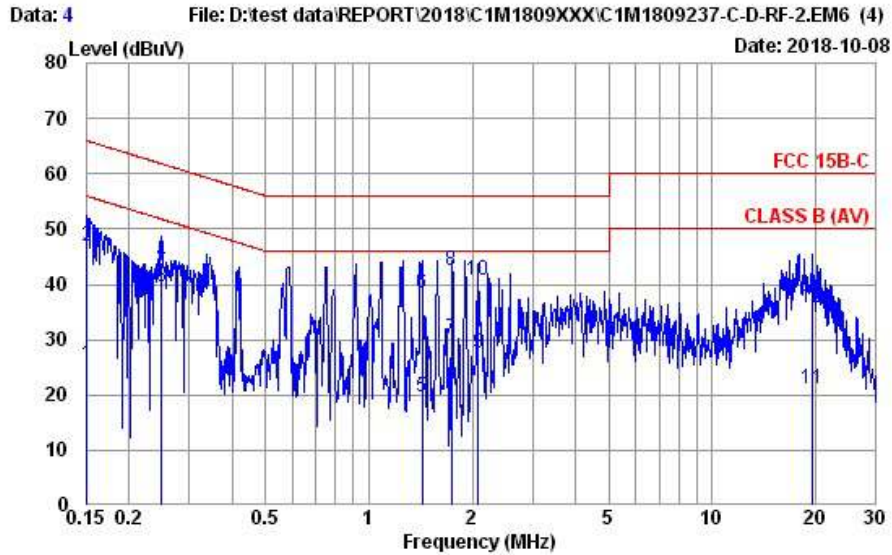


## TABLE OF CONTENTS

<b>A.1 CONDUCTED EMISSION</b> .....	<b>2</b>
<b>A.2 RADIATED EMISSION</b> .....	<b>4</b>
A.2.1 Emissions within Restricted Frequency Bands.....	4
A.2.2 Emissions outside the frequency band:.....	13
A.2.3 Emissions in Non-restricted Frequency Bands:.....	15
<b>A.3 20dB BANDWIDTH</b> .....	<b>16</b>
A.3.1 6dB Bandwidth Result.....	16
A.3.2 Measurement Plots .....	17
<b>A.4 CARRIER FREQUENCY SEPARATION</b> .....	<b>18</b>
<b>A.5 TIME OF OCCUPANCY</b> .....	<b>20</b>
A.5.1 Time of Occupancy .....	20
<b>A.6 NUMBER OF HOPPING CHANNELS</b> .....	<b>30</b>
<b>A.7 MAXIMUM PEAK OUTPUT POWER</b> .....	<b>31</b>
A.7.1 Maximum Peak Output Power.....	31
A.7.2 Measurement Plots .....	32
<b>A.8 EMISSION LIMITATIONS MEASUREMENT</b> .....	<b>33</b>
A.8.1 Band Edge.....	33
A.8.2 Spurious Emission .....	35

## A.1 CONDUCTED EMISSION

Test Date	2018/10/08	Temp./Hum.	21°C/62%
Test Voltage	AC 120V, 60Hz		

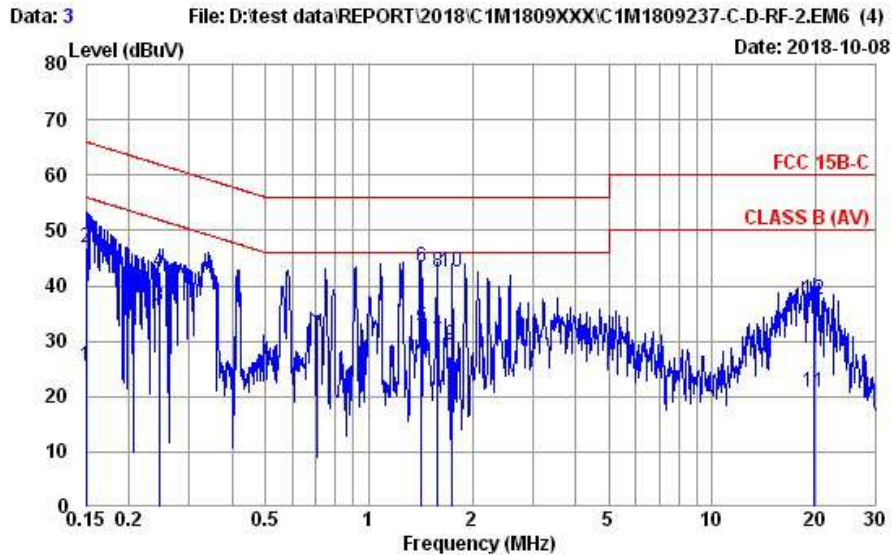


Site no. : No.7 Shielded Room Data no. : 4  
 Condition : ESH2-Z5 366(ADAPTER) LISN Phase : NEUTRAL  
 Limit : FCC 15B-C  
 Env. / Ins. : 21°C / 62% ESCI (1276) Engineer : NICK  
 EUT : HSD-0015-Q  
 Power Rating : 120Vac/60Hz  
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.151	0.13	0.03	9.98	15.44	25.58	55.96	30.38	Average
2	0.151	0.13	0.03	9.98	36.66	46.80	65.96	19.16	QP
3	0.249	0.14	0.03	9.98	29.52	39.67	51.78	12.11	Average
4	0.249	0.14	0.03	9.98	33.90	44.05	61.78	17.73	QP
5	1.426	0.19	0.05	9.99	9.40	19.63	46.00	26.37	Average
6	1.426	0.19	0.05	9.99	28.19	38.42	56.00	17.58	QP
7	1.744	0.19	0.06	9.99	19.85	30.09	46.00	15.91	Average
8	1.744	0.19	0.06	9.99	32.20	42.44	56.00	13.56	QP
9	2.077	0.20	0.06	9.99	17.24	27.49	46.00	18.51	Average
10	2.077	0.20	0.06	9.99	30.39	40.64	56.00	15.36	QP
11	19.532	0.94	0.21	10.07	9.74	20.96	50.00	29.04	Average
12	19.532	0.94	0.21	10.07	24.65	35.87	60.00	24.13	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.

Test Date	2018/10/08	Temp./Hum.	21°C/62%
Test Voltage	AC 120V, 60Hz		



Site no. : No.7 Shielded Room Data no. : 3  
 Condition : ESH2-Z5 366(ADAPTER) LISN Phase : LINE  
 Limit : FCC 15B-C  
 Env. / Ins. : 21°C / 62% ESCI (1276) Engineer : NICK  
 EUT : HSD-0015-Q  
 Power Rating : 120Vac/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	0.150	0.13	0.03	9.98	15.28	25.42	55.99	30.57	Average
2	0.150	0.13	0.03	9.98	36.79	46.93	65.99	19.06	QP
3	0.246	0.13	0.03	9.98	26.21	36.35	51.91	15.56	Average
4	0.246	0.13	0.03	9.98	32.26	42.40	61.91	19.51	QP
5	1.418	0.18	0.05	9.99	22.27	32.49	46.00	13.51	Average
6	1.418	0.18	0.05	9.99	33.16	43.38	56.00	12.62	QP
7	1.585	0.18	0.05	9.99	19.57	29.79	46.00	16.21	Average
8	1.585	0.18	0.05	9.99	32.14	42.36	56.00	13.64	QP
9	1.744	0.18	0.06	9.99	19.08	29.31	46.00	16.69	Average
10	1.744	0.18	0.06	9.99	32.18	42.41	56.00	13.59	QP
11	19.740	0.86	0.21	10.07	9.77	20.91	50.00	29.09	Average
12	19.740	0.86	0.21	10.07	26.32	37.46	60.00	22.54	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.

## A.2 RADIATED EMISSION

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Test Voltage	AC 120V, 60Hz		

### A.2.1 Emissions within Restricted Frequency Bands

#### A.2.1.1 Frequency 9kHz~30MHz

**The emissions (9kHz~30MHz) not reported for there is no emission be found.**

#### A.2.1.2 Frequency Below 1GHz

Mode	GFSK	Frequency	TX 2480MHz
------	------	-----------	------------

#### 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
59.1000	12.75	1.71	15.92	30.38	40.00	9.62	Peak
126.0300	18.50	2.57	20.03	41.10	43.50	2.40	Peak
184.2300	15.50	3.18	13.22	31.90	43.50	11.60	Peak
306.4500	19.68	4.40	8.31	32.39	46.00	13.61	Peak
360.7700	21.13	5.10	8.25	34.48	46.00	11.52	Peak
456.8000	22.72	6.08	5.51	34.31	46.00	11.69	Peak

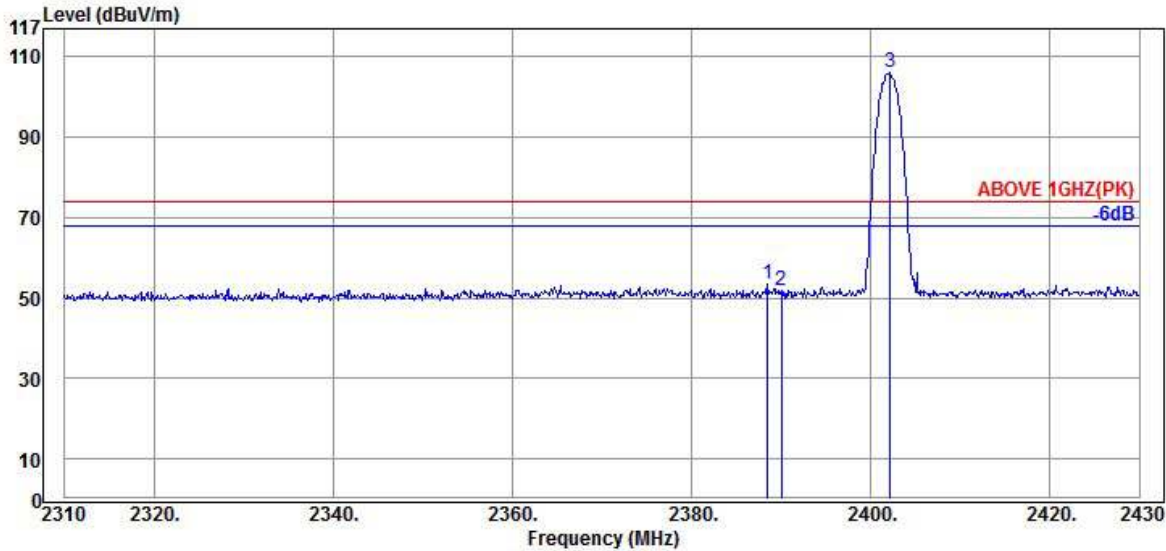
#### Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
30.9700	24.27	1.22	13.89	39.38	40.00	0.62	Peak
126.0300	18.50	2.57	21.06	42.13	43.50	1.37	Peak
328.7600	20.31	4.71	10.98	36.00	46.00	10.00	Peak
446.1300	22.60	5.98	10.59	39.17	46.00	6.83	Peak
664.3800	24.79	6.97	7.74	39.50	46.00	6.50	Peak
794.3600	25.86	7.57	5.76	39.19	46.00	6.81	Peak

A.2.1.3 Frequency Above 1 GHz to 10<sup>th</sup> harmonics

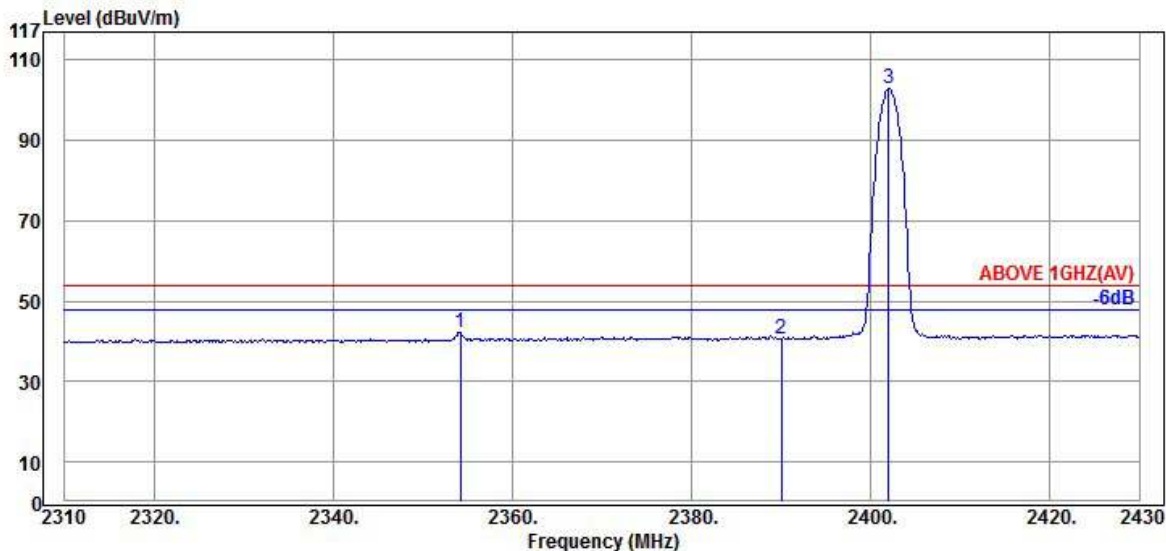
**Band Edge:**

Mode	GFSK	Frequency	TX 2402MHz
------	------	-----------	------------



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
2388.4800	28.28	5.24	19.92	53.44	74.00	20.56	Peak
2390.0400	28.28	5.24	18.40	51.92	74.00	22.08	Peak
2402.1600	28.29	5.25	72.42	105.96	---	---	Peak

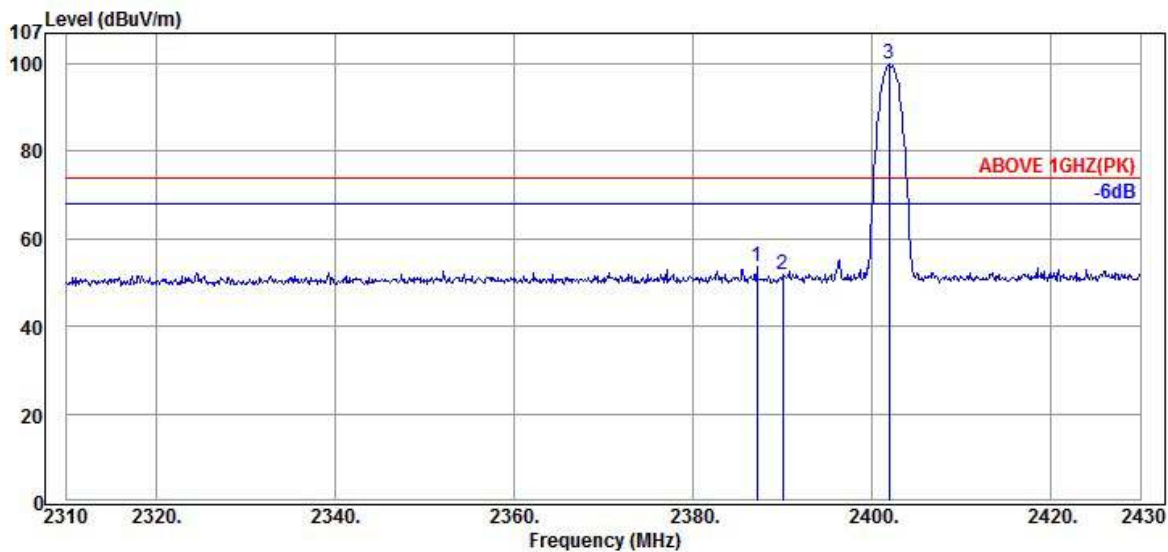


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2354.1600	28.24	5.21	8.73	42.18	54.00	11.82	Average
2390.0400	28.28	5.24	7.24	40.76	54.00	13.24	Average
2402.0400	28.29	5.25	69.26	102.80	---	---	Average

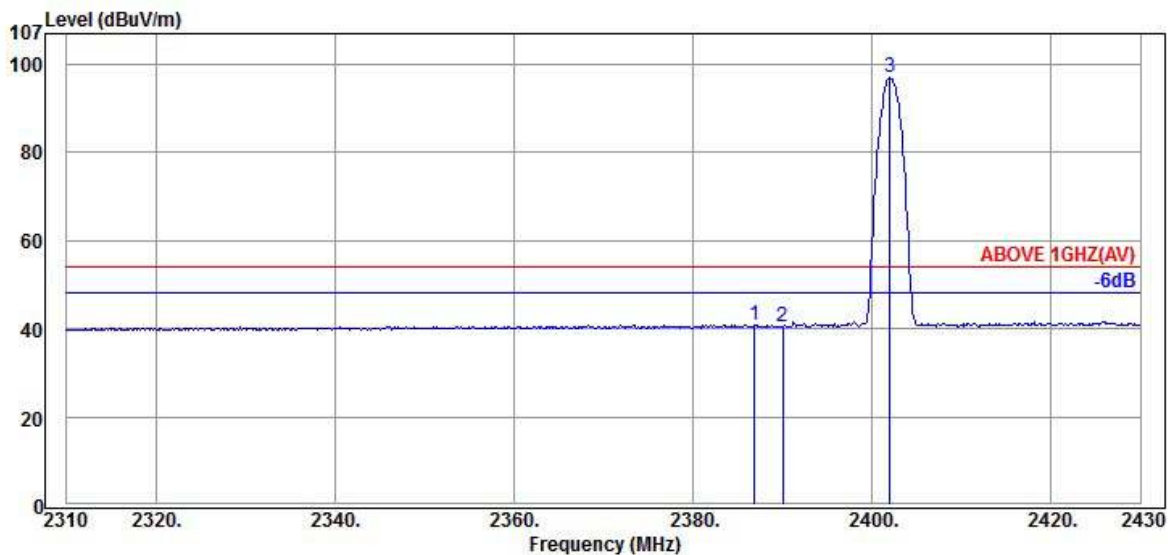


Mode	GFSK	Frequency	TX 2402MHz
------	------	-----------	------------



Antenna at Vertical Polarization

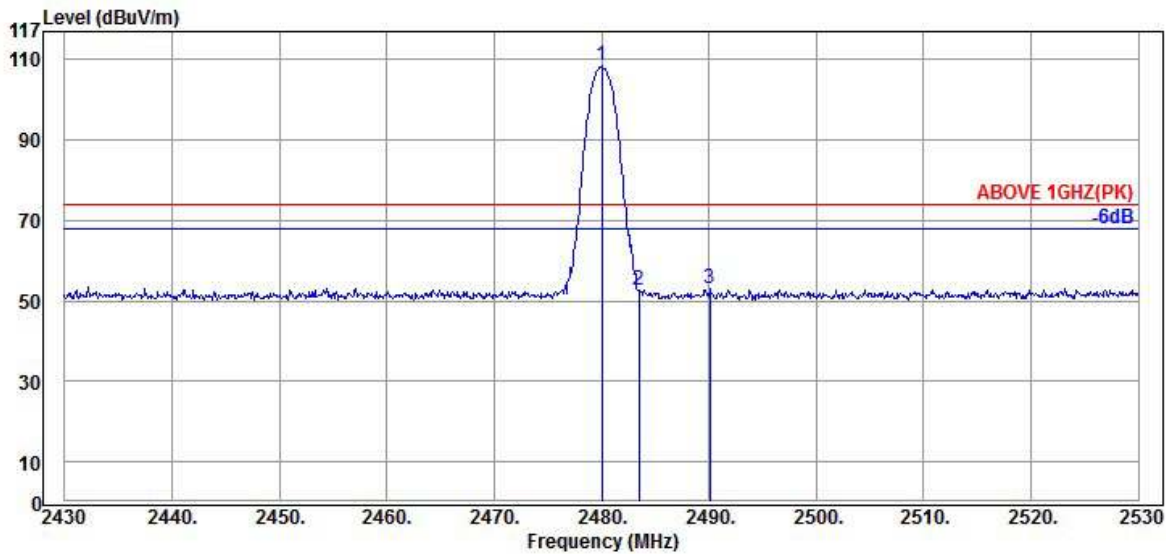
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.1600	28.28	5.23	20.15	53.66	74.00	20.34	Peak
2390.0400	28.28	5.24	18.22	51.74	74.00	22.26	Peak
2401.9200	28.29	5.25	66.44	99.98	---	---	Peak



Antenna at Vertical Polarization

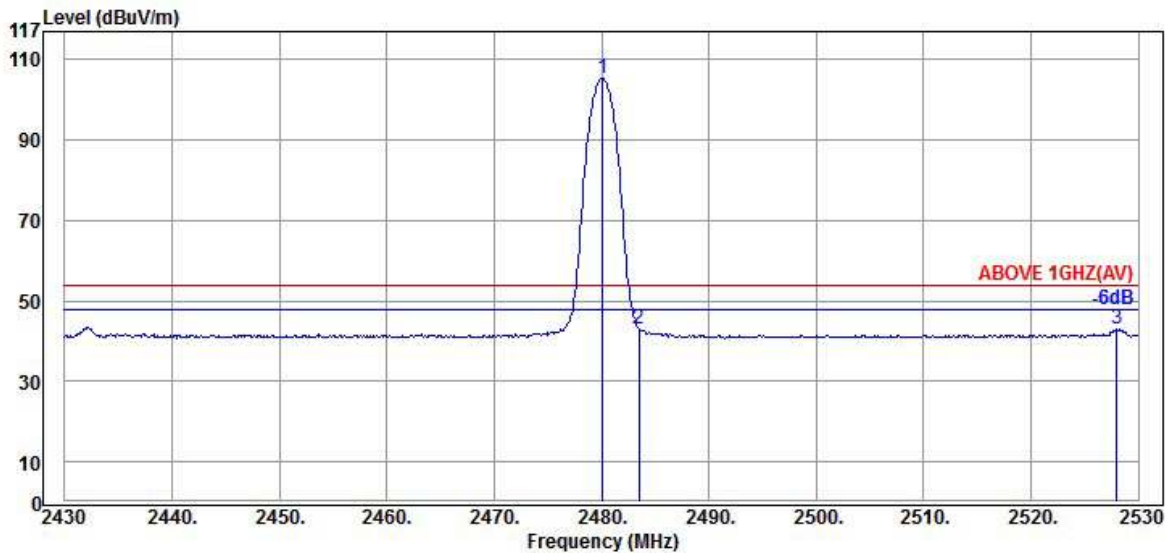
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2386.9200	28.28	5.23	7.38	40.89	54.00	13.11	Average
2390.0400	28.28	5.24	7.07	40.59	54.00	13.41	Average
2402.0400	28.29	5.25	63.48	97.02	---	---	Average

Mode	GFSK	Frequency	TX 2480MHz
------	------	-----------	------------



Antenna at Horizontal Polarization

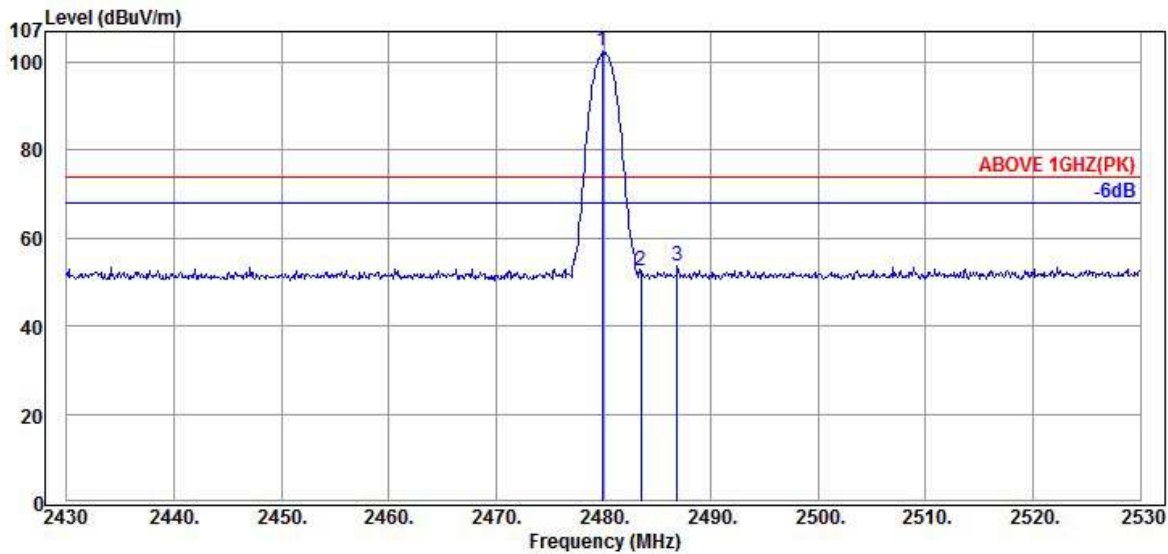
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2480.0000	28.38	5.30	74.73	108.41	---	---	Peak
2483.5000	28.38	5.31	18.89	52.58	74.00	21.42	Peak
2490.1000	28.39	5.31	19.25	52.95	74.00	21.05	Peak



Antenna at Horizontal Polarization

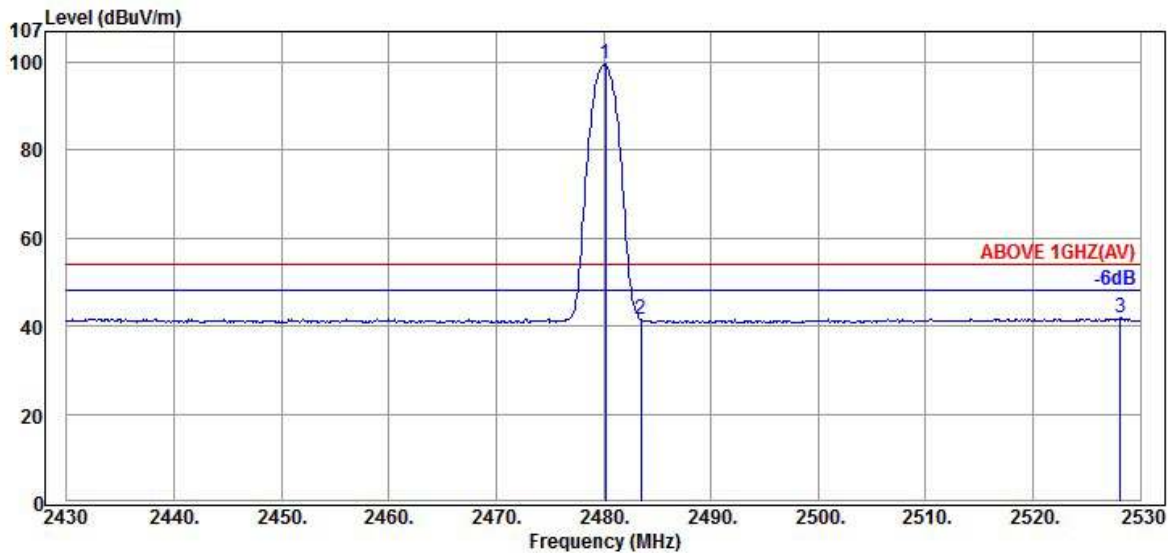
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2480.1000	28.38	5.30	71.79	105.47	---	---	Average
2483.5000	28.38	5.31	9.38	43.07	54.00	10.93	Average
2528.0000	28.51	5.35	9.11	42.97	54.00	11.03	Average

Mode	GFSK	Frequency	TX 2480MHz
------	------	-----------	------------



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
2479.9000	28.38	5.30	68.75	102.43	---	---	Peak
2483.5000	28.38	5.31	19.06	52.75	74.00	21.25	Peak
2486.9000	28.38	5.31	19.88	53.57	74.00	20.43	Peak

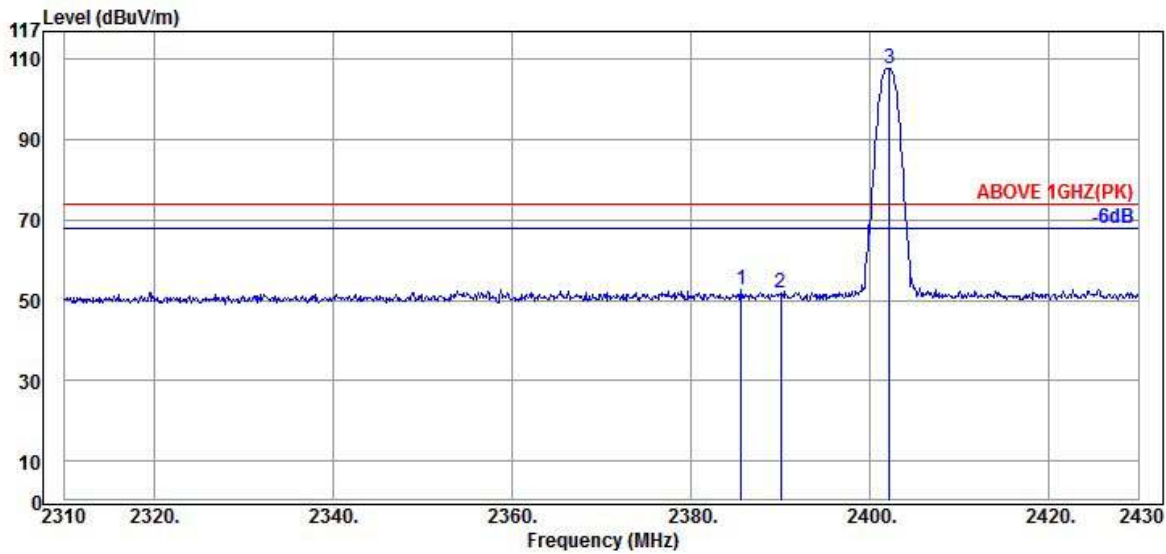


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2480.2000	28.38	5.30	65.88	99.56	---	---	Average
2483.5000	28.38	5.31	7.71	41.40	54.00	12.60	Average
2528.1000	28.51	5.35	7.94	41.80	54.00	12.20	Average

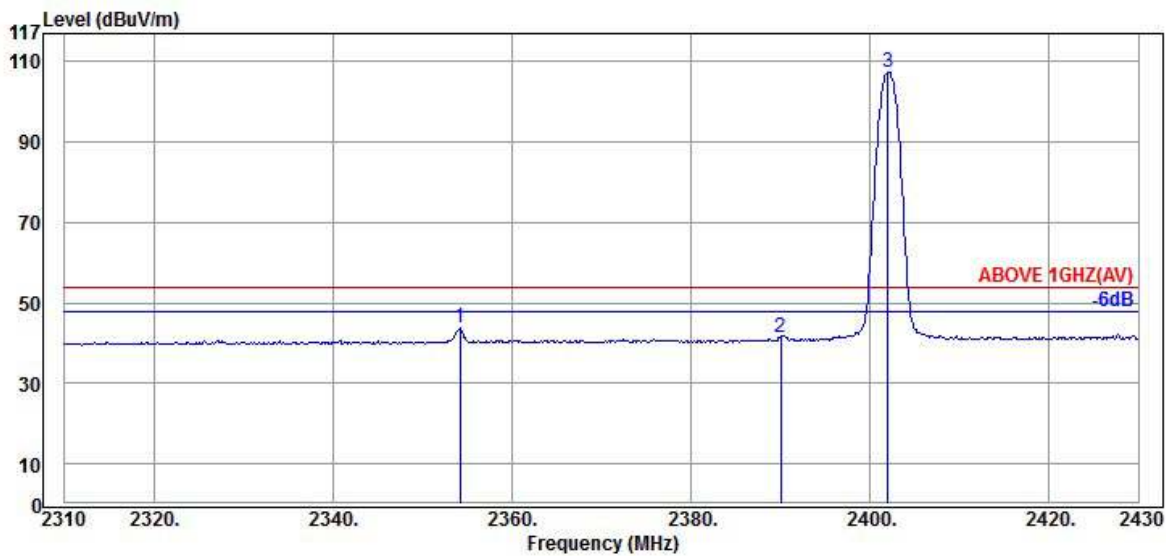


Mode	8-DPSK	Frequency	TX 2402MHz
------	--------	-----------	------------



Antenna at Horizontal Polarization

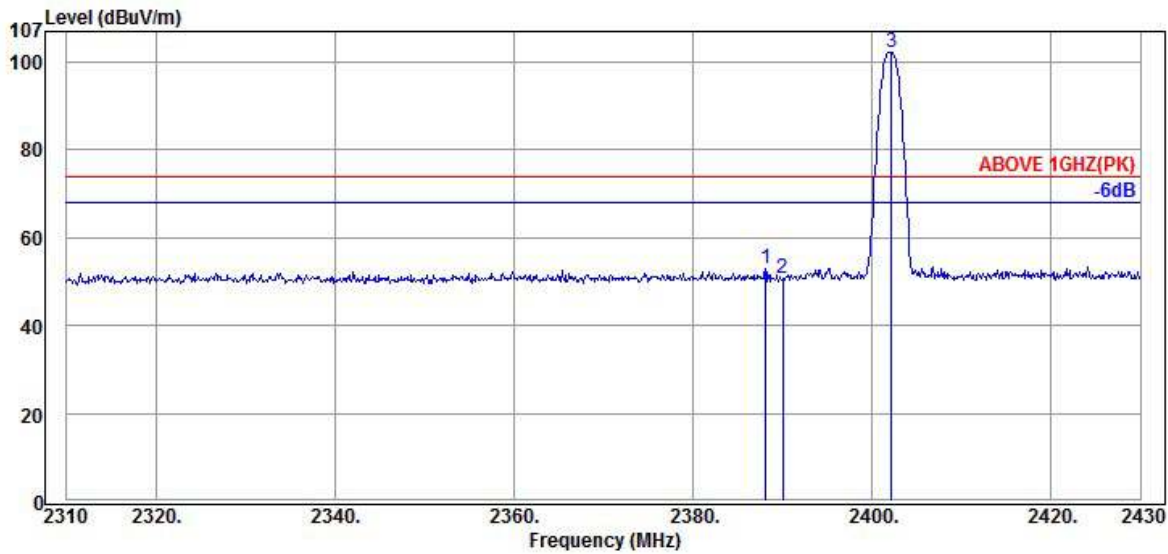
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2385.6000	28.28	5.23	19.21	52.72	74.00	21.28	Peak
2390.0400	28.28	5.24	18.25	51.77	74.00	22.23	Peak
2402.1600	28.29	5.25	74.10	107.64	---	---	Peak



Antenna at Horizontal Polarization

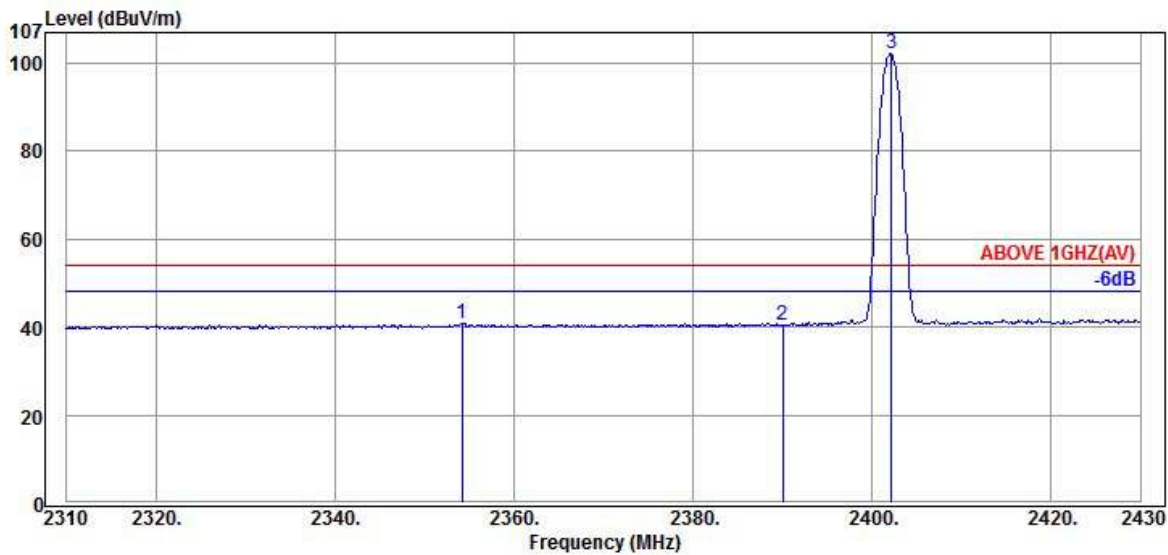
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2354.1600	28.24	5.21	10.17	43.62	54.00	10.38	Average
2390.0400	28.28	5.24	7.92	41.44	54.00	12.56	Average
2402.0400	28.29	5.25	73.96	107.50	---	---	Average

Mode	8-DPSK	Frequency	TX 2402MHz
------	--------	-----------	------------



Antenna at Vertical Polarization

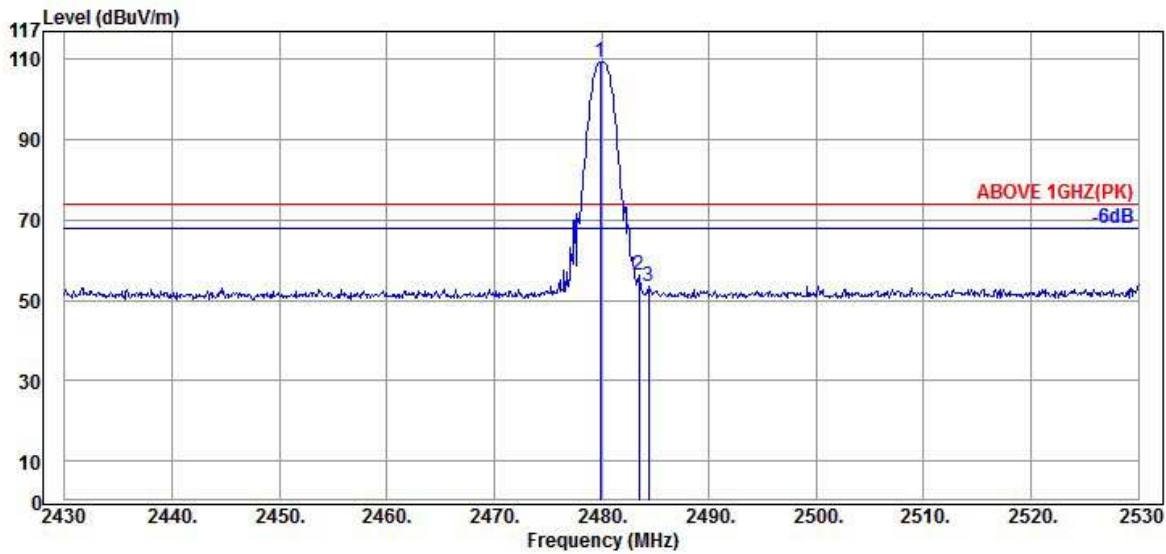
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.1200	28.28	5.24	19.39	52.91	74.00	21.09	Peak
2390.0400	28.28	5.24	17.32	50.84	74.00	23.16	Peak
2402.1600	28.29	5.25	68.79	102.33	---	---	Peak



Antenna at Vertical Polarization

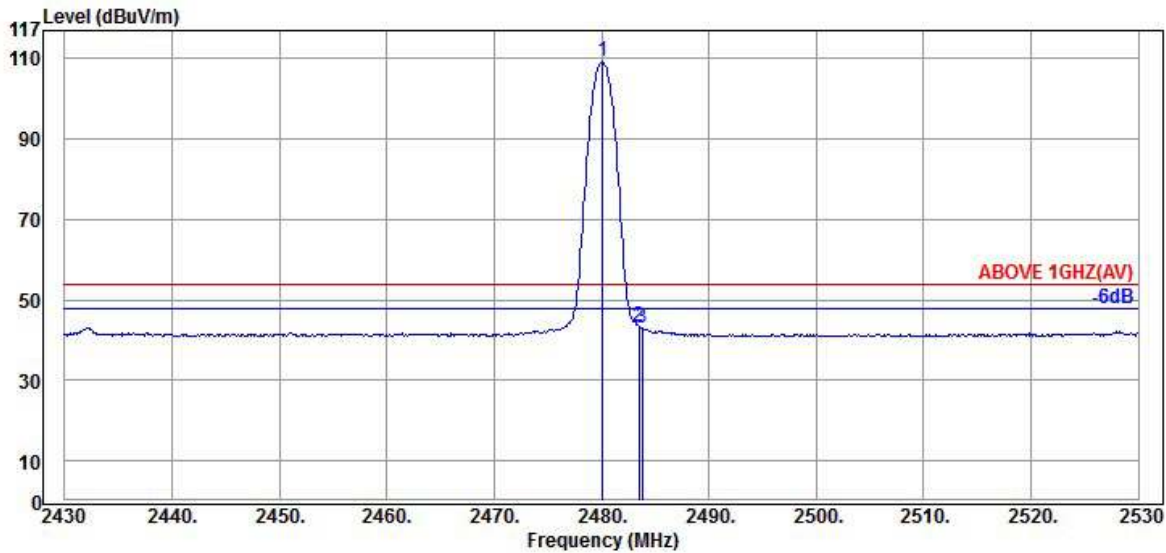
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2354.1600	28.24	5.21	7.37	40.82	54.00	13.18	Average
2390.0400	28.28	5.24	6.82	40.34	54.00	13.66	Average
2402.1600	28.29	5.25	68.59	102.13	---	---	Average

Mode	8-DPSK	Frequency	TX 2480MHz
------	--------	-----------	------------



Antenna at Horizontal Polarization

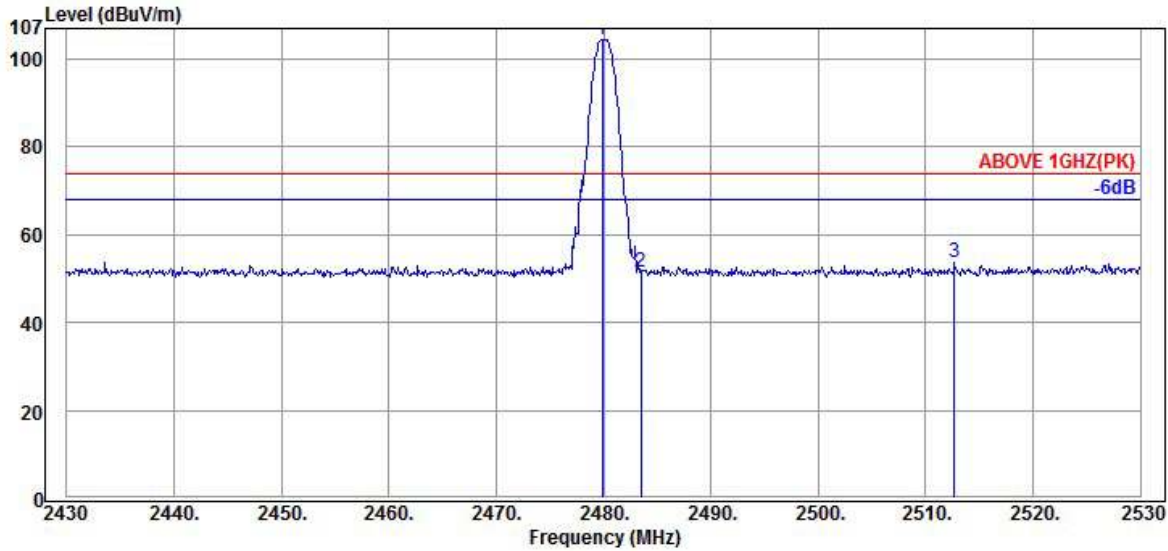
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2479.9000	28.38	5.30	75.73	109.41	---	---	Peak
2483.5000	28.38	5.31	22.51	56.20	74.00	17.80	Peak
2484.4000	28.38	5.31	19.90	53.59	74.00	20.41	Peak



Antenna at Horizontal Polarization

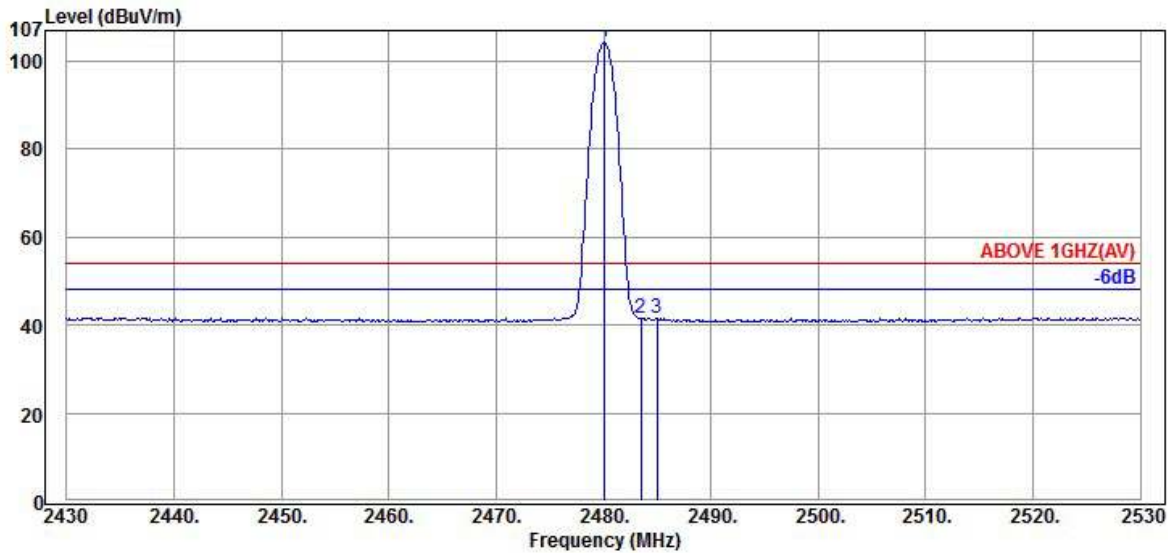
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2480.1000	28.38	5.30	75.56	109.24	---	---	Average
2483.5000	28.38	5.31	9.82	43.51	54.00	10.49	Average
2483.8000	28.38	5.31	9.15	42.84	54.00	11.16	Average

Mode	8-DPSK	Frequency	TX 2480MHz
------	--------	-----------	------------



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
2479.9000	28.38	5.30	70.93	104.61	---	---	Peak
2483.5000	28.38	5.31	17.87	51.56	74.00	22.44	Peak
2512.7000	28.45	5.33	19.94	53.72	74.00	20.28	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
2480.1000	28.38	5.30	70.59	104.27	---	---	Average
2483.5000	28.38	5.31	7.75	41.44	54.00	12.56	Average
2485.0000	28.38	5.31	7.92	41.61	54.00	12.39	Average

A.2.2 Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	GFSK	Frequency	TX 2402MHz
------	------	-----------	------------

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
1192.0000	25.47	3.38	21.07	49.92	54.00	4.08	Peak
1582.0000	25.77	4.12	18.22	48.11	54.00	5.89	Peak
1796.0000	26.88	4.55	20.06	51.49	54.00	2.51	Peak
1996.0000	27.77	4.92	19.33	52.02	54.00	1.98	Peak
2116.0000	27.95	5.02	14.31	47.28	54.00	6.72	Peak
2354.0000	28.24	5.21	14.32	47.77	54.00	6.23	Peak
2614.0000	28.80	5.42	13.67	47.89	54.00	6.11	Peak
2694.0000	29.10	5.48	16.39	50.97	54.00	3.03	Peak
2814.0000	29.51	5.58	12.90	47.99	54.00	6.01	Peak
3164.0000	30.42	6.09	-1.16	35.35	54.00	18.65	Average
3164.0000	30.42	6.09	19.76	56.27	74.00	17.73	Peak
4750.0000	32.71	8.90	10.80	52.41	74.00	21.59	Peak
5387.0000	33.83	9.48	-2.34	40.97	54.00	13.03	Average
5387.0000	33.83	9.48	20.83	64.14	74.00	9.86	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
1194.0000	25.47	3.38	22.73	51.58	54.00	2.42	Peak
1796.0000	26.88	4.55	19.74	51.17	54.00	2.83	Peak
1998.0000	27.77	4.92	18.83	51.52	54.00	2.48	Peak
2096.0000	27.92	5.01	13.64	46.57	54.00	7.43	Peak
2608.0000	28.80	5.41	12.72	46.93	54.00	7.07	Peak
2690.0000	29.07	5.48	17.07	51.62	54.00	2.38	Peak
3146.0000	30.39	6.07	-1.66	34.80	54.00	19.20	Average
3146.0000	30.39	6.07	19.26	55.72	74.00	18.28	Peak
4750.0000	32.71	8.90	10.34	51.95	74.00	22.05	Peak
5399.0000	33.83	9.49	-2.16	41.16	54.00	12.84	Average
5399.0000	33.83	9.49	21.03	64.35	74.00	9.65	Peak



Mode	GFSK			Frequency	TX 2441MHz		
<b>Antenna at Horizontal Polarization</b>							
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1196.0000	25.47	3.39	21.24	50.10	54.00	3.90	Peak
1398.0000	25.35	3.76	15.72	44.83	54.00	9.17	Peak
1572.0000	25.72	4.10	19.39	49.21	54.00	4.79	Peak
1798.0000	26.88	4.56	18.60	50.04	54.00	3.96	Peak
1940.0000	27.52	4.82	12.82	45.16	54.00	8.84	Peak
1998.0000	27.77	4.92	18.38	51.07	54.00	2.93	Peak
2120.0000	27.96	5.03	14.57	47.56	54.00	6.44	Peak
2694.0000	29.10	5.48	17.10	51.68	54.00	2.32	Peak
2978.0000	30.05	5.70	11.84	47.59	54.00	6.41	Peak
3152.0000	30.39	6.07	-1.50	34.96	54.00	19.04	Average
3152.0000	30.39	6.07	19.42	55.88	74.00	18.12	Peak
4736.0000	32.69	8.89	10.21	51.79	74.00	22.21	Peak
5399.0000	33.83	9.49	-3.29	40.03	54.00	13.97	Average
5399.0000	33.83	9.49	18.20	61.52	74.00	12.48	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
1194.0000	25.47	3.38	21.98	50.83	54.00	3.17	Peak
1798.0000	26.88	4.56	15.78	47.22	54.00	6.78	Peak
2000.0000	27.80	4.92	18.94	51.66	54.00	2.34	Peak
2124.0000	27.96	5.03	12.82	45.81	54.00	8.19	Peak
2596.0000	28.75	5.40	13.67	47.82	54.00	6.18	Peak
2698.0000	29.10	5.48	15.28	49.86	54.00	4.14	Peak
2982.0000	30.05	5.71	12.03	47.79	54.00	6.21	Peak
3146.0000	30.39	6.07	-1.72	34.74	54.00	19.26	Average
3146.0000	30.39	6.07	19.20	55.66	74.00	18.34	Peak
4744.0000	32.71	8.90	10.37	51.98	74.00	22.02	Peak
5384.0000	33.81	9.48	-1.84	41.45	54.00	12.55	Average
5384.0000	33.81	9.48	19.65	62.94	74.00	11.06	Peak

Mode		GFSK		Frequency		TX 2480MHz	
<b>Antenna at Horizontal Polarization</b>							
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
1188.0000	25.47	3.38	20.66	49.51	54.00	4.49	Peak
1500.0000	25.30	3.94	15.90	45.14	54.00	8.86	Peak
1580.0000	25.75	4.12	18.97	48.84	54.00	5.16	Peak
1796.0000	26.88	4.55	19.80	51.23	54.00	2.77	Peak
1932.0000	27.50	4.81	13.04	45.35	54.00	8.65	Peak
1996.0000	27.77	4.92	17.33	50.02	54.00	3.98	Peak
2098.0000	27.92	5.01	13.89	46.82	54.00	7.18	Peak
2610.0000	28.80	5.41	12.90	47.11	54.00	6.89	Peak
2692.0000	29.10	5.48	17.71	52.29	54.00	1.71	Peak
2804.0000	29.48	5.57	12.88	47.93	54.00	6.07	Peak
3150.0000	30.39	6.07	18.91	55.37	74.00	18.63	Peak
3150.0000	30.39	6.07	-2.01	34.45	74.00	39.55	Peak
4752.0000	32.71	8.90	10.41	52.02	74.00	21.98	Peak
5399.0000	33.83	9.49	-2.34	40.98	54.00	13.02	Average
5399.0000	33.83	9.49	18.58	61.90	74.00	12.10	Peak

**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
1190.0000	25.47	3.38	21.35	50.20	54.00	3.80	Peak
1798.0000	26.88	4.56	15.91	47.35	54.00	6.65	Peak
1998.0000	27.77	4.92	20.29	52.98	54.00	1.02	Peak
2114.0000	27.95	5.02	13.18	46.15	54.00	7.85	Peak
2698.0000	29.10	5.48	15.53	50.11	54.00	3.89	Peak
3146.0000	30.39	6.07	-0.77	35.69	54.00	18.31	Average
3146.0000	30.39	6.07	20.15	56.61	74.00	17.39	Peak
4732.0000	32.69	8.89	10.24	51.82	74.00	22.18	Peak
5375.0000	33.81	9.47	-1.36	41.92	54.00	12.08	Average
5375.0000	33.81	9.47	20.13	63.41	74.00	10.59	Peak

**A.2.3 Emissions in Non-restricted Frequency Bands:**

All emission levels below the FCC 15.209(a)/RSS-Gen Section 8.9table 4 general radiated emissions limits is not required.

### A.3 20dB BANDWIDTH

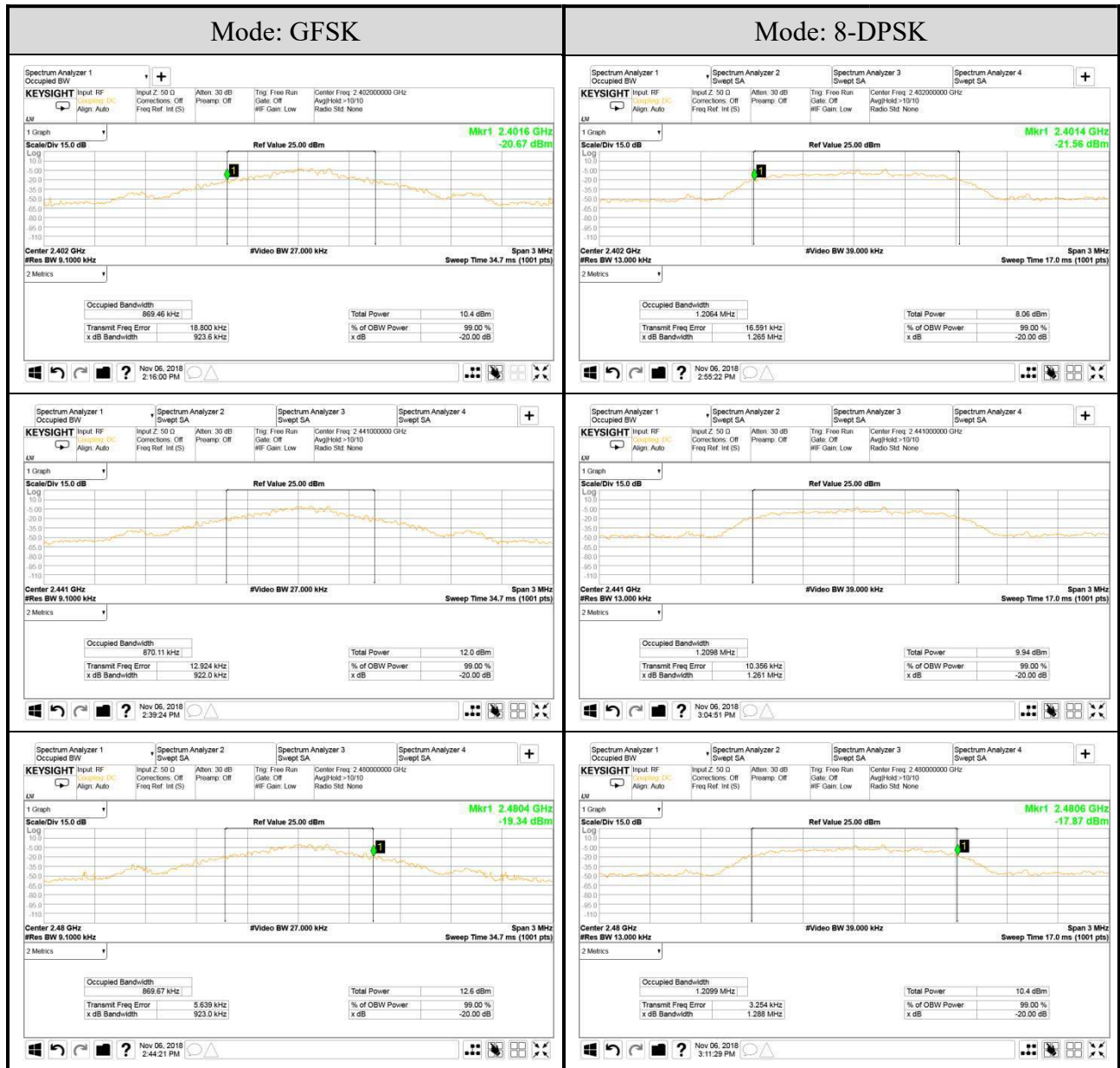
Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz

#### A.3.1 6dB Bandwidth Result

Mode	Centre Frequency (MHz)	20dB Bandwidth (MHz)	99%Occupied Bandwidth (MHz) (Reference only)	2/3 (20dB Bandwidth)
GFSK	2402	0.9236	0.86946	0.616
	2441	0.9220	0.87011	0.615
	2480	0.9230	0.86967	0.615
8-DPSK	2402	1.265	1.2064	0.843
	2441	1.261	1.2098	0.841
	2480	1.288	1.2099	0.859

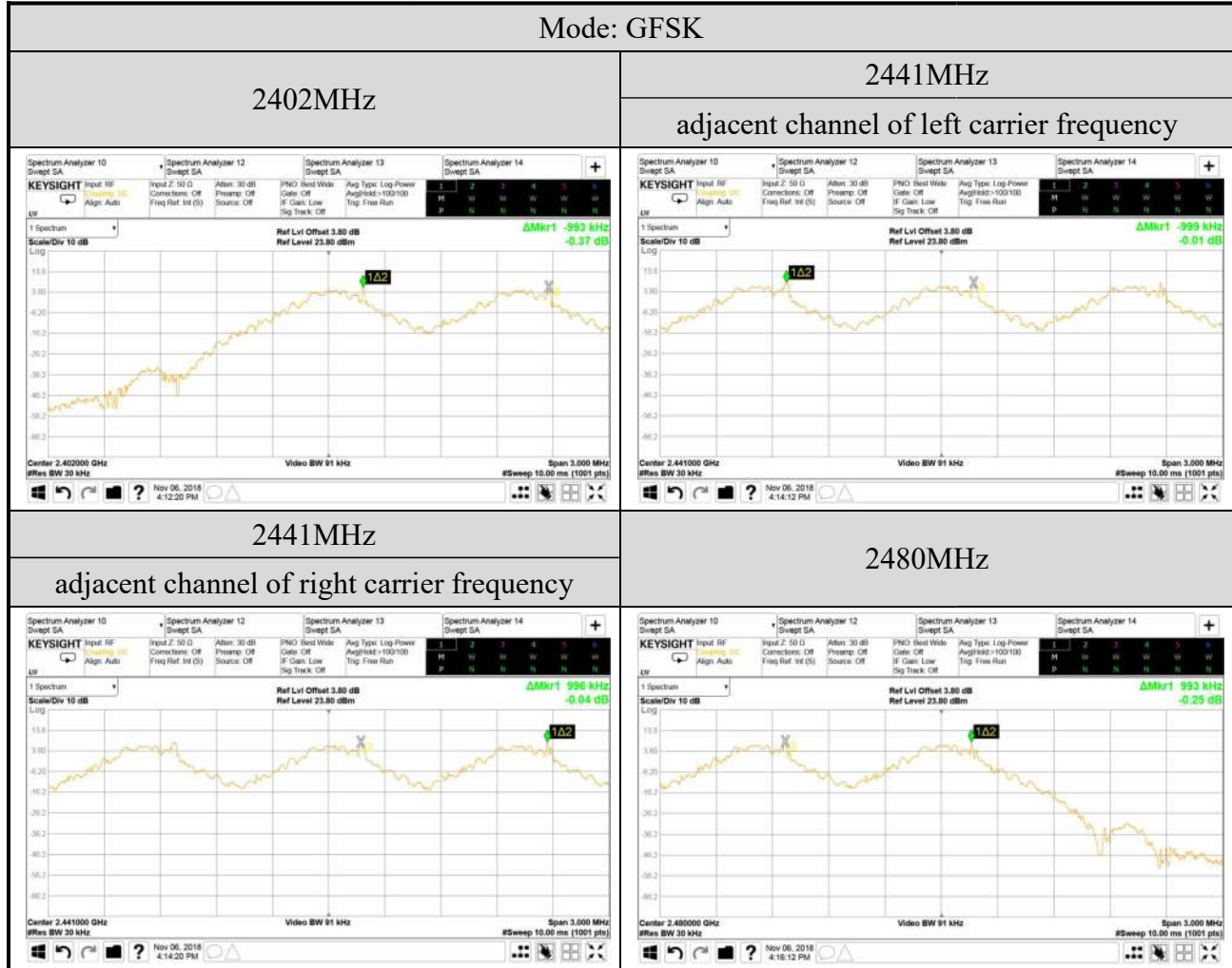
Remark: The maximum two-thirds of the 20dB bandwidth is the limit for carrier frequency separation presented.

A.3.2 Measurement Plots

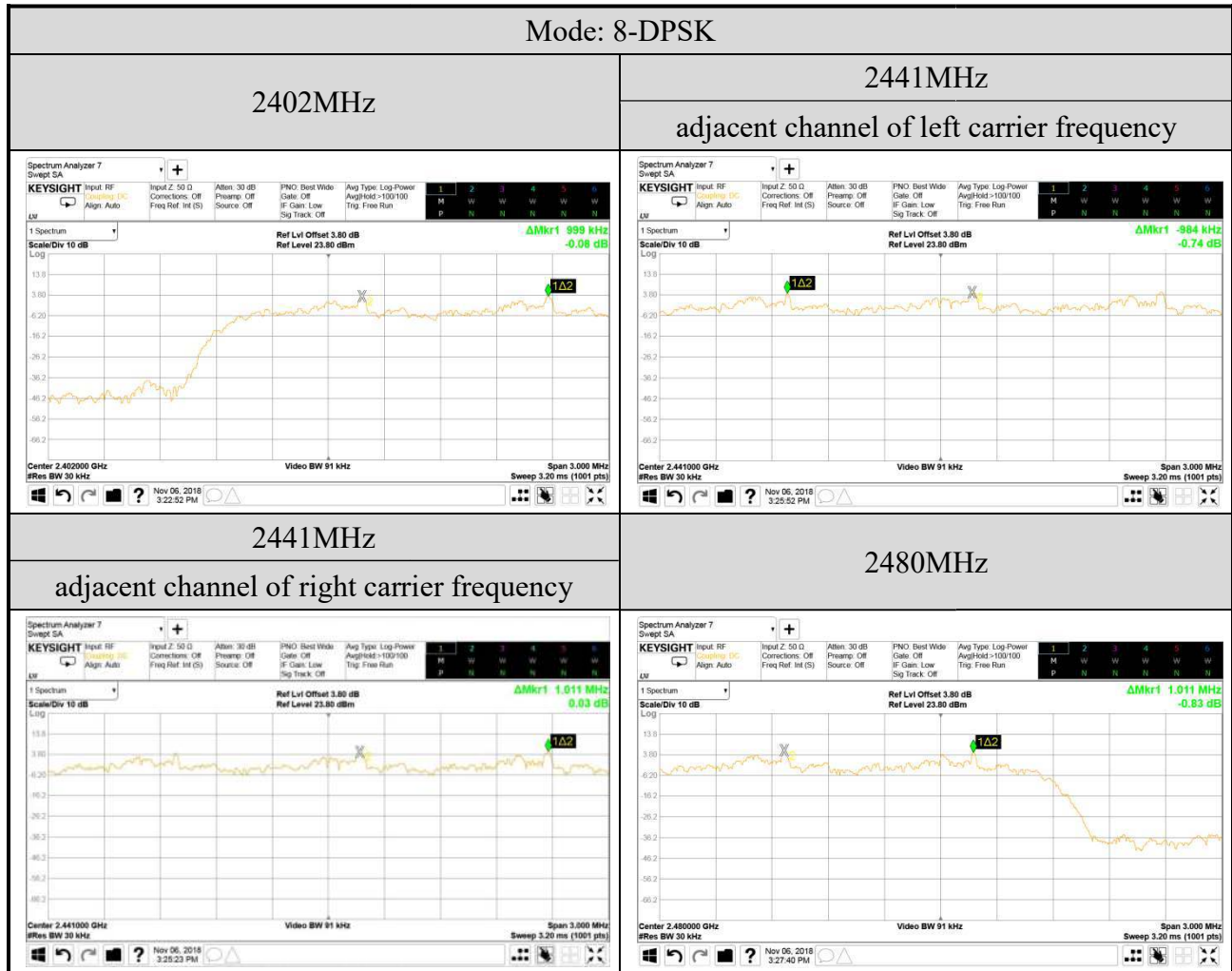


## A.4 CARRIER FREQUENCY SEPARATION

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz







## A.5 TIME OF OCCUPANCY

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz

### A.5.1 Time of Occupancy

Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
GFSK	2402	DH1	10	0.385	121.660	<400
		DH3	5	1.642	259.436	<400
		DH5	3	2.890	273.972	<400

Observation Period:

$$79 \text{ channels} * 0.4 \text{ seconds} = 31.6 \text{ seconds}$$

**DH1 Mode**

For each second of 10 transmission appearance, the longest time of occupancy is  
 10 transmission \* 31.6 seconds \* 0.385 ms = 121.660 ms (<400ms)

**DH3 Mode**

For each second of 5 transmission appearance, the longest time of occupancy is  
 5 transmission \* 31.6 seconds \* 1.642 ms = 259.436 ms (<400ms)

**DH5 Mode**

For each second of 3 transmission appearance, the longest time of occupancy is  
 3 transmission \* 31.6 seconds \* 2.890 ms = 273.972 ms (<400ms)

Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
GFSK	2441	DH1	10	0.385	121.660	<400
		DH3	5	1.642	259.436	<400
		DH5	3	2.880	273.024	<400

Observation Period:

$$79 \text{ channels} * 0.4 \text{ seconds} = 31.6 \text{ seconds}$$

**DH1 Mode**

For each second of 10 transmission appearance, the longest time of occupancy is  
 10 transmission \* 31.6 seconds \* 0.385 ms = 121.660 ms (<400ms)

**DH3 Mode**

For each second of 5 transmission appearance, the longest time of occupancy is  
 5 transmission \* 31.6 seconds \* 1.642 ms = 259.436 ms (<400ms)

**DH5 Mode**

For each second of 3 transmission appearance, the longest time of occupancy is  
 3 transmission \* 31.6 seconds \* 2.880 ms = 273.024 ms (<400ms)

Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
GFSK	2480	DH1	10	0.380	120.080	<400
		DH3	5	1.642	259.436	<400
		DH5	3	2.880	273.024	<400

Observation Period:

79 channels\* 0.4 seconds= 31.6 seconds

**DH1 Mode**

For each second of 10 transmission appearance, the longest time of occupancy is  
 10 transmission\* 31.6 seconds\* 0.380 ms= 120.080 ms (<400ms)

**DH3 Mode**

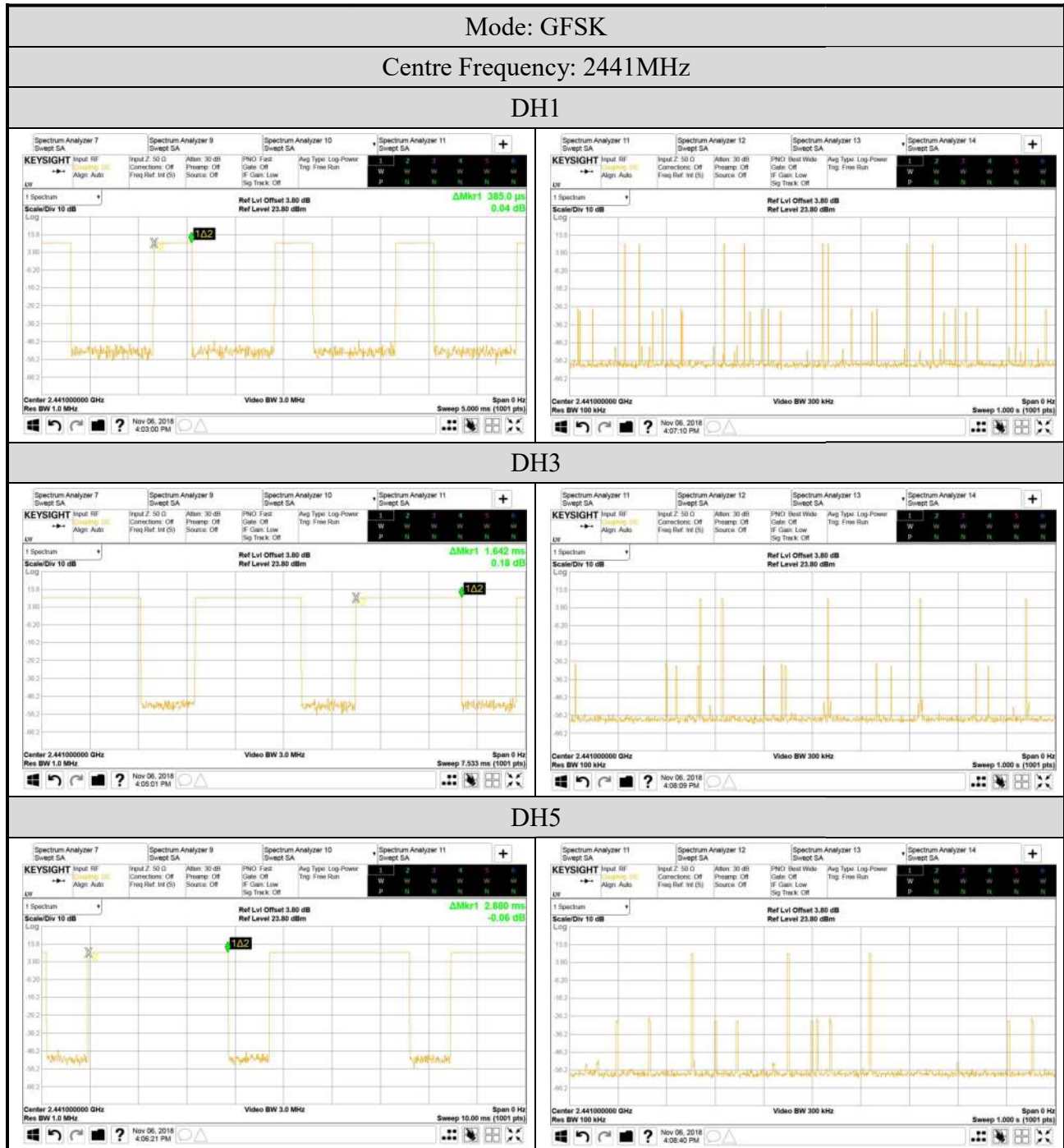
For each second of 5 transmission appearance, the longest time of occupancy is  
 5 transmission\* 31.6 seconds\* 1.642 ms= 259.436 ms (<400ms)

**DH5 Mode**

For each second of 3 transmission appearance, the longest time of occupancy is  
 3 transmission\* 31.6 seconds\* 2.880 ms= 273.024 ms (<400ms)

● Measurement Plots









Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
8-DPSK	2402	3DH1	10	0.390	123.240	<400
		3DH3	5	1.642	259.436	<400
		3DH5	3	2.890	273.972	<400

Observation Period:

$79 \text{ channels} * 0.4 \text{ seconds} = 31.6 \text{ seconds}$

**3DH1 Mode**

For each second of **10** transmission appearance, the longest time of occupancy is  
 $10 \text{ transmission} * 31.6 \text{ seconds} * 0.390 \text{ ms} = 123.240 \text{ ms} (<400\text{ms})$

**3DH3 Mode**

For each second of **5** transmission appearance, the longest time of occupancy is  
 $5 \text{ transmission} * 31.6 \text{ seconds} * 1.642 \text{ ms} = 259.436 \text{ ms} (<400\text{ms})$

**3DH5 Mode**

For each second of **3** transmission appearance, the longest time of occupancy is  
 $3 \text{ transmission} * 31.6 \text{ seconds} * 2.890 \text{ ms} = 273.972 \text{ ms} (<400\text{ms})$

Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
8-DPSK	2441	3DH1	10	0.390	123.240	<400
		3DH3	5	1.635	258.330	<400
		3DH5	3	2.891	274.067	<400

Observation Period:

$79 \text{ channels} * 0.4 \text{ seconds} = 31.6 \text{ seconds}$

**3DH1 Mode**

For each second of **10** transmission appearance, the longest time of occupancy is  
 $10 \text{ transmission} * 31.6 \text{ seconds} * 0.390 \text{ ms} = 123.240 \text{ ms} (<400\text{ms})$

**3DH3 Mode**

For each second of **5** transmission appearance, the longest time of occupancy is  
 $5 \text{ transmission} * 31.6 \text{ seconds} * 1.635 \text{ ms} = 258.330 \text{ ms} (<400\text{ms})$

**3DH5 Mode**

For each second of **3** transmission appearance, the longest time of occupancy is  
 $3 \text{ transmission} * 31.6 \text{ seconds} * 2.891 \text{ ms} = 274.067 \text{ ms} (<400\text{ms})$

Mode	Centre Frequency (MHz)	Mode	Each second appearance transmission	Time of Occupancy (ms)	Maximum accumulated Time of Occupancy (ms)	Limit (ms)
8-DPSK	2480	3DH1	10	0.390	123.240	<400
		3DH3	5	1.642	259.436	<400
		3DH5	3	2.890	273.972	<400

Observation Period:

$$79 \text{ channels} * 0.4 \text{ seconds} = 31.6 \text{ seconds}$$

**3DH1 Mode**

For each second of **10** transmission appearance, the longest time of occupancy is  
**10** transmission \* **31.6** seconds \* **0.390** ms = **123.240** ms (<400ms)

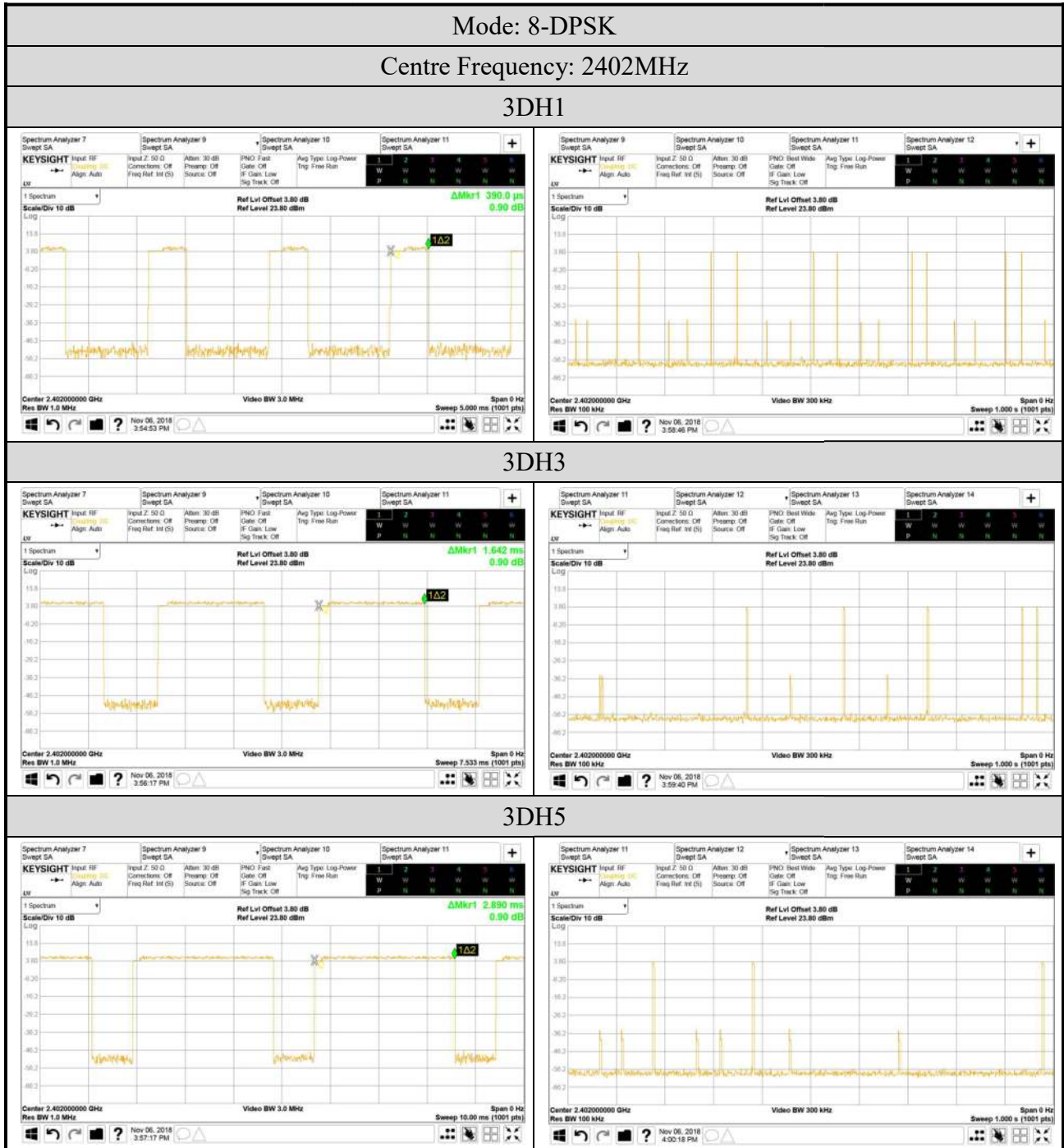
**3DH3 Mode**

For each second of **5** transmission appearance, the longest time of occupancy is  
**5** transmission \* **31.6** seconds \* **1.642** ms = **259.436** ms (<400ms)

**3DH5 Mode**

For each second of **3** transmission appearance, the longest time of occupancy is  
**3** transmission \* **31.6** seconds \* **2.890** ms = **273.972** ms (<400ms)

● Measurement Plots









## A.6 NUMBER OF HOPPING CHANNELS

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB / 4.30dB	Test Voltage	AC 120V, 60Hz

Mode: GFSK	Mode: 8-DPSK
The number hopping channel is 79.	The number hopping channel is 79.

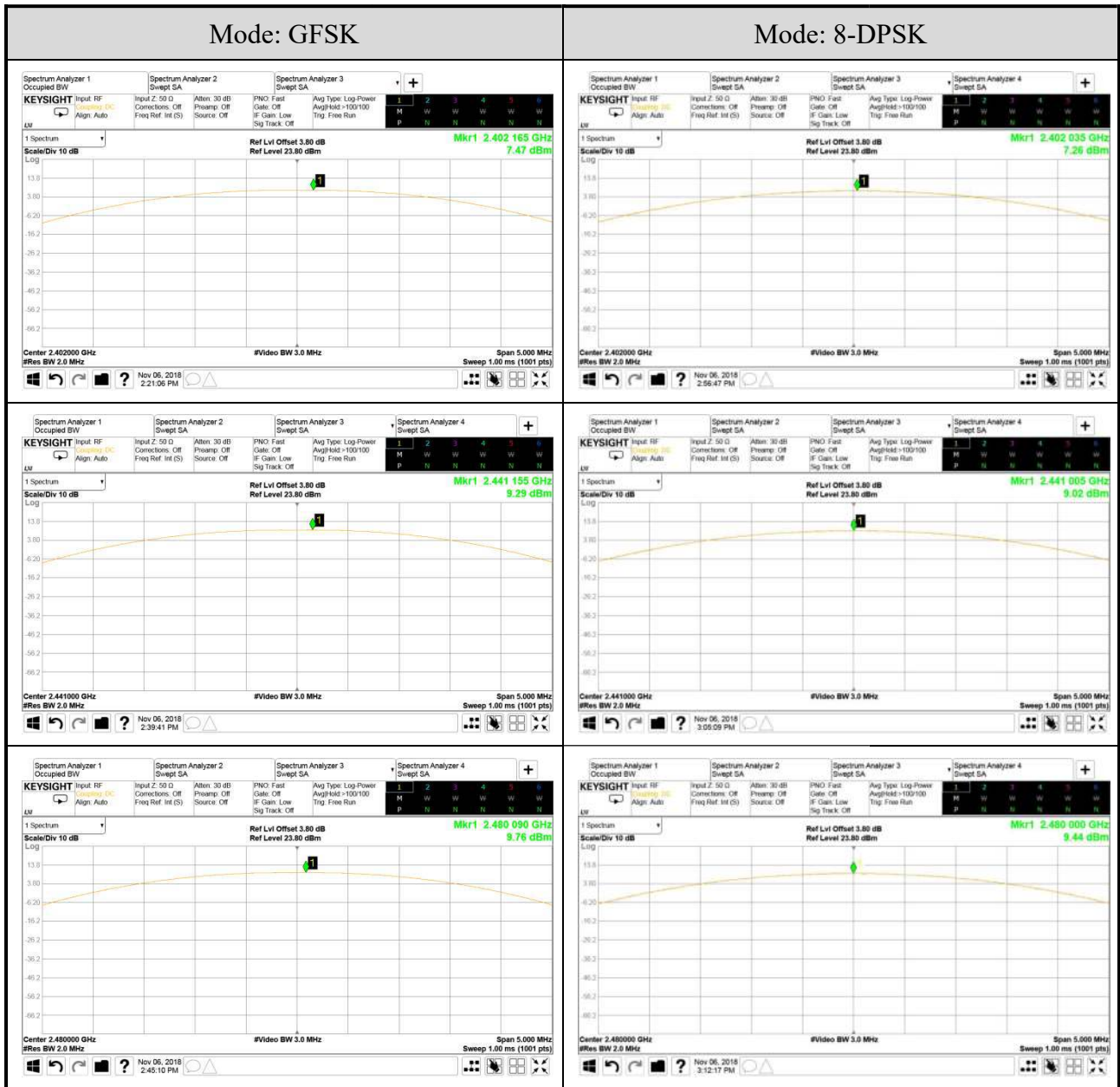
## A.7 MAXIMUM PEAK OUTPUT POWER

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz

### A.7.1 Maximum Peak Output Power

Mode	Centre Frequency (MHz)	Maximum Peak Output Power		Limit
		dBm	W	
GFSK	2402	7.47	0.006	21dBm (0.125W)
	2441	9.29	0.008	
	2480	9.76	0.009	
8-DPSK	2402	7.26	0.005	
	2441	9.02	0.008	
	2480	9.44	0.009	

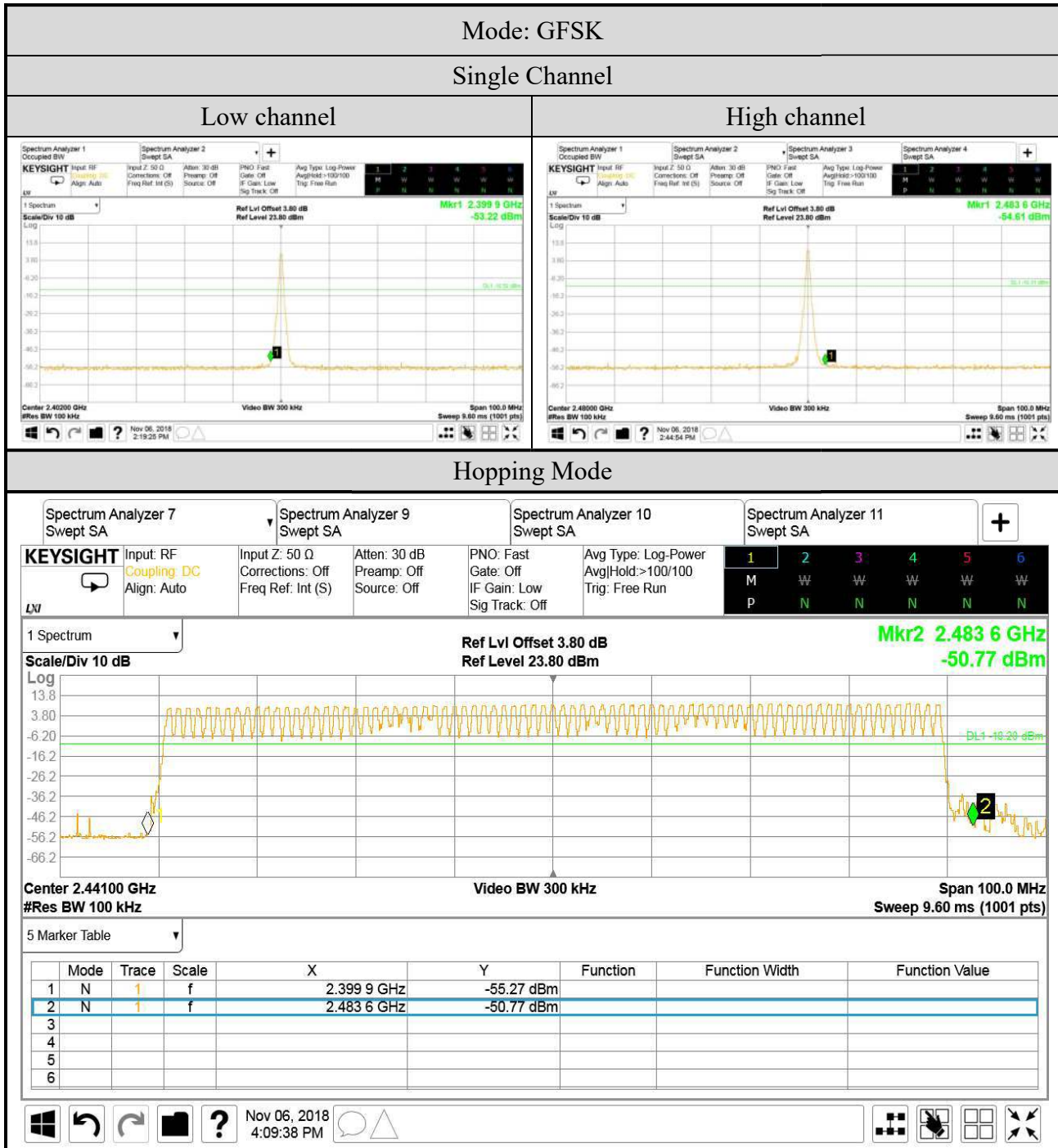
A.7.2 Measurement Plots



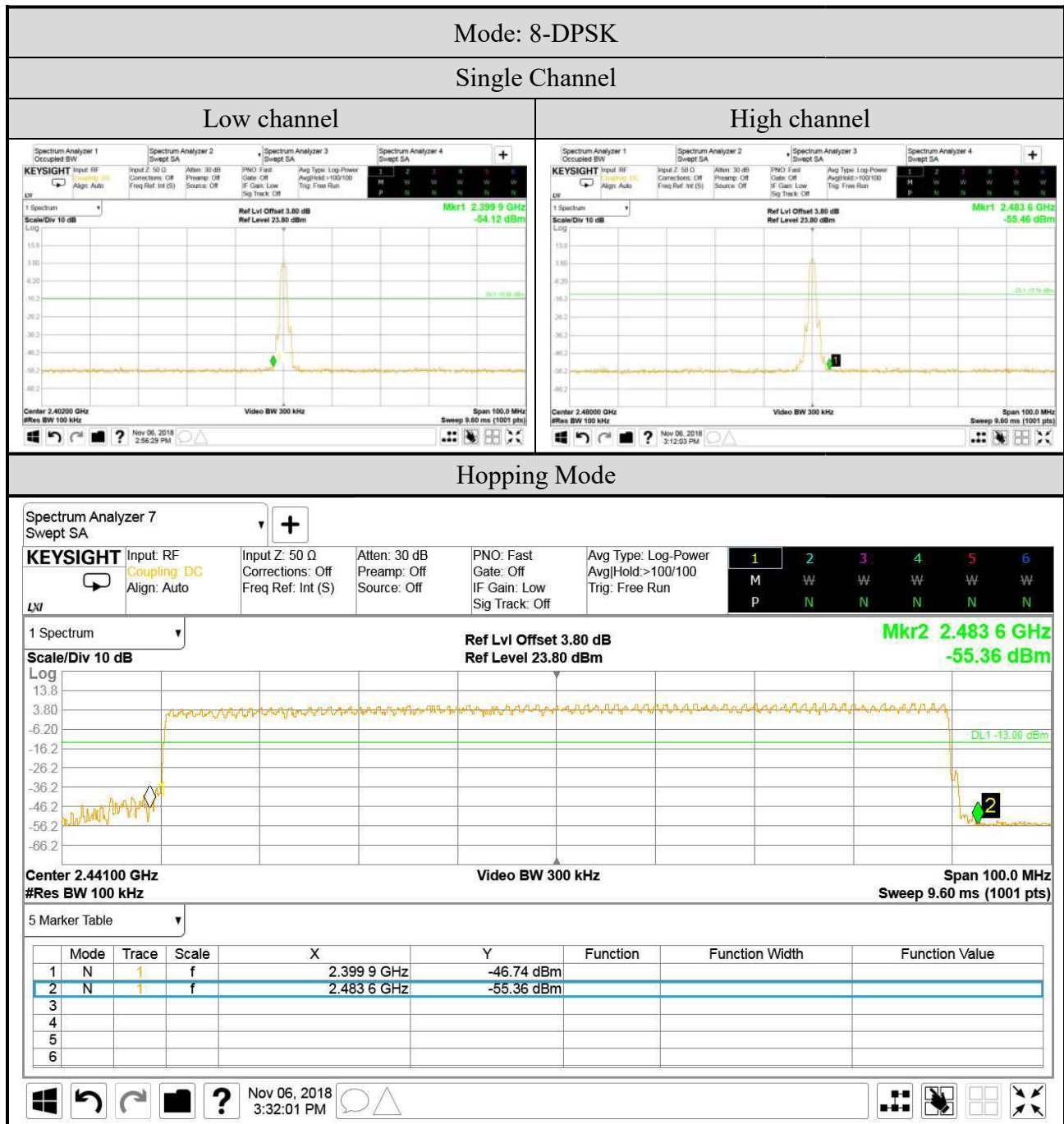
## A.8 EMISSION LIMITATIONS MEASUREMENT

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz

### A.8.1 Band Edge

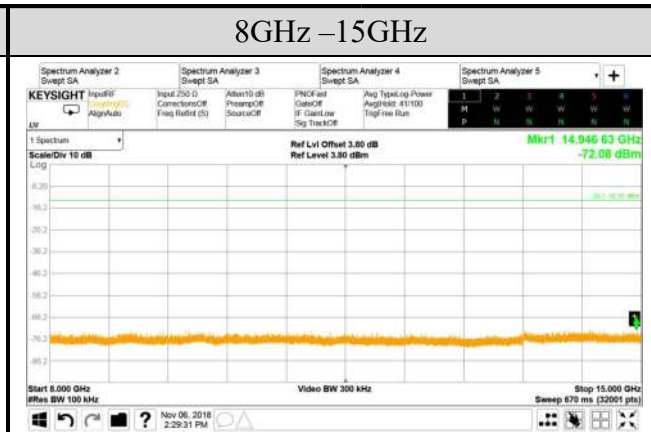
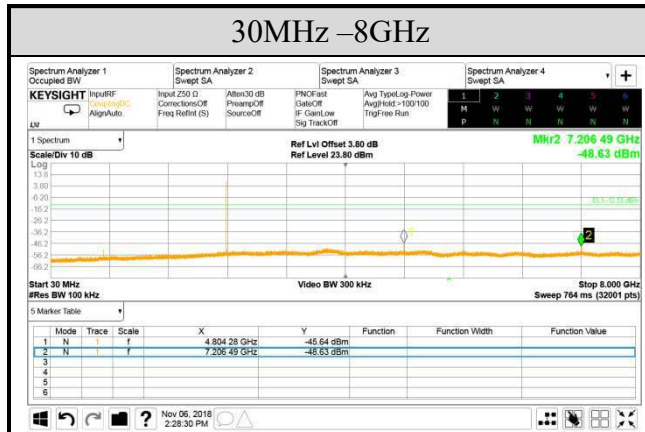






A.8.2 Spurious Emission

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	GFSK	Frequency	2402MHz



Note: All results have been included cable loss.

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	GFSK	Frequency	2441MHz



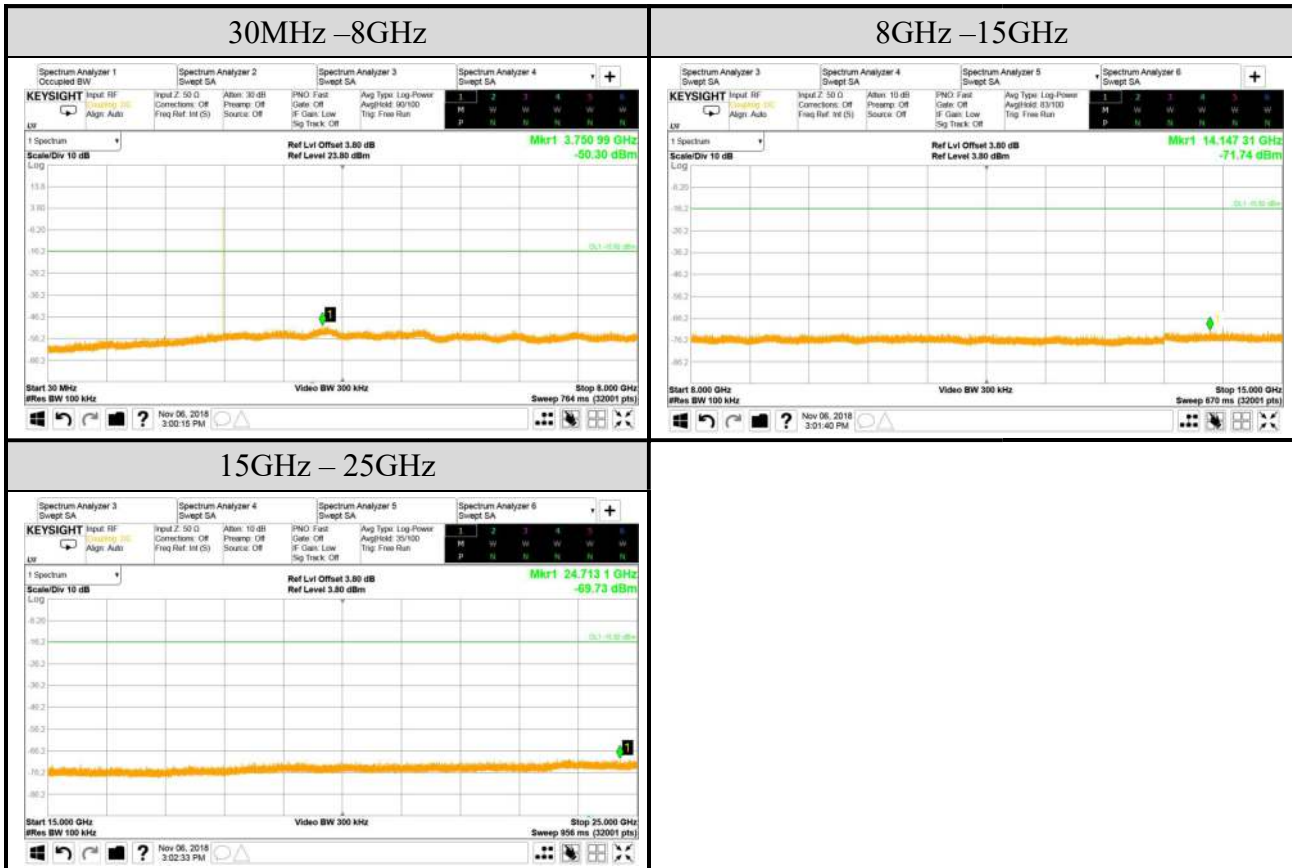
Note: All results have been included cable loss.

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	GFSK	Frequency	2480MHz



Note: All results have been included cable loss.

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	8-DPSK	Frequency	2402MHz



Note: All results have been included cable loss.



Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	8-DPSK	Frequency	2441MHz



Note: All results have been included cable loss.

Audix Technology Corp.  
 No. 53-11, Dingfu, Linkou, Dist.,  
 New Taipei City 244, Taiwan

Tel: +886 2 26099301  
 Fax: +886 2 26099303

Test Date	2018/11/06	Temp./Hum.	23°C/55%
Cable Loss	3.80dB	Test Voltage	AC 120V, 60Hz
Mode	8-DPSK	Frequency	2480MHz



Note: All results have been included cable loss.