



NCC

低功率射頻器材型式試驗報告

產品名稱 : Wireless Boddypack Transmitter
型號 : GLXD1+Z3
廠牌 : SHURE
申請者 : Shure Incorporated
申請者地址 : 5800 West Touhy Avenue, Niles, IL 60714-4608, USA
測試標準 : LP0002 (109 年版)
參考法規 : ANSI C63.10-2013
測試結果 : 符合
接收日期 : 2021/9/17
測試日期 : 2021/9/20~2021/9/30

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1. 一般資訊

申請者	Shure Incorporated
申請者地址	5800 West Touhy Avenue, Niles, IL 60714-4608, USA
製造商	Shure Incorporated
製造商地址	5800 West Touhy Avenue, Niles, IL 60714-4608, USA
實驗室	台灣曼瑞檢測科技有限公司
實驗室地址	33377 台灣桃園市龜山區復興二路 38 號
實驗室資訊	1. MRT facility is a FCC registered (Reg. No. 153292) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品描述

2.1 產品資訊

產品名稱	Wireless Bodypack Transmitter
產品型號	GLXD1+Z3
廠牌	SHURE
商標	
支援規格	2.4GHz & 5.8GHz
頻率範圍	5729~5846MHz
調變模式	GFSK
最大輸出功率	8.33dBm
配件	
Adapter	Brand: SHURE Model No: SBC10-USB15WSUSTWJ Input Power: 100 -240V ~ 50/60Hz,0.6A Output Power: 5VDC,3A
Battery	Brand: SHURE Model No: SB904 Capacitance: 2420mAh/8.71Wh Rated Voltage: 3.6V

2.2 產品規格

Type of modulation	2-level CPM with Gaussian shaping (basically GFSK)
Declared Channel Bandwidth	Full Bandwidth Mode: 2 MHz Half Bandwidth Mode: 1 MHz
Channel Number	55
Channel Spacing	1MHz

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	5729 MHz	01	5730 MHz	02	5733 MHz
03	5734 MHz	04	5736 MHz	05	5739 MHz
06	5742 MHz	07	5744 MHz	08	5745 MHz
09	5748 MHz	10	5749 MHz	11	5751 MHz
12	5754 MHz	13	5757 MHz	14	5759 MHz
15	5760 MHz	16	5763 MHz	17	5764 MHz
18	5766 MHz	19	5769 MHz	20	5772 MHz
21	5774 MHz	22	5775 MHz	23	5778 MHz
24	5779 MHz	25	5781 MHz	26	5784 MHz
27	5787 MHz	28	5789 MHz	29	5790 MHz
30	5793 MHz	31	5794 MHz	32	5796 MHz
33	5799 MHz	34	5802 MHz	35	5804 MHz
36	5805 MHz	37	5808 MHz	38	5809 MHz
39	5811 MHz	40	5814 MHz	41	5817 MHz
42	5819 MHz	43	5820 MHz	44	5823 MHz
45	5824 MHz	46	5826 MHz	47	5829 MHz
48	5832 MHz	49	5835 MHz	50	5836 MHz
51	5838 MHz	52	5841 MHz	53	5845 MHz
54	5846 MHz	--	--	--	--

2.3 測試模式

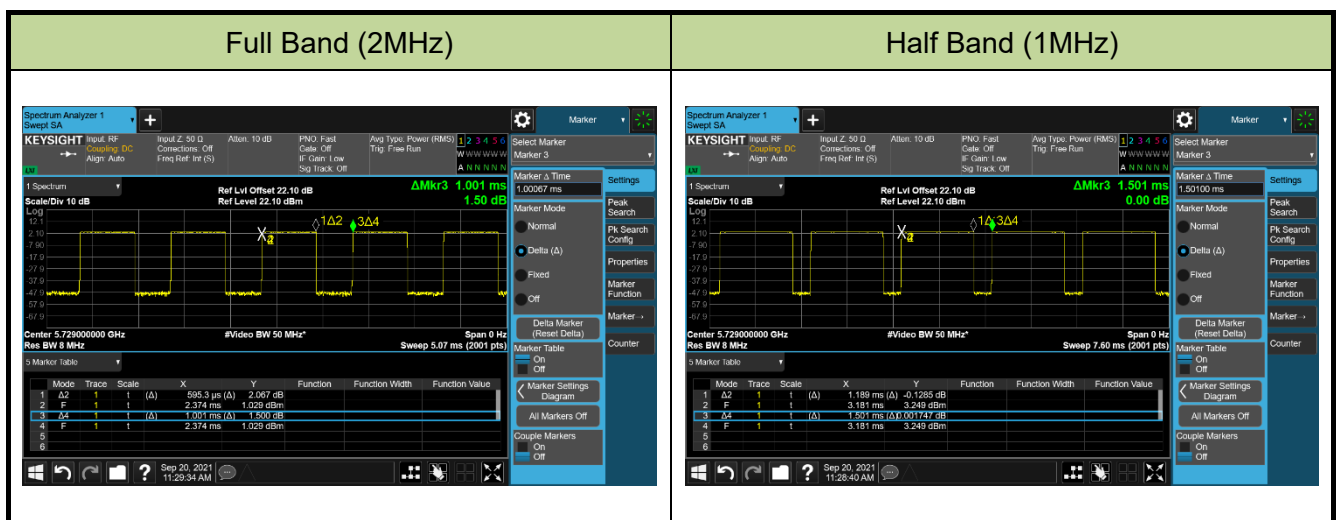
Test Mode	Mode 1: 發射器- Full Bandwidth Mode (2 MHz)
	Mode 2: 發射器- Half Bandwidth Mode (1 MHz)
	Mode 3: 接收機- Full Bandwidth Mode (2 MHz)

Note:

1. 經初測驗證過，1GHz 以下的 Mode 1 & Mode 2 並無明顯差異，故僅檢附最差狀況之 Mode1。

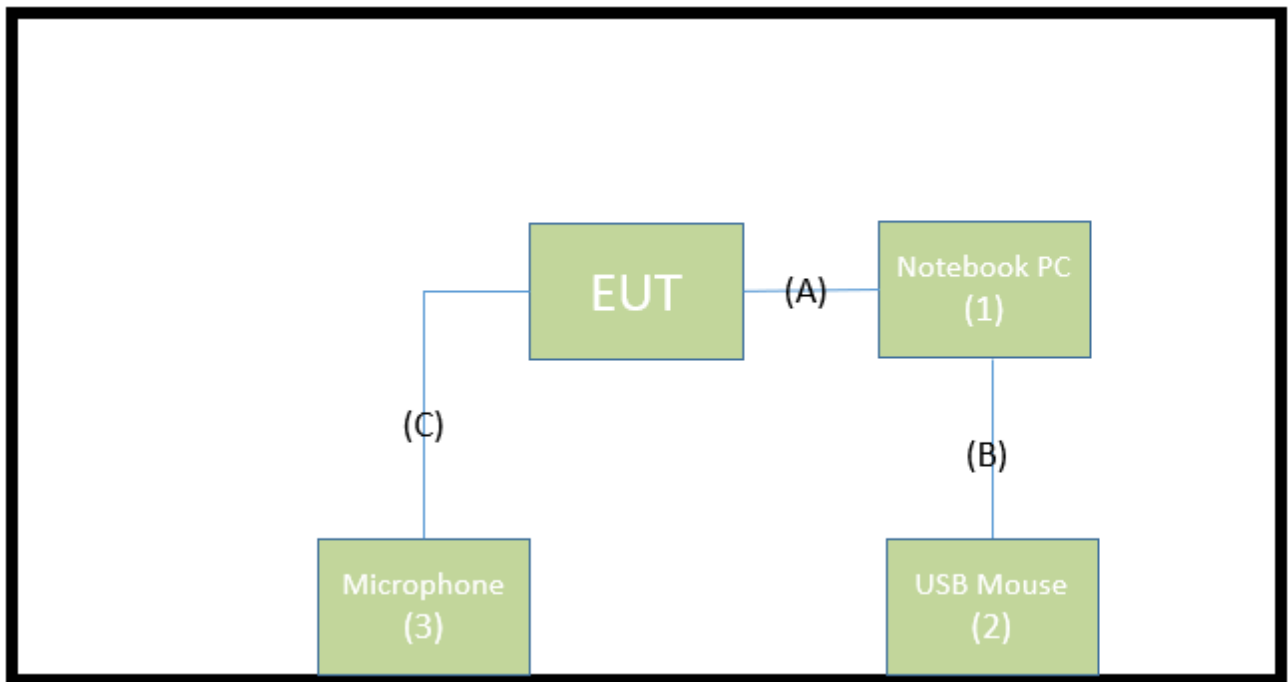
Duty Cycle

Test Mode	Duty Cycle
Full Band (2MHz)	59.47%
Half Band (1MHz)	79.21%



2.4 測試配置

待測物測試配置圖



Signal Cable Type		Signal Cable Description
A	USB Cable	Shielded, 1.2m (Brand: SHURE, M/N: 95A42232UTJ)
B	USB Mouse Cable	Shielded, 1.6m
C	Microphone	Non-Shielded, 1.2m

2.5 測試周邊

待測裝置測試時，其搭配系統測試時之週邊裝置包括如下：

No.	周邊名稱	廠牌	型號	序號	電源線
1	Notebook PC	Lenovo	T450	N/A	Non-shielded, 0.8m
2	USB Mouse	Lenovo	M110	N/A	N/A
3	Microphone	SHURE	GLXD+	N/A	N/A

2.6 操作程序

1.	Turn on the power of all equipment.
2.	Execute "Tera Term" program
3.	Configure the test channel and the data rate.
4.	Start test.

3. 測試設備明細

傳導干擾 -SR2

儀器名稱	廠牌	型號	財產編號	校正週期	有效日期
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2022/3/23
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2022/4/28
8-Wire ISN (T8)	R&S	ENY81	MRTTWA00018	1 year	2022/5/30
Cable	Rosnol	N1C50-RG400- B1C50-500CM	MRTTWE00013	1 year	2022/6/20
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2022/3/24

輻射干擾 - AC1

儀器名稱	廠牌	型號	財產編號	校正週期	有效日期
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2021/10/5
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2022/3/24
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2022/5/6
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2022/4/21
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2022/4/28
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2022/4/26
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2022/4/21
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2022/6/15

傳導量測設備 -SR5

儀器名稱	廠牌	型號	財產編號	校正週期	有效日期
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/14
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2022/7/19
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2022/3/24

EMI 測試軟體

軟體名稱	廠牌	版本
e3	Audix	9.160520a
EMI	Quietek	V3

4. 量測不確定度

電源傳導量測-電源線 (Conducted Emission- Power Line)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.15MHz~30MHz: $\pm 2.53\text{dB}$
輻射干擾量測 (Radiated Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~30MHz: $\pm 3.92\text{dB}$ 30MHz~1GHz: $\pm 4.25\text{dB}$ 1GHz~18GHz: $\pm 4.40\text{dB}$ 18GHz~40GHz: $\pm 4.45\text{dB}$
頻率誤差量測 (Frequency Error)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$
傳導功率量測 (Conducted Power)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.84\text{dB}$
傳導干擾量測 (Conducted Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 2.65\text{dB}$
佔用頻寬量測 (Occupied Bandwidth)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.3%
溫度 / 濕度 (Temp. / Humidity)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C}$ / $\pm 3\%$
直流電源 (DC Voltage)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.3\%$

5. 測試結果

產品名稱 **Wireless Bodypack Transmitter**
 型號 **GLXD1+Z3**

章節	量測項目	限制值	測試結果	測試數據
3.3	電源傳導	低功率射頻器材技術規範 3.3 節	符合	第 5.1 章節
5.7.3	峰值傳導輸出功率	$\leq 30.00\text{dBm}$ for Band 4	符合	第 5.2 章節
5.7.8	天線之要求	低功率射頻器材技術規範 3.3 節	符合	第 5.3 章節
3.6	輻射電場強度	低功率射頻器材技術規範 3.6 節	符合	第 5.5 章節
3.5 5.7.4.2	頻帶邊緣	$\leq 74\text{dBuV/m(Peak)}$ $\leq 54\text{dBuV/m(Average)}$	符合	第 5.6 章節
5.7.5	占用頻寬	$\geq 500\text{KHz}$ (26dB Bandwidth) $\geq 500\text{KHz}$ (6dB Bandwidth)	符合	第 5.7 章節
5.7.3	功率頻譜密度	$\leq 30\text{dBm} / 500\text{kHz}$ for Band 4	符合	第 5.8 章節

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

5.1 電源傳導測試

5.1.1 量測方法

待測物放置於1m*2m*0.8m之非導體桌面並離垂直牆面40cm（落地型產品置於地上），將待測物之電源線接至電源阻抗網路器(LISN)，同時保持待測物至LISN距80公分，並將電源線多餘部份以30至40公分之八字形捆綁於電源線中央並離地40cm，於在正常工作狀態下，執行待測物之火線(Line)及地線(neutral)各一次量測。

電源端點場強之測量範圍由 0.15MHz –30MHz，所量測之讀值皆為準尖峰值(Quasi-Peak Value)及平均值(Average Value)。場強接收機之解析頻寬為9kHz。

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

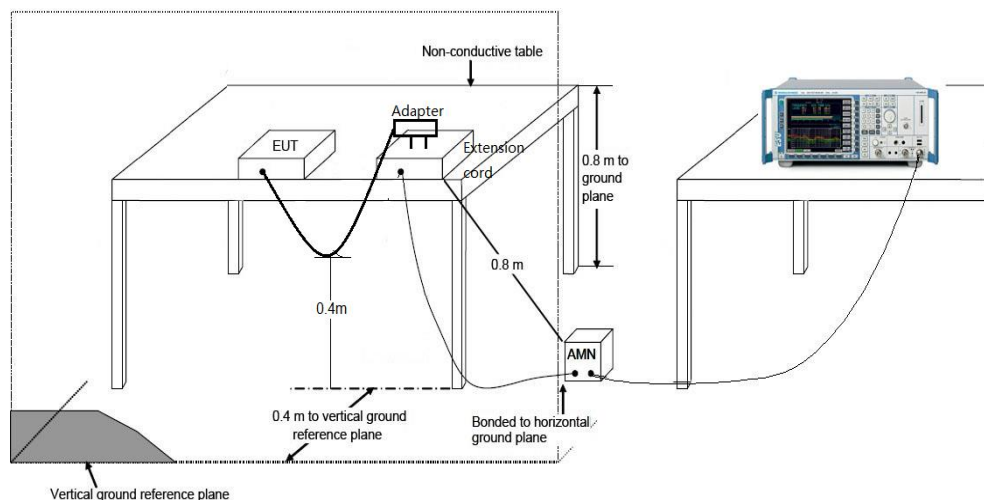
5.1.2 限制要求

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

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

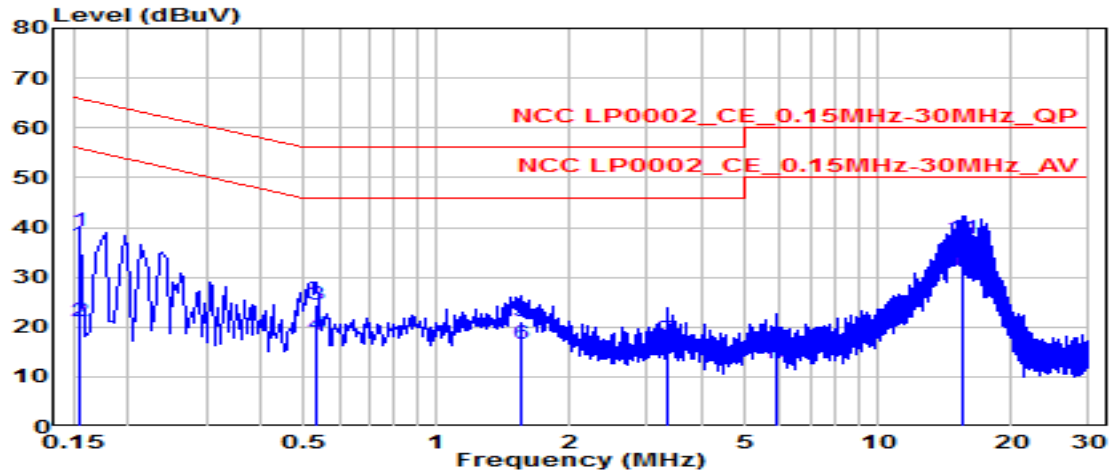
註:隨頻率之對數遞減

5.1.3 測試架構圖



5.1.4 電源端點測試結果

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-30
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	26°C /49%
Polarity	Line1	Site / Test Engineer	SR2 / Dean
Test Mode	TX_Full Band_5788MHz	Test Voltage	AC 110V/60Hz

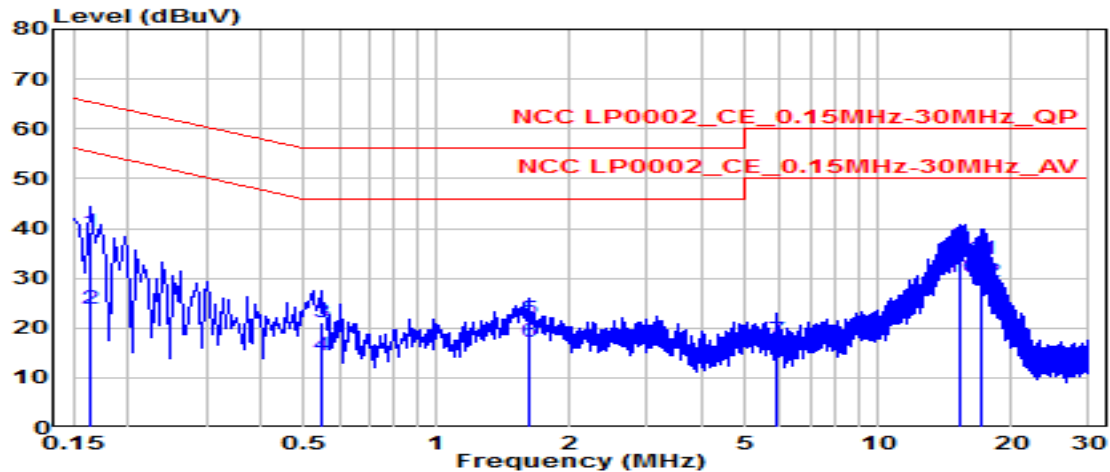


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	0.154	29.66	9.61	39.27	-26.49	65.75	QP
2	0.154	11.61	9.61	21.22	-34.53	55.75	Average
3	0.532	14.67	9.63	24.31	-31.69	56.00	QP
4	0.532	8.73	9.63	18.37	-27.63	46.00	Average
5	1.545	11.57	9.68	21.25	-34.75	56.00	QP
6	1.545	6.98	9.68	16.66	-29.34	46.00	Average
7	3.340	7.75	9.71	17.46	-38.54	56.00	QP
8	3.340	4.28	9.71	13.99	-32.01	46.00	Average
9	5.905	6.65	9.76	16.41	-43.59	60.00	QP
10	5.905	2.97	9.76	12.73	-37.27	50.00	Average
11	* 15.534	27.82	9.93	37.75	-22.25	60.00	QP
12	* 15.534	21.41	9.93	31.34	-18.66	50.00	Average

Note:

1. " * ", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-30
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	26°C / 49%
Polarity	Neutral	Site / Test Engineer	SR2 / Dean
Test Mode	TX_Full Band_5788MHz	Test Voltage	AC 110V/60Hz



No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1	0.163	29.56	9.62	39.18	-26.10	65.28	QP
2	0.163	14.18	9.62	23.80	-31.48	55.28	Average
3	0.546	11.64	9.64	21.28	-34.72	56.00	QP
4	0.546	4.73	9.64	14.37	-31.63	46.00	Average
5	1.612	11.95	9.68	21.63	-34.37	56.00	QP
6	1.612	7.40	9.68	17.08	-28.92	46.00	Average
7	5.878	7.85	9.77	17.62	-42.38	60.00	QP
8	5.878	4.59	9.77	14.37	-35.63	50.00	Average
9	*	15.250	9.97	36.39	-23.61	60.00	QP
10	*	15.250	9.97	30.16	-19.84	50.00	Average
11	17.122	23.82	10.00	33.82	-26.18	60.00	QP
12	17.122	19.27	10.00	29.27	-20.73	50.00	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

5.2 峰值傳導輸出功率

5.2.1 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，設定頻譜分析儀之解析度頻寬大於6dB發射頻寬或使用峰值功率表。除使用上述測量方式外，並得使用以最大傳導輸出功率作為測量方式（最大傳導輸出功率必須使用依據均方根等效電壓校準之儀器測量於任何連續傳輸之時段，測量結果須依儀器限制（如偵測器反應時間、相較於發射頻寬有限之解析頻寬能力，靈敏度等）調整得出正確之峰值測量。

5.2.2 限制要求

1. 使用頻率於5.725 GHz~5.850 GHz 頻段

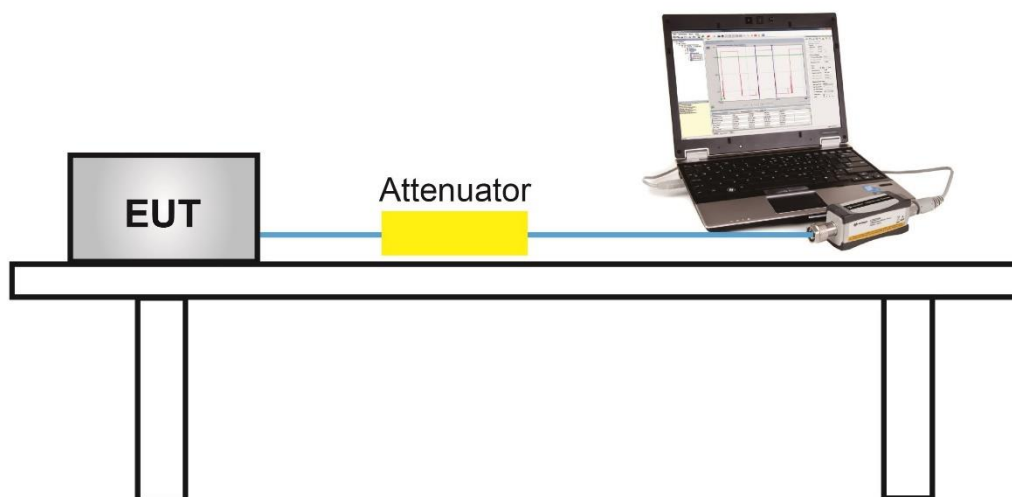
(1)最大傳導輸出功率應小於或等於1 W。

(2)在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。

(3)供固定式點對點操作時，使用方向增益超過6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。

(4)除(3)外，使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

5.2.3 測試架構圖



5.2.4 峰值傳導輸出功率測試結果

待測物名稱	Wireless Bodypack Transmitter	測試日期	2021/9/30
待測物型號	GLXD1+Z3	溫度 / 濕度	23°C / 55%
測試場地 / 測試工程師	SR5 / Eric		

Test Mode	Frequency (MHz)	Average Power (dBm)	Limit (dBm)
Full Band (2MHz)	5729	7.85	< 30
Full Band (2MHz)	5788	8.33	< 30
Full Band (2MHz)	5846	8.06	< 30
Half Band (1MHz)	5729	7.70	< 30
Half Band (1MHz)	5788	8.21	< 30
Half Band (1MHz)	5846	7.97	< 30

備 註：此量測值已含線材損耗(Cable Loss=1.5dB)。

5.3 天線之要求

5.3.1 限制要求

依據國家通訊傳播委員會低功率射頻器材技術規範之第5.7.8節規定，天線之規格可不受下述規定之限制。

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

5.3.2 天線樣式

此其天線為 Dual-band Internal Monopole Antenna Type，(檢附天線規格書)

Antenna List

No.	Brand	Part No.	Peak Gain
1	SHURE	53A43255	1.07 dBi

5.4 輻射電場強度

5.4.1 量測方法

待測物置於非導體桌面（落地型產品置於地上），受測物使用交流電源時，將其與任何配件設備之電源線連接至位於旋轉桌的交流電源。受測物使用電池時，測試時應裝置新電池或充電完全的電池。受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度，接收天線並應於水平及垂直極化方向各量測一次。（待測物擺設方式根據 ANSI C63.10-2013 版本，待測物放置桌中心，1G 以下擺設高度為 80cm/1G 以上擺設高度為 150cm）

備註：若為手持式或穿戴式之裝置，需對其三個正交軸的方位評估測試，並記錄最差的數值（此待測物最差方位為 X 軸（側躺））。

。

(1) 任一頻率小於或等於 1000 MHz 之訊號,使用 CISPR 準峰值檢波器

(2) 任一頻率大於 1000 MHz 之訊號，使用平均值檢波器測量，當規定之發射限制值為平均值時(含 1000 MHz 以下)，受測訊號藉由峰值檢波器(RBW:1MHz,VBW:3MHz)所測量之峰值，亦須符合峰值發射限制值，其峰值發射限制值為最大容許平均值加 20 dB。

5.4.2 限制要求

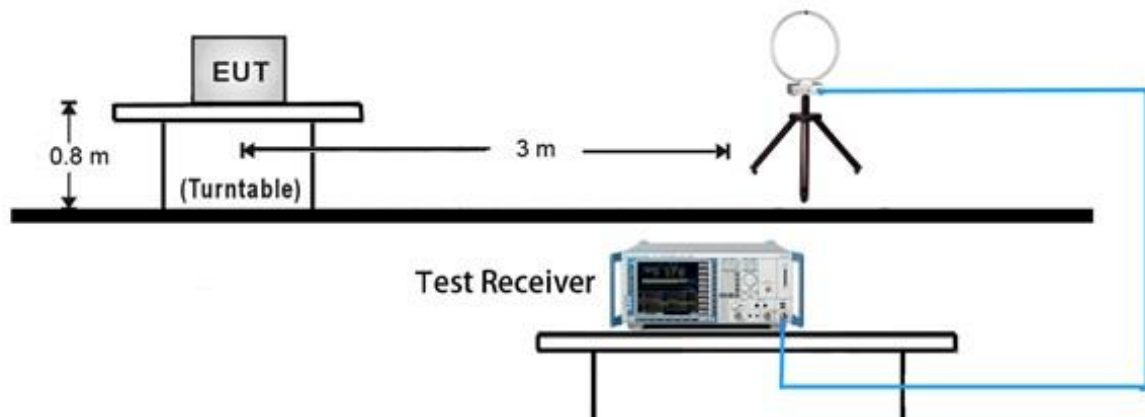
其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

頻率(f) (MHz)	電場強度 (微伏特/公尺, $\mu\text{V/m}$)	測距 (公尺)
$0.009 \leq f \leq 0.490$	$2400/f(\text{kHz})$	300
$0.490 < f \leq 1.705$	$24000/f(\text{kHz})$	30
$1.705 < f < 30$	30	30
$30 \leq f \leq 88$	100	3
$88 < f \leq 216$	150	3
$216 < f \leq 960$	200	3
$960 < f$	500	3

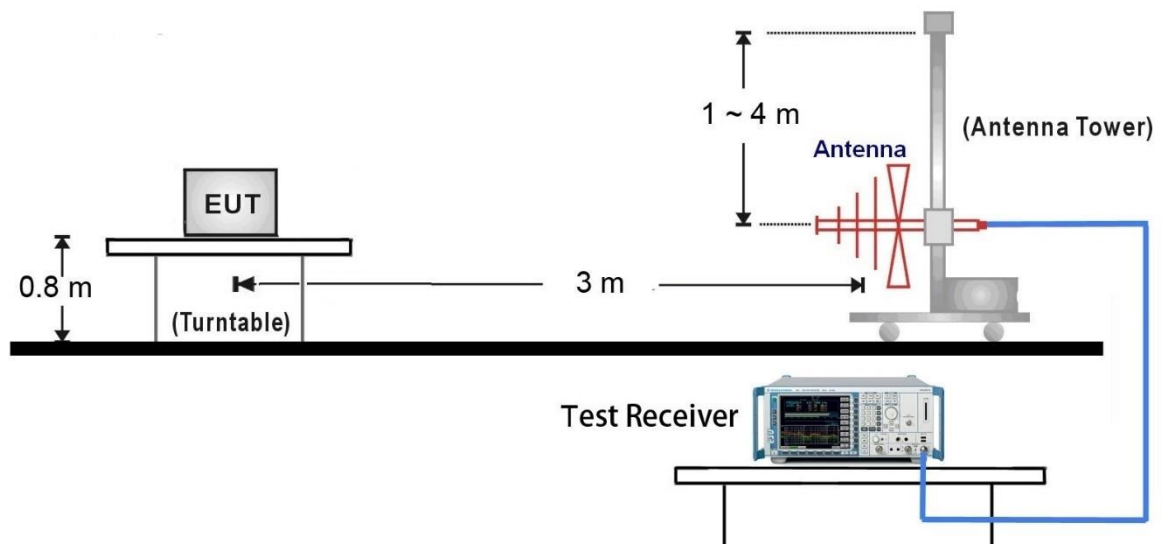
上表規定之電場強度，發射頻率在 9 kHz~90 kHz、110 kHz~490 kHz 及 1000MHz 以上者，其量測應以平均值檢波器為基準，且須符合低功率射頻器材技術規範第 6.14.節之規定；其他發射頻率，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時，應符合第 6.5 節之規定，而輻射發射之量測頻率範圍須符合低功率射頻器材技術規範第 6.12 節之規定。

5.4.3 測試架構圖

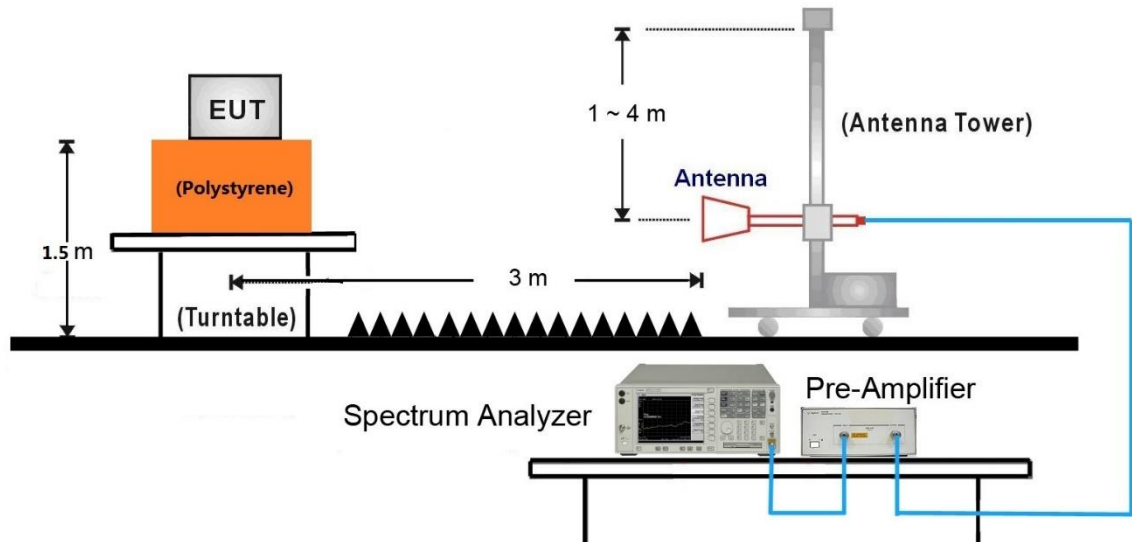
Under 30MHz Test



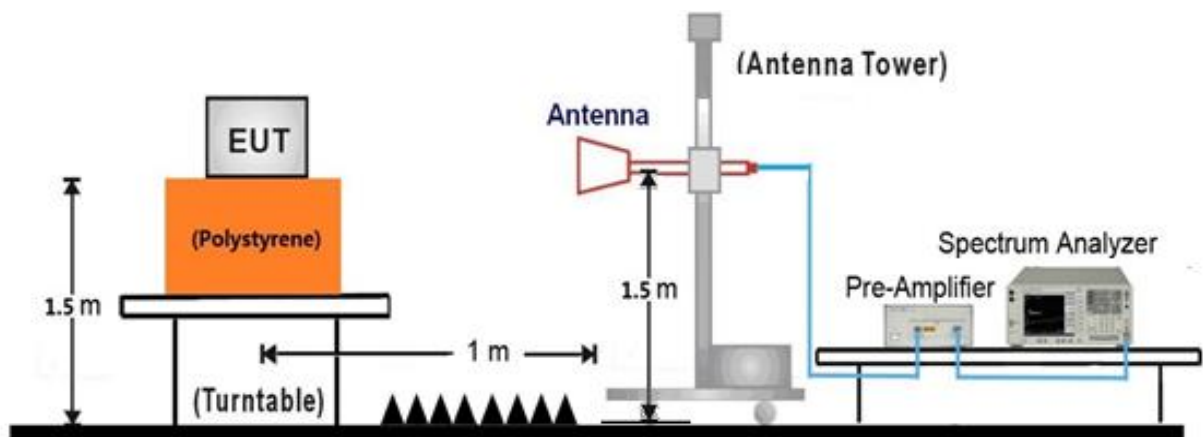
Under 1GHz Test Setup



1GHz ~ 18GHz Test Setup:

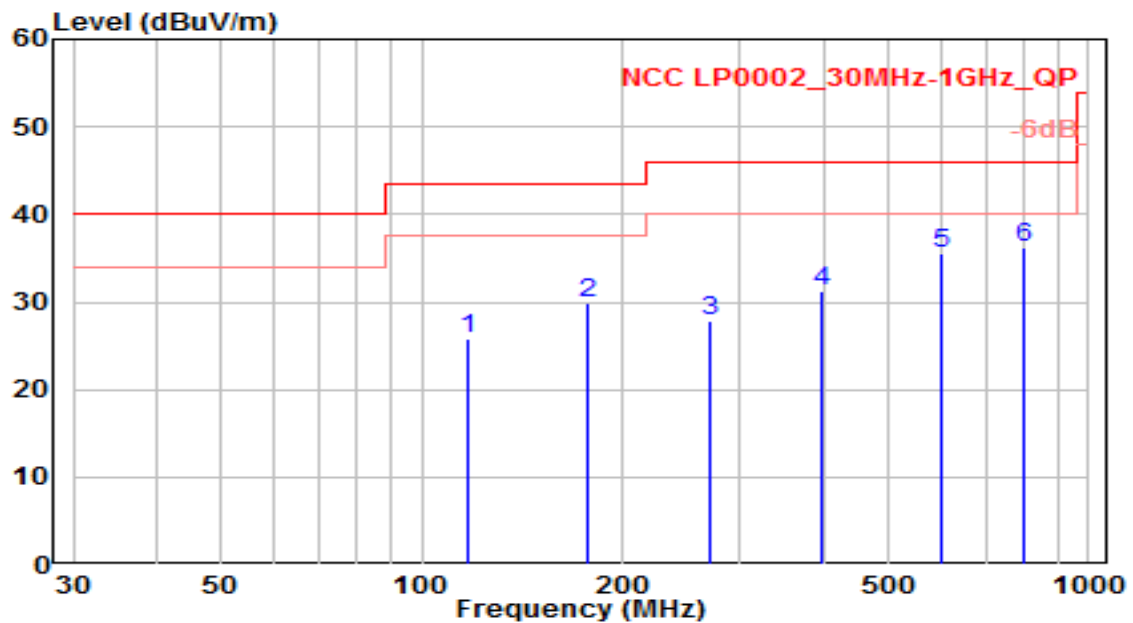


18GHz ~ 25GHz Test Setup:



5.4.4 輻射電場強度測試結果

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-30
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Volvo
Test Mode	TX_Full Band_5788MHz	Test Voltage	By Notebook PC

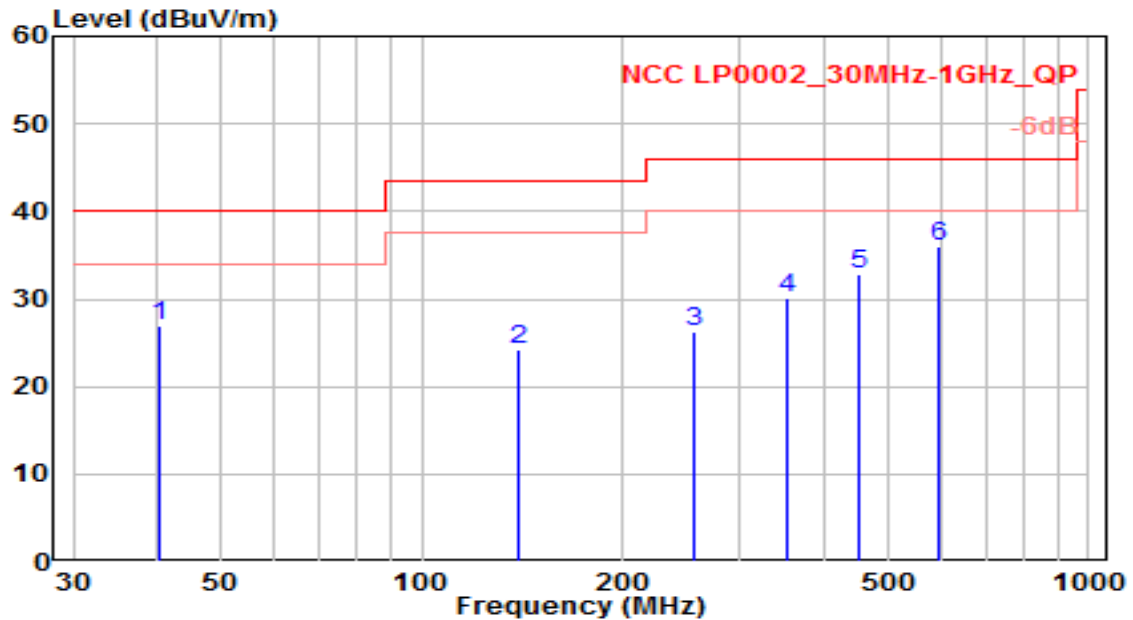


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	117.142	8.10	17.66	25.76	-17.74	43.50	100	55	QP
2	177.344	12.64	17.19	29.83	-13.67	43.50	100	320	QP
3	271.554	7.05	20.76	27.80	-18.20	46.00	100	230	QP
4	398.732	7.17	24.04	31.21	-14.79	46.00	100	35	QP
5	600.254	7.63	27.80	35.44	-10.56	46.00	100	165	QP
6	* 799.565	5.68	30.50	36.18	-9.82	46.00	100	175	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-30
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Volvo
Test Mode	TX_Full Band_5788MHz	Test Voltage	By Notebook PC

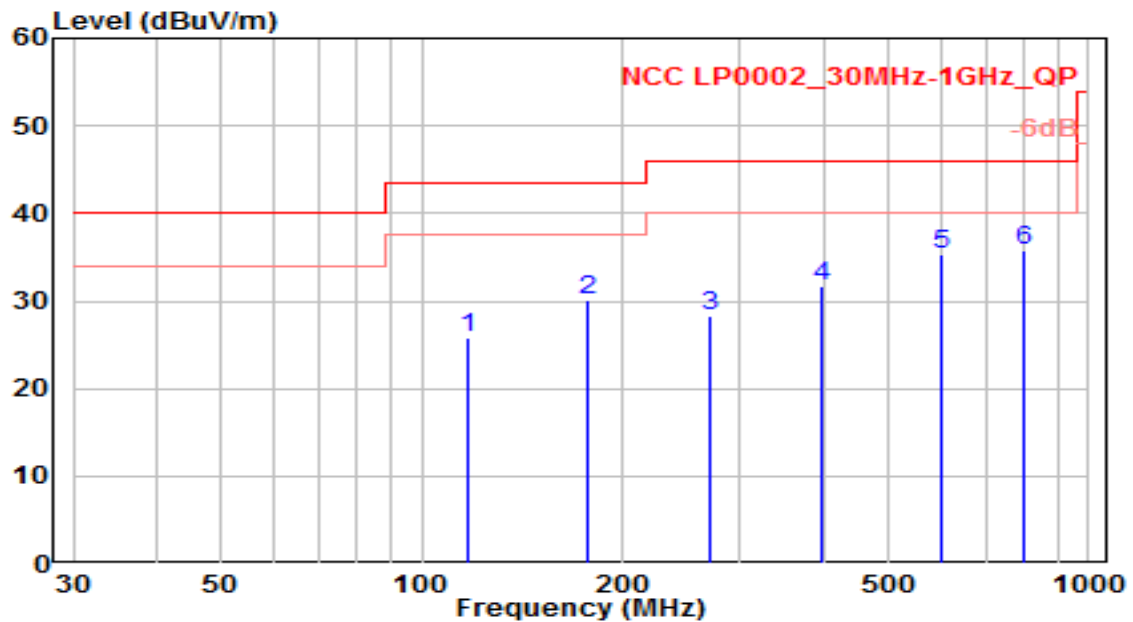


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	40.554	5.78	21.14	26.93	-13.07	40.00	100	165	QP
2	139.328	8.18	16.05	24.23	-19.27	43.50	100	35	QP
3	256.344	5.66	20.56	26.22	-19.78	46.00	100	245	QP
4	353.544	6.85	23.29	30.13	-15.87	46.00	100	330	QP
5	451.119	7.95	24.92	32.87	-13.13	46.00	100	75	QP
6	* 597.940	8.18	27.76	35.94	-10.06	46.00	100	140	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-30
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Volvo
Test Mode	RX_Full Band_5788MHz	Test Voltage	By Notebook PC

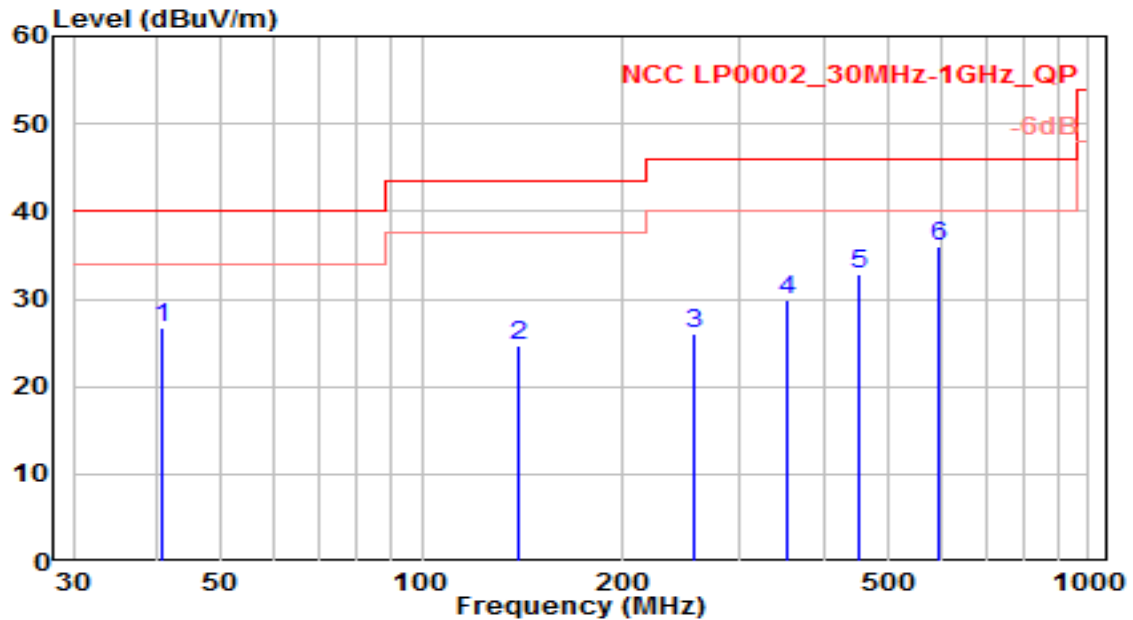


No	Frequency (MHz)	Reading (dBUV)	C.F (dB/m)	Measurement (dBUV/m)	Margin (dB)	Limit (dBUV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	117.642	8.22	17.59	25.81	-17.69	43.50	100	55	QP
2	177.224	12.84	17.18	30.02	-13.48	43.50	100	335	QP
3	271.314	7.50	20.75	28.25	-17.75	46.00	100	220	QP
4	398.317	7.68	24.03	31.72	-14.28	46.00	100	35	QP
5	600.646	7.62	27.81	35.43	-10.57	46.00	100	170	QP
6	* 799.684	5.35	30.50	35.85	-10.15	46.00	100	155	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBUV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-30
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Volvo
Test Mode	RX_Full Band_5788MHz	Test Voltage	By Notebook PC

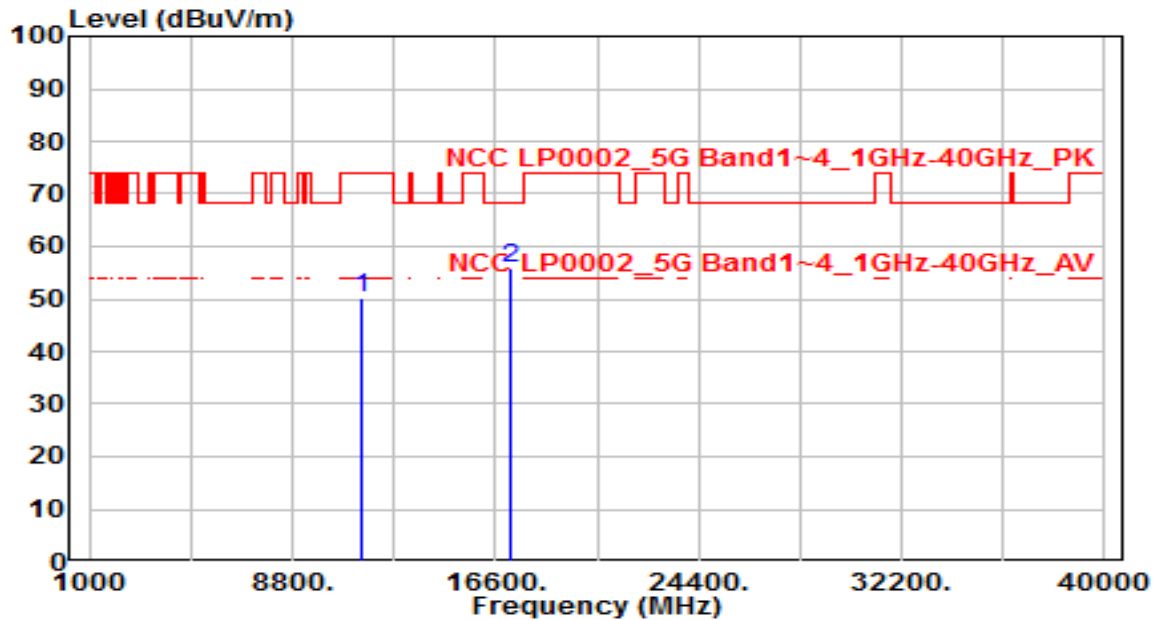


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	40.649	5.62	21.16	26.78	-13.22	40.00	100	170	QP
2	139.442	8.66	16.04	24.71	-18.79	43.50	100	20	QP
3	256.456	5.40	20.56	25.96	-20.04	46.00	100	265	QP
4	353.758	6.48	23.29	29.77	-16.23	46.00	100	340	QP
5	451.449	7.99	24.93	32.92	-13.08	46.00	100	80	QP
6	* 597.359	8.18	27.75	35.93	-10.07	46.00	100	150	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5729MHz	Test Voltage	By Notebook PC

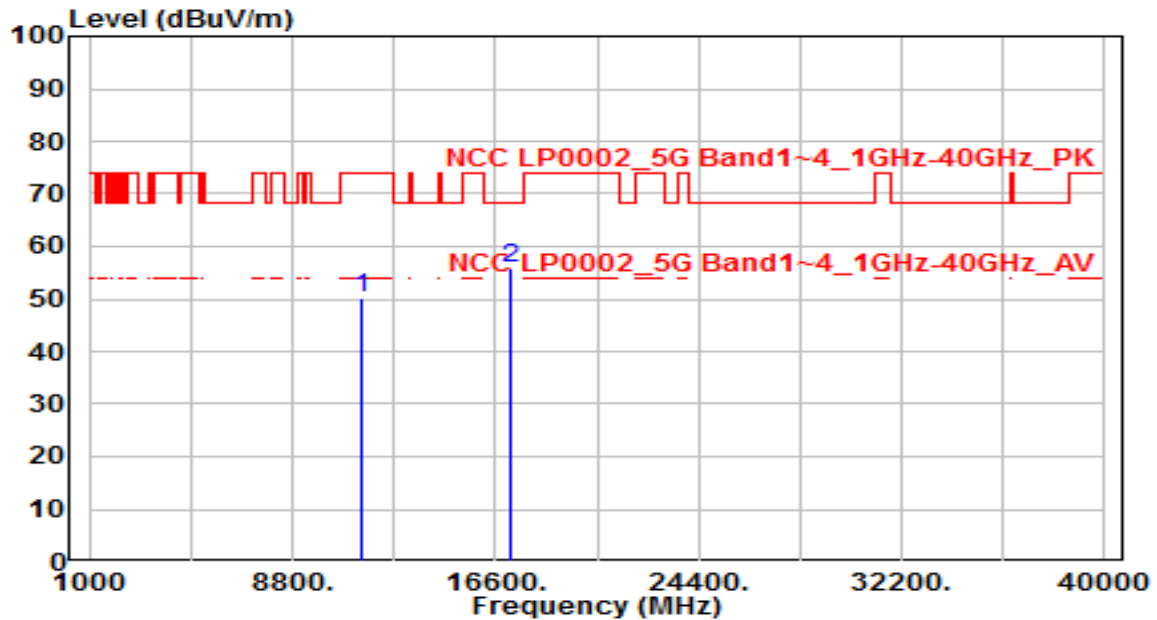


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11458.000	30.35	19.99	50.34	-23.66	74.00	150	360	Peak
2	* 17187.000	30.11	25.76	55.86	-12.34	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C / 58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5729MHz	Test Voltage	By Notebook PC

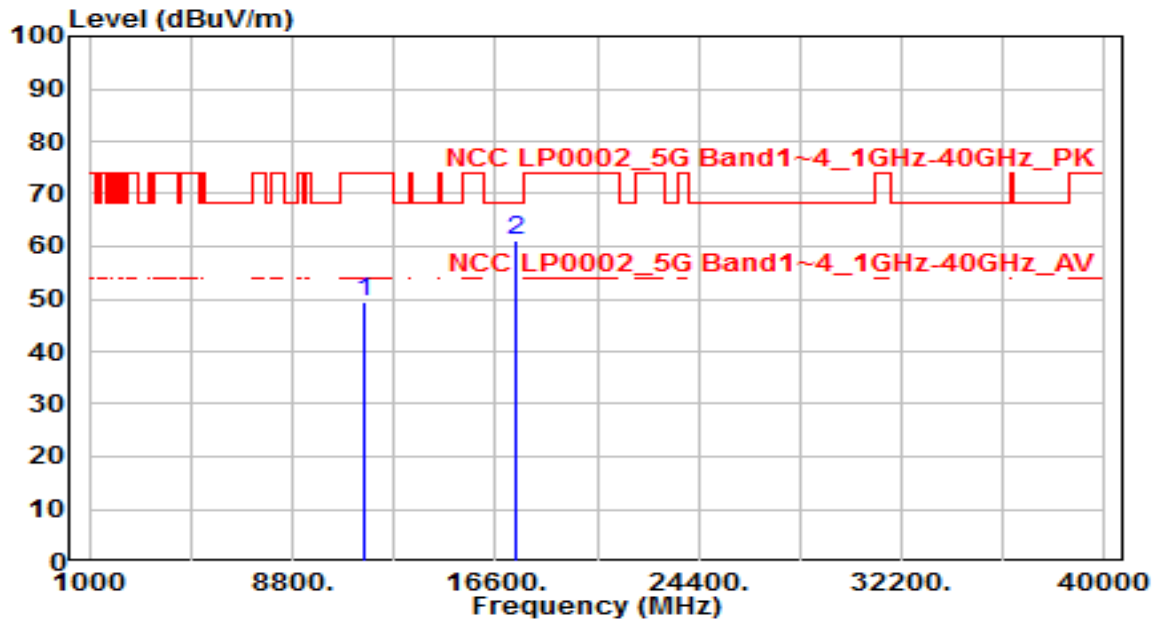


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11458.000	30.16	19.99	50.15	-23.85	74.00	150	360	Peak
2	* 17187.000	30.18	25.76	55.93	-12.27	68.20	150	360	Peak

Note:

- "*", means this data is the worst emission level.
- C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
- Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
- No2 is not in restricted band, the limit is 68.2dBuV/m.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5788MHz	Test Voltage	By Notebook PC

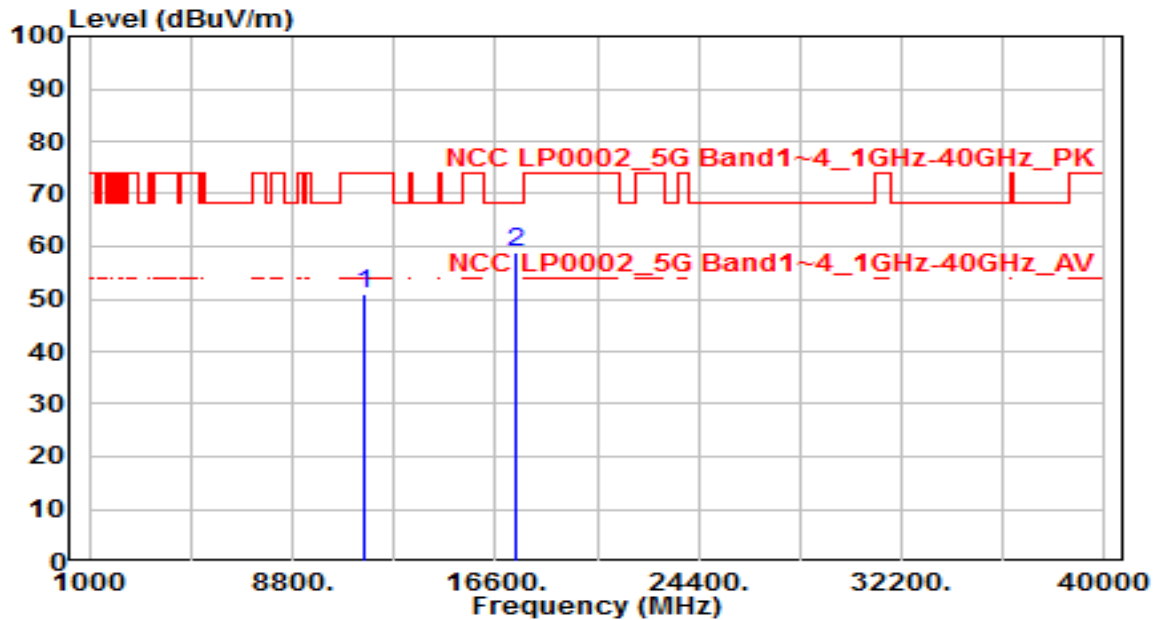


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11576.000	29.37	19.88	49.25	-24.75	74.00	150	360	Peak
2	* 17364.000	34.17	26.93	61.11	-7.09	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5788MHz	Test Voltage	By Notebook PC

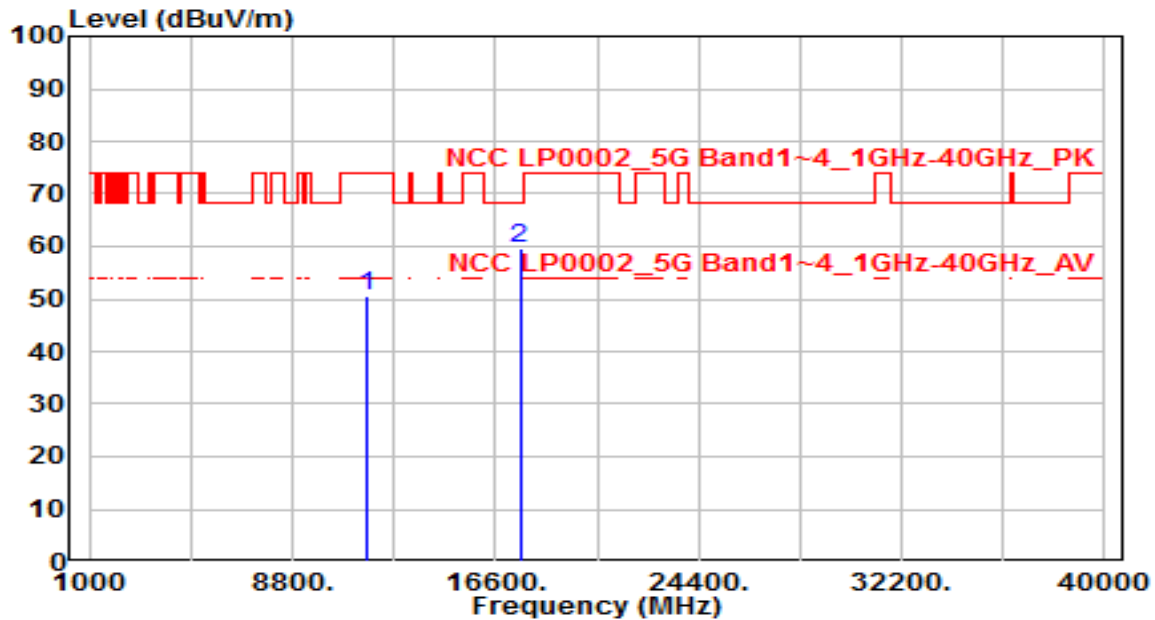


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11576.000	31.24	19.88	51.12	-22.88	74.00	150	360	Peak
2	* 17364.000	32.08	26.93	59.01	-9.19	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5846MHz	Test Voltage	By Notebook PC

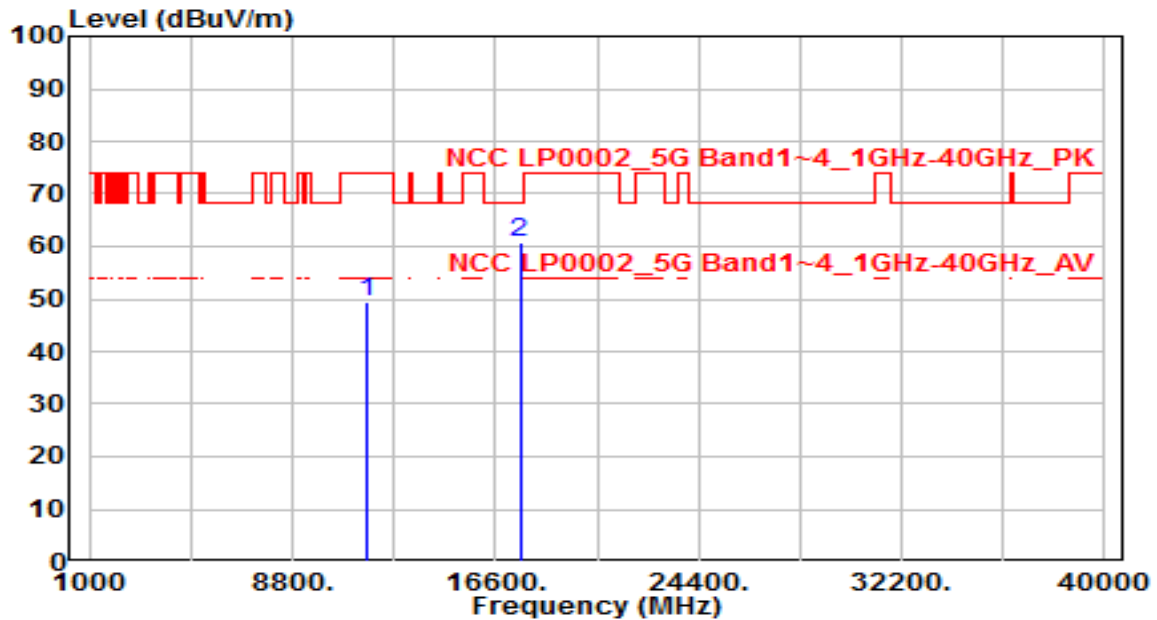


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11692.000	31.05	19.62	50.66	-23.34	74.00	150	360	Peak
2	* 17538.000	31.60	28.20	59.80	-8.40	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5846MHz	Test Voltage	By Notebook PC

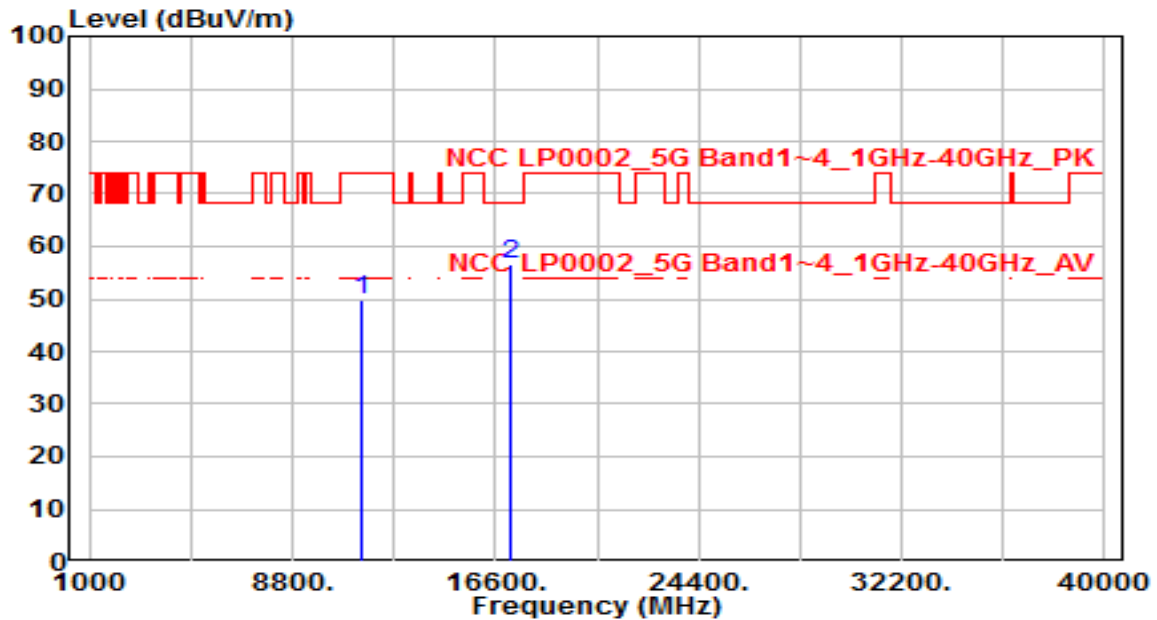


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11692.000	30.00	19.62	49.62	-24.38	74.00	150	360	Peak
2	* 17538.000	32.62	28.20	60.82	-7.38	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5729MHz	Test Voltage	By Notebook PC

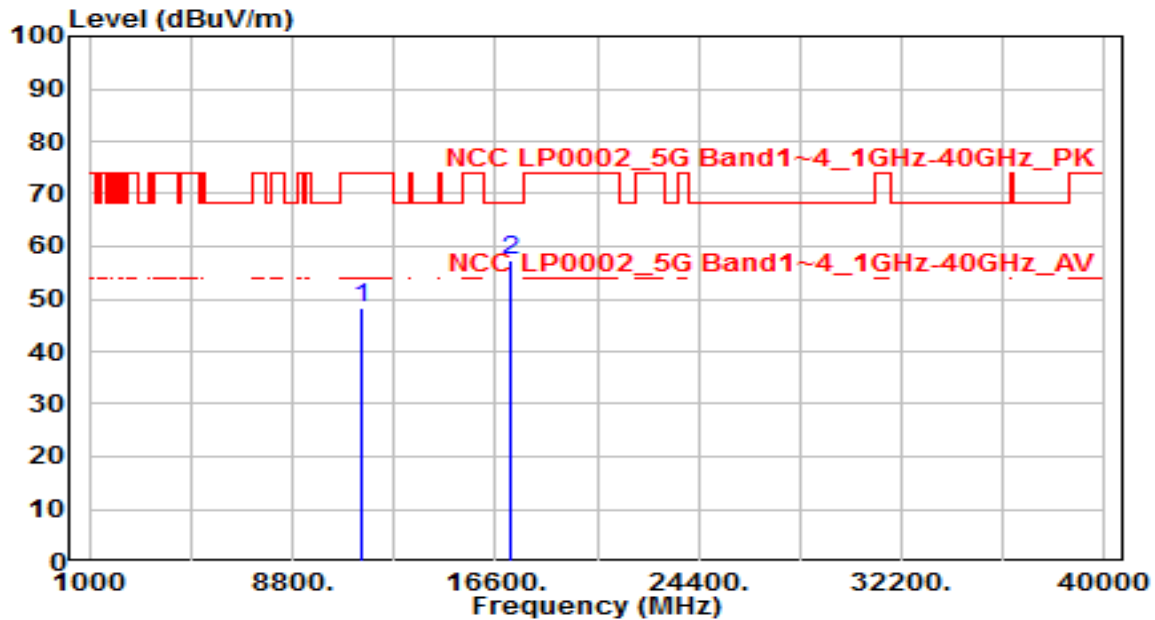


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11458.000	29.78	19.99	49.77	-24.23	74.00	150	360	Peak
2	* 17187.000	30.91	25.76	56.66	-11.54	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C / 58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5729MHz	Test Voltage	By Notebook PC

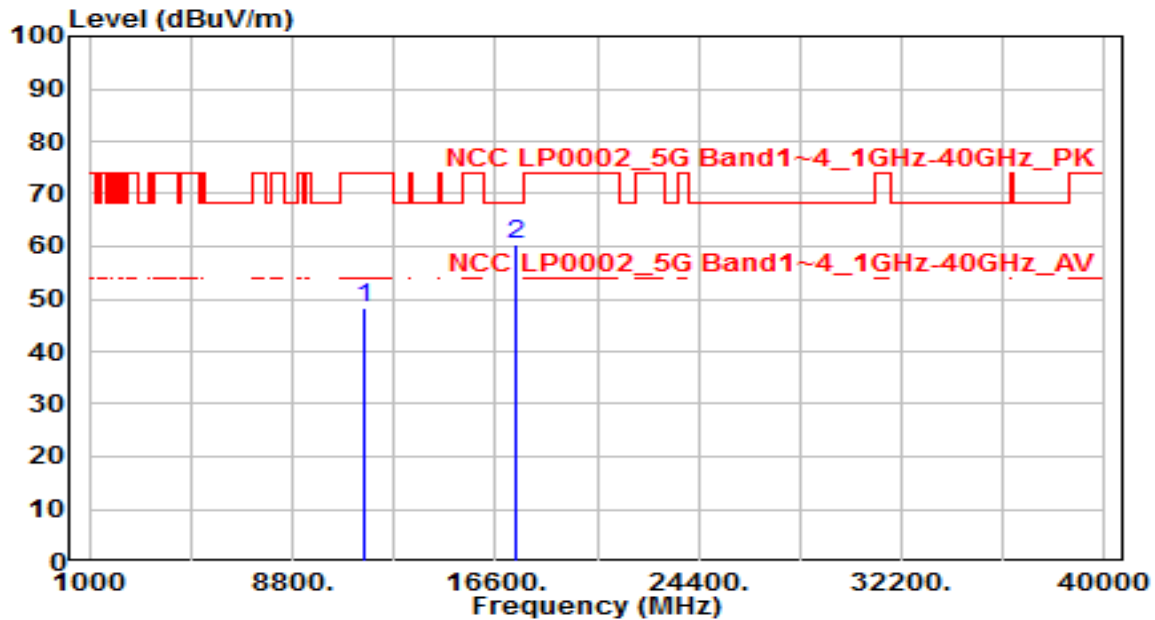


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11458.000	28.32	19.99	48.31	-25.69	74.00	150	360	Peak
2	* 17187.000	31.69	25.76	57.44	-10.76	68.20	150	360	Peak

Note:

- "*", means this data is the worst emission level.
- C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
- Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
- No2 is not in restricted band, the limit is 68.2dBuV/m.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5788MHz	Test Voltage	By Notebook PC

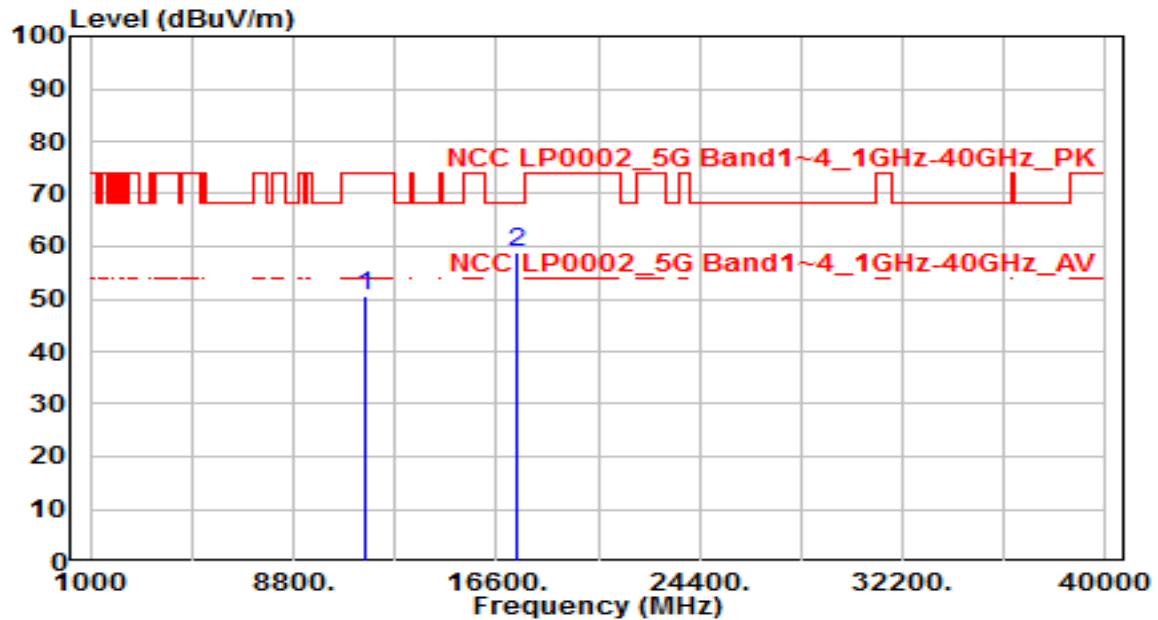


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11576.000	28.48	19.88	48.36	-25.64	74.00	150	360	Peak
2	* 17364.000	33.31	26.93	60.25	-7.95	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5788MHz	Test Voltage	By Notebook PC

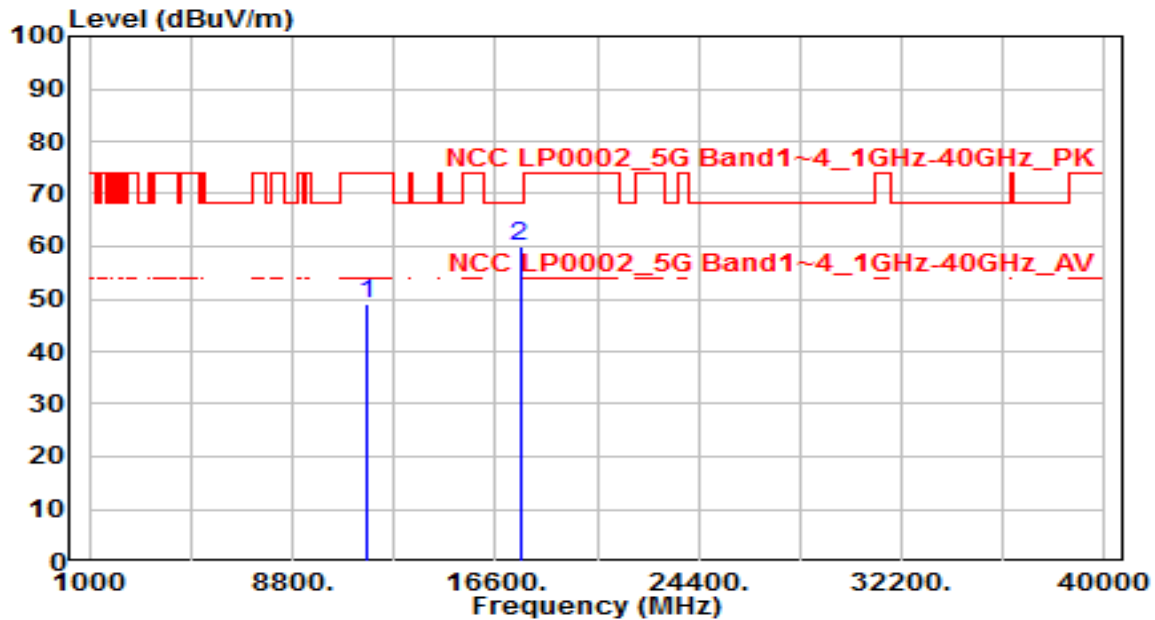


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11576.000	30.83	19.88	50.71	-23.29	74.00	150	360	Peak
2	* 17364.000	32.07	26.93	59.00	-9.20	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5846MHz	Test Voltage	By Notebook PC

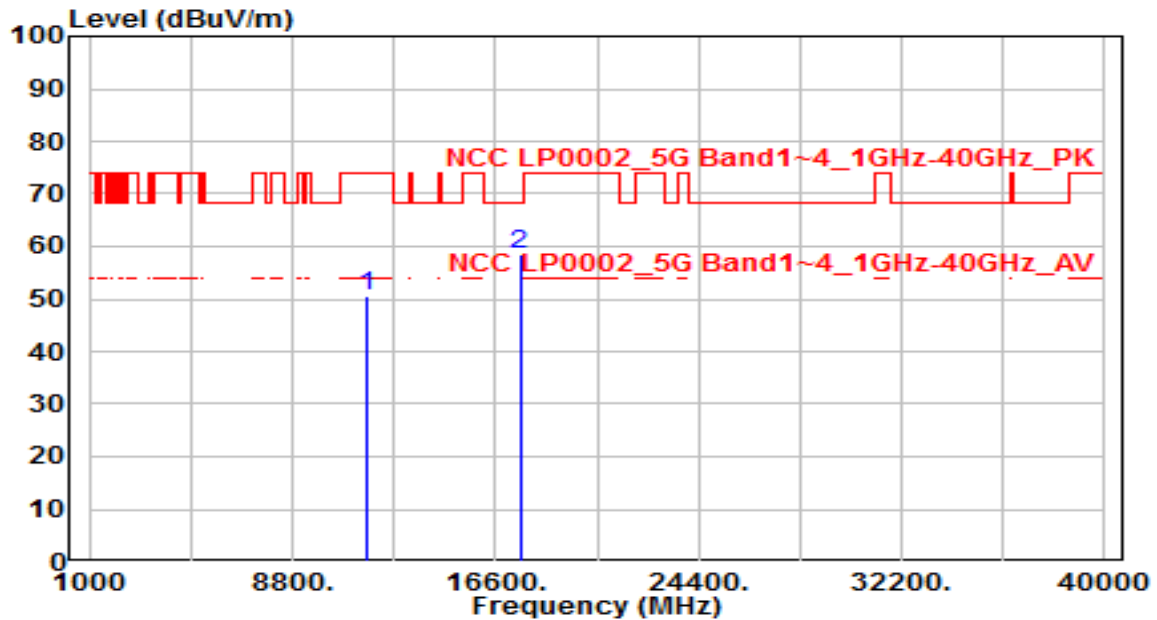


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11692.000	29.52	19.62	49.14	-24.86	74.00	150	360	Peak
2	* 17538.000	31.74	28.20	59.94	-8.26	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. No2 is not in restricted band, the limit is 68.2dBuV/m.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5846MHz	Test Voltage	By Notebook PC

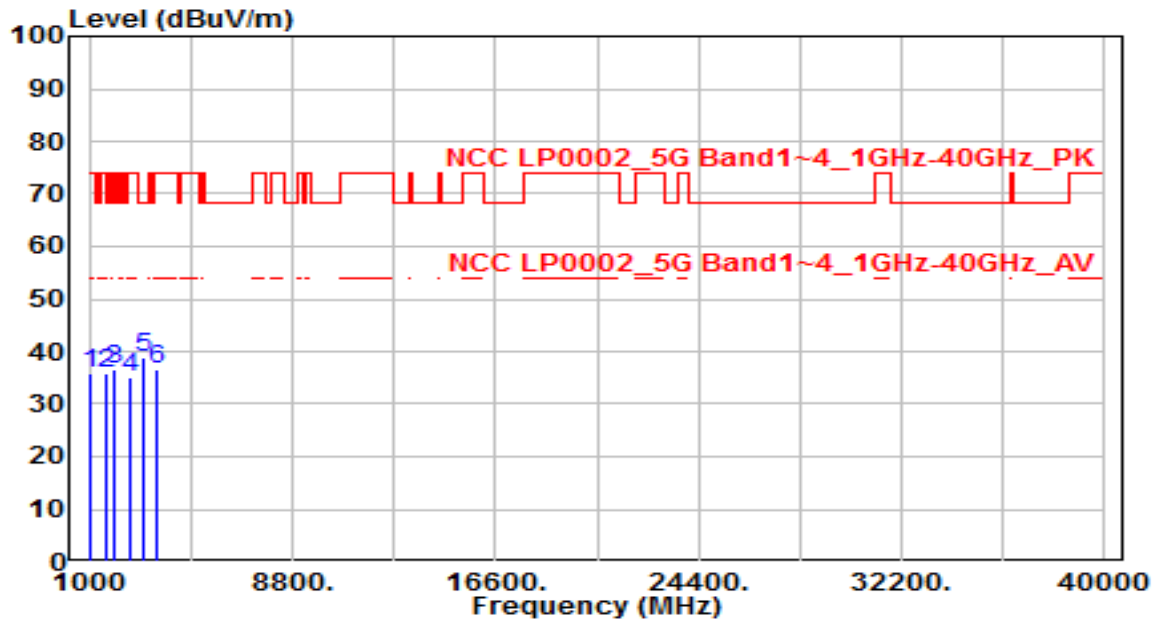


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	11692.000	30.76	19.62	50.38	-23.62	74.00	150	360	Peak
2	* 17538.000	30.46	28.20	58.66	-9.54	68.20	150	360	Peak

Note:

- "*", means this data is the worst emission level.
- C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
- Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
- No2 is not in restricted band, the limit is 68.2dBuV/m.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	RX_Full Band_5788MHz	Test Voltage	By Notebook PC

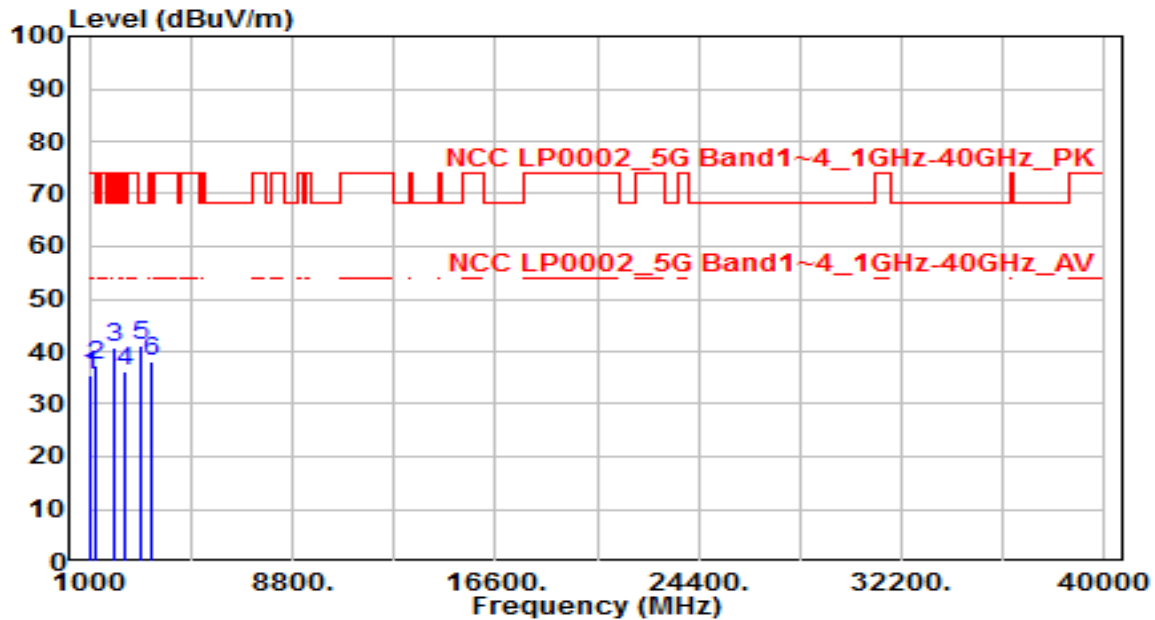


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1037.514	42.22	-6.51	35.70	-38.30	74.00	150	360	Peak
2	1629.857	40.34	-4.49	35.85	-32.35	68.20	150	360	Peak
3	1993.963	39.98	-3.54	36.45	-31.75	68.20	150	360	Peak
4	2586.854	36.56	-1.64	34.92	-39.08	74.00	150	360	Peak
5	* 3063.625	40.47	-1.55	38.92	-29.28	68.20	150	360	Peak
6	3552.930	36.89	-0.18	36.71	-37.29	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	RX_Full Band_5788MHz	Test Voltage	By Notebook PC



No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	1063.874	41.85	-6.42	35.43	-38.57	74.00	150	360	Peak
2	1272.293	43.16	-5.66	37.50	-30.70	68.20	150	360	Peak
3	1992.846	44.24	-3.54	40.71	-27.49	68.20	150	360	Peak
4	2369.025	38.35	-2.12	36.23	-37.77	74.00	150	360	Peak
5	* 2991.985	42.75	-1.73	41.03	-27.17	68.20	150	360	Peak
6	3376.517	38.88	-0.68	38.20	-30.00	68.20	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

5.5 頻帶邊緣

5.5.1 量測方法

待測物置於非導體桌面（落地型產品置於地上），受測物使用交流電源時，將其與任何配件設備之電源線連接至位於旋轉桌的交流電源。受測物使用電池時，測試時應裝置新電池或充電完全的電池。受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可360度旋轉，接收天線置於距待測物3m距離，高度可在1至4公尺間變動，以量測待測物之最大輻射電場強，接收天線並應於水平及垂直極化方向各量測一次。（待測物擺設方式根據 ANSI C63.10-2013版，待測物放置桌中心，1G以下擺設高度為80cm/1G以上擺設高度為150cm）

備註：若為手持式或穿戴式之裝置，需對其三個正交軸的方位評估測試，並記錄最差的數值（此待測物最差方位為 X 軸（側躺））。

- (1) 任一頻率小於或等於1000 MHz 之訊號,使用CISPR準峰值檢波器
- (2) 任一頻率大於1000 MHz 之訊號，使用平均值檢波器測量，當規定之發射限制值為平均值時(含1000 MHz 以下)，受測訊號藉由峰值檢波器(RBW:1MHz,VBW:3MHz)所測量之峰值，亦須符合峰值發射限制值，其峰值發射限制值為最大容許平均值加20 dB。

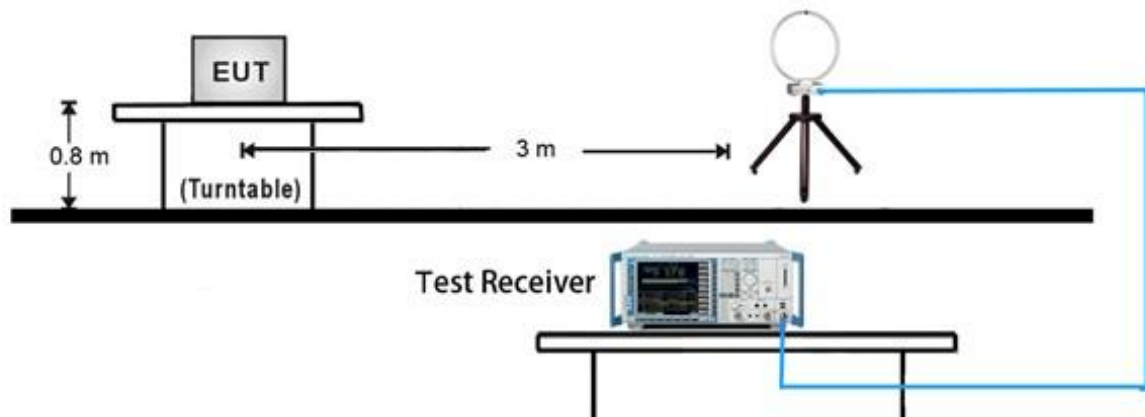
5.5.2 限制要求

除低功率射頻器材技術規範另有規定外，任何低功率射頻器材之主波皆不得使用下表所列各頻段之頻率低功率射頻器材落於下表所列頻帶內之混附發射，其電場強度必須符合低功率射頻器材技術規範之第3.6節限制規定

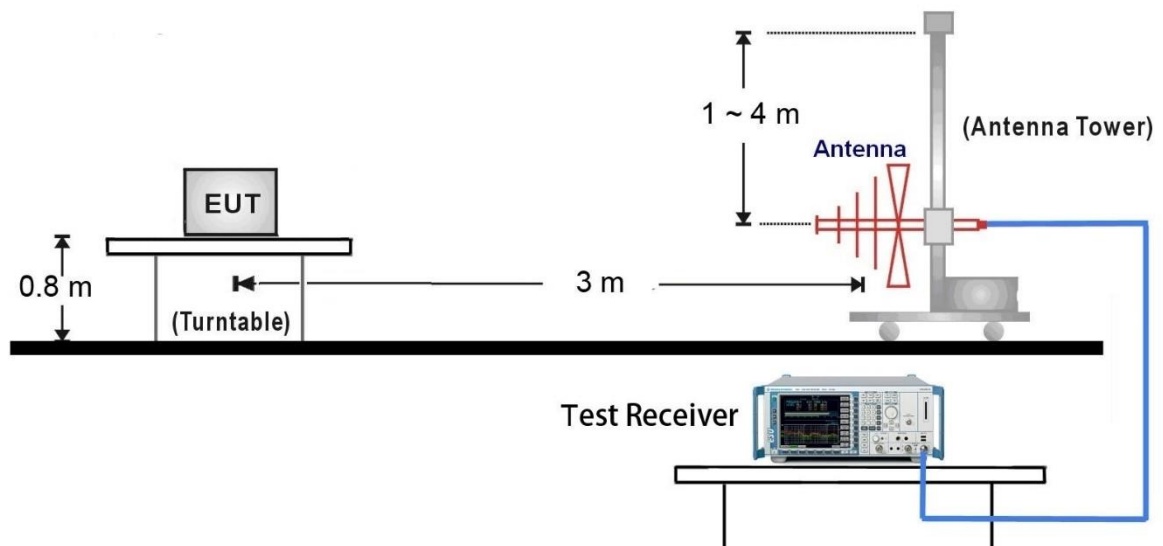
頻 率 (MHz)	頻 率 (MHz)	頻 率 (MHz)	頻 率 (MHz)	頻 率 (MHz)
0.090~0.110	25.500~25.700	703.00~748.00	2310.0~2390.0	13250~13400
0.490~0.510	37.475~38.275	758.00~803.00	2483.5~2900.0	14470~14500
2.172~2.198	73.500~75.400	825.00~915.00	3260.0~3267.0	15350~16200
3.013~3.033	108.00~138.00	930.00~1240.0	3332.0~3339.0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

5.5.3 測試架構圖

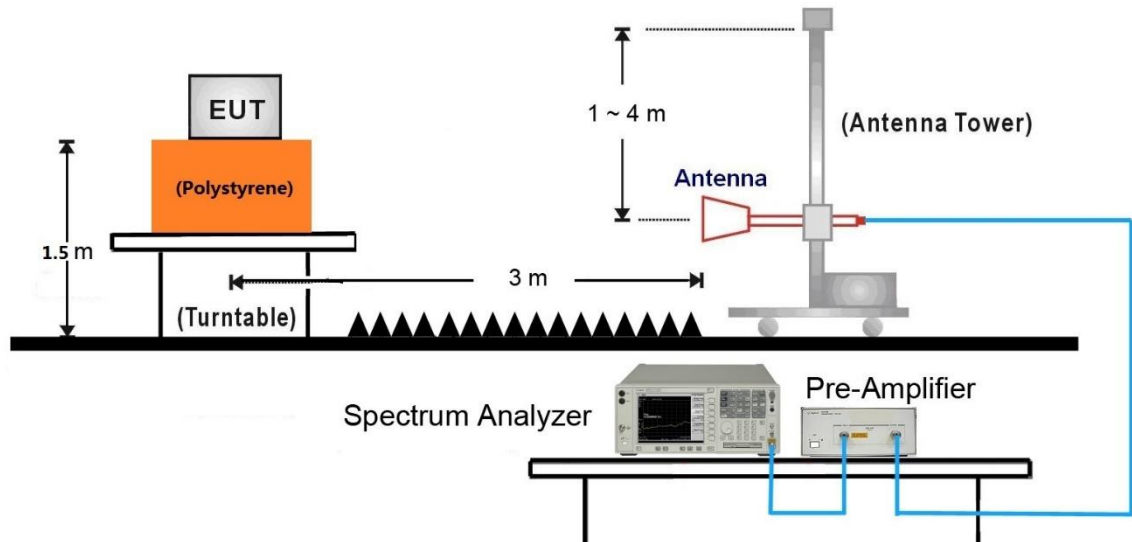
Under 30MHz Test



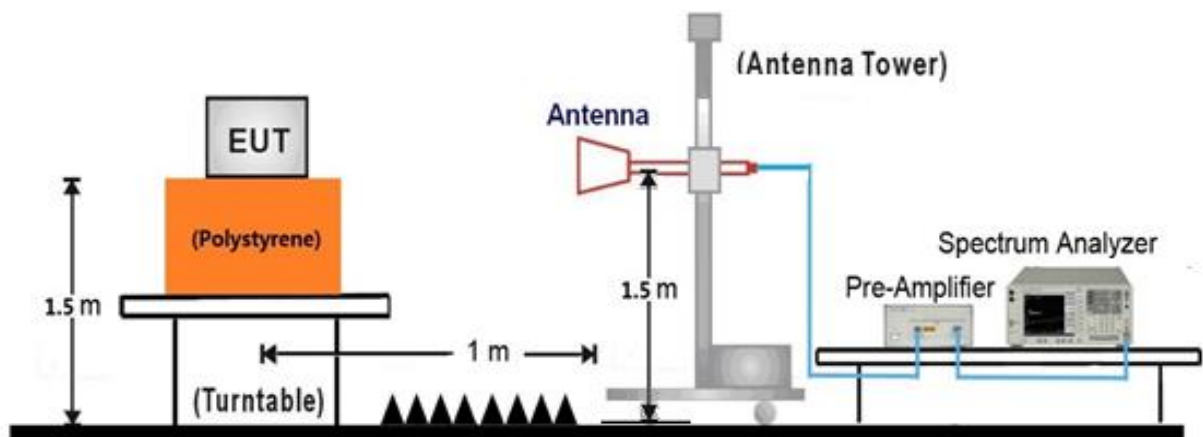
Under 1GHz Test Setup



1GHz ~ 18GHz Test Setup:

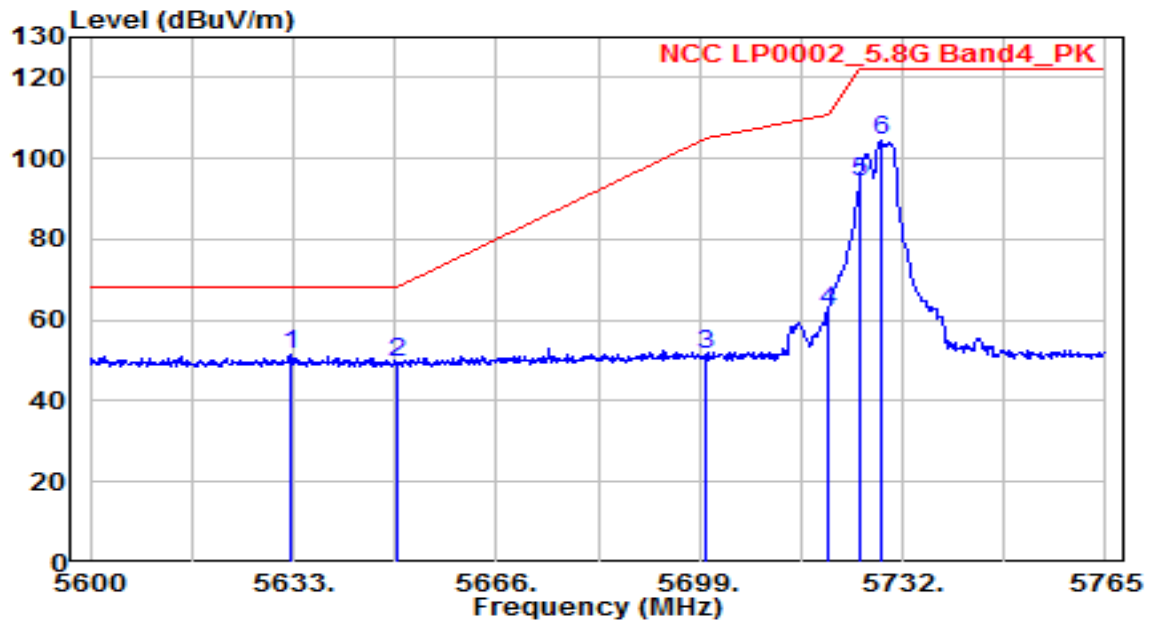


18GHz ~ 25GHz Test Setup:



5.5.4 頻帶邊緣測試結果

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5729MHz	Test Voltage	By Notebook PC

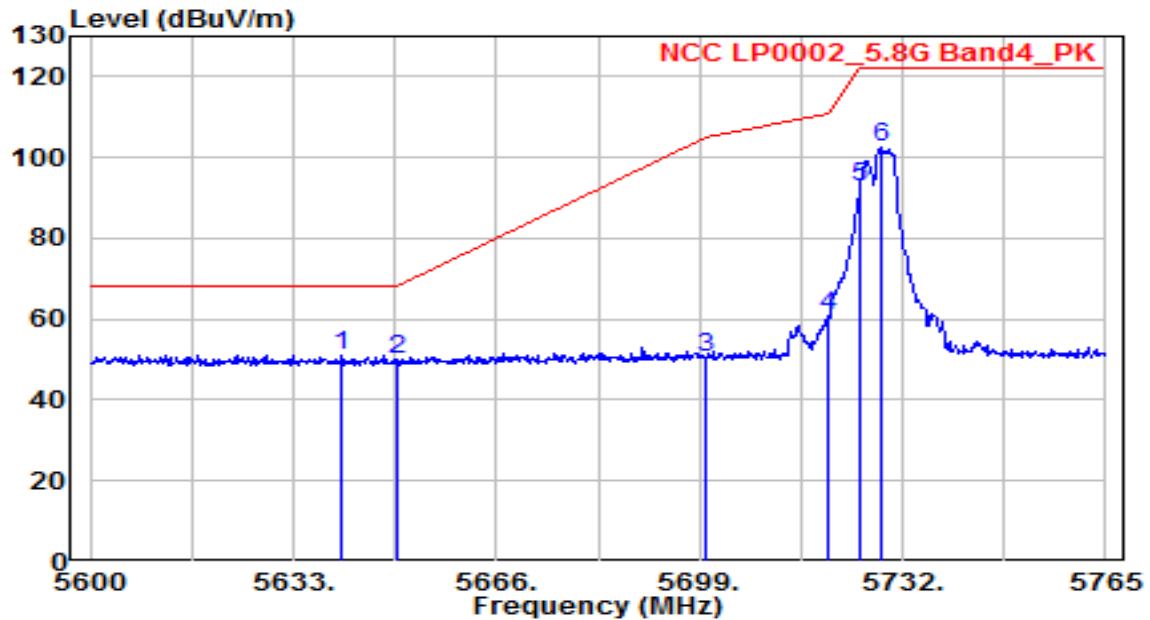


No	Frequency (MHz)	Reading (dBUV)	C.F (dB/m)	Measurement (dBUV/m)	Margin (dB)	Limit (dBUV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5632.670	46.12	5.25	51.37	-16.83	68.20	110	135	Peak
2	5650.000	44.42	5.32	49.73	-18.47	68.20	110	135	Peak
3	5700.000	46.07	5.50	51.57	-53.63	105.20	110	135	Peak
4	5720.000	56.59	5.57	62.16	-48.64	110.80	110	135	Peak
5	5725.000	88.72	5.59	94.31	-27.89	122.20	110	135	Peak
6	5728.370	98.71	5.60	104.31	N/A	N/A	110	135	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBUV/m) = Reading(dBUV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodypack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5729MHz	Test Voltage	By Notebook PC

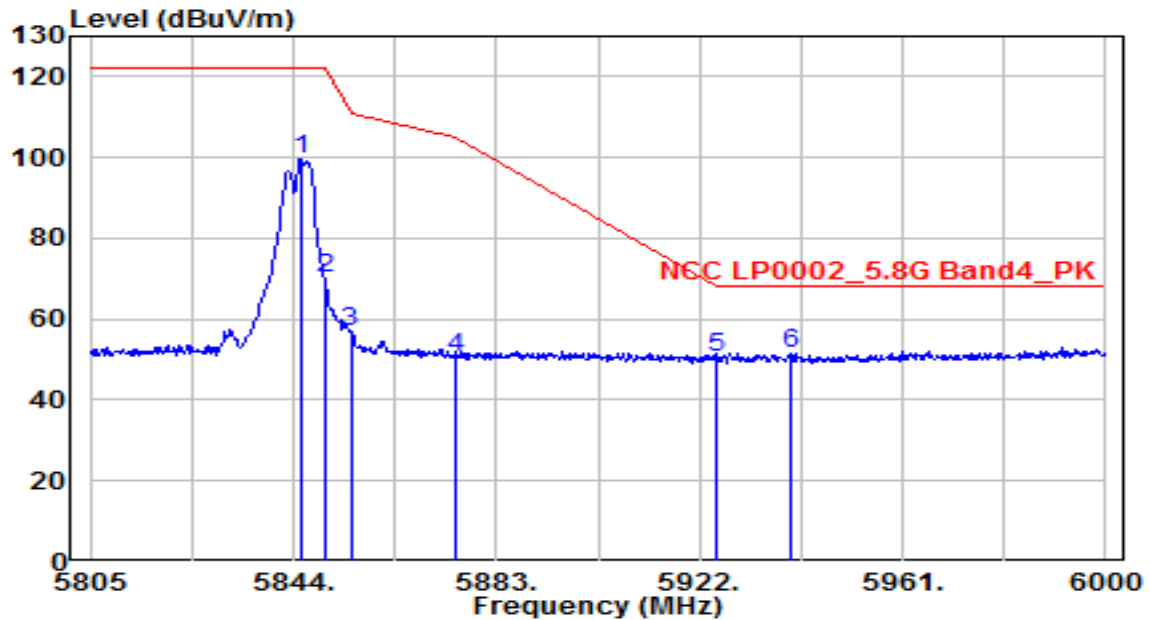


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5640.920	45.49	5.28	50.77	-17.43	68.20	110	215	Peak
2	5650.000	44.70	5.32	50.01	-18.19	68.20	110	215	Peak
3	5700.000	44.91	5.50	50.41	-54.79	105.20	110	215	Peak
4	5720.000	55.16	5.57	60.73	-50.07	110.80	110	215	Peak
5	5725.000	86.95	5.59	92.54	-29.66	122.20	110	215	Peak
6	5728.370	96.84	5.60	102.44	N/A	N/A	110	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5846MHz	Test Voltage	By Notebook PC

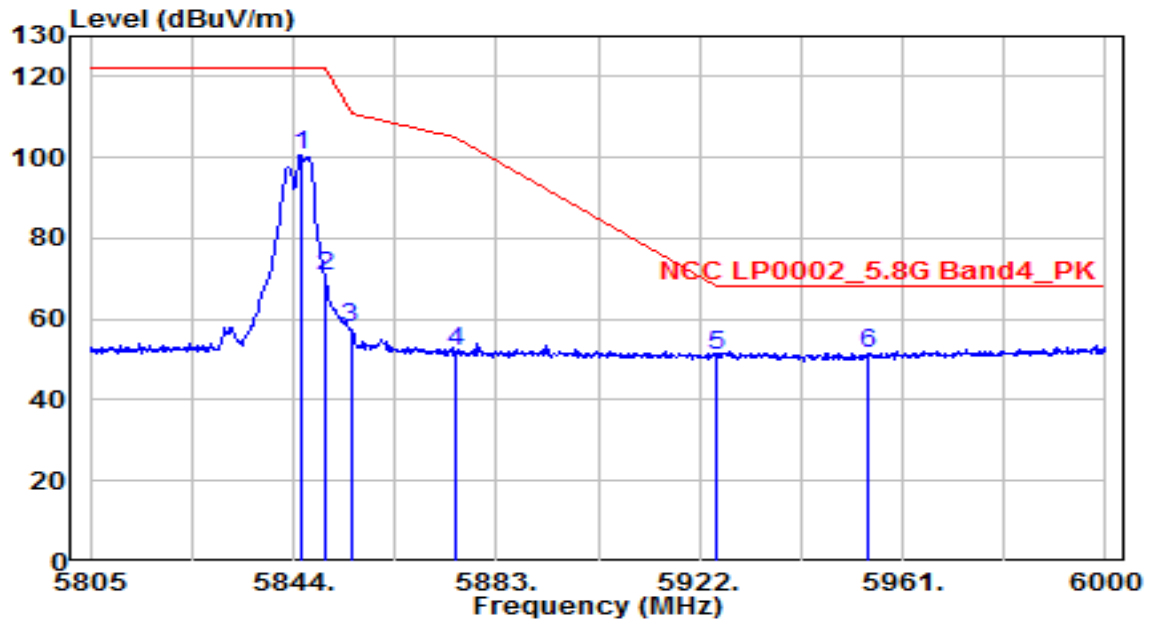


No	Frequency (MHz)	Reading (dBUV)	C.F (dB/m)	Measurement (dBUV/m)	Margin (dB)	Limit (dBUV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5845.365	93.53	6.03	99.56	N/A	N/A	130	135	Peak
2	5850.000	63.93	6.04	69.98	-52.22	122.20	130	135	Peak
3	5855.000	50.68	6.06	56.74	-54.06	110.80	130	135	Peak
4	5875.000	44.60	6.13	50.74	-54.46	105.20	130	135	Peak
5	5925.000	44.03	6.32	50.35	-17.85	68.20	130	135	Peak
6	* 5939.550	45.32	6.37	51.69	-16.51	68.20	130	135	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBUV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Full Band_5846MHz	Test Voltage	By Notebook PC

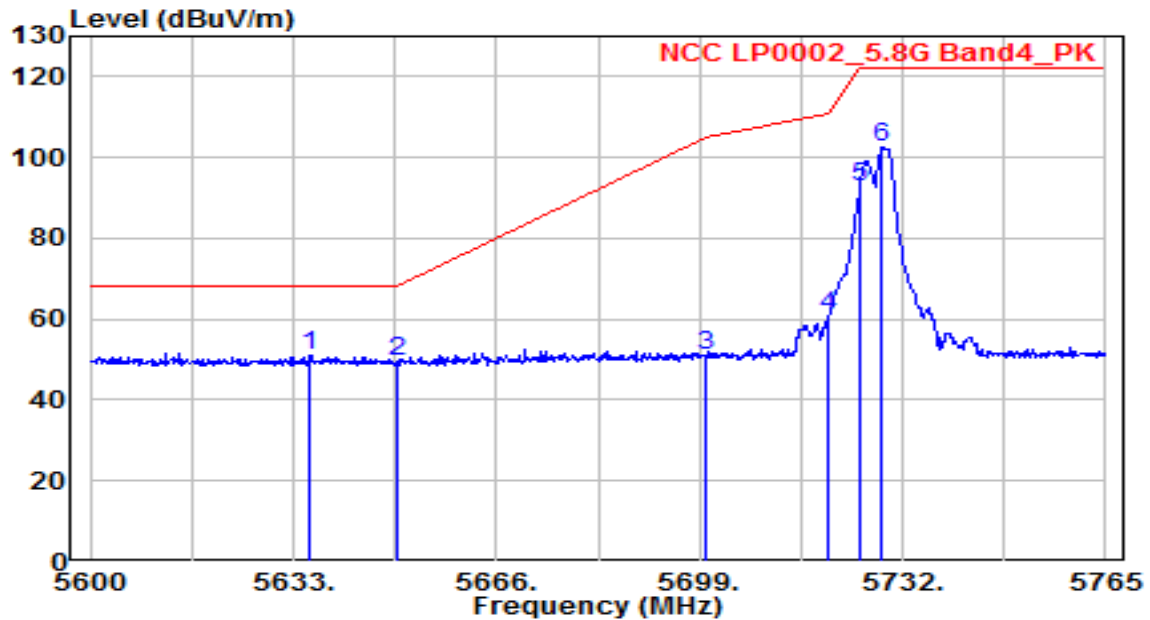


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5845.365	94.55	6.03	100.57	N/A	N/A	115	215	Peak
2	5850.000	64.81	6.04	70.85	-51.35	122.20	115	215	Peak
3	5855.000	51.74	6.06	57.80	-53.00	110.80	115	215	Peak
4	5875.000	45.86	6.13	52.00	-53.20	105.20	115	215	Peak
5	5925.000	44.79	6.32	51.10	-17.10	68.20	115	215	Peak
6	* 5954.175	45.32	6.42	51.75	-16.45	68.20	115	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5729MHz	Test Voltage	By Notebook PC

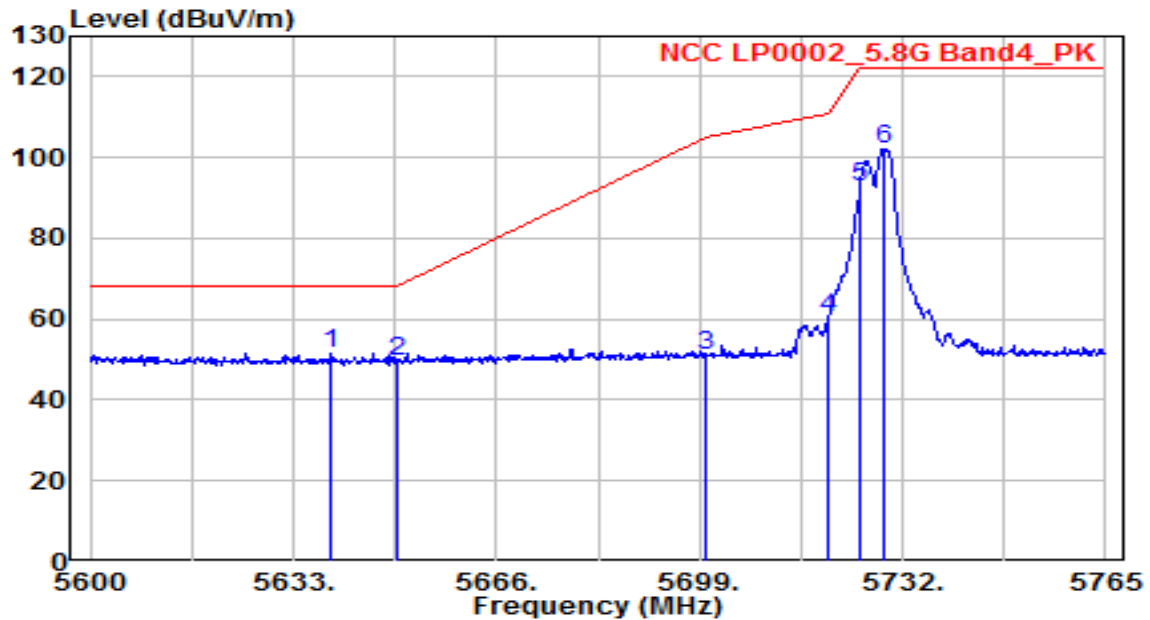


No	Frequency (MHz)	Reading (dBUV)	C.F (dB/m)	Measurement (dBUV/m)	Margin (dB)	Limit (dBUV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5635.640	45.97	5.26	51.23	-16.97	68.20	110	135	Peak
2	5650.000	44.17	5.32	49.48	-18.72	68.20	110	135	Peak
3	5700.000	45.48	5.50	50.97	-54.23	105.20	110	135	Peak
4	5720.000	55.07	5.57	60.65	-50.15	110.80	110	135	Peak
5	5725.000	87.00	5.59	92.59	-29.61	122.20	110	135	Peak
6	5728.700	96.80	5.60	102.40	N/A	N/A	100	135	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBUV/m) = Reading(dBUV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5729MHz	Test Voltage	By Notebook PC

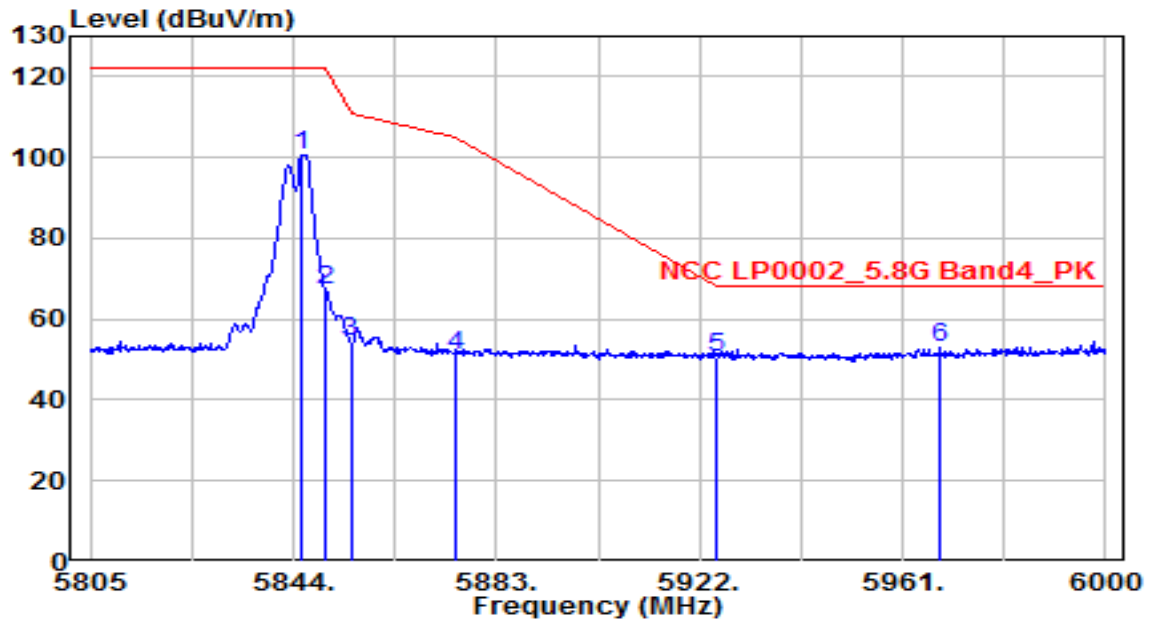


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	* 5639.270	46.25	5.28	51.53	-16.67	68.20	110	215	Peak
2	5650.000	44.41	5.32	49.72	-18.48	68.20	110	215	Peak
3	5700.000	45.59	5.50	51.09	-54.11	105.20	110	215	Peak
4	5720.000	54.74	5.57	60.31	-50.49	110.80	110	215	Peak
5	5725.000	87.26	5.59	92.85	-29.35	122.20	110	215	Peak
6	5728.865	96.59	5.60	102.19	N/A	N/A	110	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5846MHz	Test Voltage	By Notebook PC

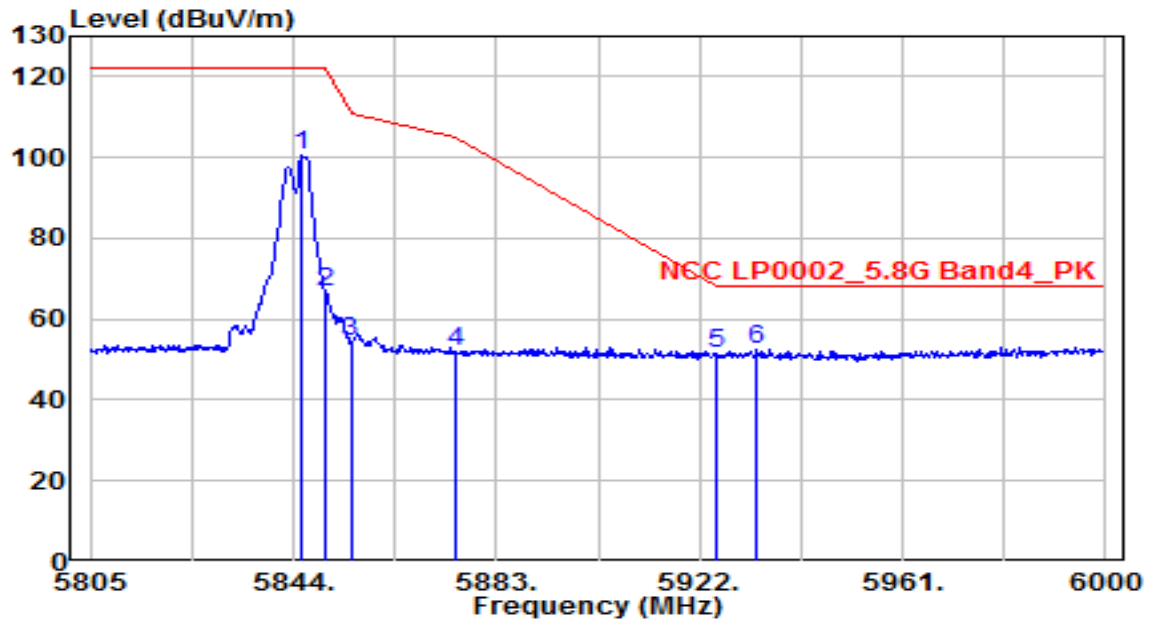


No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5845.755	94.74	6.03	100.77	N/A	N/A	130	135	Peak
2	5850.000	61.33	6.04	67.38	-54.82	122.20	130	135	Peak
3	5855.000	48.22	6.06	54.28	-56.52	110.80	130	135	Peak
4	5875.000	44.76	6.13	50.89	-54.31	105.20	130	135	Peak
5	5925.000	44.17	6.32	50.49	-17.71	68.20	130	135	Peak
6	* 5968.215	46.65	6.47	53.13	-15.07	68.20	130	135	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Wireless Bodepack Transmitter	Date of Test	2021-09-29
Factor	BBHA 9120D	Temp. / Humidity	24°C /58%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	TX_Half Band_5846MHz	Test Voltage	By Notebook PC



No	Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	5845.755	94.48	6.03	100.51	N/A	N/A	115	215	Peak
2	5850.000	60.87	6.04	66.91	-55.29	122.20	115	215	Peak
3	5855.000	48.40	6.06	54.47	-56.33	110.80	115	215	Peak
4	5875.000	45.68	6.13	51.81	-53.39	105.20	115	215	Peak
5	5925.000	45.09	6.32	51.40	-16.80	68.20	115	215	Peak
6	* 5933.115	45.99	6.35	52.33	-15.87	68.20	115	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

5.6 占用頻寬

5.6.1 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，頻譜分析儀之設定,參考如下:

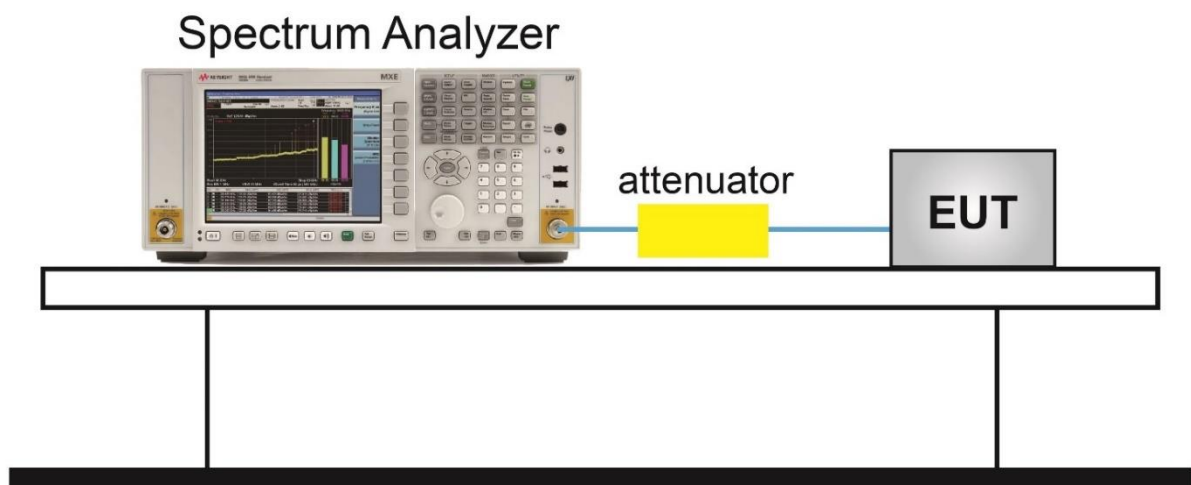
- (1) Set RBW = 100 kHz
- (2) VBW $\geq 3 \times$ RBW
- (3) Detector = Peak
- (4) Trace mode = max hold
- (5) Sweep = auto couple

5.6.2 限制要求

26dB頻寬至少應有500kHz。

6dB頻寬至少應有500kHz。

5.6.3 測試架構圖

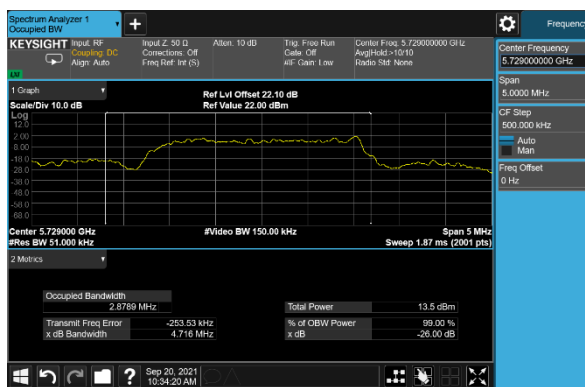


5.6.4 占用頻寬測試結果

26dB 頻寬:

Test Mode	Frequency (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Result
Full Band (2MHz)	5729	4.716	≥ 0.5	Pass
	5788	4.710	≥ 0.5	Pass
	5846	4.715	≥ 0.5	Pass
Half Band (1MHz)	5729	2.280	≥ 0.5	Pass
	5788	2.278	≥ 0.5	Pass
	5846	2.272	≥ 0.5	Pass

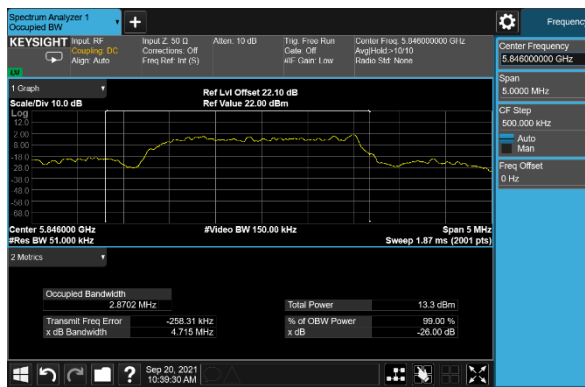
5729MHz Full Band (2MHz)



5788MHz Full Band (2MHz)



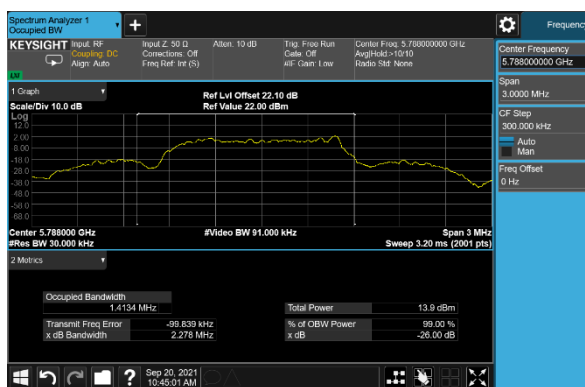
5846MHz Full Band (2MHz)



5729MHz Half Band (1MHz)



5788MHz Half Band (1MHz)



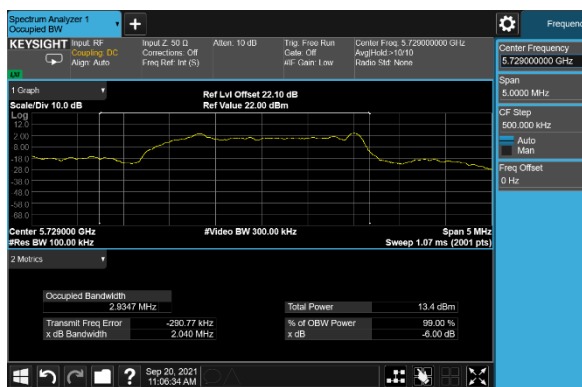
5846MHz Half Band (1MHz)



6dB 頻寬:

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
Full Band (2MHz)	5729	2.040	≥ 0.5	Pass
	5788	2.039	≥ 0.5	Pass
	5846	2.033	≥ 0.5	Pass
Half Band (1MHz)	5729	1.030	≥ 0.5	Pass
	5788	1.033	≥ 0.5	Pass
	5846	1.037	≥ 0.5	Pass

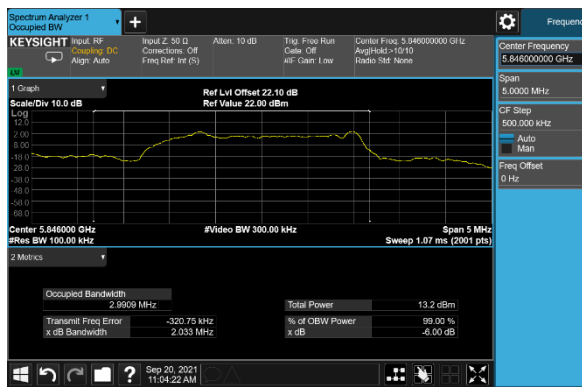
5729MHz Full Band (2MHz)



5788MHz Full Band (2MHz)



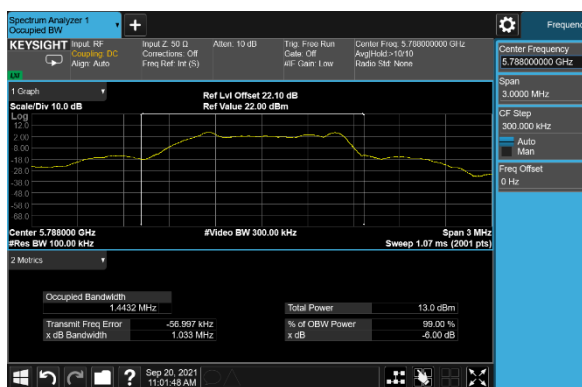
5846MHz Full Band (2MHz)



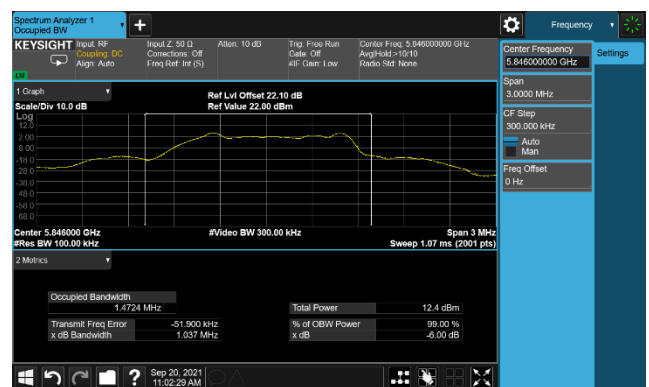
5729MHz Half Band (1MHz)



5788MHz Half Band (1MHz)



5846MHz Half Band (1MHz)



5.7. 功率頻譜密度

5.7.1 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，量測定於1MHz頻寬。

5.7.2 限制要求

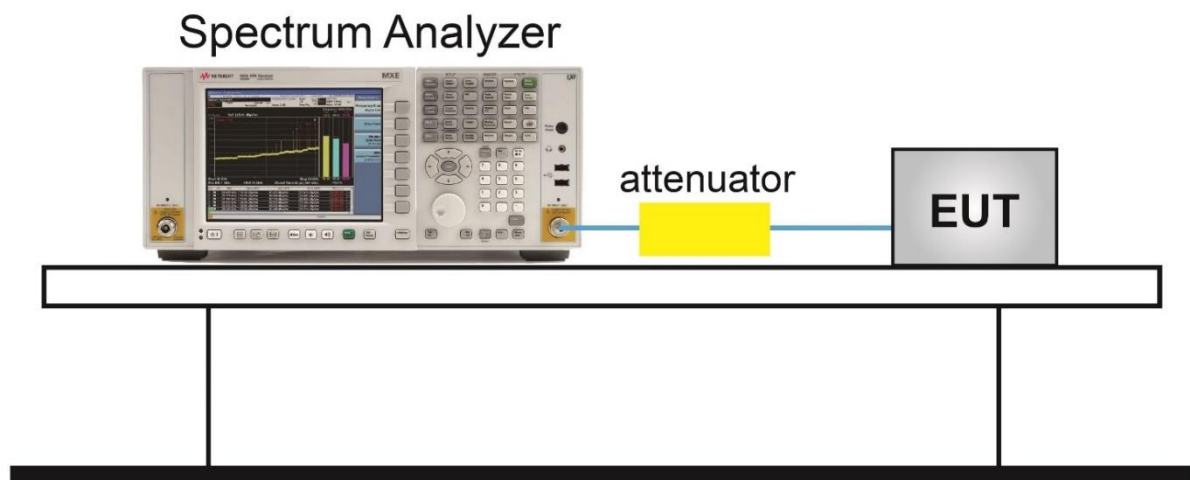
1. 使用頻率於5.725 GHz~5.850 GHz 頻段

(1)在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。

(2)供固定式點對點操作時，使用方向增益超過6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。

(3)除(2)外，使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

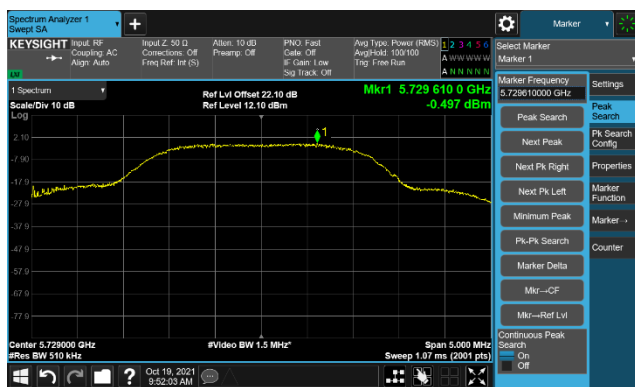
5.7.3 測試架構圖



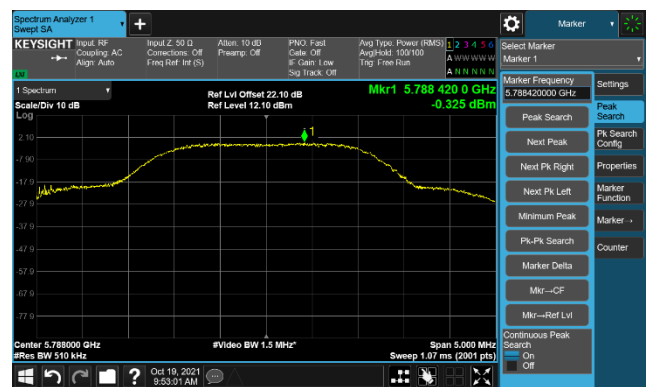
5.7.4 功率頻譜密度測試結果

Test Mode	Freq. (MHz)	PSD (dBm/kHz)	Duty Cycles (%)	Total PSD (dBm/kHz)	Limit (dBm/kHz)	Result
Full Band (2MHz)	5729	-0.497	59.47%	4.017	$\leq 30\text{dBm}/500\text{kHz}$	Pass
	5788	-0.325	59.47%	4.189	$\leq 30\text{dBm}/500\text{kHz}$	Pass
	5846	0.070	59.47%	4.584	$\leq 30\text{dBm}/500\text{kHz}$	Pass
Half Band (1MHz)	5729	2.917	79.21%	4.941	$\leq 30\text{dBm}/500\text{kHz}$	Pass
	5788	3.257	79.21%	5.281	$\leq 30\text{dBm}/500\text{kHz}$	Pass
	5846	3.185	79.21%	5.209	$\leq 30\text{dBm}/500\text{kHz}$	Pass

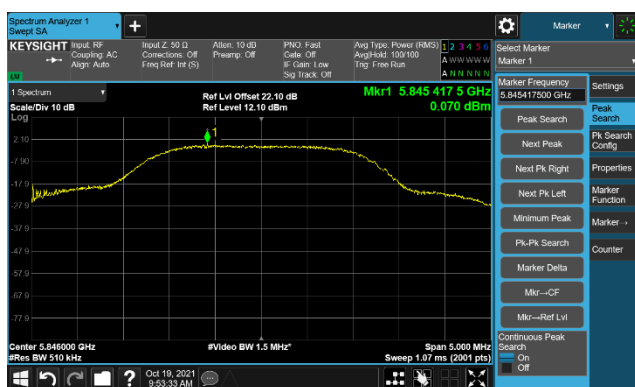
5729MHz Full Band (2MHz)



5788MHz Full Band (2MHz)



5846MHz Full Band (2MHz)



5729MHz Half Band (1MHz)



5788MHz Half Band (1MHz)



5846MHz Half Band (1MHz)



The End