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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, IL60714-4608, USA
產品名稱(英文): Wireless Boundary Transmitter
主型號.: ULXD6/O G62
系列型號: ULXD6W/O G62; ULXD6/C G62; ULXD6W/C G62
廠牌: SHURE
測試標準: 低功率射頻電機技術規範(107 年) 4.6 章節
結果: Complies
測試日期: 106 年 10 月 18 日 ~ 106 年 10 月 29 日

測試工程師

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本測試報告僅對實驗室所受測之樣品負責

本測試報告非經本公司同意不可局部複製使用

修訂記錄

Report No.	Version	Description	Issue Date
1710TW0111-T1	1.0	Original Report	2017-10-31
1710TW0111-T1	2.0	Add Serial Model	2018-06-11

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1. 一般資訊

申請者	Shure Incorporated
申請者地址	5800 West Touhy Avenue, Niles, IL60714-4608, USA
製造商	Shure Incorporated
製造商地址	5800 West Touhy Avenue, Niles, IL60714-4608, 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. 待測物規格

2.1. 產品資訊

產品名稱	Wireless Boundary Transmitter
產品型號	ULXD6/O G62
系列型號	ULXD6W/O G62; ULXD6/C G62(備註 1); ULXD6W/C G62
商標	SHURE
待測物電壓	DC 3.0V
頻率範圍	510~ 530MHz
傳導功率等級	1mW & 10mW & 20mW(備註 2)
調製類型	8PSK
通道間隔	25kHz
電池信息 (備註 3)	
可充電鋰電池	Model: SB900A OUTPUT: 3.7Vdc, 1320mAh, 4.88Wh

備註 1: ULXD6/O G62 和 ULXD6/C G62 的區別是有不同的內置麥克風。

備註 2: 待測物有三個傳導功率等級，與接收器配對後，可以在接收器螢幕上切換。

備註 3: 待測物可以使用兩節 AA 鹼性電池或者 Shure SB900A 可充電電池來供電。

2.2. 操作頻率

通道	頻率
LOW	510.100 MHz
...	...
MID	520.000 MHz
...	...
HIG	529.900 MHz

2.3. 系列差異說明

系列型號與主型號差異僅做為市場行銷管理區隔，其硬體電路及軟體與主型號相同。該產品亦符合同系列產品技術規格及射頻性能相同。

3. 待測物架設

3.1. 測試模式

Test Mode
Mode 1: Transmit

3.2. 測試架設示意圖



3.3. 操作程式

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

4. 測試設備明細

電源傳導 – SR2

儀器名稱	製造商	型號	財產編號	校正年限	校正有效日期
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2018.03.15
Cable	Rosnol	N1C50-RG400-B1C5 0-500CM	MRTTWE00013	1 year	2018.05.17
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2018.03.16

輻射干擾 – AC1

儀器名稱	製造商	型號	財產編號	校正年限	校正有效日期
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2018.05.14
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2018.03.16
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2018.04.13
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2018.04.17
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2018.04.24
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2018.04.24
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2018.04.19
Cable	HUBERSUHNER	SF106	MRTTWA00010	1 year	2018.05.19
Cable	Rosnol	K1K50-UP0264-K1K5 0-4M	MRTTWA00012	1 year	2018.05.19

傳導測試 – SR2

儀器名稱	製造商	型號	財產編號	校正日期	有效日期
Spectrum Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2018.07.24
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2018.03.19
Audio Analyzer	MRTSUE06143	U8903B	MY55280009	1 year	2018.08.29

EMI 測試軟體

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

5. 量測不確定度

電源傳導量測
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 2.42dB
輻射干擾量測
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.22dB

6. 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 7 章節
2.2 & 4.6.8	天線之要求	符合	第 8 章節
4.6.5	頻率穩定度	符合	第 9 章節
4.6.3	主波發射功率	符合	第 10 章節
4.6.2	必須頻帶寬度	符合	第 11 章節
4.6.6	混附發射	符合	第 12 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，待測物評估了所有三個不同功率等級。			

7. 電源端點干擾測試

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 2.3 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

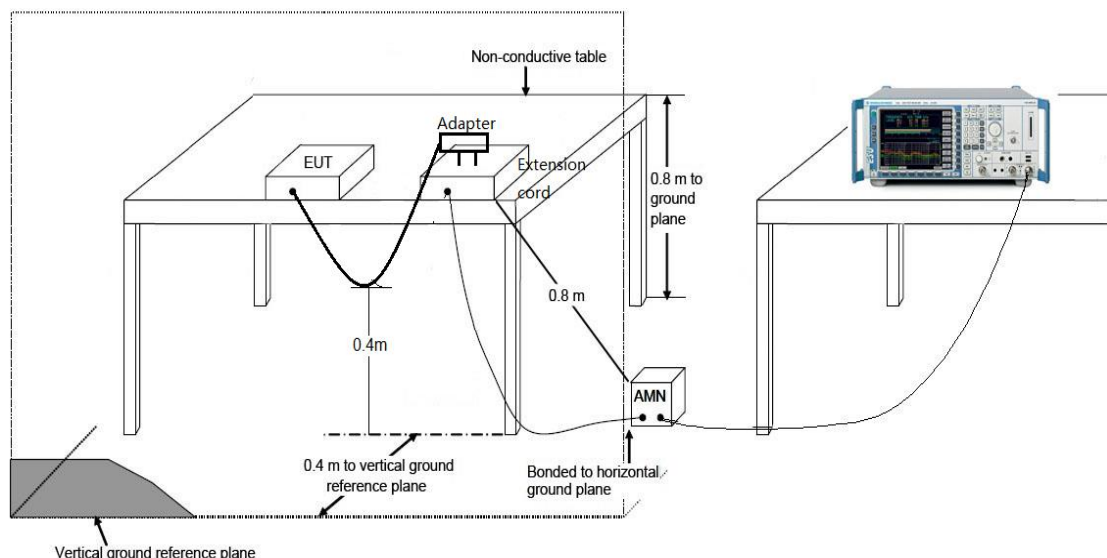
7.2. 量測方法

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。

7.3. 測試架構圖



7.4. 電源端點測試結果

測試樣品為電池供電，所以這個測試項目對它不適用。

8. 天線之要求

8.1. 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。

8.2. 天線樣式

天線類型	製造商	型號	最大峰值 (dBi)
PIFA Antenna	Shure Incorporated	N/A	-8.4

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。

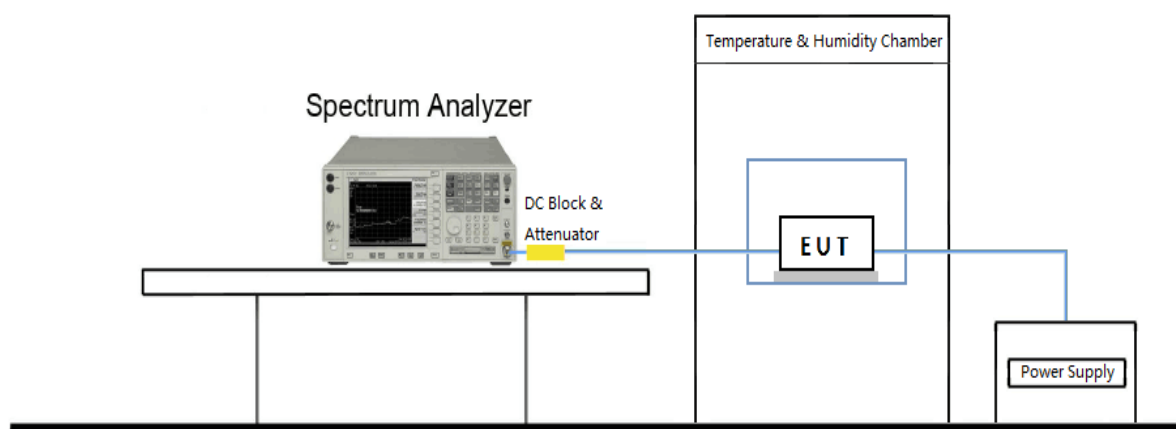
9. 頻率穩定度

9.1. 限值要求

操作頻率小於1 GHz 之系統: 20 ppm。

9.2. 測試架構圖

傳導量測



9.3. 量測步驟

參照法規ETSI EN 300 422-1 V2.1.2 (2017-01) 章節 8.1.2.

9.4. 頻率穩定度測試結果

待測物	Wireless Boundary Transmitter	測試溫度	-10 ~ 45°C
測試工程師	Kevin	測試濕度	64%
測試模式	Mode 1 (Carrier Mode)	測試場地	AC1

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 3V	510.100	510.1001426	0.28	±20
		520.000	520.0001475	0.28	±20
		529.900	529.9001524	0.29	±20
T(35°C)	DC 3V	510.100	510.1001434	0.28	±20
		520.000	520.0001484	0.29	±20
		529.900	529.9001535	0.29	±20
T(20°C)	DC 3V	510.100	510.1001441	0.28	±20
		520.000	520.0001465	0.28	±20
		529.900	529.9001518	0.29	±20
	DC 2.25V	510.100	510.1001446	0.28	±20
		520.000	520.0001498	0.29	±20
		529.900	529.9001514	0.29	±20
	DC 3.75V	510.100	510.1001445	0.28	±20
		520.000	520.0001479	0.28	±20
		529.900	529.9001545	0.29	±20
T(10°C)	DC 3V	510.100	510.1001456	0.29	±20
		520.000	520.0001487	0.29	±20
		529.900	529.9001532	0.29	±20
	DC 2.25V	510.100	510.1001442	0.28	±20
		520.000	520.0001479	0.28	±20
		529.900	529.9001545	0.29	±20
	DC 3.75V	510.100	510.1001461	0.29	±20
		520.000	520.0001467	0.28	±20
		529.900	529.9001543	0.29	±20

T(0°C)	DC 3V	510.100	510.1001435	0.28	±20
		520.000	520.0001483	0.29	±20
		529.900	529.9001535	0.29	±20
	DC 2.25V	510.100	510.1001454	0.29	±20
		520.000	520.0001452	0.28	±20
		529.900	529.9001551	0.29	±20
	DC 3.75V	510.100	510.1001435	0.28	±20
		520.000	520.0001449	0.28	±20
		529.900	529.9001523	0.29	±20
T(-10°C)	DC 3V	510.100	510.1001454	0.29	±20
		520.000	520.0001469	0.28	±20
		529.900	529.9001532	0.29	±20
	DC 2.25V	510.100	510.1001451	0.28	±20
		520.000	520.0001474	0.28	±20
		529.900	529.9001552	0.29	±20
	DC 3.75V	510.100	510.1001446	0.28	±20
		520.000	520.0001477	0.28	±20
		529.900	529.9001542	0.29	±20

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

備註 2: DC 電壓由製造者所宣告。

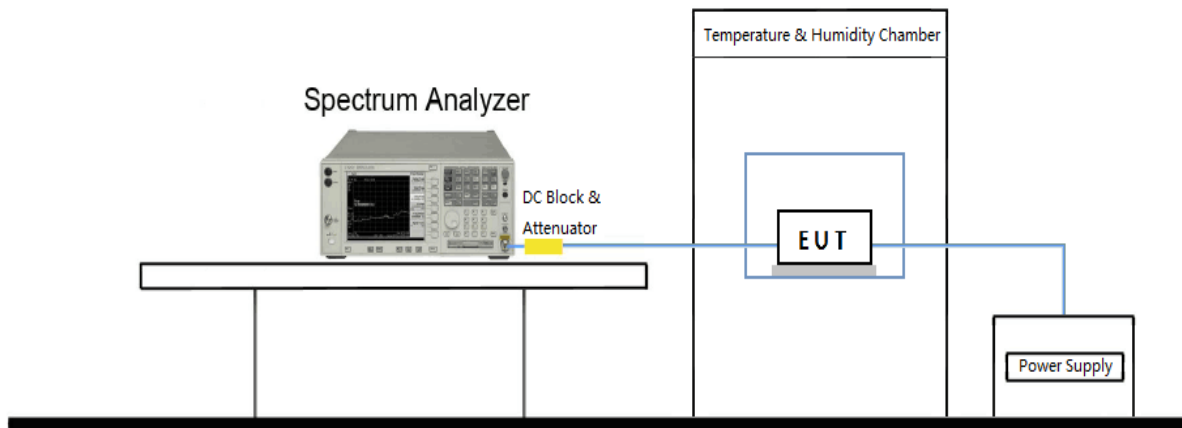
10. 主波發射功率

10.1. 限值要求

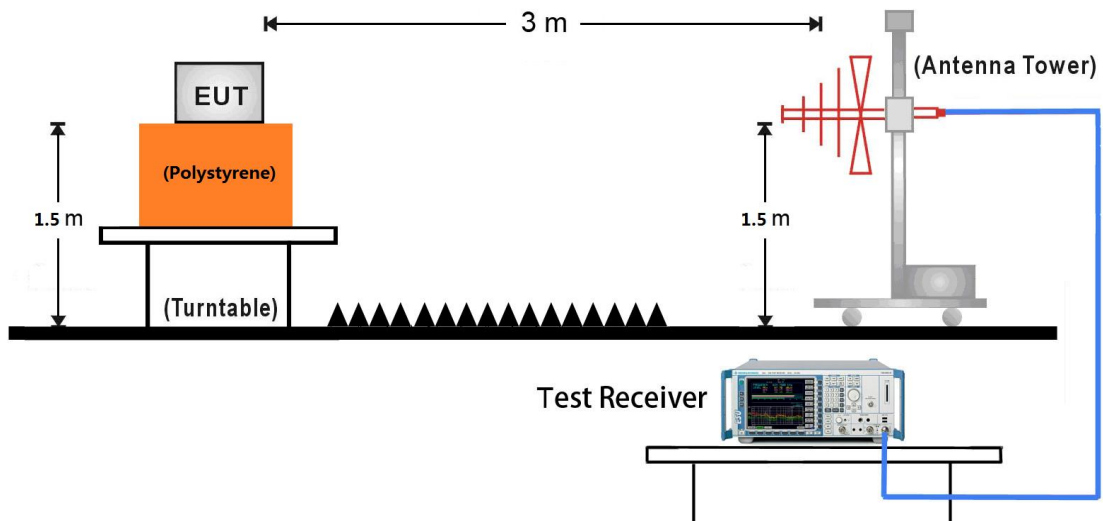
操作於 510.0 MHz~530.0 MHz 者：50 mW 以下。

10.2. 測試架構圖

傳導量測



輻射量測



10.3. 量測步驟

參照法規 ETSI EN 300 422-1 V2.1.2 (2017-01) 章節 8.2.2.

10.4. 主波發射功率測試結果

待測物	Wireless Boundary Transmitter	測試溫度	25°C
測試工程師	Peter	測試濕度	52%
測試模式	Mode 1	測試場地	AC1/SR1

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	-12.24	0.06	50	符合
	520.000	-10.80	0.08	50	符合
	529.900	-11.78	0.07	50	符合
10	510.100	-2.98	0.50	50	符合
	520.000	-0.95	0.80	50	符合
	529.900	-2.58	0.55	50	符合
20	510.100	0.48	1.12	50	符合
	520.000	2.02	1.59	50	符合
	529.900	0.03	1.01	50	符合

備註：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。

極限測試條件

極限條件		功率等級 (mW)	操作頻率 (MHz)	量測功率值 (dBm)	量測功率值 (mW)	限值要求 (mW)	結果
溫度 (°C)	電壓 (V)						
常溫 (25°C)	常壓 (DC 3.00V)	1	510.100	-12.24	0.06	50	符合
			520.000	-10.80	0.08	50	符合
			529.900	-11.78	0.07	50	符合
高溫 (45°C)	高壓 (DC 3.75V)	1	510.100	-12.29	0.06	50	符合
			520.000	-10.84	0.08	50	符合
			529.900	-11.86	0.07	50	符合
高溫 (45°C)	低壓 (DC 2.25V)	1	510.100	-12.35	0.06	50	符合
			520.000	-10.92	0.08	50	符合
			529.900	-11.93	0.06	50	符合
低溫 (-10°C)	高壓 (DC 3.75V)	1	510.100	-11.99	0.06	50	符合
			520.000	-10.57	0.09	50	符合
			529.900	-11.59	0.07	50	符合
高溫(-10°C)	低壓 (DC 2.25V)	1	510.100	-12.02	0.06	50	符合
			520.000	-10.63	0.09	50	符合
			529.900	-11.76	0.07	50	符合

極限條件		功率等級 (mW)	操作頻率 (MHz)	量測功率值 (dBm)	量測功率值 (mW)	限值要求 (mW)	結果
溫度 (°C)	電壓 (V)						
常溫 (25°C)	常壓 (DC 3.00V)	10	510.100	-2.98	0.50	50	符合
			520.000	-0.95	0.80	50	符合
			529.900	-2.58	0.55	50	符合
高溫 (45°C)	高壓 (DC 3.75V)	10	510.100	-3.26	0.47	50	符合
			520.000	-1.05	0.79	50	符合
			529.900	-2.75	0.53	50	符合
高溫 (45°C)	低壓 (DC 2.25V)	10	510.100	-3.02	0.50	50	符合
			520.000	-1.15	0.77	50	符合
			529.900	-2.65	0.54	50	符合
低溫 (-10°C)	高壓 (DC 3.75V)	10	510.100	-2.96	0.51	50	符合
			520.000	-0.70	0.85	50	符合
			529.900	-2.38	0.58	50	符合
高溫 (-10°C)	低壓 (DC 2.25V)	10	510.100	-2.87	0.52	50	符合
			520.000	-0.83	0.83	50	符合
			529.900	-2.44	0.57	50	符合

極限條件		功率等級 (mW)	操作頻率 (MHz)	量測功率值 (dBm)	量測功率值 (mW)	限值要求 (mW)	結果
溫度 (°C)	電壓 (V)						
常溫 (25°C)	常壓 (DC 3.00V)	20	510.100	0.48	1.12	50	符合
			520.000	2.02	1.59	50	符合
			529.900	0.03	1.01	50	符合
高溫 (45°C)	高壓 (DC 3.75V)	20	510.100	0.29	1.07	50	符合
			520.000	1.81	1.52	50	符合
			529.900	-0.11	0.97	50	符合
高溫 (45°C)	低壓 (DC 2.25V)	20	510.100	0.21	1.05	50	符合
			520.000	1.57	1.44	50	符合
			529.900	-0.16	0.96	50	符合
低溫 (-10°C)	高壓 (DC 3.75V)	20	510.100	0.60	1.15	50	符合
			520.000	2.11	1.63	50	符合
			529.900	0.16	1.04	50	符合
高溫 (-10°C)	低壓 (DC 2.25V)	20	510.100	0.49	1.12	50	符合
			520.000	1.98	1.58	50	符合
			529.900	0.21	1.05	50	符合

11. 必須頻帶寬度

11.1. 限值要求

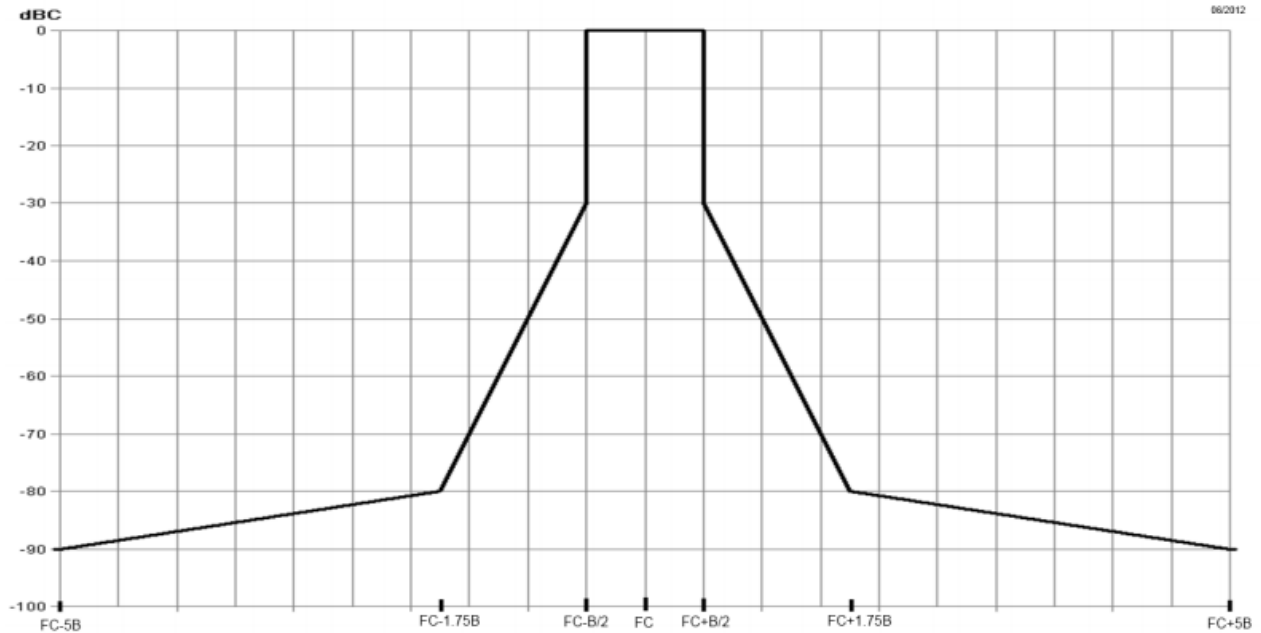
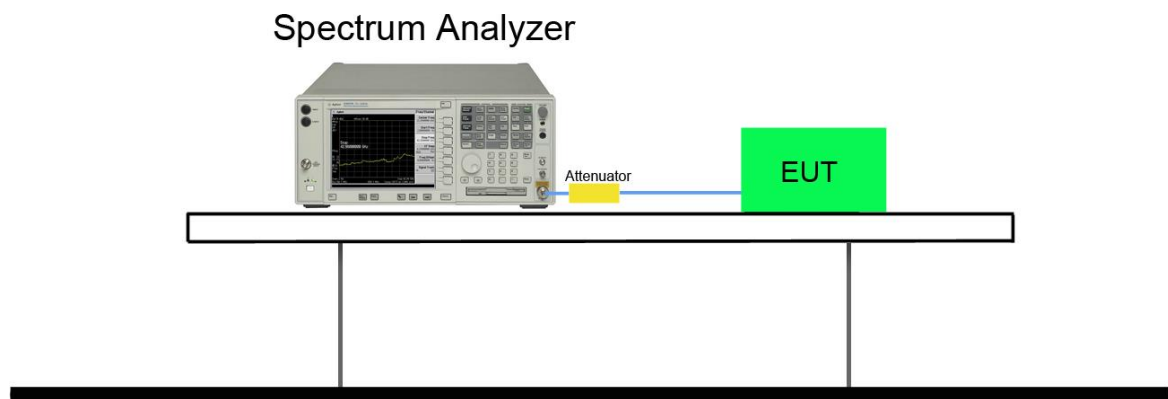


Figure 4: Spectrum mask for digital systems below 2 GHz

11.2. 測試架構圖



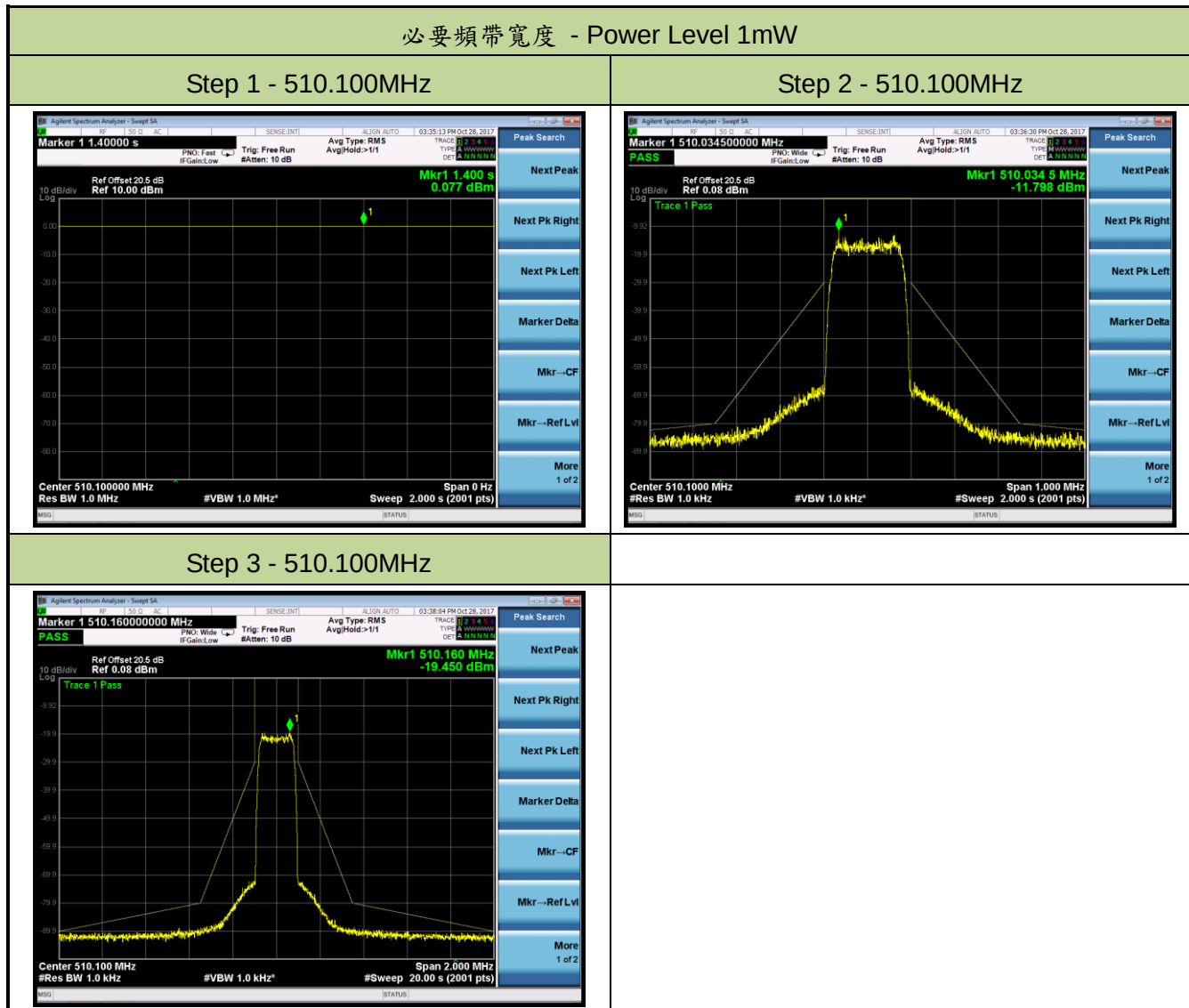
11.3. 量測步驟

參照法規 ETSI EN 300 422-1 V2.1.2 (2017-01) 章節 8.3.3.

11.4. 必要頻帶寬度測試結果

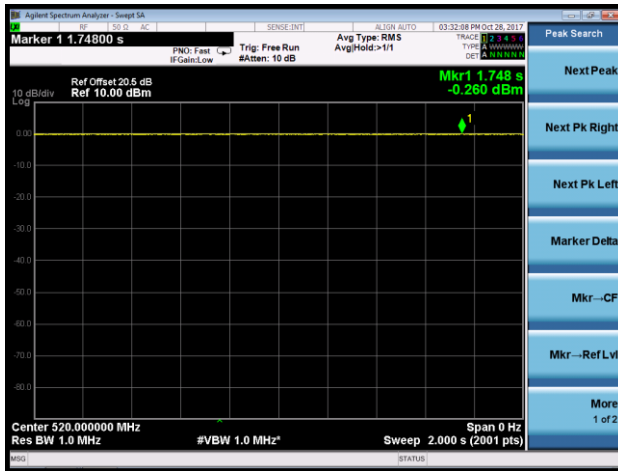
待測物	Wireless Boundary Transmitter	測試溫度	23°C
測試工程師	Peter	測試濕度	52%
測試模式	Mode 1	測試場地	SR1

備註：B - 廠商宣稱頻帶寬度為 200kHz;

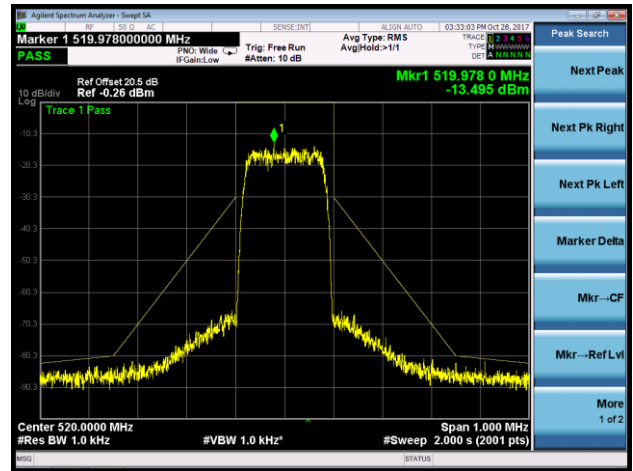


必要頻帯寬度 - Power Level 1mW

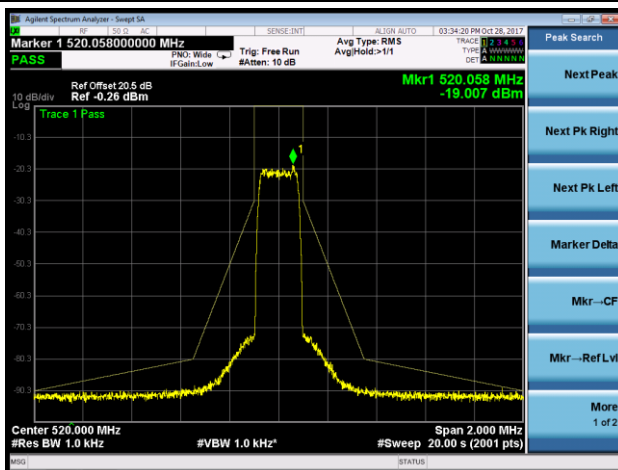
Step 1 - 520.000MHz



Step 2 - 520.000MHz

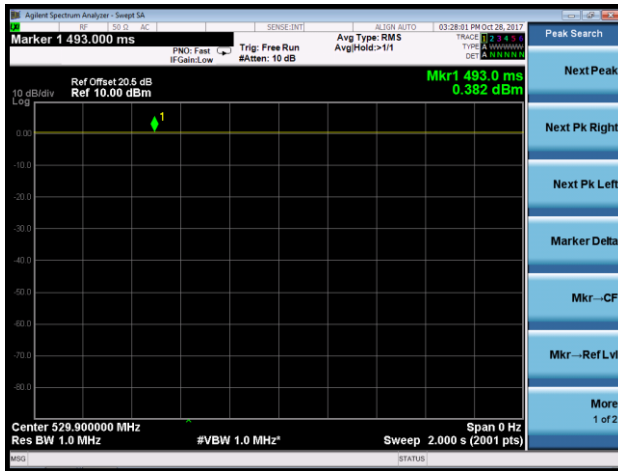


Step 3 - 520.000MHz

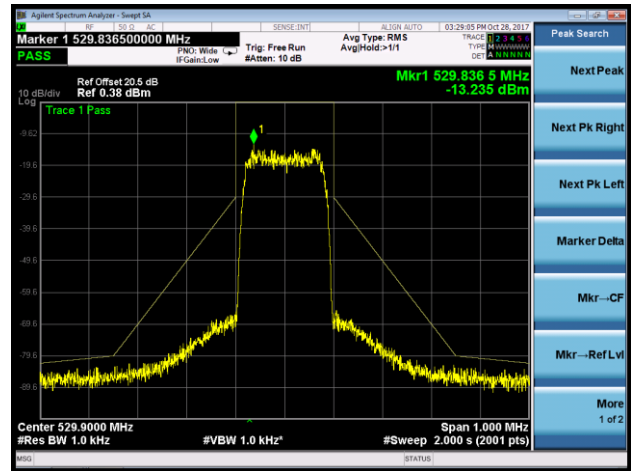


必要頻帯寬度 - Power Level 1mW

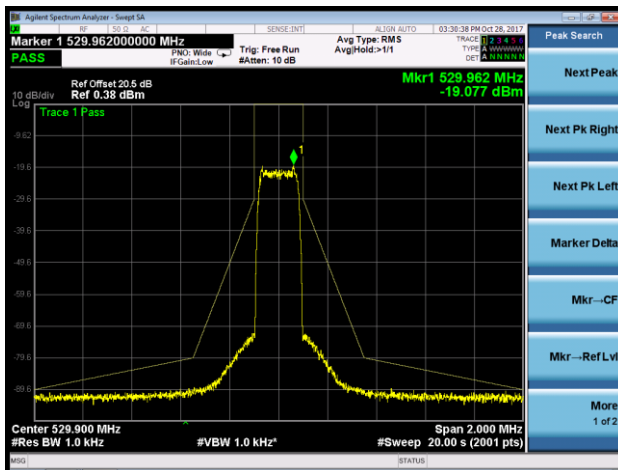
Step 1 - 529.900MHz



Step 2 - 529.900MHz



Step 3 - 529.900MHz

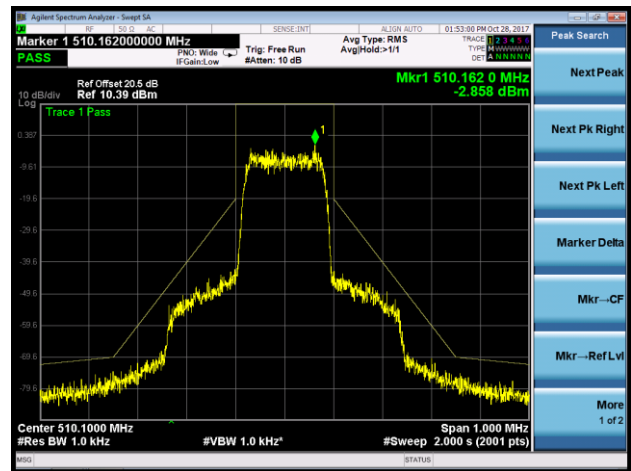


必要頻帶寬度 - Power Level 10mW

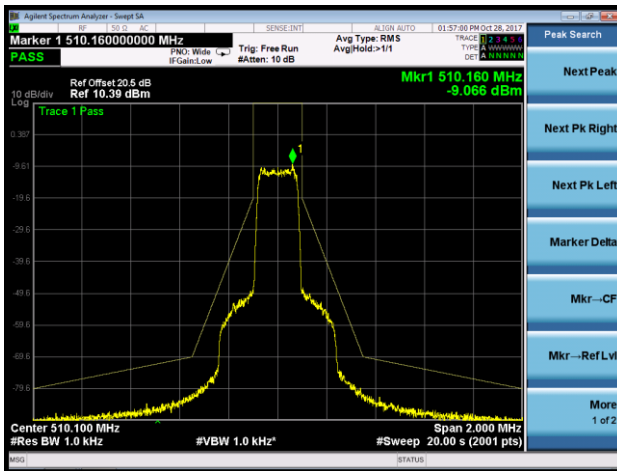
Step 1 - 510.100MHz



Step 2 - 510.100MHz



Step 3 - 510.100MHz

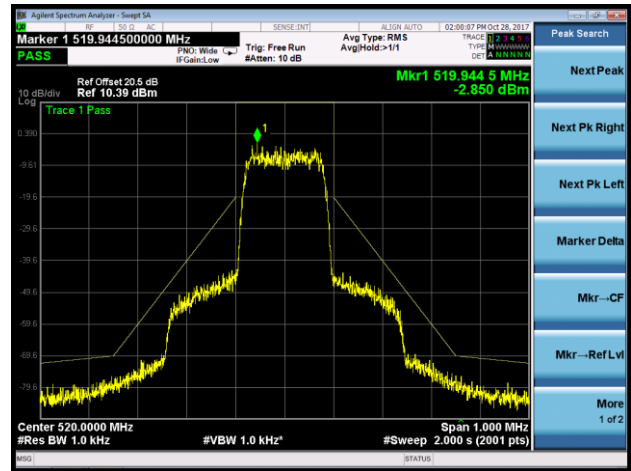


必要頻帶寬度 - Power Level 10mW

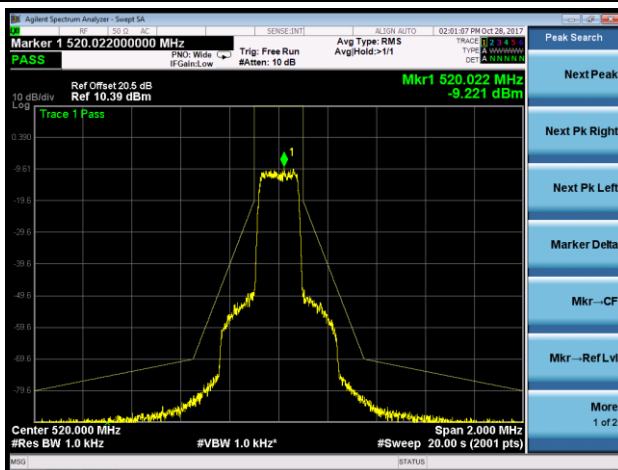
Step 1 - 520.000MHz



Step 2 - 520.000MHz

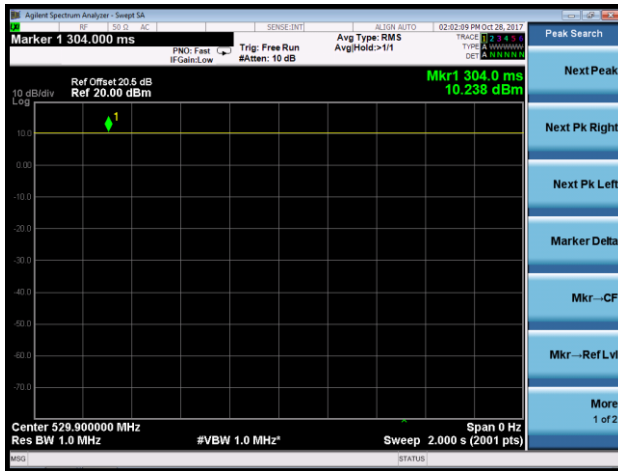


Step 3 - 520.000MHz

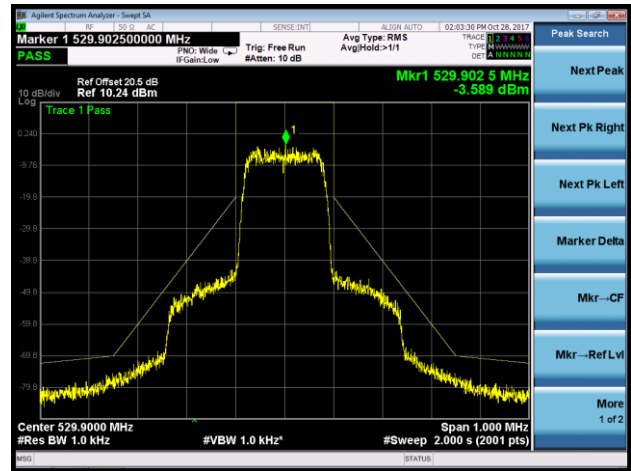


必要頻帯宽度 - Power Level 10mW

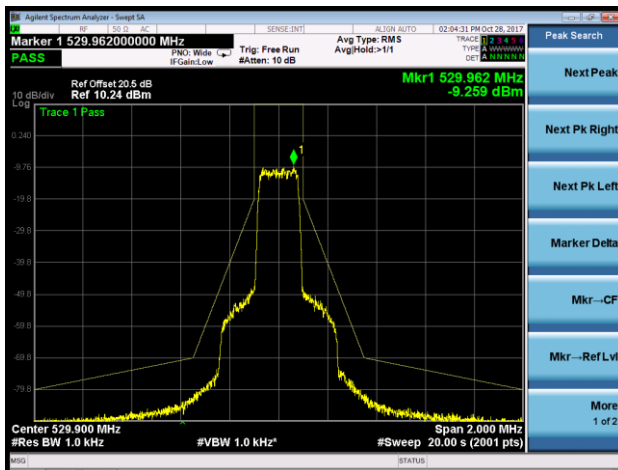
Step 1 - 529.900MHz



Step 2 - 529.900MHz

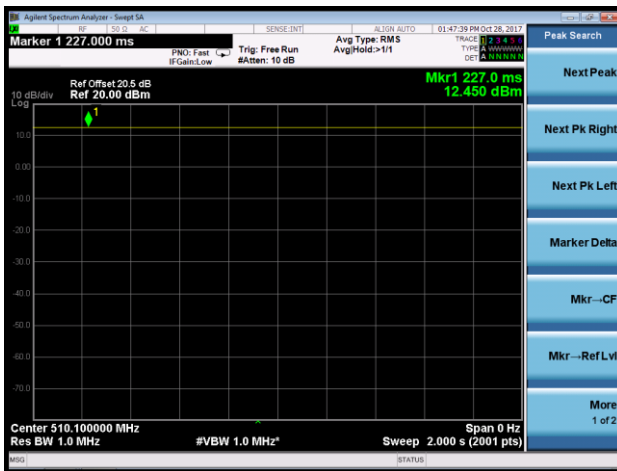


Step 3 - 529.900MHz

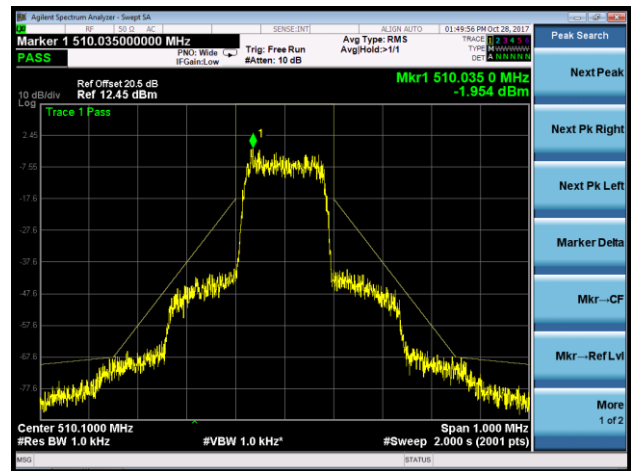


必要頻帶寬度 - Power Level 20mW

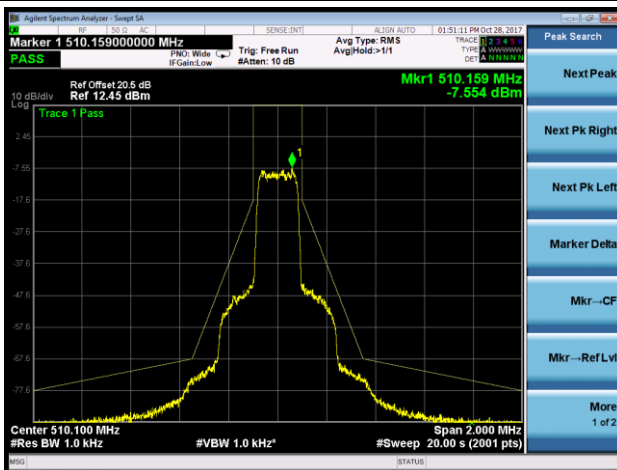
Step 1 - 510.100MHz



Step 2 - 510.100MHz

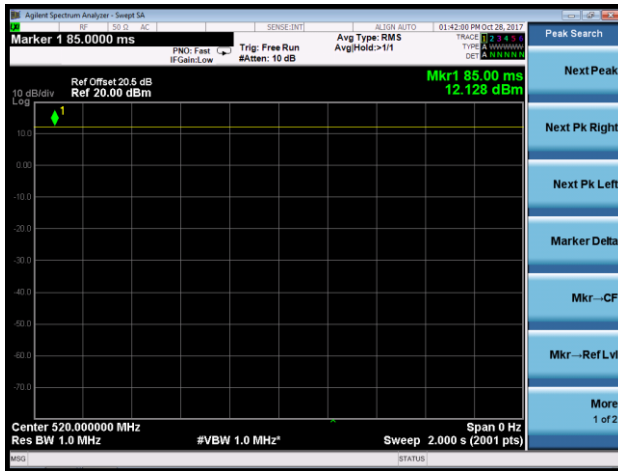


Step 3 - 510.100MHz

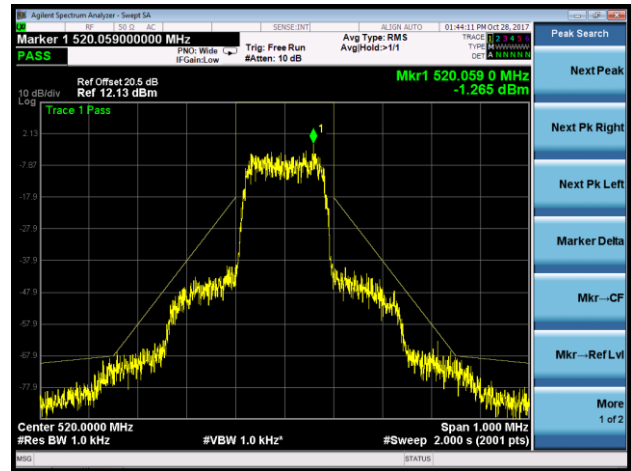


必要頻帯寬度 - Power Level 20mW

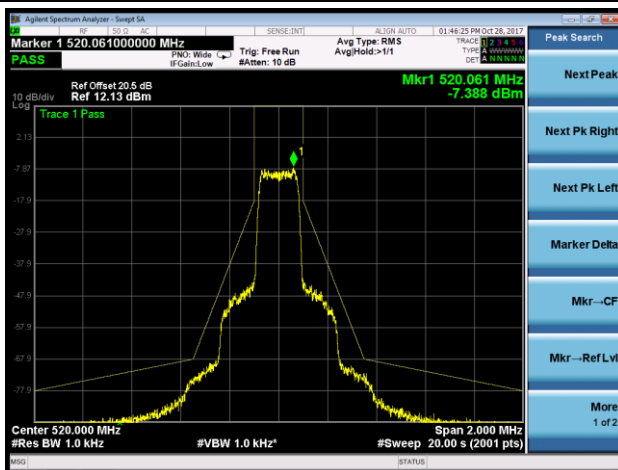
Step 1 - 520.000MHz



Step 2 - 520.000MHz



Step 3 - 520.000MHz

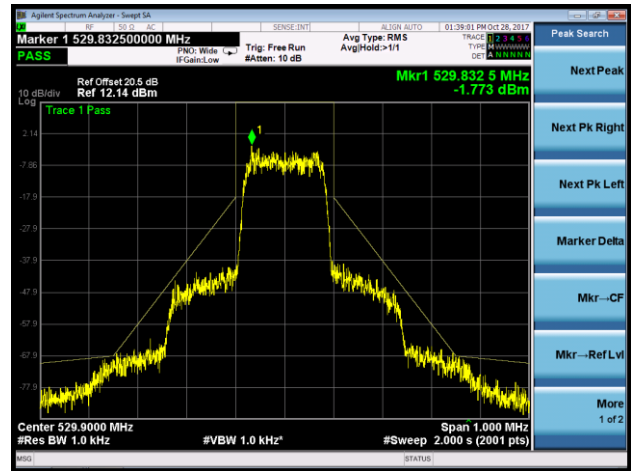


必要頻帶寬度 - Power Level 20mW

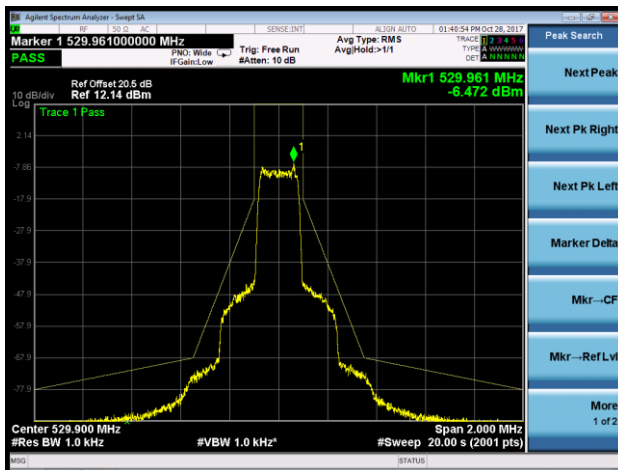
Step 1 - 529.900MHz



Step 2 - 529.900MHz



Step 3 - 529.900MHz



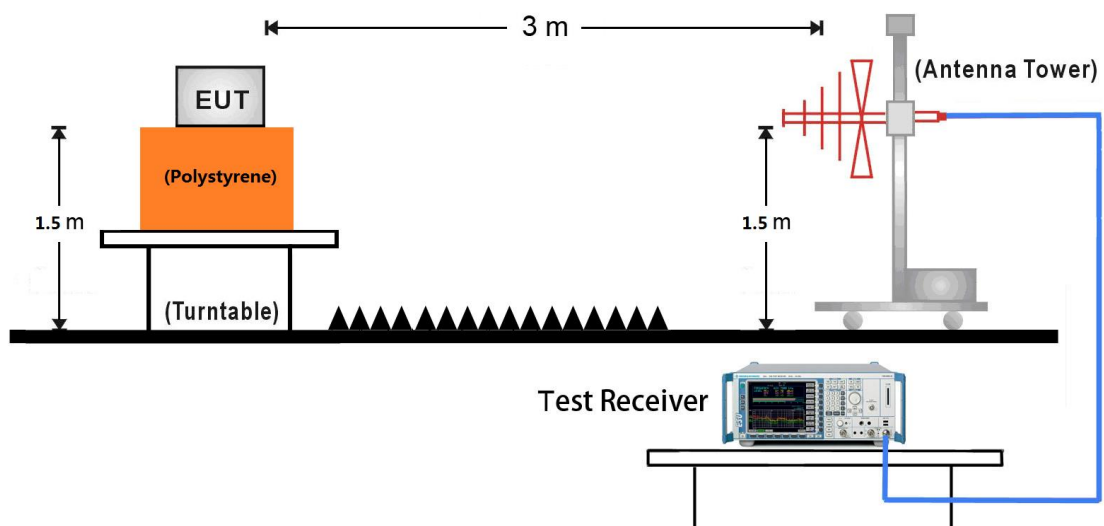
12. 混附發射

12.1. 限值要求

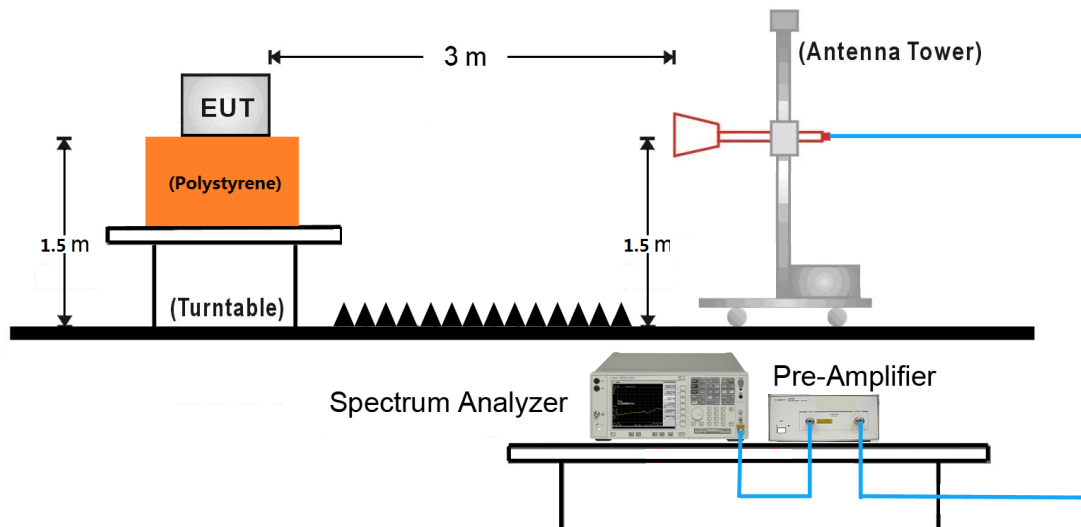
State	Frequency		
	47MHz to 74MHz 87.5MHz to 118MHz 174MHz to 230MHz 470MHz to 862MHz	Other Frequencies below 1000MHz	Frequencies above 1000MHz
Operation	4nW	250nW	1uW
Standby	2nW	2nW	20nW

12.2. 測試架構圖

25MHz ~ 1GHz 測試架構圖：



1GHz ~ 6GHz 測試架構圖:



12.3. 量測步驟

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

12.4. 混附發射測試結果

待測物	Wireless Boundary Transmitter	測試溫度	25°C
測試工程師	Peter	測試濕度	54%
測試模式	Mode 1	測試場地	AC1

Power Level (mW)	Test Channel (MHz)	Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
1	510.100	217.1	-103.8	25.4	-78.4	-54.0	-24.4	Peak	Horizontal
		766.0	-103.5	36.3	-67.2	-54.0	-13.2	Peak	Horizontal
		183.4	-96.5	23.1	-73.4	-54.0	-19.4	Peak	Vertical
		804.0	-104.3	36.2	-68.1	-54.0	-14.1	Peak	Vertical
		1530.3	-65.7	7.5	-58.2	-30.0	-28.2	Peak	Horizontal
		2040.4	-67.3	9.2	-58.1	-30.0	-28.1	Peak	Horizontal
		1530.3	-65.8	7.5	-58.3	-30.0	-28.3	Peak	Vertical
		2040.4	-66.8	9.0	-57.8	-30.0	-27.8	Peak	Vertical
	520.000	229.3	-103.8	27.0	-76.8	-54.0	-22.8	Peak	Horizontal
		742.6	-103.2	35.4	-67.8	-54.0	-13.8	Peak	Horizontal
		183.0	-96.1	23.1	-73.0	-54.0	-19.0	Peak	Vertical
		738.7	-104.1	35.2	-68.9	-54.0	-14.9	Peak	Vertical
		1560.0	-65.4	7.1	-58.3	-30.0	-28.3	Peak	Horizontal
		2080.0	-68.5	9.6	-58.9	-30.0	-28.9	Peak	Horizontal
		1560.0	-66.5	6.9	-59.6	-30.0	-29.6	Peak	Vertical
		2080.0	-67.2	9.6	-57.6	-30.0	-27.6	Peak	Vertical
	529.900	226.8	-103.4	26.5	-76.9	-54.0	-22.9	Peak	Horizontal
		781.1	-103.7	36.1	-67.6	-54.0	-13.6	Peak	Horizontal
		183.0	-95.8	23.1	-72.7	-54.0	-18.7	Peak	Vertical
		711.9	-102.4	33.7	-68.7	-54.0	-14.7	Peak	Vertical
		1589.7	-67.1	7.0	-60.1	-30.0	-30.1	Peak	Horizontal
		2119.6	-68.3	10.1	-58.2	-30.0	-28.2	Peak	Horizontal
		1589.7	-66.7	7.2	-59.5	-30.0	-29.5	Peak	Vertical
		2119.6	-69.2	10.1	-59.1	-30.0	-29.1	Peak	Vertical

Note1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Power Level (mW)	Test Channel (MHz)	Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
10	510.100	220.5	-104.2	26.2	-78.0	-54.0	-24.0	Peak	Horizontal
		778.7	-103.7	36.2	-67.5	-54.0	-13.5	Peak	Horizontal
		183.4	-96.4	23.1	-73.3	-54.0	-19.3	Peak	Vertical
		746.5	-103.5	35.4	-68.1	-54.0	-14.1	Peak	Vertical
		1530.3	-63.8	7.5	-56.3	-30.0	-26.3	Peak	Horizontal
		2040.4	-67.7	9.2	-58.5	-30.0	-28.5	Peak	Horizontal
		1530.3	-65.6	7.5	-58.1	-30.0	-28.1	Peak	Vertical
		2040.4	-67.1	9.0	-58.1	-30.0	-28.1	Peak	Vertical
	520.000	219.5	-104.4	26.1	-78.3	-54.0	-24.3	Peak	Horizontal
		763.1	-103.1	36.2	-66.9	-54.0	-12.9	Peak	Horizontal
		183.0	-96.4	23.1	-73.3	-54.0	-19.3	Peak	Vertical
		686.1	-103.0	33.9	-69.1	-54.0	-15.1	Peak	Vertical
		1560.0	-63.5	7.1	-56.4	-30.0	-26.4	Peak	Horizontal
		2080.0	-68.2	9.6	-58.6	-30.0	-28.6	Peak	Horizontal
		1560.0	-65.3	6.9	-58.4	-30.0	-28.4	Peak	Vertical
		2080.0	-66.9	9.6	-57.3	-30.0	-27.3	Peak	Vertical
	529.900	223.4	-104.3	26.5	-77.8	-54.0	-23.8	Peak	Horizontal
		751.4	-104.1	35.7	-68.4	-54.0	-14.4	Peak	Horizontal
		183.0	-96.0	23.1	-72.9	-54.0	-18.9	Peak	Vertical
		741.1	-104.0	35.3	-68.7	-54.0	-14.7	Peak	Vertical
		1589.7	-66.4	7.0	-59.4	-30.0	-29.4	Peak	Horizontal
		2119.6	-68.6	10.1	-58.5	-30.0	-28.5	Peak	Horizontal
		1589.7	-66.9	7.2	-59.7	-30.0	-29.7	Peak	Vertical
		2119.6	-68.6	10.1	-58.5	-30.0	-28.5	Peak	Vertical

Note1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

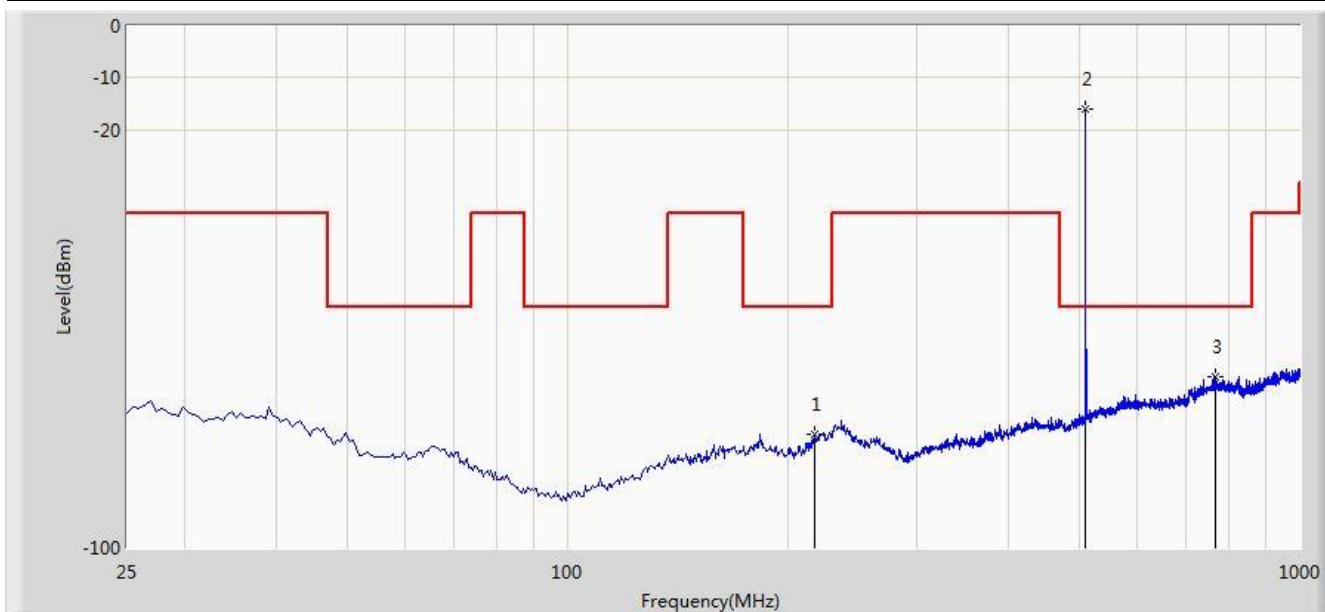
Note2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Power Level (mW)	Test Channel (MHz)	Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
20	510.100	222.9	-103.8	26.3	-77.5	-54.0	-23.5	Peak	Horizontal
		759.2	-103.6	36.1	-67.5	-54.0	-13.5	Peak	Horizontal
		183.0	-96.4	23.1	-73.3	-54.0	-19.3	Peak	Vertical
		746.5	-104.0	35.4	-68.6	-54.0	-14.6	Peak	Vertical
		1530.3	-65.1	7.5	-57.6	-30.0	-27.6	Peak	Horizontal
		2040.4	-66.8	9.2	-57.6	-30.0	-27.6	Peak	Horizontal
		1530.3	-65.1	7.5	-57.6	-30.0	-27.6	Peak	Vertical
		2040.4	-67.0	9.0	-58.0	-30.0	-28.0	Peak	Vertical
	520.000	225.4	-104.1	26.4	-77.7	-54.0	-23.7	Peak	Horizontal
		776.7	-103.8	36.2	-67.6	-54.0	-13.6	Peak	Horizontal
		183.0	-95.8	23.1	-72.7	-54.0	-18.7	Peak	Vertical
		752.8	-103.3	35.2	-68.1	-54.0	-14.1	Peak	Vertical
		1560.0	-59.8	7.1	-52.7	-30.0	-22.7	Peak	Horizontal
		2080.0	-67.7	9.6	-58.1	-30.0	-28.1	Peak	Horizontal
		1560.0	-64.1	6.9	-57.2	-30.0	-27.2	Peak	Vertical
		2080.0	-68.7	9.6	-59.1	-30.0	-29.1	Peak	Vertical
	529.900	227.8	-104.3	26.7	-77.6	-54.0	-23.6	Peak	Horizontal
		784.0	-103.8	36.2	-67.6	-54.0	-13.6	Peak	Horizontal
		183.0	-96.1	23.1	-73.0	-54.0	-19.0	Peak	Vertical
		753.8	-103.8	35.2	-68.6	-54.0	-14.6	Peak	Vertical
		1589.7	-66.6	7.0	-59.6	-30.0	-29.6	Peak	Horizontal
		2119.6	-68.1	10.1	-58.0	-30.0	-28.0	Peak	Horizontal
		1589.7	-66.3	7.2	-59.1	-30.0	-29.1	Peak	Vertical
		2119.6	-68.7	10.1	-58.6	-30.0	-28.6	Peak	Vertical

Note1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 14:29
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 1mW	

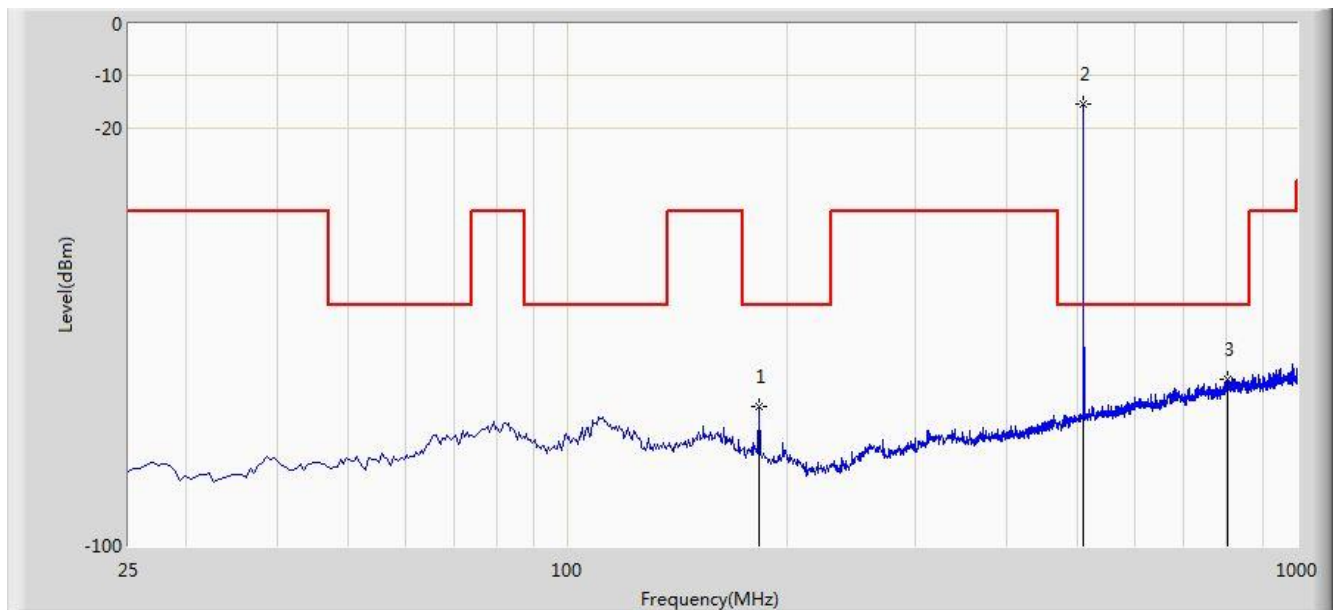


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			217.075	-78.403	-103.817	-24.403	-54.000	25.414	PK
2		*	510.062	-15.946	-45.626	N/A	N/A	29.680	PK
3			766.000	-67.235	-103.520	-13.235	-54.000	36.285	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:35
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 1mW	

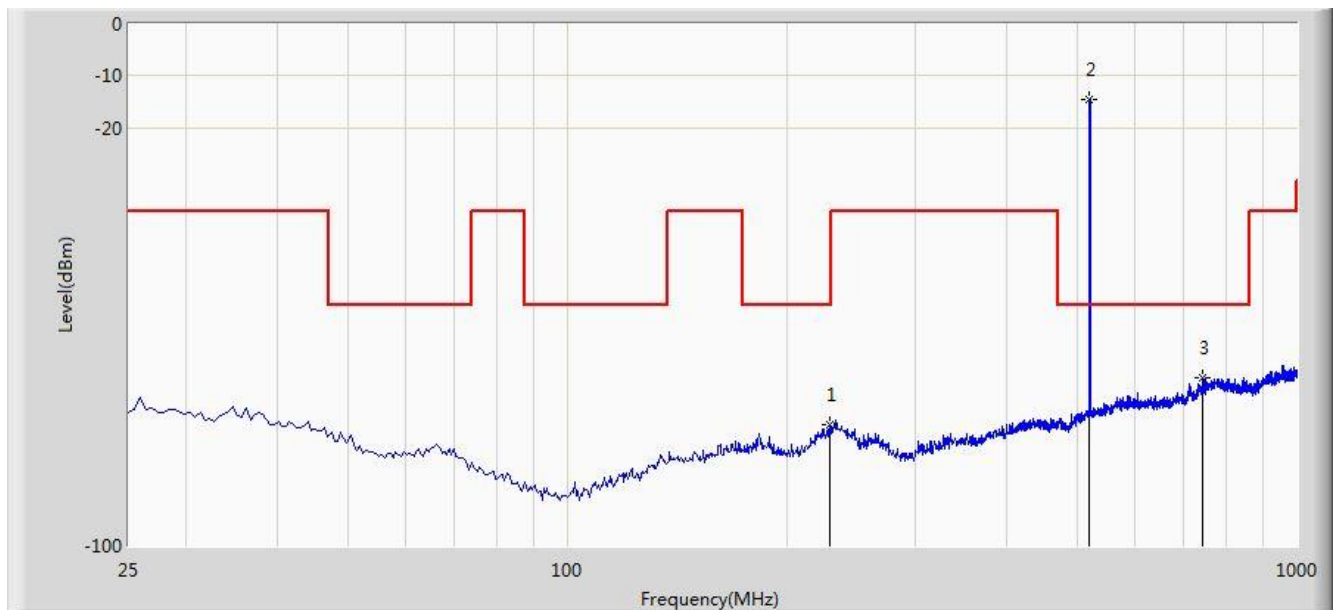


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			183.437	-73.417	-96.476	-19.417	-54.000	23.059	PK
2		*	510.062	-15.274	-45.434	N/A	N/A	30.160	PK
3			804.025	-68.052	-104.259	-14.052	-54.000	36.207	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:44
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 1mW	

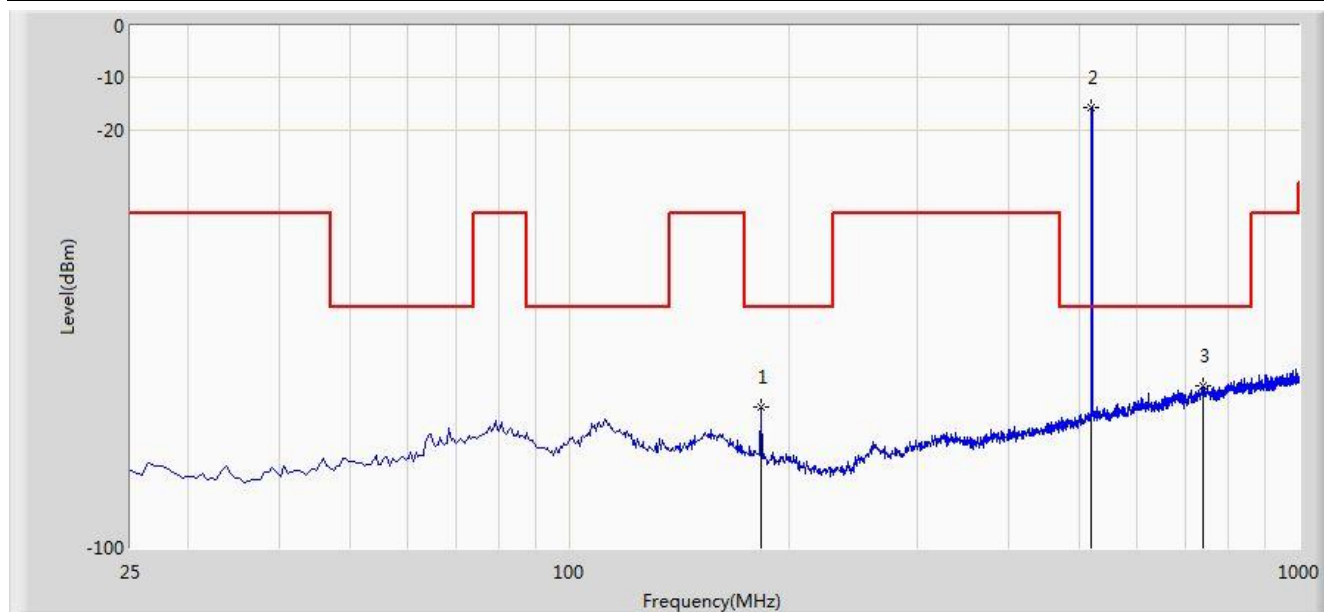


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			229.262	-76.769	-103.811	-22.769	-54.000	27.042	PK
2		*	519.812	-14.542	-45.025	N/A	N/A	30.483	PK
3			742.600	-67.831	-103.245	-13.831	-54.000	35.414	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:46
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 1mW	

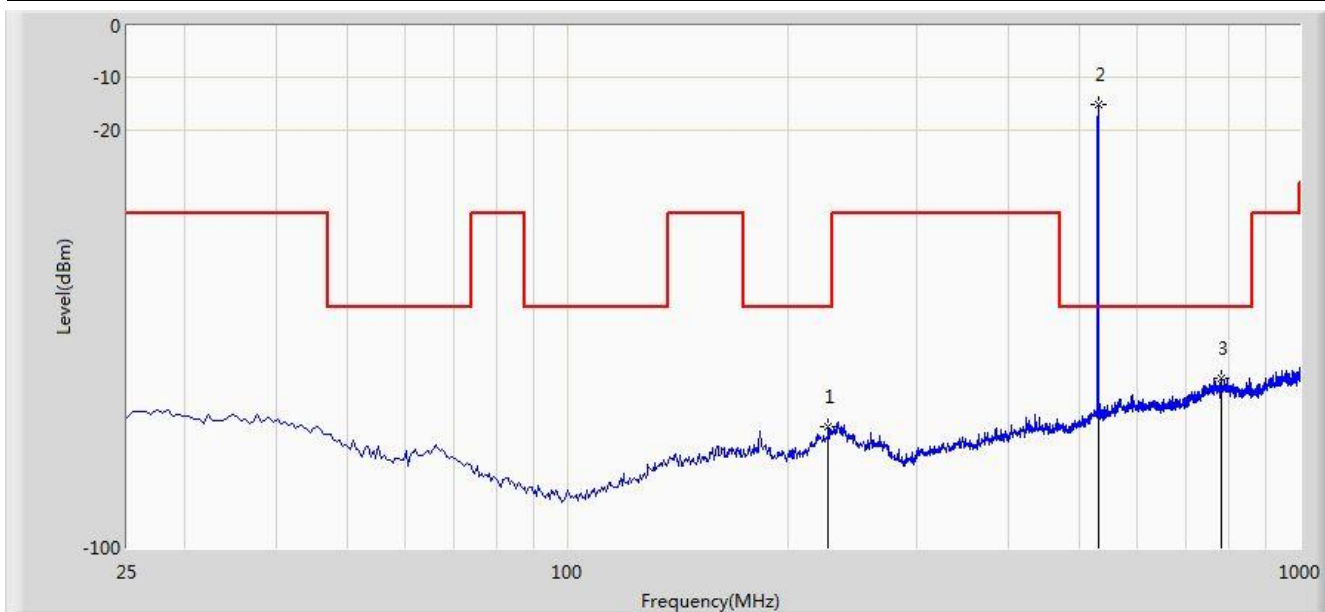


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-73.010	-96.123	-19.010	-54.000	23.113	PK
2		*	519.812	-15.582	-46.133	N/A	N/A	30.551	PK
3			738.700	-68.867	-104.101	-14.867	-54.000	35.234	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:54
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 1mW	

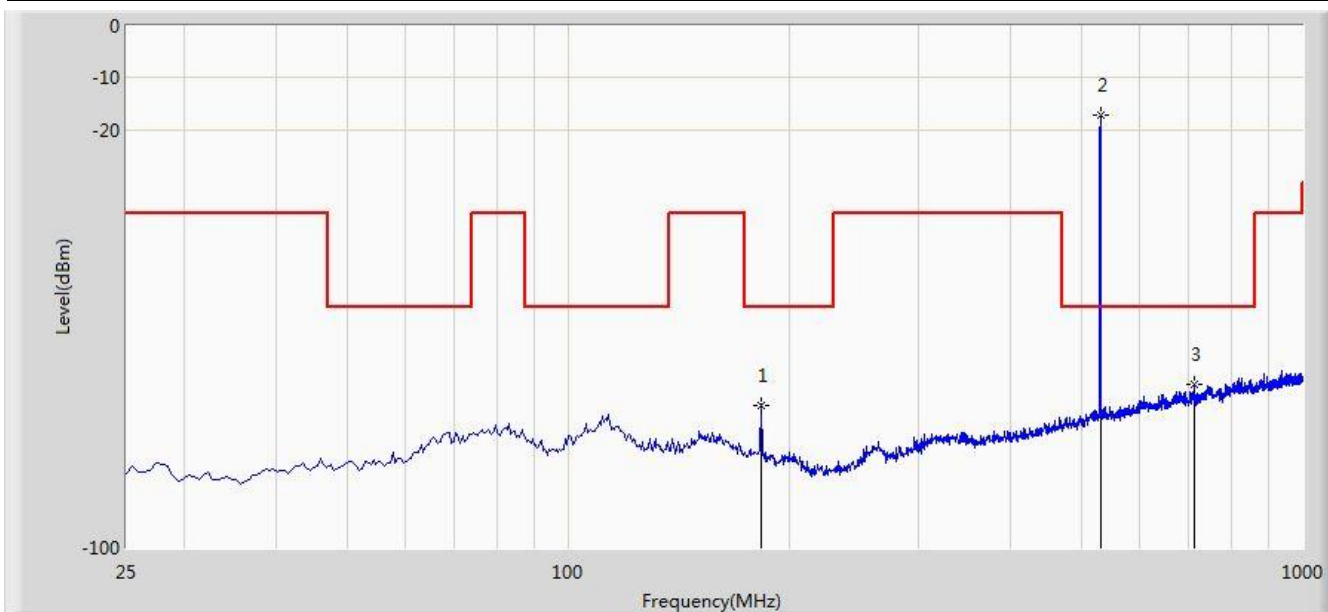


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			226.825	-76.873	-103.365	-22.873	-54.000	26.492	PK
2		*	530.050	-15.061	-45.993	N/A	N/A	30.932	PK
3			781.112	-67.519	-103.656	-13.519	-54.000	36.137	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:56
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 1mW	

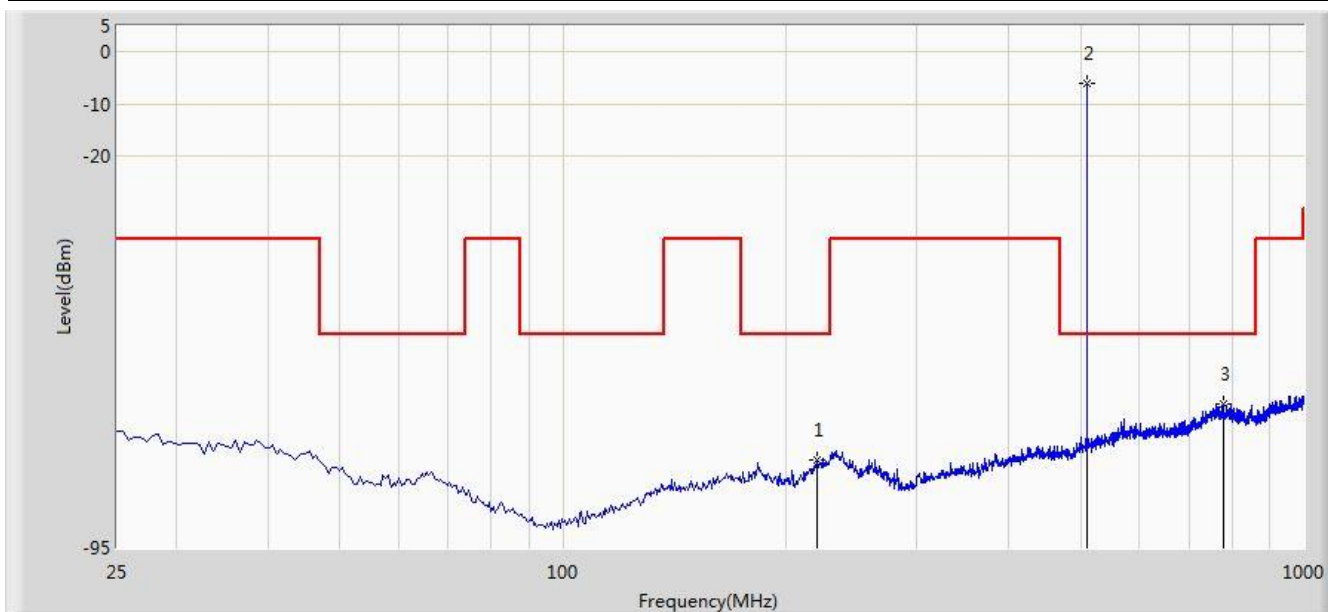


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-72.727	-95.840	-18.727	-54.000	23.113	PK
2		*	530.050	-17.000	-47.970	N/A	N/A	30.970	PK
3			711.888	-68.773	-102.446	-14.773	-54.000	33.673	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:36
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 10mW	

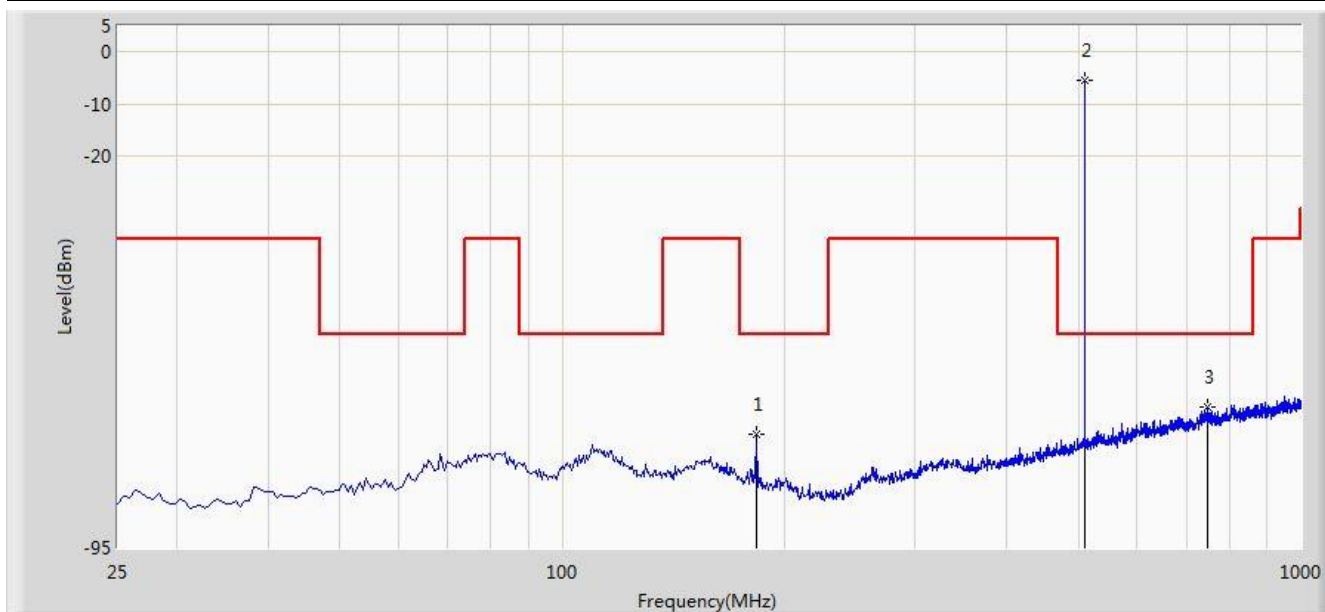


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			220.488	-78.091	-104.245	-24.091	-54.000	26.154	PK
2		*	510.062	-6.046	-35.726	N/A	N/A	29.680	PK
3			778.675	-67.505	-103.682	-13.505	-54.000	36.177	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:39
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 10mW	

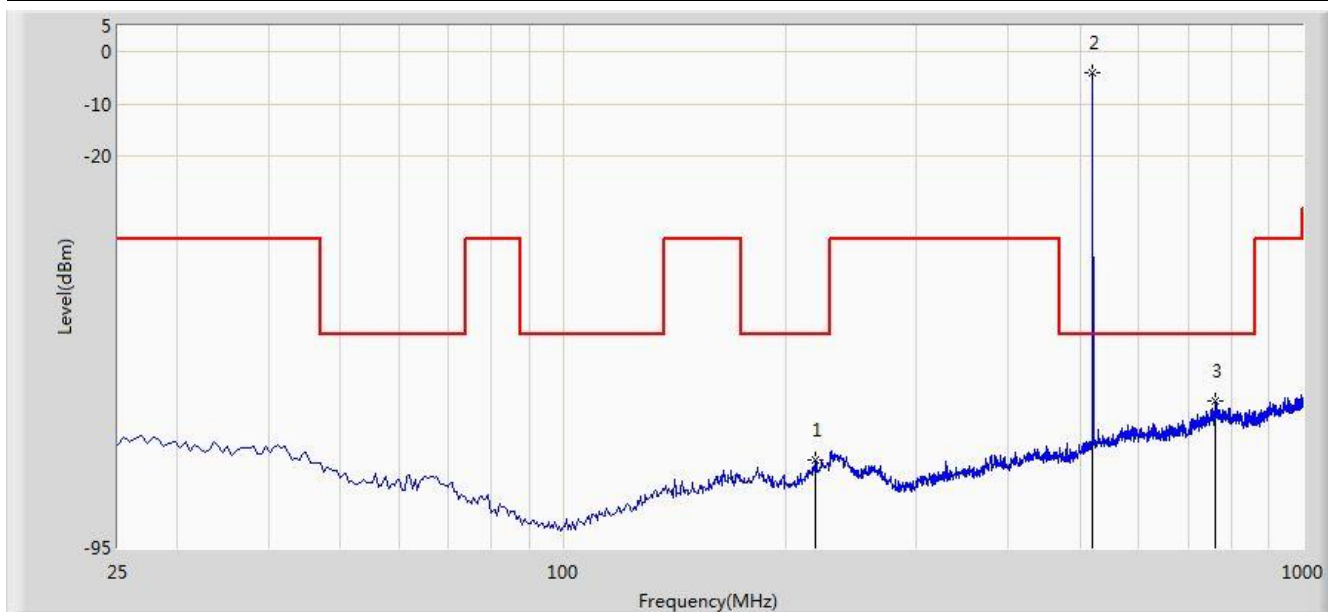


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			183.437	-73.380	-96.439	-19.380	-54.000	23.059	PK
2		*	510.062	-5.437	-35.597	N/A	N/A	30.160	PK
3			746.500	-68.101	-103.457	-14.101	-54.000	35.356	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:48
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 10mW	

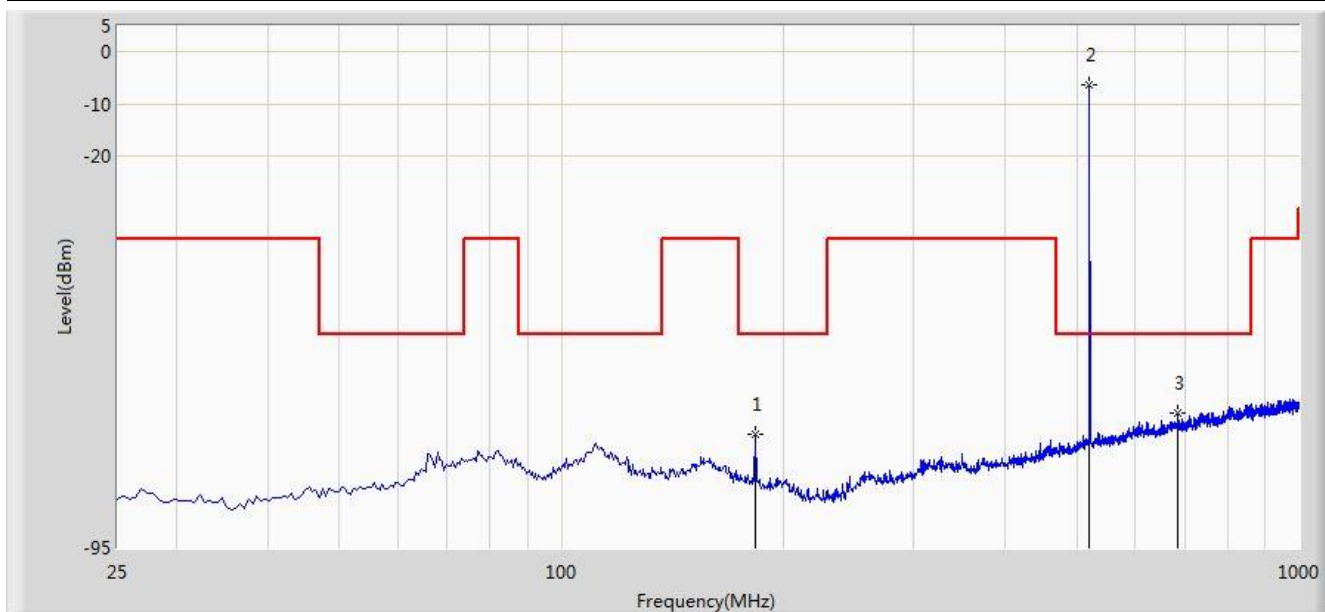


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			219.512	-78.261	-104.383	-24.261	-54.000	26.122	PK
2		*	519.812	-4.001	-34.484	N/A	N/A	30.483	PK
3			763.075	-66.885	-103.095	-12.885	-54.000	36.210	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:50
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 10mW	

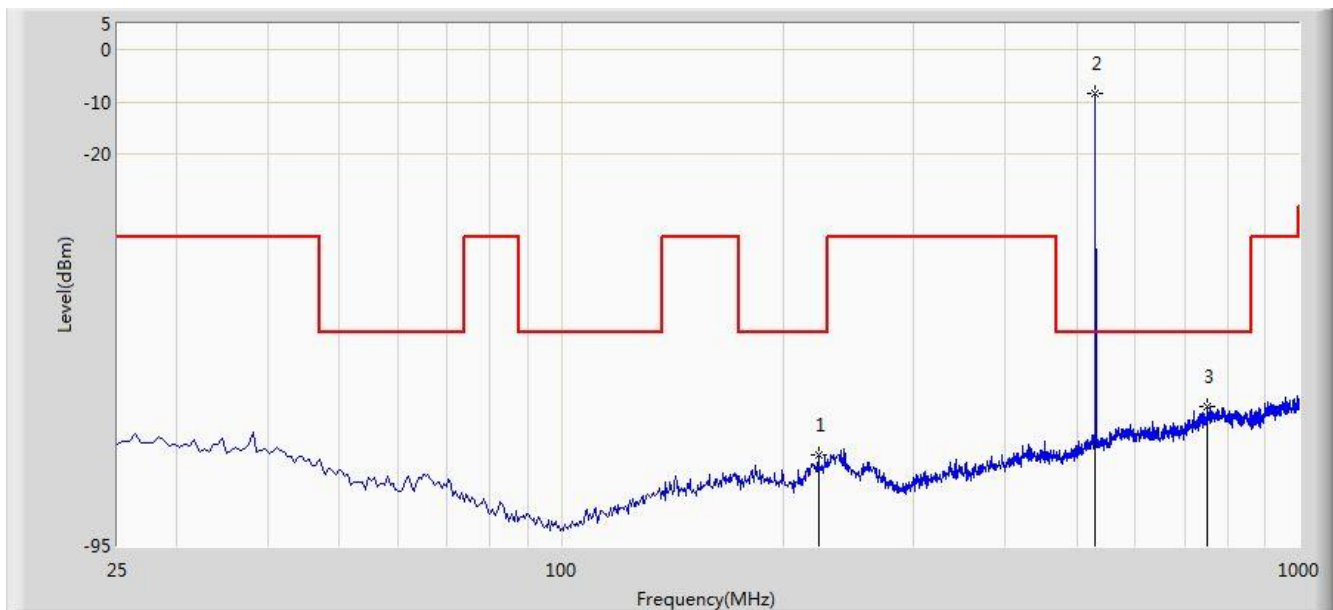


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-73.247	-96.360	-19.247	-54.000	23.113	PK
2		*	519.812	-6.266	-36.817	N/A	N/A	30.551	PK
3			686.050	-69.076	-103.015	-15.076	-54.000	33.939	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:58
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 10mW	

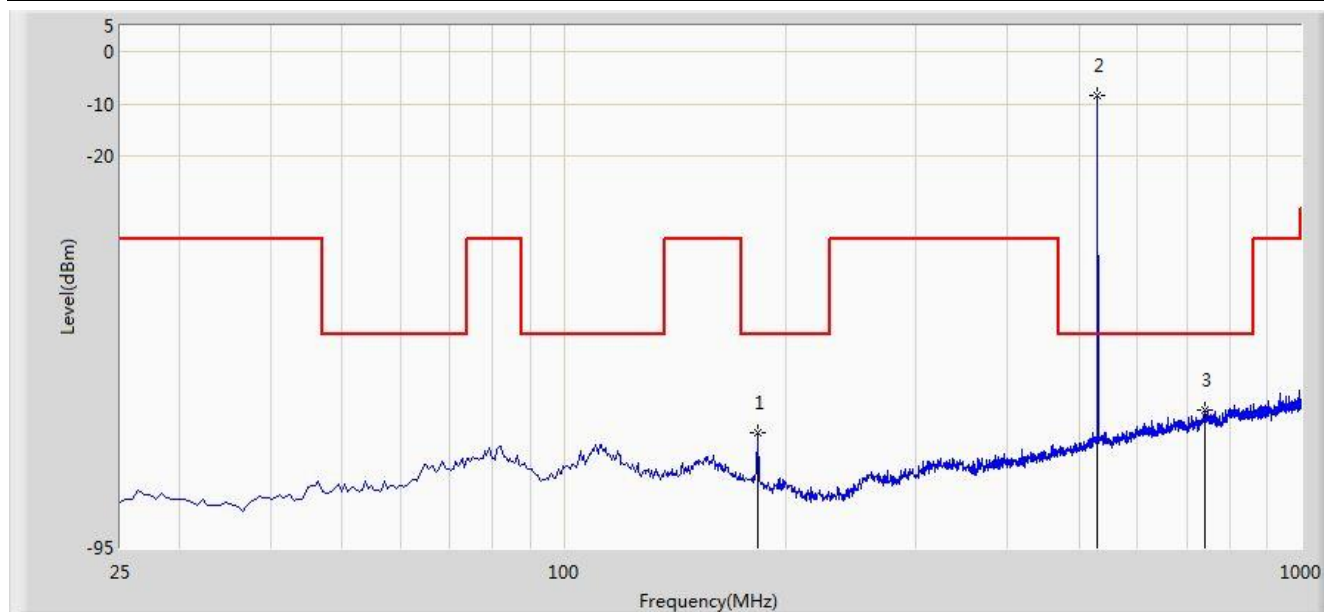


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			223.413	-77.749	-104.271	-23.749	-54.000	26.522	PK
2		*	530.050	-8.330	-39.262	N/A	N/A	30.932	PK
3			751.375	-68.374	-104.074	-14.374	-54.000	35.700	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 15:00
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 10mW	

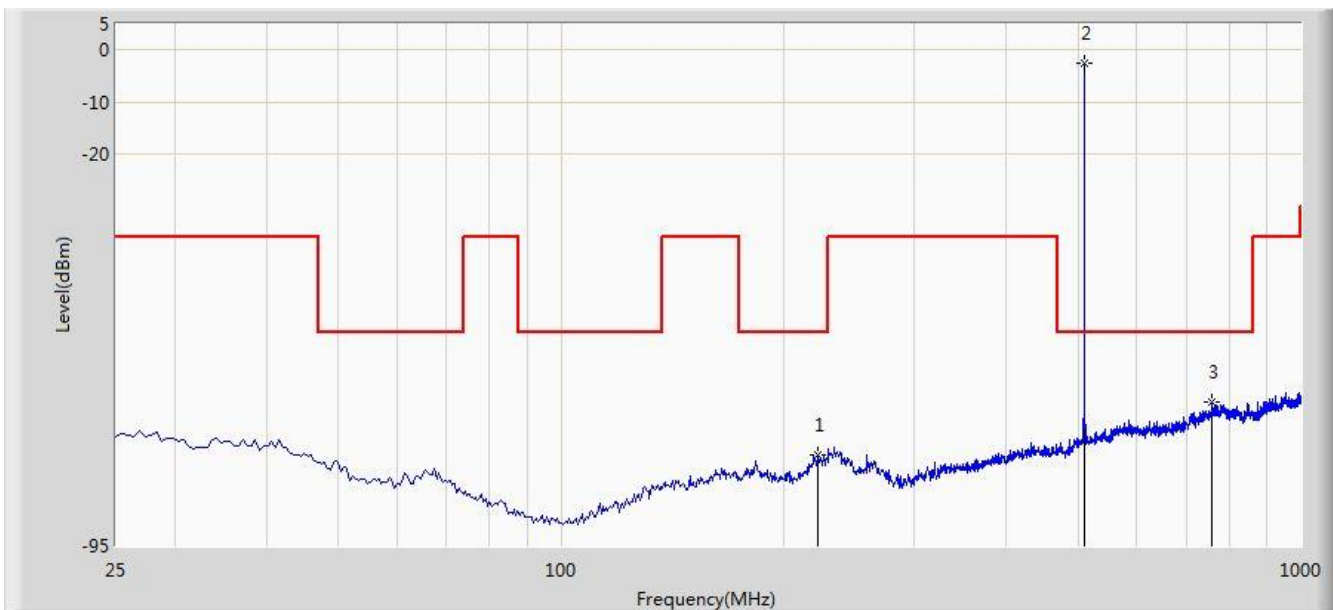


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-72.855	-95.968	-18.855	-54.000	23.113	PK
2		*	530.050	-8.300	-39.270	N/A	N/A	30.970	PK
3			741.138	-68.635	-103.976	-14.635	-54.000	35.341	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:40
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 20mW	

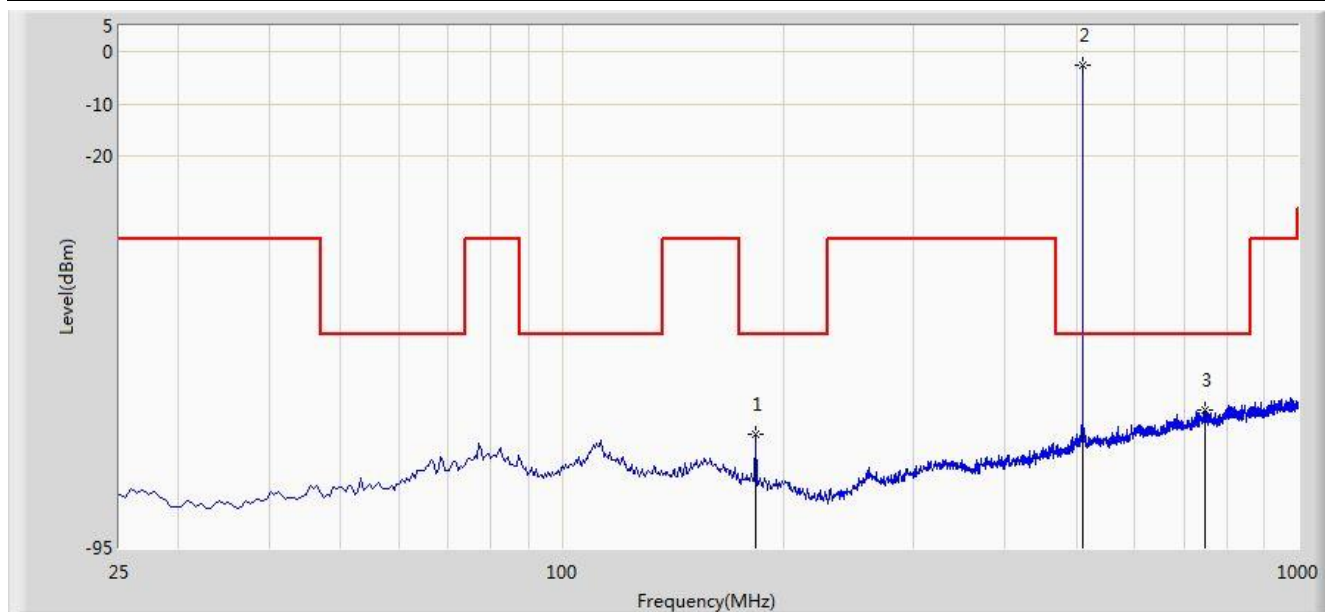


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			222.925	-77.561	-103.829	-23.561	-54.000	26.268	PK
2		*	510.062	-2.619	-32.299	N/A	N/A	29.680	PK
3			759.175	-67.487	-103.601	-13.487	-54.000	36.114	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:42
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 20mW	

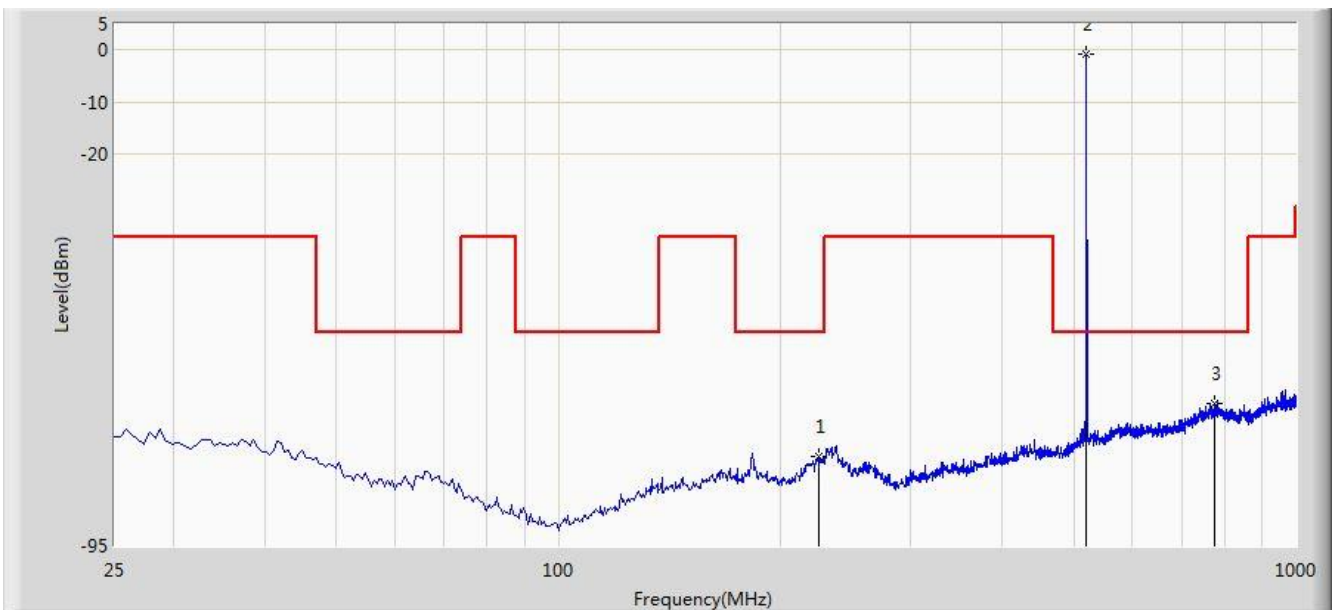


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-73.303	-96.416	-19.303	-54.000	23.113	PK
2		*	510.062	-2.434	-32.594	N/A	N/A	30.160	PK
3			746.500	-68.610	-103.966	-14.610	-54.000	35.356	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:51
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 20mW	

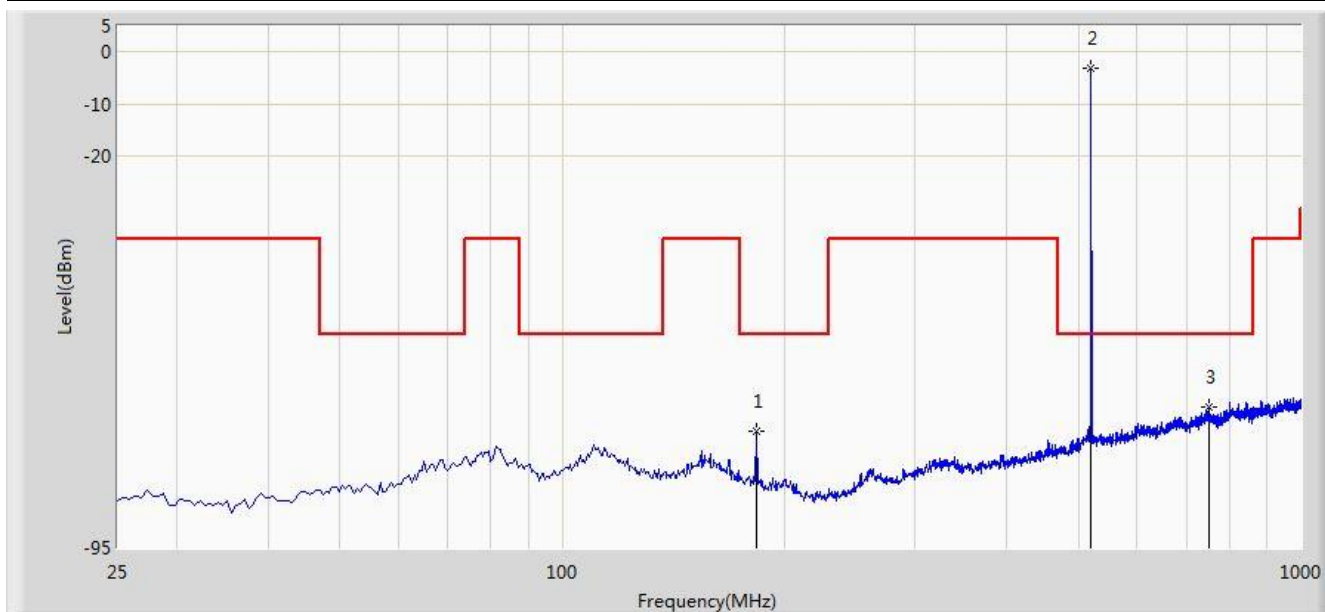


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			225.363	-77.757	-104.112	-23.757	-54.000	26.355	PK
2		*	519.812	-0.785	-31.268	N/A	N/A	30.483	PK
3			776.725	-67.644	-103.821	-13.644	-54.000	36.177	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 14:53
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 20mW	

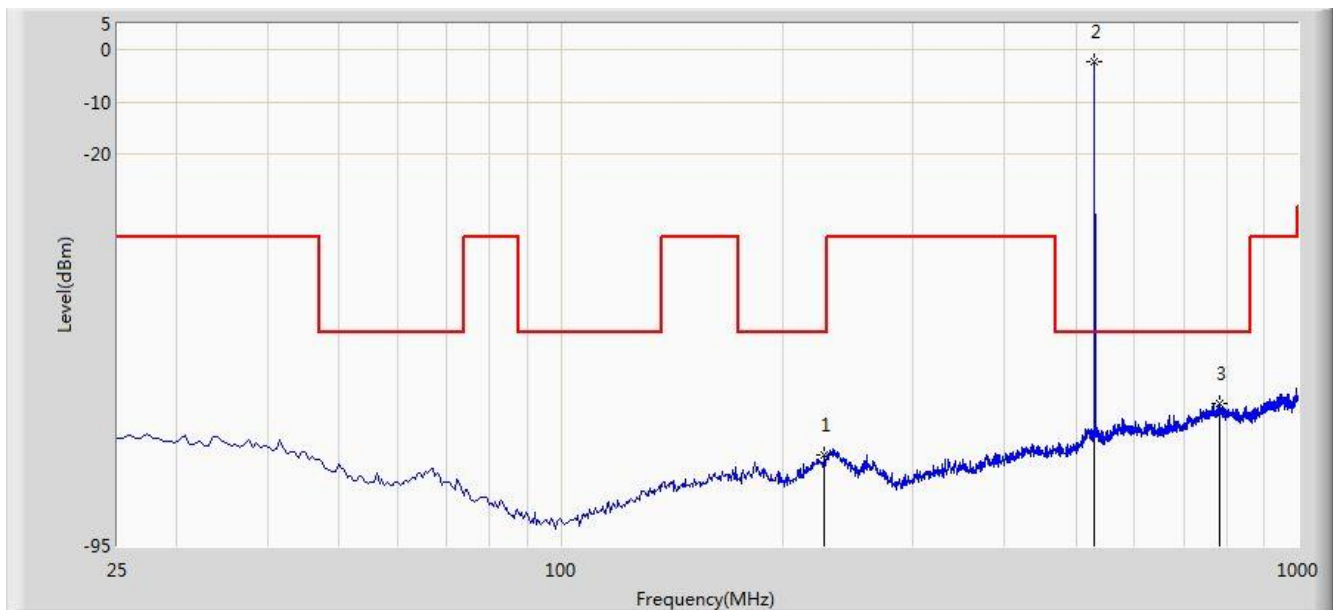


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-72.657	-95.770	-18.657	-54.000	23.113	PK
2		*	519.812	-3.043	-33.594	N/A	N/A	30.551	PK
3			752.838	-68.083	-103.268	-14.083	-54.000	35.185	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 15:01
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 20mW	

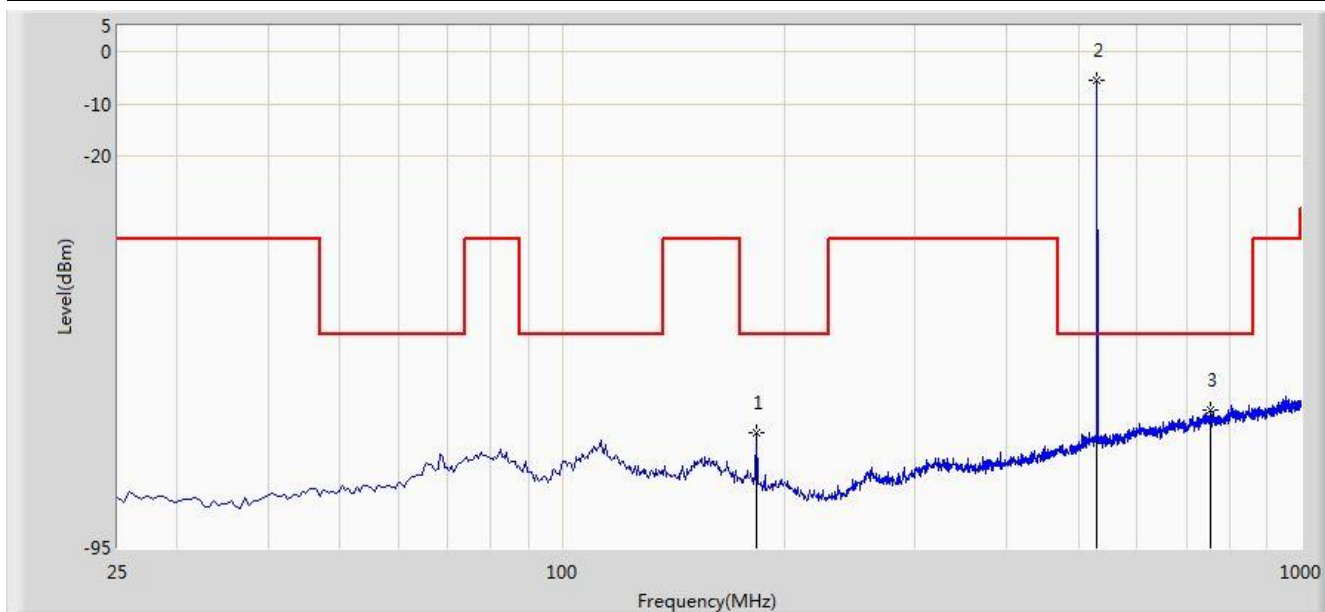


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			227.800	-77.595	-104.283	-23.595	-54.000	26.688	PK
2		*	530.050	-2.352	-33.284	N/A	N/A	30.932	PK
3			784.037	-67.640	-103.808	-13.640	-54.000	36.168	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 15:03
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(20-1000MHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 20mW	

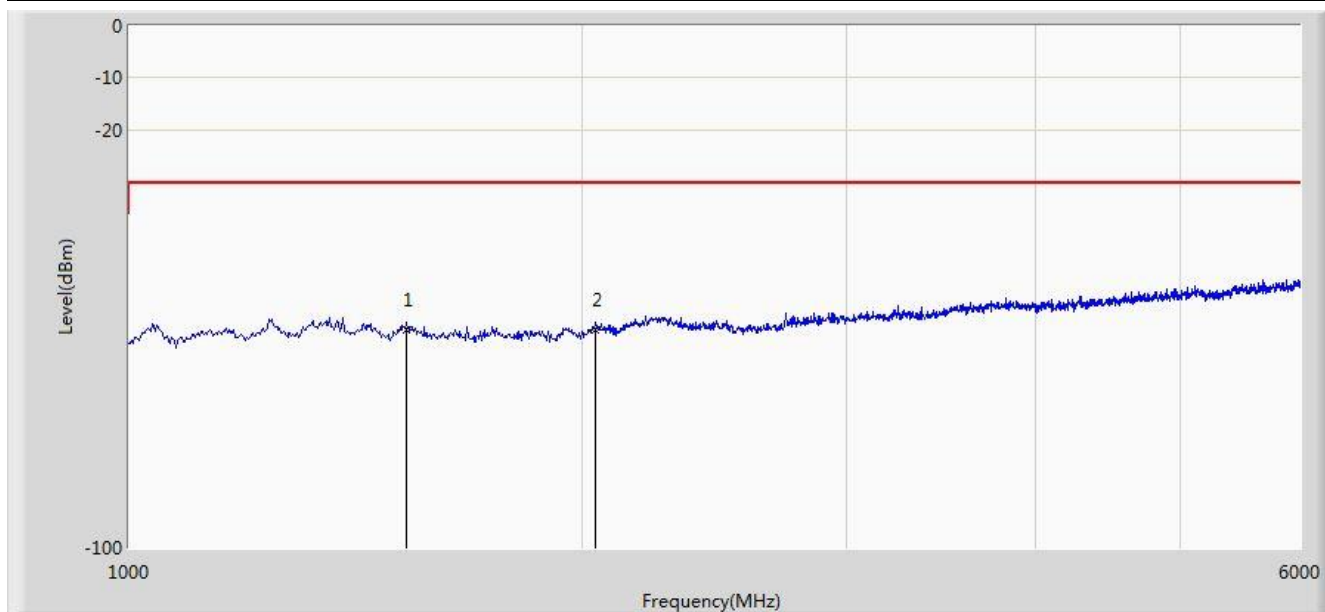


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			182.950	-72.944	-96.057	-18.944	-54.000	23.113	PK
2		*	530.050	-5.370	-36.340	N/A	N/A	30.970	PK
3			753.812	-68.632	-103.803	-14.632	-54.000	35.171	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2017/10/25 - 16:19
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 1mW	

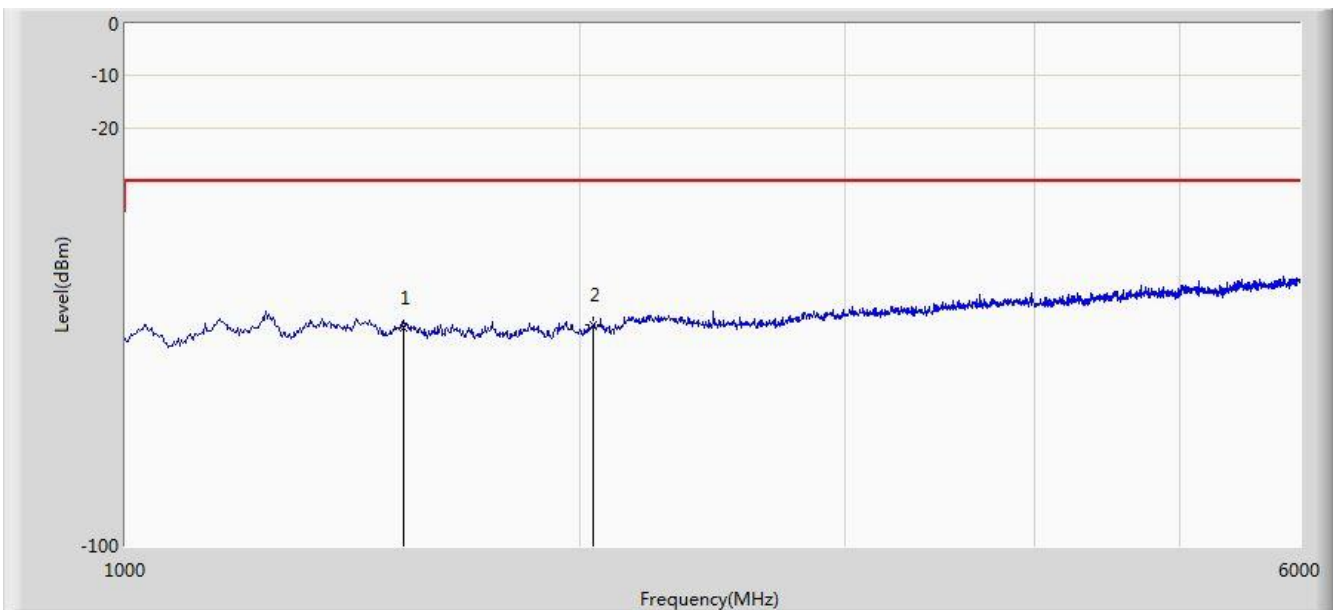


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1530.300	-58.167	-65.663	-28.167	-30.000	7.496	PK
2		*	2040.400	-58.144	-67.337	-28.144	-30.000	9.193	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:21
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 1mW	

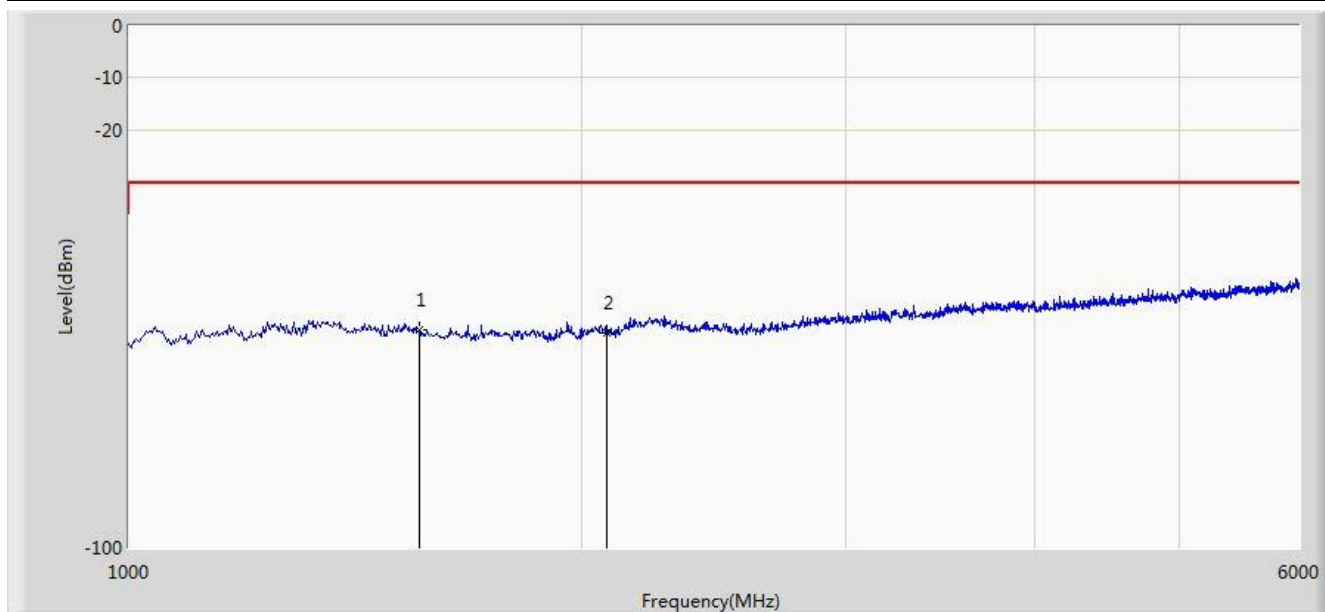


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1530.300	-58.272	-65.775	-28.272	-30.000	7.503	PK
2		*	2040.400	-57.816	-66.768	-27.816	-30.000	8.952	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:29
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 1mW	

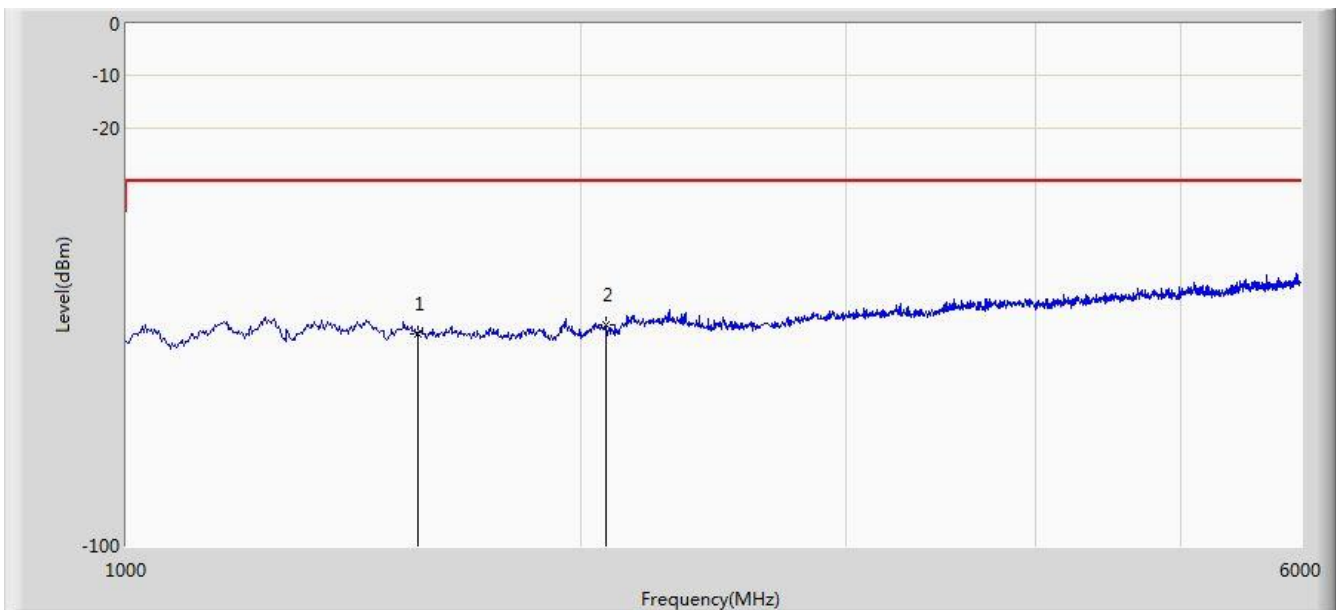


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1560.000	-58.371	-65.441	-28.371	-30.000	7.070	PK
2			2080.000	-58.886	-68.519	-28.886	-30.000	9.633	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:31
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 1mW	

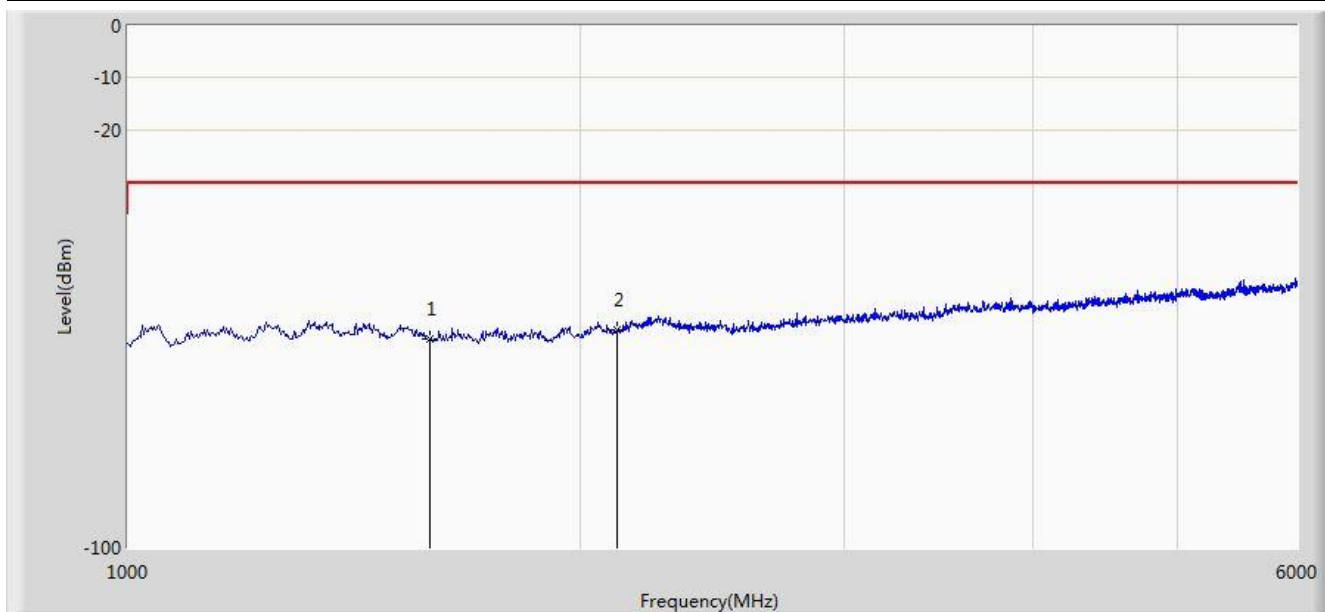


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1560.000	-59.515	-66.450	-29.515	-30.000	6.935	PK
2		*	2080.000	-57.611	-67.216	-27.611	-30.000	9.605	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:37
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 1mW	

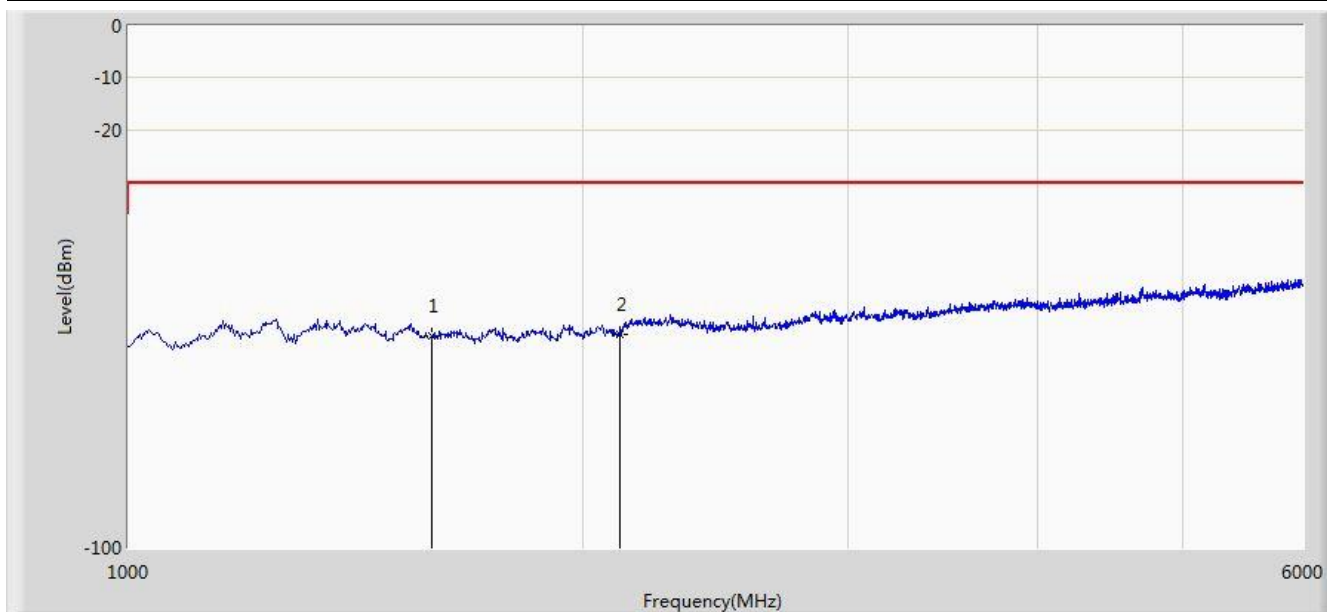


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-60.033	-67.075	-30.033	-30.000	7.042	PK
2		*	2119.600	-58.210	-68.307	-28.210	-30.000	10.097	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:40
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 1mW	

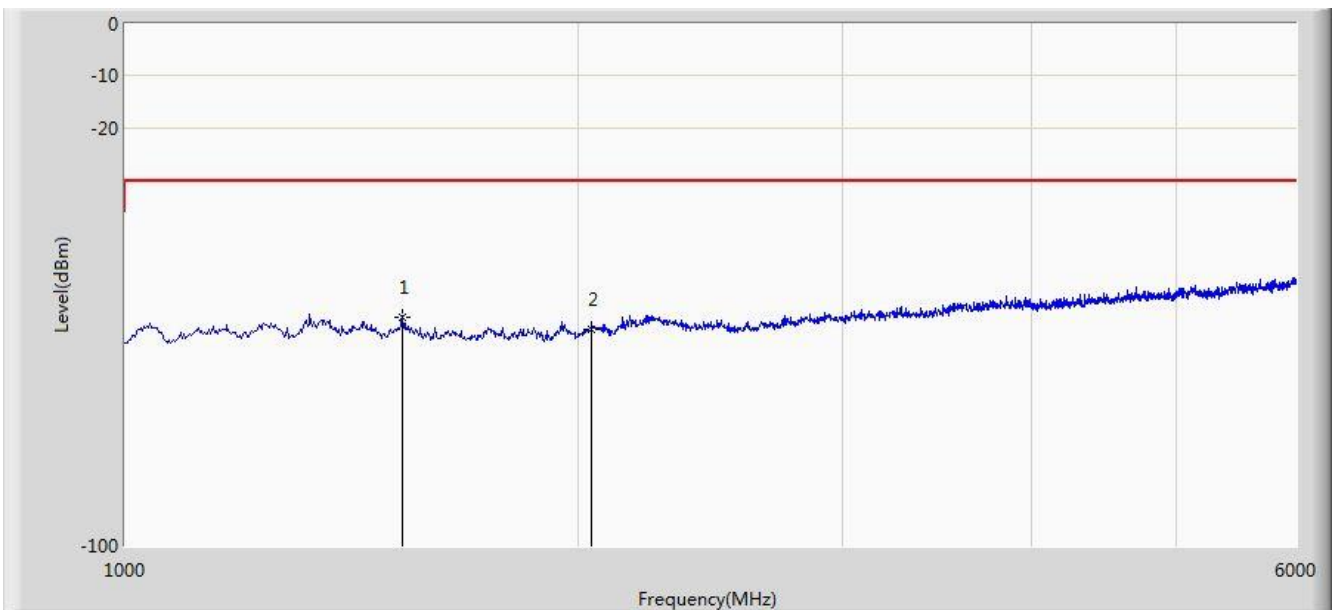


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-59.478	-66.721	-29.478	-30.000	7.243	PK
2		*	2119.600	-59.106	-69.180	-29.106	-30.000	10.074	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:23
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 10mW	

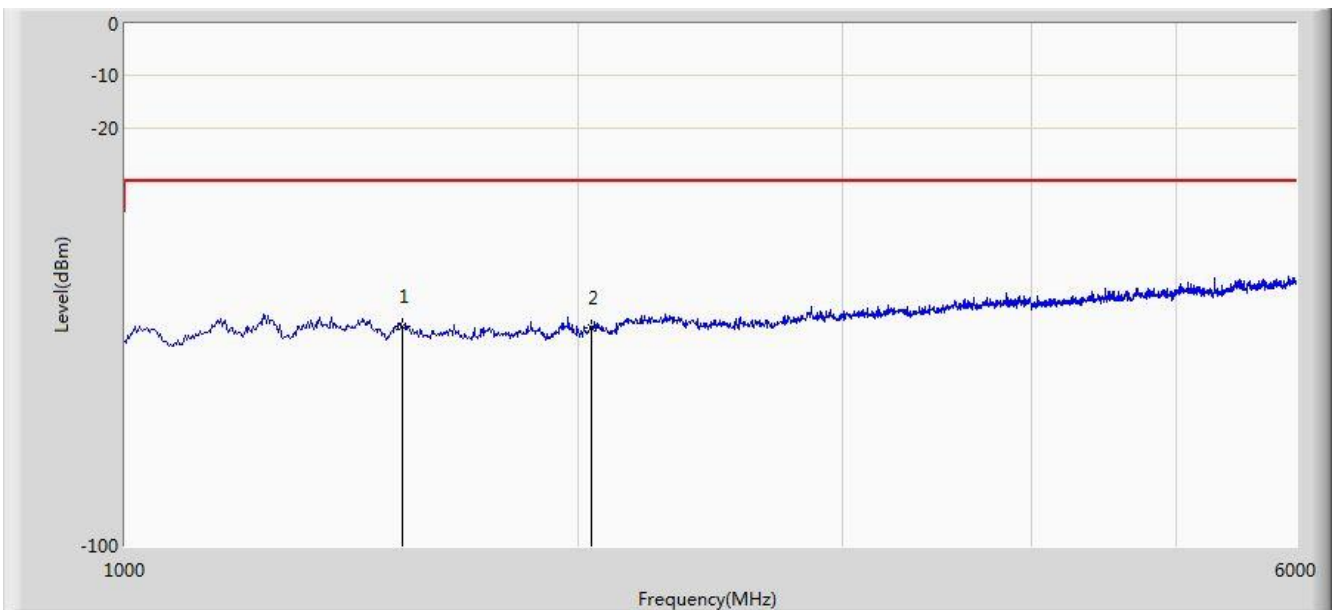


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1530.300	-56.333	-63.829	-26.333	-30.000	7.496	PK
2			2040.400	-58.525	-67.718	-28.525	-30.000	9.193	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:25
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 10mW	

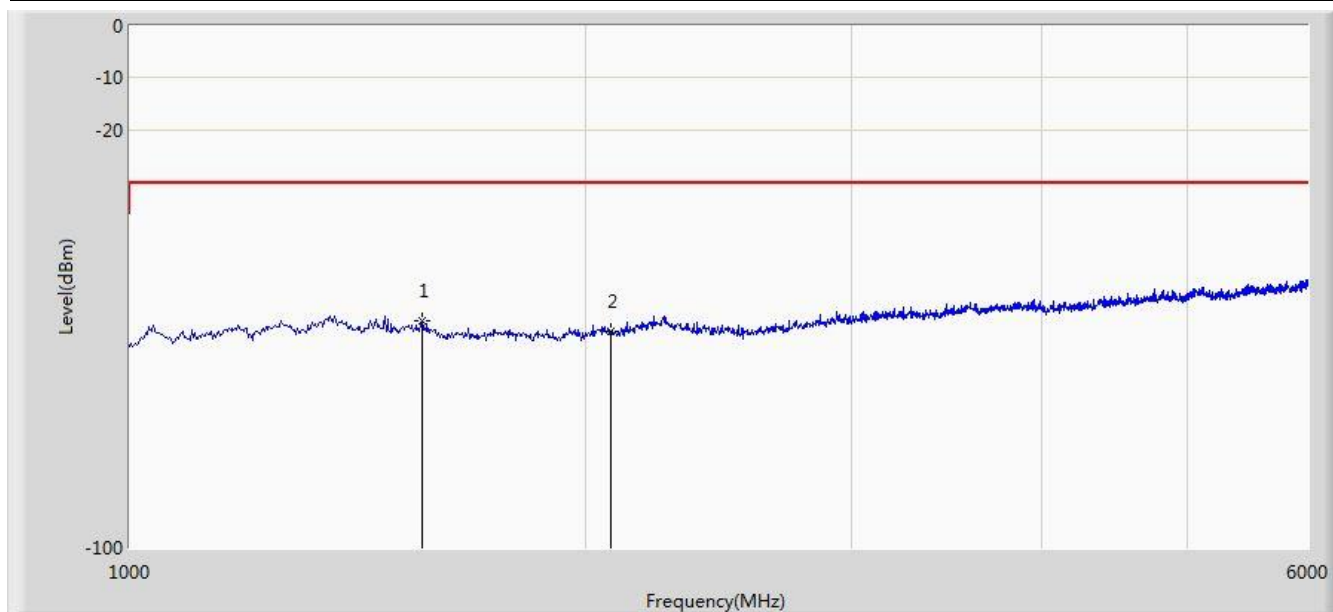


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1530.300	-58.097	-65.600	-28.097	-30.000	7.503	PK
2			2040.400	-58.123	-67.075	-28.123	-30.000	8.952	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:32
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 10mW	

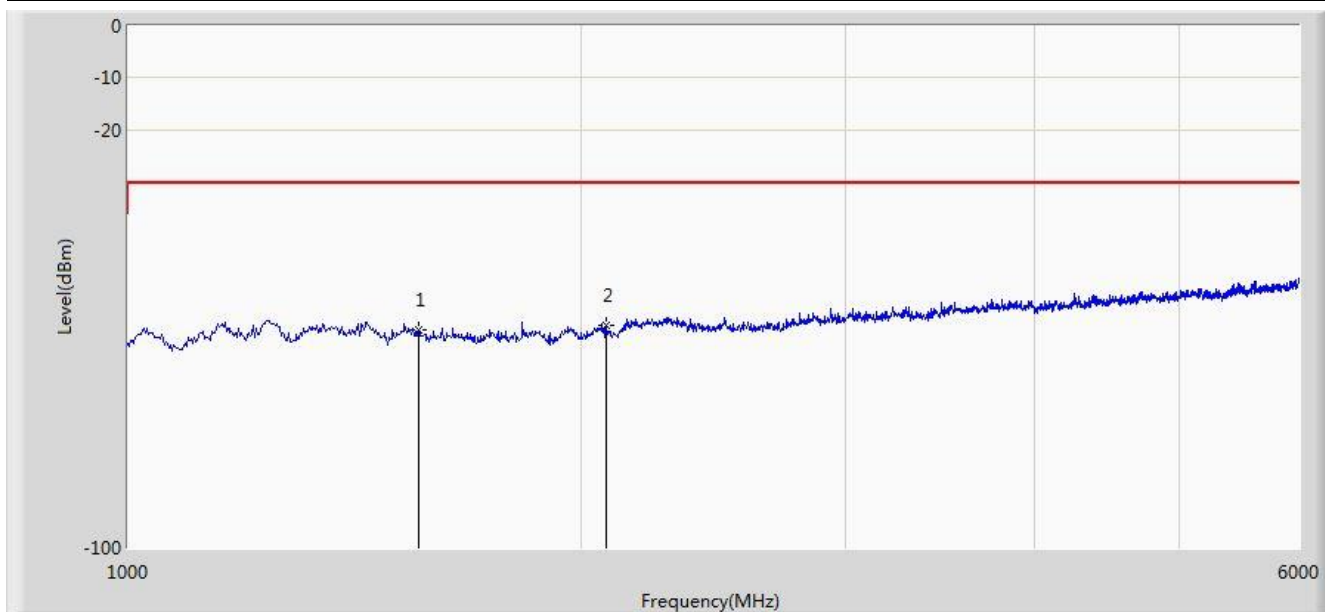


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1560.000	-56.431	-63.501	-26.431	-30.000	7.070	PK
2			2080.000	-58.541	-68.174	-28.541	-30.000	9.633	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:34
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 10mW	

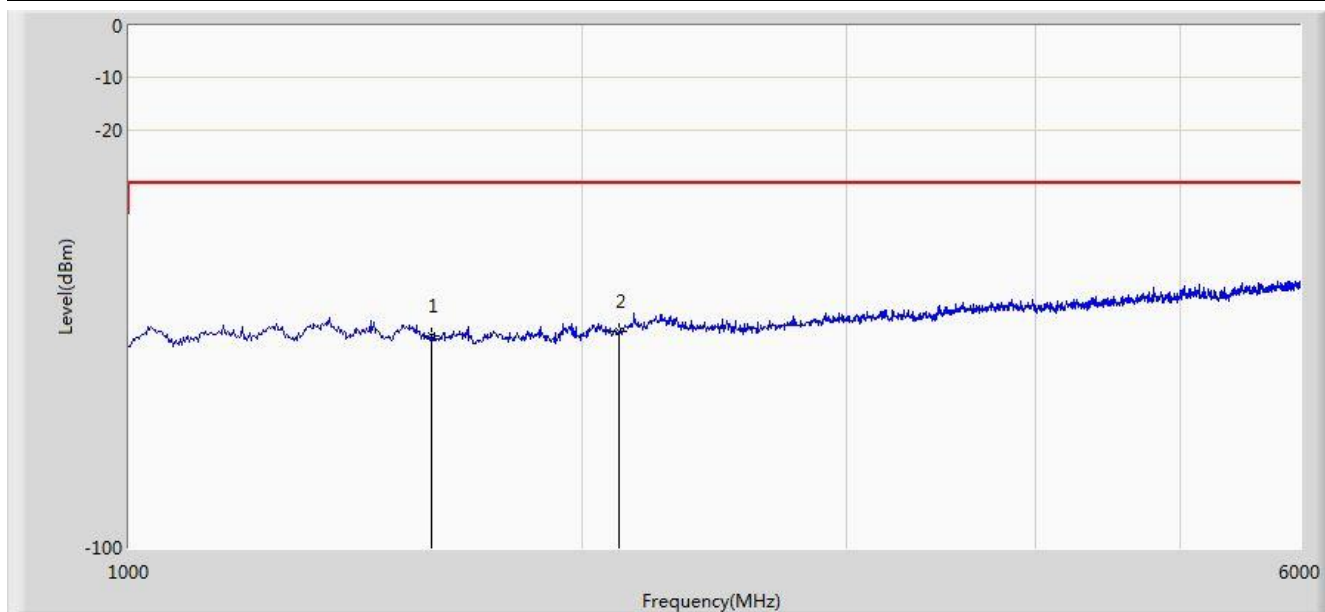


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1560.000	-58.322	-65.257	-28.322	-30.000	6.935	PK
2		*	2080.000	-57.263	-66.868	-27.263	-30.000	9.605	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:41
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 10mW	

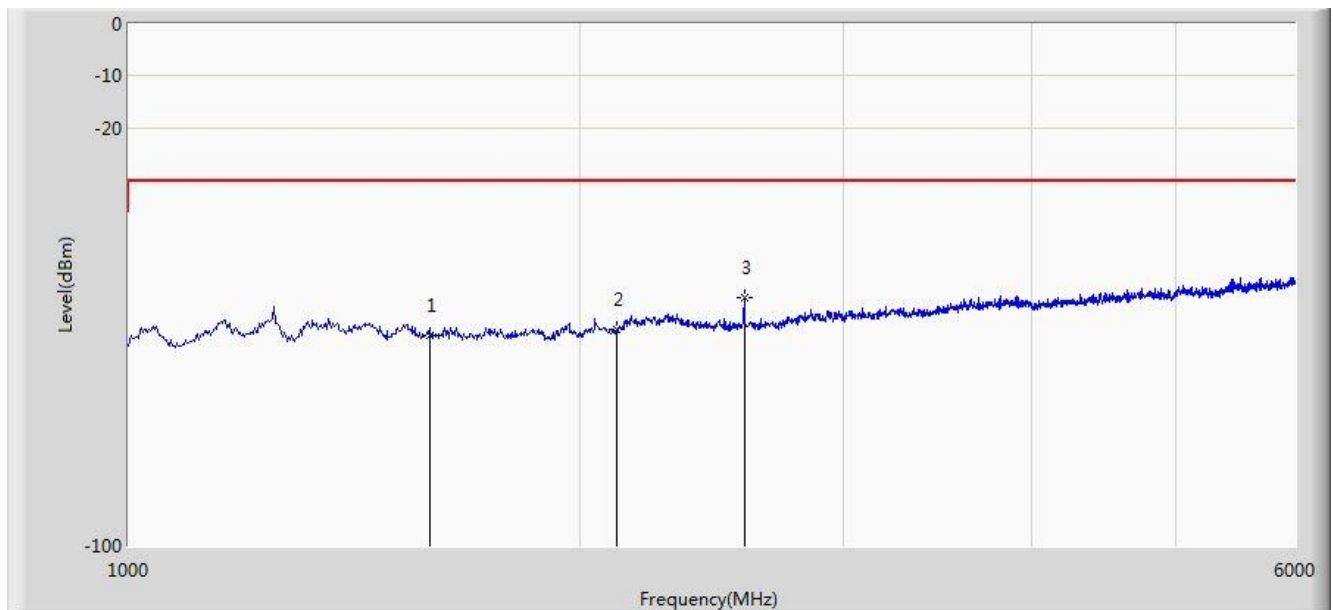


N	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-59.338	-66.380	-29.338	-30.000	7.042	PK
2		*	2119.600	-58.517	-68.614	-28.517	-30.000	10.097	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:43
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 10mW	

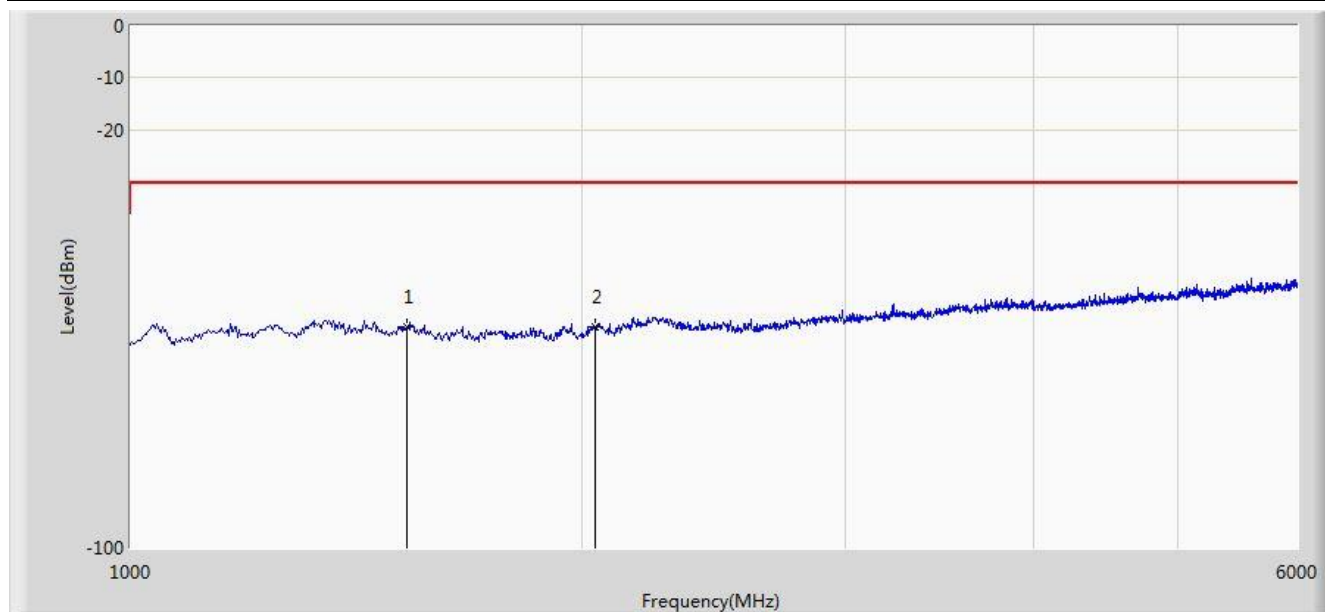


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-59.688	-66.931	-29.688	-30.000	7.243	PK
2			2119.600	-58.499	-68.573	-28.499	-30.000	10.074	PK
3		*	2575.000	-52.454	-63.695	-22.454	-30.000	11.241	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:26
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 20mW	

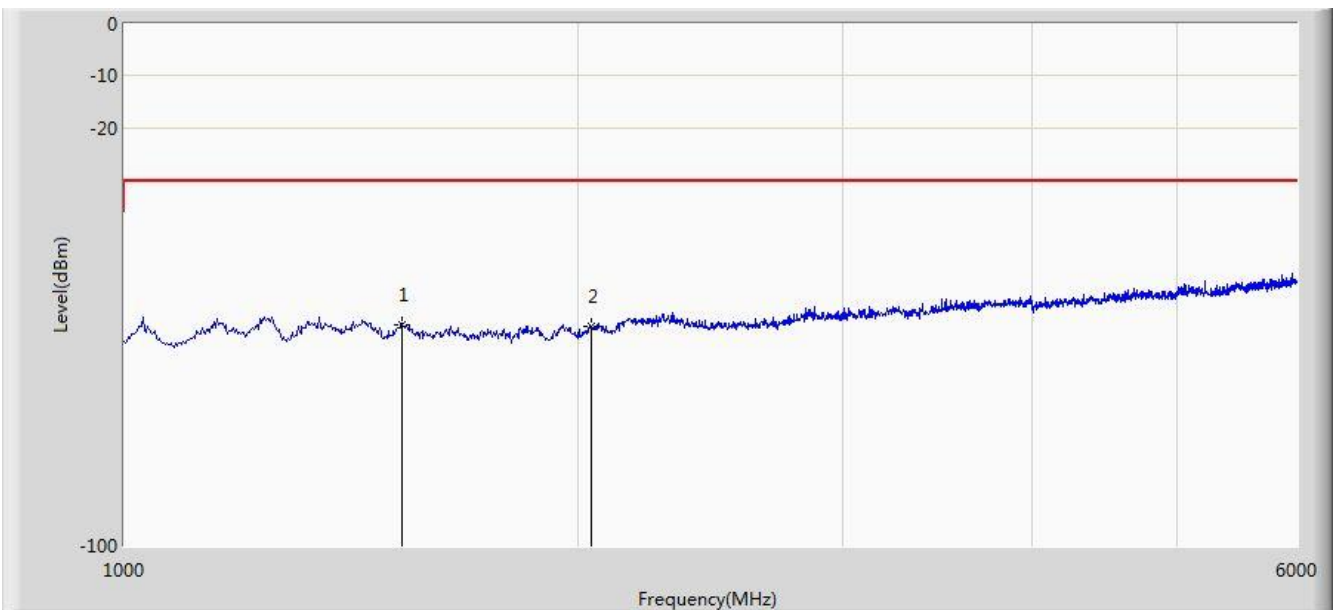


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1530.300	-57.577	-65.073	-27.577	-30.000	7.496	PK
2			2040.400	-57.635	-66.828	-27.635	-30.000	9.193	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:28
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 510.1MHz 20mW	

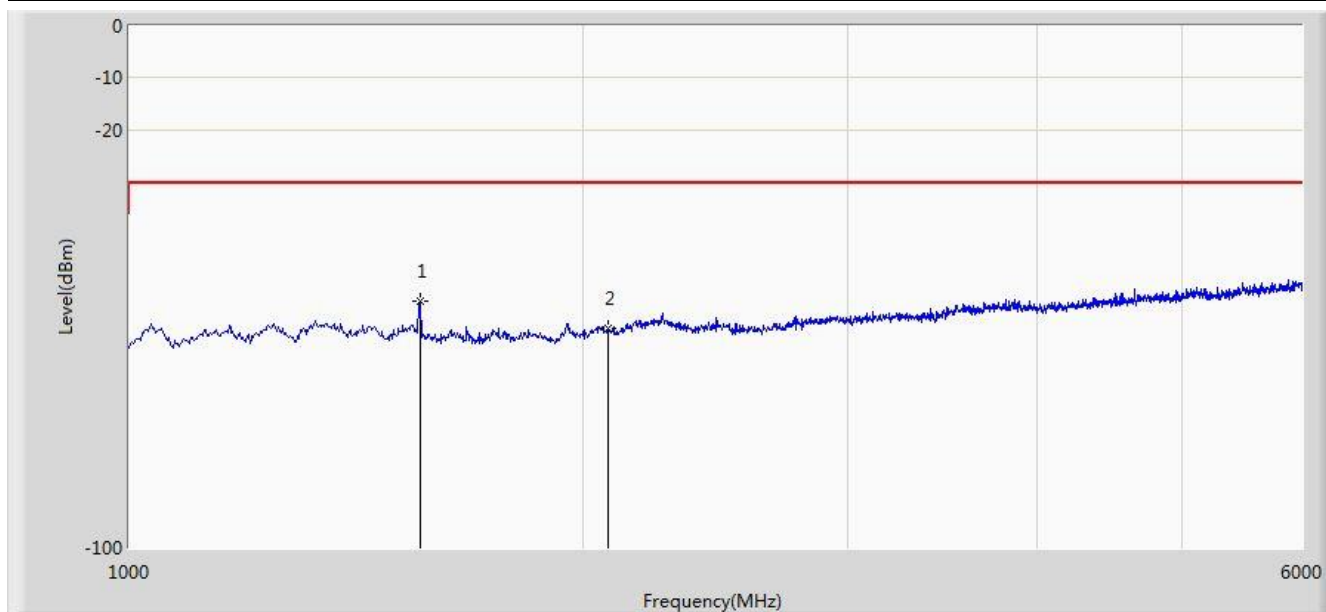


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1530.300	-57.567	-65.070	-27.567	-30.000	7.503	PK
2			2040.400	-58.086	-67.038	-28.086	-30.000	8.952	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:35
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 20mW	

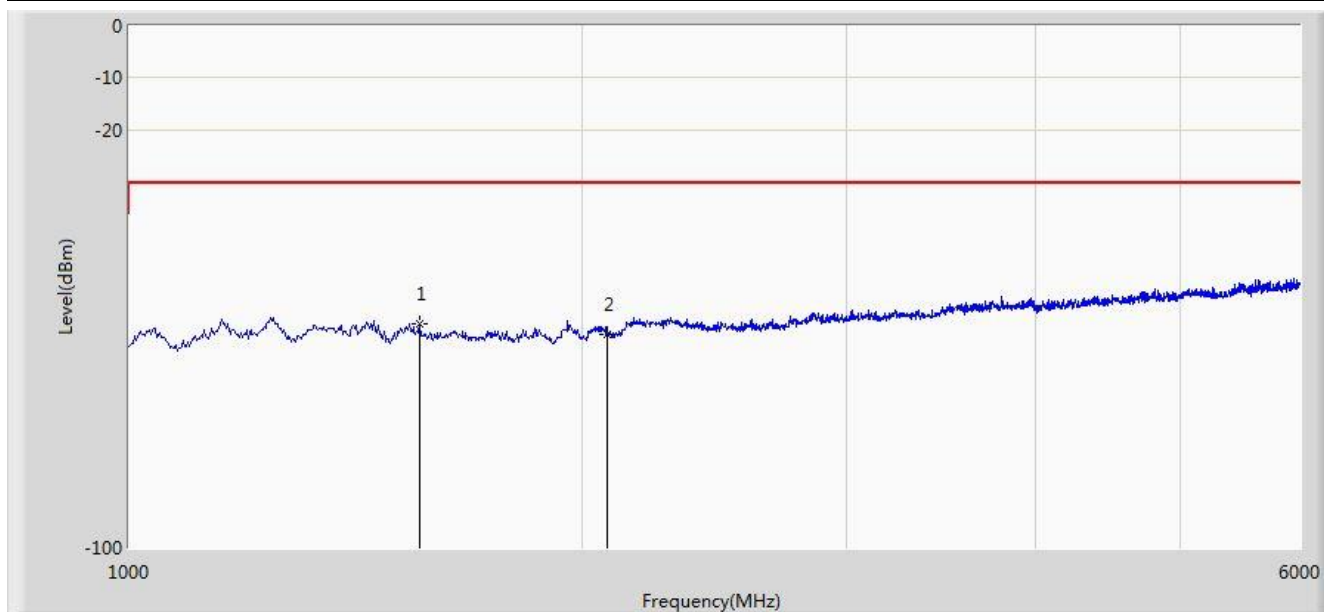


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1560.000	-52.720	-59.790	-22.720	-30.000	7.070	PK
2			2080.000	-58.034	-67.667	-28.034	-30.000	9.633	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:36
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 520MHz 20mW	

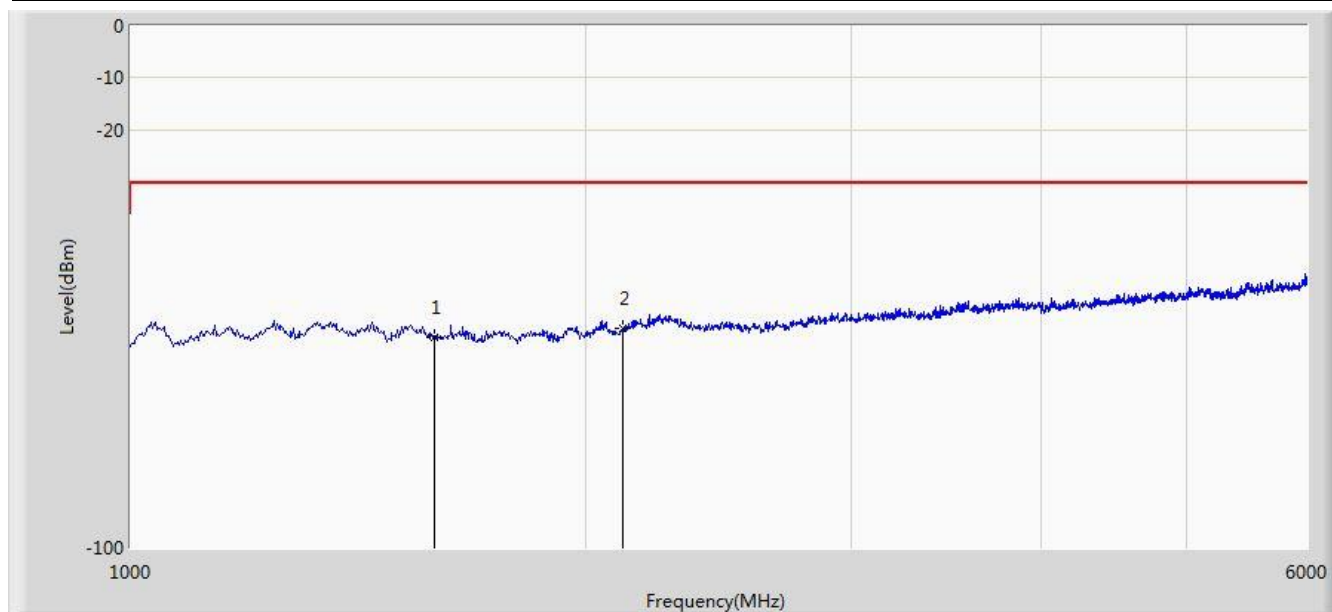


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1		*	1560.000	-57.191	-64.126	-27.191	-30.000	6.935	PK
2			2080.000	-59.086	-68.691	-29.086	-30.000	9.605	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:44
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Horizontal
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 20mW	

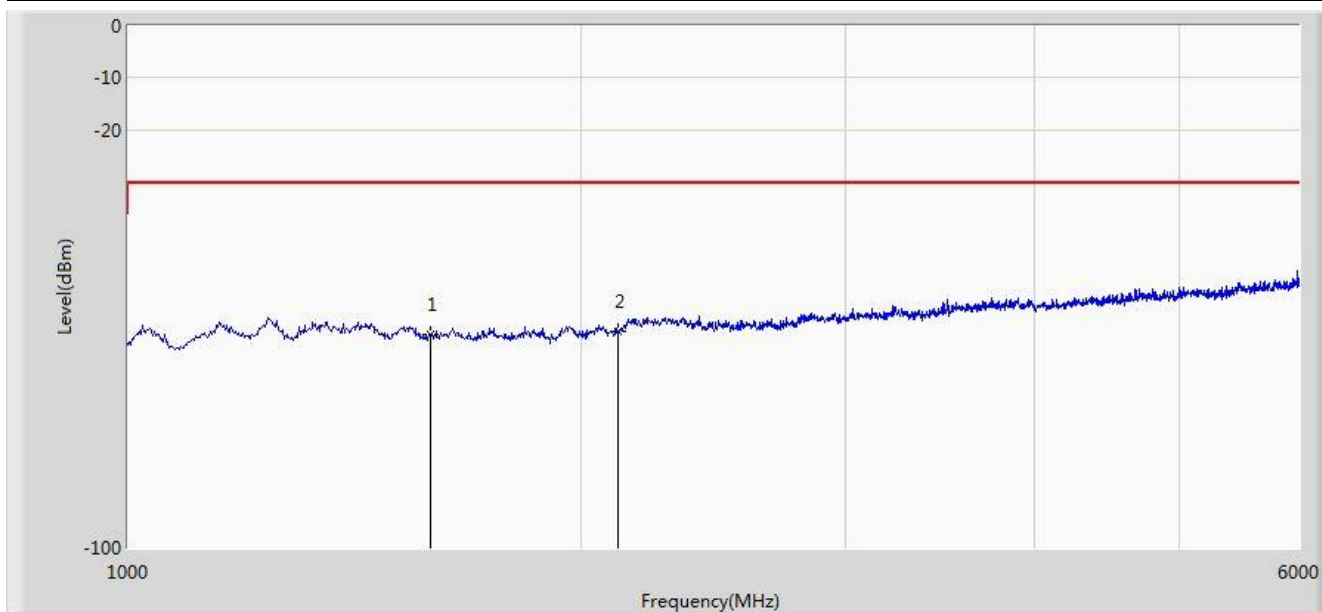


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-59.566	-66.608	-29.566	-30.000	7.042	PK
2		*	2119.600	-58.015	-68.112	-28.015	-30.000	10.097	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2017/10/25 - 16:46
Limit: ETSI_EN300422_RSE(3m)_Tx(Operating)	Engineer: Peter
Probe: RF_Substitution_(1-6GHz)	Polarity: Vertical
EUT: Wireless Boundary Transmitter	Power: By Battery
Test Mode: Transmit at Channel 529.9MHz 20mW	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBm)	Reading Level (dBm)	Over Limit (dB)	Limit (dBm)	Factor (dB)	Type
1			1589.700	-59.022	-66.265	-29.022	-30.000	7.243	PK
2		*	2119.600	-58.648	-68.722	-28.648	-30.000	10.074	PK

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The End