



# FCC TEST REPORT

According to

## FCC Rules and Regulations Part 15 Subpart E

Applicant	:	CTC Union Technologies Co., Ltd.
Address	:	8F, No. 60, Zhouzi St., Neihu, Taipei 114, Taiwan
Equipment	:	Gigabit Fiber IAD with IEEE 802.11ac WiFi
Model No.	:	GW-732FW
Trade Name	:	CTC Union
FCC ID	:	2AERFGE732FW

- 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.



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## History of this test report

■ ORIGINAL.

Additional attachment as following record:



# CERTIFICATE OF COMPLIANCE

According to

## FCC Rules and Regulations Part 15 Subpart E

Applicant : CTC Union Technologies Co., Ltd.

Address : 8F, No. 60, Zhouzi St., Neihu, Taipei 114, Taiwan

Equipment : Gigabit Fiber IAD with IEEE 802.11ac WiFi

Model No. : GW-732FW

Trade Name : CTC Union

FCC ID : 2AERFGE732FW

### I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 2009**. The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart E, and KDB789033**.

The test was carried out on Dec. 26, 2014 at **Cerpass Technology(Suzhou) Corp.**

Signature

Miro Chueh/ Technical director



## 1. Report of Measurements and Examinations

### 1.1. List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.407(a)	. Antenna Requirement	Pass
15.407(b)	. Conducted Emission	Pass
15.407(b)	. Spurious Emission	Pass
15.247(a)	. 6dB Bandwidth	Pass
15.247(a)	. 26dB Bandwidth	Pass
15.407(a)	. Average Power	Pass
15.407(a)(5)	. Output and PPSD	Pass



## 2. Test Configuration of Equipment under Test

### 2.1. Feature of Equipment under Test

<b>Voice Features</b>	<ul style="list-style-type: none"><li>■ G.711 a/μ-law, G.729, G.726, G.723.1</li><li>■ In-Band DTMF, Out-of-Band DTMF Relay (RFC2833 or SIP INFO)</li><li>■ Echo Cancellation (G.168)</li><li>■ Adaptive Jitter Buffer</li><li>■ T.30 FAX Bypass to G.711, T.38 Real Time FAX Relay</li></ul>
<b>Telephony Specifications</b>	<ul style="list-style-type: none"><li>■ DTMF / PULSE Dial Support</li><li>■ Caller ID Generation / Detection :DTMF, FSK-Bellcore Type 1 &amp; 2, FSK-ETSI Type 1 &amp; 2, FSK-NTT</li><li>■ FXS metering pulse: Polarity Reversal, 12kHz/ 16kHz calling tone</li><li>■ Polarity Reversal Generation (FXS)</li></ul>
<b>SIP Call Features</b>	<ul style="list-style-type: none"><li>■ Peer to Peer Call</li><li>■ Call Hold / Retrieve, Call Waiting, Call Pick Up</li><li>■ Call Park / Retrieve (SIP Server Required)</li><li>■ Call Forward - unconditional, busy, no answer</li><li>■ Call Transfer - attended, unattended</li><li>■ Do Not Disturb ■ Speed Dialing ■ Repeat Dialing</li><li>■ MWI (RFC-3842), ■ Hot Line and Warm Line</li></ul>
<b>SIP Call Management</b>	<ul style="list-style-type: none"><li>■ Support Outbound Proxy</li><li>■ SIP Registration Failover Mechanism</li><li>■ Group Hunting</li><li>■ User Programmable Dial Plan Support</li><li>■ Automatic Calling Number Manipulation</li><li>■ CDR Client</li><li>■ E.164 Numbering, ENUM support</li></ul>
<b>Wireless</b>	<ul style="list-style-type: none"><li>■ Compliant with IEEE 802.11 a/b/g/n/ac standards</li><li>■ Operating Frequency : 2.4GHz/5GHz</li><li>■ Multi-SSID</li><li>■ Broadcast SSID control</li><li>■ 64 / 128 bits WEP supported for encryption</li><li>■ Wireless Security with WPA2-PSK, WPA-PSK, WPA-Enterprise, WPA2-Enterprise</li><li>■ Wi-Fi Multi-Media (WMM) for AP mode</li><li>■ WPS (Wi-Fi Protected Setup) for easy setup</li></ul>



<b>IP Network Specifications</b>	<ul style="list-style-type: none"><li>■ Support IPv4, IPv6 (RFC2460, RFC 4861, RFC4862, RFC4863, RFC1981)</li><li>■ WAN: Static IP, PPPoE, DHCP, PPTP, L2TP, Bridge</li><li>■ NAT Functions: Virtual Servers, DMZ, NAT Traversal : Pass-through NAT, STUN client</li><li>■ VRF (Virtual Routing and Forwarding)</li><li>■ VLAN (802.1Q, 802.1p)</li><li>■ QoS features:<ul style="list-style-type: none"><li><input type="checkbox"/> SIP and RTP always-first policy</li><li><input type="checkbox"/> WAN access rate control</li><li><input type="checkbox"/> IP Precedence, DSCP (DiffServ) tagging on SIP and RTP packets</li><li><input type="checkbox"/> LAN port rate limit</li></ul></li></ul>
<b>Network Security Specifications</b>	<ul style="list-style-type: none"><li>■ DIGEST Authentication</li><li>■ MD5 Encryption</li><li>■ DoS Protection (configurable)</li><li>■ Firewall: MAC filter, IP/Port filter, URL filter, Contents filter</li></ul>
<b>Router Management</b>	<ul style="list-style-type: none"><li>■ WEB , TELNET,</li><li>■ TR-069/TR-104</li><li>■ TR-111 part I &amp;II(DHCP option 125)</li><li>■ DHCP option 43 auto provisioning</li><li>■ Two levels WEB login account</li><li>■ WEB languages : English, TC</li><li>■ System Information</li><li>■ Per call RTP packet summary</li><li>■ PING test</li><li>■ STUN inquiry</li><li>■ Syslog</li></ul>
<b>Physical Interface</b>	<ul style="list-style-type: none"><li>■ Combo WAN : Gigabit Ethernet copper and fiber (SFP)</li><li>■ LAN : 4-port RJ-45 10/100/1000 Ethernet</li><li>■ Antenna : 2 Detachable antenna (dual band concurrent-2T2R)</li><li>■ Telephone: 2 FXS</li><li>■ Factory default reset button, WPS push button, Power jack, Power switch</li><li>■ 2x USB 2.0 Host interface</li></ul>



## 2.2. Carrier Frequency of Channels

802.11a, 802.11an HT 20 (5150MHz~5250MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
<b>*36</b>	5180	<b>*44</b>	5220
40	5200	<b>*48</b>	5240

802.11a, 802.11an HT 20, 802.11ac VHT20 (5725MHz~5850MHz)

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

802.11an HT 40 (5150MHz~5250MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
<b>*38</b>	5190	<b>*46</b>	5230

802.11an HT 40, 802.11ac VHT40 (5725MHz~5850MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
<b>*151</b>	<b>5755</b>	<b>*159</b>	<b>5795</b>

802.11ac VHT80 (5150-5250MHz)

Channel	Frequency(MHz)
<b>*42</b>	<b>5210</b>

802.11ac VHT80 (5725-5850MHz)

Channel	Frequency(MHz)
<b>*155</b>	<b>5775</b>

Note: Channels marked \* 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 C63.4:2009.
- b. The complete test system included Notebook and EUT for RF test.
- c. An executive program, "MP\_TEST" under WIN XP was executed to transmit and receive data via WLAN.
- d. The following test modes were performed for test:
  - 802.11a/an, HT20, ac VHT20: CH 36: 5180MHz, CH 44: 5220MHz, CH 48: 5240MHz  
CH149: 5745MHz, CH157: 5785MHz, CH165: 5825MHz
  - 802.11an, HT40, ac VHT40: CH 38: 5190MHz, CH 46: 5230MHz  
CH151: 5755MHz, CH159: 5795MHz
  - 802.11ac VHT80: CH 42: 5210MHz, CH155: 5775MHz

For conduction test, caused "802.11a CH36" generated the worst case, it was reported as the final data.

For radiation (30MHz ~ 1GHz) test, caused "802.11ac VHT80 CH42" generated the worst case, it was reported as the final data.

\* Power output of data rate:

mode	rate	A											
		6M			9M			12M			18M		
Channel	Peak	Average	setting	setting									
802.11a	36	18.63	13.55	49									
	44	18.66	13.62	48	18.82	13.57		18.77	13.53		18.70	13.45	
	48	18.30	13.59	48									
mode	rate	MCS0			MCS1			MCS2			MCS3		
802.11an HT20	36	18.47	13.72	49	18.42	13.66		18.35	13.60		18.27	13.52	
	44	18.36	13.16	47									
	48	18.16	14.02	51									
mode	rate	MCS0			MCS1			MCS2			MCS3		
802.11ac VHT20	36	18.08	13.77	52									
	44	18.45	14.02	51	18.38	13.95	18	18.30	13.86		18.18	13.78	
	48	17.97	13.62	51									
mode	rate	MCS8			MCS9			MCS10			MCS11		
802.11an HT40	38	18.55	14.13	54	18.47	14.05		18.39	13.97		18.31	13.90	
	46	18.26	13.93	54									
mode	rate	MCS4			MCS5			MCS6			MCS7		
802.11ac VHT40	38	18.33	13.65	54	18.27	13.57		18.18	15.49		18.11	15.43	
	46	18.21	13.95	54									
mode	rate	MCS8			MCS9			MCS10			MCS11		
802.11ac VHT80	42	22.67	15.68	55	22.62	15.60		22.55	15.50		22.47	15.40	
	155	18.54	13.82	55									



mode	rate	B												
		6M			9M			12M			18M			
Channel	Peak	Average	setting											
802.11a	36	16.08	11.59	45										
	44	16.62	11.73	44										
	48	16.69	11.76	44	16.65	11.71		16.59	11.65		11.52	11.60		
	mode	rate	MCS0			MCS1			MCS2			MCS3		
802.11an HT20	Channel	Peak	Average	setting										
	36	16.44	11.40	47										
	44	16.89	11.75	46										
	48	17.39	11.92	58	17.32	11.83		17.25	11.75		17.16	11.68		
802.11ac VHT20	mode	rate	MCS0			MCS1			MCS2			MCS3		
	Channel	Peak	Average	setting										
	36	16.49	11.20	47										
	44	16.88	11.78	47										
802.11an HT40	48	16.96	11.47	47	16.91	11.42		16.85	16.37		16.78	16.31		
	mode	rate	MCS8			MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting										
	38	16.57	11.72	50	16.52	11.66		11.45	11.57		11.35	11.46		
802.11ac VHT40	46	16.51	11.36	48										
	mode	rate	MCS4			MCS5			MCS6			MCS7		
	Channel	Peak	Average	setting										
	38	16.81	11.43	49	16.72	11.35		16.65	11.27		16.57	11.21		
802.11ac VHT80	46	16.57	11.60	49.00										
	mode	rate	MCS8			MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting										
	42	22.05	15.04	51	21.95	14.97		21.88	14.91		21.80	14.85		
	155	17.92	11.82	51.00										



mode	A+B								
	rate	1M		2M		5.5M		11M	
802.11a	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	1	20.55	15.69	3.01	3.01	3.01	3.01	3.01	3.01
	6	20.77	15.79	18.88	13.76	18.83	13.72	18.76	13.64
	11	20.58	15.78	16.74	11.99	16.68	11.94	11.82	11.89
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11an HT20	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	1	20.58	15.72	18.48	13.84	18.41	13.79	18.33	13.71
	6	20.70	15.52	3.01	3.01	3.01	3.01	3.01	3.01
	11	20.80	16.11	17.40	12.11	17.33	12.03	17.24	11.97
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11ac VHT20	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	36	20.37	15.68	47.00	3.01	3.01	3.01	3.01	3.01
	44	20.75	16.05	47.01	14.12	18.36	14.03	18.25	13.96
	48	20.50	15.69	47.00	17.00	16.94	16.47	16.87	16.41
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11an HT40	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	3	20.68	16.10	50.00	18.47	19.19	15.94	19.11	15.86
	6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
	9	20.48	15.84	48.00	3.01	3.01	3.01	3.01	3.01
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11ac VHT40	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	3	20.65	15.69	49.00	18.43	20.49	16.88	20.42	16.82
	6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
	9	20.48	15.94	49.00	3.01	3.01	3.01	3.01	3.01
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11ac VHT80	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	3	25.38	18.38	51.01	22.86	25.24	18.23	25.16	18.14
	6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
	9	21.25	15.94	51.00	3.01	3.01	3.01	3.01	3.01



mode	A												
	rate	6M			9M			12M			18M		
802.11a	Channel	Peak	Average	setting									
	149	21.34	13.47										
	157	21.36	13.44		21.32	13.35		21.25	13.27		21.16	13.15	
	165	21.26	13.51										
802.11an HT20	mode	rate	MCS0		MCS1			MCS2			MCS3		
	Channel	Peak	Average	setting									
	149	20.77	13.35										
	157	20.78	13.32		20.72	13.25		20.64	13.17		20.55	13.11	
802.11ac VHT20	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting	Peak	Average	setting	Peak	Average	setting	Peak	Average	Average
	149	20.97	13.44										
	157	20.89	13.4										
802.11an HT40	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	151	21.09	13.56		21.02	13.51		20.95	13.45		20.88	13.36	
	159	21.08	13.49										
802.11ac VHT40	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	151	21.13	13.89		21.05	13.82		20.95	13.75		20.92	13.70	
	159	21.03	13.87										
802.11ac VHT80	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	151	21.14	13.21		21.05	13.15		20.96	13.08		20.90	13.00	
	159												

mode	B												
	rate	6M			9M			12M			18M		
802.11a	Channel	Peak	Average	setting									
	149	21.20	13.38	54									
	157	21.34	13.58	54									
	165	21.30	13.66	54	21.10	13.65	54	21.20	13.61	54	20.93	13.66	54
802.11an HT20	mode	rate	MCS0		MCS1			MCS2			MCS3		
	Channel	Peak	Average	setting									
	149	21.11	13.62	54	21.22	13.55	54	21.40	13.65	54	21.21	13.57	54
	157	21.02	13.24	53									
802.11ac VHT20	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	149	21.18	13.29										
	157	21.23	13.24										
802.11an HT40	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	151	20.66	13.56		20.60	13.51		20.52	13.43		20.45	13.35	
	159	20.41	13.12										
802.11ac VHT40	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	151	20.56	13.87										
	159	20.61	13.21		20.55	13.15		20.47	13.08		20.40	13.02	
802.11ac VHT80	mode	rate	MCS8		MCS9			MCS10			MCS11		
	Channel	Peak	Average	setting									
	155	21.51	13.45		21.45	13.38		21.36	13.32		21.31	13.27	
	159												



mode	A+B								
	rate	1M		2M		5.5M		11M	
Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average	
802.11a	1	24.28	16.44	3.01	3.01	3.01	3.01	3.01	3.01
	6	24.36	16.52	21.35	13.55	21.28	13.47	21.19	13.36
	11	24.29	16.60	21.13	13.83	21.23	13.80	20.96	13.84
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11an HT20	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	1	23.95	16.50	21.25	13.74	21.43	13.83	21.24	13.76
	6	23.91	16.29	20.76	13.45	20.68	13.37	20.59	13.32
802.11ac VHT20	11	23.89	16.32	3.01	3.01	3.01	3.01	3.01	3.01
mode	rate	MCS8		MCS9		MCS10		MCS11	
Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average	
1	24.09	16.38	3.01	3.01	3.01	3.01	3.01	3.01	
6	24.07	16.33	3.01	3.01	3.01	3.01	3.01	3.01	
11	24.03	16.23	21.24	13.36	21.18	13.31	21.08	13.26	
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11an HT40	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	3	23.89	16.57	23.83	16.52	23.75	16.45	23.68	16.37
	6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
802.11ac VHT40	9	23.77	16.32	3.01	3.01	3.01	3.01	3.01	3.01
mode	rate	MCS8		MCS9		MCS10		MCS11	
Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average	
3	23.86	16.89	21.08	14.00	20.98	13.93	20.95	13.88	
6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	
9	23.84	16.56	20.59	13.36	20.51	13.29	20.44	13.23	
mode	rate	MCS8		MCS9		MCS10		MCS11	
802.11ac VHT80	Channel	Peak	Average	Peak	Average	Peak	Average	Peak	Average
	3	24.34	16.34	24.26	16.28	24.17	16.21	24.12	16.15
	6	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
	9	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01

## 2.4. Description of Test System

Device	Manufacturer	Model No.	Description
Notebook	ASUS	A8J	Power Cable, Unshielding, 1.8m

Used cable

Cable	Quantity	Description
Network Cable	1	Unshielding, 1.8m



## 2.5. General Information of Test

Test Site:	Cerpass Technology(Suzhou) Co., Ltd.
Test Site Location :	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China
NVLAP LAB Code :	200814-0
FCC Registration Number :	916572, 331395
IC Registration Number :	7290A-1, 7290A-2
VCCI Registration Number :	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 40,000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

Laboratory accreditation





### 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

##### 802.11a, an, ac:

ANT A, ANT B

Antenna Type: Dipole Antenna

Antenna Gain: 2.23 dBi for 5150 ~ 5250MHz

1.68 dBi for 5725 ~ 5850MHz

Note: Directional gain =  $G_{ant} + 10\log(N)$  dBi =  $2.23 + 10\log(2) = 5.23$  (dBi) for 5150 ~ 5250MHz

Directional gain =  $G_{ant} + 10\log(N)$  dBi =  $1.68 + 10\log(2) = 4.68$  (dBi) for 5725 ~ 5850MHz



## 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 $\mu$ V)	Average (dB $\mu$ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

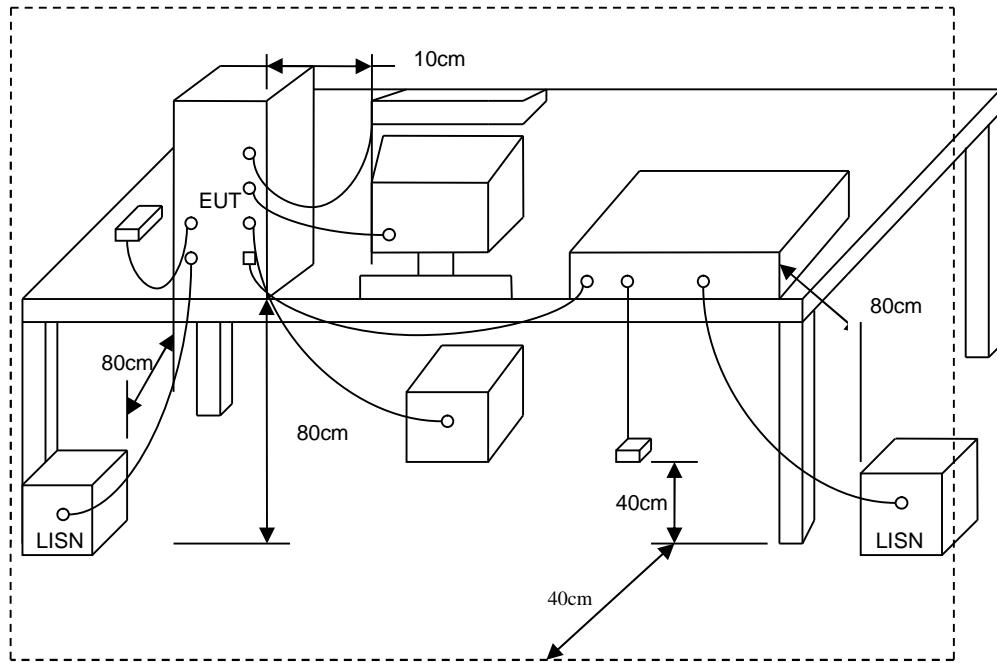
\*Decreases with the logarithm of the frequency.

### 4.2. Test Procedures

- a. 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.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



#### 4.3. Typical Test Setup



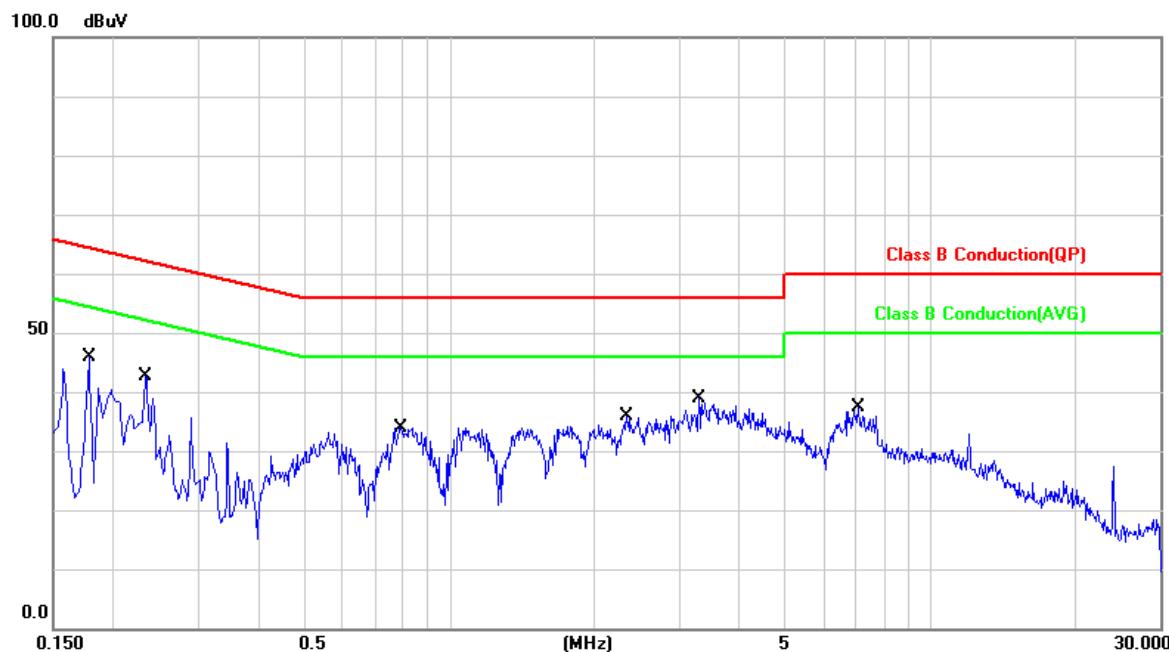
#### 4.4. Measurement Equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
EMI Receiver	R&S	ESCI	100821	2013/09/18	2014/09/17
LISN	Rolf Heine	NNB-2/16Z	02/10191	2013/09/30	2014/09/29
LISN	Schwarzbeck	NSLK 8127	8127-568	2013/08/30	2014/08/29
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	:	26 °C
Test Date	:	Aug. 22, 2014	Humidity	:	46 %
Memo	:		Atmospheric Pressure	:	1006 hPa



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1780	9.92	27.11	37.03	64.57	-27.54	QP	P
2	0.1780	9.92	14.37	24.29	54.57	-30.28	AVG	P
3	0.2340	9.92	24.01	33.93	62.30	-28.37	QP	P
4	0.2340	9.92	15.33	25.25	52.30	-27.05	AVG	P
5	0.7940	9.95	22.40	32.35	56.00	-23.65	QP	P
6	0.7940	9.95	16.98	26.93	46.00	-19.07	AVG	P
7	2.3340	10.04	22.19	32.23	56.00	-23.77	QP	P
8	2.3340	10.04	15.92	25.96	46.00	-20.04	AVG	P
9	3.3060	10.07	22.94	33.01	56.00	-22.99	QP	P
10	3.3060	10.07	17.53	27.60	46.00	-18.40	AVG	P
11	7.0740	10.18	21.36	31.54	60.00	-28.46	QP	P
12	7.0740	10.18	15.52	25.70	50.00	-24.30	AVG	P

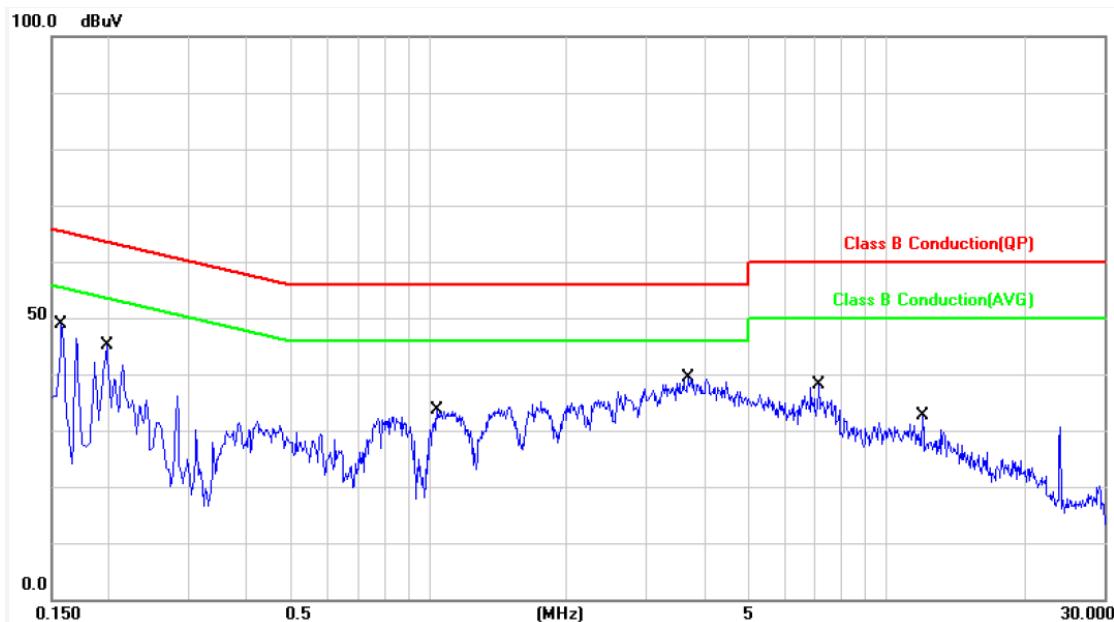
Note: Level = Reading + Factor

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	: 26 °C
Test Date	: Aug. 22, 2014	Humidity	: 46 %
Memo	:	Atmospheric Pressure	: 1006 hPa



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	9.92	30.61	40.53	65.56	-25.03	QP	P
2	0.1580	9.92	20.73	30.65	55.56	-24.91	AVG	P
3	0.1980	9.91	29.41	39.32	63.69	-24.37	QP	P
4	0.1980	9.91	25.18	35.09	53.69	-18.60	AVG	P
5	1.0460	9.96	20.93	30.89	56.00	-25.11	QP	P
6	1.0460	9.96	14.47	24.43	46.00	-21.57	AVG	P
7	3.7180	10.08	25.00	35.08	56.00	-20.92	QP	P
8	3.7180	10.08	19.49	29.57	46.00	-16.43	AVG	P
9	7.1380	10.18	22.31	32.49	60.00	-27.51	QP	P
10	7.1380	10.18	16.19	26.37	50.00	-23.63	AVG	P
11	12.0100	10.30	22.00	32.30	60.00	-27.70	QP	P
12	12.0100	10.30	19.82	30.12	50.00	-19.88	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 Spurious Emission (Radiated)

### 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

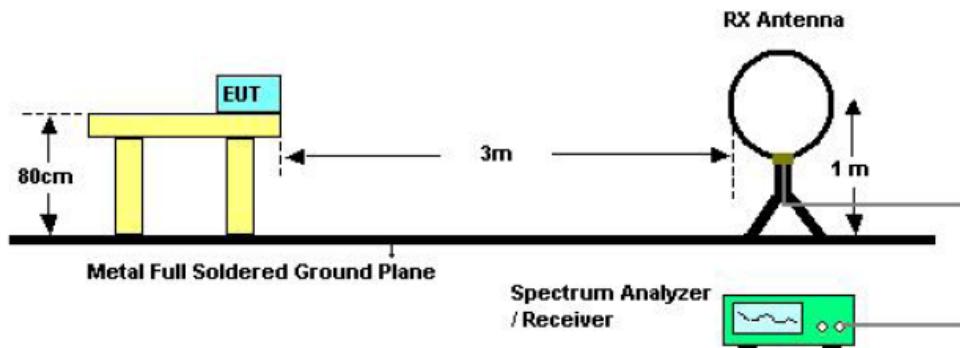
### 5.2. Test Procedures

- 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.
- i. "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

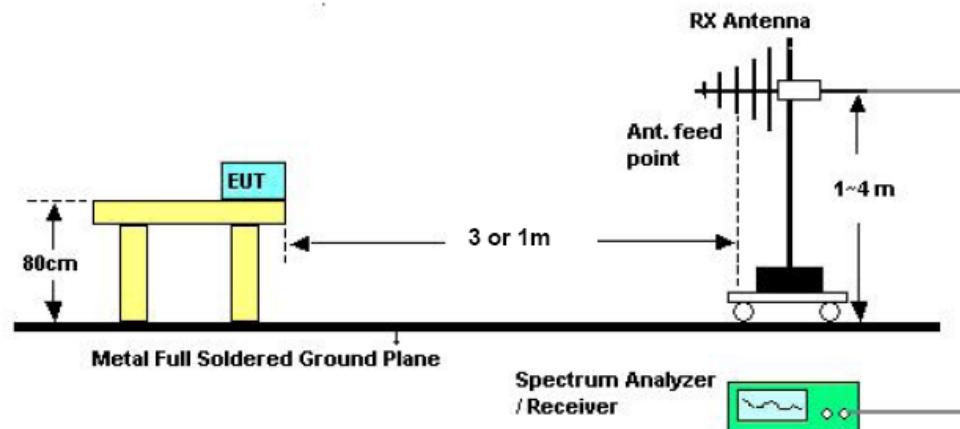


### 5.3. Typical Test Setup

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	2013/10/01	2014/09/30
Amplifier	QuieTek	AP/0100A	CHM0906075	2013/09/30	2014/09/29
SPECTRUM ANALYZER	R&S	FSP40	100219	2013/09/14	2014/09/13
HORN ANTENNA	EMCO	3115	31601	2013/09/18	2014/09/17
PREAMPLIFIER	AGILENT	8449B	3008A01954	2014/03/28	2015/03/27
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A

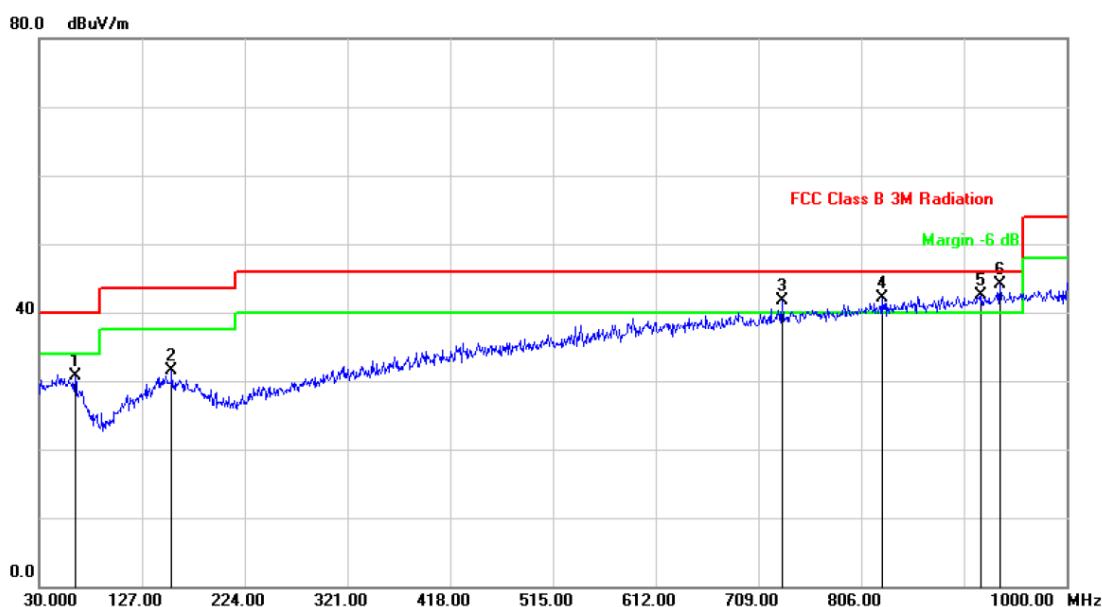


## 5.5. Test Result and Data (9kHz ~ 30MHz)

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	: 802.11ac VHT80, CH42	Temperature	: 24 °C
Test Date	: Aug. 04, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1012 hpa



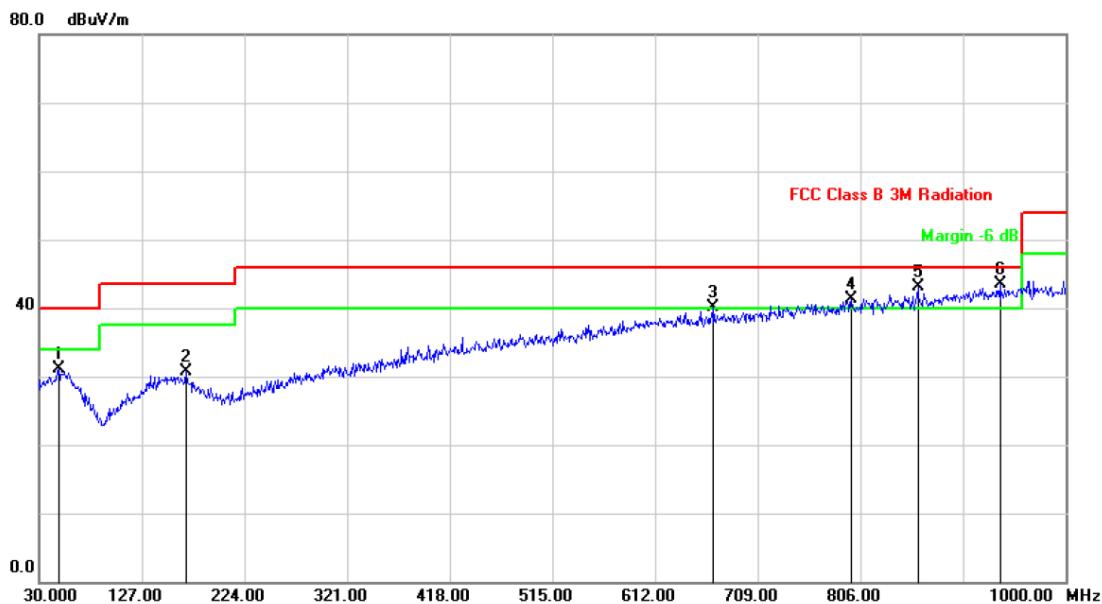
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	63.9500	-8.97	39.76	30.79	40.00	-9.21	peak	100	182
2	155.1300	-8.15	39.71	31.56	43.50	-11.94	peak	100	182
3	731.3100	1.54	40.18	41.72	46.00	-4.28	peak	100	182
4	825.4000	2.71	39.37	42.08	46.00	-3.92	peak	100	182
5	919.4900	4.08	38.37	42.45	46.00	-3.55	peak	100	182
6	936.9500	4.35	39.69	44.04	46.00	-1.96	peak	100	182

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11ac VHT80, CH42	Temperature	: 24 °C
Test Date	: Aug. 04, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1012 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	48.4300	-7.63	38.74	31.11	40.00	-8.89	peak	100	177
2	168.7100	-8.44	39.11	30.67	43.50	-12.83	peak	100	177
3	667.2900	0.53	39.49	40.02	46.00	-5.98	peak	100	177
4	797.2700	2.34	38.94	41.28	46.00	-4.72	peak	100	177
5	860.3200	3.21	39.94	43.15	46.00	-2.85	peak	100	177
6	937.9200	4.36	39.19	43.55	46.00	-2.45	peak	100	177

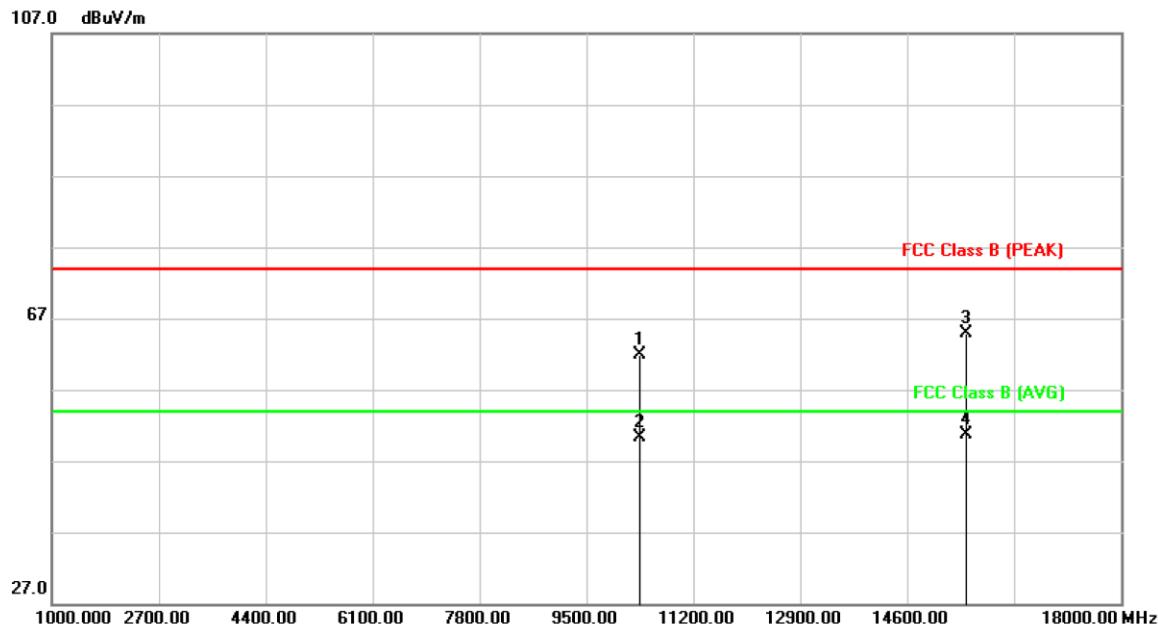
Note: Level = Reading + Factor

Margin = Level - Limit



## 5.7. Test Result and Data (Above 1GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH36	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



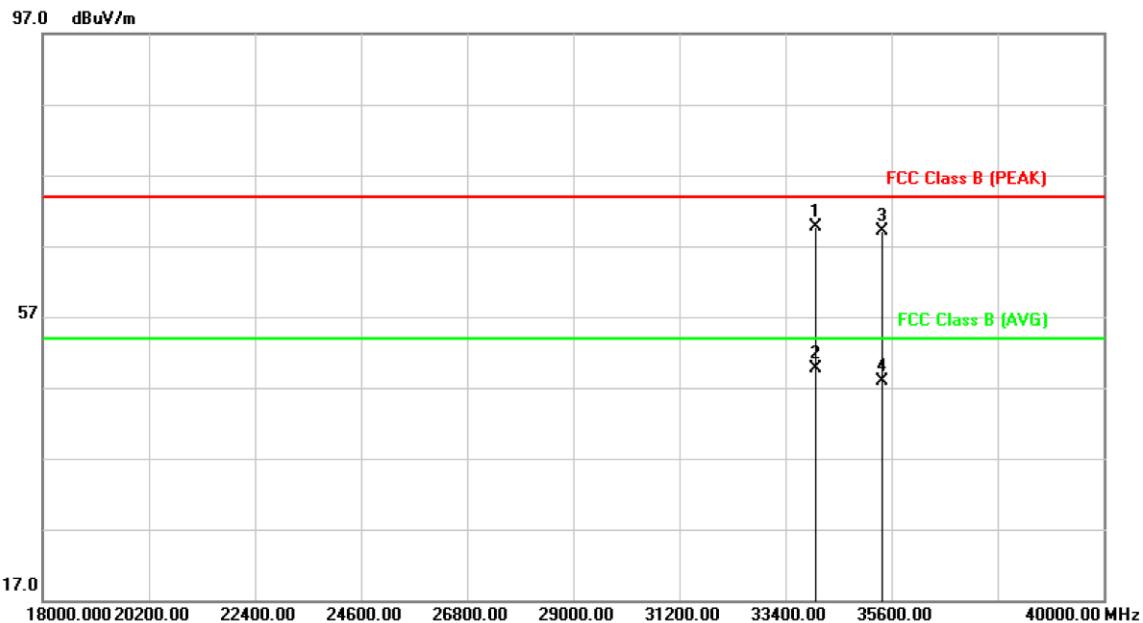
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	16.94	44.89	61.83	74.00	-12.17	peak	105	178
2	10360.000	16.94	33.26	50.20	54.00	-3.80	AVG	105	178
3	15540.000	21.17	43.65	64.82	74.00	-9.18	peak	105	178
4	15540.000	21.17	29.45	50.62	54.00	-3.38	AVG	105	178

Note: Level = Reading + Factor

Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH36	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



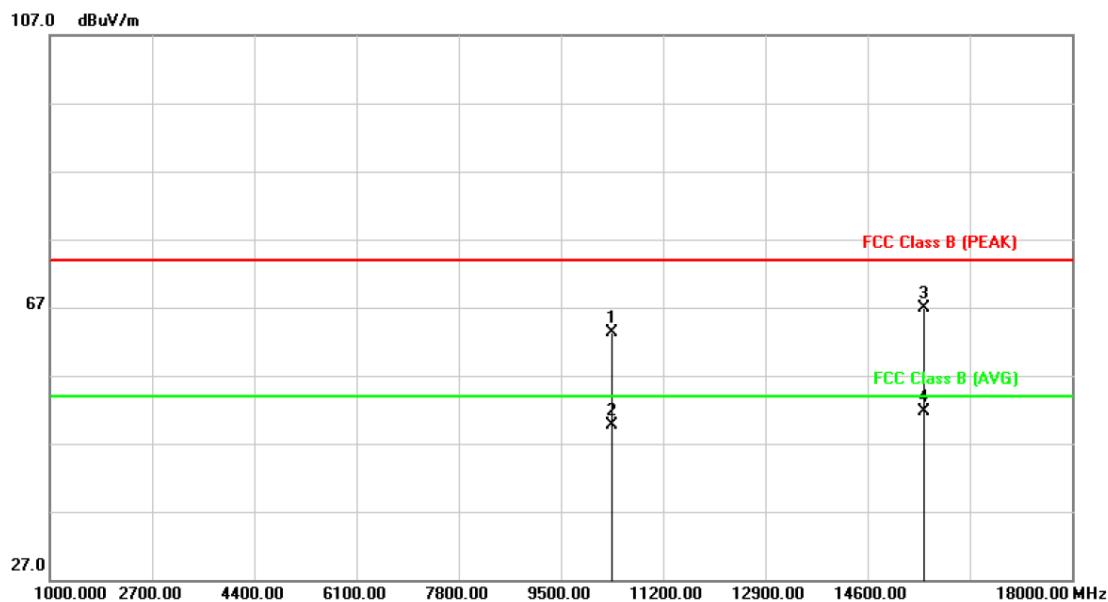
No.	Frequency (MHz)	Factor (dB/m)	Reading (dB <sub>u</sub> V)	Level (dB <sub>u</sub> V/m)	Limit (dB <sub>u</sub> V/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34038.000	7.30	62.35	69.65	74.00	-4.35	peak	102	171
2	34038.000	7.30	42.38	49.68	54.00	-4.32	Avg	102	171
3	35402.000	6.32	62.87	69.19	74.00	-4.81	peak	102	171
4	35402.000	6.32	41.58	47.90	54.00	-6.10	Avg	102	171

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH36	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



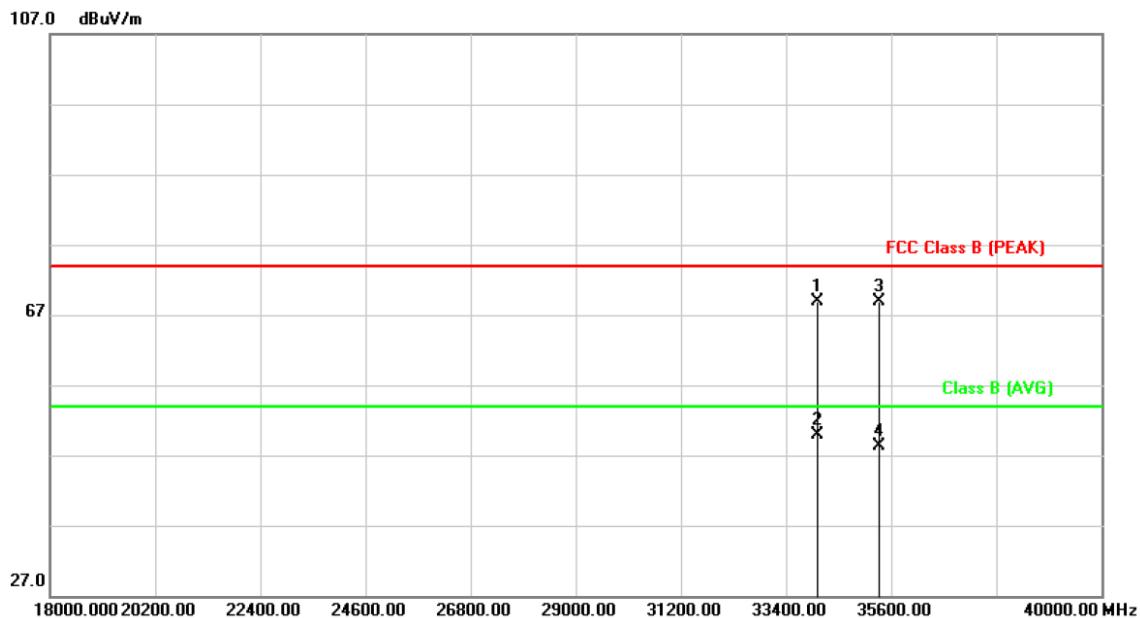
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	16.94	46.27	63.21	74.00	-10.79	peak	113	175
2	10360.000	16.94	32.86	49.80	54.00	-4.20	AVG	113	175
3	15540.000	21.17	45.69	66.86	74.00	-7.14	peak	113	175
4	15540.000	21.17	30.56	51.73	54.00	-2.27	AVG	113	175

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH36	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



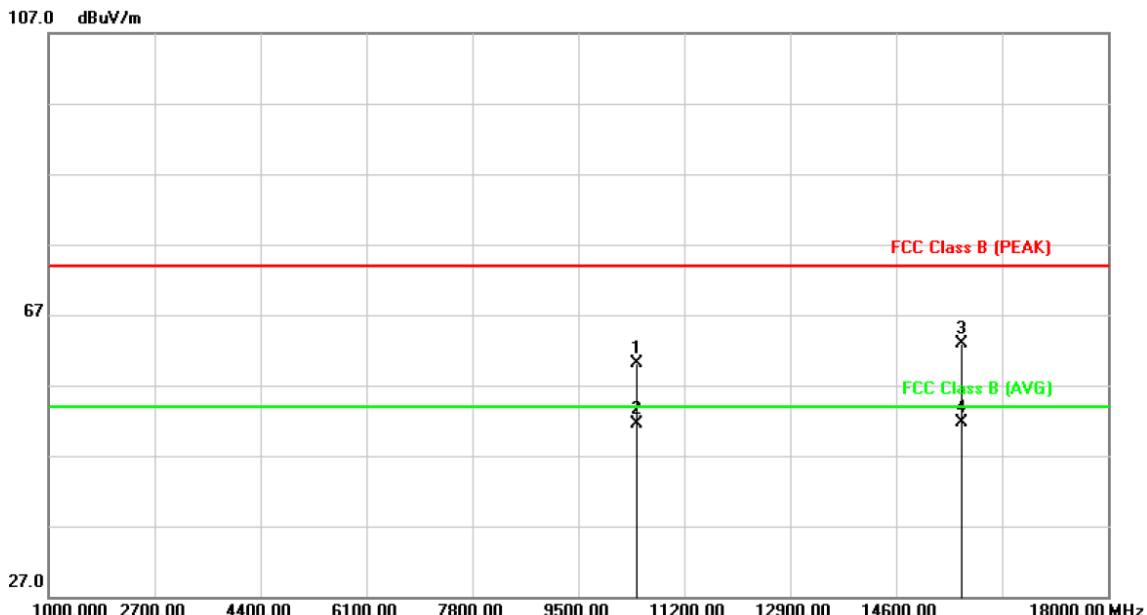
No.	Frequency (MHz)	Factor (dB/m)	Reading (dB <sub>uV</sub> )	Level (dB <sub>uV/m</sub> )	Limit (dB <sub>uV/m</sub> )	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34060.000	7.28	61.59	68.87	74.00	-5.13	peak	105	182
2	34060.000	7.28	42.55	49.83	54.00	-4.17	AVG	105	182
3	35358.000	6.48	62.37	68.85	74.00	-5.15	peak	105	182
4	35358.000	6.48	41.72	48.20	54.00	-5.80	AVG	105	182

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH44	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



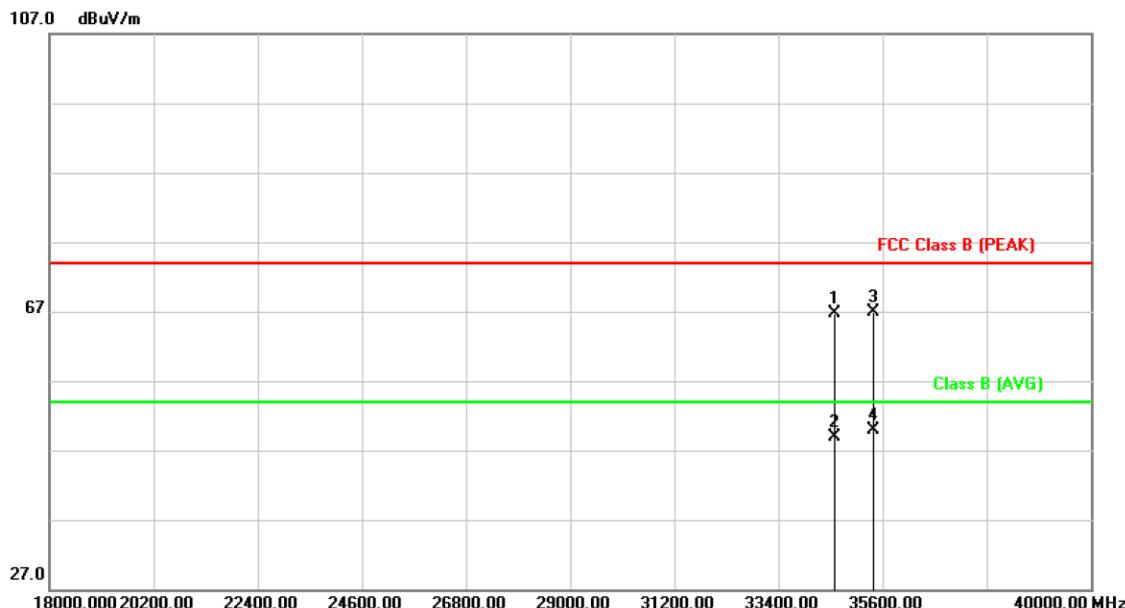
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	17.08	43.03	60.11	74.00	-13.89	peak	108	166
2	10440.000	17.08	34.52	51.60	54.00	-2.40	AVG	108	166
3	15660.000	20.93	41.95	62.88	74.00	-11.12	peak	108	166
4	15660.000	20.93	30.78	51.71	54.00	-2.29	AVG	108	166

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH44	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



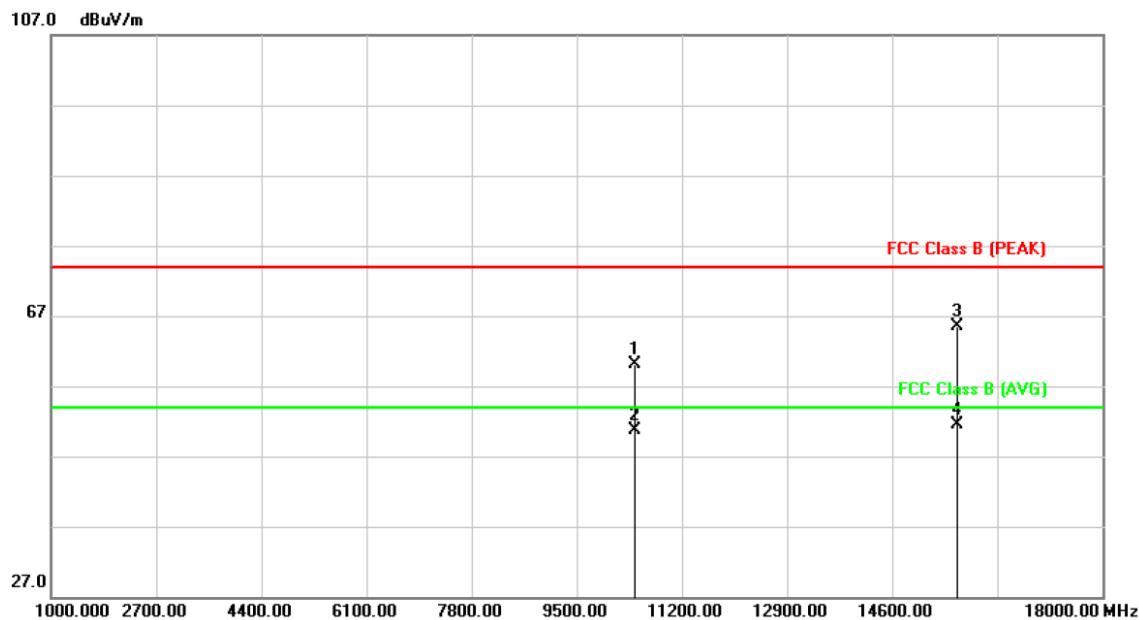
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34588.000	7.17	59.63	66.80	74.00	-7.20	peak	108	175
2	34588.000	7.17	41.76	48.93	54.00	-5.07	AVG	108	175
3	35402.000	6.32	60.57	66.89	74.00	-7.11	peak	108	175
4	35402.000	6.32	43.68	50.00	54.00	-4.00	AVG	108	175

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH44	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



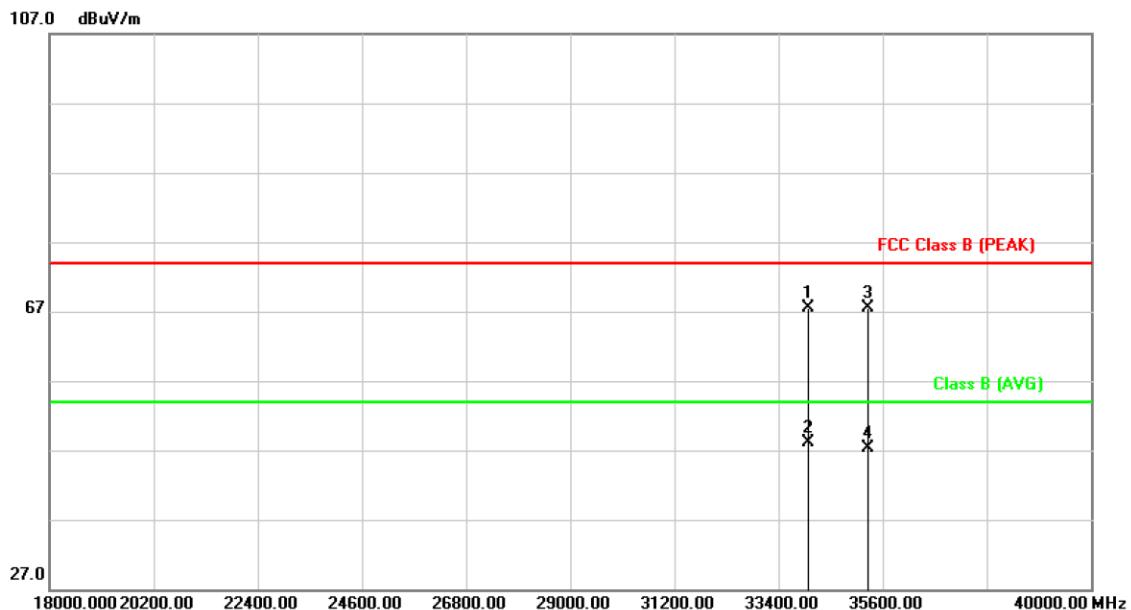
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10440.000	17.08	43.09	60.17	74.00	-13.83	peak	112	175
2	10440.000	17.08	33.66	50.74	54.00	-3.26	AVG	112	175
3	15660.000	20.93	44.66	65.59	74.00	-8.41	peak	112	175
4	15660.000	20.93	30.55	51.48	54.00	-2.52	AVG	112	175

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH44	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



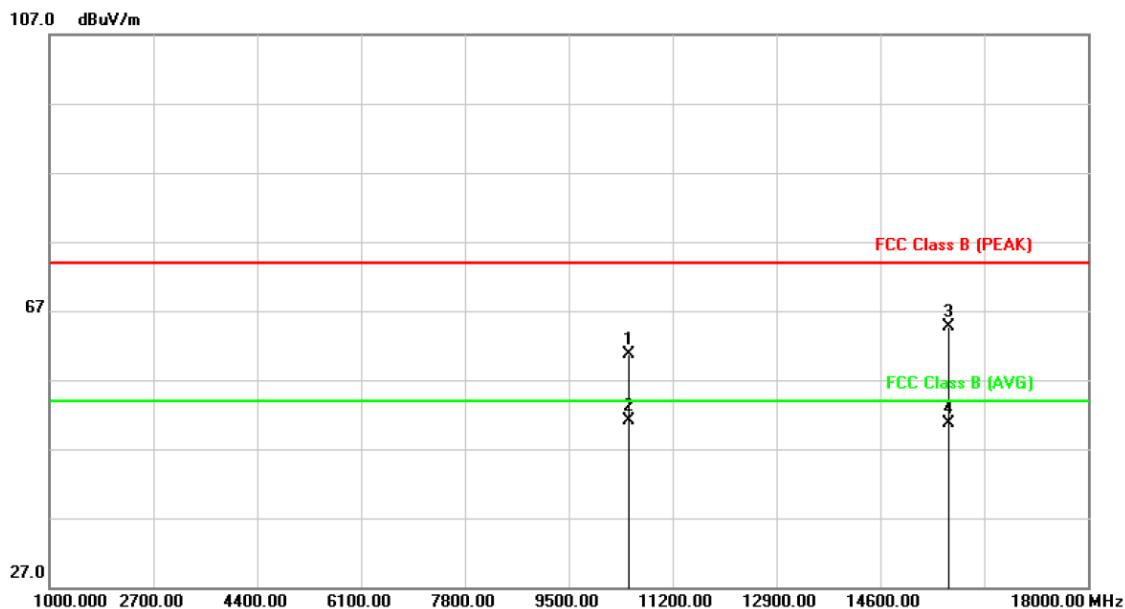
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34016.000	7.31	60.26	67.57	74.00	-6.43	peak	101	166
2	34016.000	7.31	40.87	48.18	54.00	-5.82	AVG	101	166
3	35292.000	6.71	60.89	67.60	74.00	-6.40	peak	101	166
4	35292.000	6.71	40.52	47.23	54.00	-6.77	AVG	101	166

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH48	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	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	10480.000	17.15	43.62	60.77	74.00	-13.23	peak	114	176
2	10480.000	17.15	33.95	51.10	54.00	-2.90	AVG	114	176
3	15720.000	20.83	43.81	64.64	74.00	-9.36	peak	114	176
4	15720.000	20.83	29.87	50.70	54.00	-3.30	AVG	114	176

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH48	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



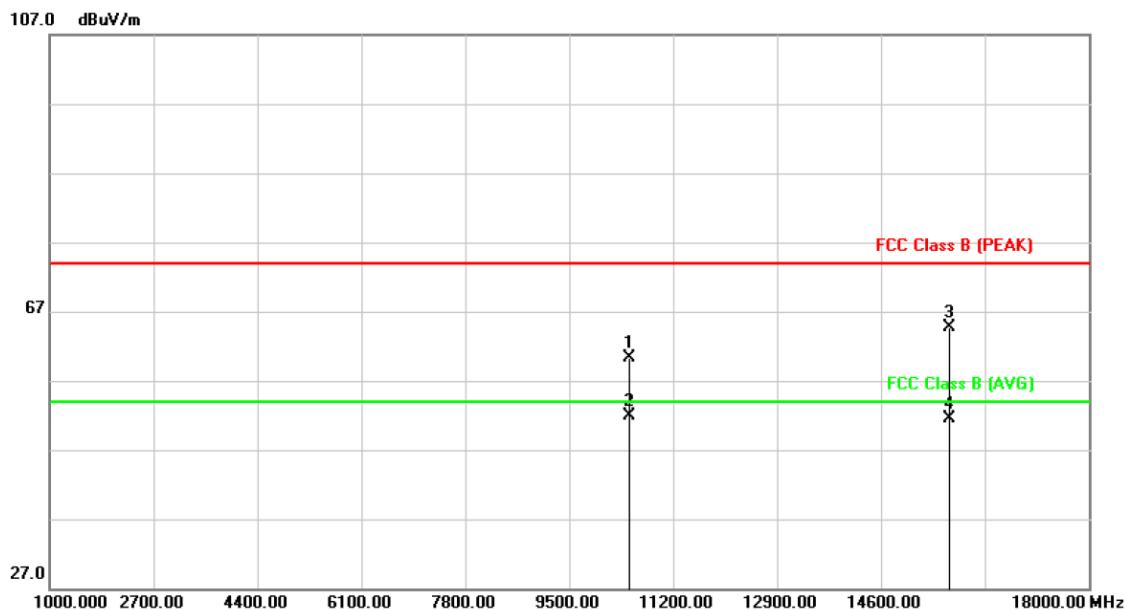
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34104.000	7.26	59.58	66.84	74.00	-7.16	peak	103	183
2	34104.000	7.26	43.66	50.92	54.00	-3.08	Avg	103	183
3	35402.000	6.32	60.45	66.77	74.00	-7.23	peak	103	183
4	35402.000	6.32	41.55	47.87	54.00	-6.13	Avg	103	183

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH48	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



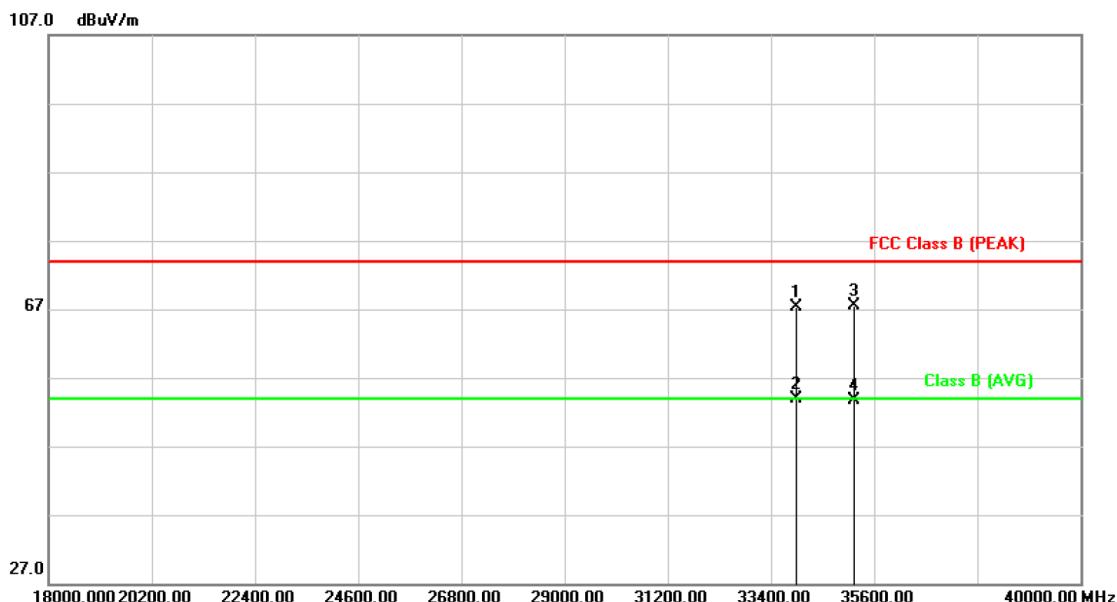
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	17.15	43.20	60.35	74.00	-13.65	peak	105	163
2	10480.000	17.15	34.69	51.84	54.00	-2.16	AVG	105	163
3	15720.000	20.83	43.87	64.70	74.00	-9.30	peak	105	163
4	15720.000	20.83	30.62	51.45	54.00	-2.55	AVG	105	163

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11a, CH48	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



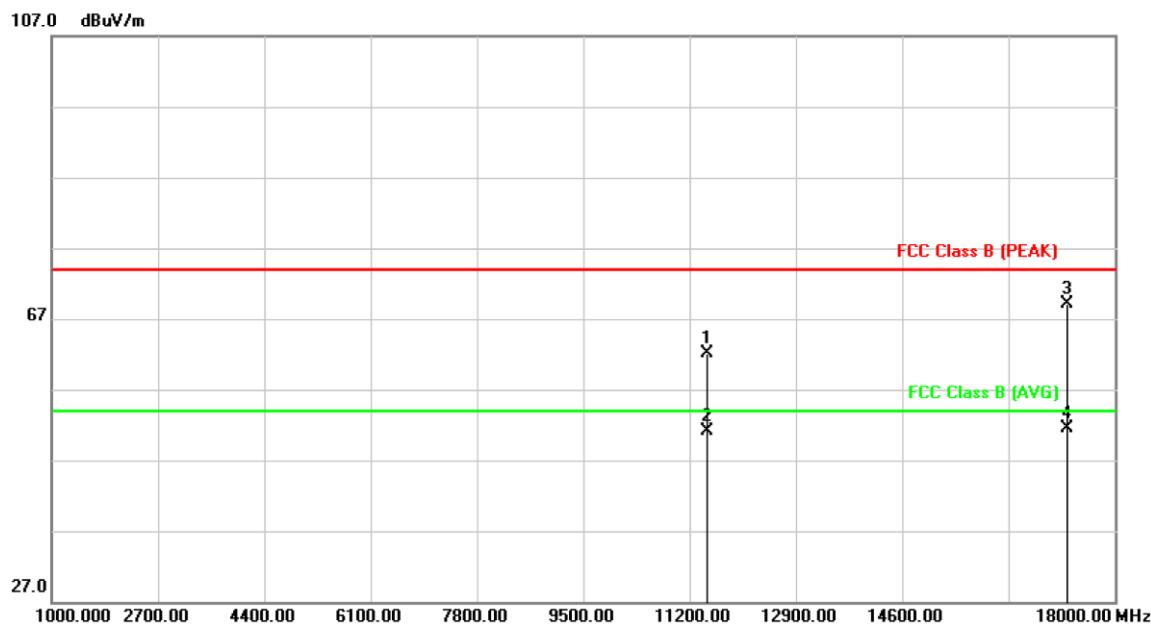
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33950.000	7.21	60.12	67.33	74.00	-6.67	peak	100	360
2	33950.000	7.21	46.67	53.88	54.00	-1.10	AVG	100	360
3	35182.000	7.09	60.42	67.51	74.00	-6.49	peak	100	360
4	35182.000	7.09	46.64	53.73	54.00	-1.24	AVG	100	360

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH149	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



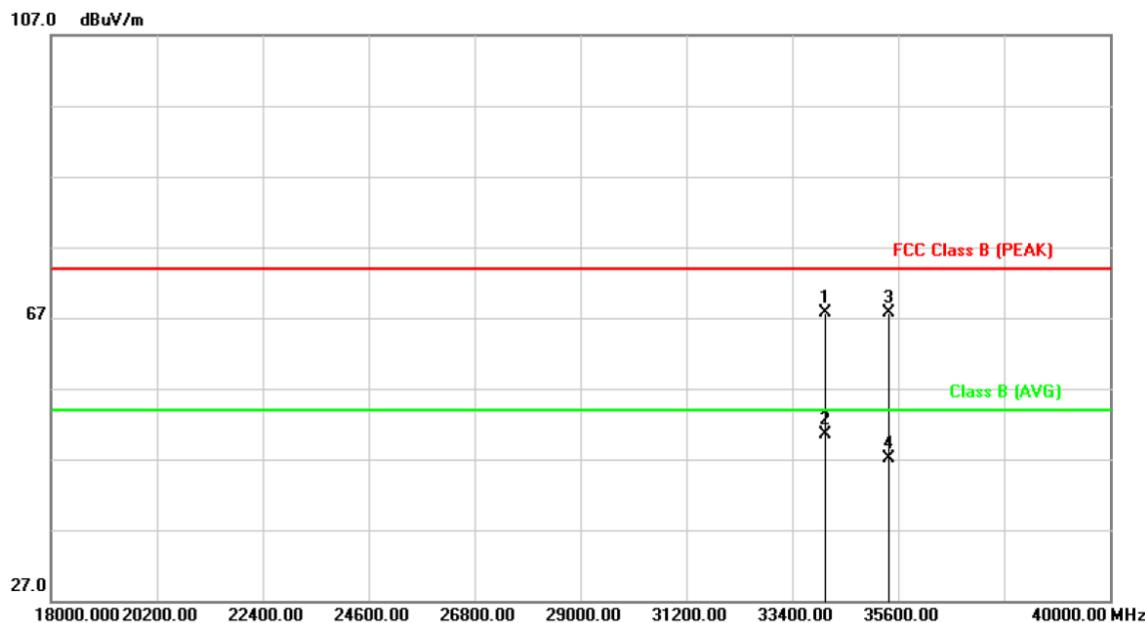
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11490.000	18.87	43.21	62.08	74.00	-11.92	peak	102	176
2	11490.000	18.87	32.28	51.15	54.00	-2.85	AVG	102	176
3	17235.000	26.12	43.08	69.20	74.00	-4.80	peak	102	176
4	17235.000	26.12	25.46	51.58	54.00	-2.42	AVG	102	176

Note: Level = Reading + Factor

Margin = Level – Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11a, CH149	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



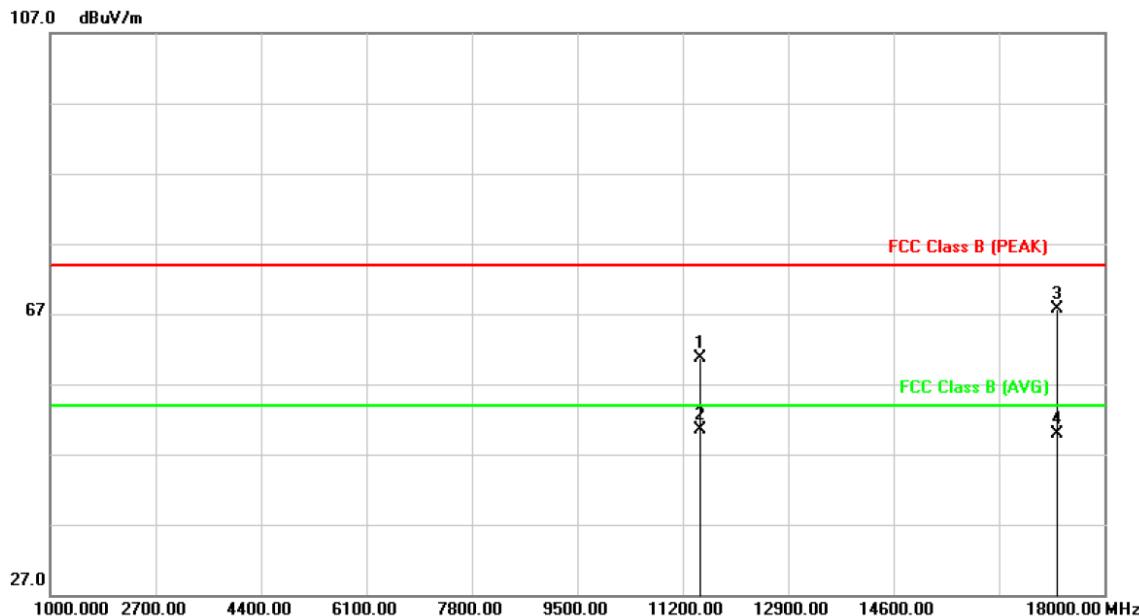
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34082.000	7.27	60.50	67.77	74.00	-6.23	peak	100	172
2	34082.000	7.27	43.21	50.48	54.00	-3.52	AVG	100	172
3	35402.000	6.32	61.37	67.69	74.00	-6.31	peak	100	172
4	35402.000	6.32	40.82	47.14	54.00	-6.86	AVG	100	172

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11a, CH149	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



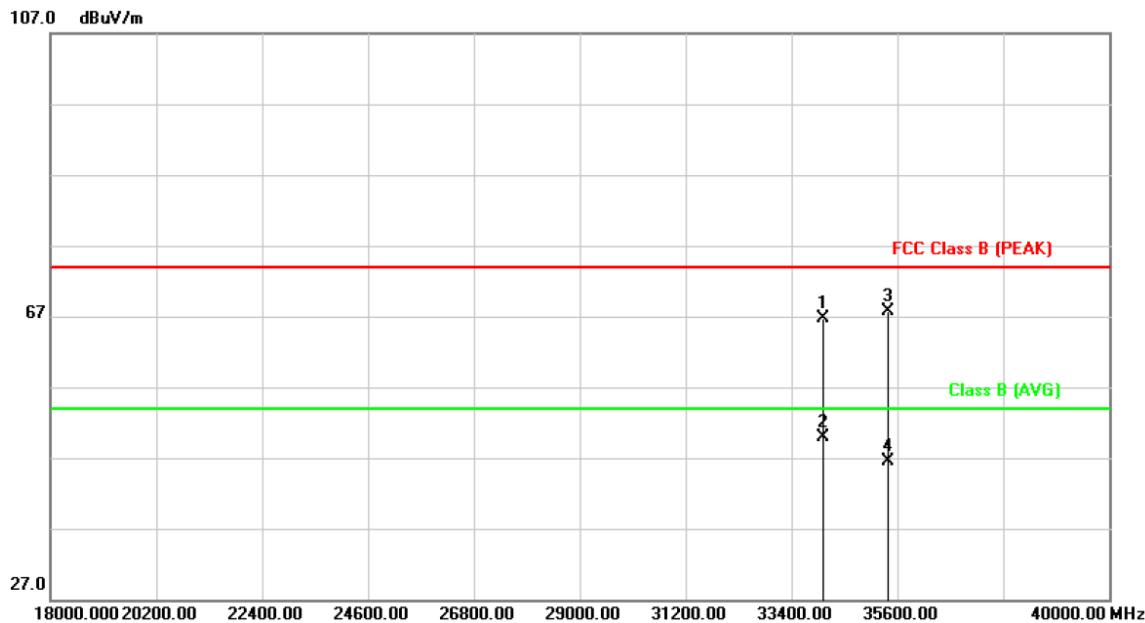
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11490.000	18.87	41.90	60.77	74.00	-13.23	peak	106	172
2	11490.000	18.87	31.57	50.44	54.00	-3.56	AVG	106	172
3	17235.000	26.12	41.68	67.80	74.00	-6.20	peak	106	172
4	17235.000	26.12	23.86	49.98	54.00	-4.02	AVG	106	172

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH149	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



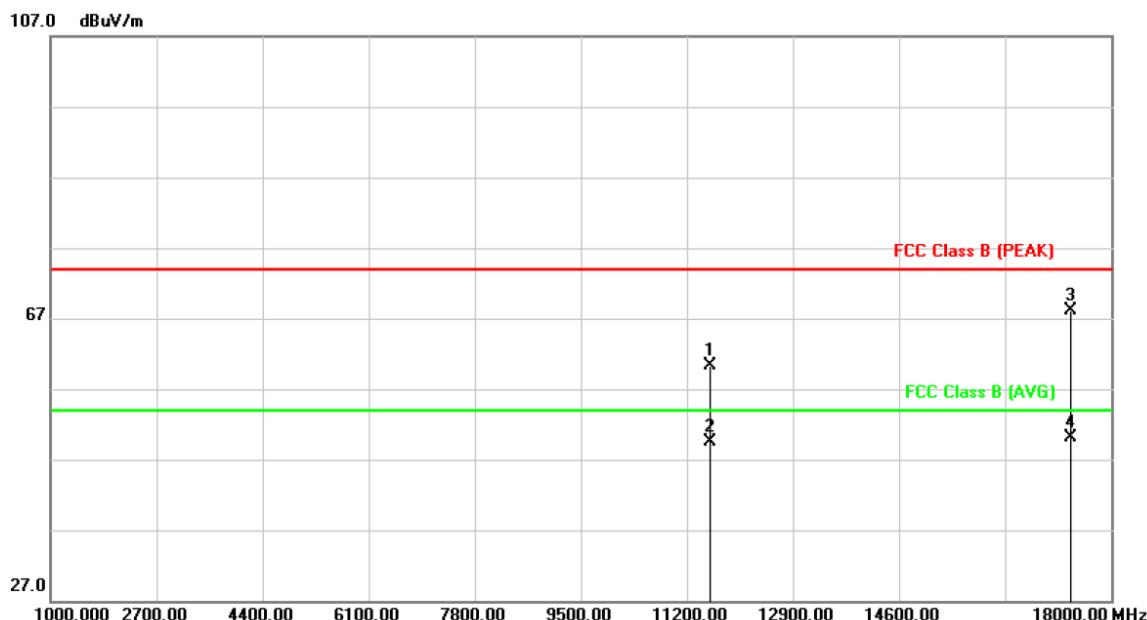
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34060.000	7.28	59.33	66.61	74.00	-7.39	peak	106	161
2	34060.000	7.28	42.63	49.91	54.00	-4.09	AVG	106	161
3	35402.000	6.32	61.47	67.79	74.00	-6.21	peak	106	161
4	35402.000	6.32	40.17	46.49	54.00	-7.51	AVG	106	161

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11a, CH157	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



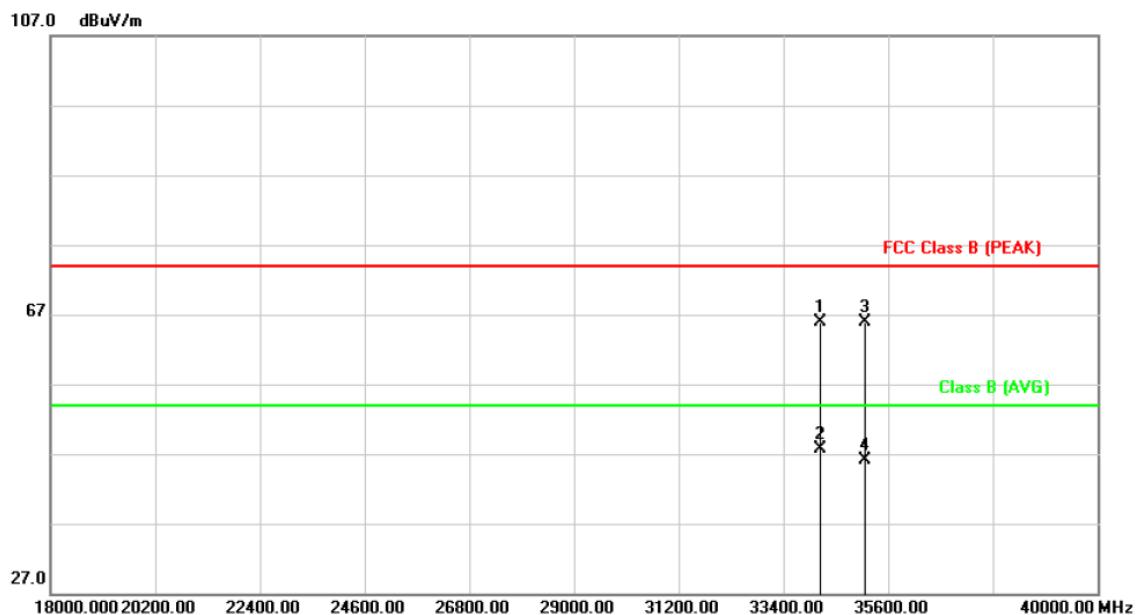
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11570.000	18.94	41.41	60.35	74.00	-13.65	peak	112	167
2	11570.000	18.94	30.64	49.58	54.00	-4.42	AVG	112	167
3	17355.000	26.79	41.32	68.11	74.00	-5.89	peak	112	167
4	17355.000	26.79	23.35	50.14	54.00	-3.86	AVG	112	167

Note: Level = Reading + Factor

Margin = Level – Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11a, CH157	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



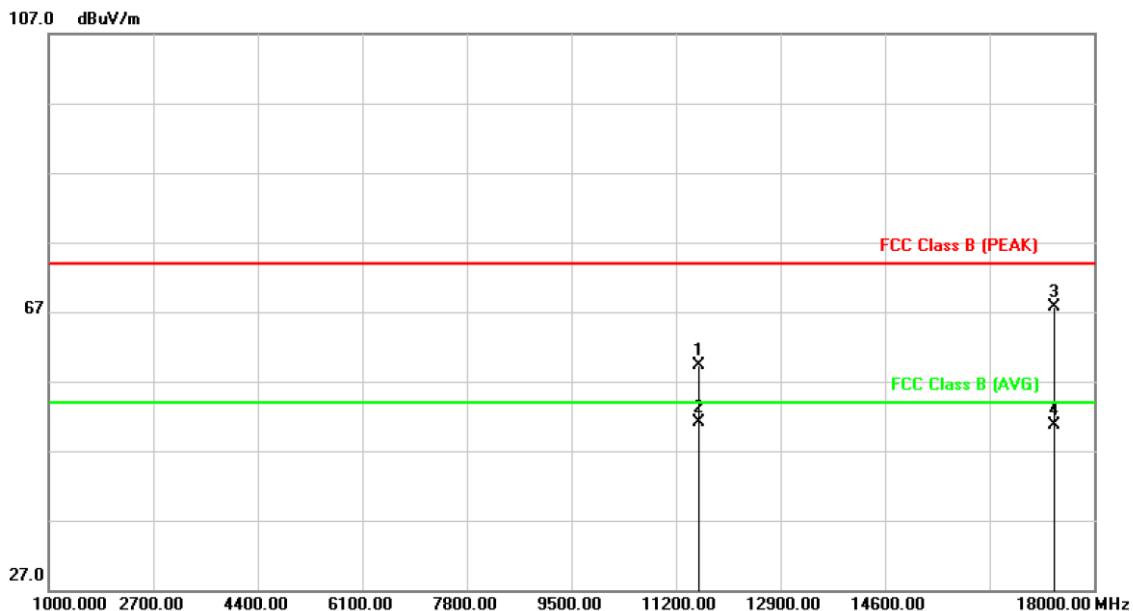
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34170.000	7.23	58.67	65.90	74.00	-8.10	peak	107	169
2	34170.000	7.23	40.56	47.79	54.00	-6.21	AVG	107	169
3	35116.000	7.32	58.67	65.99	74.00	-8.01	peak	107	169
4	35116.000	7.32	38.72	46.04	54.00	-7.96	AVG	107	169

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH157	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo		Atmospheric Pressure	: 1010 hpa



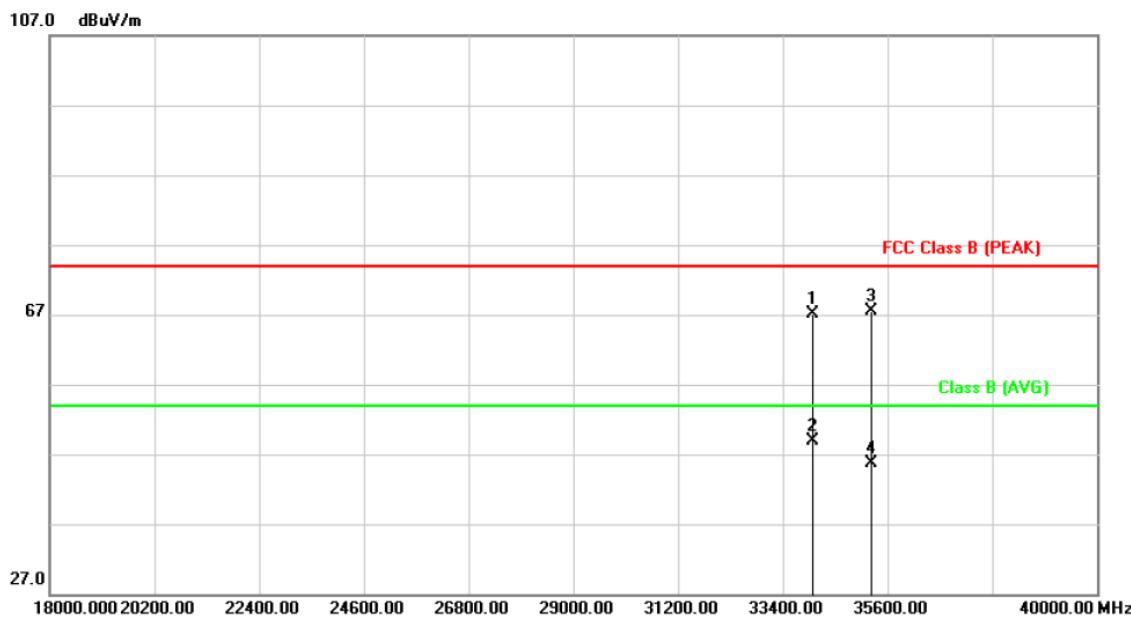
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11570.000	18.94	40.37	59.31	74.00	-14.69	peak	110	164
2	11570.000	18.94	32.17	51.11	54.00	-2.89	AVG	110	164
3	17355.000	26.79	40.92	67.71	74.00	-6.29	peak	110	164
4	17355.000	26.79	23.85	50.64	54.00	-3.36	AVG	110	164

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11a, CH157	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34016.000	7.31	59.84	67.15	74.00	-6.85	peak	114	173
2	34016.000	7.31	41.67	48.98	54.00	-5.02	AVG	114	173
3	35270.000	6.79	60.74	67.53	74.00	-6.47	peak	114	173
4	35270.000	6.79	38.97	45.76	54.00	-8.24	AVG	114	173

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11a, CH165	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



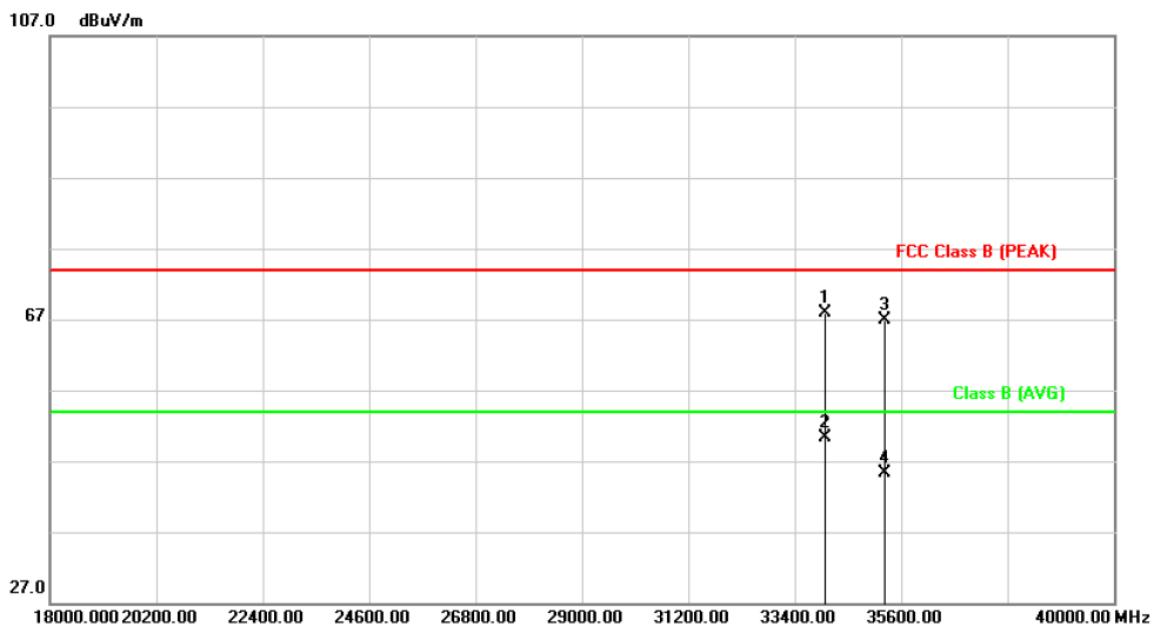
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11650.000	19.00	38.69	57.69	74.00	-16.31	peak	103	163
2	11650.000	19.00	31.47	50.47	54.00	-3.53	AVG	103	163
3	17475.000	27.48	41.23	68.71	74.00	-5.29	peak	103	163
4	17475.000	27.48	22.67	50.15	54.00	-3.85	AVG	103	163

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11a, CH165	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



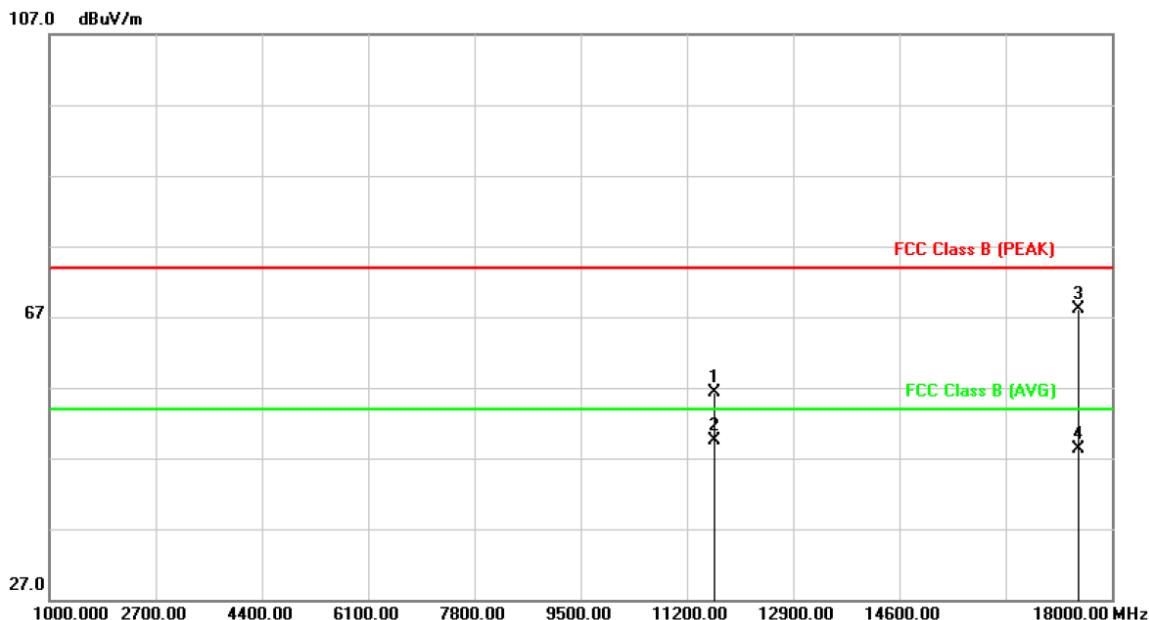
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34016.000	7.31	60.61	67.92	74.00	-6.08	peak	111	174
2	34016.000	7.31	42.91	50.22	54.00	-3.78	AVG	111	174
3	35270.000	6.79	60.17	66.96	74.00	-7.04	peak	111	174
4	35270.000	6.79	38.45	45.24	54.00	-8.76	AVG	111	174

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11a, CH165	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



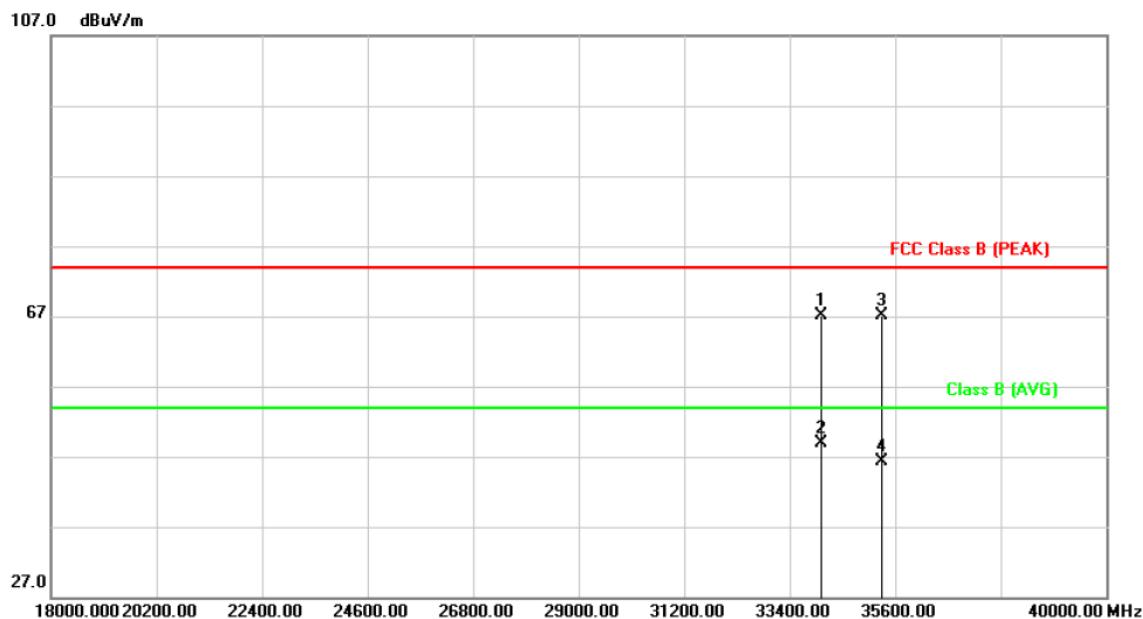
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11650.000	19.00	37.25	56.25	74.00	-17.75	peak	114	185
2	11650.000	19.00	30.54	49.54	54.00	-4.46	AVG	114	185
3	17475.000	27.48	40.68	68.16	74.00	-5.84	peak	114	185
4	17475.000	27.48	20.89	48.37	54.00	-5.63	AVG	114	185

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11a, CH165	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



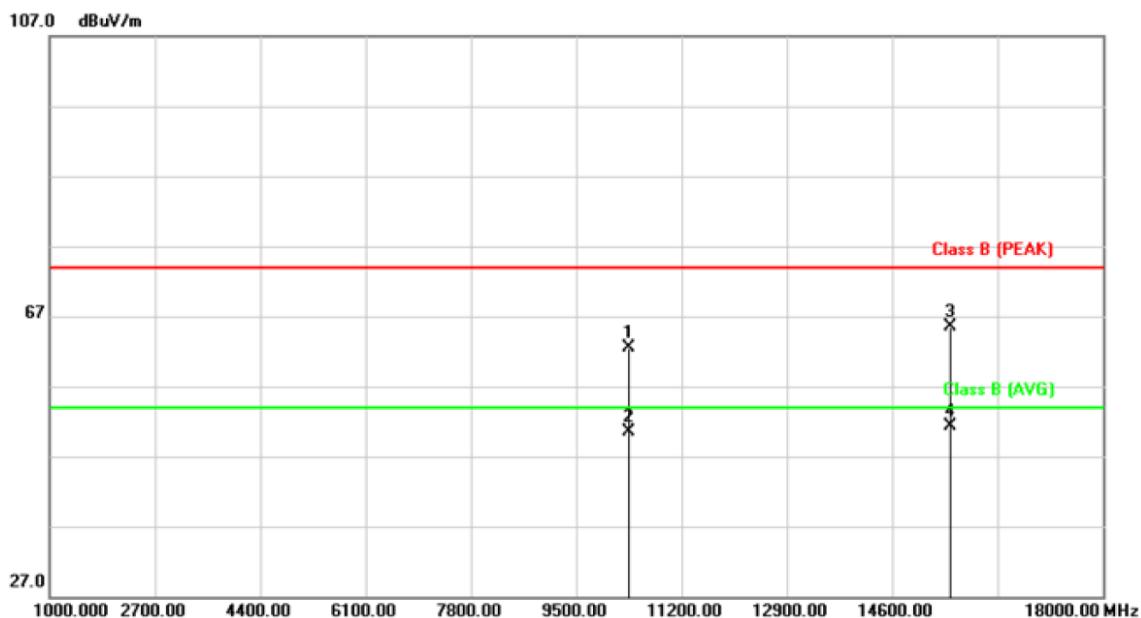
No.	Frequency (MHz)	Factor (dB/m)	Reading (dB <sub>uV</sub> )	Level (dB <sub>uV/m</sub> )	Limit (dB <sub>uV/m</sub> )	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34060.000	7.28	59.87	67.15	74.00	-6.85	peak	109	177
2	34060.000	7.28	41.59	48.87	54.00	-5.13	AVG	109	177
3	35314.000	6.63	60.54	67.17	74.00	-6.83	peak	109	177
4	35314.000	6.63	39.77	46.40	54.00	-7.60	AVG	109	177

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	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	10360.000	16.94	45.60	62.54	74.00	-11.46	peak	107	185
2	10360.000	16.94	33.56	50.50	54.00	-3.50	AVG	107	185
3	15540.000	21.17	44.28	65.45	74.00	-8.55	peak	107	185
4	15540.000	21.17	30.15	51.32	54.00	-2.68	AVG	107	185

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



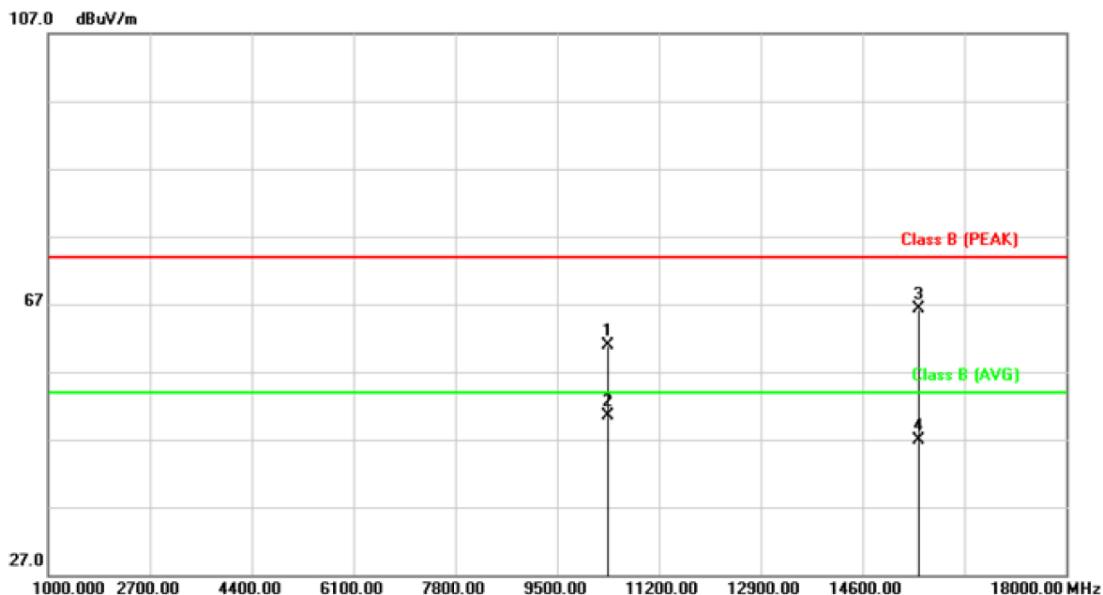
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34060.000	7.28	60.73	68.01	74.00	-5.99	peak	114	178
2	34060.000	7.28	42.38	49.66	54.00	-4.34	AVG	114	178
3	35512.000	5.94	60.84	66.78	74.00	-7.22	peak	114	178
4	35512.000	5.94	40.67	46.61	54.00	-7.39	AVG	114	178

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric	: 1010 hpa



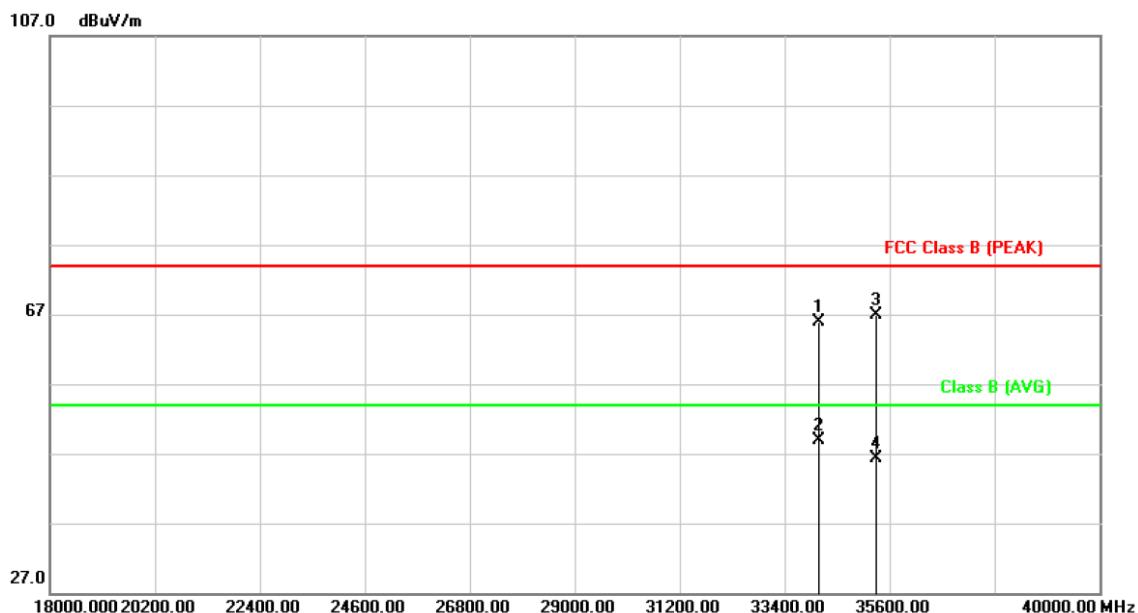
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10360.000	16.94	44.03	60.97	74.00	-13.03	peak	114	175
2	10360.000	16.94	33.62	50.56	54.00	-3.44	AVG	114	175
3	15540.000	21.17	45.13	66.30	74.00	-7.70	peak	114	175
4	15540.000	21.17	25.66	46.83	54.00	-7.17	AVG	114	175

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH36	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34104.000	7.26	58.69	65.95	74.00	-8.05	peak	116	164
2	34104.000	7.26	41.55	48.81	54.00	-5.19	AVG	116	164
3	35314.000	6.63	60.31	66.94	74.00	-7.06	peak	116	164
4	35314.000	6.63	39.77	46.40	54.00	-7.60	AVG	116	164

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	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	10360.000	16.94	44.45	61.39	74.00	-12.61	peak	115	166
2	10360.000	16.94	34.67	51.61	54.00	-2.39	AVG	115	166
3	15540.000	21.17	41.35	62.52	74.00	-11.48	peak	115	166
4	15540.000	21.17	28.55	49.72	54.00	-4.28	AVG	115	166

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



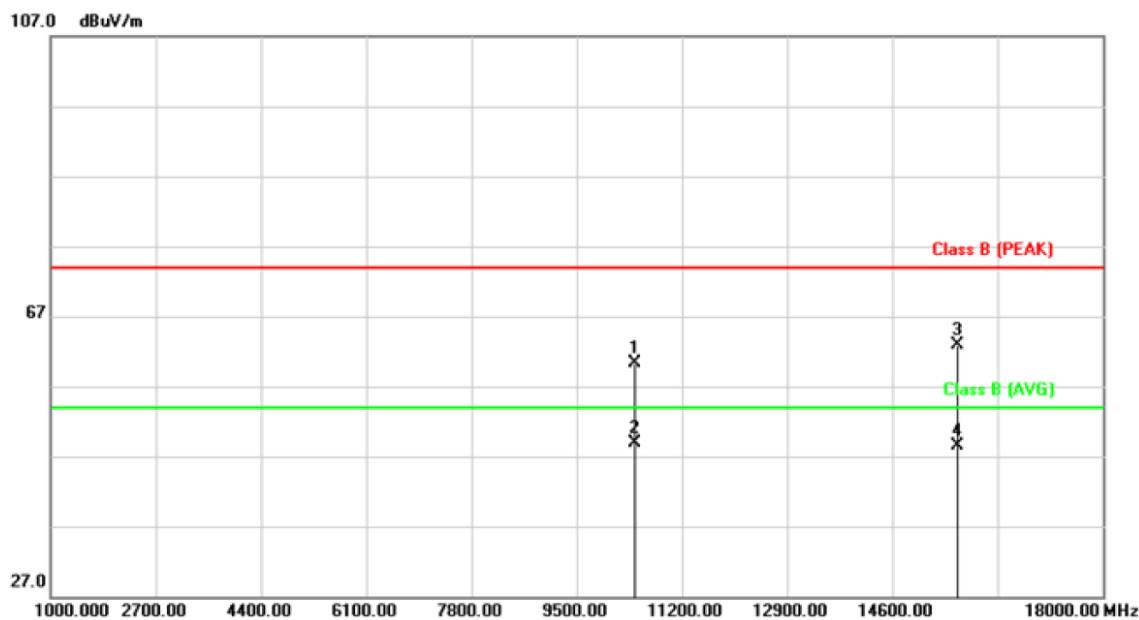
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34016.000	7.31	60.62	67.93	74.00	-6.07	peak	104	177
2	34016.000	7.31	42.34	49.65	54.00	-4.35	AVG	104	177
3	35402.000	6.32	60.93	67.25	74.00	-6.75	peak	104	177
4	35402.000	6.32	38.46	44.78	54.00	-9.22	AVG	104	177

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH44	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	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	10440.000	17.08	43.30	60.38	74.00	-13.62	peak	111	163
2	10440.000	17.08	31.87	48.95	54.00	-5.05	AVG	111	163
3	15660.000	20.93	41.88	62.81	74.00	-11.19	peak	111	163
4	15660.000	20.93	27.58	48.51	54.00	-5.49	AVG	111	163

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11an HT20, CH44	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33686.000	6.68	60.35	67.03	74.00	-6.97	peak	115	166
2	33686.000	6.68	42.67	49.35	54.00	-4.65	AVG	115	166
3	34016.000	7.31	60.05	67.36	74.00	-6.64	peak	115	166
4	34016.000	7.31	39.56	46.87	54.00	-7.13	AVG	115	166

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



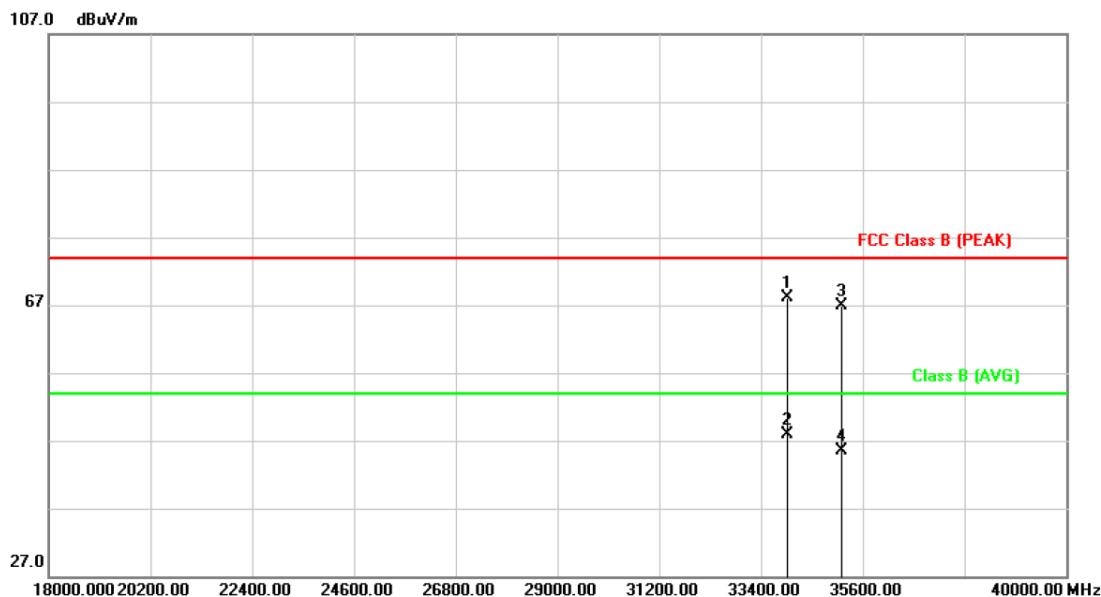
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	17.15	43.77	60.92	74.00	-13.08	peak	108	177
2	10480.000	17.15	30.43	47.58	54.00	-6.42	AVG	108	177
3	15720.000	20.83	39.64	60.47	74.00	-13.53	peak	108	177
4	15720.000	20.83	27.18	48.01	54.00	-5.99	AVG	108	177

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33972.000	7.27	60.93	68.20	74.00	-5.80	peak	112	164
2	33972.000	7.27	40.57	47.84	54.00	-6.16	AVG	112	164
3	35138.000	7.24	59.70	66.94	74.00	-7.06	peak	112	164
4	35138.000	7.24	38.23	45.47	54.00	-8.53	AVG	112	164

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



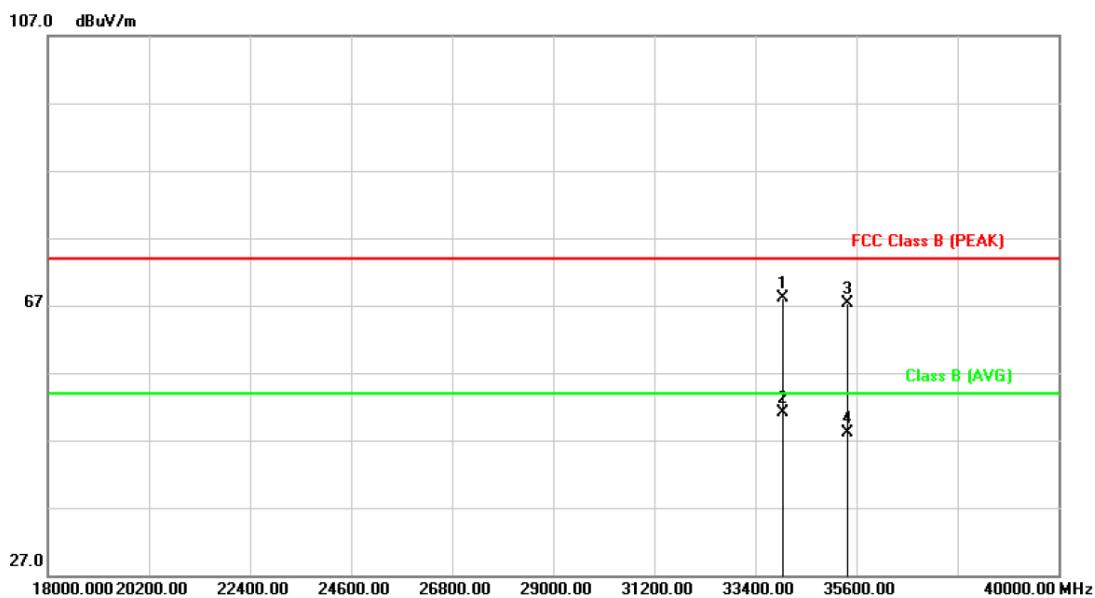
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10480.000	17.15	41.68	58.83	74.00	-15.17	peak	104	165
2	10480.000	17.15	30.67	47.82	54.00	-6.18	AVG	104	165
3	15720.000	20.83	40.85	61.68	74.00	-12.32	peak	104	165
4	15720.000	20.83	27.64	48.47	54.00	-5.53	AVG	104	165

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT20, CH48	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



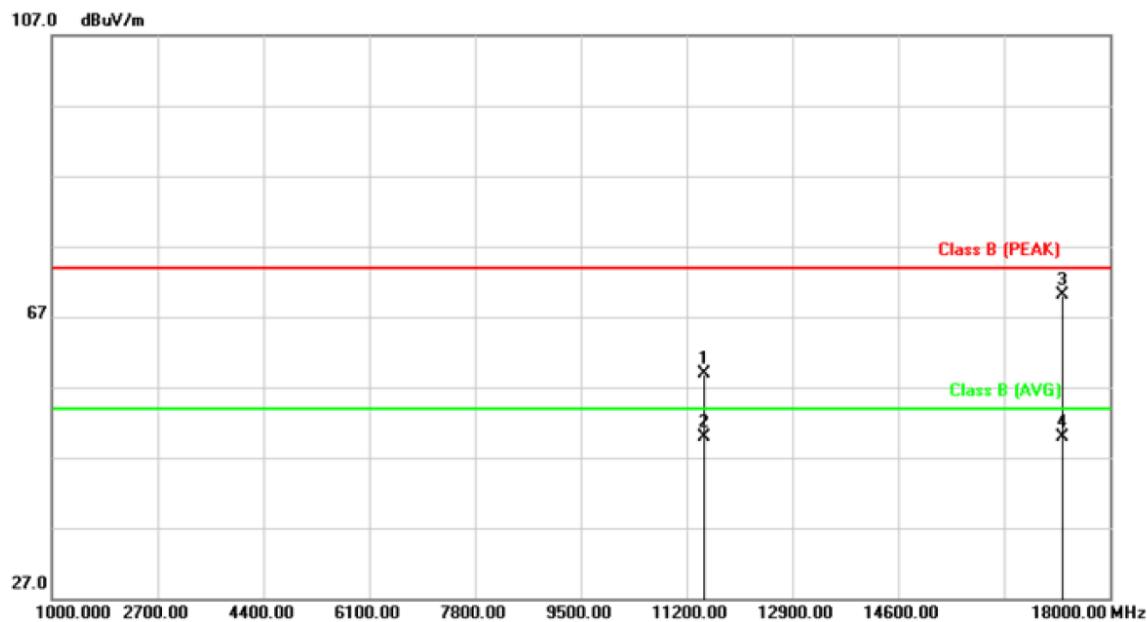
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33994.000	7.31	60.76	68.07	74.00	-5.93	peak	105	179
2	33994.000	7.31	43.88	51.19	54.00	-2.81	AVG	105	179
3	35402.000	6.32	61.04	67.36	74.00	-6.64	peak	105	179
4	35402.000	6.32	41.83	48.15	54.00	-5.85	AVG	105	179

Note: Level = Reading + Factor

Margin = Level - Limit



Power :	AC 120V	Pol/Phase :	VERTICAL
Test Mode :	802.11an HT20, CH149	Temperature :	25 °C
Test Date :	Aug. 11, 2014	Humidity :	52 %
Memo :		Atmospheric Pressure :	1010 hpa



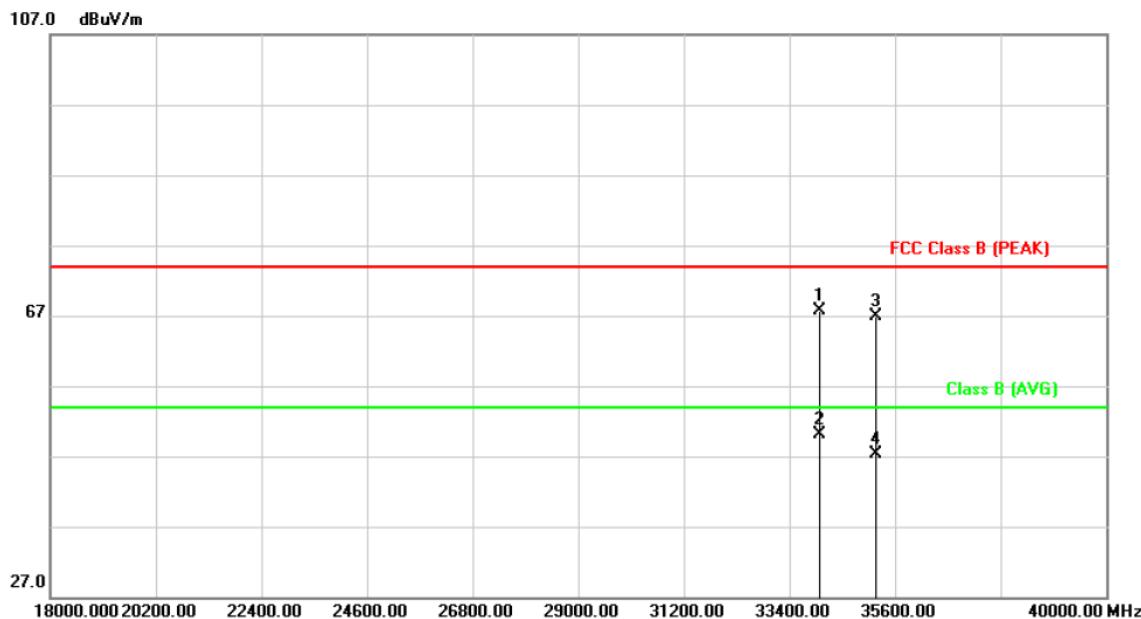
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11490.000	18.87	40.02	58.89	74.00	-15.11	peak	102	174
2	11490.000	18.87	31.05	49.92	54.00	-4.08	AVG	102	174
3	17235.000	26.12	44.05	70.17	74.00	-3.83	peak	102	174
4	17235.000	26.12	23.71	49.83	54.00	-4.17	AVG	102	174

Note: Level = Reading + Factor

Margin = Level - Limit



Power :	AC 120V	Pol/Phase :	VERTICAL
Test Mode :	802.11an HT20, CH149	Temperature :	24 °C
Test Date :	Aug. 13, 2014	Humidity :	53 %
Memo :		Atmospheric Pressure :	1038 hpa



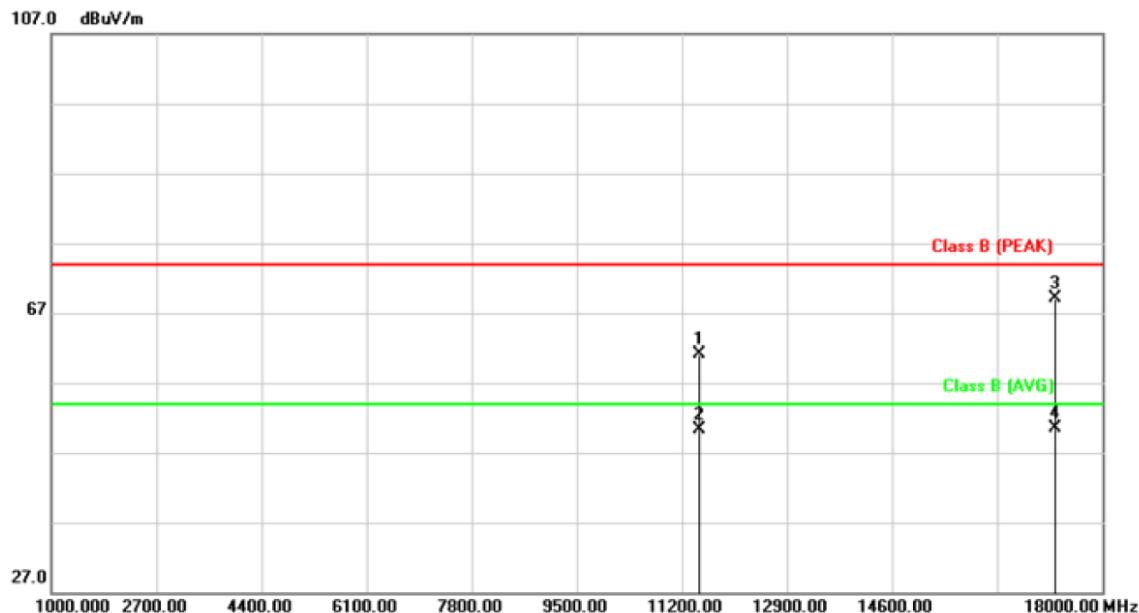
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34038.000	7.30	60.32	67.62	74.00	-6.38	peak	112	167
2	34038.000	7.30	42.75	50.05	54.00	-3.95	AVG	112	167
3	35204.000	7.02	59.96	66.98	74.00	-7.02	peak	112	167
4	35204.000	7.02	40.36	47.38	54.00	-6.62	AVG	112	167

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11an HT20, CH149	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



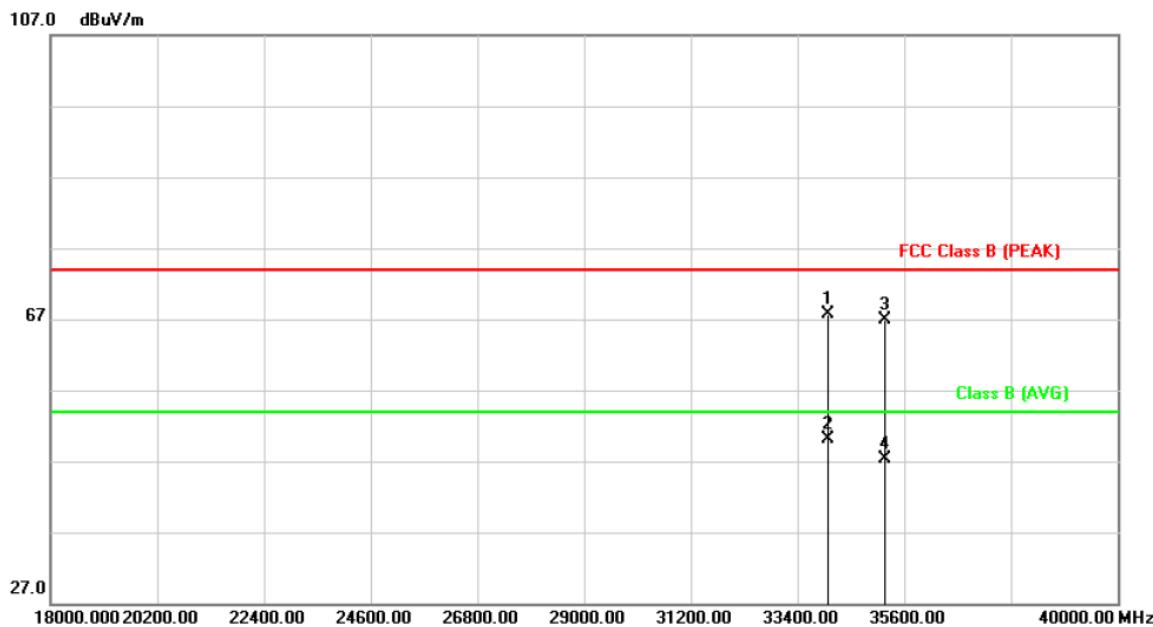
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11490.000	18.87	42.32	61.19	74.00	-12.81	peak	116	168
2	11490.000	18.87	31.52	50.39	54.00	-3.61	AVG	116	168
3	17235.000	26.12	42.91	69.03	74.00	-4.97	peak	116	168
4	17235.000	26.12	24.35	50.47	54.00	-3.53	AVG	116	168

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH149	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



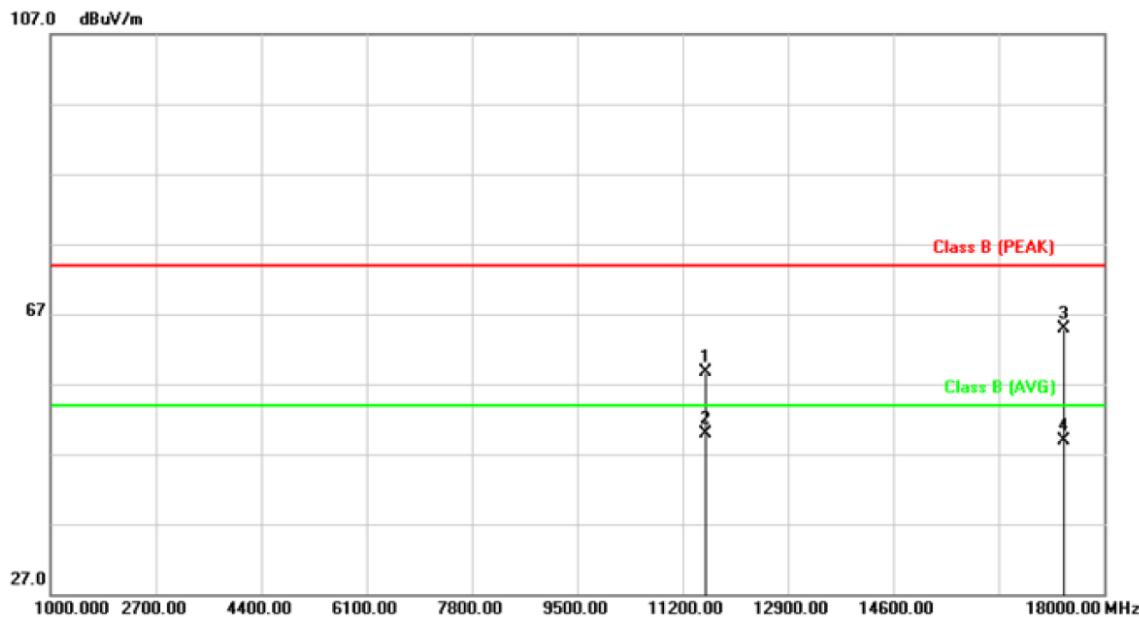
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34038.000	7.30	60.32	67.62	74.00	-6.38	peak	112	167
2	34038.000	7.30	42.75	50.05	54.00	-3.95	AVG	112	167
3	35204.000	7.02	59.96	66.98	74.00	-7.02	peak	112	167
4	35204.000	7.02	40.36	47.38	54.00	-6.62	AVG	112	167

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11an HT20, CH157	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



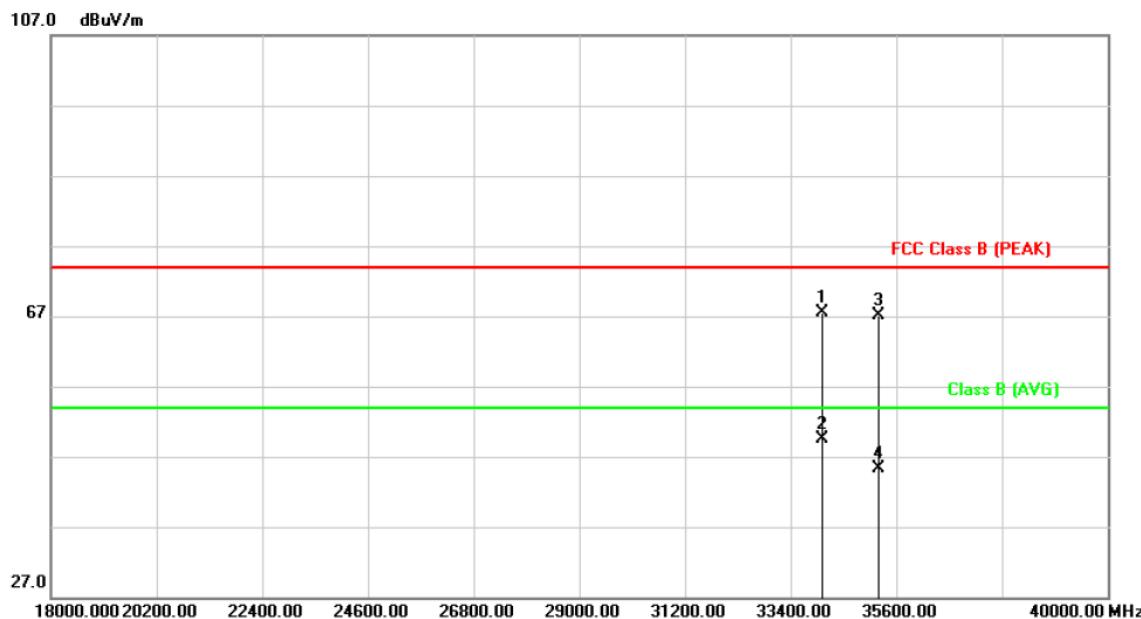
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11570.000	18.94	39.83	58.77	74.00	-15.23	peak	114	162
2	11570.000	18.94	30.88	49.82	54.00	-4.18	AVG	114	162
3	17355.000	26.79	38.17	64.96	74.00	-9.04	peak	114	162
4	17355.000	26.79	22.17	48.96	54.00	-5.04	AVG	114	162

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11an HT20, CH157	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



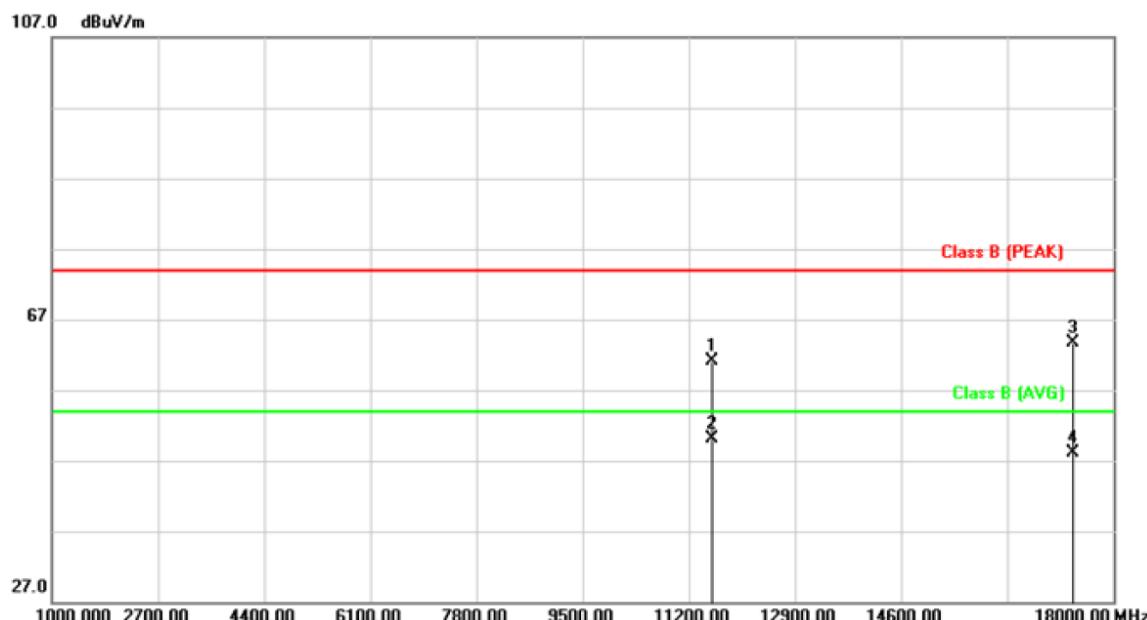
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34060.000	7.28	60.20	67.48	74.00	-6.52	peak	116	174
2	34060.000	7.28	42.14	49.42	54.00	-4.58	AVG	116	174
3	35226.000	6.94	60.12	67.06	74.00	-6.94	peak	116	174
4	35226.000	6.94	38.27	45.21	54.00	-8.79	AVG	116	174

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH157	Temperature	: 25 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo		Atmospheric Pressure	: 1010 hpa



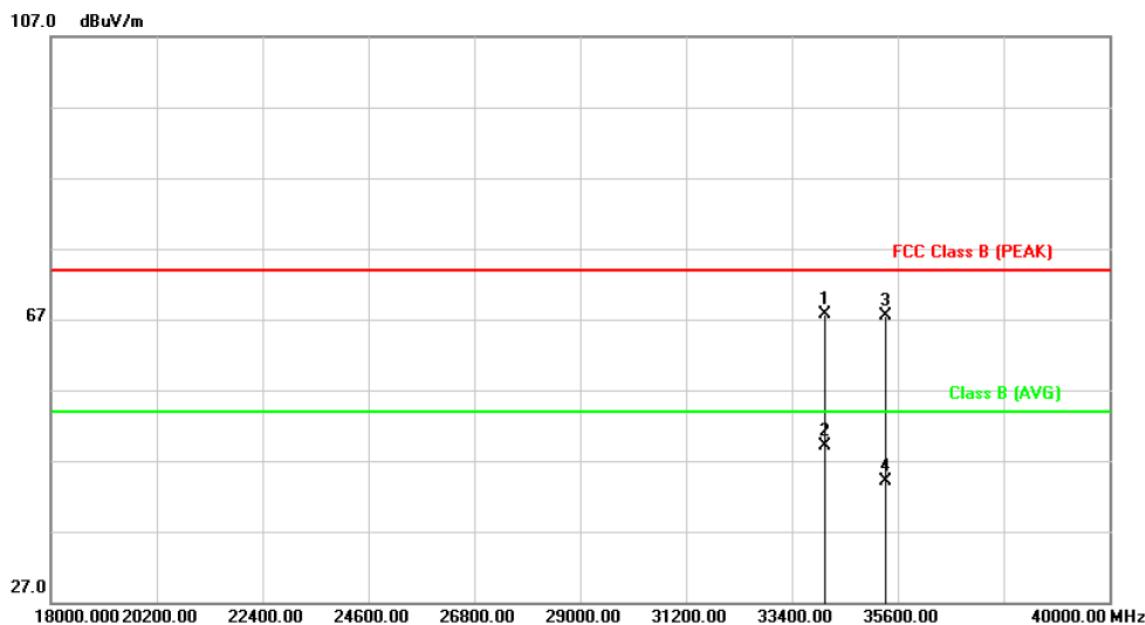
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11570.000	18.94	42.07	61.01	74.00	-12.99	peak	101	183
2	11570.000	18.94	31.16	50.10	54.00	-3.90	AVG	101	183
3	17355.000	26.79	36.99	63.78	74.00	-10.22	peak	101	183
4	17355.000	26.79	21.24	48.03	54.00	-5.97	AVG	101	183

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT20, CH157	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



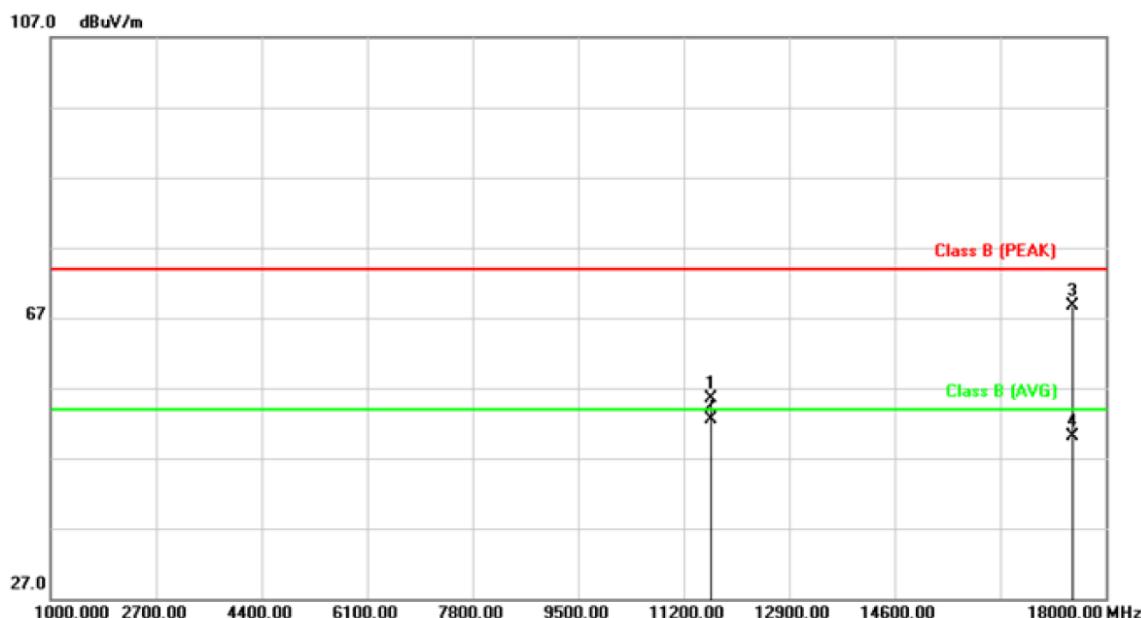
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34082.000	7.27	60.48	67.75	74.00	-6.25	peak	118	171
2	34082.000	7.27	41.86	49.13	54.00	-4.87	AVG	118	171
3	35358.000	6.48	60.98	67.46	74.00	-6.54	peak	118	171
4	35358.000	6.48	37.64	44.12	54.00	-9.88	AVG	118	171

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11an HT20, CH165	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



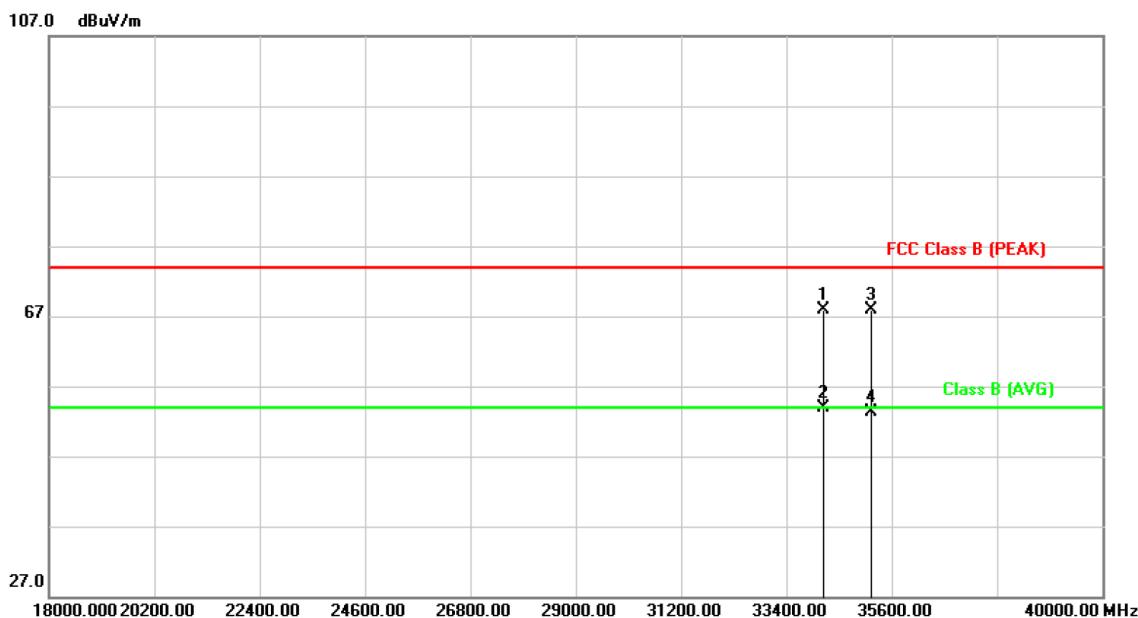
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11650.000	19.00	36.50	55.50	74.00	-18.50	peak	106	181
2	11650.000	19.00	33.52	52.52	54.00	-1.48	AVG	106	181
3	17475.000	27.48	41.28	68.76	74.00	-5.24	peak	106	181
4	17475.000	27.48	22.63	50.11	54.00	-3.89	AVG	106	181

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	802.11an HT20, CH165	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



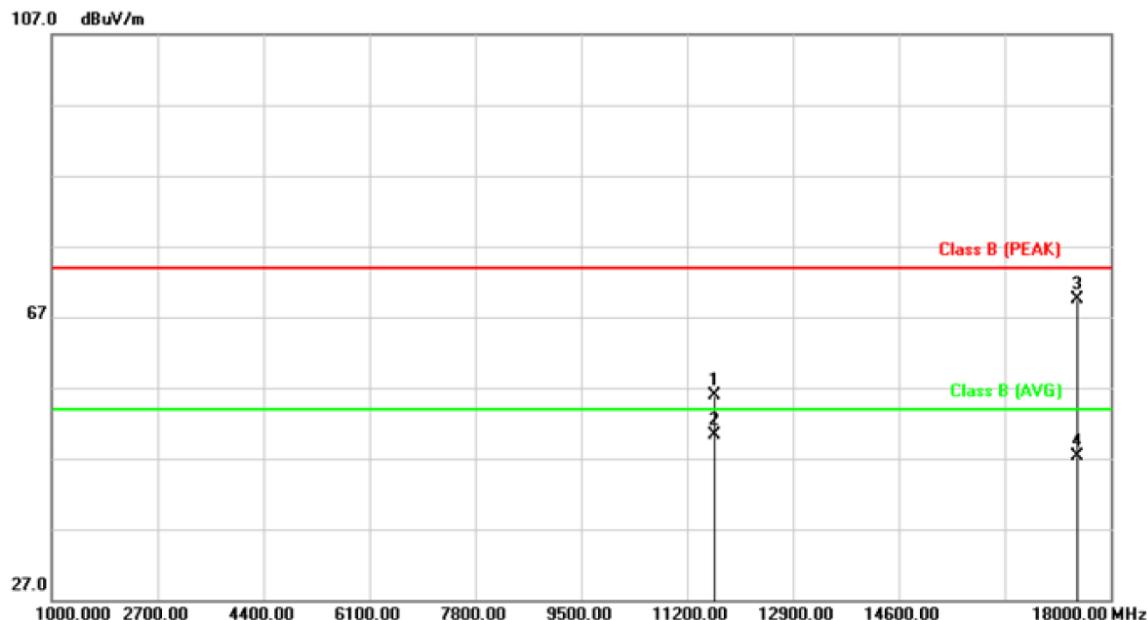
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34170.000	7.23	60.69	67.92	74.00	-6.08	peak	104	162
2	34170.000	7.23	46.67	53.90	54.00	-1.08	AVG	104	162
3	35160.000	7.16	60.65	67.81	74.00	-6.19	peak	104	162
4	35160.000	7.16	46.16	53.32	54.00	-1.27	AVG	104	162

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11an HT20, CH165	Temperature	:	25 °C
Test Date	:	Aug. 11, 2014	Humidity	:	52 %
Memo	:		Atmospheric Pressure	:	1010 hpa



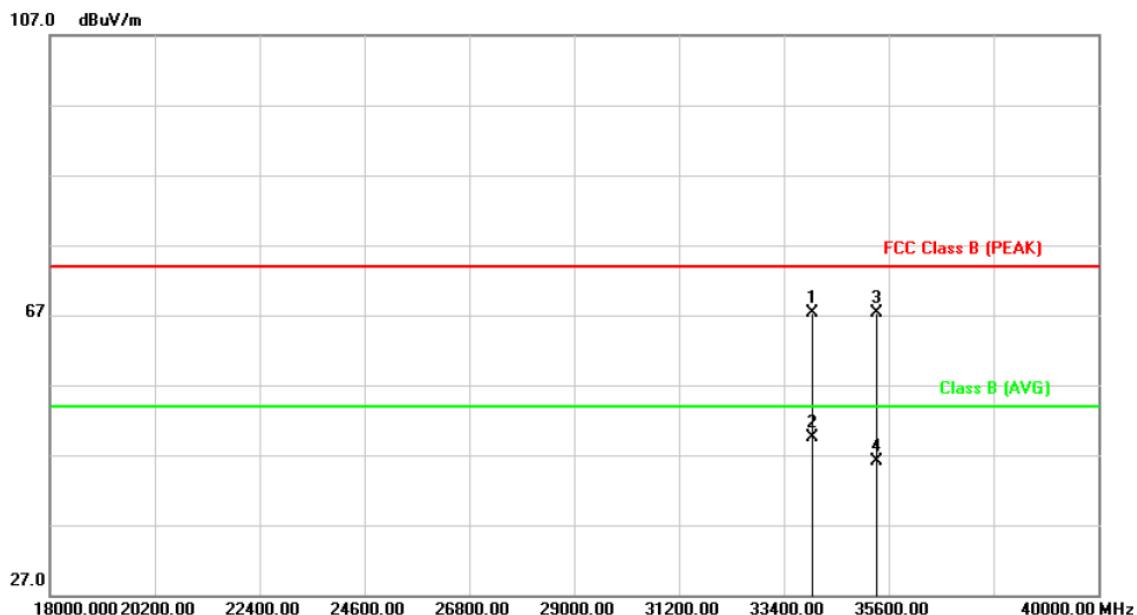
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	11650.000	19.00	36.90	55.90	74.00	-18.10	peak	111	172
2	11650.000	19.00	31.38	50.38	54.00	-3.62	AVG	111	172
3	17475.000	27.48	41.92	69.40	74.00	-4.60	peak	111	172
4	17475.000	27.48	19.76	47.24	54.00	-6.76	AVG	111	172

Note: Level = Reading + Factor

Margin = Level - Limit



Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	802.11an HT20, CH165	Temperature	:	24 °C
Test Date	:	Aug. 13, 2014	Humidity	:	53 %
Memo	:		Atmospheric Pressure	:	1038 hpa



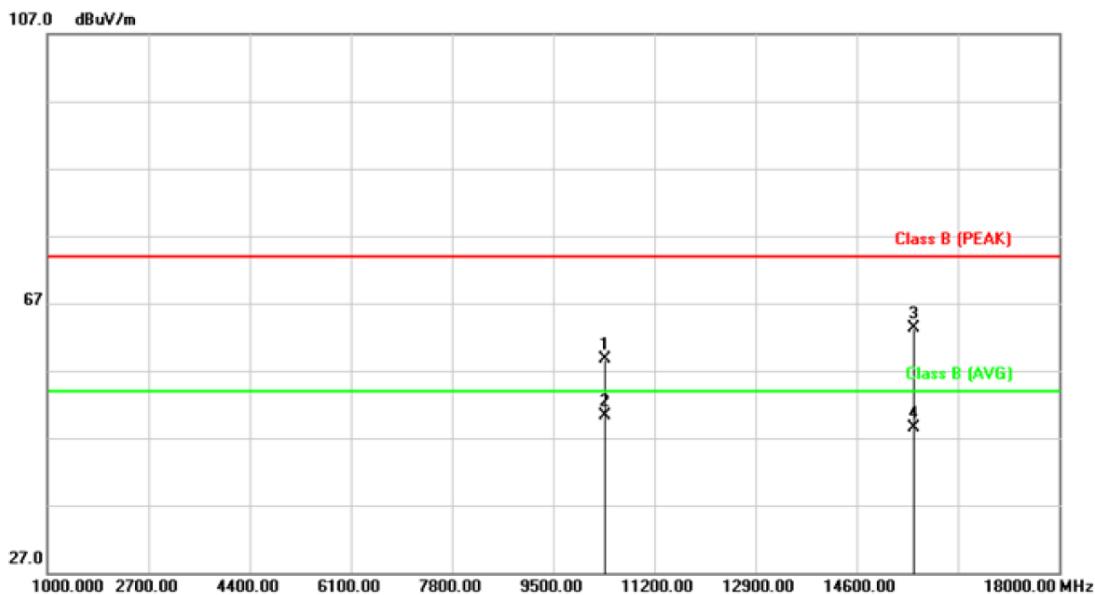
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33994.000	7.31	60.04	67.35	74.00	-6.65	peak	114	164
2	33994.000	7.31	42.18	49.49	54.00	-4.51	AVG	114	164
3	35358.000	6.48	60.74	67.22	74.00	-6.78	peak	114	164
4	35358.000	6.48	39.66	46.14	54.00	-7.86	AVG	114	164

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT40, CH38	Temperature	: 26 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



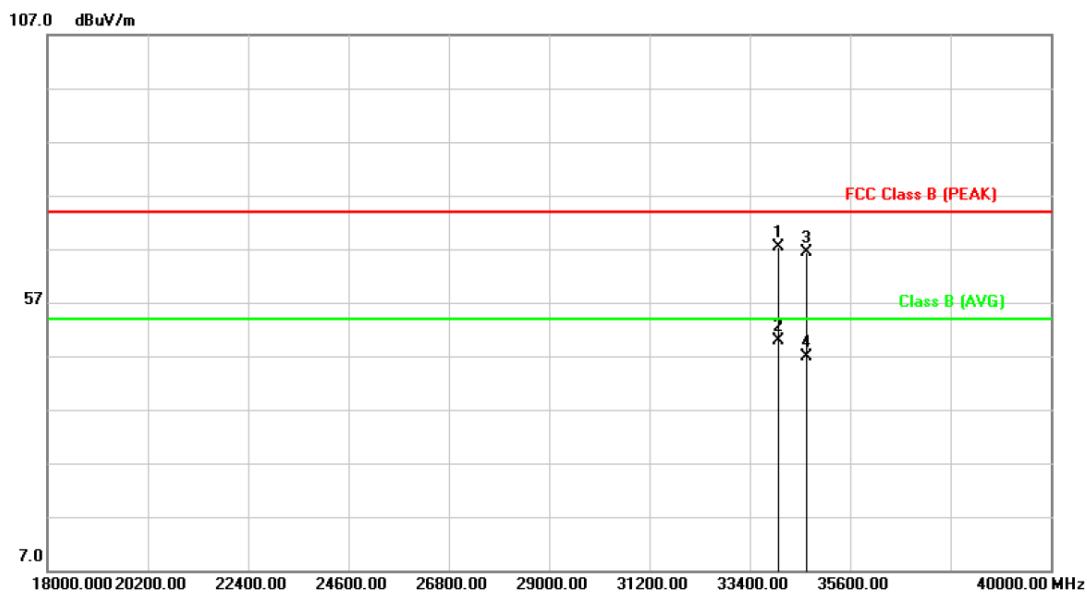
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10380.000	16.97	41.78	58.75	74.00	-15.25	peak	112	163
2	10380.000	16.97	33.27	50.24	54.00	-3.76	AVG	112	163
3	15570.000	21.10	42.17	63.27	74.00	-10.73	peak	112	163
4	15570.000	21.10	27.34	48.44	54.00	-5.56	AVG	112	163

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT40, CH38	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34038.000	7.30	60.09	67.39	74.00	-6.61	peak	102	165
2	34038.000	7.30	42.51	49.81	54.00	-4.19	AVG	102	165
3	34654.000	7.25	59.09	66.34	74.00	-7.66	peak	102	165
4	34654.000	7.25	39.67	46.92	54.00	-7.08	AVG	102	165

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT40, CH38	Temperature	: 26 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



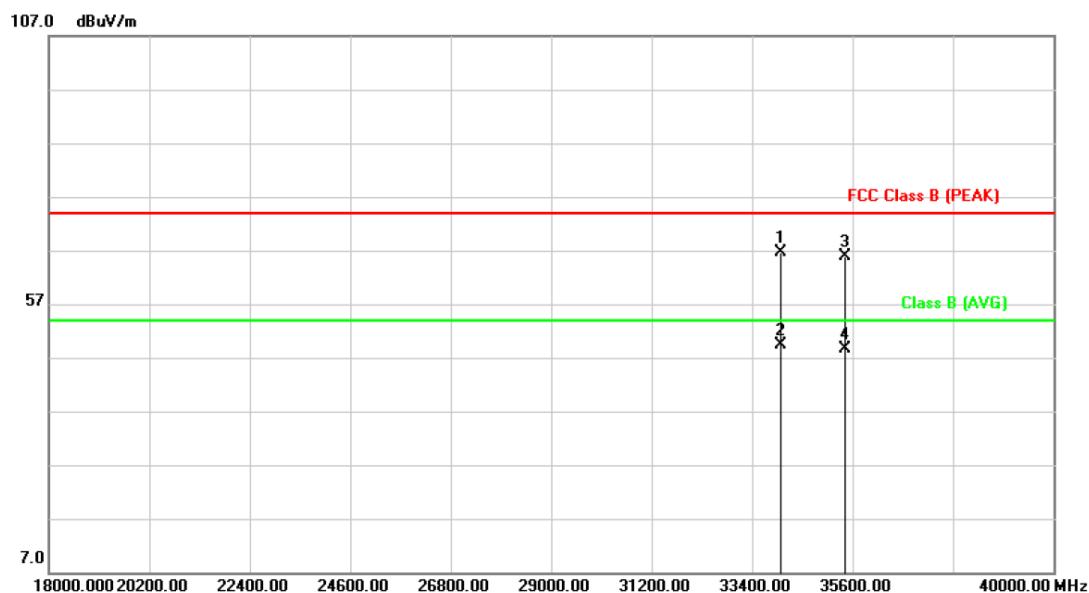
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10380.000	16.97	39.86	56.83	74.00	-17.17	peak	106	166
2	10380.000	16.97	32.78	49.75	54.00	-4.25	AVG	106	166
3	15570.000	21.10	41.35	62.45	74.00	-11.55	peak	106	166
4	15570.000	21.10	26.49	47.59	54.00	-6.41	AVG	106	166

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT40, CH38	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



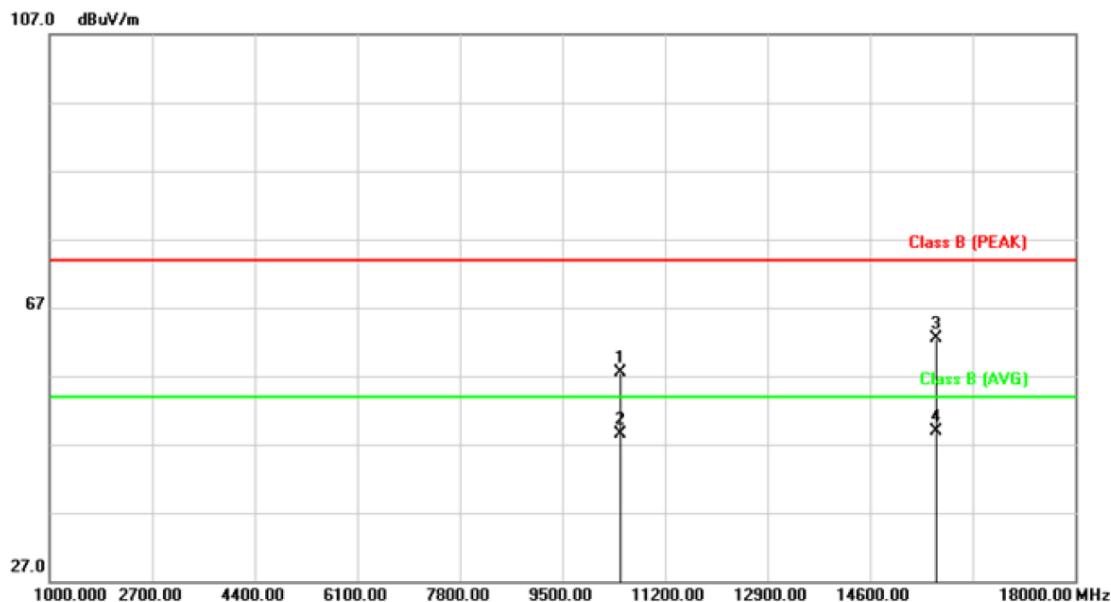
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34038.000	7.30	59.40	66.70	74.00	-7.30	peak	105	161
2	34038.000	7.30	41.99	49.29	54.00	-4.71	AVG	105	161
3	35424.000	6.25	59.60	65.85	74.00	-8.15	peak	105	161
4	35424.000	6.25	42.38	48.63	54.00	-5.37	AVG	105	161

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT40, CH46	Temperature	: 26 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



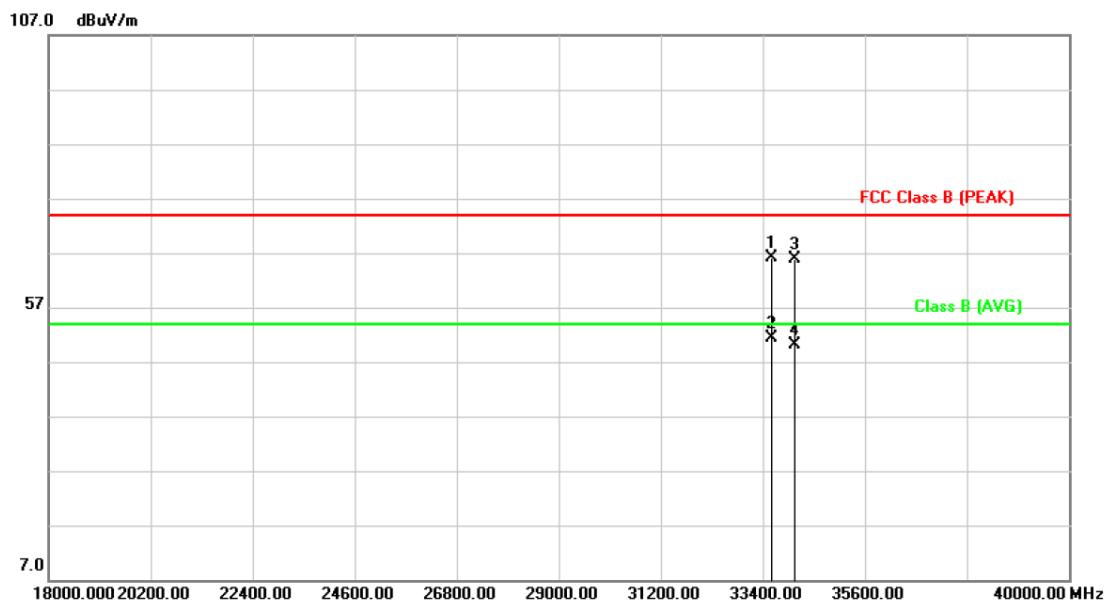
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10460.000	17.11	40.45	57.56	74.00	-16.44	peak	110	174
2	10460.000	17.11	31.46	48.57	54.00	-5.43	AVG	110	174
3	15690.000	20.89	41.57	62.46	74.00	-11.54	peak	110	174
4	15690.000	20.89	27.93	48.82	54.00	-5.18	AVG	110	174

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: 802.11an HT40, CH46	Temperature	: 24 °C
Test Date	: Aug. 13, 2014	Humidity	: 53 %
Memo	:	Atmospheric Pressure	: 1038 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33576.000	6.46	59.65	66.11	74.00	-7.89	peak	118	163
2	33576.000	6.46	44.81	51.27	54.00	-2.73	AVG	118	163
3	34082.000	7.27	58.52	65.79	74.00	-8.21	peak	118	163
4	34082.000	7.27	42.83	50.10	54.00	-3.90	AVG	118	163

Note: Level = Reading + Factor

Margin = Level - Limit



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11an HT40, CH46	Temperature	: 26 °C
Test Date	: Aug. 11, 2014	Humidity	: 52 %
Memo	:	Atmospheric Pressure	: 1010 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dB <sub>B</sub> V)	Level (dB <sub>B</sub> V/m)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	10460.000	17.11	42.79	59.90	74.00	-14.10	peak	105	185
2	10460.000	17.11	30.71	47.82	54.00	-6.18	AVG	105	185
3	15690.000	20.89	43.56	64.45	74.00	-9.55	peak	105	185
4	15690.000	20.89	26.98	47.87	54.00	-6.13	AVG	105	185

Note: Level = Reading + Factor

Margin = Level - Limit