

MEASUREMENT AND TEST REPORT

For

Grandstream Networks, Inc.

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Shenzhen, Guangdong, China

FCC ID: YZZGXV3651

Report Type: Original Report		Product Type: IP Camera	
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Report Number:	RSZ10112604		
Report Date:	2011-01-21		
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP*, NIST, or any agency of the Federal Government.

* This report contains data that are not covered by the NVLAP accreditation and are marked with an asterisk "★" (Rev.2)

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Grandstream Networks, Inc.*'s product, model number: *GXV3651_FHD* & *GXV3651_HD* (FCC ID: *YZZGXV3651*) or the "EUT" as referred to in this report is *IP camera*, The EUT measure approximately: 19.5cm L x 7.0cm W x 6.0cm H, rated input voltage: AC 120V 60Hz, the highest operating frequency are 400MHz for *GXV3651_FHD* and 296MHz for *GXV3651_HD*.

Adaptor information:

Model: CPS012A120100U

Input: 100-240V~50/60Hz 0.4A

Output: 12V 1.0A

Note: The serial products, models *GXV3651_FHD* & *GXV3651_HD*, we select *GXV3651_FHD* & *GXV3651_HD* to test. They are electrically identical; but *GXV3651_HD* software only run at 296MHz to support maximal HD resolution and *GXV3651_FHD* software run up to 400MHz to support both HD and FHD resolution., which was explained in the attached product similarity declaration letter provided by manufacturer.

**All measurement and test data in this report was gathered from production sample serial number: 1011133 (Assigned by Shenzhen BACL). The EUT was received on 2010-11-26.*

Objective

The following test report is prepared on behalf of *Grandstream Networks, Inc.* in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine compliance with FCC Part 15B.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect radiated and conducted emission measurement data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

No modification was made to the unit tested.

Local Support Equipment List and Details

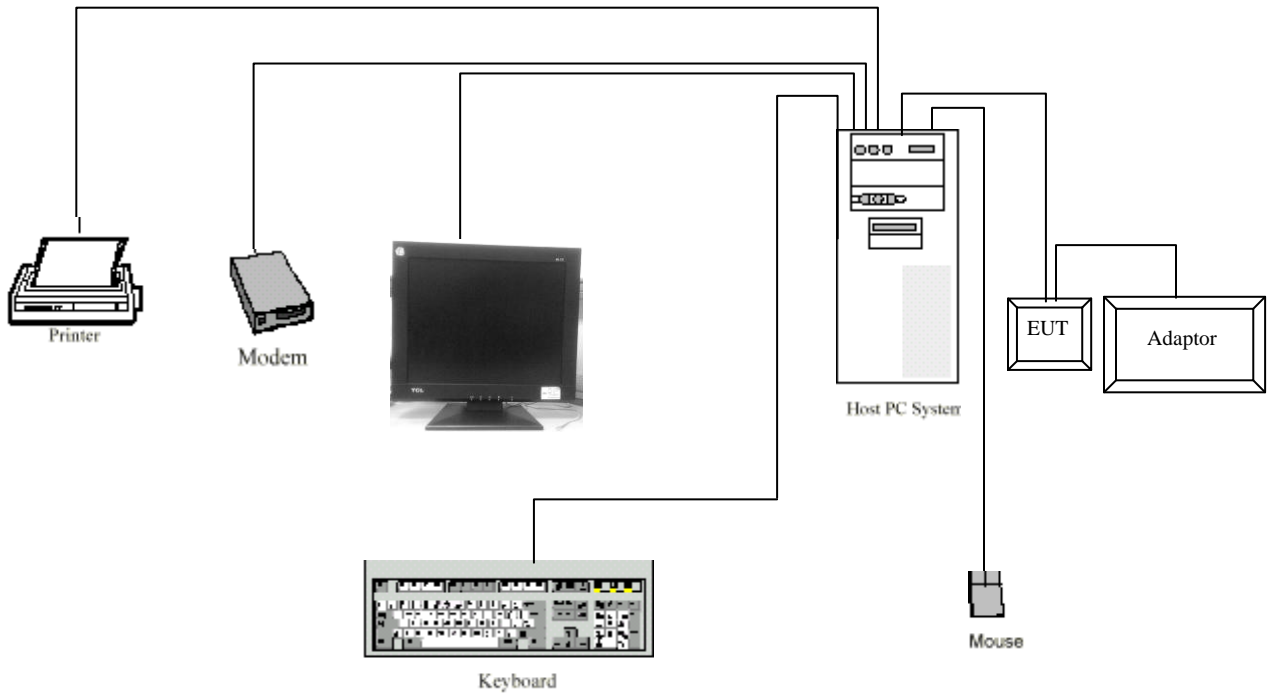
Manufacturer	Device Name	Model	Serial Number	FCC ID
DELL	System PC	1#	N/A	DOC
SAST	Modem	AEM-2100	0293	DOC
HP	Laser Jet5L	C3941A	JPTVOB2337	DOC
Kingmax	USB storage	2G	N/A	N/A
N/A	75 Ω Load	N/A	N/A	N/A
N/A	Prosafe Switch with POE	N/A	PSEM04205	N/A

External I/O Cable

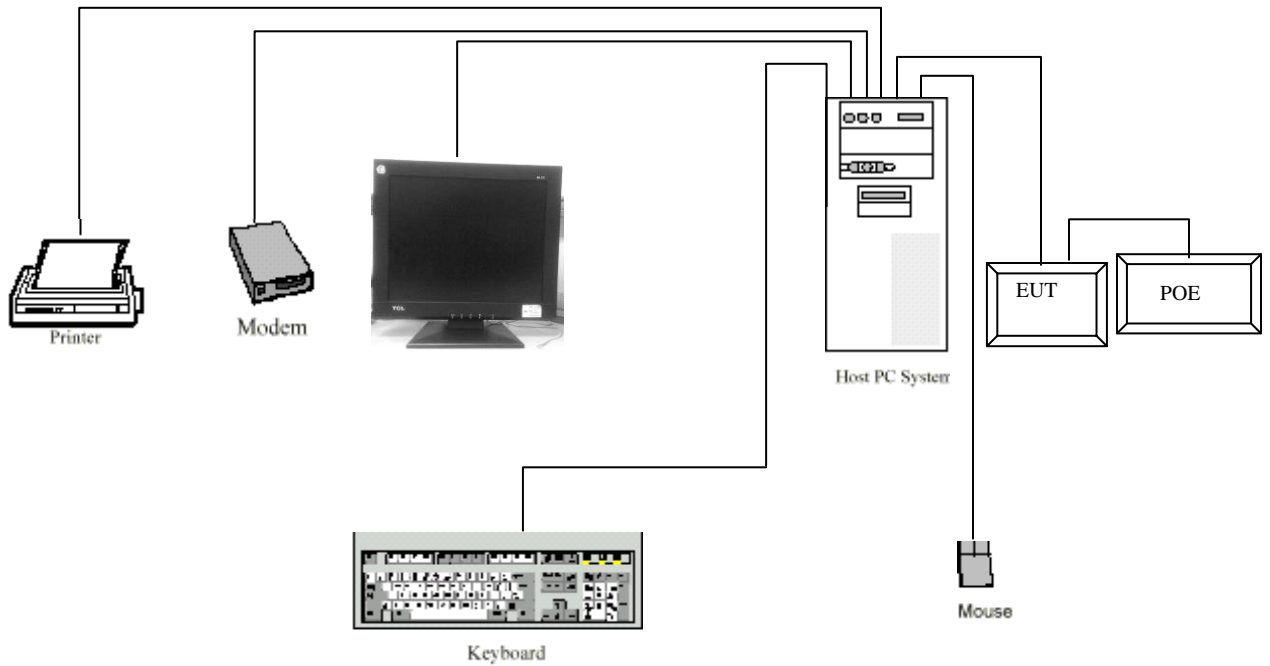
Cable Description	Length (m)	From/Port	To
Shielded Detachable Mouse Cable	1.5	Mouse	Mouse
Shielded Detachable Printer Cable	1.2	Parallel	Printer
Shielded Detachable Serial Cable	1.2	Serial Port/Host	Modem
Shielded Detachable VGA Cable	1.5	VGA Port/Host	Monitor
Shielded Detachable Coaxial	1.8	Video Port/Host	Color TV PG
Unshielded Detachable DC Cable	1.8	EUT	Adaptor
Shielded Detachable RJ45 Cable	2.0	RJ45Port/Host	EUT

Configuration of Test Setup

Adaptor Power:

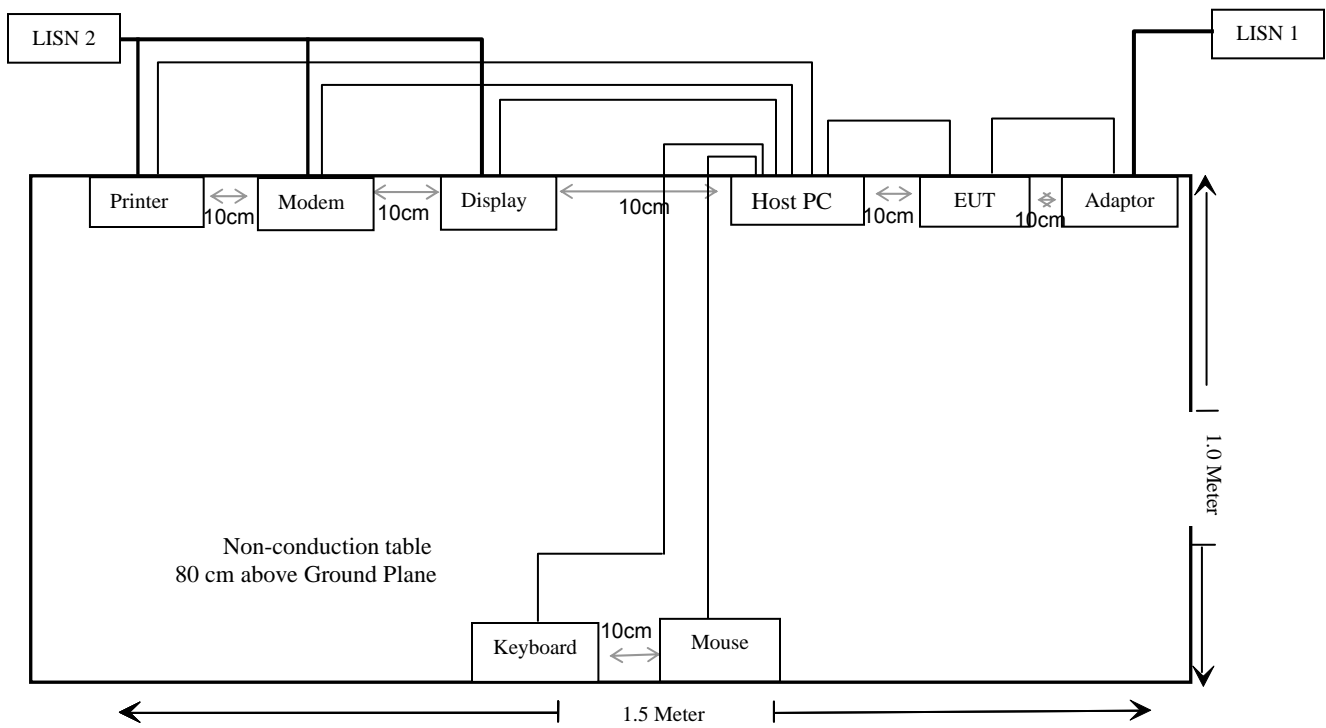


POE:

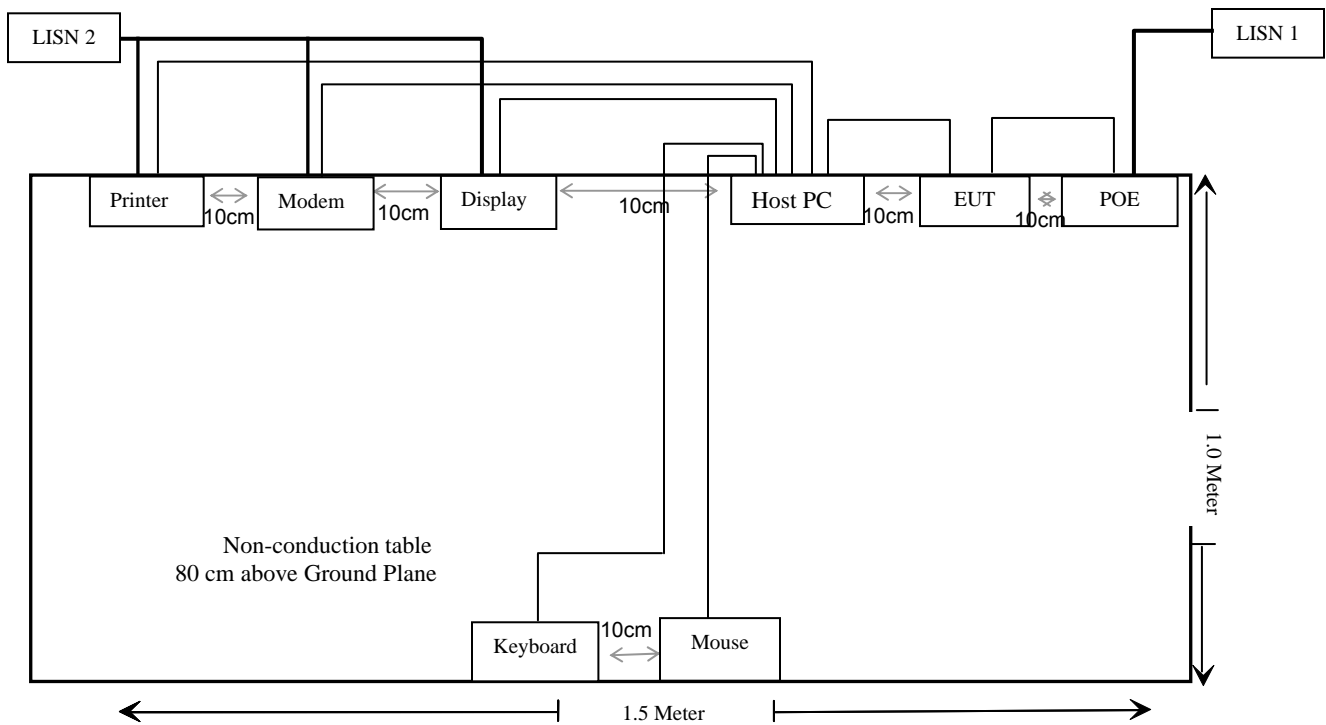


Block Diagram of Test Setup

Adaptor Power:



POE:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

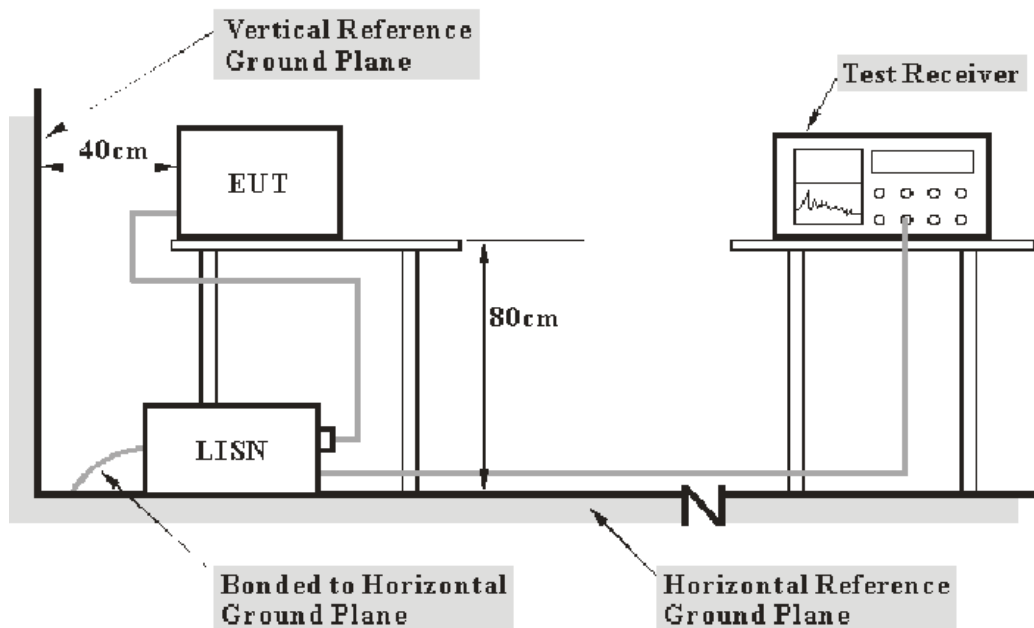
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ± 2.4 dB.

EUT Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

For AC/DC adapter power supply, the adapter was connected to a 120VAC/60 Hz power source.

For POE power supply, the POE was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>IF B/W</i>
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	DE25330	2010-03-03	2011-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2010-03-09	2011-03-08

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN; the other support equipments were connected to second LISN for AC/DC adapter power supply. EUT and notebook were connected to prosafe switch with POE prosafe switch with POE was connected to the first LISN. All the other relevant support equipments were connected to the second LISN for POE power supply mode.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

We fast scan PC output, USB output, SD Card output and AV output. According to the recorded data in following table, the EUT complied with the FCC Part 15B, Class B, with the worst margin reading of:

GXV3651__FHD:

AC/DC adapter Power Supply

10.02 dB at 7.680 MHz in the **Neutral** conductor mode for PC output

POE Power Supply

17.09 dB at 0.170 MHz in the **Neutral** conductor mode for PC output

GXV3651__HD:**AC/DC adapter Power Supply**

10.52 dB at **7.76 MHz** in the **Neutral** conductor mode for PC output

POE Power Supply

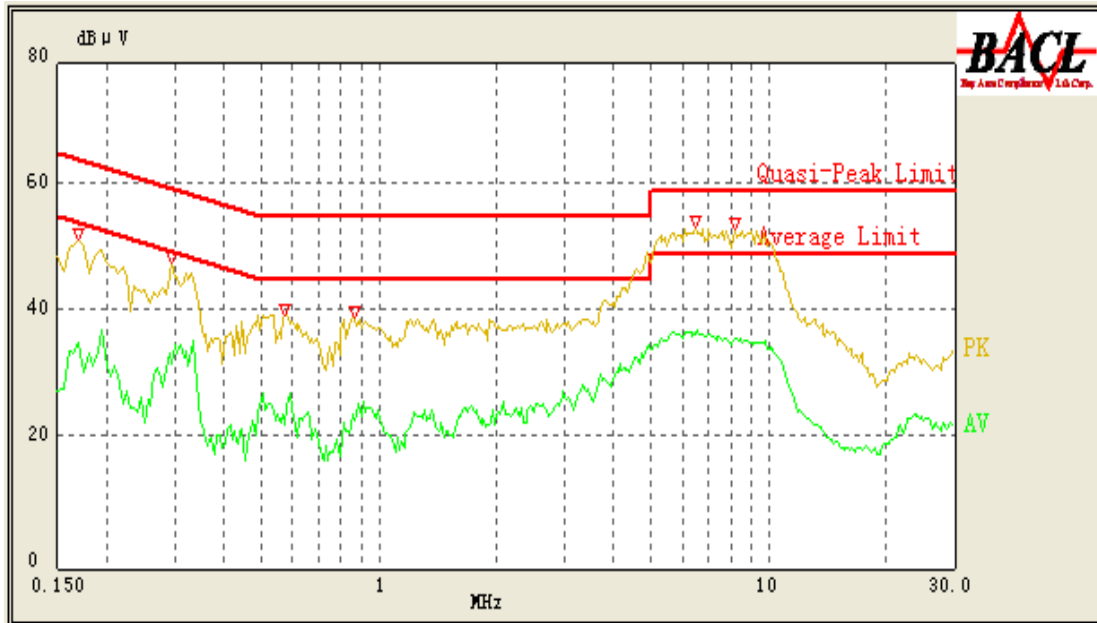
17.09 dB at **0.170 MHz** in the **Neutral** conductor mode for PC output

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

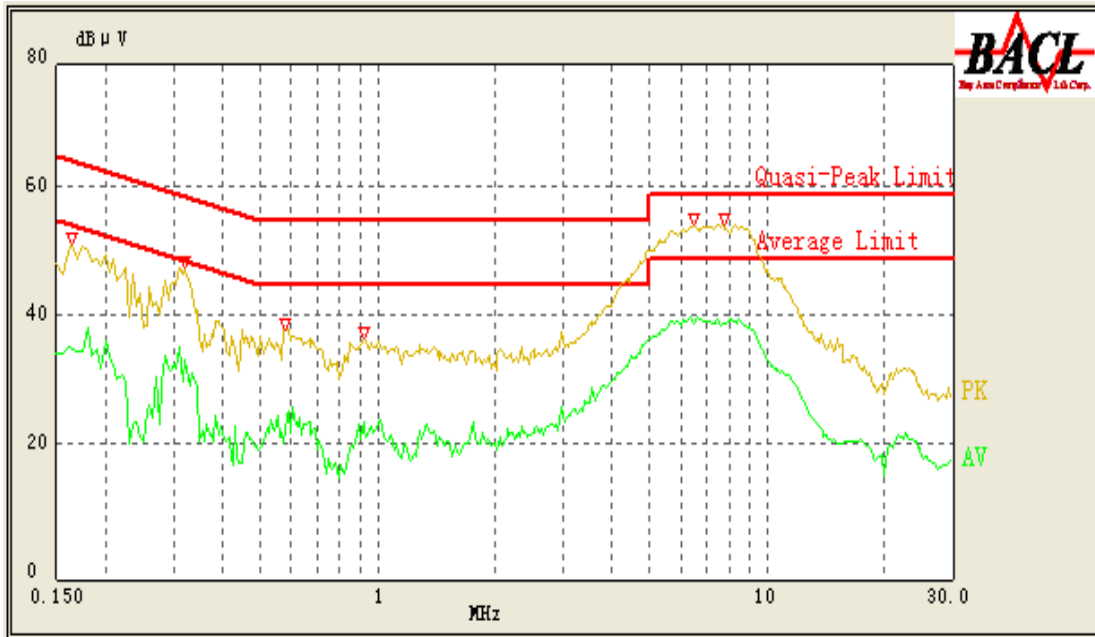
The testing was performed by Cabin on 2011-01-12.

Test Mode: *Running*

Model: GXV3651__FHD**AC/DC adapter Power Supply****PC output (worse case)****AC 120V/ 60 Hz, Line**

Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Corrected Factor (dB)	Corrected Result (dBμV)	Limit (dBμV)	Margin (dB)	Remark (PK/Ave/QP)
6.480	10.10	37.26	50.00	12.74	Ave
6.480	10.10	46.23	60.00	13.77	QP
8.030	10.10	35.59	50.00	14.41	Ave
8.030	10.10	44.31	60.00	15.69	QP
0.170	10.09	47.05	65.43	18.38	QP
0.295	10.00	42.91	61.86	18.95	QP
0.295	10.00	32.66	51.86	19.20	Ave
0.565	10.18	36.58	56.00	19.42	QP
0.170	10.09	35.80	55.43	19.63	Ave
0.870	10.13	35.15	56.00	20.85	QP
0.870	10.13	23.49	46.00	22.51	Ave
0.565	10.18	22.65	46.00	23.35	Ave

AC 120V/ 60 Hz, Neutral:

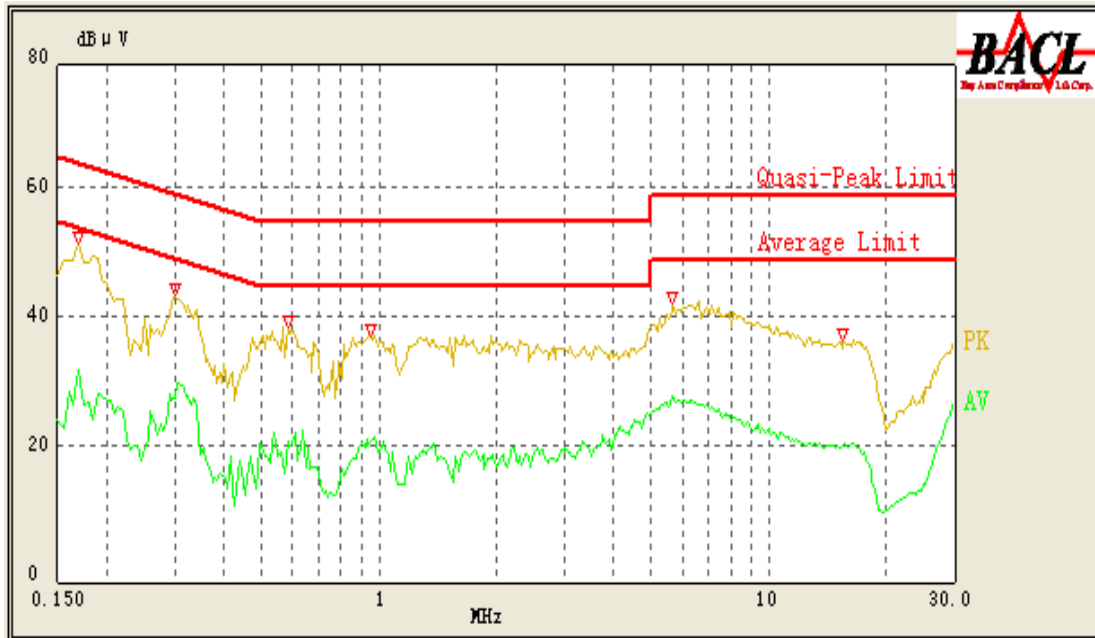


Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Correct ed Factor (dB)	Corrected Result (dBμV)	Limit (dBμV)	Margin (dB)	Remark (PK/Ave/QP)
7.680	10.10	39.98	50.00	10.02	Ave
6.465	10.10	39.80	50.00	10.20	Ave
6.465	10.10	49.12	60.00	10.88	QP
7.680	10.10	48.45	60.00	11.55	QP
0.320	10.02	44.75	61.14	16.39	QP
0.165	10.09	49.12	65.57	16.45	QP
0.320	10.02	34.14	51.14	17.00	Ave
0.165	10.09	36.02	55.57	19.55	Ave
0.585	10.18	25.65	46.00	20.35	Ave
0.585	10.18	34.63	56.00	21.37	QP
0.920	10.12	24.35	46.00	21.65	Ave
0.920	10.12	32.51	56.00	23.49	QP

POE Power Supply

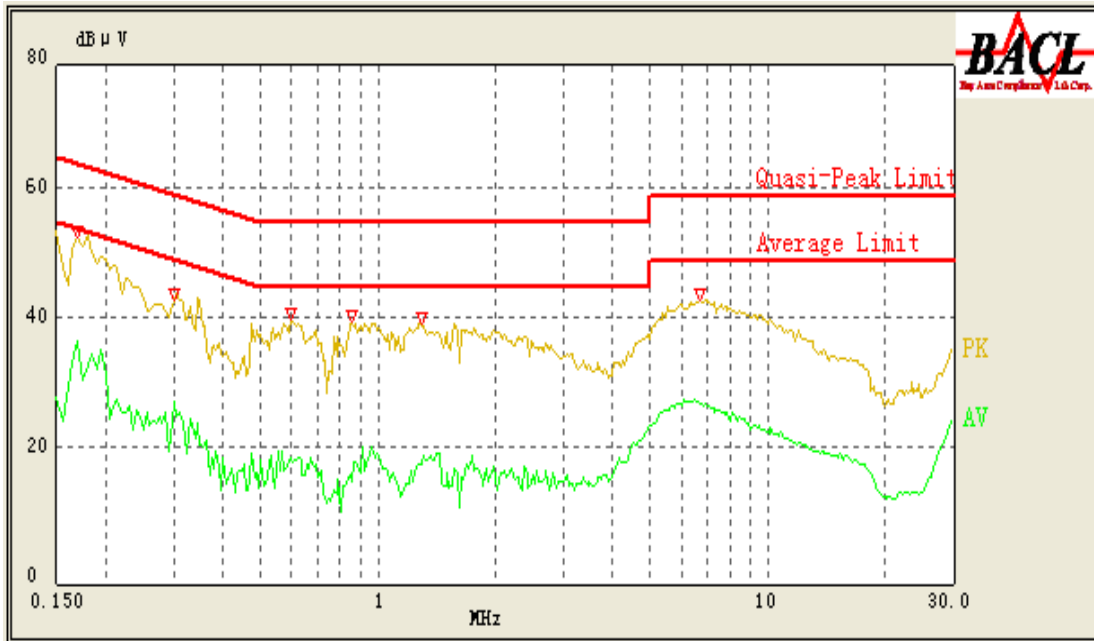
PC output (worse case)

AC 120V/ 60 Hz, Line



Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Corrected Factor (dB)	Corrected Result (dBµV)	Limit (dBµV)	Margin (dB)	Remark (PK/Ave/QP)
0.170	10.09	46.40	65.43	19.03	QP
0.300	10.00	41.18	61.71	20.53	QP
0.585	10.18	34.80	56.00	21.20	QP
5.670	10.10	28.65	50.00	21.35	Ave
0.950	10.11	33.95	56.00	22.05	QP
0.170	10.09	32.90	55.43	22.53	Ave
0.300	10.00	28.45	51.71	23.26	Ave
0.950	10.11	21.69	46.00	24.31	Ave
0.585	10.18	21.65	46.00	24.35	Ave
5.670	10.10	35.20	60.00	24.72	QP
15.600	10.16	21.38	50.00	28.62	Ave
15.600	10.16	30.82	60.00	29.18	QP

AC 120V/ 60 Hz, Neutral:



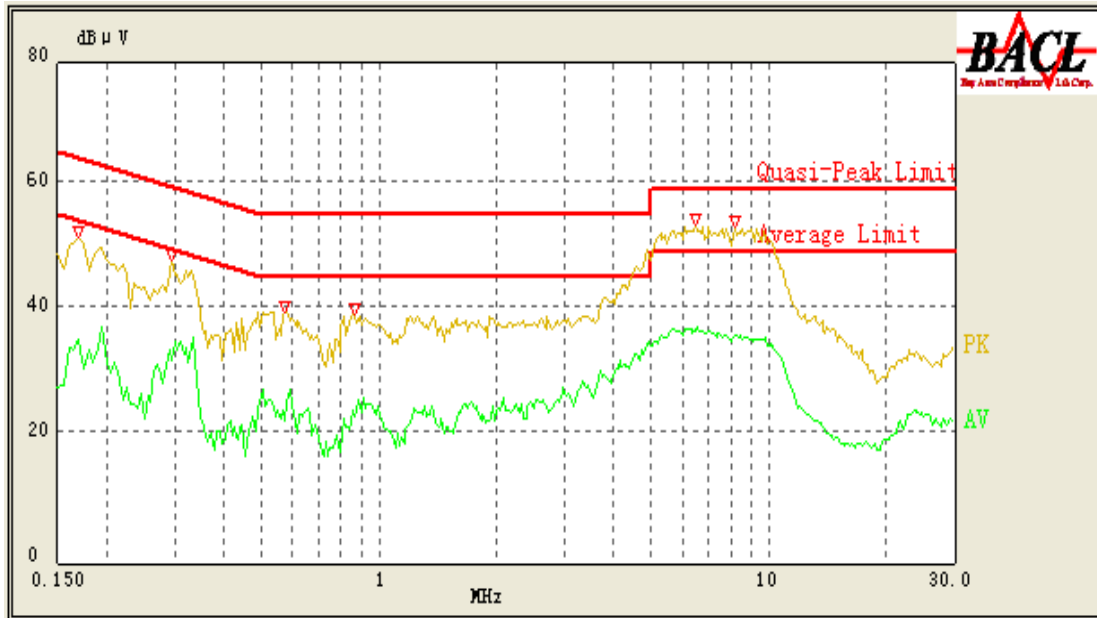
Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Correct ed Factor (dB)	Corrected Result (dBµV)	Limit (dBµV)	Margin (dB)	Remark (PK/Ave/QP)
0.170	10.09	48.34	65.43	17.09	QP
0.170	10.09	37.53	55.43	17.90	Ave
0.600	10.18	36.90	56.00	19.10	QP
0.300	10.00	41.89	61.71	19.82	QP
0.860	10.13	35.62	56.00	20.38	QP
1.300	10.13	35.00	56.00	21.00	QP
6.675	10.10	27.92	50.00	22.08	Ave
6.675	10.10	37.42	60.00	22.58	QP
0.300	10.00	28.24	51.71	23.47	Ave
1.315	10.13	19.70	46.00	26.30	Ave
0.595	10.18	19.57	46.00	26.43	Ave
0.855	10.13	15.94	46.00	30.06	Ave

Model: GXV3651_HD:

AC/DC adapter Power Supply

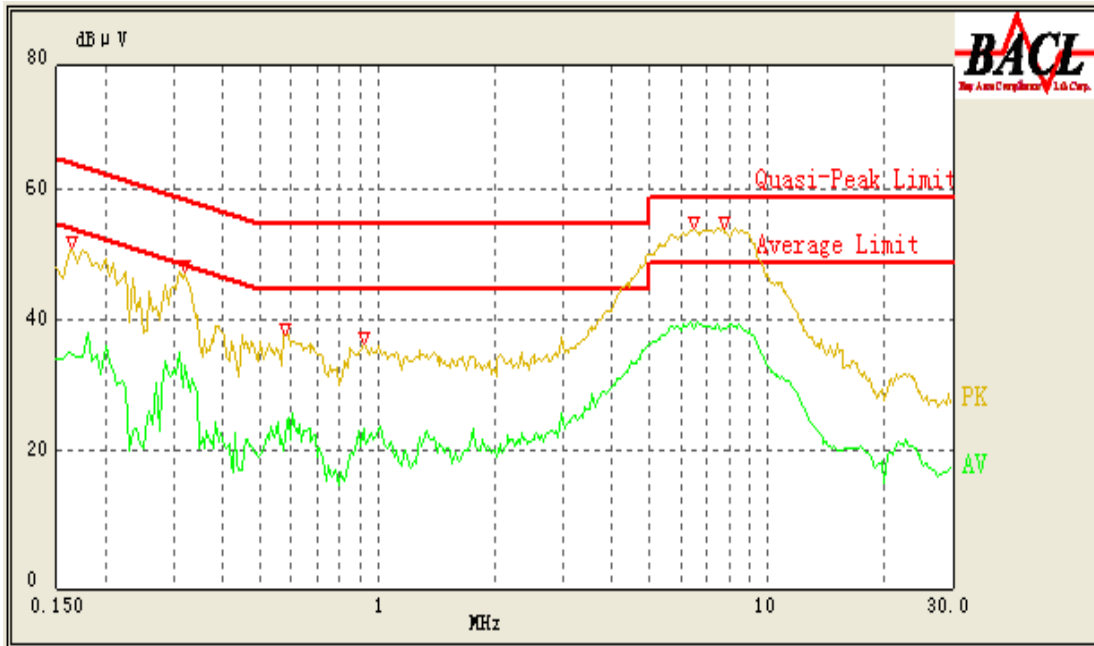
PC output (worse case)

AC 120V/ 60 Hz, Line:



Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Corrected Factor (dB)	Corrected Result (dBμV)	Limit (dBμV)	Margin (dB)	Remark (PK/Ave/QP)
6.63	10.10	37.41	50.00	12.59	Ave
6.63	10.10	46.38	60.00	13.62	QP
8.18	10.10	35.74	50.00	14.26	Ave
8.18	10.10	44.46	60.00	15.54	QP
0.32	10.09	47.2	65.43	18.23	QP
0.445	10.00	43.06	61.86	18.8	QP
0.445	10.00	32.81	51.86	19.05	Ave
0.715	10.18	36.73	56.00	19.27	QP
0.32	10.09	35.95	55.43	19.48	Ave
1.02	10.13	35.3	56.00	20.7	QP
1.02	10.13	23.64	46.00	22.36	Ave
0.715	10.18	22.8	46.00	23.2	Ave

AC 120V/ 60 Hz, Neutral:

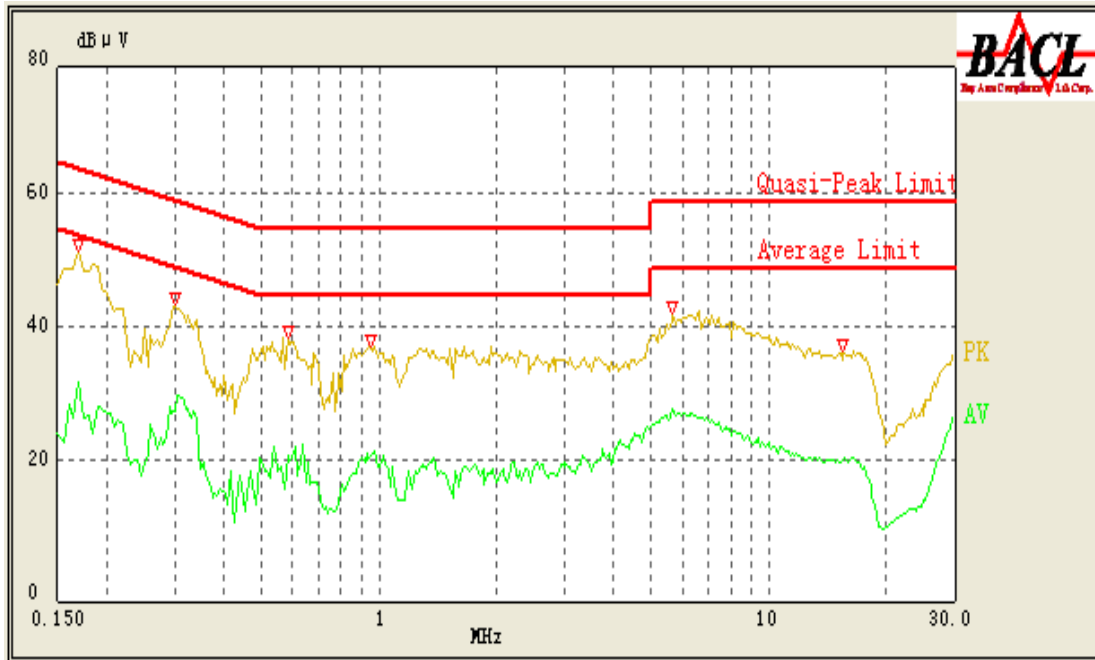


Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Correct ed Factor (dB)	Corrected Result (dBµV)	Limit (dBµV)	Margin (dB)	Remark (PK/Ave/QP)
7.76	10.10	39.48	50.00	10.52	Ave
6.545	10.10	39.3	50.00	10.7	Ave
6.545	10.10	48.62	60.00	11.38	QP
7.76	10.10	47.95	60.00	12.05	QP
0.4	10.02	44.25	61.14	16.89	QP
0.245	10.09	48.62	65.57	16.95	QP
0.4	10.02	33.64	51.14	17.5	Ave
0.245	10.09	35.52	55.57	20.05	Ave
0.665	10.18	25.15	46.00	20.85	Ave
0.665	10.18	34.13	56.00	21.87	QP
0.923	10.12	23.85	46.00	22.15	Ave
0.923	10.12	32.01	56.00	23.99	QP

POE Power Supply

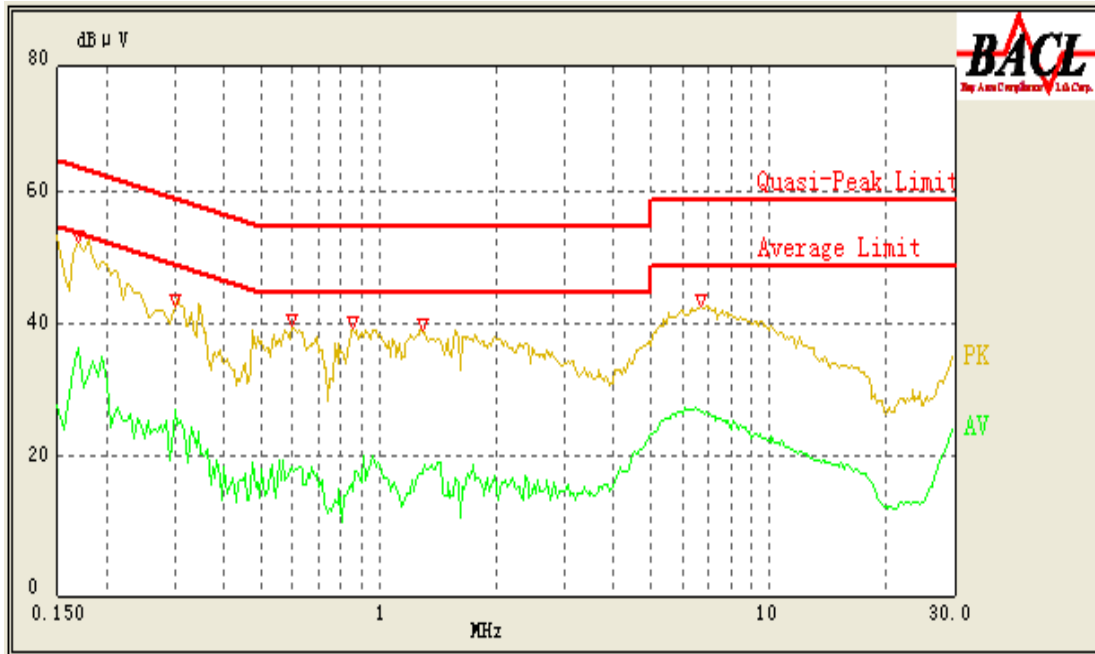
PC output (worse case)

AC 120V/ 60 Hz, Line:



Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Corrected Factor (dB)	Corrected Result (dBµV)	Limit (dBµV)	Margin (dB)	Remark (PK/Ave/QP)
0.170	10.09	46.40	65.43	19.03	QP
0.300	10.00	41.18	61.71	20.53	QP
0.585	10.18	34.80	56.00	21.20	QP
5.670	10.10	28.65	50.00	21.35	Ave
0.950	10.11	33.95	56.00	22.05	QP
0.170	10.09	32.90	55.43	22.53	Ave
0.300	10.00	28.45	51.71	23.26	Ave
0.950	10.11	21.69	46.00	24.31	Ave
0.585	10.18	21.65	46.00	24.35	Ave
5.670	10.10	35.20	60.00	24.72	QP
15.600	10.16	21.38	50.00	28.62	Ave
15.600	10.16	30.82	60.00	29.18	QP

AC 120V/ 60 Hz, Neutral:



Conducted Emissions			FCC 15.107, Class B		
Frequency (MHz)	Correct ed Factor (dB)	Corrected Result (dBμV)	Limit (dBμV)	Margin (dB)	Remark (PK/Ave/QP)
0.170	10.09	48.34	65.43	17.09	QP
0.170	10.09	37.53	55.43	17.90	Ave
0.600	10.18	36.90	56.00	19.10	QP
0.300	10.00	41.89	61.71	19.82	QP
0.860	10.13	35.62	56.00	20.38	QP
1.300	10.13	35.00	56.00	21.00	QP
6.675	10.10	27.92	50.00	22.08	Ave
6.675	10.10	37.42	60.00	22.58	QP
0.300	10.00	28.24	51.71	23.47	Ave
1.315	10.13	19.70	46.00	26.30	Ave
0.595	10.18	19.57	46.00	26.43	Ave
0.855	10.13	15.94	46.00	30.06	Ave

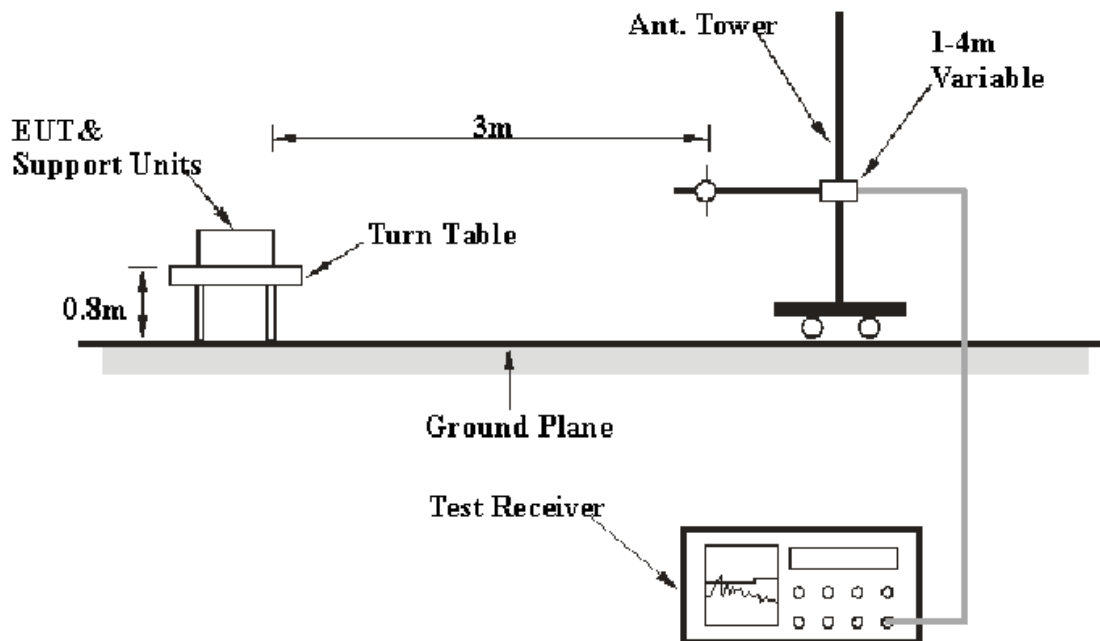
FCC §15.109 – RADIATED SPURIOUS EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. is ± 4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3 meters, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

For AC/DC adapter power supply, the adapter was connected to a 120 VAC/60 Hz power source.

For POE power supply, the prosafe switch with POE was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 2000 MHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>RBW</i>	<i>Video B/W</i>	<i>Detector</i>
30 MHz – 1000 MHz	100 kHz	300 kHz	QP
1000 MHz – 2 GHz	1 MHz	3 MHz	PK
1000 MHz – 2 GHz	1 MHz	10 Hz	Ave

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2010-08-02	2011-08-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-24	2011-11-23
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2010-03-11	2011-03-10
HP	Amplifier	2VA-213+	T-E27H	2010-03-08	2011-03-07
Sunol Sciences	Horn Antenna	DRH-118	A052604	2010-05-05	2011-05-04
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2010-07-08	2011-07-07

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the radiated emissions test, the adapter and all the other relevant support equipments were connected to the AC floor outlet for AC/DC adapter power supply mode; EUT and host PC were connected to prosafe switch with POE, all the other relevant support equipments were connected to the AC floor outlet for POE power supply mode.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode from 30 MHz to 1GHz, and above 1GHz in Peak & Average detection

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

Model: GXV3651__FHD:

For AC/DC adapter power supply

0.2 dB at 431.9360 MHz in the Horizontal polarization

For POE power supply (USB)

0.4 dB at 287.99375 MHz in the Horizontal polarization

Model: GXV3651__HD:

For AC/DC adapter power supply

0.4 dB at 287.976250 MHz in the Horizontal polarization

For POE power supply (USB)

0.6 dB at 288.020000MHz in the Horizontal polarization

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Cabin on 2011-01-12.

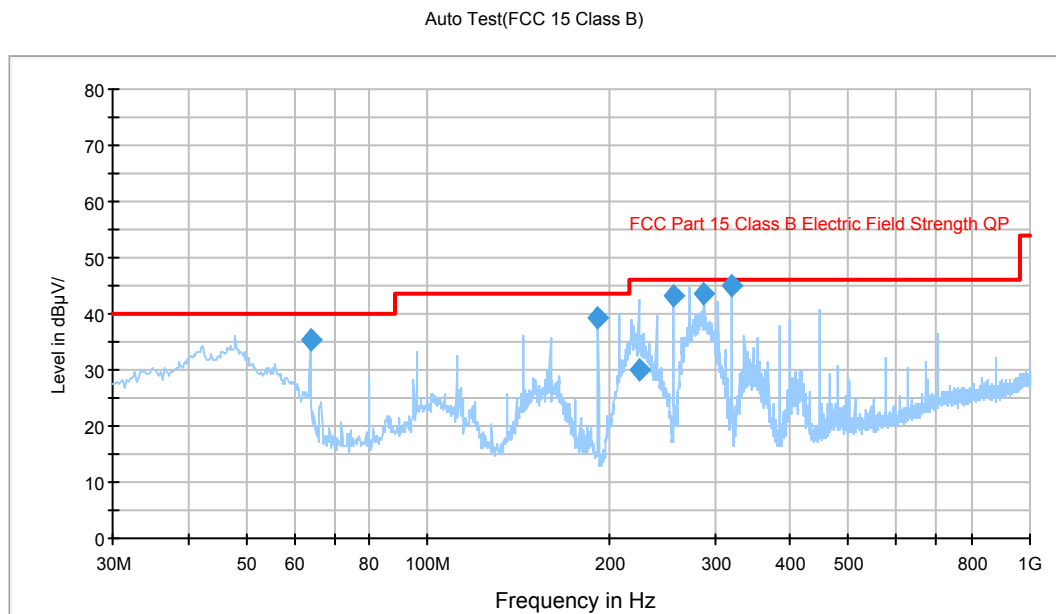
Test Mode: Running

Model: GXV3651__FHD

AC/DC adapter Power Supply

PC output:

Below 1 GHz:



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
319.974250	45.0	125.0	H	78.0	-11.9	46.0	1.0*
288.009000	43.5	162.0	H	339.0	-12.6	46.0	2.5*
255.986250	43.3	158.0	H	298.0	-13.4	46.0	2.7*
191.987500	39.5	199.0	H	76.0	-14.7	43.5	4.0*
64.001000	35.2	102.0	V	219.0	-18.5	40.0	4.8
224.108500	30.0	212.0	V	141.0	-13.9	46.0	16.0

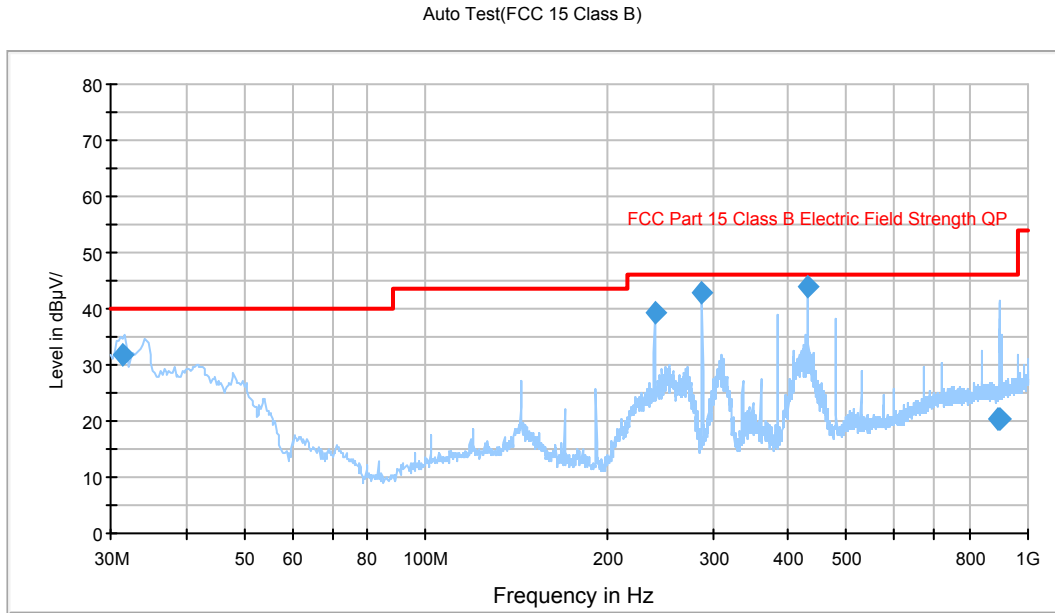
**Within measurement uncertainty.*

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1554.4	34.02	Ave	102	1.1	V	27.2	2.33	27.13	36.42	54	17.58
1399.2	33.54	Ave	90	1.1	H	26.8	2.26	26.85	35.75	54	18.25
1228.7	34.71	Ave	134	1.1	V	24.6	2.01	26.84	34.48	54	19.52
1288.3	32.17	Ave	92	1.2	V	25.1	2.12	26.88	32.51	54	21.49
1247.5	31.02	Ave	90	1.1	H	25.5	2.12	26.83	31.81	54	22.19
1554.4	48.58	PK	102	1.1	V	27.2	2.33	27.13	50.98	74	23.02
1175.4	29.48	Ave	140	1	H	24.8	2.01	26.85	29.44	54	24.56
1399.2	46.77	PK	90	1.1	H	26.8	2.26	26.85	48.98	74	25.02
1288.3	45.51	PK	92	1.2	V	25.1	2.12	26.88	45.85	74	28.15
1247.5	44.89	PK	90	1.1	H	25.5	2.12	26.83	45.68	74	28.32
1228.7	44.65	PK	134	1.1	V	24.6	2.01	26.84	44.42	74	29.58
1175.4	42.77	PK	140	1	H	24.8	2.01	26.85	42.73	74	31.27

AV output:

Below 1GHz:

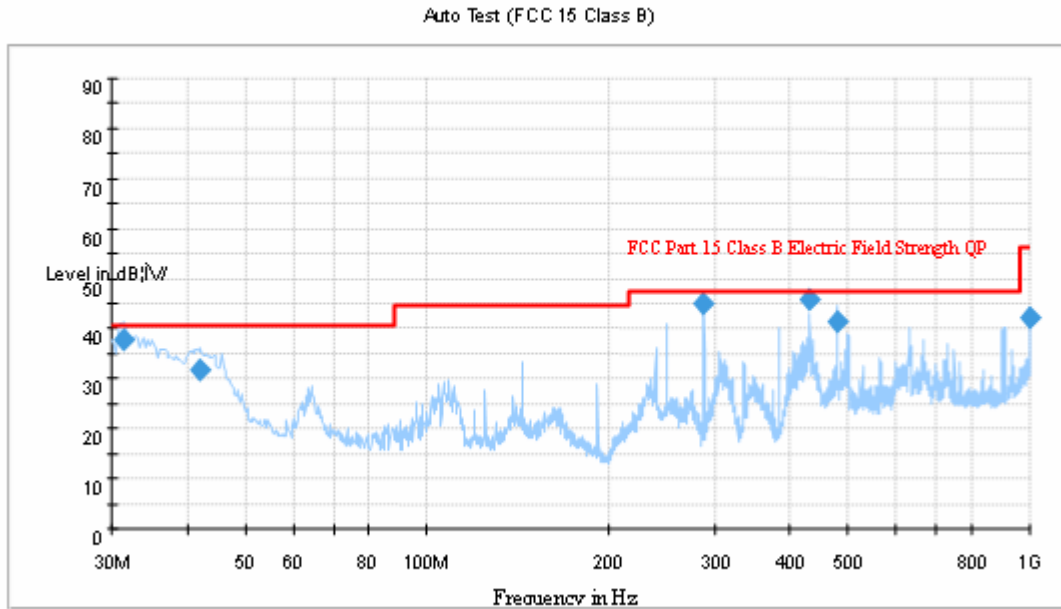


Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
431.971750	43.9	100.0	H	95.0	-9.4	46.0	2.1*
287.988750	42.7	100.0	H	95.0	-12.6	46.0	3.3*
239.985750	39.2	134.0	H	128.0	-13.7	46.0	6.8
31.510500	31.7	100.0	V	150.0	-6.5	40.0	8.3
894.866000	20.3	224.0	H	213.0	-1.0	46.0	25.7

**Within measurement uncertainty.*

Above 1GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1557.1	33.2	Ave	102	1.1	V	27.2	2.33	27.13	35.6	54	18.4
1377.4	32.72	Ave	90	1.1	H	26.8	2.26	26.85	34.93	54	19.07
1114.7	33.89	Ave	134	1.1	V	24.6	2.01	26.84	33.66	54	20.34
1231.8	31.35	Ave	92	1.2	V	25.1	2.12	26.88	31.69	54	22.31
1227.9	30.2	Ave	90	1.1	H	25.5	2.12	26.83	30.99	54	23.01
1557.1	47.76	PK	102	1.1	V	27.2	2.33	27.13	50.16	74	23.84
1112.8	28.66	Ave	140	1	H	24.8	2.01	26.85	28.62	54	25.38
1377.4	45.95	PK	90	1.1	H	26.8	2.26	26.85	48.16	74	25.84
1231.8	44.69	PK	92	1.2	V	25.1	2.12	26.88	45.03	74	28.97
1227.9	44.07	PK	90	1.1	H	25.5	2.12	26.83	44.86	74	29.14
1114.7	43.83	PK	134	1.1	V	24.6	2.01	26.84	43.6	74	30.4
1112.8	41.95	PK	140	1	H	24.8	2.01	26.85	41.91	74	32.09

USB output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
431.936000	45.8	100.0	H	60.0	-9.4	46.0	0.2*
287.976250	45.2	100.0	H	103.0	-12.6	46.0	0.8*
31.421750	37.9	100.0	V	230.0	-6.4	40.0	2.1*
999.982250	42.0	130.0	H	118.0	1.7	46.0	4.0*
479.941250	41.4	100.0	H	70.0	-8.7	46.0	4.6
42.004500	31.6	115.0	V	257.0	-13.3	40.0	8.4

*Within measurement uncertainty.

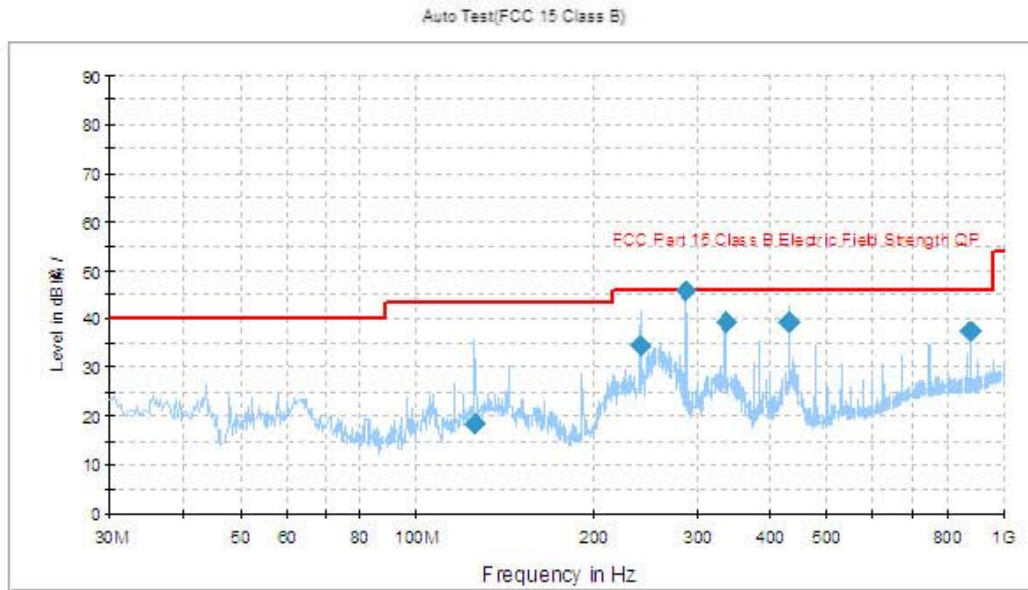
Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1404.2	33.63	Ave	90	1.1	H	26.8	2.26	26.85	35.84	54	18.16
1583.9	33.34	Ave	102	1.1	V	27.2	2.33	27.13	35.74	54	18.26
1583.9	49.11	PK	102	1.1	V	27.2	2.33	27.13	51.51	74	22.49
1404.2	47.21	PK	90	1.1	H	26.8	2.26	26.85	49.42	74	24.58
1141.5	48.35	PK	134	1.1	V	24.6	2.01	26.84	48.12	74	25.88
1139.6	27.73	Ave	140	1	H	24.8	2.01	26.85	27.69	54	26.31
1141.5	27.84	Ave	134	1.1	V	24.6	2.01	26.84	27.61	54	26.39
1254.7	26.72	Ave	90	1.1	H	25.5	2.12	26.83	27.51	54	26.49
1258.6	26.25	Ave	92	1.2	V	25.1	2.12	26.88	26.59	54	27.41
1254.7	45.39	PK	90	1.1	H	25.5	2.12	26.83	46.18	74	27.82
1258.6	45.33	PK	92	1.2	V	25.1	2.12	26.88	45.67	74	28.33
1139.6	45.08	PK	140	1	H	24.8	2.01	26.85	45.04	74	28.96

POE power supply:

PC output:

Below 1 GHz:

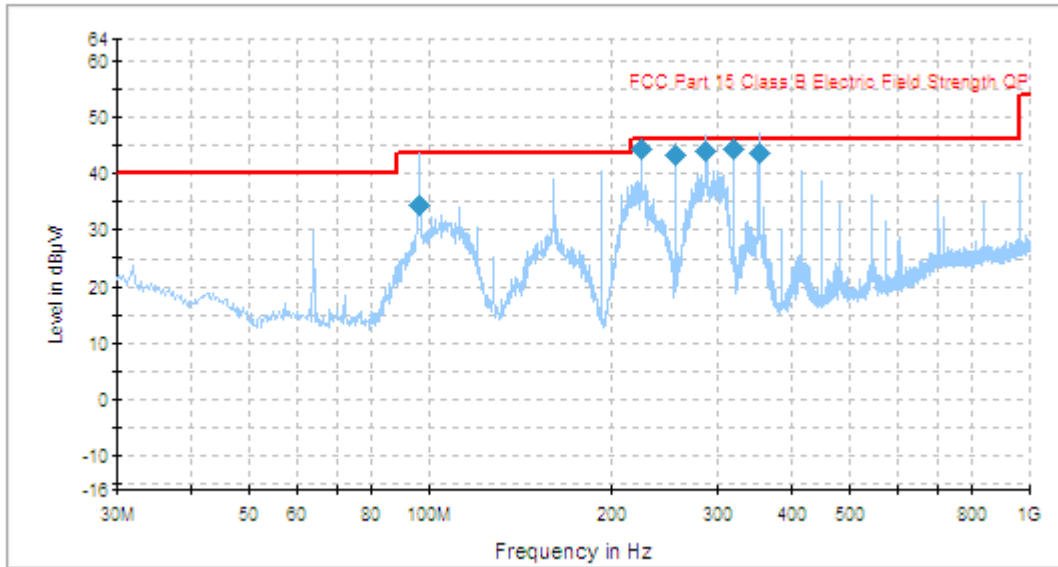


Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
287.996750	45.6	100.0	H	259.0	-12.6	46.0	0.4*
335.977500	39.6	100.0	H	44.0	-11.4	46.0	6.4
431.909500	39.6	130.0	V	2.0	-9.4	46.0	6.4
875.003500	37.3	100.0	V	147.0	-1.2	46.0	8.7
240.085250	34.5	155.0	H	226.0	-13.7	46.0	11.5
126.050000	18.4	100.0	V	175.0	-12.4	40.0	21.6

*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1570.6	32.55	Ave	102	1.1	V	27.2	2.33	27.13	34.95	54	19.05
1390.5	32.31	Ave	90	1.1	H	26.8	2.26	26.85	34.52	54	19.48
1293.5	31.28	Ave	90	1.1	H	25.5	2.12	26.83	32.07	54	21.93
1570.6	48.11	PK	102	1.1	V	27.2	2.33	27.13	50.51	74	23.49
1390.5	46.29	PK	90	1.1	H	26.8	2.26	26.85	48.5	74	25.5
1143.2	28.42	Ave	140	1	H	24.8	2.01	26.85	28.38	54	25.62
1255.3	26.08	Ave	92	1.2	V	25.1	2.12	26.88	26.42	54	27.58
1125.6	26.12	Ave	134	1.1	V	24.4	2.01	26.84	25.69	54	28.31
1255.3	45.25	PK	92	1.2	V	25.1	2.12	26.88	45.59	74	28.41
1125.6	45.05	PK	134	1.1	V	24.4	2.01	26.84	44.62	74	29.38
1293.5	43.15	PK	90	1.1	H	25.5	2.12	26.83	43.94	74	30.06
1143.2	42.27	PK	140	1	H	24.8	2.01	26.85	42.23	74	31.77

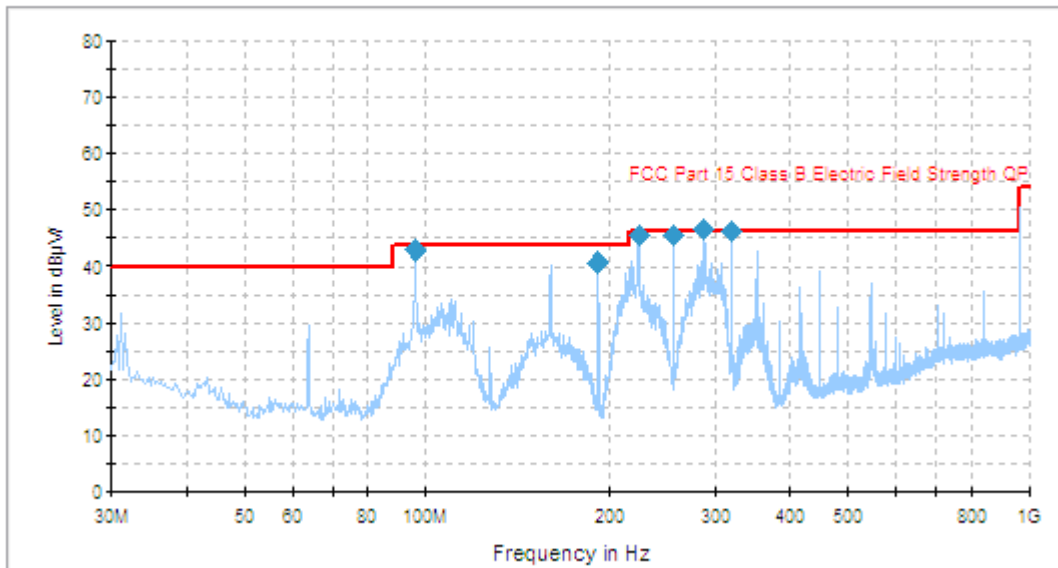
AV output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
224.017750	44.3	170.0	H	147.0	-13.9	46.0	1.7*
319.972250	44.2	122.0	H	54.0	-11.9	46.0	1.8*
287.912500	44.0	121.0	V	276.0	-12.6	46.0	2.0*
351.970750	43.7	100.0	H	288.0	-11.0	46.0	2.3*
255.997250	43.4	121.0	H	239.0	-13.4	46.0	2.6*
96.095250	34.4	205.0	V	161.0	-15.7	43.5	9.1

*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1395.4	33.56	Ave	90	1.1	H	26.8	2.26	26.85	35.77	54	18.23
1584.5	32.78	Ave	102	1.1	V	27.2	2.33	27.13	35.18	54	18.82
1275.6	31.28	Ave	90	1.1	H	25.5	2.12	26.83	32.07	54	21.93
1584.5	48.53	PK	102	1.1	V	27.2	2.33	27.13	50.93	74	23.07
1268.7	30.21	Ave	92	1.2	V	25.1	2.12	26.88	30.55	54	23.45
1155.1	29.31	Ave	140	1	H	24.8	2.01	26.85	29.27	54	24.73
1395.4	46.34	PK	90	1.1	H	26.8	2.26	26.85	48.55	74	25.45
1147.3	28.67	Ave	134	1.1	V	24.4	2.01	26.84	28.24	54	25.76
1268.7	45.22	PK	92	1.2	V	25.1	2.12	26.88	45.56	74	28.44
1147.3	43.17	PK	134	1.1	V	24.4	2.01	26.84	42.74	74	31.26
1155.1	42.51	PK	140	1	H	24.8	2.01	26.85	42.47	74	31.53
1275.6	40.49	PK	90	1.1	H	25.5	2.12	26.83	41.28	74	32.72

USB output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
288.020000	45.6	253.0	H	256.0	-12.6	46.0	0.4*
320.030000	44.8	54.0	H	125.0	-11.9	46.0	1.2*
256.010000	44.5	54.0	V	10.0	-13.4	46.0	1.5*
95.960000	41.5	132.0	V	360.0	-15.8	43.5	2.0*
224.000000	44.0	306.0	H	178.0	-13.9	46.0	2.0*
191.990000	40.2	218.0	H	192.0	-14.7	46.0	5.8

*Within measurement uncertainty.

Above 1 GHz:

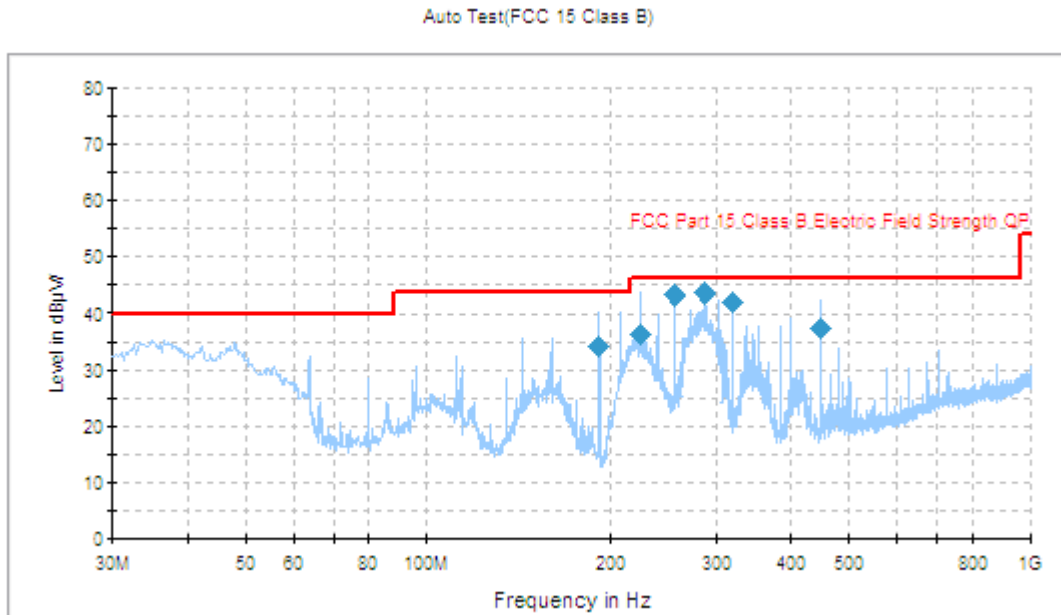
Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1386.3	33.86	Ave	90	1.1	H	26.8	2.26	26.85	36.07	54	17.93
1569.5	33.25	Ave	102	1.1	V	27.2	2.33	27.13	35.65	54	18.35
1257.5	31.13	Ave	90	1.1	H	25.5	2.12	26.83	31.92	54	22.08
1272.7	31.32	Ave	92	1.2	V	25.1	2.12	26.88	31.66	54	22.34
1569.5	48.66	PK	102	1.1	V	27.2	2.33	27.13	51.06	74	22.94
1203.5	30.53	Ave	134	1.1	V	24.6	2.01	26.84	30.3	54	23.7
1163.5	29.41	Ave	140	1	H	24.8	2.01	26.85	29.37	54	24.63
1386.3	46.48	PK	90	1.1	H	26.8	2.26	26.85	48.69	74	25.31
1272.7	45.52	PK	92	1.2	V	25.1	2.12	26.88	45.86	74	28.14
1257.5	44.23	PK	90	1.1	H	25.5	2.12	26.83	45.02	74	28.98
1203.5	44.29	PK	134	1.1	V	24.6	2.01	26.84	44.06	74	29.94
1163.5	42.76	PK	140	1	H	24.8	2.01	26.85	42.72	74	31.28

Model: GXV3651__HD

AC/DC adapter Power Supply

PC output:

Below 1 GHz:



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
319.987412	42.0	125.0	H	78.0	-11.9	46.0	4.0*
288.000000	43.3	215.0	H	0.0	-12.6	46.0	2.7 *
256.102145	42.8	199.0	H	178.0	-13.4	46.0	3.2*
192.014200	34.7	145.0	H	102.0	-14.7	43.5	8.8
451.201000	37.1	102.0	V	219.0	-10.0	46.0	8.9
224.245700	35.8	179.0	V	214.0	-13.9	46.0	10.2

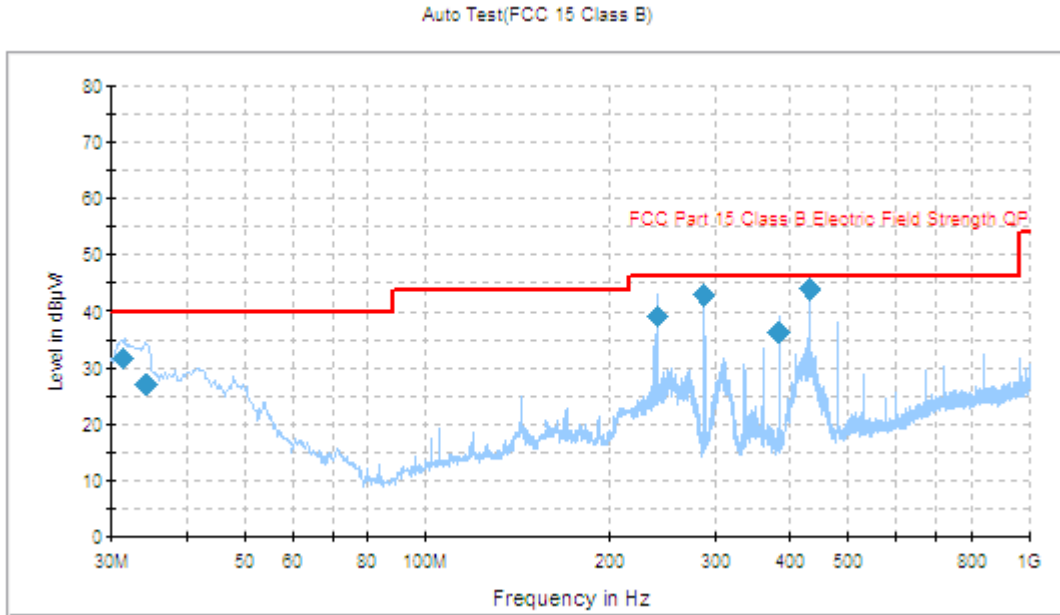
*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1545.9	34.84	Ave	102	1.1	V	27.2	2.33	27.13	37.24	54	16.76
1390.7	34.36	Ave	90	1.1	H	26.8	2.26	26.85	36.57	54	17.43
1220.2	35.53	Ave	134	1.1	V	24.6	2.01	26.84	35.3	54	18.7
1279.8	32.99	Ave	92	1.2	V	25.1	2.12	26.88	33.33	54	20.67
1239.4	31.84	Ave	90	1.1	H	25.5	2.12	26.83	32.63	54	21.37
1545.9	49.41	PK	102	1.1	V	27.2	2.33	27.13	51.81	74	22.19
1166.9	30.38	Ave	140	1	H	24.8	2.01	26.85	30.34	54	23.66
1390.7	47.59	PK	90	1.1	H	26.8	2.26	26.85	49.8	74	24.2
1279.8	46.33	PK	92	1.2	V	25.1	2.12	26.88	46.67	74	27.33
1239.4	45.71	PK	90	1.1	H	25.5	2.12	26.83	46.5	74	27.5
1220.2	45.47	PK	134	1.1	V	24.6	2.01	26.84	45.24	74	28.76
1166.9	43.59	PK	140	1	H	24.8	2.01	26.85	43.55	74	30.45

AV output:

Below 1 GHz:

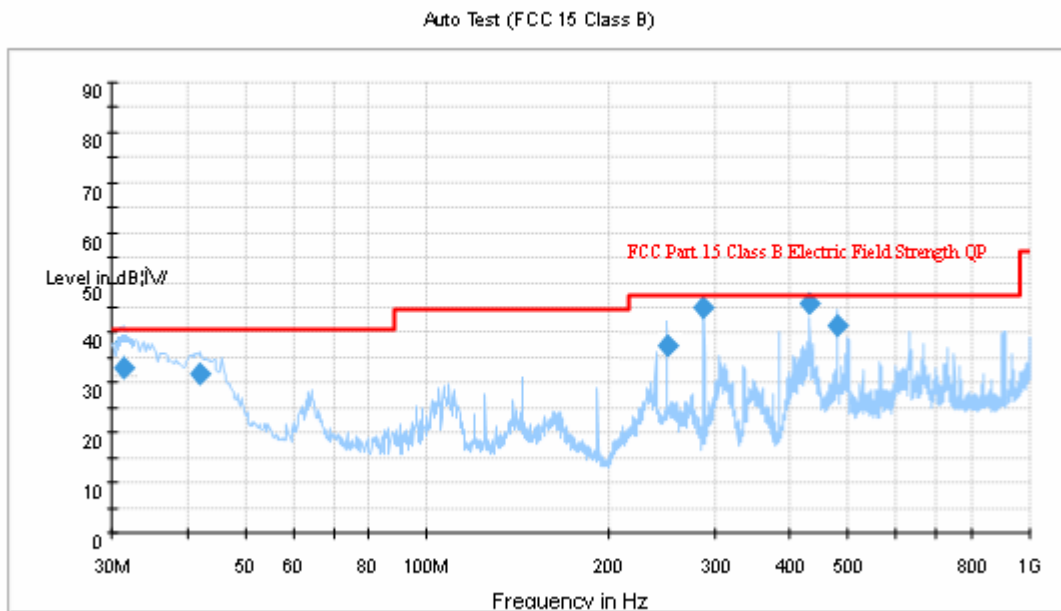


Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
431.975214	44.0	105.0	H	24.0	-9.4	46.0	2.0*
288.001425	42.8	124.0	H	210.0	-12.6	46.0	3.2*
240.120124	39.2	138.0	H	245.0	-13.7	46.0	6.8
31.555120	32.0	170.0	V	114.0	-6.5	40.0	8.0
288.009000	35.8	245.0	V	110.0	-12.6	46.0	10.2
33.854712	26.0	241.0	V	255.0	-6.7	40.0	14.0

*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1566.8	33.62	Ave	102	1.1	V	27.2	2.33	27.13	36.02	54	17.98
1387.1	33.14	Ave	90	1.1	H	26.8	2.26	26.85	35.35	54	18.65
1124.4	34.31	Ave	134	1.1	V	24.6	2.01	26.84	34.08	54	19.92
1241.5	31.77	Ave	92	1.2	V	25.1	2.12	26.88	32.11	54	21.89
1237.6	30.62	Ave	90	1.1	H	25.5	2.12	26.83	31.41	54	22.59
1566.8	48.18	PK	102	1.1	V	27.2	2.33	27.13	50.58	74	23.42
1122.5	29.08	Ave	140	1	H	24.8	2.01	26.85	29.04	54	24.96
1387.1	46.37	PK	90	1.1	H	26.8	2.26	26.85	48.58	74	25.42
1241.5	45.11	PK	92	1.2	V	25.1	2.12	26.88	45.45	74	28.55
1237.6	44.49	PK	90	1.1	H	25.5	2.12	26.83	45.28	74	28.72
1124.4	44.25	PK	134	1.1	V	24.6	2.01	26.84	44.02	74	29.98
1122.5	42.37	PK	140	1	H	24.8	2.01	26.85	42.33	74	31.67

USB output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
287.976250	45.6	102.0	H	112.0	-12.6	46.0	0.4*
431.936000	45.1	100.0	H	60.0	-9.4	46.0	0.9*
479.941250	42.0	125.0	H	185.0	-8.7	46.0	4.0
42.004500	32.5	115.0	V	257.0	-13.3	40.0	7.5
31.421750	31.0	105.0	V	0.0	-6.4	40.0	9.0
249.523150	35.6	215.0	H	150.0	-12.4	46.0	10.4

*Within measurement uncertainty.

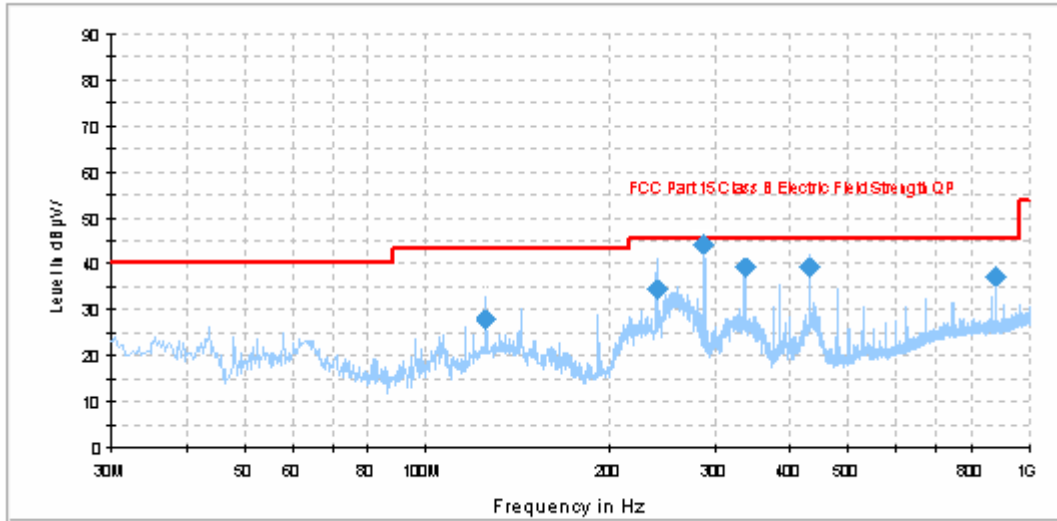
Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1413.9	34.05	Ave	90	1.1	H	26.8	2.26	26.85	36.26	54	17.74
1593.6	33.76	Ave	102	1.1	V	27.2	2.33	27.13	36.16	54	17.84
1593.6	49.53	PK	102	1.1	V	27.2	2.33	27.13	51.93	74	22.07
1413.9	47.63	PK	90	1.1	H	26.8	2.26	26.85	49.84	74	24.16
1151.2	48.77	PK	134	1.1	V	24.6	2.01	26.84	48.54	74	25.46
1149.3	28.15	Ave	140	1	H	24.8	2.01	26.85	28.11	54	25.89
1151.2	28.26	Ave	134	1.1	V	24.6	2.01	26.84	28.03	54	25.97
1264.4	27.14	Ave	90	1.1	H	25.5	2.12	26.83	27.93	54	26.07
1268.3	26.67	Ave	92	1.2	V	25.1	2.12	26.88	27.01	54	26.99
1264.4	45.81	PK	90	1.1	H	25.5	2.12	26.83	46.6	74	27.4
1268.3	45.75	PK	92	1.2	V	25.1	2.12	26.88	46.09	74	27.91
1149.3	45.52	PK	140	1	H	24.8	2.01	26.85	45.48	74	28.52

POE power supply:

PC output:

Below 1 GHz:

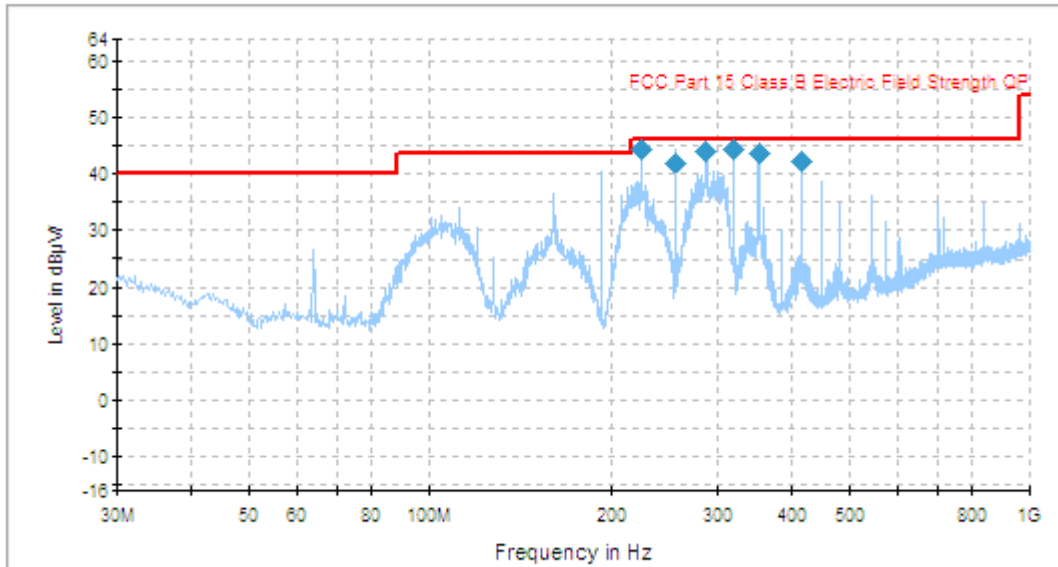


Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
287.996750	45.0	215.0	H	0.0	-12.6	46.0	1.0*
335.977500	39.7	100.0	H	175.0	-11.4	46.0	6.3
431.909500	39.7	130.0	V	2.0	-9.4	46.0	6.3
875.003500	37.3	102.0	V	360.0	-1.2	46.0	8.7
240.085250	34.5	205.0	H	176.0	-13.7	46.0	11.5
126.050000	26.8	175.0	V	108.0	-12.4	40.0	13.2

**Within measurement uncertainty.*

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1555.3	32.97	Ave	102	1.1	V	27.2	2.33	27.13	35.37	54	18.63
1400.2	32.73	Ave	90	1.1	H	26.8	2.26	26.85	34.94	54	19.06
1303.2	31.73	Ave	90	1.1	H	25.5	2.12	26.83	32.52	54	21.48
1555.3	48.53	PK	102	1.1	V	27.2	2.33	27.13	50.93	74	23.07
1400.2	46.71	PK	90	1.1	H	26.8	2.26	26.85	48.92	74	25.08
1152.9	28.84	Ave	140	1	H	24.8	2.01	26.85	28.8	54	25.2
1265.2	26.55	Ave	92	1.2	V	25.1	2.12	26.88	26.89	54	27.11
1135.3	26.54	Ave	134	1.1	V	24.6	2.01	26.84	26.31	54	27.69
1265.2	45.67	PK	92	1.2	V	25.1	2.12	26.88	46.01	74	27.99
1135.3	45.47	PK	134	1.1	V	24.6	2.01	26.84	45.24	74	28.76
1303.2	43.57	PK	90	1.1	H	25.5	2.12	26.83	44.36	74	29.64
1152.9	42.69	PK	140	1	H	24.8	2.01	26.85	42.65	74	31.35

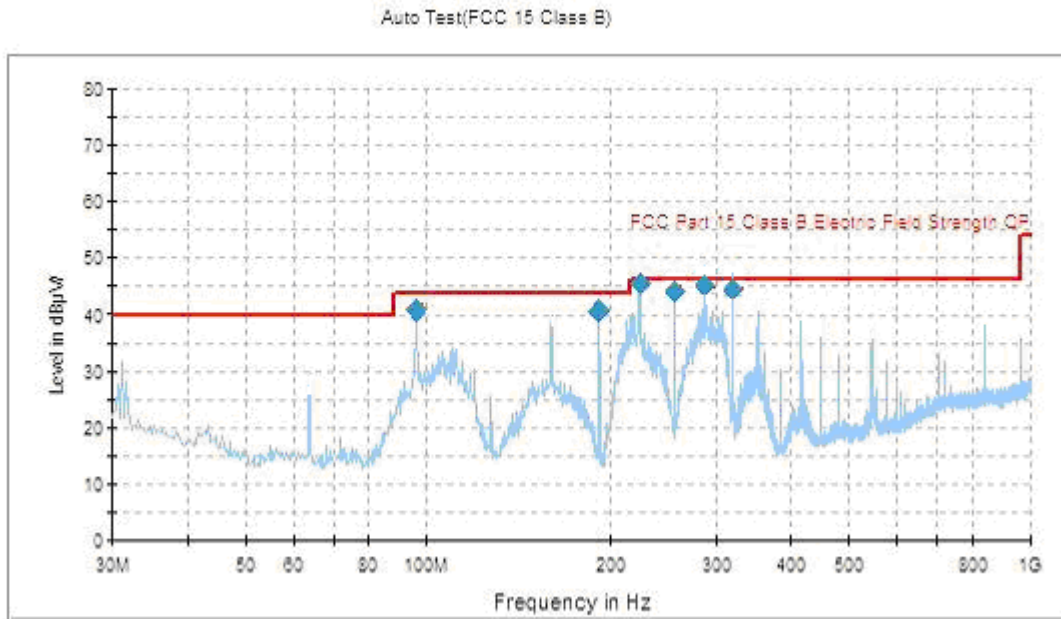
AV output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
224.012457	43.8	112.0	H	251.0	-13.9	46.0	2.2*
320.000154	44.0	100.0	H	132.0	-11.9	46.0	2.0*
287.901502	44.0	124.0	H	0.0	-12.6	46.0	2.0*
351.970750	43.7	100.0	H	288.0	-11.0	46.0	2.3*
412.125420	43.5	100.0	H	112.0	-9.0	46.0	2.5*
255.997250	43.4	121.0	H	239.0	-13.4	46.0	2.6*

*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1385.7	33.06	Ave	90	1.1	H	26.8	2.26	26.85	35.27	54	18.73
1574.8	32.28	Ave	102	1.1	V	27.2	2.33	27.13	34.68	54	19.32
1265.9	30.78	Ave	90	1.1	H	25.5	2.12	26.83	31.57	54	22.43
1574.8	48.03	PK	102	1.1	V	27.2	2.33	27.13	50.43	74	23.57
1259.8	29.71	Ave	92	1.2	V	25.1	2.12	26.88	30.05	54	23.95
1145.4	28.81	Ave	140	1	H	24.8	2.01	26.85	28.77	54	25.23
1385.7	45.84	PK	90	1.1	H	26.8	2.26	26.85	48.05	74	25.95
1137.6	28.17	Ave	134	1.1	V	24.6	2.01	26.84	27.94	54	26.06
1259.8	44.72	PK	92	1.2	V	25.1	2.12	26.88	45.06	74	28.94
1137.6	42.67	PK	134	1.1	V	24.6	2.01	26.84	42.44	74	31.56
1145.4	42.01	PK	140	1	H	24.8	2.01	26.85	41.97	74	32.03
1265.9	39.99	PK	90	1.1	H	25.5	2.12	26.83	40.78	74	33.22

USB output:**Below 1 GHz:**

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Pposition (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
288.020000	45.4	175.0	H	17.0	-12.6	46.0	0.6*
224.000000	44.1	306.0	H	360.0	-13.9	46.0	1.9*
256.010000	43.4	175.0	V	255.0	-13.4	46.0	2.6*
95.960000	40.8	185.0	V	185.0	-15.8	43.5	2.7*
320.030000	43.0	215.0	H	257.0	-11.9	46.0	3.0*
191.990000	40.5	222.0	H	12.0	-14.7	46.0	5.5

*Within measurement uncertainty.

Above 1 GHz:

Frequency (MHz)	S.A. Reading (dB μ V)	Detector (PK/QP/Ave)	Direction (Degree)	Ant. Height (m)	Ant. Polar (H/V)	Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC 15.109	
										Limit (dB μ V/m)	Margin (dB)
1376.6	34.28	Ave	90	1.1	H	26.8	2.26	26.85	36.49	54	17.51
1559.8	33.67	Ave	102	1.1	V	27.2	2.33	27.13	36.07	54	17.93
1247.8	31.55	Ave	90	1.1	H	25.5	2.12	26.83	32.34	54	21.66
1263.9	31.74	Ave	92	1.2	V	25.1	2.12	26.88	32.08	54	21.92
1559.8	49.08	PK	102	1.1	V	27.2	2.33	27.13	51.48	74	22.52
1193.8	30.95	Ave	134	1.1	V	24.6	2.01	26.84	30.72	54	23.28
1153.8	29.83	Ave	140	1	H	24.8	2.01	26.85	29.79	54	24.21
1376.6	46.92	PK	90	1.1	H	26.8	2.26	26.85	49.13	74	24.87
1263.9	45.94	PK	92	1.2	V	25.1	2.12	26.88	46.28	74	27.72
1247.8	44.65	PK	90	1.1	H	25.5	2.12	26.83	45.44	74	28.56
1193.8	44.71	PK	134	1.1	V	24.6	2.01	26.84	44.48	74	29.52
1153.8	43.11	PK	140	1	H	24.8	2.01	26.85	43.07	74	30.93

PRODUCT SIMILARTITY DECLARATION LETTER



Company: Grandstream Networks, Inc.
Address: 5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, ShenZhen, China

Product Similarity Declaration

To Whom It May Concern,

We, Grandstream Networks, Inc, hereby declare that Our products IP camera, model name GXV3651_HD is electrically identical with the model GXV3651_FHD, Two model Share the same PCB Layout and components, but GXV3651_HD software only runs at 296MHz to support maximal HD resolution and GXV3651_FHD software runs up to 400MHz to support both HD and FHD resolution.

Please contact me if you have any question.

Signature:

Print Name:

Title:

Date:2010-11-29

******* END OF REPORT *******