



低功率射頻器材測試報告

申請廠商	: 惠州高盛達科技有限公司
地址	: 惠州市惠澳大道惠南高新科技產業園金達路 2 號
工廠	: 惠州高盛達科技有限公司
地址	: 惠州市惠澳大道惠南高新科技產業園金達路 2 號
產品名稱	: WIFI+BT Module
產品型號	: DCT12R2511
廠牌	: GSD
受理日期	: 110 年 09 月 29 日
完成日期	: 110 年 11 月 01 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：112 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
21090245-TRNCC02	Nov. 01, 2021	Original



證 明 書

申請廠商	:	惠州高盛達科技有限公司
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產品型號	:	DCT12R2511
廠牌	:	GSD
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器材技術規範(LP0002)。
	:	規範修訂日期 109 年 07 月 01 日。
發射功率 (電場強度)	:	FCC Part 15E, 15.407
	:	LP0002 5.7 章節及 FCC KDB 789033 D02 General UNII Test Procedures New Rules
發射功率 (電場強度)	:	16.30 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 110 年 10 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器材技術規範及 FCC Part 15E 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器材技術規範規定。

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	低功率射頻器材技術規範	FCC Rule	量測設備	測試結果	結果判定
1	天線增益之要求	5.7.3 節	---	---	請參閱 3.2 節	---
2	電源線傳導干擾之要求	3.3 節	---	請參閱 2 章	請參閱 4.4 節	合格
3	場強輻射之要求	5.7.4 節	---	請參閱 2 章	請參閱 5.4 節, 5.5 節及 5.6 節	合格
4	On Time, Duty Cycle and Measurement methods	---	KDB 789033	請參閱 2 章	請參閱 6.4 節	合格
5	6dB 頻寬之規定	5.7.5 節	FCC 15.407	請參閱 2 章	請參閱 7.4 節	合格
6	26dB 頻寬之規定	5.7.3.2 節	FCC 15.407(a)	請參閱 2 章	請參閱 8.4 節	合格
7	傳導輸出功率	5.7.3 節	KDB 789033	請參閱 2 章	請參閱 9.4 節	合格
8	最大功率頻譜密度	5.7.3 節	FCC 15.407(a)	請參閱 2 章	請參閱 10.4 節	合格

本實驗室已依據合約內的標準，降低儀器、環境、人員等不確定因素。因此測試結果將直接依照標準要求判定之。

報告簽署人：



1. 一般描述

1.1. 產品規格

Main Chip	8822CU
IEEE Standards	IEEE 802.11a/b/g/n/ac+ BT
Operating Frequencies	2.4GHz~2.4835GHz /5.150~5.250GHz, 5.725~5.825GHz
Modulation	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11a/g: 64-QAM, 16-QAM, QPSK, BPSK 802.11n: 64-QAM, 16-QAM, QPSK, BPSK 802.11ac: 256-QAM, 64-QAM, 16-QAM, QPSK, BPSK (註：802.11b,a,g,n,ac 可以支持 2TX 模式)
Wireless Data Rate	BT: GFSK: 1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps, 2Mbps WIFI 2.4G: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps WIFI 5G: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps 802.11ac: VHT20 reach up to 173.3Mbps, VHT40 reach up to 400Mbps, VHT80 reach up to 866.7Mbps
Working Temperature	0°C to +70°C
Storage Temperature	-40°C to +80°C
Power Supply	3.3V +/-10%

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

1.2. 差異說明

無。



1.3. 無線界面規格及頻道對應頻率

Band: 5150MHz-5250MHz

802.11a, 802.11n HT 20, 802.11ac VHT20

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

802.11n HT 40, 802.11ac VHT40

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

802.11ac VHT80

Channel	Frequency(MHz)
*42	5210

Band: 5725MHz -5850MHz

802.11a, 802.11n HT20, 802.11ac VHT20

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

802.11n HT 40, 802.11ac VHT40

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

802.11ac VHT80

Channel	Frequency(MHz)
*155	5775

*為量測之頻道及頻率

1.4. 測試模式之描述

- 電源傳導及輻射測試之測試模式如下：

1.將量測系統之全部電源打開。

2.EUT 連接治具，治具再連接電腦，電腦於 Win 7 作業系統下，EUT 進入“REALTEK 11ac 8822CU USB WLAN NIC Massproduction Kit.exe”來發射與接收訊號。(軟體版本號: 1.2.0.9)

- 執行以下測試模式如下：

Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	802.11a (6Mbps) ,Transmitter Mode
2	802.11ac VHT20 (6.5Mbps) ,Transmitter Mode
3	802.11ac VHT40 (13.5Mbps) ,Transmitter Mode
4	802.11ac VHT80 (29.3Mbps) ,Transmitter Mode
5	802.11a (6Mbps) ,Receiver Mode
6	802.11ac VHT20 (6.5Mbps) ,Receiver Mode
7	802.11ac VHT40 (13.5Mbps) ,Receiver Mode
8	802.11ac VHT80 (29.3Mbps) ,Receiver Mode
caused “Test Mode 1,5” generated the worst case, it was reported as the final data.	
Radiation Emissions (30MHz ~ 1GHz)	
Test Mode	Operating Description

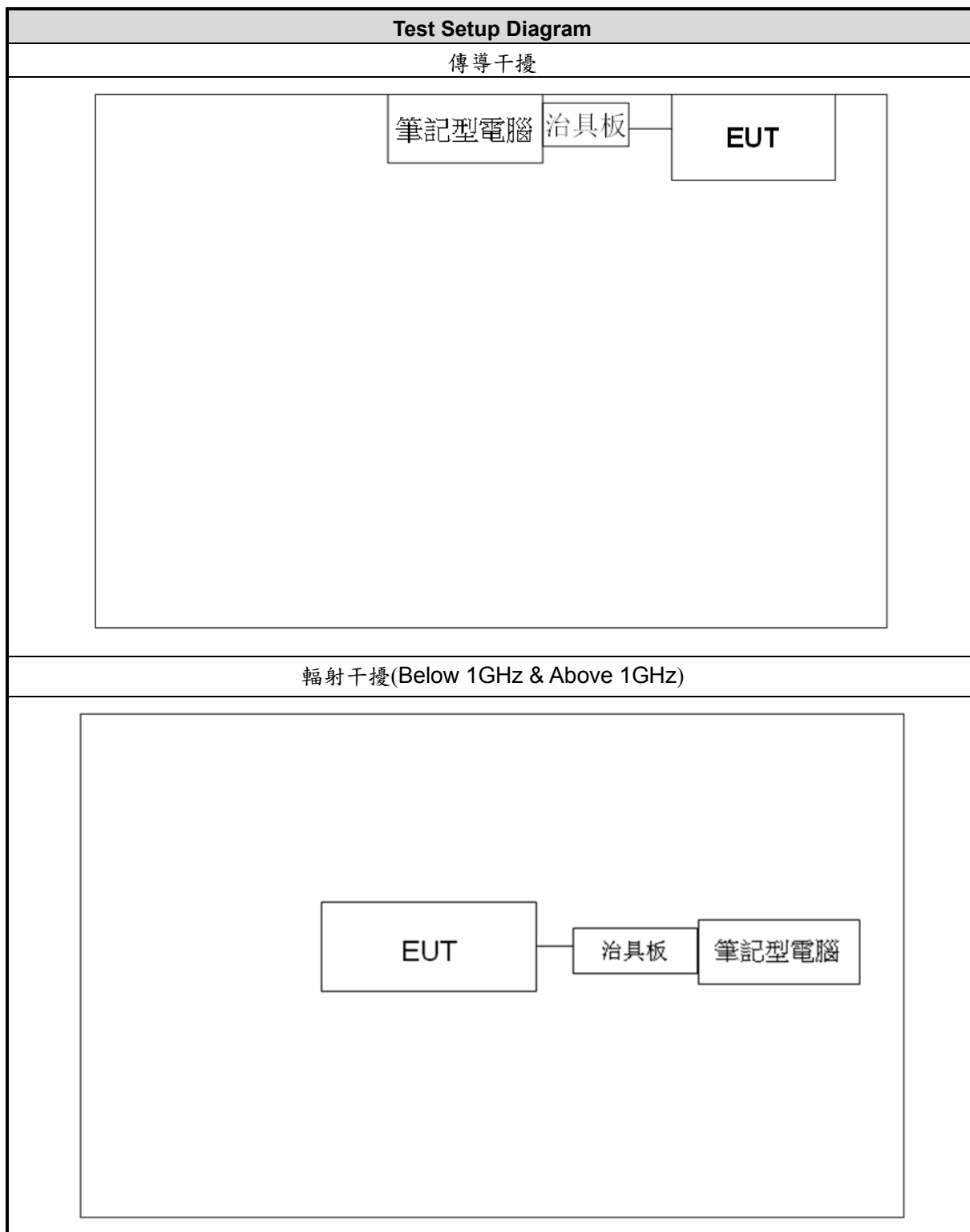


1	802.11a (6Mbps) ,Transmitter Mode
2	802.11ac VHT20 (6.5Mbps) ,Transmitter Mode
3	802.11ac VHT40 (13.5Mbps) ,Transmitter Mode
4	802.11ac VHT80 (29.3Mbps) ,Transmitter Mode
5	802.11a (6Mbps) ,Receiver Mode
6	802.11ac VHT20 (6.5Mbps) ,Receiver Mode
7	802.11ac VHT40 (13.5Mbps) ,Receiver Mode
8	802.11ac VHT80 (29.3Mbps) ,Receiver Mode
caused "Test Mode 1,5" generated the worst case, they were reported as the final data.	
Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps) ,Transmitter Mode
2	802.11ac VHT20 (6.5Mbps) ,Transmitter Mode
3	802.11ac VHT40 (13.5Mbps) ,Transmitter Mode
4	802.11ac VHT80 (29.3Mbps) ,Transmitter Mode
5	802.11a (6Mbps) ,Receiver Mode
6	802.11ac VHT20 (6.5Mbps) ,Receiver Mode
7	802.11ac VHT40 (13.5Mbps) ,Receiver Mode
8	802.11ac VHT80 (29.3Mbps) ,Receiver Mode
caused "Test Mode 1~4,8" generated the worst case, they were reported as the final data.	

Modulation Type	TX CONFIGURATION
802.11a	2TX
802.11ac VHT20	2TX
802.11ac VHT40	2TX
802.11ac VHT80	2TX



1.5. 受測裝置之系統說明



[本案經申請者切結器材不提供隨貨配件，配件由實驗室提供併同檢驗]，及其廠牌型號資訊如下：

AC Power Line Conducted Emission & Radiated Emissions & RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
筆記型電腦	Sony	PCG-71811P	N/A	非隔離/1.8m
治具板	GSD	N/A	非隔離/0.5m	N/A



1.6. 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
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器材技術規範以及參考 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 40,000 MHz。
測試天線的距離：	場強輻射之測試距離為 3 M。

Test Item	Test Site	Finish Date	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan
Radiated Emissions (LF, TX)	3M01-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan
Radiated Emissions (LF, RX)	3M01-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan
Radiated Emissions (HF, TX)	3M01-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan
Radiated Emissions (HF, RX)	3M01-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan
AC Power Line Conducted Emission	CON02-NK	2021/10/07~2021/10/27	22~25℃ / 50~60%	Nick Guan



1.7. 量測不確定度

量測項目	不確定度
AC Power Line Conduction(150K~30MHz)	$\pm 1.90\text{dB}$
Radiated Spurious Emission(9KHz~30MHz)	$\pm 3.405\text{dB}$
Radiated Spurious Emission(30MHz~1GHz)	$\pm 5.636\text{dB}$
Radiated Spurious Emission(1GHz~25GHz)	$\pm 6.621\text{dB}$
Conducted Spurious Emission	$\pm 1.8\text{dB}$
6dB Bandwidth	$\pm 4.4\%$
20dB Bandwidth	$\pm 4.4\%$
Occupied Bandwidth	$\pm 4.4\%$
Peak Output Power(Conducted Power Meter)	$\pm 1.1\text{dB}$
Dwell Time	$\pm 1.2\%$
Power Spectral Density	$\pm 1.8\text{dB}$
Duty Cycle	$\pm 1.2\%$



2. 測試儀器

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M01-NK)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Active Loop Antenna	EMCO	6507	40855	2021/06/10	2022/06/09
Bilog Antenna	Sunol	JB1	A051717	2021/06/03	2022/06/02
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-02203	2021/03/16	2022/03/15
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-02203	2021/03/16	2022/03/15
EMI Receiver	ROHDE & SCHWARZ	ESR 7	101906	2021/05/20	2022/05/19
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2021/07/14	2022/07/13
Preamplifier	EM Electronics corp.	EM330	60611	2021/03/26	2022/03/25
Preamplifier	EM Electronics corp.	EM01G18G	60700	2021/5/20	2022/05/19
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2020/11/06	2021/11/05
Cable-1m(1G-40G)	HUBER SUHNER	EM104-SMSM	MY4569/2	2021/06/29	2022/06/28
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2021/03/15	2022/03/14
Cable-9m(1G-40G)	HUBER SUHNER	EM104-SMSM	MY5740/2	2021/06/29	2022/06/28
Cable-0.5m(30M-1G)	HUBER SUHNER	RG-214	Cable-08	2021/03/15	2022/03/14
Cable-1m(30M-1G)	HUBER SUHNER	RG-214	Cable-09	2021/03/15	2022/03/14
Cable-6m(30M-1G)	HUBER SUHNER	RG-214	Cable-10	2021/03/15	2022/03/14
Cable-1.5m(1G-40G)	HUBER SUHNER	EM104-SMSM	MY5739/2	2021/06/29	2022/06/28
Cable-3m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	MY2608/2	2021/04/09	2022/04/08
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2021/04/03	2022/04/02
E3	AUDIX	v8.2014-8-6	RK-000533	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200207	2021/04/21	2022/04/20
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2020/11/10	2021/11/09
Attenuator	KEYSIGHT	8491B	MY39250703	2021/04/09	2022/04/08
Power Meter	Anritsu	ML2495A	1224005	2021/04/14	2022/04/13
Power Sensor	Anritsu	MA2411B	1207295	2021/04/14	2022/04/13

Test Item	AC Power Line Conducted Emission				
Test Site	CON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESCI	100443	2021/05/20	2022/05/19
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-568	2021/06/02	2022/06/01
TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	102185	2021/08/18	2022/08/17
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2021/03/15	2022/03/14
E3	AUDIX	v8.2014-8-6	RK-000536	NA	NA



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器材技術規範(3.2)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 5.15G-5.25G 頻段者	
☐	供戶外操作使用：使用超過 6dBi 方向增益之發射天線時，應依超過 6dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
☐	供室內操作使用：使用超過 6dBi 方向增益之發射天線時，應依超過 6dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
☐	供固定式點對點操作使用：使用超過 23dBi 方向增益之發射天線時，應依超過 23dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
☒	供用戶端裝置(Client Device)操作使用：使用超過 6dBi 方向增益之發射天線時，應依超過 6dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
操作於 5.25G-5.35G 與 5.470G-5.725G 頻段者	
使用超過 6dBi 方向增益之發射天線時，應依超過 6dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。	
操作於 5.725G-5.850G 頻段者	
☐	供固定式點對點操作使用：使用超過 6dBi 方向增益之發射天線時，可不須對應減少發射器之傳導輸出功率限制值。
☒	除(1)外，使用超過 6dBi 方向增益之發射天線時，應依超過 6dBi 天線方增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

3.1. 天線型式及其增益

ANT 1

- 1.1 Brand : 中天迅
- 1.2 Model : DCT12
- 1.3 Antenna type : PCB Antenna
- 1.4 Frequency Rang : 5150MHz - 5250MHz, 5725MHz - 5850MHz
- 1.5 Gain(peak) : 5150MHz - 5250MHz: 3.84dBi;
5725MHz - 5850MHz: 3.88dBi;

ANT 2

- 1.1 Brand : 中天迅
- 1.2 Model : DCT12
- 1.3 Antenna type : PCB Antenna
- 1.4 Frequency Rang : 5150MHz - 5250MHz, 5725MHz - 5850MHz
- 1.5 Gain(peak) : 5150MHz - 5250MHz: 3.44dBi;
5725MHz - 5850MHz: 4.00dBi;

(參照天線規格資料)

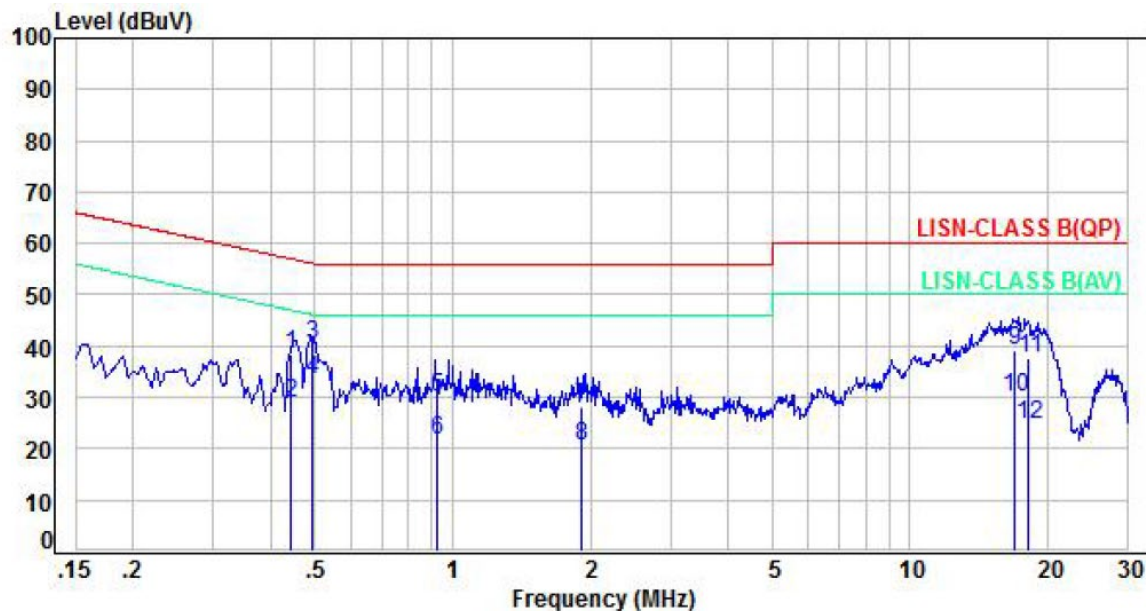
3.2. 結果判定

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。



4.4. 傳導干擾之測試結果及數據

Power	: AC 110V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 1		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.44	9.84	28.45	38.29	56.97	-18.68	QP	P
2	0.44	9.84	19.10	28.94	46.97	-18.03	Average	P
3	0.49	9.83	30.59	40.42	56.15	-15.73	QP	P
4	0.49	9.83	23.61	33.44	46.15	-12.71	Average	P
5	0.92	9.82	20.08	29.90	56.00	-26.10	QP	P
6	0.92	9.82	11.96	21.78	46.00	-24.22	Average	P
7	1.92	9.88	18.21	28.09	56.00	-27.91	QP	P
8	1.92	9.88	10.60	20.48	46.00	-25.52	Average	P
9	17.02	10.11	28.95	39.06	60.00	-20.94	QP	P
10	17.02	10.11	19.76	29.87	50.00	-20.13	Average	P
11	18.18	10.11	27.59	37.70	60.00	-22.30	QP	P
12	18.18	10.11	14.74	24.85	50.00	-25.15	Average	P

Site: COND-02-NK

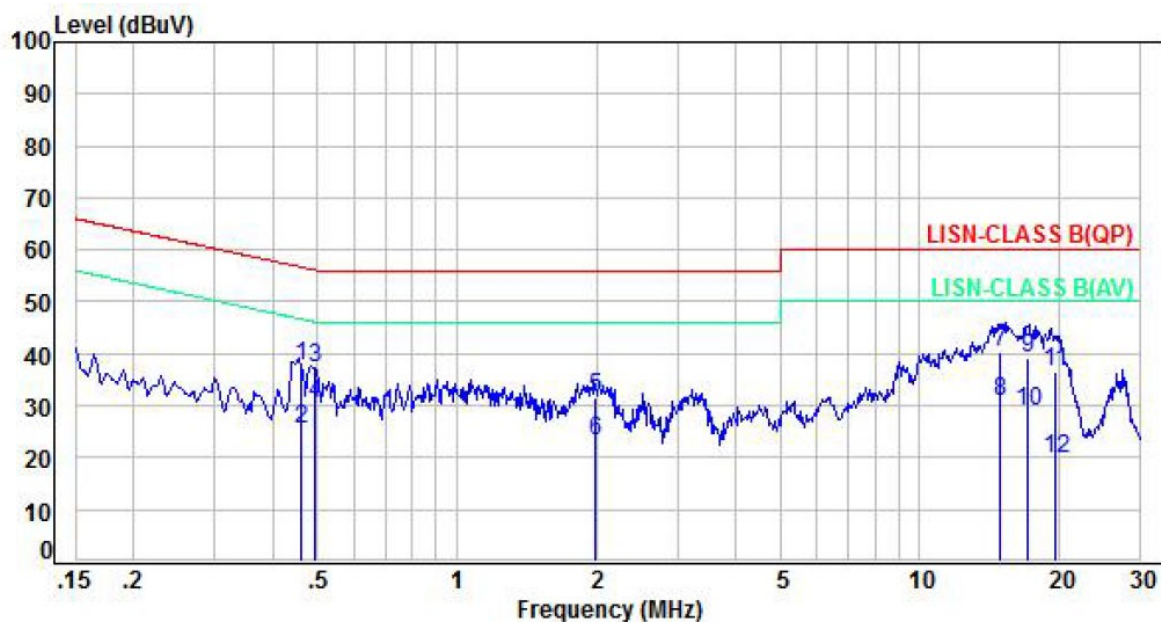
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	: AC 110V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F
1	0.46	9.75	27.79	37.54	56.68	-19.14	QP	P
2	0.46	9.75	15.77	25.52	46.68	-21.16	Average	P
3	0.50	9.75	27.38	37.13	56.08	-18.95	QP	P
4	0.50	9.75	20.69	30.44	46.08	-15.64	Average	P
5	1.98	9.82	21.84	31.66	56.00	-24.34	QP	P
6	1.98	9.82	13.19	23.01	46.00	-22.99	Average	P
7	14.94	10.07	30.23	40.30	60.00	-19.70	QP	P
8	14.94	10.07	20.87	30.94	50.00	-19.06	Average	P
9	17.09	10.13	29.01	39.14	60.00	-20.86	QP	P
10	17.09	10.13	18.95	29.08	50.00	-20.92	Average	P
11	19.61	10.18	26.29	36.47	60.00	-23.53	QP	P
12	19.61	10.18	9.40	19.58	50.00	-30.42	Average	P

Site: COND-02-NK

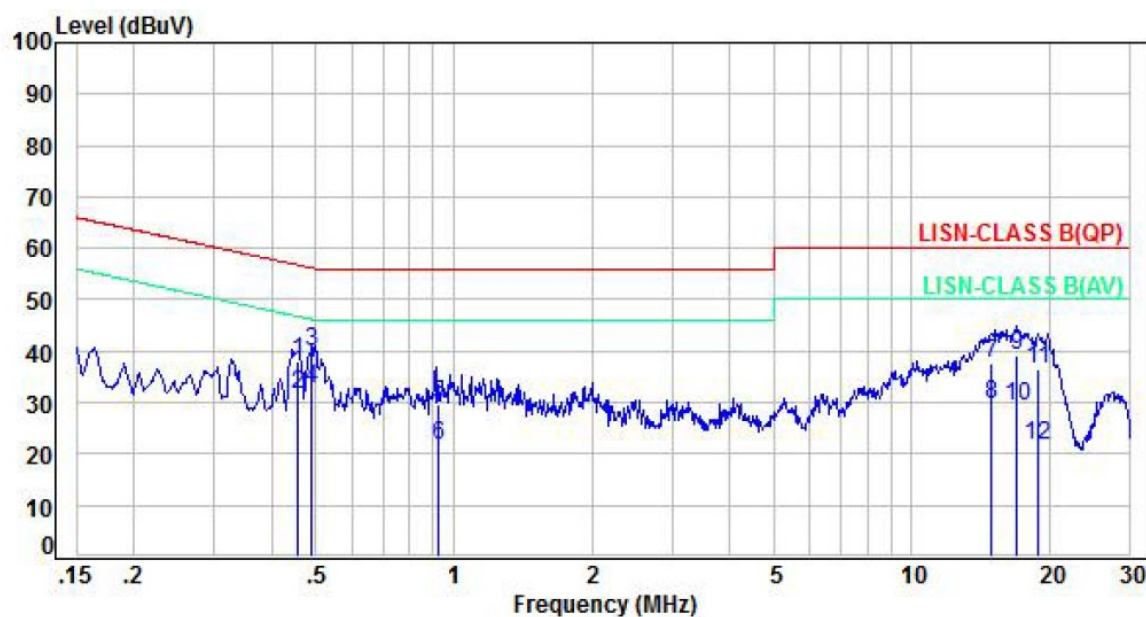
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	: AC 110V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 5		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.46	9.83	28.06	37.89	56.76	-18.87	QP	P
2	0.46	9.83	21.54	31.37	46.76	-15.39	Average	P
3	0.49	9.83	30.20	40.03	56.16	-16.13	QP	P
4	0.49	9.83	23.01	32.84	46.16	-13.32	Average	P
5	0.92	9.82	19.66	29.48	56.00	-26.52	QP	P
6	0.92	9.82	11.81	21.63	46.00	-24.37	Average	P
7	14.92	10.09	27.51	37.60	60.00	-22.40	QP	P
8	14.92	10.09	19.58	29.67	50.00	-20.33	Average	P
9	16.93	10.11	28.93	39.04	60.00	-20.96	QP	P
10	16.93	10.11	19.27	29.38	50.00	-20.62	Average	P
11	18.78	10.13	26.29	36.42	60.00	-23.58	QP	P
12	18.78	10.13	11.48	21.61	50.00	-28.39	Average	P

Site: COND-02-NK

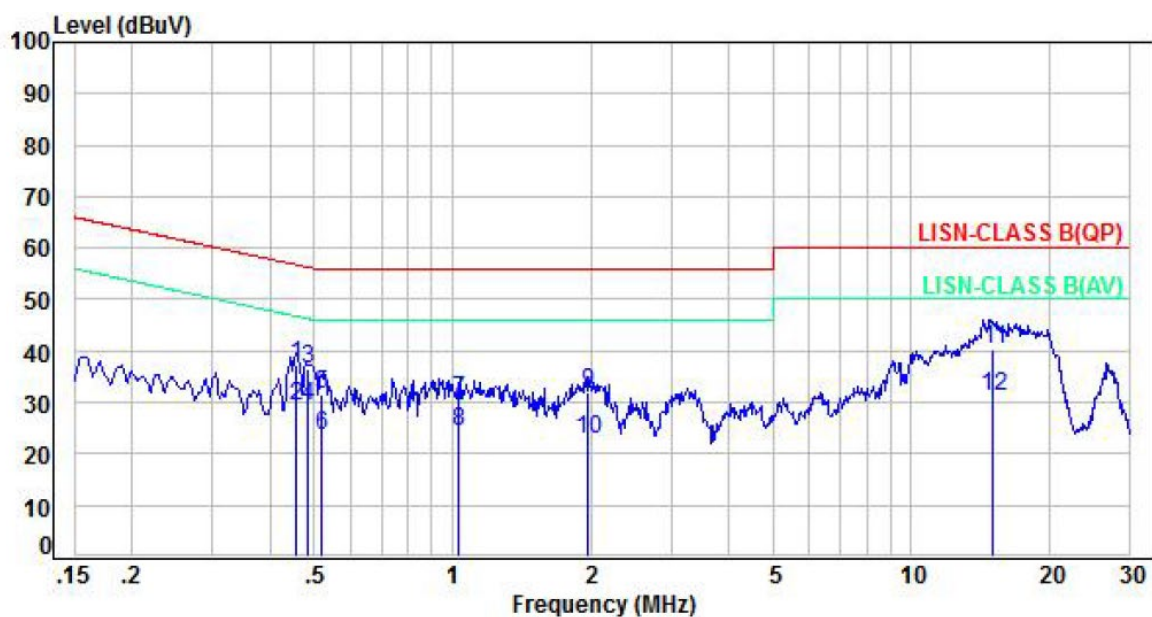
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	: AC 110V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 5		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F
1	0.45	9.76	27.68	37.44	56.80	-19.36	QP	P
2	0.45	9.76	19.47	29.23	46.80	-17.57	Average	P
3	0.49	9.76	26.78	36.54	56.24	-19.70	QP	P
4	0.49	9.76	19.69	29.45	46.24	-16.79	Average	P
5	0.52	9.75	21.69	31.44	56.00	-24.56	QP	P
6	0.52	9.75	13.67	23.42	46.00	-22.58	Average	P
7	1.04	9.76	20.60	30.36	56.00	-25.64	QP	P
8	1.04	9.76	14.52	24.28	46.00	-21.72	Average	P
9	1.98	9.82	22.02	31.84	56.00	-24.16	QP	P
10	1.98	9.82	12.92	22.74	46.00	-23.26	Average	P
11	15.11	10.08	30.26	40.34	60.00	-19.66	QP	P
12	15.11	10.08	21.24	31.32	50.00	-18.68	Average	P

Site: COND-02-NK

Note: Level=Reading+Factor

Margin=Level-Limit

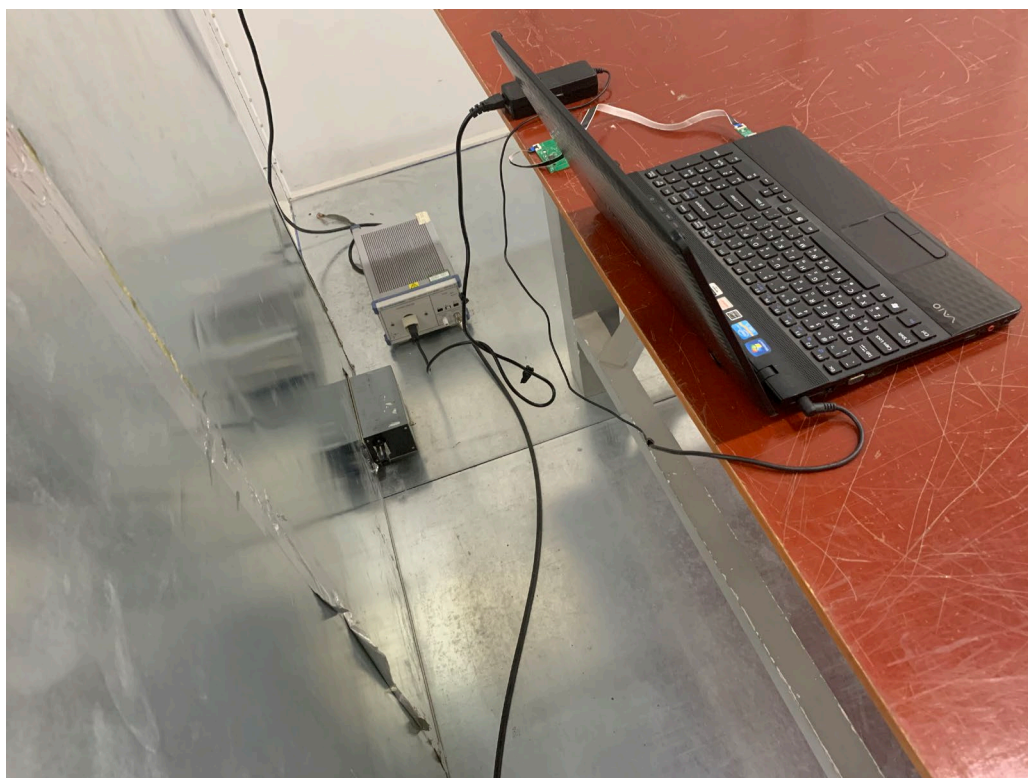
Factor=(LISN or ISN or Current Probe)Factor + Cable Loss

4.5. 傳導量測之配置照片

正面照



背面照





5. 輻射之量測規定

5.1. 適用標準

不必要發射之限制值

在 5.15GHz~5.35GHz 及 5.470GHz~5.725GHz 頻段操作的發射器:帶外發射之有效等向輻射功率(EIRP) $\leq$ -27dBm/MHz 在 5.725GHz~5.850GHz 的頻帶操作之發射器:所有頻帶邊緣向外 5MHz 內頻率之發射,有效等向輻射功率(EIRP) $\leq$ 27dBm/MHz~15.6dBm/MHz(以線性法計算對應之限制值);所有頻帶邊緣向外 5MHz~25MHz,有效等向輻射功(EIRP) $\leq$ 15.6dBm/MHz~10dBm/MHz(以線性法計算對應之限制值);所有頻帶邊緣外 25MHz~75MHz,有效等向輻射功(EIRP) $\leq$ 10dBm/MHz~-27dBm/MHz(以線性法計算對應之限制值);所有頻帶邊緣外 $\geq$ 75MHz 的頻率之發射有效等向輻射功(EIRP) $\leq$ -27dBm/MHz

依據國家通訊傳播委員會低功率射頻器材技術規範 5.7.4.6 節之要求,落於 3.5 節禁用頻段之輻射干擾需符合 3.6 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

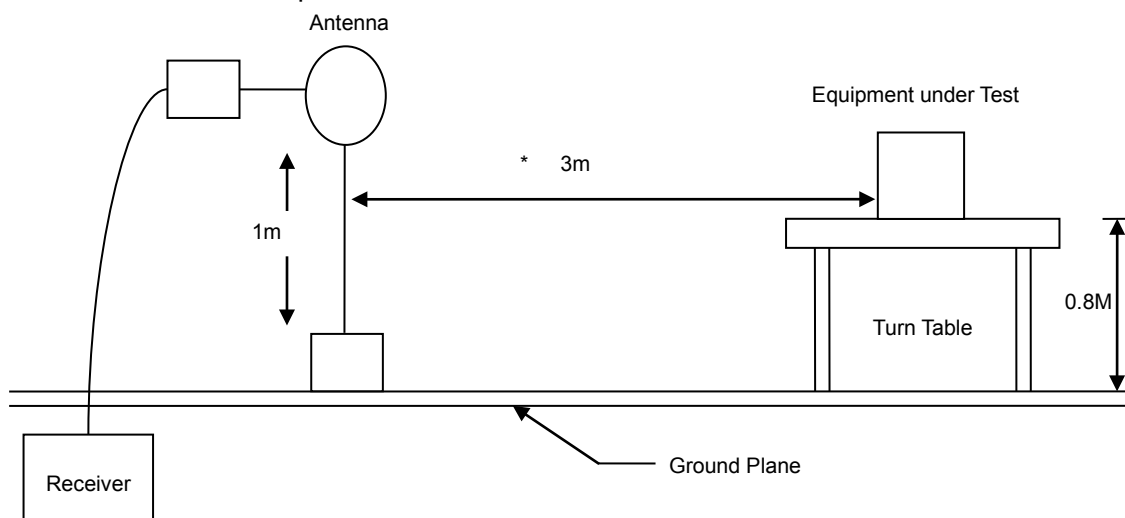
將待測物置於 0.8 米(Below 1G) & 1.5 米(Above 1G)高的非金屬桌面,使其在測試模式狀態,且設定為高、中、低各頻道產生最高峰值輸出功率的傳輸速率,接收天線置於 3 米外,且桌面要 360 度旋轉,另外接收天線也要從 1 米至 4 米升降變化,接收天線置於水平、垂直極向各執行測試一次。如待測物可以三軸相放置,並分別測試以找出最大輻射電場強度(最差的結果為 X 軸)。

備註:

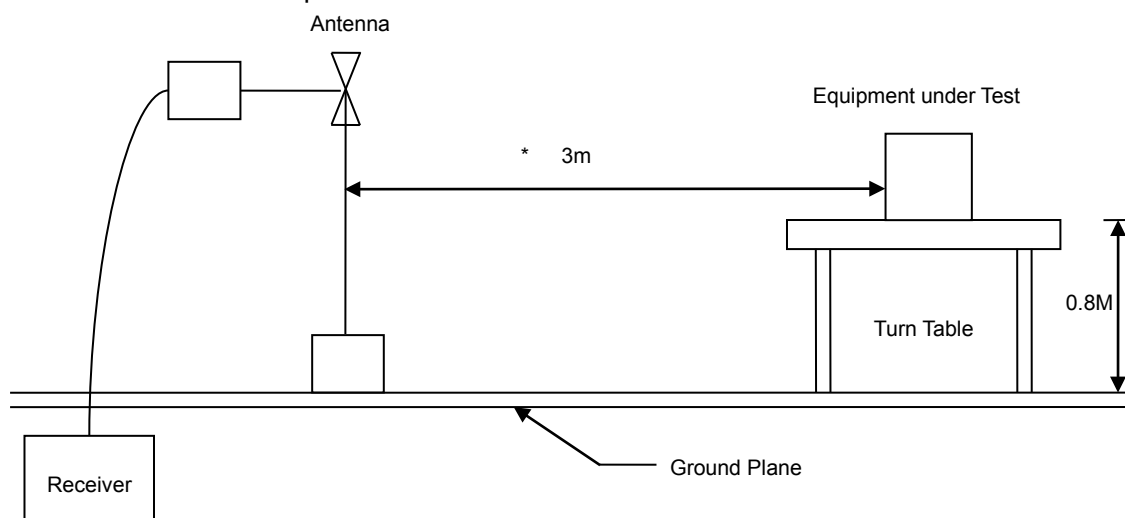
For Below 1G 若待測物之輻射峰值低於限制值 3dB 以上,則將終止測試,並以峰值之讀值作為報告之記錄;反之,若無 3dB 餘裕範圍之輻射,則每一訊號皆以準峰值之測試方法量測,並記錄於報告之中

5.3. 輻射場地之擺設

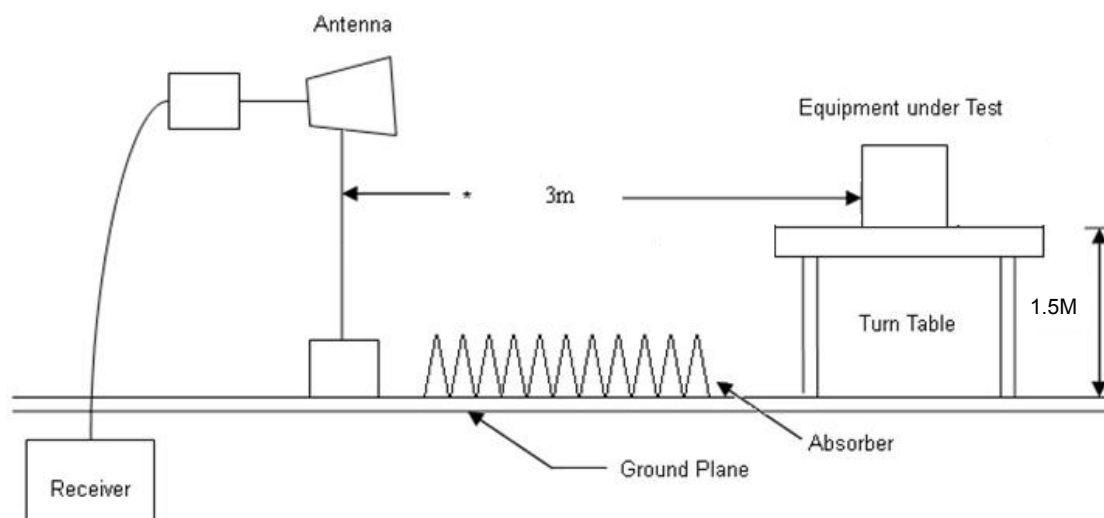
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



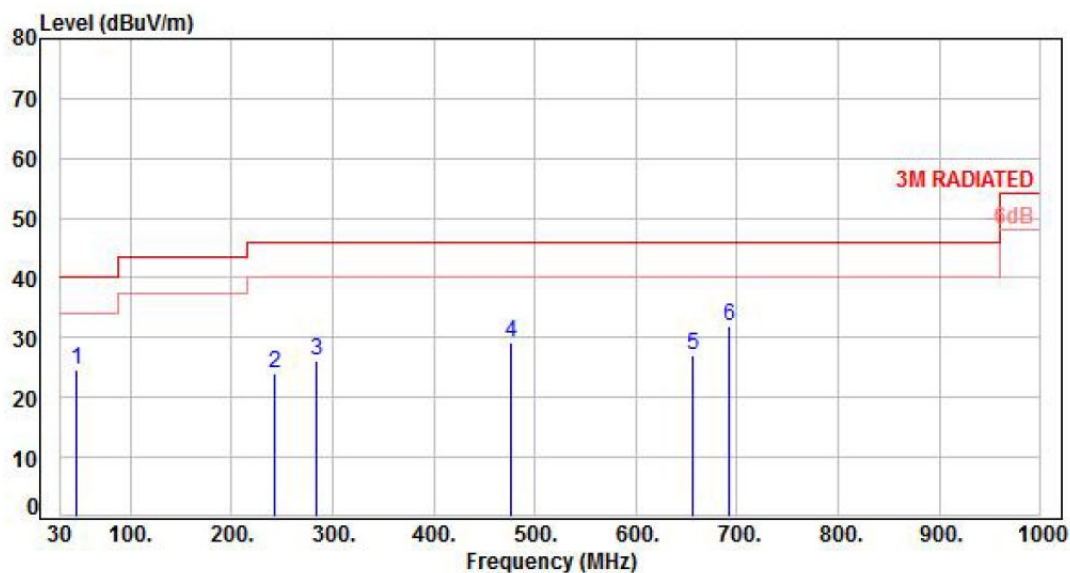


5.4. 輻射之測試結果及數據(9kHz ~ 30MHz)

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

5.5. 輻射之測試結果及數據 (30MHz ~ 1GHz)

Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	46.49	-14.40	39.13	24.73	40.00	-15.27	Peak	100	265	P
2	242.43	-11.57	35.55	23.98	46.00	-22.02	Peak	100	348	P
3	283.17	-9.81	35.83	26.02	46.00	-19.98	Peak	100	52	P
4	477.17	-5.11	34.32	29.21	46.00	-16.79	Peak	200	302	P
5	656.62	-2.16	29.24	27.08	46.00	-18.92	Peak	200	206	P
6	692.51	-1.94	33.87	31.93	46.00	-14.07	Peak	100	127	P

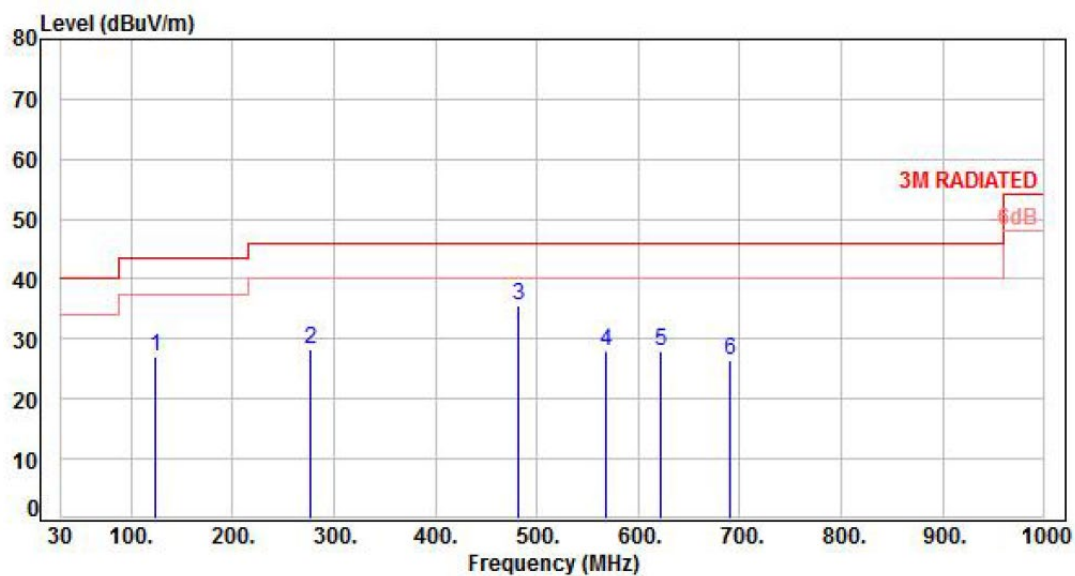
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	124.09	-9.93	36.91	26.98	43.50	-16.52	Peak	100	218	P
2	276.38	-9.77	38.07	28.30	46.00	-17.70	Peak	200	207	P
3	482.02	-4.95	40.48	35.53	46.00	-10.47	Peak	200	326	P
4	568.35	-3.63	31.62	27.99	46.00	-18.01	Peak	200	281	P
5	621.70	-2.86	30.89	28.03	46.00	-17.97	Peak	100	137	P
6	690.57	-1.95	28.54	26.59	46.00	-19.41	Peak	200	313	P

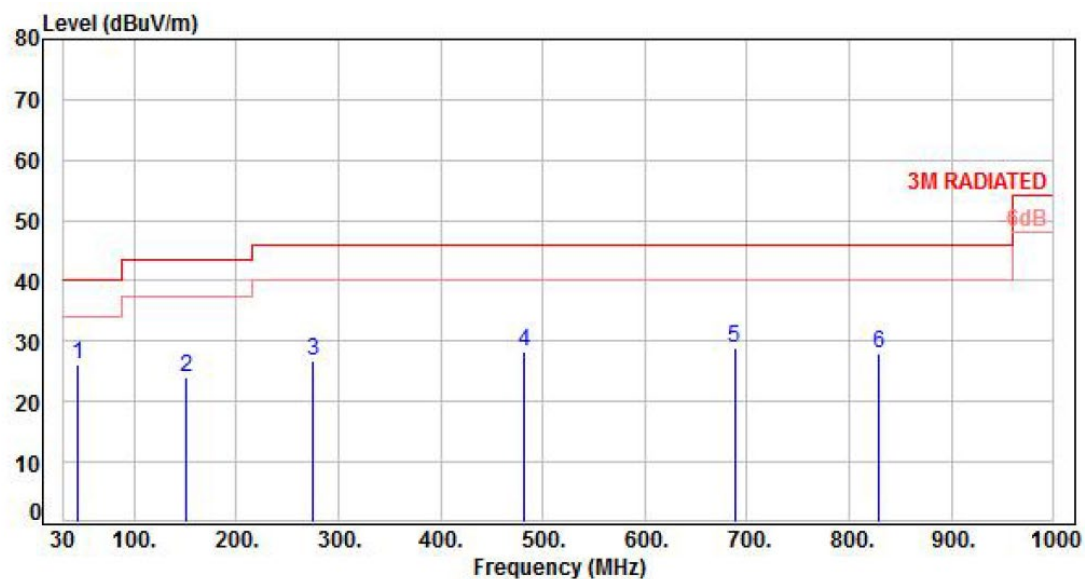
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 5		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	45.52	-14.15	40.25	26.10	40.00	-13.90	Peak	100	248	P
2	151.25	-11.18	35.28	24.10	43.50	-19.40	Peak	100	359	P
3	275.41	-9.78	36.42	26.64	46.00	-19.36	Peak	200	285	P
4	482.02	-4.95	33.39	28.44	46.00	-17.56	Peak	100	162	P
5	687.66	-2.00	30.89	28.89	46.00	-17.11	Peak	200	203	P
6	828.31	0.45	27.53	27.98	46.00	-18.02	Peak	100	81	P

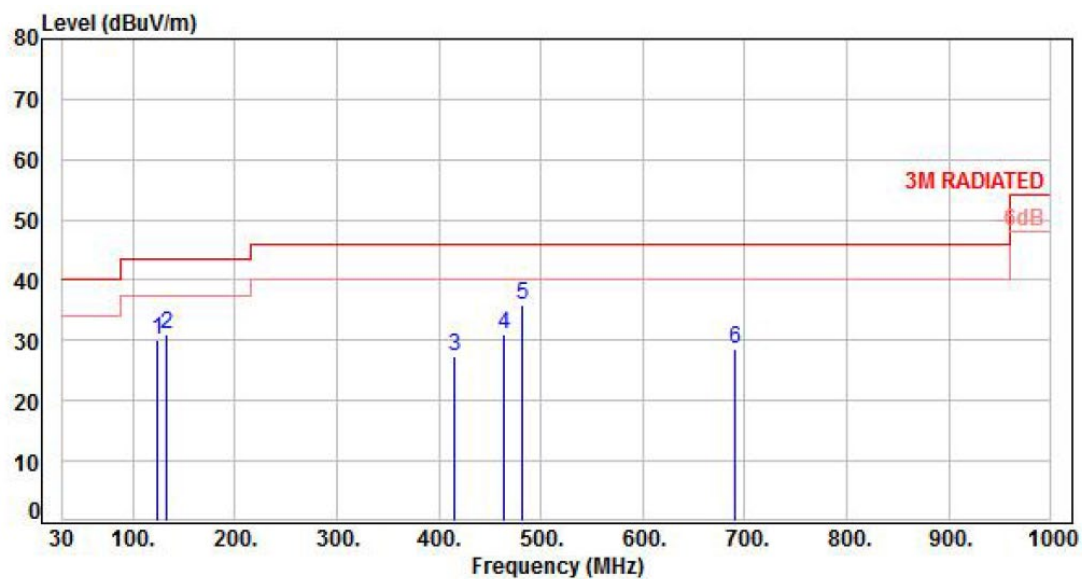
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5		



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	124.09	-9.93	40.17	30.24	43.50	-13.26	Peak	200	277	P
2	132.82	-10.15	41.15	31.00	43.50	-12.50	Peak	200	163	P
3	416.06	-6.51	33.85	27.34	46.00	-18.66	Peak	100	152	P
4	464.56	-5.58	36.49	30.91	46.00	-15.09	Peak	200	205	P
5	482.02	-4.95	40.92	35.97	46.00	-10.03	Peak	200	327	P
6	689.60	-1.95	30.47	28.52	46.00	-17.48	Peak	200	338	P

Note: Level=Reading+Factor

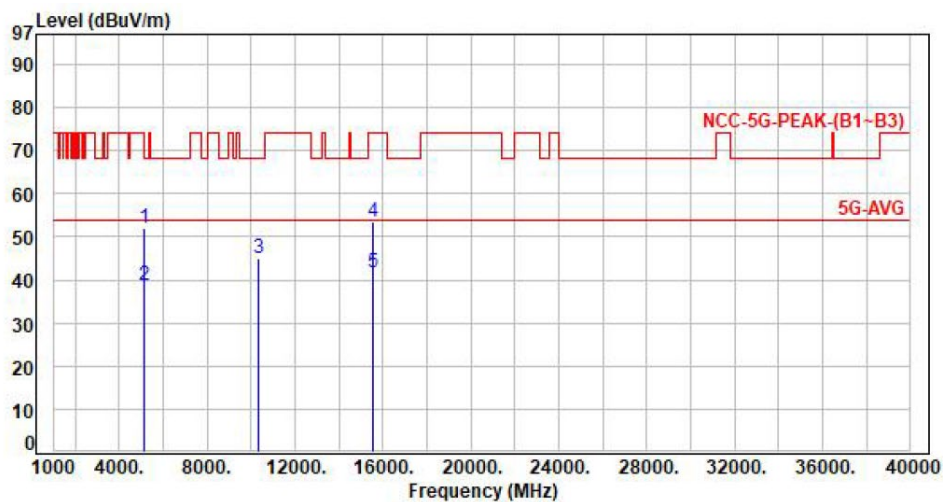
Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



5.6. 輻射之測試結果及數據 (Above 1GHz)

Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH36		:

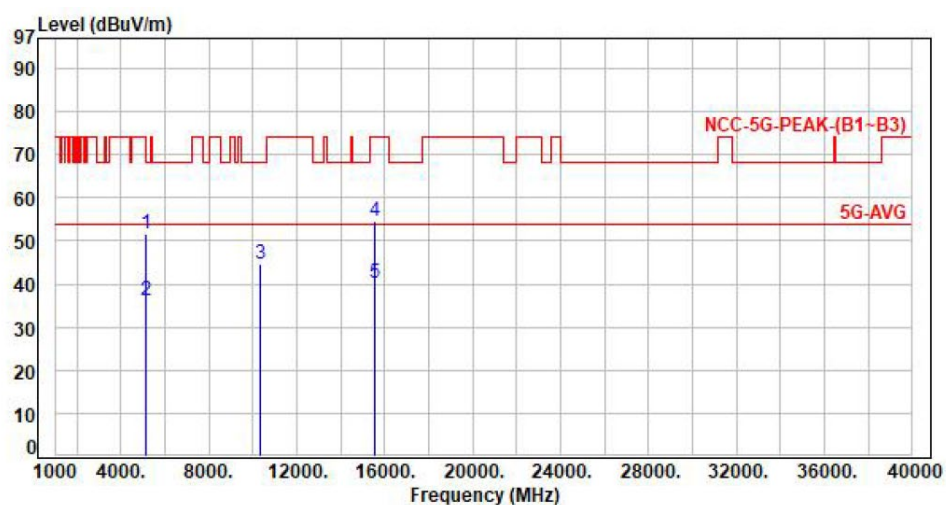


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.44	51.98	74.00	-22.02	Peak	100	228	P
2	5150.00	-24.46	63.13	38.67	54.00	-15.33	Average	100	228	P
3	10360.00	-15.95	60.81	44.86	68.20	-23.34	Peak	100	107	P
4	15540.00	-12.66	66.02	53.36	74.00	-20.64	Peak	100	316	P
5	15540.00	-12.66	54.30	41.64	54.00	-12.36	Average	100	316	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH36		:

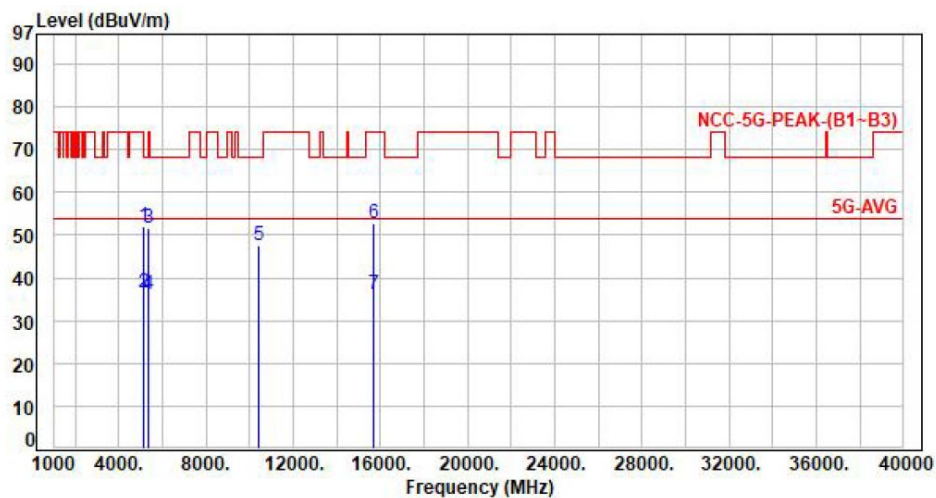


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.12	51.66	74.00	-22.34	Peak	100	138	P
2	5150.00	-24.46	60.70	36.24	54.00	-17.76	Average	100	138	P
3	10360.00	-15.95	60.58	44.63	68.20	-23.57	Peak	100	205	P
4	15540.00	-12.66	67.31	54.65	74.00	-19.35	Peak	100	354	P
5	15540.00	-12.66	52.71	40.05	54.00	-13.95	Average	100	354	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH44		:

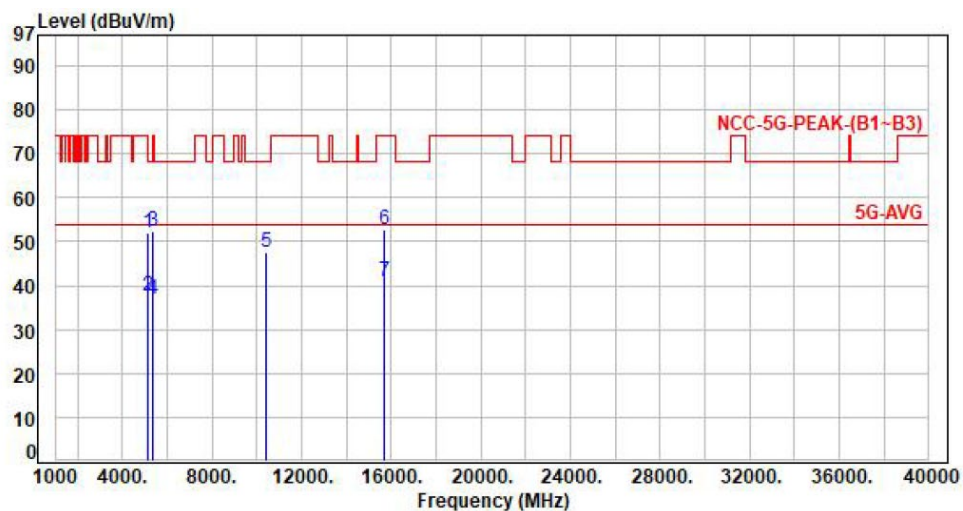


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.33	51.87	74.00	-22.13	Peak	100	257	P
2	5150.00	-24.46	61.08	36.62	54.00	-17.38	Average	100	257	P
3	5350.00	-24.93	76.40	51.47	74.00	-22.53	Peak	100	317	P
4	5350.00	-24.93	61.08	36.15	54.00	-17.85	Average	100	317	P
5	10440.00	-15.70	63.34	47.64	68.20	-20.56	Peak	100	124	P
6	15660.00	-12.87	65.71	52.84	74.00	-21.16	Peak	100	165	P
7	15660.00	-12.87	49.15	36.28	54.00	-17.72	Average	100	165	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH44		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.56	52.10	74.00	-21.90	Peak	100	166	P
2	5150.00	-24.46	62.23	37.77	54.00	-16.23	Average	100	166	P
3	5350.00	-24.93	77.16	52.23	74.00	-21.77	Peak	100	197	P
4	5350.00	-24.93	61.91	36.98	54.00	-17.02	Average	100	197	P
5	10440.00	-15.70	63.42	47.72	68.20	-20.48	Peak	100	301	P
6	15660.00	-12.87	65.73	52.86	74.00	-21.14	Peak	100	238	P
7	15660.00	-12.87	53.80	40.93	54.00	-13.07	Average	100	238	P

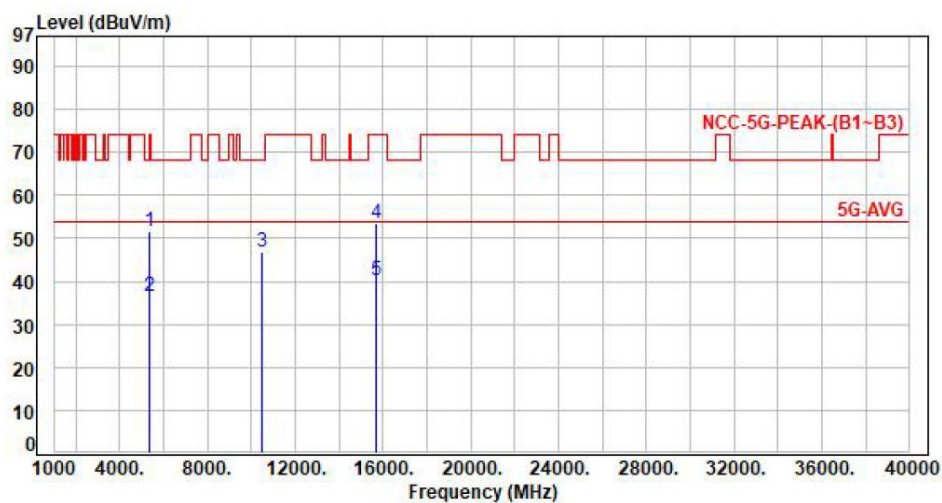
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH48		:

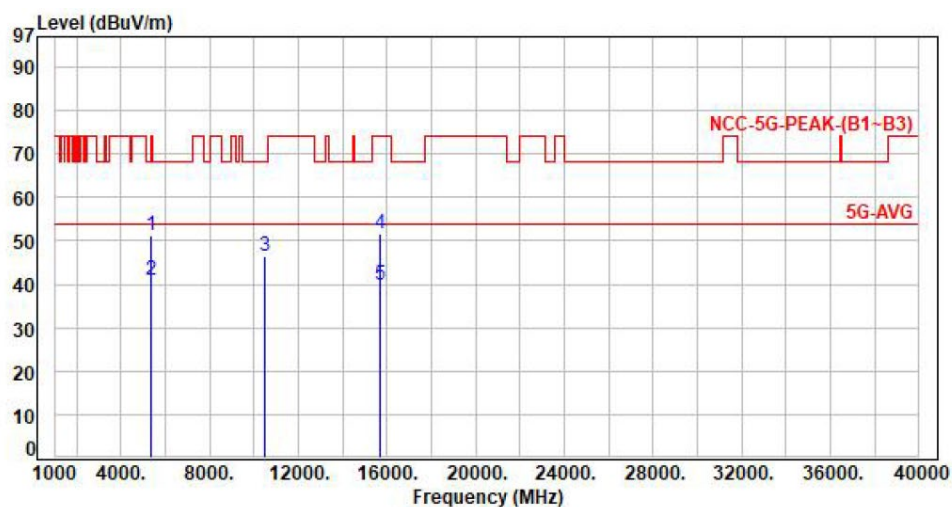


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5350.00	-24.93	76.62	51.69	74.00	-22.31	Peak	100	248	P
2	5350.00	-24.93	61.27	36.34	54.00	-17.66	Average	100	248	P
3	10480.00	-15.64	62.66	47.02	68.20	-21.18	Peak	100	327	P
4	15720.00	-12.80	66.16	53.36	74.00	-20.64	Peak	100	187	P
5	15720.00	-12.80	52.93	40.13	54.00	-13.87	Average	100	187	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH48		:

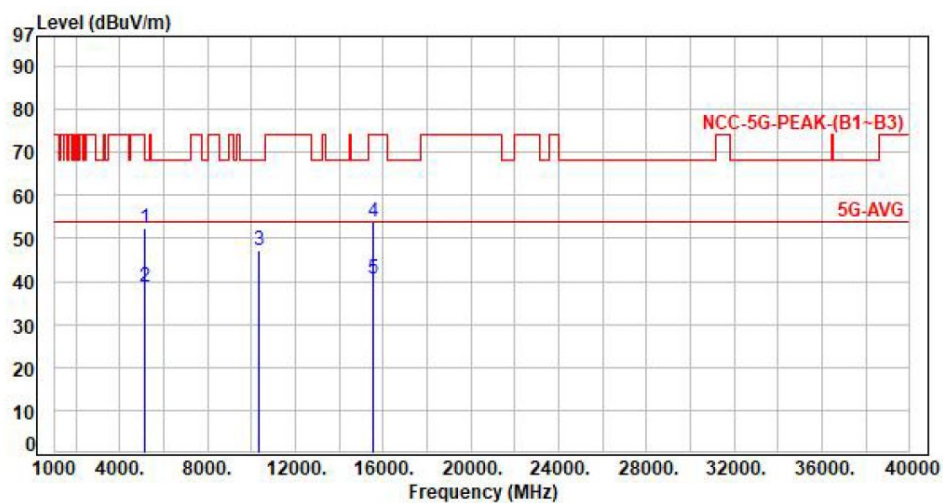


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5350.00	-24.93	76.12	51.19	74.00	-22.81	Peak	100	329	P
2	5350.00	-24.93	65.76	40.83	54.00	-13.17	Average	100	329	P
3	10480.00	-15.64	61.97	46.33	68.20	-21.87	Peak	100	280	P
4	15720.00	-12.80	64.49	51.69	74.00	-22.31	Peak	100	135	P
5	15720.00	-12.80	52.76	39.96	54.00	-14.04	Average	100	135	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 1, CH36		:

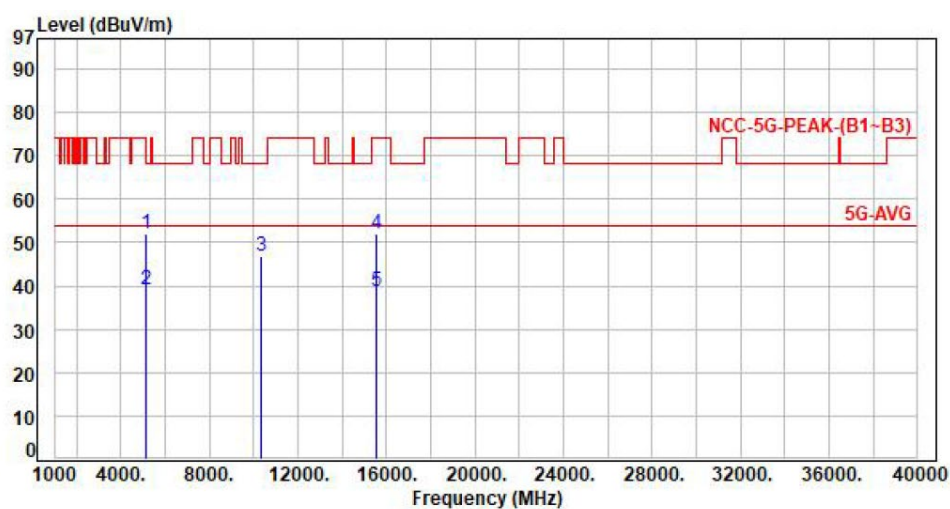


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.87	52.41	74.00	-21.59	Peak	100	138	P
2	5150.00	-24.46	63.37	38.91	54.00	-15.09	Average	100	138	P
3	10360.00	-15.95	63.33	47.38	68.20	-20.82	Peak	100	304	P
4	15540.00	-12.66	66.42	53.76	74.00	-20.24	Peak	100	211	P
5	15540.00	-12.66	53.25	40.59	54.00	-13.41	Average	100	211	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 1, CH36		:

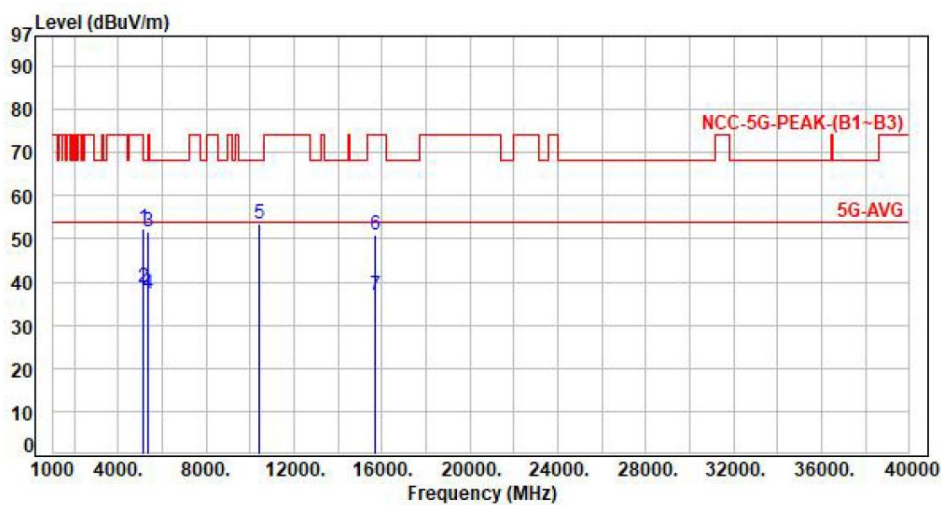


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.38	51.92	74.00	-22.08	Peak	100	137	P
2	5150.00	-24.46	63.42	38.96	54.00	-15.04	Average	100	137	P
3	10360.00	-15.95	62.96	47.01	68.20	-21.19	Peak	100	184	P
4	15540.00	-12.66	64.63	51.97	74.00	-22.03	Peak	100	304	P
5	15540.00	-12.66	51.48	38.82	54.00	-15.18	Average	100	304	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 1, CH44		:

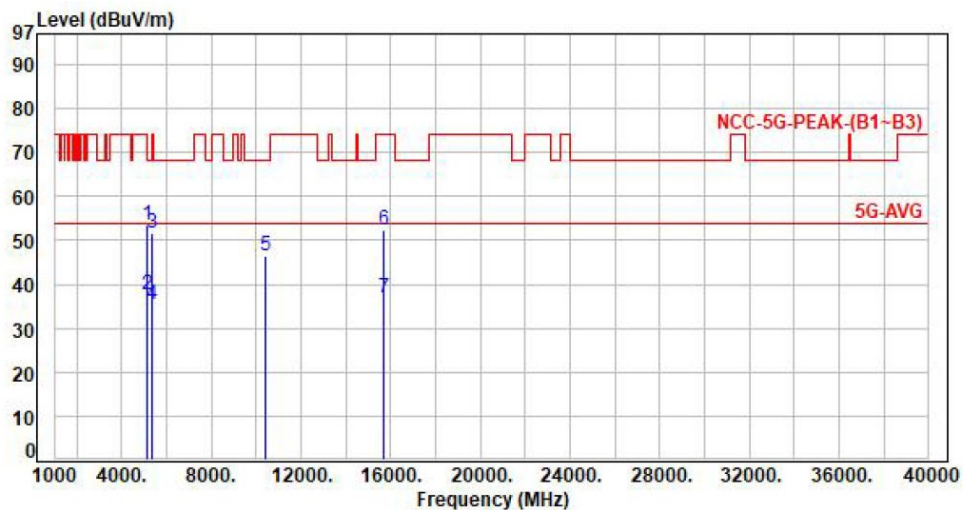


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.82	52.36	74.00	-21.64	Peak	100	148	P
2	5150.00	-24.46	63.13	38.67	54.00	-15.33	Average	100	148	P
3	5350.00	-24.93	76.40	51.47	74.00	-22.53	Peak	100	208	P
4	5350.00	-24.93	62.25	37.32	54.00	-16.68	Average	100	208	P
5	10440.00	-15.70	69.33	53.63	68.20	-14.57	Peak	100	275	P
6	15660.00	-12.87	63.83	50.96	74.00	-23.04	Peak	100	348	P
7	15660.00	-12.87	49.65	36.78	54.00	-17.22	Average	100	348	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 1, CH44		:

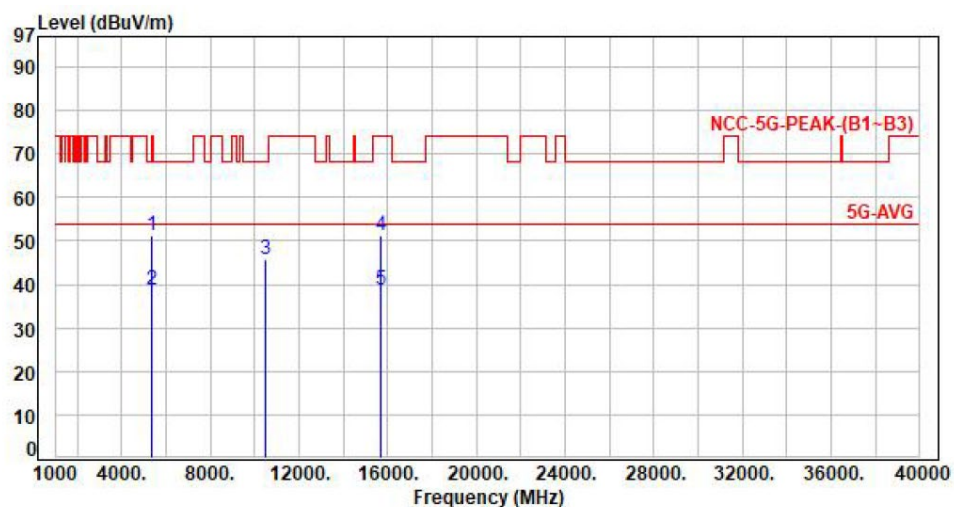


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	77.76	53.30	74.00	-20.70	Peak	100	138	P
2	5150.00	-24.46	62.11	37.65	54.00	-16.35	Average	100	138	P
3	5350.00	-24.93	76.50	51.57	74.00	-22.43	Peak	100	205	P
4	5350.00	-24.93	60.24	35.31	54.00	-18.69	Average	100	205	P
5	10440.00	-15.70	62.35	46.65	68.20	-21.55	Peak	100	117	P
6	15660.00	-12.87	65.39	52.52	74.00	-21.48	Peak	100	322	P
7	15660.00	-12.87	49.74	36.87	54.00	-17.13	Average	100	322	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 1, CH48		:

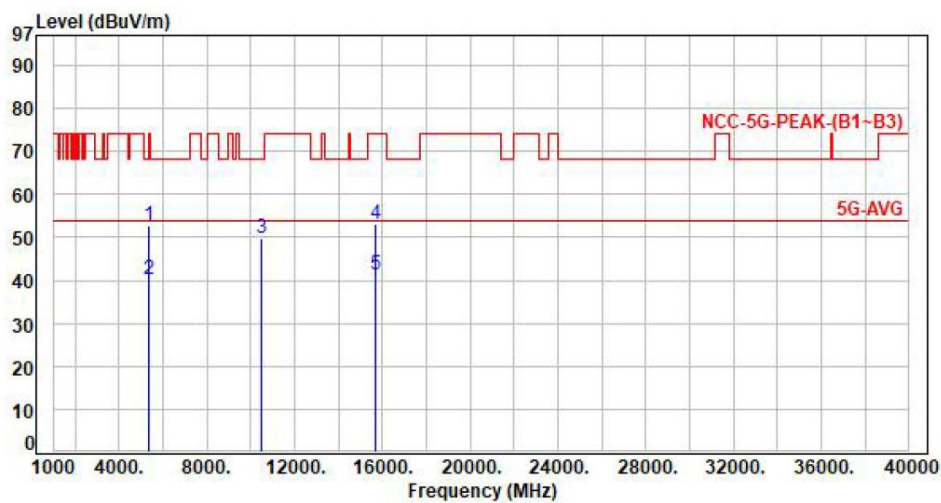


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5350.00	-24.93	76.33	51.40	74.00	-22.60	Peak	100	183	P
2	5350.00	-24.93	63.57	38.64	54.00	-15.36	Average	100	183	P
3	10480.00	-15.64	61.32	45.68	68.20	-22.52	Peak	100	203	P
4	15720.00	-12.80	64.07	51.27	74.00	-22.73	Peak	100	304	P
5	15720.00	-12.80	51.71	38.91	54.00	-15.09	Average	100	304	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 1, CH48		:

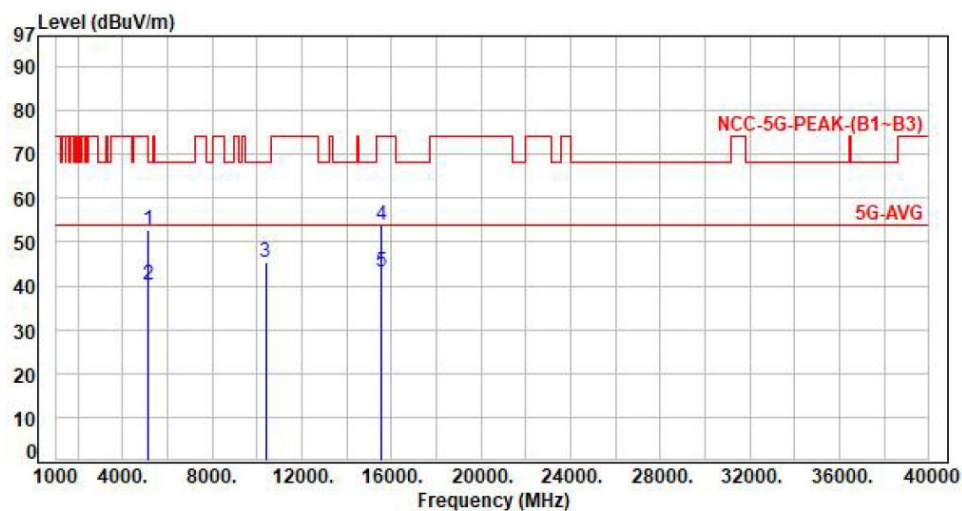


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5350.00	-24.93	77.53	52.60	74.00	-21.40	Peak	100	132	P
2	5350.00	-24.93	65.11	40.18	54.00	-13.82	Average	100	132	P
3	10480.00	-15.64	65.31	49.67	68.20	-18.53	Peak	100	211	P
4	15720.00	-12.80	66.07	53.27	74.00	-20.73	Peak	100	339	P
5	15720.00	-12.80	54.04	41.24	54.00	-12.76	Average	100	339	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 1, CH38		:

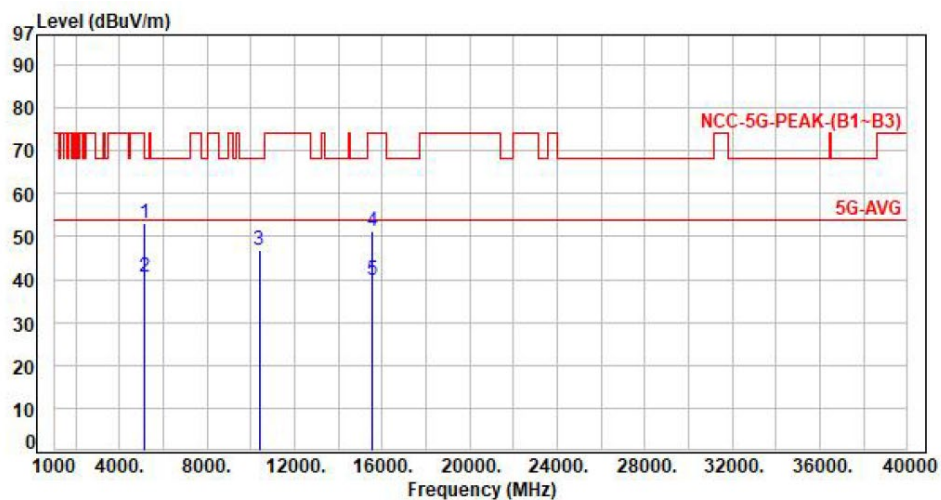


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	77.25	52.79	74.00	-21.21	Peak	100	328	P
2	5150.00	-24.46	64.78	40.32	54.00	-13.68	Average	100	328	P
3	10380.00	-15.86	61.33	45.47	68.20	-22.73	Peak	100	262	P
4	15570.00	-12.81	66.59	53.78	74.00	-20.22	Peak	100	104	P
5	15570.00	-12.81	55.84	43.03	54.00	-10.97	Average	100	104	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 1, CH38		:

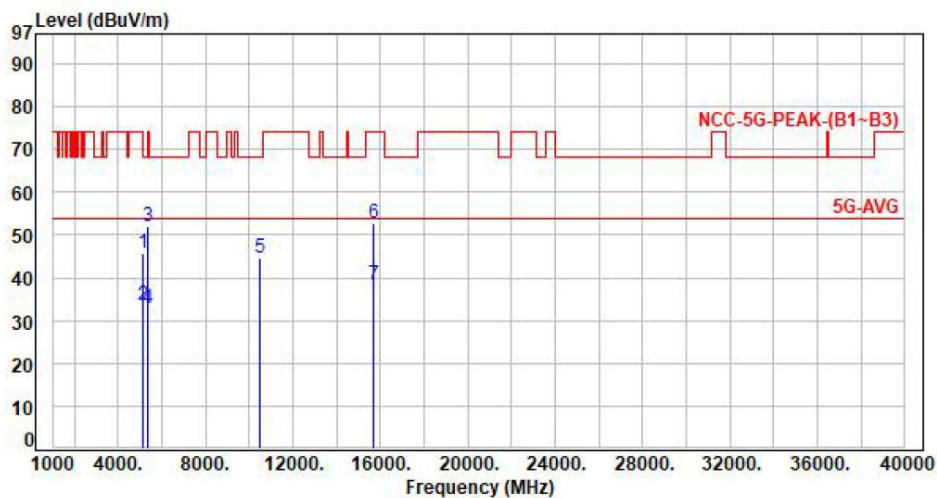


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	77.46	53.00	74.00	-21.00	Peak	100	288	P
2	5150.00	-24.46	64.88	40.42	54.00	-13.58	Average	100	288	P
3	10380.00	-15.86	62.73	46.87	68.20	-21.33	Peak	100	105	P
4	15570.00	-12.81	64.00	51.19	74.00	-22.81	Peak	100	319	P
5	15570.00	-12.81	52.79	39.98	54.00	-14.02	Average	100	319	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 1, CH46		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	70.19	45.73	74.00	-28.27	Peak	100	139	P
2	5150.00	-24.46	58.13	33.67	54.00	-20.33	Average	100	138	P
3	5350.00	-24.93	76.81	51.88	74.00	-22.12	Peak	100	263	P
4	5350.00	-24.93	57.91	32.98	54.00	-21.02	Average	100	263	P
5	10460.00	-15.67	60.34	44.67	68.20	-23.53	Peak	100	357	P
6	15690.00	-12.82	65.46	52.64	74.00	-21.36	Peak	100	227	P
7	15690.00	-12.82	51.21	38.39	54.00	-15.61	Average	100	227	P

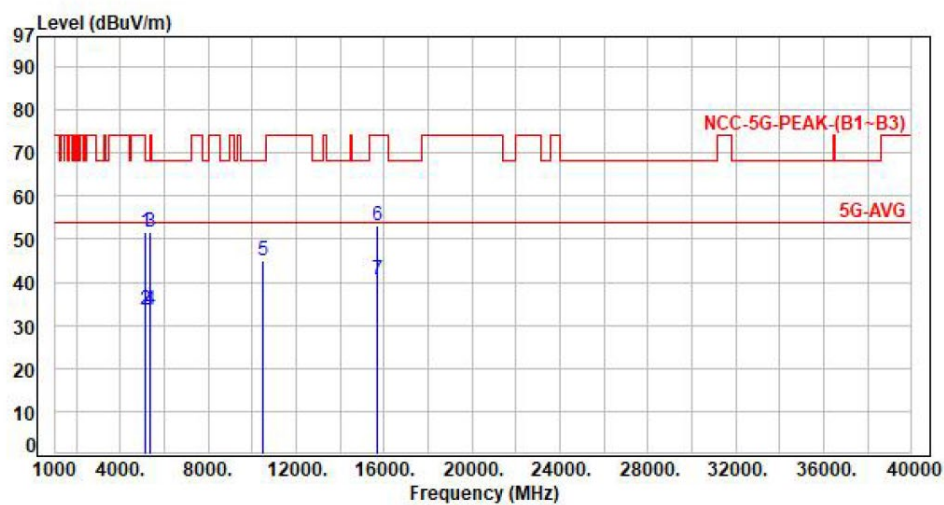
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 1, CH46		:

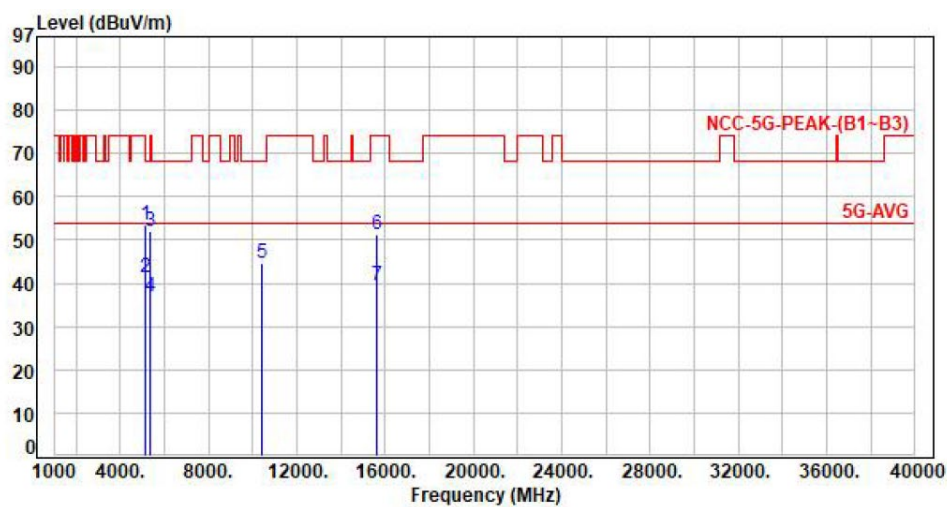


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.04	51.58	74.00	-22.42	Peak	100	349	P
2	5150.00	-24.46	58.15	33.69	54.00	-20.31	Average	100	349	P
3	5350.00	-24.93	76.62	51.69	74.00	-22.31	Peak	100	167	P
4	5350.00	-24.93	58.60	33.67	54.00	-20.33	Average	100	167	P
5	10460.00	-15.67	60.53	44.86	68.20	-23.34	Peak	100	268	P
6	15690.00	-12.82	65.76	52.94	74.00	-21.06	Peak	100	303	P
7	15690.00	-12.82	53.54	40.72	54.00	-13.28	Average	100	303	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 1, CH42		:

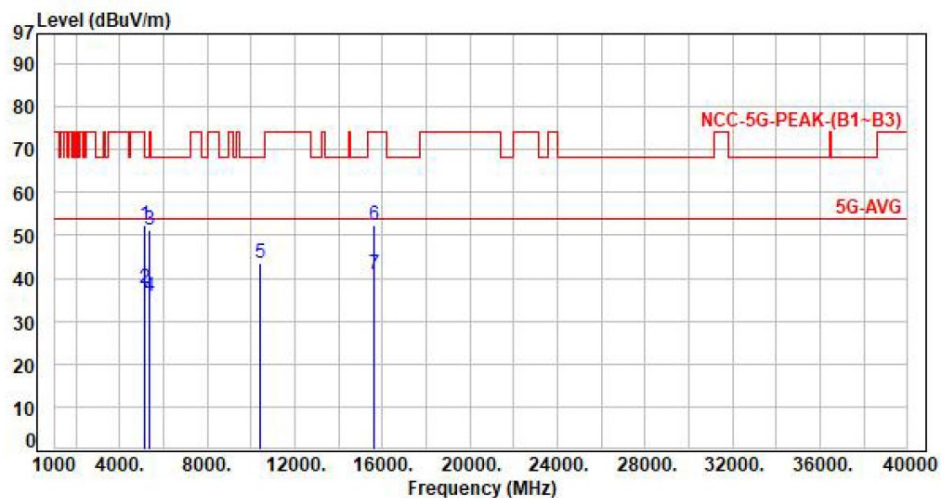


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	77.84	53.38	74.00	-20.62	Peak	100	327	P
2	5150.00	-24.46	65.69	41.23	54.00	-12.77	Average	100	327	P
3	5350.00	-24.93	76.84	51.91	74.00	-22.09	Peak	100	266	P
4	5350.00	-24.93	61.67	36.74	54.00	-17.26	Average	100	266	P
5	10420.00	-15.73	60.36	44.63	68.20	-23.57	Peak	100	204	P
6	15630.00	-12.92	64.29	51.37	74.00	-22.63	Peak	100	117	P
7	15630.00	-12.92	52.54	39.62	54.00	-14.38	Average	100	117	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 1, CH42		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-24.46	76.65	52.19	74.00	-21.81	Peak	100	134	P
2	5150.00	-24.46	62.07	37.61	54.00	-16.39	Average	100	134	P
3	5350.00	-24.93	76.31	51.38	74.00	-22.62	Peak	100	267	P
4	5350.00	-24.93	60.57	35.64	54.00	-18.36	Average	100	267	P
5	10420.00	-15.73	59.14	43.41	68.20	-24.79	Peak	100	215	P
6	15630.00	-12.92	65.30	52.38	74.00	-21.62	Peak	100	327	P
7	15630.00	-12.92	53.95	41.03	54.00	-12.97	Average	100	327	P

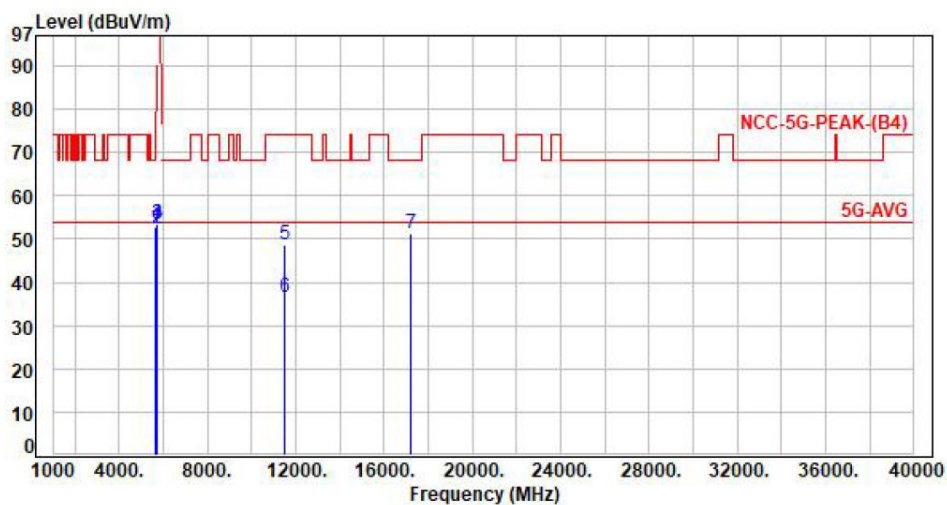
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4 CH149		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	77.12	52.66	68.20	-15.54	Peak	100	103	P
2	5700.00	-24.17	76.63	52.46	105.20	-52.74	Peak	100	264	P
3	5720.00	-24.12	77.59	53.47	110.80	-57.33	Peak	100	318	P
4	5725.00	-24.11	77.73	53.62	122.20	-68.58	Peak	100	274	P
5	11490.00	-14.13	62.98	48.85	74.00	-25.15	Peak	100	259	P
6	11490.00	-14.13	50.76	36.63	54.00	-17.37	Average	100	259	P
7	17235.00	-8.48	59.62	51.14	68.20	-17.06	Peak	100	170	P

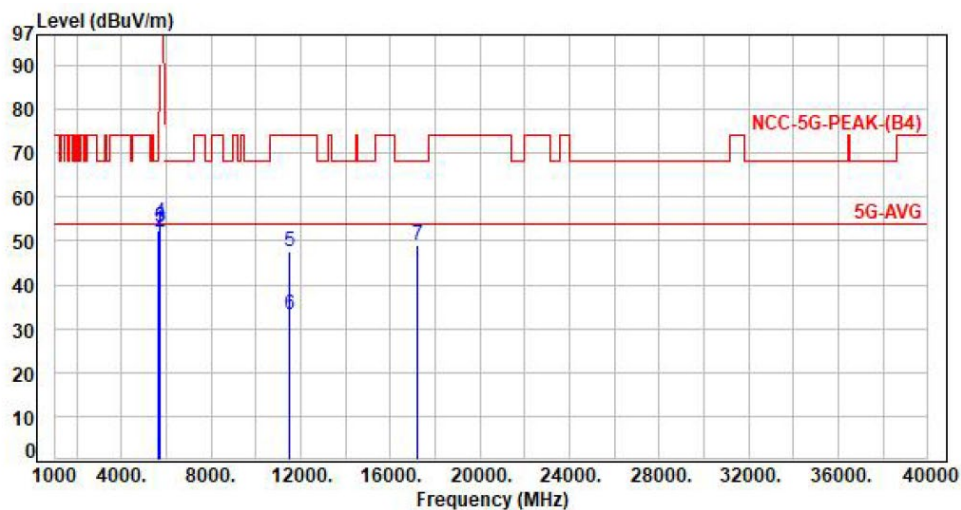
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4 CH149		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	76.73	52.27	68.20	-15.93	Peak	100	326	P
2	5700.00	-24.17	76.15	51.98	105.20	-53.22	Peak	100	108	P
3	5720.00	-24.12	77.37	53.25	110.80	-57.55	Peak	100	283	P
4	5725.00	-24.11	78.20	54.09	122.20	-68.11	Peak	100	211	P
5	11490.00	-14.13	61.77	47.64	74.00	-26.36	Peak	100	291	P
6	11490.00	-14.13	47.40	33.27	54.00	-20.73	Average	100	291	P
7	17235.00	-8.48	57.66	49.18	68.20	-19.02	Peak	100	177	P

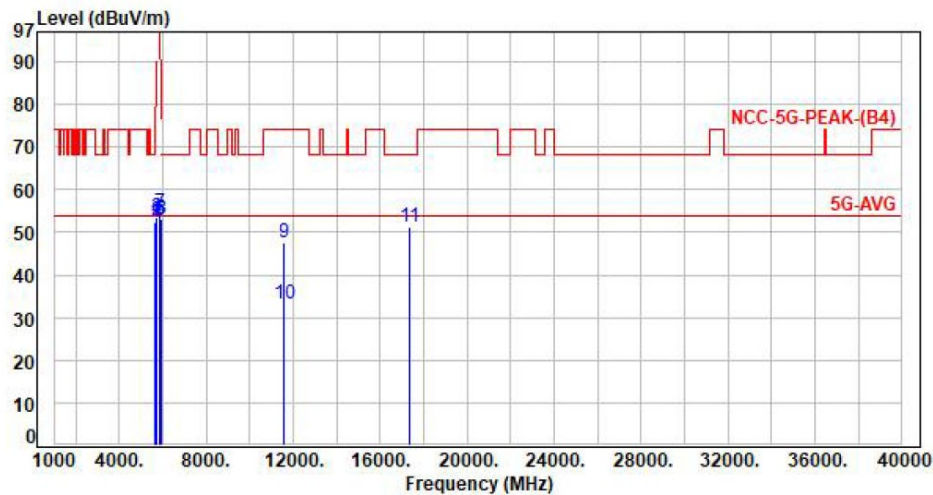
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4 CH157		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	76.83	52.37	68.20	-15.83	Peak	100	357	P
2	5700.00	-24.17	77.06	52.89	105.20	-52.31	Peak	100	349	P
3	5720.00	-24.12	77.57	53.45	110.80	-57.35	Peak	100	183	P
4	5725.00	-24.11	77.09	52.98	122.20	-69.22	Peak	100	295	P
5	5850.00	-23.76	76.67	52.91	122.20	-69.29	Peak	100	176	P
6	5855.00	-23.74	76.80	53.06	110.80	-57.74	Peak	100	214	P
7	5875.00	-23.69	78.27	54.58	105.20	-50.62	Peak	100	71	P
8	5925.00	-23.52	76.65	53.13	68.20	-15.07	Peak	100	302	P
9	11570.00	-14.08	61.66	47.58	74.00	-26.42	Peak	100	291	P
10	11570.00	-14.08	47.15	33.07	54.00	-20.93	Average	100	291	P
11	17355.00	-7.70	59.12	51.42	68.20	-16.78	Peak	100	279	P

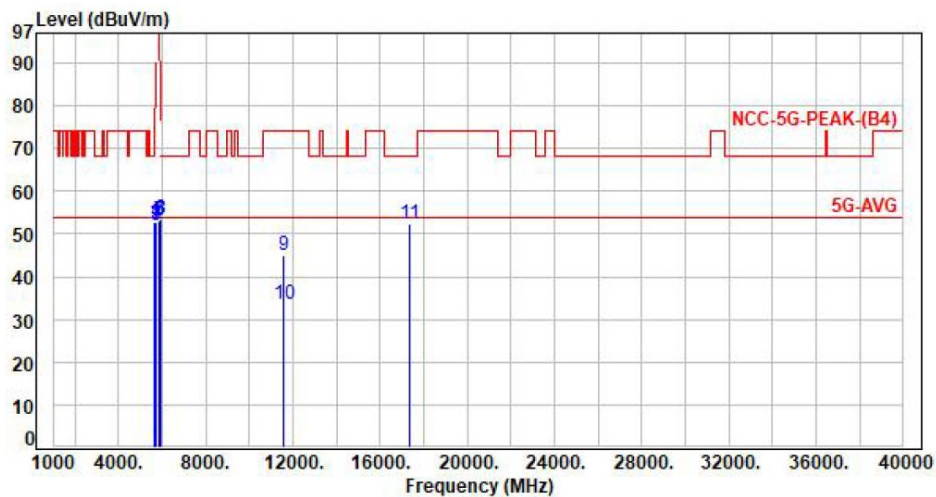
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4 CH157		:

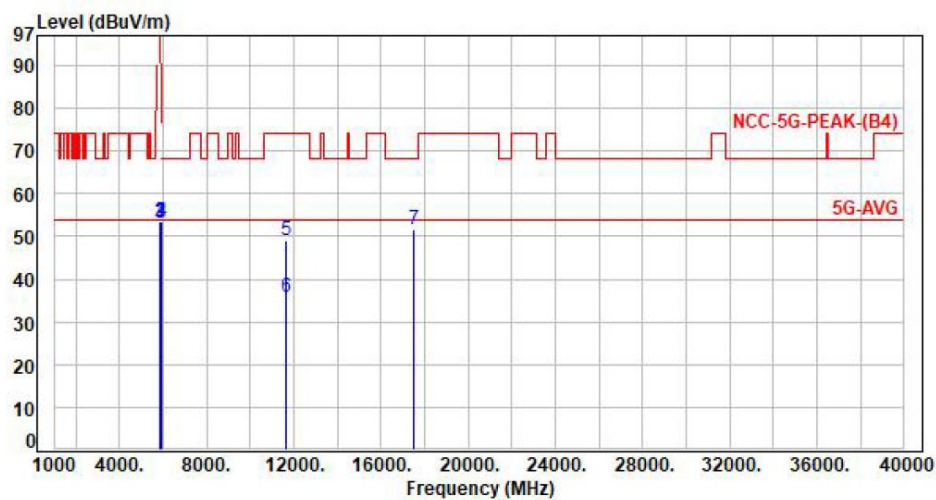


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	77.09	52.63	68.20	-15.57	Peak	100	163	P
2	5700.00	-24.17	76.67	52.50	105.20	-52.70	Peak	100	287	P
3	5720.00	-24.12	76.24	52.12	110.80	-58.68	Peak	100	167	P
4	5725.00	-24.11	76.86	52.75	122.20	-69.45	Peak	100	161	P
5	5850.00	-23.76	76.79	53.03	122.20	-69.17	Peak	100	143	P
6	5855.00	-23.74	76.67	52.93	110.80	-57.87	Peak	100	295	P
7	5875.00	-23.69	76.89	53.20	105.20	-52.00	Peak	100	332	P
8	5925.00	-23.52	76.99	53.47	68.20	-14.73	Peak	100	281	P
9	11570.00	-14.08	59.05	44.97	74.00	-29.03	Peak	100	315	P
10	11570.00	-14.08	47.57	33.49	54.00	-20.51	Average	100	315	P
11	17355.00	-7.70	59.97	52.27	68.20	-15.93	Peak	100	204	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4 CH165		:

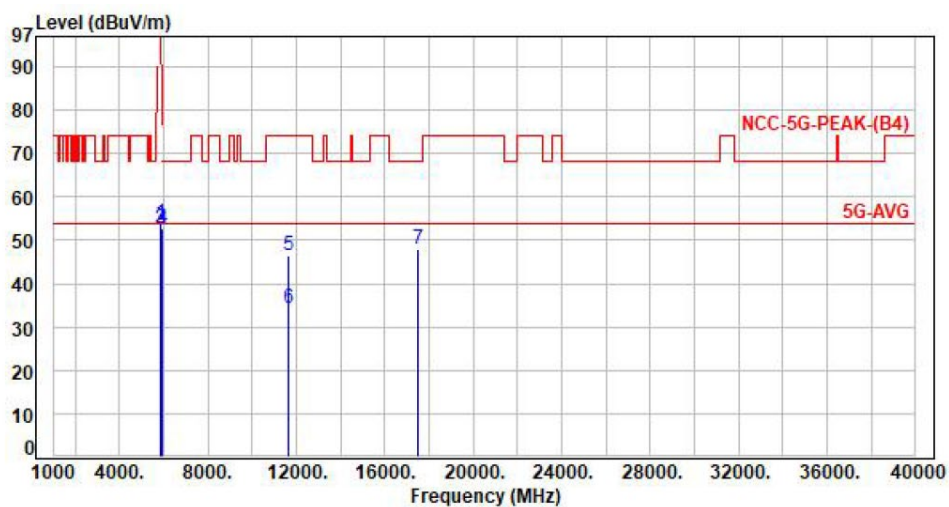


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	77.10	53.34	122.20	-68.86	Peak	100	36	P
2	5855.00	-23.74	77.33	53.59	110.80	-57.21	Peak	100	261	P
3	5875.00	-23.69	76.93	53.24	105.20	-51.96	Peak	100	238	P
4	5925.00	-23.52	76.84	53.32	68.20	-14.88	Peak	100	105	P
5	11650.00	-14.31	63.22	48.91	74.00	-25.09	Peak	100	357	P
6	11650.00	-14.31	49.91	35.60	54.00	-18.40	Average	100	357	P
7	17475.00	-6.59	58.22	51.63	68.20	-16.57	Peak	100	211	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4 CH165		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	77.49	53.73	122.20	-68.47	Peak	100	329	P
2	5855.00	-23.74	76.51	52.77	110.80	-58.03	Peak	100	295	P
3	5875.00	-23.69	76.33	52.64	105.20	-52.56	Peak	100	277	P
4	5925.00	-23.52	76.41	52.89	68.20	-15.31	Peak	100	150	P
5	11650.00	-14.31	60.68	46.37	74.00	-27.63	Peak	100	183	P
6	11650.00	-14.31	48.57	34.26	54.00	-19.74	Average	100	183	P
7	17475.00	-6.59	54.36	47.77	68.20	-20.43	Peak	100	184	P

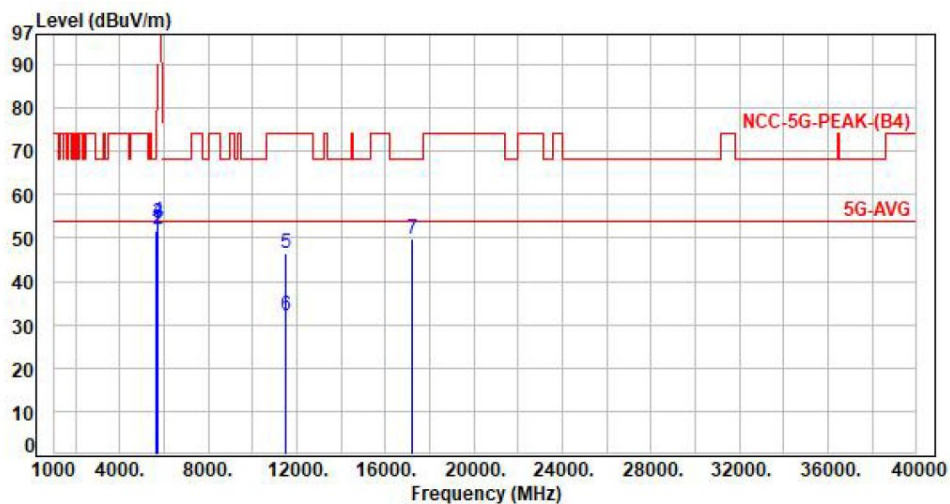
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 4, CH149		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	76.08	51.62	68.20	-16.58	Peak	100	119	P
2	5700.00	-24.17	76.24	52.07	105.20	-53.13	Peak	100	357	P
3	5720.00	-24.12	77.50	53.38	110.80	-57.42	Peak	100	288	P
4	5725.00	-24.11	78.08	53.97	122.20	-68.23	Peak	100	320	P
5	11490.00	-14.13	60.75	46.62	74.00	-27.38	Peak	100	168	P
6	11490.00	-14.13	46.37	32.24	54.00	-21.76	Average	100	168	P
7	17235.00	-8.48	58.40	49.92	68.20	-18.28	Peak	100	345	P

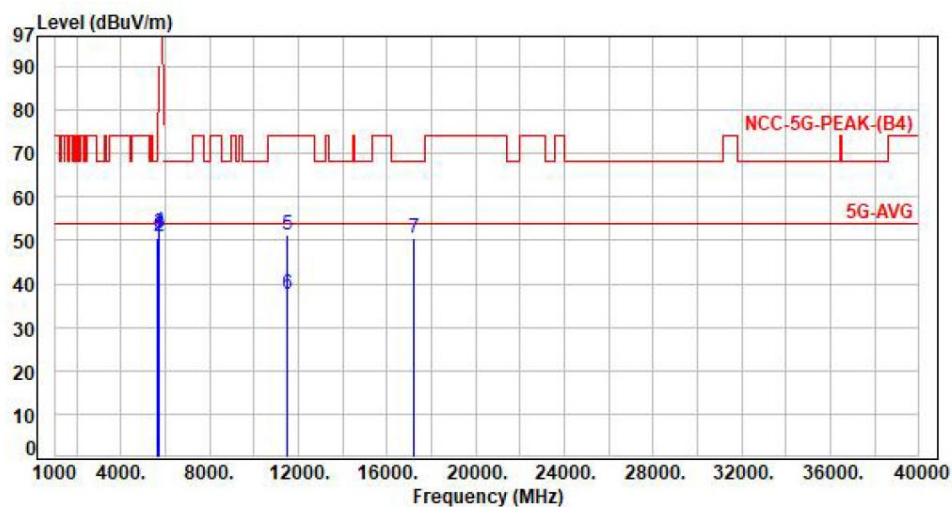
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 4, CH149		:

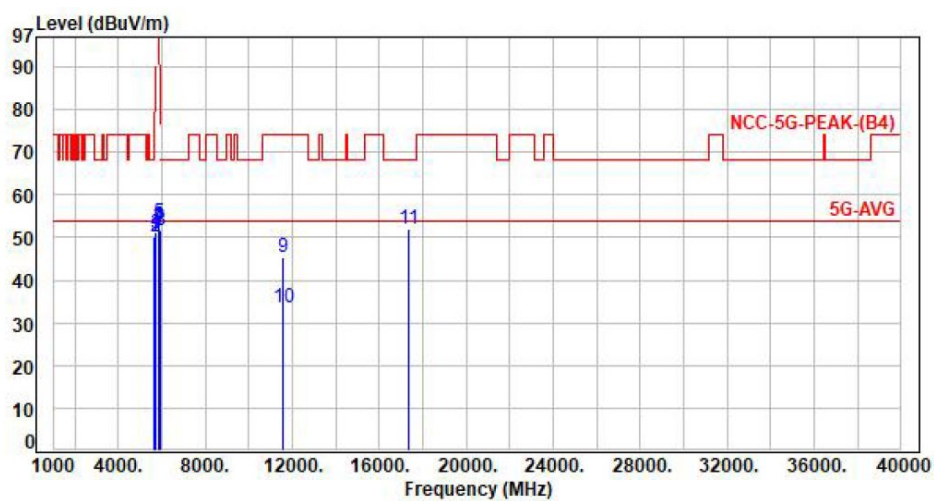


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	75.09	50.63	68.20	-17.57	Peak	100	138	P
2	5700.00	-24.17	75.12	50.95	105.20	-54.25	Peak	100	192	P
3	5720.00	-24.12	75.79	51.67	110.80	-59.13	Peak	100	311	P
4	5725.00	-24.11	76.28	52.17	122.20	-70.03	Peak	100	351	P
5	11490.00	-14.13	65.29	51.16	74.00	-22.84	Peak	100	224	P
6	11490.00	-14.13	51.81	37.68	54.00	-16.32	Average	100	324	P
7	17235.00	-8.48	59.04	50.56	68.20	-17.64	Peak	100	192	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 4, CH157		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	74.51	50.05	68.20	-18.15	Peak	100	149	P
2	5700.00	-24.17	74.49	50.32	105.20	-54.88	Peak	100	314	P
3	5720.00	-24.12	75.09	50.97	110.80	-59.83	Peak	100	158	P
4	5725.00	-24.11	75.27	51.16	122.20	-71.04	Peak	100	232	P
5	5850.00	-23.76	77.10	53.34	122.20	-68.86	Peak	100	106	P
6	5855.00	-23.74	76.36	52.62	110.80	-58.18	Peak	100	197	P
7	5875.00	-23.69	75.70	52.01	105.20	-53.19	Peak	100	318	P
8	5925.00	-23.52	75.15	51.63	68.20	-16.57	Peak	100	67	P
9	11570.00	-14.08	59.61	45.53	74.00	-28.47	Peak	100	148	P
10	11570.00	-14.08	47.69	33.61	54.00	-20.39	Average	100	148	P
11	17355.00	-7.70	59.83	52.13	68.20	-16.07	Peak	100	140	P

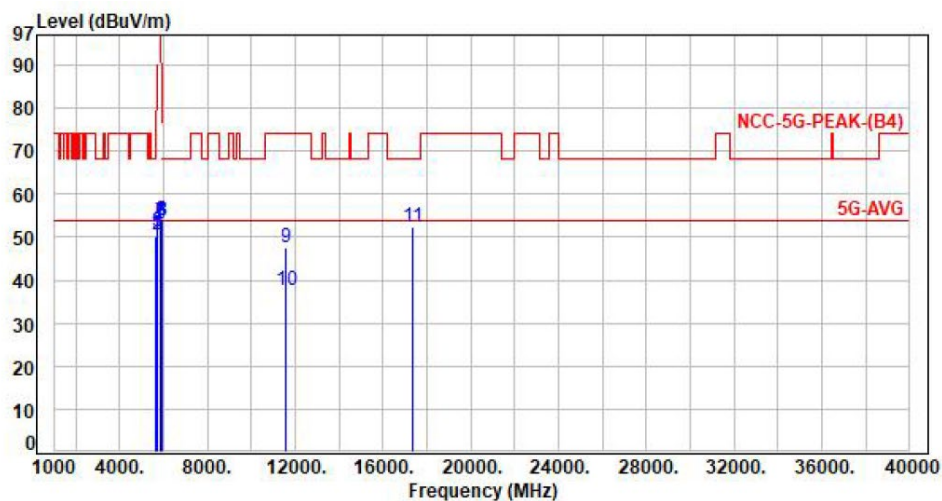
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 4, CH157		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	74.51	50.05	68.20	-18.15	Peak	100	176	P
2	5700.00	-24.17	74.80	50.63	105.20	-54.57	Peak	100	192	P
3	5720.00	-24.12	75.26	51.14	110.80	-59.66	Peak	100	107	P
4	5725.00	-24.11	76.35	52.24	122.20	-69.96	Peak	100	291	P
5	5850.00	-23.76	76.73	52.97	122.20	-69.23	Peak	100	342	P
6	5855.00	-23.74	77.41	53.67	110.80	-57.13	Peak	100	354	P
7	5875.00	-23.69	77.24	53.55	105.20	-51.65	Peak	100	319	P
8	5925.00	-23.52	77.47	53.95	68.20	-14.25	Peak	100	81	P
9	11570.00	-14.08	61.71	47.63	74.00	-26.37	Peak	100	318	P
10	11570.00	-14.08	51.70	37.62	54.00	-16.38	Average	100	318	P
11	17355.00	-7.70	59.95	52.25	68.20	-15.95	Peak	100	114	P

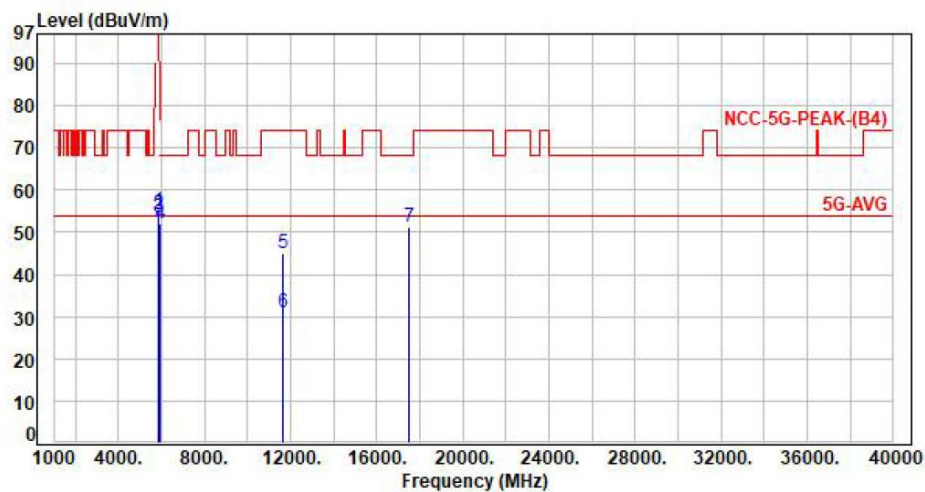
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, Band 4, CH165		:

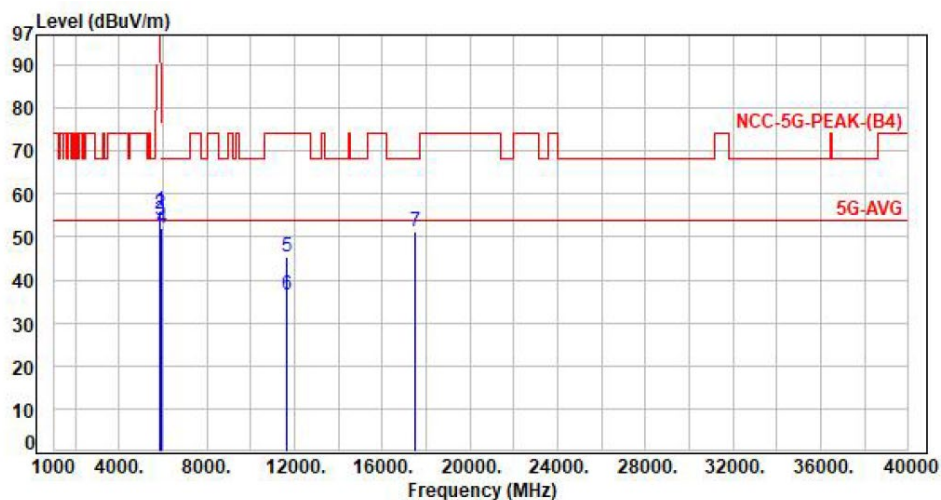


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	78.59	54.83	122.20	-67.37	Peak	100	204	P
2	5855.00	-23.74	77.89	54.15	110.80	-56.65	Peak	100	261	P
3	5875.00	-23.69	77.04	53.35	105.20	-51.85	Peak	100	267	P
4	5925.00	-23.52	75.63	52.11	68.20	-16.09	Peak	100	102	P
5	11650.00	-14.31	59.26	44.95	74.00	-29.05	Peak	100	307	P
6	11650.00	-14.31	45.47	31.16	54.00	-22.84	Average	100	307	P
7	17475.00	-6.59	57.76	51.17	68.20	-17.03	Peak	100	357	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, Band 4, CH165		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	79.72	55.96	122.20	-66.24	Peak	100	342	P
2	5855.00	-23.74	79.10	55.36	110.80	-55.44	Peak	100	308	P
3	5875.00	-23.69	77.36	53.67	105.20	-51.53	Peak	100	281	P
4	5925.00	-23.52	75.63	52.11	68.20	-16.09	Peak	100	102	P
5	11650.00	-14.31	59.73	45.42	74.00	-28.58	Peak	100	176	P
6	11650.00	-14.31	50.93	36.62	54.00	-17.38	Average	100	176	P
7	17475.00	-6.59	57.84	51.25	68.20	-16.95	Peak	100	349	P

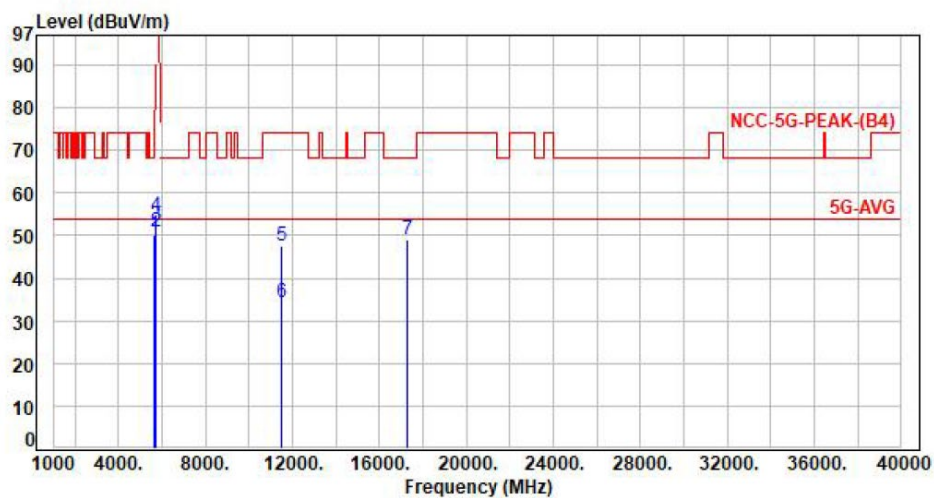
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 4, CH151		:

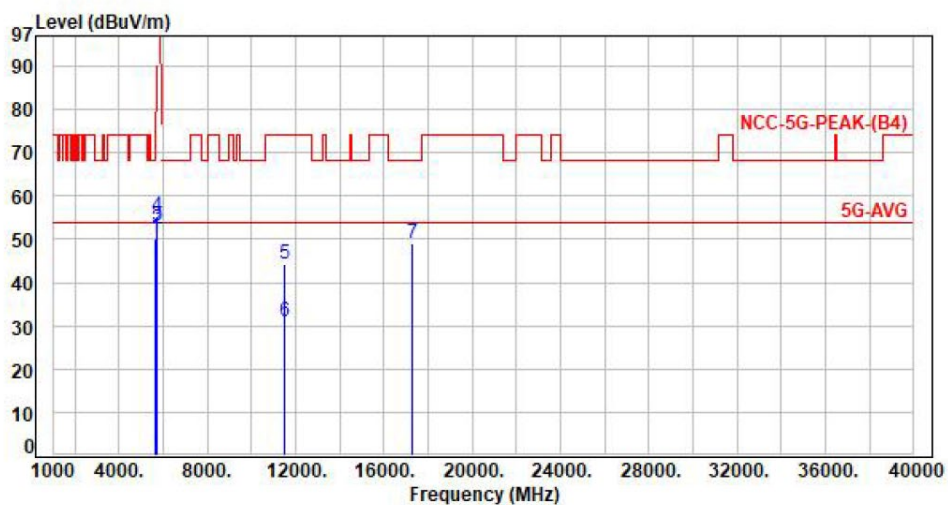


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	74.80	50.34	68.20	-17.86	Peak	100	173	P
2	5700.00	-24.17	75.16	50.99	105.20	-54.21	Peak	100	201	P
3	5720.00	-24.12	76.51	52.39	110.80	-58.41	Peak	100	349	P
4	5725.00	-24.11	78.87	54.76	122.20	-67.44	Peak	100	238	P
5	11510.00	-14.10	61.71	47.61	74.00	-26.39	Peak	100	274	P
6	11510.00	-14.10	48.29	34.19	54.00	-19.81	Average	100	274	P
7	17265.00	-8.41	57.59	49.18	68.20	-19.02	Peak	100	341	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 4, CH151		:

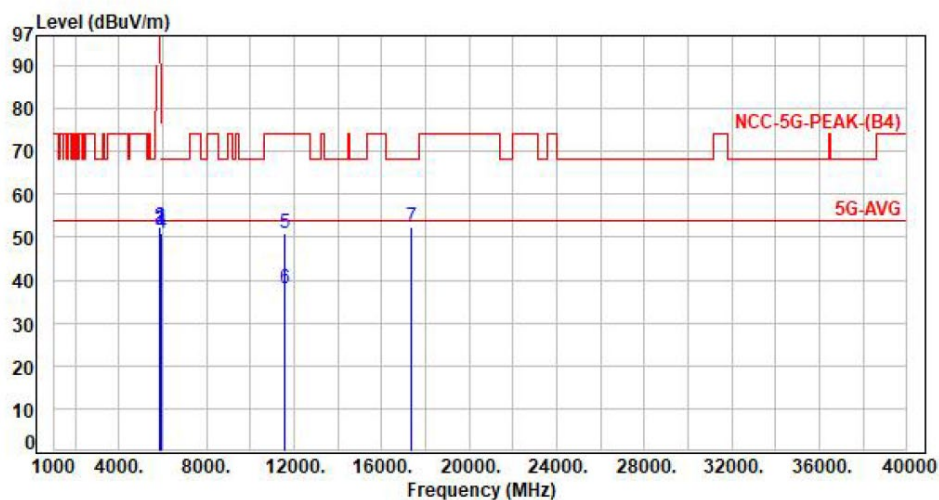


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	74.74	50.28	68.20	-17.92	Peak	100	102	P
2	5700.00	-24.17	76.42	52.25	105.20	-52.95	Peak	100	297	P
3	5720.00	-24.12	77.26	53.14	110.80	-57.66	Peak	100	167	P
4	5725.00	-24.11	79.47	55.36	122.20	-66.84	Peak	100	52	P
5	11510.00	-14.10	58.23	44.13	74.00	-29.87	Peak	100	217	P
6	11510.00	-14.10	45.22	31.12	54.00	-22.88	Average	100	217	P
7	17265.00	-8.41	57.36	48.95	68.20	-19.25	Peak	100	276	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 4, CH159		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	75.81	52.05	122.20	-70.15	Peak	100	272	P
2	5855.00	-23.74	76.01	52.27	110.80	-58.53	Peak	100	235	P
3	5875.00	-23.69	75.31	51.62	105.20	-53.58	Peak	100	309	P
4	5925.00	-23.52	74.43	50.91	68.20	-17.29	Peak	100	284	P
5	11590.00	-14.08	65.05	50.97	74.00	-23.03	Peak	100	103	P
6	11590.00	-14.08	52.03	37.95	54.00	-16.05	Average	100	103	P
7	17385.00	-7.35	59.58	52.23	68.20	-15.97	Peak	100	81	P

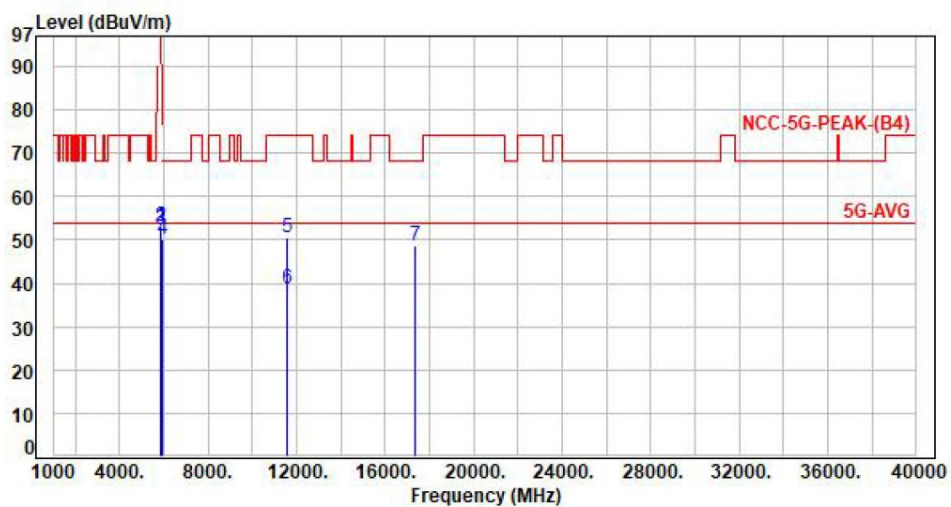
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 4, CH159		:

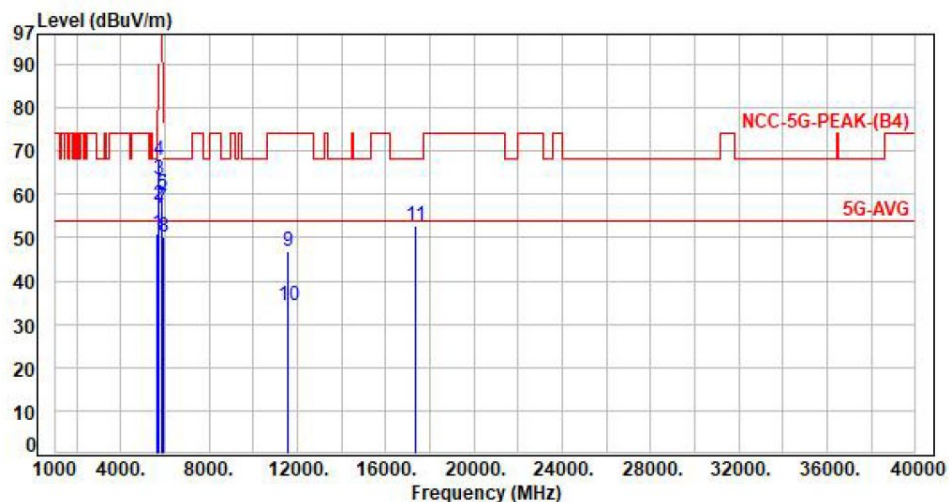


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-23.76	76.96	53.20	122.20	-69.00	Peak	100	184	P
2	5855.00	-23.74	76.71	52.97	110.80	-57.83	Peak	100	318	P
3	5875.00	-23.69	75.94	52.25	105.20	-52.95	Peak	100	288	P
4	5925.00	-23.52	73.55	50.03	68.20	-18.17	Peak	100	291	P
5	11590.00	-14.08	64.71	50.63	74.00	-23.37	Peak	100	211	P
6	11590.00	-14.08	52.92	38.84	54.00	-15.16	Average	100	211	P
7	17385.00	-7.35	56.17	48.82	68.20	-19.38	Peak	100	357	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 4, CH155		:

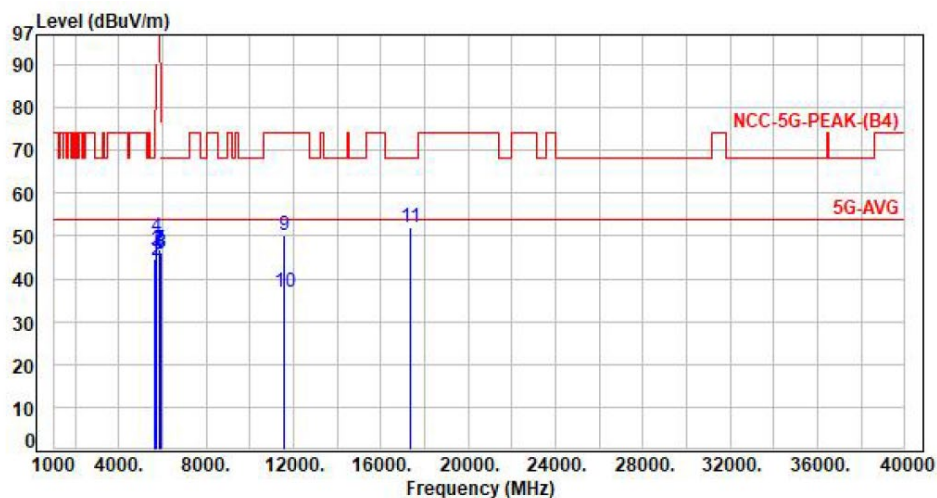


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	75.51	51.05	68.20	-17.15	Peak	100	214	P
2	5700.00	-24.17	81.81	57.64	105.20	-47.56	Peak	100	316	P
3	5720.00	-24.12	87.44	63.32	110.80	-47.48	Peak	100	61	P
4	5725.00	-24.11	91.86	67.75	122.20	-54.45	Peak	100	257	P
5	5850.00	-23.76	83.83	60.07	122.20	-62.13	Peak	100	349	P
6	5855.00	-23.74	83.71	59.97	110.80	-50.83	Peak	100	127	P
7	5875.00	-23.69	80.33	56.64	105.20	-48.56	Peak	100	287	P
8	5925.00	-23.52	73.84	50.32	68.20	-17.88	Peak	100	322	P
9	11550.00	-14.08	60.89	46.81	74.00	-27.19	Peak	100	24	P
10	11550.00	-14.08	48.53	34.45	54.00	-19.55	Average	100	24	P
11	17325.00	-8.05	60.68	52.63	68.20	-15.57	Peak	100	144	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 4, CH155		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-24.46	68.91	44.45	68.20	-23.75	Peak	100	84	P
2	5700.00	-24.17	68.55	44.38	105.20	-60.82	Peak	100	176	P
3	5720.00	-24.12	70.74	46.62	110.80	-64.18	Peak	100	307	P
4	5725.00	-24.11	74.06	49.95	122.20	-72.25	Peak	100	328	P
5	5850.00	-23.76	69.39	45.63	122.20	-76.57	Peak	100	106	P
6	5855.00	-23.74	70.36	46.62	110.80	-64.18	Peak	100	37	P
7	5875.00	-23.69	70.60	46.91	105.20	-58.29	Peak	100	163	P
8	5925.00	-23.52	69.50	45.98	68.20	-22.22	Peak	100	128	P
9	11550.00	-14.08	64.24	50.16	74.00	-23.84	Peak	100	120	P
10	11550.00	-14.08	51.02	36.94	54.00	-17.06	Average	100	120	P
11	17325.00	-8.05	60.22	52.17	68.20	-16.03	Peak	100	298	P

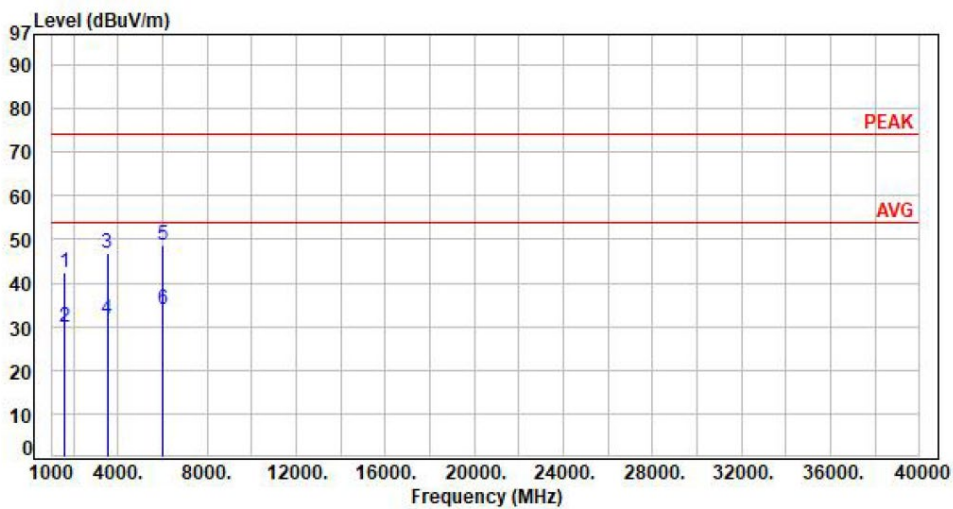
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 8, Band 1 CH42		:

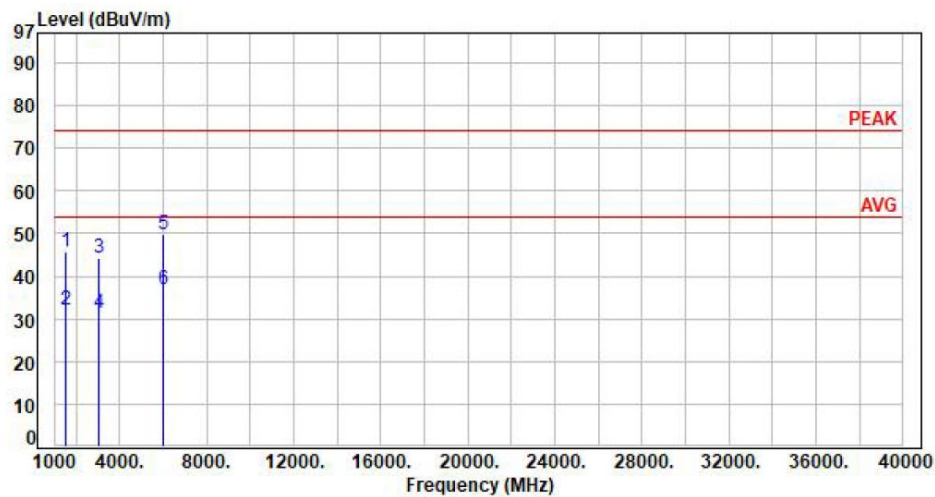


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	1607.00	-33.98	76.25	42.27	74.00	-31.73	Peak	100	194	P
2	1607.00	-33.98	63.93	29.95	54.00	-24.05	Average	100	194	P
3	3512.00	-28.57	75.24	46.67	74.00	-27.33	Peak	100	281	P
4	3512.00	-28.57	60.21	31.64	54.00	-22.36	Average	100	281	P
5	6018.00	-23.44	72.09	48.65	74.00	-25.35	Peak	100	319	P
6	6018.00	-23.44	57.39	33.95	54.00	-20.05	Average	100	319	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 8, Band 1 CH42		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	1553.00	-33.80	79.47	45.67	74.00	-28.33	Peak	100	127	P
2	1553.00	-33.80	65.75	31.95	54.00	-22.05	Average	100	127	P
3	3012.00	-29.30	73.48	44.18	74.00	-29.82	Peak	100	197	P
4	3012.00	-29.30	60.49	31.19	54.00	-22.81	Average	100	297	P
5	6014.00	-23.46	73.43	49.97	74.00	-24.03	Peak	100	314	P
6	6014.00	-23.46	60.22	36.76	54.00	-17.24	Average	100	314	P

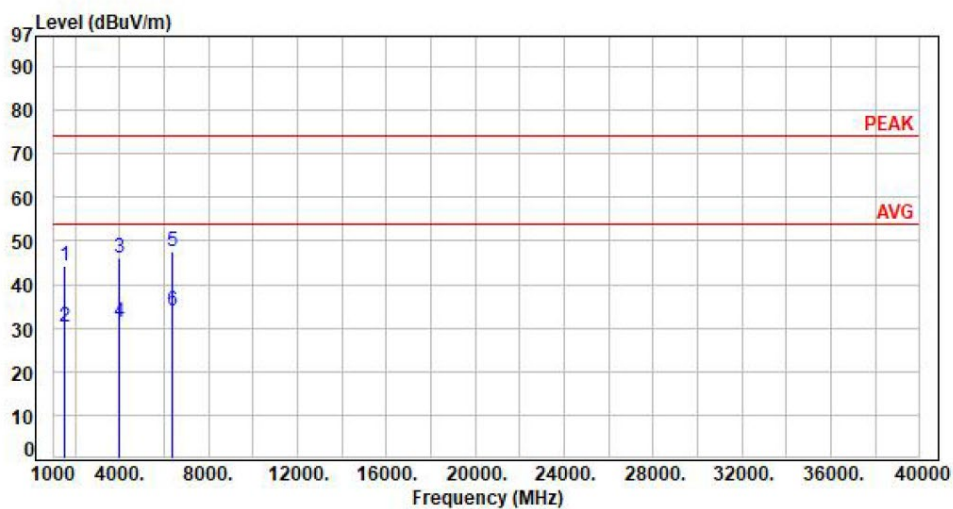
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 110V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 8, Band 4 CH155		:

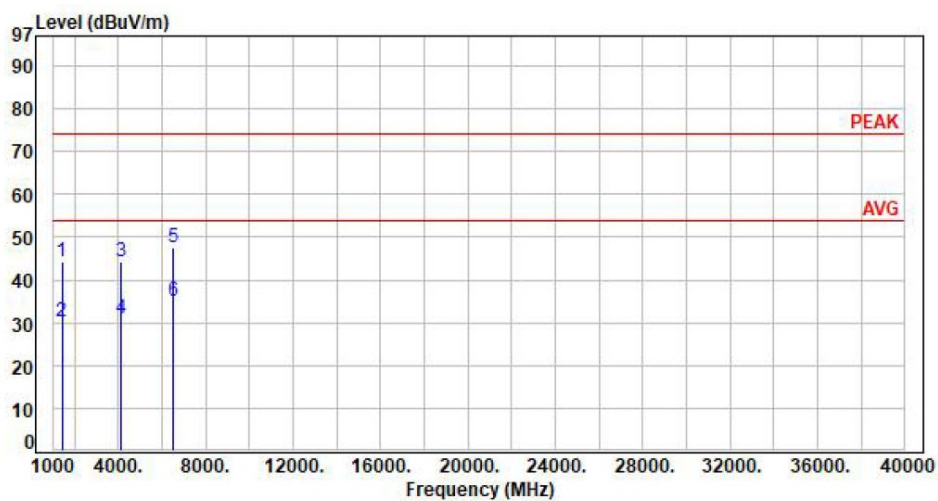


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	1513.00	-33.60	77.76	44.16	74.00	-29.84	Peak	100	211	P
2	1513.00	-33.60	63.86	30.26	54.00	-23.74	Average	100	211	P
3	4015.00	-27.41	73.38	45.97	74.00	-28.03	Peak	100	183	P
4	4015.00	-27.41	58.67	31.26	54.00	-22.74	Average	100	183	P
5	6387.00	-22.48	70.22	47.74	74.00	-26.26	Peak	100	304	P
6	6387.00	-22.48	56.49	34.01	54.00	-19.99	Average	100	304	P

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



Power	: AC 110V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 8, Band 4 CH155		:



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	1413.00	-33.29	77.47	44.18	74.00	-29.82	Peak	100	187	P
2	1413.00	-33.29	63.37	30.08	54.00	-23.92	Average	100	187	P
3	4097.00	-27.19	71.34	44.15	74.00	-29.85	Peak	100	338	P
4	4097.00	-27.19	58.31	31.12	54.00	-22.88	Average	100	338	P
5	6507.00	-21.82	69.57	47.75	74.00	-26.25	Peak	100	358	P
6	6507.00	-21.82	56.94	35.12	54.00	-18.88	Average	100	358	P

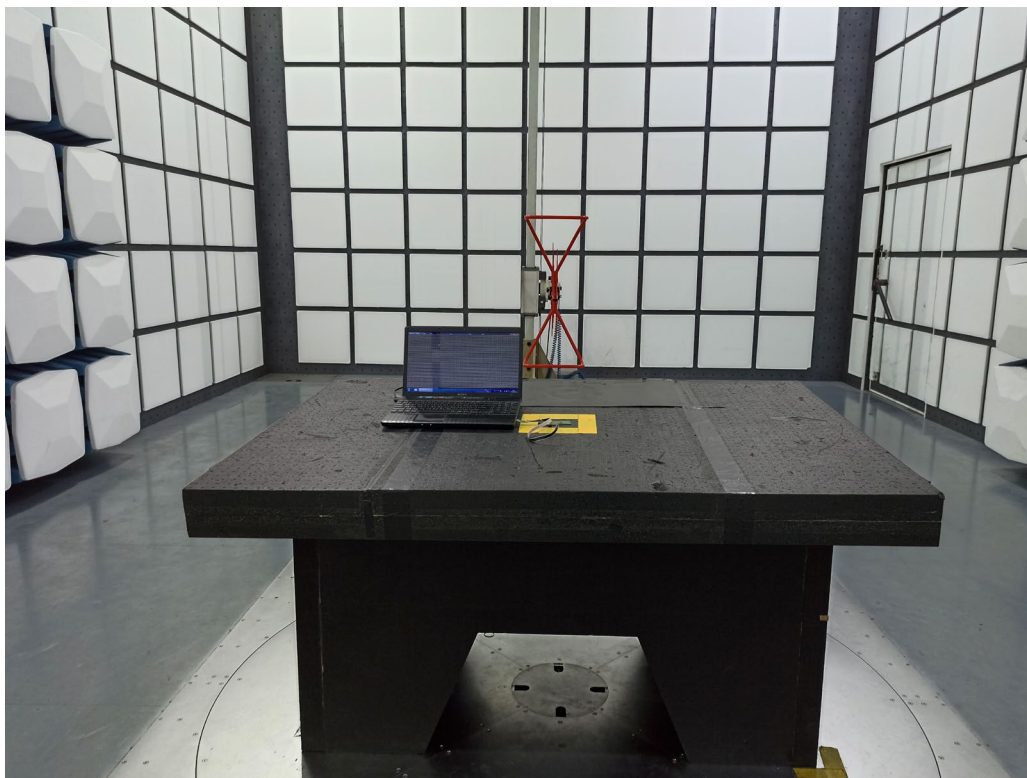
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

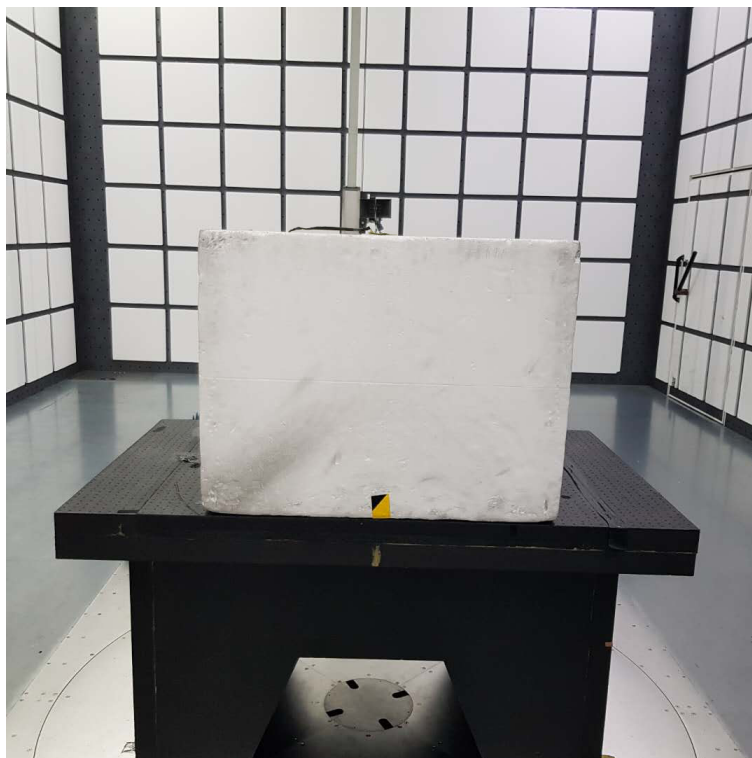


5.7. 輻射量測之配置照片(30MHz ~ 1GHz)





5.8. 輻射量測之配置照片 (Above 1GHz)





6. On Time, Duty Cycle and Measurement methods

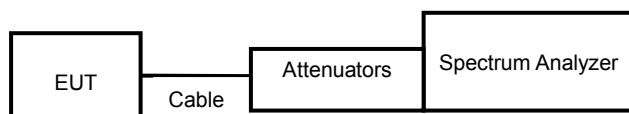
6.1. 適用標準

None; for reporting purposes only.

6.2. 測試方法

KDB 789033 Zero-Span Spectrum Analyzer Method.

6.3. 測試配置



6.4. 測試結果及數據

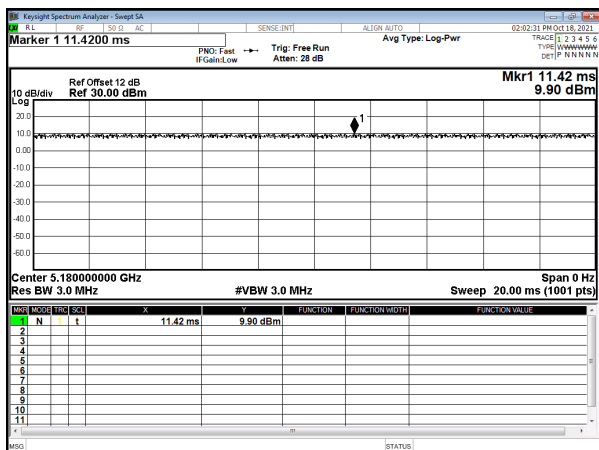
Modulation Mode	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	100.00	100.00	100.00%
802.11ac VHT20	100.00	100.00	100.00%
802.11ac VHT40	100.00	100.00	100.00%
802.11ac VHT80	100.00	100.00	100.00%

6.5. Measurement Methods

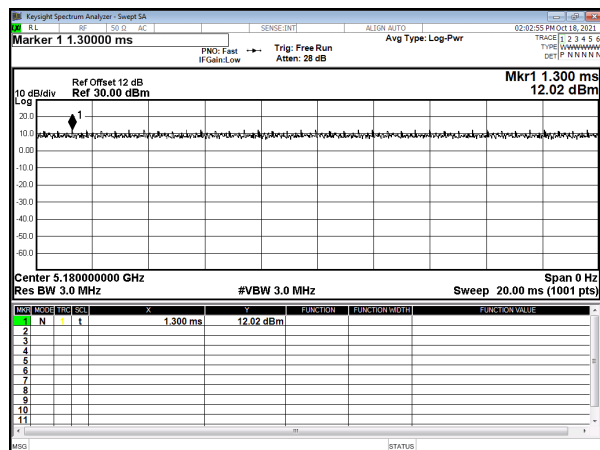
26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H



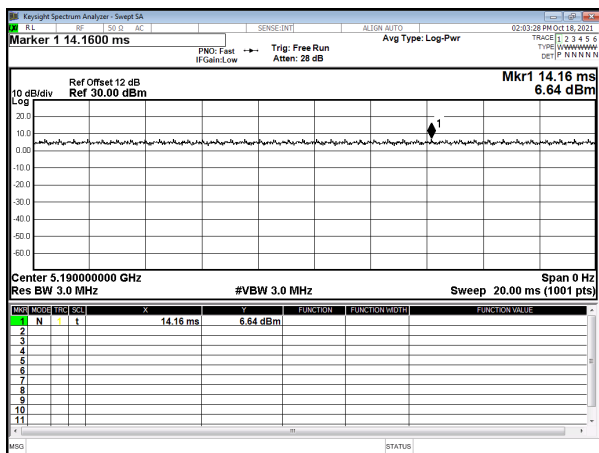
Modulation Type: 802.11a (6Mbps)



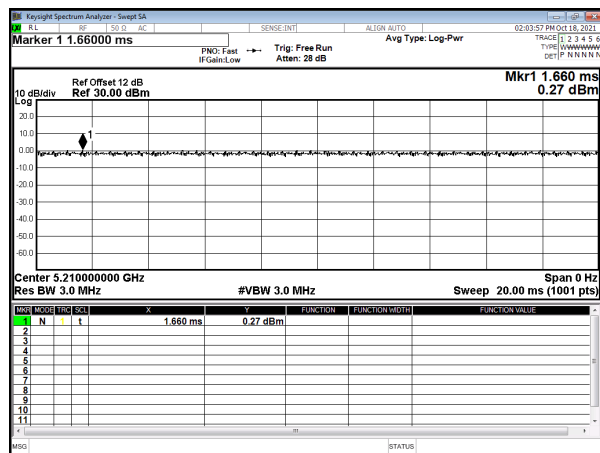
Modulation Type: 802.11ac VHT20 (6.5Mbps)



Modulation Type: 802.11ac VHT40 (13.5Mbps)



Modulation Type: 802.11ac VHT80 (29.3Mbps)





7. 6dB & 99% Occupied 頻寬之規定

7.1. 適用標準

依據國家通訊傳播委員會低功率射頻器材技術規範5.7.5節規定，載在5.725 GHz~5.850 GHz 頻段操作之設備，其6 dB 頻寬至少應有500 kHz。

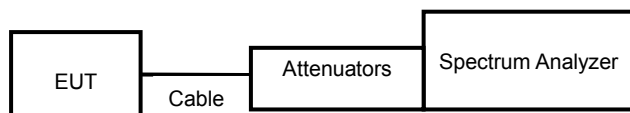
FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2. 測試方法

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

7.3. 測試配置





7.4. 測試結果及數據(6dB Bandwidth)

In the 5.8G Band

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	16.52	16.53	0.50
	157	5785	16.54	16.53	0.50
	165	5825	16.54	16.53	0.50
802.11ac VHT20	149	5745	17.78	17.74	0.50
	157	5785	17.76	17.70	0.50
	165	5825	17.76	17.72	0.50
802.11ac VHT40	155	5755	36.45	36.39	0.50
	159	5795	36.45	36.40	0.50
802.11ac VHT80	155	5775	76.05	73.83	0.50

備註：繪圖資料請參考下頁。

7.5. 測試結果及數據(99% Occupied Bandwidth)

In the 5.8G Band

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	149	5745	16.40	16.39
	157	5785	16.41	16.43
	165	5825	16.41	16.42
802.11ac VHT20	149	5745	17.60	17.61
	157	5785	17.60	17.61
	165	5825	17.62	17.60
802.11ac VHT40	155	5755	36.11	36.09
	159	5795	36.15	36.11
802.11ac VHT80	155	5775	75.01	74.46

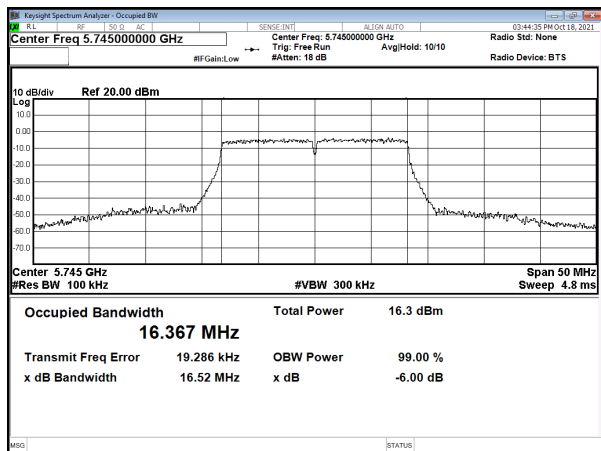
備註：繪圖資料請參考下頁。

7.6. 結果判定

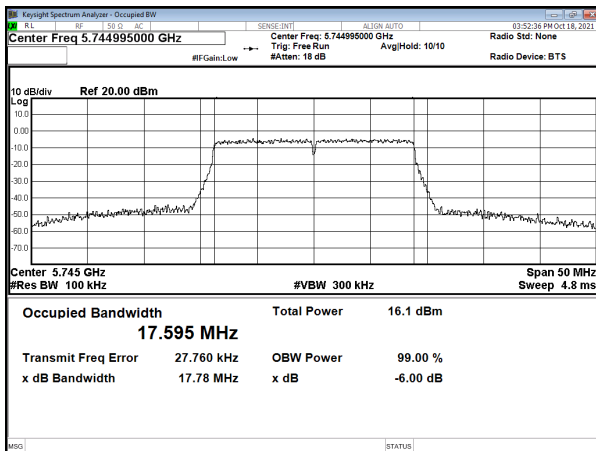
高、中、低頻段的 6dB 頻寬皆大於 500 KHz，合乎標準規定。



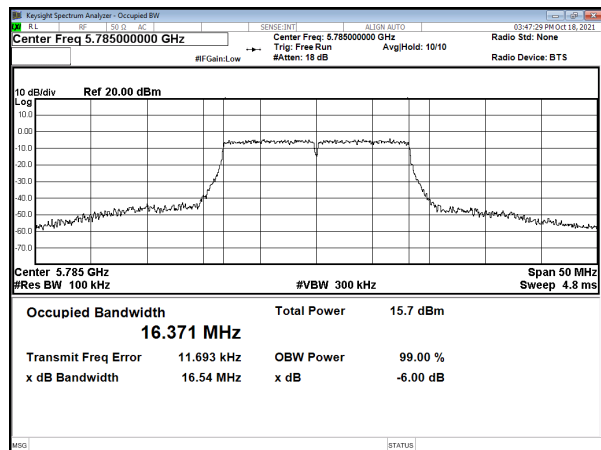
ANT A
6dB Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



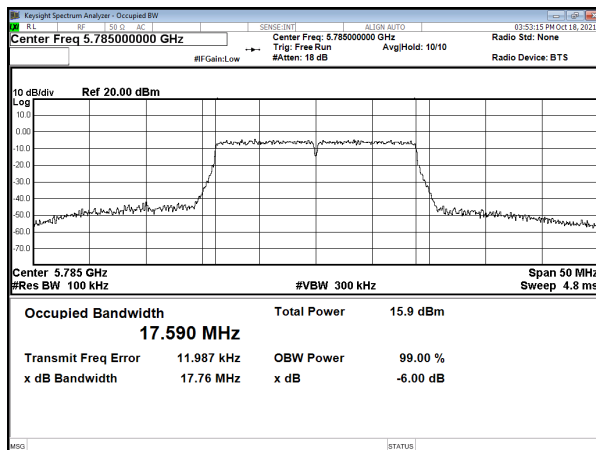
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



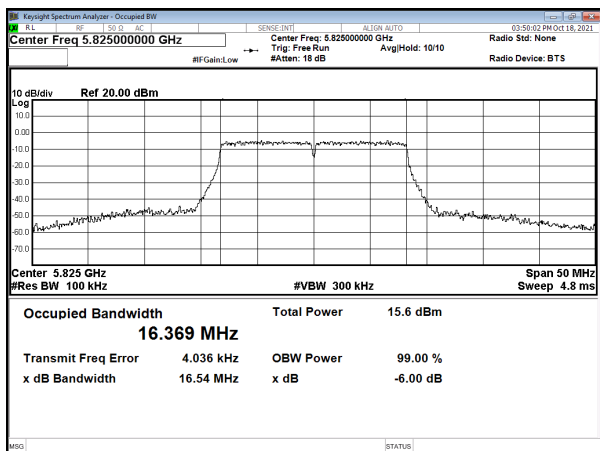
CH157



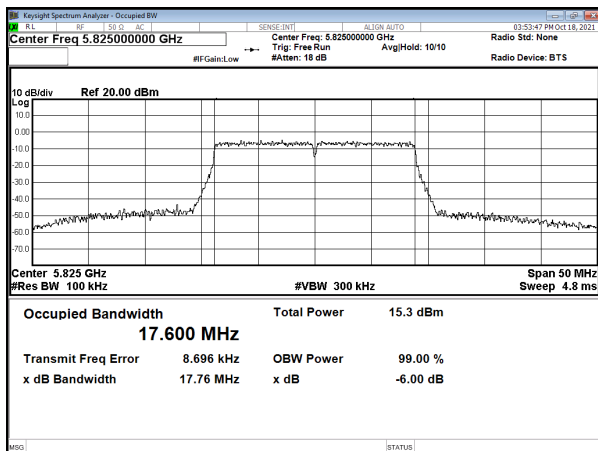
CH157



CH165

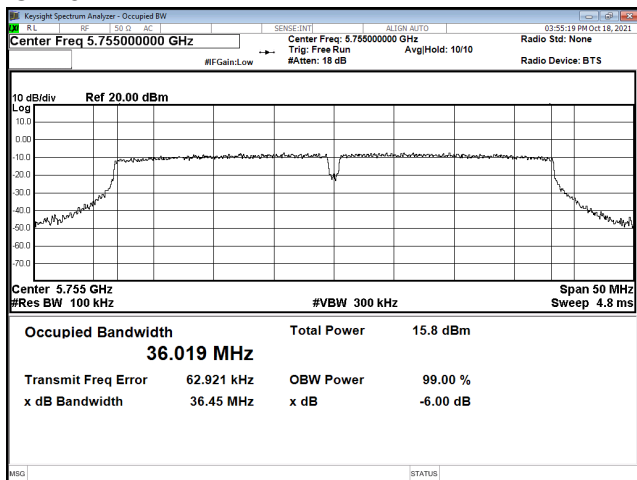


CH165

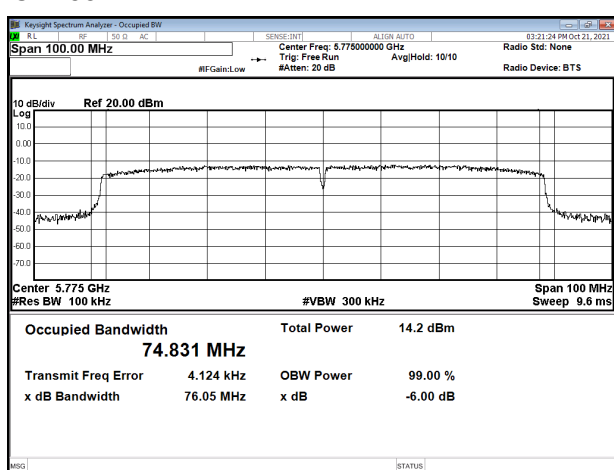




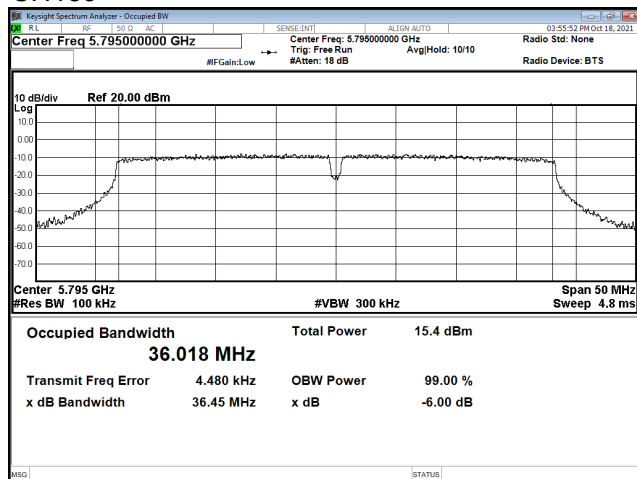
6dB Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

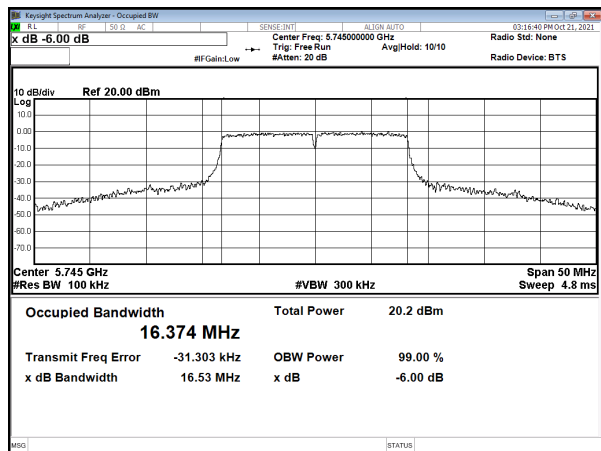


CH159

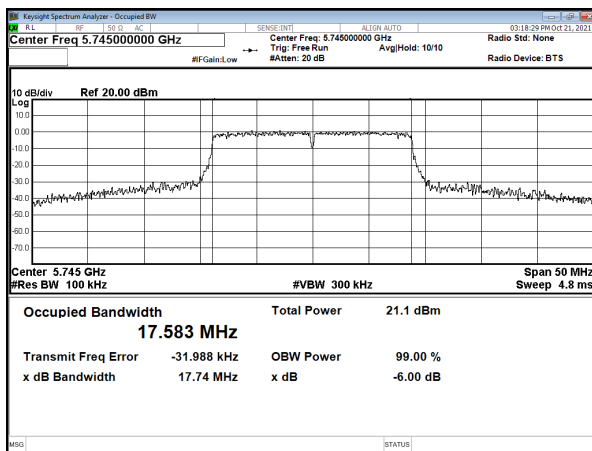




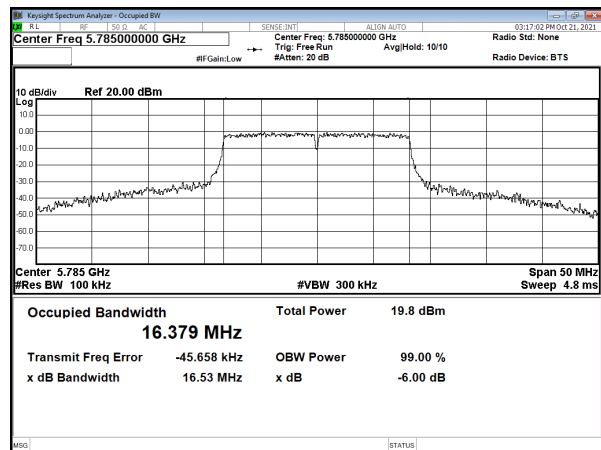
ANT B
6dB Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



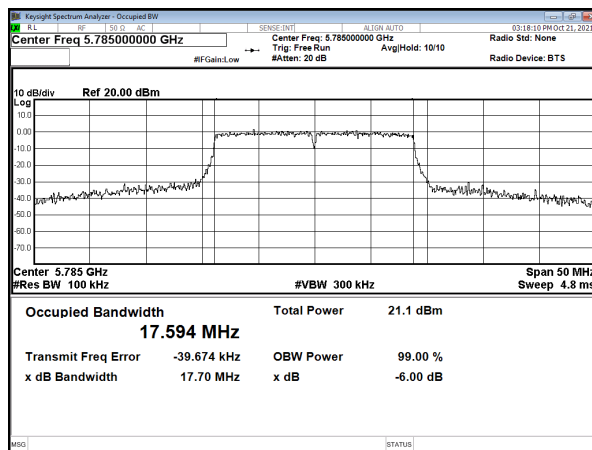
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



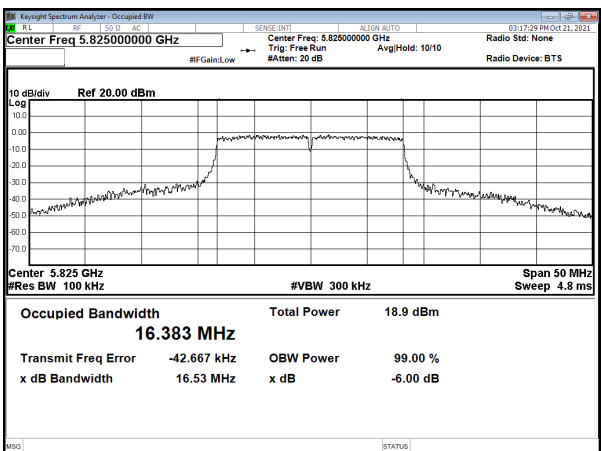
CH157



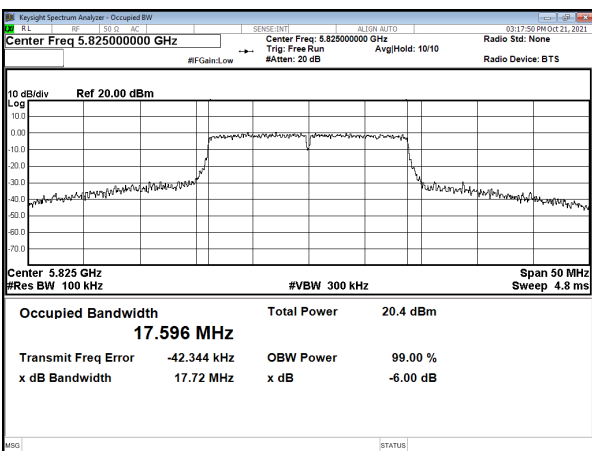
CH157



CH165

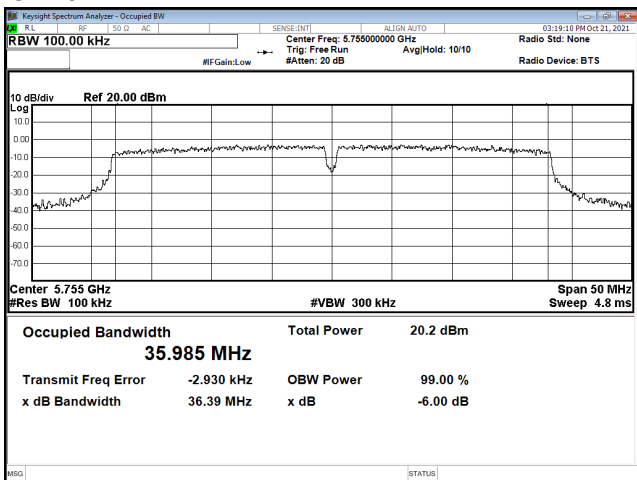
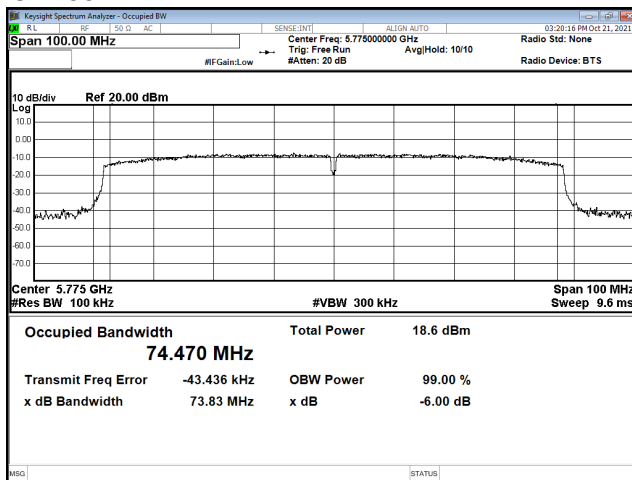


CH165

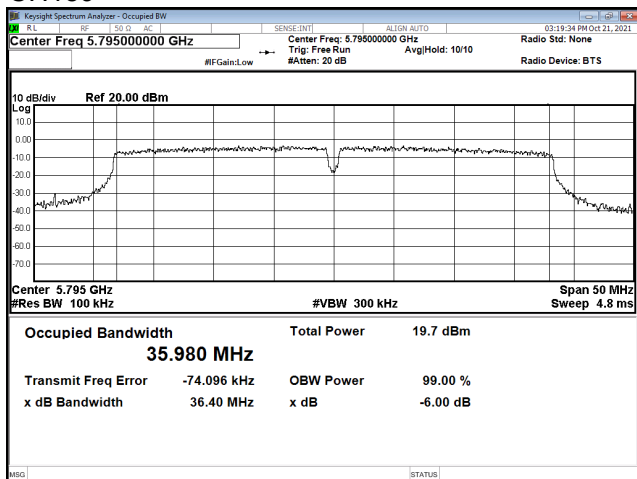




6dB Bandwidth

Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159



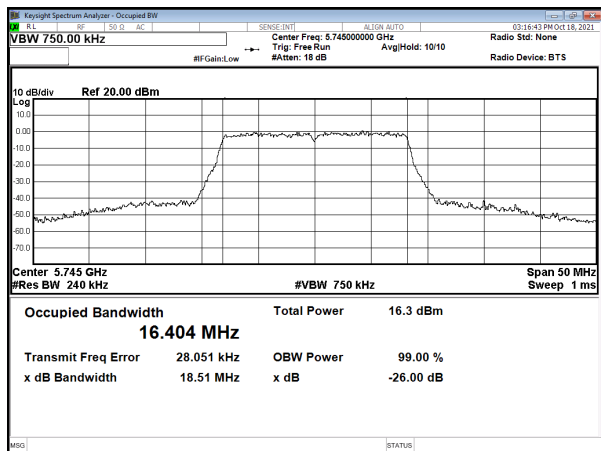
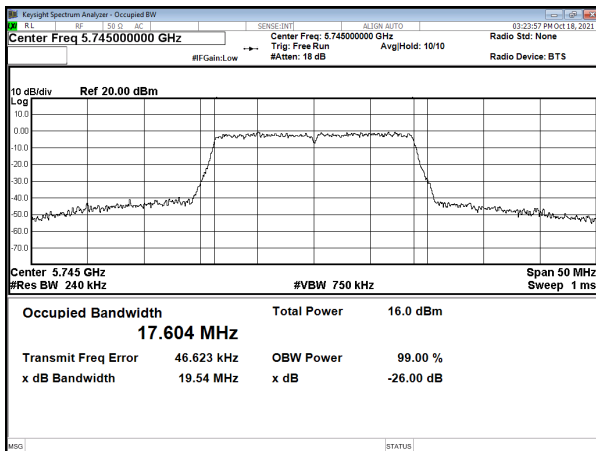


ANTA

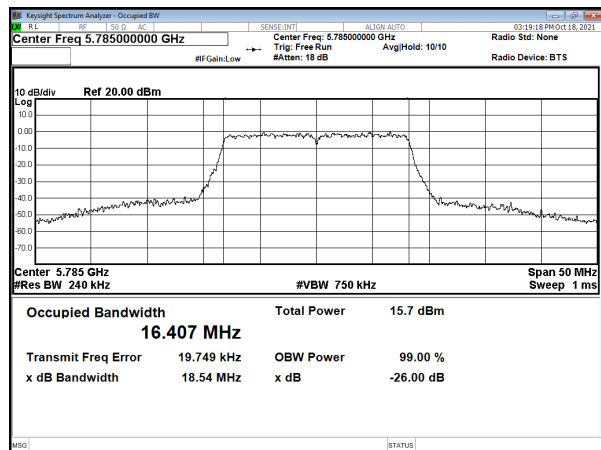
99% Occupied Bandwidth

Modulation Type: 802.11a (6Mbps)

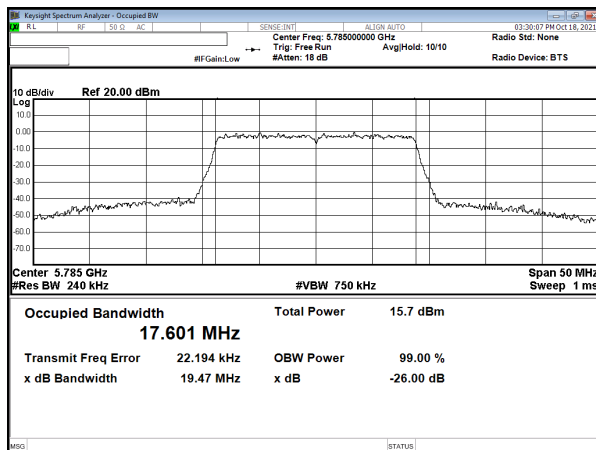
CH149

Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149

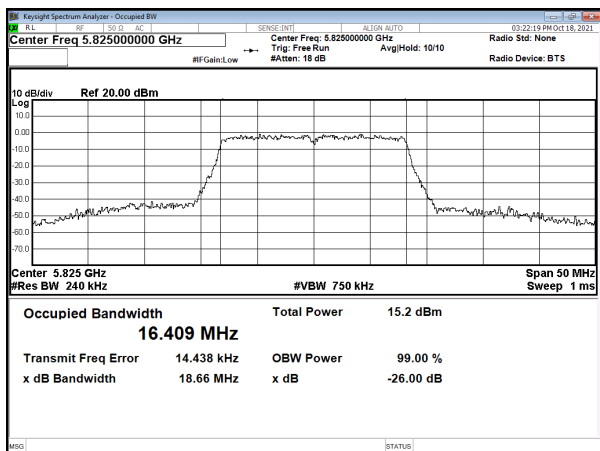
CH157



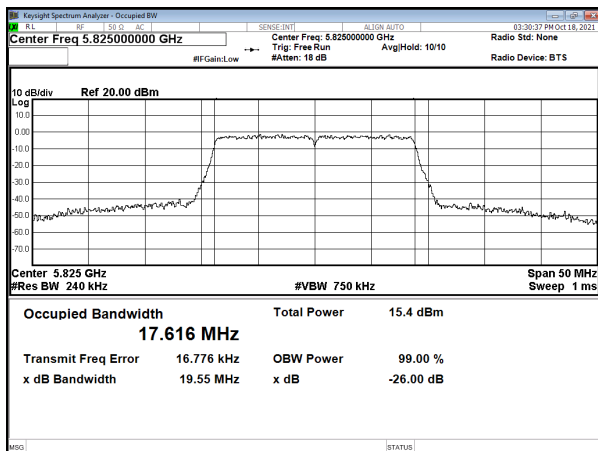
CH157



CH165

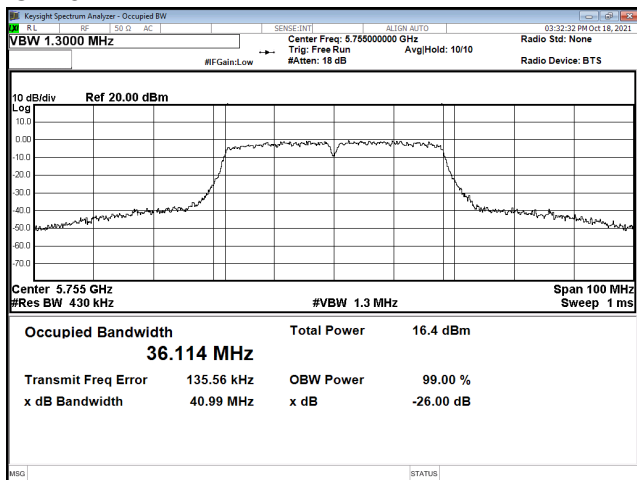


CH165

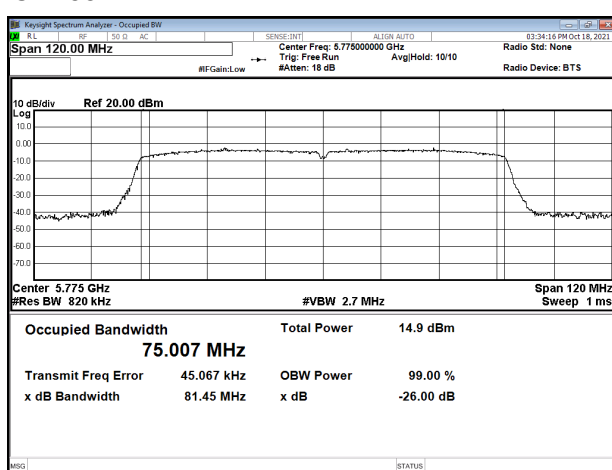




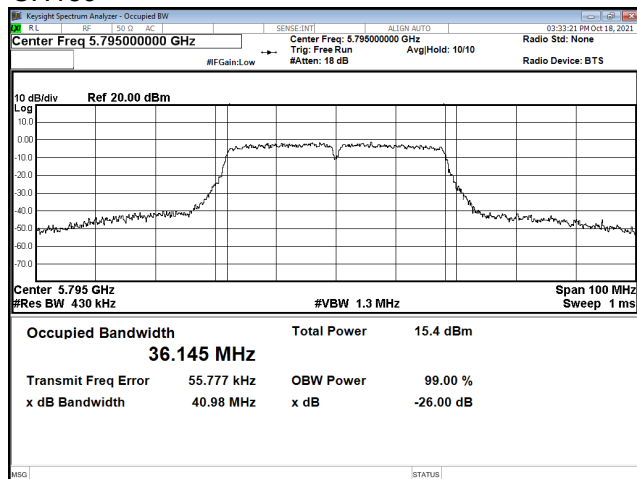
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

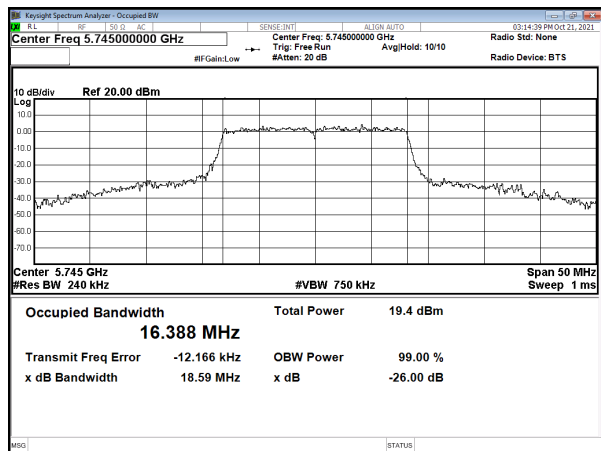


CH159

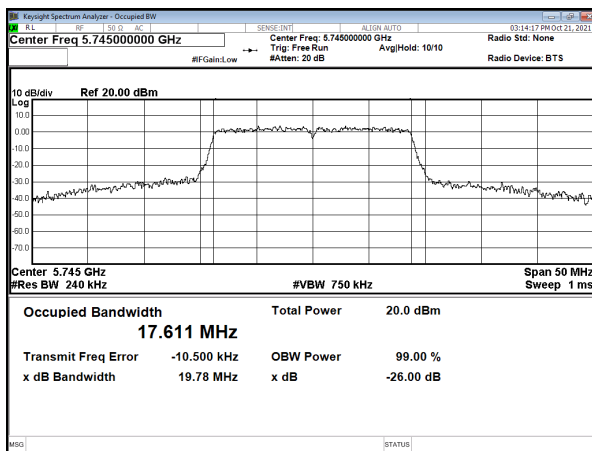




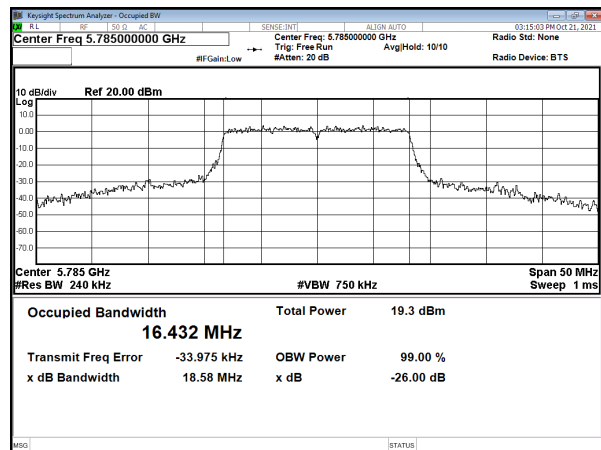
ANT B
99% Occupied Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



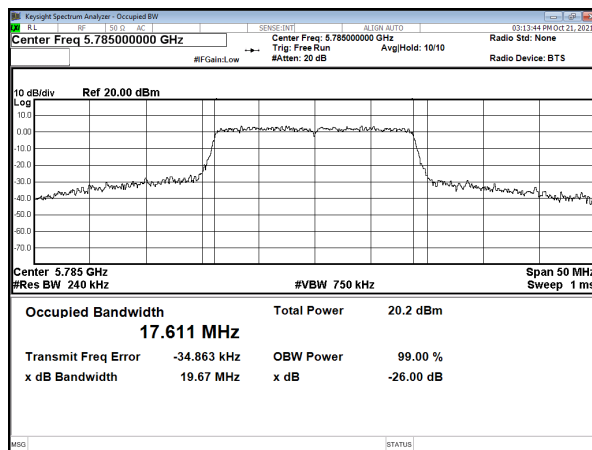
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



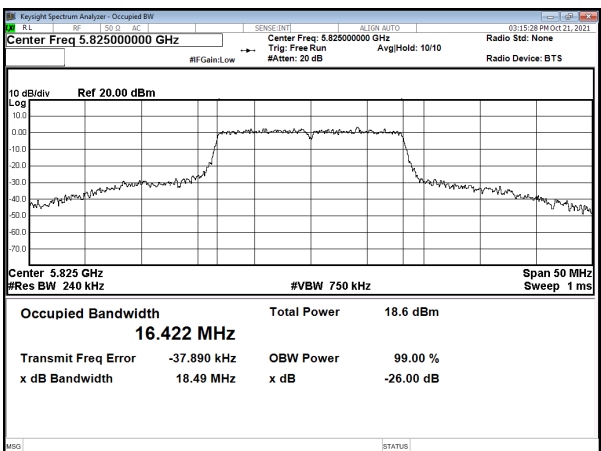
CH157



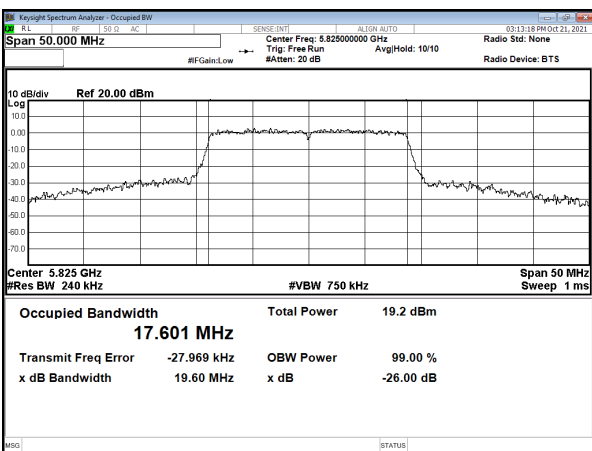
CH157



CH165

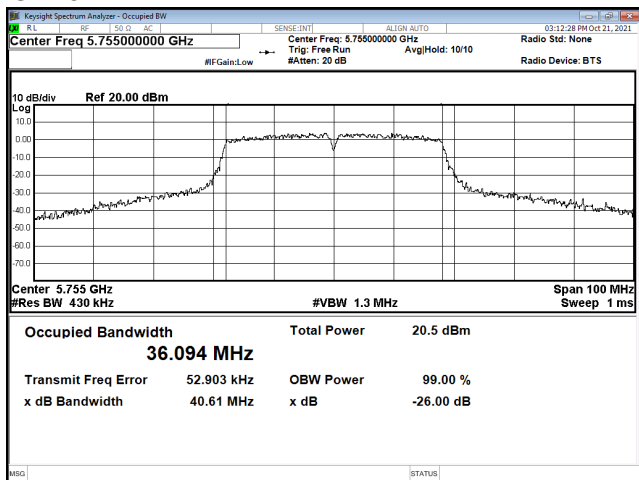


CH165

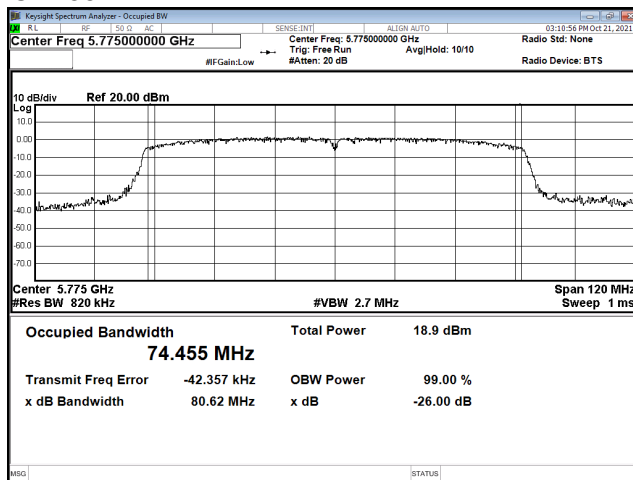




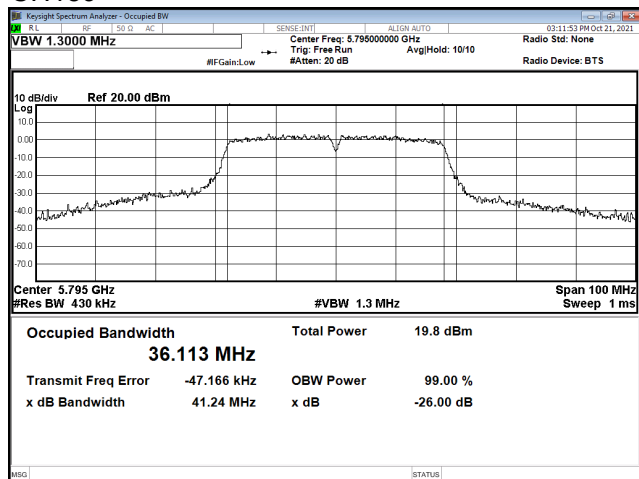
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159





8. 26dB & 99% Occupied 頻寬之規定

8.1. 適用標準

依據國家通訊傳播委員會低功率射頻器材技術規範 5.7.3.2 節規定，載在使用頻率於 5.25 GHz ~5.35 GHz 與 5.470 GHz~5.725 GHz 頻段

最大傳導輸出功率應小於或等於 250 mW 或 $11\text{dBm} + 10\log B$ (B 是 26 dB

發射頻寬，單位 MHz) 之較小者

依據國家通訊傳播委員會低功率射頻器材技術規範 5.7.2.3 節規定，發射頻寬(emission bandwidth)：係測量訊號兩點之間寬度而得，此兩

點是調變載波中心頻率上下兩邊，相對其調變載波最高功率降低 26 dB

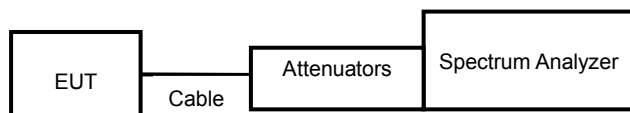
處。需使用峰值檢測(peak detector)功能及解析頻寬約等於受測物發射頻寬 1%之儀器。

None; for reporting purposes only.

8.2. 測試方法

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of the emission bandwidth, the VBW $\geq$ RBW, peak detector and max hold.

8.3. 測試配置





8.4. 測試結果及數據(26dB Bandwidth)

In the 5.2G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	18.61	18.69
	44	5220	18.61	18.55
	48	5240	18.5	18.64
802.11ac VHT20	36	5180	19.52	19.73
	44	5220	19.5	19.59
	48	5240	19.58	19.33
802.11ac VHT40	38	5190	41.44	42.1
	46	5230	41.01	40.81
802.11ac VHT80	42	5210	81.56	80.85

備註：繪圖資料請參考下頁。

8.5. 測試結果及數據(99% Occupied Bandwidth)

In the 5.2G Band

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	36	5180	16.40	16.40
	44	5220	16.41	16.40
	48	5240	16.42	16.40
802.11ac VHT20	36	5180	17.59	17.60
	44	5220	17.60	17.58
	48	5240	17.60	17.59
802.11ac VHT40	38	5190	36.10	36.10
	46	5230	36.12	36.05
802.11ac VHT80	42	5210	75.07	74.68

備註：繪圖資料請參考下頁。

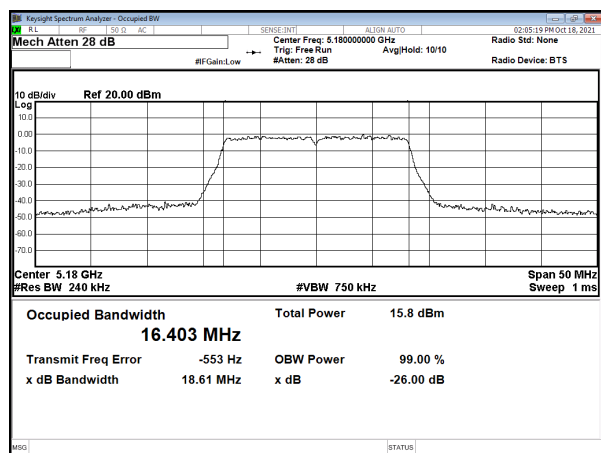


ANT A

26dB Bandwidth &99% Occupied Bandwidth, Band 1

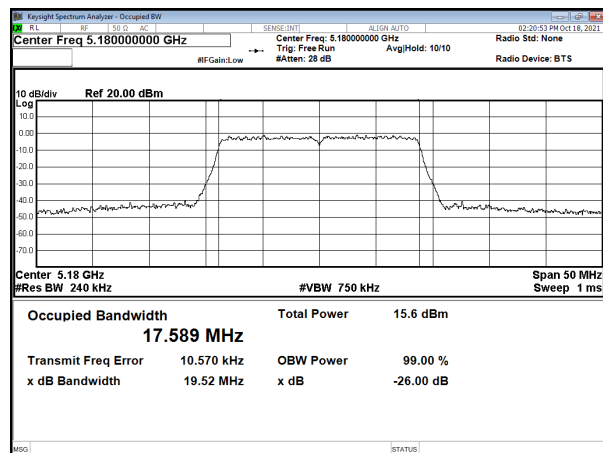
Modulation Standard: 802.11a (6Mbps)

CH36

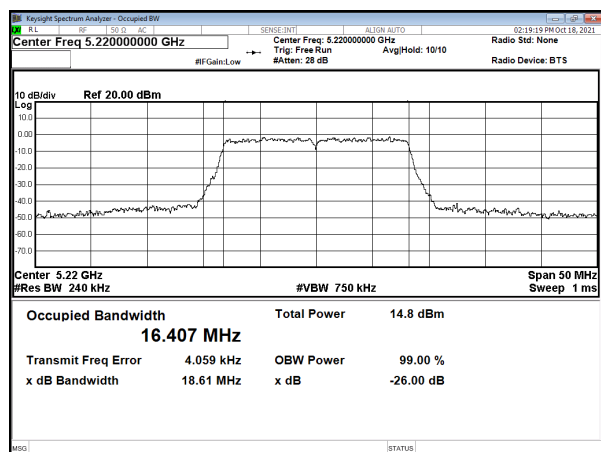


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

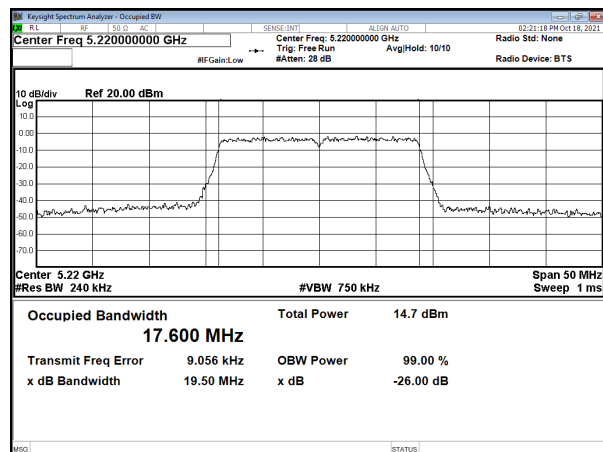
CH36



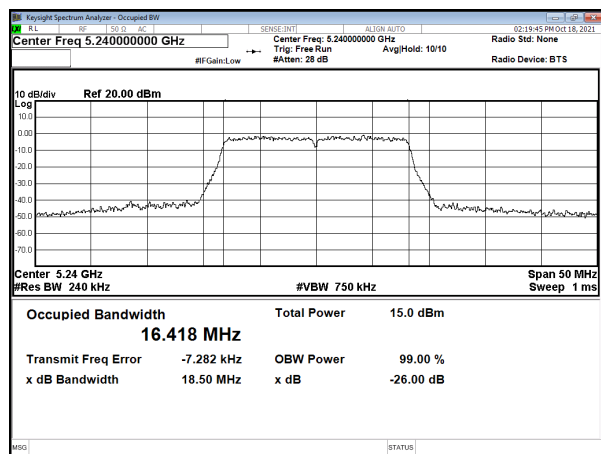
CH44



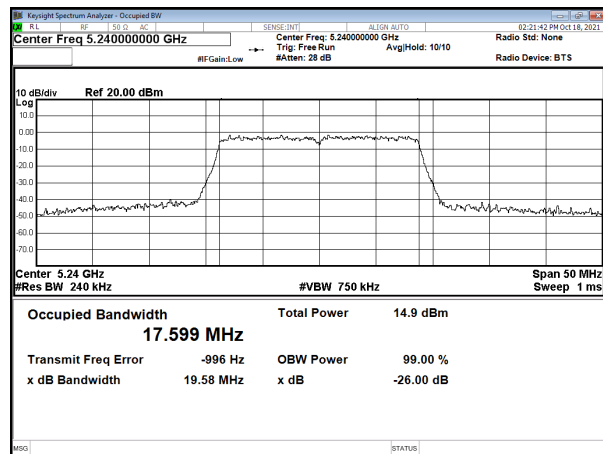
CH44



CH48



CH48

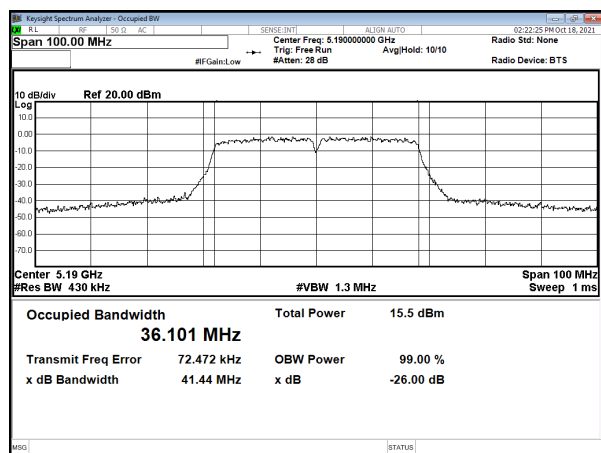




26dB Bandwidth & 99% Occupied Bandwidth, Band 1

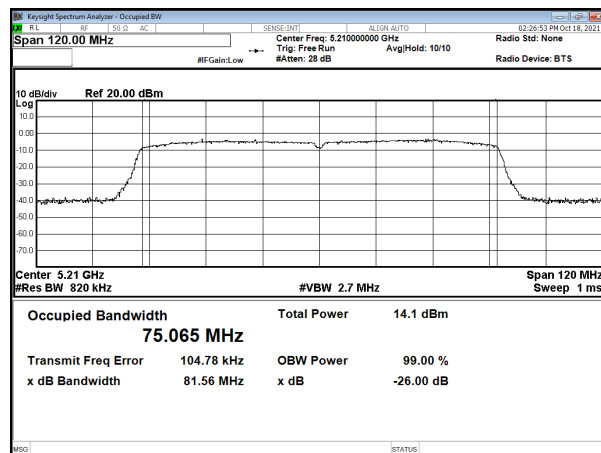
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

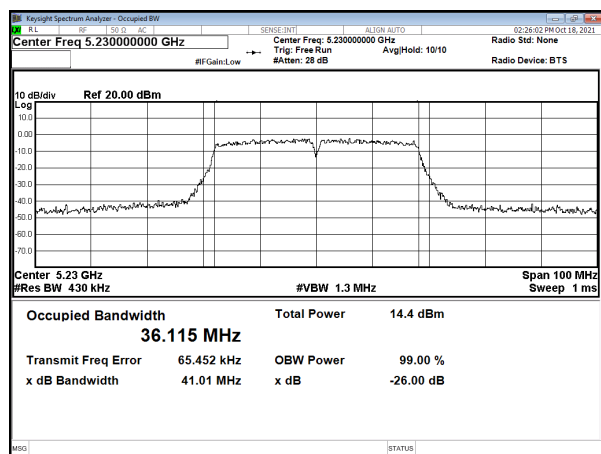


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46



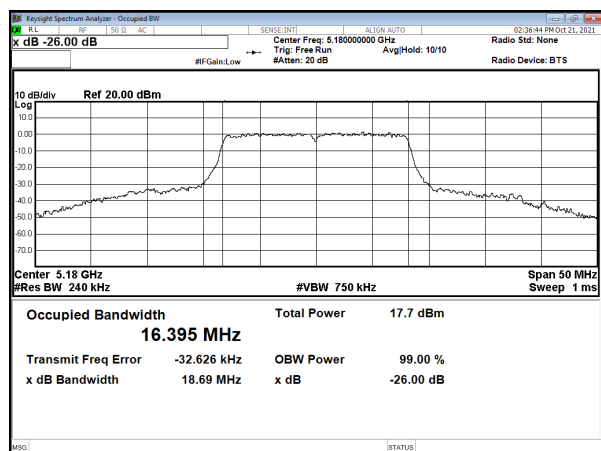


ANT B

26dB Bandwidth &99% Occupied Bandwidth, Band 1

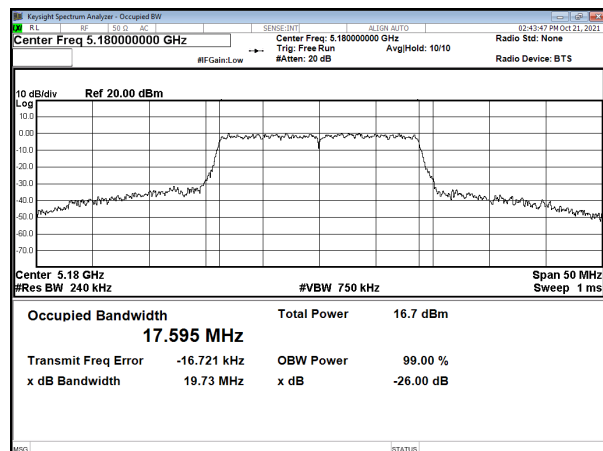
Modulation Standard: 802.11a (6Mbps)

CH36

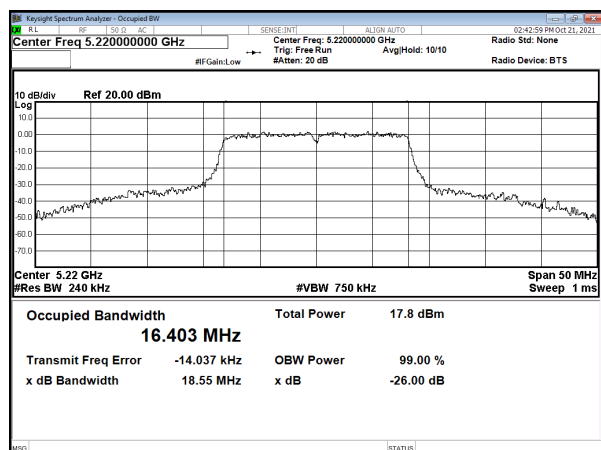


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

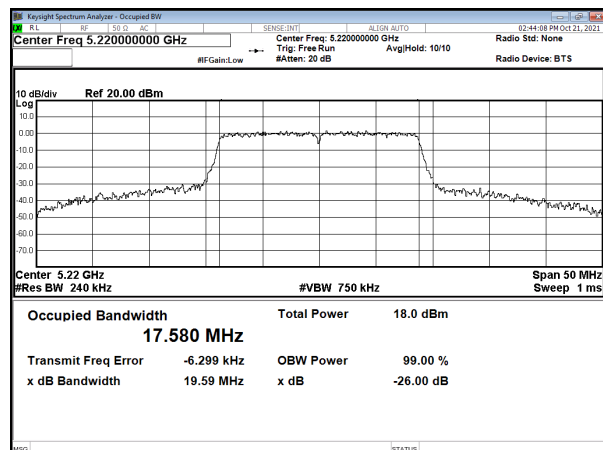
CH36



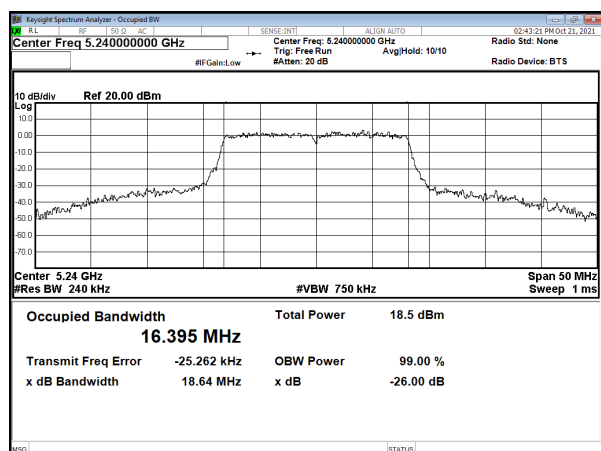
CH44



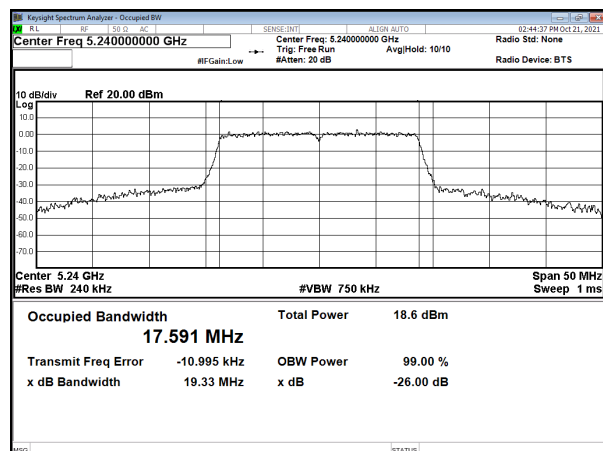
CH44



CH48



CH48

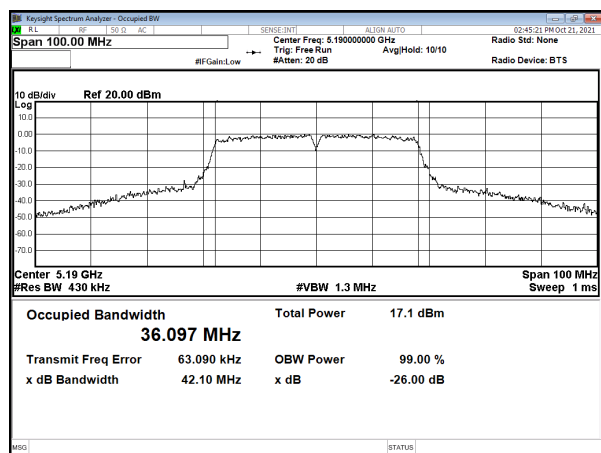




26dB Bandwidth & 99% Occupied Bandwidth, Band 1

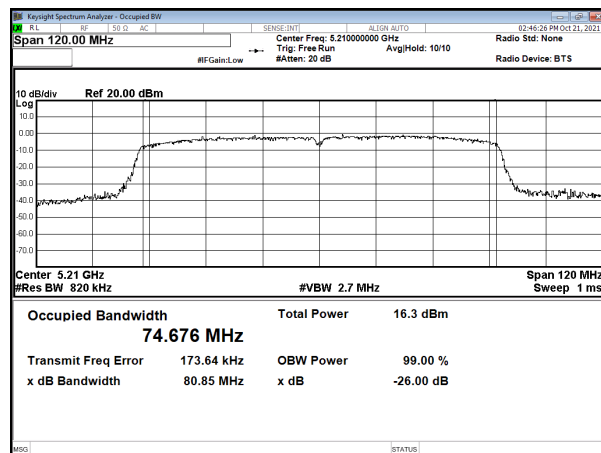
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

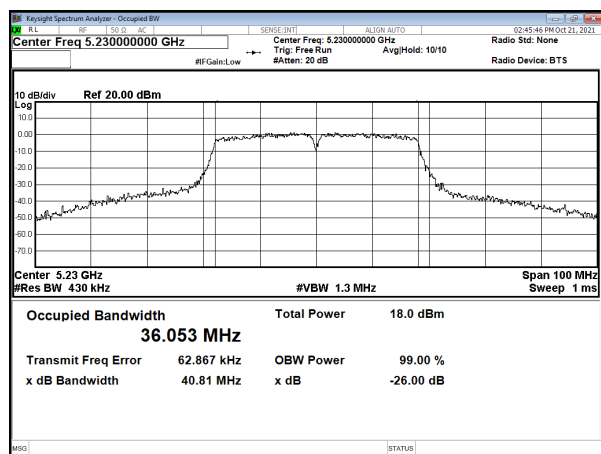


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





9. 傳導輸出功率

9.1. 適用標準

依照國家通訊傳播委員會低功率射頻器材技術規範(5.7.3)節功率限制規定如下:

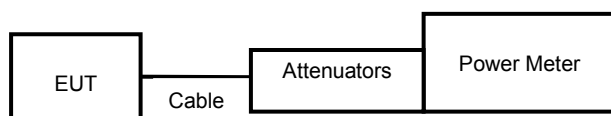
操作於 5.15G-5.25G 頻段者	
☐	供戶外操作使用：最大傳導輸出功率應小於 1W。
☐	供室內操作使用：最大傳導輸出功率應小於 1W。
☐	供固定式點對點操作使用：最大傳導輸出功率應小於 1W。
☒	供用戶端裝置(Client Device)操作使用：最大傳導輸出功率應小於 250mW。
操作於 5.25G-5.35G 與 5.470G-5.725G 頻段者 最大傳導輸出功率應小於 250mW 或 $11\text{dBm} + 10\log B$ (B 是 26dB 發射頻寬，單位 MHz) 之較小者。	
操作於 5.725G-5.850G 頻段者 最大傳導輸出功率應小於 1W。	

9.2. 測試方法

The transmitter output is connected to a power meter.

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

9.3. 測試配置





9.4. 測試結果及數據

In the 5.2G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	36	5180	8.54	10.64	12.73	18.733	24.00
11a	6 Mbps	62	44	5220	7.51	11.76	13.15	20.633	24.00
11a	6 Mbps	62	48	5240	7.35	12.19	13.42	21.990	24.00
11n HT20	MCS 0	62	36	5180	7.23	10.12	11.92	15.565	24.00
11n HT20	MCS 0	62	44	5220	7.25	11.35	12.78	18.955	24.00
11n HT20	MCS 0	62	48	5240	7.97	11.84	13.33	21.542	24.00
11n HT40	MCS 0	62	38	5190	7.14	10.53	12.17	16.474	24.00
11n HT40	MCS 0	62	46	5230	6.03	11.37	12.48	17.717	24.00
11ac VHT20	NSS1-MCS0	62	36	5180	7.75	10.72	12.49	17.760	24.00
11ac VHT20	NSS1-MCS0	62	44	5220	7.49	11.72	13.11	20.470	24.00
11ac VHT20	NSS1-MCS0	62	48	5240	8.11	12.05	13.52	22.504	24.00
11ac VHT40	NSS1-MCS0	62	38	5190	7.40	10.84	12.46	17.629	24.00
11ac VHT40	NSS1-MCS0	62	46	5230	6.35	11.66	12.78	18.971	24.00
11ac VHT80	NSS1-MCS0	62	42	5210	3.70	8.92	10.06	10.143	24.00

In the 5.8G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	149	5745	9.23	14.77	15.84	38.367	30.00
11a	6 Mbps	62	157	5785	9.02	14.08	15.26	33.566	30.00
11a	6 Mbps	62	165	5825	8.72	14.65	15.64	36.622	30.00
11n HT20	MCS 0	62	149	5745	9.24	15.14	16.13	41.053	30.00
11n HT20	MCS 0	62	157	5785	8.57	15.28	16.12	40.923	30.00
11n HT20	MCS 0	62	165	5825	8.38	14.33	15.31	33.988	30.00
11n HT40	MCS 0	62	151	5755	9.85	14.57	15.83	38.302	30.00
11n HT40	MCS 0	62	159	5795	9.34	13.94	15.23	33.364	30.00
11ac VHT20	NSS1-MCS0	62	149	5745	9.31	15.26	16.24	42.105	30.00
11ac VHT20	NSS1-MCS0	62	157	5785	8.88	15.43	16.30	42.641	30.00
11ac VHT20	NSS1-MCS0	62	165	5825	8.51	14.53	15.50	35.475	30.00
11ac VHT40	NSS1-MCS0	62	151	5755	10.07	14.80	16.06	40.362	30.00
11ac VHT40	NSS1-MCS0	62	159	5795	9.66	14.09	15.43	34.892	30.00
11ac VHT80	NSS1-MCS0	62	155	5775	7.95	12.30	13.66	23.220	30.00



10. 最大功率頻譜密度

10.1. 適用標準

依照國家通訊傳播委員會低功率射頻器材技術規範(5.7.3)節功率限制規定如下:

操作於 5.15G-5.25G 頻段者	
☐	供戶外操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 17dBm。
☐	供室內操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 17dBm。
☐	供固定式點對點操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等 17dBm。
☒	供用戶端裝置(Client Device)操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 11dBm。
操作於 5.25G-5.35G 與 5.470G-5.725G 頻段者 在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 11Bm。	
操作於 5.725G-5.850G 頻段者 在任何 500KHz 頻帶中最大功率頻譜密度應小於或等於 30Bm。	

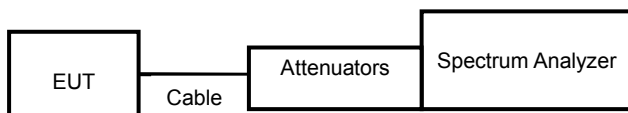
10.2. 測試方法

依照KDB 789033 D02 General UNII Test Procedures New Rules測試方法如下

For 5150~5250 MHz, 5250~5350 MHz, 5470~5725 MHz	
☒	Method SA-1 1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS. 2. Trace average 100 traces. 3. Use the peak marker function to determine the maximum amplitude level.
☐	Method SA-2 Alternative 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS. 2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$. 3. Perform a single sweep. 4. Use the peak marker function to determine the maximum amplitude level. 5. Add $10 \log(1/x)$, where x is the duty cycle.
For 5725~5850 MHz	
☒	Method SA-1 1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS. 2. Trace average 100 traces. 3. Use the peak marker function to determine the maximum amplitude level. 4. Add $10 \log(500\text{KHz}/1000\text{KHz})$
☐	Method SA-2 Alternative 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS. 2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$. 3. Perform a single sweep. 4. Use the peak marker function to determine the maximum amplitude level. 5. Add $10 \log(1/x)$, where x is the duty cycle 6. Add $10 \log(500\text{KHz}/1000\text{KHz})$



10.3.測試配置



10.4.測試結果及數據

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSS (dBm/MHz)	PPSD Limit (dBm/MHz)
			ANT A	ANT B				
11a	36	5180	-1.83	-0.63	1.82	0.00	1.82	10.13
11a	44	5220	-2.27	0.63	2.43	0.00	2.43	10.13
11a	48	5240	-2.10	1.00	2.73	0.00	2.73	10.13
11ac VHT20	36	5180	-1.82	-0.52	1.89	0.00	1.89	10.13
11ac VHT20	44	5220	-2.55	0.39	2.18	0.00	2.18	10.13
11ac VHT20	48	5240	-2.31	0.94	2.62	0.00	2.62	10.13
11ac VHT40	38	5190	-4.56	-3.07	-0.74	0.00	-0.74	10.13
11ac VHT40	46	5230	-5.35	-2.18	-0.47	0.00	-0.47	10.13
11ac VHT80	42	5210	-9.97	-7.97	-5.85	0.00	-5.85	10.13

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSS (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500 KHz/RBW) CF (dB)	Total Corr'd PSD (dBm/500k Hz)	PSD Limit (dBm/500kHz)
			ANT A	ANT B					
11a	149	5745	-0.79	3.80	5.09	0.00	-3.01	2.08	29.27
11a	157	5785	-1.22	3.68	4.90	0.00	-3.01	1.89	29.27
11a	165	5825	-1.69	2.65	4.01	0.00	-3.01	1.00	29.27
11ac VHT20	149	5745	-1.05	4.00	5.18	0.00	-3.01	2.17	29.27
11ac VHT20	157	5785	-1.51	4.30	5.31	0.00	-3.01	2.30	29.27
11ac VHT20	165	5825	-1.57	3.22	4.46	0.00	-3.01	1.45	29.27
11ac VHT40	151	5755	-4.05	0.44	1.76	0.00	-3.01	-1.25	29.27
11ac VHT40	159	5795	-4.58	0.43	1.62	0.00	-3.01	-1.39	29.27
11ac VHT80	155	5775	-9.29	-4.77	-3.46	0.00	-3.01	-6.47	29.27

備註：繪圖資料請參考下頁。

10.5.結果判定

高、中、低頻段的數值皆低於限制值要求，合乎標準規定。

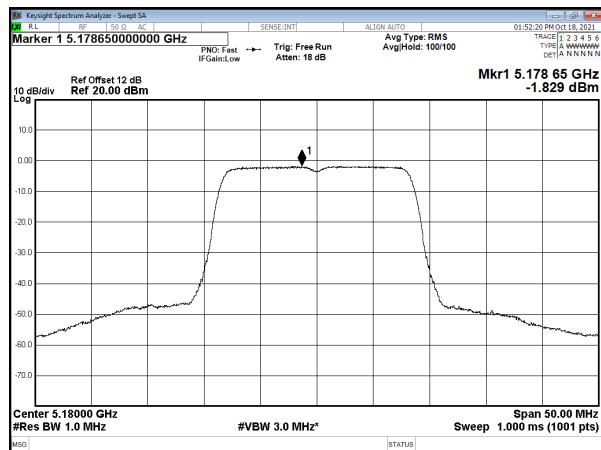


ANT A

5.2G, Band 1

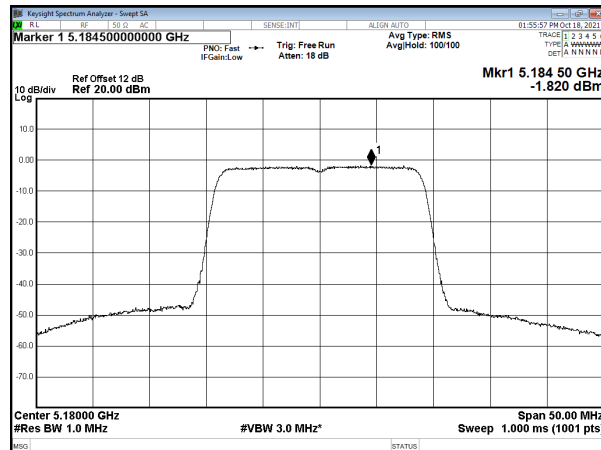
Modulation Standard: 802.11a (6Mbps)

CH36

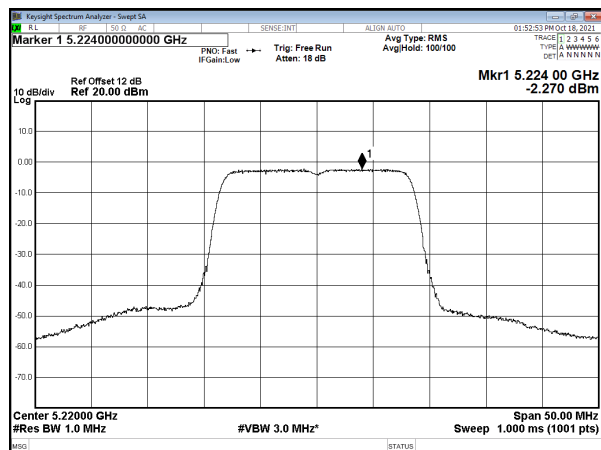


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

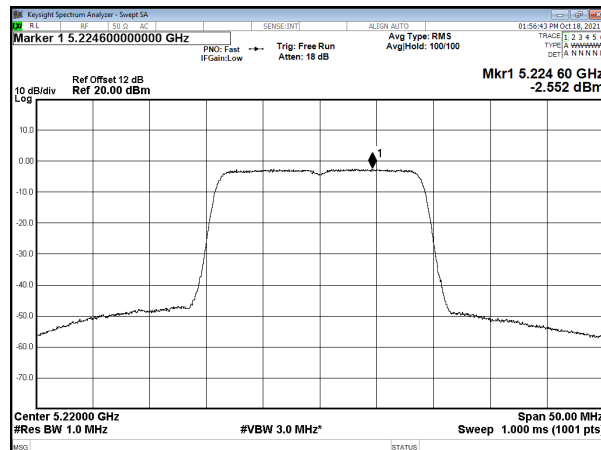
CH36



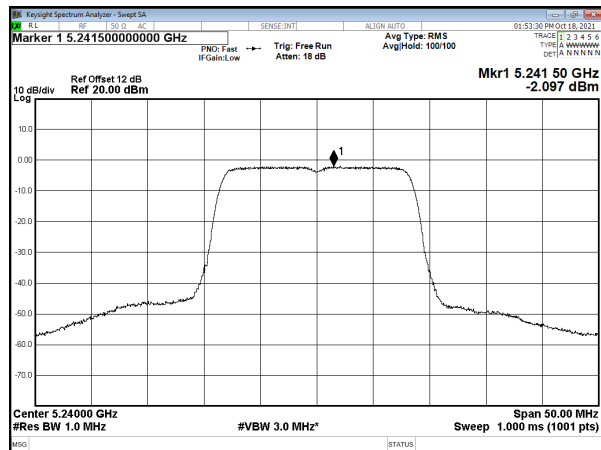
CH44



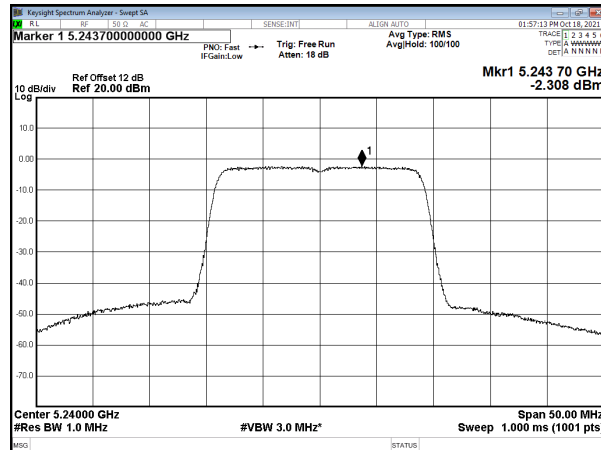
CH44



CH48



CH48

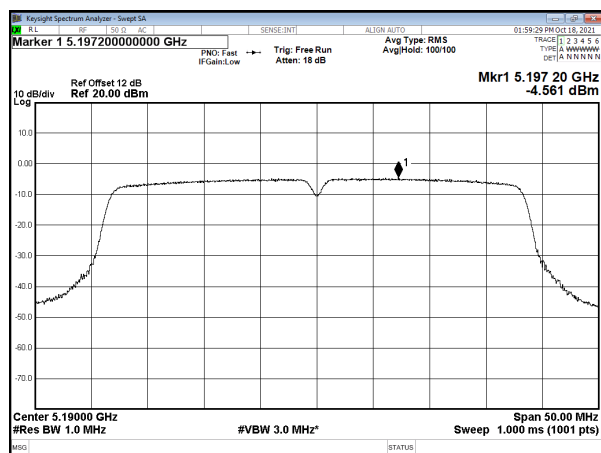




5.2G, Band 1

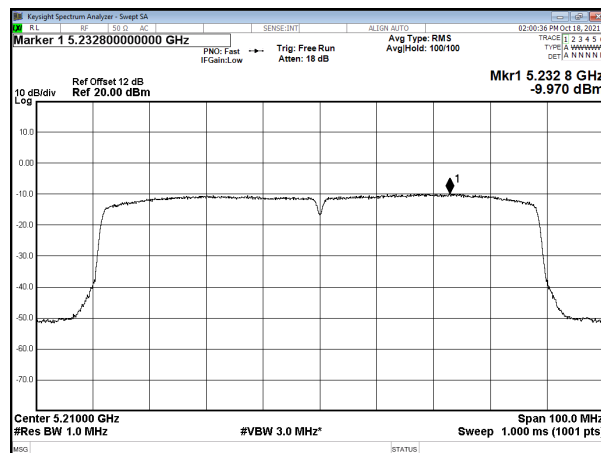
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

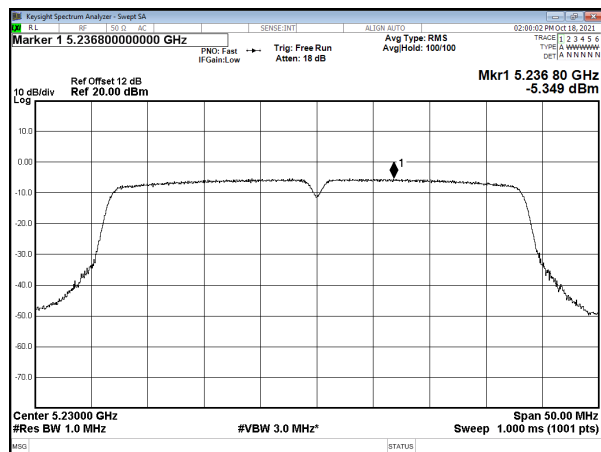


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

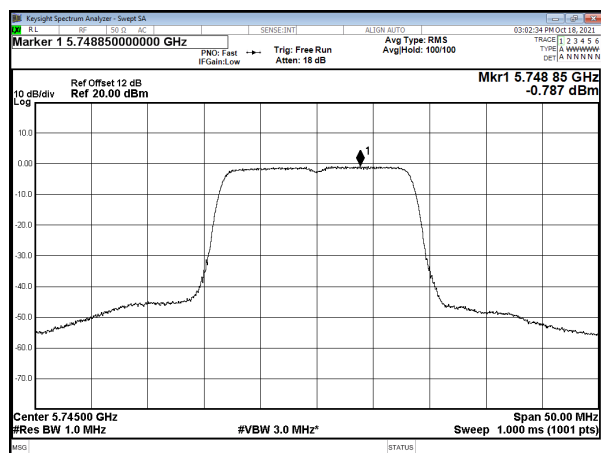




5.8G, Band 4

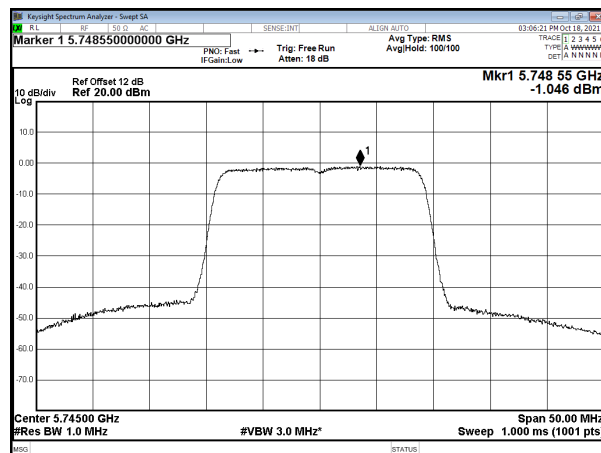
Modulation Standard: 802.11a (6Mbps)

CH149

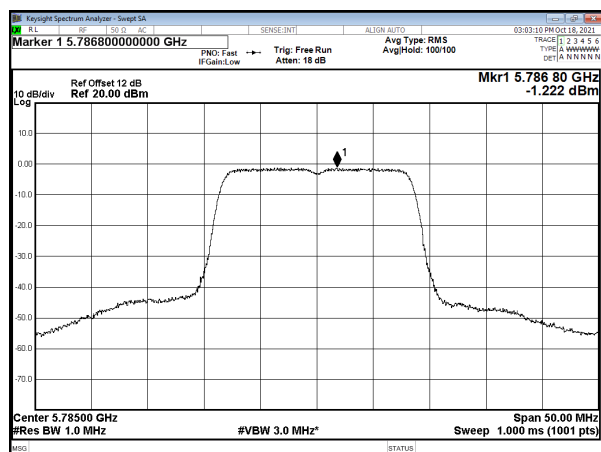


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

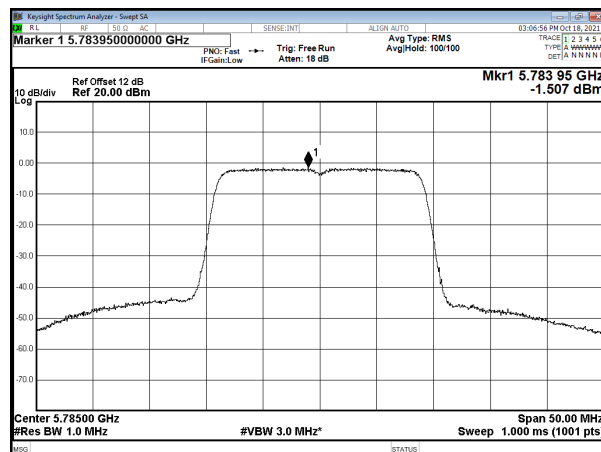
CH149



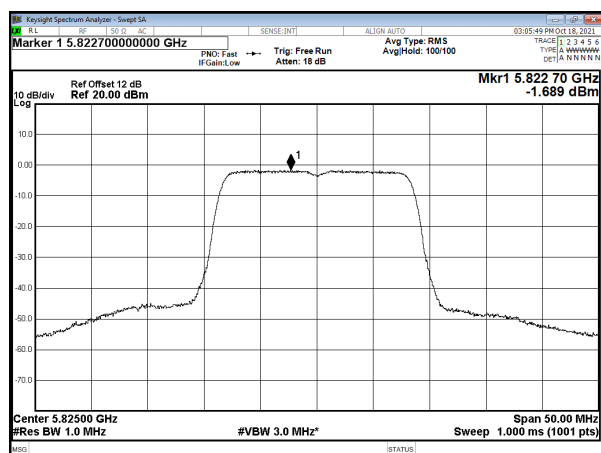
CH157



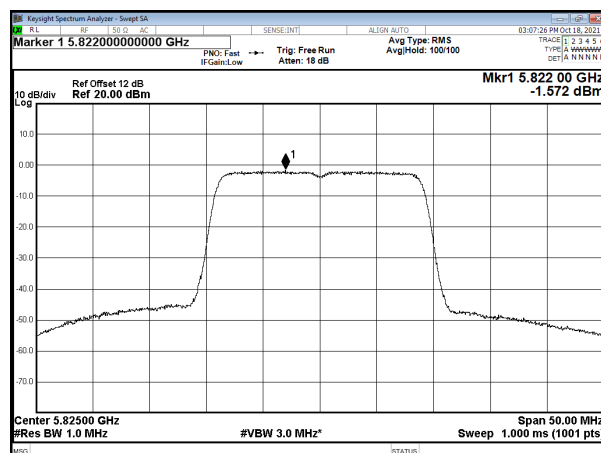
CH157



CH165



CH165

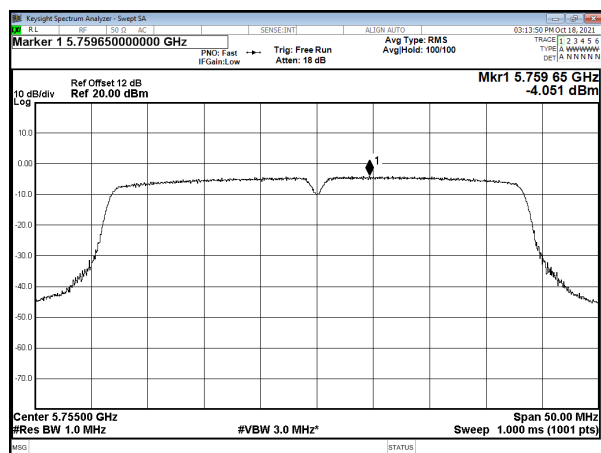




5.8G, Band 4

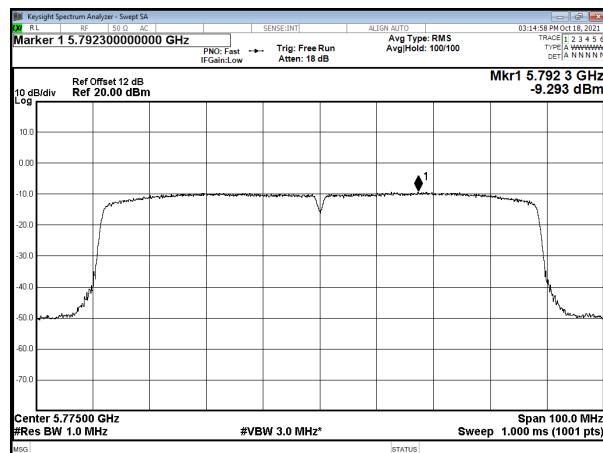
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

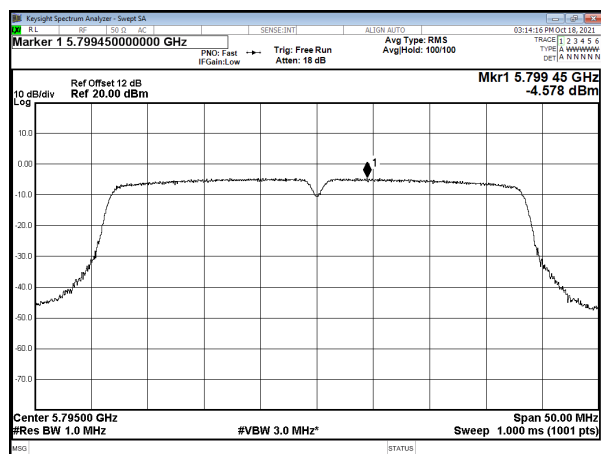


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



CH159



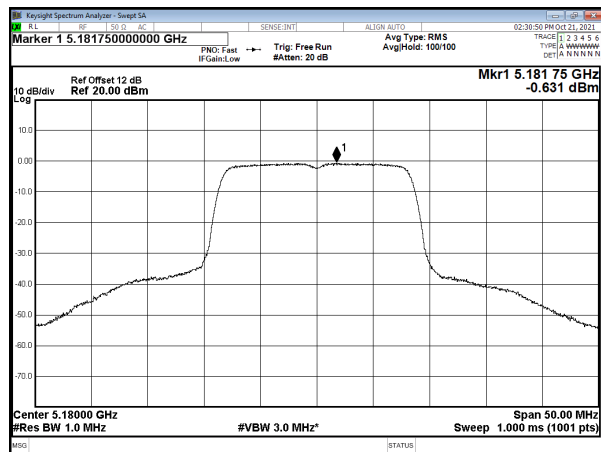


ANT B

5.2G, Band 1

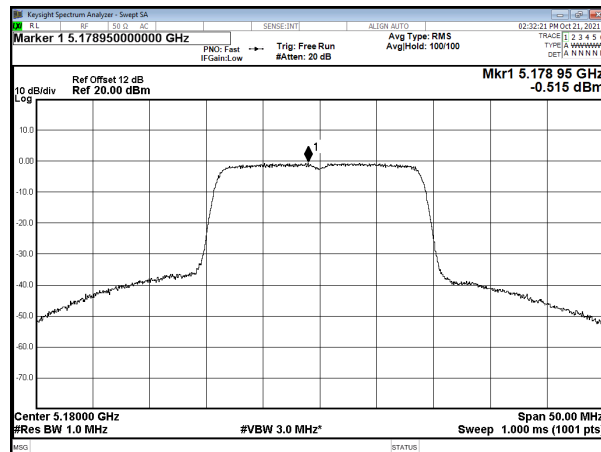
Modulation Standard: 802.11a (6Mbps)

CH36

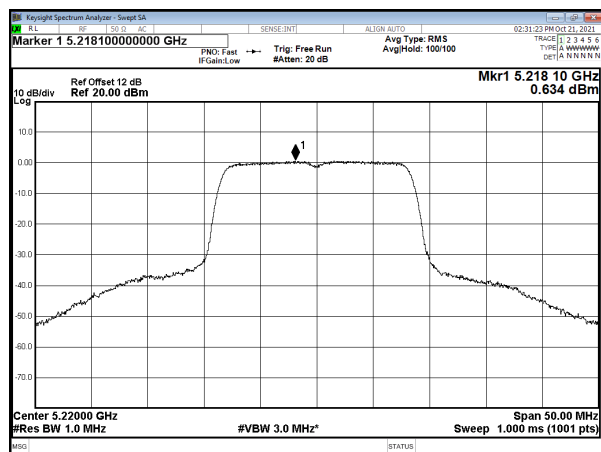


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

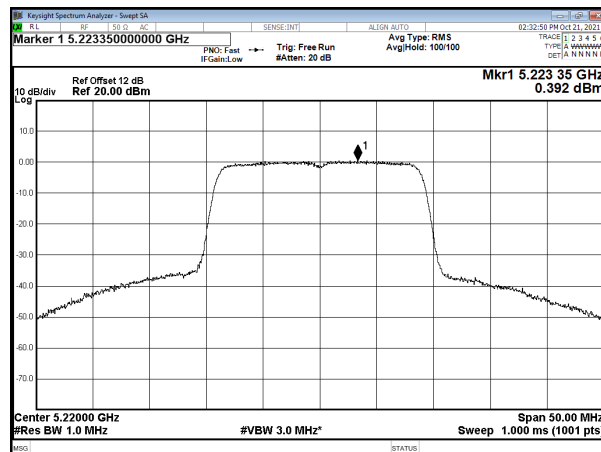
CH36



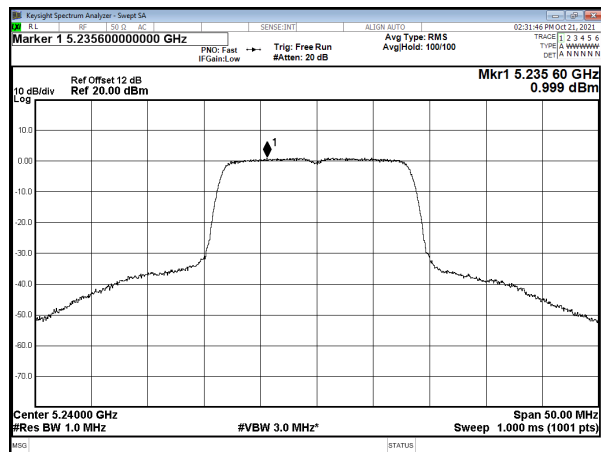
CH44



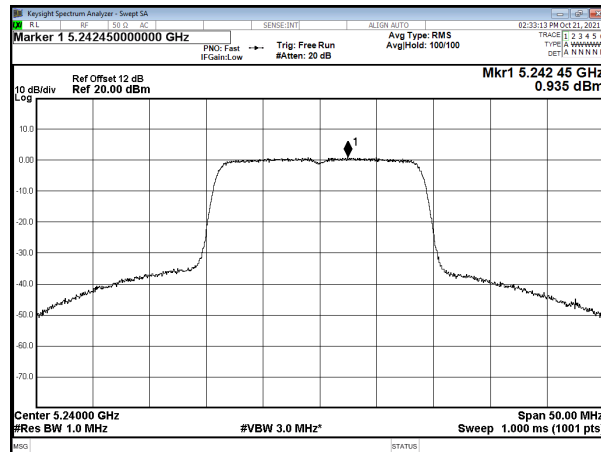
CH44



CH48



CH48

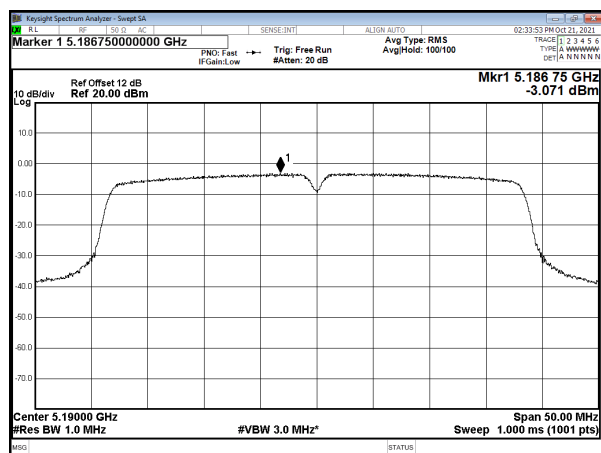




5.2G, Band 1

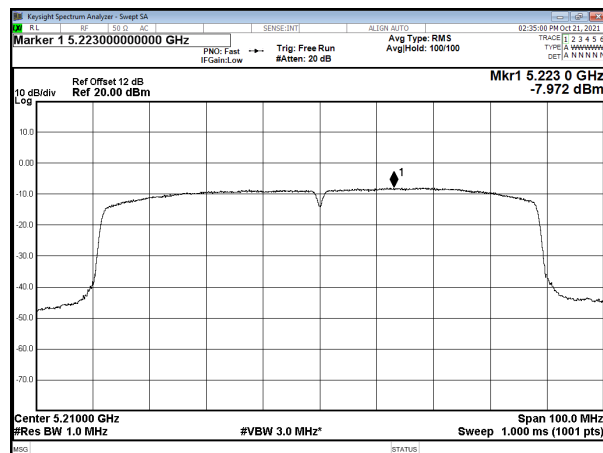
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

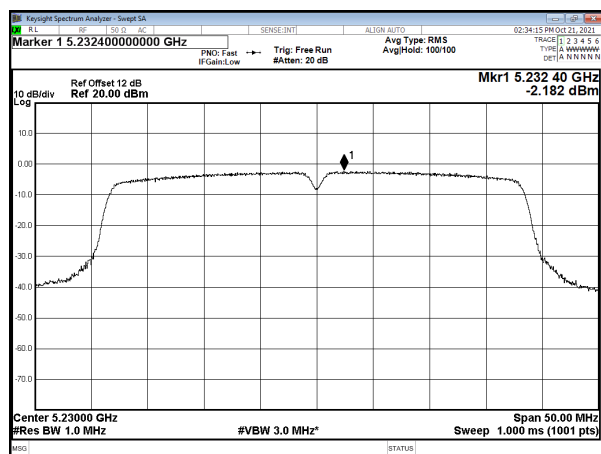


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

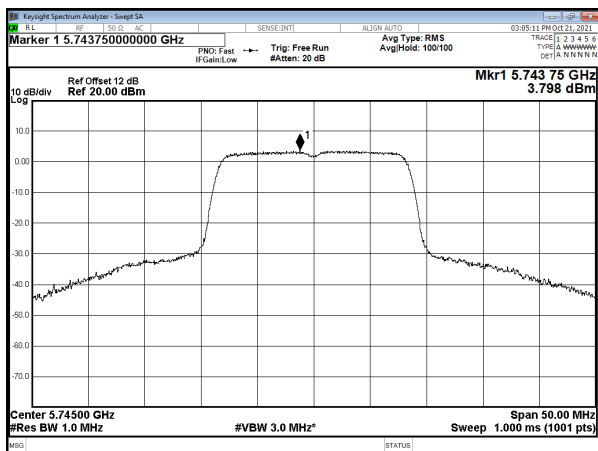




5.8G, Band 4

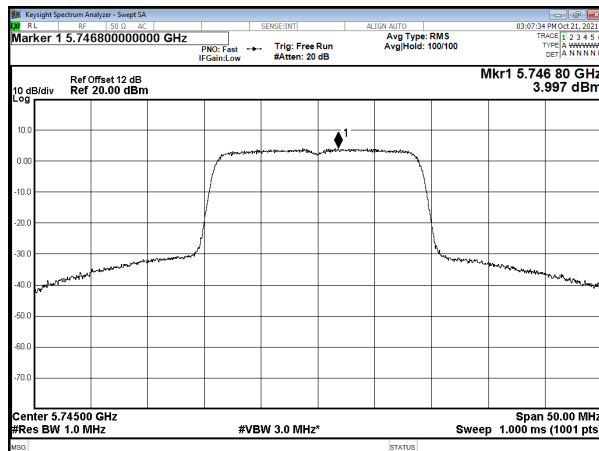
Modulation Standard: 802.11a (6Mbps)

CH149

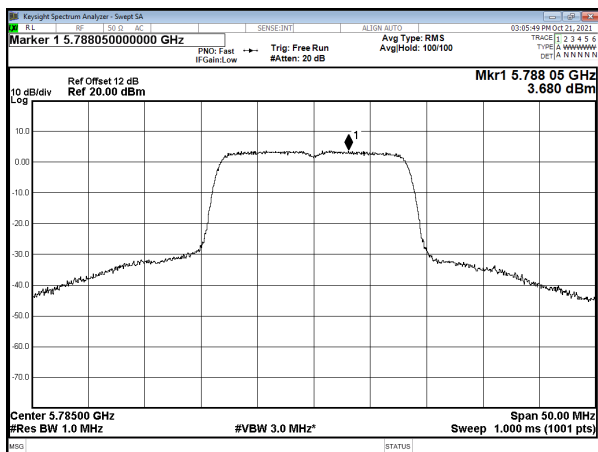


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

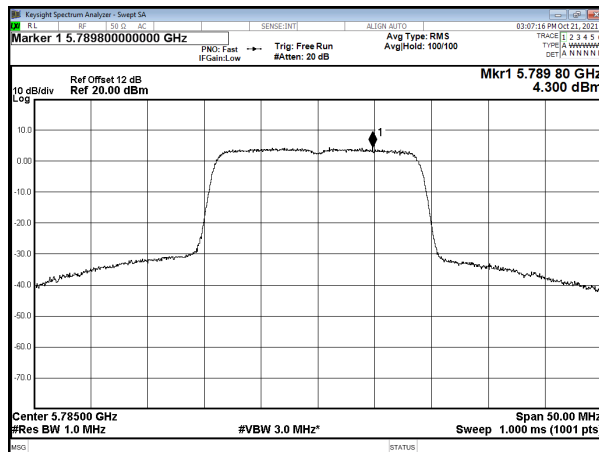
CH149



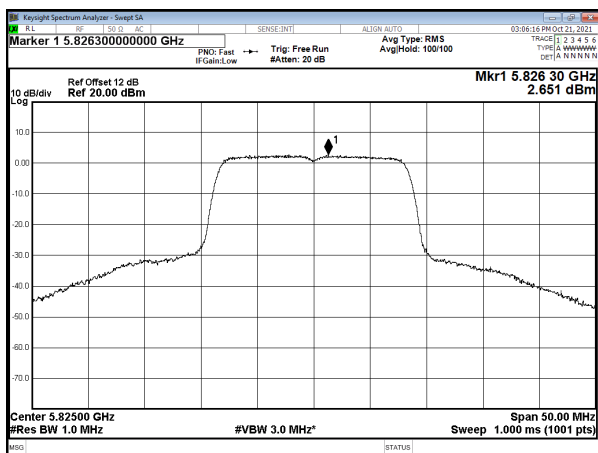
CH157



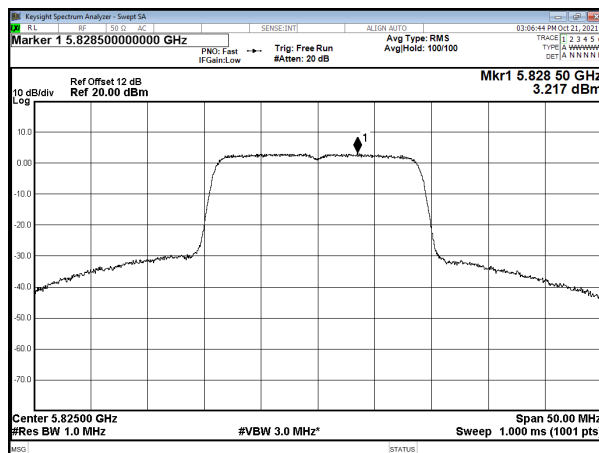
CH157



CH165



CH165

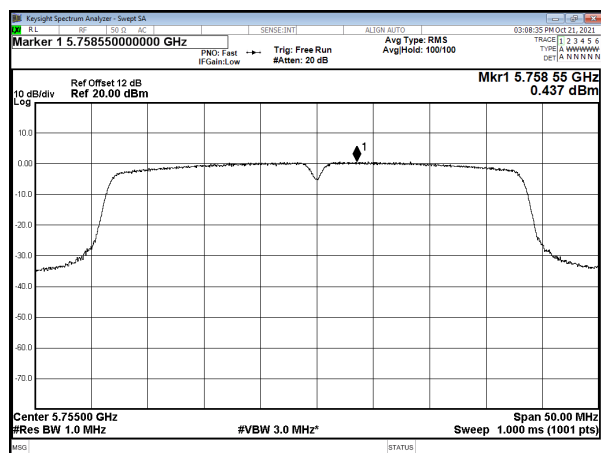




5.8G, Band 4

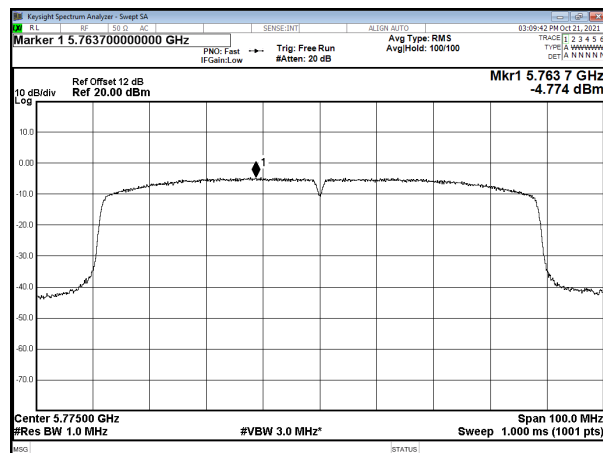
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

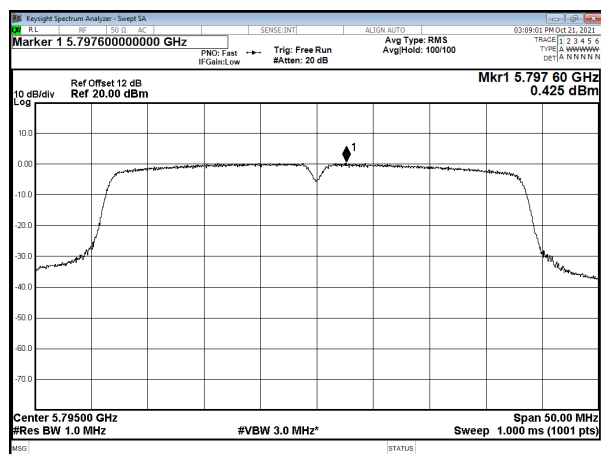


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



CH159





11. 頻率容許差度

11.1. 適用標準

應維持在主波頻率之 $\pm 0.01\%$ 以內。在正常供應電壓下，溫度在攝氏 -20°C 至 50°C 間變化；及在 20°C 下，供應電壓在額定值之 $\pm 15\%$ 內變化時。以電池作業者，應以新電池測試，須符合第 5.18 節之規定。

11.2. 測試方法

將 EUT 放置在可控制溫度和濕度設備室中。

發射機輸出連接到頻譜分析儀。

打開 EUT 並將其輸出耦合到頻譜分析儀。

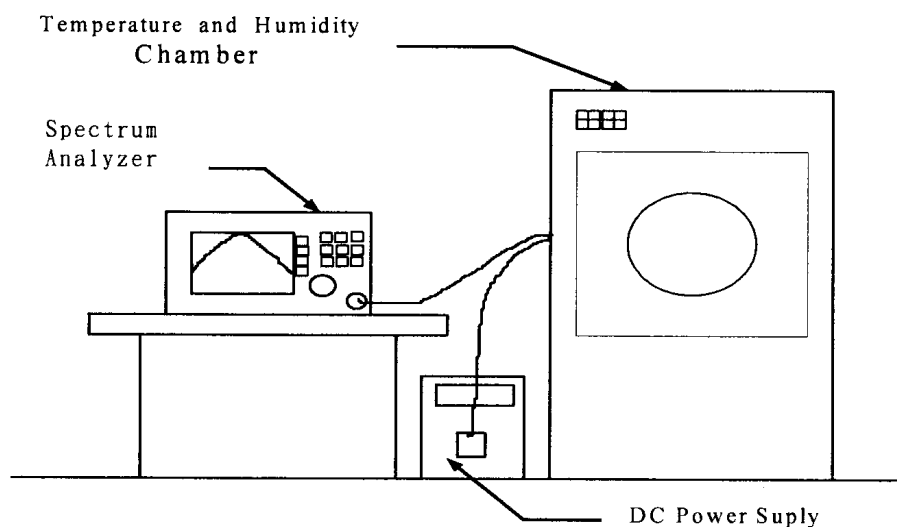
關閉 EUT 並將可控制溫度和濕度設備室設置為指定的最高溫度。

等待足夠的時間（約 30 分鐘）使可控制溫度和濕度設備室的溫度穩定，打開 EUT 並在 2 分鐘，5 分鐘和 10 分鐘後測量操作頻率。

重複步驟 2 和 3，將可控制溫度和濕度設備室設置為最低溫度。

使可控制溫度和濕度設備室在 $+20^{\circ}\text{C}$ 下穩定至少 30 分鐘。然後在 EUT 上將電源電壓從 85% 調節到 115% 並記錄頻率

11.3. 測試架構





11.4. 測試結果及數據

Operating frequency: 5180 MHz							
Temperature (°C)	Power supply (V)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
70	3.6	5179.9901	-0.000191	5179.9918	-0.000158	5180.0014	0.000027
	3.3	5179.9909	-0.000176	5179.9914	-0.000166	5180.0016	0.000031
	3	5179.9912	-0.000170	5179.9919	-0.000156	5180.0017	0.000033
60	3.6	5179.991	-0.000174	5179.9914	-0.000166	5180.0015	0.000029
	3.3	5179.9915	-0.000164	5179.9916	-0.000162	5180.0018	0.000035
	3	5179.9918	-0.000158	5179.9917	-0.000160	5180.0016	0.000031
50	3.6	5179.9927	-0.000141	5179.9915	-0.000164	5180.0013	0.000025
	3.3	5179.9925	-0.000145	5179.9913	-0.000168	5180.0017	0.000033
	3	5179.9921	-0.000153	5179.9916	-0.000162	5180.0014	0.000027
40	3.6	5179.9923	-0.000149	5179.9918	-0.000158	5180.0016	0.000031
	3.3	5179.9928	-0.000139	5179.9919	-0.000156	5180.0019	0.000037
	3	5179.9931	-0.000133	5179.9921	-0.000153	5180.0021	0.000041
30	3.6	5179.9925	-0.000145	5179.9923	-0.000149	5180.0018	0.000035
	3.3	5179.9928	-0.000139	5179.9922	-0.000151	5180.0015	0.000029
	3	5179.9929	-0.000137	5179.9924	-0.000147	5180.0013	0.000025
20	3.6	5179.9932	-0.000131	5179.9923	-0.000149	5180.0011	0.000021
	3.3	5179.9933	-0.000129	5179.9921	-0.000153	5180.0013	0.000025
	3	5179.9935	-0.000125	5179.9919	-0.000156	5180.0015	0.000029
10	3.6	5179.9932	-0.000131	5179.992	-0.000154	5180.0016	0.000031
	3.3	5179.9931	-0.000133	5179.9924	-0.000147	5180.0014	0.000027
	3	5179.9928	-0.000139	5179.9925	-0.000145	5180.0017	0.000033
0	3.6	5179.9926	-0.000143	5179.9927	-0.000141	5180.0015	0.000029
	3.3	5179.9924	-0.000147	5179.9926	-0.000143	5180.0011	0.000021
	3	5179.9921	-0.000153	5179.9924	-0.000147	5180.0012	0.000023



12. 電波暴露量之評估

12.1. 適用標準

依據國家通訊傳播委員會低功率射頻器材技術規範 6.20 節之(6.20.2)規定，若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符電波暴露量之要求。限制值如下：

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-----	-----	f/300	6
1,500-100,000	-----	-----	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	30
3-30	1842/f	4.89/f	*180/f ²	30
30-300	27.5	0.073	1.0	30
300-1,500	-----	-----	f/1500	30
1,500-100,000	-----	-----	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。



12.2. 電波暴露量之評估結果及數據

Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5180-5240	13.52	15.52	3.84	20	0.017	1
5745-5825	16.30	18.30	4	20	0.034	1

12.3. 結果判定

高、中、低頻段的電波暴露量皆低於限制值，合乎標準規定。



13. 限制使用之頻帶

Only spurious emissions are permitted in any of the frequency bands listed below:

頻率(兆赫)	頻率(兆赫)	頻率(兆赫)
0.090 - 0.110	240.00 - 285.00	3332.0 - 3339.0
0.490 - 0.510	322.00 - 335.40	3345.8 - 3358.0
2.172 - 2.198	399.90 - 410.00	3500.0 - 4400.0
3.013 - 3.033	485.00 - 510.00	4500.0 - 5250.0
4.115 - 4.198	608.00 - 614.00	5350.0 - 5460.0
5.670 - 5.690	703.00 - 748.00	7250.0 - 7750.0
6.200 - 6.300	758.00 - 803.00	8025.0 - 8500.0
8.230 - 8.400	825.00 - 915.00	9000.0 - 9200.0
12.265 - 12.600	930.00 - 1240.0	9300.0 - 9500.0
13.340 - 13.430	1300.0 - 1427.0	10600 - 12700
14.965 - 15.020	1435.0 - 1626.5	13250 - 13400
16.700 - 16.755	1660.0 - 1785.0	14470 - 14500
19.965 - 20.020	1805.0 - 1880.0	15350 - 16200
25.500 - 25.700	1885.0 - 1900.0	17700 - 21400
37.475 - 38.275	1905.0 - 1985.0	22010 - 23120
73.500 - 75.400	2010.0 - 2025.0	23600 - 24000
108.00 - 138.00	2110.0 - 2170.0	31200 - 31800
149.90 - 150.05	2200.0 - 2300.0	36430 - 36500
156.70 - 156.90	2310.0 - 2390.0	38600 以上
162.01 - 167.17	2483.5 - 2900.0	
167.72 - 173.20	3260.0 - 3267.0	

-----THE END OF REPORT-----