FCC RADIO TEST REPORT

Applicant	:	D-Link Corporation
Address	:	No. 289, Sinhu 3rd., Neihu District, Taipei City 114, Taiwan, R.O.C.
Tel	:	886-2-66000123
Fax	:	886-2-55509988
Equipment	:	Unified AC Concurrent Dual-band PoE Access Point
Model No.	:	DWL-6610AP
Trade Name	:	D-Link
FCC ID.	:	KA2WL6610APB1

I HEREBY CERTIFY THAT :

The sample was received on Oct. 13, 2016 and the testing was carried out on Mar. 08, 2017 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 / Assistant Manager

Tested by:

Spree Yei / Engineer

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

CONTENTS

History of this test report

Report No.	Issue Date	Description
TEFE1610038	Mar. 13, 2017	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

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment

Equipment	Unified AC Concurrent Dual-band PoE Access Point
Model No.	DWL-6610AP
Brand Name	D-Link
Product Description	Please refer to User's Manual.
AC ADAPTER	Adapter Brand: D-Link Model No.: AMS115-1201500FV; AMS115-1201500FU; AMS115-1201500FB; AMS115-1201500FS I/P: AC 100-240V~, 50/60Hz, 0.8A ; O/P: DC 12V, 1.5A
Connecting I/O Port(s)	Please refer to User's Manual.
Frequency Range	802.11b/g/n: 2412-2472 MHz 802.11a/an/ac: 5150MHz-5250MHz, 5725MHz -5850MHz
Modulation Type	OFDM, DSSS, FHSS
Data Rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type/ gain	PIFA antenna 2412-2462MHz: ANT 1: 3.9dBi; ANT 2: 4dBi 5150MHz-5250MHz: ANT 3: 3.6dBi; ANT 4: 3.1dBi 5725MHz -5850MHz: ANT 3: 3.3dBi; ANT 4: 4dBi

Note:
1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. 802.11ac VHT20, VHT40 and VHT80 support beamforming.

2.2. Description of Main Source and Second Source

Component Position	Main Source	Second Source
C857,C859	V	x
T13	V	x
R922	V	x
D36,D37	V	x
R915	V	x
Q8	V	x
R906,R908	0Ω	100Ω
C844	39pF	330pF
R918	0KΩ	10KΩ
Q5	N-Channel Shielded Gate Power Trench	DIODE

2.3. Carrier Frequency of Channels

Band 1: 5150MHz-5250MHz

802.11a, 802.11an HT 20, 802.11ac VHT20

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

802.11an HT 40, 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, 802.11an HT20, 802.11ac VHT20

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

802.11an HT 40, 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.

2.4. 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, ”MTool_REL_2_0_3_2” under WIN 7 was executed to transmit and receive data via WLAN.
d. The following test modes were performed for the test:
   Test Mode 1: 802.11a (6Mbps)
   Test Mode 2: 802.11an HT20 (6.5Mbps)
   Test Mode 3: 802.11an HT40 (13.5Mbps)
   Test Mode 4: 802.11ac VHT20 (6.5Mbps)
   Test Mode 5: 802.11ac VHT40 (13.5Mbps)
   Test Mode 6: 802.11ac VHT80 (29.3Mbps)
   For conduction test, caused “Test Mode 1” generated the worst case, it was reported as the final data.
   For radiated test (below 1GHz), caused “Test Mode 1” generated the worst case, it was reported as the final data.
   For radiated test (above 1GHz), caused “Test Mode 1,4,5,6” generated the worst case, they were reported as the final data.

2.5. Description of Test System

Device	Manufacturer	Model No.	Description
Remote workstation			
Notebook	DELL	Latitude E5450	Power Cable, Unshielding, 1.8m
Notebook	ASUS	A8J	Power Cable, Unshielding, 1.8m

2.6. 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, 390316, 228391, 641184
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4218, R-4399 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 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

2.7. 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	101423	2016/04/08	2017/04/07
LISN	Schwarzbeck	NSLK 8127	8127-740	2016/08/30	2017/08/29
Pulse Limiter	R&S	ESH3-Z2	101933	2016/08/29	2017/08/28
Bilog Antenna	Schwarzbeck	VULB9168	275	2016/08/26	2017/08/25
Active Loop Antenna	EMCO	6507	40855	2016/05/11	2017/05/10
Horn Antenna	EMCO	3116	31589	2016/03/22	2017/03/21
Horn Antenna	EMCO	3116	31974	2016/09/01	2017/08/31
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200207	2016/03/16	2017/03/15
Preamplifier	EM	EM330	060659	2016/03/23	2017/03/22
Preamplifier	MITEQ	AMF-7D-001010 0-30-10P	1860212	2016/03/16	2017/03/15
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2016/11/04	2017/11/03
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2016/03/18	2017/03/17
MXG-B RF Vector Signal Generator	KEYSIGHT	N5182B	MY53051383	2016/03/18	2017/03/17
Spectrum Analyzer	R&S	FSP40	100047	2016/03/05	2017/03/04
Bluetooth Tester	R&S	CBT	101133	2016/03/18	2017/03/17
Attenuator	KEYSIGHT	8491B	MY39250703	2017/03/06	2018/03/05
Rotary Attenuator	Agilent	8495B	MY42146680	2017/03/07	2018/03/06
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
USB Average Power Sensor	Theda	4PS6A	TW5451013~16	2016/11/08	2017/11/07
Software	AUDIX	E3	V8.2014-8-6	N/A	N/A
Software	Keysight	Console	v0.01	N/A	N/A
Software	Keysight	ETSI Standard Test System	v3.160422	N/A	N/A
Software	Keysight	N7607B Signal Studio	v2.0.0.1	N/A	N/A
Software	Keysight	Inservice Monitor Utility	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	PIFA Antenna
Antenna Gain	2412-2462MHz: ANT 1: 3.9dBi; ANT 2: 4dBi 5150MHz-5250MHz: ANT 3: 3.6dBi; ANT 4: 3.1dBi 5725MHz -5850MHz: ANT 3: 3.3dBi; ANT 4: 4dBi

For Non-Beamforming

2412-2462MHz

For Power directional gain= G_{ant}= 4 dBi

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

= 6.96 (dBi)

5150MHz-5250MHz

For Power directional gain= G_{ant}= 3.6 dBi

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

= 6.36 (dBi)

5725MHz -5850MHz

For Power directional gain= G_{ant}= 4 dBi

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

= 6.67 (dBi)

For Beamforming

5150MHz-5250MHz

For Power directional gain= G_{ant}= 6.36 dBi

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

= 6.36 (dBi)

5725MHz -5850MHz

For Power directional gain= G_{ant}= 6.67 dBi

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

= 6.67 (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.

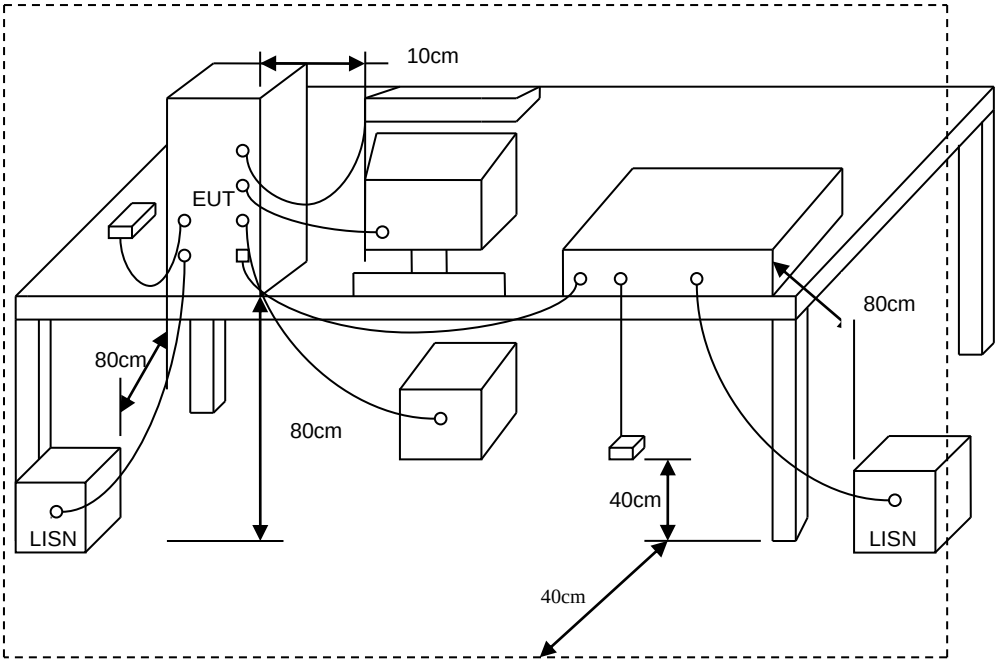
Frequency (MHz)	Quasi Peak (dBμV)	Average (dBμV)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*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.

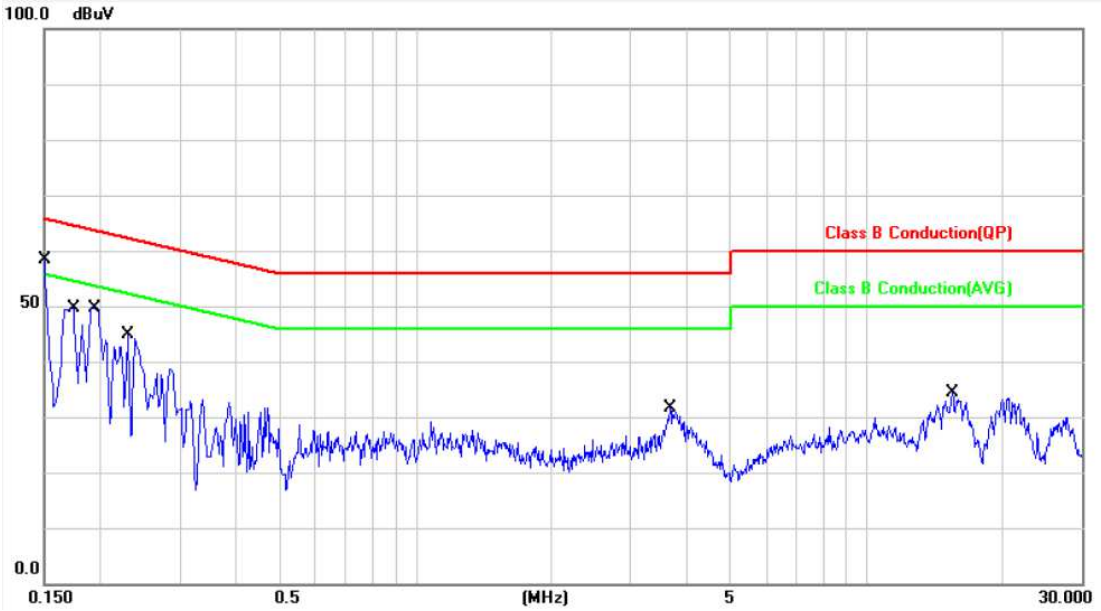
5.3. Typical Test Setup



5.4. Test Result and Data

5.4.1. Test Result and Data of Main Source

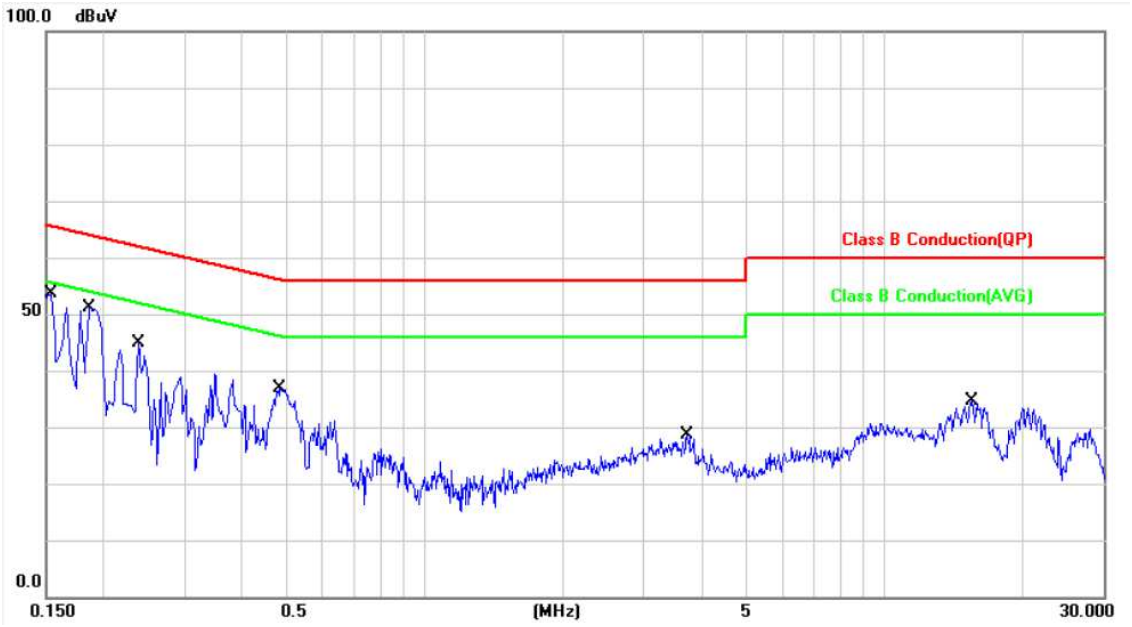
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1, Band 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	9.98	44.96	54.94	65.99	-11.05	QP	P
2	0.1500	9.98	28.69	38.67	55.99	-17.32	AVG	P
3	0.1740	9.98	34.72	44.70	64.76	-20.06	QP	P
4	0.1740	9.98	17.08	27.06	54.76	-27.70	AVG	P
5	0.1940	9.97	39.22	49.19	63.86	-14.67	QP	P
6	0.1940	9.97	26.69	36.66	53.86	-17.20	AVG	P
7	0.2300	9.97	30.72	40.69	62.45	-21.76	QP	P
8	0.2300	9.97	12.70	22.67	52.45	-29.78	AVG	P
9	3.6700	10.14	16.06	26.20	56.00	-29.80	QP	P
10	3.6700	10.14	7.27	17.41	46.00	-28.59	AVG	P
11	15.4820	10.39	20.83	31.22	60.00	-28.78	QP	P
12	15.4820	10.39	18.01	28.40	50.00	-21.60	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

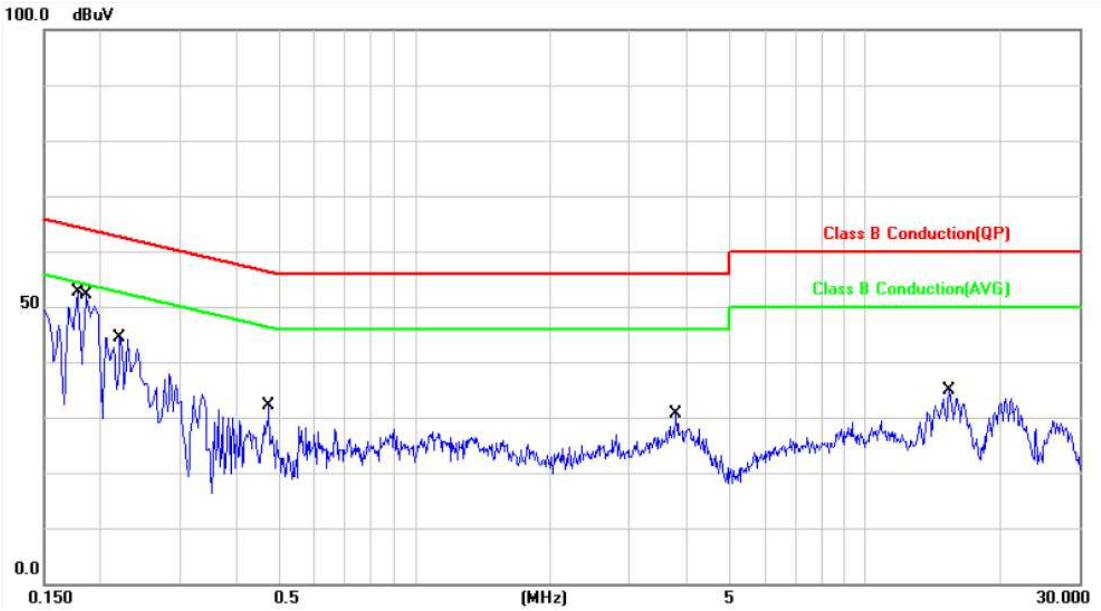
Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1, Band 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	37.45	47.43	65.78	-18.35	QP	P
2	0.1539	9.98	18.98	28.96	55.78	-26.82	AVG	P
3	0.1860	9.98	38.76	48.74	64.21	-15.47	QP	P
4	0.1860	9.98	23.85	33.83	54.21	-20.38	AVG	P
5	0.2380	9.97	32.89	42.86	62.16	-19.30	QP	P
6	0.2380	9.97	19.43	29.40	52.16	-22.76	AVG	P
7	0.4863	9.94	25.31	35.25	56.23	-20.98	QP	P
8	0.4863	9.94	18.00	27.94	46.23	-18.29	AVG	P
9	3.7260	10.13	13.69	23.82	56.00	-32.18	QP	P
10	3.7260	10.13	6.69	16.82	46.00	-29.18	AVG	P
11	15.5220	10.47	21.57	32.04	60.00	-27.96	QP	P
12	15.5220	10.47	18.26	28.73	50.00	-21.27	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

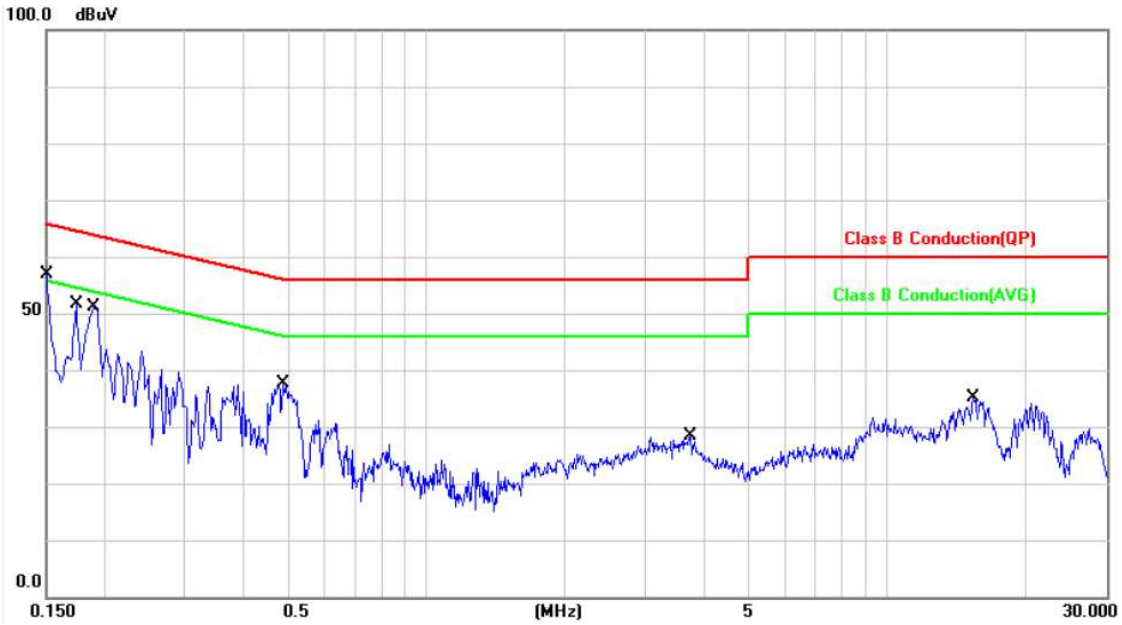
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1, Band 4	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1780	9.97	37.67	47.64	64.57	-16.93	QP	P
2	0.1780	9.97	16.99	26.96	54.57	-27.61	AVG	P
3	0.1860	9.97	38.84	48.81	64.21	-15.40	QP	P
4	0.1860	9.97	24.15	34.12	54.21	-20.09	AVG	P
5	0.2220	9.97	30.01	39.98	62.74	-22.76	QP	P
6	0.2220	9.97	10.69	20.66	52.74	-32.08	AVG	P
7	0.4740	9.97	18.88	28.85	56.44	-27.59	QP	P
8	0.4740	9.97	8.18	18.15	46.44	-28.29	AVG	P
9	3.8020	10.14	14.26	24.40	56.00	-31.60	QP	P
10	3.8020	10.14	6.97	17.11	46.00	-28.89	AVG	P
11	15.4020	10.39	20.23	30.62	60.00	-29.38	QP	P
12	15.4020	10.39	16.90	27.29	50.00	-22.71	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1, Band 4	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %

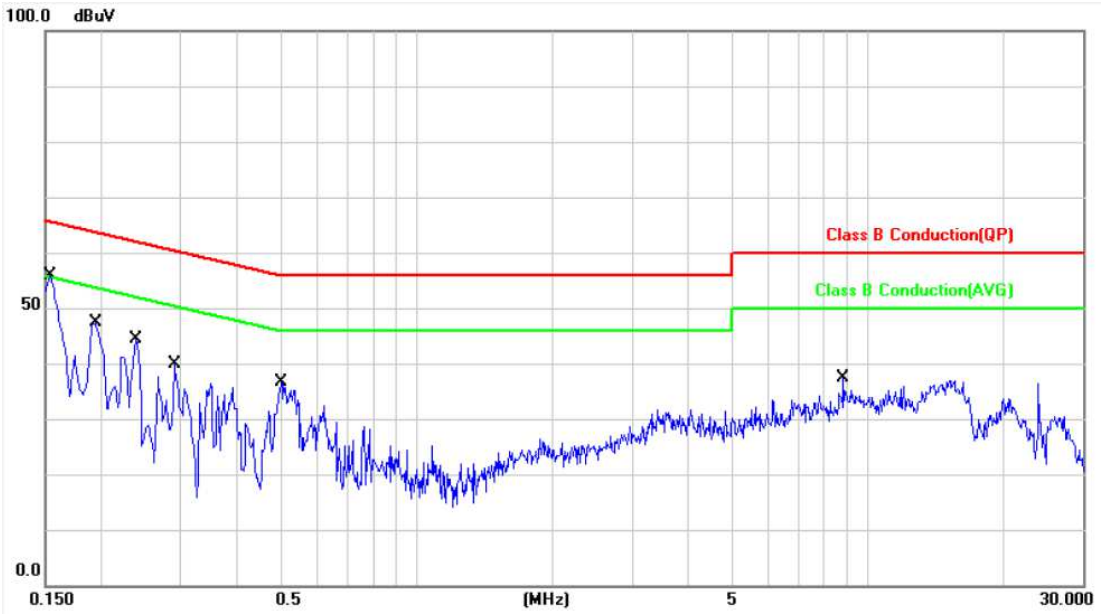


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	9.98	42.93	52.91	65.99	-13.08	QP	P
2	0.1500	9.98	25.57	35.55	55.99	-20.44	AVG	P
3	0.1740	9.98	35.49	45.47	64.76	-19.29	QP	P
4	0.1740	9.98	15.89	25.87	54.76	-28.89	AVG	P
5	0.1900	9.98	39.61	49.59	64.03	-14.44	QP	P
6	0.1900	9.98	28.21	38.19	54.03	-15.84	AVG	P
7	0.4900	9.94	25.27	35.21	56.17	-20.96	QP	P
8	0.4900	9.94	15.71	25.65	46.17	-20.52	AVG	P
9	3.7460	10.13	11.56	21.69	56.00	-34.31	QP	P
10	3.7460	10.13	5.84	15.97	46.00	-30.03	AVG	P
11	15.4380	10.47	21.41	31.88	60.00	-28.12	QP	P
12	15.4380	10.47	18.17	28.64	50.00	-21.36	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

5.4.2. Test Result and Data of Second Source

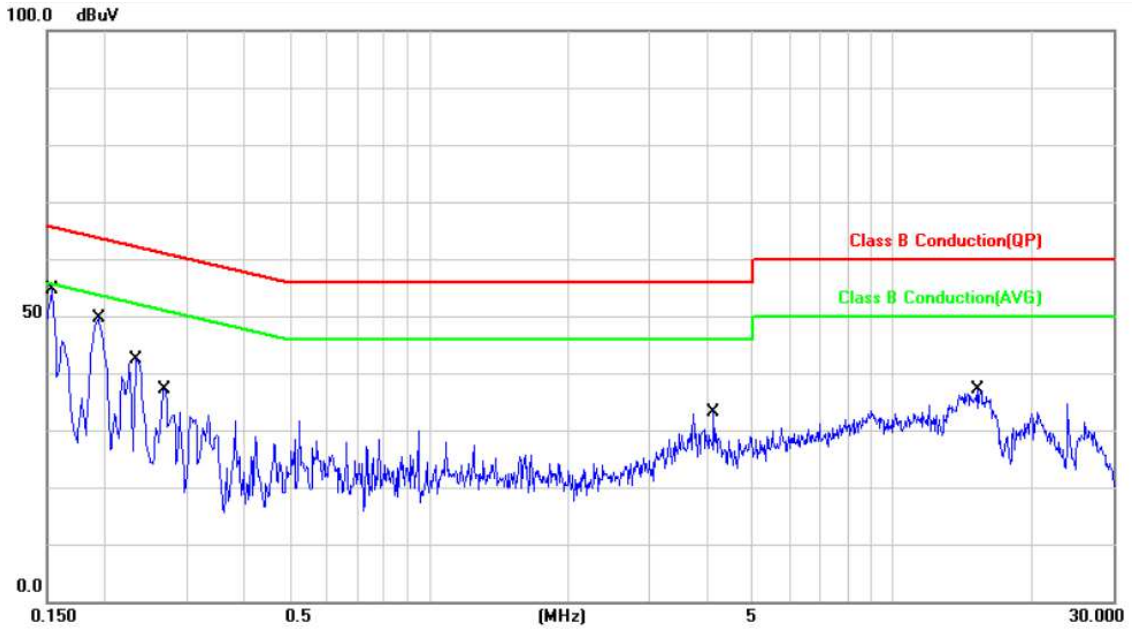
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1, Band 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	44.53	54.51	65.78	-11.27	QP	P
2	0.1539	9.98	32.05	42.03	55.78	-13.75	AVG	P
3	0.1940	9.97	37.76	47.73	63.86	-16.13	QP	P
4	0.1940	9.97	27.12	37.09	53.86	-16.77	AVG	P
5	0.2380	9.97	29.50	39.47	62.16	-22.69	QP	P
6	0.2380	9.97	14.48	24.45	52.16	-27.71	AVG	P
7	0.2900	9.97	19.67	29.64	60.52	-30.88	QP	P
8	0.2900	9.97	6.70	16.67	50.52	-33.85	AVG	P
9	0.5020	9.98	23.76	33.74	56.00	-22.26	QP	P
10	0.5020	9.98	19.15	29.13	46.00	-16.87	AVG	P
11	8.8580	10.24	17.19	27.43	60.00	-32.57	QP	P
12	8.8580	10.24	11.28	21.52	50.00	-28.48	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

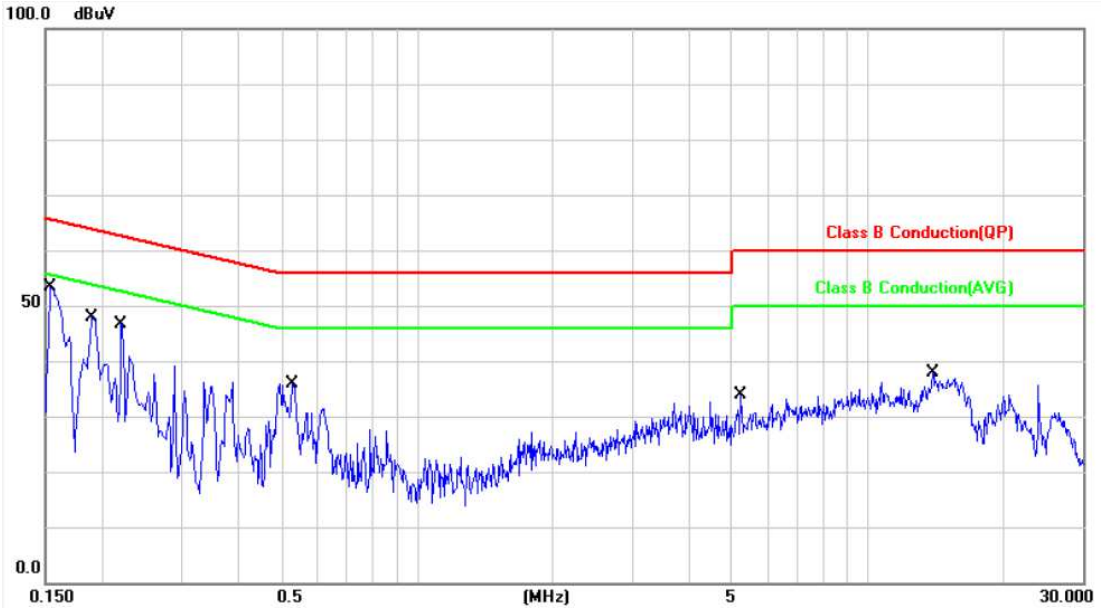
Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1, Band 1	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	44.05	54.03	65.78	-11.75	QP	P
2	0.1539	9.98	30.12	40.10	55.78	-15.68	AVG	P
3	0.1940	9.98	36.89	46.87	63.86	-16.99	QP	P
4	0.1940	9.98	24.07	34.05	53.86	-19.81	AVG	P
5	0.2340	9.97	30.87	40.84	62.30	-21.46	QP	P
6	0.2340	9.97	17.34	27.31	52.30	-24.99	AVG	P
7	0.2700	9.96	27.38	37.34	61.12	-23.78	QP	P
8	0.2700	9.96	13.68	23.64	51.12	-27.48	AVG	P
9	4.1260	10.15	14.55	24.70	56.00	-31.30	QP	P
10	4.1260	10.15	8.01	18.16	46.00	-27.84	AVG	P
11	15.2820	10.46	23.73	34.19	60.00	-25.81	QP	P
12	15.2820	10.46	20.58	31.04	50.00	-18.96	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

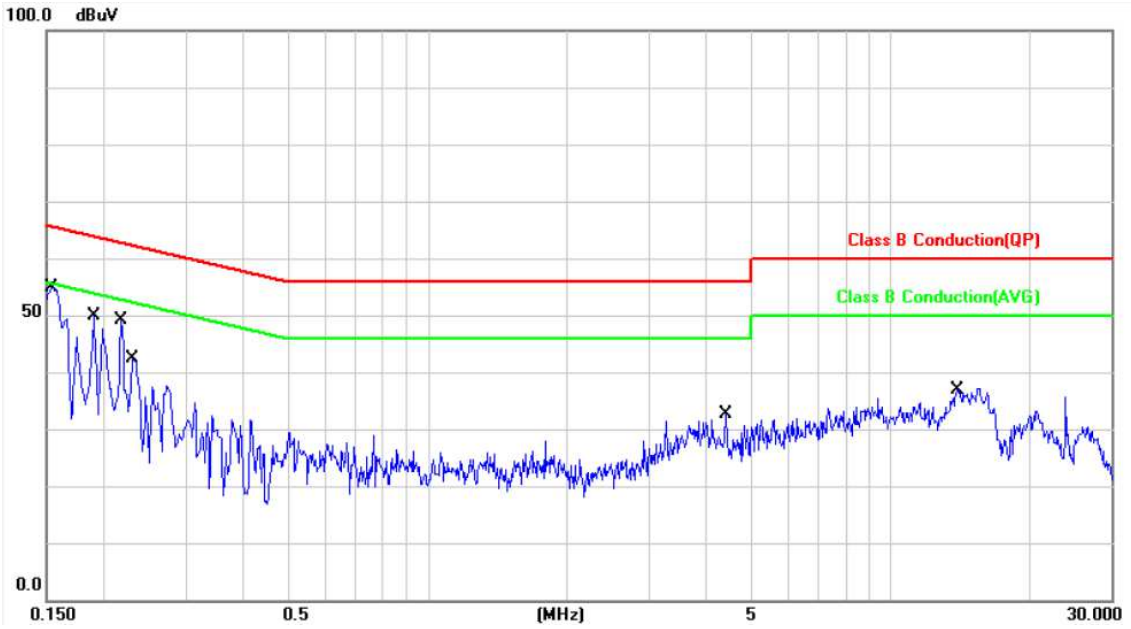
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1, Band 4	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	44.35	54.33	65.78	-11.45	QP	P
2	0.1539	9.98	31.77	41.75	55.78	-14.03	AVG	P
3	0.1900	9.97	38.50	48.47	64.03	-15.56	QP	P
4	0.1900	9.97	26.06	36.03	54.03	-18.00	AVG	P
5	0.2220	9.97	27.68	37.65	62.74	-25.09	QP	P
6	0.2220	9.97	12.04	22.01	52.74	-30.73	AVG	P
7	0.5299	9.98	23.35	33.33	56.00	-22.67	QP	P
8	0.5299	9.98	16.23	26.21	46.00	-19.79	AVG	P
9	5.2220	10.18	14.19	24.37	60.00	-35.63	QP	P
10	5.2220	10.18	7.43	17.61	50.00	-32.39	AVG	P
11	13.9820	10.36	18.87	29.23	60.00	-30.77	QP	P
12	13.9820	10.36	12.66	23.02	50.00	-26.98	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1, Band 4	Temperature	:	20 °C
Test date	:	Dec. 06, 2016	Humidity	:	56 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	9.98	43.85	53.83	65.78	-11.95	QP	P
2	0.1539	9.98	30.14	40.12	55.78	-15.66	AVG	P
3	0.1900	9.98	37.74	47.72	64.03	-16.31	QP	P
4	0.1900	9.98	23.08	33.06	54.03	-20.97	AVG	P
5	0.2180	9.98	27.95	37.93	62.89	-24.96	QP	P
6	0.2180	9.98	10.02	20.00	52.89	-32.89	AVG	P
7	0.2300	9.97	31.86	41.83	62.45	-20.62	QP	P
8	0.2300	9.97	17.99	27.96	52.45	-24.49	AVG	P
9	4.4140	10.17	12.49	22.66	56.00	-33.34	QP	P
10	4.4140	10.17	6.67	16.84	46.00	-29.16	AVG	P
11	13.9620	10.43	23.20	33.63	60.00	-26.37	QP	P
12	13.9620	10.43	20.01	30.44	50.00	-19.56	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

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.

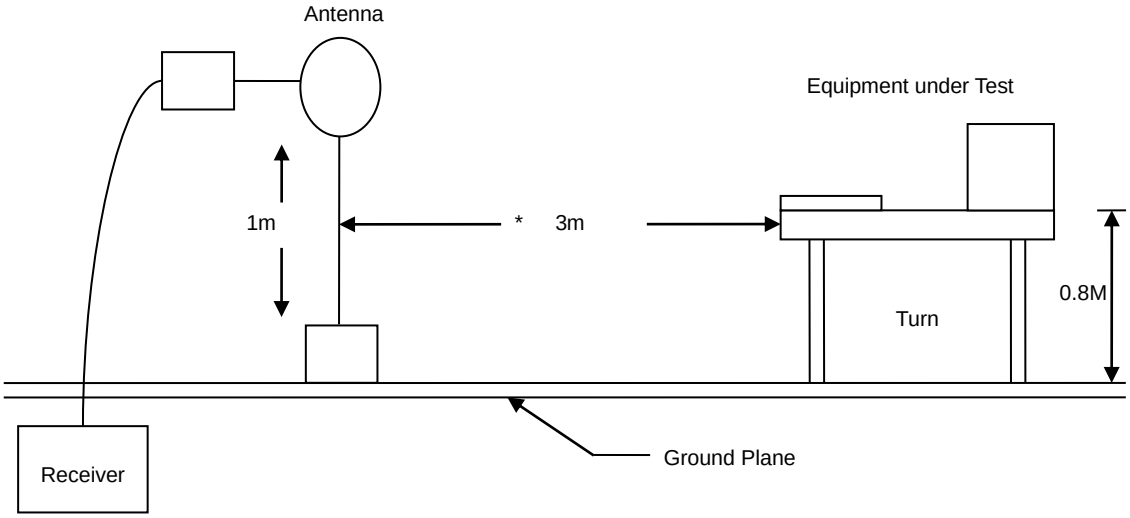
(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

6.2. Test Procedures

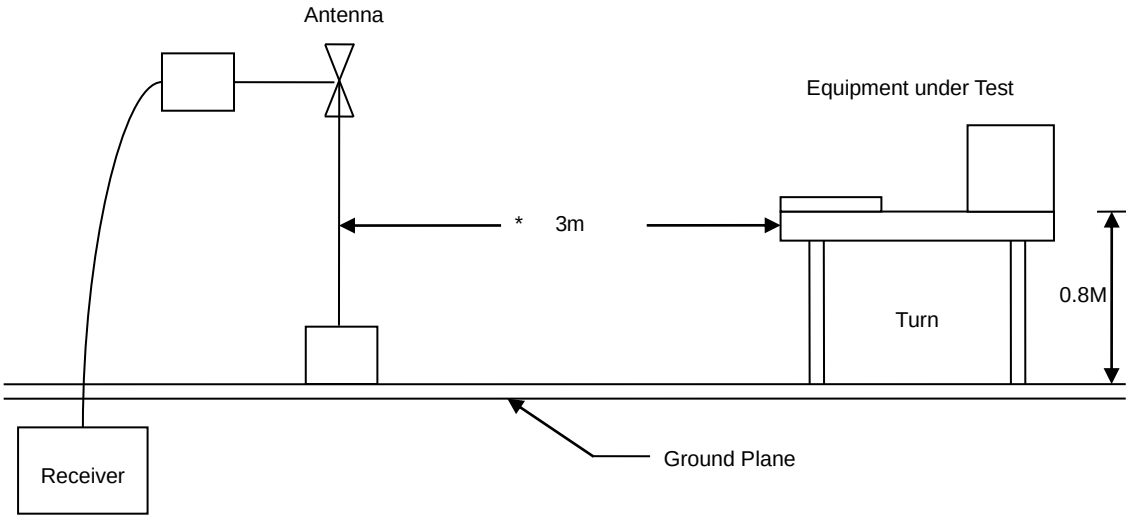
a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna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

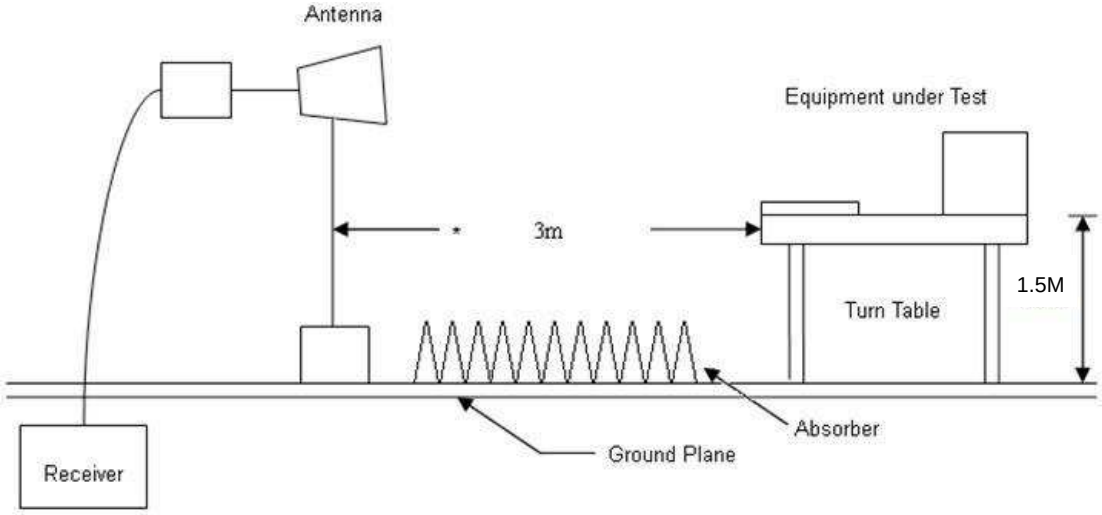
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



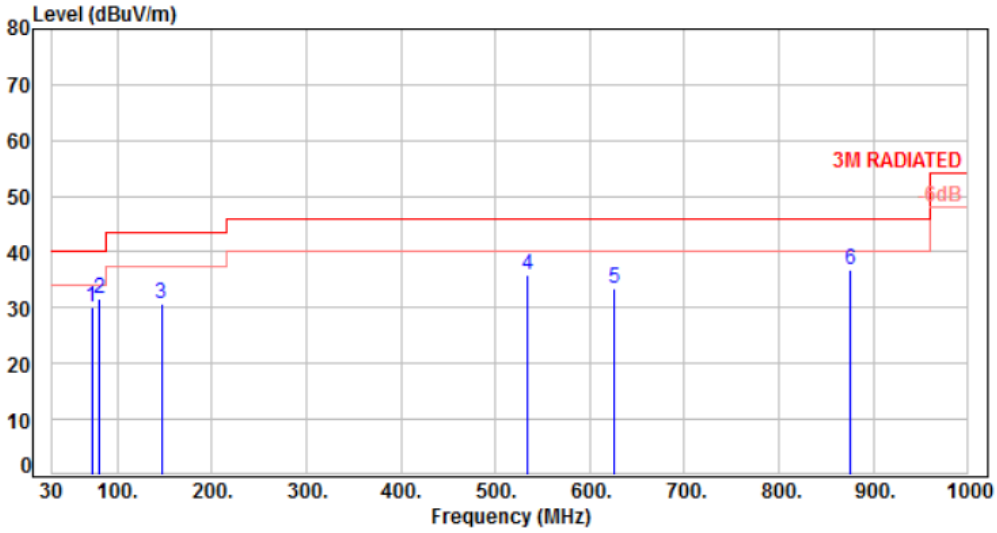
6.4. Test Result and Data (9kHz ~ 30MHz)

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

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

6.5.1. Test Result and Data of Main Source

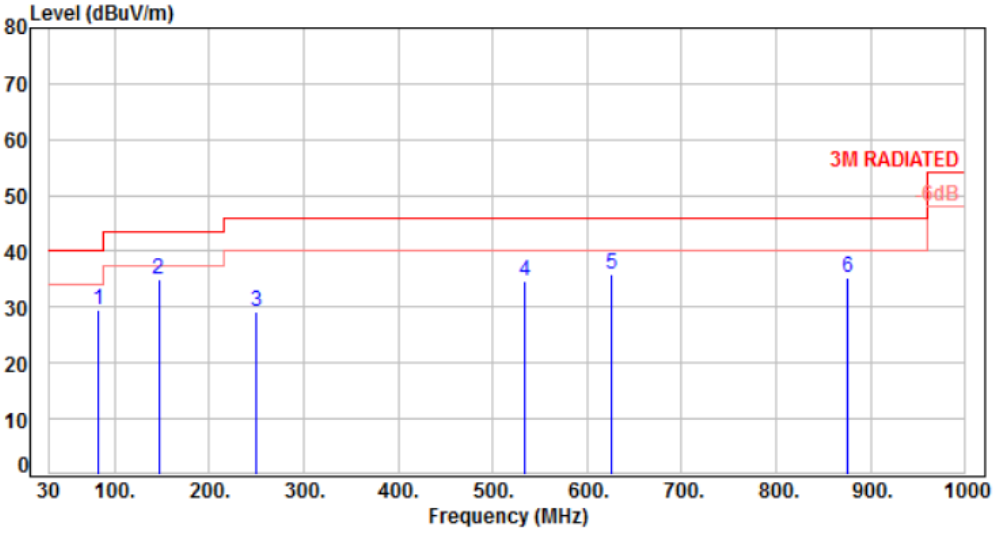
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	72.68	-13.12	43.17	30.05	40.00	-9.95	QP	149	312	P
2	80.44	-14.95	46.58	31.63	40.00	-8.37	Peak	400	0	P
3	146.40	-10.15	40.90	30.75	43.50	-12.75	Peak	400	0	P
4	534.40	-3.57	39.46	35.89	46.00	-10.11	Peak	400	0	P
5	625.58	-1.70	35.06	33.36	46.00	-12.64	Peak	400	0	P
6	875.84	1.87	34.84	36.71	46.00	-9.29	Peak	400	0	P

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

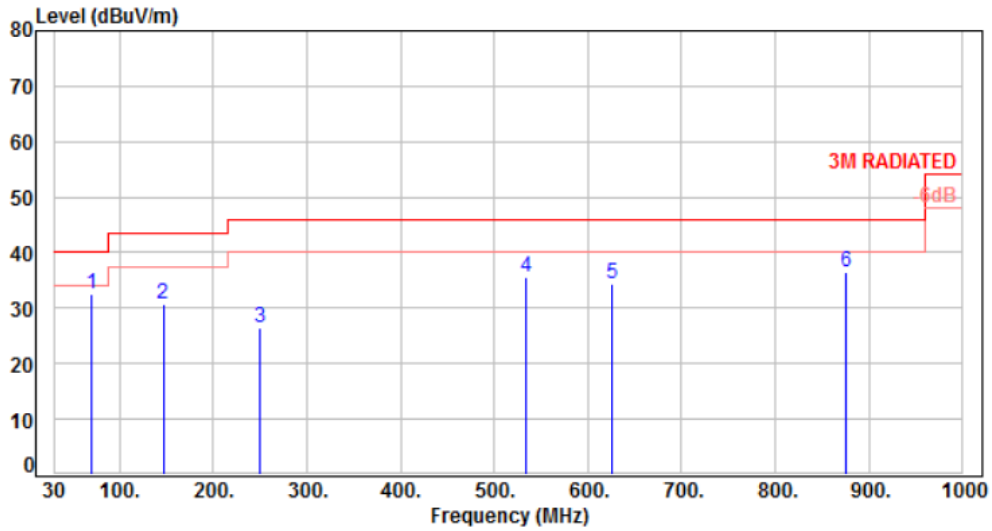
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	82.38	-15.21	44.74	29.53	40.00	-10.47	Peak	400	0	P
2	146.40	-10.15	45.15	35.00	43.50	-8.50	Peak	400	0	P
3	249.22	-11.00	40.20	29.20	46.00	-16.80	Peak	400	0	P
4	534.40	-3.57	38.28	34.71	46.00	-11.29	Peak	400	0	P
5	625.58	-1.70	37.68	35.98	46.00	-10.02	Peak	400	0	P
6	875.84	1.87	33.41	35.28	46.00	-10.72	Peak	400	0	P

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

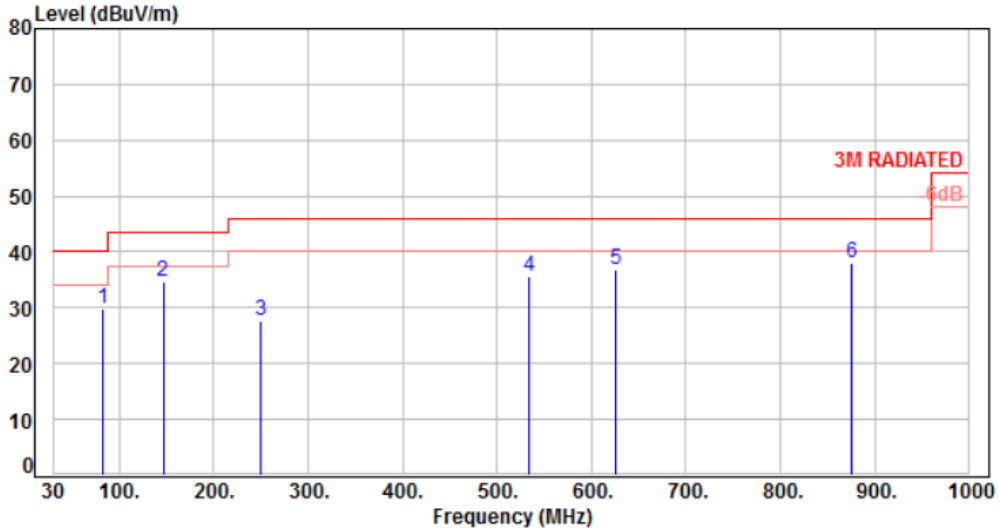
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	70.74	-12.65	45.12	32.47	40.00	-7.53	Peak	400	0	P
2	146.40	-10.15	40.83	30.68	43.50	-12.82	Peak	400	0	P
3	249.22	-11.00	37.55	26.55	46.00	-19.45	Peak	400	0	P
4	534.40	-3.57	39.24	35.67	46.00	-10.33	Peak	400	0	P
5	625.58	-1.70	36.05	34.35	46.00	-11.65	Peak	400	0	P
6	875.84	1.87	34.51	36.38	46.00	-9.62	Peak	400	0	P

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

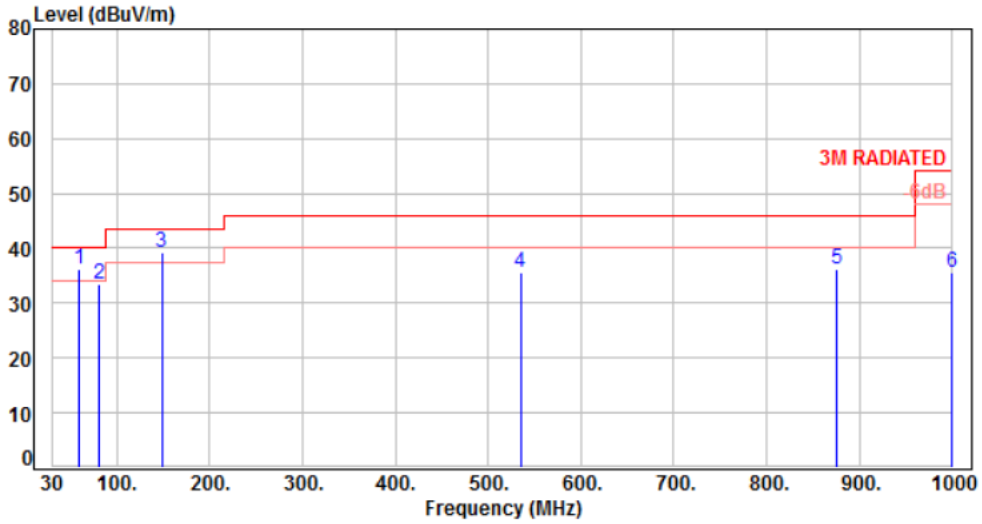
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	82.38	-15.21	45.17	29.96	40.00	-10.04	Peak	400	0	P
2	146.40	-10.15	44.95	34.80	43.50	-8.70	Peak	400	0	P
3	249.22	-11.00	38.57	27.57	46.00	-18.43	Peak	400	0	P
4	534.40	-3.57	39.13	35.56	46.00	-10.44	Peak	400	0	P
5	625.58	-1.70	38.41	36.71	46.00	-9.29	Peak	400	0	P
6	875.84	1.87	36.20	38.07	46.00	-7.93	Peak	400	0	P

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

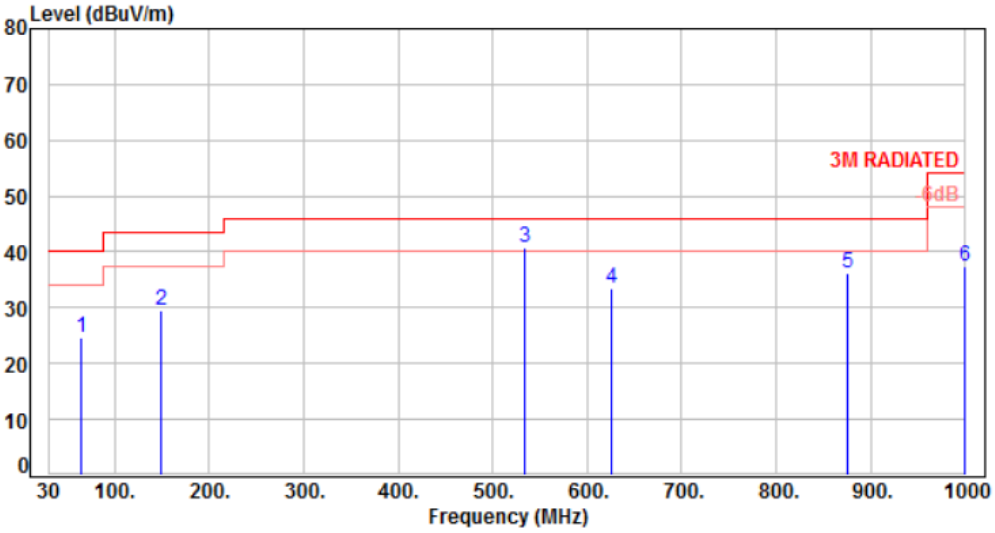
Power	:	PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	59.25	-10.40	46.62	36.22	40.00	-3.78	Peak	200	0	P
2	80.67	-14.98	48.45	33.47	40.00	-6.53	QP	115	210	P
3	148.17	-10.08	49.35	39.27	43.50	-4.23	Peak	200	0	P
4	534.82	-3.56	39.23	35.67	46.00	-10.33	Peak	200	0	P
5	875.73	1.87	34.41	36.28	46.00	-9.72	Peak	200	0	P
6	1000.00	3.44	32.17	35.61	54.00	-18.39	Peak	200	0	P

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

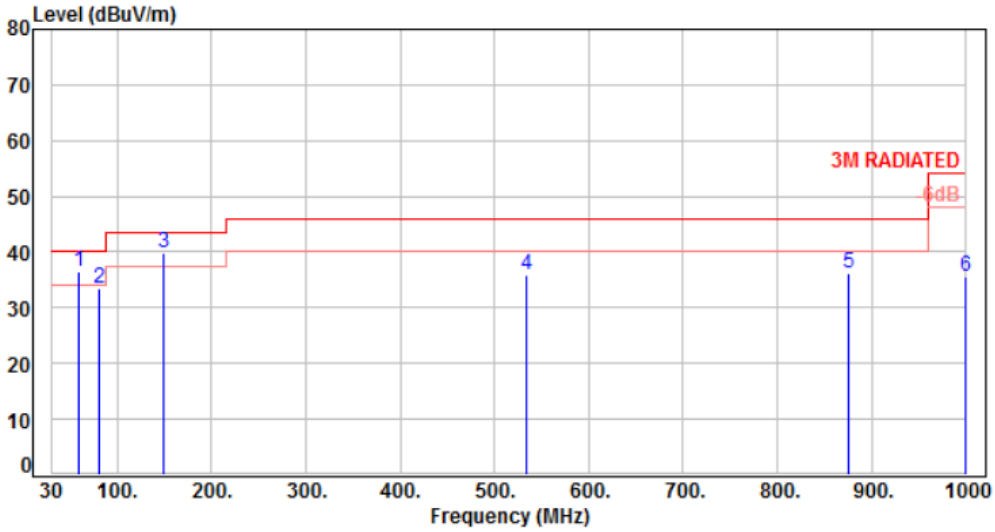
Power	:	PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	64.75	-11.42	36.14	24.72	40.00	-15.28	Peak	200	0	P
2	148.61	-10.08	39.45	29.37	43.50	-14.13	Peak	200	0	P
3	534.31	-3.57	44.25	40.68	46.00	-5.32	Peak	200	0	P
4	625.77	-1.69	35.22	33.53	46.00	-12.47	Peak	200	0	P
5	875.67	1.87	34.35	36.22	46.00	-9.78	Peak	200	0	P
6	1000.00	3.44	34.08	37.52	54.00	-16.48	Peak	200	0	P

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

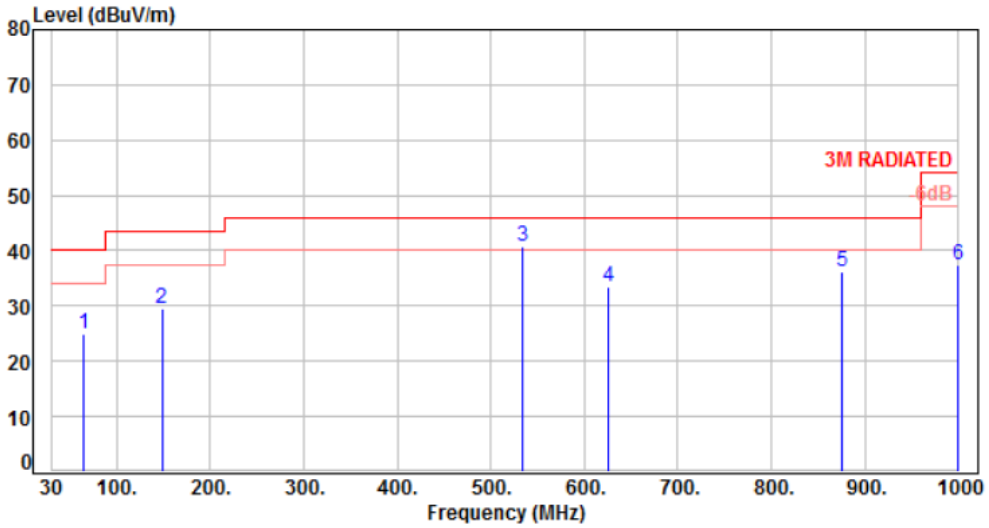
Power	:	PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	59.33	-10.41	46.82	36.41	40.00	-3.59	Peak	200	0	P
2	80.63	-14.97	48.33	33.36	40.00	-6.64	QP	120	310	P
3	148.53	-10.08	49.79	39.71	43.50	-3.79	Peak	200	0	P
4	534.71	-3.56	39.32	35.76	46.00	-10.24	Peak	200	0	P
5	875.99	1.87	34.27	36.14	46.00	-9.86	Peak	200	0	P
6	1000.00	3.44	32.28	35.72	54.00	-18.28	Peak	200	0	P

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

Power	:	PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %

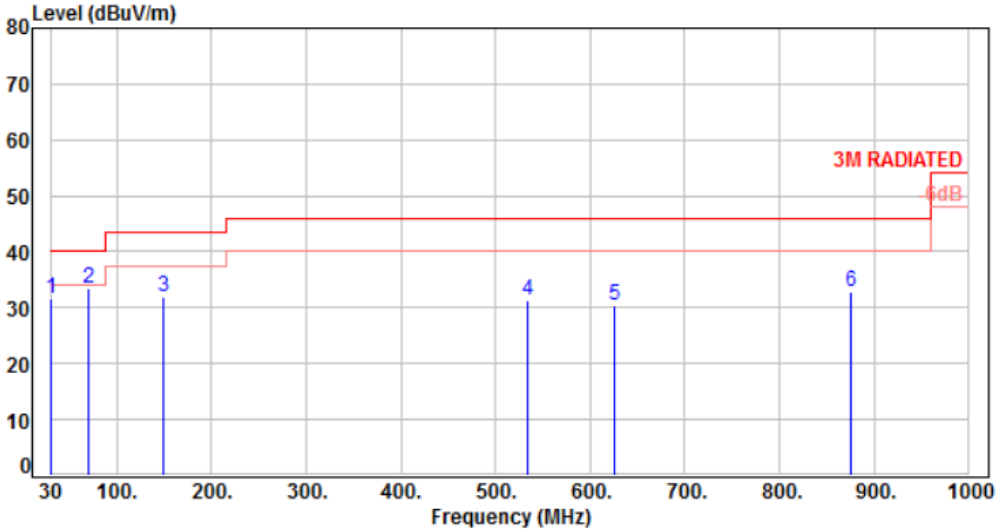


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	64.81	-11.43	36.30	24.87	40.00	-15.13	Peak	200	0	P
2	148.24	-10.08	39.49	29.41	43.50	-14.09	Peak	200	0	P
3	534.31	-3.57	44.30	40.73	46.00	-5.27	Peak	200	0	P
4	625.72	-1.69	35.26	33.57	46.00	-12.43	Peak	200	0	P
5	875.93	1.87	34.35	36.22	46.00	-9.78	Peak	200	0	P
6	1000.00	3.44	34.03	37.47	54.00	-16.53	Peak	200	0	P

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

6.5.2. Test Result and Data of Second Source

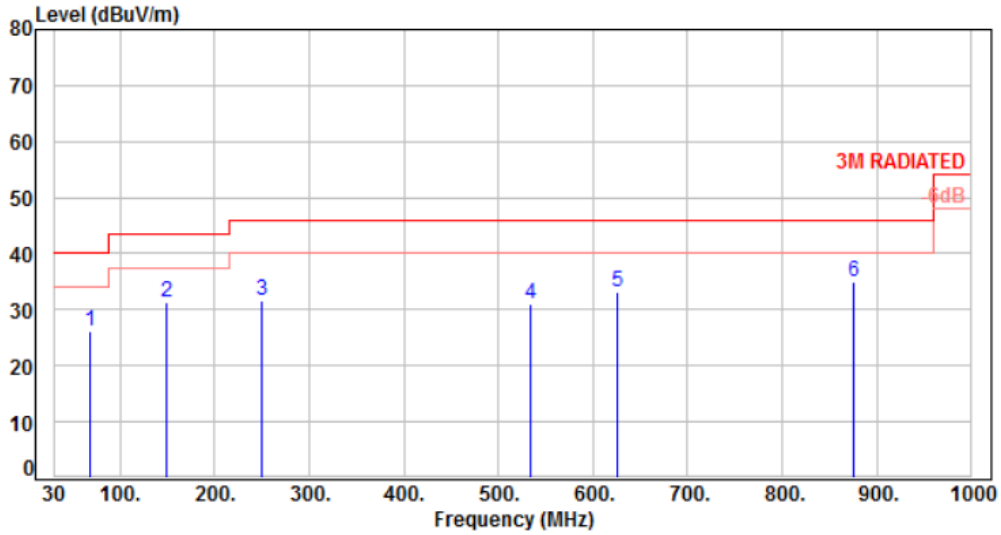
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	30.00	-10.73	42.47	31.74	40.00	-8.26	Peak	100	0	P
2	70.74	-12.65	46.03	33.38	40.00	-6.62	Peak	100	0	P
3	148.34	-10.09	42.06	31.97	43.50	-11.53	Peak	100	0	P
4	534.40	-3.57	34.86	31.29	46.00	-14.71	Peak	100	0	P
5	625.58	-1.70	31.98	30.28	46.00	-15.72	Peak	100	0	P
6	875.84	1.87	31.03	32.90	46.00	-13.10	Peak	100	0	P

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

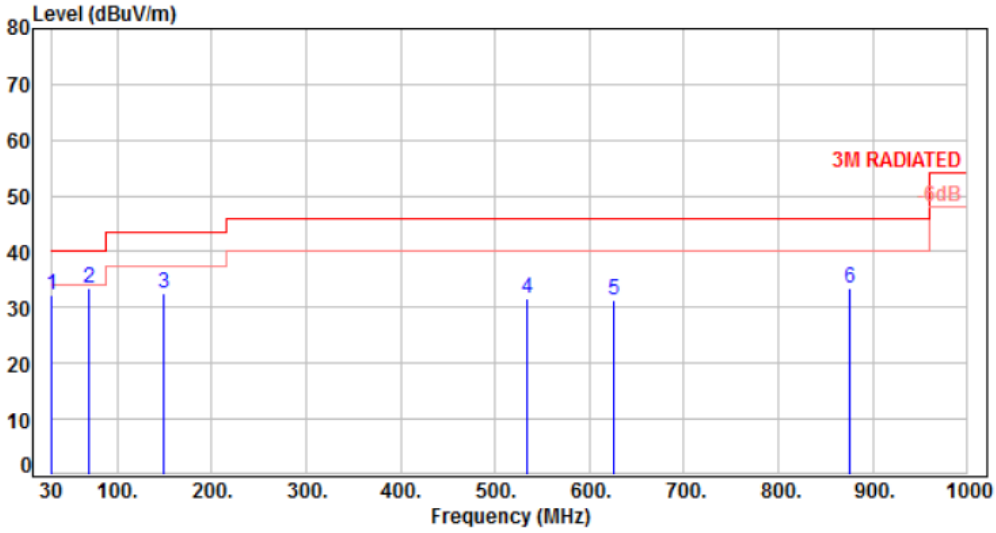
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	68.80	-12.23	38.26	26.03	40.00	-13.97	Peak	100	0	P
2	148.34	-10.09	41.40	31.31	43.50	-12.19	Peak	100	0	P
3	249.22	-11.00	42.65	31.65	46.00	-14.35	Peak	100	0	P
4	534.40	-3.57	34.74	31.17	46.00	-14.83	Peak	100	0	P
5	625.58	-1.70	34.76	33.06	46.00	-12.94	Peak	100	0	P
6	875.84	1.87	33.19	35.06	46.00	-10.94	Peak	100	0	P

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

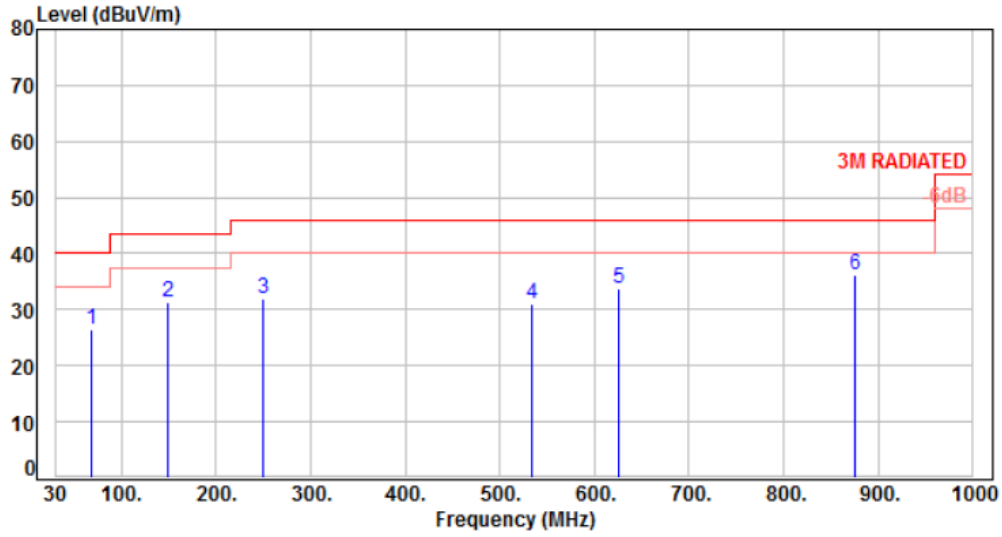
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	30.00	-10.73	43.02	32.29	40.00	-7.71	Peak	100	0	P
2	70.74	-12.65	46.11	33.46	40.00	-6.54	Peak	100	0	P
3	148.34	-10.09	42.78	32.69	43.50	-10.81	Peak	100	0	P
4	534.40	-3.57	35.31	31.74	46.00	-14.26	Peak	100	0	P
5	625.58	-1.70	33.02	31.32	46.00	-14.68	Peak	100	0	P
6	875.84	1.87	31.66	33.53	46.00	-12.47	Peak	100	0	P

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

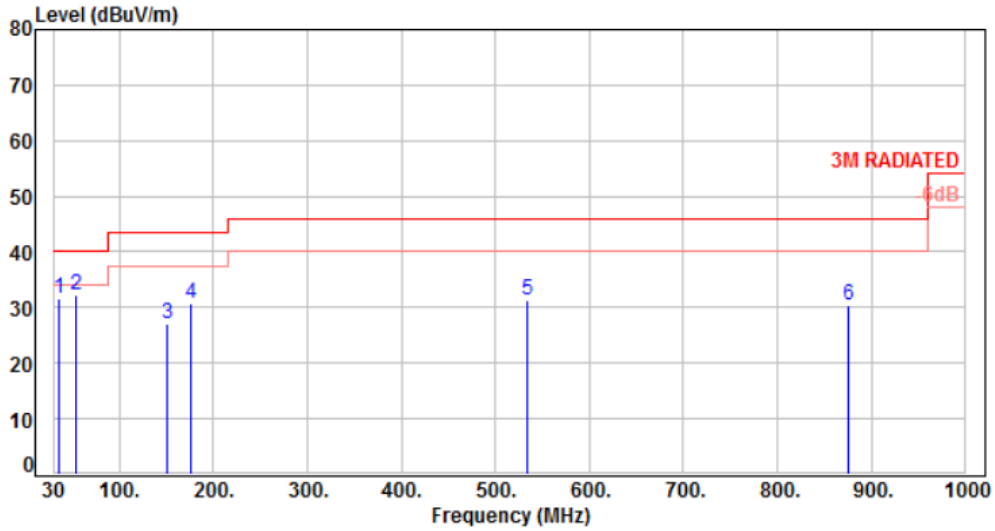
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	68.80	-12.23	38.71	26.48	40.00	-13.52	Peak	100	0	P
2	148.34	-10.09	41.56	31.47	43.50	-12.03	Peak	100	0	P
3	249.22	-11.00	42.88	31.88	46.00	-14.12	Peak	100	0	P
4	534.40	-3.57	34.61	31.04	46.00	-14.96	Peak	100	0	P
5	625.58	-1.70	35.44	33.74	46.00	-12.26	Peak	100	0	P
6	875.84	1.87	34.38	36.25	46.00	-9.75	Peak	100	0	P

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

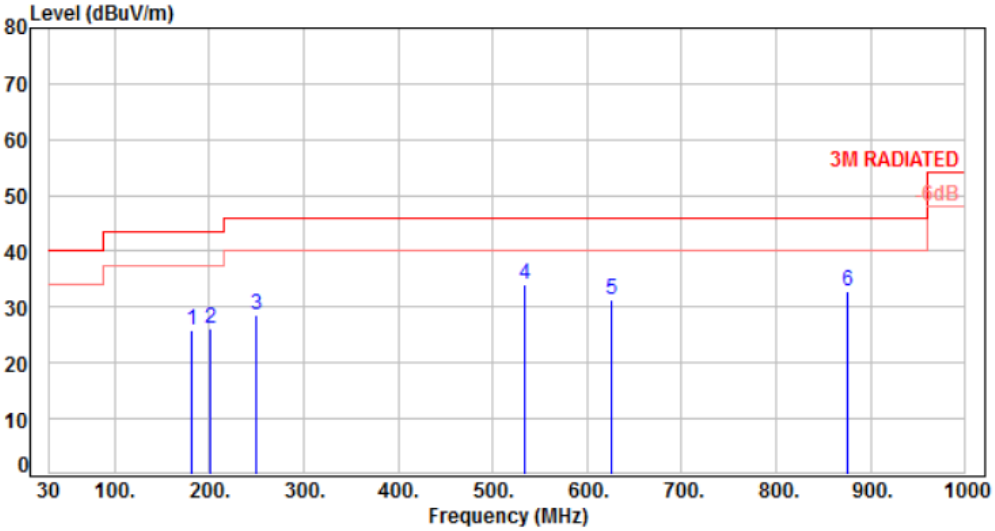
Power	:	PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	35.82	-10.47	42.21	31.74	40.00	-8.26	QP	100	173	P
2	53.28	-9.96	42.21	32.25	40.00	-7.75	Peak	100	0	P
3	150.28	-10.03	37.10	27.07	43.50	-16.43	Peak	100	0	P
4	175.50	-10.86	41.60	30.74	43.50	-12.76	Peak	100	0	P
5	534.40	-3.57	34.79	31.22	46.00	-14.78	Peak	100	0	P
6	875.84	1.87	28.55	30.42	46.00	-15.58	Peak	100	0	P

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

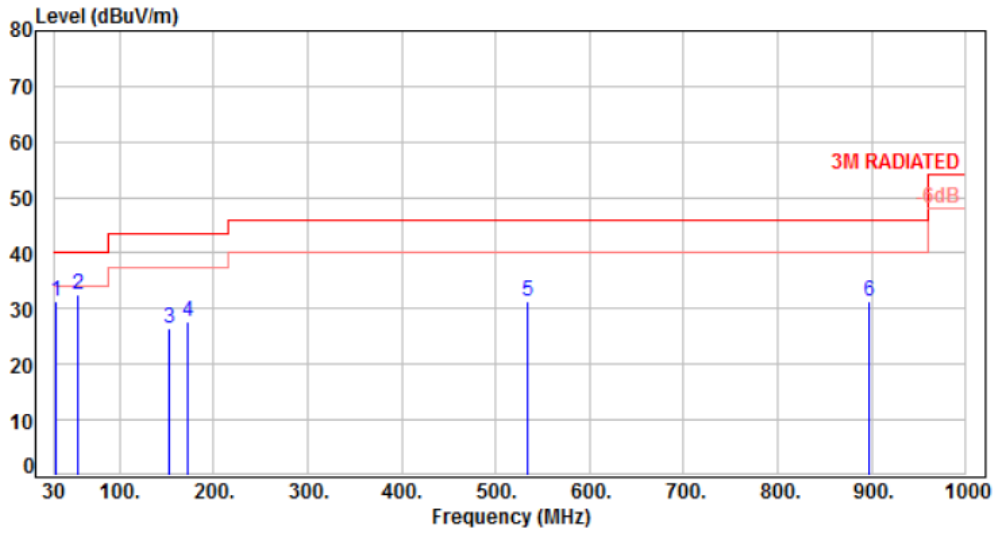
Power	:	PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	181.32	-11.48	37.40	25.92	43.50	-17.58	Peak	100	0	P
2	200.72	-12.56	38.64	26.08	43.50	-17.42	Peak	100	0	P
3	249.22	-11.00	39.64	28.64	46.00	-17.36	Peak	100	0	P
4	534.40	-3.57	37.77	34.20	46.00	-11.80	Peak	100	0	P
5	625.58	-1.70	33.03	31.33	46.00	-14.67	Peak	100	0	P
6	875.84	1.87	30.91	32.78	46.00	-13.22	Peak	100	0	P

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

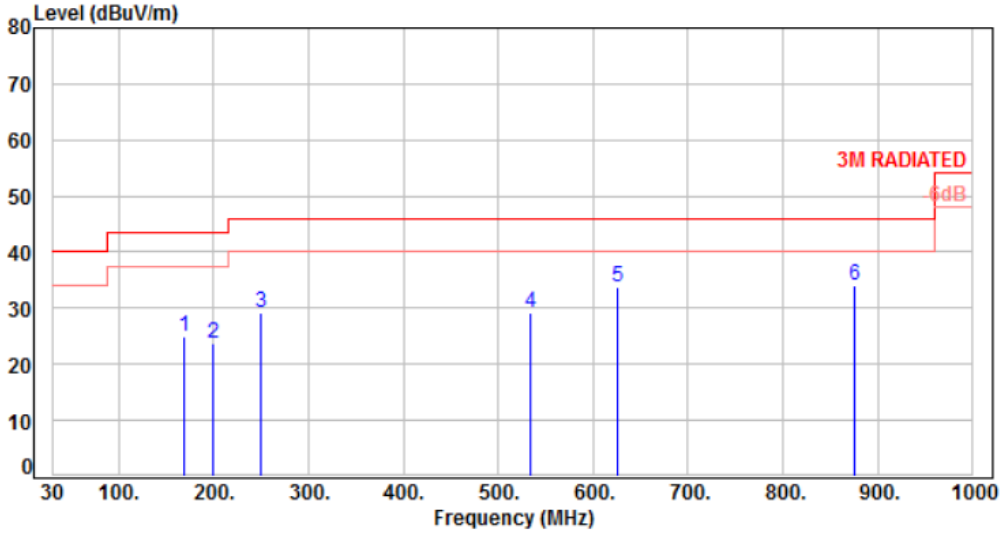
Power	:	PoE	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	31.94	-10.66	41.98	31.32	40.00	-8.68	QP	100	177	P
2	55.22	-10.11	42.67	32.56	40.00	-7.44	Peak	100	0	P
3	152.22	-9.99	36.42	26.43	43.50	-17.07	Peak	100	0	P
4	171.62	-10.41	38.07	27.66	43.50	-15.84	Peak	100	0	P
5	534.40	-3.57	34.87	31.30	46.00	-14.70	Peak	100	0	P
6	897.18	2.10	29.22	31.32	46.00	-14.68	Peak	100	0	P

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

Power	:	PoE	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 4	Temperature	:	25 °C
Test Date	:	Dec. 20, 2016	Humidity	:	60 %



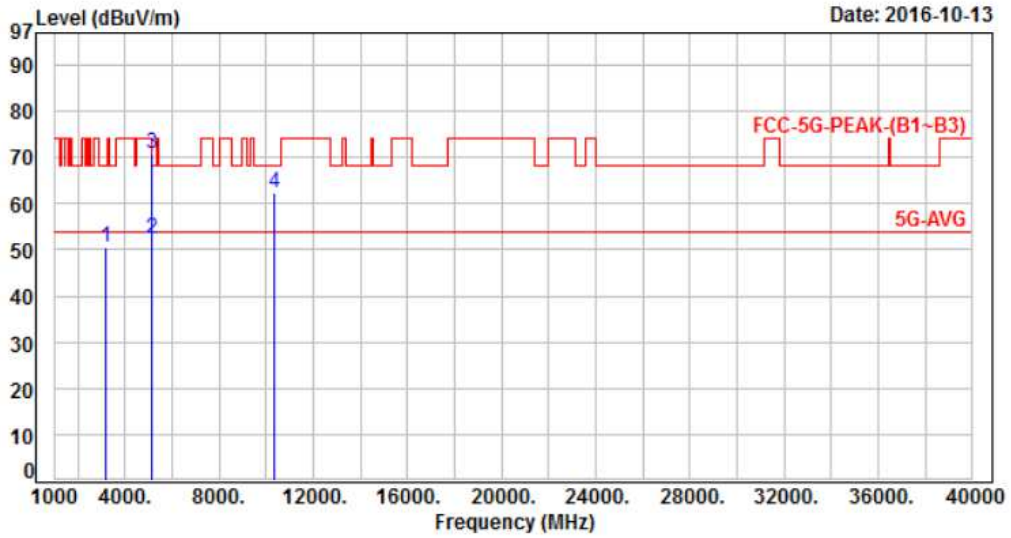
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	169.68	-10.22	35.09	24.87	43.50	-18.63	Peak	100	0	P
2	198.78	-12.50	36.30	23.80	43.50	-19.70	Peak	100	0	P
3	249.22	-11.00	40.18	29.18	46.00	-16.82	Peak	100	0	P
4	534.40	-3.57	32.81	29.24	46.00	-16.76	Peak	100	0	P
5	625.58	-1.70	35.58	33.88	46.00	-12.12	Peak	100	0	P
6	875.84	1.87	32.06	33.93	46.00	-12.07	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)

6.6.1. Test Result and Data of Non Beamforming

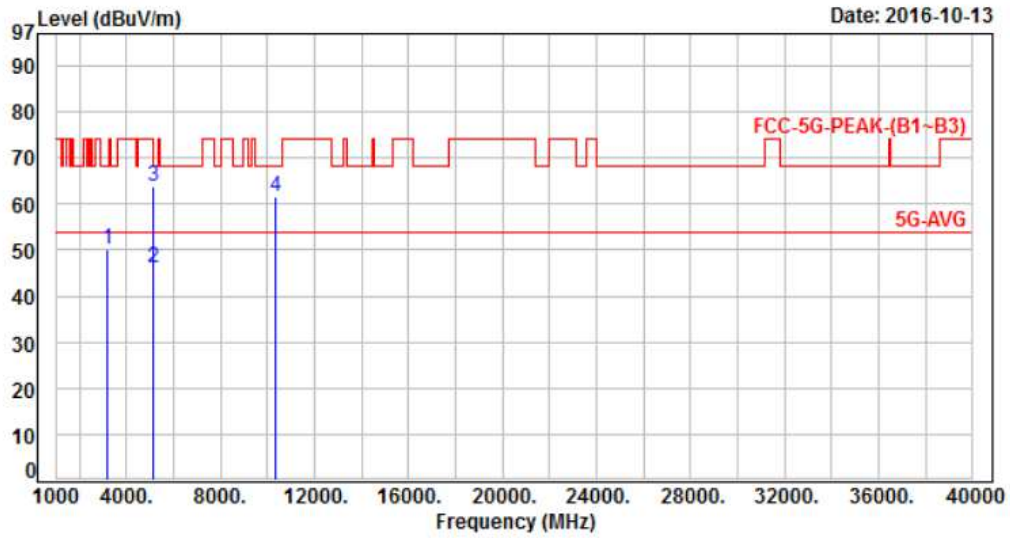
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH36	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	3200.00	2.94	47.61	50.55	68.20	-17.65	Peak	165	168	P
2	5150.00	9.82	42.53	52.35	54.00	-1.65	Average	154	148	P
3	5150.00	9.82	60.84	70.66	74.00	-3.34	Peak	154	148	P
4	10360.00	18.05	44.10	62.15	68.20	-6.05	Peak	108	119	P

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

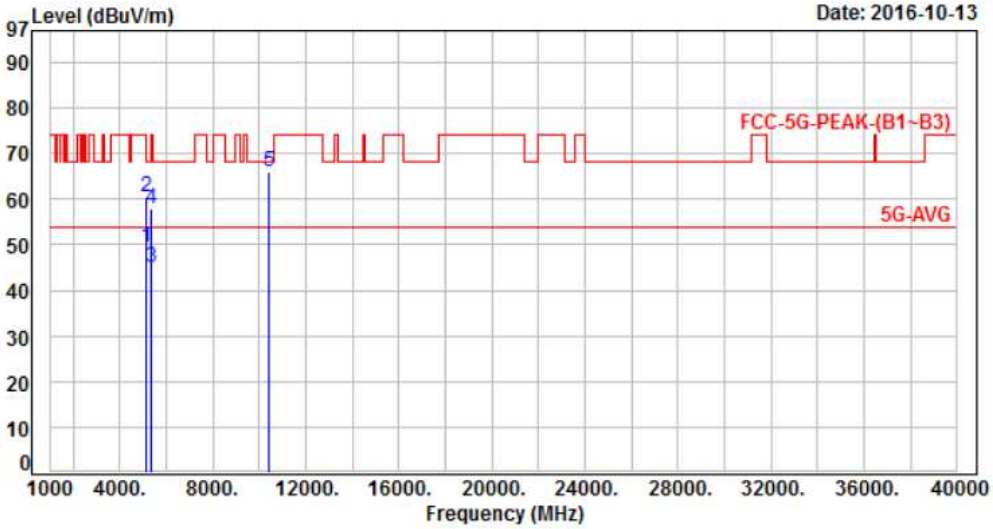
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH36	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	3200.00	2.94	47.21	50.15	68.20	-18.05	Peak	201	307	P
2	5150.00	9.82	36.31	46.13	54.00	-7.87	Average	187	117	P
3	5150.00	9.82	53.81	63.63	74.00	-10.37	Peak	187	117	P
4	10360.00	18.05	43.50	61.55	68.20	-6.65	Peak	112	296	P

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

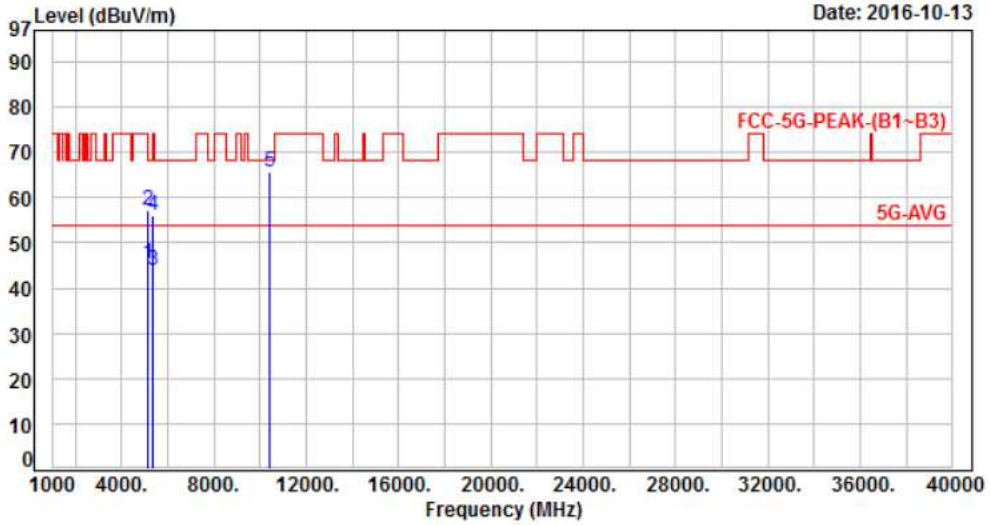
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH44	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	39.76	49.58	54.00	-4.42	Average	325	196	P
2	5150.00	9.82	50.78	60.60	74.00	-13.40	Peak	325	196	P
3	5350.00	10.36	34.76	45.12	54.00	-8.88	Average	165	126	P
4	5350.00	10.36	47.52	57.88	74.00	-16.12	Peak	165	126	P
5	10440.00	18.15	47.87	66.02	68.20	-2.18	Peak	192	145	P

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

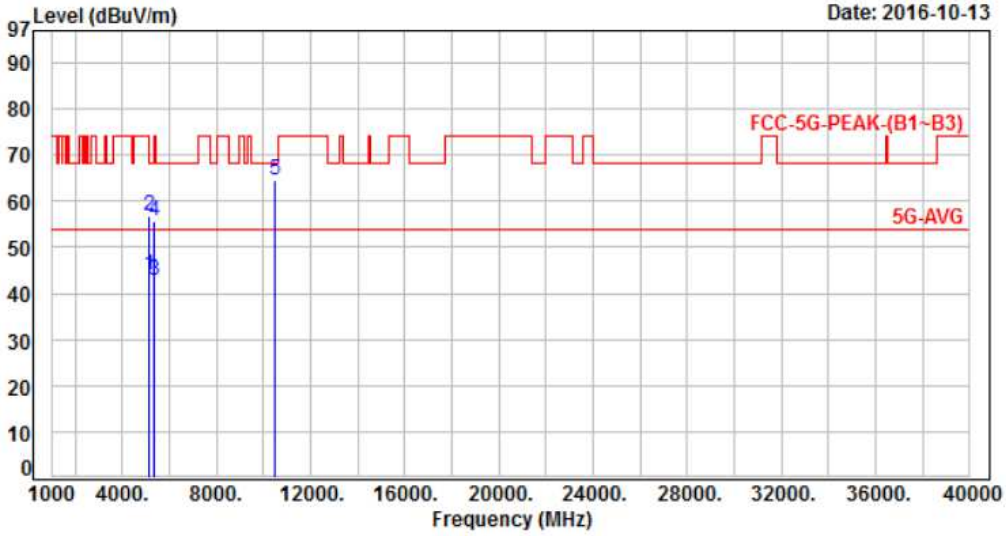
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH44	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	35.49	45.31	54.00	-8.69	Average	313	189	P
2	5150.00	9.82	47.17	56.99	74.00	-17.01	Peak	313	189	P
3	5350.00	10.36	33.65	44.01	54.00	-9.99	Average	225	216	P
4	5350.00	10.36	45.70	56.06	74.00	-17.94	Peak	225	216	P
5	10440.00	18.15	47.36	65.51	68.20	-2.69	Peak	146	198	P

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

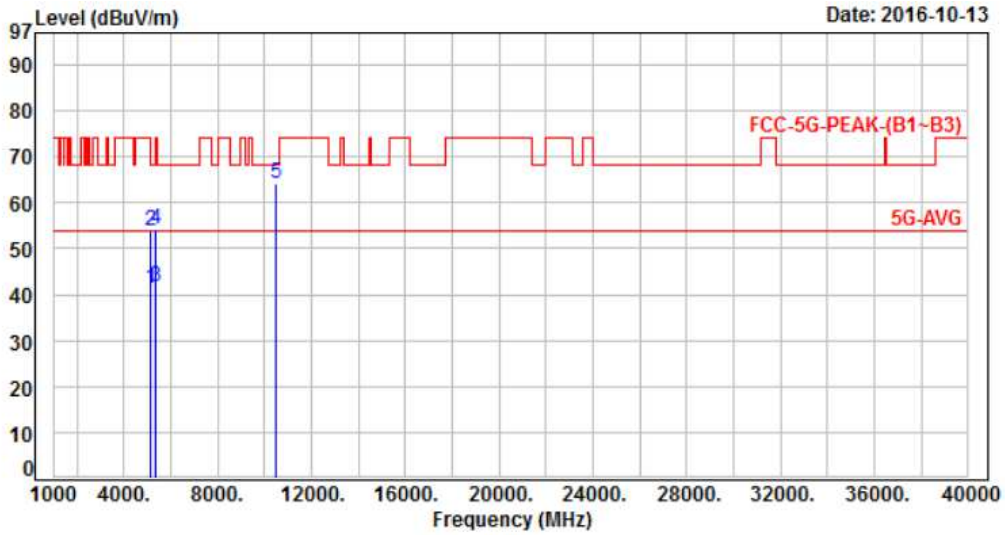
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH48	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	34.21	44.03	54.00	-9.97	Average	153	150	P
2	5150.00	9.82	46.86	56.68	74.00	-17.32	Peak	153	150	P
3	5350.00	10.36	32.59	42.95	54.00	-11.05	Average	153	150	P
4	5350.00	10.36	45.49	55.85	74.00	-18.15	Peak	153	150	P
5	10480.00	18.21	46.50	64.71	68.20	-3.49	Peak	133	158	P

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

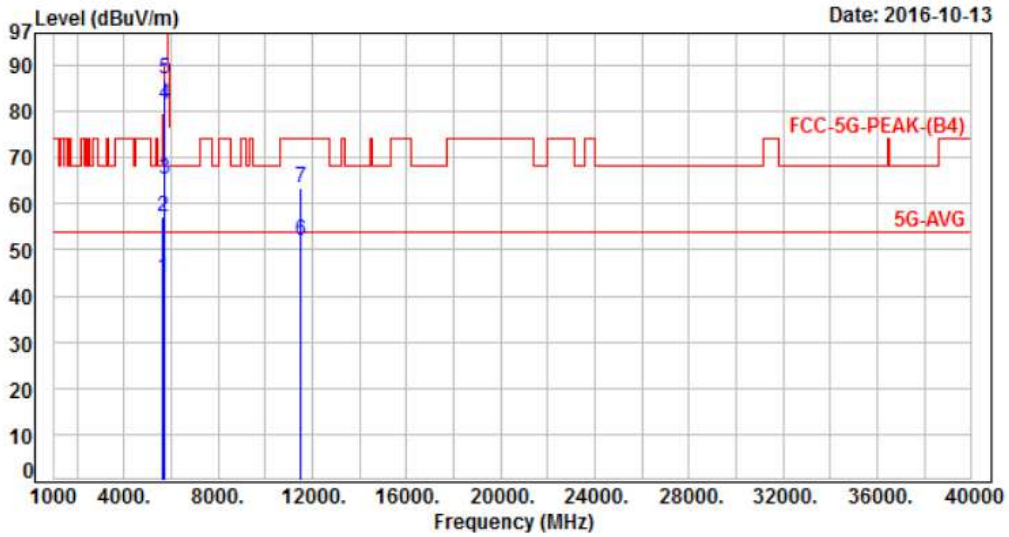
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH48	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	31.31	41.13	54.00	-12.87	Average	147	100	P
2	5150.00	9.82	44.21	54.03	74.00	-19.97	Peak	147	100	P
3	5350.00	10.36	31.49	41.85	74.00	-32.15	Peak	147	100	P
4	5350.00	10.36	43.88	54.24	74.00	-19.76	Peak	147	100	P
5	10480.00	18.21	45.80	64.01	68.20	-4.19	Peak	163	221	P

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

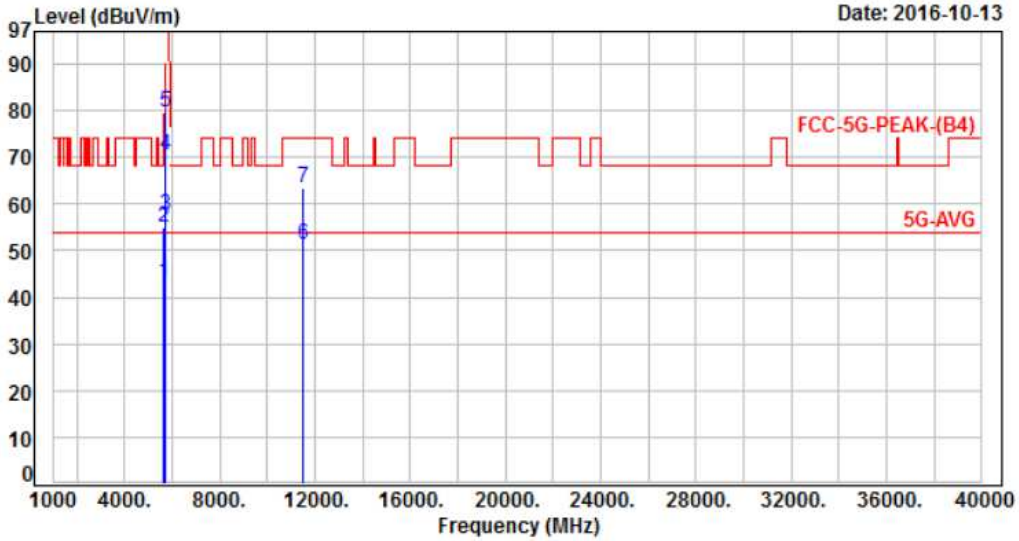
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH149	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	33.20	44.01	54.00	-9.99	Average	223	117	P
2	5650.00	10.81	46.30	57.11	68.20	-11.09	Peak	223	117	P
3	5700.00	10.83	54.60	65.43	105.20	-39.77	Peak	223	117	P
4	5720.00	10.84	70.70	81.54	110.80	-29.26	Peak	223	117	P
5	5725.00	10.84	76.33	87.17	122.20	-35.03	Peak	223	117	P
6	11490.00	19.85	32.10	51.95	54.00	-2.05	Average	155	201	P
7	11490.00	19.85	43.60	63.45	74.00	-10.55	Peak	155	201	P

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

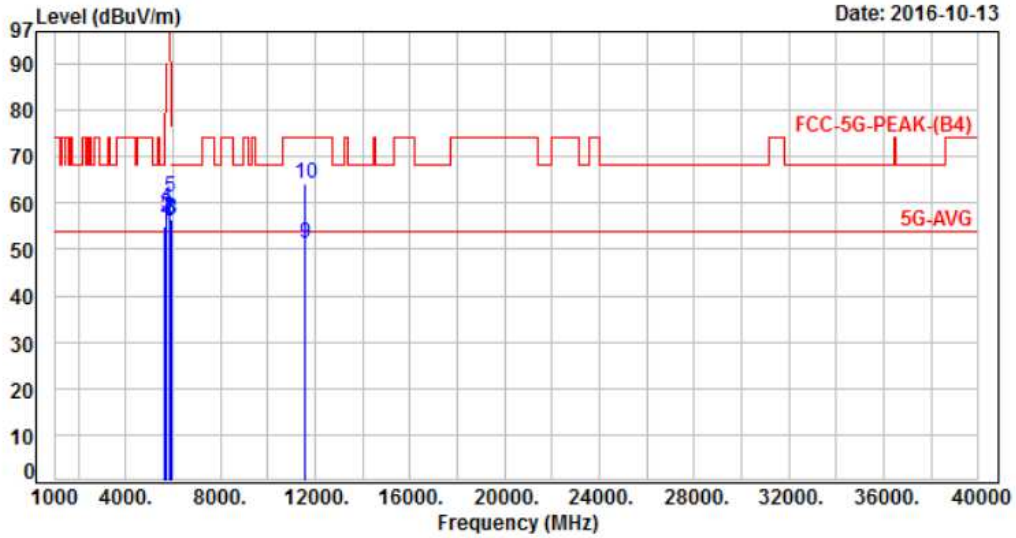
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH149	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	32.20	43.01	54.00	-10.99	Average	229	99	P
2	5650.00	10.81	44.00	54.81	68.20	-13.39	Peak	229	99	P
3	5700.00	10.83	46.68	57.51	105.20	-47.69	Peak	229	99	P
4	5720.00	10.84	59.60	70.44	110.80	-40.36	Peak	229	99	P
5	5725.00	10.84	68.85	79.69	122.20	-42.51	Peak	229	99	P
6	11490.00	19.85	31.55	51.40	54.00	-2.60	Average	142	351	P
7	11490.00	19.85	43.50	63.35	74.00	-10.65	Peak	142	351	P

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

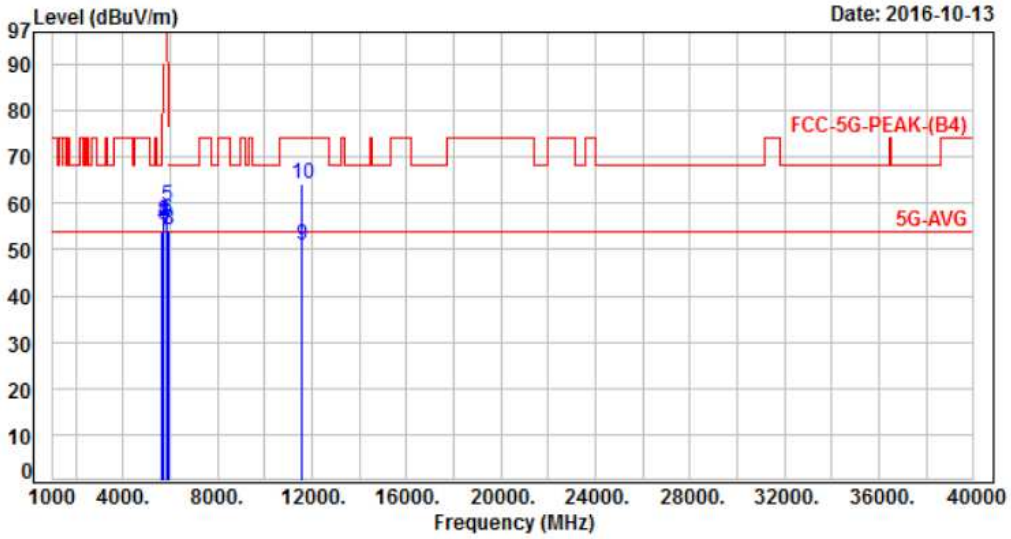
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH157	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	44.23	55.04	68.20	-13.16	Peak	199	148	P
2	5700.00	10.83	45.80	56.63	105.20	-48.57	Peak	199	148	P
3	5720.00	10.84	46.80	57.64	110.80	-53.16	Peak	199	148	P
4	5725.00	10.84	48.30	59.14	122.20	-63.06	Peak	199	148	P
5	5850.00	10.90	50.40	61.30	122.20	-60.90	Peak	199	148	P
6	5855.00	10.90	45.10	56.00	110.80	-54.80	Peak	199	148	P
7	5875.00	10.91	45.70	56.61	105.20	-48.59	Peak	199	148	P
8	5925.00	10.93	45.40	56.33	68.20	-11.87	Peak	199	148	P
9	11570.00	19.88	31.26	51.14	54.00	-2.86	Average	102	118	P
10	11570.00	19.88	44.36	64.24	74.00	-9.76	Peak	102	118	P

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

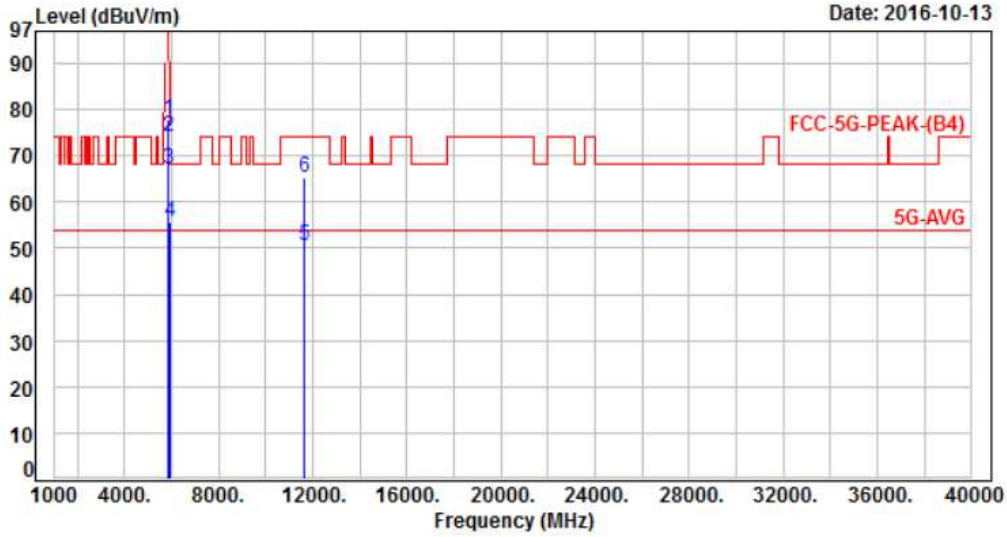
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH157	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	43.10	53.91	68.20	-14.29	Peak	148	206	P
2	5700.00	10.83	45.20	56.03	105.20	-49.17	Peak	148	206	P
3	5720.00	10.84	44.50	55.34	110.80	-55.46	Peak	148	206	P
4	5725.00	10.84	45.20	56.04	122.20	-66.16	Peak	148	206	P
5	5850.00	10.90	48.60	59.50	122.20	-62.70	Peak	148	206	P
6	5855.00	10.90	45.40	56.30	110.80	-54.50	Peak	148	206	P
7	5875.00	10.91	43.26	54.17	105.20	-51.03	Peak	148	206	P
8	5925.00	10.93	43.11	54.04	68.20	-14.16	Peak	148	206	P
9	11570.00	19.88	31.02	50.90	54.00	-3.10	Average	135	229	P
10	11570.00	19.88	44.28	64.16	74.00	-9.84	Peak	135	229	P

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

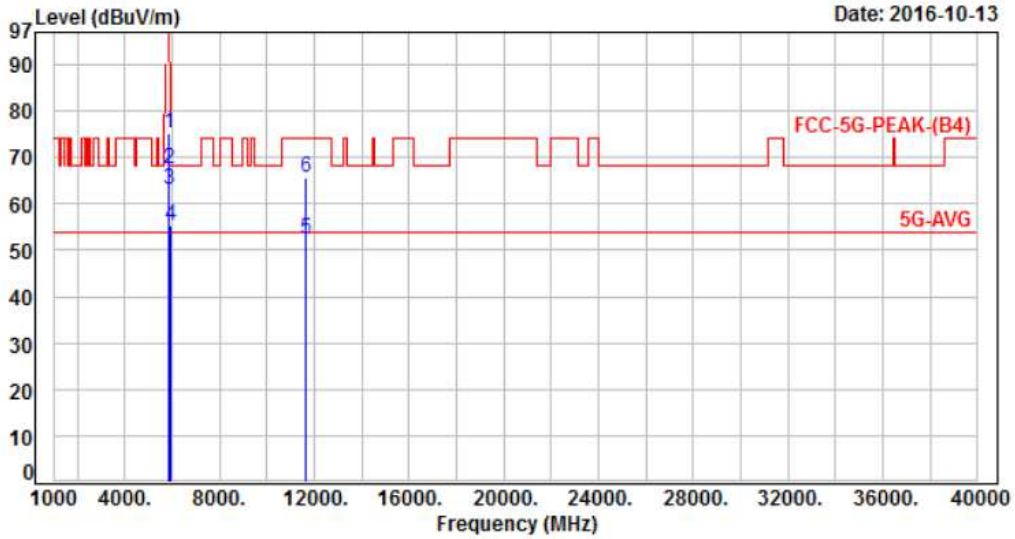
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH165	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	10.90	67.00	77.90	122.20	-44.30	Peak	229	180	P
2	5855.00	10.90	63.10	74.00	110.80	-36.80	Peak	229	180	P
3	5875.00	10.91	56.10	67.01	105.20	-38.19	Peak	229	180	P
4	5925.00	10.93	44.60	55.53	68.20	-12.67	Peak	229	180	P
5	11650.00	19.90	30.67	50.57	54.00	-3.43	Average	189	114	P
6	11650.00	19.90	45.36	65.26	74.00	-8.74	Peak	189	114	P

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

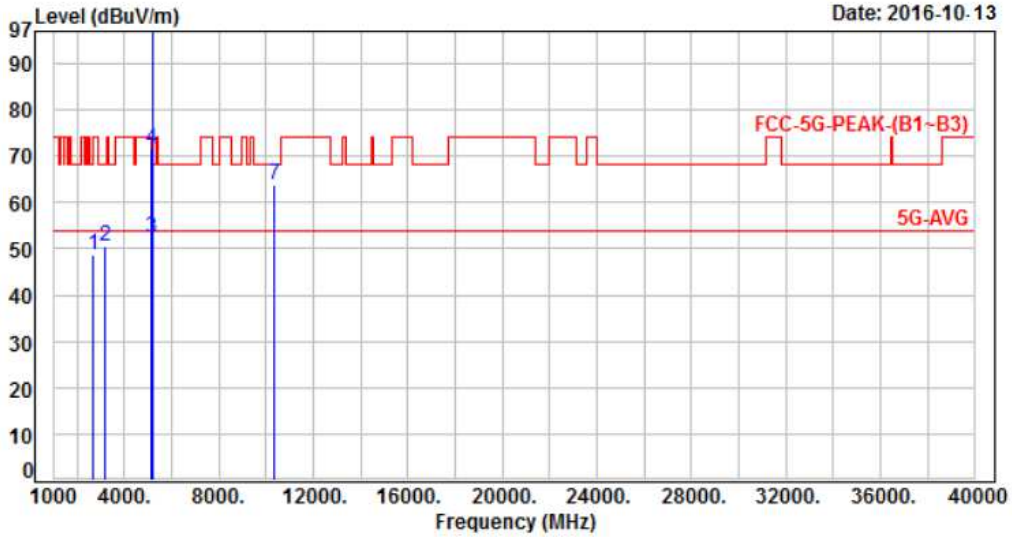
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH165	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	10.90	64.30	75.20	122.20	-47.00	Peak	201	110	P
2	5855.00	10.90	56.62	67.52	110.80	-43.28	Peak	201	110	P
3	5875.00	10.91	52.30	63.21	105.20	-41.99	Peak	201	110	P
4	5925.00	10.93	44.50	55.43	68.20	-12.77	Peak	201	110	P
5	11650.00	19.90	32.30	52.20	54.00	-1.80	Average	163	331	P
6	11650.00	19.90	45.81	65.71	74.00	-8.29	Peak	163	331	P

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

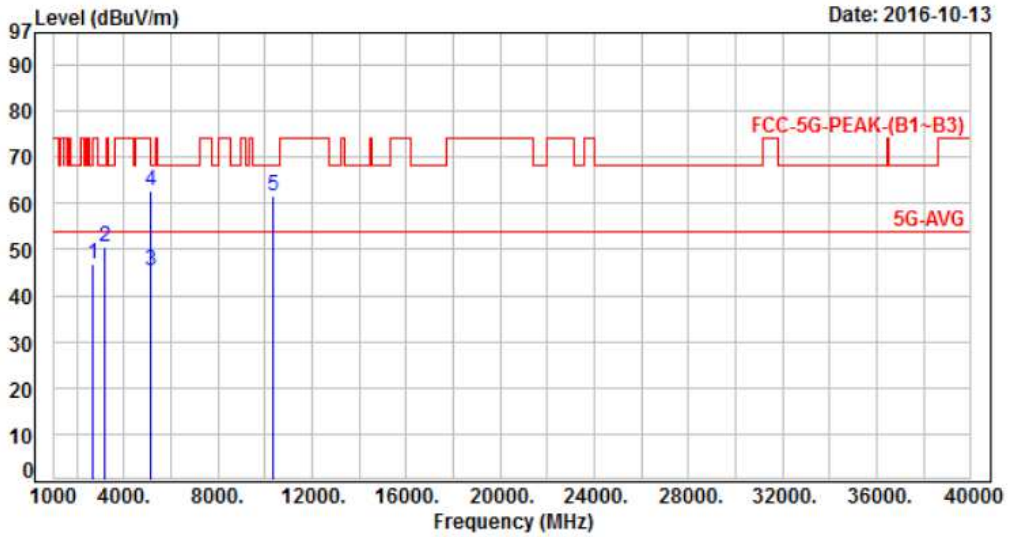
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH36	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2666.00	0.31	48.23	48.54	68.20	-19.66	Peak	347	360	P
2	3200.00	2.94	47.68	50.62	68.20	-17.58	Peak	120	158	P
3	5150.00	9.82	42.51	52.33	54.00	-1.67	Average	100	196	P
4	5150.00	9.82	61.61	71.43	74.00	-2.57	Peak	100	196	P
5	5180.00	9.90	90.98	100.88	54.00	46.88	Average	100	196	F
6	5180.00	9.90	103.11	113.01	68.20	44.81	Peak	100	196	F
7	10360.00	18.05	45.67	63.72	68.20	-4.48	Peak	100	130	P

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

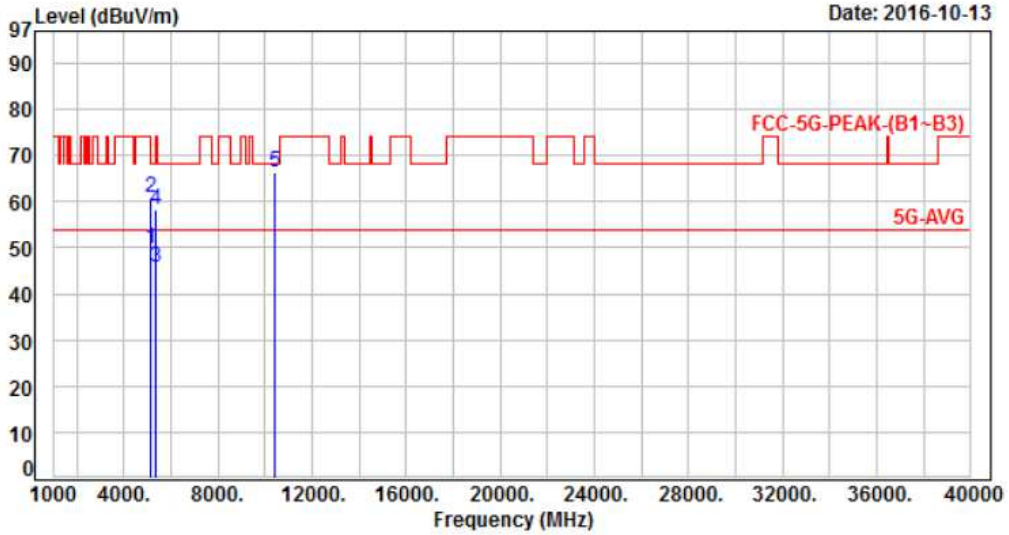
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH36	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2666.70	0.31	46.41	46.72	68.20	-21.48	Peak	100	212	P
2	3200.00	2.94	47.61	50.55	68.20	-17.65	Peak	167	26	P
3	5150.00	9.82	35.70	45.52	54.00	-8.48	Average	180	113	P
4	5150.00	9.82	53.01	62.83	74.00	-11.17	Peak	180	113	P
5	10360.00	18.05	43.66	61.71	68.20	-6.49	Peak	105	225	P

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

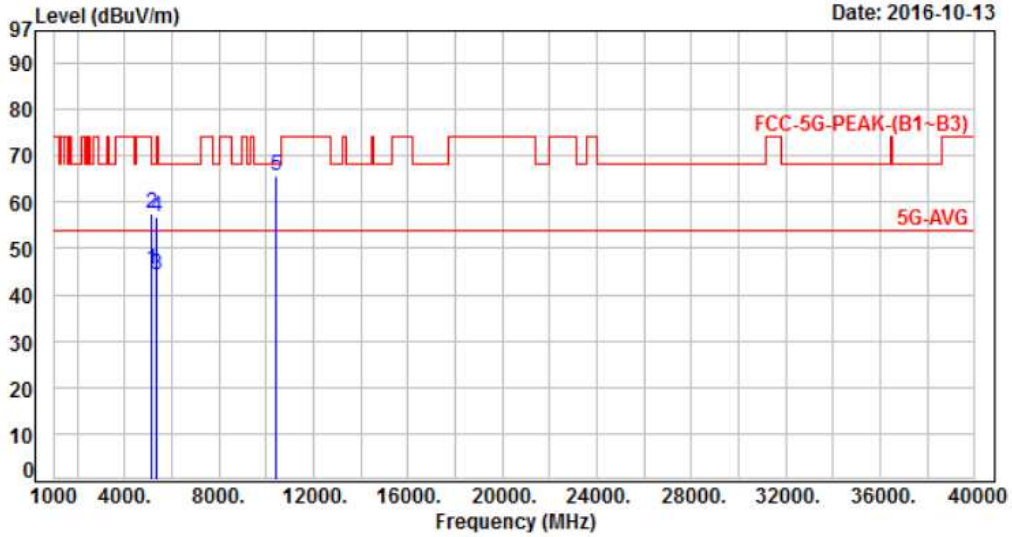
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH44	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	40.14	49.96	54.00	-4.04	Average	312	189	P
2	5150.00	9.82	51.13	60.95	74.00	-13.05	Peak	312	189	P
3	5350.00	10.36	35.23	45.59	54.00	-8.41	Average	189	101	P
4	5350.00	10.36	47.86	58.22	74.00	-15.78	Peak	189	101	P
5	10440.00	18.15	48.13	66.28	68.20	-1.92	Peak	188	152	P

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

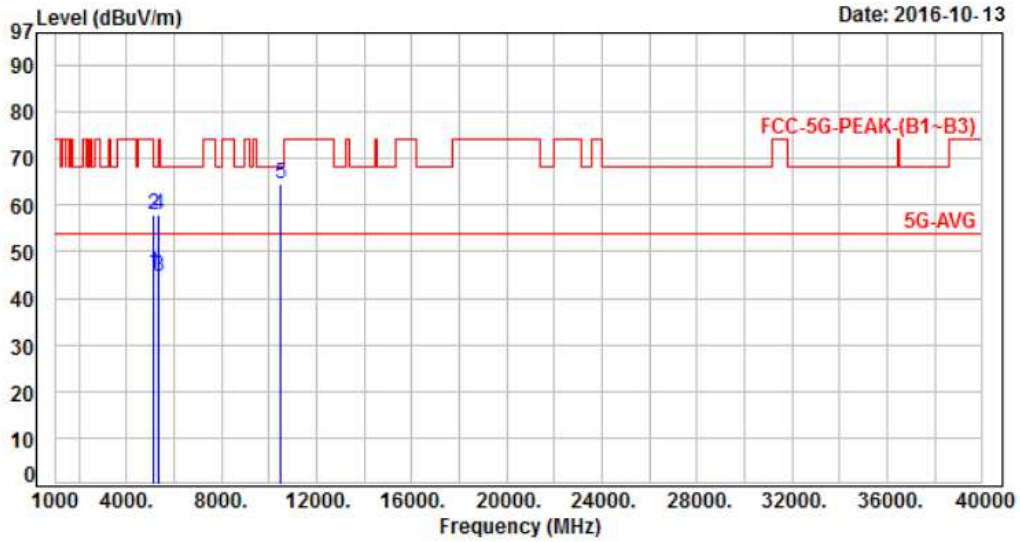
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH44	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	35.70	45.52	54.00	-8.48	Average	312	177	P
2	5150.00	9.82	47.62	57.44	74.00	-16.56	Peak	312	177	P
3	5350.00	10.36	34.04	44.40	54.00	-9.60	Average	233	196	P
4	5350.00	10.36	46.26	56.62	74.00	-17.38	Peak	233	196	P
5	10440.00	18.15	47.49	65.64	68.20	-2.56	Peak	150	202	P

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

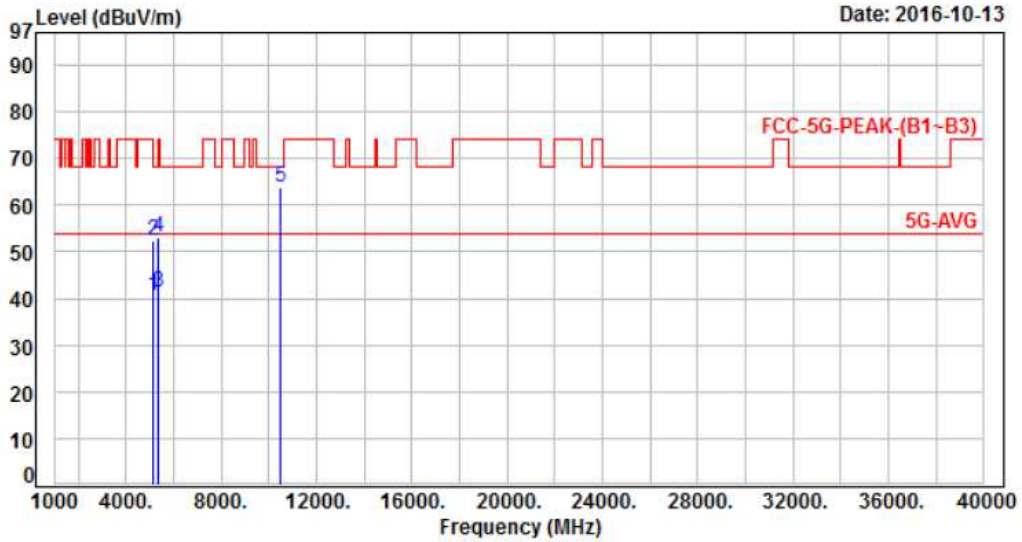
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH48	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	35.72	45.54	54.00	-8.46	Average	201	150	P
2	5150.00	9.82	47.97	57.79	74.00	-16.21	Peak	201	150	P
3	5350.00	10.36	34.12	44.48	54.00	-9.52	Average	201	150	P
4	5350.00	10.36	47.41	57.77	74.00	-16.23	Peak	201	150	P
5	10480.00	18.21	46.18	64.39	68.20	-3.81	Peak	100	123	P

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

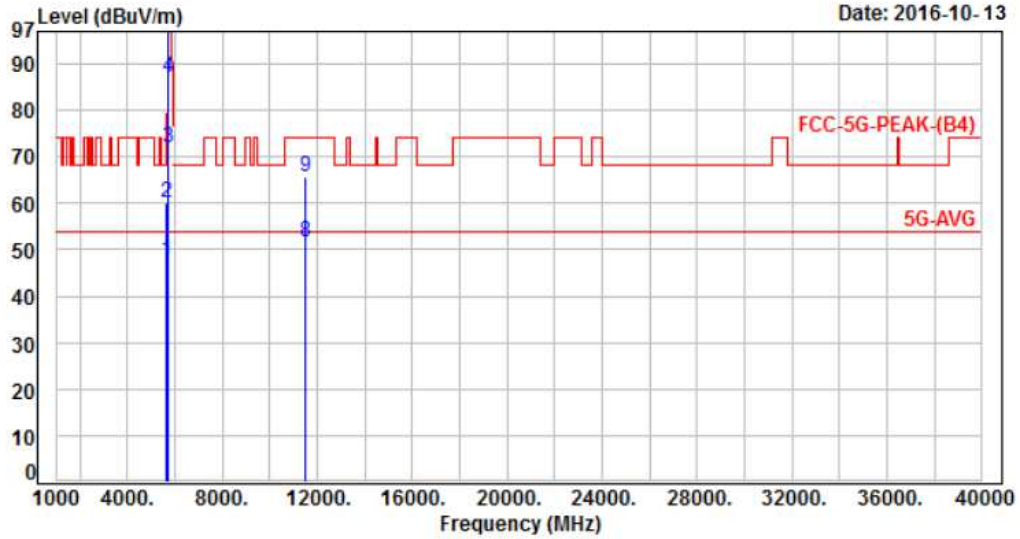
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH48	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	30.71	40.53	54.00	-13.47	Average	100	97	P
2	5150.00	9.82	42.51	52.33	74.00	-21.67	Peak	100	97	P
3	5350.00	10.36	30.91	41.27	54.00	-12.73	Average	100	97	P
4	5350.00	10.36	42.57	52.93	74.00	-21.07	Peak	100	97	P
5	10480.00	18.21	45.62	63.83	68.20	-4.37	Peak	122	196	P

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

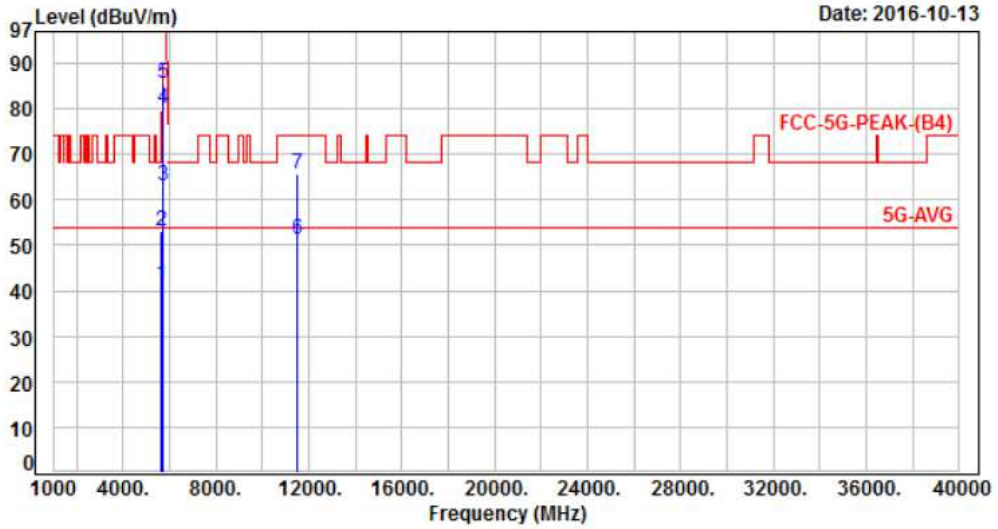
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH149	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	36.64	47.45	54.00	-6.55	Average	349	206	P
2	5650.00	10.81	49.31	60.12	68.20	-8.08	Peak	349	206	P
3	5700.00	10.83	61.00	71.83	105.20	-33.37	Peak	349	206	P
4	5720.00	10.84	76.33	87.17	110.80	-23.63	Peak	349	206	P
5	5725.00	10.84	88.15	98.99	122.20	-23.21	Peak	349	206	P
6	5745.00	10.85	95.09	105.94	54.00	51.94	Average	349	206	F
7	5745.00	10.85	107.62	118.47	122.20	-3.73	Peak	349	206	P
8	11490.00	19.85	31.80	51.65	54.00	-2.35	Average	100	255	P
9	11490.00	19.85	45.62	65.47	74.00	-8.53	Peak	100	255	P

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

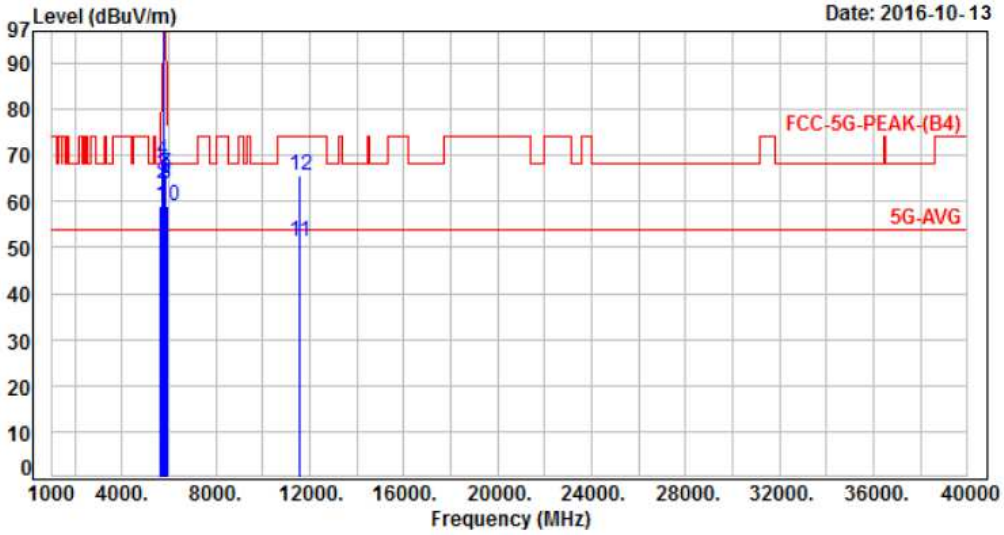
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH149	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	30.50	41.31	54.00	-12.69	Average	111	136	P
2	5650.00	10.81	42.30	53.11	68.20	-15.09	Peak	111	136	P
3	5700.00	10.83	52.22	63.05	105.20	-42.15	Peak	111	136	P
4	5720.00	10.84	69.20	80.04	110.80	-30.76	Peak	111	136	P
5	5725.00	10.84	74.70	85.54	122.20	-36.66	Peak	111	136	P
6	11490.00	19.85	31.60	51.45	54.00	-2.55	Average	100	325	P
7	11490.00	19.85	45.90	65.75	74.00	-8.25	Peak	100	325	P

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

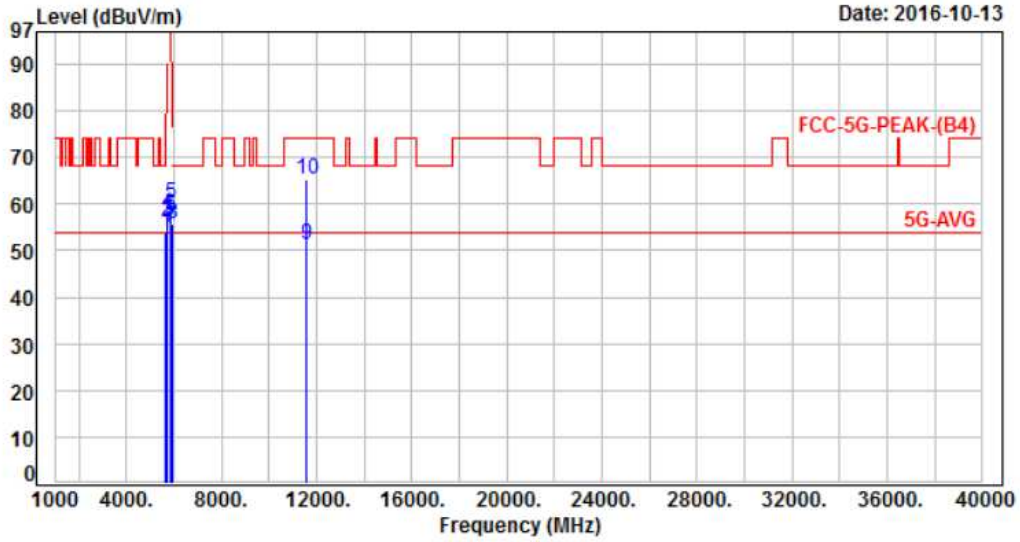
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH157	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	48.29	59.10	68.20	-9.10	Peak	198	179	P
2	5700.00	10.83	52.90	63.73	105.20	-41.47	Peak	198	179	P
3	5720.00	10.84	54.66	65.50	110.80	-45.30	Peak	198	179	P
4	5725.00	10.84	58.22	69.06	122.20	-53.14	Peak	198	179	P
5	5785.00	10.87	93.24	104.11	54.00	50.11	Average	198	179	F
6	5785.00	10.87	105.27	116.14	122.20	-6.06	Peak	198	179	P
7	5850.00	10.90	55.05	65.95	122.20	-56.25	Peak	198	179	P
8	5855.00	10.90	52.73	63.63	110.80	-47.17	Peak	198	179	P
9	5875.00	10.91	54.14	65.05	105.20	-40.15	Peak	198	179	P
10	5925.00	10.93	48.08	59.01	68.20	-9.19	Peak	198	179	P
11	11570.00	19.88	31.52	51.40	54.00	-2.60	Average	100	260	P
12	11570.00	19.88	45.68	65.56	74.00	-8.44	Peak	100	260	P

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

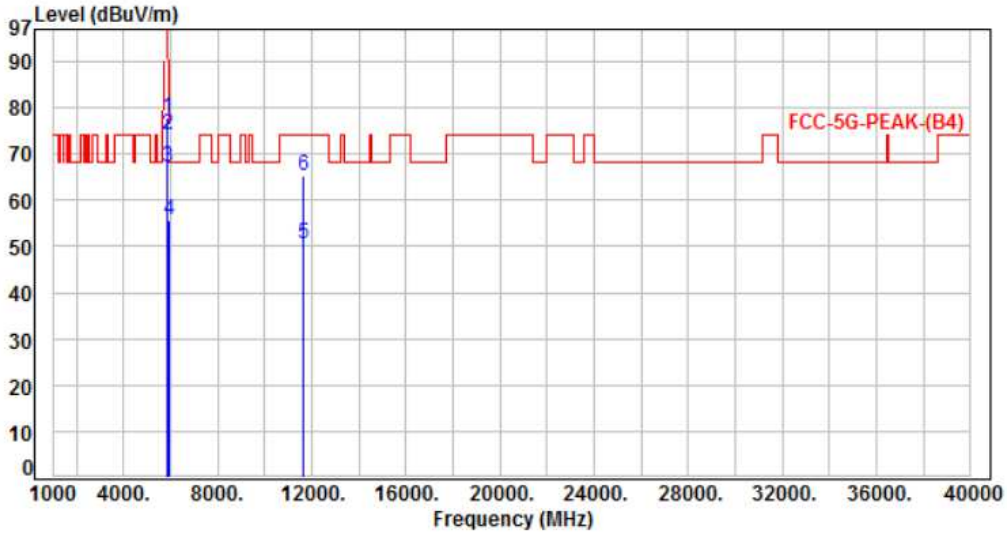
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH157	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	43.10	53.91	68.20	-14.29	Peak	180	96	P
2	5700.00	10.83	45.70	56.53	105.20	-48.67	Peak	180	96	P
3	5720.00	10.84	45.20	56.04	110.80	-54.76	Peak	180	96	P
4	5725.00	10.84	47.10	57.94	122.20	-64.26	Peak	180	96	P
5	5850.00	10.90	49.30	60.20	122.20	-62.00	Peak	180	96	P
6	5855.00	10.90	46.72	57.62	110.80	-53.18	Peak	180	96	P
7	5875.00	10.91	44.20	55.11	105.20	-50.09	Peak	180	96	P
8	5925.00	10.93	44.60	55.53	68.20	-12.67	Peak	180	96	P
9	11570.00	19.88	31.50	51.38	54.00	-2.62	Average	117	296	P
10	11570.00	19.88	45.23	65.11	74.00	-8.89	Peak	117	296	P

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

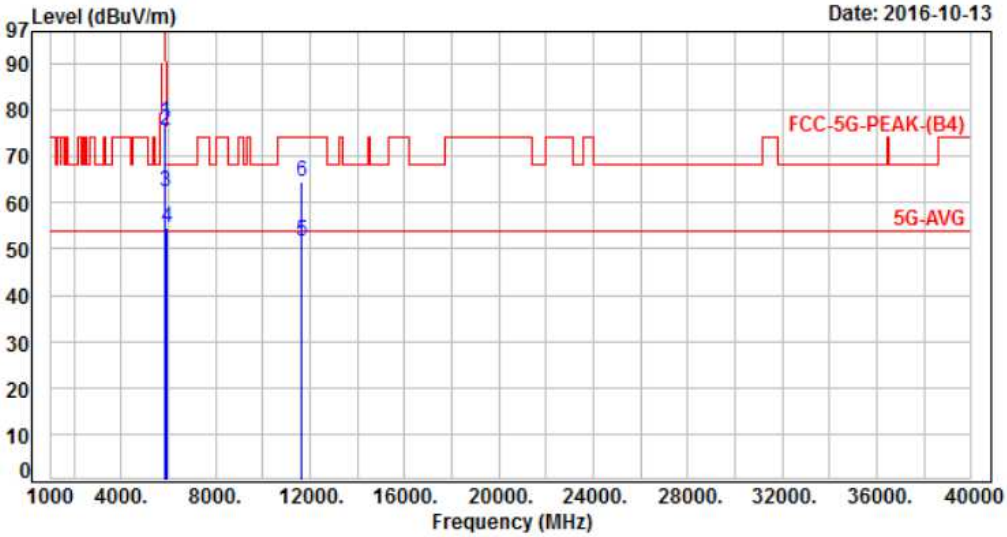
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH165	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	10.90	67.00	77.90	122.20	-44.30	Peak	229	180	P
2	5855.00	10.90	63.10	74.00	110.80	-36.80	Peak	229	180	P
3	5875.00	10.91	56.10	67.01	105.20	-38.19	Peak	229	180	P
4	5925.00	10.93	44.60	55.53	68.20	-12.67	Peak	229	180	P
5	11650.00	19.90	30.67	50.57	54.00	-3.43	Average	189	114	P
6	11650.00	19.90	45.36	65.26	74.00	-8.74	Peak	189	114	P

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

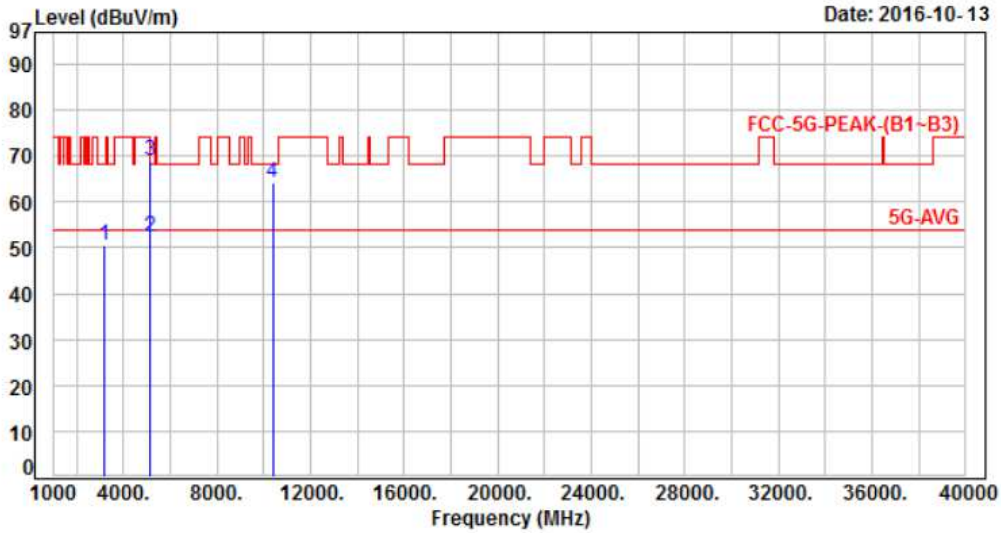
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH165	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	10.90	66.60	77.50	122.20	-44.70	Peak	215	108	P
2	5855.00	10.90	64.70	75.60	110.80	-35.20	Peak	215	108	P
3	5875.00	10.91	51.40	62.31	105.20	-42.89	Peak	215	108	P
4	5925.00	10.93	43.80	54.73	68.20	-13.47	Peak	215	108	P
5	11650.00	19.90	31.91	51.81	54.00	-2.19	Average	201	335	P
6	11650.00	19.90	44.50	64.40	74.00	-9.60	Peak	201	335	P

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

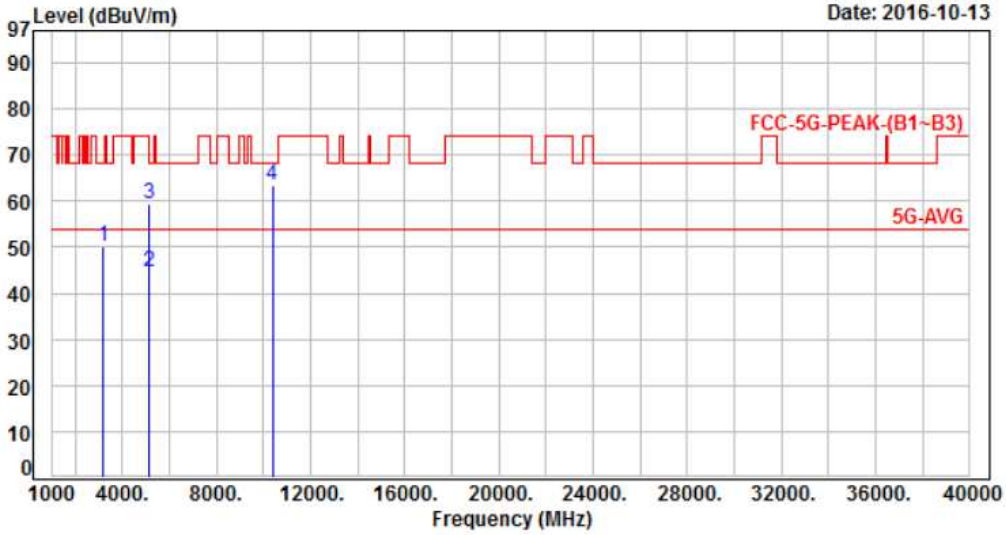
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH38	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	3200.00	2.94	47.71	50.65	68.20	-17.55	Peak	377	230	P
2	5150.00	9.82	42.71	52.53	54.00	-1.47	Average	204	149	P
3	5150.00	9.82	59.08	68.90	74.00	-5.10	Peak	204	149	P
4	10380.00	18.08	46.04	64.12	68.20	-4.08	Peak	100	125	P

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

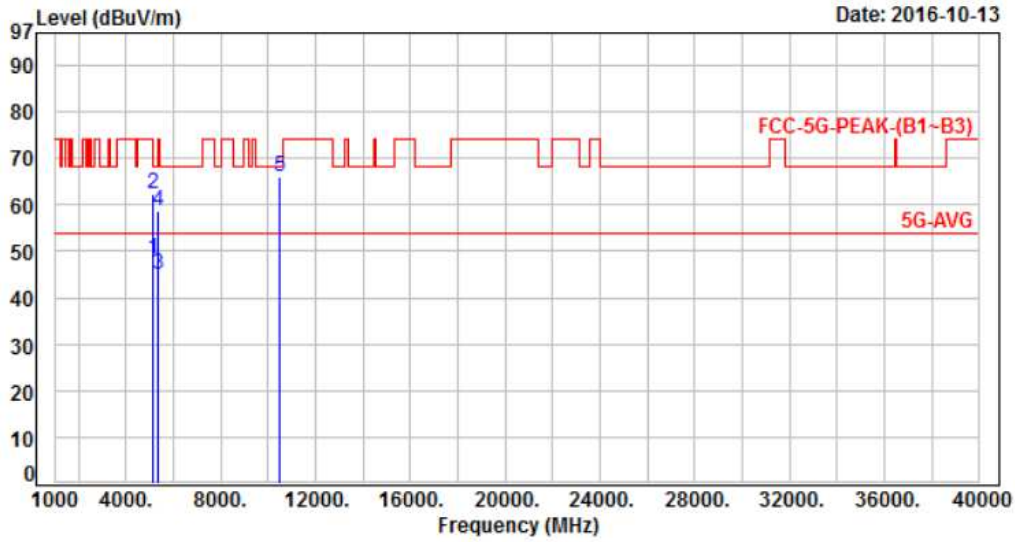
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH38	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	3200.00	2.94	47.21	50.15	68.20	-18.05	Peak	252	313	P
2	5150.00	9.82	34.81	44.63	54.00	-9.37	Average	100	26	P
3	5150.00	9.82	49.51	59.33	74.00	-14.67	Peak	100	26	P
4	10380.00	18.08	45.50	63.58	68.20	-4.62	Peak	155	263	P

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

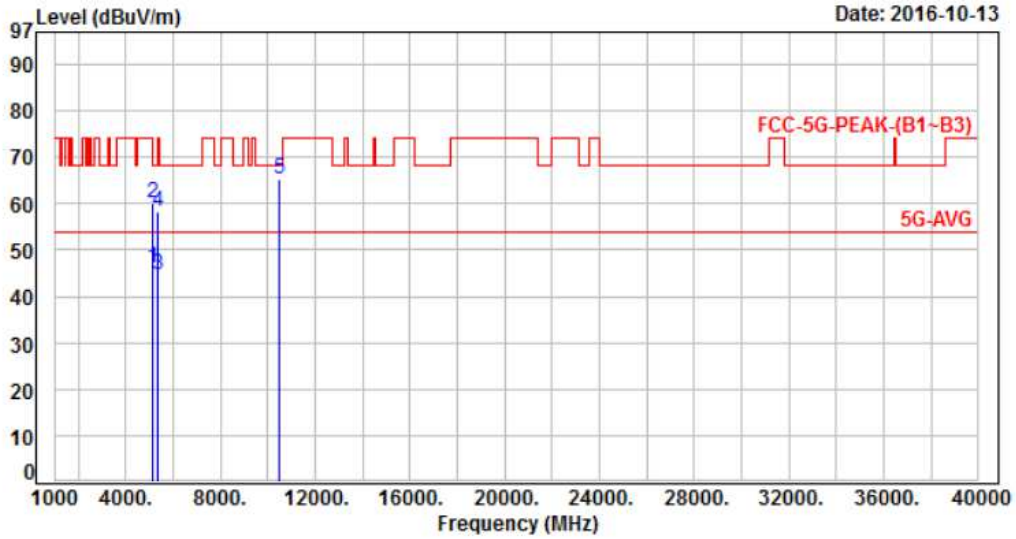
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH46	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	38.39	48.21	54.00	-5.79	Average	206	160	P
2	5150.00	9.82	52.64	62.46	74.00	-11.54	Peak	206	160	P
3	5350.00	10.36	34.73	45.09	54.00	-8.91	Average	262	125	P
4	5350.00	10.36	48.42	58.78	74.00	-15.22	Peak	262	125	P
5	10460.00	18.19	47.67	65.86	68.20	-2.34	Peak	152	316	P

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

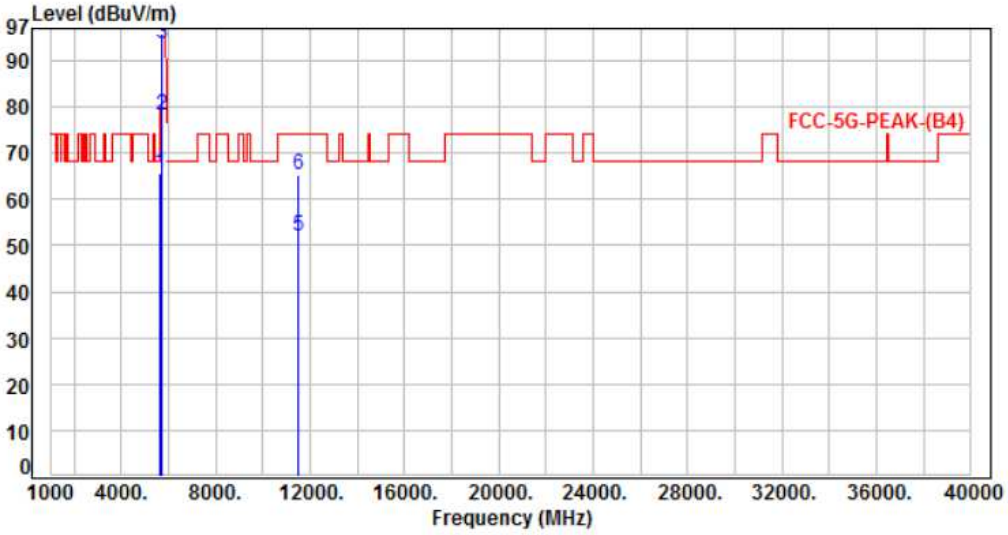
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH46	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	9.82	36.17	45.99	54.00	-8.01	Average	188	219	P
2	5150.00	9.82	50.38	60.20	74.00	-13.80	Peak	188	219	P
3	5350.00	10.36	34.11	44.47	54.00	-9.53	Average	158	242	P
4	5350.00	10.36	47.88	58.24	74.00	-15.76	Peak	158	242	P
5	10460.00	18.19	47.13	65.32	68.20	-2.88	Peak	353	159	P

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

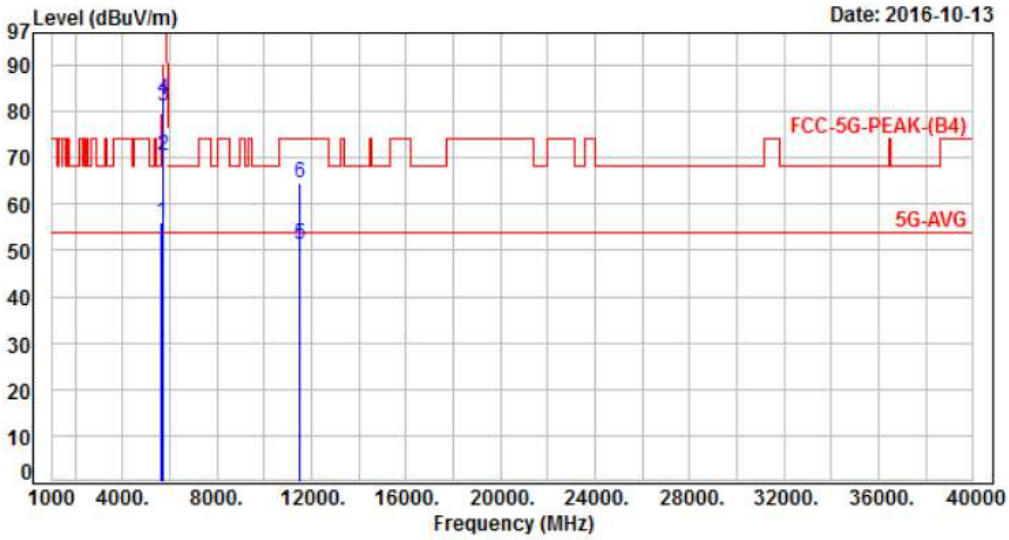
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH151	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	54.75	65.56	68.20	-2.64	Peak	367	206	P
2	5700.00	10.83	67.33	78.16	105.20	-27.04	Peak	367	206	P
3	5720.00	10.84	82.75	93.59	110.80	-17.21	Peak	367	206	P
4	5725.00	10.84	84.94	95.78	122.20	-26.42	Peak	367	206	P
5	11510.00	19.86	32.12	51.98	54.00	-2.02	Average	100	246	P
6	11510.00	19.86	45.25	65.11	74.00	-8.89	Peak	100	246	P

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

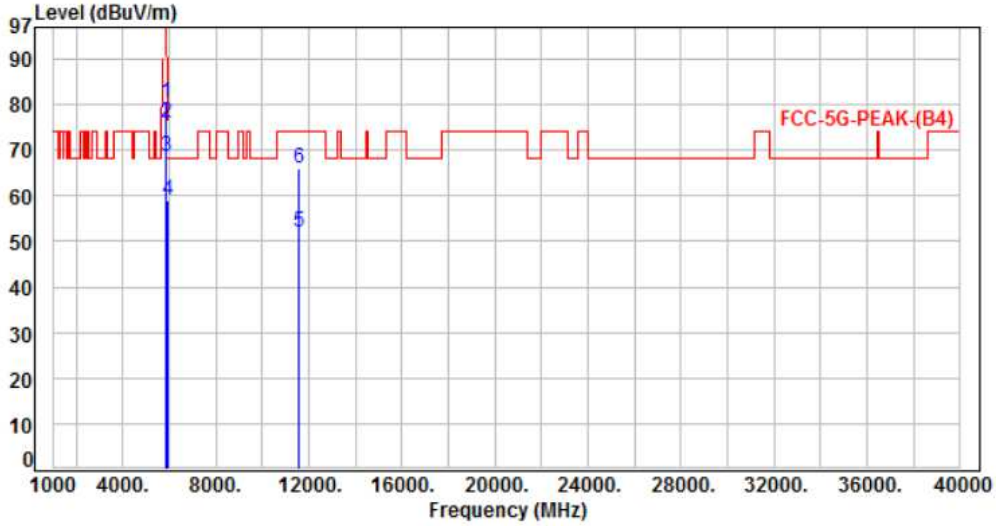
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH151	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	10.81	45.20	56.01	68.20	-12.19	Peak	166	134	P
2	5700.00	10.83	59.50	70.33	105.20	-34.87	Peak	166	134	P
3	5720.00	10.84	70.23	81.07	110.80	-29.73	Peak	166	134	P
4	5725.00	10.84	71.70	82.54	122.20	-39.66	Peak	166	134	P
5	11510.00	19.86	31.50	51.36	54.00	-2.64	Average	116	287	P
6	11510.00	19.86	44.80	64.66	74.00	-9.34	Peak	116	287	P

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

Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH159	Temperature	:	25°C
Test Date	:	Oct. 13, 2016	Humidity	:	63%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	10.90	69.44	80.34	122.20	-41.86	Peak	197	182	P
2	5855.00	10.90	65.13	76.03	110.80	-34.77	Peak	197	182	P
3	5875.00	10.91	57.53	68.44	105.20	-36.76	Peak	197	182	P
4	5925.00	10.93	48.17	59.10	68.20	-9.10	Peak	197	182	P
5	11590.00	19.88	32.19	52.07	54.00	-1.93	Average	100	230	P
6	11590.00	19.88	46.19	66.07	74.00	-7.93	Peak	100	230	P

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