EMC
TEST REPORT

Report No.: 151000317TWN-001
Model No.: AIWPTFI4U1
Issued Date: Oct. 30, 2015

Applicant:	**Nexxt Solutions** **3505 N.W 107TH AVE. MIAMI, Florida 33178, United States**
Test Method/ Standard:	**FCC Part 15 Subpart C Section §15.205, §15.207, §15.209, §15.247, DA 00-705 and ANSI C63.4/2003**
Test By:	**Intertek Testing Services Taiwan Ltd.** **No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li,** **Shiang-Shan District, Hsinchu City, Taiwan**

Testing Laboratory
0597

The test report was prepared by: Candy Liu / Assistant

These measurements were taken by: Terry Hsu / Engineer

The test report was reviewed by: Jimmy Yang

Name Jimmy Yang
Title Senior Engineer

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Summary of Tests

Test Item	Reference	Results
20dB Bandwidth test	15.247(a)(1)	Pass
Carrier Frequency Separation test	15.247(a)(1)	Pass
Number of hopping frequencies test	15.247(a)(1)	Pass
Time of Occupancy (dwell time) test	15.247(a)(1)	Pass
Maximum Output Power test	15.247(b)	Pass
RF Antenna Conducted Spurious test	15.247(d)	Pass
Radiated Spurious Emission test	15.205, 15.209	Pass
Emission on the Band Edge test	15.247(d)	Pass
AC Power Line Conducted Emission test	15.207	Pass

1. General information

1.1 Identification of the EUT

Product:	Wireless Baby Monitor
Model No.:	AIWPTFI4U1
FCC ID.:	X4YRMI4U1M
Frequency Range:	2408MHz~2468MHz
Available Hopping Channels:	31 channels
Frequency of Each Channel:	2408+2k, k＝0~30
Type of Modulation:	GFSK, FHSS
Rated Power:	1. DC 6 V from adapter 2. DC 3.7 V from battery
Power Cord:	N/A
Sample Received:	Jun. 13, 2013
Test Date(s):	Jun. 24, 2013~Aug. 08, 2013
Note 1:	This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
Note 2:	When determining the test conclusion, the Measurement Uncertainty of test has been considered.

1.2 Additional information about the EUT

The EUT is Wireless Baby Monitor, and was defined as information technology equipment.

For more detail features, please refer to User's manual as file name “Installation guide.pdf”

1.3 Antenna description

The EUT uses a permanently connected antenna.

Antenna Gain	: 0dBi
Antenna Type	: Monopole Antenna
Connector Type	: Fixed Type Antenna

1.4 Adapter information

The EUT will be supplied with a power supply from below list:

No.	Brand	Model no.	Specification
Adapter	NEXXT SOLUTIONS	OH-1048A0600800U2	I/P: 100-240V~, 50/60Hz, 0.2A O/P: 6.0V, 0.8A
Adapter	NEXXT SOLUTIONS	TS-A005-060008A1	I/P: 100-240V~, 50/60Hz, 0.2A O/P: 6.0V, 0.8A

1.5 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Description of Data Cable
Wireless Baby Camera	NEXXT SOLUTIONS	AIWPTFI4U1	N/A	N/A

2. Test specifications

2.1 Test standard

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section §15.205, §15.207, §15.209, §15.247, DA 00-705 and ANSI C63.4/2003.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band was all meet limit requirement, thus we evaluate the EUT pass the specified test.

2.2 Operation mode

The EUT is supplied with DC 6 V from adapter (Test voltage: 120Vac, 60Hz).

The EUT is the type of transmitter and receiver equipment and transmits RF signal.

The EUT configuration refers to the “Spurious set-up photo.pdf”.

2.3 Measurement Uncertainty

Measurement uncertainty was calculated in accordance with TR 100 028-1

Parameter	Uncertainty		
Radiated Emission	Below 1 GHz	Vertical	3.90 dB
		Horizontal	3.86 dB
	Above 1 GHz	Vertical	5.74 dB
		Horizontal	5.55 dB
Conducted Emission	2.08 dB		

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of *k*=2.

2.4 Test equipment

Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100018	2012/11/30	2013/11/29
Spectrum Analyzer	Rohde&schwarz	FSP30	100137	2013/06/21	2014/06/21
Spectrum Analyzer	Rohde&schwarz	FSEK30	100186	2013/01/23	2014/01/23
Horn Antenna (1-18G)	Schwarzbeck	BBHA 9120 D	9120D-456	2012/09/03	2014/09/03
Horn Antenna (14-42G)	SHWARZBECK	BBHA 9170	BBHA9170159	2012/09/05	2014/09/05
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2011/07/26	2013/07/25
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2013/08/08	2015/08/08
Loop Antenna	RolfHeine	LA-285	02/10033	2012/03/20	2014/03/20
Pre-Amplifier	MITEQ	AFS44-00102650--42-10P-44	1495287	2011/10/27	2013/10/26
Pre-Amplifier	MITEQ	JS4-26004000--27-8A	828825	2012/09/18	2014/09/18
Power Meter	Anritsu	ML2495A	0844001	2012/10/09	2013/10/09
Power Senor	Anritsu	MA2411B	0738452	2012/10/09	2013/10/09
Temperature&Humidity Test Chamber	TERCHY	MHU-225LRU (SA)	950838	2013/06/14	2014/06/14
Two-Line V-Network	Rohde&schwarz	ESH3-Z5	838979/014	2012/10/29	2013/10/29
Singal Analyzer	Agilent	N9030A	MY51380492	2012/09/19	2013/09/19

Note: The above equipments are within the valid calibration period.

3. 20dB Bandwidth test

3.1 Operating environment

Temperature: 23 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa
Test Date: Jul. 31, 2013~Aug. 08, 2013

3.2 Test setup & procedure

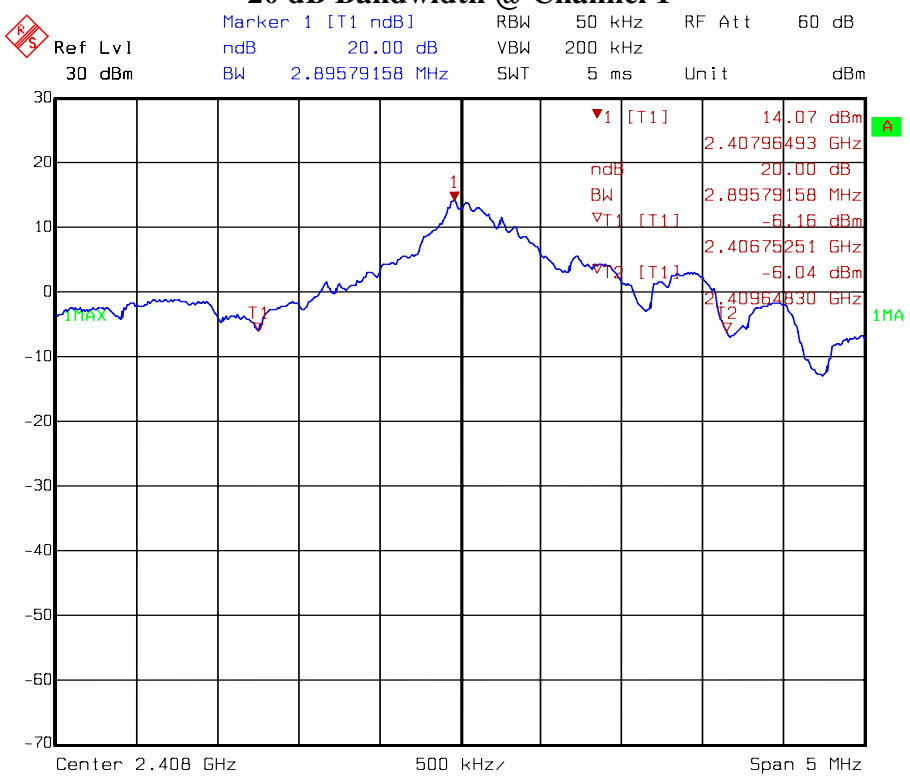
The test procedure was according to FCC measurement guidelines DA 00-705.
The 20dB bandwidth per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set≧1% of the Span, the video bandwidth ≧ RBW, and the SPAN may equal to approximately 2 to 3 times the 20dB bandwidth. The test was performed at 3 channels (lowest, middle and highest channel). The maximum 20dB modulation bandwidth is in the following Table.

3.3 Measured data of modulated bandwidth test results

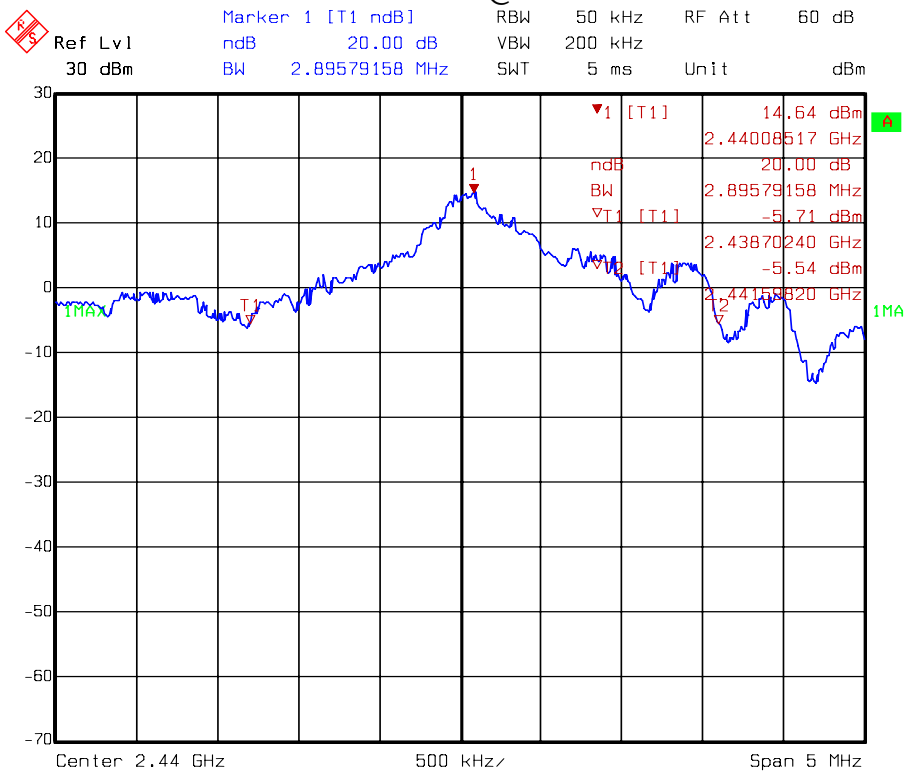
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
1	2408	2.895
17	2440	2.895
31	2468	2.555

Please see the plot below.

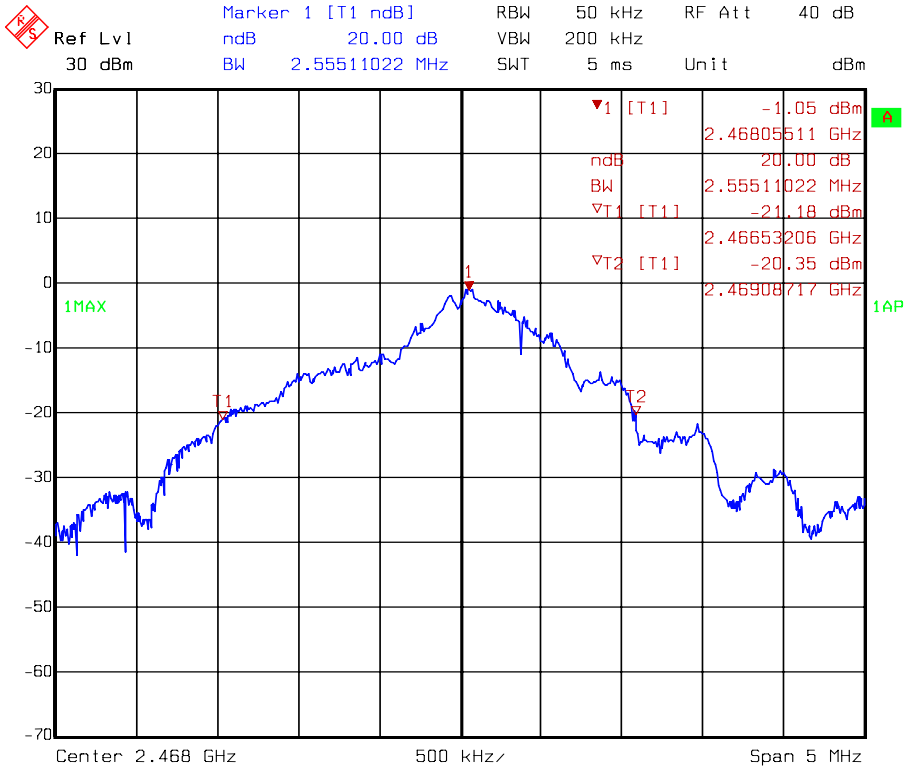
20 dB Bandwidth @ Channel 1



20 dB Bandwidth @ Channel 17



20 dB Bandwidth @ Channel 31



4. Carrier Frequency Separation test

4.1 Operating environment

Temperature: 23 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa
Test Date: Jul. 12, 2013

4.2 Test setup & procedure

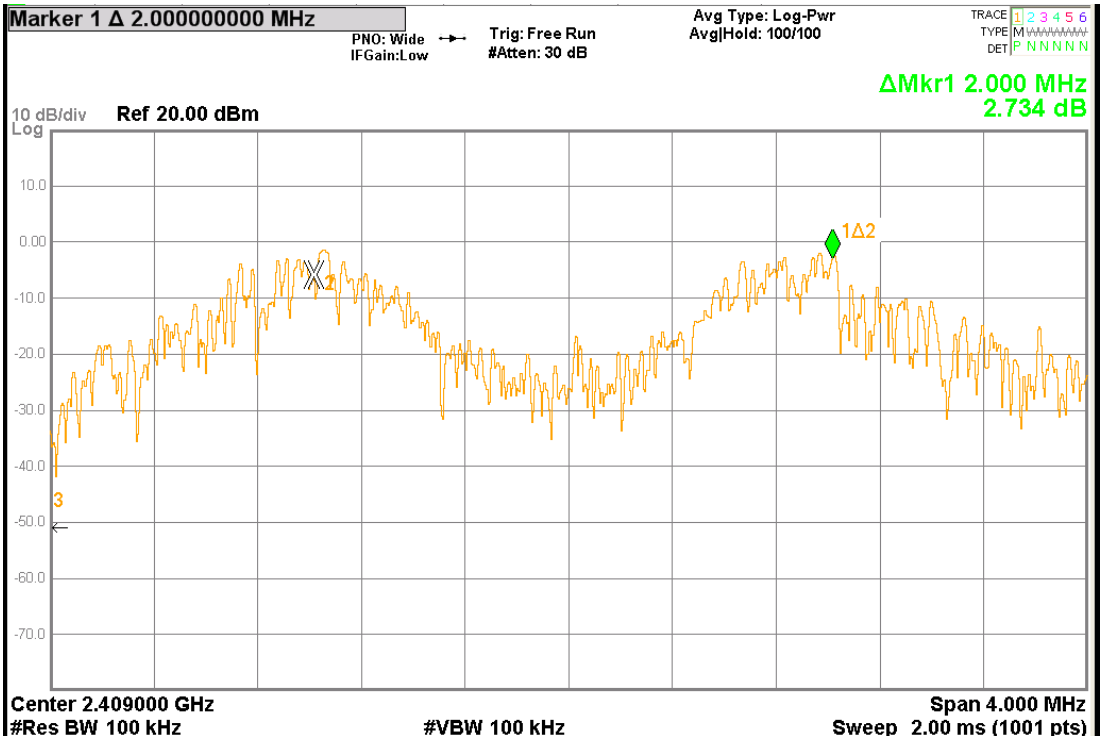
The test procedure was according to FCC measurement guidelines DA 00-705.
The carrier frequency separation per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧ 1% of the span, the video bandwidth ≧ RBW, and the SPAN was wide enough to capture the peaks of two adjacent channels. The carrier frequency separation result is in the following Table.

4.3 Measured data of Carrier Frequency Separation test result

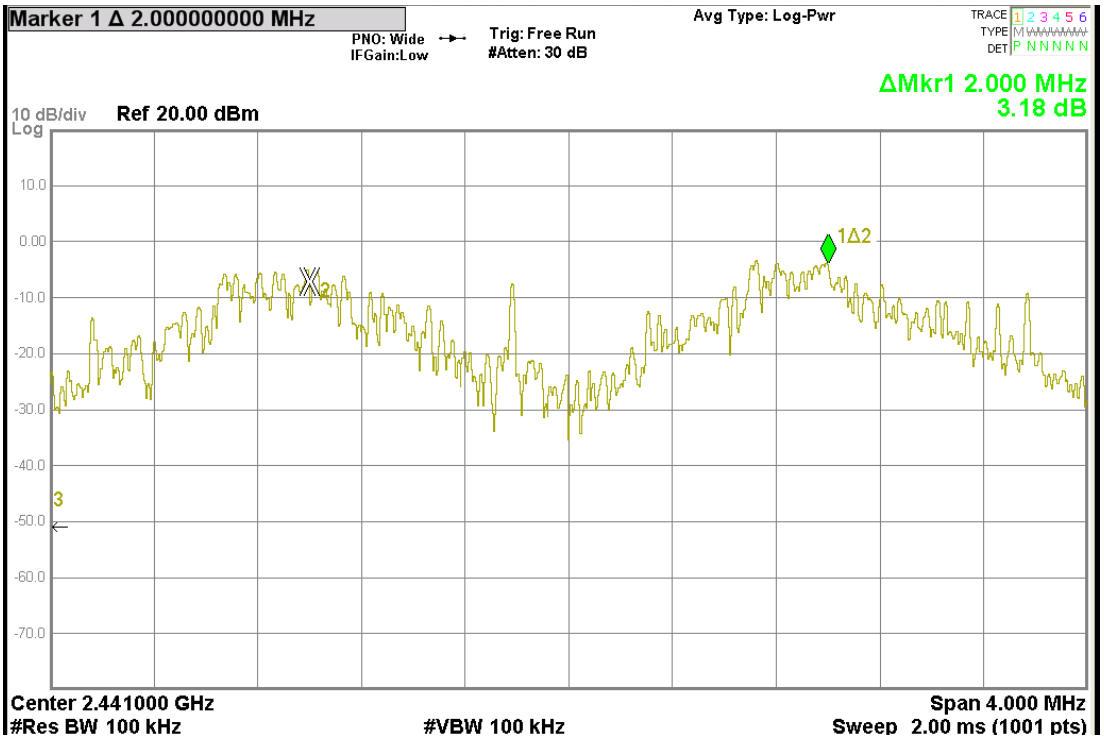
Channel	Frequency (MHz)	Carrier freq. Separation (MHz)	Limit 20dB BW*2/3(kHz)
Channel 1~2	2408	2.000	1930
	2409		
Channel 17~18	2440	2.000	1930
	2441		
Channel 30~31	2467	2.008	1703
	2468		

Please see the plot below.

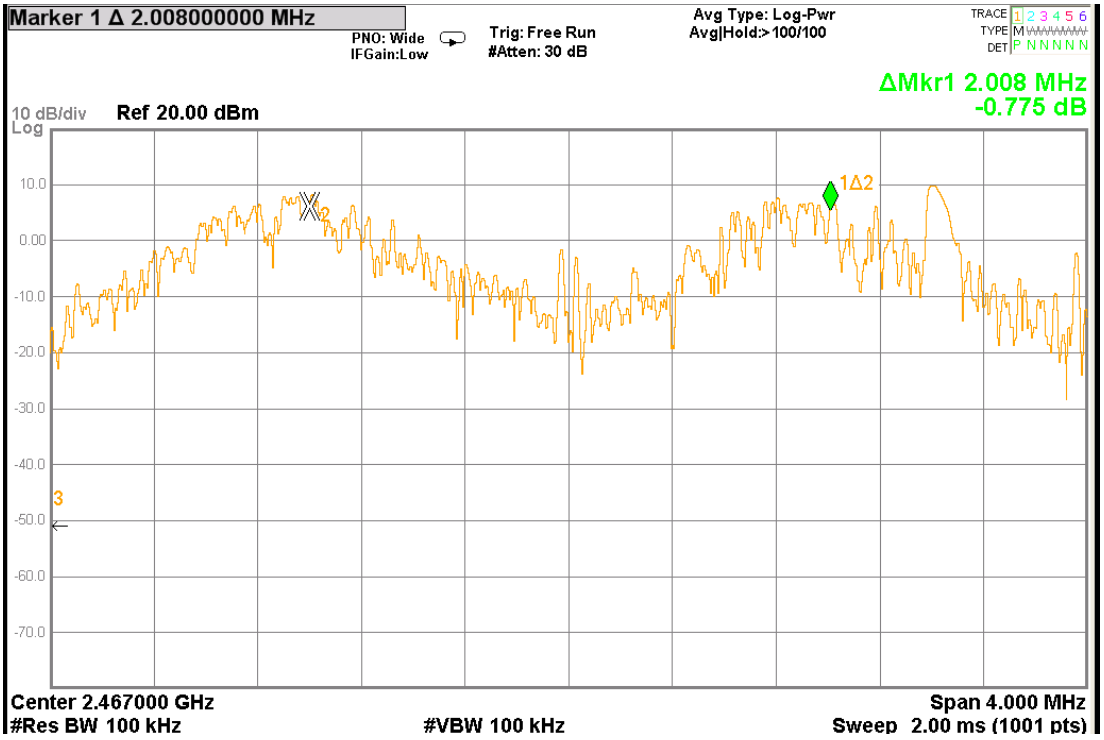
Carrier Frequency Separation @ Channel 1~2



Carrier Frequency Separation @ Channel 17~18



Carrier Frequency Separation @ Channel 30~31



5. Number of hopping frequencies test

5.1 Operating environment

Temperature:	25	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jul. 16, 2013	

5.2 Test setup & procedure

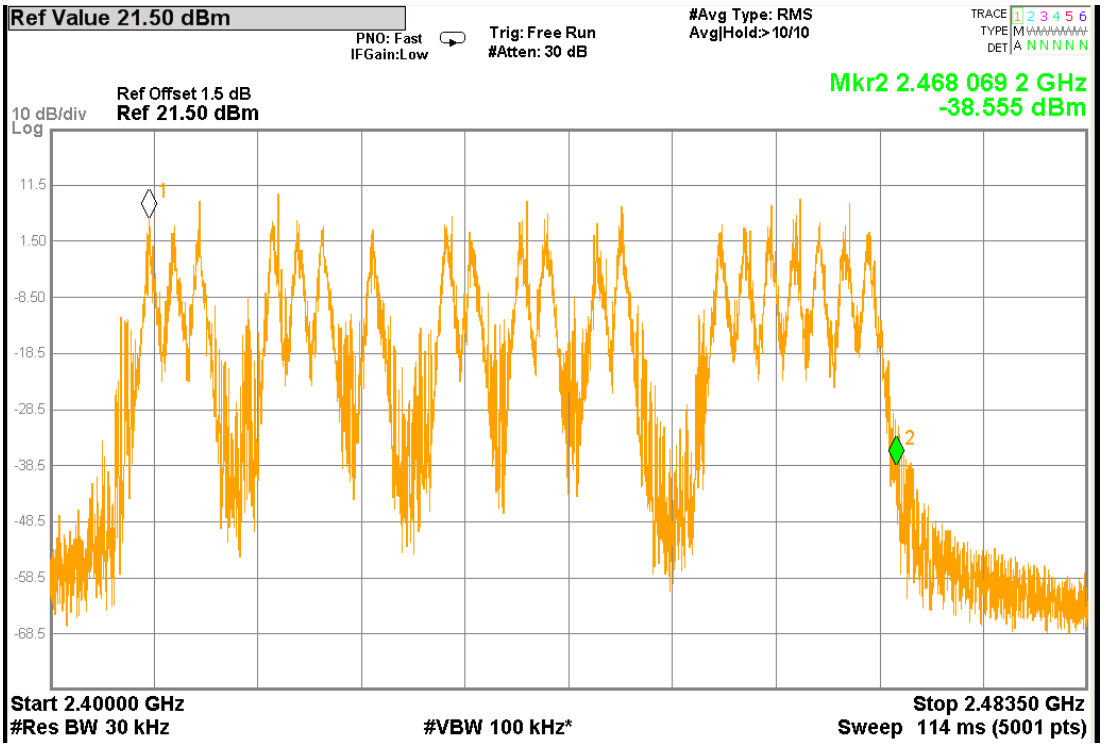
The test procedure was according to FCC measurement guidelines DA 00-705.
The number of hopping frequencies per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧1% of the span, the video bandwidth ≧ RBW, and the SPAN was the frequency band of operation. The carrier frequency separation result is in the following Table.

5.3 Measured data of number of hopping frequencies test result

Frequency Range (MHz)	Hopping Channels
2408~2468	20

Note: According to 15.247 paragraph (g): Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission.
The system declares the EUT supports 31 channels. However, the system distributes its transmissions from 16~20 hopping channels during each transmission, so we define the EUT supports 20 hopping channels.

Number of hopping frequencies



6. Time of Occupancy (dwell time) & Duty Cycle Correction Factor test

6.1 Operating environment

Temperature: 24 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa
Test Date: Jul. 16, 2013~Jul. 19, 2013

6.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The time of occupancy (dwell time) per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth ≧ RBW, and the zero span function of spectrum analyzer was enable. The EUT has its hopping function enable.

6.3 Measured data of Maximum Output Power test results

The total sweep time is 0.4 s×20 Channels =8 s

Time of occupancy (dwell time) for Ch 1
Number of Hops in 8s=16, Single Pulse Width = 0.00137 sec
Dwell time = Pulse Width×16= 0.022 s

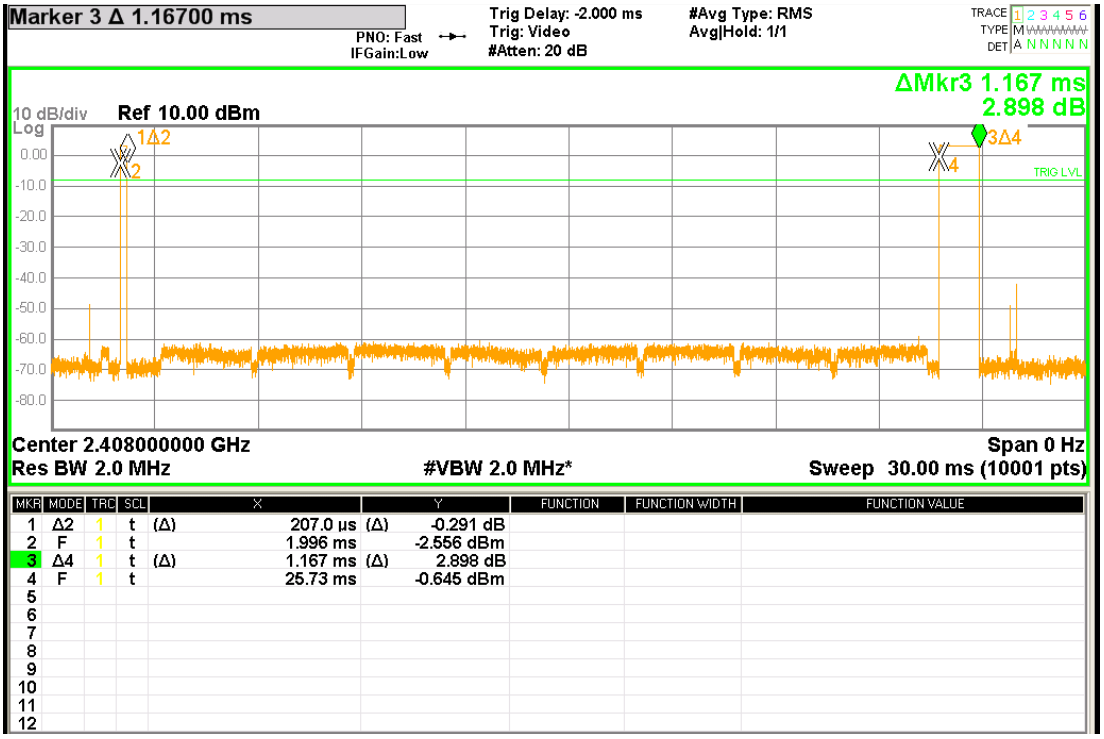
Time of occupancy (dwell time) for Ch 17
Number of Hops in 8s=16, Single Pulse Width = 0.00153 sec
Dwell time = Pulse Width×16= 0.0244 s

Time of occupancy (dwell time) for Ch 31
Number of Hops in 8s=16, Single Pulse Width = 0.00163 sec
Dwell time = Pulse Width×16= 0.0261 s

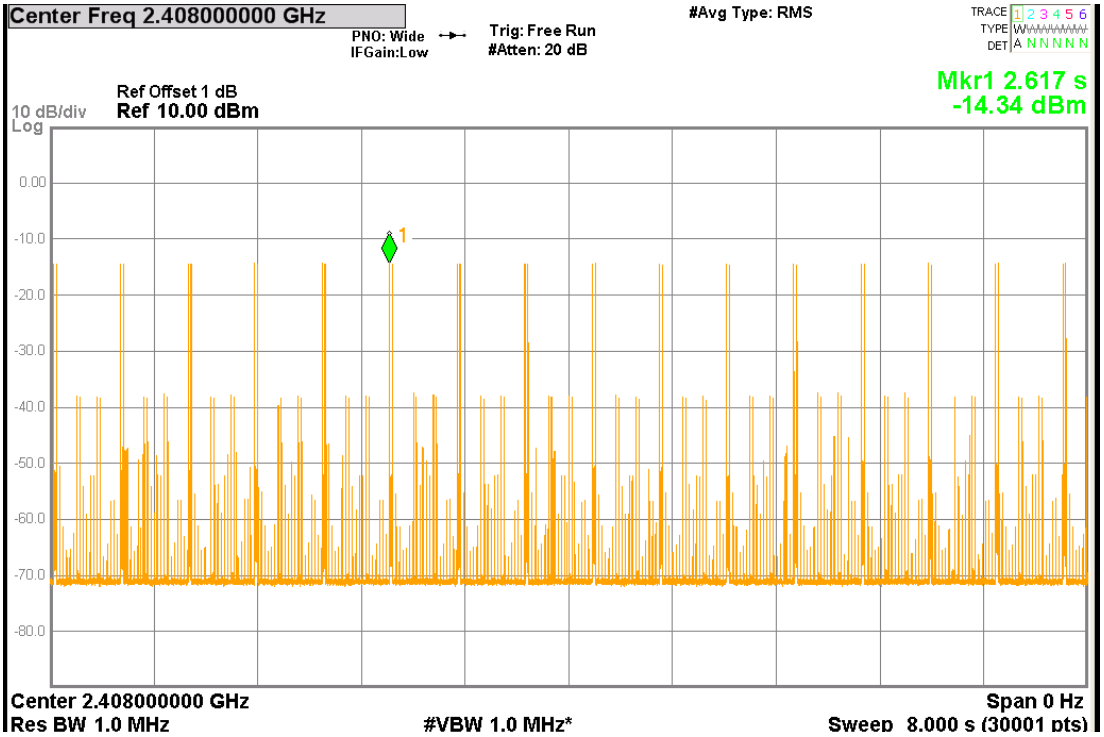
Channel	Short on time (ms)	Long on time (ms)	Pulse duration (ms)	Number of pulse	Measure time (s)	Dwell time (s)	Limit (s)
1	0.207	1.167	1.37	16	8	0.0220	0.4
17	0.204	1.323	1.53	16	8	0.0244	0.4
31	0.21	1.419	1.63	16	8	0.0261	0.4

Please see the plot below.

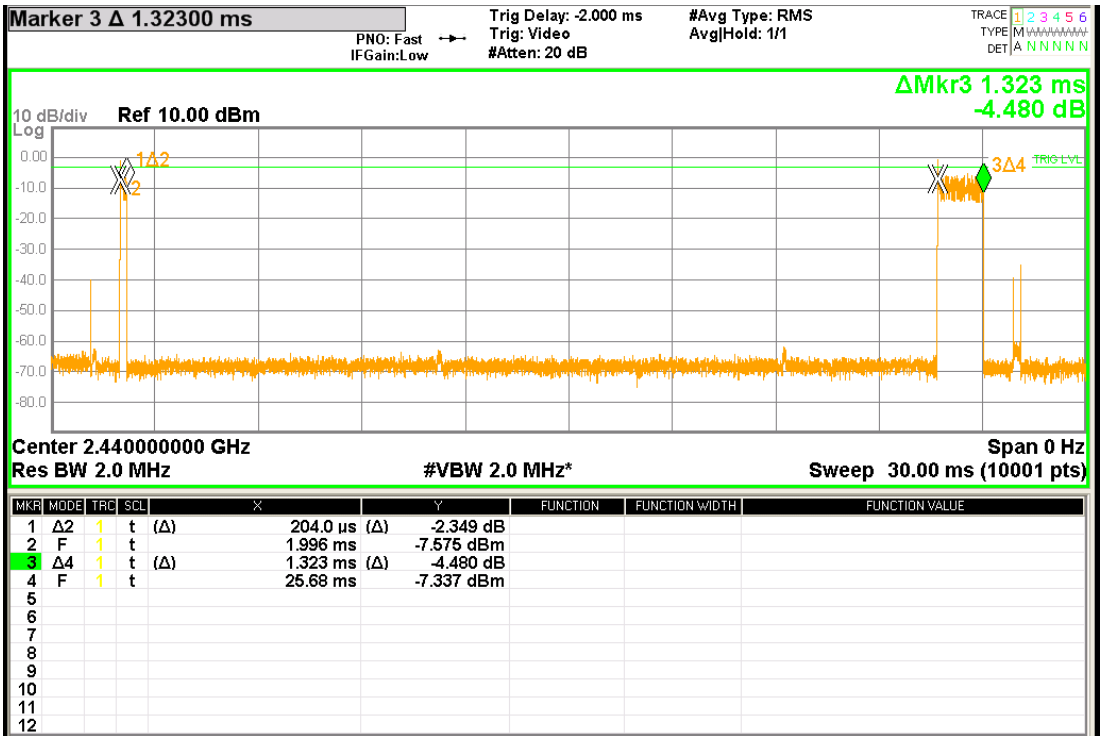
Dwell time (Pulse time) @ Channel 1



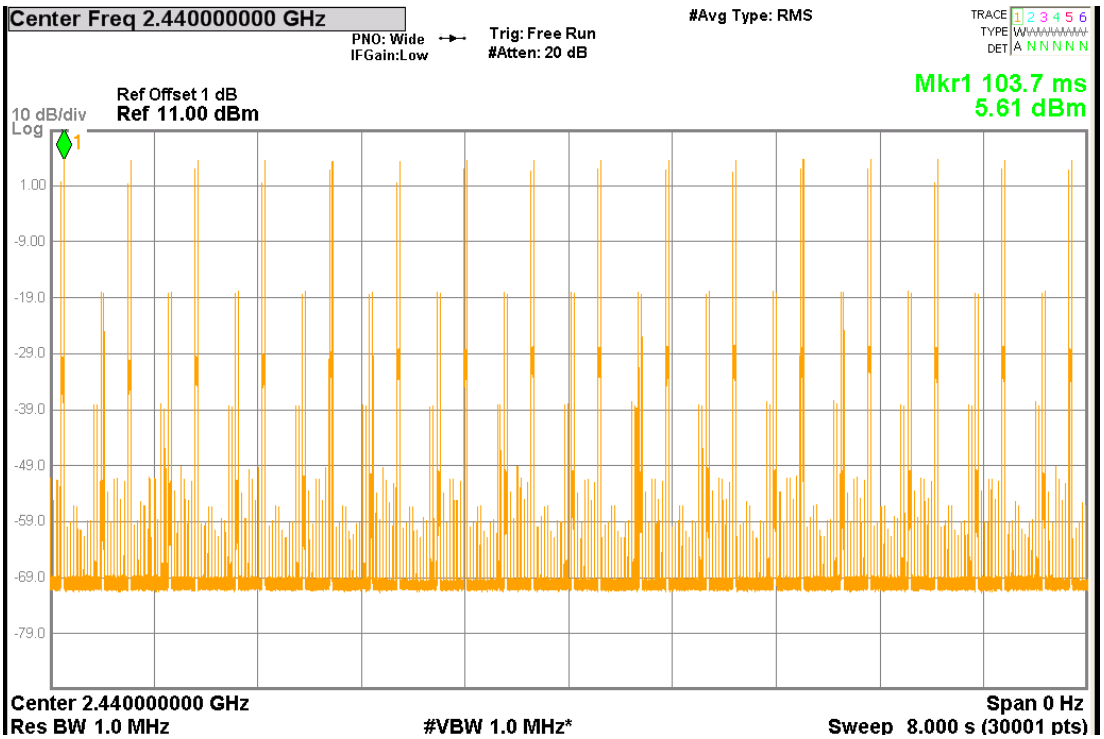
Dwell time (Number of pulse) @ Channel 1



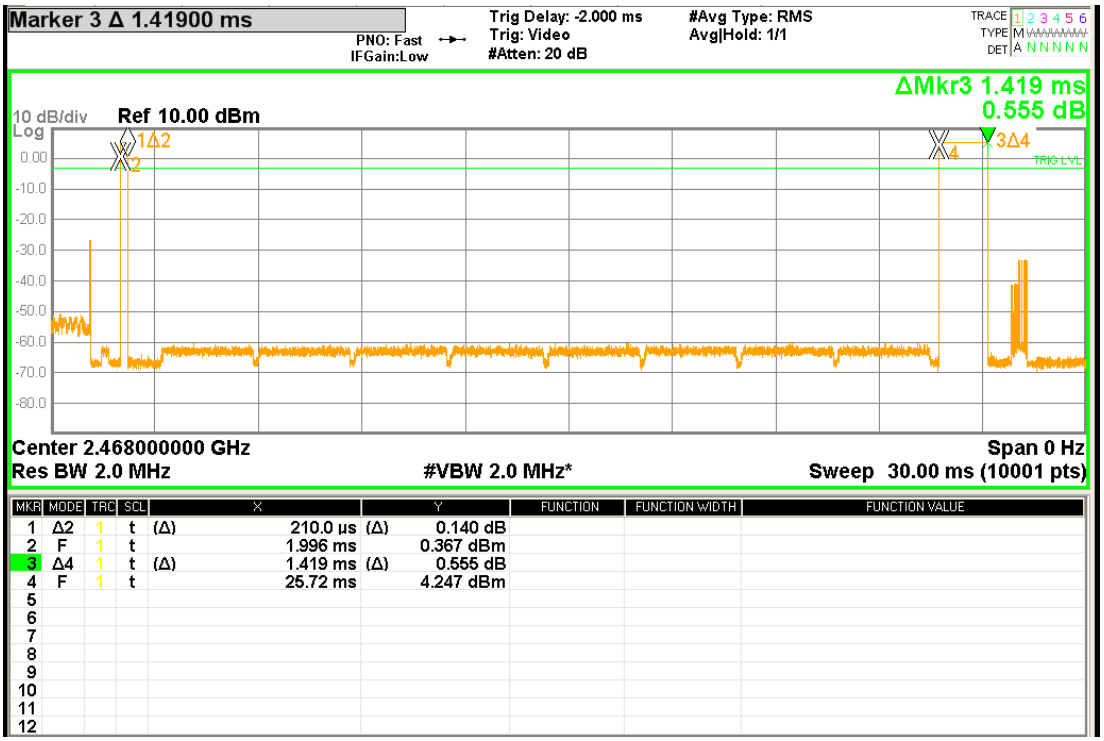
Dwell time (Pulse time) @ Channel 17



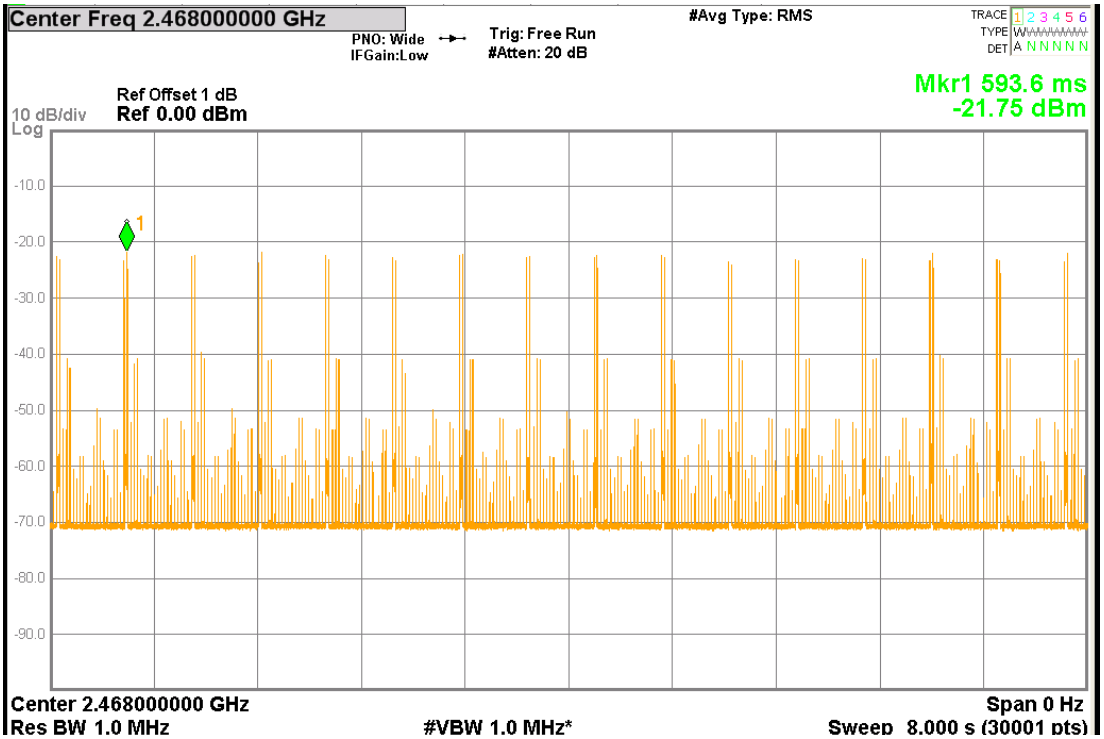
Dwell time (Number of pulse) @ Channel 17



Dwell time (Pulse time) @ Channel 31



Dwell time (Number of pulse) @ Channel 31



7. Maximum Output Power test

7.1 Operating environment

Temperature: 23 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa
Test Date: Jul. 17, 2013

7.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The power output per FCC §15.247(b) was measured on the EUT using a 50 ohm SMA cable connected to peak power meter via power sensor. Power was read directly and cable loss correction (2 dB) was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel).

7.3 Measured data of Maximum Output Power test results

Channel	Frequency (MHz)	Output Power (dBm) (PK)	Total Power (mW) (PK)	Limit (dBm)	Margin (dB)
1	2408	17	50.12	20.97	-3.97
17	2440	17.97	62.66	20.97	-3.00
31	2468	18.61	72.61	20.97	-2.36

8. RF Antenna Conducted Spurious test

8.1 Operating environment

Temperature:	23	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jul. 12, 2013	

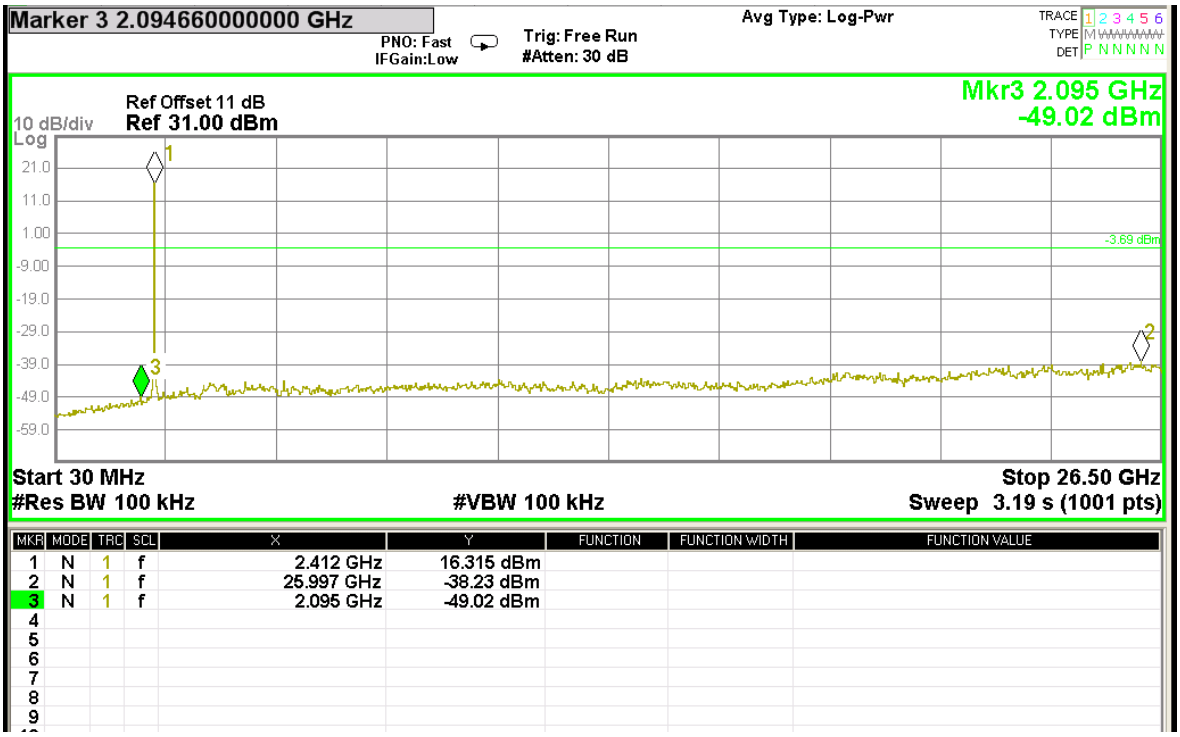
8.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

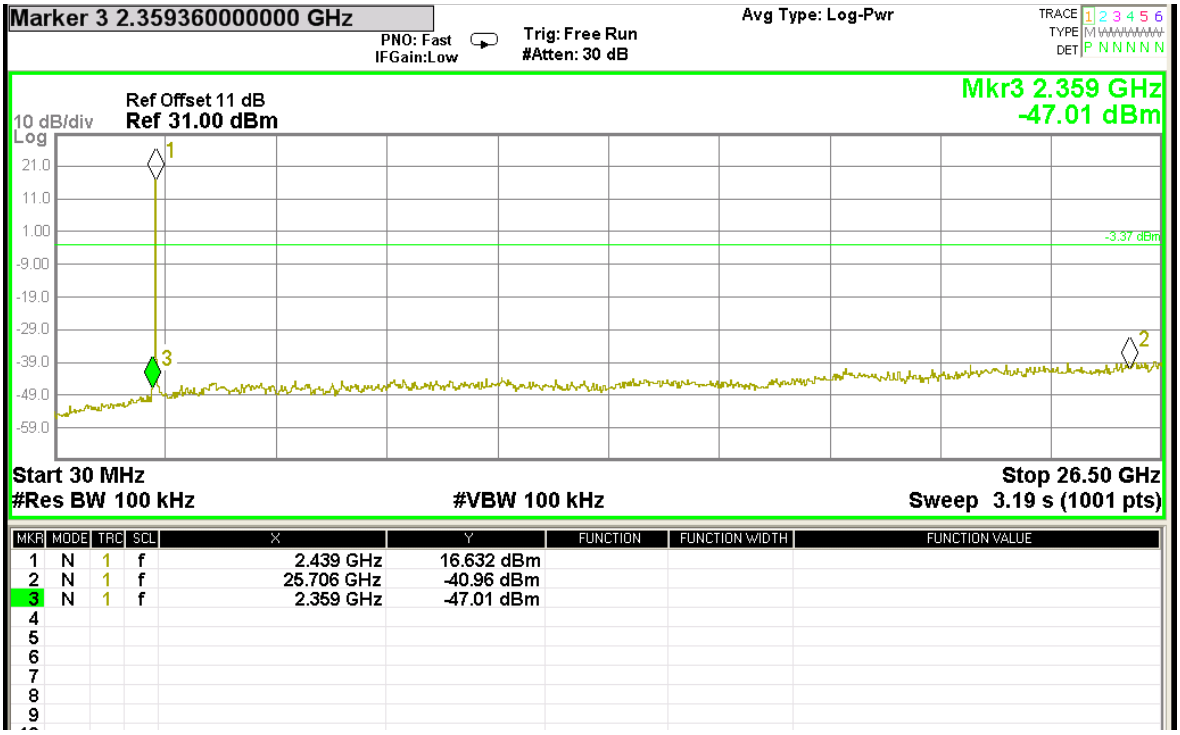
The measurements were performed from 30MHz to 25GHz RF antenna conducted per FCC 15.247 (c) was measured from the EUT antenna port using a 50ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 100 kHz.
Harmonics and spurious noise must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The table below is the results from the highest emission for each channel within the authorized band. This table was used to determine the spurious limits for each channel.

8.3 Measured data of the highest RF Antenna Conducted Spurious test result

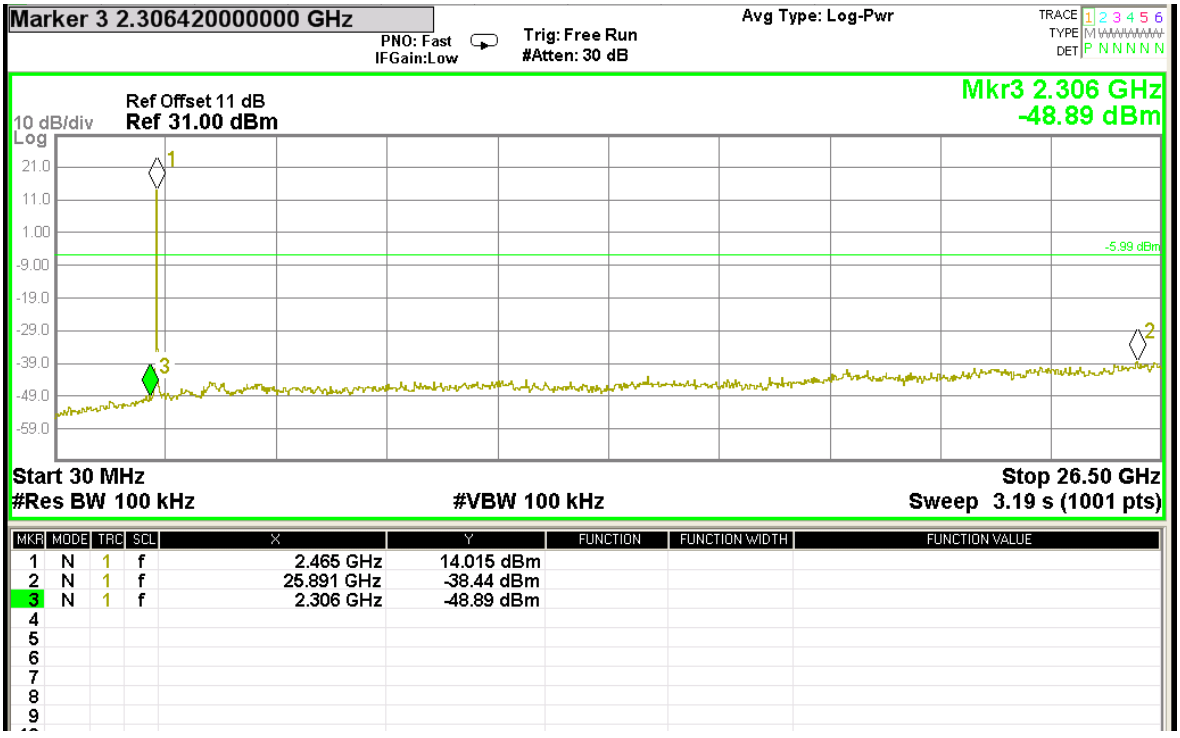
Conducted spurious @ Channel 1



Conducted spurious @ Channel 17



Conducted spurious @ Channel 31



9. Radiated Emission test

9.1 Operating environment

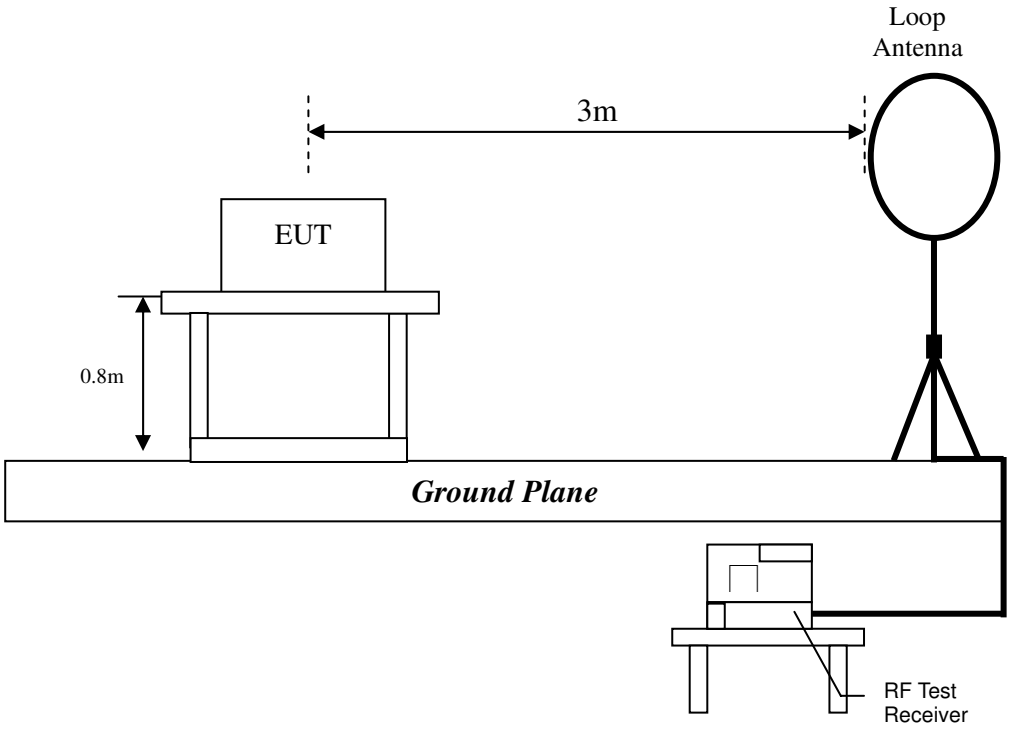
Temperature:	28	℃
Relative Humidity:	52	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jul. 04, 2013~Jul. 17, 2013	

9.2 Test setup & procedure

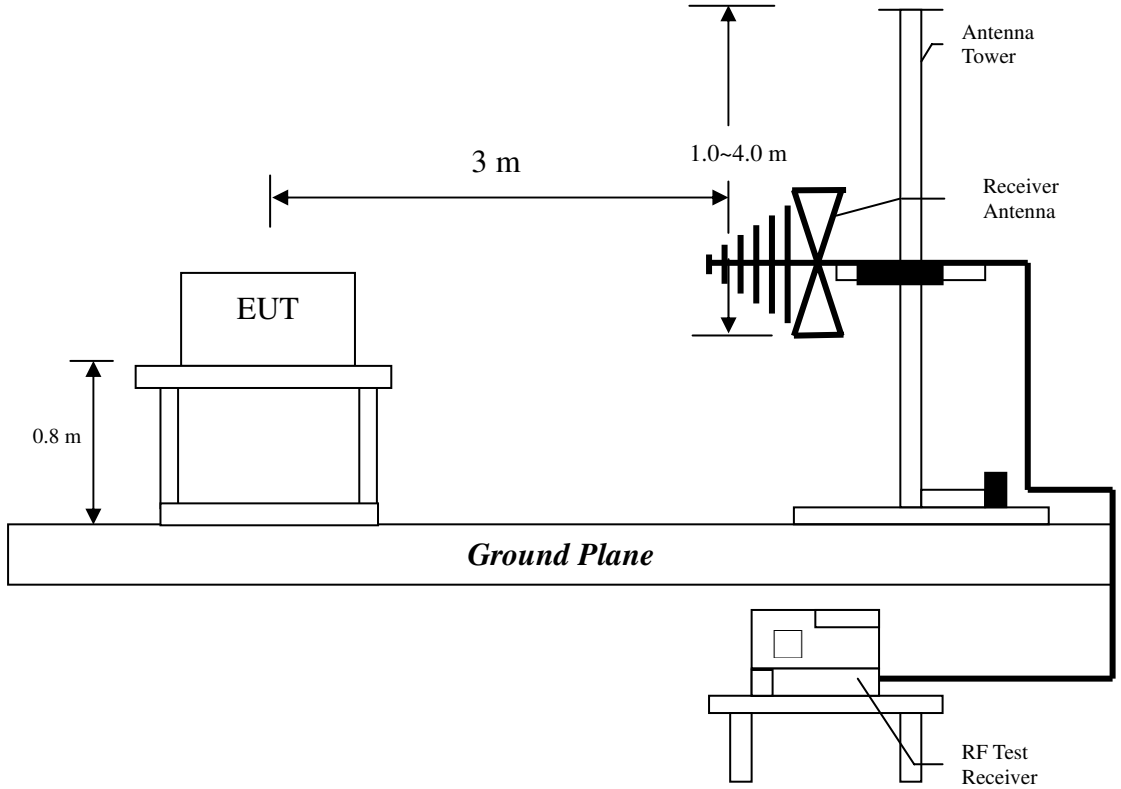
The test procedure was according to FCC measurement guidelines DA 00-705 and ANSI C63.4/2003.

The Diagram below shows the test setup, which is utilized to make these measurements.

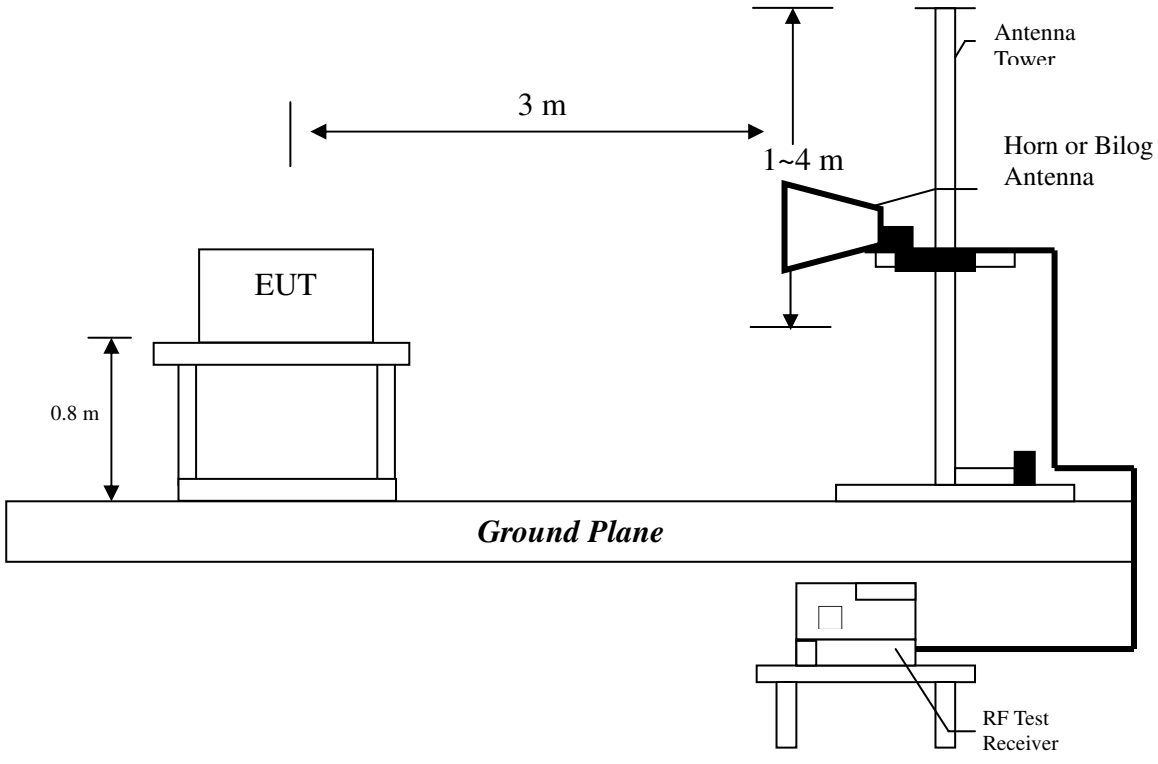
Radiated emission from 9kHz to 30MHz uses Loop Antenna:



Radiated emission from 30MHz to 1GHz uses Bilog Antenna:



Radiated emission above 1GHz uses Horn Antenna:



The signal is maximized through rotation and placement in the three orthogonal axes. According to §15.33(a), the spectrum shall be investigated from the lowest radio frequency signal generated in the device, to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz – for frequencies above 1GHz.

The EUT for testing is arranged on a fiberglass turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent 3 meter reading using inverse scaling with distance.

The EUT configuration refers to the "Spurious set-up photo.pdf".

9.3 Emission limits

The spurious Emission shall test through the 10th harmonic. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Frequency (MHz)	Field Strength (microvolts/meter)
0.009~0.490	2400/F(kHz)
0.490~1.705	2400/F(kHz)
1.705~30	30
30-88	100
88-216	150
216-960	200
Above 960	500

Remark:
1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

9.4 Radiated spurious emission test data

9.4.1 Measurement results: frequencies equal to or less than 1 GHz

The test was performed on EUT under Channel 1, Channel 17 and Channel 31. The worst case occurred at Channel 1.

EUT : AIWPTFI4U1
Worst Case : TX mode at Channel 1

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	51.34	QP	12.90	21.34	34.23	40.00	-5.77
V	101.78	QP	7.64	25.10	32.74	43.50	-10.76
V	191.02	QP	12.00	9.61	21.61	43.50	-21.89
V	288.02	QP	13.70	9.50	23.19	46.00	-22.81
V	480.08	QP	18.43	11.22	29.64	46.00	-16.36
V	864.20	QP	23.70	9.49	33.19	46.00	-12.81
H	101.78	QP	9.03	11.77	20.79	43.50	-22.71
H	191.02	QP	11.27	9.31	20.57	43.50	-22.93
H	288.02	QP	13.85	10.34	24.18	46.00	-21.82
H	480.08	QP	18.64	13.58	32.22	46.00	-13.78
H	672.14	QP	21.52	12.07	33.58	46.00	-12.42
H	864.20	QP	24.12	13.89	38.00	46.00	-8.00

Remark:1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

Note: The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

9.4.2 Measurement results: frequency above 1GHz

EUT : AIWPTFI4U1
Test Condition : TX mode at Channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4816	PK	V	35.1	38.54	62.57	66.01	74	-7.99
4816	AV	V	35.1	38.54	46.8	50.24	54	-3.76
7224	PK	V	33	44.6	50.47	62.07	74	-11.93
7224	AV	V	33	44.6	36.85	48.45	54	-5.55
9632	PK	V	32.7	49.3	39.93	56.53	74	-17.47
9632	AV	V	32.7	49.3	28.11	44.71	54	-9.29
12040	PK	V	31.6	50.87	36.3	55.57	74	-18.43
12040	AV	V	31.6	50.87	24.51	43.78	54	-10.22
4816	PK	H	35.1	38.54	58.05	61.49	74	-12.51
4816	AV	H	35.1	38.54	44.91	48.35	54	-5.65
7224	PK	H	33	44.6	43.08	54.68	74	-19.32
7224	AV	H	33	44.6	31.24	42.84	54	-11.16
9632	PK	H	32.7	49.3	38.3	54.90	74	-19.10
9632	AV	H	32.7	49.3	25.55	42.15	54	-11.85
12040	PK	H	31.6	50.87	36.81	56.08	74	-17.92
12040	AV	H	31.6	50.87	25.6	44.87	54	-9.13

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : AIWPTFI4U1
Test Condition : TX mode at Channel 17

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4880	PK	V	35.1	38.54	61.62	65.06	74	-8.94
4880	AV	V	35.1	38.54	46.68	50.12	54	-3.88
7320	PK	V	33	44.6	46.58	58.18	74	-15.82
7320	AV	V	33	44.6	36.25	47.85	54	-6.15
9760	PK	V	32.7	49.3	44.37	60.97	74	-13.03
9760	AV	V	32.7	49.3	32.11	48.71	54	-5.29
12200	PK	V	31.6	50.87	35.81	55.08	74	-18.92
12200	AV	V	31.6	50.87	25.1	44.37	54	-9.63
4880	PK	H	35.1	38.54	56.86	60.30	74	-13.70
4880	AV	H	35.1	38.54	45.51	48.95	54	-5.05
7320	PK	H	33	44.6	48.07	59.67	74	-14.33
7320	AV	H	33	44.6	35.96	47.56	54	-6.44
9760	PK	H	32.7	49.3	41.92	58.52	74	-15.48
9760	AV	H	32.7	49.3	30.12	46.72	54	-7.28
12200	PK	H	31.6	50.87	34.25	53.52	54	-0.48

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : AIWPTFI4U1
Test Condition : TX mode at Channel 31

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4936	PK	V	35.1	38.54	65.12	68.56	74	-5.44
4936	AV	V	35.1	38.54	50.18	53.62	54	-0.38
7404	PK	V	33	44.6	48.45	60.05	74	-13.95
7404	AV	V	33	44.6	36.05	47.65	54	-6.35
9872	PK	V	33	49.3	52.23	68.53	74	-5.47
9872	AV	V	33	49.3	37.16	53.46	54	-0.54
12340	PK	V	33	50.87	35.62	53.49	54	-0.51
4936	PK	H	35.1	38.54	56.51	59.95	74	-14.05
4936	AV	H	35.1	38.54	43.94	47.38	54	-6.62
7404	PK	H	33	44.6	54.17	65.77	74	-8.23
7404	AV	H	33	44.6	41.29	52.89	54	-1.11
9872	PK	H	33	49.3	48.96	65.26	74	-8.74
9872	AV	H	33	49.3	36.48	52.78	54	-1.22
12340	PK	H	33	50.87	40.31	58.18	74	-15.82
12340	AV	H	33	50.87	28.07	45.94	54	-8.06

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

10. Emission on the band edge §FCC 15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

10.1 Operating environment

Temperature:	23	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa
Test Date:	Aug. 07, 2013	

10.2 Test setup & procedure

Please refer to the section 9.2 of this report.

10.3 Test Result

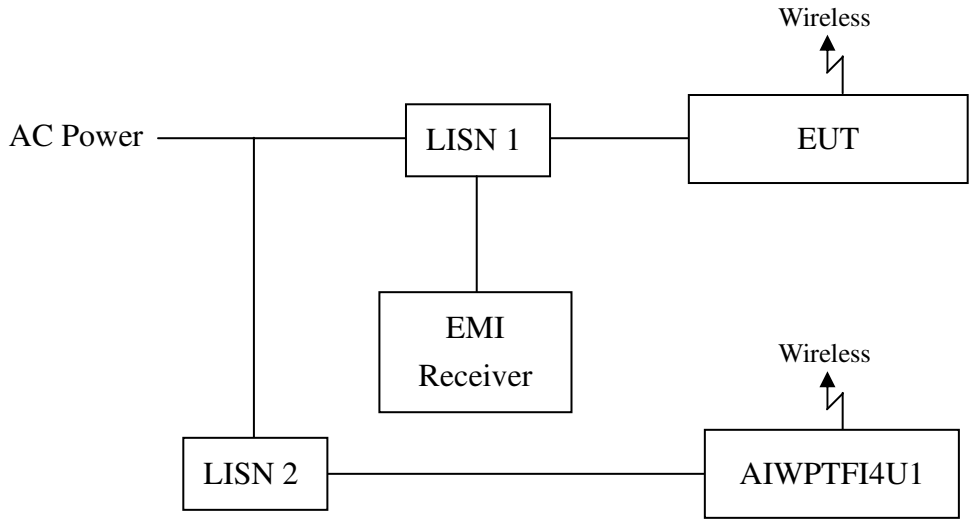
Restricted Band (MHz)	Freq. (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
2310~2390	2389.86	PK	V	38.021	31.849	76.762	70.59	74	-3.41
	2333.10	AV	V	38.007	31.580	52.527	46.10	54	-7.90
-	2408.00	PK	V	38.026	31.936	119.031	112.94	-	112.94
	2408.00	AV	V	38.026	31.936	105.621	99.53	-	99.53
-	2468.00	PK	V	38.042	32.221	120.291	114.47	-	114.47
	2468.00	AV	V	38.042	32.221	107.171	101.35	-	101.35
2483.5~2500	2483.52	PK	V	38.046	32.294	78.211	72.46	74	-1.54
	2484.16	AV	V	38.046	32.297	51.788	46.04	54	-7.96

11. Power Line Conducted Emission test §FCC 15.207

11.1 Operating environment

Temperature:	23	℃
Relative Humidity:	52	%
Atmospheric Pressure	1008	hPa
Test Date:	Jun. 24, 2013	

11.2 Test setup & procedure



The test procedure was according to ANSI C63.4/2003.

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm/50uH coupling impedance with 50 ohm termination.
Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement. The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9 kHz.

The EUT configuration refers to the “Conducted set-up photo.pdf”.

11.3 Emission limit

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

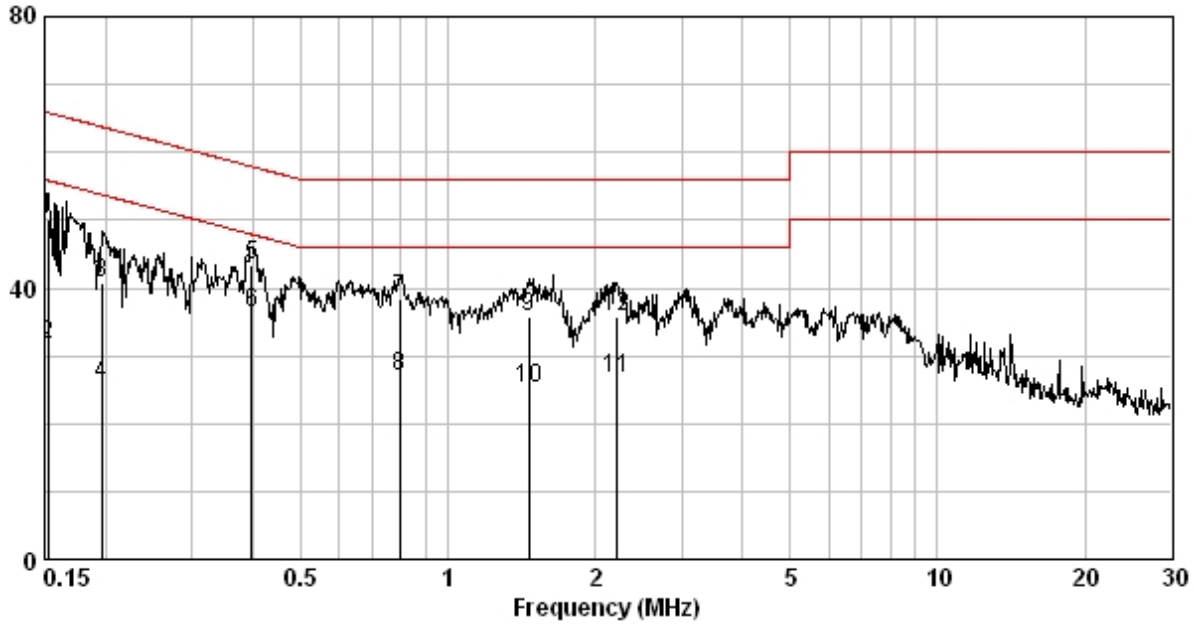
*Decreases with the logarithm of the frequency.

11.4 Power Line Conducted Emission test data

Phase:	Line
Model No.:	AIWPTFI4U1
Operating mode:	Tx mode
Adapter:	OH-1048A0600800U2

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Over Limit (dB) Qp	Over Limit (dB) Av
0.152	0.33	50.19	65.87	31.56	55.87	-15.67	-24.30
0.197	0.34	40.60	63.76	25.84	53.76	-23.16	-27.92
0.398	0.29	43.36	57.90	36.41	47.90	-14.54	-11.49
0.796	0.37	38.46	56.00	27.07	46.00	-17.54	-18.93
1.464	0.45	35.62	56.00	25.07	46.00	-20.38	-20.93
2.213	0.51	35.79	56.00	26.60	46.00	-20.21	-19.40

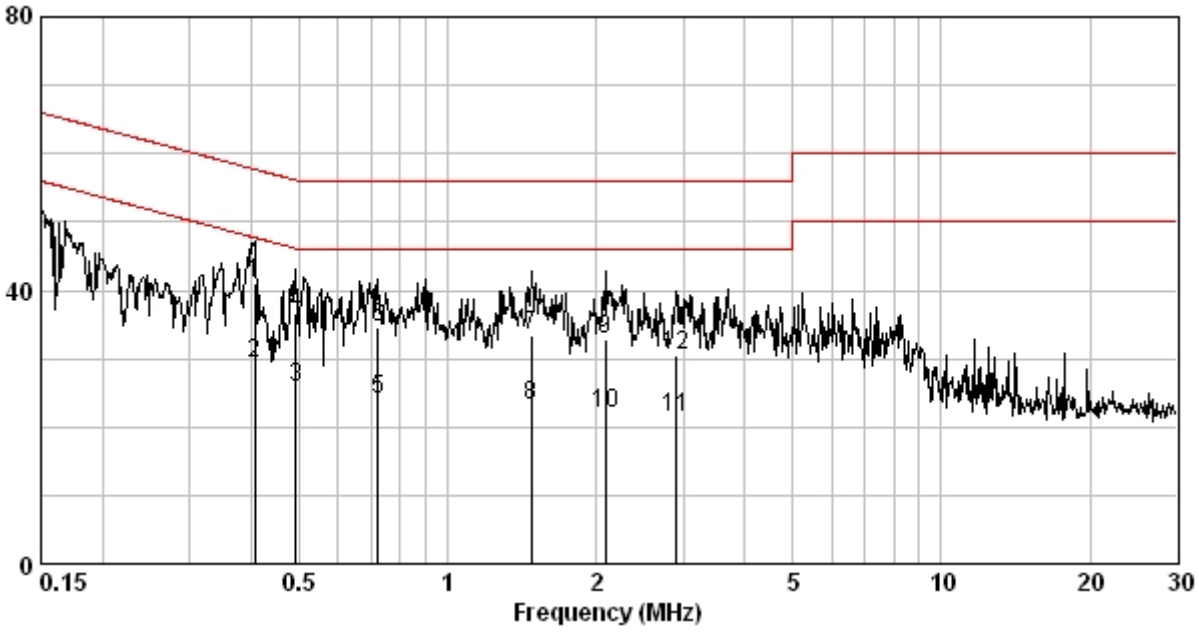
Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Over Limit (dB) = Level (dBuV) – Limit (dBuV)



Phase:	Neutral
Model No.:	AIWPTFI4U1
Operating mode:	Tx mode
Adapter:	OH-1048A0600800U2

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Over Limit (dB) Qp	Over Limit (dB) Av
0.406	0.28	41.08	57.73	29.26	47.73	-16.64	-18.46
0.491	0.28	36.61	56.14	25.83	46.14	-19.54	-20.32
0.724	0.34	34.65	56.00	24.13	46.00	-21.35	-21.87
1.480	0.44	33.41	56.00	23.11	46.00	-22.59	-22.89
2.088	0.48	32.82	56.00	22.07	46.00	-23.18	-23.93
2.900	0.59	30.50	56.00	21.39	46.00	-25.50	-24.61

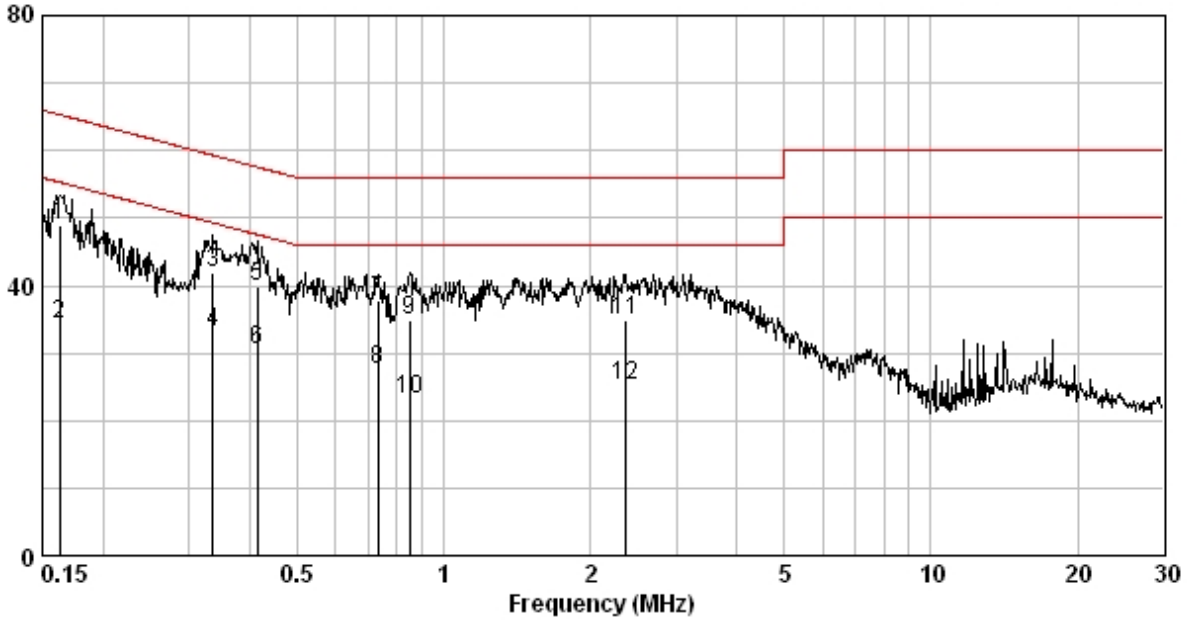
Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Over Limit (dB) = Level (dBuV) – Limit (dBuV)



Phase:	Line
Model No.:	AIWPTFI4U1
Operating mode:	Tx mode
Adapter:	TS-A005-060008A1

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Over Limit (dB) Qp	Av
0.162	0.34	48.93	65.34	34.26	55.34	-16.41	-21.08
0.336	0.31	41.79	59.31	33.06	49.31	-17.52	-16.25
0.415	0.29	39.81	57.55	30.37	47.55	-17.74	-17.18
0.731	0.35	37.69	56.00	27.52	46.00	-18.31	-18.48
0.853	0.38	34.86	56.00	23.29	46.00	-21.14	-22.71
2.371	0.54	34.80	56.00	25.14	46.00	-21.20	-20.86

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Over Limit (dB) = Level (dBuV) – Limit (dBuV)



Phase:	Neutral
Model No.:	AIWPTFI4U1
Operating mode:	Tx mode
Adapter:	TS-A005-060008A1

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Over Limit (dB) Qp	Over Limit (dB) Av
0.341	0.29	40.43	59.18	30.37	49.18	-18.74	-18.80
0.387	0.29	37.21	58.12	27.26	48.12	-20.92	-20.87
0.549	0.29	33.27	56.00	22.80	46.00	-22.73	-23.20
0.731	0.34	33.48	56.00	25.55	46.00	-22.52	-20.45
1.249	0.42	30.60	56.00	20.44	46.00	-25.40	-25.56
2.077	0.48	31.71	56.00	21.67	46.00	-24.29	-24.33

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Over Limit (dB) = Level (dBuV) – Limit (dBuV)