



# FCC RADIO TEST REPORT

Applicant : Ubiquiti Networks, Inc.  
Address : 685 Third Avenue, 27th Floor New York,  
New York 10017 USA  
Equipment : PowerBeam AC  
Model No. : PBE-2AC-400  
Trade Name : UBIQUITI  
FCC ID. : SWX-PBE2ACN


**I HEREBY CERTIFY THAT :**

The sample was received on Aug. 25, 2017 and the testing was carried out on Aug. 31, 2017 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

  
Mark Liao / Assistant Manager

Tested by:

  
Spree Yei / Engineer

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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# 1. Summary of Test Procedure and Test Results

## 1.1 Applicable Standards

ANSI C63.4:2014

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart C §15.247

KDB558074

KDB662911

KDB447498

FCC Rule	Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. AC Power Line Conducted Emission	Pass
15.209 15.205	. Radiated Spurious Emission	Pass
15.247(d)	. Conducted Spurious Emission	Pass
15.247(a)(2)	. 6dB Bandwidth	Pass
15.247(b)	. Maximum Peak and Average Output Power	Pass
15.247(e)	. Power Spectral Density	Pass
2.1091	. Radio Frequency Exposure	Pass

This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report.



## 2. Test Configuration of Equipment under Test

### 2.1 Feature of Equipment

Frequency Range	802.11n/ac: 2412-2462 MHz 802.11n: 5725MHz -5850MHz
Modulation Type	OFDM
Data Rate	2.4GHz 802.11n: MCS0 – MCS15, HT10/20/40 802.11ac: MCS0 – MCS9, VHT10/20/40 5GHz 802.11n: MCS0 – MCS7, HT20
Antenna Type/ gain	2.4G: Dish Antenna ANT A/B: 18dBi 5G: Internal Antenna ANT A: 2dBi

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. devices must be professionally installed ,Supply Point to Point & Point to multiple Point System

### 2.2 Carrier Frequency of Channels

802.11n HT10, 802.11n HT20, 802.11ac VHT10, 802.11ac VHT20 (2412MHz~2462MHz)

Frequency(MHz)	Frequency(MHz)	Frequency(MHz)	Frequency(MHz)
<b>*2412</b>	2427	2442	2457
2414	2429	2444	2459
2417	2432	2447	<b>*2462</b>
2419	2434	2449	
2422	<b>*2437</b>	2452	
2424	2439	2454	

802.11n HT40, 802.11ac VHT40 (2422MHz~2452MHz)

Frequency(MHz)	Frequency(MHz)	Frequency(MHz)
<b>*2422</b>	<b>*2437</b>	<b>*2452</b>
2424	2439	
2427	2442	
2429	2444	
2432	2447	
2434	2449	

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 EUT for RF test.
- c. An executive program, " Art2\_ver\_3\_11\_2a" under WIN 8 was executed to transmit and receive data via WLAN.
- d. The following test modes were performed for the test:
  - Test Mode 1. 802.11n HT10 (MCS0)
  - Test Mode 2. 802.11n HT20 (MCS0)
  - Test Mode 3. 802.11n HT40 (MCS0)
  - Test Mode 4. 802.11ac VHT10 (MCS0)
  - Test Mode 5. 802.11ac VHT20 (MCS0)
  - Test Mode 6. 802.11ac VHT40 (MCS0)For conduction test, caused "Test Mode 4" generated the worst case, it was reported as the final data.  
For radiation test (below 1GHz), caused "Test Mode 4" generated the worst case, it was reported as the final data.  
For radiation test (above 1GHz), caused "Test Mode 4~6" generated the worst case, they were reported as the final data.

### 2.4 Description of Test System

No support unit was used during testing.



## 2.5 General Information of Test

Test Site	<b>CerpPASS Technology Corporation Test Laboratory</b> Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582	
	FCC	TW1079, TW1061, 390316, 228391, 641184
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4399, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

## 2.6 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	Line / Neutral	±2.9076 dB
Radiated Emission	9 kHz ~ 25,000 MHz	Vertical / Horizontal	±0.948 dB
Spurious Emission (Conducted)	-	-	±4.011 dB
Maximum Peak and Average Output Power	-	-	±0.322 dB
Power Spectral Density	-	-	±0.322 dB
Bandwidth	-	-	74.224Hz





### 3. Test Equipment and Ancillaries Used for Tests

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100443	2017/03/07	2018/03/06
LISN	Schwarzbeck	NSLK 8127	8127-568	2017/02/15	2018/02/14
Pulse Limiter	R&S	ESH3-Z2	101934	2017/02/14	2018/02/13
Bilog Antenna	Schwarzbeck	VULB9168	369	2017/03/15	2018/03/14
Active Loop Antenna	EMCO	6507	40855	2017/05/15	2018/05/14
Horn Antenna	EMCO	3115	31601	2016/09/05	2017/09/04
Horn Antenna	EMCO	3116	31970	2017/03/29	2018/03/28
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200207	2017/03/17	2018/03/16
Preamplifier	EM	EM330	60660	2017/02/25	2018/02/24
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2016/09/13	2017/09/12
Preamplifier	Agilent	8449B	3008A01954	2017/02/09	2018/02/08
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2016/11/04	2017/11/03
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2017/03/17	2018/03/16
Spectrum Analyzer	R&S	FSP40	100219	2017/07/01	2018/06/30
BLUETOOTH TESTER	R&S	CBT	101133	2017/03/10	2018/03/09
Attenuator	KEYSIGHT	8491B	MY39250703	2017/03/07	2018/03/06
Rotary Attenuator	Agilent	8495B	MY42146680	2017/03/13	2018/03/12
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2016/09/05	2017/09/04
Series Power Meter	Anritsu	ML2495A	1224005	2017/03/01	2018/02/28
Power Sensor	Anritsu	MA2411B	1207295	2017/03/01	2018/02/28
Cable	HUBER SUHNER	SUCOFLEX 102	28422/2	2017/02/25	2018/02/24
Cable	HUBER SUHNER	SUCOFLEX 102	28418/2	2017/02/25	2018/02/24
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A
Software	AUDIX	E3	V8.2014-8-6	N/A	N/A
Software	Keysight	N7607B Signal Studio	v2.0.0.1	N/A	N/A
Software	Keysight	Inservice MonitorUtility	N/A	N/A	N/A



## 4. Antenna Requirements

### 4.1 Antenna Construction and Directional Gain

Antenna Type	2.4G: Dish Antenna 5G: Internal Antenna
Antenna Gain	2.4G: ANT A/B: 18dBi 5G: ANT A: 2dBi

2412-2462MHz

For Power directional gain=  $G_{ant}= 18$  dBi

For PSD directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / NANT]$   
= 21.01(dBi)

5725MHz -5850MHz

For Power directional gain=  $G_{ant}= 2$  dBi

For PSD directional gain =  $G_{ant}= 2$  dBi



## 5. Test of AC Power Line Conducted Emission

### 5.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. 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

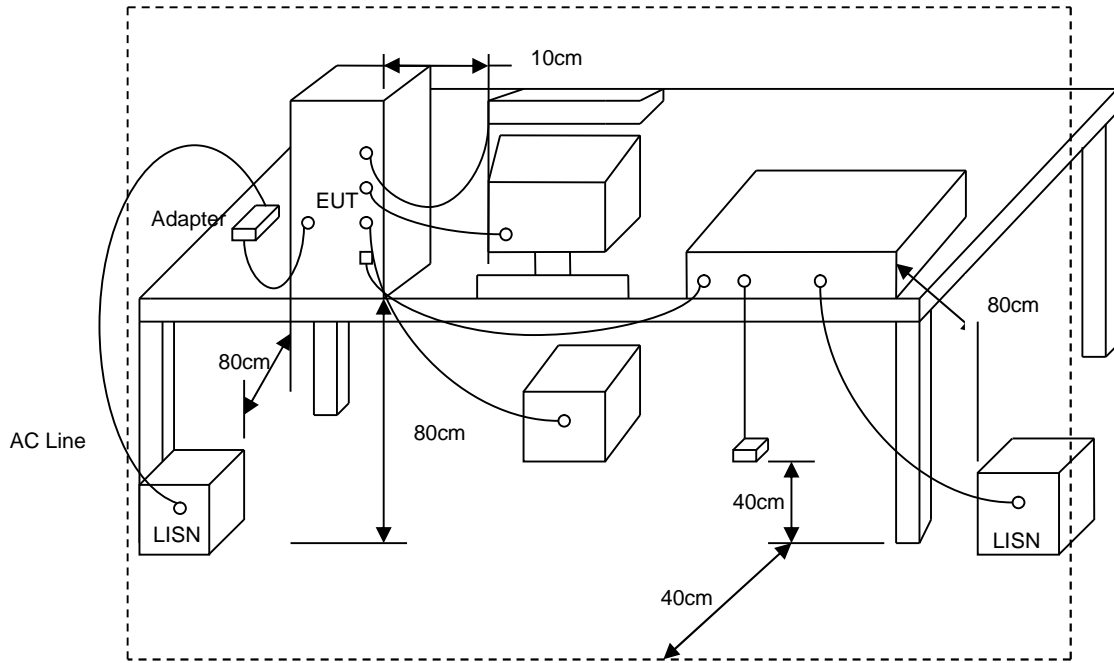
\*Decreases with the logarithm of the frequency.

### 5.2 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.



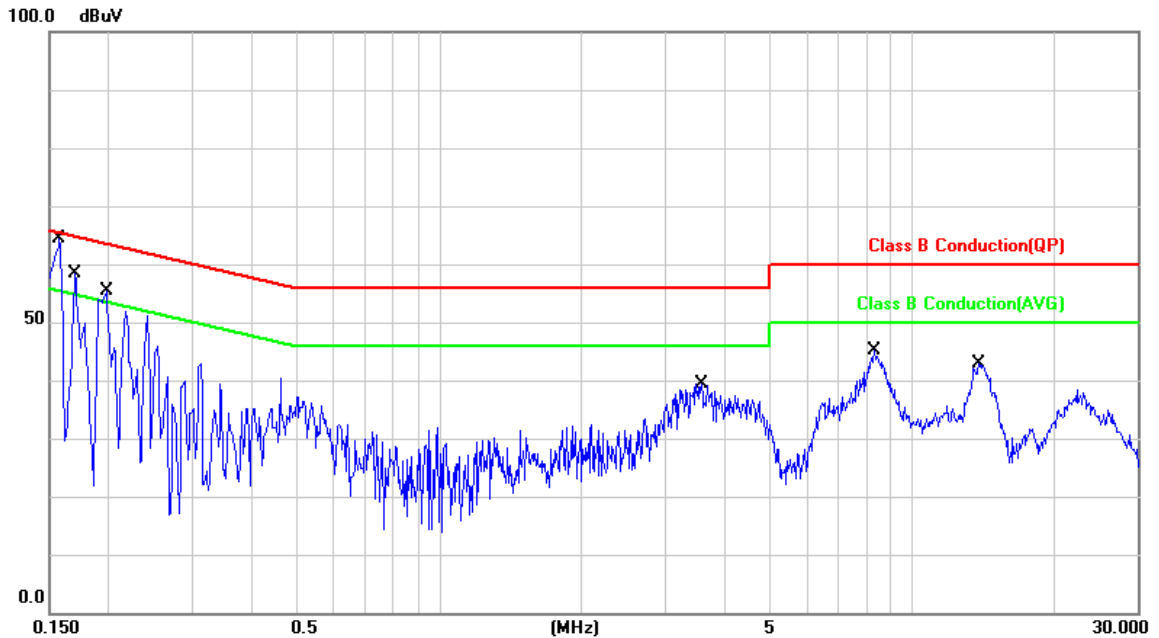
### 5.3 Typical Test Setup





### 5.4 Test Result and Data

Power	: PoE 24V	Pol/Phase	: LINE
Test Mode	: Mode 4	Temperature	: 23 °C
Test date	: Aug. 31, 2017	Humidity	: 64 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	9.91	49.72	59.63	65.56	-5.93	QP	P
2	0.1580	9.91	28.70	38.61	55.56	-16.95	AVG	P
3	0.1700	9.91	41.14	51.05	64.96	-13.91	QP	P
4	0.1700	9.91	17.06	26.97	54.96	-27.99	AVG	P
5	0.1980	9.91	44.94	54.85	63.69	-8.84	QP	P
6	0.1980	9.91	27.08	36.99	53.69	-16.70	AVG	P
7	3.6020	10.12	25.10	35.22	56.00	-20.78	QP	P
8	3.6020	10.12	13.54	23.66	46.00	-22.34	AVG	P
9	8.3460	10.29	30.75	41.04	60.00	-18.96	QP	P
10	8.3460	10.29	22.89	33.18	50.00	-16.82	AVG	P
11	13.8900	10.44	28.45	38.89	60.00	-21.11	QP	P
12	13.8900	10.44	20.53	30.97	50.00	-19.03	AVG	P

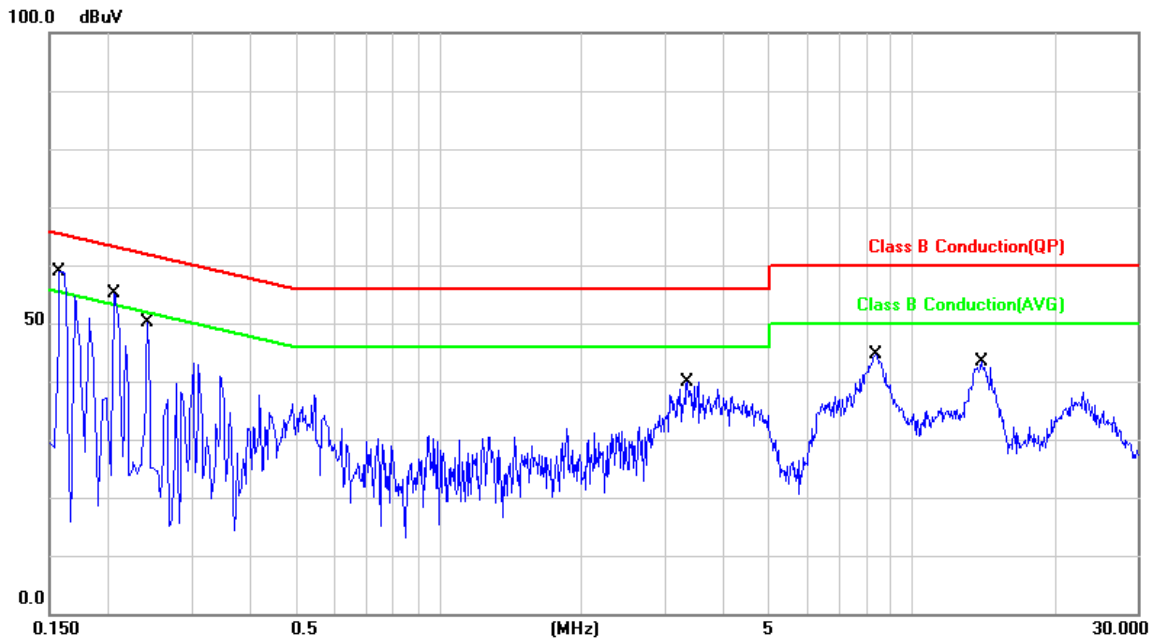
Note: Level = Reading + Factor

Margin = Level – Limit

Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator



Power	: PoE 24V	Pol/Phase	: NEUTRAL
Test Mode	: Mode 4	Temperature	: 23 °C
Test date	: Aug. 31, 2017	Humidity	: 64 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	9.88	49.23	59.11	65.56	-6.45	QP	P
2	0.1580	9.88	28.46	38.34	55.56	-17.22	AVG	P
3	0.2060	9.88	43.11	52.99	63.36	-10.37	QP	P
4	0.2060	9.88	24.28	34.16	53.36	-19.20	AVG	P
5	0.2420	9.88	37.33	47.21	62.02	-14.81	QP	P
6	0.2420	9.88	19.47	29.35	52.02	-22.67	AVG	P
7	3.3460	10.06	25.38	35.44	56.00	-20.56	QP	P
8	3.3460	10.06	13.33	23.39	46.00	-22.61	AVG	P
9	8.4060	10.26	30.92	41.18	60.00	-18.82	QP	P
10	8.4060	10.26	22.88	33.14	50.00	-16.86	AVG	P
11	14.0420	10.44	28.42	38.86	60.00	-21.14	QP	P
12	14.0420	10.44	20.62	31.06	50.00	-18.94	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator



## 6. Test of Radiated Spurious Emission

### 6.1 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

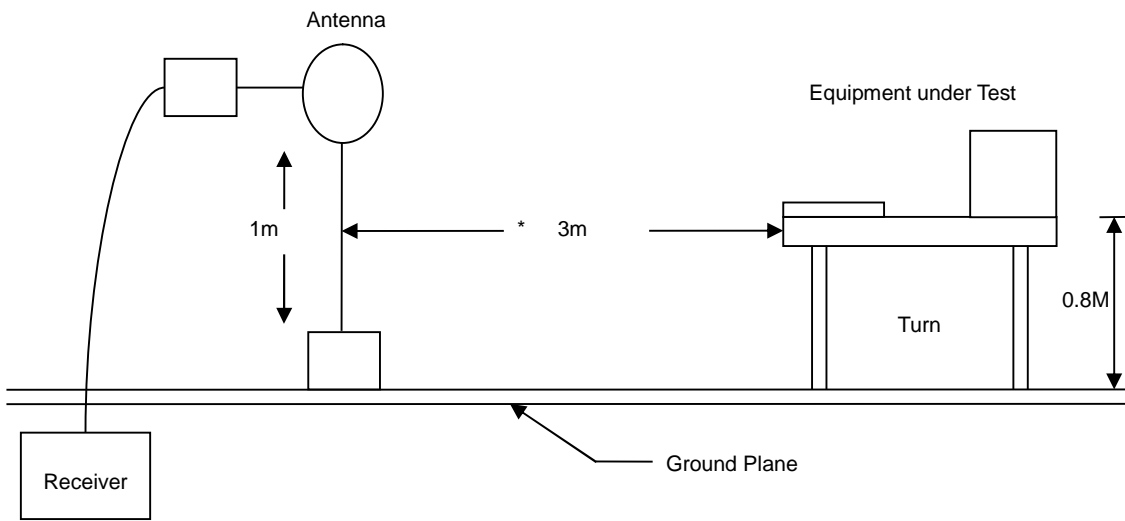
### 6.2 Test Procedures

- 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.

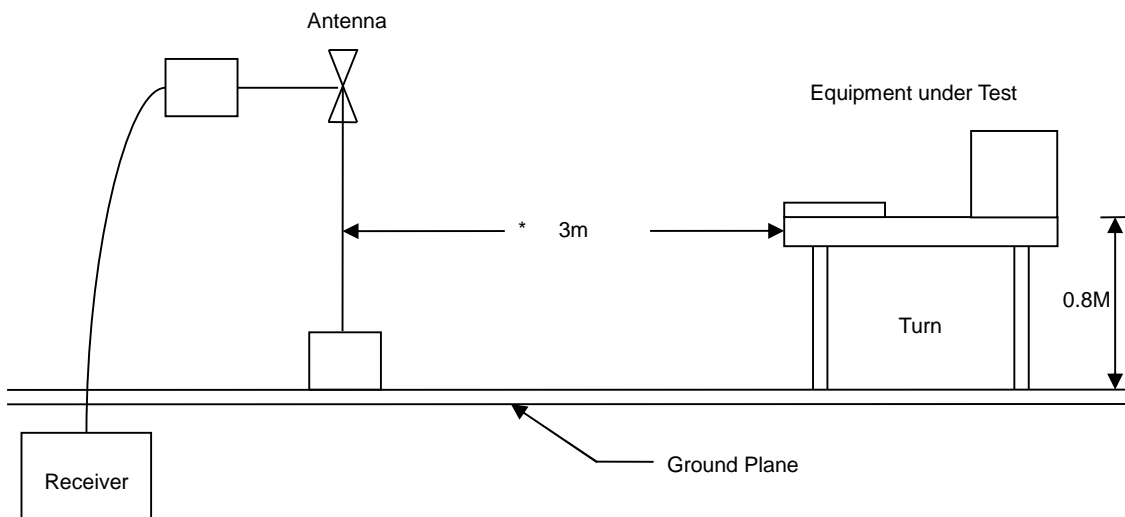


### 6.3 Typical Test Setup

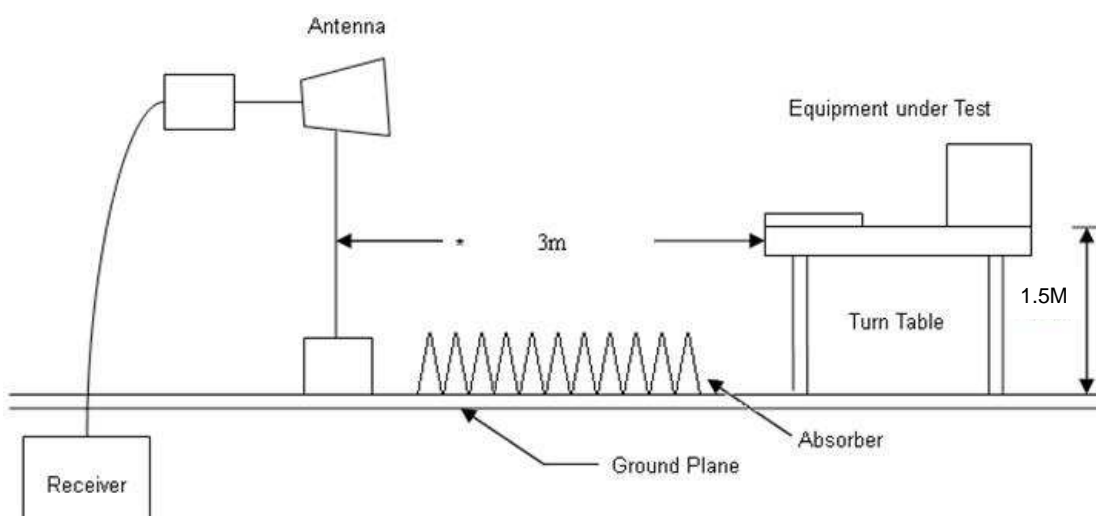
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup





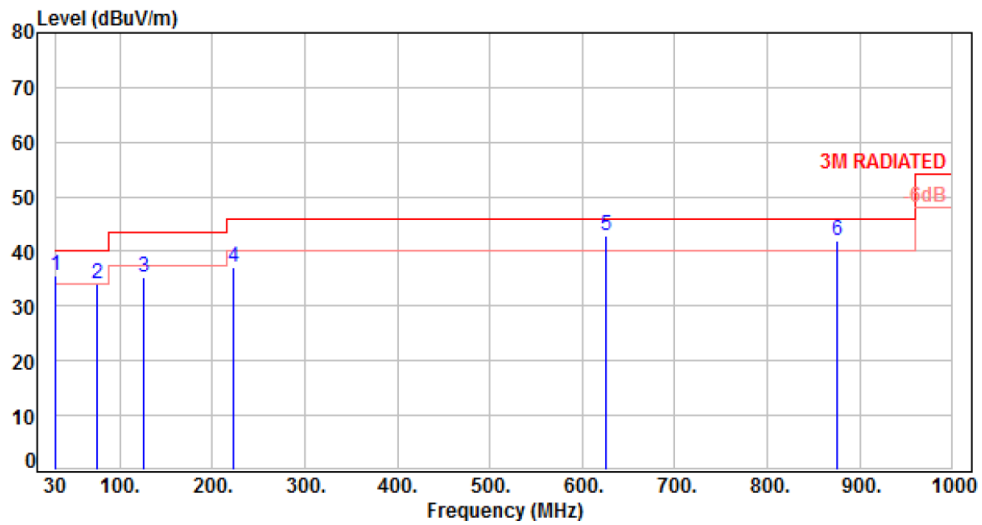


### 6.4 Test Result and Data (9KHz ~ 30MHz)

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

### 6.5 Test Result and Data (30MHz ~ 1GHz)

Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4	Temperature	: 23 °C
Test Date	: Aug. 30, 2017	Humidity	: 63 %

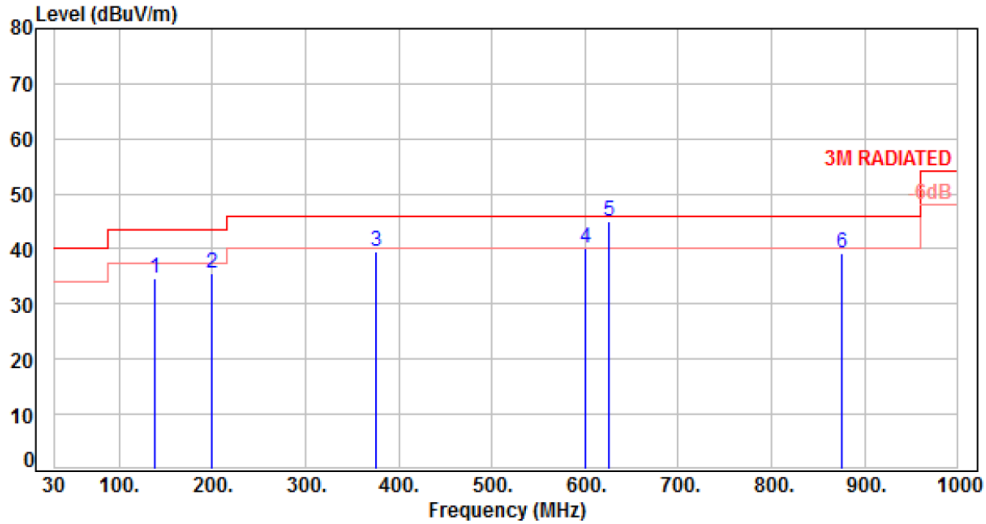


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	30.00	-11.20	46.78	35.58	40.00	-4.42	Peak	100	0	P
2	74.62	-13.81	47.78	33.97	40.00	-6.03	Peak	100	0	P
3	125.06	-12.34	47.75	35.41	43.50	-8.09	Peak	100	0	P
4	222.06	-12.93	50.02	37.09	46.00	-8.91	Peak	100	0	P
5	625.58	-2.37	45.13	42.76	46.00	-3.24	QP	100	217	P
6	875.84	1.45	40.68	42.13	46.00	-3.87	Peak	100	0	P

Note: Level=Reading+Factor  
Margin=Level-Limit  
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4	Temperature	: 23 °C
Test Date	: Aug. 30, 2017	Humidity	: 63 %



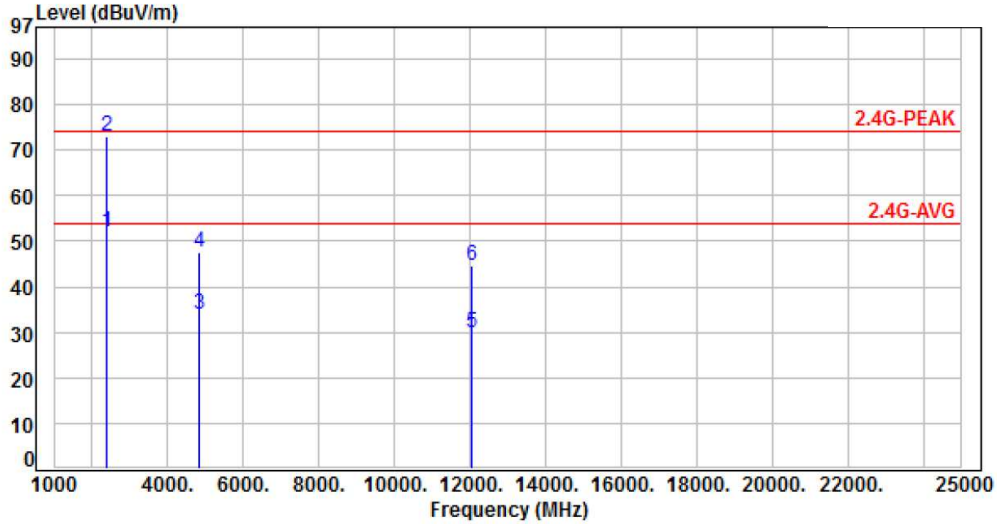
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	138.64	-11.33	46.15	34.82	43.50	-8.68	Peak	100	0	P
2	198.78	-13.23	48.87	35.64	43.50	-7.86	Peak	100	0	P
3	375.32	-7.71	47.17	39.46	46.00	-6.54	Peak	100	0	P
4	600.36	-2.62	42.62	40.00	46.00	-6.00	Peak	100	0	P
5	625.58	-2.37	47.24	44.87	46.00	-1.13	QP	100	226	P
6	875.84	1.45	37.82	39.27	46.00	-6.73	Peak	100	0	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



6.6 Test Result and Data (1GHz ~ 25GHz)

Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2412MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

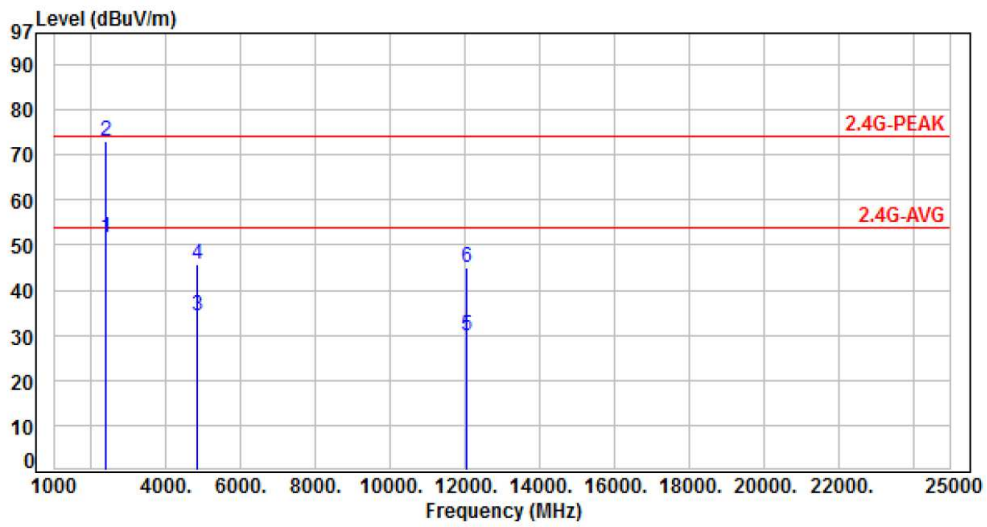


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.20	52.17	54.00	-1.83	Average	176	341	P
2	2390.00	-19.03	92.17	73.14	74.00	-0.86	Peak	176	341	P
3	4824.00	-13.33	47.25	33.92	54.00	-20.08	Average	212	338	P
4	4824.00	-13.33	60.77	47.44	74.00	-26.56	Peak	212	338	P
5	12060.00	-6.06	35.88	29.82	54.00	-24.18	Average	198	346	P
6	12060.00	-6.06	50.78	44.72	74.00	-29.28	Peak	198	346	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2412MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

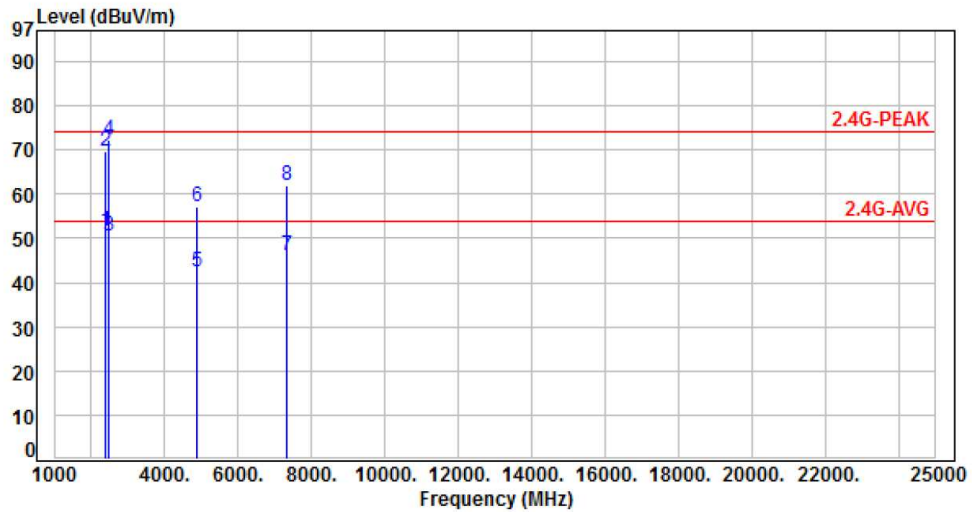


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.70	51.67	54.00	-2.33	Average	164	339	P
2	2390.00	-19.03	91.97	72.94	74.00	-1.06	Peak	164	339	P
3	4824.00	-13.33	47.56	34.23	54.00	-19.77	Average	152	341	P
4	4824.00	-13.33	58.92	45.59	74.00	-28.41	Peak	152	341	P
5	12060.00	-6.06	35.85	29.79	54.00	-24.21	Average	179	338	P
6	12060.00	-6.06	51.10	45.04	74.00	-28.96	Peak	179	338	P

Note: Level=Reading+Factor  
Margin=Level-Limit  
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

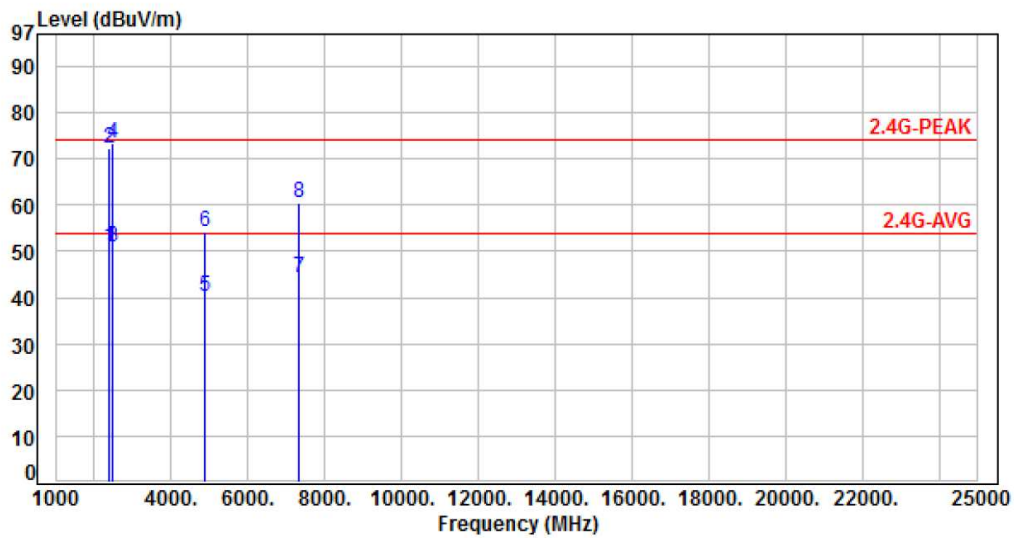


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.51	51.48	54.00	-2.52	Average	166	338	P
2	2390.00	-19.03	88.90	69.87	74.00	-4.13	Peak	166	338	P
3	2483.50	-18.81	69.20	50.39	54.00	-3.61	Average	167	341	P
4	2483.50	-18.81	91.14	72.33	74.00	-1.67	Peak	167	341	P
5	4874.00	-13.24	55.62	42.38	54.00	-11.62	Average	223	338	P
6	4874.00	-13.24	70.23	56.99	74.00	-17.01	Peak	223	338	P
7	7311.00	-10.19	56.32	46.13	54.00	-7.87	Average	176	327	P
8	7311.00	-10.19	72.08	61.89	74.00	-12.11	Peak	176	327	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

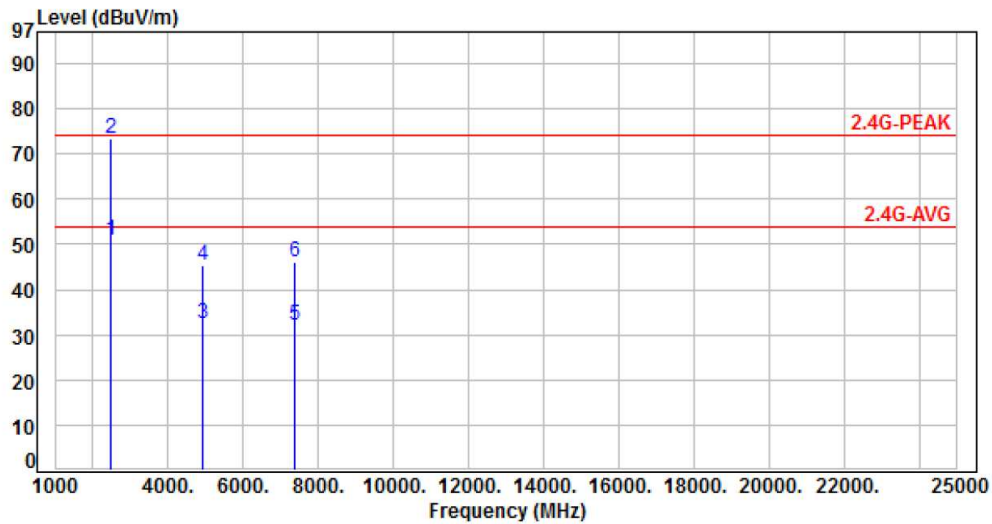


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	69.77	50.74	54.00	-3.26	Average	161	338	P
2	2390.00	-19.03	91.23	72.20	74.00	-1.80	Peak	161	338	P
3	2483.50	-18.81	69.64	50.83	54.00	-3.17	Average	171	339	P
4	2483.50	-18.81	92.02	73.21	74.00	-0.79	Peak	171	339	P
5	4874.00	-13.24	53.27	40.03	54.00	-13.97	Average	177	342	P
6	4874.00	-13.24	67.57	54.33	74.00	-19.67	Peak	177	342	P
7	7311.00	-10.19	54.63	44.44	54.00	-9.56	Average	190	355	P
8	7311.00	-10.19	70.62	60.43	74.00	-13.57	Peak	190	355	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2462MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %



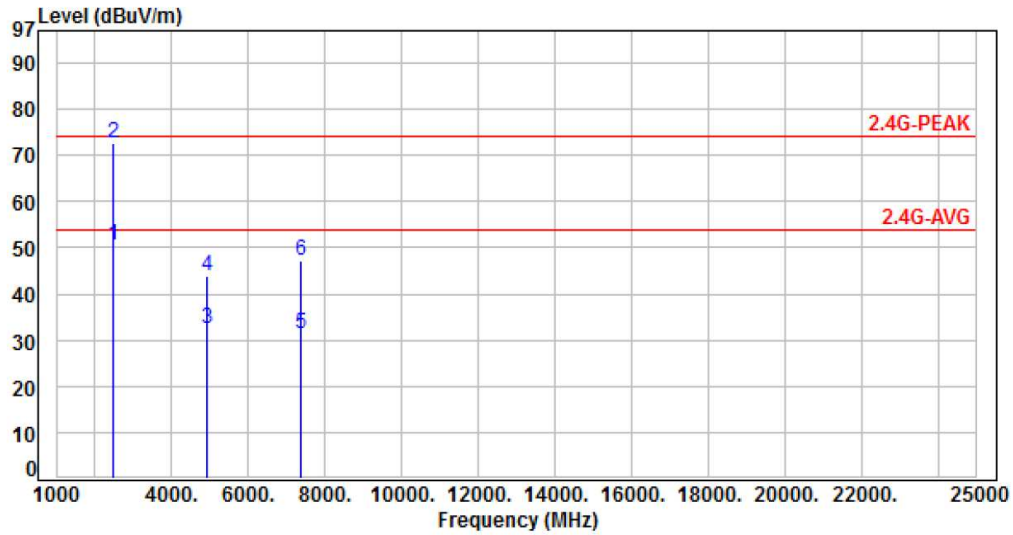
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	69.58	50.77	54.00	-3.23	Average	174	338	P
2	2483.50	-18.81	92.11	73.30	74.00	-0.70	Peak	174	338	P
3	4924.00	-13.14	45.73	32.59	54.00	-21.41	Average	223	336	P
4	4924.00	-13.14	58.39	45.25	74.00	-28.75	Peak	223	336	P
5	7386.00	-10.01	42.12	32.11	54.00	-21.89	Average	252	322	P
6	7386.00	-10.01	56.21	46.20	74.00	-27.80	Peak	252	322	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2462MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %



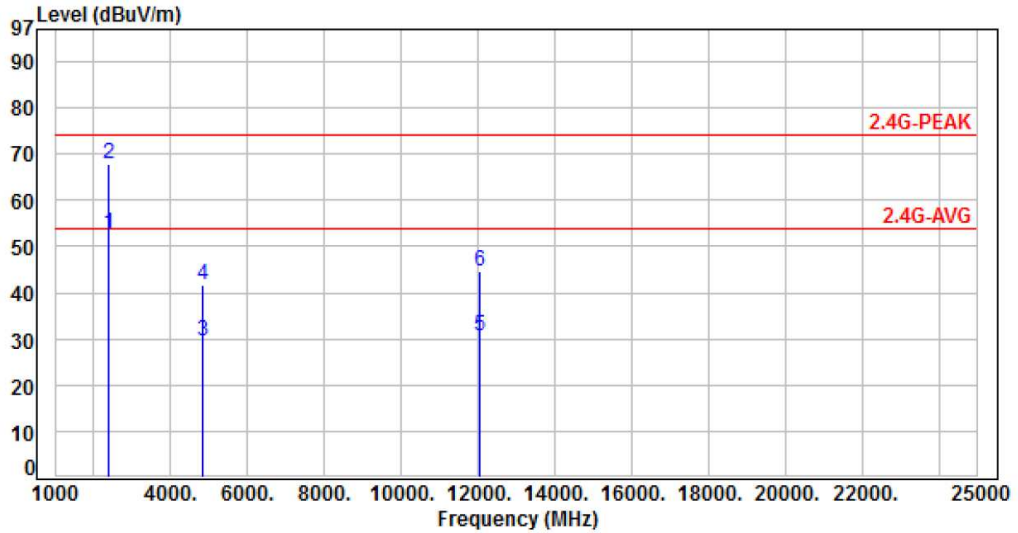
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	69.31	50.50	54.00	-3.50	Average	171	340	P
2	2483.50	-18.81	91.52	72.71	74.00	-1.29	Peak	171	340	P
3	4924.00	-13.14	45.68	32.54	54.00	-21.46	Average	180	335	P
4	4924.00	-13.14	56.86	43.72	74.00	-30.28	Peak	180	335	P
5	7386.00	-10.01	41.47	31.46	54.00	-22.54	Average	152	353	P
6	7386.00	-10.01	57.23	47.22	74.00	-26.78	Peak	152	353	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2412MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

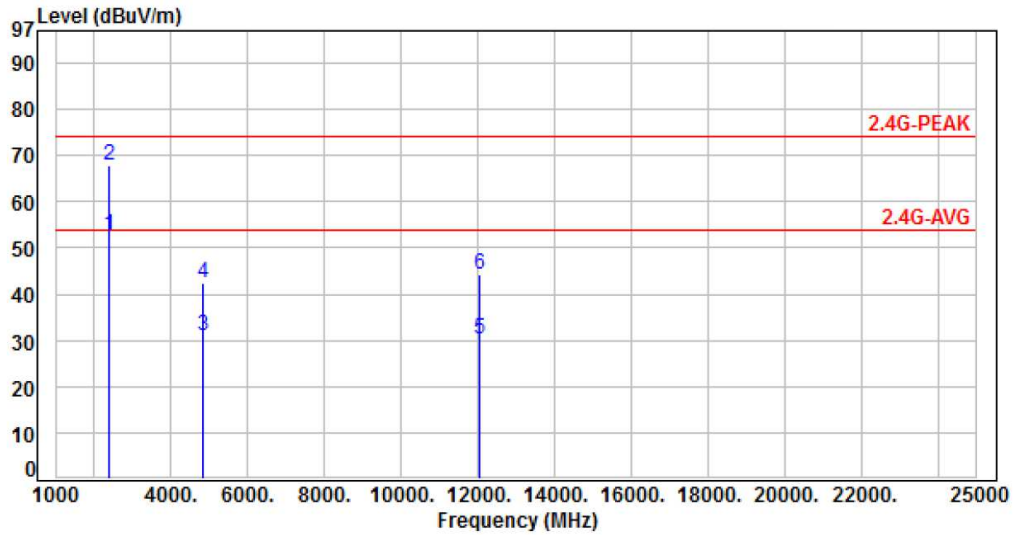


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.72	52.69	54.00	-1.31	Average	175	338	P
2	2390.00	-19.03	86.93	67.90	74.00	-6.10	Peak	175	338	P
3	4824.00	-13.33	42.92	29.59	54.00	-24.41	Average	133	342	P
4	4824.00	-13.33	55.04	41.71	74.00	-32.29	Peak	133	342	P
5	12060.00	-6.06	36.60	30.54	54.00	-23.46	Average	183	338	P
6	12060.00	-6.06	50.56	44.50	74.00	-29.50	Peak	183	338	P

Note: Level=Reading+Factor  
Margin=Level-Limit  
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2412MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

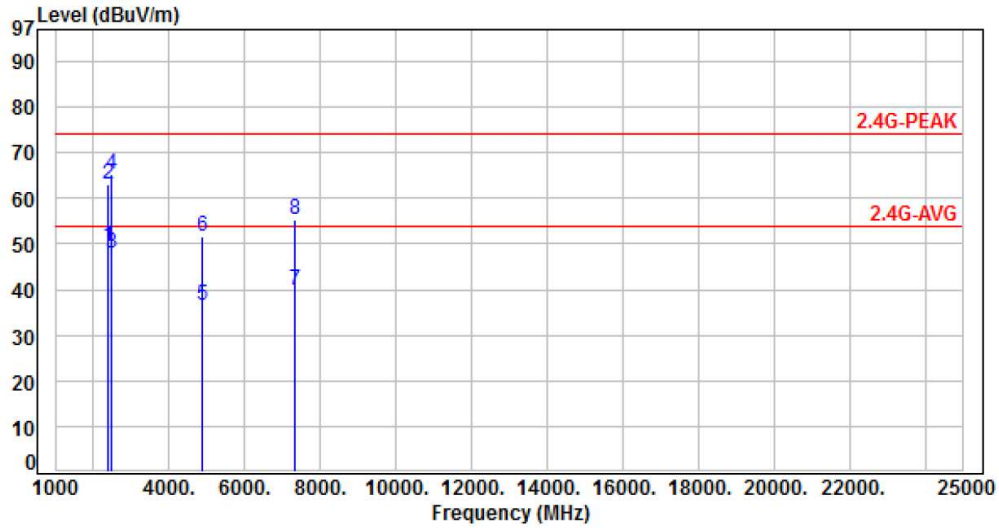


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.89	52.86	54.00	-1.14	Average	161	343	P
2	2390.00	-19.03	86.98	67.95	74.00	-6.05	Peak	161	343	P
3	4824.00	-13.33	44.17	30.84	54.00	-23.16	Average	170	342	P
4	4824.00	-13.33	55.81	42.48	74.00	-31.52	Peak	170	342	P
5	12060.00	-6.06	36.42	30.36	54.00	-23.64	Average	112	346	P
6	12060.00	-6.06	50.14	44.08	74.00	-29.92	Peak	112	346	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

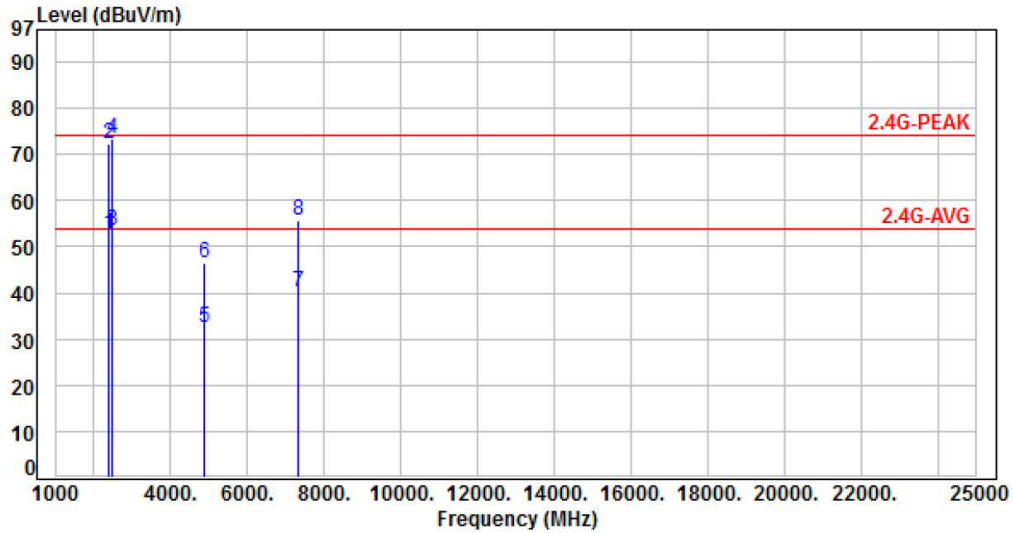


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	68.62	49.59	54.00	-4.41	Average	191	338	P
2	2390.00	-19.03	82.19	63.16	74.00	-10.84	Peak	191	338	P
3	2483.50	-18.81	66.91	48.10	54.00	-5.90	Average	189	340	P
4	2483.50	-18.81	83.91	65.10	74.00	-8.90	Peak	189	340	P
5	4874.00	-13.24	49.65	36.41	54.00	-17.59	Average	220	340	P
6	4874.00	-13.24	64.73	51.49	74.00	-22.51	Peak	220	340	P
7	7311.00	-10.19	50.01	39.82	54.00	-14.18	Average	134	336	P
8	7311.00	-10.19	65.42	55.23	74.00	-18.77	Peak	134	336	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

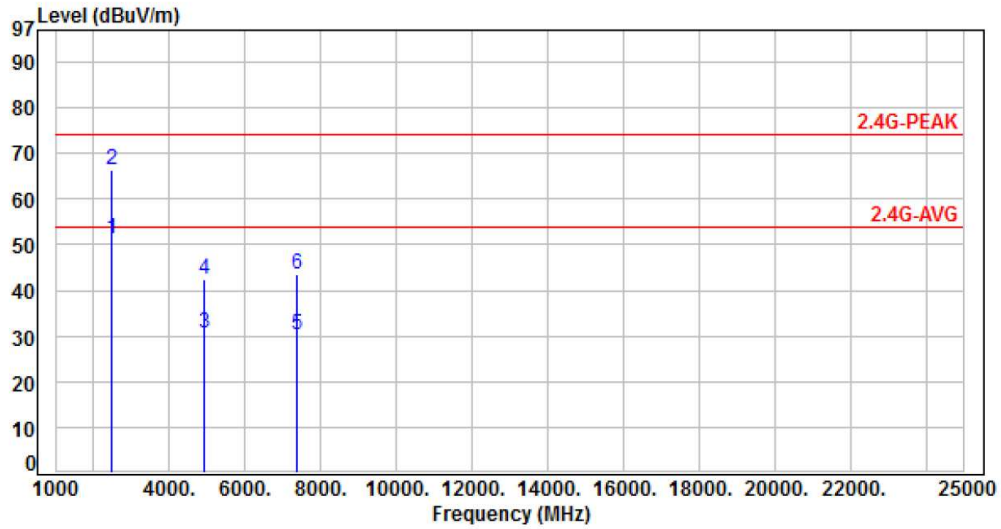


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.77	52.74	54.00	-1.26	Average	184	339	P
2	2390.00	-19.03	91.25	72.22	74.00	-1.78	Peak	184	339	P
3	2483.50	-18.81	72.21	53.40	54.00	-0.60	Average	182	342	P
4	2483.50	-18.81	92.03	73.22	74.00	-0.78	Peak	182	342	P
5	4874.00	-13.24	45.56	32.32	54.00	-21.68	Average	176	347	P
6	4874.00	-13.24	59.79	46.55	74.00	-27.45	Peak	176	347	P
7	7311.00	-10.19	50.49	40.30	54.00	-13.70	Average	101	340	P
8	7311.00	-10.19	65.83	55.64	74.00	-18.36	Peak	101	340	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2462MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

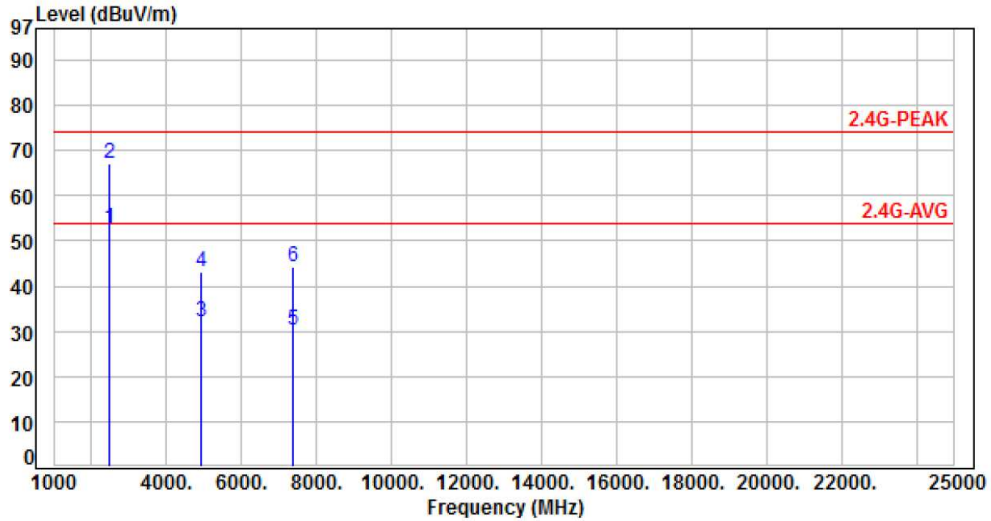


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	70.20	51.39	54.00	-2.61	Average	180	340	P
2	2483.50	-18.81	85.12	66.31	74.00	-7.69	Peak	180	340	P
3	4924.00	-13.14	43.70	30.56	54.00	-23.44	Average	113	340	P
4	4924.00	-13.14	55.57	42.43	74.00	-31.57	Peak	113	340	P
5	7386.00	-10.01	40.17	30.16	54.00	-23.84	Average	158	336	P
6	7386.00	-10.01	53.71	43.70	74.00	-30.30	Peak	158	336	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2462MHz, P to P	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %



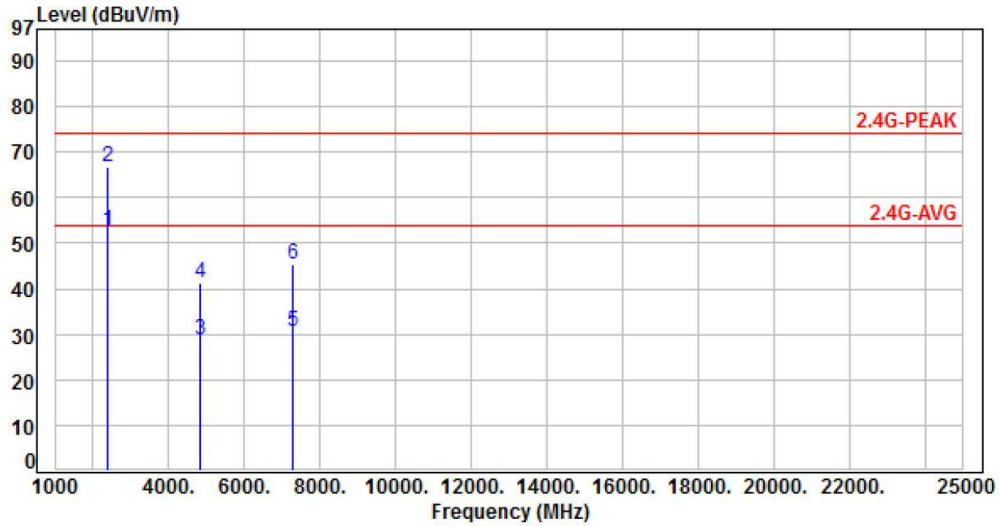
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.47	52.66	54.00	-1.34	Average	176	337	P
2	2483.50	-18.81	85.96	67.15	74.00	-6.85	Peak	176	337	P
3	4924.00	-13.14	45.23	32.09	54.00	-21.91	Average	175	337	P
4	4924.00	-13.14	56.12	42.98	74.00	-31.02	Peak	175	337	P
5	7386.00	-10.01	40.22	30.21	54.00	-23.79	Average	134	342	P
6	7386.00	-10.01	54.14	44.13	74.00	-29.87	Peak	134	342	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, 2422MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

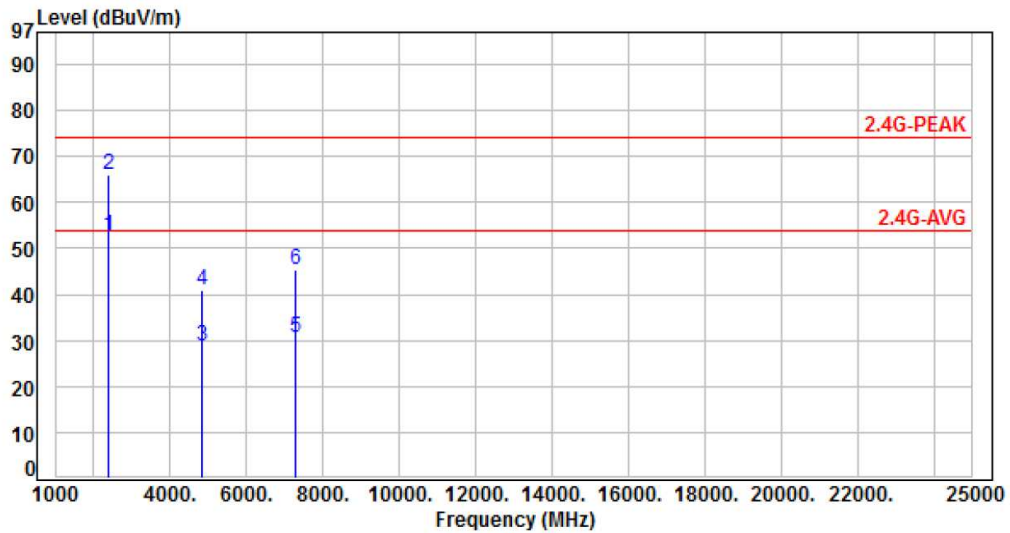


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.86	52.83	54.00	-1.17	Average	193	339	P
2	2390.00	-19.03	85.68	66.65	74.00	-7.35	Peak	193	339	P
3	4844.00	-13.29	42.13	28.84	54.00	-25.16	Average	186	338	P
4	4844.00	-13.29	54.62	41.33	74.00	-32.67	Peak	186	338	P
5	7266.00	-10.30	40.92	30.62	54.00	-23.38	Average	183	342	P
6	7266.00	-10.30	55.81	45.51	74.00	-28.49	Peak	183	342	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, 2422MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %



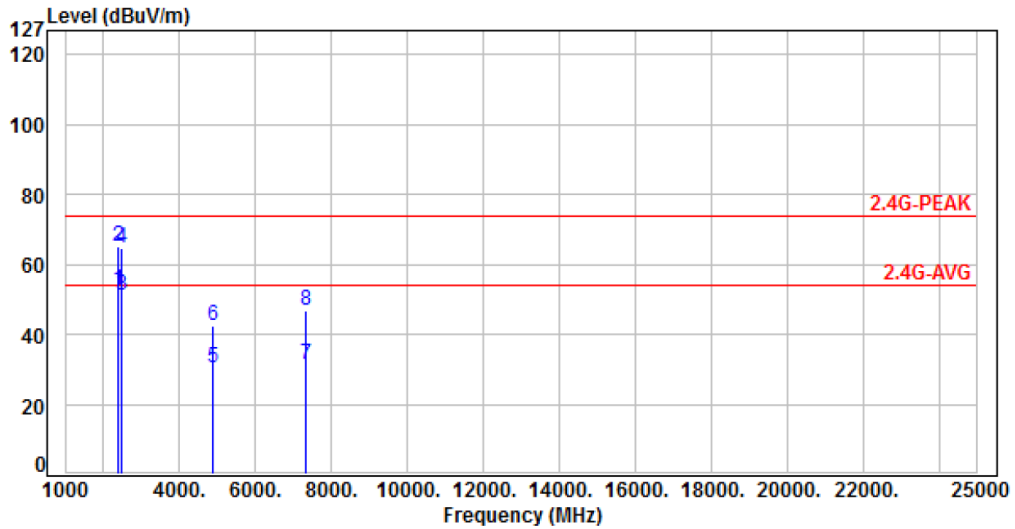
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.63	52.60	54.00	-1.40	Average	180	336	P
2	2390.00	-19.03	85.15	66.12	74.00	-7.88	Peak	180	336	P
3	4844.00	-13.29	41.98	28.69	54.00	-25.31	Average	178	342	P
4	4844.00	-13.29	54.26	40.97	74.00	-33.03	Peak	178	342	P
5	7266.00	-10.30	40.83	30.53	54.00	-23.47	Average	181	339	P
6	7266.00	-10.30	55.77	45.47	74.00	-28.53	Peak	181	339	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

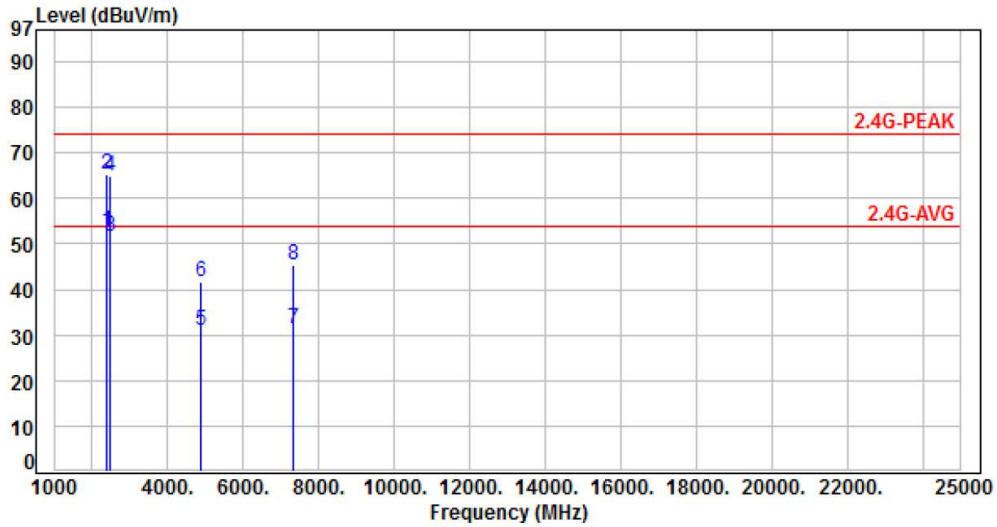


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.83	52.80	54.00	-1.20	Average	178	342	P
2	2390.00	-19.03	84.29	65.26	74.00	-8.74	Peak	178	342	P
3	2483.50	-18.81	69.97	51.16	54.00	-2.84	Average	172	340	P
4	2483.50	-18.81	83.65	64.84	74.00	-9.16	Peak	172	340	P
5	4874.00	-13.24	43.80	30.56	54.00	-23.44	Average	218	338	P
6	4874.00	-13.24	55.53	42.29	74.00	-31.71	Peak	218	338	P
7	7311.00	-10.19	41.79	31.60	54.00	-22.40	Average	124	335	P
8	7311.00	-10.19	56.98	46.79	74.00	-27.21	Peak	124	335	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, 2437MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

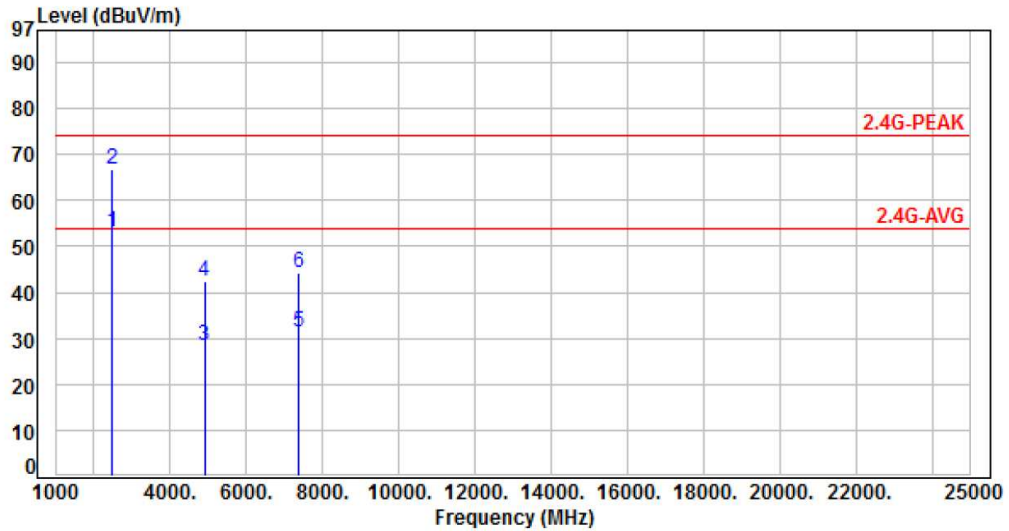


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.68	52.65	54.00	-1.35	Average	166	339	P
2	2390.00	-19.03	84.21	65.18	74.00	-8.82	Peak	166	339	P
3	2483.50	-18.81	70.36	51.55	54.00	-2.45	Average	156	342	P
4	2483.50	-18.81	83.63	64.82	74.00	-9.18	Peak	156	342	P
5	4874.00	-13.24	44.14	30.90	54.00	-23.10	Average	178	335	P
6	4874.00	-13.24	55.07	41.83	74.00	-32.17	Peak	178	335	P
7	7311.00	-10.19	41.58	31.39	54.00	-22.61	Average	101	337	P
8	7311.00	-10.19	55.74	45.55	74.00	-28.45	Peak	101	337	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, 2452MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

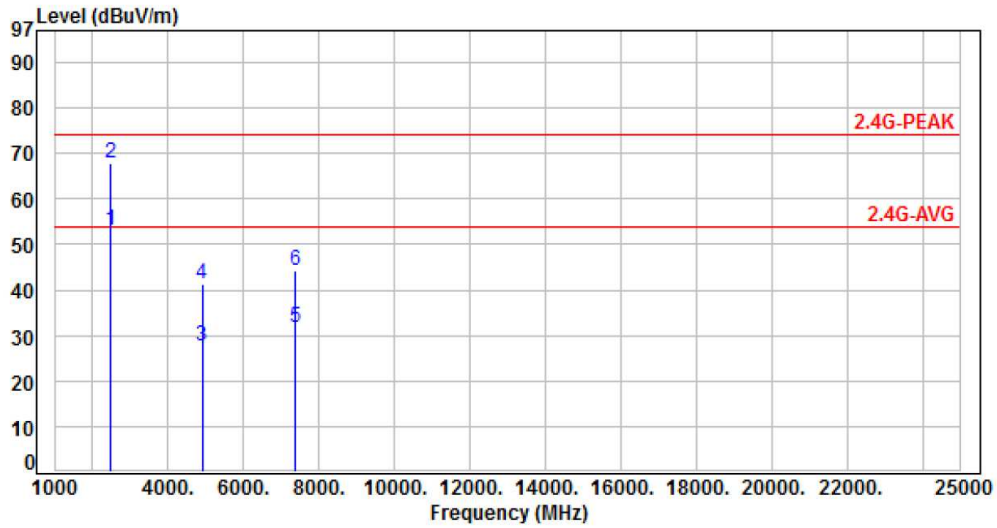


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.83	53.02	54.00	-0.98	Average	186	340	P
2	2483.50	-18.81	85.72	66.91	74.00	-7.09	Peak	186	340	P
3	4904.00	-13.17	41.62	28.45	54.00	-25.55	Average	187	342	P
4	4904.00	-13.17	55.69	42.52	74.00	-31.48	Peak	187	342	P
5	7356.00	-10.07	41.57	31.50	54.00	-22.50	Average	179	337	P
6	7356.00	-10.07	54.45	44.38	74.00	-29.62	Peak	179	337	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, 2452MHz, P to P	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

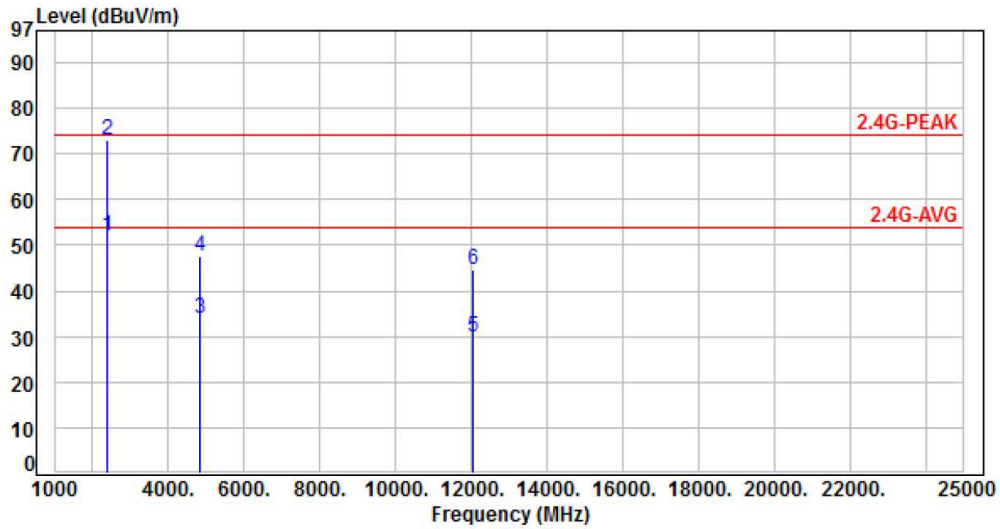


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.95	53.14	54.00	-0.86	Average	158	339	P
2	2483.50	-18.81	86.56	67.75	74.00	-6.25	Peak	158	339	P
3	4904.00	-13.17	40.92	27.75	54.00	-26.25	Average	183	346	P
4	4904.00	-13.17	54.58	41.41	74.00	-32.59	Peak	183	346	P
5	7356.00	-10.07	41.76	31.69	54.00	-22.31	Average	179	335	P
6	7356.00	-10.07	54.32	44.25	74.00	-29.75	Peak	179	335	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2412MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

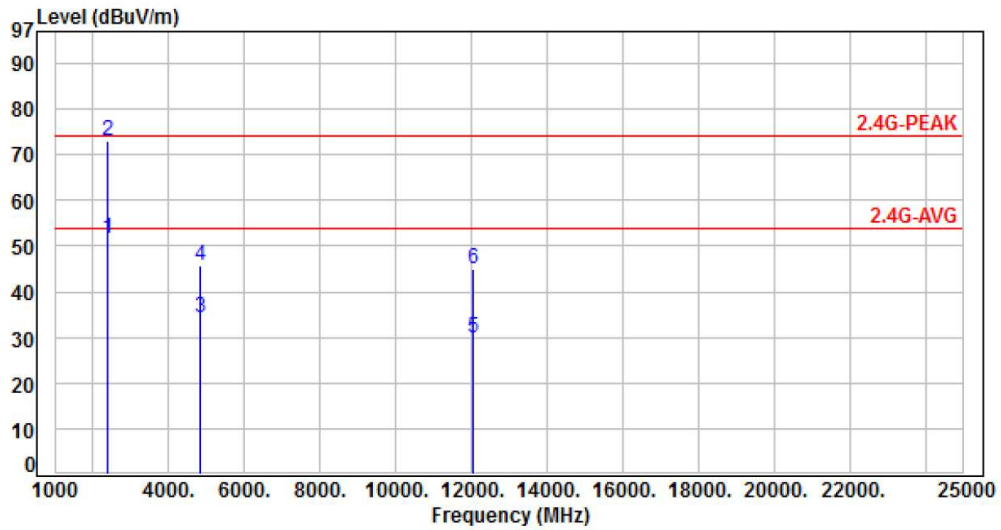


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.20	52.17	54.00	-1.83	Average	176	341	P
2	2390.00	-19.03	92.17	73.14	74.00	-0.86	Peak	176	341	P
3	4824.00	-13.33	47.25	33.92	54.00	-20.08	Average	212	338	P
4	4824.00	-13.33	60.77	47.44	74.00	-26.56	Peak	212	338	P
5	12060.00	-6.06	35.88	29.82	54.00	-24.18	Average	198	346	P
6	12060.00	-6.06	50.78	44.72	74.00	-29.28	Peak	198	346	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2412MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %



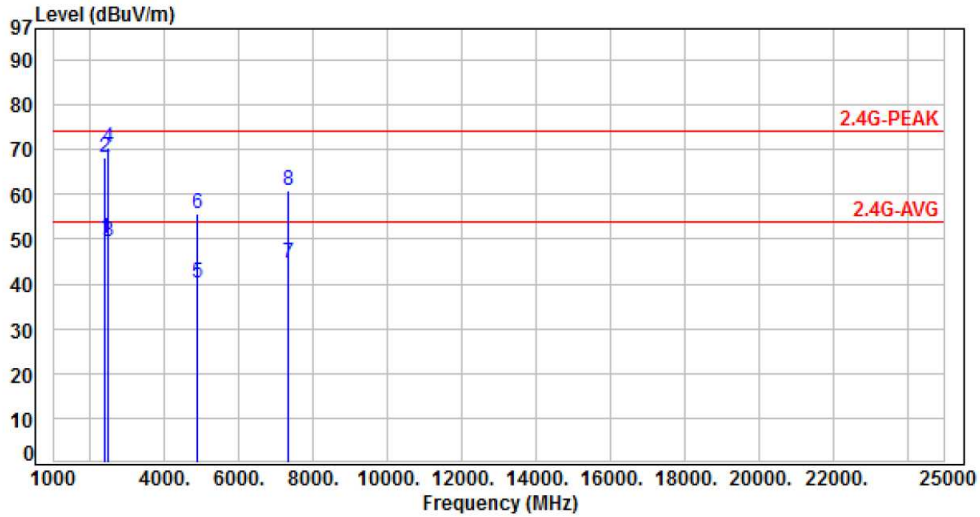
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.70	51.67	54.00	-2.33	Average	164	339	P
2	2390.00	-19.03	91.97	72.94	74.00	-1.06	Peak	164	339	P
3	4824.00	-13.33	47.56	34.23	54.00	-19.77	Average	152	341	P
4	4824.00	-13.33	58.92	45.59	74.00	-28.41	Peak	152	341	P
5	12060.00	-6.06	35.85	29.79	54.00	-24.21	Average	179	338	P
6	12060.00	-6.06	51.10	45.04	74.00	-28.96	Peak	179	338	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2437MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

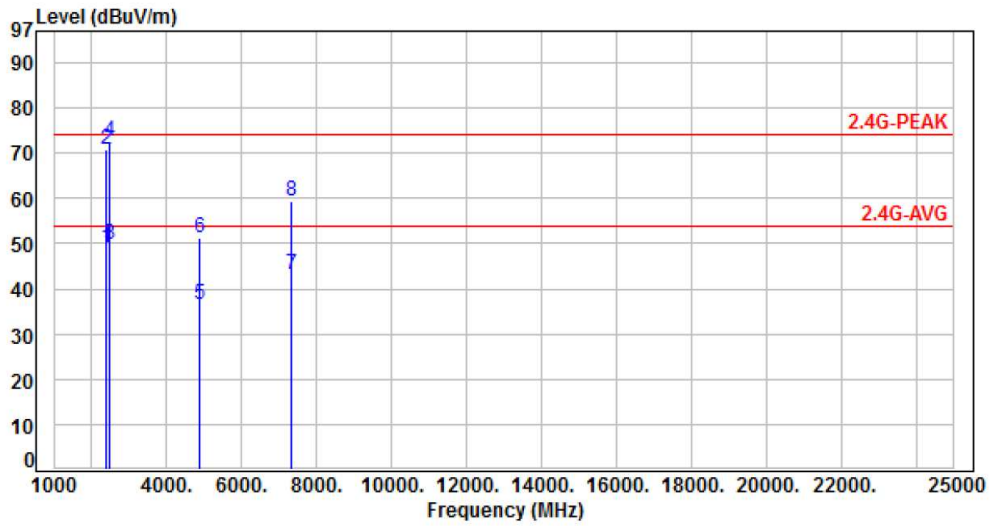


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	69.20	50.17	54.00	-3.83	Average	166	338	P
2	2390.00	-19.03	87.14	68.11	74.00	-5.89	Peak	166	338	P
3	2483.50	-18.81	68.12	49.31	54.00	-4.69	Average	167	341	P
4	2483.50	-18.81	89.31	70.50	74.00	-3.50	Peak	167	341	P
5	4874.00	-13.24	53.33	40.09	54.00	-13.91	Average	223	341	P
6	4874.00	-13.24	68.85	55.61	74.00	-18.39	Peak	223	341	P
7	7311.00	-10.19	54.73	44.54	54.00	-9.46	Average	176	327	P
8	7311.00	-10.19	70.87	60.68	74.00	-13.32	Peak	176	327	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2437MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %



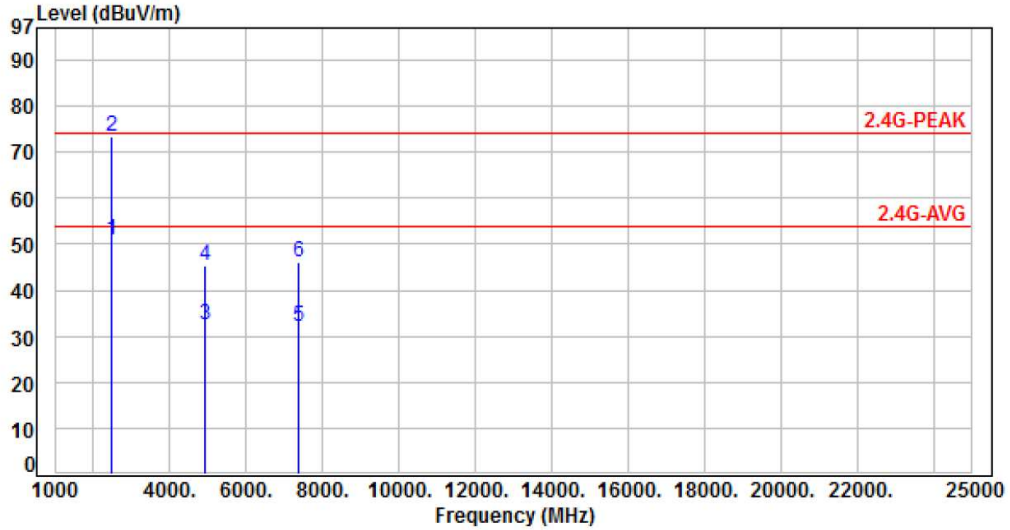
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	68.10	49.07	54.00	-4.93	Average	186	338	P
2	2390.00	-19.03	89.77	70.74	74.00	-3.26	Peak	186	338	P
3	2483.50	-18.81	68.45	49.64	54.00	-4.36	Average	181	338	P
4	2483.50	-18.81	91.62	72.81	74.00	-1.19	Peak	181	338	P
5	4874.00	-13.24	49.83	36.59	54.00	-17.41	Average	174	342	P
6	4874.00	-13.24	64.67	51.43	74.00	-22.57	Peak	174	342	P
7	7311.00	-10.19	53.28	43.09	54.00	-10.91	Average	192	336	P
8	7311.00	-10.19	69.49	59.30	74.00	-14.70	Peak	192	336	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, 2462MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

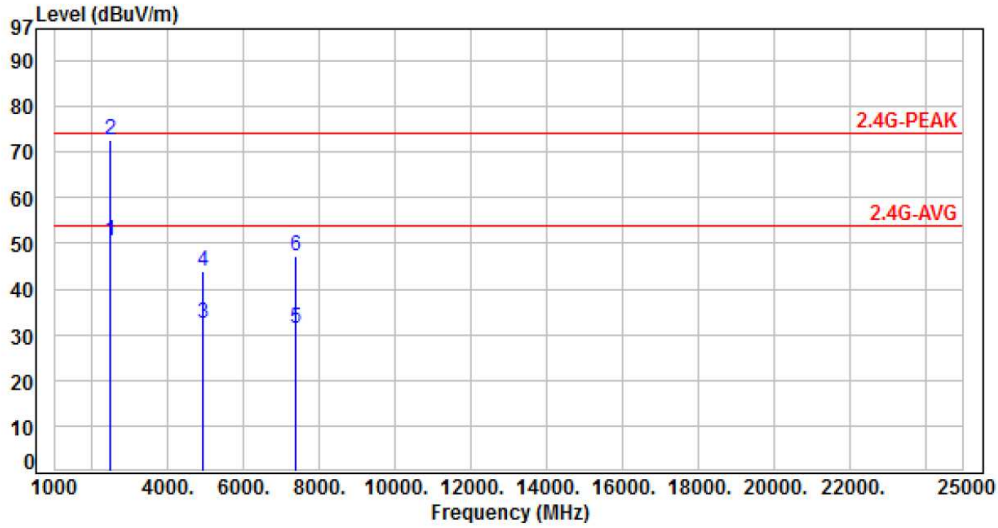


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	69.58	50.77	54.00	-3.23	Average	174	338	P
2	2483.50	-18.81	92.11	73.30	74.00	-0.70	Peak	174	338	P
3	4924.00	-13.14	45.73	32.59	54.00	-21.41	Average	223	336	P
4	4924.00	-13.14	58.39	45.25	74.00	-28.75	Peak	223	336	P
5	7386.00	-10.01	42.12	32.11	54.00	-21.89	Average	252	322	P
6	7386.00	-10.01	56.21	46.20	74.00	-27.80	Peak	252	322	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, 2462MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

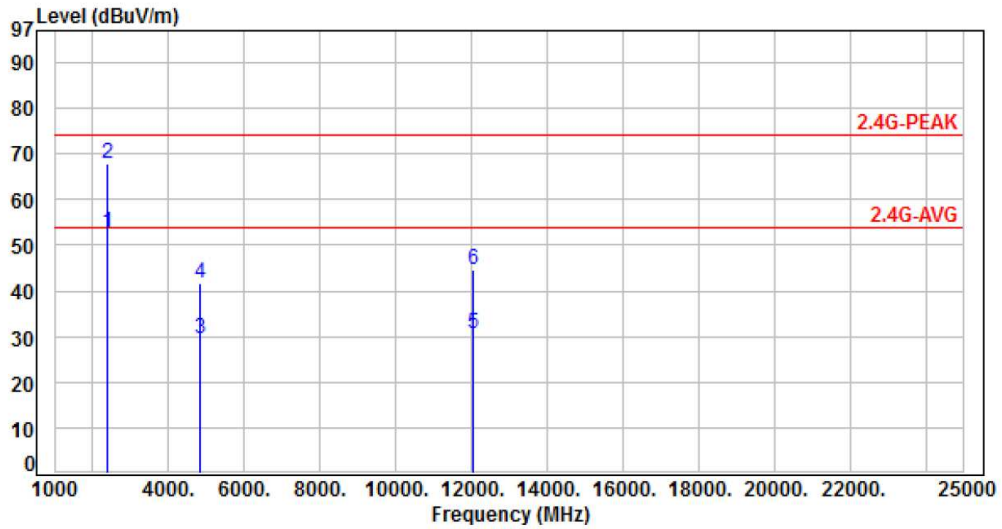


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	69.31	50.50	54.00	-3.50	Average	171	340	P
2	2483.50	-18.81	91.52	72.71	74.00	-1.29	Peak	171	340	P
3	4924.00	-13.14	45.68	32.54	54.00	-21.46	Average	180	335	P
4	4924.00	-13.14	56.86	43.72	74.00	-30.28	Peak	180	335	P
5	7386.00	-10.01	41.47	31.46	54.00	-22.54	Average	152	353	P
6	7386.00	-10.01	57.23	47.22	74.00	-26.78	Peak	152	353	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2412MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

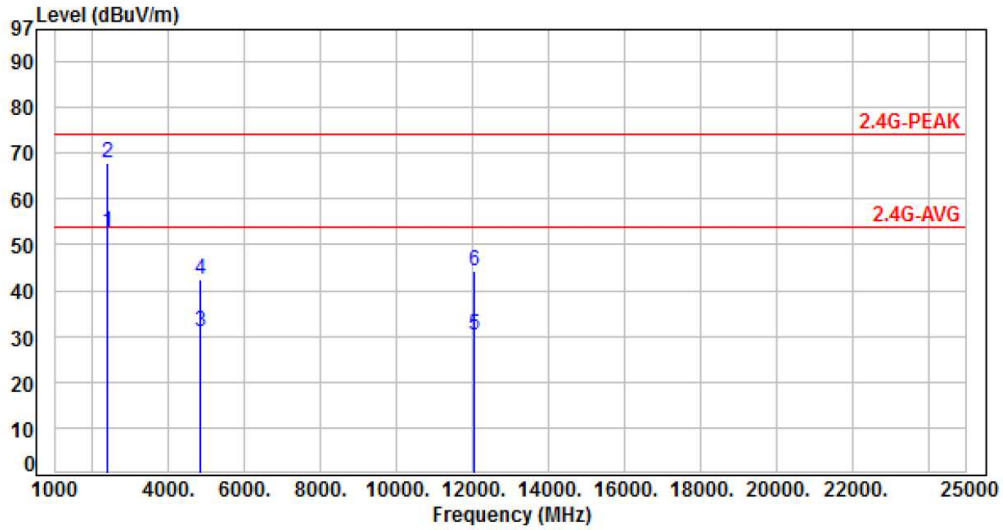


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.72	52.69	54.00	-1.31	Average	175	338	P
2	2390.00	-19.03	86.93	67.90	74.00	-6.10	Peak	175	338	P
3	4824.00	-13.33	42.92	29.59	54.00	-24.41	Average	133	342	P
4	4824.00	-13.33	55.04	41.71	74.00	-32.29	Peak	133	342	P
5	12060.00	-6.06	36.60	30.54	54.00	-23.46	Average	183	338	P
6	12060.00	-6.06	50.56	44.50	74.00	-29.50	Peak	183	338	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2412MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

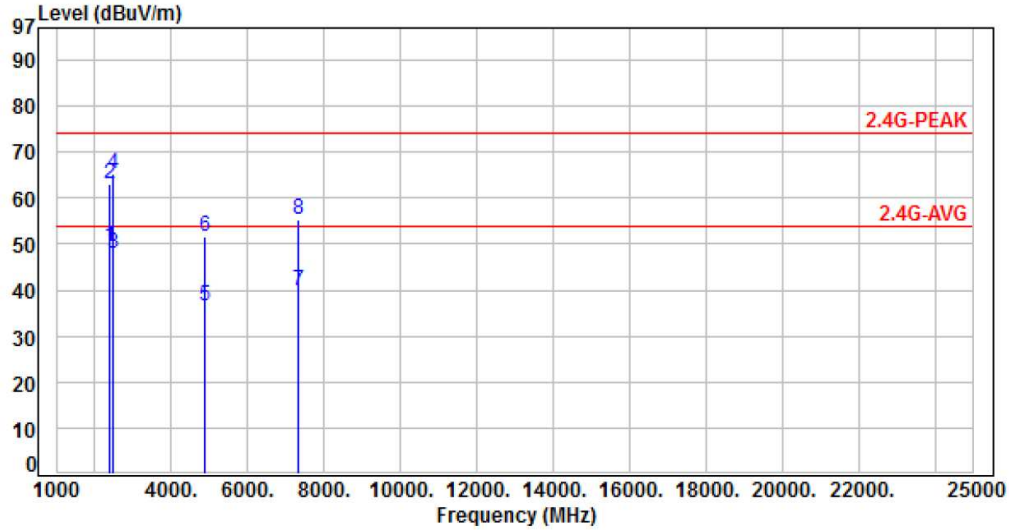


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.89	52.86	54.00	-1.14	Average	161	343	P
2	2390.00	-19.03	86.98	67.95	74.00	-6.05	Peak	161	343	P
3	4824.00	-13.33	44.17	30.84	54.00	-23.16	Average	170	342	P
4	4824.00	-13.33	55.81	42.48	74.00	-31.52	Peak	170	342	P
5	12060.00	-6.06	36.42	30.36	54.00	-23.64	Average	112	346	P
6	12060.00	-6.06	50.14	44.08	74.00	-29.92	Peak	112	346	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2437MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

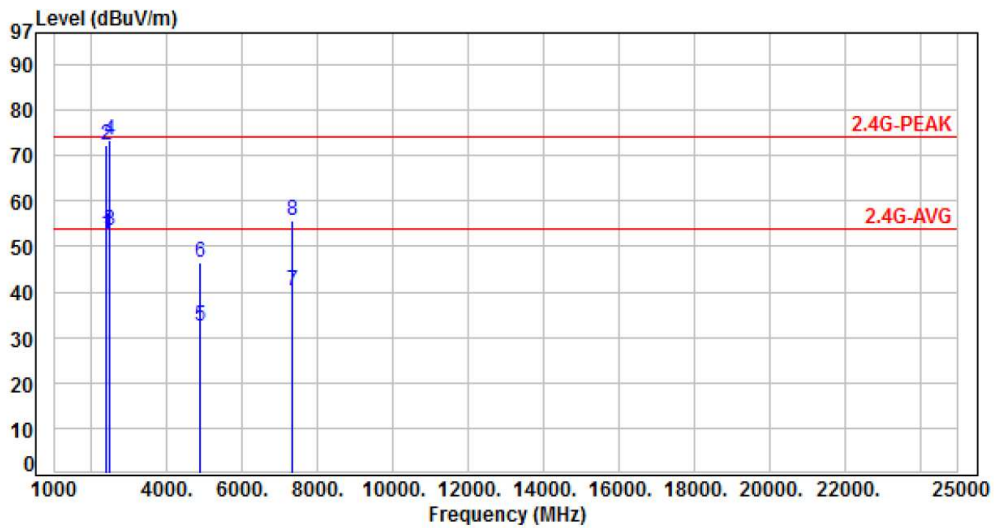


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	68.62	49.59	54.00	-4.41	Average	191	338	P
2	2390.00	-19.03	82.19	63.16	74.00	-10.84	Peak	191	338	P
3	2483.50	-18.81	66.91	48.10	54.00	-5.90	Average	189	340	P
4	2483.50	-18.81	83.91	65.10	74.00	-8.90	Peak	189	340	P
5	4874.00	-13.24	49.65	36.41	54.00	-17.59	Average	220	340	P
6	4874.00	-13.24	64.73	51.49	74.00	-22.51	Peak	220	340	P
7	7311.00	-10.19	50.01	39.82	54.00	-14.18	Average	134	336	P
8	7311.00	-10.19	65.42	55.23	74.00	-18.77	Peak	134	336	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2437MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %



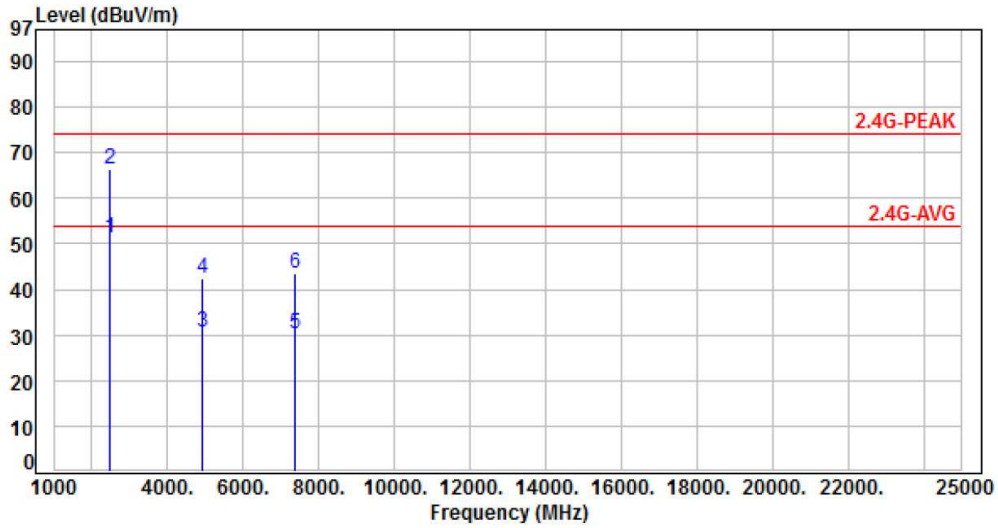
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.77	52.74	54.00	-1.26	Average	184	339	P
2	2390.00	-19.03	91.25	72.22	74.00	-1.78	Peak	184	339	P
3	2483.50	-18.81	72.21	53.40	54.00	-0.60	Average	182	342	P
4	2483.50	-18.81	92.03	73.22	74.00	-0.78	Peak	182	342	P
5	4874.00	-13.24	45.56	32.32	54.00	-21.68	Average	176	347	P
6	4874.00	-13.24	59.79	46.55	74.00	-27.45	Peak	176	347	P
7	7311.00	-10.19	50.49	40.30	54.00	-13.70	Average	101	340	P
8	7311.00	-10.19	65.83	55.64	74.00	-18.36	Peak	101	340	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, 2462MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %

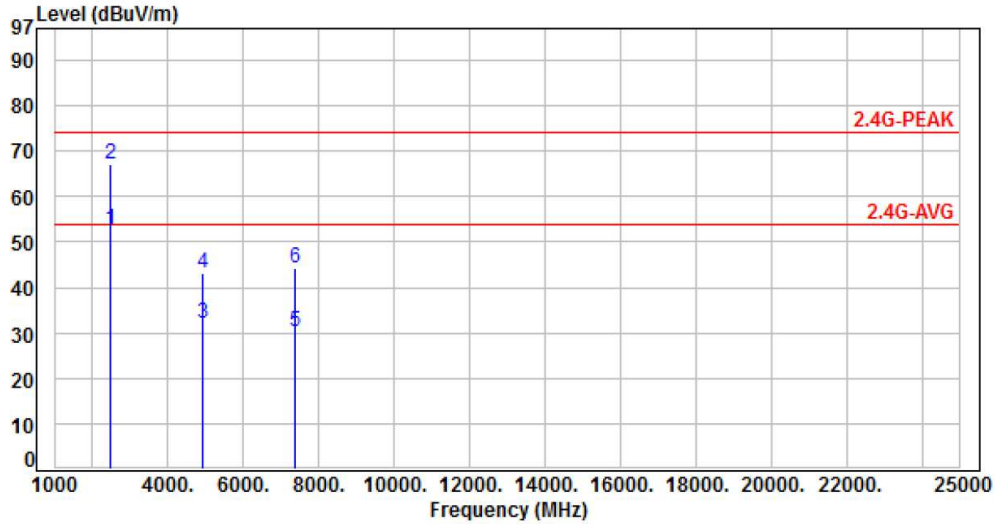


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	70.20	51.39	54.00	-2.61	Average	180	340	P
2	2483.50	-18.81	85.12	66.31	74.00	-7.69	Peak	180	340	P
3	4924.00	-13.14	43.70	30.56	54.00	-23.44	Average	113	340	P
4	4924.00	-13.14	55.57	42.43	74.00	-31.57	Peak	113	340	P
5	7386.00	-10.01	40.17	30.16	54.00	-23.84	Average	158	336	P
6	7386.00	-10.01	53.71	43.70	74.00	-30.30	Peak	158	336	P

Note: Level=Reading+Factor  
Margin=Level-Limit  
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, 2462MHz, P to MP	Temperature	: 23 °C
Test Date	: Aug. 25, 2017	Humidity	: 63 %



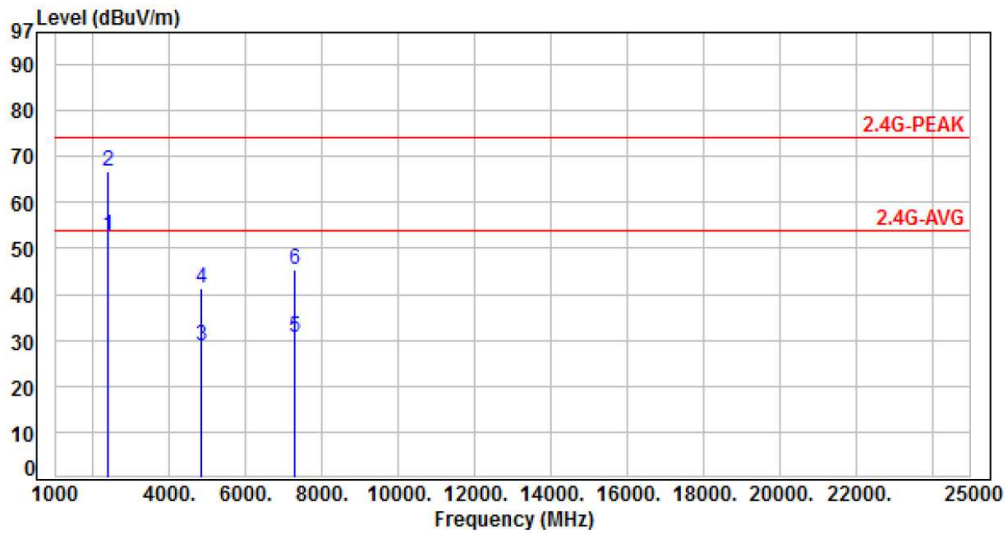
No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.47	52.66	54.00	-1.34	Average	176	337	P
2	2483.50	-18.81	85.96	67.15	74.00	-6.85	Peak	176	337	P
3	4924.00	-13.14	45.23	32.09	54.00	-21.91	Average	175	337	P
4	4924.00	-13.14	56.12	42.98	74.00	-31.02	Peak	175	337	P
5	7386.00	-10.01	40.22	30.21	54.00	-23.79	Average	134	342	P
6	7386.00	-10.01	54.14	44.13	74.00	-29.87	Peak	134	342	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor





Power	: PoE 24V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, 2422MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %

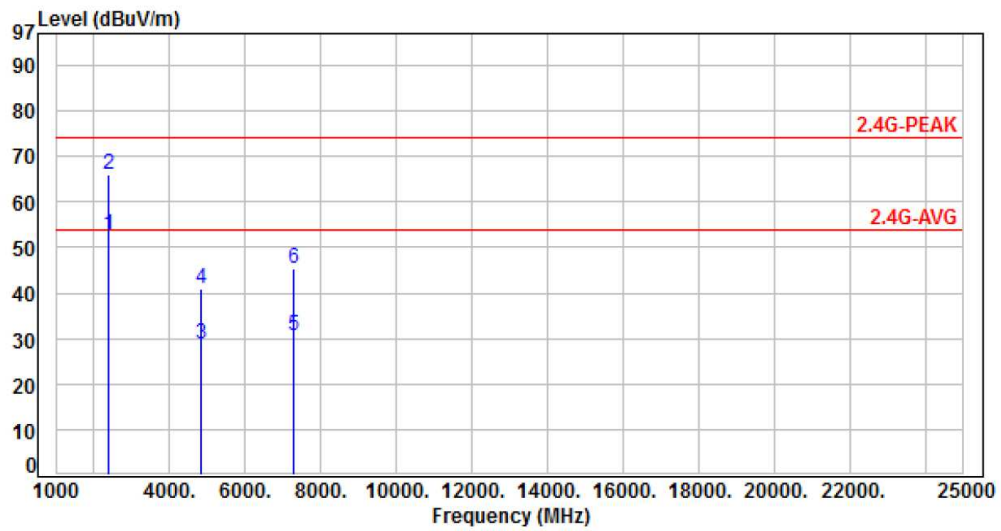


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.86	52.83	54.00	-1.17	Average	193	339	P
2	2390.00	-19.03	85.68	66.65	74.00	-7.35	Peak	193	339	P
3	4844.00	-13.29	42.13	28.84	54.00	-25.16	Average	186	338	P
4	4844.00	-13.29	54.62	41.33	74.00	-32.67	Peak	186	338	P
5	7266.00	-10.30	40.92	30.62	54.00	-23.38	Average	183	342	P
6	7266.00	-10.30	55.81	45.51	74.00	-28.49	Peak	183	342	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: PoE 24V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, 2422MHz, P to MP	Temperature	: 24 °C
Test Date	: Aug. 25, 2017	Humidity	: 68 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.63	52.60	54.00	-1.40	Average	180	336	P
2	2390.00	-19.03	85.15	66.12	74.00	-7.88	Peak	180	336	P
3	4844.00	-13.29	41.98	28.69	54.00	-25.31	Average	178	342	P
4	4844.00	-13.29	54.26	40.97	74.00	-33.03	Peak	178	342	P
5	7266.00	-10.30	40.83	30.53	54.00	-23.47	Average	181	339	P
6	7266.00	-10.30	55.77	45.47	74.00	-28.53	Peak	181	339	P

Note: Level=Reading+Factor  
 Margin=Level-Limit  
 Factor=Antenna Factor + cable loss - Amplifier Factor