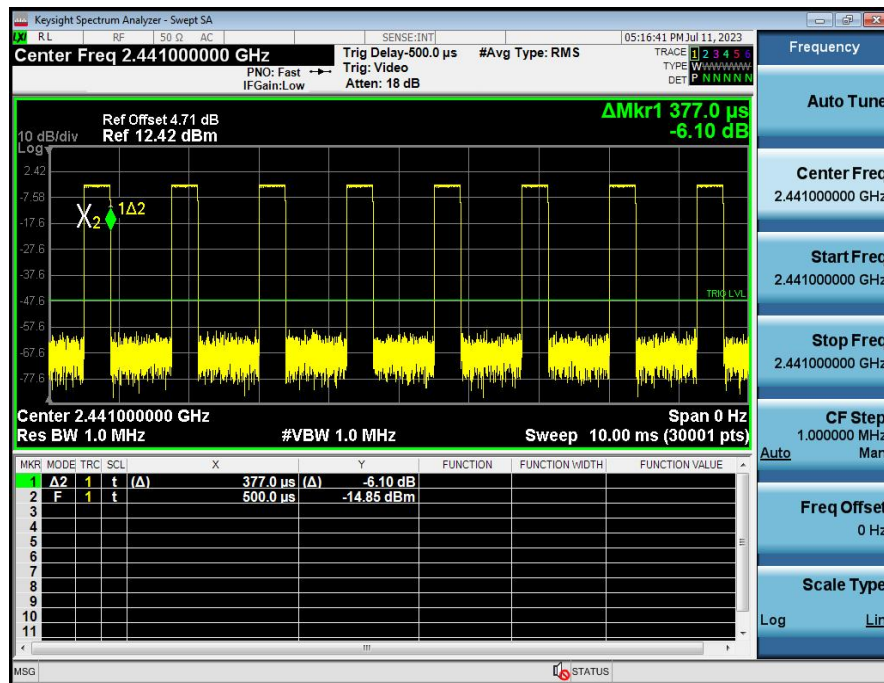


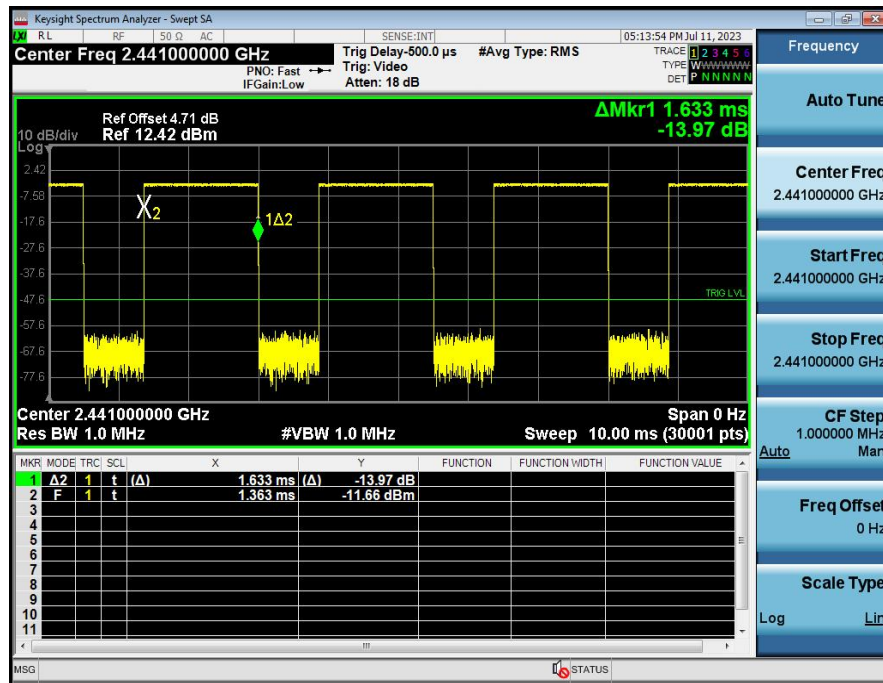
A.5 Average time of Occupancy

Frequency	Packet	Pulse Time(ms)	Dwell time(ms)	Limit(ms)	Result
2441MHz	DH1	0.377	120.64	400	Pass
2441MHz	DH3	1.633	261.28	400	Pass
2441MHz	DH5	2.881	307.31	400	Pass
2441MHz	2DH1	0.378	120.96	400	Pass
2441MHz	2DH3	1.633	261.28	400	Pass
2441MHz	2DH5	2.881	307.31	400	Pass
2441MHz	3DH1	0.378	120.96	400	Pass
2441MHz	3DH3	1.633	261.28	400	Pass
2441MHz	3DH5	2.882	307.41	400	Pass

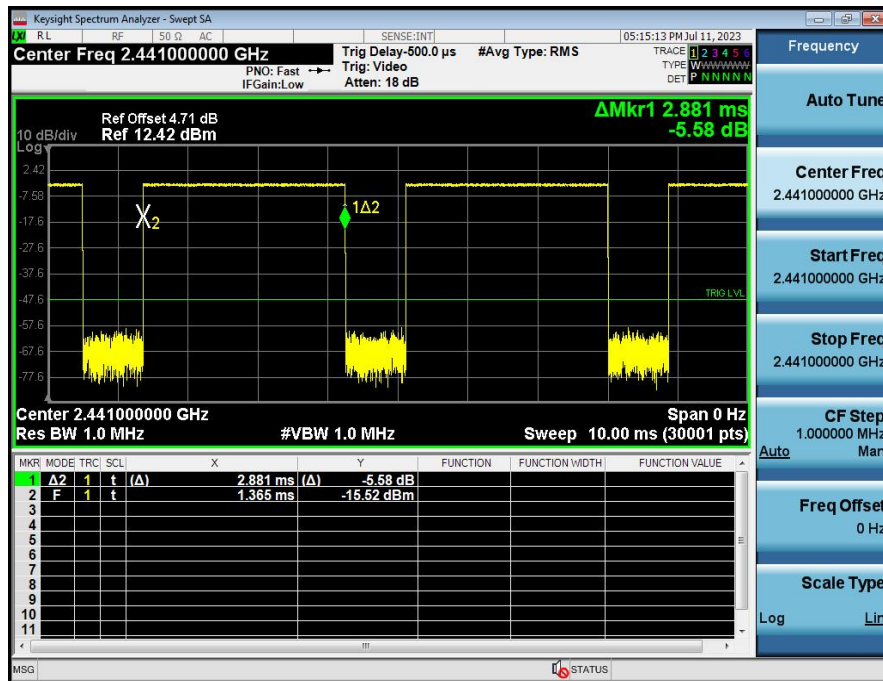
DH1 2441MHz



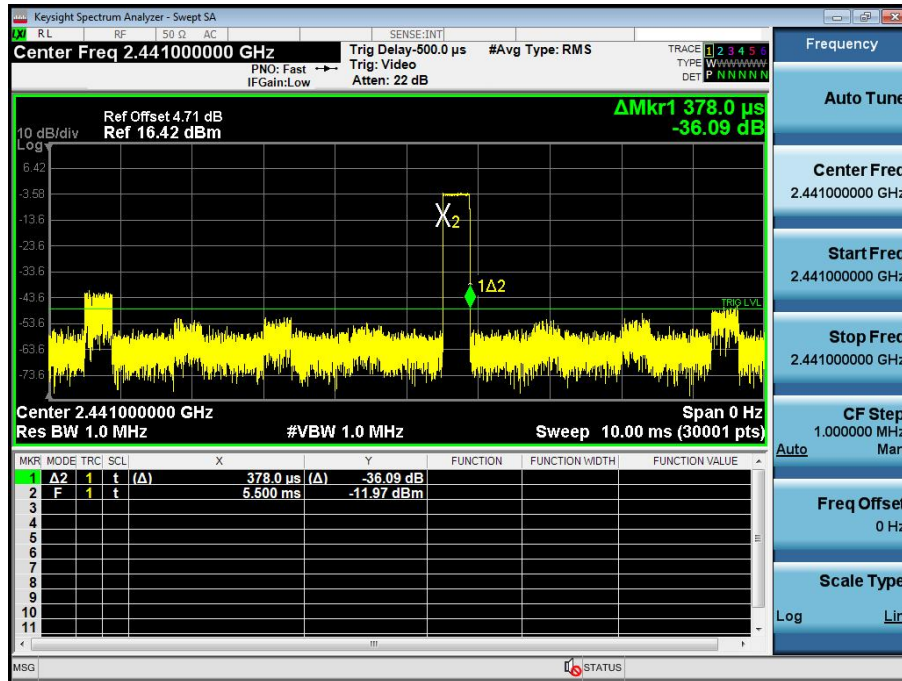
DH3 2441MHz



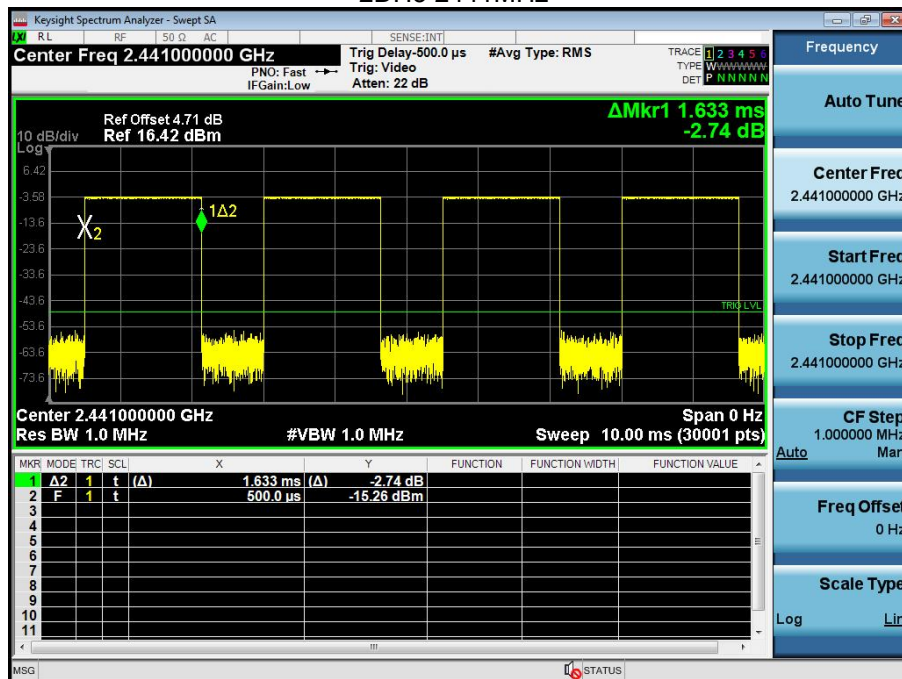
DH5 2441MHz



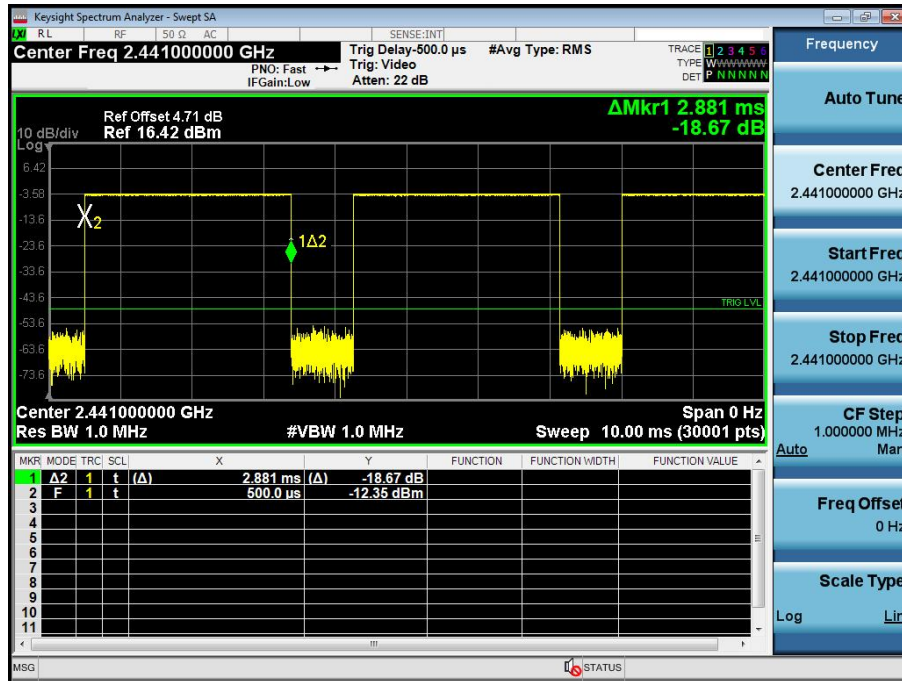
2DH1 2441MHz



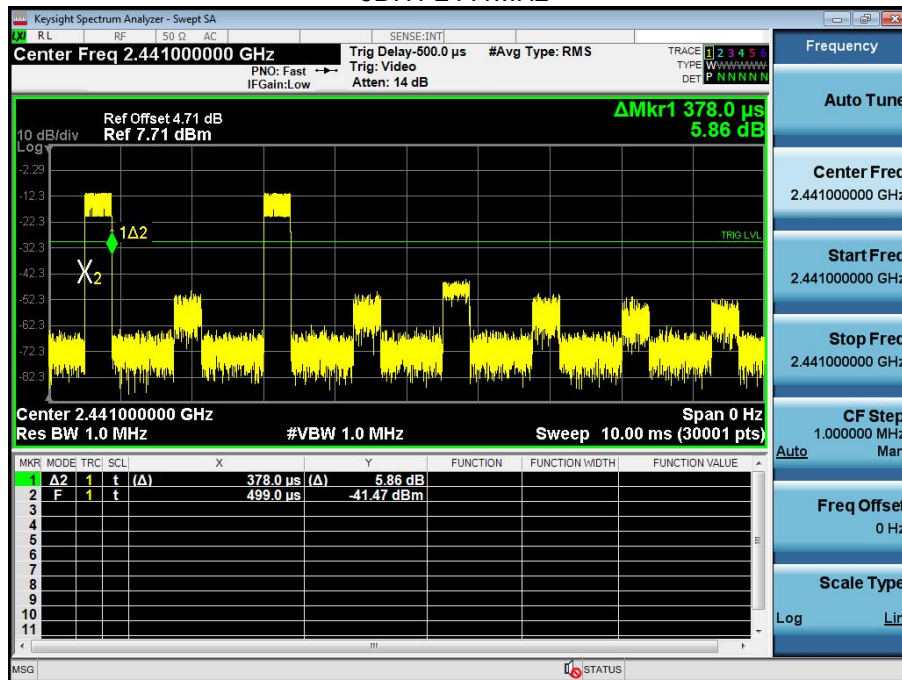
2DH3 2441MHz



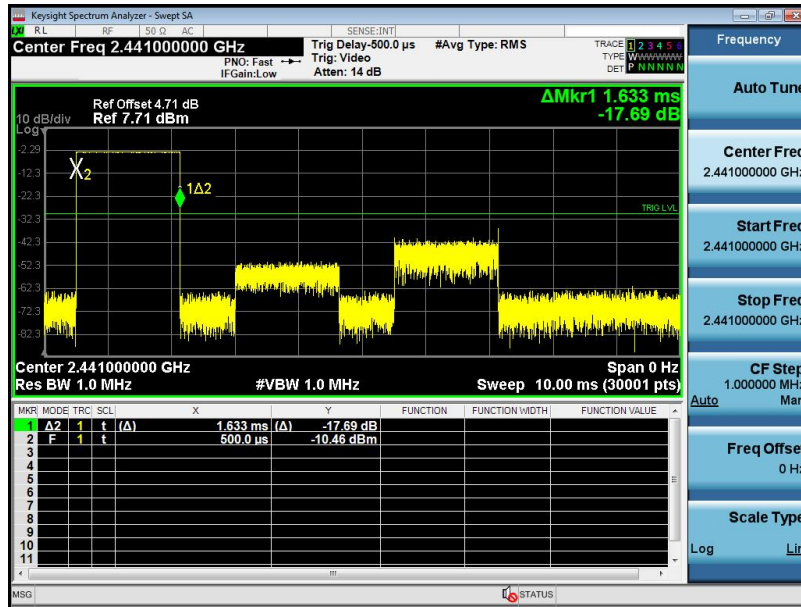
2DH5 2441MHz



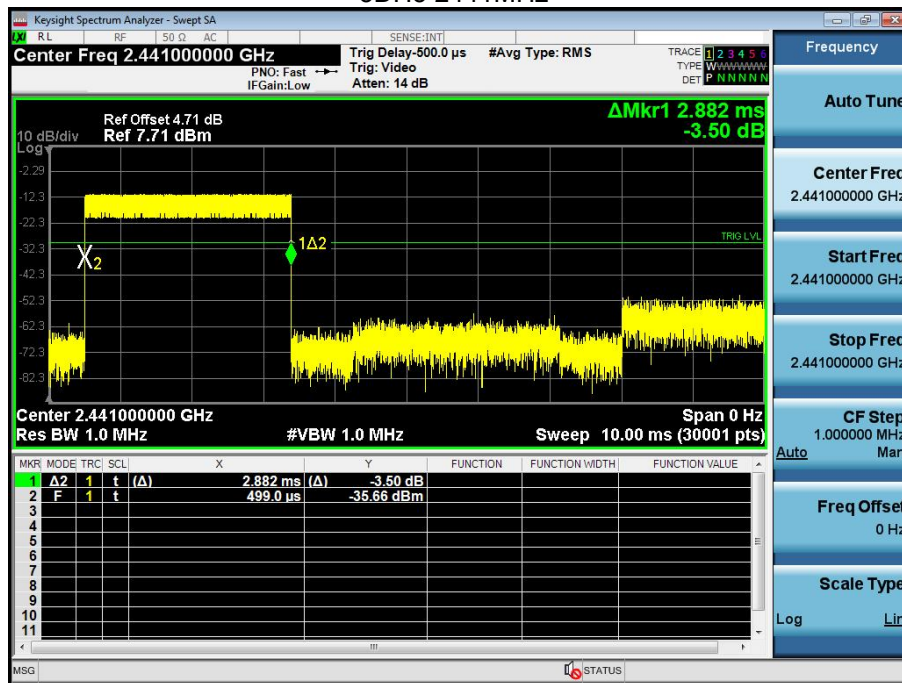
3DH1 2441MHz



3DH3 2441MHz



3DH5 2441MHz

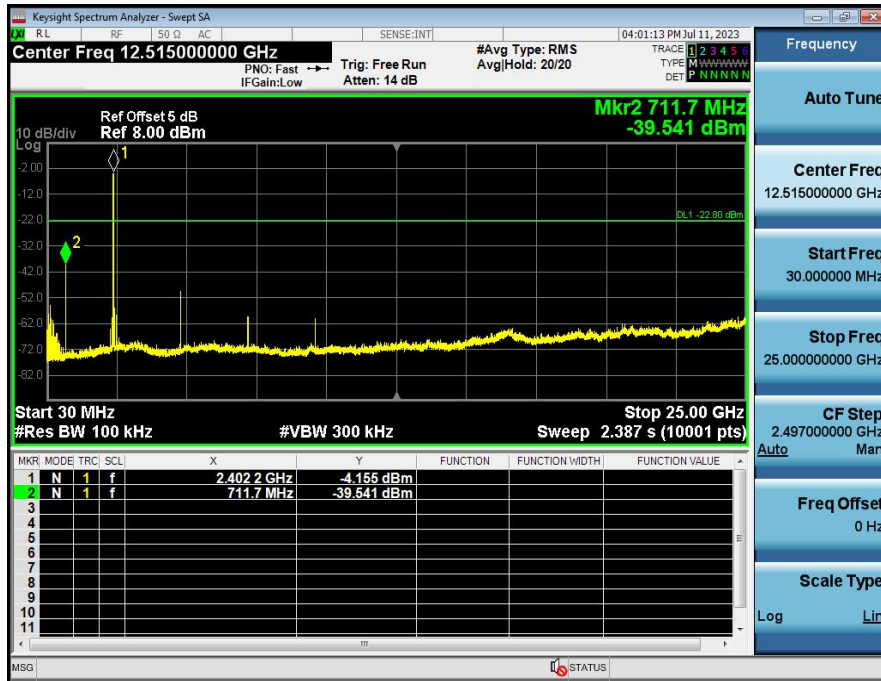


A.6 Conducted Spurious Emissions & Authorized-band band-edge

GFSK mode:

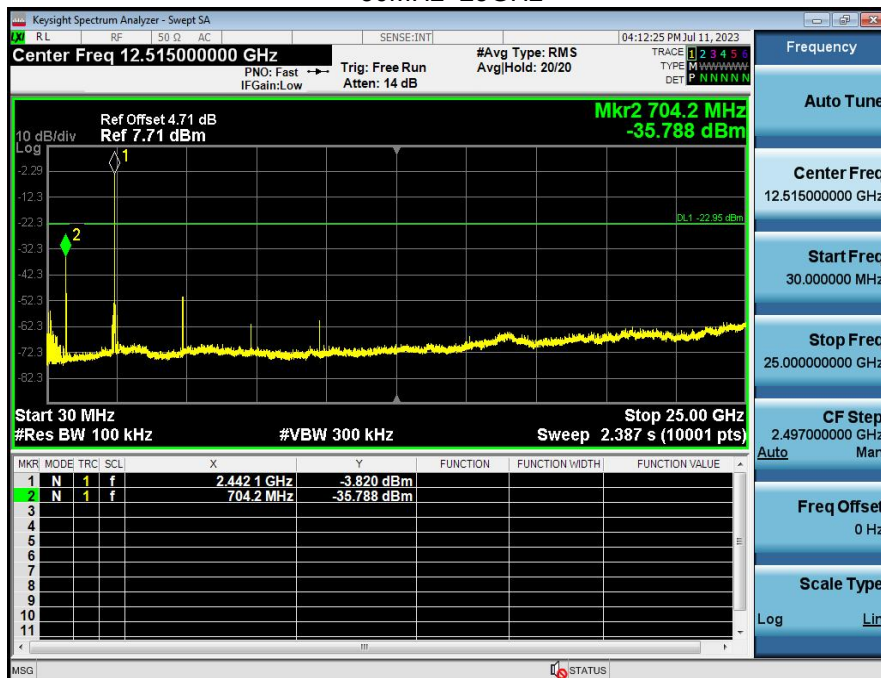
Test channel:	Lowest channel
---------------	----------------

30MHz~25GHz



Test channel:	Middle channel
---------------	----------------

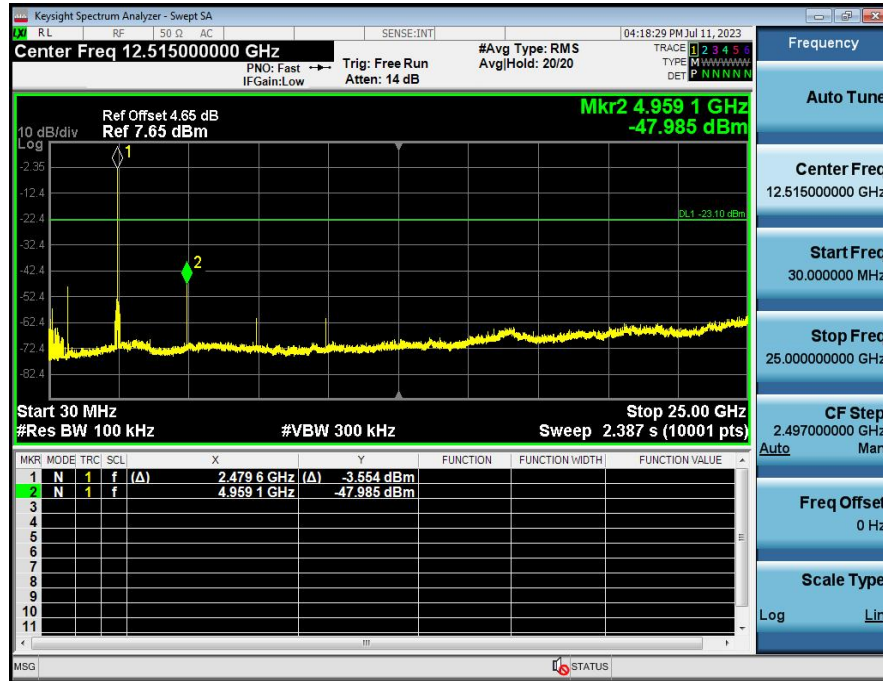
30MHz~25GHz



Test channel:

Highest channel

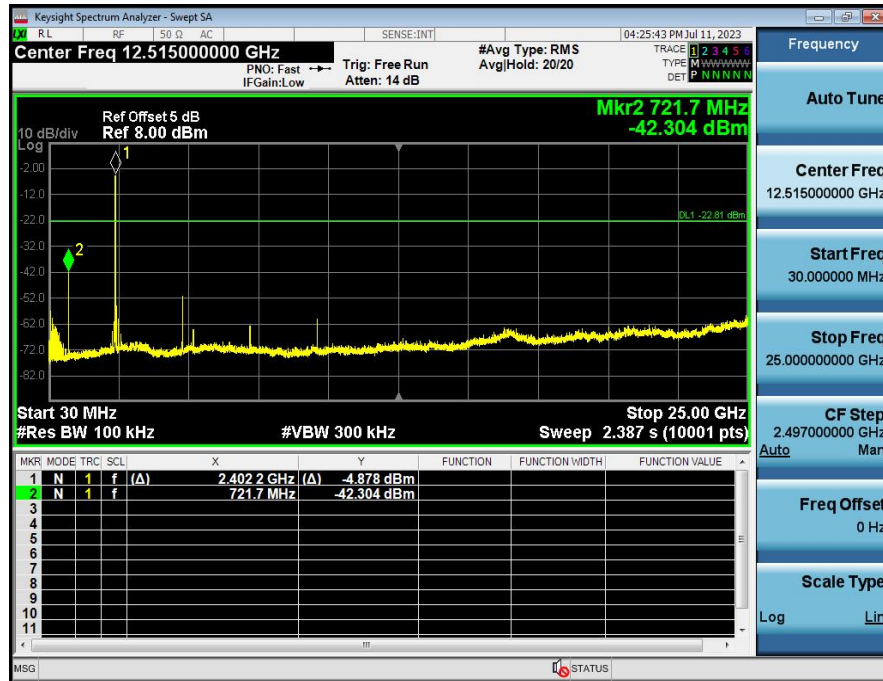
30MHz~25GHz



$\pi/4$ -DQPSK mode:

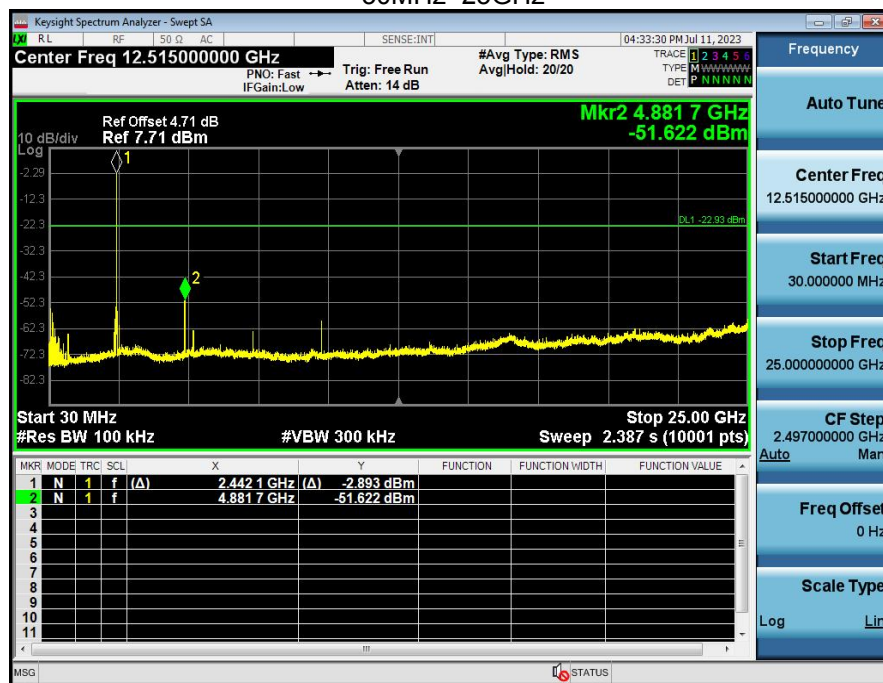
Test channel:	Lowest channel
---------------	----------------

30MHz~25GHz



Test channel:	Middle channel
---------------	----------------

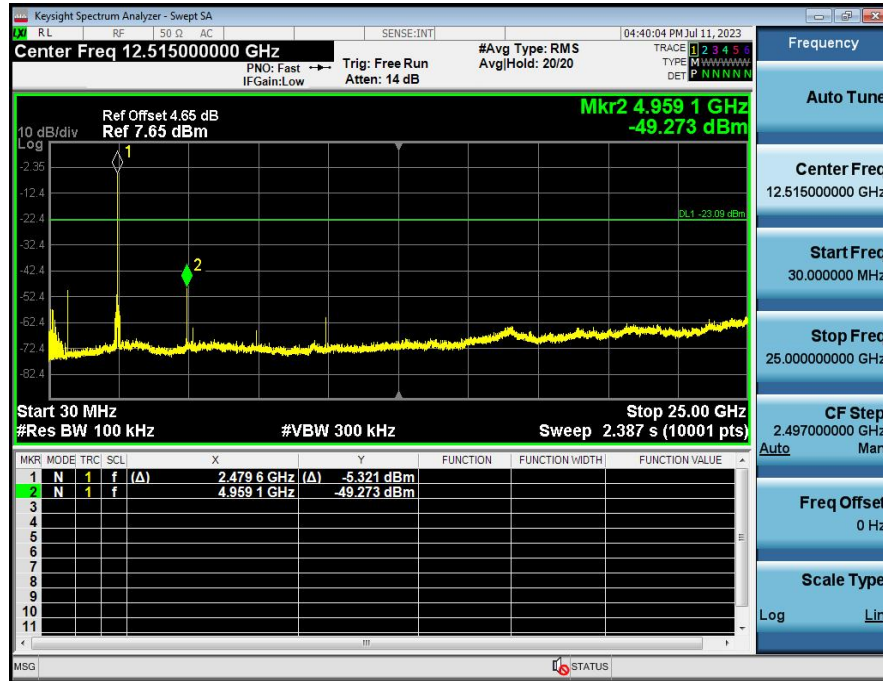
30MHz~25GHz



Test channel:

Highest channel

30MHz~25GHz

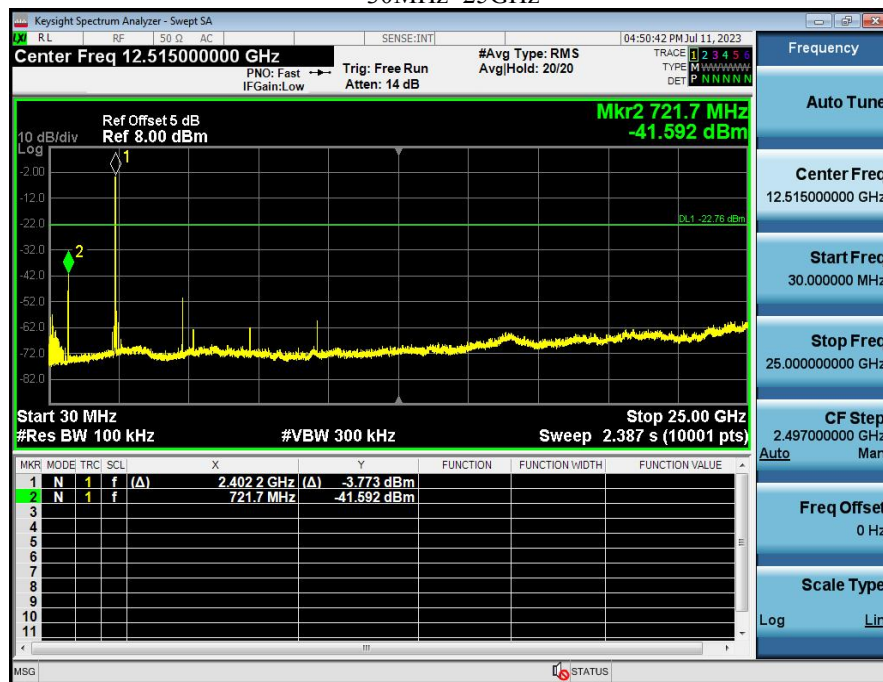


8-DPSK mode:

Test channel:

Lowest channel

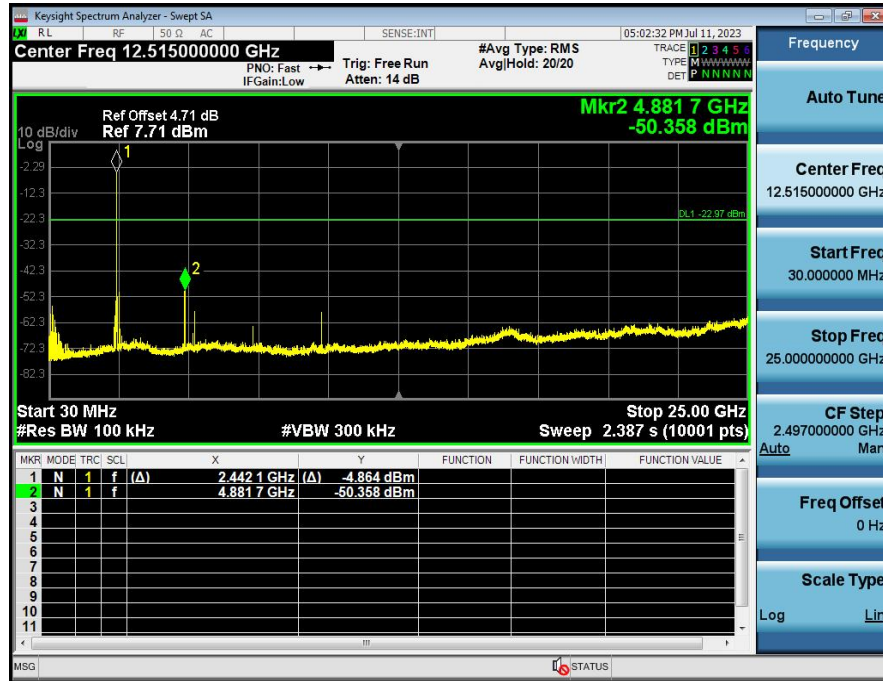
30MHz~25GHz



Test channel:

Middle channel

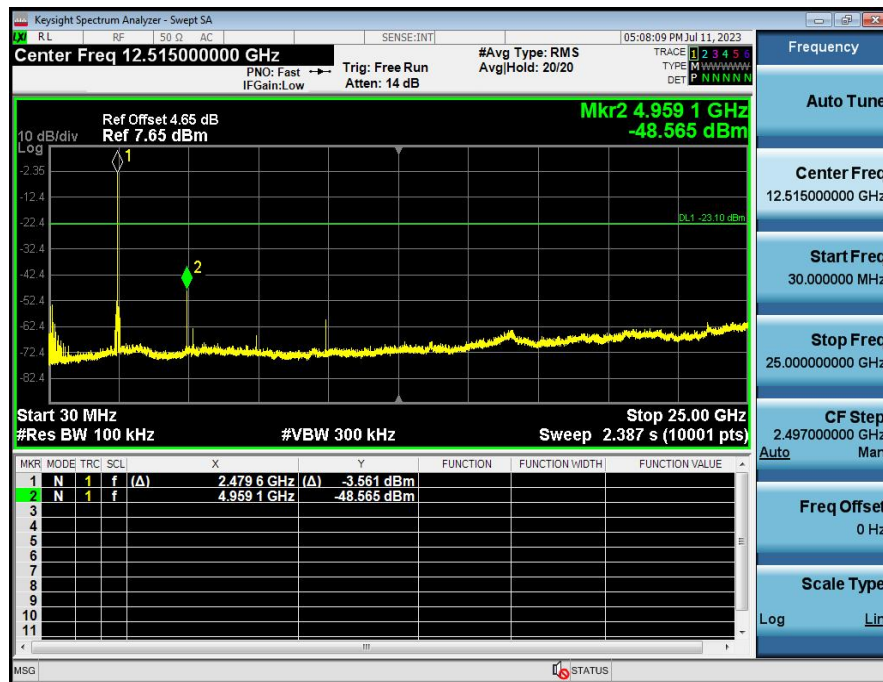
30MHz~25Hz



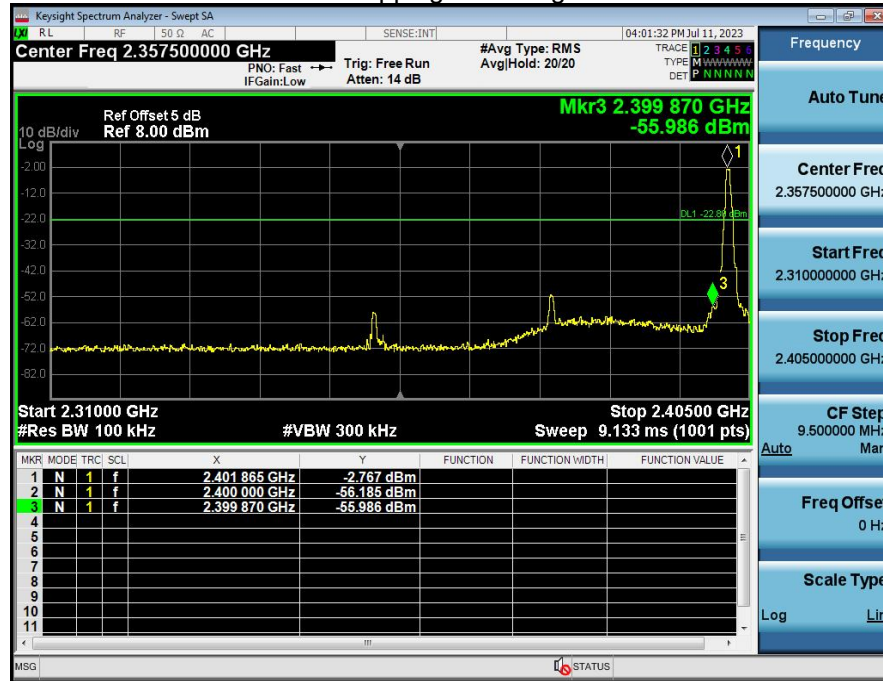
Test channel:

Highest channel

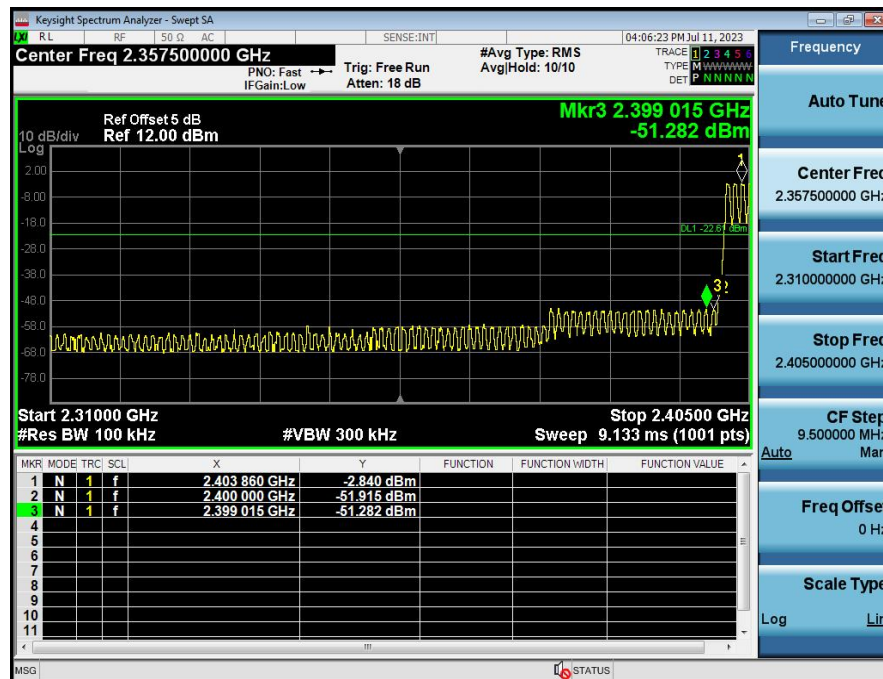
30MHz~25GHz



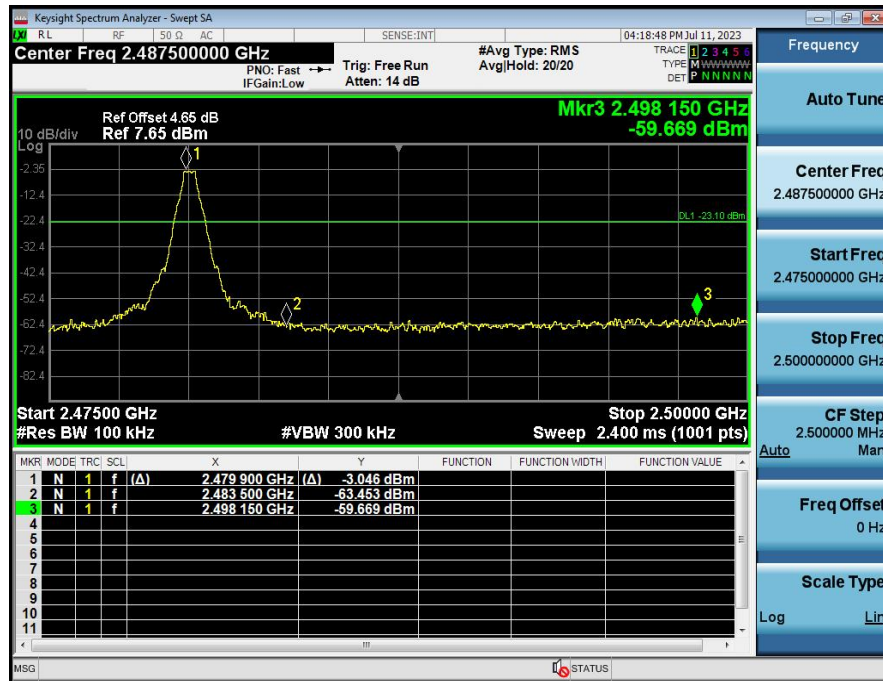
GFSK No-hopping Band edge-left side



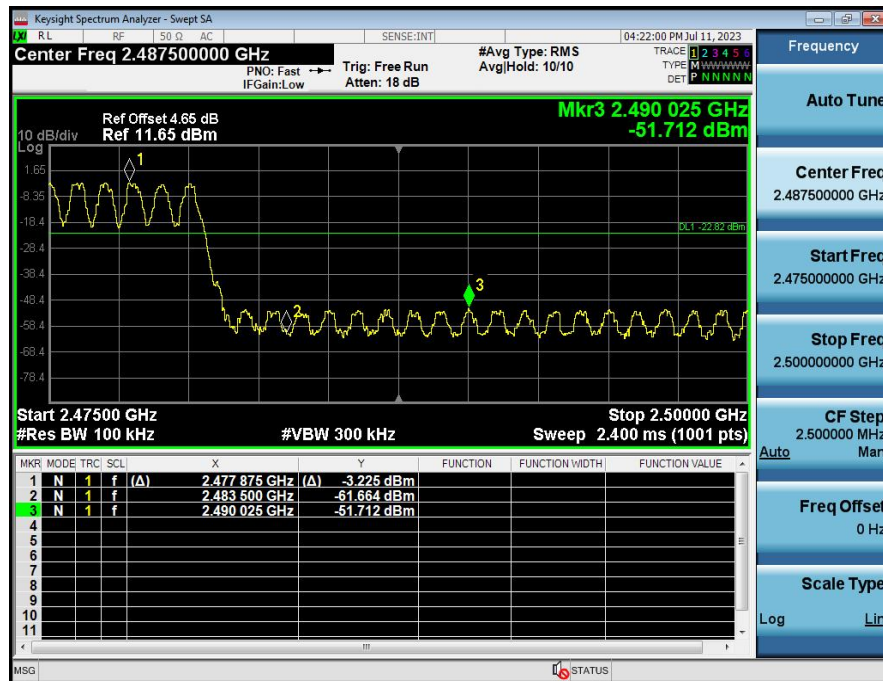
GFSK Hopping Band edge-left side

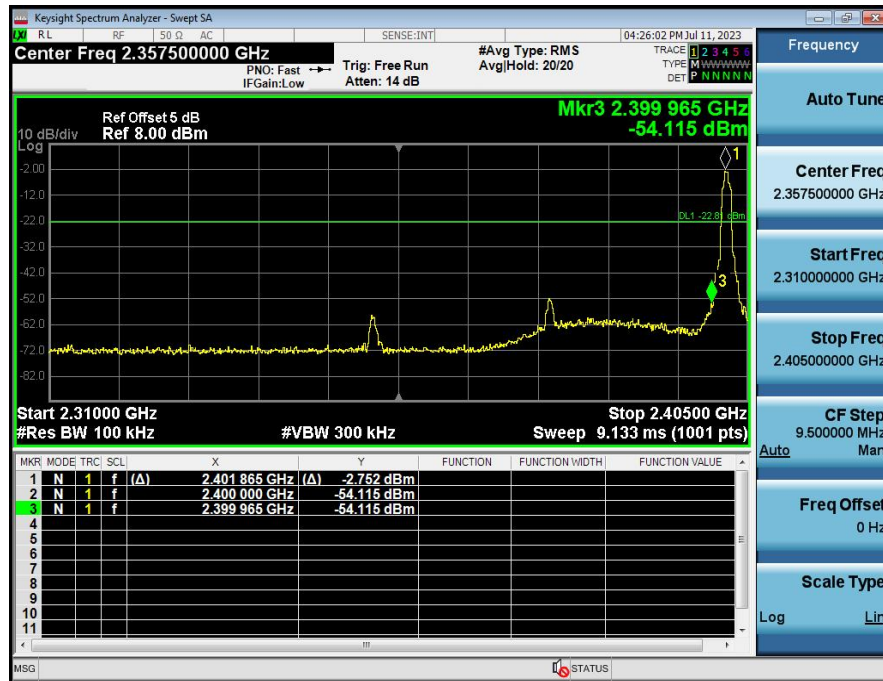
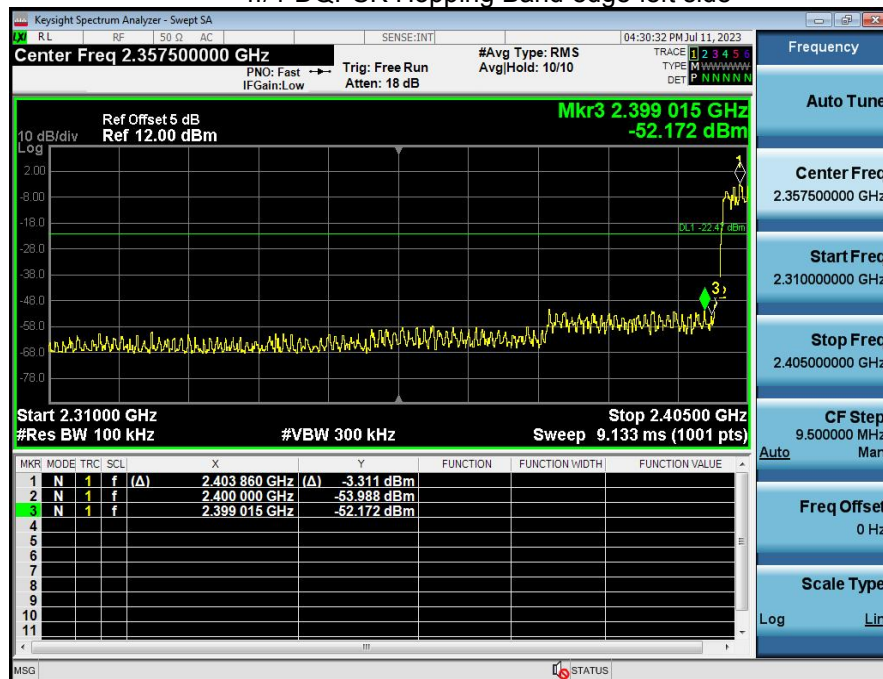


GFSK No-hopping Band edge-right side

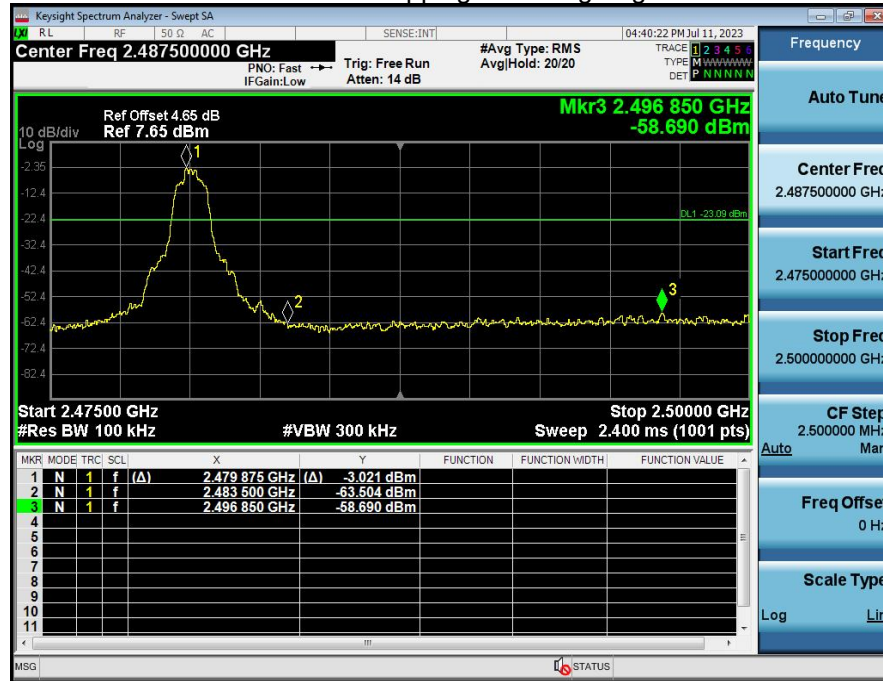


GFSK Hopping Band edge-right side

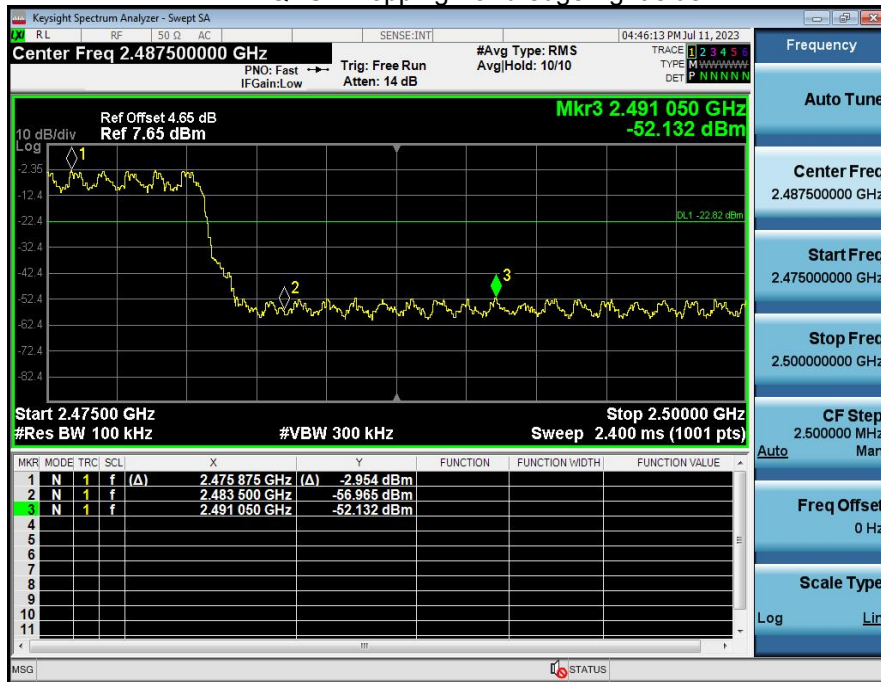


$\pi/4$ -DQPSK No-hopping Band edge-left side

 $\pi/4$ -DQPSK Hopping Band edge-left side


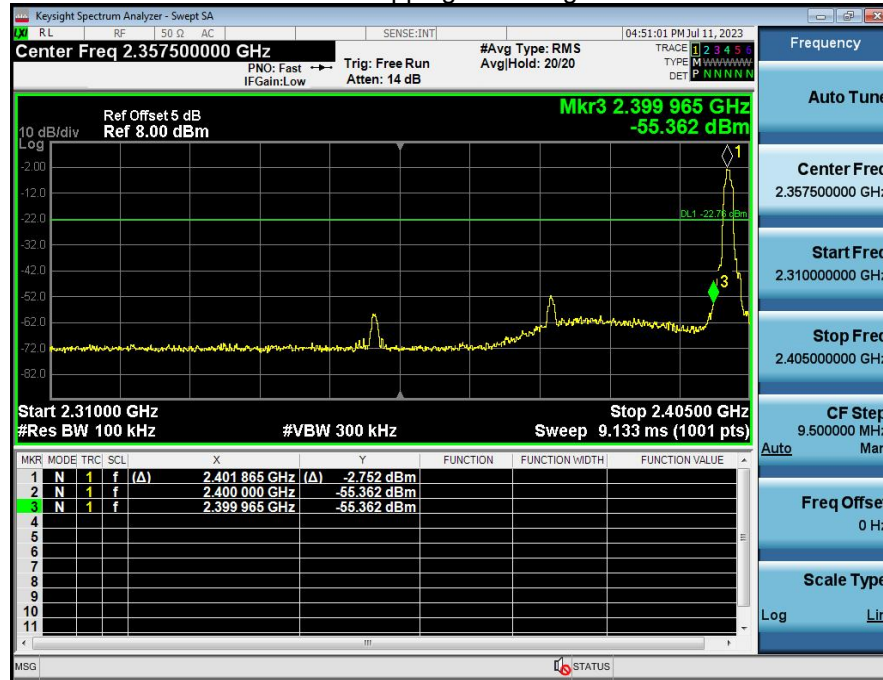
$\pi/4$ -DQPSK No-hopping Band edge-right side



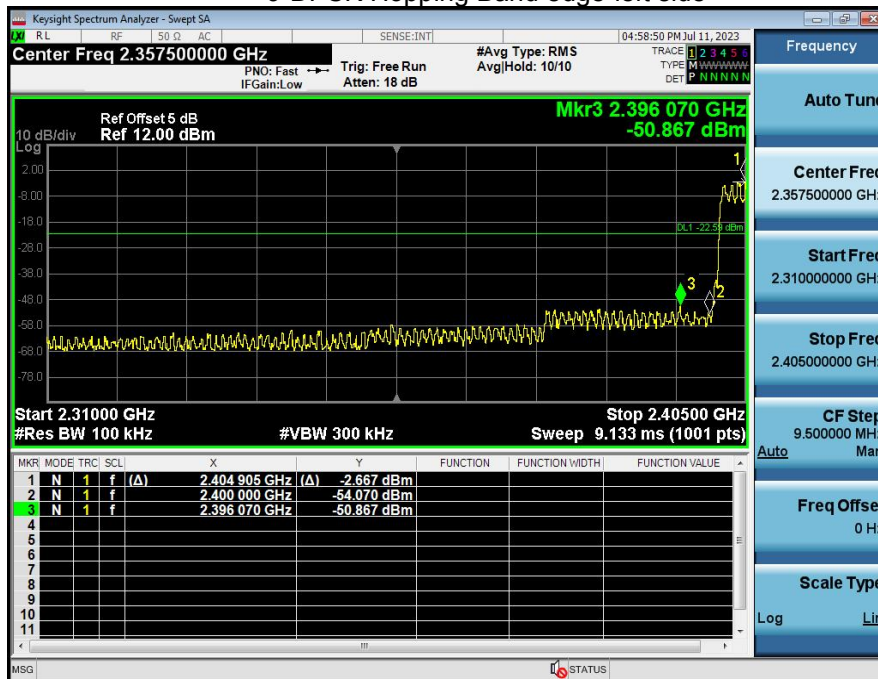
$\pi/4$ -DQPSK Hopping Band edge-right side



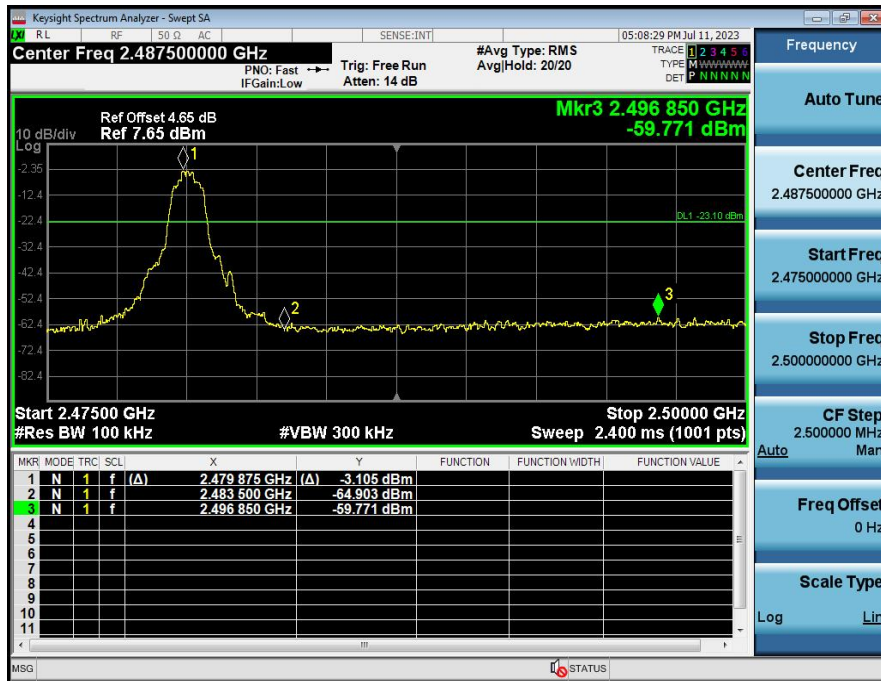
8-DPSK No-hopping Band edge-left side



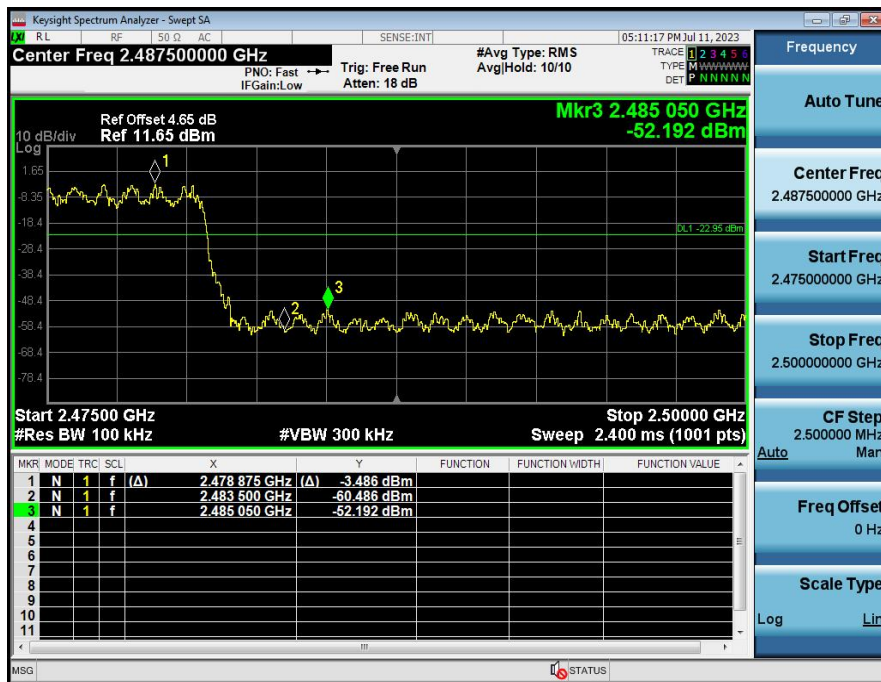
9-DPSK Hopping Band edge-left side



8-DPSK No-hopping Band edge-right side



8-DPSK Hopping Band edge-right side

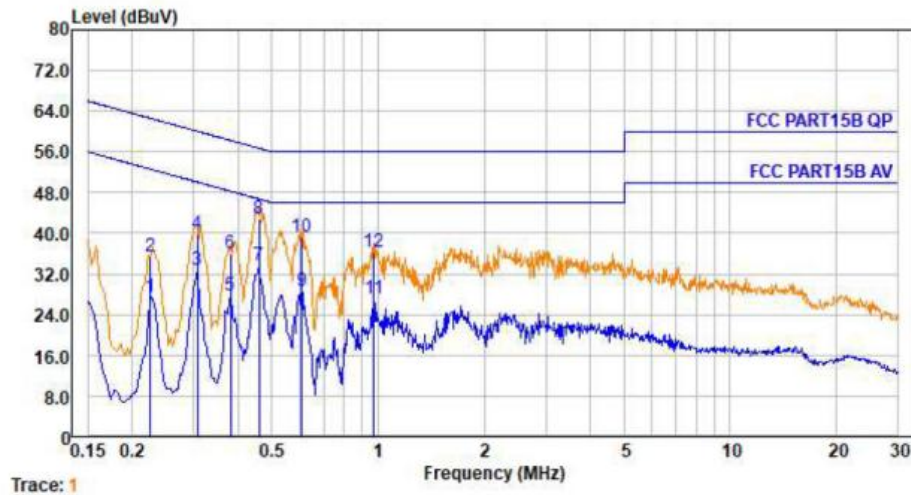


A.7 Conducted Emission

Note 1: 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.

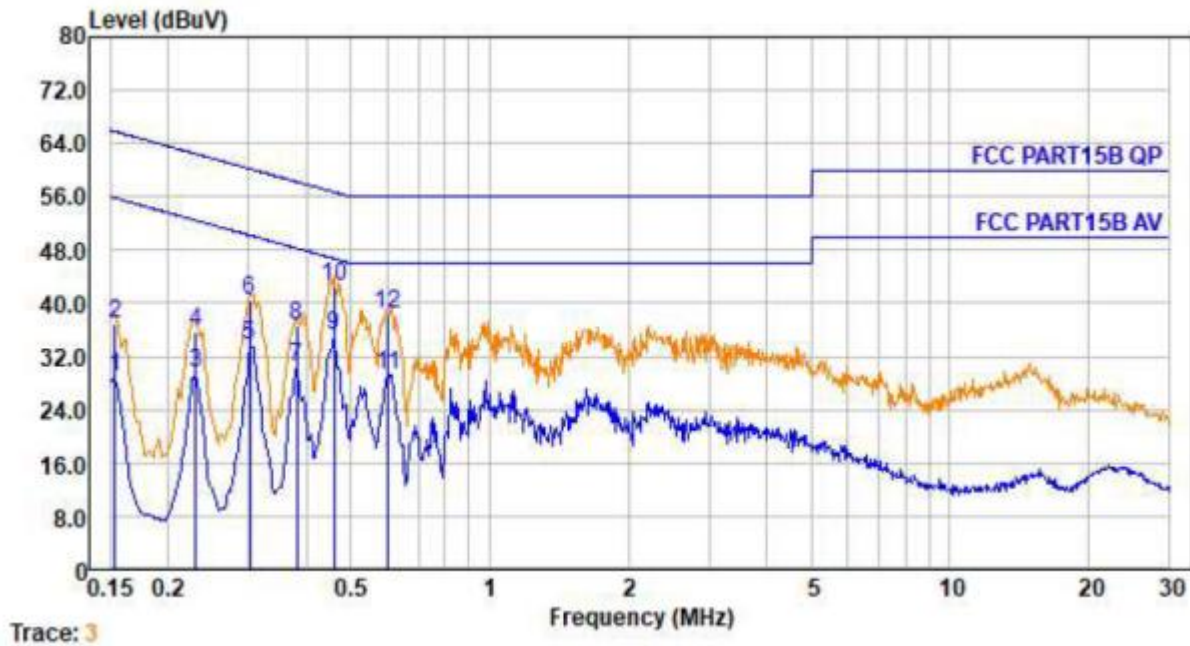
Test Data and plots.

PHASE L



No.	Freq MHz	Cable Loss dB	LISN Factor dB/m	Receiver Reading dBuV	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	0.226	0.01	9.55	17.83	27.39	52.61	-25.22	Average
2.	0.226	0.01	9.55	25.83	35.39	62.61	-27.22	QP
3.	0.307	0.01	9.56	23.19	32.76	50.06	-17.30	Average
4.	0.307	0.01	9.56	30.18	39.75	60.06	-20.31	QP
5.	0.381	0.01	9.56	18.32	27.89	48.25	-20.36	Average
6.	0.381	0.01	9.56	26.48	36.05	58.25	-22.20	QP
7.	0.459	0.01	9.57	24.10	33.68	46.71	-13.03	Average
8.	0.459	0.01	9.57	33.29	42.87	56.71	-13.84	QP
9.	0.608	0.02	9.58	18.96	28.56	46.00	-17.44	Average
10.	0.608	0.02	9.58	29.54	39.14	56.00	-16.86	QP
11.	0.974	0.02	9.58	17.54	27.14	46.00	-18.86	Average
12.	0.974	0.02	9.58	26.67	36.27	56.00	-19.73	QP

PHASE N



No.	Freq MHz	Cable Loss dB	LISN Factor dB/m	Receiver Reading dBuV	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	0.154	0.00	9.53	19.27	28.80	55.78	-26.98	Average
2.	0.154	0.00	9.53	27.27	36.80	65.78	-28.98	QP
3.	0.230	0.01	9.55	19.91	29.47	52.44	-22.97	Average
4.	0.230	0.01	9.55	26.23	35.79	62.44	-26.65	QP
5.	0.302	0.01	9.56	24.05	33.62	50.19	-16.57	Average
6.	0.302	0.01	9.56	30.85	40.42	60.19	-19.77	QP
7.	0.381	0.01	9.57	20.96	30.54	48.25	-17.71	Average
8.	0.381	0.01	9.57	26.91	36.49	58.25	-21.76	QP
9.	0.459	0.01	9.58	25.65	35.24	46.71	-11.47	Average
10.	0.459	0.01	9.58	32.98	42.57	56.71	-14.14	QP
11.	0.601	0.02	9.58	19.60	29.20	46.00	-16.80	Average
12.	0.601	0.02	9.58	28.68	38.28	56.00	-17.72	QP

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.

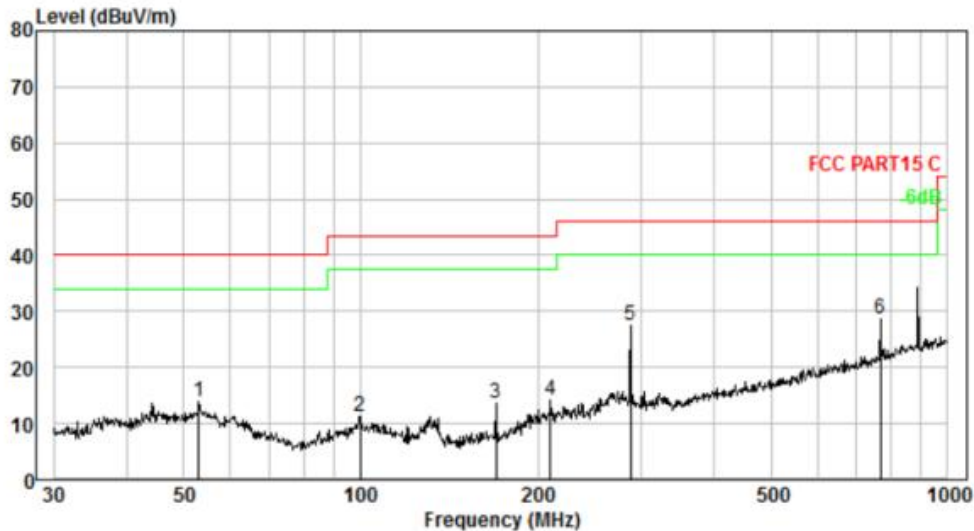
Note 3: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and DH5-Hopping mode is the worst.

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.

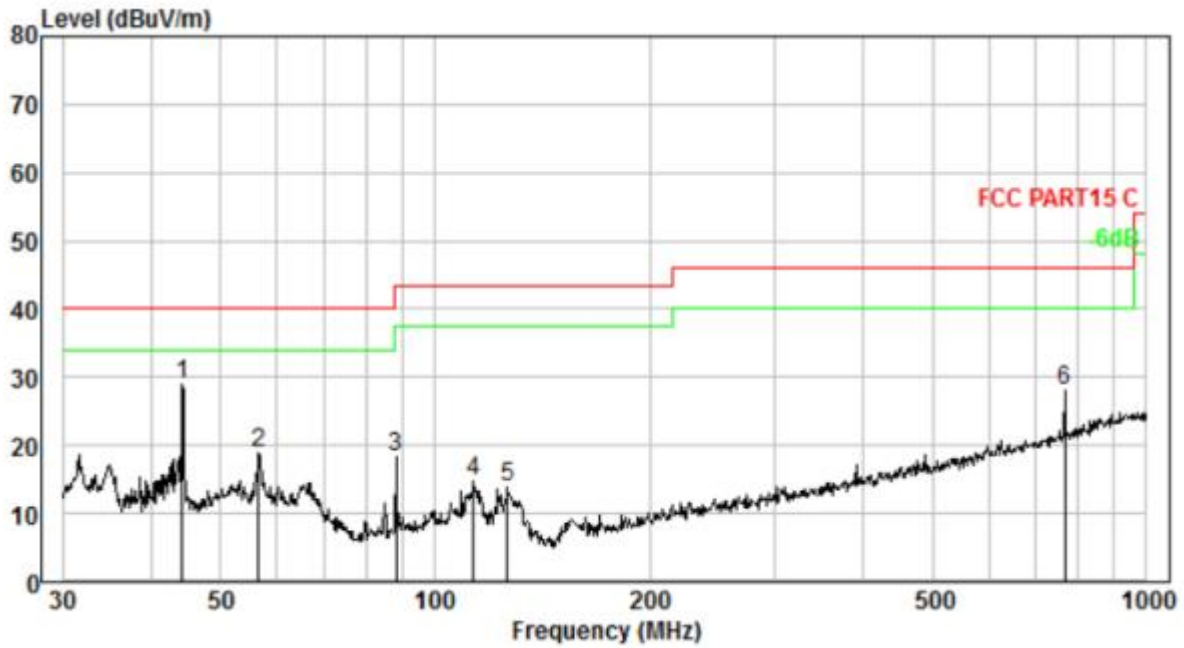
(30 MHz ~ 1GHz Harmonic)

30 MHz to 1 GHz, ANT Vertical



No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBμV	Preamp Gain dB	Emission Level dBμV/m	Limit dBμV/m	Over Limit dB	Remark
1	52.945	0.20	12.95	28.93	28.33	13.75	40.00	-26.25	QP
2	99.878	0.40	10.98	28.35	28.41	11.32	43.50	-32.18	QP
3	170.195	0.60	8.78	32.52	28.44	13.46	43.50	-30.04	QP
4	210.048	0.64	11.12	30.88	28.44	14.20	43.50	-29.30	QP
5	287.990	0.87	13.08	41.86	28.43	27.38	46.00	-18.62	QP
6	768.748	1.35	20.96	33.98	27.79	28.50	46.00	-17.50	QP

30 MHz to 1 GHz, ANT Horizontal



No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBμV	Preamp Gain dB	Emission Level dBμV/m	Limit dBμV/m	Over Limit dB	Remark
1	44.120	0.09	12.65	44.49	28.28	28.95	40.00	-11.05	QP
2	56.593	0.24	12.51	34.34	28.34	18.75	40.00	-21.25	QP
3	88.342	0.41	8.84	37.41	28.41	18.25	43.50	-25.25	QP
4	113.316	0.42	9.60	33.25	28.42	14.85	43.50	-28.65	QP
5	126.772	0.46	8.63	33.32	28.43	13.98	43.50	-29.52	QP
6	768.748	1.35	20.96	33.57	27.79	28.09	46.00	-17.91	QP

(1 GHz ~ 10th Harmonic)

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

GFSK

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:2402MHz									
V	4804.00	50.97	30.55	5.77	24.66	50.85	74.00	-23.15	Pk
V	4804.00	39.64	30.55	5.77	24.66	39.52	54.00	-14.48	AV
V	7206.00	48.02	30.33	6.32	24.55	48.56	74.00	-25.44	Pk
V	7206.00	41.11	30.33	6.32	24.55	41.65	54.00	-12.35	AV
V	9608.00	48.55	30.85	7.45	24.69	49.84	74.00	-24.16	Pk
V	9608.00	41.42	30.85	7.45	24.69	42.71	54.00	-11.29	AV
V	12010.00	48.77	31.02	8.99	25.57	52.31	74.00	-21.69	Pk
V	12010.00	39.60	31.02	8.99	25.57	43.14	54.00	-10.86	AV
H	4804.00	50.41	30.55	5.77	24.66	50.29	74.00	-23.71	Pk
H	4804.00	40.78	30.55	5.77	24.66	40.66	54.00	-13.34	AV
H	7206.00	50.71	30.33	6.32	24.55	51.25	74.00	-22.75	Pk
H	7206.00	41.52	30.33	6.32	24.55	42.06	54.00	-11.94	AV
H	9608.00	49.46	30.85	7.45	24.69	50.75	74.00	-23.25	Pk
H	9608.00	40.12	30.85	7.45	24.69	41.41	54.00	-12.59	AV
H	12010.00	50.37	31.02	8.99	25.57	53.91	74.00	-20.09	Pk
H	12010.00	40.48	31.02	8.99	25.57	44.02	54.00	-9.98	AV

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:2441MHz									
V	4882.00	48.63	30.55	5.77	24.66	48.51	74.00	-25.49	Pk
V	4882.00	38.93	30.55	5.77	24.66	38.81	54.00	-15.19	AV
V	7323.00	47.87	30.33	6.32	24.55	48.41	74.00	-25.59	Pk
V	7323.00	40.63	30.33	6.32	24.55	41.17	54.00	-12.83	AV
V	9764.00	46.92	30.85	7.45	24.69	48.21	74.00	-25.79	Pk
V	9764.00	39.11	30.85	7.45	24.69	40.40	54.00	-13.60	AV
V	12205.00	47.39	31.02	8.99	25.57	50.93	74.00	-23.07	Pk
V	12205.00	37.88	31.02	8.99	25.57	41.42	54.00	-12.58	AV
H	4882.00	49.20	30.55	5.77	24.66	49.08	74.00	-24.92	Pk
H	4882.00	39.63	30.55	5.77	24.66	39.51	54.00	-14.49	AV
H	7323.00	48.92	30.33	6.32	24.55	49.46	74.00	-24.54	Pk
H	7323.00	39.15	30.33	6.32	24.55	39.69	54.00	-14.31	AV
H	9764.00	49.53	30.85	7.45	24.69	50.82	74.00	-23.18	Pk
H	9764.00	40.22	30.85	7.45	24.69	41.51	54.00	-12.49	AV
H	12205.00	48.41	31.02	8.99	25.57	51.95	74.00	-22.05	Pk
H	12205.00	38.42	31.02	8.99	25.57	41.96	54.00	-12.04	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2480MHz									
V	4960.00	49.90	30.55	5.77	24.66	49.78	74.00	-24.22	Pk
V	4960.00	39.09	30.55	5.77	24.66	38.97	54.00	-15.03	AV
V	7440.00	47.42	30.33	6.32	24.55	47.96	74.00	-26.04	Pk
V	7440.00	40.94	30.33	6.32	24.55	41.48	54.00	-12.52	AV
V	9920.00	46.54	30.85	7.45	24.69	47.83	74.00	-26.17	Pk
V	9920.00	39.47	30.85	7.45	24.69	40.76	54.00	-13.24	AV
V	12400.00	47.49	31.02	8.99	25.57	51.03	74.00	-22.97	Pk
V	12400.00	37.73	31.02	8.99	25.57	41.27	54.00	-12.73	AV
H	4960.00	49.16	30.55	5.77	24.66	49.04	74.00	-24.96	Pk
H	4960.00	39.97	30.55	5.77	24.66	39.85	54.00	-14.15	AV
H	7440.00	48.81	30.33	6.32	24.55	49.35	74.00	-24.65	Pk
H	7440.00	40.12	30.33	6.32	24.55	40.66	54.00	-13.34	AV
H	9920.00	48.42	30.85	7.45	24.69	49.71	74.00	-24.29	Pk
H	9920.00	40.22	30.85	7.45	24.69	41.51	54.00	-12.49	AV
H	12400.00	49.55	31.02	8.99	25.57	53.09	74.00	-20.91	Pk
H	12400.00	38.77	31.02	8.99	25.57	42.31	54.00	-11.69	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The test data shows only the worst case GFSK mode

A.9 Band Edge (Restricted-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.

	Polar (H/V)	Frequenc y (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV /m)	Detec tor Type	Result
GFSK	Low Channel: 2402MHz									
	H	2390.00	54.21	30.22	4.85	23.98	52.82	74.00	PK	PASS
	H	2390.00	46.64	30.22	4.85	23.98	45.25	54.00	AV	PASS
	H	2400.00	58.43	30.22	4.85	23.98	57.04	74.00	PK	PASS
	H	2400.00	47.63	30.22	4.85	23.98	46.24	54.00	AV	PASS
	V	2390.00	53.32	30.22	4.85	23.98	51.93	74.00	PK	PASS
	V	2390.00	46.23	30.22	4.85	23.98	44.84	54.00	AV	PASS
	V	2400.00	57.07	30.22	4.85	23.98	55.68	74.00	PK	PASS
	V	2400.00	44.82	30.22	4.85	23.98	43.43	54.00	AV	PASS
	High Channel: 2480MHz									
	H	2483.50	54.87	30.22	4.85	23.98	53.48	74.00	PK	PASS
	H	2483.50	46.37	30.22	4.85	23.98	44.98	54.00	AV	PASS
	H	2500.00	56.28	30.22	4.85	23.98	54.89	74.00	PK	PASS
	H	2500.00	48.79	30.22	4.85	23.98	47.40	54.00	AV	PASS
	V	2483.50	53.48	30.22	4.85	23.98	52.09	74.00	PK	PASS
	V	2483.50	47.36	30.22	4.85	23.98	45.97	54.00	AV	PASS
	V	2500.00	54.60	30.22	4.85	23.98	53.21	74.00	PK	PASS
	V	2500.00	45.15	30.22	4.85	23.98	43.76	54.00	AV	PASS
π/4- DQPSK	Low Channel: 2402MHz									
	H	2390.00	55.99	30.22	4.85	23.98	54.60	74.00	PK	PASS
	H	2390.00	47.61	30.22	4.85	23.98	46.22	54.00	AV	PASS
	H	2400.00	57.39	30.22	4.85	23.98	56.00	74.00	PK	PASS
	H	2400.00	45.13	30.22	4.85	23.98	43.74	54.00	AV	PASS
	V	2390.00	56.59	30.22	4.85	23.98	55.20	74.00	PK	PASS
	V	2390.00	47.30	30.22	4.85	23.98	45.91	54.00	AV	PASS
	V	2400.00	55.55	30.22	4.85	23.98	54.16	74.00	PK	PASS
	V	2400.00	45.45	30.22	4.85	23.98	44.06	54.00	AV	PASS
	High Channel: 2480MHz									
	H	2483.50	51.72	30.22	4.85	23.98	50.33	74.00	PK	PASS
	H	2483.50	44.34	30.22	4.85	23.98	42.95	54.00	AV	PASS
	H	2500.00	57.66	30.22	4.85	23.98	56.27	74.00	PK	PASS
	H	2500.00	43.88	30.22	4.85	23.98	42.49	54.00	AV	PASS
	V	2483.50	54.44	30.22	4.85	23.98	53.05	74.00	PK	PASS
	V	2483.50	47.82	30.22	4.85	23.98	46.43	54.00	AV	PASS
	V	2500.00	52.75	30.22	4.85	23.98	51.36	74.00	PK	PASS

	V	2500.00	46.59	30.22	4.85	23.98	45.20	54.00	AV	PASS
8-DPSK	Low Channel: 2402MHz									
	H	2390.00	54.61	30.22	4.85	23.98	53.22	74.00	PK	PASS
	H	2390.00	47.54	30.22	4.85	23.98	46.15	54.00	AV	PASS
	H	2400.00	57.28	30.22	4.85	23.98	55.89	74.00	PK	PASS
	H	2400.00	45.25	30.22	4.85	23.98	43.86	54.00	AV	PASS
	V	2390.00	55.44	30.22	4.85	23.98	54.05	74.00	PK	PASS
	V	2390.00	48.41	30.22	4.85	23.98	47.02	54.00	AV	PASS
	V	2400.00	58.22	30.22	4.85	23.98	56.83	74.00	PK	PASS
	V	2400.00	47.83	30.22	4.85	23.98	46.44	54.00	AV	PASS
	High Channel: 2480MHz									
	H	2483.50	54.92	30.22	4.85	23.98	53.53	74.00	PK	PASS
	H	2483.50	47.23	30.22	4.85	23.98	45.84	54.00	AV	PASS
	H	2500.00	57.14	30.22	4.85	23.98	55.75	74.00	PK	PASS
	H	2500.00	45.04	30.22	4.85	23.98	43.65	54.00	AV	PASS
	V	2483.50	55.19	30.22	4.85	23.98	53.80	74.00	PK	PASS
	V	2483.50	48.76	30.22	4.85	23.98	47.37	54.00	AV	PASS
	V	2500.00	58.31	30.22	4.85	23.98	56.92	74.00	PK	PASS
	V	2500.00	47.70	30.22	4.85	23.98	46.31	54.00	AV	PASS

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit



ANNEX B TEST SETUP PHOTOS

Please refer to the attachment.

ANNEX C EUT EXTERNAL PHOTOS

Please refer to the attachment.

ANNEX D EUT INTERNAL PHOTOS

Please refer to the attachment.



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