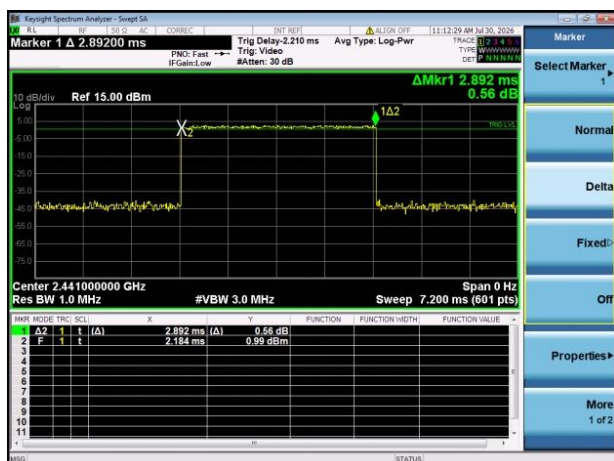
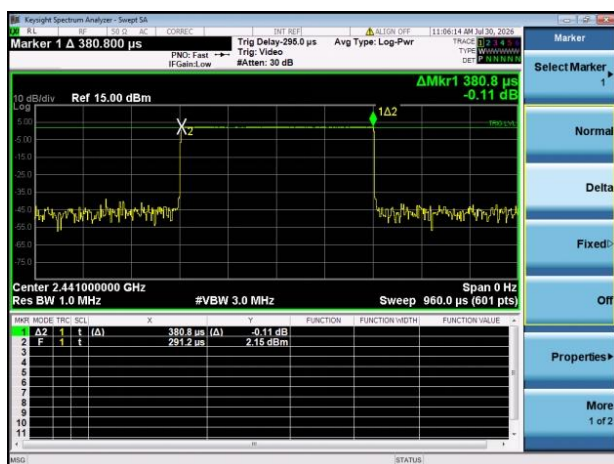


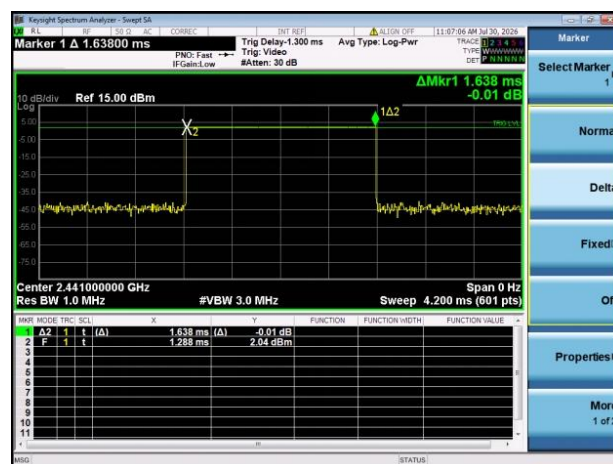
8DPSK 3DH5



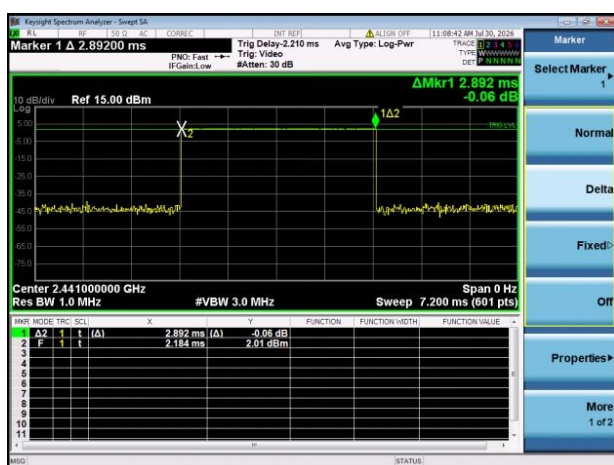
AFH Mode DH1



AFH Mode DH3



AFH Mode DH5



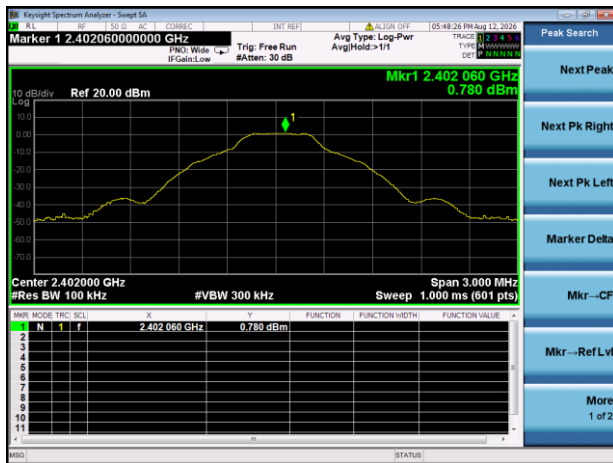
A.6 Conducted Spurious Emissions & Authorized-band band-edge

Test Data

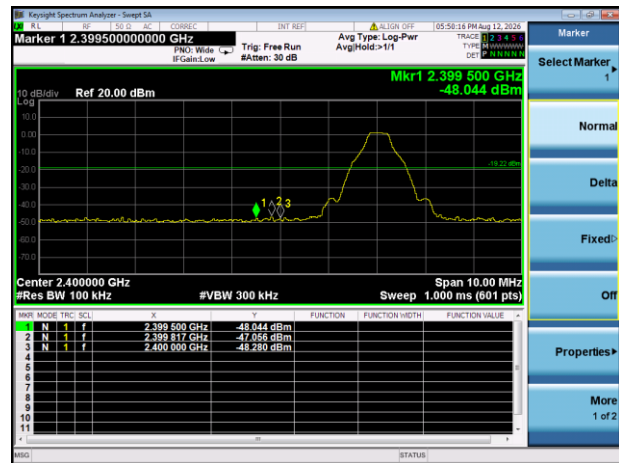
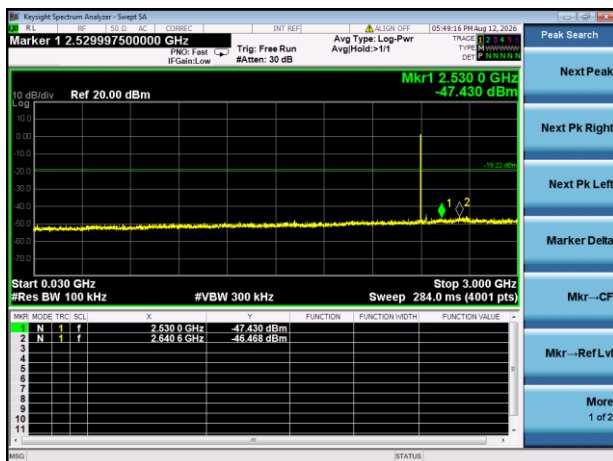
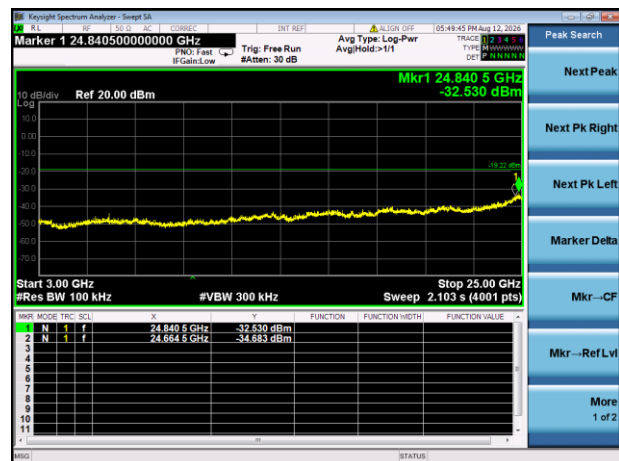
GFSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-32.53	0.78	-19.22	Pass
Middle	-33.49	1.31	-18.69	Pass
High	-33.52	0.74	-19.26	Pass
8DPSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-33.37	-3.94	-23.94	Pass
Middle	-33.31	-3.33	-23.33	Pass
High	-33.01	-3.60	-23.60	Pass
Hopping Mode				
Mode	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
GFSK	-33.45	1.77	-18.23	Pass
8DPSK	-33.79	-0.24	-20.24	Pass

Test Plots

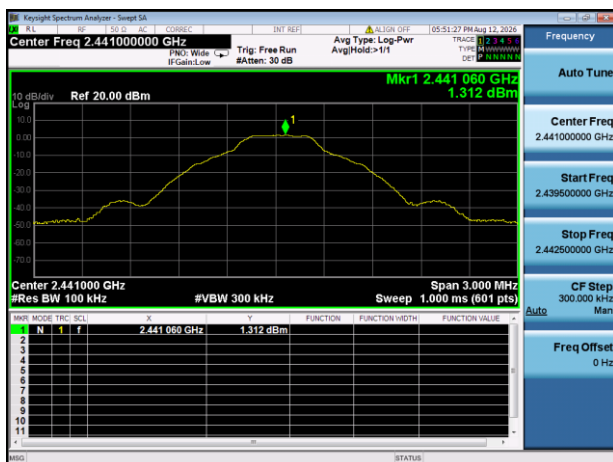
GFSK LOW CHANNEL, CARRIER LEVEL



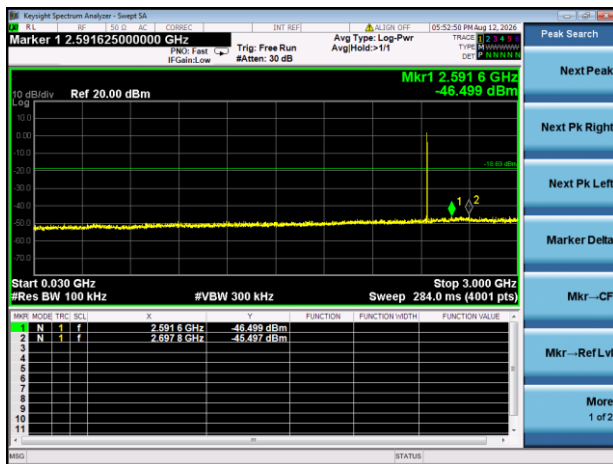
GFSK LOW CHANNEL, BAND EDGE

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

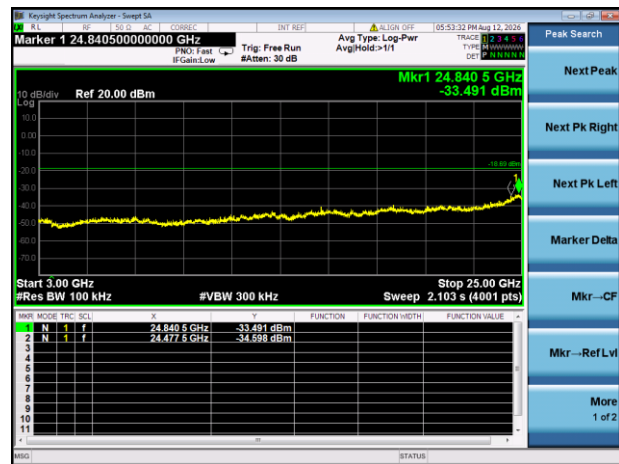
GFSK MIDDLE CHANNEL, CARRIER LEVEL



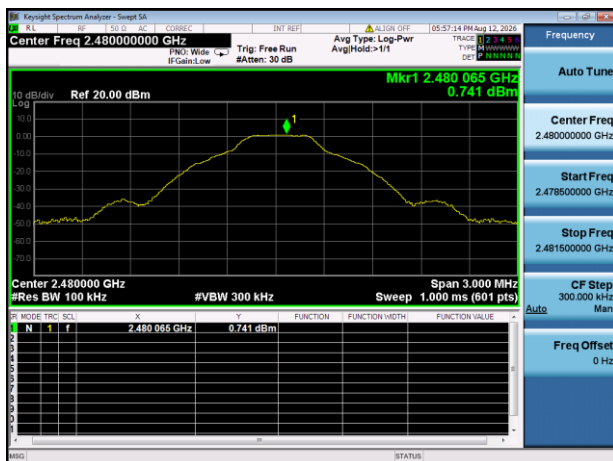
GFSK MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



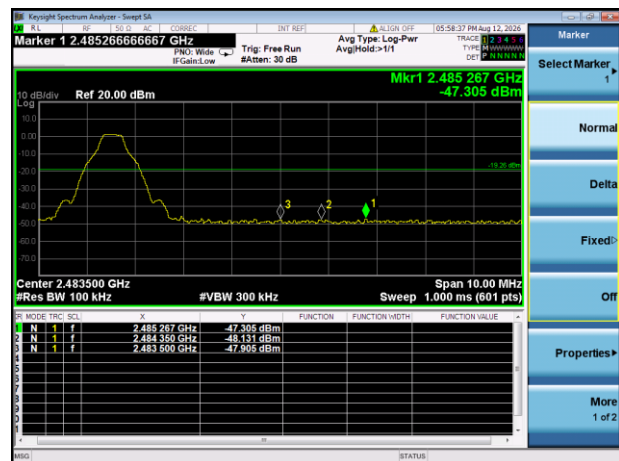
GFSK MIDDLE CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



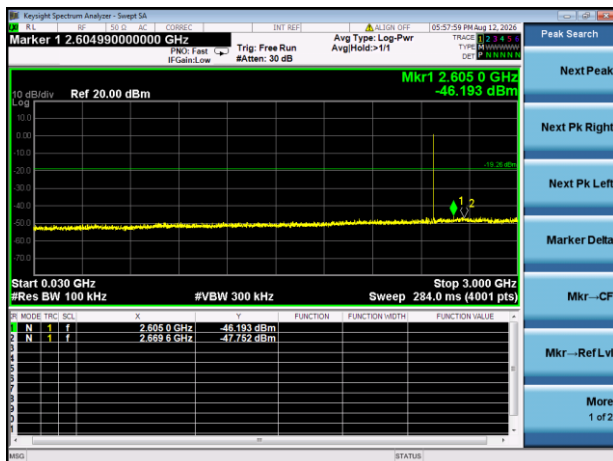
GFSK HIGH CHANNEL, CARRIER LEVEL



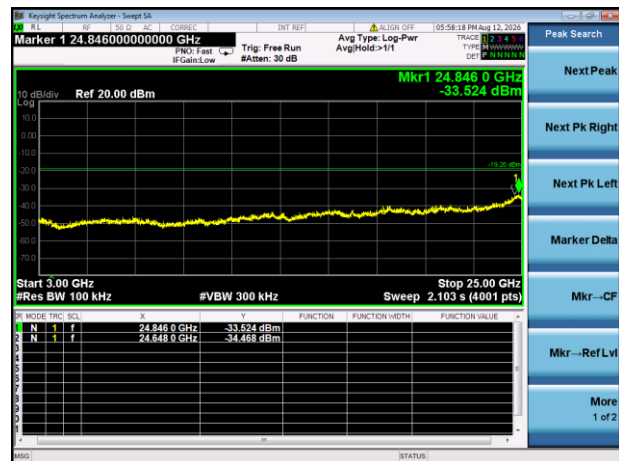
GFSK HIGH CHANNEL, BAND EDGE



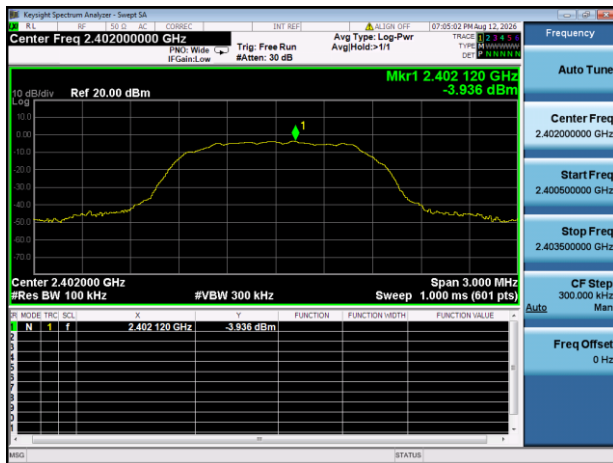
GFSK HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



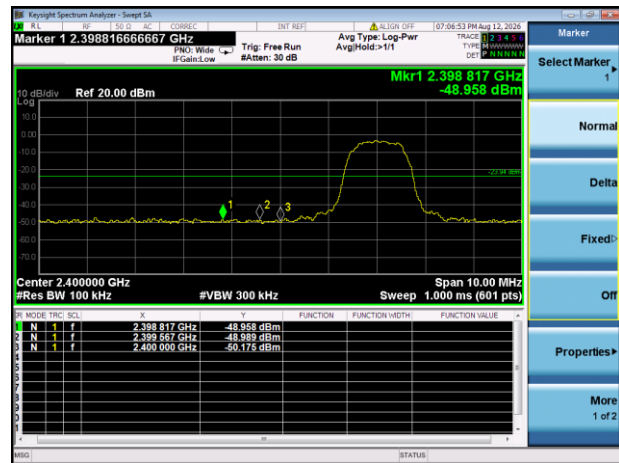
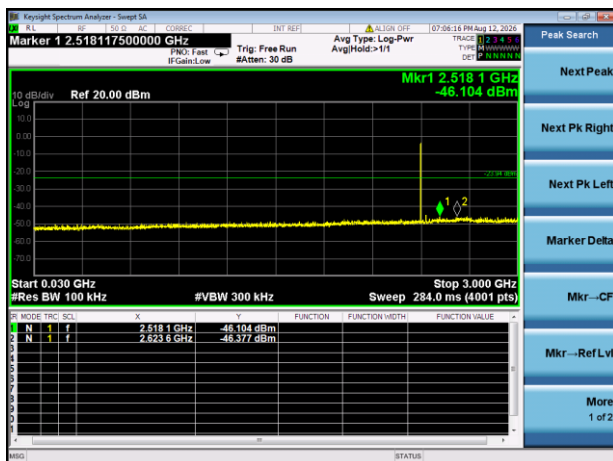
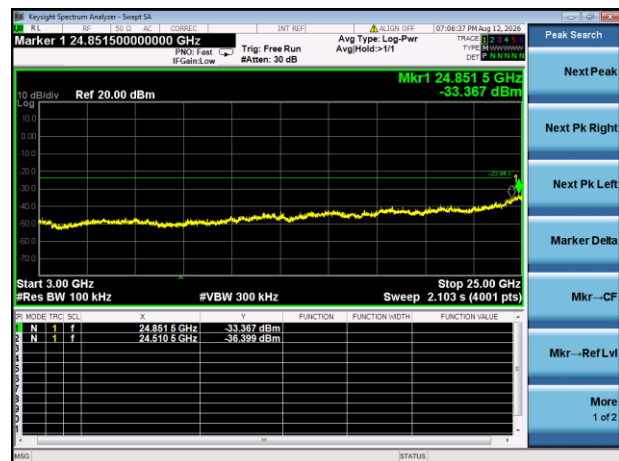
GFSK HIGH CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



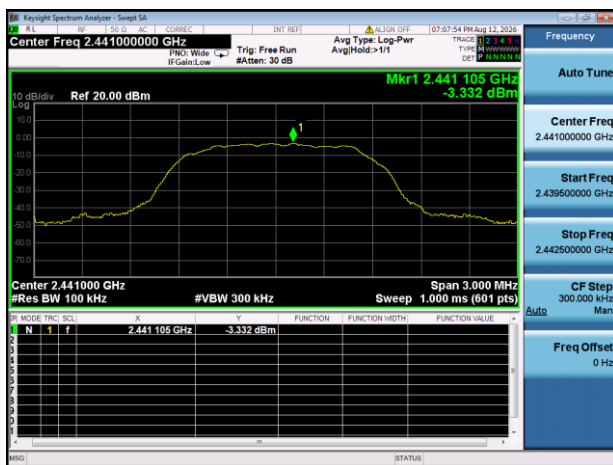
8DPSK LOW CHANNEL, CARRIER LEVEL



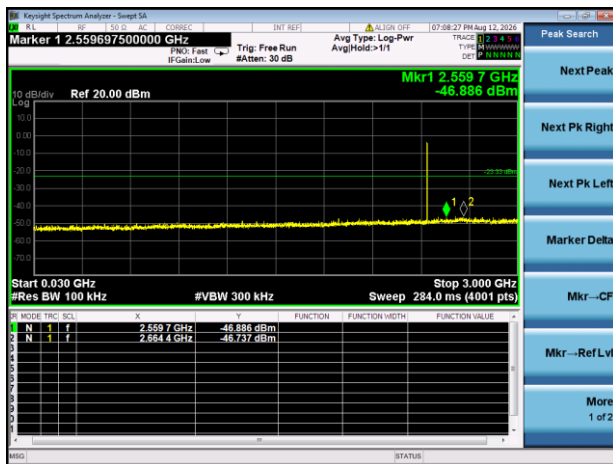
8DPSK LOW CHANNEL, BAND EDGE

8DPSK LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHz8DPSK LOW CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

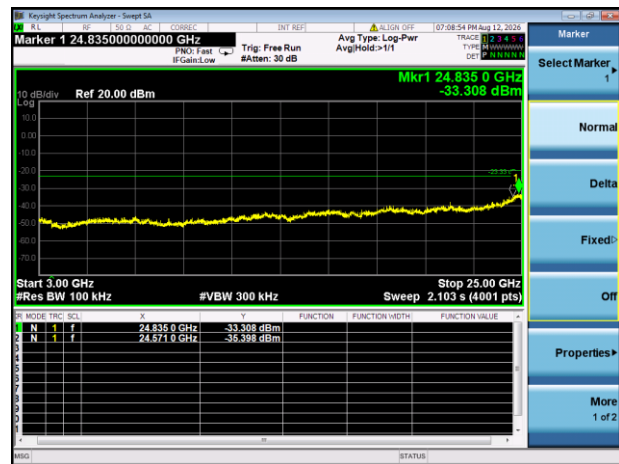
8DPSK MIDDLE CHANNEL, CARRIER LEVEL



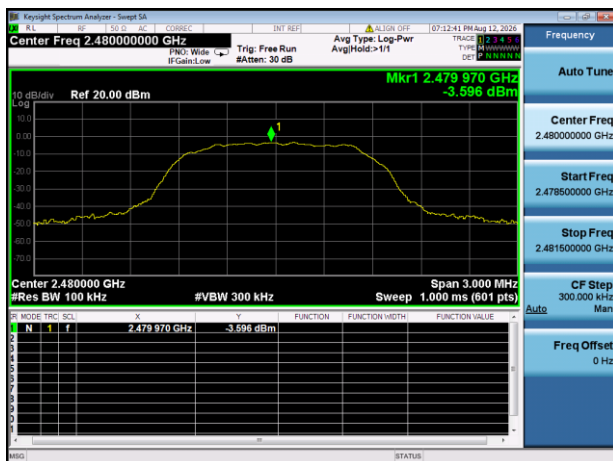
8DPSK MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



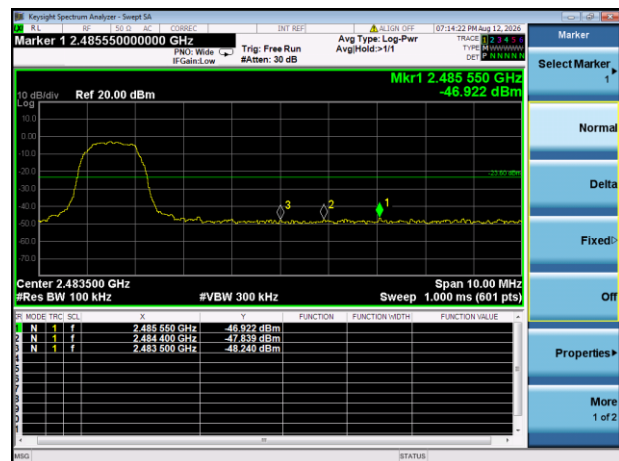
8DPSK MIDDLE CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



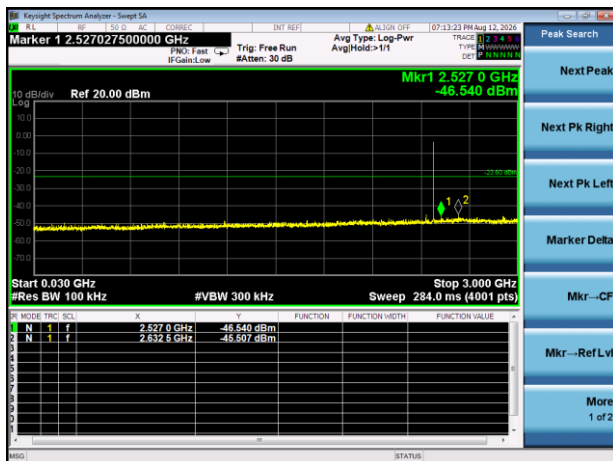
8DPSK HIGH CHANNEL, CARRIER LEVEL



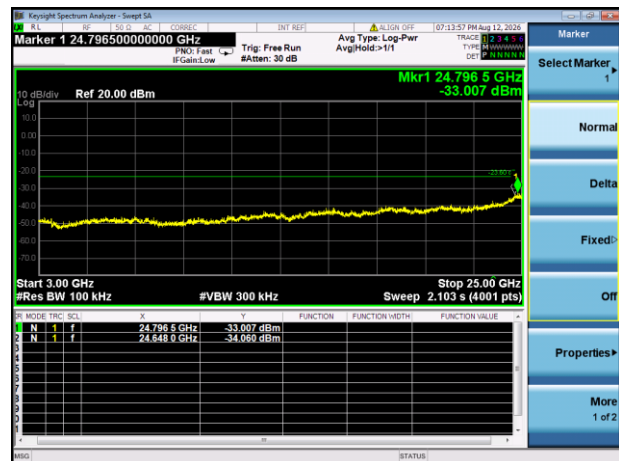
8DPSK HIGH CHANNEL, BAND EDGE



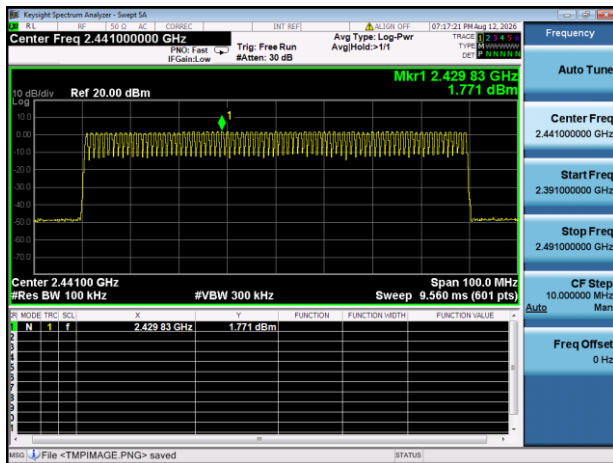
8DPSK HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



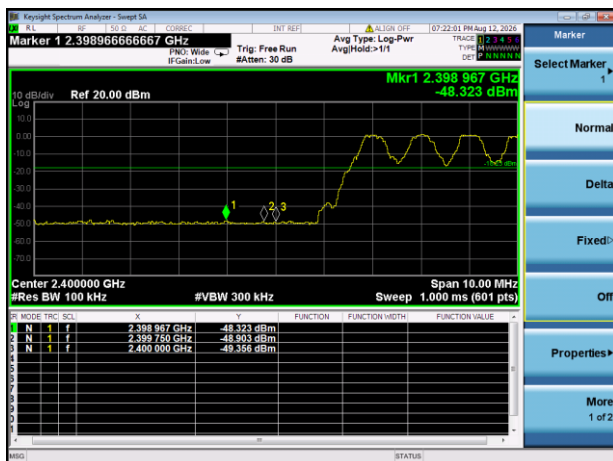
8DPSK HIGH CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



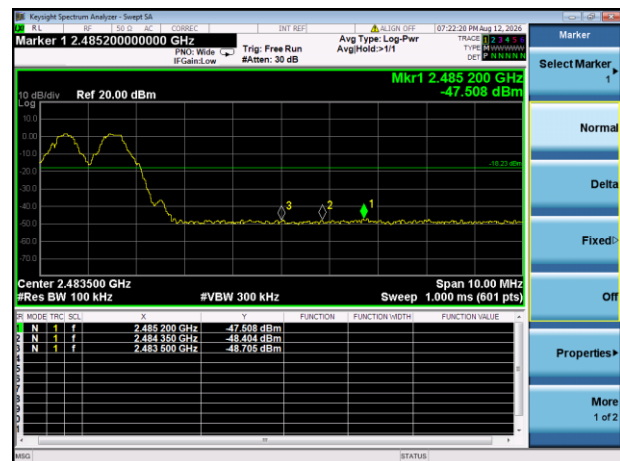
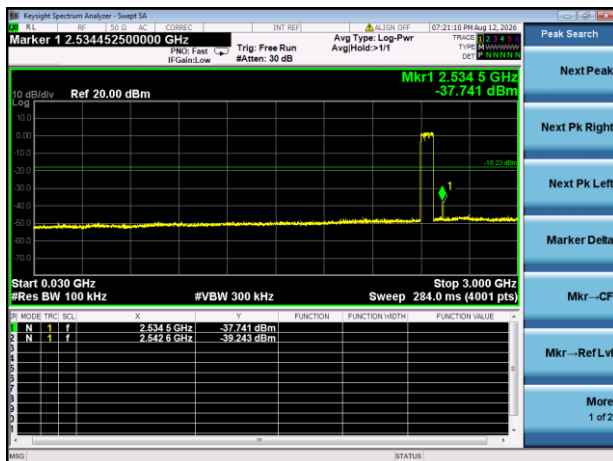
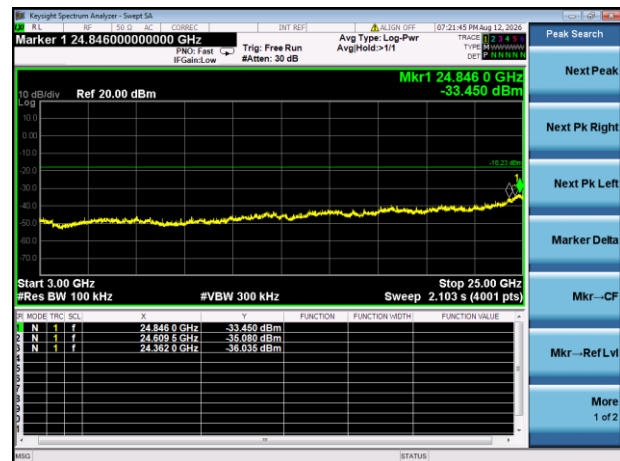
GFSK HOPPING, CARRIER LEVEL



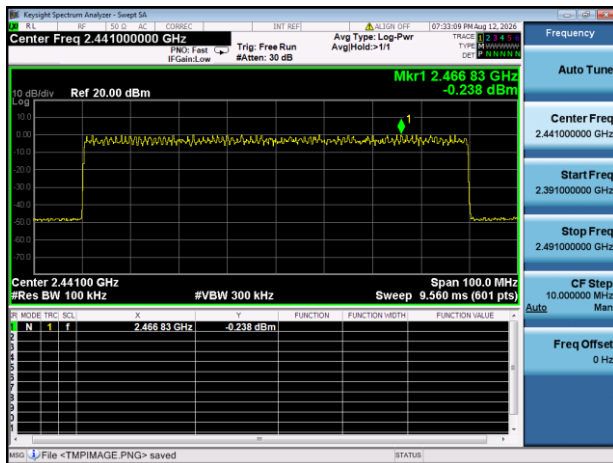
GFSK HOPPING BAND EDGE (LOW)



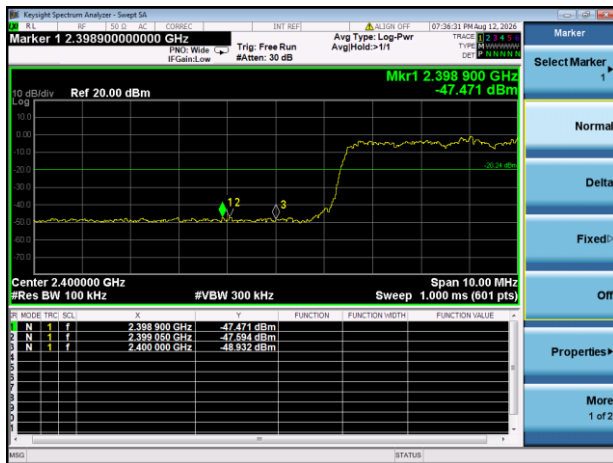
GFSK HOPPING BAND EDGE (HIGH)

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

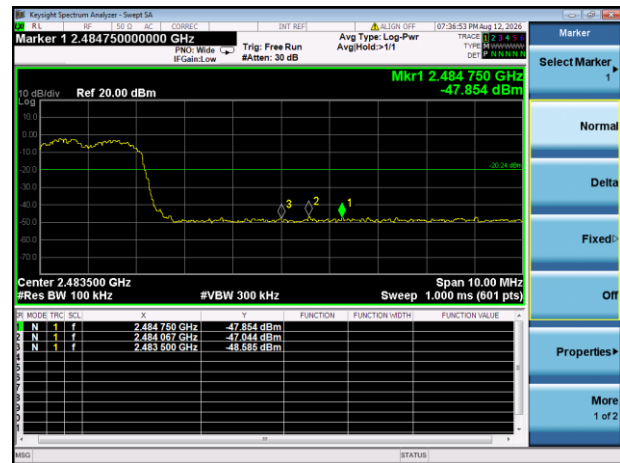
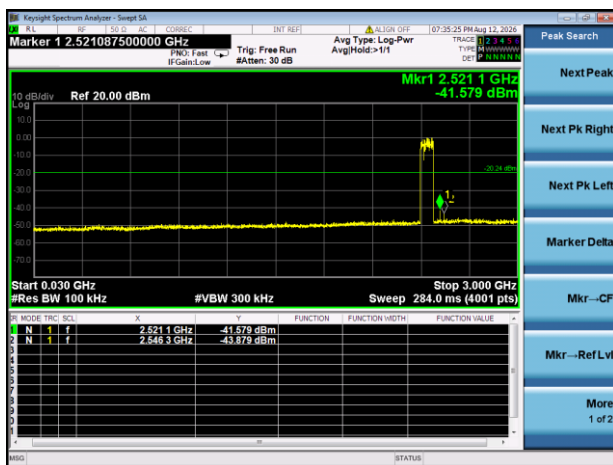
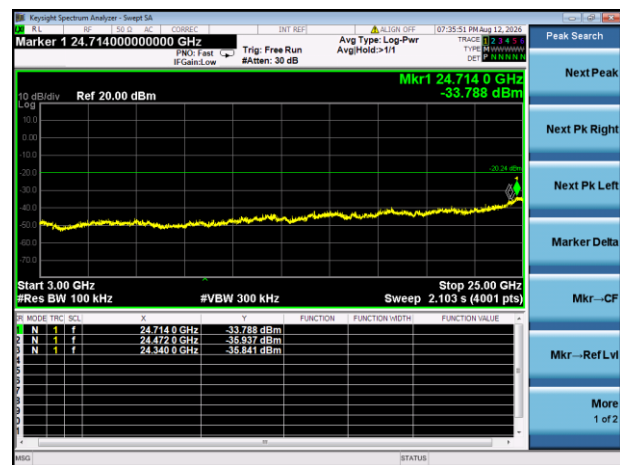
8DPSK HOPPING, CARRIER LEVEL



8DPSK Hopping BAND EDGE (LOW)



8DPSK Hopping BAND EDGE (HIGH)

8DPSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHz8DPSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz

A.7 Conducted Emissions

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

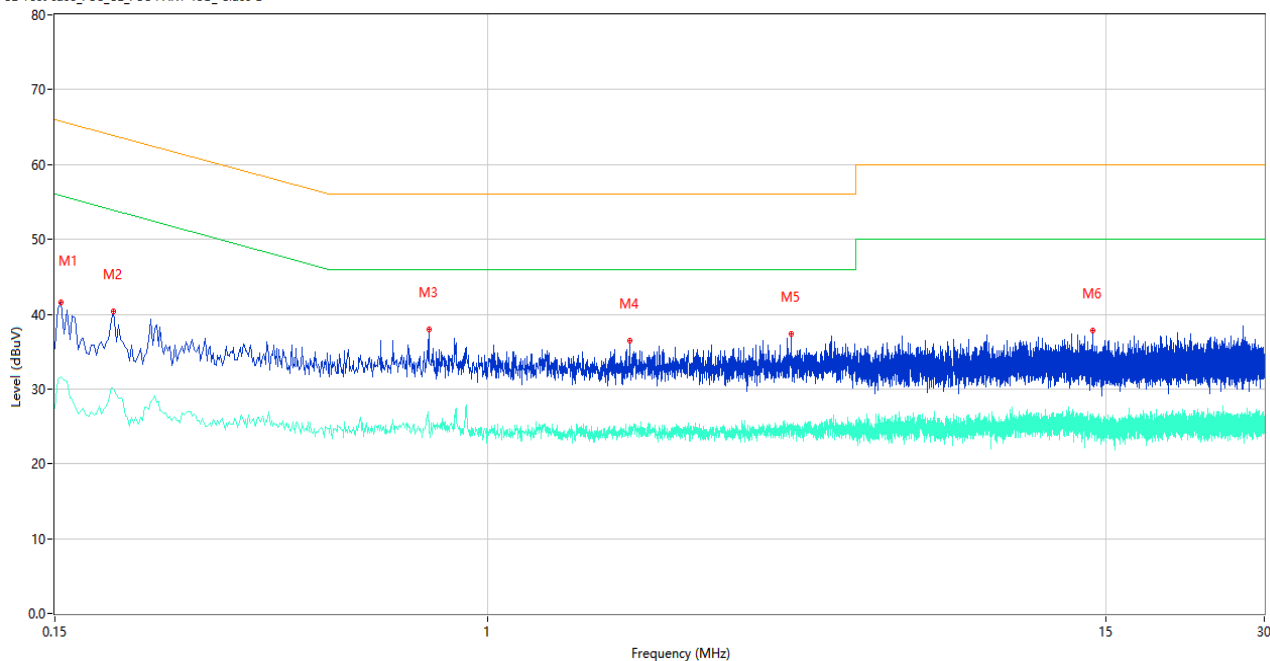
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration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

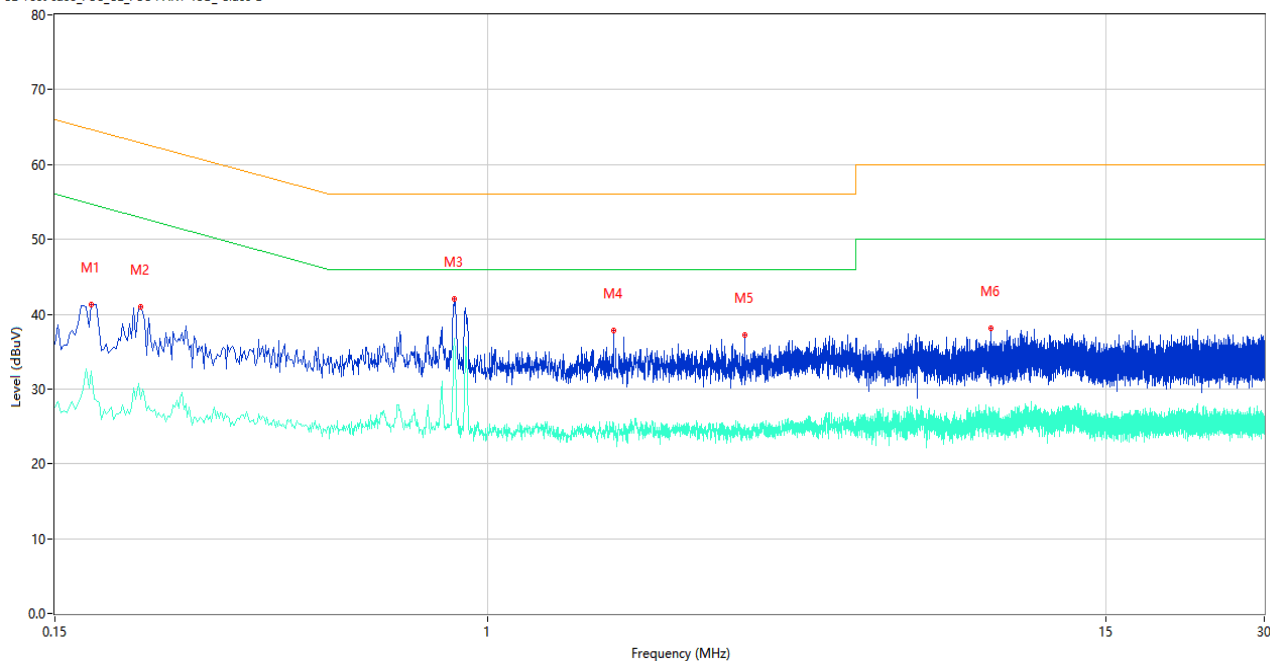
CE Test case_FCC_CE_FCC PART 15B_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	41.65	9.86	65.78	24.13	Peak	L	Pass
1**	0.154	31.66	9.86	55.78	24.12	AV	L	Pass
2	0.194	40.40	9.84	63.86	23.46	Peak	L	Pass
2**	0.194	30.01	9.84	53.86	23.85	AV	L	Pass
3	0.772	37.99	10.39	56.00	18.01	Peak	L	Pass
3**	0.772	25.72	10.39	46.00	20.28	AV	L	Pass
4	1.858	36.46	10.27	56.00	19.54	Peak	L	Pass
4**	1.858	25.16	10.27	46.00	20.84	AV	L	Pass
5	3.772	37.37	10.44	56.00	18.63	Peak	L	Pass
5**	3.772	24.89	10.44	46.00	21.11	AV	L	Pass
6	14.176	37.77	10.89	60.00	22.23	Peak	L	Pass
6**	14.176	26.72	10.89	50.00	23.28	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15B_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.176	41.32	9.85	64.67	23.35	Peak	N	Pass
1**	0.176	32.35	9.85	54.67	22.32	AV	N	Pass
2	0.218	40.91	9.83	62.89	21.98	Peak	N	Pass
2**	0.218	28.63	9.83	52.89	24.26	AV	N	Pass
3	0.862	42.00	10.57	56.00	14.00	Peak	N	Pass
3**	0.862	36.81	10.57	46.00	9.19	AV	N	Pass
4	1.736	37.77	10.21	56.00	18.23	Peak	N	Pass
4**	1.736	25.04	10.21	46.00	20.96	AV	N	Pass
5	3.080	37.16	9.97	56.00	18.84	Peak	N	Pass
5**	3.080	25.14	9.97	46.00	20.86	AV	N	Pass
6	9.074	38.04	10.34	60.00	21.96	Peak	N	Pass
6**	9.074	26.83	10.34	50.00	23.17	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 C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024, 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 and DH5-Hopping mode is the worst.

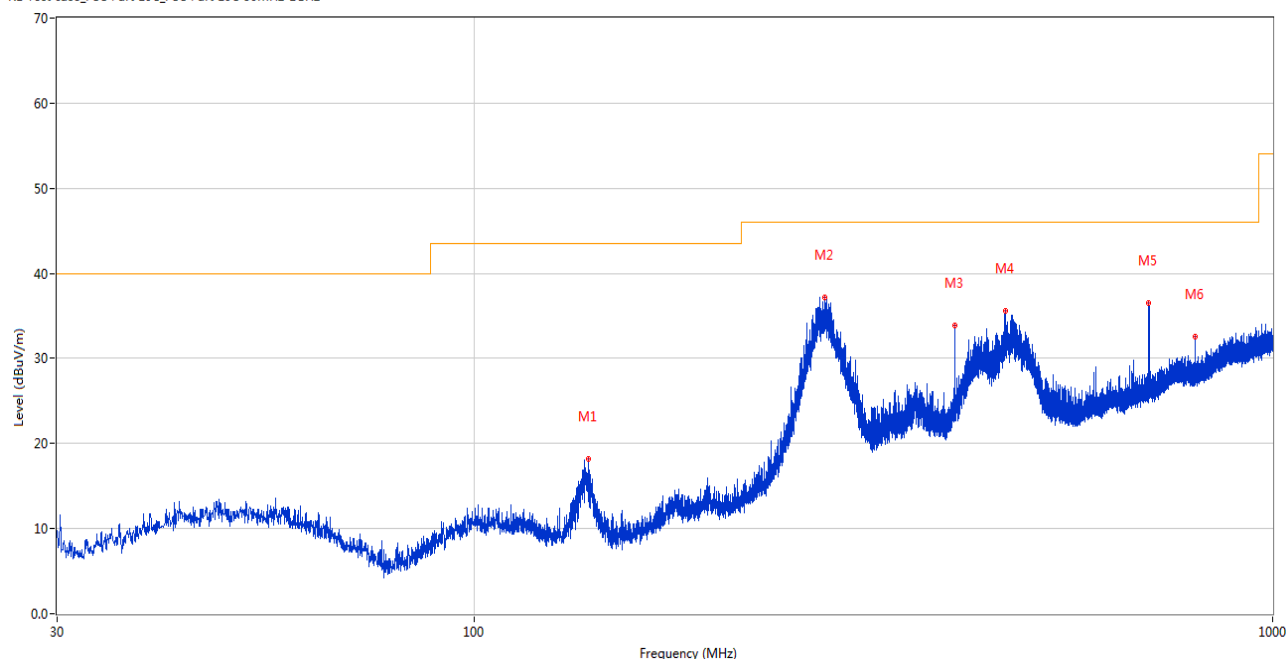
Note ⁴: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

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

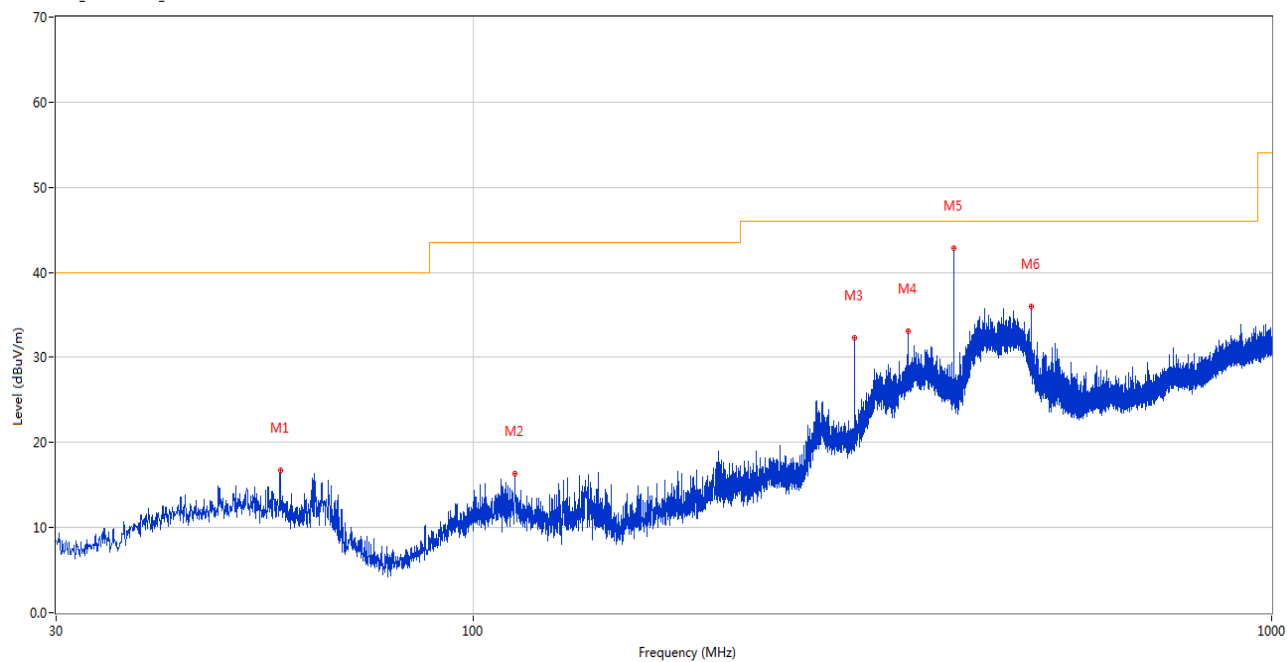
RE Test case_FCC Part 15C_FCC Part 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	138.980	18.23	-28.65	43.5	25.27	Peak	148.70	200	Horizontal	Pass
2	274.488	37.23	-22.19	46.0	8.77	Peak	226.60	100	Horizontal	Pass
3	400.006	33.92	-18.37	46.0	12.08	Peak	155.30	100	Horizontal	Pass
4	463.105	35.60	-17.08	46.0	10.40	Peak	223.90	100	Horizontal	Pass
5	699.979	36.50	-11.05	46.0	9.50	Peak	206.70	100	Horizontal	Pass
6	800.034	32.59	-8.79	46.0	13.41	Peak	53.60	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC Part 15C 30MHz-1GHz



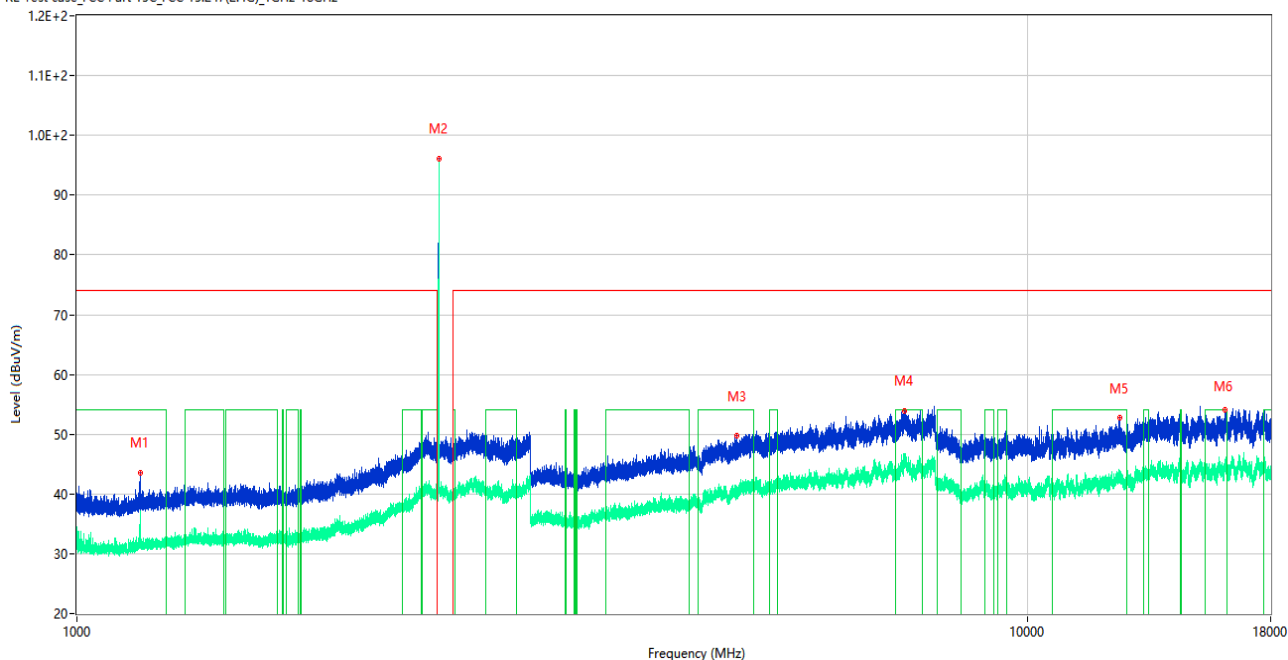
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	57.257	16.73	-24.83	40.0	23.27	Peak	174.10	100	Vertical	Pass
2	112.595	16.38	-26.09	43.5	27.12	Peak	153.70	100	Vertical	Pass
3	300.000	32.36	-21.27	46.0	13.64	Peak	254.30	100	Vertical	Pass
4	350.003	33.06	-19.18	46.0	12.94	Peak	200.70	100	Vertical	Pass
5	400.006	42.79	-18.37	46.0	3.21	Peak	254.30	100	Vertical	Pass
6	500.014	35.98	-15.88	46.0	10.02	Peak	127.10	100	Vertical	Pass

Note¹: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note²: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT H

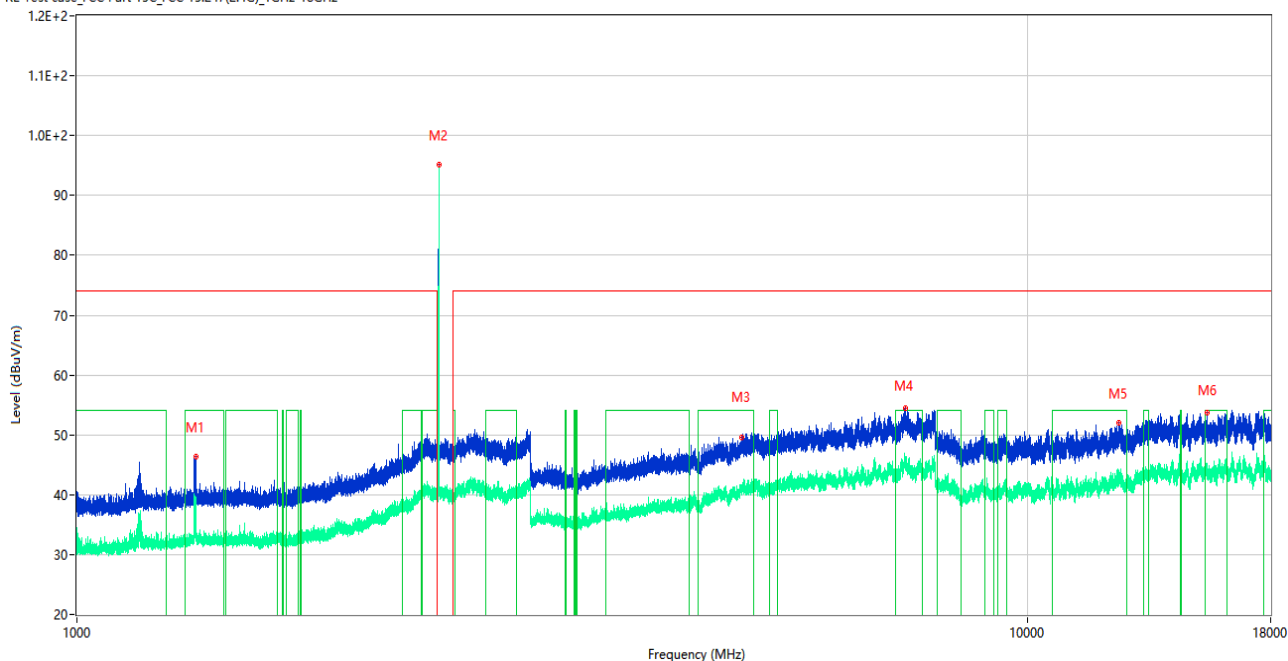
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1165.600	43.62	74.0	30.38	Peak	125.00	300	Horizontal	Pass
1**	1165.600	34.40	54.0	19.60	AV	125.00	300	Horizontal	Pass
2	2401.900	96.13	--	--	Peak	237.00	150	Horizontal	N/A
2**	2401.900	95.54	--	--	AV	237.00	150	Horizontal	N/A
3	4937.750	49.68	74.0	24.32	Peak	176.00	200	Horizontal	Pass
3**	4937.750	40.29	54.0	13.71	AV	176.00	200	Horizontal	Pass
4	7426.000	53.97	74.0	20.03	Peak	176.00	100	Horizontal	Pass
4**	7426.000	46.06	54.0	7.94	AV	176.00	100	Horizontal	Pass
5	12492.313	52.74	74.0	21.26	Peak	0.00	150	Horizontal	Pass
5**	12492.313	43.65	54.0	10.35	AV	0.00	150	Horizontal	Pass
6	16132.050	54.12	74.0	19.88	Peak	296.00	200	Horizontal	Pass
6**	16132.050	44.36	54.0	9.64	AV	296.00	200	Horizontal	Pass

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

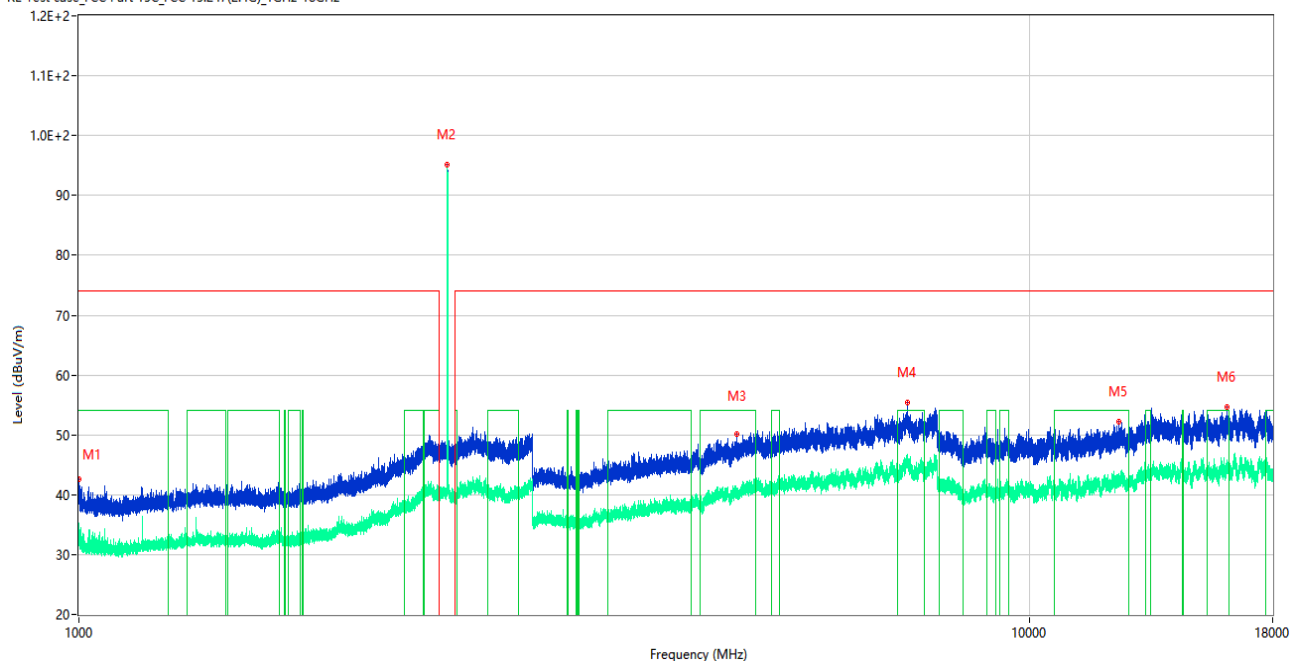
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.600	46.34	74.0	27.66	Peak	123.00	400	Vertical	Pass
1**	1333.600	37.19	54.0	16.81	AV	123.00	400	Vertical	Pass
2	2402.100	95.09	--	--	Peak	256.00	100	Vertical	N/A
2**	2402.100	94.80	--	--	AV	256.00	100	Vertical	N/A
3	4996.750	49.56	74.0	24.44	Peak	288.00	100	Vertical	Pass
3**	4996.750	40.00	54.0	14.00	AV	288.00	100	Vertical	Pass
4	7431.000	54.55	74.0	19.45	Peak	250.00	400	Vertical	Pass
4**	7431.000	45.10	54.0	8.90	AV	250.00	400	Vertical	Pass
5	12460.250	51.95	74.0	22.05	Peak	30.00	150	Vertical	Pass
5**	12460.250	42.95	54.0	11.05	AV	30.00	150	Vertical	Pass
6	15448.500	53.77	74.0	20.23	Peak	110.00	400	Vertical	Pass
6**	15448.500	43.96	54.0	10.04	AV	110.00	400	Vertical	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

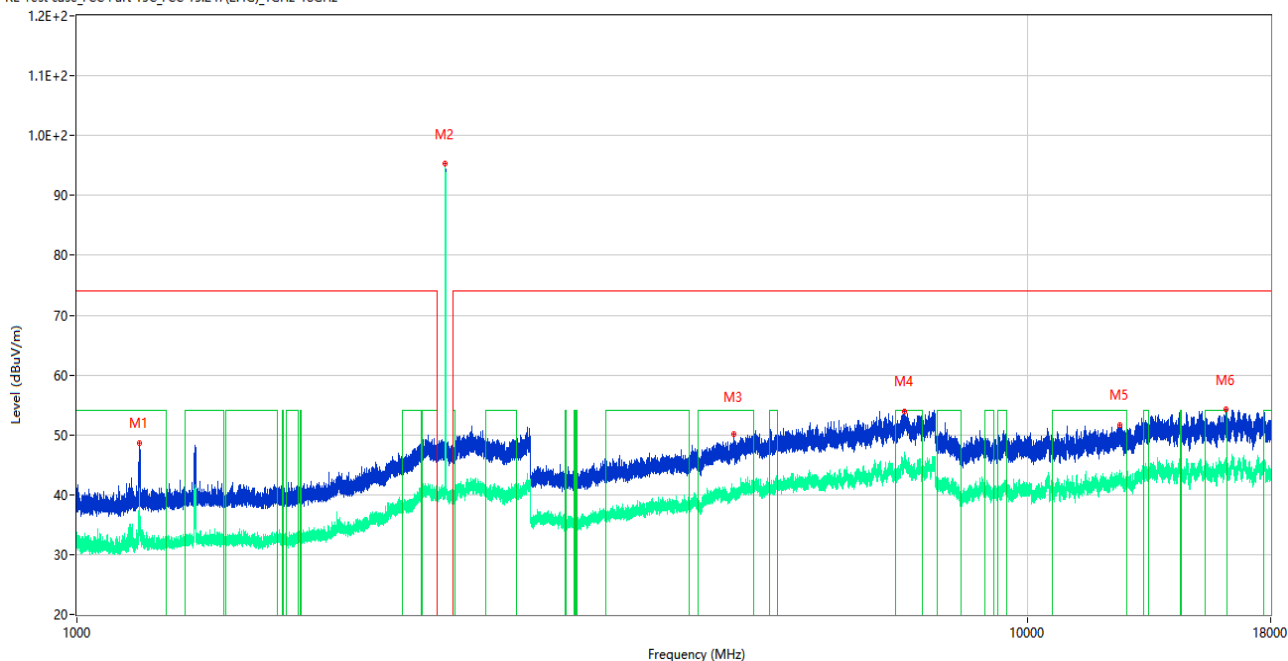
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1000.300	42.65	74.0	31.35	Peak	163.00	300	Horizontal	Pass
1**	1000.300	33.60	54.0	20.40	AV	163.00	300	Horizontal	Pass
2	2440.800	95.19	--	--	Peak	283.00	200	Horizontal	N/A
2**	2440.800	94.03	--	--	AV	283.00	200	Horizontal	N/A
3	4915.750	50.09	74.0	23.91	Peak	111.00	100	Horizontal	Pass
3**	4915.750	40.30	54.0	13.70	AV	111.00	100	Horizontal	Pass
4	7426.750	55.46	74.0	18.54	Peak	159.00	100	Horizontal	Pass
4**	7426.750	45.91	54.0	8.09	AV	159.00	100	Horizontal	Pass
5	12403.963	52.29	74.0	21.71	Peak	221.00	150	Horizontal	Pass
5**	12403.963	42.46	54.0	11.54	AV	221.00	150	Horizontal	Pass
6	16123.912	54.66	74.0	19.34	Peak	360.00	400	Horizontal	Pass
6**	16123.912	44.69	54.0	9.31	AV	360.00	400	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

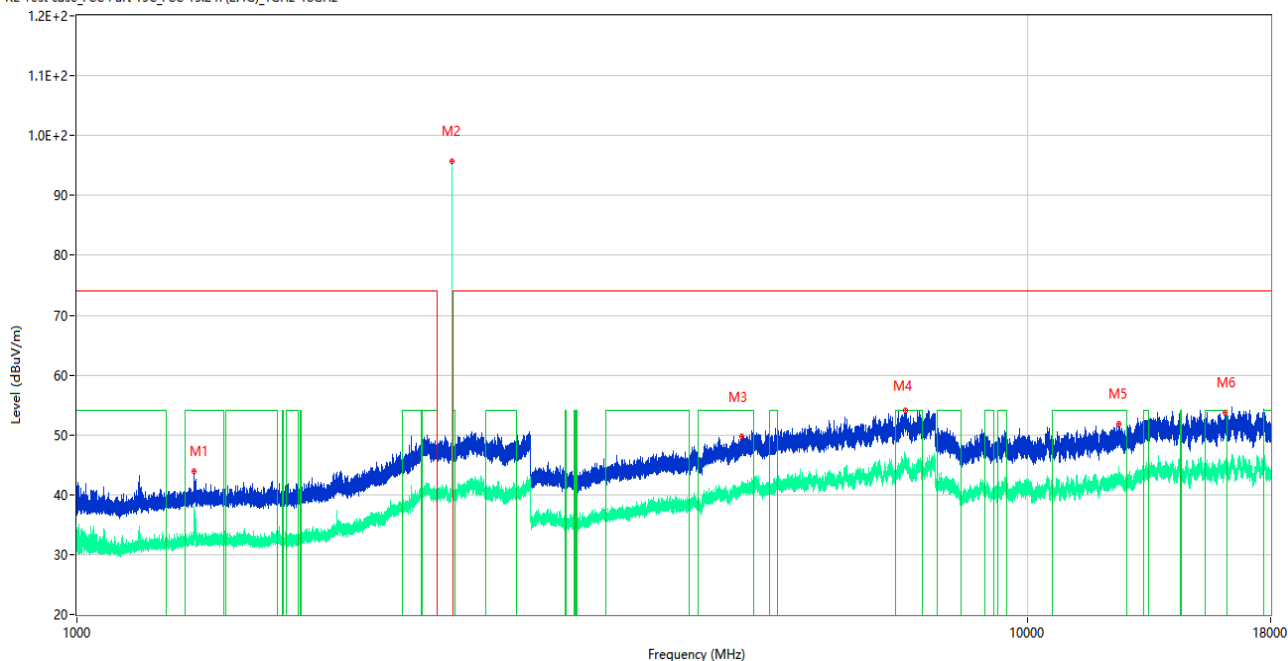
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.100	48.68	74.0	25.32	Peak	122.00	200	Vertical	Pass
1**	1163.100	36.45	54.0	17.55	AV	122.00	200	Vertical	Pass
2	2441.200	95.31	--	--	Peak	268.00	100	Vertical	N/A
2**	2441.200	94.94	--	--	AV	268.00	100	Vertical	N/A
3	4907.500	50.21	74.0	23.79	Peak	21.00	100	Vertical	Pass
3**	4907.500	41.06	54.0	12.94	AV	21.00	100	Vertical	Pass
4	7420.250	53.93	74.0	20.07	Peak	254.00	300	Vertical	Pass
4**	7420.250	45.80	54.0	8.20	AV	254.00	300	Vertical	Pass
5	12507.037	51.66	74.0	22.34	Peak	98.00	100	Vertical	Pass
5**	12507.037	42.70	54.0	11.30	AV	98.00	100	Vertical	Pass
6	16141.763	54.22	74.0	19.78	Peak	176.00	100	Vertical	Pass
6**	16141.763	44.59	54.0	9.41	AV	176.00	100	Vertical	Pass

GFSK HIGH 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)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.800	43.84	74.0	30.16	Peak	212.00	200	Horizontal	Pass
1**	1327.800	32.35	54.0	21.65	AV	212.00	200	Horizontal	Pass
2	2480.100	95.76	--	--	Peak	273.00	100	Horizontal	N/A
2**	2480.100	95.56	--	--	AV	273.00	100	Horizontal	N/A
3	4999.500	49.84	74.0	24.16	Peak	176.00	200	Horizontal	Pass
3**	4999.500	40.51	54.0	13.49	AV	176.00	200	Horizontal	Pass
4	7427.500	54.00	74.0	20.00	Peak	206.00	400	Horizontal	Pass
4**	7427.500	45.58	54.0	8.42	AV	206.00	400	Horizontal	Pass
5	12472.362	51.89	74.0	22.11	Peak	33.00	200	Horizontal	Pass
5**	12472.362	42.54	54.0	11.46	AV	33.00	200	Horizontal	Pass
6	16132.312	53.79	74.0	20.21	Peak	233.00	200	Horizontal	Pass
6**	16132.312	44.66	54.0	9.34	AV	233.00	200	Horizontal	Pass