APPLICATION FOR CERTIFICATION
On Behalf of
VOXLAND SARL
BeeWi Bluetooth Smart Controlled AC Plug
Model No.: BBP200
FCC ID: ZKI-BBP200
IC: 9713A-BBP200
Brand : BeeWi

Prepared for : VOXLAND SARL
CS90234 - 13311 Marseille Cedex 14

Prepared by : AUDIX Technology Corporation
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File Number	:	C1M1409199
Report Number	:	EM-F140629
Date of Test	:	2014. 09. 26 ~ 10. 15
Date of Report	:	2014. 10. 16

TABLE OF CONTENTS

TEST REPORT CERTIFICATION

Applicant	:	VOXLAND SARL
Manufacturer	:	Dongguan Quan Sheng Electric Co., Ltd.
EUT Description	:	BeeWi Bluetooth Smart Controlled AC Plug
FCC ID	:	**ZKI-BBP200**
IC	:	**9713A-BBP200**

(A) Model No.	:	BBP200
(B) Serial No.	:	N/A
(C) Brand	:	BeeWi
(D) Power Supply	:	AC 120V, 60Hz
(E) Test Voltage	:	AC 120V, 60Hz

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C, Oct. 2013
Industry Canada Rules and Regulations RSS-Gen (Issue 3), December 2010 and RSS-210 (Issue 8), December 2010
(Canada RSS-210 §Annex 8)
And ANSI C63.4:2003

(FCC CFR 47 Part 15C, §15.205 and §15.207 and §15.209 and §15.247)

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart B and C and Canada RSS-Gen, RSS-210 limits.

The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the requirements of FCC and Industry Canada RSS-Gen, RSS-210 standards.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test: 2014. 09. 26 ~ 10. 15 Date of Report: 2014. 10. 16

Producer: Annie Yu
(Annie Yu/Administrator)

Signatory: Ben Cheng
(Ben Cheng/Manager)

1. DESCRIPTION OF REVISION HISTORY

Edition No.	Date of Rev.	Revision Summary	Report No.
0	2014. 10. 16	Original Report	EM-F140629

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product	BeeWi Bluetooth Smart Controlled AC Plug
Model Number	BBP200
Serial Number	N/A
Brand	BeeWi
Applicant	VOXLAND SARL CS90234 - 13311 Marseille Cedex 14
Manufacturer	Dongguan Quan Sheng Electric Co., Ltd. CHU-TANG 2nd Industrial Park Hou-Chieh Twon Dongguan, Guangdong China
FCC ID	ZKI-BBP200
IC	9713A-BBP200
Fundamental Range	Bluetooth Low Energy: 2402MHz ~ 2480MHz
Frequency Channel	40 channels
Radio Technology	GFSK
Data Transfer Rate	1Mbps
Antenna Type	Chip Antenna, 2dBi(Peak)
Date of Receipt of Sample	2014. 09. 19
Date of Test	2014. 09. 26 ~ 10. 15

2.2. Tested Supporting System Details

2.2.1. Support Peripheral Unit

No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Power Socket	N/A	N/A	N/A	N/A
2.	Power Plug	N/A	P9211047	N/A	N/A

2.2.2. Cable Lists

No.	Cable Description Of The Above Support Units
1.	AC Power Code: Non-Shielded, Detachable, 1.8m
2.	DC Power Code: Non-Shielded, Undetachable, 1.0m AC Power Code: Non-Shielded, Undetachable, 1.0m

2.3. Description of Test Facility

Name of Firm	:	**AUDIX Technology Corporation** EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Site (C8/Semi-AC)	:	**No. 8 Shielded Room &** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan **Semi-Anechoic Chamber** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan May 11, 2012 Renewal on Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

2.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz~30MHz	±3.43dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.74dB
	Above 1GHz	± 5.02dB

Remark：Uncertainty = $ku_c(y)$

Test Item	Uncertainty
6dB Bandwidth	± 0.05kHz
Maximum peak output power	± 0.33dBm
Emission Limitations	± 0.13dB
Band edges	± 0.13dB
Power spectral density	± 0.13dB

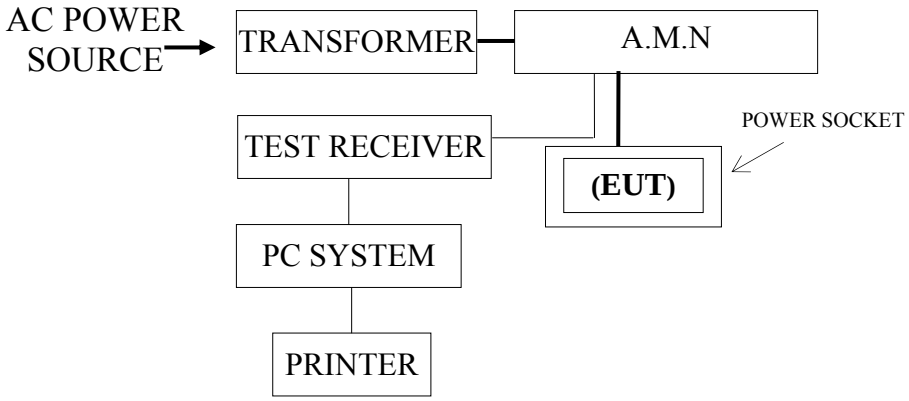
3. CONDUCTED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the powerline conducted emission measurement: (No. 8 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESR3	101774	2014. 02. 19	1 Year
2.	A.M.N.	R&S	ESH2-Z5	100366	2014. 03. 21	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-855-9	2013. 12. 26	1 Year

3.2. Block Diagram of Test Setup



EUT: BeeWi Bluetooth Smart Controlled AC Plug

3.3. Powerline Conducted Emission Limit §15.207, Class B, RSS-Gen §7.2.2/Table 2]

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dBμV	56 ~ 46 dBμV
500kHz ~ 5MHz	56 dBμV	46 dBμV
5MHz ~ 30MHz	60 dBμV	50 dBμV

Remark: 1. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.
2. The lower limit applies at the band edges.

3.4. Operating Condition of EUT

3.4.1. Set up the EUT and simulator as shown on 3.2.

3.4.2. Set to EUT (BeeWi Bluetooth Smart Controlled AC Plug) on transmitting and receiving during all testing.

3.5. Test Procedure

The EUT (linked to Power Socket) was placed on the table which was above the ground by 80cm and Power Socket's power cord connected to the AC mains through an Artificial Mains Network (A.M.N.). This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.)
Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions simulators of the interface cables should be manipulated according to ANSI C63.4-2003, RSS-Gen and RSS-210 regulation during conducted measurement.

The bandwidth of the R&S Test Receiver ESR3 was set at 9kHz.

The frequency range from 150kHz to 30MHz was checked.

All the final readings from Test Receiver were measured with the Quasi-Peak detector and Average detector. Remark: If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

3.6. Powerline Conducted Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

The EUT was measured during this section testing and all the test results are listed in next pages.

EUT：BeeWi Bluetooth Smart Controlled AC Plug

Model No.：BBP200

Test Date：2014. 09. 26 Temperature：26℃ Humidity：64%

The details are as follows：

Mode	Reference Test Data	
	Neutral	Line
1.	# 2	# 1

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No.53-11, Dingfu, Linkou Dist.,New Taipei City
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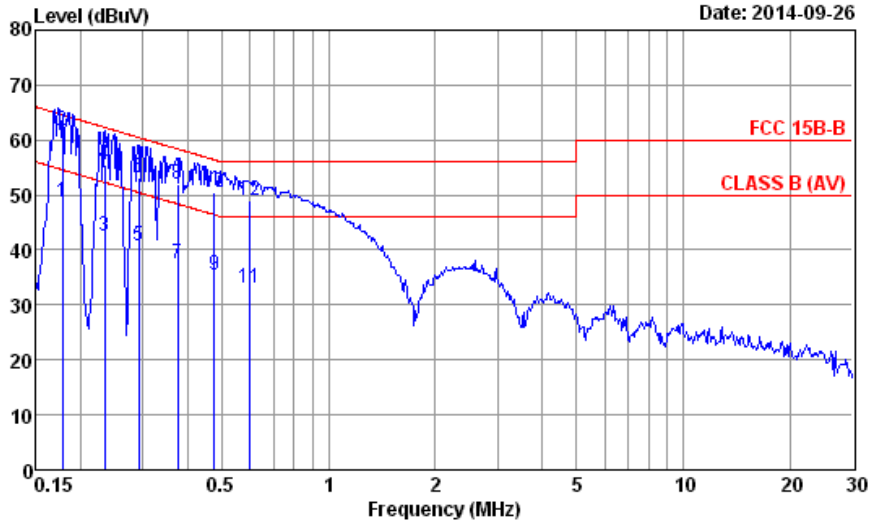
Data: 2 File: D:\test data\REPORT\2014\C1M1409XXX\C1M1409199-C-D(rf).EM6 (2)



Site no. : No.8 Shielded Room
Condition : ESH2-Z5 366
Limit : FCC 15B-B
Env. / Ins. : 26°C / 64% ESR3 (1774)
EUT : BBP200
Power Rating : 120Vac/60Hz
Test Mode : OPERATING

Data no. : 2
Phase : NEUTRAL
Engineer : John

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.178	0.21	0.03	9.85	38.69	48.78	54.60	5.82	Average
2	0.178	0.21	0.03	9.85	51.52	61.61	64.60	2.99	QP
3	0.234	0.21	0.03	9.85	32.44	42.53	52.30	9.77	Average
4	0.234	0.21	0.03	9.85	45.55	55.64	62.30	6.66	QP
5	0.292	0.22	0.03	9.85	30.55	40.65	50.46	9.81	Average
6	0.292	0.22	0.03	9.85	43.14	53.24	60.46	7.22	QP
7	0.375	0.23	0.03	9.84	27.32	37.42	48.39	10.97	Average
8	0.375	0.23	0.03	9.84	41.92	52.02	58.39	6.37	QP
9	0.476	0.23	0.03	9.85	25.28	35.39	46.41	11.02	Average
10	0.476	0.23	0.03	9.85	40.31	50.42	56.41	5.99	QP
11	0.598	0.23	0.03	9.86	22.89	33.01	46.00	12.99	Average
12	0.598	0.23	0.03	9.86	38.94	49.06	56.00	6.94	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

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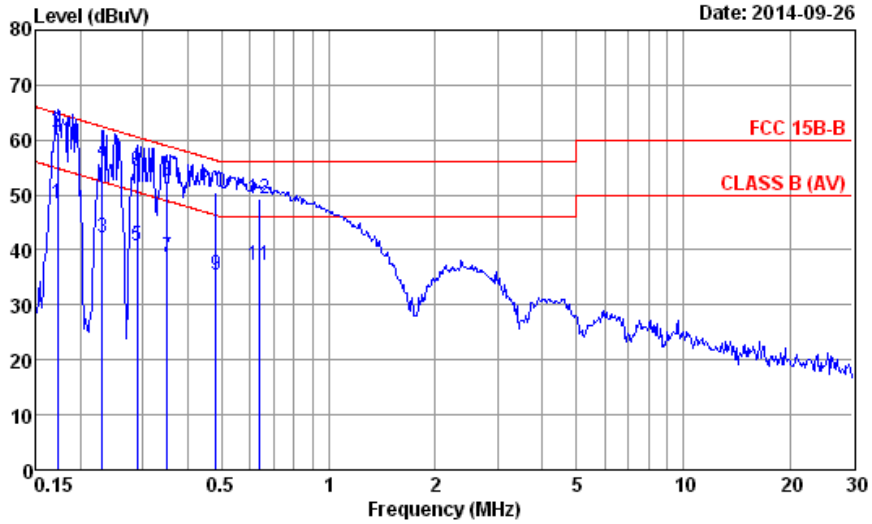
Data: 1 File: D:\test data\REPORT\2014\C1M1409XXX\C1M1409199-C-D(rf).EM6 (2)



Site no. : No.8 Shielded Room
Condition : ESH2-Z5 366
Limit : FCC 15B-B
Env. / Ins. : 26°C / 64% ESR3 (1774)
EUT : BBP200
Power Rating : 120Vac/60Hz
Test Mode : OPERATING

Data no. : 1
Phase : LINE
Engineer : John

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.172	0.18	0.02	9.85	38.23	48.28	54.86	6.58	Average
2	0.172	0.18	0.02	9.85	51.43	61.48	64.86	3.38	QP
3	0.230	0.18	0.03	9.85	32.17	42.23	52.44	10.21	Average
4	0.230	0.18	0.03	9.85	46.01	56.07	62.44	6.37	QP
5	0.289	0.19	0.03	9.85	30.55	40.62	50.54	9.92	Average
6	0.289	0.19	0.03	9.85	44.21	54.28	60.54	6.26	QP
7	0.352	0.19	0.03	9.84	28.60	38.66	48.91	10.25	Average
8	0.352	0.19	0.03	9.84	42.63	52.69	58.91	6.22	QP
9	0.481	0.20	0.03	9.85	25.22	35.30	46.32	11.02	Average
10	0.481	0.20	0.03	9.85	40.37	50.45	56.32	5.87	QP
11	0.641	0.20	0.04	9.85	26.97	37.06	46.00	8.94	Average
12	0.641	0.20	0.04	9.85	39.09	49.18	56.00	6.82	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

4.1.1. For Frequency Range 30MHz~1000MHz (at Semi-Anechoic Chamber)

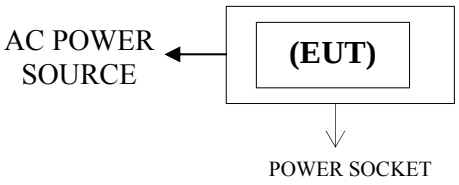
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9010A-503	MY52220119	2014. 06. 25	1 Year
2	Test Receiver	R & S	ESCS30	100338	2014. 06. 24	1 Year
3	Amplifier	HP	8447D	2944A06305	2014. 02. 19	1 Year
4	Bilog Antenna	TESEQ	CBL6112D	33821	2014. 08. 02	1 Year

4.1.2. For Frequency Above 1GHz (at Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-544	US51350140	2014. 06. 25	1 Year
2	Test Receiver	R & S	ESCS30	100338	2014. 06. 24	1 Year
3	Amplifier	Agilent	8449B	3008A02676	2014. 02. 21	1 Year
4	2.4GHz Notch Filter	K&L	7NSL10-2441 .5E130.5-00	1	2014. 06. 12	1 Year
5	3G High Pass Filter	Microware Circuits	H3G018G1	484796	2014. 06. 12	1 Year
6	Horn Antenna	EMCO	3115	9609-4927	2014. 06. 17	1 Year
7	Horn Antenna	EMCO	3116	2653	2014. 10. 10	1 Year

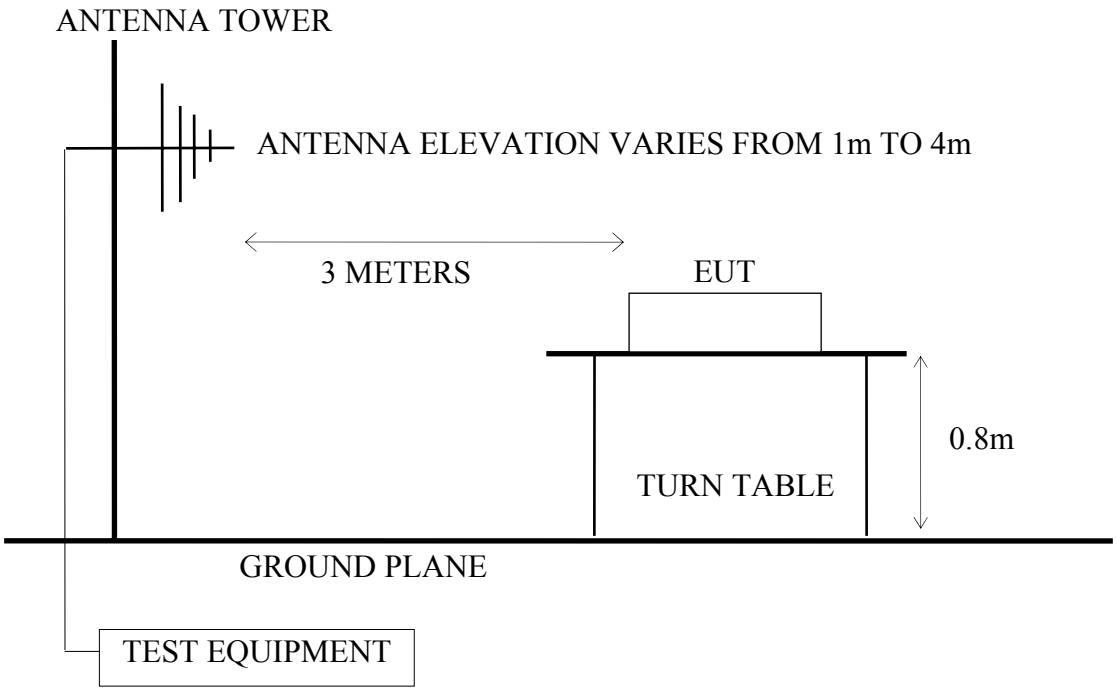
4.2. Test Setup

4.2.1. Block Diagram of connection between EUT and simulators

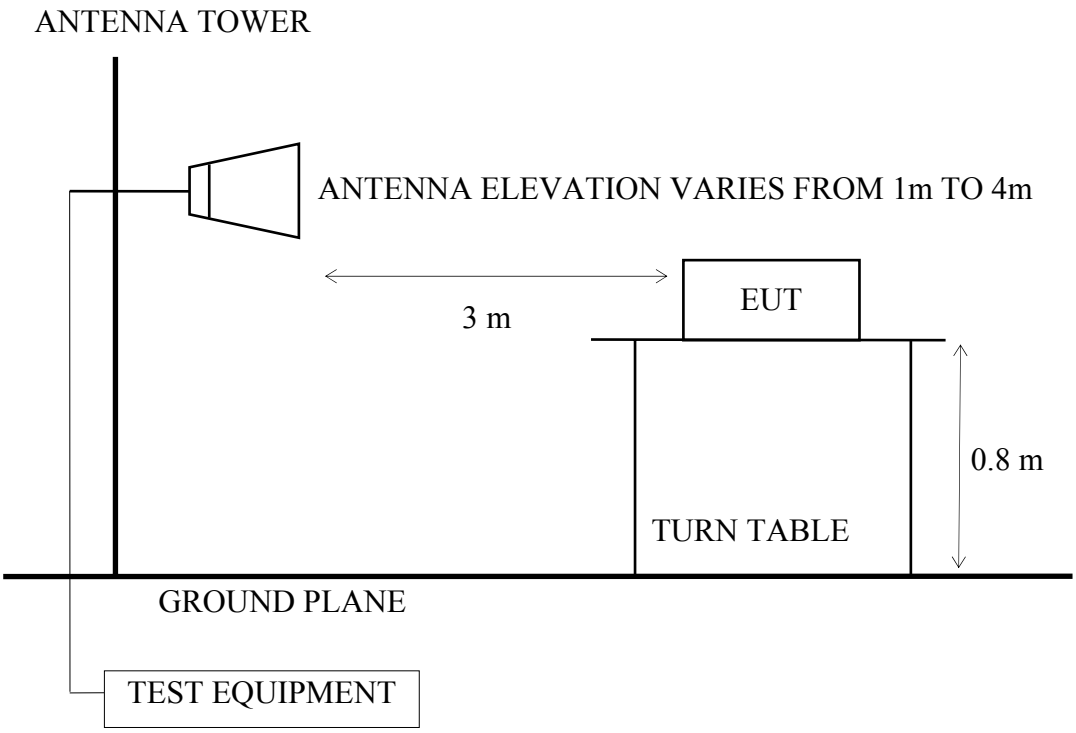


EUT: BeeWi Bluetooth Smart Controlled AC Plug

4.2.2. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000MHz



4.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



4.3. Radiated Emission Limits (§15.209, RSS-210 §2.7/Table 2)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMITS	
		μV/m	dBμV/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)	

Remark：(1) Emission level (dBμV/m) = 20 log Emission level (μV/m)
(2) The tighter limit applies at the edge between two frequency bands.
(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
(4) The limits in this table are based on CFR 47 Part 15.205(a)(b) and Part 15.209 (a).
(5) The over 1GHz limit, FCC limit is used based on CFR 47 Part 15.35(b) and Part 15.205(b) & Part 15.209(e) and Part 15.207(c).

4.4. Operating Condition of EUT

4.4.1. Set up the EUT and simulator as shown on 4.2.

4.4.2. The EUT set to continuously transmit signals at 2402MHz, 2440MHz and 2480MHz and receiving signal at 2440MHz during all test time.

4.5. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna such as bilog antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4-2003, RSS-Gen and RSS-210 regulation.

The bandwidth of the R&S Test Receiver ESCS30 was set at 120kHz. (For 30MHz to 1000MHz)

The resolution bandwidth and video bandwidth of test spectrum analyzer is 1MHz for peak detection (PK) at frequency above 1GHz.

The resolution bandwidth of test spectrum analyzer is 1MHz and the video bandwidth is 10Hz for average detection (AV) at frequency above 1GHz.

The frequency range from 30MHz to 25GHz (Up to 10th harmonics from fundamental frequency) was checked. 30MHz to 1000MHz was measured with Quasi-Peak detector. Pursuant to ANSI 4.2.2, peak detector is an alternate option for frequency from 30MHz to 1000MHz.

Above 1GHz was measured with peak and average detector. For frequency from 1GHz to 25GHz, we checked it in 1 meter distance and with a shorter cable 2 meter instead of original's. There is no signal exist.

Pursuant to ANSI C63.4 8.3.1.2, when peak value complies with the average limit, we didn't perform measurement in average detector.

4.6. Test Results

PASSED.
(All emissions not reported for there is no emission be found.)

EUT: BeeWi Bluetooth Smart Controlled AC Plug M/N: BBP200

Test Date: 2014. 10. 15 Temperature: 26℃ Humidity: 43%

For Frequency Range 30MHz~1000MHz:
The EUT emitted the fundamental frequency with data code at the stand, side and lying conditions.

The EUT select **worst position "lying"** and power by battery and with following test modes was performed during this section testing and all the test results are listed in section 4.6.1.

Mode	Channel	Frequency	Test Mode	Reference Test Data	
				Horizontal	Vertical
1.	CH 0	2402MHz	Transmit	# 1	# 5
2.	CH 19	2440MHz		# 2	# 6
3.	CH 39	2480MHz		# 3	# 7

* Above all final readings were measured with Peak detector.

For Frequency above 1GHz:
The emissions (up to 25GHz) not reported are too low to be measured.

For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 4.6.2. (The restricted bands defined in part 15.205(a))

Mode	Channel	Frequency	Test Mode	Reference Test Data No.	
				Horizontal	Vertical
1	CH 0	2402MHz	Transmit	# 1, # 2	# 1, # 2
2	CH 39	2480MHz		# 3, # 4	# 3, # 4

4.6.1. For 30-1000MHz Frequency Range Measurement Results

Bluetooth Low Energy, Transmit, Frequency: 2402MHz

Site no. : Audix NO.1 Chamber Data no. : 1
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : HORIZONTAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402MHz BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	31.94	17.52	2.37	8.41	28.30	40.00	11.70	Peak
2	189.08	9.19	3.90	14.01	27.10	43.50	16.40	Peak
3	296.75	13.09	4.64	13.09	30.82	46.00	15.18	Peak
4	415.09	15.78	5.78	7.68	29.24	46.00	16.76	Peak
5	746.83	19.38	6.94	5.53	31.85	46.00	14.15	Peak
6	912.70	20.65	7.62	2.64	30.91	46.00	15.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Site no. : Audix NO.1 Chamber Data no. : 5
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : VERTICAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402MHz BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	30.97	18.07	2.34	9.27	29.68	40.00	10.32	Peak
2	189.08	9.19	3.90	13.40	26.49	43.50	17.01	Peak
3	296.75	13.09	4.64	8.80	26.53	46.00	19.47	Peak
4	415.09	15.78	5.78	9.00	30.56	46.00	15.44	Peak
5	746.83	19.38	6.94	3.56	29.88	46.00	16.12	Peak
6	912.70	20.65	7.62	-1.88	26.39	46.00	19.61	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Bluetooth Low Energy, Transmit, Frequency: 2440MHz

Site no. : Audix NO.1 Chamber Data no. : 2
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : HORIZONTAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2440MHz BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	30.97	18.07	2.34	7.79	28.20	40.00	11.80	Peak
2	189.08	9.19	3.90	13.87	26.96	43.50	16.54	Peak
3	296.75	13.09	4.64	11.47	29.20	46.00	16.80	Peak
4	415.09	15.78	5.78	5.65	27.21	46.00	18.79	Peak
5	746.83	19.38	6.94	1.65	27.97	46.00	18.03	Peak
6	912.70	20.65	7.62	-0.30	27.97	46.00	18.03	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Site no. : Audix NO.1 Chamber Data no. : 6
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : VERTICAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2440MHz BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	30.97	18.07	2.34	9.12	29.53	40.00	10.47	Peak
2	189.08	9.19	3.90	14.24	27.33	43.50	16.17	Peak
3	296.75	13.09	4.64	8.50	26.23	46.00	19.77	Peak
4	415.09	15.78	5.78	8.81	30.37	46.00	15.63	Peak
5	746.83	19.38	6.94	2.66	28.98	46.00	17.02	Peak
6	912.70	20.65	7.62	-1.29	26.98	46.00	19.02	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Bluetooth Low Energy, Transmit, Frequency: 2480MHz

Site no. : Audix NO.1 Chamber Data no. : 3
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : HORIZONTAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480MHz BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	30.97	18.07	2.34	9.23	29.64	40.00	10.36	Peak
2	189.08	9.19	3.90	14.01	27.10	43.50	16.40	Peak
3	296.75	13.09	4.64	10.16	27.89	46.00	18.11	Peak
4	485.90	16.77	6.34	6.00	29.11	46.00	16.89	Peak
5	746.83	19.38	6.94	1.84	28.16	46.00	17.84	Peak
6	912.70	20.65	7.62	-0.93	27.34	46.00	18.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Site no. : Audix NO.1 Chamber Data no. : 7
Dis. / Ant. : 3m CBL6112D 33821 Ant. pol. : VERTICAL
Limit : 30M-1G
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480MHz BLE

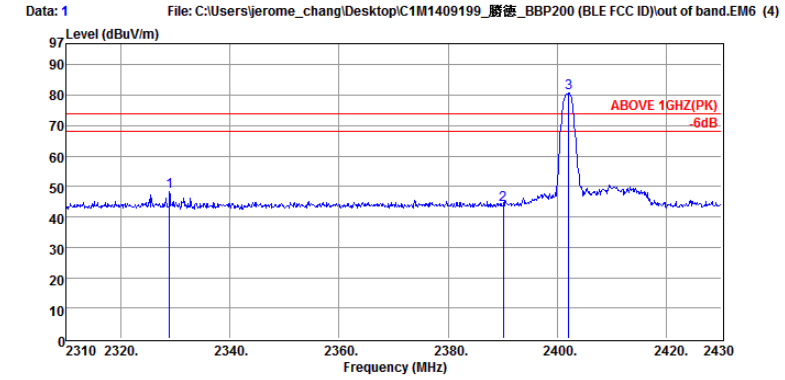
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	30.97	18.07	2.34	8.97	29.38	40.00	10.62	Peak
2	189.08	9.19	3.90	14.27	27.36	43.50	16.14	Peak
3	296.75	13.09	4.64	9.19	26.92	46.00	19.08	Peak
4	415.09	15.78	5.78	9.05	30.61	46.00	15.39	Peak
5	746.83	19.38	6.94	2.43	28.75	46.00	17.25	Peak
6	912.70	20.65	7.62	-1.26	27.01	46.00	18.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

4.6.2. Restricted Bands Measurement Results

Date of Test：	2014. 10. 15	Temperature：	26℃
EUT：	BeeWi Bluetooth Smart Controlled AC Plug	Humidity：	43%

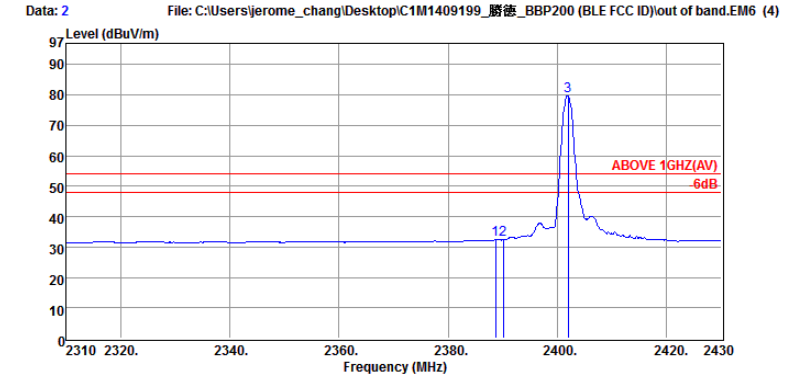
Test Mode： **Bluetooth Low Energy, Transmit, Channel 0, Frequency: 2402MHz**



Site no. : Audix NO.1 Chamber Data no. : 1
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : ABOVE 1GHZ(PK)
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402_BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2328.96	28.14	5.15	15.07	48.36	74.00	25.64	Peak
2	2390.04	28.20	5.24	10.48	43.92	74.00	30.08	Peak
3	2402.04	28.21	5.26	47.30	80.77	74.00	-6.77	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.



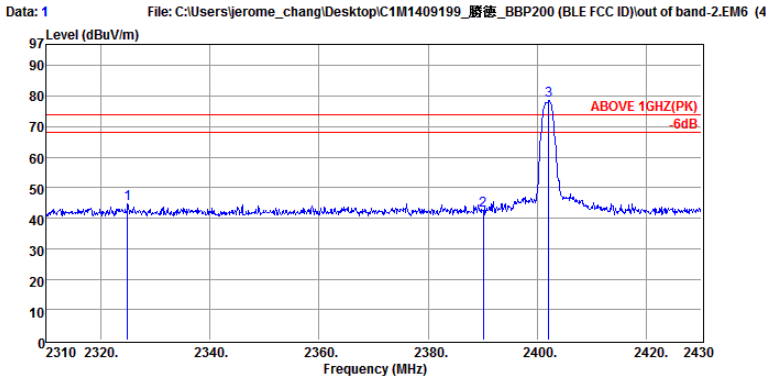
Site no. : Audix NO.1 Chamber Data no. : 2
Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
Limit : ABOVE 1GHZ(AV)
Env. / Ins. : 26*C / 43% N9010A Engineer : Jerome_Chang
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402_BLE

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2388.72	28.20	5.24	-1.09	32.35	54.00	21.65	Average
2	2390.04	28.20	5.24	-1.10	32.34	54.00	21.66	Average
3	2401.92	28.21	5.26	46.30	79.77	54.00	-25.77	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Date of Test：	2014. 10. 15	Temperature：	26℃
EUT：	BeeWi Bluetooth Smart Controlled AC Plug	Humidity：	43%

Test Mode： **Bluetooth Low Energy, Transmit, Channel 0, Frequency: 2402MHz**

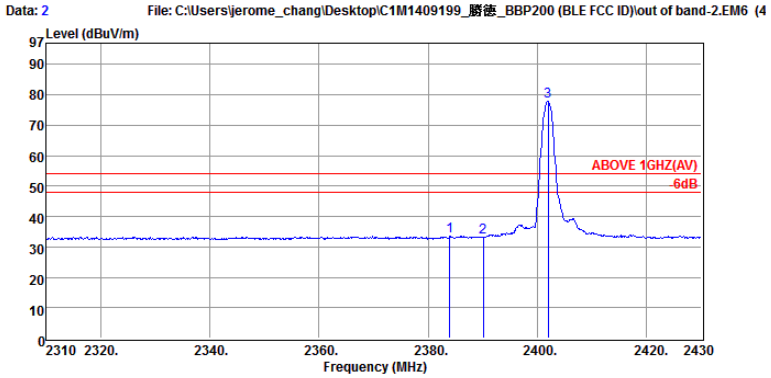


Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(PK)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402_BLE

Data no. : 1
Ant. pol. : VERTICAL
Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2325.00	28.14	5.15	11.31	44.60	74.00	29.40	Peak
2	2390.04	28.20	5.24	9.16	42.60	74.00	31.40	Peak
3	2402.04	28.21	5.26	44.98	78.45	74.00	-4.45	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(AV)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2402_BLE

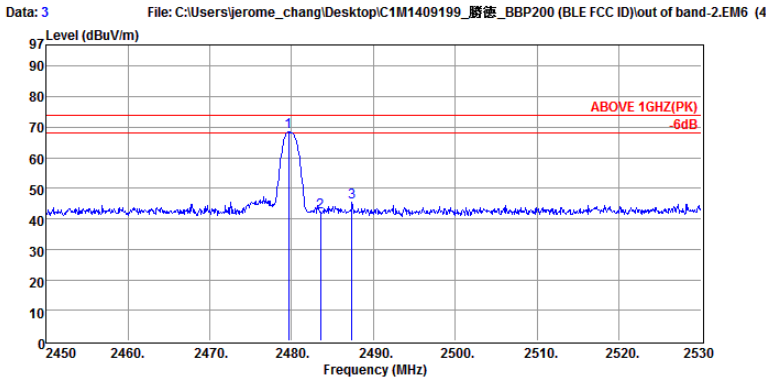
Data no. : 2
Ant. pol. : VERTICAL
Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2383.92	28.20	5.23	0.12	33.55	54.00	20.45	Average
2	2390.04	28.20	5.24	-0.30	33.14	54.00	20.86	Average
3	2401.92	28.21	5.26	44.29	77.76	54.00	-23.76	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Date of Test：	2014. 10. 15	Temperature：	26℃
EUT：	BeeWi Bluetooth Smart Controlled AC Plug	Humidity：	43%

Test Mode： **Bluetooth Low Energy, Transmit, Channel 39, Frequency: 2480MHz**

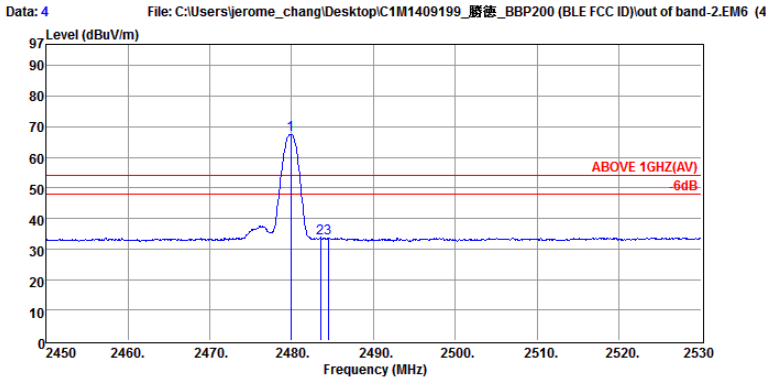


Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(PK)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480_BLE

Data no. : 3
Ant. pol. : HORIZONTAL
Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2479.60	28.28	5.36	34.92	68.56	74.00	5.44	Peak
2	2483.52	28.29	5.37	8.54	42.20	74.00	31.80	Peak
3	2487.36	28.29	5.37	11.79	45.45	74.00	28.55	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(AV)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480_BLE

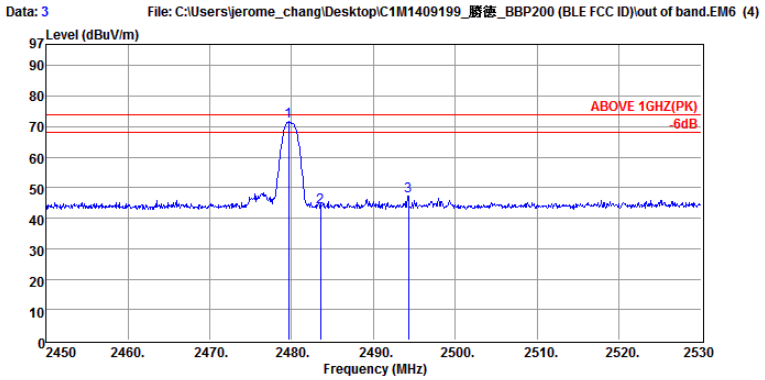
Data no. : 4
Ant. pol. : HORIZONTAL
Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2479.92	28.28	5.36	33.95	67.59	54.00	-13.59	Average
2	2483.52	28.29	5.37	0.01	33.67	54.00	20.33	Average
3	2484.48	28.29	5.37	-0.11	33.55	54.00	20.45	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

Date of Test：	2014. 10. 15	Temperature：	26℃
EUT：	BeeWi Bluetooth Smart Controlled AC Plug	Humidity：	43%

Test Mode： **Bluetooth Low Energy, Transmit, Channel 39, Frequency: 2480MHz**



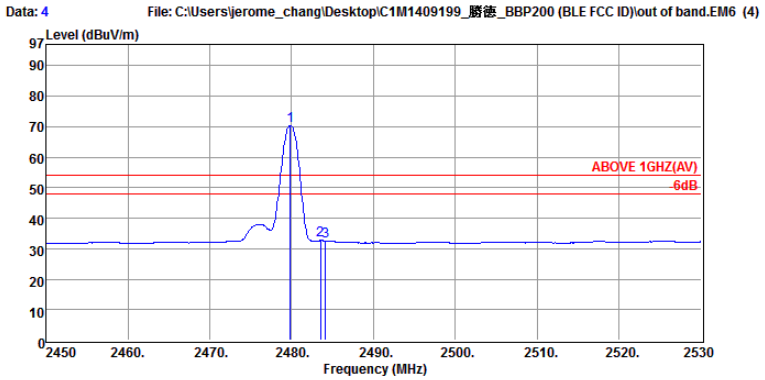
Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(PK)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480_BLE

Data no. : 3
Ant. pol. : VERTICAL

Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2479.60	28.28	5.36	38.02	71.66	74.00	2.34	Peak
2	2483.52	28.29	5.37	10.10	43.76	74.00	30.24	Peak
3	2494.24	28.29	5.38	13.68	47.35	74.00	26.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : Audix NO.1 Chamber
Dis. / Ant. : 3m 3115(4927)
Limit : ABOVE 1GHZ(AV)
Env. / Ins. : 26*C / 43% N9010A
EUT : BBP200
Power Rating : AC 120V/60Hz
Test Mode : TX 2480_BLE

Data no. : 4
Ant. pol. : VERTICAL

Engineer : Jerome_Chang

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2479.84	28.28	5.36	36.84	70.48	54.00	-16.48	Average
2	2483.52	28.29	5.37	-0.99	32.67	54.00	21.33	Average
3	2484.16	28.29	5.37	-1.15	32.51	54.00	21.49	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
2. The emission levels that are 20dB below the official limit are not reported.

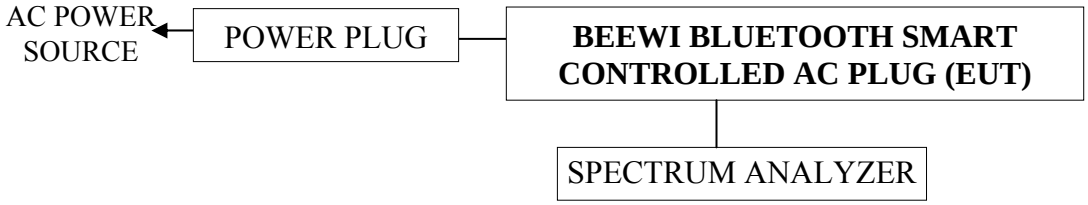
5. 6dB BANDWIDTH MEASUREMENT

5.1. Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-526	MY53310269	2014. 09. 19	1 Year

5.2. Block Diagram of Test Setup



5.3. Specification Limits [§15.247(a)(2), RSS-210 §A8.2 (a)]

The minimum 6dB bandwidth shall be at least 500kHz.

5.4. Operating Condition of EUT

EUT (Radio Control) was on transmitting frequency function by manual operation during the testing.

5.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 1.5% EBW, VBW≥3xRBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.
The measurement guideline was according to 558074 D01 v03r02.

5.6. Test Results

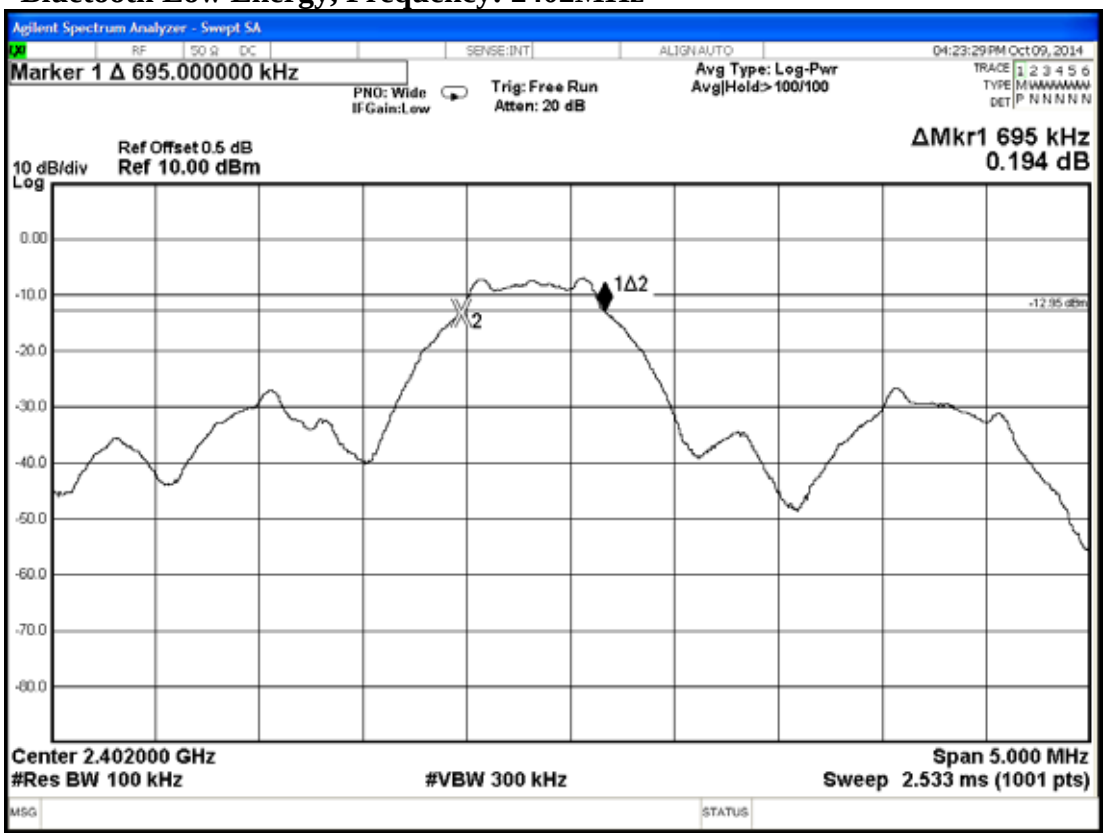
PASSED. All the test results are attached in next pages.

Test Date: 2014. 10. 09 Temperature: 25℃ Humidity: 40%

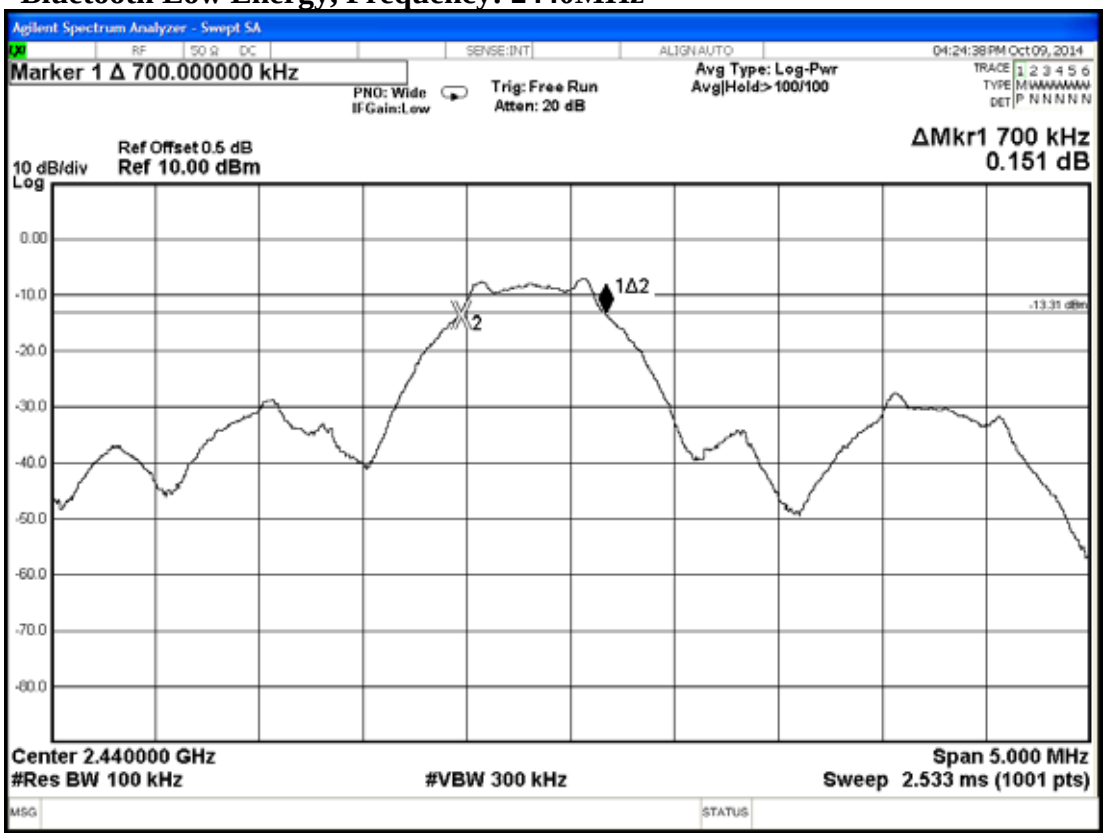
Mode	Type of Network	Channel	Frequency	**6dB Bandwidth**
1	Bluetooth Low Energy	CH0	2402MHz	**0.695 MHz**
2		CH19	2440MHz	**0.700 MHz**
3		CH39	2480MHz	**0.690 MHz**

[Limit: least 500kHz]

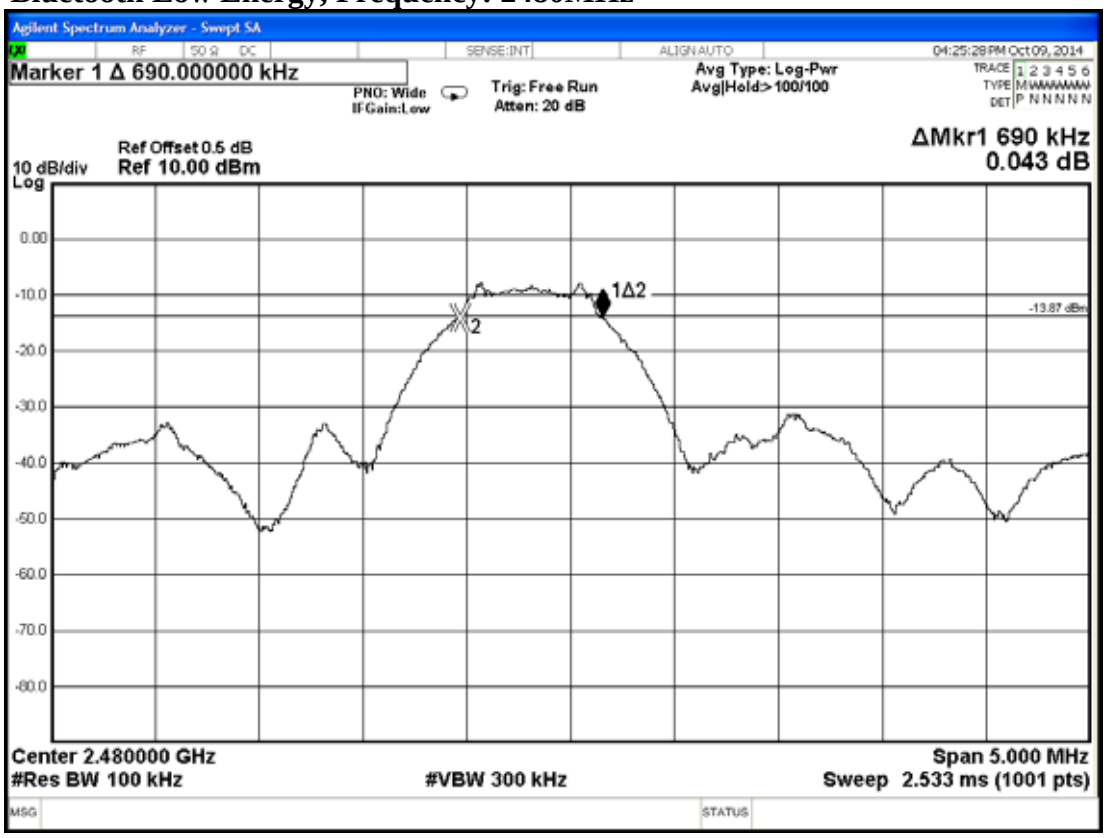
Bluetooth Low Energy, Frequency: 2402MHz



Bluetooth Low Energy, Frequency: 2440MHz



Bluetooth Low Energy, Frequency: 2480MHz



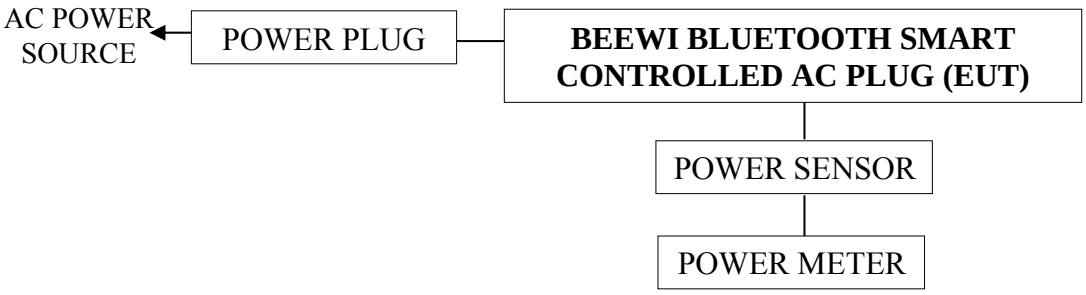
6. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

6.1. Test Equipment

The following test equipment was used during the maximum peak output power measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Power Meter	Anritsu	ML2495A	1145008	2013. 10. 23	1 Year
2.	Power Sensor	Anritsu	MA2411B	1126096	2013. 10. 23	1 Year

6.2. Block Diagram of Test Setup



6.3. Specification Limits [§15.247(b)-(3), RSS-210 §A8.4 (4)]

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5MHz is: 1Watt. (30dBm)

6.4. Operating Condition of EUT

EUT (Radio Control) was on transmitting frequency function by manual operation during the testing.

6.5. Test Procedure

The transmitter output was connected to the power sensor and record the reading of power meter.
The measurement guideline was according to 558074 D01 v03r02.

6.6. Test Results

PASSED. All the test results are listed below.

Test Date: 2014. 10. 09 Temperature: 25℃ Humidity: 40%

Mode	Type of Network	Channel	Test Frequency	Output Power(dBm)	
				Peak	**Average**
1	Bluetooth Low Energy	CH0	2402MHz	**-5.01**	**-7.09**
2		CH19	2440MHz	**-4.99**	**-7.09**
3		CH39	2480MHz	**-5.11**	**-7.28**

[Limit: 1Watt. (30dBm)]

7. EMISSION LIMITATIONS MEASUREMENT

7.1. Test Equipment

The following test equipment was used during the emission limitations test：

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-526	MY53310269	2014. 09. 19	1 Year

7.2. Block Diagram of Test Setup

The same as section.5.2

7.3. Specification Limits (§15.247(c), RSS-210 A8.5)

7.3.1. In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).(※This test result attaching to §4.6.3)

7.3.2. The reference level for determining limit of emission limitations is according to the value measured indicated in plots at section 9.6.

7.4. Operating Condition of EUT

EUT (Radio Control) was on transmitting frequency function by manual operation during the testing.

7.5. Test Procedure

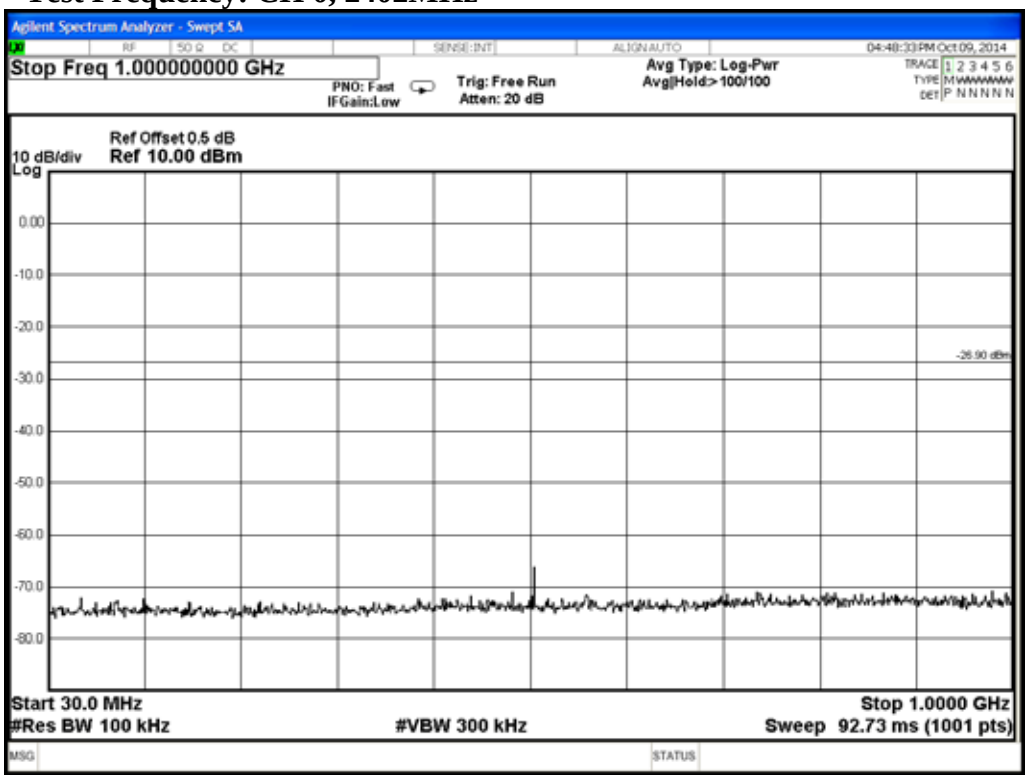
The RF output of EUT was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 100kHz RBW and 300kHz VBW.
The measurement guideline was according to 558074 D01 v03r02.

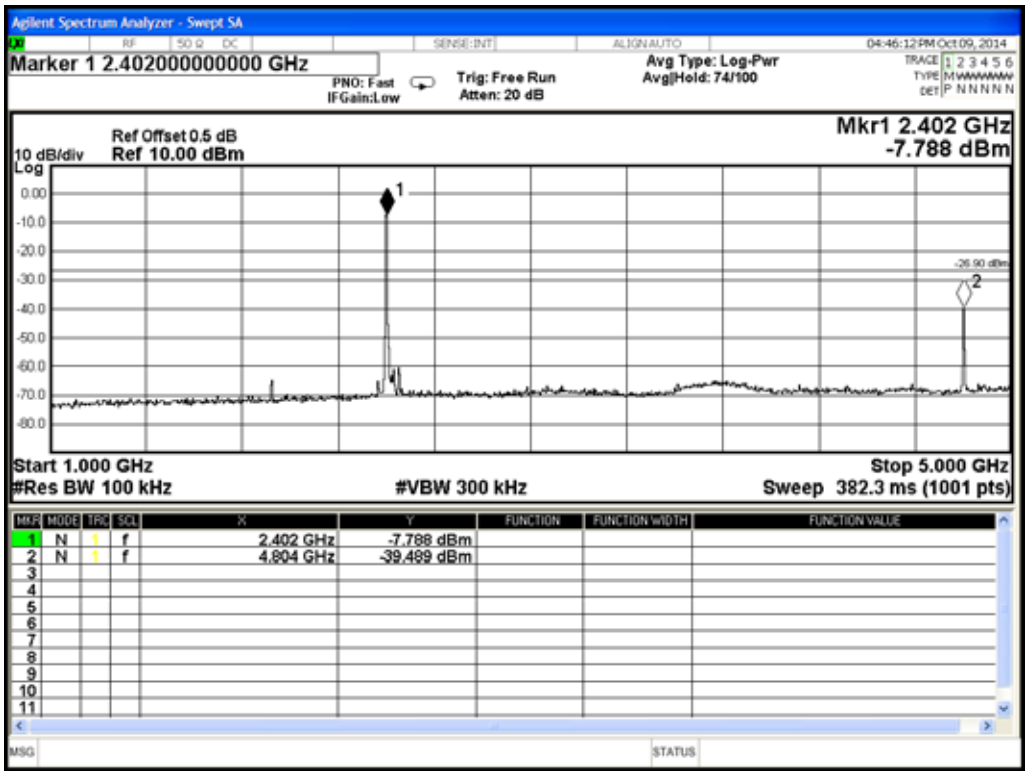
7.6. Test Results

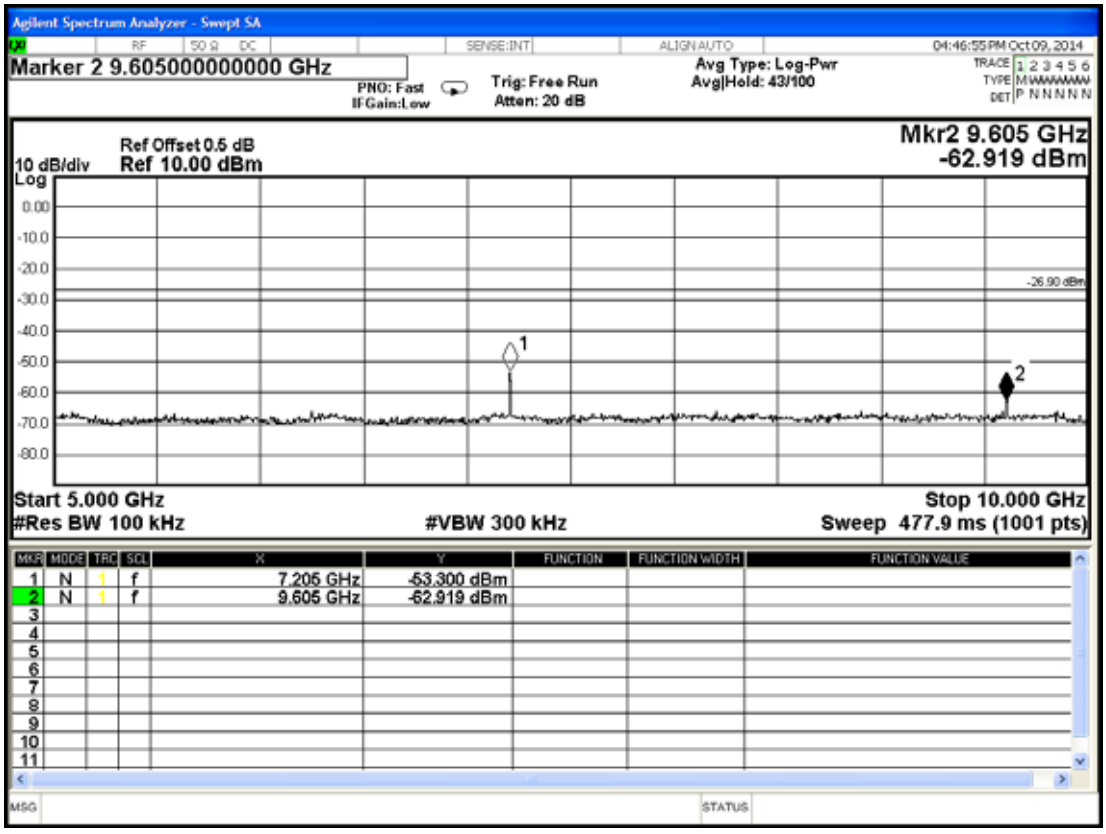
PASSED. The testing data was attached in the next pages.

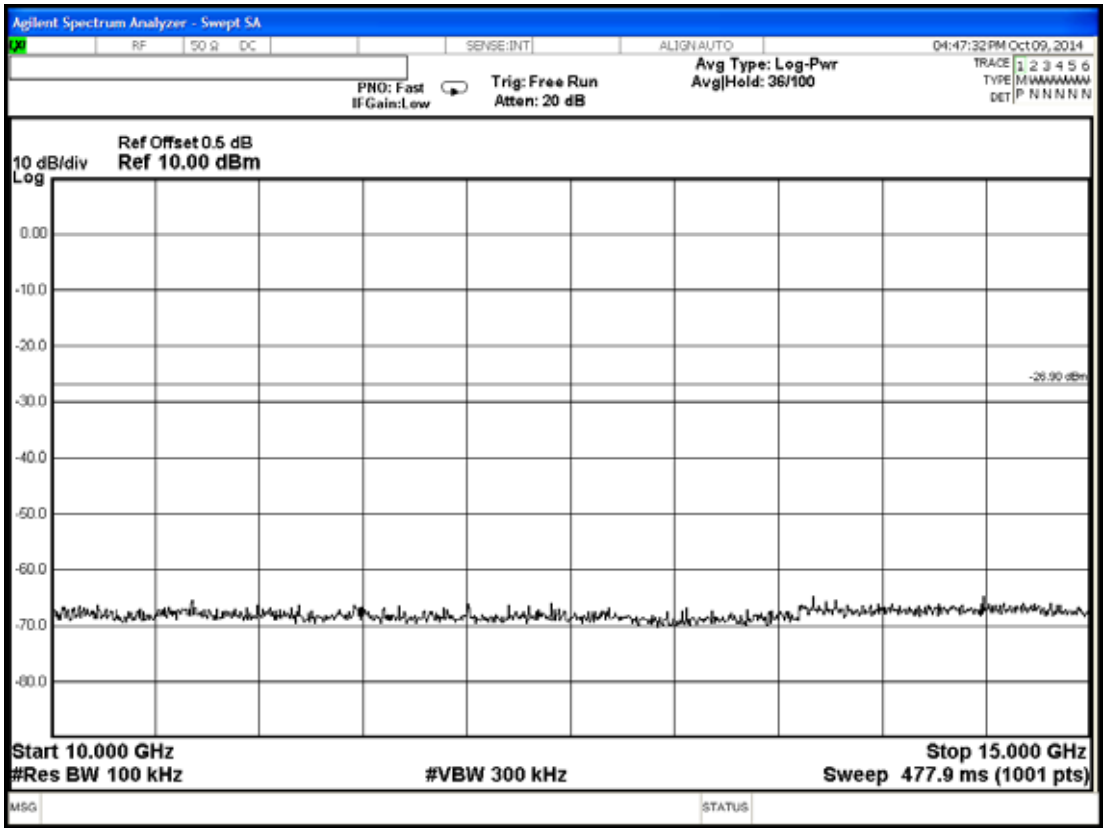
Test Date: 2014. 10. 09 Temperature: 25℃ Humidity: 40%

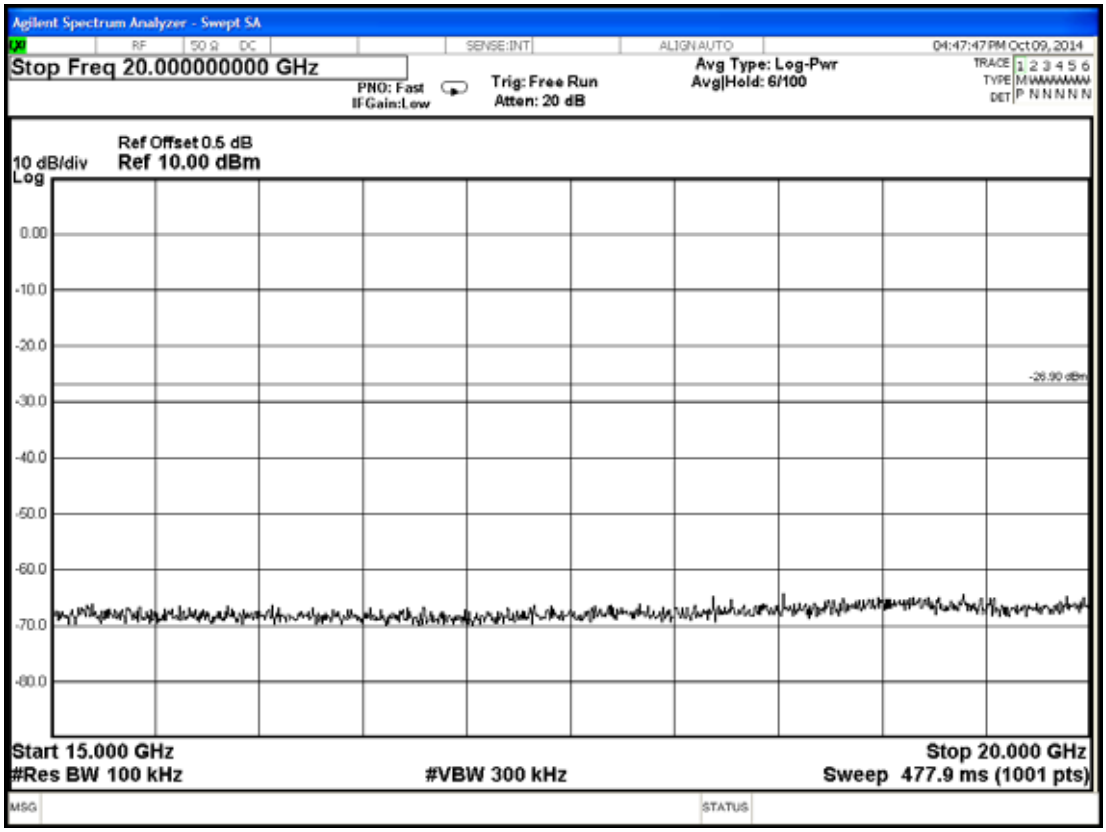
Test Frequency: CH 0, 2402MHz

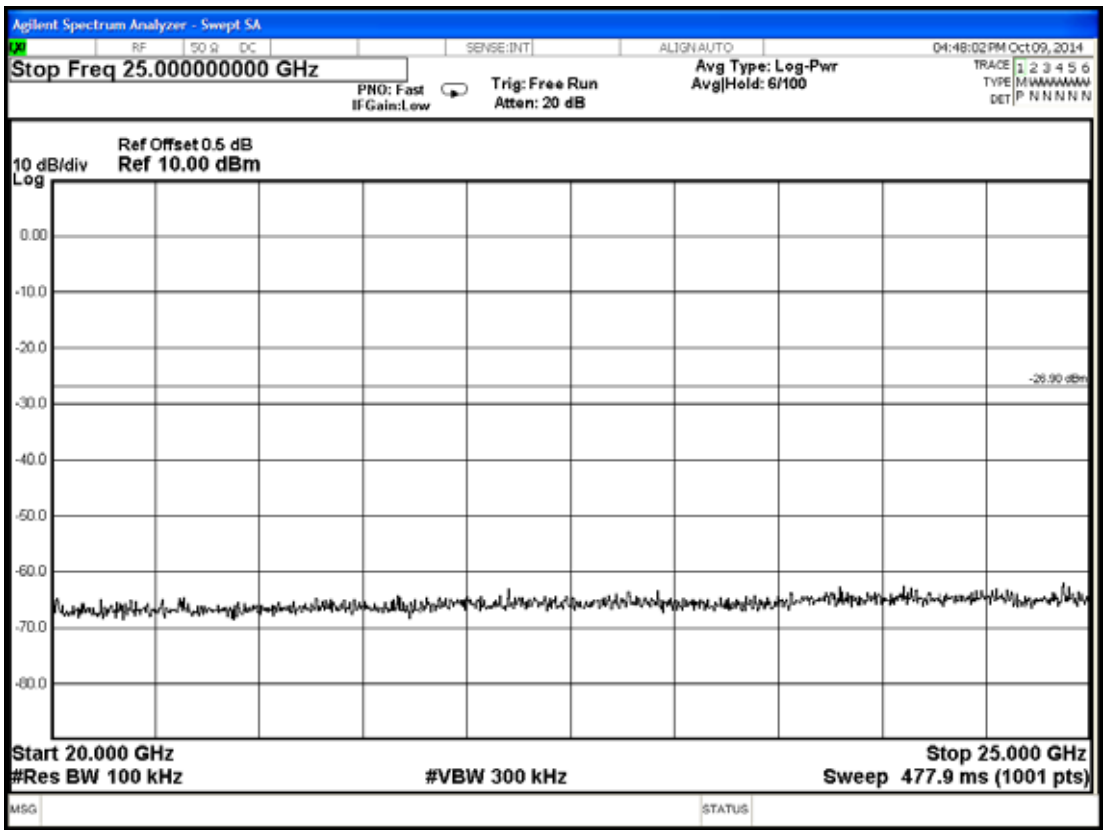




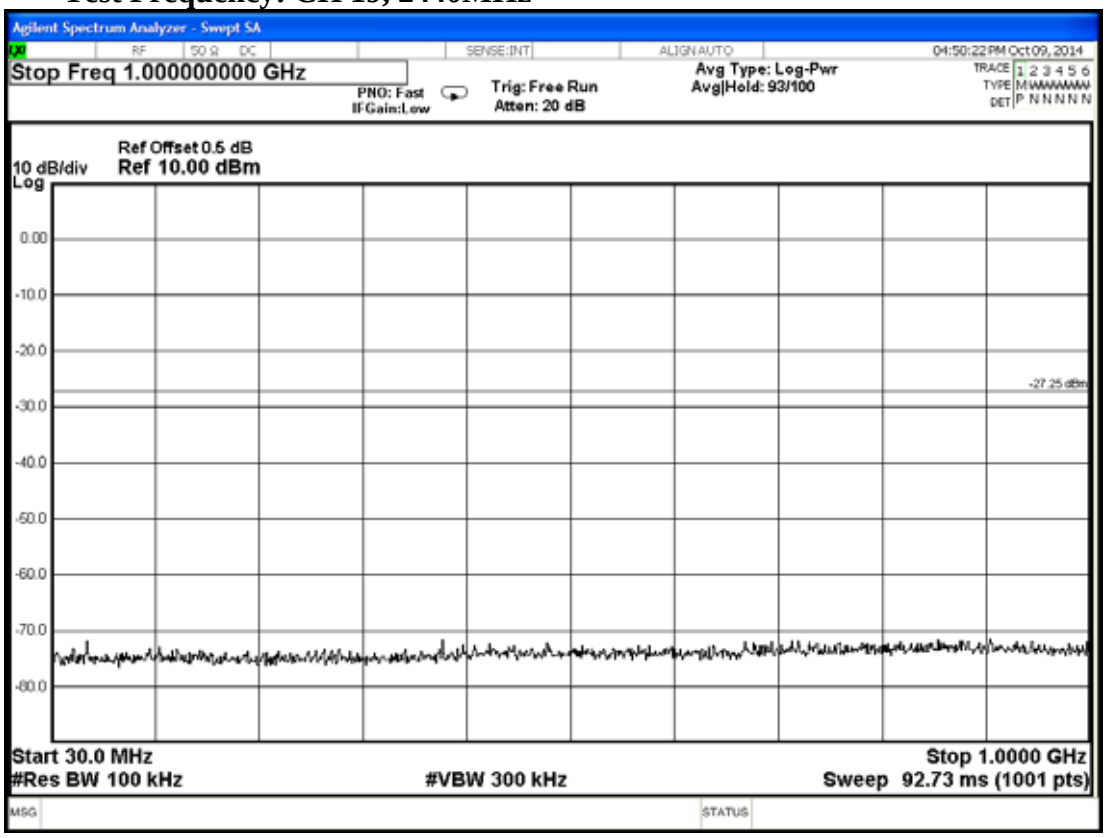

Agilent Spectrum Analyzer - Swept SA
Marker 2 9.605000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 43/100
04:46:55 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
Mkr2 9.605 GHz
-62.919 dBm
-26.90 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 10.000 GHz
Sweep 477.9 ms (1001 pts)
1 N 1 f 7.205 GHz -53.300 dBm
2 N 1 f 9.605 GHz -62.919 dBm

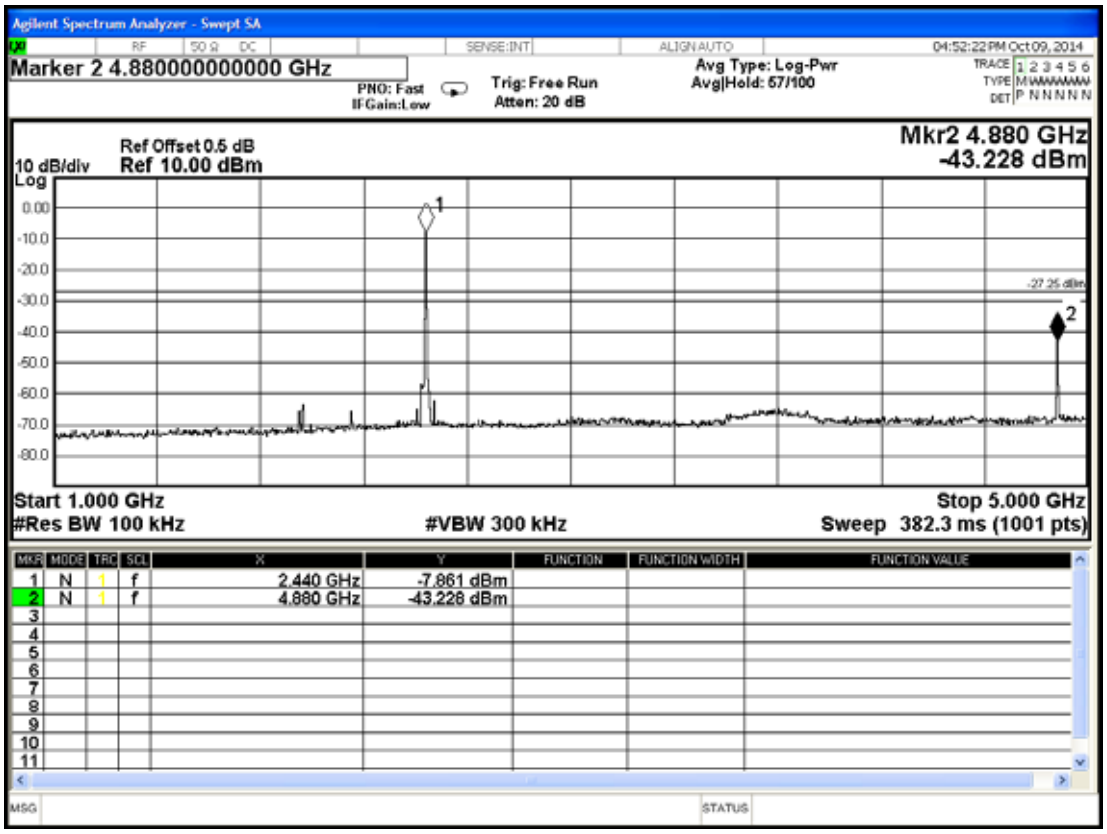

Agilent Spectrum Analyzer - Swept SA
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 36/100
04:47:32 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
-26.90 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 477.9 ms (1001 pts)

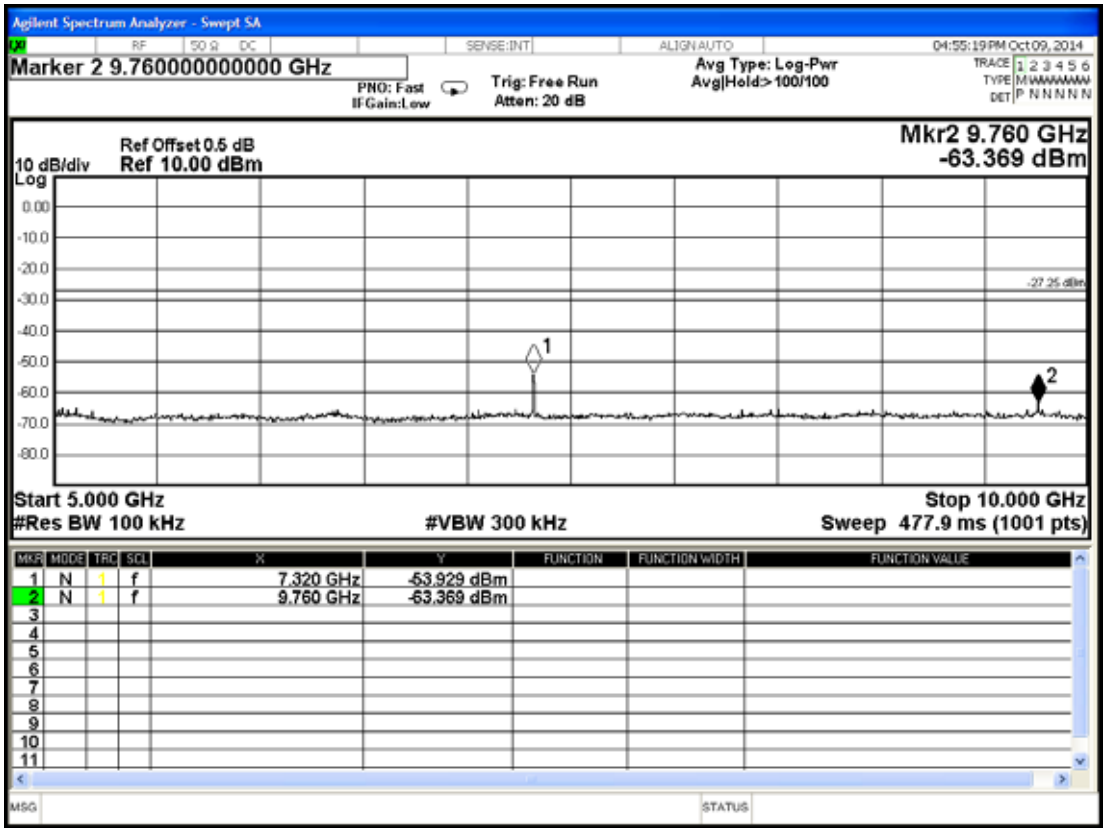

Agilent Spectrum Analyzer - Swept SA
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 6/100
04:47:47 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-26.90 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 20.000 GHz
Sweep 477.9 ms (1001 pts)

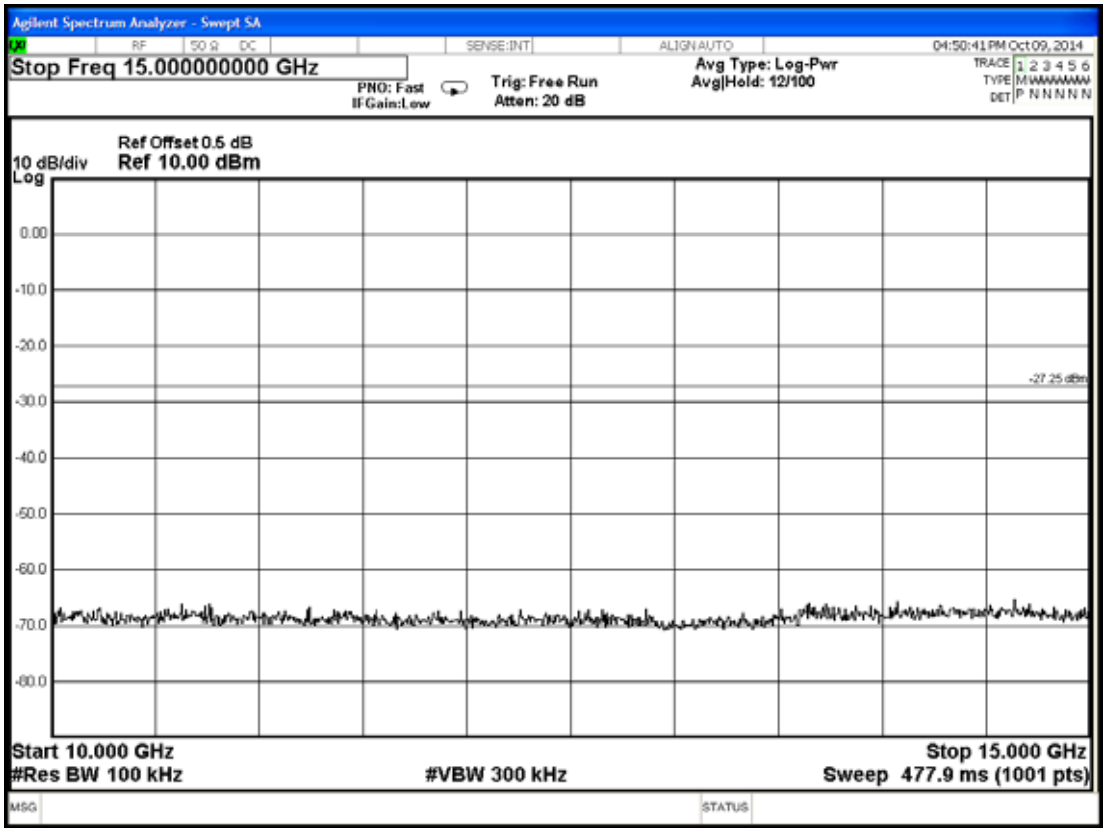

Agilent Spectrum Analyzer - Swept SA
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 6/100
04:48:02 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-26.90 dBm
Start 20.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 477.9 ms (1001 pts)

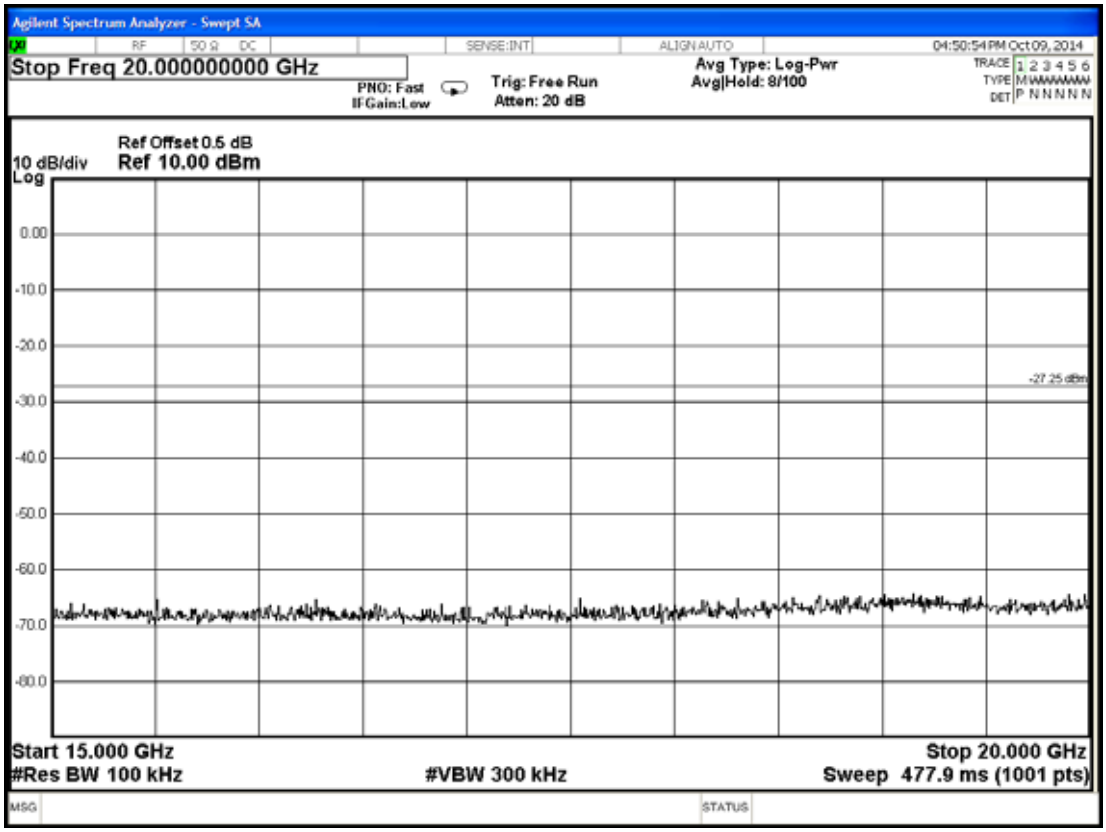
Test Frequency: CH 19, 2440MHz

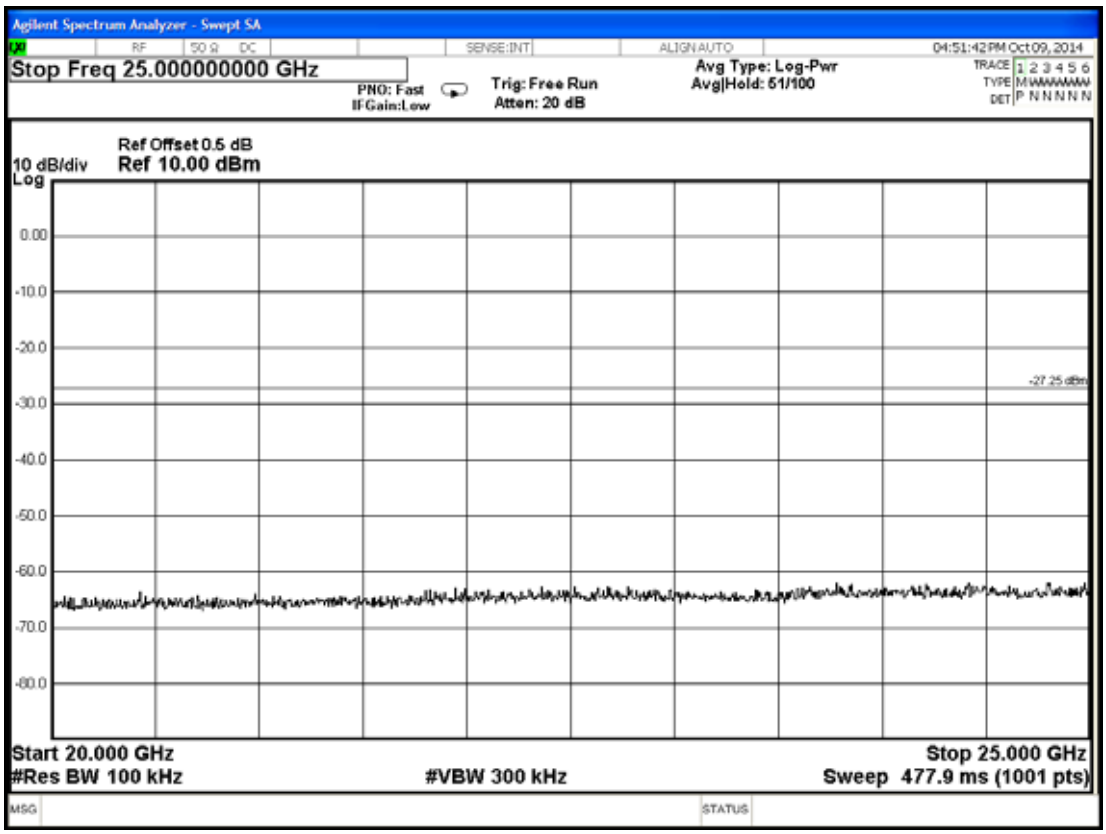




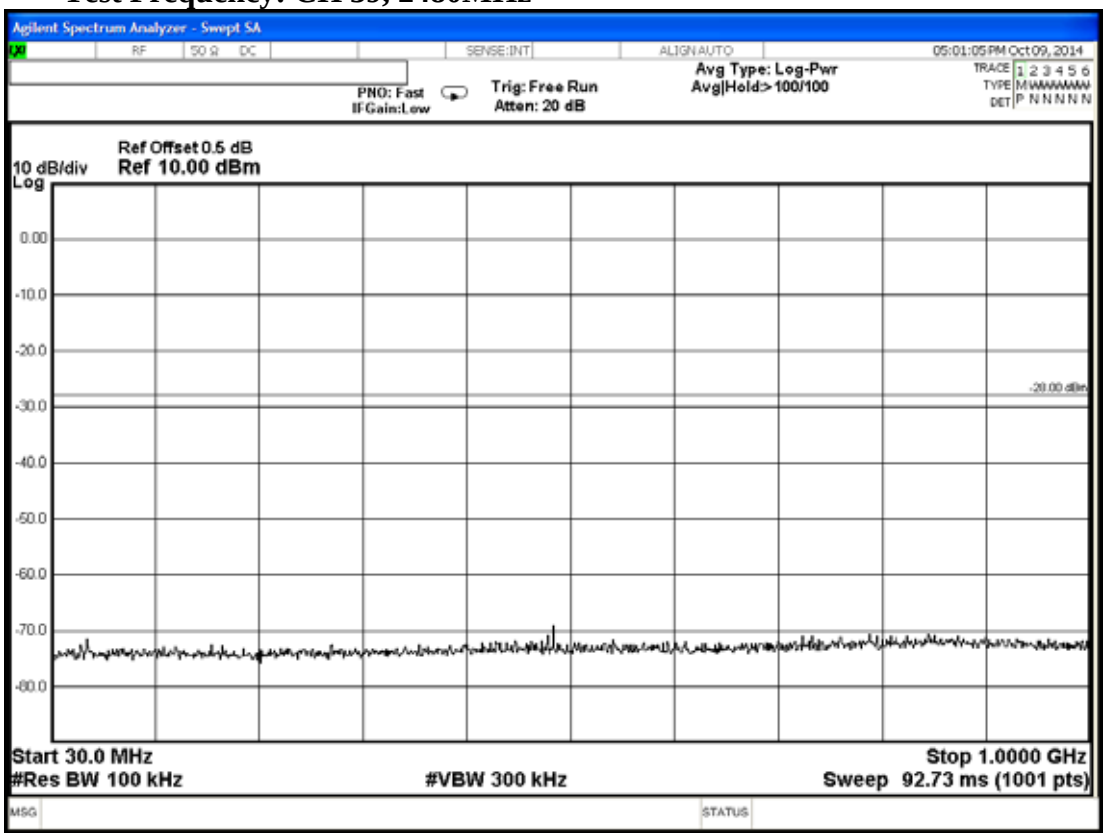

Agilent Spectrum Analyzer - Swept SA
Marker 2 9.760000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:55:19 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 9.760 GHz
-63.369 dBm
-27.25 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 10.000 GHz
Sweep 477.9 ms (1001 pts)
1 N 1 f 7.320 GHz -53.929 dBm
2 N 1 f 9.760 GHz -63.369 dBm

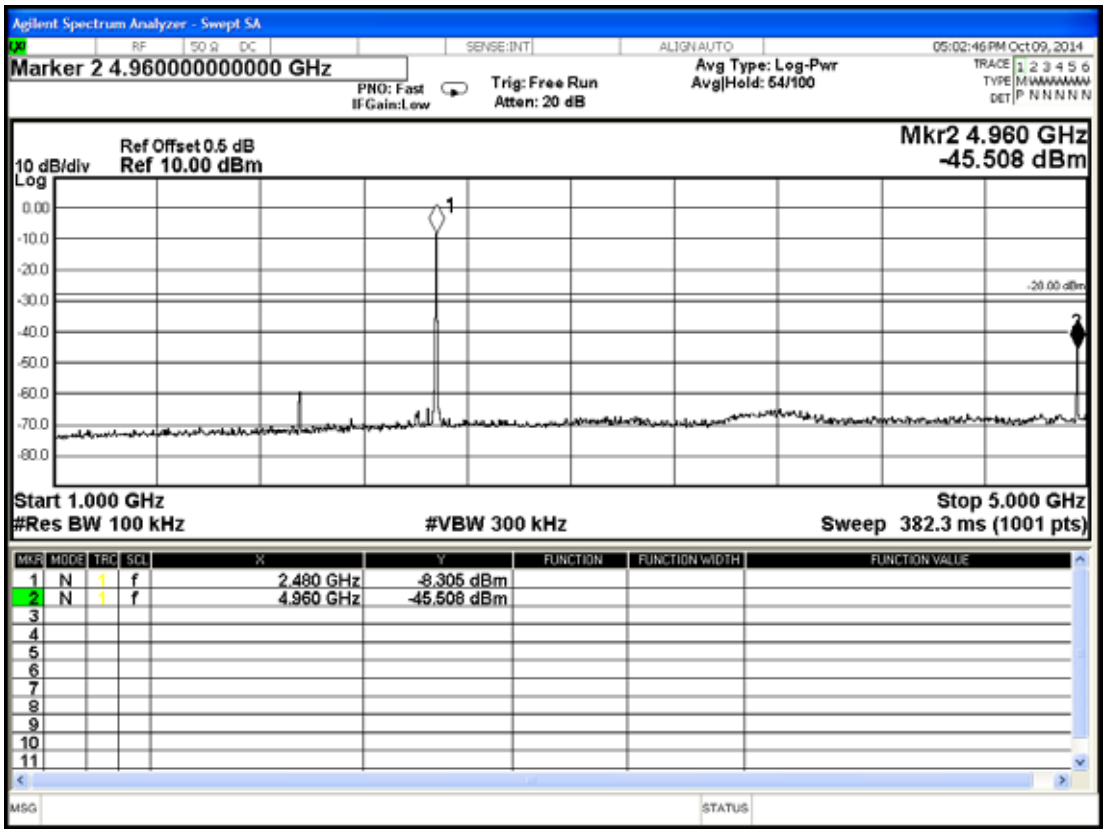

Agilent Spectrum Analyzer - Swept SA
Stop Freq 15.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 12/100
04:50:41 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
-27.25 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 477.9 ms (1001 pts)

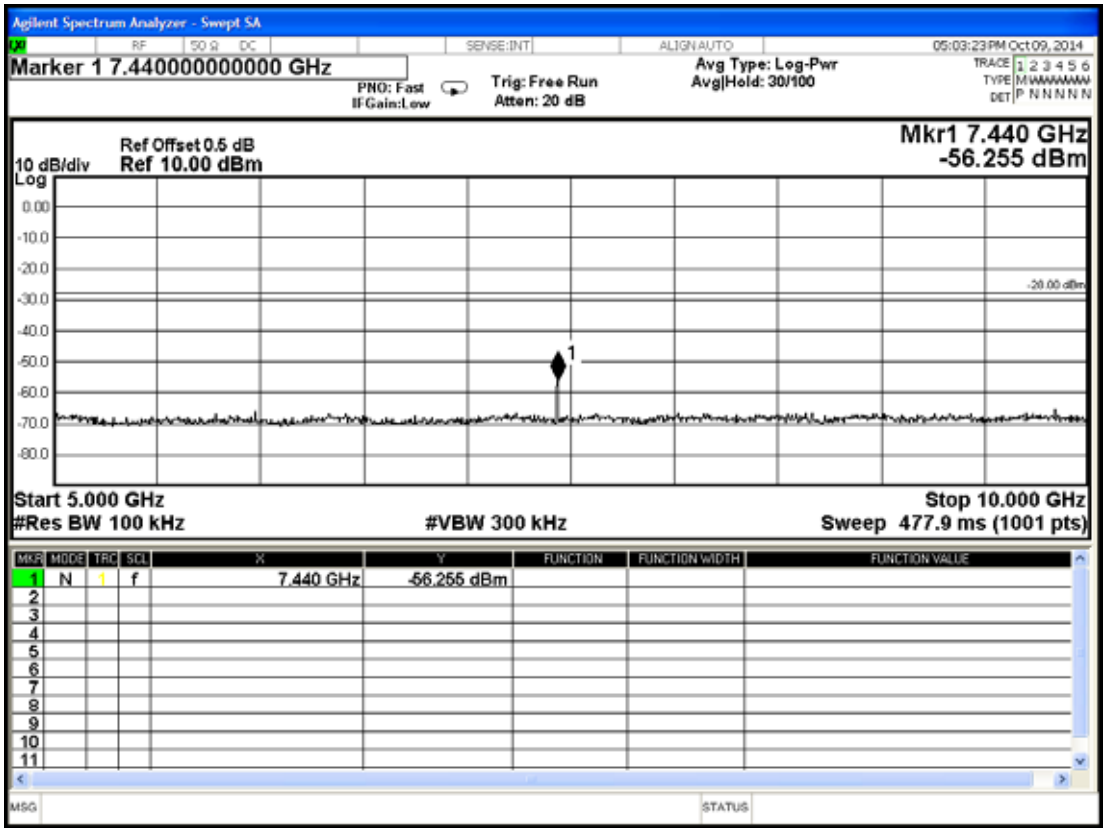

Agilent Spectrum Analyzer - Swept SA
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 8/100
04:50:54 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-27.25 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 20.000 GHz
Sweep 477.9 ms (1001 pts)

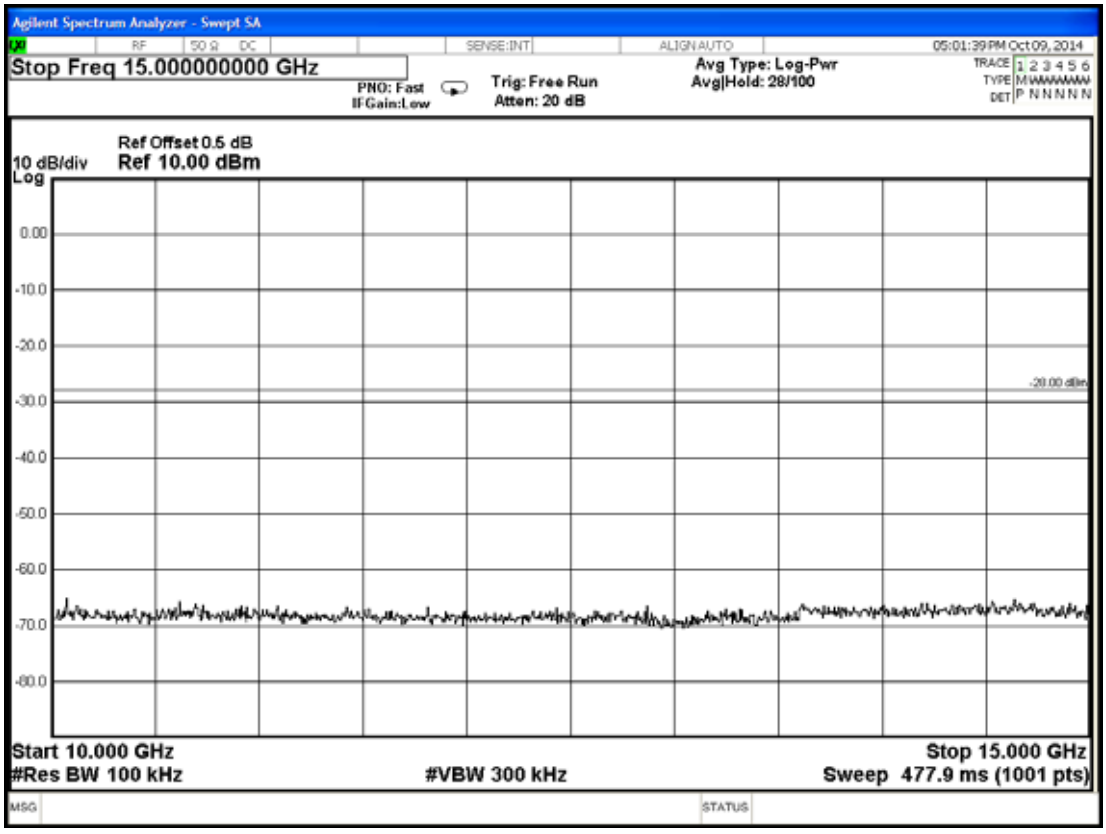

Agilent Spectrum Analyzer - Swept SA
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 51/100
04:51:42 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-27.25 dBm
Start 20.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 477.9 ms (1001 pts)

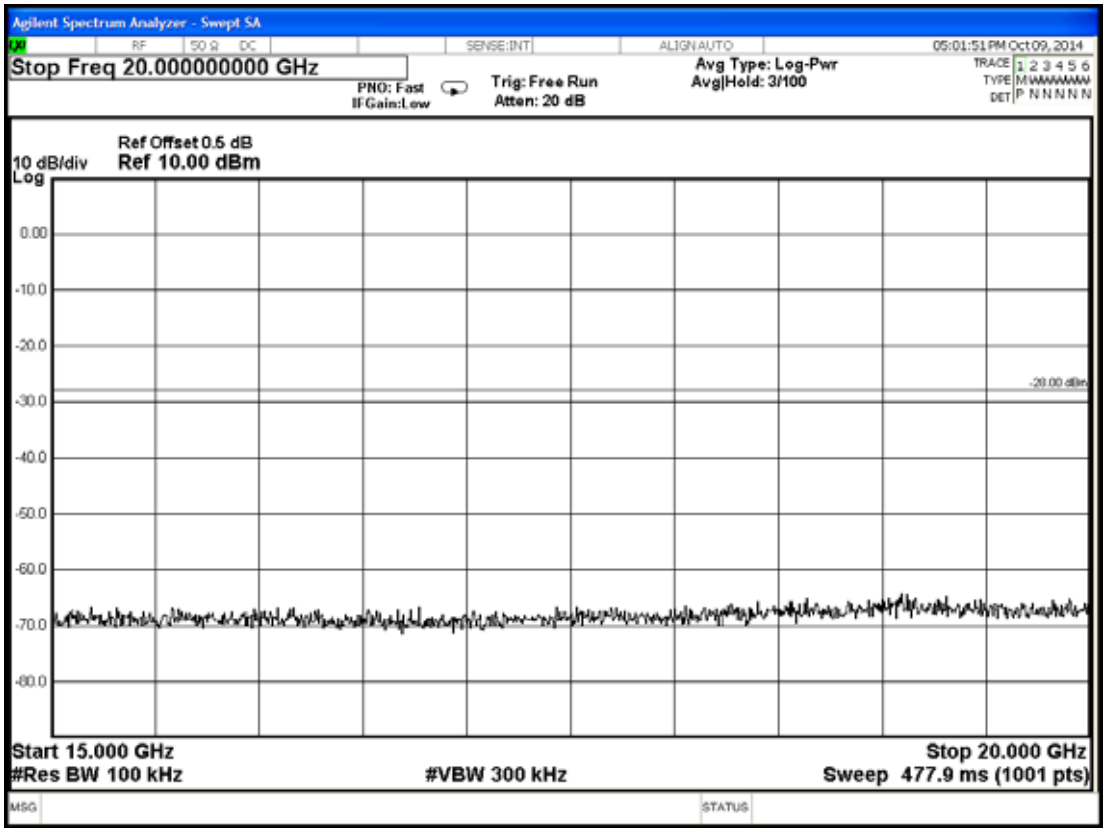
Test Frequency: CH 39, 2480MHz

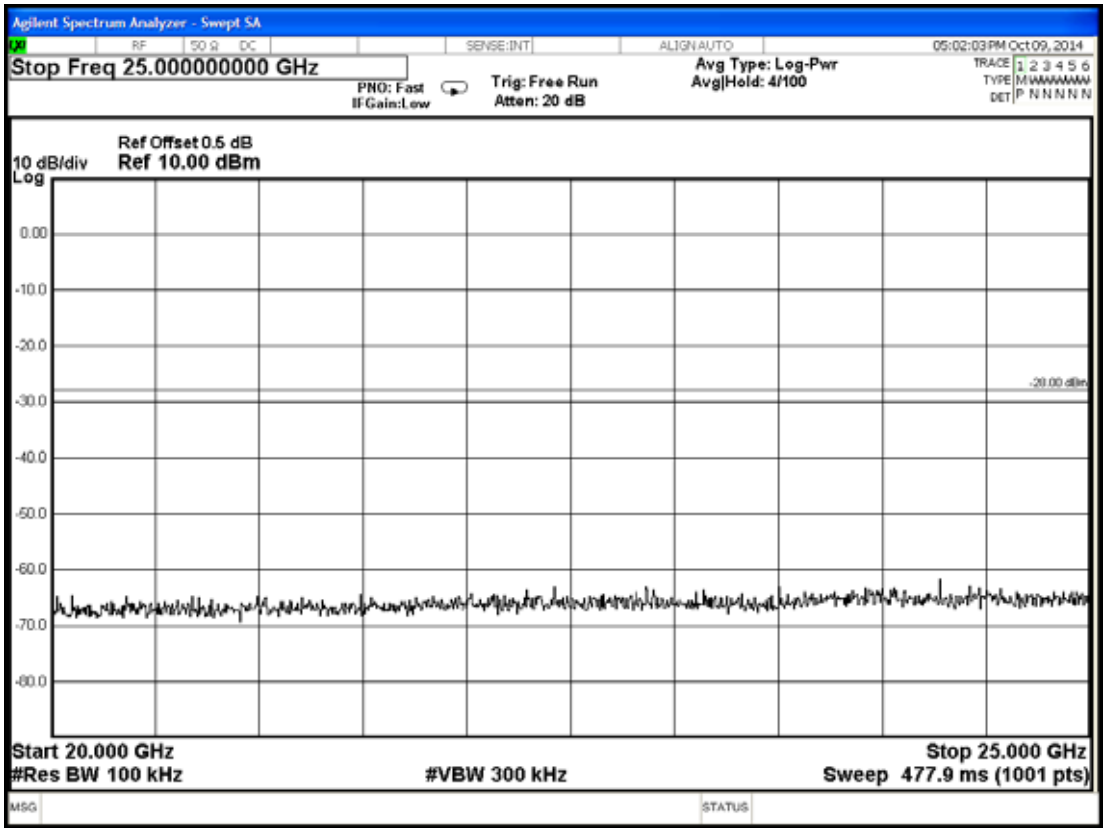





Agilent Spectrum Analyzer - Swept SA
Marker 1 7.440000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 30/100
05:03:23 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 7.440 GHz
-56.255 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 10.000 GHz
Sweep 477.9 ms (1001 pts)
1 N 1 f 7.440 GHz -56.255 dBm


Agilent Spectrum Analyzer - Swept SA
Stop Freq 15.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 28/100
05:01:39 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
Start 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 477.9 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 3/100
05:01:51 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 20.000 GHz
Sweep 477.9 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
05:02:03 PM Oct 09, 2014
Ref Offset 0.5 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Start 20.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 477.9 ms (1001 pts)

8. BAND EDGES MEASUREMENT

8.1. Test Equipment

The following test equipment was used during the band edges measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-526	MY53310269	2014. 09. 19	1 Year

8.2. Block Diagram of Test Setup

The same as section.5.2.

8.3. Specification Limits [§15.247(c), RSS-210 §A8.5]

8.3.1. In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).(※This test result attaching to §4.6.3)

8.3.2. The reference level for determining limit of emission limitations is according to the value measured indicated in plots at section 9.6.

8.4. Operating Condition of EUT

EUT (Radio Control) was on transmitting frequency function by manual operation during the testing.

8.5. Test Procedure

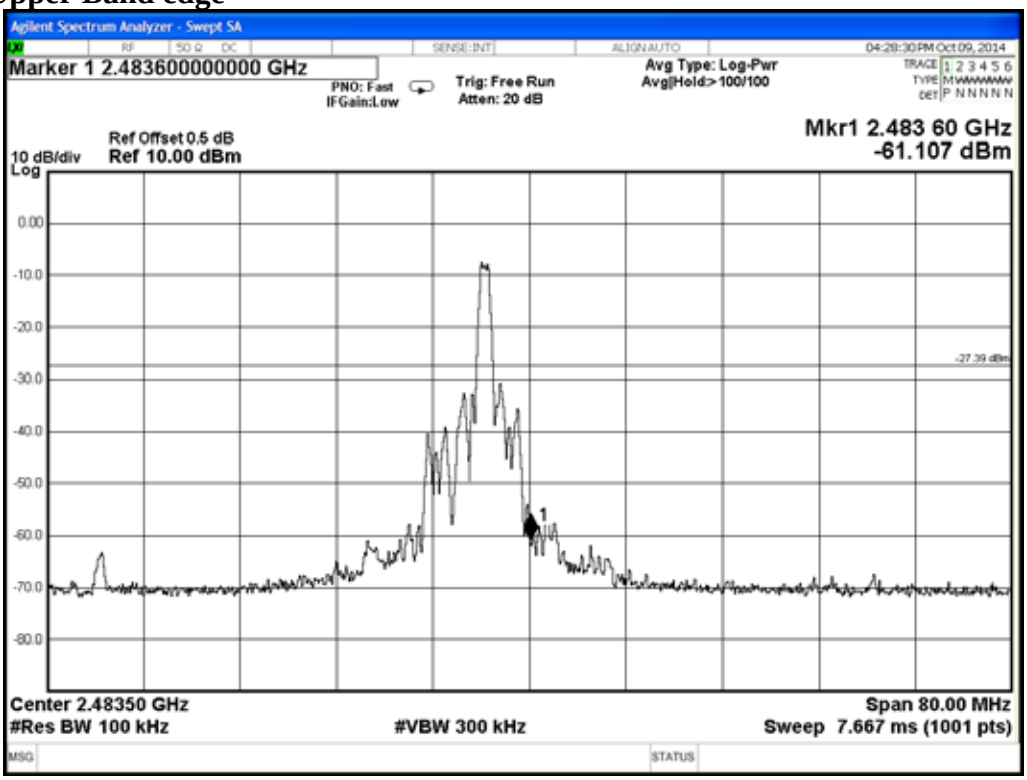
The transmitter output was connected to the spectrum analyzer. Set both RBW=100 kHz and VBW to 300kHz with suitable frequency span including 100kHz bandwidth from band edge.
The measurement guideline was according to 558074 D01 v03r02.

8.6. Test Results

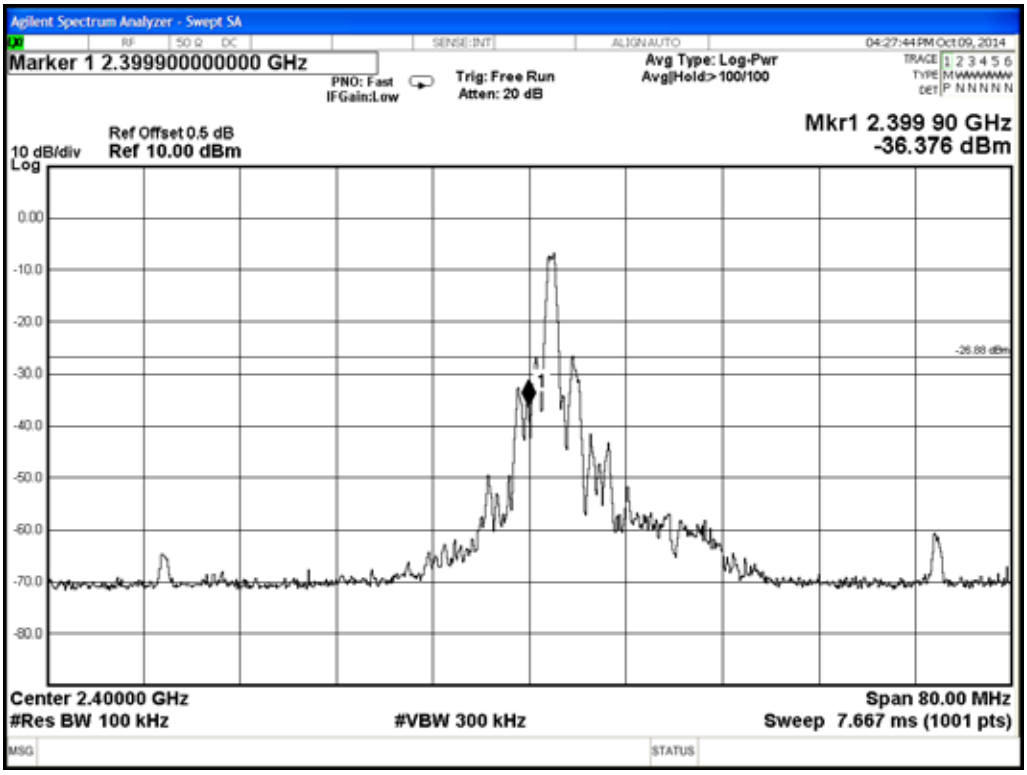
PASSED. All the test results are attached in next pages.

Test Date: 2014. 10. 09 Temperature: 25℃ Humidity: 40%

Bluetooth Low Energy,
Upper Band edge



Below Band edge



9. POWER SPECTRAL DENSITY MEASUREMENT

9.1. Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-526	MY53310269	2014. 09. 19	1 Year

9.2. Block Diagram of Test Setup

The same as section.5.2.

9.3. Specification Limits [§15.247(d), RSS-210 §A8.2 (b)]

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

9.4. Operating Condition of EUT

EUT (Radio Control) was on transmitting frequency function by manual operation during the testing.

9.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using 100kHz RBW and ≥300kHz VBW, set sweep time = Auto.
The measurement guideline was according to 558074 D01 v03r02.

9.6. Test Results

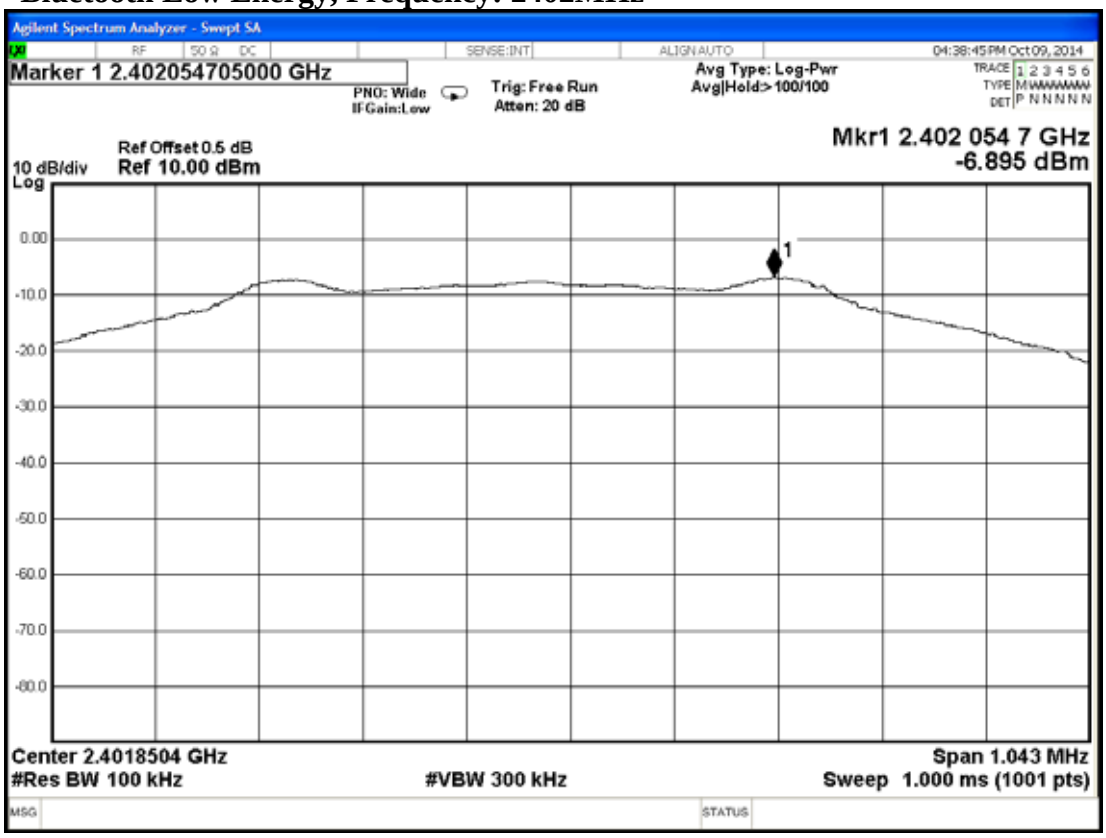
PASSED. All the test results are attached in next pages.

Test Date: 2014. 10. 09 Temperature: 25℃ Humidity: 40%

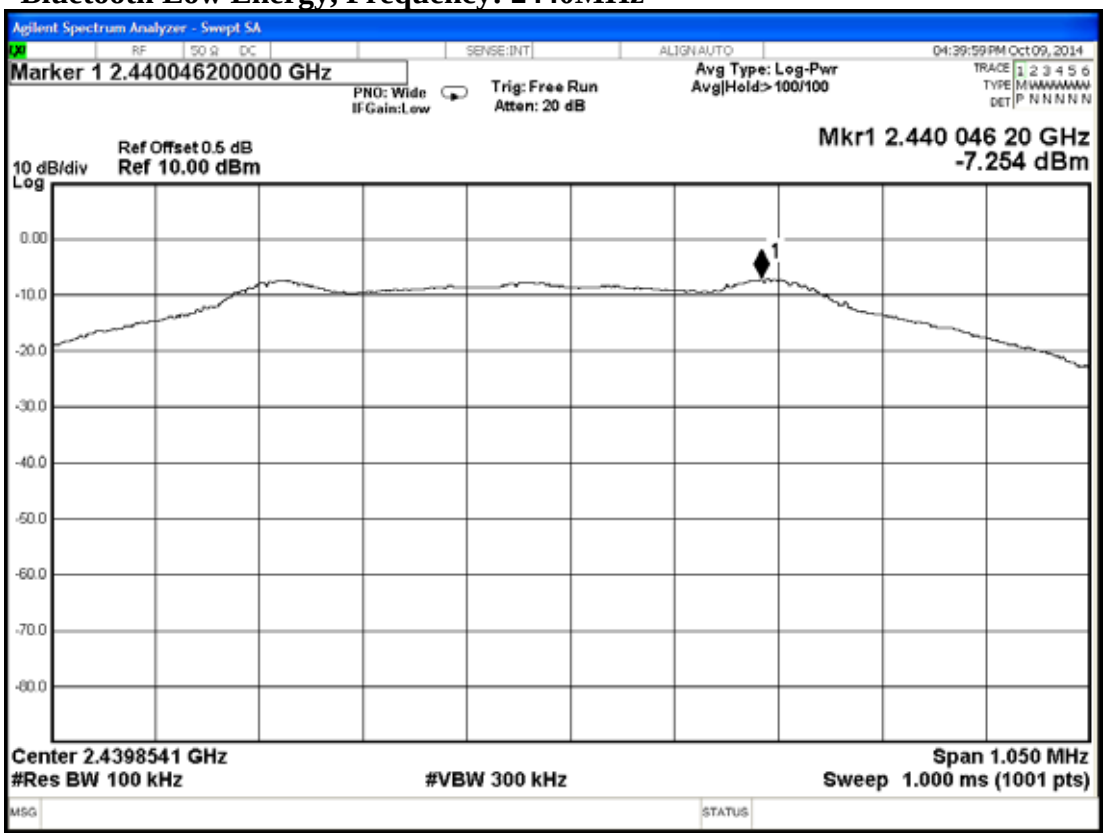
Mode	Type of Network	Channel	Frequency	**Power Spectral Density**
1	Bluetooth Low Energy	CH0	2402MHz	**-6.895 dBm**
2		CH19	2440MHz	**-7.254 dBm**
3		CH39	2480MHz	**-7.997 dBm**

[Limit: 8dBm]

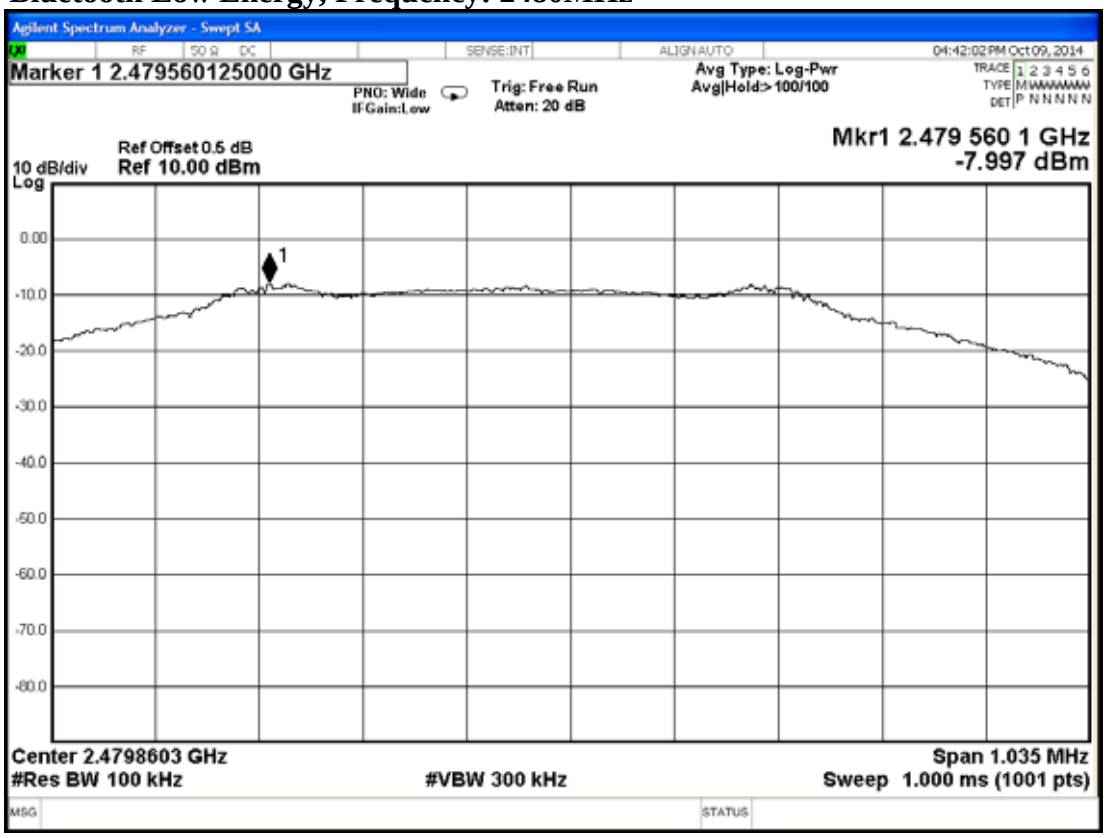
Bluetooth Low Energy, Frequency: 2402MHz



Bluetooth Low Energy, Frequency: 2440MHz



Bluetooth Low Energy, Frequency: 2480MHz



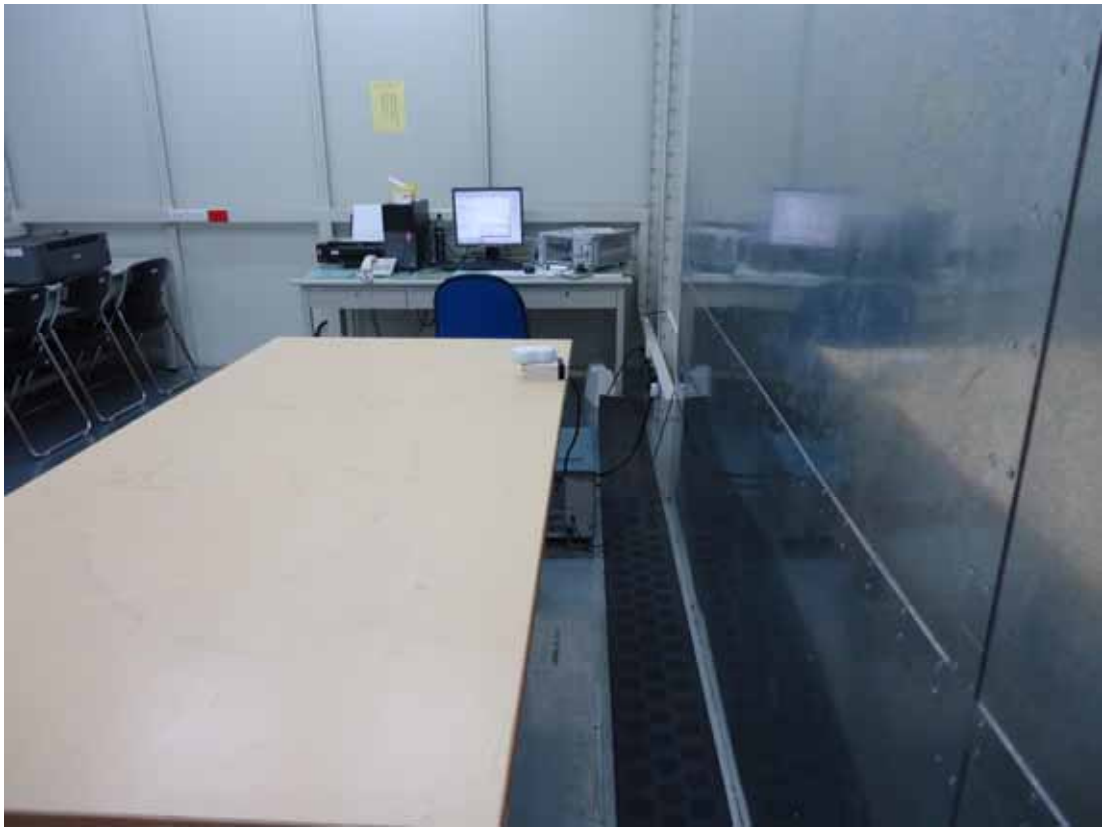
10. DEVIATION TO TEST SPECIFICATIONS

【NONE】

11. PHOTOGRAPHS

11.1. Photos of Conducted Disturbance Measurement

FRONT VIEW OF CONDUCTED MEASUREMENT



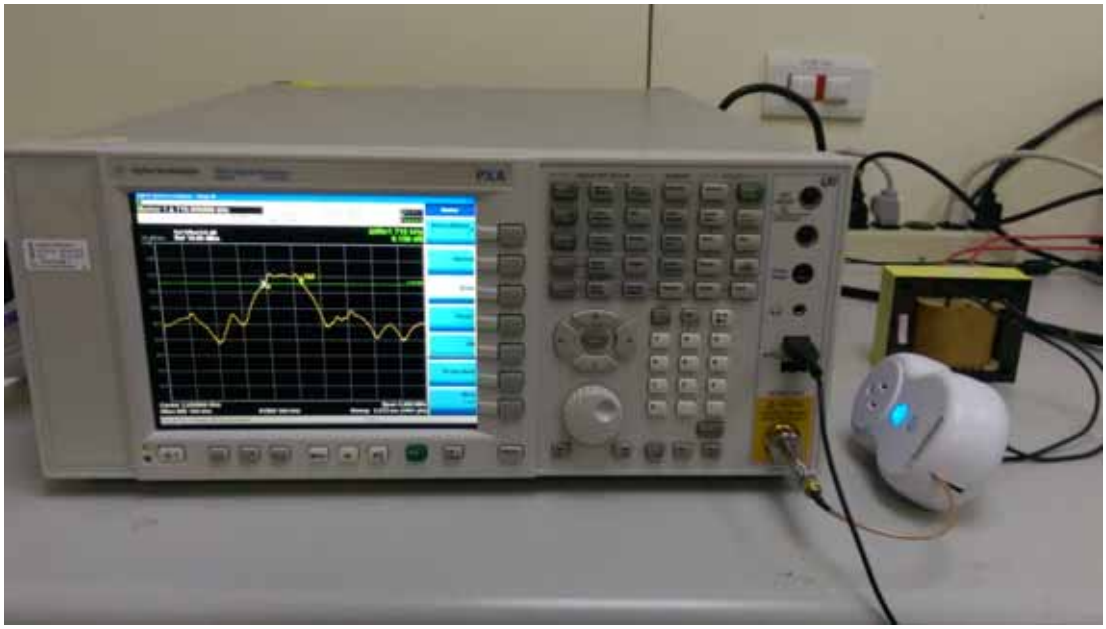
BACK VIEW OF CONDUCTED MEASUREMENT

11.2.Photos of Radiated Measurement at Semi-Anechoic Chamber

11.2.1.Frequency Range 30MHz~1GHz

11.2.2.Frequency Range Above 1GHz

11.3.Photo of Section RF Conducted Measurement



11.4.Photo of Maximum Peak Output Power Measurement