



低功率射頻電機測試報告

申請廠商	: 香港商優比快科技有限公司台灣分公司
地址	: 台北市信義區松仁路 107 號 12 樓
製造廠商	: Ubiquiti Networks, Inc.
地址	: 685 Third Avenue, 27th Floor New York, New York 10017 USA
產品名稱	: 雙頻無線接入點
產品型號	: AFi-INS-R
廠牌	: ULABS
受理日期	: 107 年 11 月 15 日
完成日期	: 108 年 01 月 19 日

實驗室名稱：世騰電子科技股份有限公司測試實驗室

實驗室地址：桃園市蘆竹區聯福街 2 巷 10 號

實驗室認可證書有效期限：109 年 07 月 08 日

實驗室認可編號及範圍：1439 (9 kHz to 40 GHz)

實驗室認證資格





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修訂記錄

報告號碼.	發行日期	描述
TENC1811084-488	Jan. 21, 2019	Original



證 明 書

申請廠商 : 香港商優比快科技有限公司台灣分公司

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廠牌 : ULABS

該產品樣品試驗
依據之試驗標準 : 國家通訊傳播委員會低功率射頻電機技術規範(LP0002)。
規範修訂日期 107 年 1 月 10 日。

發射功率
(電場強度) : 27.95 dBm

茲在此鄭重聲明：

本試驗報告所列之待測設備樣品已於民國 107 年 07 月 27 日在本公司的標準測試場地完成詳細及完整之量測。本試驗報告所列之量測皆依據低功率射頻電機技術規範之規定來執行。並判斷此待測設備樣品確實符合低功率射頻電機技術規範規定。

備註：本測試報告僅對受測之樣品負責。非經本公司同意，測試報告不得摘錄複印使用。(全部複製除外)。

項次	測試項目	低功率射頻電機技術 規範	量測設備	測試結果	結果判定
1	天線增益之要求	3.10.1.3 節	---	請參閱 2.2 節	---
2	電源線傳導干擾之要求	2.3 節	請參閱 2 章	請參閱 4.4 節	合格
3	場強輻射之要求	3.10.1.5 節	請參閱 2 章	請參閱 5.4 節 及 5.5 節	合格
4	發射頻寬之要求	3.10.1.6 節(2).(A)	請參閱 2 章	請參閱 6.4 節	合格
5	峰值輸出功率之要求	3.10.1.2 節(1)(C)	請參閱 2 章	請參閱 7.4 節	合格
6	混附波發射限制之要求	3.10.1.5 節	請參閱 2 章	請參閱 8.4 節	合格
7	功率密度之要求	3.10.1.6 節(2)(B)	請參閱 2 章	請參閱 9.4 節	合格

報告簽署人：

測試工程師：



1. 一般描述

1.1. 產品規格

Max. TX Power	22 dBm
MIMO	2.4GHz: 2x2; 5GHz: 2x2
Speeds	2.4GHz: 300Mbps; 5GHz: 867Mbps
Networking Interface	Wi-Fi/Gigabit Ethernet (1)WAN, (1)LAN
Max. Power Consumption	9W
ESD/EMP Protection	± 24kV Air/Contact
Buttons	Reset
Antennas	(1)Dual-Band Antenna, Single-Polarity
Display	30.73mm(1.21")Diagonal, 160x64, 142ppi, Capacitive Touch, Grayscale
Wi-Fi Standard	802.11ac
Power Save	Supported
Wireless Security	WPA2-PSK AES/TKIP
Operating Temperature	14 to 131°F(-10 to 55°C)
Operating Humidity	5 to 95% Noncondensing
Adapter	UBIQUITI \ GP-M015-QC Input: 100-240Vac 50/60Hz Max 0.5A Output: 5Vdc 3A, 9Vdc 1.7A, 12Vdc 1.25A
Frequency Range	BT, BLE: 2400-2483.5MHz 802.11b/g/n: 2400-2483.5MHz 802.11a/ac: 5150-5250MHz, 5725-5850MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11g/n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	DSSS, OFDM, FHSS, DTS
Data Rate	BT: GFSK: 1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps WLAN: 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	Internal Antenna
Antenna Gain	BT / BLE: 1dBi 2400-2483.5MHz: ANT A: 3dBi, B: 3dBi 5150-5250MHz: ANT A: 4dBi, B: 4dBi 5250-5350MHz: ANT A: 4dBi, B: 4dBi 5470-5725MHz: ANT A: 4dBi, B: 4dBi 5745-5850MHz: ANT A: 4dBi, B: 4dBi

Note: for more details, please refer to the User's manual of the EUT.



1.2. 無線界面規格及頻道對應頻率

802.11b, 802.11g, 802.11n HT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	*11	2462
*06	2437	---	---

802.11n HT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
---	---	*07	2442
---	---	08	2447
*03	2422	09	2452
04	2427	10	2457
05	2432	*11	2462
06	2437	---	---

*為量測之頻率

1.3. 測試模式之描述

- 電源傳導及輻射測試之測試軟體如下:
 1. 將量測系統之全部電源打開。
 2. 於測試進行的同時，待測物執行”ART2-Command”傳送及接收訊號。
- 傳導干擾及輻射干擾測試模式如下:
 - Test Mode 1. 802.11b (1Mbps)
 - Test Mode 2. 802.11g (6Mbps)
 - Test Mode 3. 802.11n HT20 (6.5Mbps)
 - Test Mode 4. 802.11n HT40 (13.5Mbps)經驗證傳導干擾及輻射干擾(below 1GHz)以 Test Mode 2 之測試結果為最差，故以此作為報告之依據。
- 直接量測測試模式如下:
 - Test Mode 1. 802.11b (1Mbps)
 - Test Mode 2. 802.11g (6Mbps)
 - Test Mode 3. 802.11n HT20 (6.5Mbps)
 - Test Mode 4. 802.11n HT40 (13.5Mbps)
- 量測頻道及頻率:
 - 802.11b/g/n HT20: CH 01: 2412MHz, CH 06: 2437MHz, CH 11: 2462MHz

1.4. 受測裝置之系統說明

設備	廠牌	型號	長度/訊號線類別	長度/電源線類別
筆記型電腦	DELL	Latitude E5450/5450	NSPIRON 510m	Adapter, 非隔離 1.8m

Use Cable:

線材	數量	說明
Network	1	Unshielding, 15m



1.5. 測試場地

測試場地：	世騰電子科技股份有限公司測試實驗室 338 桃園市蘆竹區聯福街 2 巷 10 號 223 新北市石碇區十八重溪 68 之 1 號
測試電壓：	AC 110V / 60Hz
適用規範：	本測試報告之所有項目皆依據國家通訊傳播委員會低功率射頻電機技術規範以及參考 ANSI、FCC/47CFR/2.1046、2.1047、2.1049、2.1051、2.1053 及 2.1055 之檢驗法。
測試頻率：	電源傳導：從 150 kHz 到 30 MHz。 場強輻射：從 30 MHz 到 25000 MHz。
測試天線的距離：	場強輻射之測試距離為 3 M。

1.6. 量測不確定度

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%



2. 測試儀器

<For radiation test (above 1GHz) & Others Test>

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100443	2017/03/07	2018/03/06
LISN	Schwarzbeck	NSLK 8127	8127-740	2016/08/30	2017/08/29
LISN	Schwarzbeck	NSLK 8127	8127-516	2016/09/06	2017/09/05
Pulse Limiter	R&S	ESH3-Z2	101934	2017/02/14	2018/02/13
Bilog Antenna	Schwarzbeck	VULB9168	369	2017/03/15	2018/03/14
Active Loop Antenna	EMCO	6507	40855	2017/05/15	2018/05/14
Horn Antenna	EMCO	3115	31601	2016/09/05	2017/09/04
Horn Antenna	EMCO	3116	31970	2017/03/29	2018/03/28
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200207	2017/03/17	2018/03/16
Preamplifier	EM	EM330	60660	2017/02/25	2018/02/24
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2016/09/13	2017/09/12
Preamplifier	Agilent	8449B	3008A01954	2017/02/09	2018/02/08
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2016/11/04	2017/11/03
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2017/03/17	2018/03/16
Spectrum Analyzer	R&S	FSP40	100219	2016/09/01	2017/08/31
BLUETOOTH TESTER	R&S	CBT	101133	2017/03/10	2018/03/09
Attenuator	KEYSIGHT	8491B	MY39250703	2017/03/07	2018/03/06
Rotary Attenuator	Agilent	8495B	MY42146680	2017/03/13	2018/03/12
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2016/09/05	2017/09/04
Series Power Meter	Anritsu	ML2495A	1224005	2017/03/01	2018/02/28
Power Sensor	Anritsu	MA2411B	1207295	2017/03/01	2018/02/28
Cable	HUBER SUHNER	SUCOFLEX 102	28422/2	2017/02/25	2018/02/24
Cable	HUBER SUHNER	SUCOFLEX 102	28418/2	2017/02/25	2018/02/24
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A
Software	AUDIX	E3	V8.2014-8-6	N/A	N/A
Software	Keysight	N7607B Signal Studio	v2.0.0.1	N/A	N/A
Software	Keysight	Inservice MonitorUtility	N/A	N/A	N/A



<For conduction & radiation test (below 1GHz) Test>

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100821	2017/09/08	2018/09/07
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	2017/08/31	2018/08/30
Active Loop Antenna	EMCO	6507	40855	2018/05/22	2019/05/21
Horn Antenna	EMCO	3115	31601	2017/09/11	2018/09/10
Horn Antenna	EMCO	3116	31970	2018/03/23	2019/03/22
Preamplifier	EM	EM330	60658	2017/09/08	2018/09/07
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2017/09/20	2018/09/19
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2017/11/10	2018/11/09
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	2017/09/04	2018/09/03
Rotary Attenuator	Agilent	8495B	MY42146680	2018/03/29	2019/03/28
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2017/09/04	2018/09/03
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



3. 天線增益之要求

天線規格不受國家通訊傳播委員會低功率射頻電機技術規範(2.2)節規定之限制，其發射天線之方向性增益超過 6dBi 時，應依其所超過之 dB 數等量降低峰值輸出功率。如用於固定式點對點操作時，應符合下列情形之一：

操作於 2400-2483.5 兆赫(MHz)者，其發射天線之方向性增益超過 6dBi，應於每超過 3dB 降低 1dB 之峰值輸出功率。

操作於 5725-5850 兆赫(MHz)者，其發射天線之方向性增益超過 6dBi，不需降低峰值輸出功率。

3.1. 天線型式及其增益

1.1 Brand :	LONGWELL
1.2 Model :	030-048-1002C
1.3 Antenna type :	Internal Antenna
1.4 Frequency Rang :	2400-2483.5MHz
1.5 Gain(peak) :	ANT A: 4dBi ANT B: 4dBi

(參照天線規格資料)

3.2. 結果判定

其發射天線之方向性增益低於 6dBi，因此無需降低峰值輸出功率。

4. 電源線傳導干擾之量測規定

4.1. 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範之 2.3 節，電源傳導干擾之限制要求如下：

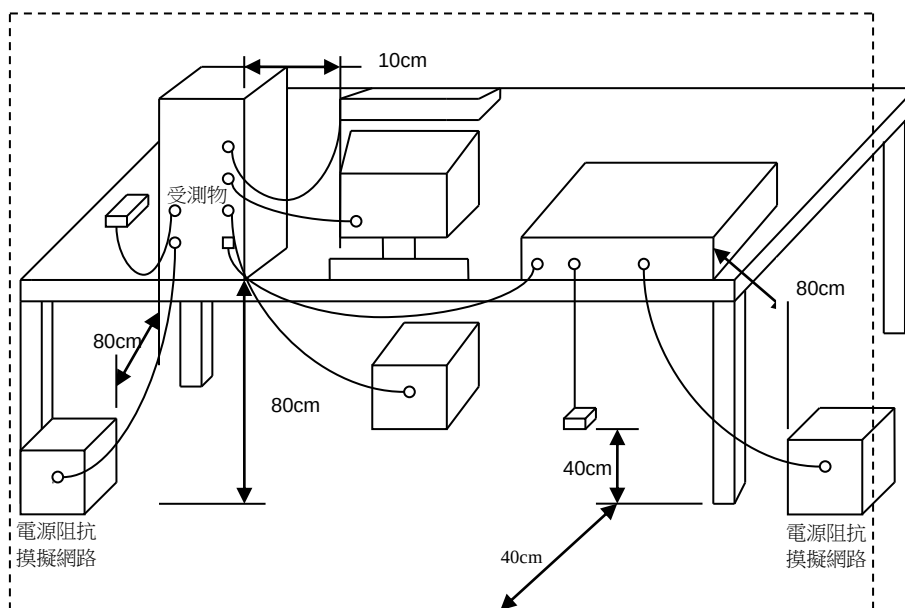
頻率範圍(MHz)	傳導限制值 (dB μ V)	
	準峰值(Quasi-peak)	平均值(Average)
0.15 ~ 0.5	66-56 (註)	56-46 (註)
0.5 ~ 5	56	46
5 ~ 30	60	50

註：隨頻率之對數遞減

4.2. 測試方法

將待測物置於 0.8 米高的非金屬桌面，使其在工作狀態，待測物電源線接至電源線接至電源阻抗穩定網路上，從測試接收機記錄頻率由 0.15MHz 至 30MHz 之間之電源線導放射強度。

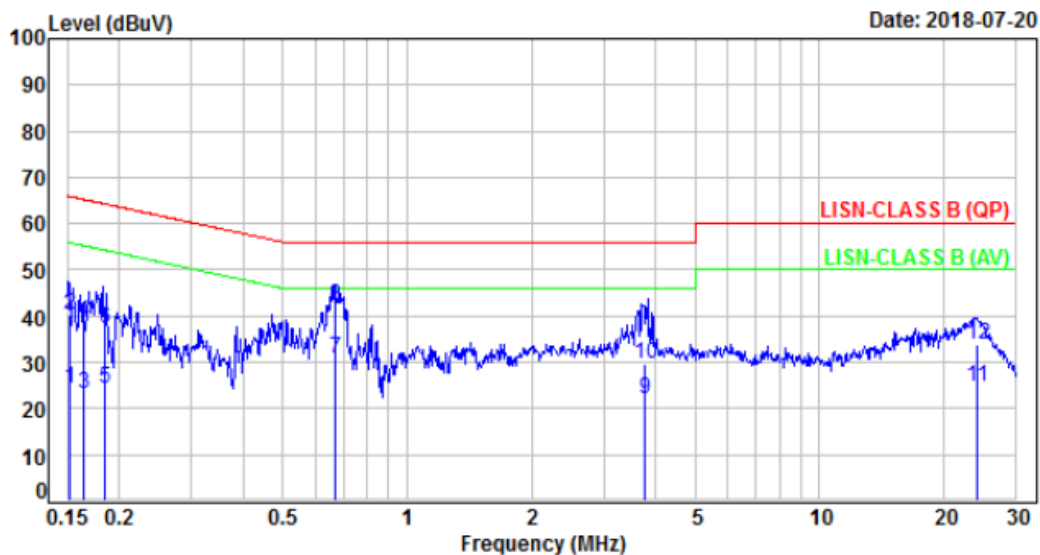
4.3. 傳導干擾之擺設





4.4. 傳導干擾之測試結果及數據

Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: Mode 2	Temperature	: 20°C
Test Date	: Jul. 20, 2018	Humidity	: 40%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.94	14.24	24.18	55.92	-31.74	Average	P
2	0.15	9.94	30.26	40.20	65.92	-25.72	QP	P
3	0.16	9.94	13.09	23.03	55.23	-32.20	Average	P
4	0.16	9.94	28.93	38.87	65.23	-26.36	QP	P
5	0.19	9.94	14.34	24.28	54.23	-29.95	Average	P
6	0.19	9.94	27.35	37.29	64.23	-26.94	QP	P
7	0.67	9.97	20.90	30.87	46.00	-15.13	Average	P
8	0.67	9.97	32.23	42.20	56.00	-13.80	QP	P
9	3.76	10.12	12.05	22.17	46.00	-23.83	Average	P
10	3.76	10.12	19.40	29.52	56.00	-26.48	QP	P
11	24.11	10.60	13.93	24.53	50.00	-25.47	Average	P
12	24.11	10.60	23.06	33.66	60.00	-26.34	QP	P

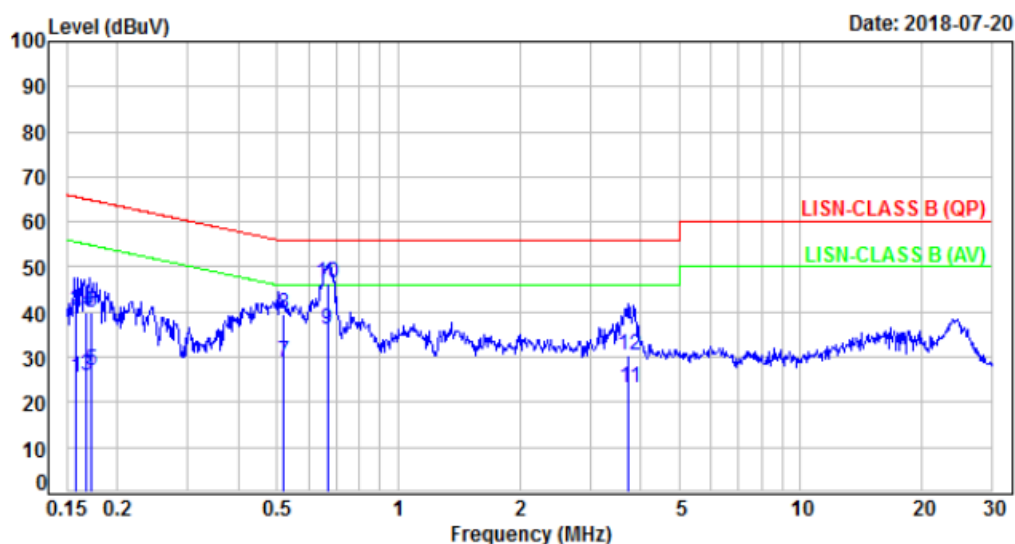
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: Mode 2	Temperature	: 20°C
Test Date	: Jul. 20, 2018	Humidity	: 40%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.16	9.94	15.53	25.47	55.61	-30.14	Average	P
2	0.16	9.94	30.30	40.24	65.61	-25.37	QP	P
3	0.17	9.94	15.73	25.67	55.09	-29.42	Average	P
4	0.17	9.94	30.17	40.11	65.09	-24.98	QP	P
5	0.17	9.94	16.90	26.84	54.86	-28.02	Average	P
6	0.17	9.94	29.96	39.90	64.86	-24.96	QP	P
7	0.52	9.95	18.76	28.71	46.00	-17.29	Average	P
8	0.52	9.95	29.58	39.53	56.00	-16.47	QP	P
9	0.67	9.97	26.30	36.27	46.00	-9.73	Average	P
10	0.67	9.97	36.29	46.26	56.00	-9.74	QP	P
11	3.75	10.12	12.98	23.10	46.00	-22.90	Average	P
12	3.75	10.12	20.42	30.54	56.00	-25.46	QP	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



5. 輻射之量測規定

5.1. 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.5 節之要求，落於 2.7 節禁用頻段之輻射干擾需符合 2.8 節之一般限制要求：

頻率(MHz)	測試距離(m)	限制值(dB μ V)	限制值(μ V/m)
0.009 – 0.490 (含)	300	67.6 / f(kHz)	2400 / f(kHz)
0.490 (不含) – 1.705 (含)	30	87.6 / f(kHz)	24000 / f(kHz)
1.705(不含) – 30(不含)	30	29.5	30
30 (含) – 88 (含)	3	40.0	100
88(不含) – 216 (含)	3	43.5	150
216(不含) – 960 (含)	3	46.0	200
960(不含)以上	3	54.0	500

5.2. 測試方法

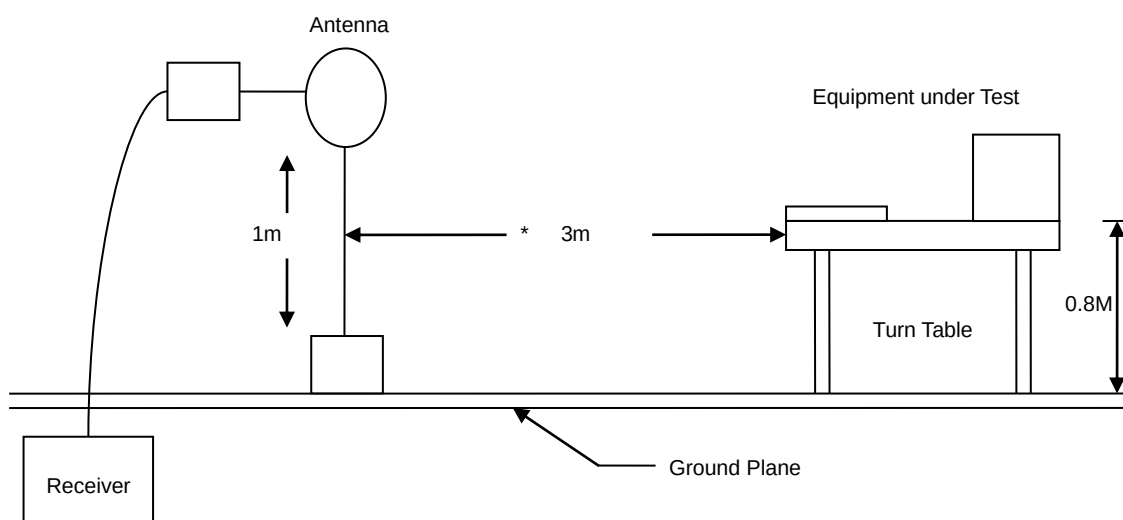
將待測物置於 0.8 米(Below 1G) & 1.5 米(Above 1G)高的非金屬桌面，使其在測試模式狀態，且設定為高、中、低各頻道產生最高峰值輸出功率的傳輸速率，接收天線置於 3 米外，且桌面要 360 度旋轉，另外接收天線也要從 1 米至 4 米升降變化，接收天線置於水平、垂直極向各執行測試一次。待測物若為手持式則分別要以三軸相放置，並分別測試以找出最大輻射電場強度。

備註：

For Below 1G 若待測物之輻射峰值低於限制值 6dB 以上，則將終止測試，並以峰值之讀值作為報告之記錄；反之，若無 6dB 餘裕範圍之輻射，則每一訊號皆以準峰值之測試方法量測，並記錄於報告之中

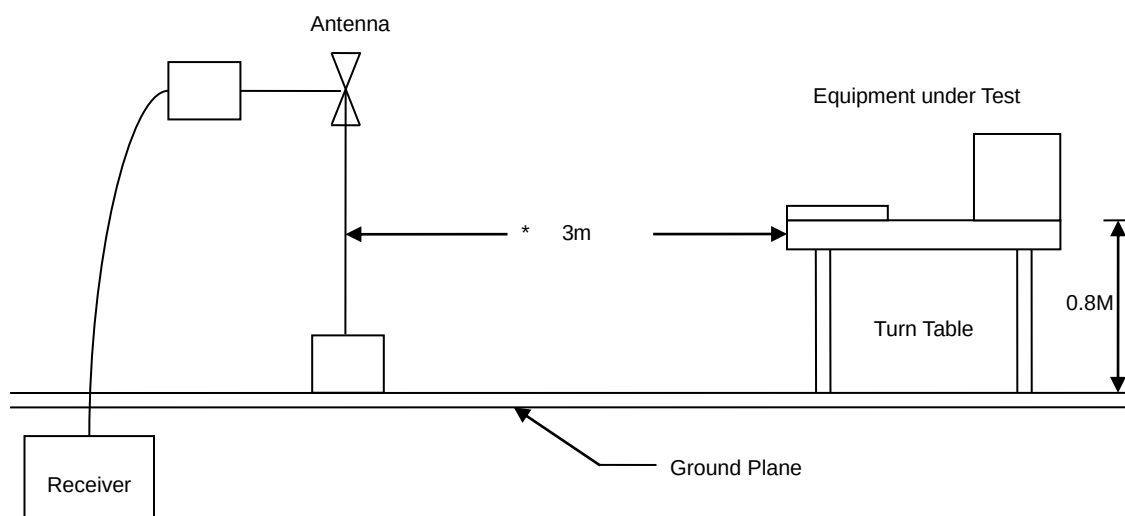
5.3. 輻射場地之擺設

Below 30MHz test setup

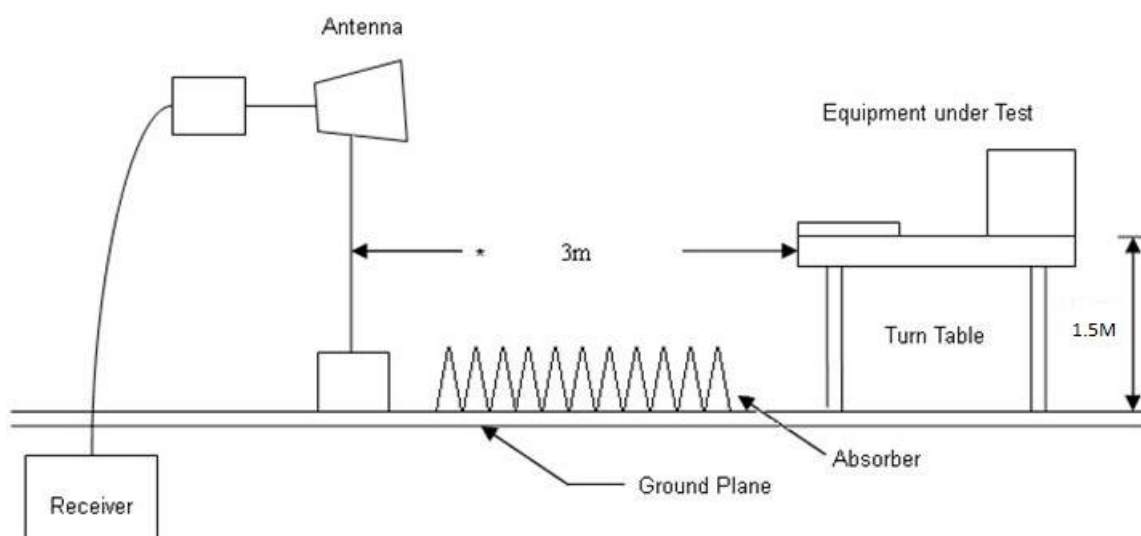




30MHz- 1GHz Test Setup



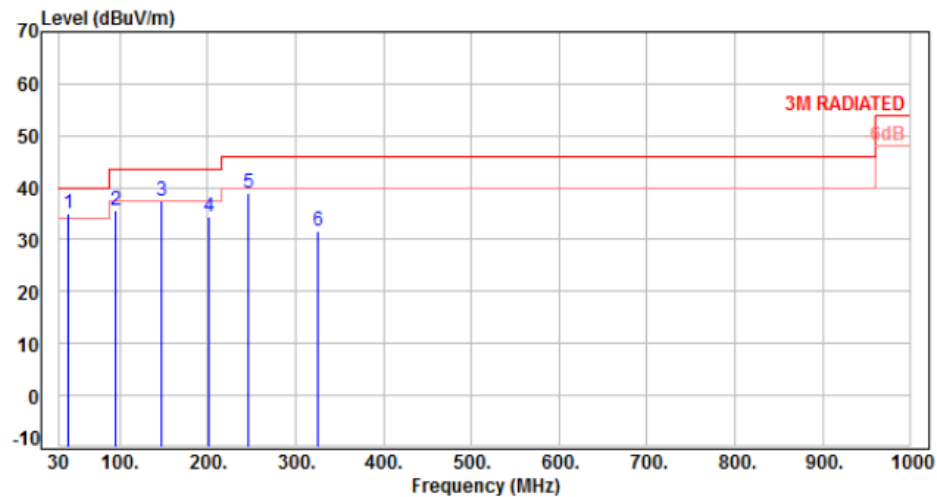
Above 1GHz Test Setup





5.4. 輻射之測試結果及數據 (30MHz ~ 1GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2	Temperature	: 23°C
Test Date	: Jul. 27, 2018	Humidity	: 62%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	40.67	-11.07	46.19	35.12	40.00	-4.88	Peak	400	0	P
2	94.99	-16.31	51.92	35.61	43.50	-7.89	Peak	400	0	P
3	147.37	-11.14	48.46	37.32	43.50	-6.18	Peak	400	0	P
4	200.72	-13.03	47.58	34.55	43.50	-8.95	Peak	400	0	P
5	246.31	-11.69	50.61	38.92	46.00	-7.08	Peak	400	0	P
6	324.88	-9.22	40.90	31.68	46.00	-14.32	Peak	400	0	P

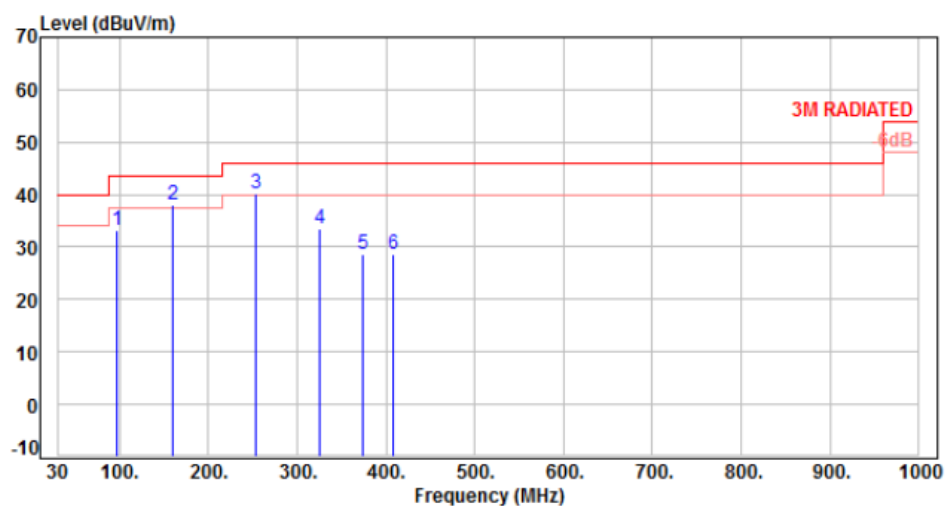
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2	Temperature	: 23°C
Test Date	: Jul. 27, 2018	Humidity	: 62%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	96.93	-16.15	49.32	33.17	43.50	-10.33	Peak	100	0	P
2	159.98	-10.84	48.91	38.07	43.50	-5.43	Peak	100	0	P
3	254.07	-11.54	51.67	40.13	46.00	-5.87	Peak	100	0	P
4	324.88	-9.22	42.72	33.50	46.00	-12.50	Peak	100	0	P
5	374.35	-7.86	36.54	28.68	46.00	-17.32	Peak	100	0	P
6	407.33	-6.91	35.68	28.77	46.00	-17.23	Peak	100	0	P

Note: Level=Reading+Factor

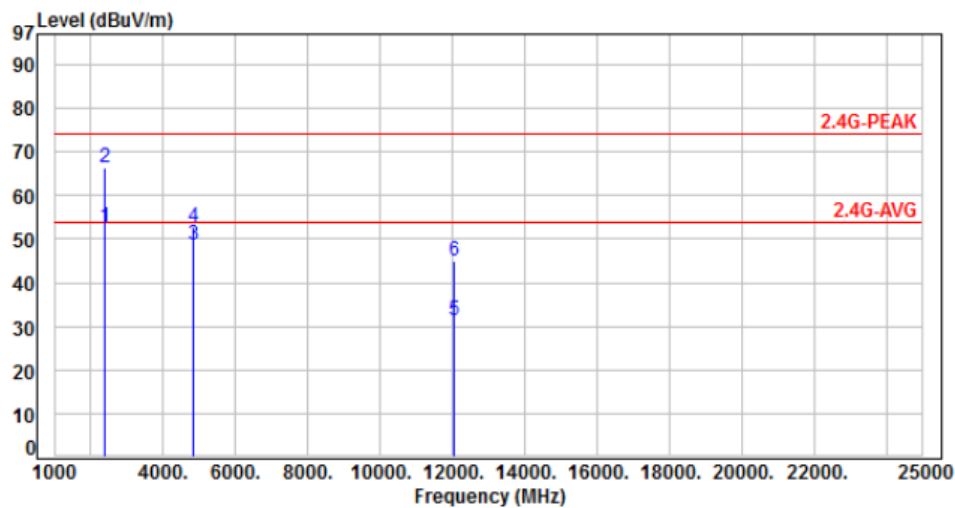
Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



5.5. 輻射之測試結果及數據 (1GHz ~ 25GHz)

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH01	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.66	52.63	54.00	-1.37	Average	274	34	P
2	2390.00	-19.03	85.49	66.46	74.00	-7.54	Peak	274	34	P
3	4824.00	-13.33	62.06	48.73	54.00	-5.27	Average	247	120	P
4	4824.00	-13.33	66.09	52.76	74.00	-21.24	Peak	247	120	P
5	12060.00	-6.06	37.27	31.21	54.00	-22.79	Average	100	193	P
6	12060.00	-6.06	50.92	44.86	74.00	-29.14	Peak	100	193	P

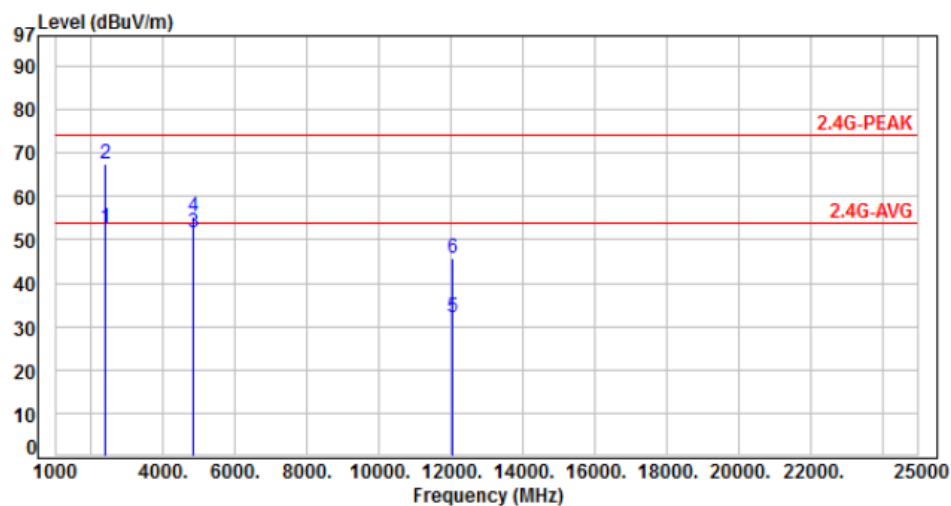
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH01	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.77	52.74	54.00	-1.26	Average	320	284	P
2	2390.00	-19.03	86.66	67.63	74.00	-6.37	Peak	320	284	P
3	4824.00	-13.33	65.13	51.80	54.00	-2.20	Average	262	358	P
4	4824.00	-13.33	68.57	55.24	74.00	-18.76	Peak	262	358	P
5	12060.00	-6.06	38.29	32.23	54.00	-21.77	Average	100	314	P
6	12060.00	-6.06	51.78	45.72	74.00	-28.28	Peak	100	314	P

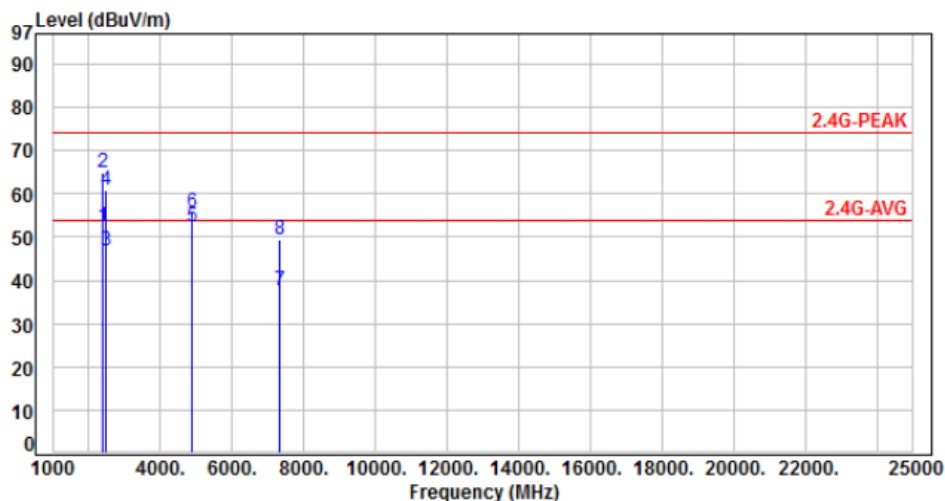
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.39	52.36	54.00	-1.64	Average	232	307	P
2	2390.00	-19.03	84.10	65.07	74.00	-8.93	Peak	232	307	P
3	2483.50	-18.81	65.52	46.71	54.00	-7.29	Average	230	302	P
4	2483.50	-18.81	79.58	60.77	74.00	-13.23	Peak	230	302	P
5	4874.00	-13.24	65.51	52.27	54.00	-1.73	Average	290	108	P
6	4874.00	-13.24	68.81	55.57	74.00	-18.43	Peak	290	108	P
7	7311.00	-10.19	47.67	37.48	54.00	-16.52	Average	100	316	P
8	7311.00	-10.19	59.68	49.49	74.00	-24.51	Peak	100	316	P

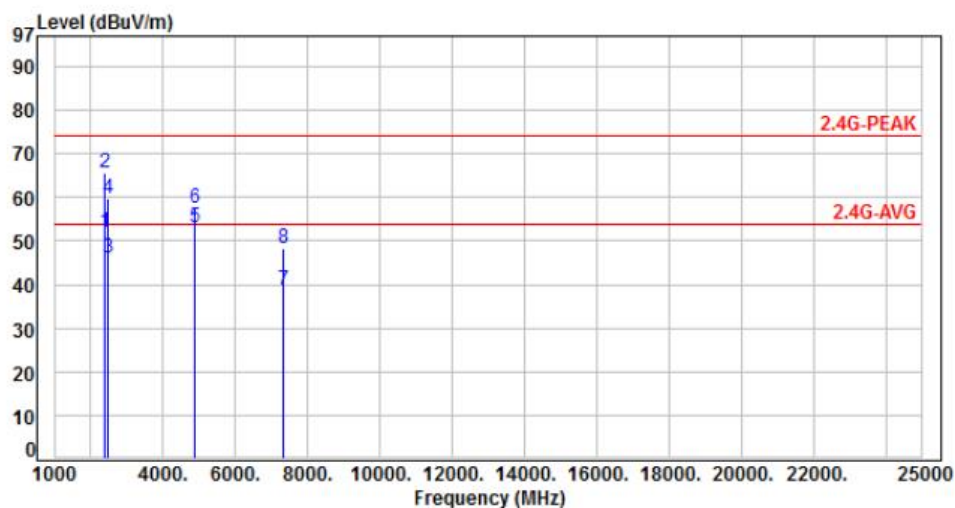
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.09	52.06	54.00	-1.94	Average	349	285	P
2	2390.00	-19.03	84.78	65.75	74.00	-8.25	Peak	349	285	P
3	2483.50	-18.81	64.93	46.12	54.00	-7.88	Average	268	306	P
4	2483.50	-18.81	78.73	59.92	74.00	-14.08	Peak	268	306	P
5	4874.00	-13.24	66.23	52.99	54.00	-1.01	Average	225	349	P
6	4874.00	-13.24	70.84	57.60	74.00	-16.40	Peak	225	349	P
7	7311.00	-10.19	48.81	38.62	54.00	-15.38	Average	100	282	P
8	7311.00	-10.19	58.40	48.21	74.00	-25.79	Peak	100	282	P

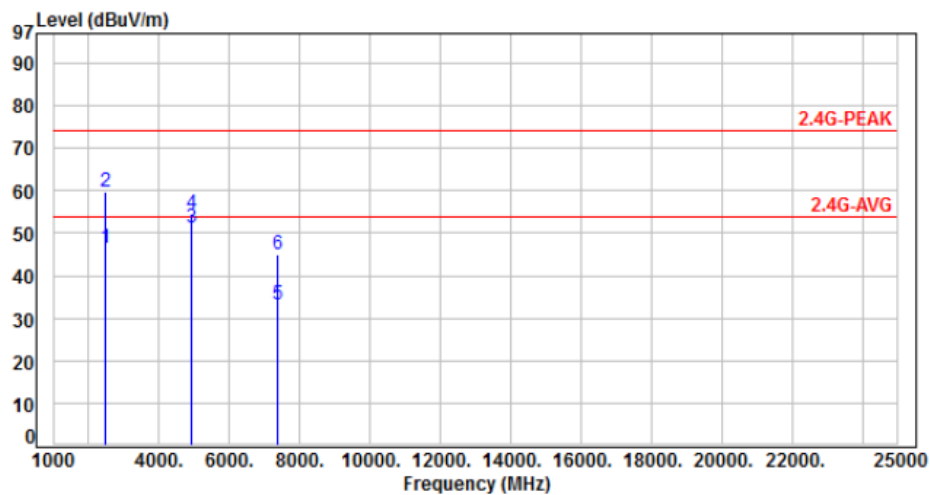
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	65.40	46.59	54.00	-7.41	Average	327	294	P
2	2483.50	-18.81	78.60	59.79	74.00	-14.21	Peak	327	294	P
3	4924.00	-13.14	64.36	51.22	54.00	-2.78	Average	252	119	P
4	4924.00	-13.14	67.76	54.62	74.00	-19.38	Peak	252	119	P
5	7386.00	-10.01	43.15	33.14	54.00	-20.86	Average	100	147	P
6	7386.00	-10.01	54.83	44.82	74.00	-29.18	Peak	100	147	P

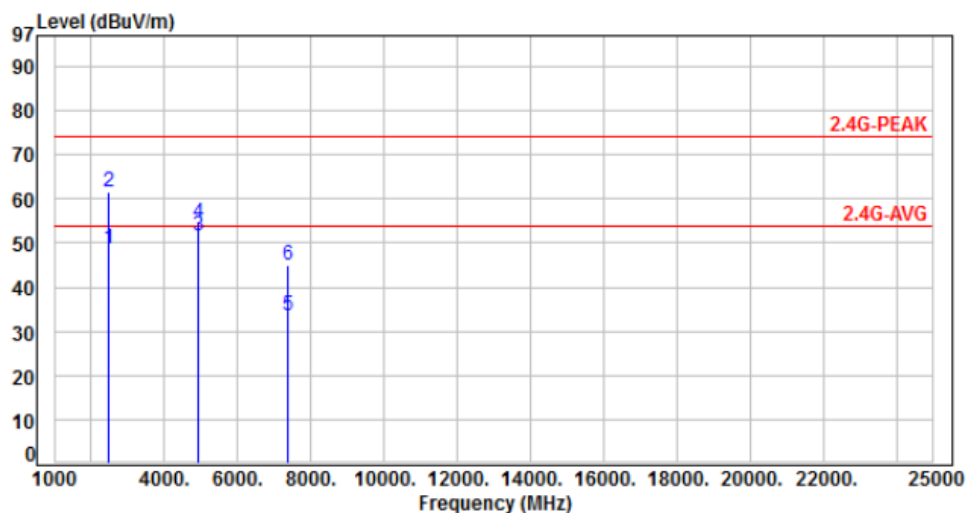
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	67.49	48.68	54.00	-5.32	Average	386	160	P
2	2483.50	-18.81	80.33	61.52	74.00	-12.48	Peak	386	160	P
3	4924.00	-13.14	64.71	51.57	54.00	-2.43	Average	216	358	P
4	4924.00	-13.14	67.81	54.67	74.00	-19.33	Peak	216	358	P
5	7386.00	-10.01	43.68	33.67	54.00	-20.33	Average	289	210	P
6	7386.00	-10.01	55.17	45.16	74.00	-28.84	Peak	289	210	P

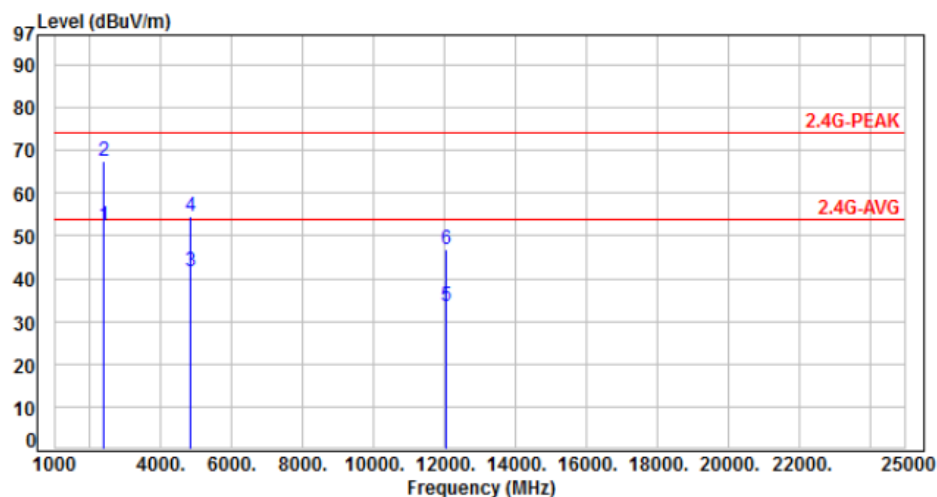
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH01	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.41	52.38	54.00	-1.62	Average	100	207	P
2	2390.00	-19.03	86.64	67.61	74.00	-6.39	Peak	100	207	P
3	4824.00	-13.33	54.86	41.53	54.00	-12.47	Average	254	128	P
4	4824.00	-13.33	67.82	54.49	74.00	-19.51	Peak	254	128	P
5	12060.00	-6.06	39.48	33.42	54.00	-20.58	Average	100	194	P
6	12060.00	-6.06	52.78	46.72	74.00	-27.28	Peak	100	194	P

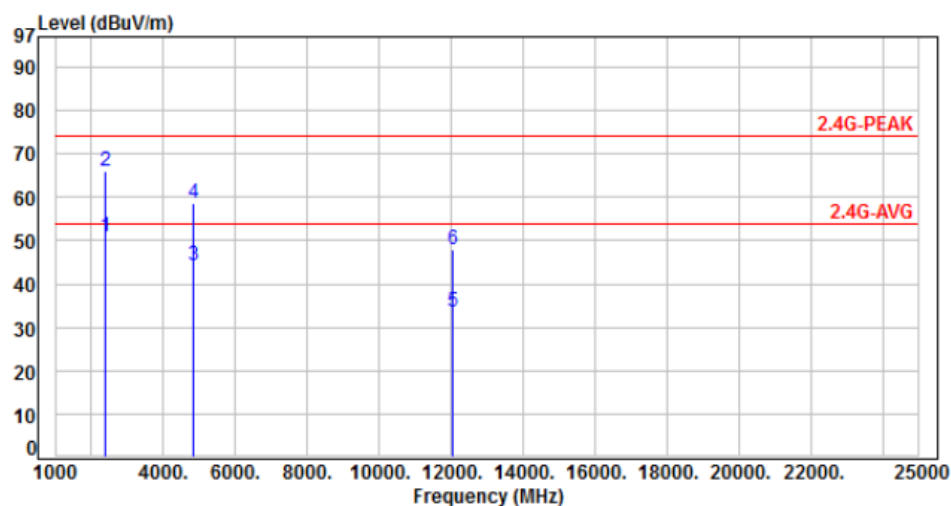
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH01	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	69.94	50.91	54.00	-3.09	Average	100	250	P
2	2390.00	-19.03	85.15	66.12	74.00	-7.88	Peak	100	250	P
3	4824.00	-13.33	57.66	44.33	54.00	-9.67	Average	213	359	P
4	4824.00	-13.33	71.84	58.51	74.00	-15.49	Peak	213	359	P
5	12060.00	-6.06	39.73	33.67	54.00	-20.33	Average	102	321	P
6	12060.00	-6.06	53.92	47.86	74.00	-26.14	Peak	102	321	P

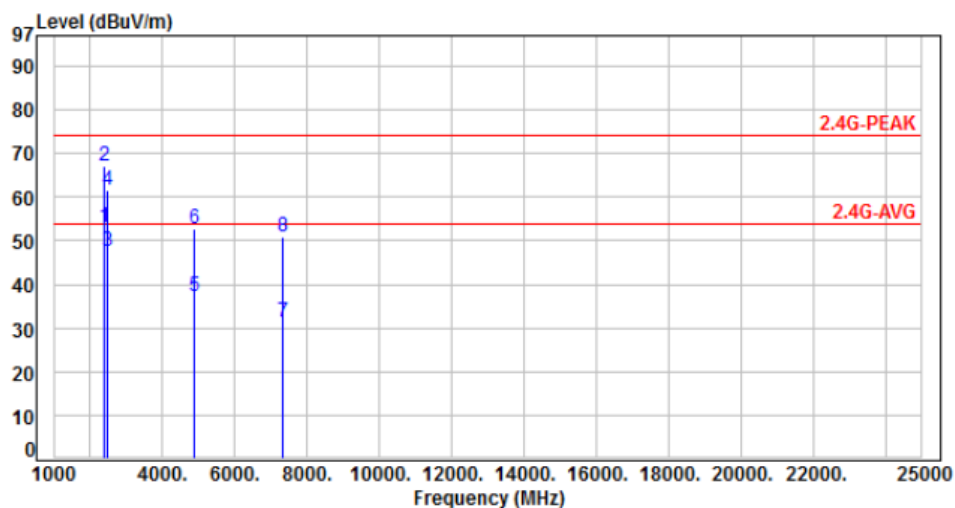
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	72.06	53.03	54.00	-0.97	Average	242	360	P
2	2390.00	-19.03	86.13	67.10	74.00	-6.90	Peak	242	360	P
3	2483.50	-18.81	66.44	47.63	54.00	-6.37	Average	286	359	P
4	2483.50	-18.81	80.27	61.46	74.00	-12.54	Peak	286	359	P
5	4874.00	-13.24	50.36	37.12	54.00	-16.88	Average	259	121	P
6	4874.00	-13.24	66.13	52.89	74.00	-21.11	Peak	259	121	P
7	7311.00	-10.19	41.68	31.49	54.00	-22.51	Average	100	321	P
8	7311.00	-10.19	60.93	50.74	74.00	-23.26	Peak	100	321	P

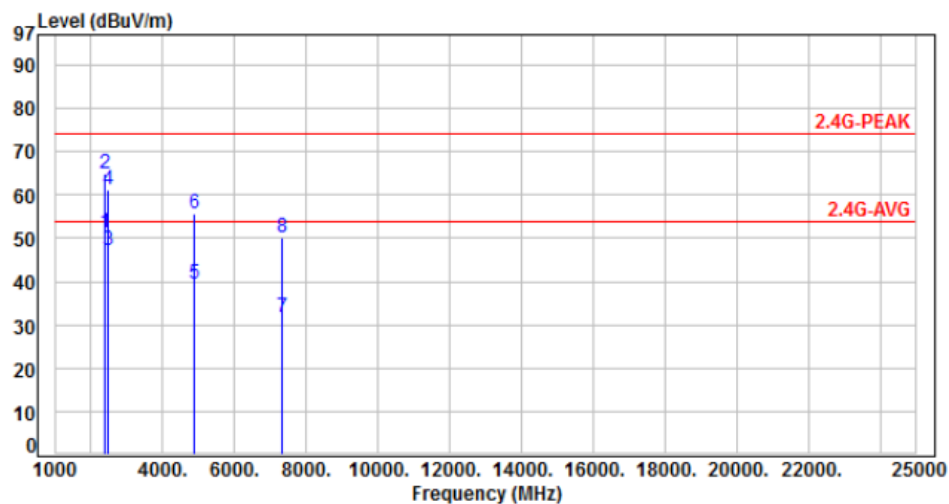
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.36	51.33	54.00	-2.67	Average	327	291	P
2	2390.00	-19.03	83.93	64.90	74.00	-9.10	Peak	327	291	P
3	2483.50	-18.81	65.87	47.06	54.00	-6.94	Average	279	290	P
4	2483.50	-18.81	79.89	61.08	74.00	-12.92	Peak	279	290	P
5	4874.00	-13.24	52.76	39.52	54.00	-14.48	Average	226	360	P
6	4874.00	-13.24	68.78	55.54	74.00	-18.46	Peak	226	360	P
7	7311.00	-10.19	41.88	31.69	54.00	-22.31	Average	100	283	P
8	7311.00	-10.19	60.27	50.08	74.00	-23.92	Peak	100	283	P

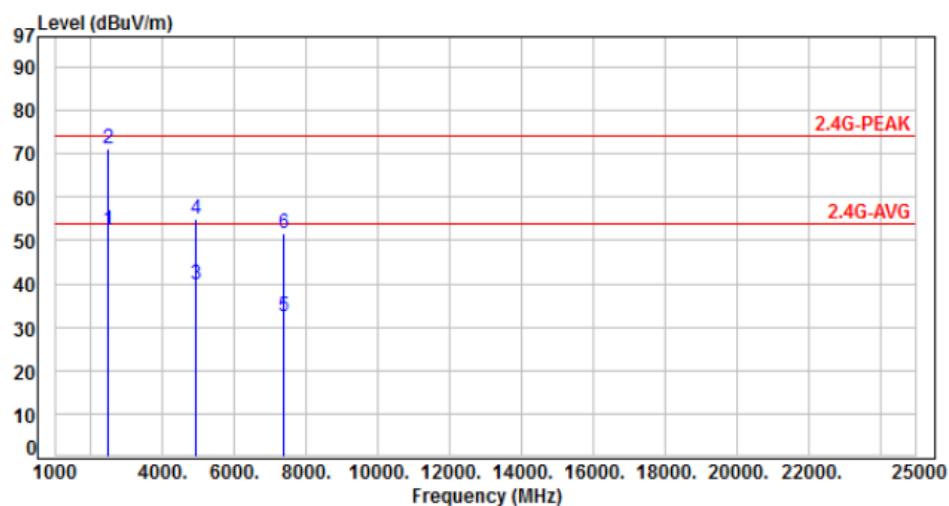
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.17	52.36	54.00	-1.64	Average	101	210	P
2	2483.50	-18.81	89.94	71.13	74.00	-2.87	Peak	101	210	P
3	4924.00	-13.14	52.84	39.70	54.00	-14.30	Average	258	114	P
4	4924.00	-13.14	67.92	54.78	74.00	-19.22	Peak	258	114	P
5	7386.00	-10.01	42.34	32.33	54.00	-21.67	Average	100	278	P
6	7386.00	-10.01	61.75	51.74	74.00	-22.26	Peak	100	278	P

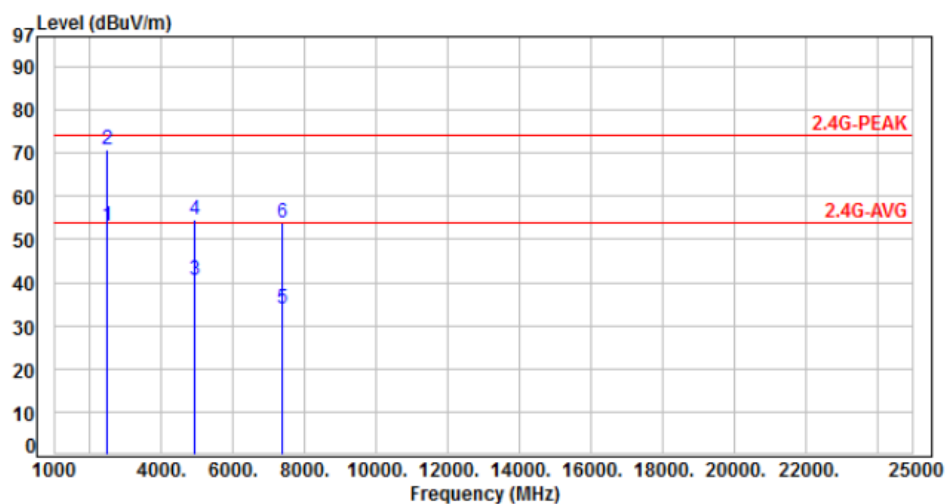
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.87	53.06	54.00	-0.94	Average	108	249	P
2	2483.50	-18.81	89.68	70.87	74.00	-3.13	Peak	108	249	P
3	4924.00	-13.14	53.73	40.59	54.00	-13.41	Average	214	360	P
4	4924.00	-13.14	67.62	54.48	74.00	-19.52	Peak	214	360	P
5	7386.00	-10.01	43.78	33.77	74.00	-40.23	Peak	207	121	P
6	7386.00	-10.01	63.92	53.91	74.00	-20.09	Peak	207	121	P

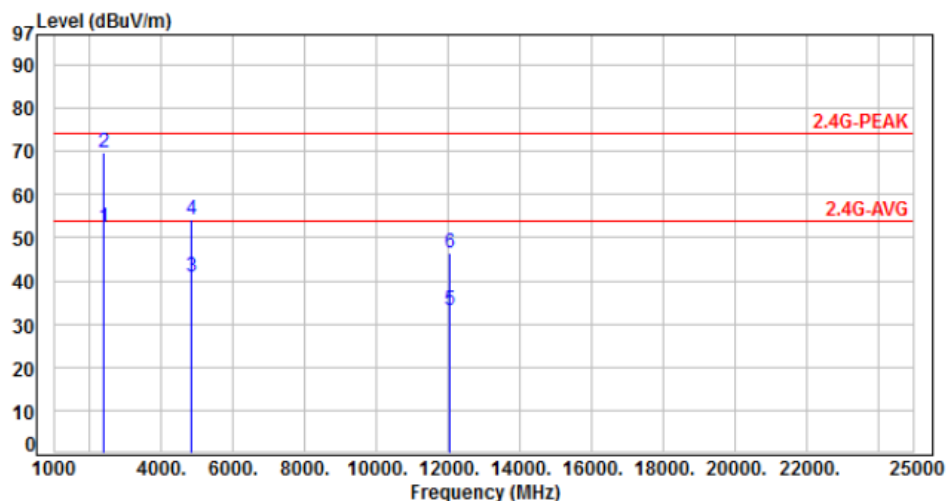
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH01	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.55	52.52	54.00	-1.48	Average	127	210	P
2	2390.00	-19.03	88.80	69.77	74.00	-4.23	Peak	127	210	P
3	4824.00	-13.33	54.36	41.03	54.00	-12.97	Average	259	292	P
4	4824.00	-13.33	67.65	54.32	74.00	-19.68	Peak	259	292	P
5	12060.00	-6.06	39.34	33.28	54.00	-20.72	Average	103	188	P
6	12060.00	-6.06	52.46	46.40	74.00	-27.60	Peak	103	188	P

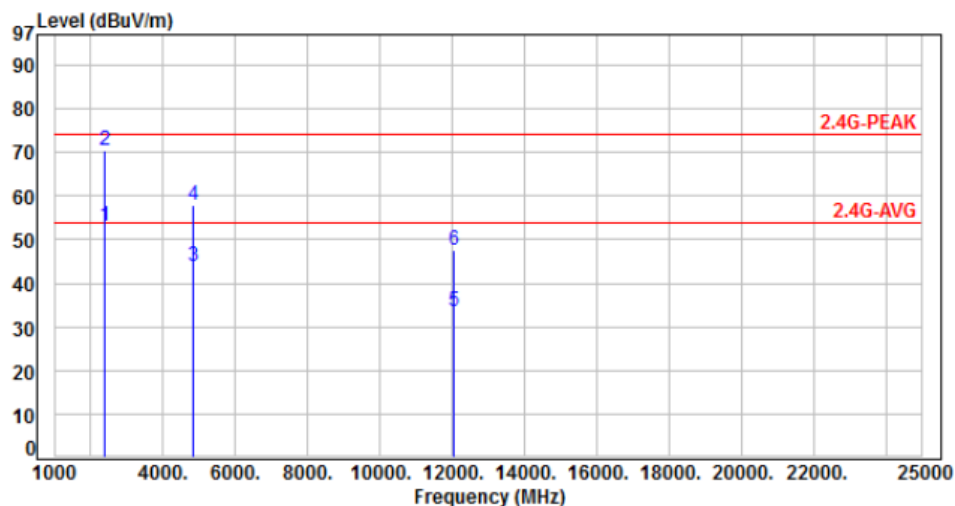
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH01	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	72.01	52.98	54.00	-1.02	Average	113	251	P
2	2390.00	-19.03	89.39	70.36	74.00	-3.64	Peak	113	251	P
3	4824.00	-13.33	57.33	44.00	54.00	-10.00	Average	100	211	P
4	4824.00	-13.33	71.30	57.97	74.00	-16.03	Peak	100	211	P
5	12060.00	-6.06	39.51	33.45	54.00	-20.55	Average	100	316	P
6	12060.00	-6.06	53.70	47.64	74.00	-26.36	Peak	100	316	P

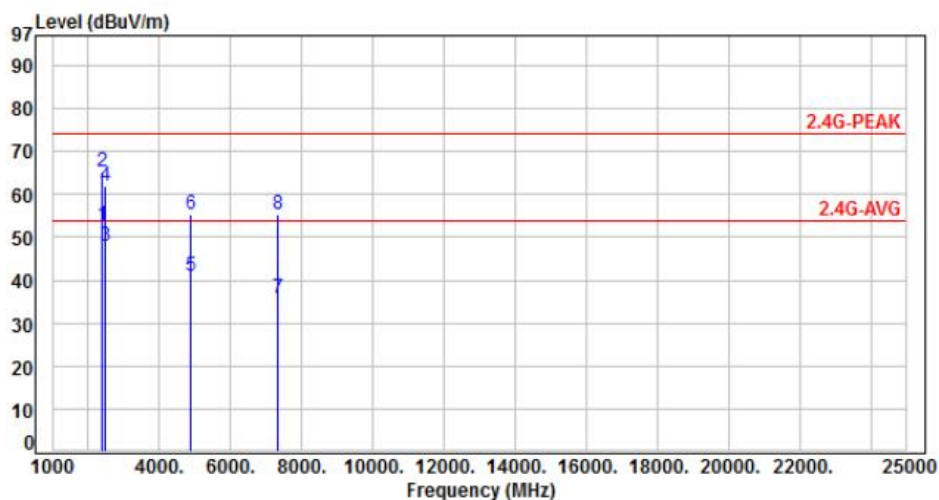
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH06	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	71.60	52.57	54.00	-1.43	Average	238	344	P
2	2390.00	-19.03	84.34	65.31	74.00	-8.69	Peak	238	344	P
3	2483.50	-18.81	66.61	47.80	54.00	-6.20	Average	330	355	P
4	2483.50	-18.81	80.95	62.14	74.00	-11.86	Peak	330	355	P
5	4874.00	-13.24	54.21	40.97	54.00	-13.03	Average	292	103	P
6	4874.00	-13.24	68.58	55.34	74.00	-18.66	Peak	292	103	P
7	7311.00	-10.19	45.91	35.72	54.00	-18.28	Average	103	317	P
8	7311.00	-10.19	65.52	55.33	74.00	-18.67	Peak	103	317	P

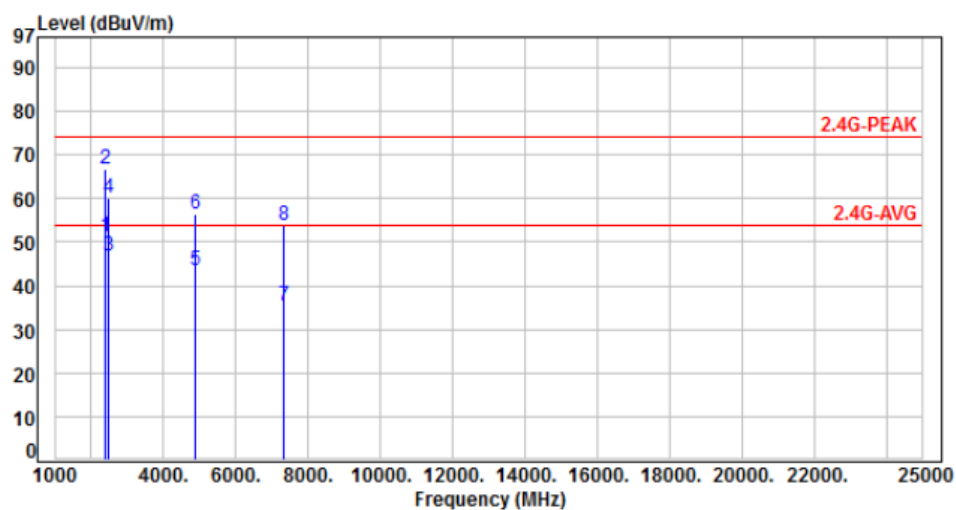
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH06	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.27	51.24	54.00	-2.76	Average	330	289	P
2	2390.00	-19.03	85.61	66.58	74.00	-7.42	Peak	330	289	P
3	2483.50	-18.81	65.65	46.84	54.00	-7.16	Average	277	300	P
4	2483.50	-18.81	78.86	60.05	74.00	-13.95	Peak	277	300	P
5	4874.00	-13.24	56.81	43.57	54.00	-10.43	Average	189	360	P
6	4874.00	-13.24	69.83	56.59	74.00	-17.41	Peak	189	360	P
7	7311.00	-10.19	45.61	35.42	54.00	-18.58	Average	116	288	P
8	7311.00	-10.19	64.18	53.99	74.00	-20.01	Peak	116	288	P

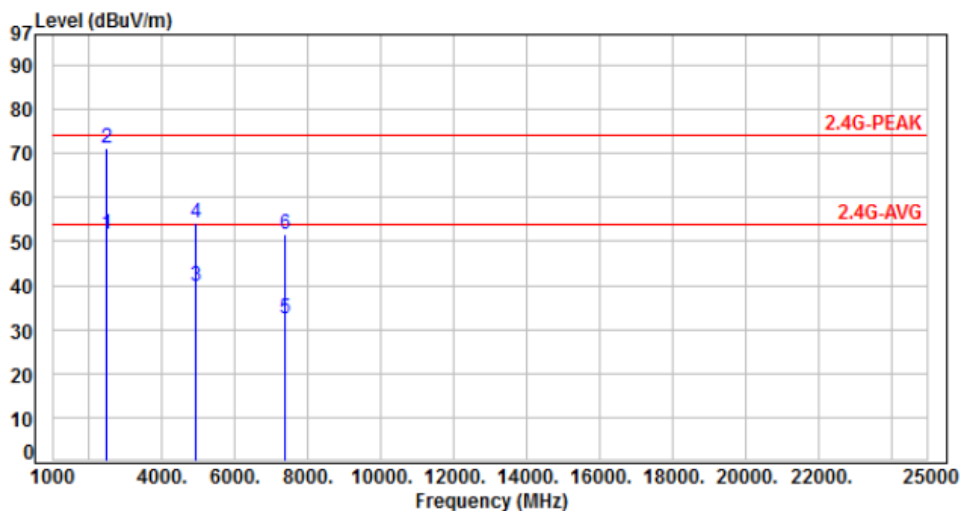
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	70.51	51.70	54.00	-2.30	Average	100	213	P
2	2483.50	-18.81	90.09	71.28	74.00	-2.72	Peak	100	213	P
3	4924.00	-13.14	52.91	39.77	54.00	-14.23	Average	293	114	P
4	4924.00	-13.14	67.44	54.30	74.00	-19.70	Peak	293	114	P
5	7386.00	-10.01	42.30	32.29	54.00	-21.71	Average	102	289	P
6	7386.00	-10.01	61.66	51.65	74.00	-22.35	Peak	102	289	P

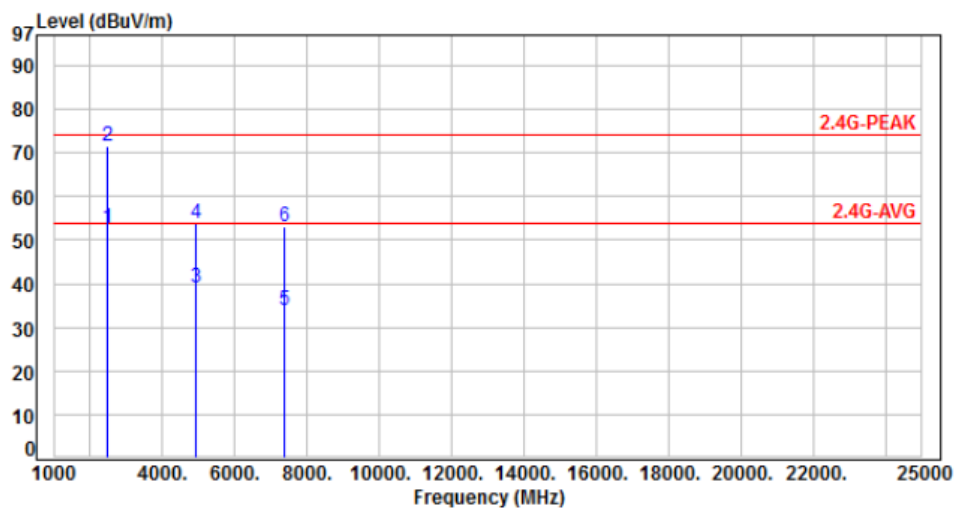
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH11	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.62	52.81	54.00	-1.19	Average	114	249	P
2	2483.50	-18.81	90.22	71.41	74.00	-2.59	Peak	114	249	P
3	4924.00	-13.14	52.06	38.92	54.00	-15.08	Average	192	354	P
4	4924.00	-13.14	66.91	53.77	74.00	-20.23	Peak	192	354	P
5	7386.00	-10.01	43.99	33.98	54.00	-20.02	Average	209	111	P
6	7386.00	-10.01	63.16	53.15	74.00	-20.85	Peak	209	111	P

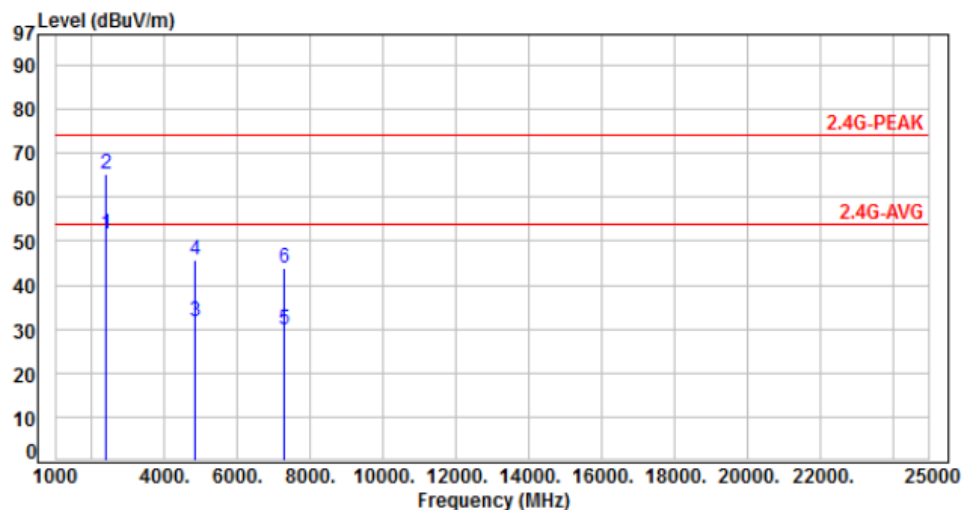
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH03	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.83	51.80	54.00	-2.20	Average	241	209	P
2	2390.00	-19.03	84.36	65.33	74.00	-8.67	Peak	241	209	P
3	4844.00	-13.29	44.96	31.67	54.00	-22.33	Average	276	108	P
4	4844.00	-13.29	59.16	45.87	74.00	-28.13	Peak	276	108	P
5	7266.00	-10.30	40.31	30.01	54.00	-23.99	Average	100	318	P
6	7266.00	-10.30	54.15	43.85	74.00	-30.15	Peak	100	318	P

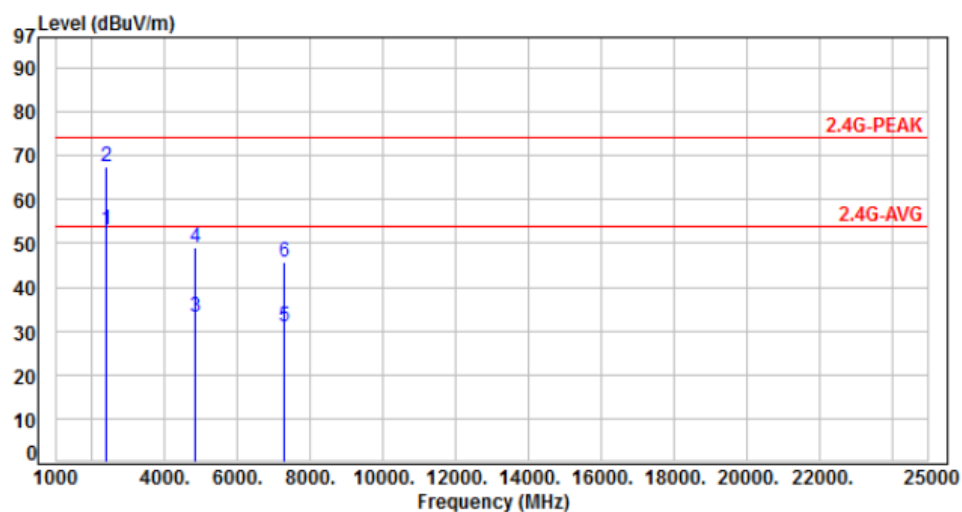
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH03	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	72.19	53.16	54.00	-0.84	Average	110	252	P
2	2390.00	-19.03	86.57	67.54	74.00	-6.46	Peak	110	252	P
3	4844.00	-13.29	46.65	33.36	54.00	-20.64	Average	238	356	P
4	4844.00	-13.29	62.39	49.10	74.00	-24.90	Peak	238	356	P
5	7266.00	-10.30	41.35	31.05	54.00	-22.95	Average	211	116	P
6	7266.00	-10.30	55.95	45.65	74.00	-28.35	Peak	211	116	P

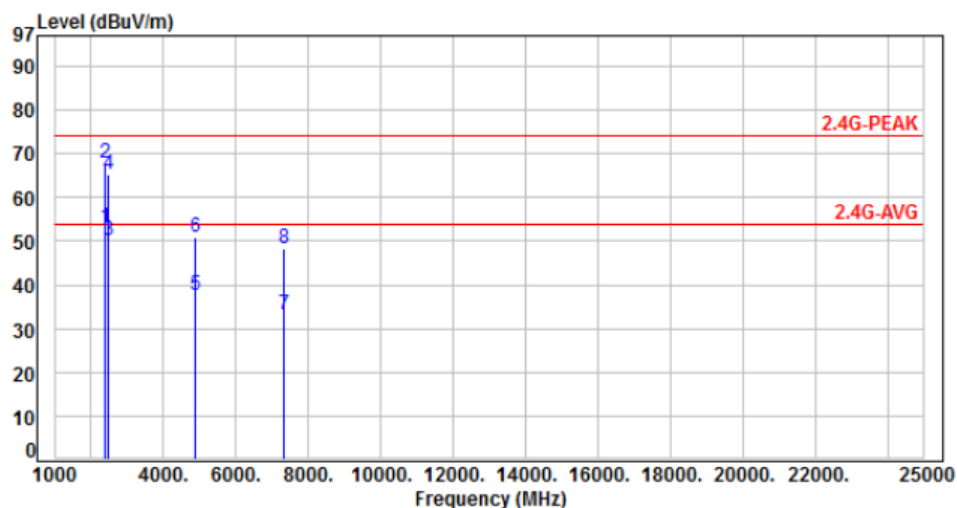
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	72.16	53.13	54.00	-0.87	Average	243	359	P
2	2390.00	-19.03	86.93	67.90	74.00	-6.10	Peak	243	359	P
3	2483.50	-18.81	68.93	50.12	54.00	-3.88	Average	289	347	P
4	2483.50	-18.81	84.23	65.42	74.00	-8.58	Peak	289	347	P
5	4874.00	-13.24	50.71	37.47	54.00	-16.53	Average	275	105	P
6	4874.00	-13.24	64.08	50.84	74.00	-23.16	Peak	275	105	P
7	7311.00	-10.19	43.23	33.04	54.00	-20.96	Average	100	316	P
8	7311.00	-10.19	58.59	48.40	74.00	-25.60	Peak	100	316	P

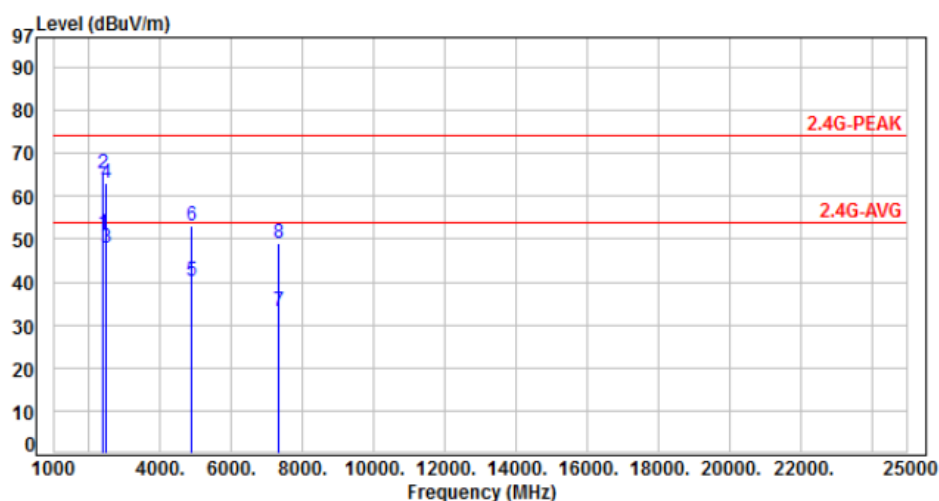
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH06	Temperature	: 24°C
Test Date	: Aug. 03, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-19.03	70.24	51.21	54.00	-2.79	Average	333	290	P
2	2390.00	-19.03	84.45	65.42	74.00	-8.58	Peak	333	290	P
3	2483.50	-18.81	66.82	48.01	54.00	-5.99	Average	279	291	P
4	2483.50	-18.81	81.89	63.08	74.00	-10.92	Peak	279	291	P
5	4874.00	-13.24	53.41	40.17	54.00	-13.83	Average	242	360	P
6	4874.00	-13.24	66.51	53.27	74.00	-20.73	Peak	242	360	P
7	7311.00	-10.19	43.45	33.26	54.00	-20.74	Average	100	280	P
8	7311.00	-10.19	59.17	48.98	74.00	-25.02	Peak	100	280	P

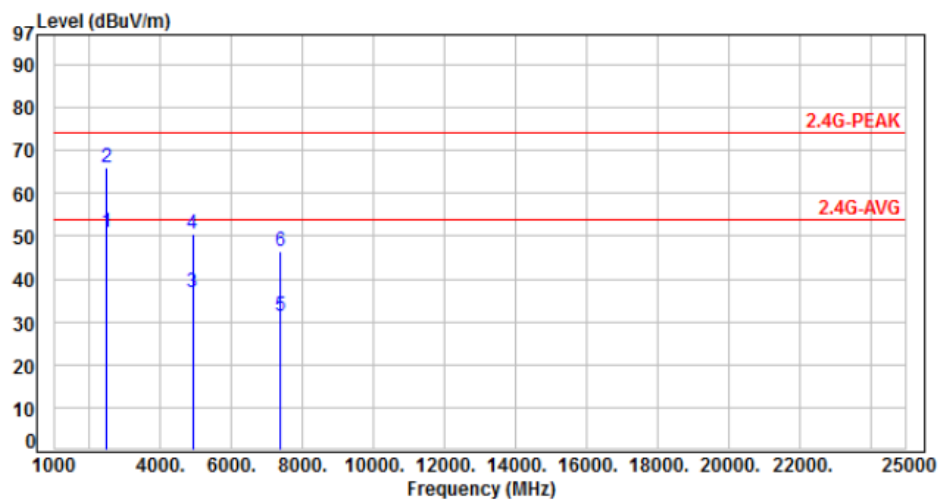
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH09	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	69.74	50.93	54.00	-3.07	Average	121	302	P
2	2483.50	-18.81	84.82	66.01	74.00	-7.99	Peak	121	302	P
3	4904.00	-13.17	49.97	36.80	54.00	-17.20	Average	280	118	P
4	4904.00	-13.17	63.67	50.50	74.00	-23.50	Peak	280	118	P
5	7356.00	-10.07	41.37	31.30	54.00	-22.70	Average	100	324	P
6	7356.00	-10.07	56.56	46.49	74.00	-27.51	Peak	100	324	P

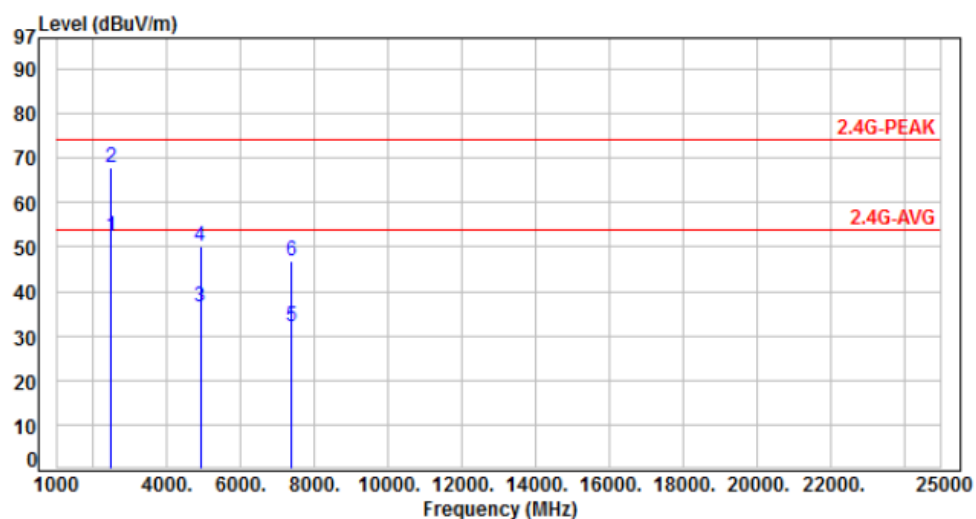
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH09	Temperature	: 24°C
Test Date	: Aug. 04, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-18.81	71.34	52.53	54.00	-1.47	Average	100	227	P
2	2483.50	-18.81	86.57	67.76	74.00	-6.24	Peak	100	227	P
3	4904.00	-13.17	49.71	36.54	54.00	-17.46	Average	231	356	P
4	4904.00	-13.17	63.34	50.17	74.00	-23.83	Peak	231	356	P
5	7356.00	-10.07	42.29	32.22	54.00	-21.78	Average	212	113	P
6	7356.00	-10.07	57.05	46.98	74.00	-27.02	Peak	212	113	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6. On Time, Duty Cycle and Measurement methods

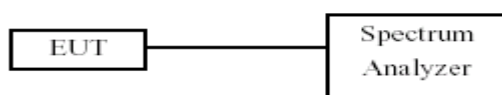
6.1. 適用標準

None; for reporting purposes only.

6.2. 測試方法

KDB 558074 Zero-Span Spectrum Analyzer Method.

6.3. 測試配置



6.4. 測試結果及數據

Temperature: 24°C

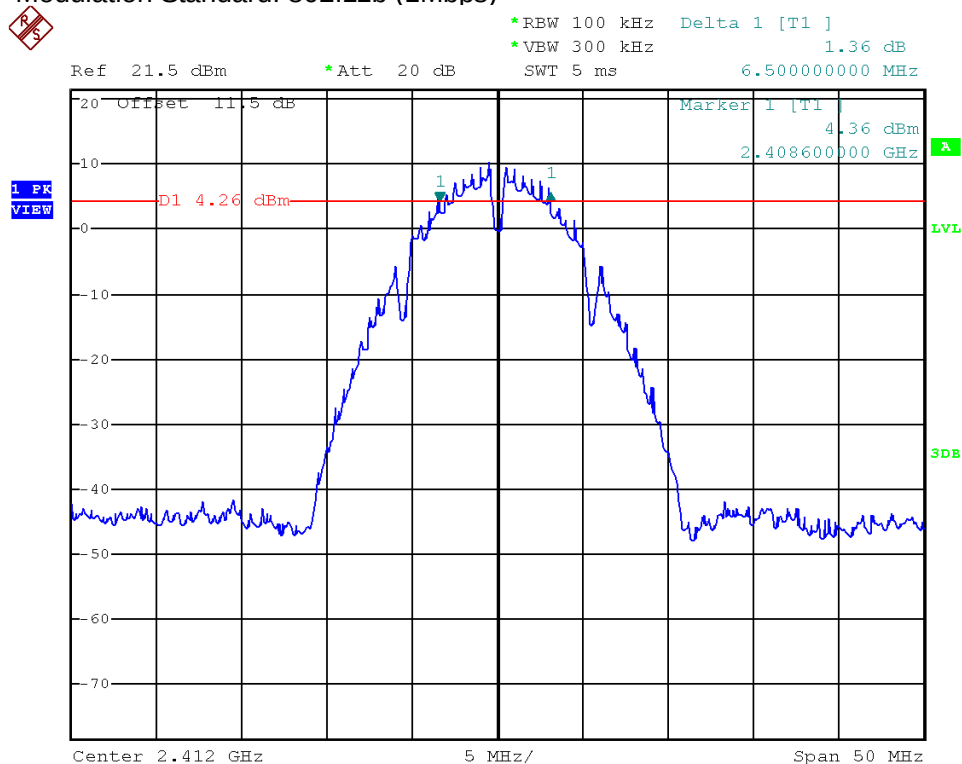
Humidity: 68%

Test Date: Aug. 16, 2017

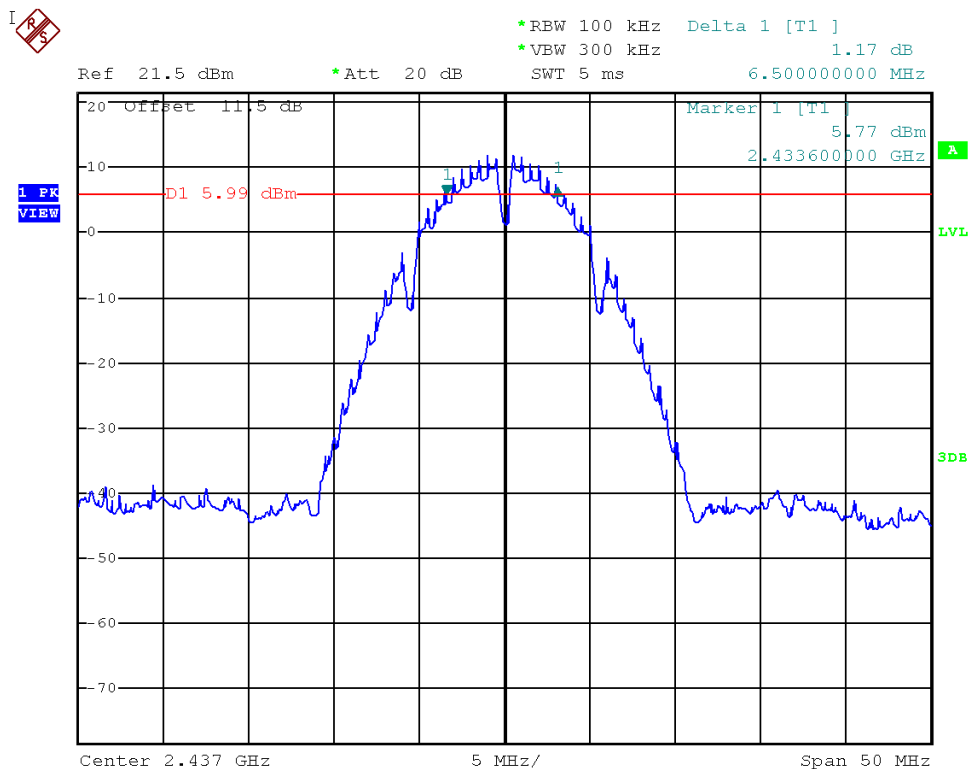
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	100.00	100.00	100.00%
802.11b	100.00	100.00	100.00%
802.11n HT20	100.00	100.00	100.00%
802.11n HT40	100.00	100.00	100.00%



Modulation Standard: 802.11b (1Mbps)

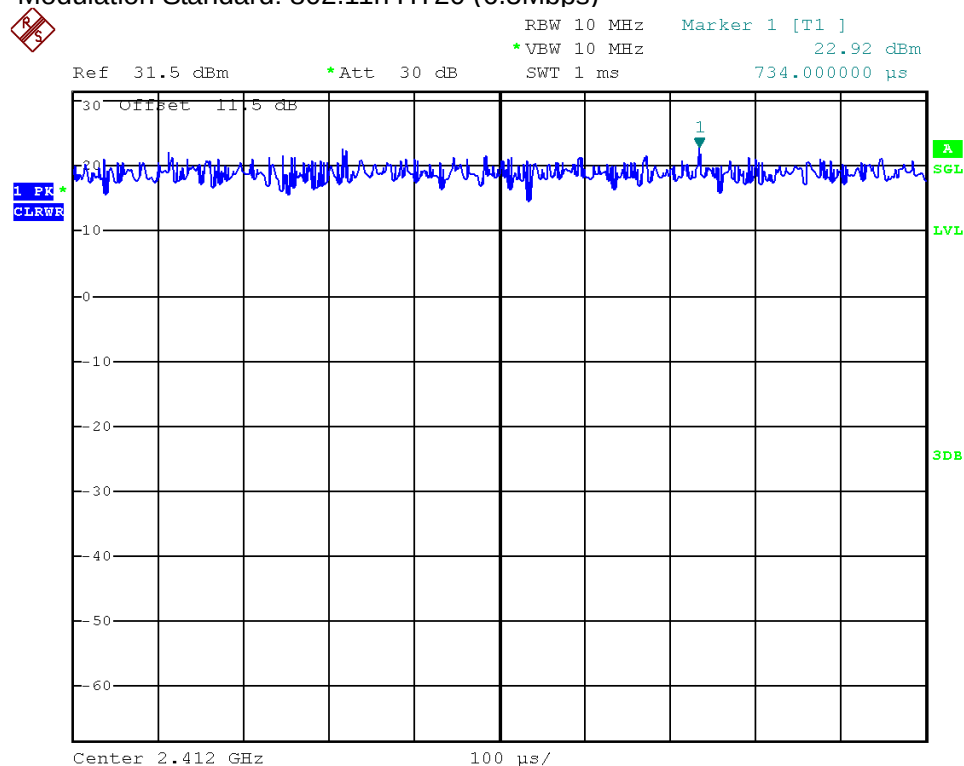


Modulation Standard: 802.11g (6Mbps)

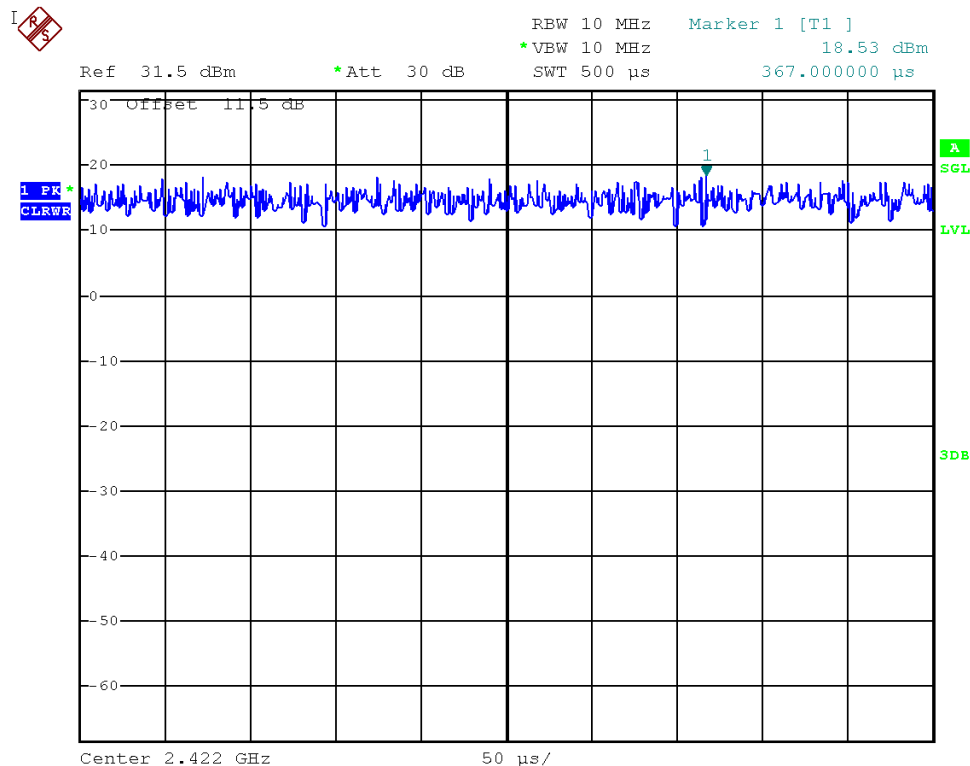




Modulation Standard: 802.11n HT20 (6.5Mbps)



Modulation Standard: 802.11n HT40 (13.5Mbps)





7. 6dB 頻寬之規定

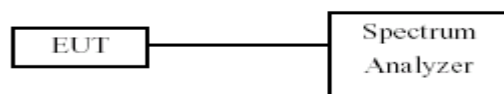
7.1. 適用標準

對使用數位調變技術之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之(2)(A)規定，6dB 頻寬至少應有 500 kHz。

7.2. 測試方法

- 將待測物和儀器相連接。
- 設定儀器解析頻寬 100KHz 和視訊頻寬為 300KHz。
- 量測峰值減去 6 dB 之頻寬並記錄於報告中。

7.3. 測試配置



7.4. 6dB 頻寬之測試結果及數據

Temperature: 24°C

Humidity: 68%

Test Date: Aug. 16, 2017

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
IEEE 802.11b (1Mbps)	1	2412	6.50	6.50	0.5
	6	2437	6.50	6.50	0.5
	11	2462	6.50	6.90	0.5
IEEE 802.11g (6Mbps)	1	2412	16.00	16.00	0.5
	6	2437	16.00	16.00	0.5
	11	2462	15.70	15.70	0.5
IEEE 802.11n HT20 (6.5Mbps)	1	2412	16.60	17.00	0.5
	6	2437	17.30	17.30	0.5
	11	2462	16.00	16.00	0.5
IEEE 802.11n HT40 (13.5Mbps)	3	2422	31.00	31.40	0.5
	6	2437	31.80	31.80	0.5
	9	2452	32.00	32.40	0.5

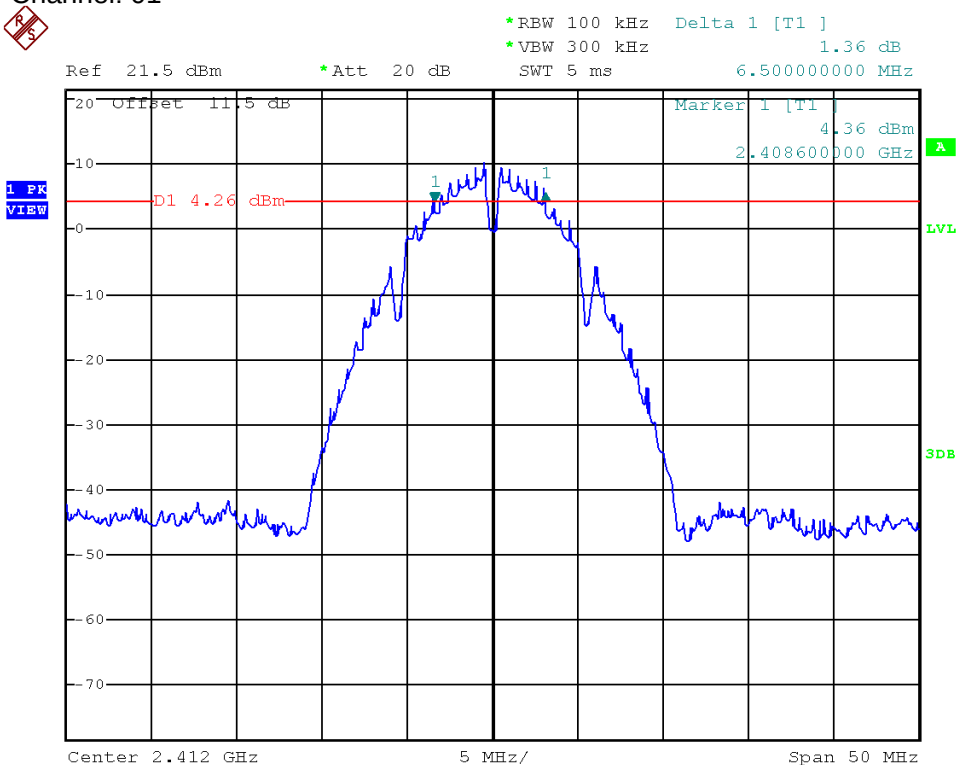
備註：繪圖資料請參考下頁。

7.5. 結果判定

高、中、低頻段的 6dB 頻寬皆大於 500 KHz，合乎標準規定。

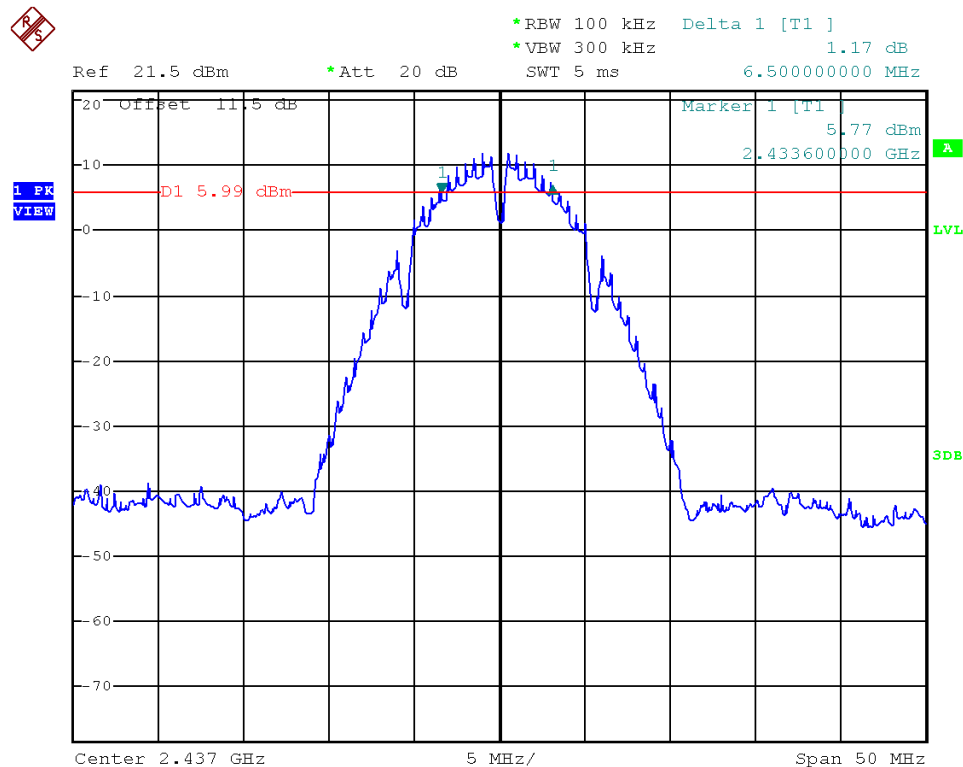


ANT A:
Modulation Standard: 802.11b (1Mbps)
Channel: 01



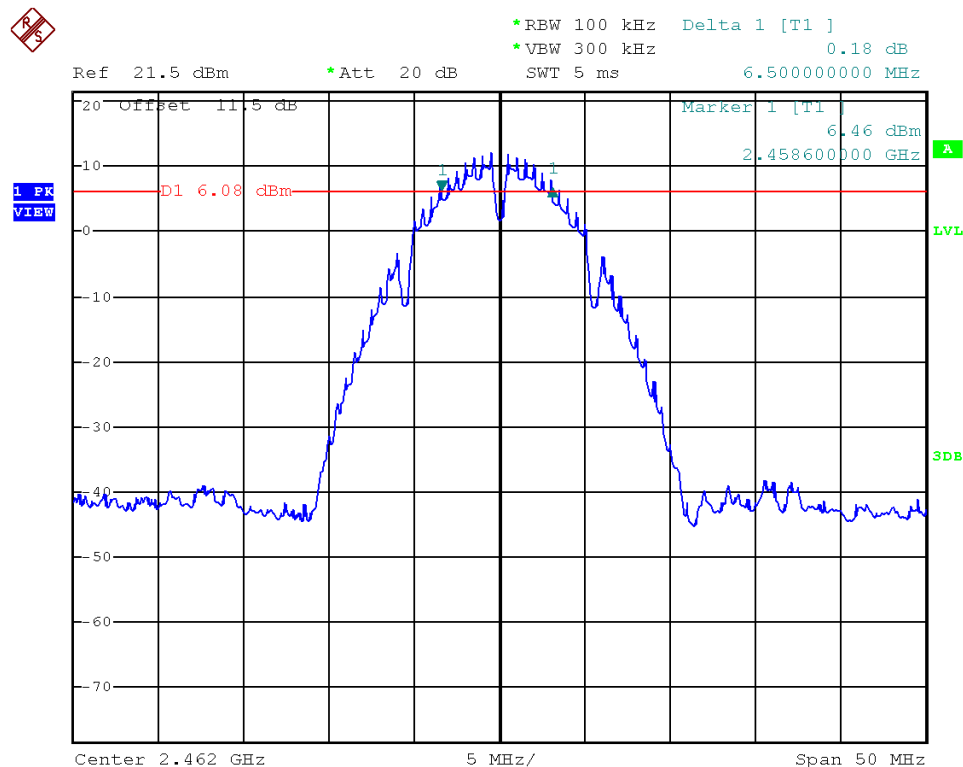
Modulation Standard: 802.11b (1Mbps)
Channel: 06

Date: 2017 14:34:43

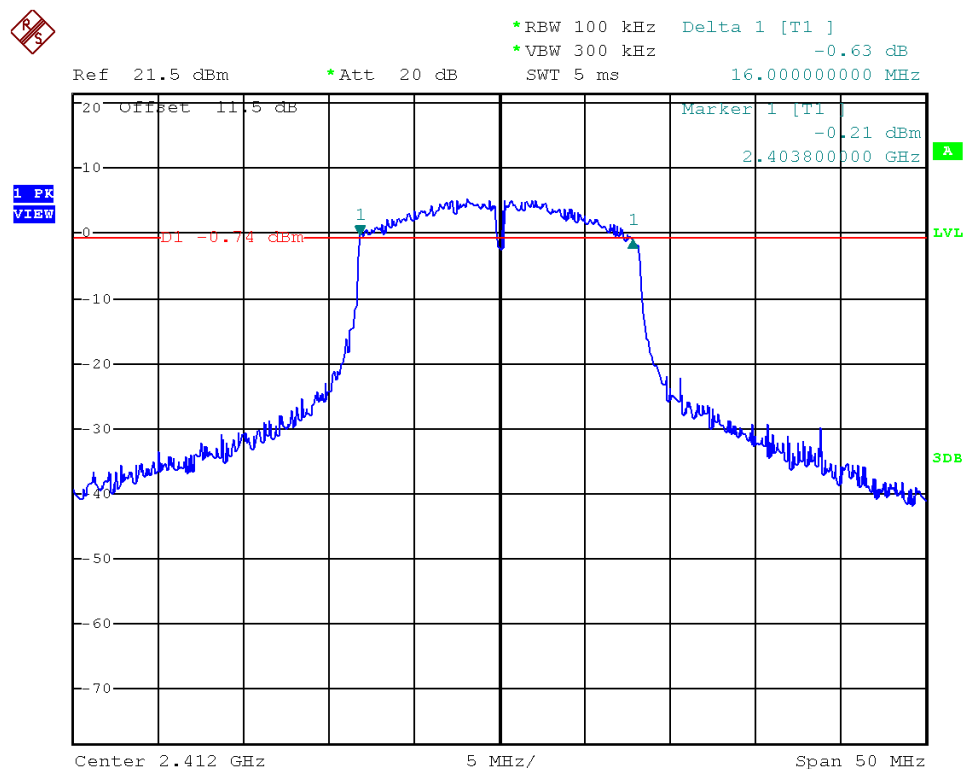




Modulation Standard: 802.11b (1Mbps)
Channel: 11



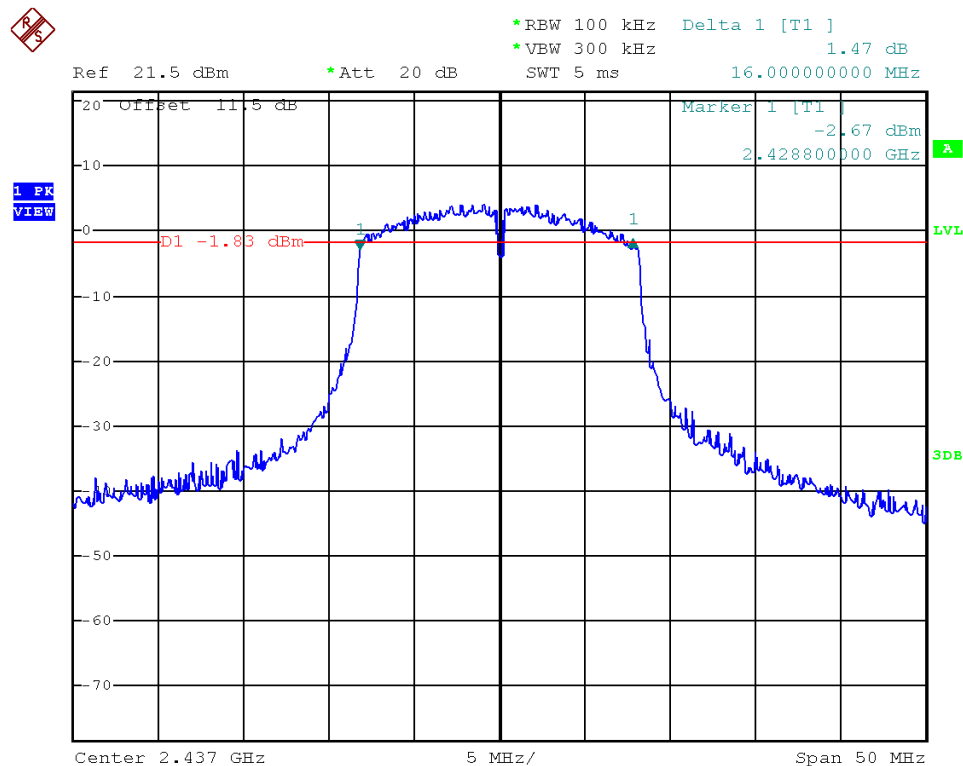
Modulation Standard: 802.11g (6Mbps)
Channel: 01





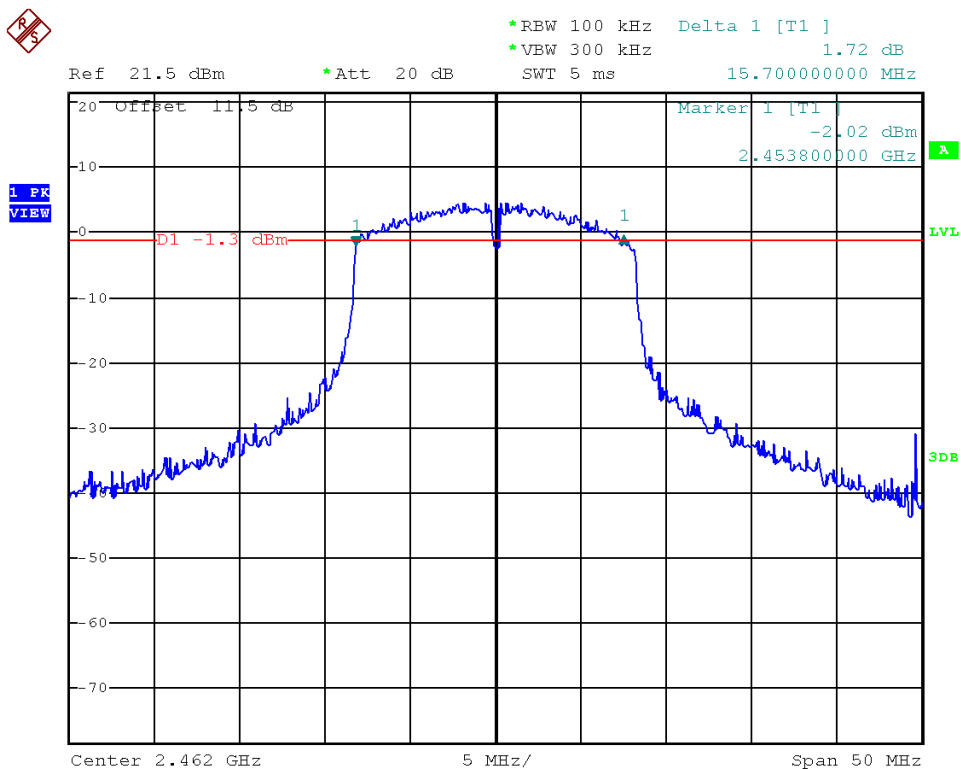
Modulation Standard: 802.11g (6Mbps)

Channel: 06



Modulation Standard: 802.11g (6Mbps)

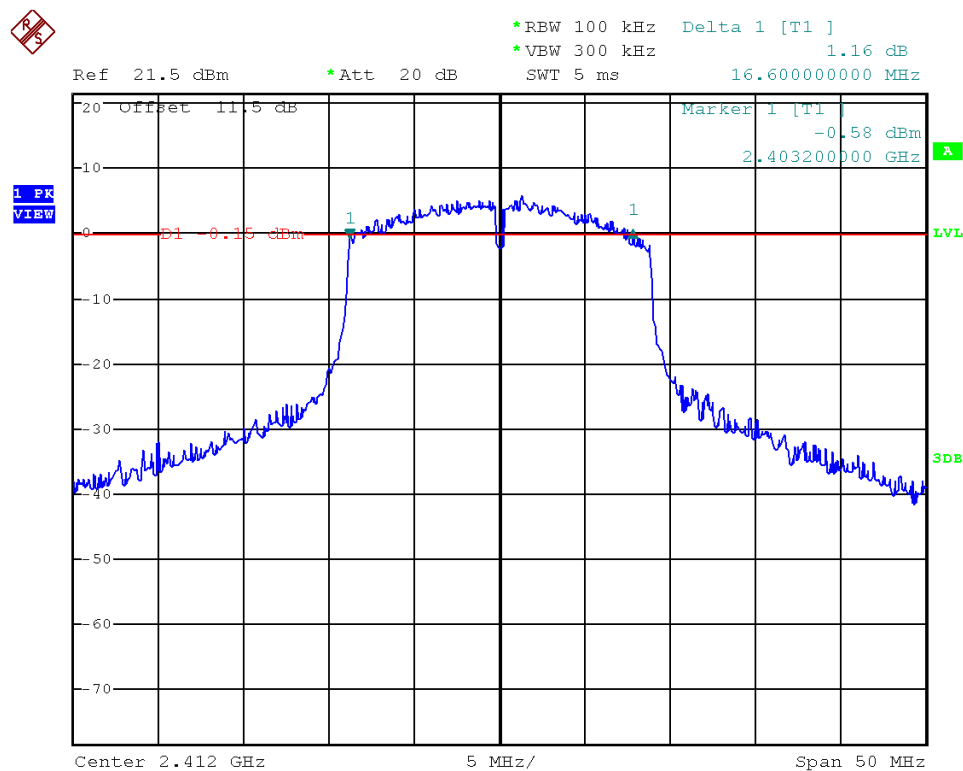
Channel: 11





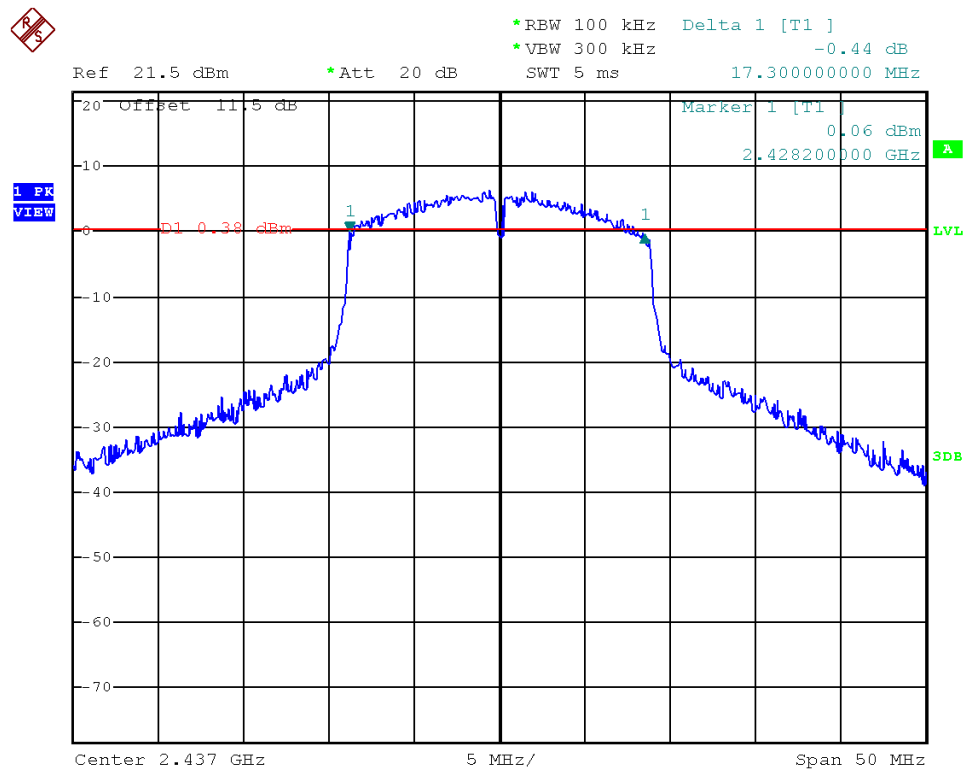
Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 01



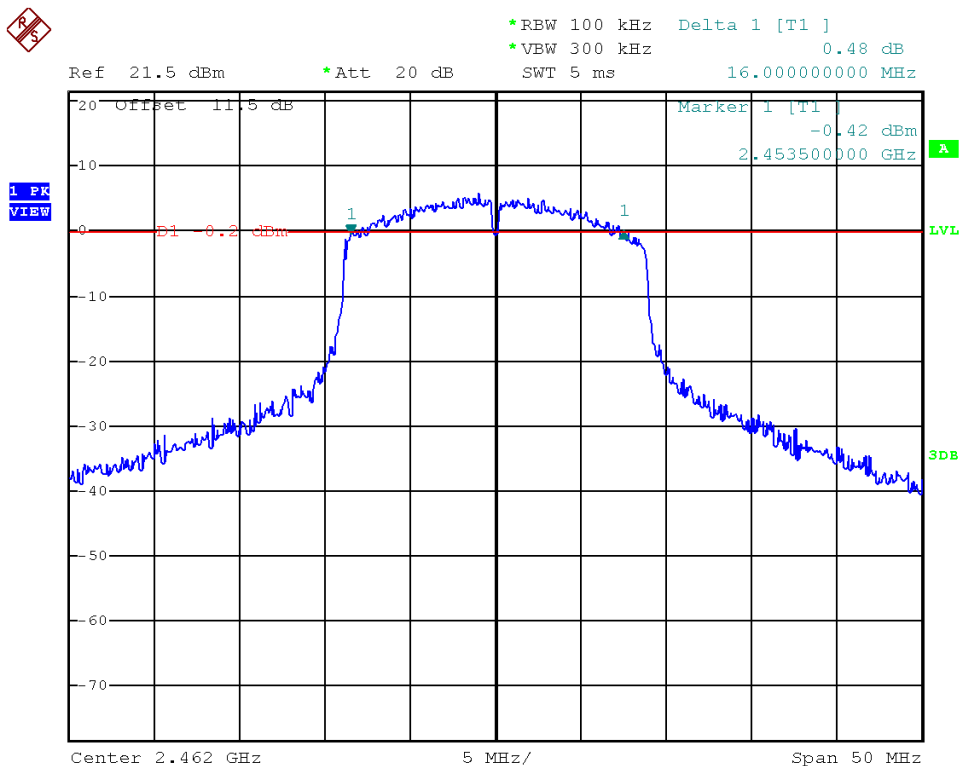
Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 06

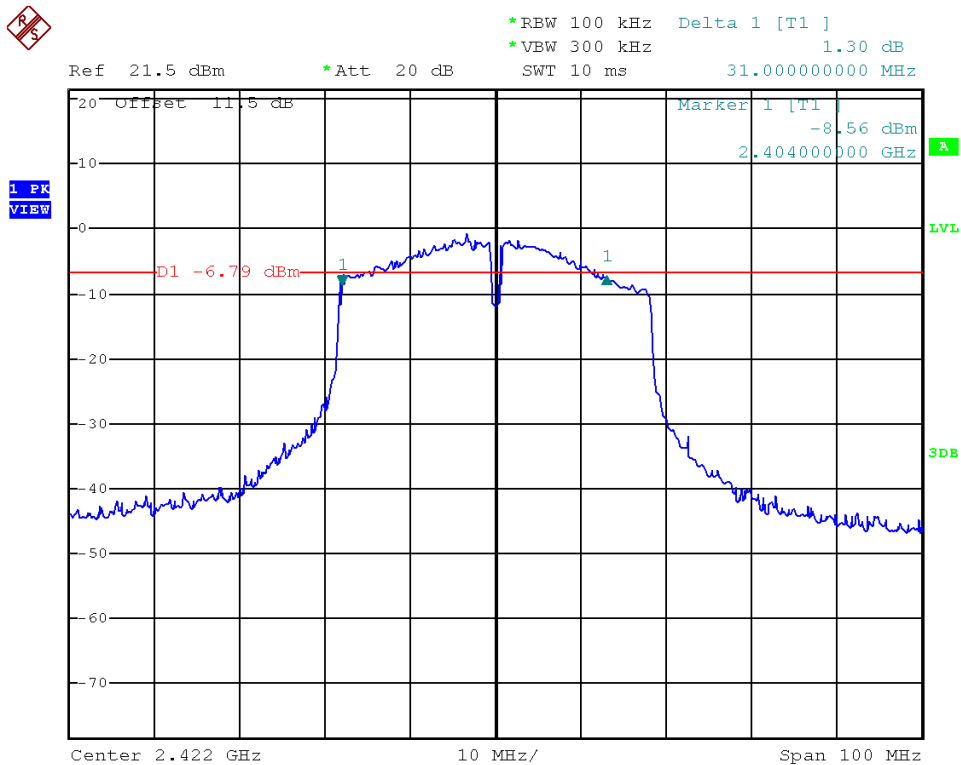




Modulation Standard: 802.11n HT20 (6.5Mbps)
Channel: 11

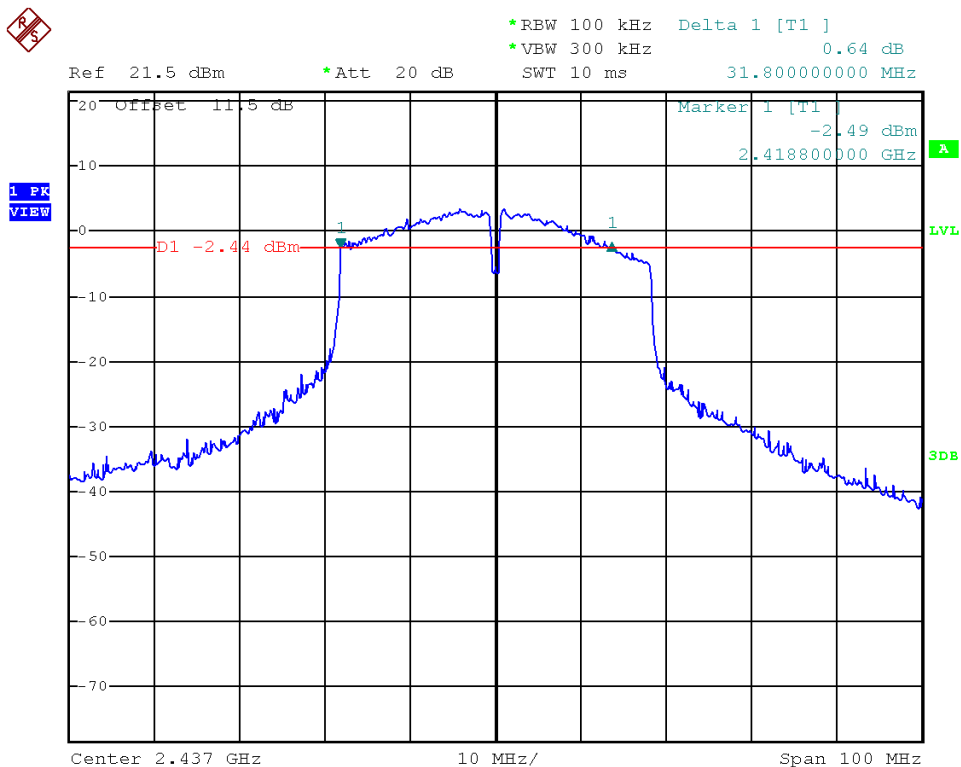


Modulation Standard: 802.11n HT40 (13.5Mbps)
Channel: 03

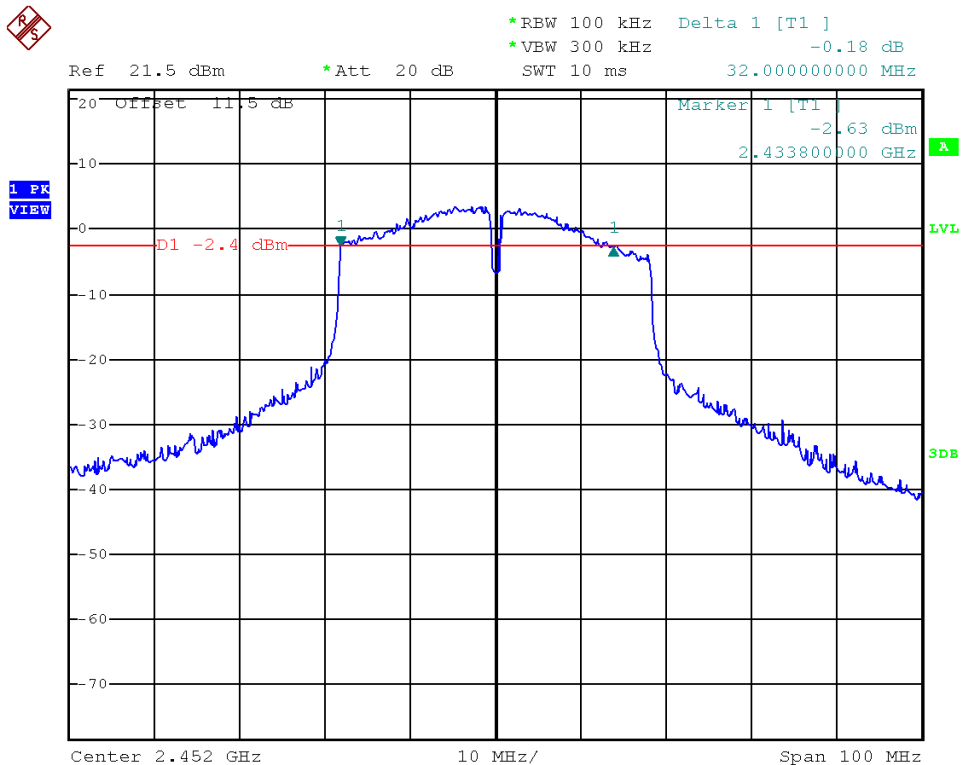




Modulation Standard: 802.11n HT40 (13.5Mbps)
Channel: 06

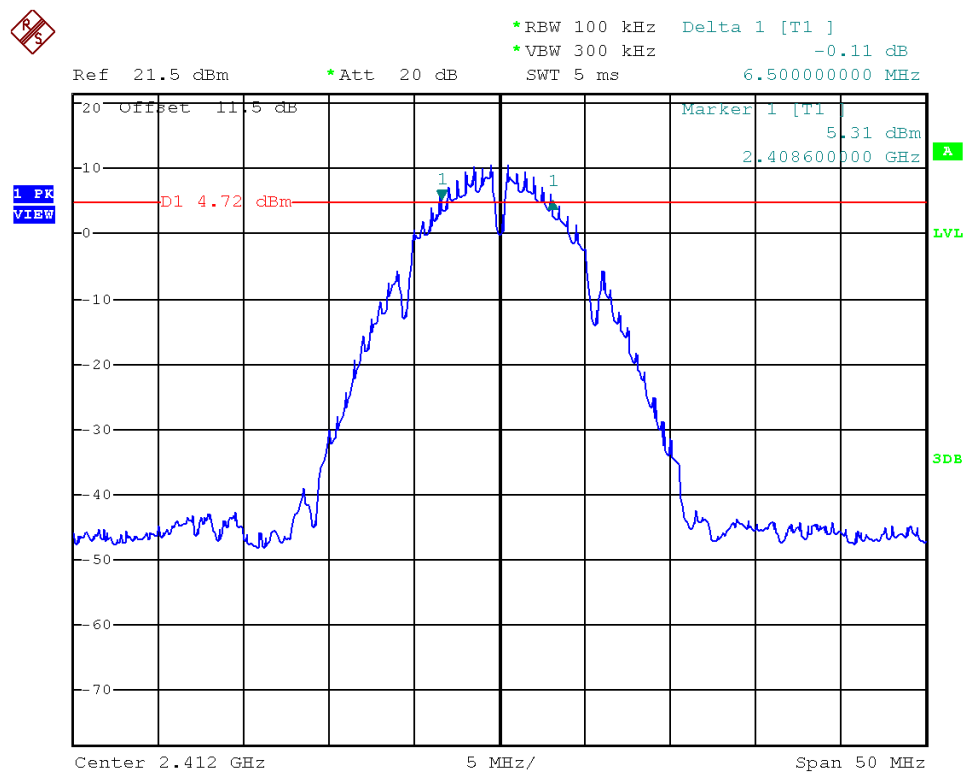


Modulation Standard: 802.11n HT40 (13.5Mbps)
Channel: 09

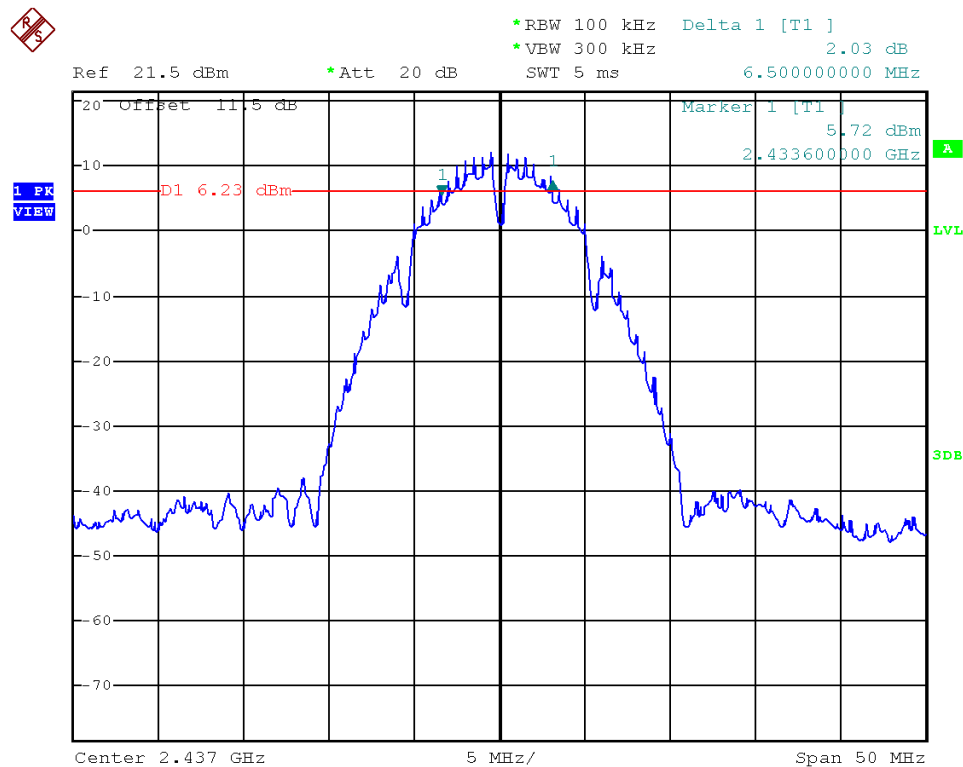




ANT B:
Modulation Standard: 802.11b (1Mbps)
Channel: 01



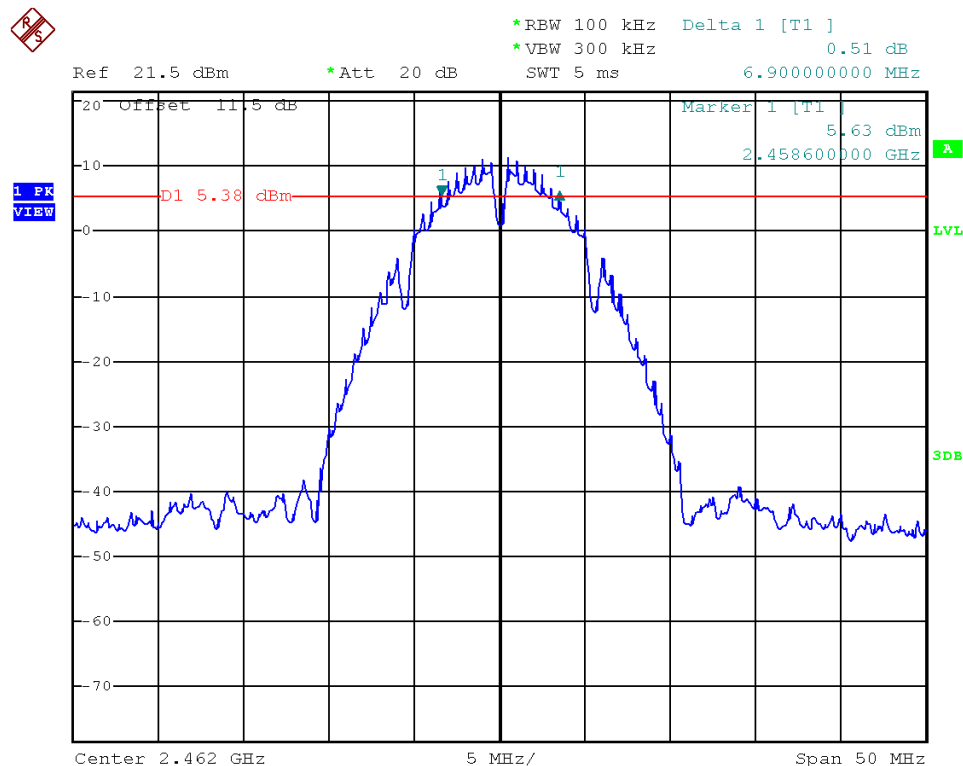
Modulation Standard: 802.11b (1Mbps)
Channel: 06





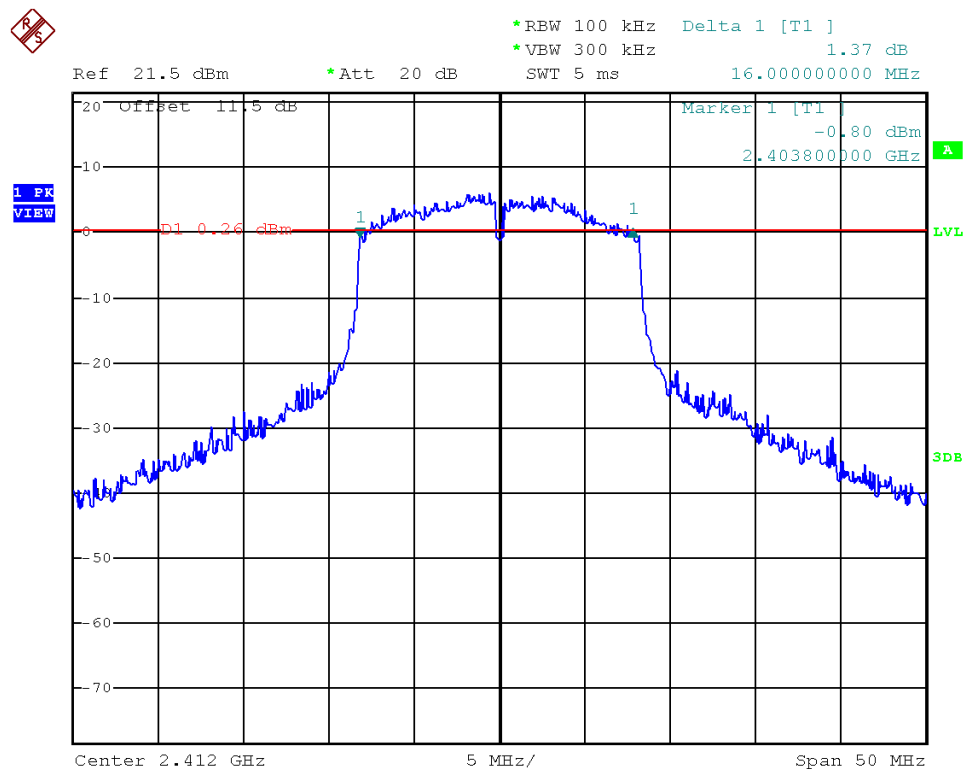
Modulation Standard: 802.11b (1Mbps)

Channel: 11



Modulation Standard: 802.11g (6Mbps)

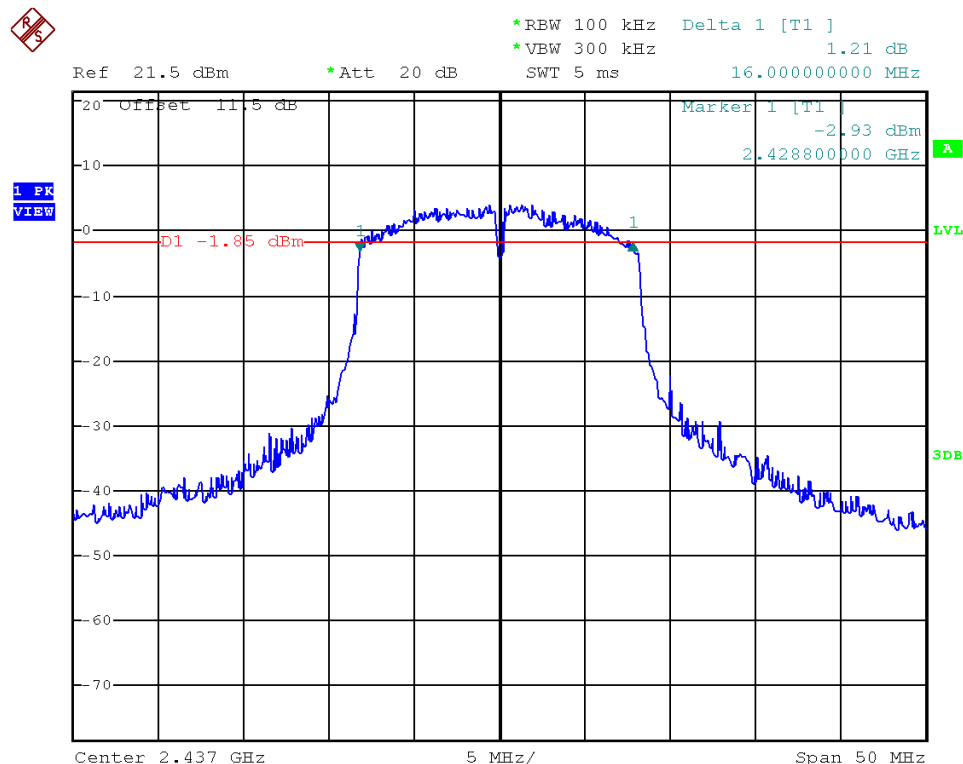
Channel: 01





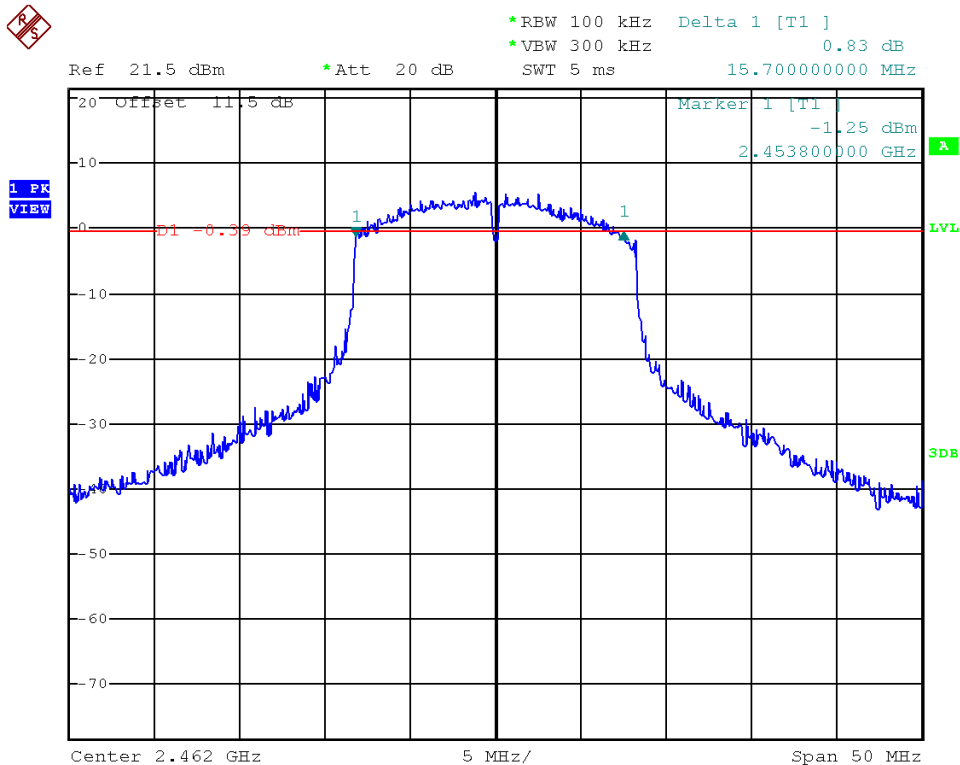
Modulation Standard: 802.11g (6Mbps)

Channel: 06



Modulation Standard: 802.11g (6Mbps)

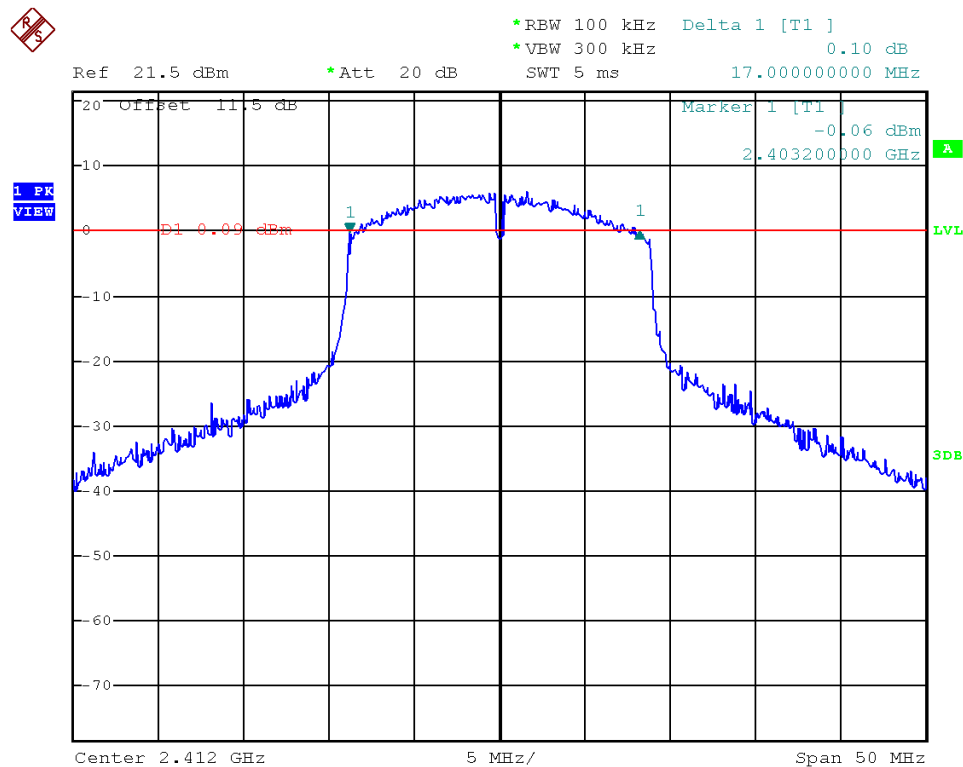
Channel: 11





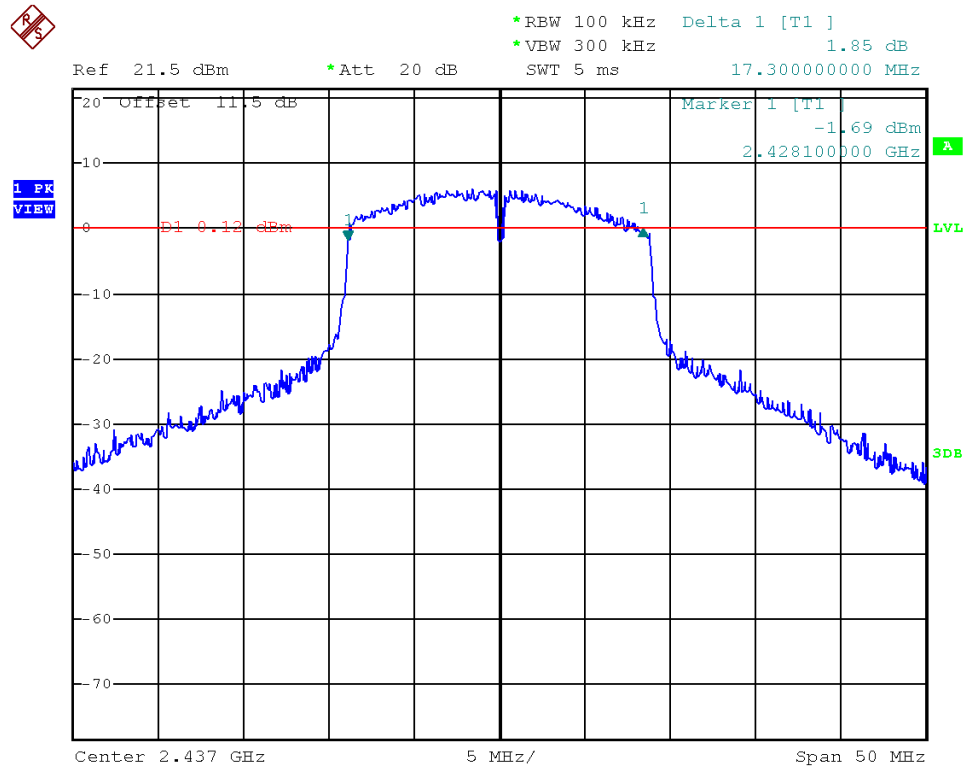
Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 01



Modulation Standard: 802.11n HT20 (6.5Mbps)

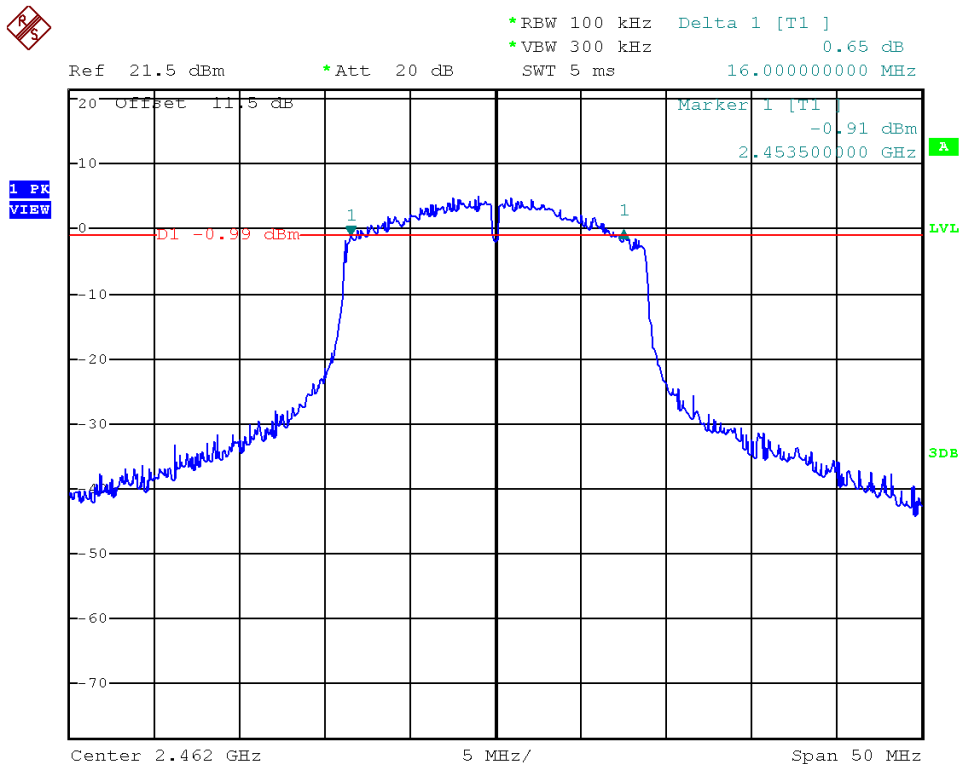
Channel: 06





Modulation Standard: 802.11n HT20 (6.5Mbps)

Channel: 11



Modulation Standard: 802.11n HT40 (13.5Mbps)

Channel: 03

