



FCC TEST REPORT

According to

FCC Rules and Regulations Part 15 Subpart E

Applicant : Partner Tech Corp.
Address : 10FL, 233-2, Baoqiao Road, Xindian, New Taipei City, Taiwan
Equipment : Enterprise Tablet
Model No. : EM-100
Trade Name : PARTNER
FCC ID : NDPEM-100

- The test result refers exclusively to the test presented test model / sample.,
- The test result does not include DFS test for 5250 ~ 5350 MHz.
- Without written approval of **CerpPASS 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





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CERTIFICATE OF COMPLIANCE

According to

FCC Rules and Regulations Part 15 Subpart E

Applicant : Partner Tech Corp.
Address : 10FL, 233-2, Baoqiao Road, Xindian, New Taipei
City, Taiwan
Equipment : Enterprise Tablet
Model No. : EM-100
FCC ID : NDPEM-100

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart E (2011), and KDB789033.**

The sample was received on Sep. 21, 2014 and the testing was carried out on Sep. 30, 2014 at **CerpPASS 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

For Frequency 5.15GHz ~ 5.25GHZ

Applied Standard : FCC Part 15, Subpart E (Section 15.407)		
FCC Rule	Description of Test	Result
15.407(b)(5)	. Conducted Emission	Pass
15.407(b/1/2/3)(b)(5)	. Radiated Emission	Pass
15.407(a/1/2/3)	. Peak Transmit Power	Pass
15.407(a)(6)	. Peak Power Excursion	Pass
15.407(a/1/2/3)	. Peak Power Spectral Density	Pass
15.407(g)	. Frequency Stability	Pass



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Processor	Freescale i.MX 6 Dual Lite 1G
OS	Android 4.2 need CTS, GMS
Memory	Standard: 1GB (up to 2G)
Storage	Standard: 8GB for Android eMMC on board (eMMC/8G/KE4CN3K6A/FBGA169)
Display	10.1", 1280 x 800, 350nits
Touch	10.1" capacitive touch FT-5606
Bluetooth	V4.0+HS WM-BAN-BM-07_S module UART interface
WiFi	802.11 a/b/g/n Roaming function The WM-BAN-BM-07_S module is designed based on Broadcom 4334 chipset solution. It supports generic GSPI, SDIOv2.0, HSIC interface to connect the WLAN to the host processor. High speed UART is available to connect the Bluetooth 4.0+HS/FM Receiver to the host processor.
NFC	On board NXP PN544 C3 IC
Accelerometer	Acceleration sensor/KXTI9-1001
E-compass Sensor	Compass Sensor/AMI306/SMD LGA10
Rear Camera	5.0 Mega Pixels, Auto Focus, Flash Light (Sensor Type OV5640)
Front Camera	2.0 Mega Pixels CM2015-MI10
Battery	Li-Polymer, 3.7V, 8060mAh
Working time	8 hours @film with speaker, 50% Brightness, WiFi on
Speaker	Internal*2
I/O	1 x SIM (internal) 1 x Micro SD 1 x DC Jack 1 x Micro HDMI 1 x Earphone & MIC Jack 2 x function keys 1 x Micro USB female type 1 x Power button 2 x Volume button 1 x USB host 2 x Internal Host USB for MSR or IC Card reader 1 x Internal RS232 for 1D or 2D barcode scanner
LEDs	1 x red/green LED for power & system status 1 x blue LED for NFC good read



Power Adaptor	Input:100V to 240V AC 50/60Hz 0.8A Output: 5V DC 3A ; AC Cable
Dimension	WxLxT: 267mm x 197mm x 20.5/25mm (1D/2D)
Operating temperature	0oC to +40oC
Storage temperature	-20oC to +60oC (without battery)
Charging temperature	0oC to +40oC
Humidity	5% to 95% RH (no condensation)
Sealing	IP65 (w/o MSR/IC card/Scanner); IP54 (w/MSR/IC card/Scanner)
Drop specification	1M drop onto concrete
Vibration	MIL-STD-810G Method 514.6 Procedure I (non-operating)
Certification	CE/FCC/VCCI/BSMI/NCC

2.2. Carrier Frequency of Channels

802.11a, 802.11an HT20 (5150 ~ 5250MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*36	5180	*48	5240
40	5200	---	---
*44	5220	---	---

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:
 - 802.11a/an, HT20: CH 36: 5180MHz, CH 44: 5220MHz, CH 48: 5240MHz

* Power output of data rate:

Avg.:

802.11a Band 1		802.11an HT20 Band 1	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
54	8.98	65/7	9.35
24	9.45	58.5/6	9.43
12	9.78	52/5	9.55
6	9.98	39/4	9.65
---	---	26/3	9.71
---	---	19.5/2	9.78
---	---	13/1	9.88
---	---	6.5/0	9.96

Peak.:

802.11a Band 1		802.11an HT20 Band 1	
Data Rate (Mbps)	Power Output (dBm)	Data Rate (Mbps)	Power Output (dBm)
54	19.25	65/7	18.88
24	19.33	58.5/6	18.95
12	19.42	52/5	19.02
6	19.54	39/4	19.08
---	---	26/3	19.15
---	---	19.5/2	19.21
---	---	13/1	19.28
---	---	6.5/0	19.38

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 15.407 (a), 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: 2.59 dBi @ 2.4GHz,
0.86 dBi @ 5.15GHz
-0.23 dBi @ 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

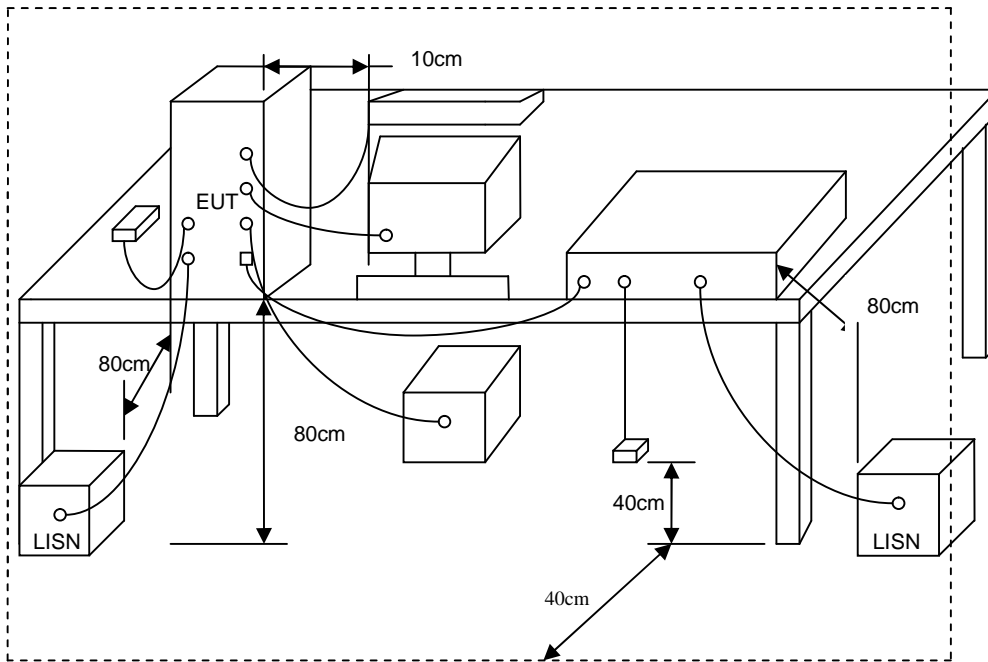
*Decreases with the logarithm of the frequency.

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



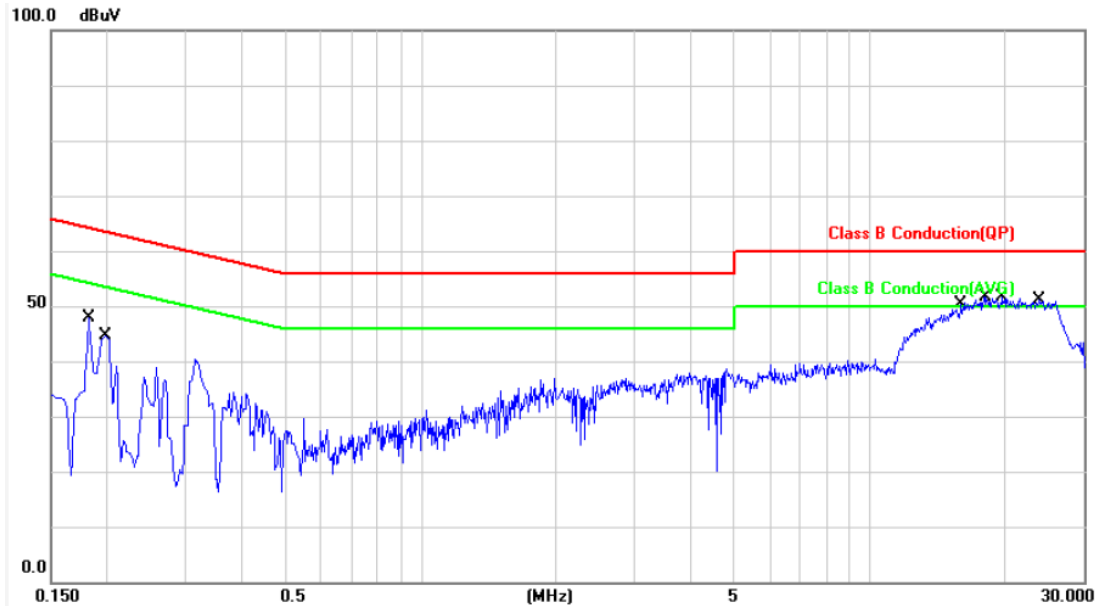
4.4. Measurement Equipment

Instrument/Ancillary	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	: 802.11a, CH36	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

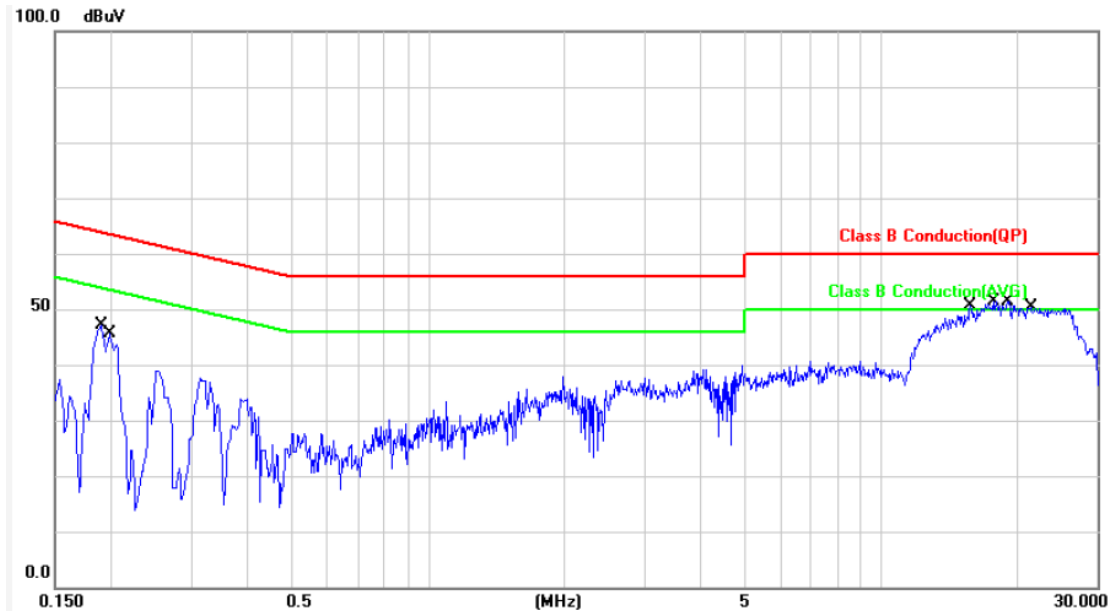


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F
1	0.1819	9.92	35.72	45.64	64.39	-18.75	QP	P
2	0.1819	9.92	18.12	28.04	54.39	-26.35	AVG	P
3	0.1986	9.92	35.16	45.08	63.66	-18.58	QP	P
4	0.1986	9.92	20.31	30.23	53.66	-23.43	AVG	P
5	16.0540	10.40	36.20	46.60	60.00	-13.40	QP	P
6	16.0540	10.40	25.39	35.79	50.00	-14.21	AVG	P
7	18.1660	10.44	36.00	46.44	60.00	-13.56	QP	P
8	18.1660	10.44	26.98	37.42	50.00	-12.58	AVG	P
9	19.8260	10.48	37.36	47.84	60.00	-12.16	QP	P
10	19.8260	10.48	25.69	36.17	50.00	-13.83	AVG	P
11	24.0140	10.52	35.20	45.72	60.00	-14.28	QP	P
12	24.0140	10.52	26.80	37.32	50.00	-12.68	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN or ISN or PLC or Current Probe) Factor + Cable Loss + Attenuator



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11a, CH36	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

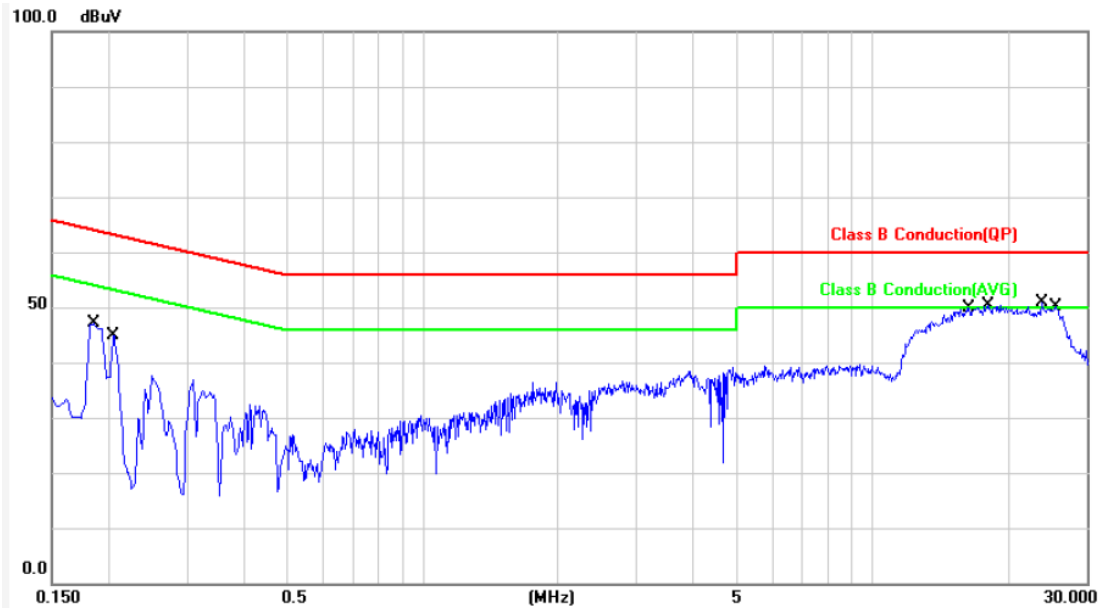


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1900	9.91	34.81	44.72	64.03	-19.31	QP	P
2	0.1900	9.91	21.79	31.70	54.03	-22.33	AVG	P
3	0.1980	9.91	33.80	43.71	63.69	-19.98	QP	P
4	0.1980	9.91	19.99	29.90	53.69	-23.79	AVG	P
5	15.7820	10.37	35.16	45.53	60.00	-14.47	QP	P
6	15.7820	10.37	24.83	35.20	50.00	-14.80	AVG	P
7	17.7020	10.41	35.40	45.81	60.00	-14.19	QP	P
8	17.7020	10.41	26.85	37.26	50.00	-12.74	AVG	P
9	19.0740	10.43	35.16	45.59	60.00	-14.41	QP	P
10	19.0740	10.43	26.50	36.93	50.00	-13.07	AVG	P
11	21.4100	10.47	36.48	46.95	60.00	-13.05	QP	P
12	21.4100	10.47	27.47	37.94	50.00	-12.06	AVG	P

Note: Level = Reading + Factor
 Margin = Level – Limit
 Factor = (LISN or ISN or PLC or Current Probe) Factor + Cable Loss + Attenuator



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 802.11an, CH36	Temperature	: 25 °C
		Humidity	: 45 %
Test date	: Sep. 22, 2014	Atmospheric Pressure	: 1008 hpa

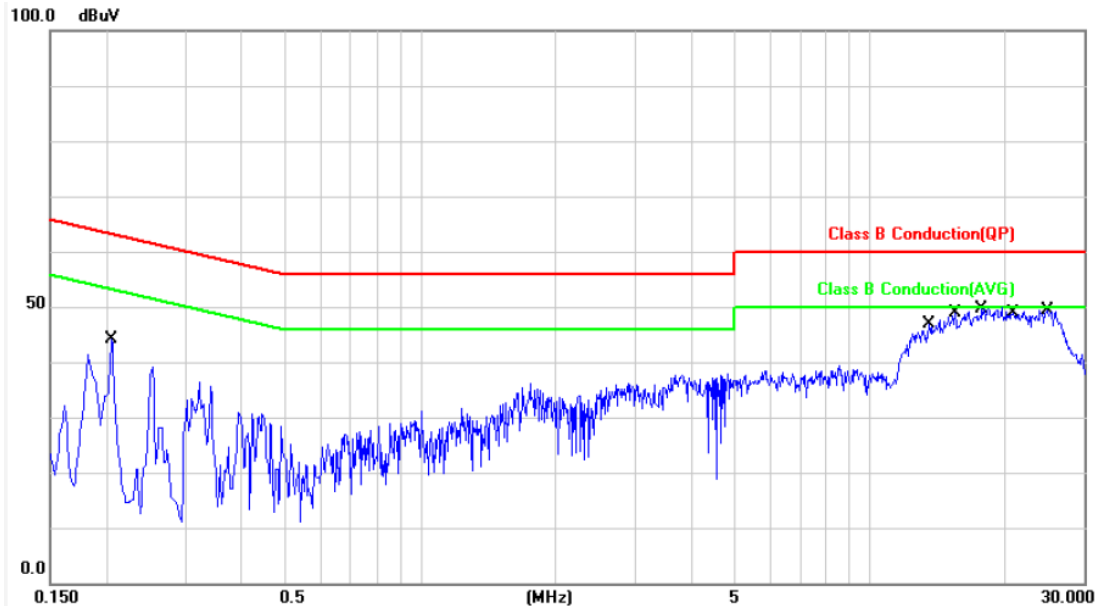


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1860	9.92	34.63	44.55	64.21	-19.66	QP	P
2	0.1860	9.92	20.33	30.25	54.21	-23.96	AVG	P
3	0.2060	9.92	31.25	41.17	63.36	-22.19	QP	P
4	0.2060	9.92	12.67	22.59	53.36	-30.77	AVG	P
5	16.2698	10.40	35.26	45.66	60.00	-14.34	QP	P
6	16.2698	10.40	26.90	37.30	50.00	-12.70	AVG	P
7	18.0699	10.44	36.61	47.05	60.00	-12.95	QP	P
8	18.0699	10.44	24.76	35.20	50.00	-14.80	AVG	P
9	23.8740	10.52	35.03	45.55	60.00	-14.45	QP	P
10	23.8740	10.52	26.42	36.94	50.00	-13.06	AVG	P
11	25.6980	10.52	35.64	46.16	60.00	-13.84	QP	P
12	25.6980	10.52	28.22	38.74	50.00	-11.26	AVG	P

Note: Level = Reading + Factor
 Margin = Level – Limit
 Factor = (LISN or ISN or PLC or Current Probe) Factor + Cable Loss + Attenuator



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 802.11an, CH36	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	0.2060	9.91	31.13	41.04	63.36	-22.32	QP	P
2	0.2060	9.91	12.63	22.54	53.36	-30.82	AVG	P
3	13.6020	10.33	33.79	44.12	60.00	-15.88	QP	P
4	13.6020	10.33	21.79	32.12	50.00	-17.88	AVG	P
5	15.5420	10.36	35.62	45.98	60.00	-14.02	QP	P
6	15.5420	10.36	24.65	35.01	50.00	-14.99	AVG	P
7	17.8420	10.41	35.95	46.36	60.00	-13.64	QP	P
8	17.8420	10.41	26.31	36.72	50.00	-13.28	AVG	P
9	20.9220	10.46	35.44	45.90	60.00	-14.10	QP	P
10	20.9220	10.46	26.68	37.14	50.00	-12.86	AVG	P
11	24.8260	10.51	35.69	46.20	60.00	-13.80	QP	P
12	24.8260	10.51	25.15	35.66	50.00	-14.34	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN or ISN or PLC or Current Probe) Factor + Cable Loss + Attenuator



5. Test of Radiated Emission

5.1. Test Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

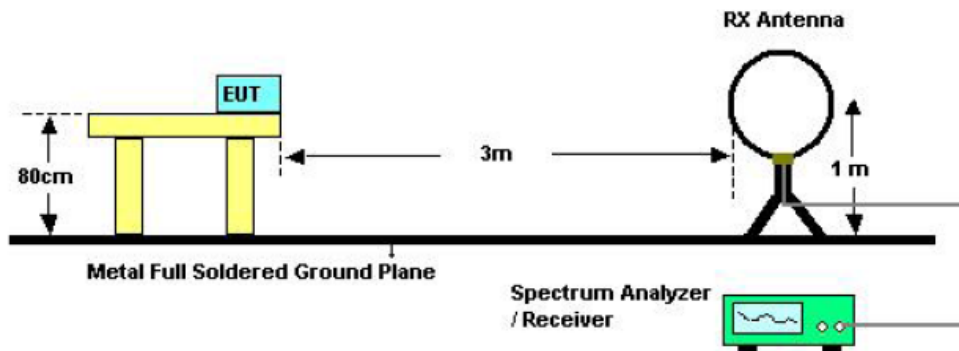
5.2. Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. 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.
- e. 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.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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.
- h. 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.

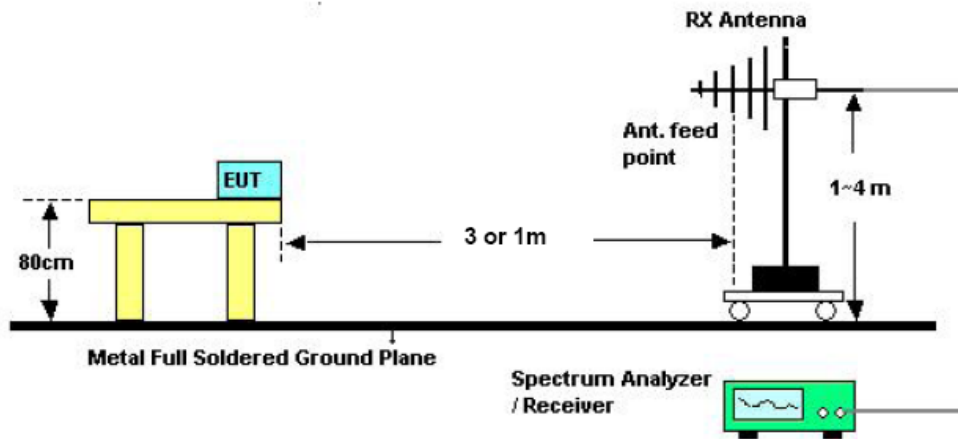


5.3. Typical Test Setup

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 (specific distance [3m] / 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

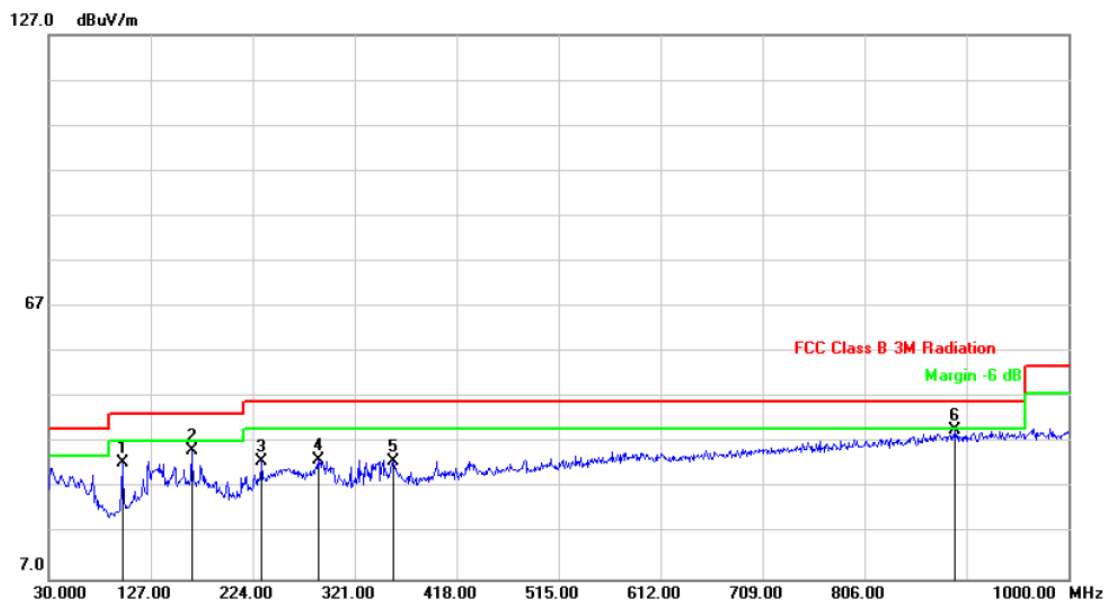


5.5. Test Result and Data (9kHz ~ 30MHz)

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	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



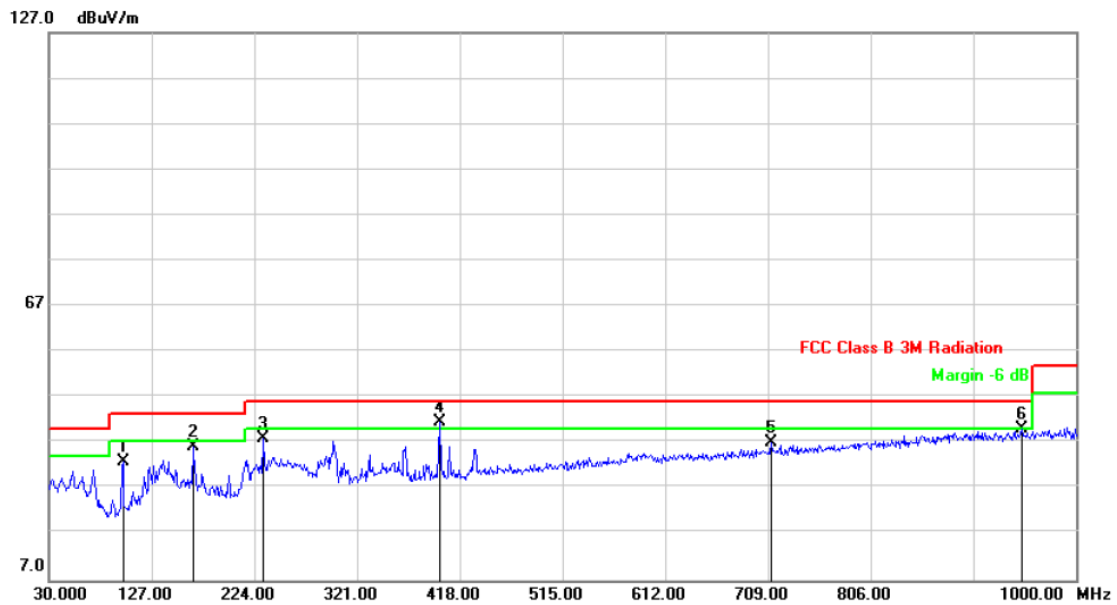
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	99.8400	-13.09	45.74	32.65	43.50	-10.85	peak	105	156
2	165.8000	-8.41	43.72	35.31	43.50	-8.19	peak	105	156
3	232.7300	-9.98	42.97	32.99	46.00	-13.01	peak	105	156
4	286.0800	-7.89	41.01	33.12	46.00	-12.88	peak	105	156
5	357.8600	-5.93	38.97	33.04	46.00	-12.96	peak	105	156
6	892.3300	3.58	36.13	39.71	46.00	-6.29	peak	105	156

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



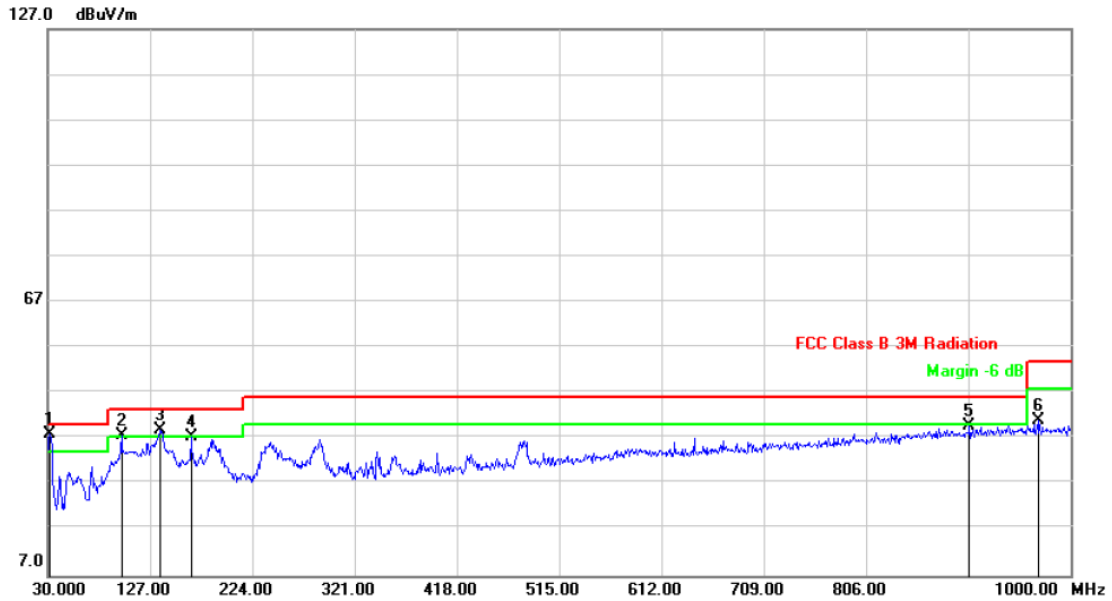
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	99.8400	-13.09	46.04	32.95	43.50	-10.55	peak	104	162
2	165.8000	-8.41	44.62	36.21	43.50	-7.29	peak	104	162
3	232.7300	-9.98	47.93	37.95	46.00	-8.05	peak	104	162
4	399.5700	-4.68	46.39	41.71	46.00	-4.29	peak	104	162
5	711.9100	1.14	36.04	37.18	46.00	-8.82	peak	104	162
6	948.5900	4.40	35.84	40.24	46.00	-5.76	peak	104	162

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

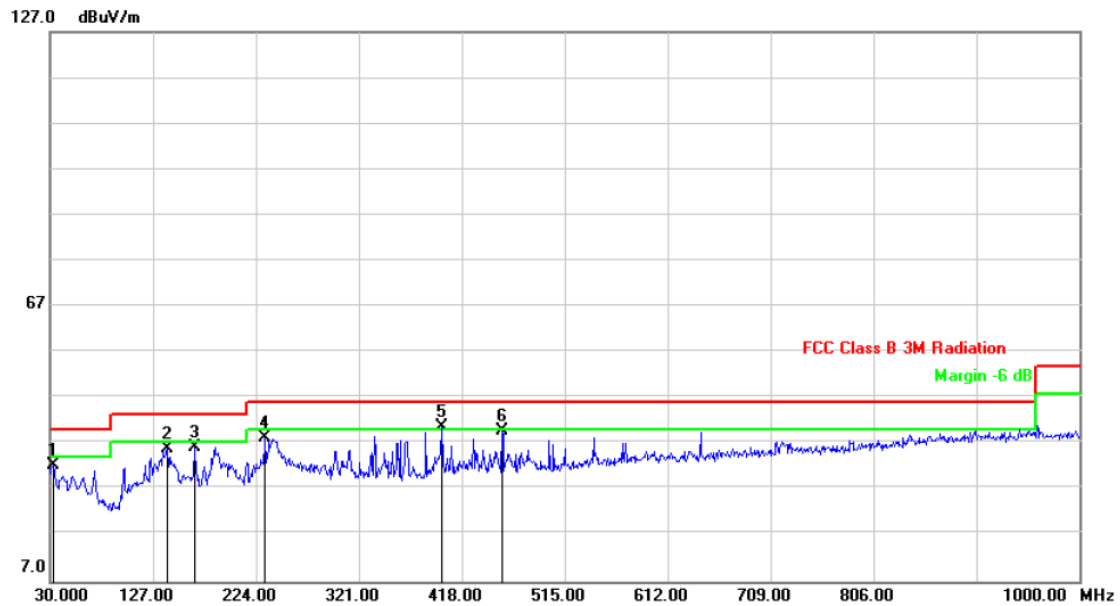


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	31.9400	-8.85	46.83	37.98	40.00	-2.02	peak	107	168
2	99.8400	-13.09	50.72	37.63	43.50	-5.87	peak	107	168
3	136.7000	-9.04	48.05	39.01	43.50	-4.49	peak	107	168
4	165.8000	-8.41	45.89	37.48	43.50	-6.02	peak	107	168
5	903.9700	3.74	36.13	39.87	46.00	-6.13	peak	107	168
6	969.9300	4.51	36.40	40.91	54.00	-13.09	peak	107	168

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



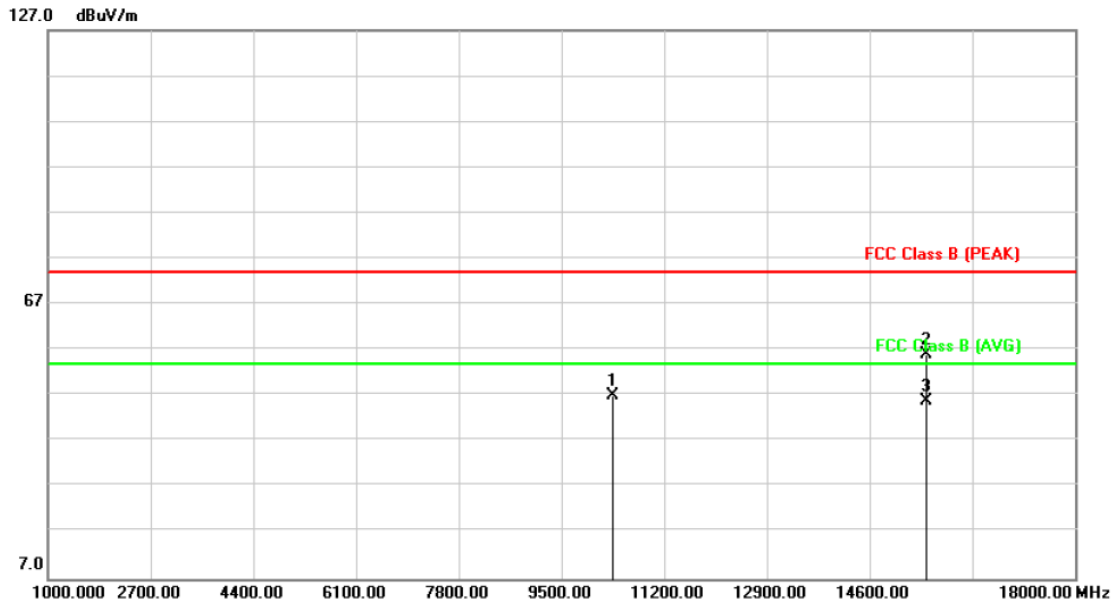
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9100	-8.79	41.12	32.33	40.00	-7.67	peak	104	163
2	140.5800	-8.67	44.67	36.00	43.50	-7.50	peak	104	163
3	165.8000	-8.41	44.68	36.27	43.50	-7.23	peak	104	163
4	232.7300	-9.98	48.35	38.37	46.00	-7.63	peak	104	163
5	399.5700	-4.68	45.46	40.78	46.00	-5.22	peak	104	163
6	455.8300	-3.32	43.29	39.97	46.00	-6.03	peak	104	163

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



5.7. Test Result and Data (Above 1GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

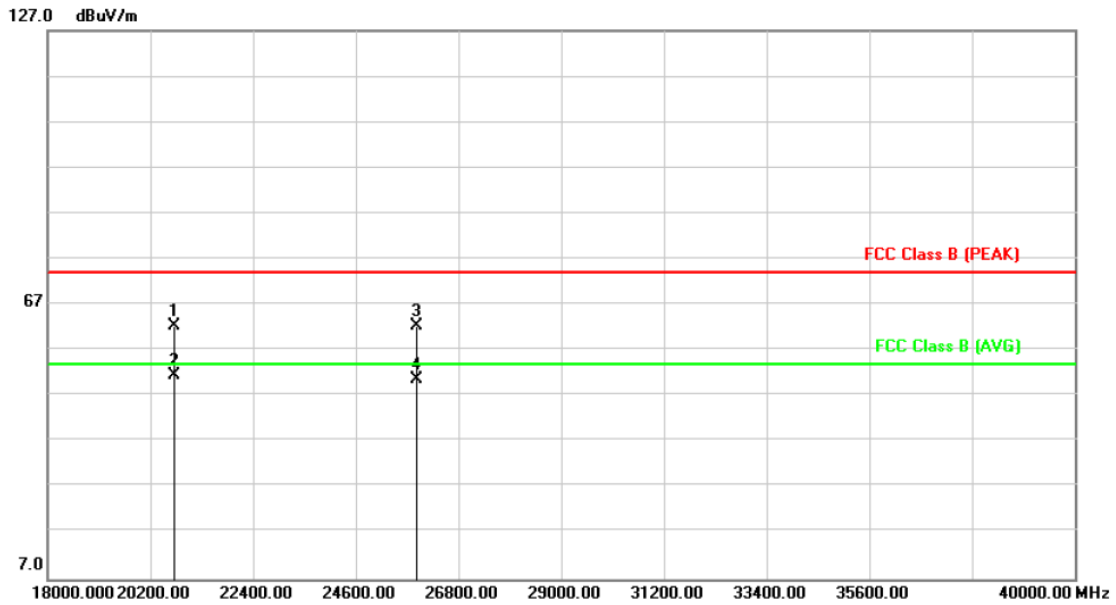


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	-6.95	53.93	46.98	74.00	-27.02	peak	107	165
2	15540.000	-1.69	57.74	56.05	74.00	-17.95	peak	107	165
3	15540.000	-1.69	47.66	45.97	54.00	-8.03	AVG	107	165

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

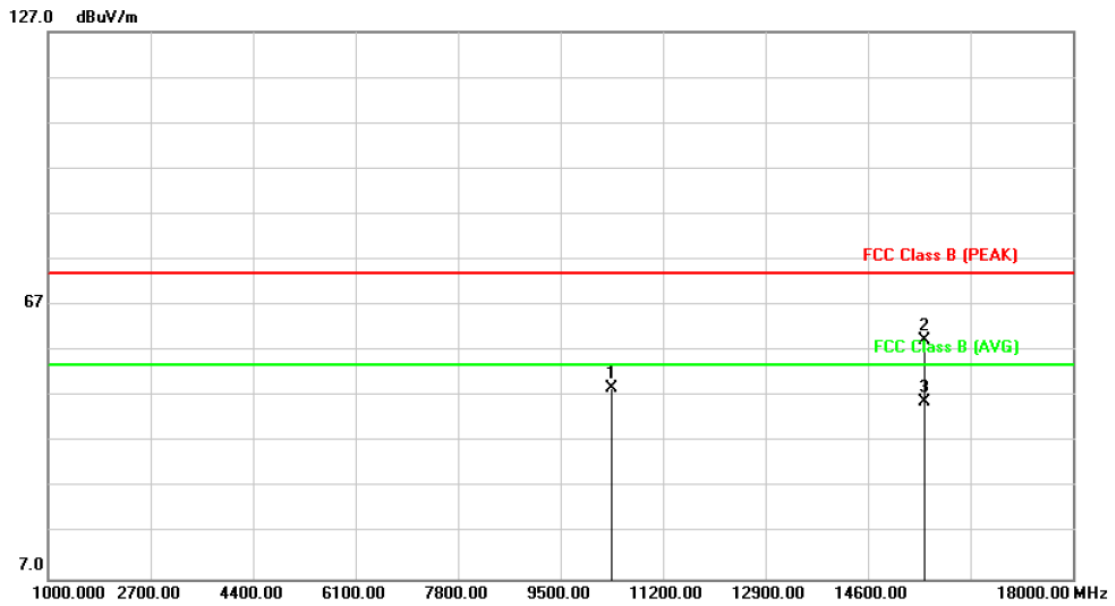


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20720.000	1.99	60.40	62.39	74.00	-11.61	peak	102	163
2	20720.000	1.99	49.49	51.48	54.00	-2.52	AVG	102	163
3	25900.000	1.94	60.44	62.38	74.00	-11.62	peak	102	163
4	25900.000	1.94	48.72	50.66	54.00	-3.34	AVG	102	163

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



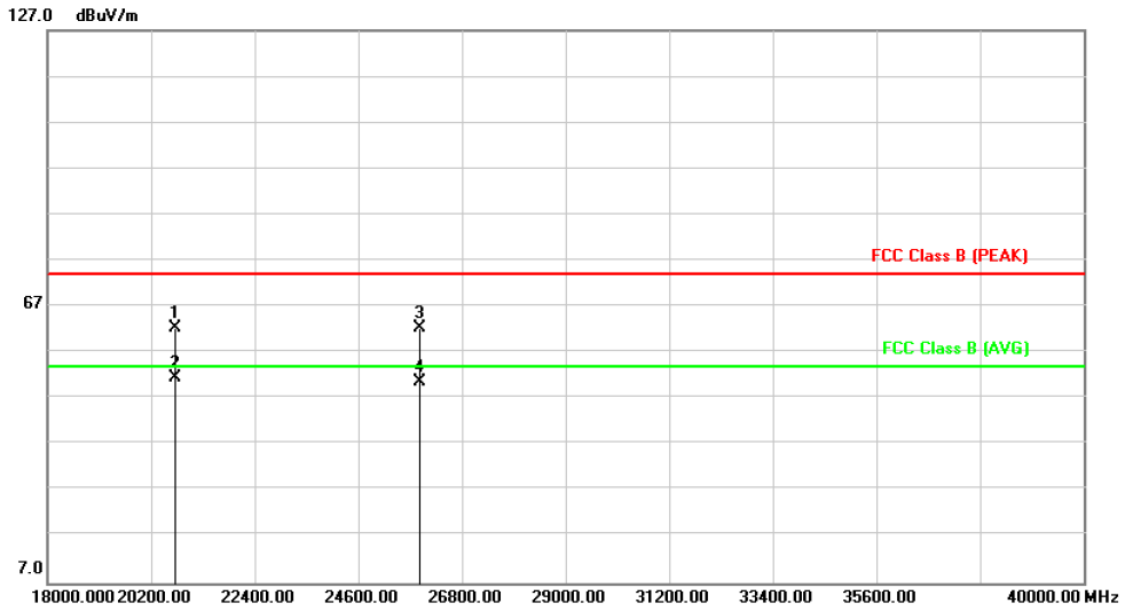
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	-6.95	55.90	48.95	74.00	-25.05	peak	104	165
2	15540.000	-1.69	61.14	59.45	74.00	-14.55	peak	104	165
3	15540.000	-1.69	47.65	45.96	54.00	-8.04	AVG	104	165

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

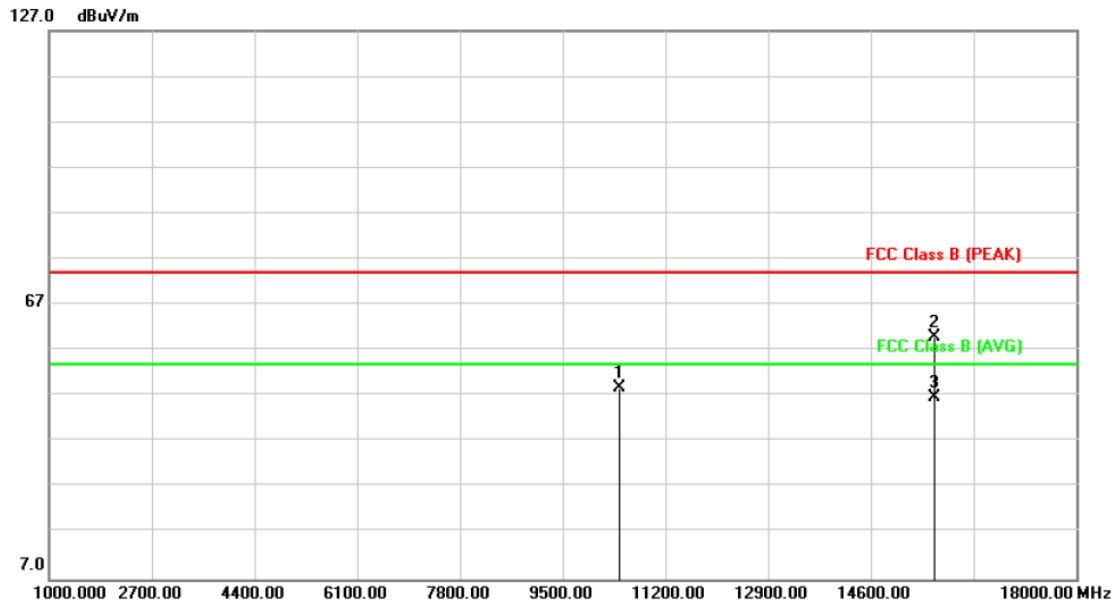


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20720.000	1.99	60.22	62.21	74.00	-11.79	peak	105	171
2	20720.000	1.99	49.50	51.49	54.00	-2.51	AVG	105	171
3	25900.000	1.94	60.33	62.27	74.00	-11.73	peak	105	171
4	25900.000	1.94	48.75	50.69	54.00	-3.31	AVG	105	171

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



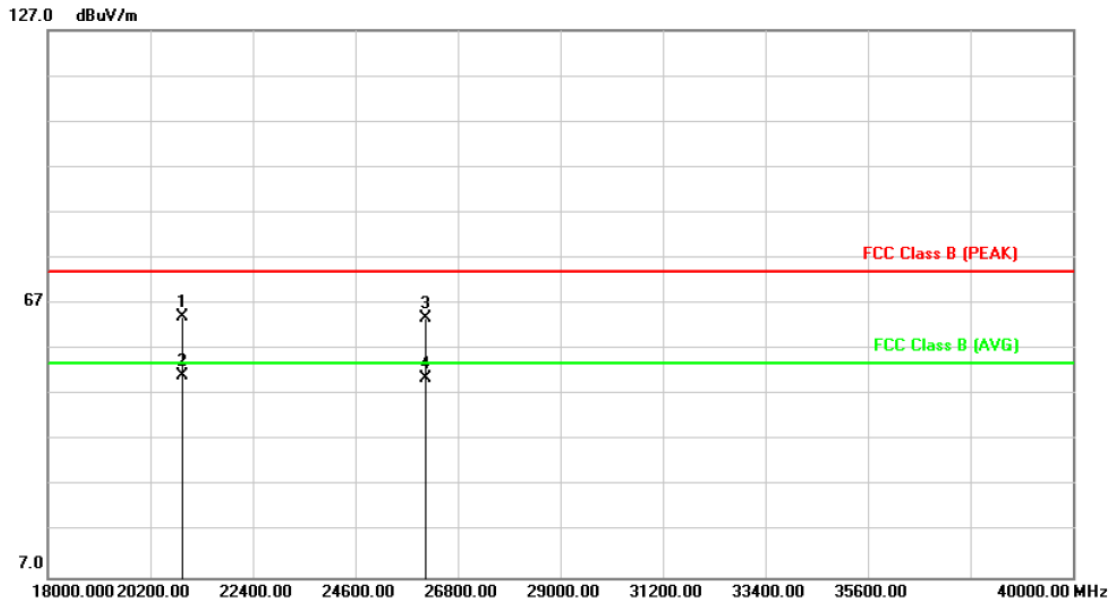
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	-7.09	55.83	48.74	74.00	-25.26	peak	103	184
2	15660.000	-1.38	61.20	59.82	74.00	-14.18	peak	103	184
3	15660.000	-1.38	47.99	46.61	54.00	-7.39	AVG	103	184

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

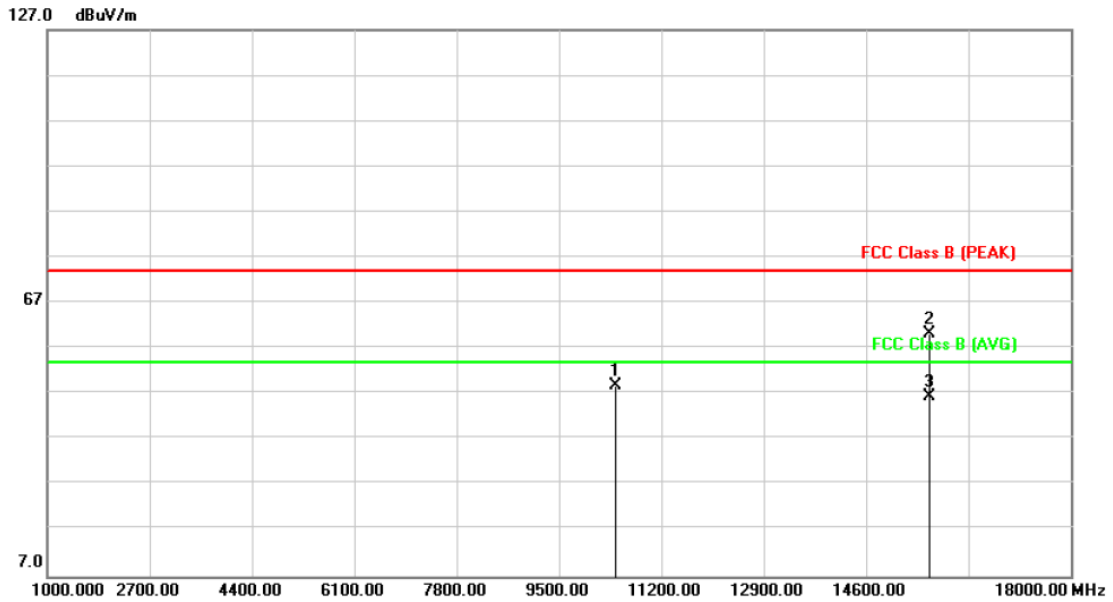


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20880.000	2.22	61.90	64.12	74.00	-9.88	peak	107	165
2	20880.000	2.22	48.89	51.11	54.00	-2.89	AVG	107	165
3	26100.000	1.81	61.92	63.73	74.00	-10.27	peak	107	165
4	26100.000	1.81	48.98	50.79	54.00	-3.21	AVG	107	165

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

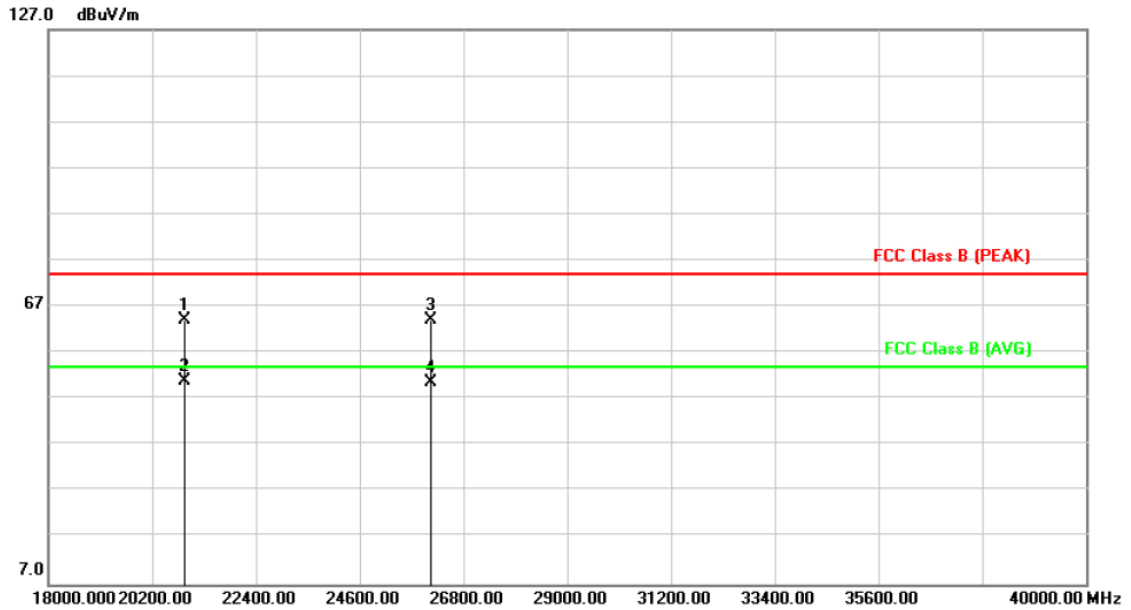


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	-7.09	55.95	48.86	74.00	-25.14	peak	105	170
2	15660.000	-1.38	61.71	60.33	74.00	-13.67	peak	105	170
3	15660.000	-1.38	47.95	46.57	54.00	-7.43	AVG	105	170

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

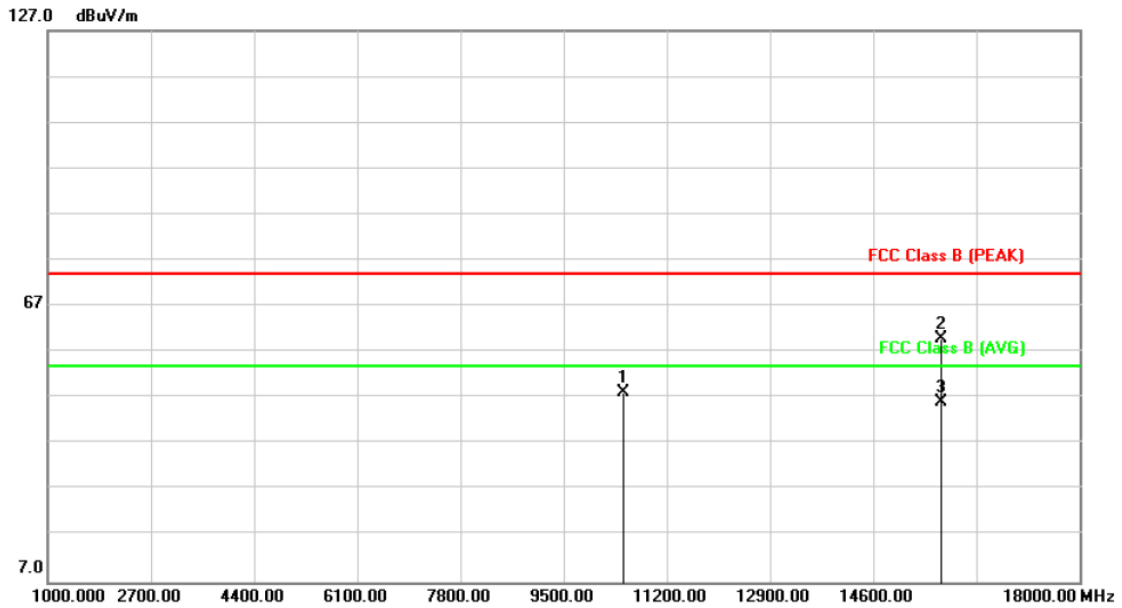


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20880.000	2.22	61.93	64.15	74.00	-9.85	peak	110	166
2	20880.000	2.22	48.84	51.06	54.00	-2.94	AVG	110	166
3	26100.000	1.81	62.20	64.01	74.00	-9.99	peak	110	166
4	26100.000	1.81	48.97	50.78	54.00	-3.22	AVG	110	166

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

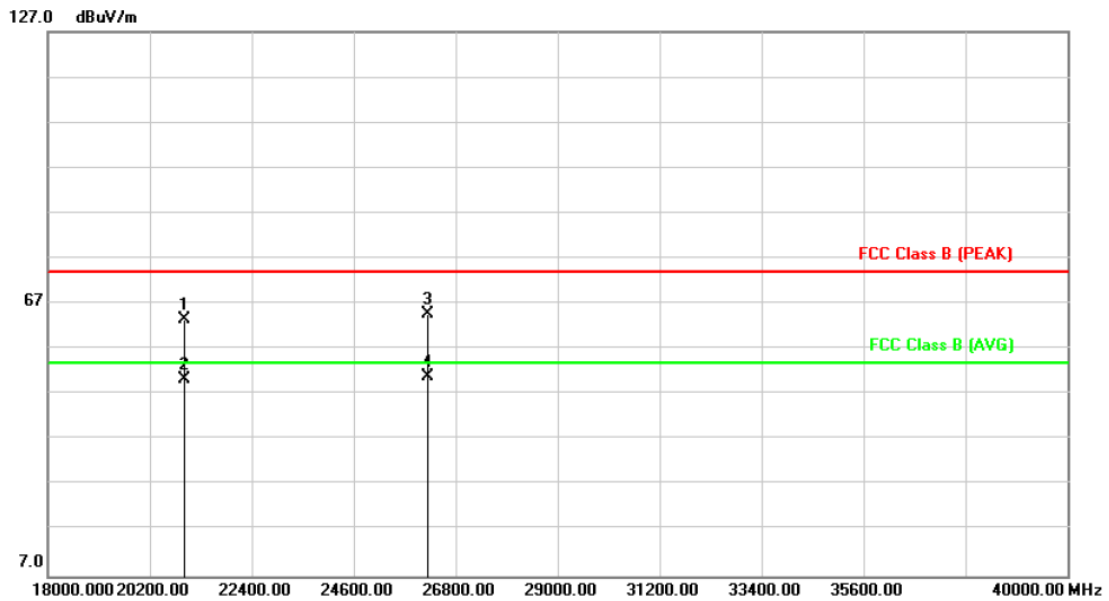


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	-7.15	55.54	48.39	74.00	-25.61	peak	101	177
2	15720.000	-1.22	61.20	59.98	74.00	-14.02	peak	101	177
3	15720.000	-1.22	47.51	46.29	54.00	-7.71	AVG	101	177

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

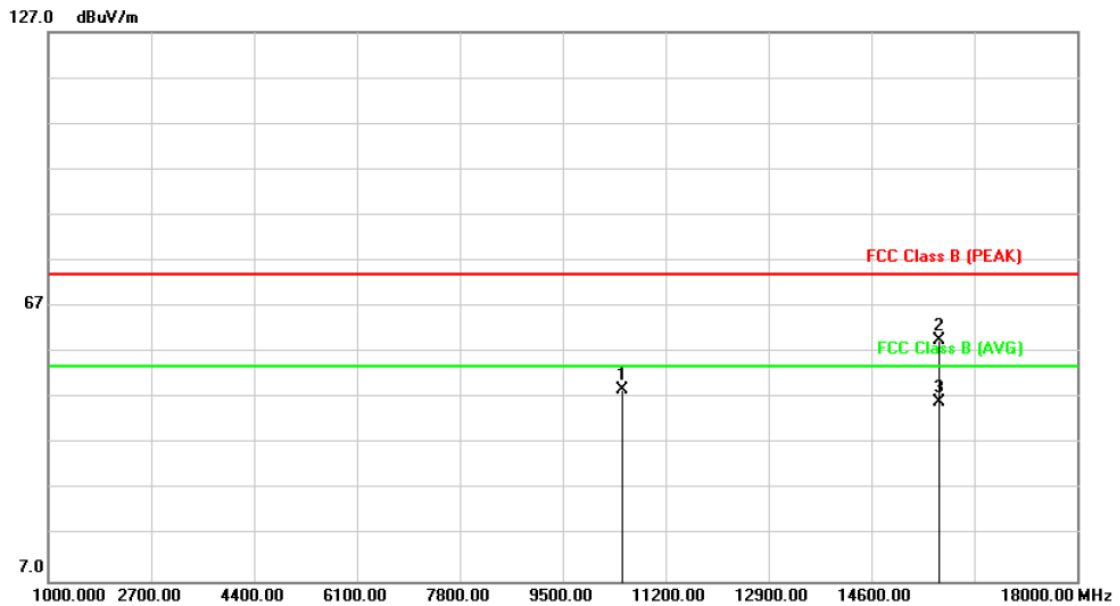


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20960.000	2.33	61.10	63.43	74.00	-10.57	peak	108	176
2	20960.000	2.33	47.98	50.31	54.00	-3.69	AVG	108	176
3	26200.000	1.81	63.05	64.86	74.00	-9.14	peak	108	176
4	26200.000	1.81	49.28	51.09	54.00	-2.91	AVG	108	176

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

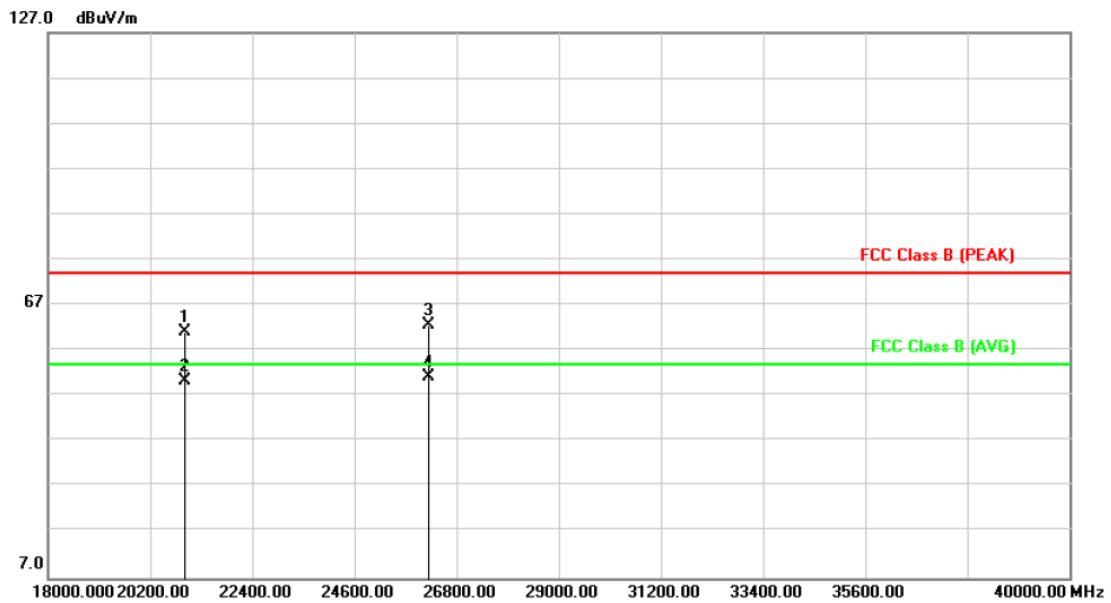


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	-7.15	56.04	48.89	74.00	-25.11	peak	106	188
2	15720.000	-1.22	60.75	59.53	74.00	-14.47	peak	106	188
3	15720.000	-1.22	47.48	46.26	54.00	-7.74	AVG	106	188

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

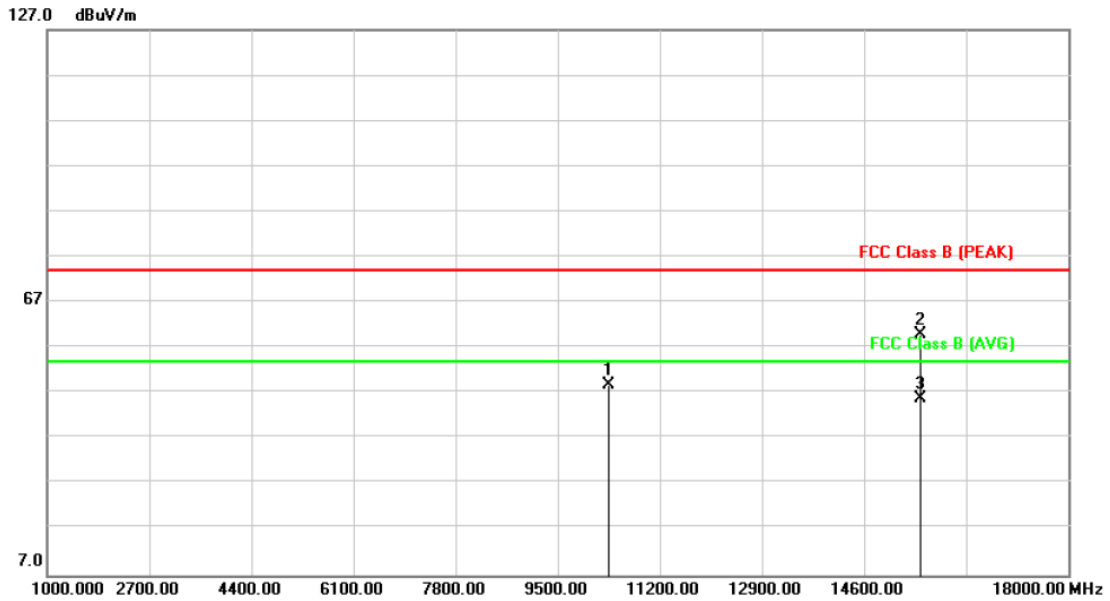


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20960.000	2.33	58.94	61.27	74.00	-12.73	peak	104	185
2	20960.000	2.33	48.02	50.35	54.00	-3.65	AVG	104	185
3	26200.000	1.81	60.93	62.74	74.00	-11.26	peak	104	185
4	26200.000	1.81	49.31	51.12	54.00	-2.88	AVG	104	185

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

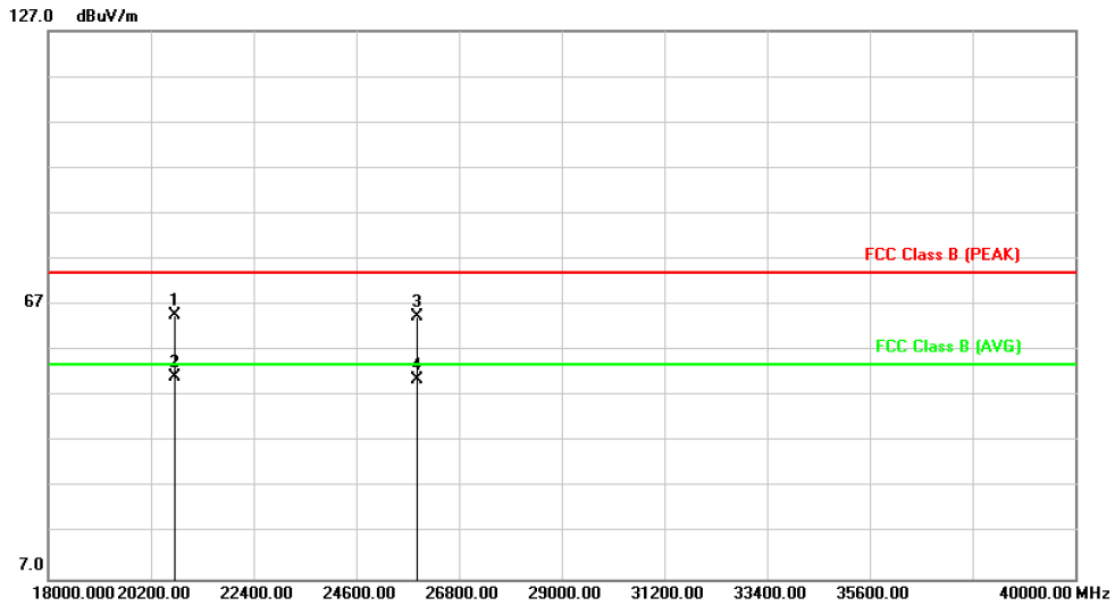


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	-6.95	55.92	48.97	74.00	-25.03	peak	102	176
2	15540.000	-1.69	61.54	59.85	74.00	-14.15	peak	102	176
3	15540.000	-1.69	47.60	45.91	54.00	-8.09	AVG	102	176

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

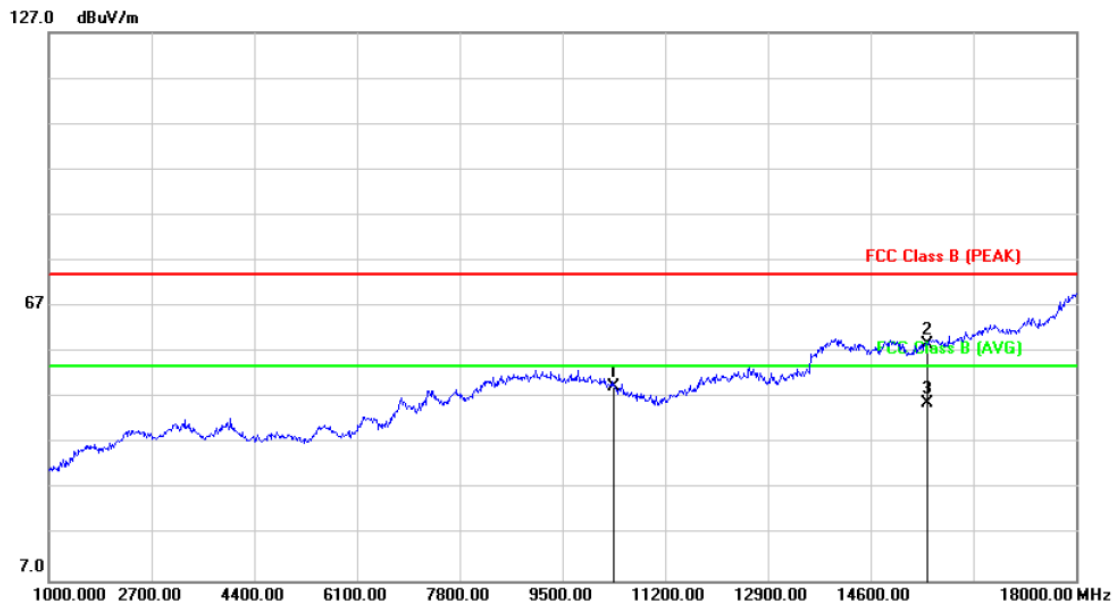


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20720.000	1.99	62.65	64.64	74.00	-9.36	peak	103	175
2	20720.000	1.99	49.41	51.40	54.00	-2.60	AVG	103	175
3	25900.000	1.94	62.46	64.40	74.00	-9.60	peak	103	175
4	25900.000	1.94	48.66	50.60	54.00	-3.40	AVG	103	175

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

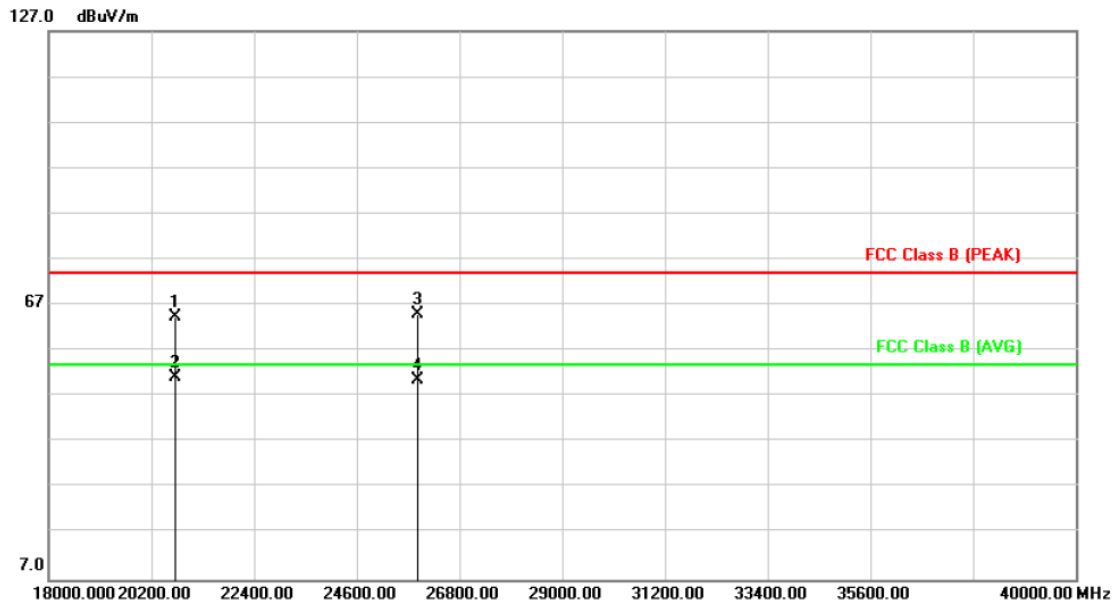


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	-6.95	56.32	49.37	74.00	-24.63	peak	105	164
2	15540.000	-1.69	60.34	58.65	74.00	-15.35	peak	105	164
3	15540.000	-1.69	47.56	45.87	54.00	-8.13	AVG	105	164

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

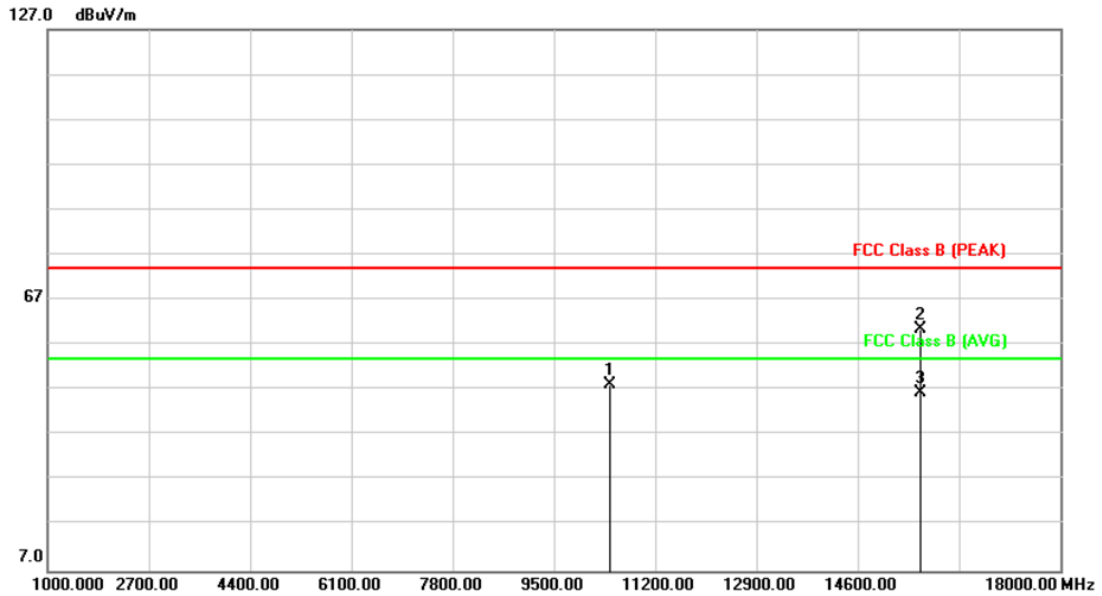


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20720.000	1.99	62.54	64.53	74.00	-9.47	peak	108	164
2	20720.000	1.99	49.38	51.37	54.00	-2.63	AVG	108	164
3	25900.000	1.94	63.25	65.19	74.00	-8.81	peak	108	164
4	25900.000	1.94	48.70	50.64	54.00	-3.36	AVG	108	164

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

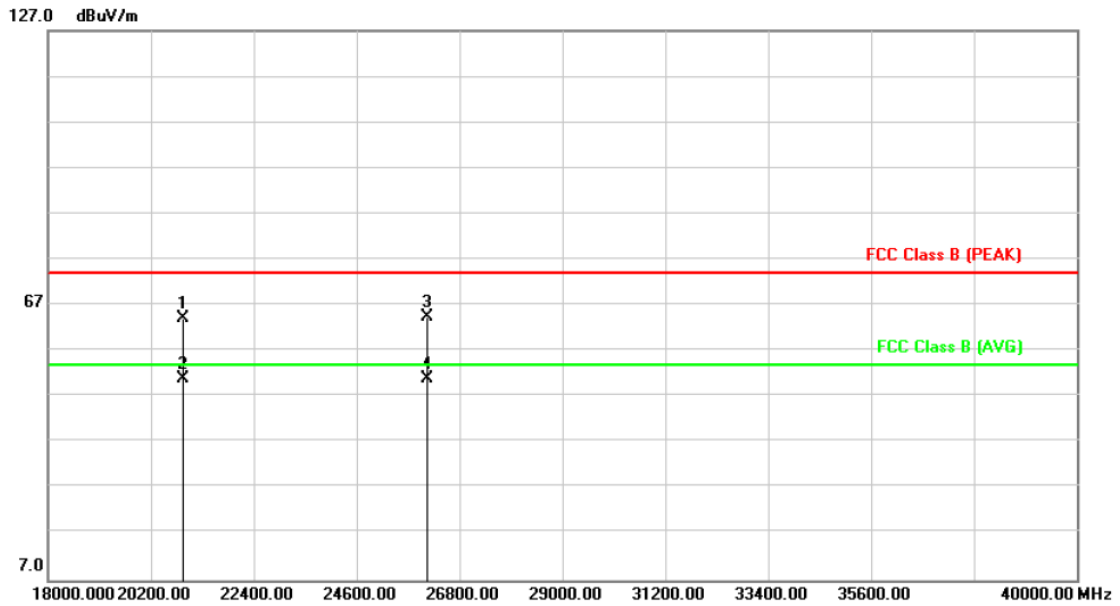


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	-7.09	55.28	48.19	74.00	-25.81	peak	102	170
2	15660.000	-1.38	61.85	60.47	74.00	-13.53	peak	102	170
3	15660.000	-1.38	47.88	46.50	54.00	-7.50	AVG	102	170

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

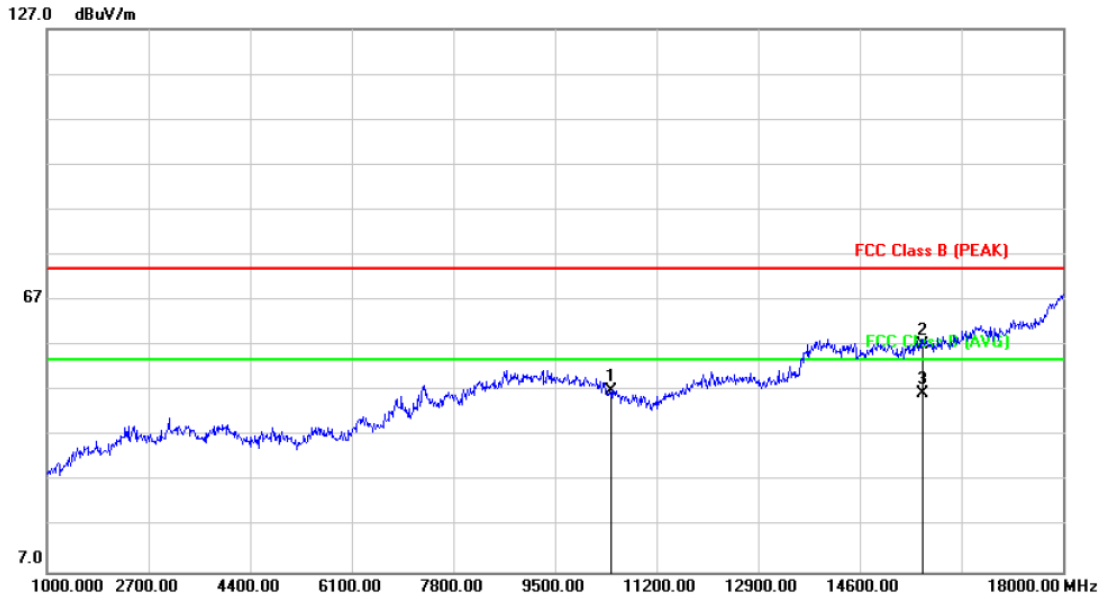


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20880.000	2.22	62.07	64.29	74.00	-9.71	peak	107	162
2	20880.000	2.22	48.77	50.99	54.00	-3.01	AVG	107	162
3	26100.000	1.81	62.68	64.49	74.00	-9.51	peak	107	162
4	26100.000	1.81	49.03	50.84	54.00	-3.16	AVG	107	162

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

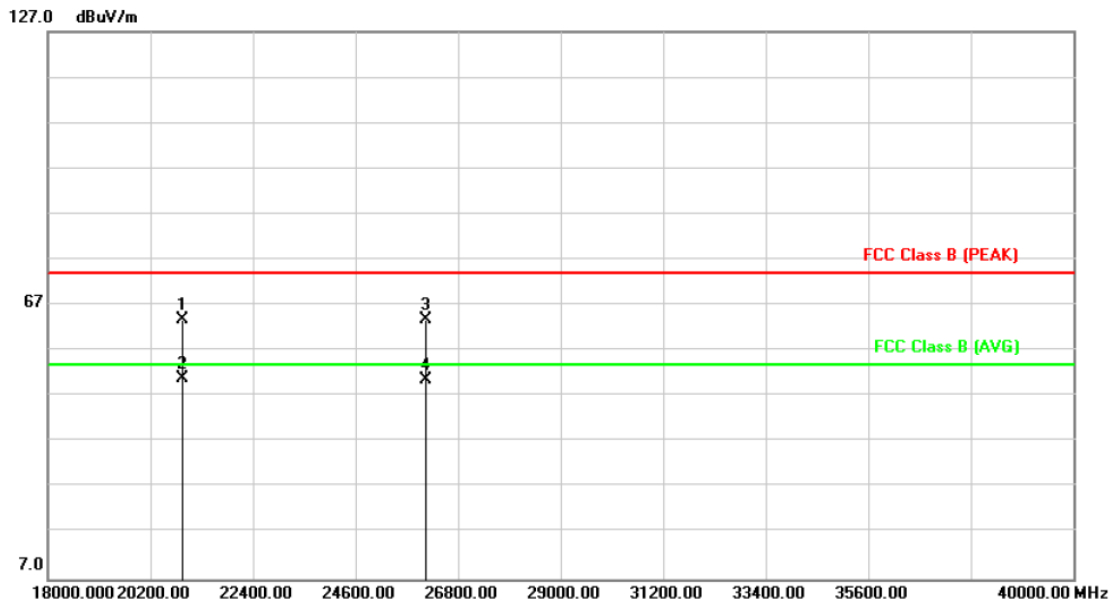


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	-7.09	54.15	47.06	74.00	-26.94	peak	104	159
2	15660.000	-1.38	58.50	57.12	74.00	-16.88	peak	104	159
3	15660.000	-1.38	47.91	46.53	54.00	-7.47	AVG	104	159

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

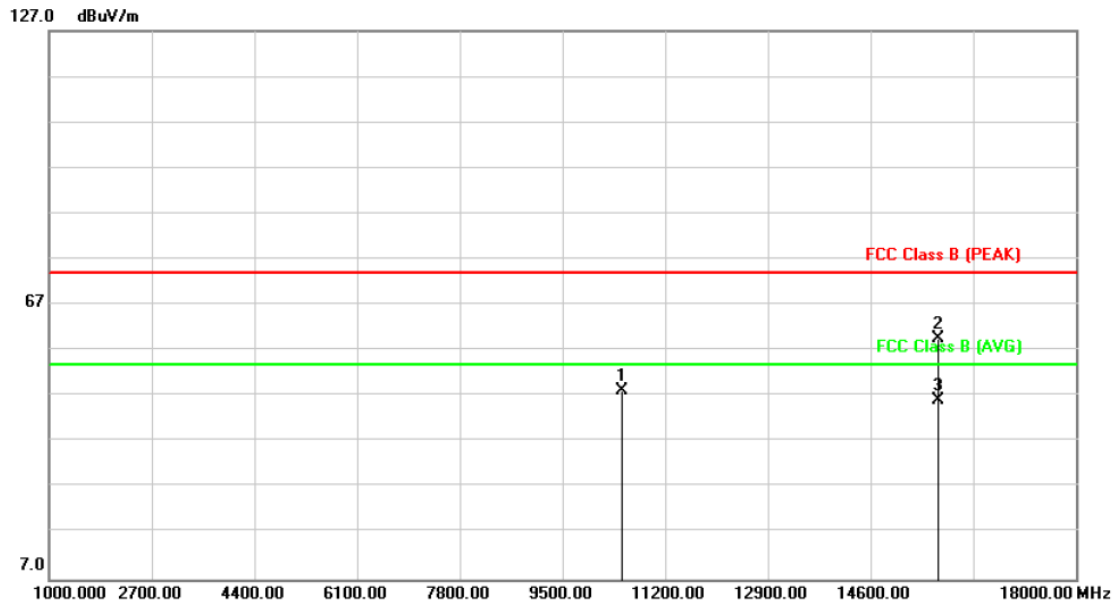


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20880.000	2.22	61.59	63.81	74.00	-10.19	peak	101	178
2	20880.000	2.22	48.75	50.97	54.00	-3.03	AVG	101	178
3	26100.000	1.81	62.05	63.86	74.00	-10.14	peak	101	178
4	26100.000	1.81	48.96	50.77	54.00	-3.23	AVG	101	178

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

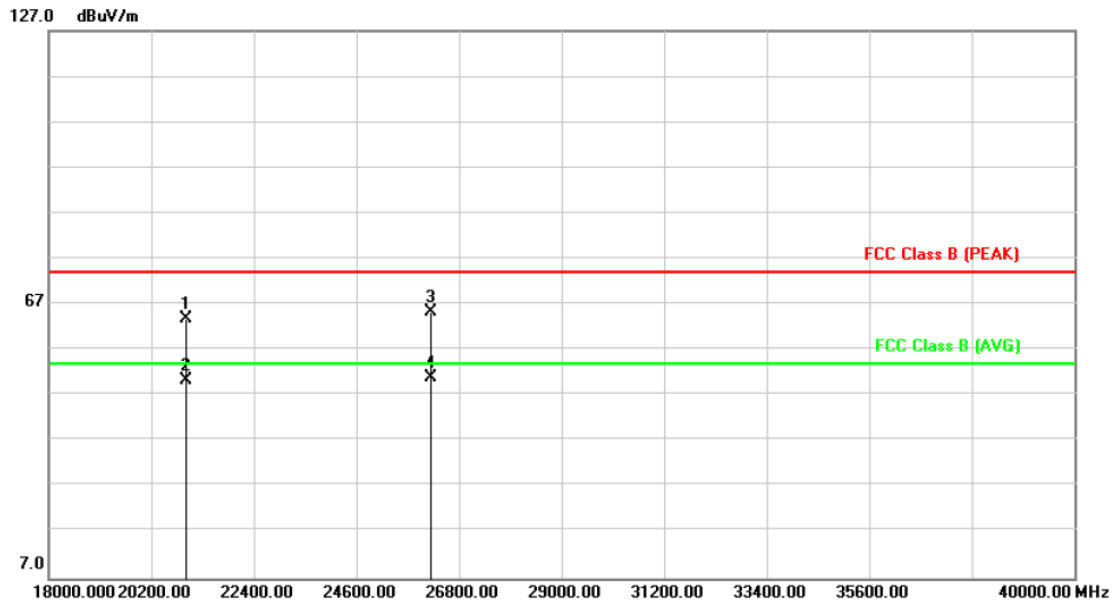


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	-7.15	55.55	48.40	74.00	-25.60	peak	103	165
2	15720.000	-1.22	60.75	59.53	74.00	-14.47	peak	103	165
3	15720.000	-1.22	47.41	46.19	54.00	-7.81	AVG	103	165

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



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa

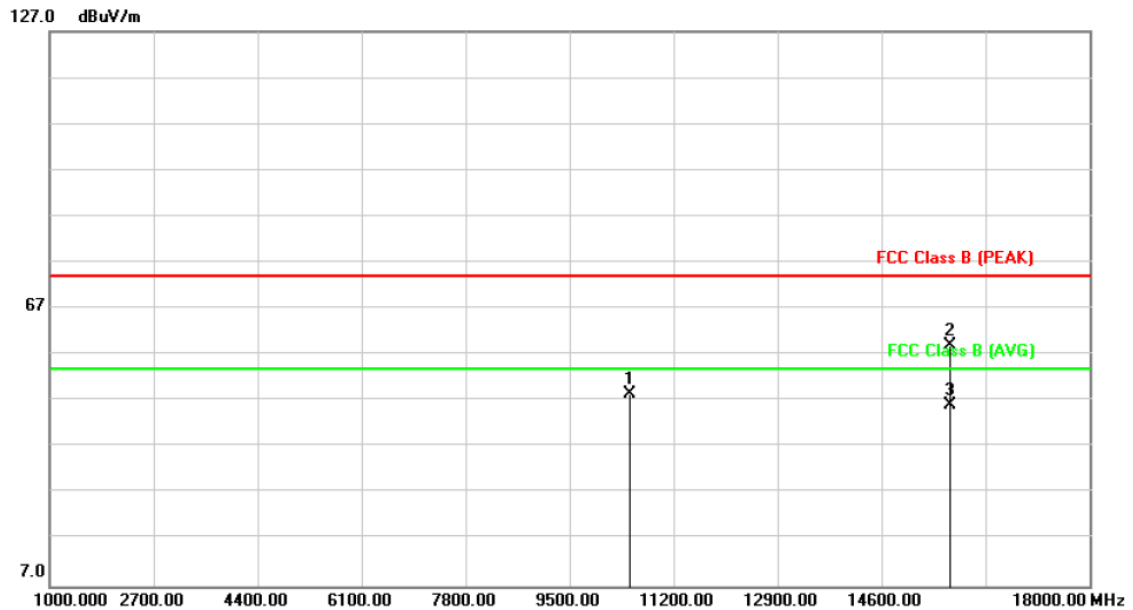


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20960.000	2.33	61.54	63.87	74.00	-10.13	peak	100	174
2	20960.000	2.33	48.00	50.33	54.00	-3.67	AVG	100	174
3	26200.000	1.81	63.50	65.31	74.00	-8.69	peak	100	174
4	26200.000	1.81	49.27	51.08	54.00	-2.92	AVG	100	174

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



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



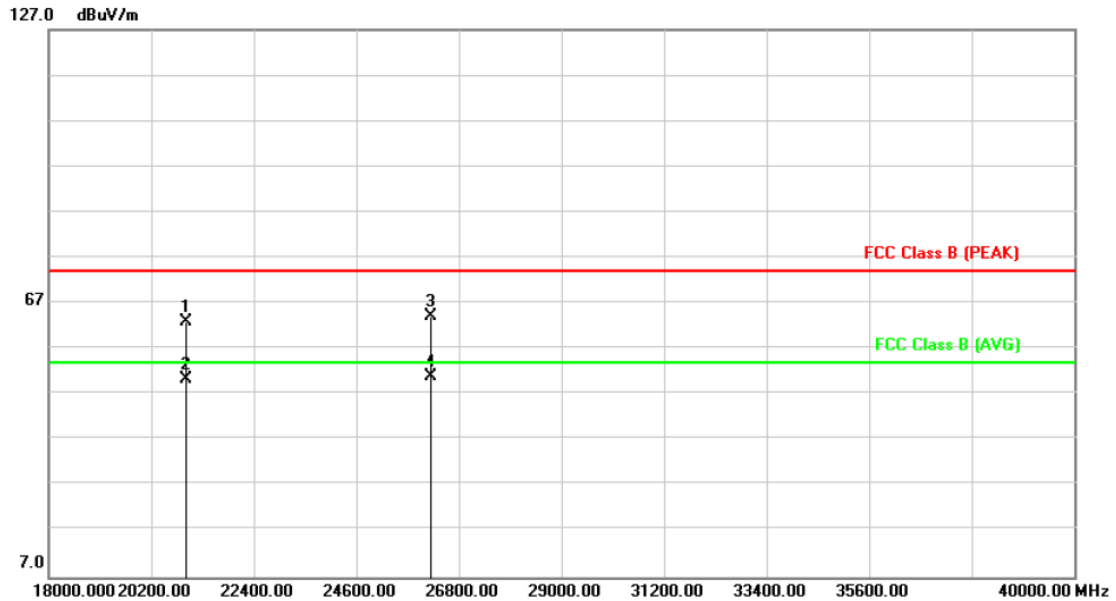
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	-7.15	55.82	48.67	74.00	-25.33	peak	101	174
2	15720.000	-1.22	60.15	58.93	74.00	-15.07	peak	101	174
3	15720.000	-1.22	47.49	46.27	54.00	-7.73	AVG	100	174

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 26 °C
Test Date	: Sep. 21, 2014	Humidity	: 50 %
Memo	:	Atmospheric Pressure	: 1009 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	20960.000	2.33	60.74	63.07	74.00	-10.93	peak	106	183
2	20960.000	2.33	48.00	50.33	54.00	-3.67	AVG	106	183
3	26200.000	1.81	62.35	64.16	74.00	-9.84	peak	106	183
4	26200.000	1.81	49.23	51.04	54.00	-2.96	AVG	106	183

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

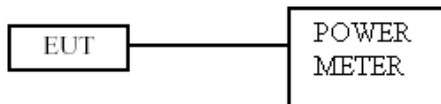


6. Peak Transmit Power

6.1. Test Procedure

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.

6.2. Test Setup Layout



6.3. 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



6.4. Test Result and Data

Test Date: Sep. 30, 2014

Temperature: 25°C

Atmospheric pressure: 1056 hPa

Humidity: 52%

Modulation Standard: IEEE 802.11a (6Mbps)

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)	26dB Occupied Bandwidth (MHz)
36	5180	9.18	8.28	23.0
44	5220	9.16	8.24	23.4
48	5240	9.40	8.71	23.4

Modulation Standard: IEEE 802.11an, HT20 (6.5Mbps)

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)	26dB Occupied Bandwidth (MHz)
36	5180	8.87	7.71	23.4
44	5220	8.81	7.60	23.5
48	5240	9.07	8.07	23.9

Limit:

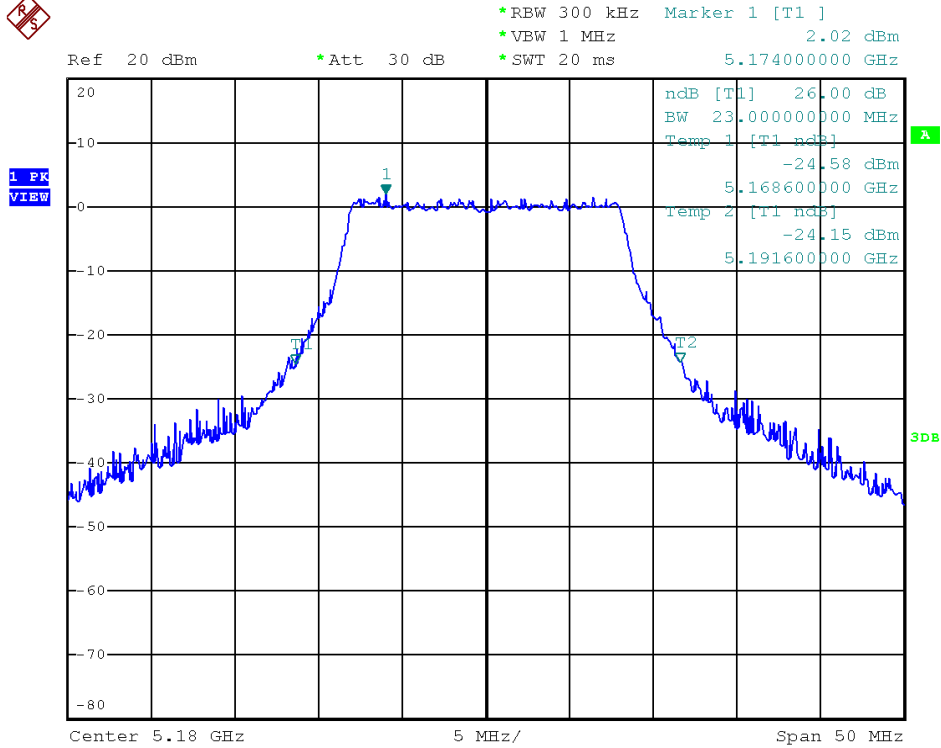
Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW(17dBm) or 4dBm + 10logB
5.25 – 5.35 GHz	The lesser of 250mW(24dBm) or 11dBm + 10logB
5.47 – 5.725 GHz	The lesser of 250mW(24dBm) or 11dBm + 10logB
5.725 – 5.825 GHz	The lesser of 1W(30dBm) or 17dBm + 10logB

B is the 26dB emission bandwidth in MHz.

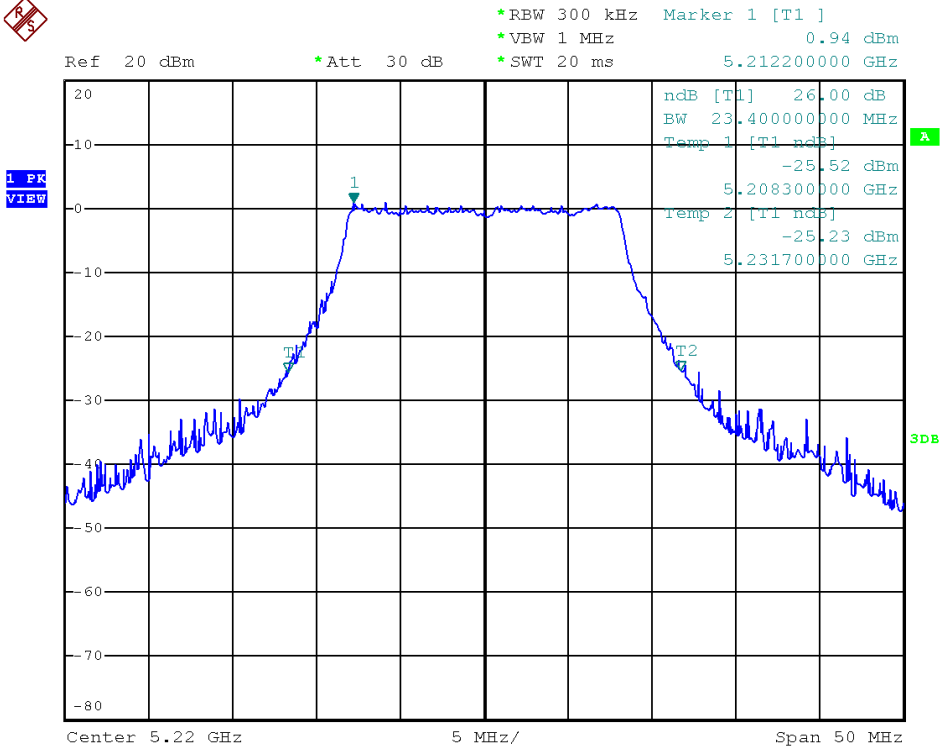


26dB Occupied Bandwidth

Modulation Standard: 802.11a (6Mbps)
Channel: 36



Modulation Standard: 802.11a (6Mbps)
Channel: 44

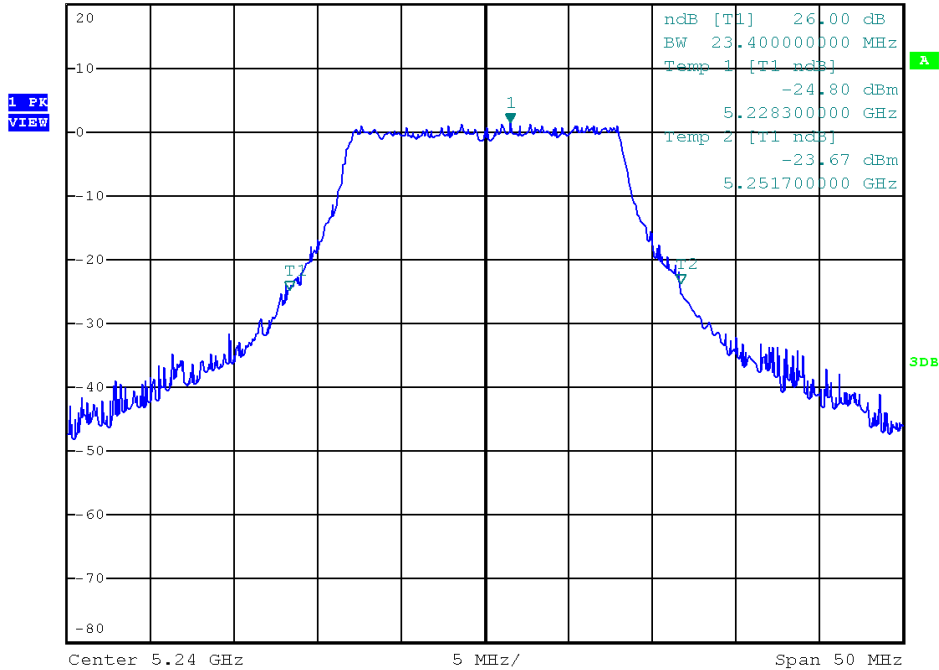




Modulation Standard: 802.11a (6Mbps)
Channel: 48



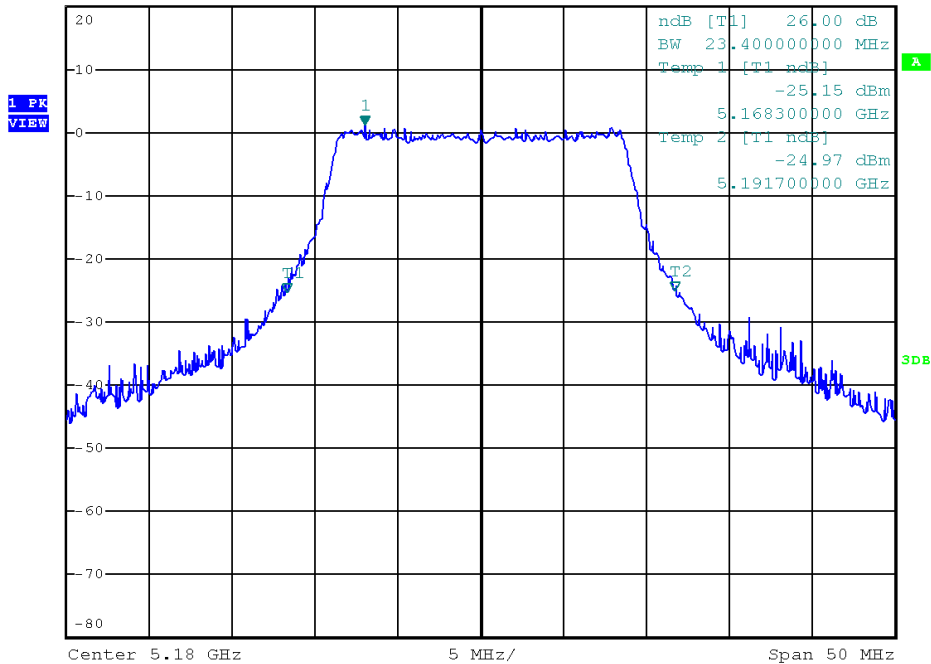
Ref 20 dBm *Att 30 dB *REW 300 kHz Marker 1 [T1] 1.59 dBm
 *VBW 1 MHz 5.241500000 GHz
 *SWT 20 ms



Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 36



Ref 20 dBm *Att 30 dB *REW 300 kHz Marker 1 [T1] 1.18 dBm
 *VBW 1 MHz 5.173000000 GHz
 *SWT 20 ms

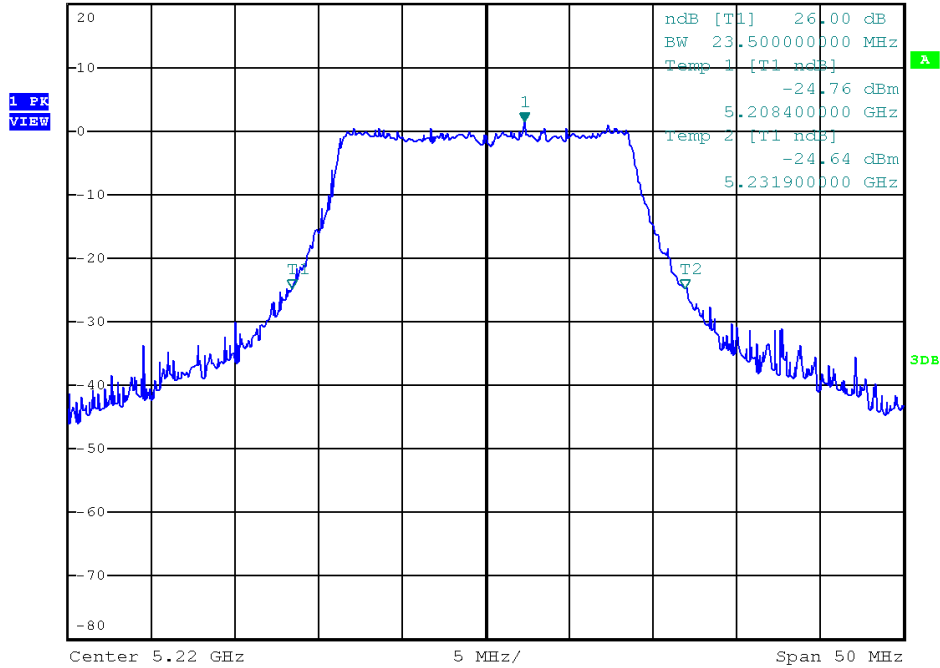




Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 44



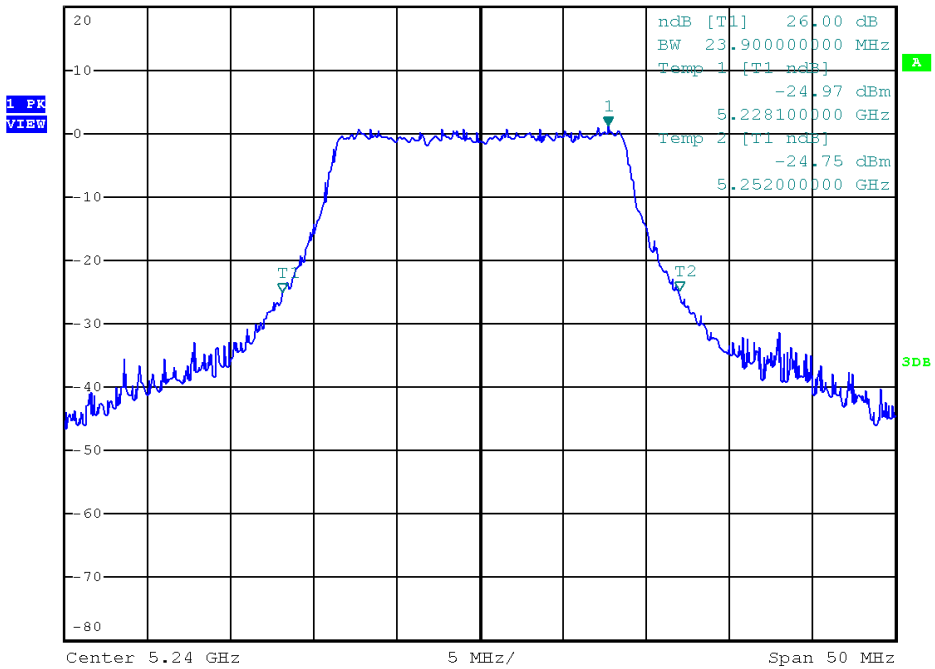
*RBW 300 kHz Marker 1 [T1]
*VBW 1 MHz 1.42 dBm
*Att 30 dB
*SWT 20 ms 5.222300000 GHz



Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 48



*RBW 300 kHz Marker 1 [T1]
*VBW 1 MHz 1.13 dBm
*Att 30 dB
*SWT 20 ms 5.247700000 GHz



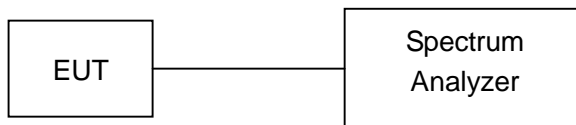


7. Peak Power Excursion

7.1. Test Procedure

1. The transmitter output was connected to the spectrum analyzer
2. Using Peak detector and max-hold function for Trace 1.
3. Set RBW of spectrum analyzer to 1 MHz and VBW to 3 MHz for Trace 1.
4. Set RBW of spectrum analyzer to 1 MHz and VBW to 3 MHz for Trace 2, Set detector mode to RMS, trace average 100 traces in power averaging mode.
5. The largest difference between Trace 1 and Trace 2 in any 1 MHz band on any frequency was recorded.

7.2. Test Setup Layout



7.3. 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

7.4. Test Result and Data

Test Date: Sep. 30, 2014

Temperature: 25°C

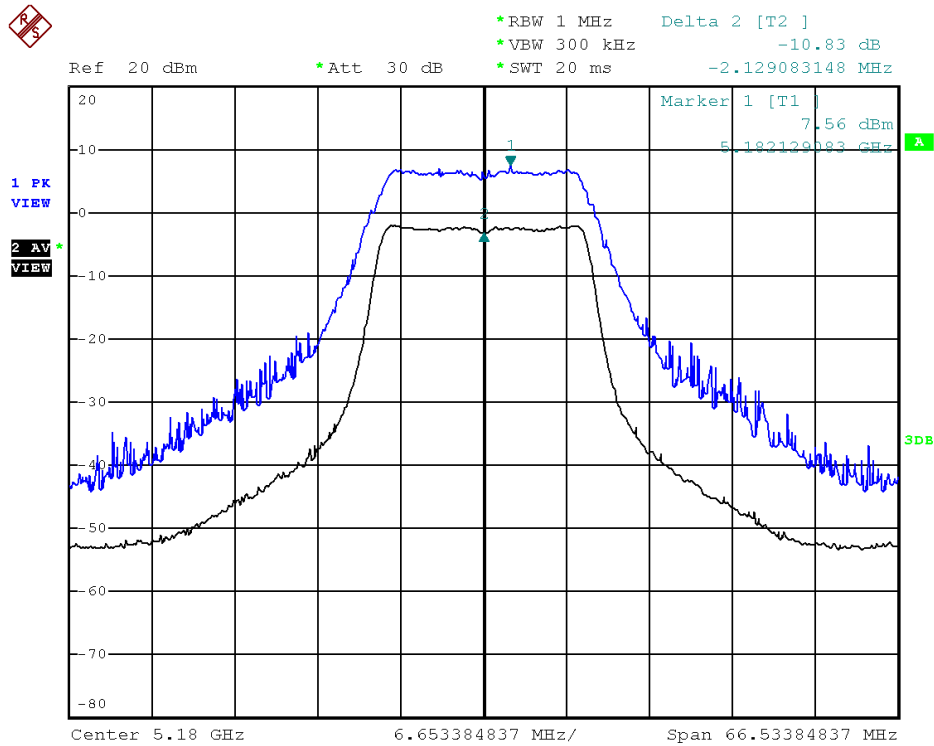
Atmospheric pressure: 1056 hPa

Humidity: 52%

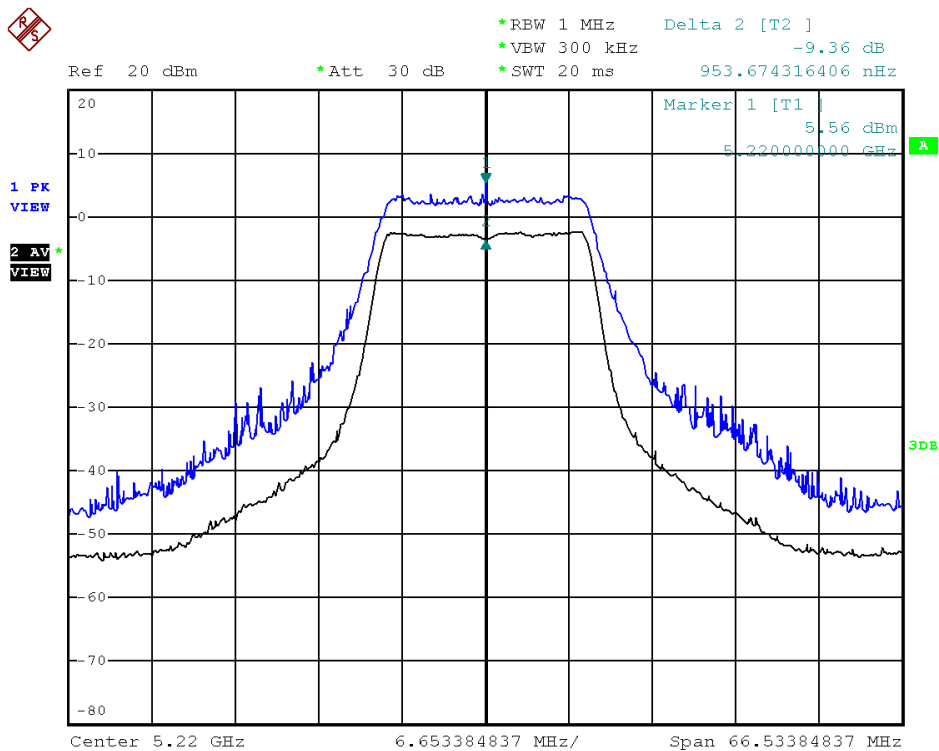
Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Limit (dB)
802.11a (6Mbps)	36	5180	10.83	13
	44	5220	9.36	13
	48	5240	7.46	13
802.11an HT20 (6.5Mbps)	36	5180	6.87	13
	44	5220	7.61	13
	48	5240	7.67	13



Modulation Standard: 802.11a (6Mbps)
Channel: 36

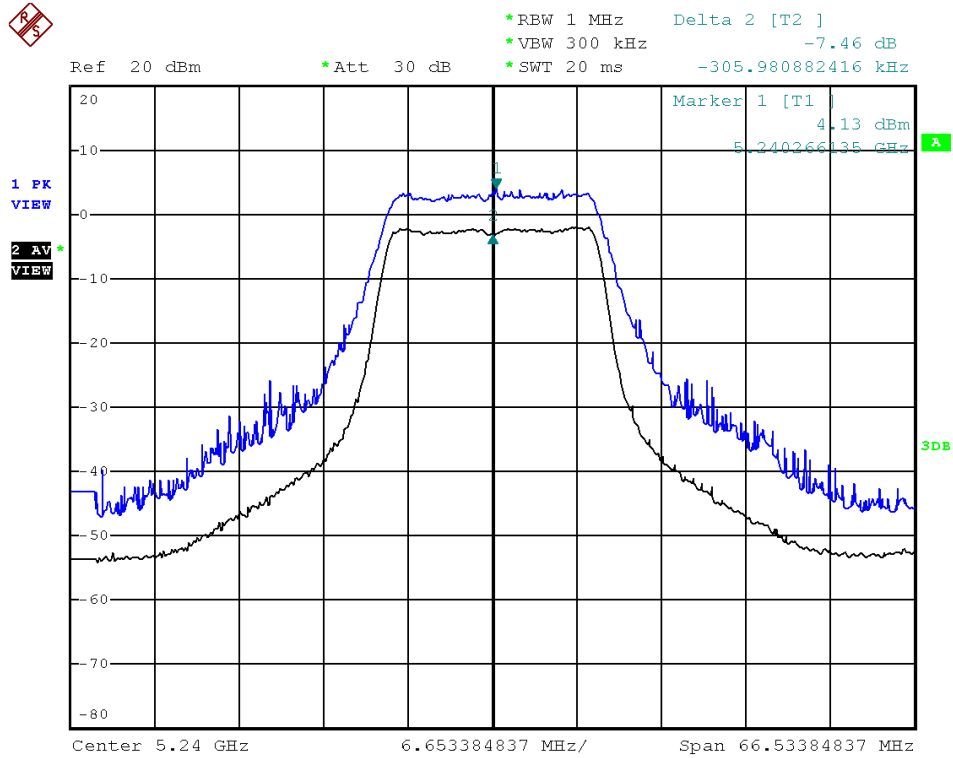


Modulation Standard: 802.11a (6Mbps)
Channel: 44

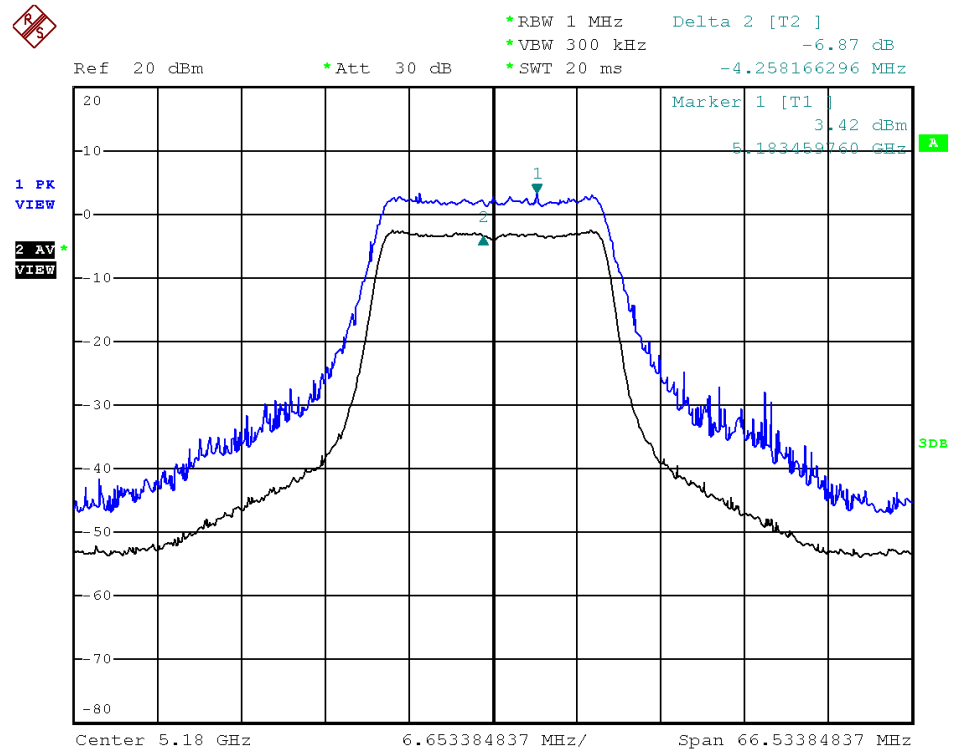




Modulation Standard: 802.11a (6Mbps)
Channel: 48

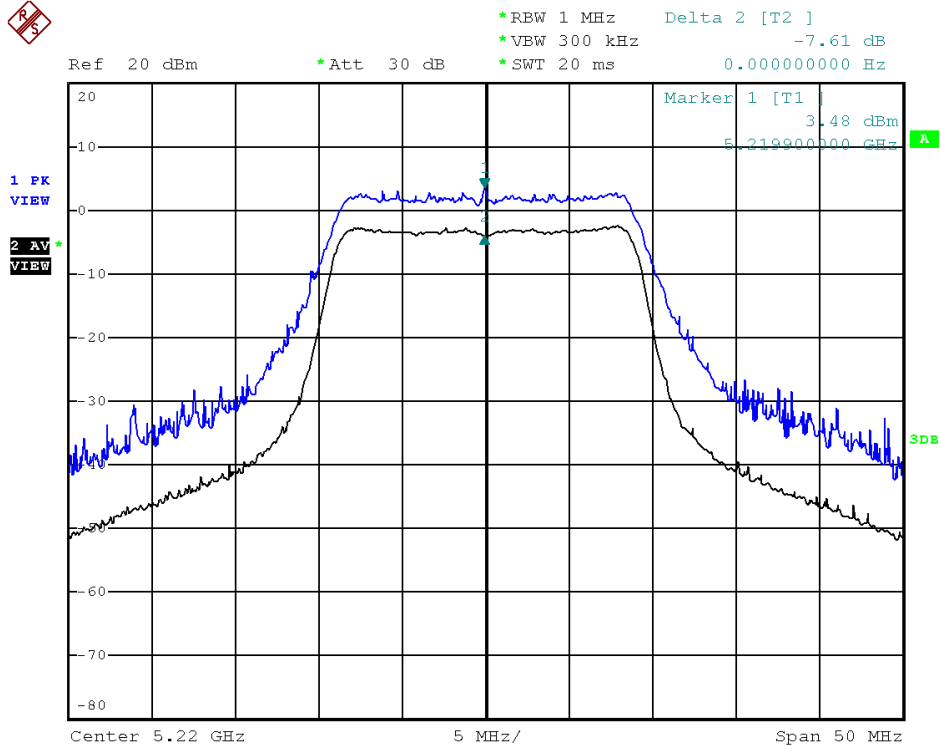


Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 36

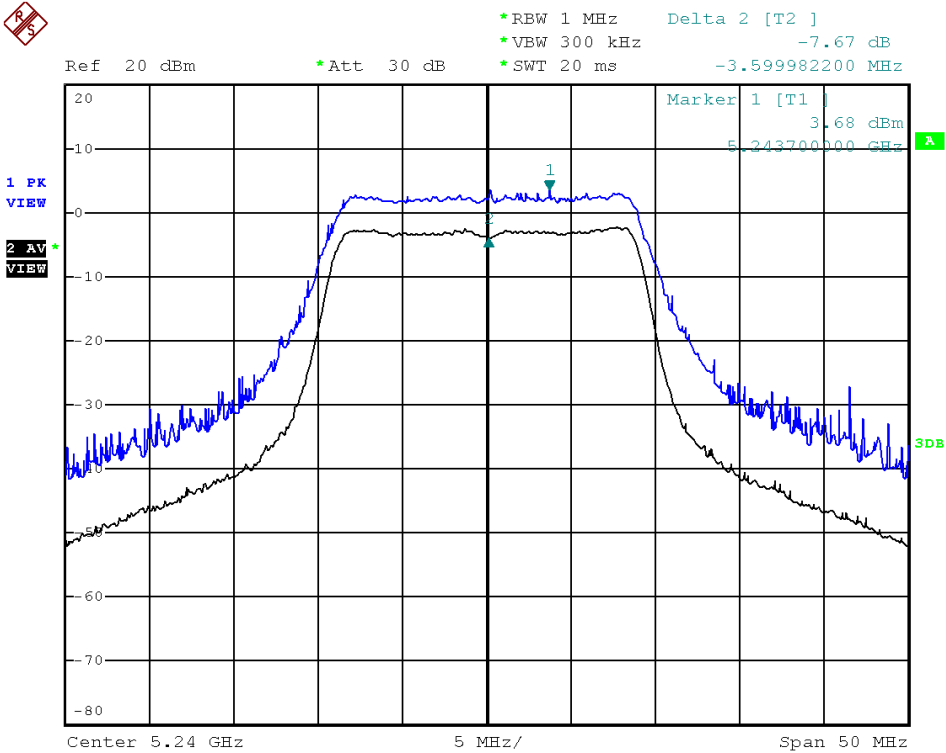




Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 44



Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 48



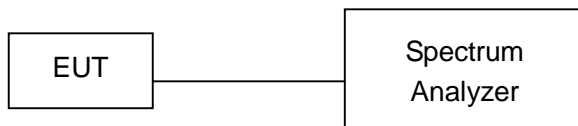


8. Peak Power Spectral Density

8.1. Test Procedure

1. The transmitter output was connected to spectrum analyzer.
2. Set RBW of spectrum analyzer to 1 MHz and VBW to 3 MHz, Set detector mode to RMS, trace average 100 traces in power averaging mode.
3. The Peak Power Spectral Density is the highest level found across the emission in any 1MHz Band

8.2. Test Setup Layout



8.3. 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

8.4. Test Result and Data

Test Date: Sep. 30, 2014

Temperature: 25°C

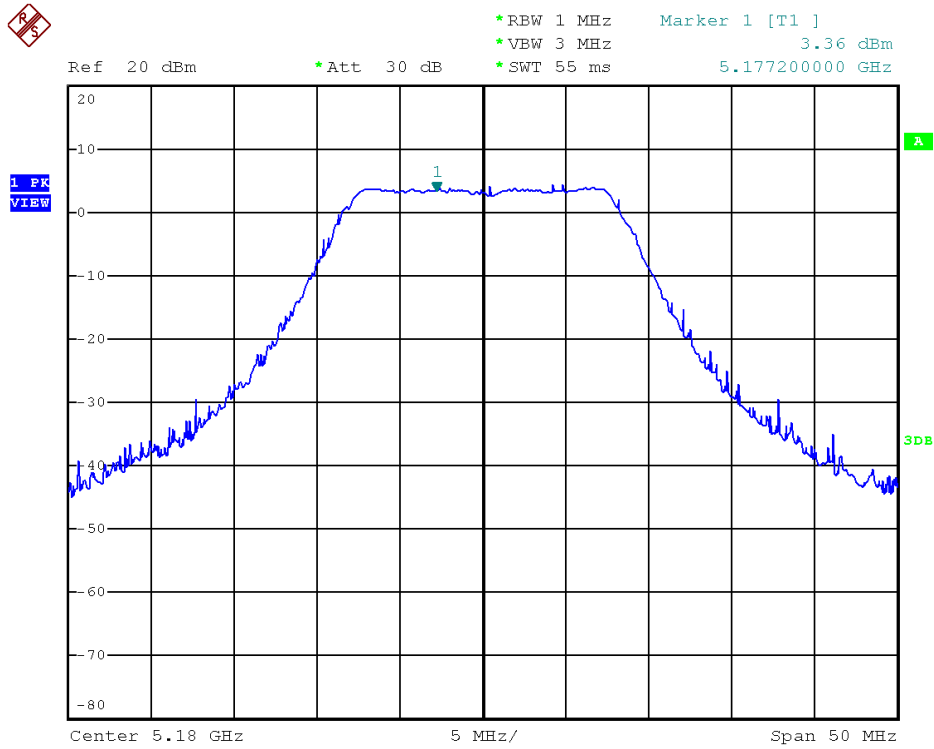
Atmospheric pressure: 1056 hPa

Humidity: 52%

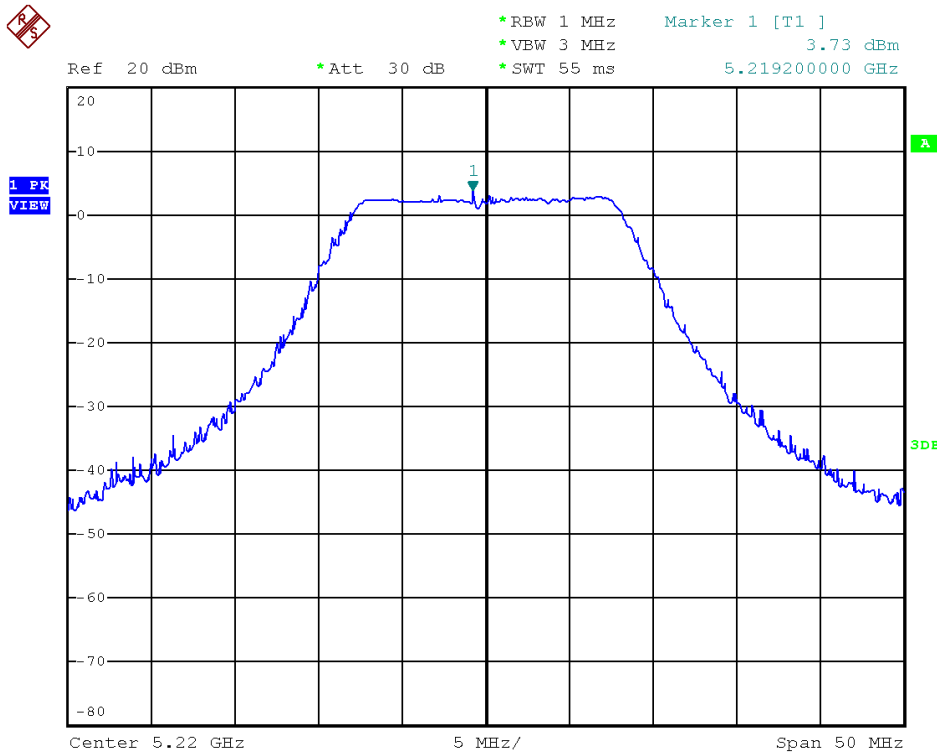
Modulation Standard	Channel	Frequency (MHz)	RF Power Level In 1MHz BW (dBm)	Limit (dB)
802.11a (6Mbps)	36	5180	3.36	5.15 – 5.25 GHz: 4
	44	5220	3.73	
	48	5240	3.88	
802.11an HT20 (6.5Mbps)	36	5180	3.00	5.15 – 5.25 GHz: 4
	44	5220	3.27	
	48	5240	3.69	



Modulation Standard: 802.11a (6Mbps)
Channel: 36

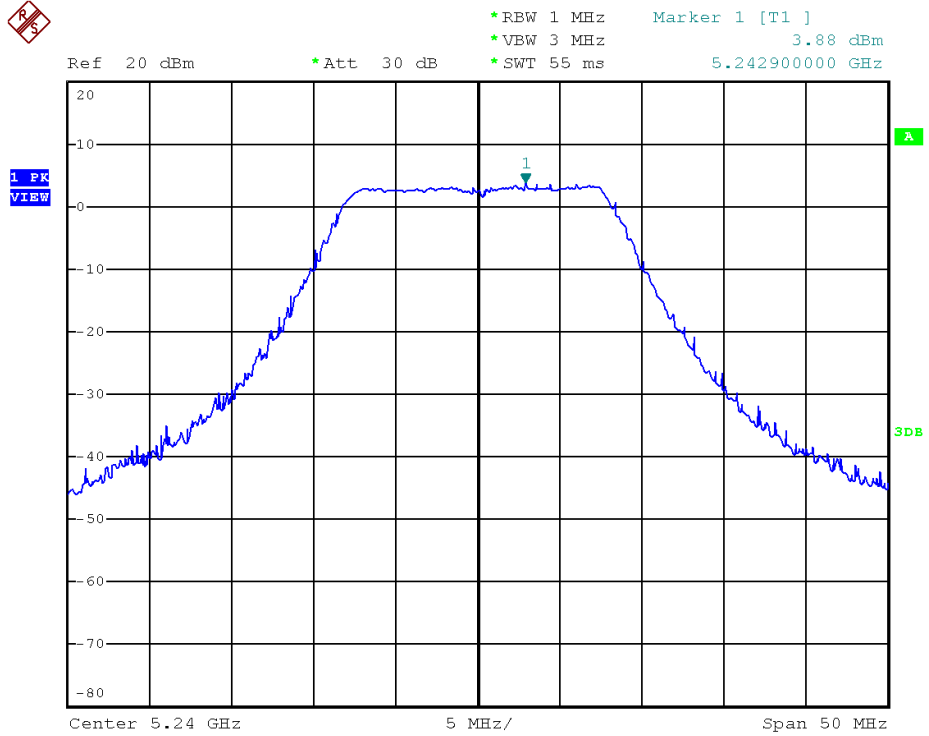


Modulation Standard: 802.11a (6Mbps)
Channel: 44

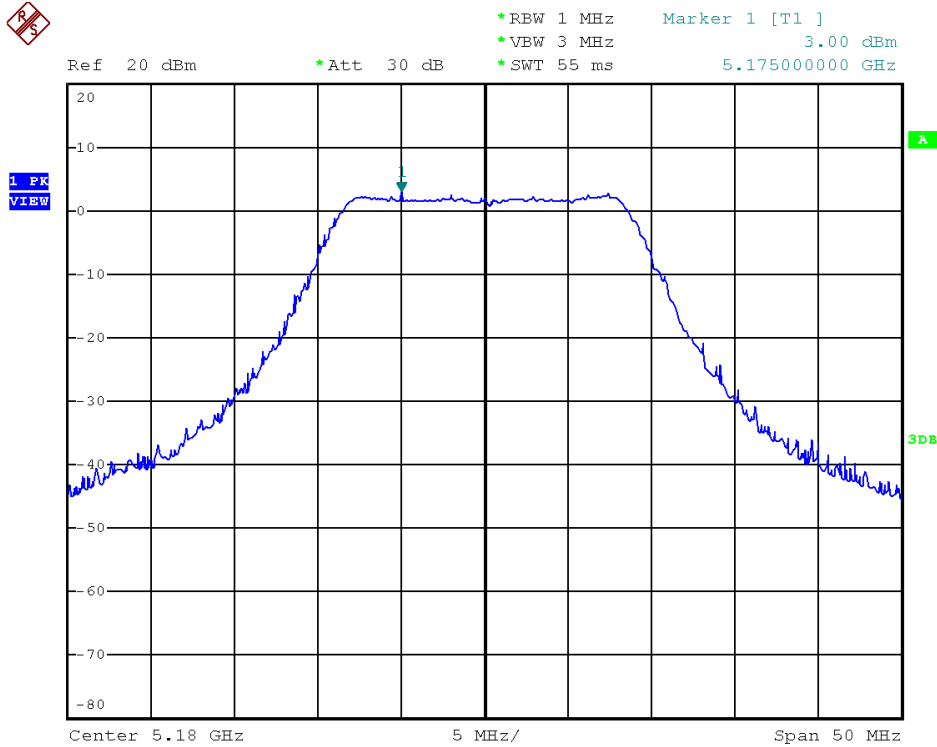




Modulation Standard: 802.11a (6Mbps)
Channel: 48

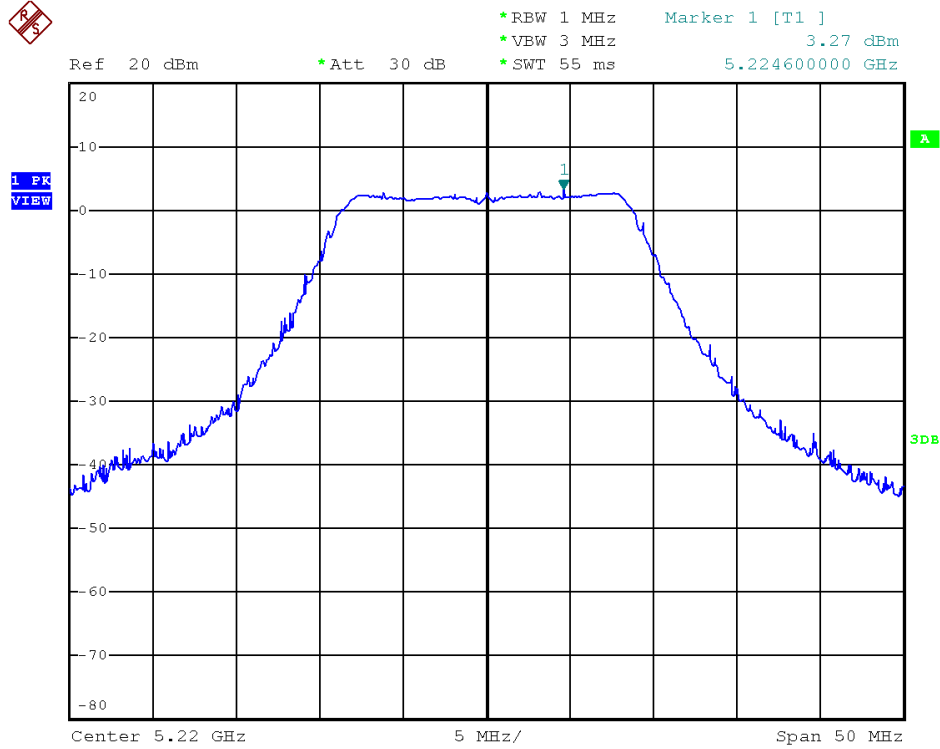


Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 36

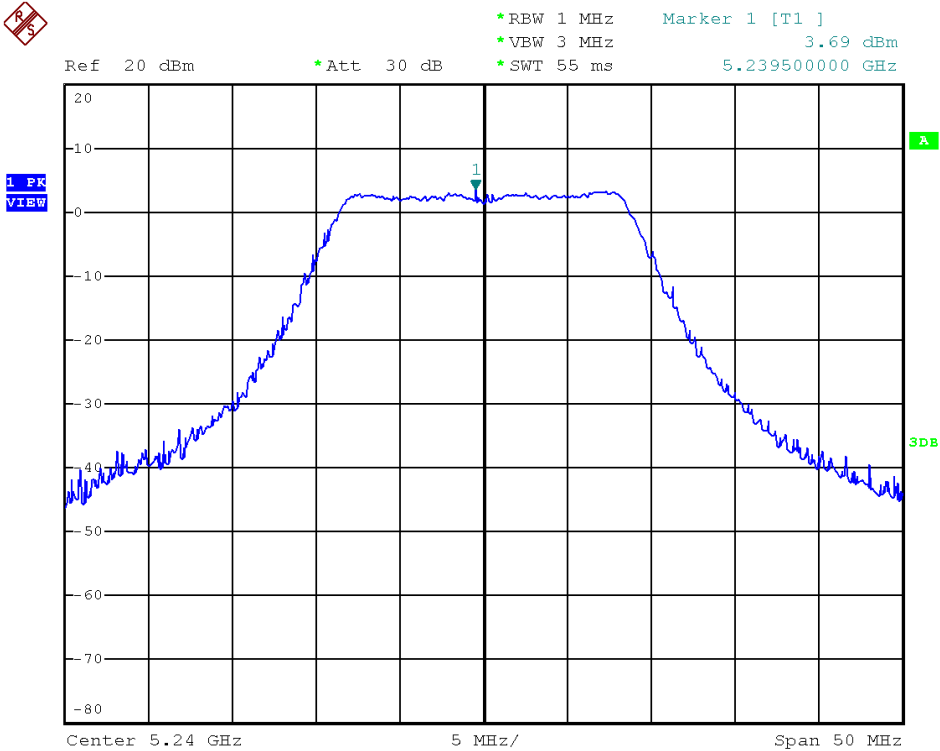




Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 44



Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 48



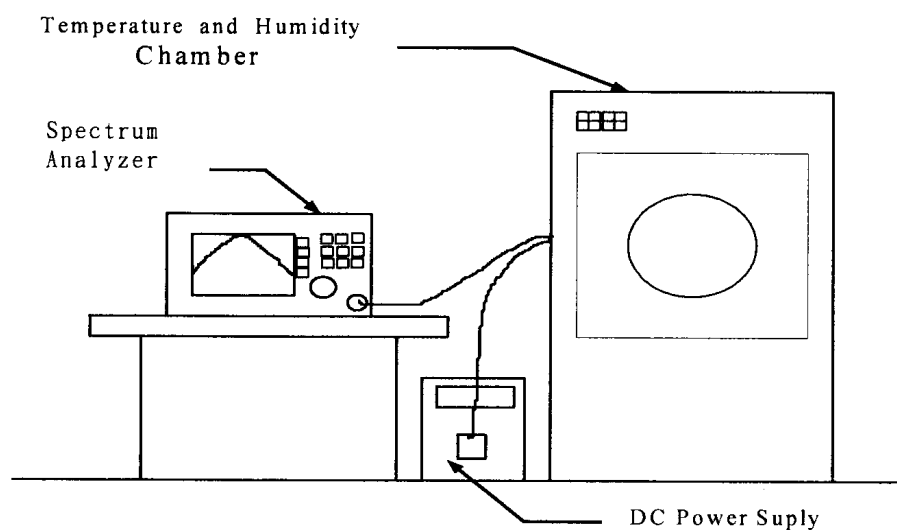


9. Frequency Stability

9.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

9.2. Test Setup Layout



9.3. 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
TEMPERATURE CHAMBER	TERCHY	MHK-120NK	1010407	2014/04/22	2015/04/21
DC Power Supply	GPD-3030	GM	7020936	N/A	N/A
AC POWER CONVERTER	AFC-11005	APC	F103120008	N/A	N/A



9.4. Test Result and Data

Test Date: Sep. 30, 2014

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Operating Frequency: 5180 MHz

Temp (°C)	Power supply (V)	2 minute		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	108	5180.0789	0.001523	5180.0789	0.001523	5179.9808	-0.000371	5179.9802	-0.000382
	120	5179.9998	-0.000004	5179.9998	-0.000004	5179.9850	-0.000290	5179.9826	-0.000336
	132	5179.9931	-0.000133	5179.9931	-0.000133	5179.9902	-0.000189	5179.9882	-0.000228
40	108	5179.9899	-0.000195	5179.9899	-0.000195	5179.9878	-0.000236	5179.9884	-0.000224
	120	5179.9921	-0.000153	5179.9921	-0.000153	5179.9886	-0.000220	5179.9884	-0.000224
	132	5179.9898	-0.000197	5179.9898	-0.000197	5179.9884	-0.000224	5179.9888	-0.000216
30	108	5179.9484	-0.000996	5179.9484	-0.000996	5179.9482	-0.001000	5179.9484	-0.000996
	120	5179.9490	-0.000985	5179.9490	-0.000985	5179.9495	-0.000975	5179.9484	-0.000996
	132	5179.9484	-0.000996	5179.9484	-0.000996	5179.9488	-0.000988	5179.9494	-0.000977
20	108	5179.9384	-0.001189	5179.9384	-0.001189	5179.9392	-0.001174	5179.9388	-0.001181
	120	5179.9392	-0.001174	5179.9392	-0.001174	5179.9386	-0.001185	5179.9394	-0.001170
	132	5179.9388	-0.001181	5179.9388	-0.001181	5179.9388	-0.001181	5179.9396	-0.001166
10	108	5179.9502	-0.000961	5179.9502	-0.000961	5179.9492	-0.000981	5179.9502	-0.000961
	120	5179.9500	-0.000965	5179.9500	-0.000965	5179.9496	-0.000973	5179.9490	-0.000985
	132	5179.9498	-0.000969	5179.9498	-0.000969	5179.9490	-0.000985	5179.9494	-0.000977
0	108	5179.9776	-0.000432	5179.9776	-0.000432	5179.9760	-0.000463	5179.9734	-0.000514
	120	5179.9706	-0.000568	5179.9706	-0.000568	5179.9706	-0.000568	5179.9690	-0.000598
	132	5179.9674	-0.000629	5179.9674	-0.000629	5179.9672	-0.000633	5179.9664	-0.000649
-10	108	5179.9778	-0.000429	5179.9778	-0.000429	5179.9774	-0.000436	5179.9776	-0.000432
	120	5179.9780	-0.000425	5179.9780	-0.000425	5179.9780	-0.000425	5179.9774	-0.000436
	132	5179.9790	-0.000405	5179.9790	-0.000405	5179.9792	-0.000402	5179.9806	-0.000375
-20	108	5179.9828	-0.000332	5179.9828	-0.000332	5179.9820	-0.000347	5179.9822	-0.000344
	120	5179.9826	-0.000336	5179.9826	-0.000336	5179.9812	-0.000363	5179.9808	-0.000371
	132	5179.9838	-0.000313	5179.9838	-0.000313	5179.9240	-0.001467	5179.9838	-0.000313
-30	108	5179.9848	-0.000293	5179.9848	-0.000293	5179.9890	-0.000212	5179.9853	-0.000284
	120	5179.9844	-0.000301	5179.9844	-0.000301	5179.9844	-0.000301	5179.9842	-0.000305
	132	5179.5000	-0.009653	5179.5000	-0.009653	5179.9842	-0.000305	5179.9846	-0.000297

Limit : ±20ppm



10. Band Edges Measurement

10.1. Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz with convenient frequency span including 100 MHz bandwidth from band edge.
3. The band edges was measured and recorded.

10.2. 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

10.3. Test Result and Data

Test Date: Sep. 22, 2014

Temperature: 25°C

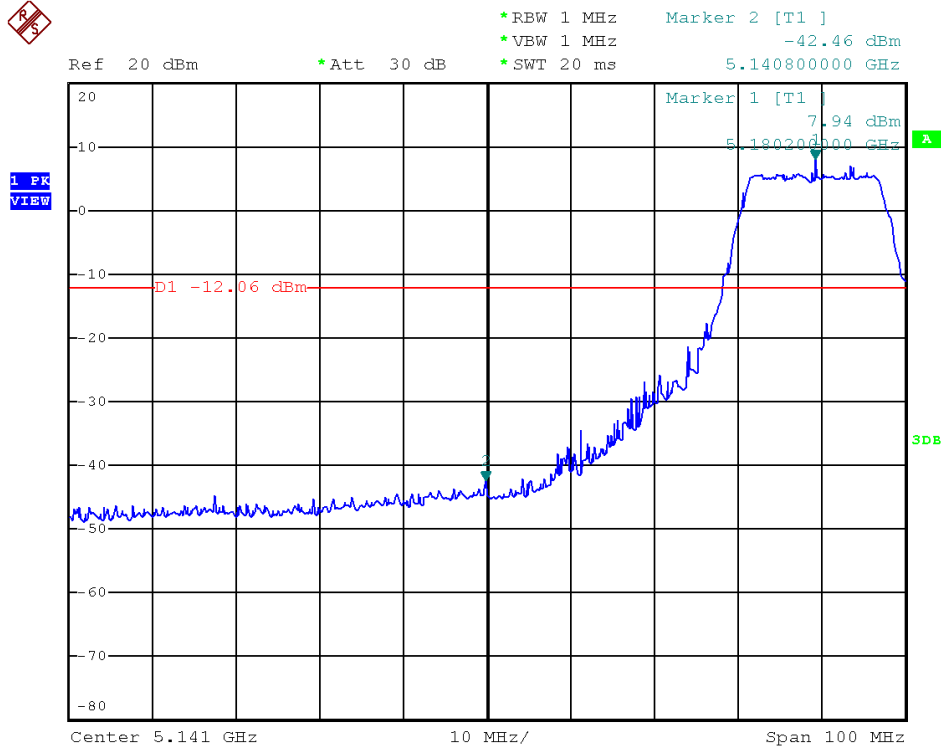
Atmospheric pressure: 1020 hPa

Humidity: 65%

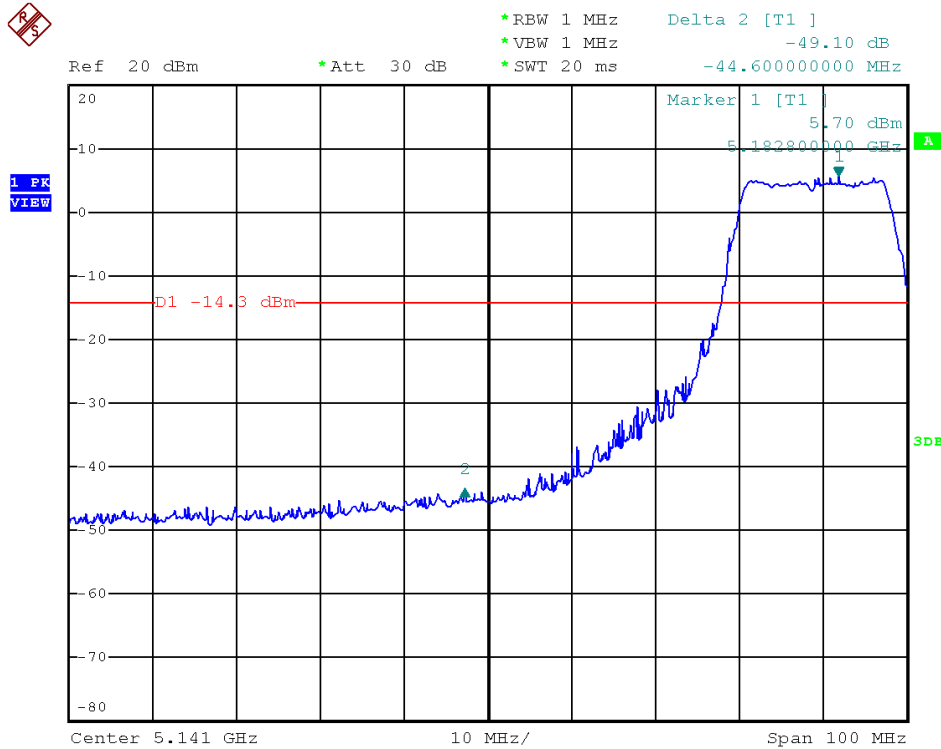
Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)	maximum value (dBm)
802.11a (6Mbps)	36	5180	5140.8000	-42.46
802.11an HT20 (6.5Mbps)	36	5180	5182.8000	-49.10



Modulation Standard: 802.11a (6Mbps)
Channel: 36



Modulation Standard: 802.11an, HT20 (6.5Mbps)
Channel: 36





10.4. Restrict Band Emission Measurement Data

Test Date: Sep. 23, 2014 Temperature: 25°C
Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard: IEEE 802.11a (6Mbps)

Table with 11 columns: Frequency (MHz), Ant-Pol H/V, Meter Reading (dBuV), Corrected Factor (dB), Result (dBuV/m), Remark, Limit (dBuV/m) (Peak/Ave), Margin (dB), Table Deg., Ant High (m). Includes data for Channel 36 (Fundamental Frequency: 5180 MHz) and Channel 48 (Fundamental Frequency: 5240 MHz).

Modulation Standard: IEEE 802.11an, HT20 (6Mbps)

Table with 11 columns: Frequency (MHz), Ant-Pol H/V, Meter Reading (dBuV), Corrected Factor (dB), Result (dBuV/m), Remark, Limit (dBuV/m) (Peak/Ave), Margin (dB), Table Deg., Ant High (m). Includes data for Channel 36 (Fundamental Frequency: 5180 MHz) and Channel 48 (Fundamental Frequency: 5240 MHz).



11. 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 – 5.150
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

11.1. 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.