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Report No.: SZEMO10070422702

Page : 1 of 38

# FCC REPORT

**Application No:** SZEMO100704227RF  
**Applicant:** ALBAHITH TECHNOLOGIES (Known as Younivate)  
**Product Name:** Fleet Management System  
**Operation Frequency:** 2405MHz to 2475MHz  
**FCC ID:** YLNY5030-C  
**Standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2008  
**Date of Receipt:** 2010-07-07  
**Date of Test:** 2010-07-13 to 2010-08-18  
**Date of Issue:** 2010-09-08

<b>Test Result :</b>	<b>PASS *</b>
----------------------	---------------

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

Authorized Signature:

Jack Zhang  
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2 Contents

	Page
.....	1
<b>2 CONTENTS</b> .....	<b>2</b>
<b>3 TEST SUMMARY</b> .....	<b>3</b>
<b>4 GENERAL INFORMATION</b> .....	<b>4</b>
4.1 CLIENT INFORMATION .....	4
4.2 GENERAL DESCRIPTION OF E.U.T.....	4
4.3 TEST ENVIRONMENT AND MODE .....	5
4.4 TEST FACILITY .....	6
4.5 TEST LOCATION .....	6
4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	6
4.7 TEST INSTRUMENTS LIST .....	7
<b>5 TEST RESULTS AND MEASUREMENT DATA</b> .....	<b>9</b>
5.1 ANTENNA REQUIREMENT: .....	9
5.2 CONDUCTED EMISSIONS .....	11
5.3 CONDUCTED PEAK OUTPUT POWER .....	14
5.4 6dB OCCUPY BANDWIDTH .....	16
5.5 POWER SPECTRAL DENSITY .....	19
5.6 BAND EDGE.....	21
5.7 RF ANTENNA CONDUCTED SPURIOUS EMISSIONS.....	23
5.8 RADIATED EMISSION.....	25
5.8.1 Radiated emission below 1GHz.....	27
5.8.2 Transmitter emission above 1GHz.....	28
5.8.3 Band edge (Radiated Emission).....	31-38

### 3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Passed
AC Power Line Conducted Emission	15.207	Passed
Conducted Peak Output Power	15.247 (b)(3)	Passed
6dB Occupied Bandwidth	15.247 (a)(2)	Passed
Power Spectral Density	15.247 (e)	Passed
Radiated Emission	15.205/15.209	Passed
Band Edge	15.247(d)	Passed

*Remark: Passed: The EUT complies with the essential requirements in the standard.*

*Failed: The EUT does not comply with the essential requirements in the standard.*

## 4 General Information

### 4.1 Client Information

Applicant:	ALBAHITH TECHNOLOGIES (Known as Younivate)
Address of Applicant :	165, King Abdullah Second Street Amman, 11953 Jordan
Manufacturer:	ALBAHITH TECHNOLOGIES (Known as Younivate) ALBAHITH is the ODM/OEM
Address of Manufacturer:	165, King Abdullah Second Street Amman, 11953 Jordan
Factory:	We normally subcontract with EMSs. Currently we use the following EMS:(we may use some other EMS in diffcountry)
Address of Factory:	1-4 Floor, B Building, Shan Li Lang Village Ind, Buji Town Shenzhen 518112, People's Republic of China.

### 4.2 General Description of E.U.T.

Product Name:	Fleet Management System
Trade mark:	Younivate
Model No.:	Y5030-C,Y5031-C
Operation Frequency:	2405MHz~2475MHz
Channel numbers:	14
Channel separation:	5MHz
Modulation type: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Antenna Type:	Integral
Antenna gain:	3.2dBi
Power supply:	Type: DC 12V

Operation Frequency of each channel			
Channel	Frequency	Channel	Frequency
CH00	2405.050±50KHz	CH08	2445.050±50KHz
CH01	2410.050±50KHz	CH09	2450.050±50KHz
CH02	2415.050±50KHz	CH10	2455.050±50KHz
CH03	2420.050±50KHz	CH11	2460.050±50KHz
CH04	2425.050±50KHz	CH12	2465.050±50KHz
CH05	2430.050±50KHz	CH13	2470.050±50KHz
CH06	2435.050±50KHz	CH14	2475.050±50KHz
CH07	2440.050±50KHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2405MHz
The middle channel	2440MHz
The Highest channel	2475MHz

### 4.3 Test environment and mode

Test Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1008 mbar
Test mode:	
TX mode:	Keep the EUT in transmitting mode with modulation.

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#### 4.4 Test Facility

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

- **CNAS (No. CNAS L2929)**  
CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab 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.
- **VCCI**  
The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.  
Date of Registration: September 29, 2008. Valid until September 28, 2011.
- **FCC – Registration No.: 556682**  
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, June 27, 2008.
- **Industry Canada (IC)**  
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

#### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China  
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

#### 4.6 Other Information Requested by the Customer

None.

#### 4.7 Test Instruments list

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2010-06-17	2011-06-17
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2009-11-05	2010-11-05
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2008-06-18	2011-06-18
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2009-11-05	2010-11-05
6	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2009-11-10	2010-11-10
7	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2009-11-10	2010-11-10
8	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2010-06-02	2011-06-02
9	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2009-12-18	2010-12-18
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	SEL0080	2010-06-04	2011-06-04
11	Band filter	Amindeon	82346	SEL0094	2010-06-02	2011-06-02

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	N/A	N/A
2	LISN	ETS-LINDGREN	3816/2	SEL0021	2010-06-02	2011-06-02
3	Two-Line V-Network	Rohde & Schwarz	ENV216	SEL0152	2009-10-22	2010-10-22
4	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2010-06-02	2011-06-02
5	Coaxial Cable	SGS	N/A	SEL0024	2008-06-18	2011-06-18

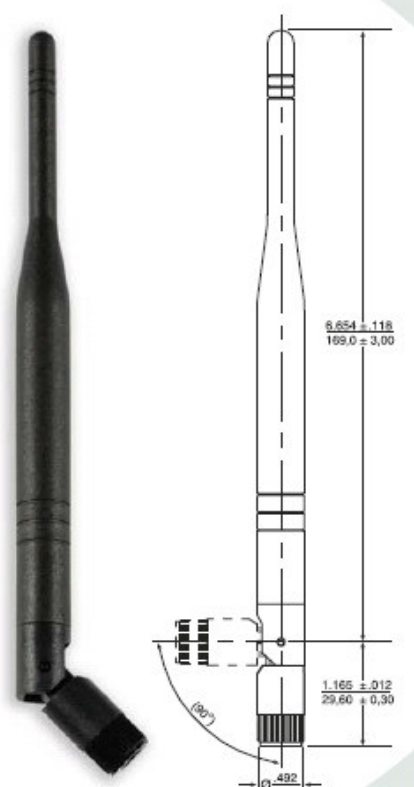


RF conducted						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	Spectrum Analyzer	Rohde & Schwarz	FSP 30	SEL0154	2009-10-22	2010-10-22
2	Coaxial cable	SGS	N/A	SEL0028	2008-06-18	2011-06-18

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## 5 Test results and Measurement Data

### 5.1 Antenna requirement:

<b>Standard requirement:</b>	FCC Part15 C Section 15.203 /247(c)
<p>15.203 requirement:  <i>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</i></p> <p>15.247(c) (1)(i) requirement:  <i>(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.</i></p>	
<b>E.U.T Antenna:</b>	
	



*Note: This part number is lead-free and RoHS compliant. No additional suffix or identifier is required.*

Antenna Part No.	Frequency [GHz]	Gain [dBi]	Impedance [Nom]	VSWR	Polarization	Electrical Length	Radiation	Color
W1037	2.4 – 2.5	3.2	50 $\Omega$	$\leq 2.0$	Vertical	1/4, dipole	Omni	Black

## 5.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207			
Test Method:	ANSI C63.4: 2009			
Test Frequency Range:	150KHz to 30MHz			
Class / Severity:	Class B			
Receiver setup:	RBW=9KHz, VBW=30KHz			
Limit:	Frequency range (MHz)	Limit (dBuV)		
		Quasi-peak	Average	
		0.15-0.5	66 to 56*	56 to 46*
		0.5-5	56	46
		5-30	60	50
* Decreases with the logarithm of the frequency.				
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. 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: 2009 on conducted measurement.			
Test setup:	<div><div><div>Reference Plane</div><div><div><div>LISN</div><div>AUX Equipment</div><div>E.U.T</div></div><div>40cm</div><div>80cm</div><div>EMI Receiver</div><div>Filter</div><div>AC power</div></div></div><div>Test table/Insulation plane</div></div> <div>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</div>			
Test Instruments:	Refer to section 4.7 for details			
Test mode:				
Test results:	Passed			

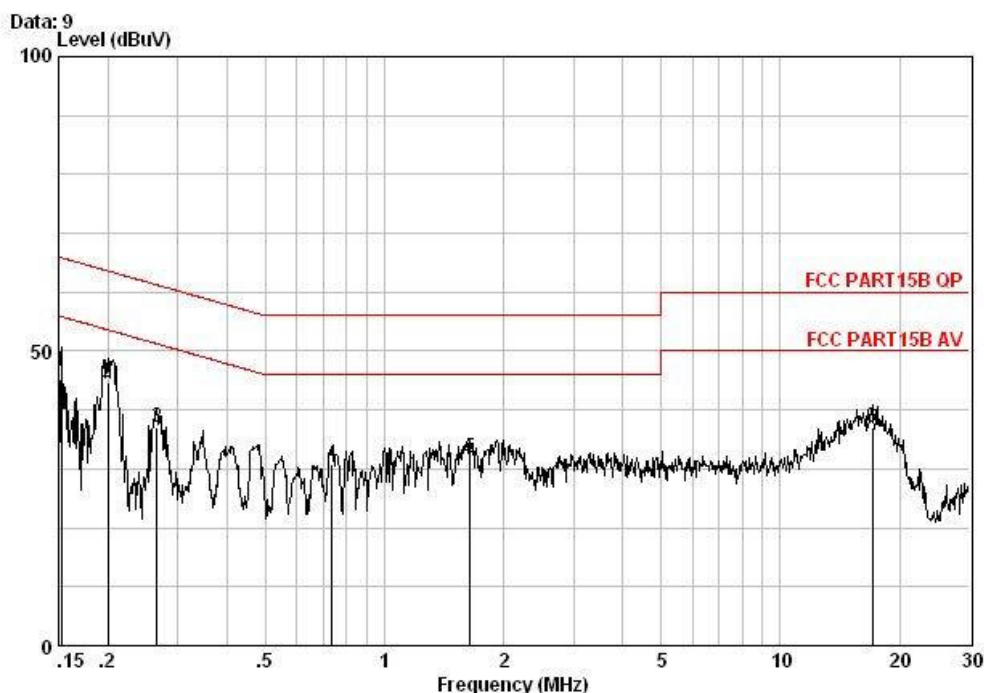
## Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

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Live Line:

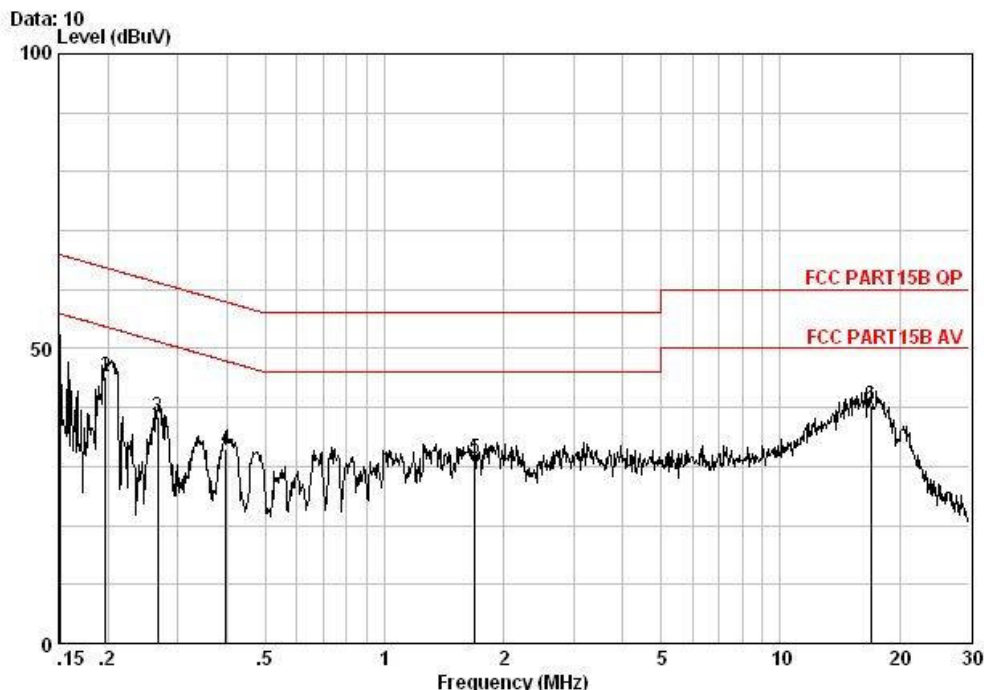


	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15240	0.04	-0.05	46.65	46.64	65.87	-19.23	QP
2	0.19969	0.04	-0.05	44.75	44.75	63.62	-18.88	QP
3	0.26583	0.05	-0.04	37.14	37.14	61.25	-24.11	QP
4	0.73519	0.06	-0.05	30.67	30.69	56.00	-25.31	QP
5	1.645	0.11	-0.06	31.90	31.95	56.00	-24.05	QP
6	17.109	0.26	-0.57	37.30	36.99	60.00	-23.01	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

Neutral Line:

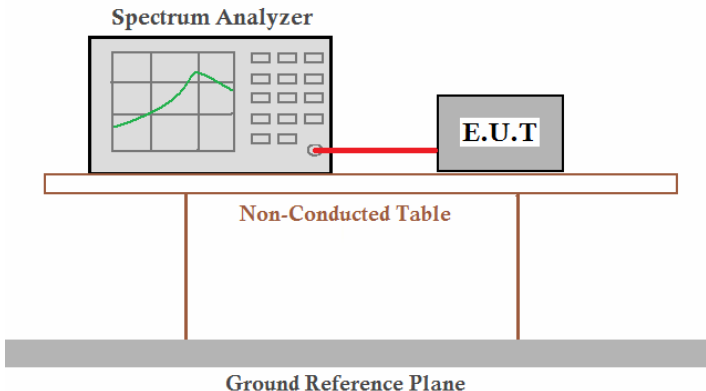


	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 Ø	0.15160	0.04	-0.05	49.10	49.10	65.91	-16.82	QP
2 Ø	0.19758	0.04	-0.04	45.29	45.28	63.71	-18.43	QP
3	0.26724	0.05	-0.04	38.36	38.37	61.20	-22.83	QP
4	0.39763	0.06	-0.04	32.88	32.89	57.90	-25.01	QP
5	1.689	0.11	-0.06	31.21	31.26	56.00	-24.74	QP
6	16.928	0.26	-0.56	40.55	40.25	60.00	-19.75	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

### 5.3 Conducted Peak Output Power

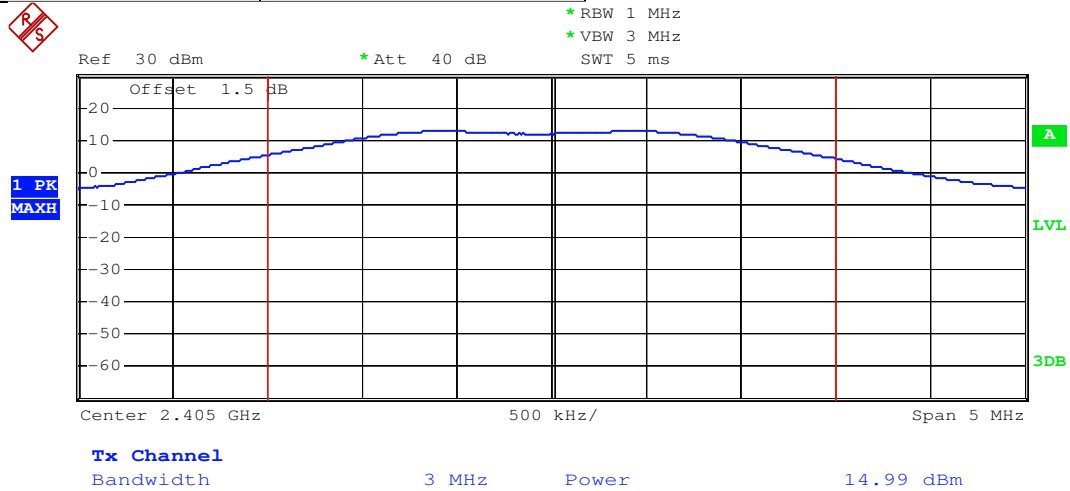
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	30dBm
Test setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

#### Measurement Data

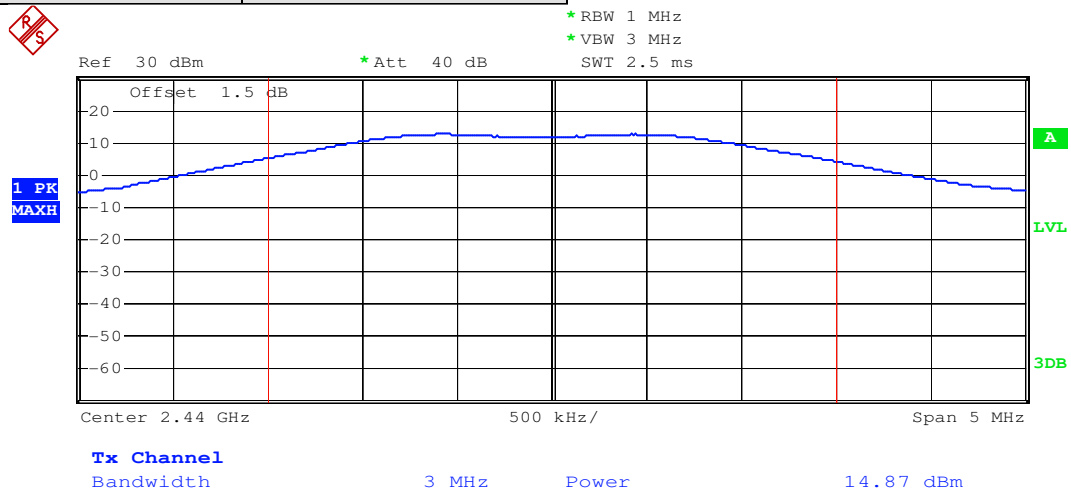
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	14.99	30.00	Pass
Middle	14.87	30.00	Pass
Highest	14.51	30.00	Pass

Test plot as follows:

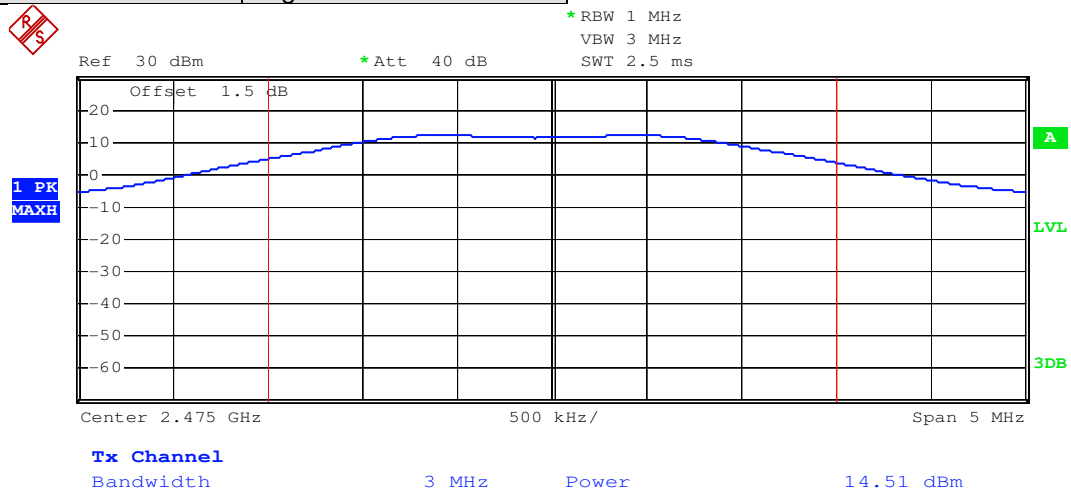
Test channel: Lowest



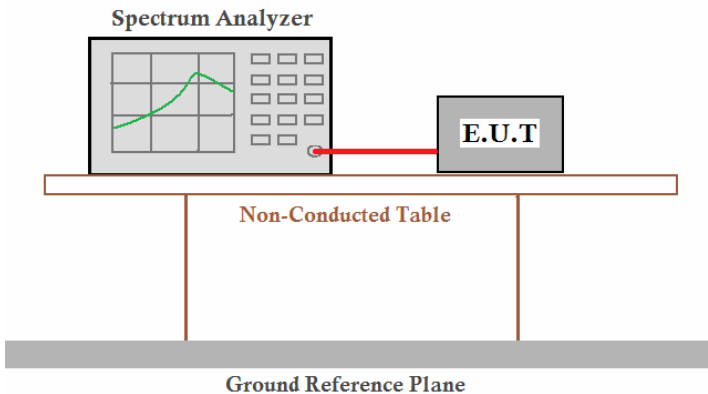
Test channel: Middle



Test channel: Highest



## 5.4 6dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

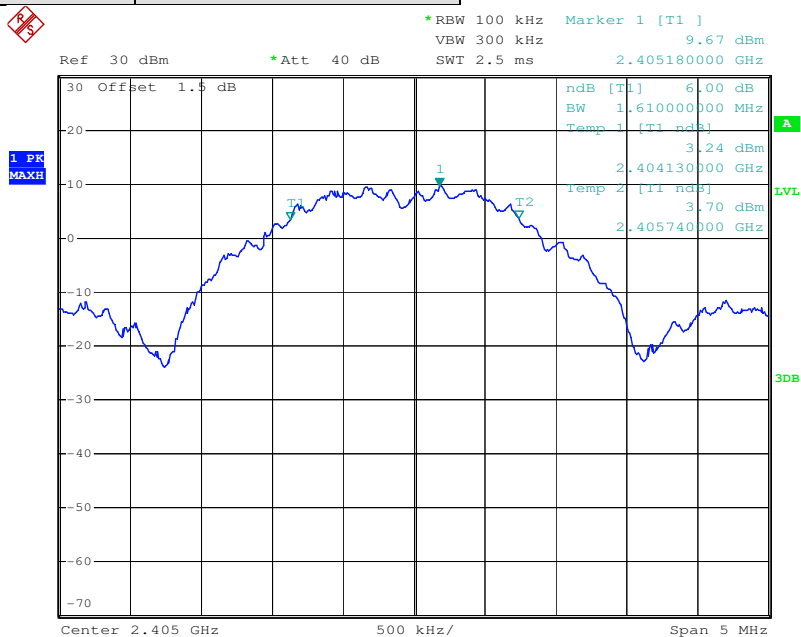
### Measurement Data

Test channel	6dB Occupy Bandwidth (kHz)	Limit (kHz)	Result
Lowest	1610	>500	Pass
Middle	1620	>500	Pass
Highest	1620	>500	Pass

Test plot as follows:

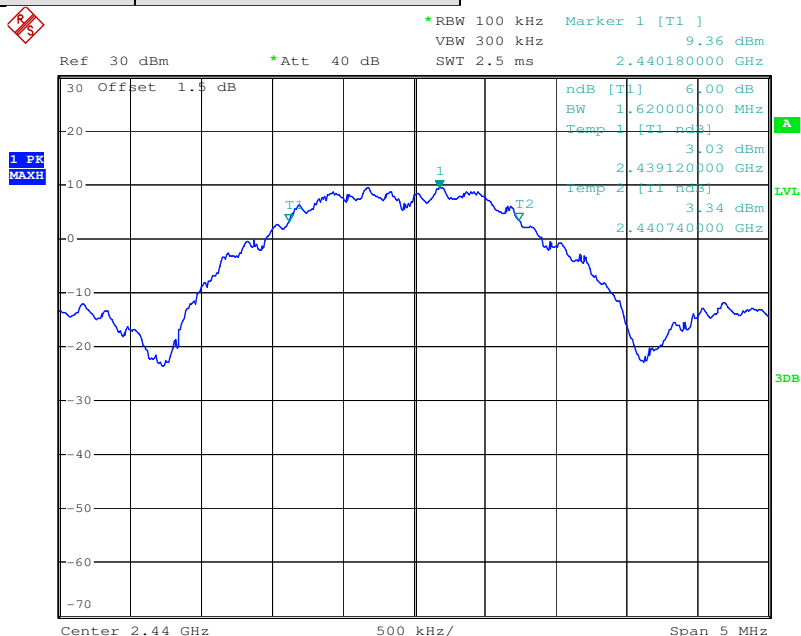


Test channel: Lowest



Date: 17.AUG.2010 09:41:23

Test channel: Middle

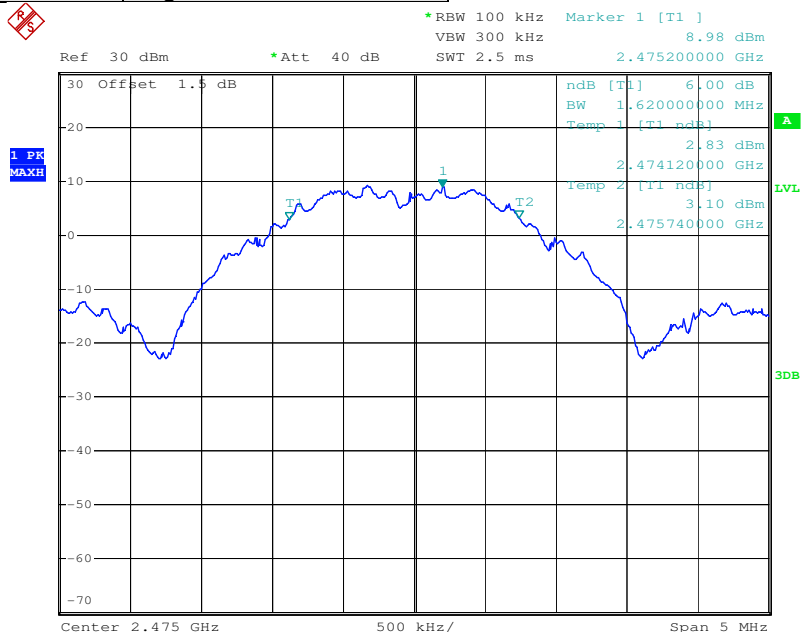


Date: 17.AUG.2010 10:38:38

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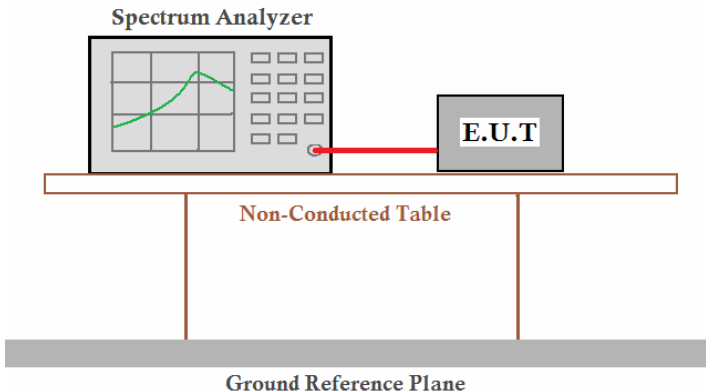


Test channel: Highest



Date: 17.AUG.2010 10:50:57

## 5.5 Power Spectral Density

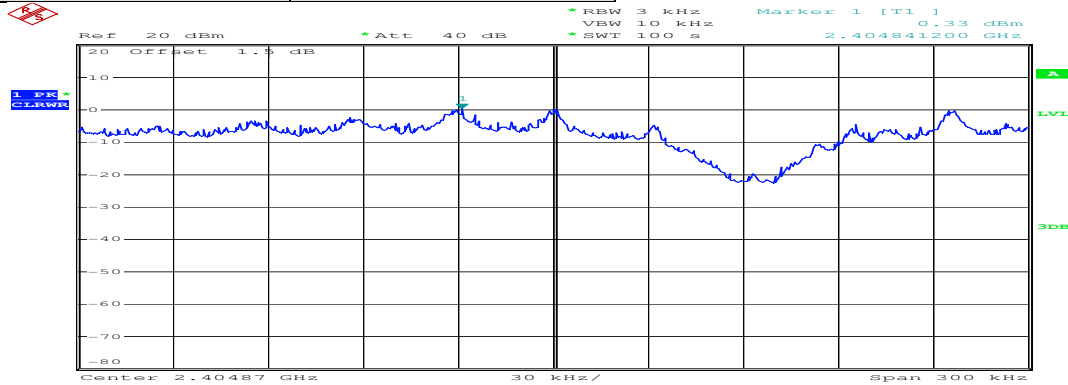
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	<8dBm
Test setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

### Measurement Data

Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	0.33	<8.00	Pass
Middle	1.54	<8.00	Pass
Highest	0.67	<8.00	Pass

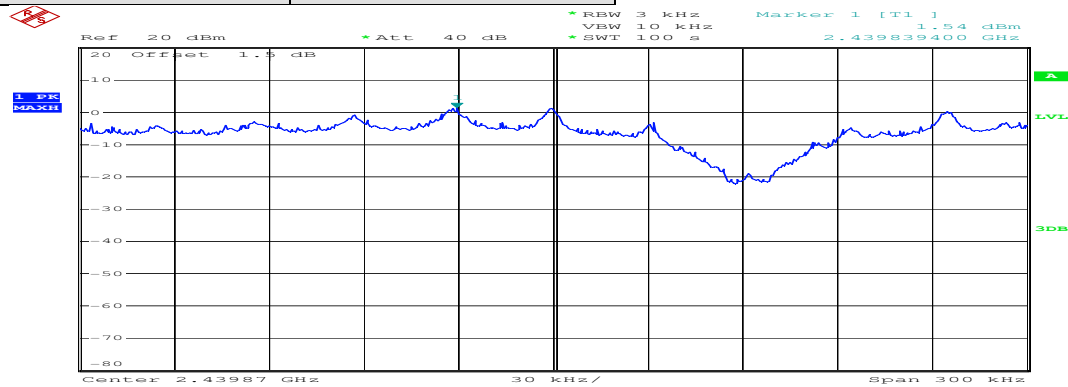
Test plot as follows:

Test channel: Lowest



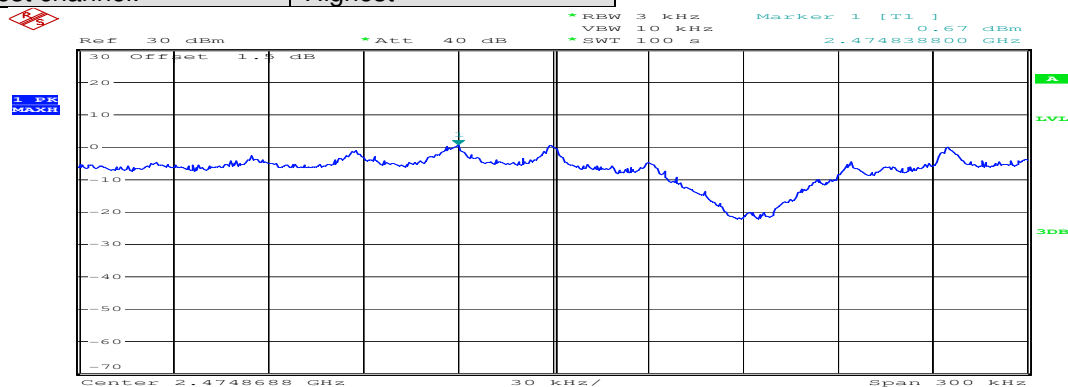
Date: 17.AUG.2010 11:31:29

Test channel: Middle



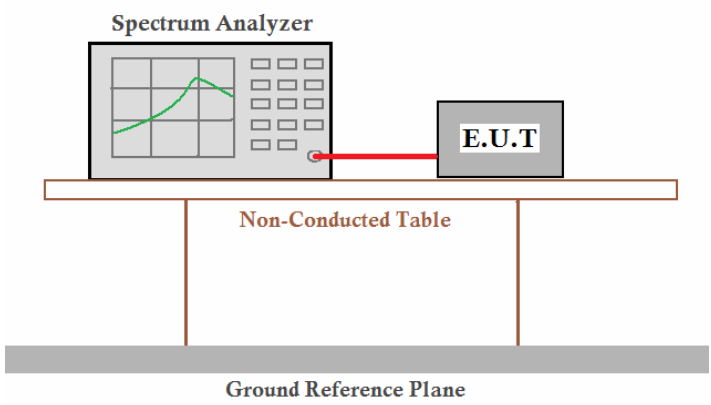
Date: 17.AUG.2010 11:58:38

Test channel: Highest



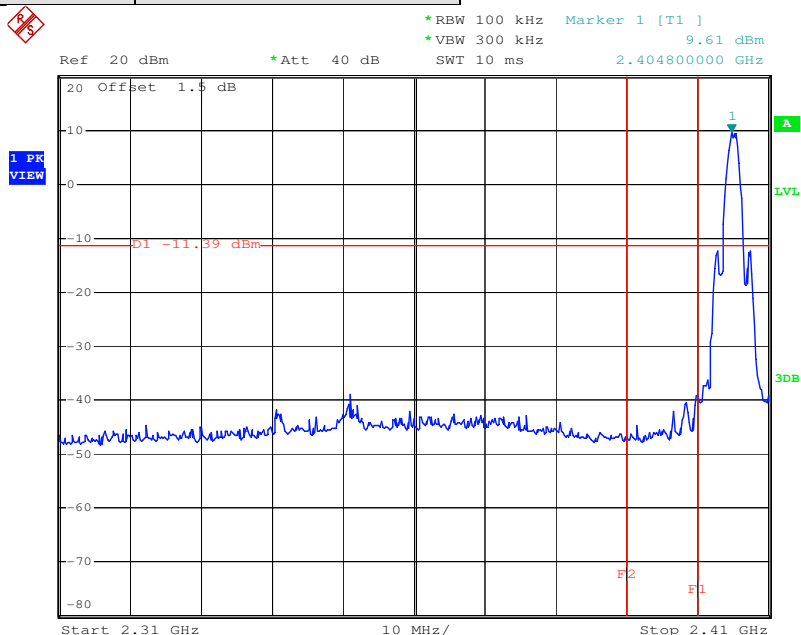
Date: 17.AUG.2010 11:21:32

## 5.6 Band Edge

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	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.
Test setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

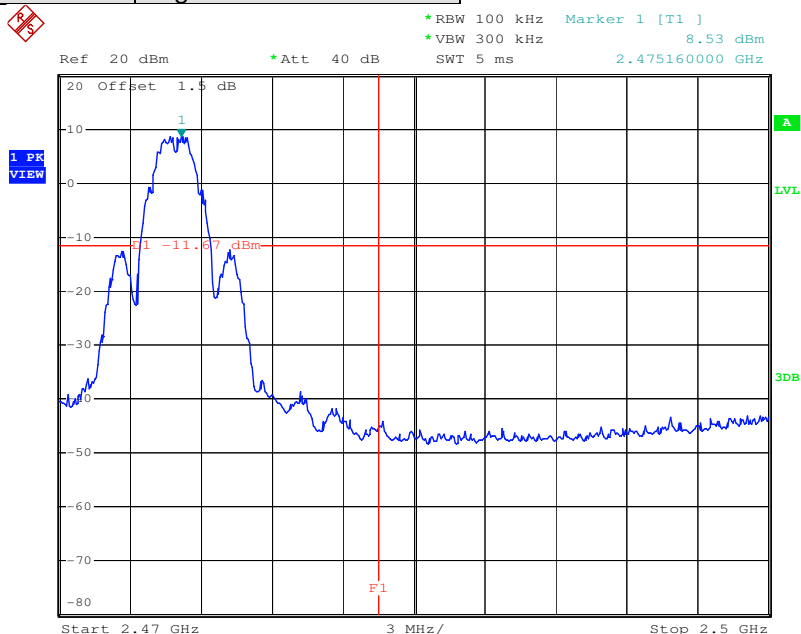
**Test plot as follows:**

Test channel: Lowest



Date: 17.AUG.2010 10:09:45

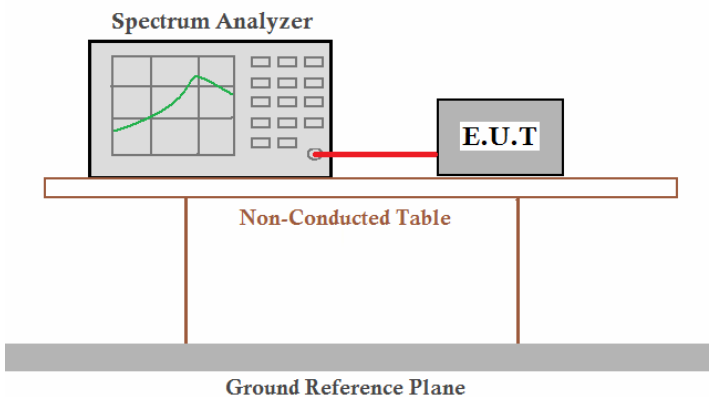
Test channel: Highest



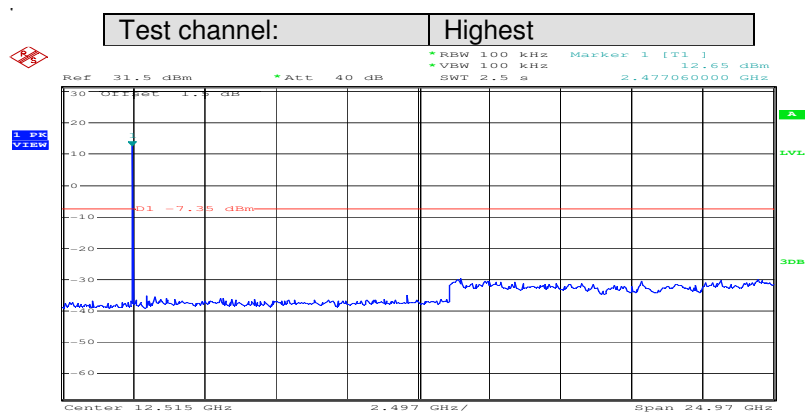
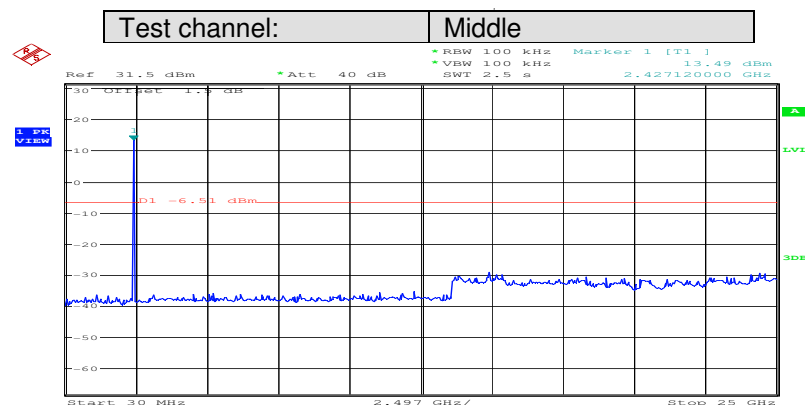
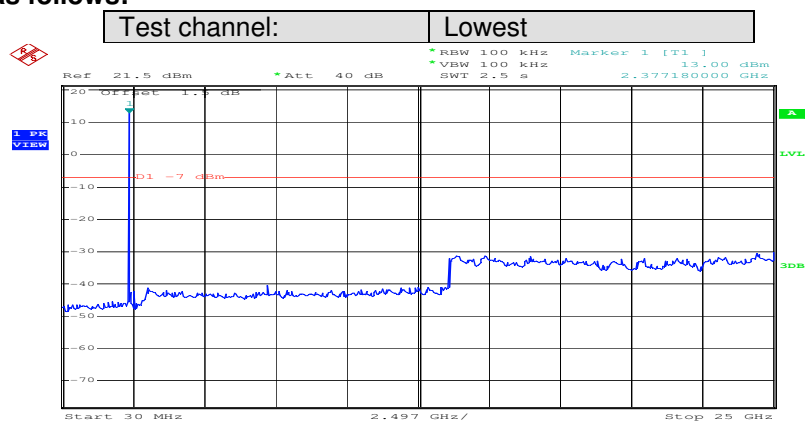
Date: 17.AUG.2010 11:24:13

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## 5.7 RF Antenna Conducted spurious emissions

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	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.
Test setup:	 <p><i>Remark:</i> <i>Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</i></p>
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

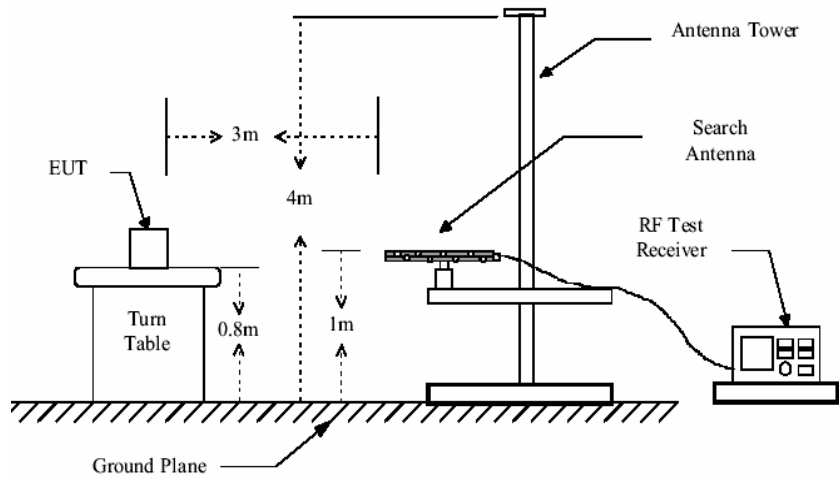
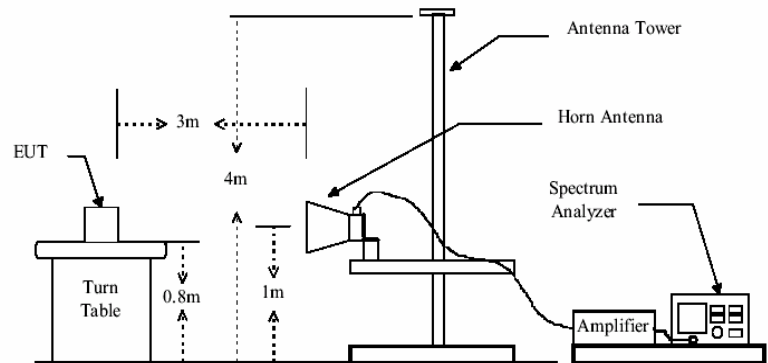
Test plot as follows:



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## 5.8 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:					
	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Peak		1MHz	10Hz	Average Value	
Limit:					
	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
74.0			Peak Value		
Test Procedure:	The E.U.T and its simulators are placed on a turn table which is 0.8meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.				
	Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.				
Test Instruments:	Refer to section 4.7 for details				
Test mode:	Tx mode				
Test results:	Passed				

**Test setup:**
**Below 1GHz**

**Above 1GHz**

**Note:**

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

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$

### 5.8.1 Radiated emission below 1GHz

Test in Tx mode.

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
40.670	0.61	10.93	28.09	44.14	27.59	40.00	-12.41	Vertical
44.550	0.70	9.61	28.10	43.61	25.82	40.00	-14.18	Vertical
52.310	0.80	7.80	28.09	43.87	24.38	40.00	-15.62	Vertical
90.140	1.10	8.71	27.95	38.80	20.66	43.50	-22.84	Vertical
184.230	1.38	9.98	27.24	33.50	17.62	43.50	-25.88	Vertical
967.020	3.67	23.80	26.44	29.16	30.19	54.00	-23.81	Vertical
179.380	1.37	9.87	27.26	32.45	16.43	43.50	-27.07	Horizontal
296.750	1.88	13.76	26.73	33.57	22.48	46.00	-23.52	Horizontal
347.190	2.05	15.34	27.07	33.31	23.63	46.00	-22.37	Horizontal
397.630	2.20	16.27	27.39	32.58	23.66	46.00	-22.34	Horizontal
832.190	3.34	22.40	26.77	31.84	30.81	46.00	-15.19	Horizontal
890.390	3.57	23.14	26.48	31.10	31.33	46.00	-14.67	Horizontal



## 5.8.2 Transmitter emission above 1GHz

Test channel:	Lowest		Remark:		Peak			
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4808	9.36	34.04	41.53	48.48	50.35	74.00	-13.65	Vertical
7222	13.30	36.29	40.88	42.69	51.40	74.00	-12.60	Vertical
9619	13.39	36.99	37.56	44.00	56.82	74.00	-17.18	Vertical
12033	16.77	38.82	39.13	46.80	63.26	74.00	-10.74	Vertical
14447	17.43	39.45	45.11	47.86	59.63	74.00	-14.37	Vertical
4808	9.36	34.04	41.53	57.89	59.76	74.00	-14.24	Horizontal
7222	13.30	36.29	40.88	50.69	59.40	74.00	-14.60	Horizontal
9619	13.39	36.99	37.56	46.98	59.80	74.00	-14.20	Horizontal
12033	16.77	38.82	39.13	45.51	61.97	74.00	-12.03	Horizontal
14447	17.43	39.45	45.11	46.88	58.65	74.00	-15.35	Horizontal

Test channel:	Lowest		Remark:		Average			
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over limit	polarization
4808	9.36	34.04	41.53	46.30	48.17	54.00	-5.83	Vertical
7222	13.30	36.29	40.88	39.17	47.88	54.00	-6.12	Vertical
9619	13.39	36.99	37.56	31.22	44.04	54.00	-9.96	Vertical
12033	16.77	38.82	39.13	28.48	44.94	54.00	-9.06	Vertical
14447	17.43	39.45	45.11	33.48	45.25	54.00	-8.75	Vertical
4808	9.36	34.04	41.53	40.26	42.13	54.00	-11.87	Horizontal
7222	13.30	36.29	40.88	35.97	44.68	54.00	-9.32	Horizontal
9619	13.39	36.99	37.56	31.28	44.10	54.00	-9.90	Horizontal
12033	16.77	38.82	39.13	29.58	46.04	54.00	-7.96	Horizontal
14447	17.43	39.45	45.11	32.20	43.97	54.00	-10.03	Horizontal

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Test channel:		Middle		Remark:		Peak		
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4876	10.36	34.02	39.89	47.15	51.64	74.00	-12.36	Vertical
7324	12.91	36.10	40.40	44.60	53.21	74.00	-10.79	Vertical
9755	13.89	37.10	37.94	45.85	58.90	74.00	-15.10	Vertical
12203	17.95	38.93	39.30	42.96	60.54	74.00	-13.46	Vertical
14634	17.38	39.60	45.83	49.57	60.72	74.00	-13.28	Vertical
4876	10.36	34.02	39.89	55.66	60.15	74.00	-13.85	Horizontal
7324	12.91	36.10	40.40	53.25	61.86	74.00	-12.14	Horizontal
9772	13.99	37.12	38.01	49.11	62.21	74.00	-11.79	Horizontal
12203	17.95	38.93	39.30	44.62	62.20	74.00	-11.80	Horizontal
14634	17.38	39.60	45.83	46.75	57.90	74.00	-16.10	Horizontal

Test channel:		Middle		Remark:		Average		
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Over limit	polarization
4876	10.36	34.02	39.89	40.11	44.60	54.00	-9.40	Vertical
7324	12.91	36.10	40.40	38.32	46.93	54.00	-7.07	Vertical
9755	13.89	37.10	37.94	32.16	45.21	54.00	-8.79	Vertical
12203	17.95	38.93	39.30	28.58	46.16	54.00	-7.84	Vertical
14634	17.38	39.60	45.83	33.58	44.73	54.00	-9.27	Vertical
4876	10.36	34.02	39.89	42.66	47.15	54.00	-6.85	Horizontal
7324	12.91	36.10	40.40	38.59	47.20	54.00	-6.80	Horizontal
9772	13.99	37.12	38.01	33.59	46.69	54.00	-7.31	Horizontal
12203	17.95	38.93	39.30	28.99	46.57	54.00	-7.43	Horizontal
14634	17.38	39.60	45.83	33.58	44.73	54.00	-9.27	Horizontal

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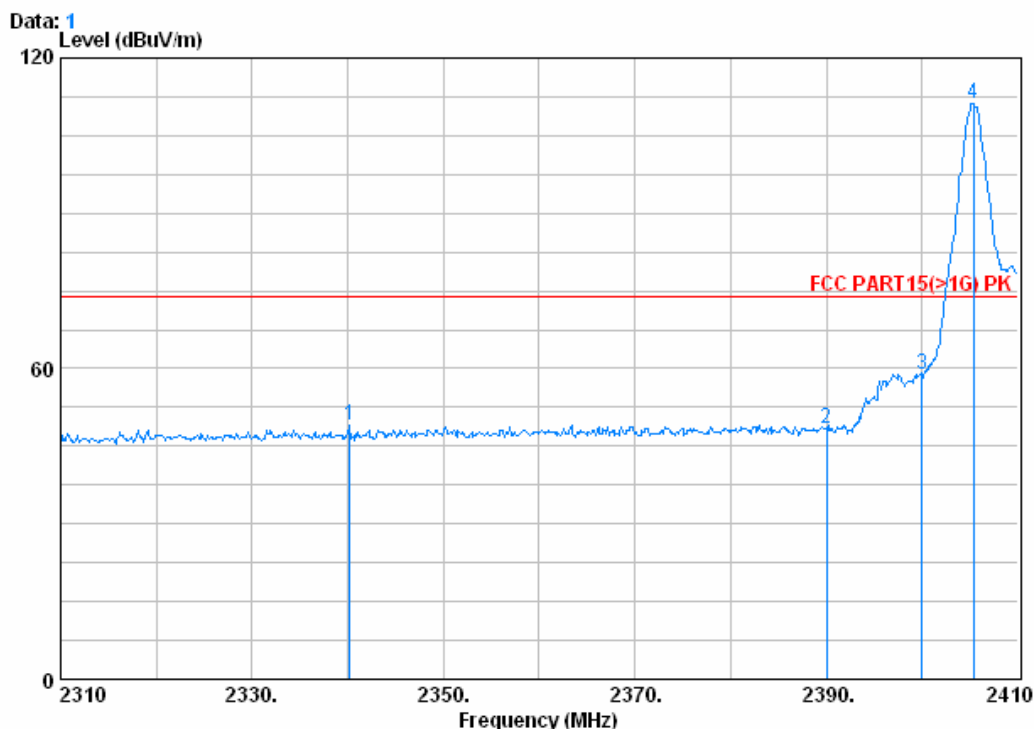
Test channel:		Highest		Remark:		Peak		
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4944	10.51	34.01	40.96	45.63	49.19	74.00	-14.81	Vertical
7426	12.72	35.91	40.01	43.06	51.68	74.00	-12.32	Vertical
9908	14.21	37.21	37.85	48.63	62.20	74.00	-11.80	Vertical
12373	17.63	39.01	39.45	43.99	61.18	74.00	-12.82	Vertical
14855	16.69	39.80	46.61	50.04	59.92	74.00	-14.08	Vertical
4944	10.51	34.01	40.96	56.47	60.03	74.00	-13.97	Horizontal
7426	12.72	35.91	40.01	53.69	62.31	74.00	-11.69	Horizontal
9908	14.21	37.21	37.85	47.31	60.88	74.00	-13.12	Horizontal
12373	17.63	39.01	39.45	43.42	60.61	74.00	-13.39	Horizontal
14855	16.69	39.80	46.61	47.68	57.56	74.00	-16.44	Horizontal

Test channel:		Highest		Remark:		Average		
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Over limit	polarization
4944	10.51	34.01	40.96	43.01	46.57	54.00	-7.43	Vertical
7426	12.72	35.91	40.01	38.49	47.11	54.00	-6.89	Vertical
9908	14.21	37.21	37.85	32.97	46.54	54.00	-7.46	Vertical
12373	17.63	39.01	39.45	30.70	47.89	54.00	-6.11	Vertical
14855	16.69	39.80	46.61	35.70	45.58	54.00	-8.42	Vertical
4944	10.51	34.01	40.96	44.44	48.00	54.00	-6.00	Horizontal
7426	12.72	35.91	40.01	37.57	46.19	54.00	-7.81	Horizontal
9908	14.21	37.21	37.85	33.98	47.55	54.00	-6.45	Horizontal
12373	17.63	39.01	39.45	29.65	46.84	54.00	-7.16	Horizontal
14855	16.69	39.80	46.61	35.38	45.26	54.00	-8.74	Horizontal

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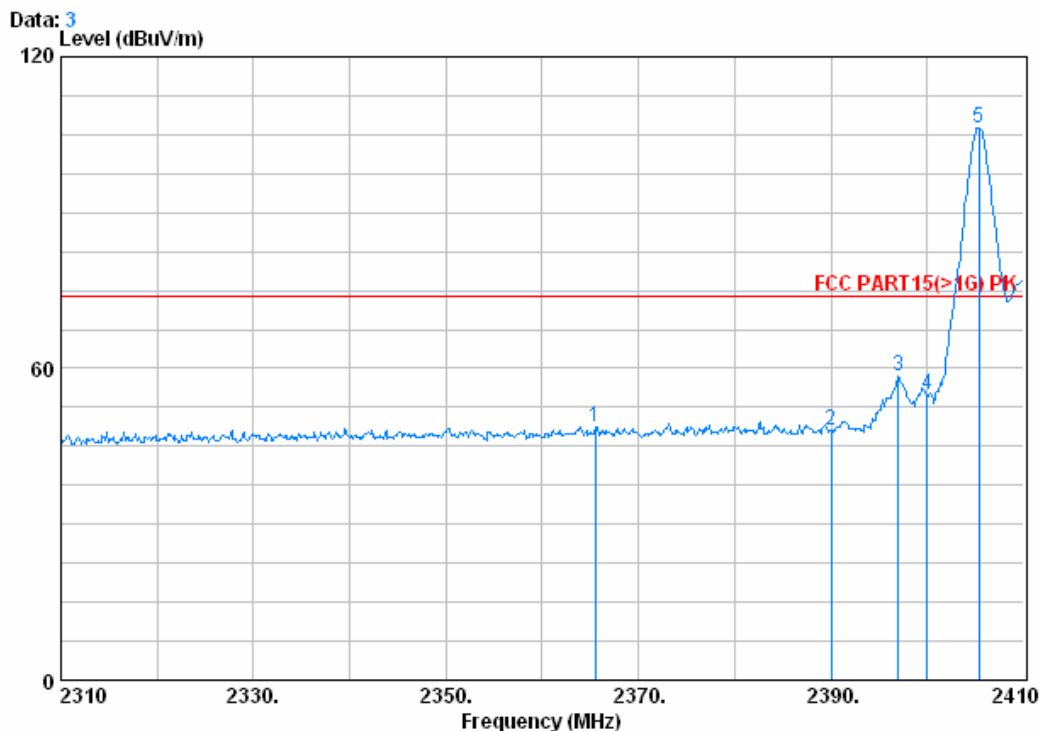
### 5.8.3 Band edge (Radiated Emission)

Vertical:



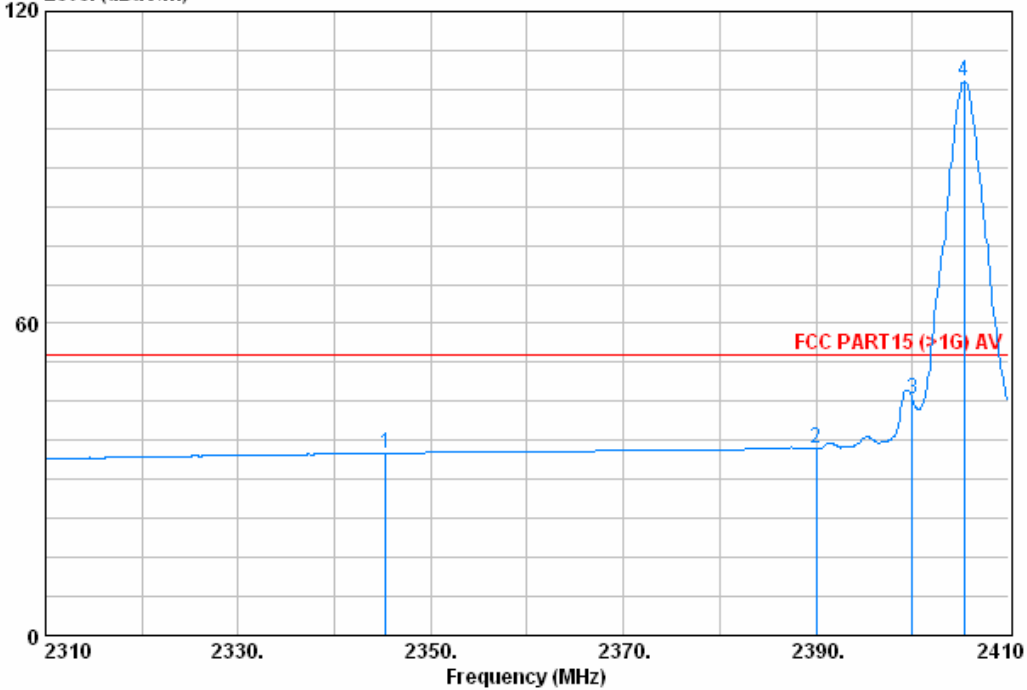
	Freq	Cable Loss	Antenna Factor	Preamplifier	Read Level	Limit	Over	Remark
	MHz	dB	dB/m	Factor	Level	Line	Limit	
1	2340.200	6.08	32.21	39.59	50.22	48.93	74.00	-25.07 Peak
2	2390.000	6.28	32.24	39.03	49.04	48.53	74.00	-25.47 Peak
3	2400.000	6.34	32.25	38.87	59.04	58.76	74.00	-15.24 Peak
4 X	2405.400	6.25	32.25	38.83	111.44	111.11	74.00	37.11 Peak

Horizontal:



		CableAntenna		Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2365.500	6.20	32.23	39.27	49.67	48.83	74.00	-25.17	Peak
2	2390.000	6.28	32.24	39.03	48.55	48.04	74.00	-25.96	Peak
3	2397.000	6.31	32.24	38.95	58.86	58.46	74.00	-15.54	Peak
4	2400.000	6.34	32.25	38.87	55.13	54.85	74.00	-19.15	Peak
5 X	2405.400	6.25	32.25	38.83	106.73	106.40	74.00	32.40	Peak

Vertical:

Data: 2  
Level (dBuV/m)


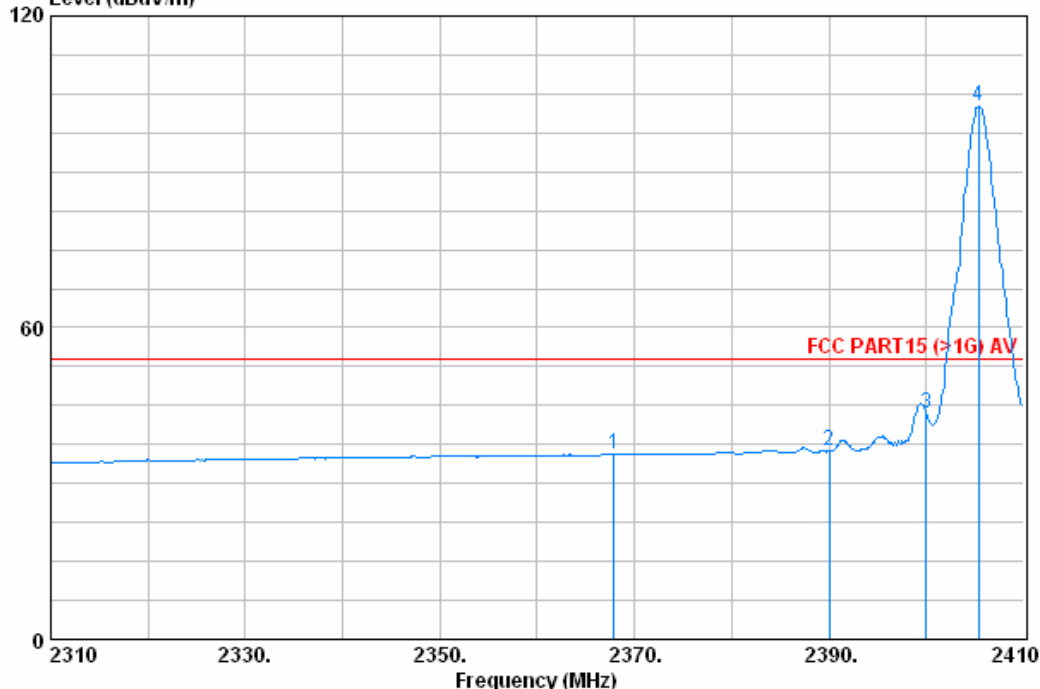
	Freq	Cable	Antenna	Preamp	Read	Limit	Over	
		Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2345.300	6.11	32.21	39.51	36.15	34.97	54.00	-19.03 Average
2	2390.000	6.28	32.24	39.03	36.39	35.88	54.00	-18.12 Average
3	2400.000	6.34	32.25	38.87	45.71	45.42	54.00	-8.58 Average
4 X	2405.400	6.25	32.25	38.83	106.84	106.51	54.00	52.51 Average

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Horizontal:

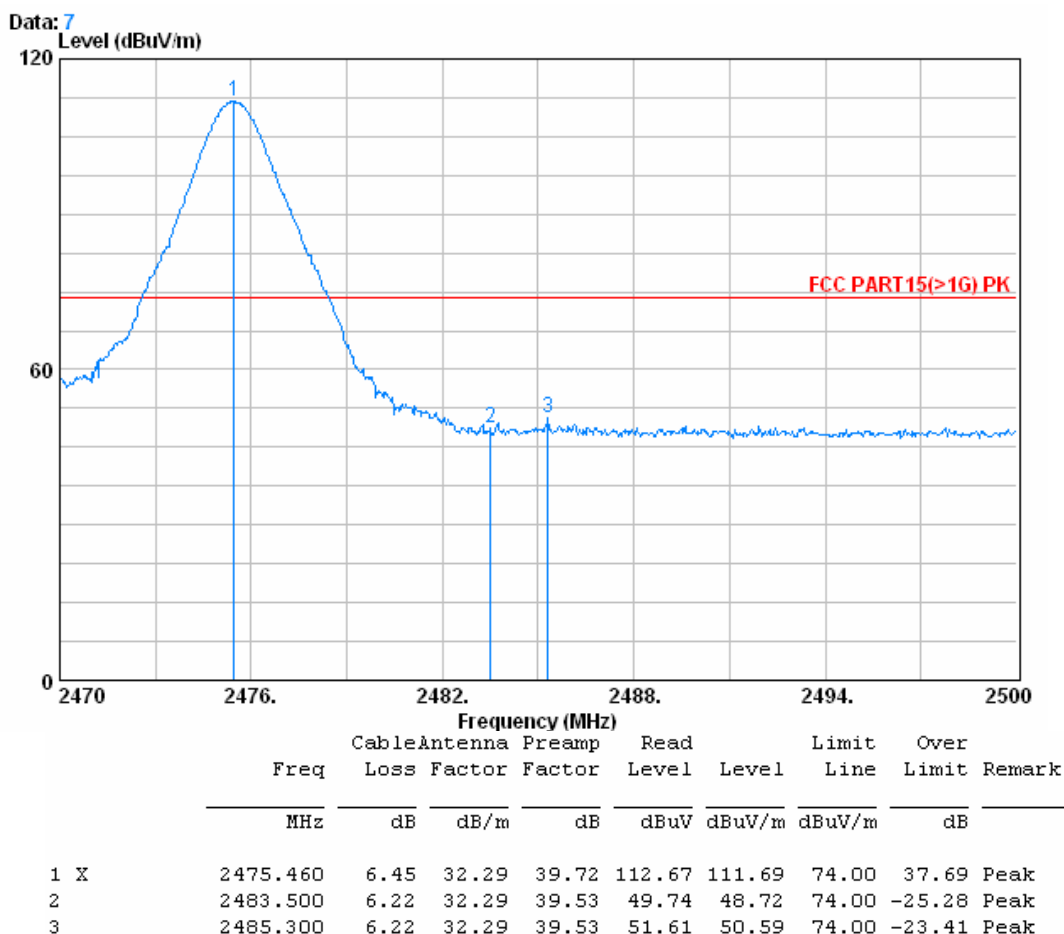
Data: 4

Level (dBuV/m)

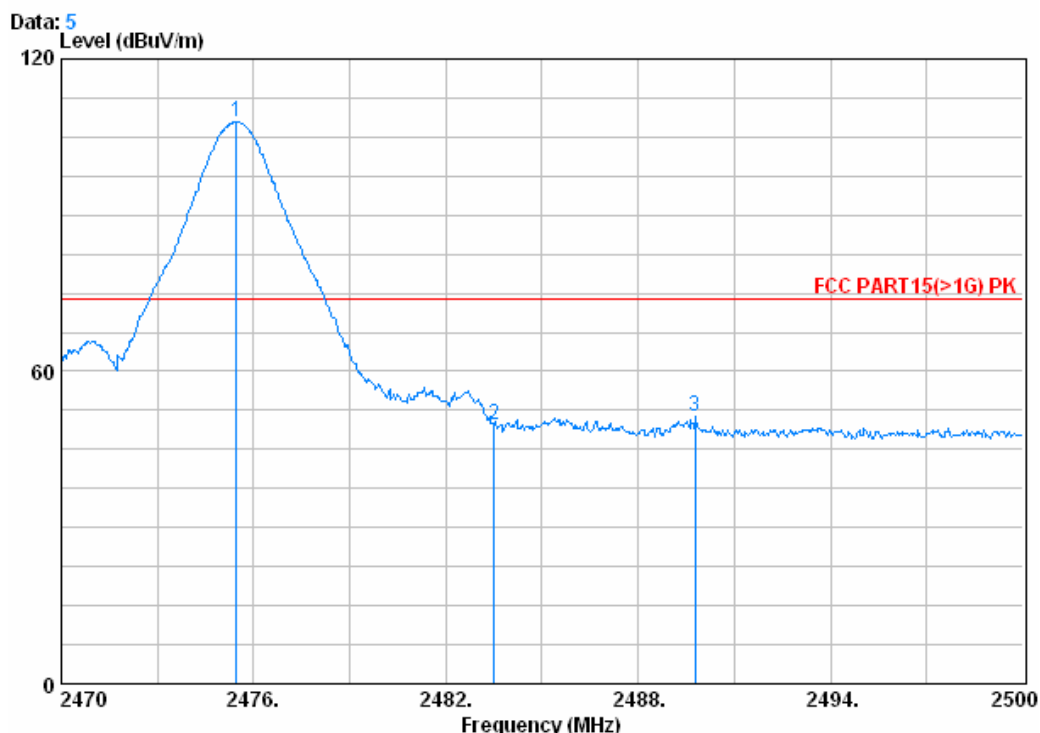


		CableAntenna Preamp			Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2367.900	6.20	32.23	39.27	36.56	35.71	54.00	-18.29	Average
2	2390.000	6.28	32.24	39.03	36.66	36.15	54.00	-17.85	Average
3	2400.000	6.34	32.25	38.87	43.76	43.48	54.00	-10.52	Average
4 X	2405.400	6.25	32.25	38.83	102.87	102.54	54.00	48.54	Average

Vertical:

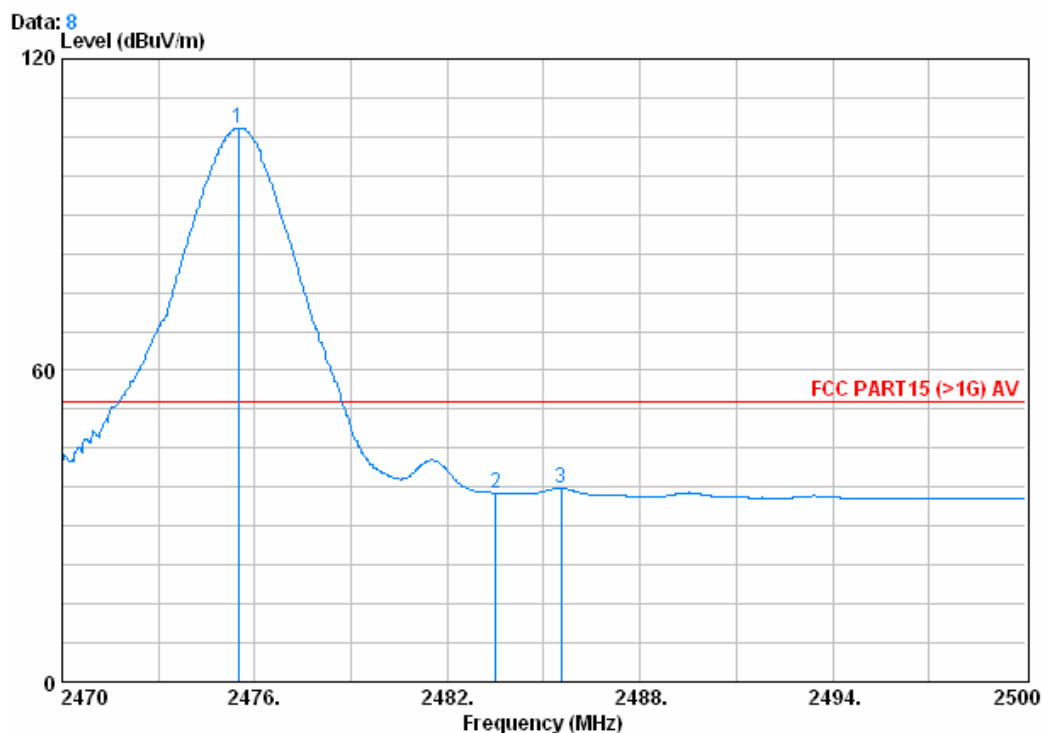


Horizontal:



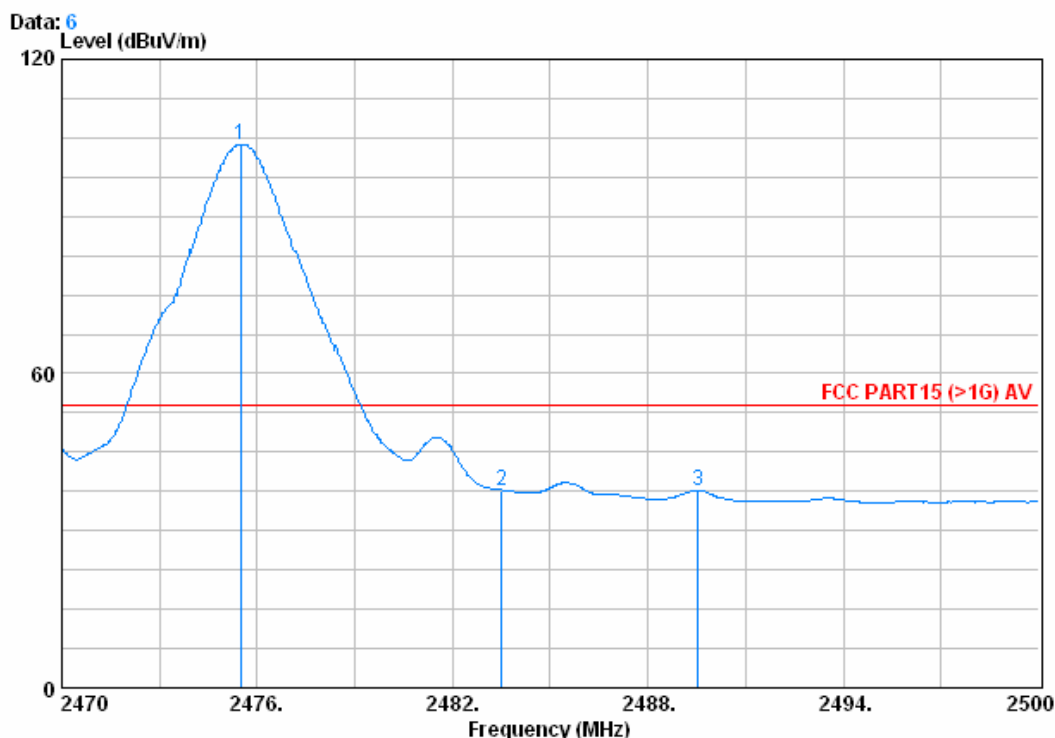
	Freq	CableAntenna Loss	Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 X	2475.460	6.45	32.29	39.72	108.85	107.86	74.00	33.86	Peak
2	2483.500	6.22	32.29	39.53	50.58	49.57	74.00	-24.43	Peak
3	2489.770	5.99	32.30	39.34	52.32	51.26	74.00	-22.74	Peak

Vertical:



		Cable	Antenna	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2475.490	6.45	32.29	39.72	107.66	106.68	54.00	52.68 Average
2	2483.500	6.22	32.29	39.53	37.45	36.43	54.00	-17.57 Average
3	2485.540	6.22	32.29	39.53	38.32	37.30	54.00	-16.70 Average

Horizontal:



		Cable	Antenna	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 X	2475.490	6.45	32.29	39.72	104.74	103.76	54.00	49.76	Average
2	2483.500	6.22	32.29	39.53	38.73	37.71	54.00	-16.29	Average
3	2489.530	5.99	32.30	39.34	38.71	37.65	54.00	-16.35	Average