



低功率射頻電機測試報告

台灣索尼股份有限公司

器材名稱: Communication Module (WLAN,BTLE)

廠牌: SONY

型號: Type1DR

申請廠商 : 台灣索尼股份有限公司
 台北市中山區長春路 145 號 5 樓

測試實驗室 : 敦吉檢測科技股份有限公司電磁相容部
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低功率射頻電機測試報告

受理日期 : 2018年08月13日
 完成日期 : 2018年09月04日
 報告號碼 : EM-NC180144
 實驗室名稱 : 敦吉檢測科技股份有限公司電磁相容部
 實驗室地址 : 新北市林口區頂福里53-11號
 實驗室電話 : (02) 2609-9301, (02) 2609-2133
 認可編號及範圍 : TAF 1724 (9KHz ~ 40GHz)
 申請廠商 : 台灣索尼股份有限公司
 製造廠商 : 台灣索尼股份有限公司
 器材名稱 : Communication Module (WLAN,BTLE)
 廠牌 : SONY
 型號 : Type1DR
 工作頻率/發射功率 :



無線技術	工作頻率(MHz)	頻道數	發射功率(dBm)	
			峰值 (Peak)	平均值 (Average)
802.11b	2412-2462	11	7.71	4.48
802.11g	2412-2462	11	13.63	4.34
802.11n-HT20	2412-2462	11	13.66	4.46
BLE	2402-2480	40	7.34	---

調變方式 :

無線技術	調變方式
802.11b	DSSS (DBPSK/ DQPSK/ CCK)
802.11g/n-HT20	OFDM (BPSK/ QPSK/ 16QAM/ 64QAM)
BLE	GFSK

天線規格 : 此裝置使用固定式天線，其天線資料如下:

天線類型	製造商	型號	頻率(MHz)	天線增益(dBi)
Monopole Antenna	Fujikura Ltd.	FPC-2010	2400-2483.5	-6.60

註:天線已符合NCC低功率射頻電機技術規範2.2.節之規定

- 備註 :
1. 本測試報告僅對受測之樣品負責。
 2. 非經本公司同意，測試報告不得摘錄複印使用。(全部複製除外)
 3. 本產品所適用之規範修訂日期 2018 年 01 月 10 日。

依低功率射頻電機技術規範 3.10.1 節，工作頻率為 2400-2483.5MHz，採用數位調變技術之發射器具。

項次	測試項目	適用規範章節	測試結果	量測設備	判定
1	電源傳導干擾電壓	低功率射頻電機技術規範 2.3 節	請參閱 4.5 節	請參閱 2.1 節	合格
2	場強輻射	低功率射頻電機技術規範 3.10.1.5 節、2.8 節	請參閱 5.5 節	請參閱 2.2 節	合格
3	峰值輸出功率	低功率射頻電機技術規範 3.10.1.2 節(1)(C)	請參閱 6.5 節	請參閱 2.3 節	合格
4	電波暴露量	低功率射頻電機技術規範 5.20.2 節(2)	請參閱 7.5 節	無	合格

單位主管：

劉李煌

(劉李煌/副總經理)

測試員：

薛舜誠

(薛舜誠/課長)

1 一般資料

1.1 產品描述

- a) 產品型態：Communication Module (WLAN,BTLE)
- b) 廠牌：SONY
- c) 產品型號：Type1DR
- d) 供應電源：備註：適用設備：Digital Still Camera；
廠牌/型號：SONY/ DSC-HX99
- e) 測試電源：DC 3.3V (透過 Digital Still Camera 供電)

1.2 產品特性

- 1.2.1. 此裝置系統為 Communication Module (WLAN,BTLE)，具 IEEE 802.11b/g/n 及 BLE 功能。
- 1.2.2. Wi-Fi 功能：採用 IEEE 802.11b/g/n 數位直接序列展頻調變技術，其應用為區域網路無線傳輸，IEEE 802.11b 最高資料傳輸速度為 11Mbps，IEEE 802.11g 最高資料傳輸速度為 54Mbps，IEEE 802.11n-HT20 最高資料傳輸速度為 150Mbps。
- 1.2.3. Bluetooth Low Energy (BLE)發射頻率落於 2400~2483.5MHz 共分 40 個頻道，最大傳輸速率為 1Mbps。
- 1.2.4. 本次是針對審驗合格證書號碼 CCAO18LP0350T3 登錄機型的差異說明如下：

差異點	原登錄機型	第一次系列申請機型	本次系列申請機型
廠牌	SONY	SONY	SONY
型號	Type1DR	Type1DR	Type1DR
適用設備	Digital Still Camera 廠牌: SONY, 型號: WW771132	Digital Still Camera 廠牌SONY, 型號 DSC-WX800	Digital Still Camera 廠牌SONY, 型號 DSC-HX99
天線	Monopole Antenna: -10.39dBi	Monopole Antenna:-11.01dBi	Monopole Antenna:-6.60dBi
報告號碼	EM-NC180029	EM-NC180144	EM-NC180150
審驗合格證書 號碼	CCAO18LP0350T3	CCAO18LP0350T3	CCAO18LP0350T3

因此次增列適用設備部份對電源線傳導干擾、場強輻射之不必要發射及峰值輸出功率之測試結果會有影響，故本實驗室針對此項測試項目進行量測，該測試皆符合規定。所得測試資料請見本報告之各章節。單獨限制性模組之各項測試數據及說明，請參考報告號碼: EM-NC180029)

1.3 測試方法之依據

- 1.3.1. 本測試報告之所有項目皆依據 NCC 低功率射頻電機技術規範執行檢驗，未規範者依國家標準辦理，無國家標準可適用者，依 IEEE ANSI、歐盟 ETSI EN 與美國 EIA、FCC 47 CFR PART 2、KDB 及 ARIB STD-T67 等有關檢驗之規定。
- 1.3.2. 根據 NCC 一致性會議，提案編號 09406017，此產品所建之 NFC 標籤為 13.56MHz 之被動式標籤可免除測試。

2 量測儀器

2.1 電源線傳導干擾量測儀器

2.1.1. 量測儀器

儀器名稱	製造者	型號	序號	校正日期	校正周期
測試接收機	R&S	ESR3	101774	2018. 01. 24	1 年
電源阻抗模擬網路#1	R&S	ENV4200	100169	2017. 11. 12	1 年
電源阻抗模擬網路#2	Kyoritsu	KNW-407	8-1539-3	2018. 01. 09	1 年
突波限制器	R&S	ESH3-Z2	100354	2018. 01. 16	1 年
同軸電纜	Yeida	RG/58AU	CE-08	2017. 09. 22	1 年
測試軟體	Audix	e3	V.6.120424	N.C.R.	N.C.R.

2.1.2. 儀器設定

儀器名稱	使用功能	解析頻寬	視訊頻寬
測試接收機	傳導電壓干擾量測(dB μ V)	9kHz	N/A

2.3 場強輻射量測儀器

2.3.1. 頻率範圍 30MHz~1000MHz 量測使用儀器 (No. 1 3m Chamber)

儀器名稱	製造者	型號	序號	校正日期	校正周期
頻譜分析儀	Agilent	N9010A-526	MY53400071	2017. 09. 13	1 年
測試接收機	R&S	ESCS30	100338	2018. 06. 20	1 年
前置放大器	HP	8447D	2944A06305	2018. 01. 30	1 年
廣帶域天線	TESEQ	CBL6112D	33821	2018. 01. 21	1 年
同軸電纜	MIYAZAKI	5D2W	RE-11	2018. 02. 08	1 年
測試軟體	Audix	e3	V.6.110601	N.C.R.	N.C.R.

2.3.2. 頻率範圍 1GHz 以上量測使用儀器(Fully 3m Chamber)

儀器名稱	製造者	型號	序號	校正日期	校正周期
頻譜分析儀	Agilent	N9030A-544	US51350140	2018. 06. 20	1 年
前置放大器	HP	8449B	3008A02678	2018. 03. 06	1 年
2.4GHz陷波濾波器	K&L	7NSL10-2441.5E 130.5-00	1	2018. 07. 24	1 年
3GHz陷波濾波器	Microwave	H3G018G1	484798	N.C.R.	N.C.R.
喇叭天線	ETS-Lindgren	3117	00135902	2018. 03. 08	1 年
喇叭天線	COM-POWER	AH-840	101092	2018. 05. 07	1 年
同軸電纜	HUBER+SUHNER	SUCOFLEX 106	54591/6	N.C.R.	N.C.R.
測試軟體	Audix	e3	V.6.110601	N.C.R.	N.C.R.

2.3.3. 儀器設定

量測頻率範圍	儀器名稱/使用功能	檢波值	解析頻寬	視訊頻寬	
30至1000MHz	頻譜分析儀	Peak	120kHz	1MHz	
1GHz以上	頻譜分析儀	Peak	1MHz	1MHz	
	頻譜分析儀	Average	1MHz	802.11b	10Hz
				802.11g	680Hz
				802.11n-HT20	750Hz
				BLE	2.7kHz

2.4 RF Conducted 量測儀器

儀器名稱	製造者	型號	序號	校正日期	校正周期
功率計	Antrisu	ML2495A	1145008	2017. 11. 03	1 年
功率感應器	Antrisu	MA2411B	1126096	2017. 11. 03	1 年

3 受測裝置之系統說明

3.1 申請之受測裝置

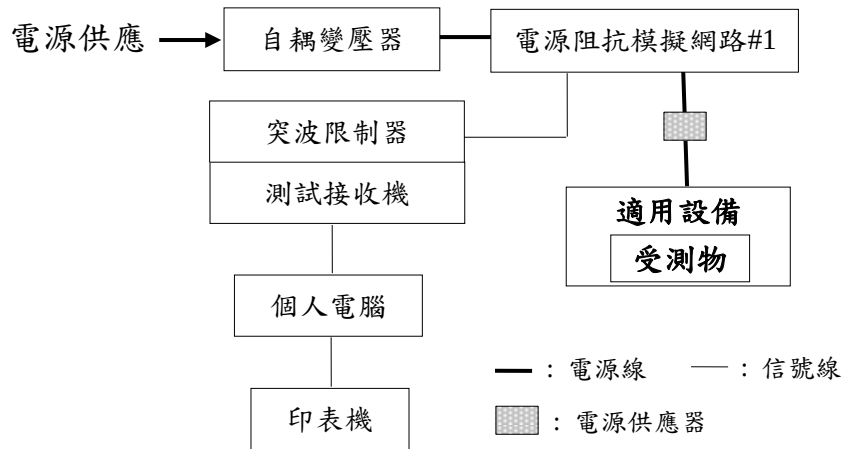
裝置名稱	製造者	型 號	說明/纜線
Communication Module (WLAN,BTLE)	Sony Corporation	Type1DR	---

3.2 測試連接之週邊裝置

裝置名稱	製造者	型 號	說明/纜線
Digital Still Camera	SONY	DSC-HX99	二次鋰電池組 (附件) : SONY, 型號: NP-BX1 (3.6V, 4.5Wh) 電源供應器(附件) : SONY, 型號 AC-UB10C BSMI 驗證登錄代碼:R33021 輸入電壓: AC100-240V, 50/60Hz, 70mA 輸出電壓: DC 5V, 0.5A AC 電源線: 可拆, 無金屬被覆, 1.8 米長 (2C) 小型 USB 電纜 (附件) : 可拆, 金屬被覆, 0.5 米長 HDMI 電纜 (附件) : 可拆, 金屬被覆, 1.8 米長

3.3 測試配置

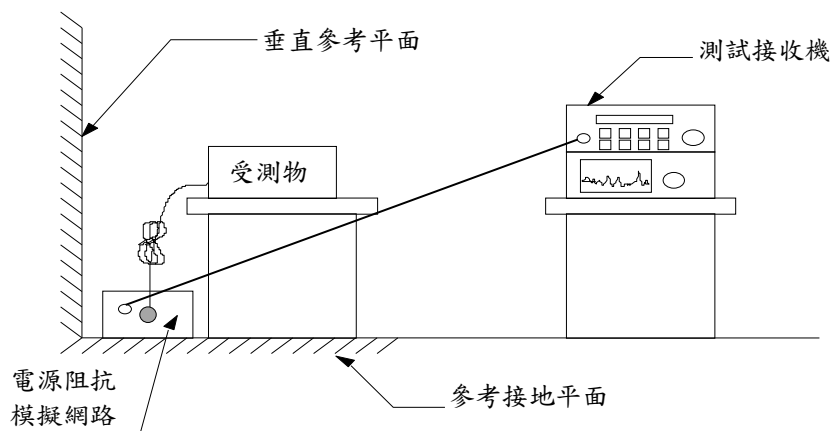
3.3.1. 電源線傳導干擾之測試配置



待測物: Communication Module (WLAN,BTLE)

適用設備: Digital Still Camera

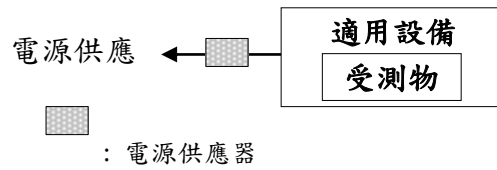
● 量測場地擺設之架構圖



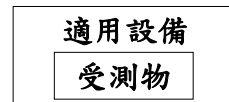
3.3.2. 輻射之測試配置

● 受測物裝置與連接週邊裝置之架構圖

連接電供應器模式：



單機模式：



受測物: Communication Module (WLAN,BTLE)

適用設備: Digital Still Camera

● 量測場地擺設之架構圖

圖 1: 量測場地(No. 1 3m Chamber)量測頻率低於 1GHz 之測試配置

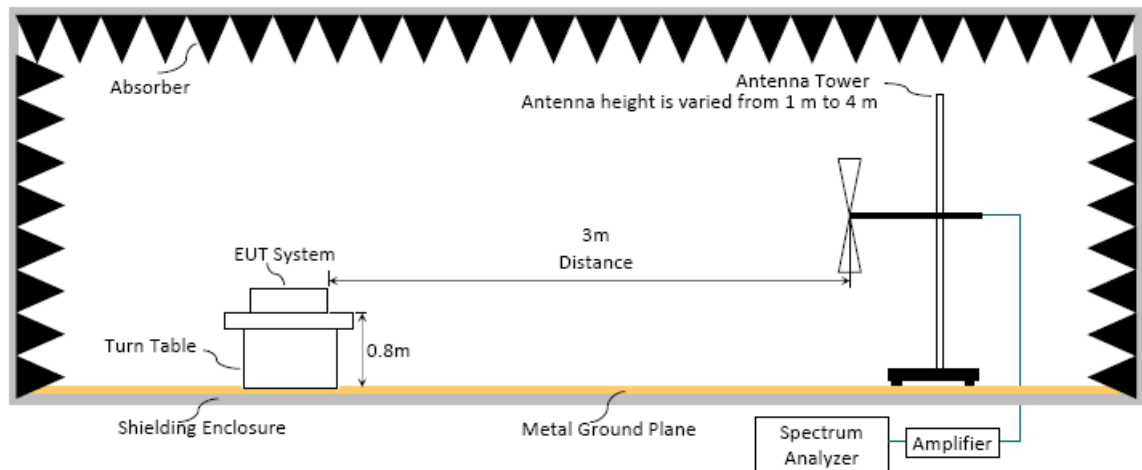
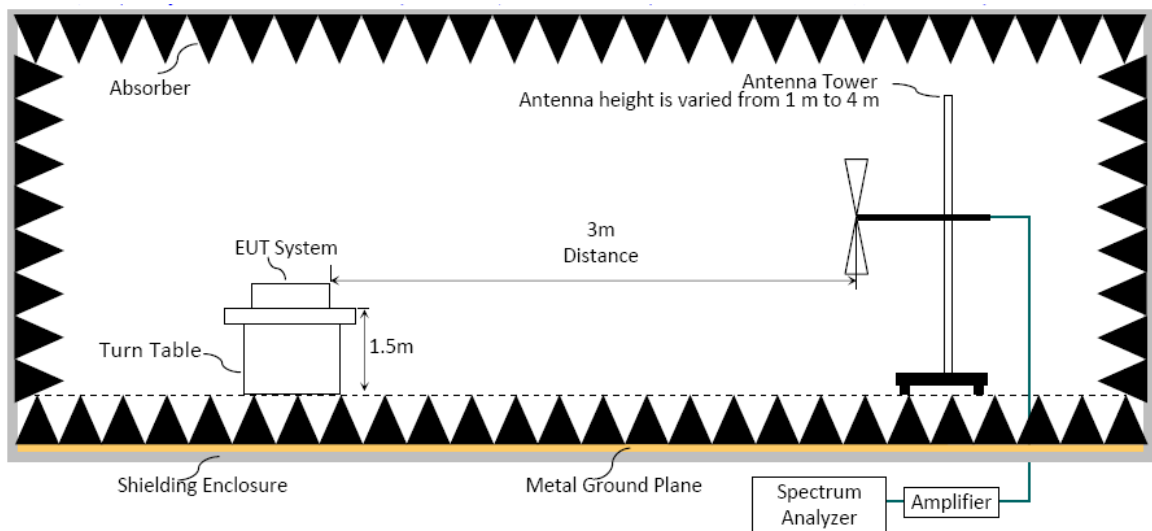
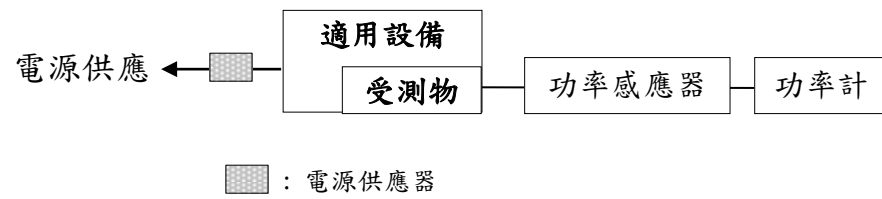


圖 2: 量測場地(Fully 3m Chamber)量測頻率高於 1GHz 之測試配置



3.3.3. RF Conducted 之測試配置

● 峰值輸出功率



受測物: Communication Module (WLAN,BTLE)

適用設備: Digital Still Camera

4 電源線傳導干擾之量測

4.1 適用標準

依據 NCC 低功率射頻電機技術規範之 2.3 節之規定，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 150 kHz~30 百萬赫(MHz)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制值。測量時應經過 50 微亨利(uH)及 50 歐姆(Ω)之電源線阻抗穩定網路(Line Impedance Stabilization Network；LISN)。頻率重疊處，以較低限制值為準。

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

註：隨頻率之對數遞減

4.2 量測方法

- 4.2.1. 將受測物依章節 3.3.1 圖示擺設在隔離室內離地 80 公分的非金屬桌面上，並透過電源阻抗模擬網路接至 110V/60Hz 交流電源上；其他測試週邊裝置之電源線則連接至另一台電源阻抗模擬網路#2。
- 4.2.2. 電源阻抗模擬網路是在電壓測量端，針對高頻訊號時，提供一個固定阻抗(50 Ω /50 μ H)，以及提供待測設備一個與週邊雜訊隔離的電源。(未受測之電源阻抗模擬網路信號端需接上一 50 Ω 之終端阻抗)
- 4.2.3. 電源阻抗模擬網路與受測物的最近表面距離為 0.8 米，受測物的電源線若超過 1 米，則需加以來回的折疊束綁，且折疊束綁的部份其長度不可超過 0.4 米。
- 4.2.4. 而後根據規定進行量測並在頻率範圍 0.15MHz 至 30MHz 間各頻率點進行最大讀值量測及記錄，電源的中性線(Neutral)與火線(Line)分別需依此予以量測。
- 4.2.5. 進行傳導干擾電壓量測時，測試接收機之頻寬設定在 9kHz。
- 4.2.6. 對受測物裝置先以峰值檢波器進行檢測並取得結果曲線圖，再以準峰值及平均值檢波器進行讀值之量測，所得測試結果資料是附於附錄一。
(備註：當使用準峰值檢波器測量而能符合平均值檢波器的限制值，則此時受測物可被認為同時符合二者的限制值，而不需要再用平均值檢波器測試。)
- 4.2.7. 場強度之計算，公式如下：

$$\text{場強結果值(Emission Level)} = \text{參數(AMN Factor \& Cable Loss \& Pulse Att.)} + \text{接收機讀值(Reading)}。$$

$$\text{邊緣值(Margin)} = \text{限制值(Limits)} - \text{結果值(Emission Level)}。$$

其中參數為：電源阻抗模擬網路損失與電纜損失

4.3 量測時受測物之工作狀況

由筆記型電腦修改適用設備 Digital Still Camera 內記憶卡指令，使受測物進行發射/接收動作以進行量測，動作持續不斷直到測試結束。(筆記型電腦僅用於設定程式用)

4.4 量測時受測物之不確定度

測 試 項 目	頻率範圍	不確定度
傳導干擾電壓量測	150kHz~30MHz	±3.5dB

4.5 電源線傳導干擾之量測結果

量測結果皆合乎標準規定，請參見附錄一。

5 場強輻射之量測

5.1 適用標準

依據 NCC 低功率射頻電機技術規範 3.10.1.5 節(1)之要求：操作頻帶範圍外之任意 100 kHz 內，發射機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 kHz 內的射頻功率，其衰減值限制如下：

- (1) 輸出功率以附件二之峰值輸出功率方式測量者，至少須衰減 20 dB，可使用射頻傳導或輻射方式測量。

此外，落於 2.7 禁用頻段之輻射發射，應符合 2.8 之規定。

依據 NCC 低功率射頻電機技術規範之 2.7 節之規定：

任何低功率射頻電機之主波皆不得使用下表所列各頻帶內之頻率。低功率射頻電機落於下表所列頻帶內之混附發射，其電場強度必須符合第 2.8.節的限制規定。

頻率(MHz)	頻率(MHz)	頻率(MHz)
0.090~0.110	240.00~285.00	3332.0~3339.0
0.490~0.510	322.00~335.40	3345.8~3358.0
2.172~2.198	399.90~410.00	3500.0~4400.0
3.013~3.033	485.00~510.00	4500.0~5250.0
4.115~4.198	608.00~614.00	5350.0~5460.0
5.670~5.690	703.00~748.00	7250.0~7750.0
6.200~6.300	758.00~803.00	8025.0~8500.0
8.230~8.400	825.00~915.00	9000.0~9200.0
12.265~12.600	935.00~1240.0	9300.0~9500.0
13.340~13.430	1300.0~1427.0	10600~12700
14.965~15.020	1435.0~1626.5	13250~13400
16.700~16.755	1660.0~1785.0	14470~14500
19.965~20.020	1805.0~1880.0	15350~16200
25.500~25.700	1885.0~1900.0	17700~21400
37.475~38.275	1905.0~1985.0	22010~23120
73.500~75.400	2010.0~2025.0	23600~24000
108.00~138.00	2110.0~2170.0	31200~31800
149.90~150.05	2200.0~2300.0	36430~36500
156.70~156.90	2310.0~2390.0	38600以上
162.01~167.17	2483.5~2900.0	
167.72~173.20	3260.0~3267.0	

依據 NCC 低功率射頻電機技術規範之(2.8)之規定：

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 MHz	測試距離 m	限制值 dB μ V/m	限制值 μ V/m
0.009 - 0.490(含)	300	67.6-20 log f(kHz)	2400/f kHz
0.490(不含) - 1.705(含)	30	87.6-20 log f(kHz)	24000/f kHz
1.705(不含) - 30(不含)	30	29.5	30
30(含) - 88(含)	3	40.0	100
88(不含) - 216(含)	3	43.5	150
216(不含) - 960(含)	3	46.0	200
960(不含)以上	3	54.0	500

5.2 量測方法

- 5.2.1. 輻射干擾場強量測時受測物與電波暗室場地擺設依 3.3.2 圖示。
- 5.2.2. 頻譜分析儀之頻寬設定為 120kHz，接收天線應使用偶極平衡天線或經校正的廣帶域天線如雙錐形天線與對數週期天線。
- 5.2.3. 受測物裝置放置於測試區地面 80 公分(量測頻率低於 1GHz)或 150 公分(量測頻率高於 1GHz)之非金屬桌上且可 360 度旋轉的轉盤上，而後調整轉盤角度並從接收機上量得受測物之最大場強。
- 5.2.4. 接收天線距受測物 3 公尺，操作天線升降機使接收天線在離地 1 公尺與 4 公尺間並從接收器量得受測物之最大場強。
- 5.2.5. 在測試頻率範圍內，重覆 5.2.3 及 5.2.4 之步驟，以量得受測物每一頻率點之輻射干擾最大場強。
- 5.2.6. 接收天線的水平極化偏波與垂直極化偏波需分別依上述程序進行量測。
- 5.2.7. 量測頻率低於 1GHz: 場強度之計算，公式如下：
場強結果值(Emission Level)=接收機讀值(Meter Reading)+ 校正因子。

其中校正因子為：

天線因數(Antenna Factor)+電纜損失(Cable Loss)+濾波器損失(若有使用)-放大器增益(若有使用)。

*若峰值已低於準峰值限制值，故不另檢附準峰值之讀值。

頻率範圍量測至主波發射的 10 倍諧波，其他未列在報告上乃因訊號太小無法量測。

5.2.8. 量測頻率高於 1GHz: 場強度之計算，公式如下：

■ 場強結果值(Emission Level)= 接收機讀值(Meter Reading)+ 校正因子。

其中校正因子為：

天線因數(Antenna Factor)+電纜損失(Cable Loss)+濾波器損失(若有使用)-放大器增益(若有使用)。

*若峰值之讀值小於平均值之限制值，故不再對平均值進行讀值。

□ 場強結果值(Average Emission Level)=
峰值場強結果值(Peak Emission Level)+DCCF。

Duty Cycle Correction Factor (DCCF)= $20\log(TX_{on}/TX_{on+off})$ 。

“TX_{on+off}” means the period of the pulse train or 100ms if the pulse train length is greater than 100ms

頻率範圍量測至主波發射的 10 倍諧波，其他未列在報告上乃因訊號太小無法量測。

5.3 量測時受測物之工作狀況

由筆記型電腦修改適用設備 Digital Still Camera 內記憶卡指令，使受測物進行發射/接收動作以進行量測，動作持續不斷直到測試結束。(筆記型電腦僅用於設定程式用)

5.4 量測之不確定度

測 試 項 目	頻率範圍	不確定度
輻射干擾場強量測 (測試距離: 3m)	30MHz~1000MHz	±4.68dB
	1GHz 以上	±5.98dB

5.5 場強輻射之量測結果

量測結果皆合乎標準規定，請參見附錄一。

6 峰值輸出功率之量測

6.1 適用標準

依據 NCC 低功率射頻電機技術規範 3.10.1.2 節(1)(C)之規定，操作 2400 MHz～2483.5 MHz 頻段者，數位調變技術系統：1 W(含) 以下，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。

6.2 量測方法

將天線發射端直接連接至 Power Sensor，以 Power Meter 量測。

6.3 量測時受測物之工作狀況

由筆記型電腦修改適用設備 Digital Still Camera 內記憶卡指令，使受測物進行發射動作以進行量測，動作持續不斷直到測試結束。(筆記型電腦僅用於設定程式用)

6.4 量測之不確定度

實驗室峰值輸出功率量測之不確定度為 $\pm 0.52\text{dB}$ 。

6.5 峰值輸出功率之量測結果

量測結果，請參見附錄一。

7 電波暴露量之要求

7.1 適用標準

依據NCC低功率射頻電機技術規範5.20.2節(2)之規定，受測物於正常操作模式下，其發射機距離人體20公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符電波暴露量之要求。

一般人/不可控制之暴露:

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

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

註 3：電波暴露量 $MPE(S) = (P * G) / (4 * \pi * r^2)$

r 表:距離人體; P 表:最大發射功率; G 表:最大天線增益。

7.2 電波暴露量之量測結果

量測結果，請參見附錄一。

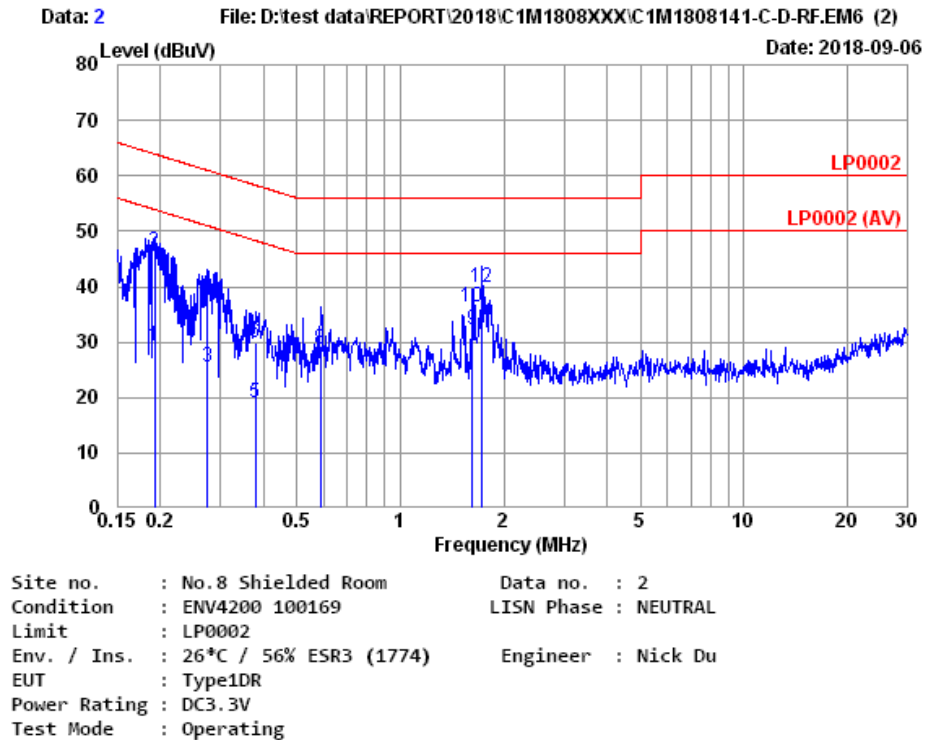
附錄 一

受測裝置之測試結果

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1. 電源線傳導干擾之量測

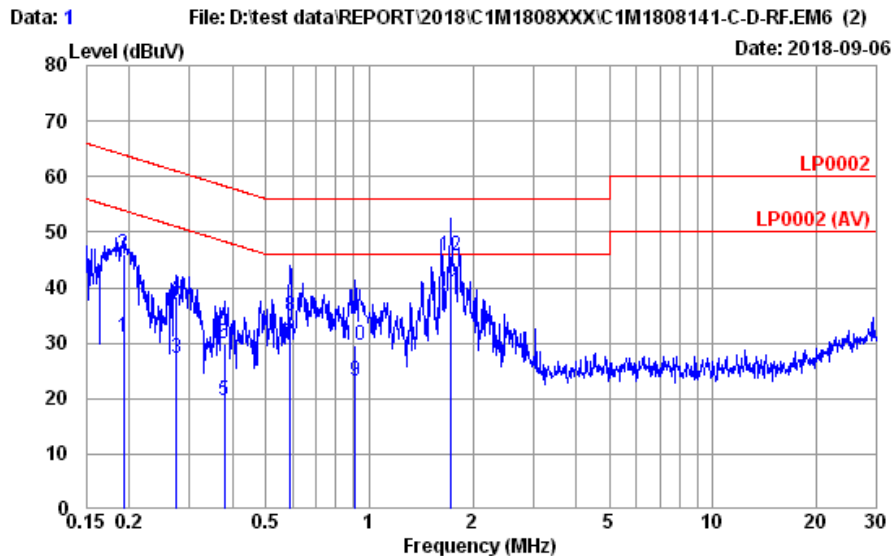
測試日期	2018/09/06	環境溫/濕度	26°C/56%
測試電壓	DC 3.3V (透過 Digital Still Camera 供電)		



	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.192	10.53	0.03	9.98	8.69	29.23	63.93	34.70	Average
2	0.192	10.53	0.03	9.98	25.70	46.24	63.93	17.69	QP
3	0.274	10.48	0.03	9.98	5.01	25.50	60.98	35.48	Average
4	0.274	10.48	0.03	9.98	18.86	39.35	60.98	21.63	QP
5	0.379	10.44	0.04	9.98	-1.47	18.99	58.30	39.31	Average
6	0.379	10.44	0.04	9.98	9.39	29.85	58.30	28.45	QP
7	0.585	10.43	0.05	9.98	4.92	25.38	56.00	30.62	Average
8	0.585	10.43	0.05	9.98	8.32	28.78	56.00	27.22	QP
9	1.619	10.45	0.07	9.99	11.66	32.17	56.00	23.83	Average
10	1.619	10.45	0.07	9.99	15.80	36.31	56.00	19.69	QP
11	1.725	10.45	0.07	9.99	12.72	33.23	56.00	22.77	Average
12	1.725	10.45	0.07	9.99	19.43	39.94	56.00	16.06	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

測試日期	2018/09/06	環境溫/濕度	26°C/56%
測試電壓	DC 3.3V (透過 Digital Still Camera 供電)		



Site no. : No.8 Shielded Room Data no. : 1
Condition : ENV4200 100169 LISN Phase : LINE
Limit : LP0002
Env. / Ins. : 26°C / 56% ESR3 (1774) Engineer : Nick Du
EUT : Type1DR
Power Rating : DC3.3V
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.192	10.57	0.03	9.98	10.58	31.16	63.93	32.77	Average
2	0.192	10.57	0.03	9.98	25.47	46.05	63.93	17.88	QP
3	0.274	10.51	0.03	9.98	6.77	27.29	60.98	33.69	Average
4	0.274	10.51	0.03	9.98	17.91	38.43	60.98	22.55	QP
5	0.379	10.46	0.04	9.98	-0.86	19.62	58.30	38.68	Average
6	0.379	10.46	0.04	9.98	9.35	29.83	58.30	28.47	QP
7	0.589	10.45	0.05	9.98	9.43	29.91	56.00	26.09	Average
8	0.589	10.45	0.05	9.98	14.48	34.96	56.00	21.04	QP
9	0.909	10.44	0.06	9.99	2.58	23.07	56.00	32.93	Average
10	0.909	10.44	0.06	9.99	9.05	29.54	56.00	26.46	QP
11	1.721	10.46	0.07	9.99	18.79	39.31	56.00	16.69	Average
12	1.721	10.46	0.07	9.99	25.17	45.69	56.00	10.31	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

2. 場強輻射之量測

對受測物裝置(置於 Digital Still Camera 內)之其他不必要之發射(測至本地頻率之 10 次諧波)依下列測試模式分別於電波暗室內進行量測；**Digital Still Camera** 有兩種供電模式分別為(1)電池(DC 3.6V)、(2)USB (DC 5V)，實驗室先兩種供電方式進行評估，再以較差之電池供電模式分別進行三種不同的擺設方式(平放、站立、側立)模式進行量試評估，最後選取最大場強值的擺設方式-(站立)以低、中、高頻率來進行量測，並將下列測試模式之掃頻圖檢附於附錄中；最後，選擇較差模式進行讀值之測量，所得讀值資料請見章節 2.1 ~ 2.2：

Wireless LAN 模式

支援 IEEE 802.11b/g/n，依測試要求評估低、中、高頻率，並檢附三頻率之最差模式於此測試報告中。

模式	動作狀態	基本頻率	量測頻率範圍
Wireless LAN 測試模式 (802.11b)			
1	發射	2462MHz (CH11)	1000-3000MHz
2			3000-8000MHz
3			8000-18000MHz
4			18000-25000MHz
Wireless LAN 測試模式 (802.11g)			
5	發射	2462MHz* (CH11)	30-1000MHz
6			1000-3000MHz
7			3000-8000MHz
8			8000-18000MHz
9			18000-25000MHz
Wireless LAN 測試模式 (802.11n-HT20)			
10	發射	2462MHz (CH11)	1000-3000MHz
11			3000-8000MHz
12			8000-18000MHz
13			18000-25000MHz
Wireless LAN 測試模式			
14	接收	2437MHz (CH6)	30-1000MHz
15			1000-3000MHz
16			3000-8000MHz
17			8000-18000MHz
18			18000-25000MHz

註: 1. 以上所有模式之掃頻圖是檢附於附錄中。

2.*: 經評估後，以最差頻率進行 30-1000MHz 量測。

BLE 測試模式

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz (CH37)	1000-3000MHz
2			3000-8000MHz
3			8000-18000MHz
4			18000-25000MHz
5		2440MHz (CH17)	1000-3000MHz
6			3000-8000MHz
7			8000-18000MHz
8			18000-25000MHz
9		2480MHz* (CH39)	30-1000MHz
10			1000-3000MHz
11			3000-8000MHz
12			8000-18000MHz
13			18000-25000MHz
14	接收	2440MHz (CH17)	30-1000MHz
15			1000-3000MHz
16			3000-8000MHz
17			8000-18000MHz
18			18000-25000MHz

註: 1. 以上所有模式之掃頻圖是檢附於附錄中。

2.*: 經評估後，以最差頻率進行 30-1000MHz 量測。

對受測物裝置落於技術規範第 2.7 章節的禁用頻帶之混附發射以下列測試模式依規定分別進行量測，所得量測資料請見章節 2.3。

模式	動作狀態	基本頻率	量測頻率範圍
Wireless LAN 測試模式 (802.11b)			
1	發射	2412MHz (CH1)	2310-2430MHz
2		2462MHz (CH11)	2450-2530MHz
Wireless LAN 測試模式 (802.11g)			
4	發射	2412MHz (CH1)	2310-2430MHz
5		2462MHz (CH11)	2450-2530MHz
Wireless LAN 測試模式 (802.11n-HT20)			
7	發射	2412MHz (CH1)	2310-2430MHz
8		2462MHz (CH11)	2450-2530MHz
BLE 測試模式			
9	發射	2402MHz (CH37)	2310-2430MHz
10		2480MHz (CH39)	2450-2530MHz

測試日期	2018/08/21	環境溫/濕度	23°C/51%
測試電壓	DC 3.3V (透過 Digital Still Camera 供電)		

2.1. 30-1000MHz 頻率範圍，其他不必要發射量測

● Wireless LAN 模式

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
175.50	15.73	3.59	4.79	24.11	43.50	19.39	Peak
202.66	16.16	3.68	8.23	28.07	43.50	15.43	Peak
229.82	18.10	3.85	7.05	29.00	46.00	17.00	Peak
337.49	20.89	4.91	3.40	29.20	46.00	16.80	Peak
570.29	24.62	6.37	1.89	32.88	46.00	13.12	Peak
866.14	26.96	7.92	1.19	36.07	46.00	9.93	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
115.36	18.54	2.92	3.58	25.04	43.50	18.46	Peak
403.45	22.50	5.81	-0.01	28.30	46.00	17.70	Peak
612.00	25.00	6.58	0.48	32.06	46.00	13.94	Peak
733.25	25.72	7.25	2.00	34.97	46.00	11.03	Peak
843.83	26.82	7.80	1.24	35.86	46.00	10.14	Peak
950.53	27.80	8.36	1.04	37.20	46.00	8.80	Peak

Mode	Wireless LAN	Frequency	RX 2437MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	3.09	23.41	43.50	20.09	Peak
202.66	16.16	3.68	8.28	28.12	43.50	15.38	Peak
229.82	18.10	3.85	6.70	28.65	46.00	17.35	Peak
701.24	25.30	7.10	2.22	34.62	46.00	11.38	Peak
921.43	27.46	8.21	1.84	37.51	46.00	8.49	Peak
960.23	27.87	8.39	1.35	37.61	54.00	16.39	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
116.33	18.59	2.92	3.76	25.27	43.50	18.23	Peak
242.43	18.91	3.93	2.76	25.60	46.00	20.40	Peak
333.61	20.80	4.85	3.16	28.81	46.00	17.19	Peak
378.23	21.95	5.49	2.59	30.03	46.00	15.97	Peak
880.69	27.07	8.00	0.53	35.60	46.00	10.40	Peak
970.90	28.03	8.45	1.28	37.76	54.00	16.24	Peak

● BLE 測試模式

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	4.10	24.42	43.50	19.08	Peak
202.66	16.16	3.68	8.69	28.53	43.50	14.97	Peak
229.82	18.10	3.85	7.23	29.18	46.00	16.82	Peak
337.49	20.89	4.91	5.00	30.80	46.00	15.20	Peak
611.03	25.00	6.58	2.10	33.68	46.00	12.32	Peak
931.13	27.57	8.26	2.52	38.35	46.00	7.65	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
115.36	18.54	2.92	4.08	25.54	43.50	17.96	Peak
398.60	22.43	5.79	2.38	30.60	46.00	15.40	Peak
535.37	24.18	6.20	2.01	32.39	46.00	13.61	Peak
673.11	25.19	6.93	1.55	33.67	46.00	12.33	Peak
797.27	26.46	7.54	1.60	35.60	46.00	10.40	Peak
970.90	28.03	8.45	1.84	38.32	54.00	15.68	Peak

Mode	BLE	Frequency	RX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	2.91	23.23	43.50	20.27	Peak
202.66	16.16	3.68	7.16	27.00	43.50	16.50	Peak
229.82	18.10	3.85	5.34	27.29	46.00	18.71	Peak
393.75	22.30	5.72	1.39	29.41	46.00	16.59	Peak
784.66	26.33	7.49	1.93	35.75	46.00	10.25	Peak
957.32	27.87	8.39	2.94	39.20	46.00	6.80	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
114.39	18.49	2.90	2.10	23.49	43.50	20.01	Peak
289.96	19.76	4.29	0.52	24.57	46.00	21.43	Peak
427.70	22.83	5.87	0.24	28.94	46.00	17.06	Peak
686.69	25.23	7.01	1.60	33.84	46.00	12.16	Peak
762.35	26.07	7.39	-0.16	33.30	46.00	12.70	Peak
940.83	27.68	8.30	0.67	36.65	46.00	9.35	Peak

2.2. 1000MHz 以上頻率範圍，其他不必要發射量測

● Wireless LAN 模式

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-2.02	41.83	54.00	12.17	Peak
7385.00	35.80	11.99	-1.68	46.11	54.00	7.89	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-1.98	41.87	54.00	12.13	Peak
7385.00	35.80	11.99	-1.57	46.22	54.00	7.78	Peak

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-1.95	41.90	54.00	12.10	Peak
7385.00	35.80	11.99	-3.22	44.57	54.00	9.43	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-1.53	42.32	54.00	11.68	Peak
7385.00	35.80	11.99	-2.46	45.33	54.00	8.67	Peak

Mode	802.11n-HT20	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-2.16	41.69	54.00	12.31	Peak
7385.00	35.80	11.99	-2.54	45.25	54.00	8.75	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4925.00	34.27	9.58	-2.34	41.51	54.00	12.49	Peak
7385.00	35.80	11.99	-3.78	44.01	54.00	9.99	Peak

● BLE 測試模式

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4805.00	34.22	9.54	0.83	44.59	54.00	9.41	Peak
7205.00	35.80	11.80	-3.32	44.28	54.00	9.72	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4805.00	34.22	9.54	1.42	45.18	54.00	8.82	Peak
7205.00	35.80	11.80	-2.69	44.91	54.00	9.09	Peak

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	9.56	-1.14	42.67	54.00	11.33	Peak
7320.00	35.80	11.92	-2.91	44.81	54.00	9.19	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	9.56	-1.62	42.19	54.00	11.81	Peak
7320.00	35.80	11.92	-2.63	45.09	54.00	8.91	Peak

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	9.60	-2.65	41.24	54.00	12.76	Peak
7440.00	35.80	12.04	-2.58	45.26	54.00	8.74	Peak

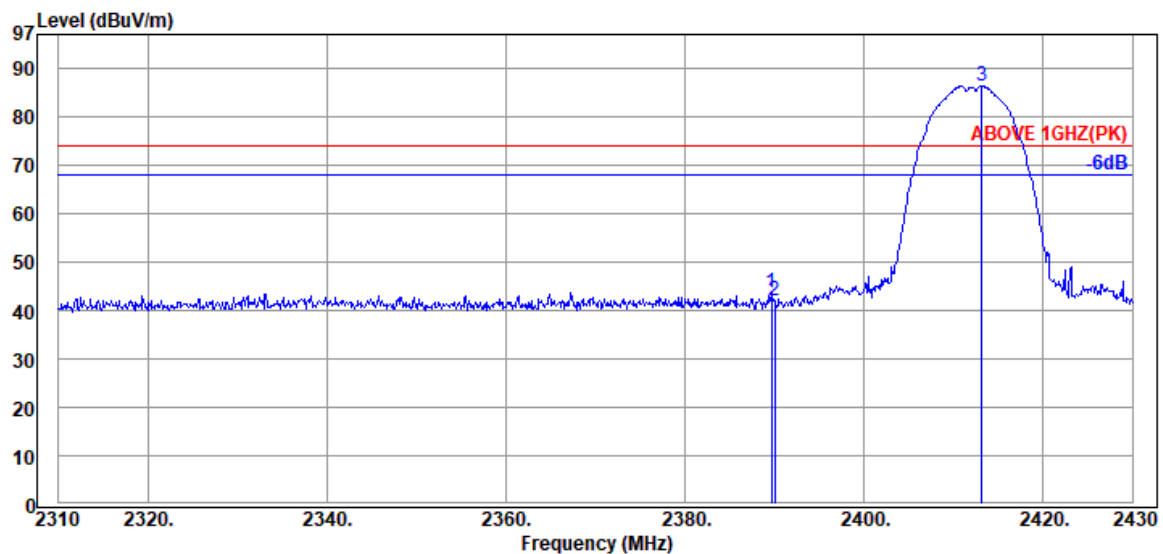
Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	9.60	-2.72	41.17	54.00	12.83	Peak
7440.00	35.80	12.04	-3.78	44.06	54.00	9.94	Peak

2.3. 禁用頻帶量測結果 (其他不必要發射)

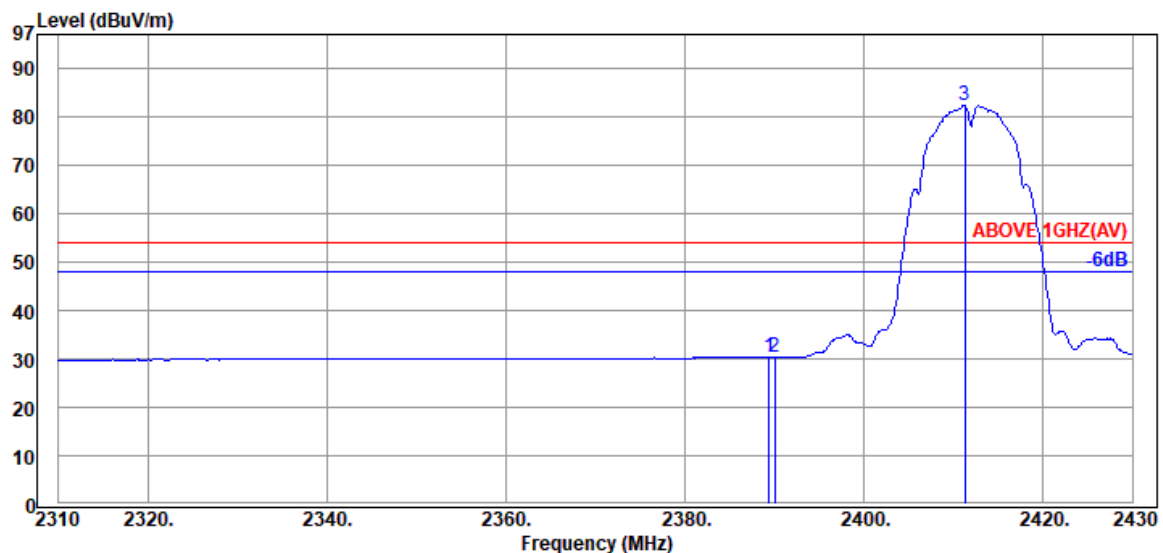
● Wireless LAN 模式

Mode	802.11b	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	32.16	6.57	5.08	43.81	74.00	30.19	Peak
2390.04	32.16	6.57	3.39	42.12	74.00	31.88	Peak
@ 2413.20	32.18	6.59	47.54	86.31	---	---	Peak

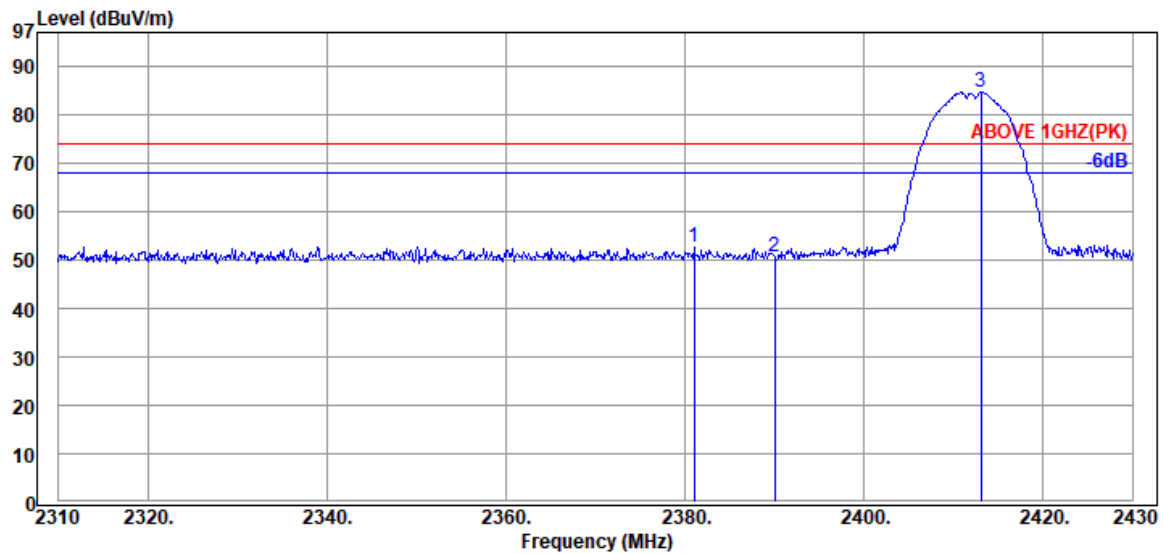


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.44	32.16	6.57	-8.38	30.35	54.00	23.65	Average
2390.04	32.16	6.57	-8.40	30.33	54.00	23.67	Average
@ 2411.28	32.18	6.59	43.64	82.41	---	---	Average

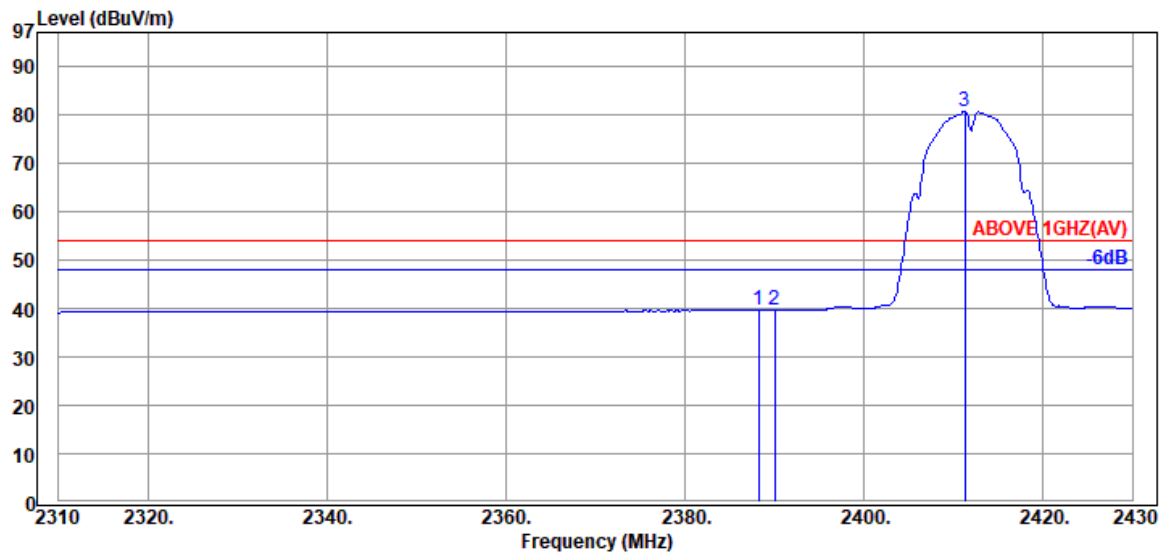
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11b	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.04	32.13	6.55	14.14	52.82	74.00	21.18	Peak
2390.04	32.16	6.57	12.08	50.81	74.00	23.19	Peak
@ 2413.08	32.18	6.59	45.80	84.57	---	---	Peak

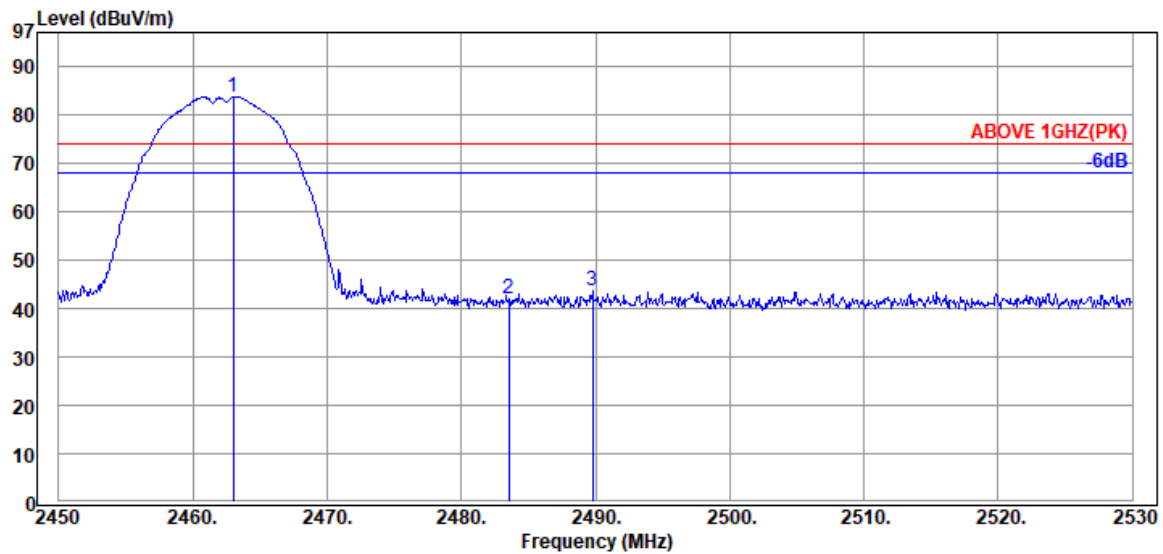


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.24	32.16	6.57	0.93	39.66	54.00	14.34	Average
2390.04	32.16	6.57	0.91	39.64	54.00	14.36	Average
@ 2411.28	32.18	6.59	42.02	80.79	---	---	Average

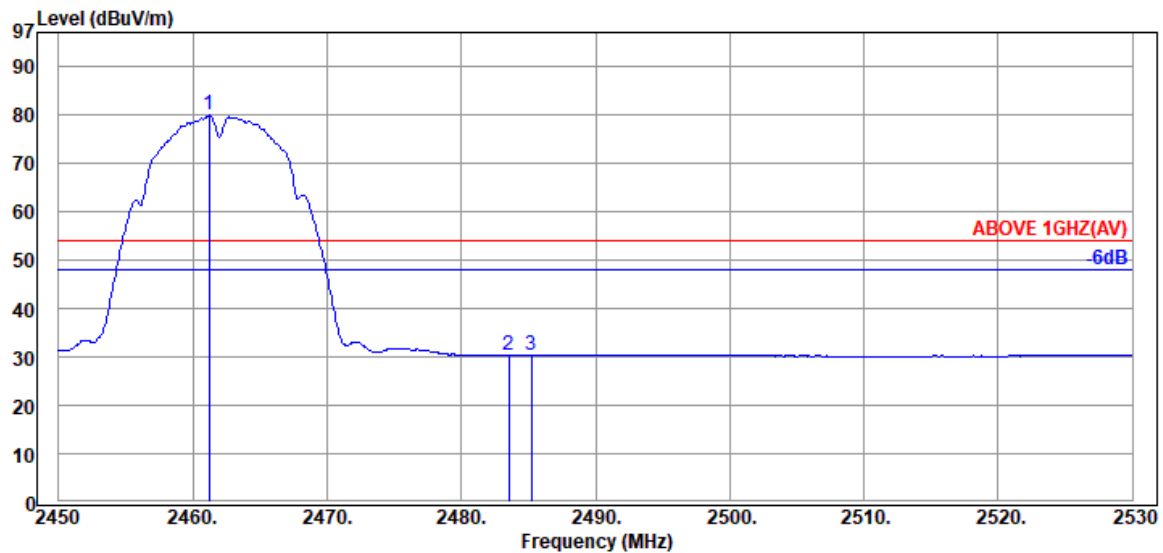
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2463.04	32.25	6.65	44.81	83.71	---	---	Peak
	2483.52	32.28	6.67	3.20	42.15	74.00	31.85	Peak
	2489.76	32.30	6.69	4.53	43.52	74.00	30.48	Peak

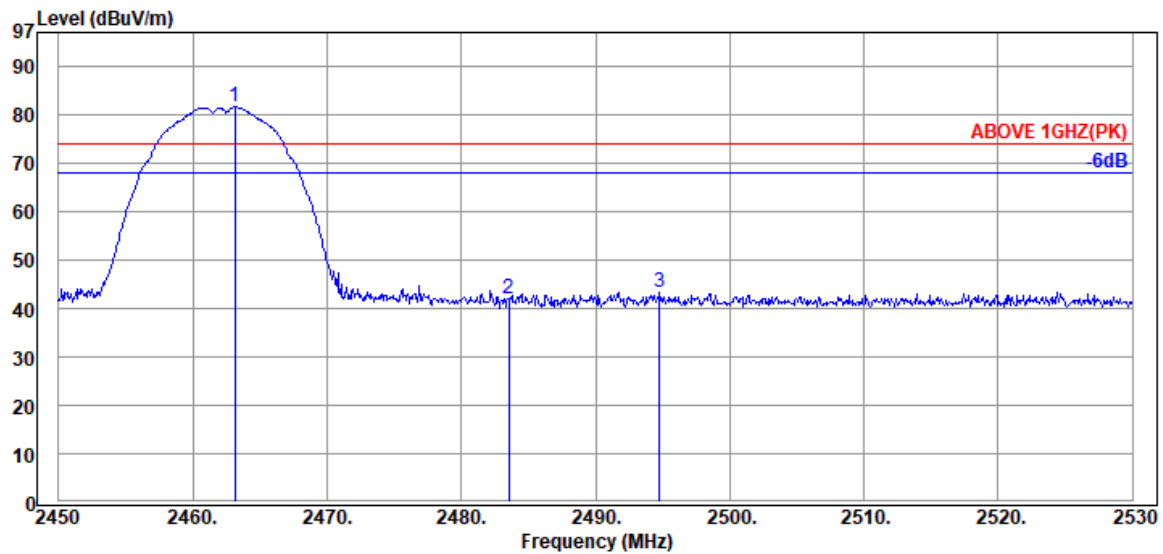


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2461.20	32.25	6.65	40.96	79.86	---	---	Average
	2483.52	32.28	6.67	-8.53	30.42	54.00	23.58	Average
	2485.20	32.28	6.67	-8.47	30.48	54.00	23.52	Average

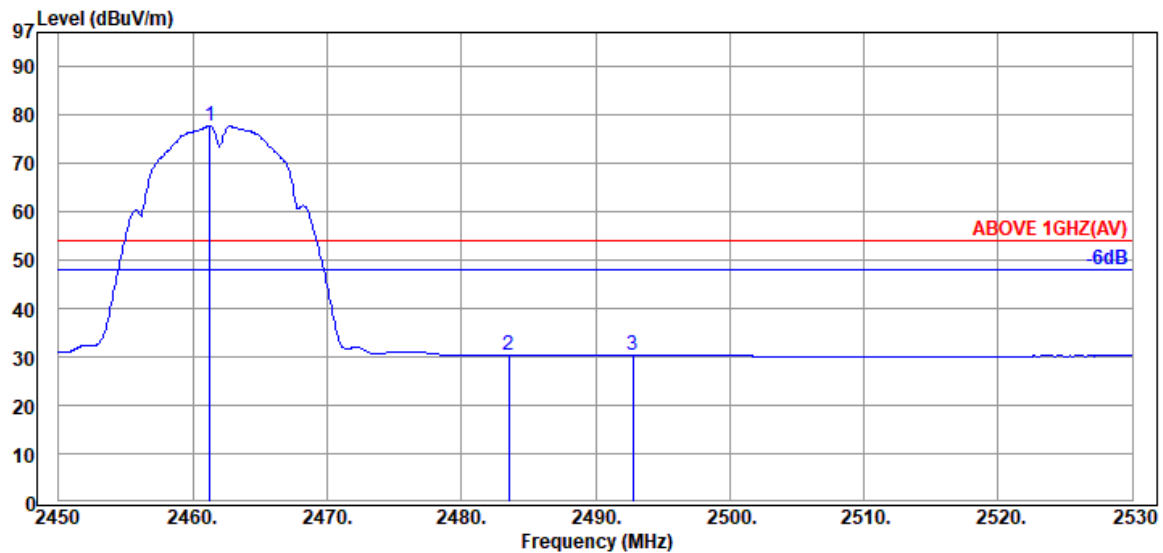
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2463.12	32.25	6.65	42.71	81.61	---	---	Peak
	2483.52	32.28	6.67	3.09	42.04	74.00	31.96	Peak
	2494.80	32.30	6.69	4.32	43.31	74.00	30.69	Peak

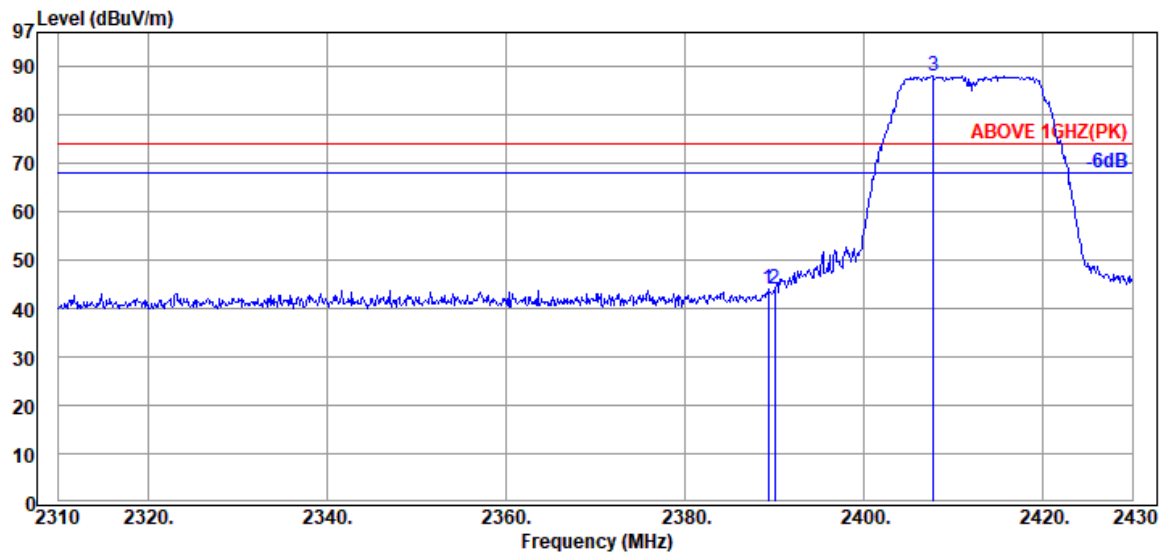


Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2461.28	32.25	6.65	38.93	77.83	---	---	Average
	2483.52	32.28	6.67	-8.61	30.34	54.00	23.66	Average
	2492.80	32.30	6.69	-8.60	30.39	54.00	23.61	Average

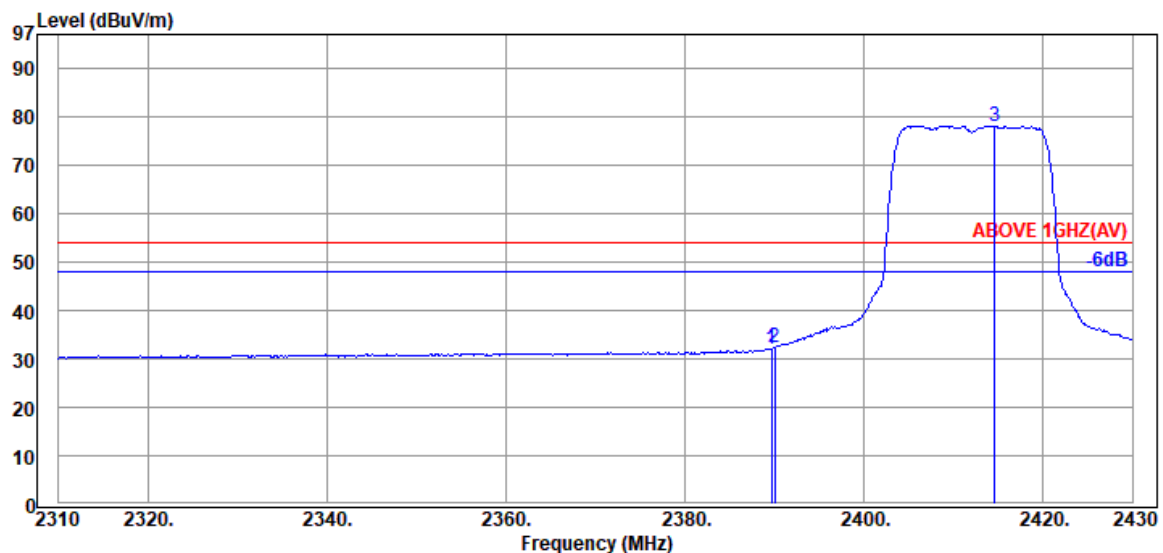
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11g	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.32	32.16	6.57	5.37	44.10	74.00	29.90	Peak
2390.04	32.16	6.57	5.25	43.98	74.00	30.02	Peak
@ 2407.80	32.18	6.59	49.19	87.96	---	---	Peak

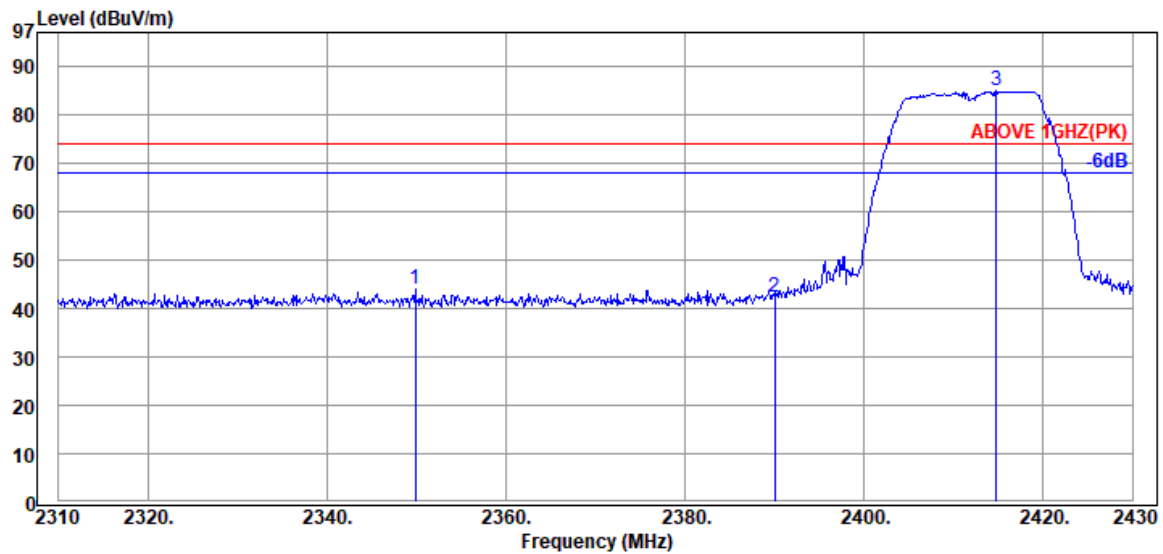


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	32.16	6.57	-6.58	32.15	54.00	21.85	Average
2390.04	32.16	6.57	-6.34	32.39	54.00	21.61	Average
@ 2414.64	32.18	6.59	39.30	78.07	---	---	Average

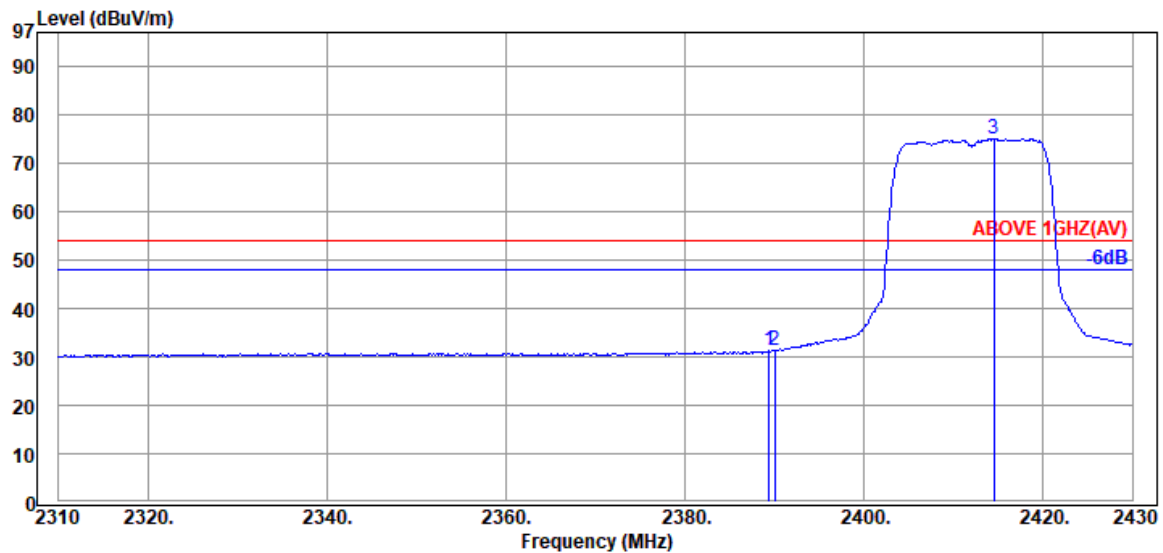
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11g	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2349.84	32.08	6.51	5.48	44.07	74.00	29.93	Peak
2390.04	32.16	6.57	3.52	42.25	74.00	31.75	Peak
@ 2414.76	32.18	6.59	46.10	84.87	---	---	Peak

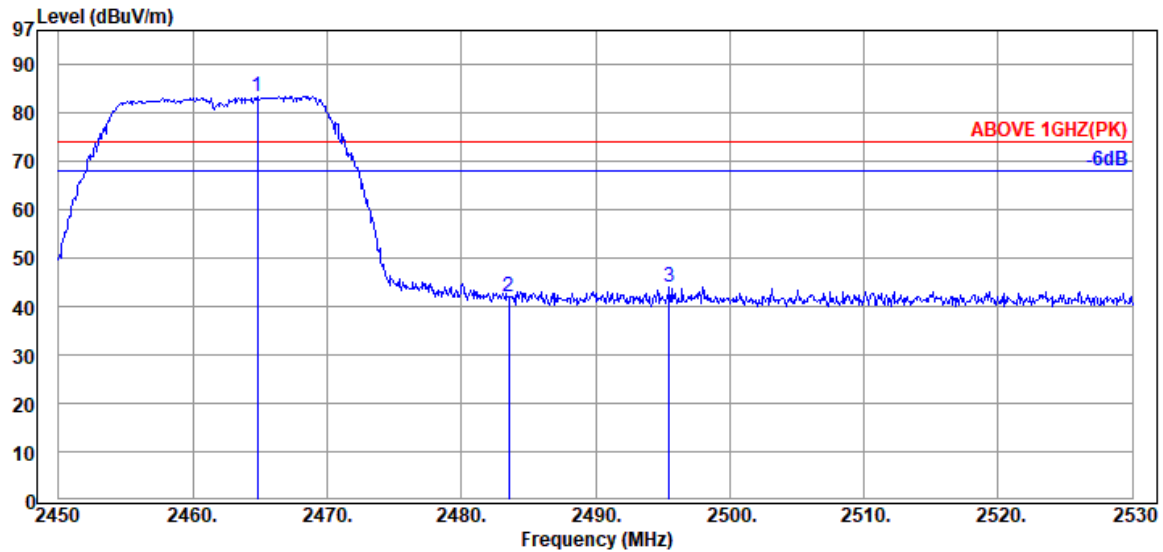


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.44	32.16	6.57	-7.44	31.29	54.00	22.71	Average
2390.04	32.16	6.57	-7.38	31.35	54.00	22.65	Average
@ 2414.52	32.18	6.59	36.21	74.98	---	---	Average

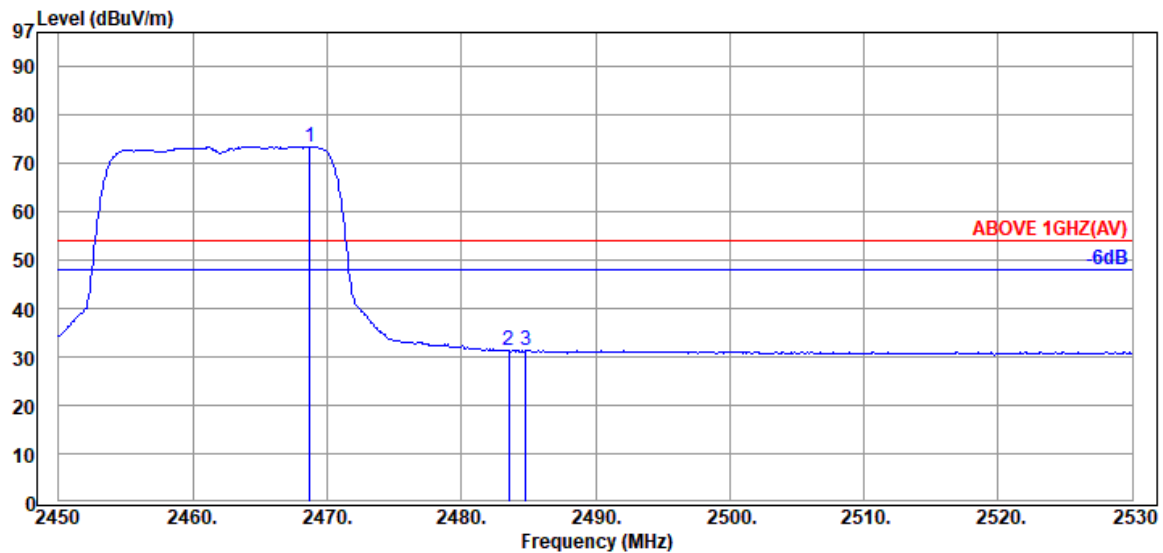
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2464.80	32.25	6.65	44.41	83.31	---	---	Peak
	2483.52	32.28	6.67	3.11	42.06	74.00	31.94	Peak
	2495.52	32.30	6.69	5.09	44.08	74.00	29.92	Peak

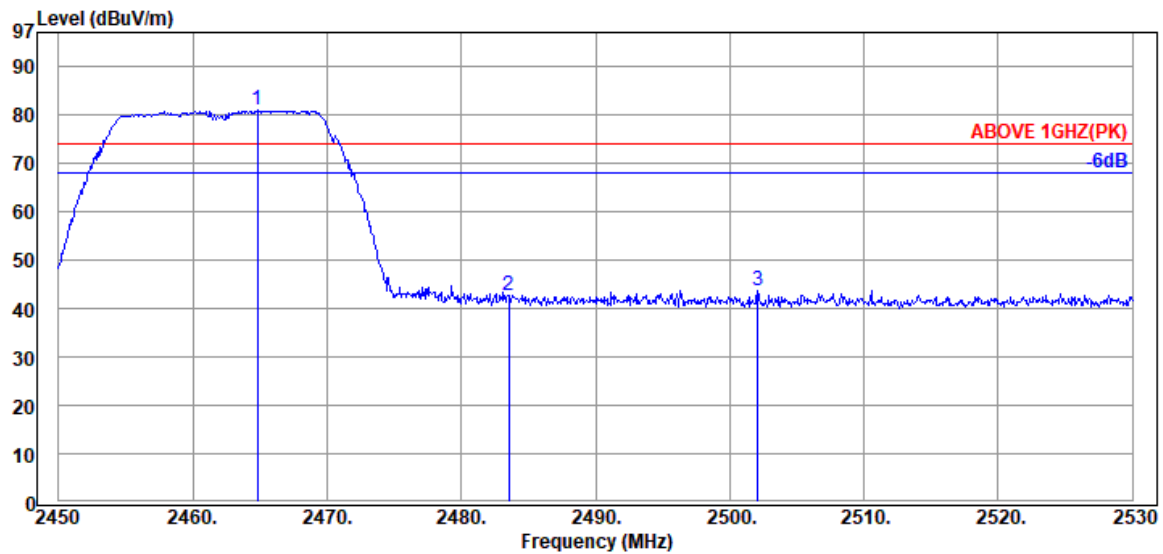


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2468.72	32.25	6.65	34.59	73.49	---	---	Average
	2483.52	32.28	6.67	-7.65	31.30	54.00	22.70	Average
	2484.80	32.28	6.67	-7.59	31.36	54.00	22.64	Average

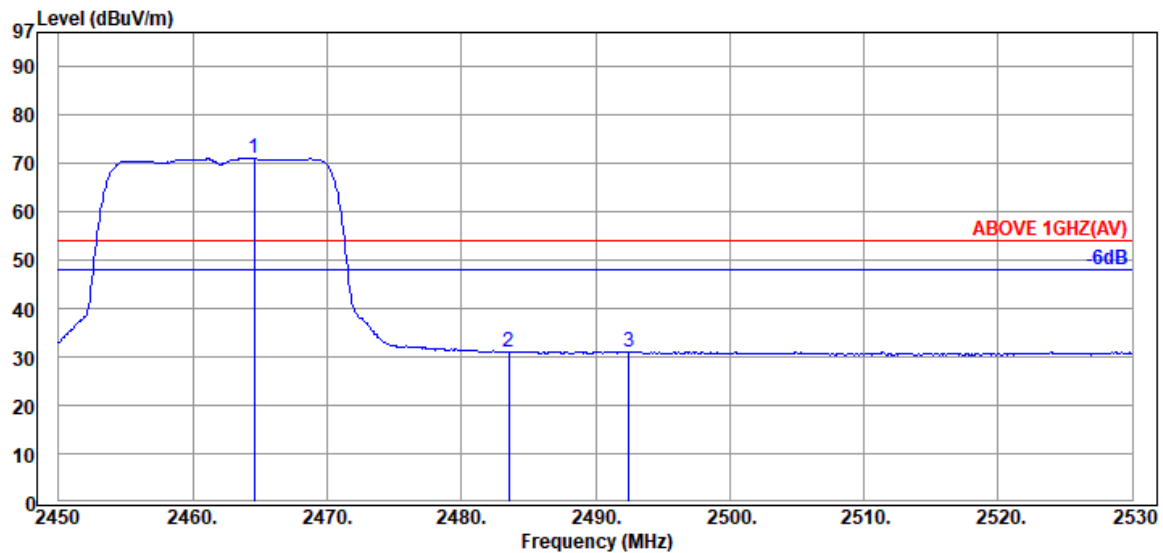
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2464.80	32.25	6.65	41.96	80.86	---	---	Peak
	2483.52	32.28	6.67	3.78	42.73	74.00	31.27	Peak
	2502.08	32.30	6.69	4.73	43.72	74.00	30.28	Peak

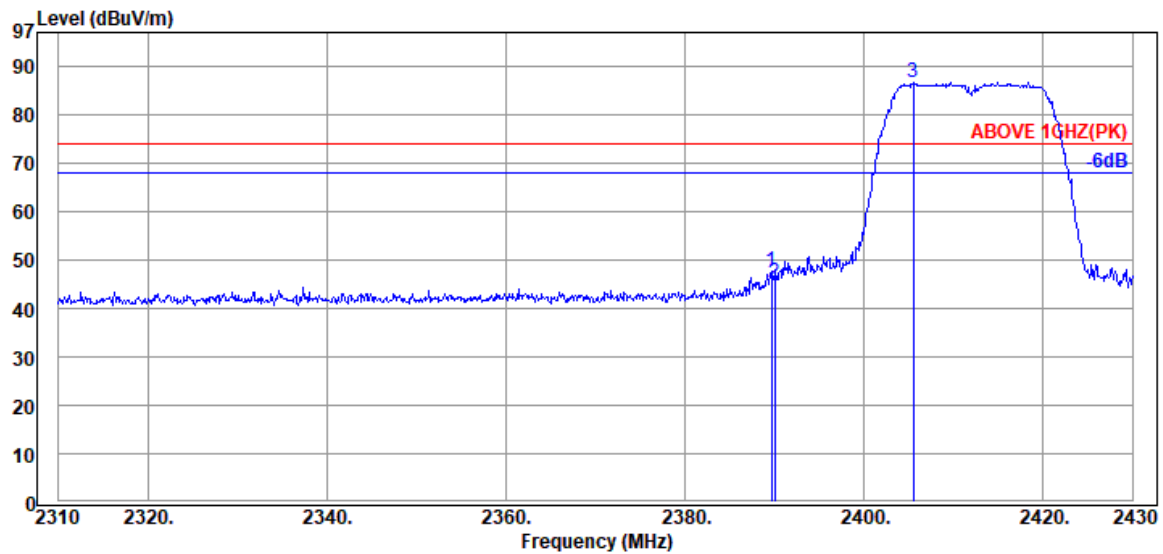


Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2464.56	32.25	6.65	32.07	70.97	---	---	Average
	2483.52	32.28	6.67	-7.88	31.07	54.00	22.93	Average
	2492.48	32.30	6.69	-7.91	31.08	54.00	22.92	Average

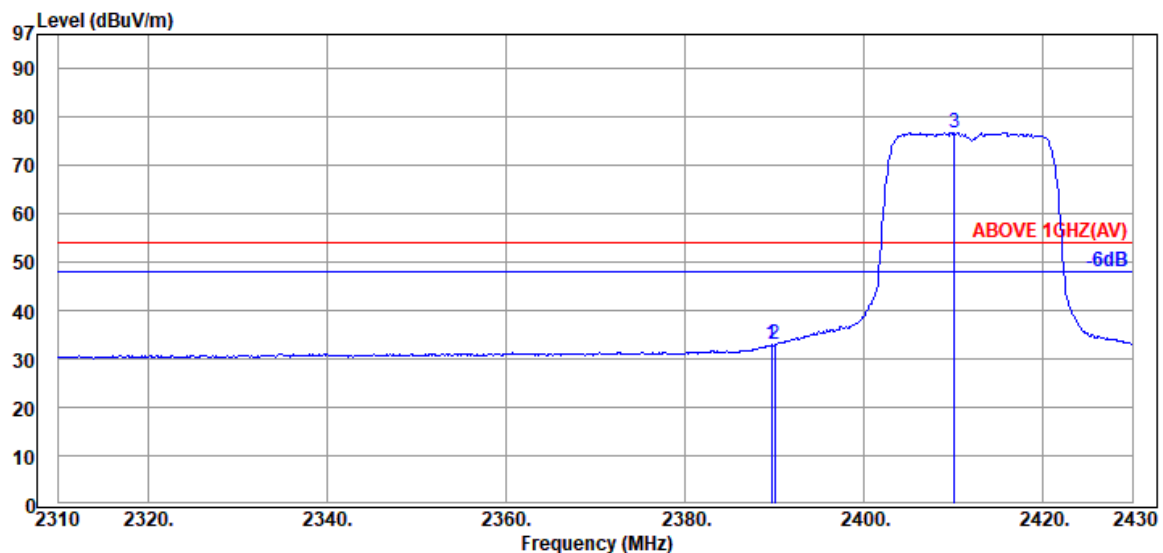
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11n-HT20	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	32.16	6.57	8.99	47.72	74.00	26.28	Peak
2390.04	32.16	6.57	6.54	45.27	74.00	28.73	Peak
@ 2405.52	32.18	6.59	48.03	86.80	---	---	Peak

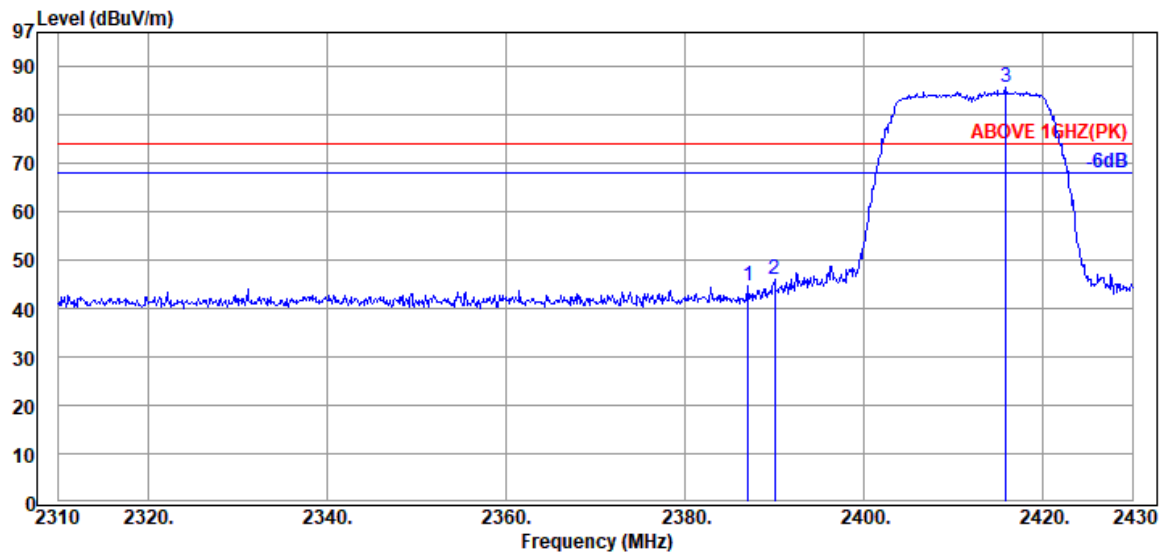


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	32.16	6.57	-5.88	32.85	54.00	21.15	Average
2390.04	32.16	6.57	-5.84	32.89	54.00	21.11	Average
@ 2410.08	32.18	6.59	37.89	76.66	---	---	Average

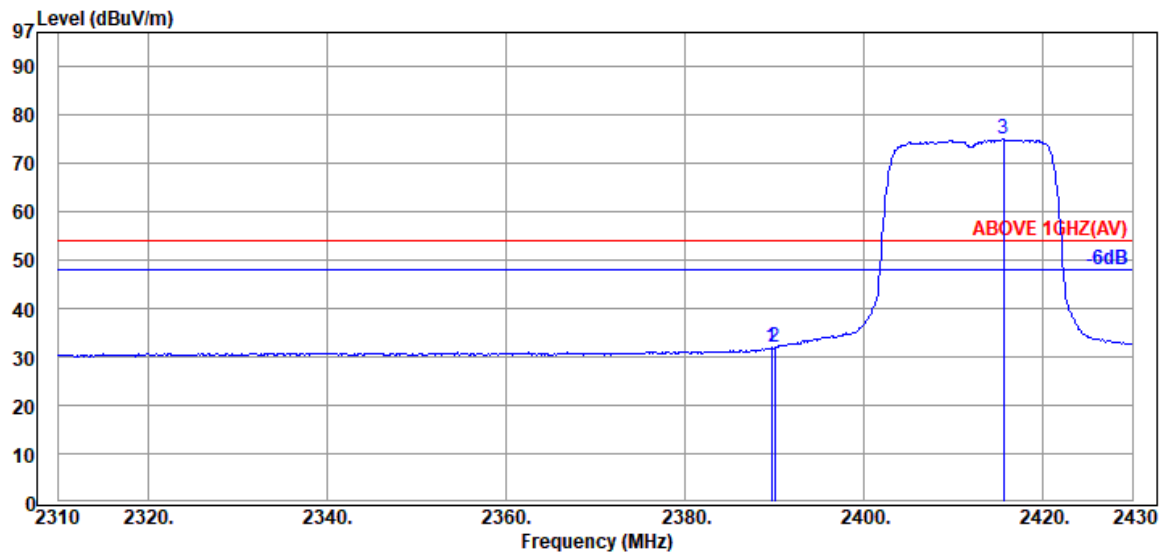
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11n-HT20	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.04	32.16	6.57	5.98	44.71	74.00	29.29	Peak
2390.04	32.16	6.57	7.18	45.91	74.00	28.09	Peak
@ 2415.84	32.18	6.59	46.81	85.58	---	---	Peak

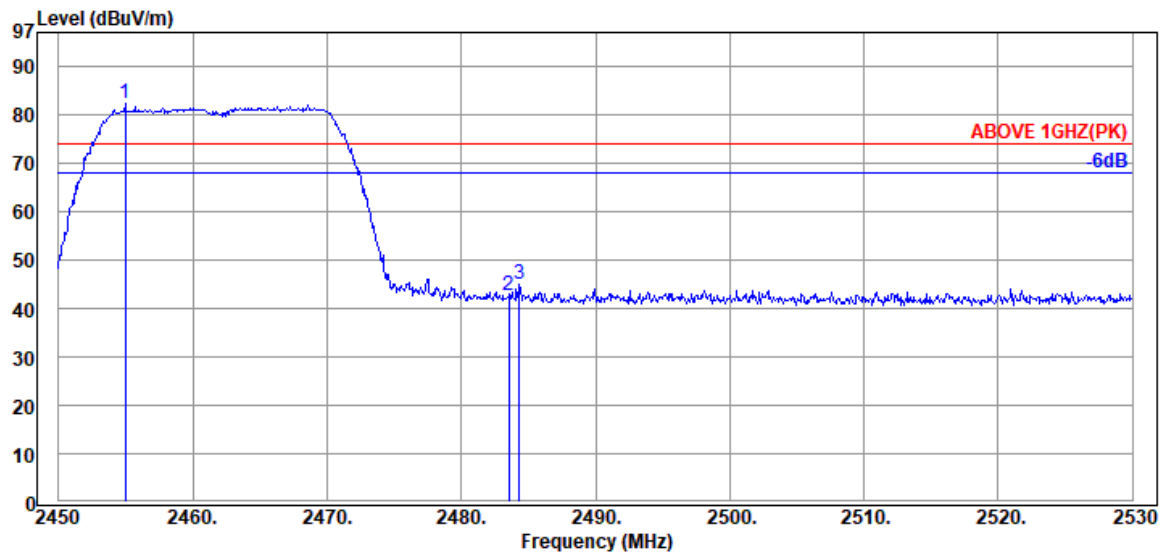


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	32.16	6.57	-6.89	31.84	54.00	22.16	Average
2390.04	32.16	6.57	-6.83	31.90	54.00	22.10	Average
@ 2415.60	32.18	6.59	36.09	74.86	---	---	Average

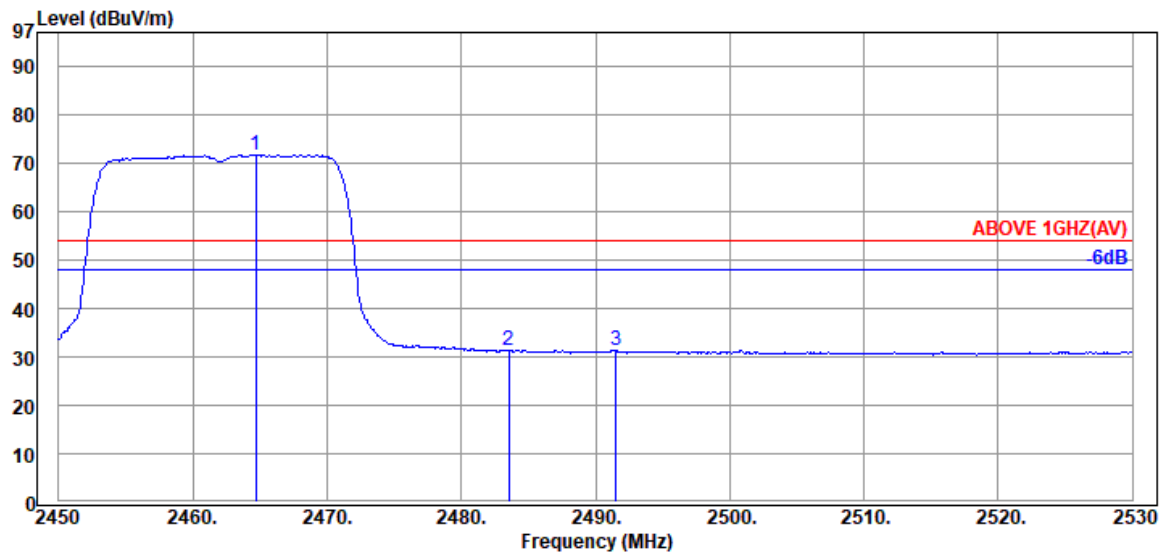
備註：“@”為主波，在此章節是不予以判定。

Mode	802.11n-HT20	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2454.96	32.25	6.65	43.33	82.23	---	---	Peak
	2483.52	32.28	6.67	3.74	42.69	74.00	31.31	Peak
	2484.32	32.28	6.67	6.09	45.04	74.00	28.96	Peak



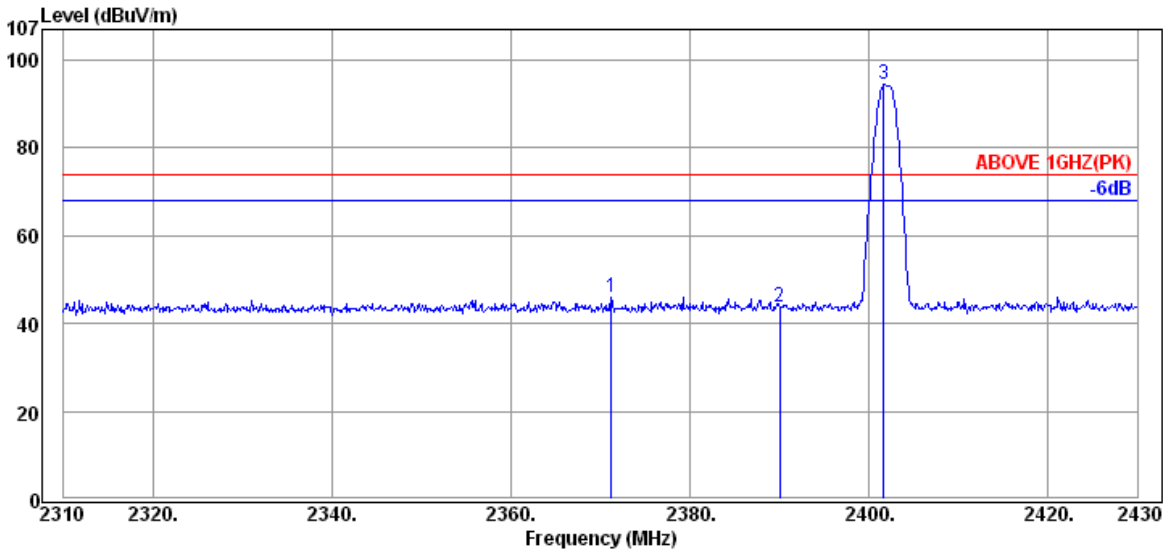
Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2464.72	32.25	6.65	32.89	71.79	---	---	Average
	2483.52	32.28	6.67	-7.67	31.28	54.00	22.72	Average
	2491.52	32.30	6.69	-7.53	31.46	54.00	22.54	Average

備註：“@”為主波，在此章節是不予以判定。

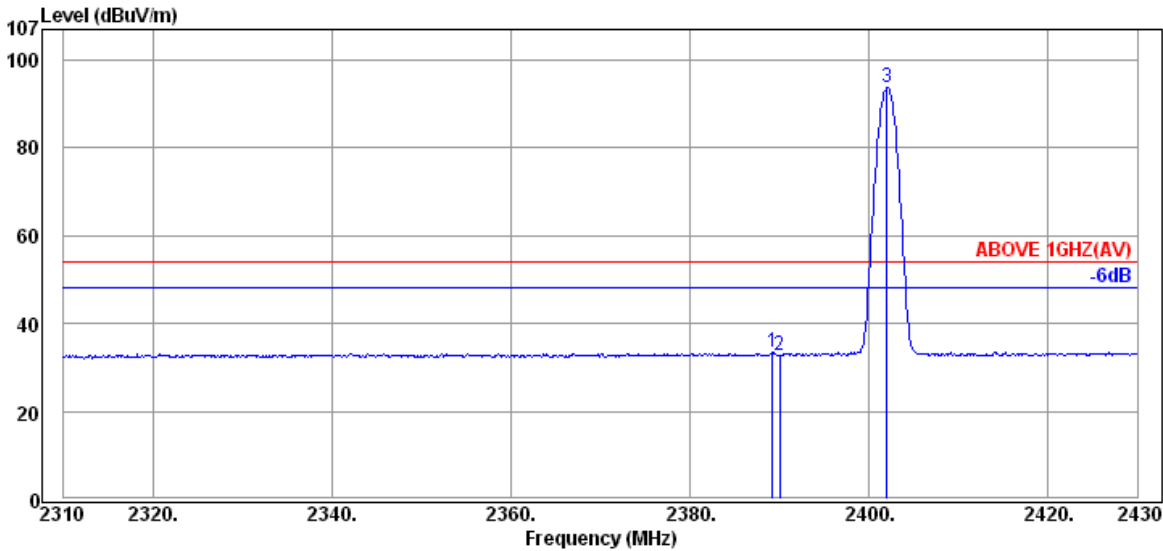
● BLE 測試模式

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2371.20	32.13	6.55	7.23	45.91	74.00	28.09	Peak
2390.04	32.16	6.57	4.84	43.57	74.00	30.43	Peak
@ 2401.68	32.16	6.57	55.59	94.32	---	---	Peak

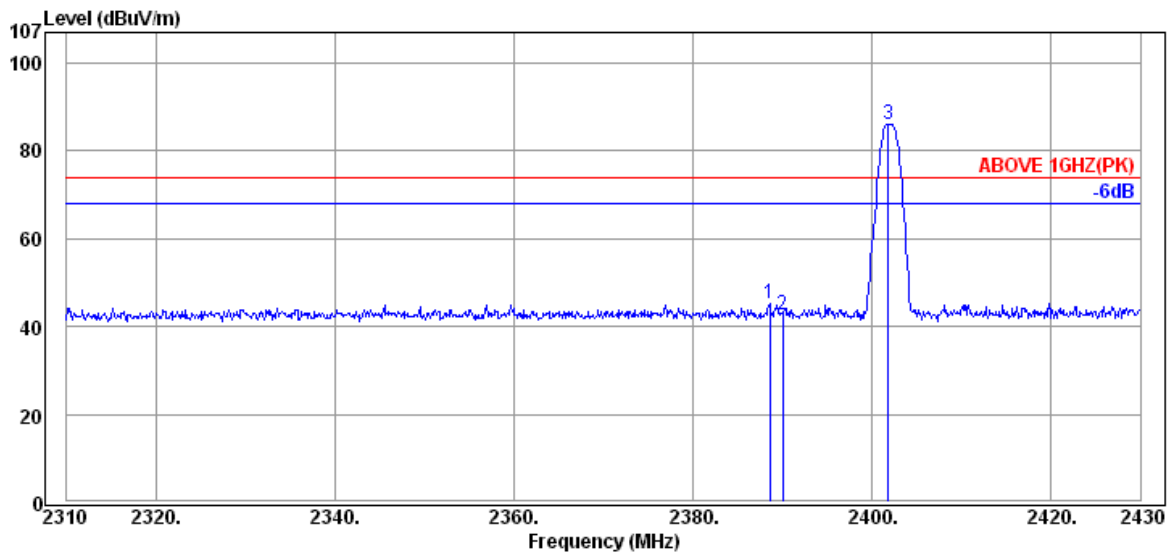


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2389.20	32.16	6.57	-5.40	33.33	54.00	20.67	Average
2390.04	32.16	6.57	-5.87	32.86	54.00	21.14	Average
@ 2402.04	32.16	6.57	54.89	93.62	---	---	Average

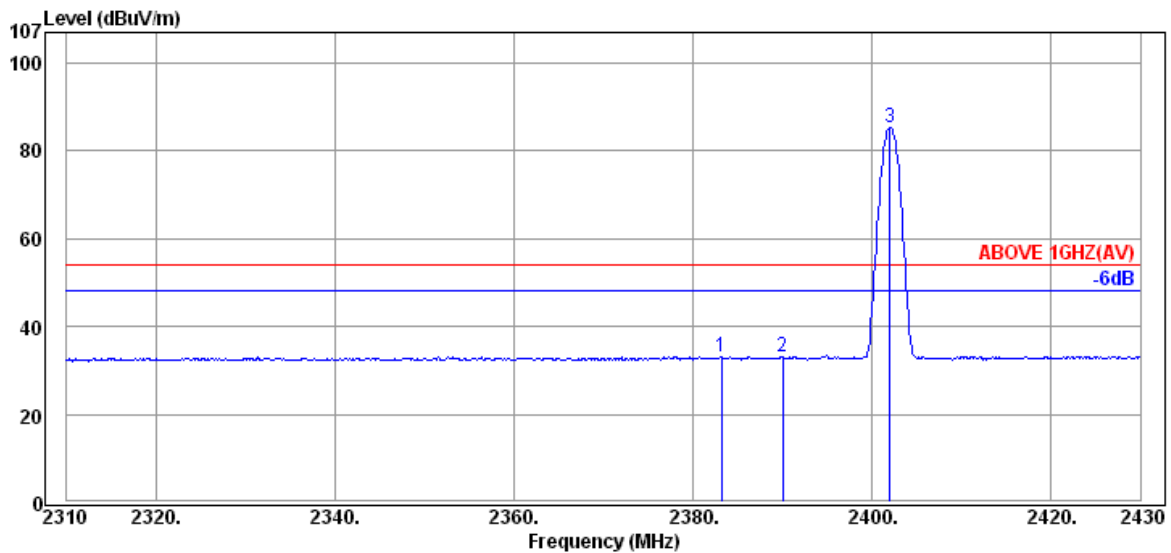
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.60	32.16	6.57	6.55	45.28	74.00	28.72	Peak
2390.04	32.16	6.57	3.82	42.55	74.00	31.45	Peak
@ 2401.80	32.16	6.57	47.39	86.12	---	---	Peak

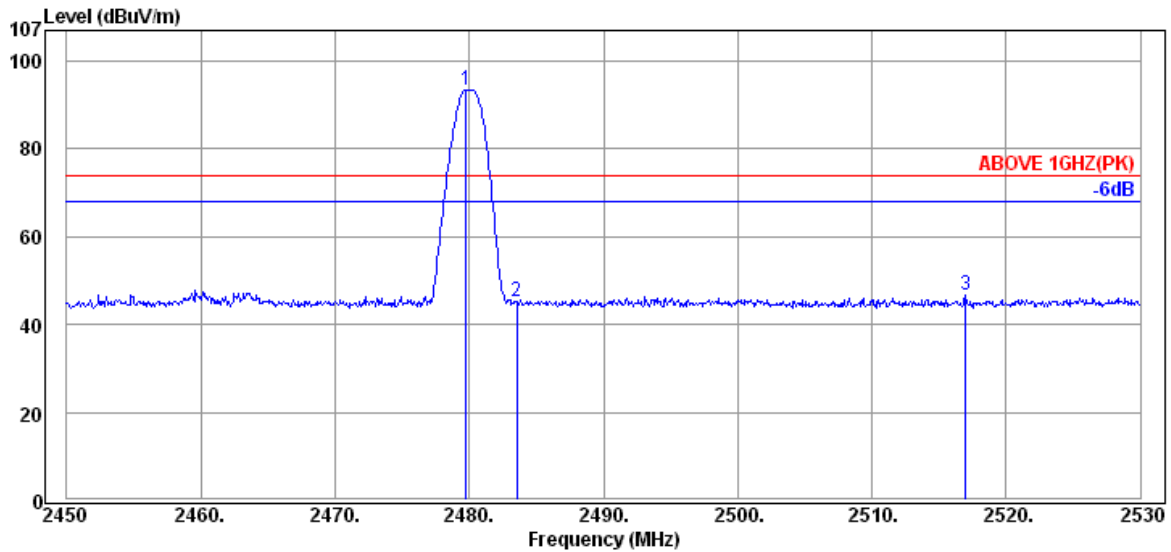


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2383.20	32.13	6.55	-5.46	33.22	54.00	20.78	Average
2390.04	32.16	6.57	-5.75	32.98	54.00	21.02	Average
@ 2402.04	32.16	6.57	46.70	85.43	---	---	Average

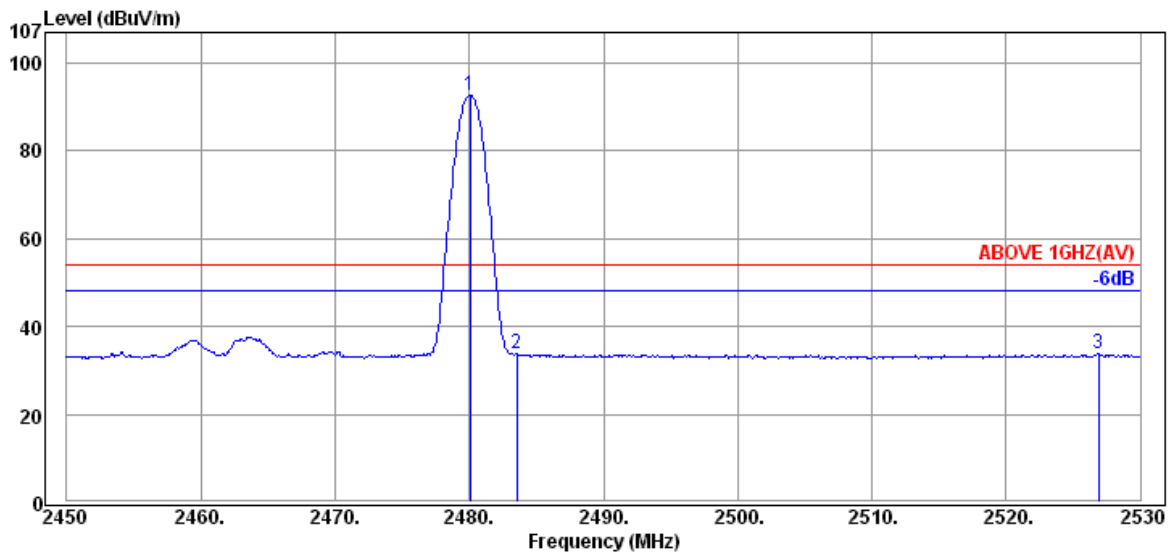
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.76	32.28	6.67	54.47	93.42	---	---	Peak
	2483.52	32.28	6.67	6.35	45.30	74.00	28.70	Peak
	2516.96	32.32	6.72	7.48	46.52	74.00	27.48	Peak

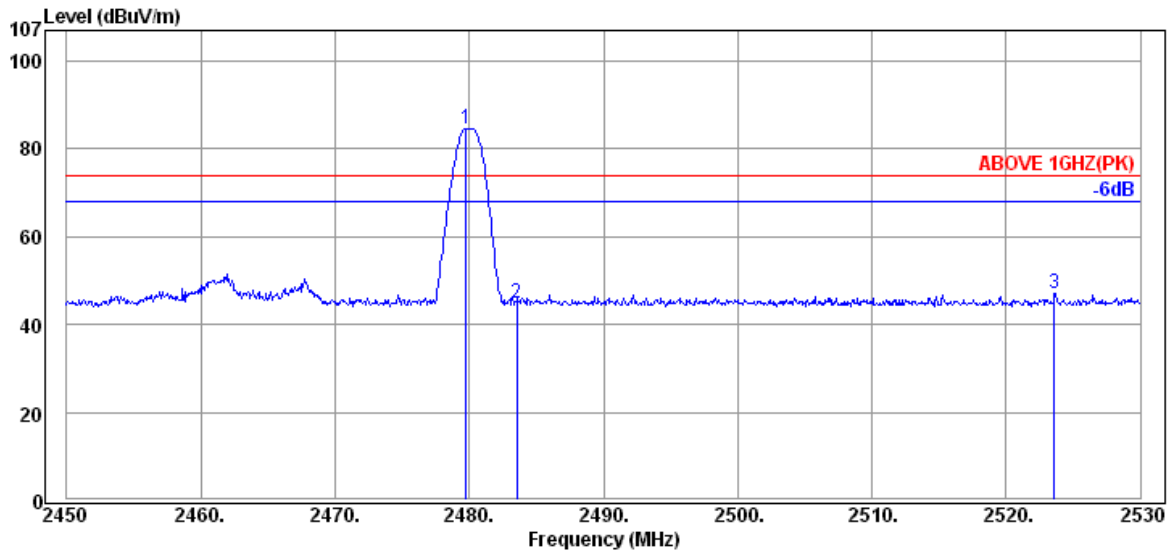


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.08	32.28	6.67	53.71	92.66	---	---	Average
	2483.52	32.28	6.67	-5.21	33.74	54.00	20.26	Average
	2526.88	32.34	6.74	-5.35	33.73	54.00	20.27	Average

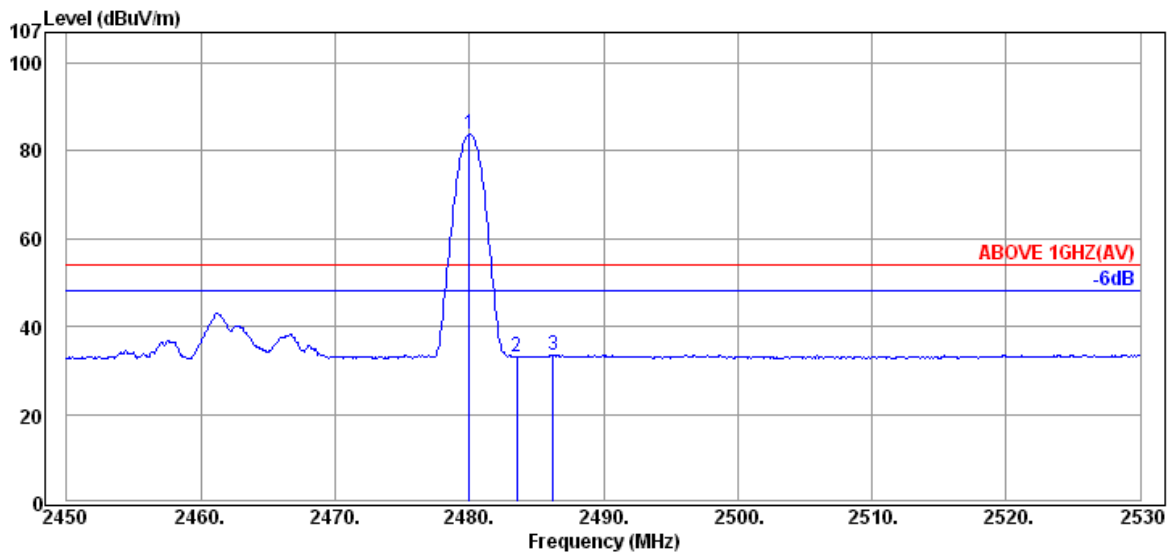
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.76	32.28	6.67	45.64	84.59	---	---	Peak
	2483.52	32.28	6.67	6.00	44.95	74.00	29.05	Peak
	2523.60	32.34	6.74	8.01	47.09	74.00	26.91	Peak



Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.00	32.28	6.67	44.80	83.75	---	---	Average
	2483.52	32.28	6.67	-5.80	33.15	54.00	20.85	Average
	2486.24	32.28	6.67	-5.31	33.64	54.00	20.36	Average

備註：“@”為主波，在此章節是不予以判定。

3. 峰值輸出功率之量測

測試日期	2018/08/21	環境溫/濕度	23°C/51%
測試電壓	DC 3.3V (透過 Digital Still Camera 供電)		

3.1. 峰值輸出功率

模式 (Mode)	測試頻率 (MHz)	最大輸出功率(dBm)	限制值 (dBm)
802.11b	2412	7.69	30
	2437	7.64	
	2462	7.71	
802.11g	2412	13.47	
	2437	13.49	
	2462	13.63	
802.11n-HT20	2412	13.31	
	2437	13.45	
	2462	13.66	
BLE	2402	6.10	
	2440	7.15	
	2480	7.34	

3.2. 平均輸出功率(參考用)

模式 (Mode)	測試頻率 (MHz)	Duty Cycle (X)	最大輸出功率(dBm)			限制值 (dBm)
			輸出功率(dBm)	$10\log(1/X)$	Total	
802.11b	2412	0.989	4.37	0.05	4.42	30
	2437		4.38		4.43	
	2462		4.43		4.48	
802.11g	2412	0.940	3.88	0.27	4.15	
	2437		3.91		4.18	
	2462		4.07		4.34	
802.11n-HT20	2412	0.936	3.84	0.29	4.13	
	2437		4.13		4.42	
	2462		4.17		4.46	

註：當 Duty cycle<98%，最大輸出功率必需要加上 duty cycle factor $10\log(1/x) \cdot (x=\text{duty cycle})$

4. 電波暴露量之量測

測試日期	2018/08/21	環境溫/濕度	23°C/51%
測試電壓	DC 3.3V (透過 Digital Still Camera 供電)		

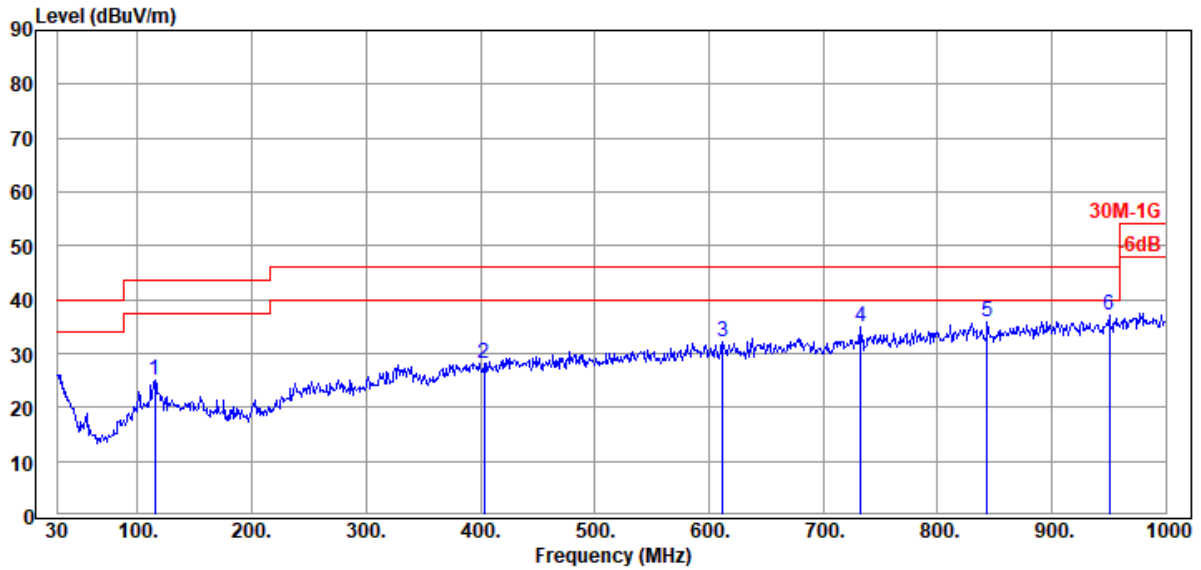
距離人體(r):	20	cm		
最大發射功率(P):	13.66	dBm	=	23.227 mW
最大天線增益(G):	-6.60	dB	=	0.219 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	0.0010 mW/cm ²			
註：1. 最大發射功率系指2.4GHz各模式/頻道中最大之發射功率功率。				
2. 電磁波曝露量MPE標準值1mW/cm ² ，送測產品實測值為：0.0010 mW/cm ²				

附錄 二

輻射干擾場強量測掃頻圖資料
(頻率範圍 30MHz~25000MHz)

Data no. : 7

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : VERTICAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Tx 2462MHz(802.11g)

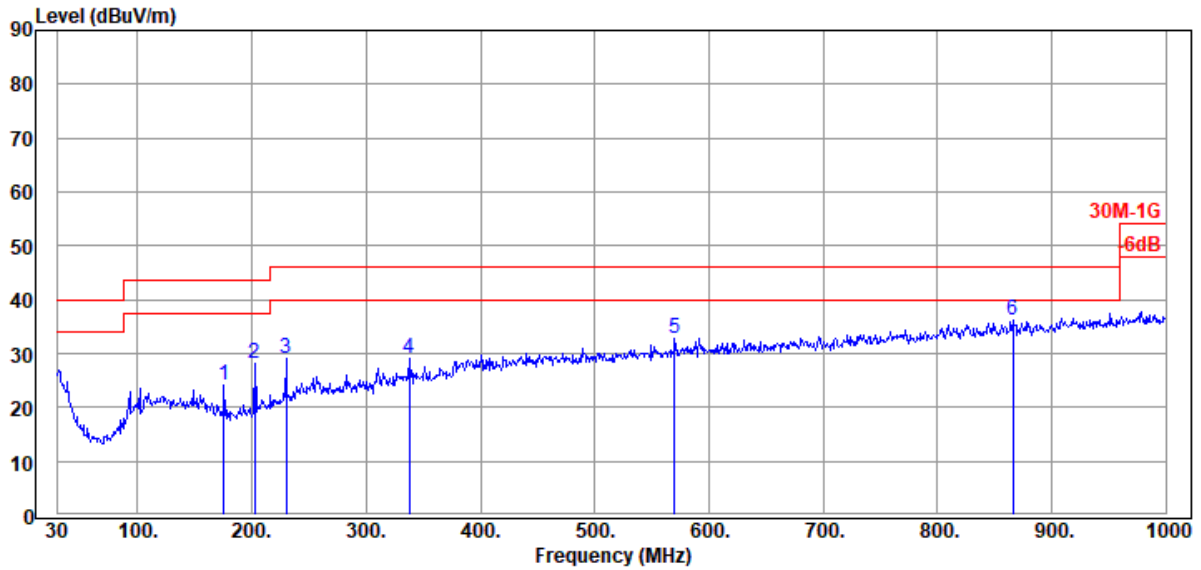
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	115.36	18.54	2.92	3.58	25.04	43.50	18.46	Peak
2	403.45	22.50	5.81	-0.01	28.30	46.00	17.70	Peak
3	612.00	25.00	6.58	0.48	32.06	46.00	13.94	Peak
4	733.25	25.72	7.25	2.00	34.97	46.00	11.03	Peak
5	843.83	26.82	7.80	1.24	35.86	46.00	10.14	Peak
6	950.53	27.80	8.36	1.04	37.20	46.00	8.80	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 8

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : HORIZONTAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Tx 2462MHz(802.11g)

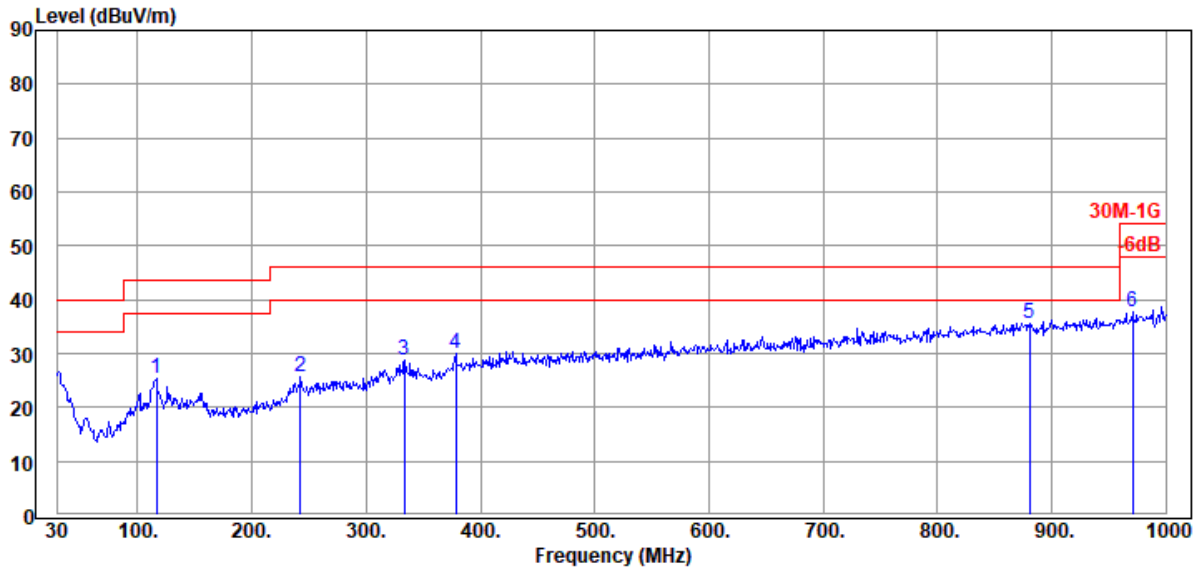
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	175.50	15.73	3.59	4.79	24.11	43.50	19.39	Peak
2	202.66	16.16	3.68	8.23	28.07	43.50	15.43	Peak
3	229.82	18.10	3.85	7.05	29.00	46.00	17.00	Peak
4	337.49	20.89	4.91	3.40	29.20	46.00	16.80	Peak
5	570.29	24.62	6.37	1.89	32.88	46.00	13.12	Peak
6	866.14	26.96	7.92	1.19	36.07	46.00	9.93	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 9

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : VERTICAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Rx 2437MHz

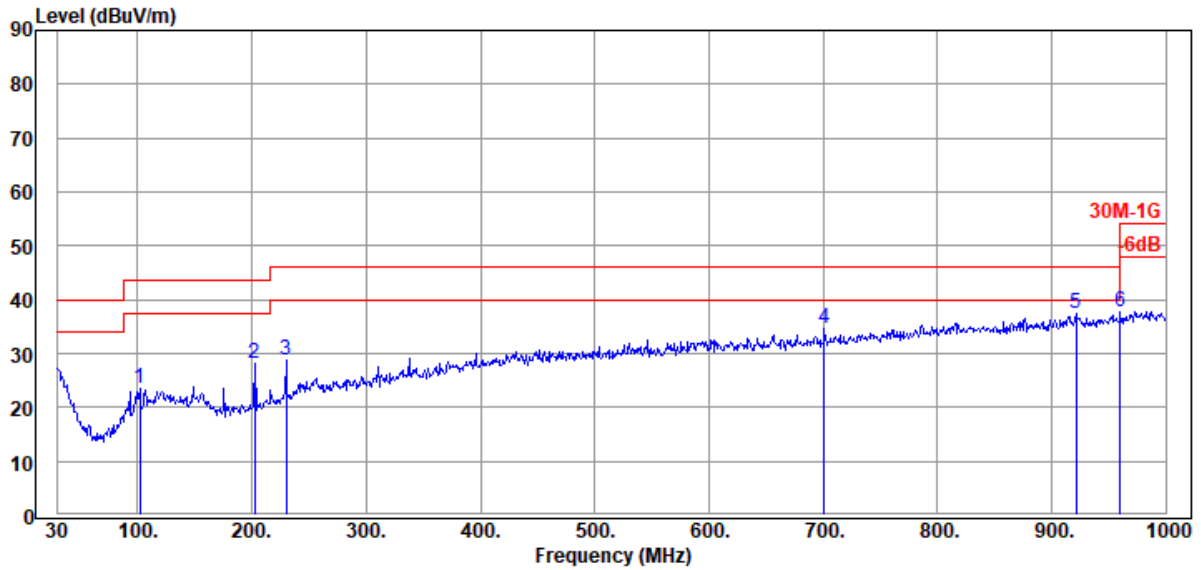
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	116.33	18.59	2.92	3.76	25.27	43.50	18.23	Peak
2	242.43	18.91	3.93	2.76	25.60	46.00	20.40	Peak
3	333.61	20.80	4.85	3.16	28.81	46.00	17.19	Peak
4	378.23	21.95	5.49	2.59	30.03	46.00	15.97	Peak
5	880.69	27.07	8.00	0.53	35.60	46.00	10.40	Peak
6	970.90	28.03	8.45	1.28	37.76	54.00	16.24	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 10

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : HORIZONTAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Rx 2437MHz

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	101.78	17.60	2.72	3.09	23.41	43.50	20.09	Peak
2	202.66	16.16	3.68	8.28	28.12	43.50	15.38	Peak
3	229.82	18.10	3.85	6.70	28.65	46.00	17.35	Peak
4	701.24	25.30	7.10	2.22	34.62	46.00	11.38	Peak
5	921.43	27.46	8.21	1.84	37.51	46.00	8.49	Peak
6	960.23	27.87	8.39	1.35	37.61	54.00	16.39	Peak

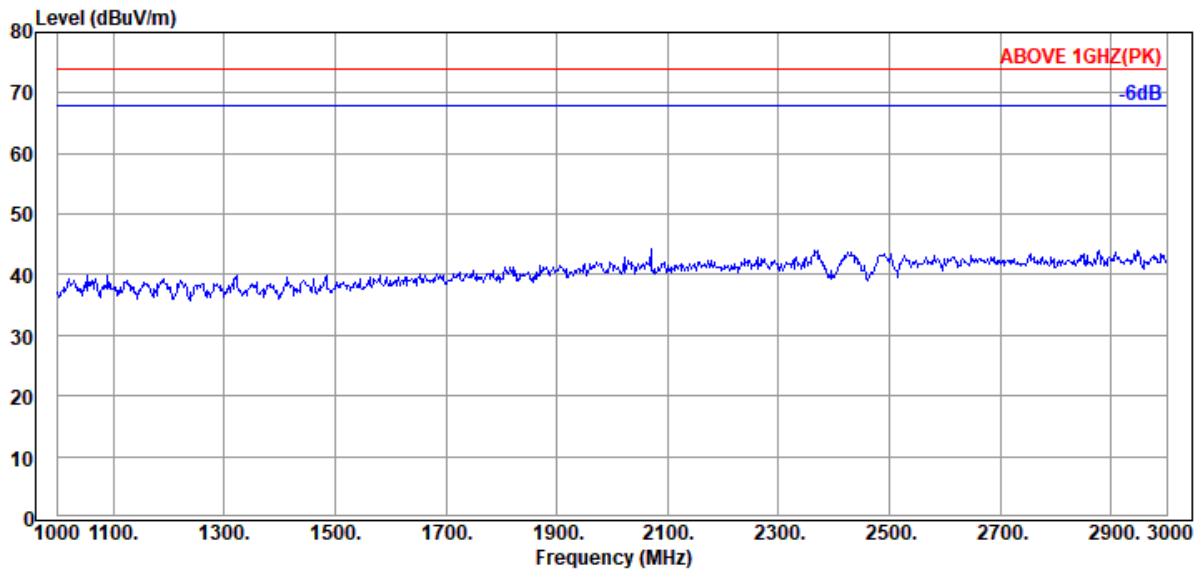
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : VERTICAL

Engineer : Martin

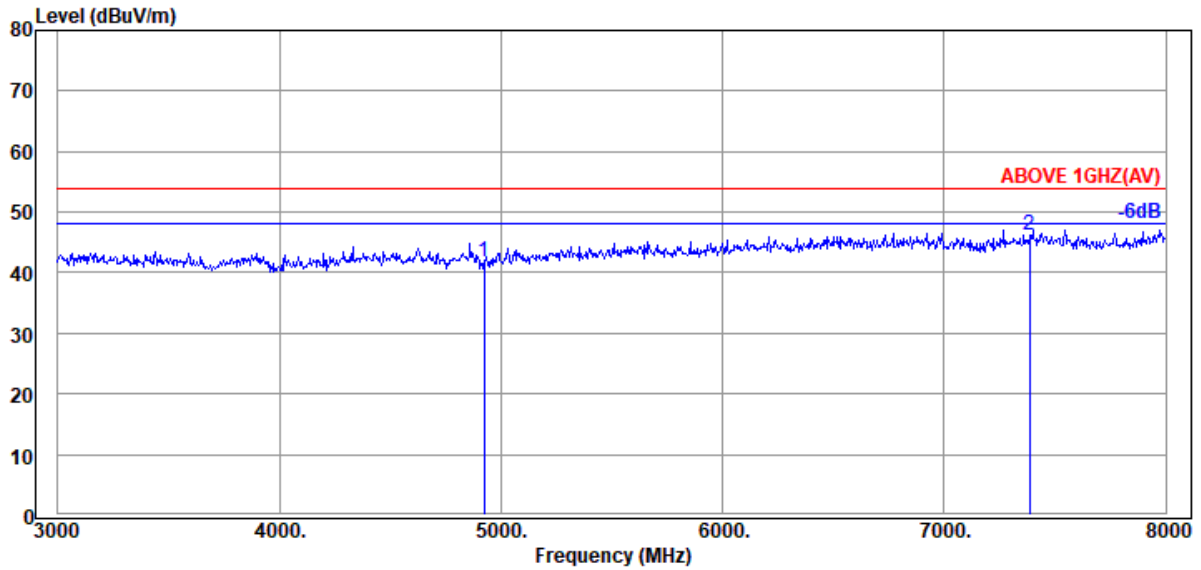
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : VERTICAL

Engineer : Martin

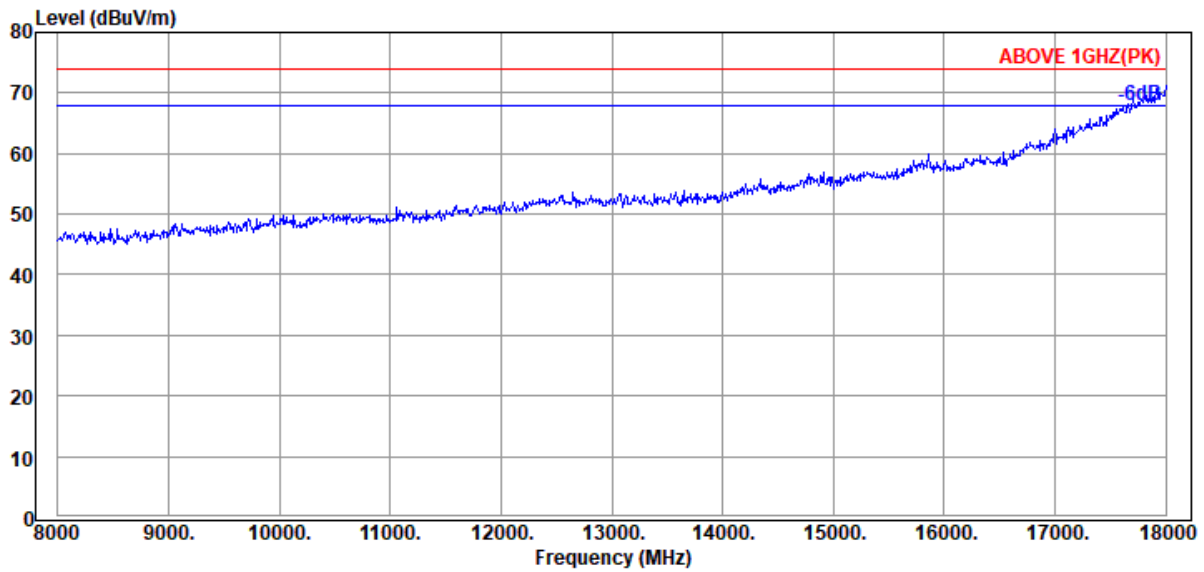
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-1.98	41.87	54.00	12.13	Peak
2	7385.00	35.80	11.99	-1.57	46.22	54.00	7.78	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : VERTICAL

Engineer : Martin

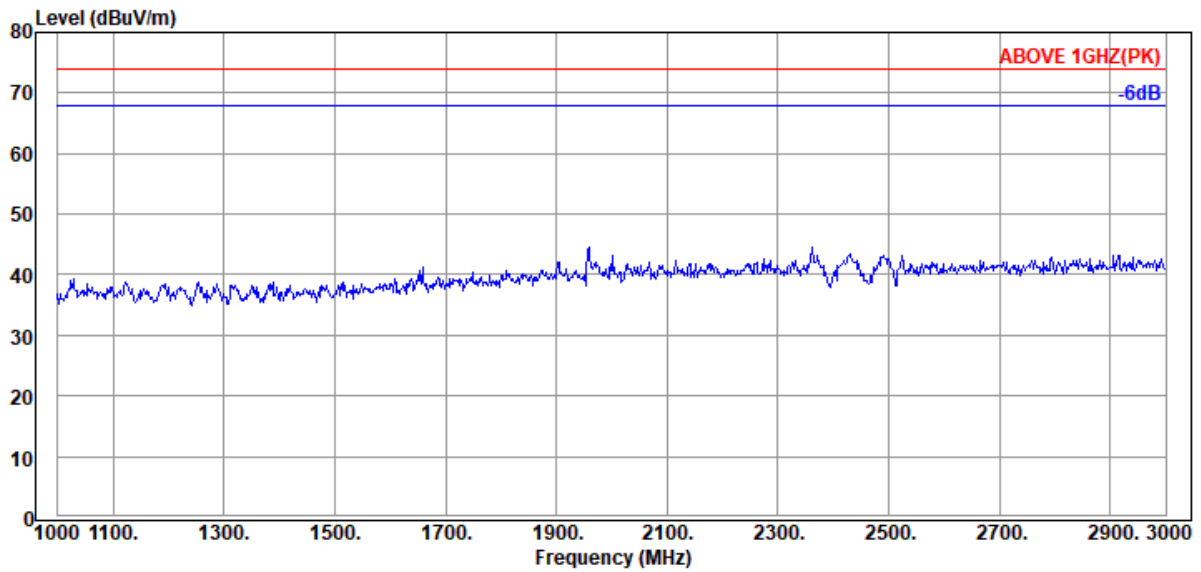
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : HORIZONTAL

Engineer : Martin

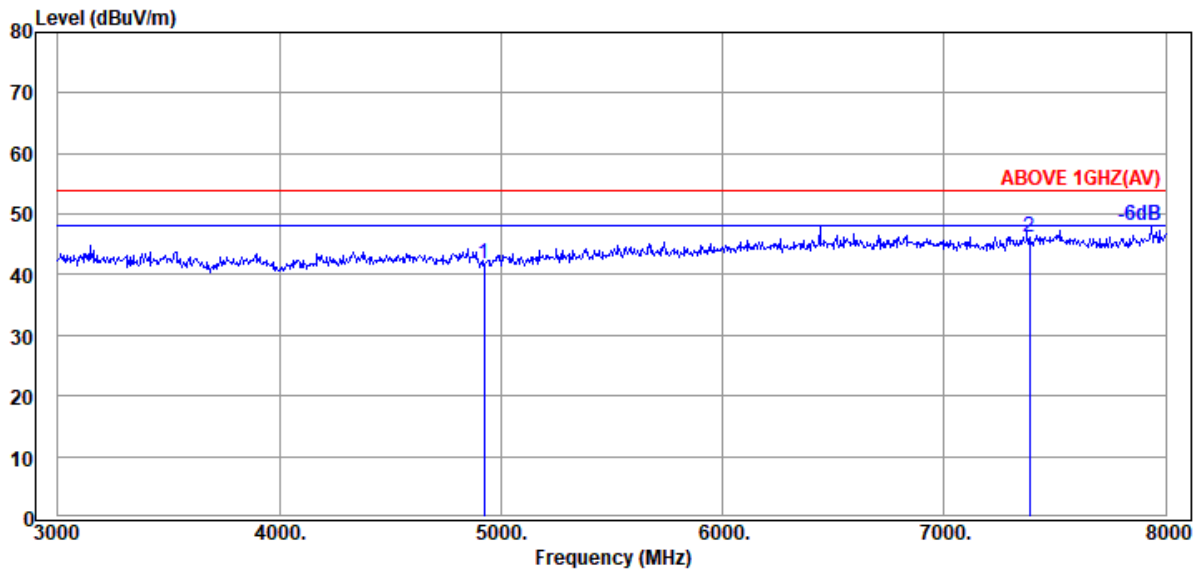
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : HORIZONTAL

Engineer : Martin

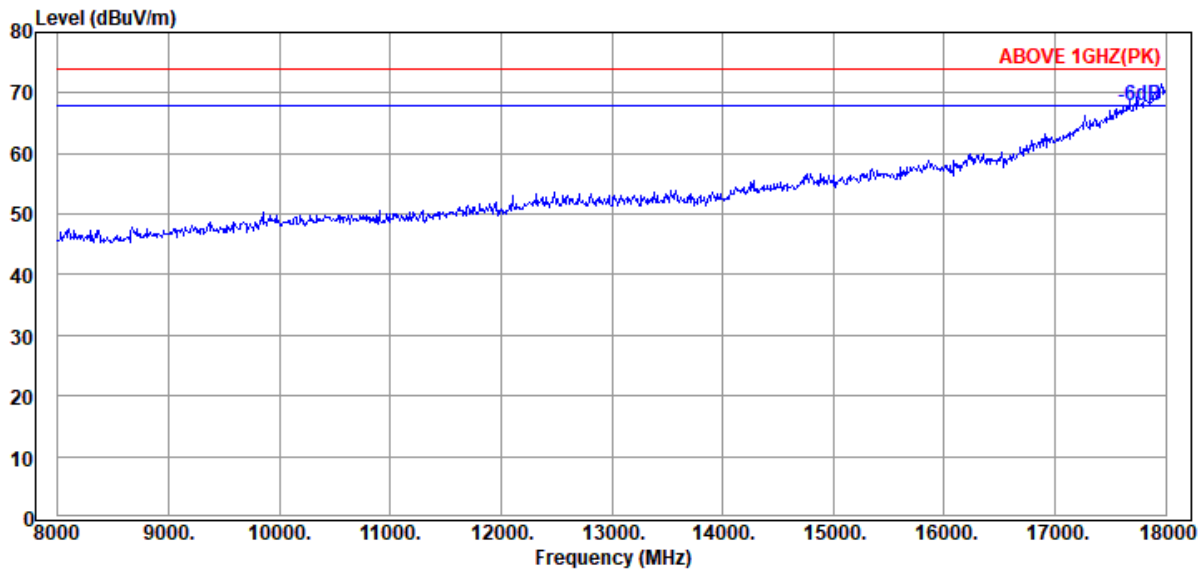
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-2.02	41.83	54.00	12.17	Peak
2	7385.00	35.80	11.99	-1.68	46.11	54.00	7.89	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : HORIZONTAL

Engineer : Martin

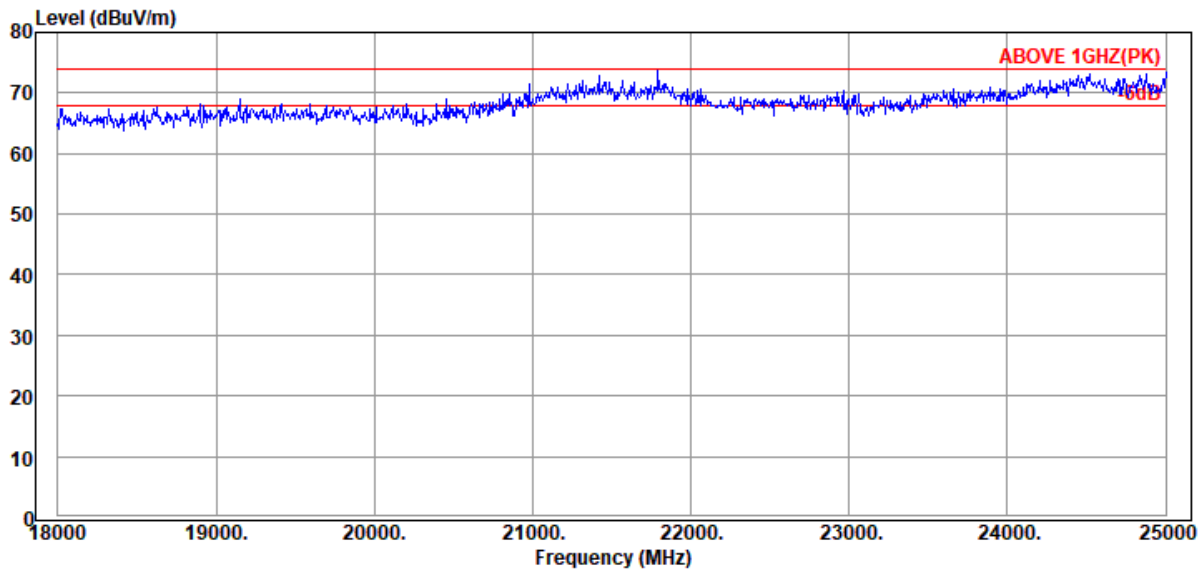
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : VERTICAL

Engineer : Martin

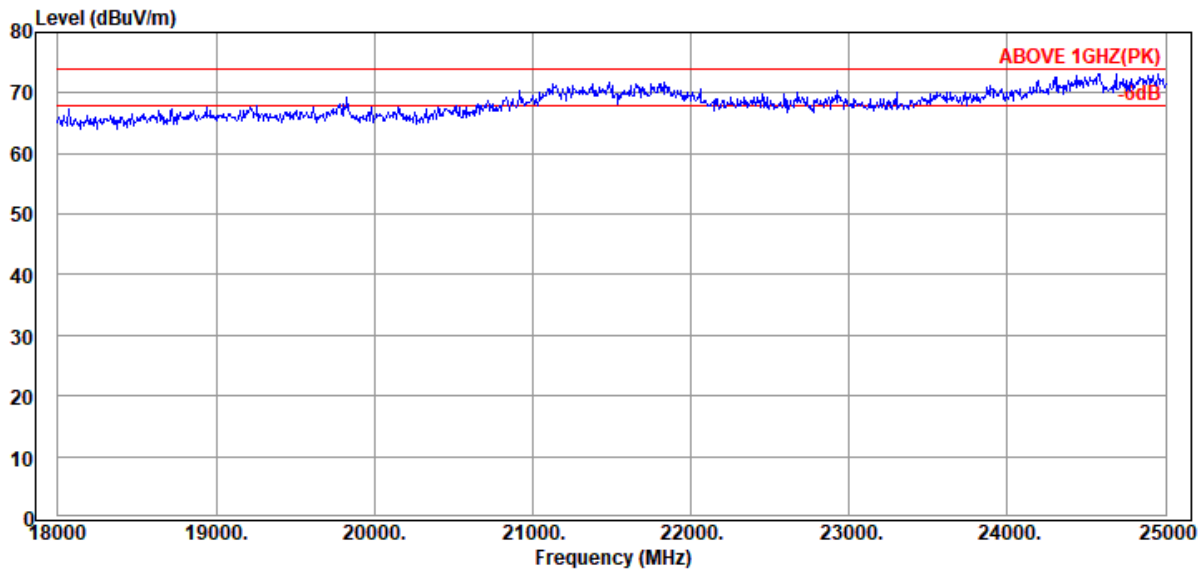
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11b)

Phase : HORIZONTAL

Engineer : Martin

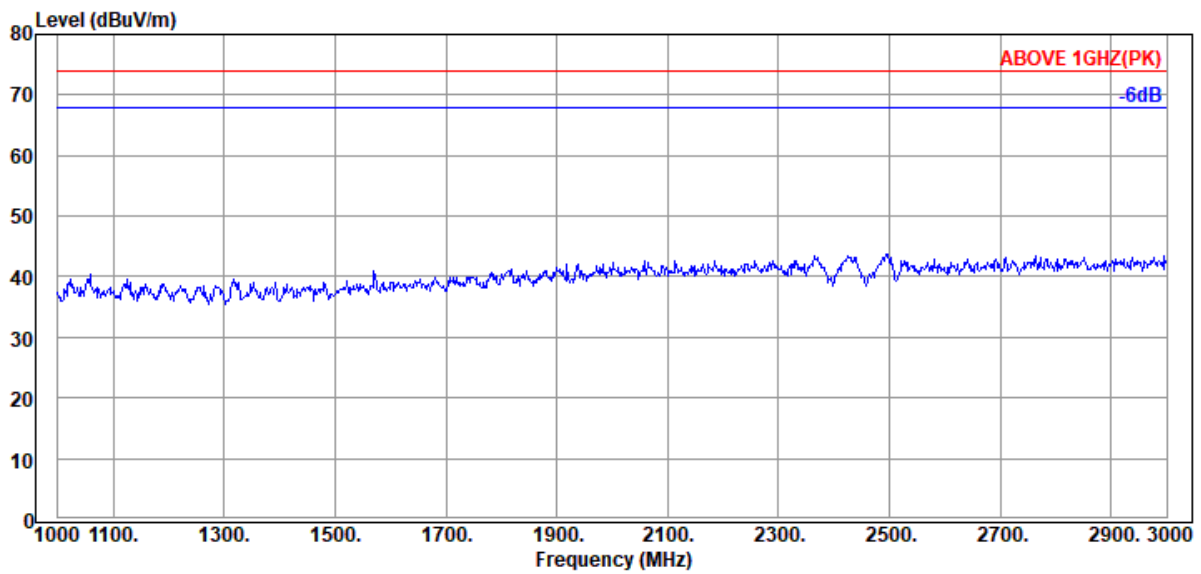
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : VERTICAL

Engineer : Martin

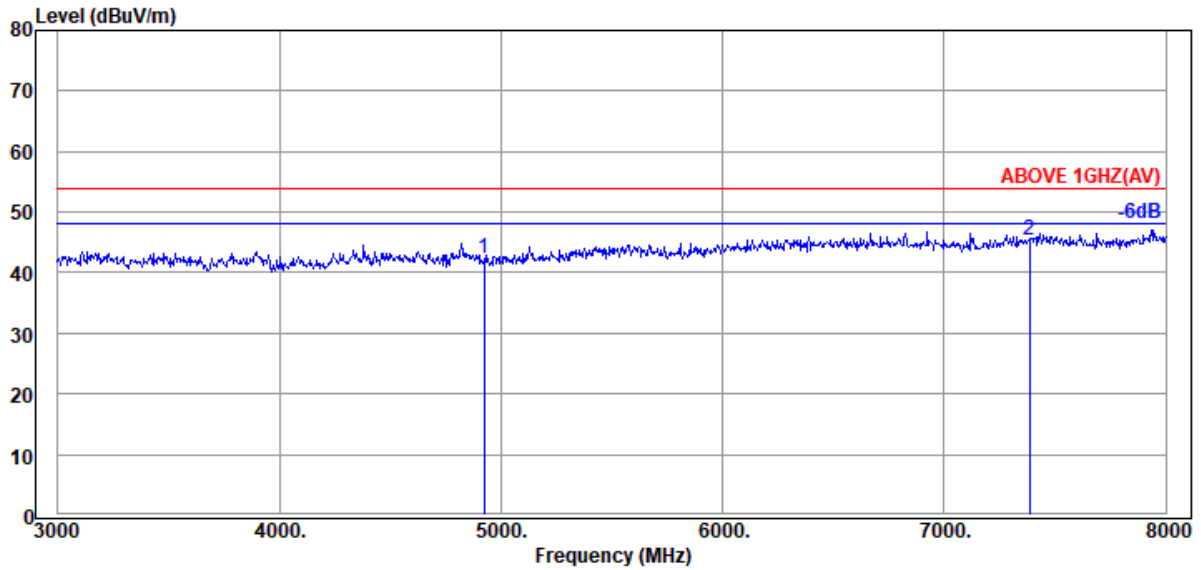
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : VERTICAL

Engineer : Martin

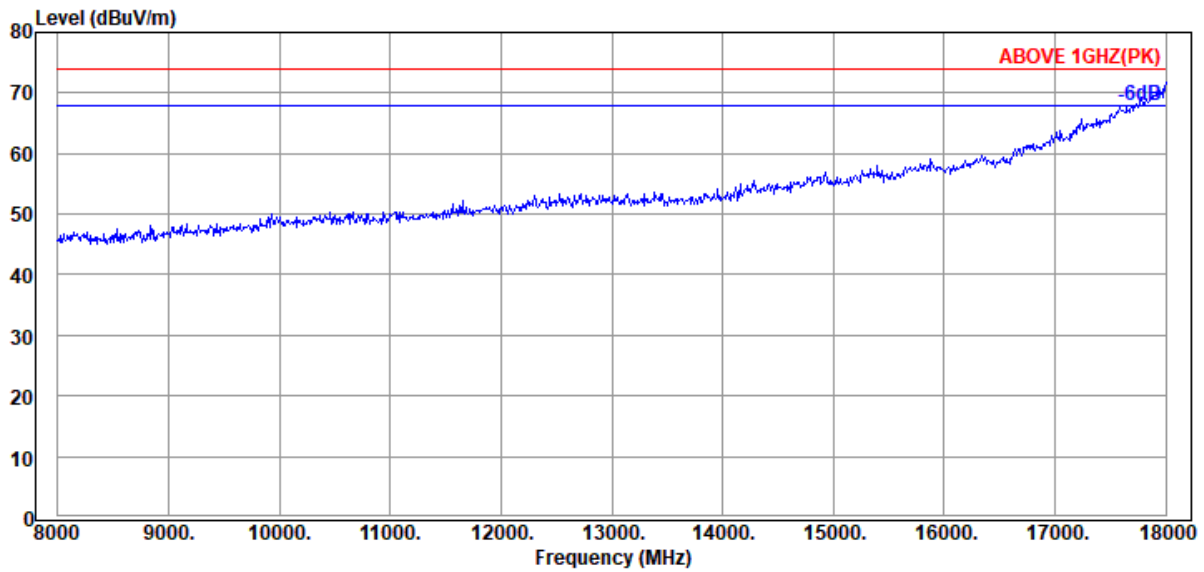
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-1.53	42.32	54.00	11.68	Peak
2	7385.00	35.80	11.99	-2.46	45.33	54.00	8.67	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : VERTICAL

Engineer : Martin

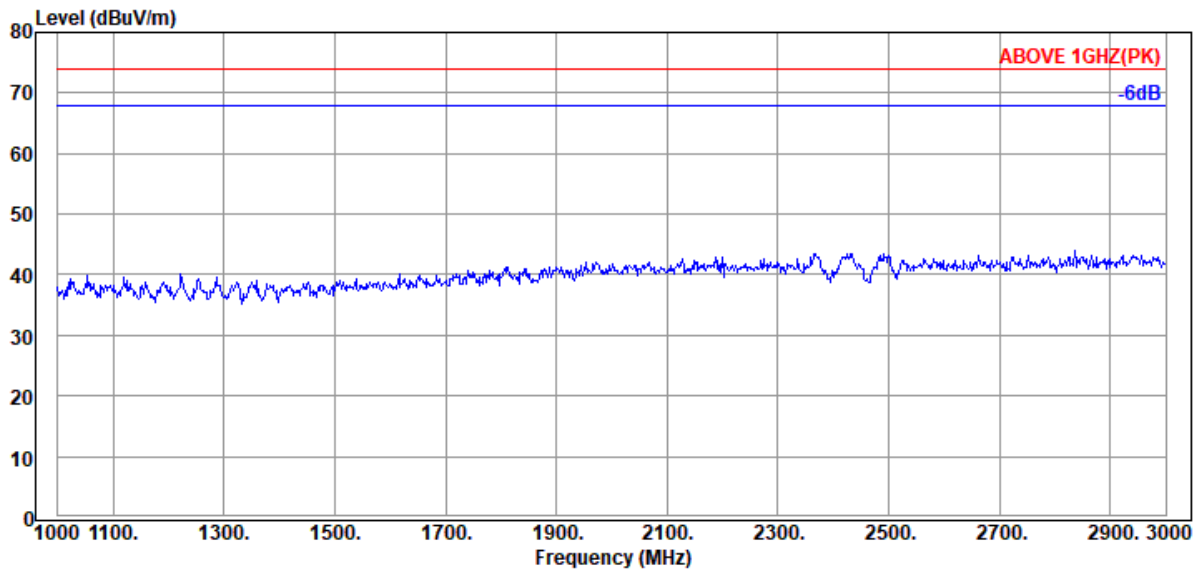
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : HORIZONTAL

Engineer : Martin

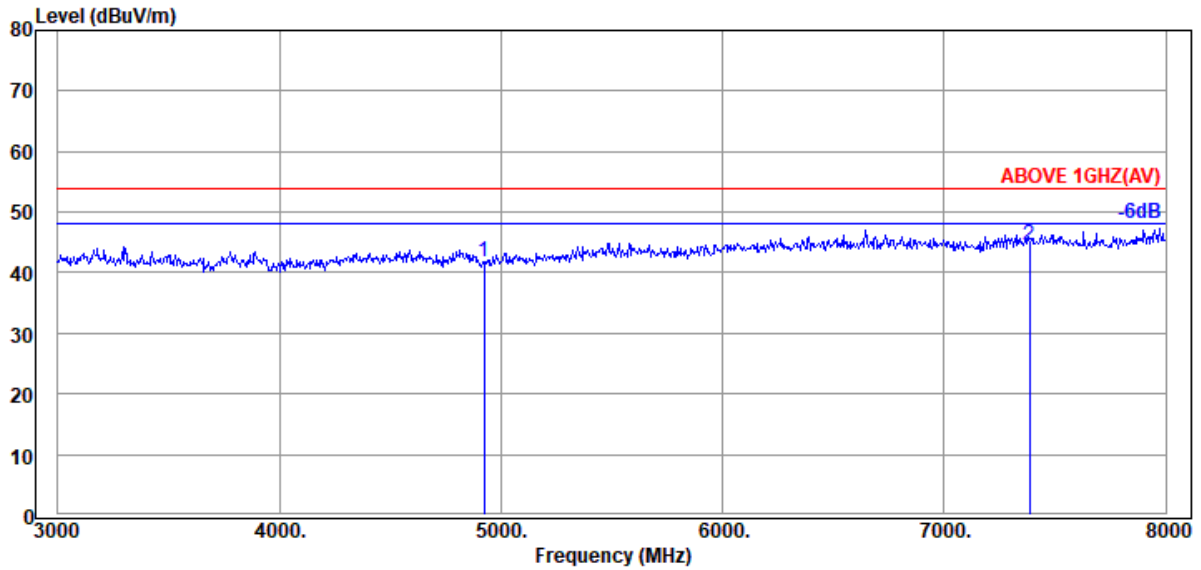
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : HORIZONTAL

Engineer : Martin

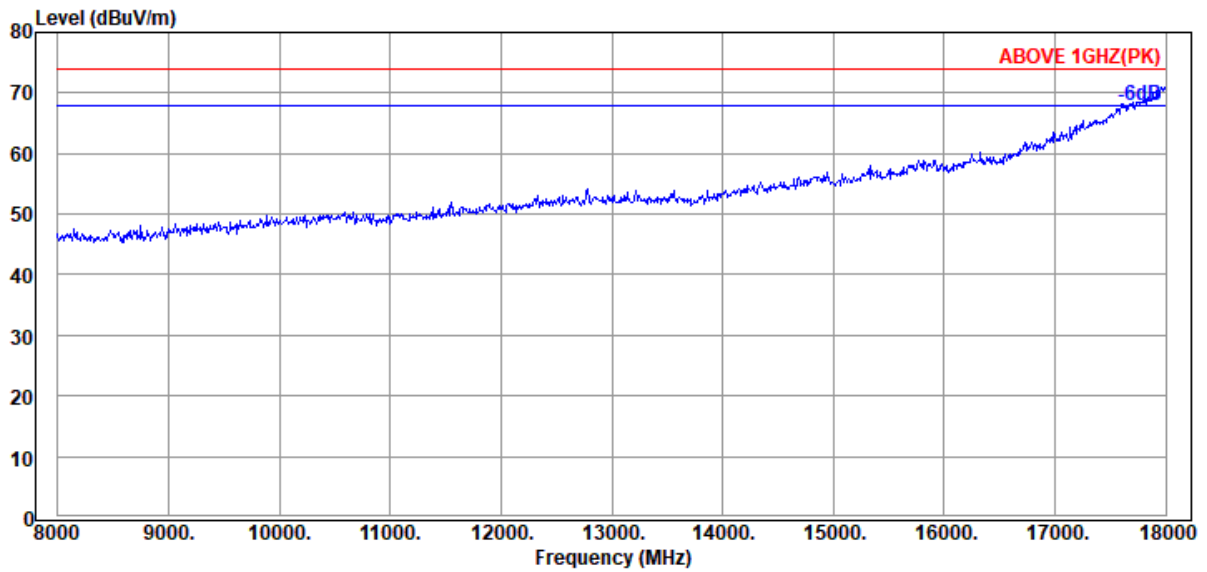
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-1.95	41.90	54.00	12.10	Peak
2	7385.00	35.80	11.99	-3.22	44.57	54.00	9.43	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : HORIZONTAL

Engineer : Martin

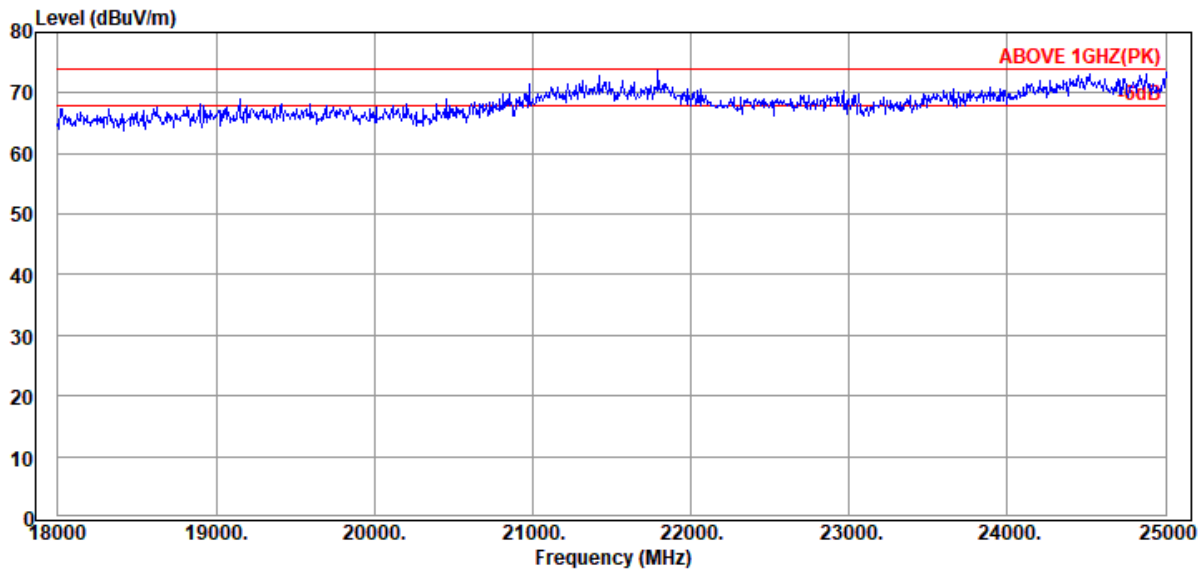
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : VERTICAL

Engineer : Martin

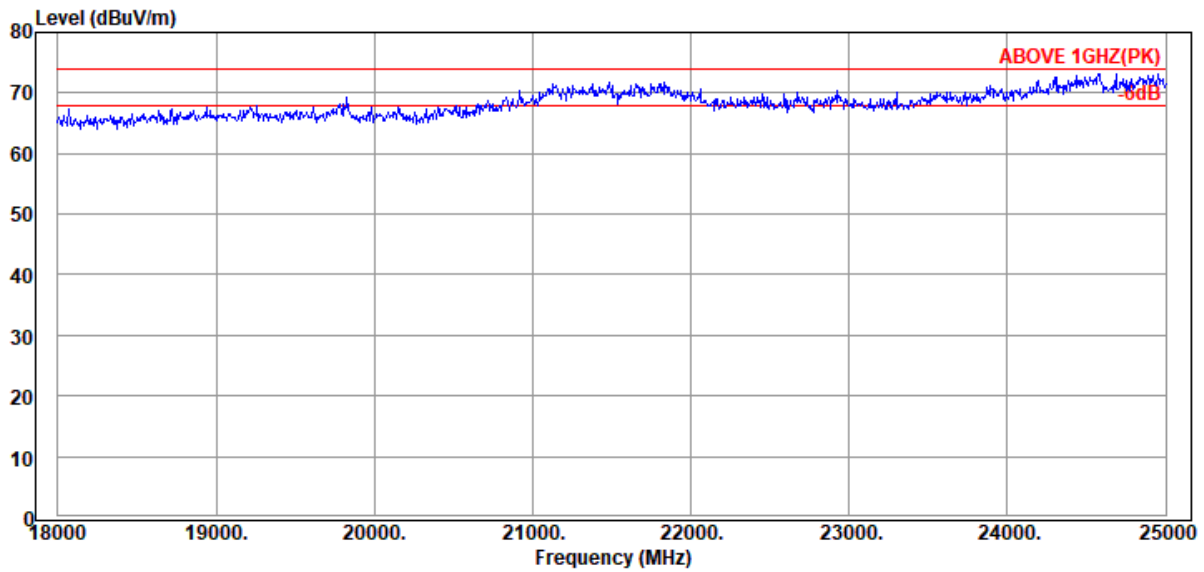
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2462MHz(802.11g)

Phase : HORIZONTAL

Engineer : Martin

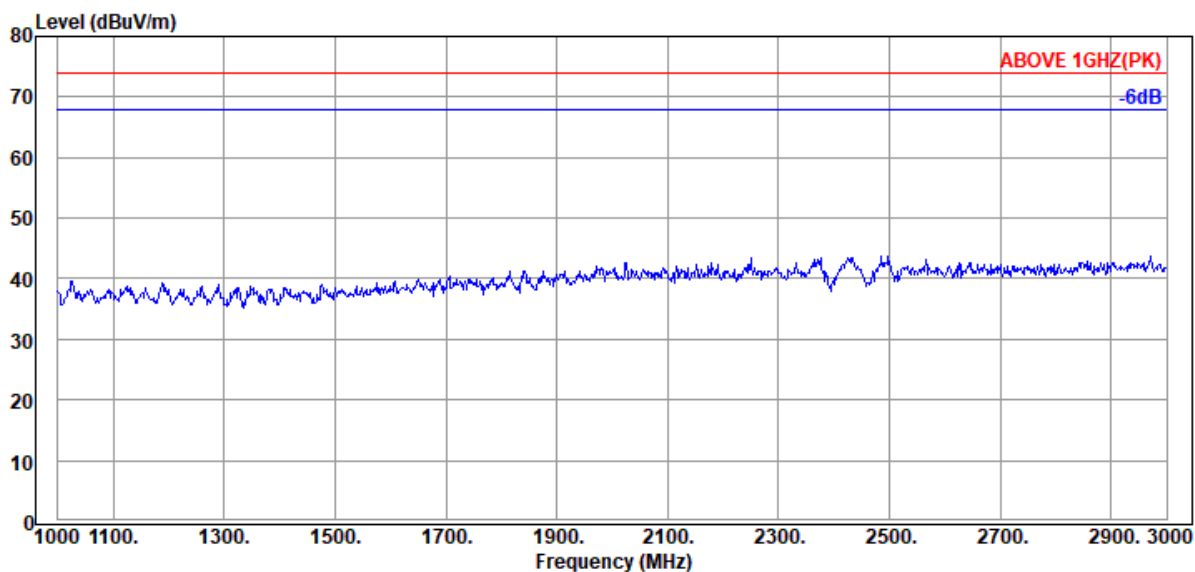
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

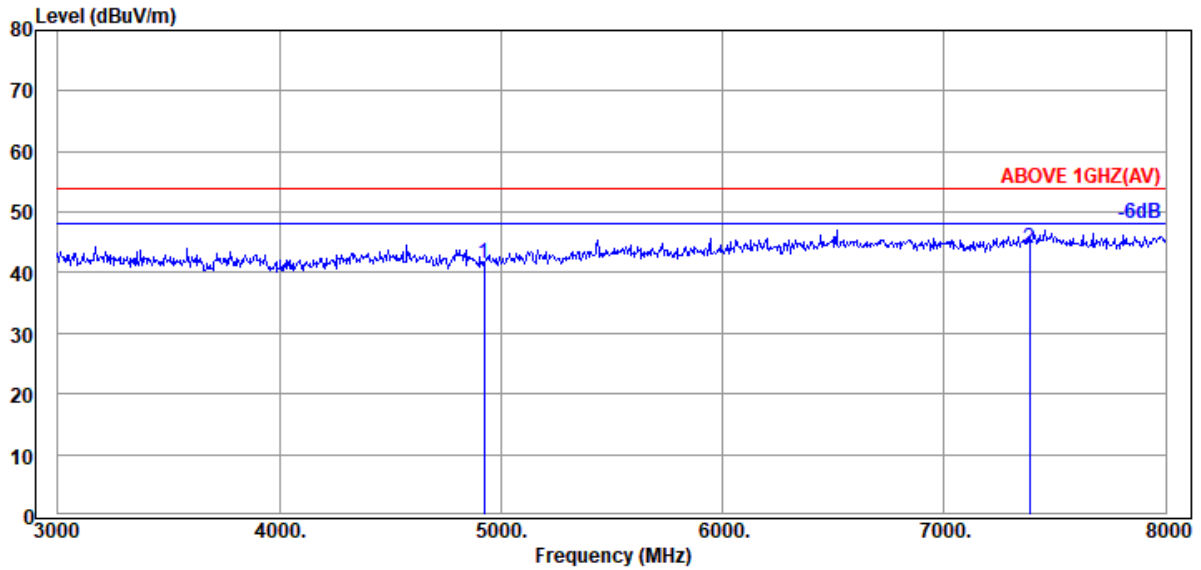
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : VERTICAL

Limit : ABOVE 1GHZ(AV)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-2.34	41.51	54.00	12.49	Peak
2	7385.00	35.80	11.99	-3.78	44.01	54.00	9.99	Peak

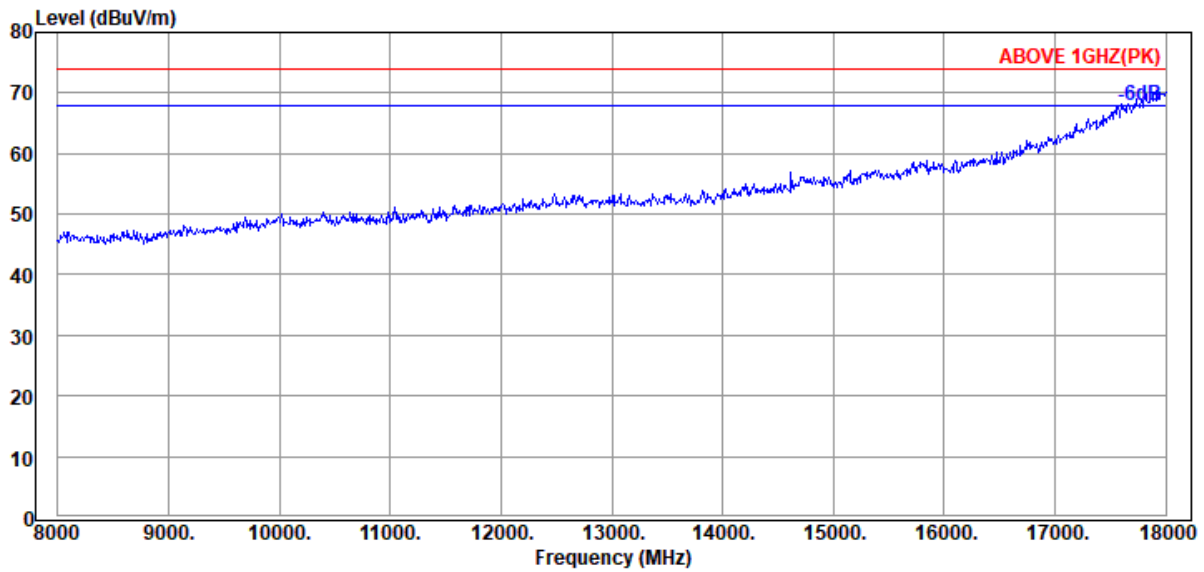
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

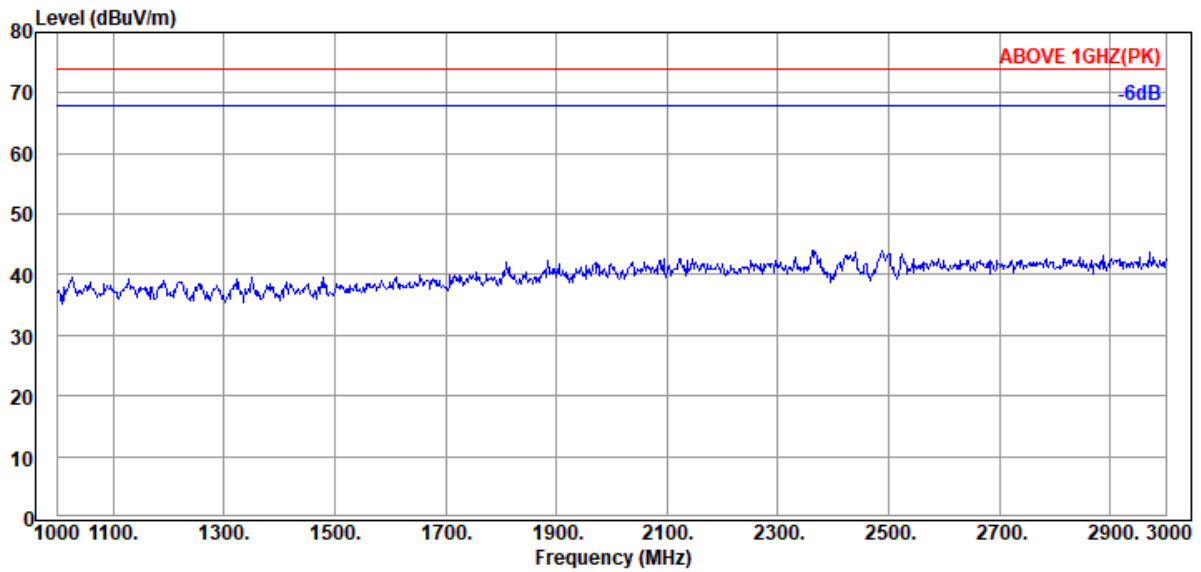
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

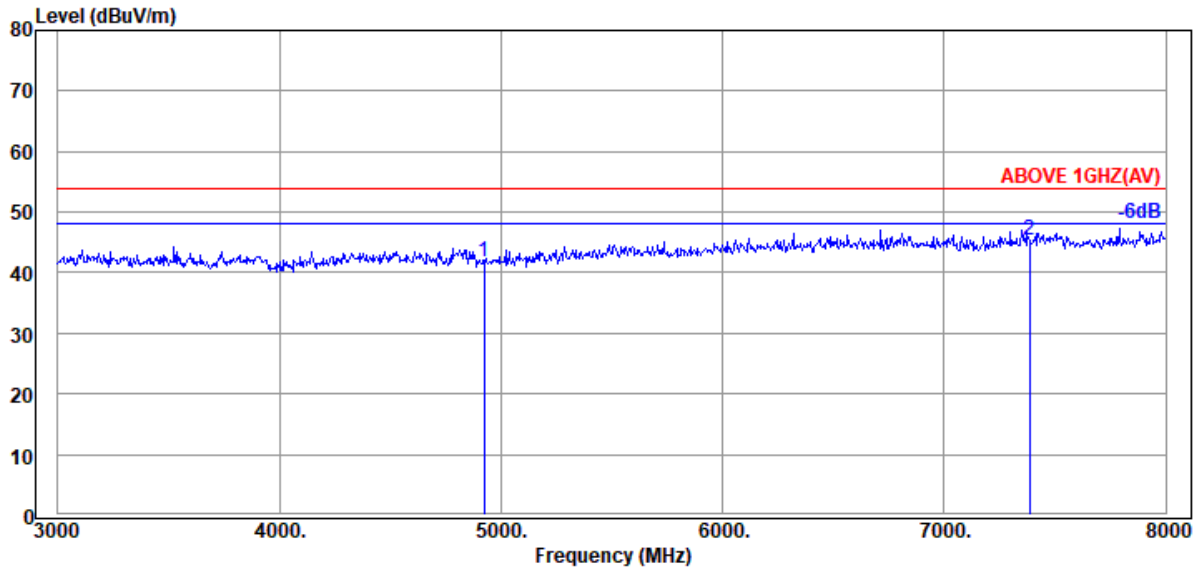
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(AV)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4925.00	34.27	9.58	-2.16	41.69	54.00	12.31	Peak
2	7385.00	35.80	11.99	-2.54	45.25	54.00	8.75	Peak

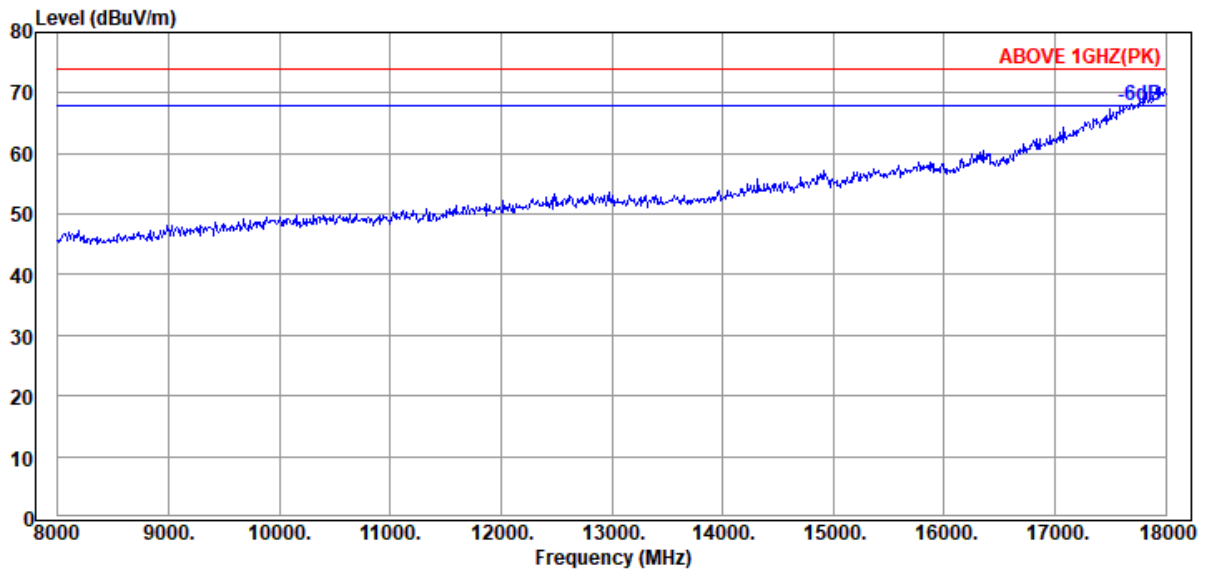
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

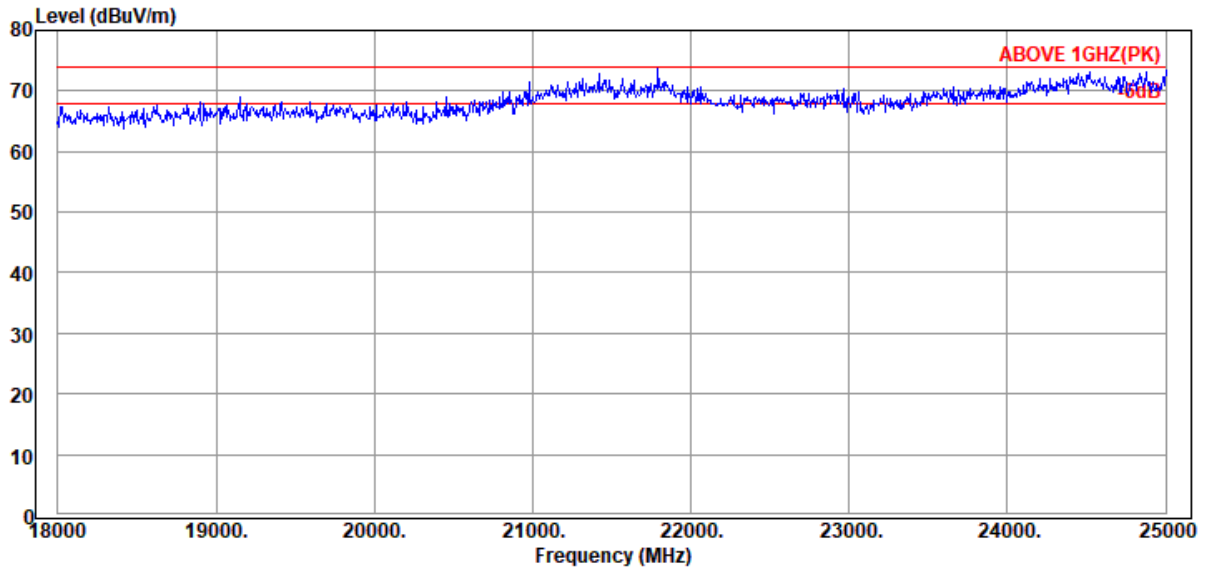
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 7

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

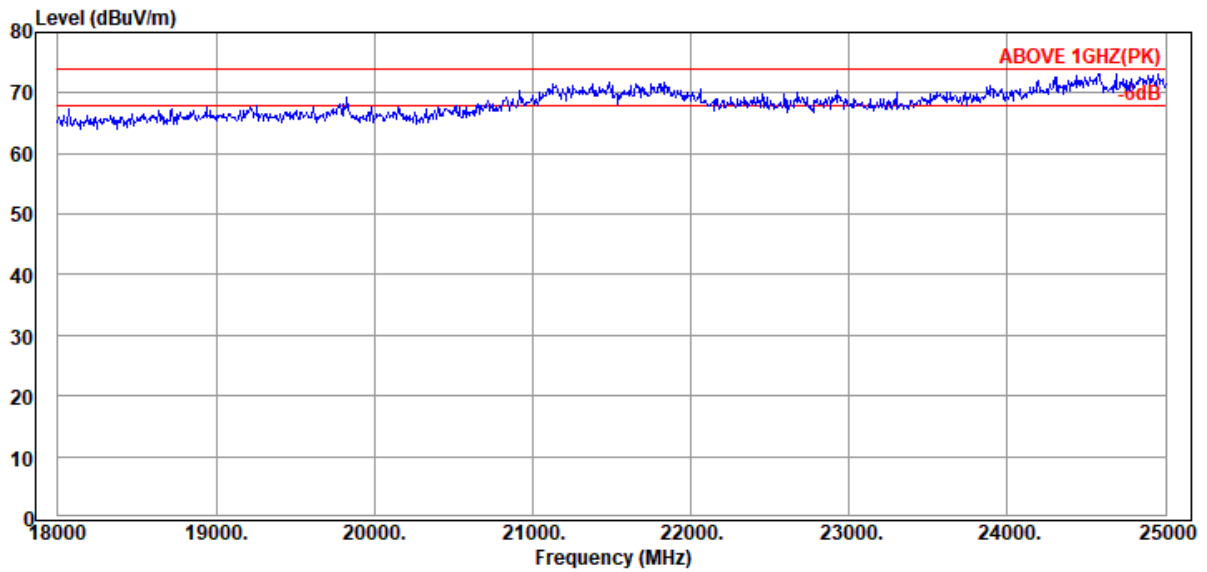
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 8

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2462MHz(802.11n-HT20)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

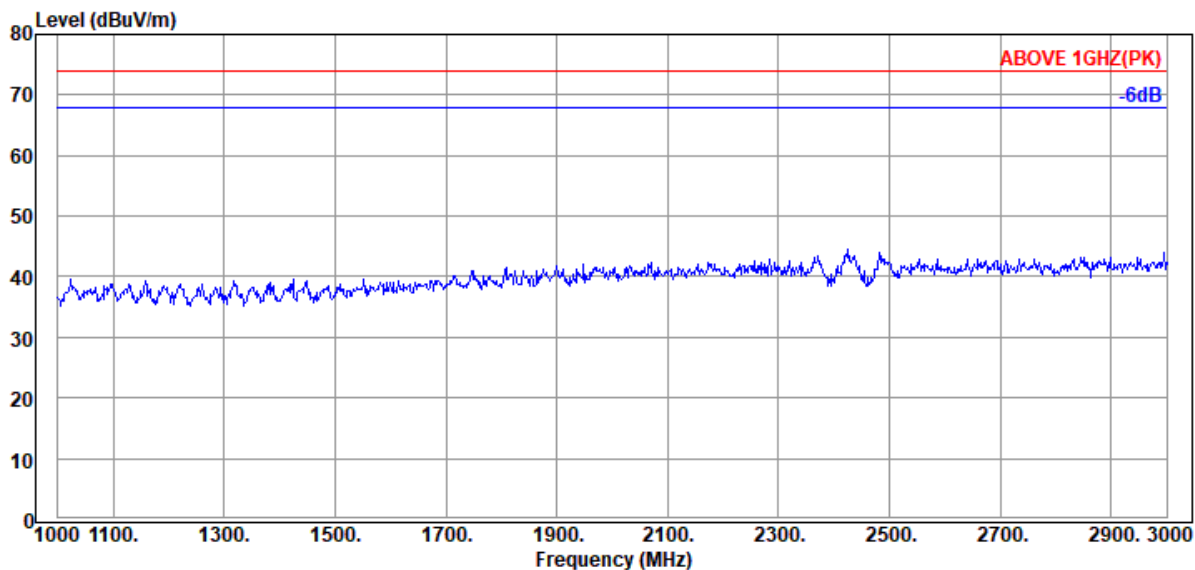
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : VERTICAL

Engineer : Martin

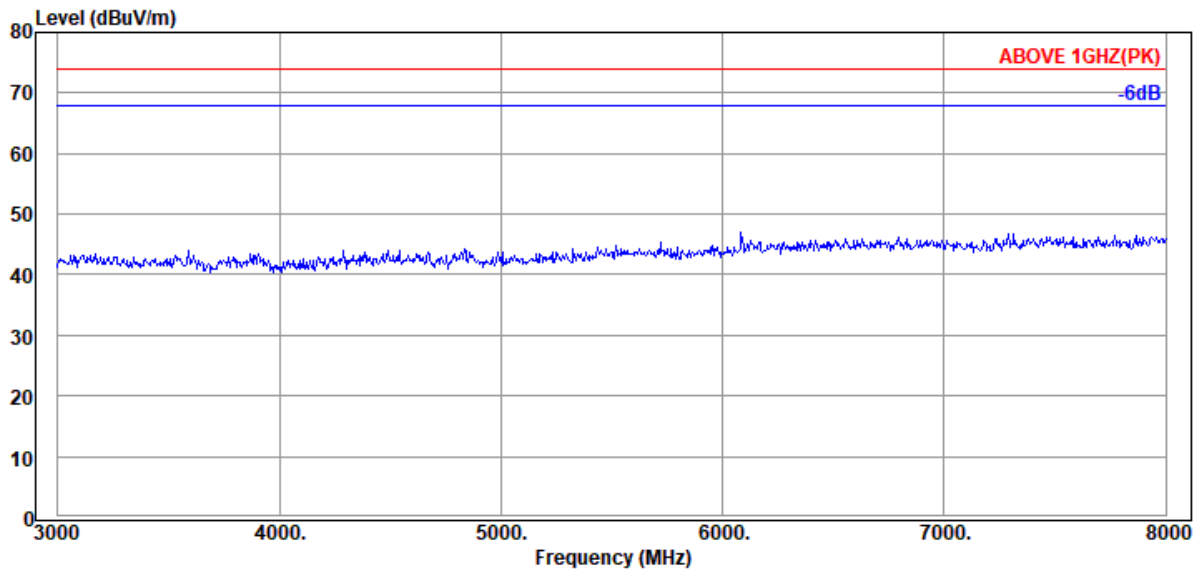
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : VERTICAL

Engineer : Martin

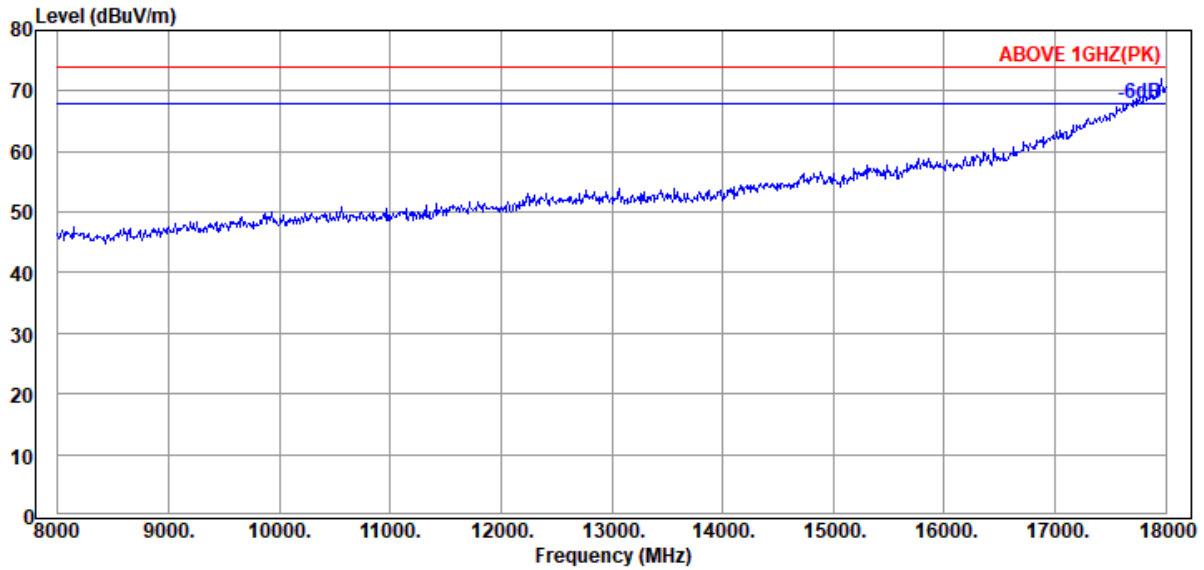
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : VERTICAL

Engineer : Martin

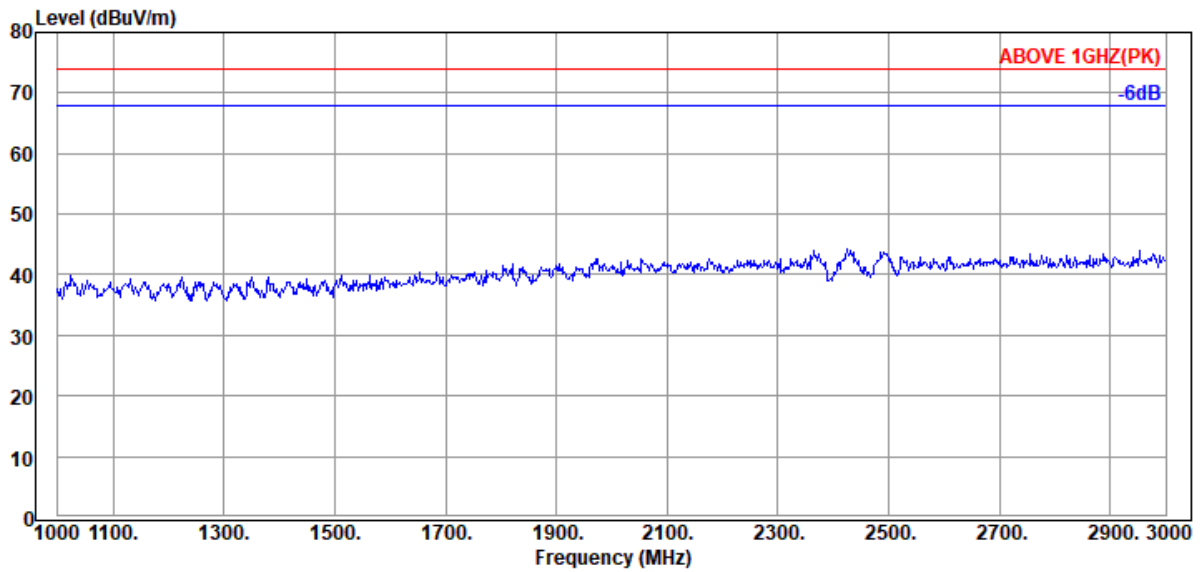
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : HORIZONTAL

Engineer : Martin

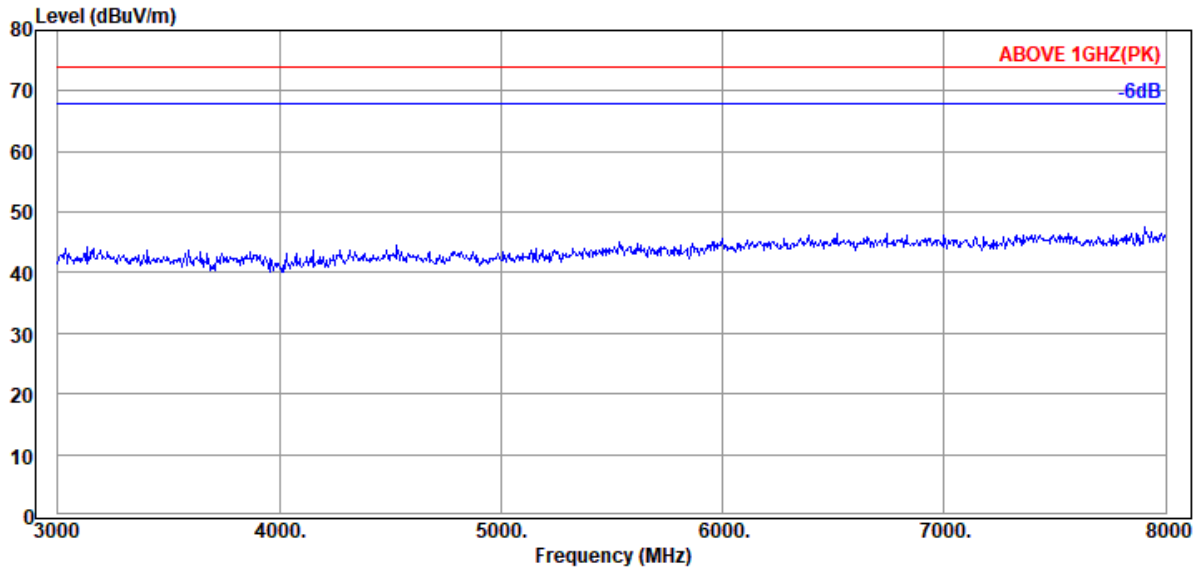
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : HORIZONTAL

Engineer : Martin

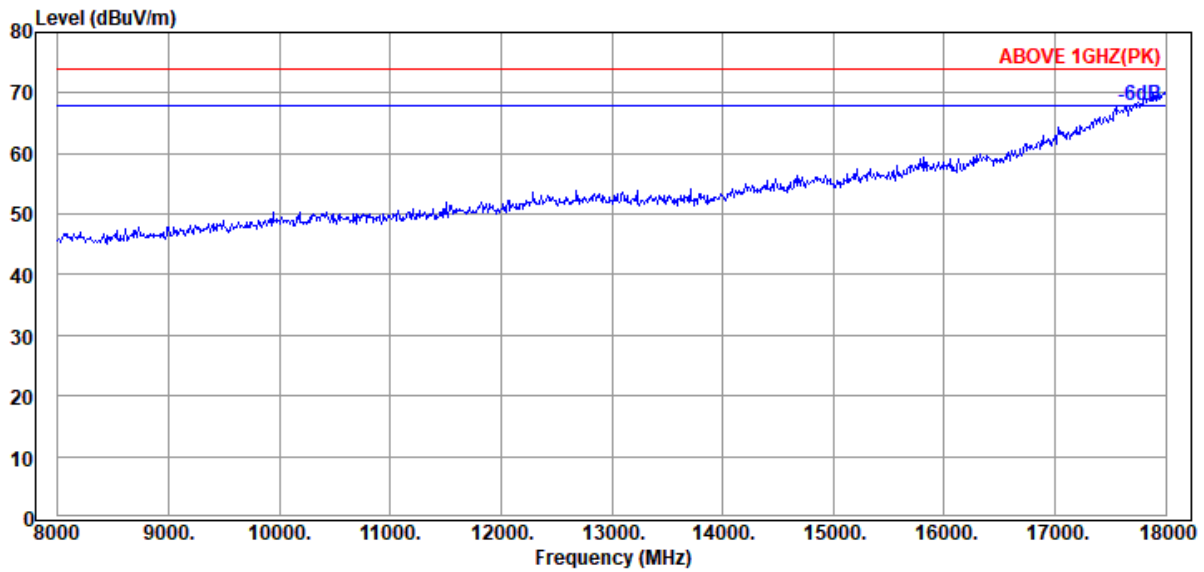
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2437MHz

Phase : HORIZONTAL

Engineer : Martin

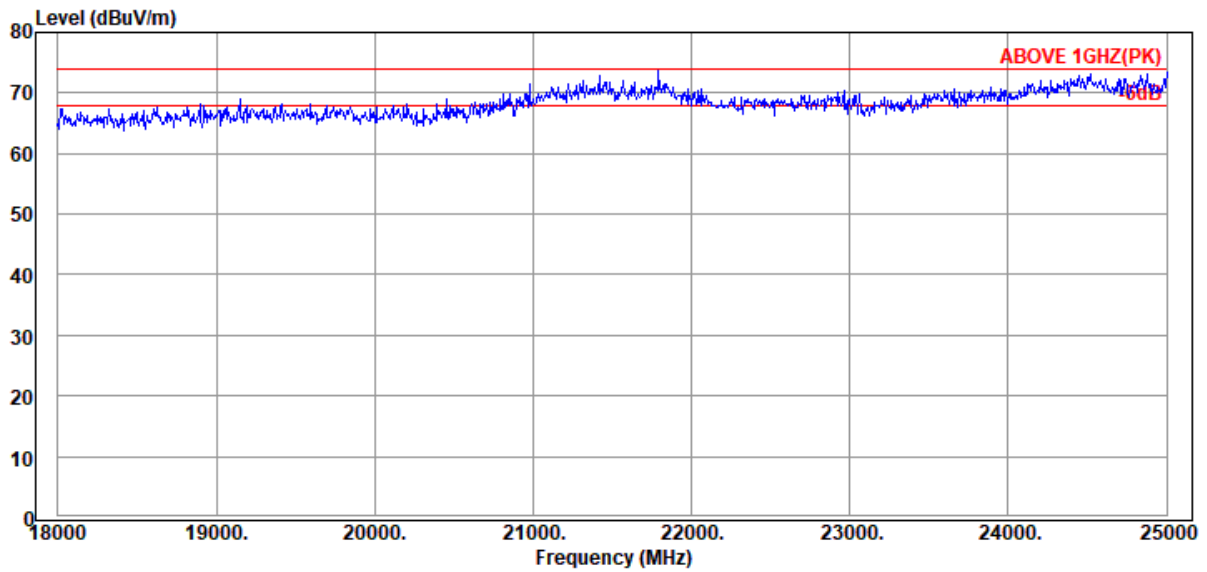
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Rx 2437MHz

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

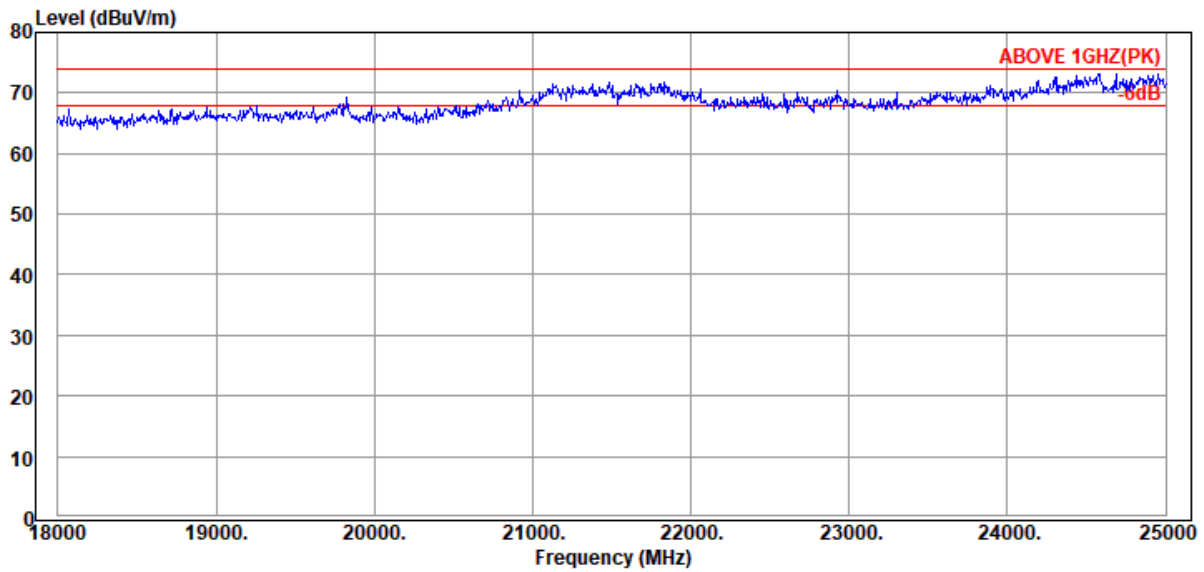
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Rx 2437MHz

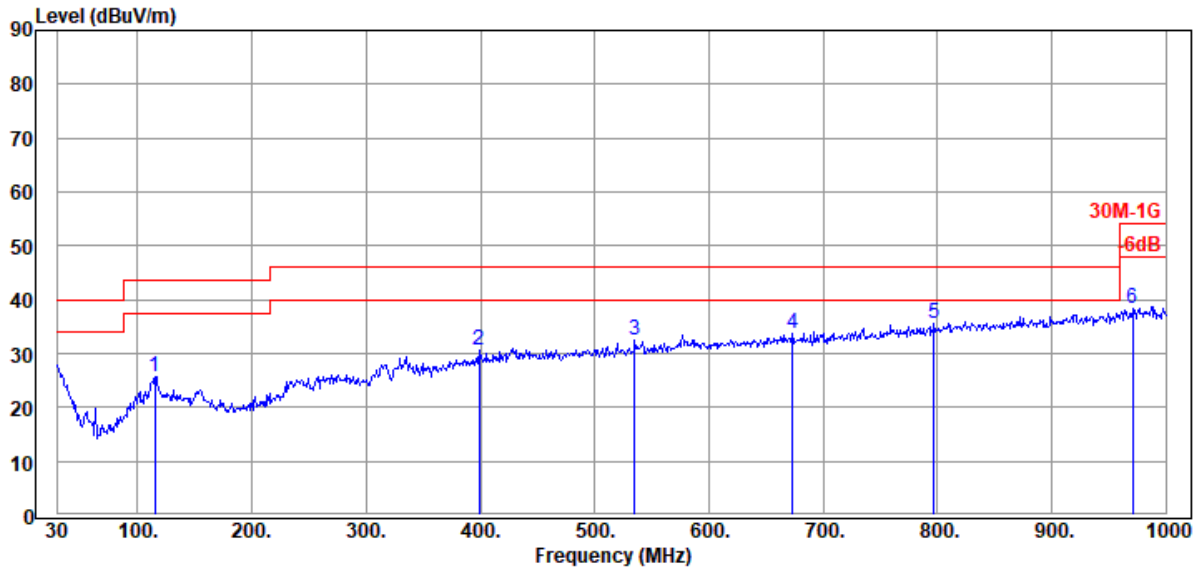
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 3

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : VERTICAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Tx 2480MHz(ble)

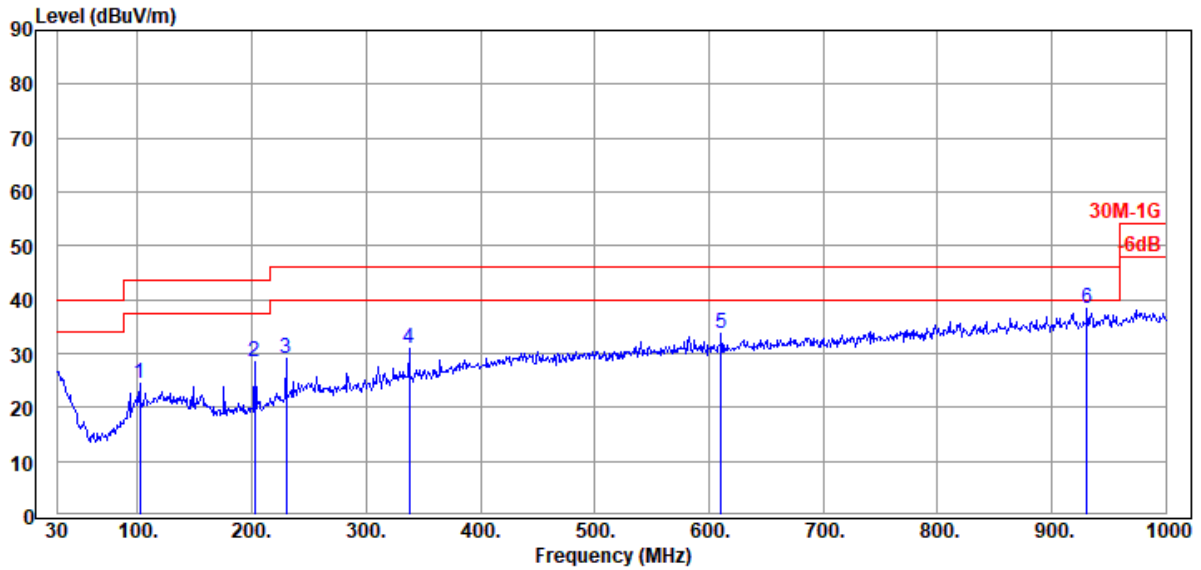
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	115.36	18.54	2.92	4.08	25.54	43.50	17.96	Peak
2	398.60	22.43	5.79	2.38	30.60	46.00	15.40	Peak
3	535.37	24.18	6.20	2.01	32.39	46.00	13.61	Peak
4	673.11	25.19	6.93	1.55	33.67	46.00	12.33	Peak
5	797.27	26.46	7.54	1.60	35.60	46.00	10.40	Peak
6	970.90	28.03	8.45	1.84	38.32	54.00	15.68	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 4

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : HORIZONTAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Tx 2480MHz(ble)

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	101.78	17.60	2.72	4.10	24.42	43.50	19.08	Peak
2	202.66	16.16	3.68	8.69	28.53	43.50	14.97	Peak
3	229.82	18.10	3.85	7.23	29.18	46.00	16.82	Peak
4	337.49	20.89	4.91	5.00	30.80	46.00	15.20	Peak
5	611.03	25.00	6.58	2.10	33.68	46.00	12.32	Peak
6	931.13	27.57	8.26	2.52	38.35	46.00	7.65	Peak

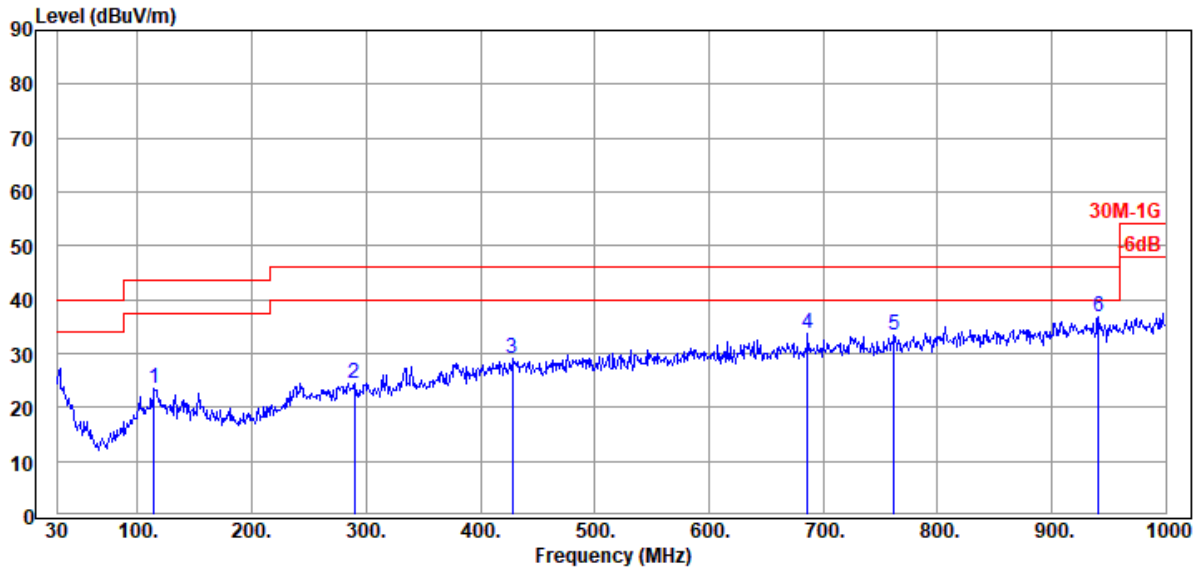
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : VERTICAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Rx 2440MHz

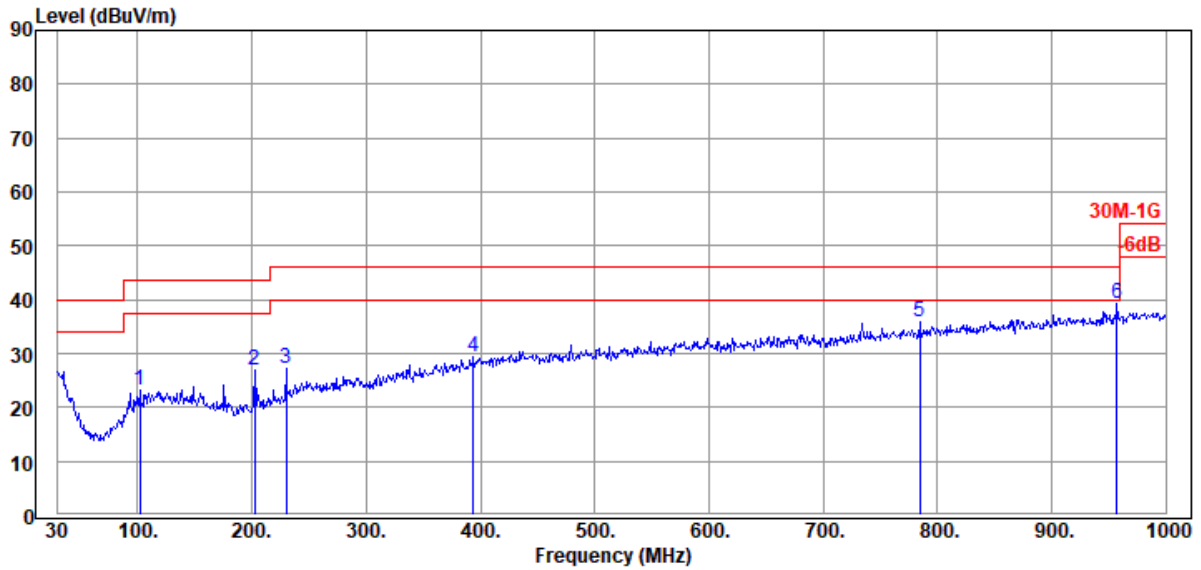
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	114.39	18.49	2.90	2.10	23.49	43.50	20.01	Peak
2	289.96	19.76	4.29	0.52	24.57	46.00	21.43	Peak
3	427.70	22.83	5.87	0.24	28.94	46.00	17.06	Peak
4	686.69	25.23	7.01	1.60	33.84	46.00	12.16	Peak
5	762.35	26.07	7.39	-0.16	33.30	46.00	12.70	Peak
6	940.83	27.68	8.30	0.67	36.65	46.00	9.35	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported

Data no. : 6

Test Site: AUDIX No.1 3m Chamber



Condition : 3m CBL6112D 33821(PAD)

Phase : HORIZONTAL

Limit : 30M-1G

Env. /Ins. : 25°C / 46% N9010A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.6V

Memo : Rx 2440MHz

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	101.78	17.60	2.72	2.91	23.23	43.50	20.27	Peak
2	202.66	16.16	3.68	7.16	27.00	43.50	16.50	Peak
3	229.82	18.10	3.85	5.34	27.29	46.00	18.71	Peak
4	393.75	22.30	5.72	1.39	29.41	46.00	16.59	Peak
5	784.66	26.33	7.49	1.93	35.75	46.00	10.25	Peak
6	957.32	27.87	8.39	2.94	39.20	46.00	6.80	Peak

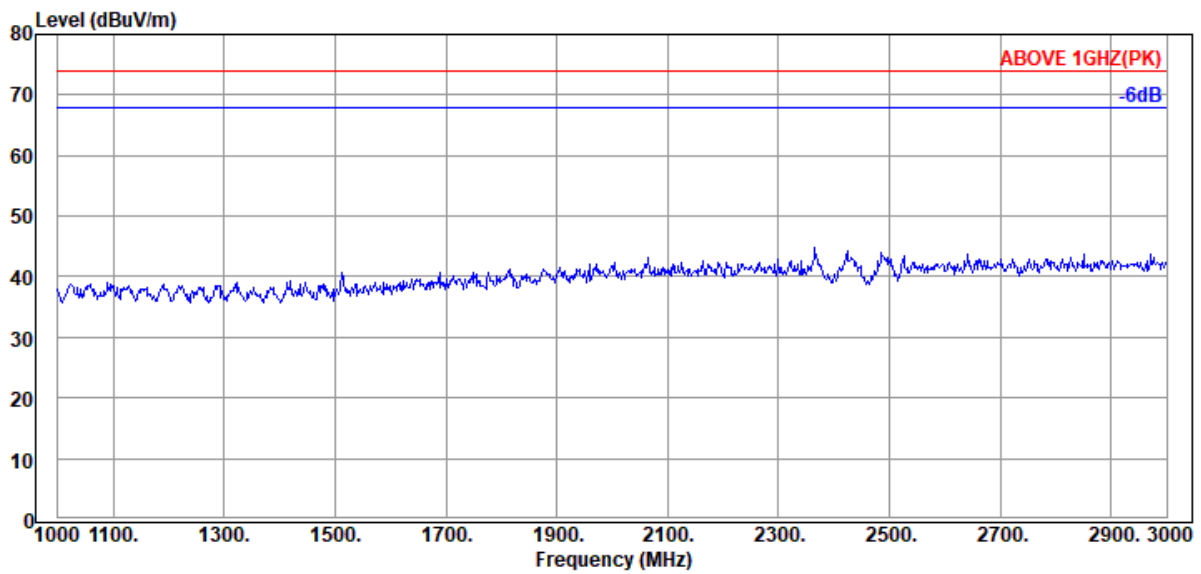
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : VERTICAL

Engineer : Martin

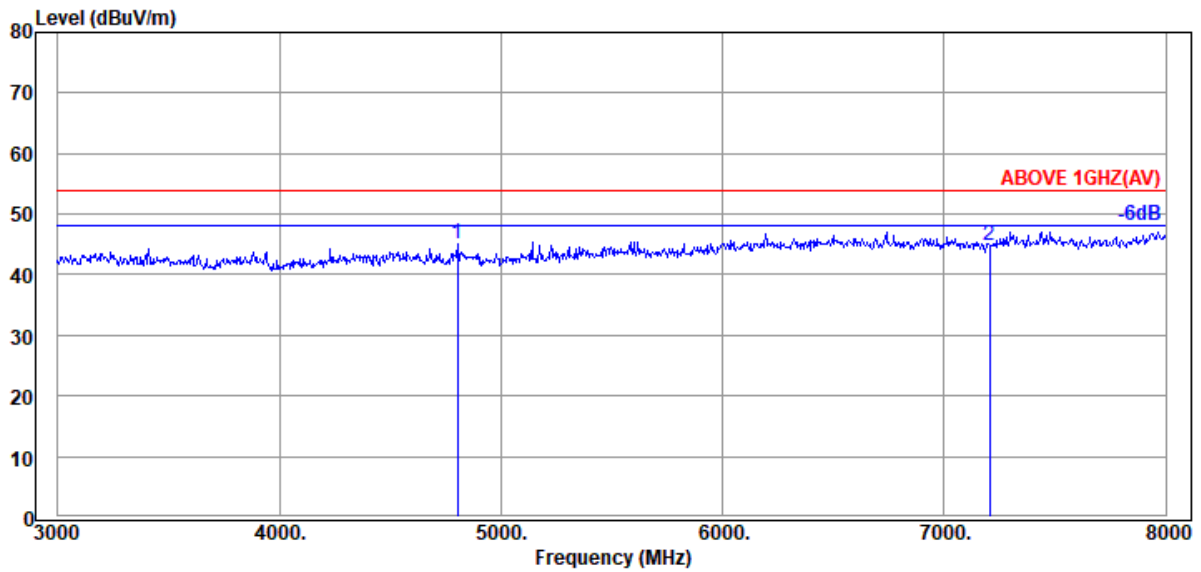
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : VERTICAL

Engineer : Martin

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4805.00	34.22	9.54	1.42	45.18	54.00	8.82	Peak
2	7205.00	35.80	11.80	-2.69	44.91	54.00	9.09	Peak

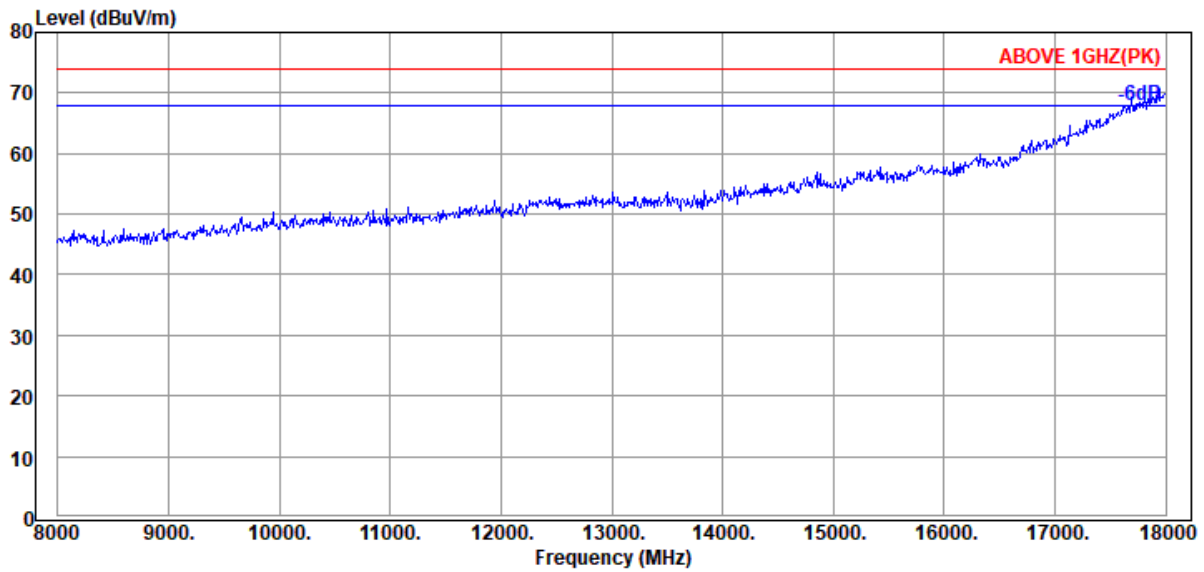
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : VERTICAL

Engineer : Martin

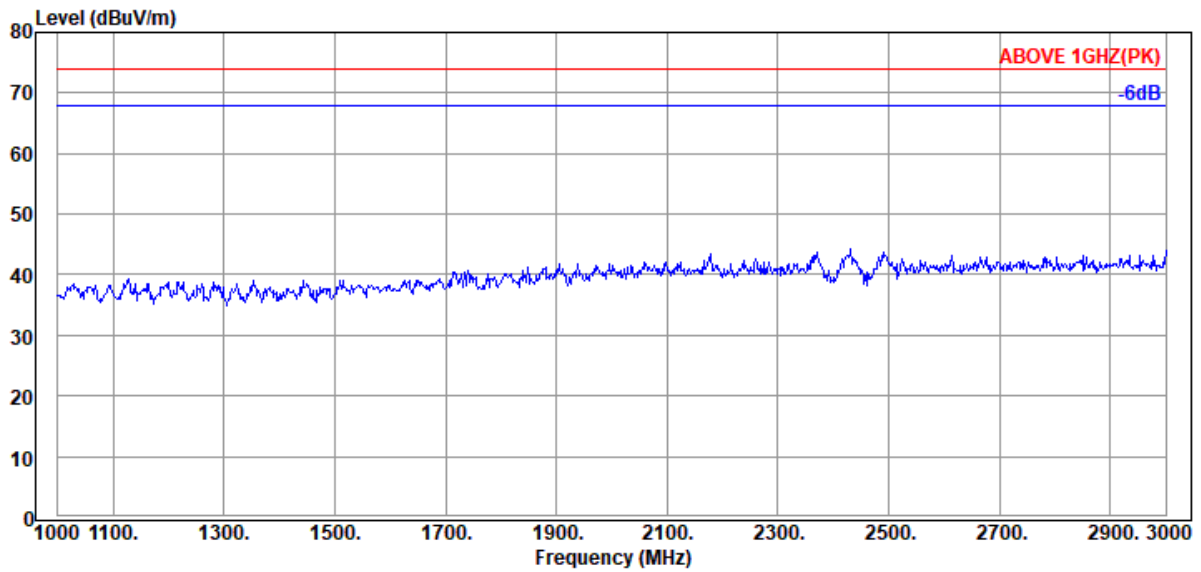
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

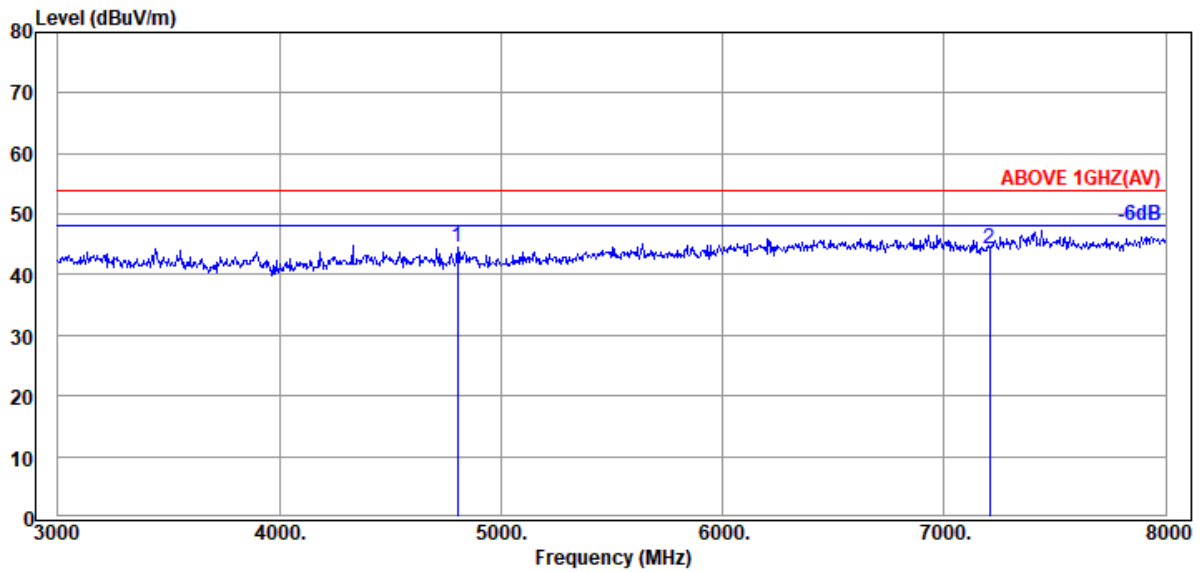
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4805.00	34.22	9.54	0.83	44.59	54.00	9.41	Peak
2	7205.00	35.80	11.80	-3.32	44.28	54.00	9.72	Peak

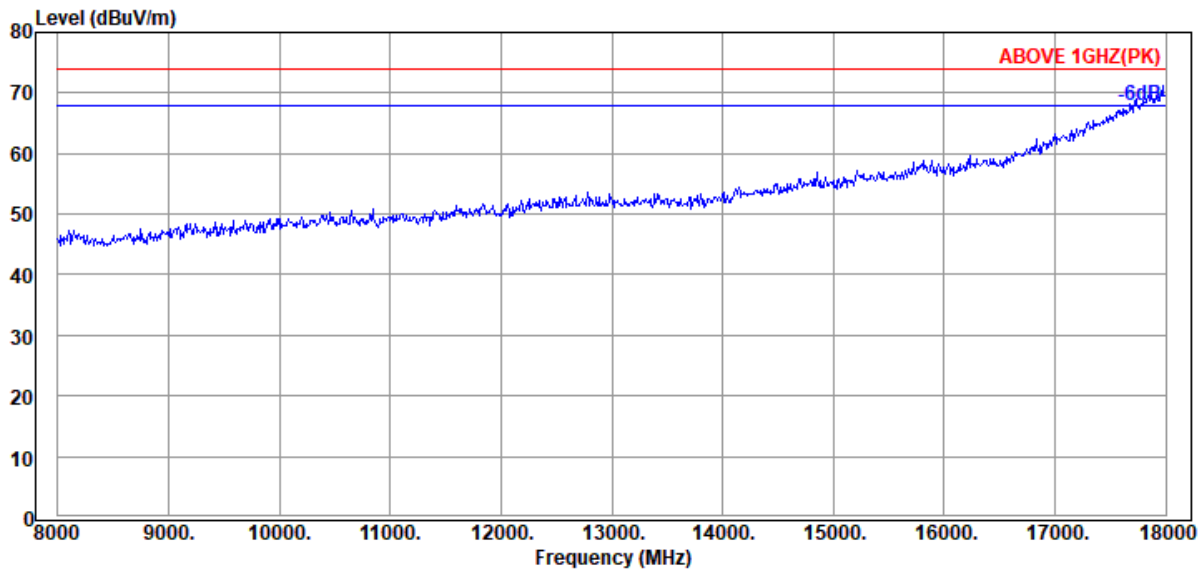
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2402MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

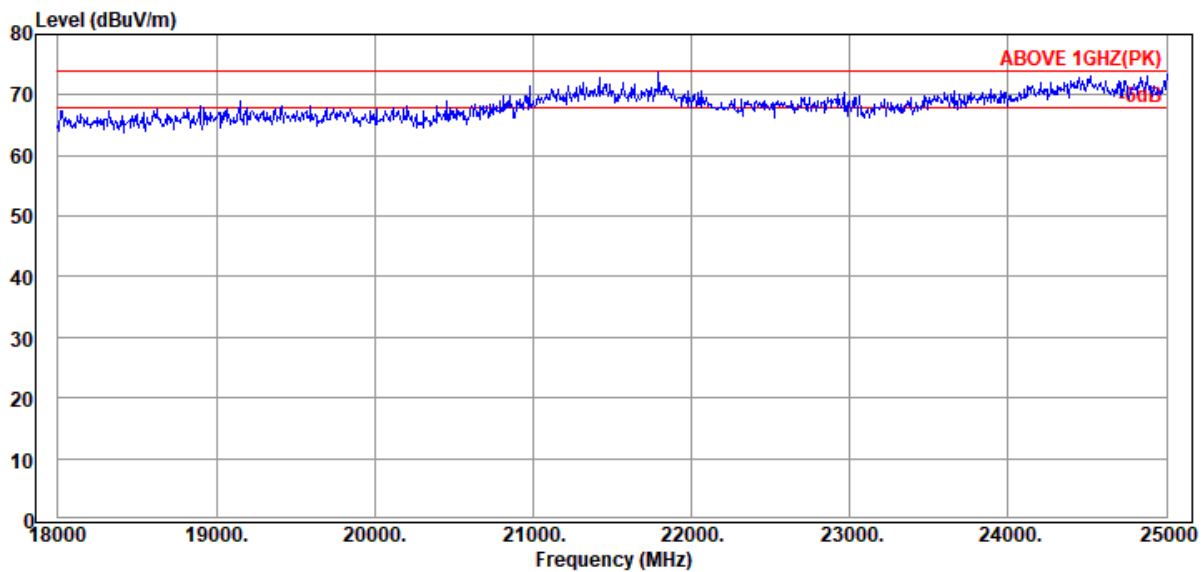
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2402MHz(ble)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

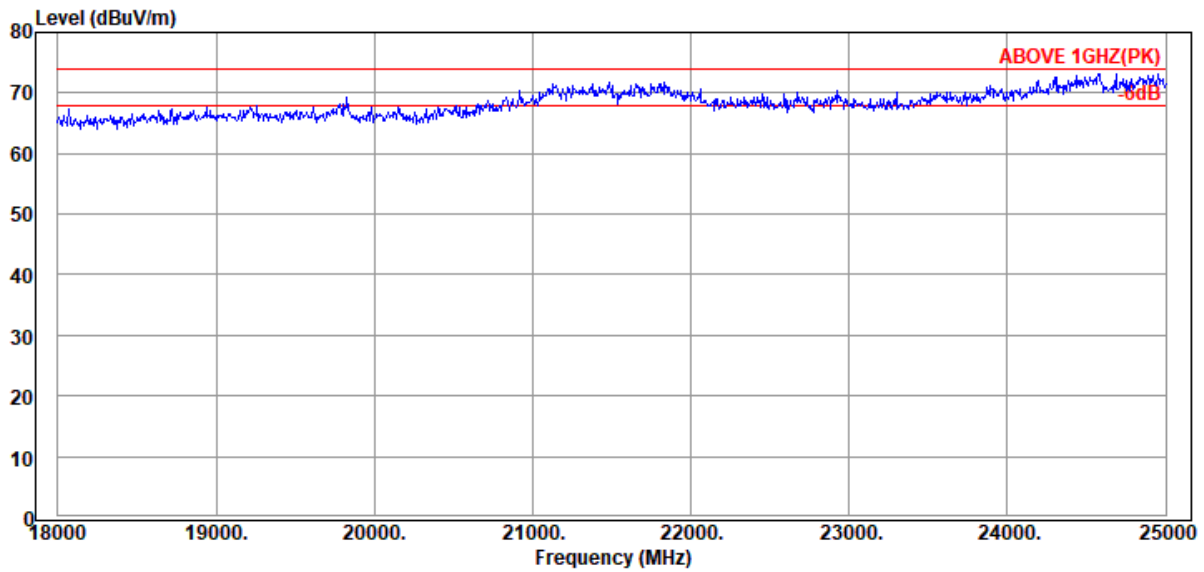
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2402MHz(ble)

Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

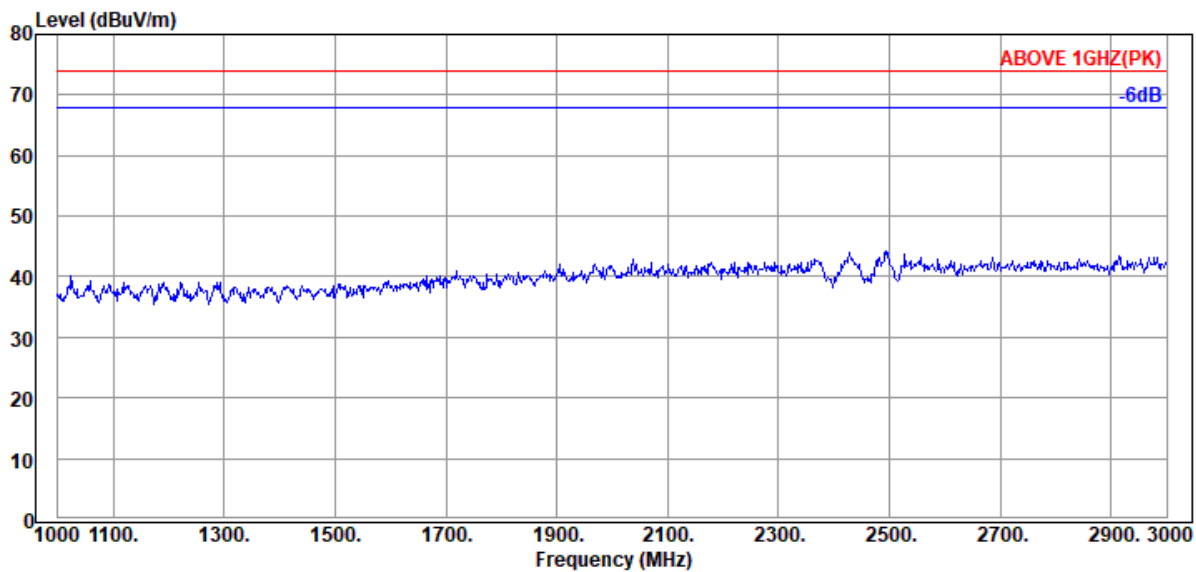
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : VERTICAL

Engineer : Martin

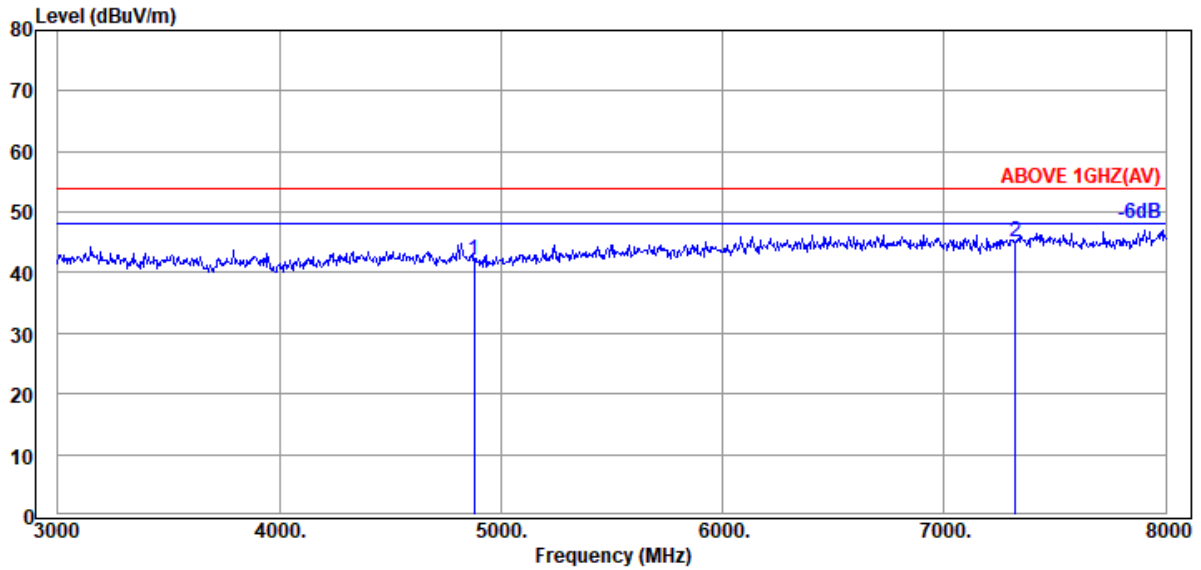
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : VERTICAL

Engineer : Martin

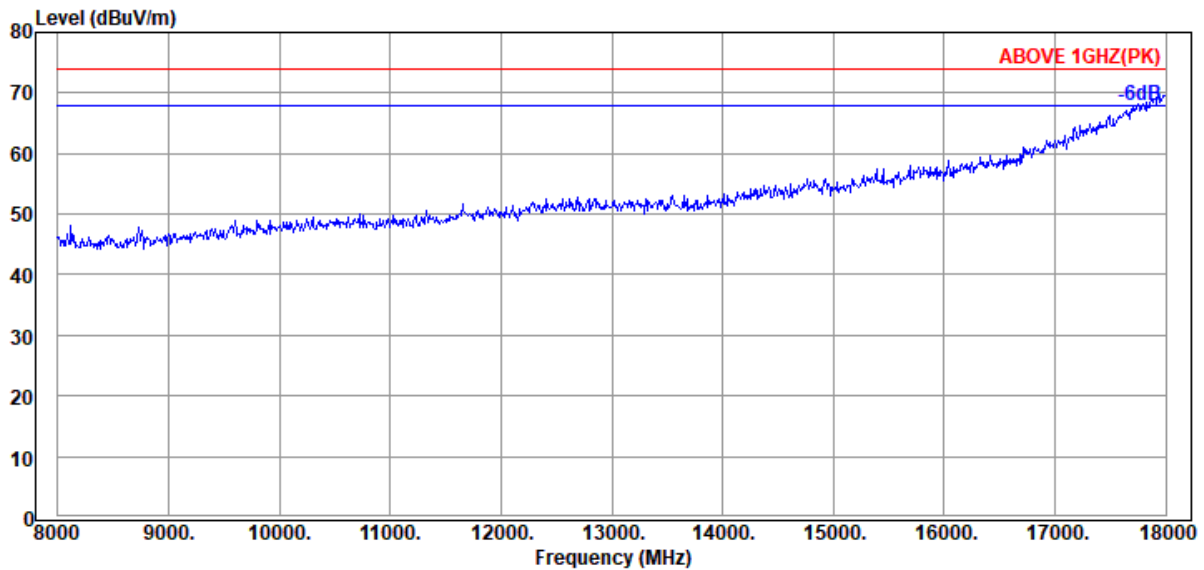
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4880.00	34.25	9.56	-1.62	42.19	54.00	11.81	Peak
2	7320.00	35.80	11.92	-2.63	45.09	54.00	8.91	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : VERTICAL

Engineer : Martin

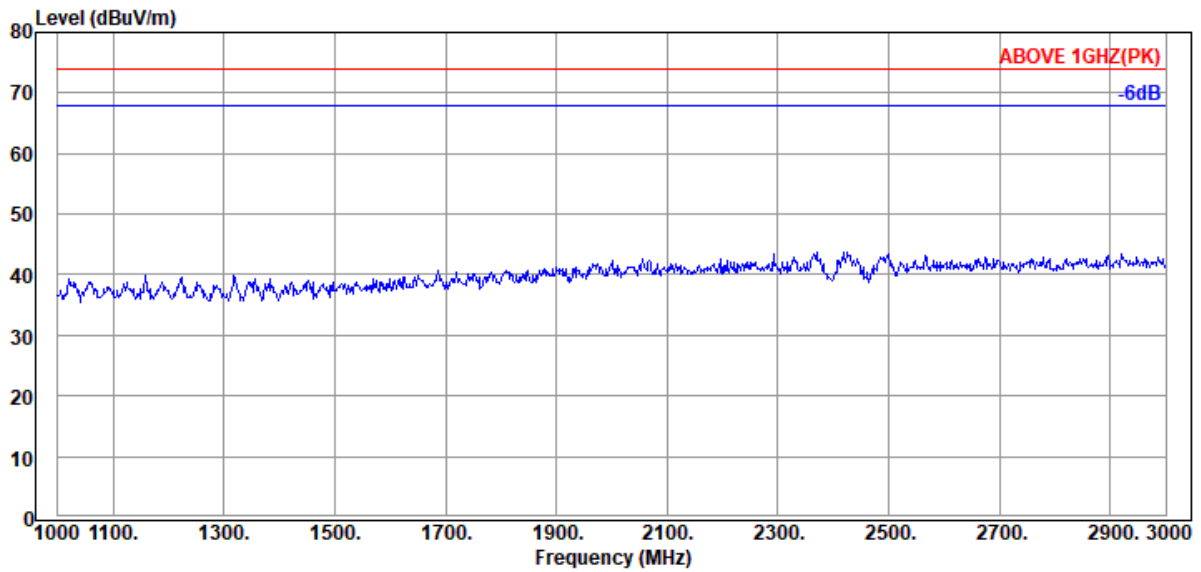
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

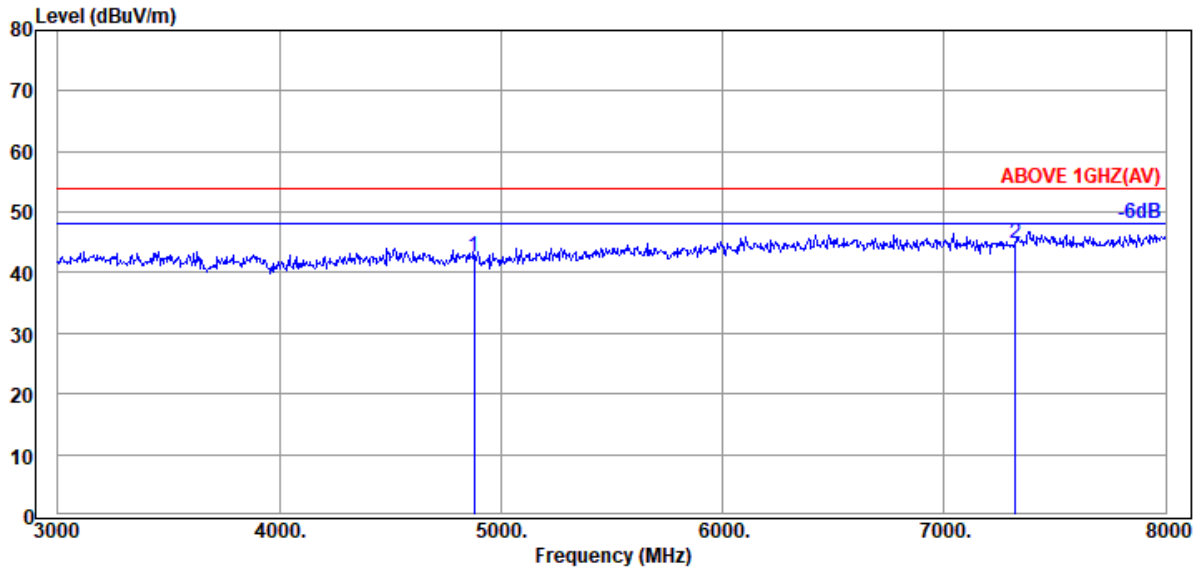
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

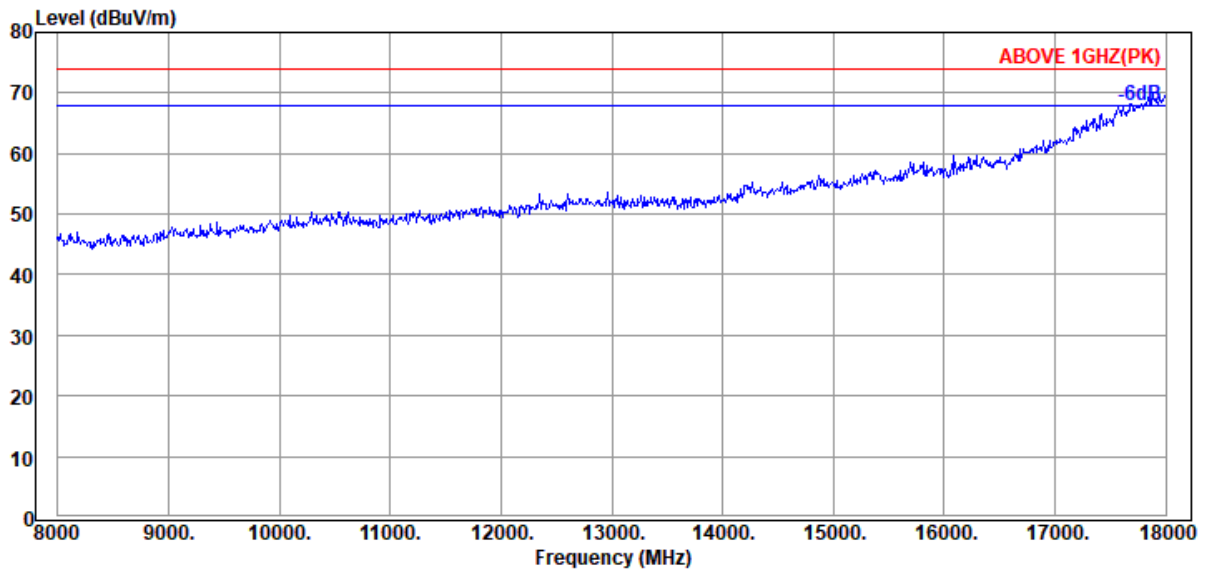
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4880.00	34.25	9.56	-1.14	42.67	54.00	11.33	Peak
2	7320.00	35.80	11.92	-2.91	44.81	54.00	9.19	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

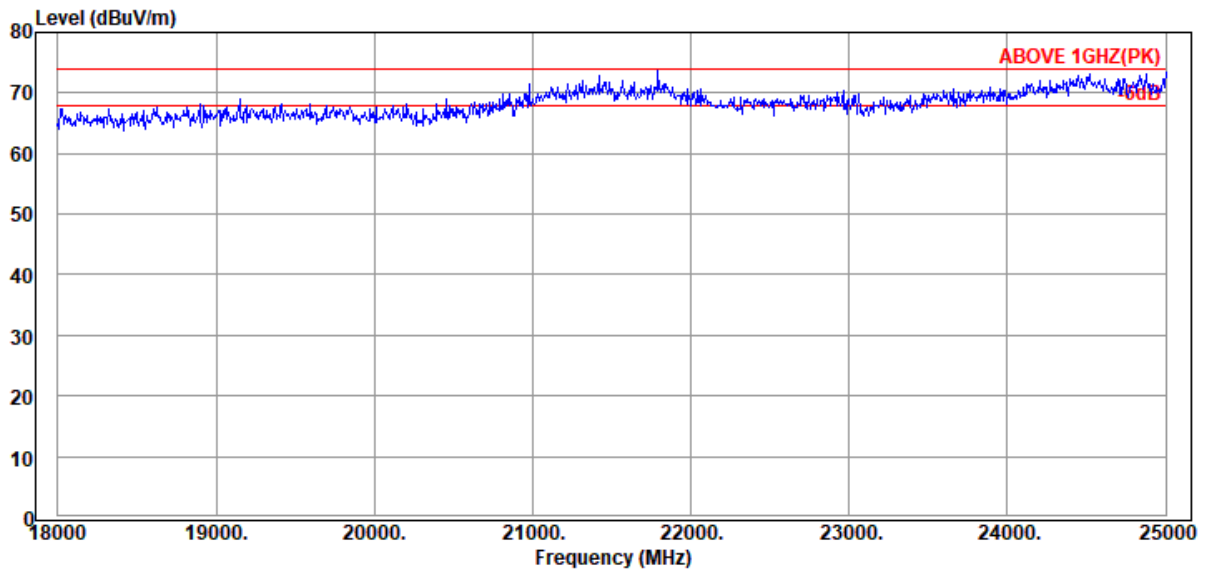
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : VERTICAL

Engineer : Martin

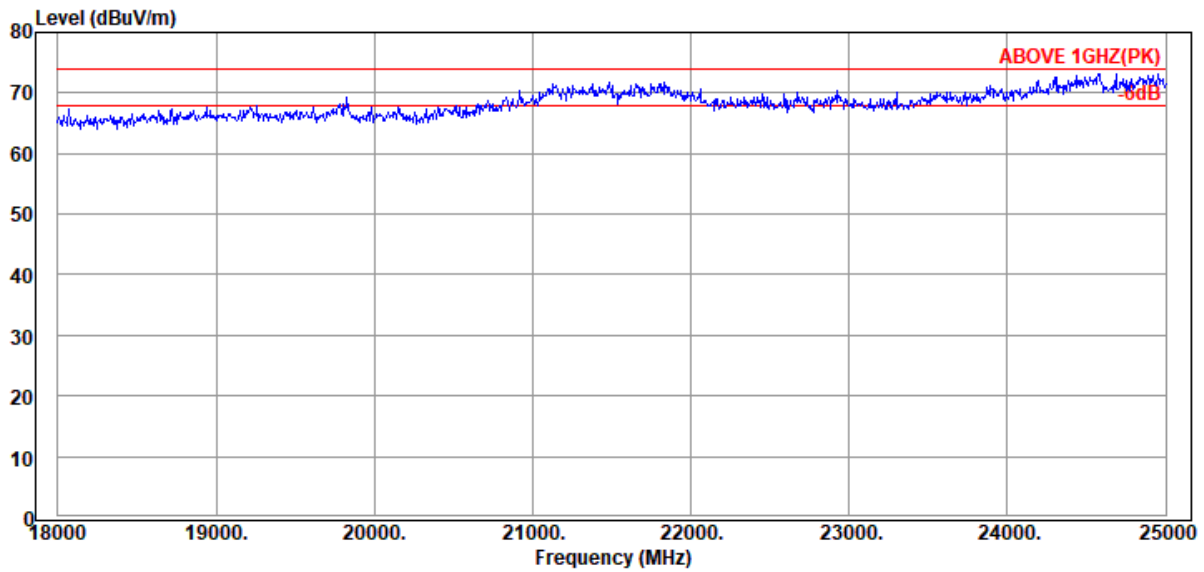
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2440MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

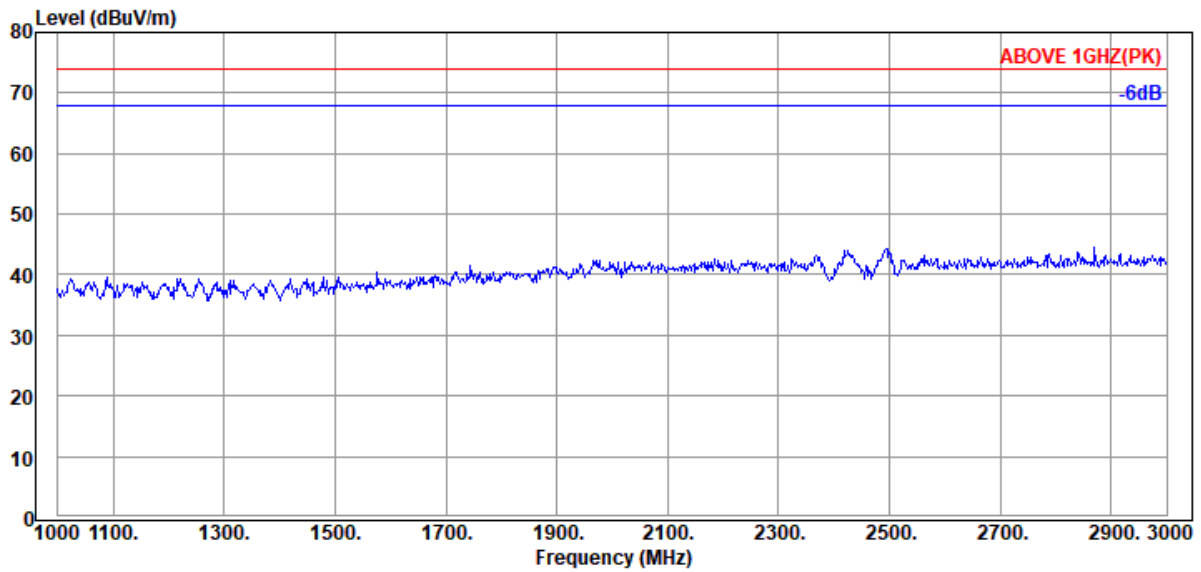
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : VERTICAL

Engineer : Martin

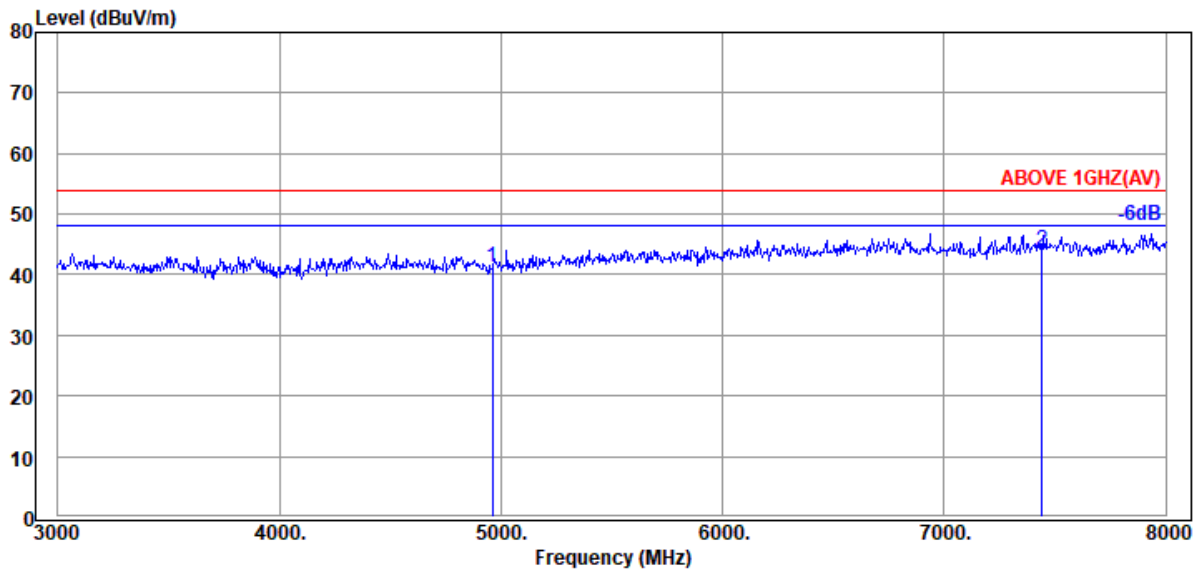
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : VERTICAL

Engineer : Martin

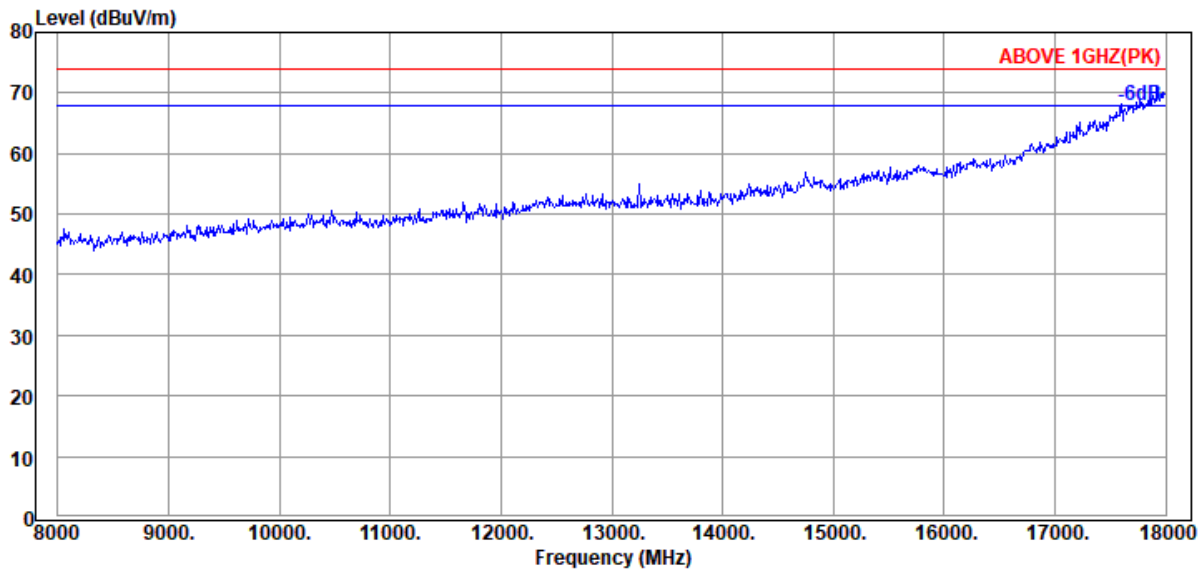
Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4960.00	34.29	9.60	-2.72	41.17	54.00	12.83	Peak
2	7440.00	35.80	12.04	-3.78	44.06	54.00	9.94	Peak

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : VERTICAL

Engineer : Martin

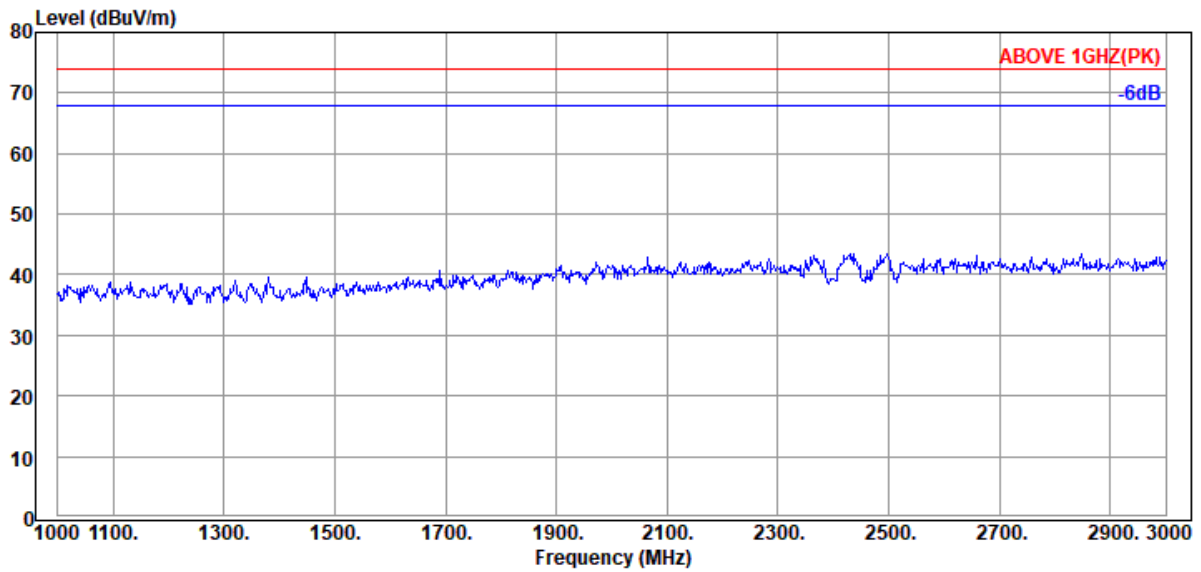
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

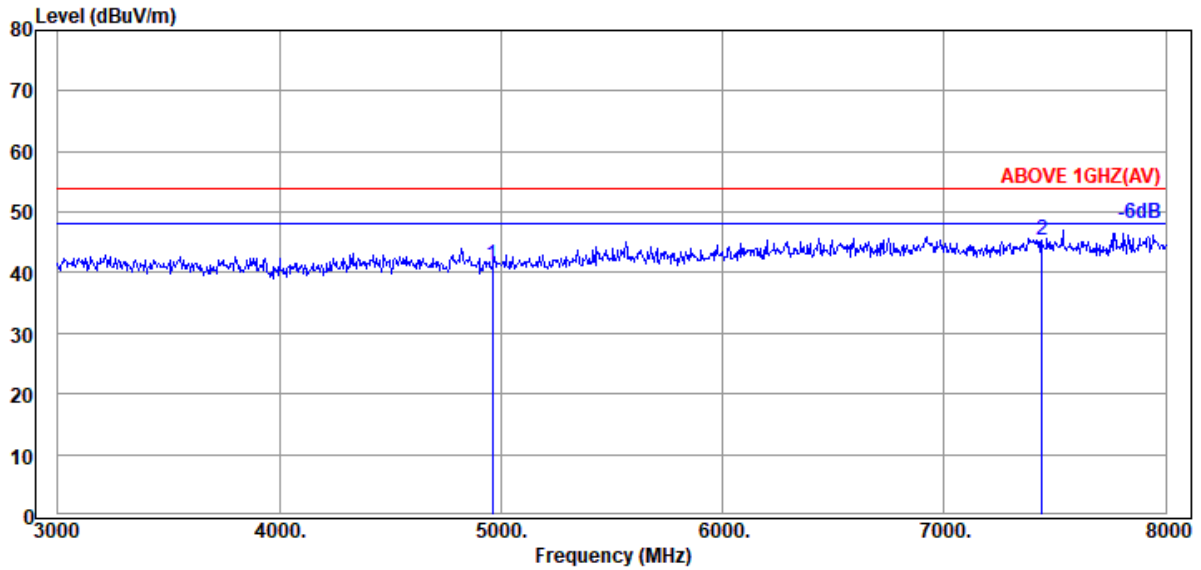
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(AV)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

Item (Mark)	Freq (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read Level (dBμV)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector
1	4960.00	34.29	9.60	-2.65	41.24	54.00	12.76	Peak
2	7440.00	35.80	12.04	-2.58	45.26	54.00	8.74	Peak

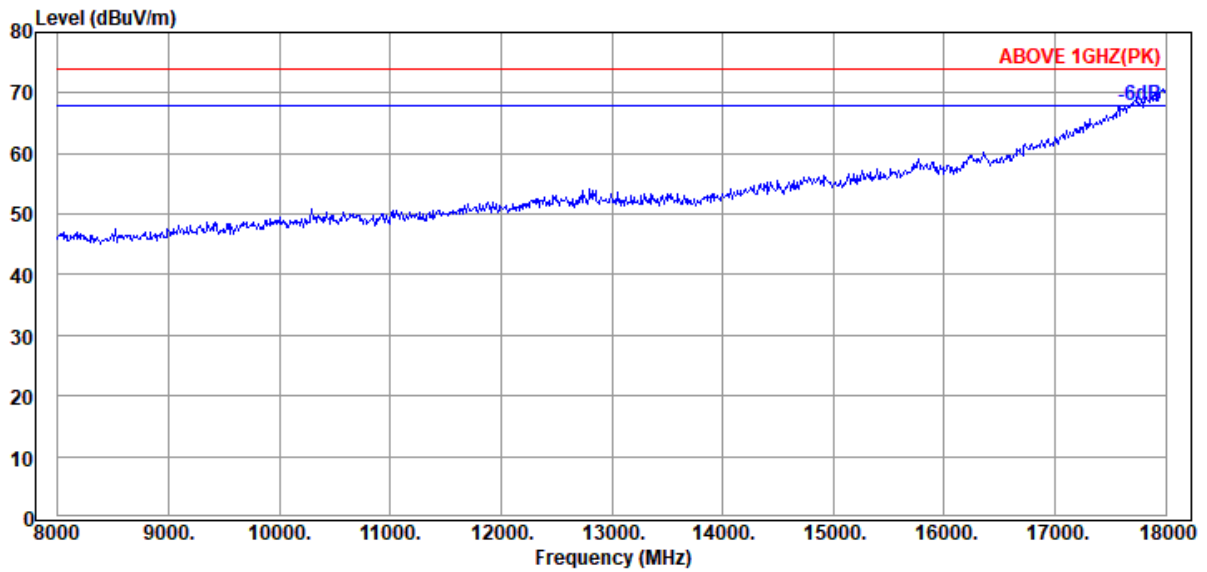
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Tx 2480MHz(ble)

Phase : HORIZONTAL

Engineer : Martin

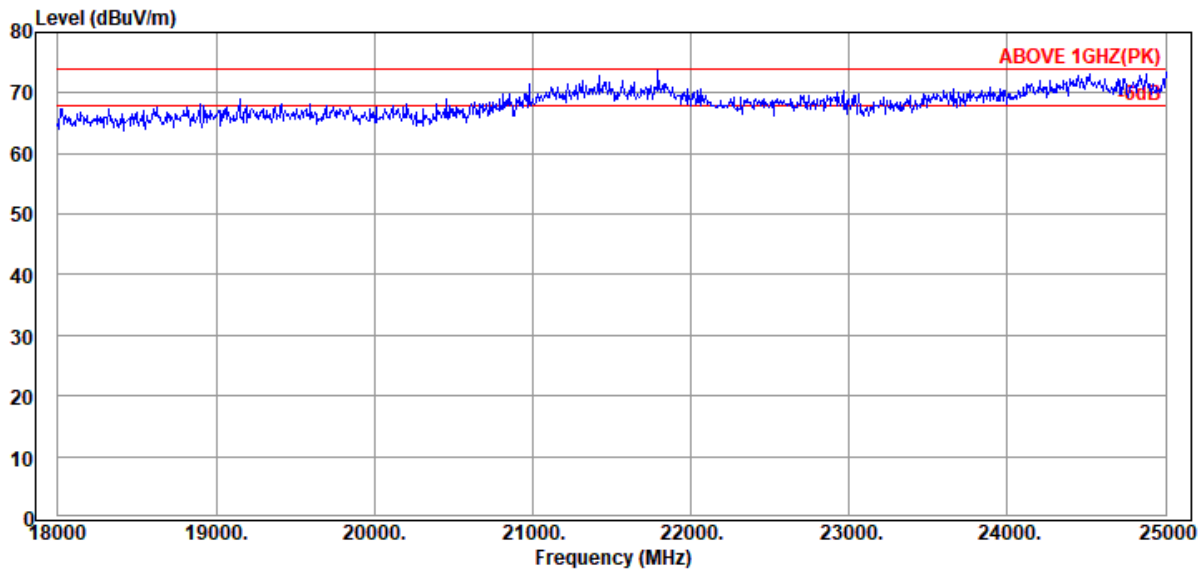
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2480MHz(ble)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	(dBμV)	(dB)	
		(dB)	(dB)	(dBμV)				

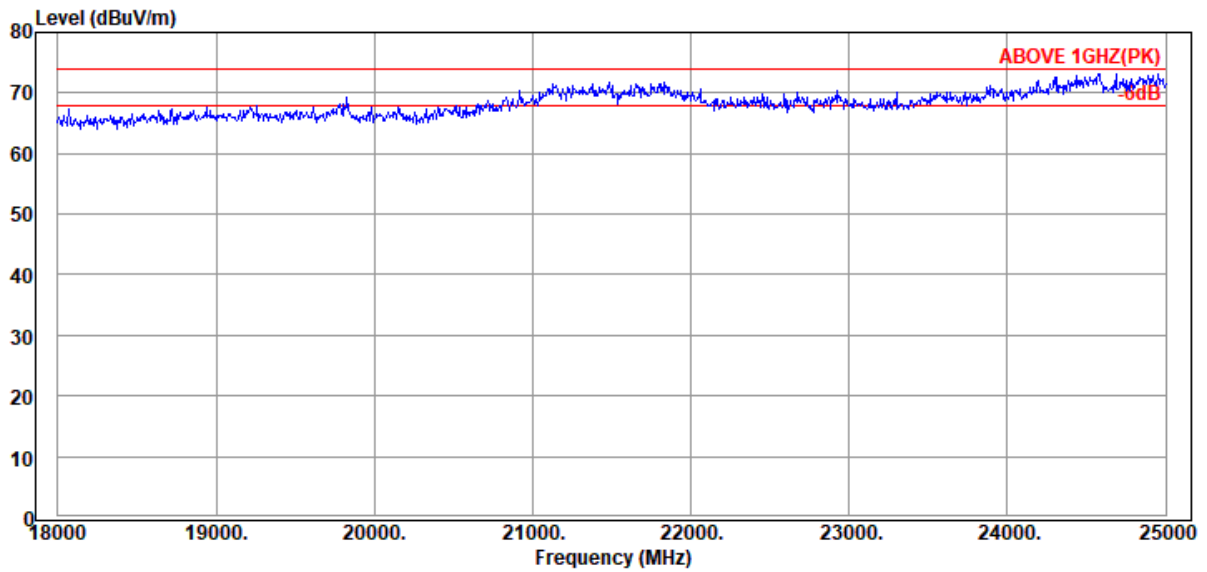
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Tx 2480MHz(ble)

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

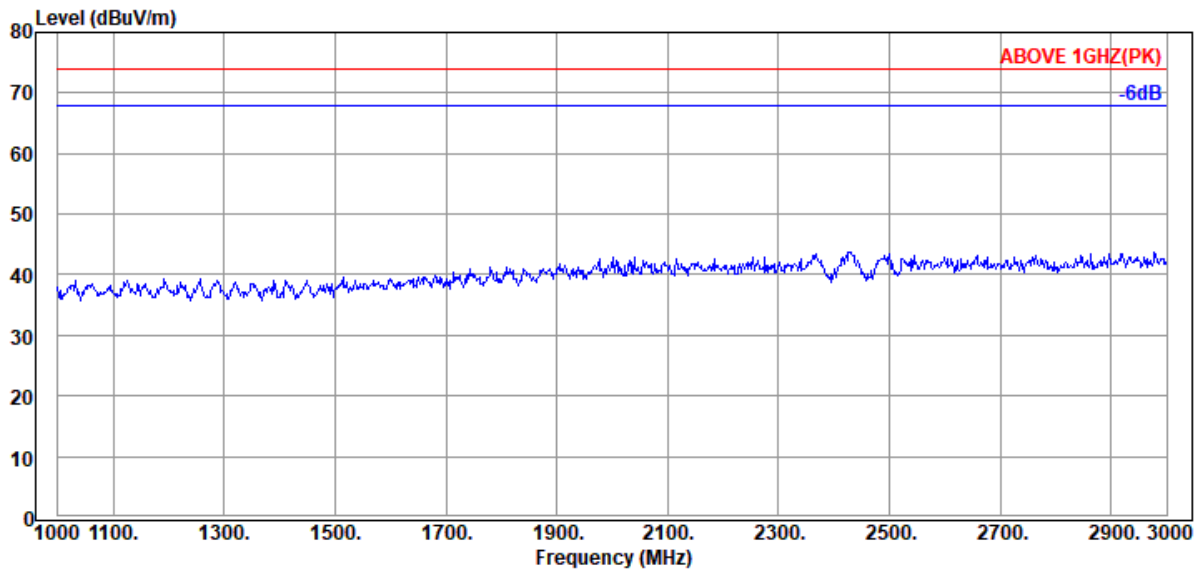
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 1

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : VERTICAL

Engineer : Martin

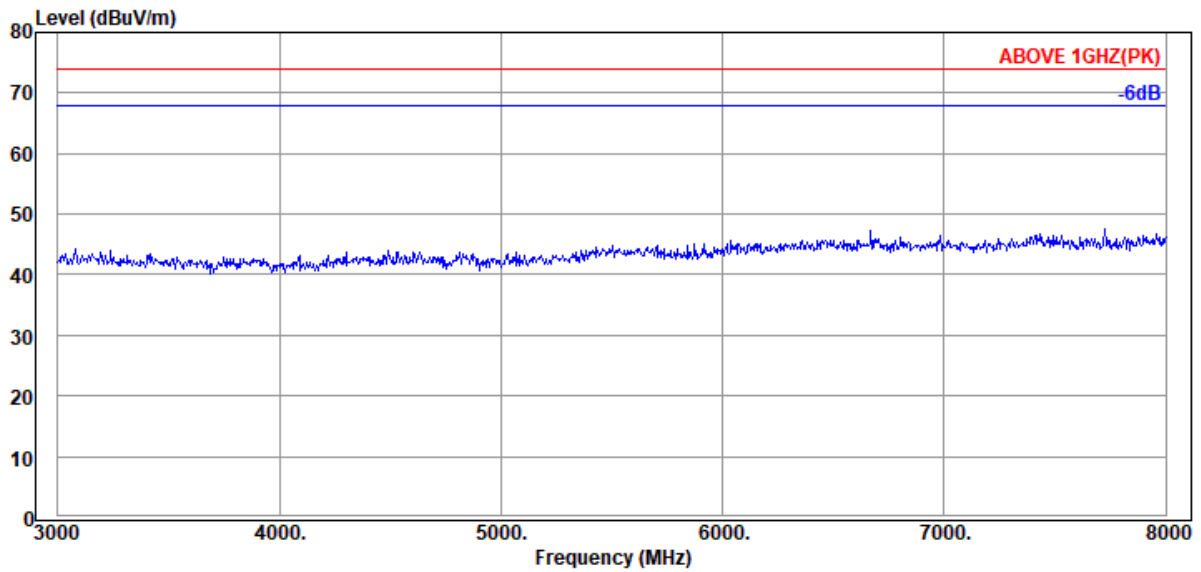
Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 2

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : VERTICAL

Engineer : Martin

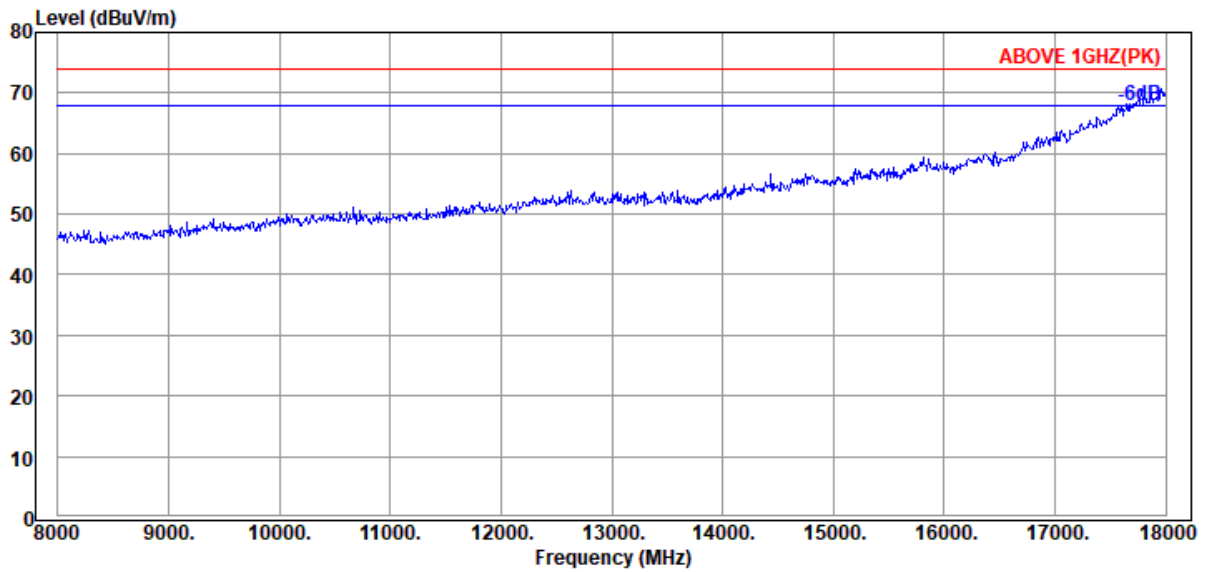
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 3

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : VERTICAL

Engineer : Martin

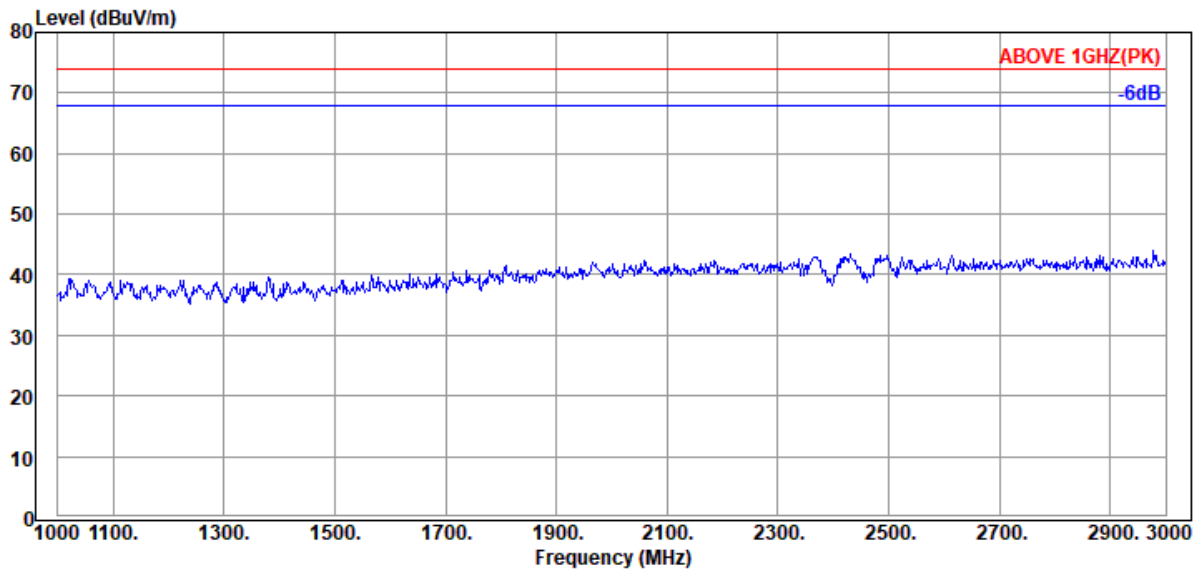
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 4

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : HORIZONTAL

Engineer : Martin

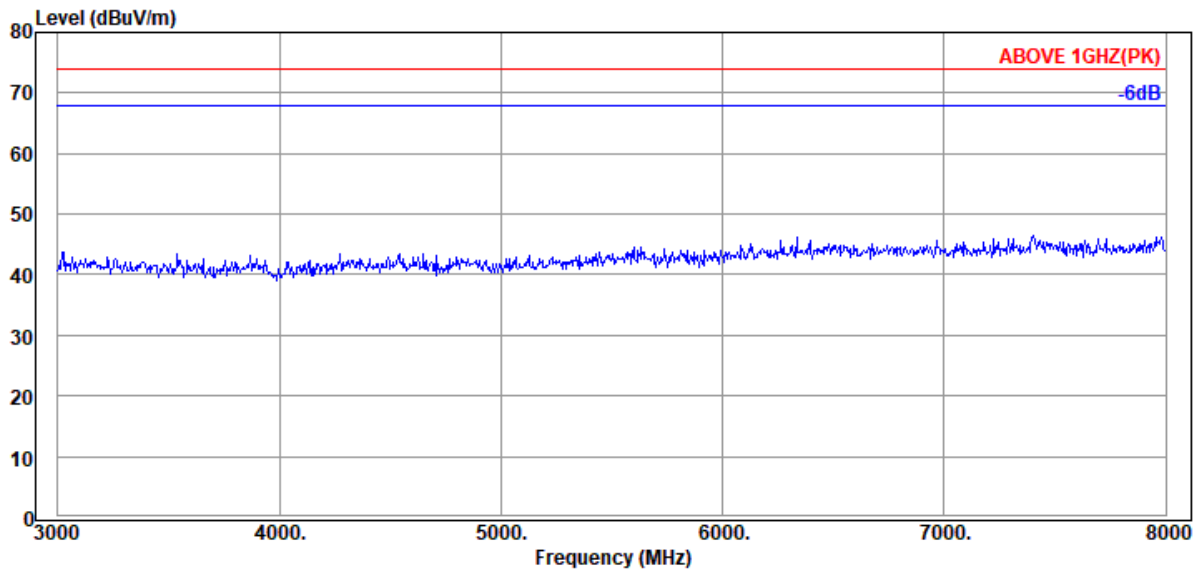
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 5

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : HORIZONTAL

Engineer : Martin

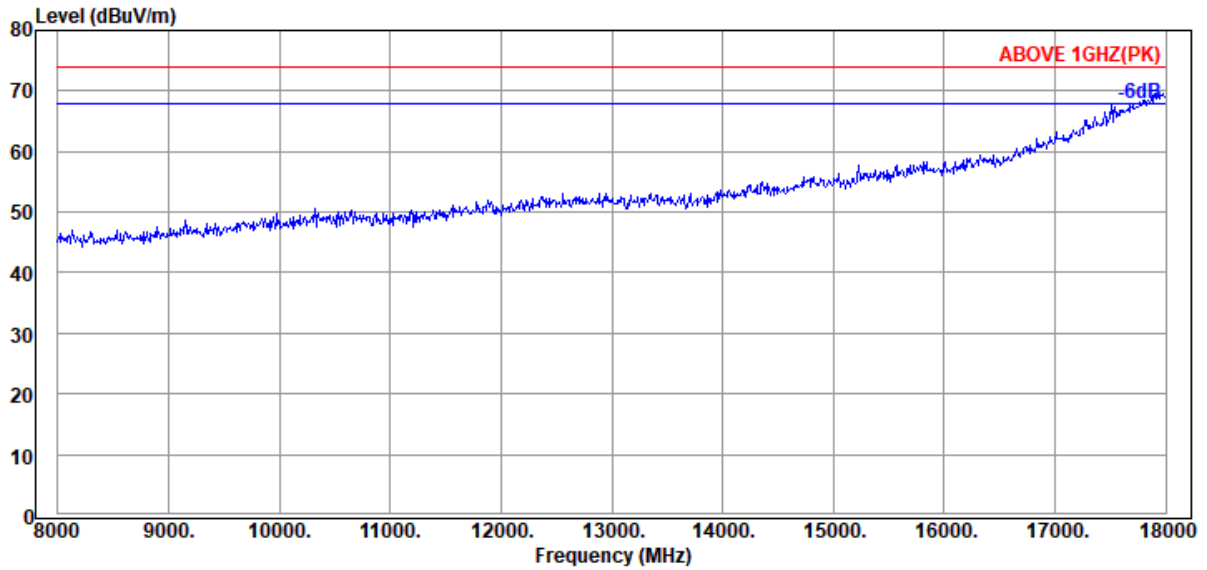
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 6

Test Site: Fully Chamber



Condition : 3m 3117(00135902)
Limit : ABOVE 1GHZ(PK)
Env. /Ins. : 25°C / 51% N9030A
EUT : Type1DR
Power Rating : DC 3.3V
Memo : Rx 2440MHz

Phase : HORIZONTAL

Engineer : Martin

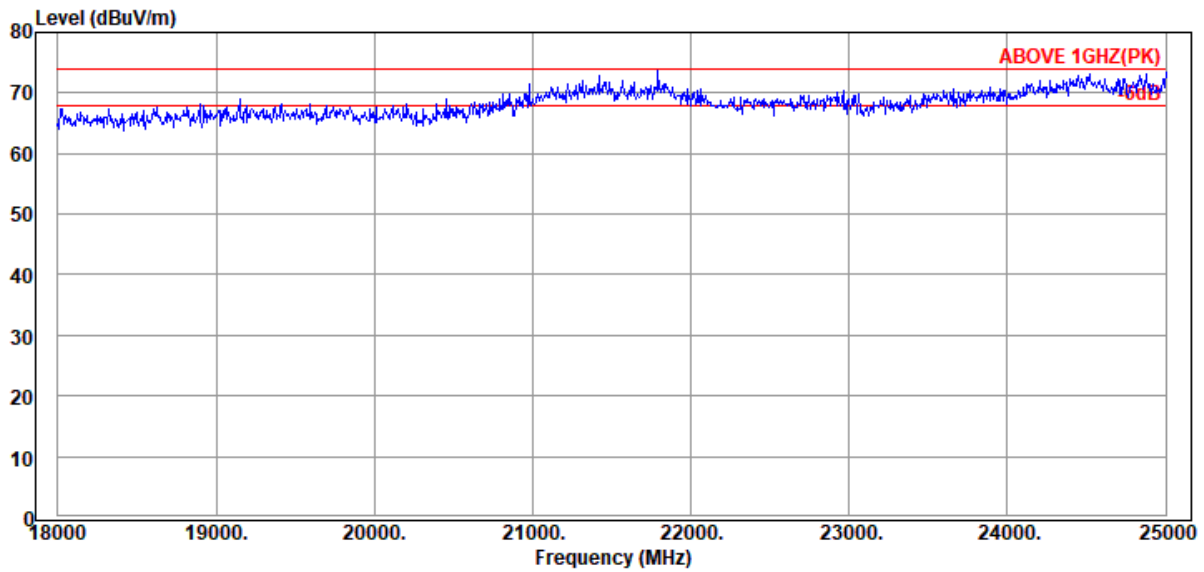
Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported



Data no. : 7

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : VERTICAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Rx 2440MHz

Item	Freq	Antenna Factor	Cable Loss	Read Level	Level	Limit Line	Margin	Detector
(Mark)	(MHz)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)	

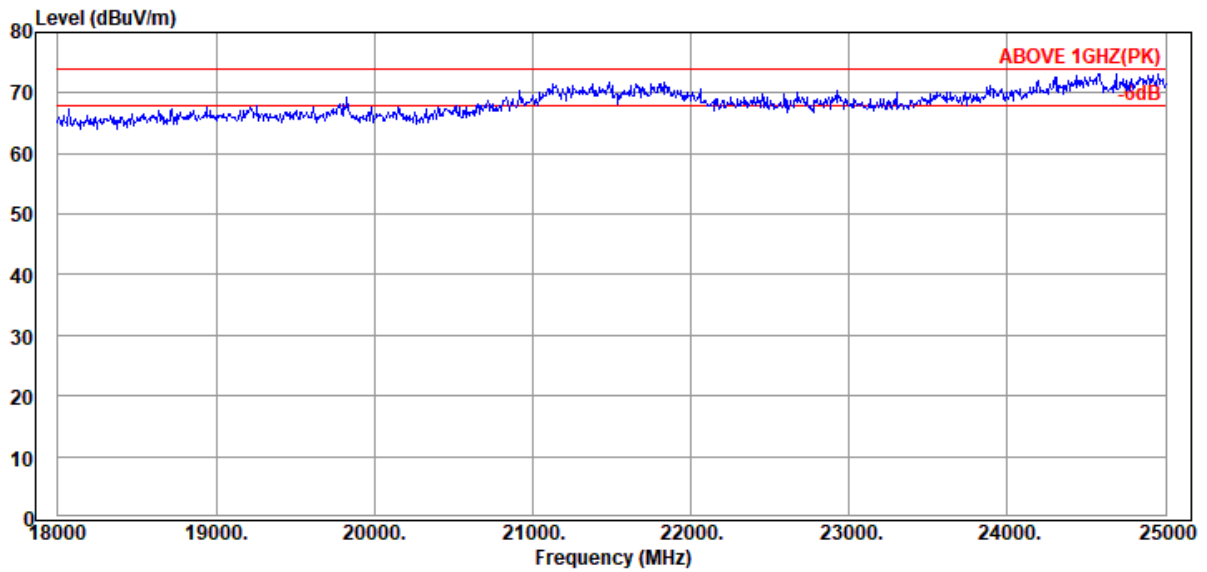
Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported



Data no. : 8

Test Site: Fully Chamber



Condition : 3m AH-840 (101092)

Phase : HORIZONTAL

Limit : ABOVE 1GHZ(PK)

Env. /Ins. : 25°C / 51% N9030A

Engineer : Martin

EUT : Type1DR

Power Rating : DC 3.3V

Memo : Rx 2440MHz

Item	Freq	Antenna	Cable	Read	Level	Limit	Margin	Detector
(Mark)	(MHz)	Factor	Loss	Level	(dBμV)	Line	(dB)	
		(dB)	(dB)	(dBμV)		(dBμV)		

Remark: 1. Emission Level= Antenna Factor +Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported