



FCC TEST REPORT

According to

FCC Rules and Regulations Part 15 Subpart C

Applicant	: Partner Tech Corp.
Address	: 10FL, 233-2, Baoqiao Road, Xindian, New Taipei City, Taiwan
Equipment	: Enterprise Tablet
Model No.	: EM-70
Trade Name	: PARTNER
FCC ID	: NDPEM-70

- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Cerpass Technology Corp.**, the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

Laboratory Accreditation





Contents

1. Report of Measurements and Examinations	6
1.1 List of Measurements and Examinations	6
2. Test Configuration of Equipment under Test	7
2.1 Feature of Equipment under Test	7
2.2 Carrier Frequency of Channels	8
2.3 Test Mode and Test Software	9
2.4 Description of Test System	10
2.5 General Information of Test	11
3. Antenna Requirements	12
3.1 Standard Applicable	12
3.2 Antenna Construction and Directional Gain	12
4. Test of Conducted Emission	13
4.1 Test Limit	13
4.2 Test Procedures	13
4.3 Typical Test Setup	14
4.4 Measurement Equipment	14
4.5 Test Result and Data	15
4.6 Test Photographs	23
5. Test of Radiated Emission	24
5.1 Test Limit	24
5.2 Test Procedures	24
5.3 Typical Test Setup	25
5.4 Measurement Equipment	25
5.5 Test Result and Data (9kHz ~ 30MHz)	26
5.6 Test Result and Data (30MHz ~ 1GHz)	26
5.7 Test Result and Data (1GHz~40GHz)	34
5.8 Photographs (30MHz~1GHz)	76
5.9 Test Photographs (1GHz~40GHz)	77
6. 6dB Bandwidth Measurement Data	78
6.1 Test Limit	78
6.2 Test Procedures	78
6.3 Test Setup Layout	78
6.4 Measurement Equipment	78
6.5 Test Result and Data	79
7. Maximum Peak and Average Output Power	88
7.1 Test Limit	88
7.2 Test Procedures	88
7.3 Test Setup Layout	88
7.4 Measurement Equipment	88
7.5 Test Result and Data	89
8. Power Spectral Density	91
8.1 Test Limit	91
8.2 Test Procedures	91



8.3	Test Setup Layout	91
8.4	Measurement Equipment.....	91
8.5	Test Result and Data.....	92
9.	Band Edges Measurement	101
9.1	Test Limit	101
9.2	Test Procedure	101
9.3	Test Setup Layout	101
9.4	Measurement Equipment.....	101
9.5	Test Result and Data.....	102
9.6	Restrict Band Emission Measurement Data	113
10.	Restricted Bands of Operation	115
10.1	Labeling Requirement	115
Appendix A. Photographs of EUT.....		A1 ~ A17



History of this test report

■ ORIGINAL.

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description
TEFI1406213	Oct. 03, 2014	Original.



CERTIFICATE OF COMPLIANCE

According to

FCC Rules and Regulations Part 15 Subpart C

Applicant	: Partner Tech Corp.
Address	: 10FL, 233-2, Baoqiao Road, Xindian, New Taipei City, Taiwan
Equipment	: Enterprise Tablet
Model No.	: EM-70
FCC ID	: NDPEM-70

I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 2009, KDB558074 & KDB662911**. The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2010)**.

The sample was received on Sep. 15, 2014 and the testing was carried out on Sep. 30, 2014 at **Cerpass Technology Corp.**

Approved by:

Hill Chen
EMC/RF B.U. Assistant Manager

Tested by:

Aiden Lu
Engineer



1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. Conducted Emission	Pass
15.209 15.247(d)	. Radiated Emission	Pass
15.247(a)(2)	. 6dB Bandwidth	Pass
15.247(b)	. Maximum Peak Output Power	Pass
15.247(d)	. 100kHz Bandwidth of Frequency Band Edges	Pass
15.247(e)	. Power Spectral Density	Pass
1.1307 1.1310 2.1091 2.1093	. RF Exposure Compliance	Pass



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Item	Specification
CPU	Freescale i.MX 6 1G Dual Lite
OS	Android 4.2.x or above , need CTS, GMS
Memory	DDR 1G (up to 2G), NAND flash 8GB (eMMC/8G/KE4CN3K6A/FBGA169)
Display	Type: High Brightness TFT Color LCD 天馬, Capacitive multi touch SILEAD GSL1688 Size: 7";Resolution: 1024 x 600;Brightness 350nits
Back Camera	5.0 Mega Pixels, Flash Light, Auto Focus, MIPI interface (Sensor Type OV5640)
I/O Interface	1 x SIM (Internal);1 x Micro SD;1 x DC Jack;1 x Earphone Jack 1 x Micro USB Female type, OTG & Charging function 1 x Power button;2 x Volume button;1 x Internal Host USB for MSR 1 x Internal RS232 for 1D & 2D barcode scanner
NFC	NFC Controller/NXP PN544 C3
SENSOR	3-Axis Gyroscope/MPU-3050 Acceleration sensor/KXTI9-1001 Compass Sensor/AMI306/SMD LGA10 Vibrator
Storage	Support MicroSD card (SDHC) with Eject function, Max. 32GB
LED	1 x Red/Green LED for Power & System
Weight	630g (approx.) with battery
Others	1 x Audio speaker
Dimension	219.4(L) x 41.3(W) x 22.3(H) mm
Battery	Li-polymer, 3.7V, 6000mAh
Sealing	IP54
Drop Specification	1.2M (w/o MSR/Scanner)
Temperature	Operation Temperature 0 to 40 degrees °C Storage Temperature -20 to 60 degrees °C
Humidity	Operation Temperature 5% to 95% Storage Temperature 5% to 95%
EMC & Safety	CE/FCC/VCCI/BSMI/NCC
Accessory	Power adapter Rating: AC Input: 100-240V~, 0.5A, 50-60Hz DC Output: 5.0V, 3.0A MAX. USB-Cable



2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT 20 (2412MHz~2462MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	*11	2462
*06	2437	---	---

802.11a, 802.11an HT 20 (5745MHz~5825MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*149	5745	161	5805
153	5765	*165	5825
*157	5785	---	---

Note: Channels remarked * are selected to perform test.



2.3 Test Mode and Test Software

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. The complete test system included Notebook and EUT for RF test.
- c. An executive program, " USI BCM FCC CE REG Tool 1.4.10r8" under WIN 7 was executed to transmit and receive data via WLAN.
- d. The following test modes were performed for test:
 - 802.11b/g/n HT20: CH01: 2412MHz, CH06: 2437MHz, CH11: 2462MHz
 - 802.11a/ an HT20: CH149: 5745MHz, CH157: 5785MHz, CH165: 5825MHz

* Power output of data rate:

Avg.:

802.11b		802.11g		802.11n HT20	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
11	16.25	54	12.38	65/7	11.43
5.5	16.32	48	12.53	58.5/6	11.47
2	16.43	36	12.78	52/5	11.67
1	16.47	24	13.11	39/4	11.83
---	---	18	13.25	26/3	12.18
---	---	12	13.38	19.5/2	12.28
---	---	9	13.49	13/1	12.47
---	---	6	13.57	6.5/0	12.67

802.11a Band 4		802.11an HT20 Band 4	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
54	12.47	65/7	11.33
24	13.25	58.5/6	11.4
12	13.49	52/5	11.52
6	13.66	39/4	11.75
---	---	26/3	12.05
---	---	19.5/2	12.17
---	---	13/1	12.36
---	---	6.5/0	12.45



Peak:

802.11b		802.11g		802.11n HT20	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
11	18.72	54	20.42	65/7	20.03
5.5	18.79	48	20.53	58.5/6	20.12
2	18.85	36	20.58	52/5	20.19
1	18.90	24	20.62	39/4	20.26
---	---	18	20.65	26/3	20.32
---	---	12	20.68	19.5/2	20.38
---	---	9	20.77	13/1	20.45
---	---	6	20.85	6.5/0	20.51

802.11a Band 4		802.11an HT20 Band 4	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
54	21.26	65/7	20.66
24	21.32	58.5/6	20.75
12	21.36	52/5	20.88
6	21.47	39/4	20.97
---	---	26/3	21.05
---	---	19.5/2	21.15
---	---	13/1	21.23
---	---	6.5/0	21.33

2.4 Description of Test System

Device	Manufacturer	Model No.	Description
Notebook	SONY	PCG-71218P	Power Cable, Unshielding, 1.8m

Used cable

Cable	Quantity	Description
USB	1	Shielding, 0.9m

**2.5 General Information of Test**

Test Site :	CerpPASS Technology Corporation Test Laboratory No.10, Lane 2, Lianfu Street, Luzhu Township, Taoyuan County 33848, Taiwan(R.O.C.)
Test Site Location :	2F-11, No. 3, Yuan Qu St., (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location :	No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C.
FCC Registration Number :	TW1079, TW1061, 488071, 390316, 228391, 641184
IC Registration Number :	4934B-1, 4934D-1, 4934E-1, 4934E-2
VCCI Registration Number :	T-1173 for Telecommunication Test C-4139 for Conducted emission test R-3428 for Radiated emission test G-97 for radiated disturbance above 1GHz
Frequency Range Investigated :	Conducted Emission Test: from 150 kHz to 30 MHz Radiated Emission Test: from 30 MHz to 6,000 MHz
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 10 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.



3. Antenna Requirements

3.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, 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.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

3.2 Antenna Construction and Directional Gain

WIFI/ Bluetooth

Antenna Type: PIFA Antenna

Antenna Gain: 3.03 dB i@ 2.4GHz,
0.88dBi @5.15GHz
5.74dBi @5.8GHz

NFC

Antenna Type: PCB Antenna



4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2009 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

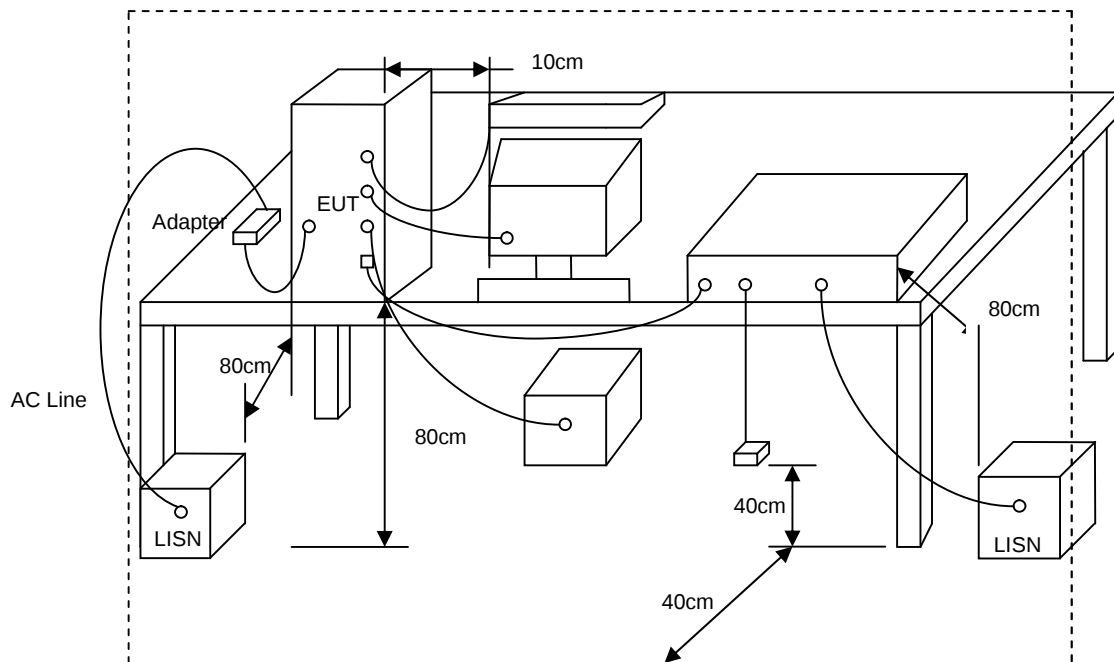
*Decreases with the logarithm of the frequency.

4.2 Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



4.3 Typical Test Setup



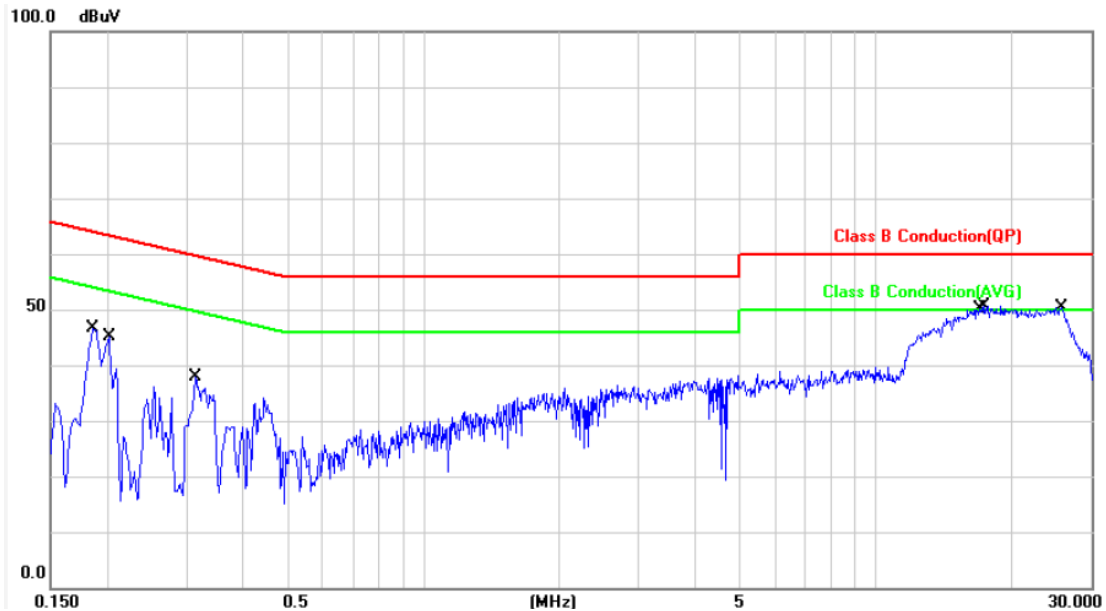
4.4 Measurement Equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI	101423	2014/06/05	2015/06/04
LISN	Schwarzbeck	NSLK 8127	8127-740	2014/08/14	2015/08/13
LISN	Schwarzbeck	NSLK 8127	8127-516	2014/03/10	2015/03/09
Pulse Limiter	R&S	ESH3-Z2	101933	2014/08/12	2015/08/11
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A



4.5 Test Result and Data

Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 802.11g, CH1	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

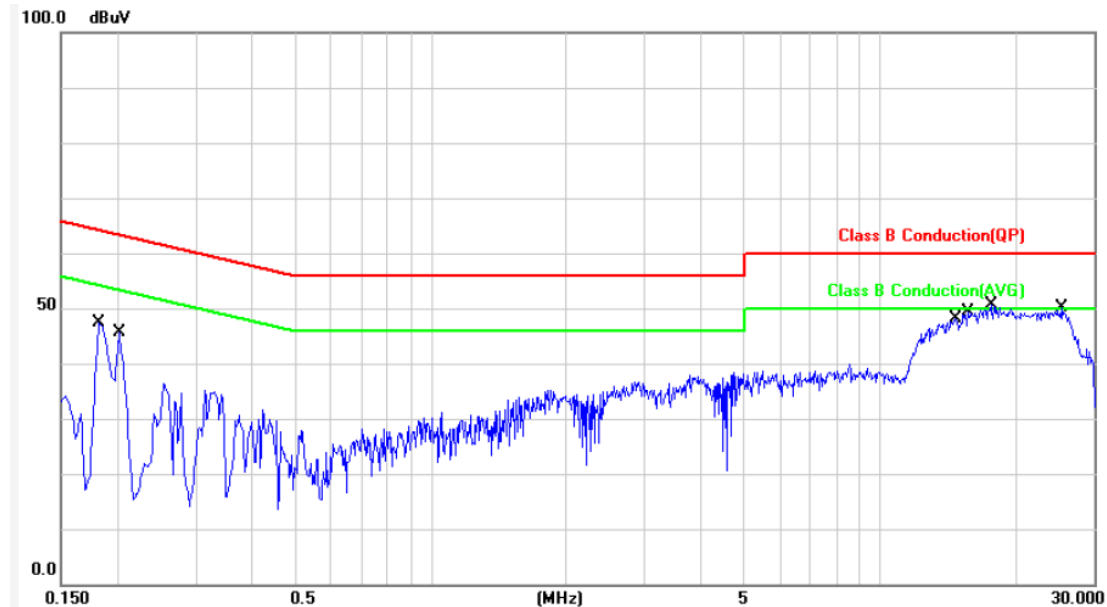


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1860	9.92	35.79	45.71	64.21	-18.50	QP	P
2	0.1860	9.92	21.48	31.40	54.21	-22.81	AVG	P
3	0.2020	9.92	33.39	43.31	63.52	-20.21	QP	P
4	0.2020	9.92	18.20	28.12	53.52	-25.40	AVG	P
5	0.3140	9.91	25.26	35.17	59.86	-24.69	QP	P
6	0.3140	9.91	13.48	23.39	49.86	-26.47	AVG	P
7	16.6780	10.42	34.71	45.13	60.00	-14.87	QP	P
8	16.6780	10.42	23.76	34.18	50.00	-15.82	AVG	P
9	17.4100	10.42	36.55	46.97	60.00	-13.03	QP	P
10	17.4100	10.42	26.26	36.68	50.00	-13.32	AVG	P
11	25.8220	10.52	35.35	45.87	60.00	-14.13	QP	P
12	25.8220	10.52	28.31	38.83	50.00	-11.17	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11g, CH1	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

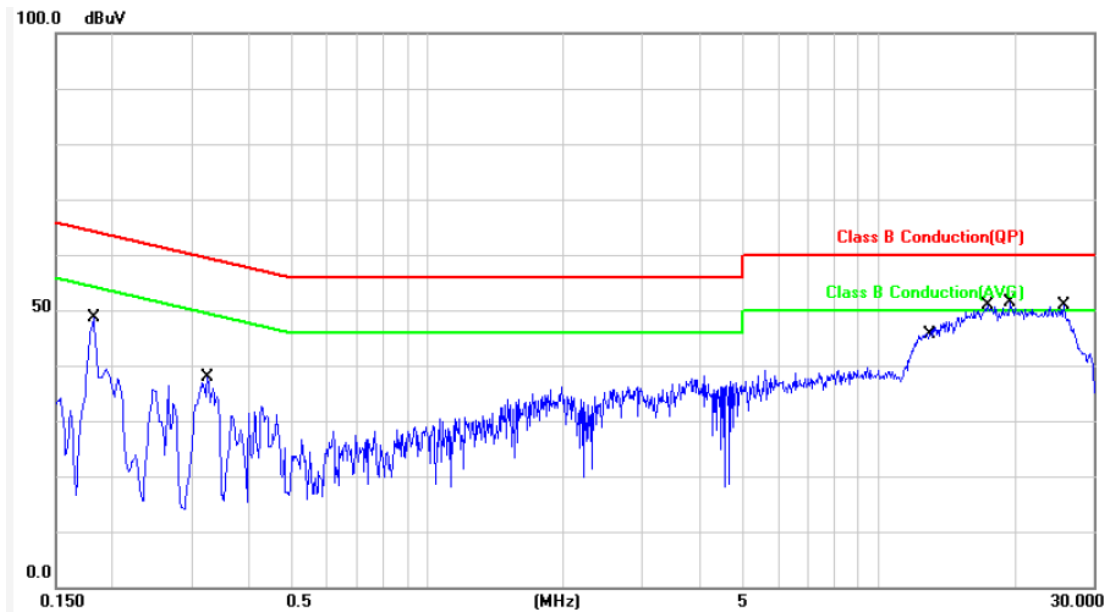


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1819	9.91	34.62	44.53	64.39	-19.86	QP	P
2	0.1819	9.91	16.95	26.86	54.39	-27.53	AVG	P
3	0.2020	9.91	32.27	42.18	63.52	-21.34	QP	P
4	0.2020	9.91	17.27	27.18	53.52	-26.34	AVG	P
5	14.7819	10.36	32.55	42.91	60.00	-17.09	QP	P
6	14.7819	10.36	22.97	33.33	50.00	-16.67	AVG	P
7	15.7739	10.37	34.17	44.54	60.00	-15.46	QP	P
8	15.7739	10.37	24.75	35.12	50.00	-14.88	AVG	P
9	17.6979	10.41	35.70	46.11	60.00	-13.89	QP	P
10	17.6979	10.41	26.79	37.20	50.00	-12.80	AVG	P
11	25.3300	10.51	35.61	46.12	60.00	-13.88	QP	P
12	25.3300	10.51	26.00	36.51	50.00	-13.49	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 802.11n HT20, CH1	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

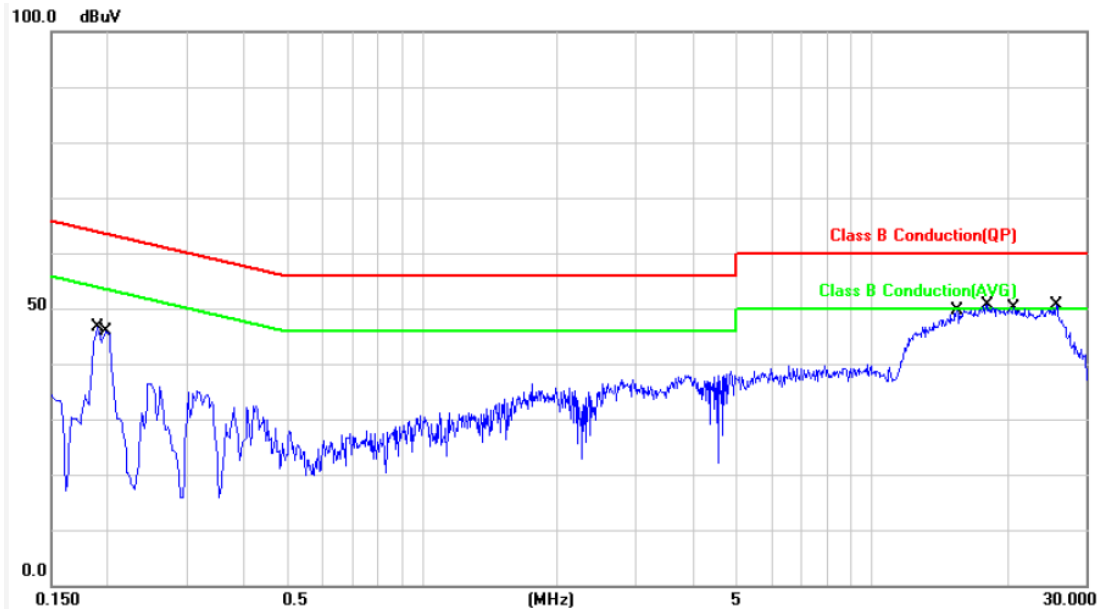


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1819	9.92	35.27	45.19	64.39	-19.20	QP	P
2	0.1819	9.92	17.80	27.72	54.39	-26.67	AVG	P
3	0.3260	9.91	24.60	34.51	59.55	-25.04	QP	P
4	0.3260	9.91	13.13	23.04	49.55	-26.51	AVG	P
5	12.7900	10.33	33.06	43.39	60.00	-16.61	QP	P
6	12.7900	10.33	21.95	32.28	50.00	-17.72	AVG	P
7	17.5620	10.44	36.73	47.17	60.00	-12.83	QP	P
8	17.5620	10.44	27.78	38.22	50.00	-11.78	AVG	P
9	19.5500	10.48	35.14	45.62	60.00	-14.38	QP	P
10	19.5500	10.48	24.74	35.22	50.00	-14.78	AVG	P
11	25.8620	10.53	35.32	45.85	60.00	-14.15	QP	P
12	25.8620	10.53	24.26	34.79	50.00	-15.21	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11n HT20, CH1	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

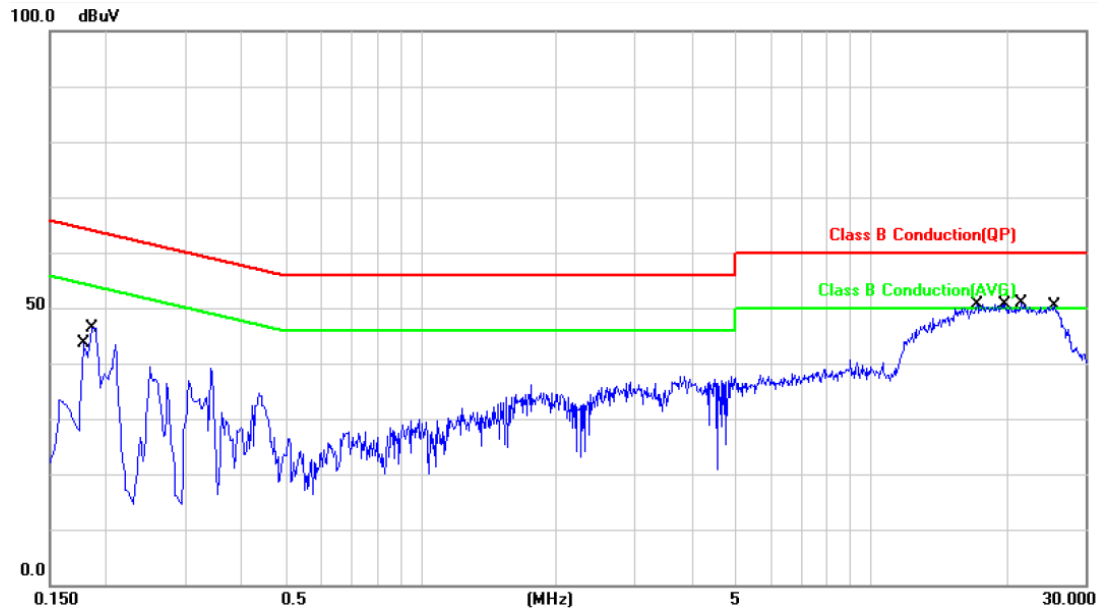


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1900	9.91	34.48	44.39	64.03	-19.64	QP	P
2	0.1900	9.91	21.65	31.56	54.03	-22.47	AVG	P
3	0.1980	9.91	33.95	43.86	63.69	-19.83	QP	P
4	0.1980	9.91	20.03	29.94	53.69	-23.75	AVG	P
5	15.5380	10.36	35.25	45.61	60.00	-14.39	QP	P
6	15.5380	10.36	24.62	34.98	50.00	-15.02	AVG	P
7	18.0780	10.41	36.25	46.66	60.00	-13.34	QP	P
8	18.0780	10.41	24.61	35.02	50.00	-14.98	AVG	P
9	20.7180	10.45	34.39	44.84	60.00	-15.16	QP	P
10	20.7180	10.45	25.74	36.19	50.00	-13.81	AVG	P
11	25.8580	10.52	33.81	44.33	60.00	-15.67	QP	P
12	25.8580	10.52	23.34	33.86	50.00	-16.14	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

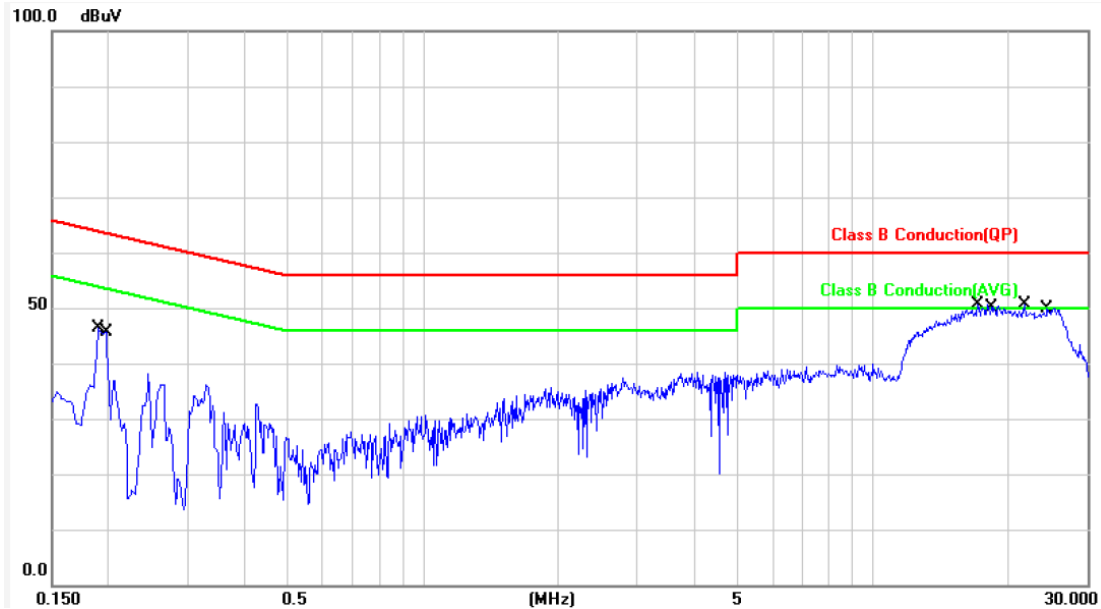


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1780	9.92	30.30	40.22	64.57	-24.35	QP	P
2	0.1780	9.92	11.15	21.07	54.57	-33.50	AVG	P
3	0.1860	9.92	35.49	45.41	64.21	-18.80	QP	P
4	0.1860	9.92	21.32	31.24	54.21	-22.97	AVG	P
5	17.2620	10.42	36.54	46.96	60.00	-13.04	QP	P
6	17.2620	10.42	24.77	35.19	50.00	-14.81	AVG	P
7	19.6540	10.48	36.86	47.34	60.00	-12.66	QP	P
8	19.6540	10.48	27.12	37.60	50.00	-12.40	AVG	P
9	21.6140	10.50	36.57	47.07	60.00	-12.93	QP	P
10	21.6140	10.50	27.51	38.01	50.00	-11.99	AVG	P
11	25.6660	10.52	32.80	43.32	60.00	-16.68	QP	P
12	25.6660	10.52	22.98	33.50	50.00	-16.50	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

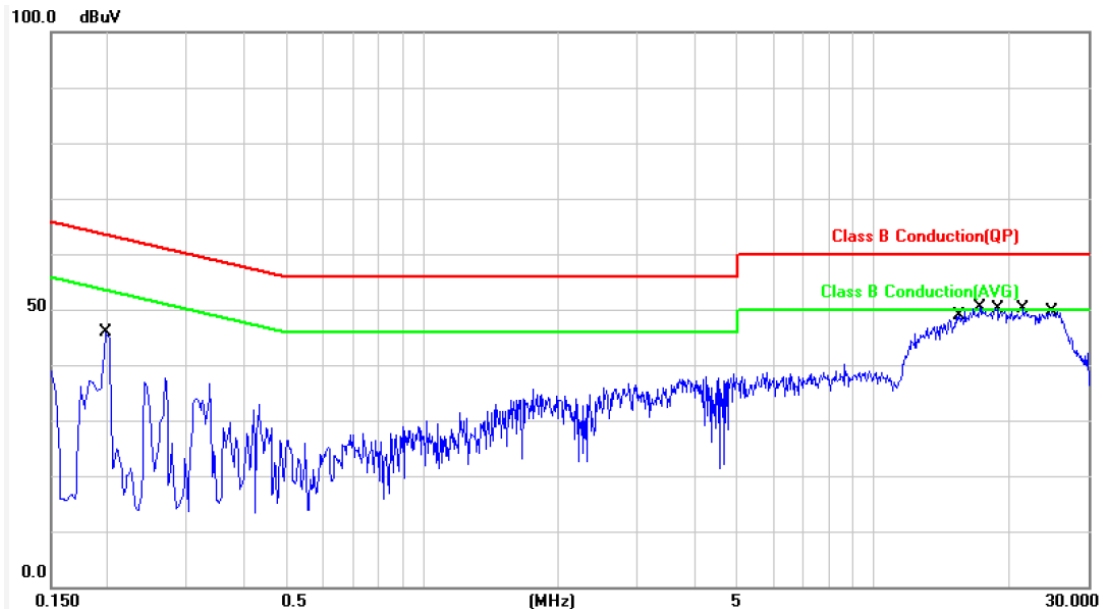


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1900	9.91	34.38	44.29	64.03	-19.74	QP	P
2	0.1900	9.91	21.55	31.46	54.03	-22.57	AVG	P
3	0.1980	9.91	33.77	43.68	63.69	-20.01	QP	P
4	0.1980	9.91	20.00	29.91	53.69	-23.78	AVG	P
5	17.1540	10.40	34.80	45.20	60.00	-14.80	QP	P
6	17.1540	10.40	25.74	36.14	50.00	-13.86	AVG	P
7	18.3860	10.42	37.11	47.53	60.00	-12.47	QP	P
8	18.3860	10.42	27.93	38.35	50.00	-11.65	AVG	P
9	21.7500	10.47	34.62	45.09	60.00	-14.91	QP	P
10	21.7500	10.47	25.17	35.64	50.00	-14.36	AVG	P
11	24.4420	10.51	34.32	44.83	60.00	-15.17	QP	P
12	24.4420	10.51	25.50	36.01	50.00	-13.99	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 802.11an, CH149	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

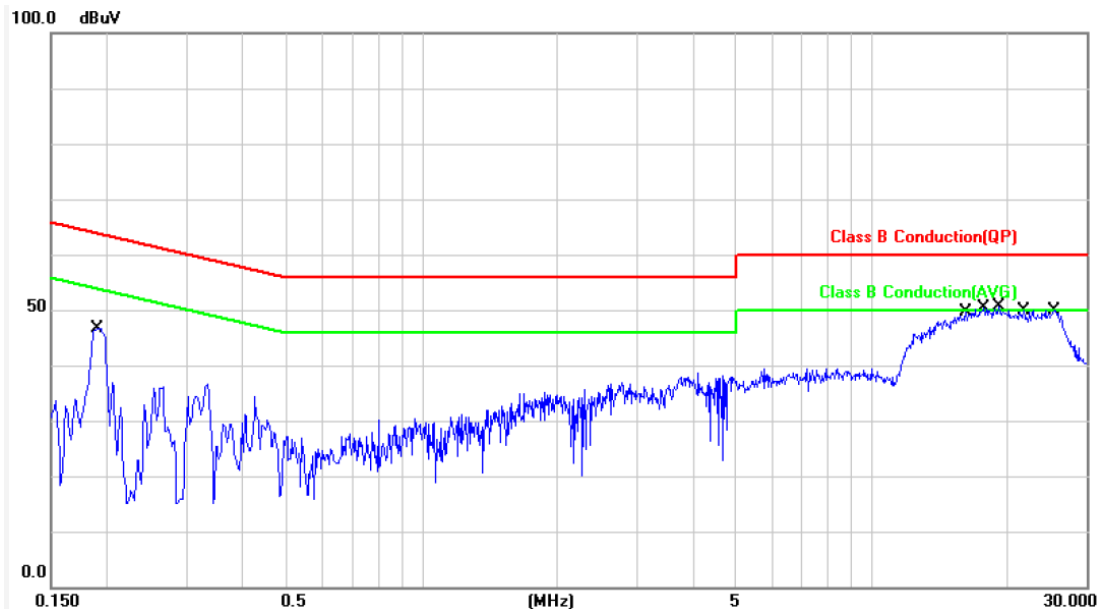


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1980	9.92	33.80	43.72	63.69	-19.97	QP	P
2	0.1980	9.92	19.97	29.89	53.69	-23.80	AVG	P
3	15.4860	10.38	34.58	44.96	60.00	-15.04	QP	P
4	15.4860	10.38	25.61	35.99	50.00	-14.01	AVG	P
5	17.2260	10.42	34.60	45.02	60.00	-14.98	QP	P
6	17.2260	10.42	24.30	34.72	50.00	-15.28	AVG	P
7	18.8819	10.46	34.63	45.09	60.00	-14.91	QP	P
8	18.8819	10.46	25.68	36.14	50.00	-13.86	AVG	P
9	21.5419	10.50	35.11	45.61	60.00	-14.39	QP	P
10	21.5419	10.50	26.81	37.31	50.00	-12.69	AVG	P
11	24.9980	10.53	34.27	44.80	60.00	-15.20	QP	P
12	24.9980	10.53	24.96	35.49	50.00	-14.51	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11an, CH149	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1900	9.91	34.37	44.28	64.03	-19.75	QP	P
2	0.1900	9.91	21.56	31.47	54.03	-22.56	AVG	P
3	16.2060	10.38	35.93	46.31	60.00	-13.69	QP	P
4	16.2060	10.38	26.88	37.26	50.00	-12.74	AVG	P
5	17.8380	10.41	36.12	46.53	60.00	-13.47	QP	P
6	17.8380	10.41	26.27	36.68	50.00	-13.32	AVG	P
7	19.1460	10.43	34.30	44.73	60.00	-15.27	QP	P
8	19.1460	10.43	26.27	36.70	50.00	-13.30	AVG	P
9	21.7460	10.47	34.75	45.22	60.00	-14.78	QP	P
10	21.7460	10.47	25.54	36.01	50.00	-13.99	AVG	P
11	25.5180	10.51	35.93	46.44	60.00	-13.56	QP	P
12	25.5180	10.51	28.39	38.90	50.00	-11.10	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit



5. Test of Radiated Emission

5.1 Test Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

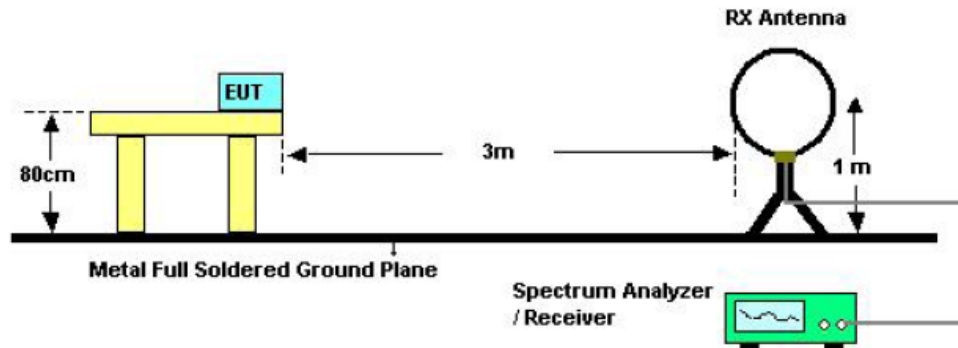
5.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

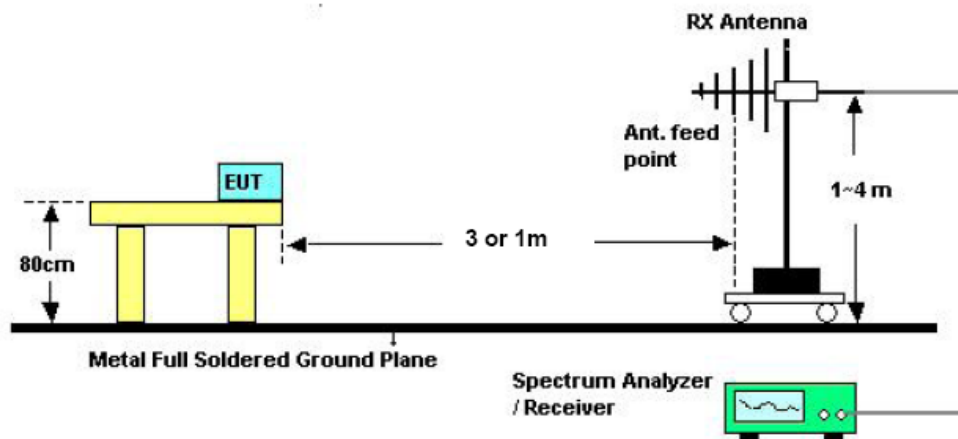


5.3 Typical Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

5.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI	100443	2014/04/09	2015/04/08
Bilog Antenna	Schwarzbeck	VULB 9168	275	2014/09/18	2015/09/17
Amplifier	QuieTek	AP/0100A	CHM0906075	2014/09/17	2015/09/16
SPECTRUM ANALYZER	R&S	FSP40	100219	2014/09/03	2015/09/02
HORN ANTENNA	EMCO	3115	31601	2014/07/09	2015/07/08
PREAMPLIFIER	AGILENT	8449B	3008A01954	2014/03/28	2015/03/27
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A

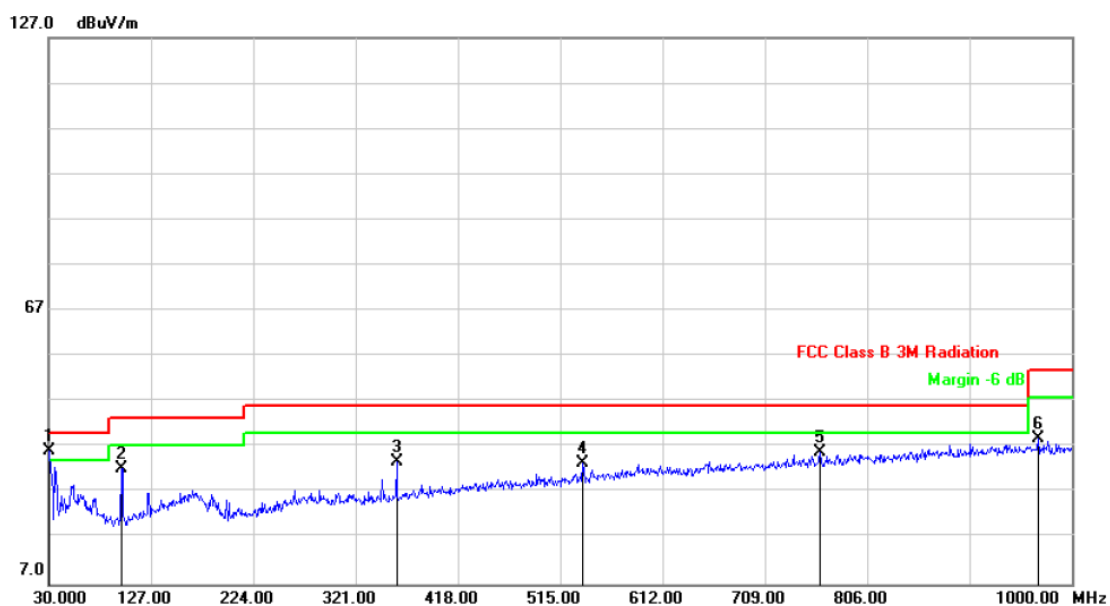


5.5 Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

5.6 Test Result and Data (30MHz ~ 1GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11g, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.0000	-8.97	45.15	36.18	40.00	-3.82	peak	105	172
2	98.8700	-13.22	45.62	32.40	43.50	-11.10	peak	105	172
3	359.8000	-5.88	39.76	33.88	46.00	-12.12	peak	105	172
4	536.3400	-1.89	35.33	33.44	46.00	-12.56	peak	105	172
5	761.3800	1.88	34.15	36.03	46.00	-9.97	peak	105	172
6	967.9900	4.50	34.33	38.83	54.00	-15.17	peak	105	172

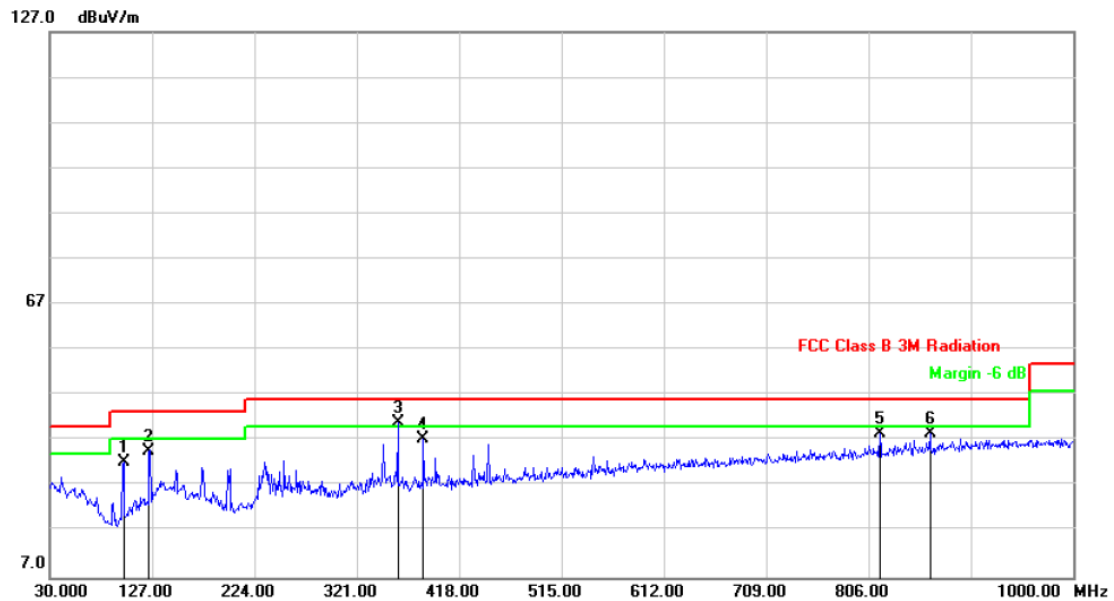
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11g, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	99.8400	-13.09	45.29	32.20	43.50	-11.30	peak	103	172
2	124.0900	-10.29	45.10	34.81	43.50	-8.69	peak	103	172
3	359.8000	-5.88	46.96	41.08	46.00	-4.92	peak	103	172
4	384.0500	-5.15	42.66	37.51	46.00	-8.49	peak	103	172
5	816.6700	2.51	36.07	38.58	46.00	-7.42	peak	103	172
6	864.2000	3.17	35.40	38.57	46.00	-7.43	peak	103	172

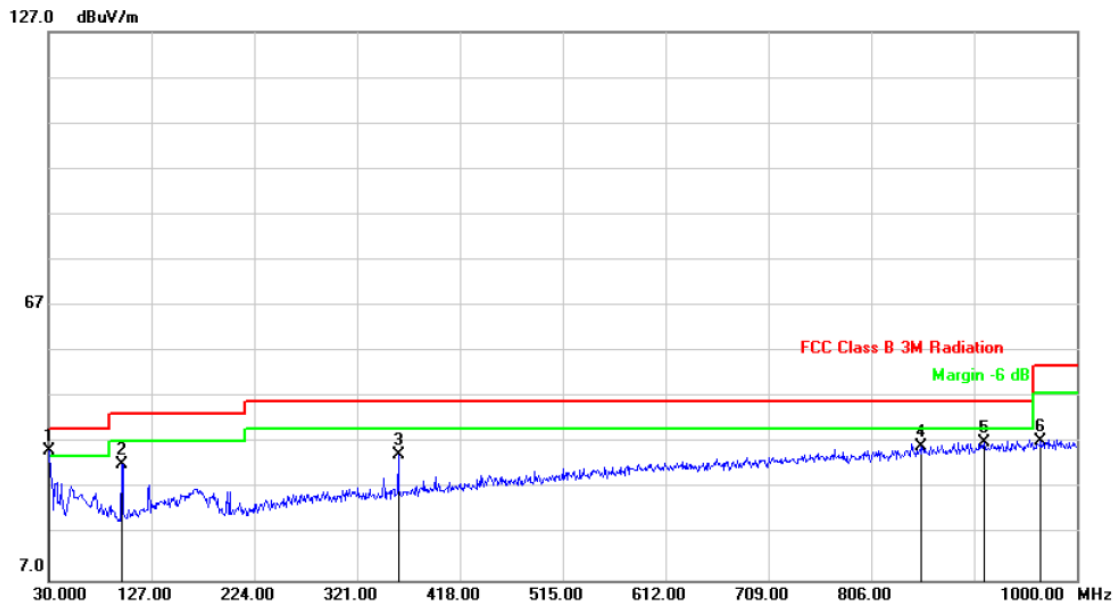
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11n HT20, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9700	-8.90	44.16	35.26	40.00	-4.74	peak	105	166
2	98.8700	-13.22	45.67	32.45	43.50	-11.05	peak	105	166
3	359.8000	-5.88	40.24	34.36	46.00	-11.64	peak	105	166
4	853.5300	3.02	33.20	36.22	46.00	-9.78	peak	105	166
5	912.7000	3.87	33.15	37.02	46.00	-8.98	peak	105	166
6	966.0500	4.49	32.92	37.41	54.00	-16.59	peak	105	166

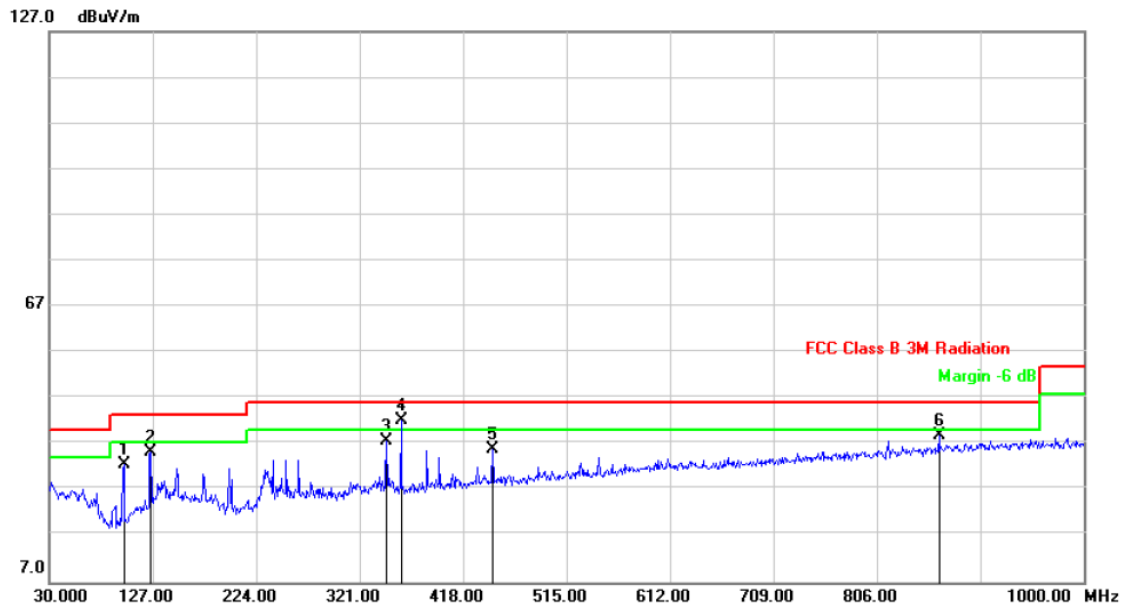
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11n HT20, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	99.8400	-13.09	45.60	32.51	43.50	-10.99	peak	100	177
2	125.0600	-10.19	45.44	35.25	43.50	-8.25	peak	100	177
3	346.2200	-6.26	43.91	37.65	46.00	-8.35	peak	100	177
4	359.8000	-5.88	48.05	42.17	46.00	-3.83	peak	100	177
5	445.1600	-3.54	39.42	35.88	46.00	-10.12	peak	100	177
6	864.2000	3.17	35.67	38.84	46.00	-7.16	peak	100	177

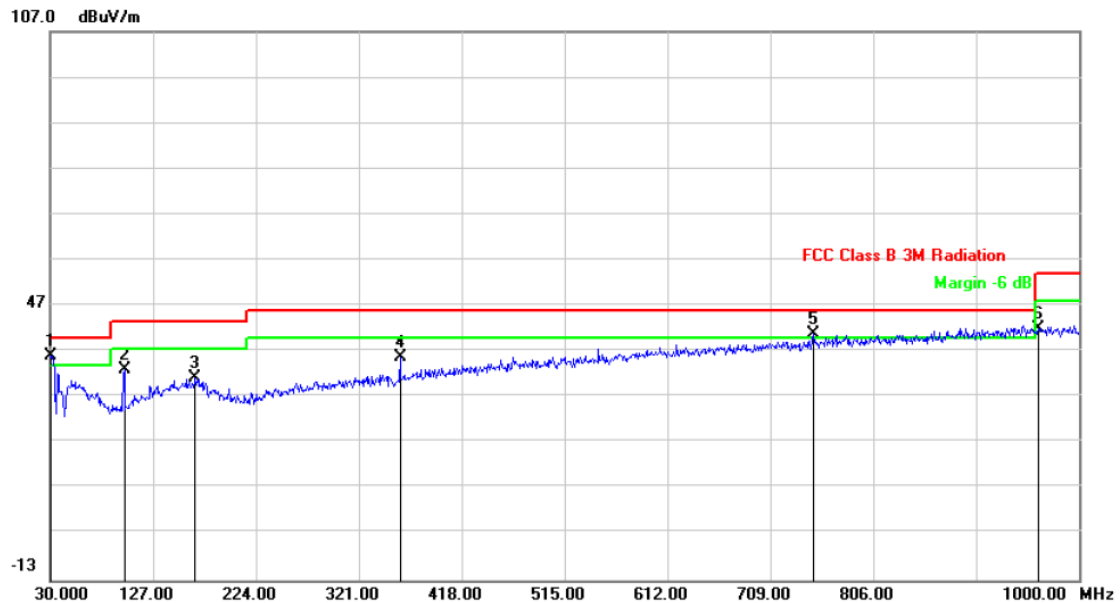
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH149	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9700	-8.90	44.86	35.96	40.00	-4.04	peak	102	177
2	99.8400	-13.09	46.20	33.11	43.50	-10.39	peak	102	177
3	166.7700	-8.44	39.76	31.32	43.50	-12.18	peak	102	177
4	359.8000	-5.88	41.49	35.61	46.00	-10.39	peak	102	177
5	749.7400	1.76	39.00	40.76	46.00	-5.24	peak	102	177
6	961.2000	4.47	37.61	42.08	54.00	-11.92	peak	102	177

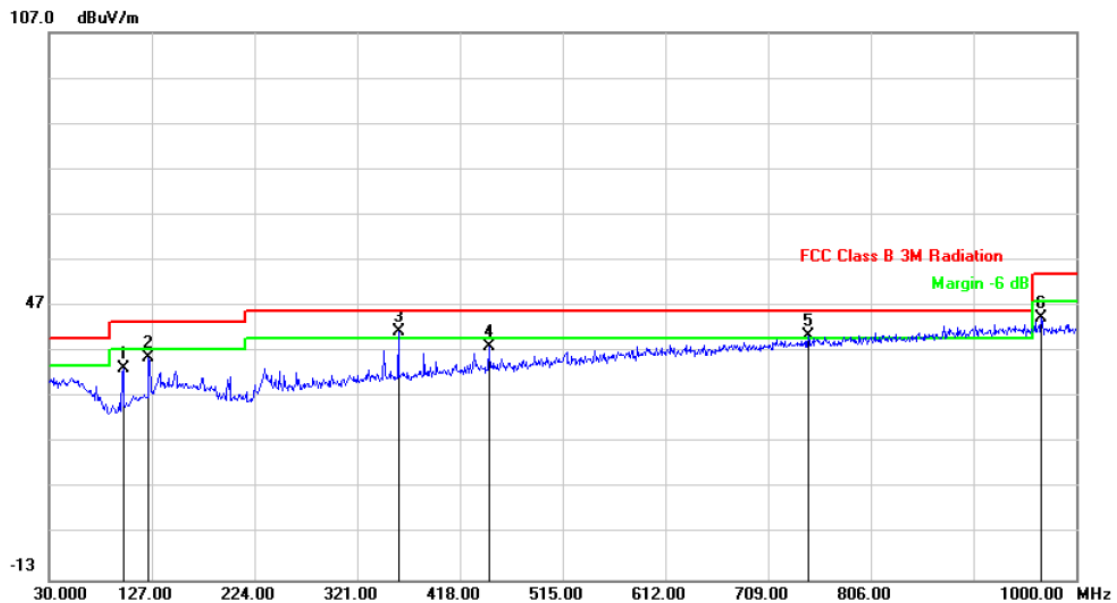
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH149	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	99.8400	-13.09	46.58	33.49	43.50	-10.01	peak	105	164
2	124.0900	-10.29	46.02	35.73	43.50	-7.77	peak	105	164
3	359.8000	-5.88	47.23	41.35	46.00	-4.65	peak	105	164
4	445.1600	-3.54	41.63	38.09	46.00	-7.91	peak	105	164
5	746.8300	1.71	38.82	40.53	46.00	-5.47	peak	105	164
6	967.0200	4.49	39.91	44.40	54.00	-9.60	peak	105	164

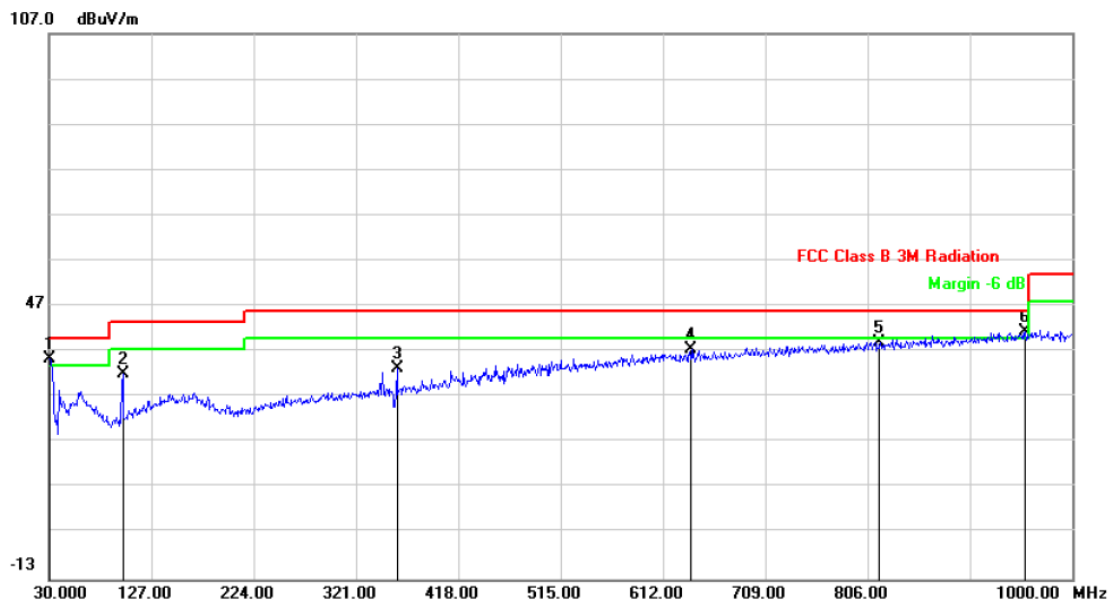
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an, CH149	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9699	-8.90	44.44	35.54	40.00	-4.46	peak	106	174
2	99.8400	-13.09	45.25	32.16	43.50	-11.34	peak	106	174
3	359.8000	-5.88	39.23	33.35	46.00	-12.65	peak	106	174
4	639.1599	0.04	37.55	37.59	46.00	-8.41	peak	106	174
5	817.6399	2.52	36.52	39.04	46.00	-6.96	peak	106	174
6	955.3799	4.45	37.08	41.53	46.00	-4.47	peak	106	174

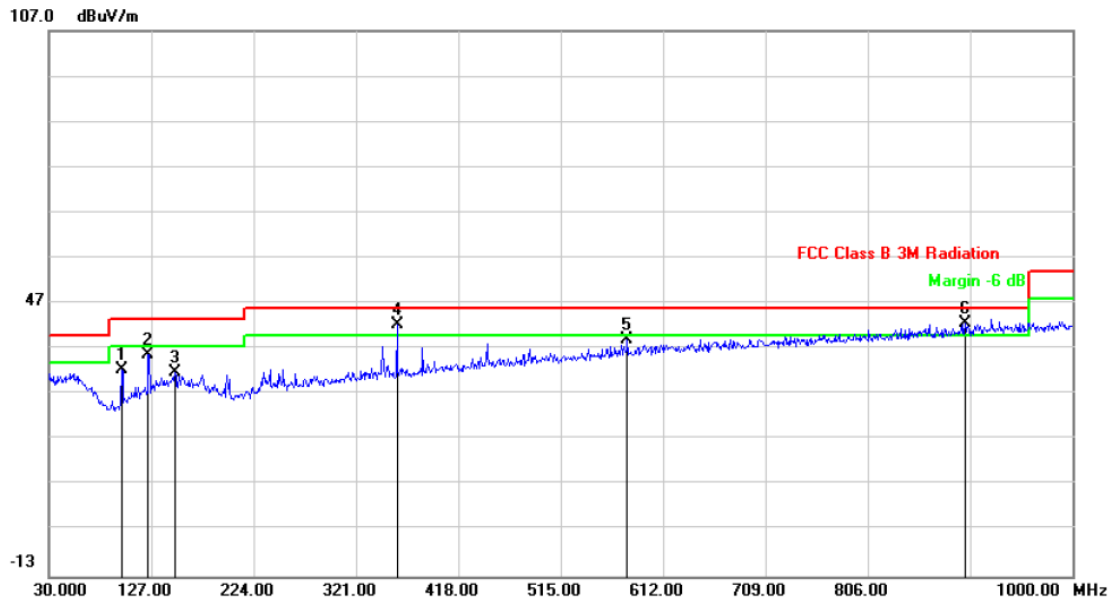
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an, CH149	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	98.8700	-13.22	45.58	32.36	43.50	-11.14	peak	103	161
2	124.0900	-10.29	46.08	35.79	43.50	-7.71	peak	103	161
3	149.3100	-8.29	40.00	31.71	43.50	-11.79	peak	103	161
4	359.8000	-5.88	48.28	42.40	46.00	-3.60	peak	103	161
5	578.0500	-0.88	40.04	39.16	46.00	-6.84	peak	103	161
6	898.1500	3.66	38.85	42.51	46.00	-3.49	peak	103	161

Note: Level = Reading + Factor

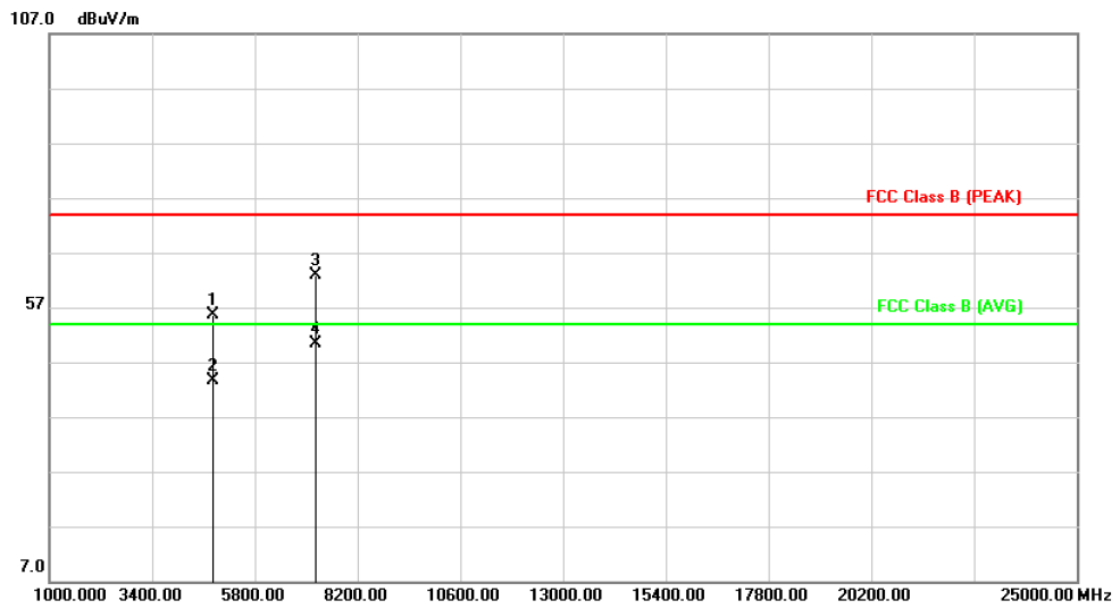
Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



5.7 Test Result and Data (1GHz~40GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11b, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	48.26	55.57	74.00	-18.43	peak	104	175
2	4824.000	7.31	36.29	43.60	54.00	-10.40	AVG	104	175
3	7236.000	12.29	50.53	62.82	74.00	-11.18	peak	104	175
4	7236.000	12.29	38.15	50.44	54.00	-3.56	AVG	104	175

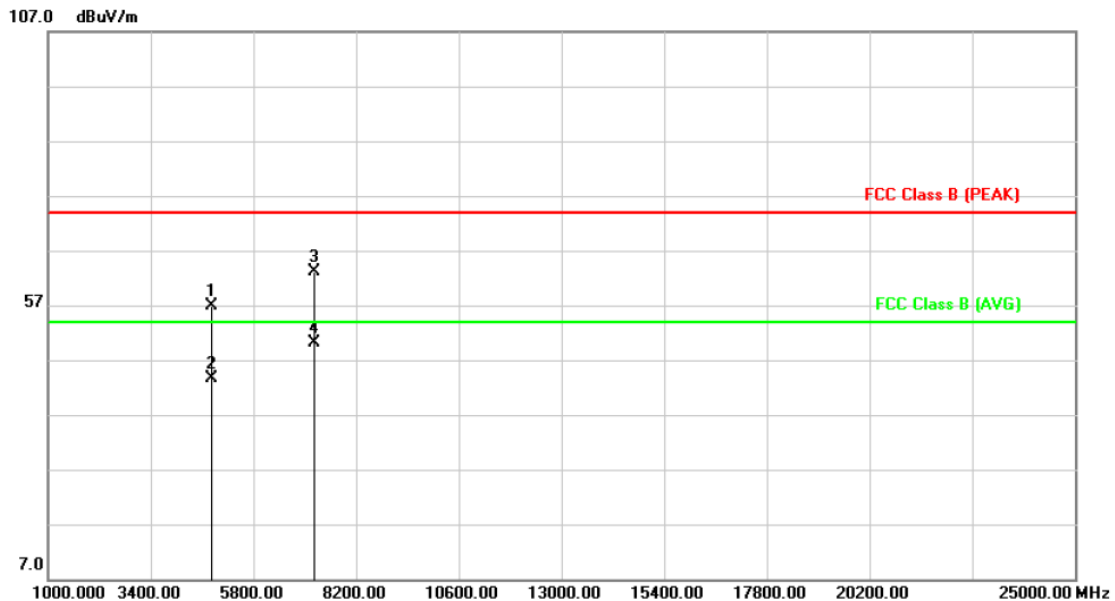
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11b, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	49.49	56.80	74.00	-17.20	peak	104	175
2	4824.000	7.31	36.38	43.69	54.00	-10.31	AVG	104	175
3	7236.000	12.29	50.84	63.13	74.00	-10.87	peak	104	175
4	7236.000	12.29	37.78	50.07	54.00	-3.93	AVG	104	175

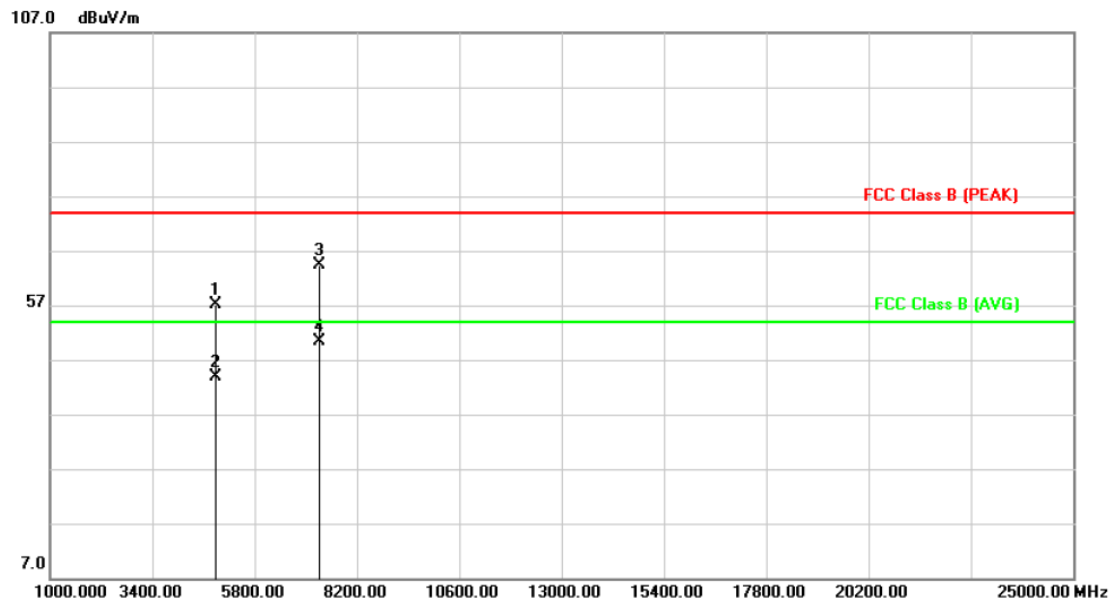
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11b, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	49.74	57.21	74.00	-16.79	peak	102	175
2	4874.000	7.47	36.36	43.83	54.00	-10.17	AVG	102	175
3	7311.000	12.61	51.74	64.35	74.00	-9.65	peak	102	175
4	7311.000	12.61	37.65	50.26	54.00	-3.74	AVG	102	175

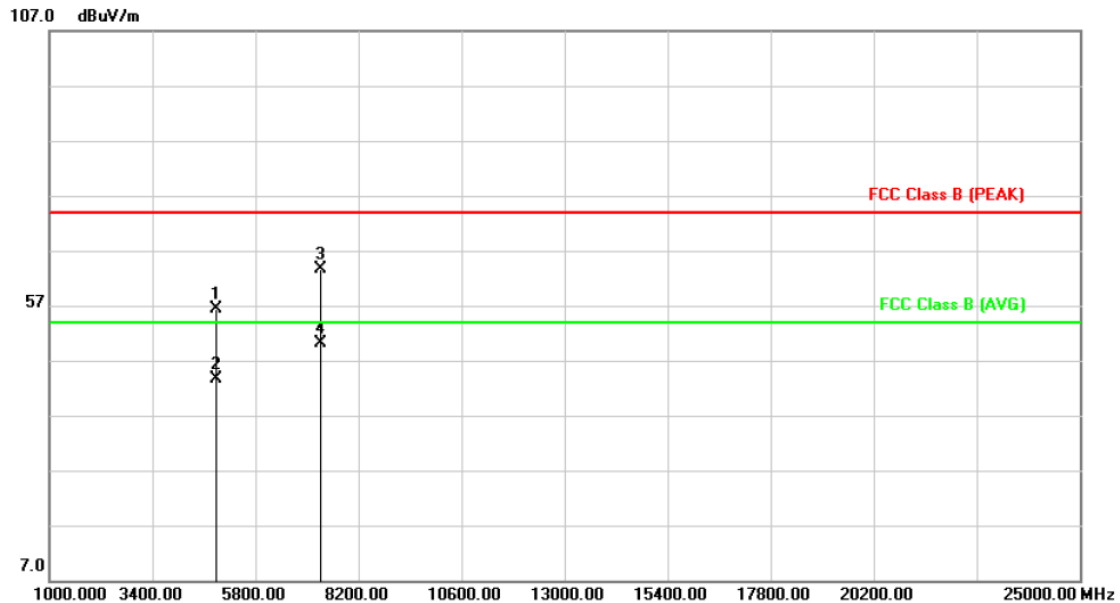
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11b, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	48.90	56.37	74.00	-17.63	peak	103	165
2	4874.000	7.47	36.28	43.75	54.00	-10.25	AVG	103	165
3	7311.000	12.61	51.00	63.61	74.00	-10.39	peak	103	165
4	7311.000	12.61	37.59	50.20	54.00	-3.80	AVG	103	165

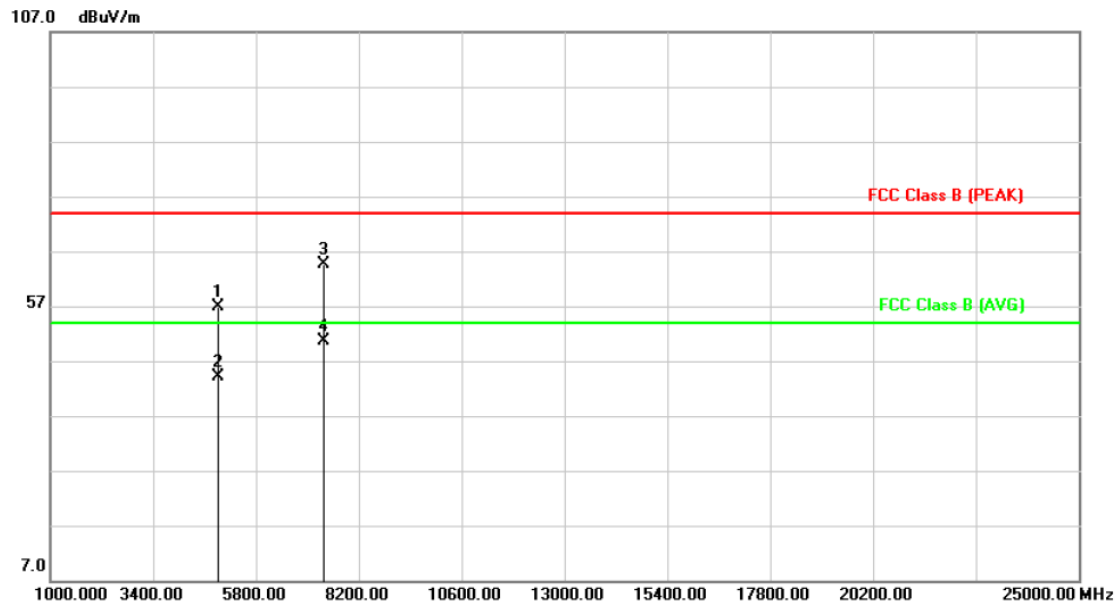
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11b, CH11	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	49.12	56.76	74.00	-17.24	peak	106	172
2	4924.000	7.64	36.38	44.02	54.00	-9.98	AVG	106	172
3	7386.000	12.92	51.65	64.57	74.00	-9.43	peak	106	172
4	7386.000	12.92	37.64	50.56	54.00	-3.44	AVG	106	172

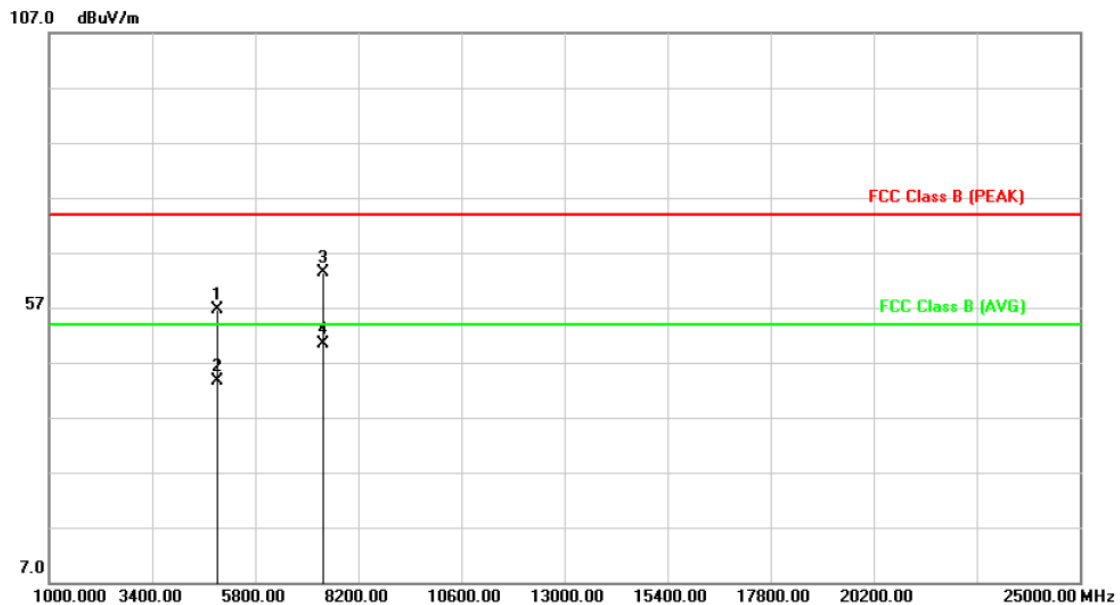
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11b, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	49.10	56.74	74.00	-17.26	peak	100	168
2	4924.000	7.64	36.10	43.74	54.00	-10.26	AVG	100	168
3	7386.000	12.92	50.45	63.37	74.00	-10.63	peak	100	168
4	7386.000	12.92	37.52	50.44	54.00	-3.56	AVG	100	168

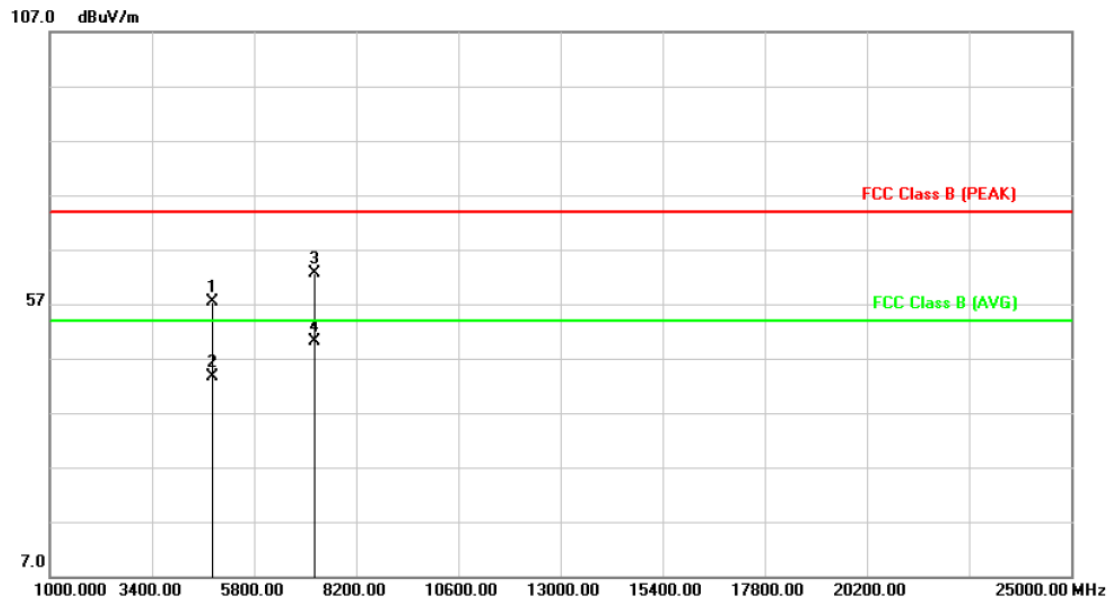
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11g, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	50.16	57.47	74.00	-16.53	peak	101	174
2	4824.000	7.31	36.24	43.55	54.00	-10.45	AVG	101	174
3	7236.000	12.29	50.33	62.62	74.00	-11.38	peak	101	174
4	7236.000	12.29	37.74	50.03	54.00	-3.97	AVG	101	174

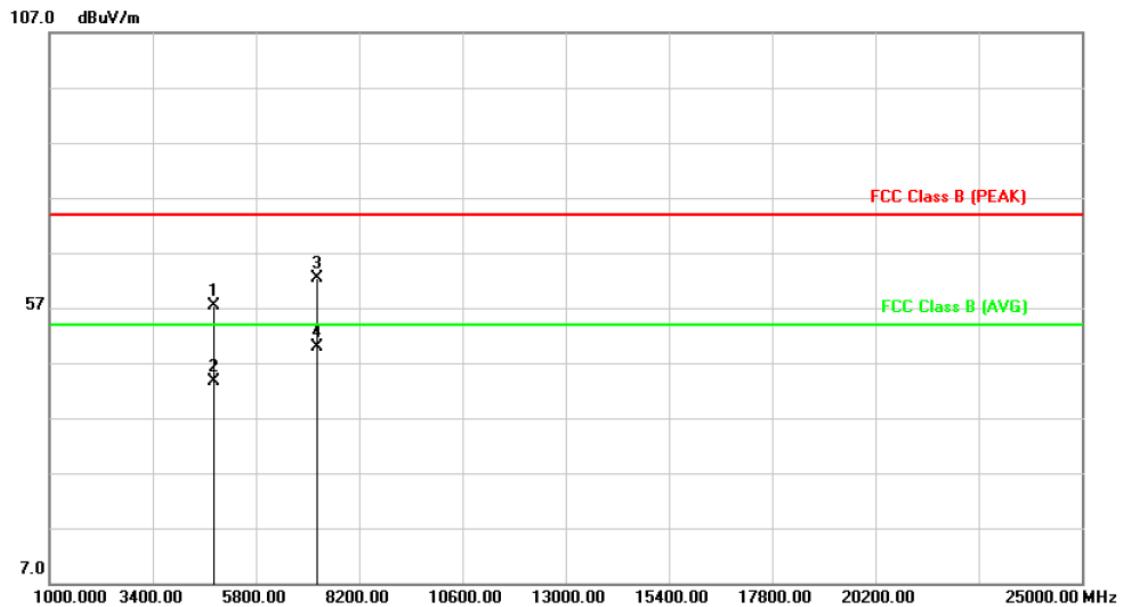
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11g, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	50.14	57.45	74.00	-16.55	peak	105	174
2	4824.000	7.31	36.22	43.53	54.00	-10.47	AVG	105	174
3	7236.000	12.29	50.18	62.47	74.00	-11.53	peak	105	174
4	7236.000	12.29	37.67	49.96	54.00	-4.04	AVG	105	174

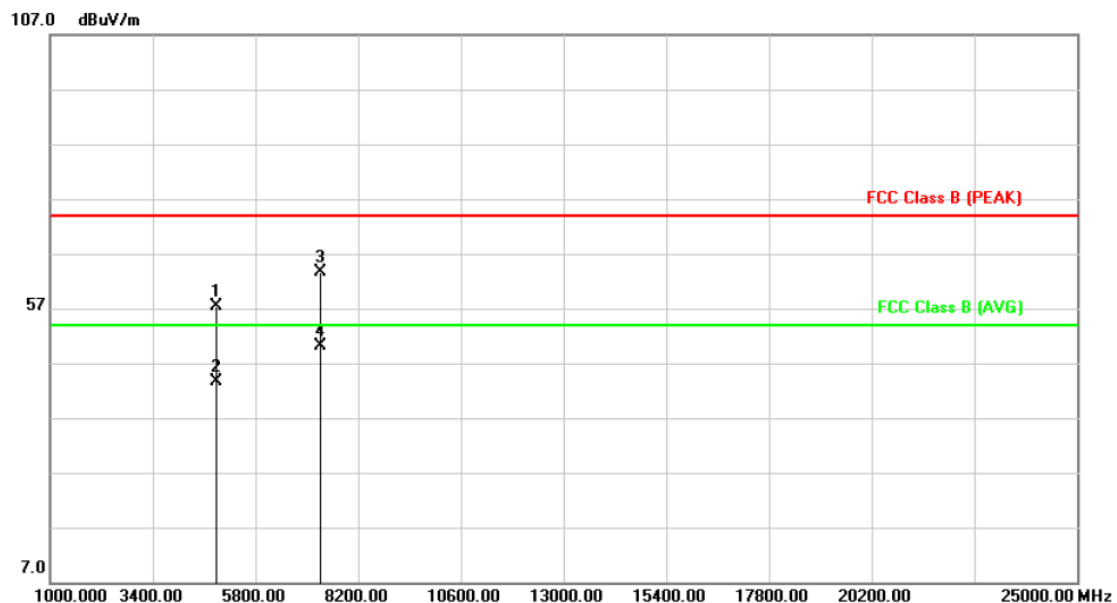
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11g, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	49.90	57.37	74.00	-16.63	peak	103	165
2	4874.000	7.47	36.18	43.65	54.00	-10.35	AVG	103	165
3	7311.000	12.61	50.91	63.52	74.00	-10.48	peak	103	165
4	7311.000	12.61	37.49	50.10	54.00	-3.90	AVG	103	165

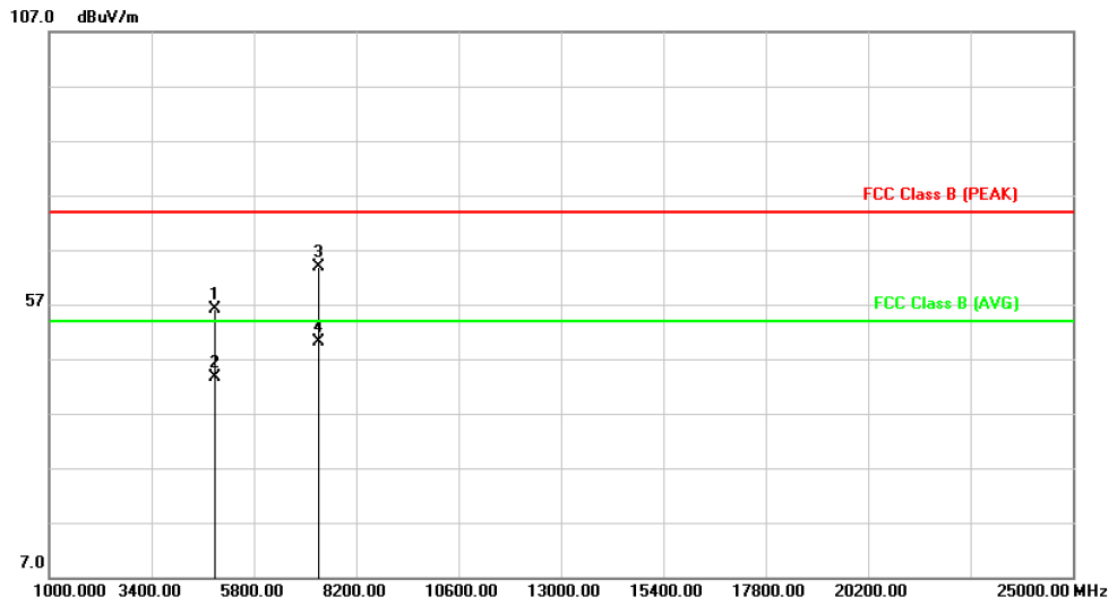
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11g, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	48.76	56.23	74.00	-17.77	peak	101	177
2	4874.000	7.47	36.17	43.64	54.00	-10.36	AVG	101	177
3	7311.000	12.61	51.22	63.83	74.00	-10.17	peak	101	177
4	7311.000	12.61	37.48	50.09	54.00	-3.91	AVG	101	177

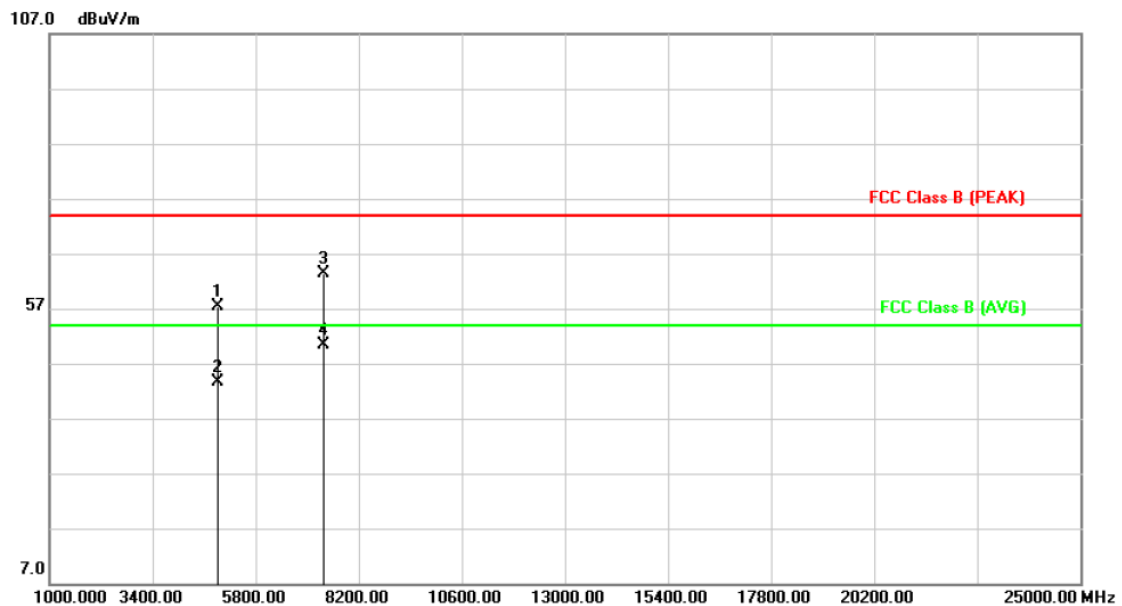
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11g, CH11	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	49.80	57.44	74.00	-16.56	peak	105	166
2	4924.000	7.64	36.01	43.65	54.00	-10.35	AVG	105	166
3	7386.000	12.92	50.35	63.27	74.00	-10.73	peak	105	166
4	7386.000	12.92	37.44	50.36	54.00	-3.64	AVG	105	166

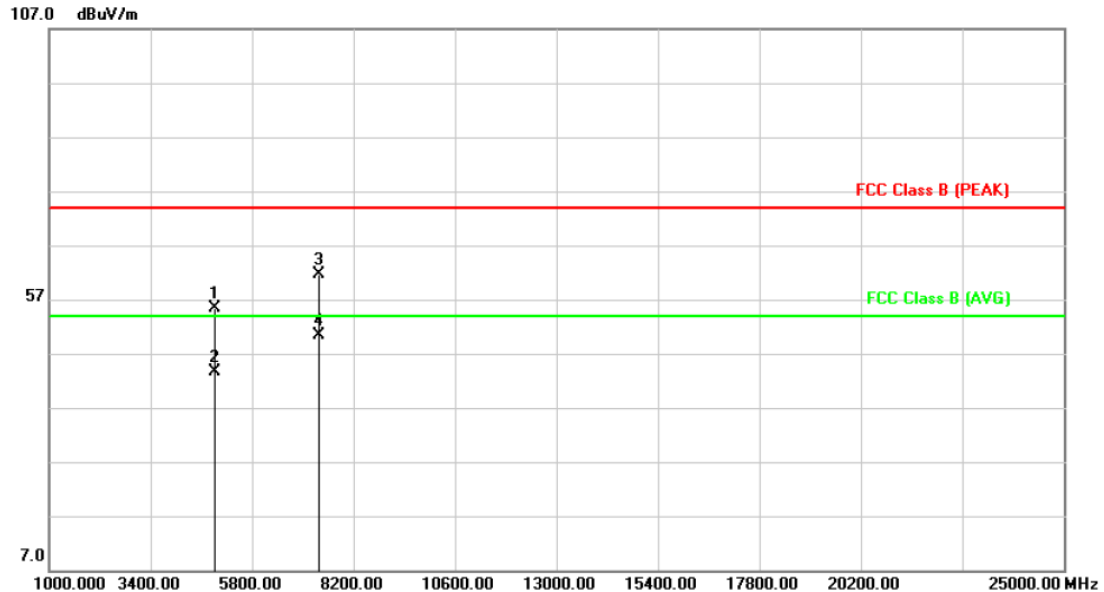
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11g, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	47.66	55.30	74.00	-18.70	peak	102	178
2	4924.000	7.64	35.93	43.57	54.00	-10.43	AVG	102	178
3	7386.000	12.92	48.60	61.52	74.00	-12.48	peak	102	178
4	7386.000	12.92	37.34	50.26	54.00	-3.74	AVG	102	178

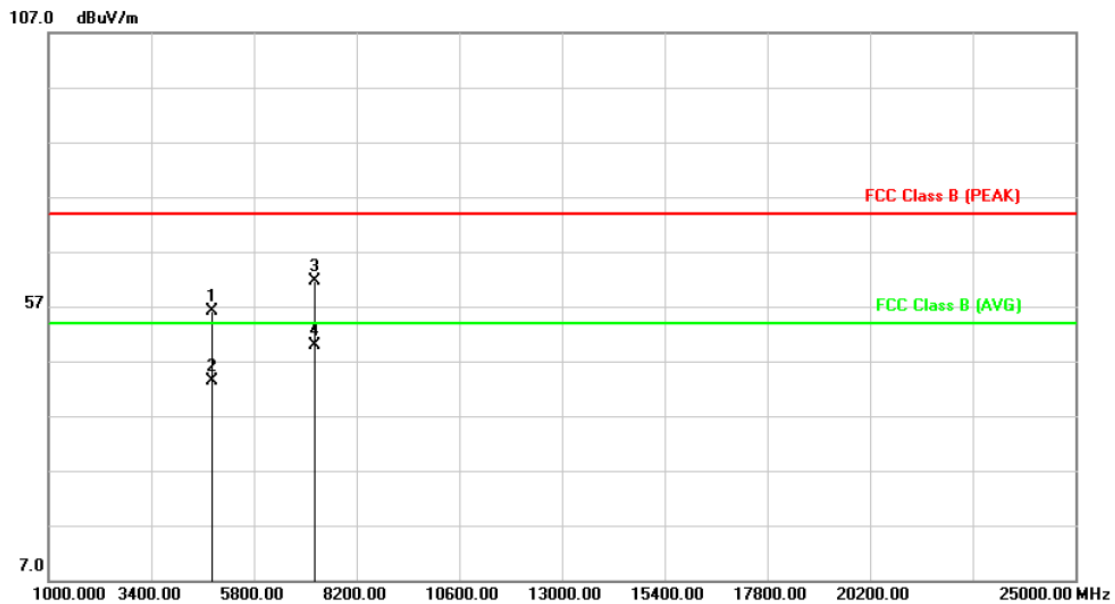
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11n HT20, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	48.76	56.07	74.00	-17.93	peak	106	164
2	4824.000	7.31	36.12	43.43	54.00	-10.57	AVG	106	164
3	7236.000	12.29	49.22	61.51	74.00	-12.49	peak	106	164
4	7236.000	12.29	37.62	49.91	54.00	-4.09	AVG	106	164

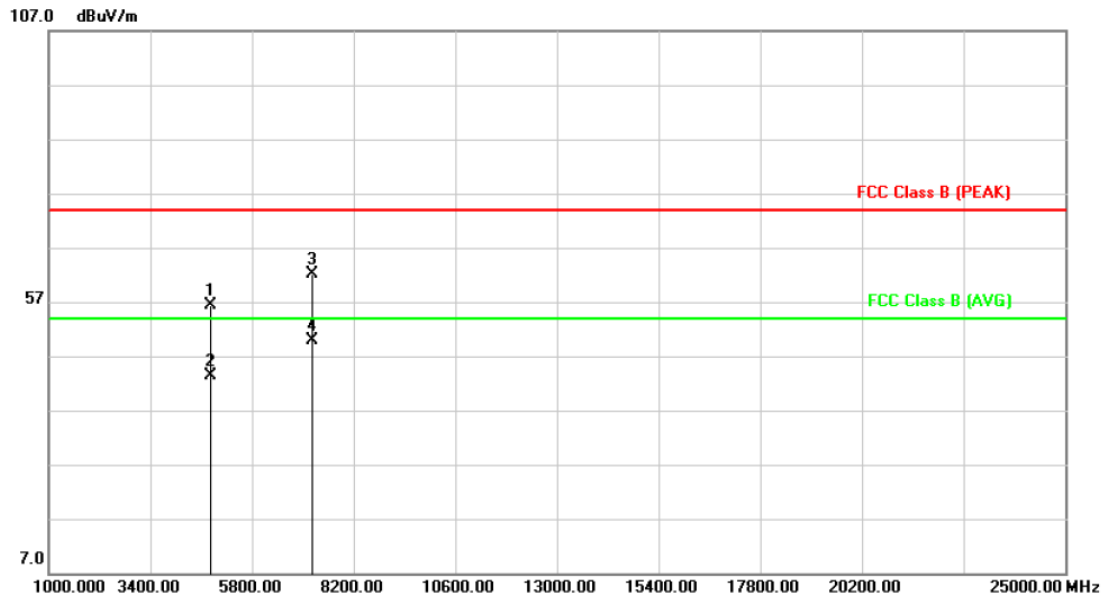
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11n HT20, CH1	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4824.000	7.31	49.18	56.49	74.00	-17.51	peak	101	167
2	4824.000	7.31	36.17	43.48	54.00	-10.52	AVG	101	167
3	7236.000	12.29	49.91	62.20	74.00	-11.80	peak	101	167
4	7236.000	12.29	37.68	49.97	54.00	-4.03	AVG	101	167

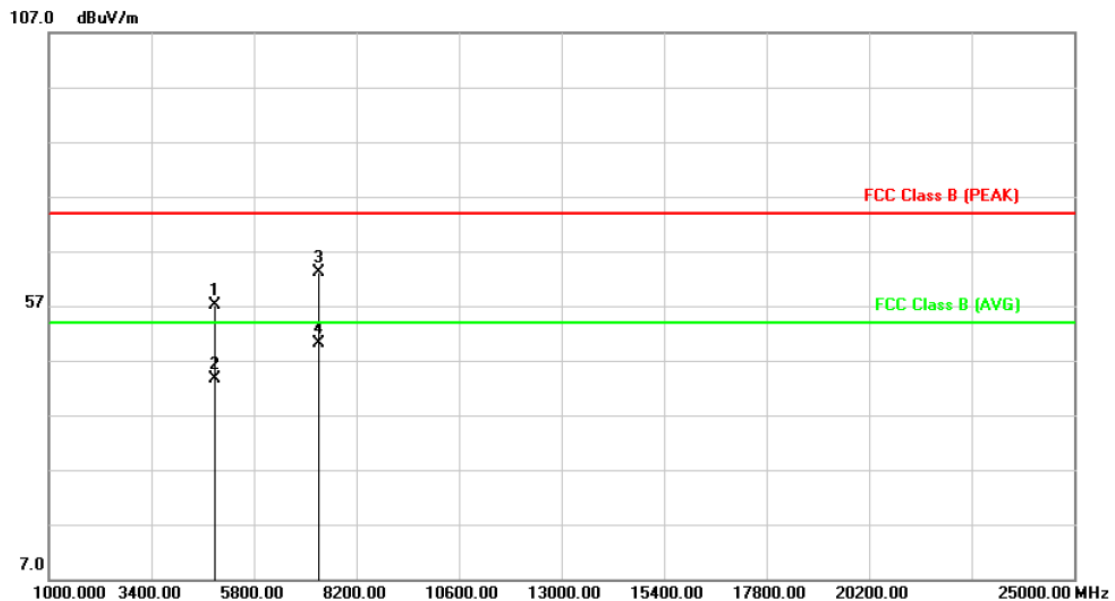
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11n HT20, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	49.71	57.18	74.00	-16.82	peak	100	166
2	4874.000	7.47	36.12	43.59	54.00	-10.41	AVG	100	166
3	7311.000	12.61	50.44	63.05	74.00	-10.95	peak	100	166
4	7311.000	12.61	37.42	50.03	54.00	-3.97	AVG	100	166

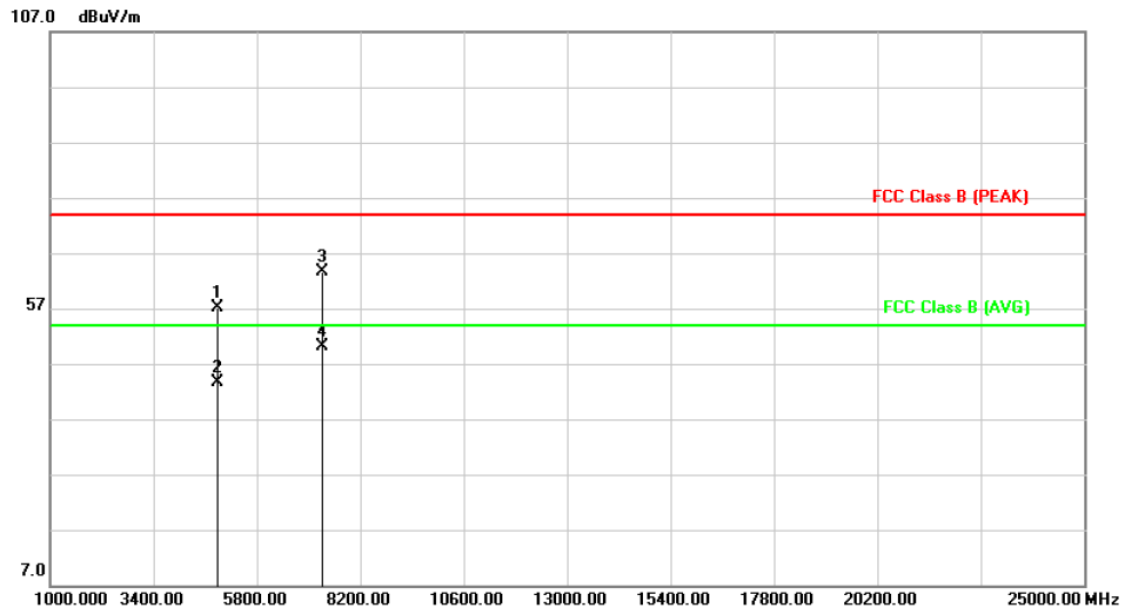
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11n HT20, CH6	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4874.000	7.47	49.56	57.03	74.00	-16.97	peak	106	163
2	4874.000	7.47	36.23	43.70	54.00	-10.30	AVG	106	163
3	7311.000	12.61	50.95	63.56	74.00	-10.44	peak	106	163
4	7311.000	12.61	37.52	50.13	54.00	-3.87	AVG	106	163

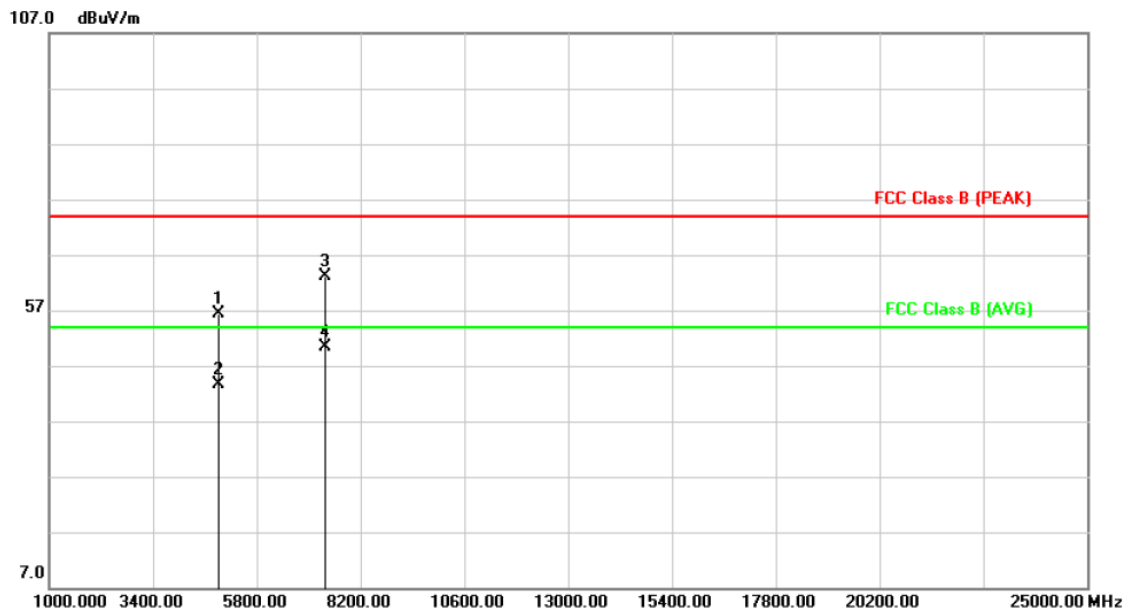
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 1	: 802.11n HT20, CH11	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	48.76	56.40	74.00	-17.60	peak	104	176
2	4924.000	7.64	36.05	43.69	54.00	-10.31	AVG	104	176
3	7386.000	12.92	50.30	63.22	74.00	-10.78	peak	104	176
4	7386.000	12.92	37.44	50.36	54.00	-3.64	AVG	104	176

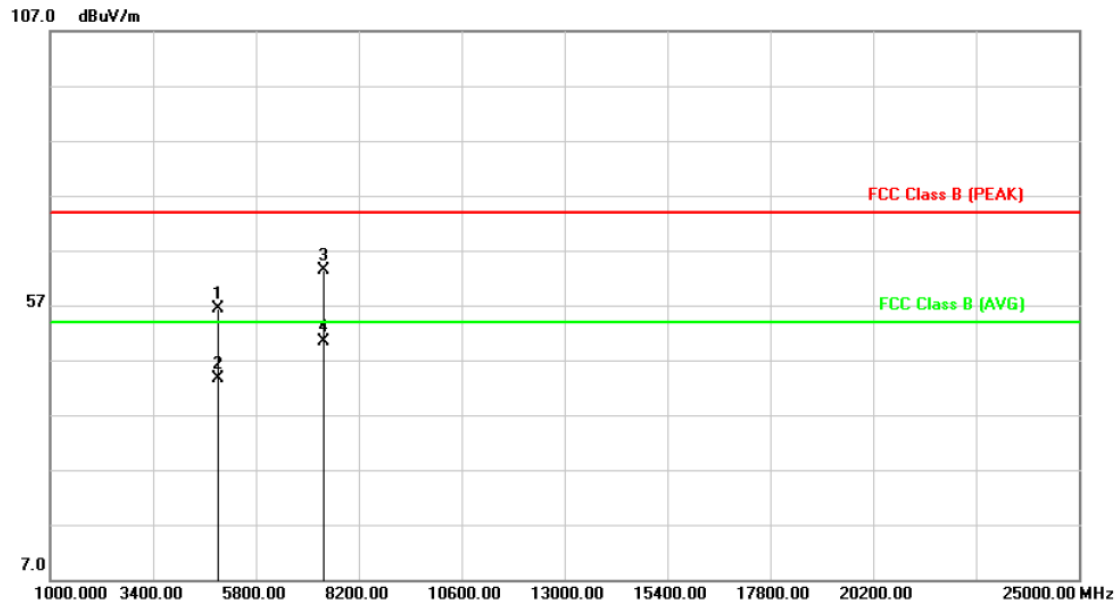
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 1	: 802.11n HT20, CH11	Temperature	: 24 °C
		Humidity	: 54 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4924.000	7.64	48.86	56.50	74.00	-17.50	peak	102	178
2	4924.000	7.64	36.04	43.68	54.00	-10.32	AVG	102	178
3	7386.000	12.92	50.47	63.39	74.00	-10.61	peak	102	178
4	7386.000	12.92	37.43	50.35	54.00	-3.65	AVG	102	178

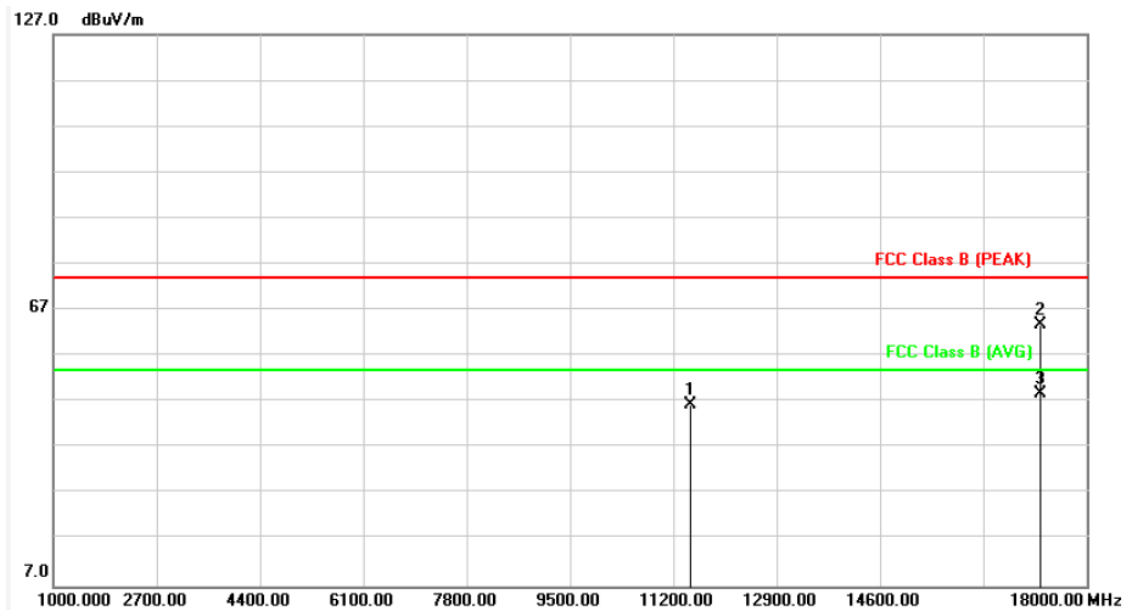
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11489.000	18.87	27.65	46.52	74.00	-27.48	peak	100	2	P
2	17235.000	26.12	37.63	63.75	74.00	-10.25	peak	100	11	P
3	17235.000	26.12	22.64	48.76	54.00	-5.24	AVG	100	11	P

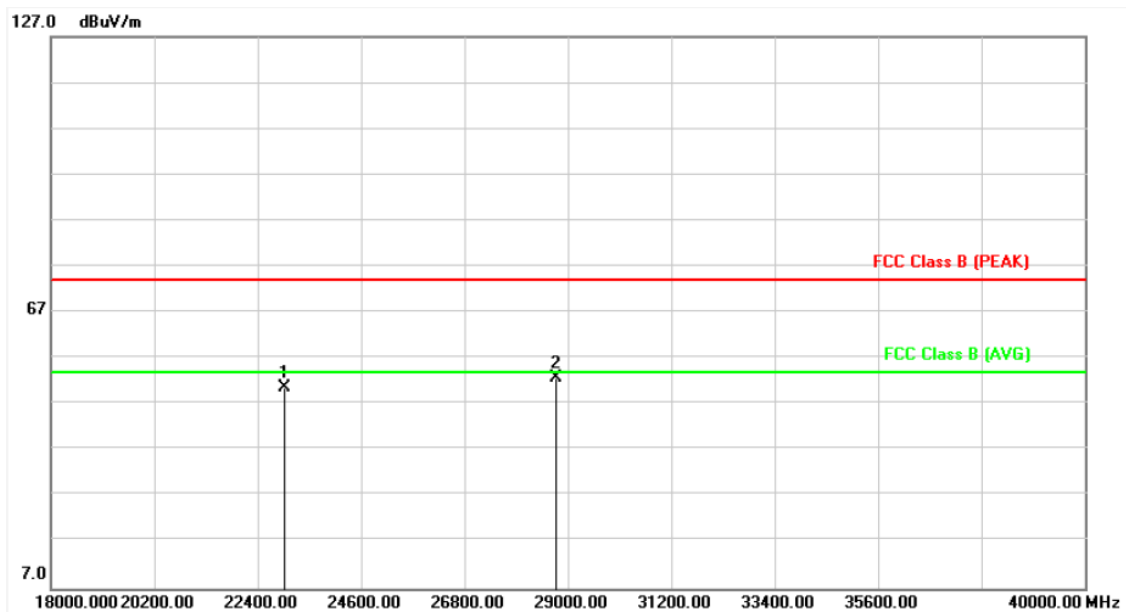
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	22980.000	1.79	48.87	50.66	74.00	-23.34	peak	100	0	P
2	28750.000	1.81	50.97	52.78	74.00	-21.22	peak	100	0	P

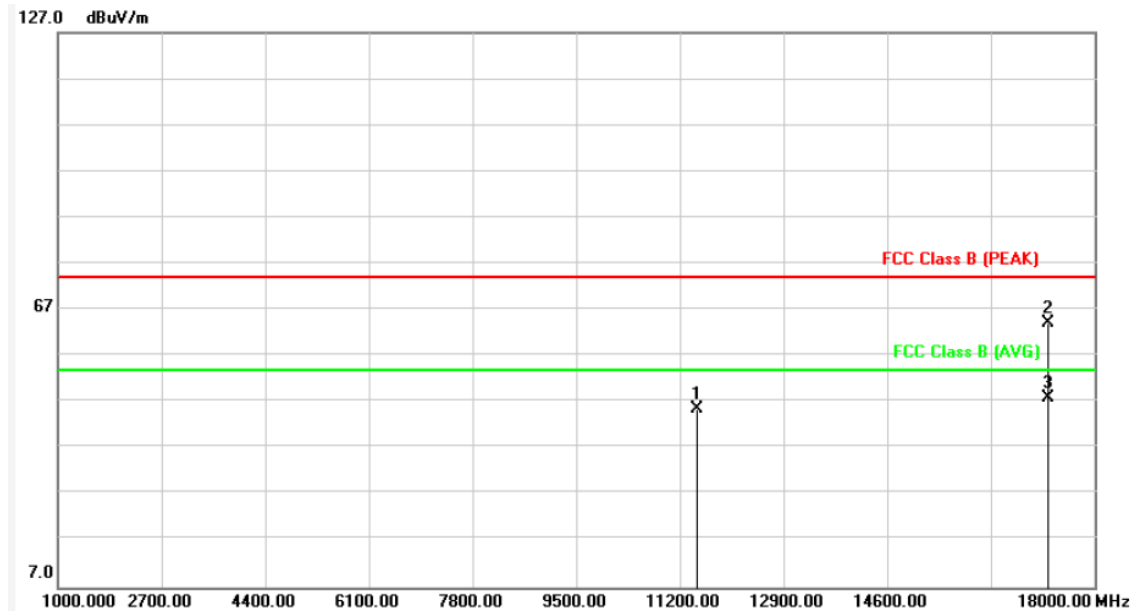
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11489.000	18.87	26.80	45.67	74.00	-28.33	peak	100	0	P
2	17235.000	26.12	38.01	64.13	74.00	-9.87	peak	100	12	P
3	17235.000	26.12	21.69	47.81	54.00	-6.19	AVG	100	12	P

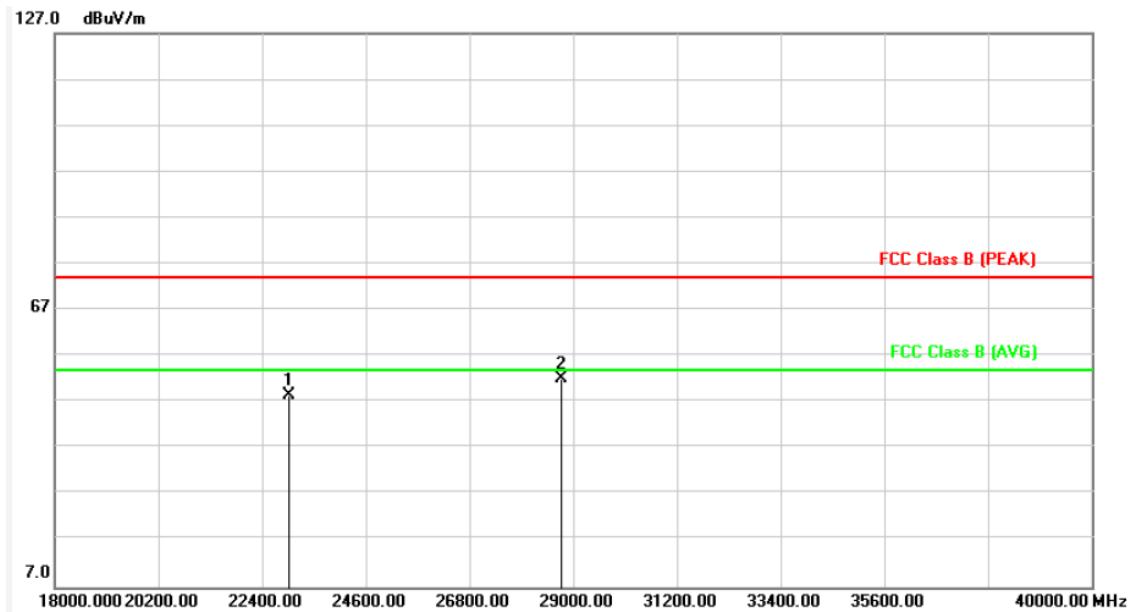
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	22980.000	1.79	46.75	48.54	74.00	-25.46	peak	100	0	P
2	28750.000	1.81	50.41	52.22	74.00	-21.78	peak	100	0	P

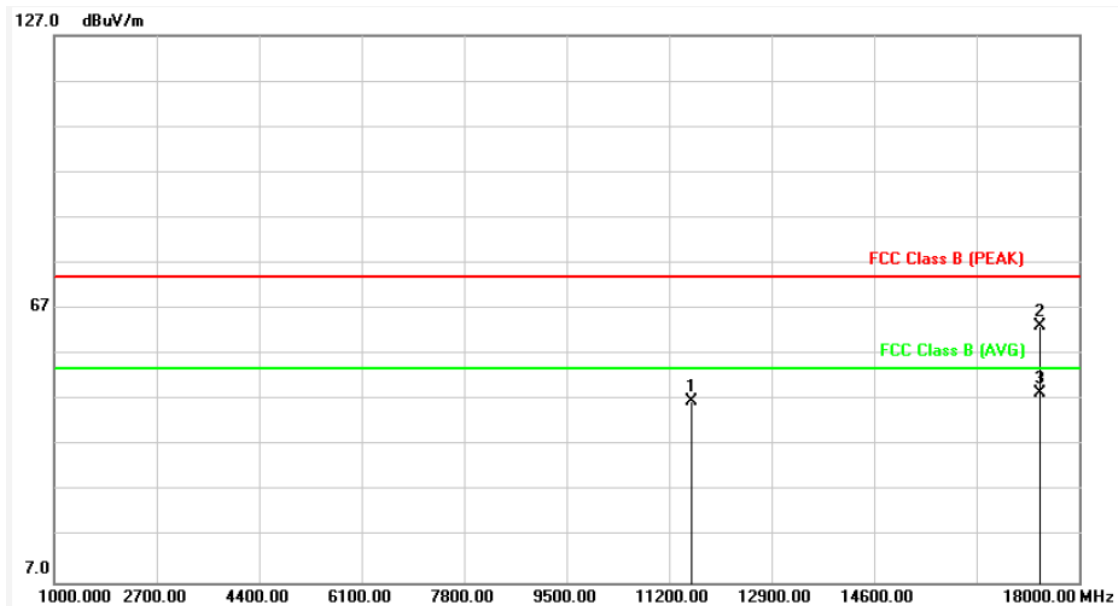
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11574.000	18.94	27.83	46.77	74.00	-27.23	peak	100	0	P
2	17354.000	26.79	36.37	63.16	74.00	-10.84	peak	100	26	P
3	17354.000	26.79	21.64	48.43	54.00	-5.57	AVG	100	26	P

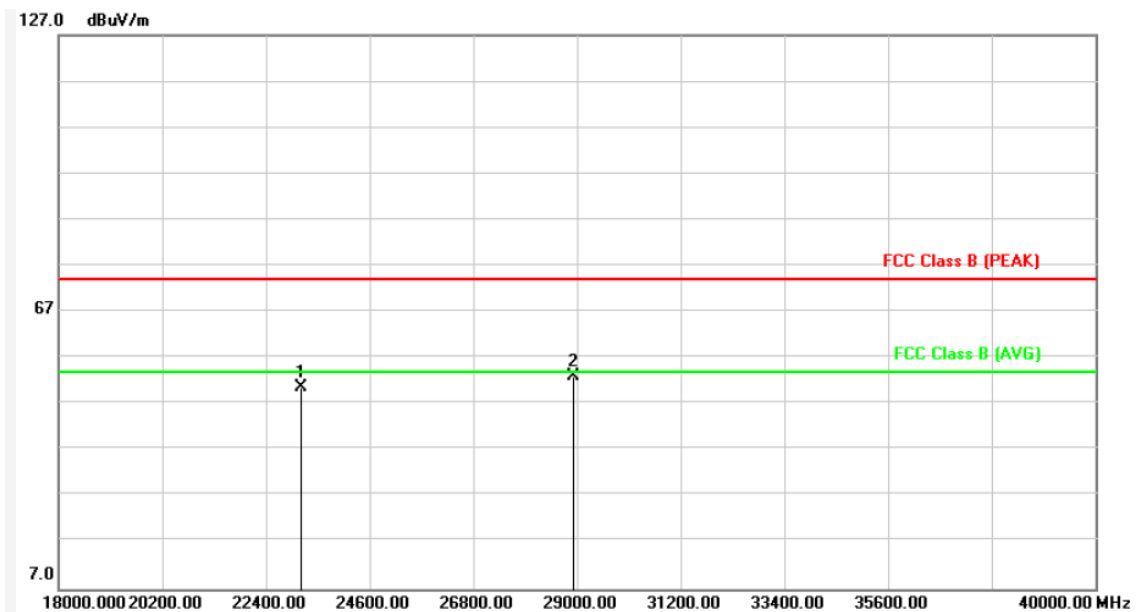
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23140.000	1.66	48.91	50.57	74.00	-23.43	peak	100	0	P
2	28925.000	2.08	50.87	52.95	74.00	-21.05	peak	100	0	P

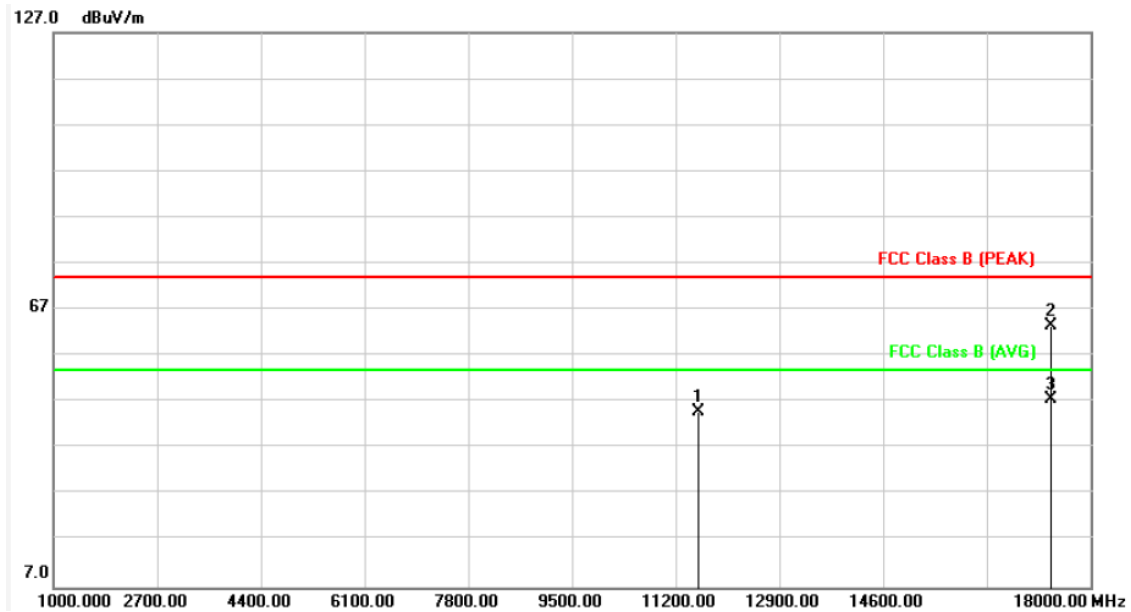
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11574.000	18.94	26.10	45.04	74.00	-28.96	peak	100	0	P
2	17354.000	26.79	36.80	63.59	74.00	-10.41	peak	100	20	P
3	17354.000	26.79	20.88	47.67	54.00	-6.33	AVG	100	20	P

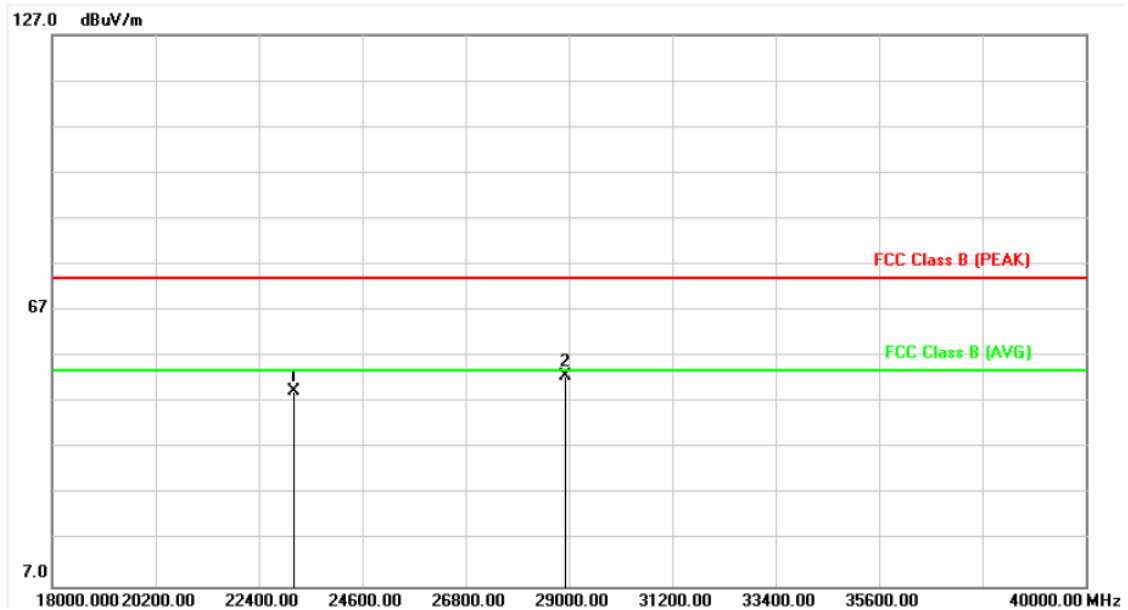
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23140.000	1.66	47.85	49.51	74.00	-24.49	peak	100	0	P
2	28925.000	2.08	50.82	52.90	74.00	-21.10	peak	100	0	P

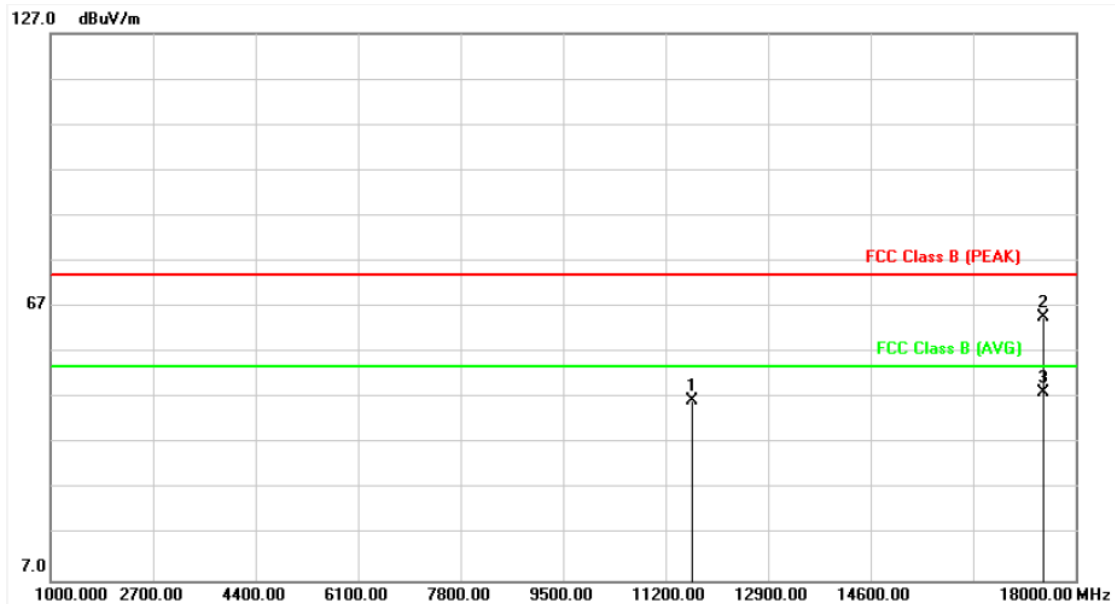
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11642.000	18.99	27.46	46.45	74.00	-27.55	peak	100	0	P
2	17473.000	27.47	37.36	64.83	74.00	-9.17	peak	100	18	P
3	17473.000	27.47	20.87	48.34	54.00	-5.66	AVG	100	18	P

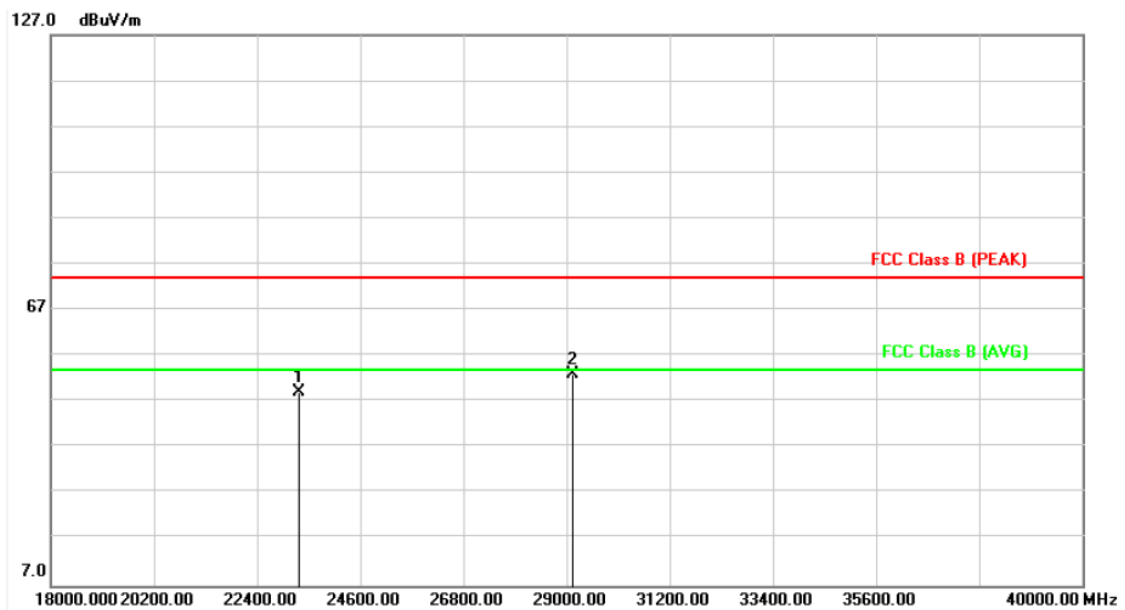
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11a, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23300.000	1.52	47.52	49.04	74.00	-24.96	peak	100	0	P
2	29125.000	2.27	50.88	53.15	74.00	-20.85	peak	100	0	P

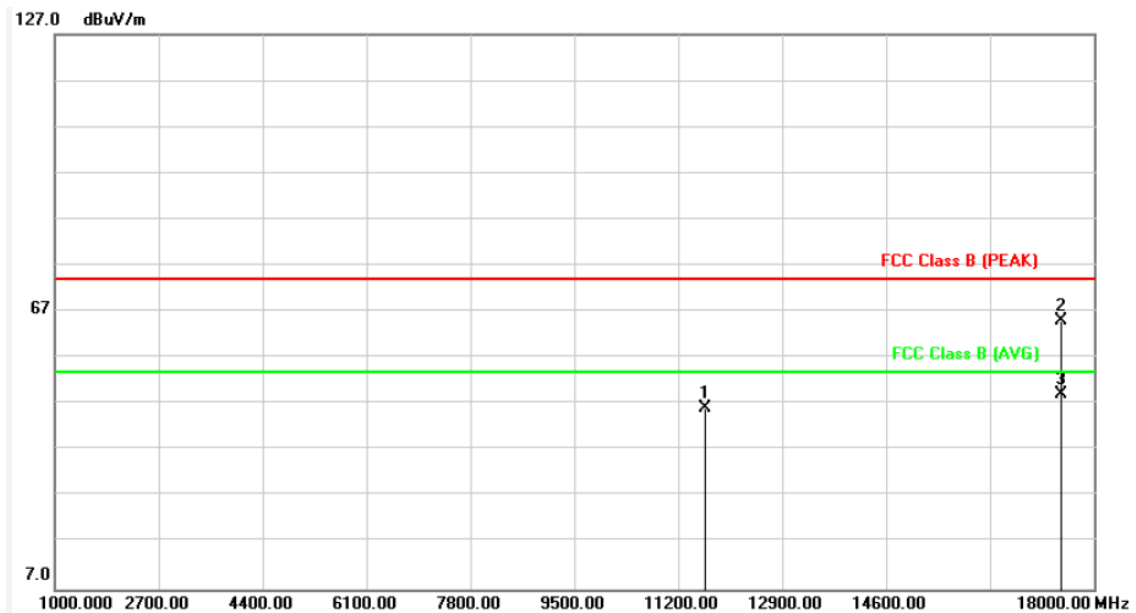
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11642.000	18.99	27.08	46.07	74.00	-27.93	peak	100	0	P
2	17473.000	27.47	37.71	65.18	74.00	-8.82	peak	100	15	P
3	17473.000	27.47	21.67	49.14	54.00	-4.86	AVG	100	15	P

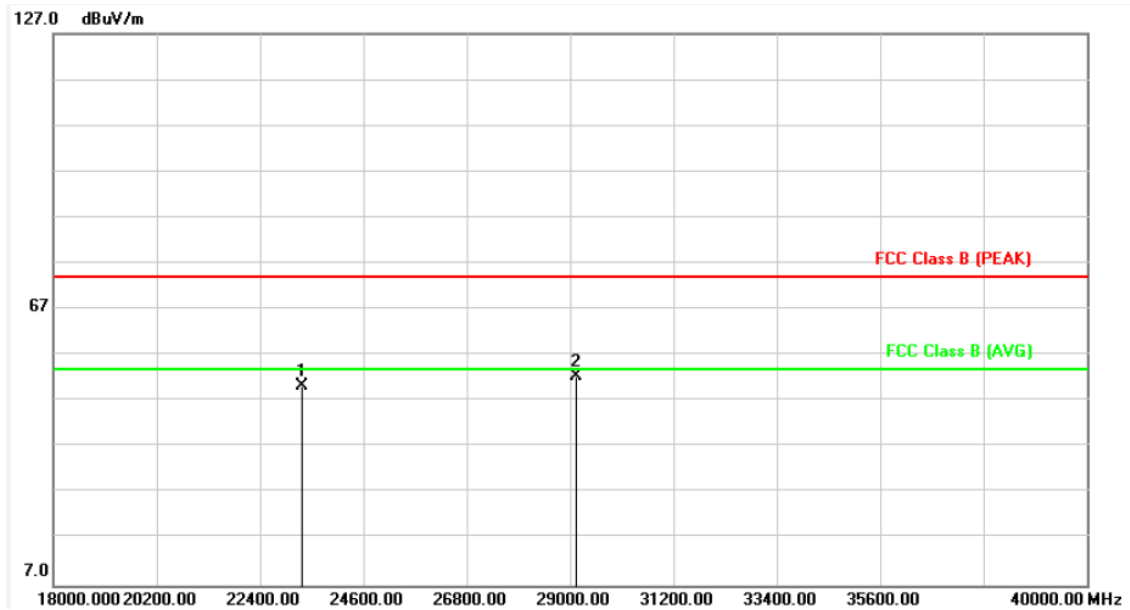
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11a, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23300.000	1.52	48.82	50.34	74.00	-23.66	peak	100	0	P
2	29125.000	2.27	50.07	52.34	74.00	-21.66	peak	100	0	P

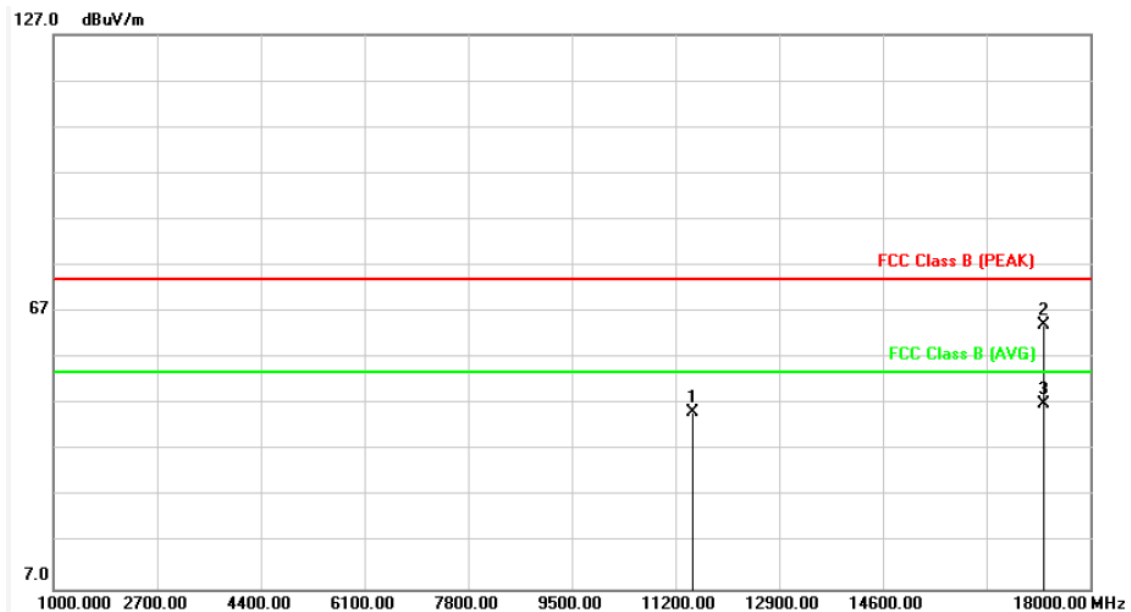
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11489.000	18.87	26.30	45.17	74.00	-28.83	peak	100	0	P
2	17235.000	26.12	38.17	64.29	74.00	-9.71	peak	100	181	P
3	17235.000	26.12	20.99	47.11	54.00	-6.89	AVG	100	181	P

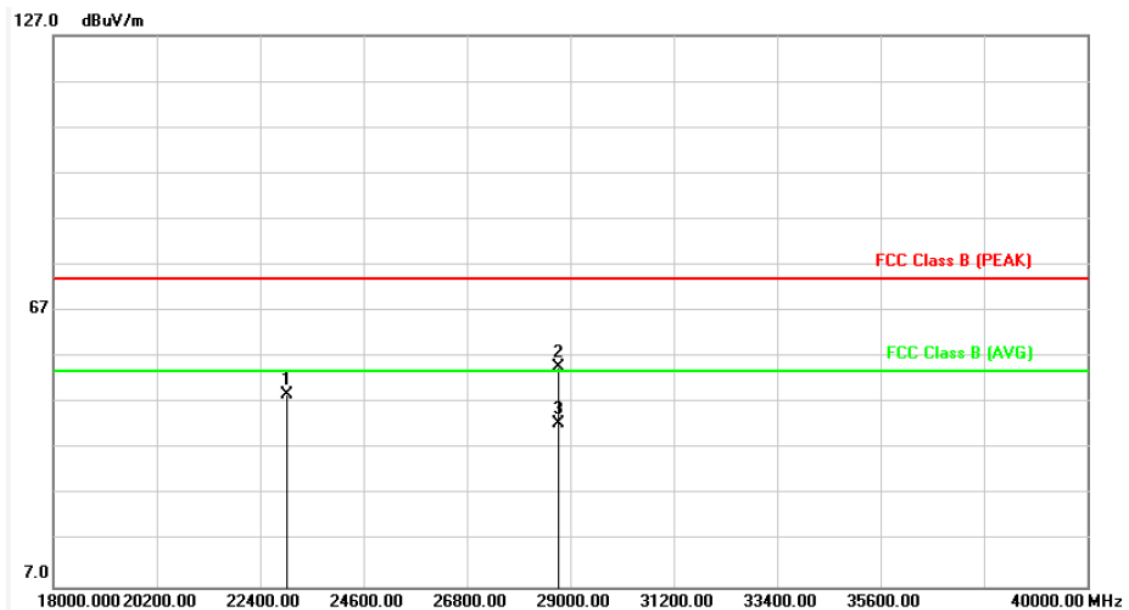
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	22980.000	1.79	47.09	48.88	74.00	-25.12	peak	100	0	P
2	28750.000	1.81	53.01	54.82	74.00	-19.18	peak	100	188	P
3	28750.000	1.81	40.72	42.53	54.00	-11.47	AVG	100	188	P

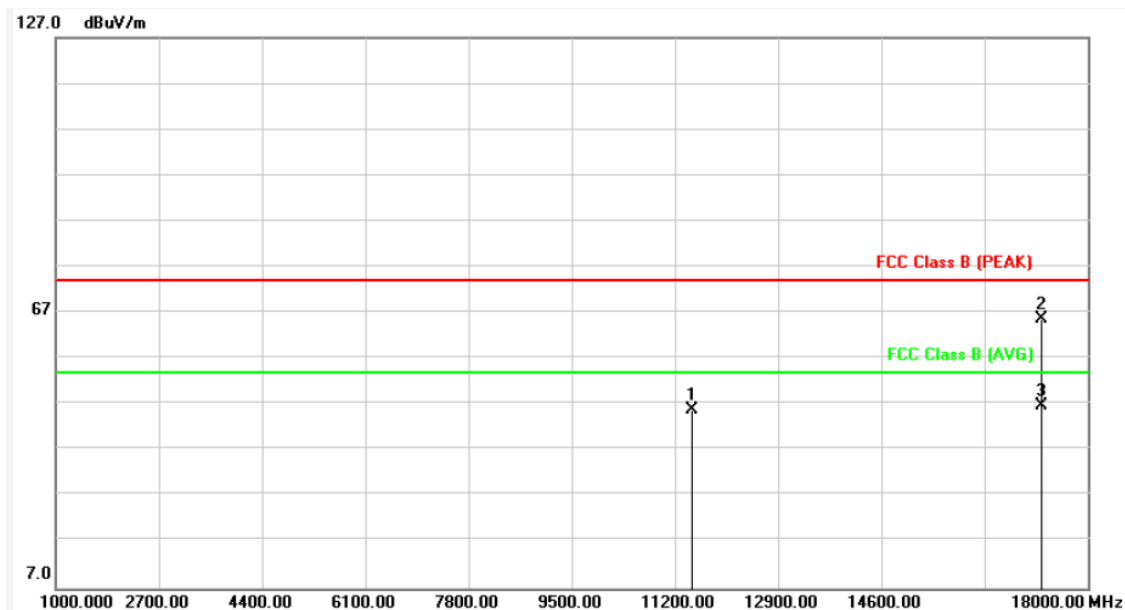
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11489.000	18.87	26.99	45.86	74.00	-28.14	peak	100	0	P
2	17235.000	26.12	39.63	65.75	74.00	-8.25	peak	100	178	P
3	17235.000	26.12	20.70	46.82	54.00	-7.18	AVG	100	178	P

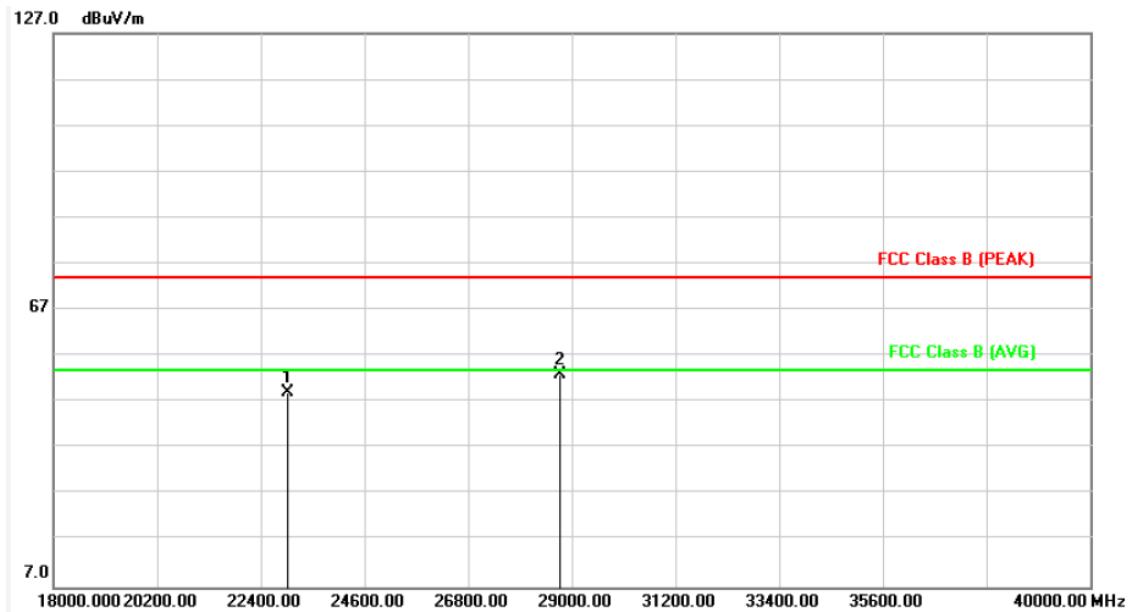
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH149	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	22980.000	1.79	47.43	49.22	74.00	-24.78	peak	100	0	P
2	28750.000	1.81	51.23	53.04	74.00	-20.96	peak	100	0	P

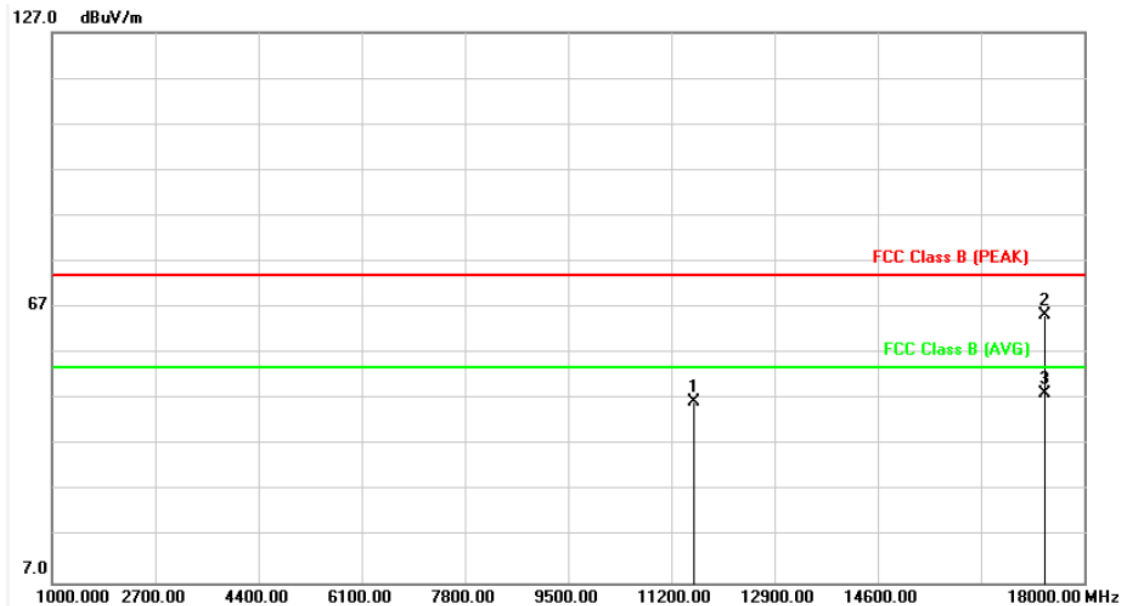
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11574.000	18.94	27.59	46.53	74.00	-27.47	peak	100	0	P
2	17354.000	26.79	38.42	65.21	74.00	-8.79	peak	100	177	P
3	17354.000	26.79	21.38	48.17	54.00	-5.83	AVG	100	177	P

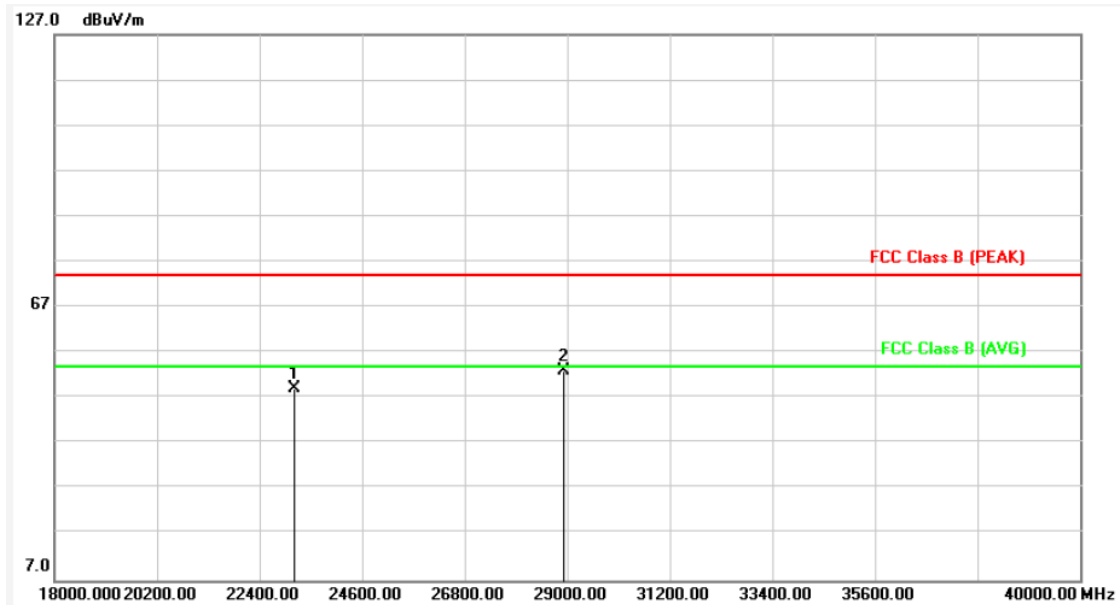
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23140.000	1.66	47.56	49.22	74.00	-24.78	peak	100	0	P
2	28925.000	2.08	50.96	53.04	74.00	-20.96	peak	100	0	P

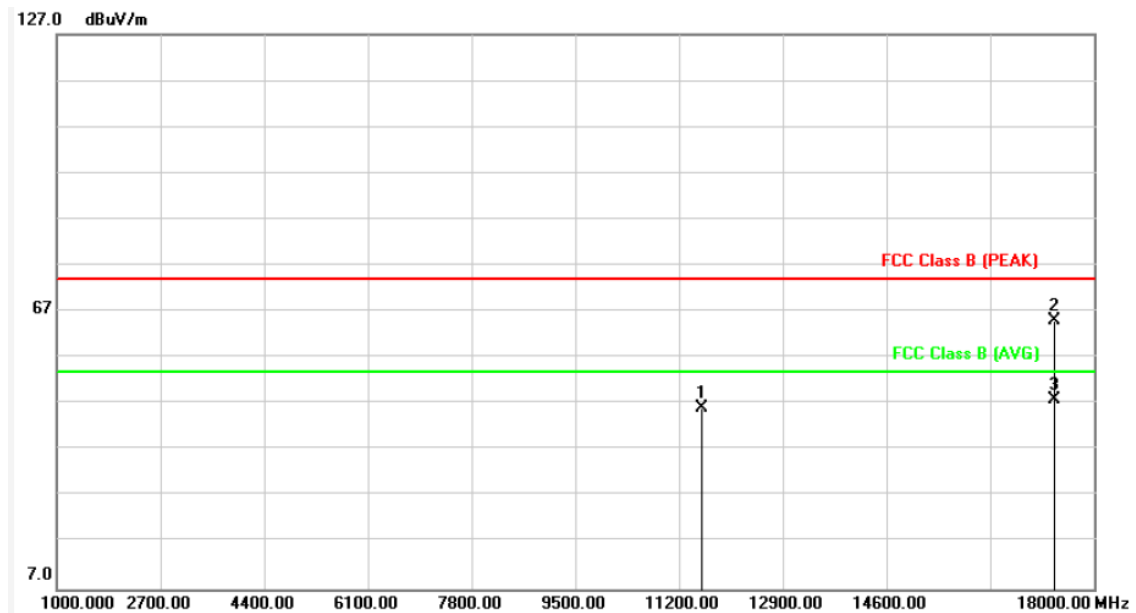
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11574.000	18.94	27.23	46.17	74.00	-27.83	peak	100	0	P
2	17354.000	26.79	38.20	64.99	74.00	-9.01	peak	100	185	P
3	17354.000	26.79	21.31	48.10	54.00	-5.90	AVG	100	185	P

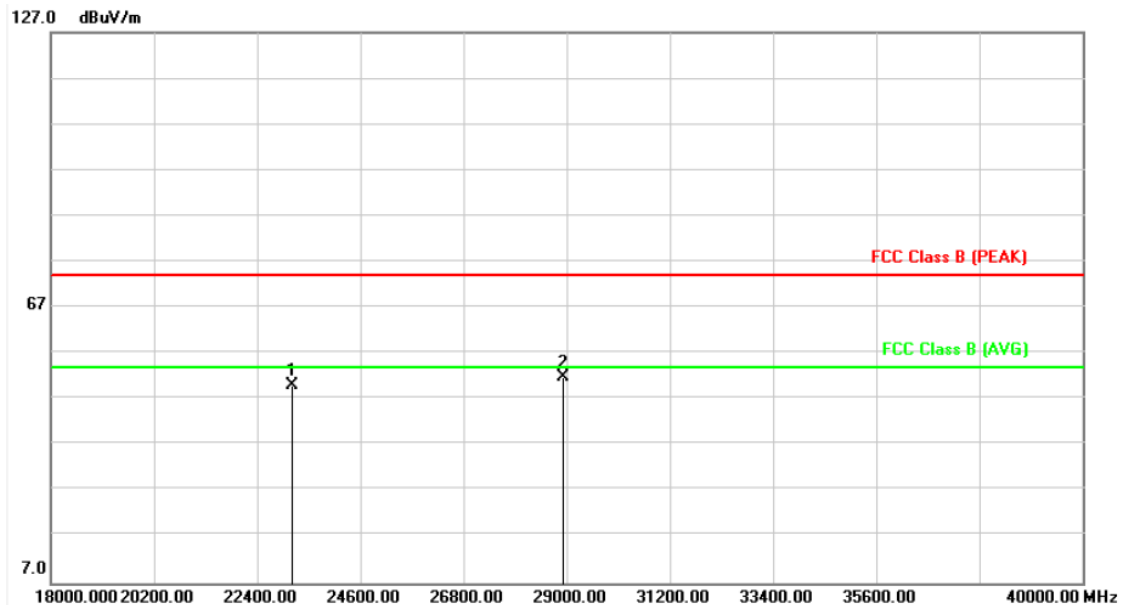
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH157	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23140.000	1.66	48.47	50.13	74.00	-23.87	peak	100	0	P
2	28925.000	2.08	49.75	51.83	74.00	-22.17	peak	100	0	P

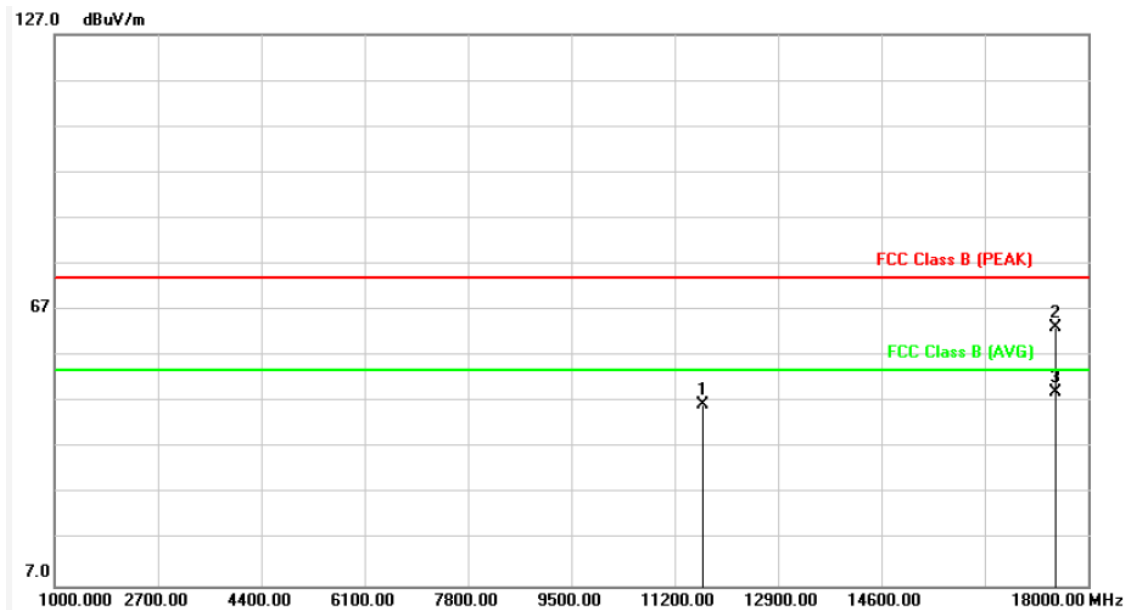
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11659.000	19.00	27.39	46.39	74.00	-27.61	peak	100	0	P
2	17473.000	27.47	35.84	63.31	74.00	-10.69	peak	100	188	P
3	17473.000	27.47	21.54	49.01	54.00	-4.99	AVG	100	188	P

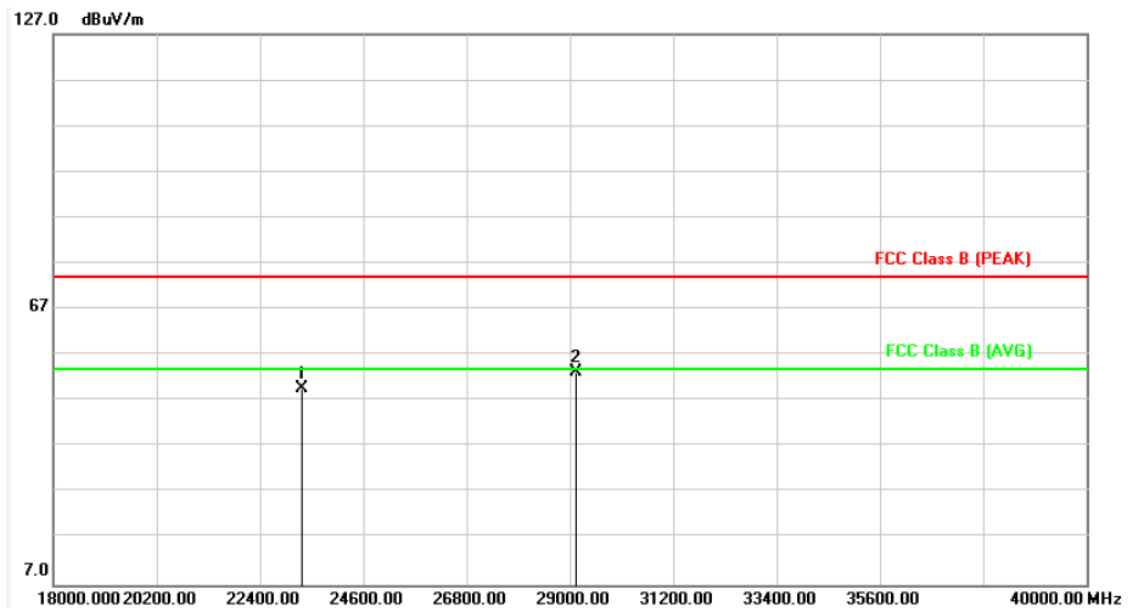
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode 2	: 802.11an HT20, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23300.000	1.52	48.25	49.77	74.00	-24.23	peak	100	0	P
2	29125.000	2.27	51.03	53.30	74.00	-20.70	peak	100	0	P

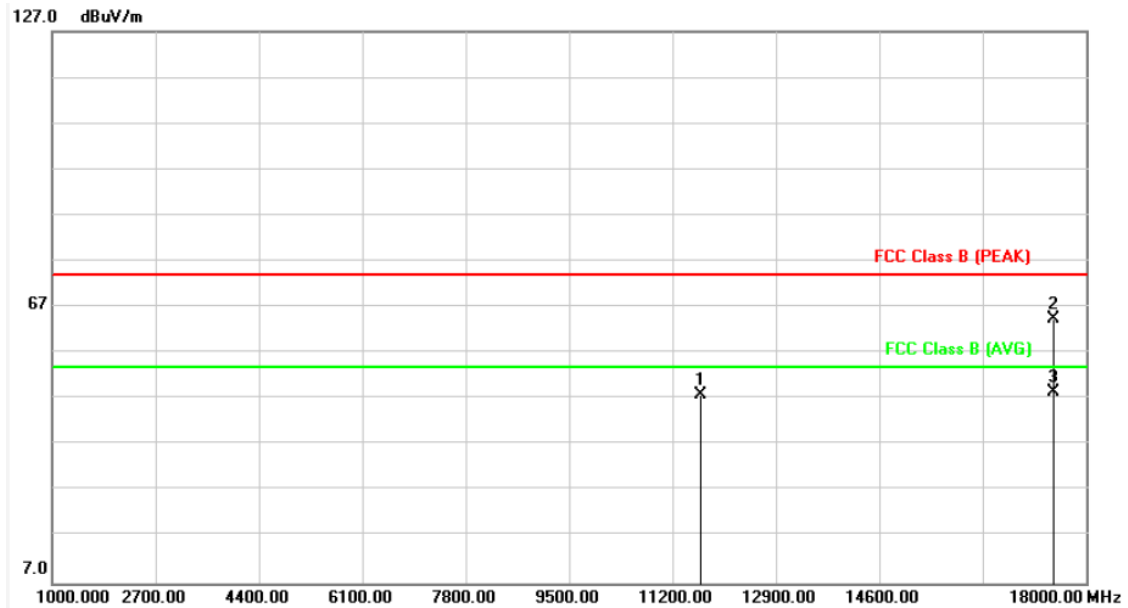
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	11659.000	19.00	28.89	47.89	74.00	-26.11	peak	100	0	P
2	17473.000	27.47	36.91	64.38	74.00	-9.62	peak	100	182	P
3	17473.000	27.47	21.15	48.62	54.00	-5.38	AVG	100	182	P

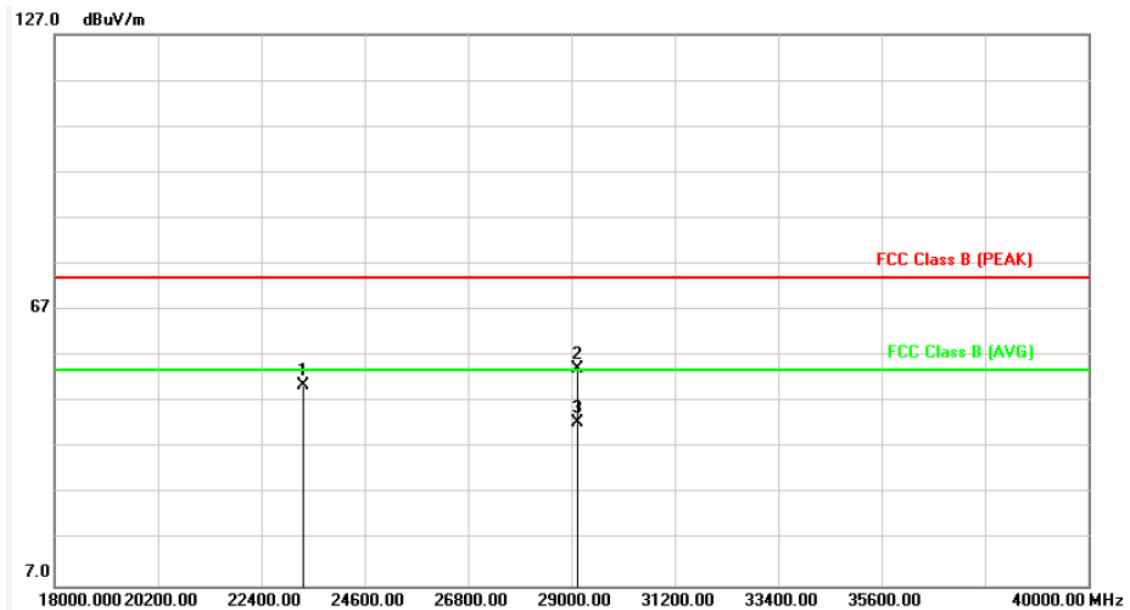
Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode 2	: 802.11an HT20, CH165	Temperature	: 25 °C
		Humidity	: 52 %
Test Date	: Sep. 23, 2014	Atmospheric Pressure	: 1014 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F
1	23300.000	1.52	49.28	50.80	74.00	-23.20	peak	100	0	P
2	29125.000	2.27	51.87	54.14	74.00	-19.86	peak	100	175	P
3	29125.000	2.27	40.26	42.53	54.00	-11.47	AVG	100	175	P

Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



6. 6dB Bandwidth Measurement Data

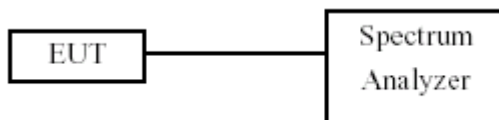
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 1~5% of the emission bandwidth and $VBW \geq 3 \times RBW$.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- The 6dB Bandwidth was measured and recorded.

6.3 Test Setup Layout



6.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2014/03/27	2015/03/26



6.5 Test Result and Data

Test Date : Sep. 15, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

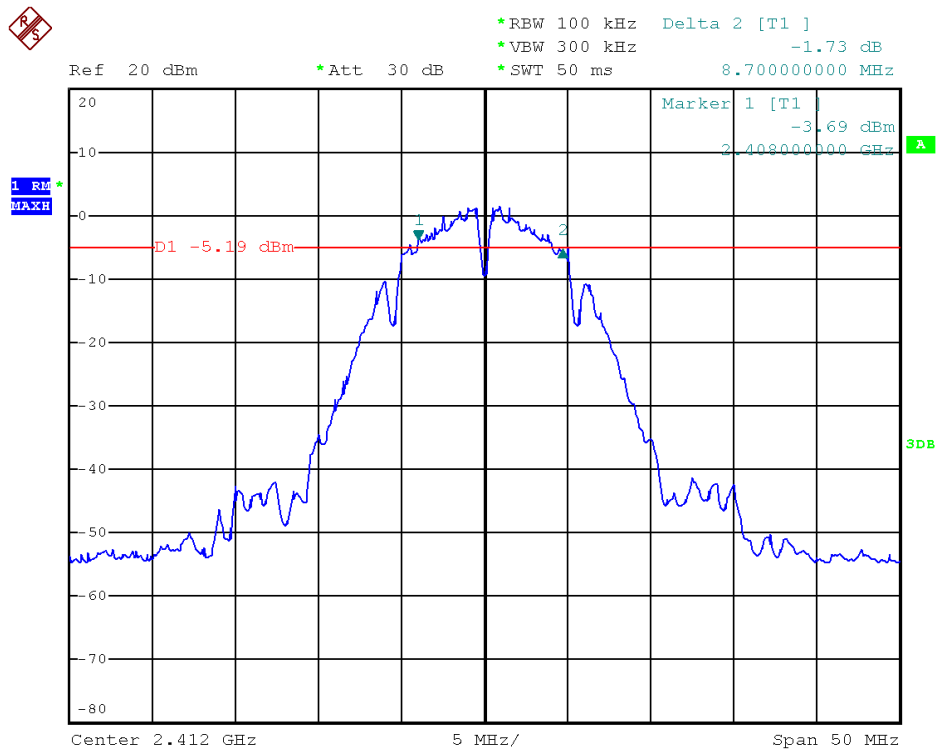
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
IEEE 802.11b (11Mbps)	01	2412	8.7
	06	2437	8.0
	11	2462	7.9
IEEE 802.11g (54Mbps)	01	2412	16.0
	06	2437	16.5
	11	2462	16.5
IEEE 802.11n HT20 (65Mbps)	01	2412	17.7
	06	2437	17.7
	11	2462	17.7

Test Date : Sep. 24, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

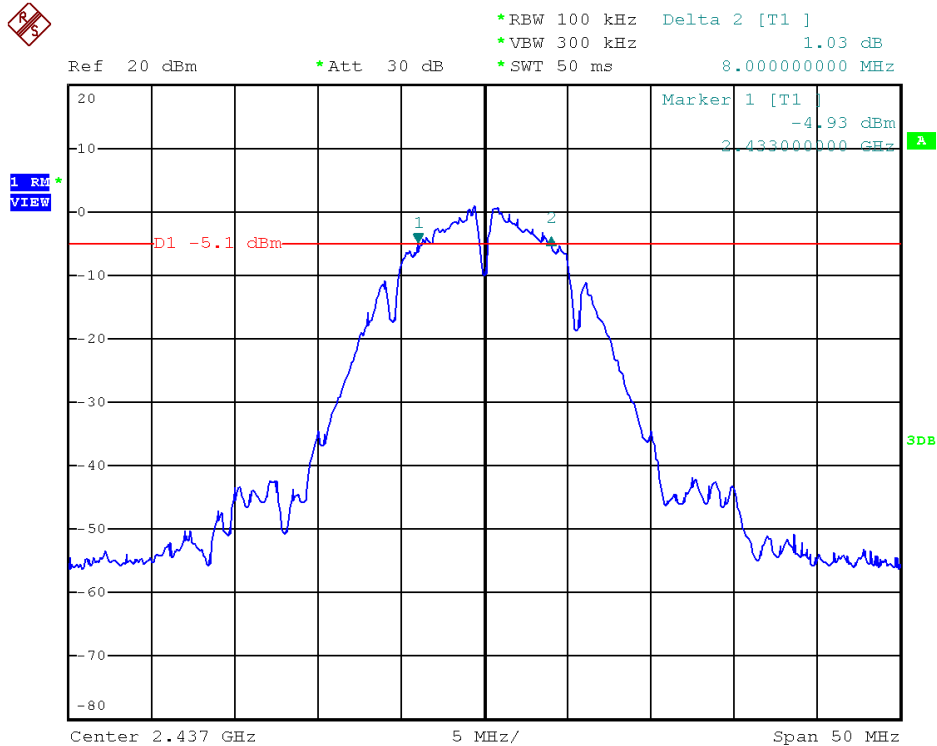
Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
802.11a (6Mbps)	149	5745	16.5
	157	5785	16.5
	165	5825	16.6
802.11an HT20 (6.5Mbps)	149	5745	17.9
	157	5785	17.8
	165	5825	17.8



Modulation Standard: 802.11b (1Mbps)
Channel: 01

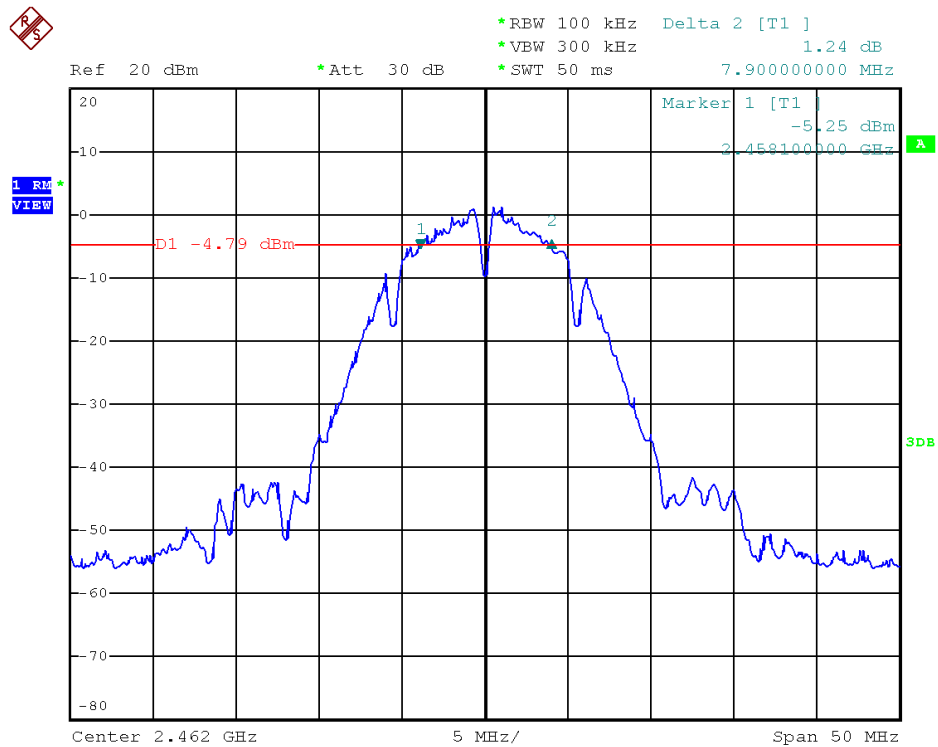


Modulation Standard: 802.11b (1Mbps)
Channel: 06

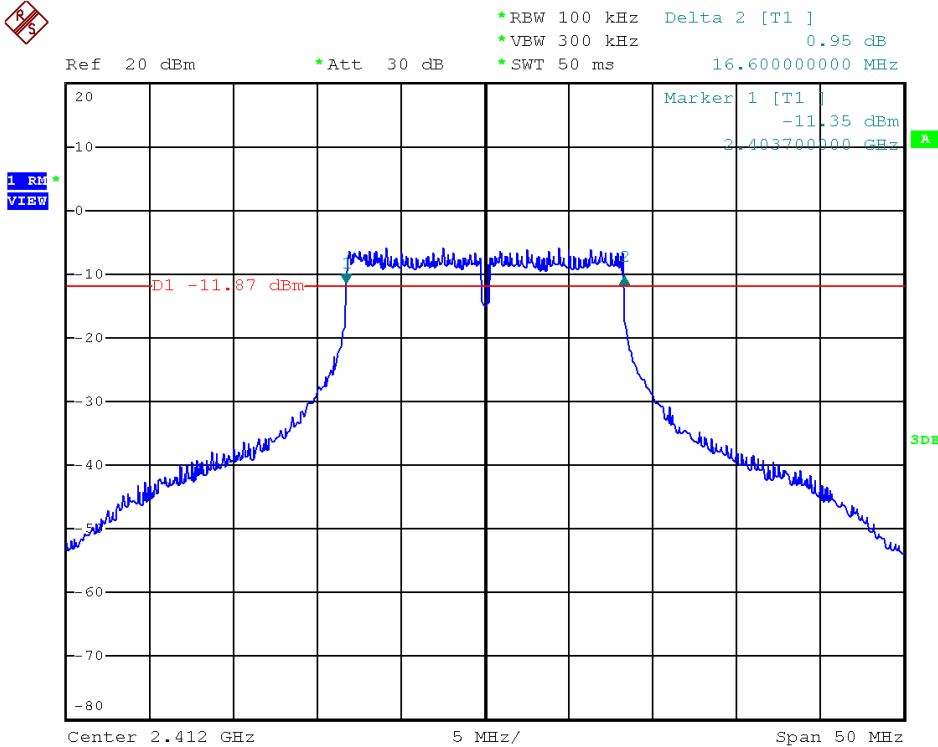




Modulation Standard: 802.11b (1Mbps)
Channel: 11

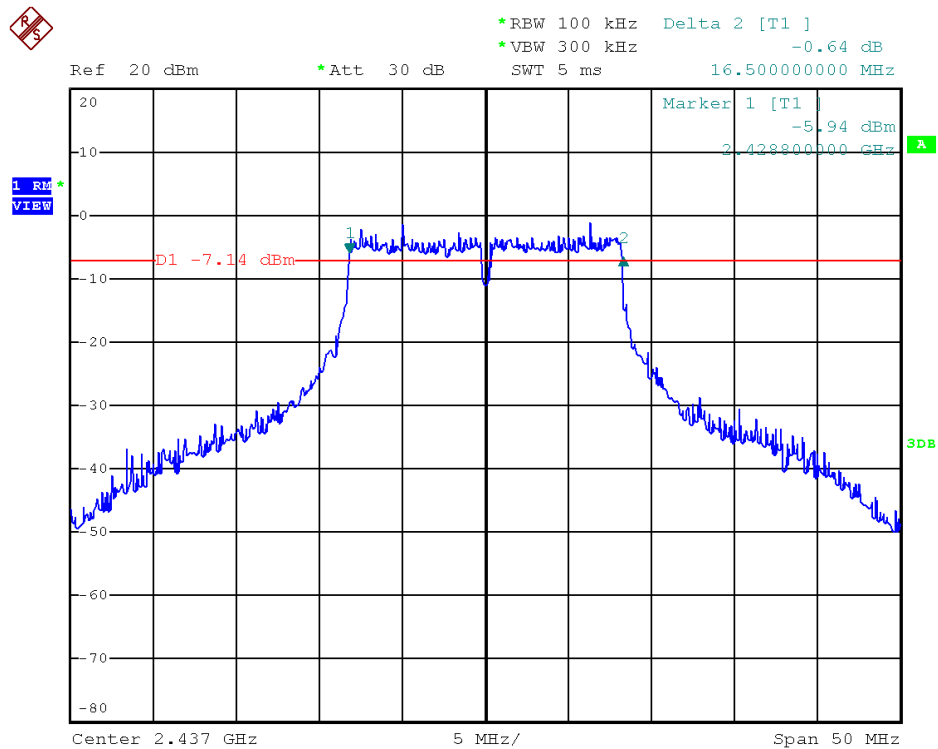


Modulation Standard: 802.11g (6Mbps)
Channel: 01

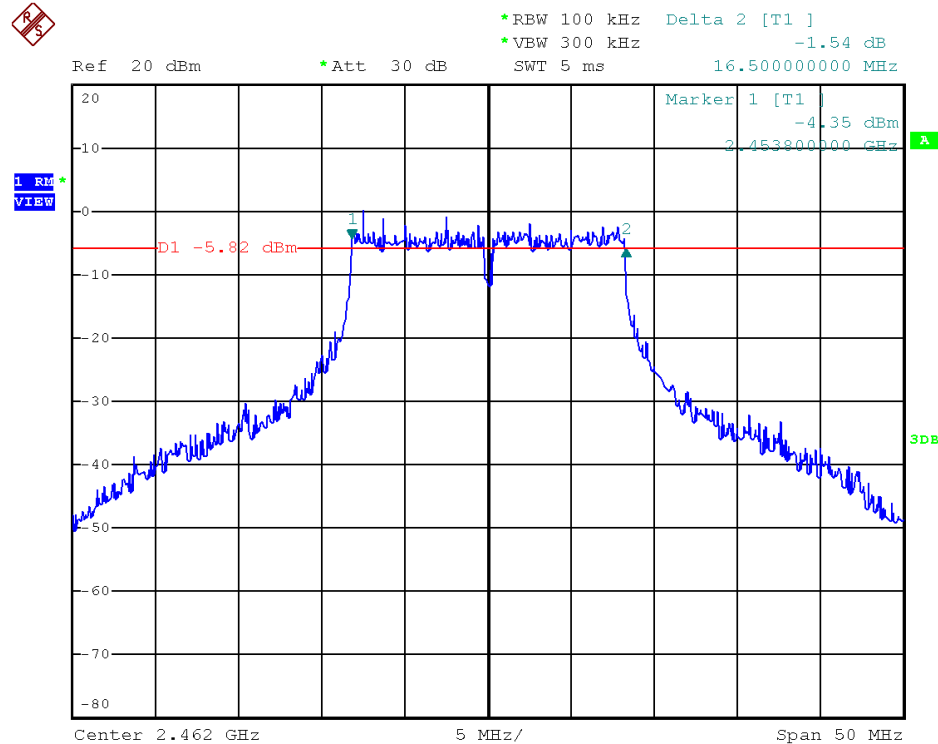




Modulation Standard: 802.11g (6Mbps)
Channel: 06

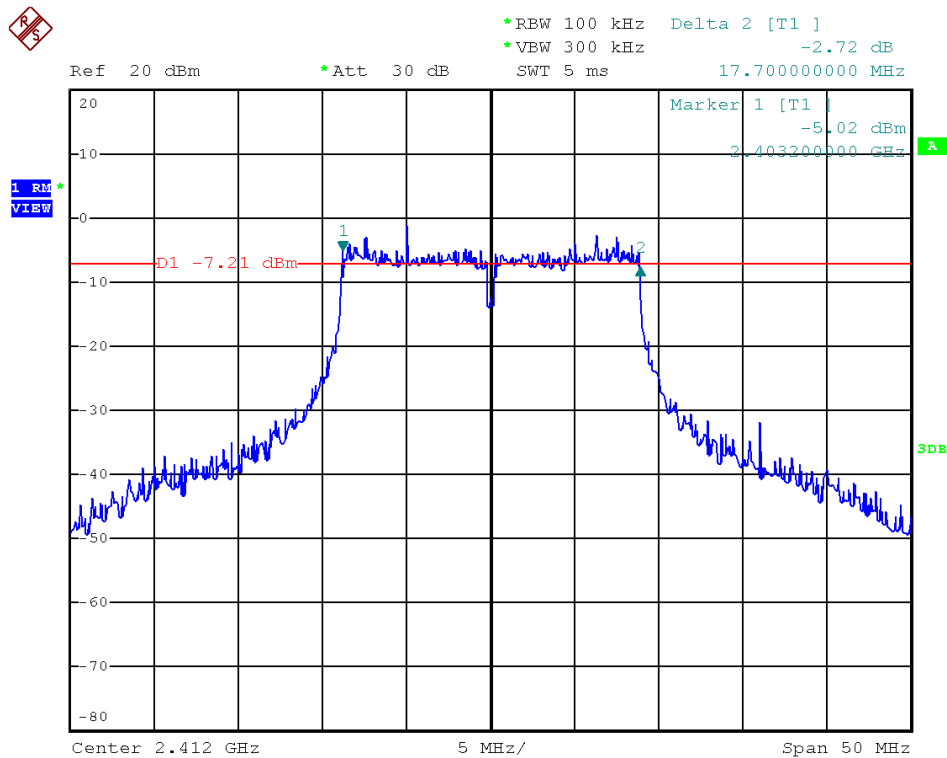


Modulation Standard: 802.11g (6Mbps)
Channel: 11

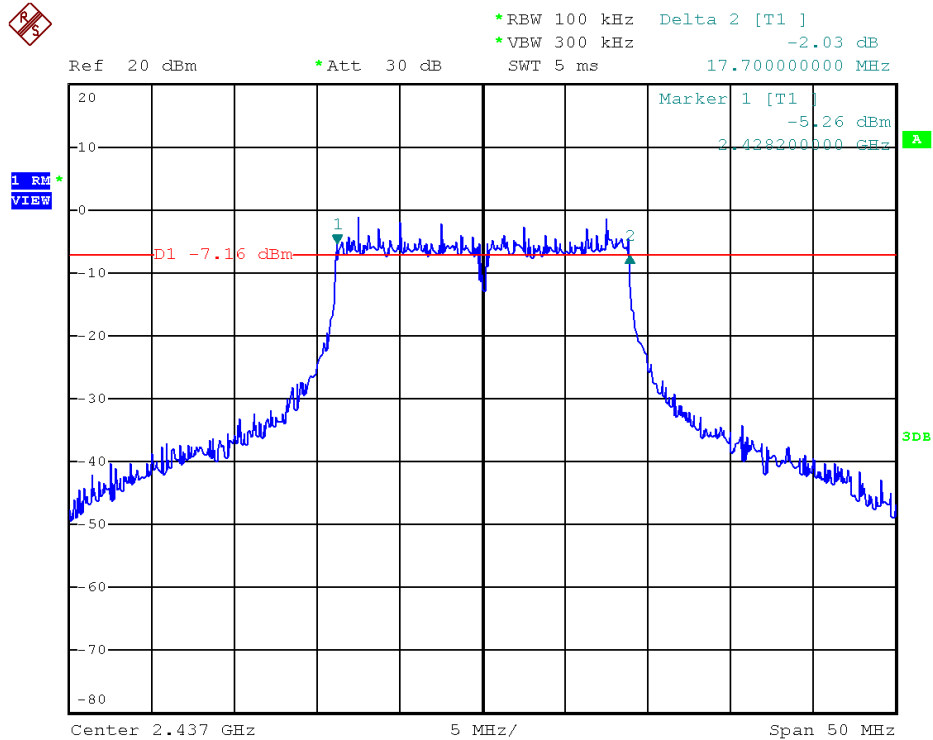




Modulation Standard: 802.11n HT20 (6.5Mbps)
Channel: 01

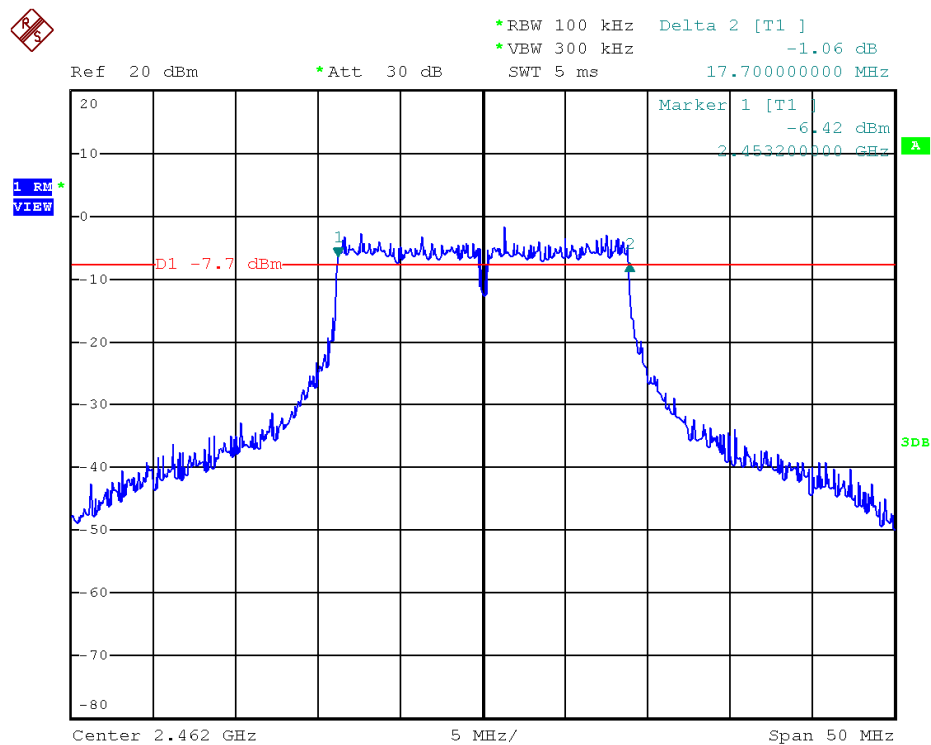


Modulation Standard: 802.11n HT20 (6.5Mbps)
Channel: 06



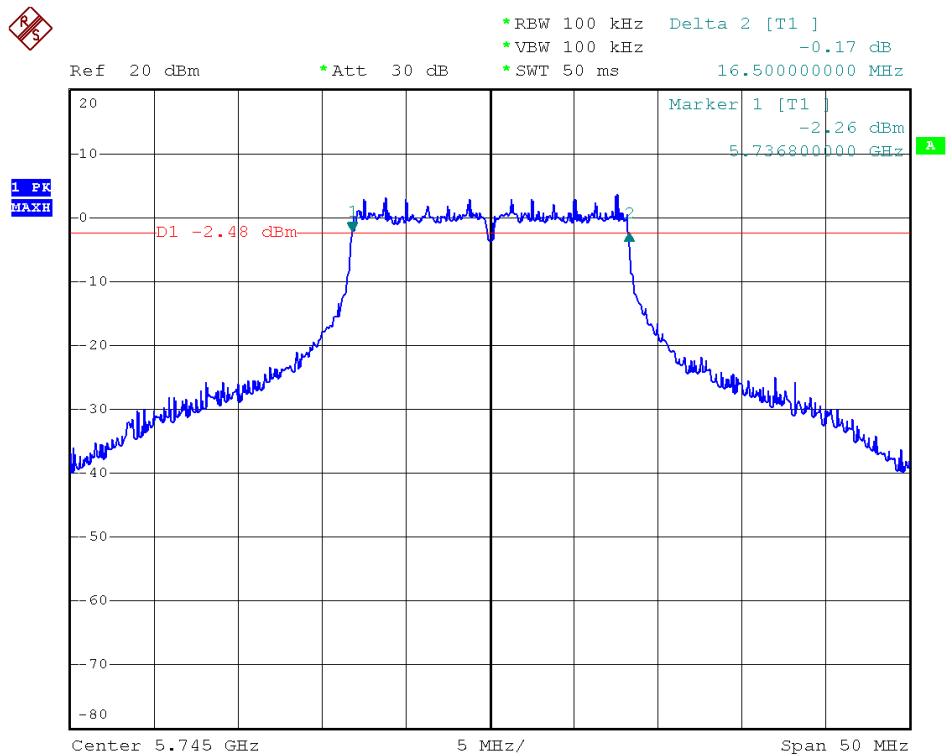


Modulation Standard: 802.11n HT20 (6.5Mbps)
Channel: 11

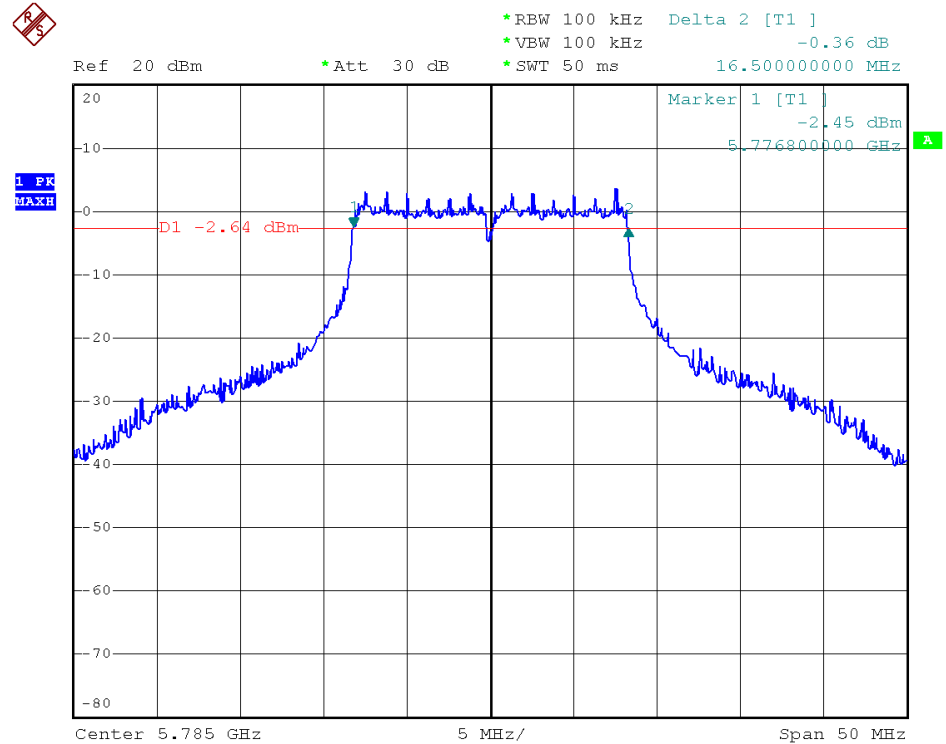




Modulation Standard: 802.11a (6Mbps)
Channel: 149

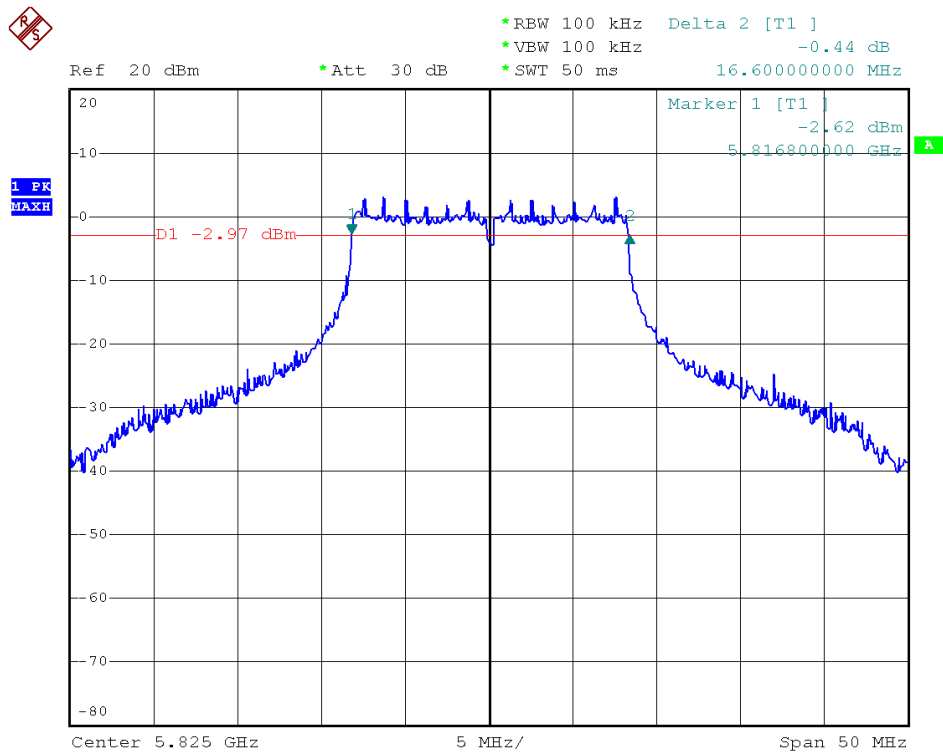


Modulation Standard: 802.11a (6Mbps)
Channel: 157

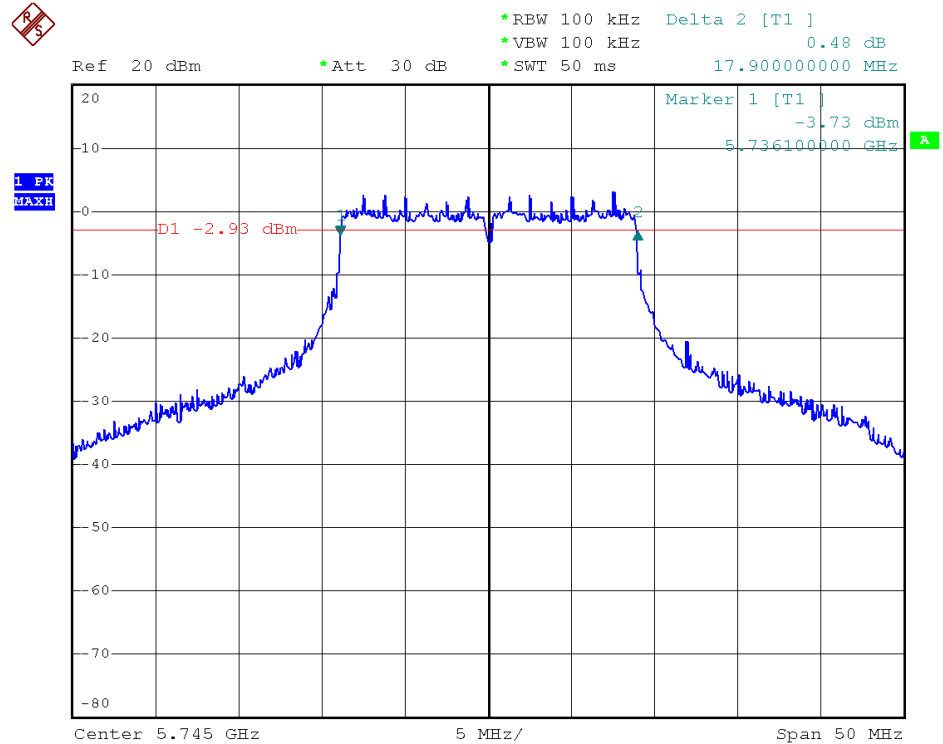




Modulation Standard: 802.11a (6Mbps)
Channel: 165

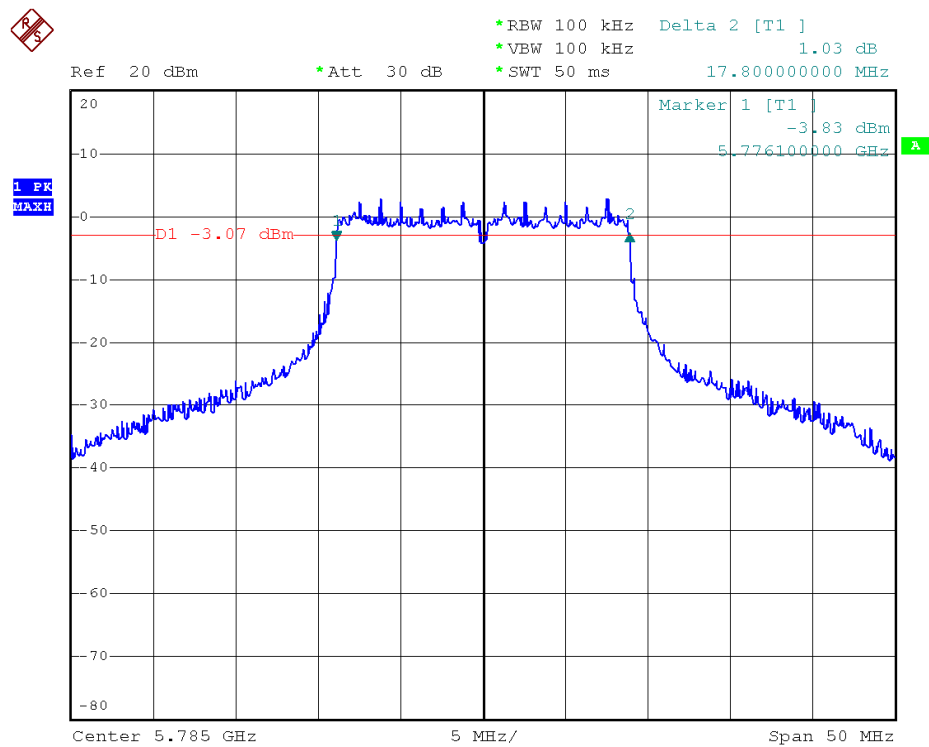


Modulation Standard: 802.11an HT20 (6.5Mbps)
Channel: 149

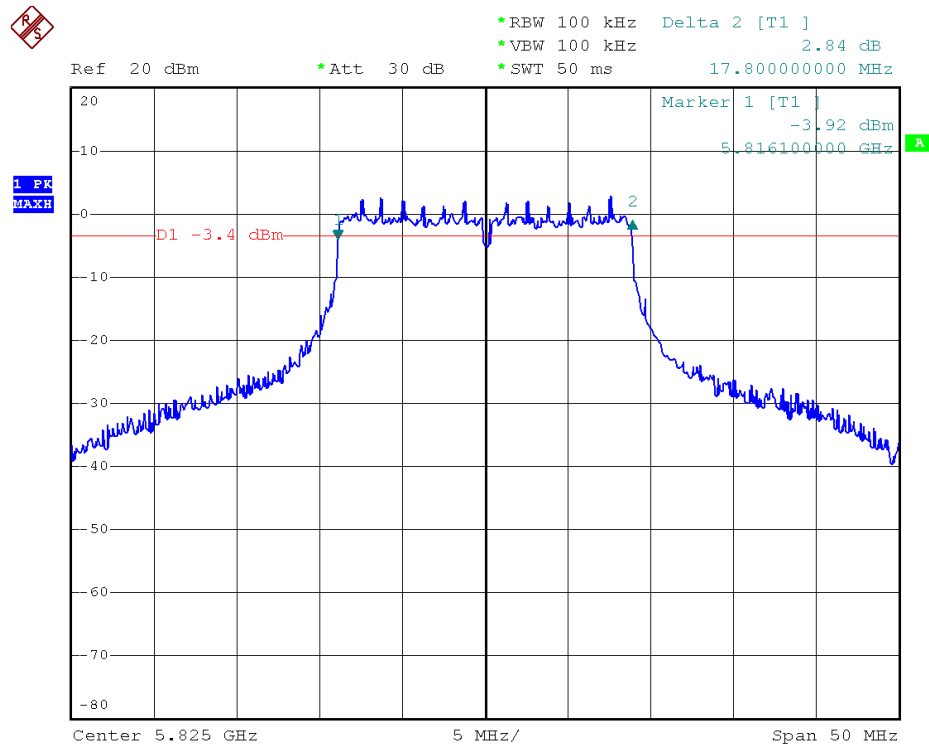




Modulation Standard: 802.11an HT20 (6.5Mbps)
Channel: 157



Modulation Standard: 802.11an HT20 (6.5Mbps)
Channel: 165





7. Maximum Peak and Average Output Power

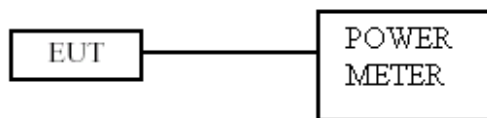
7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

7.2 Test Procedures

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

7.3 Test Setup Layout



7.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
SERIES POWER METER	ANRITSU	ML2495A	1224005	2014/03/27	2015/03/26
POWER SENSOR	ANRITSU	MA2411B	1207295	2014/03/27	2015/03/26



7.5 Test Result and Data

Test Date : Sep. 15, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

Modulation Type	Channe	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
IEEE 802.11b (1Mbps)	01	2412	18.56	71.779
	06	2437	18.77	75.336
	11	2462	18.90	77.625
IEEE 802.11g (6Mbps)	01	2412	20.23	105.439
	06	2437	20.45	110.917
	11	2462	20.67	116.681

Modulation Type	Channe	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
IEEE 802.11n HT20 (6.5Mbps)	01	2412	20.06	101.391
	06	2437	20.51	112.461
	11	2462	20.32	107.647

Test Date : Sep. 24, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

Modulation Type	Channe	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
IEEE 802.11a (6Mbps)	149	5745	13.66	23.227
	157	5785	13.53	22.542
	165	5825	13.45	22.131
IEEE 802.11an HT20 (6.5Mbps)	149	5745	12.45	17.580
	157	5785	12.35	17.179
	165	5825	12.30	16.998



Test Date : Sep. 15, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

Modulation Type	Channe	Frequency (MHz)	Avg. Power Output (dBm)	Avg. Power Output (mW)
IEEE 802.11b (1Mbps)	01	2412	12.44	17.539
	06	2437	13.12	20.512
	11	2462	13.01	19.999
IEEE 802.11g (6Mbps)	01	2412	12.31	17.022
	06	2437	12.93	19.634
	11	2462	12.81	19.099

Modulation Type	Channe	Frequency (MHz)	Avg. Power Output (dBm)	Avg. Power Output (mW)
IEEE 802.11n HT20 (6.5Mbps)	01	2412	12.53	17.906
	06	2437	13.04	20.137
	11	2462	12.94	19.679

Test Date : Sep. 30, 2014 Temperature : 25°C
Atmospheric pressure : 1056 hPa Humidity : 52%

Modulation Type	Channe	Frequency (MHz)	Avg. Power Output (dBm)	Avg. Power Output (mW)
IEEE 802.11a (6Mbps)	149	5745	11.93	15.60
	157	5785	11.46	13.99
	165	5825	11.54	14.26
IEEE 802.11an HT20 (6.5Mbps)	149	5745	11.77	15.03
	157	5785	11.43	13.90
	165	5825	11.33	13.58



8. Power Spectral Density

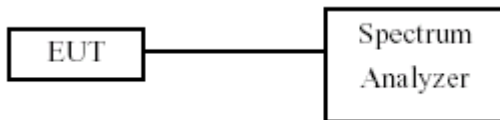
8.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm (2.4GHz), 6.99dBm (5GHz).

8.2 Test Procedures

- The transmitter output was connected to spectrum analyzer.
- The spectrum analyzer's resolution bandwidth were set at 3KHz RBW and 30KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.
- The power spectral density was measured and recorded.

8.3 Test Setup Layout



8.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2014/03/27	2015/03/26



8.5 Test Result and Data

Test Date : Sep. 15, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

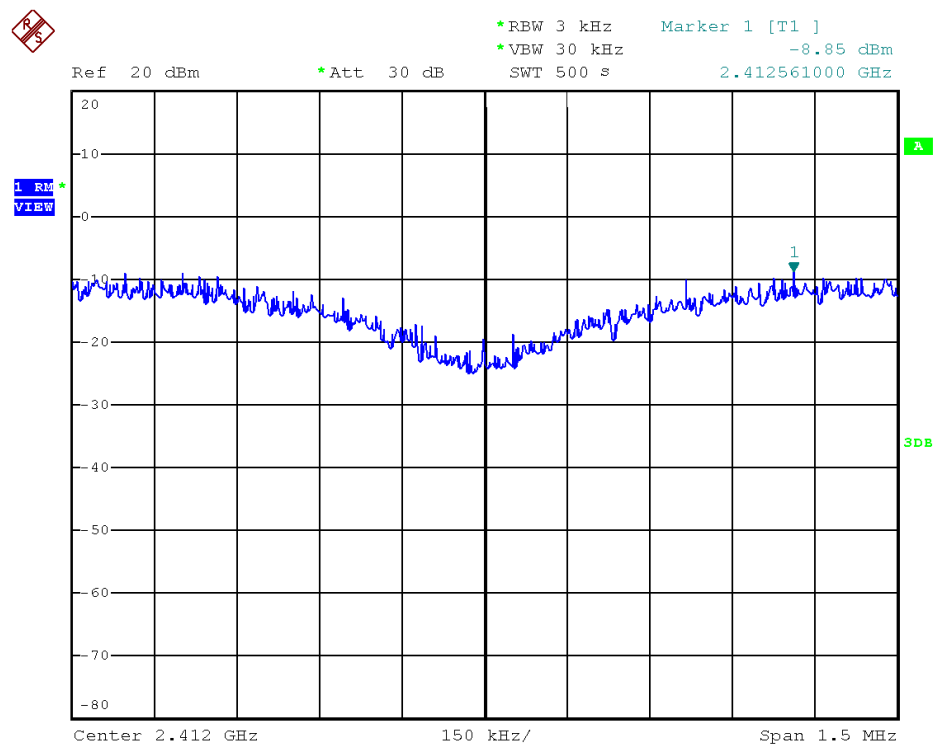
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
IEEE 802.11b (1Mbps)	01	2412	-8.85
	06	2437	-8.79
	11	2462	-8.46
IEEE 802.11g (6Mbps)	01	2412	-14.86
	06	2437	-15.11
	11	2462	-14.67
IEEE 802.11n HT20 (6.5Mbps)	01	2412	-16.88
	06	2437	-16.60
	11	2462	-14.35

Test Date : Sep. 24, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

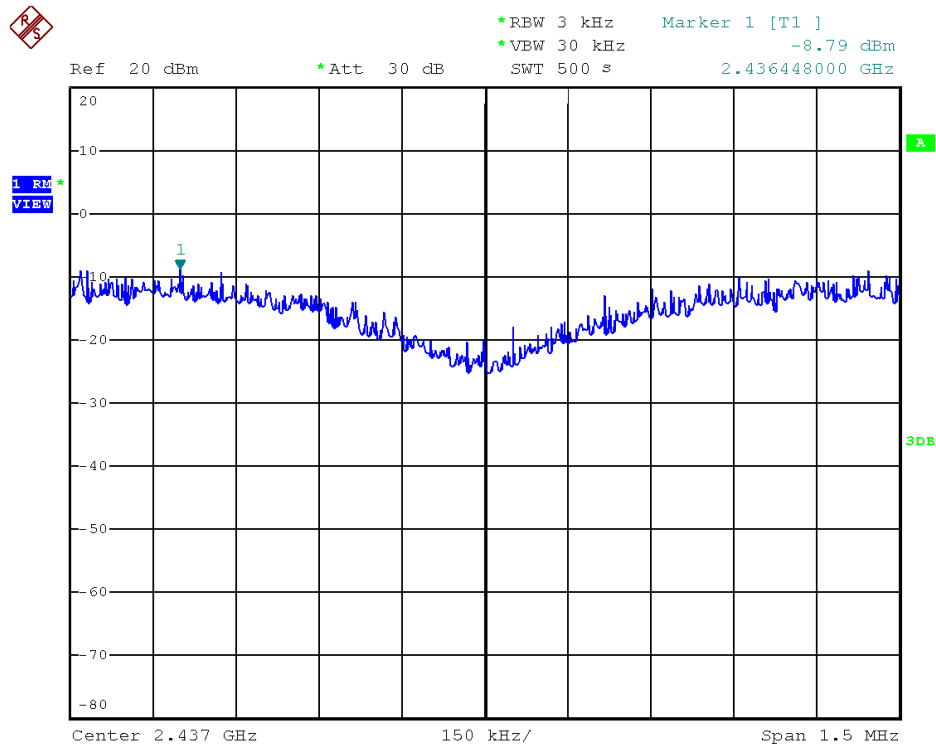
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
IEEE 802.11a (6Mbps)	149	5745	-10.11
	157	5785	-10.42
	165	5825	-11.19
IEEE 802.11an HT20 (6.5Mbps)	149	5745	-10.82
	157	5785	-10.96
	165	5825	-11.38



Modulation Standard: 802.11b (1Mbps)
Channel: 01



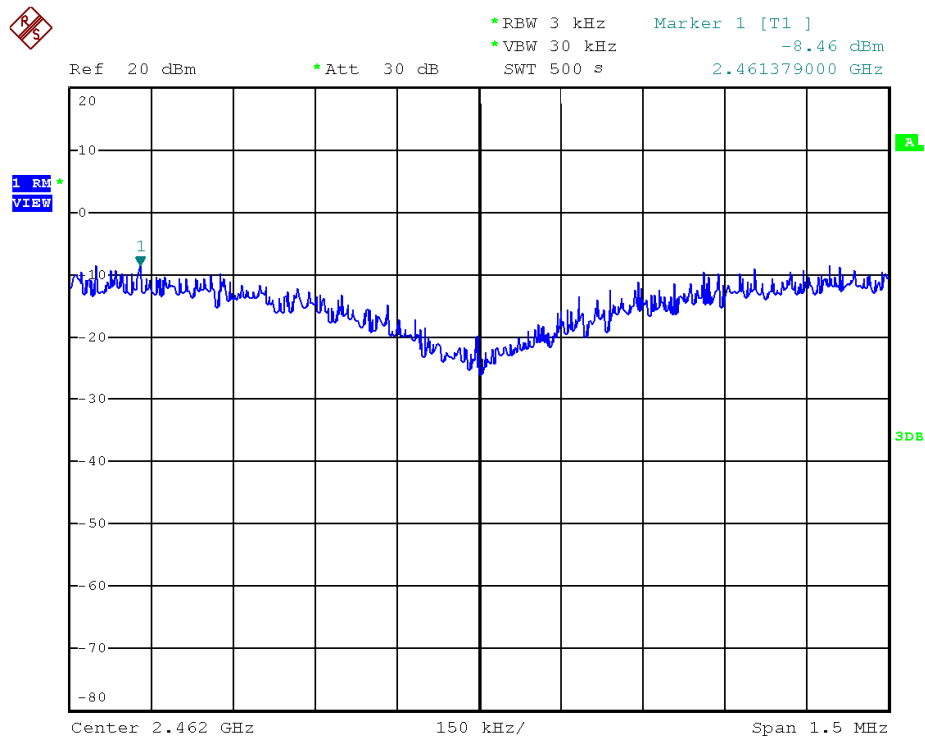
Modulation Standard: 802.11b (1Mbps)
Channel: 06





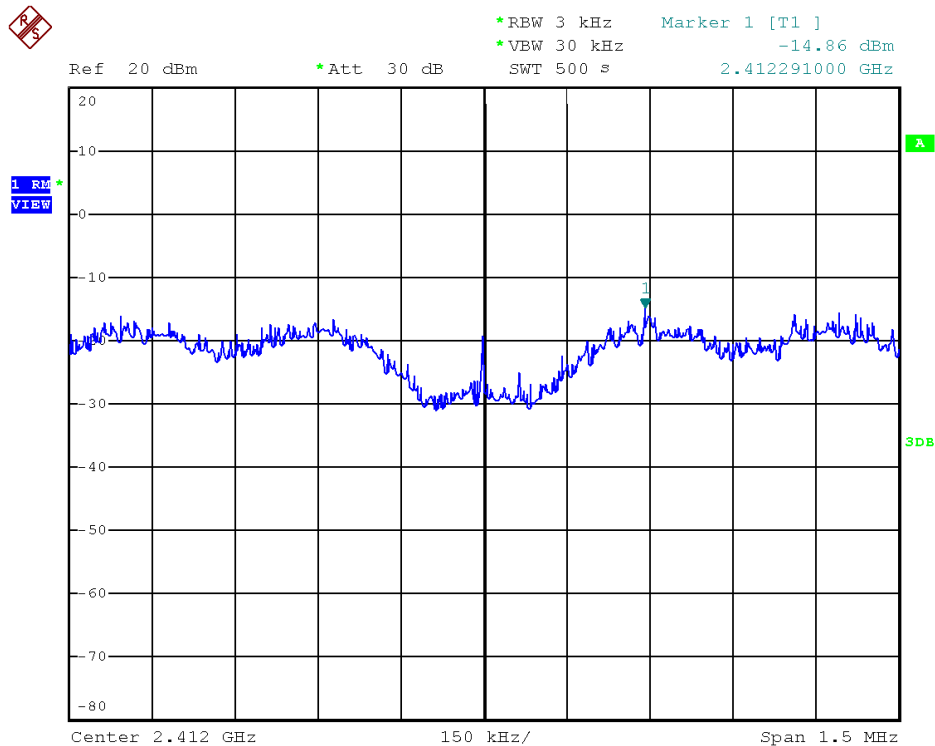
Modulation Standard: 802.11b (1Mbps)

Channel: 11



Modulation Standard: 802.11g (6.5Mbps)

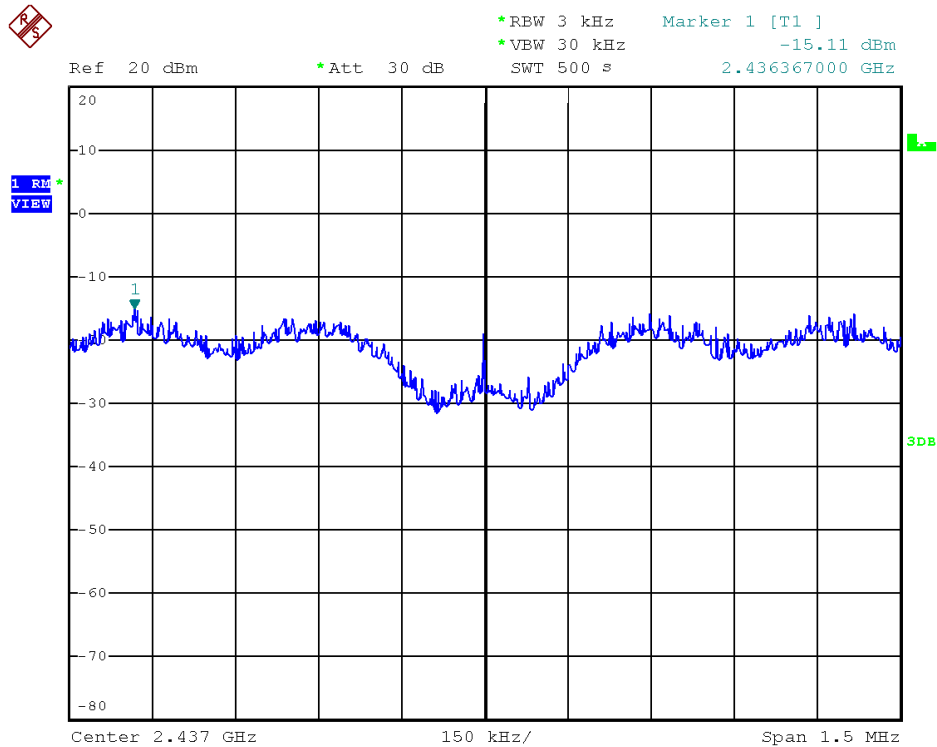
Channel: 01





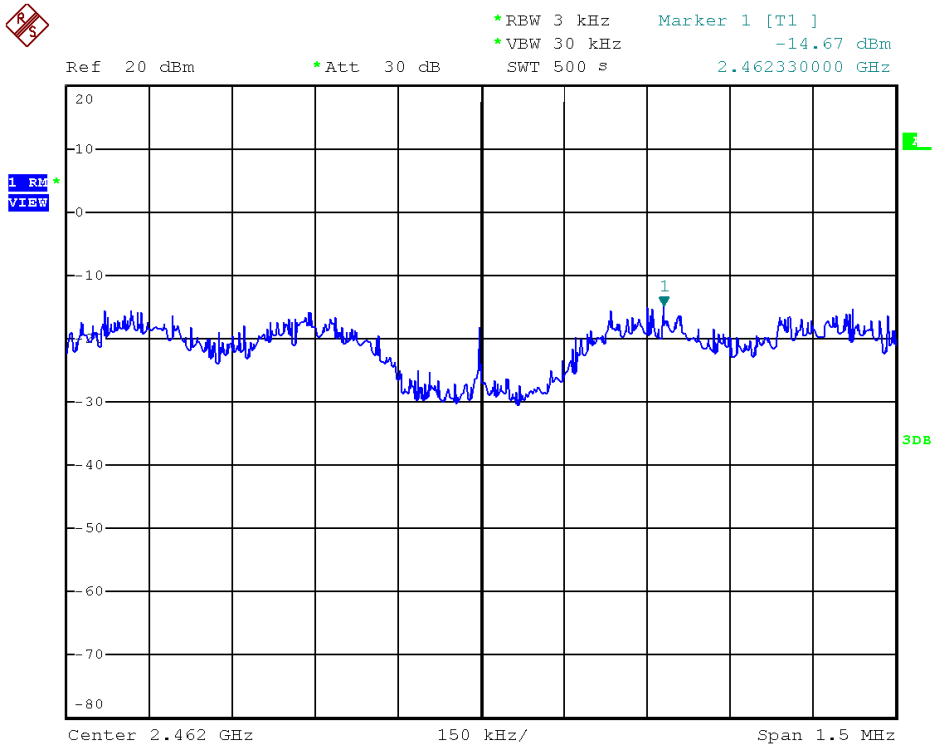
Modulation Standard: 802.11g (6.5Mbps)

Channel: 06



Modulation Standard: 802.11g (6.5Mbps)

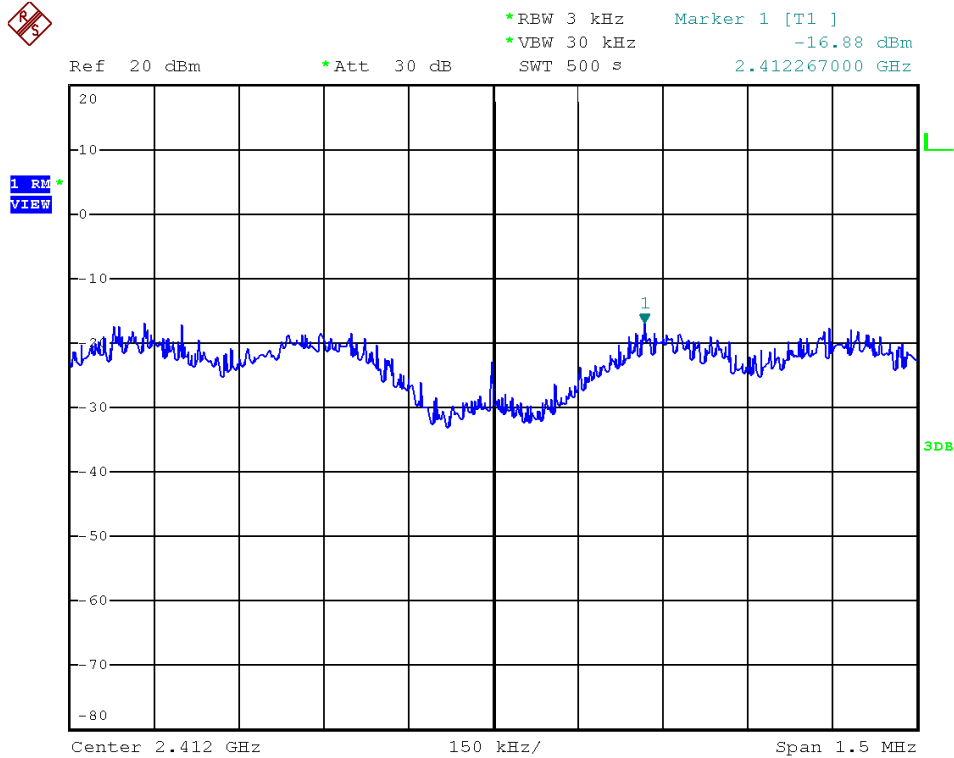
Channel: 11





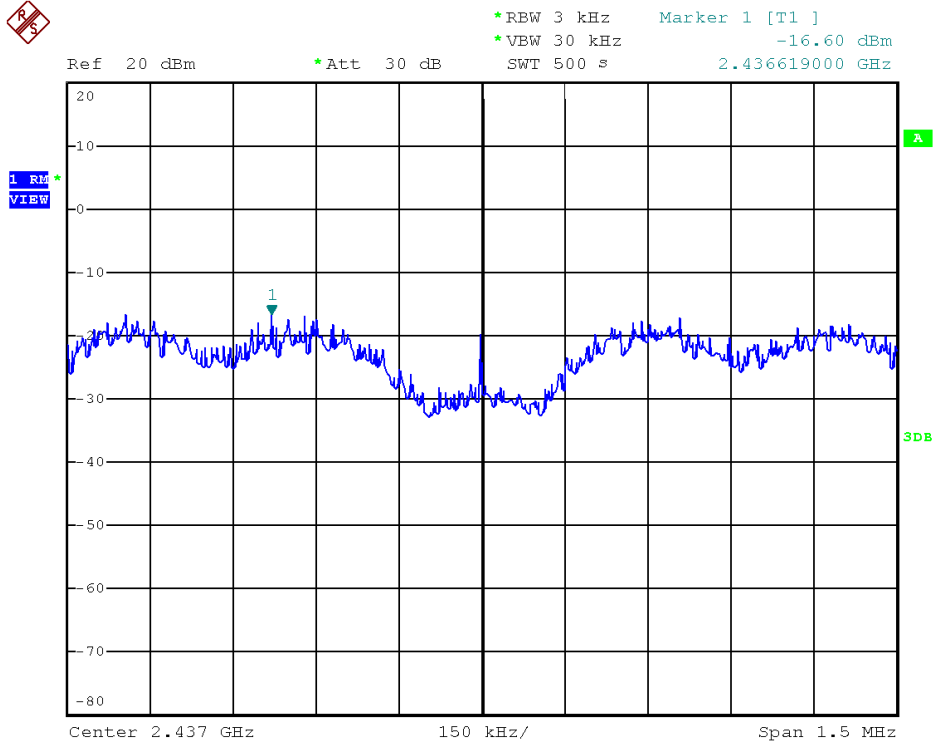
Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 01



Modulation Standard: 802.11n HT20 (6.5Mbps)

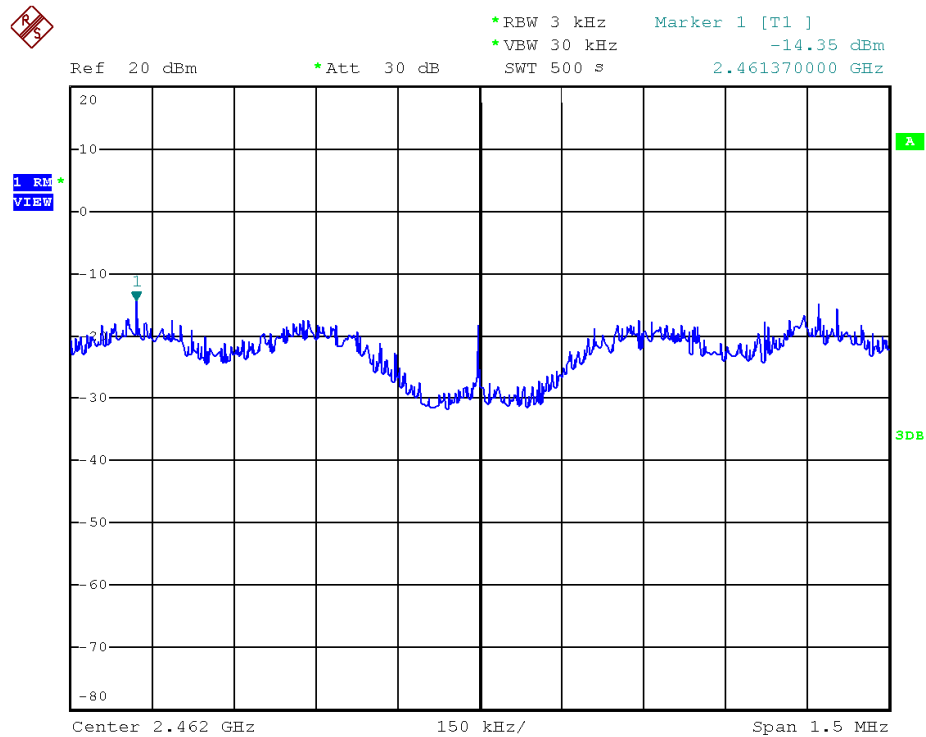
Channel: 06





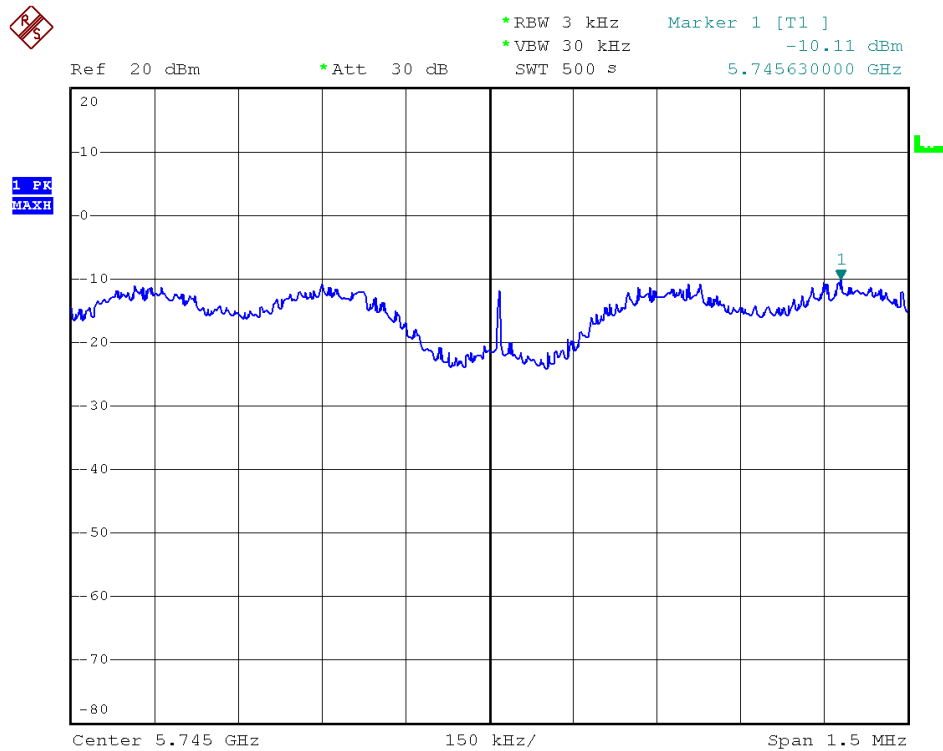
Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 11

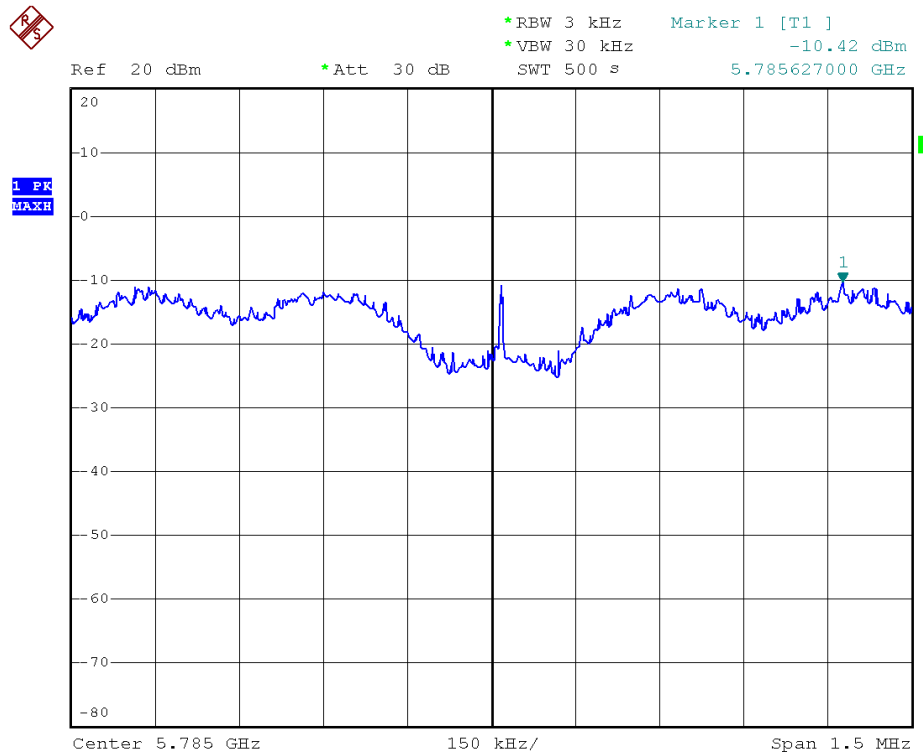




Modulation Standard: 802.11a (6Mbps)
Channel: 149



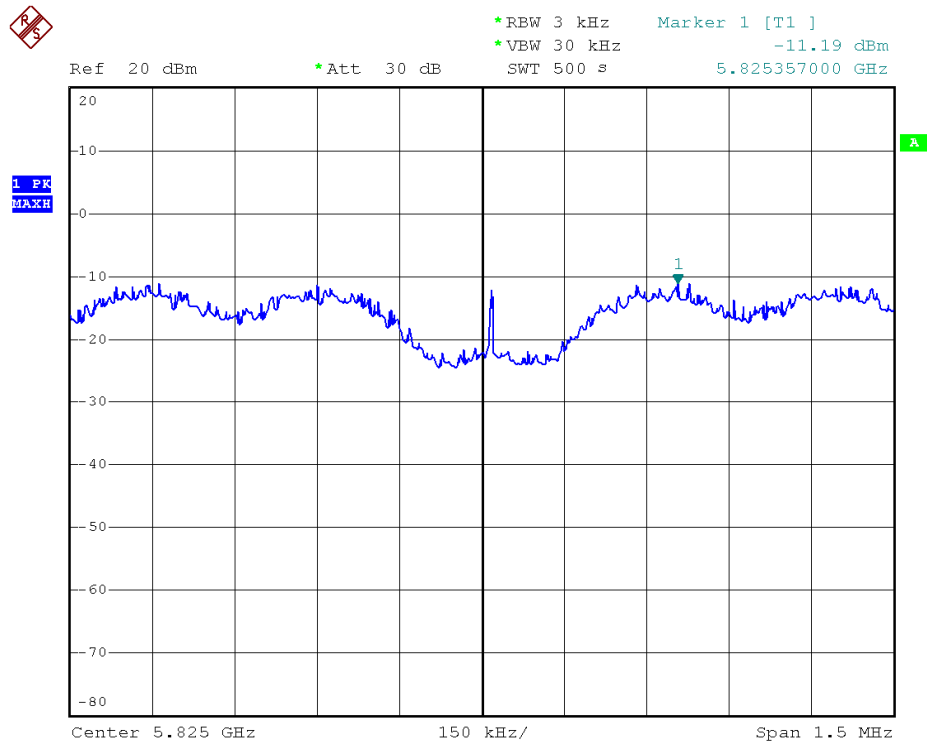
Modulation Standard: 802.11a (6Mbps)
Channel: 157





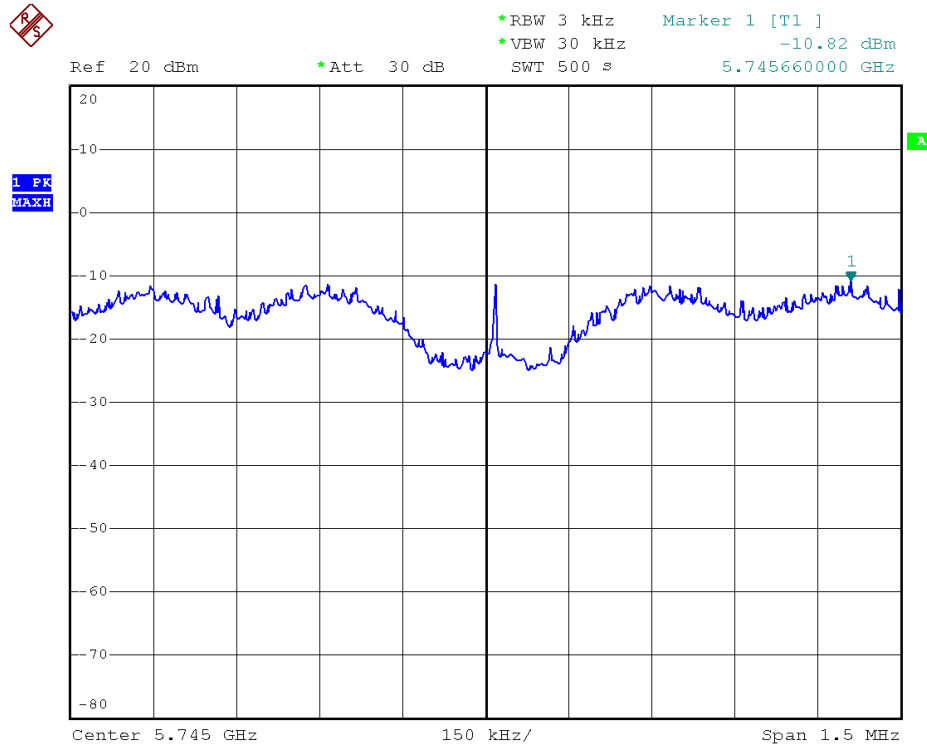
Modulation Standard: 802.11a (6Mbps)

Channel: 165



Modulation Standard: 802.11an HT20 (6.5Mbps)

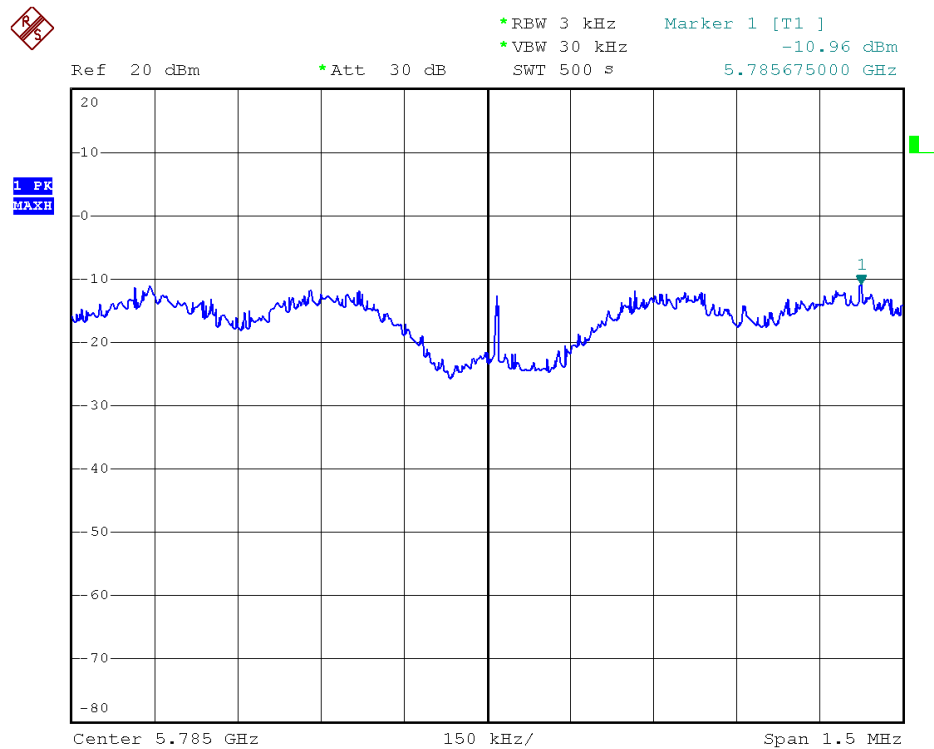
Channel: 149





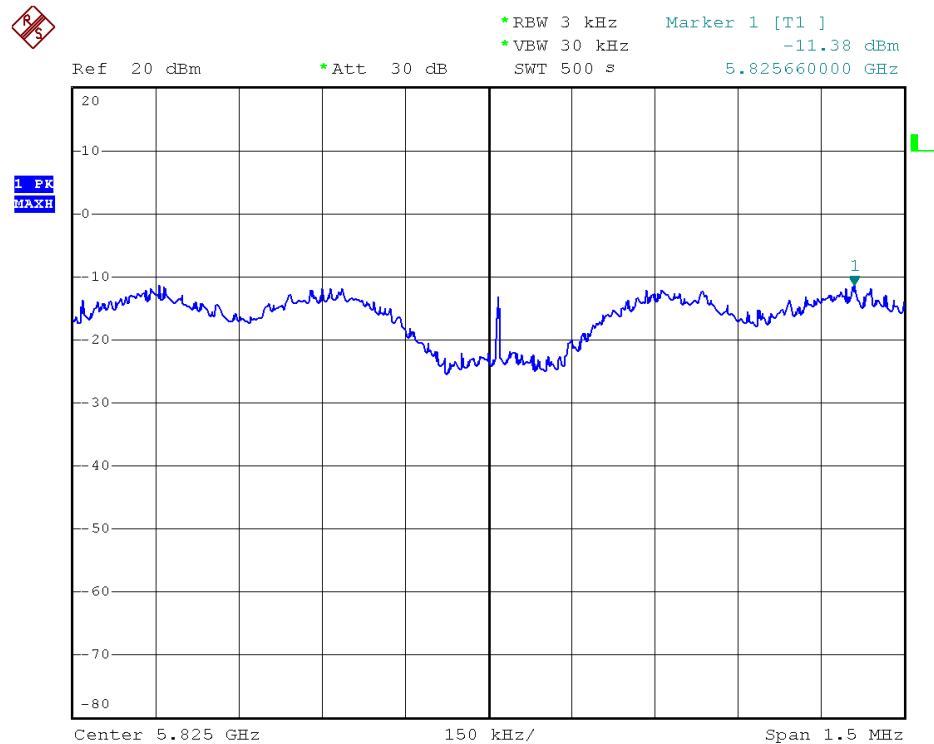
Modulation Standard: 802.11an HT20 (6.5Mbps)

Channel: 157



Modulation Standard: 802.11an HT20 (6.5Mbps)

Channel: 165





9. Band Edges Measurement

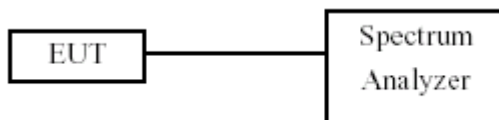
9.1 Test Limit

Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

9.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer via a low lose cable.
- Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20dB relative to the maximum measured in-band peak PSD level.
- The band edges was measured and recorded.

9.3 Test Setup Layout



9.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100047	2014/03/27	2015/03/26



9.5 Test Result and Data

Test Date : Sep. 15, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

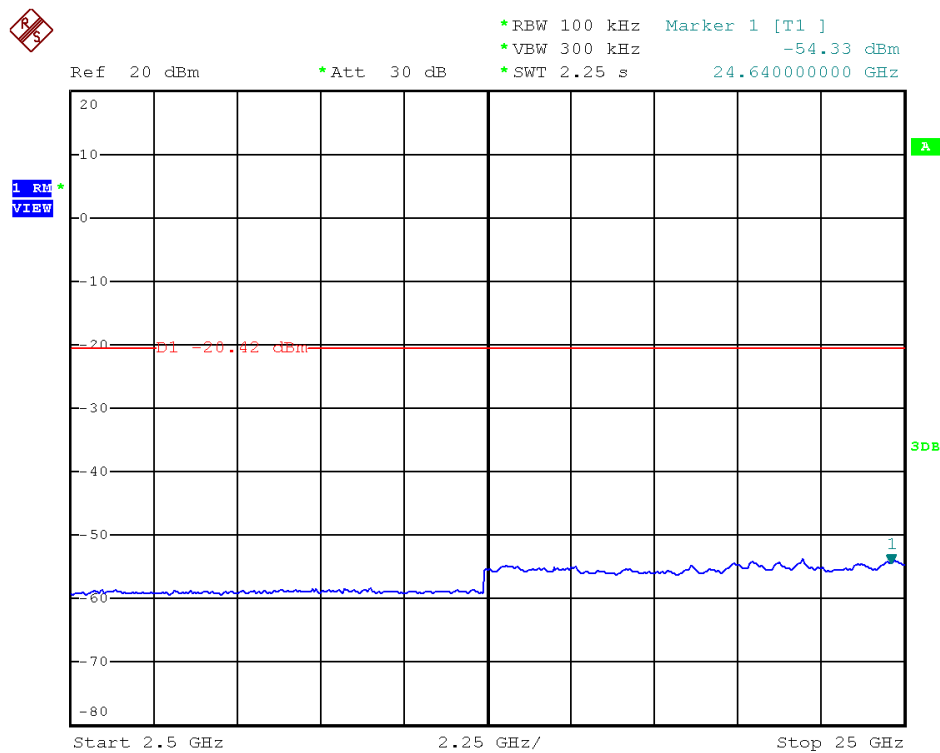
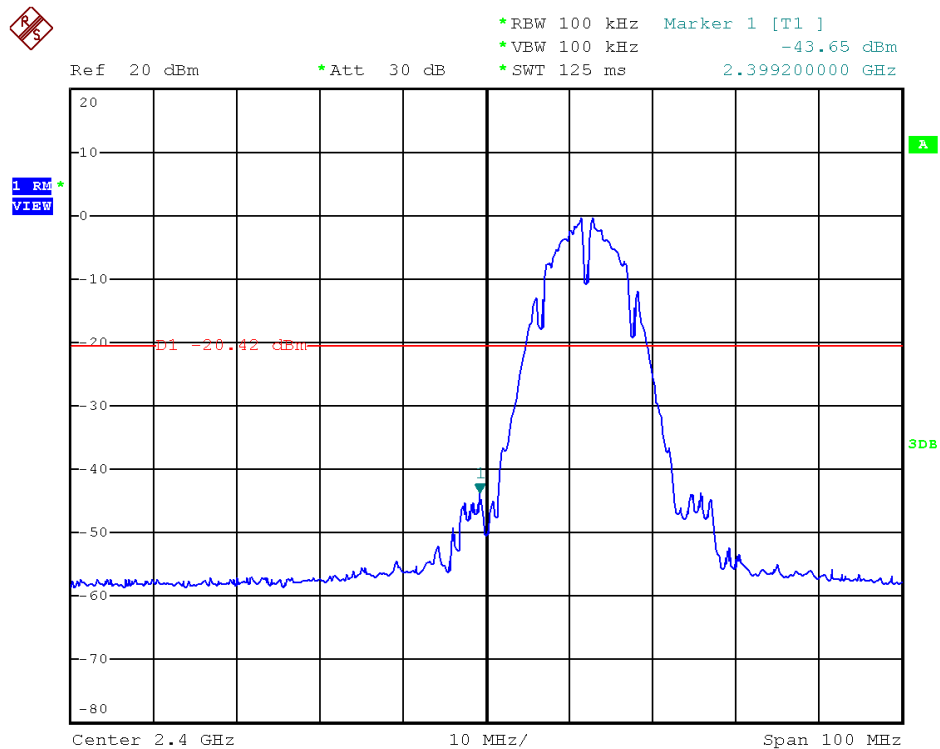
Modulation Type	Channel	Frequency (MHz)	Maximum value in frequency (MHz)	Maximum value (dBm)
IEEE 802.11b (1Mbps)	01	2412	2399.2	-43.65
	11	2462	2488.7	-53.93
IEEE 802.11g (6Mbps)	01	2412	2398.8	-36.84
	11	2462	2485.5	-52.99
IEEE 802.11n HT20 (6.5Mbps)	01	2412	2389.2	-48.13
	11	2462	2486.1	-50.52

Test Date : Sep. 24, 2014 Temperature : 20°C
Atmospheric pressure : 1020 hPa Humidity : 50%

Modulation Type	Channel	Frequency (MHz)	Maximum value in frequency (MHz)	Maximum value (dBm)
IEEE 802.11a (6Mbps)	149	5745	5724.400	-30.97
	165	5825	5850.800	-38.48
IEEE 802.11an HT20 (6.5Mbps)	149	5745	5724.800	-32.05
	165	5825	5850.200	-37.89



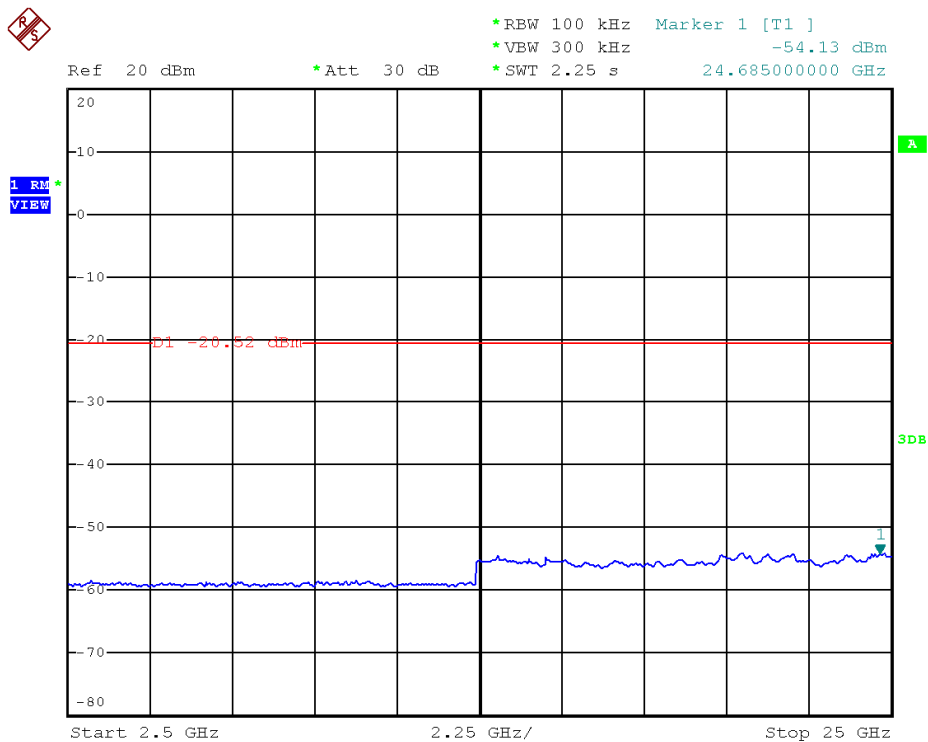
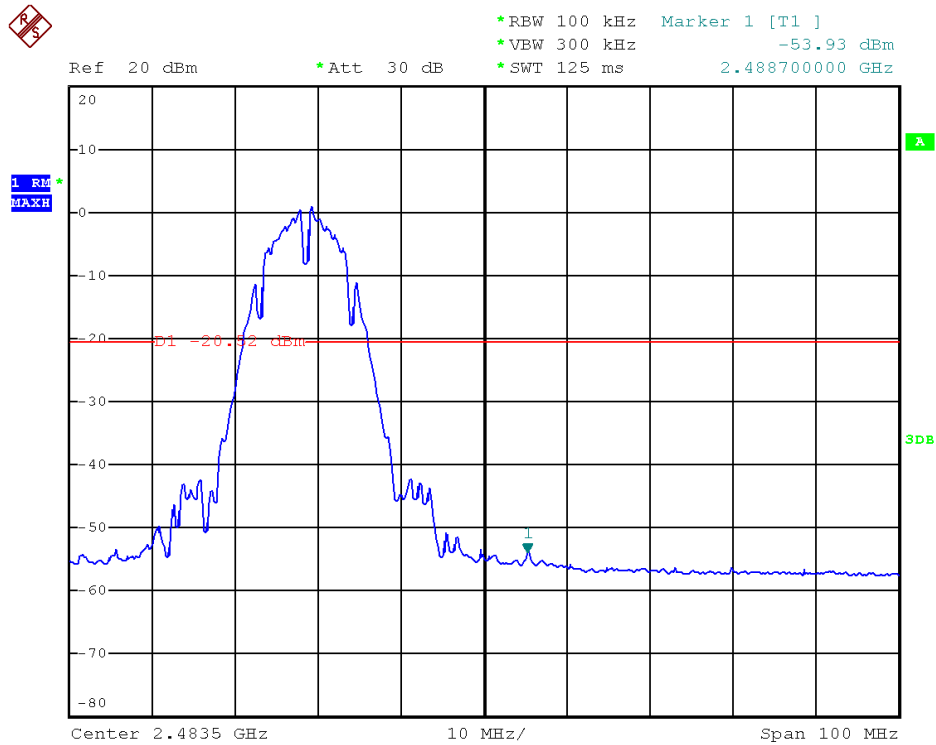
Modulation Standard: 802.11b (1Mbps)
Channel: 01





Modulation Standard: 802.11b (1Mbps)

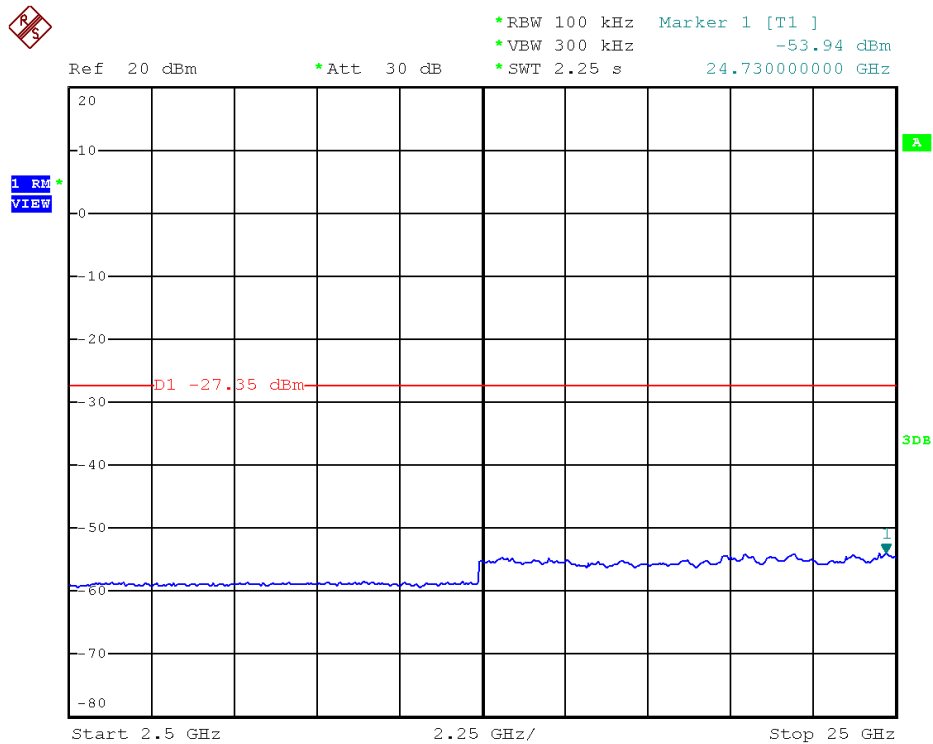
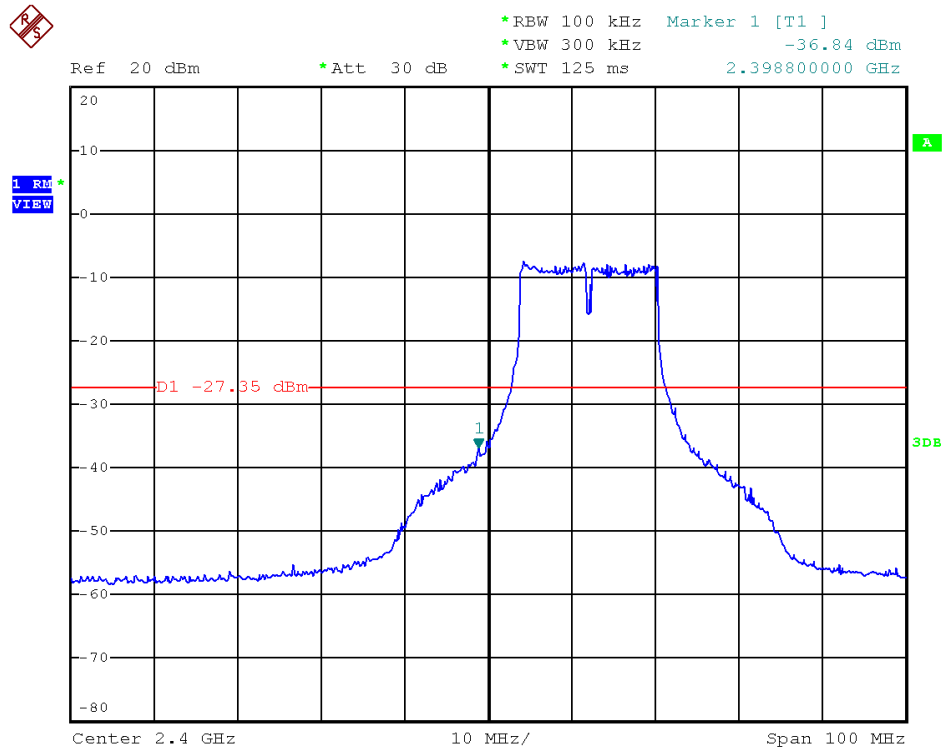
Channel: 11





Modulation Standard: 802.11g (6Mbps)

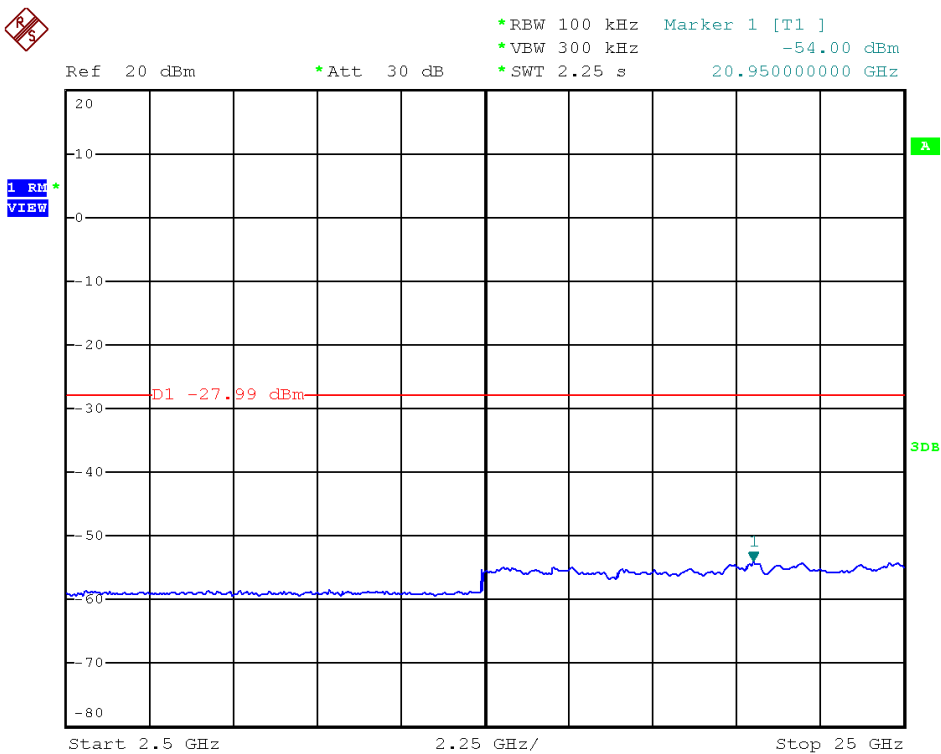
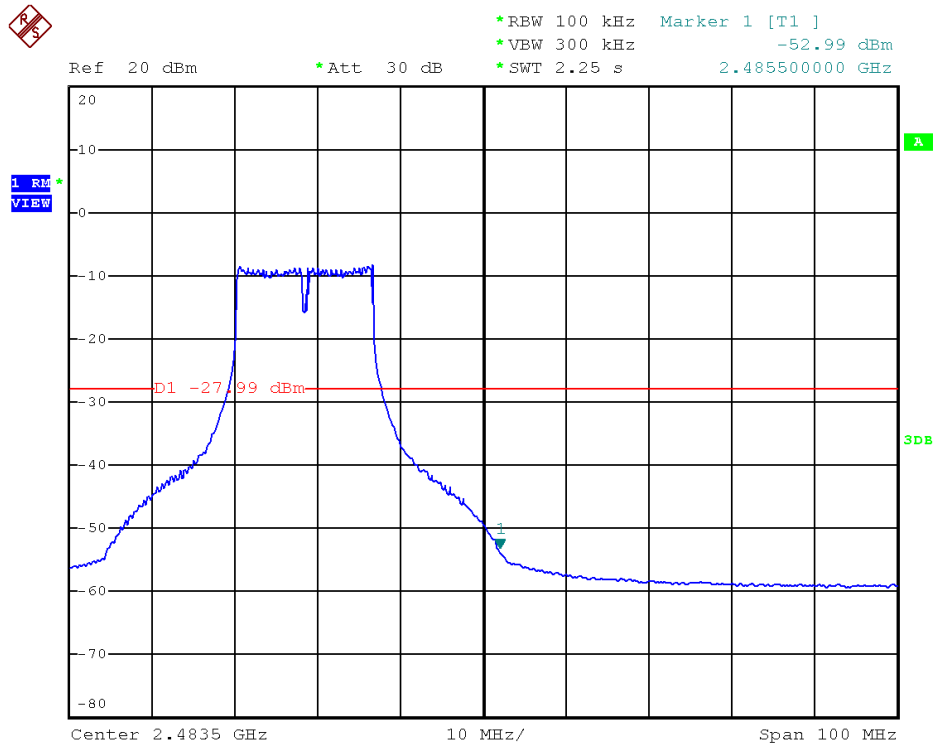
Channel: 01





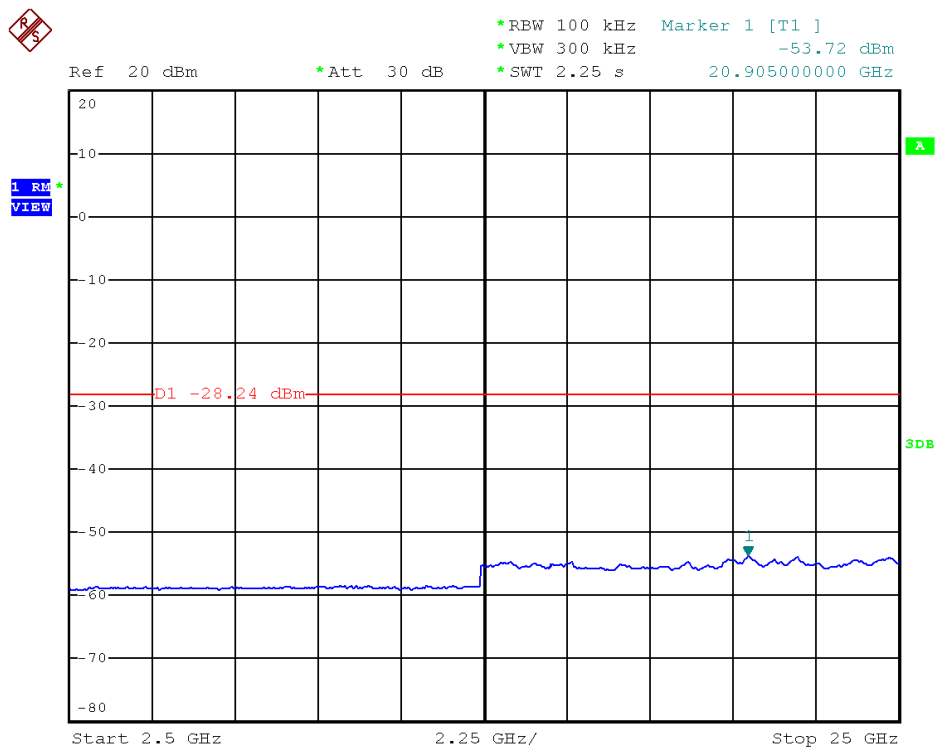
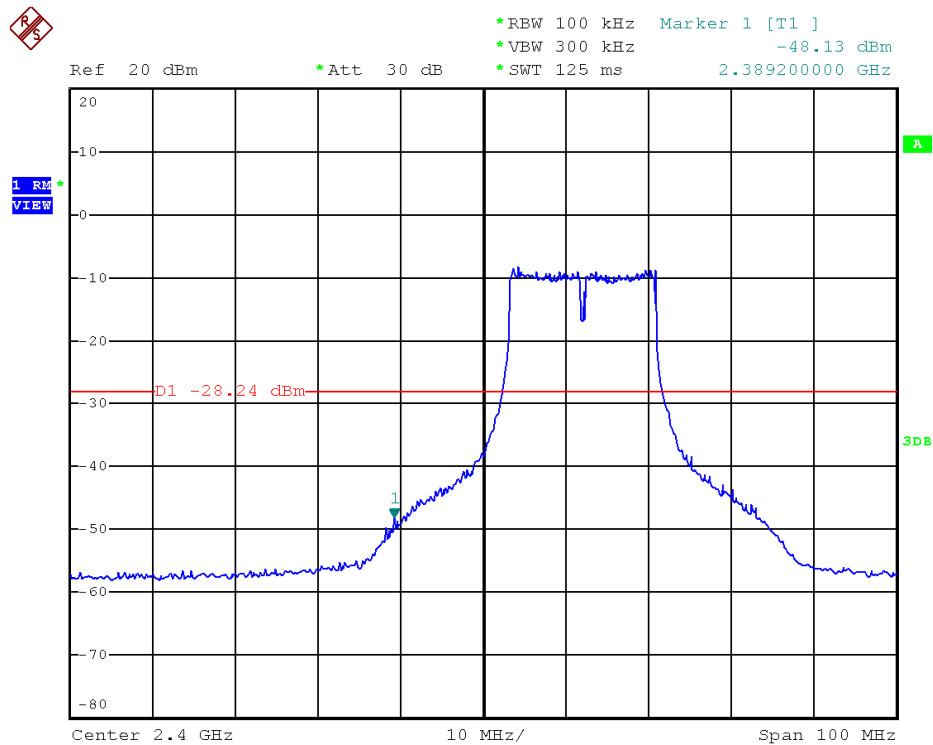
Modulation Standard: 802.11g (6Mbps)

Channel: 11





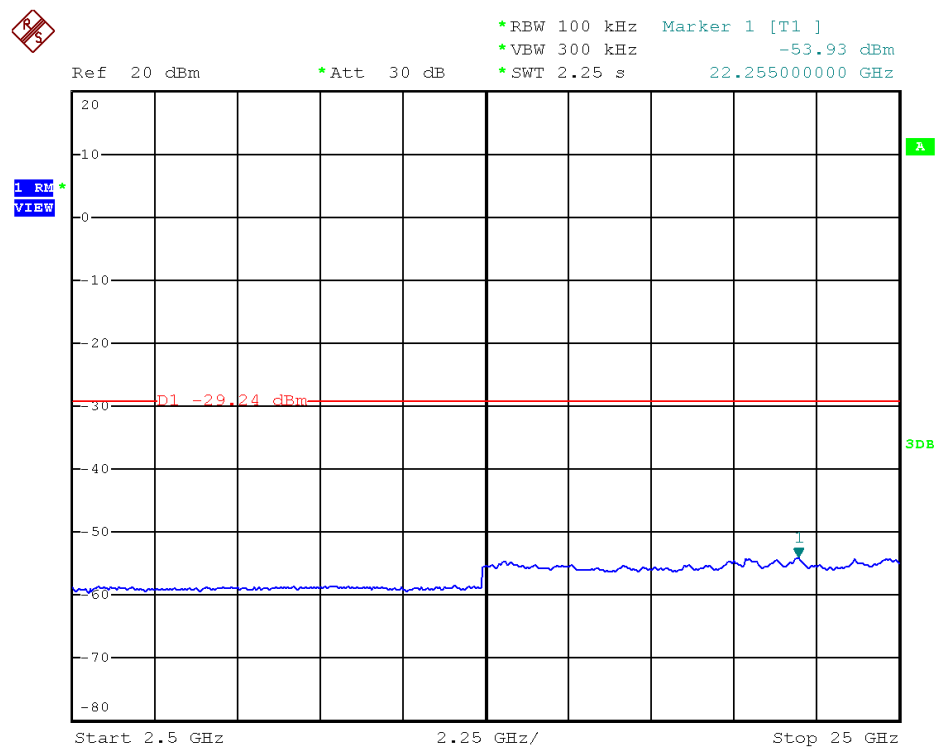
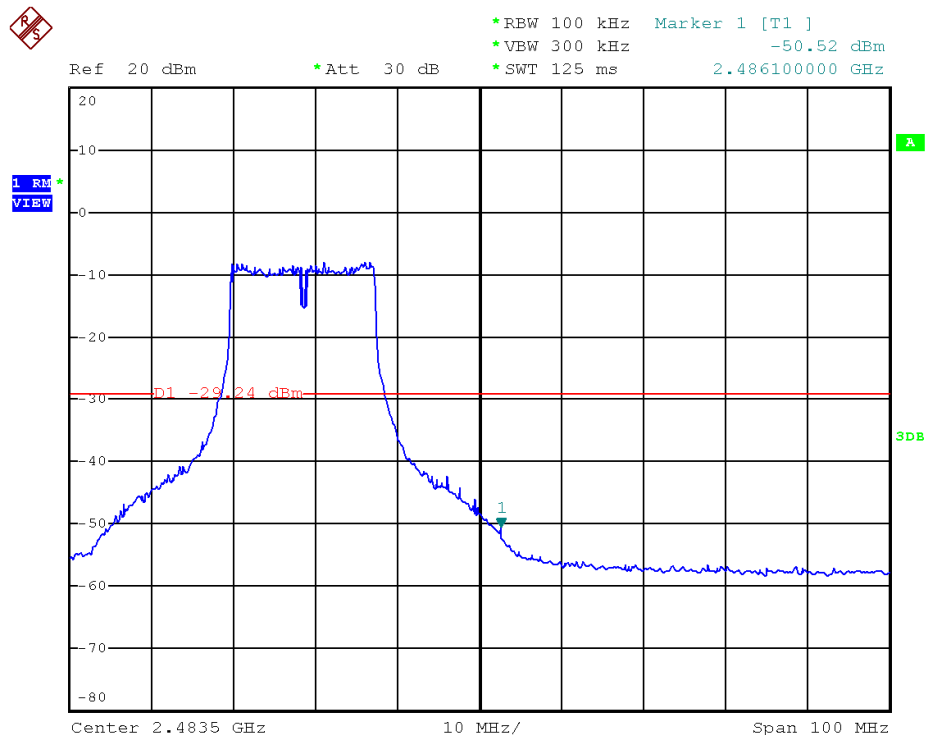
Modulation Standard: 802.11n HT20 (6.5Mbps)
Channel: 01





Modulation Standard: 802.11n HT20 (6.5Mbps)

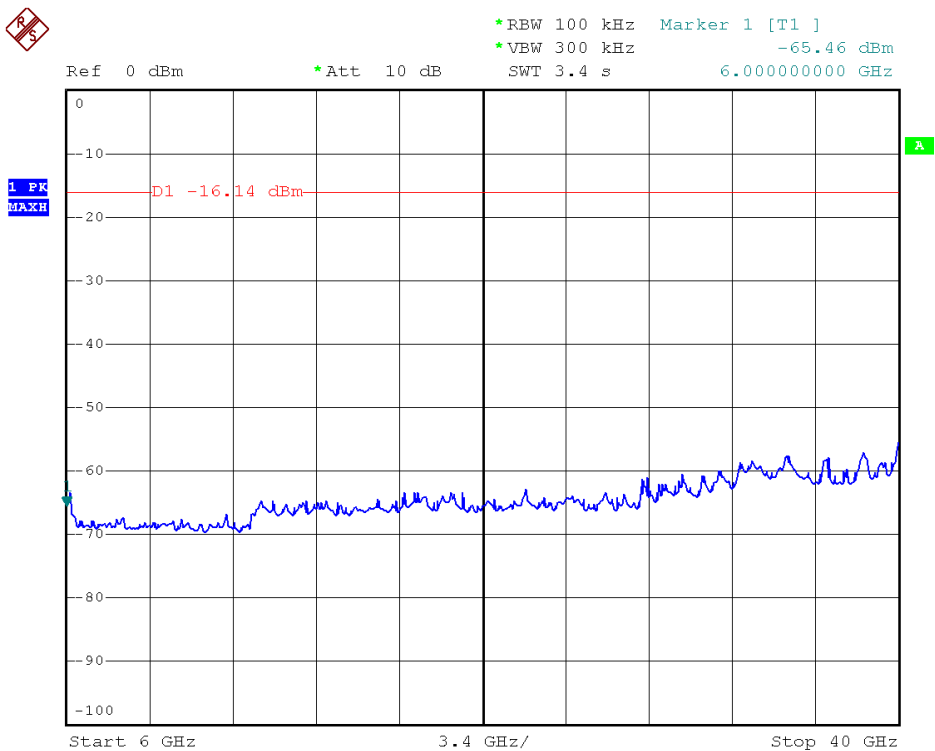
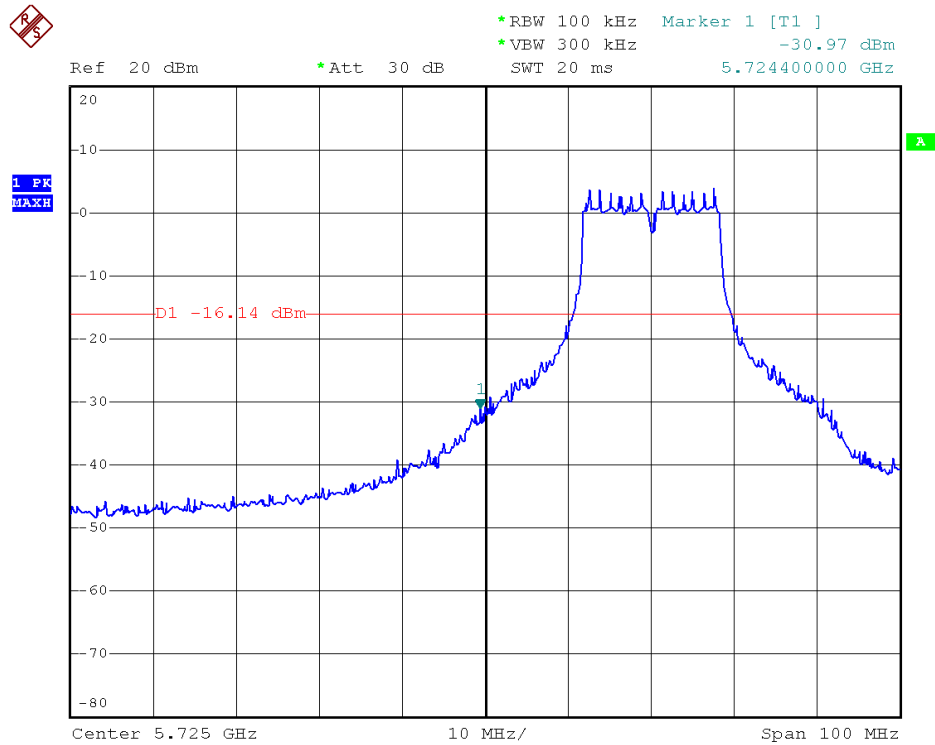
Channel: 11





Modulation Standard: 802.11a (6Mbps)

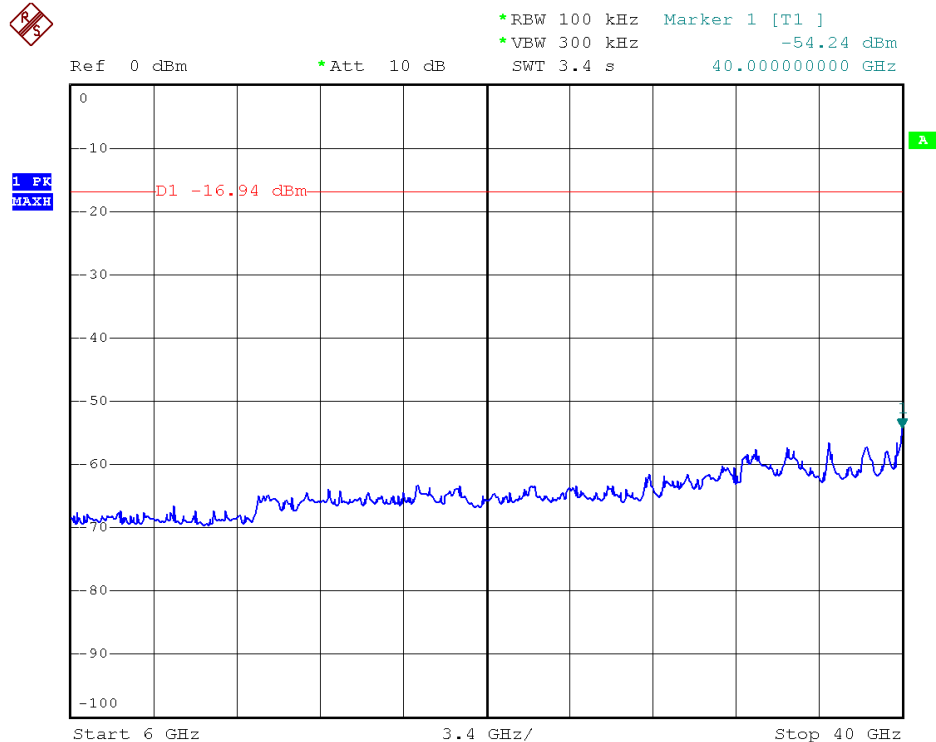
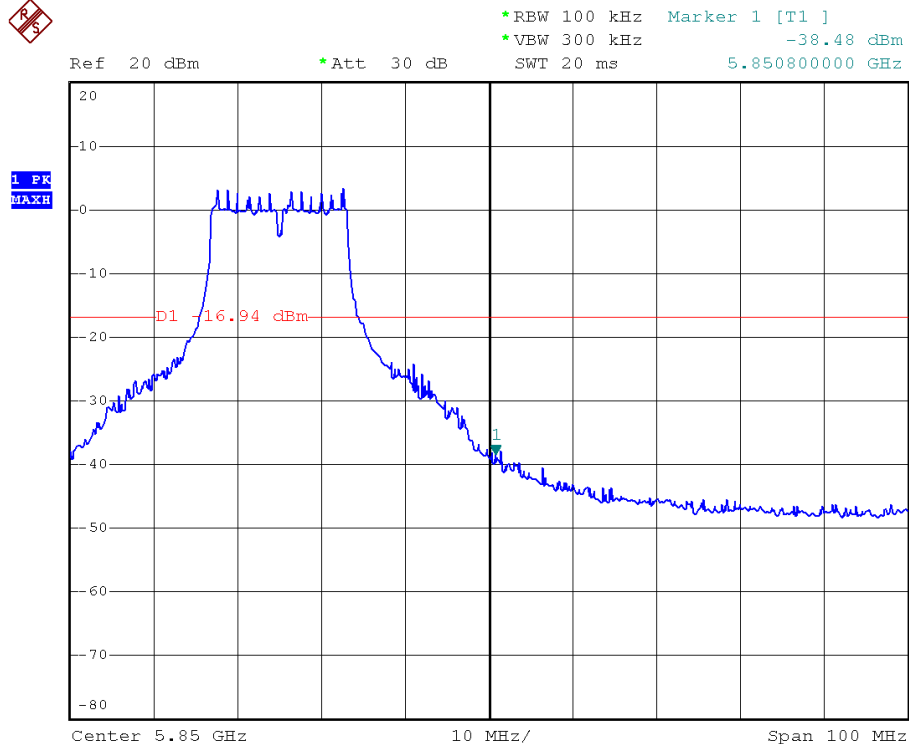
Channel: 149





Modulation Standard: 802.11a (6Mbps)

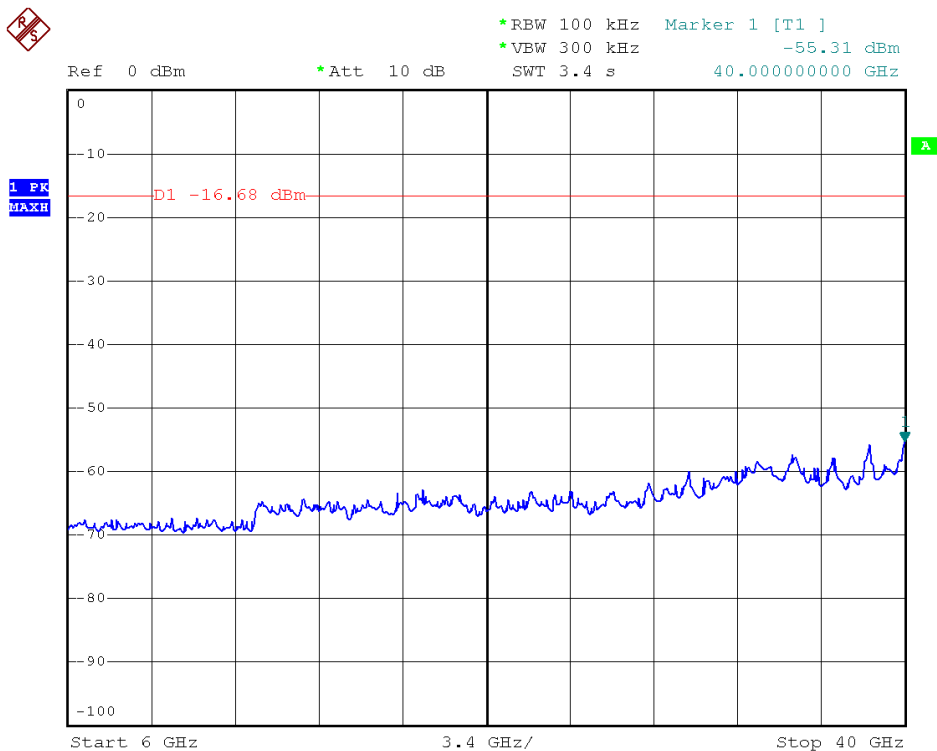
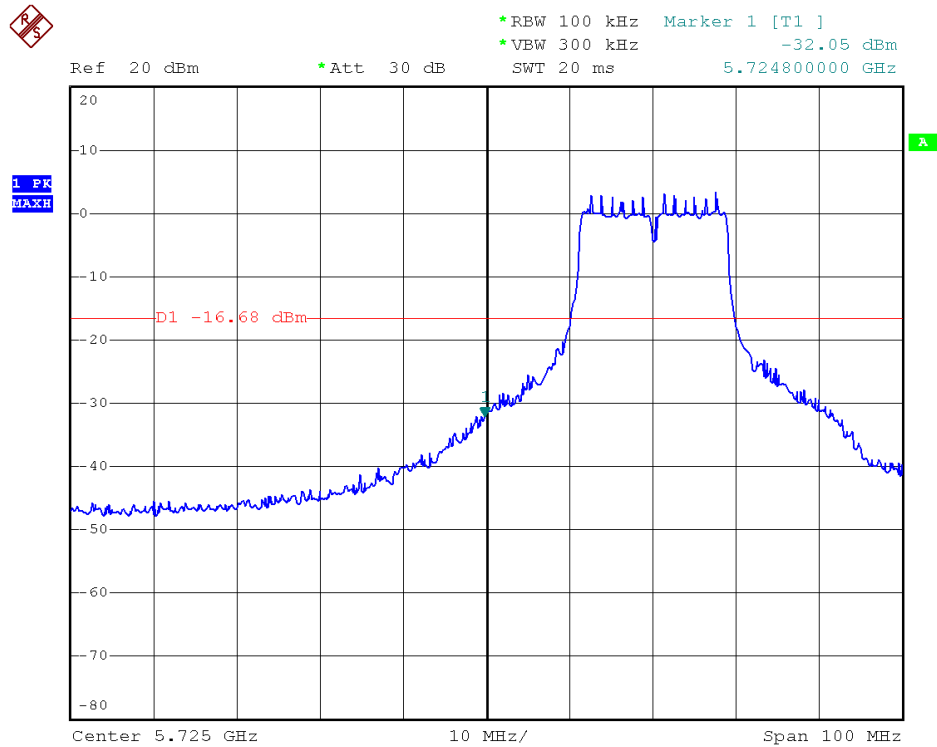
Channel: 165





Modulation Standard: 802.11an HT20 (6.5Mbps)

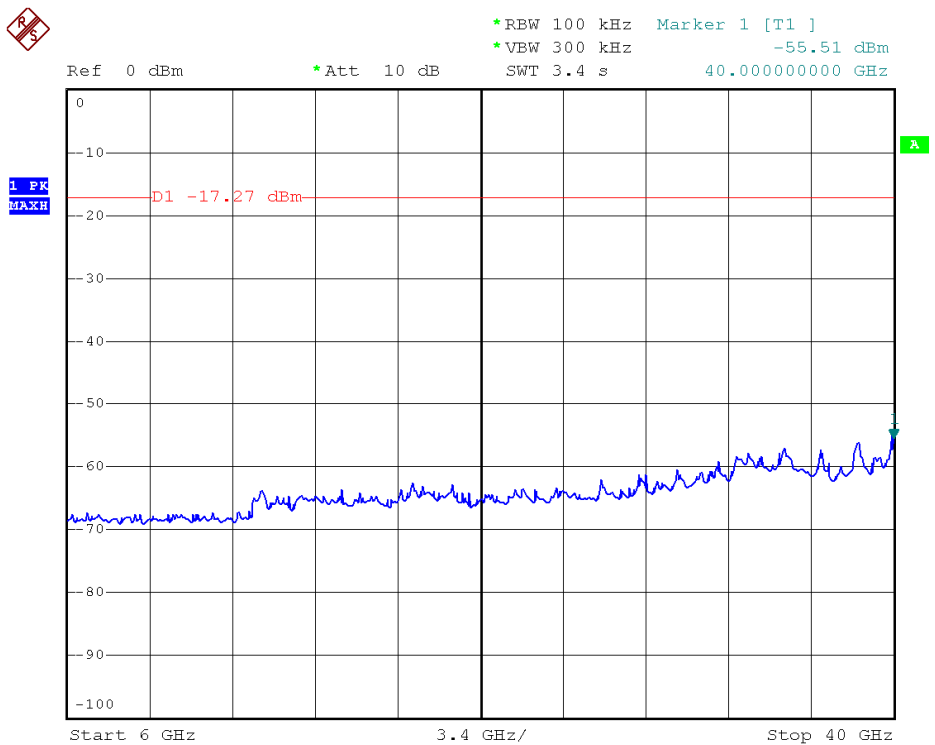
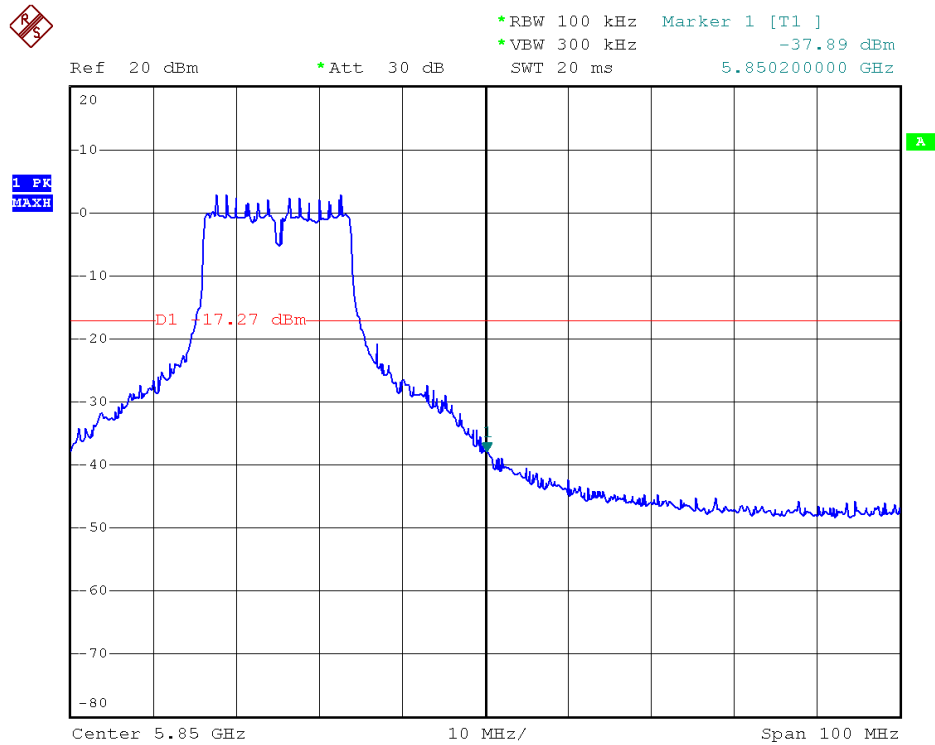
Channel: 149





Modulation Standard: 802.11an HT20 (6.5Mbps)

Channel: 165





9.6 Restrict Band Emission Measurement Data

Test Date: Sep. 24, 2014

Temperature: 24 °C

Atmospheric pressure: 1027 hPa

Humidity: 52 %

Modulation Standard: IEEE 802.11b (1Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2384.868	V	53.09	-1.20	51.89	Peak	74	54	-22.11	168	1.02
---	V	---	---	---	Ave	74	54	---	---	---
2389.662	H	59.16	-1.18	57.98	Peak	74	54	-16.02	163	1.04
2389.662	H	36.52	-1.18	35.34	Ave	74	54	-18.66	163	1.04
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.666	V	51.36	-0.82	50.54	Peak	74	54	-23.46	175	1.02
---	V	---	---	---	Ave	74	54	---	---	---
2488.634	H	50.02	-0.81	49.21	Peak	74	54	-24.79	162	1.07
---	H	---	---	---	Ave	74	54	---	---	---

Modulation Standard: IEEE 802.11g (6Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2386.092	V	62.05	-1.19	60.86	Peak	74	54	-13.14	166	1.03
2386.092	V	35.63	-1.19	34.44	Ave	74	54	-19.56	166	1.03
2387.520	H	63.67	-1.19	62.48	Peak	74	54	-11.52	164	1.02
2387.520	H	41.36	-1.19	40.17	Ave	74	54	-13.83	164	1.02
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2485.874	V	58.83	-0.81	58.02	Peak	74	54	-15.98	175	1.07
2485.874	V	42.83	-0.81	42.02	Ave	74	54	-11.98	175	1.07
2487.392	H	60.17	-0.81	59.36	Peak	74	54	-14.64	169	1.02
2487.392	H	39.17	-0.81	38.36	Ave	74	54	-15.64	169	1.02



Modulation Standard: IEEE 802.11n HT20 (6.5Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.152	V	62.13	-1.19	60.94	Peak	74	54	-13.06	176	1.05
2389.152	V	31.23	-1.19	30.04	Ave	74	54	-23.96	176	1.05
2383.950	H	61.98	-1.20	60.78	Peak	74	54	-13.22	161	1.04
2383.950	H	48.90	-1.20	47.70	Ave	74	54	-6.30	161	1.04
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2485.598	V	57.07	-0.81	56.26	Peak	74	54	-17.74	170	1.06
2485.598	V	42.45	-0.81	41.64	Ave	74	54	-12.36	170	1.06
2491.118	H	58.81	-0.79	58.02	Peak	74	54	-15.98	166	1.01
2491.118	H	40.20	-0.79	39.41	Ave	74	54	-14.59	166	1.01

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector peak mode) for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector sample mode) for Average detection at frequency above 1GHz.



10. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

10.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.