MRT Technology (Suzhou) Co., Ltd
Phone: +86-512-66308358
Fax: +86-512-66308368
Web: www.mrt-cert.com

Report No.: 1601RSU00701
Report Version: V02
Issue Date: 01-20-2016

MEASUREMENT REPORT
FCC PART 15.247 Bluetooth v2.1 + EDR

FCC ID:	YZZGXP2140
APPLICANT:	Grandstream Networks, Inc.

Application Type:	Certification
Product:	IP Phone
Model No.:	GXP2140
Brand Name:	Grandstream
FCC Classification:	FCC Part 15 Spread Spectrum Transmitter(DSS)
FCC Rule Part(s):	Part 15.247
Test Procedure(s):	ANSI C63.10-2013, DA 00-705
Test Date:	January 12 ~ 16, 2016

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlin Chen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013 and DA 00-705. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date
1601RSU00701	Rev. 01	Initial report	01-18-2016
1601RSU00701	Rev. 02	Update the test date and test data	01-20-2016

Note: The EUT has been got the FCC certificate (FCC ID: YZZGXP2140). The EUT adds two new adapters now and we have shown the conducted emission data and radiated emission data (below 1GHz) in this DSS report.

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Description Page

§2.1033 General Information

Applicant:	Grandstream Networks, Inc.
Applicant Address:	4th Floor, Rainbow Technology Building #16 New West Rd, Nanshan Science & Technology Park (North District), Shenzhen, China 518057
Manufacturer:	Grandstream Networks, Inc.
Manufacturer Address:	4th Floor, Rainbow Technology Building #16 New West Rd, Nanshan Science & Technology Park (North District), Shenzhen, China 518057
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT Registration No.:	809388
FCC Rule Part(s):	Part 15.247
Model No.	GXP2140
FCC ID:	YZZGXP2140
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	FCC Part 15 Spread Spectrum Transmitter (DSS)
Method/System:	Frequency Hopping Spread Spectrum (FHSS)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- **MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

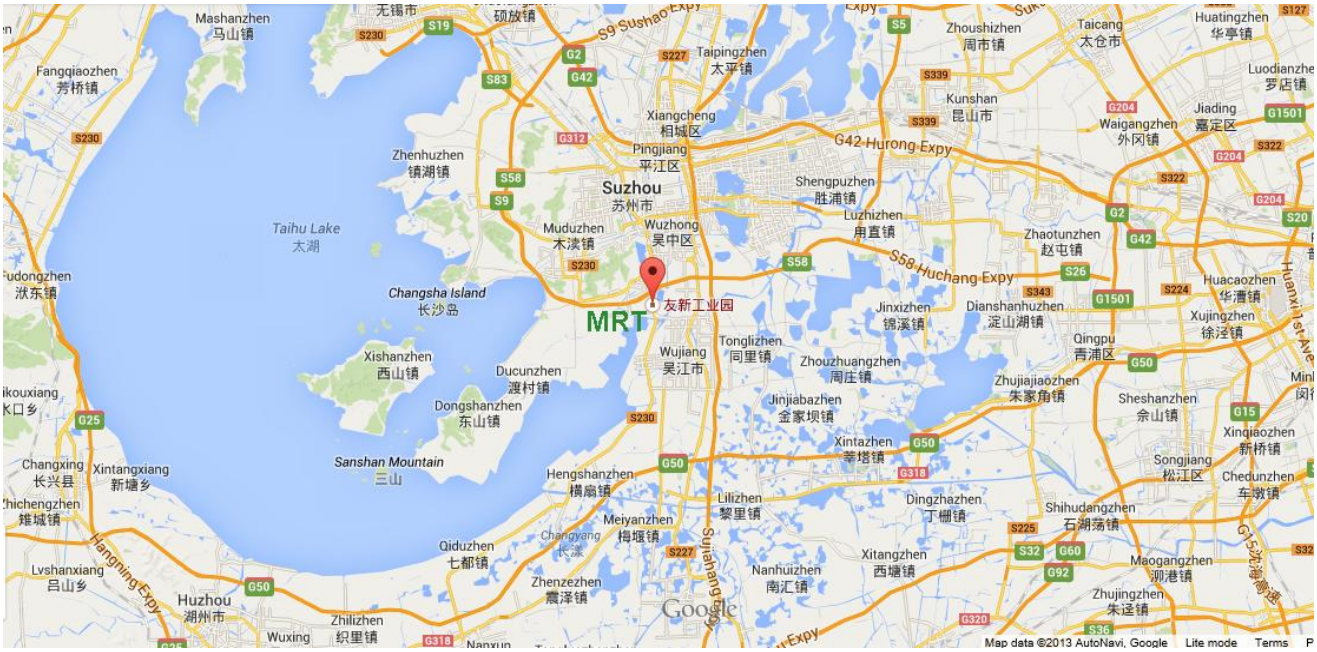
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	IP Phone
Model No.	GXP2140
Brand Name	Grandstream
BT Specification	v2.1+EDR
Antenna Type	PIFA Antenna
Antenna Gain	2dBi
Components	
Adapter #1	M/N: F12US1200100A Input: AC 100-240V ~ 50/60Hz, 0.5A max OUTPUT: 12Vdc, 1.0A
Adapter #2	M/N: PEA-120100VA Input: AC 100-240V ~ 50/60Hz, 0.3A OUTPUT: 12Vdc, 1.0A

2.2. Product Specification Subjective to this Standard

Product Specification Subjective to this Standard	
Frequency Range	2402~2480MHz
Number of Channels	79
Channel Spacing	1MHz
Type of Modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)

Note: For other features of this EUT, test report will be issued separately.

The equipment under test (EUT) is the **IP Phone FCC ID: YZZGXP2140**. The test data contained in this report pertains only to the emissions due to the EUT's Bluetooth transmitter.

- 15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.

- 15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate its channels selection/ hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

- 15.247(h): The EUT employs Adaptive Frequency Hopping (AFH) which identifies sources of interference namely devices operating in 802.11 WLAN and excludes them from the list of available channels. The process of re-mapping reduces the number of test channels from 79 channels to a minimum number of 20 channels.

2.3. Operation Frequency / Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz
03	2405 MHz	04	2406 MHz	05	2407 MHz
06	2408 MHz	07	2409 MHz	08	2410 MHz
09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz
15	2417 MHz	16	2418 MHz	17	2419 MHz
18	2420 MHz	19	2421 MHz	20	2422 MHz
21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz
27	2429 MHz	28	2430 MHz	29	2431 MHz
30	2432 MHz	31	2433 MHz	32	2434 MHz
33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz
39	2441 MHz	40	2442 MHz	41	2443 MHz
42	2444 MHz	43	2445 MHz	44	2446 MHz
45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz
51	2453 MHz	52	2454 MHz	53	2455 MHz
54	2456 MHz	55	2457 MHz	56	2458 MHz
57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz
63	2465 MHz	64	2466 MHz	65	2467 MHz
66	2468 MHz	67	2469 MHz	68	2470 MHz
69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz
75	2477 MHz	76	2478 MHz	77	2479 MHz
78	2480 MHz	N/A	N/A	N/A	N/A

2.4. Test Configuration

The **IP Phone FCC ID: YZZGXP2140** was tested per the guidance of ANSI C63.10-2013 and DA 00-705. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.5. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

3. DESCRIPTION of TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” (DA 00-705) were used in the measurement of the **IP Phone FCC ID: YZZGXP2140.**

Deviation from measurement procedure…….....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions were used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

Line conducted emissions test results are shown in Section 6.3.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.
For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.
Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beamwidth of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2016/11/03
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2016/11/03
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2016/11/03
Temperature/ Meter Humidity	Yuhuaze	N/A	MRTSUE06180	1 year	2016/12/20

Radiated Emissions - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MRTSUE06124	1 year	2016/06/23
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2016/11/03
TRILOG Antenna	Schwarzbeck	VULB9168	MRTSUE06172	1 year	2016/12/10
Temperature/ Meter Humidity	Mingao	ETH529	MRTSUE06170	1 year	2016/11/29

Software	**Version**	**Function**
e3	V 8.3.5	EMI Test Software

5. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement - SR2
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement - AC2
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: 4.18dB

6. TEST RESULT

6.1. Summary

Product Name: **IP Phone**
FCC ID: **YZZGXP2140**
Method/System: **Frequency Hopping Spread Spectrum (FHSS)**
Number of Channels: **79**

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.209	General Field Strength Limits (Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.2
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.3

Notes: All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

6.2. Radiated Spurious Emission Measurement

6.2.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 – 30	30	30
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

6.2.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.12.1

6.2.3. Test Setting

Peak Field Strength Measurements

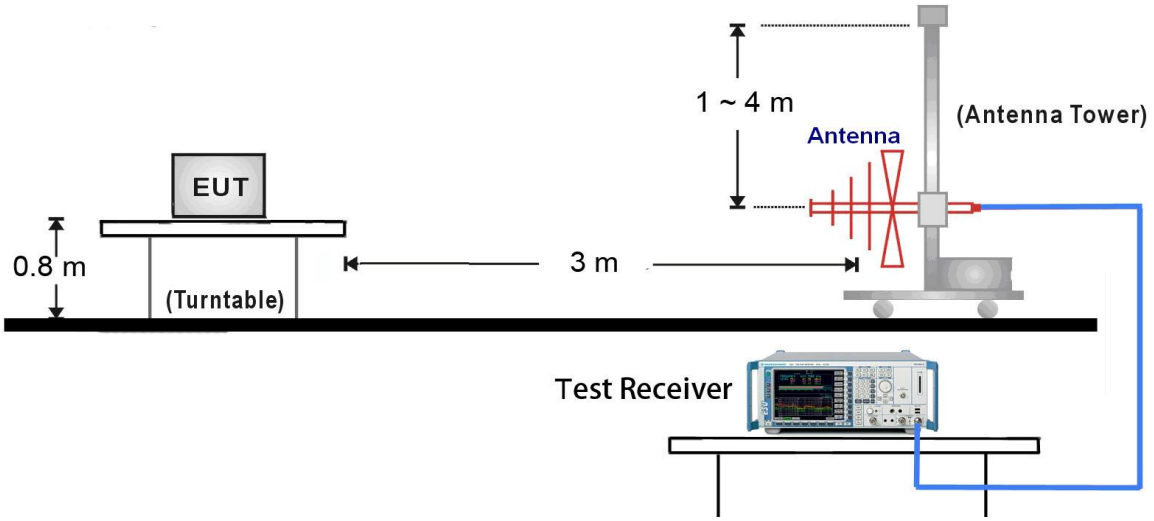
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 * RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

6.2.4. Test Setup

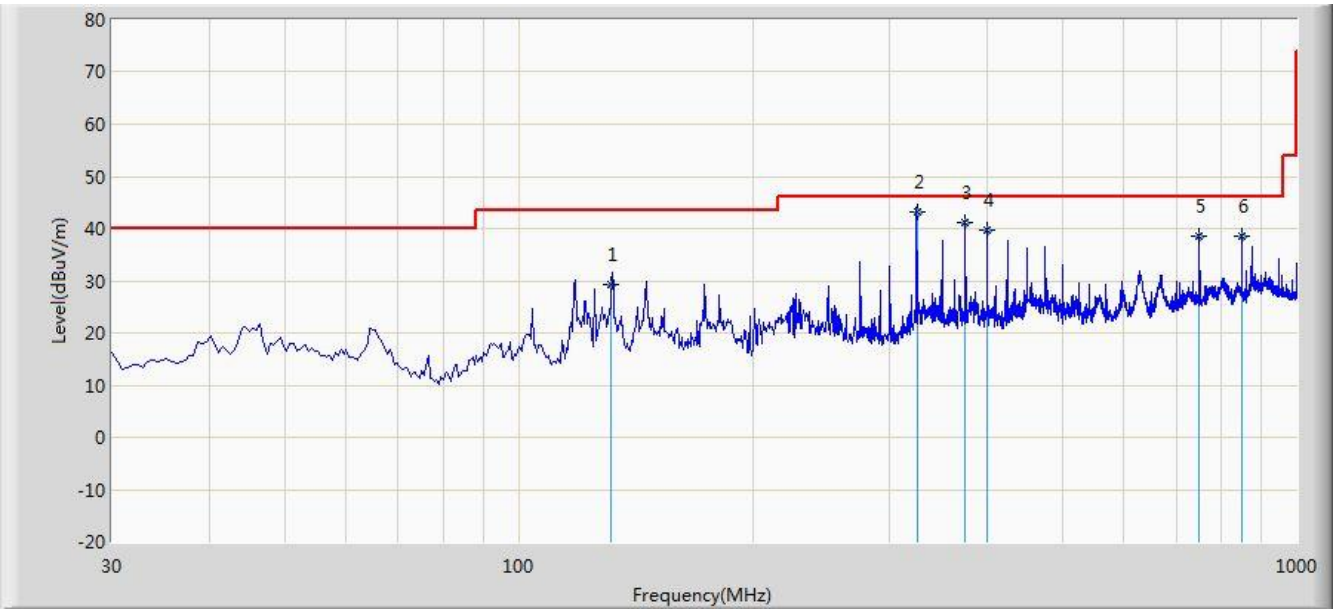
30MHz ~ 1GHz Test Setup:



6.2.5. Test Result

The worst case of Radiated Emission 30MHz ~ 1GHz:

Site: AC2	Time: 2016/01/13 - 14:05
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Lewis Huang
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: IP Phone	Power: AC 120V/60Hz
Worst Case Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #1)	

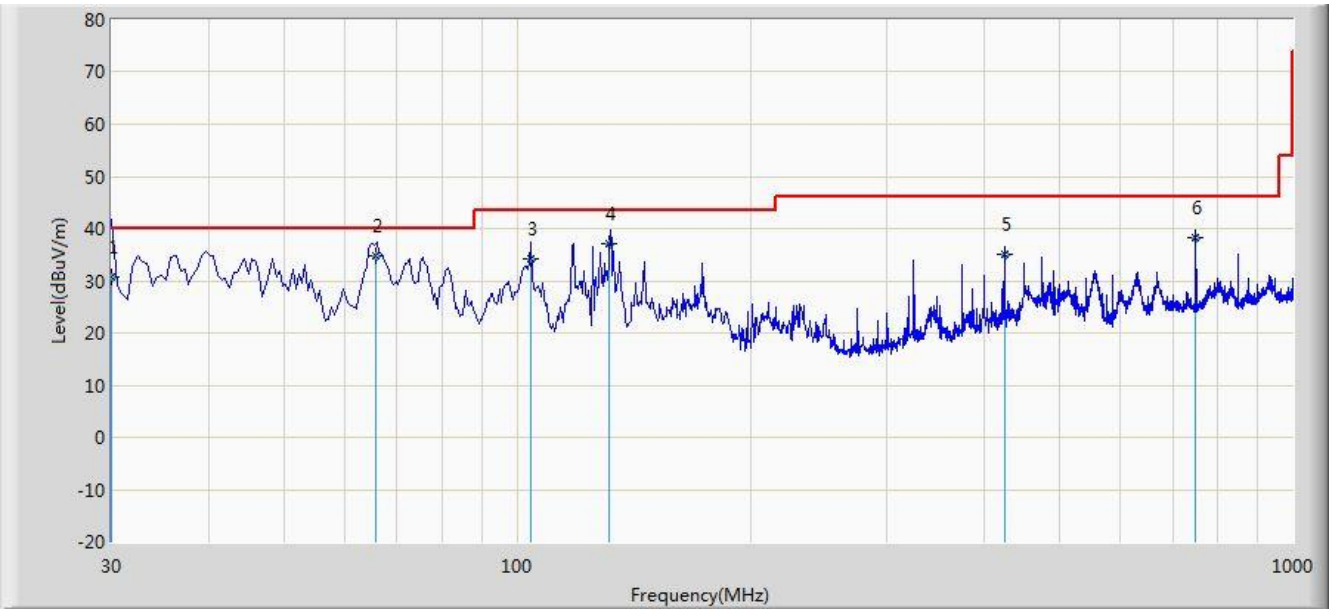


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			131.610	29.249	19.300	-14.251	43.500	9.949	QP
2		*	325.040	43.044	27.810	-2.956	46.000	15.234	QP
3			375.010	41.080	24.860	-4.920	46.000	16.220	QP
4			400.000	39.823	23.070	-6.177	46.000	16.753	QP
5			750.410	38.644	16.380	-7.356	46.000	22.263	QP
6			850.010	38.452	14.830	-7.548	46.000	23.622	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2016/01/13 - 14:07
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Lewis Huang
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: IP Phone	Power: AC 120V/60Hz
Worst Case Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #1)	

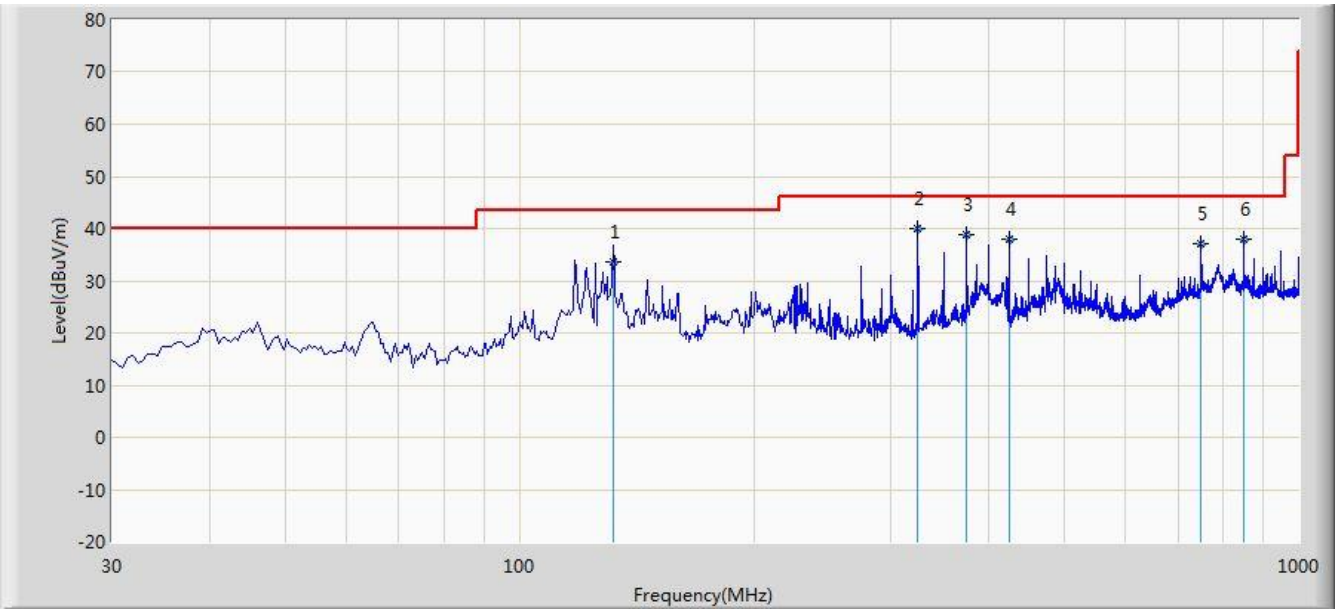


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			30.000	30.627	18.560	-9.373	40.000	12.067	QP
2		*	65.710	34.918	22.600	-5.082	40.000	12.318	QP
3			104.120	34.271	21.140	-9.229	43.500	13.131	QP
4			131.600	37.110	27.160	-6.390	43.500	9.950	QP
5			425.010	35.133	18.060	-10.867	46.000	17.073	QP
6			750.030	38.352	16.090	-7.648	46.000	22.261	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2016/01/13 - 14:44
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Lewis Huang
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: IP Phone	Power: AC 120V/60Hz
Worst Case Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #2)	

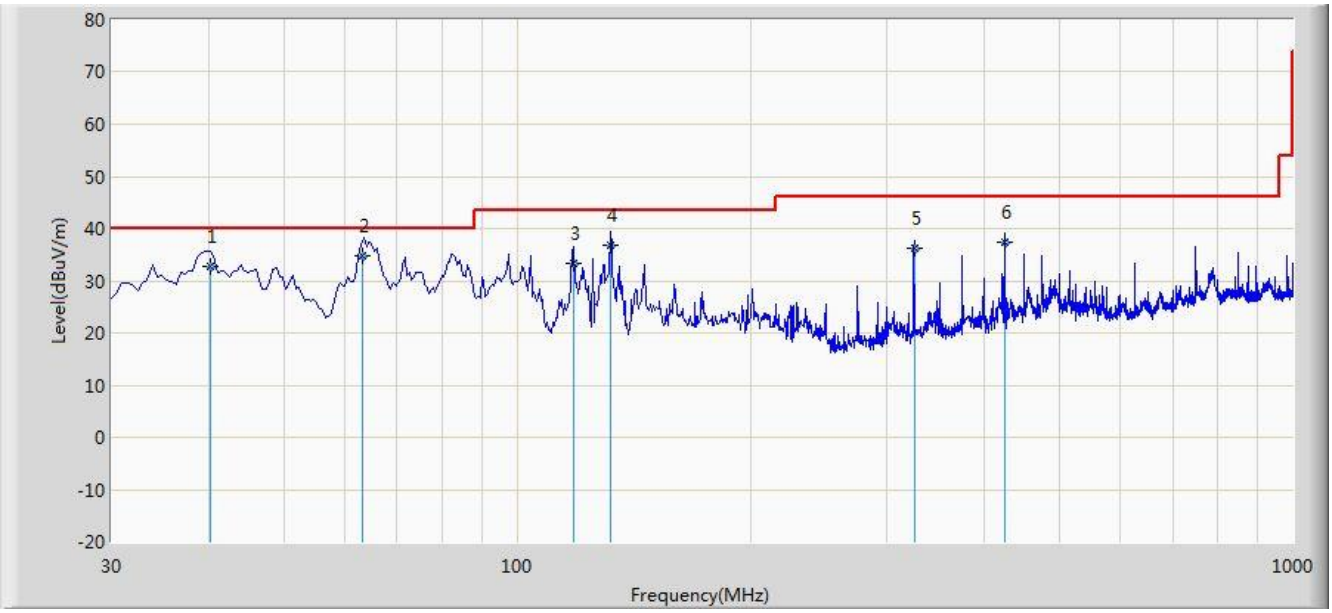


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			131.830	33.572	23.640	-9.928	43.500	9.932	QP
2		*	324.640	40.113	24.890	-5.887	46.000	15.222	QP
3			375.230	38.853	22.630	-7.147	46.000	16.223	QP
4			425.200	37.926	20.850	-8.074	46.000	17.076	QP
5			750.090	37.151	14.890	-8.849	46.000	22.261	QP
6			850.300	38.027	14.400	-7.973	46.000	23.627	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2016/01/13 - 14:51
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Lewis Huang
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: IP Phone	Power: AC 120V/60Hz
Worst Case Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #2)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			40.290	32.639	18.720	-7.361	40.000	13.919	QP
2		*	63.270	34.860	21.740	-5.140	40.000	13.120	QP
3			118.100	33.377	21.800	-10.123	43.500	11.577	QP
4			131.960	36.751	26.830	-6.749	43.500	9.921	QP
5			325.020	36.294	21.060	-9.706	46.000	15.234	QP
6			425.100	37.474	20.400	-8.526	46.000	17.075	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

6.3. AC Conducted Emissions Measurement

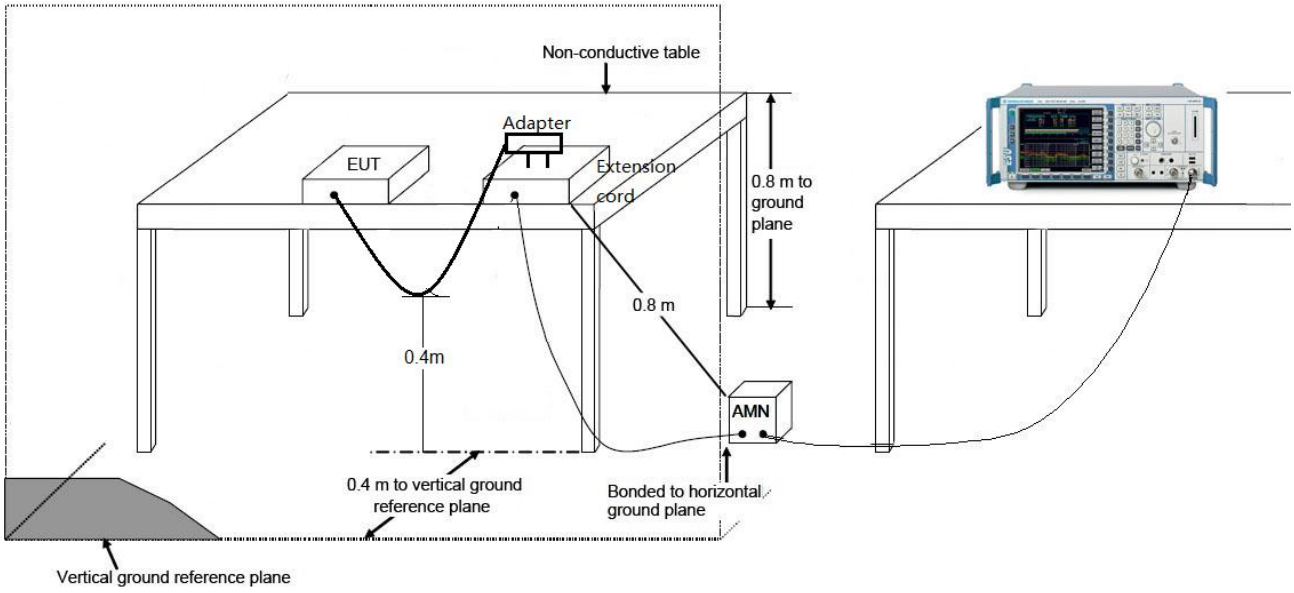
6.3.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBμV)	Average (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

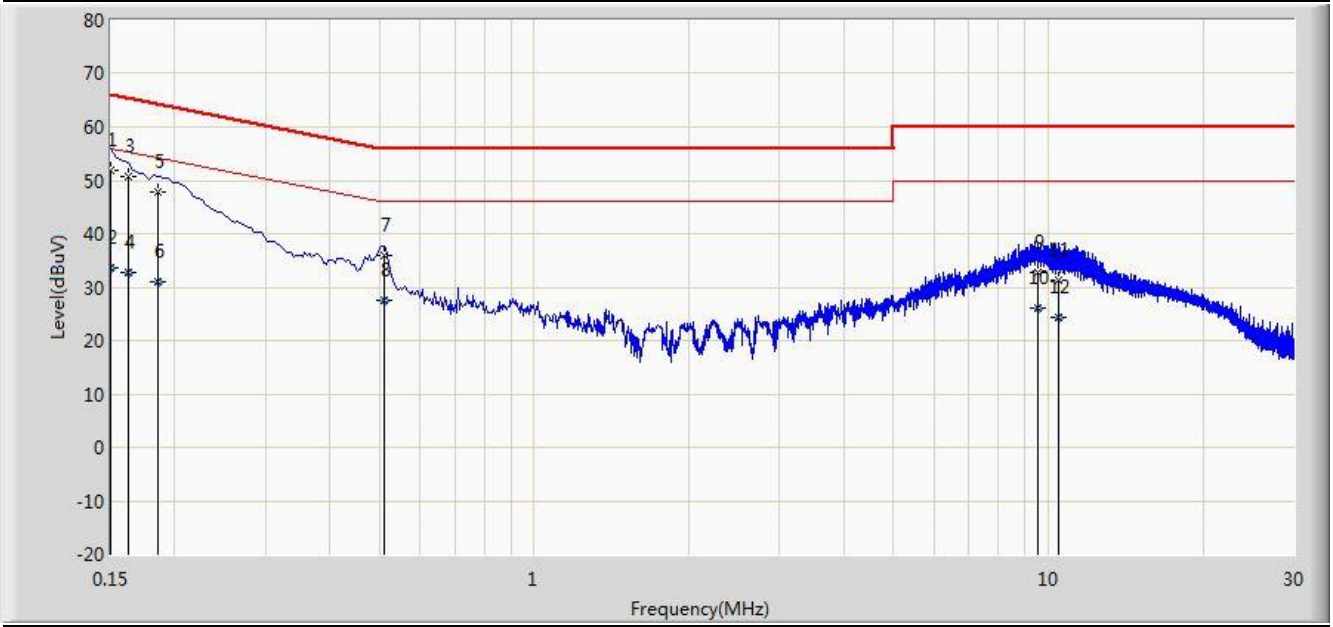
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.3.2. Test Setup



6.3.3. Test Result

Site: SR2	Time: 2016/01/12 - 13:39
Limit: FCC_Part15.207_CE_AC Power_ClassB	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: IP Phone	Power: AC 120V/60Hz
Test Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #1)	

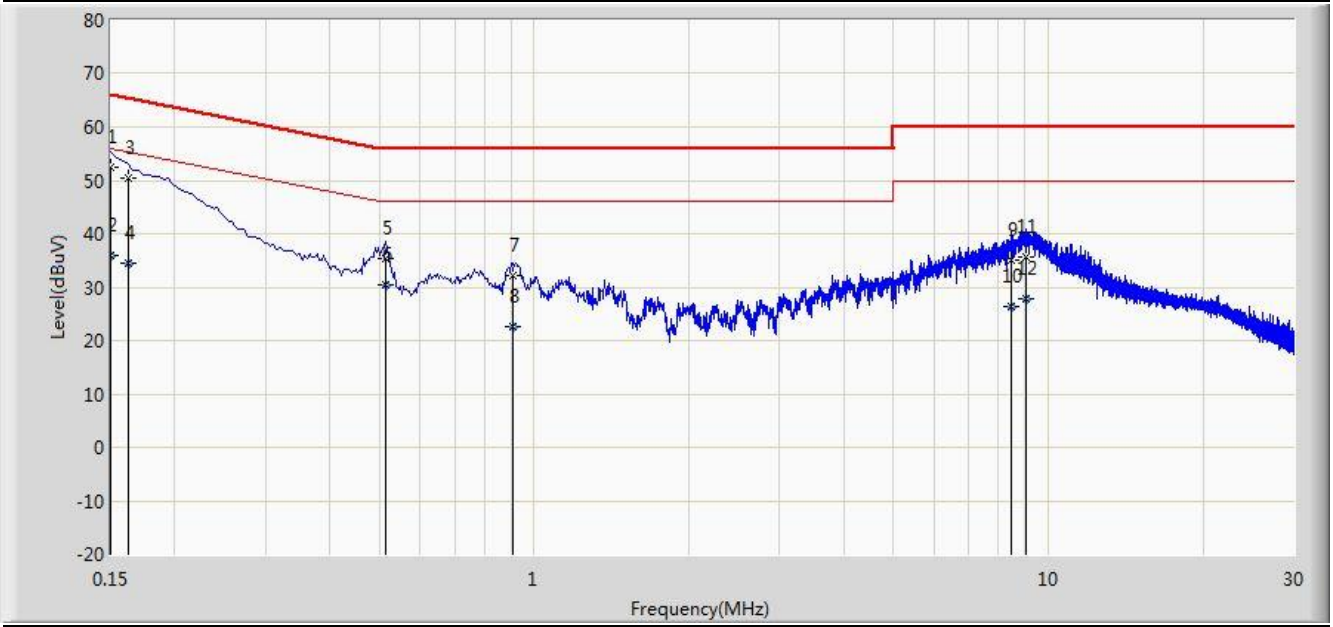


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	51.881	40.713	-14.119	66.000	11.168	QP
2			0.150	33.582	22.414	-22.418	56.000	11.168	AV
3			0.162	50.681	40.584	-14.680	65.361	10.097	QP
4			0.162	32.873	22.776	-22.487	55.361	10.097	AV
5			0.186	47.765	37.727	-16.448	64.213	10.039	QP
6			0.186	30.898	20.859	-23.316	54.213	10.039	AV
7			0.510	35.802	25.645	-20.198	56.000	10.157	QP
8			0.510	27.439	17.282	-18.561	46.000	10.157	AV
9			9.538	32.621	22.463	-27.379	60.000	10.158	QP
10			9.538	26.086	15.929	-23.914	50.000	10.158	AV
11			10.474	31.448	21.322	-28.552	60.000	10.126	QP
12			10.474	24.422	14.295	-25.578	50.000	10.126	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2016/01/12 - 13:43
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: IP Phone	Power: AC 120V/60Hz
Test Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #1)	

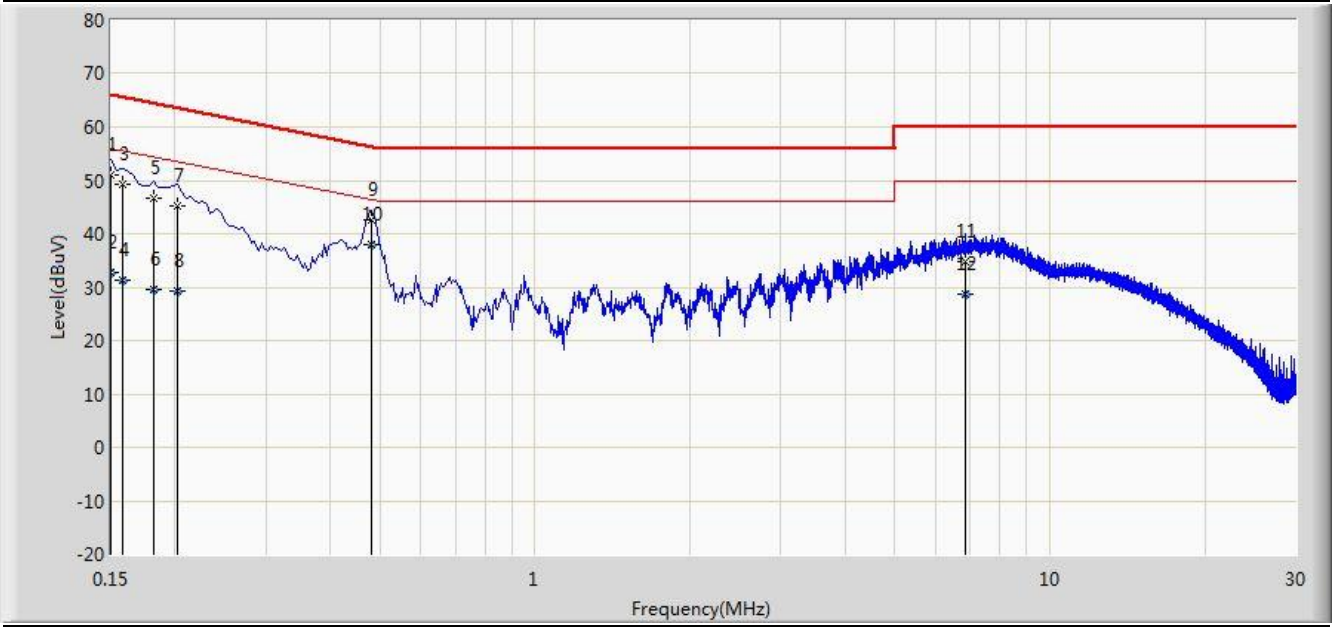


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	52.358	41.216	-13.642	66.000	11.142	QP
2			0.150	35.981	24.839	-20.019	56.000	11.142	AV
3			0.162	50.525	40.446	-14.836	65.361	10.078	QP
4			0.162	34.383	24.304	-20.978	55.361	10.078	AV
5			0.514	35.358	25.182	-20.642	56.000	10.176	QP
6			0.514	30.380	20.204	-15.620	46.000	10.176	AV
7			0.910	32.035	22.076	-23.965	56.000	9.959	QP
8			0.910	22.525	12.566	-23.475	46.000	9.959	AV
9			8.490	34.957	24.761	-25.043	60.000	10.197	QP
10			8.490	26.339	16.143	-23.661	50.000	10.197	AV
11			9.018	35.617	25.445	-24.383	60.000	10.172	QP
12			9.018	27.864	17.692	-22.136	50.000	10.172	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2016/01/12 - 19:34
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: IP Phone	Power: AC 120V/60Hz
Test Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #2)	

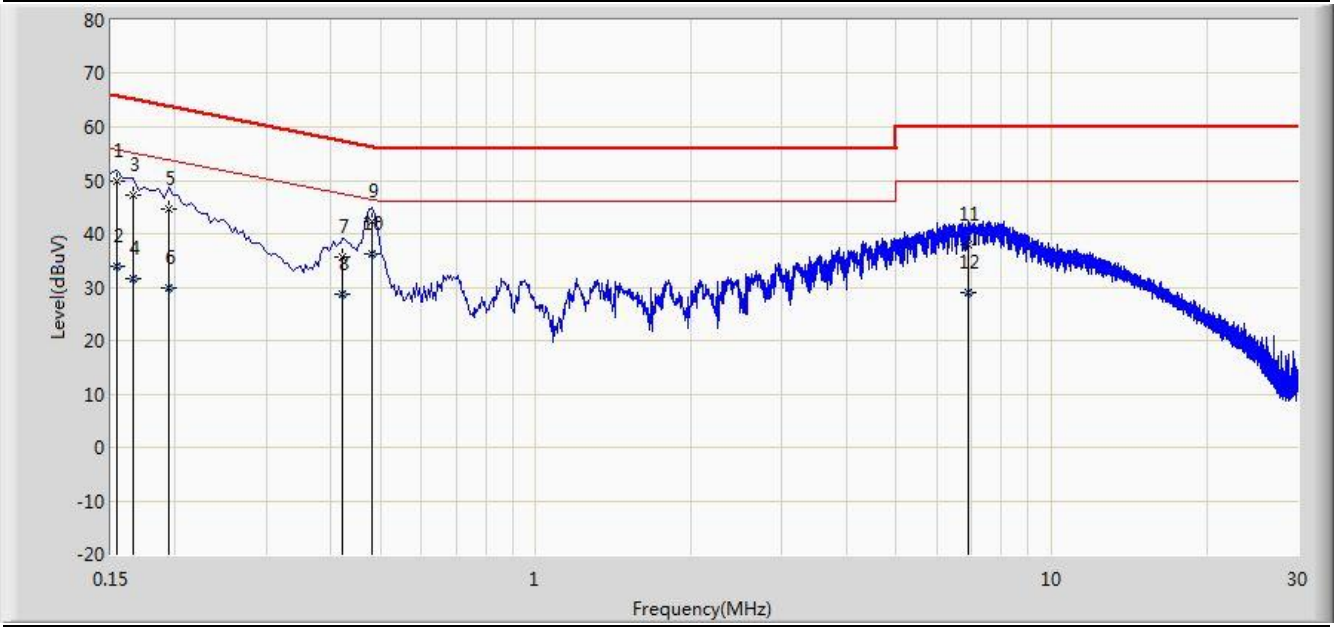


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	50.874	39.705	-15.126	66.000	11.168	QP
2			0.150	32.825	21.656	-23.175	56.000	11.168	AV
3			0.158	49.177	38.866	-16.392	65.568	10.311	QP
4			0.158	31.166	20.855	-24.402	55.568	10.311	AV
5			0.182	46.622	36.574	-17.772	64.394	10.048	QP
6			0.182	29.447	19.399	-24.947	54.394	10.048	AV
7			0.202	45.097	35.104	-18.431	63.528	9.993	QP
8			0.202	29.153	19.160	-24.375	53.528	9.993	AV
9			0.482	42.577	32.426	-13.727	56.305	10.152	QP
10		*	0.482	38.031	27.879	-8.273	46.305	10.152	AV
11			6.830	34.835	24.684	-25.165	60.000	10.151	QP
12			6.830	28.672	18.521	-21.328	50.000	10.151	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2016/01/12 - 19:39
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: IP Phone	Power: AC 120V/60Hz
Test Mode: Transmit at Channel 2440MHz by 2DH5 (Adapter #2)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.154	49.871	39.155	-15.910	65.781	10.716	QP
2			0.154	33.840	23.124	-21.941	55.781	10.716	AV
3			0.166	47.261	37.189	-17.898	65.158	10.071	QP
4			0.166	31.519	21.448	-23.639	55.158	10.071	AV
5			0.194	44.751	34.730	-19.112	63.864	10.021	QP
6			0.194	29.906	19.885	-23.958	53.864	10.021	AV
7			0.422	35.789	25.660	-21.619	57.409	10.129	QP
8			0.422	28.669	18.540	-18.740	47.409	10.129	AV
9			0.482	42.461	32.288	-13.843	56.305	10.173	QP
10		*	0.482	36.191	26.018	-10.113	46.305	10.173	AV
11			6.914	38.035	27.867	-21.965	60.000	10.168	QP
12			6.914	28.998	18.830	-21.002	50.000	10.168	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

7. CONCLUSION

The data collected relate only the item(s) tested and show that the **IP Phone FCC ID: YZZGXP2140** is in compliance with Part 15C of the FCC Rules.

The End