

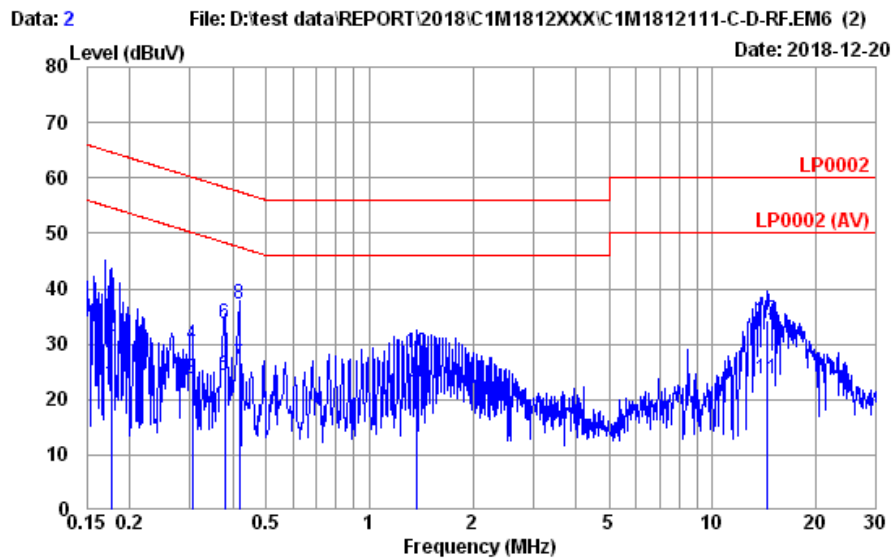
附錄一

受測裝置之測試結果

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1. 電源線傳導干擾之量測

測試日期	2018/12/20	環境溫/濕度	21°C/59%
測試電壓	AC 110V 60Hz (透過筆記型電腦供電)		

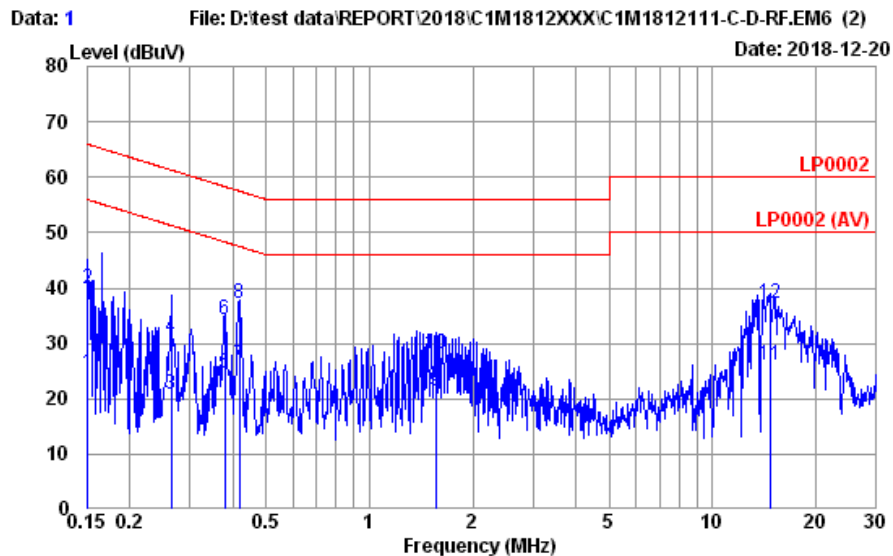


Site no. : No.8 Shielded Room Data no. : 2
Condition : ENV4200 100169 LISN Phase : NEUTRAL
Limit : LP0002
Env. / Ins. : 21°C / 59% ESCI (0558) Engineer : Jemy
EUT : WI-1000X
Power Rating : 110Vac/60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.177	10.54	0.03	9.98	2.38	22.93	54.64	31.71	Average
2	0.177	10.54	0.03	9.98	10.93	31.48	64.64	33.16	QP
3	0.305	10.47	0.04	9.98	3.32	23.81	50.10	26.29	Average
4	0.305	10.47	0.04	9.98	9.33	29.82	60.10	30.28	QP
5	0.379	10.44	0.04	9.98	3.75	24.21	48.30	24.09	Average
6	0.379	10.44	0.04	9.98	13.25	33.71	58.30	24.59	QP
7	0.417	10.43	0.04	9.98	6.01	26.46	47.51	21.05	Average
8	0.417	10.43	0.04	9.98	16.72	37.17	57.51	20.34	QP
9	1.367	10.44	0.06	9.99	2.22	22.71	46.00	23.29	Average
10	1.367	10.44	0.06	9.99	8.08	28.57	56.00	27.43	QP
11	14.440	12.47	0.23	10.05	0.98	23.73	50.00	26.27	Average
12	14.440	12.47	0.23	10.05	11.41	34.16	60.00	25.84	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

測試日期	2018/12/20	環境溫/濕度	21°C/59%
測試電壓	AC 110V 60Hz (透過筆記型電腦供電)		



Site no. : No.8 Shielded Room Data no. : 1
Condition : ENV4200 100169 LISN Phase : LINE
Limit : LP0002
Env. / Ins. : 21°C / 59% ESCI (0558) Engineer : Jemy
EUT : WI-1000X
Power Rating : 110Vac/60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.151	10.63	0.03	9.98	4.06	24.70	55.96	31.26	Average
2	0.151	10.63	0.03	9.98	19.33	39.97	65.96	25.99	QP
3	0.264	10.52	0.03	9.98	0.30	20.83	51.29	30.46	Average
4	0.264	10.52	0.03	9.98	10.61	31.14	61.29	30.15	QP
5	0.379	10.46	0.04	9.98	4.21	24.69	48.30	23.61	Average
6	0.379	10.46	0.04	9.98	13.69	34.17	58.30	24.13	QP
7	0.417	10.45	0.04	9.98	5.61	26.08	47.51	21.43	Average
8	0.417	10.45	0.04	9.98	16.67	37.14	57.51	20.37	QP
9	1.560	10.46	0.06	9.99	0.95	21.46	46.00	24.54	Average
10	1.560	10.46	0.06	9.99	7.49	28.00	56.00	28.00	QP
11	14.672	12.55	0.23	10.05	3.30	26.13	50.00	23.87	Average
12	14.672	12.55	0.23	10.05	14.50	37.33	60.00	22.67	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

2. 場強輻射之量測

對受測物裝置之其他不必要之發射(測至本地振盪頻率之 10 次諧波)依下列測試模式分別於電波暗室內進行量測，選擇低、中、高頻率來進行量測，並將下列測試模式之掃頻圖檢附於附錄中。所得讀值資料請見章節 2.1 ~2.2：

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz	1000-3000MHz
2			3000-5000MHz
3			5000-8000MHz
4			8000-18000MHz
5			18000-25000MHz
6		2440MHz*	30-1000MHz
7			1000-3000MHz
8			3000-5000MHz
9			5000-8000MHz
10			8000-18000MHz
11			18000-25000MHz
12		2480MHz	1000-3000MHz
13			3000-5000MHz
14			5000-8000MHz
15			8000-18000MHz
16			18000-25000MHz
17	接收	2440MHz	30-1000MHz
18			1000-3000MHz
19			3000-5000MHz
20			5000-8000MHz
21			8000-18000MHz
22			18000-25000MHz

註: 1.以上所有模式之掃頻圖是檢附於附錄中。

2.*: 經評估後，以最差頻率進行 30-1000MHz 量測。

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

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz	2310-2430MHz
2		2480MHz	2430-2530MHz

測試日期	2018/12/27	環境溫/濕度	23°C/50%
測試電壓	DC 5V (經筆記型電腦供電)		

2.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	6.02	26.34	43.50	17.16	Peak
216.24	17.13	3.76	8.48	29.37	46.00	16.63	Peak
227.88	17.94	3.84	11.61	33.39	46.00	12.61	Peak
235.64	18.48	3.89	10.87	33.24	46.00	12.76	Peak
330.70	20.70	4.79	7.09	32.58	46.00	13.42	Peak
380.17	21.98	5.52	4.79	32.29	46.00	13.71	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
116.33	18.59	2.92	7.61	29.12	43.50	14.38	Peak
227.88	17.94	3.84	3.74	25.52	46.00	20.48	Peak
239.52	18.70	3.91	5.42	28.03	46.00	17.97	Peak
322.94	20.51	4.70	4.91	30.12	46.00	15.88	Peak
491.72	23.61	6.02	4.25	33.88	46.00	12.12	Peak
835.10	26.76	7.75	2.62	37.13	46.00	8.87	Peak

Mode	BLE	Frequency	RX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	6.15	26.47	43.50	17.03	Peak
216.24	17.13	3.76	9.35	30.24	46.00	15.76	Peak
227.88	17.94	3.84	11.76	33.54	46.00	12.46	Peak
235.64	18.48	3.89	9.93	32.30	46.00	13.70	Peak
333.61	20.80	4.85	5.24	30.89	46.00	15.11	Peak
972.84	28.03	8.45	2.90	39.38	54.00	14.62	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	17.60	2.72	4.46	24.78	43.50	18.72	Peak
117.30	18.67	2.94	8.20	29.81	43.50	13.69	Peak
238.55	18.64	3.91	4.27	26.82	46.00	19.18	Peak
319.06	20.38	4.64	5.83	30.85	46.00	15.15	Peak
840.92	26.80	7.79	2.63	37.22	46.00	8.78	Peak
965.08	27.95	8.42	2.11	38.48	54.00	15.52	Peak

2.2. 1000MHz 以上頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4804.00	34.22	11.42	0.05	45.69	54.00	8.31	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4804.00	34.22	11.42	1.23	46.87	54.00	7.13	Peak

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	13.00	0.02	47.27	54.00	6.73	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	13.00	-0.63	46.62	54.00	7.38	Peak

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

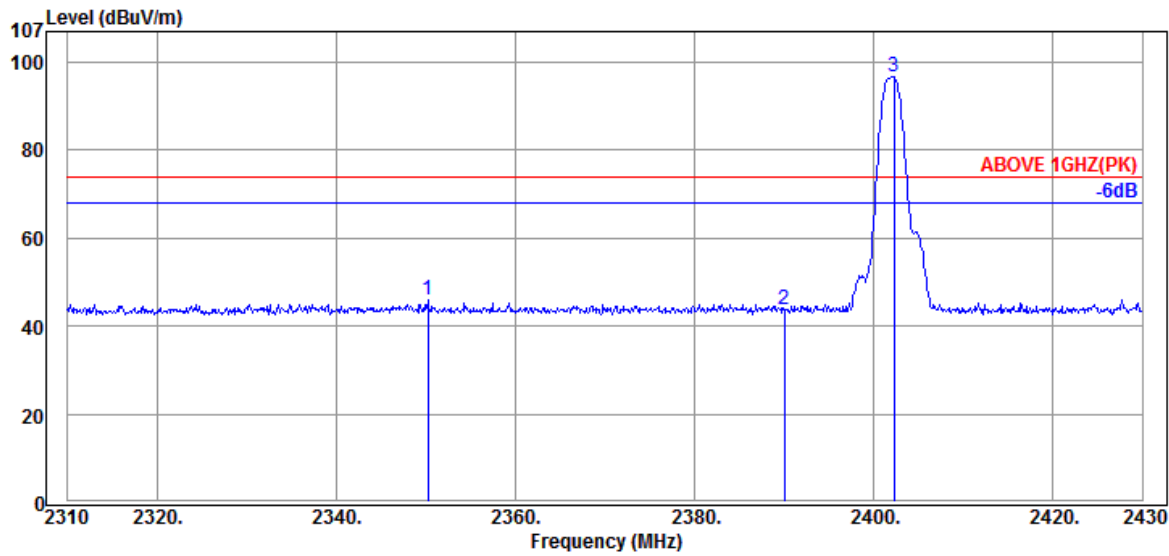
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-3.15	44.35	54.00	9.65	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-2.51	44.99	54.00	9.01	Peak

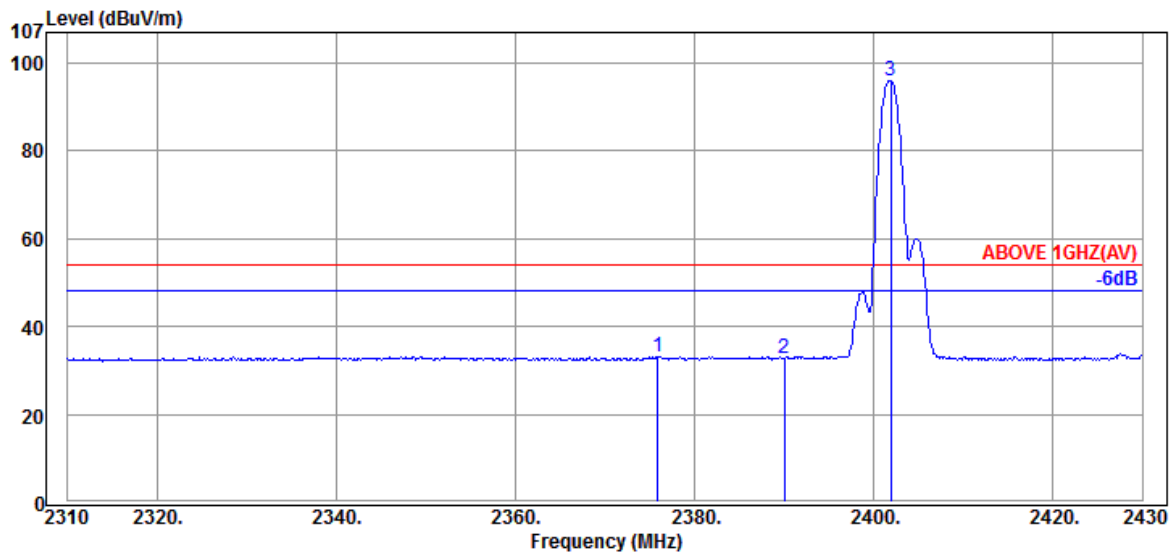
2.3. 禁用頻帶量測結果 (其他不必要發射)

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2350.20	32.08	7.82	5.90	45.80	74.00	28.20	Peak
2390.04	32.16	7.92	3.81	43.89	74.00	30.11	Peak
@ 2402.28	32.16	7.92	56.78	96.86	---	---	Peak

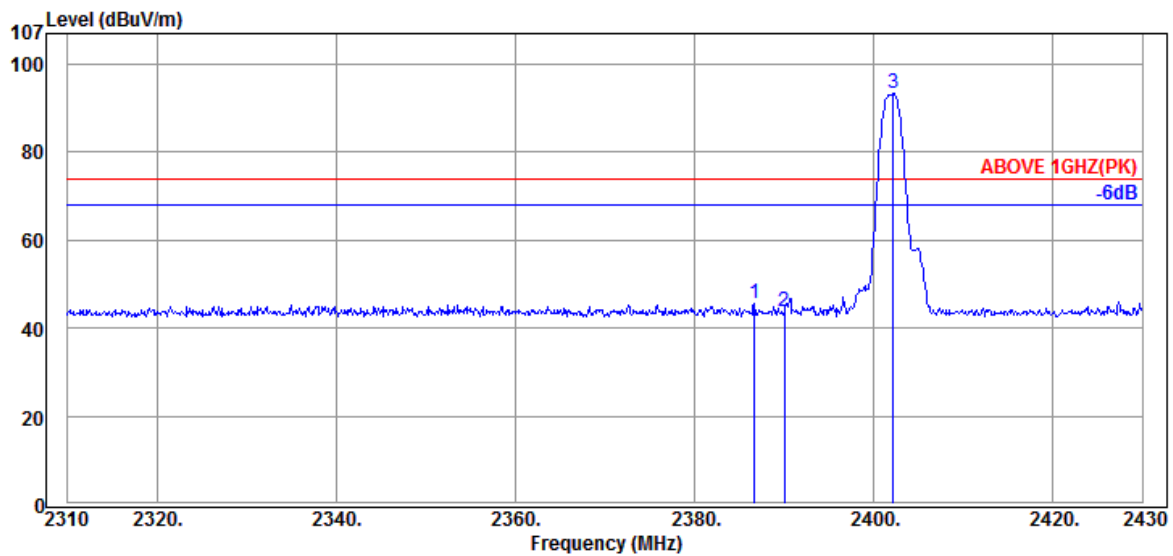


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2375.88	32.13	7.89	-6.83	33.19	54.00	20.81	Average
2390.04	32.16	7.92	-7.18	32.90	54.00	21.10	Average
@ 2401.92	32.16	7.92	55.99	96.07	---	---	Average

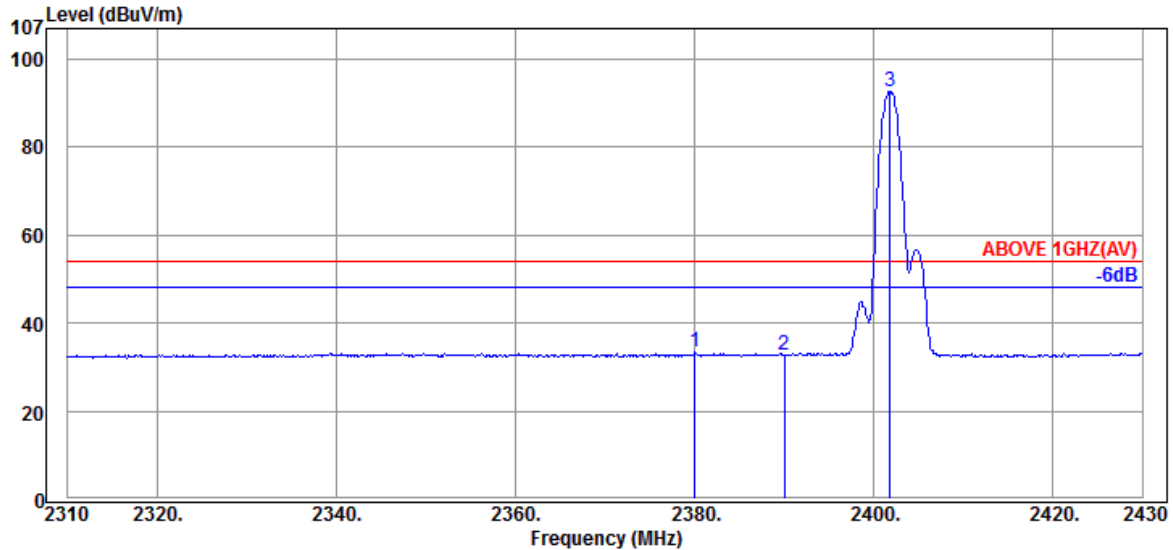
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2386.68	32.16	7.92	5.52	45.60	74.00	28.40	Peak
2390.04	32.16	7.92	3.73	43.81	74.00	30.19	Peak
@ 2402.16	32.16	7.92	53.21	93.29	---	---	Peak

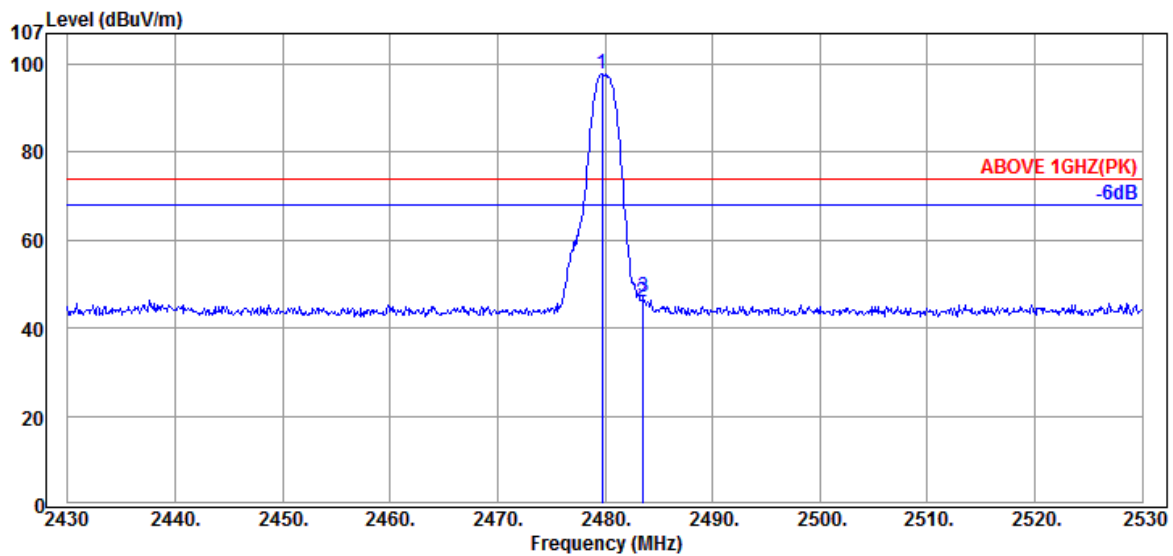


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2380.08	32.13	7.89	-6.69	33.33	54.00	20.67	Average
2390.04	32.16	7.92	-7.35	32.73	54.00	21.27	Average
@ 2401.80	32.16	7.92	52.49	92.57	---	---	Average

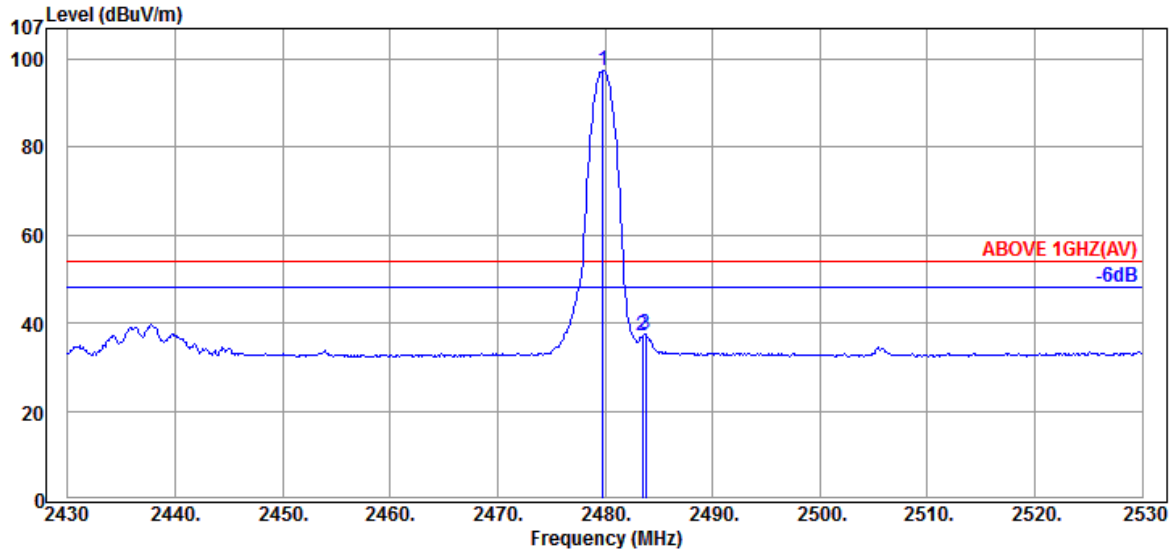
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.70	32.28	7.90	57.67	97.85	---	---	Peak
	2483.50	32.28	7.90	5.81	45.99	74.00	28.01	Peak
	2483.60	32.28	7.90	7.01	47.19	74.00	26.81	Peak

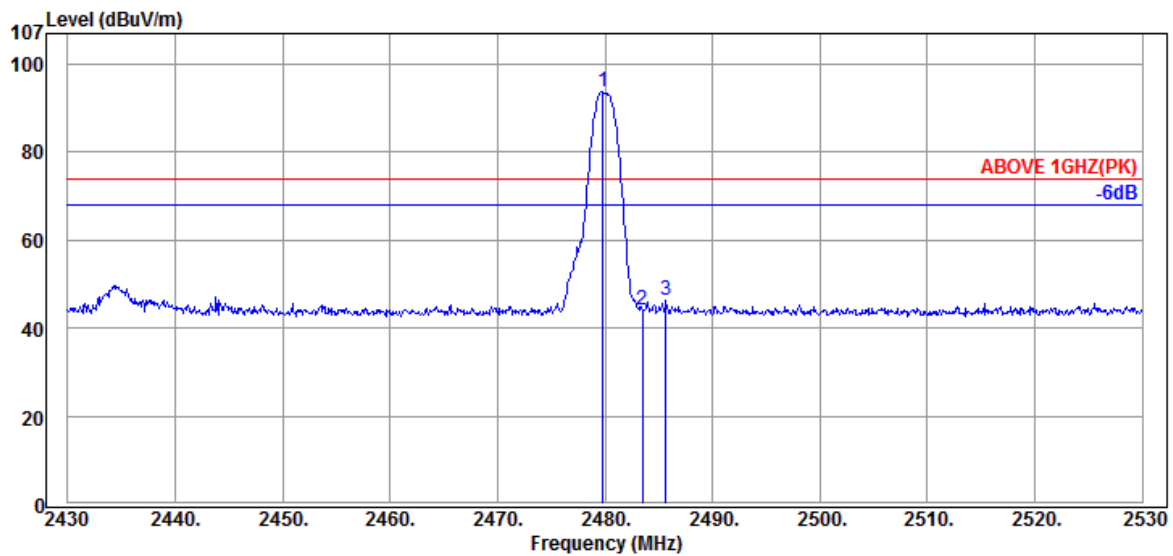


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.80	32.28	7.90	57.29	97.47	---	---	Average
	2483.50	32.28	7.90	-3.06	37.12	54.00	16.88	Average
	2483.80	32.28	7.90	-2.70	37.48	54.00	16.52	Average

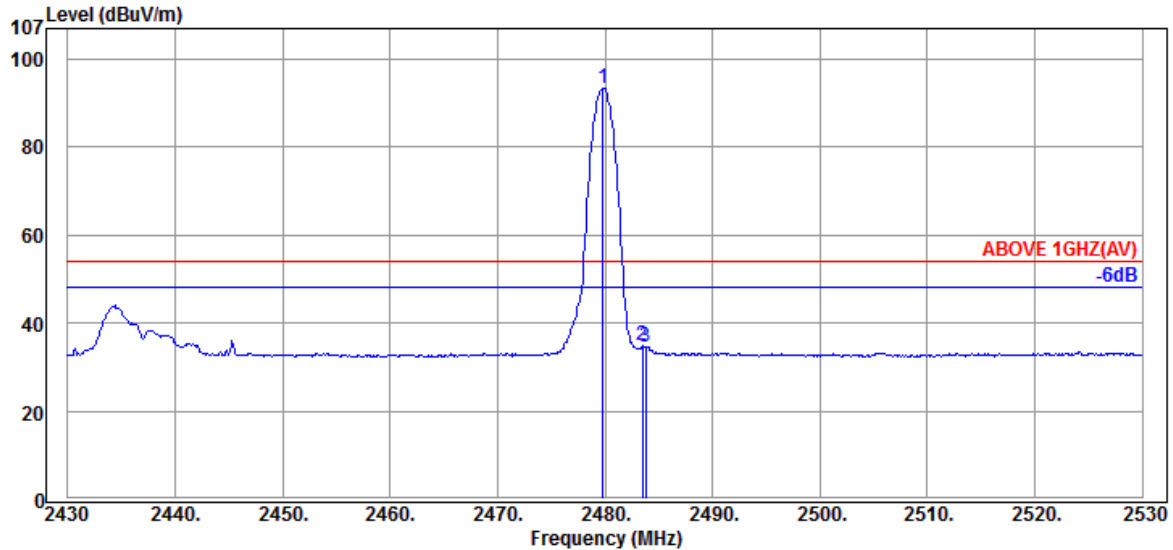
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.80	32.28	7.90	53.49	93.67	---	---	Peak
	2483.50	32.28	7.90	4.01	44.19	74.00	29.81	Peak
	2485.70	32.28	7.90	6.03	46.21	74.00	27.79	Peak



Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.80	32.28	7.90	53.21	93.39	---	---	Average
	2483.50	32.28	7.90	-5.34	34.84	54.00	19.16	Average
	2483.80	32.28	7.90	-5.66	34.52	54.00	19.48	Average

備註：“@”為主波，在此章節是不予以判定。

3. 峰值輸出功率之量測

測試日期	2018/12/27	環境溫/濕度	23°C/50%
測試電壓	DC 5V (經筆記型電腦供電)		

3.1. 峰值輸出功率

模式	測試頻率 (MHz)	Peak 輸出功率(dBm)	限制值 (dBm)
BLE	2402	0.85	30
	2440	1.07	
	2480	-0.92	

3.2. 峰值輸出功率之量測圖

