



# SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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Report No.: SHEM120200011218  
Page: 1 of 75

## TEST REPORT

**Application No.:** SHEM1202000112RF

**Applicant:** Monster, LLC

**Equipment Under Test (EUT):**

**NOTE:** The following sample(s) submitted was/were identified on behalf of the client as

**EUT Name:** StreamCast HD Receiver

**Brand Name:** Monster Products

**Model No.:** MSP STRC WL REC WW

**Fundamental Frequency:** 2412-2464 MHz, 5736-5814MHz and 5180-5240MHz\*

**Test Frequency:** 2412-2464 MHz, 5736-5814MHz

**FCC ID:** RJE-178458

**IC:** 7512A-178458

**Standards:** FCC PART 15 SUBPART C, Section 15.247

RSS-210 Issue 8 (December 2010)

RSS-Gen Issue 3 (December 2010)

**Date of Receipt:** Feb. 13, 2012

**Date of Test:** Nov. 12, 2012 to Mar. 26, 2013.

**Date of Issue:** Apr. 24, 2013

**Test Result :** PASS \*

In the configuration tested, the EUT complied with the standards specified above.

For 5180-5240MHz band please reference report SHEM120200011219.

E&E Section Head  
SGS-CSTC(Shanghai) Co., Ltd.

E&E EMC Engineer  
SGS-CSTC(Shanghai) Co., Ltd.

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## 2 Test Summary

TEST ITEM	FCC REFERENCE	IC REFERENCE	Test Procedure	RESULT
Power line conducted emission	15.207	RSS-Gen Issue 8 Clause 7.2.4	ANSI C63.10,2009 Clause 7.3	Pass
Radiated emission	15.205 & 15.209	RSS-Gen Issue 8 Clause 7.2.5	ANSI C63.10,2009 Clause 8.3	Pass
Channel number of hopping system	15.247(a)(1)(iii)	RSS-210 Issue 8 Annex 8	N/A	NA
Average time of occupancy in any channel	15.247(a)(1)(iii)	RSS-210 Issue 8 Annex 8	NA	NA
Minimum 6dB Bandwidth	15.247(a)(2)	RSS-210 Issue 8 Annex 8	ANSI C63.10,2009 Clause 6.9	Pass
Maximum peak output power	15.247(b)	RSS-210 Issue 8 Annex 8	ANSI C63.10,2009 Clause 6.10.2	Pass
RF exposure	15.247(l) 2.1091	RSS-102 Issue 4	---	Pass
Radiated Emission BandEdge	15.247(d)	---	ANSI C63.10,2009 Clause 6.9	Pass
Emission outside the Frequency band	15.247(d)	RSS-210 Issue 8 Annex 8	ANSI C63.10,2009 Clause 8.3	Pass
Power spectrum density	15.247(e)	RSS-210 Issue 8 Annex 8	ANSI C63.10,2009 Clause 6.11	Pass
Occupied bandwidth	---	RSS-Gen Issue 3 Clause 4.6.1	RSS-Gen Issue 3 Clause 4.6.1	Tested

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## 4 General Information

### 4.1 Client Information

<b>Applicant :</b>	Monster, LLC
<b>Applicant Address:</b>	7251 West Lake Mead Blvd Suite 342 Las Vegas, NV 89128
<b>Manufacturer:</b>	Hansong(Nanjing) Technology Ltd.
<b>Manufacturer Address:</b>	8 <sup>th</sup> Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 201106, China

### 4.2 Details of E.U.T.

<b>EUT Name:</b>	StreamCast HD Receiver	
<b>Brand Name:</b>	Monster Products	
<b>Model No:</b>	MSP STRC WL REC WW	
<b>Power Supply:</b>	5.2V DC	
<b>Frequency Band Channels :</b>	2412-2464 MHz Channel Description: Channel of Transmitter Frequency(MHz)	
	Low	2412
	Mid	2438
	High	2464
	5736-5814 MHz Channel Description: Channel of Transmitter Frequency(MHz)	
	Low	5736
	Mid	5762
	High	5814
<b>Modulation Type:</b>	QPSK	
<b>Antenna Type:</b>	Integral antenna(Antenna Gain 2.0dB)	

### 4.3 Description of Support Units

Name	Model No.	Remark
AC Adapter	N/A	N/A

#### **4.4 Test Location**

Tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
No.588 West Jindu Road, Songjiang District, Shanghai, China. 201612.

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

#### **4.5 Other Information Requested by the Customer**

None.

#### **4.6 Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

- CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2014-07-26.

- FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2015-02-22.

- Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A. Expiry Date: 2014-09-20.

## 5 Test Instruments

 **Conducted Emission**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESCS30	100086	2012-06-13	2013-06-12
2	Line impedance stabilization network (LISN)	SCHWARZBECK	NSLK8127	8127-490	2012-06-13	2013-06-12
3	Line impedance stabilization network (LISN)	ETS	3816/2	00034161	2012-06-13	2013-06-12

 **Radiated Spurious Emission**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESU40	100109	2012-06-02	2013-06-01
2	Antenna	SCHWARZBECK	VULB9168	9168-313	2012-08-15	2013-08-14
3	CONTROLLER	INNCO	CO200	474	/	/
4	Antenna	SCHWARZBECK	BBHA9120D	9120D-679	2012-08-15	2013-08-14
5	Antenna	SCHWARZBECK	BBHA9170	9170-373	2012-08-15	2013-08-14
6	Low noise amplifier	LNA6900	TESEQ	71033	2012-08-15	2013-08-14

 **RF Conducted Test**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESU40	100109	2012-06-03	2013-06-01
2	Horn Antenna	SCHWARZBEC K	BBHA9120D	9120D-679	2012-06-03	2013-06-01
3	Horn Antenna	Rohde & Schwarz	HF906	100284	2012-06-03	2013-06-01
4	ANTENNA	SCHWARZBEC K	VULB9168	9168-313	2012-06-03	2013-06-01
5	Horn Antenna	SCHWARZBEC K	BBHA 9170	BBHA91703 73	2012-08-15	2013-08-14
6	Ultra broadband antenna	Rohde & Schwarz	HL562	100227	2012-10-09	2013-10-08
7	Atmosphere pressure meter	Shanghai ZhongXuan Electronic Co;Ltd	BY-2009P	--	2012-10-09	2013-10-08

8	CLAMP METER	FLUKE	316	86080010	2012-06-03	2013-06-01
9	Thermo-Hygrometer	ZHICHEN	ZC1-2	01050033	2012-10-09	2013-10-08
11	High-low temperature cabinet	Shanghai YuanZhen	GW2050	--	2012-06-03	2013-06-01
12	Tunable Notch Filter	Wainwright instruments GmbH	WRCT1800.0/2000.0-0.2/40-5SSK	11	2012-06-03	2013-06-01
13	Tunable Notch Filter	Wainwright instruments GmbH	WRCT800.0/880.0-0.2/40-5SSK	9	2012-06-03	2013-06-01
14	High pass Filter	FSCW	HP 12/2800-5AA2	19A45-02	2012-06-03	2013-06-01
15	Low nosie amplifier	TESEQ	LNA6900	70133	2012-06-03	2013-06-01
16	EMI test receiver	Rohde & Schwarz	ESCS30	100086	2012-06-03	2013-06-01
17	Line impedance stabilization network	SCHWARZBEC K	NSLK8127	8127-490	2012-06-03	2013-06-01

## 6 Test Procedure & Measurement Data

### 6.1 E.U.T. Operation

Input voltage:	5.2V DC
Operating Environment:	
Temperature:	25.0 °C
Humidity:	45 % RH
Atmospheric Pressure:	1013 mbar
EUT Operation:	<p>The EUT has been tested under operating condition.</p> <p>Test program was used to control the EUT for staying in continuous transmitting mode is programmed.</p> <p>For 2412-2464MHz Band Channel low (2412MHz) mid(2438MHz) high(2464MHz)</p> <p>For 5736-5814MHz Band Channel low (5736MHz) mid(5762MHz) high(5814MHz)</p>

### 6.2 Conducted Emission Test

<b>Test Requirement:</b>	FCC Part15 15.207
<b>Test date:</b>	Feb. 21, 2012
<b>Standard Applicable</b>	According to section 15.207,frequency 150KHz to 30MHz shall not not exceed the limit table as blew.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

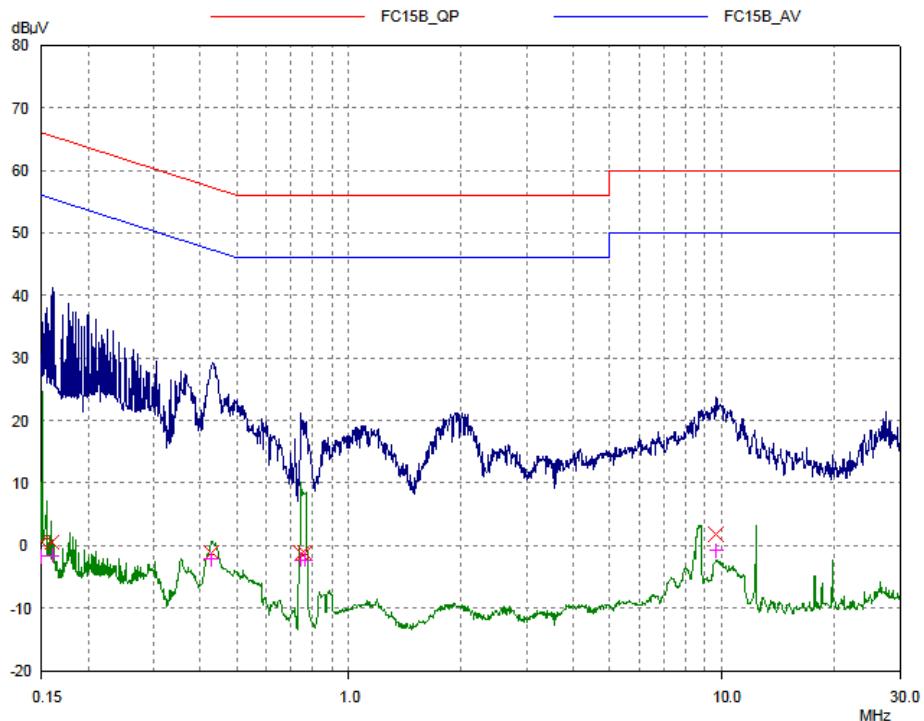
#### EUT Setup

- 1.The conducted emission tests were performed in the test site,using the setup in accordance with the ANSI C63.10-2009.
- 2.EUT is charged with PC.The AC Power adaptor of PC was plug-in LISN.The rear of the EUT and periphearals were placed flushed with the rear of the tabletop.
- 3.The LISN was connected with 120V AC/60Hz power source.

#### Measurement Result

Operation mode: Transmitter conducted to Receiver by wireless.

Note:All test modes have been tested, below show the worst plots.

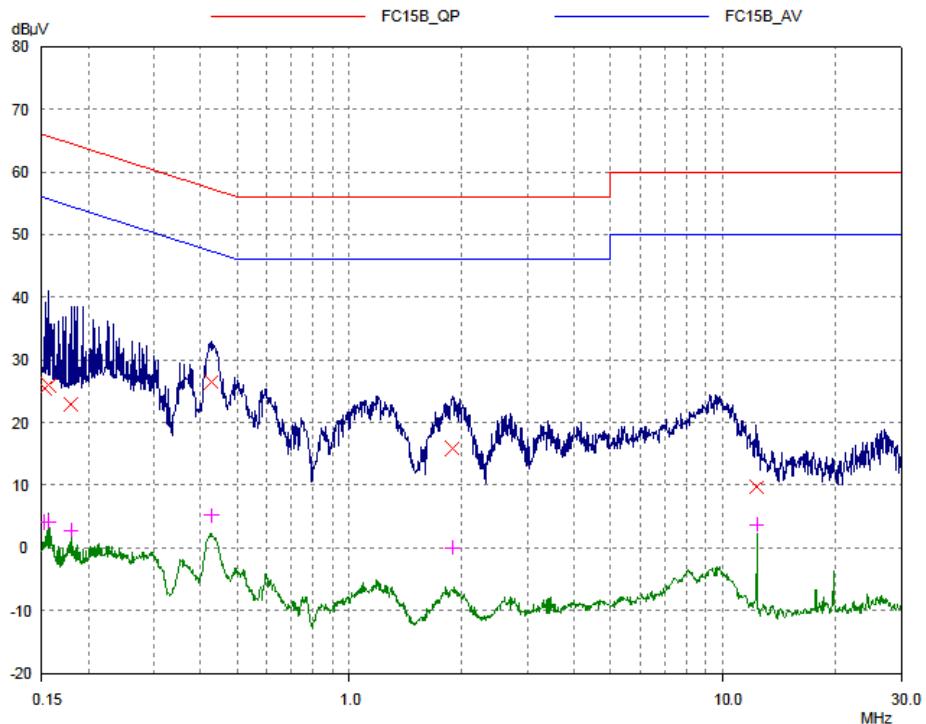
**L line:****Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
------------------	------------------------	------------------------	----------------

0.15	0.60	66.00	65.40
0.15989	0.53	65.47	64.94
0.4286	-1.18	57.28	58.46
0.74354	-1.27	56.00	57.27
0.76462	-1.19	56.00	57.19
9.64614	1.84	60.00	58.16

Frequency MHz	AV Level dB $\mu$ V	AV Limit dB $\mu$ V	AV Delta dB
------------------	------------------------	------------------------	----------------

0.15	-1.74	56.00	57.74
0.15989	-1.58	55.47	57.05
0.4286	-2.18	47.28	49.46
0.74354	-2.22	46.00	48.22
0.76462	-2.22	46.00	48.22
9.64614	-0.79	50.00	50.79

**N Line:**

**Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
------------------	------------------------	------------------------	----------------

0.15302	25.50	65.83	40.33
0.15673	26.01	65.64	39.63
0.17951	22.87	64.51	41.64
0.42689	26.43	57.31	30.88
1.89233	15.87	56.00	40.13
12.3058	9.75	60.00	50.25

Frequency MHz	AV Level dB $\mu$ V	AV Limit dB $\mu$ V	AV Delta dB
------------------	------------------------	------------------------	----------------

0.15302	4.12	55.83	51.71
0.15673	4.21	55.64	51.43
0.17951	2.77	54.51	51.74
0.42689	5.13	47.31	42.18
1.89233	-0.06	46.00	46.06
12.3058	3.70	50.00	46.30

**6.3****Radiated Spurious Emission Test**

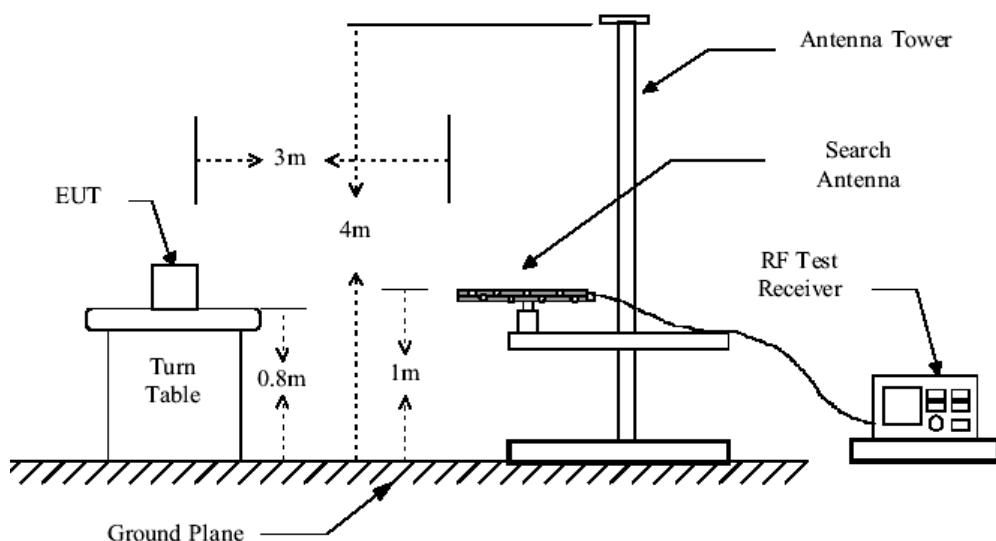
**Test Requirement:** FCC Part15 247(d) and FCC Part 15.209

**Test date:** Mar. 15, 2012 to Mar. 19, 2012

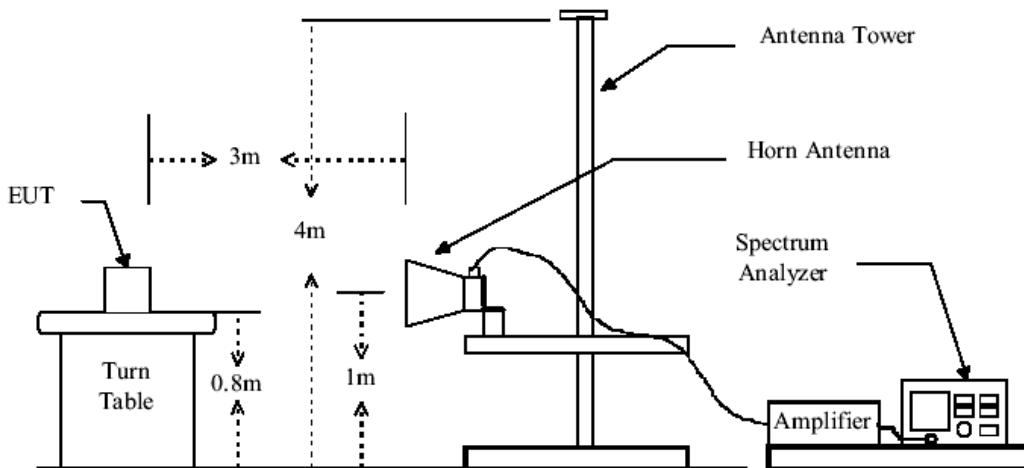
**Standard Applicable:** According to section 15.247(c),all other emissions outside these bands shall not exceed the general radiated emission limits specified in section15.209(a).And according to section 15.33(a)(1),for an intentional radiator operates below 10GHz,the frequency range of measurements:to the tenth harmonic of the highest fundamental frequency or to 40GHz,which is lower.

**Measurement Procedure:**

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Pre-test with the Horizontal, Vertical and other status towards to the test antenna. To find the worst status.
3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
4. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.  
Test instrumentation resolution bandwidth 120 kHz and Quasi-Peak detector applies (30 MHz - 1000 MHz). 1MHz resolution bandwidth and Peak detector apply (1000 MHz – 25GHz )  
Above 1GHz  
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO  
(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. Repeat above procedures until all frequency measured were complete.

**Radiated Test Set-up:****Radiated Emission Test Set-up, Frequency Below 1000MHz**

## Radiated Emission Test Set-up Frequency Over 1GHz



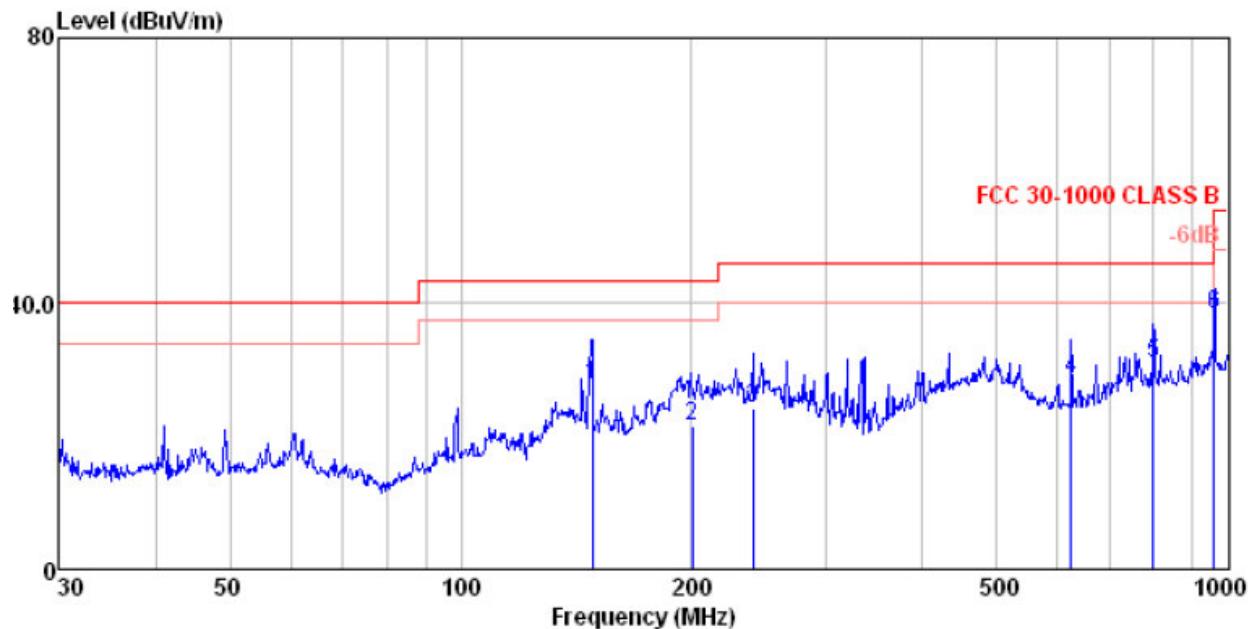
Low noise amplifier was used below 1GHz, High pass Filter was used above 1GHz.

**Tests results:**

From the pre-test the worst status is the EUT Horizontal towards to the antenna. Below is the worst test results.

**Operation Mode:2.4GHz Band**

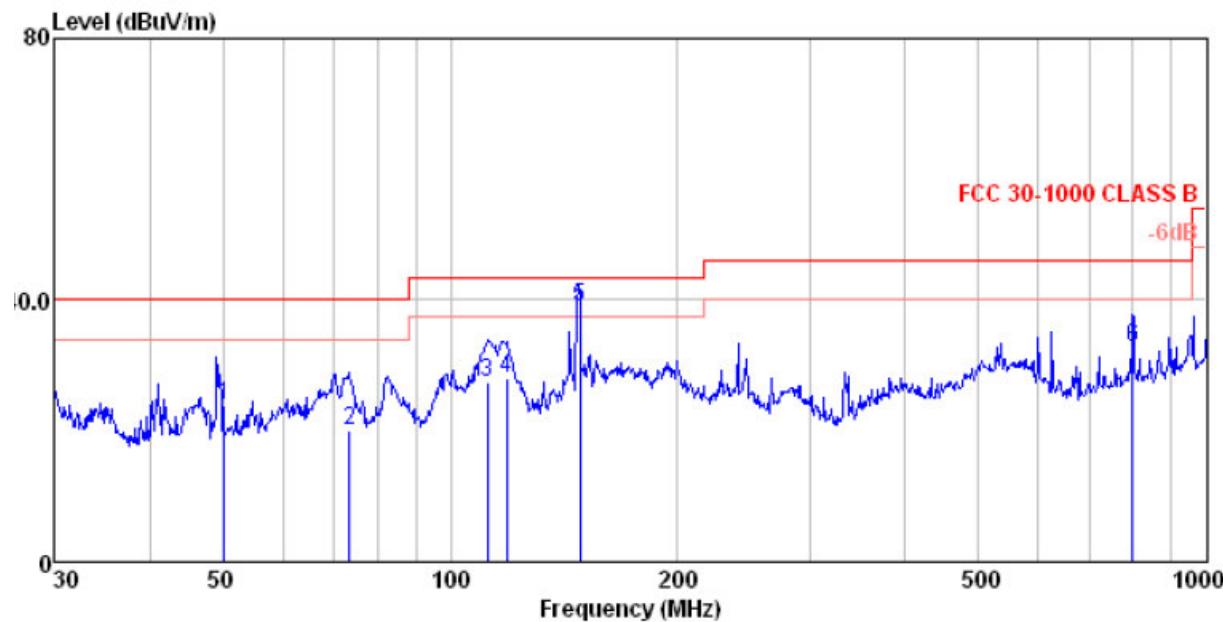
30MHz~1GHz Spurious Emissions .Quasi-Peak Measurement Antenna:Horizontal



Freq	ReadAntenna Level	Antenna Factor	Cable Preamplifier		Limit Level	Over Line	Over Limit	Remark
			Loss	Factor				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	148.37	38.70	12.60	1.26	24.70	27.86	43.50	-15.64 QP
2	200.31	35.28	9.30	1.51	24.60	21.49	43.50	-22.01 QP
3	240.33	36.67	10.40	1.69	24.50	24.26	46.00	-21.74 QP
4	625.08	30.28	19.70	2.98	24.20	28.76	46.00	-17.24 QP
5	799.16	29.31	22.19	3.45	24.00	30.95	46.00	-15.05 QP
6	958.85	34.27	23.97	3.82	23.76	38.30	46.00	-7.70 QP

30MHz~1GHz Spurious Emissions .Quasi-Peak Measurement

Antenna:Vertical



Freq	Read	Antenna	Cable	Preamp	Limit	Over	Line	Over	Remark
	Level	Factor	Loss	Factor					
	MHz	dB <sub>UV</sub>	dB/m	dB	dB	dB <sub>UV</sub> /m	dB <sub>UV</sub> /m	dB	
1	50.20	35.21	12.79	0.65	24.70	23.95	40.00	-16.05	QP
2	73.65	33.99	10.07	0.83	24.70	20.19	40.00	-19.81	QP
3	112.13	40.85	10.12	1.10	24.70	27.37	43.50	-16.13	QP
4	118.60	41.31	10.19	1.13	24.70	27.93	43.50	-15.57	QP
5	148.28	49.90	12.60	1.26	24.70	39.06	43.50	-4.44	QP
6	799.25	30.68	22.49	3.45	24.00	32.62	46.00	-13.38	QP

**Operation Mode: TX Low Mid CH 2412MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
4823.3	30.6	6.4	0.5	42.8	46.91	41.61	54	Vertical
7233.4	35.5	8.1	0.6	43.8	47.26	47.66	54	Vertical
9644.2	37.7	9.3	0.9	42.7	43.23	48.43	54	Vertical
12055.3	38.6	10.9	1.1	44.0	42.99	49.59	54	Vertical
4824.1	30.6	6.4	0.5	42.8	48.17	42.87	54	Horizontal
7236.6	35.5	8.1	0.6	43.8	48.28	48.68	54	Horizontal
9648.4	37.7	9.3	0.9	42.7	44.27	49.47	54	Horizontal
12060.3	38.6	10.9	1.1	44.0	44.02	50.62	54	Horizontal

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor +Fiter-Preamplifier Factor

**Operation Mode: TX Mid CH 2438MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
4873.0	30.6	6.4	0.5	42.8	45.37	40.07	54	Vertical
7309.5	35.5	8.1	0.6	43.1	44.61	45.71	54	Vertical
9746.0	38.1	9.8	0.9	42.3	39.88	46.38	54	Vertical
12182.5	38.6	10.9	1.1	44.0	41.93	48.53	54	Vertical
4873.0	30.6	6.4	0.5	42.8	46.42	41.12	54	Horizontal
7309.5	35.5	8.1	0.6	43.1	45.21	46.31	54	Horizontal
9746.0	38.1	9.8	0.9	42.3	42.39	48.89	54	Horizontal
12182.5	38.6	10.9	1.1	44.0	42.61	49.21	54	Horizontal

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor +Fiter-Preamplifier Factor

**Operation Mode:TX High CH 2464MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
4927.4	31.6	6.9	0.5	43.9	45.27	40.37	54	Vertical
7391.1	35.8	8.1	0.6	43.8	44.61	45.31	54	Vertical
9854.8	38.1	9.8	0.9	42.3	41.01	47.51	54	Vertical
12318.5	38.6	10.9	1.1	44.4	42.28	48.48	54	Vertical
4927.4	31.6	6.9	0.5	43.9	45.24	40.34	54	Horizontal
7391.1	35.8	8.1	0.6	43.8	43.97	44.67	54	Horizontal
9854.8	38.1	9.8	0.9	42.3	40.45	46.95	54	Horizontal
12318.5	38.6	10.9	1.1	44.4	42.00	48.20	54	Horizontal

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor + Filter-Preamplifier Factor

**Operation Mode: 5.8GHz Band**
**Operation Mode: TX Low CH 5736MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
11472.4	39.5	10.4	0.9	43.2	38.93	46.53	54	Vertical
17208.6	39.8	13.2	1.3	41.8	34.78	47.28	54	Vertical
22944.8	41.5	11.7	1.5	44.8	39.57	49.47	54	Vertical
11472.4	39.5	10.4	0.9	43.2	38.53	46.13	54	Horizontal
17208.6	39.8	13.2	1.3	41.8	34.52	47.02	54	Horizontal
22944.8	41.5	11.7	1.5	44.8	39.07	48.97	54	Horizontal

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor + Filter - Preamplifier Factor

**Operation Mode: TX Mid CH 5762MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
11523.4	39.5	10.4	0.9	43.2	38.18	45.78	54	Vertical
17285.1	39.8	13.2	1.3	41.8	34.07	46.57	54	Vertical
23046.8	41.5	11.7	1.5	44.8	38.21	48.11	54	Vertical
11523.4	39.5	10.4	0.9	43.2	37.61	45.21	54	Horizontal
17285.1	39.8	13.2	1.3	41.8	33.52	46.02	54	Horizontal
23046.8	41.5	11.7	1.5	44.8	38.04	47.94	54	Horizontal

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor + Filter - Preamplifier Factor

**Operation Mode:TX High CH 5814MHz**

1~25 GHz Harmonics &amp; Spurious Emissions.

**Peak Measurement:**

Frequency (MHz)	Antenna factors (dB/m)	Cable loss (dB)	Filter (dB)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	AV Limit (dB $\mu$ V/m)	Antenna polarization
11628.8	39.5	10.4	0.9	43.2	39.25	46.85	54	Vertical
17443.2	39.8	13.2	1.3	41.8	35.01	47.51	54	Vertical
23257.6	41.5	11.7	1.5	44.8	38.35	48.25	54	Vertical
11628.8	39.5	10.4	0.9	43.2	37.72	45.32	54	Horizontal
17443.2	39.8	13.2	1.3	41.8	33.67	46.17	54	Horizontal
23257.6	41.5	11.7	1.5	44.8	37.58	47.48	54	Horizontal

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor + Filter - Preamplifier Factor

## 6.4 6dB Bandwidth

**Test Requirement:** FCC Part15 247(a)(2)

**Test date:** Mar. 26.2012

**Standard Applicable:** According to section 15.247(a)(2),Systems using digital modulationg techniques may operate in the 902-928MHz,2400-2483.5MHz, and 5725-5850MHz bands.The minimum 6dB bandwidth shall be at least 500KHz.

**Measurement Procedure:**

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=100KHz, VBW =3\* RBW, Span=30/ 50MHz, Sweep=auto
4. Mark the peak frequency and -6dB (upper and lower) frequency.
5. Repeat above procedures until all frequency measured were complete.

**Measurement Result:**

2412-2464MHz Band for Antenna A:

CH	Frequency (MHz)	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
LOW	2412	11.64	500	PASS
MID	2438	11.34	500	PASS
HIGH	2464	11.52	500	PASS

2412-2464MHz Band for Antenna B:

CH	Frequency (MHz)	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
LOW	2412	12.06	500	PASS
MID	2438	11.22	500	PASS
HIGH	2464	11.16	500	PASS

5736-5814MHz Band for Antenna A:

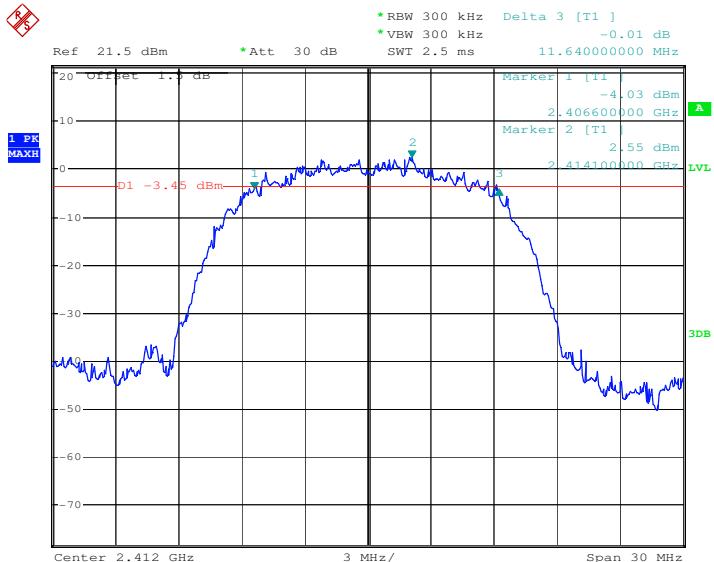
CH	Frequency (MHz)	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
LOW	5736	11.52	500	PASS
MID	5762	11.64	500	PASS
HIGH	5814	10.14	500	PASS

5736-5814MHz Band for Antenna B:

CH	Frequency (MHz)	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
LOW	5736	12.06	500	PASS
MID	5762	12.00	500	PASS
HIGH	5814	11.88	500	PASS

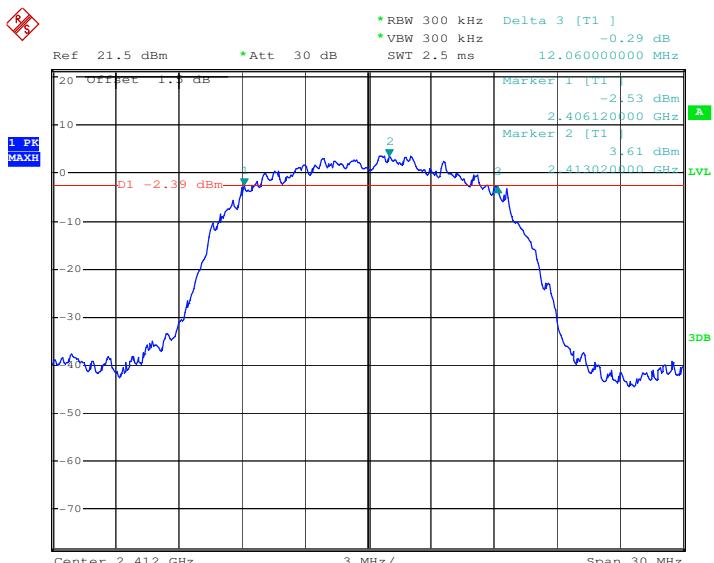
**6dB Band Width Test Data CH 2412MHz:**

For Antenna A :



Date: 15.DEC.2012 10:37:14

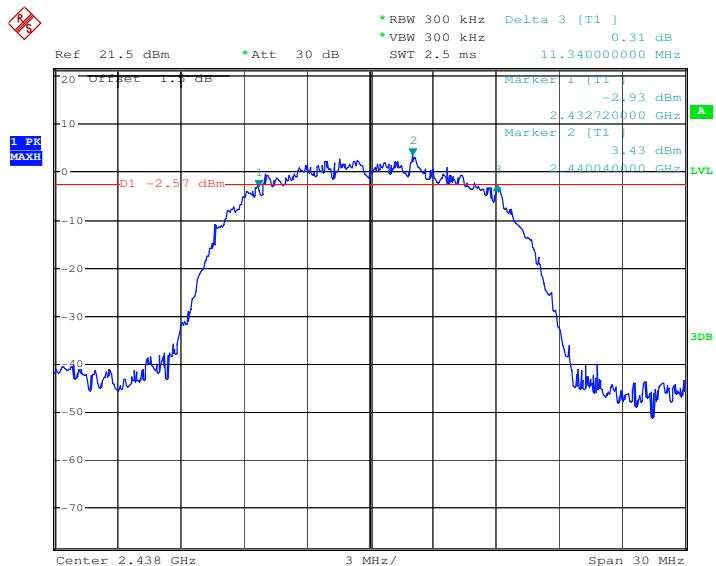
For Antenna B:



Date: 15.DEC.2012 11:48:58

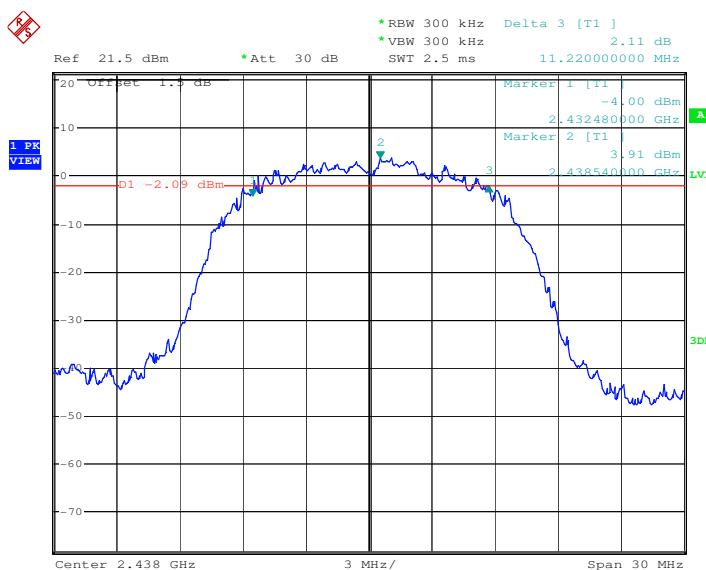
**6dB Band Width Test Data CH 2438MHz:**

For Antenna A :



Date: 15.DEC.2012 10:38:14

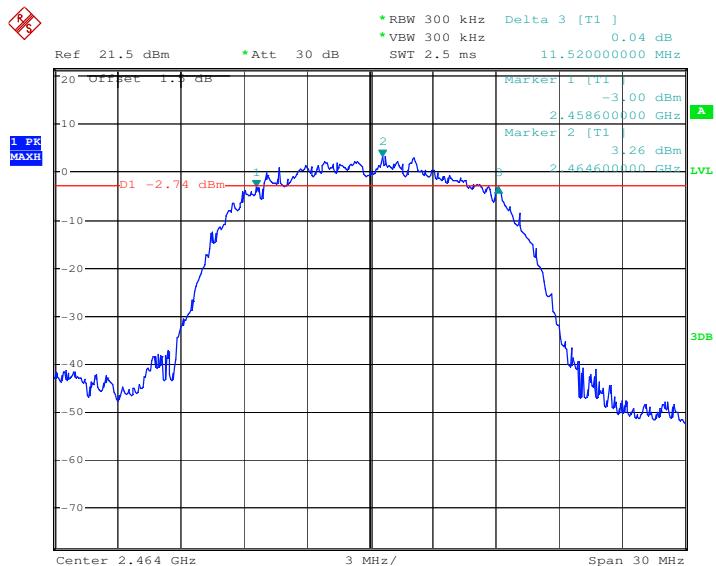
For Antenna B



Date: 15.DEC.2012 11:50:22

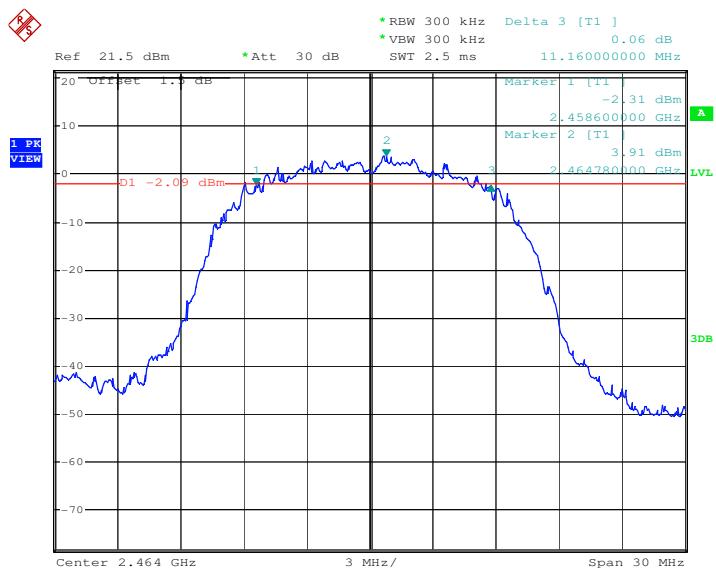
**6dB Band Width Test Data CH 2464MHz:**

For Antenna A :



Date: 15.DEC.2012 10:39:17

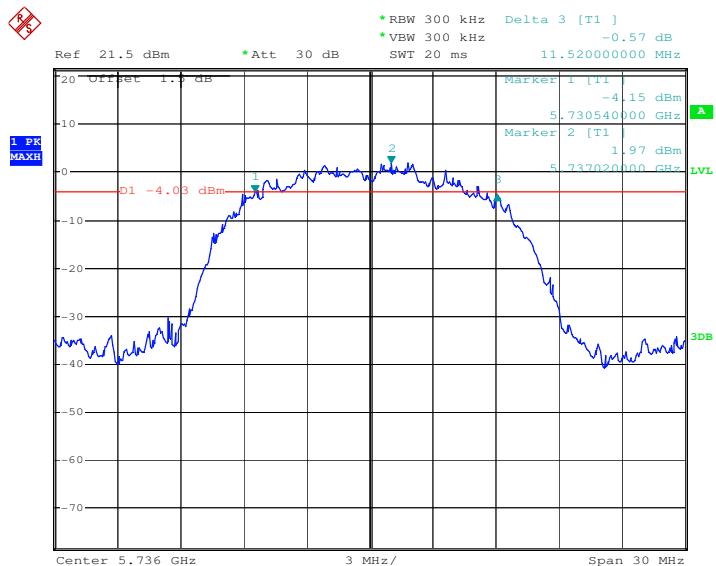
For Antenna B



Date: 15.DEC.2012 11:51:54

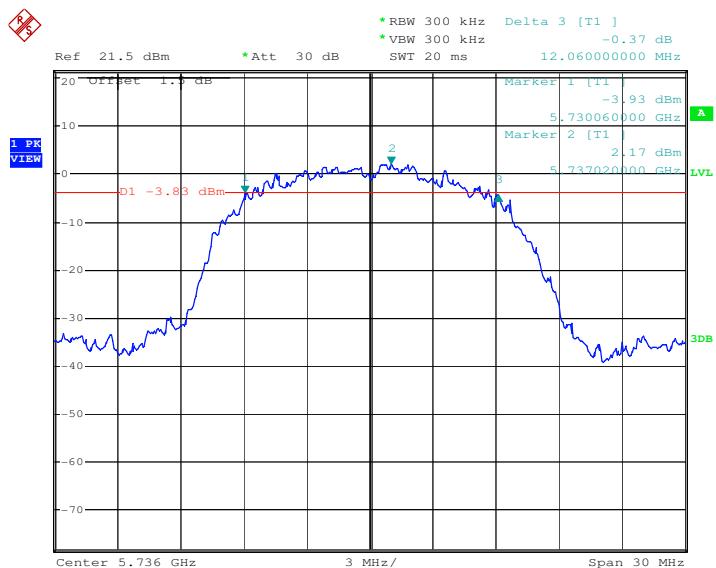
**6dB Band Width Test Data CH 5736MHz:**

For Antenna A :



Date: 15.DEC.2012 10:40:32

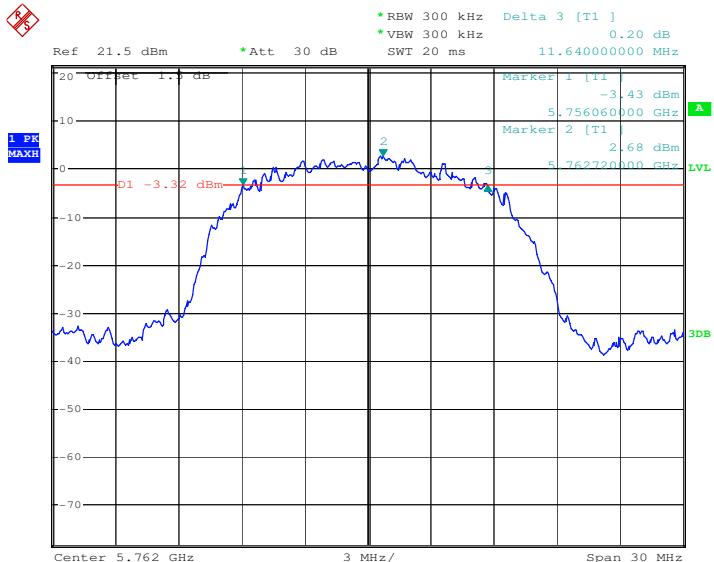
For Antenna B



Date: 15.DEC.2012 11:53:04

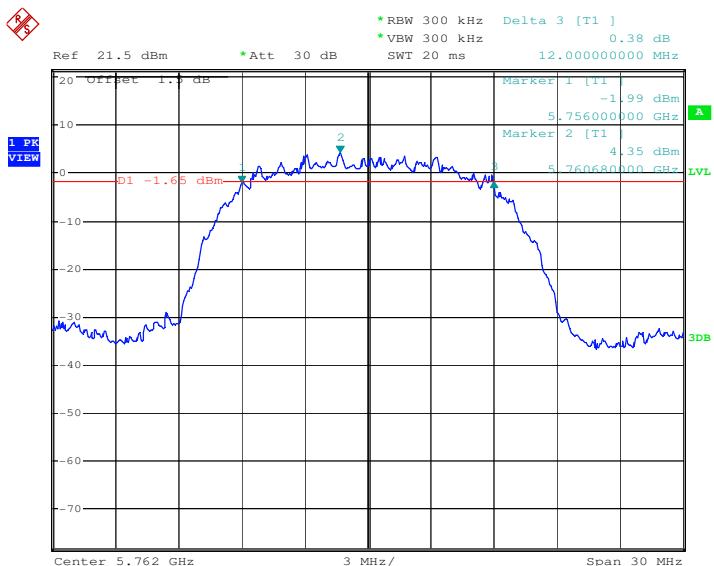
**6dB Band Width Test Data CH 5762MHz:**

For Antenna A :



Date: 15.DEC.2012 10:44:30

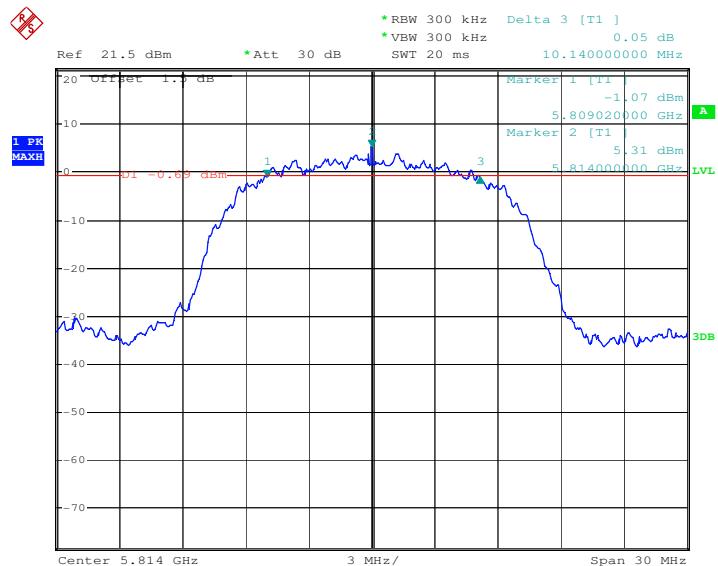
For Antenna B



Date: 15.DEC.2012 11:54:22

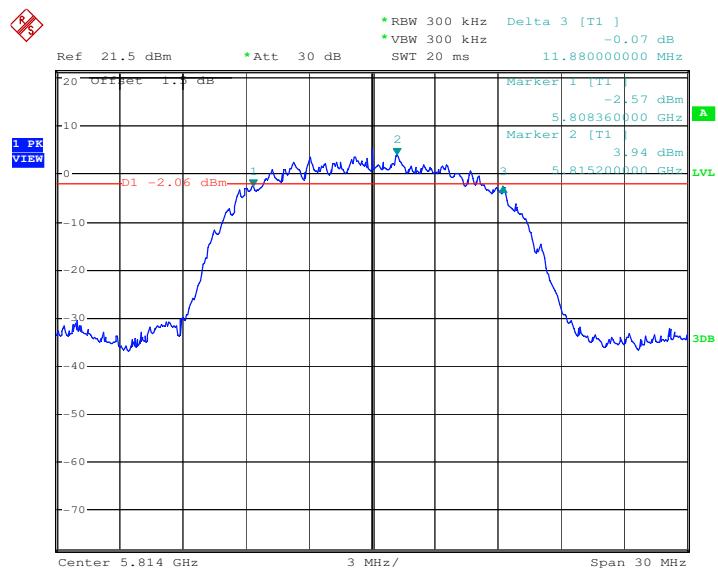
**6dB Band Width Test Data CH 5814MHz:**

For Antenna A :



Date: 15.DEC.2012 10:58:02

For Antenna B



Date: 15.DEC.2012 12:01:53

## 6.5 Peak Output Power Measurement

<b>Test Requirement:</b>	FCC Part 15 15.247(a)(2),(b)
<b>Test date</b>	Feb.15, 2013
<b>Standard Applicable:</b>	According to section 15.247(a)(2),(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
<b>Measuremet Produc</b>	<ol style="list-style-type: none"><li>1. Place the EUT on the table and set it in transmitting mode.</li><li>2. Remove the antenna from the EUT and then connect a low loss RF calbe from the antenna port to the spectrum.</li><li>3. Set the occur band to the entire emission bandwitdth of the signal.</li><li>4. Record the max.channel power reading</li></ol> <p>Repeat above procedures until all the frequency measured were complete.</p>

**Measurement Result:**

2412-2464MHz Band for Antenna A:

CH	Frequency (MHz)	Output Peak Power (dBm)	Peak Power Limit (dBm)	Result
LOW	2412	17.25	30	PASS
MID	2438	17.52	30	PASS
HIGH	2464	17.22	30	PASS

2412-2464MHz Band for Antenna B:

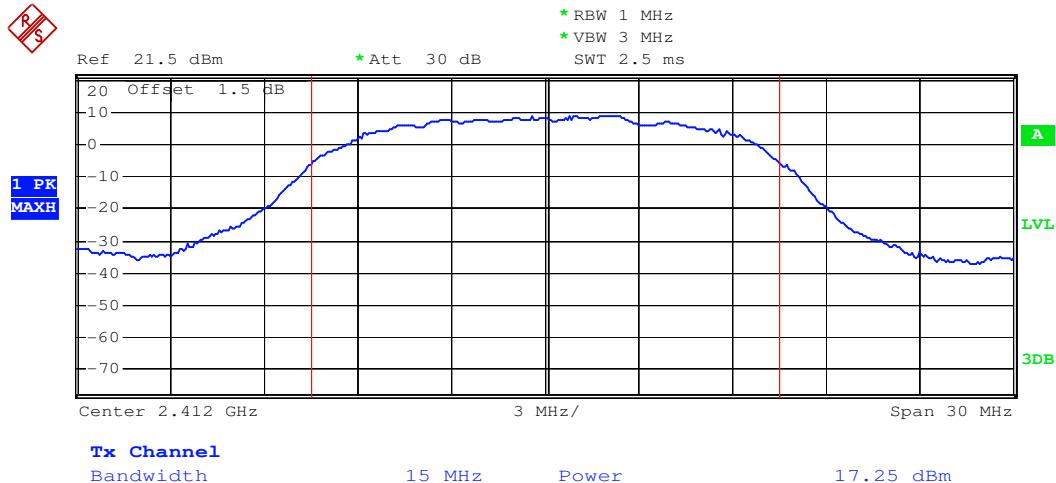
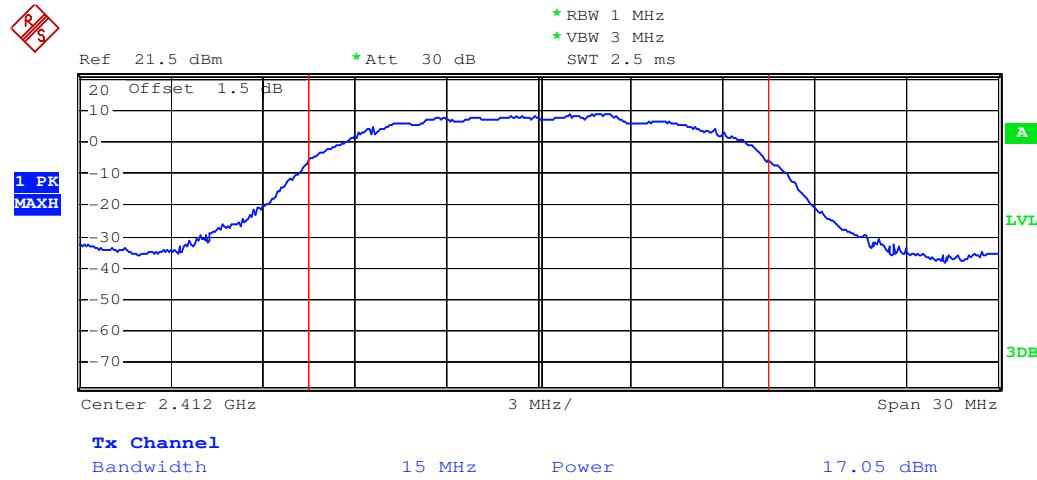
CH	Frequency (MHz)	Output Peak Power (dBm)	Peak Power Limit (dBm)	Result
LOW	2412	17.05	30	PASS
MID	2438	17.40	30	PASS
HIGH	2464	17.21	30	PASS

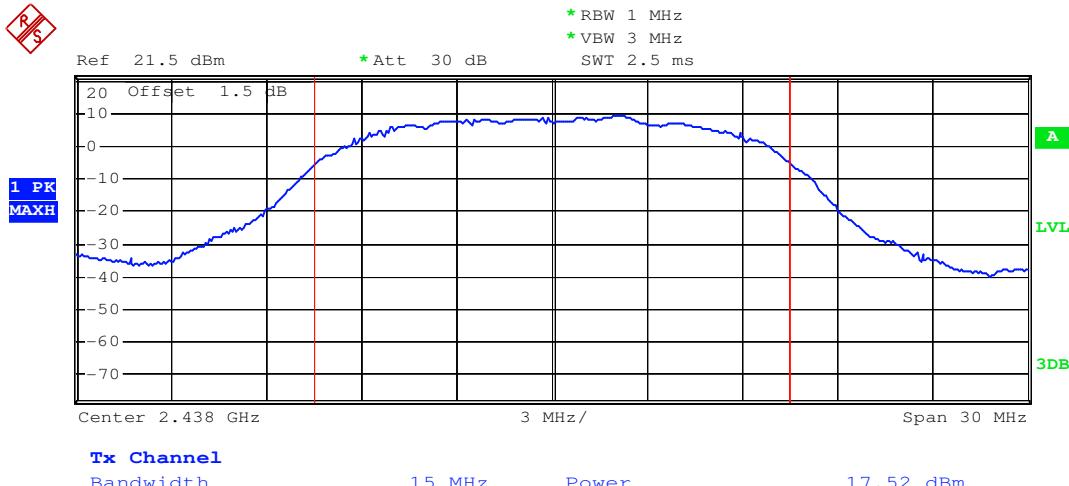
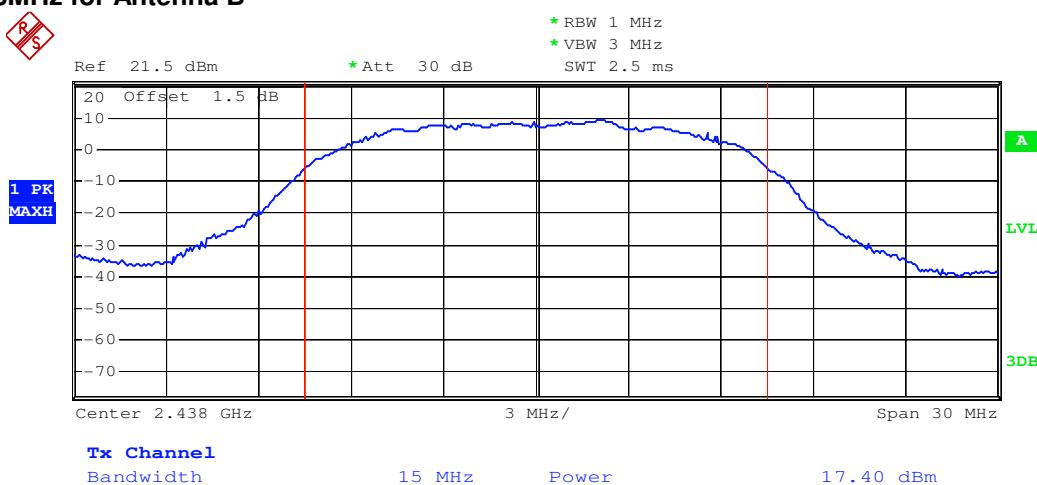
5736-5814MHz for Antenna A:

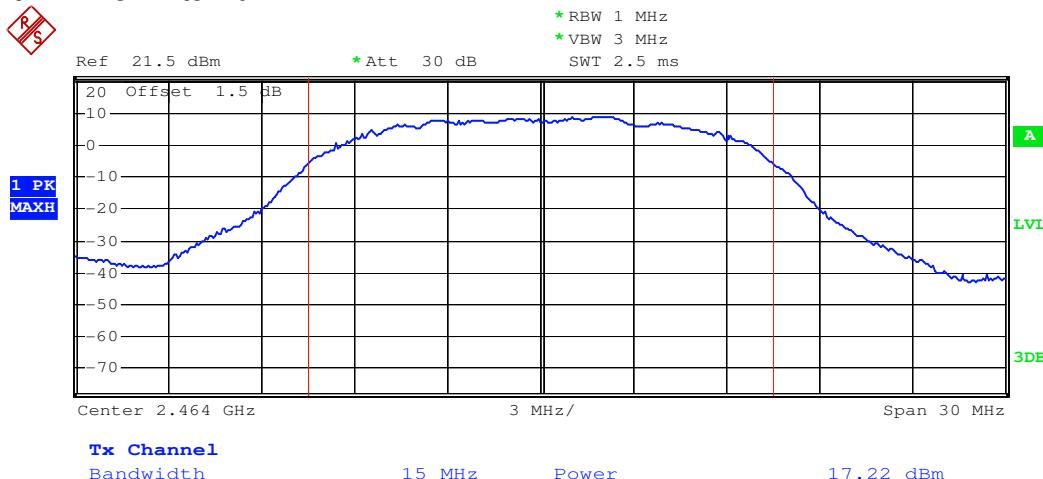
CH	Frequency (MHz)	Output Peak Power (dBm)	Peak Power Limit (dBm)	Result
LOW	5736	16.36	30	PASS
MID	5762	16.49	30	PASS
HIGH	5814	16.30	30	PASS

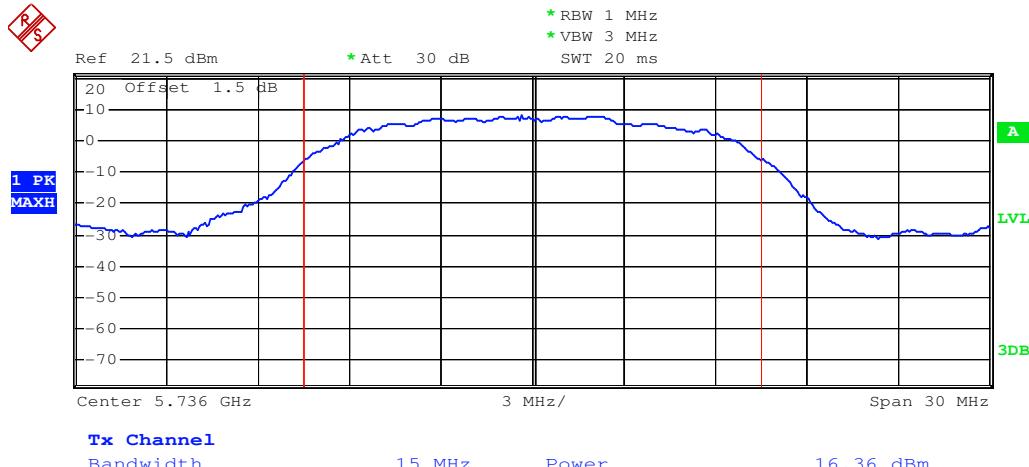
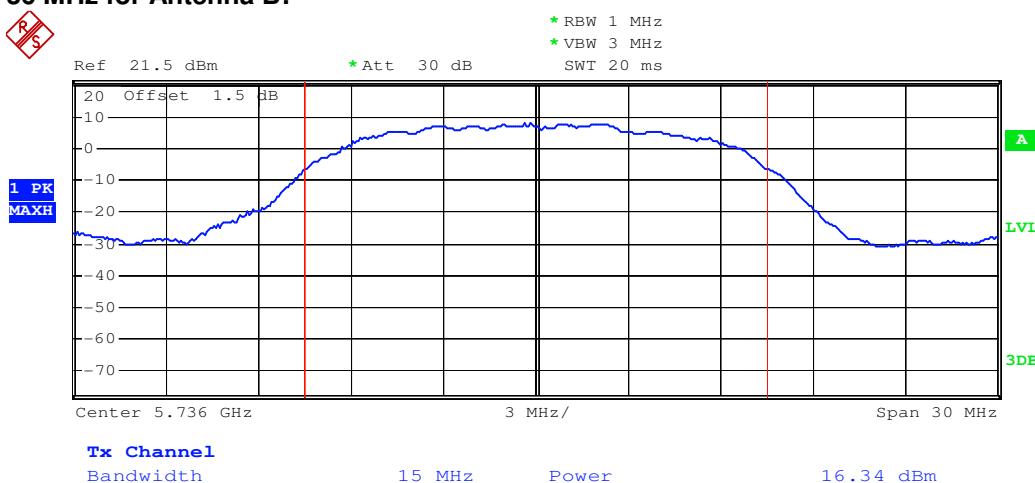
5736-5814MHz for Antenna B:

CH	Frequency (MHz)	Output Peak Power (dBm)	Peak Power Limit (dBm)	Result
LOW	5736	16.34	30	PASS
MID	5762	16.56	30	PASS
HIGH	5814	16.43	30	PASS

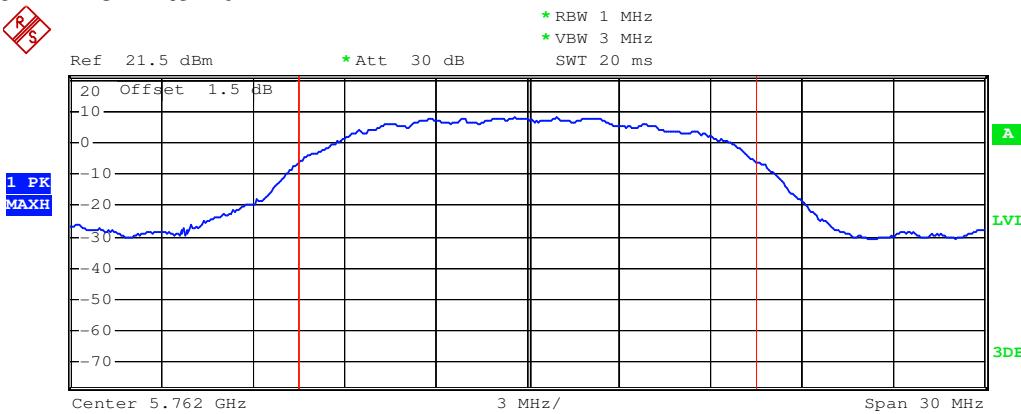
**For 2412-2464MHz Band:**
**2412MHz for Antenna A**

**2412MHz for Antenna B**


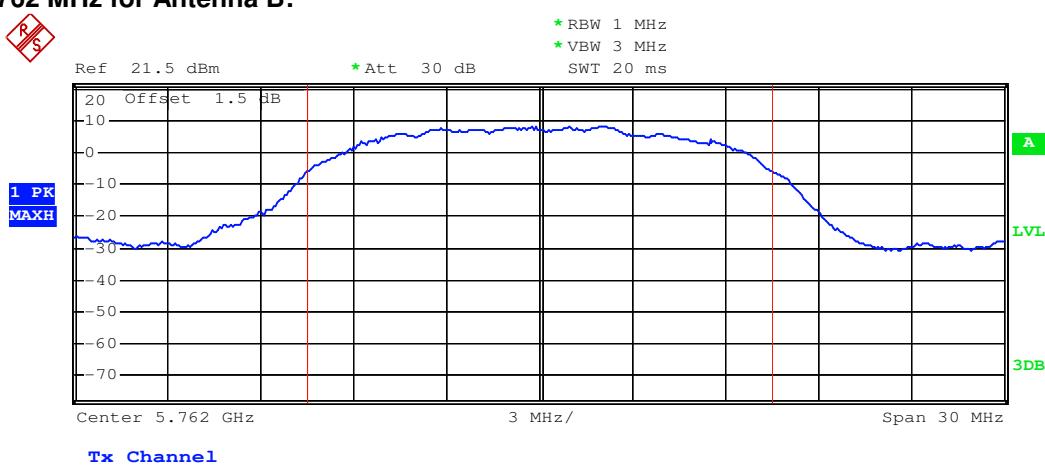
**2438MHz for Antenna A**

**2438MHz for Antenna B**


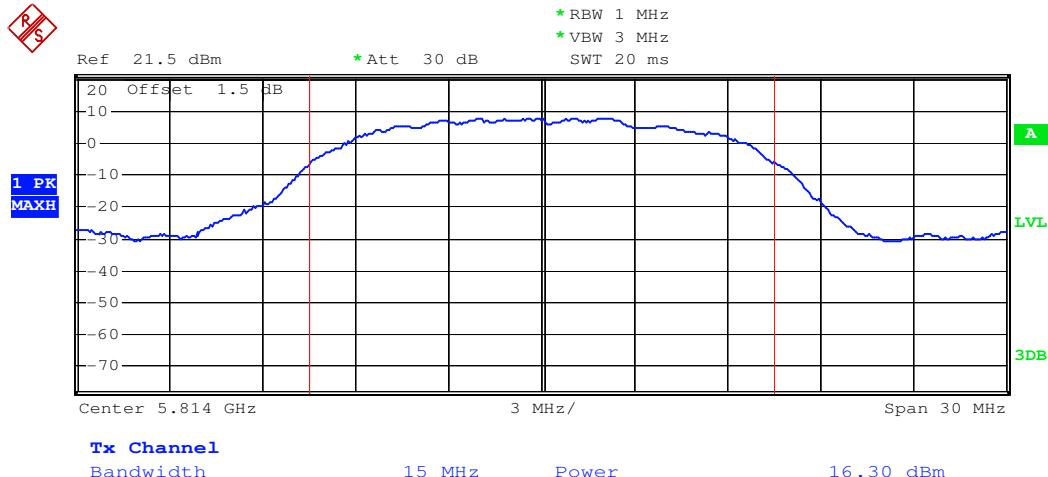
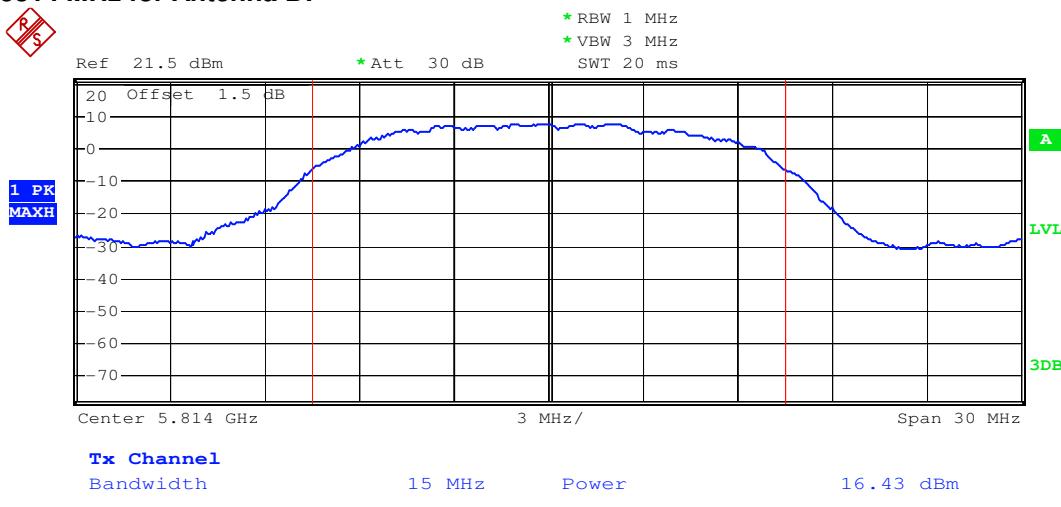
**2464MHz for Antenna A**

**2464MHz for Antenna B**


**For 5736- 5814 MHz Brand:**
**5736MHz for Antenna A:**

**5736 MHz for Antenna B:**


**5762MHz for Antenna A:**


**5762 MHz for Antenna B:**

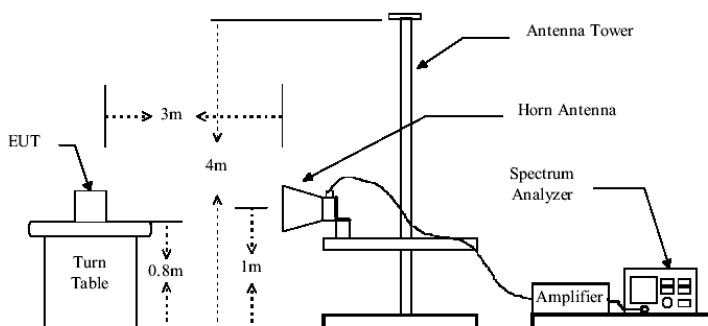


**5814MHz for Antenna A:**

**5814 MHz for Antenna B:**


## 6.6 Radiated Emission Band Edge

<b>Test Requirement:</b>	FCC Part15 247(c)
<b>Test date:</b>	Feb.15, 2013
<b>Standard Applicable:</b>	According to section 15.247(c),in any 100KHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in 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. In addition, radiated emissions which fall in the restricted bands, as defined in section 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).
<b>Measurement Distance:</b>	3m (Semi-Anechoic Chamber)
<b>Limit:</b>	40.0 dB $\mu$ V/m between 30MHz & 88MHz; 43.5 dB $\mu$ V/m between 88MHz & 216MHz; 46.0 dB $\mu$ V/m between 216MHz & 960MHz; AV 54.0 dB $\mu$ V/m PK 74.0dB $\mu$ V/m above 960MHz.
<b>Measurement Procedure:</b>	The EUT was setup according to ANSI 63.10,2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47 CFR 15.247 requirements. The EUT is placed on a turn table which is 0.8 m above ground. The turn table is rotated 360 degrees to determine to the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C 63.10:2009 on radiated measurement. Spectrum analyzer parameters setting as shown below: (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

### Radiated Emission Test Set-up Frequency Over 1GHz

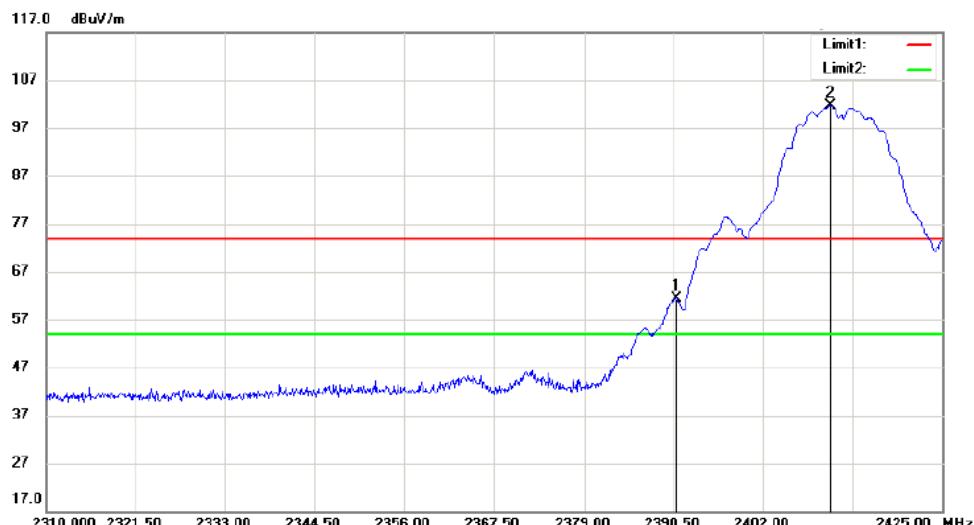


The field strength is calculated by adding the Antenna Factor, Preamplifier Factor & Cable Factor. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

**Measurement Result:**
**Test Mode:** 2412MHz for Antenna A

**Test Antenna:** Vertical

**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.845	68.05	peak	-6.55	61.50	74.00	-12.50
2	2410.625	108.22	peak	-6.52	101.70	74.00	27.70

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.385	40.05	peak	-6.55	33.50	54.00	-20.50
2	2412.695	98.55	peak	-6.52	92.03	54.00	38.03

**Test Mode:** 2412MHz for Antenna A

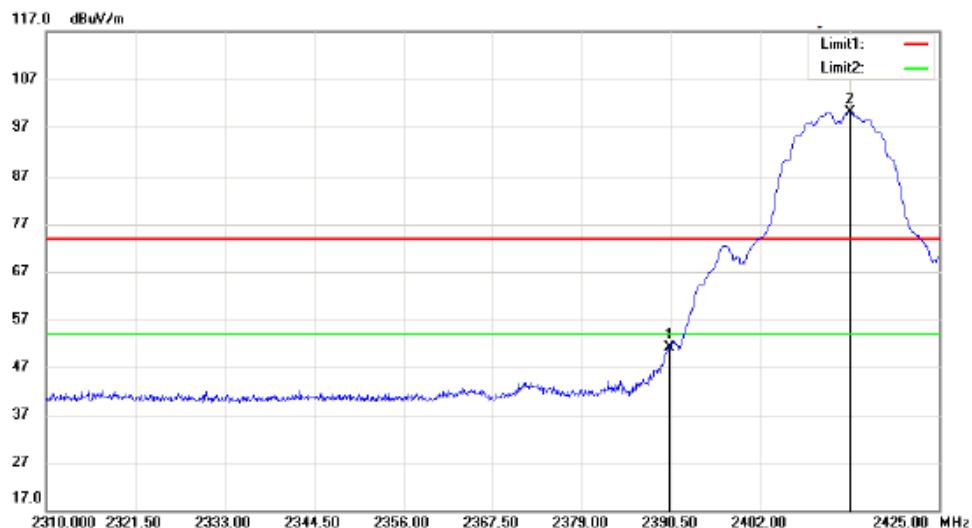
**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**

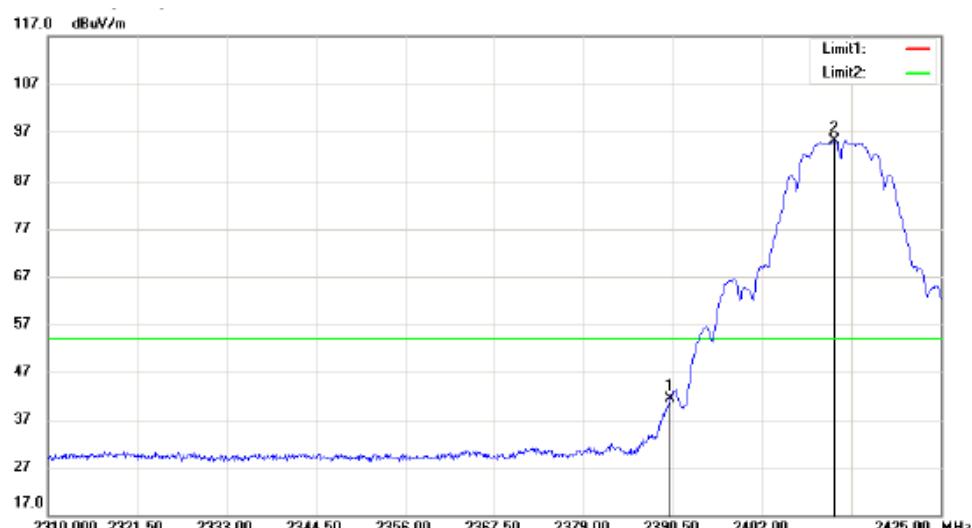

Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.730	75.15	peak	-6.55	68.60	74.00	-5.40
2	2410.625	107.49	peak	-6.52	100.97	74.00	26.97

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.155	53.10	peak	-6.55	46.55	54.00	-7.45
2	2411.430	101.15	peak	-6.51	94.64	54.00	40.64

**Test Mode: 2412MHz for Antenna B**
**Test Antenna: Vertical**
**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.270	57.66	peak	-6.55	51.11	74.00	-22.89
2	2413.500	106.67	peak	-6.52	100.15	74.00	26.15

**AV**


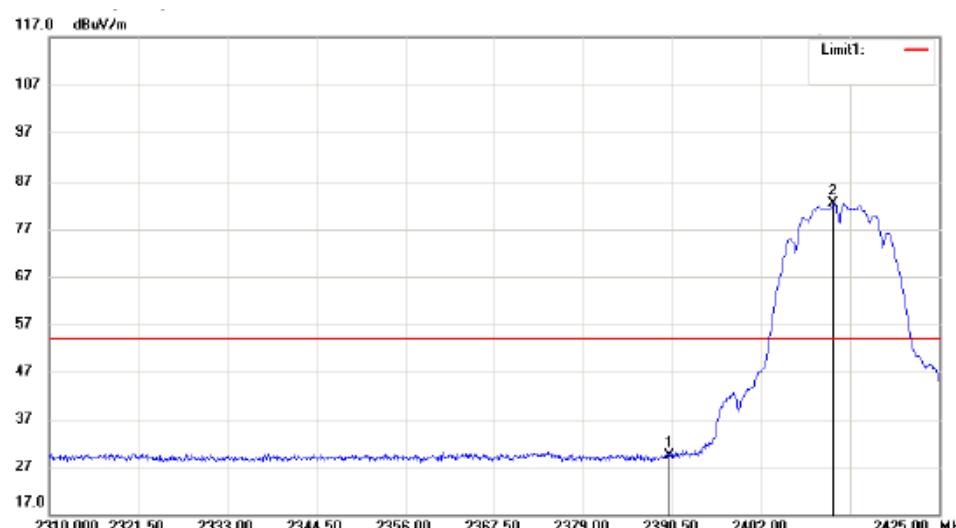
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.155	47.91	peak	-6.55	41.36	54.00	-12.64
2	2411.315	101.69	peak	-6.51	95.18	54.00	41.18

**Test Mode:** 2412MHz for Antenna B

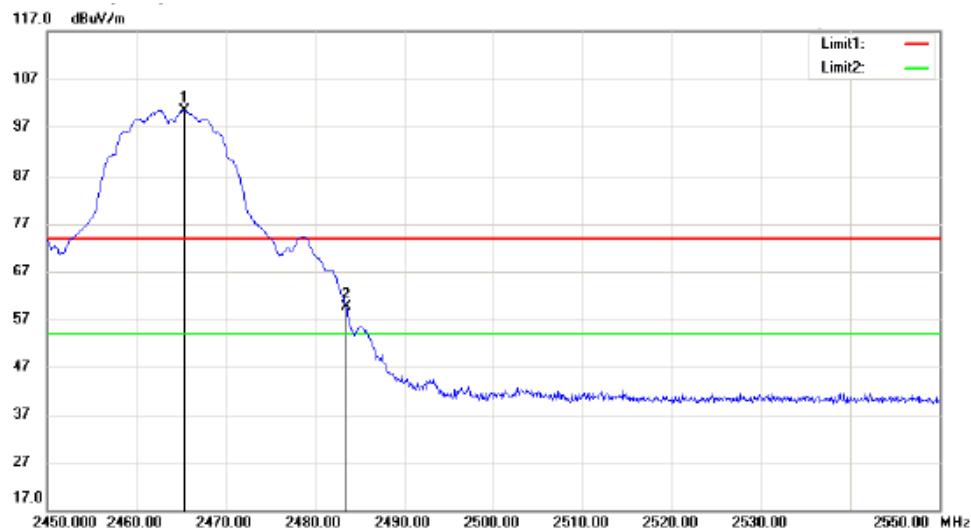
**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**

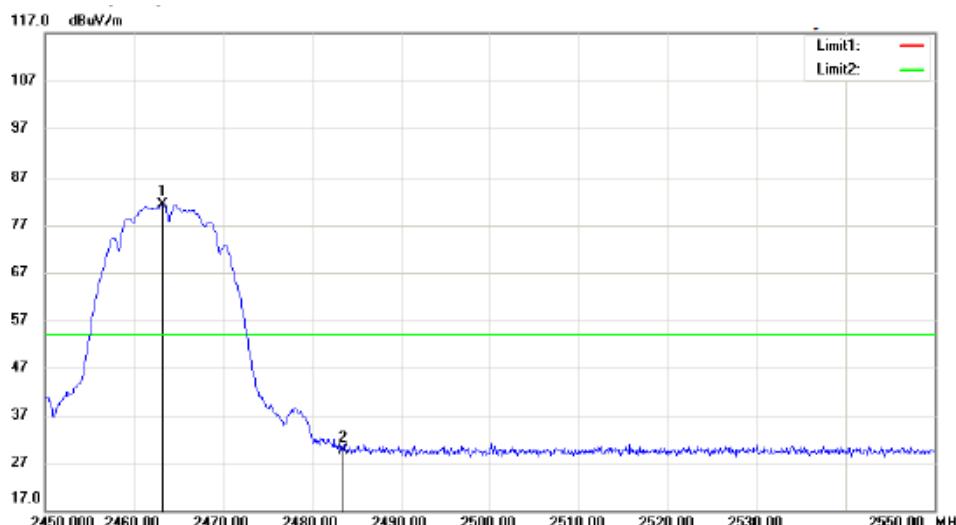

Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.155	64.96	peak	-6.55	58.41	74.00	-15.59
2	2410.625	108.09	peak	-6.52	101.57	74.00	27.57

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2390.155	35.87	peak	-6.55	29.32	54.00	-24.68
2	2411.315	88.78	peak	-6.51	82.27	54.00	28.27

**Test Mode: 2464MHz for Antenna A**
**Test Antenna: Vertical**
**Peak**


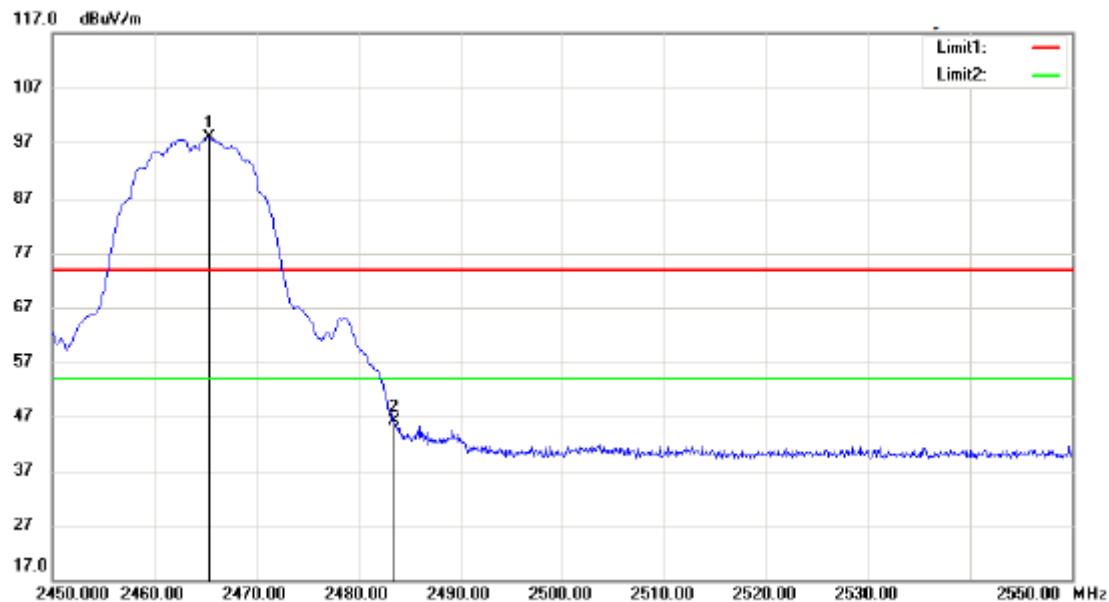
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2465.400	106.85	peak	-6.45	100.40	74.00	26.40
2	2483.500	65.97	peak	-6.41	59.56	74.00	-14.44

**AV**


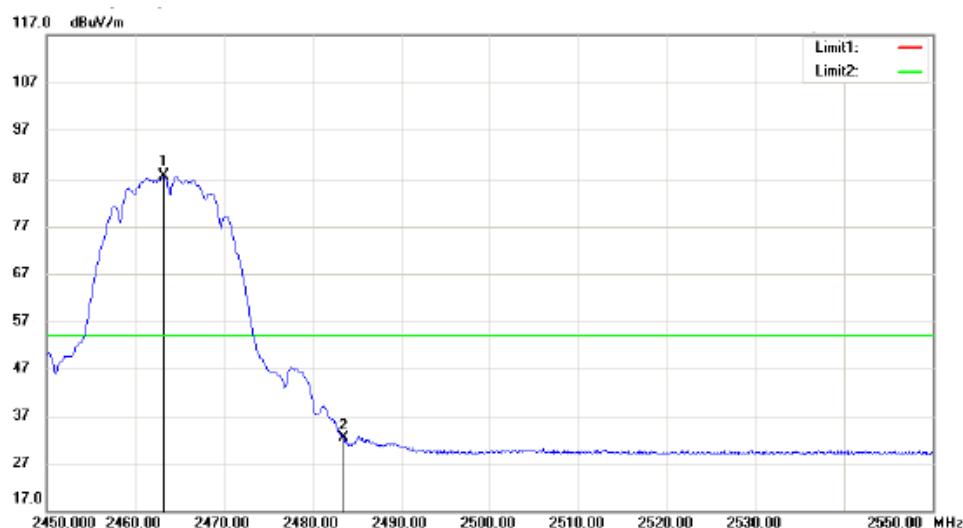
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2463.300	87.82	peak	-6.45	81.37	54.00	27.37
2	2483.500	35.97	peak	-6.41	29.56	54.00	-24.44

**Test Mode:** 2464MHz for Antenna A

**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2465.400	104.35	peak	-6.45	97.90	74.00	23.90
2	2483.500	52.51	peak	-6.41	46.10	74.00	-27.90

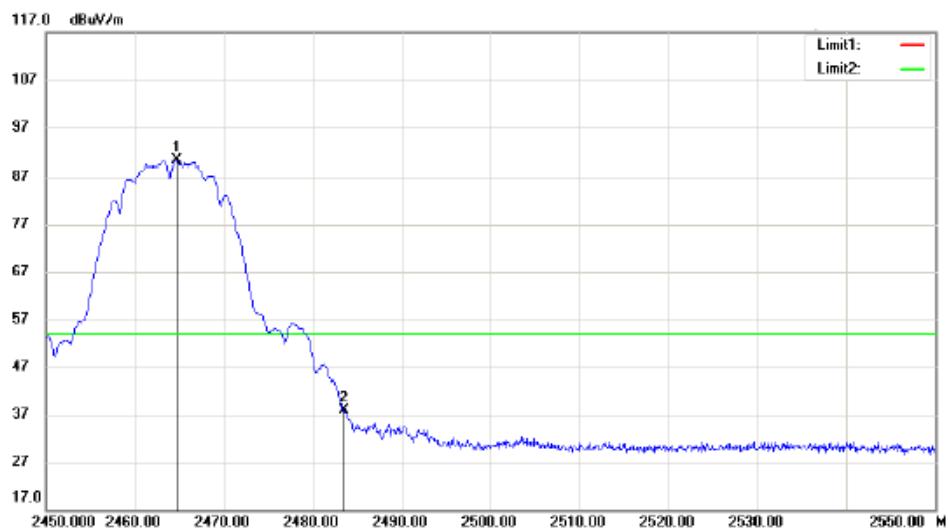
**AV**




Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2463.300	94.05	peak	-6.45	87.60	54.00	33.60
2	2483.500	38.67	peak	-6.41	32.26	54.00	-21.74

**Test Mode: 2464MHz for Antenna B**
**Test Antenna: Vertical**
**Peak**

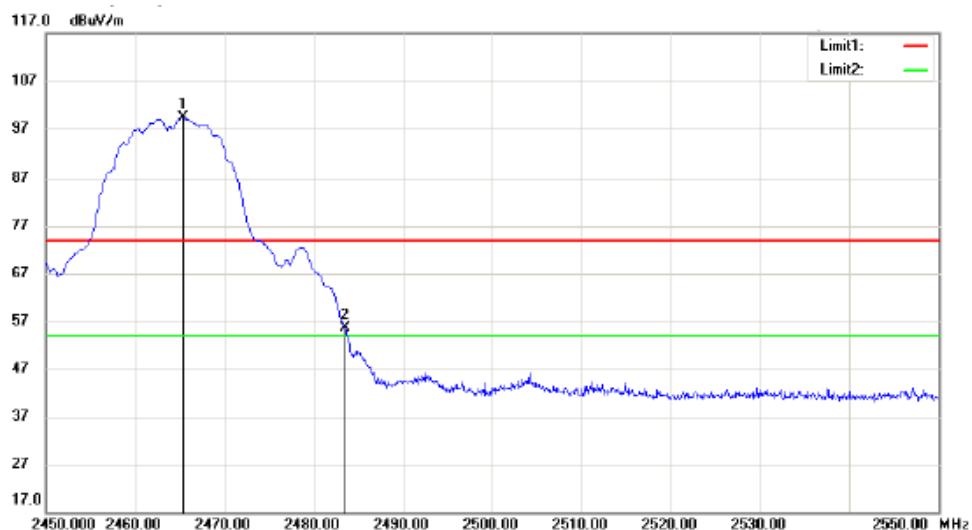

Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2465.400	105.99	peak	-6.45	99.54	74.00	25.54
2	2483.500	62.11	peak	-6.41	55.70	74.00	-18.30

**AV**


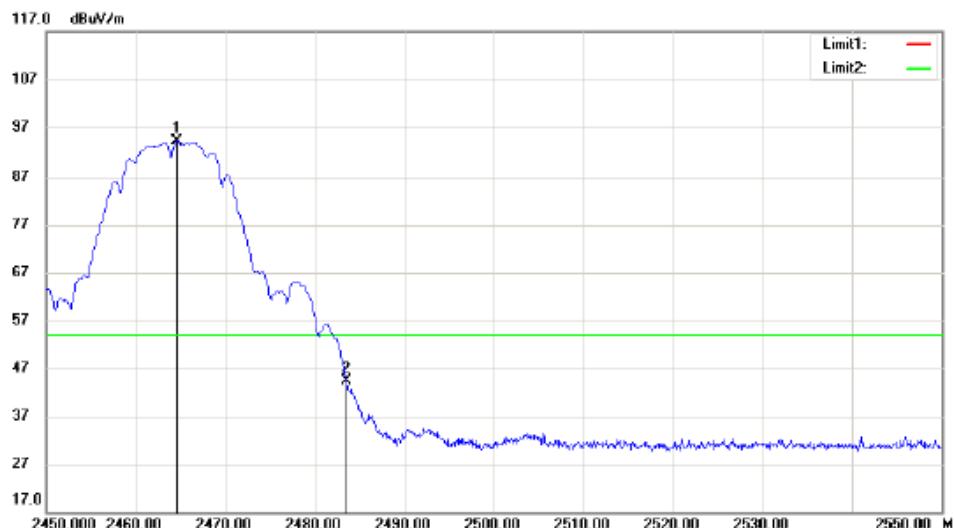
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2464.700	96.57	peak	-6.45	90.12	54.00	36.12
2	2483.500	44.26	peak	-6.41	37.85	54.00	-16.15

**Test Mode:** 2464MHz for Antenna B

**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2465.400	105.89	peak	-6.45	99.44	74.00	25.44
2	2483.500	62.03	peak	-6.41	55.62	74.00	-18.38

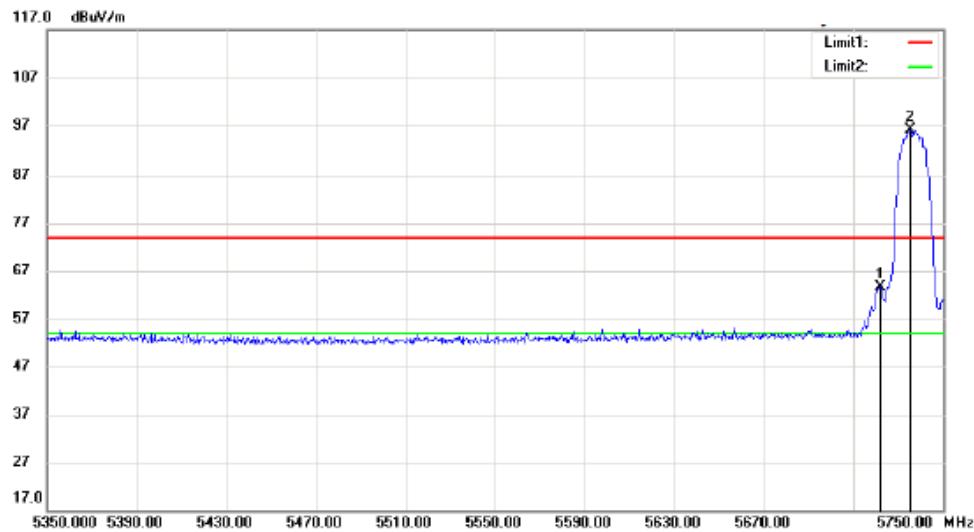
**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2464.600	100.55	AVG	-6.45	94.10	54.00	40.10
2	2483.500	50.87	AVG	-6.41	44.46	54.00	-9.54

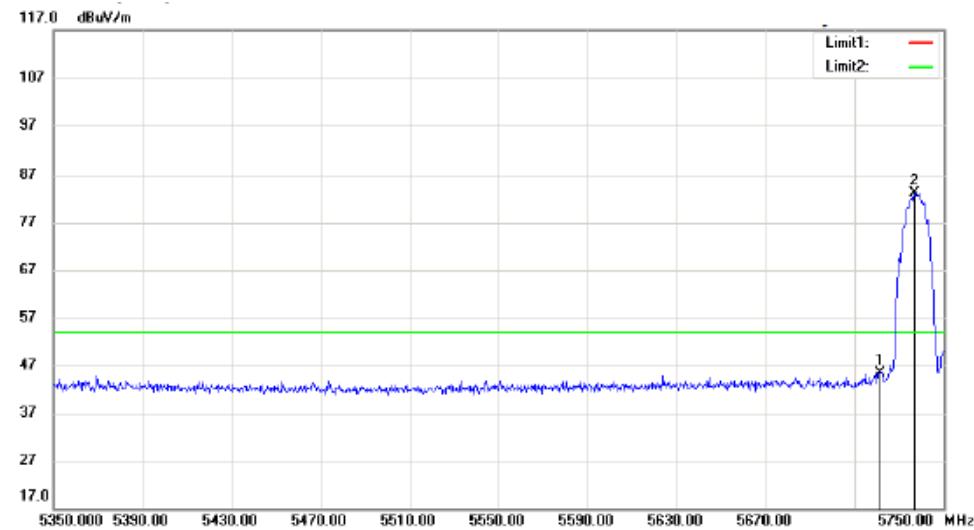


**Test Mode:** 5736MHz for Antenna A

**Test Antenna:** Vertical

**Peak**


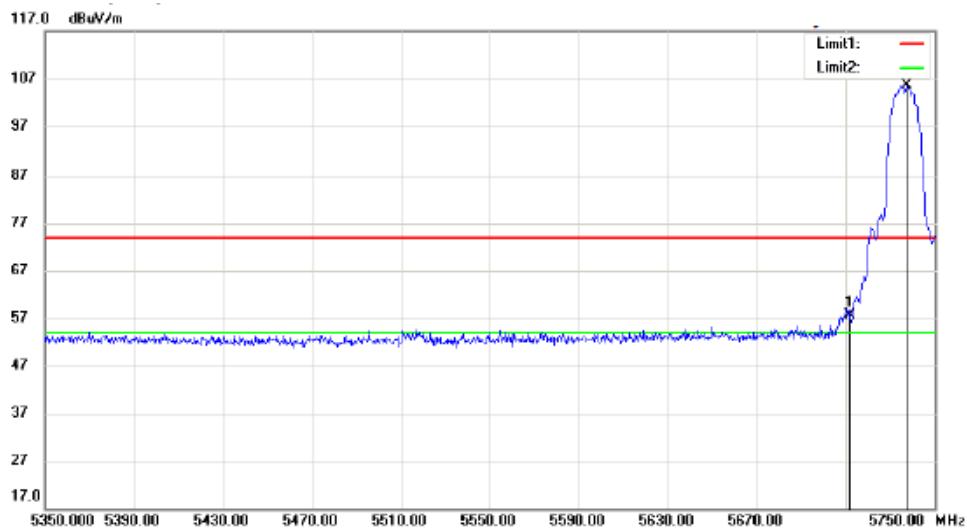
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5722.000	62.14	peak	1.53	63.67	74.00	-10.33
2	5735.200	94.60	peak	1.56	96.16	74.00	22.16

**AV**


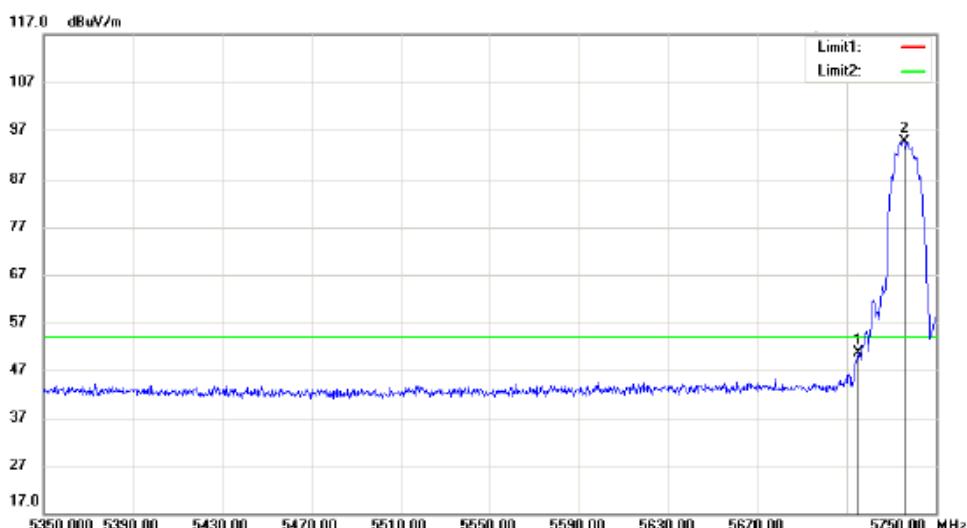
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5721.600	43.83	peak	1.53	45.36	54.00	-8.64
2	5736.800	81.55	peak	1.56	83.11	54.00	29.11

**Test Mode:** 5736MHz for Antenna A

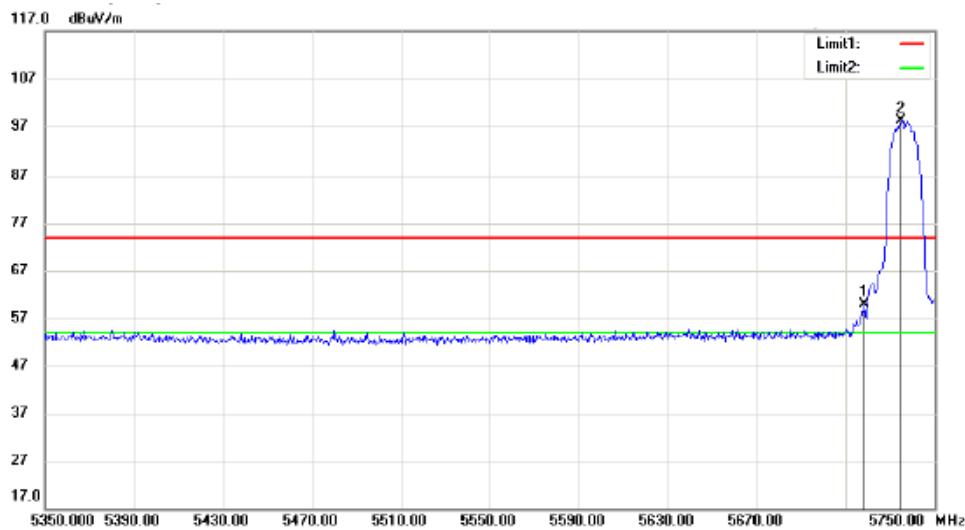
**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


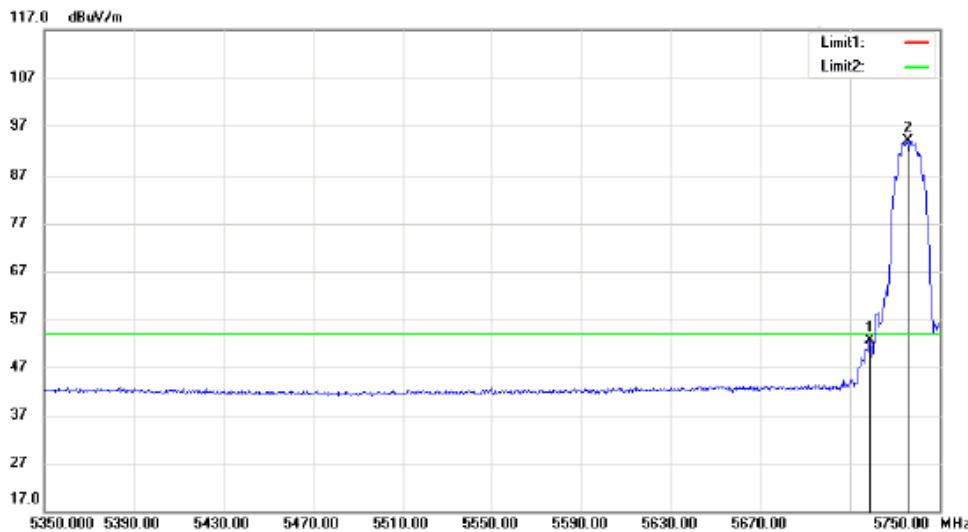
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5712.000	56.01	peak	1.50	57.51	74.00	-16.49
2	5737.600	104.06	peak	1.57	105.63	74.00	31.63

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5715.200	49.10	peak	1.52	50.62	54.00	-3.38
2	5735.600	92.95	peak	1.56	94.51	54.00	40.51

**Test Mode: 5736MHz for Antenna B**
**Peak**
**Test Antenna: Vertical**


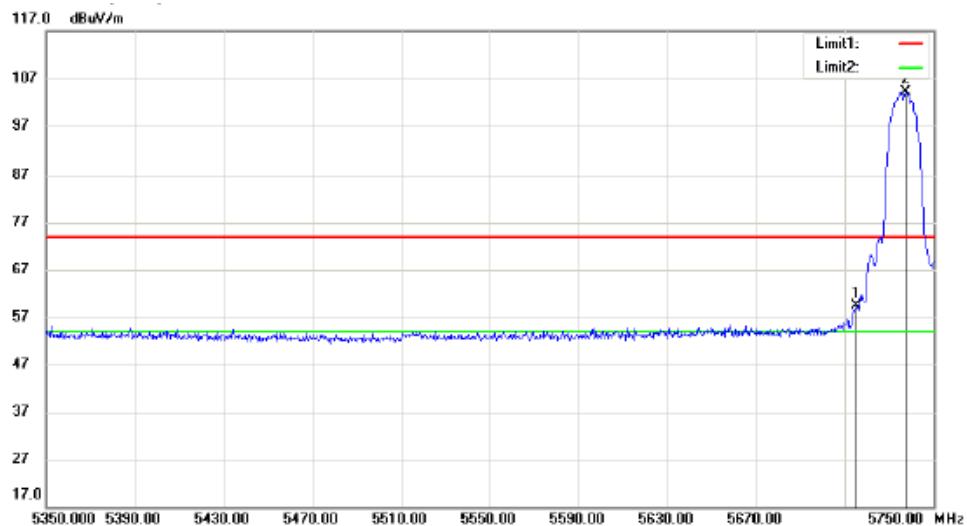
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5718.400	58.31	peak	1.53	59.84	74.00	-14.16
2	5734.800	96.60	peak	1.55	98.15	74.00	24.15

**AV**


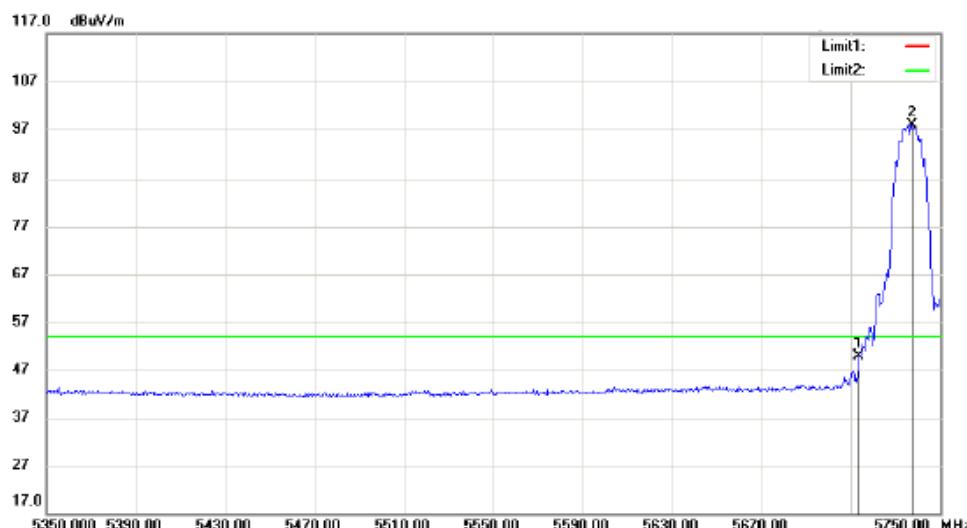
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5718.800	51.11	peak	1.53	52.64	54.00	-1.36
2	5735.600	92.33	peak	1.56	93.89	54.00	39.89

**Test Mode:** 5736MHz for Antenna B

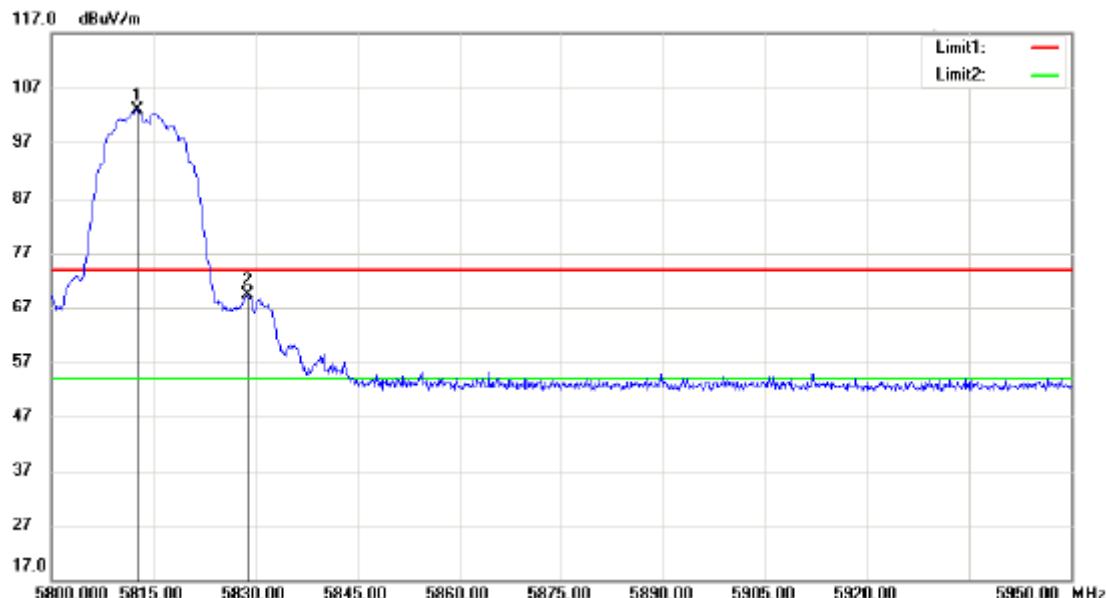
**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


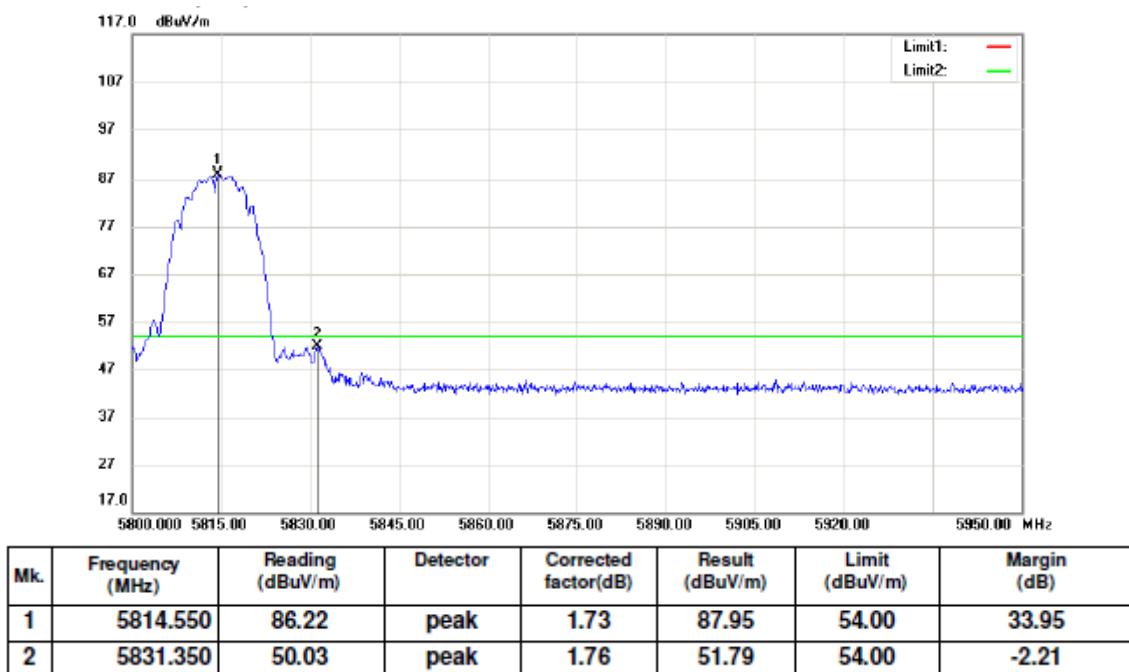
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5715.200	57.77	peak	1.52	59.29	74.00	-14.71
2	5737.600	102.54	peak	1.57	104.11	74.00	30.11

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5713.600	48.28	peak	1.51	49.79	54.00	-4.21
2	5737.200	96.24	peak	1.56	97.80	54.00	43.80

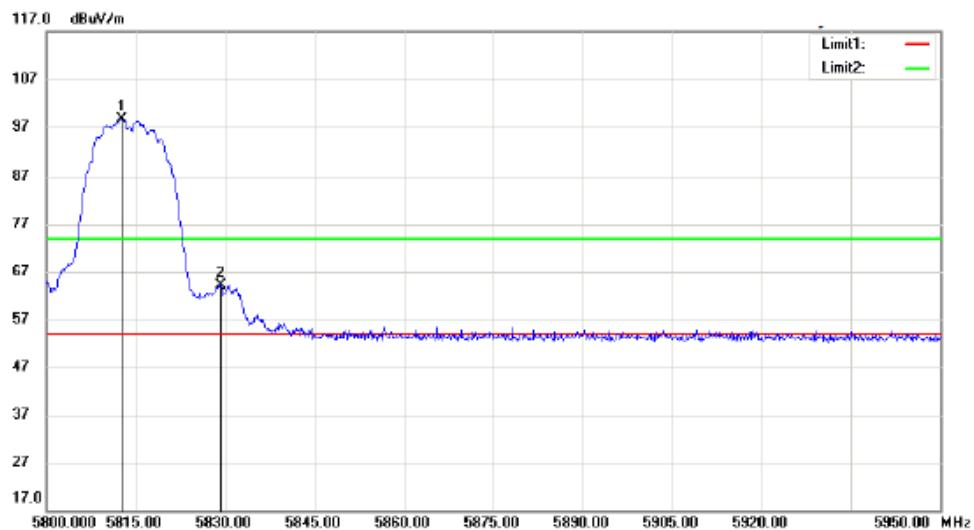
**Test Mode: 5814MHz for Antenna A**
**Test Antenna: Vertical**
**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5812.600	101.11	peak	1.73	102.84	74.00	28.84
2	5828.800	67.55	peak	1.76	69.31	74.00	-4.69

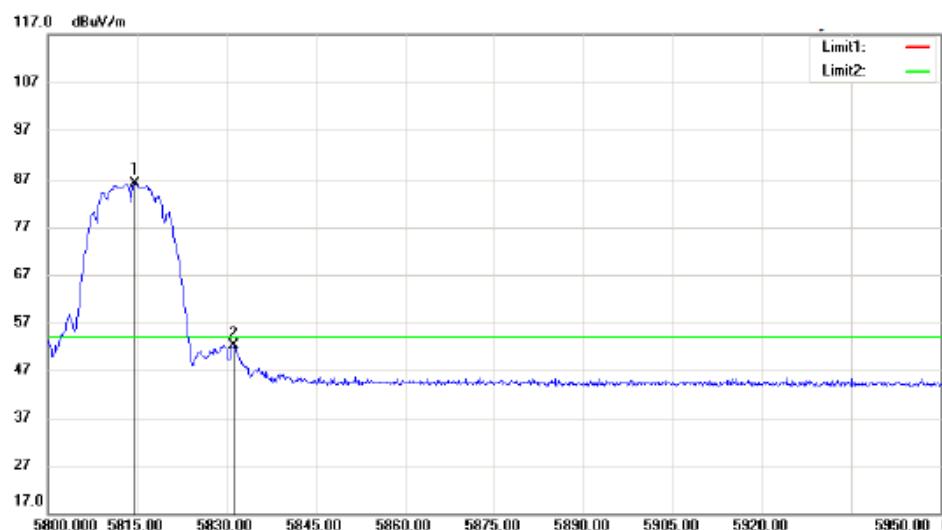
**AV**


**Test Mode:** 5814MHz for Antenna A

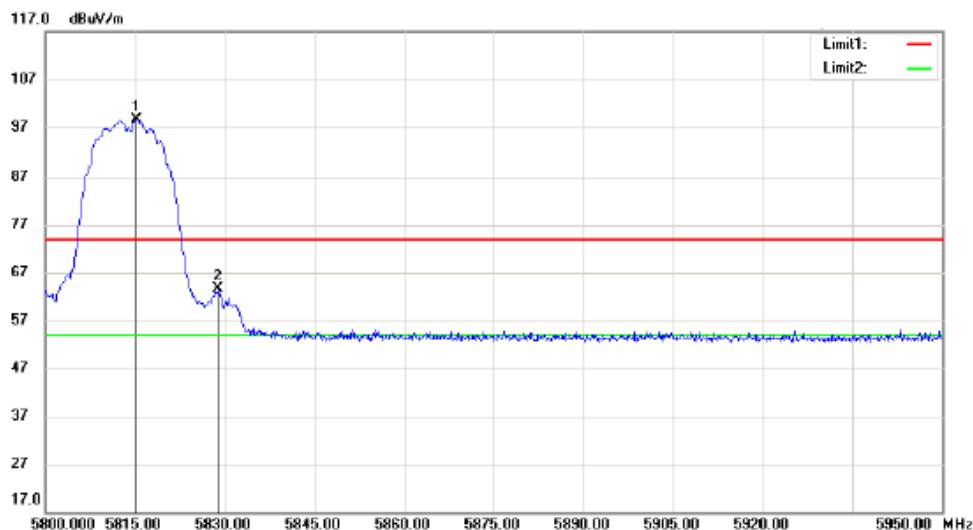
**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


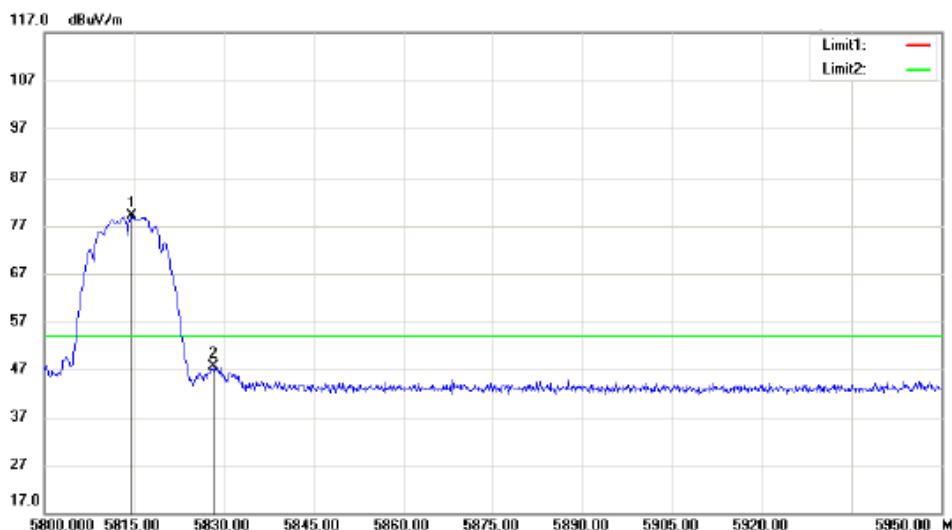
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5812.600	96.86	peak	1.73	98.59	54.00	44.59
2	5829.250	62.37	peak	1.76	64.13	54.00	10.13

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5814.700	84.47	peak	1.73	86.20	54.00	32.20
2	5831.350	50.44	peak	1.76	52.20	54.00	-1.80

**Test Mode: 5814MHz for Antenna B**
**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5815.300	96.82	peak	1.74	98.56	74.00	24.56
2	5828.950	61.91	peak	1.76	63.67	74.00	-10.33

**AV**


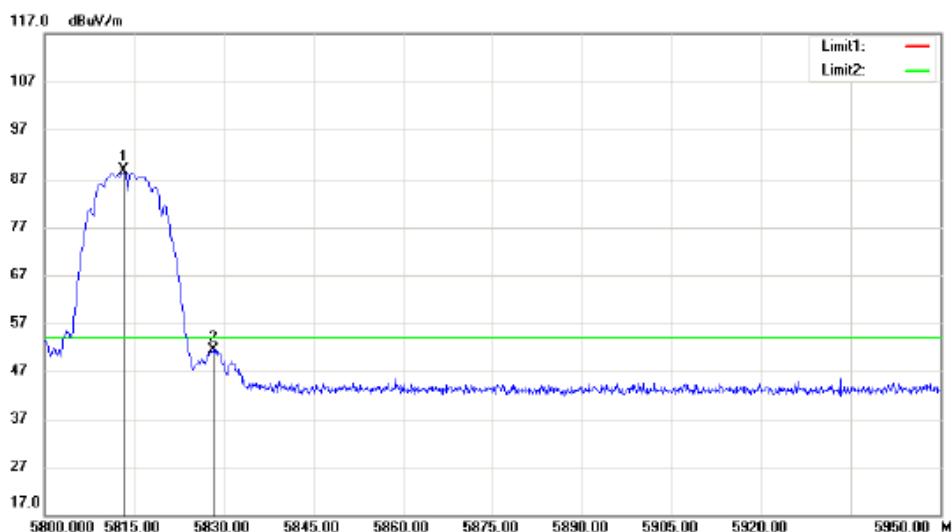
Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5814.700	77.33	peak	1.73	79.06	54.00	25.06
2	5828.350	45.82	peak	1.76	47.58	54.00	-6.42

**Test Mode:** 5814MHz for Antenna B

**Test Antenna:** Error!  
Hyperlink reference not valid.

**Peak**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5812.600	98.27	peak	1.73	100.00	74.00	26.00
2	5829.250	62.11	peak	1.76	63.87	74.00	-10.13

**AV**


Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5813.200	86.87	peak	1.73	88.60	54.00	34.60
2	5828.200	49.66	peak	1.76	51.42	54.00	-2.58



Remark: 1. The Peak Level less than the AV limit, so the AV level is no greater than the AV limit.

2. No any other emission which fall in restricted bands can be detected and be reported.

All frequencies within the "Restricted bands" have been evaluated to compliance. Section 15.205 Restricted bands of operation.

## 6.7 Conducted Spurious Emission Test

**Test Requirement:** FCC Part15 247(c)

**Test date:** Mar. 26, 2013

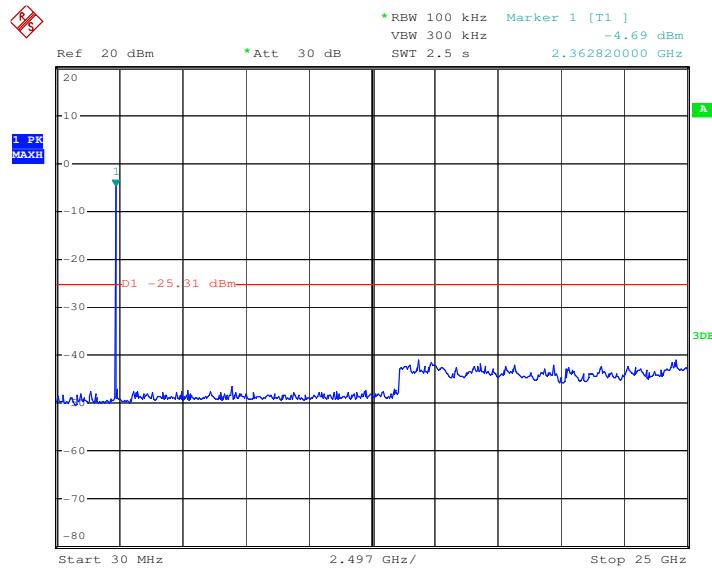
**Standard Applicable:** According to section 15.247(c), in any 100KHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100KHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in section 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

**Measurement Procedure:**

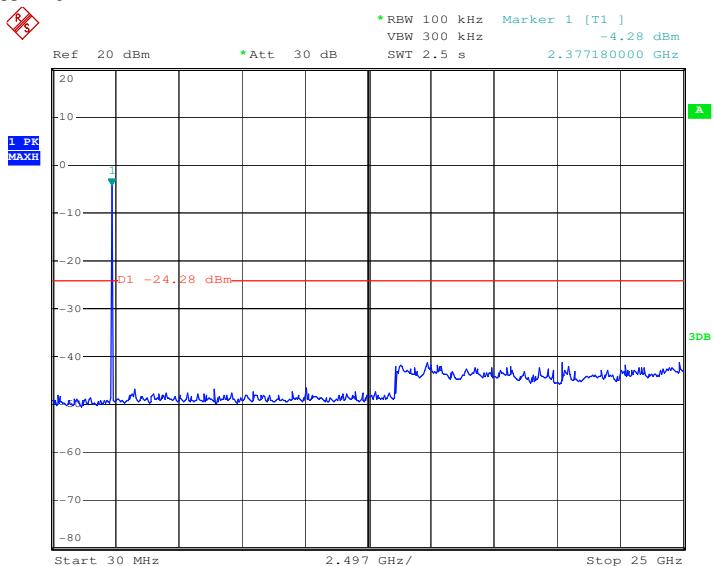
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW=100KHz VBW=300KHz, Sweep = auto
6. Repeat above procedures until all frequency measured were complete.

## Measurement Result:

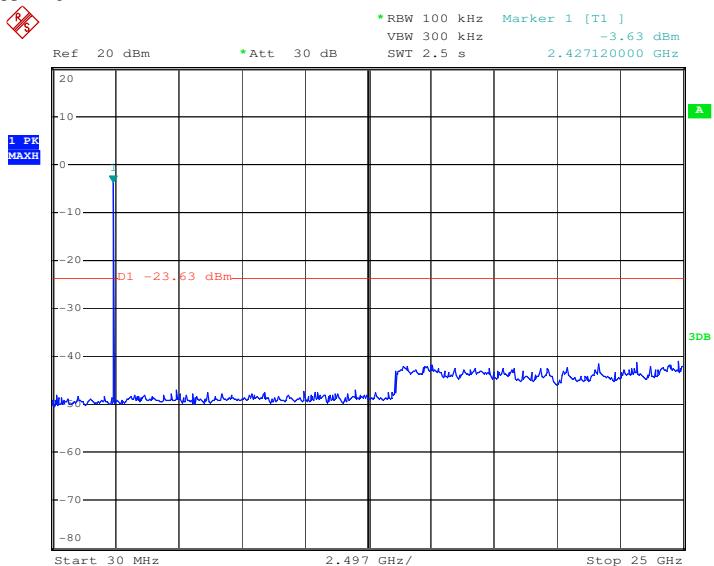
### Conducted spurious Emission Measurement Result For 2412-2464MHz Band 2412MHz for Antenna A



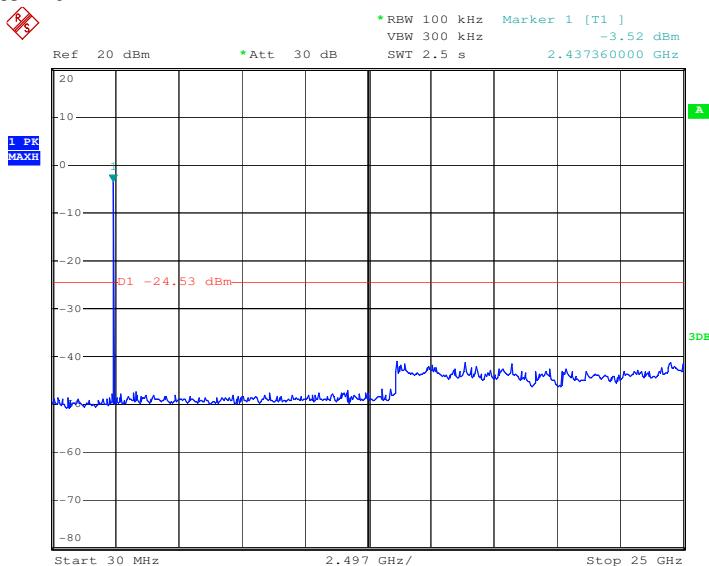
Date: 15.DEC.2012 16:05:18

**2412MHz for Antenna B**


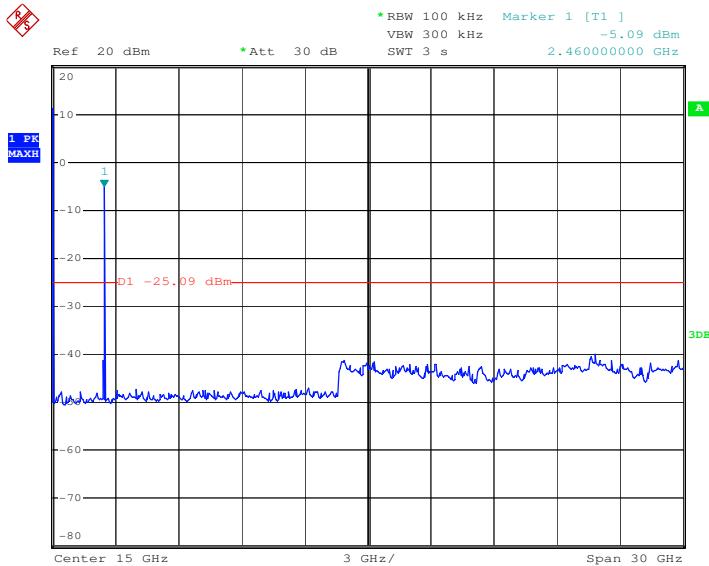
Date: 15.DEC.2012 16:06:17

**2438MHz for Antenna A**


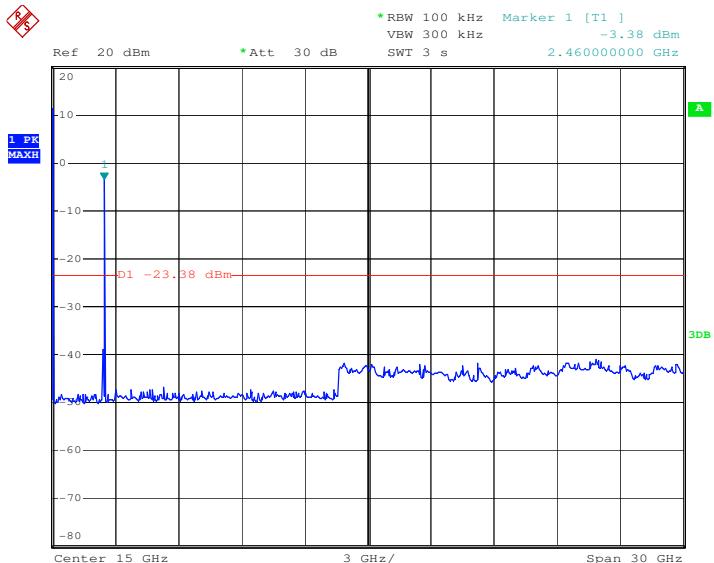
Date: 15.DEC.2012 16:07:23

**2438MHz for Antenna B**


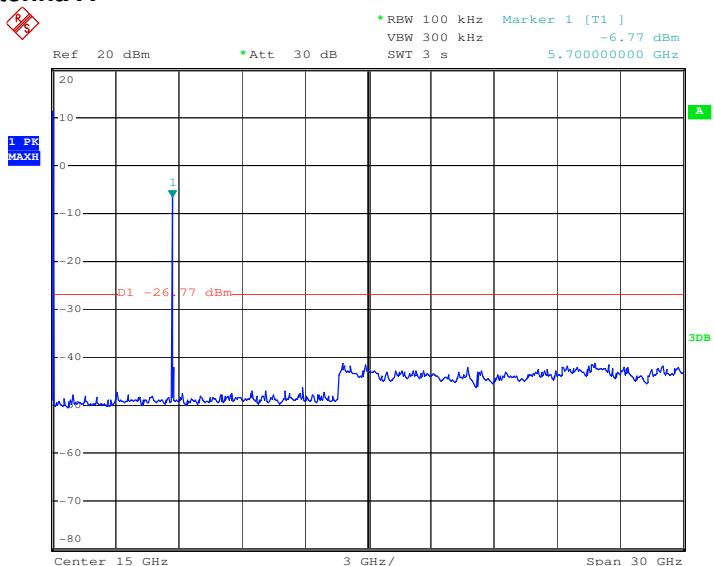
Date: 15.DEC.2012 16:08:43

**2464MHz for Antenna A**


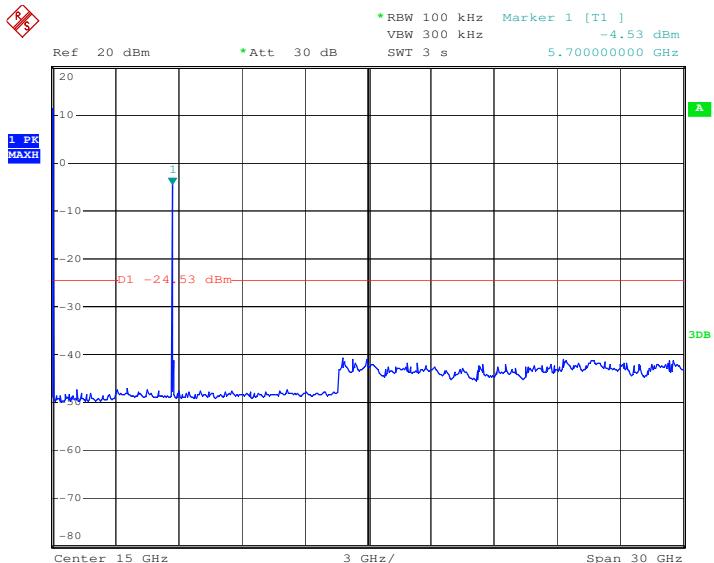
Date: 15.DEC.2012 16:22:29

**2464MHz for Antenna B**


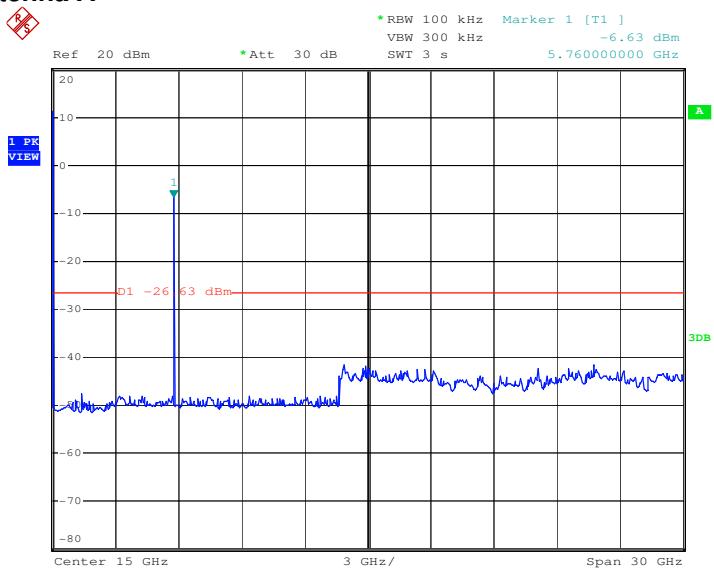
Date: 15.DEC.2012 16:23:53

**5736MHz for Antenna A**


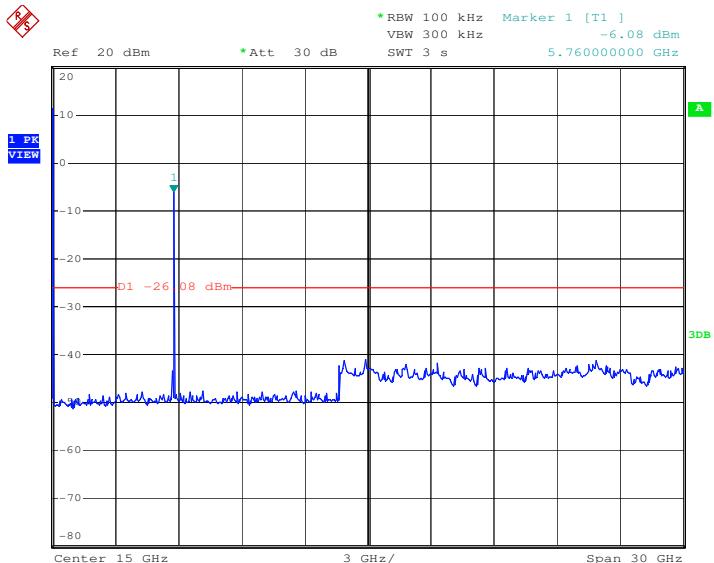
Date: 15.DEC.2012 16:24:59

**5736MHz for Antenna B**


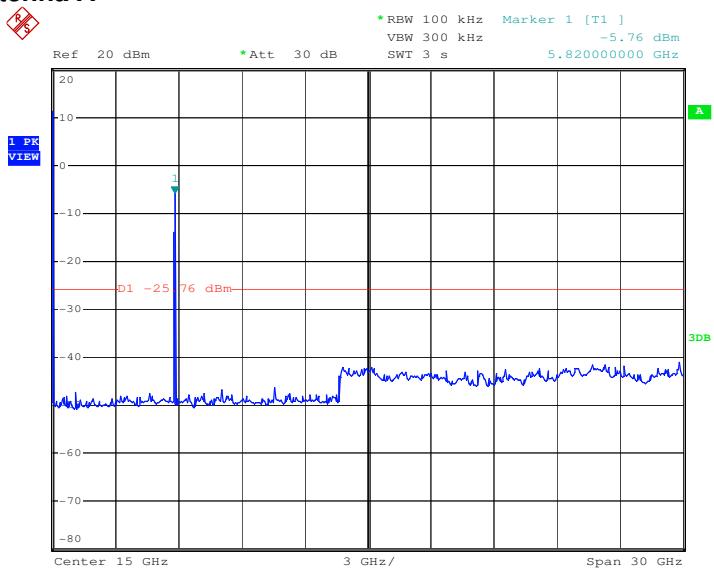
Date: 15.DEC.2012 16:27:06

**5762MHz for Antenna A**


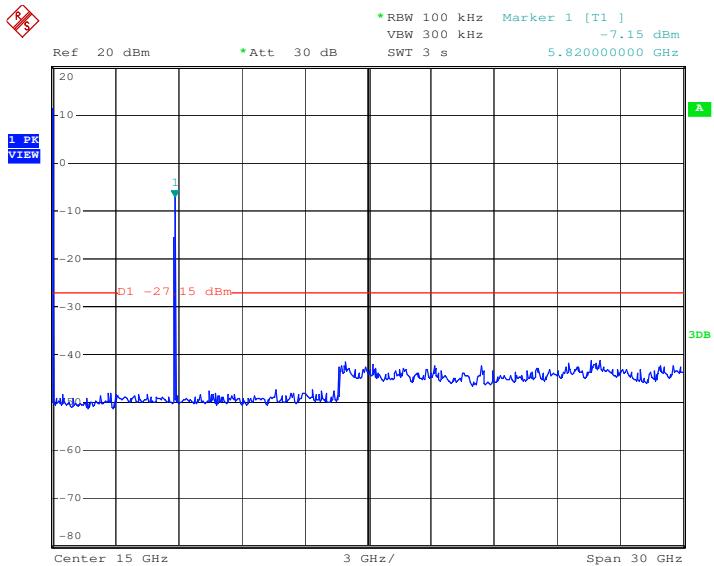
Date: 15.DEC.2012 16:28:37

**5762MHz for Antenna B**


Date: 15.DEC.2012 16:29:22

**5814MHz for Antenna A**


Date: 15.DEC.2012 16:30:29

**5814MHz for Antenna B**

Date: 15.DEC.2012 16:31:08

## 6.8 Peak Power Spectral Density

**Test Requirement:** FCC Part15 247(e)

**Test date:** Dec.15, 2012

**Standard Applicable:** According to section 15.247(e), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dB in any 3KHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph(b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

**Measurement Procedure:** The EUT was tested according to DTS test procedure of ANSI C63.10 for compliance to FCC 47CFR 15.247 requirements. Set RBW=3KHz, Set VBW=10KHz, Span=3MHz, Sweep time=100s, Set detector=Peak detector.

### Measurement Result:

2412-2464MHz Band for Antenna A

CH	Frequency (MHz)	RF Power Density (dBm)	Limit (dBm)	Result
LOW	2412	-12.13	8	PASS
MID	2438	-10.37	8	PASS
HIGH	2462	-10.53	8	PASS

2412-2464MHz Band for Antenna B

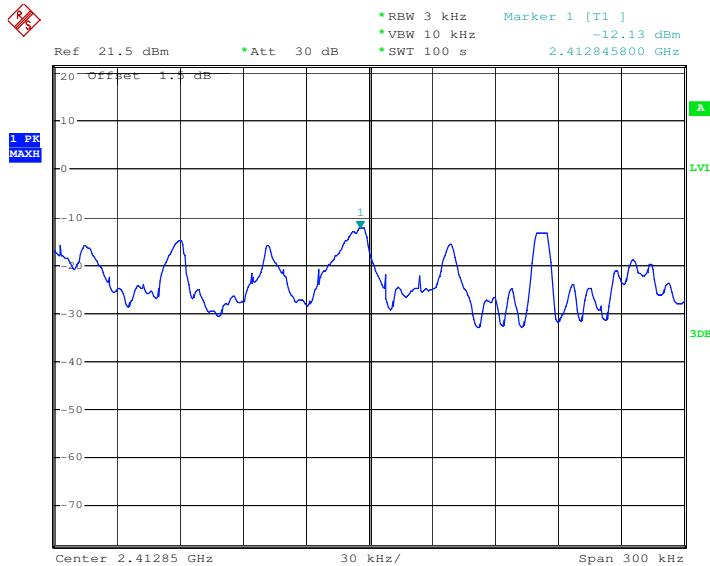
CH	Frequency (MHz)	RF Power Density (dBm)	Limit (dBm)	Result
LOW	2412	-10.34	8	PASS
MID	2438	-10.45	8	PASS
HIGH	2462	-10.15	8	PASS

5736-5814MHz Band for Antenna A

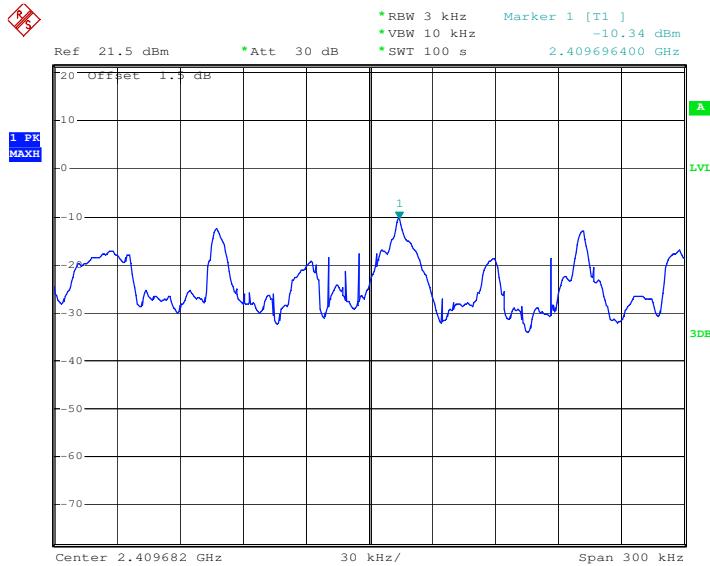
CH	Frequency (MHz)	RF Power Density (dBm)	Limit (dBm)	Result
LOW	5736	-11.23	8	PASS
MID	5762	-11.95	8	PASS
HIGH	5814	-11.59	8	PASS

5736-5814MHz Band for Antenna B

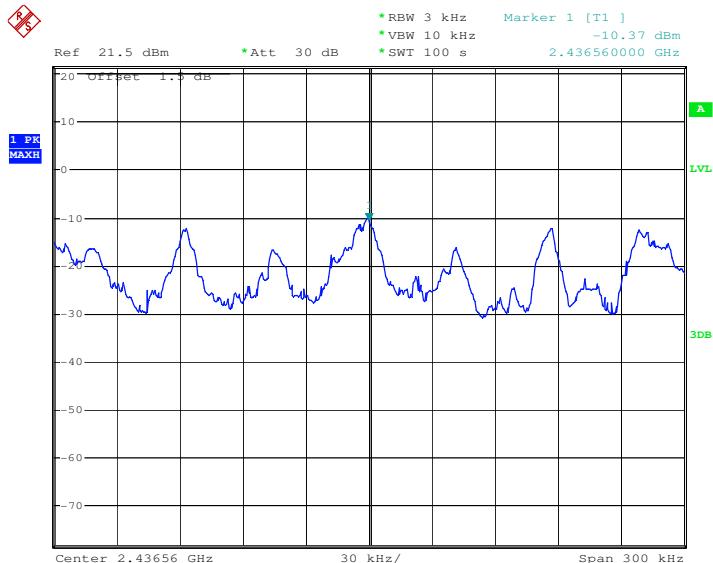
CH	Frequency (MHz)	RF Power Density (dBm)	Limit (dBm)	Result
LOW	5736	-11.00	8	PASS
MID	5762	-11.83	8	PASS
HIGH	5814	-12.17	8	PASS

**Power Spectral Density Test Plot(CH 2412MHz)**  
**Antenna A**


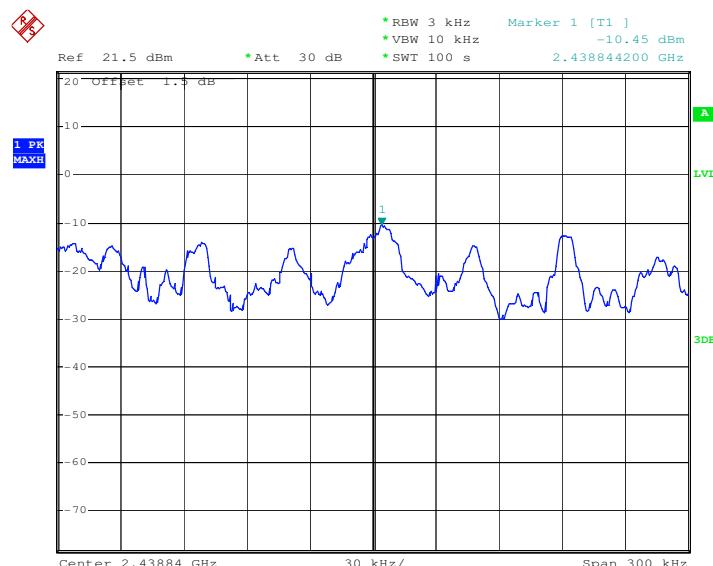
Date: 15.DEC.2012 13:33:45

**Antenna B**


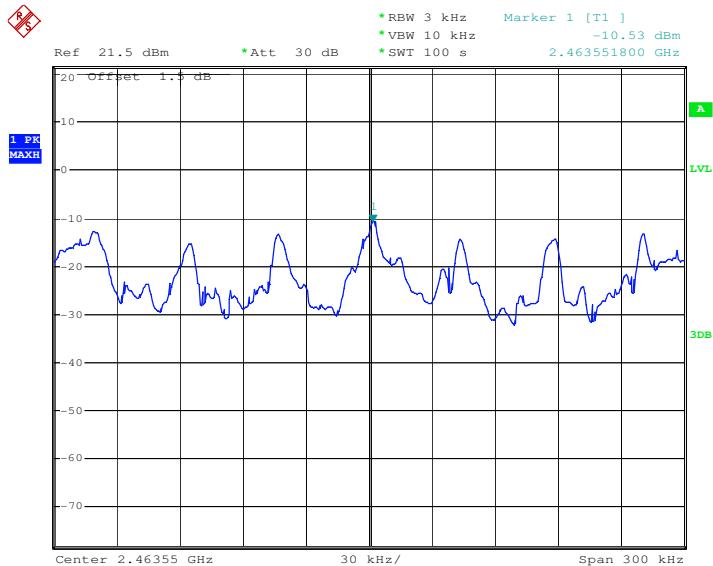
Date: 15.DEC.2012 13:38:33

**Power Spectral Density Test Plot(CH 2438MHz)**  
**Antenna A**


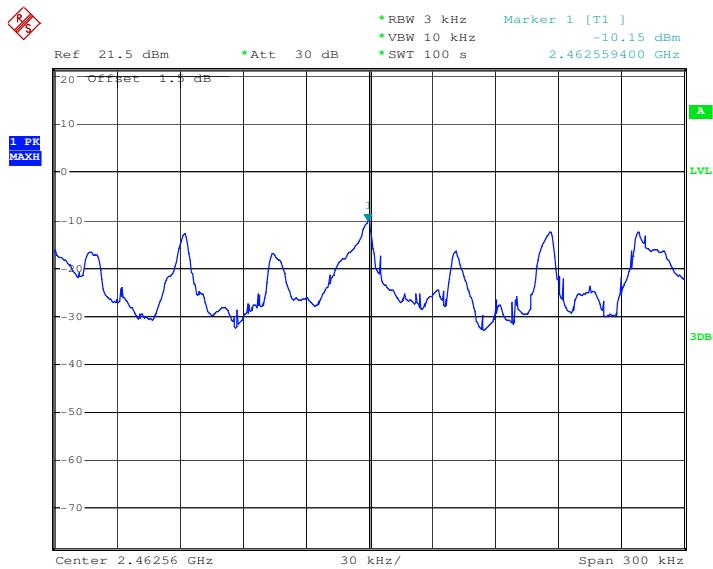
Date: 15.DEC.2012 13:44:05

**Antenna B**


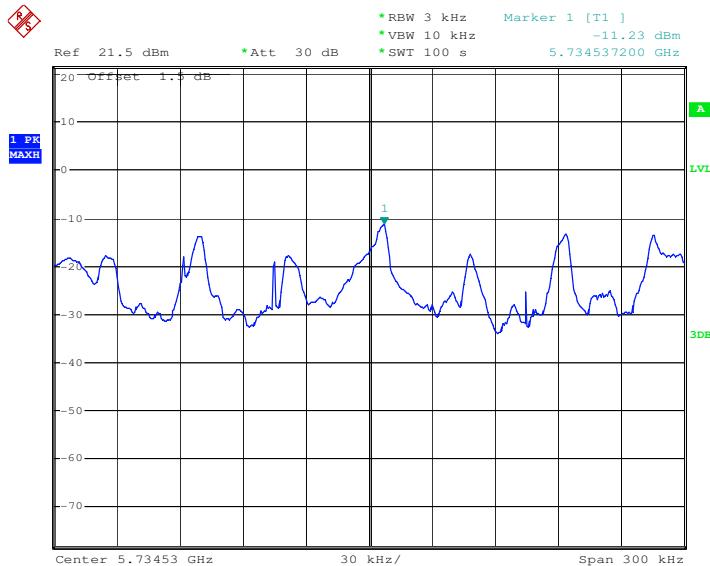
Date: 15.DEC.2012 13:49:04

**Power Spectral Density Test Plot(CH 2464MHz)**  
**Antenna A**


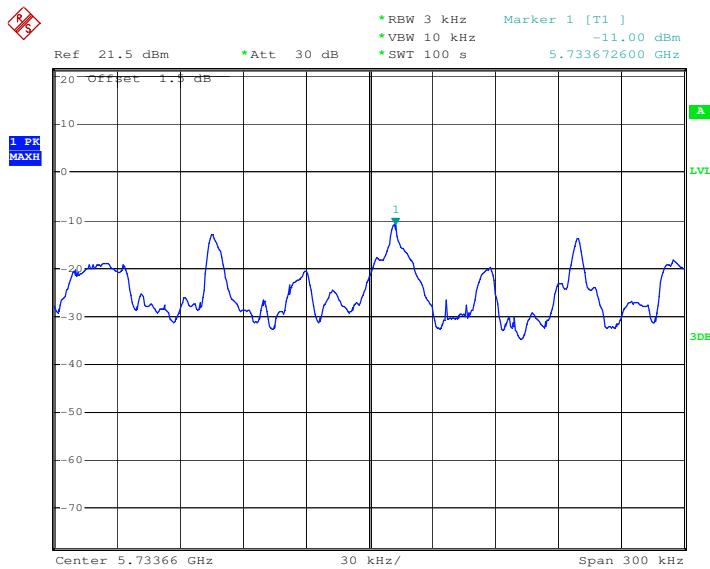
Date: 15.DEC.2012 13:53:42

**Antenna B**


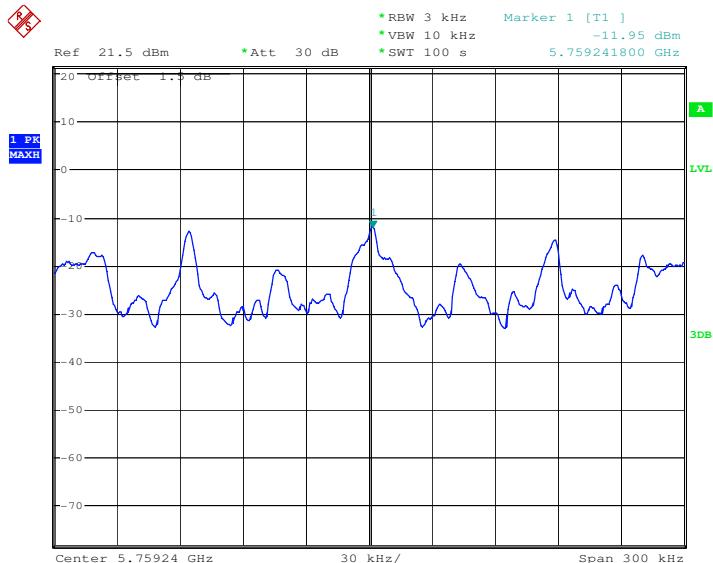
Date: 15.DEC.2012 13:58:26

**Power Spectral Density Test Plot(CH 5736MHz)**  
**Antenna A**


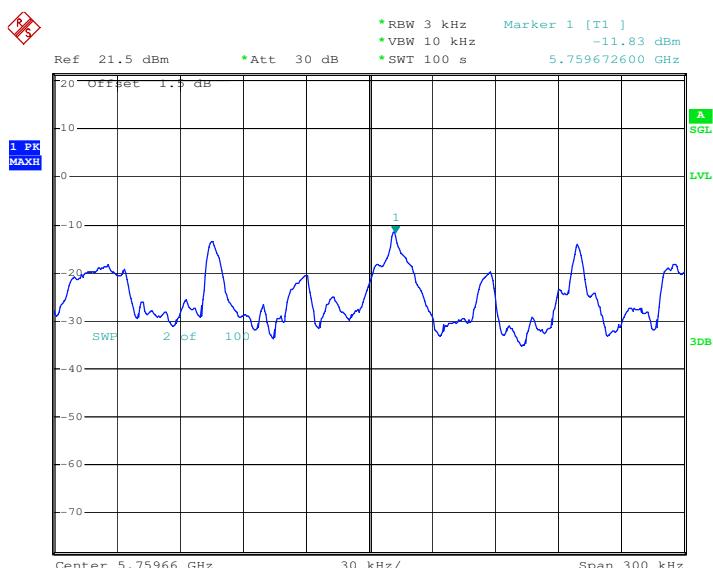
Date: 15.DEC.2012 14:12:04

**Antenna B**


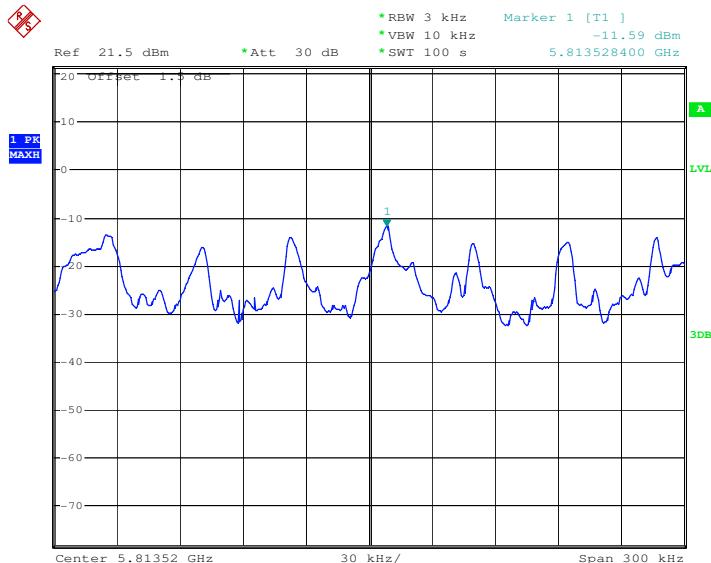
Date: 15.DEC.2012 14:16:54

**Power Spectral Density Test Plot(CH 5762MHz)**  
**Antenna A**


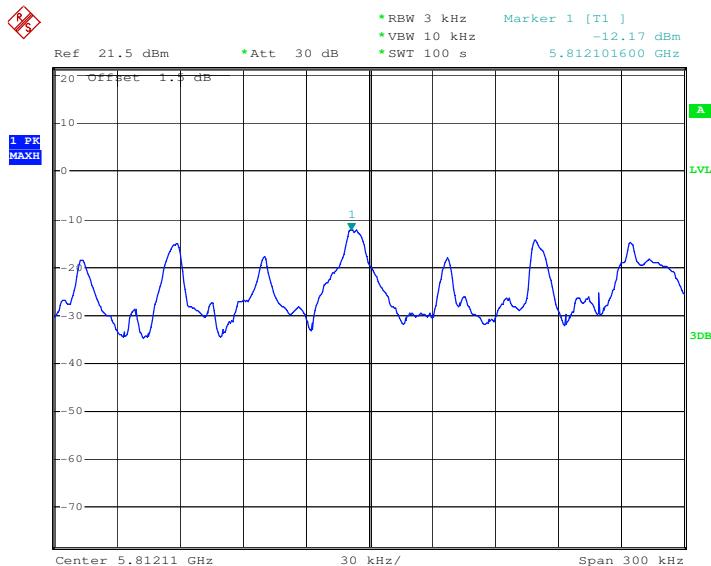
Date: 15.DEC.2012 14:32:35

**Antenna B**


Date: 15.DEC.2012 14:36:37

**Power Spectral Density Test Plot(CH 5814MHz)**  
**Antenna A**


Date: 15.DEC.2012 14:21:51

**Antenna B**


Date: 15.DEC.2012 14:26:30

## 6.9 Occupied Bandwidth Test

<b>Test Requirement:</b>	RSS-Gen Issue 3 Clause 4.6.1
<b>Test date:</b>	Dec.15, 2013
<b>Standard Applicable</b>	According to the section RSS-Gen Issue 3 Clause 4.6.1
<b>EUT Setup</b>	The occupied bandwidth per RSS-Gen Issue 3 Clause 4.6.1 was measured using the Spectrum Analyzer with the resolutions set at 100kHz, the video bandwidth set at 300kHz.

**Measurement Result:****2412-2464MHz Band for Antenna A**

Channel	Frequency (MHz)	Bandwidth (MHz)
LOW	2412	13.74
MID	2438	13.74
HIGH	2464	13.8

**2412-2464MHz Band for Antenna B**

Channel	Frequency (MHz)	Bandwidth (MHz)
LOW	2412	13.8
MID	2438	13.74
HIGH	2464	13.74

**5736-5814MHz Band for Antenna A**

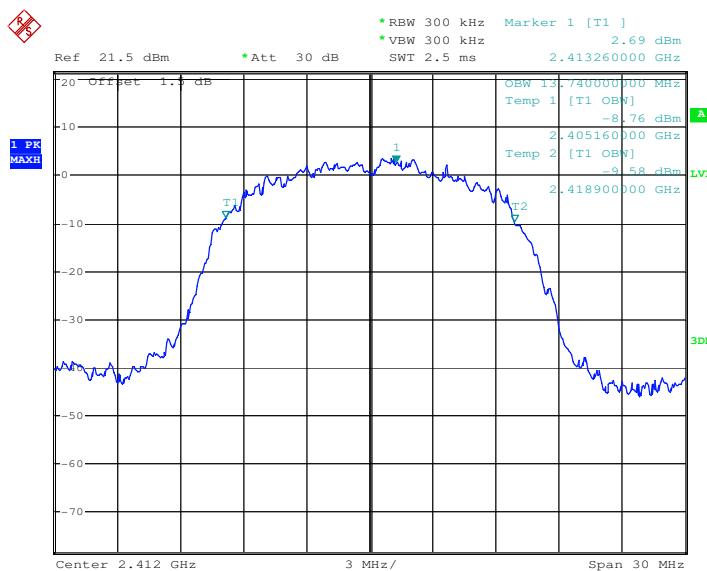
Channel	Frequency (MHz)	Bandwidth (MHz)
LOW	5736	13.92
MID	5762	14.04
HIGH	5814	13.92

**5736-5814MHz Band for Antenna B**

Channel	Frequency (MHz)	Bandwidth (MHz)
LOW	5736	13.92
MID	5762	13.92
HIGH	5814	13.92

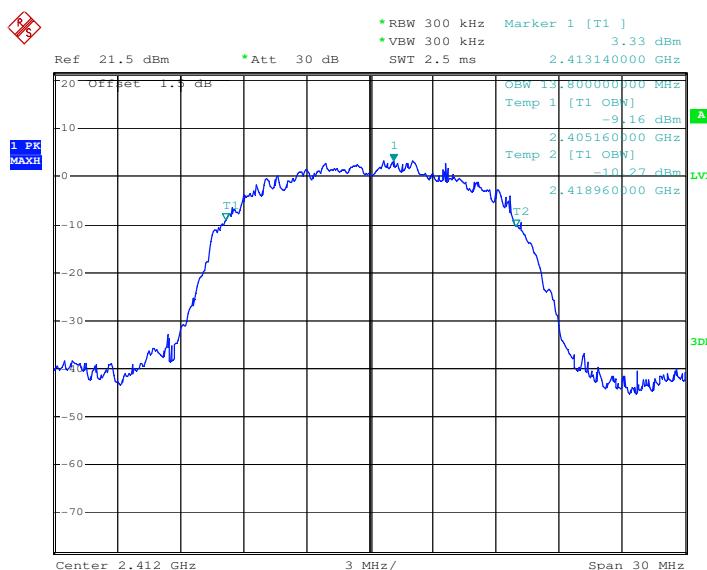
## Channel 2412MHz

### Antenna A:



Date: 15.DEC.2012 12:13:09

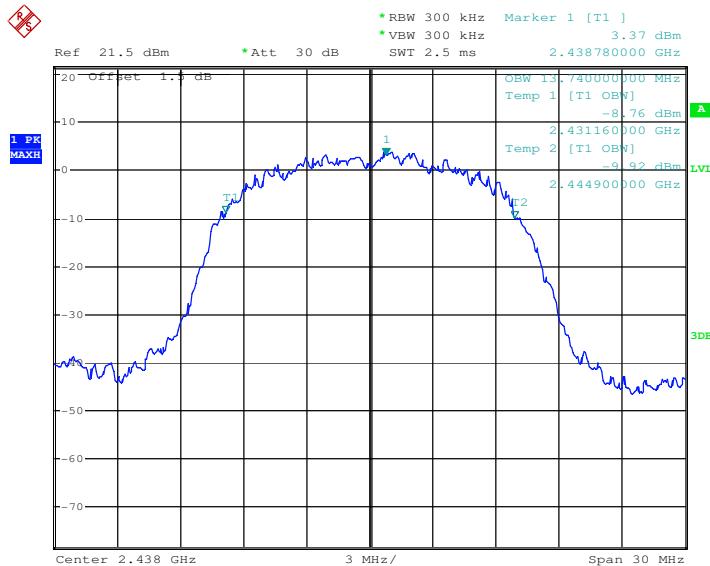
### Antenna B:



Date: 15.DEC.2012 12:24:13

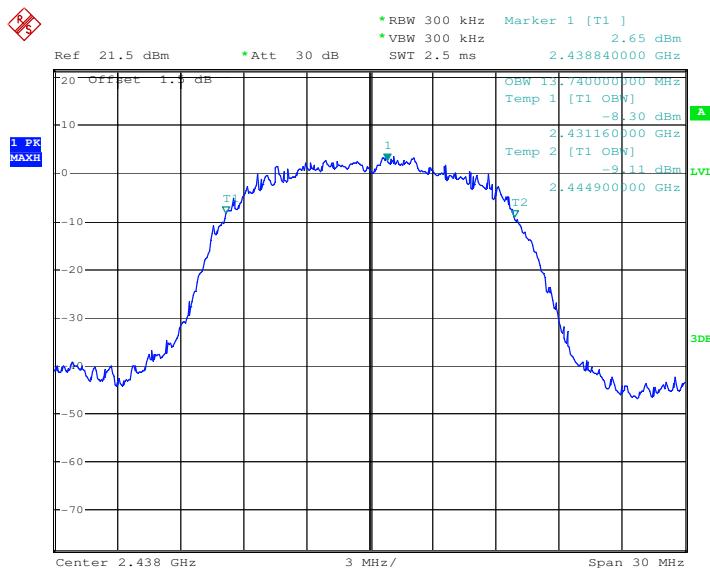
## Channel 2438MHz

### Antenna A:

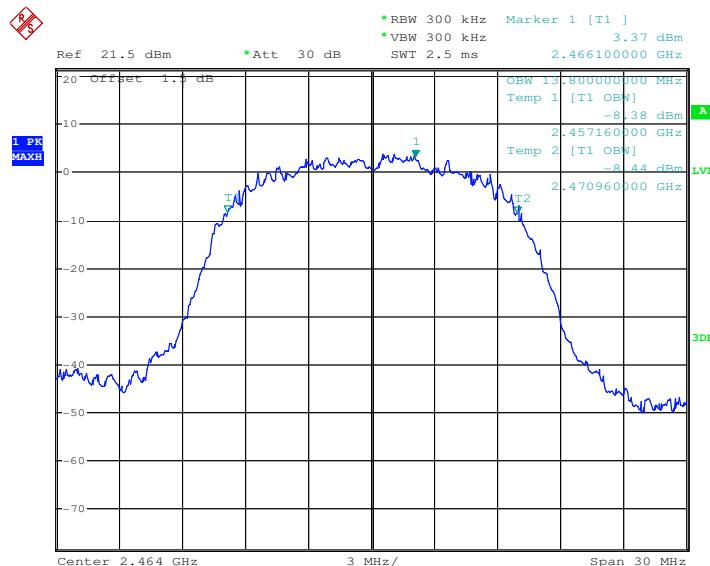


Date: 15.DEC.2012 12:14:46

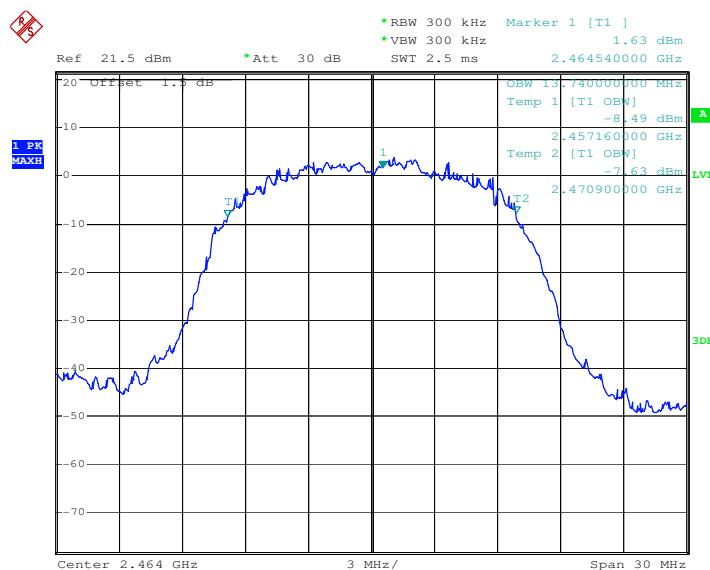
### Antenna B:



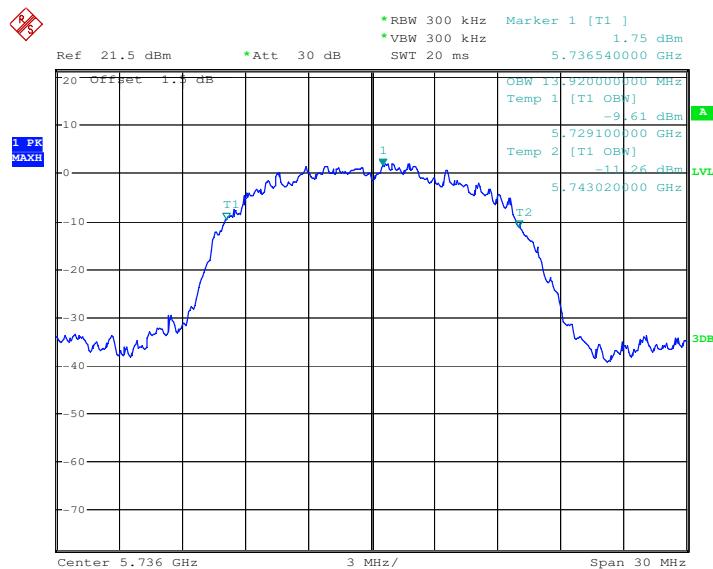
Date: 15.DEC.2012 12:25:07

**Channel 2464MHz**
**Antenna A:**


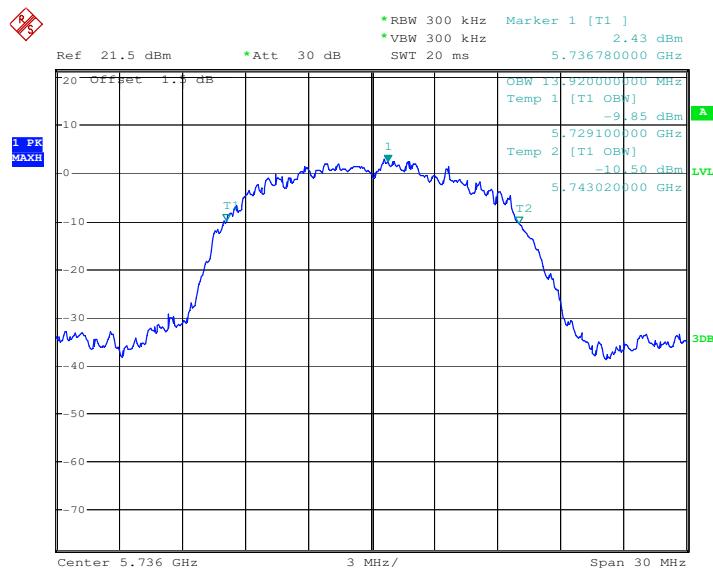
Date: 15.DEC.2012 12:16:25

**Antenna B:**


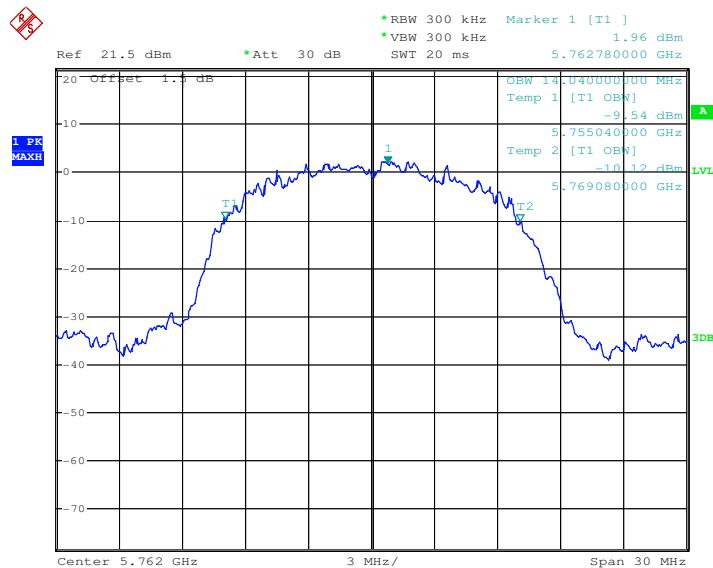
Date: 15.DEC.2012 12:26:26

**Channel 5736MHz**
**Antenna A:**


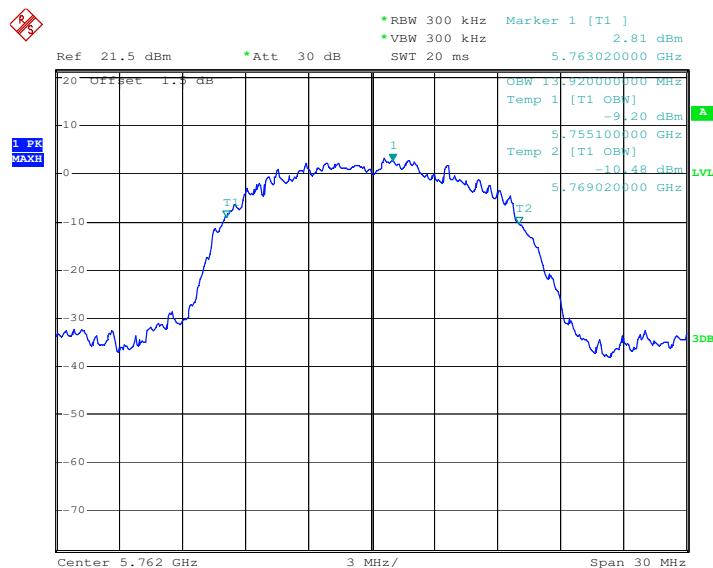
Date: 15.DEC.2012 12:17:19

**Antenna B:**


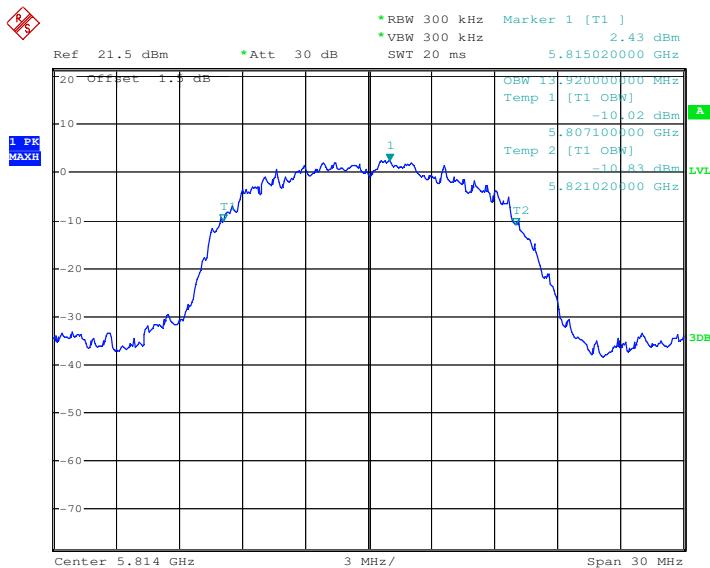
Date: 15.DEC.2012 12:27:31

**Channel 5762MHz**
**Antenna A:**


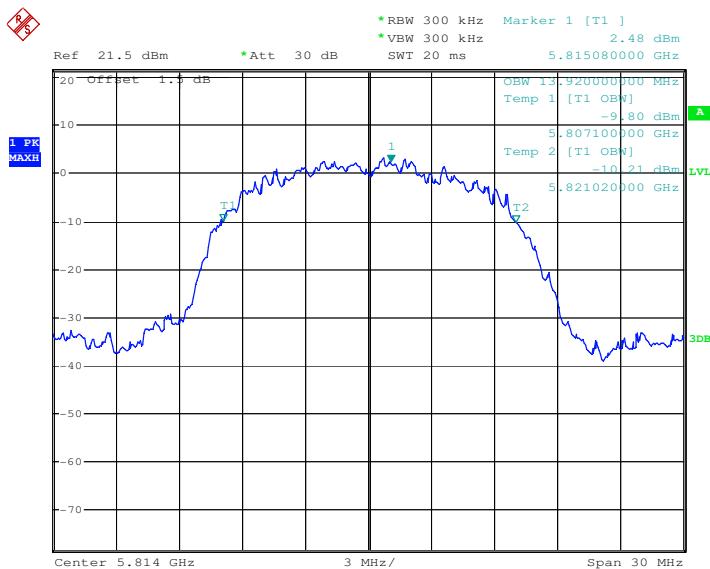
Date: 15.DEC.2012 12:18:44

**Antenna B:**


Date: 15.DEC.2012 12:29:27

**Channel 5814MHz**
**Antenna A:**


Date: 15.DEC.2012 12:19:34

**Antenna B:**


Date: 15.DEC.2012 12:30:19

## **7 Test Setup Photographs**

Refer to the < Appendix A \_Test Setup photos>.

## **8 EUT Constructional Details**

Refer to the < Appendix B \_External Photos > & < Appendix C \_Internal Photos >.

***End of Report***