

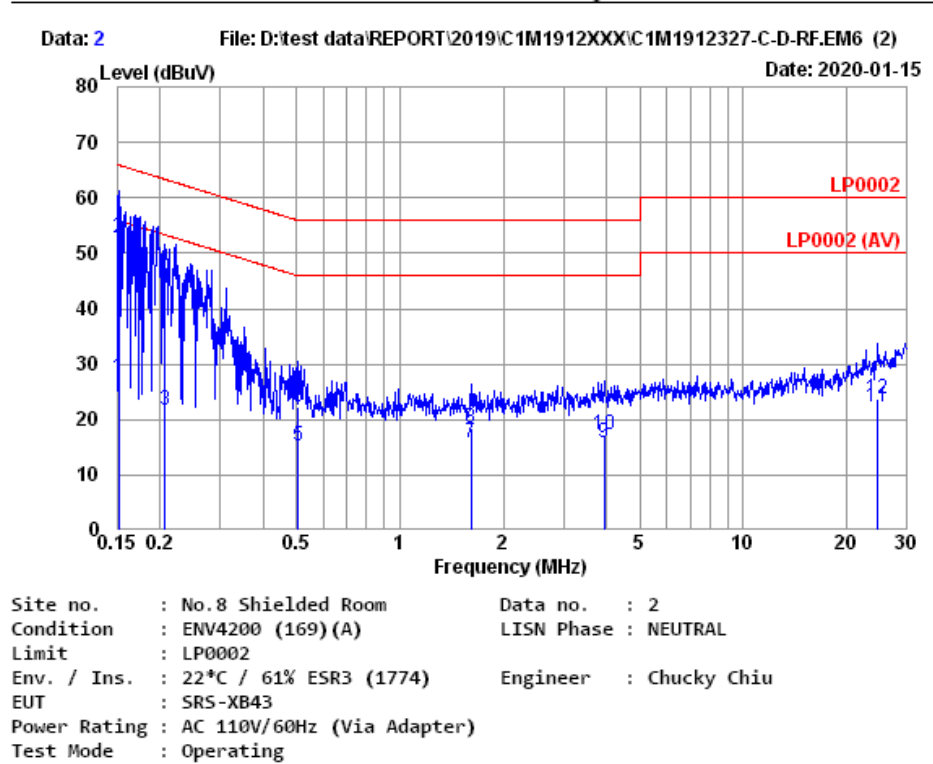
附錄 一

受測裝置之測試結果

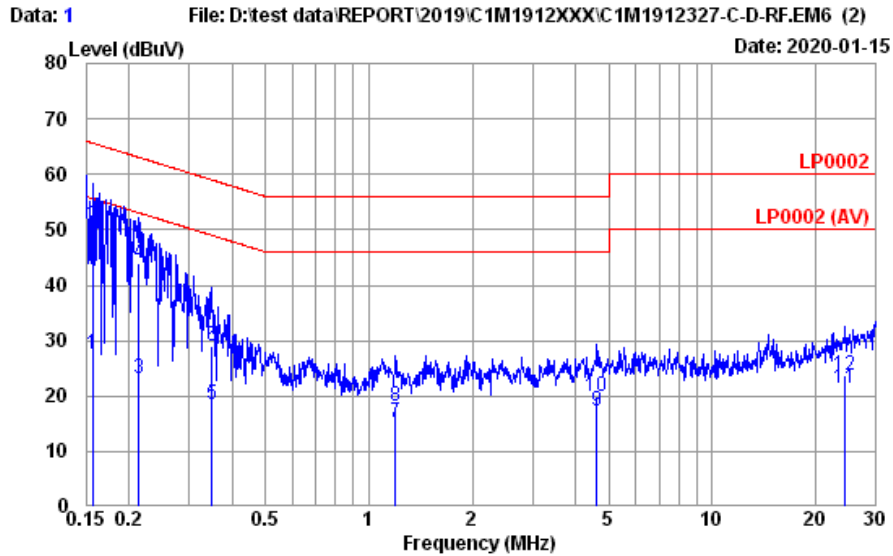
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1. 電源線傳導干擾之量測

測試日期	2020/01/15	環境溫/濕度	22°C/61%
測試電壓	AC 110V/60Hz (經電源供應器供電)	測試人員	Chucky Chiu



測試日期	2020/01/15	環境溫/濕度	22°C/61%
測試電壓	AC 110V/60Hz (經電源供應器供電)	測試人員	Chucky Chiu



Site no. : No.8 Shielded Room Data no. : 1
Condition : ENV4200 (169) (A) LISN Phase : LINE
Limit : LP0002
Env. / Ins. : 22°C / 61% ESR3 (1774) Engineer : Chucky Chiu
EUT : SRS-XB43
Power Rating : AC 110V/60Hz (Via Adapter)
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	0.156	10.67	0.06	9.86	6.91	27.50	55.65	28.15	Average
2	0.156	10.67	0.06	9.86	30.08	50.67	65.65	14.98	QP
3	0.214	10.60	0.06	9.86	2.68	23.20	53.05	29.85	Average
4	0.214	10.60	0.06	9.86	23.43	43.95	63.05	19.10	QP
5	0.348	10.51	0.07	9.86	-2.12	18.32	49.00	30.68	Average
6	0.348	10.51	0.07	9.86	8.46	28.90	59.00	30.10	QP
7	1.197	10.48	0.12	9.86	-5.21	15.25	46.00	30.75	Average
8	1.197	10.48	0.12	9.86	-2.15	18.31	56.00	37.69	QP
9	4.598	10.70	0.23	9.87	-3.48	17.32	46.00	28.68	Average
10	4.598	10.70	0.23	9.87	-0.82	19.98	56.00	36.02	QP
11	24.400	14.51	0.62	9.98	-3.84	21.27	50.00	28.73	Average
12	24.400	14.51	0.62	9.98	-1.49	23.62	60.00	36.38	QP

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

2. 場強輻射之量測

【經實驗室評估量測後，以最差之調變方式 GFSK 進行本章節之測試】

本裝置有兩種電源供應模式分別為電池(DC 7.2V)及 USB (DC 5V)，實驗室以單機(電池供電)分別以三種不同的擺設方式(站立、平放、側立)進行量試評估，最後選取最大場強值的擺設方式(平放)以低、中、高頻率來進行量測，並將下列測試模式之掃頻圖隨案件所附。另搭配電源供應器(DC 5V)執行充電模式，經評估充電模式不影響 1GHz 以上訊號結果，此模式僅呈現 30MHz-1GHz 測試結果於此份報告。所得讀值資料請見章節 2.1~2.2：

● Normal/充電模式

動作狀態	測試電壓	量測頻率範圍
Normal	AC 110V/60Hz (經電源供應器供電)	30-1000MHz
		1000-25000MHz
充電	AC 110V/60Hz (經電源供應器供電)	30-1000MHz

● 發射/接收模式

模式	測試電壓	動作狀態	基本頻率	量測頻率範圍
BT	DC 7.2V (經內建鋰電池供電)	發射	2402MHz (CH0)	1000-25000MHz
		發射	2441MHz (CH39) *	30-1000MHz
				1000-25000MHz
		發射	2480MHz (CH78)	1000-25000MHz
		接收	2441MHz (CH39)	30-1000MHz
				1000-25000MHz

註：*：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 章節的禁用頻率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 1.3。

模式	測試電壓	動作狀態	基本頻率	量測頻率範圍
BT (GFSK)	DC 7.2V (經內建鋰電池供電)	發射	2402MHz (CH0)	2310-2410MHz
			2480MHz (CH78)	2450-2900MHz
BT (8-DPSK)		發射	2402MHz (CH0)	2310-2410MHz
			2480MHz (CH78)	2450-2900MHz

測試日期	2020/01/15~20	環境溫/濕度	17~20°C/59~66%
測試電壓	(1) AC 110V/60Hz (經電源供應器供電) (2) DC 7.2V (經內建鋰電池供電)	測試人員	Sean Wang

2.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	Normal	Frequency	---
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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
33.880	23.04	1.27	-2.52	21.79	40.00	18.21	Peak
93.050	16.05	2.20	4.93	23.18	43.50	20.32	Peak
442.250	22.98	6.27	3.43	32.68	46.00	13.32	Peak
745.860	25.93	7.62	-0.35	33.20	46.00	12.80	Peak
915.610	27.44	8.55	-1.35	34.64	46.00	11.36	Peak
986.420	27.97	8.96	-2.20	34.73	54.00	19.27	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
32.910	23.73	1.25	7.23	32.21	40.00	7.79	Peak
124.090	18.41	2.58	10.62	31.61	43.50	11.89	Peak
554.770	24.31	6.82	-0.88	30.25	46.00	15.75	Peak
744.890	25.93	7.61	-1.50	32.04	46.00	13.96	Peak
905.910	27.36	8.49	-1.17	34.68	46.00	11.32	Peak
967.990	27.84	8.86	-1.81	34.89	54.00	19.11	Peak

Mode	充電	Frequency	---
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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
37.760	20.81	1.35	-3.38	18.78	40.00	21.22	Peak
199.750	16.27	3.42	11.86	31.55	43.50	11.95	Peak
312.270	20.07	4.63	13.65	38.35	46.00	7.65	Peak
666.320	25.22	7.21	1.69	34.12	46.00	11.88	Peak
926.280	27.51	8.61	-1.51	34.61	46.00	11.39	Peak
981.570	27.94	8.94	-1.13	35.75	54.00	18.25	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
31.940	24.34	1.23	-3.83	21.74	40.00	18.26	Peak
199.750	16.27	3.42	11.96	31.65	43.50	11.85	Peak
664.380	25.21	7.20	-0.58	31.83	46.00	14.17	Peak
757.500	26.07	7.68	-1.68	32.07	46.00	13.93	Peak
924.340	27.51	8.60	-0.98	35.13	46.00	10.87	Peak
974.780	27.89	8.90	-2.17	34.62	54.00	19.38	Peak

Mode	GFSK	Frequency	TX 2441MHz
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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
71.710	12.67	1.91	14.76	29.34	40.00	10.66	Peak
120.210	18.63	2.53	20.78	41.94	43.50	1.56	Peak
322.940	20.40	4.80	15.42	40.62	46.00	5.38	Peak
672.140	25.27	7.23	7.82	40.32	46.00	5.68	Peak
904.940	27.36	8.48	-0.13	35.71	46.00	10.29	Peak
980.600	27.92	8.93	-1.13	35.72	54.00	18.28	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
31.940	24.34	1.23	-1.72	23.85	40.00	16.15	Peak
167.740	16.05	3.10	12.27	31.42	43.50	12.08	Peak
486.870	23.56	6.65	4.35	34.56	46.00	11.44	Peak
636.250	25.02	7.06	9.64	41.72	46.00	4.28	Peak
924.340	27.51	8.60	-1.29	34.82	46.00	11.18	Peak
986.420	27.97	8.96	-1.03	35.90	54.00	18.10	Peak

Mode	---	Frequency	RX 2441MHz
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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
71.710	12.67	1.91	14.31	28.89	40.00	11.11	Peak
120.210	18.63	2.53	19.14	40.30	43.50	3.20	Peak
324.880	20.43	4.83	13.11	38.37	46.00	7.63	Peak
660.500	25.19	7.18	10.30	42.67	46.00	3.33	Peak
959.260	27.77	8.81	-0.94	35.64	46.00	10.36	Peak
995.150	28.04	9.01	-1.19	35.86	54.00	18.14	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
32.910	23.73	1.25	-2.97	22.01	40.00	17.99	Peak
120.210	18.63	2.53	9.78	30.94	43.50	12.56	Peak
199.750	16.27	3.42	11.47	31.16	43.50	12.34	Peak
485.900	23.53	6.64	4.62	34.79	46.00	11.21	Peak
623.640	24.93	7.00	9.48	41.41	46.00	4.59	Peak
672.140	25.27	7.23	7.88	40.38	46.00	5.62	Peak
968.960	27.84	8.86	-0.92	35.78	54.00	18.22	Peak

2.2. 1000MHz 以上頻率範圍，其他不必要發射量測

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

Mode	Normal	Frequency	---
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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	34.34	0.00	7.91	42.25	54.00	11.75	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	34.34	0.00	7.95	42.29	54.00	11.71	Peak

Mode	GFSK	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	33.92	10.22	-2.03	42.11	54.00	11.89	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	33.92	10.22	-0.25	43.89	54.00	10.11	Peak

Mode	GFSK	Frequency	TX 2441MHz
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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
4882.00	34.36	10.24	-2.30	42.30	54.00	11.70	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
4882.00	34.36	10.24	-3.03	41.57	54.00	12.43	Peak

Mode	GFSK	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	34.32	10.27	-1.74	42.85	54.00	11.15	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	34.32	10.27	-2.35	42.24	54.00	11.76	Peak

Mode	---	Frequency	RX 2441MHz
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Antenna at Horizontal Polarization

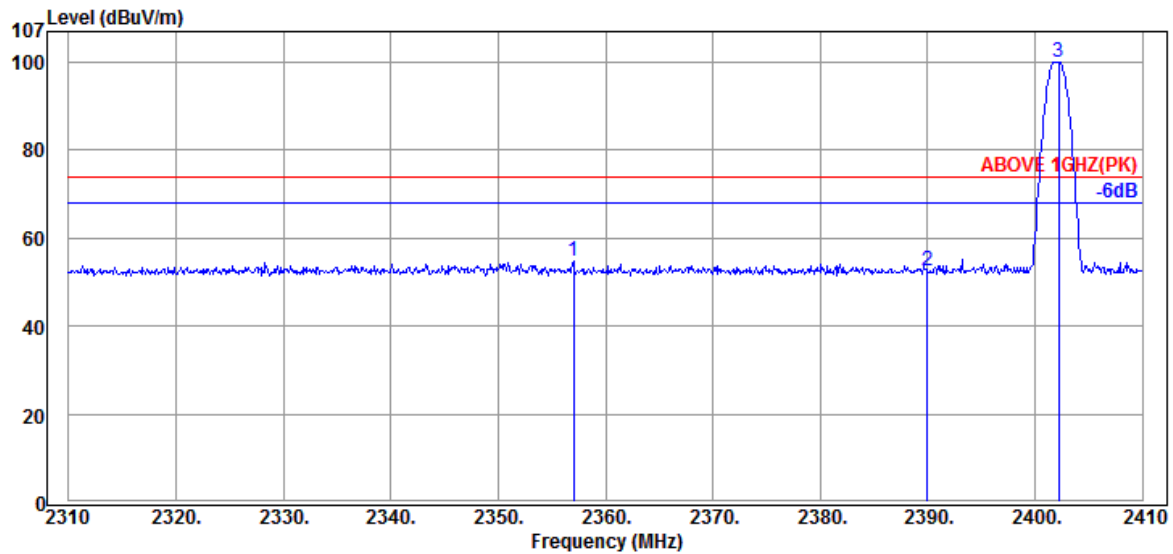
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4882.00	34.36	10.24	-3.73	40.87	54.00	13.13	Peak

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
4882.00	34.36	10.24	-2.77	41.83	54.00	12.17	Peak

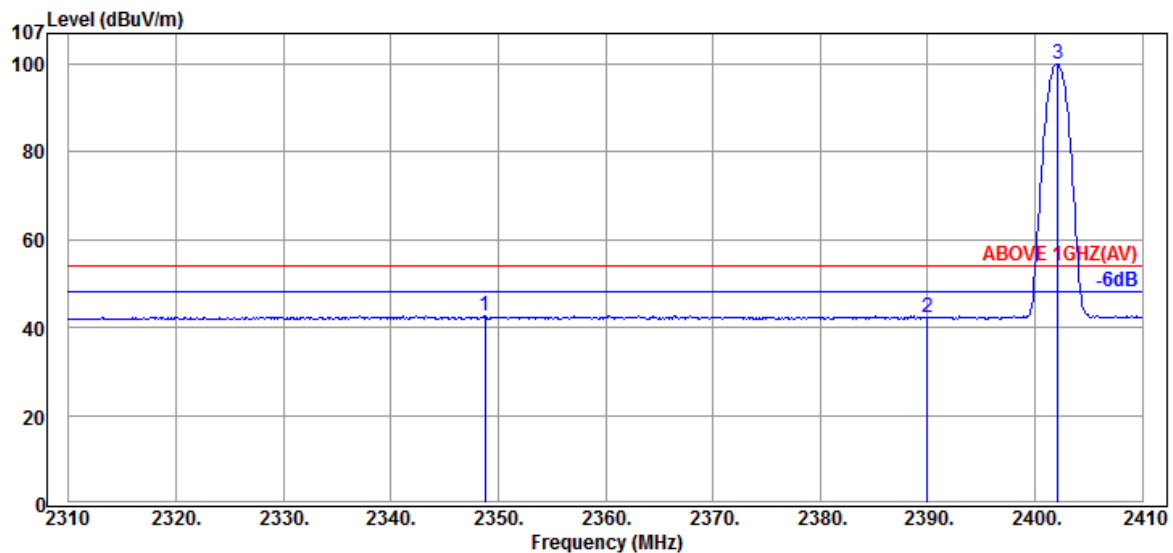
2.3. 禁用頻帶量測結果 (其他不必要發射)

Mode	GFSK	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2357.00	32.00	8.49	14.41	54.90	74.00	19.10	Peak
2390.00	32.00	8.52	11.93	52.45	74.00	21.55	Peak
@ 2402.20	32.03	8.52	59.61	100.16	---	---	Peak

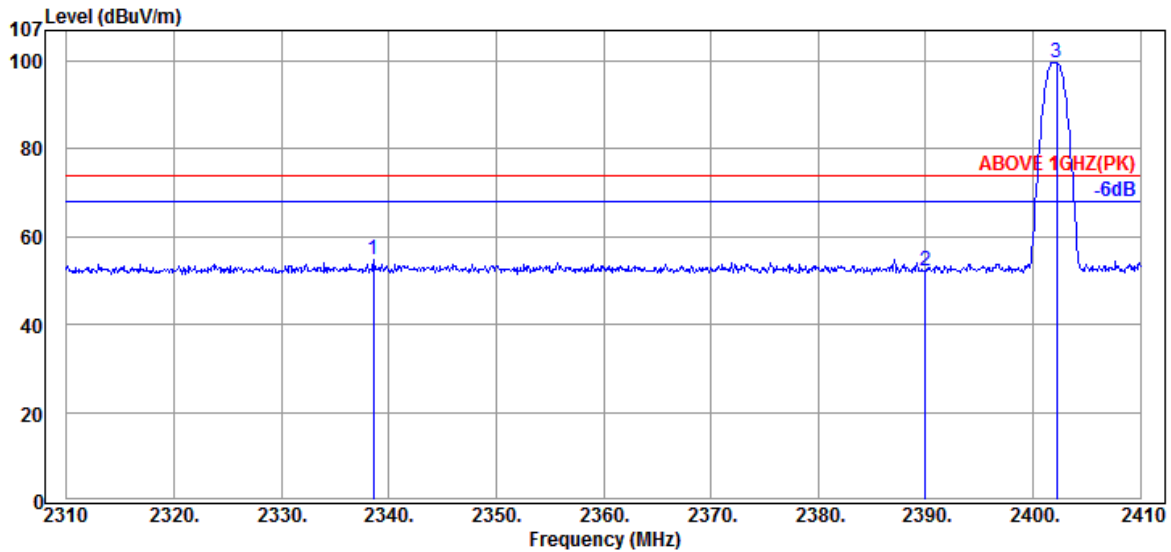


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2348.80	32.00	8.48	2.22	42.70	54.00	11.30	Average
2390.00	32.00	8.52	1.69	42.21	54.00	11.79	Average
@ 2402.10	32.03	8.52	59.49	100.04	---	---	Average

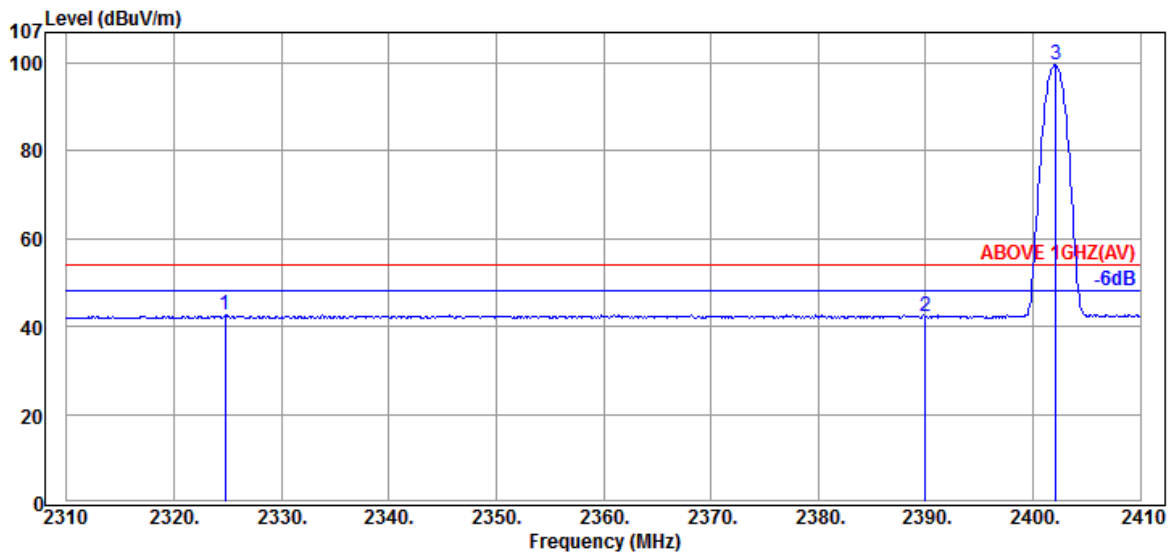
備註: “@”為主波，在此章節是不予以判定。

Mode	GFSK	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
2338.60	32.00	8.48	14.23	54.71	74.00	19.29	Peak
2390.00	32.00	8.52	11.52	52.04	74.00	21.96	Peak
@ 2402.20	32.03	8.52	59.14	99.69	---	---	Peak

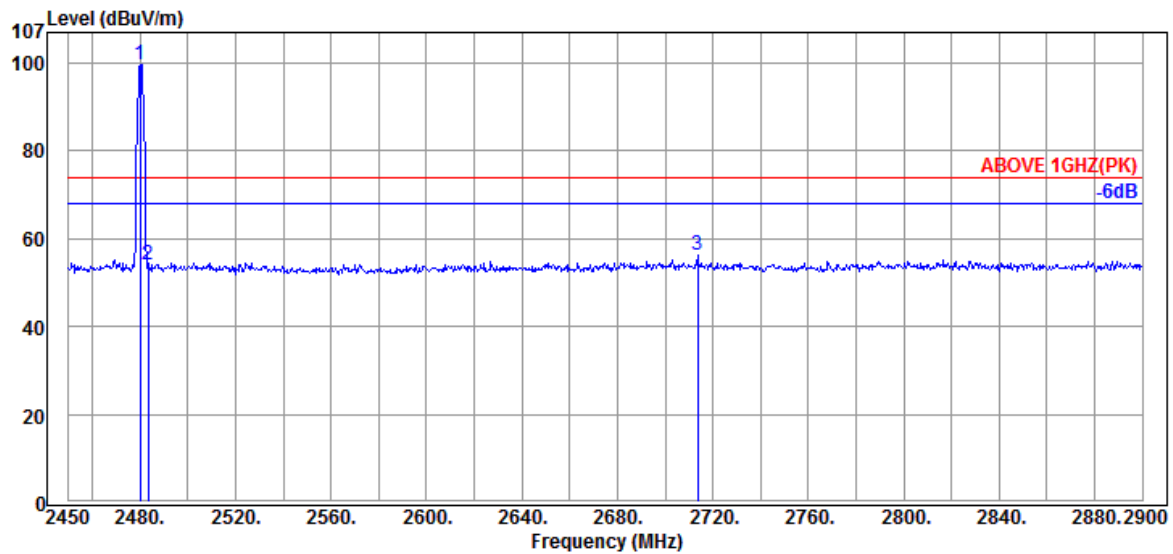


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2324.80	32.00	8.47	2.27	42.74	54.00	11.26	Average
2390.00	32.00	8.52	1.60	42.12	54.00	11.88	Average
@ 2402.10	32.03	8.52	58.99	99.54	---	---	Average

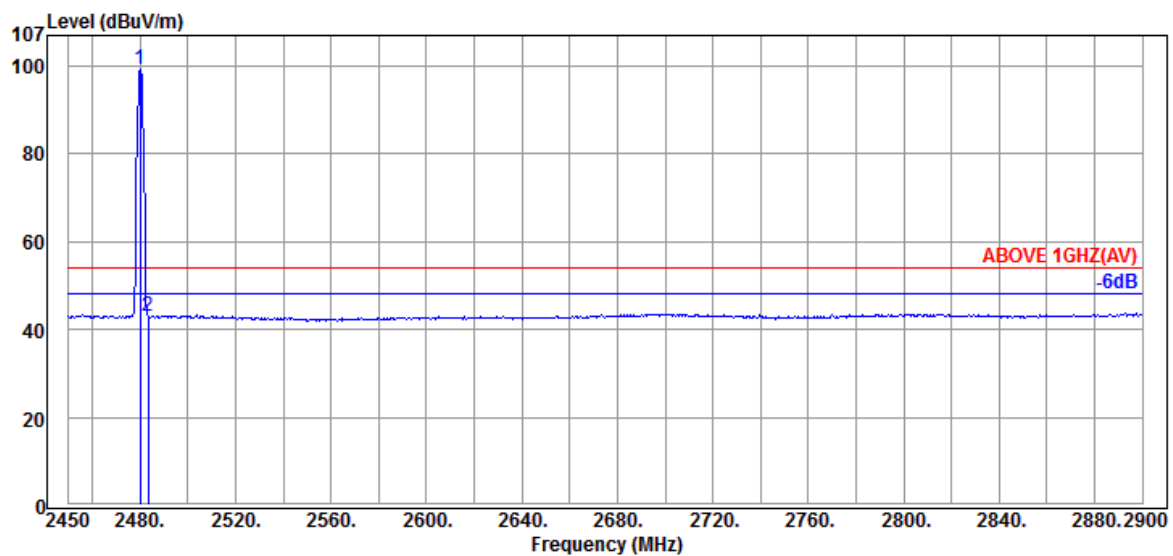
備註：“@”為主波，在此章節是不予以判定。

Mode	GFSK	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 (dBUV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	58.48	99.64	---	---	Peak
	2483.30	32.57	8.58	13.04	54.19	74.00	19.81	Peak
	2713.70	32.64	8.64	14.88	56.16	74.00	17.84	Peak

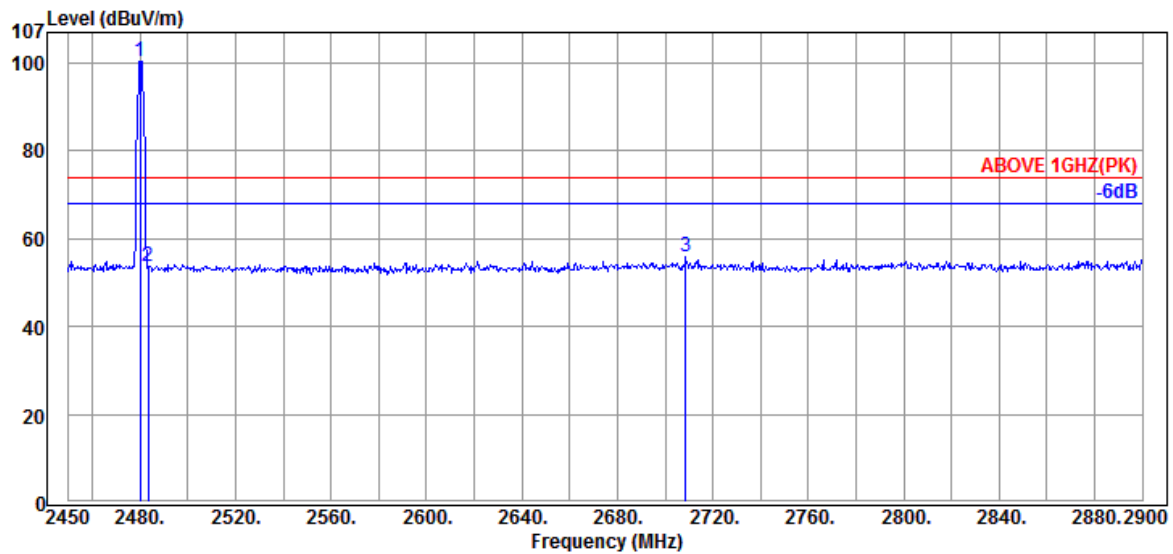


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBUV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	58.00	99.16	---	---	Average
	2483.30	32.57	8.58	1.90	43.05	54.00	10.95	Average
	2900.00	33.00	8.69	1.90	43.59	54.00	10.41	Average

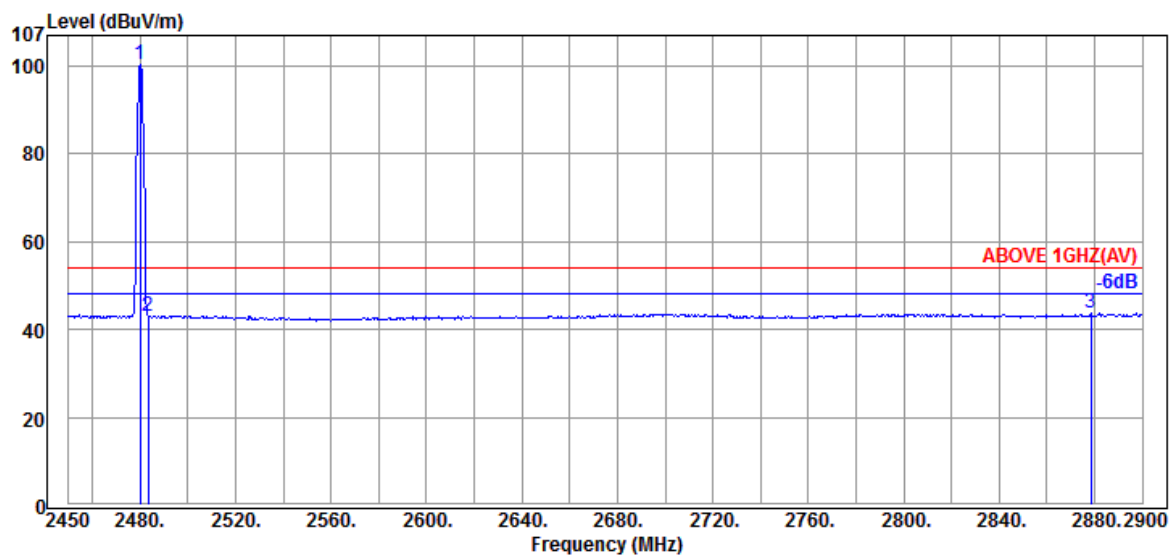
備註：“@”為主波，在此章節是不予以判定。

Mode	GFSK	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
@	2480.15	32.58	8.58	59.36	100.52	---	---	Peak
	2483.30	32.57	8.58	12.47	53.62	74.00	20.38	Peak
	2708.75	32.69	8.64	14.55	55.88	74.00	18.12	Peak

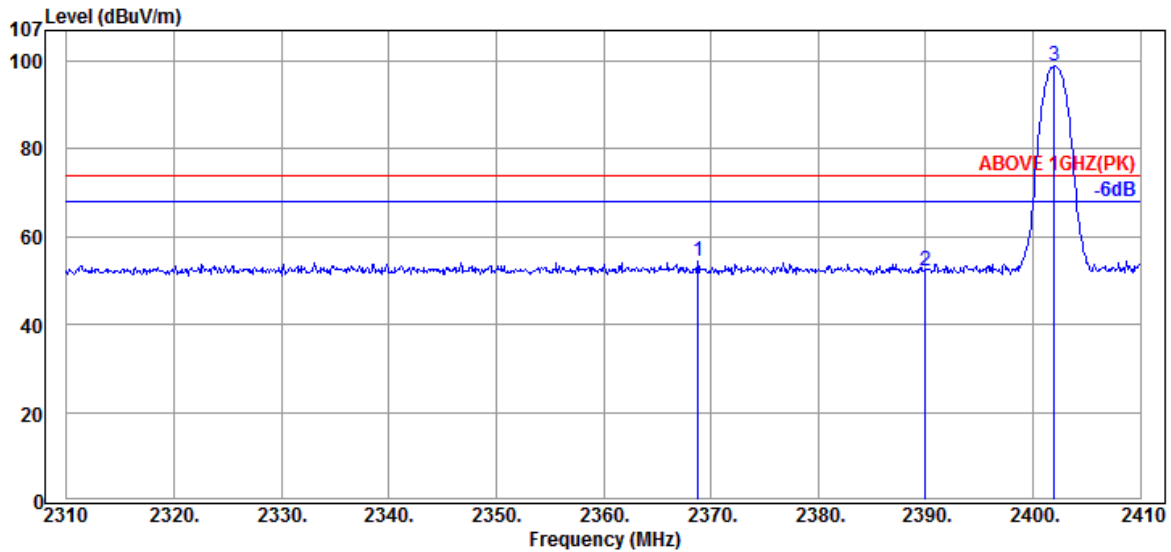


Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	59.05	100.21	---	---	Average
	2483.30	32.57	8.58	2.02	43.17	54.00	10.83	Average
	2878.40	32.87	8.68	2.23	43.78	54.00	10.22	Average

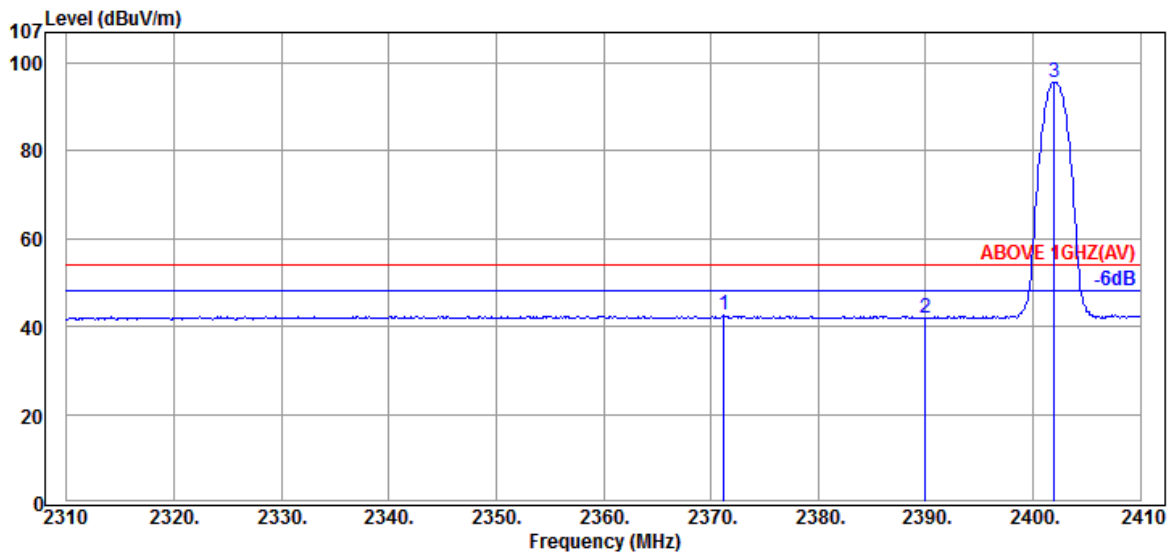
備註：“@”為主波，在此章節是不予以判定。

Mode	8-DPSK	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
2368.80	32.00	8.51	13.92	54.43	74.00	19.57	Peak
2390.00	32.00	8.52	11.84	52.36	74.00	21.64	Peak
@ 2402.00	32.03	8.52	58.36	98.91	---	---	Peak

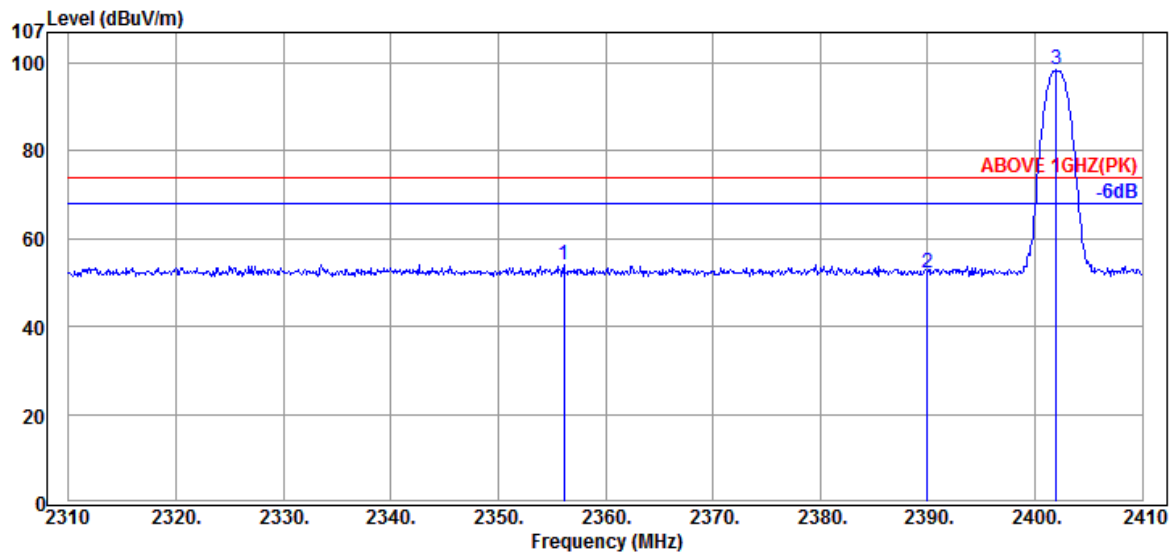


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2371.20	32.00	8.51	1.97	42.48	54.00	11.52	Average
2390.00	32.00	8.52	1.50	42.02	54.00	11.98	Average
@ 2402.00	32.03	8.52	55.17	95.72	---	---	Average

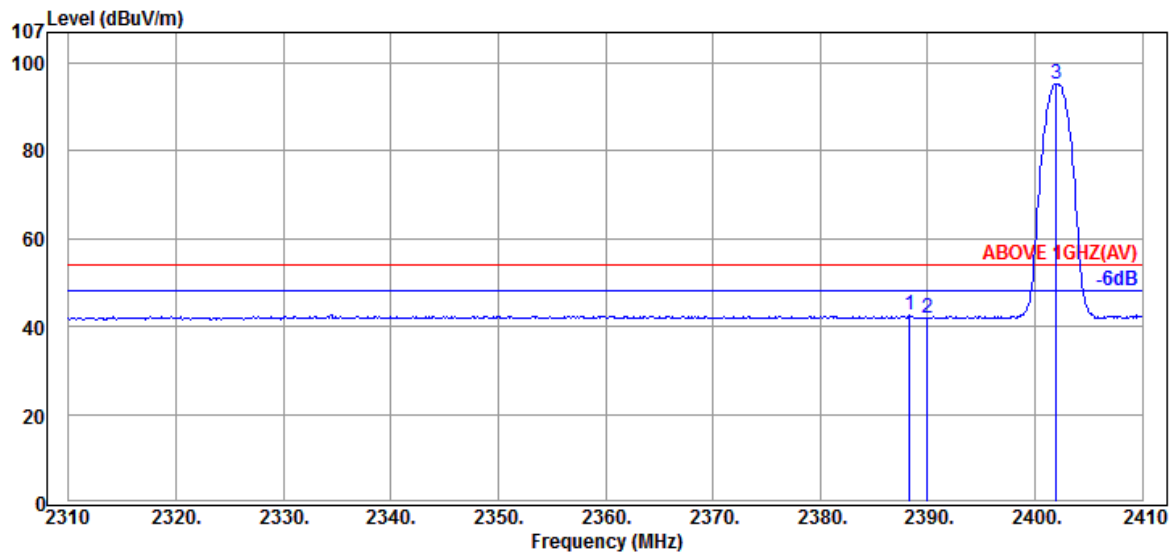
備註：“@”為主波，在此章節是不予以判定。

Mode	8-DPSK	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
2356.10	32.00	8.49	13.67	54.16	74.00	19.84	Peak
2390.00	32.00	8.52	11.62	52.14	74.00	21.86	Peak
@ 2402.00	32.03	8.52	57.98	98.53	---	---	Peak

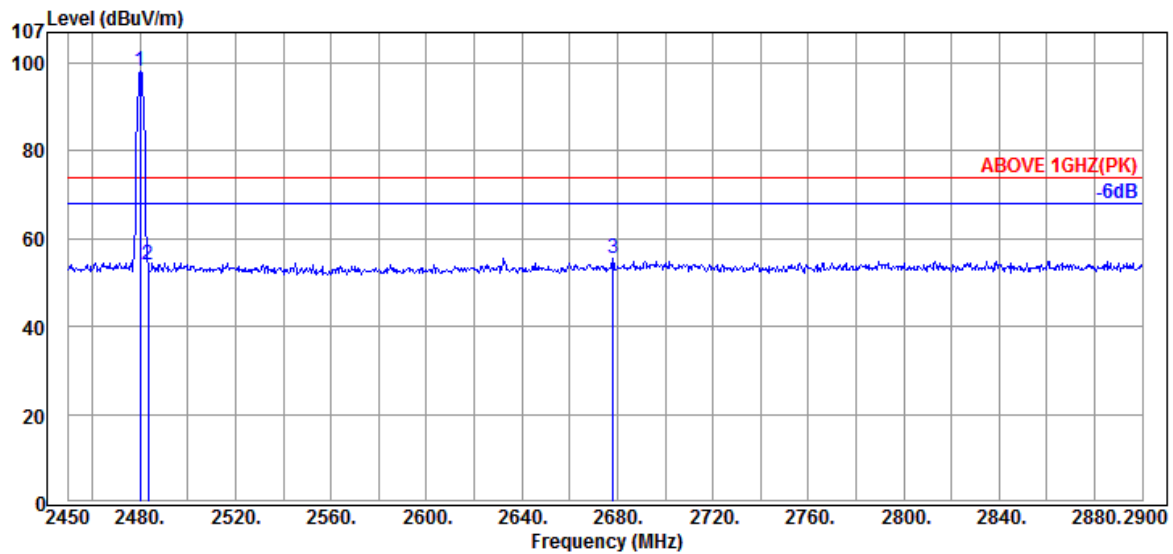


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.30	32.00	8.52	2.10	42.62	54.00	11.38	Average
2390.00	32.00	8.52	1.49	42.01	54.00	11.99	Average
@ 2402.00	32.03	8.52	54.81	95.36	---	---	Average

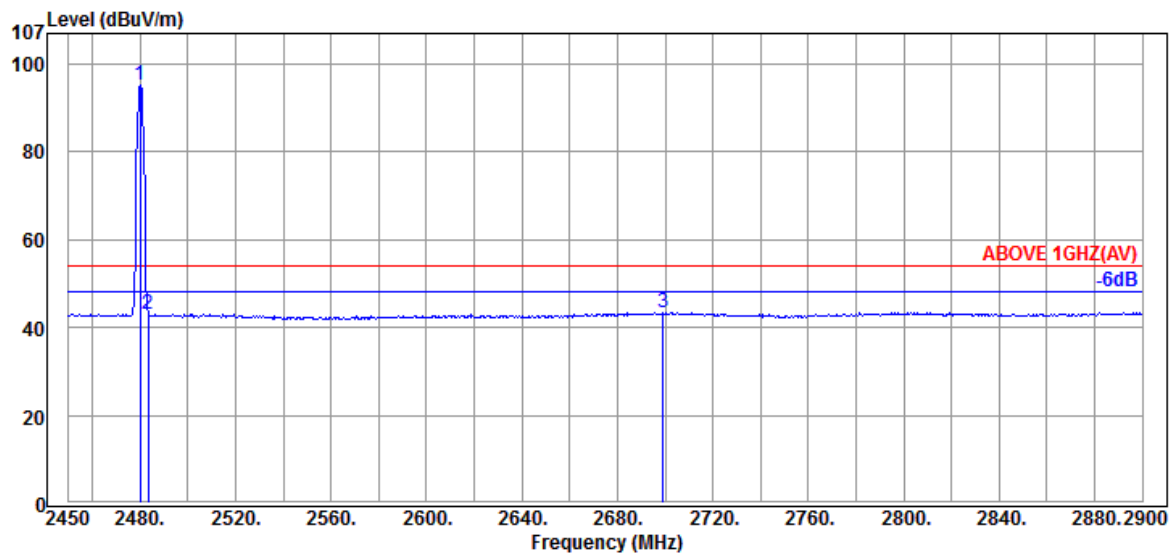
備註：“@”為主波，在此章節是不予以判定。

Mode	8-DPSK	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 (dBUV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	57.18	98.34	---	---	Peak
	2483.30	32.57	8.58	12.93	54.08	74.00	19.92	Peak
	2678.15	32.45	8.63	14.37	55.45	74.00	18.55	Peak

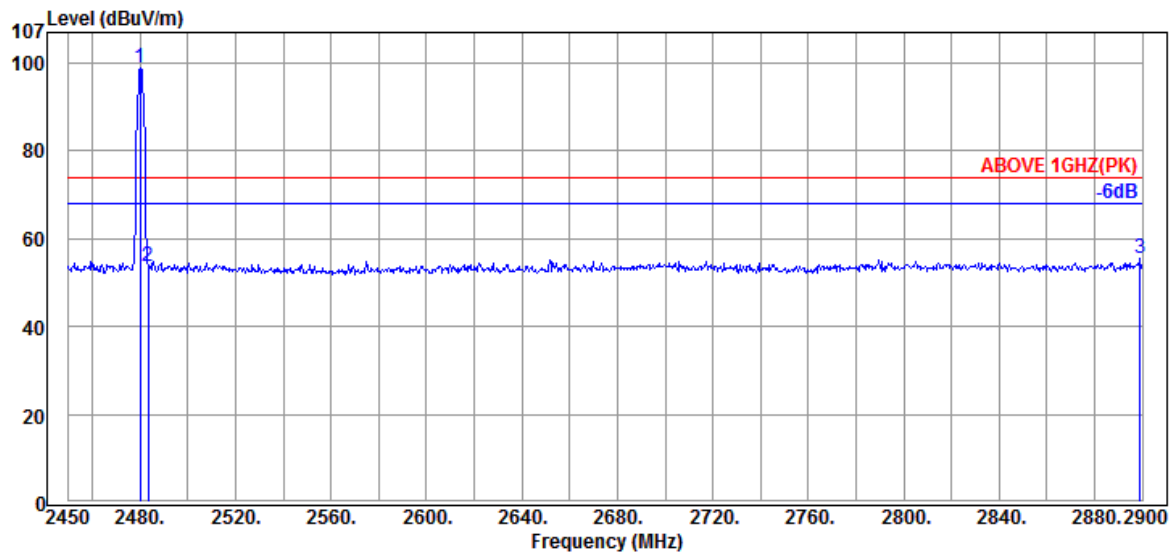


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBUV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	53.89	95.05	---	---	Average
	2483.30	32.57	8.58	1.78	42.93	54.00	11.07	Average
	2699.30	32.79	8.64	1.98	43.41	54.00	10.59	Average

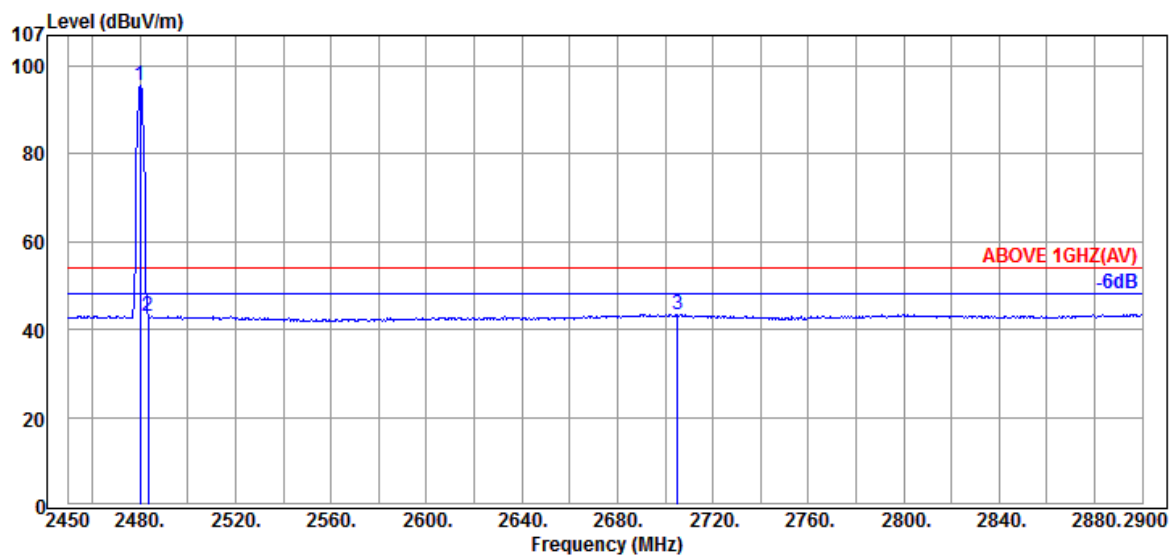
備註：“@”為主波，在此章節是不予以判定。

Mode	8-DPSK	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 (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	57.75	98.91	---	---	Peak
	2483.30	32.57	8.58	12.67	53.82	74.00	20.18	Peak
	2899.10	32.99	8.69	13.68	55.36	74.00	18.64	Peak



Antenna at Vertical Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	54.45	95.61	---	---	Average
	2483.30	32.57	8.58	1.87	43.02	54.00	10.98	Average
	2705.15	32.74	8.64	2.13	43.51	54.00	10.49	Average

備註：“@”為主波，在此章節是不予以判定。

3. 20dB 頻寬之量測

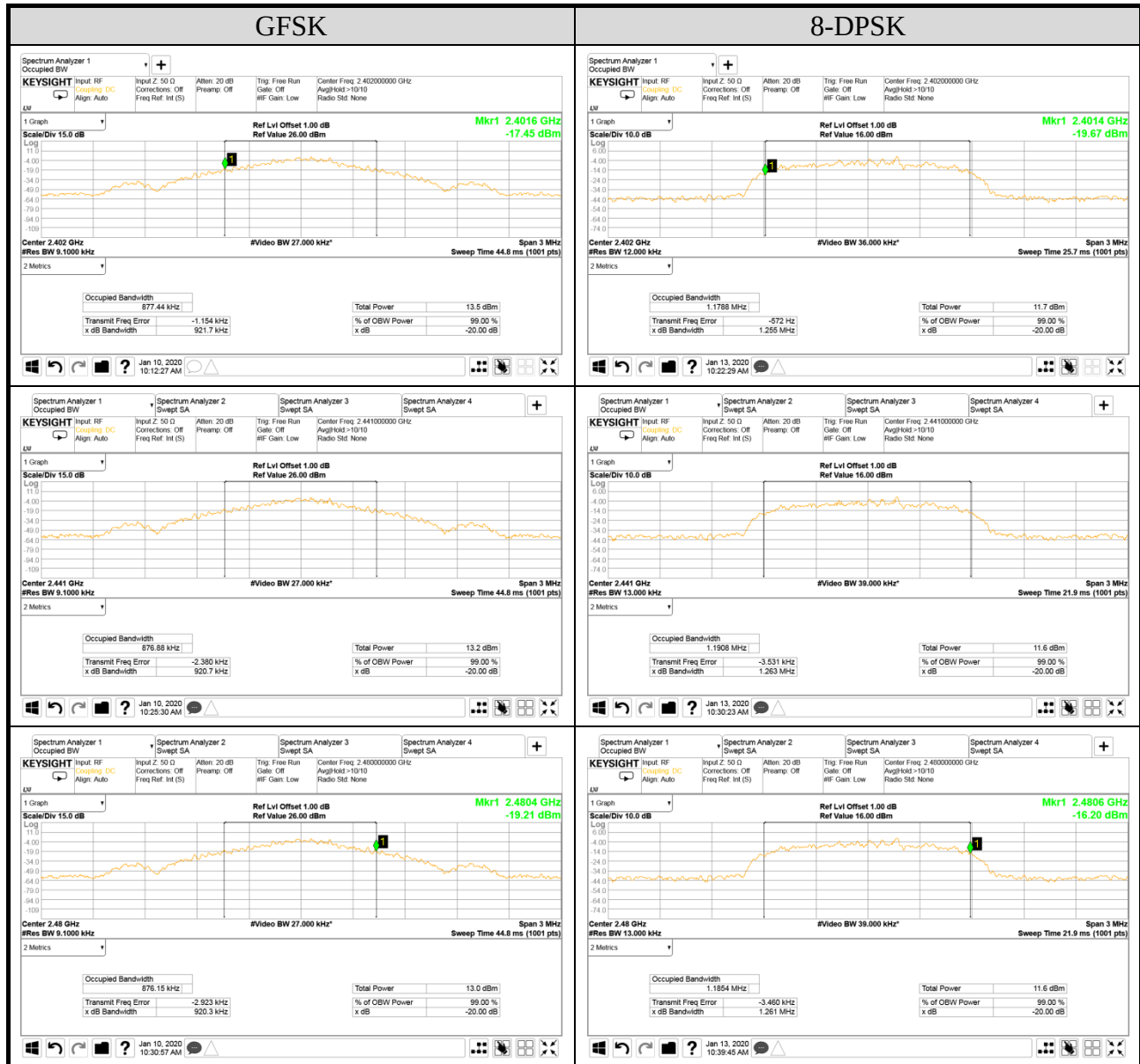
測試日期	2020/01/10~13	環境溫/濕度	20~21℃/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		

3.1. 20dB 頻寬

模式	測試頻率 (MHz)	20dB 頻寬 (MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
GFSK	2402	0.9217	0.614
	2441	0.9207	0.614
	2480	0.9203	0.614

模式	測試頻率 (MHz)	20dB 頻寬 (MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
8-DPSK	2402	1.255	0.837
	2441	1.263	0.842
	2480	1.261	0.841

3.2. 20dB 頻寬之量測圖



4. 載波頻率間隔之量測

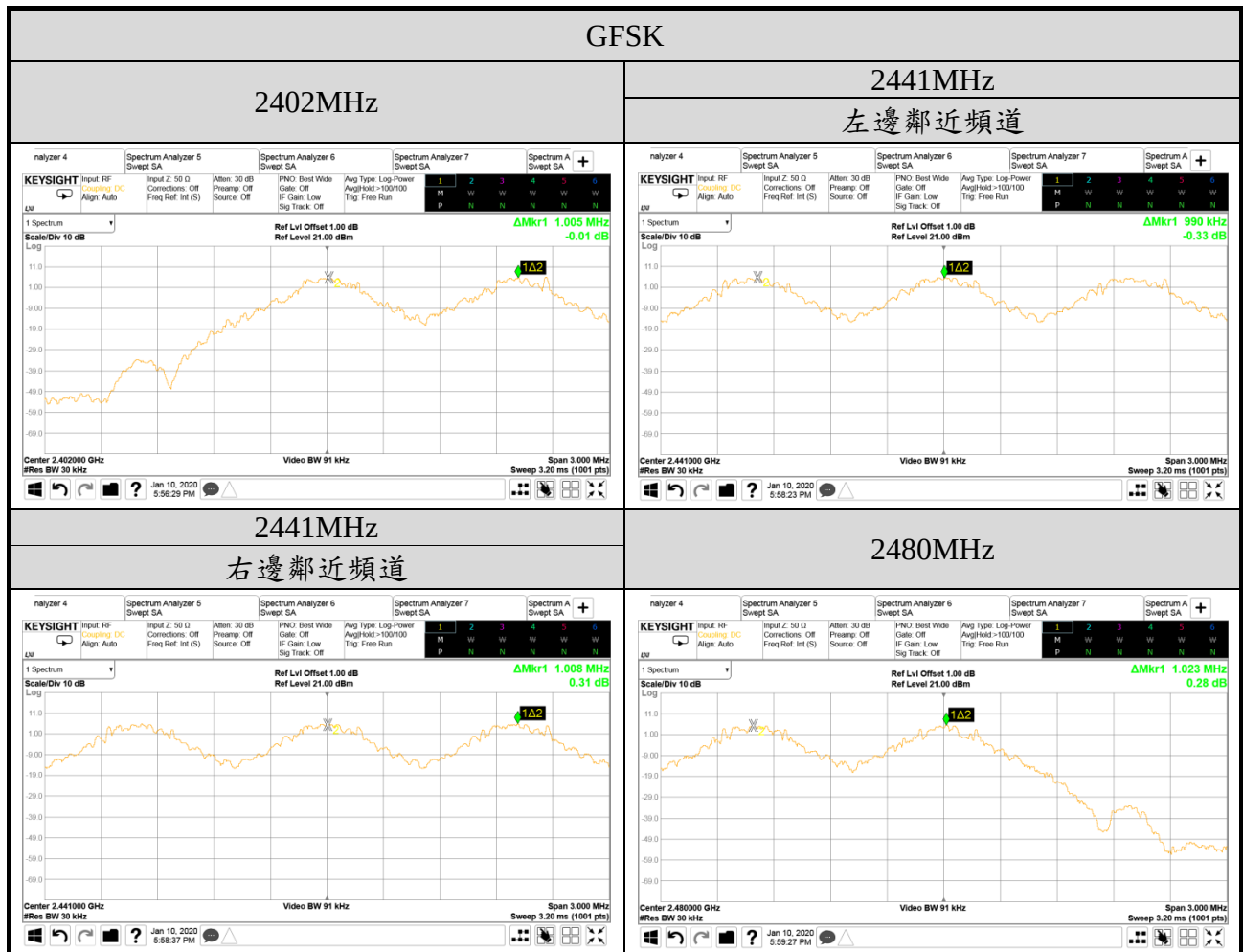
測試日期	2020/01/10~13	環境溫/濕度	20~21℃/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		

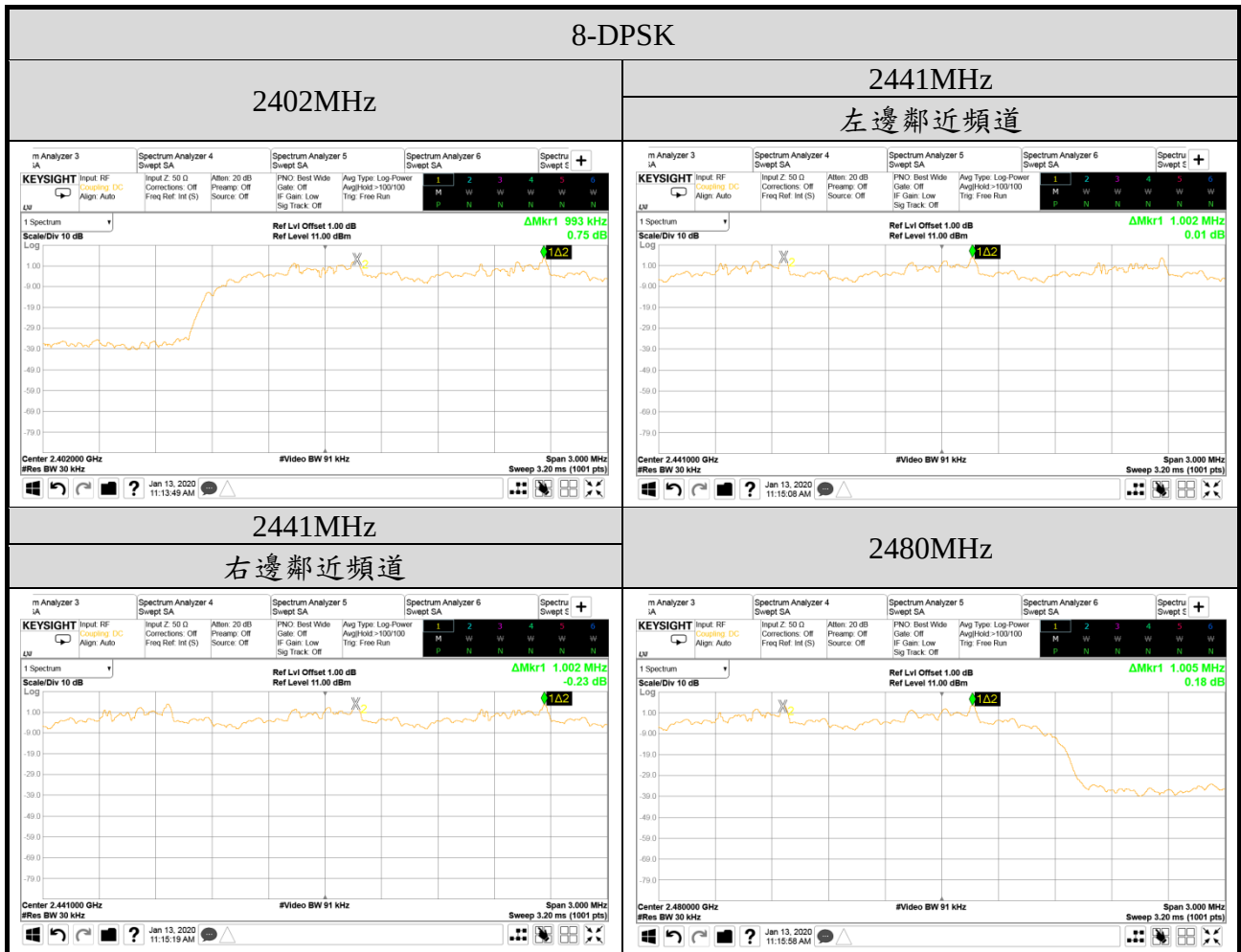
4.1. 載波頻率間隔

模式 (Mode)	測試頻率 (MHz)	頻道間隔(MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
GFSK	2402	1.005	> 0.614
	2441 (左邊鄰近頻道)	0.990	
	2441 (右邊鄰近頻道)	1.008	
	2480	1.023	

模式 (Mode)	測試頻率 (MHz)	頻道間隔(MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
8-DPSK	2402	0.993	> 0.842
	2441 (左邊鄰近頻道)	1.002	
	2441 (右邊鄰近頻道)	1.002	
	2480	1.005	

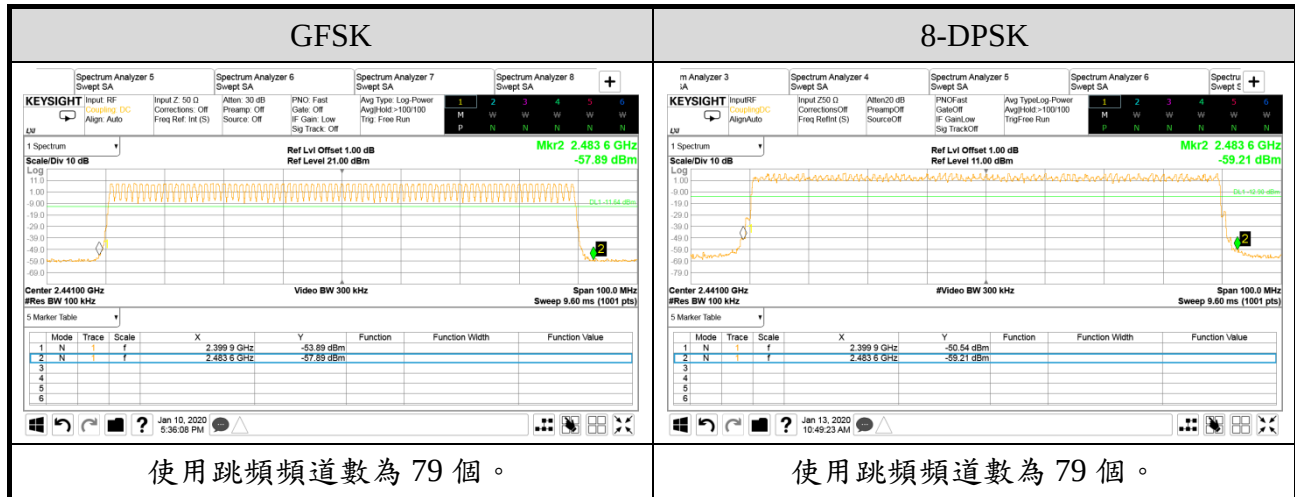
4.2. 載波頻率間隔之量測圖





5. 跳頻頻率數目之量測

測試日期	2020/01/10~13	環境溫/濕度	20~21°C/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		



6. 佔用時間(停留時間)之量測

測試日期	2020/01/10~13	環境溫/濕度	20~21℃/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		

6.1. 佔用時間(停留時間)

模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2402	DH1	8	0.370	93.536	<400
		DH3	5	1.630	257.540	<400
		DH5	2	2.870	181.384	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.870 \text{ ms} = 181.384 \text{ ms} (<400\text{ms})$$

● 佔用時間(停留時間)之量測圖

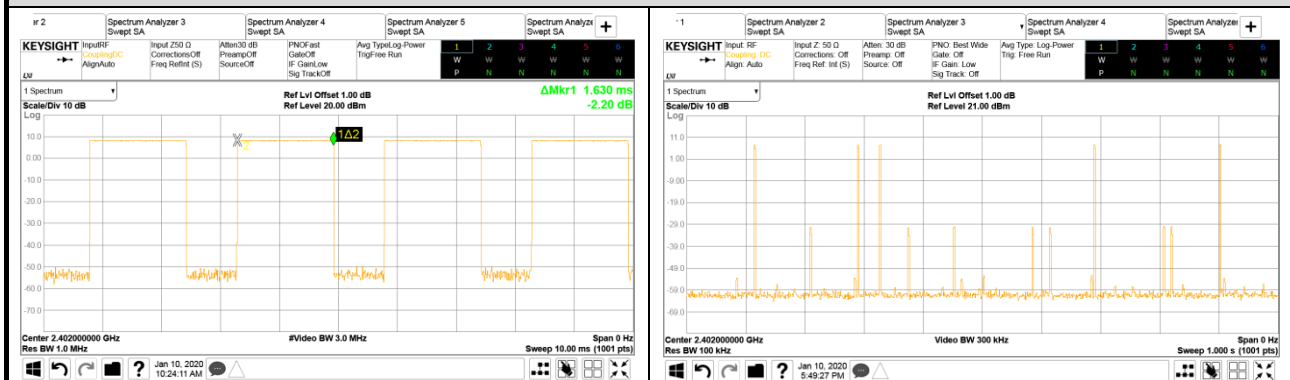
GFSK

2402MHz

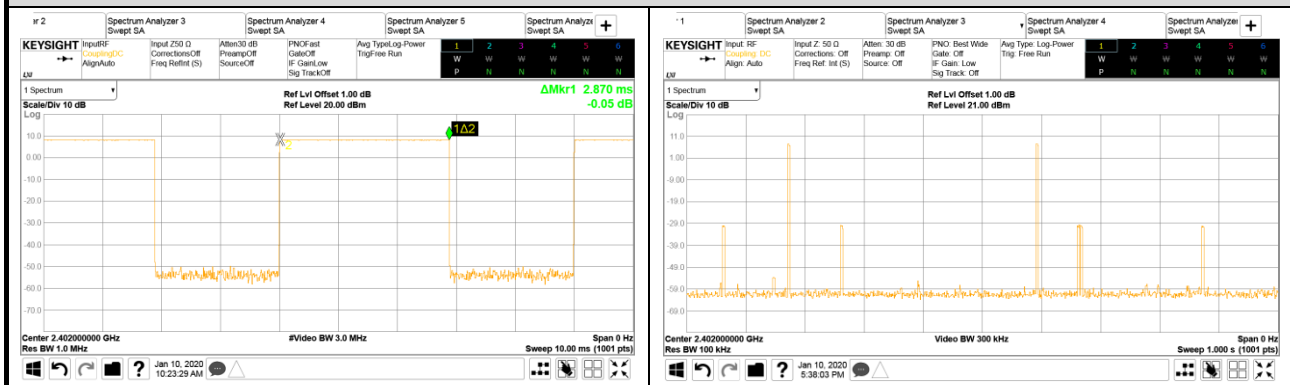
DH1



DH3



DH5



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2441	DH1	8	0.370	93.536	<400
		DH3	5	1.630	257.540	<400
		DH5	2	2.870	181.384	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.870 \text{ ms} = 181.384 \text{ ms} (<400\text{ms})$$

● 佔用時間(停留時間)之量測圖

GFSK

2441MHz

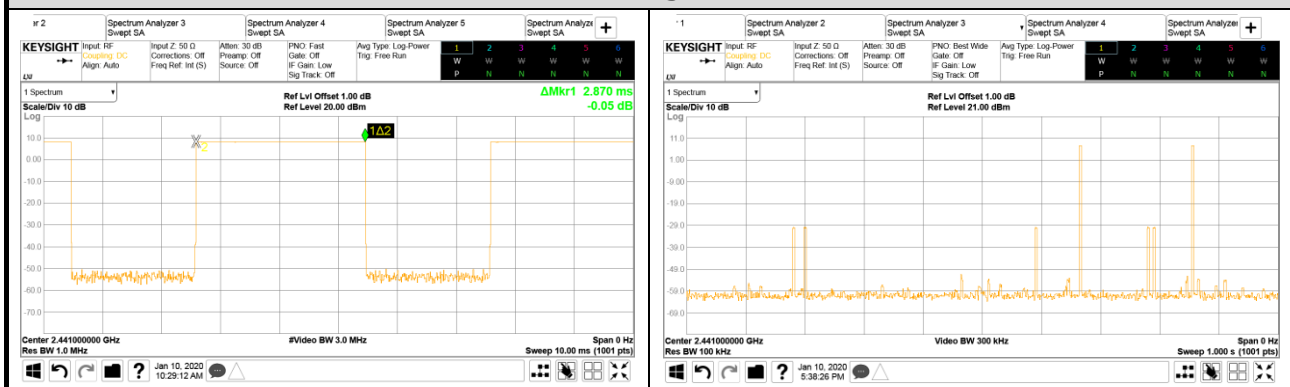
DH1



DH3



DH5



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2480	DH1	8	0.370	93.536	<400
		DH3	5	1.620	255.960	<400
		DH5	3	2.880	273.024	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

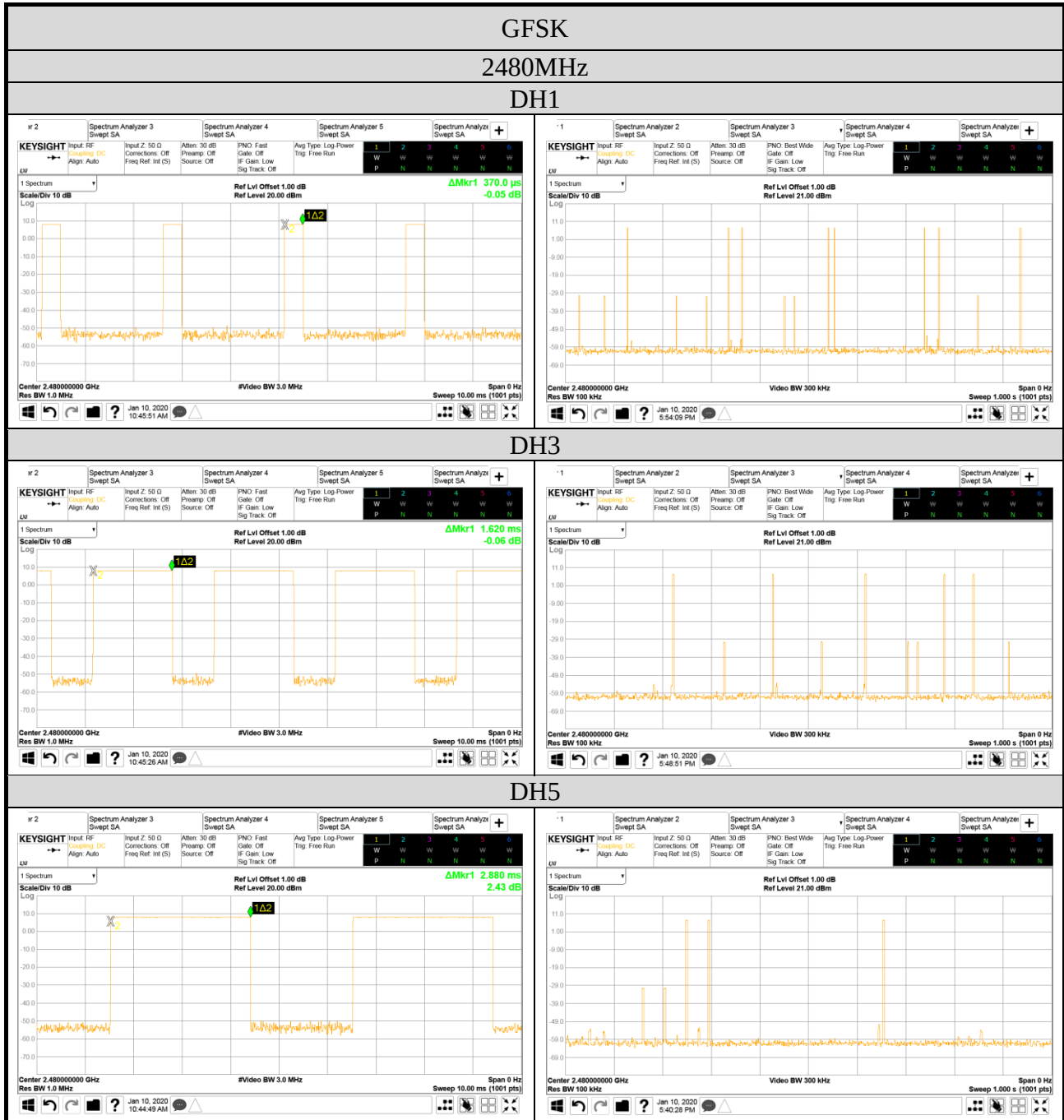
$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.620 \text{ ms} = 255.960 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 3 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$3 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 273.024 \text{ ms} (<400\text{ms})$$

● 佔用時間(停留時間)之量測圖



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2402	3DH1	8	0.370	93.536	<400
		3DH3	5	1.630	257.540	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

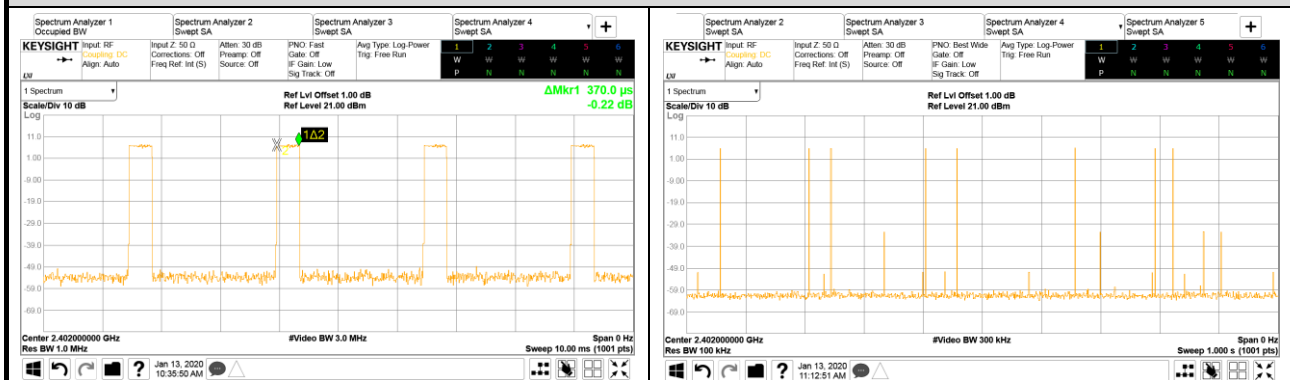
$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖

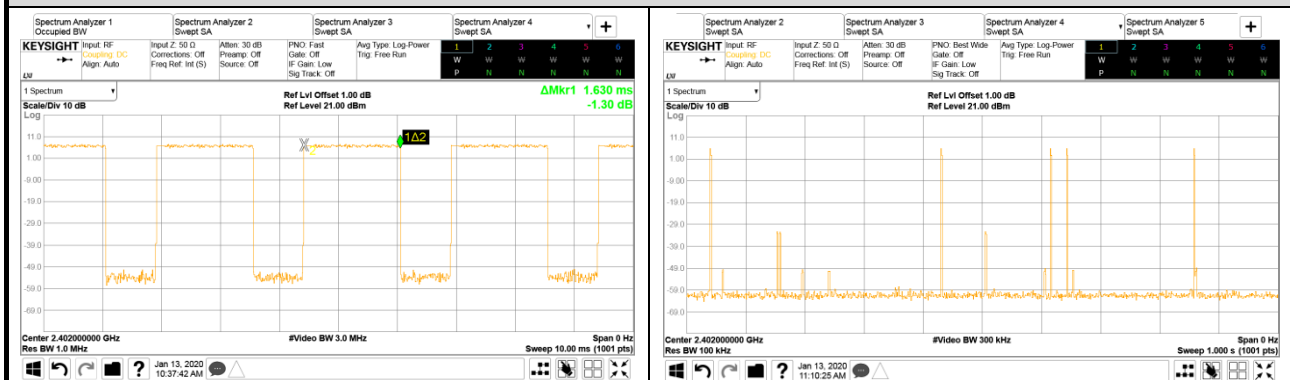
8-DPSK

2402MHz

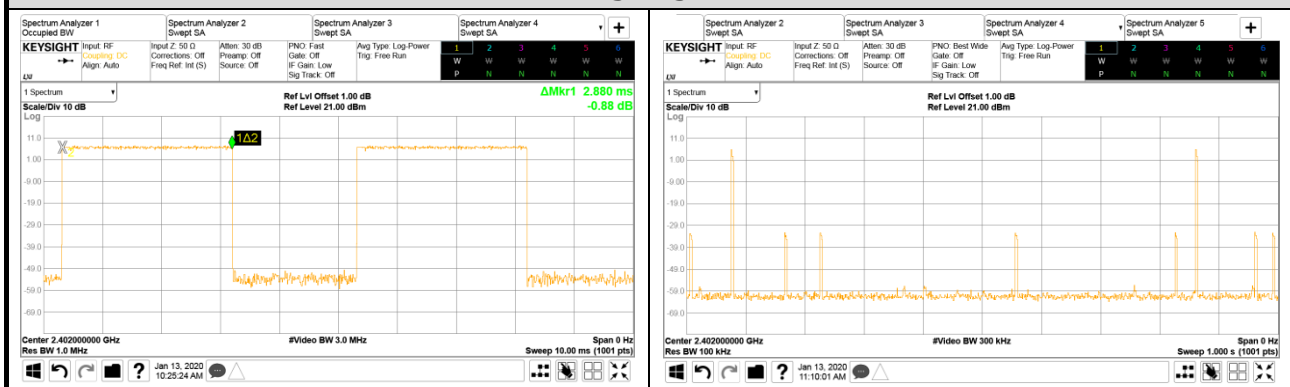
3DH1



3DH3



3DH5



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2441	3DH1	8	0.370	93.536	<400
		3DH3	5	1.630	257.540	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

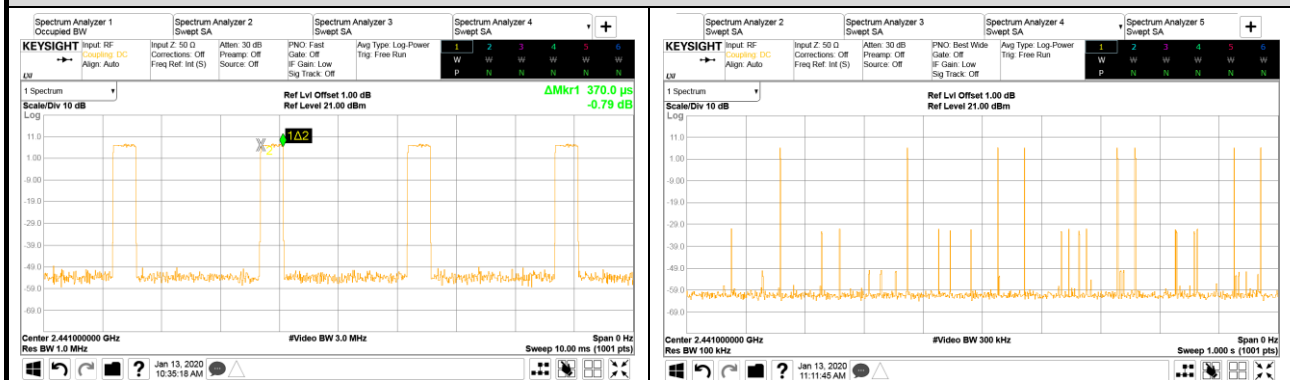
$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖

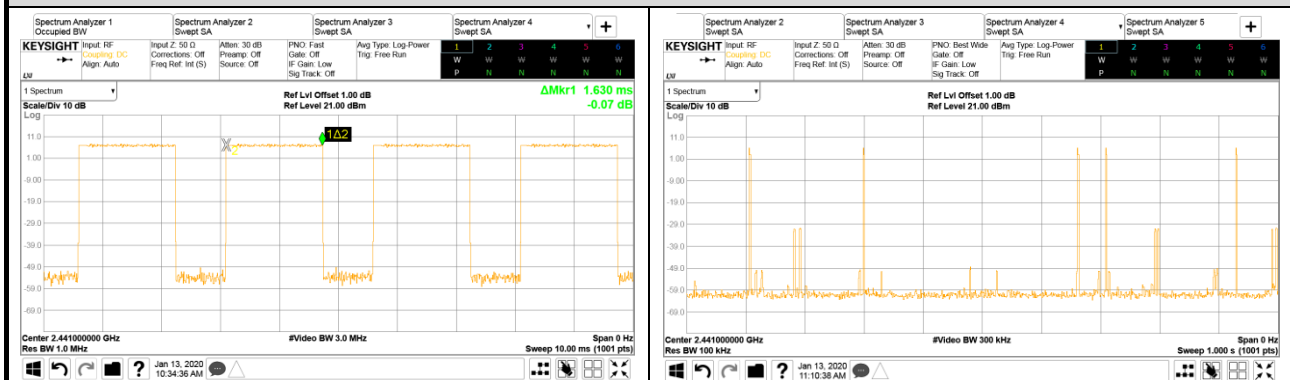
8-DPSK

2441MHz

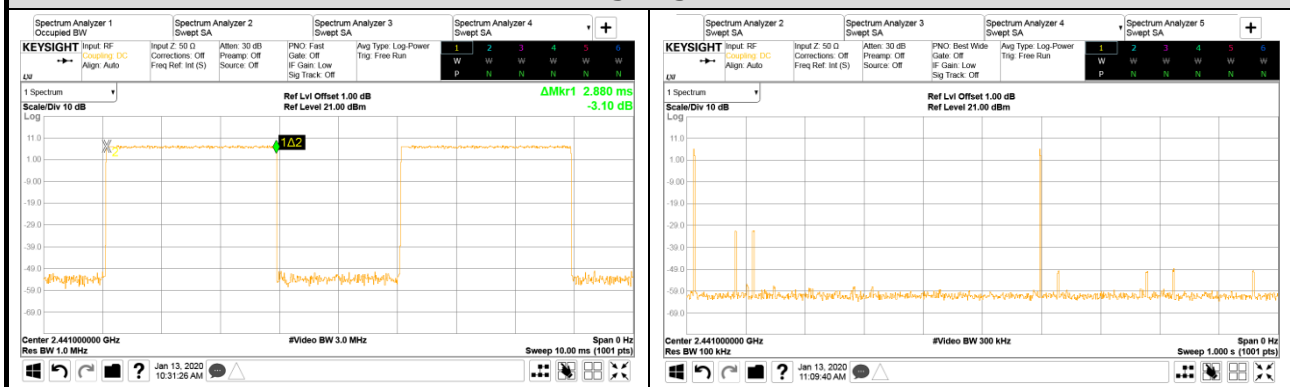
3DH1



3DH3



3DH5



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2480	3DH1	9	0.380	108.072	<400
		3DH3	5	1.630	257.540	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 9 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$9 \text{ 頻道數} * 31.6 \text{ 秒} * 0.380 \text{ ms} = 108.072 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

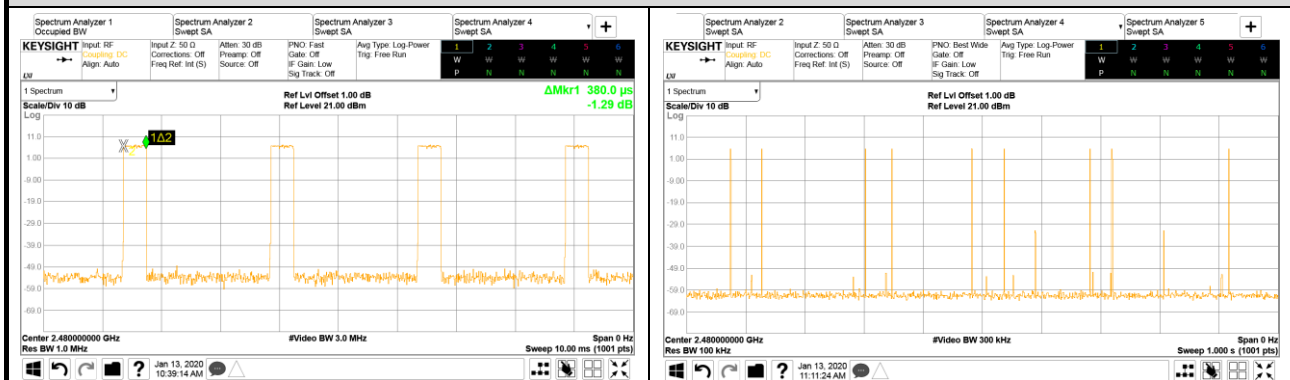
$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖

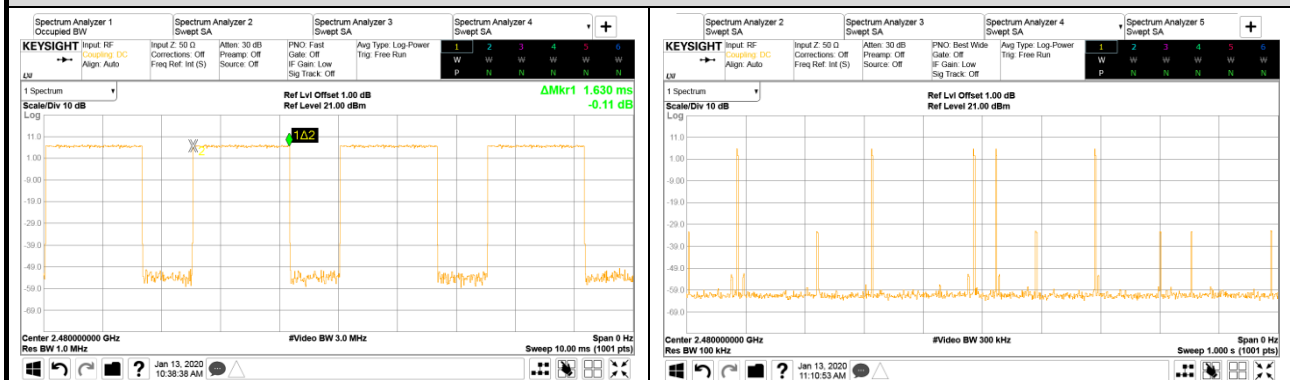
8-DPSK

2480MHz

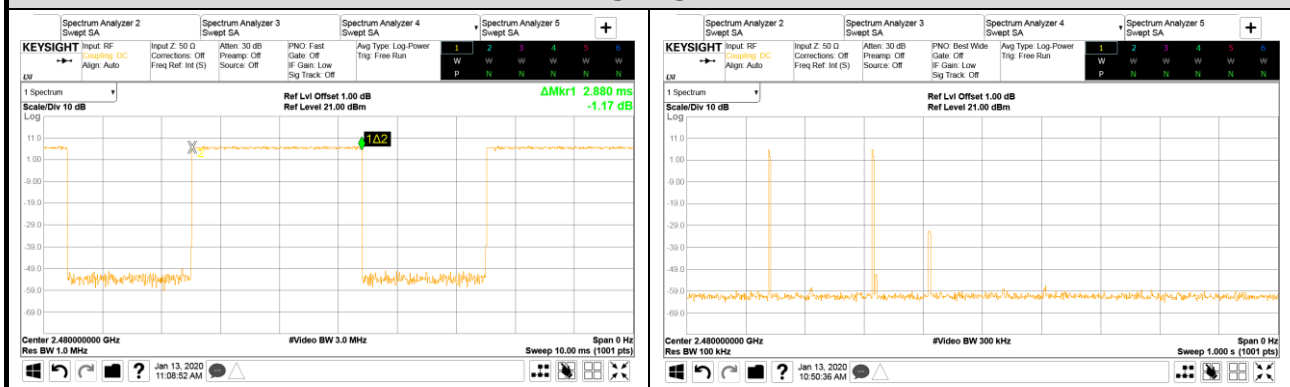
3DH1



3DH3



3DH5



7. 峰值輸出功率之量測

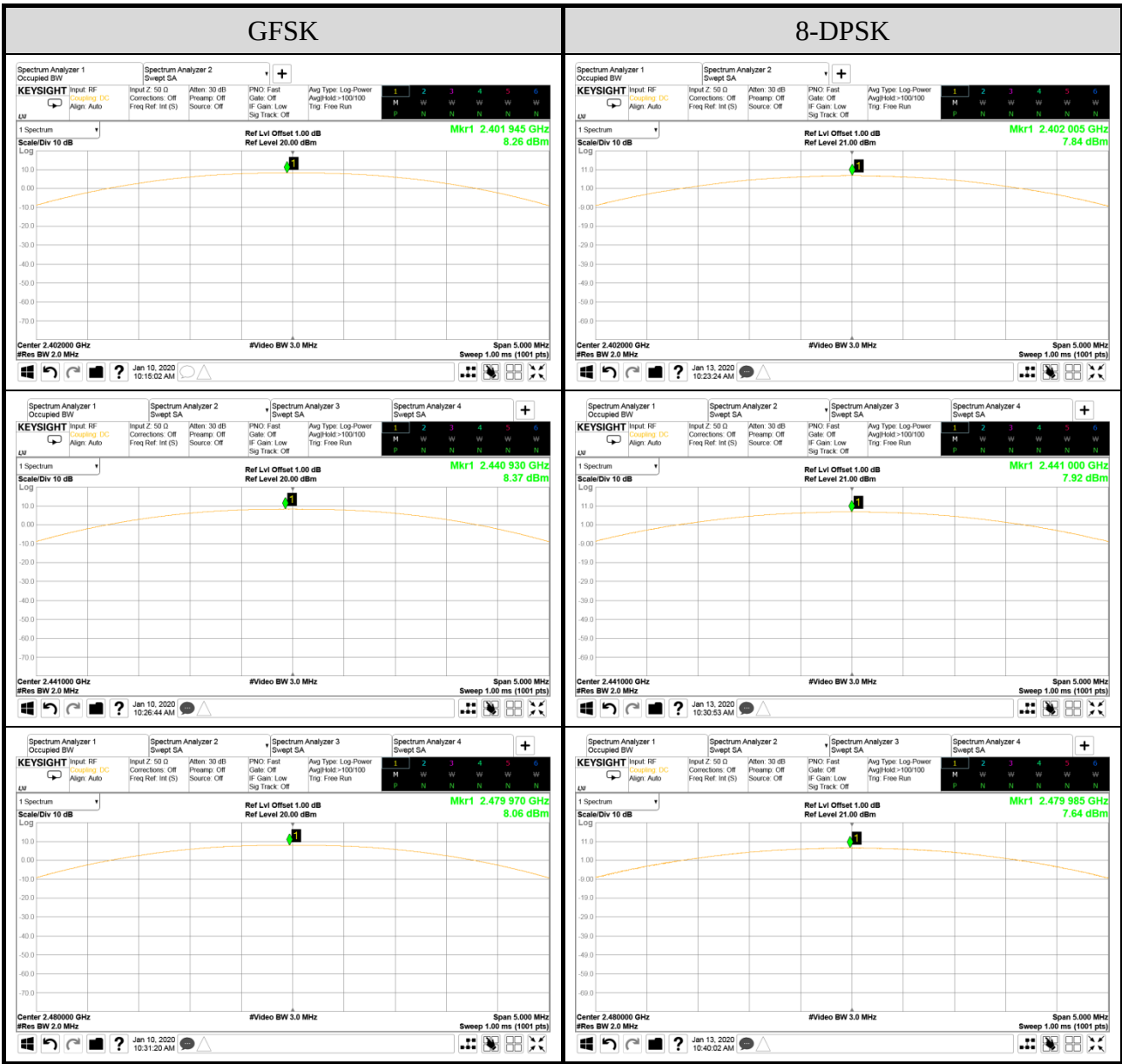
測試日期	2020/01/10~13	環境溫/濕度	20~21°C/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		

7.1. 峰值輸出功率

模式	測試頻率 (MHz)	峰值輸出功率(dBm)
GFSK	2402	8.26
	2441	8.37
	2480	8.06

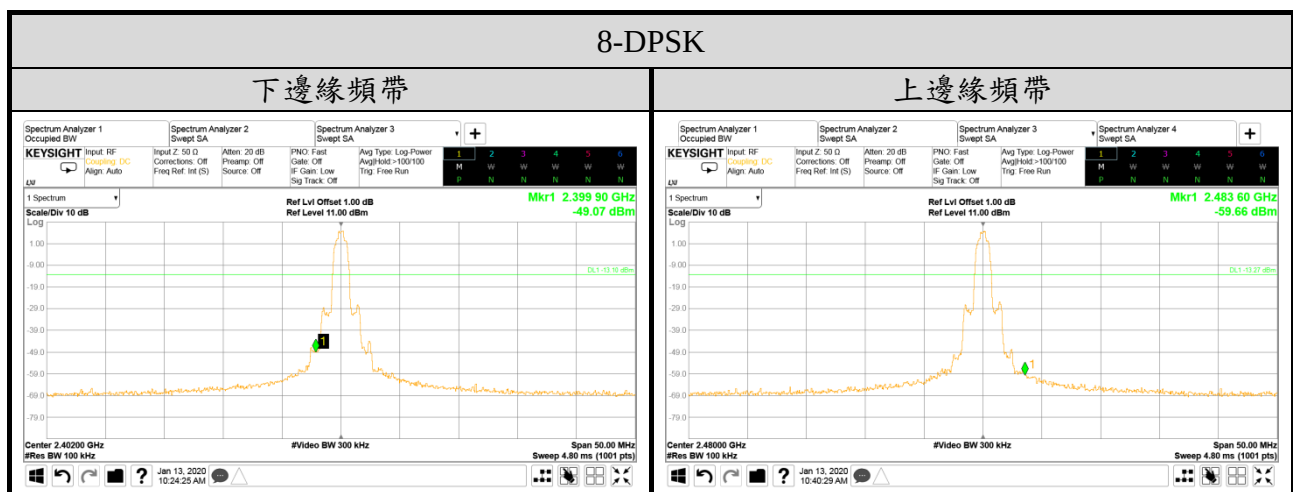
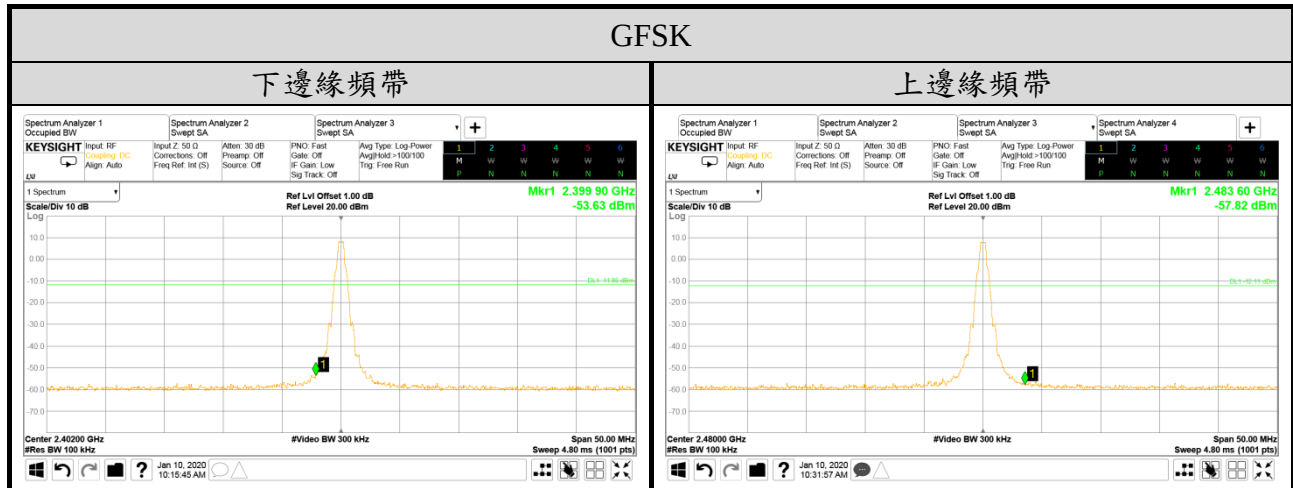
模式	測試頻率 (MHz)	峰值輸出功率(dBm)
8-DPSK	2402	7.84
	2441	7.92
	2480	7.64

7.2. 峰值輸出功率之量測圖



8. 頻帶邊緣之 RF 傳導發射之量測

測試日期	2020/01/10~13	環境溫/濕度	20~21°C/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		



9. 混附發射之 RF 傳導發射之量測

測試日期	2020/01/10~13	環境溫/濕度	20~21°C/54~61%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 7.2V (經內建鋰電池供電)		

