

NCC

低功率射頻電機型式試驗報告

產品名稱: 510 系列存取點
型號: APIN0514, APIN0515
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: 2018.06.19 ~ 2018.08.10
發行日期: 2019.01.04

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(2019.01.04)

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修訂紀錄

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CONTENTS

Description	Page
1. 一般資訊	5
2. 產品資訊	6
2.1. 待測物裝置資料	6
2.2. 通道清單	7
2.3. 測試模式	7
2.4. 測試系統組合圖	8
2.5. 測試周邊	8
2.6. 待測裝置測試時之典型操作程式	8
3. 量測不確定度	9
4. 測試設備明細	10
5. 測試結果	11
5.1. 電源端點干擾測試	12
5.1.1. 適用標準	12
5.1.2. 量測方法	12
5.1.3. 測試架構圖	12
5.1.4. 電源端點測試結果	13
5.2. 峰值傳導輸出功率	17
5.2.1. 適用標準	17
5.2.2. 量測方法	17
5.2.3. 測試架構圖	17
5.2.4. 峰值傳導輸出功率測試結果	18
5.3. 天線之要求	21
5.3.1. 適用標準	21
5.3.2. 天線樣式	21
5.4. 輻射干擾測試	23
5.4.1. 適用標準	23
5.4.2. 量測方法	23
5.4.3. 測試架構圖	24
5.4.4. 輻射干擾測試結果	26
5.5. 混附發射之 RF 傳導發射	106
5.5.1. 適用標準	106
5.5.2. 量測方法	106
5.5.3. 測試架構圖	106

5.5.4.	混附發射之 RF 傳導發射測試結果	107
5.6.	開放頻帶邊緣之不必要幅射要求	120
5.6.1.	適用標準	120
5.6.2.	量測方法	120
5.6.3.	測試架構圖	121
5.6.4.	測試結果	122
5.7.	佔用頻道寬度	346
5.7.1.	適用標準	346
5.7.2.	量測方法	346
5.7.3.	測試架構圖	346
5.7.4.	佔用頻帶寬度測試結果	347
5.8.	發射電功率密度	354
5.8.1.	適用標準	354
5.8.2.	量測方法	354
5.8.3.	測試架構圖	354
5.8.4.	功率密度量測結果	355

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	6280 America Center Drive, San Jose, CA 95002
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	510 系列存取點
產品型號	APIN0514, APIN0515
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

Note: The difference between models is that EUT use different antenna and appearance, APIN0514 use some external antennas, but APIN0515 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	--	--

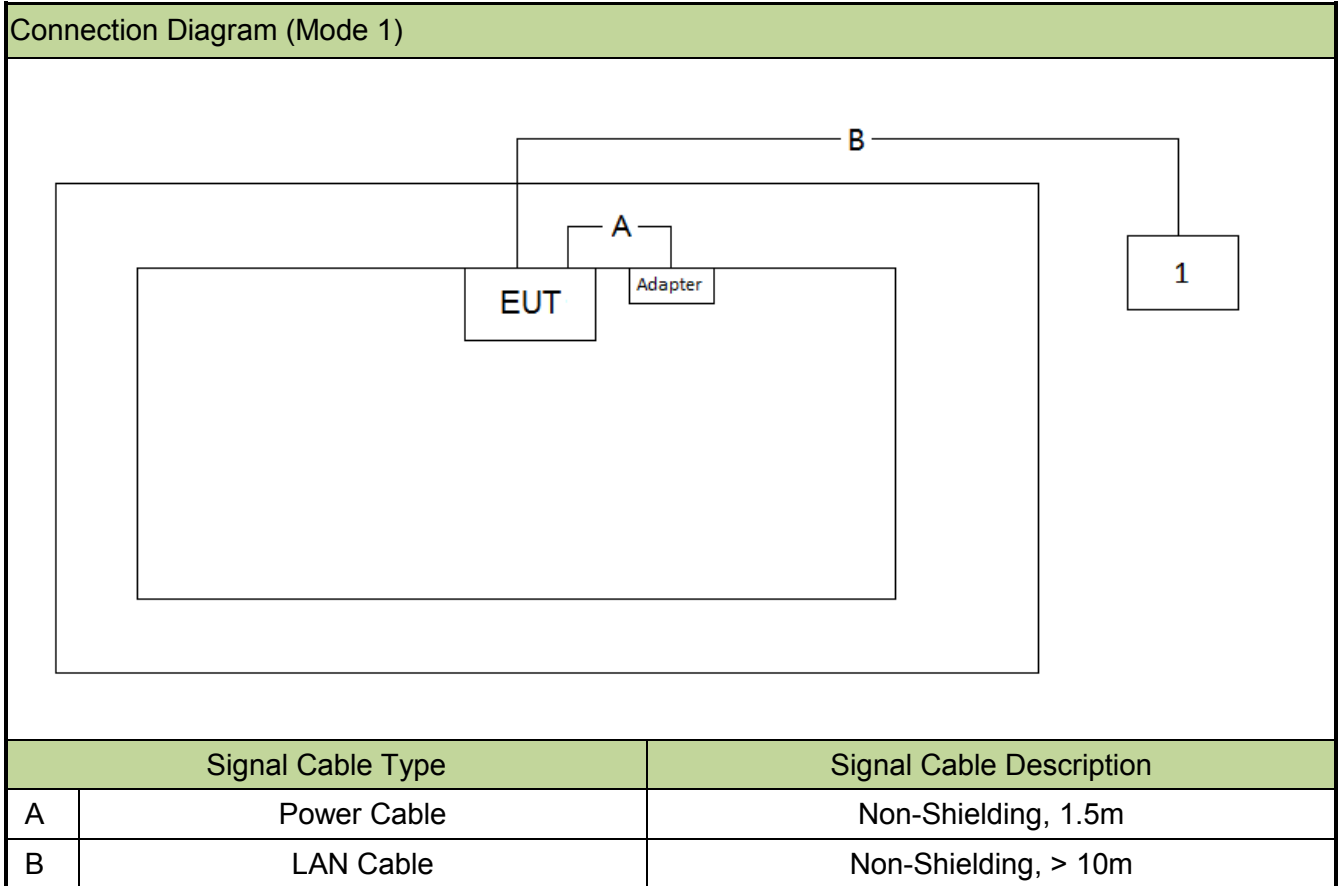
802.11n-HT40/ax-HE40

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. 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 "telnet.exe" 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	2019/3/20
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2019/3/20
8-Wire ISN (T8)	R&S	ENY81	MRTTWA00018	1 year	2019/4/24
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2019/5/14
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2019/5/21

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2019/4/24
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2019/5/22
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2019/4/24
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2019/4/23
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2019/4/23
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2019/4/23
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2019/3/19
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/7/30
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2019/5/18
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2019/5/21

Conducted Test Equipment - SR1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/7/30
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06457	1 year	2019/7/19
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2019/4/24
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2019/5/21

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

5. 測試結果

產品名稱 510 系列存取點
型號 APIN0514, APIN0515

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

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

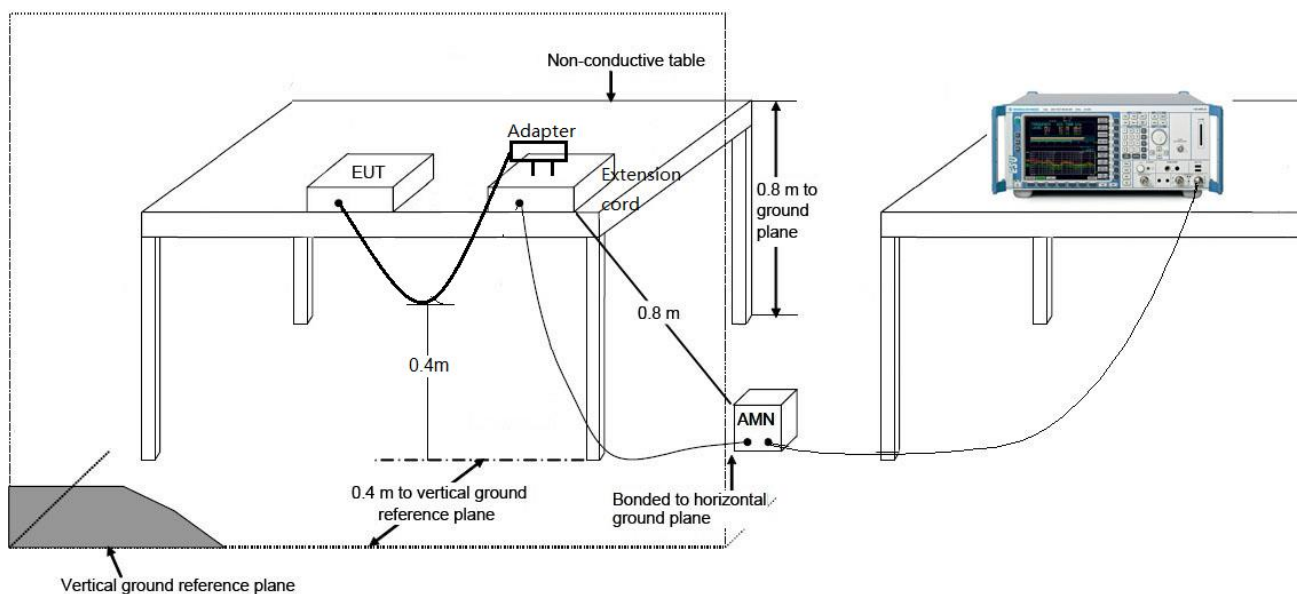
註:隨頻率之對數遞減

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。

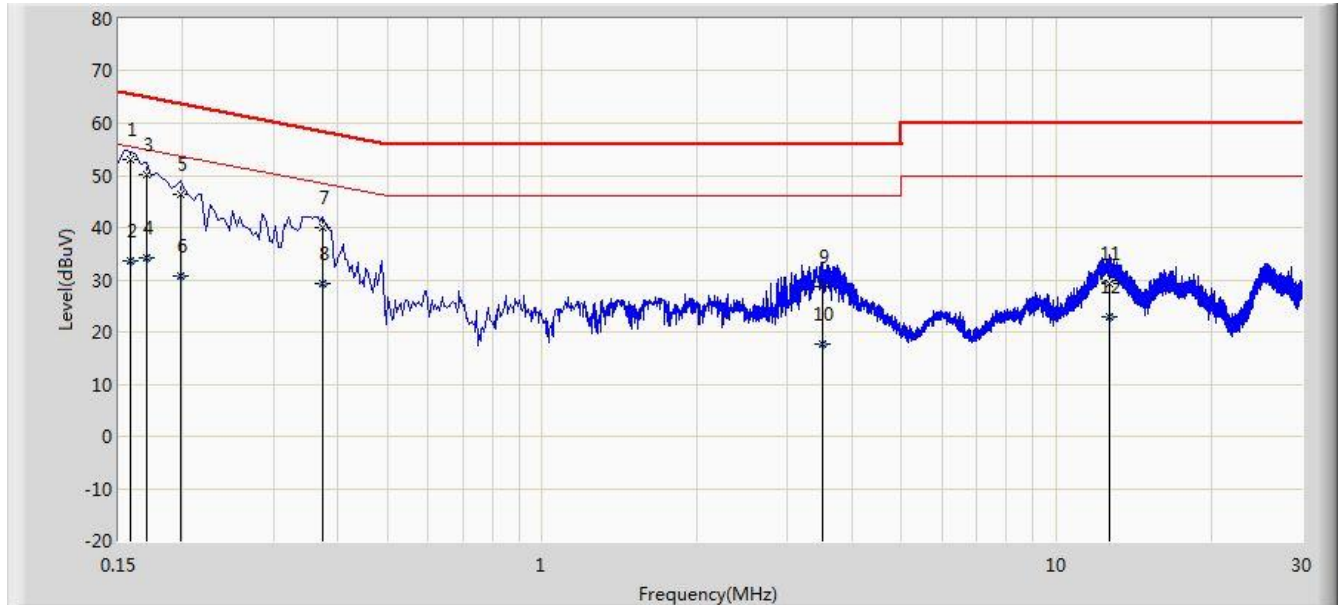
備 註: 經初測驗證過，電源端點干擾測試對測試頻道數並無差異，因此檢附其中一個測試頻道之測試數。

5.1.3. 測試架構圖



5.1.4. 電源端點測試結果

Site: SR2	Time: 2018/07/25 - 10:33
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: ENV216_Filter On	Polarity: Line
EUT: 510 系列存取點 (APIN0514)	Power: AC 110V/60Hz
Worst Case Mode	

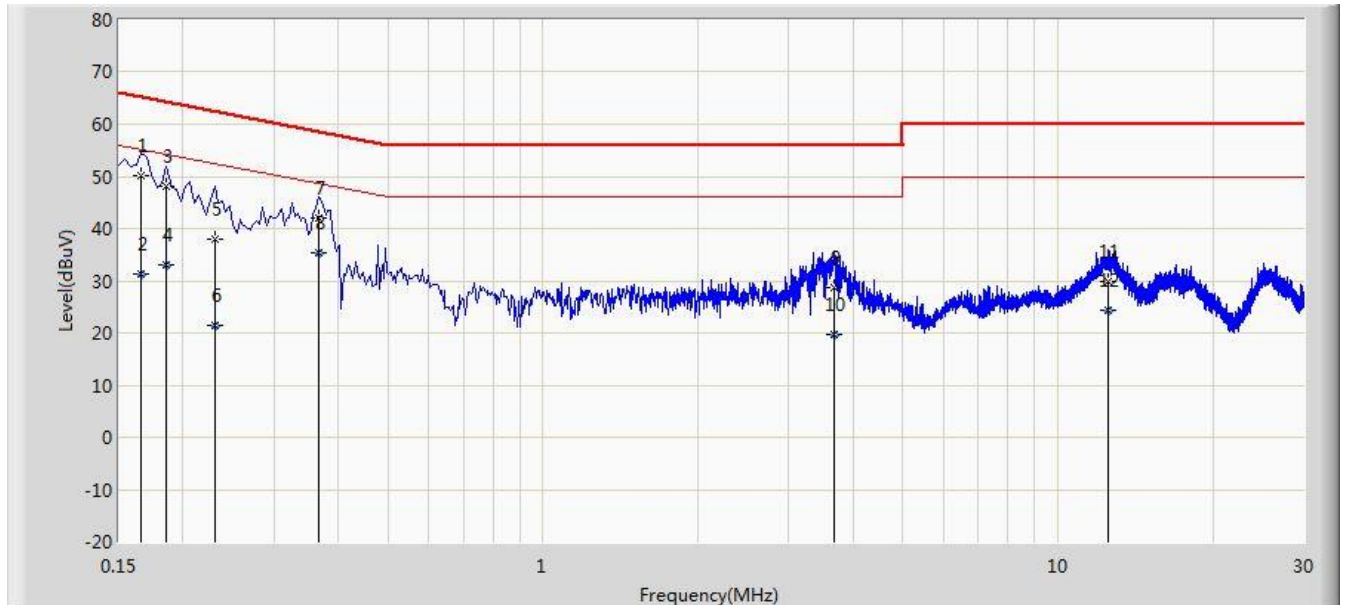


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	52.905	42.594	-12.663	65.568	10.311	QP
2			0.158	33.516	23.205	-22.053	55.568	10.311	AV
3			0.170	50.170	40.092	-14.790	64.960	10.078	QP
4			0.170	34.271	24.194	-20.689	54.960	10.078	AV
5			0.198	46.278	36.274	-17.416	63.694	10.005	QP
6			0.198	30.775	20.770	-22.919	53.694	10.005	AV
7			0.374	40.118	30.054	-18.293	58.412	10.064	QP
8			0.374	29.259	19.195	-19.152	48.412	10.064	AV
9			3.506	28.605	18.696	-27.395	56.000	9.908	QP
10			3.506	17.816	7.908	-28.184	46.000	9.908	AV
11			12.654	29.305	19.233	-30.695	60.000	10.073	QP
12			12.654	22.809	12.736	-27.191	50.000	10.073	AV

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

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

Site: SR2	Time: 2018/07/25 - 10:38
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: ENV216_Filter On	Polarity: Neutral
EUT: 510 系列存取點 (APIN0514)	Power: AC 110V/60Hz
Worst Case Mode	

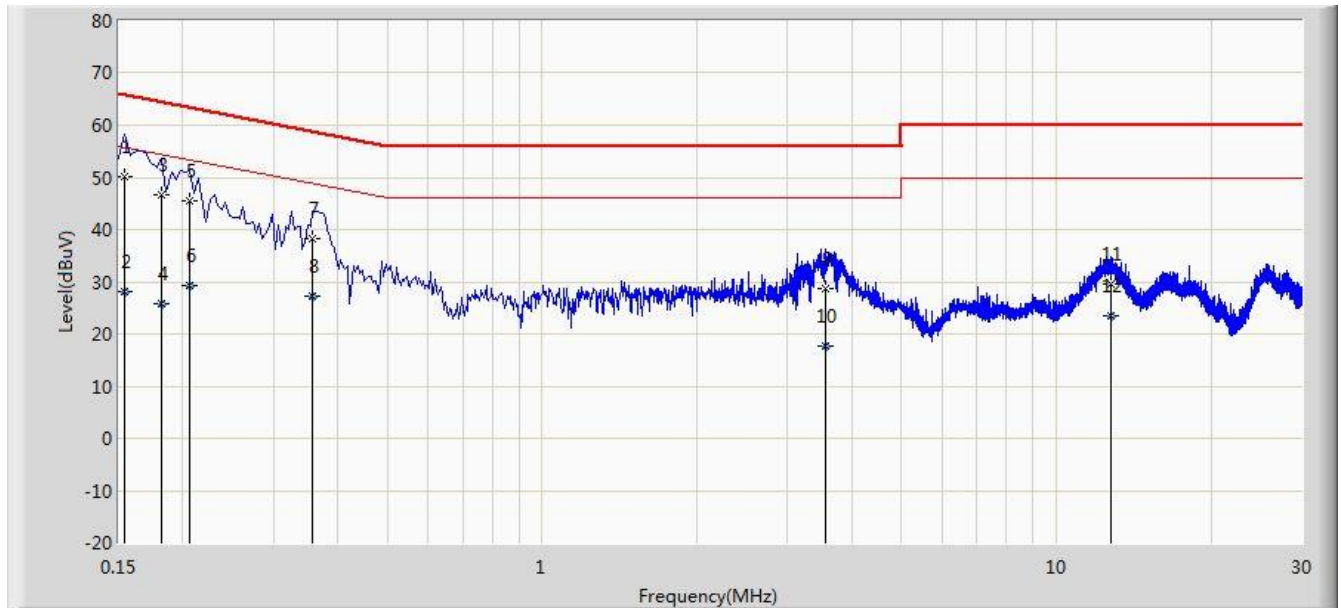


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.166	50.227	40.156	-14.931	65.158	10.071	QP
2			0.166	31.339	21.268	-23.820	55.158	10.071	AV
3			0.186	48.048	38.013	-16.165	64.213	10.035	QP
4			0.186	33.073	23.038	-21.140	54.213	10.035	AV
5			0.230	37.979	27.993	-24.471	62.450	9.985	QP
6			0.230	21.542	11.556	-30.908	52.450	9.985	AV
7			0.366	42.013	31.926	-16.578	58.591	10.087	QP
8		*	0.366	35.362	25.275	-13.229	48.591	10.087	AV
9			3.678	28.687	18.744	-27.313	56.000	9.944	QP
10			3.678	19.708	9.764	-26.292	46.000	9.944	AV
11			12.530	29.900	19.799	-30.100	60.000	10.101	QP
12			12.530	24.240	14.139	-25.760	50.000	10.101	AV

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

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

Site: SR2	Time: 2018/07/25 - 09:57
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: ENV216_Filter On	Polarity: Line
EUT: 510 系列存取點 (APIN0515)	Power: AC 110V/60Hz
Worst Case Mode	

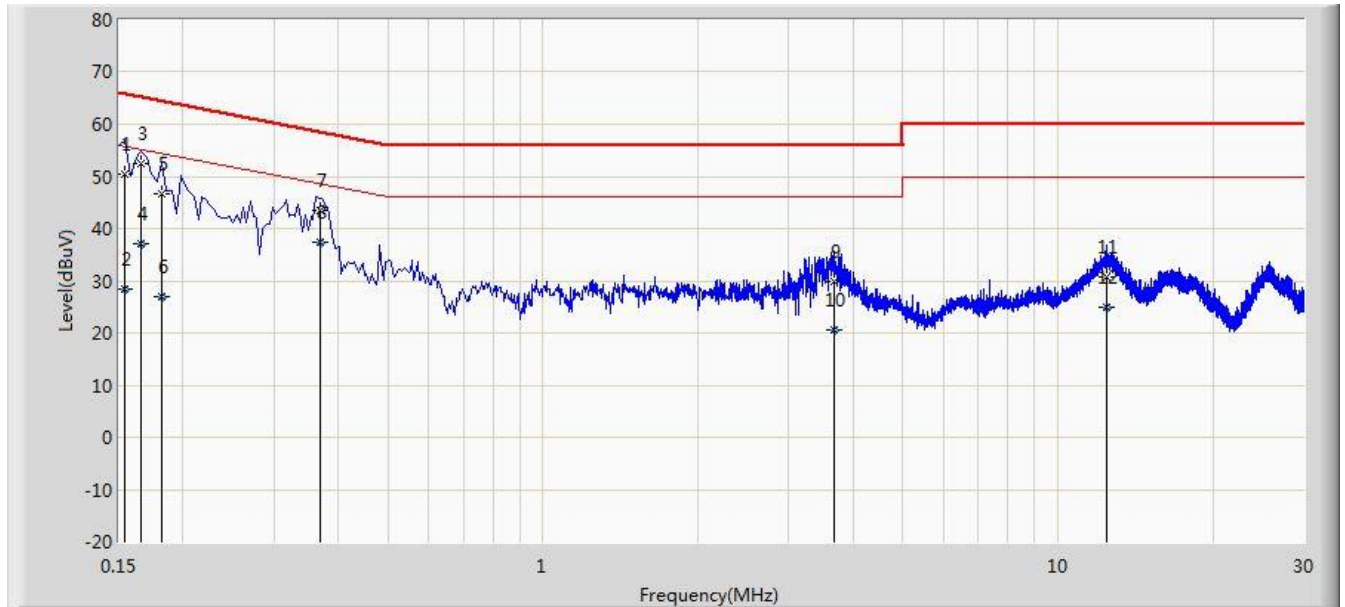


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.154	50.282	39.542	-15.499	65.781	10.740	QP
2			0.154	28.165	17.426	-27.616	55.781	10.740	AV
3			0.182	46.614	36.565	-17.780	64.394	10.048	QP
4			0.182	25.811	15.763	-28.583	54.394	10.048	AV
5			0.206	45.562	35.582	-17.803	63.365	9.981	QP
6			0.206	29.232	19.251	-24.133	53.365	9.981	AV
7			0.358	38.374	28.323	-20.401	58.775	10.051	QP
8			0.358	27.127	17.076	-21.647	48.775	10.051	AV
9			3.558	28.735	18.821	-27.265	56.000	9.913	QP
10			3.558	17.583	7.669	-28.417	46.000	9.913	AV
11			12.754	29.602	19.508	-30.398	60.000	10.094	QP
12			12.754	23.488	13.395	-26.512	50.000	10.094	AV

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

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

Site: SR2	Time: 2018/07/25 - 10:02
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin Ker
Probe: ENV216_Filter On	Polarity: Neutral
EUT: 510 系列存取點 (APIN0515)	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.154	50.464	39.748	-15.318	65.781	10.716	QP
2			0.154	28.537	17.821	-27.245	55.781	10.716	AV
3			0.166	52.485	42.414	-12.674	65.158	10.071	QP
4			0.166	37.089	27.017	-18.070	55.158	10.071	AV
5			0.182	46.695	36.653	-17.699	64.394	10.042	QP
6			0.182	27.068	17.026	-27.326	54.394	10.042	AV
7			0.370	43.450	33.360	-15.051	58.501	10.090	QP
8		*	0.370	37.253	27.163	-11.248	48.501	10.090	AV
9			3.666	29.942	20.001	-26.058	56.000	9.940	QP
10			3.666	20.712	10.772	-25.288	46.000	9.940	AV
11			12.394	30.679	20.571	-29.321	60.000	10.108	QP
12			12.394	24.989	14.881	-25.011	50.000	10.108	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。

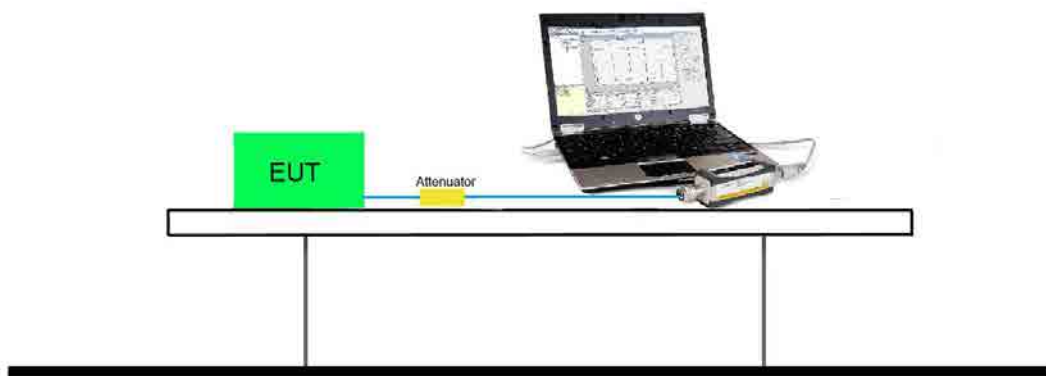
同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a) 總和傳導輸出功率限制值加 8 dB。方向性增益值計算同(a)。

(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 + 2 + 3 port

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11b	20	6	2437	1Mbps	18.29
				5.5Mbps	18.01
				11Mbps	17.76
802.11g	20	6	2437	6Mbps	18.04
				24Mbps	17.78
				54Mbps	17.54
802.11n	20	6	2437	MCS0	18.24
				MCS3	17.95
				MCS7	17.65
802.11n	40	6	2437	MCS0	18.24
				MCS3	18.01
				MCS7	17.78
802.11ax	20	6	2437	MCS0	18.29
				MCS5	18.03
				MCS11	17.78
802.11ax	40	6	2437	MCS0	18.30
				MCS5	18.01
				MCS11	17.81

待測物名稱	510 系列存取點	溫度	25°C
待測物型號	APIN0514	濕度	54%
測試場地	SR1	測試日期	2018/06/26
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
802.11b	1Mbps	01	2412	18.03	18.33	21.19	≤ 30.00	23.19	Pass
802.11b	1Mbps	06	2437	17.82	18.29	21.07	≤ 30.00		Pass
802.11b	1Mbps	11	2462	17.83	18.11	20.98	≤ 30.00		Pass
802.11g	6Mbps	01	2412	17.45	18.05	20.77	≤ 30.00	22.79	Pass
802.11g	6Mbps	06	2437	17.50	18.04	20.79	≤ 30.00		Pass
802.11g	6Mbps	11	2462	14.93	15.59	18.28	≤ 30.00		Pass
802.11n-HT20	MCS0	01	2412	17.73	18.07	20.91	≤ 30.00	23.06	Pass
802.11n-HT20	MCS0	06	2437	17.85	18.24	21.06	≤ 30.00		Pass
802.11n-HT20	MCS0	11	2462	16.30	16.74	19.54	≤ 30.00		Pass
802.11n-HT40	MCS0	03	2422	16.07	16.65	19.38	≤ 30.00	23.04	Pass
802.11n-HT40	MCS0	06	2437	17.81	18.24	21.04	≤ 30.00		Pass
802.11n-HT40	MCS0	09	2452	15.33	15.73	18.54	≤ 30.00		Pass
802.11ax-HE20	MCS0	01	2412	16.34	16.72	19.54	≤ 30.00	23.10	Pass
802.11ax-HE20	MCS0	06	2437	17.89	18.29	21.10	≤ 30.00		Pass
802.11ax-HE20	MCS0	10	2457	16.82	17.60	20.24	≤ 30.00		Pass
802.11ax-HE20	MCS0	11	2462	14.11	14.64	17.39	≤ 30.00		Pass
802.11ax-HE40	MCS0	03	2422	16.22	16.73	19.49	≤ 30.00	23.09	Pass
802.11ax-HE40	MCS0	06	2437	17.84	18.30	21.09	≤ 30.00		Pass
802.11ax-HE40	MCS0	09	2452	15.33	15.77	18.57	≤ 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	510 系列存取點	溫度	25°C
待測物型號	APIN0515	濕度	54%
測試場地	SR1	測試日期	2018/06/26
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	18.06	18.22	21.15	≤ 30.00	25.04	Pass
11b	1Mbps	06	2437	18.16	18.36	21.27	≤ 30.00		Pass
11b	1Mbps	11	2462	18.02	18.28	21.16	≤ 30.00		Pass
11g	6Mbps	01	2412	17.52	17.33	20.44	≤ 30.00	24.83	Pass
11g	6Mbps	06	2437	17.99	18.11	21.06	≤ 30.00		Pass
11g	6Mbps	11	2462	16.35	16.40	19.39	≤ 30.00		Pass
11n-HT20	MCS0	01	2412	17.56	17.68	20.63	≤ 30.00	24.82	Pass
11n-HT20	MCS0	06	2437	18.03	18.05	21.05	≤ 30.00		Pass
11n-HT20	MCS0	11	2462	16.28	16.25	19.28	≤ 30.00		Pass
11n-HT40	MCS0	03	2422	16.29	15.11	18.75	≤ 30.00	24.94	Pass
11n-HT40	MCS0	06	2437	18.34	17.97	21.17	≤ 30.00		Pass
11n-HT40	MCS0	08	2447	16.41	15.82	19.14	≤ 30.00		Pass
11n-HT40	MCS0	09	2452	15.40	14.79	18.12	≤ 30.00	24.99	Pass
11ax-HE20	MCS0	01	2412	17.23	17.01	20.13	≤ 30.00		Pass
11ax-HE20	MCS0	06	2437	18.34	18.07	21.22	≤ 30.00		Pass
11ax-HE20	MCS0	11	2462	15.32	15.55	18.45	≤ 30.00	25.03	Pass
11ax-HE40	MCS0	03	2422	16.33	16.22	19.29	≤ 30.00		Pass
11ax-HE40	MCS0	06	2437	18.39	18.10	21.26	≤ 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 = 3.77 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 APIN0514 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 Gain (dBi)	CDD Directional Gain (dBi)	
						For Power	For PSD
Wi-Fi External Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)(MFR: Aruba)							
1	Omni/Panel	2.4	AP-ANT-40	4.0	3.01	4.0	7.01
		5		5.0	6.02	5.0	11.02
2	Omni/Dipole	2.4	AP-ANT-19	3.0	3.01	3.0	6.01
		5		6.0	6.02	6.0	12.02
3	Omni/Dipole	2.4	AP-ANT-1W	3.8	3.01	3.8	6.81
		5		5.8	6.02	5.8	11.82
4	Omni/Panel	2.4	AP-ANT-13B	2.3	3.01	2.3	5.31
		5		4.0	6.02	4.0	10.02
5	Omni/Dipole	2.4	AP-ANT-20W	2.0	3.01	2.0	5.01
		5		2.0	6.02	2.0	8.02
6 (Note 3)	Directional/ Panel	2.4	AP-ANT-45	4.5	0.00	4.5	4.50
		5		5.5	3.01	5.5	8.51
7 (Note 3)	Directional/ Panel	2.4	AP-ANT-48	8.5	0.00	8.5	8.5
		5		8.5	3.01	8.5	11.51
Bluetooth & ZigBee Internal Antenna(MFR: Airgain)							
PCB		2.4	N2410CH3	4.9			

型號 APIN0515 使用全固定式天線

Directionality/Type	Frequency Band (GHz)	Max Peak Gain (dBi)	BF Gain (dBi)	CDD Directional Gain (dBi)	
				For Power	For PSD
Wi-Fi Internal Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)					
Omni/PIFA	2.4	3.77	3.01	3.77	6.78
Omni/PIFA	5	4.55	5.97	4.55	10.52
Bluetooth & ZigBee Internal Antenna					
PIFA	2.4	3.5			

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,

$$\text{Array Gain} = 10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01;$$

- For power measurements on IEEE 802.11 devices,

$$\text{Array Gain} = 0 \text{ dB for } N_{ANT} \leq 4;$$

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 = $G_{ANT} + \text{BF Gain}$, BF Gain was declared by the applicant.

3. Two antennas have Cross-Polarized design, the detail see the antenna specification.

4. For model APIN0514, the final test antenna list was shown as below table.

Antenna List	Conducted Testing	Radiated Testing
Omni Antenna 1# (Max 2.4GHz Omni ANT)	N/A	Yes
Omni Antenna 2# (Max 5GHz Omni ANT)	N/A	Yes
Omni Antenna 5# (Min 2.4&5GHz Omni ANT)	Yes (High Power Setting)	Yes
Directional Antenna 7# (Max 2.4&5GHz Directional ANT)	N/A	Yes

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

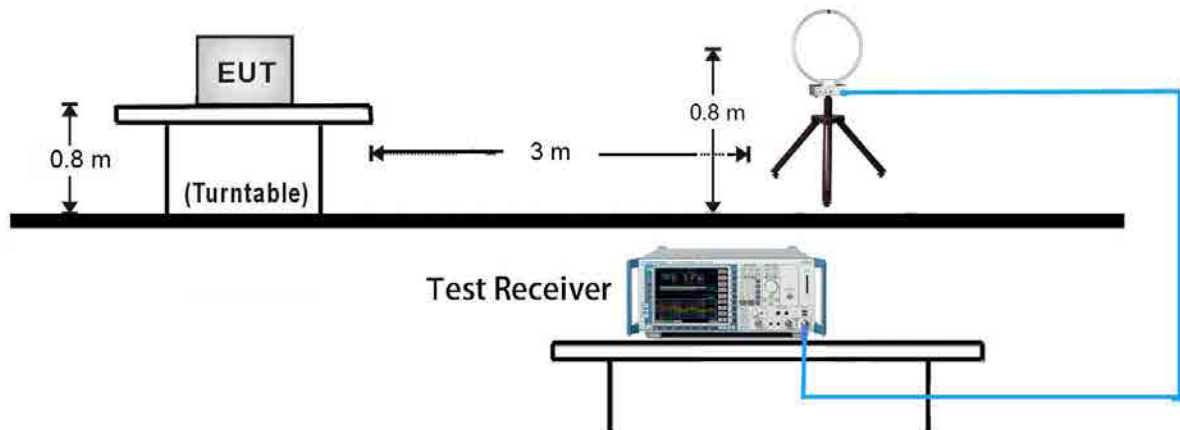
上表規定之電場強度，頻率在 9-90kHz 千赫(kHz)、110-490 千赫(kHz)以及 1000 兆赫(MHz)以上之發射，其量測以平均值檢波器為基準，且須符合第 5.15.2 節之規定；其他頻率之發射，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時須符合第 5.5 節之規定，而輻射發射之量測頻率範圍須符合第 5.14 節之規定。

5.4.2. 量測方法

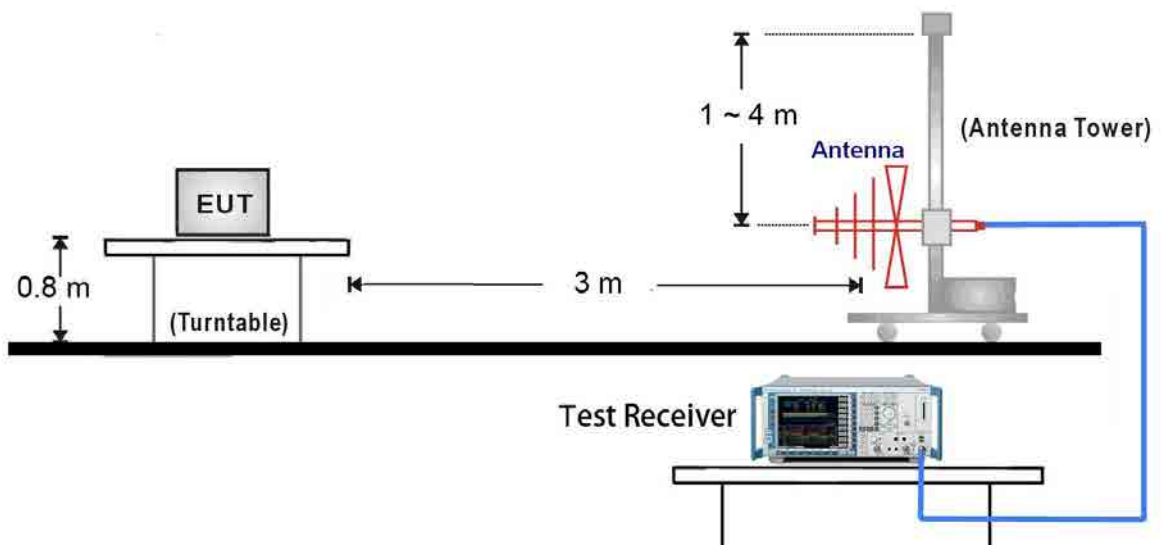
低頻待測物置於高 80 公分之非導體桌面（落地型產品置於地上），高頻待測物置於高 150 公分之非導體桌面，受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度。接收天線並應於水準及垂直極化方向各量測一次。

5.4.3. 測試架構圖

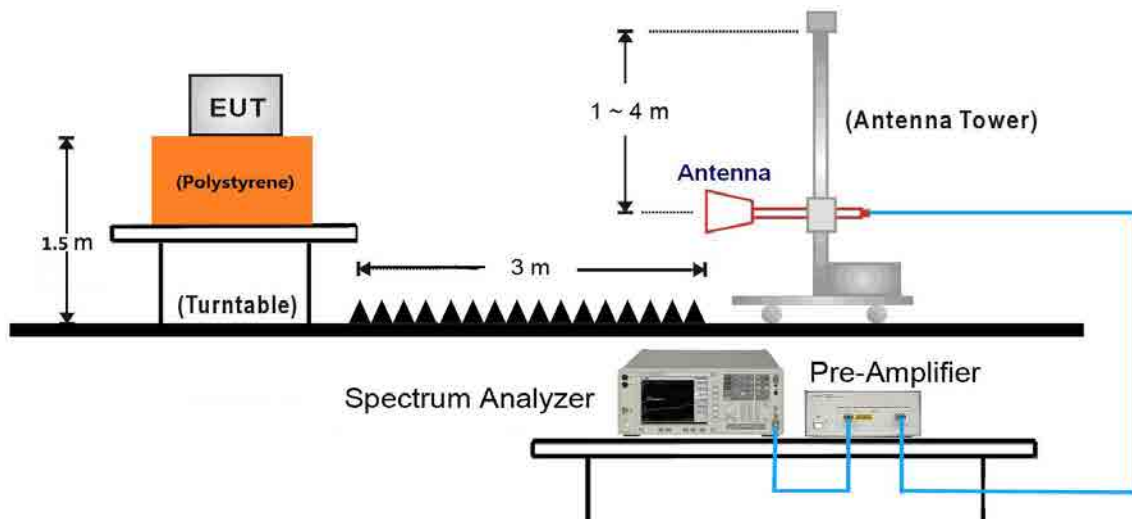
9kHz ~ 30MHz Test Setup:



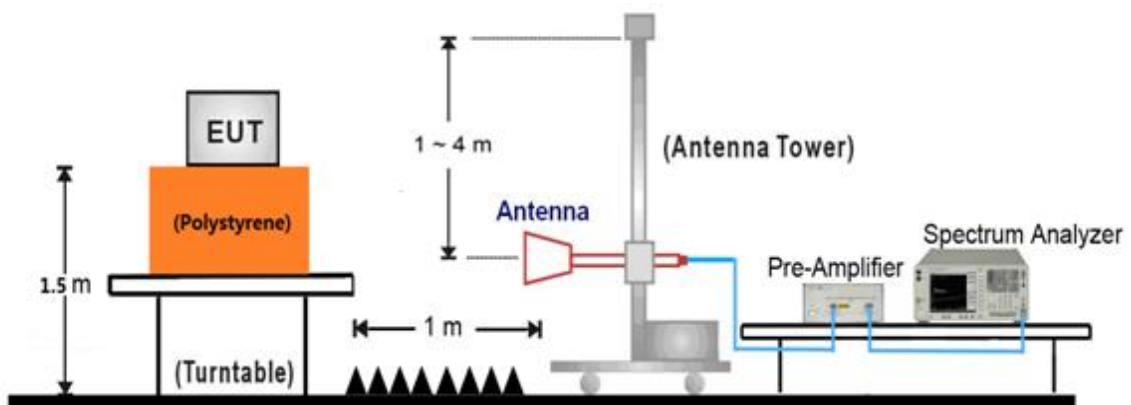
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



5.4.4. 輻射干擾測試結果

For APIN0514 - Omni Antenna (AP-ANT-20W):

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11b - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.7	0.2	41.9	54.0	-12.1	Peak	Horizontal
	5020.5	39.7	3.9	43.6	54.0	-10.4	Peak	Horizontal
*	6117.0	39.3	6.5	45.8	83.5	-37.7	Peak	Horizontal
*	6686.5	38.1	8.7	46.8	83.5	-36.7	Peak	Horizontal
	3618.0	43.9	0.0	43.9	54.0	-10.1	Peak	Vertical
	5020.5	40.0	3.9	43.9	54.0	-10.1	Peak	Vertical
*	6015.0	38.8	6.1	44.9	83.5	-38.6	Peak	Vertical
*	6499.5	37.5	8.4	45.9	83.5	-37.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11b - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	40.8	0.2	41.0	54.0	-13.0	Peak	Horizontal
	4825.0	39.3	3.7	43.0	54.0	-11.0	Peak	Horizontal
*	6040.5	39.4	6.2	45.6	83.3	-37.7	Peak	Horizontal
*	6567.5	37.9	8.6	46.5	83.3	-36.8	Peak	Horizontal
	3652.0	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4247.0	40.7	1.3	42.0	54.0	-12.0	Peak	Vertical
*	5862.0	38.8	5.8	44.6	83.3	-38.7	Peak	Vertical
*	6355.0	38.0	7.5	45.5	83.3	-37.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11b - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.2	0.2	41.4	54.0	-12.6	Peak	Horizontal
	4009.0	42.0	0.4	42.4	54.0	-11.6	Peak	Horizontal
*	5734.5	38.6	5.1	43.7	83.1	-39.4	Peak	Horizontal
*	6499.5	38.7	8.4	47.1	83.1	-36.0	Peak	Horizontal
	3694.5	42.9	0.1	43.0	54.0	-11.0	Peak	Vertical
	4927.0	40.0	3.7	43.7	54.0	-10.3	Peak	Vertical
*	5811.0	39.6	5.5	45.1	83.1	-38.0	Peak	Vertical
*	6516.5	38.3	8.5	46.8	83.1	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11g - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.4	0.2	41.6	54.0	-12.4	Peak	Horizontal
	4043.0	41.6	0.5	42.1	54.0	-11.9	Peak	Horizontal
*	5734.5	39.3	5.1	44.4	83.7	-39.3	Peak	Horizontal
*	6261.5	37.5	7.0	44.5	83.7	-39.2	Peak	Horizontal
	3618.0	43.8	0.0	43.8	54.0	-10.2	Peak	Vertical
	4068.5	41.0	0.6	41.6	54.0	-12.4	Peak	Vertical
*	5887.5	38.6	5.9	44.5	83.7	-39.2	Peak	Vertical
*	6499.5	37.5	8.4	45.9	83.7	-37.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.7dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11g - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.1	0.3	41.4	54.0	-12.6	Peak	Horizontal
	4825.0	39.5	3.7	43.2	54.0	-10.8	Peak	Horizontal
*	5632.5	37.2	4.6	41.8	82.7	-40.9	Peak	Horizontal
*	5998.0	38.3	6.1	44.4	82.7	-38.3	Peak	Horizontal
	3652.0	42.7	0.1	42.8	54.0	-11.2	Peak	Vertical
	3949.5	41.5	0.3	41.8	54.0	-12.2	Peak	Vertical
*	5828.0	38.9	5.6	44.5	82.7	-38.2	Peak	Vertical
*	6431.5	37.6	7.9	45.5	82.7	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.7dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11g - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	4034.5	42.1	0.5	42.6	54.0	-11.4	Peak	Horizontal
	4315.0	40.1	1.6	41.7	54.0	-12.3	Peak	Horizontal
*	5777.0	39.1	5.3	44.4	81.8	-37.4	Peak	Horizontal
*	6193.5	38.1	6.8	44.9	81.8	-36.9	Peak	Horizontal
	3694.5	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4315.0	41.4	1.6	43.0	54.0	-11.0	Peak	Vertical
*	5785.5	38.2	5.4	43.6	81.8	-38.2	Peak	Vertical
*	6576.0	37.5	8.6	46.1	81.8	-35.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.1	0.2	41.3	54.0	-12.7	Peak	Horizontal
	4068.5	41.1	0.6	41.7	54.0	-12.3	Peak	Horizontal
*	5709.0	38.5	4.9	43.4	82.5	-39.1	Peak	Horizontal
*	6049.0	37.9	6.2	44.1	82.5	-38.4	Peak	Horizontal
	4026.0	41.1	0.5	41.6	54.0	-12.4	Peak	Vertical
	4323.5	39.5	1.7	41.2	54.0	-12.8	Peak	Vertical
*	5768.5	39.0	5.3	44.3	82.5	-38.2	Peak	Vertical
*	6754.5	38.3	8.8	47.1	82.5	-35.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/21
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.4	0.3	41.7	54.0	-12.3	Peak	Horizontal
	4255.5	40.1	1.4	41.5	54.0	-12.5	Peak	Horizontal
*	5896.0	37.8	5.9	43.7	82.5	-38.8	Peak	Horizontal
*	6491.0	38.0	8.3	46.3	82.5	-36.2	Peak	Horizontal
	3652.0	41.9	0.1	42.0	54.0	-12.0	Peak	Vertical
	4026.0	41.1	0.5	41.6	54.0	-12.4	Peak	Vertical
*	5870.5	37.9	5.8	43.7	82.5	-38.8	Peak	Vertical
*	6652.5	37.4	8.7	46.1	82.5	-36.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3830.5	41.0	0.3	41.3	54.0	-12.7	Peak	Horizontal
	4111.0	41.4	0.8	42.2	54.0	-11.8	Peak	Horizontal
*	5768.5	38.5	5.3	43.8	82.5	-38.7	Peak	Horizontal
*	6083.0	37.9	6.4	44.3	82.5	-38.2	Peak	Horizontal
	3694.5	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4136.5	41.1	0.9	42.0	54.0	-12.0	Peak	Vertical
*	6040.5	38.4	6.2	44.6	82.5	-37.9	Peak	Vertical
*	6856.5	38.6	9.5	48.1	82.5	-34.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3686.0	40.4	0.1	40.5	54.0	-13.5	Peak	Horizontal
	4009.0	41.6	0.4	42.0	54.0	-12.0	Peak	Horizontal
*	5794.0	38.7	5.4	44.1	79.7	-35.6	Peak	Horizontal
*	6015.0	38.7	6.1	44.8	79.7	-34.9	Peak	Horizontal
	4034.5	40.7	0.5	41.2	54.0	-12.8	Peak	Vertical
	4340.5	40.3	1.8	42.1	54.0	-11.9	Peak	Vertical
*	5692.0	38.6	4.8	43.4	79.7	-36.3	Peak	Vertical
*	6380.5	37.7	7.6	45.3	79.7	-34.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.7dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3686.0	41.4	0.1	41.5	54.0	-12.5	Peak	Horizontal
	4859.0	39.3	3.7	43.0	54.0	-11.0	Peak	Horizontal
*	5768.5	38.8	5.3	44.1	79.3	-35.2	Peak	Horizontal
*	6542.0	37.7	8.6	46.3	79.3	-33.0	Peak	Horizontal
	3652.0	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	3830.5	41.8	0.3	42.1	54.0	-11.9	Peak	Vertical
*	6040.5	38.4	6.2	44.6	79.3	-34.7	Peak	Vertical
*	6559.0	38.1	8.6	46.7	79.3	-32.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3643.5	40.6	0.0	40.6	54.0	-13.4	Peak	Horizontal
	3873.0	41.1	0.3	41.4	54.0	-12.6	Peak	Horizontal
*	5573.0	38.3	4.5	42.8	78.8	-36.0	Peak	Horizontal
*	6329.5	37.5	7.3	44.8	78.8	-34.0	Peak	Horizontal
	3677.5	42.8	0.1	42.9	54.0	-11.1	Peak	Vertical
	4000.5	40.7	0.4	41.1	54.0	-12.9	Peak	Vertical
*	6253.0	38.5	7.0	45.5	78.8	-33.3	Peak	Vertical
*	6457.0	38.3	8.1	46.4	78.8	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3677.5	40.8	0.1	40.9	54.0	-13.1	Peak	Horizontal
	4034.5	40.5	0.5	41.0	54.0	-13.0	Peak	Horizontal
*	5853.5	37.8	5.7	43.5	84.4	-40.9	Peak	Horizontal
*	6236.0	38.1	6.9	45.0	84.4	-39.4	Peak	Horizontal
	4000.5	41.7	0.4	42.1	54.0	-11.9	Peak	Vertical
	4306.5	40.5	1.6	42.1	54.0	-11.9	Peak	Vertical
*	5743.0	38.3	5.1	43.4	84.4	-41.0	Peak	Vertical
*	6559.0	38.3	8.6	46.9	84.4	-37.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	41.8	0.1	41.9	54.0	-12.1	Peak	Horizontal
	3830.5	41.8	0.3	42.1	54.0	-11.9	Peak	Horizontal
*	5828.0	38.2	5.6	43.8	83.3	-39.5	Peak	Horizontal
*	6244.5	38.4	7.0	45.4	83.3	-37.9	Peak	Horizontal
	3652.0	41.9	0.1	42.0	54.0	-12.0	Peak	Vertical
	4145.0	40.2	0.9	41.1	54.0	-12.9	Peak	Vertical
*	5845.0	38.2	5.7	43.9	83.3	-39.4	Peak	Vertical
*	6253.0	37.6	7.0	44.6	83.3	-38.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3839.0	41.2	0.3	41.5	54.0	-12.5	Peak	Horizontal
	4094.0	40.7	0.7	41.4	54.0	-12.6	Peak	Horizontal
*	5913.0	38.0	5.9	43.9	82.3	-38.4	Peak	Horizontal
*	6576.0	37.2	8.6	45.8	82.3	-36.5	Peak	Horizontal
	3694.5	42.0	0.1	42.1	54.0	-11.9	Peak	Vertical
	4000.5	40.7	0.4	41.1	54.0	-12.9	Peak	Vertical
*	5794.0	37.8	5.4	43.2	82.3	-39.1	Peak	Vertical
*	6321.0	37.9	7.3	45.2	82.3	-37.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	40.8	0.1	40.9	54.0	-13.1	Peak	Horizontal
	4221.5	40.3	1.2	41.5	54.0	-12.5	Peak	Horizontal
*	5768.5	38.3	5.3	43.6	81.7	-38.1	Peak	Horizontal
*	6516.5	37.4	8.5	45.9	81.7	-35.8	Peak	Horizontal
	3635.0	41.3	0.0	41.3	54.0	-12.7	Peak	Vertical
	4026.0	40.5	0.5	41.0	54.0	-13.0	Peak	Vertical
*	5811.0	37.9	5.5	43.4	81.7	-38.3	Peak	Vertical
*	6567.5	37.5	8.6	46.1	81.7	-35.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.7dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	40.5	0.2	40.7	54.0	-13.3	Peak	Horizontal
	4247.0	40.5	1.3	41.8	54.0	-12.2	Peak	Horizontal
*	5692.0	38.3	4.8	43.1	81.4	-38.3	Peak	Horizontal
*	6610.0	37.4	8.7	46.1	81.4	-35.3	Peak	Horizontal
	3652.0	41.2	0.1	41.3	54.0	-12.7	Peak	Vertical
	4315.0	40.9	1.6	42.5	54.0	-11.5	Peak	Vertical
*	5743.0	38.0	5.1	43.1	81.4	-38.3	Peak	Vertical
*	5998.0	38.3	6.1	44.4	81.4	-37.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/23
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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	40.7	0.2	40.9	54.0	-13.1	Peak	Horizontal
	4026.0	41.4	0.5	41.9	54.0	-12.1	Peak	Horizontal
*	6261.5	38.3	7.0	45.3	81.2	-35.9	Peak	Horizontal
*	6635.5	37.4	8.7	46.1	81.2	-35.1	Peak	Horizontal
	3677.5	42.5	0.1	42.6	54.0	-11.4	Peak	Vertical
	4213.0	40.2	1.2	41.4	54.0	-12.6	Peak	Vertical
*	5836.5	38.5	5.7	44.2	81.2	-37.0	Peak	Vertical
*	6508.0	37.7	8.4	46.1	81.2	-35.1	Peak	Vertical

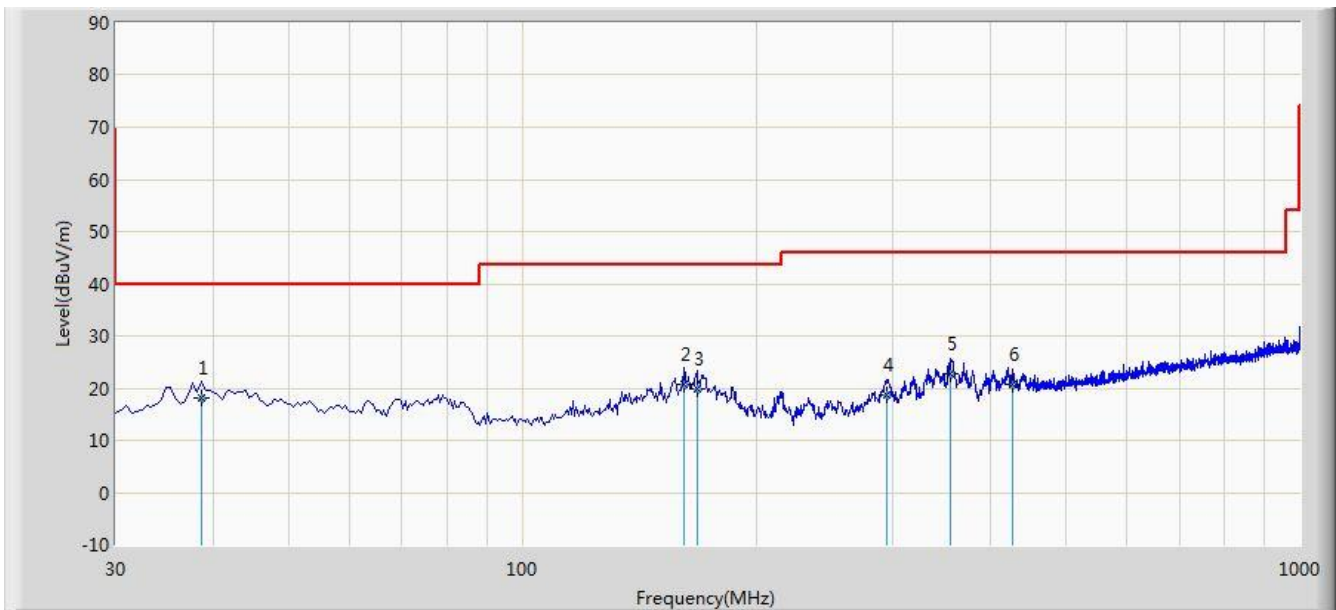
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.2dBμV/m) or LP0002 section 2.8 which is higher.

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: 2018/06/27 - 19:49
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Horizontal
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	38.730	18.022	4.392	-21.978	40.000	13.630	QP
2			161.435	20.756	10.738	-22.744	43.500	10.018	QP
3			167.740	19.904	9.624	-23.596	43.500	10.280	QP
4			293.840	18.688	4.072	-27.312	46.000	14.616	QP
5			354.950	22.651	6.527	-23.349	46.000	16.125	QP
6			428.185	20.769	3.428	-25.231	46.000	17.341	QP

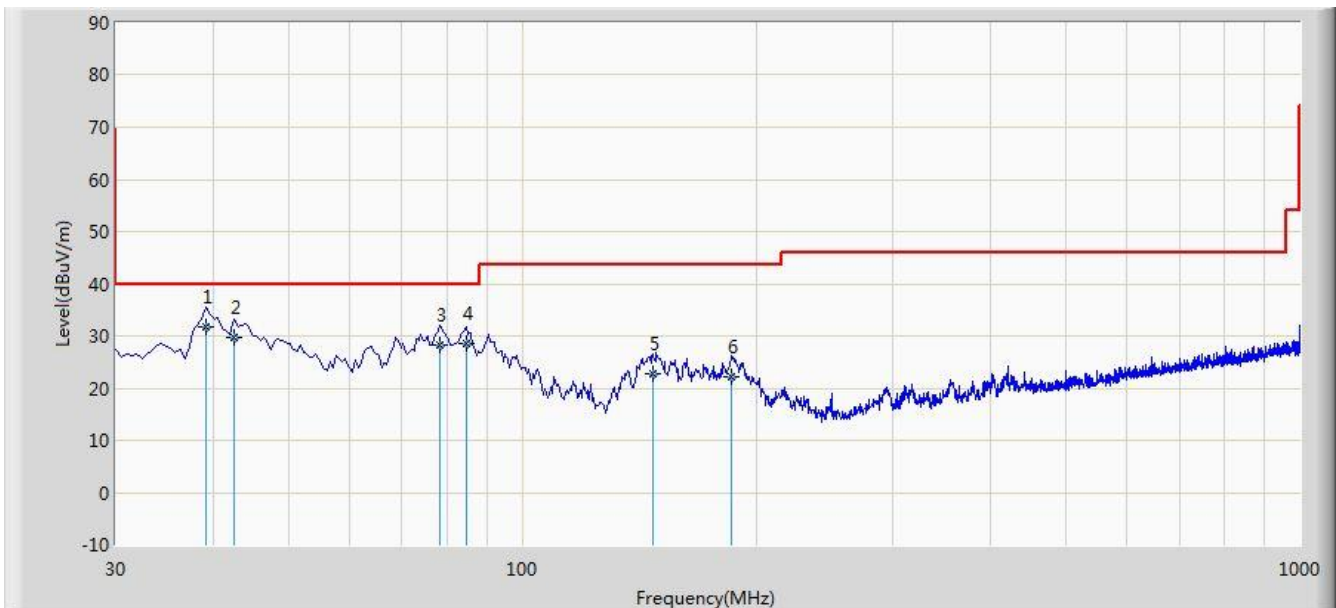
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

Site: AC1	Time: 2018/06/27 - 19:51
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Vertical
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	39.215	31.857	18.134	-8.143	40.000	13.723	QP
2			42.610	29.801	15.427	-10.199	40.000	14.374	QP
3			78.500	28.165	18.934	-11.835	40.000	9.232	QP
4			84.805	28.424	18.306	-11.576	40.000	10.118	QP
5			147.370	22.846	13.276	-20.654	43.500	9.570	QP
6			186.170	22.315	10.726	-21.185	43.500	11.589	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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

For APIN0514 - Omni Antenna (AP-ANT-40):

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11b - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3660.5	41.2	0.1	41.3	54.0	-12.7	Peak	Horizontal
	4349.0	39.6	1.8	41.4	54.0	-12.6	Peak	Horizontal
*	5760.0	38.7	5.2	43.9	82.8	-38.9	Peak	Horizontal
*	6542.0	38.2	8.6	46.8	82.8	-36.0	Peak	Horizontal
	3728.5	39.5	0.2	39.7	54.0	-14.3	Peak	Vertical
	4162.0	40.3	1.0	41.3	54.0	-12.7	Peak	Vertical
*	5666.5	38.8	4.7	43.5	82.8	-39.3	Peak	Vertical
*	5989.5	39.5	6.1	45.6	82.8	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11b - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.8	0.2	42.0	54.0	-12.0	Peak	Horizontal
	4306.5	39.8	1.6	41.4	54.0	-12.6	Peak	Horizontal
*	5649.5	38.6	4.7	43.3	82.8	-39.5	Peak	Horizontal
*	6542.0	37.7	8.6	46.3	82.8	-36.5	Peak	Horizontal
	3652.0	41.8	0.1	41.9	54.0	-12.1	Peak	Vertical
	4145.0	39.9	0.9	40.8	54.0	-13.2	Peak	Vertical
*	5709.0	38.5	4.9	43.4	82.8	-39.4	Peak	Vertical
*	6584.5	37.6	8.6	46.2	82.8	-36.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11b - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	41.2	0.1	41.3	54.0	-12.7	Peak	Horizontal
	4051.5	40.5	0.5	41.0	54.0	-13.0	Peak	Horizontal
*	5564.5	38.7	4.5	43.2	82.5	-39.3	Peak	Horizontal
*	6542.0	36.4	8.6	45.0	82.5	-37.5	Peak	Horizontal
	3694.5	41.4	0.1	41.5	54.0	-12.5	Peak	Vertical
	4315.0	40.4	1.6	42.0	54.0	-12.0	Peak	Vertical
*	5726.0	38.7	5.0	43.7	82.5	-38.8	Peak	Vertical
*	6559.0	37.3	8.6	45.9	82.5	-36.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11g - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.6	0.1	41.7	54.0	-12.3	Peak	Horizontal
	4306.5	40.4	1.6	42.0	54.0	-12.0	Peak	Horizontal
*	5590.0	38.8	4.5	43.3	82.5	-39.2	Peak	Horizontal
*	6533.5	37.7	8.5	46.2	82.5	-36.3	Peak	Horizontal
	3788.0	40.0	0.2	40.2	54.0	-13.8	Peak	Vertical
	4289.5	40.2	1.5	41.7	54.0	-12.3	Peak	Vertical
*	5998.0	37.8	6.1	43.9	82.5	-38.6	Peak	Vertical
*	6508.0	37.3	8.4	45.7	82.5	-36.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11g - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3643.5	41.8	0.0	41.8	54.0	-12.2	Peak	Horizontal
	4374.5	39.2	1.9	41.1	54.0	-12.9	Peak	Horizontal
*	5862.0	38.2	5.8	44.0	85.3	-41.3	Peak	Horizontal
*	6516.5	38.0	8.5	46.5	85.3	-38.8	Peak	Horizontal
	3643.5	40.6	0.0	40.6	54.0	-13.4	Peak	Vertical
	4247.0	39.8	1.3	41.1	54.0	-12.9	Peak	Vertical
*	5819.5	38.2	5.6	43.8	85.3	-41.5	Peak	Vertical
*	6550.5	36.8	8.6	45.4	85.3	-39.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11g - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3669	40.2	0.1	40.3	54.0	-13.7	Peak	Horizontal
	4051.5	42	0.5	42.5	54.0	-11.5	Peak	Horizontal
*	5641	38.9	4.6	43.5	82.8	-39.3	Peak	Horizontal
*	6873.5	36.8	9.6	46.4	82.8	-36.4	Peak	Horizontal
	3694.5	41.3	0.1	41.4	54.0	-12.6	Peak	Vertical
	4119.5	40.3	0.8	41.1	54.0	-12.9	Peak	Vertical
*	5862	37.1	5.8	42.9	82.8	-39.9	Peak	Vertical
*	6567.5	37.1	8.6	45.7	82.8	-37.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3728.5	40.2	0.2	40.4	54.0	-13.6	Peak	Horizontal
	4102.5	40.4	0.7	41.1	54.0	-12.9	Peak	Horizontal
*	5811.0	38.2	5.5	43.7	81.8	-38.1	Peak	Horizontal
*	6474.0	37.7	8.2	45.9	81.8	-35.9	Peak	Horizontal
	3813.5	40.1	0.3	40.4	54.0	-13.6	Peak	Vertical
	4230.0	40.1	1.3	41.4	54.0	-12.6	Peak	Vertical
*	5641.0	38.3	4.6	42.9	81.8	-38.9	Peak	Vertical
*	6516.5	37.4	8.5	45.9	81.8	-35.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/21
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	40.5	0.1	40.6	54.0	-13.4	Peak	Horizontal
	3915.5	41.3	0.3	41.6	54.0	-12.4	Peak	Horizontal
*	5760.0	38.7	5.2	43.9	84.8	-40.9	Peak	Horizontal
*	6491.0	37.4	8.3	45.7	84.8	-39.1	Peak	Horizontal
	4043.0	41.3	0.5	41.8	54.0	-12.2	Peak	Vertical
	4646.5	38.7	3.4	42.1	54.0	-11.9	Peak	Vertical
*	5989.5	38.5	6.1	44.6	84.8	-40.2	Peak	Vertical
*	6601.5	37.0	8.7	45.7	84.8	-39.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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	40.3	0.2	40.5	54.0	-13.5	Peak	Horizontal
	4068.5	40.4	0.6	41.0	54.0	-13.0	Peak	Horizontal
*	5760.0	37.7	5.2	42.9	81.5	-38.6	Peak	Horizontal
*	6618.5	37.4	8.7	46.1	81.5	-35.4	Peak	Horizontal
	3694.5	42.3	0.1	42.4	54.0	-11.6	Peak	Vertical
	4230.0	40.2	1.3	41.5	54.0	-12.5	Peak	Vertical
*	5972.5	37.9	6.1	44.0	81.5	-37.5	Peak	Vertical
*	6499.5	37.0	8.4	45.4	81.5	-36.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3660.5	40.2	0.1	40.3	54.0	-13.7	Peak	Horizontal
	3983.5	40.7	0.4	41.1	54.0	-12.9	Peak	Horizontal
*	5760.0	38.4	5.2	43.6	79.5	-35.9	Peak	Horizontal
*	6312.5	37.6	7.2	44.8	79.5	-34.7	Peak	Horizontal
	4000.5	40.9	0.4	41.3	54.0	-12.7	Peak	Vertical
	4255.5	39.4	1.4	40.8	54.0	-13.2	Peak	Vertical
*	5981.0	38.0	6.1	44.1	79.5	-35.4	Peak	Vertical
*	6525.0	37.0	8.5	45.5	79.5	-34.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3873.0	40.1	0.3	40.4	54.0	-13.6	Peak	Horizontal
	4060.0	40.1	0.6	40.7	54.0	-13.3	Peak	Horizontal
*	5794.0	38.0	5.4	43.4	75.9	-32.5	Peak	Horizontal
*	6584.5	36.9	8.6	45.5	75.9	-30.4	Peak	Horizontal
	3813.5	39.9	0.3	40.2	54.0	-13.8	Peak	Vertical
	4145.0	39.6	0.9	40.5	54.0	-13.5	Peak	Vertical
*	5836.5	38.4	5.7	44.1	75.9	-31.8	Peak	Vertical
*	6618.5	37.5	8.7	46.2	75.9	-29.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (105.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3949.5	40.3	0.3	40.6	54.0	-13.4	Peak	Horizontal
	4349.0	39.1	1.8	40.9	54.0	-13.1	Peak	Horizontal
*	5675.0	38.4	4.8	43.2	75.0	-31.8	Peak	Horizontal
*	6550.5	37.3	8.6	45.9	75.0	-29.1	Peak	Horizontal
	3983.5	40.5	0.4	40.9	54.0	-13.1	Peak	Vertical
	4289.5	40.4	1.5	41.9	54.0	-12.1	Peak	Vertical
*	5938.5	38.1	6.0	44.1	75.0	-30.9	Peak	Vertical
*	6491.0	37.4	8.3	45.7	75.0	-29.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (105.0dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3924.0	40.0	0.3	40.3	54.0	-13.7	Peak	Horizontal
	4281.0	39.1	1.5	40.6	54.0	-13.4	Peak	Horizontal
*	6006.5	37.5	6.1	43.6	79.4	-35.8	Peak	Horizontal
*	6550.5	37.4	8.6	46.0	79.4	-33.4	Peak	Horizontal
	4043.0	40.9	0.5	41.4	54.0	-12.6	Peak	Vertical
	4238.5	39.7	1.3	41.0	54.0	-13.0	Peak	Vertical
*	5751.5	38.2	5.2	43.4	79.4	-36.0	Peak	Vertical
*	6542.0	37.3	8.6	45.9	79.4	-33.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	39.9	0.2	40.1	54.0	-13.9	Peak	Horizontal
	4136.5	40.1	0.9	41.0	54.0	-13.0	Peak	Horizontal
*	5913.0	38.5	5.9	44.4	81.5	-37.1	Peak	Horizontal
*	6440.0	37.2	8.0	45.2	81.5	-36.3	Peak	Horizontal
	3754.0	39.9	0.2	40.1	54.0	-13.9	Peak	Vertical
	4043.0	40.7	0.5	41.2	54.0	-12.8	Peak	Vertical
*	5598.5	38.3	4.5	42.8	81.5	-38.7	Peak	Vertical
*	6576.0	36.6	8.6	45.2	81.5	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.5dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	40.2	0.1	40.3	54.0	-13.7	Peak	Horizontal
	4272.5	39.7	1.5	41.2	54.0	-12.8	Peak	Horizontal
*	5904.5	37.4	5.9	43.3	78.1	-34.8	Peak	Horizontal
*	6533.5	36.6	8.5	45.1	78.1	-33.0	Peak	Horizontal
	3694.5	40.1	0.1	40.2	54.0	-13.8	Peak	Vertical
	4153.5	39.7	0.9	40.6	54.0	-13.4	Peak	Vertical
*	5751.5	38.0	5.2	43.2	78.1	-34.9	Peak	Vertical
*	6533.5	37.2	8.5	45.7	78.1	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.1dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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	40.7	0.5	41.2	54.0	-12.8	Peak	Horizontal
	4264.0	39.4	1.4	40.8	54.0	-13.2	Peak	Horizontal
*	5768.5	37.7	5.3	43.0	78.0	-35.0	Peak	Horizontal
*	6559.0	37.3	8.6	45.9	78.0	-32.1	Peak	Horizontal
	3839.0	39.8	0.3	40.1	54.0	-13.9	Peak	Vertical
	4026.0	41.2	0.5	41.7	54.0	-12.3	Peak	Vertical
*	5828.0	37.5	5.6	43.1	78.0	-34.9	Peak	Vertical
*	6499.5	37.4	8.4	45.8	78.0	-32.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.0dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3873.0	39.9	0.3	40.2	54.0	-13.8	Peak	Horizontal
	4060.0	40.7	0.6	41.3	54.0	-12.7	Peak	Horizontal
*	5751.5	37.9	5.2	43.1	78.4	-35.3	Peak	Horizontal
*	6499.5	37.1	8.4	45.5	78.4	-32.9	Peak	Horizontal
	3728.5	39.7	0.2	39.9	54.0	-14.1	Peak	Vertical
	4153.5	39.9	0.9	40.8	54.0	-13.2	Peak	Vertical
*	5964.0	37.4	6.1	43.5	78.4	-34.9	Peak	Vertical
*	6610.0	37.3	8.7	46.0	78.4	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/29
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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	39.7	0.2	39.9	54.0	-14.1	Peak	Horizontal
	4119.5	39.4	0.8	40.2	54.0	-13.8	Peak	Horizontal
*	5751.5	38.0	5.2	43.2	76.7	-33.5	Peak	Horizontal
*	6491.0	36.6	8.3	44.9	76.7	-31.8	Peak	Horizontal
	3677.5	41.7	0.1	41.8	54.0	-12.2	Peak	Vertical
	4085.5	41.1	0.7	41.8	54.0	-12.2	Peak	Vertical
*	5726.0	37.7	5.0	42.7	76.7	-34.0	Peak	Vertical
*	6533.5	36.9	8.5	45.4	76.7	-31.3	Peak	Vertical

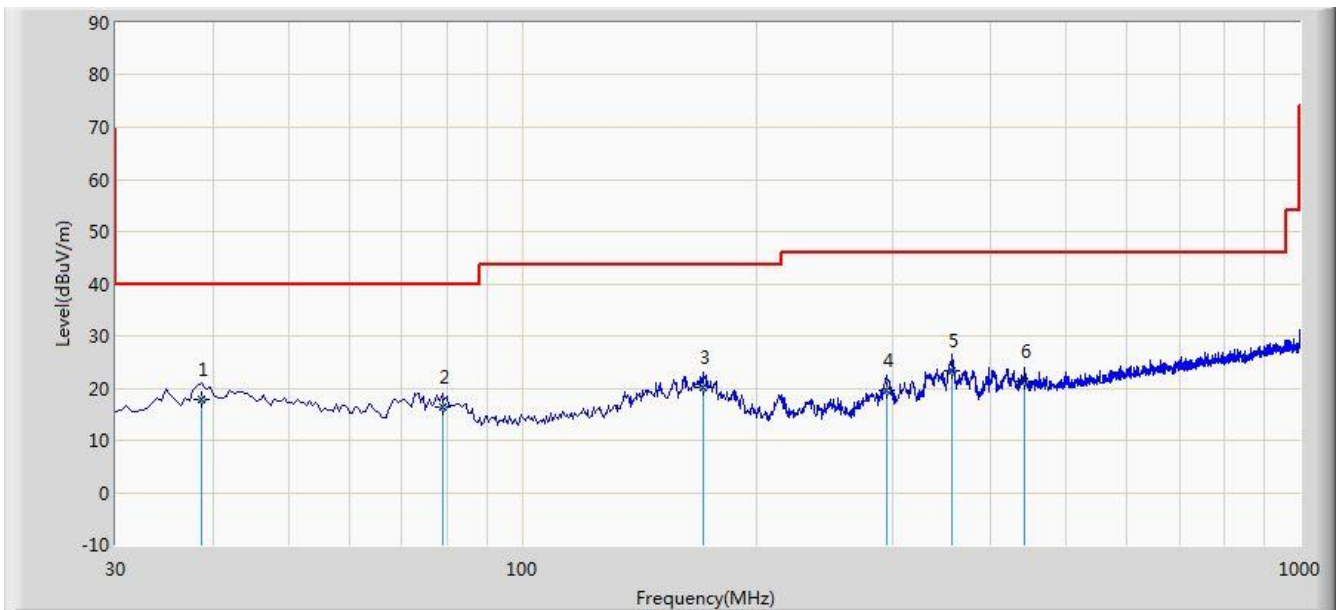
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (106.7dBμV/m) or LP0002 section 2.8 which is higher.

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: 2018/06/27 - 19:52
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Horizontal
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	38.730	17.827	4.197	-22.173	40.000	13.630	QP
2			78.985	16.330	7.031	-23.670	40.000	9.299	QP
3			170.650	20.052	9.634	-23.448	43.500	10.418	QP
4			293.840	19.518	4.902	-26.482	46.000	14.616	QP
5			356.890	23.457	7.302	-22.543	46.000	16.156	QP
6			442.250	21.251	3.724	-24.749	46.000	17.527	QP

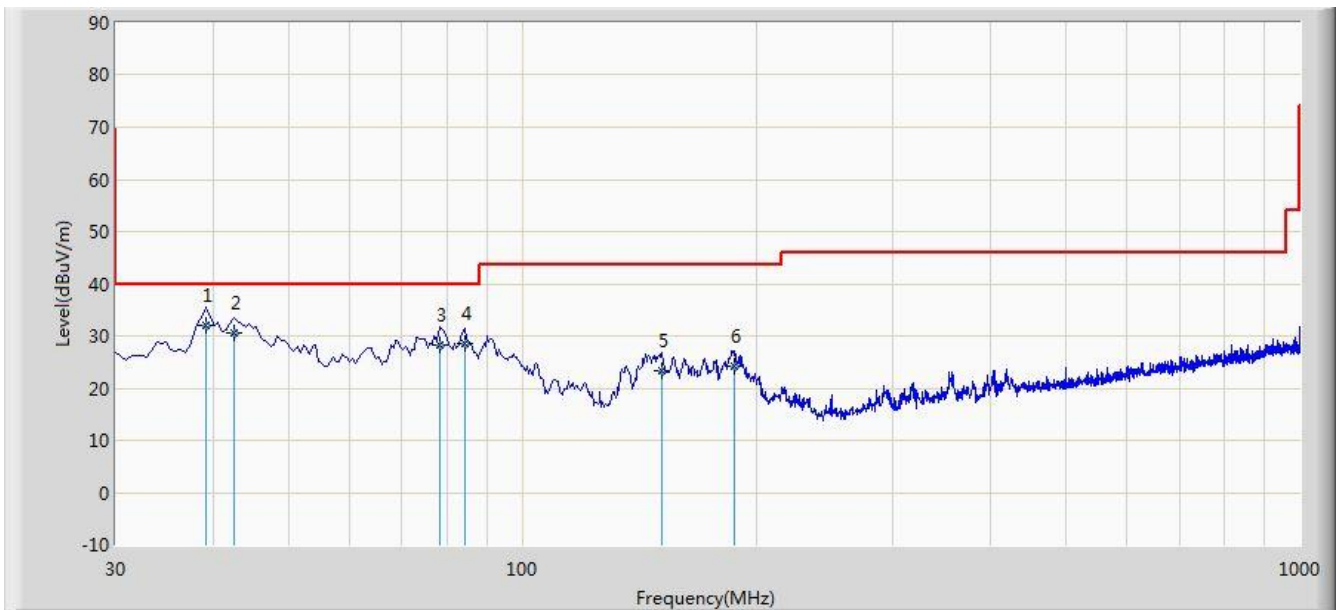
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

Site: AC1	Time: 2018/06/27 - 19:53
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Vertical
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	39.215	32.150	18.427	-7.850	40.000	13.723	QP
2			42.610	30.456	16.082	-9.544	40.000	14.374	QP
3			78.500	28.168	18.937	-11.832	40.000	9.232	QP
4			84.320	28.574	18.524	-11.426	40.000	10.050	QP
5			151.250	23.466	13.827	-20.034	43.500	9.638	QP
6			187.625	24.103	12.382	-19.397	43.500	11.722	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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

For APIN0514 - Directional Antenna (AP-ANT-48):

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11b - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3992.0	41.2	0.4	41.6	54.0	-12.4	Peak	Horizontal
	4893.0	41.2	3.7	44.9	54.0	-9.1	Peak	Horizontal
*	7120.0	36.8	11.6	48.4	82.9	-34.5	Peak	Horizontal
*	9967.5	36.0	15.3	51.3	82.9	-31.6	Peak	Horizontal
	3864.5	41.7	0.3	42.0	54.0	-12.0	Peak	Vertical
	4842.0	38.8	3.7	42.5	54.0	-11.5	Peak	Vertical
*	6533.5	37.3	8.5	45.8	82.9	-37.1	Peak	Vertical
*	10044.0	36.5	15.5	52.0	82.9	-30.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11b - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	4255.5	41.3	1.4	42.7	54.0	-11.3	Peak	Horizontal
	4833.5	38.0	3.7	41.7	54.0	-12.3	Peak	Horizontal
*	6508.0	36.8	8.4	45.2	81.2	-36.0	Peak	Horizontal
*	10520.0	35.6	17.2	52.8	81.2	-28.4	Peak	Horizontal
	3830.5	41.8	0.3	42.1	54.0	-11.9	Peak	Vertical
	5122.5	40.4	4.2	44.6	54.0	-9.4	Peak	Vertical
*	6839.5	37.3	9.3	46.6	81.2	-34.6	Peak	Vertical
*	10214.0	35.5	16.3	51.8	81.2	-29.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.2dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11b - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	43.9	0.1	44.0	54.0	-10.0	Peak	Horizontal
	4842.0	38.4	3.7	42.1	54.0	-11.9	Peak	Horizontal
*	6610.0	37.7	8.7	46.4	78.0	-31.6	Peak	Horizontal
*	10095.0	34.4	15.7	50.1	78.0	-27.9	Peak	Horizontal
	3694.5	43.7	0.1	43.8	54.0	-10.2	Peak	Vertical
	5029.0	39.9	3.9	43.8	54.0	-10.2	Peak	Vertical
*	6958.5	37.4	10.2	47.6	78.0	-30.4	Peak	Vertical
*	10010.0	35.4	15.4	50.8	78.0	-27.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.0dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11g - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	4034.5	41.0	0.5	41.5	54.0	-12.5	Peak	Horizontal
	4935.5	39.1	3.7	42.8	54.0	-11.2	Peak	Horizontal
*	6788.5	37.8	9.0	46.8	82.8	-36.0	Peak	Horizontal
*	9831.5	34.9	15.9	50.8	82.8	-32.0	Peak	Horizontal
	4085.5	40.5	0.7	41.2	54.0	-12.8	Peak	Vertical
	5003.5	38.9	3.8	42.7	54.0	-11.3	Peak	Vertical
*	6525.0	37.5	8.5	46.0	82.8	-36.8	Peak	Vertical
*	9942.0	35.5	15.3	50.8	82.8	-32.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11g - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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	41.1	0.5	41.6	54.0	-12.4	Peak	Horizontal
	4910.0	39.1	3.7	42.8	54.0	-11.2	Peak	Horizontal
*	6899.0	37.2	9.8	47.0	82.4	-35.4	Peak	Horizontal
*	9882.5	35.2	15.6	50.8	82.4	-31.6	Peak	Horizontal
	4060.0	40.2	0.6	40.8	54.0	-13.2	Peak	Vertical
	4935.5	38.9	3.7	42.6	54.0	-11.4	Peak	Vertical
*	6253.0	37.7	7.0	44.7	82.4	-37.7	Peak	Vertical
*	10052.5	35.7	15.5	51.2	82.4	-31.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11g - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	42.3	0.1	42.4	54.0	-11.6	Peak	Horizontal
	5003.5	39.8	3.8	43.6	54.0	-10.4	Peak	Horizontal
*	6729.0	36.4	8.7	45.1	81.9	-36.8	Peak	Horizontal
*	9772.0	34.7	14.9	49.6	81.9	-32.3	Peak	Horizontal
	4085.5	40.3	0.7	41.0	54.0	-13.0	Peak	Vertical
	4986.5	37.3	3.8	41.1	54.0	-12.9	Peak	Vertical
*	6397.5	37.9	7.7	45.6	81.9	-36.3	Peak	Vertical
*	10120.5	33.4	15.8	49.2	81.9	-32.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3618.0	42.8	0.0	42.8	54.0	-11.2	Peak	Horizontal
	4859.0	38.9	3.7	42.6	54.0	-11.4	Peak	Horizontal
*	6890.5	37.4	9.7	47.1	82.9	-35.8	Peak	Horizontal
*	10171.5	35.5	16.1	51.6	82.9	-31.3	Peak	Horizontal
	3618.0	43.0	0.0	43.0	54.0	-11.0	Peak	Vertical
	4884.5	39.2	3.7	42.9	54.0	-11.1	Peak	Vertical
*	6559.0	37.0	8.6	45.6	82.9	-37.3	Peak	Vertical
*	10273.5	35.1	16.5	51.6	82.9	-31.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/21
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	43.4	0.1	43.5	54.0	-10.5	Peak	Horizontal
	4901.5	38.4	3.7	42.1	54.0	-11.9	Peak	Horizontal
*	6321.0	36.9	7.3	44.2	82.1	-37.9	Peak	Horizontal
*	9942.0	35.9	15.3	51.2	82.1	-30.9	Peak	Horizontal
	3652.0	42.6	0.1	42.7	54.0	-11.3	Peak	Vertical
	4901.5	38.3	3.7	42.0	54.0	-12.0	Peak	Vertical
*	6805.5	37.4	9.1	46.5	82.1	-35.6	Peak	Vertical
*	10061.0	36.5	15.6	52.1	82.1	-30.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.1dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	42.7	0.1	42.8	54.0	-11.2	Peak	Horizontal
	4952.5	39.5	3.7	43.2	54.0	-10.8	Peak	Horizontal
*	6839.5	36.5	9.3	45.8	81.0	-35.2	Peak	Horizontal
*	9823.0	34.8	15.6	50.4	81.0	-30.6	Peak	Horizontal
	3694.5	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4791.0	38.5	3.7	42.2	54.0	-11.8	Peak	Vertical
*	6525.0	35.6	8.5	44.1	81.0	-36.9	Peak	Vertical
*	9950.5	36.0	15.3	51.3	81.0	-29.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.0dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3635.0	42.5	0.0	42.5	54.0	-11.5	Peak	Horizontal
	4927.0	38.9	3.7	42.6	54.0	-11.4	Peak	Horizontal
*	6355.0	38.0	7.5	45.5	79.4	-33.9	Peak	Horizontal
*	9848.5	34.3	16.1	50.4	79.4	-29.0	Peak	Horizontal
	3635.0	42.8	0.0	42.8	54.0	-11.2	Peak	Vertical
	4935.5	38.8	3.7	42.5	54.0	-11.5	Peak	Vertical
*	6295.5	35.8	7.2	43.0	79.4	-36.4	Peak	Vertical
*	9848.5	34.1	16.1	50.2	79.4	-29.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.4dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	42.1	0.1	42.2	54.0	-11.8	Peak	Horizontal
	4808.0	38.8	3.7	42.5	54.0	-11.5	Peak	Horizontal
*	6457.0	36.7	8.1	44.8	78.2	-33.4	Peak	Horizontal
*	9831.5	35.1	15.9	51.0	78.2	-27.2	Peak	Horizontal
	3652.0	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4918.5	39.1	3.7	42.8	54.0	-11.2	Peak	Vertical
*	6321.0	36.8	7.3	44.1	78.2	-34.1	Peak	Vertical
*	9874.0	34.6	15.8	50.4	78.2	-27.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.2dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3949.5	38.9	0.3	39.2	54.0	-14.8	Peak	Horizontal
	4706.0	36.7	3.6	40.3	54.0	-13.7	Peak	Horizontal
*	6295.5	36.0	7.2	43.2	77.0	-33.8	Peak	Horizontal
*	9678.5	33.7	14.6	48.3	77.0	-28.7	Peak	Horizontal
	3677.5	43.2	0.1	43.3	54.0	-10.7	Peak	Vertical
	4816.5	39.1	3.7	42.8	54.0	-11.2	Peak	Vertical
*	6542.0	36.1	8.6	44.7	77.0	-32.3	Peak	Vertical
*	9806.0	34.9	15.2	50.1	77.0	-26.9	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (107.0dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	01
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3618.0	42.3	0.0	42.3	54.0	-11.7	Peak	Horizontal
	4901.5	37.1	3.7	40.8	54.0	-13.2	Peak	Horizontal
*	6474.0	36.9	8.2	45.1	83.9	-38.8	Peak	Horizontal
*	9831.5	34.9	15.9	50.8	83.9	-33.1	Peak	Horizontal
	3618.0	42.9	0.0	42.9	54.0	-11.1	Peak	Vertical
	5020.5	39.0	3.9	42.9	54.0	-11.1	Peak	Vertical
*	6355.0	37.8	7.5	45.3	83.9	-38.6	Peak	Vertical
*	9823.0	34.0	15.6	49.6	83.9	-34.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.9dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	42.8	0.1	42.9	54.0	-11.1	Peak	Horizontal
	4901.5	38.8	3.7	42.5	54.0	-11.5	Peak	Horizontal
*	6584.5	36.9	8.6	45.5	83.2	-37.7	Peak	Horizontal
*	10069.5	35.3	15.6	50.9	83.2	-32.3	Peak	Horizontal
	3643.5	38.9	0.0	38.9	54.0	-15.1	Peak	Vertical
	5046.0	38.5	4.0	42.5	54.0	-11.5	Peak	Vertical
*	6134.0	36.2	6.6	42.8	83.2	-40.4	Peak	Vertical
*	9653.0	35.4	14.5	49.9	83.2	-33.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.2dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	11
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3694.5	42.2	0.1	42.3	54.0	-11.7	Peak	Horizontal
	4893.0	38.2	3.7	41.9	54.0	-12.1	Peak	Horizontal
*	6363.5	37.1	7.5	44.6	82.3	-37.7	Peak	Horizontal
*	10171.5	34.1	16.1	50.2	82.3	-32.1	Peak	Horizontal
	3694.5	42.7	0.1	42.8	54.0	-11.2	Peak	Vertical
	4765.5	38.7	3.7	42.4	54.0	-11.6	Peak	Vertical
*	6270.0	37.2	7.1	44.3	82.3	-38.0	Peak	Vertical
*	9899.5	33.9	15.4	49.3	82.3	-33.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	03
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3635.0	42.4	0.0	42.4	54.0	-11.6	Peak	Horizontal
	4901.5	38.6	3.7	42.3	54.0	-11.7	Peak	Horizontal
*	6576.0	36.5	8.6	45.1	80.3	-35.2	Peak	Horizontal
*	9942.0	35.6	15.3	50.9	80.3	-29.4	Peak	Horizontal
	3635.0	43.6	0.0	43.6	54.0	-10.4	Peak	Vertical
	4867.5	38.8	3.7	42.5	54.0	-11.5	Peak	Vertical
*	6542.0	37.3	8.6	45.9	80.3	-34.4	Peak	Vertical
*	10112.0	33.4	15.8	49.2	80.3	-31.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.3dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	06
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3652.0	42.5	0.1	42.6	54.0	-11.4	Peak	Horizontal
	4995.0	38.6	3.8	42.4	54.0	-11.6	Peak	Horizontal
*	6244.5	35.8	7.0	42.8	79.7	-36.9	Peak	Horizontal
*	10035.5	34.3	15.5	49.8	79.7	-29.9	Peak	Horizontal
	3652.0	43.0	0.1	43.1	54.0	-10.9	Peak	Vertical
	4740.0	38.4	3.6	42.0	54.0	-12.0	Peak	Vertical
*	6491.0	36.9	8.3	45.2	79.7	-34.5	Peak	Vertical
*	9942.0	36.7	15.3	52.0	79.7	-27.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.7dBμV/m) or LP0002 section 2.8 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)

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/28
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	09
備註	1. Average measurement was not performed if peak level lower than average limit. 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
	3677.5	42.3	0.1	42.4	54.0	-11.6	Peak	Horizontal
	4629.5	39.5	3.3	42.8	54.0	-11.2	Peak	Horizontal
*	6304.0	38.1	7.2	45.3	79.1	-33.8	Peak	Horizontal
*	10061.0	35.5	15.6	51.1	79.1	-28.0	Peak	Horizontal
	3677.5	44.0	0.1	44.1	54.0	-9.9	Peak	Vertical
	4995.0	38.2	3.8	42.0	54.0	-12.0	Peak	Vertical
*	6295.5	38.0	7.2	45.2	79.1	-33.9	Peak	Vertical
*	10001.5	35.9	15.4	51.3	79.1	-27.8	Peak	Vertical

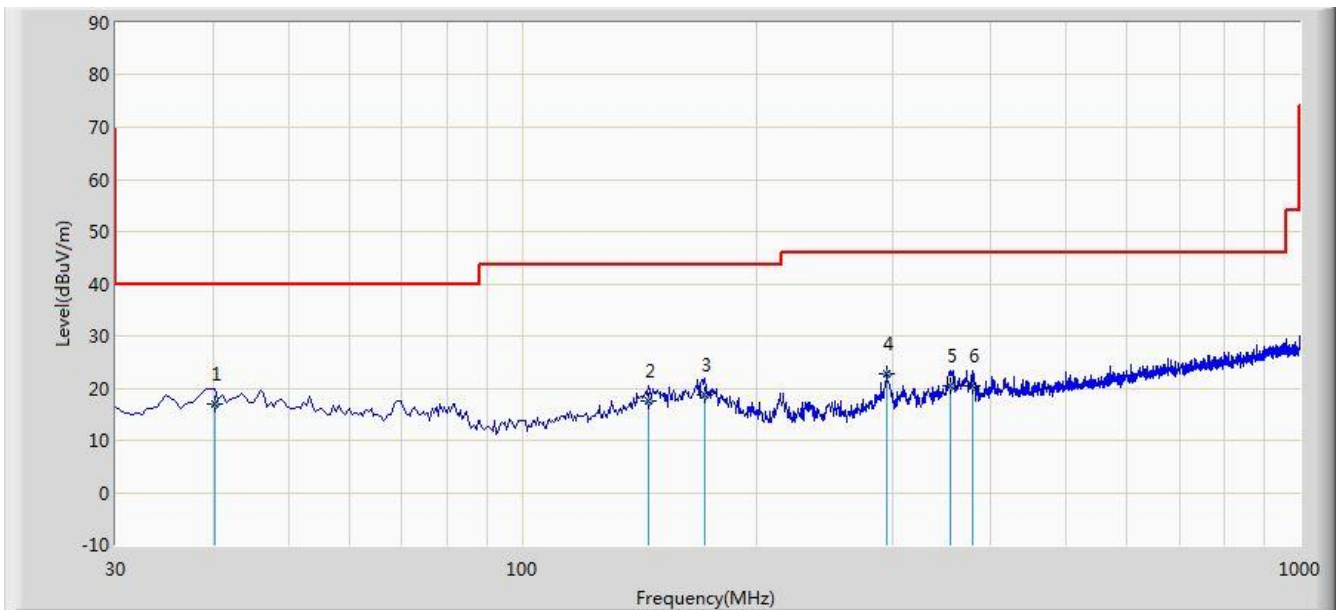
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.1dBμV/m) or LP0002 section 2.8 which is higher.

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: 2018/06/27 - 19:55
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Horizontal
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	40.185	16.843	2.934	-23.157	40.000	13.909	QP
2			145.430	17.399	7.836	-26.101	43.500	9.563	QP
3			171.620	18.836	8.372	-24.664	43.500	10.464	QP
4			294.325	22.670	8.042	-23.330	46.000	14.628	QP
5			355.920	20.357	4.217	-25.643	46.000	16.140	QP
6			379.685	20.325	3.826	-25.675	46.000	16.498	QP

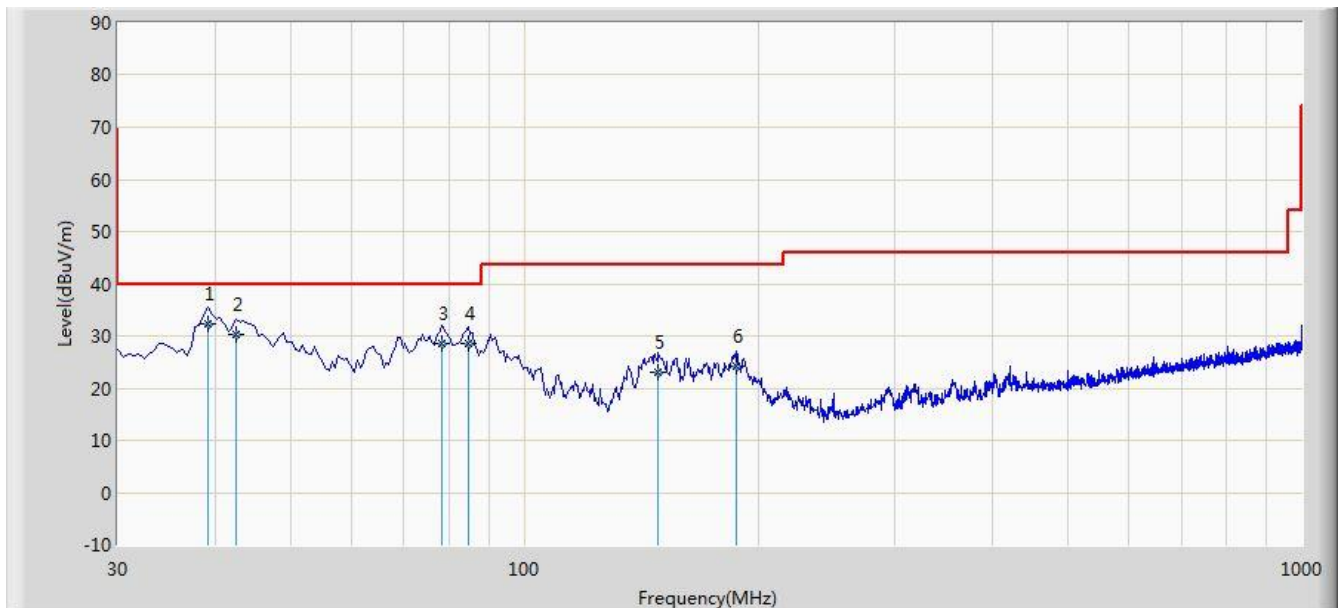
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

Site: AC1	Time: 2018/06/27 - 19:57
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	Polarity: Vertical
EUT: 510 系列存取點	Power: AC 110V/60Hz
Worst Case Mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	39.215	32.357	18.634	-7.643	40.000	13.723	QP
2			42.610	30.336	15.962	-9.664	40.000	14.374	QP
3			78.500	28.507	19.276	-11.493	40.000	9.232	QP
4			84.805	28.534	18.416	-11.466	40.000	10.118	QP
5			148.825	23.099	13.524	-20.401	43.500	9.575	QP
6			187.625	24.237	12.516	-19.263	43.500	11.722	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.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

For APIN0515:

待測物名稱	510 系列存取點	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2018/06/21
測試模式	802.11b - Ant 0 + 1	測試通道	01
備註	3. Average measurement was not performed if peak level lower than average limit. 4. 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
*	7043.5	37.7	11.0	48.7	83.4	-34.7	Peak	Horizontal
*	9933.5	36.2	15.3	51.5	83.4	-31.9	Peak	Horizontal
	11497.5	34.1	19.3	53.4	74.0	-20.6	Peak	Horizontal
	11497.5	21.3	19.3	40.6	54.0	-13.4	Average	Horizontal
	12509.0	33.7	18.5	52.2	54.0	-1.8	Peak	Horizontal
*	6261.5	38.5	7.0	45.5	83.4	-37.9	Peak	Vertical
*	8828.5	35.2	14.0	49.2	83.4	-34.2	Peak	Vertical
	10885.5	35.1	18.3	53.4	74.0	-20.6	Peak	Vertical
	10885.5	22.4	18.3	40.7	54.0	-13.3	Average	Vertical
	11667.5	33.2	19.3	52.5	54.0	-1.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.4dBμV/m) or LP0002 section 2.8 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)