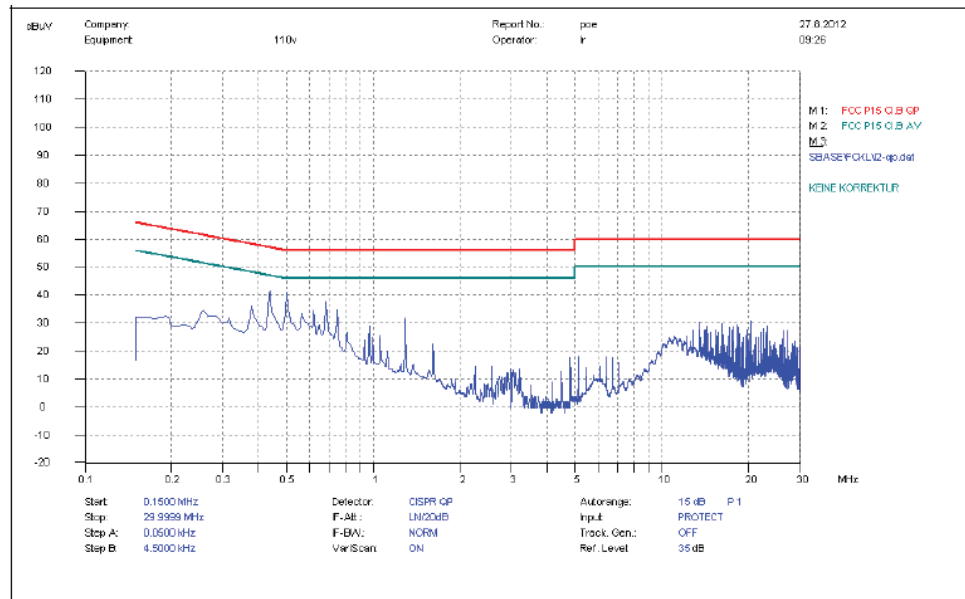


Line L Conducted Emission Graph

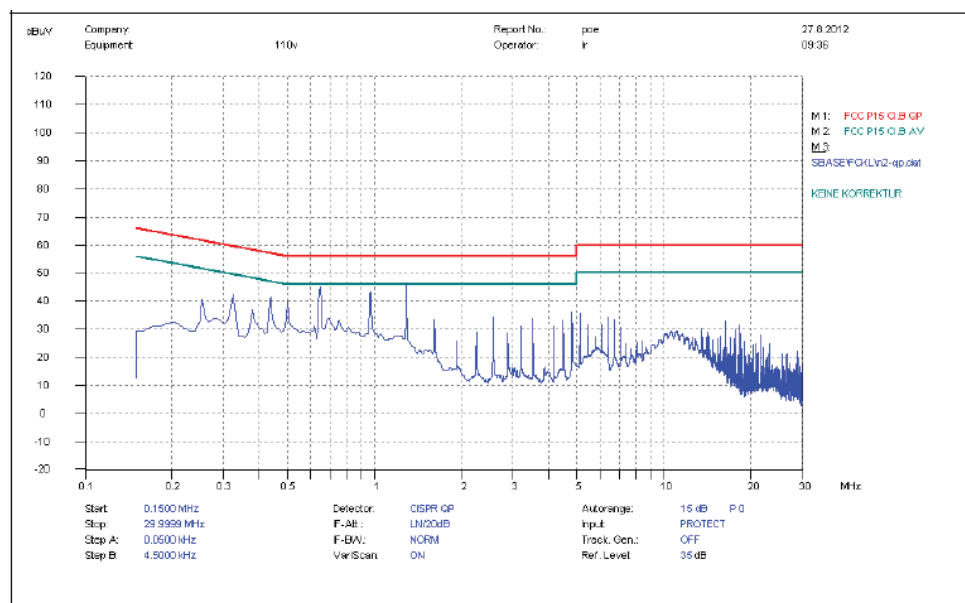


Line N Conducted Emission Graph

Mode 2:

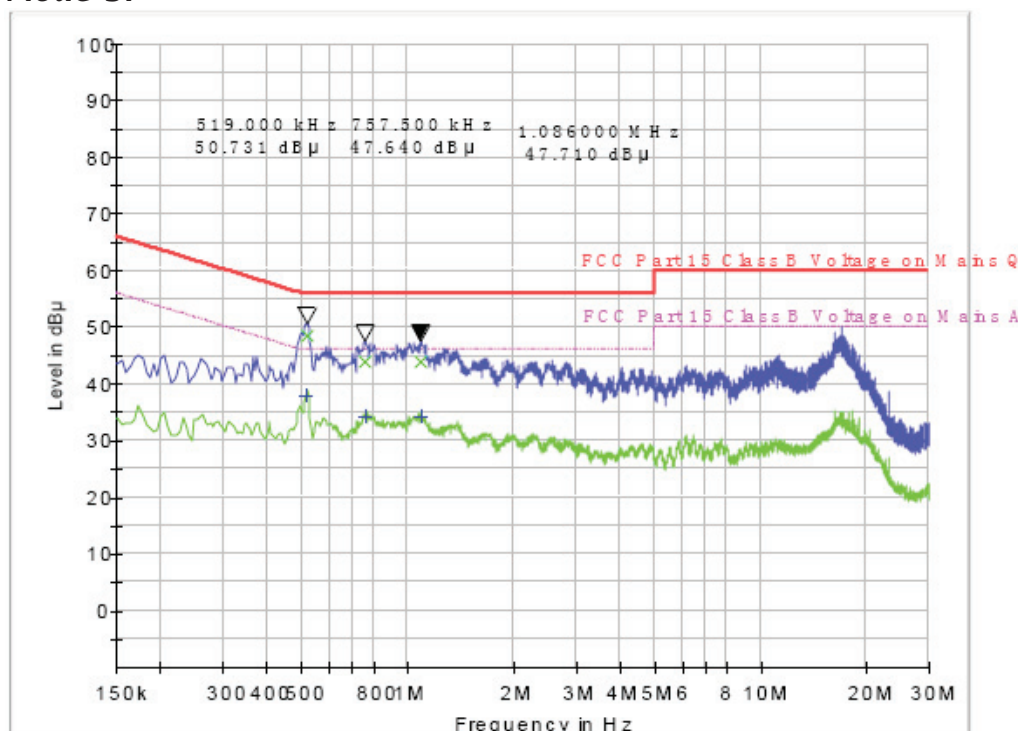


Line L Conducted Emission Graph

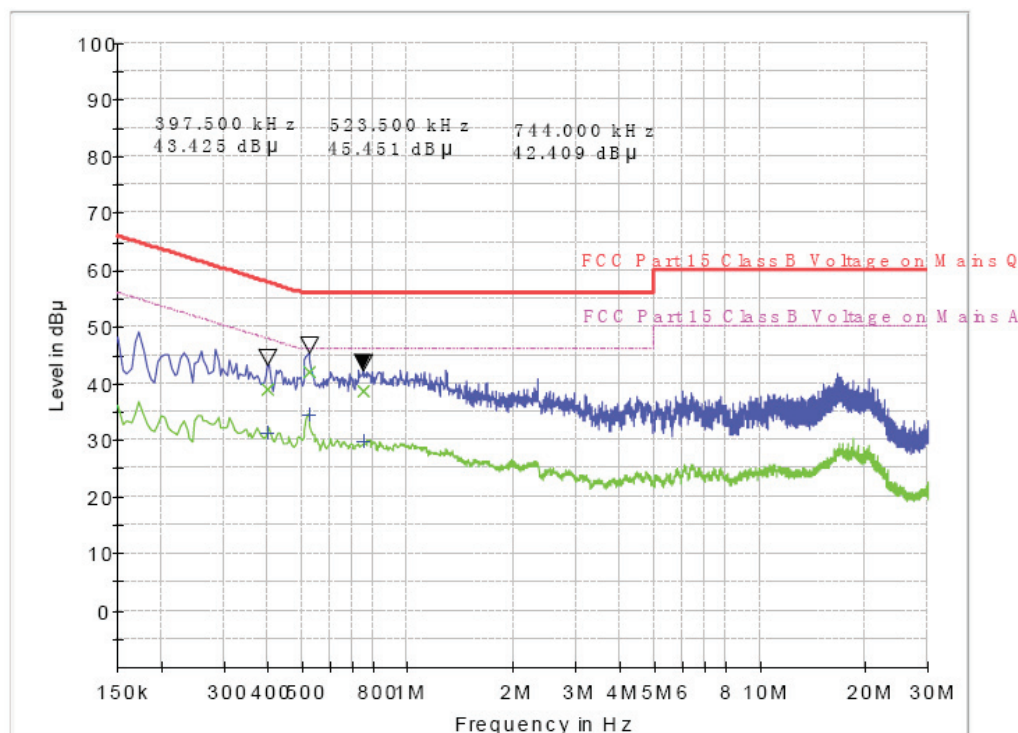


Line N Conducted Emission Graph

Mode 3:



Line L Conducted Emission Graph



Line N Conducted Emission Graph