APPLICATION FOR CERTIFICATION

On Behalf of

Creative Labs Inc.

Wireless Headset

Model No.：GH0180B

FCC ID：IBAAVPGH0180B

IC: 2315A-AVPGH0180B

Prepared for : Creative Labs Inc.
1901 McCarthy Blvd, Milpitas, California,
95035, United States

Prepared by : AUDIX Technology Corporation
EMC Department
No. 53-11, Dingfu, Linkou Dist., New Taipei
City 244, Taiwan, R.O.C.

Tel : (02) 2609-9301, 2609-2133
Fax: (02) 2609-9303

File Number	：	C1M1109228
Report Number	：	EM-F1000875
Date of Test	：	Oct. 07 ~ 13, 2011
Date of Report	：	Oct. 14, 2011

TABLE OF CONTENTS

TEST REPORT CERTIFICATION

Applicant	:	Creative Labs Inc.
Manufacturer	:	Y Charter Media (Dongguan) Co., Ltd.
EUT Description	:	Wireless Headset
FCC ID	:	IBAAVPGH0180B
IC	:	2315A-AVPGH0180B
	(A) Model No.	: GH0180B
	(B) Serial No.	: N/A
	(C) Power Supply	: DC 3.7V (from battery)
	(D) Test Voltage	: DC 3.7V

Measurement Procedure Used:
FCC RULES AND REGULATIONS PART 15 SUBPART C, October 2010
(FCC 47 CFR Part 15C, §15.205 and §15.207 and §15.209 and §15.247)
Industry Canada Rules and Regulations RSS-Gen (Issue 3), December 2010 and
RSS-210 (Issue 8), December 2010
(Canada RSS-210 §Annex A2.9)
AND ANSI C63.4/2003

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 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 : Oct. 07 ~ 13, 2011 Date of Report : Oct. 14, 2011

Producer : Annie Yu
(Annie Yu/Assistant Administrator)

Signatory: Ben Cheng
(Ben Cheng/Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Wireless Headset
FCC ID	:	IBAAVPGH0180B
IC	:	2315A-AVPGH0180B
Model Number	:	GH0180B
Applicant	:	Creative Labs Inc. 1901 McCarthy Blvd, Milpitas, California, 95035, United States.
Manufacturer	:	Y Charter Media (Dongguan) Co., Ltd. Dabandi Industrial Zone, Daning District,Humen Town, Dongguan, Guangdong,PRC
USB Cable	:	Shielded, Detachable, 1.6m
Fundamental Range	:	2405MHz ~ 2477MHz
Frequency Channel	:	37 channels
Radio Technology	:	π/4DQPSK Modulation
Antenna Gain	:	0.50dBi
Date of Receipt of Sample	:	Sep. 28, 2011
Date of Test	:	Oct. 07 ~ 13, 2011

1.2. Tested Supporting System Details

【ONLY FOR CONDUCTED EMISSION MEASUREMENT】

1.2.1. PC SYSTEM (LINKED TO EUT)

Model Number	:	MT-M 7611-PV2
Serial Number	:	R82RT27
FCC ID	:	By DoC
BSMI ID	:	R33B65
Manufacturer	:	LENOVO
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. LCD MONITOR

Model Number	:	HSG1176
Serial Number	:	N/A
FCC ID	:	N/A
BSMI ID	:	R31247
Manufacturer	:	HannStar Display Corp. (Brand: HANNS-GP)
Data Cable (D-Sub)	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.3. DOT MATRIX PRINTER

Model Number	:	KX-P2144
Serial Number	:	8DMCNC02139
FCC ID	:	ACJ5Z6KX-P2135
BSMI ID	:	3872A371
Manufacturer	:	Matsushita (Brand: Panasonic)
Data Cable	:	Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.4. USB KEYBOARD

Model Number	:	SK-2885
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	T3A002
Manufacturer	:	HP
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.5. USB MOUSE

Model Number	:	KU-0225
Serial Number	:	0904489
FCC ID	:	By DoC
BSMI ID	:	R31310
Manufacturer	:	LENOVO
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.6. USB2.0 MICRO VAULT (USB STORAGE MEDIA)

Model Number	:	USM128U2
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	D33021
Manufacturer	:	SONY
Data Cable	:	Shielded, Detachable, 1.8m

1.2.7. WIRELESS DONGLE (LINKED TO PC SYSTEM)

Model Number	:	GH0180A
Serial Number	:	N/A
FCC ID	:	IBAAVPGH0180A
IC	:	2315A-AVPGH0180A
Manufacturer	:	Creative

【ONLY FOR RADIATED EMISSION & OCCUPIED BANDWIDTH 99% POWER MEASUREMENT】

1.2.8. NOTEBOOK PC

Model Number	:	PP2170
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	33001
Brand	:	hp
AC Adapter	:	COMPAQ, M/N:Series PPP009L FCC By DoC DC Cord: Non-Shielded, Undetachable, 1.8m
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.9. JIG (LINKED TO EUT)

Model Number	:	N/A
Serial Number	:	N/A
Signal Cable	:	Non-Shielded, detachable, 0.2m

1.3. Description of Test Facility

Name of Firm	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
Test Facility & Location (C5/AC)	:	**No. 5 Shielded Room &** No. 67-4, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. **Semi-Anechoic Chamber** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. Renewal on May 14, 2009 Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz~30MHz	±1.73dB
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
Band edges	± 0.13dB
Power spectral density	± 0.13dB
Emission Limitations	± 0.13dB
Occupied Bandwidth 99% Power	± 1kHz

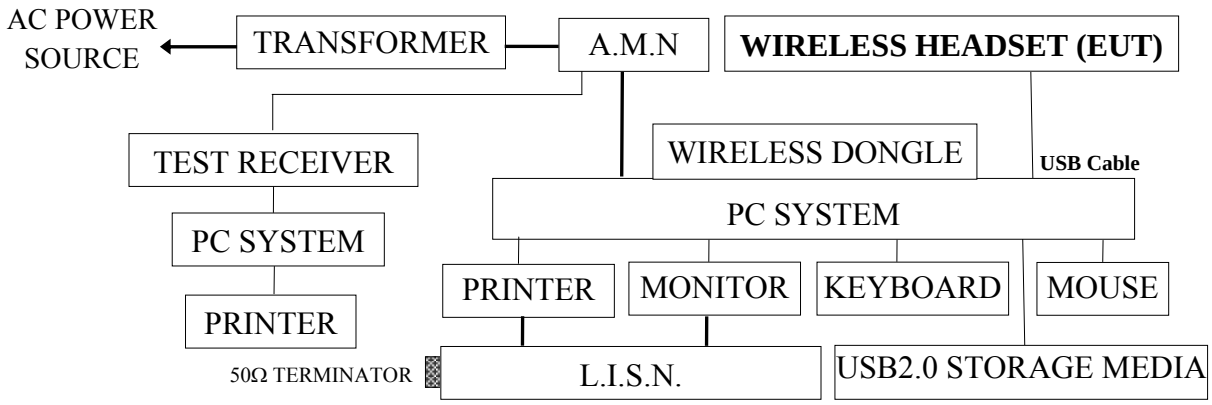
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the conducted emission measurement：
(No. 5 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCS30	100039	Jun. 23, 11’	Jun. 22, 12’
2.	A.M.N.	R&S	ENV4200	825358/003	Dec. 30, 10’	Dec. 29, 11’
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1430-5	Sep. 08, 11’	Sep. 07, 12’

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (§15.207, 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

Remark1.: 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.

2.4. Operating Condition of EUT

2.4.1. Set up the **EUT (Wireless Headset)** as shown on 2.2.

2.4.2. Turn on the power of all equipment.

2.4.3. The EUT (Wireless Headset) was linked to PC system and on charging status via USB cable during all testing.

2.4.4. The EUT (Wireless Headset) was on transmitting function at work during all testing.

2.4.5. The other peripheral devices were driven and operated in turn during all testing.

2.5. Test Procedure

The EUT (Linked to Desktop Computer) was put on table which was above the ground by 80cm and it' s power cord was connected to power 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 during conducted measurement.

The bandwidth of the R & S Test Receiver ESCS 30 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)

2.6. 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.

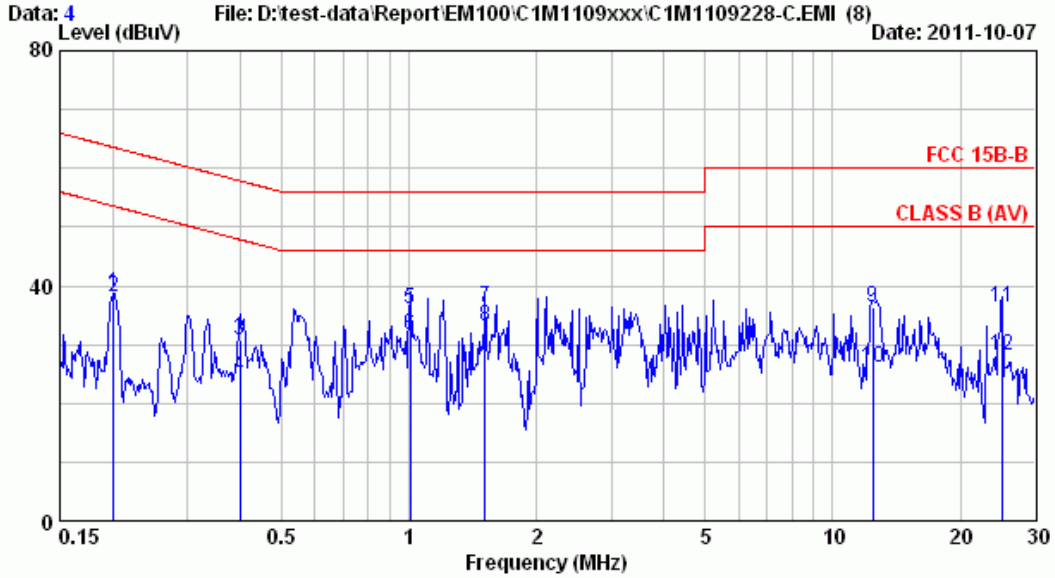
EUT：Wireless Headset Model No.：GH0180B

Test Date：Oct. 07, 2011 Te mperature：24℃ Humidity：50%

The details are as follows：

Mode	Reference Test Data	
	Neutral	Line
1.	# 4	# 3

AUDIX TECHNOLOGY Corp. EMC Laboratory
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:emc@audixtech.com



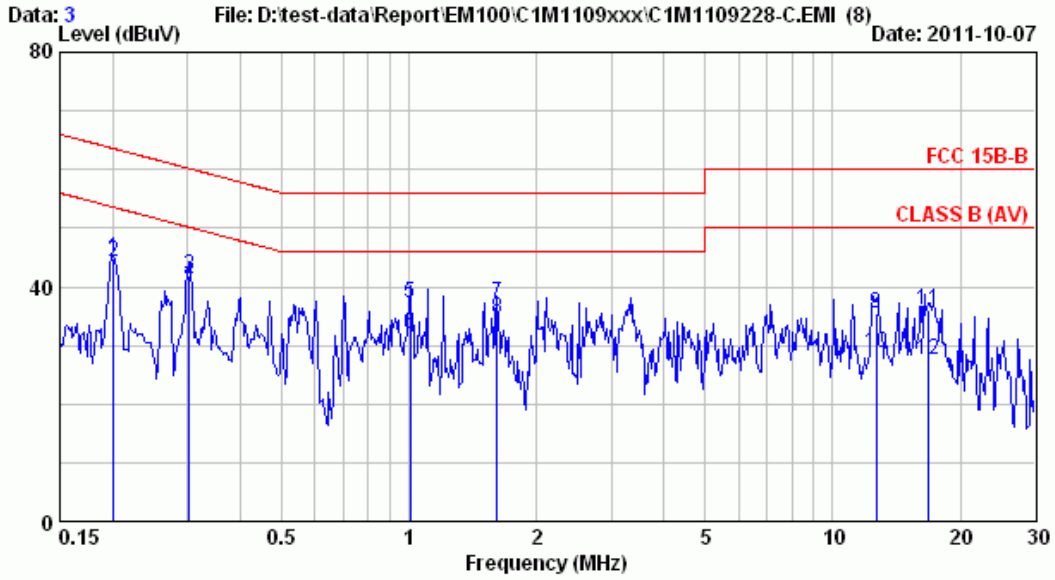
Site : NO.5 Shielded Room
Condition : ENV 4200
Limit : FCC 15B-B
Env. / Ins. : 24*C/50% ESCS 30 (039)
EUT : GH0180B
Power Rating : 120Vac / 60Hz
Test Mode : Operating

Data : 4
Phase : NEUTRAL
Engineer: Jasper Hong

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.201	10.00	0.20	28.48	38.68	63.58	24.90	QP
2	0.201	10.00	0.20	27.86	38.06	53.58	15.52	AVERAGE
3	0.400	9.90	0.20	20.69	30.79	57.86	27.07	QP
4	0.400	9.90	0.20	14.53	24.63	47.86	23.23	AVERAGE
5	1.005	9.80	0.40	25.86	36.06	56.00	19.94	QP
6	1.005	9.80	0.40	21.47	31.67	46.00	14.33	AVERAGE
7	1.511	9.80	0.40	26.18	36.38	56.00	19.62	QP
8	1.511	9.80	0.40	22.84	33.04	46.00	12.96	AVERAGE
9	12.449	10.00	0.70	25.53	36.23	60.00	23.77	QP
10	12.449	10.00	0.70	15.24	25.94	50.00	24.06	AVERAGE
11	25.188	10.00	0.70	25.77	36.47	60.00	23.53	QP
12	25.188	10.00	0.70	17.32	28.02	50.00	21.98	AVERAGE

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

AUDIX TECHNOLOGY Corp. EMC Laboratory
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:emc@audixtech.com



Site : NO.5 Shielded Room Data : 3
Condition : ENV 4200 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 24*C/50% ESCS 30 (039) Engineer: Jasper Hong
EUT : GH0180B
Power Rating : 120Vac / 60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.201	10.00	0.20	34.49	44.69	63.58	18.89	QP
2	0.201	10.00	0.20	34.01	44.21	53.58	9.37	AVERAGE
3	0.303	9.95	0.20	31.86	42.01	60.15	18.14	QP
4	0.303	9.95	0.20	30.49	40.64	50.15	9.51	AVERAGE
5	1.005	9.80	0.40	26.96	37.16	56.00	18.84	QP
6	1.005	9.80	0.40	21.74	31.94	46.00	14.06	AVERAGE
7	1.610	9.80	0.40	26.88	37.08	56.00	18.92	QP
8	1.610	9.80	0.40	24.36	34.56	46.00	11.44	AVERAGE
9	12.649	9.90	0.70	24.83	35.43	60.00	24.57	QP
10	12.649	9.90	0.70	18.18	28.78	50.00	21.22	AVERAGE
11	16.839	9.94	0.70	25.50	36.14	60.00	23.86	QP
12	16.839	9.94	0.70	16.77	27.41	50.00	22.59	AVERAGE

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

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

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

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'
2.	Test Receiver	R & S	ESCS30	100338	Jul. 12, 11'	Jul. 11, 12'
3.	Pre-Amplifier	HP	8447D	2944A06305	Feb. 10, 11'	Feb. 09, 12'
4.	Biconical Antenna	Schwarzbeck	UHALP 9108-A	0810	Mar. 08, 11'	Mar. 07, 12'
5.	Log Periodic Antenna	CHASE	VBA6106A	1264	Mar. 08, 11'	Mar. 07, 12'

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

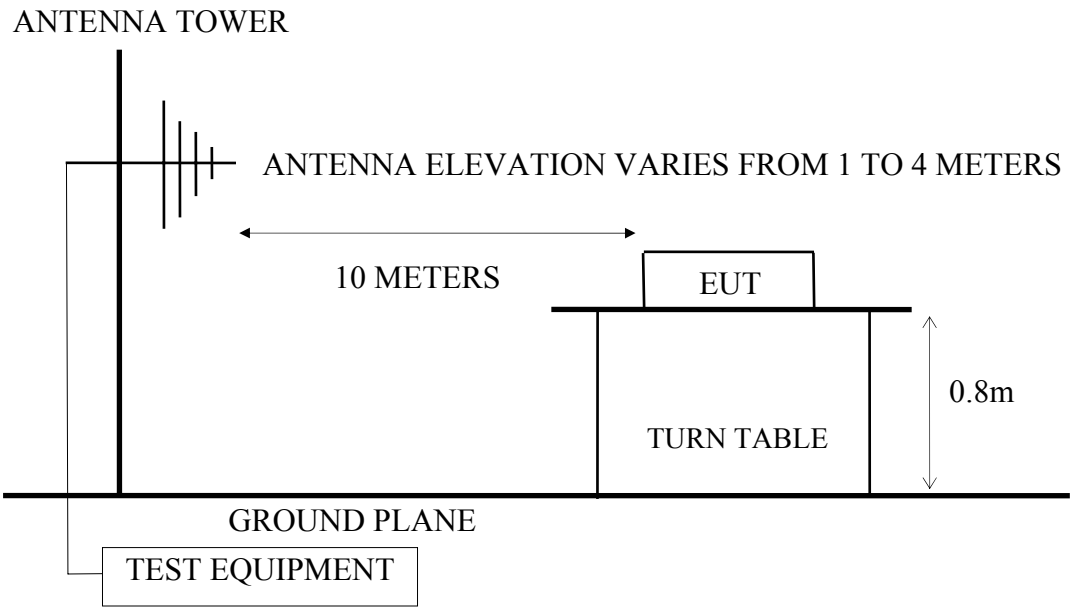
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11'	Aug. 03, 12'
2.	Test Receiver	R & S	ESCS30	100338	Jul. 12, 11'	Jul. 11, 12'
3.	Amplifier	HP	8449B	3008A00529	Dec. 10, 10'	Dec. 09, 11'
4.	2.4GHz Notch Filter	EWT	EWT-14-0 070-R1	G2	Dec. 05, 10'	Dec. 04, 11'
5.	3.5G High Pass Filter	HP	84300-800 38	005	Jan. 05, 11'	Jan. 04, 12'
6.	Horn Antenna	EMCO	3115	9112-3775	May 09, 11'	May 08, 12'
7.	Horn Antenna	EMCO	3116	2653	Oct. 07, 11'	Oct. 06, 12'

3.2. Block Diagram of Test Setup

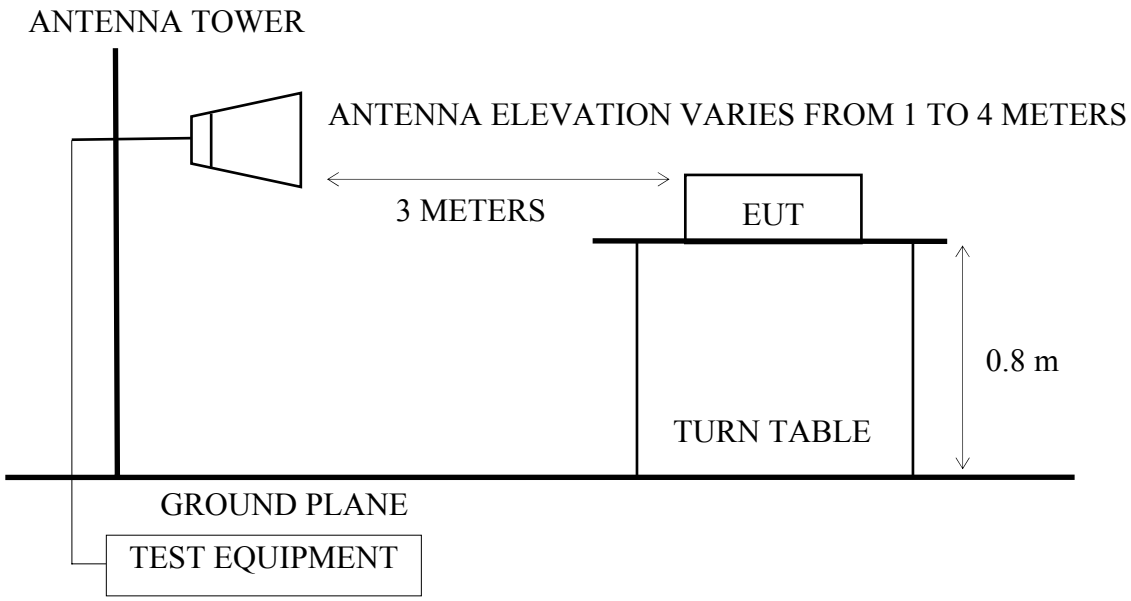
3.2.1. Block Diagram of connection between EUT and simulators

WIRELESS HEADSET (EUT)

3.2.2. Open Area Test Site (10m) Setup Diagram for 30-1000MHz



3.2.3. Open Area Test Site (3m) Setup Diagram for above 1GHz



3.3. 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).

3.4. Fundamental Frequency Limits [§15.249(a), RSS 210 A2.9 (a)]

FUNDAMENTAL FREQUENCY MHZ	**LIMITS**
2400-2485	**114 dBμV/m (Peak)** **94 dBμV/m (Average)**

3.5. Operating Condition of EUT

3.5.1. Set up the **EUT (Wireless Headset)** and simulator as shown on 3.2.

3.5.2. To turn on the power of all equipment.

3.5.3. The EUT was set the Notebook PC using test program “AMD2flash V1.45.002”.

3.5.4. Transmit Mode: The EUT was set to continuously transmit signals at 2405MHz、2441MHz and 2477MHz during testing.

3.5.5. Receive Mode: The EUT was set to continuously receive signals at 2441MHz during testing.

3.6. 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 to 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 calibrated biconical and log-periodical 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 FCC ANSI C63.4-2003, RSS-Gen and RSS-210 regulation.

The bandwidth of the R & S Test Receiver ESCS 30 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 frequency range from 30MHz to 25GHz (Up to 10^{th} harmonics from fundamental frequency) was checked.

Above 1GHz was measured with peak and average detector. For frequency from 2.68GHz 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

3.7. Radiated Emission Measurement Test Results

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

EUT：Wireless Headset Model No.：GH0180B

Test Date：Oct. 12, 2011 Te mperature：27℃ Humidity：60%

The radiation tests on three different axes (stand, lie and side), we assessed the value and we selected the worst radiation position "lie" for our measured results.

For Frequency Range 30MHz~1000MHz:

The EUT was measured during this section testing and all the test results are listed in section 3.7.1.

Mode	Channel	Frequency	Test Mode	Reference Test Data	
				Horizontal	Vertical
1.	02	2405MHz	Transmit	# 8	# 7
2.	20	2441MHz		# 8	# 7
3.	38	2477MHz		# 8	# 7
4.	20	2441MHz	Receive	# 1	# 2

* Above all final readings were measured with Quasi-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 3.7.2. (The restricted bands defined in part 15.205(a))

Mode	Channel	Frequency	Test Mode	Reference Test Data	
				Horizontal	Vertical
1.	02	2405MHz	Transmit	# 3, # 4	# 1, #2
2.	38	2477MHz		# 5, # 6	# 7, #8

3.7.1. Frequency Range 30-1000MHz

Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
Limit : FCC PART-15C
Env. / Ins. : E4446A 27℃/60% Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	294.810	26.43	3.99	7.15	37.57	46.00	8.43	QP
2	521.790	19.91	6.90	-0.10	26.72	46.00	19.28	QP
3	670.200	22.83	6.40	2.26	31.49	46.00	14.51	QP
4	680.870	22.99	6.47	3.51	32.96	46.00	13.04	QP
5	870.020	25.71	7.20	1.96	34.87	46.00	11.13	QP
6	976.720	26.16	7.70	3.40	37.26	54.00	16.74	QP

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. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
Limit : FCC PART-15C
Env. / Ins. : E4446A 27℃/60% Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	247.280	23.61	3.50	4.98	32.09	46.00	13.91	QP
2	293.840	26.33	3.96	8.52	38.81	46.00	7.19	QP
3	526.640	19.67	6.90	-1.53	25.04	46.00	20.96	QP
4	715.790	22.74	6.55	3.39	32.69	46.00	13.31	QP
5	863.230	26.09	7.20	1.87	35.16	46.00	10.84	QP
6	971.870	26.79	7.70	2.12	36.61	54.00	17.39	QP

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.      : A/C Chamber                  Data no.  : 8
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : HORIZONTAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2441
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	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	295.780	26.48	4.00	7.11	37.59	46.00	8.41	QP
2	327.790	15.28	4.10	8.31	27.69	46.00	18.31	QP
3	569.320	21.17	6.50	1.70	29.38	46.00	16.62	QP
4	774.960	24.26	6.80	4.85	35.91	46.00	10.09	QP
5	848.680	25.51	7.10	4.05	36.66	46.00	9.34	QP
6	978.660	25.88	7.70	4.08	37.66	54.00	16.34	QP

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.      : A/C Chamber                  Data no.  : 7
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : VERTICAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2441
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	294.810	26.43	3.99	9.48	39.90	46.00	6.10	QP
2	320.030	14.99	4.20	10.57	29.76	46.00	16.24	QP
3	519.850	19.99	6.90	-0.23	26.66	46.00	19.34	QP
4	709.000	23.54	6.60	3.65	33.80	46.00	12.20	QP
5	870.020	25.71	7.20	4.10	37.01	46.00	8.99	QP
6	976.720	26.16	7.70	4.05	37.91	54.00	16.09	QP

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.      : A/C Chamber                  Data no.  : 8
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : HORIZONTAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2477
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	294.810	26.43	3.99	8.47	38.89	46.00	7.11	QP
2	321.000	15.02	4.20	8.92	28.14	46.00	17.86	QP
3	521.790	19.91	6.90	0.11	26.93	46.00	19.07	QP
4	687.660	23.26	6.50	3.45	33.21	46.00	12.79	QP
5	774.960	24.26	6.80	4.85	35.91	46.00	10.09	QP
6	948.590	25.88	7.50	3.87	37.25	46.00	8.75	QP

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.      : A/C Chamber                  Data no.  : 7
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : VERTICAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2477
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	248.250	23.66	3.50	7.29	34.46	46.00	11.54	QP
2	294.810	26.43	3.99	9.24	39.66	46.00	6.34	QP
3	521.790	19.91	6.90	0.05	26.87	46.00	19.13	QP
4	574.170	21.10	6.44	2.82	30.36	46.00	15.64	QP
5	863.230	26.09	7.20	2.80	36.09	46.00	9.91	QP
6	964.110	26.80	7.60	4.09	38.49	54.00	15.51	QP

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.      : A/C Chamber                  Data no.  : 1
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : HORIZONTAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : RX
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	248.250	23.66	3.50	2.05	29.22	46.00	16.78	QP
2	294.810	26.43	3.99	7.71	38.13	46.00	7.87	QP
3	521.790	19.91	6.90	-0.13	26.69	46.00	19.31	QP
4	609.090	21.45	6.20	2.21	29.87	46.00	16.13	QP
5	843.830	25.23	7.10	2.90	35.23	46.00	10.77	QP
6	943.740	25.59	7.50	3.17	36.26	46.00	9.74	QP

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.      : A/C Chamber                  Data no.  : 2
Dis. / Ant.   : 3m   VBA6106A/UHALP9108A     Ant. pol. : VERTICAL
Limit         : FCC PART-15C
Env. / Ins.   : E4446A 27℃/60%                          Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : RX
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	221.090	21.91	3.30	0.21	25.43	46.00	20.57	QP
2	288.020	25.85	3.80	7.86	37.51	46.00	8.49	QP
3	294.810	26.43	3.99	9.73	40.15	46.00	5.85	QP
4	689.600	23.25	6.50	3.74	33.49	46.00	12.51	QP
5	843.830	25.23	7.10	3.71	36.04	46.00	9.96	QP
6	963.140	26.63	7.60	4.65	38.88	54.00	15.12	QP

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

3.7.2. Restricted Bands Measurement Results

Date of Test： Oct. 12, 2011 Temperature： 27℃

EUT： Wireless Headset Humidity： 60%

Test Mode： Transmit, Channel: 02, Frequency: 2405MHz

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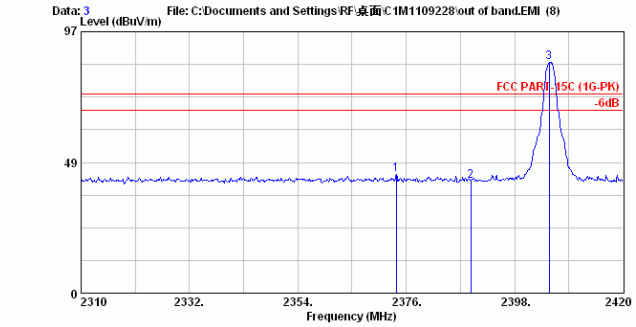
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 3
Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Rema
1	2374.020	28.08	6.32	9.78	44.18	74.00	29.82	Peak
2	2389.090	28.10	6.34	7.30	41.73	74.00	32.27	Peak
3	2405.040	28.11	6.36	51.22	85.70	74.00	-11.70	Peak X

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

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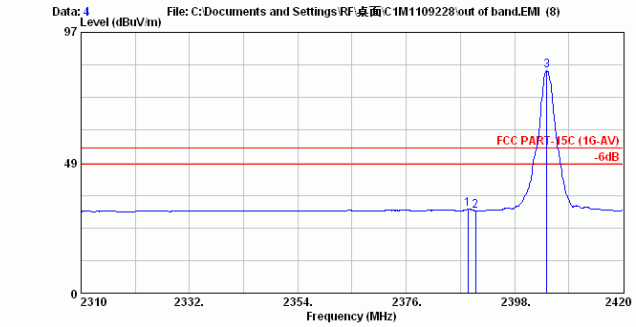
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 4
Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Rema
1	2388.540	28.10	6.34	-3.13	31.30	54.00	22.70	Average
2	2390.080	28.10	6.34	-3.74	30.70	54.00	23.30	Average
3	2404.490	28.11	6.36	48.22	82.70	54.00	-28.70	Average X

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： Oct. 12, 2011 Temperature： 27℃

EUT： Wireless Headset Humidity： 60%

Test Mode： Transmit, Channel: 02, Frequency: 2405MHz

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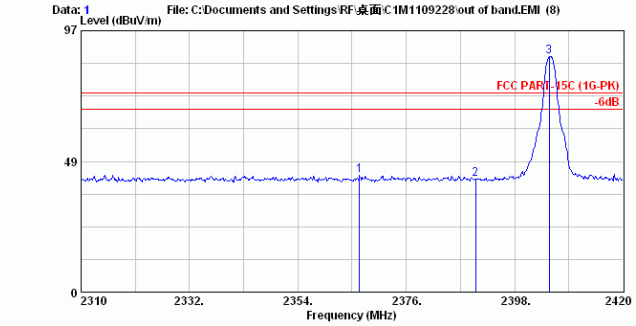
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2366.540	28.06	6.31	9.07	43.45	74.00	30.55	Peak
2	2390.080	28.10	6.34	7.41	41.85	74.00	32.15	Peak
3	2405.040	28.11	6.36	53.04	87.52	74.00	-13.52	Peak

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

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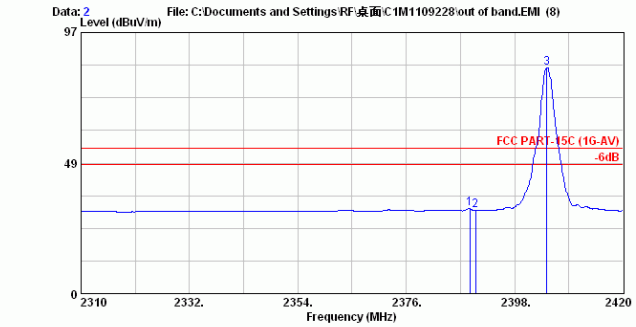
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 2
Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2388.870	28.10	6.34	-2.93	31.50	54.00	22.50	Average
2	2390.080	28.10	6.34	-3.67	30.77	54.00	23.23	Average
3	2404.490	28.11	6.36	49.39	83.87	54.00	-29.87	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：	Oct. 12, 2011	Temperature：	27℃
EUT：	Wireless Headset	Humidity：	60%
Test Mode：	Transmit, Channel: 38, Frequency: 2477MHz		

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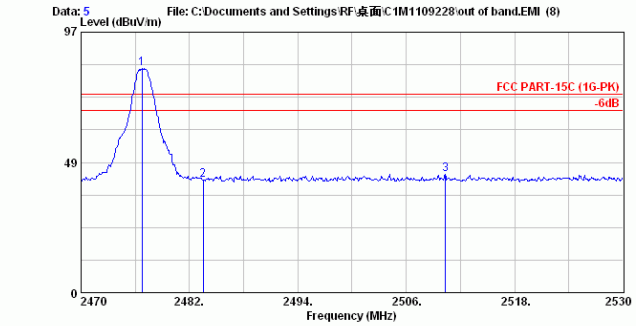
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw




```
Site no.      : A/C Chamber                Data no.  : 5
Dis. / Ant.   : 3m   3115(3775)            Ant. pol. : HORIZONTAL
Limit         : FCC PART-15C (1G-PK)
Env. / Ins.   : E4446A 27℃/60%                       ☐Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2477
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2476.720	28.18	6.44	48.76	83.39	74.00	-9.39	Peak
2	2483.500	28.18	6.45	7.36	42.00	74.00	32.00	Peak
3	2510.320	28.26	6.48	9.24	43.99	74.00	30.01	Peak

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

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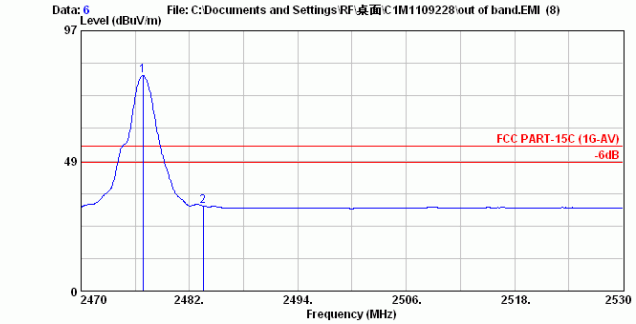
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw




```
Site no.      : A/C Chamber                Data no.  : 6
Dis. / Ant.   : 3m   3115(3775)            Ant. pol. : HORIZONTAL
Limit         : FCC PART-15C (1G-AV)
Env. / Ins.   : E4446A 27℃/60%                       ☐Jarwei Wang
EUT           : GH0180B
Power Rating  : DC 3.7V
Test Mode     : TX2477
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2476.840	28.18	6.44	45.65	80.28	54.00	-26.28	Average
2	2483.500	28.18	6.45	-2.95	31.68	54.00	22.32	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： Oct. 12, 2011 Temperature： 27℃

EUT： Wireless Headset Humidity： 60%

Test Mode： Transmit, Channel: 38, Frequency: 2477MHz

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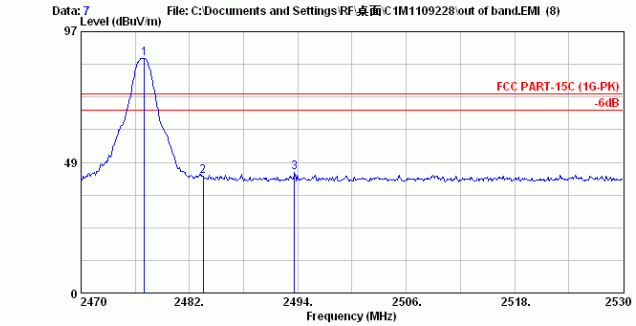
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 7
Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2477

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2477.020	28.18	6.44	52.42	87.05	74.00	-13.05	Peak
2	2483.500	28.18	6.45	8.55	43.19	74.00	30.81	Peak
3	2493.640	28.20	6.46	10.05	44.71	74.00	29.29	Peak

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

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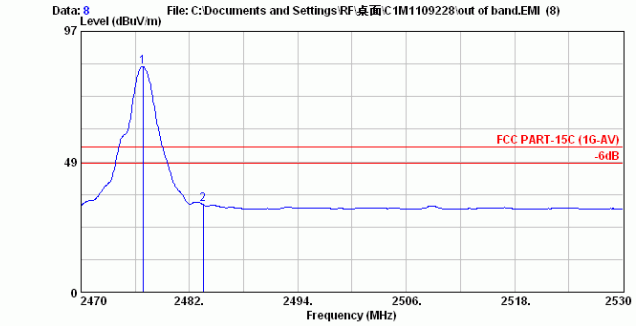
No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
County, Taiwan R.O.C. Post Code:24443
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:ttemc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 8
Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
Limit : FCC PART-15C (1G-AV)
Env. / Ins. : E4446A 27℃/60% ☐Jarwei Wang
EUT : GH0180B
Power Rating : DC 3.7V
Test Mode : TX2477

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2476.840	28.18	6.44	49.31	83.94	54.00	-29.94	Average
2	2483.500	28.18	6.45	-2.08	32.56	54.00	21.44	Average

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

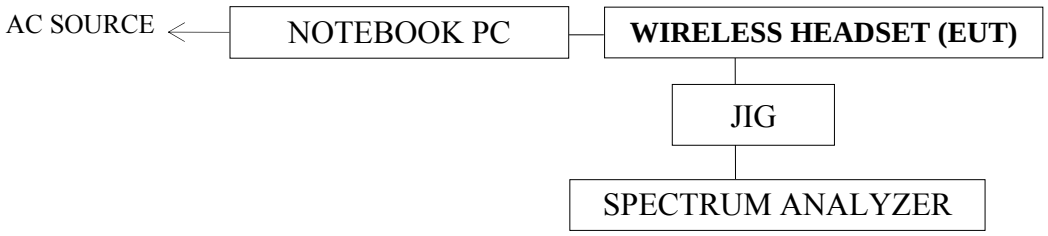
4. 6dB BANDWIDTH MEASUREMENT

4.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11'	Feb. 23, 12'

4.2. Block Diagram of Test Setup



4.3. Specification Limits [§15.247(a)(2), RSS-210 §8.2(a)]

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

4.4. Operating Condition of EUT

The test program "AMD2flash V1.45.002" was used to enable the EUT to transmit data at different channel frequency individually.

4.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 100kHz RBW and 100kHz VBW. 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 KDB 558074.

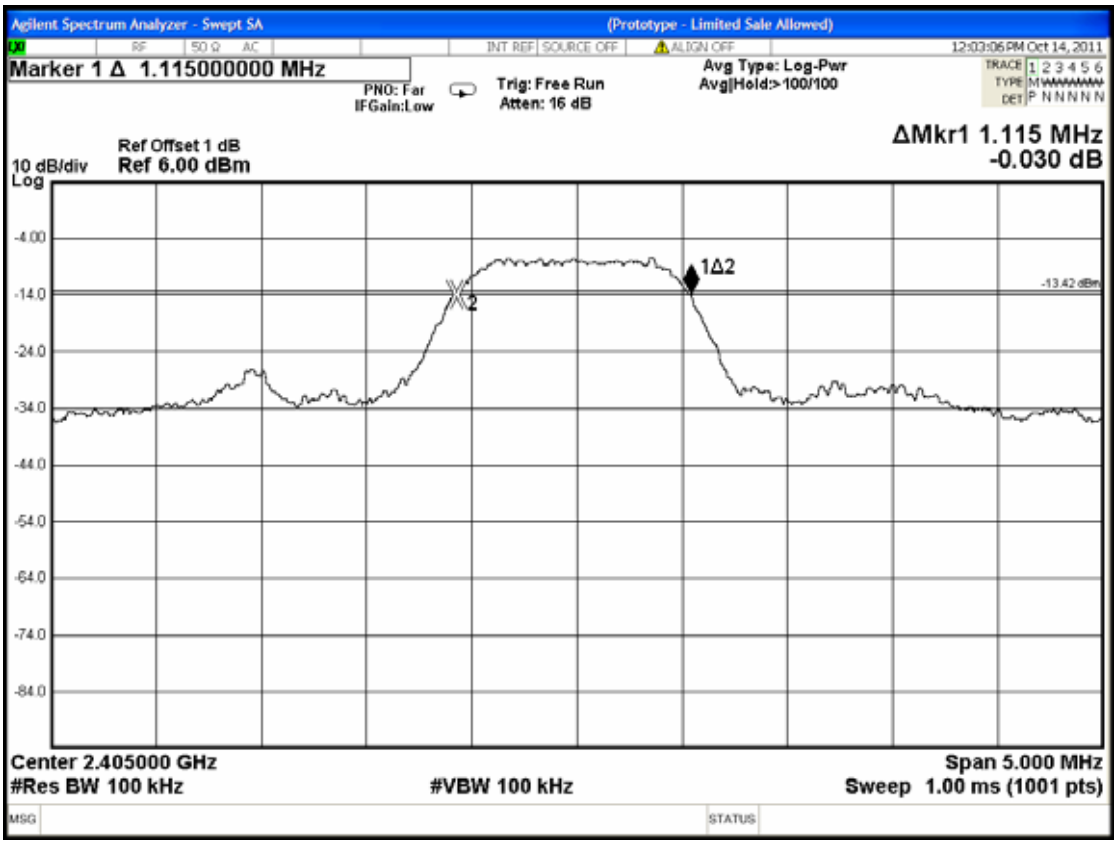
4.6. Test Results

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

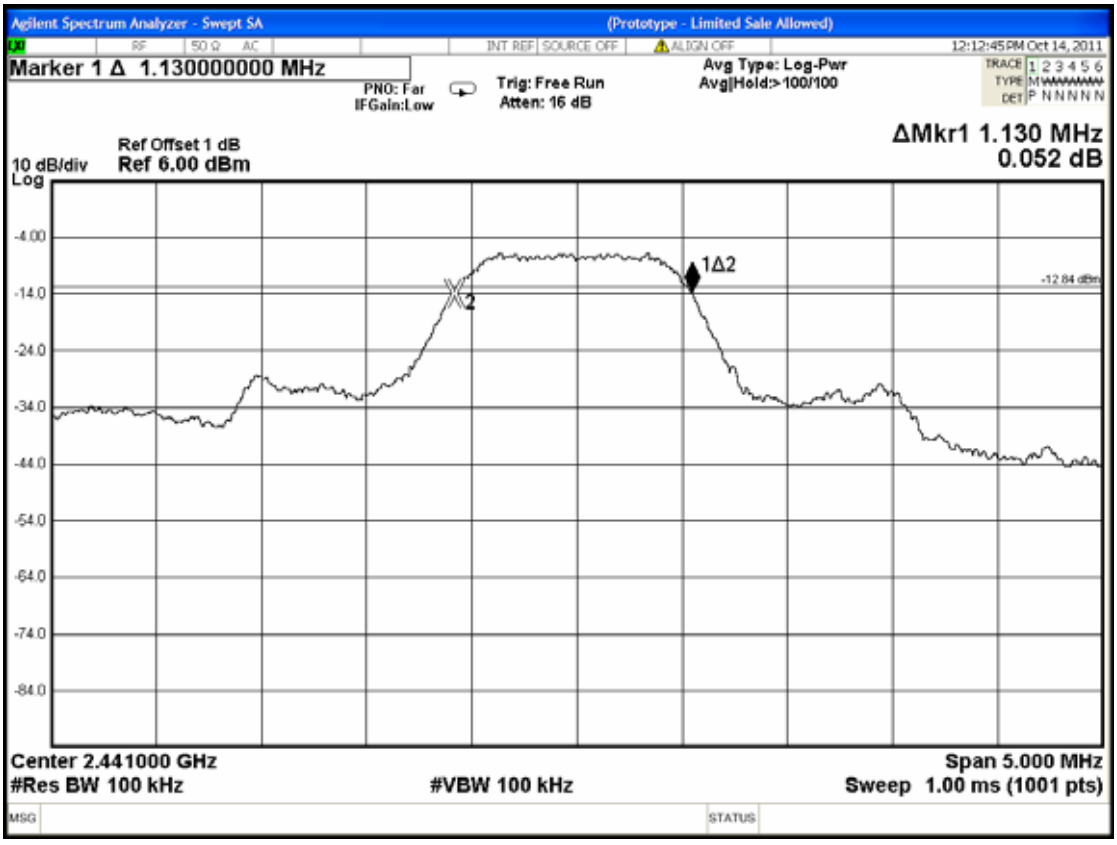
(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

Channel	Frequency	**6dB Bandwidth**
02	2405MHz	**1.115MHz**
20	2441MHz	**1.130MHz**
38	2477MHz	**1.145MHz**

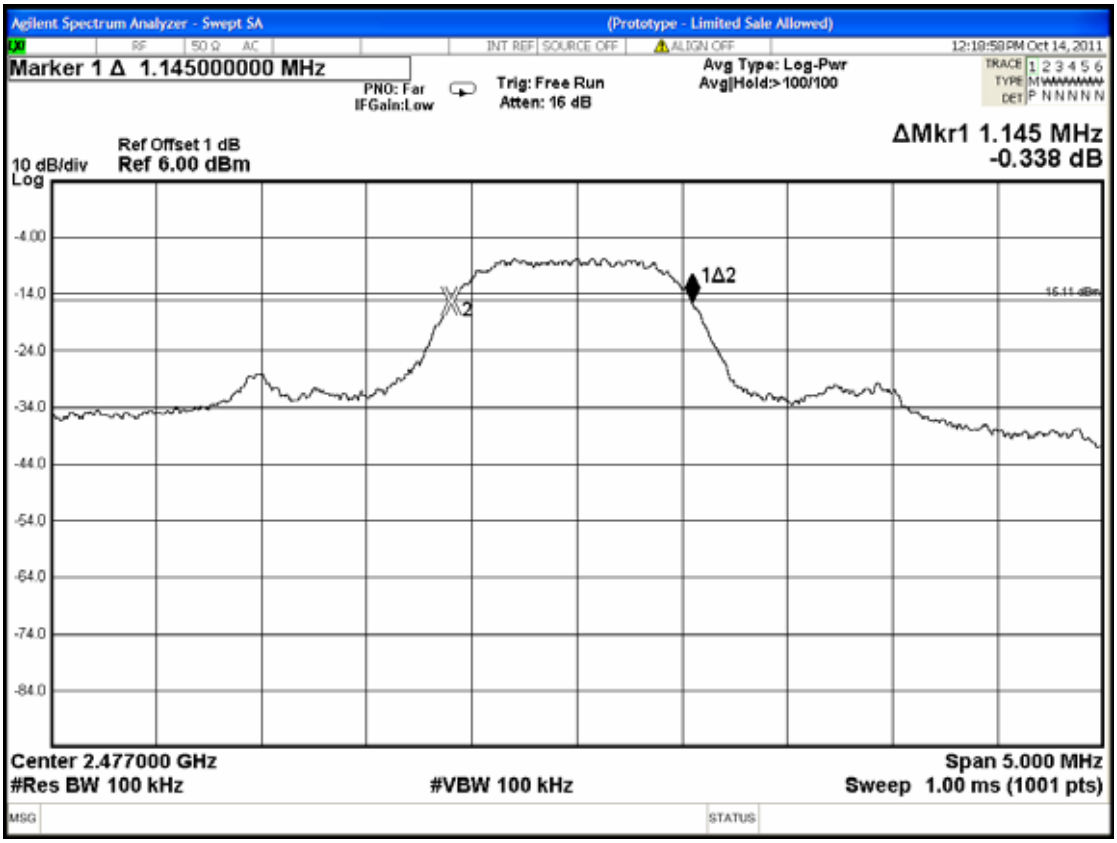
Frequency: 2405MHz



Frequency: 2441MHz



Frequency: 2477MHz



5. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

5.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11'	Feb. 23, 12'

5.2. Block Diagram of Test Setup

The same as section.4.2.

5.3. Specification Limits [§15.247(b)-(3), RSS-210 §8.4(4)]

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

5.4. Operating Condition of EUT

The test program "AMD2flash V1.45.002" was used to enable the EUT to transmit data at different channel frequency individually..

5.5. Test Procedure

Setting the spectrum span to encompass the EBW, RBW=2MHz and VBW=3MHz. Peak detector is used.

The measurement guideline was according to KDB 558074.

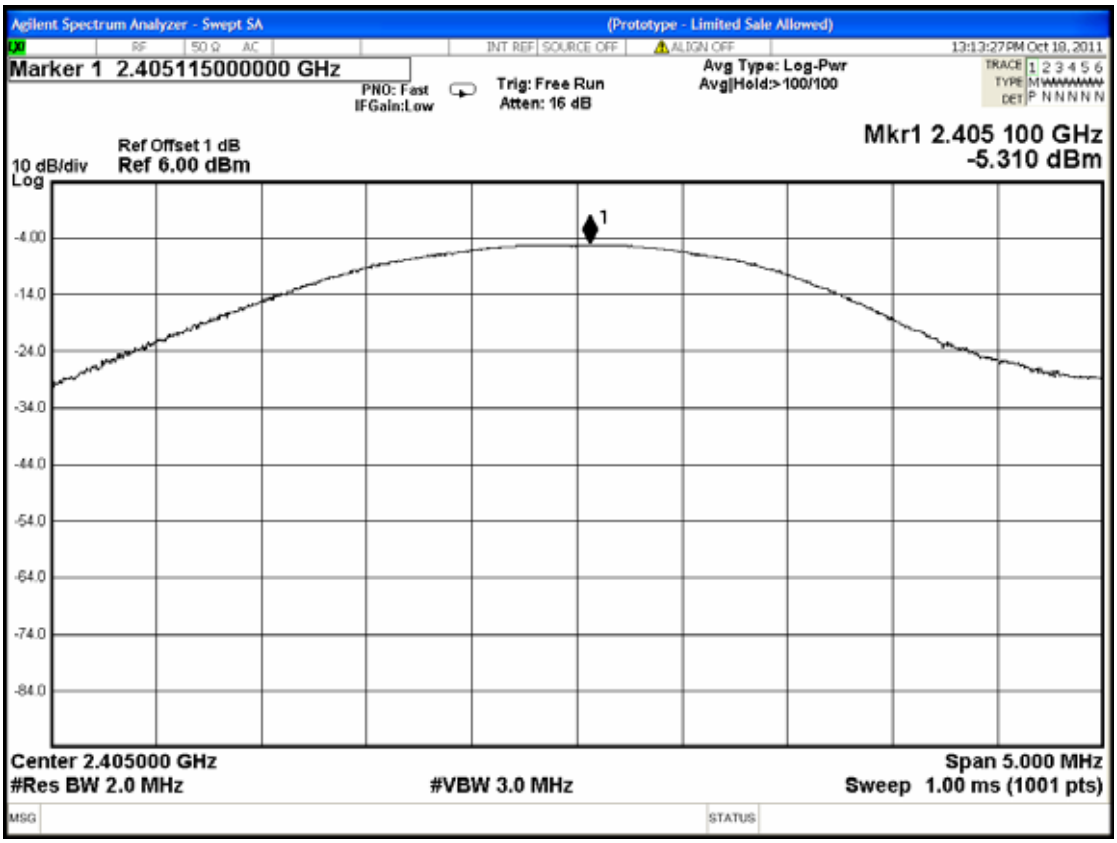
5.6. Test Results

PASSED. All the test results are listed below.

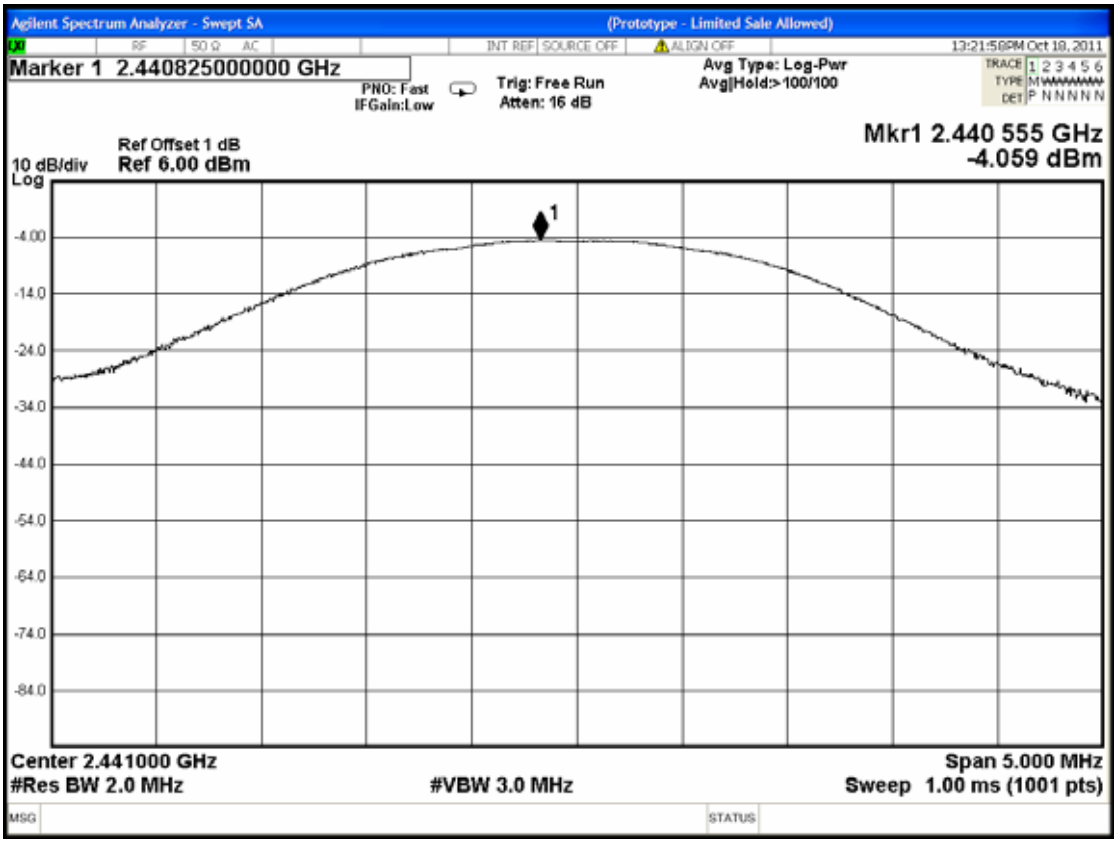
(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

Channel	Frequency	**Peak Output Power**	Limit
02	2405MHz	**-5.310dBm**	30dBm
20	2441MHz	**-4.059dBm**	30dBm
38	2477MHz	**-5.444dBm**	30dBm

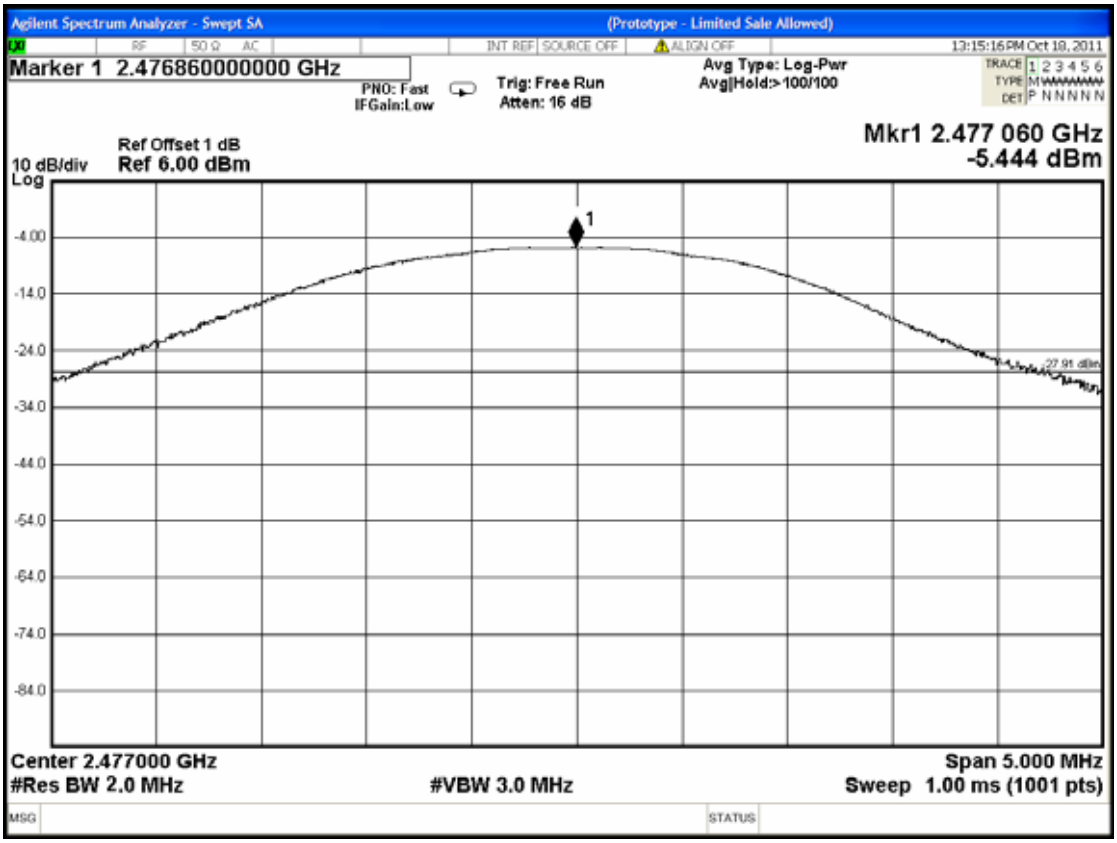
Frequency: 2405MHz



Frequency: 2441MHz



Frequency: 2477MHz



6. EMISSION LIMITATIONS MEASUREMENT

6.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11’	Feb. 23, 12’
2.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 04, 11’	Aug. 03, 12’

6.2. Block Diagram of Test Setup

The same as section.4.2.

6.3. Specification Limits［§15.247(c), RSS-210 §8.5)

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 §3.6.3)

6.4. Operating Condition of EUT

The test program “AMD2flash V1.45.002” was used to enable the EUT to transmit data at different channel frequency individually.

6.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 100kHz RBW and 100kHz VBW.

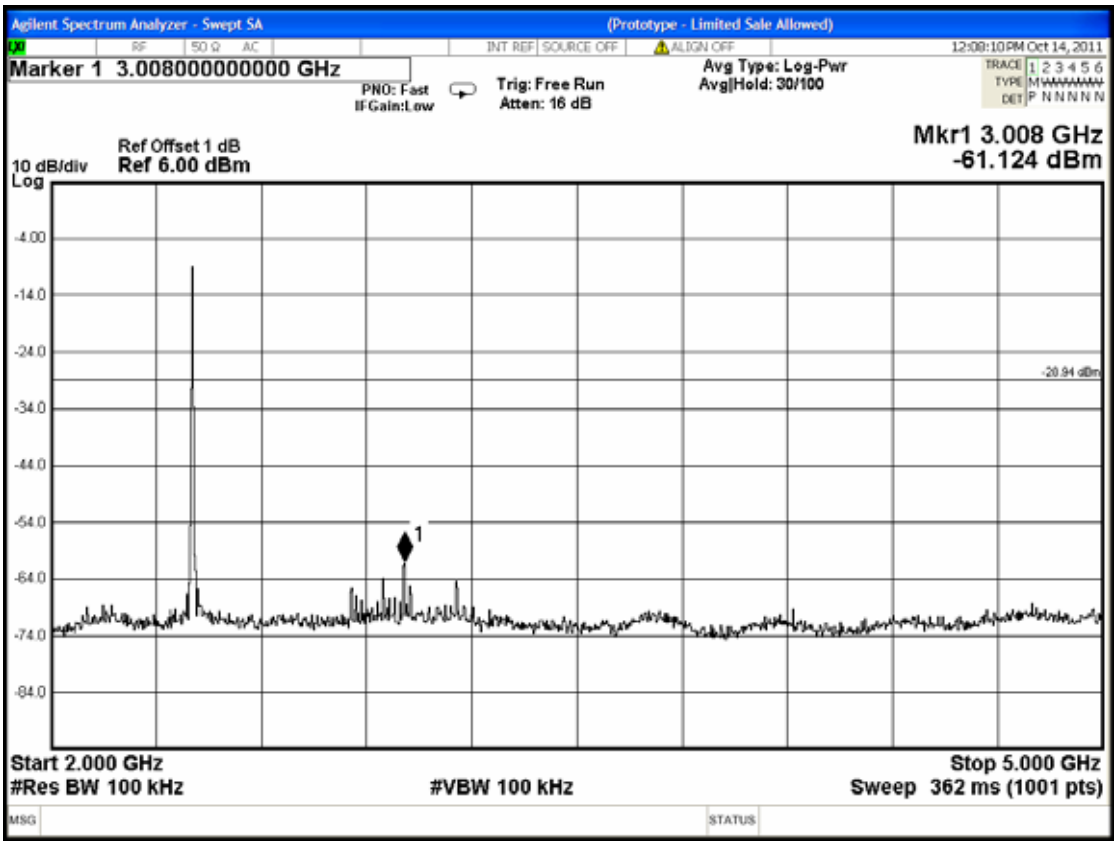
The measurement guideline was according to KDB 558074.

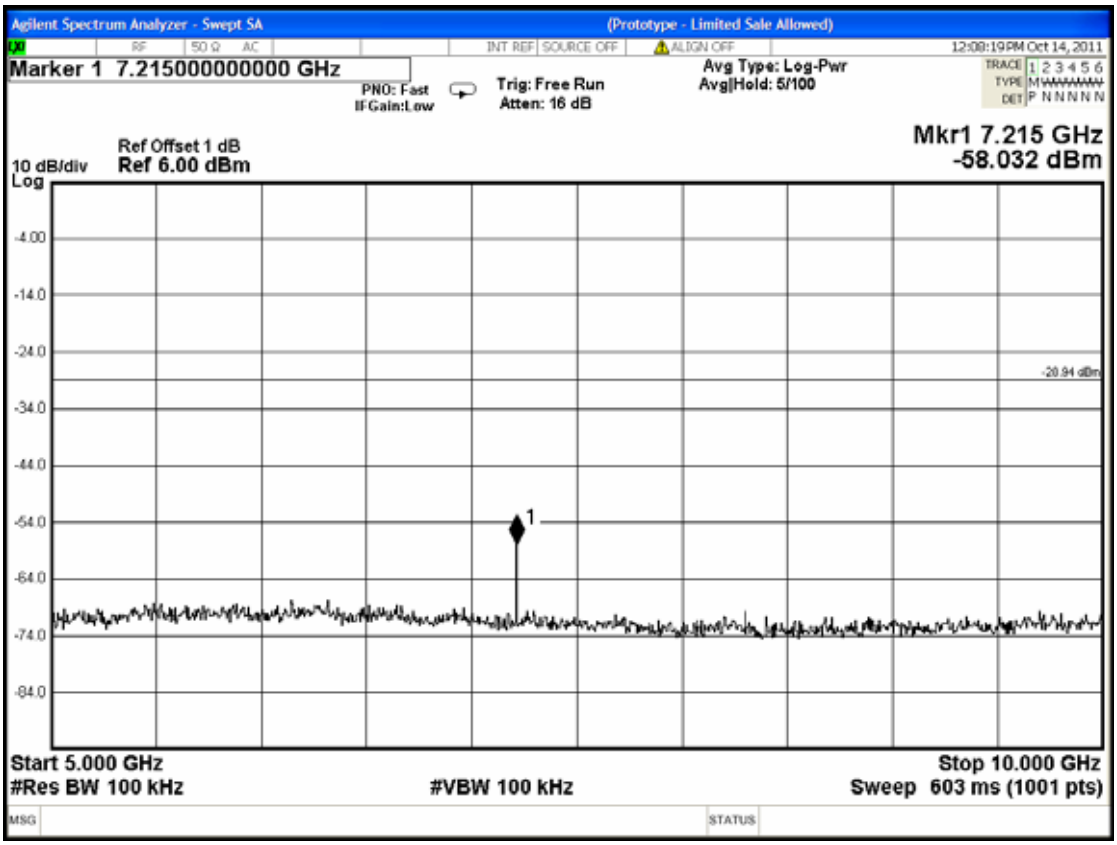
6.6. Test Results

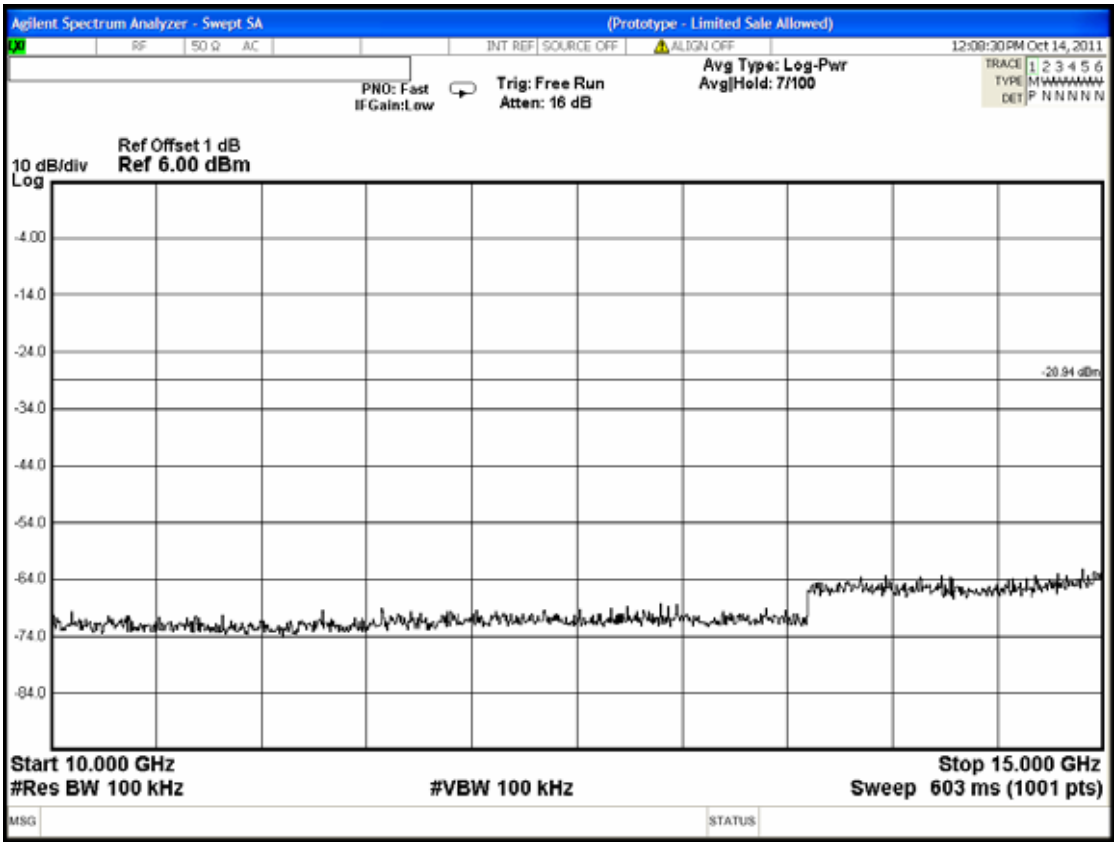
PASSED. The testing data was attached in the next pages.

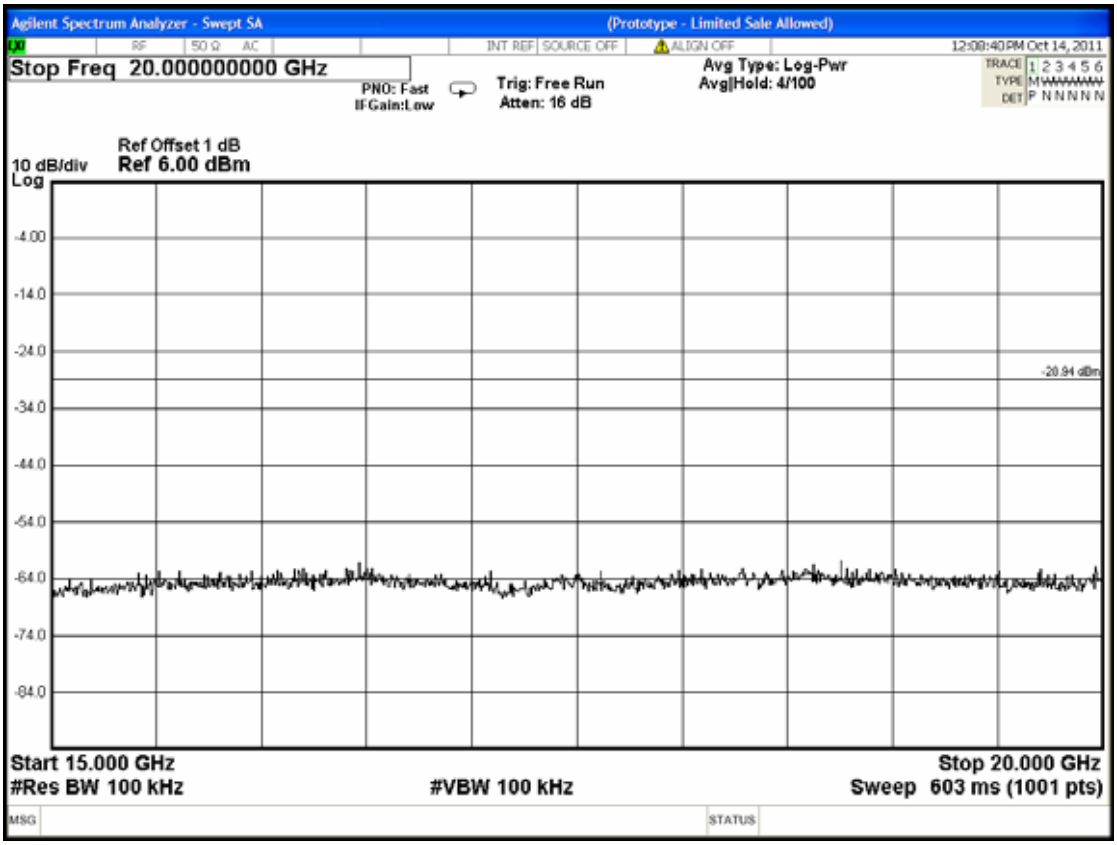
(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

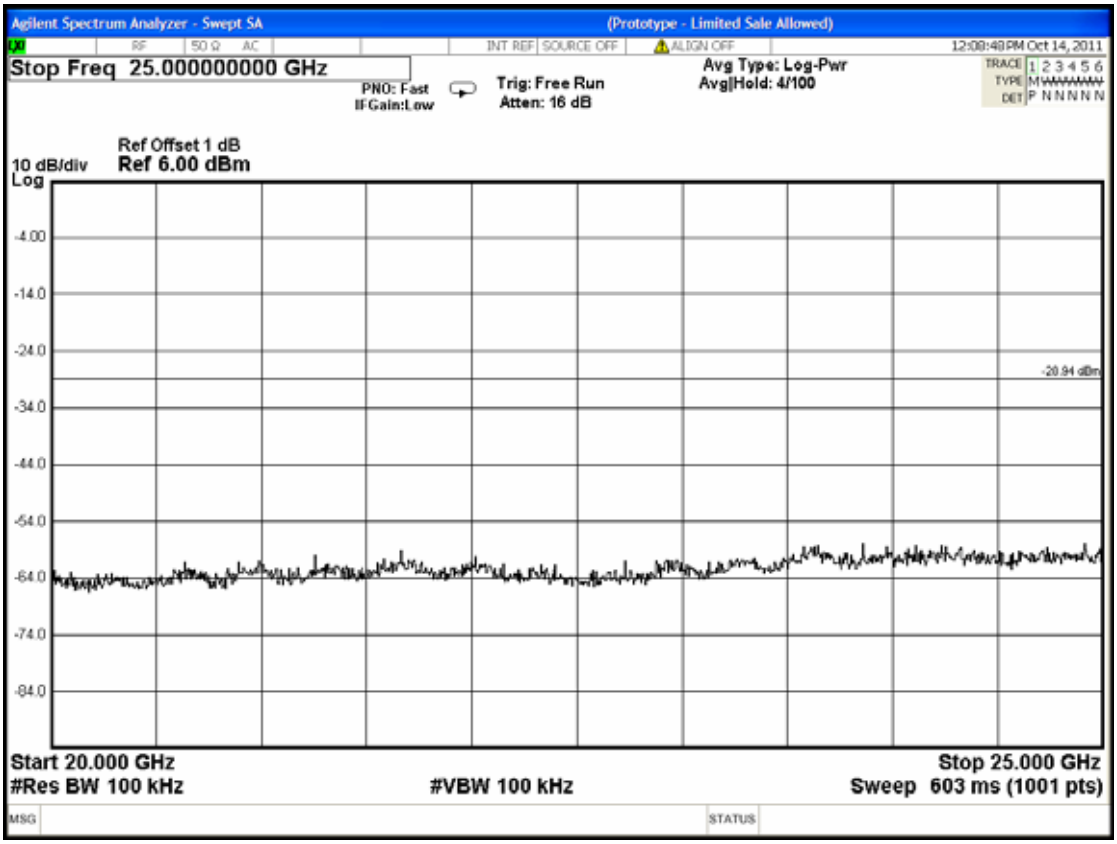
Frequency: 2405MHz

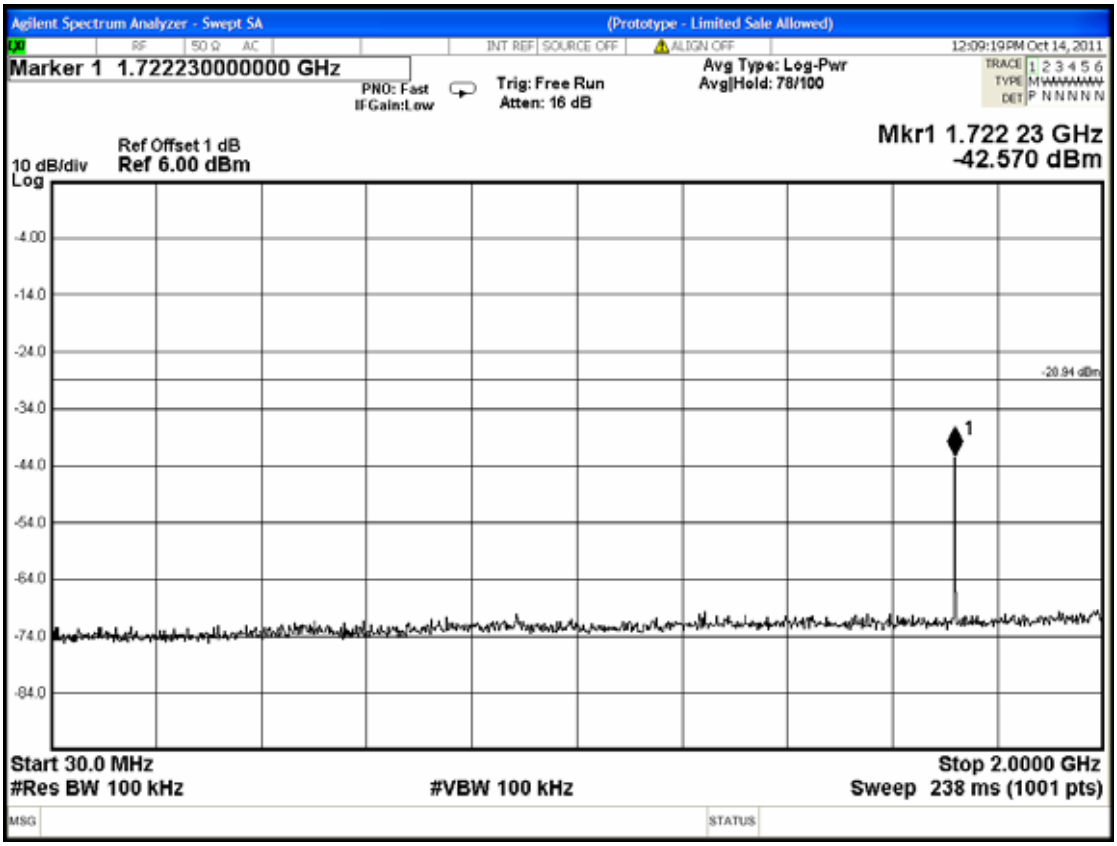




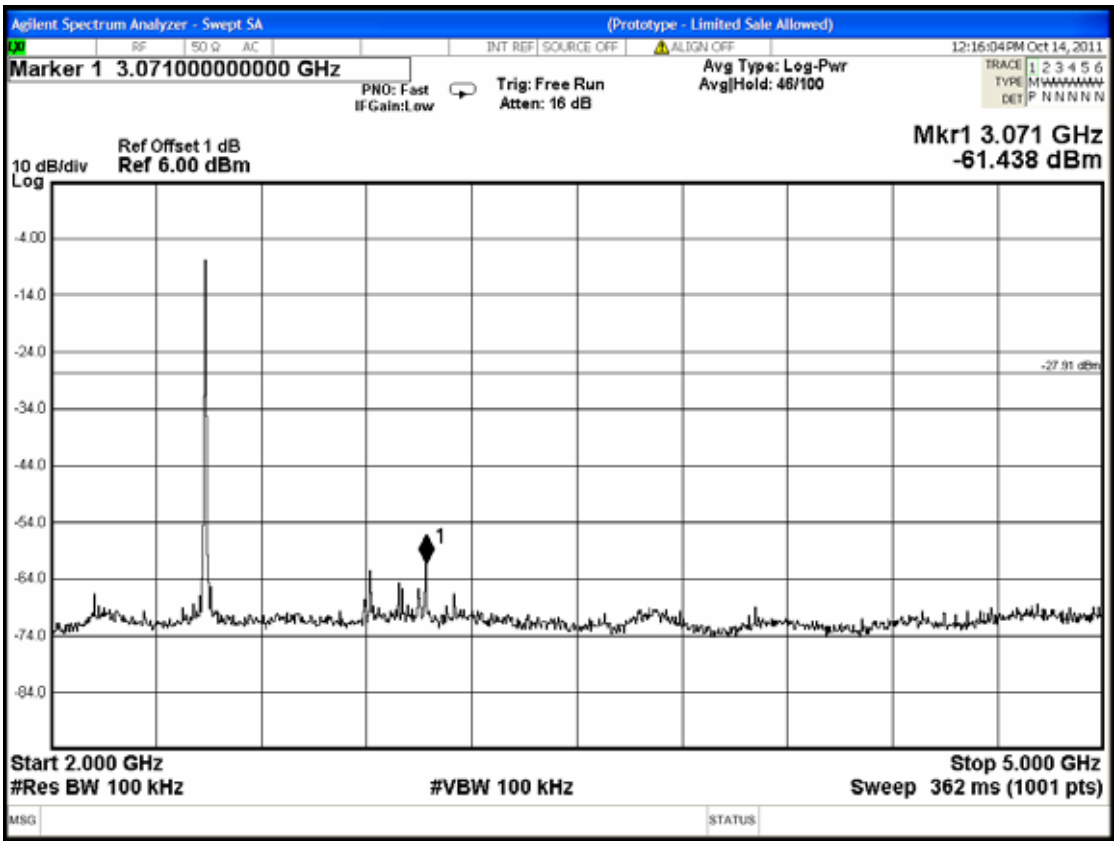

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:08:30 PM Oct 14, 2011
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 7/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-20.94 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 15.000 GHz
Sweep 603 ms (1001 pts)

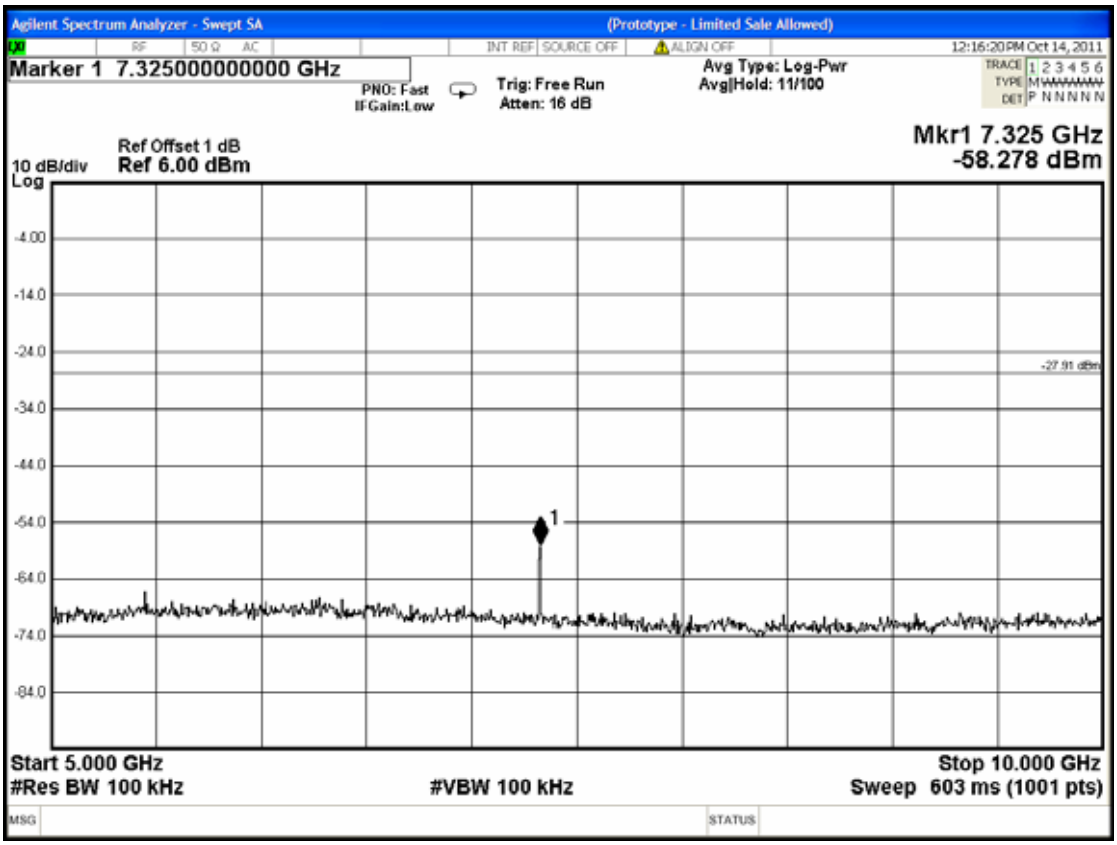

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:08:40 PM Oct 14, 2011
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-20.94 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 20.000 GHz
Sweep 603 ms (1001 pts)

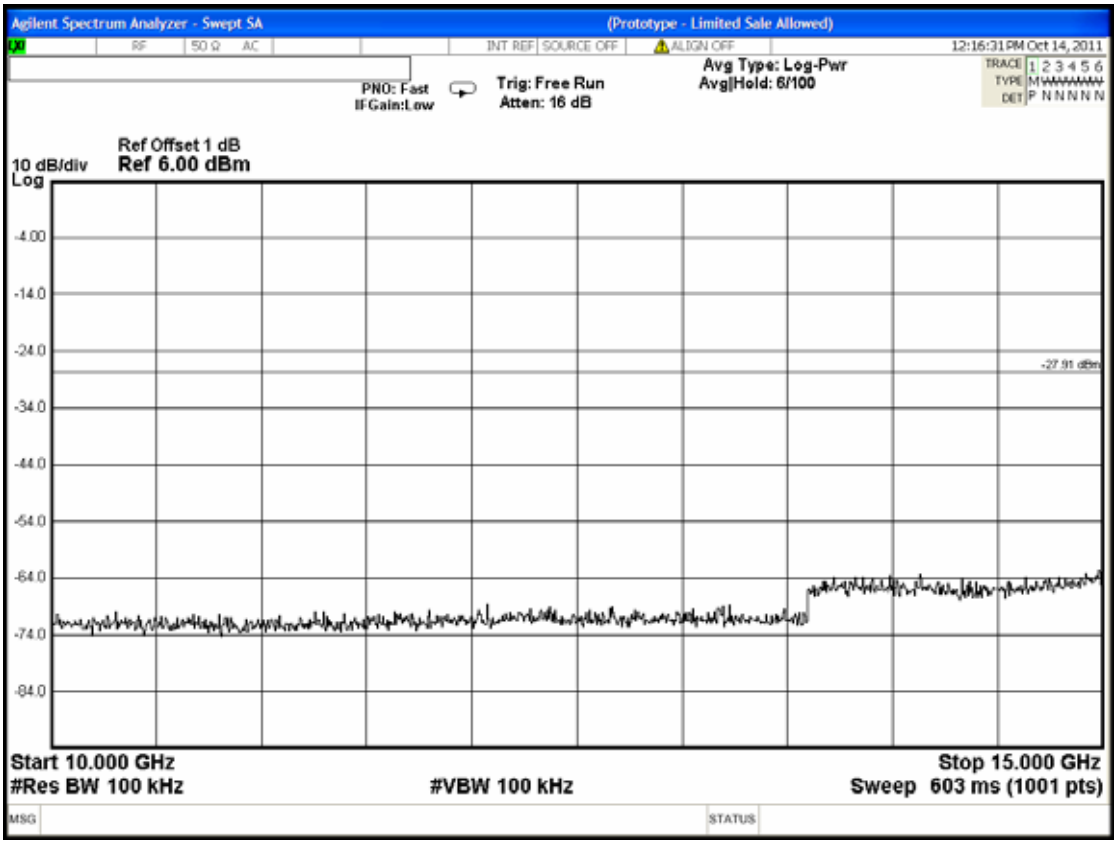

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
12:09:48 PM Oct 14, 2011
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-20.94 dBm
Start 20.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 25.000 GHz
Sweep 603 ms (1001 pts)
MSG
STATUS

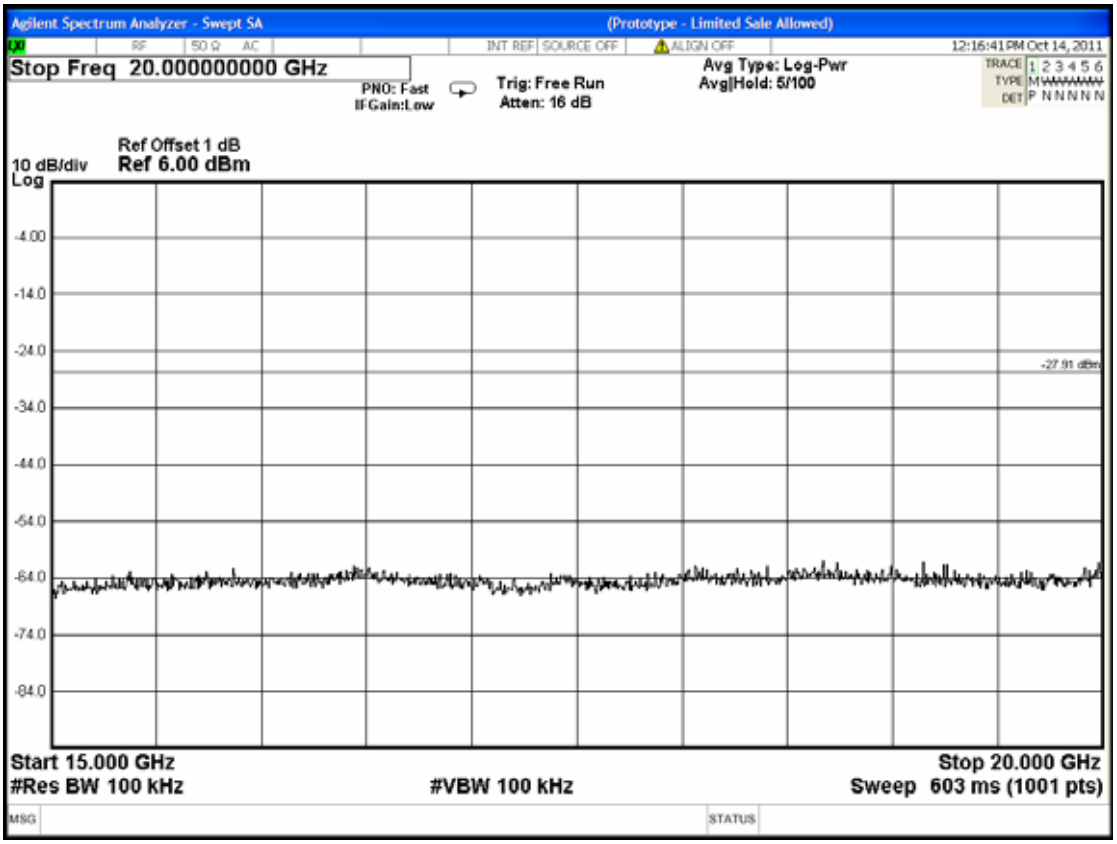

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
Marker 1 1.722230000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 78/100
12:09:19 PM Oct 14, 2011
Mkr1 1.722 23 GHz
-42.570 dBm
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-20.94 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.0000 GHz
Sweep 238 ms (1001 pts)
MSG
STATUS

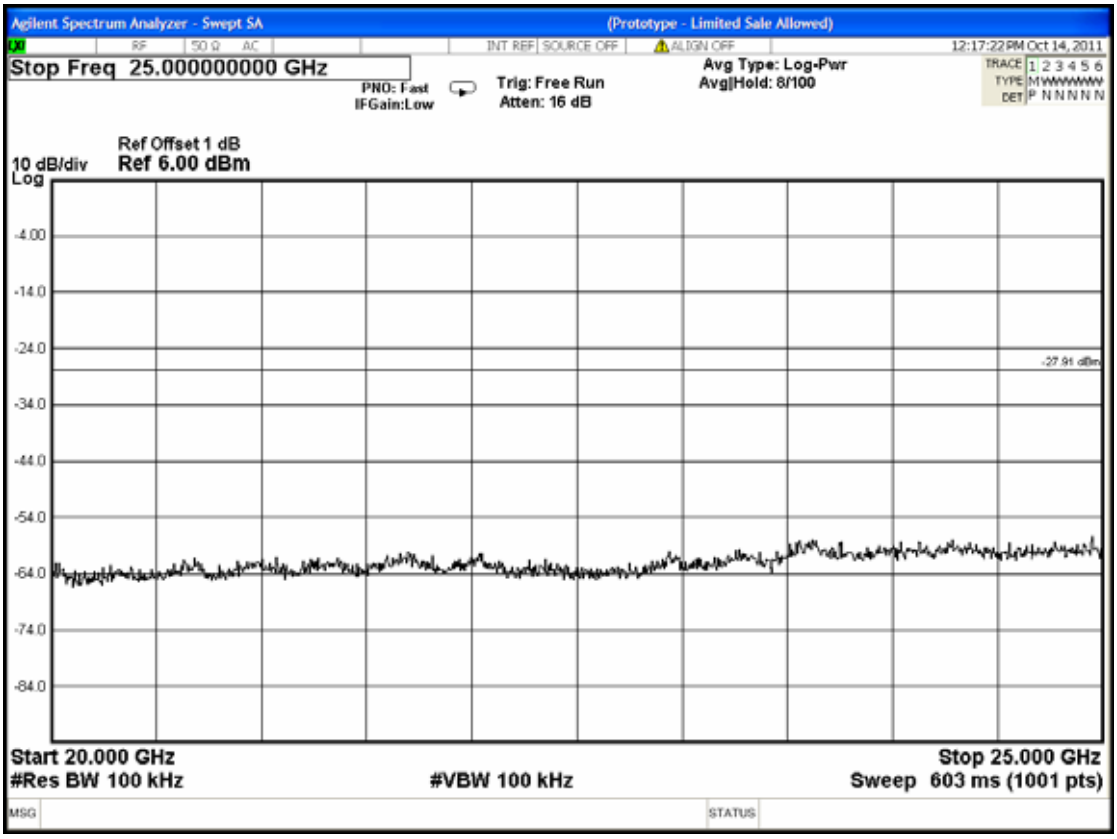
Frequency: 2441MHz

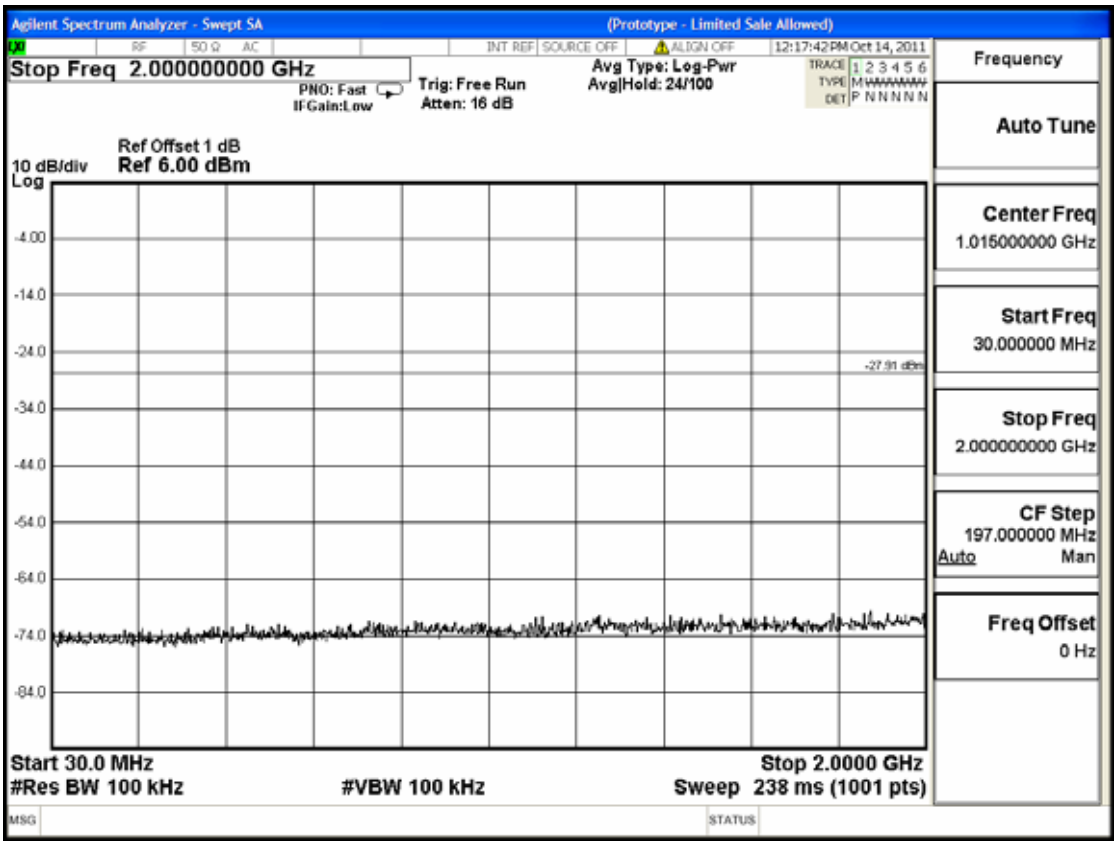




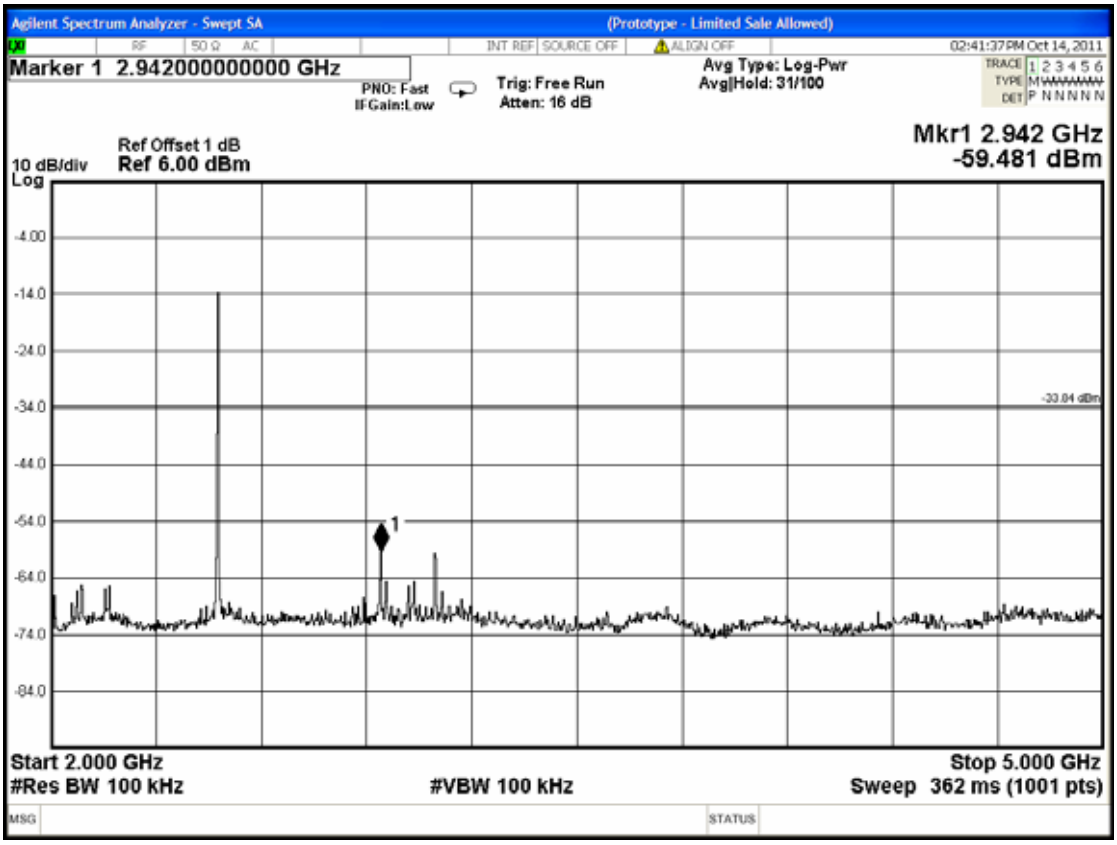

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:16:31 PM Oct 14, 2011
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 6/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-27.91 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 15.000 GHz
Sweep 603 ms (1001 pts)

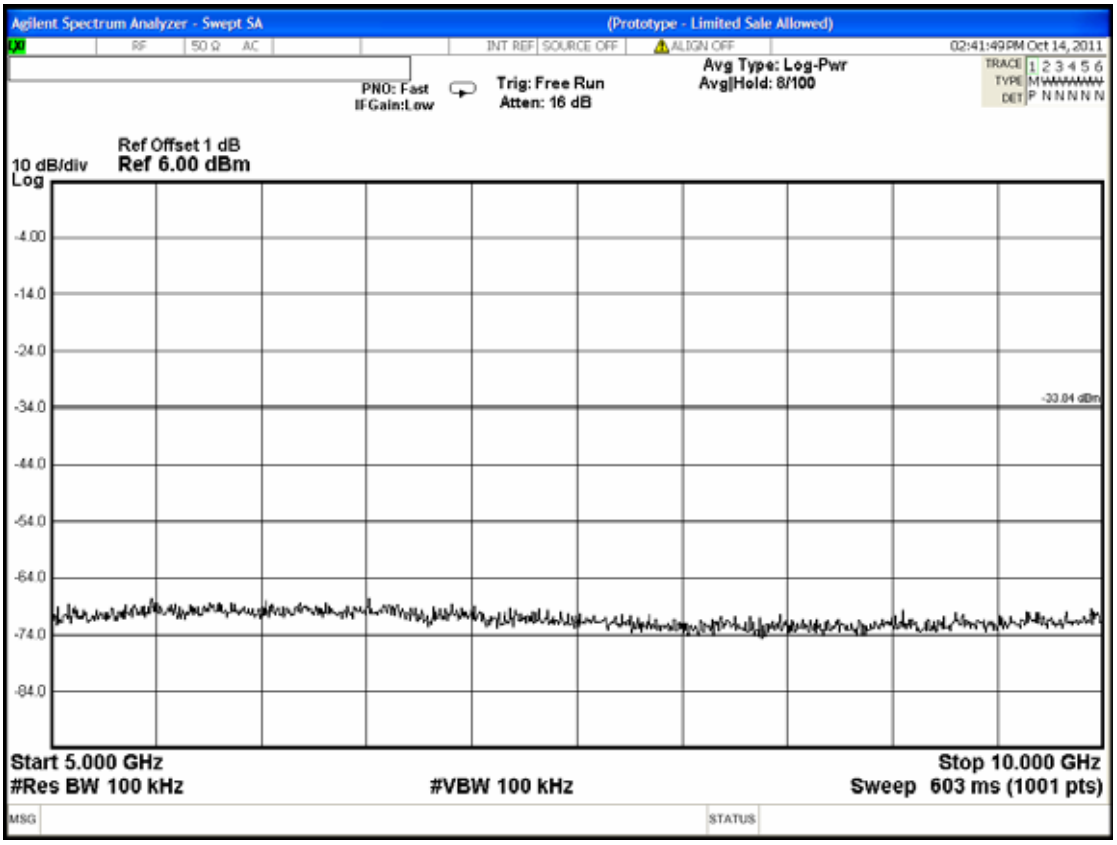

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:16:41 PM Oct 14, 2011
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 5/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-27.91 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 20.000 GHz
Sweep 603 ms (1001 pts)

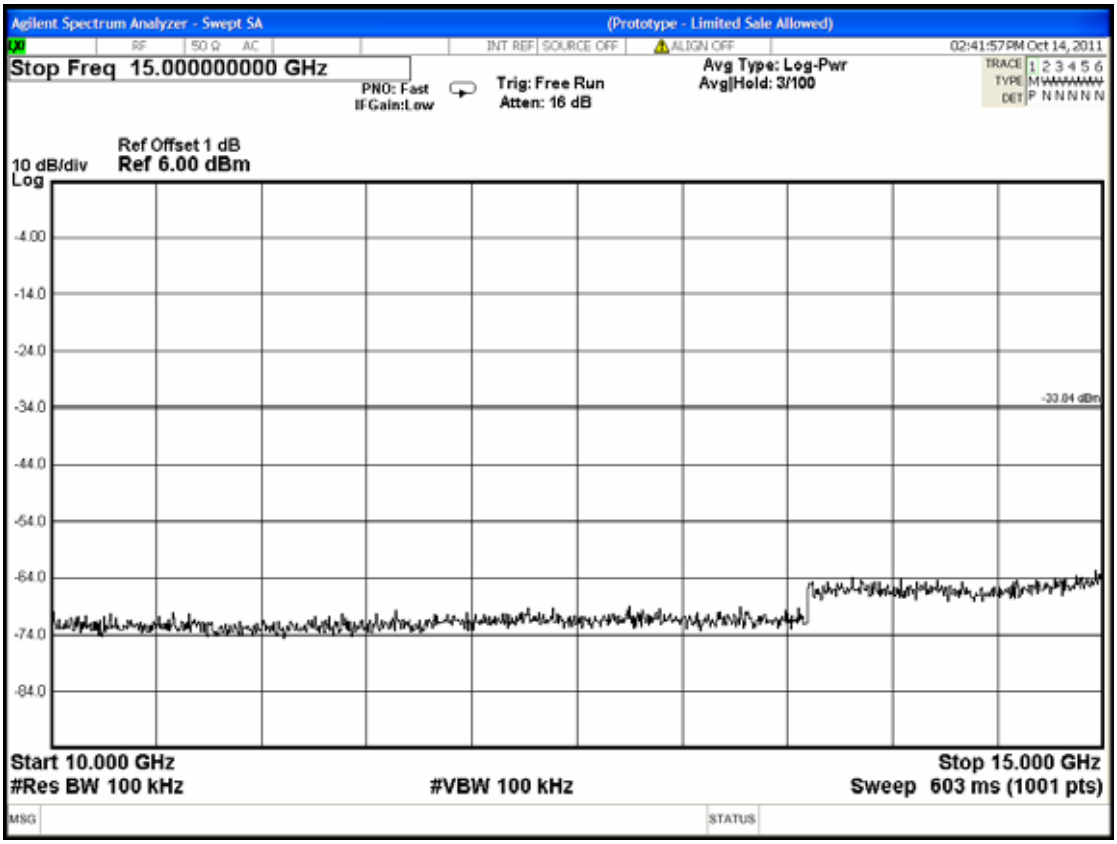

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:17:22 PM Oct 14, 2011
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 8/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-27.91 dBm
Start 20.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 25.000 GHz
Sweep 603 ms (1001 pts)
MSG
STATUS

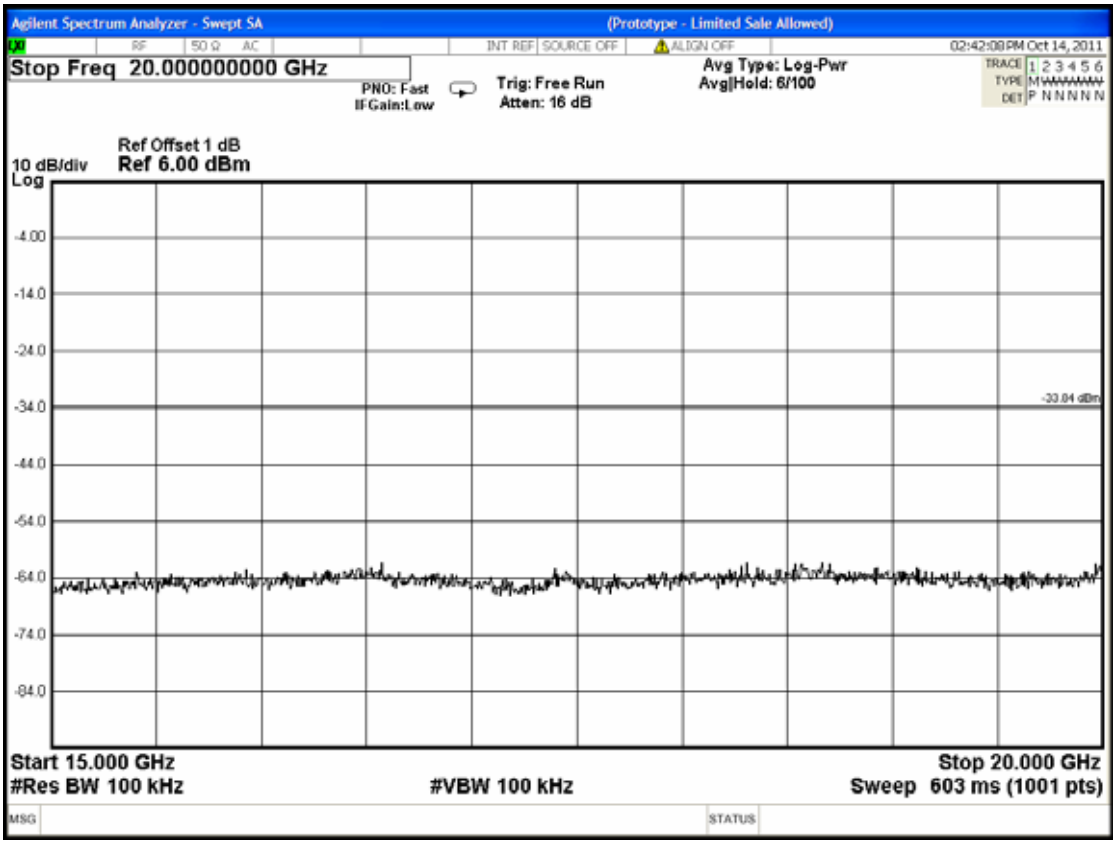

Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
12:17:42 PM Oct 14, 2011
Stop Freq 2.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 24/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-27.91 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.0000 GHz
Sweep 238 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
1.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
2.000000000 GHz
CF Step
197.000000 MHz
Auto
Man
Freq Offset
0 Hz

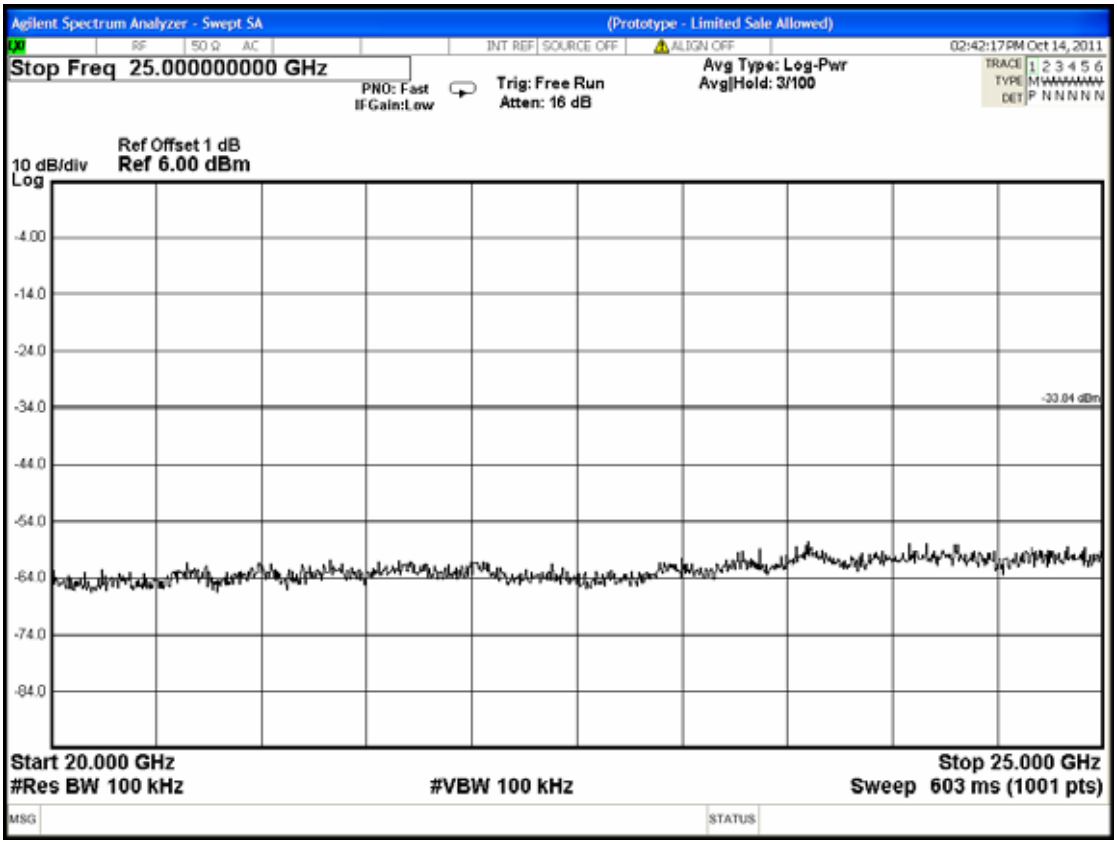
Frequency: 2477MHz

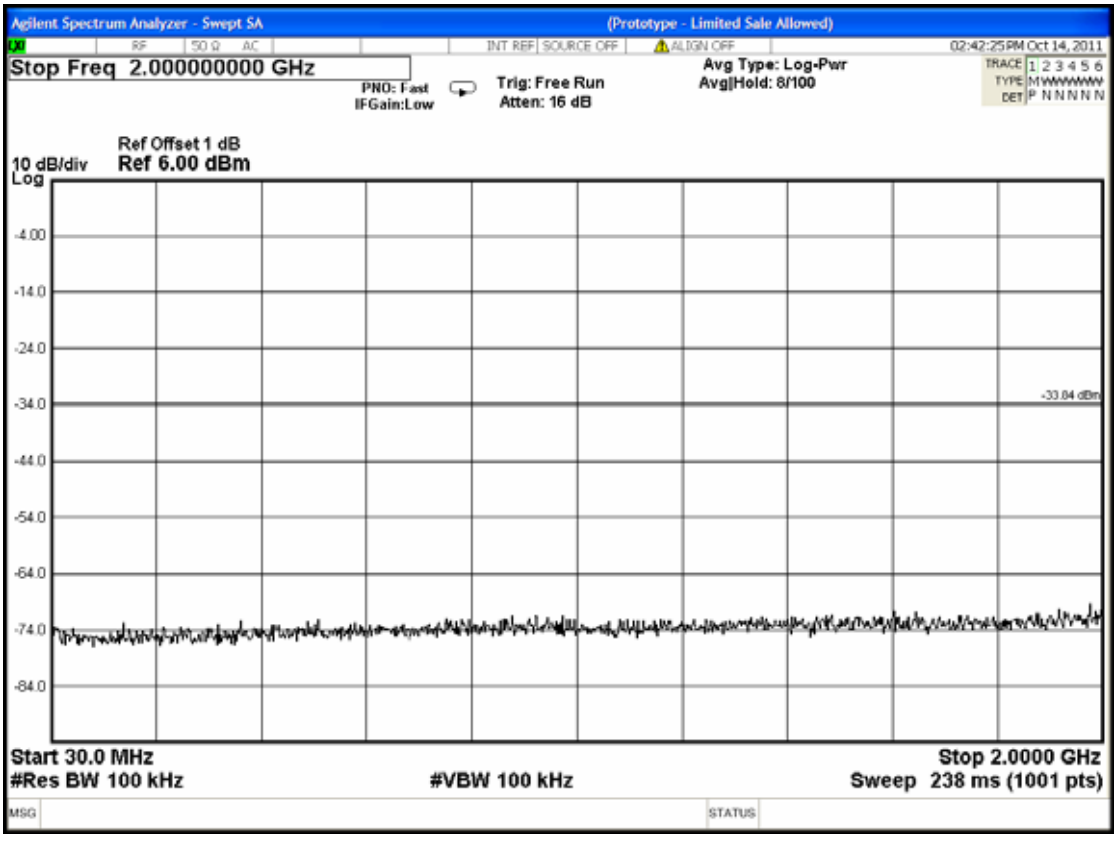





Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
02:41:57 PM Oct 14, 2011
Stop Freq 15.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 3/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-33.84 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 15.000 GHz
Sweep 603 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
02:42:08 PM Oct 14, 2011
Stop Freq 20.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 6/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-33.84 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 20.000 GHz
Sweep 603 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
02:42:17 PM Oct 14, 2011
Stop Freq 25.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 3/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-33.84 dBm
Start 20.000 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 25.000 GHz
Sweep 603 ms (1001 pts)
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
(Prototype - Limited Sale Allowed)
02:42:25 PM Oct 14, 2011
Stop Freq 2.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 16 dB
Avg Type: Log-Pwr
Avg|Hold: 8/100
Ref Offset 1 dB
10 dB/div
Log
Ref 6.00 dBm
-4.00
-14.0
-24.0
-34.0
-44.0
-54.0
-64.0
-74.0
-84.0
-33.84 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.0000 GHz
Sweep 238 ms (1001 pts)
MSG
STATUS

7. BAND EDGES MEASUREMENT

7.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11'	Feb. 23, 12'

7.2. Block Diagram of Test Setup

The same as section.4.2.

7.3. Specification Limits [§15.247(c), RSS-210 §8.5]

The highest level should be at least 20 dB below that in the 100kHz bandwidth.

7.4. Operating Condition of EUT

The test program "AMD2flash V1.45.002" was used to enable the EUT to transmit data at different channel frequency individually.

7.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100kHz bandwidth from band edge.

The measurement guideline was according to KDB 558074.

7.6. Test Results

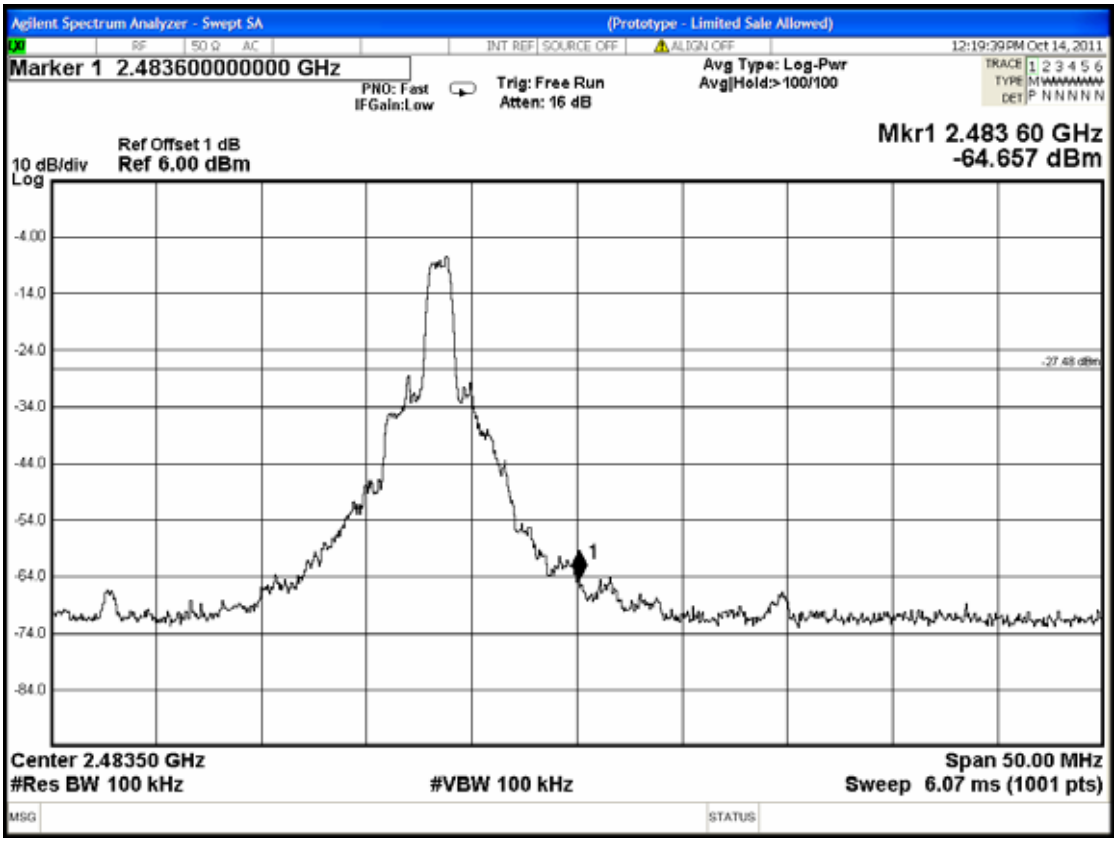
PASSED. All the test results are attached in next pages.

(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

1. Below Band edge: The highest emission level is -55.248dBm on 2.39990GHz。
2. Upper Band edge : The highest emission level is -64.657dBm on 2.48360GHz。

Below Band edge

Upper Band edge



8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11'	Feb. 23, 12'

8.2. Block Diagram of Test Setup

The same as section.4.2.

8.3. Specification Limits [§15.247(d), RSS-210 §8.2(b)]

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

8.4. Operating Condition of EUT

The test program "AMD2flash V1.45.002" was used to enable the EUT to transmit data at different channel frequency individually.

8.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz.

The measurement guideline was according to KDB 558074.

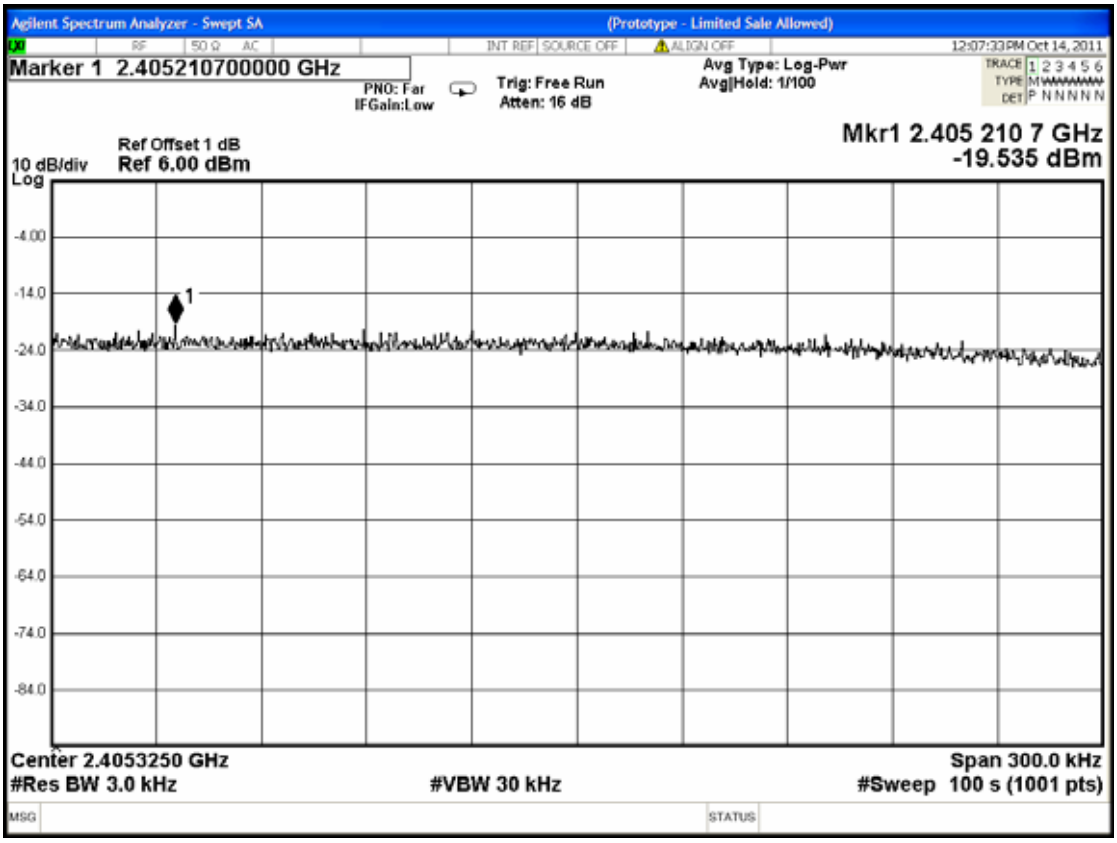
8.6. Test Results

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

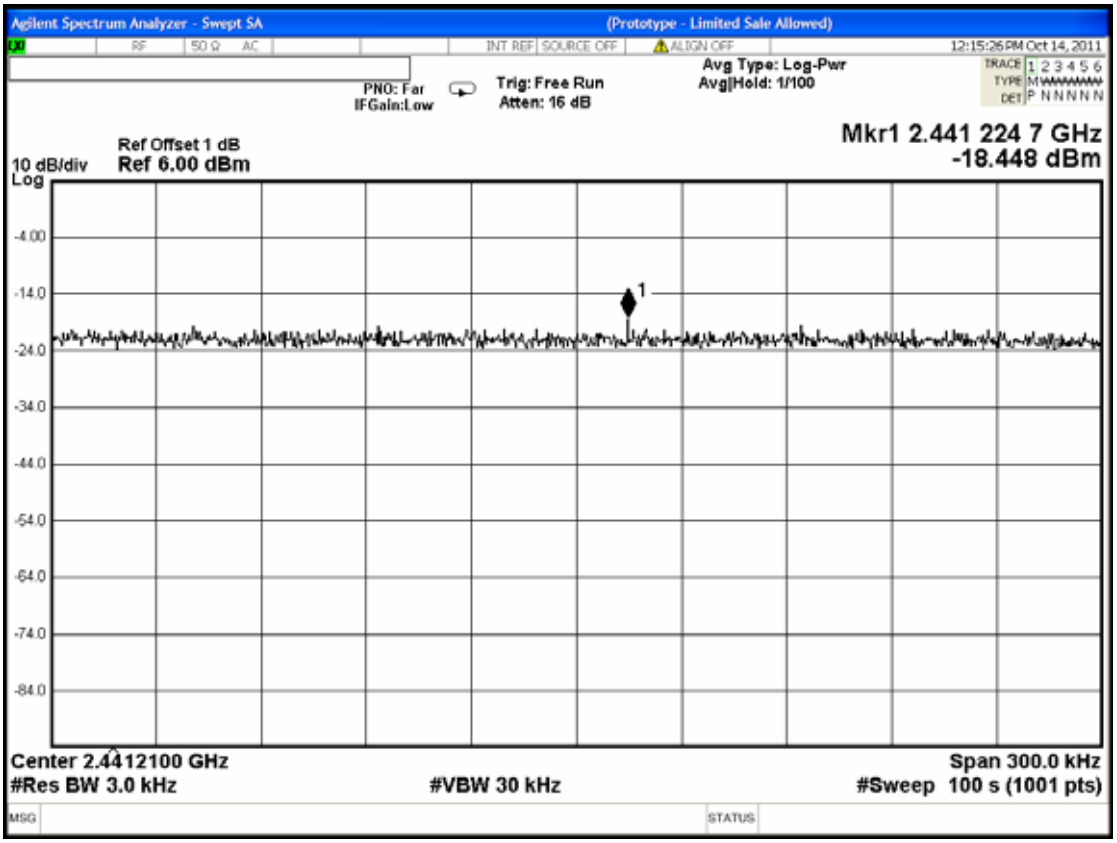
(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

Channel	Frequency	**Power Spectral Density**	Limit
20	2405MHz	**-19.535dBm**	8dBm
20	2441MHz	**-18.448dBm**	8dBm
38	2477MHz	**-24.745dBm**	8dBm

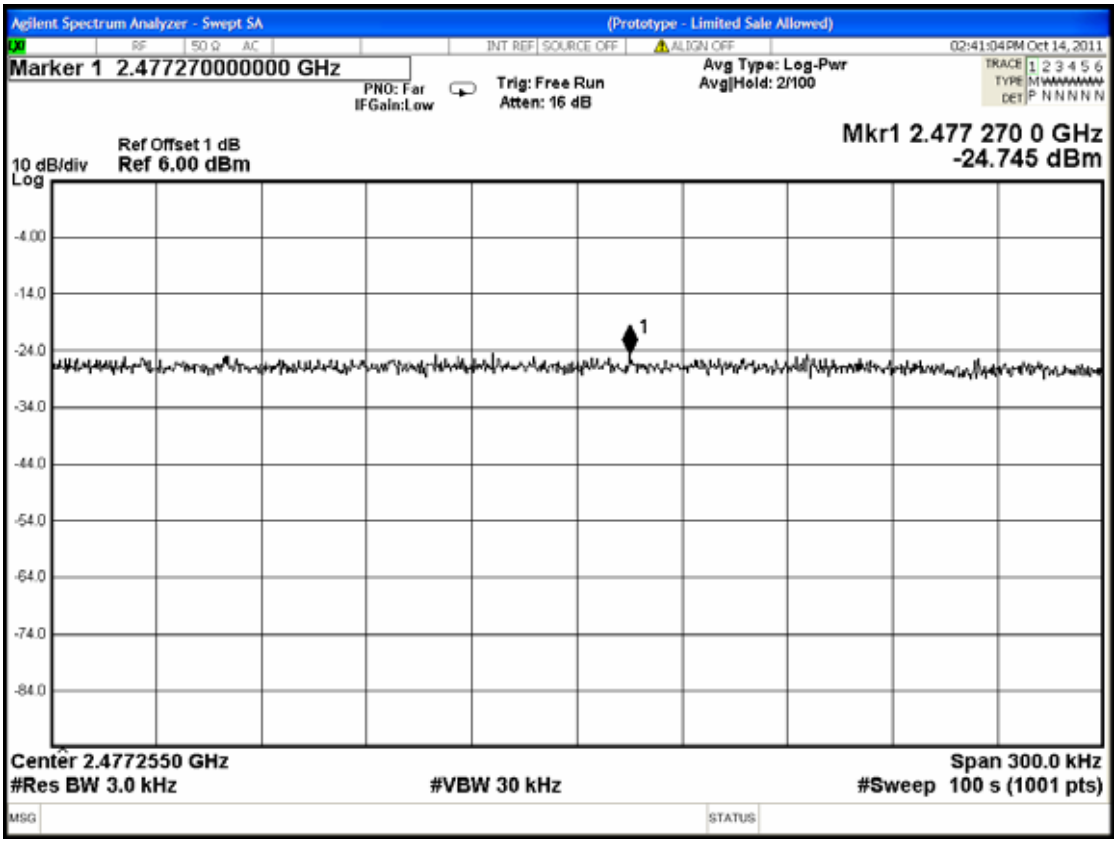
Frequency: 2405MHz



Frequency: 2441MHz



Frequency: 2477MHz



9. OCCUPIED BANDWIDTH 99% POWER MEASUREMENT

9.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A-507	MY49061167	Feb. 24, 11'	Feb. 23, 12'

9.2. Block Diagram of Test Setup

The same as section.4.2.

9.3. Specification Limits (RSS-Gen §4.6.1)

The emission bandwidth may be taken as the bandwidth within which is 99% of the transmitter output power. The 20 dB bandwidth may also be used instead, when the spectral density has decreased by 20 dB from the in band spectral density. For the determination of the 20 dB bandwidth, the measurement bandwidth should be in the order of 1.0% of the emission bandwidth and VBW=3 times RBW.

9.4. Operating Condition of EUT

The test program "AMD2flash V1.45.002" was used to enable the EUT to transmit data at different channel frequency individually.

9.5. Test Procedure

The RF output of EUT was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using 30kHz RBW and 100kHz VBW, set span = 3MHz and sweep time = auto.

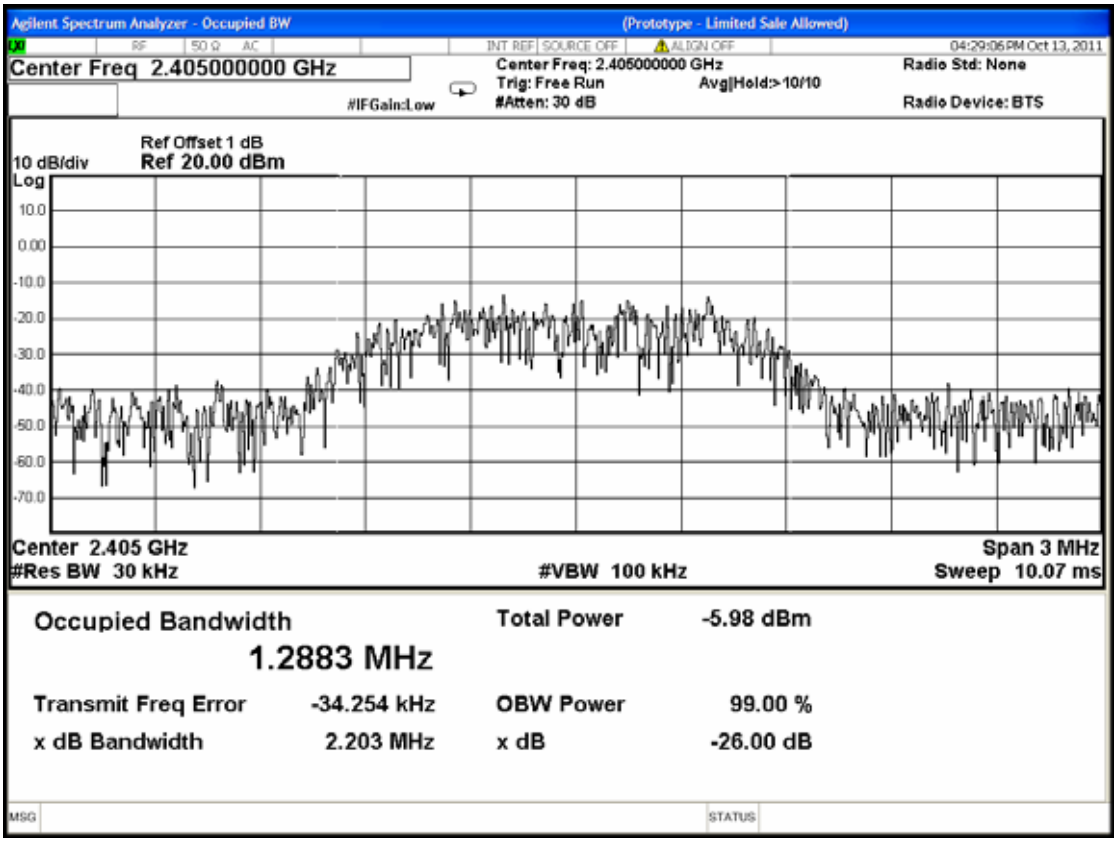
9.6. Test Results

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

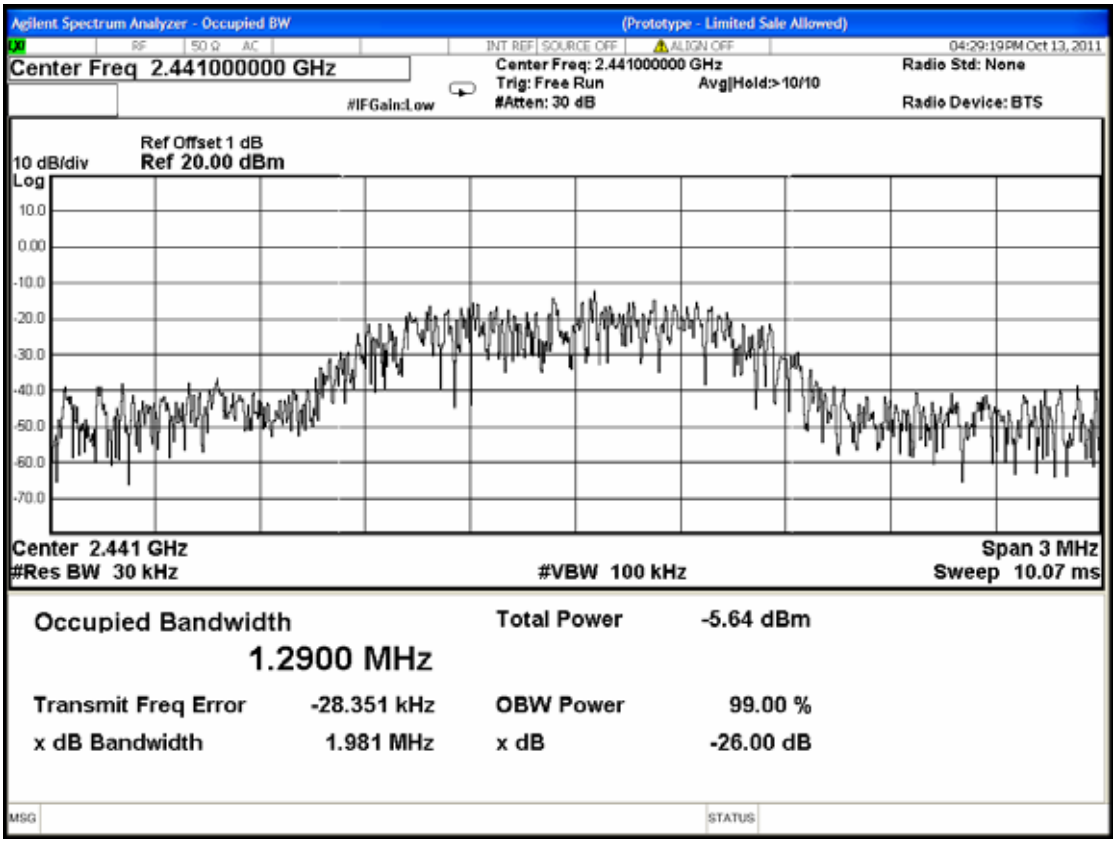
(Test Date : Oct. 14, 2011 Temperature : 26℃ Hum idity : 61%)

Channel	Frequency	**Occupied Bandwidth**
20	2405MHz	**1.2883MHz**
20	2441MHz	**1.2900MHz**
38	2477MHz	**1.3324MHz**

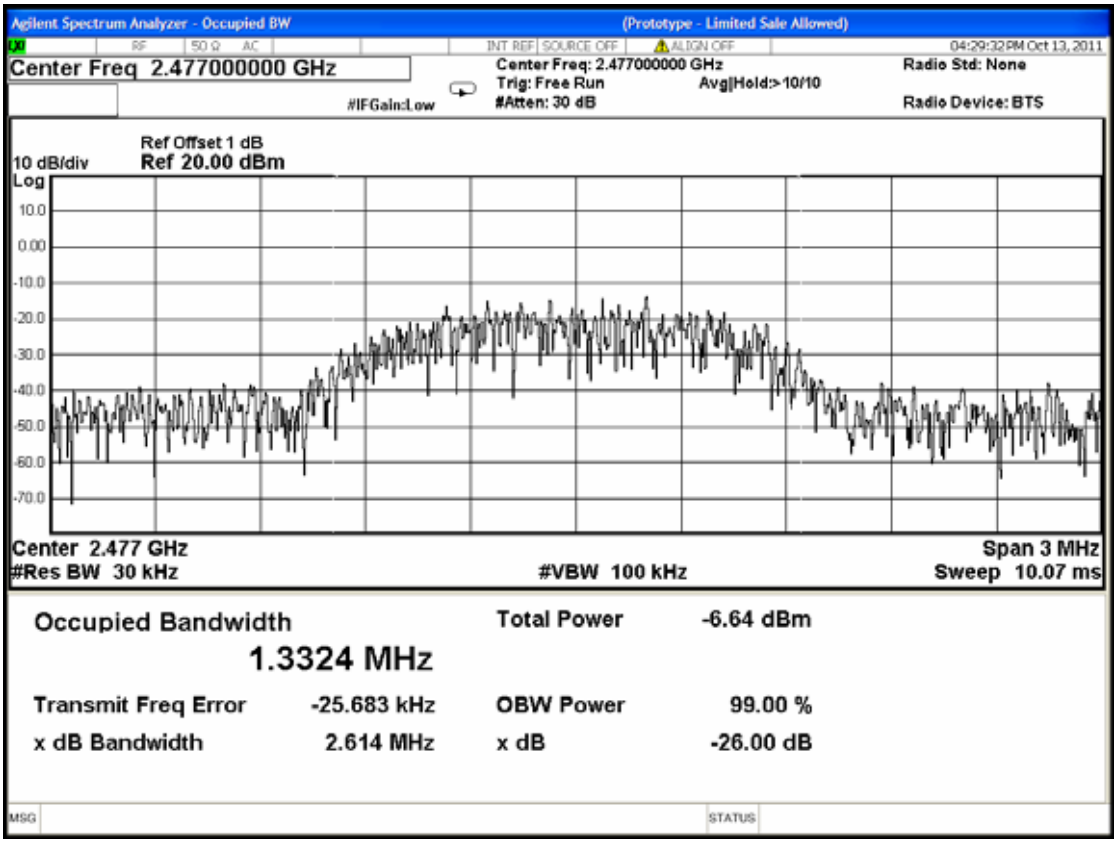
Frequency: 2405MHz



Frequency: 2441MHz



Frequency: 2477MHz



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 Below 1GHz

11.2.2. Frequency Above 1GHz

11.3.Photo of Section RF Conducted Measurement