MEASUREMENT REPORT
FCC PART 15.247 BT v4.0

FCC ID:	YZZGVC3200
APPLICANT:	Grandstream Networks, Inc.

Application Type:	Certification
Product:	Full HD Video Conferencing System
Model No.:	GVC3202
Brand Name:	Grandstream
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15.247
Test Procedure(s):	ANSI C63.10-2009, KDB 558074 D01v03r03
Test Date:	November 18 ~ 21, 2015

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 KDB 558074 D01v03r03. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date
1511RSU00502	Rev. 01	Initial report	11-24-2015
1511RSU00502	Rev. 02	Delete the conducted power and add some band-edge and conducted emission data	12-18-2015

Note: This report was based on original report no. 1506RSU00102. The EUT makes some changes on the basis of the original. The main board removed the HDMI OUT3 interface and replaced the OLYMPUS lens with UNION len. Others are the same as before.
We have assessed the worst-case mode for conducted emission & radiated spurious emission & radiated restricted band edge and shown the worst-case on the 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.:	GVC3202
FCC ID:	YZZGVC3200
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	Digital Transmission System (DTS)

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.**

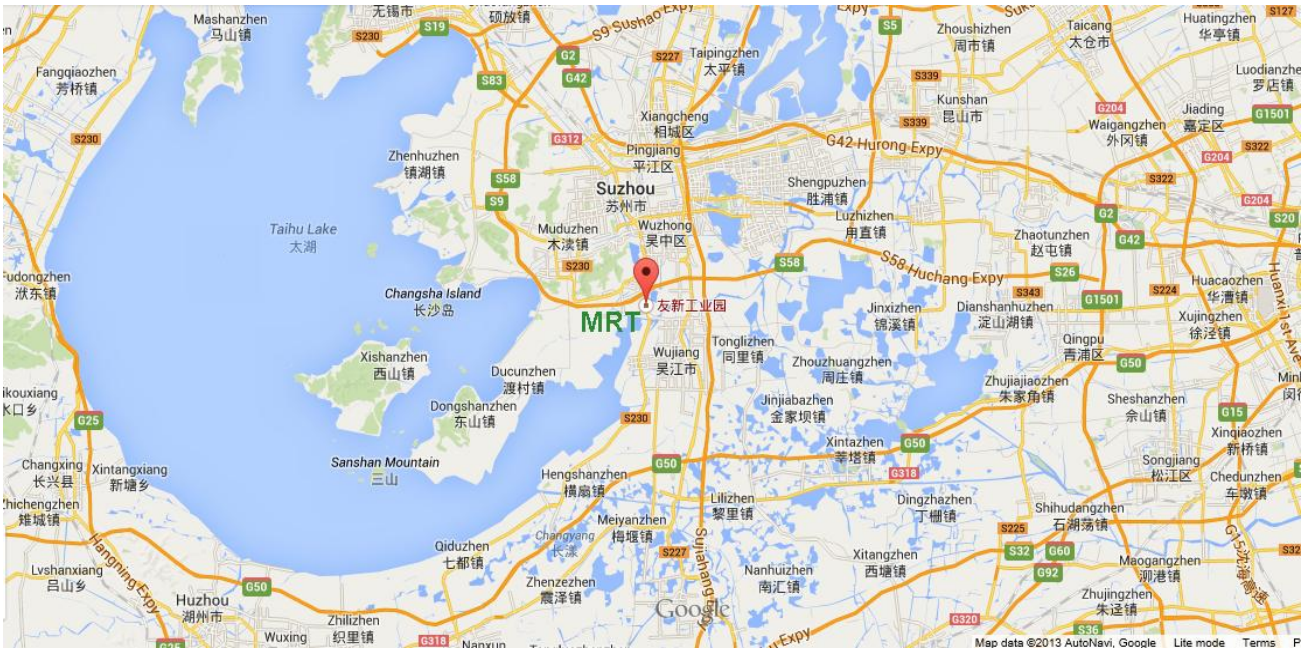
1. INTRODUCTION

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, Youxin Industrial Park, 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	Full HD Video Conferencing System
Model No.	GVC3202
Bluetooth Frequency	2402~2480MHz
Bluetooth Version	v4.0
Type of modulation	FHSS
Data Rate	1Mbps(GFSK)
Antenna Type	PCB Antenna
Antenna Gain	2.12dBi
Components	
Adapter	M/N: NBS65A120500M3 INPUT: 100-240V ~ 50/60Hz, 1.5A OUTPUT: 12.0Vdc, 5.0A

Channel List for BLE

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz	N/A	N/A	N/A	N/A

2.2. Test Software

The test utility software used during testing was engineering order by applicant.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2009), and the guidance provided in KDB 558074 D01v03r03 were used in the measurement of the **Full HD Video Conferencing System FCC ID: YZZGVC3200.**
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 are 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 6.4.

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. A 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 was placed on top of the 0.8 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

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/Humidity Meter	Ouleinuo	N/A	MRTSUE06114	1 year	2016/11/20

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	MRTSUE06028	1 year	2016/12/08
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2016/11/03
Preamplifier	Agilent	83017A	MRTSUE06020	1 year	2016/03/29
Preamplifier	Schwarzbeck	BBV9721	MRTSUE06121	1 year	2016/04/16
Loop Antenna	Schwarzbeck	FMZB1519	MRTSUE06025	1 year	2016/11/07
TRILOG Antenna	Schwarzbeck	VULB9162	MRTSUE06022	1 year	2016/11/07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2016/11/07
Broadband Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06024	1 year	2016/01/05
Temperature/Humidity Meter	Ouleinuo	N/A	MRTSUE06115	1 year	2016/11/20

Software	Version	Function
e3	V8.3.5	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
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB

6. TEST RESULT

6.1. Summary

Company Name: **Grandstream Networks, Inc.**
FCC ID: **YZZGVC3200**
FCC Classification: **Digital Transmission System (DTS)**
Data Rate(s) Tested: **1Mbps(GFSK) (BLE)**

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.205 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 6.2 & 6.3
15.207	AC Conducted Emissions 150kHz - 30MHz	FCC 15.207 limits	Line Conducted	Pass	Section 6.4

Notes:

1) 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.
2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

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

KDB 558074 D01v03r03 – Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r03 – Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r03 – Section 12.2.5 (average power measurements)

6.2.3. Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v03r03

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 = 3MHz
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

Average Field Strength Measurements per Section 12.2.5.1 of KDB 558074 D01v03r03

1. RBW = 1MHz.

2. VBW ≥ 3 x RBW.

3. Detector = RMS, if span/(# of points in sweep) ≤ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.

4. Averaging type = power (*i.e.*, RMS).

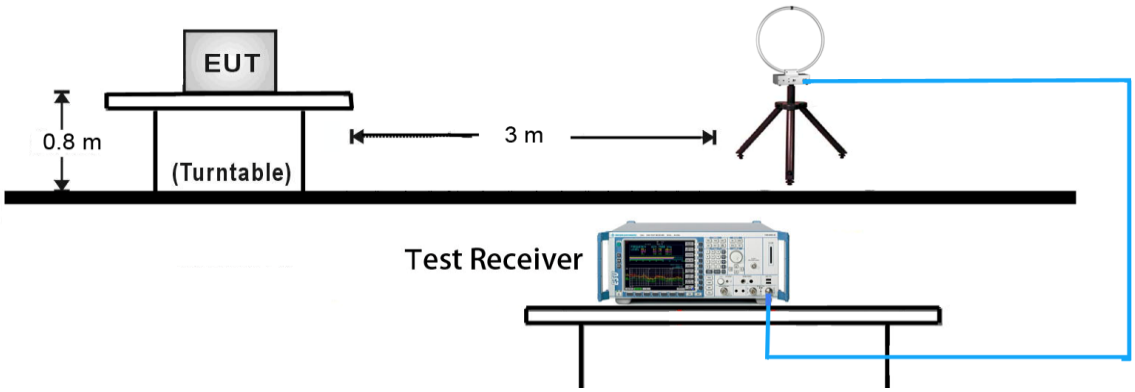
- As an alternative, the detector and averaging type may be set for linear voltage averaging.
- Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

5. Sweep time = auto.

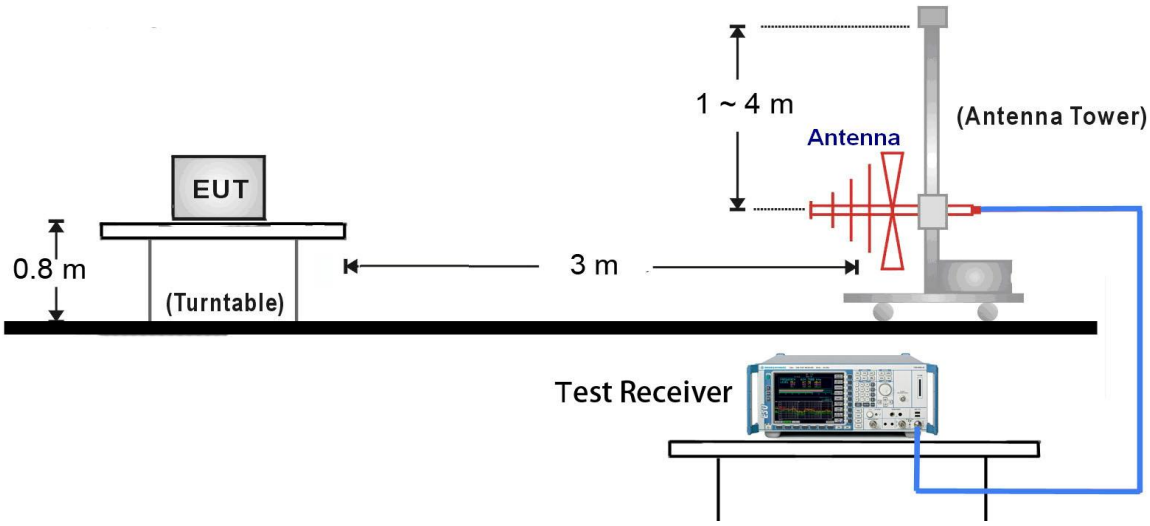
6. Perform a trace average of at least 100 traces.

6.2.4. Test Setup

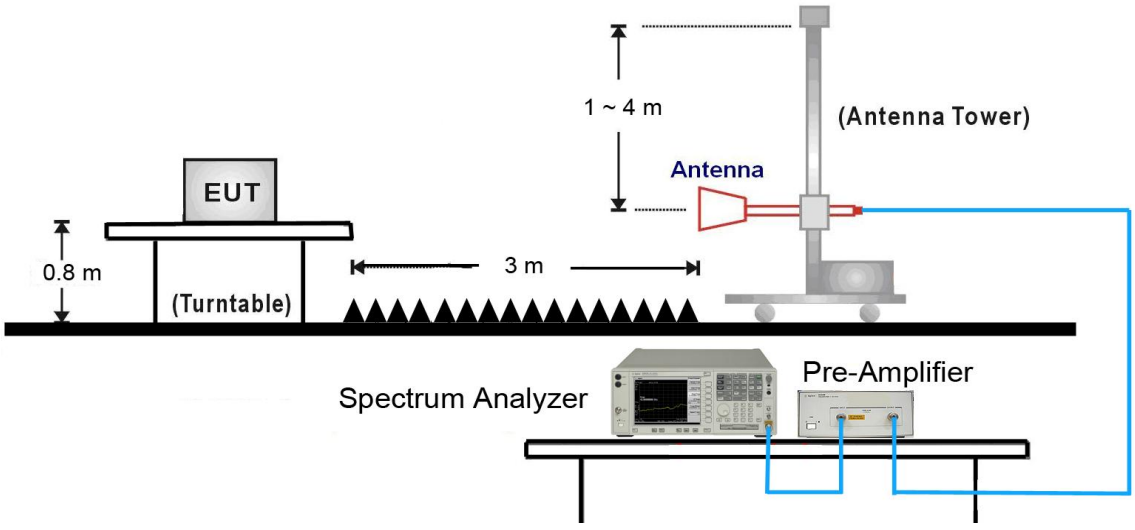
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:



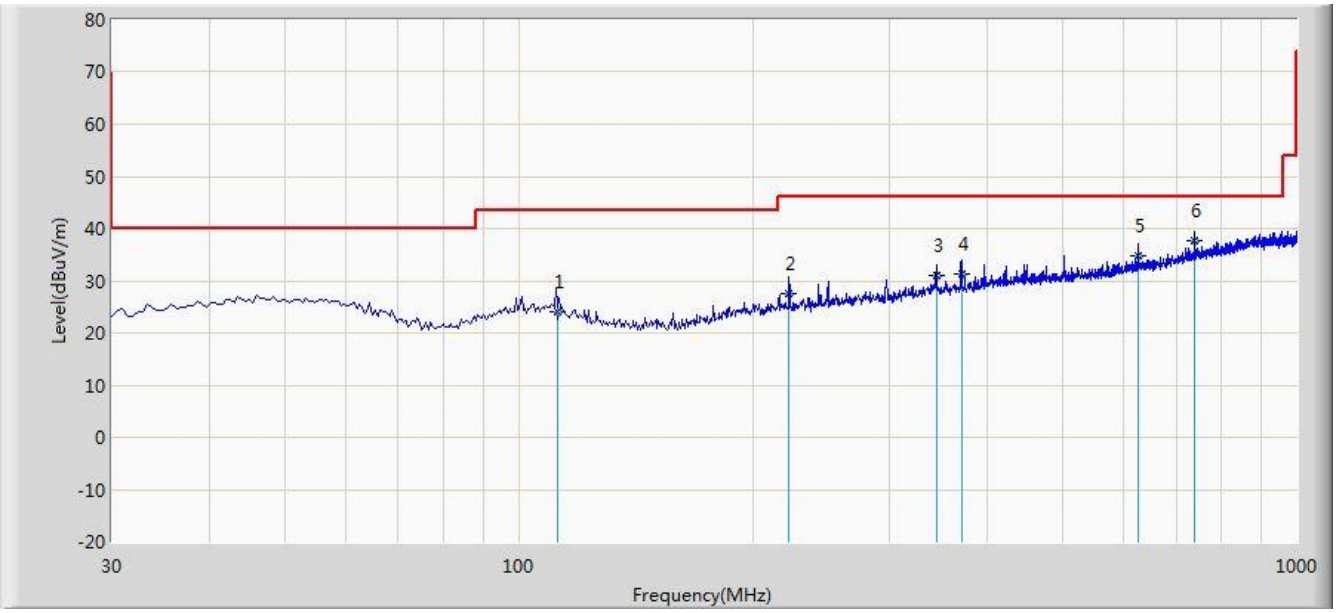
6.2.5. Test Result

Test Mode:	BLE	Test Site:	AC1
Test Channel:	39	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3533.0	39.6	-1.0	38.6	77.9	-38.9	Peak	Horizontal
*	4468.0	35.4	1.6	37.0	77.9	-40.5	Peak	Horizontal
	4960.0	35.2	2.9	38.1	74.0	-35.9	Peak	Horizontal
	7579.0	37.1	8.2	45.3	74.0	-28.7	Peak	Horizontal
*	3567.0	39.9	-0.8	39.1	77.9	-38.4	Peak	Vertical
*	4425.5	35.8	1.5	37.3	77.9	-40.2	Peak	Vertical
	4960.0	35.7	2.9	38.6	74.0	-35.4	Peak	Vertical
	7264.5	36.8	7.9	44.7	74.0	-29.3	Peak	Vertical
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level 97.5dBμV/m. Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)								

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2015/11/20 - 13:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Worse Case Mode: BLE at Channel 2440MHz	

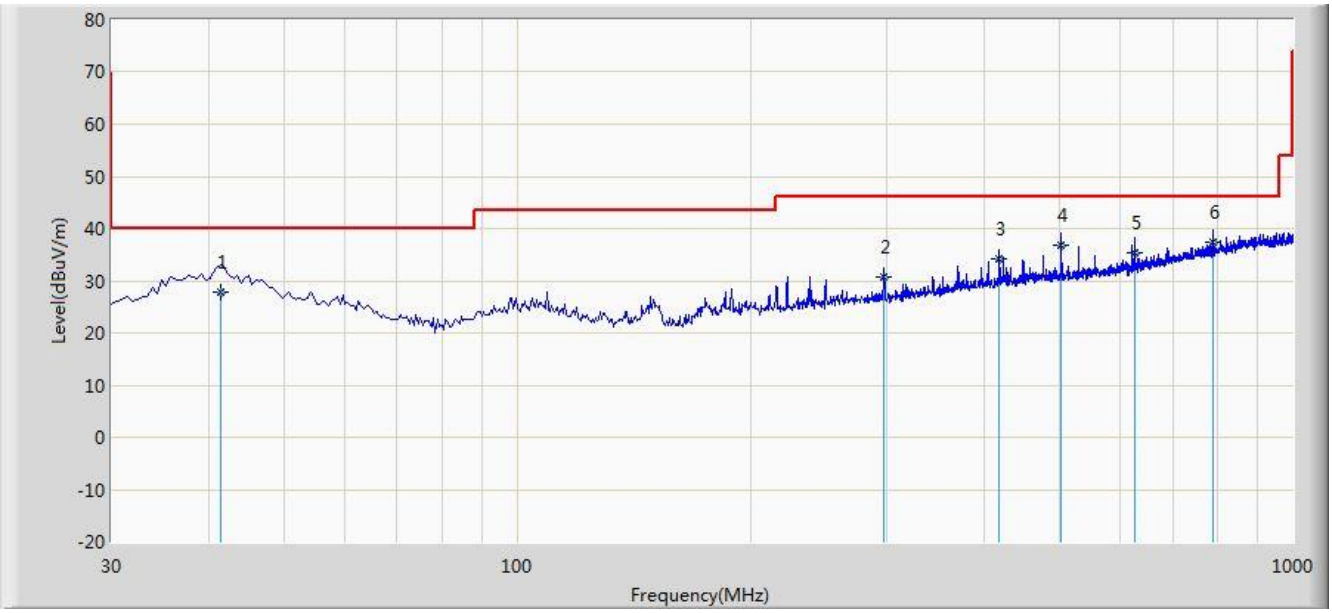


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			112.050	24.040	11.500	-19.460	43.500	12.540	QP
2			222.560	27.433	14.740	-18.567	46.000	12.693	QP
3			344.350	31.066	15.370	-14.934	46.000	15.696	QP
4			371.050	31.295	15.200	-14.705	46.000	16.095	QP
5			625.070	34.861	14.600	-11.139	46.000	20.261	QP
6		*	738.100	37.591	15.620	-8.409	46.000	21.971	QP

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

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

Site: AC1	Time: 2015/11/20 - 13:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Worse Case Mode: BLE at Channel 2440MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			41.450	27.819	13.700	-12.181	40.000	14.119	QP
2			297.440	30.795	16.340	-15.205	46.000	14.455	QP
3			418.503	34.321	17.400	-11.679	46.000	16.921	QP
4			502.900	36.765	18.500	-9.235	46.000	18.265	QP
5			625.140	35.292	15.030	-10.708	46.000	20.262	QP
6		*	788.620	37.254	14.680	-8.746	46.000	22.574	QP

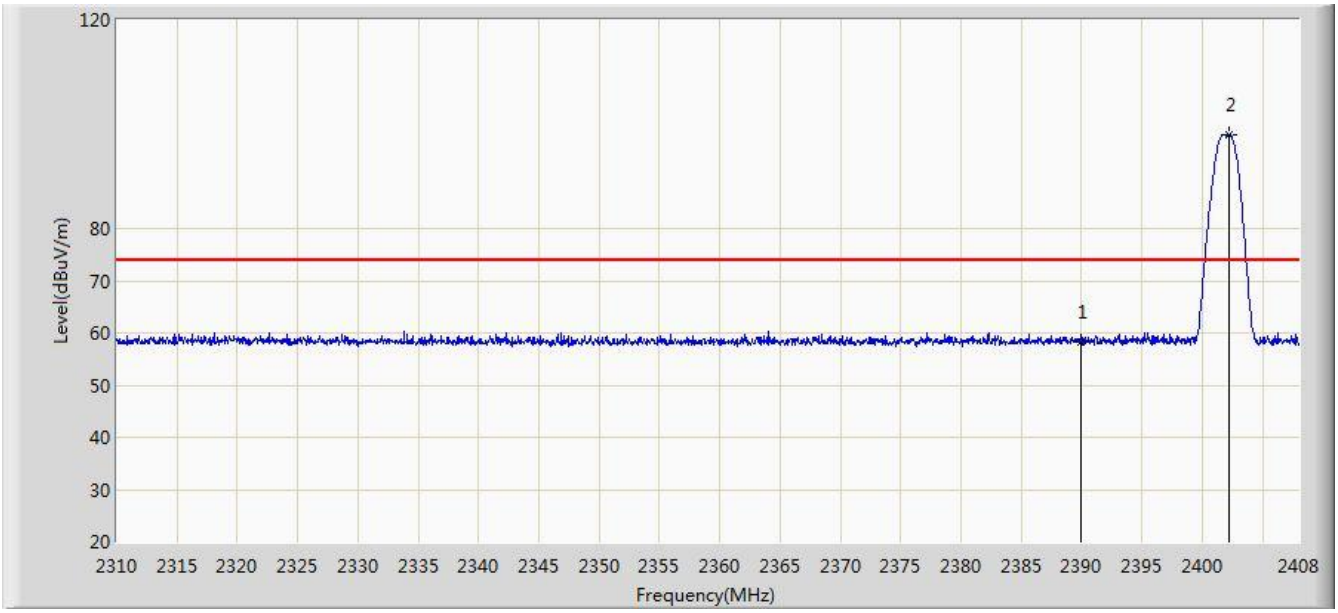
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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

6.3. Radiated Restricted Band Edge Measurement

6.3.1. Test Result

Site: AC1	Time: 2015/11/20 - 11:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2402MHz by BLE	

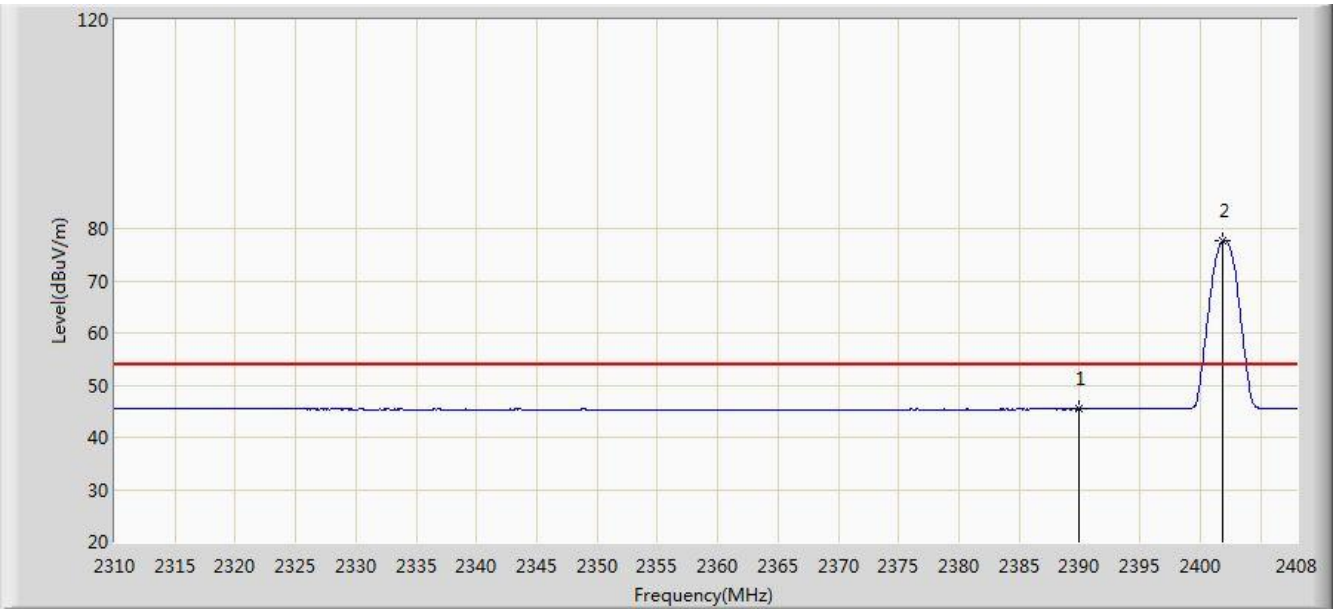


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	58.328	27.125	-15.672	74.000	31.203	PK

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

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

Site: AC1	Time: 2015/11/20 - 11:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2402MHz by BLE	

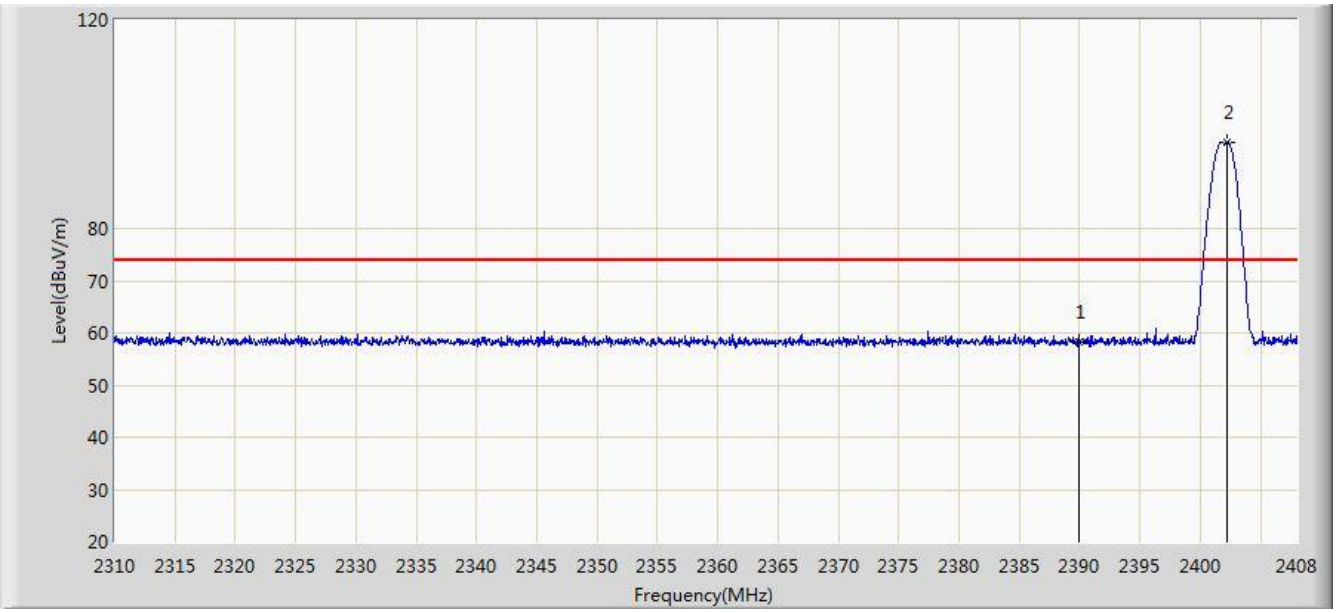


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.379	14.176	-8.621	54.000	31.203	AV

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2402MHz by BLE	

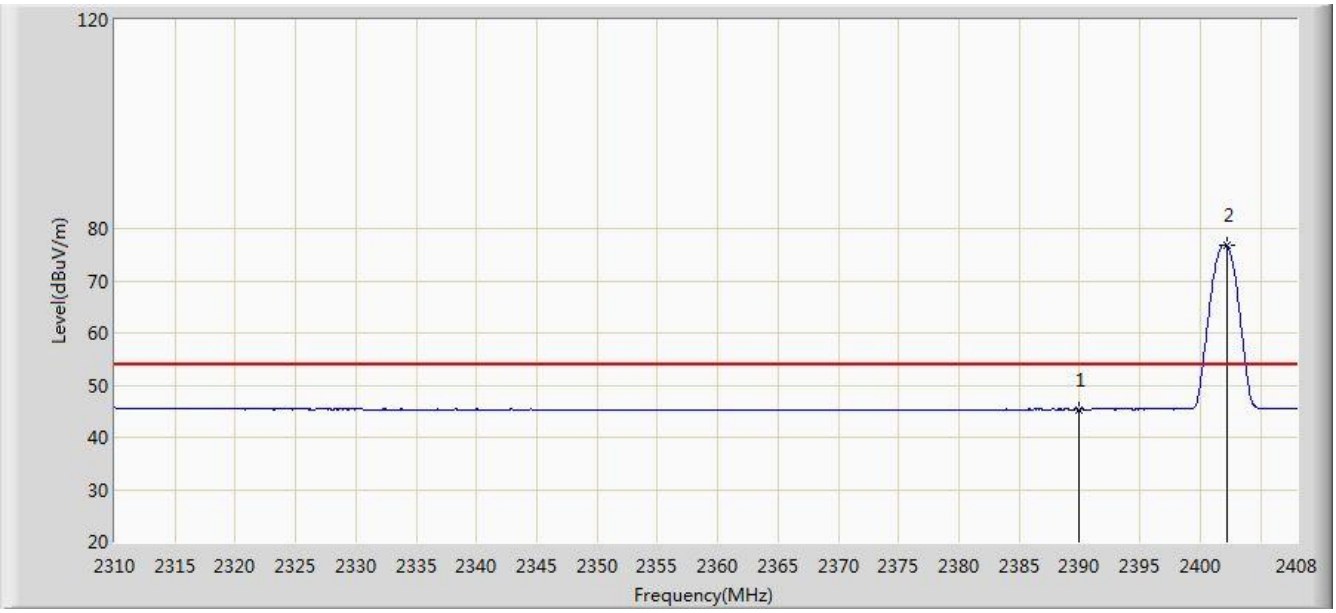


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	58.324	27.121	-15.676	74.000	31.203	PK

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2402MHz by BLE	

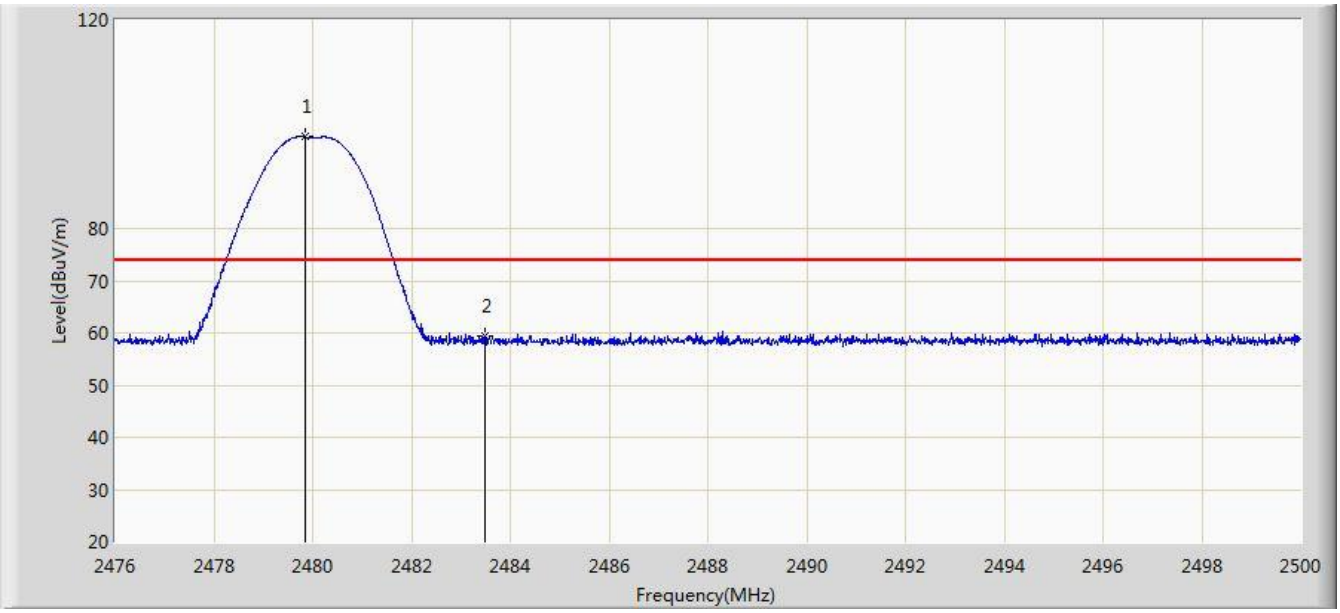


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.342	14.139	-8.658	54.000	31.203	AV

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2480MHz by BLE	

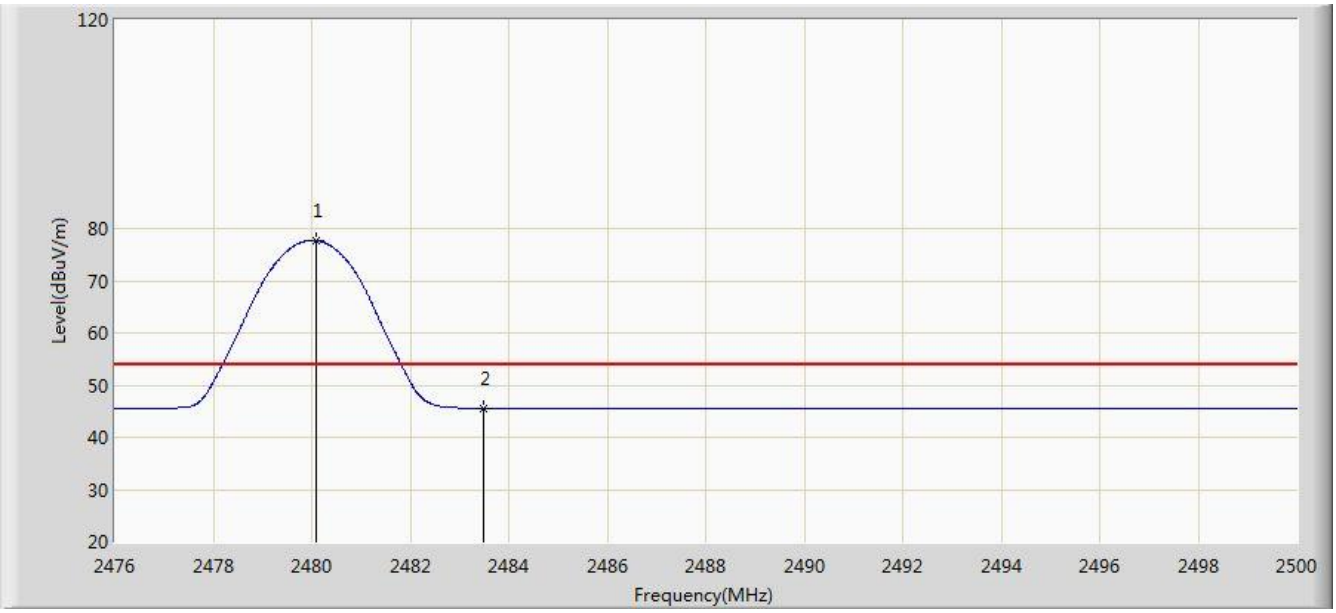


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
2			2483.500	59.450	28.257	-14.550	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2480MHz by BLE	

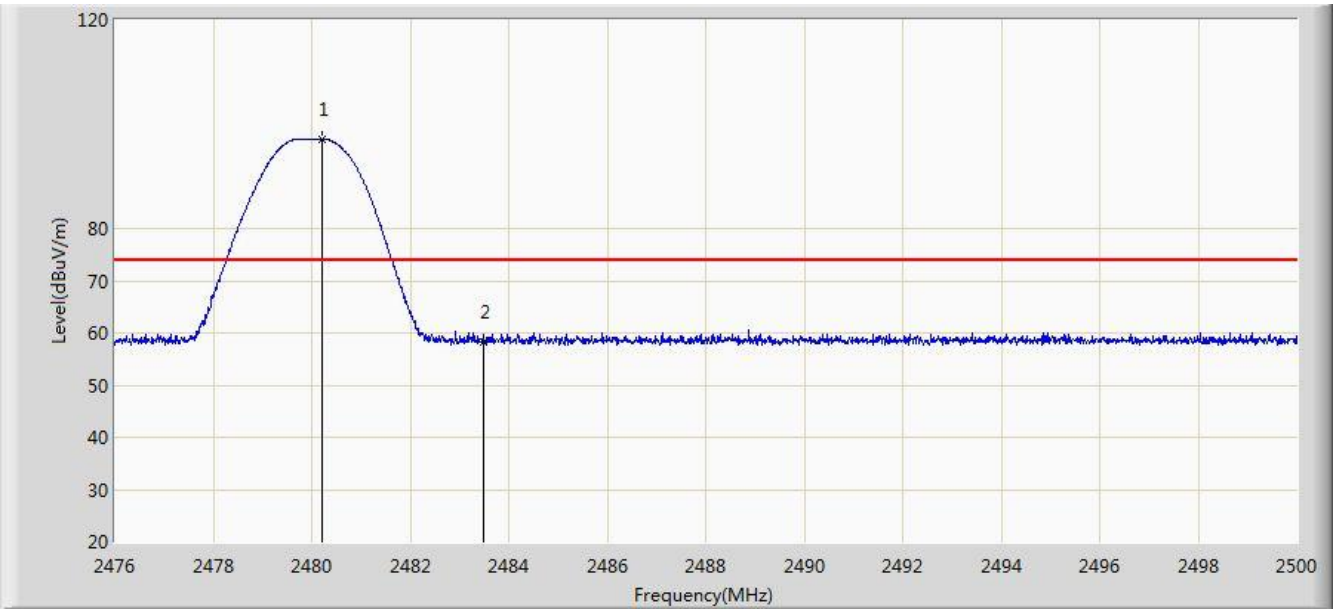


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
2			2483.500	45.595	14.402	-8.405	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2480MHz by BLE	

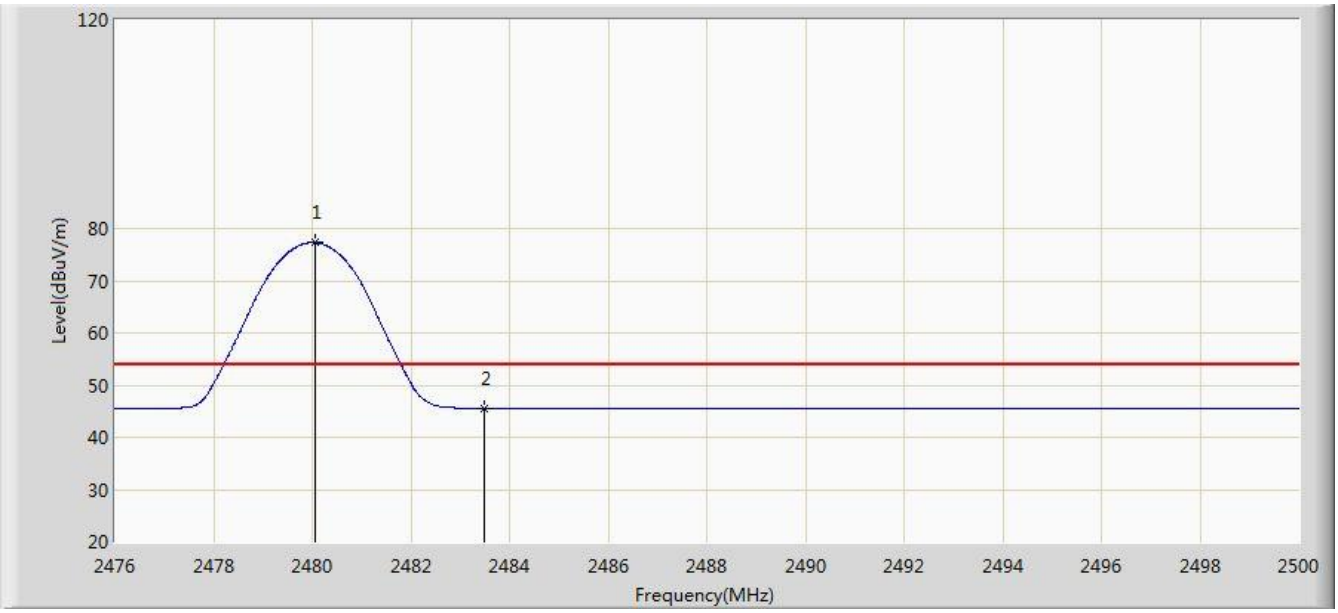


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
2			2483.500	58.148	26.955	-15.852	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/11/20 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Mode: Transmit at Channel 2480MHz by BLE	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
2			2483.500	45.543	14.350	-8.457	54.000	31.194	AV

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

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

6.4. AC Conducted Emissions Measurement

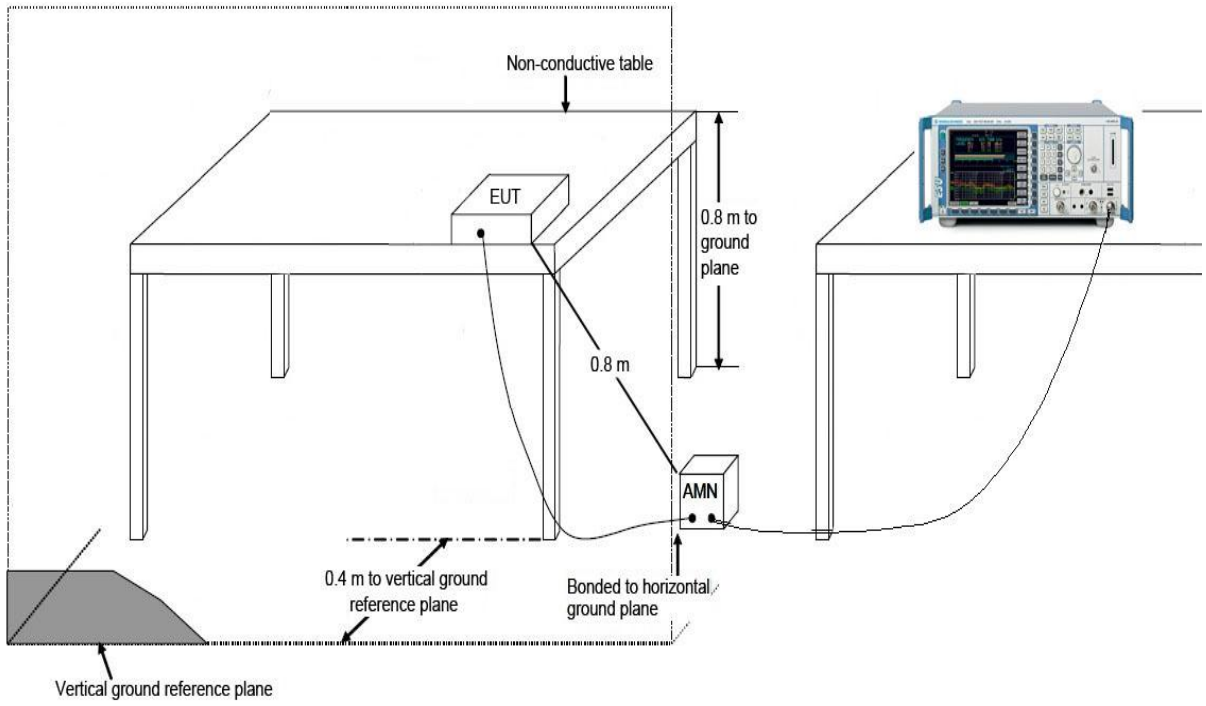
6.4.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
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.

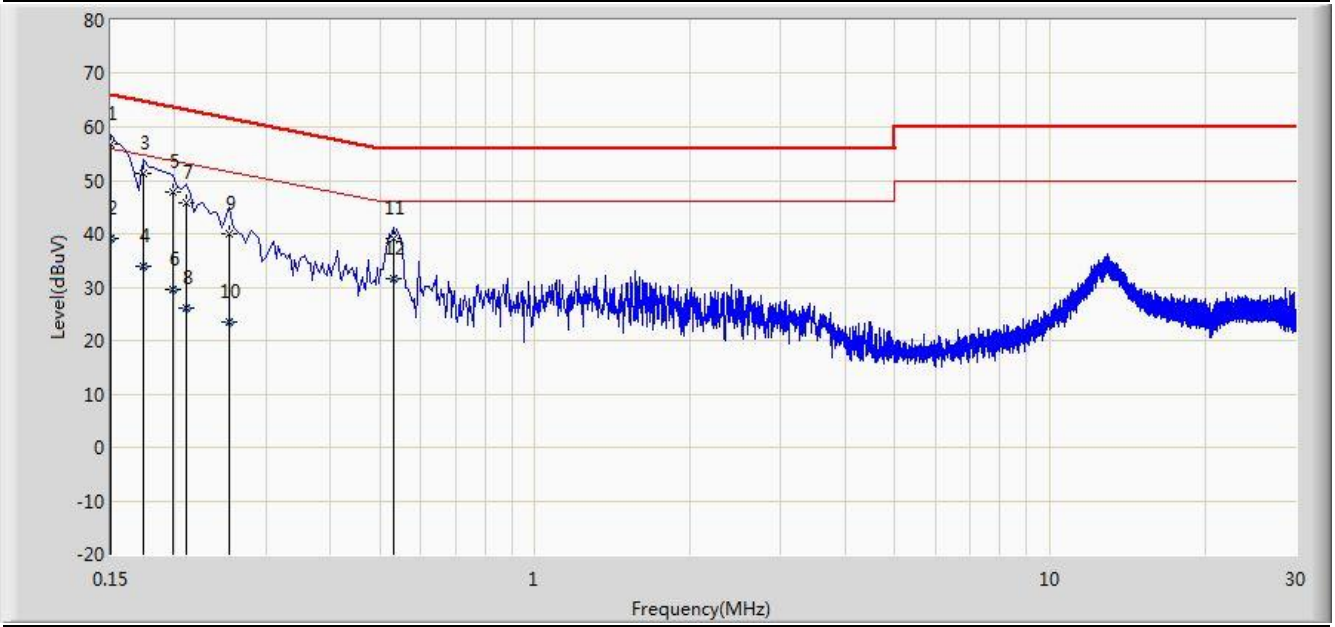
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.4.2. Test Setup



6.4.3. Test Result

Site: SR2	Time: 2015/11/20 - 10:56
Limit: FCC_Part15.207_CE_AC Power	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Note: Mode 1	

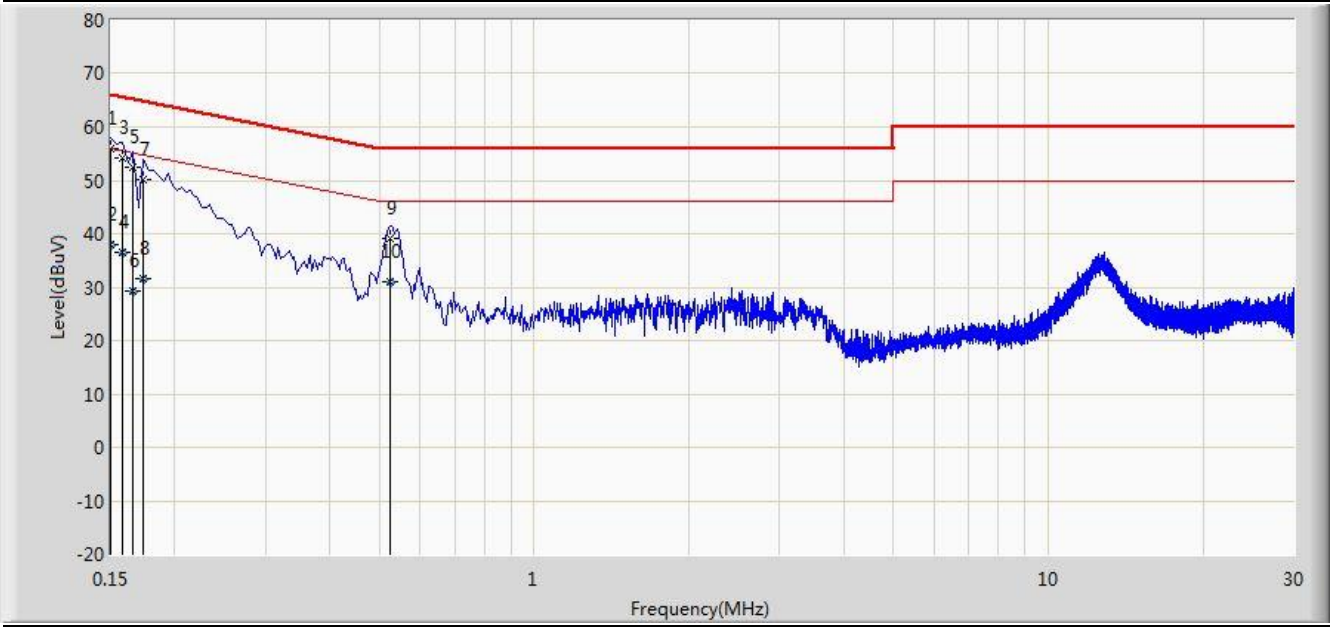


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	56.737	45.568	-9.263	66.000	11.168	QP
2			0.150	39.192	28.023	-16.808	56.000	11.168	AV
3			0.174	51.426	41.359	-13.341	64.767	10.068	QP
4			0.174	33.865	23.797	-20.903	54.767	10.068	AV
5			0.198	47.937	37.932	-15.758	63.694	10.005	QP
6			0.198	29.427	19.423	-24.267	53.694	10.005	AV
7			0.210	45.826	35.857	-17.379	63.205	9.969	QP
8			0.210	26.140	16.171	-27.065	53.205	9.969	AV
9			0.254	39.931	29.964	-21.694	61.625	9.967	QP
10			0.254	23.603	13.636	-28.022	51.625	9.967	AV
11			0.530	39.157	29.007	-16.843	56.000	10.151	QP
12			0.530	31.657	21.507	-14.343	46.000	10.151	AV

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

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

Site: SR2	Time: 2015/11/20 - 11:01
Limit: FCC_Part15.207_CE_AC Power	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Full HD Video Conferencing System	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	55.868	44.726	-10.132	66.000	11.142	QP
2			0.150	37.970	26.828	-18.030	56.000	11.142	AV
3			0.158	54.288	43.998	-11.281	65.568	10.290	QP
4			0.158	36.502	26.212	-19.066	55.568	10.290	AV
5			0.166	52.405	42.334	-12.753	65.158	10.071	QP
6			0.166	29.220	19.148	-25.939	55.158	10.071	AV
7			0.174	50.137	40.080	-14.630	64.767	10.057	QP
8			0.174	31.676	21.620	-23.091	54.767	10.057	AV
9			0.526	38.988	28.816	-17.012	56.000	10.172	QP
10			0.526	30.991	20.819	-15.009	46.000	10.172	AV

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

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

The End