

NCC

低功率射頻電機型式試驗報告

申請者: Shure Incorporated

地址: 5800 West Touhy Avenue, Niles, IL 60714-4608, USA

產品名稱(英文): Digital Wireless Microphone Transmitter

型號.: QLXD1 G62

廠牌: 

測試標準: LP0002 (107 年版)

結果: 符合

接收日期: 2020/07/28

測試日期: 2020/08/10

測試工程師: 
(柯文凱)

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(陳柏均)

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修訂記錄

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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. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品描述

2.1. 產品資訊

產品名稱	Digital Wireless Microphone Transmitter
產品型號	QLXD1 G62
商標	
供電方式	Two AA batteries (3.0Vdc) or Rechargeable Li-ion Battery Pack
頻率範圍	510 ~ 530MHz
傳導功率等級	1mW & 10mW (備註 1)
調製類型	8PSK
通道間隔	25kHz

備註 1: 待測物有二個傳導功率等級(1mW & 10mW)，與接收器配對後，可以在接收器螢幕上切換。

2.2. 操作頻率

通道	頻率
Low	510.100 MHz
...	...
Mid	520.000 MHz
...	...
High	529.900 MHz

備註: 總頻道數為 793 個

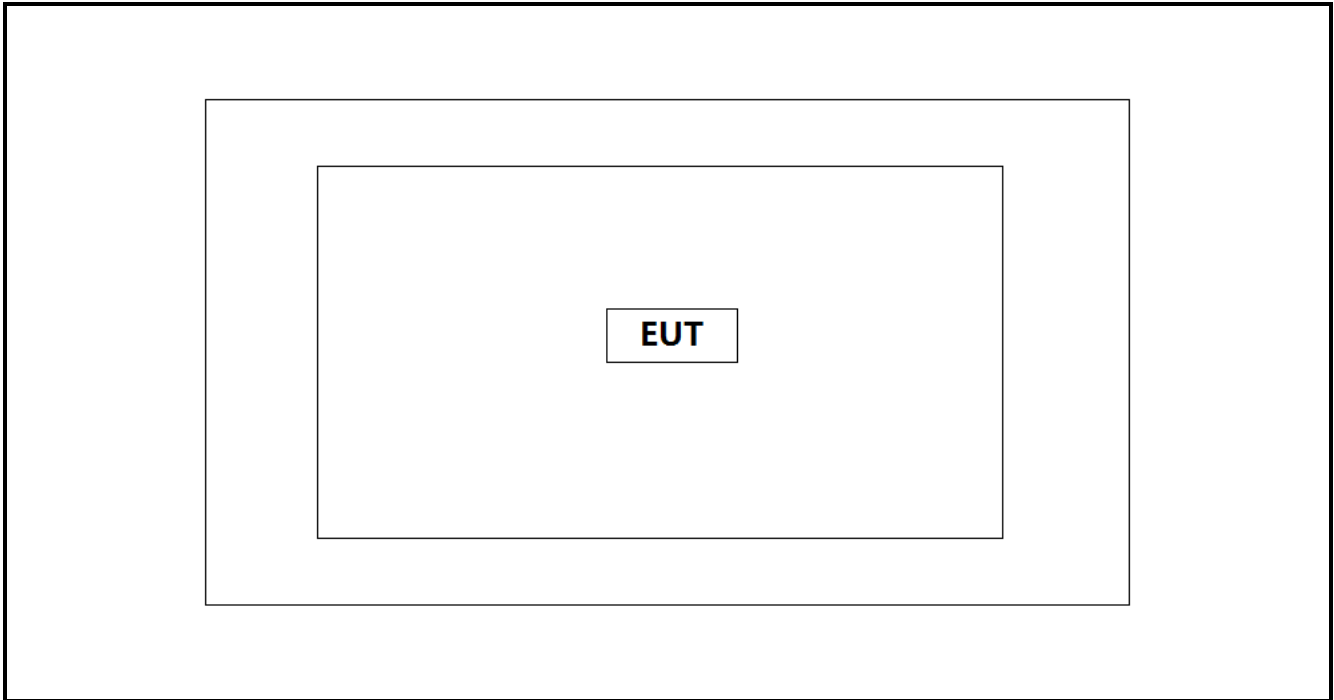
2.3. 測試模式

Test Mode
Mode 1: Transmit

2.4. 操作程式

The test utility software used during testing was “putty.exe” and choose the related script file to download into the EUT, then start to test.

2.5. 測試配置



3. 測試設備明細

傳導干擾 -SR2

儀器名稱	製造商	型號	財產編號	校正週期	校正有效日期
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2021/3/26
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2021/4/24
8-Wire ISN (T8)	R&S	ENY81	MRTTWA00018	1 year	2021/5/25
Cable	Rosnol	N1C50-RG400-B1 C50-500CM	MRTTWE00013	1 year	2021/6/21
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2021/5/26

輻射干擾 - AC1

儀器名稱	製造商	型號	財產編號	校正週期	有效日期
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2020/9/4
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2021/3/25
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2021/4/27
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2021/4/24
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2021/4/24
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2021/4/24
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2021/4/24
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2021/6/16

傳導量測設備 -SR2

儀器名稱	製造商	型號	財產編號	校正週期	有效日期
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2020/10/2
X-Series USB Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2021/3/26
Modulation Analyzer	Hewlett Packard	HP8901A	MRTSUE06098	1 year	2020/10/10
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2021/5/28

EMI 測試軟體

軟體名稱	製造商	版本
e3	Audix	9.160520a
EMI	Quietek	V3

4. 量測不確定度

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Radio Frequency	$< \pm 1 \times 10^{-7}$
Audio Output power	$< \pm 0.5\text{dB}$
Radiated RF power	$< \pm 6\text{dB}$
Conducted RF power variations using a test fixture	$< \pm 0.75\text{dB}$
Maximum frequency deviation:	
-within 300Hz and 6kHz of audio frequency	$< \pm 5\%$
-within 6kHz and 25kHz of audio frequency	$< \pm 3\text{dB}$
Deviation Limitation	$< \pm 5\%$
Radiated emission of transmitter, valid up to 12.75GHz	$< \pm 6\text{dB}$
Radiated emission of receiver, valid up to 12.75GHz	$< \pm 6\text{dB}$

5. 測試摘要

LP0002 章節	量測項目	測試結果	測試數據
2.3	電源端點干擾測試	符合	第 6 章節
2.2 & 4.6.8	天線之要求	符合	第 7 章節
4.6.5	頻率穩定度	符合	第 8 章節
4.6.3	主波發射功率	符合	第 9 章節
4.6.2	必須頻帶寬度	符合	第 10 章節
4.6.6	混附發射	符合	第 11 章節

備註 1: 針對主波發射功率和混附發射，待測物每個軸向(X, Y, Z)均有評估。報告中呈現最差軸向模式資料。

備註 2: 針對頻率穩定度，待測物僅評估了最大功率等級。針對其他測試專案，待測物評估了所有兩個不同功率等級。

6. 電源端點干擾測試

6.1. 適用標準

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

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

註:隨頻率之對數遞減

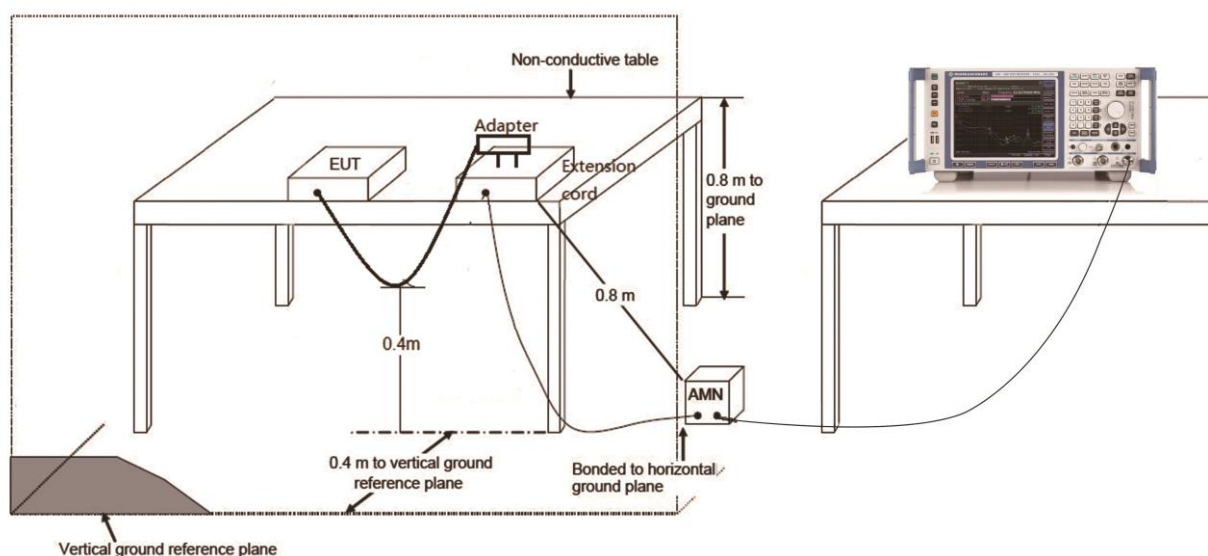
6.2. 量測方法

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

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

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

6.3. 測試架構圖



6.4. 電源端點測試結果

測試樣品為電池供電，所有這個測試項目對它不適用。

7. 天線之要求

7.1. 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範之第 2.2 節要求：

低功率射頻電機之發射機或收發信機所使用之天線，除本規範章節中另有規定外，應為全固定、半固定式或以獨特之耦合(unique coupling)方式連接機體。

依據國家通訊傳播委員會低功率射頻電機技術規範之第 4.6.8 節要求：

傳輸發射訊號之天線不可與機體分離。

7.2. 天線樣式

天線類型	製造商	型號	最大峰值 (dBi)
Whip Antenna	Shure Incorporated	N/A	0.2

待測物天線為全固定式天線，且天線與機體不可分離，滿足低功率射頻電機技術規範要求。

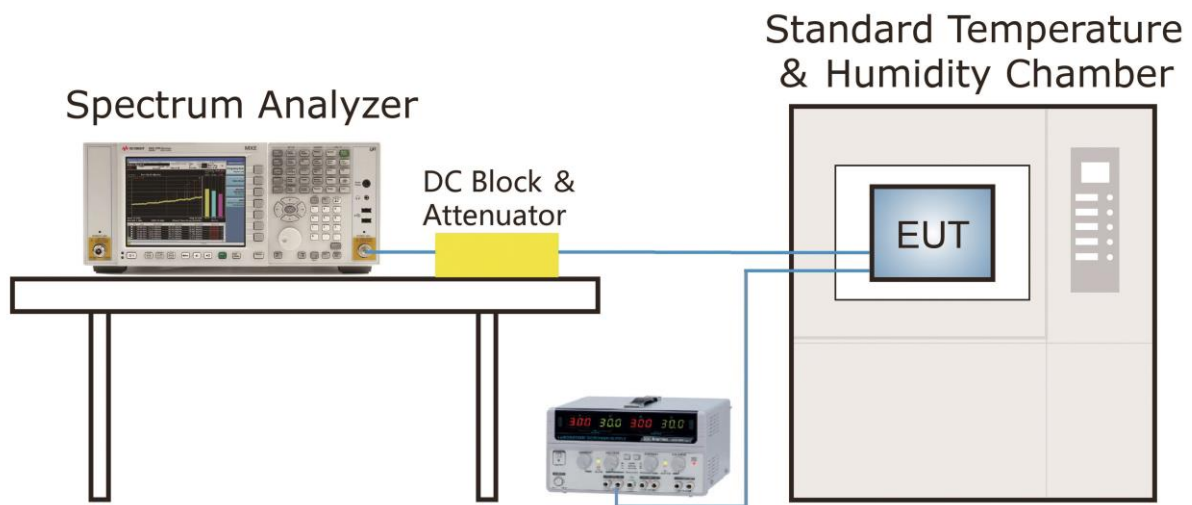
8. 頻率穩定度

8.1. 限值要求

操作頻率小於1 GHz 之系統: 20 ppm。

8.2. 測試架構圖

傳導量測



8.3. 量測步驟

(一) 測量對溫度之頻率穩定性

1. 將未供電之受測物置於環境溫櫃中，供應受測物標稱之交流電源或使用全新或充電完全之電池。若可行，則將天線連接至受測物之天線輸出接頭。使用假性負載會影響受測物之輸出頻率。若受測物具備或使用長度可調整式之天線，應使其完全伸出。

2. 供應受測物標稱之交流電源或裝入全新或完全充電之電池於受測物。啟動受測物並耦合其輸出至計頻器或其他具足夠精度之頻率量測裝置，依受測物所必須符合之頻率差度衡量。

註：為達量測目的，可將測量天線近置於受測物（例如離 15cm）而以適當長度之同軸纜線連接至測量儀器。

諧調受測物至任何指定之頻率，調整測量天線之位置及測量儀器上之控制，以獲得合適之信號位準，以避免測量儀器過載而又有足夠強度測量受測物操作或主波頻率之位準。

3. 關閉受測物且置之於環境溫櫃中，設定至適用規範指定之最高溫度。對正常為持續操作之裝置，當置於溫櫃中時可使受測物運作。對具備震盪器加熱器之裝置，當置於溫櫃中時只可使加熱器線路運作。

4. 使溫櫃之溫度有足夠時間達到穩定，當溫櫃內維持在一定溫度時，啟動受測物，並於開始時、以及啟動後第 2 分鐘、第 5 分鐘與第 10 分鐘測量受測物之操作頻率，共作四次測量。

5. 若只有單一操作頻率須測量，請進行步驟(6)，否則關閉受測物且使其有足夠時間以回穩在環境溫度，將受測物連續設定於其他新增的操作頻率以重複步驟(4)。

6. 重複步驟(4)與(5) 但溫櫃設定至適用章節規定之最低溫度。在進行此測量之前須確定使溫櫃到達穩定。

(二) 測量對輸入電壓之頻率穩定性

1. 本測量可在環境室溫為+15 到+25°C 範圍內進行，或者使用環境溫櫃設定為+20°C 。若可能的話，則將天線連接至受測物之天線輸出接頭，以避免假性負載影響受測物之輸出頻率。若受測物具備或使用長度可調整式之天線，應使其完全伸出。

2. 供應受測物標稱之交流電源或使用全新或充電完全之電池。啟動受測物並耦合其輸出至計頻器或其他具足夠精度之頻率量測裝置，依受測物所必須符合的頻率差度衡量。

註：為達量測目的，可將測量天線近置於受測物（例如離 15cm）而以適當長度之同軸纜線連接至測量儀器。

3. 諧調受測物至任何規定之頻率，調整測量天線之位置及測量儀器上之控制以獲得合適之信號位準，以避免測量儀器過載而又有足夠強度測量受測物操作或主波頻率之位準。關閉受測物，而若有需要置之於環境溫櫃中，在繼續進行之前使溫櫃穩定在+20°C，約須 30 分鐘。啟動受測物並於開始時、以及啟動後第 2 分鐘、第 5 分鐘與第 10 分鐘測量受測物之操作頻率，共作四次測量。

4. 若只有單一操作頻率須測量，請進行步驟(5)，否則關閉受測物且使其有足夠時間以回穩在環境溫度，將受測物連續設定於其他新增的操作頻率以重複步驟(3)。

5. 若受測物由交流電力線供電，供應其 85%的標稱交流電壓並重複步驟(3)與(4)。若受測物由電池供電，供應其標稱最低工作電壓。

6. 若受測物由交流電力線電，供應其115%的標稱交流電壓並重複步驟(3)與(4)。

8.4. 頻率穩定度測試結果

待測物	Digital Wireless Microphone Transmitter	測試溫度	-10 ~ 45°C
測試工程師	Eric Lin	測試濕度	46 ~ 68%
測試場地	SR2	測試日期	2020/08/10
測試模式	Mode 1 (Carrier Mode)		

測試條件		操作中心頻率 (MHz)	量測頻率 (MHz)	結果 (ppm)	限值要求 (ppm)
T(45°C)	DC 3.00V	510.100	510.100055	0.11	-20 ~ +20
		520.000	520.000044	0.08	-20 ~ +20
		529.900	529.900061	0.12	-20 ~ +20
T(35°C)	DC 3.00V	510.100	510.100061	0.12	-20 ~ +20
		520.000	520.000050	0.10	-20 ~ +20
		529.900	529.900061	0.12	-20 ~ +20
T(20°C)	DC 1.90V	510.100	510.100059	0.12	-20 ~ +20
		520.000	520.000048	0.09	-20 ~ +20
		529.900	529.900061	0.12	-20 ~ +20
	DC 3.00V	510.100	510.100062	0.12	-20 ~ +20
		520.000	520.000052	0.10	-20 ~ +20
		529.900	529.900061	0.12	-20 ~ +20
	DC 4.20V	510.100	510.100062	0.12	-20 ~ +20
		520.000	520.000051	0.10	-20 ~ +20
		529.900	529.900062	0.12	-20 ~ +20
T(10°C)	DC 3.00V	510.100	510.100063	0.12	-20 ~ +20
		520.000	520.000053	0.10	-20 ~ +20
		529.900	529.900060	0.11	-20 ~ +20
T(0°C)	DC 3.00V	510.100	510.100062	0.12	-20 ~ +20
		520.000	520.000055	0.11	-20 ~ +20
		529.900	529.900060	0.11	-20 ~ +20
T(-10°C)	DC 3.00V	510.100	510.100061	0.12	-20 ~ +20
		520.000	520.000056	0.11	-20 ~ +20
		529.900	529.900060	0.11	-20 ~ +20

備註：1. 結果(ppm) = [量測頻率 - 操作中心頻率] / 操作中心頻率 * 10⁶。

2. 此頻率穩定度的極限電壓為客戶宣告定義。

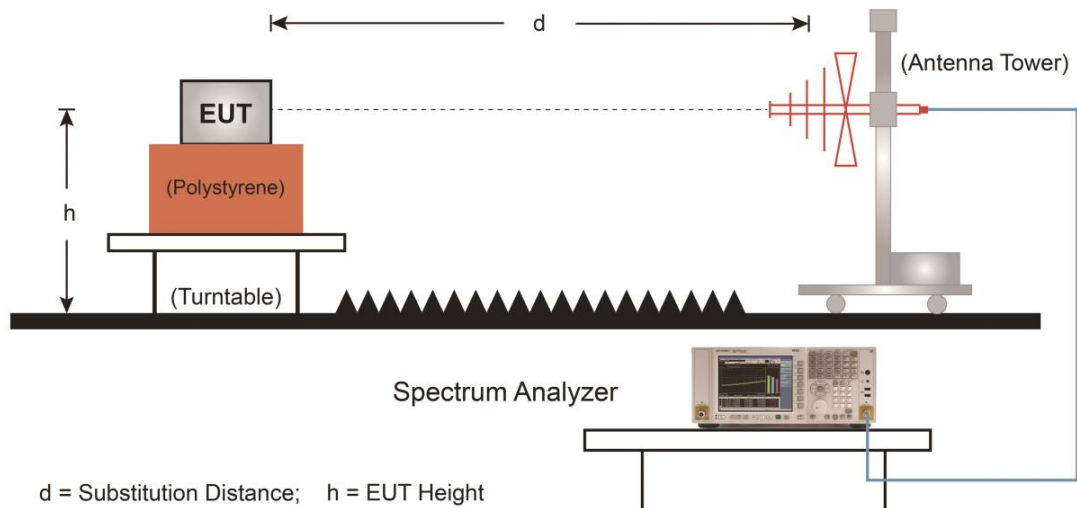
9. 主波發射功率

9.1. 限值要求

操作於 510.0 MHz～530.0 MHz 者：50 mW 以下。

9.2. 測試架構圖

輻射量測



9.3. 量測步驟

參照法規低功率 LP0002 法規章節 4.6.3.6.

9.4. 主波發射功率測試結果

待測物	Digital Wireless Microphone Transmitter	測試溫度	25°C
測試工程師	Eric Lin	測試濕度	45%
測試場地	AC1	測試日期	2020/08/10
測試模式	Mode 1		

功率等級 (mW)	操作頻率 (MHz)	主波量測值 (dBm)	主波量測值 (mW)	限值要求 (mW)	結果
1	510.100	-1.99	0.63	50	符合
	520.000	-0.35	0.92	50	符合
	529.900	-0.3	0.93	50	符合
10	510.100	8.26	6.70	50	符合
	520.000	9.88	9.73	50	符合
	529.900	10.59	11.46	50	符合

備註 1: 主波發射功率輻射量測時, 表格中體現的是每個極性/每個軸向中的最大值。

備註 2: 量測功率值 (mW) = $10^{(\text{量測功率值 (dBm)} / 10)}$ 。

10. 必須頻帶寬度

10.1. 限值要求

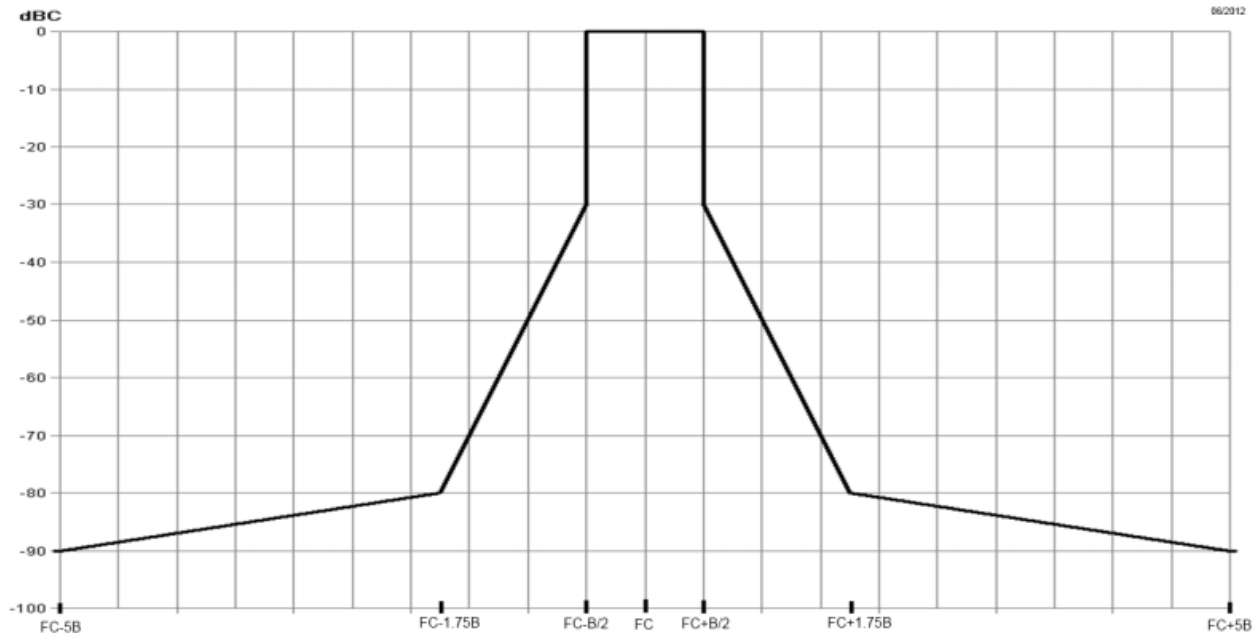
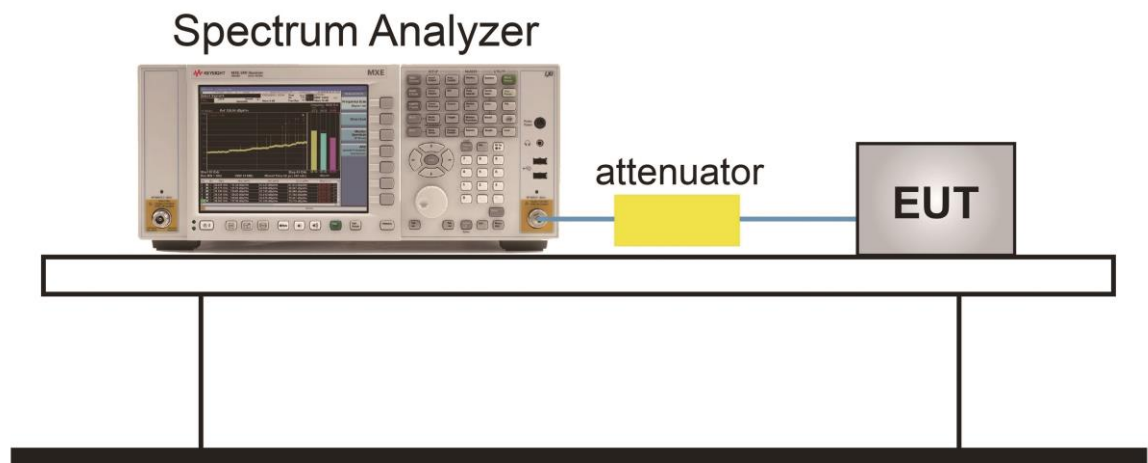


Figure 4: Spectrum mask for digital systems below 2 GHz

10.2. 測試架構圖



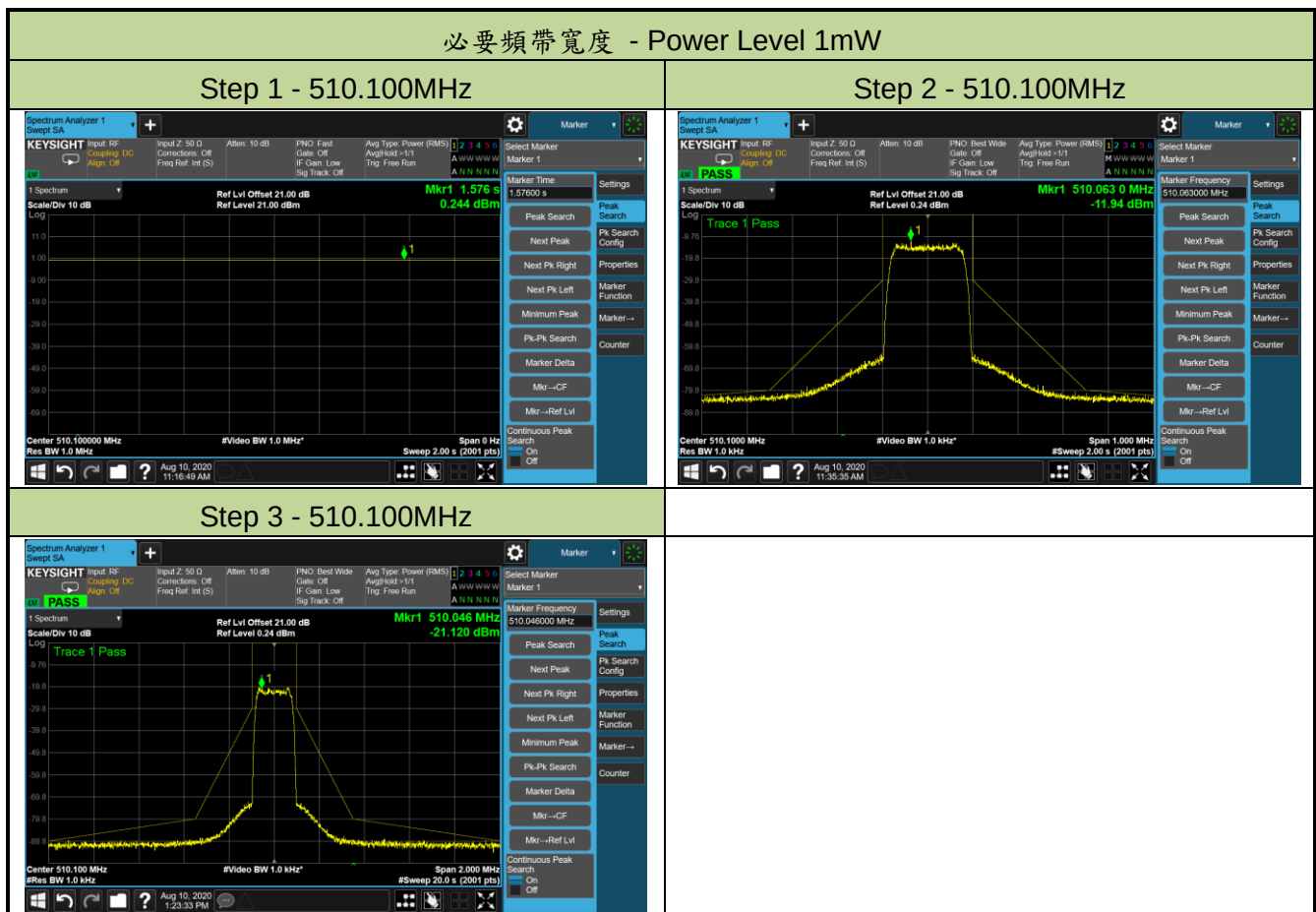
10.3. 量測步驟

參照法規 ETSI EN 300 422-1 V2.1.2 (2017-01) 章節 8.3.2.

10.4. 必要頻帶寬度測試結果

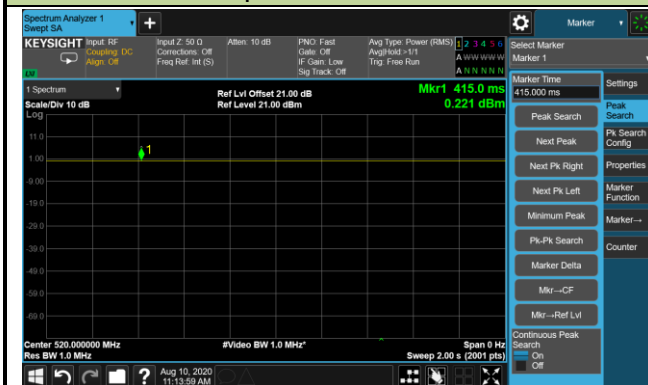
待測物	Digital Wireless Microphone Transmitter	測試溫度	25°C
測試工程師	Eric Lin	測試濕度	45%
測試場地	TR3	測試日期	2020/08/10
測試模式	Mode 1		

備註：B - 廠商宣稱頻帶寬度為 200kHz;

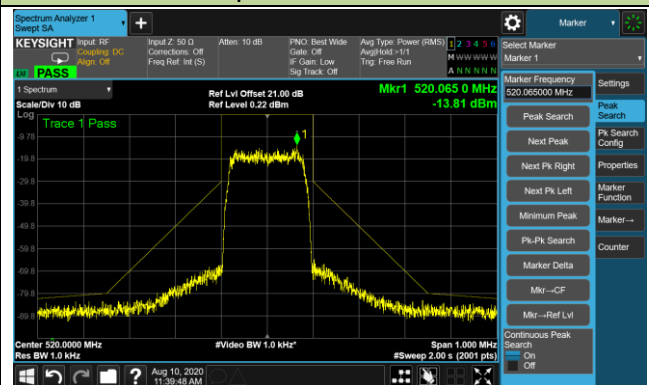


必要頻帶寬度 - Power Level 1mW

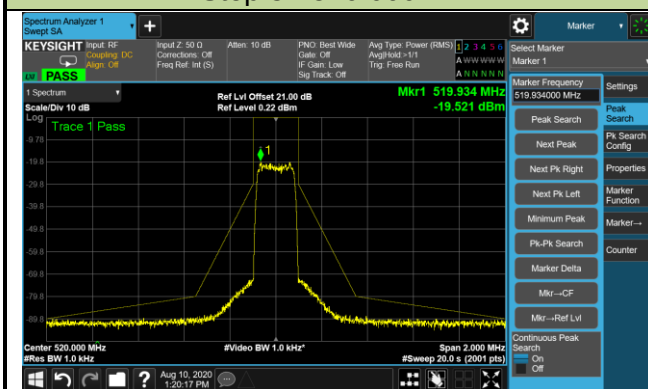
Step 1 - 520.000MHz



Step 2 - 520.000MHz

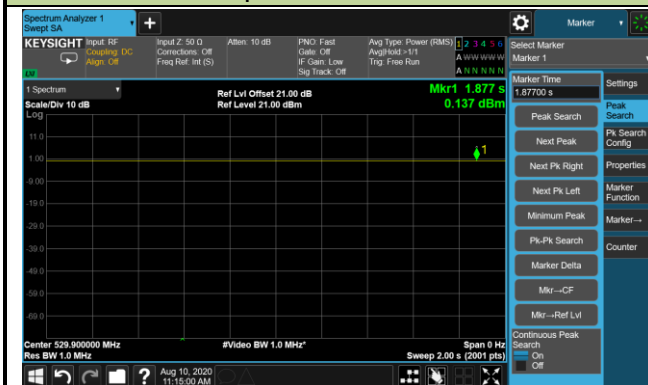


Step 3 - 520.000MHz

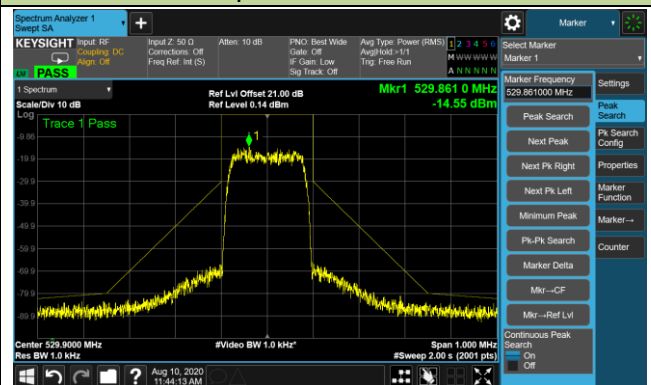


必要頻帶寬度 - Power Level 1mW

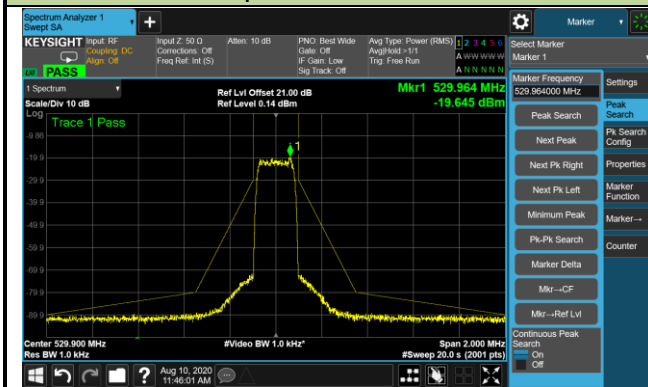
Step 1 - 529.900MHz



Step 2 - 529.900MHz

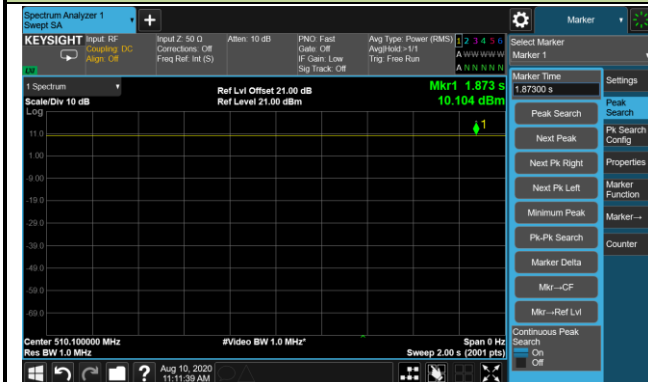


Step 3 - 529.900MHz

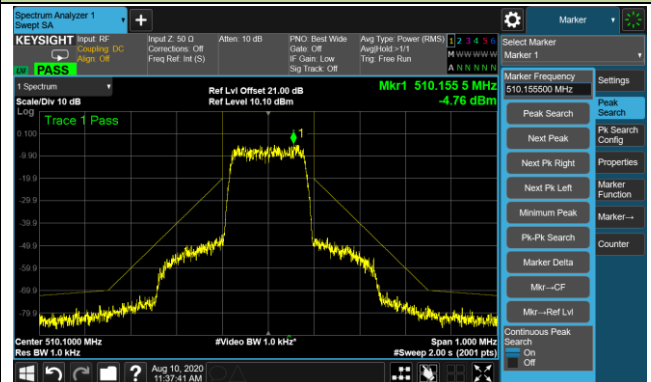


必要頻帶寬度 - Power Level 10mW

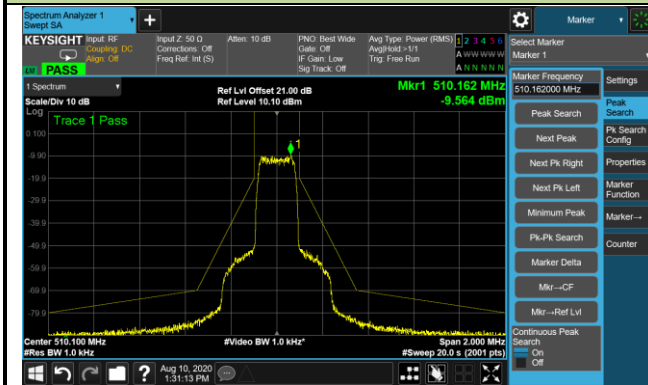
Step 1 - 510.100MHz



Step 2 - 510.100MHz

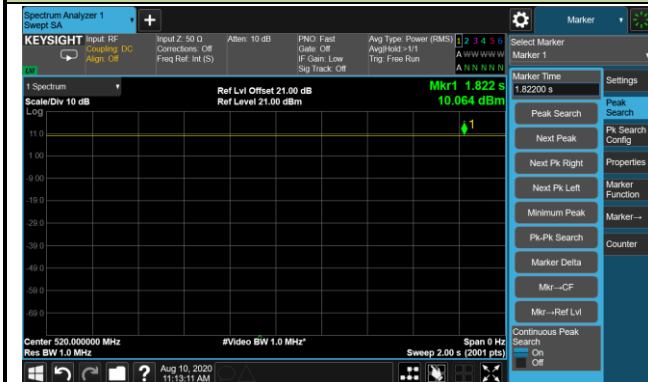


Step 3 - 510.100MHz

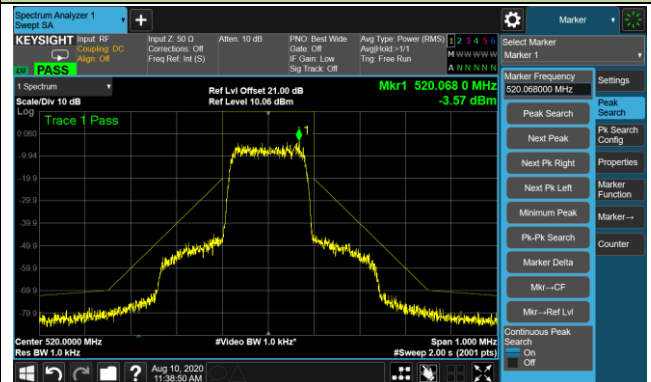


必要頻帶寬度 - Power Level 10mW

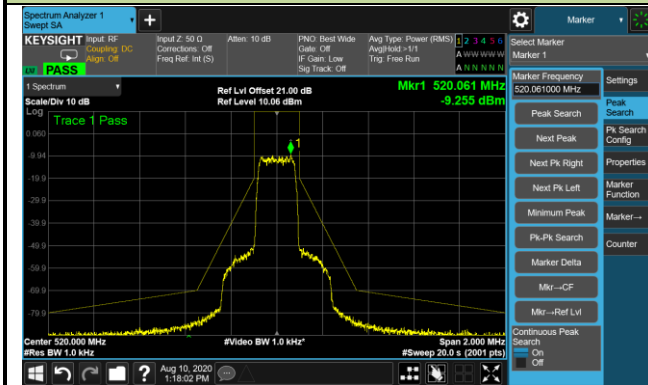
Step 1 - 520.000MHz



Step 2 - 520.000MHz

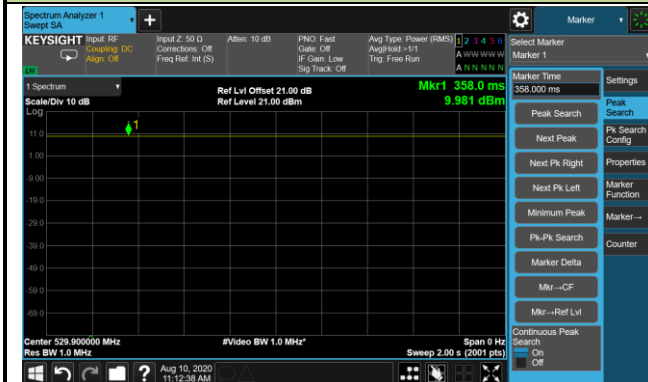


Step 3 - 520.000MHz

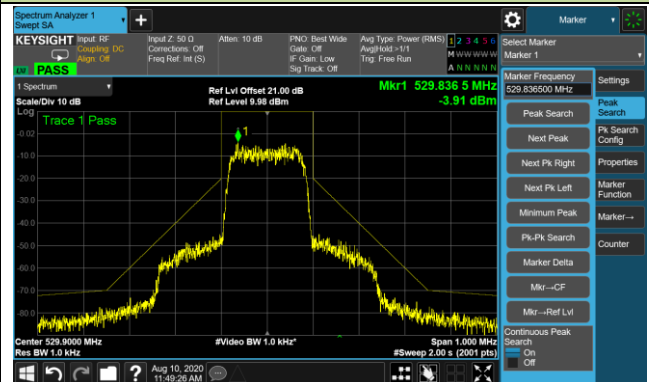


必要頻帶寬度 - Power Level 10mW

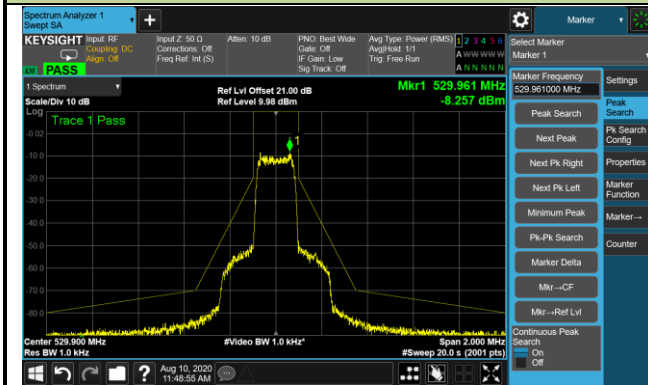
Step 1 - 529.900MHz



Step 2 - 529.900MHz



Step 3 - 529.900MHz



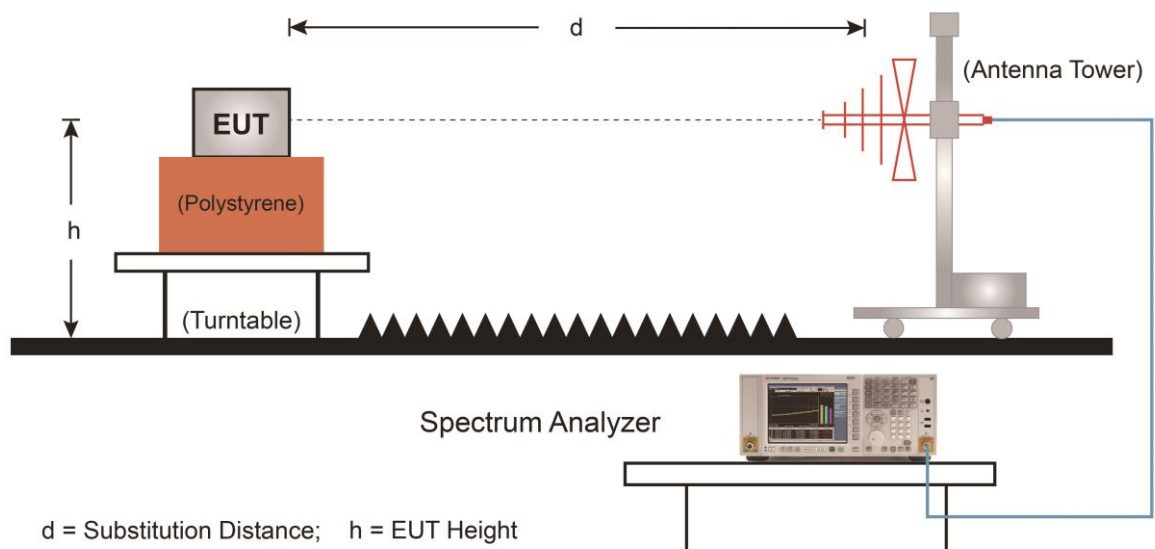
11. 混附發射

11.1. 限值要求

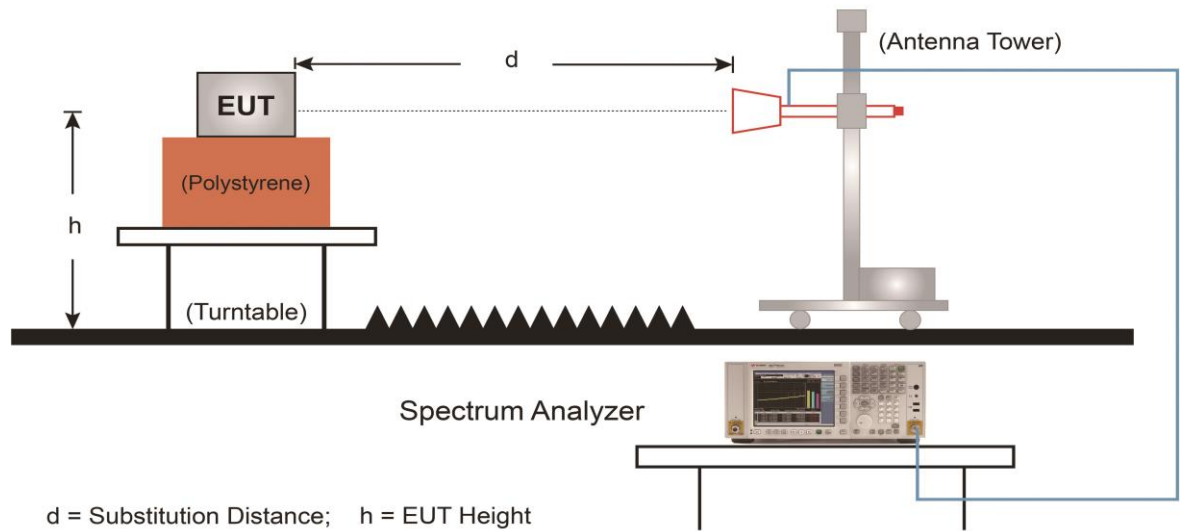
State	Frequency		
	47MHz to 74MHz 87.5MHz to 118MHz 174MHz to 230MHz 470MHz to 862MHz	Other Frequencies below 1000MHz	Frequencies above 1000MHz
Operation	4nW	250nW	1uW
Standby	2nW	2nW	20nW

11.2. 測試架構圖

30MHz ~ 1GHz 測試架構圖：



1GHz ~ 4GHz 測試架構圖:

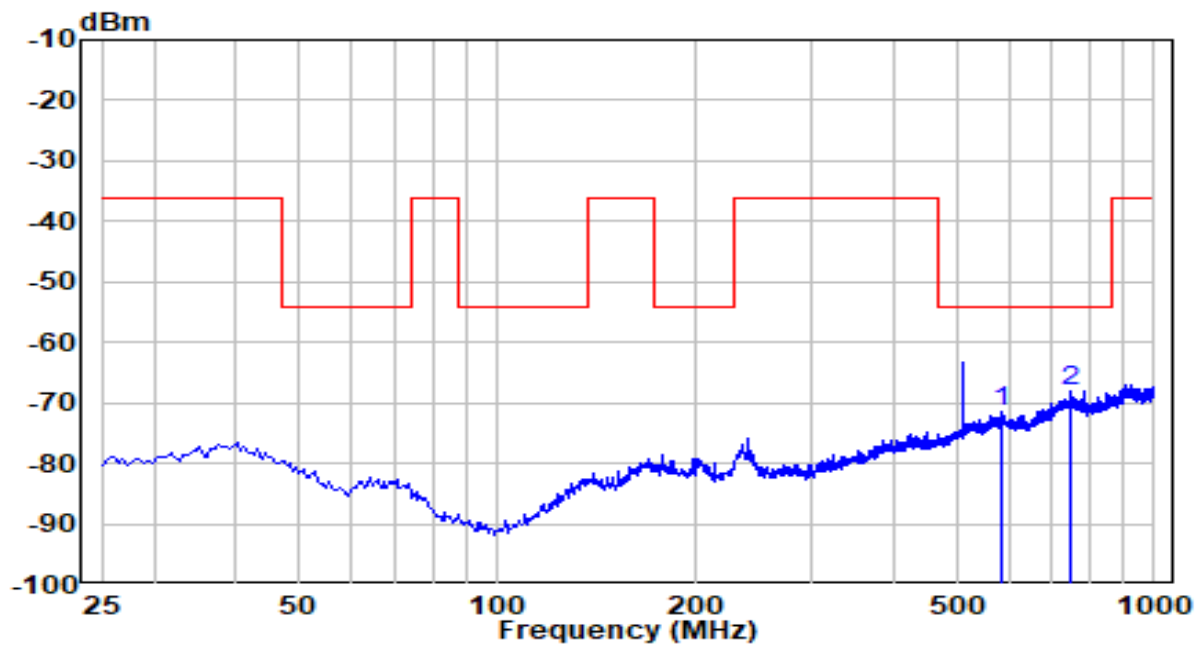


11.3. 量測步驟

參照法規ETSI EN 300 422-1 V2.1.2 (2017-01) 章節8.4.2.

11.4. 混附發射測試結果

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 510.1MHz 10mW	Test Voltage	By Battery

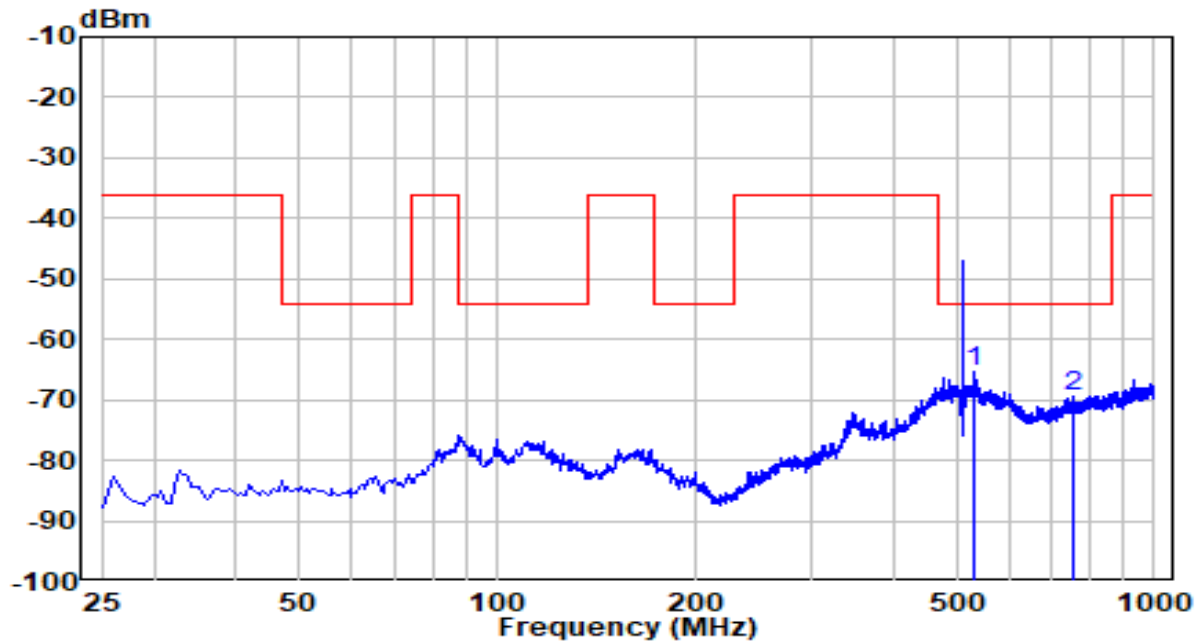


No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	585.138	-97.63	26.05	-71.58	-17.58	-54.00	Peak
2	* 746.013	-96.67	28.56	-68.10	-14.10	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency close to the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 510.1MHz 10mW	Test Voltage	By Battery

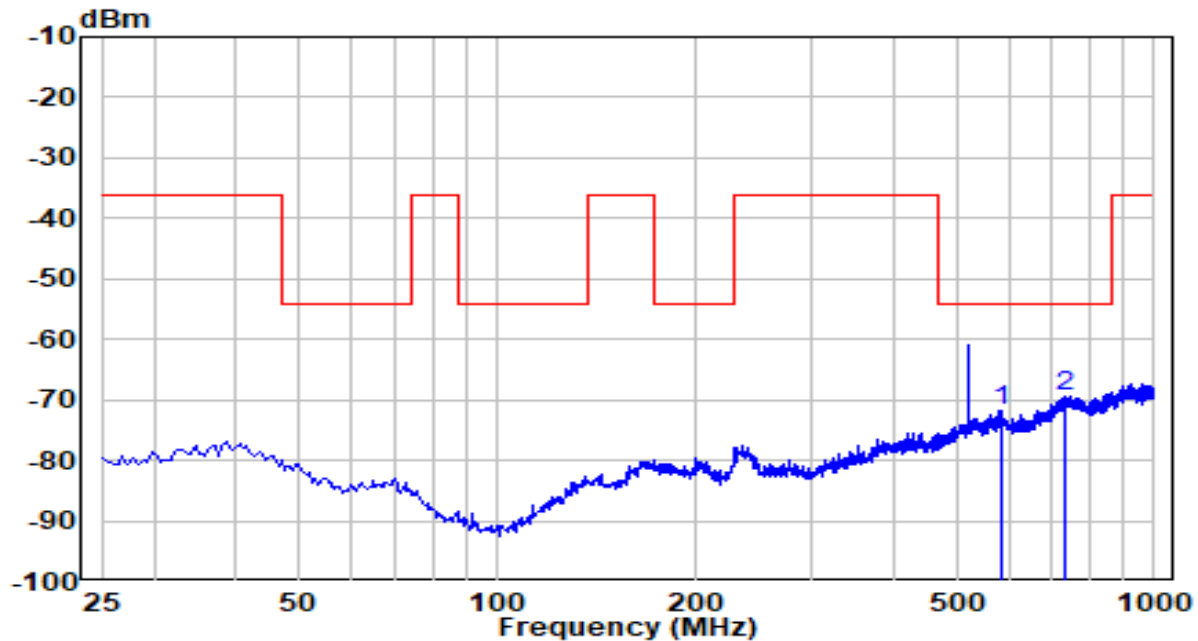


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	*	533.950	-92.51	27.03	-65.47	-11.47	-54.00	Peak
2		751.863	-99.56	30.26	-69.30	-15.30	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency over the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 520MHz 10mW	Test Voltage	By Battery

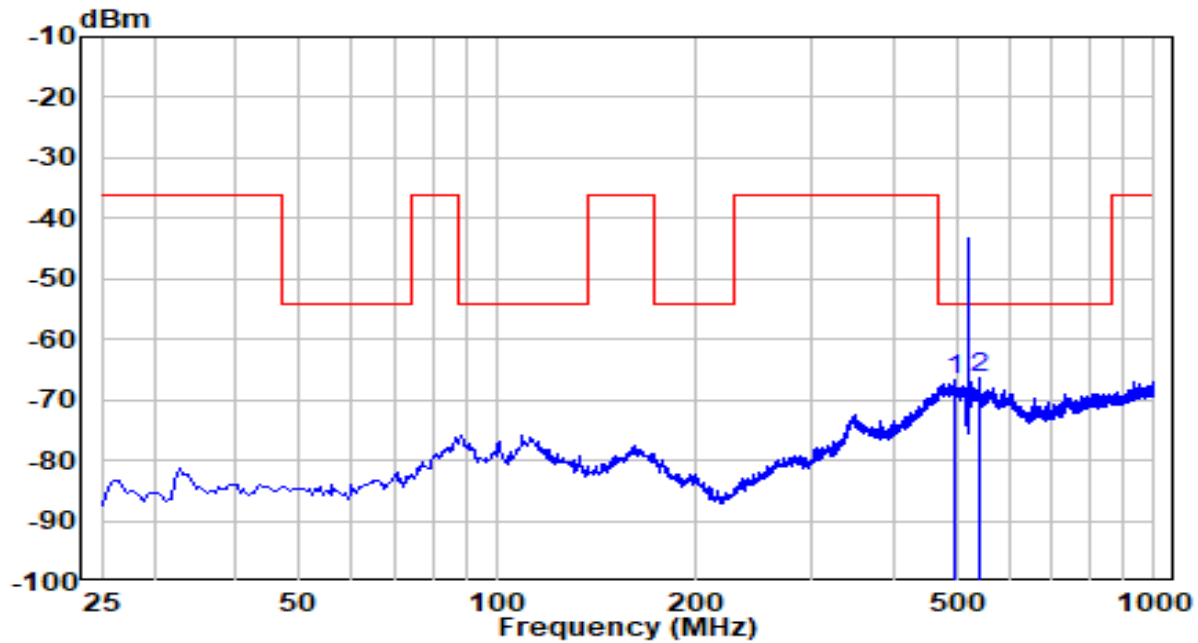


No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	583.675	-97.76	26.01	-71.75	-17.75	-54.00	Peak
2	* 734.800	-96.72	27.33	-69.39	-15.39	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency close to the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 520MHz 10mW	Test Voltage	By Battery

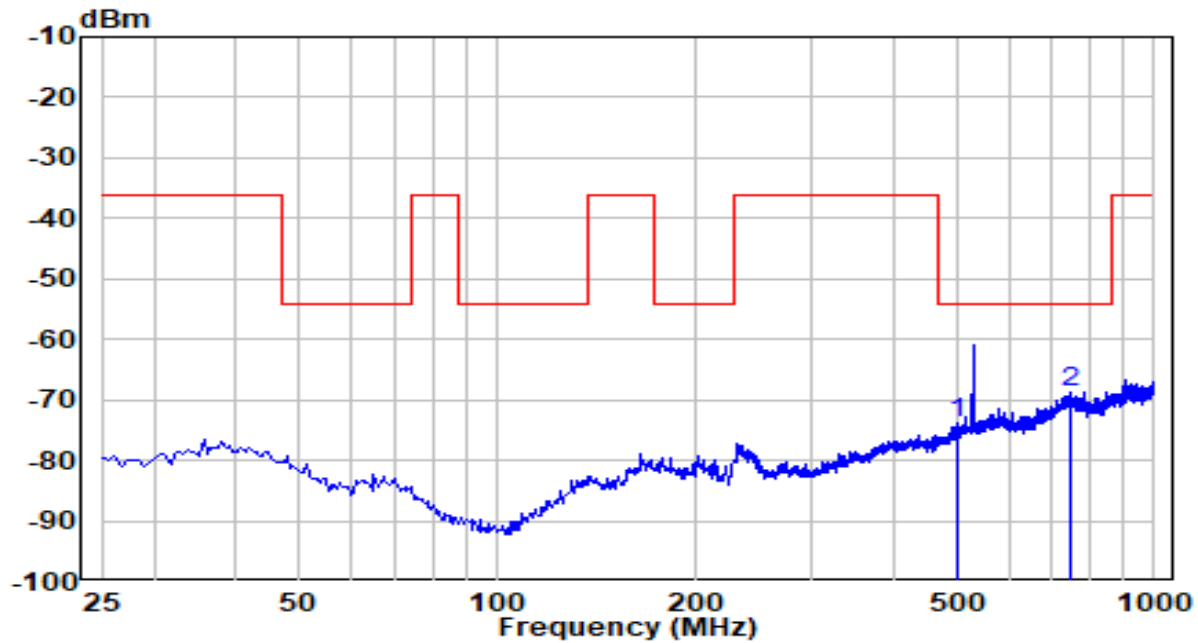


No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	495.925	-93.13	26.30	-66.83	-12.83	-54.00	Peak
2	* 544.188	-93.24	26.98	-66.26	-12.26	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency over the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 529.9MHz 10mW	Test Voltage	By Battery

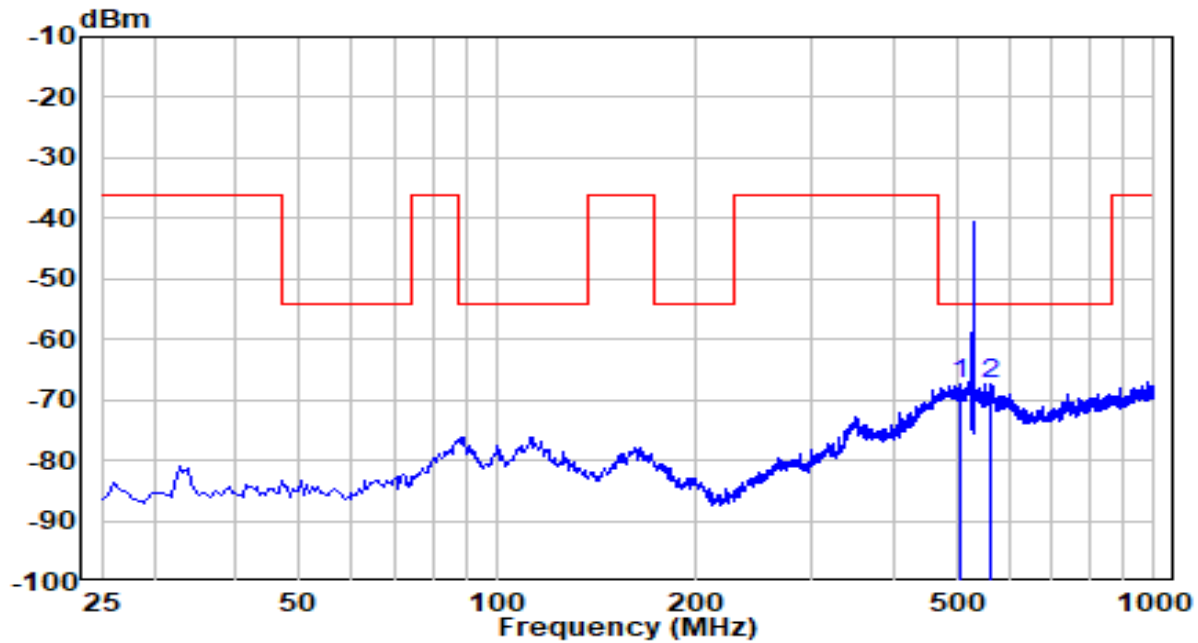


No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	500.800	-98.85	25.03	-73.81	-19.81	-54.00	Peak
2	* 746.500	-97.29	28.58	-68.71	-14.71	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency close to the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	ERP_25MHz~1GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 529.9MHz 10mW	Test Voltage	By Battery

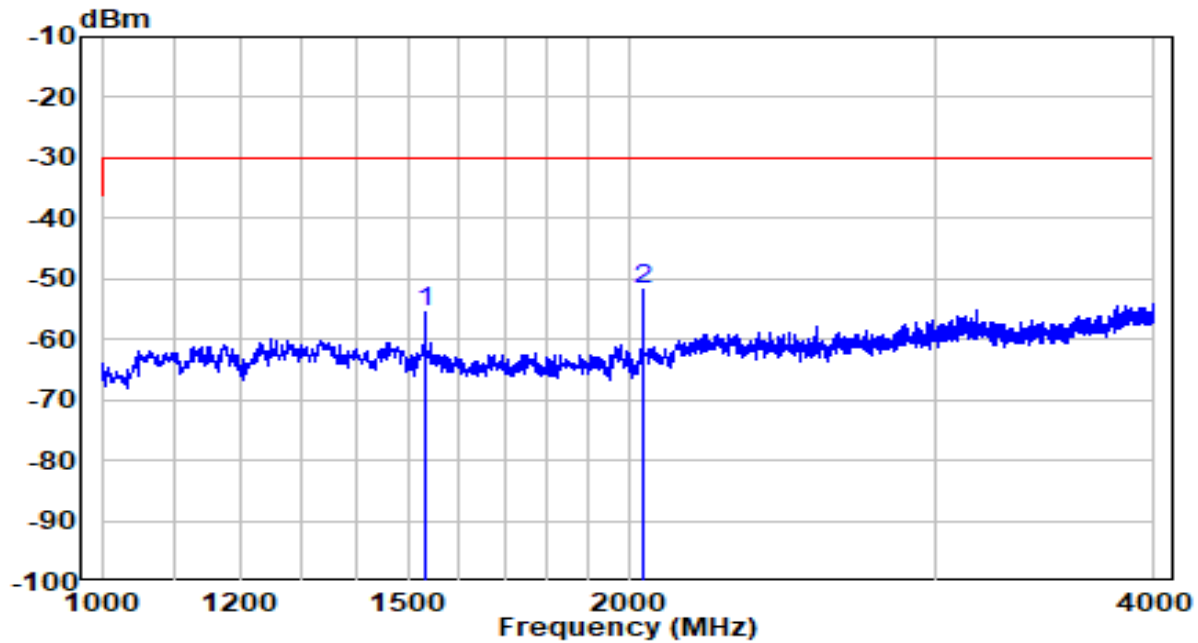


No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	505.675	-94.28	26.75	-67.53	-13.53	-54.00	Peak
2	* 562.225	-94.83	27.49	-67.33	-13.33	-54.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The frequency over the limit is the EUT fundamental frequency.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 501.1MHz 10mW	Test Voltage	By Battery

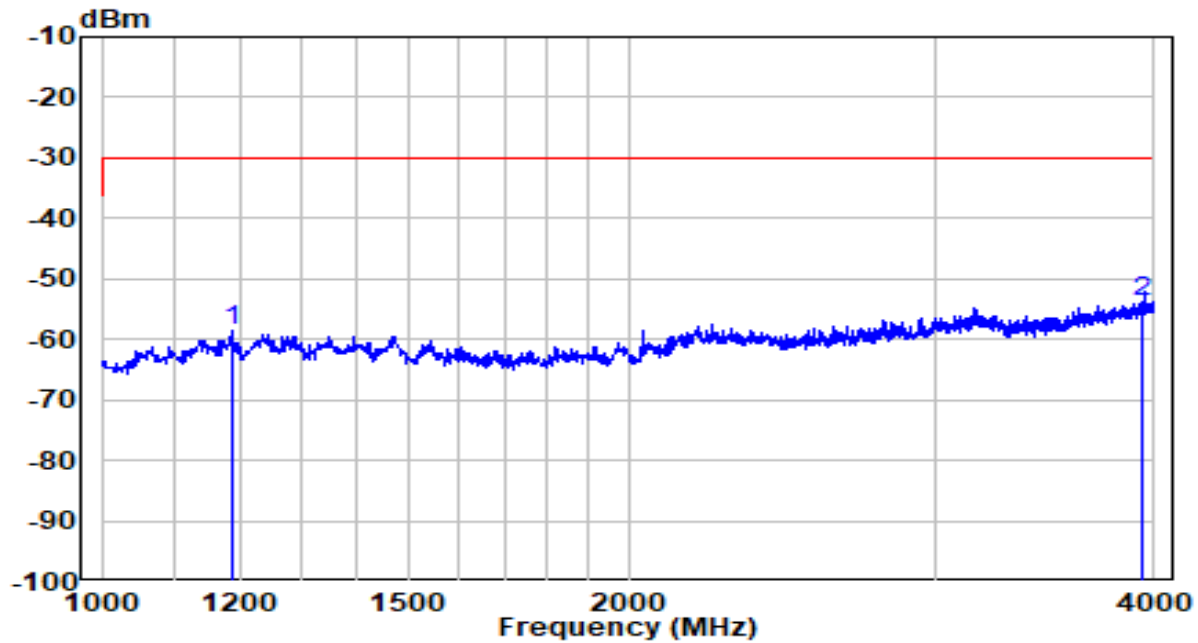


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1		1531.000	-59.48	3.89	-55.58	-25.58	-30.00	Peak
2	*	2041.000	-57.58	5.73	-51.84	-21.84	-30.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 501.1MHz 10mW	Test Voltage	By Battery

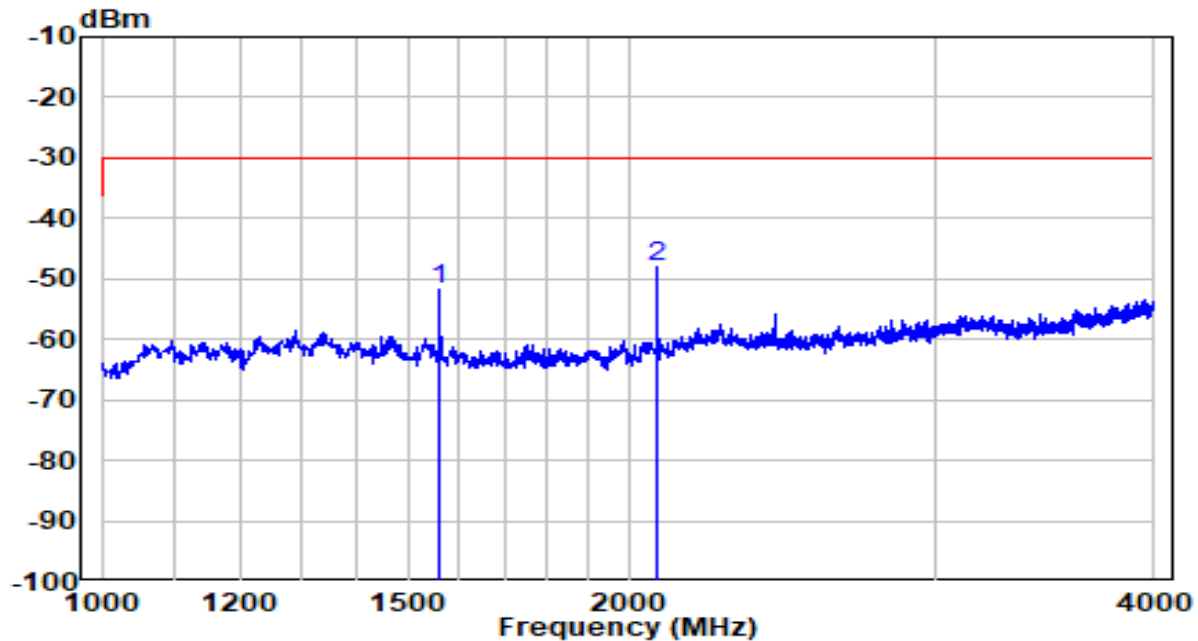


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1		1187.500	-62.00	3.35	-58.66	-28.66	-30.00	Peak
2	*	3931.000	-64.53	10.56	-53.97	-23.97	-30.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 520MHz 10mW	Test Voltage	By Battery

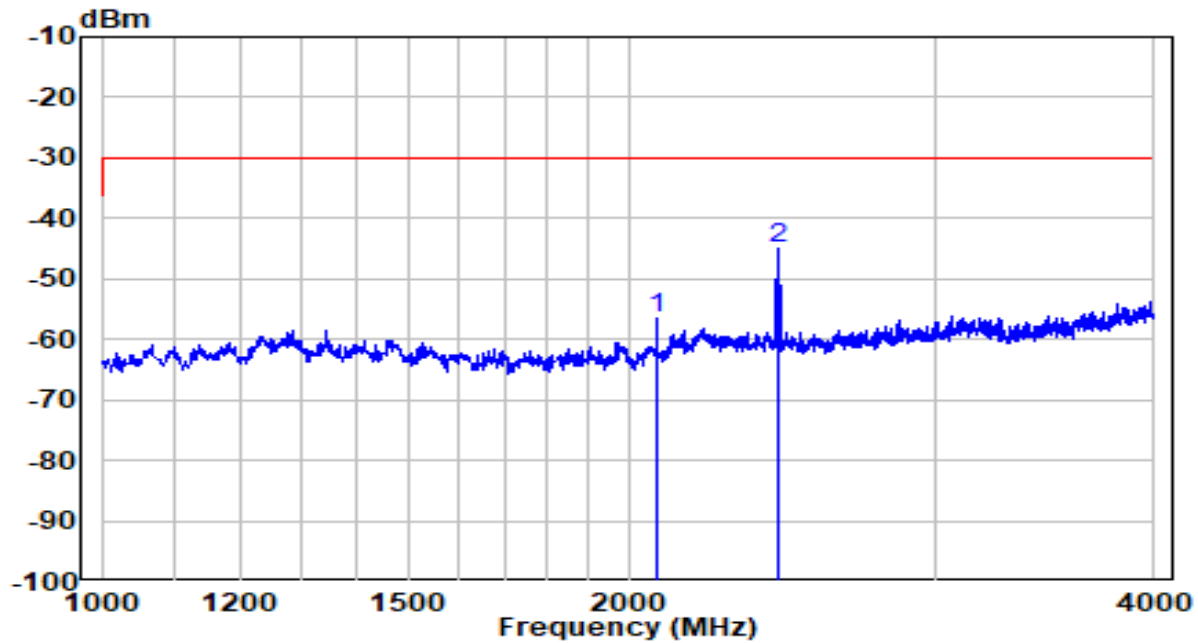


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1		1559.500	-55.92	4.18	-51.74	-21.74	-30.00	Peak
2	*	2080.000	-53.86	5.75	-48.11	-18.11	-30.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 520MHz 10mW	Test Voltage	By Battery

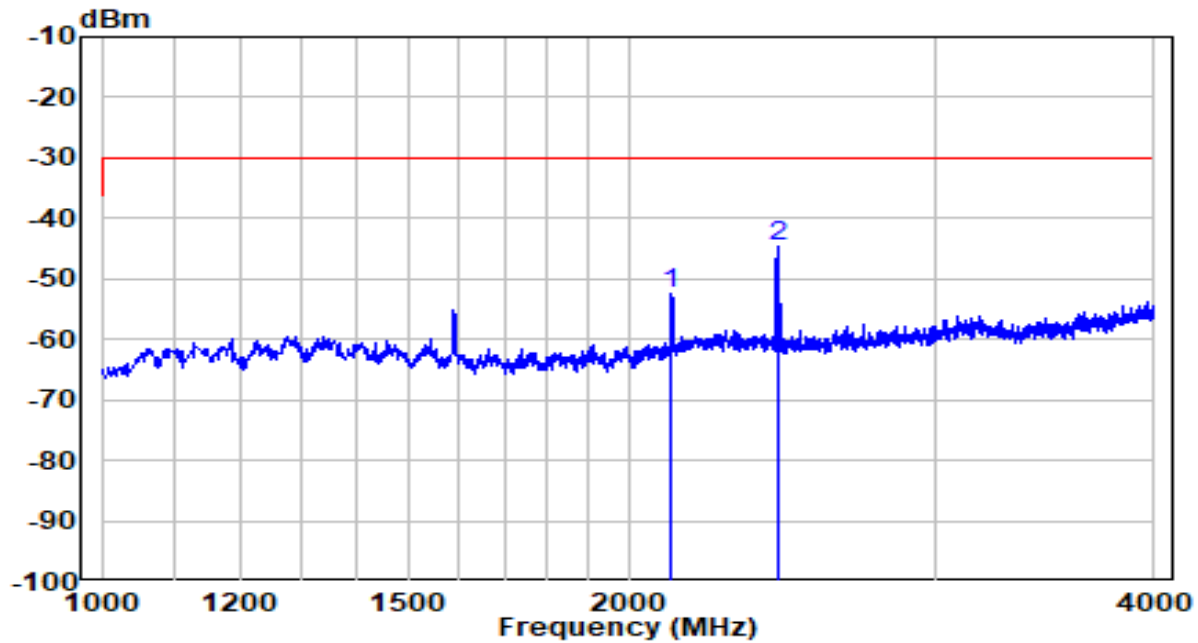


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1		2080.000	-62.92	6.42	-56.50	-26.50	-30.00	Peak
2	*	2437.000	-52.34	7.35	-44.99	-14.99	-30.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 529.9MHz 10mW	Test Voltage	By Battery

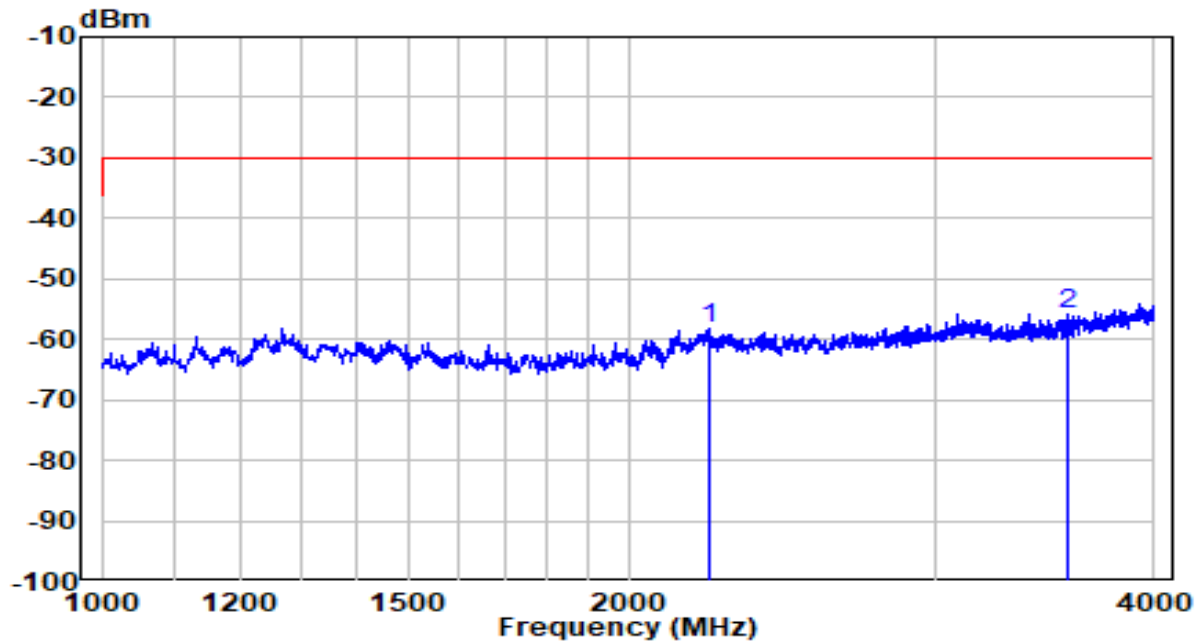


No		Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1		2119.000	-58.45	6.09	-52.36	-22.36	-30.00	Peak
2	*	2435.500	-51.44	6.71	-44.73	-14.73	-30.00	Peak

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(dBm) = Reading(dBm) + C.F (Correction Factor).
- 4.The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	Digital Wireless Microphone Transmitter	Date of Test	2020-08-10
Factor	EIRP_1GHz~18GHz (TX)	Temp. / Humidity	25.1°C /45.2%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay Chu
Test Mode	Transmit at Channel 529.9MHz 10mW	Test Voltage	By Battery



No	Frequency (MHz)	Reading (dBm)	C.F (dB)	Measurement (dBm)	Margin (dB)	Limit (dBm)	Remark (QP/PK/AV)
1	2225.500	-65.94	7.70	-58.24	-28.24	-30.00	Peak
2	* 3563.500	-65.57	9.82	-55.75	-25.75	-30.00	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(dBm) = Reading(dBm) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

結束