



NCC

低功率射頻電機型式試驗報告

產品名稱: Aruba 500 接入點
型號: APIN0504, APIN0505
廠牌: aruba / Hewlett Packard Enterprise
商標:  / 
申請者: 慧與科技股份有限公司
申請者地址: 臺北市南港區經貿二路 66 號 10 樓之 1
測試標準: LP0002 (107 年版)
參考法規: ANSI C63.10-2013
測試結果: 符合
測試日期: 2019.06.03 ~ 2019.07.14
發行日期: 2019.09.24

測試工程師:



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本測試報告非經本公司同意不可局部複製使用

修訂紀錄

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1. 一般資訊

申請者	慧與科技股份有限公司
申請者地址	臺北市南港區經貿二路 66 號 10 樓之 1
製造商	Hewlett Packard Enterprise Company
製造商地址	3333 Scott Blvd, Santa Clara, CA 94089, USA
實驗室	台灣曼瑞檢測科技有限公司
實驗室地址	33377 台灣桃園市龜山區復興二路 38 號
實驗室資訊	1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品資訊

2.1. 待測物裝置資料

產品名稱	Aruba 500 接入點
產品型號	APIN0504, APIN0505
待測物額定電壓	AC Adapter or POE input
無線規格	802.11a/b/g/n/ac/ax
頻率範圍	802.11b/g/n-HT20/ax-HE20: 2412 ~ 2462MHz 802.11n-HT40/ax-HE40: 2422 ~ 2452MHz
通道數量	802.11b/g/n-HT20/ax-HE20: 11 802.11n-HT40/ax-HE40: 7
調變模式	DSSS for IEEE 802.11b, OFDM for IEEE 802.11g/n, OFDMA for IEEE 802.11ax
傳輸速率	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 574Mbps
配件	
POE Adapter	MFR: Microsemi Corp Analog Mixed Signal Group Model: PD-9001GR/AT/AC INPUT: 100 - 240V ~ 50/60Hz, 0.67A OUTPUT: 55VDC 0.6A
AC Adapter 1#	MFR: Asian Power Devices Inc. Model: DB-48A12 INPUT: 100 - 240V ~ 50/60Hz, 1.5A OUTPUT: 12VDC 4A
AC Adapter 2#	Model: ADH-36BR B INPUT: 100 - 240V ~ 50/60Hz, 1.0A OUTPUT: 12VDC 3A
AC Adapter 3#	MFR: Shenzhen ENG Electronics Co., Ltd. P/N: SDI30-12-U-P209-C1 Model: SDI30-12-U INPUT: 100 - 240V ~ 50/60Hz, 1.0A OUTPUT: 12VDC 2.5A

Note: The difference between models is that EUT use different antenna and appearance, APIN0504 use some external antennas, but APIN0505 use internal antenna, other hardware and software are the same.

2.2. 通道清單

802.11b/g/n-HT20/ax-HE20

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

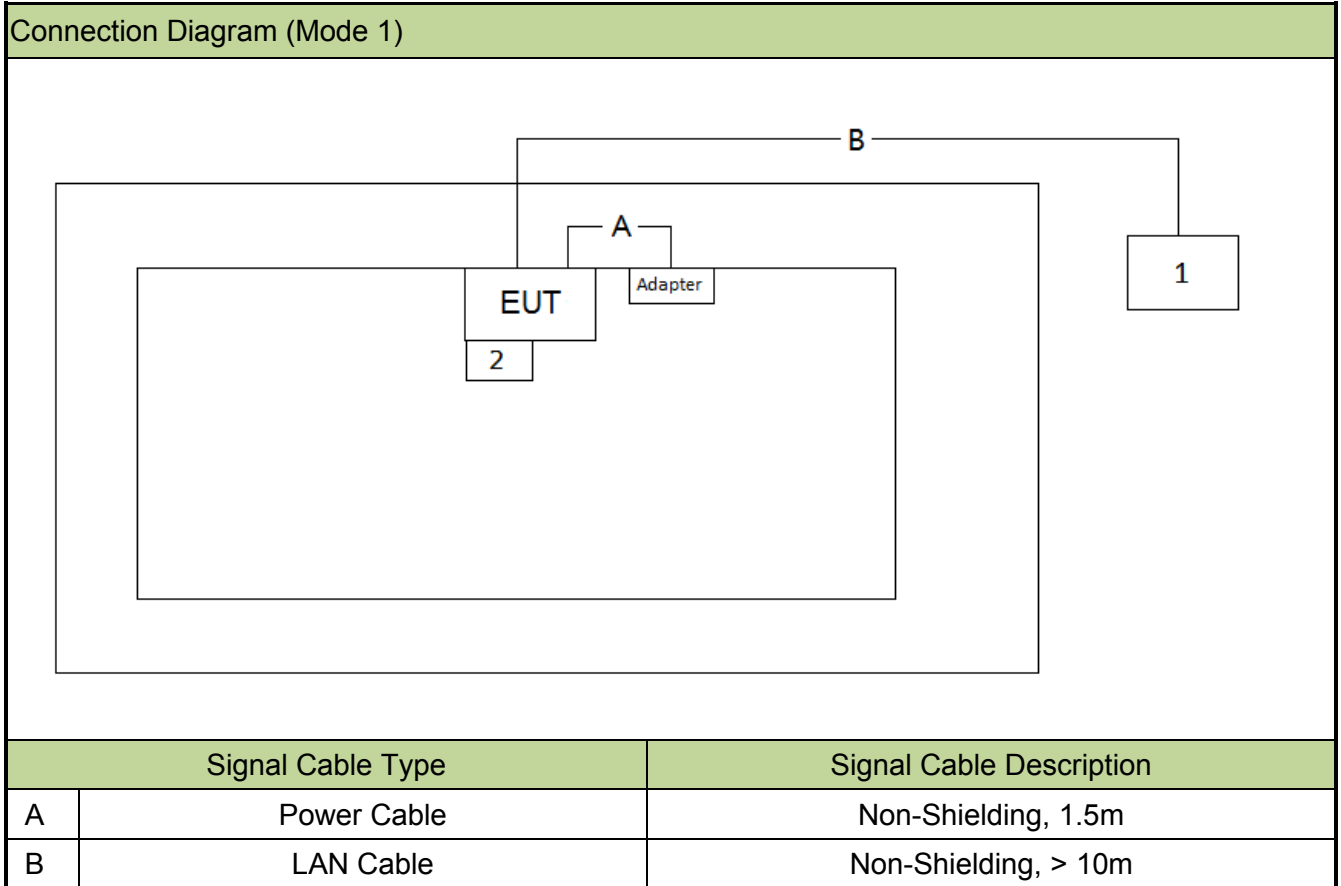
802.11n-HT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	--	--	--	--

2.3. 測試模式

Mode 1: 發射器 802.11b (1Mbps)
Mode 2: 發射器 802.11g (6Mbps)
Mode 3: 發射器 802.11n-HT20 (MCS0)
Mode 4: 發射器 802.11n-HT40 (MCS0)
Mode 5: 發射器 802.11ax-HE20 (MCS0)
Mode 6: 發射器 802.11ax-HE40 (MCS0)

2.4. 測試系統組合圖



2.5. 測試周邊

Item	待測物名稱	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	E430c	N/A	Non-Shielded, 1.8m
2	USB Dongle	藍科芯	青花 16G	--	--

2.6. 待測裝置測試時之典型操作程式

1.	Setup the EUT and simulators as shown on 2.4
2.	Turn on the power of all equipment.
3.	Execute "accessMTool" program.
4.	Configure the test channel and the data rate.
5.	Start to test.

3. 量測不確定度

電源傳導量測-電源線 (Conducted Emission- Power Line)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 2.53dB
輻射干擾量測 (Radiated Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.92dB (Below 30M)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.25dB (30M~1G)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.40dB (1G~18G)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.45dB (18G~40G)
頻率誤差量測 (Frequency Error)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$
傳導功率量測 (Conducted Power)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.84\text{dB}$
傳導干擾量測 (Conducted Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 2.65\text{ dB}$
佔用頻寬量測 (Occupied Bandwidth)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.3%
溫度 / 濕度 (Temp. / Humidity)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C} / \pm 3\%$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

4. 測試設備明細

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2020/3/25
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2020/4/25
8-Wire ISN (T8)	R&S	ENY81	MRTTWA00018	1 year	2020/4/23
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2020/5/29
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2020/5/30

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2020/4/29
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2020/6/4
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2020/4/22
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2020/4/23
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2020/4/24
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2020/4/24
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2020/3/25
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/10/30
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2020/4/22
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2020/5/30

Conducted Test Equipment - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/10/30
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06457	1 year	2020/7/19
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2020/4/22
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2020/5/30

Software	Version	Function
e3	9.160520a	EMI Test Software
EMI	Quietek	V3

5. 測試結果

章節	量測項目	限制值	測試結果	測試數據
2.3	電源傳導	低功率射頻電機技術規範 2.3 節	符合	第 5.1 章節
3.10.1.2	峰值傳導輸出功率	$\leq 30.00\text{dBm}$	符合	第 5.2 章節
3.10.1.3	天線之要求	低功率射頻電機技術規範 3.10.1.3 節	符合	第 5.3 章節
3.10.1.5	帶外發射限制	$\leq 30\text{dBc(Average)}$	符合	第 5.4 章節
2.7	輻射電場強度	低功率射頻電機技術規範 2.8 節	符合	第 5.5 章節
2.7	頻帶邊緣	$\leq 74\text{dBuV/m(Peak)}$ $\leq 54\text{dBuV/m(Average)}$	符合	第 5.6 章節
3.10.1.6(2)(A)	佔用頻寬	$\geq 500\text{kHz}$	符合	第 5.7 章節
3.10.1.6(2)(B)	功率頻譜密度	$\leq 8\text{dBm}$	符合	第 5.8 章節

備註：符合性的判定是基於測試結果符合規範的限制值或客戶的宣告要求，測試結果的判定是不考慮測量不確定度的值。

5.1. 電源端點干擾測試

5.1.1. 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第 2.3 節，以市電為電源之低功率射頻電機，其傳導回電源線上頻率自 150kHz 至 30MHz 之射頻電壓(在電源端子每一電源線對接地點)應小於或等於下表所列之限值。測量時應經過 50 微亨利(μH)及 50 歐姆(Ω)之電源線阻抗模擬網路(LISN)。頻率重疊處，以較低限值為準。

Frequency 頻率範圍 MHz	傳導限制值(dBuV)	
	準尖峰值	平均值
0.15 - 0.50	66-56 ^(註)	56-46 ^(註)
0.50 - 5.0	56	46
5.0 - 30	60	50

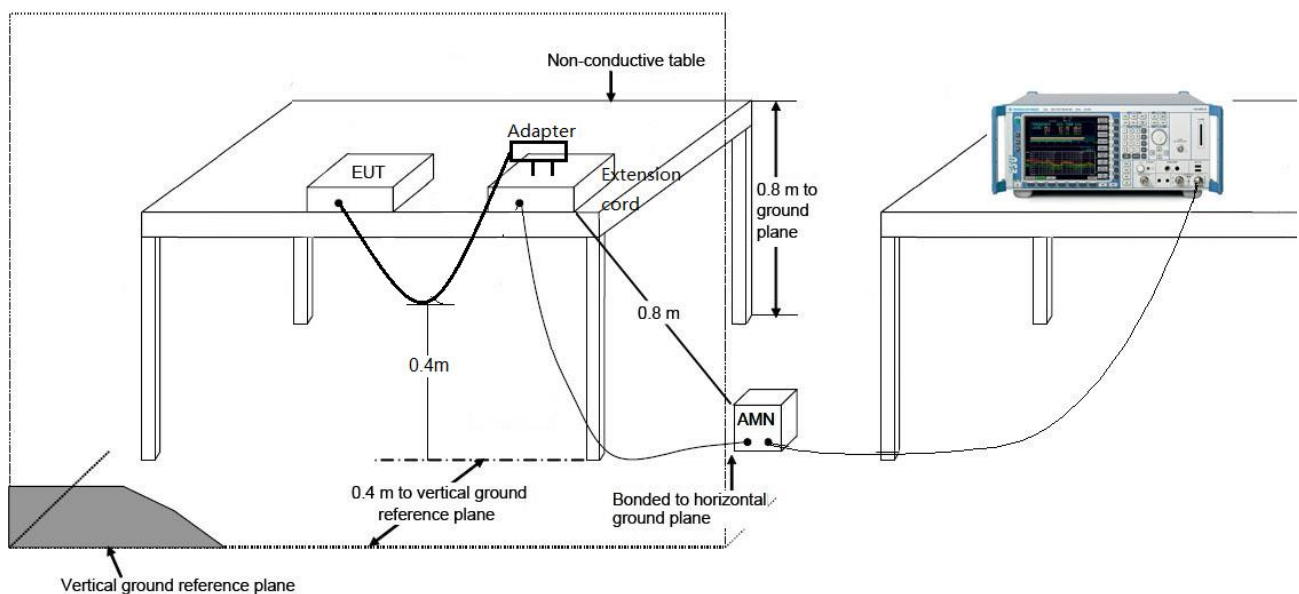
註:隨頻率之對數遞減

5.1.2. 量測方法

待測物置於高 80 公分之非導體桌面（落地型產品置於地上），將待測物之電源線接至電源阻抗網路器(LISN)，同時保持待測物至 LISN 距 80 公分，並將電源線多餘部份以 30 至 40 公分之八字形捆綁於電源線中央並離地 40cm，於在正常工作狀態下，執行待測物之火線(Line)及地線(neutral)各一次量測。電源端點場強之測量範圍由 0.15MHz –30MHz，所量測之讀值皆為準尖峰值(Quasi-Peak Value)及平均值(Average Value)。場強接收機之解析頻寬為 9kHz。

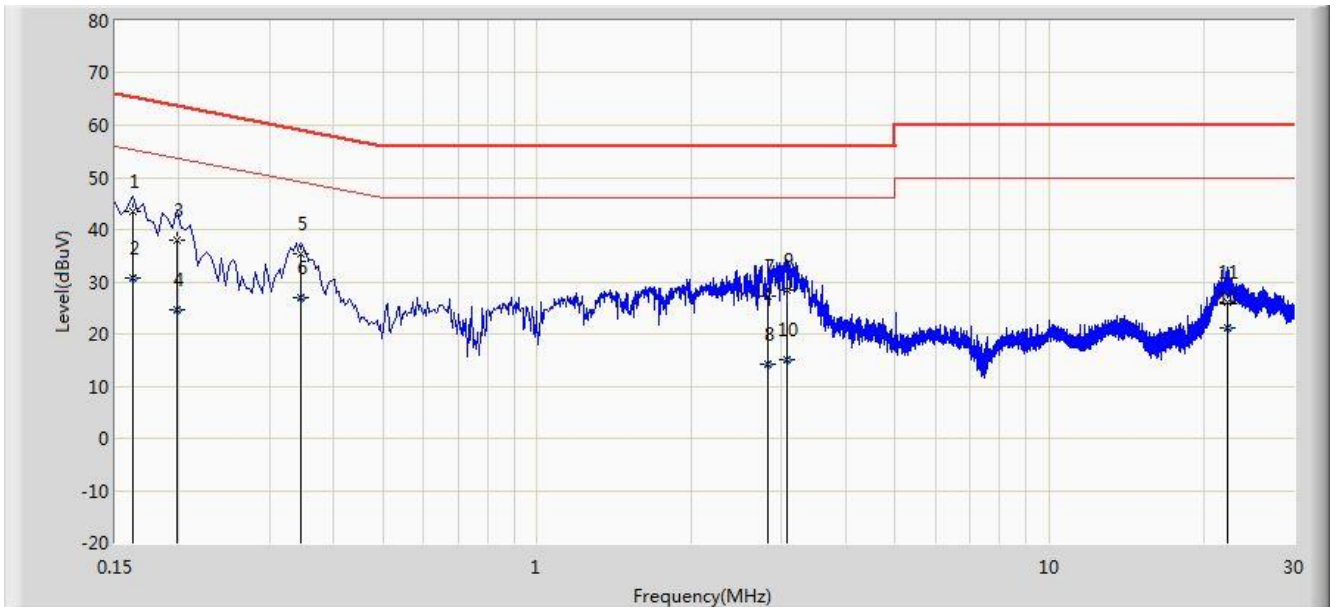
備 註: 經初測驗證過，電源端點干擾測試對測試頻道數並無差異，因此檢附其中一個測試頻道之測試數。

5.1.3. 測試架構圖



5.1.4. 電源端點測試結果

Site: SR2	Time: 2019/07/10 - 11:55
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: CE_ENV216-L1 (Filter ON)	Polarity: Line
EUT: Aruba 500 接入點 (APIN0504)	Power: AC 110V/60Hz
Test Mode 1	

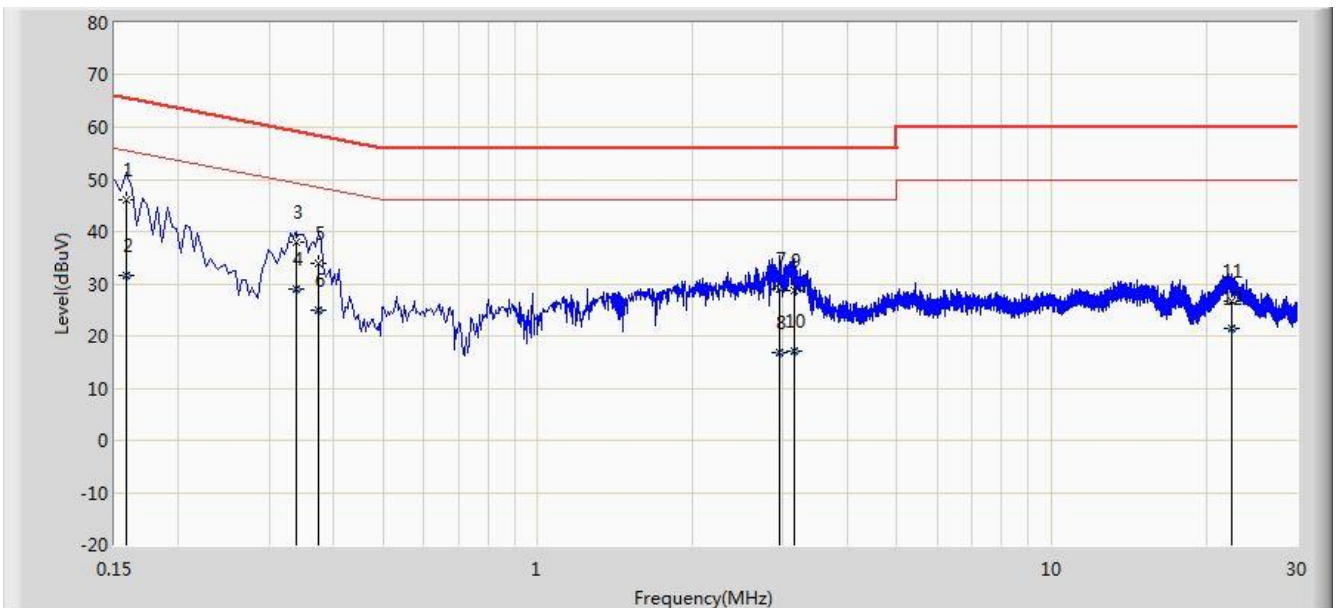


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.162	43.601	33.504	-21.760	65.361	10.097	QP
2			0.162	30.790	20.693	-24.571	55.361	10.097	AV
3			0.198	38.093	28.088	-25.601	63.694	10.005	QP
4			0.198	24.700	14.695	-28.994	53.694	10.005	AV
5			0.346	35.400	25.359	-23.658	59.058	10.041	QP
6			0.346	26.836	16.794	-22.222	49.058	10.041	AV
7			2.822	27.288	17.442	-28.712	56.000	9.846	QP
8			2.822	14.160	4.313	-31.840	46.000	9.846	AV
9			3.078	28.285	18.425	-27.715	56.000	9.861	QP
10			3.078	15.054	5.193	-30.946	46.000	9.861	AV
11			22.318	26.206	16.051	-33.794	60.000	10.155	QP
12			22.318	21.027	10.872	-28.973	50.000	10.155	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2019/07/10 - 11:59
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: CE_ENV216-N (Filter ON)	Polarity: Neutral
EUT: Aruba 500 接入點 (APIN0504)	Power: AC 110V/60Hz
Test Mode 1	

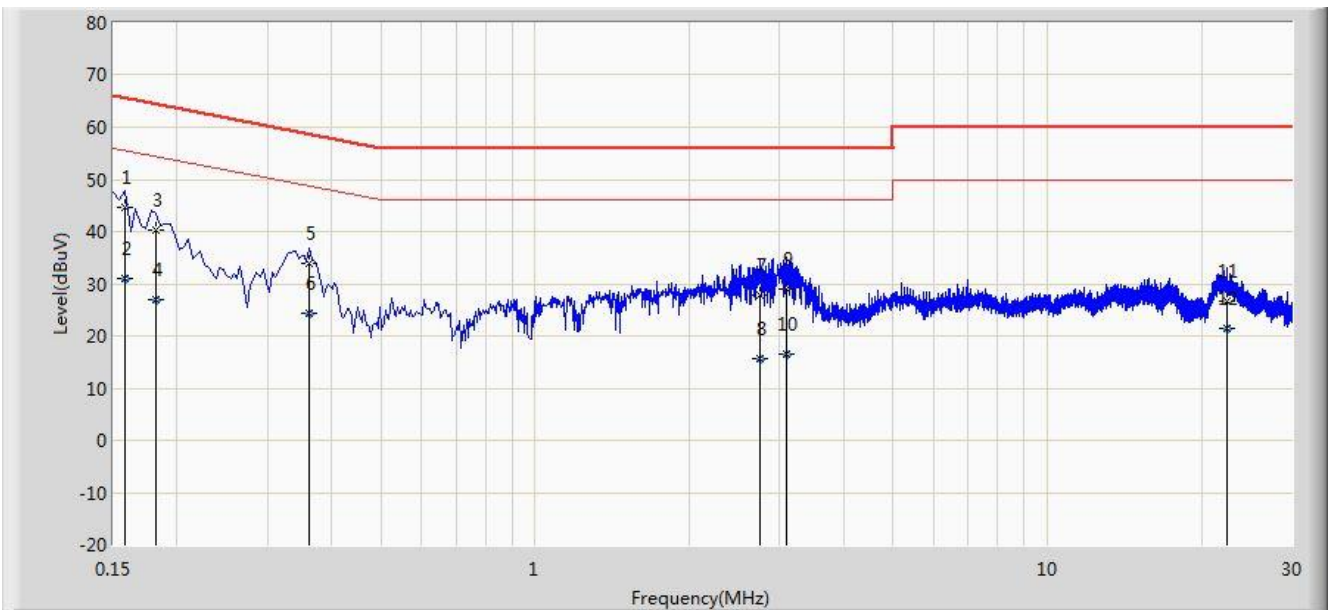


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	46.105	35.816	-19.463	65.568	10.290	QP
2			0.158	31.578	21.288	-23.990	55.568	10.290	AV
3			0.338	37.912	27.846	-21.341	59.252	10.066	QP
4			0.338	29.062	18.996	-20.190	49.252	10.066	AV
5			0.374	33.849	23.756	-24.563	58.412	10.093	QP
6			0.374	24.952	14.859	-23.459	48.412	10.093	AV
7			2.958	28.873	19.010	-27.127	56.000	9.863	QP
8			2.958	16.806	6.944	-29.194	46.000	9.863	AV
9			3.162	28.607	18.744	-27.393	56.000	9.863	QP
10			3.162	17.139	7.276	-28.861	46.000	9.863	AV
11			22.398	26.652	16.435	-33.348	60.000	10.218	QP
12			22.398	21.496	11.279	-28.504	50.000	10.218	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2019/07/10 - 13:17
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: CE_ENV216-L1 (Filter ON)	Polarity: Line
EUT: Aruba 500 接入點 (APIN0505)	Power: AC 110V/60Hz
Test Mode 1	

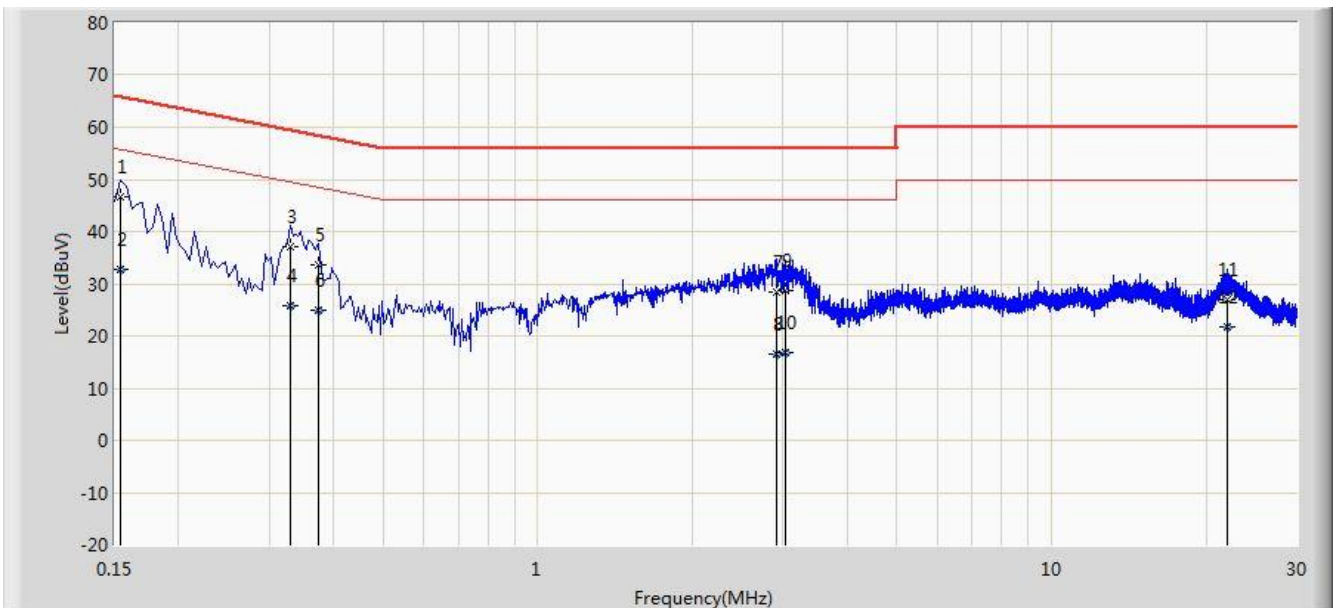


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	44.642	34.331	-20.927	65.568	10.311	QP
2			0.158	31.081	20.770	-24.487	55.568	10.311	AV
3			0.182	40.270	30.222	-24.124	64.394	10.048	QP
4			0.182	27.029	16.981	-27.365	54.394	10.048	AV
5			0.362	33.833	23.779	-24.849	58.682	10.055	QP
6			0.362	24.487	14.432	-24.196	48.682	10.055	AV
7			2.746	27.710	17.861	-28.290	56.000	9.849	QP
8			2.746	15.795	5.946	-30.205	46.000	9.849	AV
9			3.086	28.986	19.126	-27.014	56.000	9.859	QP
10			3.086	16.559	6.700	-29.441	46.000	9.859	AV
11			22.418	26.593	16.432	-33.407	60.000	10.162	QP
12			22.418	21.309	11.147	-28.691	50.000	10.162	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2019/07/10 - 13:22
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: CE_ENV216-N (Filter ON)	Polarity: Neutral
EUT: Aruba 500 接入點 (APIN0505)	Power: AC 110V/60Hz
Test Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.154	46.687	35.971	-19.094	65.781	10.716	QP
2			0.154	32.788	22.072	-22.993	55.781	10.716	AV
3			0.330	37.218	27.158	-22.233	59.451	10.060	QP
4			0.330	25.902	15.842	-23.549	49.451	10.060	AV
5			0.374	33.479	23.386	-24.932	58.412	10.093	QP
6			0.374	24.968	14.875	-23.443	48.412	10.093	AV
7			2.906	28.364	18.509	-27.636	56.000	9.855	QP
8			2.906	16.628	6.772	-29.372	46.000	9.855	AV
9			3.038	28.788	18.921	-27.212	56.000	9.867	QP
10			3.038	16.910	7.043	-29.090	46.000	9.867	AV
11			21.970	26.817	16.593	-33.183	60.000	10.224	QP
12			21.970	21.608	11.384	-28.392	50.000	10.224	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

5.2. 峰值傳導輸出功率

5.2.1. 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第 3.10.1.2(1)(C)節，操作於 2400-2483.5 MHz 之數位調變的發射器材：1 瓦(W)(含)以下。

依據國家通訊傳播委員會低功率射頻電機技術規範之第 3.10.1.3 節，天線增益限制如下：

(1) 操作於 2400 MHz~2483.5 MHz 頻段：

(A) 進行固定式點對點操作時，其發射天線之方向性增益超過6 dBi，每超過3 dBi，最大傳導輸出功率限制值應降低1 dB。

(B) 除第(A)節外，如其發射天線之方向性增益超過6dBi，應依所超過之dB數等量降低最大傳導輸出功率。

(C) 天線以多向波束發射方式(含同時發射或循序發射)將訊號導向多個接收機或接收機群組時，應符合下列規定：

(a) 非同時發射多向波束者，所有載波或頻道傳輸至所有天線陣列或陣列群之總和傳導輸出功率應符合 3.10.1.2 之功率限制值。如天線/天線陣列群之方向性增益超過 6 dBi，每超過 3 dBi，總和傳導輸出功率限制值應降低 1 dB。方向性增益值應計算如下：

(i) 方向性增益值= $10\log(\text{天線陣列之單元數目}) + \text{各單元中最高之方向性增益值}$ 。

(ii) 天線陣列間之遮蔽效應或波束干涉損失能充分佐證時，方向性增益得低於(i)計算數值。

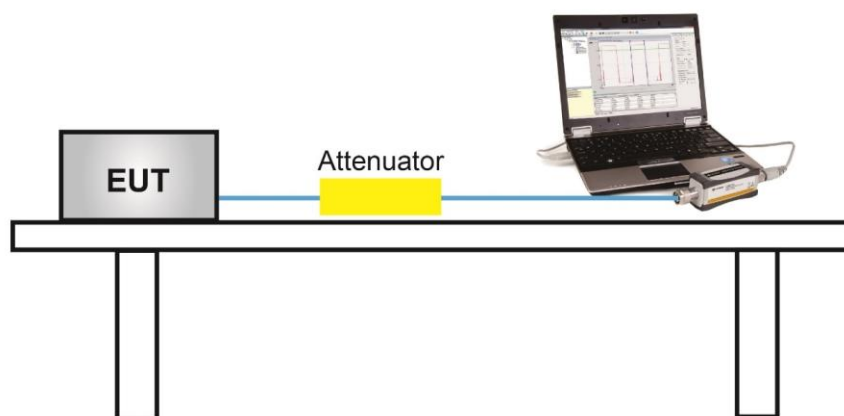
同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a) 總和傳導輸出功率限制值加 8 dB。方向性增益值計算同(a)。

(c) 發射機之天線具備單向波束功能者，應符合(1)(A)及(3)後段之規定。

5.2.2. 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀 RF 輸入端，設定頻譜分析儀之解析度頻寬大於 6dB 發射頻寬或使用峰值功率表。

5.2.3. 測試架構圖



5.2.4. 峰值傳導輸出功率測試結果

Power output test was verified over all data rates of each mode shown as below table, and then choose the maximum power output (gray marker) for final test of each channel.

For Ant 0 / Ant 0 + 1 port for APIN0504

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11b	20	6	2437	1Mbps	18.24
				5.5Mbps	18.02
				11Mbps	17.71
802.11g	20	6	2437	6Mbps	18.21
				24Mbps	17.93
				54Mbps	17.65
802.11n	20	6	2437	MCS0	18.44
				MCS3	18.19
				MCS7	17.89
802.11n	40	6	2437	MCS0	16.19
				MCS3	15.88
				MCS7	15.50
802.11ax	20	6	2437	MCS0	18.38
				MCS5	18.11
				MCS11	17.83
802.11ax	40	6	2437	MCS0	15.81
				MCS5	15.58
				MCS11	15.29

待測物名稱	Aruba 500 接入點	溫度	25°C
待測物型號	APIN0504	濕度	54%
測試場地	SR1	測試日期	2019/07/03
測試項目	Output Power	測試工程師	Kevin Ker

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Max E.I.R.P (dBm)	Result
11b	1Mbps	01	2412	18.12	18.17	21.16	≤ 30.00	23.35	Pass
11b	1Mbps	06	2437	18.24	18.14	21.20	≤ 30.00		Pass
11b	1Mbps	11	2462	18.32	18.35	21.35	≤ 30.00		Pass
11g	6Mbps	01	2412	17.29	17.40	20.36	≤ 30.00	23.17	Pass
11g	6Mbps	06	2437	18.21	18.11	21.17	≤ 30.00		Pass
11g	6Mbps	10	2457	17.49	17.31	20.41	≤ 30.00		Pass
11g	6Mbps	11	2462	14.85	15.18	18.03	≤ 30.00		Pass
11n-HT20	MCS0	01	2412	17.10	17.14	20.13	≤ 30.00	23.41	Pass
11n-HT20	MCS0	06	2437	18.44	18.35	21.41	≤ 30.00		Pass
11n-HT20	MCS0	10	2457	17.43	17.28	20.37	≤ 30.00		Pass
11n-HT20	MCS0	11	2462	14.99	14.90	17.96	≤ 30.00		Pass
11n-HT40	MCS0	03	2422	15.74	16.04	18.90	≤ 30.00	21.31	Pass
11n-HT40	MCS0	06	2437	16.19	16.40	19.31	≤ 30.00		Pass
11n-HT40	MCS0	08	2447	15.31	15.37	18.35	≤ 30.00		Pass
11n-HT40	MCS0	09	2452	14.71	14.65	17.69	≤ 30.00		Pass
11ax-HE20	MCS0	01	2412	16.48	16.25	19.38	≤ 30.00	23.31	Pass
11ax-HE20	MCS0	06	2437	18.38	18.22	21.31	≤ 30.00		Pass
11ax-HE20	MCS0	10	2457	16.94	16.86	19.91	≤ 30.00		Pass
11ax-HE20	MCS0	11	2462	13.13	13.23	16.19	≤ 30.00		Pass
11ax-HE40	MCS0	03	2422	15.84	15.87	18.87	≤ 30.00	20.87	Pass
11ax-HE40	MCS0	06	2437	15.81	15.86	18.85	≤ 30.00		Pass
11ax-HE40	MCS0	09	2452	14.38	14.46	17.43	≤ 30.00		Pass

Note 1: Total Average Power (dBm) = $10 \cdot \log \{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)}\}$ (dBm).

Note 2: Max E.I.R.P (dBm) = The Max Total Average Power (dBm) + Antenna Gain (dBi), Antenna Gain = 2 dBi.

待測物名稱	Aruba 500 接入點	溫度	25°C
待測物型號	APIN0505	濕度	54%
測試場地	SR1	測試日期	2019/07/03
測試項目	Output Power	測試工程師	Kevin Ker

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Max E.I.R.P (dBm)	Result
11b	1Mbps	01	2412	18.13	18.24	21.20	≤ 30.00	25.62	Pass
11b	1Mbps	06	2437	18.40	18.24	21.33	≤ 30.00		Pass
11b	1Mbps	11	2462	18.16	18.41	21.30	≤ 30.00		Pass
11g	6Mbps	01	2412	18.06	17.71	20.90	≤ 30.00	25.40	Pass
11g	6Mbps	06	2437	18.17	18.02	21.11	≤ 30.00		Pass
11g	6Mbps	10	2457	17.92	18.09	21.02	≤ 30.00		Pass
11g	6Mbps	11	2462	15.20	15.31	18.27	≤ 30.00		Pass
11n-HT20	MCS0	01	2412	17.92	17.57	20.76	≤ 30.00	25.50	Pass
11n-HT20	MCS0	06	2437	18.11	18.29	21.21	≤ 30.00		Pass
11n-HT20	MCS0	10	2457	18.14	17.87	21.02	≤ 30.00		Pass
11n-HT20	MCS0	11	2462	15.57	15.75	18.67	≤ 30.00		Pass
11n-HT40	MCS0	03	2422	17.02	16.91	19.98	≤ 30.00	25.49	Pass
11n-HT40	MCS0	06	2437	18.23	18.14	21.20	≤ 30.00		Pass
11n-HT40	MCS0	07	2442	16.85	16.96	19.92	≤ 30.00		Pass
11n-HT40	MCS0	08	2447	15.92	16.07	19.01	≤ 30.00		Pass
11n-HT40	MCS0	09	2452	15.69	15.83	18.77	≤ 30.00		Pass
11ax-HE20	MCS0	01	2412	17.32	17.17	20.26	≤ 30.00	25.61	Pass
11ax-HE20	MCS0	06	2437	18.38	18.24	21.32	≤ 30.00		Pass
11ax-HE20	MCS0	10	2457	17.94	17.89	20.93	≤ 30.00		Pass
11ax-HE20	MCS0	11	2462	14.84	14.77	17.82	≤ 30.00		Pass
11ax-HE40	MCS0	03	2422	17.05	17.10	20.09	≤ 30.00	25.68	Pass
11ax-HE40	MCS0	06	2437	18.39	18.37	21.39	≤ 30.00		Pass
11ax-HE40	MCS0	07	2442	16.62	16.86	19.75	≤ 30.00		Pass
11ax-HE40	MCS0	08	2447	15.99	16.04	19.03	≤ 30.00		Pass
11ax-HE40	MCS0	09	2452	15.24	15.22	18.24	≤ 30.00		Pass

Note 1: Total Average Power (dBm) = $10 \cdot \log \{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)}\}$ (dBm).

Note 2: Max E.I.R.P (dBm) = The Max Total Average Power (dBm) + Antenna Gain (dBi).

5.3. 天線之要求

5.3.1. 適用標準

低功率射頻電機之發射機或收發信機所使用之天線，應為全固定、半固定式或以獨特之耦合(unique coupling)方式連接機體。製造者可設計供使用者因損壞而替換之天線，但不得設計或使用原認證以外之天線或可供引接各類電纜之標準天線插座或電氣連接頭，如：BNC、F type、N type、M type、UG type、RCA、SMA、SMB...等及其他各類工業或通訊標準接頭。

5.3.2. 天線樣式

型號APIN0504 使用半固定式天線，使用Reverse SMA介面。

Antenna No.	Directionality/TYPE	Frequency Band (GHz)	Model No.	Max Peak Gain (dBi)	BF Dir Gain (dBi)	CDD Dir Gain (dBi)	
						For Power	For PSD
Wi-Fi External Antenna List (2.4GHz 2*2 MIMO, 5GHz 2*2 MIMO)							
1	Omni/Dipole	2.4	AP-ANT-1W	3.8	6.81	3.8	6.81
		5		5.8	8.81	5.8	8.81
2	Omni/Panel	2.4	AP-ANT-13B	2.3	5.31	2.3	5.31
		5		4.0	7.01	4.0	7.01
3	Omni/Dipole	2.4	AP-ANT-19	3.0	6.01	3.0	6.01
		5		6.0	9.01	6.0	9.01
4	Omni/Dipole	2.4	AP-ANT-20W	2.0	5.01	2.0	5.01
		5		2.0	5.01	2.0	5.01
5	Omni/Panel	2.4	AP-ANT-40	4.0	7.01	4.0	7.01
		5		5.0	8.01	5.0	8.01
6 (Note 3)	Directional/ Panel	2.4	AP-ANT-25A	5.0	5.0	5.0	8.01
		5		5.0	5.0	5.0	8.01
7 (Note 3)	Directional/ Panel	2.4	AP-ANT-28	7.5	7.5	7.5	10.51
		5		7.5	7.5	7.5	10.51
Bluetooth & ZigBee Internal Antenna							
PIFA		2.4		3.3			

型號APIN0505 使用全固定式天線

Directionality/ TYPE	Frequency Band (GHz)	Max Peak Gain (dBi)	BF Dir Gain (dBi)	CDD Dir Gain (dBi)	
				For Power	For PSD
Wi-Fi Internal Antenna List (2.4GHz 2*2 MIMO, 5GHz 2*2 MIMO)					
Omni/PIFA	2.4	4.29	7.08	4.29	7.08
Omni/PIFA	5	5.63	8.64	5.63	8.64
Bluetooth & ZigBee Internal Antenna					
PIFA	2.4	3.3			

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.
If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.
 - For power spectral density (PSD) measurements on all devices,
Array Gain = $10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01$;
 - For power measurements on IEEE 802.11 devices,
Array Gain = 0 dB for $N_{ANT} \leq 4$;
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax, not include 802.11a/b/g. Directional gain = $G_{ANT} + \text{Array Gain}$, BF Gain was declared by the applicant.
3. Two type antennas are cross polarized, the detail refer to antenna specification.
4. For APIN0504, low gain antenna AP-ANT-20W was selected to perform all RF testing that can got maximum power setting. High gain Omni antenna AP-ANT-19 & AP-ANT-40 and directional antenna AP-ANT-28 were selected to perform radiated spurious emission and band edge testing. High gain antenna power setting will be reduced according to difference value of antenna gain declared by applicant.
For APIN0505, its directional gain was declared by the applicant, the detail refers to antenna specification.

5.4. 輻射干擾測試

5.4.1. 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第 3.10.1.5 節，使用頻帶範圍外之任意 100 千赫 (kHz)內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz)內的射頻功率，衰減值限制如下：

(1)輸出功率以低功率射頻電機技術規範附件二之峰值輸出功率方式量測者，至少須衰減 20 dB，可使用射頻傳導或輻射方式測量。

(2)輸出功率以低功率射頻電機技術規範 3.10.1(2)(2.3)之最大傳導輸出功率量測方式者，至少須衰減 30 dB。

此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定。

依據國家通訊傳播委員會低功率射頻電機技術規範之第 2.8 節，低功率射頻電機，除本規範各章節另有放寬規定者外，其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

頻 率(兆赫)	電場強度(微伏/公尺)	測距(公尺)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) – 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) – 30 (不含)	30	30
30 (含) – 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含)以上	500	3

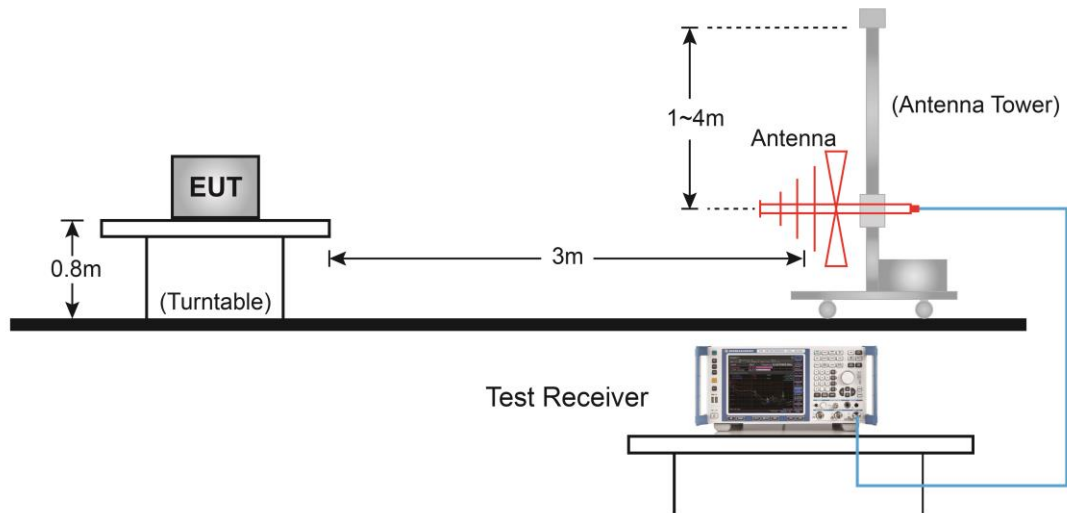
上表規定之電場強度，頻率在 9-90kHz 千赫(kHz)、110-490 千赫(kHz)以及 1000 兆赫(MHz)以上之發射，其量測以平均值檢波器為基準，且須符合第 5.15.2 節之規定；其他頻率之發射，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時須符合第 5.5 節之規定，而輻射發射之量測頻率範圍須符合第 5.14 節之規定。

5.4.2. 量測方法

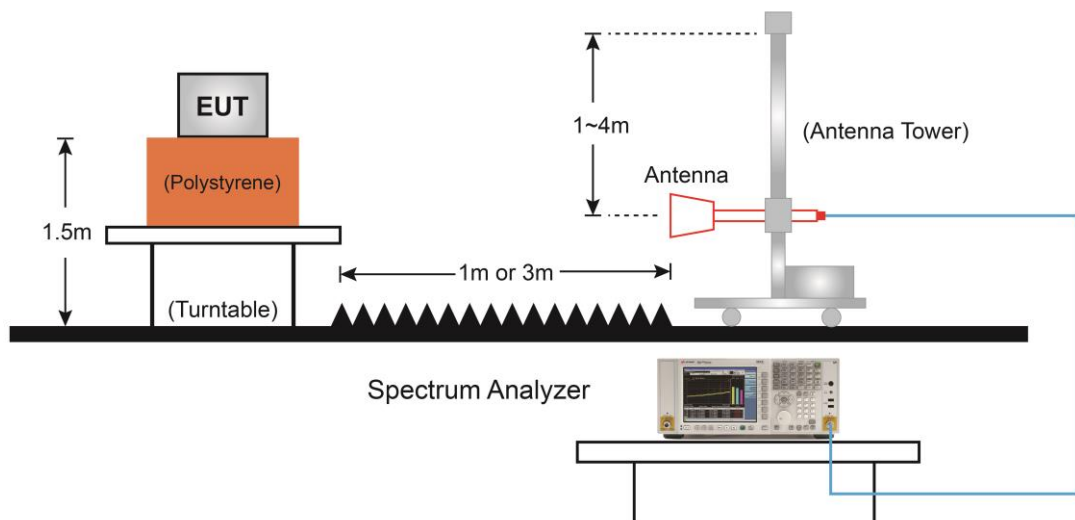
低頻待測物置於高 80 公分之非導體桌面（落地型產品置於地上），高頻待測物置於高 150 公分之非導體桌面，受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度。接收天線並應於水準及垂直極化方向各量測一次。

5.4.3. 測試架構圖

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.4.4. 輻射干擾測試結果

For APIN0504 - Omni Antenna (AP-ANT-20W):

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4009.0	41.2	0.6	41.8	54.0	-12.2	Peak	Horizontal
	4952.5	39.3	3.6	42.9	54.0	-11.1	Peak	Horizontal
*	6244.5	36.0	7.3	43.3	86.4	-43.1	Peak	Horizontal
*	9678.5	34.9	15.0	49.9	86.4	-36.5	Peak	Horizontal
	4009.0	40.2	0.6	40.8	54.0	-13.2	Peak	Vertical
	4723.0	38.7	3.1	41.8	54.0	-12.2	Peak	Vertical
*	6159.5	36.3	6.9	43.2	86.4	-43.2	Peak	Vertical
*	10120.5	33.1	16.3	49.4	86.4	-37.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.4dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	40.9	0.0	40.9	54.0	-13.1	Peak	Horizontal
	4859.0	39.7	3.4	43.1	54.0	-10.9	Peak	Horizontal
*	6491.0	37.1	8.5	45.6	86.2	-40.6	Peak	Horizontal
*	9602.0	34.0	14.9	48.9	86.2	-37.3	Peak	Horizontal
	4051.5	40.4	0.8	41.2	54.0	-12.8	Peak	Vertical
	5139.5	39.4	3.9	43.3	54.0	-10.7	Peak	Vertical
*	6355.0	36.7	7.8	44.5	86.2	-41.7	Peak	Vertical
*	9763.5	33.9	15.2	49.1	86.2	-37.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4085.5	39.9	0.9	40.8	54.0	-13.2	Peak	Horizontal
	5029.0	39.1	3.8	42.9	54.0	-11.1	Peak	Horizontal
*	6542.0	37.1	8.7	45.8	85.8	-40.0	Peak	Horizontal
*	10188.5	32.8	16.6	49.4	85.8	-36.4	Peak	Horizontal
	3975.0	40.4	0.5	40.9	54.0	-13.1	Peak	Vertical
	4884.5	39.8	3.5	43.3	54.0	-10.7	Peak	Vertical
*	6236.0	37.9	7.2	45.1	85.8	-40.7	Peak	Vertical
*	8650.0	34.4	13.5	47.9	85.8	-37.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4077.0	39.8	0.9	40.7	54.0	-13.3	Peak	Horizontal
	4969.5	38.0	3.7	41.7	54.0	-12.3	Peak	Horizontal
*	6414.5	35.5	8.1	43.6	86.1	-42.5	Peak	Horizontal
*	8684.0	33.0	13.6	46.6	86.1	-39.5	Peak	Horizontal
	4034.5	40.6	0.7	41.3	54.0	-12.7	Peak	Vertical
	4816.5	38.0	3.3	41.3	54.0	-12.7	Peak	Vertical
*	6108.5	37.9	6.6	44.5	86.1	-41.6	Peak	Vertical
*	10129.0	32.3	16.3	48.6	86.1	-37.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.1dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4060.0	40.1	0.8	40.9	54.0	-13.1	Peak	Horizontal
	4961.0	38.6	3.7	42.3	54.0	-11.7	Peak	Horizontal
*	6465.5	35.0	8.3	43.3	87.5	-44.2	Peak	Horizontal
*	8769.0	33.2	13.8	47.0	87.5	-40.5	Peak	Horizontal
	3932.5	39.7	0.4	40.1	54.0	-13.9	Peak	Vertical
	3932.5	39.7	0.4	40.1	54.0	-13.9	Peak	Vertical
*	6576.0	37.1	8.9	46.0	87.5	-41.5	Peak	Vertical
*	9814.5	33.5	15.3	48.8	87.5	-38.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4026.0	40.1	0.7	40.8	54.0	-13.2	Peak	Horizontal
	4893.0	38.6	3.5	42.1	54.0	-11.9	Peak	Horizontal
*	6295.5	36.5	7.5	44.0	78.8	-34.8	Peak	Horizontal
*	10078.0	32.6	16.1	48.7	78.8	-30.1	Peak	Horizontal
	4196.0	39.4	1.4	40.8	54.0	-13.2	Peak	Vertical
	5012.0	39.3	3.8	43.1	54.0	-10.9	Peak	Vertical
*	6593.0	36.2	9.0	45.2	78.8	-33.6	Peak	Vertical
*	10069.5	32.6	16.1	48.7	78.8	-30.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4017.5	39.5	0.7	40.2	54.0	-13.8	Peak	Horizontal
	4935.5	38.9	3.6	42.5	54.0	-11.5	Peak	Horizontal
*	6491.0	36.9	8.5	45.4	85.6	-40.2	Peak	Horizontal
*	9959.0	32.8	15.7	48.5	85.6	-37.1	Peak	Horizontal
	4034.5	38.9	0.7	39.6	54.0	-14.4	Peak	Vertical
	4799.5	39.4	3.3	42.7	54.0	-11.3	Peak	Vertical
*	6593.0	36.3	9.0	45.3	85.6	-40.3	Peak	Vertical
*	8684.0	33.0	13.6	46.6	85.6	-39.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/06/21
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4094.0	39.9	1.0	40.9	54.0	-13.1	Peak	Horizontal
	4995.0	38.7	3.7	42.4	54.0	-11.6	Peak	Horizontal
*	6703.5	34.1	9.6	43.7	87.1	-43.4	Peak	Horizontal
*	8709.5	32.8	13.7	46.5	87.1	-40.6	Peak	Horizontal
	4264.0	38.8	1.7	40.5	54.0	-13.5	Peak	Vertical
	4859.0	38.3	3.4	41.7	54.0	-12.3	Peak	Vertical
*	6253.0	36.3	7.3	43.6	87.1	-43.5	Peak	Vertical
*	8726.5	32.8	13.7	46.5	87.1	-40.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.1dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	40.0	0.0	40.0	54.0	-14.0	Peak	Horizontal
	4876.0	38.7	3.5	42.2	54.0	-11.8	Peak	Horizontal
*	6797.0	36.3	10.2	46.5	82.8	-36.3	Peak	Horizontal
*	8692.5	33.7	13.6	47.3	82.8	-35.5	Peak	Horizontal
	4026.0	39.6	0.7	40.3	54.0	-13.7	Peak	Vertical
	4816.5	38.5	3.3	41.8	54.0	-12.2	Peak	Vertical
*	6754.5	35.3	9.9	45.2	82.8	-37.6	Peak	Vertical
*	10112.0	32.6	16.3	48.9	82.8	-33.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4017.5	40.7	0.7	41.4	54.0	-12.6	Peak	Horizontal
	4910.0	38.3	3.6	41.9	54.0	-12.1	Peak	Horizontal
*	6729.0	35.9	9.8	45.7	81.2	-35.5	Peak	Horizontal
*	8752.0	32.7	13.8	46.5	81.2	-34.7	Peak	Horizontal
	4034.5	39.4	0.7	40.1	54.0	-13.9	Peak	Vertical
	5054.5	38.9	3.8	42.7	54.0	-11.3	Peak	Vertical
*	6448.5	37.1	8.2	45.3	81.2	-35.9	Peak	Vertical
*	10078.0	32.7	16.1	48.8	81.2	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4051.5	39.5	0.8	40.3	54.0	-13.7	Peak	Horizontal
	4782.5	39.1	3.3	42.4	54.0	-11.6	Peak	Horizontal
*	6644.0	35.2	9.3	44.5	81.6	-37.1	Peak	Horizontal
*	10001.5	32.9	15.8	48.7	81.6	-32.9	Peak	Horizontal
	4017.5	39.6	0.7	40.3	54.0	-13.7	Peak	Vertical
	4952.5	39.0	3.6	42.6	54.0	-11.4	Peak	Vertical
*	6380.5	36.4	7.9	44.3	81.6	-37.3	Peak	Vertical
*	9925.0	33.2	15.6	48.8	81.6	-32.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3915.5	40.0	0.3	40.3	54.0	-13.7	Peak	Horizontal
	4816.5	38.5	3.3	41.8	54.0	-12.2	Peak	Horizontal
*	6414.5	36.8	8.1	44.9	80.1	-35.2	Peak	Horizontal
*	9874.0	33.3	15.5	48.8	80.1	-31.3	Peak	Horizontal
	3915.5	40.5	0.3	40.8	54.0	-13.2	Peak	Vertical
	4859.0	37.9	3.4	41.3	54.0	-12.7	Peak	Vertical
*	6797.0	35.3	10.2	45.5	80.1	-34.6	Peak	Vertical
*	8735.0	33.1	13.7	46.8	80.1	-33.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.1dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4153.5	39.0	1.2	40.2	54.0	-13.8	Peak	Horizontal
	5046.0	38.3	3.8	42.1	54.0	-11.9	Peak	Horizontal
*	6610.0	36.8	9.1	45.9	86.5	-40.6	Peak	Horizontal
*	8675.5	34.9	13.6	48.5	86.5	-38.0	Peak	Horizontal
	3915.5	40.2	0.3	40.5	54.0	-13.5	Peak	Vertical
	4918.5	38.8	3.6	42.4	54.0	-11.6	Peak	Vertical
*	6287.0	37.0	7.5	44.5	86.5	-42.0	Peak	Vertical
*	8777.5	34.5	13.8	48.3	86.5	-38.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4162.0	38.3	1.3	39.6	54.0	-14.4	Peak	Horizontal
	4850.5	39.7	3.4	43.1	54.0	-10.9	Peak	Horizontal
*	6720.5	35.7	9.7	45.4	88.9	-43.5	Peak	Horizontal
*	8769.0	33.6	13.8	47.4	88.9	-41.5	Peak	Horizontal
	4068.5	39.8	0.9	40.7	54.0	-13.3	Peak	Vertical
	4893.0	38.7	3.5	42.2	54.0	-11.8	Peak	Vertical
*	6270.0	35.8	7.4	43.2	88.9	-45.7	Peak	Vertical
*	8743.5	33.2	13.8	47.0	88.9	-41.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4060.0	40.0	0.8	40.8	54.0	-13.2	Peak	Horizontal
	5003.5	38.9	3.7	42.6	54.0	-11.4	Peak	Horizontal
*	6499.5	36.4	8.5	44.9	84.8	-39.9	Peak	Horizontal
*	9848.5	33.4	15.4	48.8	84.8	-36.0	Peak	Horizontal
	4034.5	39.5	0.7	40.2	54.0	-13.8	Peak	Vertical
	4884.5	38.1	3.5	41.6	54.0	-12.4	Peak	Vertical
*	6465.5	34.3	8.3	42.6	84.8	-42.2	Peak	Vertical
*	8803.0	32.9	13.9	46.8	84.8	-38.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4085.5	39.4	0.9	40.3	54.0	-13.7	Peak	Horizontal
	4833.5	38.1	3.4	41.5	54.0	-12.5	Peak	Horizontal
*	6533.5	36.2	8.7	44.9	83.1	-38.2	Peak	Horizontal
*	9806.0	33.2	15.3	48.5	83.1	-34.6	Peak	Horizontal
	3975.0	40.4	0.5	40.9	54.0	-13.1	Peak	Vertical
	4876.0	38.7	3.5	42.2	54.0	-11.8	Peak	Vertical
*	6159.5	35.4	6.9	42.3	83.1	-40.8	Peak	Vertical
*	8786	32.6	13.9	46.5	83.1	-36.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4017.5	40.2	0.7	40.9	54.0	-13.1	Peak	Horizontal
	5088.5	39.3	3.8	43.1	54.0	-10.9	Peak	Horizontal
*	6440.0	35.2	8.2	43.4	83.3	-39.9	Peak	Horizontal
*	10078.0	32.9	16.1	49.0	83.3	-34.3	Peak	Horizontal
	4102.5	38.9	1.0	39.9	54.0	-14.1	Peak	Vertical
	4782.5	38.3	3.3	41.6	54.0	-12.4	Peak	Vertical
*	6525.0	36.2	8.6	44.8	83.3	-38.5	Peak	Vertical
*	10086.5	32.7	16.1	48.8	83.3	-34.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/03
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4068.5	40.0	0.9	40.9	54.0	-13.1	Peak	Horizontal
	4986.5	38.2	3.7	41.9	54.0	-12.1	Peak	Horizontal
*	6270.0	35.5	7.4	42.9	82.3	-39.4	Peak	Horizontal
*	10069.5	32.2	16.1	48.3	82.3	-34.0	Peak	Horizontal
	4043.0	40.1	0.8	40.9	54.0	-13.1	Peak	Vertical
	4910.0	38.5	3.6	42.1	54.0	-11.9	Peak	Vertical
*	6780.0	34.8	10.1	44.9	82.3	-37.4	Peak	Vertical
*	9840.0	33.2	15.4	48.6	82.3	-33.7	Peak	Vertical

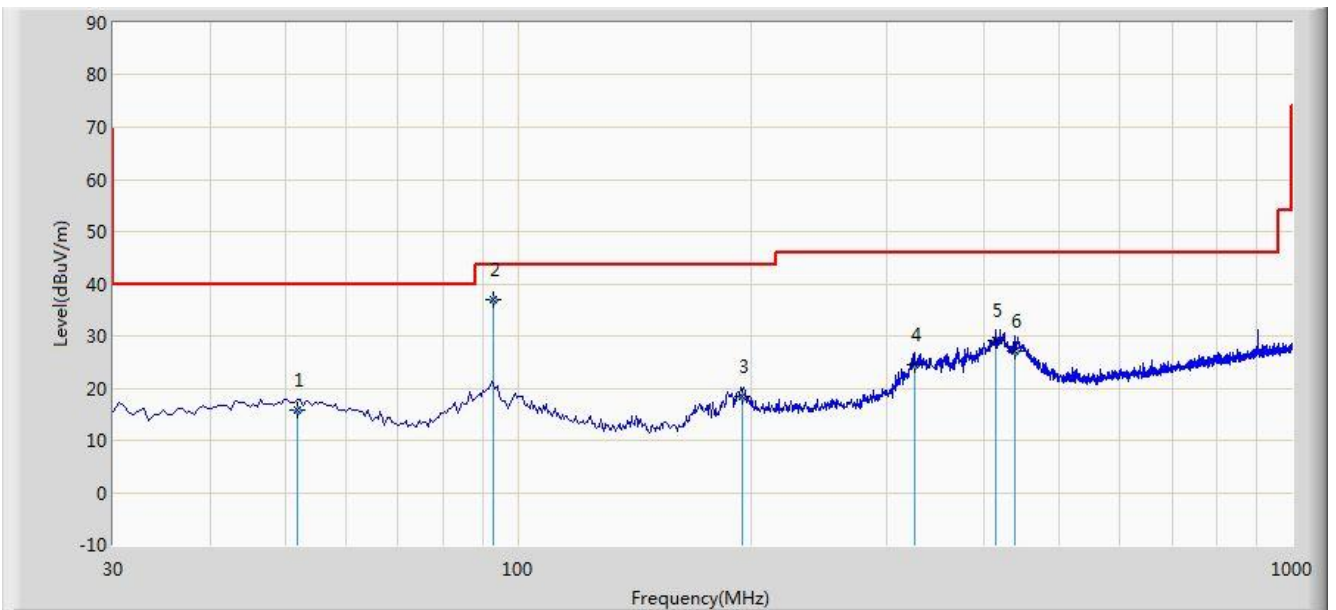
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/07/13 - 12:36
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Horizontal
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



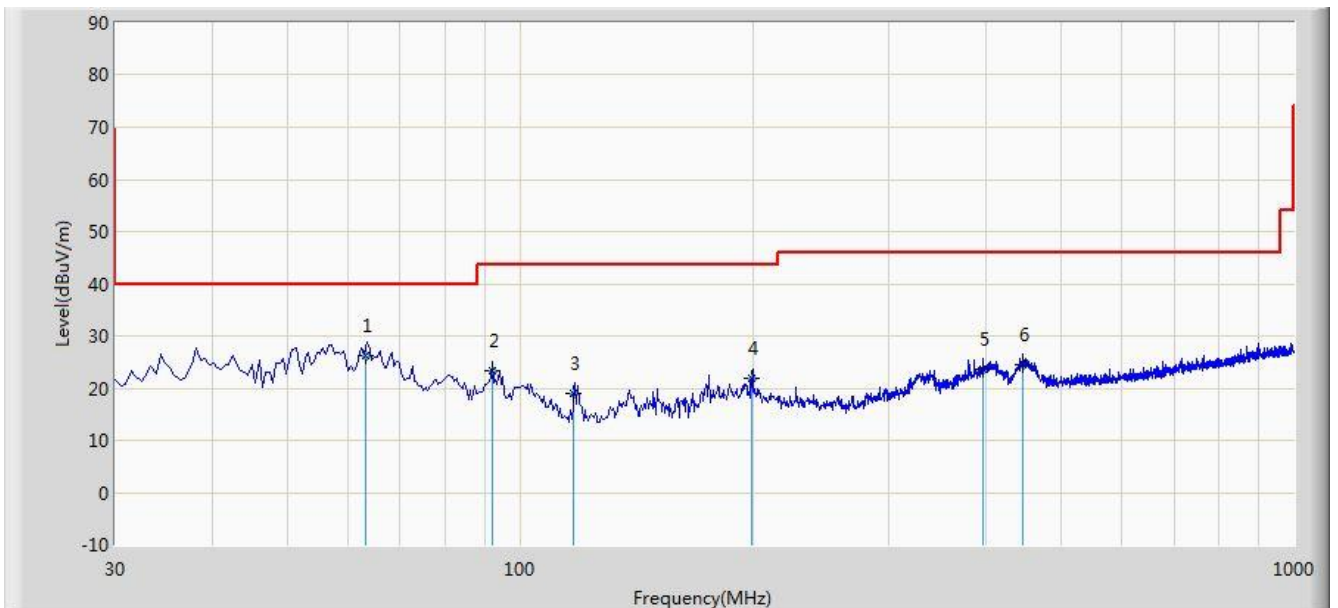
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	51.890	15.858	-5.659	-24.142	40.000	21.517	QP
2			92.970	19.330	1.698	-24.170	43.500	17.632	QP
3			195.280	18.280	-0.617	-25.220	43.500	18.897	QP
4			325.370	24.534	2.155	-21.466	46.000	22.380	QP
5			413.580	29.112	5.009	-16.888	46.000	24.104	QP
6			439.580	27.195	2.815	-18.805	46.000	24.380	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/07/13 - 12:37
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Vertical
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	63.180	26.129	7.429	-13.871	40.000	18.700	QP
2			92.087	23.220	5.778	-20.280	43.500	17.441	QP
3			117.490	19.009	0.745	-24.491	43.500	18.263	QP
4			199.480	21.821	2.699	-21.679	43.500	19.123	QP
5			396.870	23.517	-0.404	-22.483	46.000	23.921	QP
6			446.970	24.521	0.063	-21.479	46.000	24.458	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

For APIN0504 - Omni Antenna (AP-ANT-40):

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3898.5	39.4	0.3	39.7	54.0	-14.3	Peak	Horizontal
	4995.0	37.5	3.7	41.2	54.0	-12.8	Peak	Horizontal
*	6440.0	35.4	8.2	43.6	81.2	-37.6	Peak	Horizontal
*	8692.5	35.2	13.6	48.8	81.2	-32.4	Peak	Horizontal
	3839.0	41.2	0.1	41.3	54.0	-12.7	Peak	Vertical
	5054.5	38.6	3.8	42.4	54.0	-11.6	Peak	Vertical
*	5683.5	36.6	4.9	41.5	81.2	-39.7	Peak	Vertical
*	7009.5	33.7	11.3	45.0	81.2	-36.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3864.5	40.7	0.2	40.9	54.0	-13.1	Peak	Horizontal
	4791.0	37.5	3.3	40.8	54.0	-13.2	Peak	Horizontal
*	5887.5	37.2	5.7	42.9	80.4	-37.5	Peak	Horizontal
*	7111.5	35.5	11.6	47.1	80.4	-33.3	Peak	Horizontal
	3779.5	39.6	0.0	39.6	54.0	-14.4	Peak	Vertical
	4672.0	37.1	3.0	40.1	54.0	-13.9	Peak	Vertical
*	5811.0	36.3	5.4	41.7	80.4	-38.7	Peak	Vertical
*	6950.0	35.3	11.0	46.3	80.4	-34.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.4dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3720.0	40.7	-0.2	40.5	54.0	-13.5	Peak	Horizontal
	4969.5	37.5	3.7	41.2	54.0	-12.8	Peak	Horizontal
*	6168.0	35.4	6.9	42.3	78.9	-36.6	Peak	Horizontal
*	6848.0	33.5	10.4	43.9	78.9	-35.0	Peak	Horizontal
	3728.5	41.0	-0.2	40.8	54.0	-13.2	Peak	Vertical
	4629.5	38.3	2.9	41.2	54.0	-12.8	Peak	Vertical
*	5938.5	37.9	5.9	43.8	78.9	-35.1	Peak	Vertical
*	7009.5	34.3	11.3	45.6	78.9	-33.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3822.0	39.8	0.1	39.9	54.0	-14.1	Peak	Horizontal
	4731.5	37.1	3.2	40.3	54.0	-13.7	Peak	Horizontal
*	5683.5	37.6	4.9	42.5	82.7	-40.2	Peak	Horizontal
*	6950.0	33.0	11.0	44.0	82.7	-38.7	Peak	Horizontal
	3839.0	39.8	0.1	39.9	54.0	-14.1	Peak	Vertical
	4578.5	36.4	2.8	39.2	54.0	-14.8	Peak	Vertical
*	5938.5	35.5	5.9	41.4	82.7	-41.3	Peak	Vertical
*	6958.5	33.0	11.1	44.1	82.7	-38.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.7dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	40.9	0.0	40.9	54.0	-13.1	Peak	Horizontal
	4680.5	36.3	3.0	39.3	54.0	-14.7	Peak	Horizontal
*	5615.5	36.2	4.6	40.8	81.9	-41.1	Peak	Horizontal
*	6780.0	33.2	10.1	43.3	81.9	-38.6	Peak	Horizontal
	3813.5	40.0	0.1	40.1	54.0	-13.9	Peak	Vertical
	4731.5	37.1	3.2	40.3	54.0	-13.7	Peak	Vertical
*	5717.5	37.6	5.0	42.6	81.9	-39.3	Peak	Vertical
*	6984.0	34.1	11.2	45.3	81.9	-36.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9BμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3813.5	40.4	0.1	40.5	54.0	-13.5	Peak	Horizontal
	4578.5	37.9	2.8	40.7	54.0	-13.3	Peak	Horizontal
*	5564.5	36.6	4.4	41.0	80.6	-39.6	Peak	Horizontal
*	6780.0	33.2	10.1	43.3	80.6	-37.3	Peak	Horizontal
	3839.0	39.8	0.1	39.9	54.0	-14.1	Peak	Vertical
	4706.0	36.3	3.1	39.4	54.0	-14.6	Peak	Vertical
*	5913.0	35.7	5.8	41.5	80.6	-39.1	Peak	Vertical
*	6890.5	33.1	10.7	43.8	80.6	-36.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	38.4	0.0	38.4	54.0	-15.6	Peak	Horizontal
	4689.0	36.2	3.1	39.3	54.0	-14.7	Peak	Horizontal
*	5853.5	35.7	5.5	41.2	82.3	-41.1	Peak	Horizontal
*	7009.5	34.5	11.3	45.8	82.3	-36.5	Peak	Horizontal
	3711.5	40.1	-0.2	39.9	54.0	-14.1	Peak	Vertical
	4604.0	36.3	2.9	39.2	54.0	-14.8	Peak	Vertical
*	5692.0	36.4	4.9	41.3	82.3	-41.0	Peak	Vertical
*	6992.5	32.4	11.3	43.7	82.3	-38.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4017.5	39.7	0.7	40.4	54.0	-13.6	Peak	Horizontal
	4714.5	36.4	3.1	39.5	54.0	-14.5	Peak	Horizontal
*	5632.5	36.0	4.7	40.7	81.3	-40.6	Peak	Horizontal
*	6763.0	33.0	10.0	43.0	81.3	-38.3	Peak	Horizontal
	3864.5	39.1	0.2	39.3	54.0	-14.7	Peak	Vertical
	4689.0	36.7	3.1	39.8	54.0	-14.2	Peak	Vertical
*	5658.0	35.7	4.8	40.5	81.3	-40.8	Peak	Vertical
*	6669.5	33.4	9.4	42.8	81.3	-38.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3779.5	39.4	0.0	39.4	54.0	-14.6	Peak	Horizontal
	4697.5	35.9	3.1	39.0	54.0	-15.0	Peak	Horizontal
*	5683.5	35.8	4.9	40.7	80.3	-39.6	Peak	Horizontal
*	6958.5	32.9	11.1	44.0	80.3	-36.3	Peak	Horizontal
	3728.5	39.9	-0.2	39.7	54.0	-14.3	Peak	Vertical
	4655.0	38.9	3.0	41.9	54.0	-12.1	Peak	Vertical
*	5607.0	35.8	4.6	40.4	80.3	-39.9	Peak	Vertical
*	6941.5	33.0	11.0	44.0	80.3	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3805.0	39.6	0.0	39.6	54.0	-14.4	Peak	Horizontal
	4663.5	36.4	3.0	39.4	54.0	-14.6	Peak	Horizontal
*	5743.0	35.9	5.1	41.0	78.7	-37.7	Peak	Horizontal
*	6831.0	33.5	10.4	43.9	78.7	-34.8	Peak	Horizontal
	3720.0	40.1	-0.2	39.9	54.0	-14.1	Peak	Vertical
	4646.5	35.8	3.0	38.8	54.0	-15.2	Peak	Vertical
*	5607.0	36.3	4.6	40.9	78.7	-37.8	Peak	Vertical
*	6984.0	33.2	11.2	44.4	78.7	-34.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.7dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3788.0	40.3	0.0	40.3	54.0	-13.7	Peak	Horizontal
	4689.0	36.3	3.1	39.4	54.0	-14.6	Peak	Horizontal
*	5811.0	36.0	5.4	41.4	76.0	-34.6	Peak	Horizontal
*	6814.0	32.8	10.3	43.1	76.0	-32.9	Peak	Horizontal
	3779.5	40.2	0.0	40.2	54.0	-13.8	Peak	Vertical
	4680.5	35.9	3.0	38.9	54.0	-15.1	Peak	Vertical
*	5862.0	35.4	5.6	41.0	76.0	-35.0	Peak	Vertical
*	6865.0	33.2	10.5	43.7	76.0	-32.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (106.0dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3898.5	37.8	0.3	38.1	54.0	-15.9	Peak	Horizontal
	4731.5	36.4	3.2	39.6	54.0	-14.4	Peak	Horizontal
*	5760.0	37.4	5.2	42.6	76.7	-34.1	Peak	Horizontal
*	7001.0	33.0	11.3	44.3	76.7	-32.4	Peak	Horizontal
	3762.5	39.3	-0.1	39.2	54.0	-14.8	Peak	Vertical
	4740.0	36.3	3.2	39.5	54.0	-14.5	Peak	Vertical
*	5658.0	35.8	4.8	40.6	76.7	-36.1	Peak	Vertical
*	6873.5	33.4	10.6	44.0	76.7	-32.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (106.7dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3983.5	39.6	0.5	40.1	54.0	-13.9	Peak	Horizontal
	4867.5	36.7	3.5	40.2	54.0	-13.8	Peak	Horizontal
*	5785.5	39.0	5.3	44.3	82.7	-38.4	Peak	Horizontal
*	6950.0	33.1	11.0	44.1	82.7	-38.6	Peak	Horizontal
	3915.5	40.2	0.3	40.5	54.0	-13.5	Peak	Vertical
	4961.0	37.0	3.7	40.7	54.0	-13.3	Peak	Vertical
*	5624.0	37.0	4.6	41.6	82.7	-41.1	Peak	Vertical
*	6797.0	33.3	10.2	43.5	82.7	-39.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.7dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3805.0	39.9	0.0	39.9	54.0	-14.1	Peak	Horizontal
	4859.0	37.3	3.4	40.7	54.0	-13.3	Peak	Horizontal
*	5981.0	35.5	6.0	41.5	81.6	-40.1	Peak	Horizontal
*	6890.5	33.1	10.7	43.8	81.6	-37.8	Peak	Horizontal
	3728.5	39.3	-0.2	39.1	54.0	-14.9	Peak	Vertical
	4689.0	36.4	3.1	39.5	54.0	-14.5	Peak	Vertical
*	5785.5	36.5	5.3	41.8	81.6	-39.8	Peak	Vertical
*	6992.5	32.8	11.3	44.1	81.6	-37.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3771.0	40.0	-0.1	39.9	54.0	-14.1	Peak	Horizontal
	4748.5	37.4	3.2	40.6	54.0	-13.4	Peak	Horizontal
*	5632.5	37.0	4.7	41.7	81.0	-39.3	Peak	Horizontal
*	6975.5	33.0	11.2	44.2	81.0	-36.8	Peak	Horizontal
	3788.0	39.8	0.0	39.8	54.0	-14.2	Peak	Vertical
	4689.0	36.2	3.1	39.3	54.0	-14.7	Peak	Vertical
*	5811.0	35.5	5.4	40.9	81.0	-40.1	Peak	Vertical
*	6865.0	33.3	10.5	43.8	81.0	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.0dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3711.5	38.2	-0.2	38.0	54.0	-16.0	Peak	Horizontal
	4663.5	36.2	3.0	39.2	54.0	-14.8	Peak	Horizontal
*	5658.0	36.0	4.8	40.8	80.2	-39.4	Peak	Horizontal
*	7009.5	32.8	11.3	44.1	80.2	-36.1	Peak	Horizontal
	3813.5	39.8	0.1	39.9	54.0	-14.1	Peak	Vertical
	4893.0	37.4	3.5	40.9	54.0	-13.1	Peak	Vertical
*	5819.5	35.9	5.4	41.3	80.2	-38.9	Peak	Vertical
*	6950.0	33.0	11.0	44.0	80.2	-36.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3762.5	38.8	-0.1	38.7	54.0	-15.3	Peak	Horizontal
	4731.5	36.8	3.2	40.0	54.0	-14.0	Peak	Horizontal
*	5734.5	35.8	5.1	40.9	78.8	-37.9	Peak	Horizontal
*	6737.5	33.9	9.8	43.7	78.8	-35.1	Peak	Horizontal
	3796.5	39.3	0.0	39.3	54.0	-14.7	Peak	Vertical
	4697.5	36.6	3.1	39.7	54.0	-14.3	Peak	Vertical
*	5709.0	36.0	5.0	41.0	78.8	-37.8	Peak	Vertical
*	6950.0	33.4	11.0	44.4	78.8	-34.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.8dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/29
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3771.0	40.2	-0.1	40.1	54.0	-13.9	Peak	Horizontal
	4791.0	36.6	3.3	39.9	54.0	-14.1	Peak	Horizontal
*	5734.5	35.9	5.1	41.0	79.6	-38.6	Peak	Horizontal
*	6992.5	33.0	11.3	44.3	79.6	-35.3	Peak	Horizontal
	3890.0	39.6	0.3	39.9	54.0	-14.1	Peak	Vertical
	4672.0	36.4	3.0	39.4	54.0	-14.6	Peak	Vertical
*	5607.0	35.6	4.6	40.2	79.6	-39.4	Peak	Vertical
*	6865.0	32.9	10.5	43.4	79.6	-36.2	Peak	Vertical

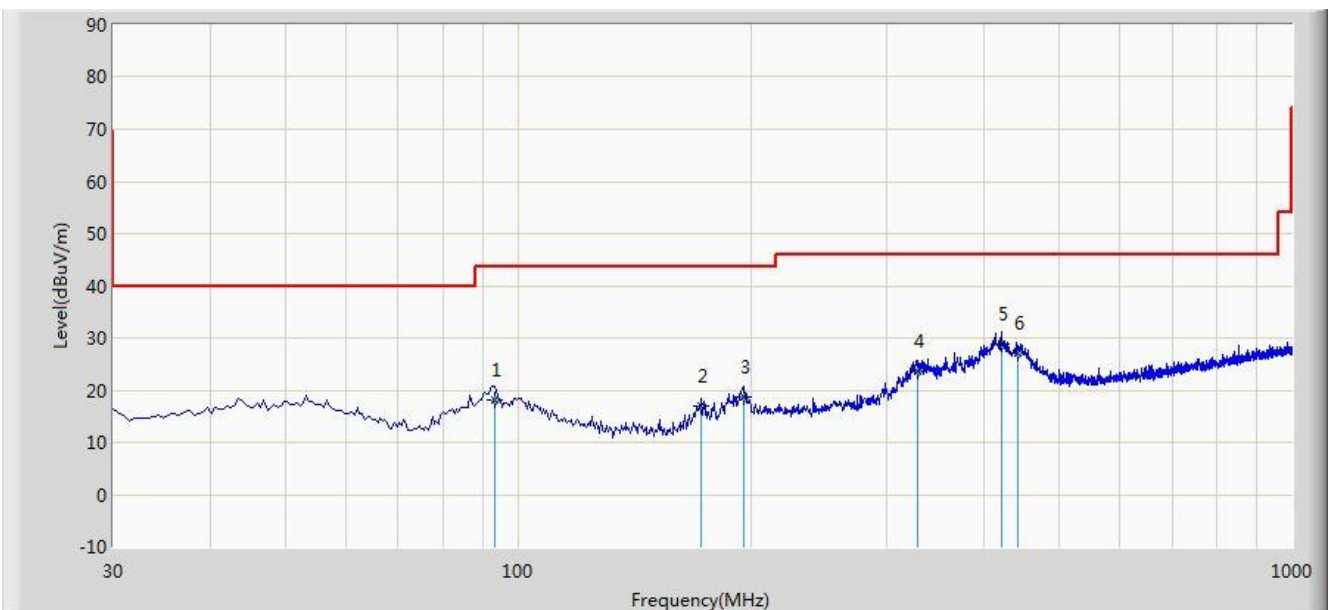
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/07/13 - 12:37
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Horizontal
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



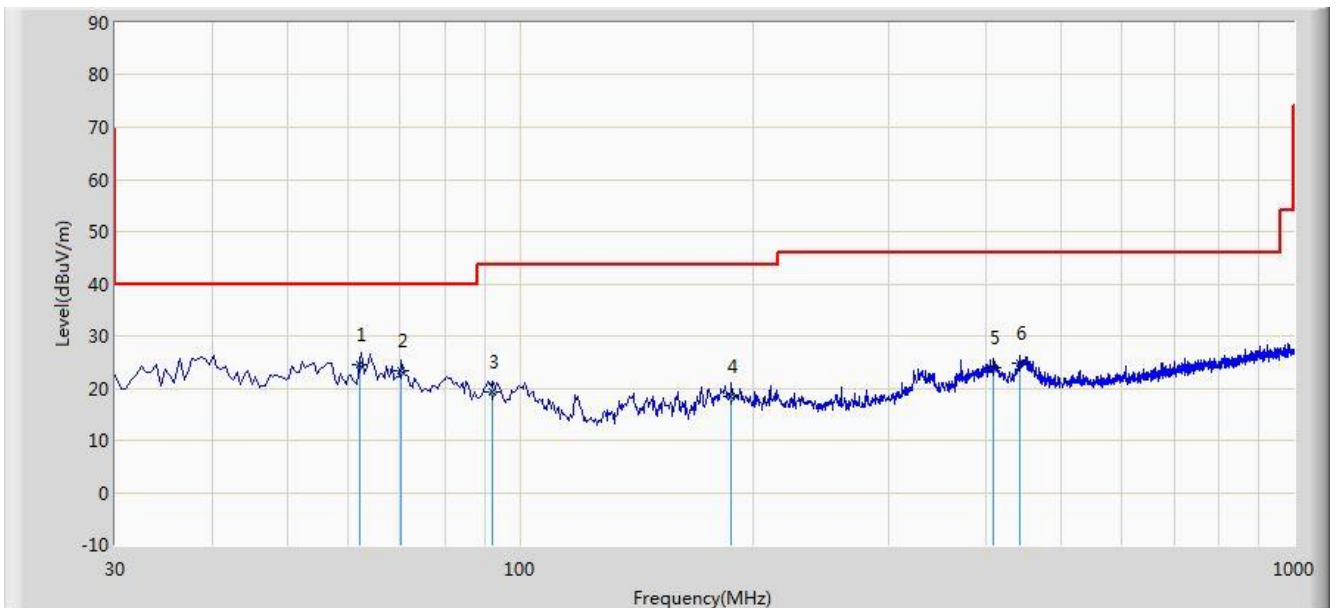
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	93.280	18.117	0.418	-25.383	43.500	17.699	QP
2			172.548	17.005	0.420	-26.495	43.500	16.585	QP
3			195.790	18.719	-0.205	-24.781	43.500	18.924	QP
4			328.290	23.528	1.037	-22.472	46.000	22.491	QP
5			421.890	28.786	4.594	-17.214	46.000	24.192	QP
6			441.970	27.112	2.707	-18.888	46.000	24.405	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/07/13 - 12:39
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Vertical
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	62.150	24.441	5.283	-15.559	40.000	19.158	QP
2			70.289	23.213	7.561	-16.787	40.000	15.652	QP
3			92.158	19.338	1.881	-24.162	43.500	17.457	QP
4			187.480	18.492	0.289	-25.008	43.500	18.203	QP
5			409.480	24.056	-0.004	-21.944	46.000	24.060	QP
6			442.105	24.813	0.407	-21.187	46.000	24.406	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

For APIN0504 - Directional Antenna (AP-ANT-28):

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4808.0	39.5	3.3	42.8	54.0	-11.2	Peak	Horizontal
*	6253.0	36.9	7.3	44.2	87.3	-43.1	Peak	Horizontal
*	8616.0	35.0	13.4	48.4	87.3	-38.9	Peak	Horizontal
	11871.5	31.1	18.9	50.0	54.0	-4.0	Peak	Horizontal
	4799.5	38.9	3.3	42.2	54.0	-11.8	Peak	Vertical
*	6355.0	35.2	7.8	43.0	87.3	-44.3	Peak	Vertical
*	9721.0	34.1	15.1	49.2	87.3	-38.1	Peak	Vertical
	12424.0	31.1	18.4	49.5	54.0	-4.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4799.5	37.8	3.3	41.1	54.0	-12.9	Peak	Horizontal
*	6321.0	36.8	7.6	44.4	87.3	-42.9	Peak	Horizontal
*	9780.5	34.6	15.3	49.9	87.3	87.3	Peak	Horizontal
	11769.5	30.8	19.0	49.8	54.0	87.3	Peak	Horizontal
	4893.0	39.0	3.5	42.5	54.0	-11.5	Peak	Vertical
*	6066.0	36.6	6.4	43.0	87.3	-44.3	Peak	Vertical
*	8947.5	31.7	14.3	46.0	87.3	-41.3	Peak	Vertical
	11174.5	31.9	19.1	51.0	54.0	-3.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4833.5	39.1	3.4	42.5	54.0	-11.5	Peak	Horizontal
*	6363.5	36.9	7.8	44.7	87.2	-42.5	Peak	Horizontal
*	8684.0	33.4	13.6	47.0	87.2	-40.2	Peak	Horizontal
	11990.5	30.9	18.8	49.7	54.0	-4.3	Peak	Horizontal
	4816.5	38.8	3.3	42.1	54.0	-11.9	Peak	Vertical
*	6329.5	37.2	7.7	44.9	87.2	-42.3	Peak	Vertical
*	8743.5	33.2	13.8	47.0	87.2	-40.2	Peak	Vertical
	11871.5	30.8	18.9	49.7	54.0	-4.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	5063.0	38.4	3.8	42.2	54.0	-11.8	Peak	Horizontal
*	6584.5	36.8	9.0	45.8	85.9	-40.1	Peak	Horizontal
*	8692.5	32.9	13.6	46.5	85.9	-39.4	Peak	Horizontal
	11829.0	30.8	19.0	49.8	54.0	-4.2	Peak	Horizontal
	4910.0	38.1	3.6	41.7	54.0	-12.3	Peak	Vertical
*	6975.5	34.5	11.2	45.7	85.9	-40.2	Peak	Vertical
*	10078.0	31.9	16.1	48.0	85.9	-37.9	Peak	Vertical
	11990.5	29.7	18.8	48.5	54.0	-5.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4731.5	37.6	3.2	40.8	54.0	-13.2	Peak	Horizontal
*	6134.0	36.5	6.7	43.2	86.9	-43.7	Peak	Horizontal
*	8624.5	33.8	13.5	47.3	86.9	-39.6	Peak	Horizontal
	11897.0	30.2	18.9	49.1	54.0	-4.9	Peak	Horizontal
	4765.5	37.8	3.2	41.0	54.0	-13.0	Peak	Vertical
*	6584.5	35.9	9.0	44.9	86.9	-42.0	Peak	Vertical
*	8794.5	32.2	13.9	46.1	86.9	-40.8	Peak	Vertical
	11769.5	30.7	19.0	49.7	54.0	-4.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.9BμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11g - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4774.0	37.3	3.3	40.6	54.0	-13.4	Peak	Horizontal
*	6525.0	36.4	8.6	45.0	84.5	-39.5	Peak	Horizontal
*	8692.5	33.5	13.6	47.1	84.5	-37.4	Peak	Horizontal
	11812.0	30.4	19.0	49.4	54.0	-4.6	Peak	Horizontal
	4808.0	39.0	3.3	42.3	54.0	-11.7	Peak	Vertical
*	6465.5	36.3	8.3	44.6	84.5	-39.9	Peak	Vertical
*	8769.0	32.0	13.8	45.8	84.5	-38.7	Peak	Vertical
	11888.5	29.9	18.9	48.8	54.0	-5.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4816.5	39.2	3.3	42.5	54.0	-11.5	Peak	Horizontal
*	6304.0	35.0	7.6	42.6	84.6	-42.0	Peak	Horizontal
*	8675.5	32.7	13.6	46.3	84.6	-38.3	Peak	Horizontal
	11735.5	30.3	19.0	49.3	54.0	-4.7	Peak	Horizontal
	4859.0	38.4	3.4	41.8	54.0	-12.2	Peak	Vertical
*	6261.5	36.7	7.3	44.0	84.6	-40.6	Peak	Vertical
*	8879.5	32.8	14.1	46.9	84.6	-37.7	Peak	Vertical
	11446.5	30.8	19.2	50.0	54.0	-4.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4774.0	38.9	3.3	42.2	54.0	-11.8	Peak	Horizontal
*	6567.5	37.0	8.9	45.9	85.9	-40.0	Peak	Horizontal
*	8650.0	34.1	13.5	47.6	85.9	-38.3	Peak	Horizontal
	11846.0	30.5	19.0	49.5	54.0	-4.5	Peak	Horizontal
	5046.0	38.8	3.8	42.6	54.0	-11.4	Peak	Vertical
*	6542.0	36.3	8.7	45.0	85.9	-40.9	Peak	Vertical
*	8913.5	32.1	14.2	46.3	85.9	-39.6	Peak	Vertical
	11965.0	31.6	18.9	50.5	54.0	-3.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4944.0	39.5	3.6	43.1	54.0	-10.9	Peak	Horizontal
*	6533.5	36.6	8.7	45.3	83.5	-38.2	Peak	Horizontal
*	8633.0	34.0	13.5	47.5	83.5	-36.0	Peak	Horizontal
	11820.5	30.7	19.0	49.7	54.0	-4.3	Peak	Horizontal
	4799.5	39.0	3.3	42.3	54.0	-11.7	Peak	Vertical
*	6737.5	34.7	9.8	44.5	83.5	-39.0	Peak	Vertical
*	8769.0	32.2	13.8	46.0	83.5	-37.5	Peak	Vertical
	11837.5	30.4	19.0	49.4	54.0	-4.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4808.0	38.8	3.3	42.1	54.0	-11.9	Peak	Horizontal
*	6533.5	36.2	8.7	44.9	81.9	-37.0	Peak	Horizontal
*	8726.5	33.9	13.7	47.6	81.9	-34.3	Peak	Horizontal
	11999.0	30.3	18.8	49.1	54.0	-4.9	Peak	Horizontal
	4808.0	39.1	3.3	42.4	54.0	-11.6	Peak	Vertical
*	6329.5	36.3	7.7	44.0	81.9	-37.9	Peak	Vertical
*	8760.5	32.0	13.8	45.8	81.9	-36.1	Peak	Vertical
	11820.5	29.9	19.0	48.9	54.0	-5.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4799.5	38.7	3.3	42.0	54.0	-12.0	Peak	Horizontal
*	6397.5	36.7	8.0	44.7	82.4	-37.7	Peak	Horizontal
*	8735.0	34.3	13.7	48.0	82.4	-34.4	Peak	Horizontal
	11837.5	30.6	19.0	49.6	54.0	-4.4	Peak	Horizontal
	4833.5	37.7	3.4	41.1	54.0	-12.9	Peak	Vertical
*	6499.5	36.3	8.5	44.8	82.4	-37.6	Peak	Vertical
*	9729.5	32.9	15.1	48.0	82.4	-34.4	Peak	Vertical
	12024.5	30.6	18.8	49.4	54.0	-4.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.4dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	5097.0	39.4	3.8	43.2	54.0	-10.8	Peak	Horizontal
*	6593.0	36.2	9.0	45.2	80.5	-35.3	Peak	Horizontal
*	8743.5	33.2	13.8	47.0	80.5	-33.5	Peak	Horizontal
	11897.0	31.3	18.9	50.2	54.0	-3.8	Peak	Horizontal
	4799.5	37.9	3.3	41.2	54.0	-12.8	Peak	Vertical
*	6822.5	33.6	10.3	43.9	80.5	-36.6	Peak	Vertical
*	8658.5	32.5	13.5	46.0	80.5	-34.5	Peak	Vertical
	11803.5	30.1	19.0	49.1	54.0	-4.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4808.0	38.5	3.3	41.8	54.0	-12.2	Peak	Horizontal
*	6584.5	36.3	9.0	45.3	87.2	-41.9	Peak	Horizontal
*	10256.5	31.3	16.9	48.2	87.2	-39.0	Peak	Horizontal
	11999.0	29.9	18.8	48.7	54.0	-5.3	Peak	Horizontal
	4961.0	38.6	3.7	42.3	54.0	-11.7	Peak	Vertical
*	6457.0	35.8	8.3	44.1	87.2	-43.1	Peak	Vertical
*	8956.0	32.1	14.3	46.4	87.2	-40.8	Peak	Vertical
	10996.0	31.3	19.1	50.4	54.0	-3.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4859.0	37.5	3.4	40.9	54.0	-13.1	Peak	Horizontal
*	5972.5	37.7	6.0	43.7	85.2	-41.5	Peak	Horizontal
*	8667.0	34.2	13.6	47.8	85.2	-37.4	Peak	Horizontal
	11701.5	32.0	19.1	51.1	54.0	-2.9	Peak	Horizontal
	5012.0	39.3	3.8	43.1	54.0	-10.9	Peak	Vertical
*	6610.0	36.7	9.1	45.8	85.2	-39.4	Peak	Vertical
*	9806.0	32.4	15.3	47.7	85.2	-37.5	Peak	Vertical
	12441.0	30.6	18.4	49.0	54.0	-5.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE20 - Ant 0 + 1	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4825.0	38.0	3.4	41.4	54.0	-12.6	Peak	Horizontal
*	6508.0	36.3	8.5	44.8	84.2	-39.4	Peak	Horizontal
*	8709.5	34.4	13.7	48.1	84.2	-36.1	Peak	Horizontal
	11956.5	31.4	18.9	50.3	54.0	-3.7	Peak	Horizontal
	4952.5	38.7	3.6	42.3	54.0	-11.7	Peak	Vertical
*	6499.5	36.1	8.5	44.6	84.2	-39.6	Peak	Vertical
*	8675.5	34.1	13.6	47.7	84.2	-36.5	Peak	Vertical
	11642.0	31.5	19.1	50.6	54.0	-3.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	03
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4714.5	37.7	3.1	40.8	54.0	-13.2	Peak	Horizontal
*	6482.5	36.2	8.4	44.6	84.2	-39.6	Peak	Horizontal
*	8735.0	33.9	13.7	47.6	84.2	-36.6	Peak	Horizontal
	11633.5	30.8	19.1	49.9	54.0	-4.1	Peak	Horizontal
	4825.0	38.7	3.4	42.1	54.0	-11.9	Peak	Vertical
*	6414.5	35.3	8.1	43.4	84.2	-40.8	Peak	Vertical
*	8794.5	32.0	13.9	45.9	84.2	-38.3	Peak	Vertical
	12101.0	30.4	18.7	49.1	54.0	-4.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4842.0	38.5	3.4	41.9	54.0	-12.1	Peak	Horizontal
*	7094.5	35.5	11.6	47.1	84.3	-37.2	Peak	Horizontal
*	8692.5	33.3	13.6	46.9	84.3	-37.4	Peak	Horizontal
	11880.0	30.0	18.9	48.9	54.0	-5.1	Peak	Horizontal
	4952.5	38.6	3.6	42.2	54.0	-11.8	Peak	Vertical
*	6720.5	35.1	9.7	44.8	84.3	-39.5	Peak	Vertical
*	8667.0	33.0	13.6	46.6	84.3	-37.7	Peak	Vertical
	11378.5	31.3	19.2	50.5	54.0	-3.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/07/11
Test Mode:	802.11ax-HE40 - Ant 0 + 1	Test Channel:	09
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4689.0	38.1	3.1	41.2	54.0	-12.8	Peak	Horizontal
*	6559.0	36.1	8.8	44.9	82.2	-37.3	Peak	Horizontal
*	8811.5	32.8	13.9	46.7	82.2	-35.5	Peak	Horizontal
	11786.5	30.3	19.0	49.3	54.0	-4.7	Peak	Horizontal
	4859.0	38.4	3.4	41.8	54.0	-12.2	Peak	Vertical
*	6355.0	37.3	7.8	45.1	82.2	-37.1	Peak	Vertical
*	8930.5	32.6	14.2	46.8	82.2	-35.4	Peak	Vertical
	11693.0	30.9	19.1	50.0	54.0	-4.0	Peak	Vertical

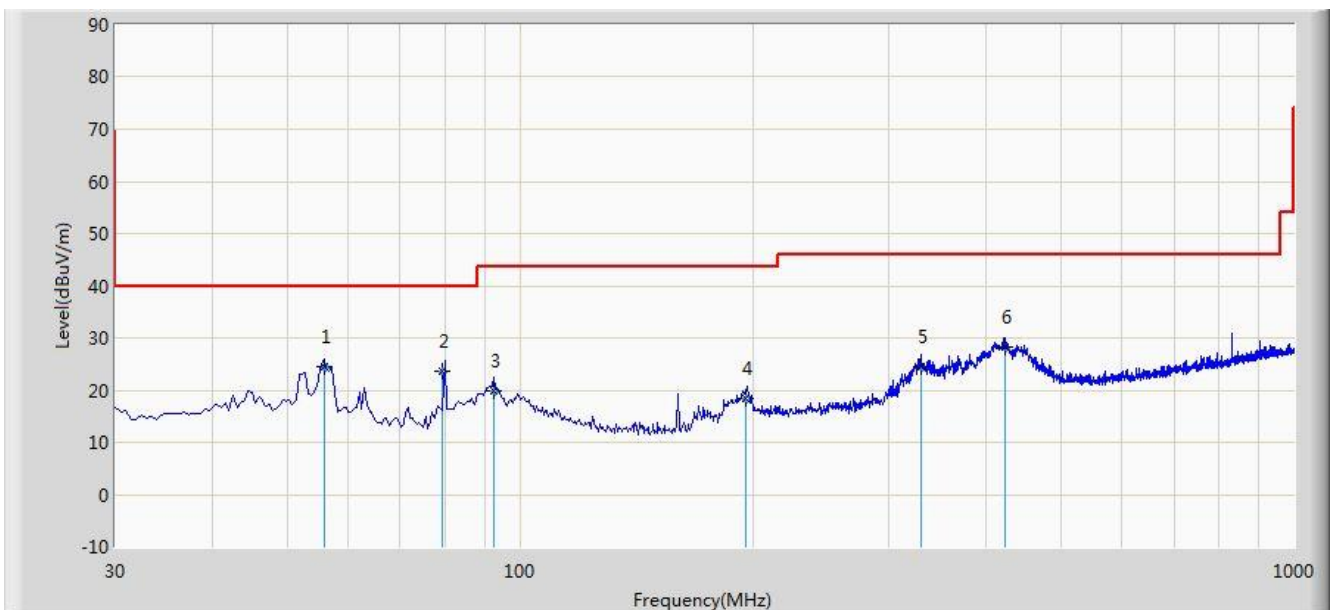
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/07/13 - 12:44
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Horizontal
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



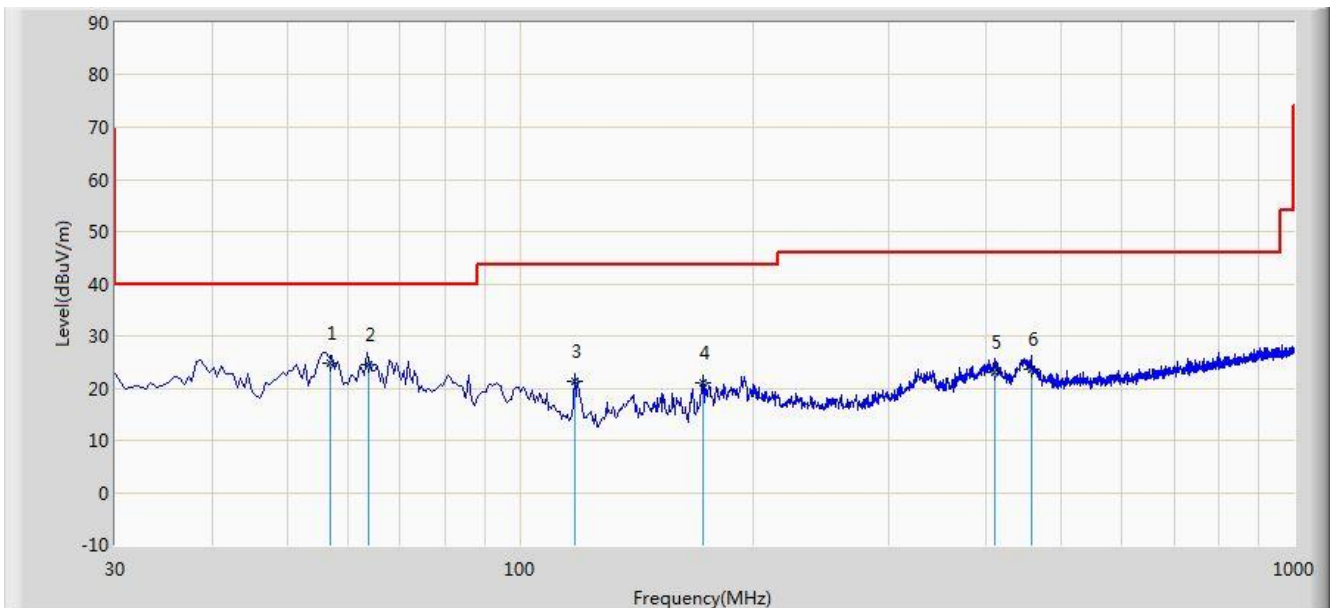
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	55.914	24.361	3.540	-15.639	40.000	20.822	QP
2			79.548	23.685	9.657	-16.315	40.000	14.028	QP
3			92.580	19.901	2.353	-23.599	43.500	17.548	QP
4			196.125	18.439	-0.503	-25.061	43.500	18.942	QP
5			329.458	24.561	2.025	-21.439	46.000	22.536	QP
6			422.890	28.240	4.037	-17.760	46.000	24.202	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/07/13 - 12:45
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin Ker
Probe: VULB 9168_20-2000MHz	Polarity: Vertical
EUT: Aruba 500 接入點	Power: AC 110V/60Hz
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	56.840	24.886	4.226	-15.114	40.000	20.661	QP
2			63.854	24.580	6.179	-15.420	40.000	18.401	QP
3			117.940	21.383	3.176	-22.117	43.500	18.207	QP
4			172.150	21.146	4.582	-22.354	43.500	16.563	QP
5			410.146	23.065	-1.002	-22.935	46.000	24.067	QP
6			457.548	23.638	-1.083	-22.362	46.000	24.722	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

For APIN0505:

Product	Aruba 500 接入點	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/06/27
Test Mode:	802.11b - Ant 0 + 1	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4000.5	39.4	0.6	40.0	54.0	-14.0	Peak	Horizontal
	4714.5	36.6	3.1	39.7	54.0	-14.3	Peak	Horizontal
*	5913.0	35.6	5.8	41.4	83.4	-42.0	Peak	Horizontal
*	7001.0	32.7	11.3	44.0	83.4	-39.4	Peak	Horizontal
	4264.0	38.7	1.7	40.4	54.0	-13.6	Peak	Vertical
	4799.5	37.8	3.3	41.1	54.0	-12.9	Peak	Vertical
*	5785.5	36.5	5.3	41.8	83.4	-41.6	Peak	Vertical
*	6737.5	33.1	9.8	42.9	83.4	-40.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.4dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)