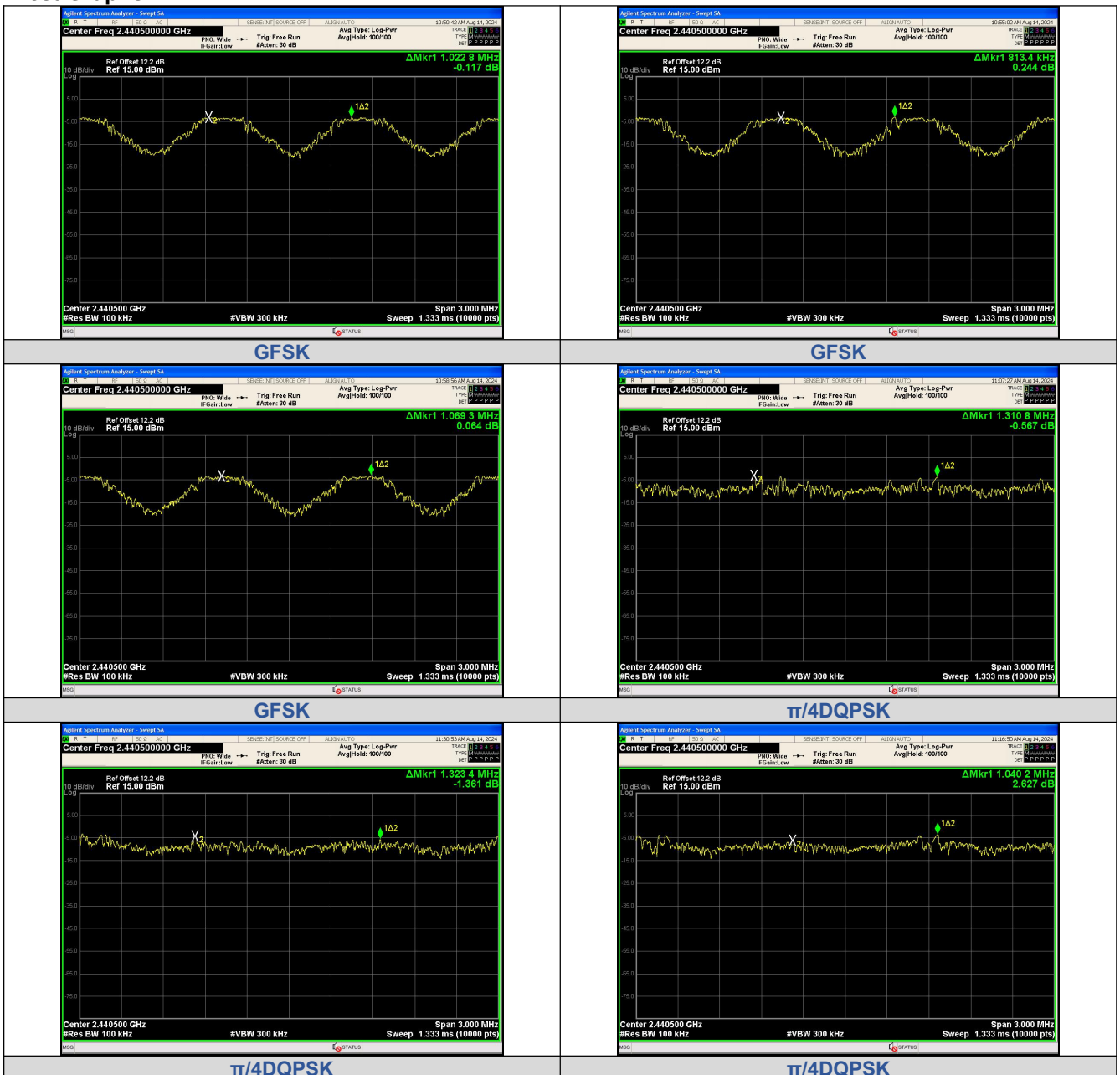


APPENDIX VII. Carrier Frequencies Separation

Test Result

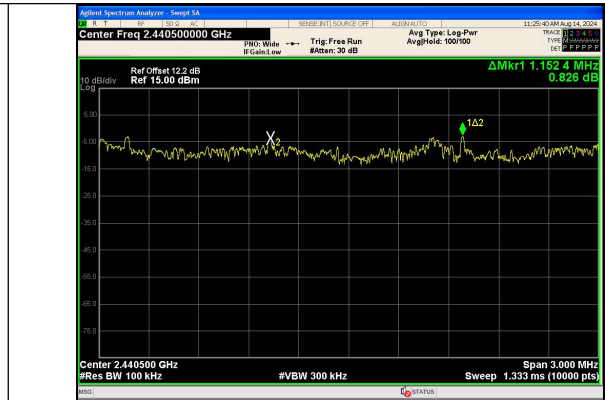
Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.9244	2440.9472	1.0228	0.691	PASS
GFSK	DH5	2440.0399	2440.8533	0.8134	0.697	PASS
GFSK	DH5	2440.0189	2441.0882	1.0693	0.693	PASS
$\pi/4$ DQPSK	2-DH5	2439.8467	2441.1575	1.3108	0.883	PASS
$\pi/4$ DQPSK	2-DH5	2439.8272	2441.1506	1.3234	0.891	PASS
$\pi/4$ DQPSK	2-DH5	2440.1215	2441.1617	1.0402	0.889	PASS
8DPSK	3-DH5	2439.8665	2440.8632	0.9967	0.865	PASS
8DPSK	3-DH5	2440.0291	2441.1815	1.1524	0.858	PASS
8DPSK	3-DH5	2440.0081	2441.0156	1.0075	0.859	PASS

Test Graphs





8DPSK



8DPSK



8DPSK

APPENDIX VIII. Conducted Out Of Band Emission

Test Result
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-50.816	-22.16	-28.656	PASS
			4803.76	-41.042	-22.16	-18.882	PASS
			7205.93	-55.491	-22.16	-33.331	PASS
			9608.11	-52.400	-22.16	-30.240	PASS
		39	4881.79	-41.781	-22.72	-19.061	PASS
			7323.30	-56.097	-22.72	-33.377	PASS
			9764.17	-52.520	-22.72	-29.800	PASS
		78	2483.50	-51.657	-23.4	-28.257	PASS
			4959.83	-43.830	-23.4	-20.430	PASS
			7440.03	-55.401	-23.4	-32.001	PASS
			9920.24	-52.284	-23.4	-28.884	PASS
		π /4DQPSK	2-DH5	0	2400.00	-50.654	-22.16
4803.76	-43.418				-22.16	-21.258	PASS
7205.93	-58.679				-22.16	-36.519	PASS
9608.11	-52.075				-22.16	-29.915	PASS
39	4881.79			-43.506	-22.77	-20.736	PASS
	7322.67			-57.691	-22.77	-34.921	PASS
	9764.17			-53.335	-22.77	-30.565	PASS
78	2483.50			-51.012	-23.39	-27.622	PASS
	4959.83			-45.270	-23.39	-21.880	PASS
	7440.66			-58.771	-23.39	-35.381	PASS
	9920.24			-51.276	-23.39	-27.886	PASS
8DPSK	3-DH5			0	2398.90	-50.580	-22.1
		2400.00	-51.512		-22.1	-29.412	PASS
		4804.40	-44.499		-22.1	-22.399	PASS
		7205.90	-58.543		-22.1	-36.443	PASS
		9608.10	-52.783		-22.1	-30.683	PASS
		39	4881.79	-42.503	-22.73	-19.773	PASS
			7323.30	-58.148	-22.73	-35.418	PASS
			9764.17	-52.473	-22.73	-29.743	PASS
		78	2483.50	-51.800	-23.37	-28.430	PASS
			4959.83	-46.398	-23.37	-23.028	PASS
			7439.41	-58.904	-23.37	-35.534	PASS
			9920.24	-51.785	-23.37	-28.415	PASS
			24971.3	-45.993	-23.37	-22.623	PASS

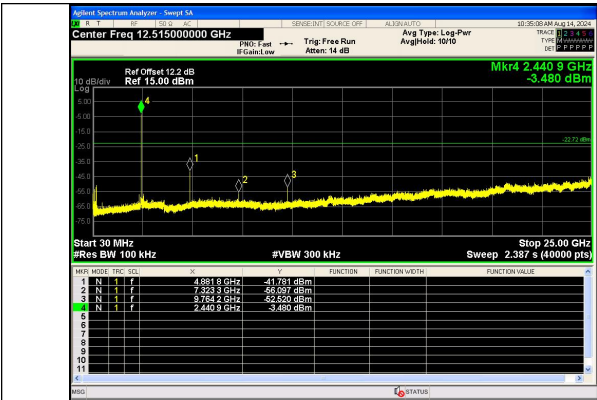
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2398.36	-49.553	-22.21	-27.343	PASS
			2400.00	-51.698	-22.21	-29.488	PASS
			2483.50	-50.751	-23.35	-27.401	PASS
			2395.15	-49.544	-22.05	-27.494	PASS
			2400.00	-51.401	-22.05	-29.351	PASS
			2483.50	-50.998	-23.5	-27.498	PASS
			2396.63	-49.299	-22.23	-27.069	PASS
			2400.00	-51.150	-22.23	-28.920	PASS
π /4DQPSK	2-DH5	Hopping	2483.50	-50.771	-23.37	-27.401	PASS
			2395.58	-49.334	-23.02	-26.314	PASS
			2400.00	-50.855	-23.02	-27.835	PASS
			2483.50	-50.935	-23.46	-27.475	PASS
			2396.77	-48.696	-22.19	-26.506	PASS
			2400.00	-50.928	-22.19	-28.738	PASS
			2483.50	-51.115	-23.38	-27.735	PASS
			2398.46	-49.510	-22.07	-27.440	PASS
8DPSK	3-DH5	Hopping	2400.00	-51.912	-22.07	-29.842	PASS
			2483.50	-50.490	-23.48	-27.010	PASS
			2396.08	-49.478	-22.18	-27.298	PASS

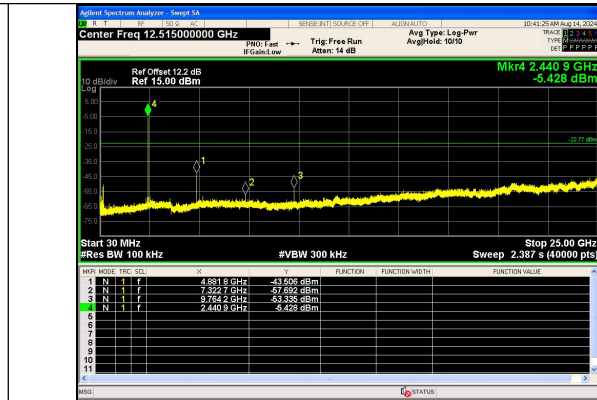
			2400.00	-51.513	-22.18	-29.333	PASS
			2483.50	-50.712	-23.39	-27.322	PASS
			2395.61	-49.963	-22.13	-27.833	PASS
			2400.00	-51.083	-22.13	-28.953	PASS
			2483.50	-49.557	-23.42	-26.137	PASS
			2396.98	-49.968	-22.91	-27.058	PASS
			2400.00	-52.240	-22.91	-29.330	PASS
			2483.50	-49.770	-23.55	-26.220	PASS

Test Graphs

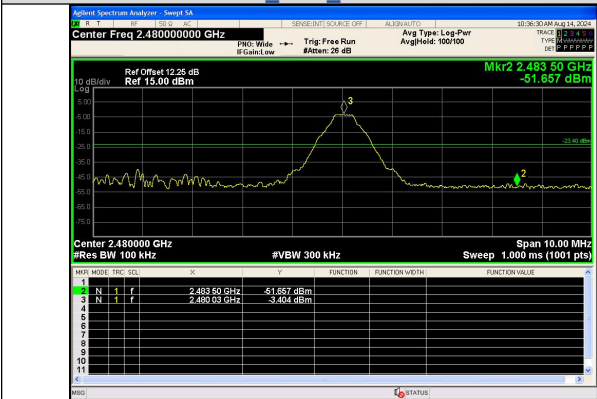
<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.40200000 GHz Ref Offset: 11.98 dB Ref: 15.00 dBm Mkr2 2.400 00 GHz -50.816 dBm</p> <p>Center 2.402000 GHz #Res BW 100 kHz #VBW 300 kHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.400 00 GHz</td> <td></td> <td></td> <td>-50.816 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 03 GHz</td> <td></td> <td></td> <td>-2.169 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.400 00 GHz			-50.816 dBm	2	N	1	f	2.402 03 GHz			-2.169 dBm	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.40200000 GHz Ref Offset: 11.98 dB Ref: 15.00 dBm Mkr2 2.400 00 GHz -50.854 dBm</p> <p>Center 2.402000 GHz #Res BW 100 kHz #VBW 300 kHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.400 00 GHz</td> <td></td> <td></td> <td>-50.854 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 19 GHz</td> <td></td> <td></td> <td>-2.165 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.400 00 GHz			-50.854 dBm	2	N	1	f	2.402 19 GHz			-2.165 dBm																																
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	2.400 00 GHz			-50.816 dBm																																																																										
2	N	1	f	2.402 03 GHz			-2.169 dBm																																																																										
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	2.400 00 GHz			-50.854 dBm																																																																										
2	N	1	f	2.402 19 GHz			-2.165 dBm																																																																										
<p align="center">Out Of Band Emission GFSK_DH5_Channel 0</p>	<p align="center">Out Of Band Emission $\pi/4$DQPSK_2-DH5_Channel 0</p>																																																																																
<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 12.515000000 GHz Ref Offset: 11.98 dB Ref: 15.00 dBm Mkr4 2.402 2 GHz -3.317 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40000 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>4.803 8 GHz</td> <td></td> <td></td> <td>-41.042 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>7.205 9 GHz</td> <td></td> <td></td> <td>-55.451 dBm</td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>9.608 1 GHz</td> <td></td> <td></td> <td>-62.400 dBm</td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 2 GHz</td> <td></td> <td></td> <td>-3.317 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	4.803 8 GHz			-41.042 dBm	2	N	1	f	7.205 9 GHz			-55.451 dBm	3	N	1	f	9.608 1 GHz			-62.400 dBm	4	N	1	f	2.402 2 GHz			-3.317 dBm	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 12.515000000 GHz Ref Offset: 11.98 dB Ref: 15.00 dBm Mkr4 2.402 2 GHz -6.246 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40000 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>4.803 8 GHz</td> <td></td> <td></td> <td>-43.418 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>7.205 9 GHz</td> <td></td> <td></td> <td>-55.873 dBm</td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>9.608 1 GHz</td> <td></td> <td></td> <td>-62.075 dBm</td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 2 GHz</td> <td></td> <td></td> <td>-6.246 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	4.803 8 GHz			-43.418 dBm	2	N	1	f	7.205 9 GHz			-55.873 dBm	3	N	1	f	9.608 1 GHz			-62.075 dBm	4	N	1	f	2.402 2 GHz			-6.246 dBm
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	4.803 8 GHz			-41.042 dBm																																																																										
2	N	1	f	7.205 9 GHz			-55.451 dBm																																																																										
3	N	1	f	9.608 1 GHz			-62.400 dBm																																																																										
4	N	1	f	2.402 2 GHz			-3.317 dBm																																																																										
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	4.803 8 GHz			-43.418 dBm																																																																										
2	N	1	f	7.205 9 GHz			-55.873 dBm																																																																										
3	N	1	f	9.608 1 GHz			-62.075 dBm																																																																										
4	N	1	f	2.402 2 GHz			-6.246 dBm																																																																										
<p align="center">30.0 MHz - 25000.0 MHz GFSK_DH5_Channel 0</p>	<p align="center">30.0 MHz - 25000.0 MHz $\pi/4$DQPSK_2-DH5_Channel 0</p>																																																																																
<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.44100000 GHz Ref Offset: 12.2 dB Ref: 15.00 dBm Mkr3 2.441 02 GHz -2.718 dBm</p> <p>Center 2.441000 GHz #Res BW 100 kHz #VBW 300 kHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.441 02 GHz</td> <td></td> <td></td> <td>-2.718 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.441 02 GHz			-2.718 dBm	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.44100000 GHz Ref Offset: 12.2 dB Ref: 15.00 dBm Mkr3 2.440 88 GHz -2.768 dBm</p> <p>Center 2.441000 GHz #Res BW 100 kHz #VBW 300 kHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>FREQ</th> <th>SCN</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.440 88 GHz</td> <td></td> <td></td> <td>-2.768 dBm</td> </tr> </tbody> </table>	MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.440 88 GHz			-2.768 dBm																																																
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	2.441 02 GHz			-2.718 dBm																																																																										
MNR	MODE	FREQ	SCN	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																																																										
1	N	1	f	2.440 88 GHz			-2.768 dBm																																																																										
<p align="center">Out Of Band Emission GFSK_DH5_Channel 39</p>	<p align="center">Out Of Band Emission $\pi/4$DQPSK_2-DH5_Channel 39</p>																																																																																



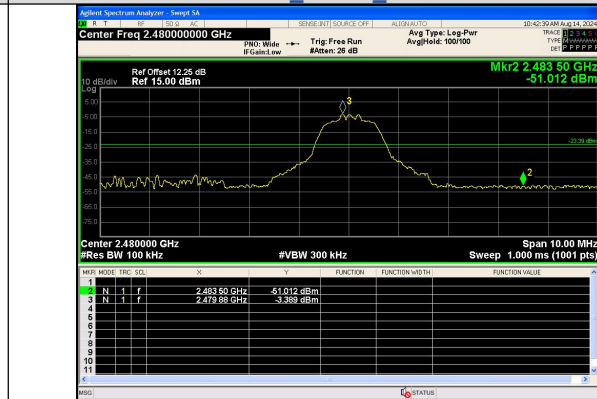
30.0 MHz - 25000.0 MHz
GFSK DH5 Channel 39



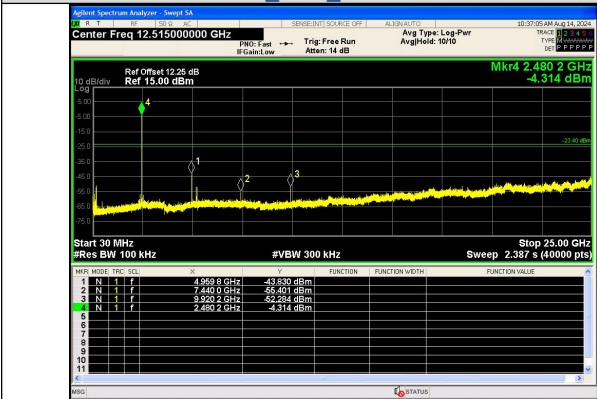
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK 2-DH5 Channel 39



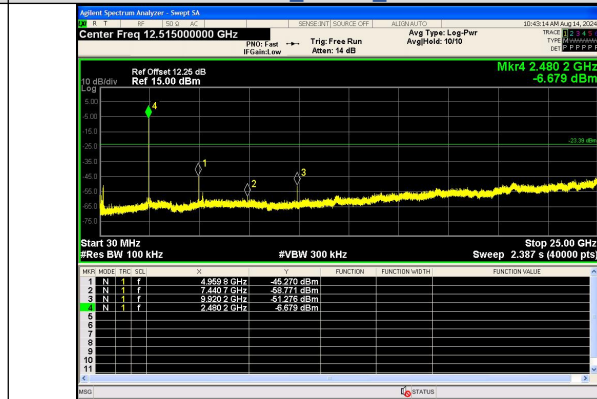
Out Of Band Emission
GFSK DH5 Channel 78



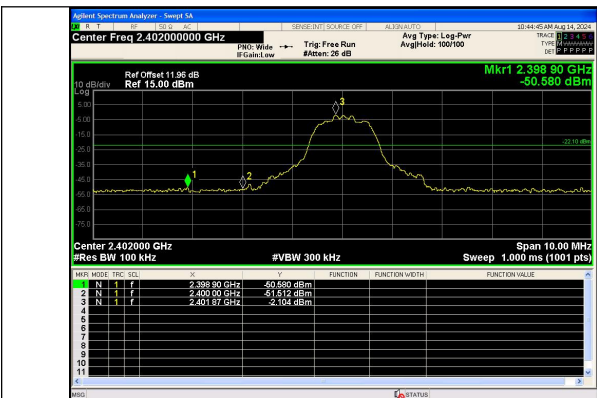
Out Of Band Emission
 $\pi/4$ DQPSK 2-DH5 Channel 78



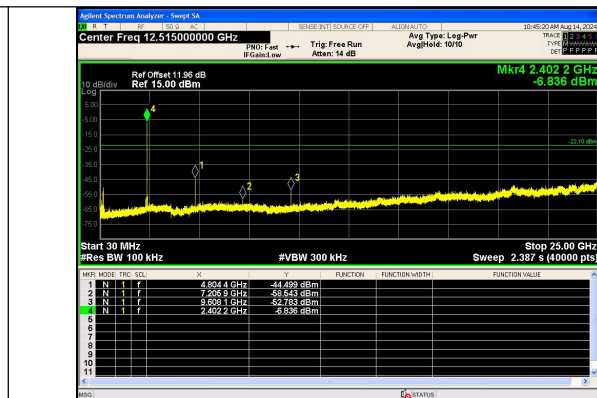
30.0 MHz - 25000.0 MHz
GFSK DH5 Channel 78



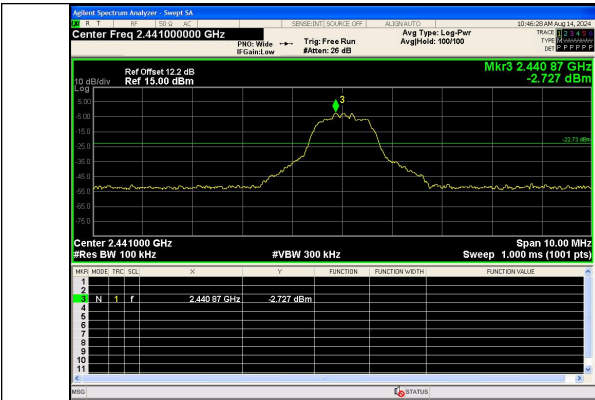
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK 2-DH5 Channel 78



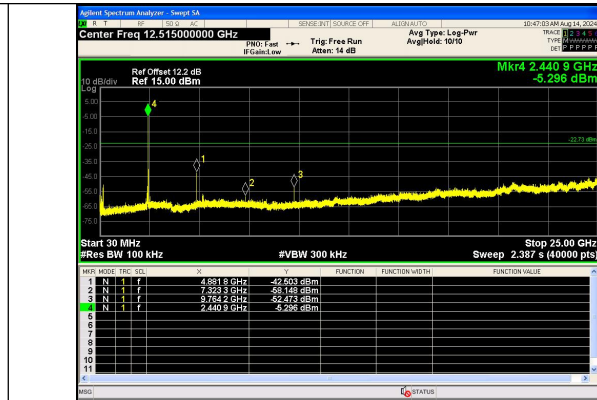
Out Of Band Emission
8DPSK 3-DH5 Channel 0



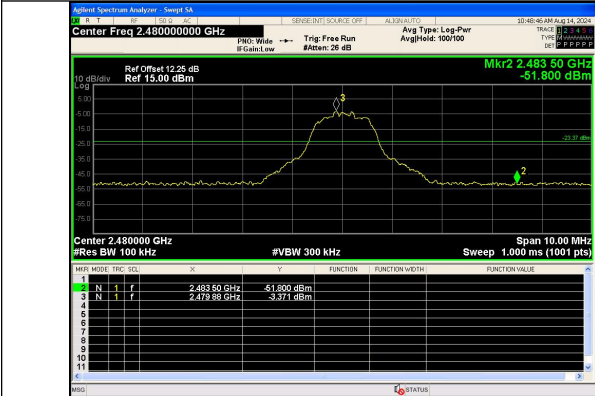
30.0 MHz - 25000.0 MHz
8DPSK 3-DH5 Channel 0



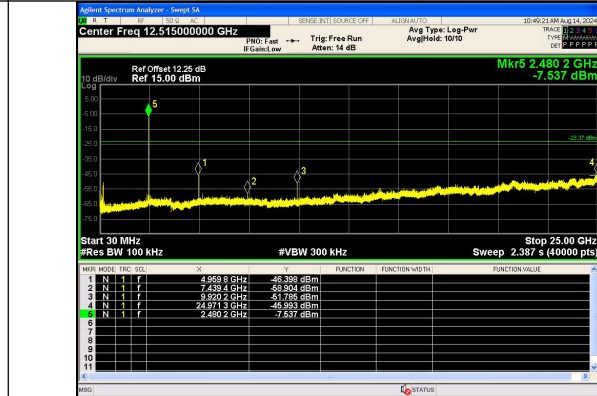
Out Of Band Emission
8PSK 3-DH5 Channel 39



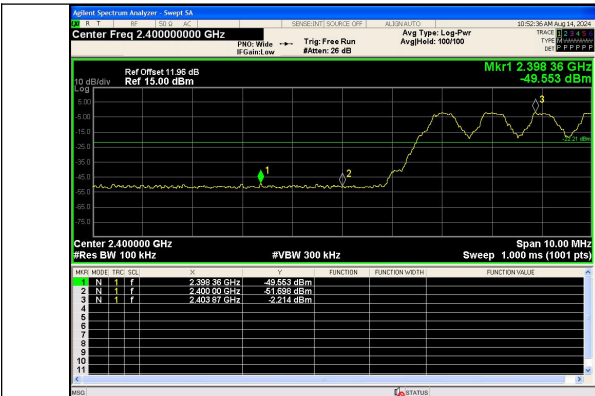
30.0 MHz - 25000.0 MHz
8PSK 3-DH5 Channel 39



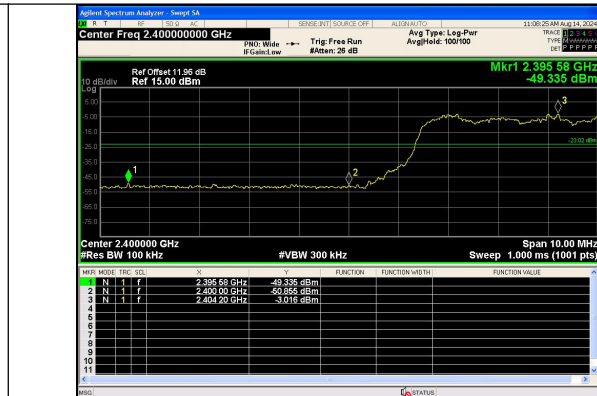
Out Of Band Emission
8PSK 3-DH5 Channel 78



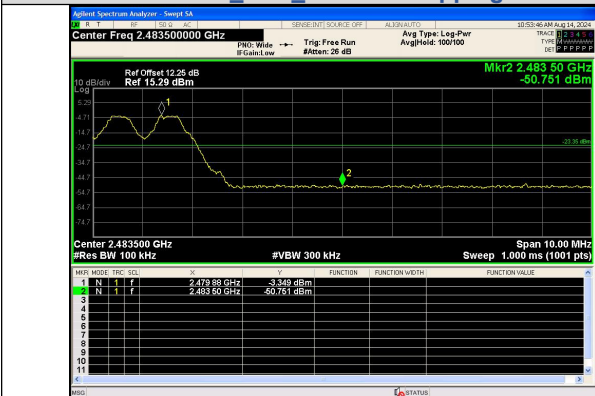
30.0 MHz - 25000.0 MHz
8PSK 3-DH5 Channel 78



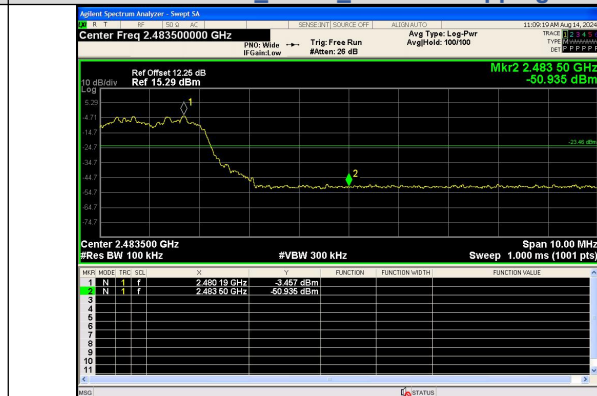
Out Of Band Emission(Left)
GFSK DH5 Channel Hopping



Out Of Band Emission(Left)
pi/4DQPSK 2-DH5 Channel Hopping



Out Of Band Emission(Right)
GFSK DH5 Channel Hopping



Out Of Band Emission(Right)
pi/4DQPSK 2-DH5 Channel Hopping