FCC RADIO TEST REPORT

Applicant	:	Allied Telesis K.K.
Address	:	2nd. TOC Bldg. 721-11 Nishi-Gotanda, Shinagawa-ku, Tokyo Japan, 141-0031
Equipment	:	802.11ac wave2 2x2 tri-radio 2.4G/5G/5G wireless AP
Model No.	:	AT-TQ5403e
Trade Name	:	Allied Telesis
FCC ID	:	RSL-TQ5403E

I HEREBY CERTIFY THAT :

The sample was received on Nov. 07, 2018 and the testing was carried out on Dec. 19, 2018 at Cerpass Technology Corp. 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.

Approved by:

Mark Liao / Supervisor

Tested by:

Spree Yei / Engineer

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

Testing Laboratory 1439

CONTENTS

History of this test report

Report No.	Issue Date	Description
TEFE1804236	Jan. 25, 2019	Original

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 E §15.407

First R&O 14-30

KDB662911

KDB789033

KDB644545

FCC Rule	Description of Test	Result
15.203	Antenna Requirement	Pass
15.207(a)	AC Power Line Conducted Emission	Pass
15.407(b) 15.209	Radiated Spurious Emission	Pass
15.407(a)	26 dB Occupied Bandwidth	Pass
15.407	6 dB Bandwidth	Pass
15.407 (a) & (a)(3)	Average Power	Pass
15.407(a)	Output and PPSD	Pass
15.407(g)	Frequency Stability	Pass
15.407(c)	Automatically Discontinue Transmission	Pass
2.1091	Radio Frequency Exposure	Pass

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Equipment	802.11ac wave2 2x2 tri-radio 2.4G/5G/5G wireless outdoor AP
Model No.	AT-TQ5403e
Brand Name	Allied Telesis
Product Description	Please refer to User's Manual.
Connecting I/O Port(s)	Please refer to User's Manual.
PoE	48Vdc/0.67A
Memo	A1
Frequency Range	802.11b/g/n/ac: 2400-2483.5MHz 802.11a/n/ac: 5150MHz-5250MHz, 5725MHz-5850MHz
Modulation Type	OFDM, DSSS
Data Rate	2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40, VHT20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	Dipole Antenna
Antenna Gain	2400-2483.5MHz: ANT A: 5.2dBi, ANT B: 5.2dBi 5150-5250MHz: ANT A: 6.91dBi, ANT B: 6.91dBi 5725-5850MHz: ANT A: 7.08dBi, ANT B: 7.08dBi

Note: For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.2. Carrier Frequency of Channels

Band 1: 5150MHz-5250MHz
802.11a, 802.11n HT20, 802.11ac VHT20

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

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***38**	**5190**	***46**	**5230**

802.11ac VHT80

Channel	Frequency(MHz)
***42**	**5210**

Band 4: 5725MHz -5850MHz
802.11a, 802.11n HT20, 802.11ac VHT20

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

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***151**	**5755**	***159**	**5795**

802.11ac VHT80

Channel	Frequency(MHz)
***155**	**5775**

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 remote workstation and EUT for RF test. The remote workstation included Notebook.
c. An executive program, ”qdart_conn.win.1.0_installer_00053.1” was executed to transmit and receive data via WLAN.
d. The following test modes were performed for the test:

Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11ac VHT20 (6.5Mbps)
3	802.11ac VHT40 (13.5Mbps)
4	802.11ac VHT80 (29.3Mbps)
For Conducted Emissions caused “Test Mode 1” generated the worst case, it was reported as the final data. For Radiated Emissions (below 1GHz) caused “Test Mode 1” generated the worst case, it was reported as the final data. For Radiated Emissions (above 1GHz) caused “Test Mode 1~4” generated the worst case, it was reported as the final data.	

Note: Non-Beamforming was worst,used Non-Beamforming mode for the test result.

2.4. Description of Test System

Device	Manufacturer	Model No.	Description
Remote workstation			
Notebook	DELL	Vostro 3560	Power Cable, Unshielding, 1.8m
POE	Bluewave	JS-100GT	-

2.5. General Information of Test

Test Site	**Cerpass Technology Corporation Test Laboratory** 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, TW1439
	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-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

2.6. Measurement Uncertainty

Measurement Item	Uncertainty
Radiated Spurious Emission(9KHz~30MHz)	±5.007dB
Radiated Spurious Emission(30MHz~1GHz)	±5.157dB
Radiated Spurious Emission(1GHz~18GHz)	±6.383dB
Radiated Spurious Emission(18GHz~40GHz)	±6.648dB
Conducted Spurious Emission	±1.253dB
6dB Bandwidth	±6.89%
Power Spectral Density	±0.630dB
26 dB Occupied Bandwidth	±6.10%
Frequency Stability	±375KHz
Channel Frequencies Separation	±6.10%
20dB Bandwidth	±6.12%
Dwell Time	±1.34%
Peak Output Power(Conducted Power Meter)	±0.86dB
Temperature	±1.2℃
Humidity	±2.7%
Channel Move Time	±4.53%
Channel Closing Transmission Time	±6.61%
Threshold	±0.631dB
Non occupancy period	±1.17%

3. Test Equipment and Ancillaries Used for Tests

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100443	2018/03/15	2019/03/14
LISN	Schwarzbeck	NSLK 8127	8127-568	2018/02/26	2019/02/25
Pulse Limiter	R&S	ESH3-Z2	101934	2018/02/22	2019/02/21
Bilog Antenna	Schwarzbeck	VULB9168	275	2018/09/17	2019/09/16
Active Loop Antenna	EMCO	6507	40855	2018/05/22	2019/05/21
Horn Antenna	EMCO	3115	31601	2018/09/26	2019/09/25
Horn Antenna	EMCO	3116	31970	2018/03/23	2019/03/22
Preamplifier	EM	EM330	60660	2018/03/08	2019/03/07
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2018/09/18	2019/09/17
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2018/10/31	2019/10/30
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2018/04/10	2019/04/09
Spectrum Analyzer	R&S	FSP40	100219	2018/07/03	2019/07/02
BLUETOOTH TESTER	R&S	CBT	101133	2018/04/02	2019/04/01
Attenuator	KEYSIGHT	8491B	MY39250705	2018/09/04	2019/09/03
Rotary Attenuator	Agilent	8495B	MY42146680	2018/03/29	2019/03/28
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2018/08/30	2019/08/29
Series Power Meter	Anritsu	ML2495A	1224005	2018/03/23	2019/03/22
Power Sensor	Anritsu	MA2411B	1207295	2018/03/23	2019/03/22
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	V3.0.0.0	N/A	N/A
Software	Keysight	Inservice MonitorUtility	N/A	N/A	N/A

4. Antenna Requirements

4.1. 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.

4.2. Antenna Construction and Directional Gain

Antenna Type	Dipole Antenna
Antenna Gain	2400-2483.5MHz: ANT A: 5.2dBi, ANT B: 5.2dBi 5150-5250MHz: ANT A: 6.91dBi, ANT B: 6.91dBi 5725-5850MHz: ANT A: 7.08dBi, ANT B: 7.08dBi

(Non-Beamforming)

2412-2462MHz
For Power directional gain= G_{ant}= 5.20 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 8.21 (dBi)
5150MHz -5250MHz
For Power directional gain= G_{ant}= 6.91 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 9.92 (dBi)
5725MHz -5850MHz
For Power directional gain= G_{ant}= 7.08 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 10.09 (dBi)

(Beamforming)

2412-2462MHz
For Power directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 8.21 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 8.21 (dBi)
5150MHz -5250MHz
For Power directional gain= 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 9.92 (dBi) For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT]= 9.92 (dBi)
5725MHz -5850MHz
For Power directional gain= 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 10.09 (dBi) For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT]= 10.09 (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.

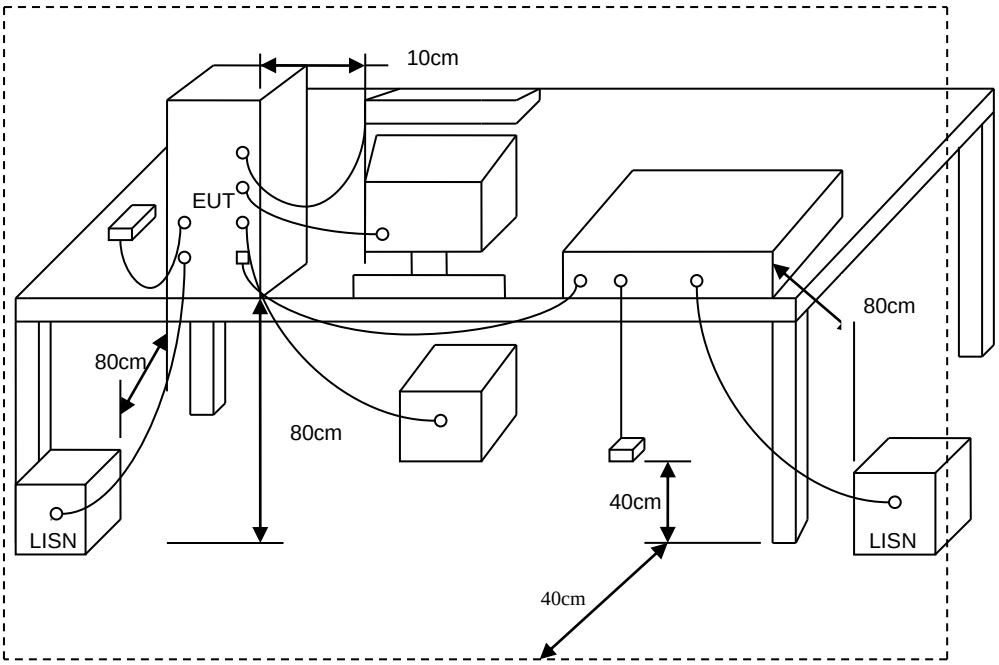
Frequency (MHz)	Quasi Peak (dBμV)	Average (dBμV)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2. Test Procedures

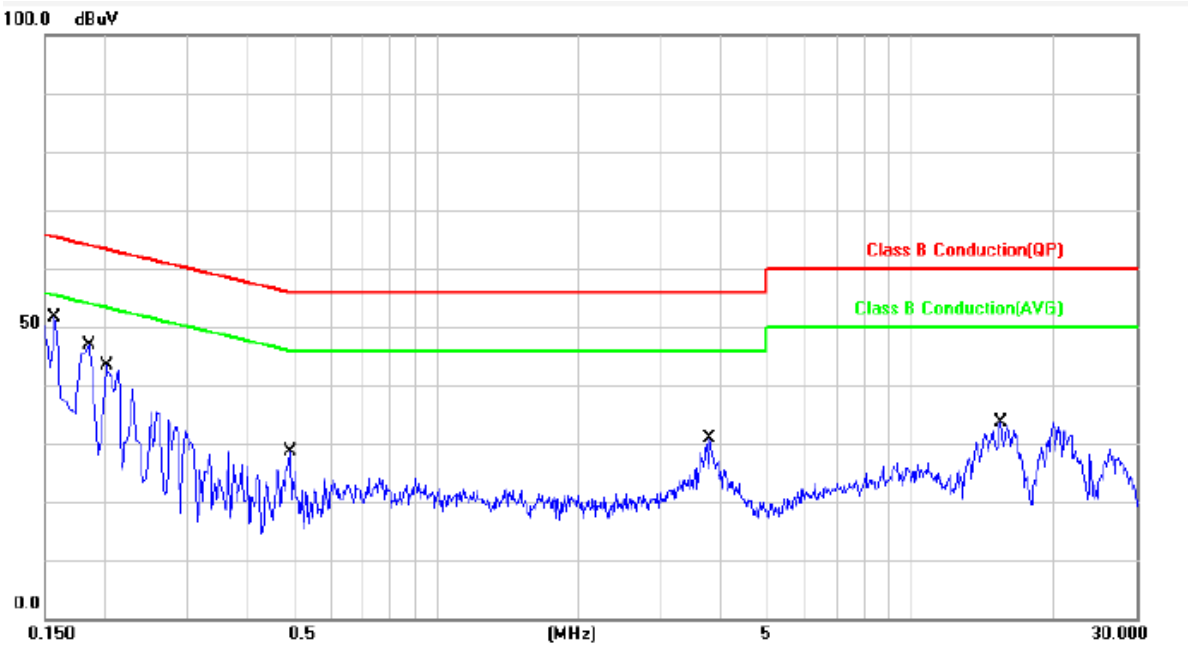
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
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



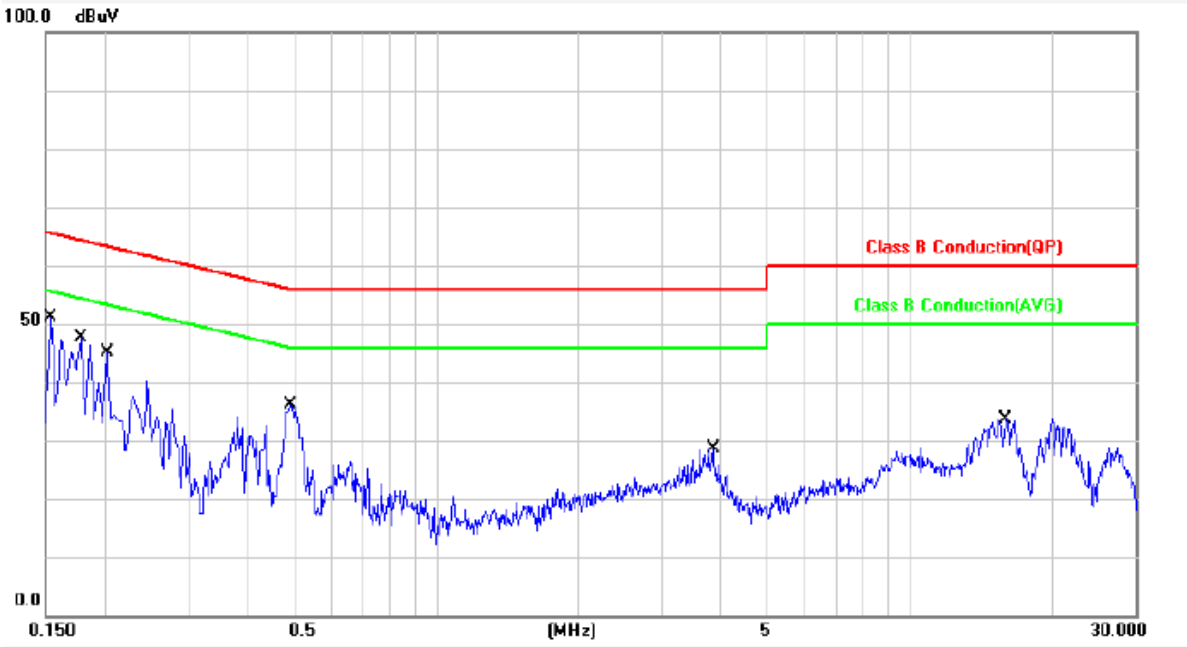
5.4. Test Result and Data

Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2018	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	9.98	38.41	48.39	65.56	-17.17	QP	P
2	0.1580	9.98	23.83	33.81	55.56	-21.75	AVG	P
3	0.1860	9.97	33.89	43.86	64.21	-20.35	QP	P
4	0.1860	9.97	18.79	28.76	54.21	-25.45	AVG	P
5	0.2020	9.97	31.22	41.19	63.52	-22.33	QP	P
6	0.2020	9.97	16.03	26.00	53.52	-27.52	AVG	P
7	0.4940	9.98	15.61	25.59	56.10	-30.51	QP	P
8	0.4940	9.98	7.18	17.16	46.10	-28.94	AVG	P
9	3.7860	10.14	13.83	23.97	56.00	-32.03	QP	P
10	3.7860	10.14	4.87	15.01	46.00	-30.99	AVG	P
11	15.4820	10.39	20.57	30.96	60.00	-29.04	QP	P
12	15.4820	10.39	17.82	28.21	50.00	-21.79	AVG	P

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2018	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	39.66	49.64	65.78	-16.14	QP	P
2	0.1539	9.98	25.45	35.43	55.78	-20.35	AVG	P
3	0.1780	9.98	35.73	45.71	64.57	-18.86	QP	P
4	0.1780	9.98	22.14	32.12	54.57	-22.45	AVG	P
5	0.2020	9.98	31.93	41.91	63.52	-21.61	QP	P
6	0.2020	9.98	18.60	28.58	53.52	-24.94	AVG	P
7	0.4940	9.94	25.21	35.15	56.10	-20.95	QP	P
8	0.4940	9.94	17.35	27.29	46.10	-18.81	AVG	P
9	3.8460	10.14	14.99	25.13	56.00	-30.87	QP	P
10	3.8460	10.14	5.42	15.56	46.00	-30.44	AVG	P
11	16.0380	10.50	20.76	31.26	60.00	-28.74	QP	P
12	16.0380	10.50	17.55	28.05	50.00	-21.95	AVG	P

6. Test of Spurious Emission (Radiated)

6.1. Test Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

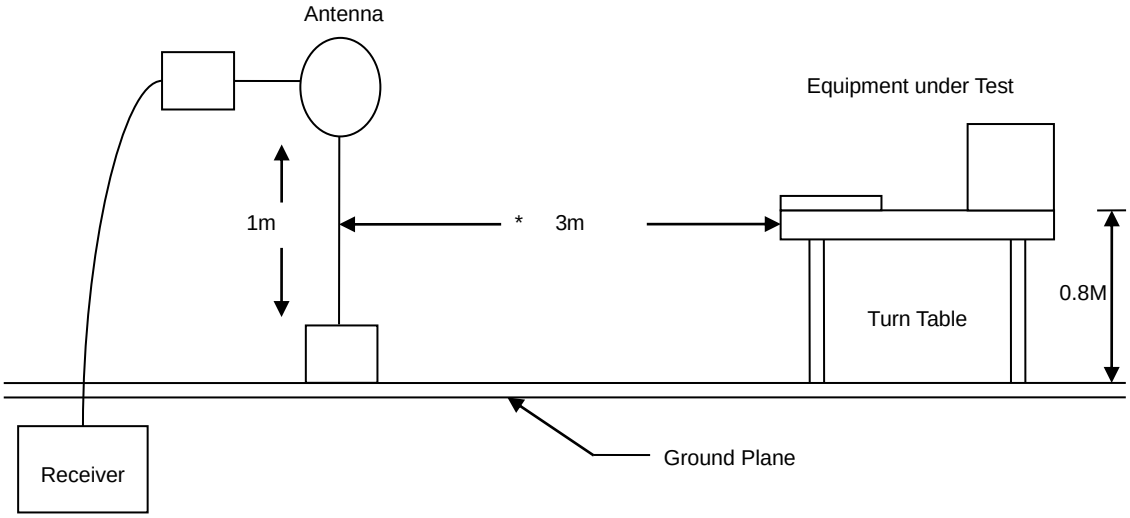
(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

6.2. Test Procedures

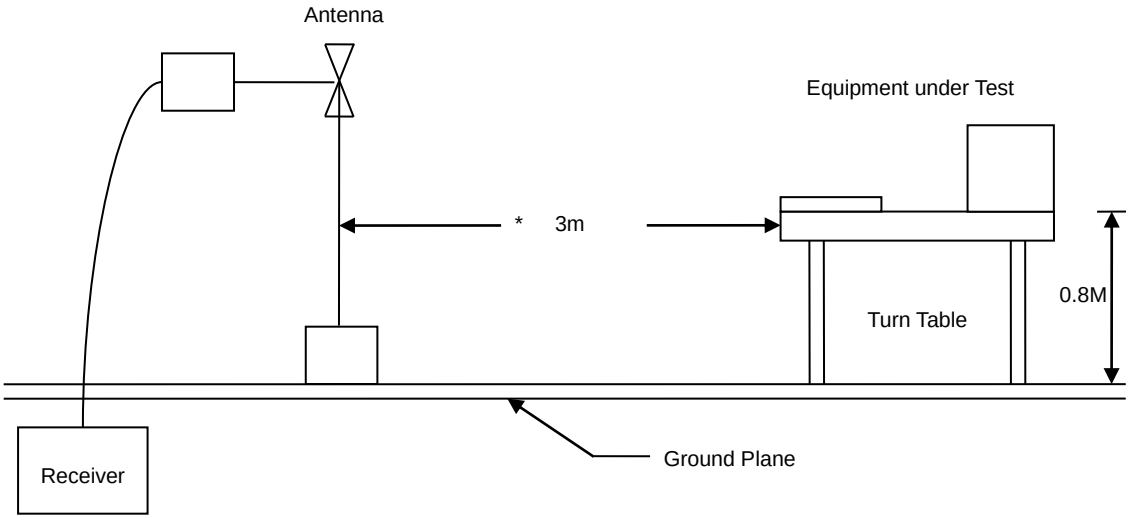
a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna 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

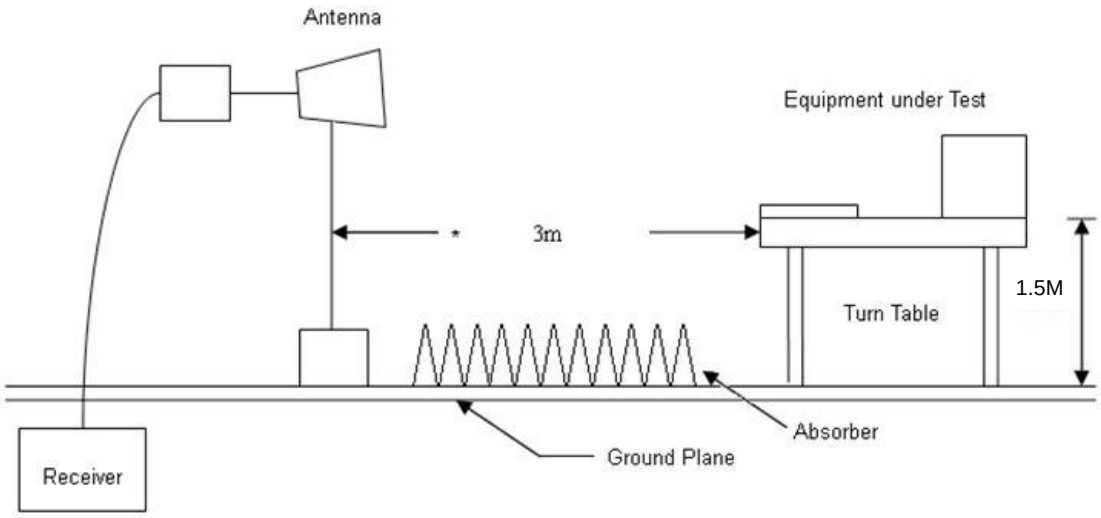
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

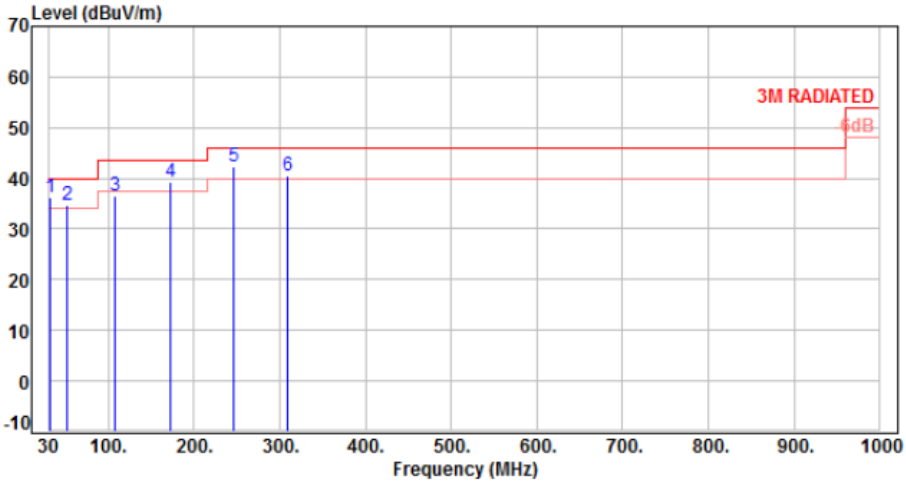


6.4. Test Result and Data (9kHz ~ 30MHz)

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

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

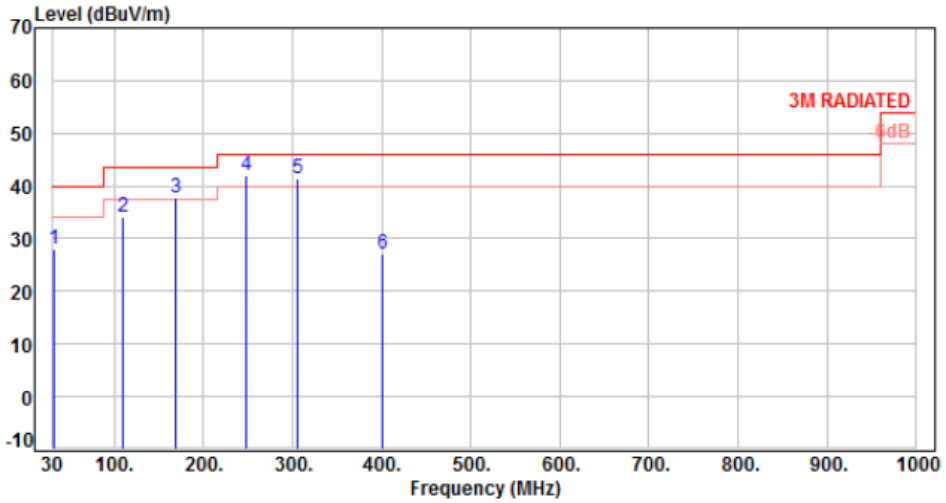
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	22 °C
Test Date	:	Dec. 06, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	32.91	-10.63	46.89	36.26	40.00	-3.74	QP	100	180	P
2	52.31	-9.48	44.10	34.62	40.00	-5.38	QP	100	250	P
3	108.57	-12.99	49.55	36.56	43.50	-6.94	Peak	400	0	P
4	171.62	-9.70	49.10	39.40	43.50	-4.10	Peak	400	0	P
5	246.31	-10.32	52.62	42.30	46.00	-3.70	Peak	400	0	P
6	308.39	-8.42	48.97	40.55	46.00	-5.45	Peak	400	0	P

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

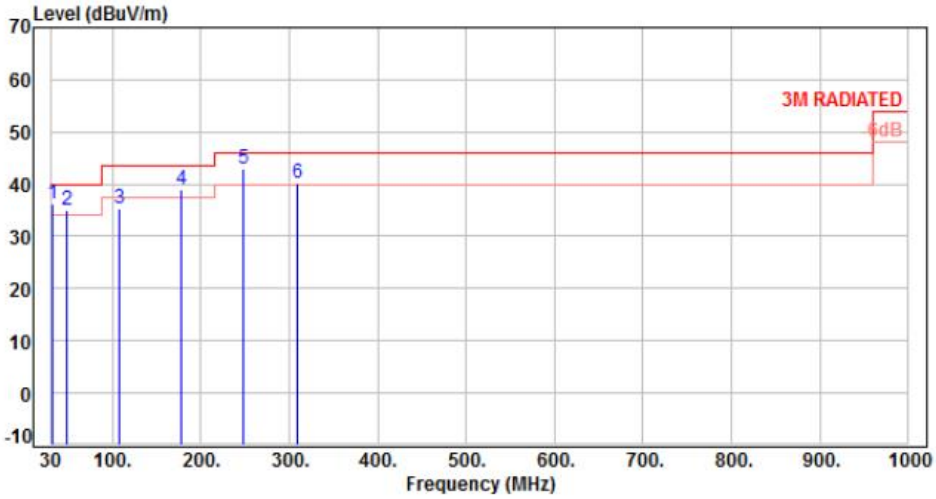
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	22 °C
Test Date	:	Dec. 06, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	32.91	-10.63	38.55	27.92	40.00	-12.08	Peak	100	0	P
2	109.54	-12.84	46.83	33.99	43.50	-9.51	Peak	100	0	P
3	168.71	-9.43	47.31	37.88	43.50	-5.62	QP	100	217	P
4	248.25	-10.27	52.20	41.93	46.00	-4.07	Peak	100	0	P
5	305.48	-8.50	50.00	41.50	46.00	-4.50	QP	100	96	P
6	400.54	-5.76	32.81	27.05	46.00	-18.95	Peak	100	0	P

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

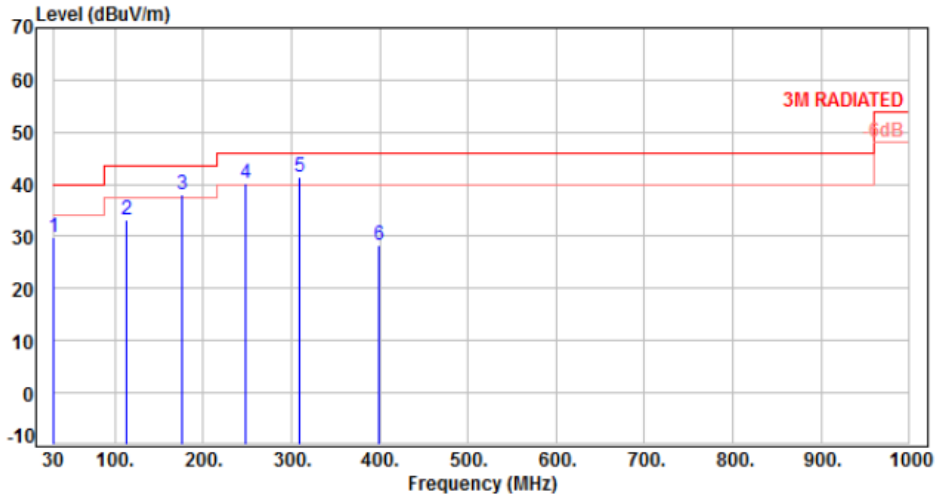
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 4	Temperature	:	22 °C
Test Date	:	Dec. 06, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	31.94	-10.56	46.78	36.22	40.00	-3.78	QP	100	191	P
2	48.43	-9.42	44.56	35.14	40.00	-4.86	QP	100	246	P
3	108.57	-12.99	48.46	35.47	43.50	-8.03	Peak	400	0	P
4	177.44	-10.55	49.54	38.99	43.50	-4.51	Peak	400	0	P
5	247.28	-10.30	53.17	42.87	46.00	-3.13	Peak	400	0	P
6	308.39	-8.42	48.62	40.20	46.00	-5.80	Peak	400	0	P

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

Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 4	Temperature	:	22 °C
Test Date	:	Dec. 06, 2018	Humidity	:	63 %

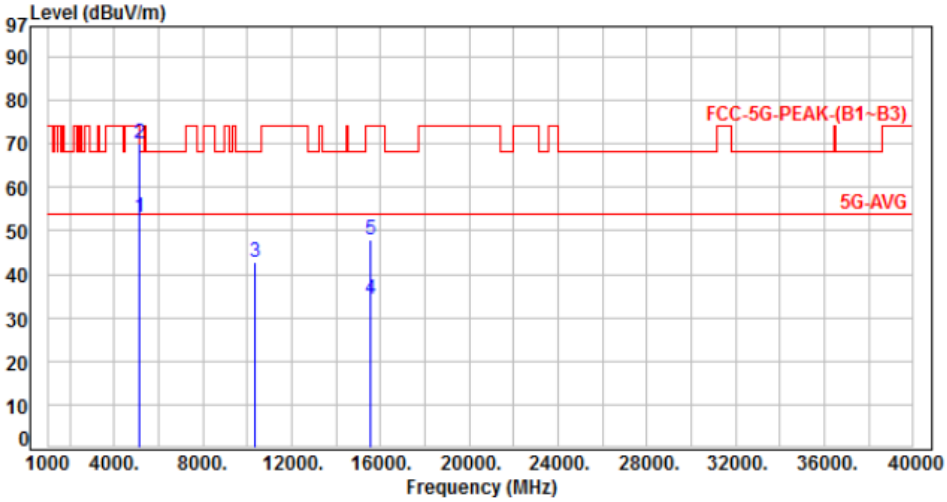


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	30.00	-10.49	40.38	29.89	40.00	-10.11	Peak	100	0	P
2	112.45	-12.49	45.70	33.21	43.50	-10.29	Peak	100	0	P
3	175.50	-10.26	48.40	38.14	43.50	-5.36	QP	100	221	P
4	248.25	-10.27	50.49	40.22	46.00	-5.78	QP	100	242	P
5	309.36	-8.40	49.80	41.40	46.00	-4.60	QP	100	237	P
6	398.60	-5.80	34.19	28.39	46.00	-17.61	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 ~ 40GHz)

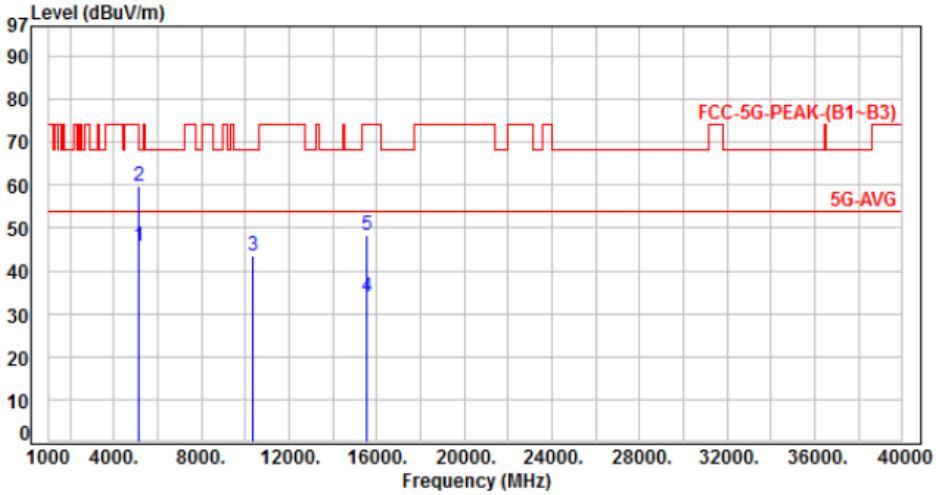
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH36, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	60.67	52.99	54.00	-1.01	Average	228	343	P
2	5150.00	-7.68	77.70	70.02	74.00	-3.98	Peak	228	343	P
3	10360.00	-0.12	42.88	42.76	68.20	-25.44	Peak	100	102	P
4	15540.00	5.24	28.99	34.23	54.00	-19.77	Average	100	133	P
5	15540.00	5.24	42.65	47.89	74.00	-26.11	Peak	100	133	P

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

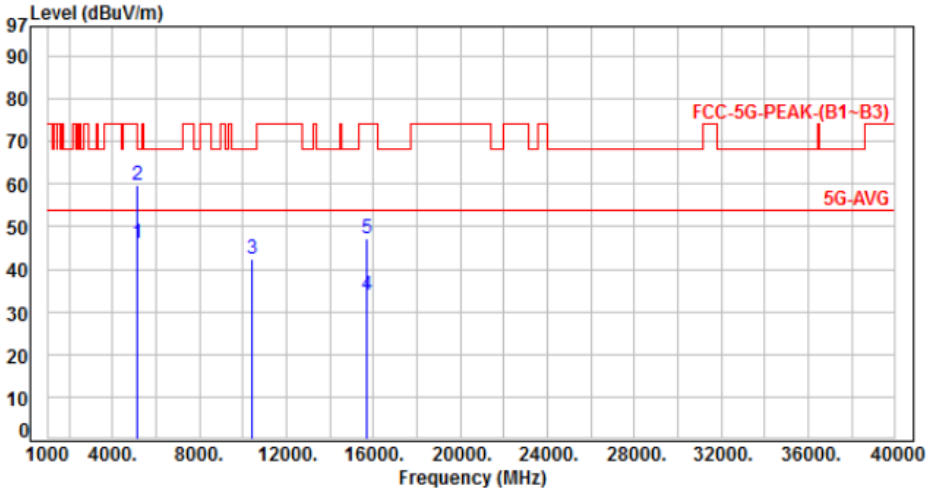
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH36, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.40	45.72	54.00	-8.28	Average	241	143	P
2	5150.00	-7.68	67.40	59.72	74.00	-14.28	Peak	241	143	P
3	10360.00	-0.12	43.58	43.46	68.20	-24.74	Peak	100	300	P
4	15540.00	5.24	28.53	33.77	54.00	-20.23	Average	100	300	P
5	15540.00	5.24	43.18	48.42	74.00	-25.58	Peak	100	300	P

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

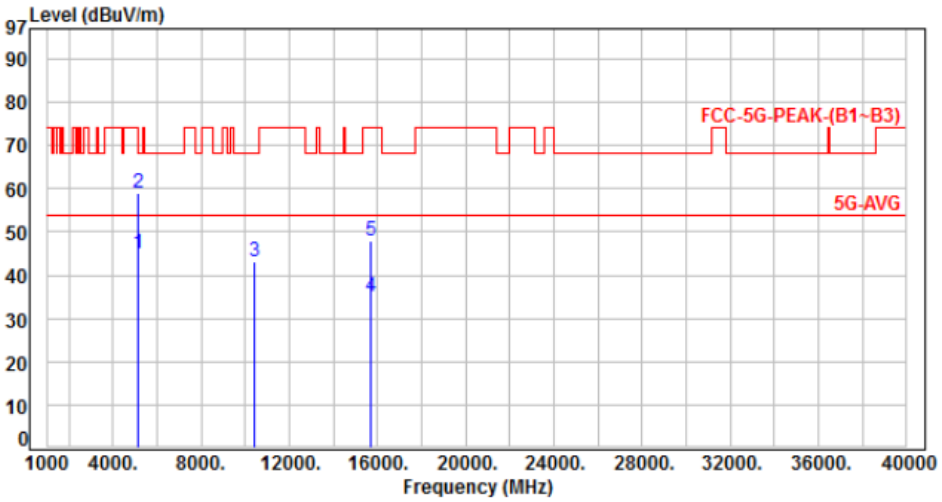
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH44, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.90	46.22	54.00	-7.78	Average	240	157	P
2	5150.00	-7.68	67.50	59.82	74.00	-14.18	Peak	240	157	P
3	10440.00	-0.03	42.58	42.55	68.20	-25.65	Peak	100	112	P
4	15660.00	5.32	28.65	33.97	54.00	-20.03	Average	105	86	P
5	15660.00	5.32	41.88	47.20	74.00	-26.80	Peak	105	86	P

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

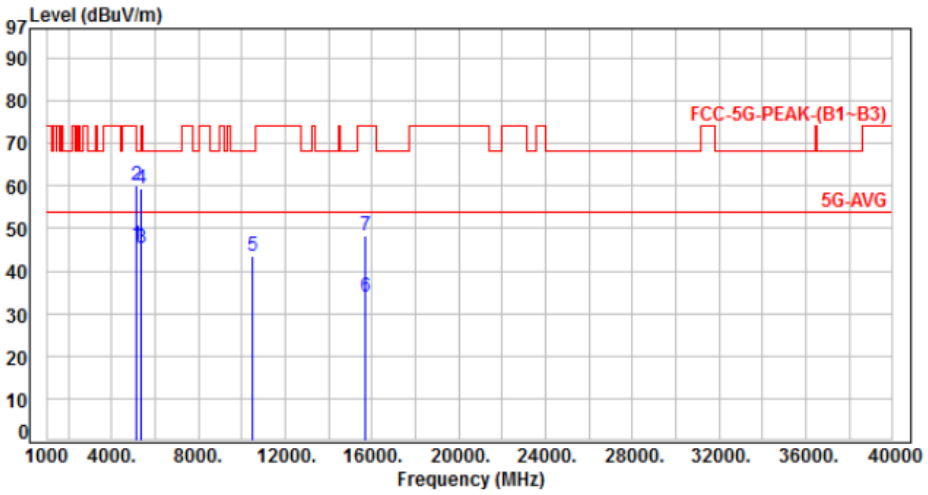
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH44, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	52.70	45.02	54.00	-8.98	Average	258	310	P
2	5150.00	-7.68	66.80	59.12	74.00	-14.88	Peak	258	310	P
3	10440.00	-0.03	43.21	43.18	68.20	-25.02	Peak	100	285	P
4	15660.00	5.32	29.55	34.87	54.00	-19.13	Average	106	311	P
5	15660.00	5.32	42.76	48.08	74.00	-25.92	Peak	106	311	P

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

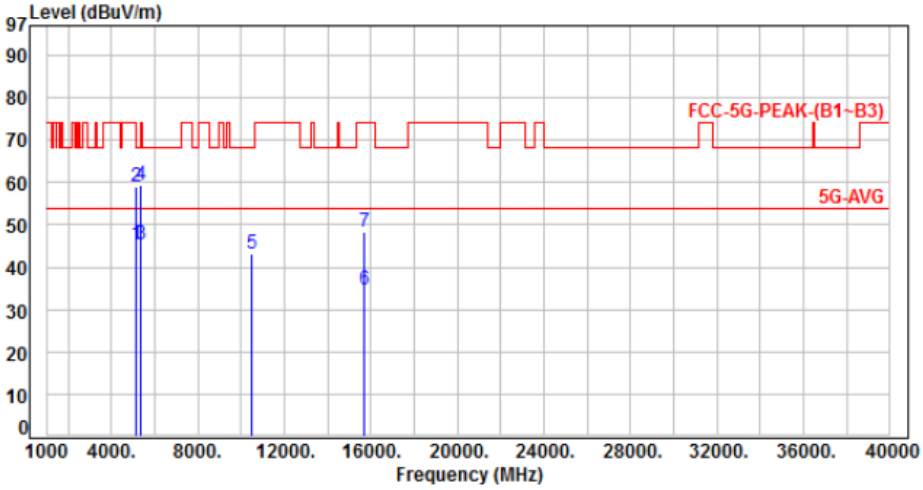
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH48, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.70	46.02	54.00	-7.98	Average	230	18	P
2	5150.00	-7.68	67.80	60.12	74.00	-13.88	Peak	230	18	P
3	5350.00	-7.30	52.80	45.50	54.00	-8.50	Average	230	18	P
4	5350.00	-7.30	66.50	59.20	74.00	-14.80	Peak	230	18	P
5	10480.00	0.01	43.55	43.56	68.20	-24.64	Peak	100	115	P
6	15720.00	5.36	28.66	34.02	54.00	-19.98	Average	100	96	P
7	15720.00	5.36	42.78	48.14	74.00	-25.86	Peak	100	96	P

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

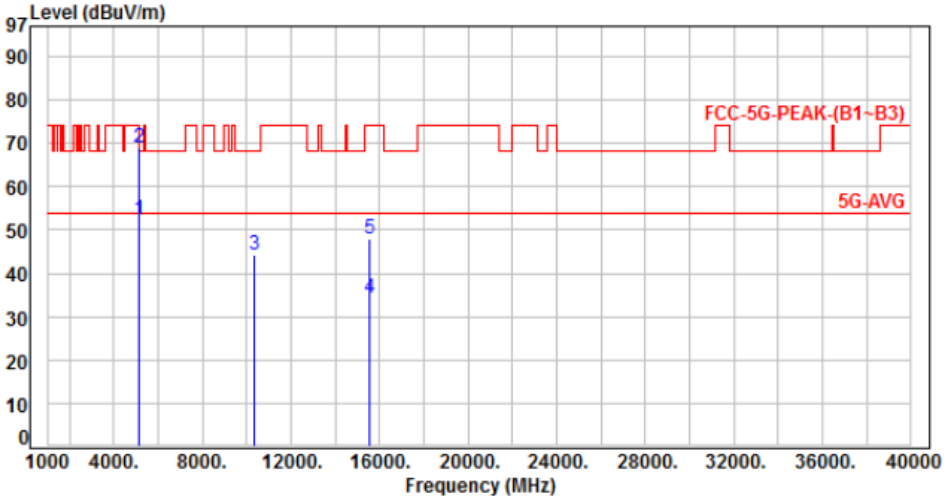
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH48, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.20	45.52	54.00	-8.48	Average	250	193	P
2	5150.00	-7.68	66.80	59.12	74.00	-14.88	Peak	250	193	P
3	5350.00	-7.30	52.80	45.50	54.00	-8.50	Average	250	193	P
4	5350.00	-7.30	66.60	59.30	74.00	-14.70	Peak	250	193	P
5	10480.00	0.01	43.21	43.22	68.20	-24.98	Peak	100	316	P
6	15720.00	5.36	29.32	34.68	54.00	-19.32	Average	108	342	P
7	15720.00	5.36	43.11	48.47	74.00	-25.53	Peak	108	342	P

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

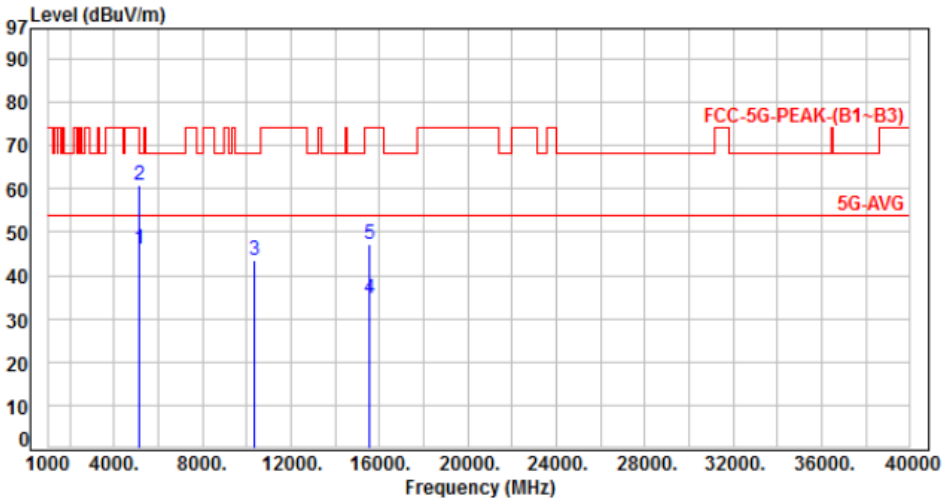
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH36, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	60.20	52.52	54.00	-1.48	Average	230	330	P
2	5150.00	-7.68	76.80	69.12	74.00	-4.88	Peak	230	330	P
3	10360.00	-0.12	44.22	44.10	68.20	-24.10	Peak	100	125	P
4	15540.00	5.24	28.95	34.19	54.00	-19.81	Average	100	85	P
5	15540.00	5.24	42.77	48.01	74.00	-25.99	Peak	100	85	P

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

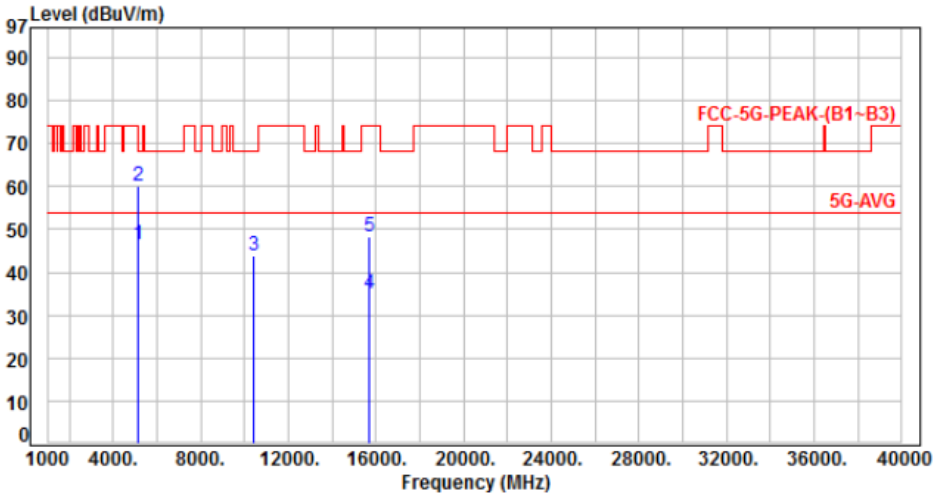
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH36, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.80	46.12	54.00	-7.88	Average	230	143	P
2	5150.00	-7.68	68.70	61.02	74.00	-12.98	Peak	230	143	P
3	10360.00	-0.12	43.81	43.69	68.20	-24.51	Peak	100	352	P
4	15540.00	5.24	29.57	34.81	54.00	-19.19	Average	100	312	P
5	15540.00	5.24	42.15	47.39	74.00	-26.61	Peak	100	312	P

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

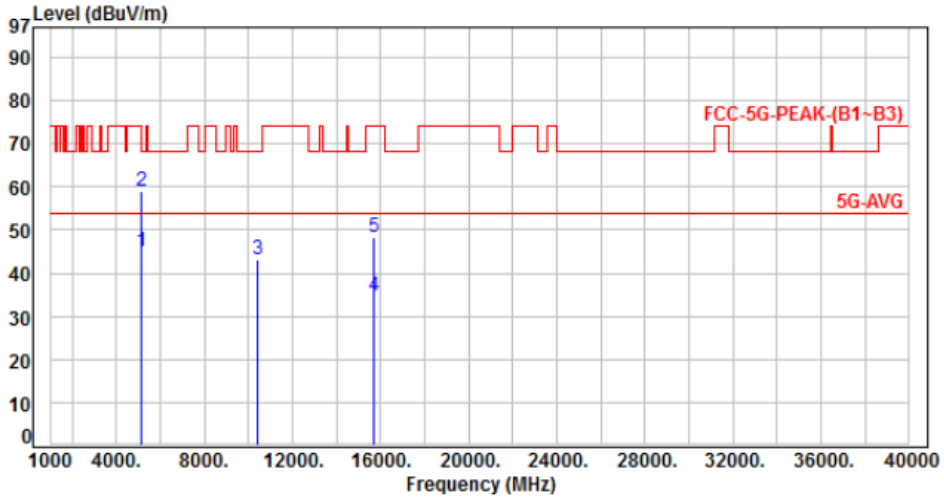
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH44, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	54.10	46.42	54.00	-7.58	Average	238	181	P
2	5150.00	-7.68	67.90	60.22	74.00	-13.78	Peak	238	181	P
3	10440.00	-0.03	43.85	43.82	68.20	-24.38	Peak	102	200	P
4	15660.00	5.32	29.68	35.00	54.00	-19.00	Average	100	123	P
5	15660.00	5.32	42.88	48.20	74.00	-25.80	Peak	100	123	P

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

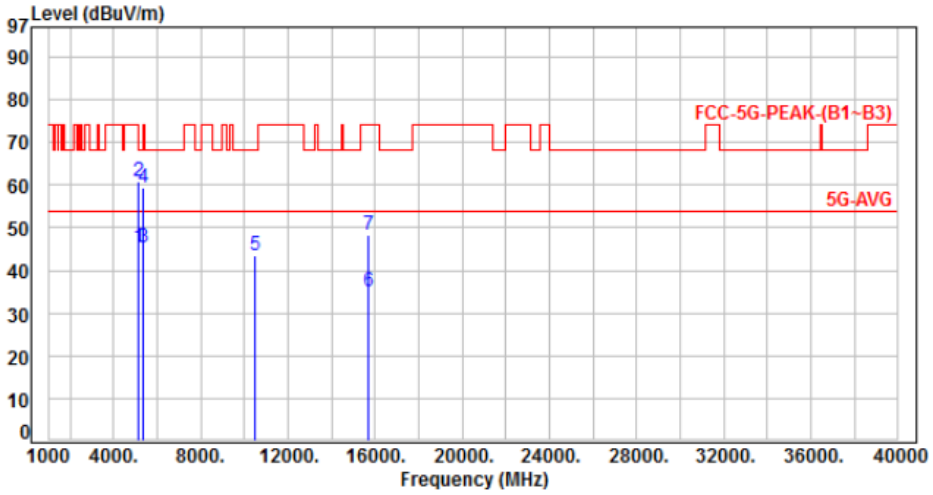
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH44, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	52.80	45.12	54.00	-8.88	Average	262	310	P
2	5150.00	-7.68	66.60	58.92	74.00	-15.08	Peak	262	310	P
3	10440.00	-0.03	43.12	43.09	68.20	-25.11	Peak	100	315	P
4	15660.00	5.32	29.22	34.54	54.00	-19.46	Average	100	318	P
5	15660.00	5.32	42.85	48.17	74.00	-25.83	Peak	100	318	P

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

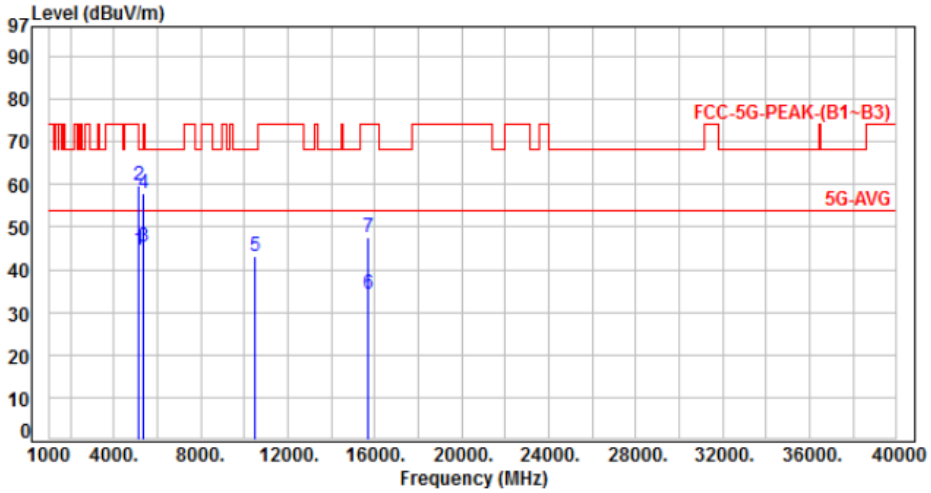
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH48, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	53.20	45.52	54.00	-8.48	Average	240	20	P
2	5150.00	-7.68	68.50	60.82	74.00	-13.18	Peak	240	20	P
3	5350.00	-7.30	52.60	45.30	54.00	-8.70	Average	240	20	P
4	5350.00	-7.30	66.70	59.40	74.00	-14.60	Peak	240	20	P
5	10480.00	0.01	43.65	43.66	68.20	-24.54	Peak	100	55	P
6	15720.00	5.36	29.68	35.04	54.00	-18.96	Average	100	102	P
7	15720.00	5.36	43.11	48.47	74.00	-25.53	Peak	100	102	P

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

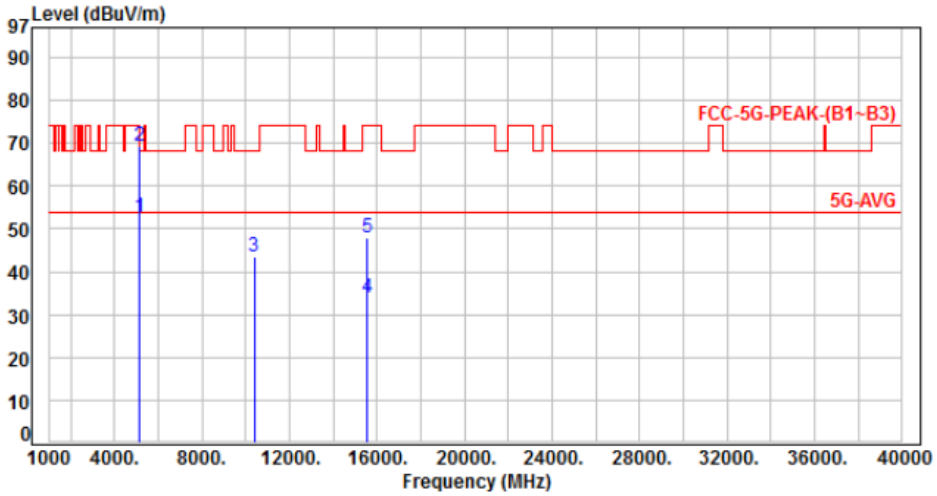
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH48, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	52.40	44.72	54.00	-9.28	Average	267	190	P
2	5150.00	-7.68	67.50	59.82	74.00	-14.18	Peak	267	190	P
3	5350.00	-7.30	52.60	45.30	54.00	-8.70	Average	267	190	P
4	5350.00	-7.30	65.30	58.00	74.00	-16.00	Peak	267	190	P
5	10480.00	0.01	43.32	43.33	68.20	-24.87	Peak	100	336	P
6	15720.00	5.36	28.92	34.28	54.00	-19.72	Average	100	314	P
7	15720.00	5.36	42.28	47.64	74.00	-26.36	Peak	100	314	P

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

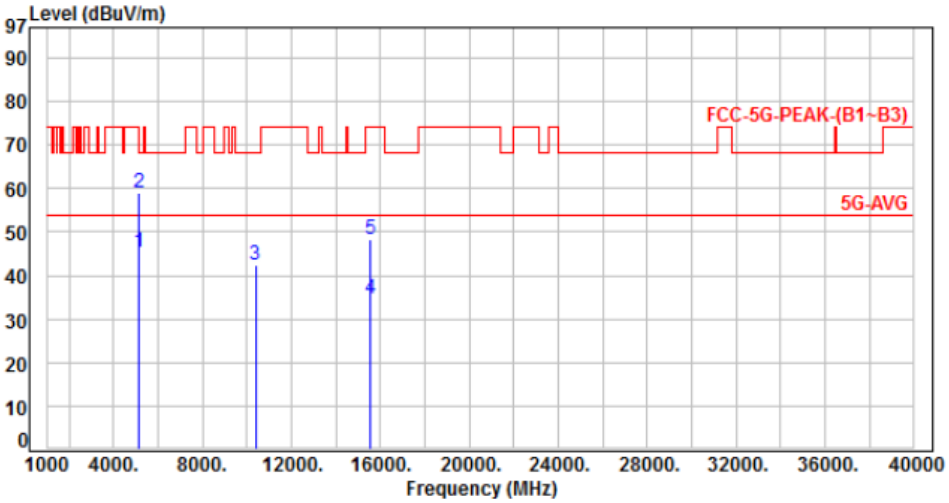
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH38, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	60.40	52.72	54.00	-1.28	Average	231	345	P
2	5150.00	-7.68	77.20	69.52	74.00	-4.48	Peak	231	345	P
3	10380.00	-0.10	43.65	43.55	68.20	-24.65	Peak	100	152	P
4	15570.00	5.26	28.68	33.94	54.00	-20.06	Average	100	133	P
5	15570.00	5.26	42.65	47.91	74.00	-26.09	Peak	100	133	P

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

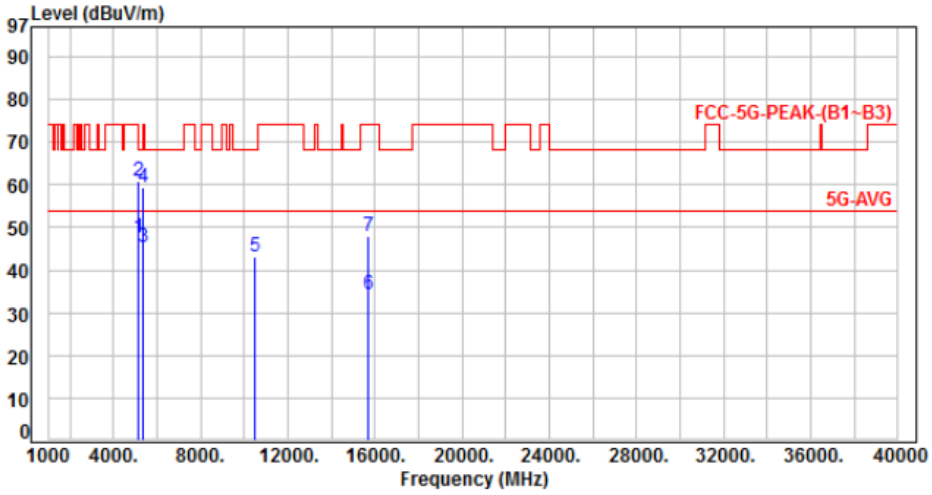
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH38, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	52.90	45.22	54.00	-8.78	Average	237	145	P
2	5150.00	-7.68	66.70	59.02	74.00	-14.98	Peak	237	145	P
3	10380.00	-0.10	42.68	42.58	68.20	-25.62	Peak	100	357	P
4	15570.00	5.26	29.35	34.61	54.00	-19.39	Average	100	325	P
5	15570.00	5.26	43.21	48.47	74.00	-25.53	Peak	100	325	P

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

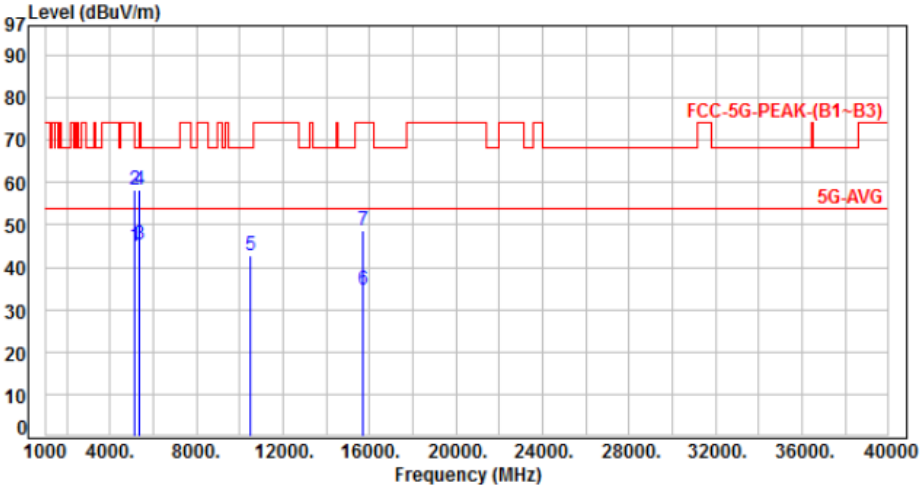
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH46, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	55.30	47.62	54.00	-6.38	Average	235	352	P
2	5150.00	-7.68	68.70	61.02	74.00	-12.98	Peak	235	352	P
3	5350.00	-7.30	52.80	45.50	54.00	-8.50	Average	235	352	P
4	5350.00	-7.30	66.60	59.30	74.00	-14.70	Peak	235	352	P
5	10460.00	-0.02	43.23	43.21	68.20	-24.99	Peak	103	77	P
6	15690.00	5.34	28.91	34.25	54.00	-19.75	Average	100	122	P
7	15690.00	5.34	42.65	47.99	74.00	-26.01	Peak	100	122	P

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

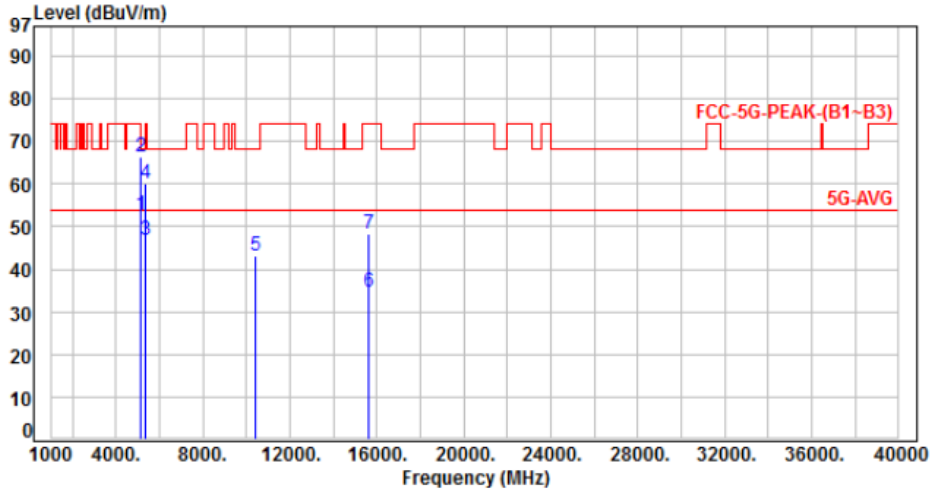
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH46, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	52.60	44.92	54.00	-9.08	Average	252	196	P
2	5150.00	-7.68	65.90	58.22	74.00	-15.78	Peak	252	196	P
3	5350.00	-7.30	52.50	45.20	54.00	-8.80	Average	252	196	P
4	5350.00	-7.30	65.70	58.40	74.00	-15.60	Peak	252	196	P
5	10460.00	-0.02	42.69	42.67	68.20	-25.53	Peak	100	311	P
6	15690.00	5.34	29.32	34.66	54.00	-19.34	Average	100	302	P
7	15690.00	5.34	43.26	48.60	74.00	-25.40	Peak	100	302	P

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

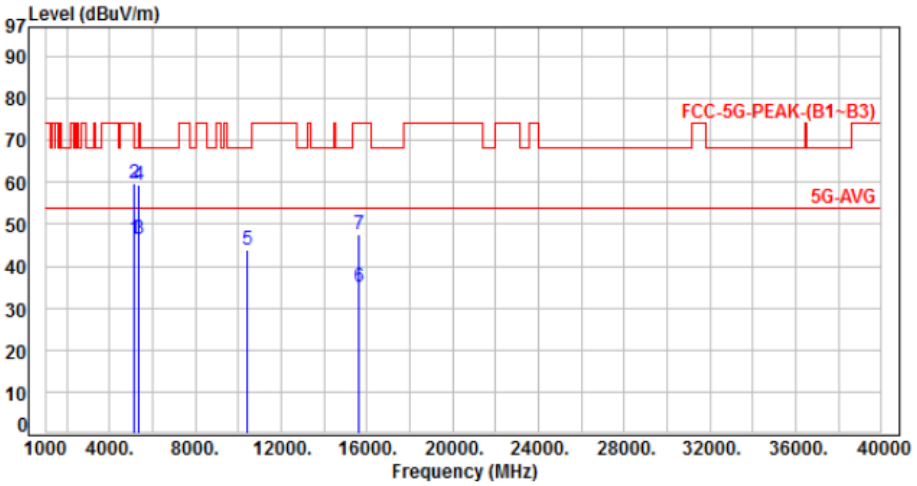
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH42, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	60.30	52.62	54.00	-1.38	Average	229	344	P
2	5150.00	-7.68	74.20	66.52	74.00	-7.48	Peak	229	344	P
3	5350.00	-7.30	54.00	46.70	54.00	-7.30	Average	229	344	P
4	5350.00	-7.30	67.60	60.30	74.00	-13.70	Peak	229	344	P
5	10420.00	-0.05	43.32	43.27	68.20	-24.93	Peak	100	98	P
6	15630.00	5.30	29.35	34.65	54.00	-19.35	Average	100	119	P
7	15630.00	5.30	42.88	48.18	74.00	-25.82	Peak	100	119	P

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

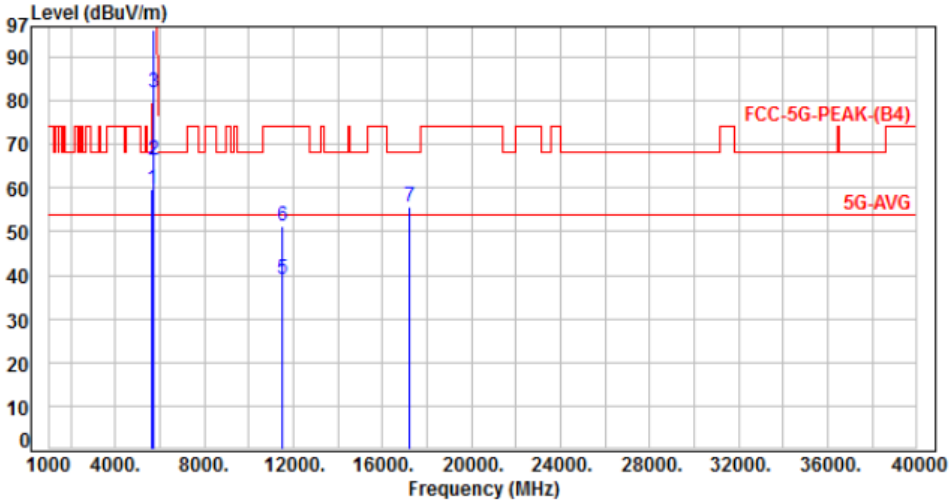
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH42, Band 1	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-7.68	54.20	46.52	54.00	-7.48	Average	230	315	P
2	5150.00	-7.68	67.30	59.62	74.00	-14.38	Peak	230	315	P
3	5350.00	-7.30	53.90	46.60	54.00	-7.40	Average	230	315	P
4	5350.00	-7.30	66.60	59.30	74.00	-14.70	Peak	230	315	P
5	10420.00	-0.05	43.77	43.72	68.20	-24.48	Peak	105	299	P
6	15630.00	5.30	29.63	34.93	54.00	-19.07	Average	100	315	P
7	15630.00	5.30	42.22	47.52	74.00	-26.48	Peak	100	315	P

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

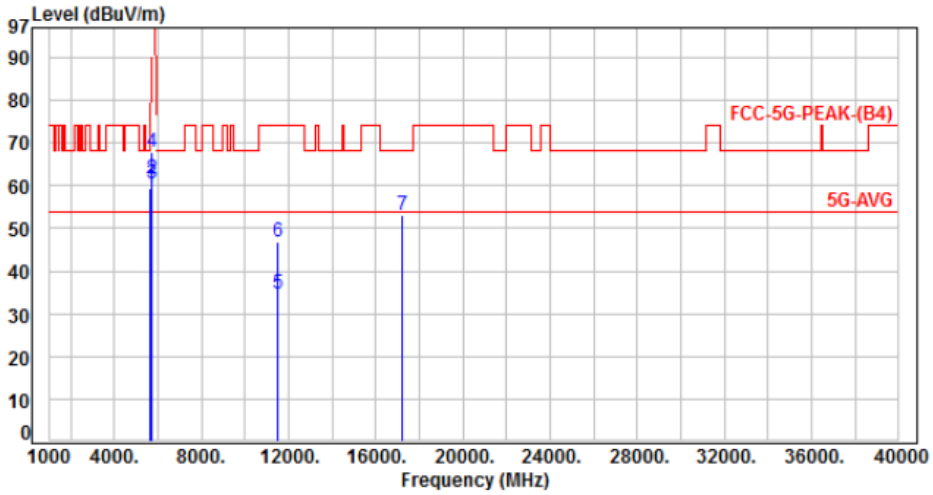
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH149, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	66.70	59.73	68.20	-8.47	Peak	100	69	P
2	5700.00	-6.95	73.30	66.35	105.20	-38.85	Peak	100	69	P
3	5720.00	-6.95	88.90	81.95	110.80	-28.85	Peak	100	69	P
4	5725.00	-6.95	103.21	96.26	122.20	-25.94	Peak	100	69	P
5	11490.00	1.18	37.91	39.09	54.00	-14.91	Average	146	174	P
6	11490.00	1.18	49.91	51.09	74.00	-22.91	Peak	146	174	P
7	17235.00	11.64	44.10	55.74	68.20	-12.46	Peak	100	144	P

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

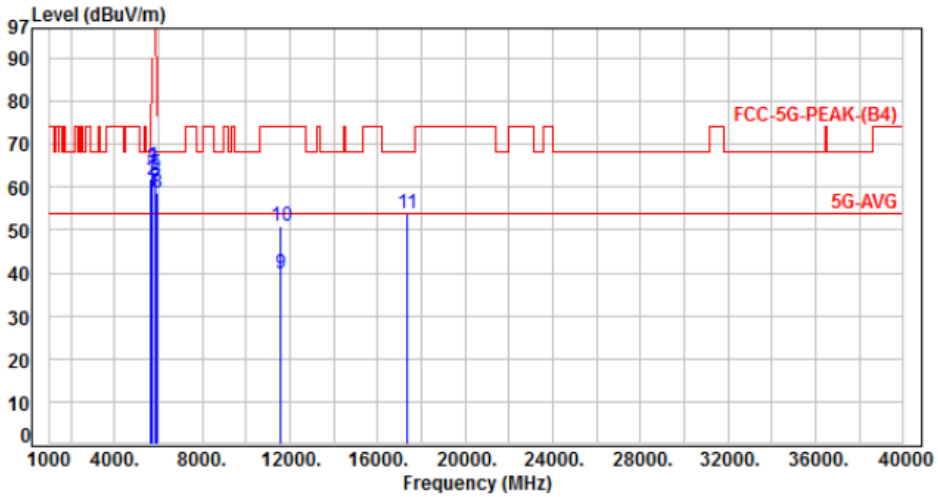
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH149, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	66.20	59.23	68.20	-8.97	Peak	100	204	P
2	5700.00	-6.95	68.60	61.65	105.20	-43.55	Peak	100	204	P
3	5720.00	-6.95	67.56	60.61	110.80	-50.19	Peak	100	204	P
4	5725.00	-6.95	74.71	67.76	122.20	-54.44	Peak	100	204	P
5	11490.00	1.18	33.53	34.71	54.00	-19.29	Average	112	195	P
6	11490.00	1.18	45.51	46.69	74.00	-27.31	Peak	112	195	P
7	17235.00	11.64	41.33	52.97	68.20	-15.23	Peak	100	311	P

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

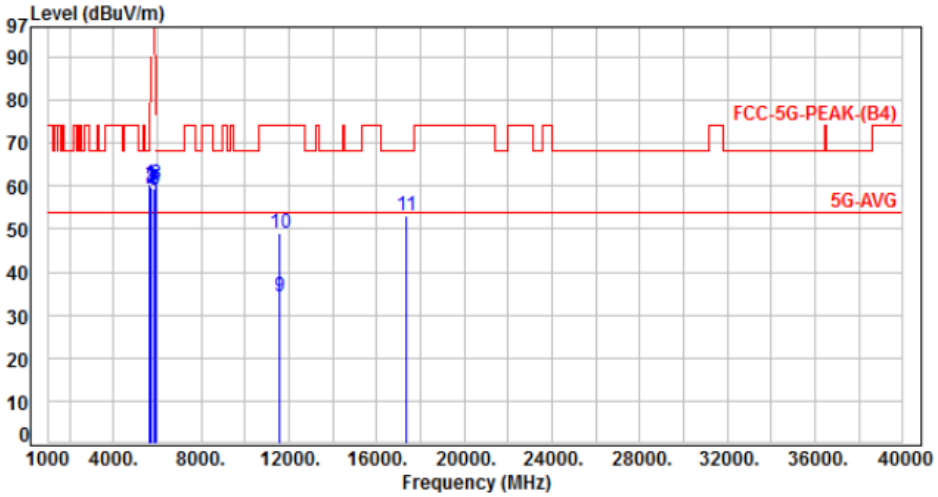
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH157, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	68.80	61.83	68.20	-6.37	Peak	170	29	P
2	5700.00	-6.95	68.50	61.55	105.20	-43.65	Peak	170	29	P
3	5720.00	-6.95	71.40	64.45	110.80	-46.35	Peak	170	29	P
4	5725.00	-6.95	71.69	64.74	122.20	-57.46	Peak	170	29	P
5	5850.00	-6.90	69.90	63.00	122.20	-59.20	Peak	170	29	P
6	5855.00	-6.90	68.20	61.30	110.80	-49.50	Peak	170	29	P
7	5875.00	-6.89	66.60	59.71	105.20	-45.49	Peak	170	29	P
8	5925.00	-6.88	65.70	58.82	68.20	-9.38	Peak	170	29	P
9	11570.00	1.28	38.55	39.83	54.00	-14.17	Average	150	30	P
10	11570.00	1.28	49.80	51.08	74.00	-22.92	Peak	150	30	P
11	17355.00	12.41	41.56	53.97	68.20	-14.23	Peak	100	88	P

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

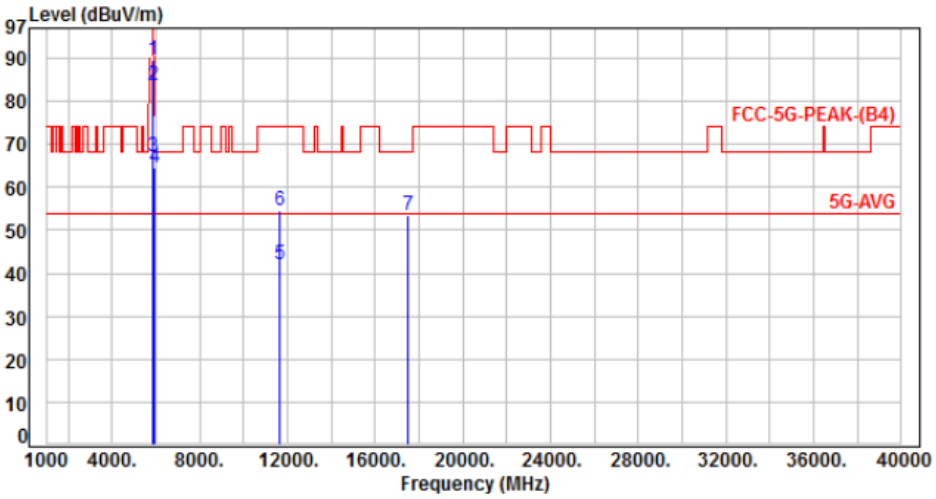
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH157, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	67.50	60.53	68.20	-7.67	Peak	161	224	P
2	5700.00	-6.95	66.30	59.35	105.20	-45.85	Peak	161	224	P
3	5720.00	-6.95	66.80	59.85	110.80	-50.95	Peak	161	224	P
4	5725.00	-6.95	66.33	59.38	122.20	-62.82	Peak	161	224	P
5	5850.00	-6.90	66.10	59.20	122.20	-63.00	Peak	161	224	P
6	5855.00	-6.90	65.80	58.90	110.80	-51.90	Peak	161	224	P
7	5875.00	-6.89	66.20	59.31	105.20	-45.89	Peak	161	224	P
8	5925.00	-6.88	67.54	60.66	68.20	-7.54	Peak	161	224	P
9	11570.00	1.28	33.20	34.48	54.00	-19.52	Average	172	215	P
10	11570.00	1.28	47.60	48.88	74.00	-25.12	Peak	172	215	P
11	17355.00	12.41	40.60	53.01	68.20	-15.19	Peak	100	325	P

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

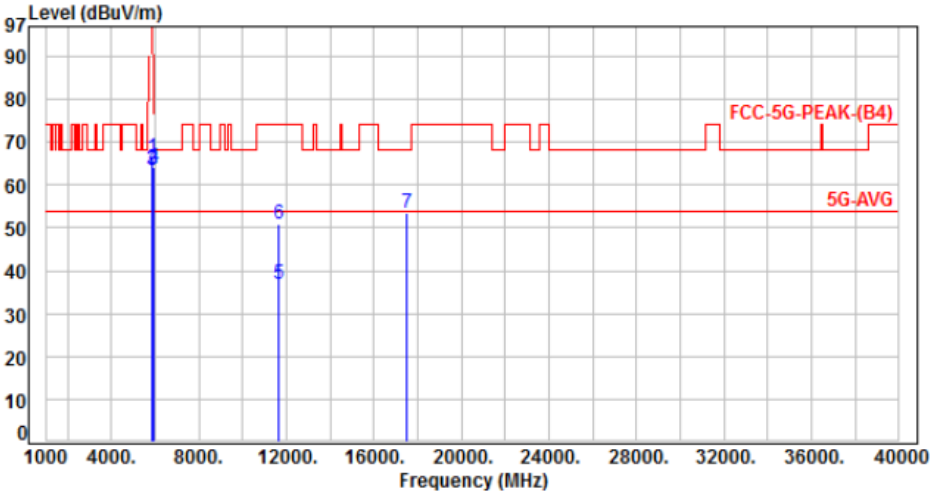
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH165, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-6.90	96.60	89.70	122.20	-32.50	Peak	160	28	P
2	5855.00	-6.90	90.50	83.60	110.80	-27.20	Peak	160	28	P
3	5875.00	-6.89	73.90	67.01	105.20	-38.19	Peak	160	28	P
4	5925.00	-6.88	71.30	64.42	68.20	-3.78	Peak	160	28	P
5	11650.00	1.37	40.80	42.17	54.00	-11.83	Average	100	333	P
6	11650.00	1.37	53.10	54.47	74.00	-19.53	Peak	100	333	P
7	17475.00	13.18	40.21	53.39	68.20	-14.81	Peak	100	112	P

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

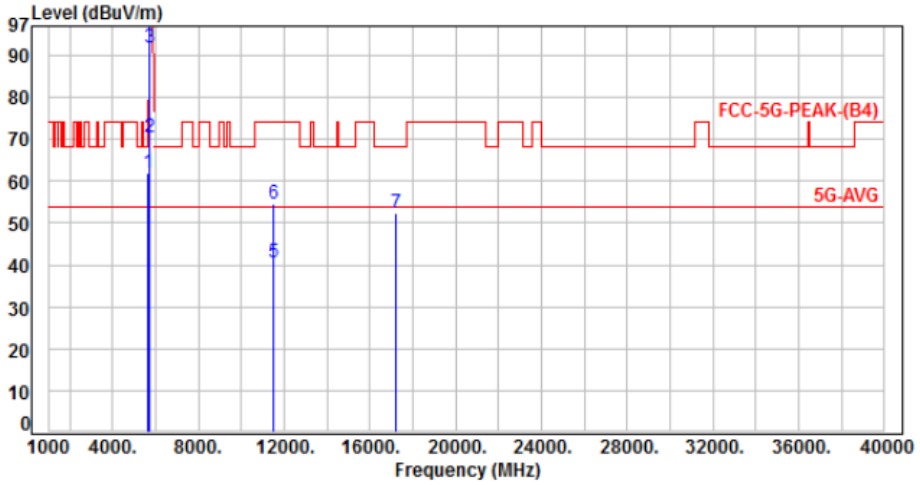
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH165, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-6.90	73.20	66.30	122.20	-55.90	Peak	100	108	P
2	5855.00	-6.90	70.80	63.90	110.80	-46.90	Peak	100	108	P
3	5875.00	-6.89	70.20	63.31	105.20	-41.89	Peak	100	108	P
4	5925.00	-6.88	71.10	64.22	68.20	-3.98	Peak	100	108	P
5	11650.00	1.37	35.50	36.87	54.00	-17.13	Average	100	220	P
6	11650.00	1.37	49.70	51.07	74.00	-22.93	Peak	100	220	P
7	17475.00	13.18	40.34	53.52	68.20	-14.68	Peak	100	108	P

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

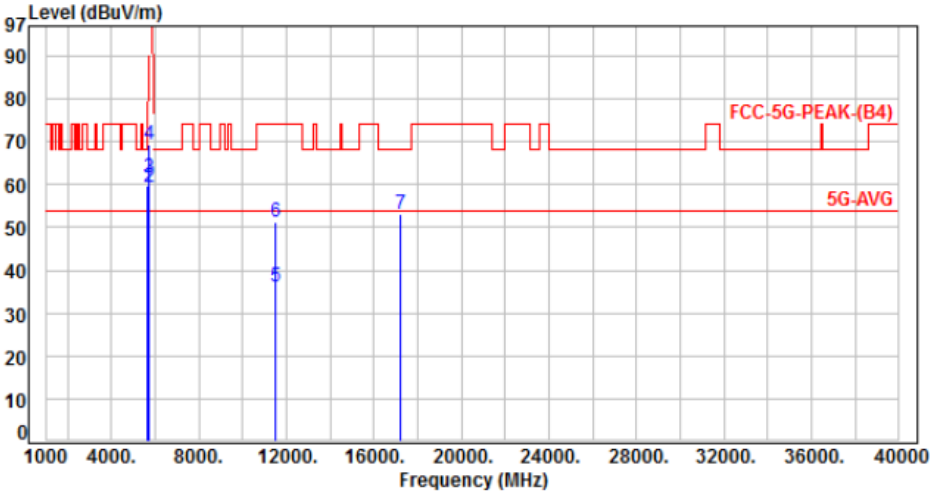
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH149, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	68.80	61.83	68.20	-6.37	Peak	180	30	P
2	5700.00	-6.95	77.30	70.35	105.20	-34.85	Peak	180	30	P
3	5720.00	-6.95	98.60	91.65	110.80	-19.15	Peak	180	30	P
4	5725.00	-6.95	104.31	97.36	122.20	-24.84	Peak	180	30	P
5	11490.00	1.18	39.51	40.69	54.00	-13.31	Average	179	156	P
6	11490.00	1.18	53.51	54.69	74.00	-19.31	Peak	179	156	P
7	17235.00	11.64	40.88	52.52	68.20	-15.68	Peak	100	66	P

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

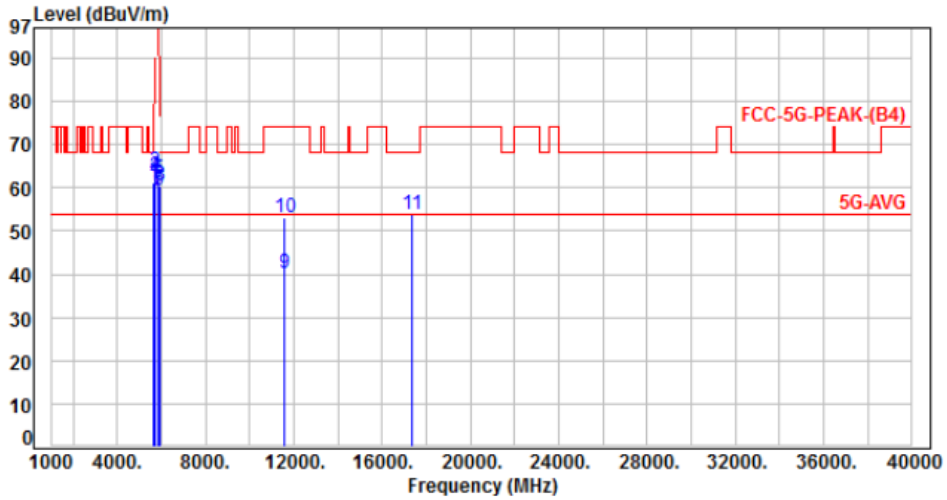
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH149, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	66.60	59.63	68.20	-8.57	Peak	100	206	P
2	5700.00	-6.95	66.40	59.45	105.20	-45.75	Peak	100	206	P
3	5720.00	-6.95	68.60	61.65	110.80	-49.15	Peak	100	206	P
4	5725.00	-6.95	76.31	69.36	122.20	-52.84	Peak	100	206	P
5	11490.00	1.18	35.11	36.29	54.00	-17.71	Average	175	216	P
6	11490.00	1.18	50.21	51.39	74.00	-22.61	Peak	175	216	P
7	17235.00	11.64	41.33	52.97	68.20	-15.23	Peak	100	316	P

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

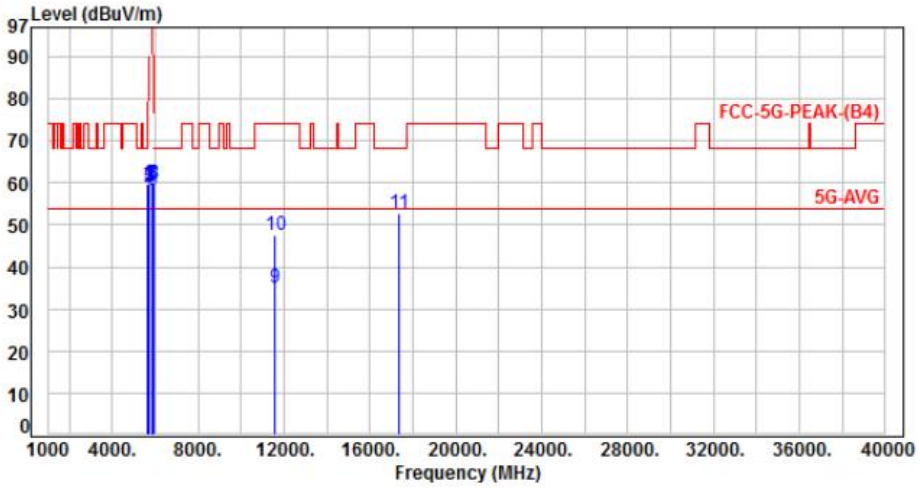
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH157, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	68.20	61.23	68.20	-6.97	Peak	180	71	P
2	5700.00	-6.95	69.60	62.65	105.20	-42.55	Peak	180	71	P
3	5720.00	-6.95	70.60	63.65	110.80	-47.15	Peak	180	71	P
4	5725.00	-6.95	69.61	62.66	122.20	-59.54	Peak	180	71	P
5	5850.00	-6.90	68.70	61.80	122.20	-60.40	Peak	180	71	P
6	5855.00	-6.90	66.40	59.50	110.80	-51.30	Peak	180	71	P
7	5875.00	-6.89	66.68	59.79	105.20	-45.41	Peak	180	71	P
8	5925.00	-6.88	67.24	60.36	68.20	-7.84	Peak	180	71	P
9	11570.00	1.28	38.80	40.08	54.00	-13.92	Average	148	35	P
10	11570.00	1.28	51.90	53.18	74.00	-20.82	Peak	148	35	P
11	17355.00	12.41	41.53	53.94	68.20	-14.26	Peak	100	74	P

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

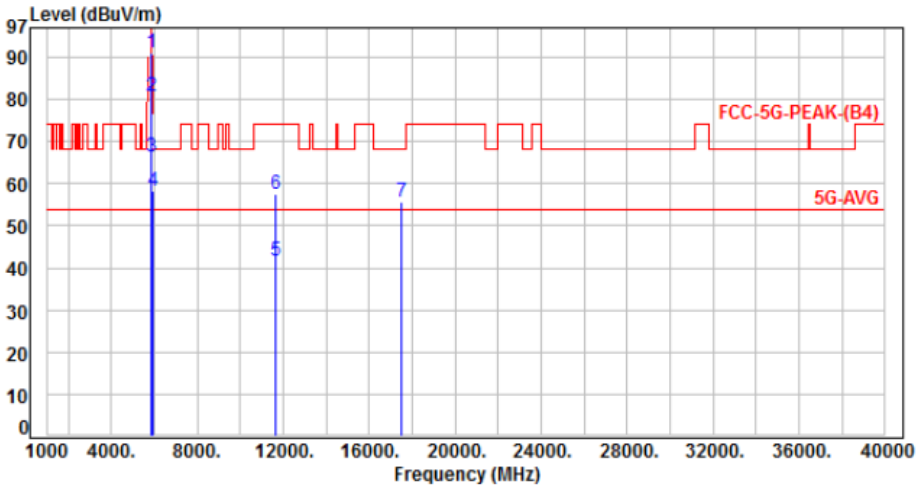
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH157, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	66.54	59.57	68.20	-8.63	Peak	100	205	P
2	5700.00	-6.95	66.13	59.18	105.20	-46.02	Peak	100	205	P
3	5720.00	-6.95	66.36	59.41	110.80	-51.39	Peak	100	205	P
4	5725.00	-6.95	66.87	59.92	122.20	-62.28	Peak	100	205	P
5	5850.00	-6.90	65.15	58.25	122.20	-63.95	Peak	100	205	P
6	5855.00	-6.90	66.10	59.20	110.80	-51.60	Peak	100	205	P
7	5875.00	-6.89	66.63	59.74	105.20	-45.46	Peak	100	205	P
8	5925.00	-6.88	66.58	59.70	68.20	-8.50	Peak	100	205	P
9	11570.00	1.28	33.65	34.93	54.00	-19.07	Average	100	227	P
10	11570.00	1.28	46.21	47.49	74.00	-26.51	Peak	100	227	P
11	17355.00	12.41	40.20	52.61	68.20	-15.59	Peak	100	326	P

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

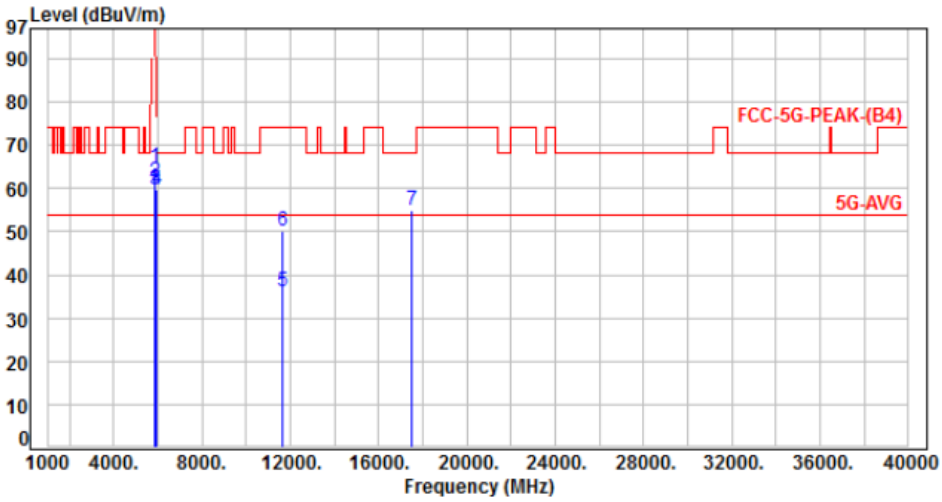
Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH165, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-6.90	97.90	91.00	122.20	-31.20	Peak	100	240	P
2	5855.00	-6.90	87.50	80.60	110.80	-30.20	Peak	100	240	P
3	5875.00	-6.89	73.30	66.41	105.20	-38.79	Peak	100	240	P
4	5925.00	-6.88	65.30	58.42	68.20	-9.78	Peak	100	240	P
5	11650.00	1.37	40.33	41.70	54.00	-12.30	Average	100	171	P
6	11650.00	1.37	56.25	57.62	74.00	-16.38	Peak	100	171	P
7	17475.00	13.18	42.35	55.53	68.20	-12.67	Peak	100	85	P

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

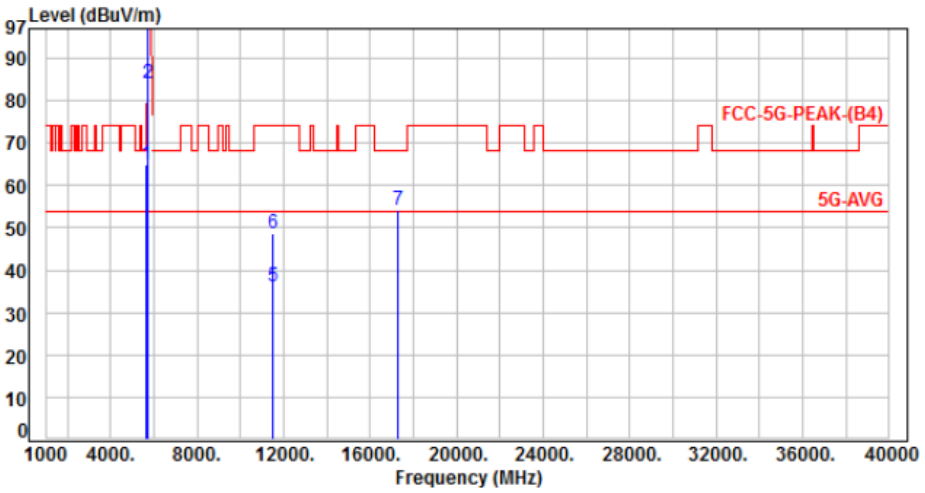
Power	:	From PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH165, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-6.90	71.80	64.90	122.20	-57.30	Peak	100	201	P
2	5855.00	-6.90	68.60	61.70	110.80	-49.10	Peak	100	201	P
3	5875.00	-6.89	66.60	59.71	105.20	-45.49	Peak	100	201	P
4	5925.00	-6.88	66.50	59.62	68.20	-8.58	Peak	100	201	P
5	11650.00	1.37	34.60	35.97	54.00	-18.03	Average	100	220	P
6	11650.00	1.37	48.90	50.27	74.00	-23.73	Peak	100	220	P
7	17475.00	13.18	41.65	54.83	68.20	-13.37	Peak	100	311	P

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

Power	:	From PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH151, Band 4	Temperature	:	22 °C
Test Date	:	Nov. 12, 2018	Humidity	:	63 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-6.97	72.00	65.03	68.20	-3.17	Peak	100	245	P
2	5700.00	-6.95	91.20	84.25	105.20	-20.95	Peak	100	245	P
3	5720.00	-6.95	106.10	99.15	110.80	-11.65	Peak	100	245	P
4	5725.00	-6.95	107.81	100.86	122.20	-21.34	Peak	100	245	P
5	11510.00	1.22	34.79	36.01	54.00	-17.99	Average	100	173	P
6	11510.00	1.22	47.54	48.76	74.00	-25.24	Peak	100	173	P
7	17265.00	11.84	42.33	54.17	68.20	-14.03	Peak	100	35	P

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