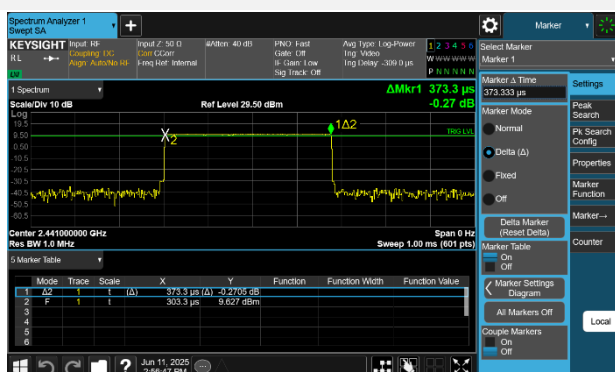
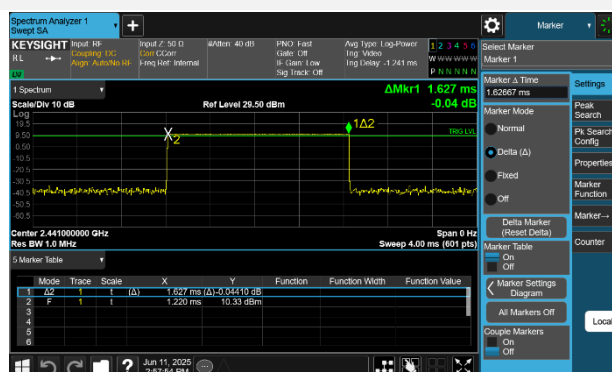


Test Plots

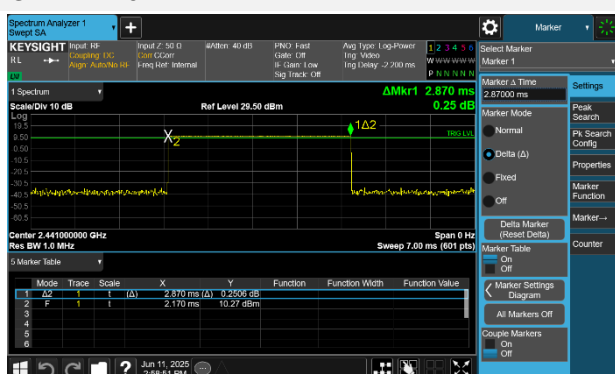
GFSK DH1



GFSK DH3



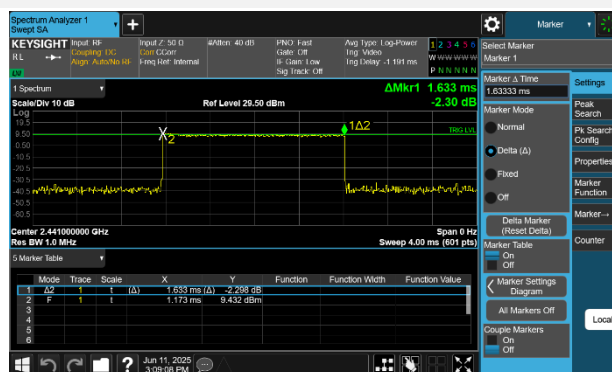
GFSK DH5



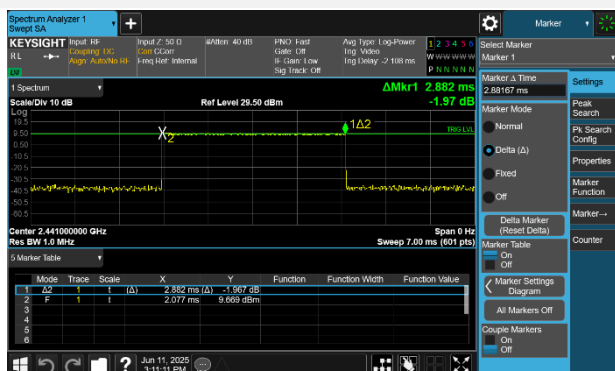
8-DPSK DH1



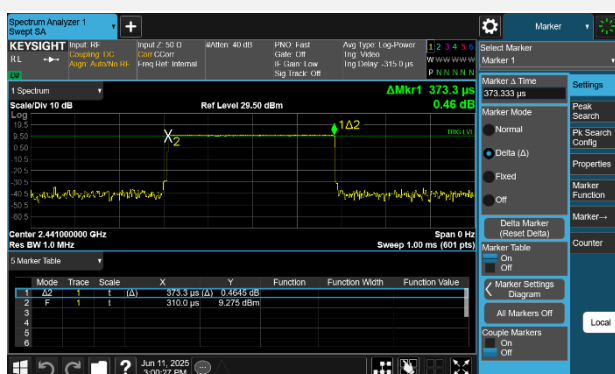
8-DPSK DH3



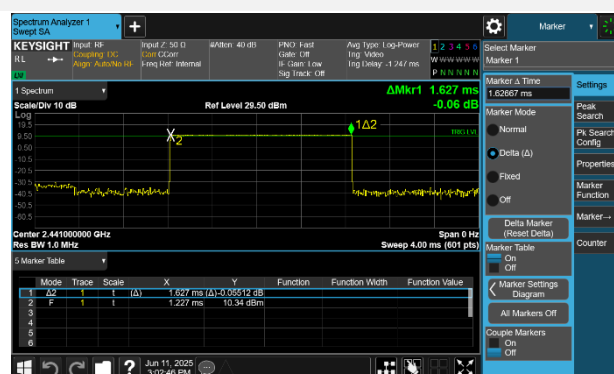
8-DPSK DH5



AFH Mode DH1

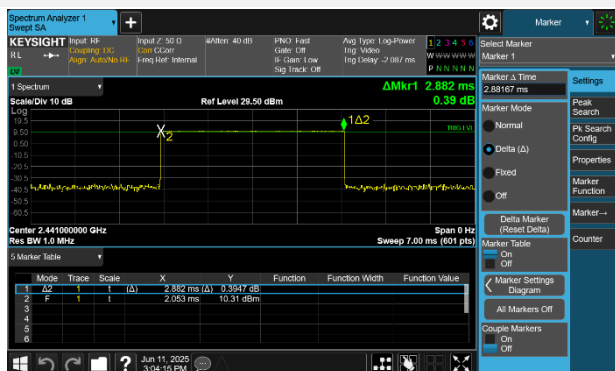


AFH Mode DH3



CC

AFH Mode DH5



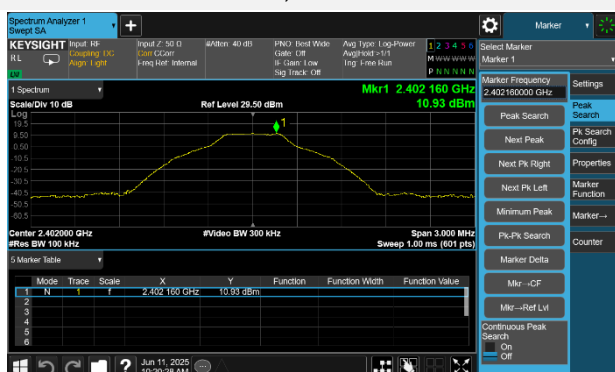
A.6 Conducted Spurious Emissions & Authorized-band band-edge

Test Data

GFSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-36.14	10.93	-9.07	Pass
Middle	-36.43	10.74	-9.26	Pass
High	-35.24	11.53	-8.47	Pass
8-DPSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-36.19	10.02	-9.98	Pass
Middle	-36.38	9.61	-10.39	Pass
High	-35.96	10.74	-9.26	
Hopping Mode				
Mode	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
GFSK	-35.48	11.50	-8.50	Pass
8-DPSK	-35.54	10.74	-9.26	Pass

Test Plots

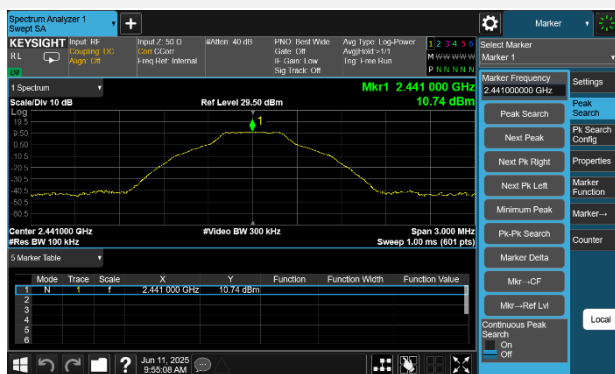
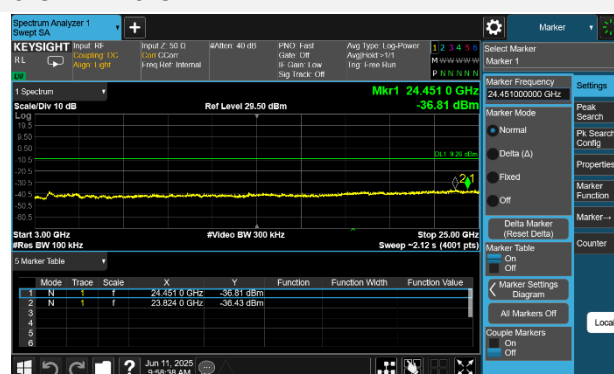
GFSK LOW CHANNEL, CARRIER LEVEL



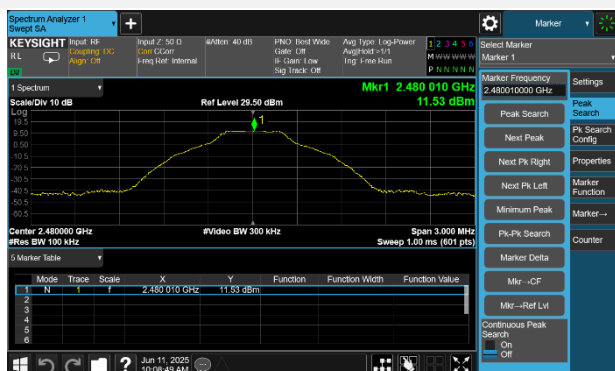
GFSK LOW CHANNEL, BAND EDGE

GFSK LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHzGFSK LOW CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

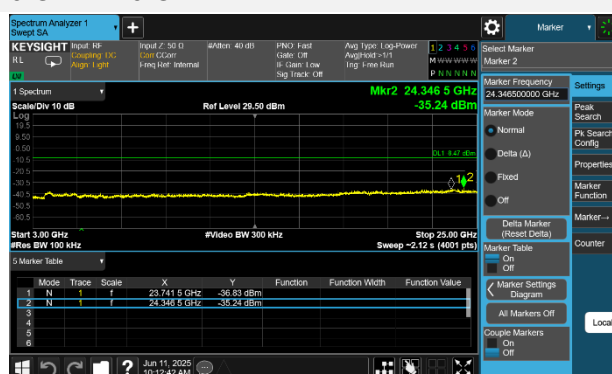
GFSK MIDDLE CHANNEL, CARRIER LEVEL

GFSK MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHzGFSK MIDDLE CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

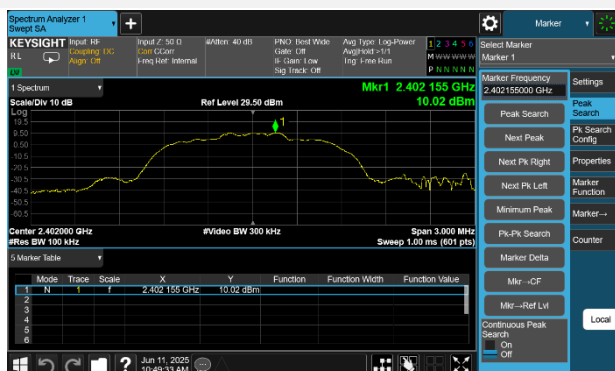
GFSK HIGH CHANNEL, CARRIER LEVEL



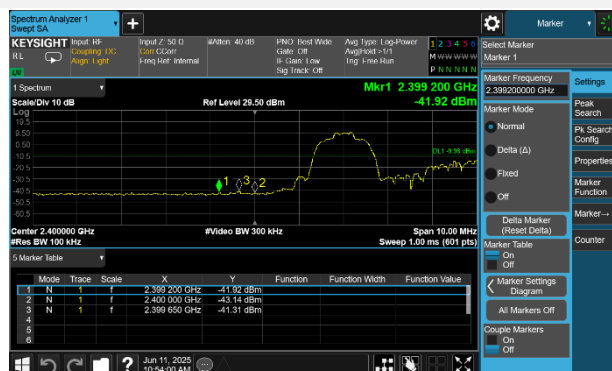
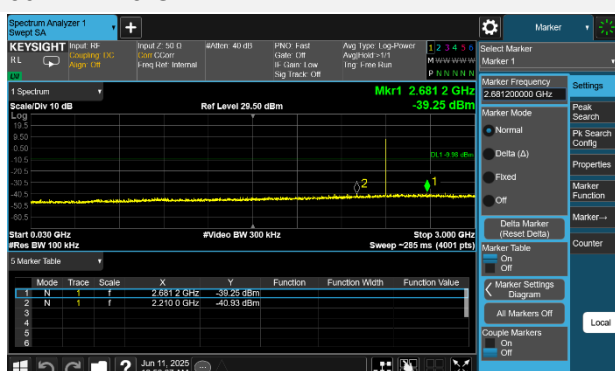
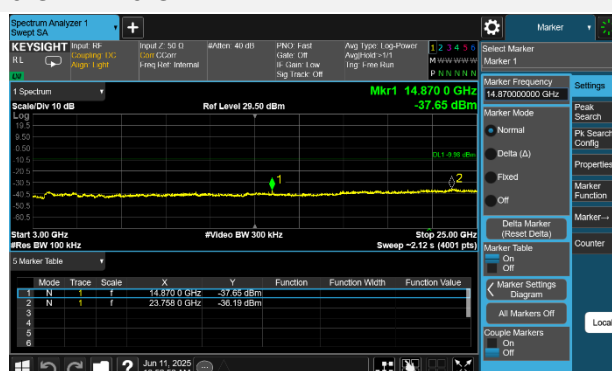
GFSK HIGH CHANNEL, BAND EDGE

GFSK HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHzGFSK HIGH CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

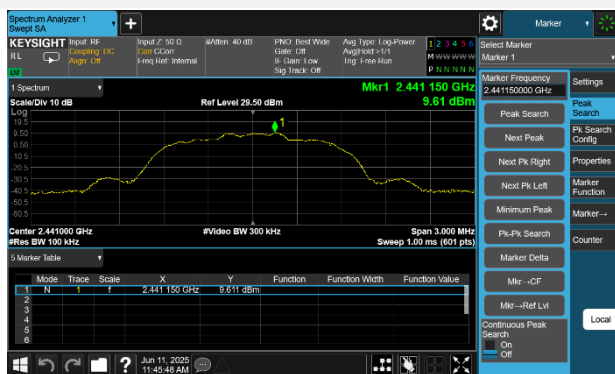
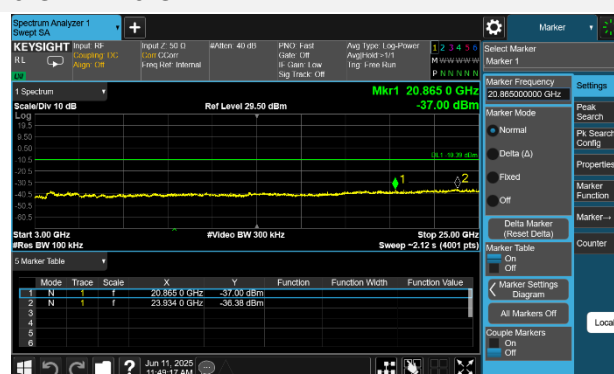
8-DPSK LOW CHANNEL, CARRIER LEVEL



8-DPSK LOW CHANNEL, BAND EDGE

8-DPSK LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHz8-DPSK LOW CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

8-DPSK MIDDLE CHANNEL, CARRIER LEVEL

8-DPSK MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz8-DPSK MIDDLE CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

8-DPSK HIGH CHANNEL, CARRIER LEVEL



8-DPSK HIGH CHANNEL, BAND EDGE

8-DPSK HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz8-DPSK HIGH CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

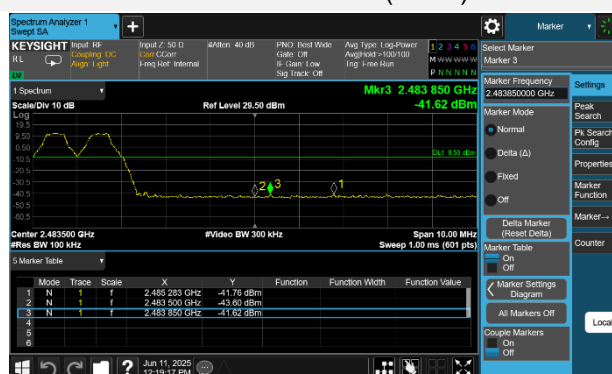
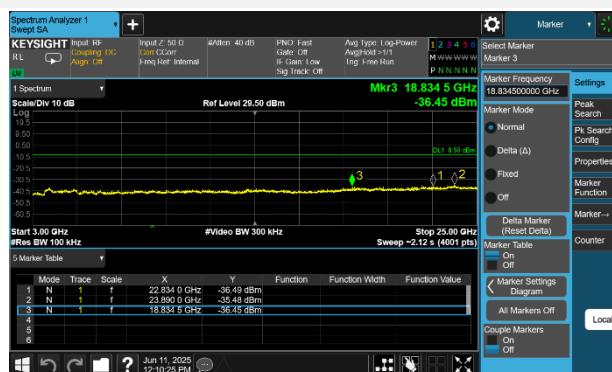
GFSK HOPPING, CARRIER LEVEL



GFSK HOPPING BAND EDGE (LOW)



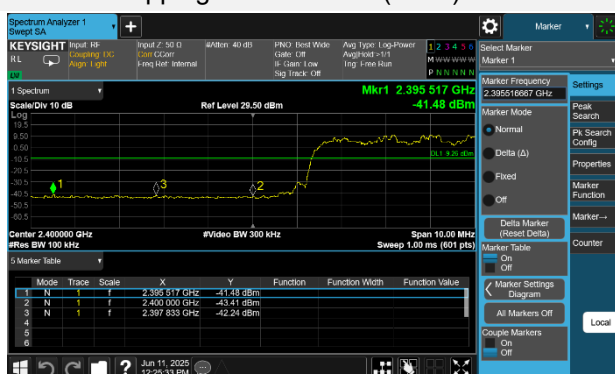
GFSK HOPPING BAND EDGE (HIGH)

GFSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHzGFSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz

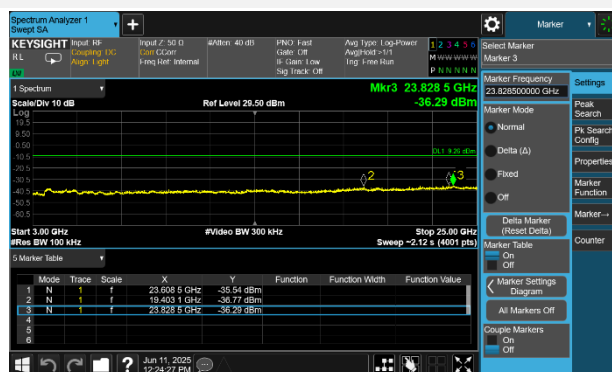
8-DPSK HOPPING, CARRIER LEVEL



8-DPSK Hopping BAND EDGE (LOW)



8-DPSK Hopping BAND EDGE (HIGH)

8-DPSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHz8-DPSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz

A.7 Conducted Emission

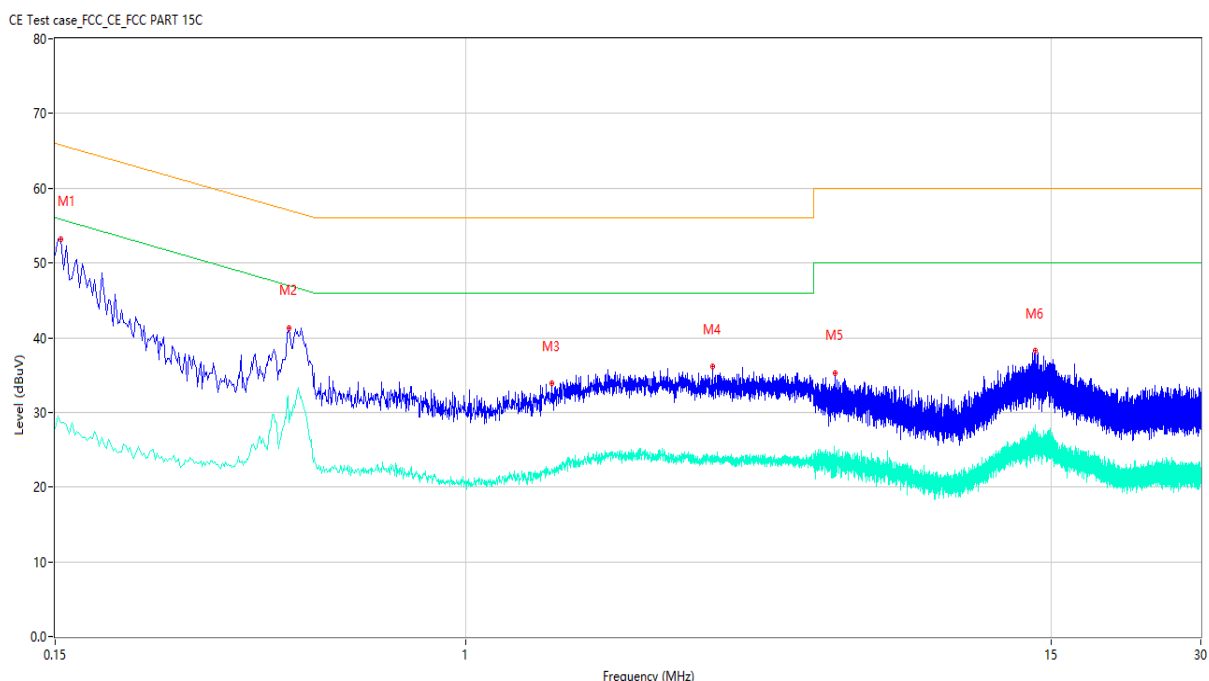
Note 1: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Note 2: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note 3: Results (dBUV) = Original reading level of Spectrum Analyzer (dBUV) + Factor (dB)

Test Data and Plots

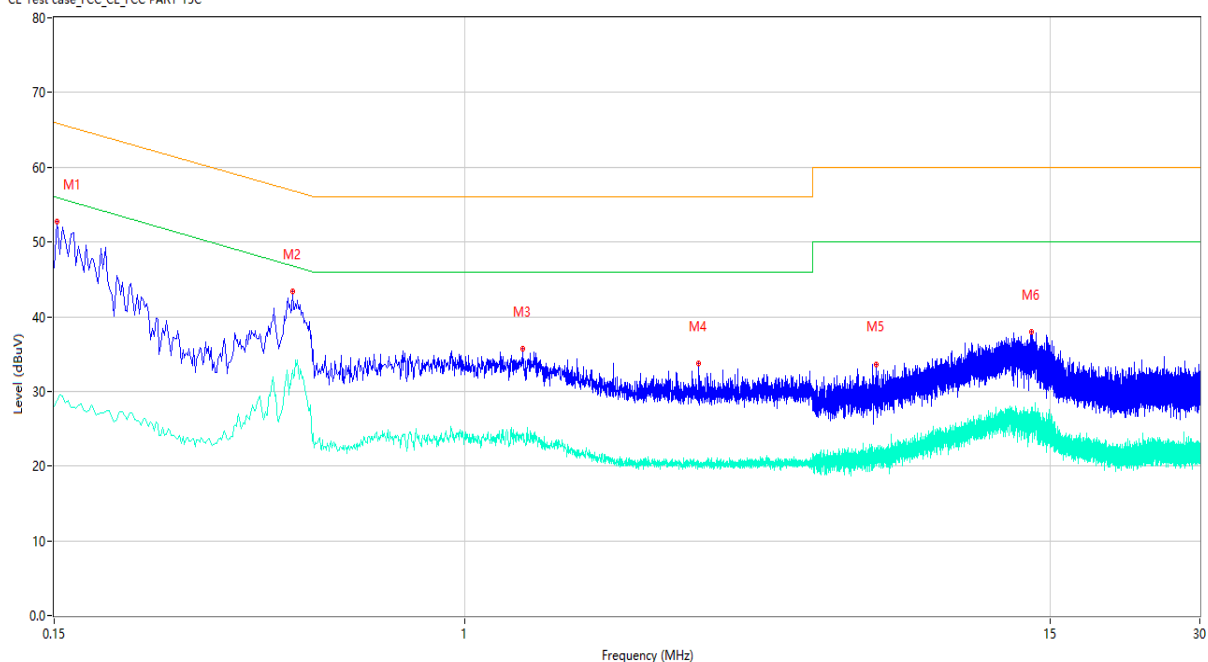
PHASE L



No.	Frequency (MHz)	Results (dBUV)	Factor (dB)	Limit (dBUV)	Margin (dB)	Detector	Line	Verdict
1	0.154	53.23	10.06	65.78	12.55	Peak	L	Pass
1**	0.154	28.67	10.06	55.78	27.11	AV	L	Pass
2	0.442	41.35	10.14	57.02	15.67	Peak	L	Pass
2**	0.442	28.65	10.14	47.02	18.37	AV	L	Pass
3	1.492	33.83	10.27	56.00	22.17	Peak	L	Pass
3**	1.492	22.45	10.27	46.00	23.55	AV	L	Pass
4	3.132	36.11	10.39	56.00	19.89	Peak	L	Pass
4**	3.132	23.98	10.39	46.00	22.02	AV	L	Pass
5	5.540	35.32	10.52	60.00	24.68	Peak	L	Pass
5**	5.540	23.38	10.52	50.00	26.62	AV	L	Pass
6	13.958	38.29	11.13	60.00	21.71	Peak	L	Pass
6**	13.958	27.27	11.13	50.00	22.73	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	52.72	10.15	65.89	13.17	Peak	N	Pass
1**	0.152	28.82	10.15	55.89	27.07	AV	N	Pass
2	0.452	43.39	10.17	56.84	13.45	Peak	N	Pass
2**	0.452	32.85	10.17	46.84	13.99	AV	N	Pass
3	1.308	35.74	10.24	56.00	20.26	Peak	N	Pass
3**	1.308	24.42	10.24	46.00	21.58	AV	N	Pass
4	2.954	33.69	10.30	56.00	22.31	Peak	N	Pass
4**	2.954	20.57	10.30	46.00	25.43	AV	N	Pass
5	6.712	33.66	10.59	60.00	26.34	Peak	N	Pass
5**	6.712	22.29	10.59	50.00	27.71	AV	N	Pass
6	13.792	37.94	11.08	60.00	22.06	Peak	N	Pass
6**	13.792	26.50	11.08	50.00	23.50	AV	N	Pass

A.8 Radiated Spurious Emission

Note 1: The symbol of “--” in the table which means not application.

Note 2: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested.

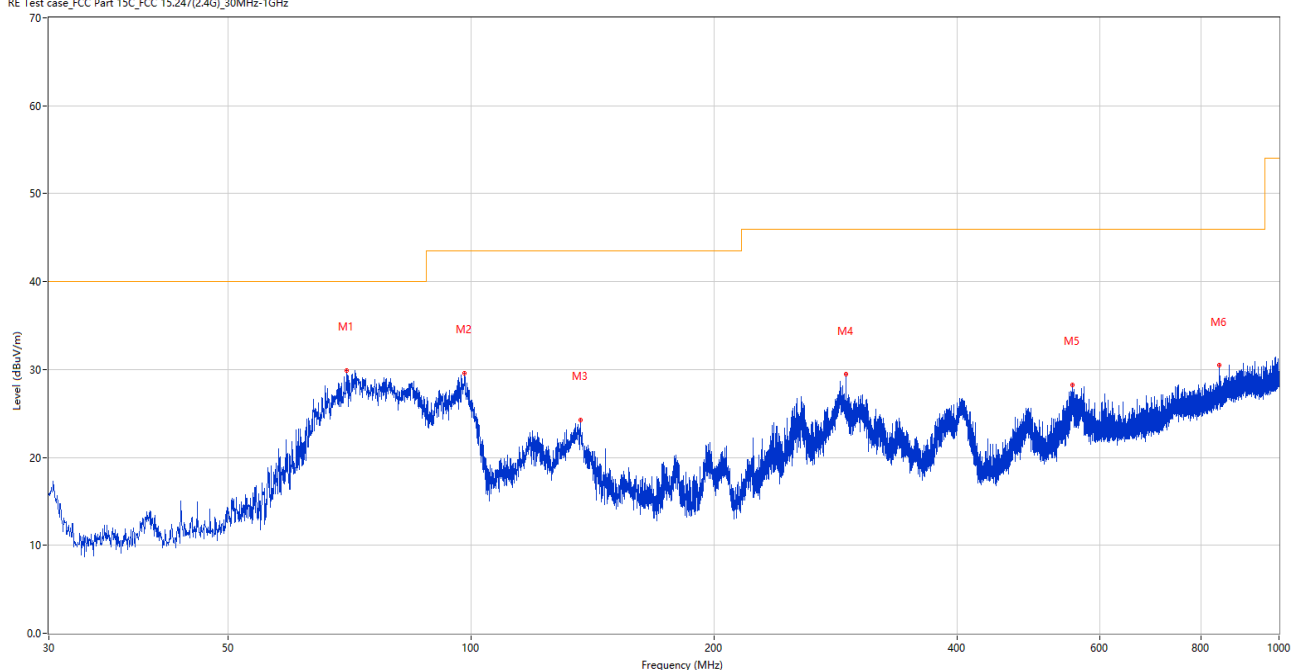
Note 4: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Note 5: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Test Data and Plots

30 MHz to 1 GHz, ANT H

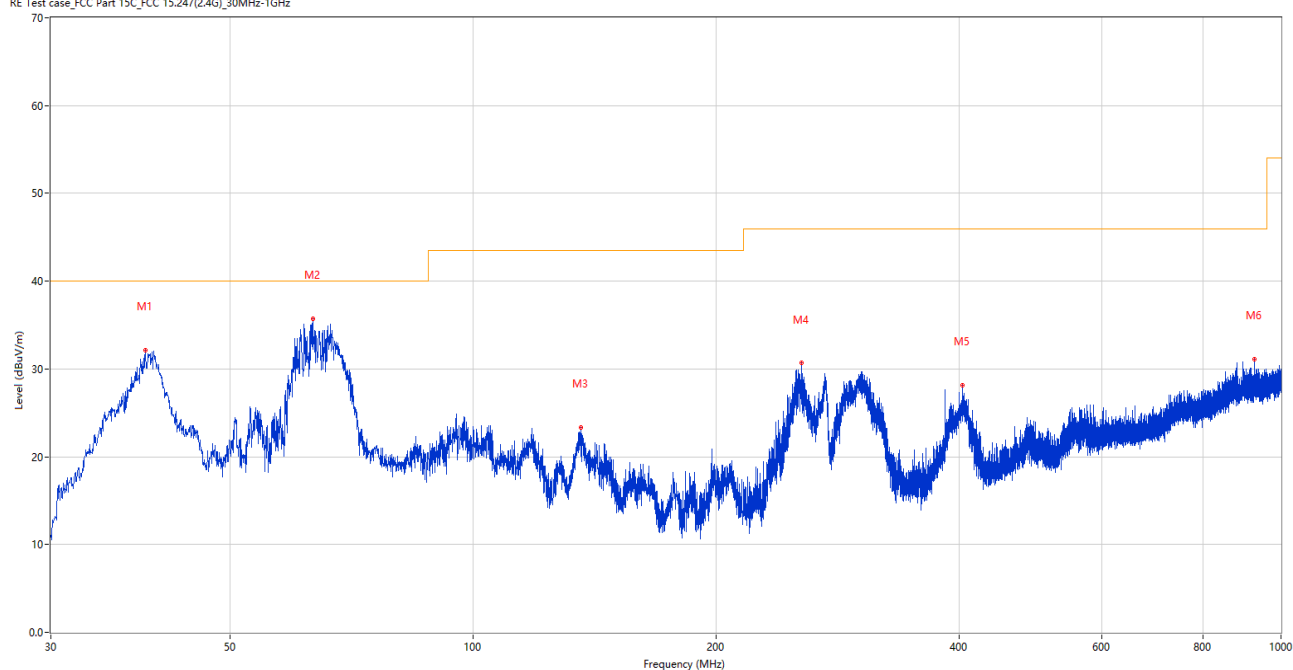
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	70.061	29.87	-29.00	40.0	10.13	Peak	166.00	200	Horizontal	Pass
2	98.143	29.60	-26.24	43.5	13.90	Peak	170.00	200	Horizontal	Pass
3	136.652	24.29	-29.38	43.5	19.21	Peak	148.00	100	Horizontal	Pass
4	291.075	29.43	-23.19	46.0	16.57	Peak	279.00	200	Horizontal	Pass
5	555.497	28.22	-16.88	46.0	17.78	Peak	81.00	100	Horizontal	Pass
6	843.830	30.50	-10.57	46.0	15.50	Peak	0.00	200	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC 15.247(2.4G)_30MHz-1GHz



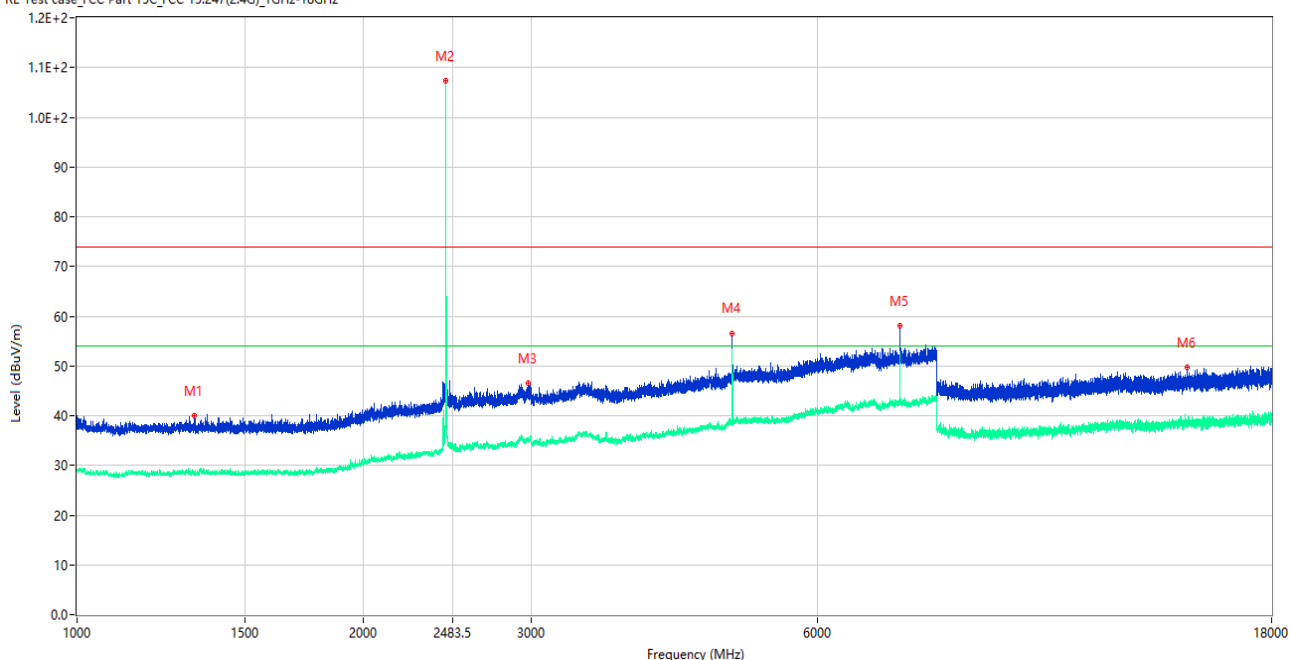
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	39.264	32.11	-26.16	40.0	7.89	Peak	21.00	100	Vertical	Pass
2	63.271	35.69	-26.83	40.0	4.31	Peak	215.00	200	Vertical	Pass
3	135.972	23.32	-29.34	43.5	20.18	Peak	179.00	200	Vertical	Pass
4	255.186	30.65	-24.07	46.0	15.35	Peak	21.00	100	Vertical	Pass
5	403.595	28.18	-20.31	46.0	17.82	Peak	270.00	200	Vertical	Pass
6	926.911	31.13	-8.86	46.0	14.87	Peak	88.00	100	Vertical	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

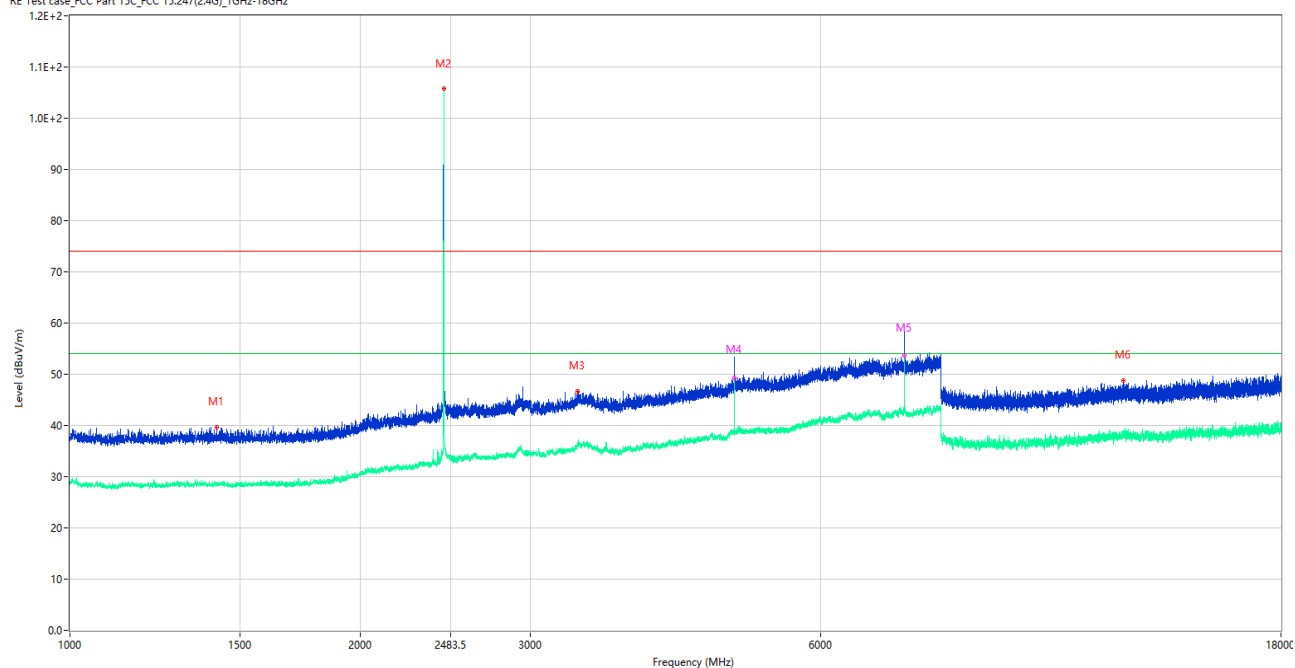
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.750	39.93	-15.94	74.0	34.07	Peak	15.00	150	Horizontal	Pass
1**	1328.750	28.11	-15.94	54.0	25.89	AV	15.00	150	Horizontal	Pass
2	2440.750	107.27	-12.38	74.0	-33.27	Peak	138.00	150	Horizontal	N/A
2**	2440.750	104.56	-12.38	54.0	-50.56	AV	138.00	150	Horizontal	N/A
3	2981.500	46.53	-9.23	74.0	27.47	Peak	360.00	150	Horizontal	Pass
3**	2981.500	35.18	-9.23	54.0	18.82	AV	360.00	150	Horizontal	Pass
4	4882.000	58.40	-2.31	74.0	15.60	Peak	170.00	150	Horizontal	Pass
4**	4882.000	53.38	-2.31	54.0	0.62	AV	170.00	150	Horizontal	Pass
5	7323.500	58.01	0.70	74.0	15.99	Peak	180.00	150	Horizontal	Pass
5**	7323.500	52.80	0.70	54.0	1.20	AV	180.00	150	Horizontal	Pass
6	14658.500	49.65	-2.40	74.0	24.35	Peak	150.00	150	Horizontal	Pass
6**	14658.500	38.91	-2.40	54.0	15.09	AV	150.00	150	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

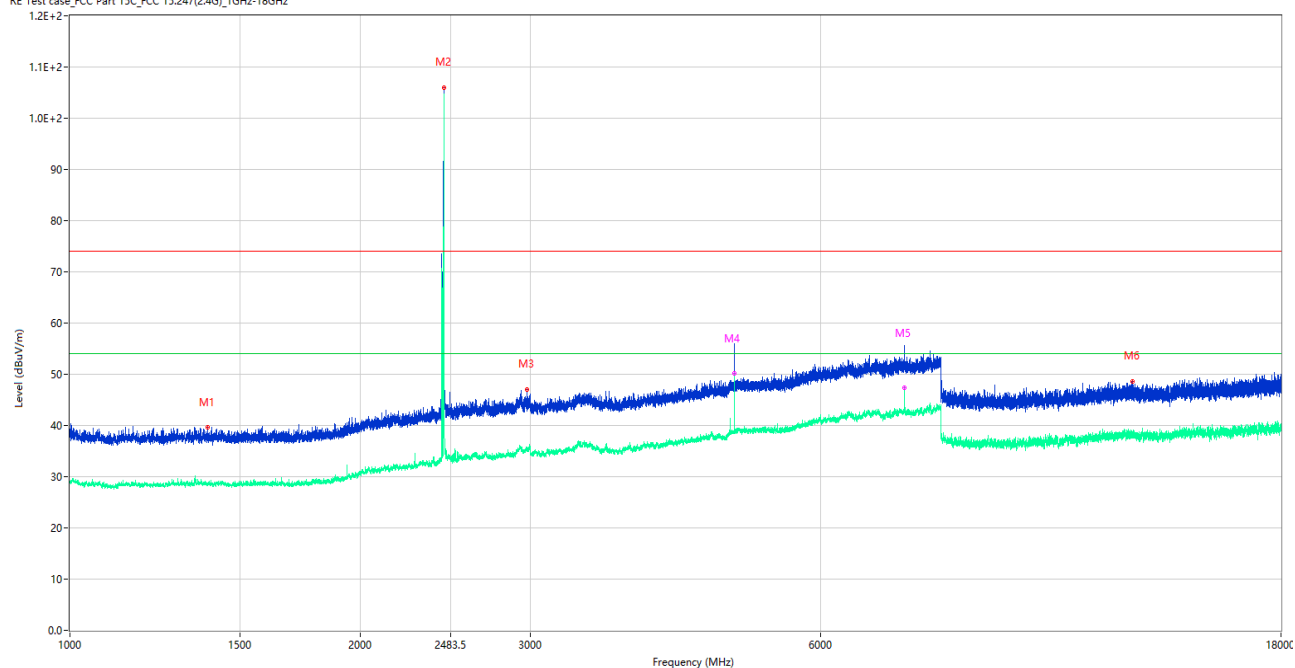
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1420.250	39.65	-15.93	74.0	34.35	Peak	38.00	150	Vertical	Pass
1**	1420.250	28.51	-15.93	54.0	25.49	AV	38.00	150	Vertical	Pass
2	2441.000	105.72	-12.39	74.0	-31.72	Peak	6.00	150	Vertical	N/A
2**	2441.000	104.67	-12.39	54.0	-50.67	AV	6.00	150	Vertical	N/A
3	3358.000	46.70	-6.04	74.0	27.30	Peak	49.00	150	Vertical	Pass
3**	3358.000	36.50	-6.04	54.0	17.50	AV	49.00	150	Vertical	Pass
4	4882.500	52.76	-2.31	74.0	21.24	Peak	49.00	150	Vertical	Pass
4**	4882.500	49.27	-2.31	54.0	4.73	AV	49.00	150	Vertical	Pass
5	7323.500	58.41	0.70	74.0	15.59	Peak	339.00	150	Vertical	Pass
5**	7323.500	53.63	0.70	54.0	0.37	AV	339.00	150	Vertical	Pass
6	12368.500	48.79	-2.30	74.0	25.21	Peak	95.00	150	Vertical	Pass
6**	12368.500	38.52	-2.30	54.0	15.48	AV	95.00	150	Vertical	Pass

8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

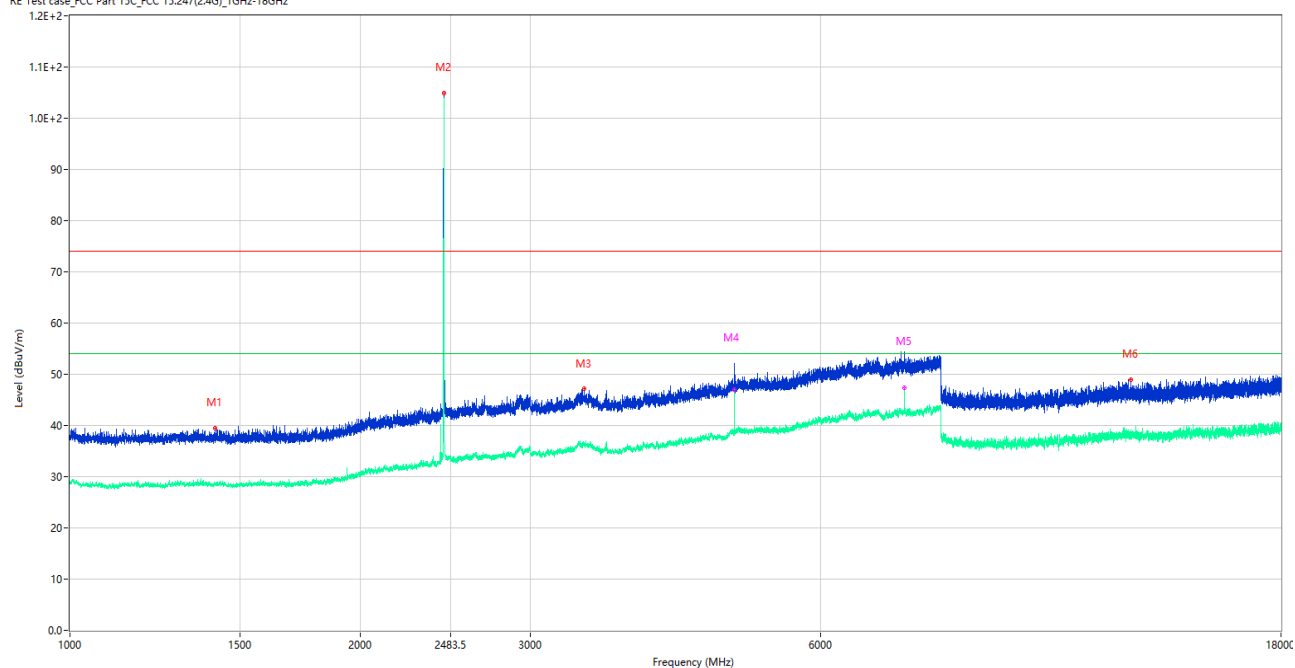
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1387.750	39.62	-15.98	74.0	34.38	Peak	245.00	150	Horizontal	Pass
1**	1387.750	28.63	-15.98	54.0	25.37	AV	245.00	150	Horizontal	Pass
2	2441.000	105.98	-12.39	74.0	-31.98	Peak	153.00	150	Horizontal	N/A
2**	2441.000	103.95	-12.39	54.0	-49.95	AV	153.00	150	Horizontal	N/A
3	2979.000	47.06	-9.01	74.0	26.94	Peak	333.00	150	Horizontal	Pass
3**	2979.000	35.06	-9.01	54.0	18.94	AV	333.00	150	Horizontal	Pass
4	4882.500	54.67	-2.31	74.0	19.33	Peak	169.00	150	Horizontal	Pass
4**	4882.500	50.10	-2.31	54.0	3.90	AV	169.00	150	Horizontal	Pass
5	7323.500	53.97	0.70	74.0	20.03	Peak	59.00	150	Horizontal	Pass
5**	7323.500	47.38	0.70	54.0	6.62	AV	59.00	150	Horizontal	Pass
6	12631.500	48.61	-3.02	74.0	25.39	Peak	321.00	150	Horizontal	Pass
6**	12631.500	38.28	-3.02	54.0	15.72	AV	321.00	150	Horizontal	Pass

8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1414.250	39.53	-15.93	74.0	34.47	Peak	35.00	150	Vertical	Pass
1**	1414.250	28.33	-15.93	54.0	25.67	AV	35.00	150	Vertical	Pass
2	2440.750	104.92	-12.38	74.0	-30.92	Peak	5.00	150	Vertical	N/A
2**	2440.750	102.00	-12.38	54.0	-48.00	AV	5.00	150	Vertical	N/A
3	3412.500	47.15	-5.28	74.0	26.85	Peak	43.00	150	Vertical	Pass
3**	3412.500	36.27	-5.28	54.0	17.73	AV	43.00	150	Vertical	Pass
4	4882.500	51.43	-2.31	74.0	22.57	Peak	55.00	150	Vertical	Pass
4**	4882.500	47.00	-2.31	54.0	7.00	AV	55.00	150	Vertical	Pass
5	7323.500	52.68	0.70	74.0	21.32	Peak	170.00	150	Vertical	Pass
5**	7323.500	47.34	0.70	54.0	6.66	AV	170.00	150	Vertical	Pass
6	12570.000	49.02	-2.98	74.0	24.98	Peak	68.00	150	Vertical	Pass
6**	12570.000	37.91	-2.98	54.0	16.09	AV	68.00	150	Vertical	Pass

A.9 Band Edge (Restricted-band band-edge)

Note 1: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

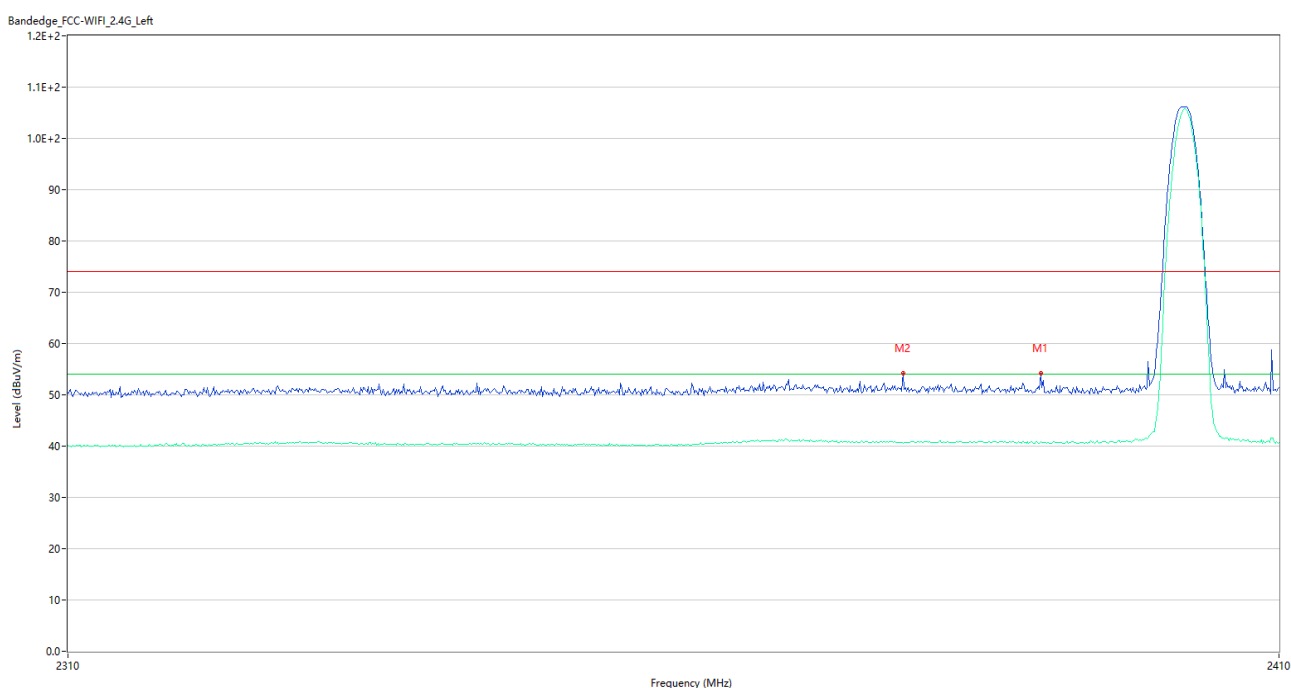
Note 2: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note 3: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 4: The Level (dBuV/m) has been corrected by factor.

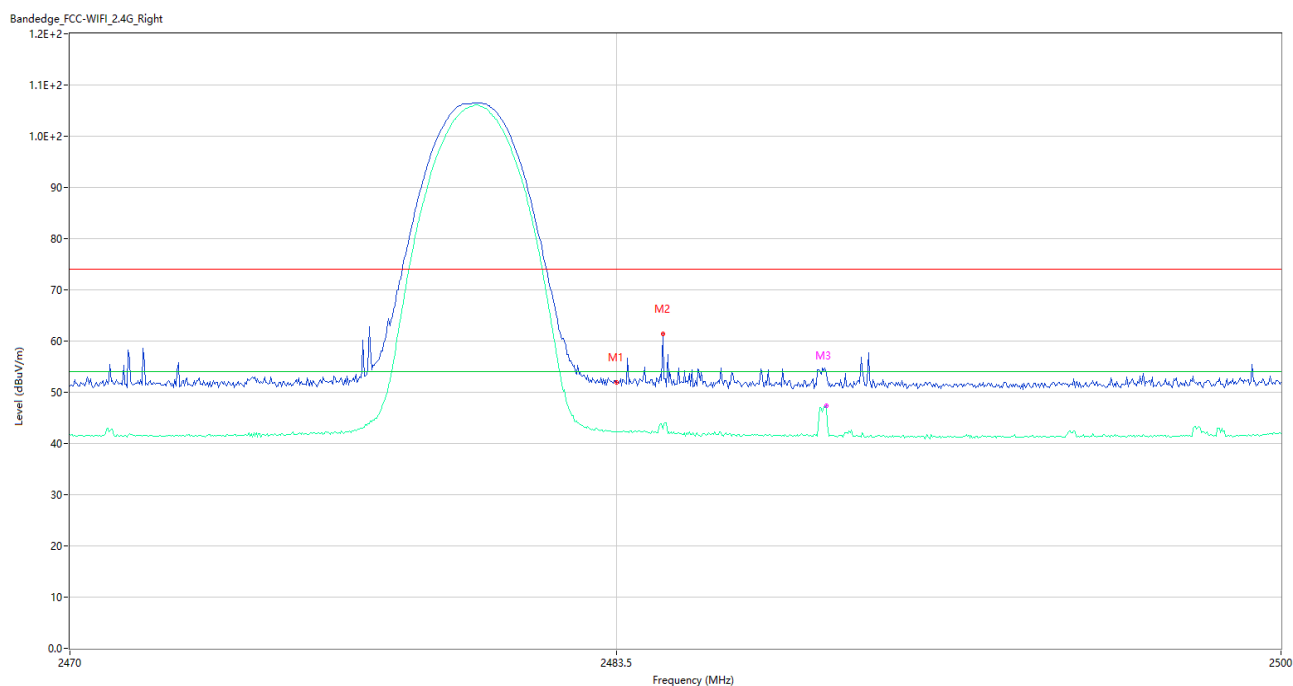
Test Data and Plots

GFSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	54.15	-4.87	74.0	19.85	Peak	120.28	150	Horizontal	Pass
1**	2390.000	40.83	-4.87	54.0	13.17	AV	120.28	150	Horizontal	Pass
2	2378.500	54.20	-4.26	74.0	19.80	Peak	127.00	150	Horizontal	Pass
2**	2378.500	40.61	-4.26	54.0	13.39	AV	127.00	150	Horizontal	Pass

GFSK HIGH CHANNEL



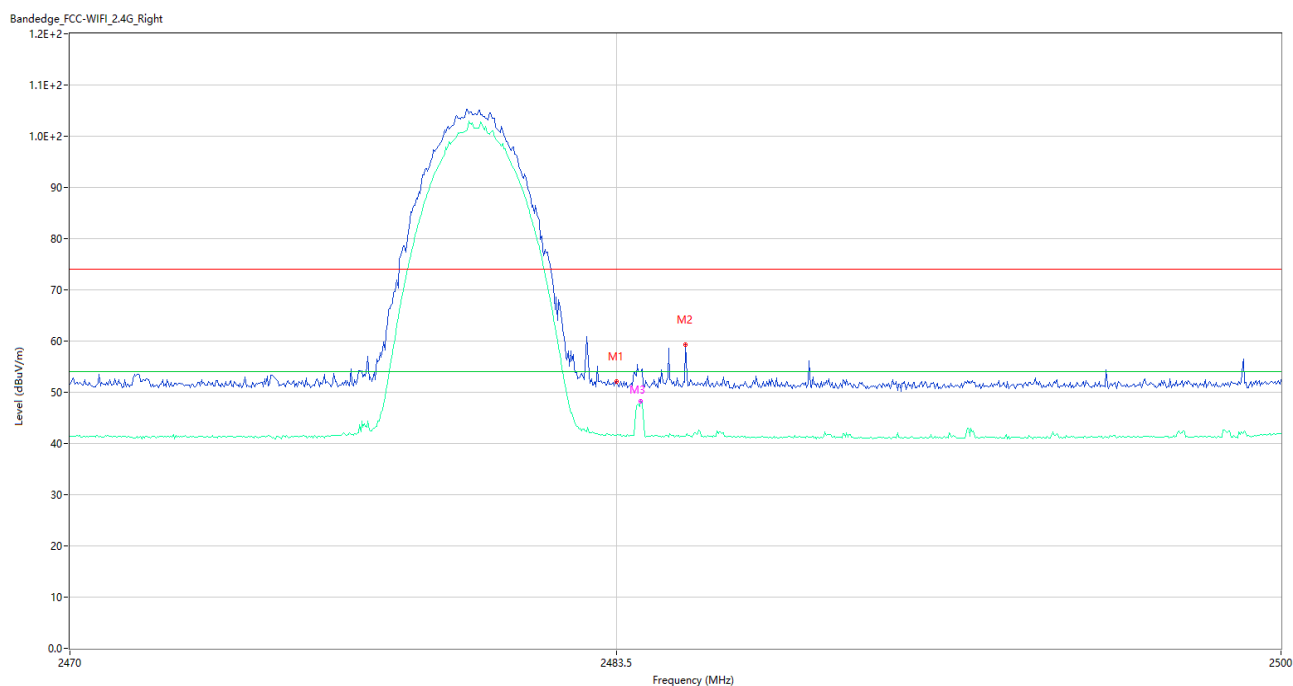
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	51.97	-3.78	74.0	22.03	Peak	335.00	150	Horizontal	Pass
1**	2483.500	42.23	-3.78	54.0	11.77	AV	335.00	150	Horizontal	Pass
2	2484.640	61.47	-3.78	74.0	12.53	Peak	89.00	150	Horizontal	Pass
2**	2484.640	42.88	-3.78	54.0	11.12	AV	89.00	150	Horizontal	Pass
3	2488.690	53.89	-3.82	74.0	20.11	Peak	338.00	150	Horizontal	Pass
3**	2488.690	47.39	-3.82	54.0	6.61	AV	338.00	150	Horizontal	Pass

8-DPSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	51.37	-4.87	74.0	22.63	Peak	336.91	150	Horizontal	Pass
1**	2390.000	40.80	-4.87	54.0	13.20	AV	336.91	150	Horizontal	Pass
2	2366.200	52.67	-4.41	74.0	21.33	Peak	260.00	150	Horizontal	Pass
2**	2366.200	41.00	-4.41	54.0	13.00	AV	260.00	150	Horizontal	Pass

8-DPSK HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	52.19	-3.78	74.0	21.81	Peak	121.00	150	Horizontal	Pass
1**	2483.500	41.53	-3.78	54.0	12.47	AV	121.00	150	Horizontal	Pass
2	2485.210	59.38	-3.78	74.0	14.62	Peak	94.00	150	Horizontal	Pass
2**	2485.210	41.43	-3.78	54.0	12.57	AV	94.00	150	Horizontal	Pass
3	2484.100	53.96	-3.78	74.0	20.04	Peak	2.00	150	Horizontal	Pass
3**	2484.100	48.16	-3.78	54.0	5.84	AV	2.00	150	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SH2550515-AR-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2550515-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SH2550515-AI.PDF”.

Statement

1. The Testing Center guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. For the report with Accreditation Symbol, the items marked with "☆" are not within the accredited scope.
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--END OF REPORT--