

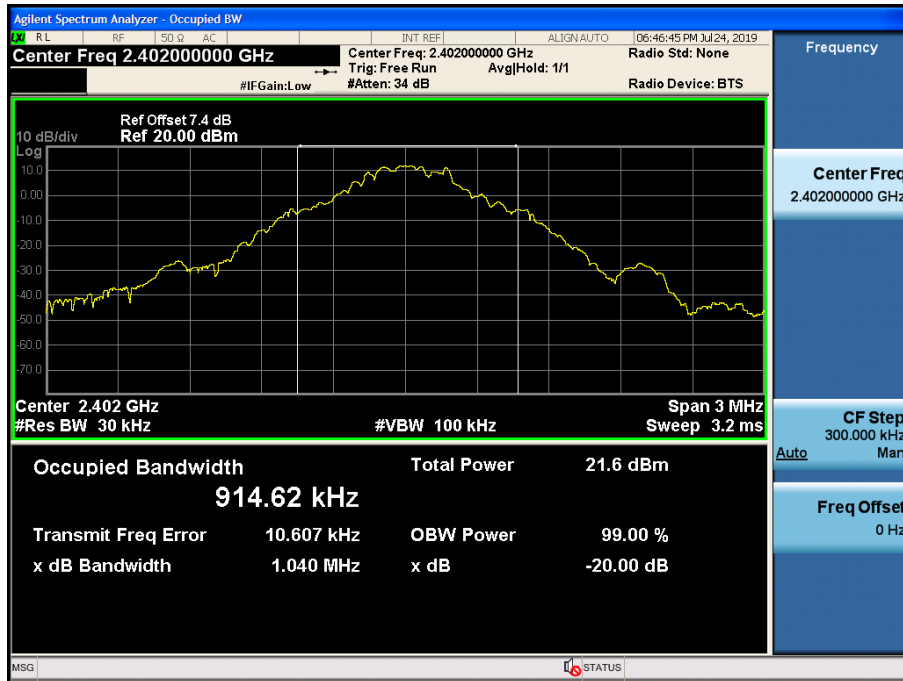
Test Plots ($\pi/4$ DQPSK)

Channel Separation



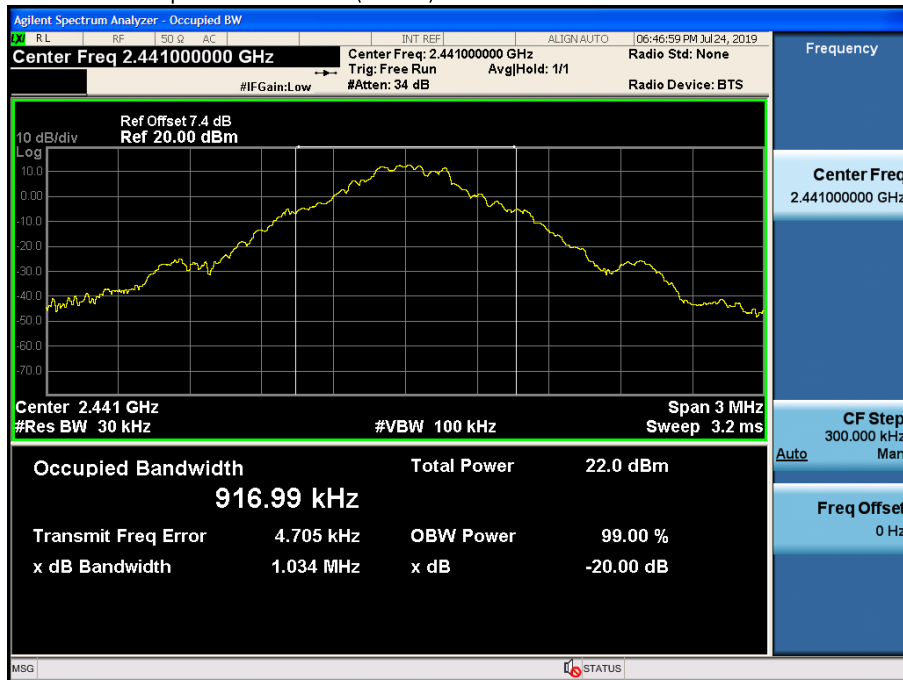
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



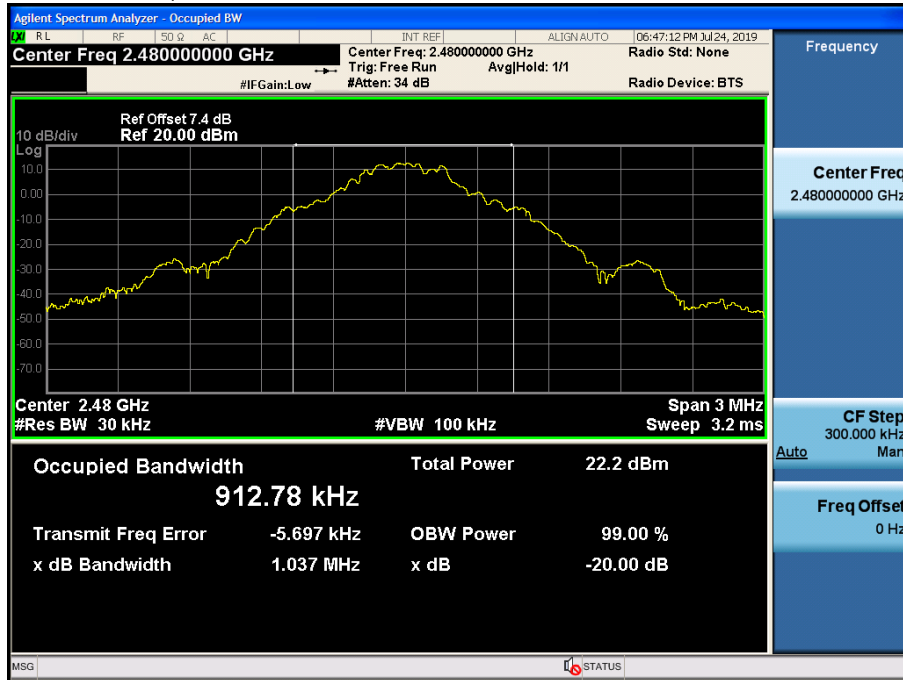
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



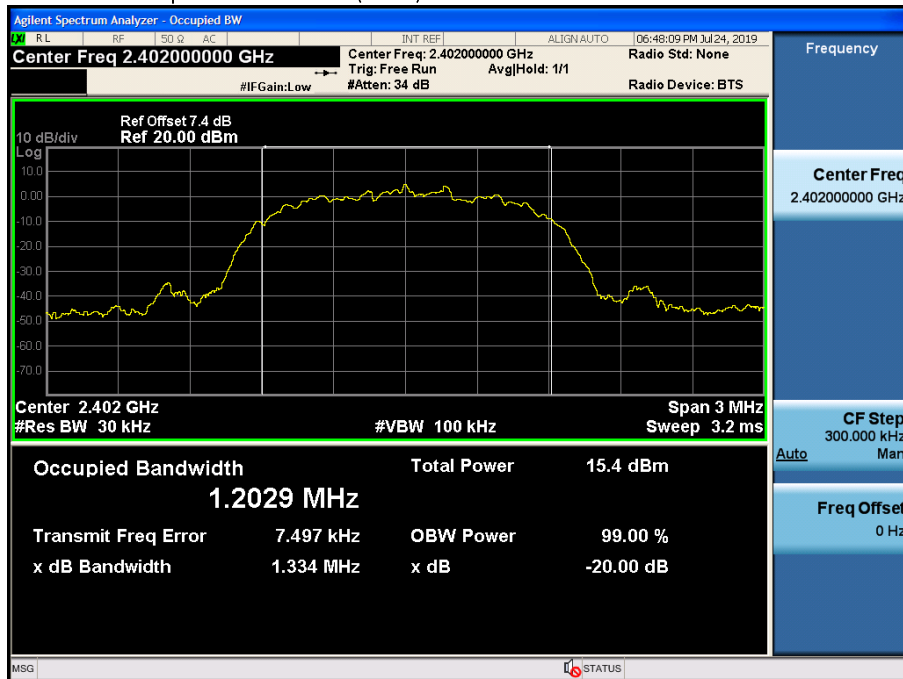
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



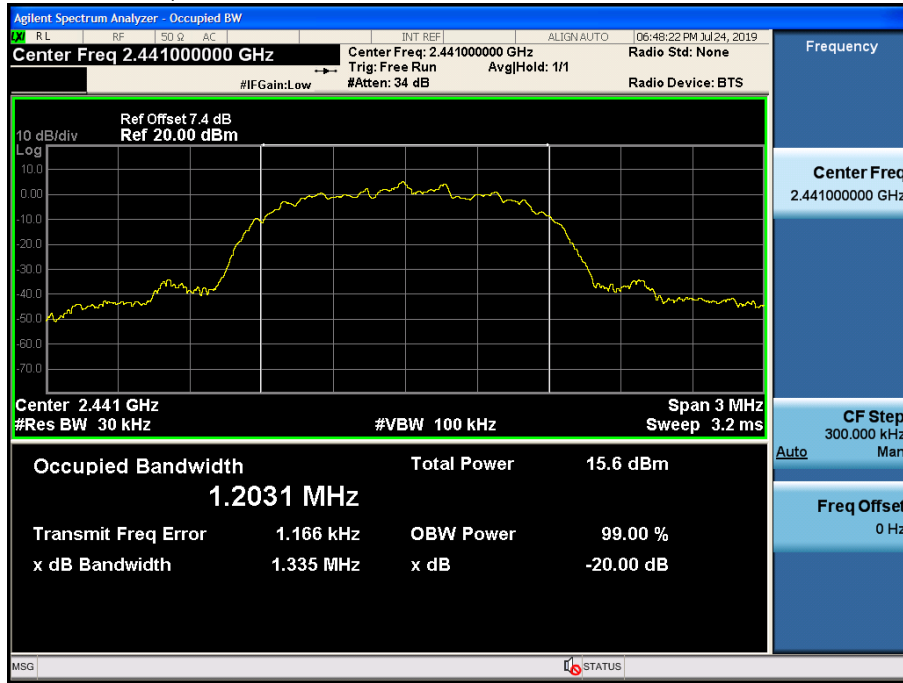
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



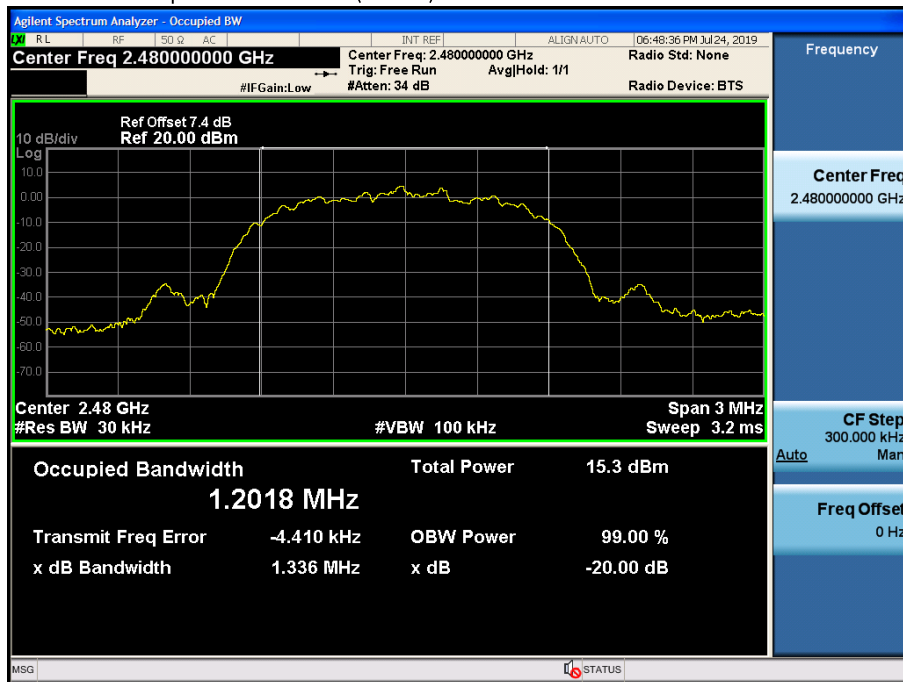
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



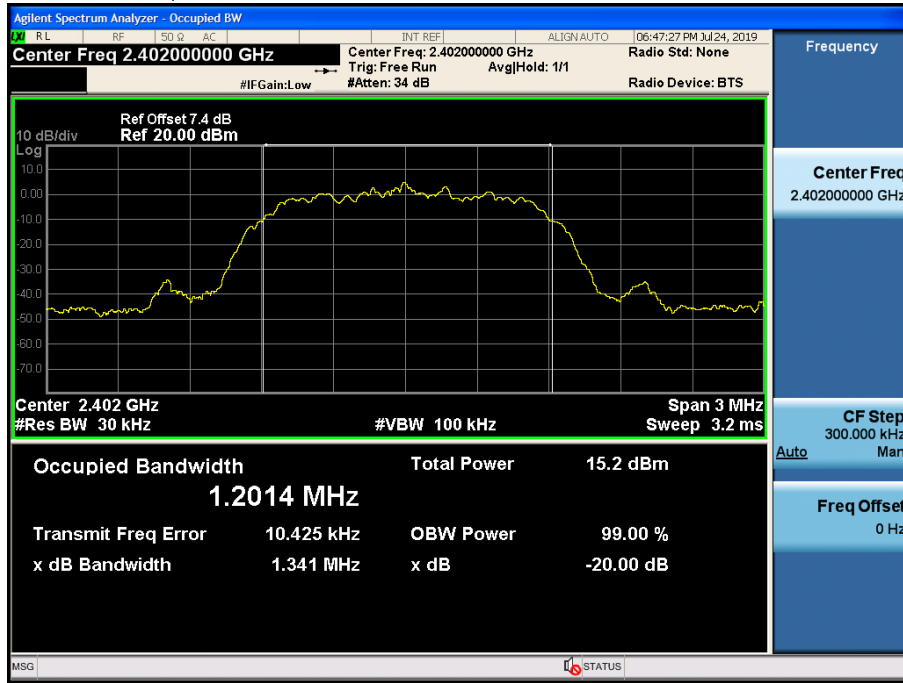
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



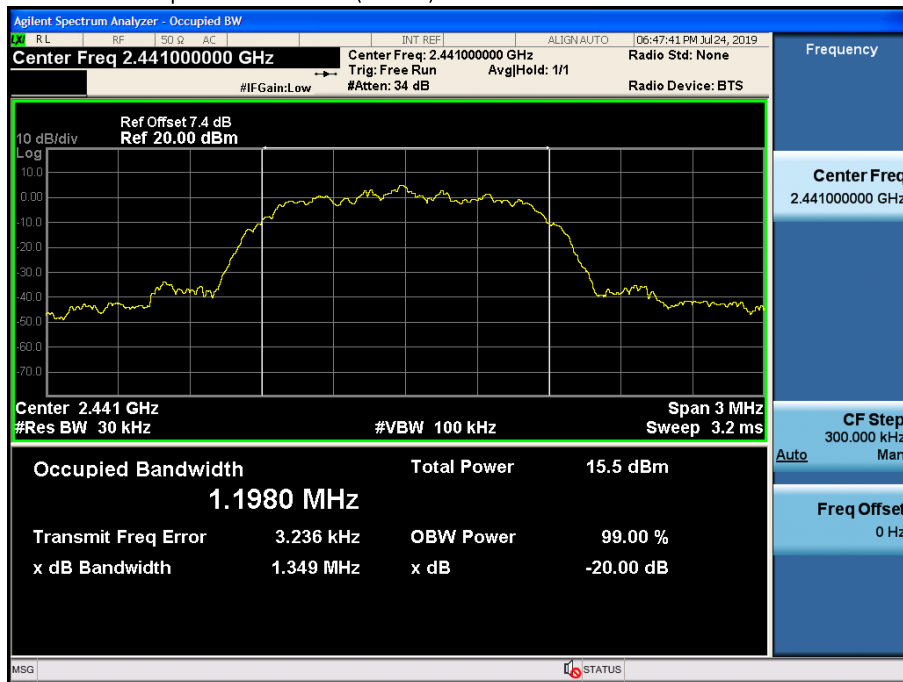
Test Plots ($\pi/4$ DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



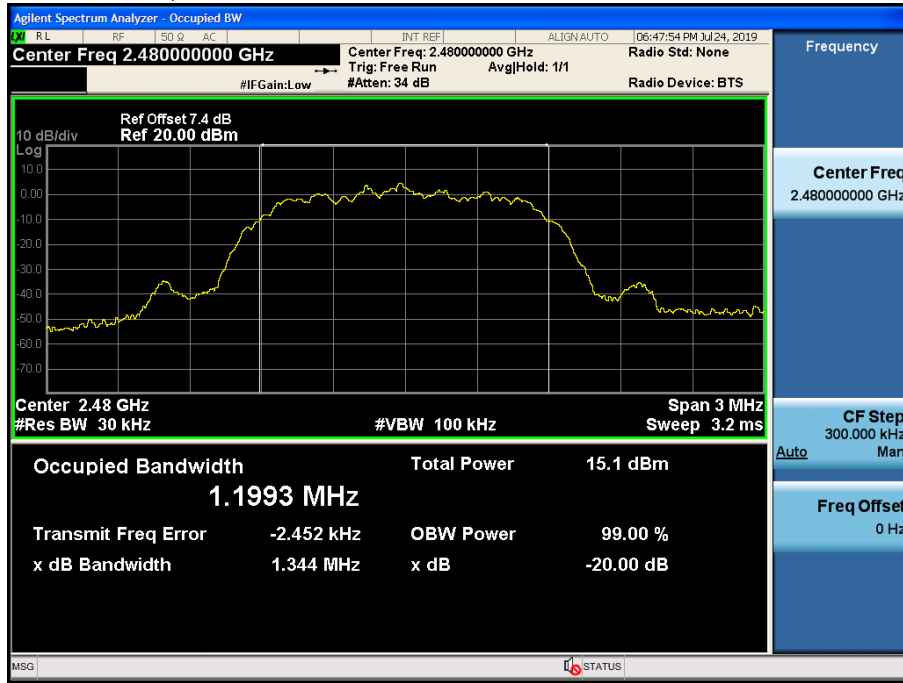
Test Plots ($\pi/4$ DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



Test Plots ($\pi/4$ DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



10.4 NUMBER OF HOPPING FREQUENCY

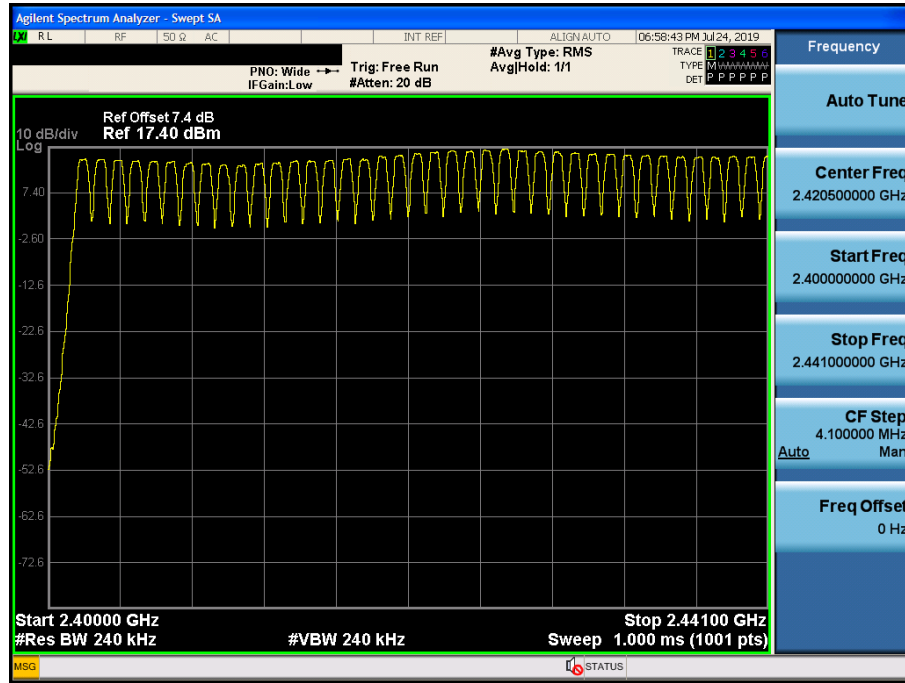
Result (No. of CH)			Limit
GFSK	8DPSK	$\pi/4$ DQPSK	
79	79	79	>15

Note :

In case of AFH mode, minimum number of hopping channels is 20.

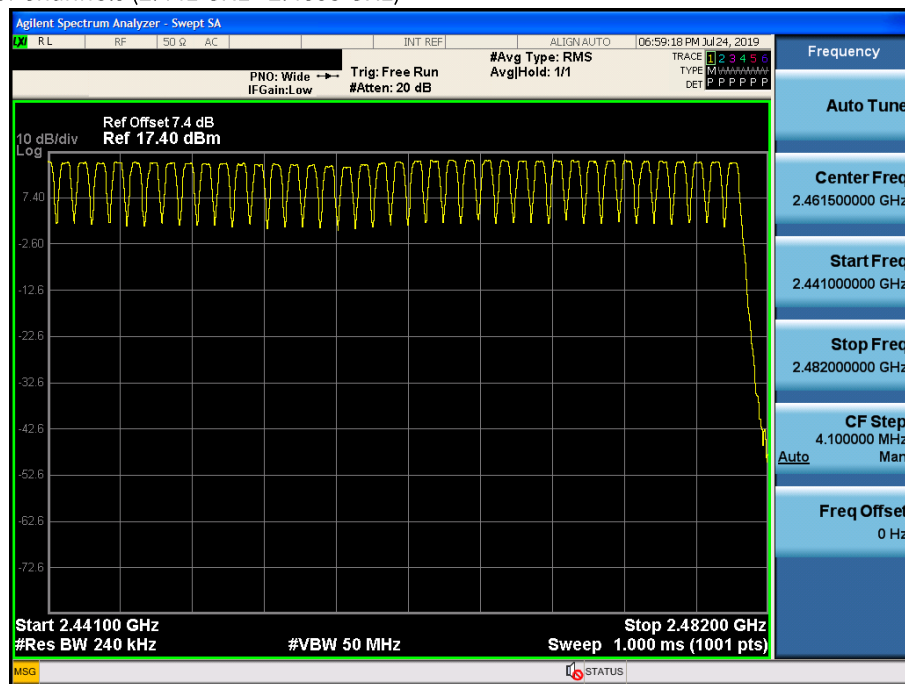
Test Plots (GFSK)

Number of Channels (2.4 GHz - 2.441 GHz)



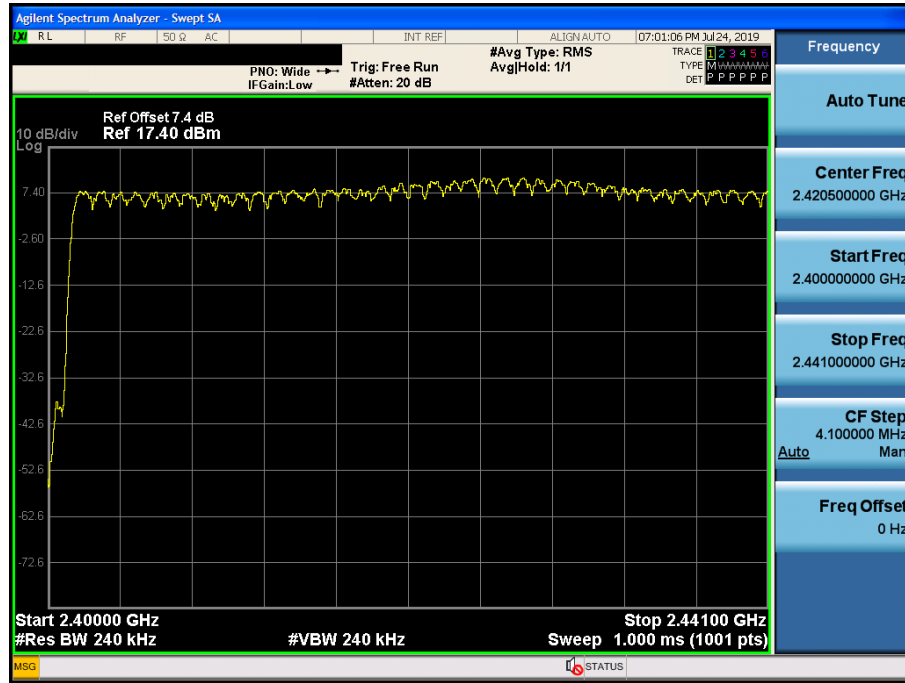
Test Plots (GFSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



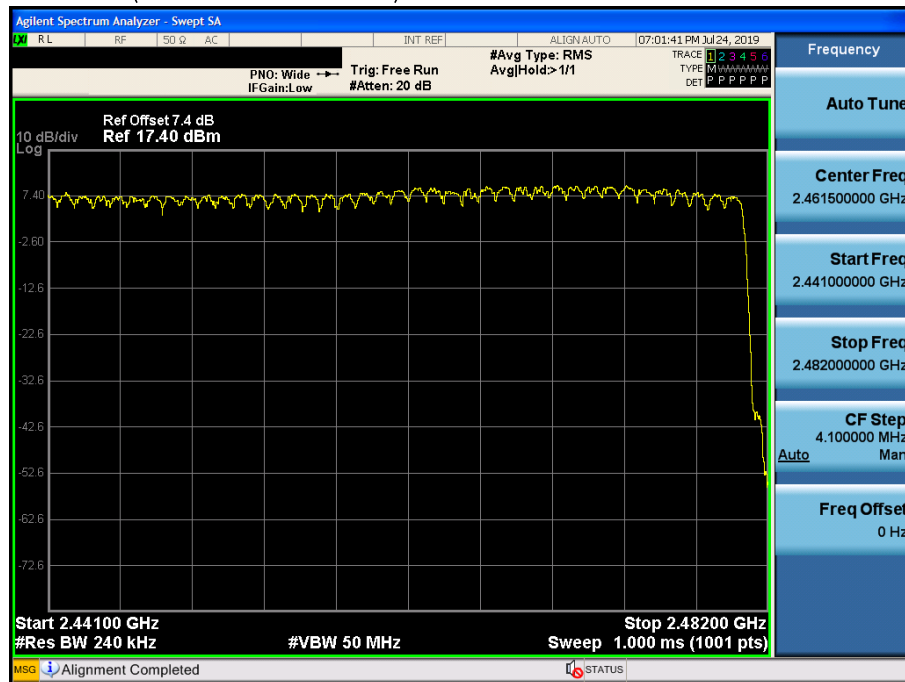
Test Plots (8DPSK)

Number of Channels (2.4 GHz - 2.441 GHz)



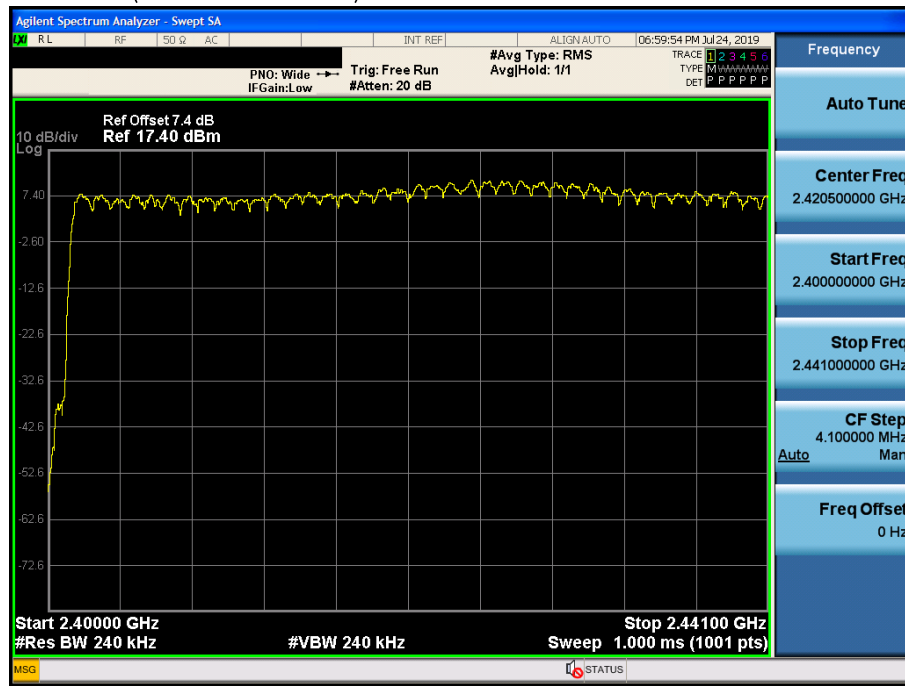
Test Plots (8DPSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



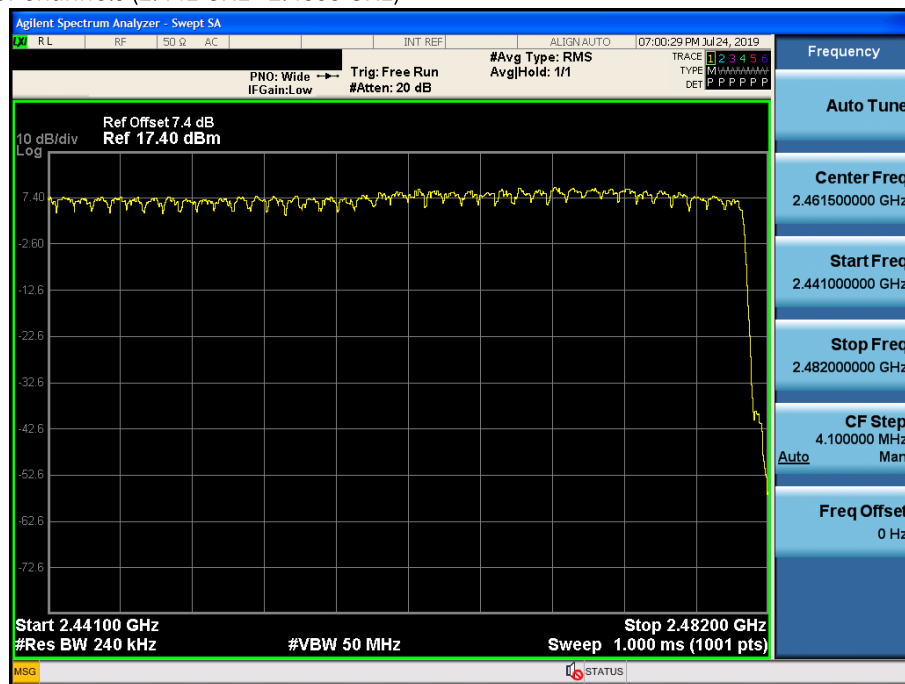
Test Plots ($\pi/4$ DQPSK)

Number of Channels (2.4 GHz - 2.441 GHz)



Test Plots ($\pi/4$ DQPSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



10.5 TIME OF OCCUPANCY (DWELL TIME)

	Channel	GFSK	8DPSK	$\pi/4$ DQPSK
Pulse Time (ms)	Low	2.890	2.890	2.890
	Mid	2.890	2.890	2.890
	High	2.885	2.890	2.890

Non-AFH Mode

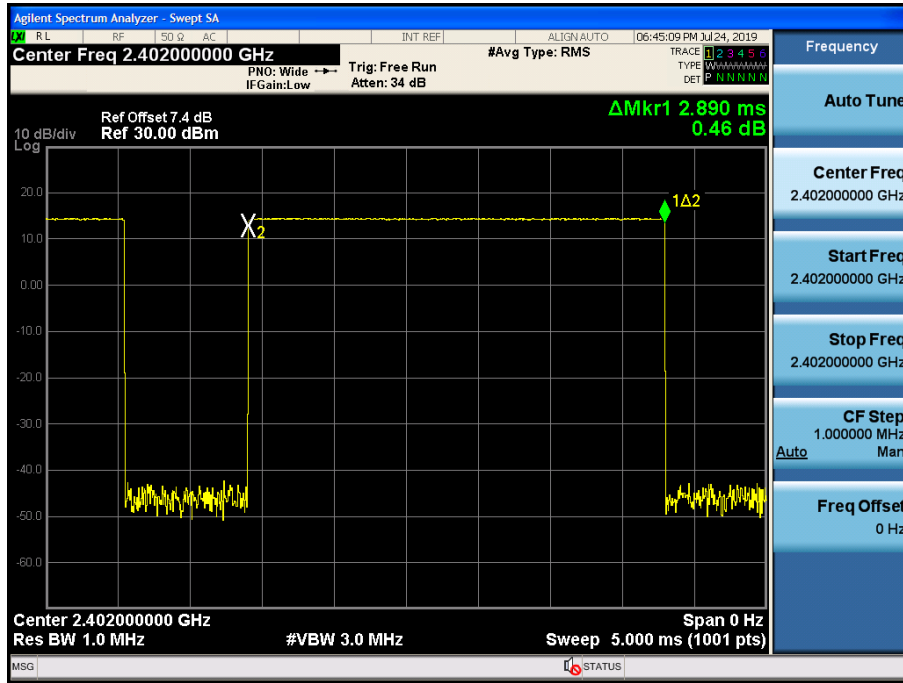
	Channel	GFSK	8DPSK	$\pi/4$ DQPSK	Period Time (s)	Limit (ms)
Total of Dwell (ms)	Low	308.27	308.27	308.27	31.6	400
	Mid	308.27	308.27	308.27	31.6	
	High	307.73	308.27	308.27	31.6	

AFH Mode

	Channel	GFSK	8DPSK	$\pi/4$ DQPSK	Period Time (s)	Limit (ms)
Total of Dwell (ms)	Low	154.13	154.13	154.13	8.0	400
	Mid	154.13	154.13	154.13	8.0	
	High	153.87	154.13	154.13	8.0	

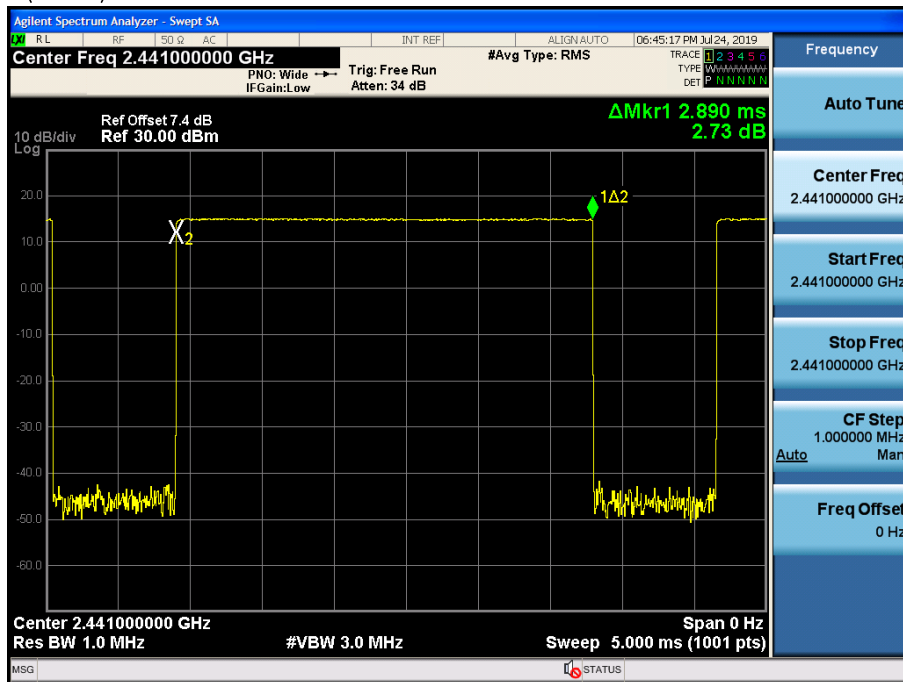
Test Plots (GFSK)

Dwell Time (CH.0)



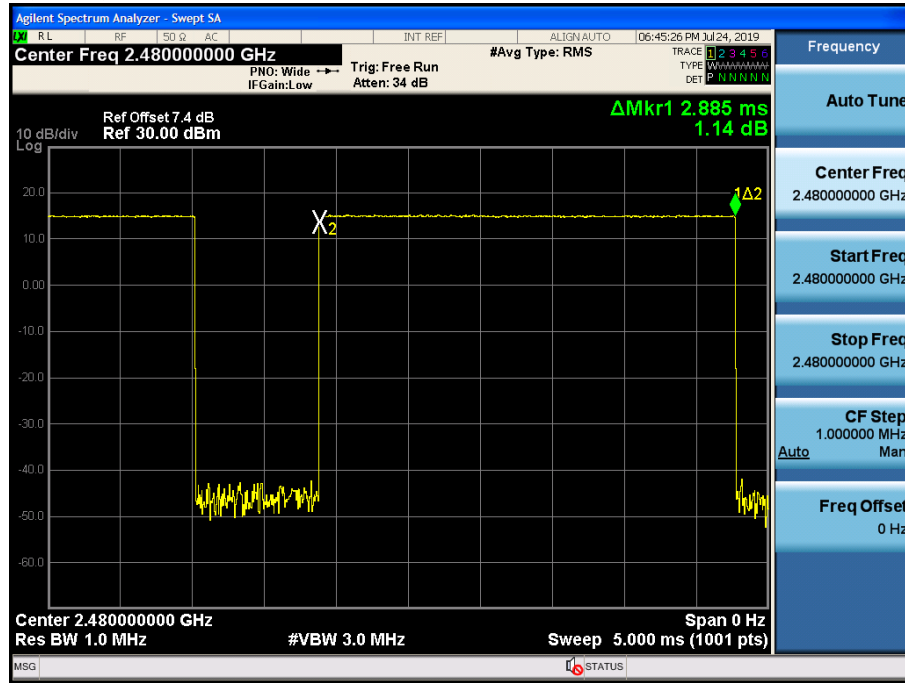
Test Plots (GFSK)

Dwell Time (CH.39)



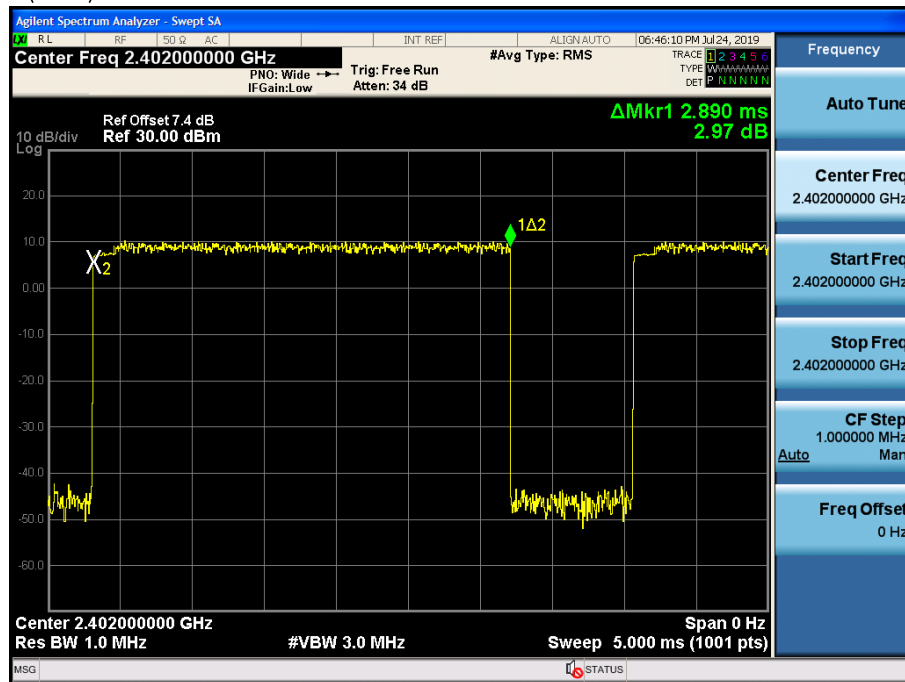
Test Plots (GFSK)

Dwell Time (CH.78)



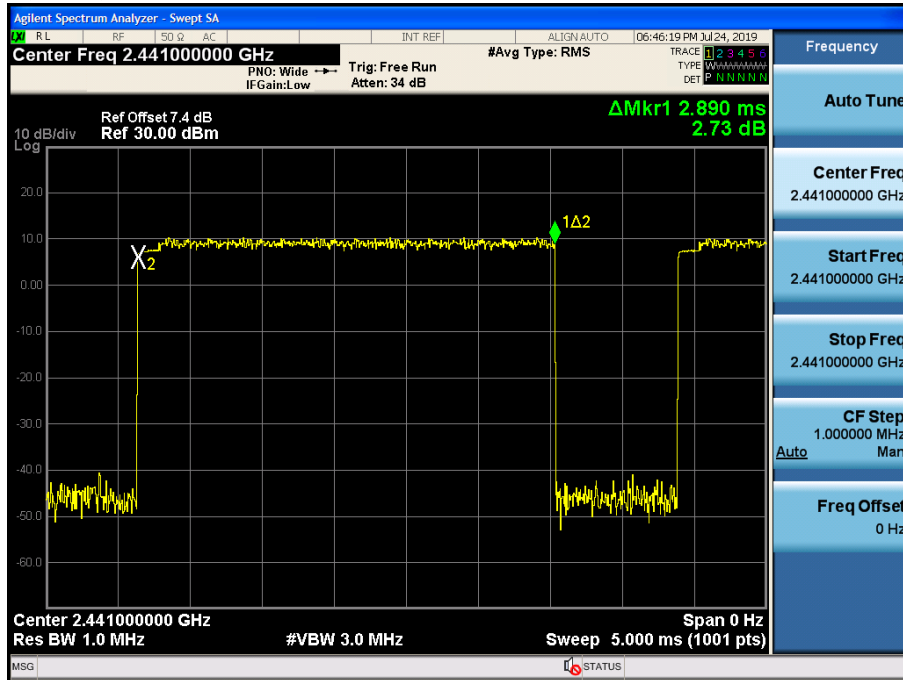
Test Plots (8DPSK)

Dwell Time (CH.0)



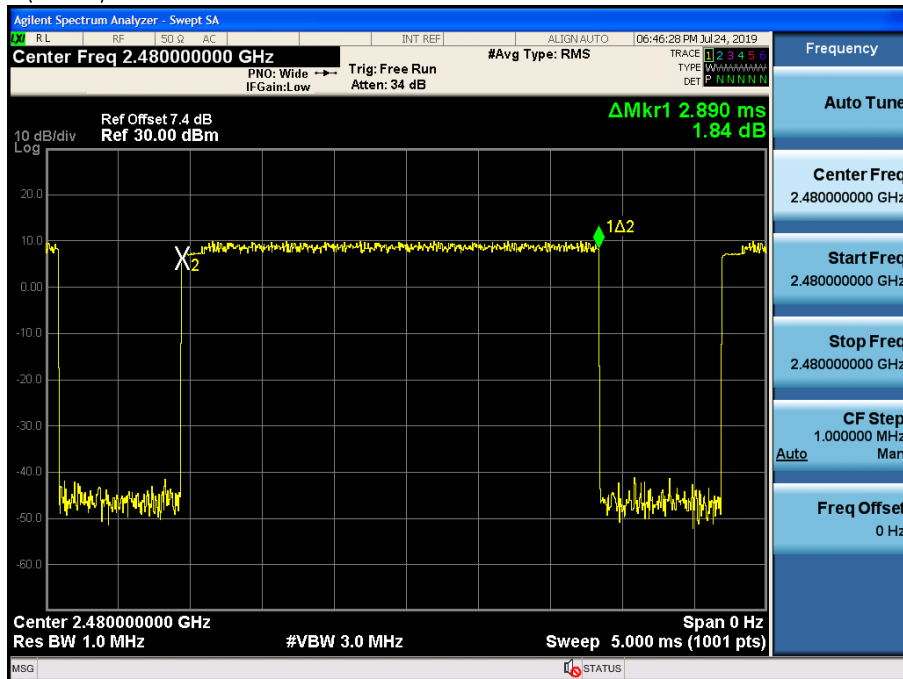
Test Plots (8DPSK)

Dwell Time (CH.39)



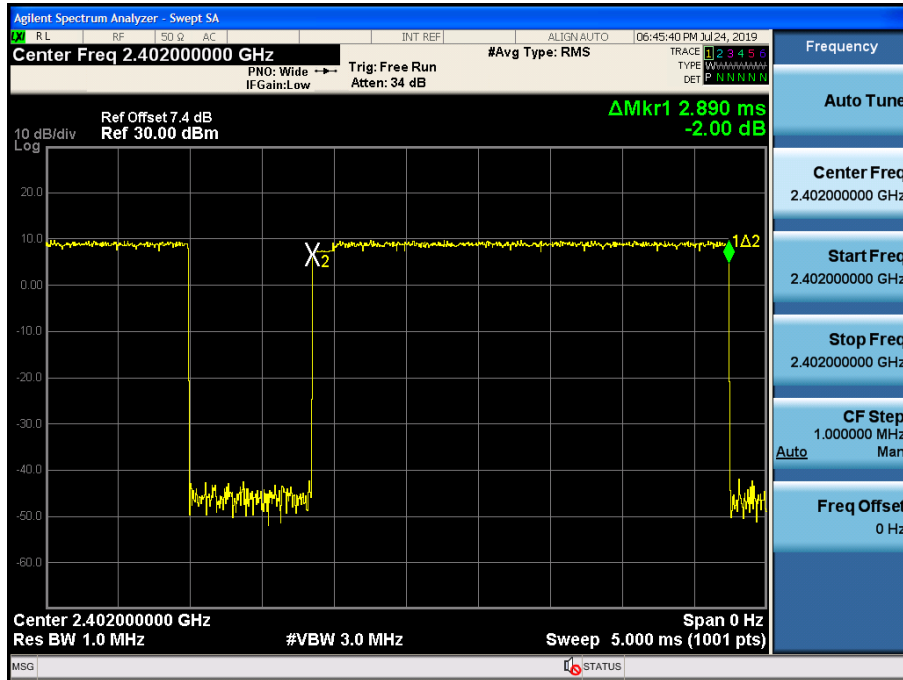
Test Plots (8DPSK)

Dwell Time (CH.78)

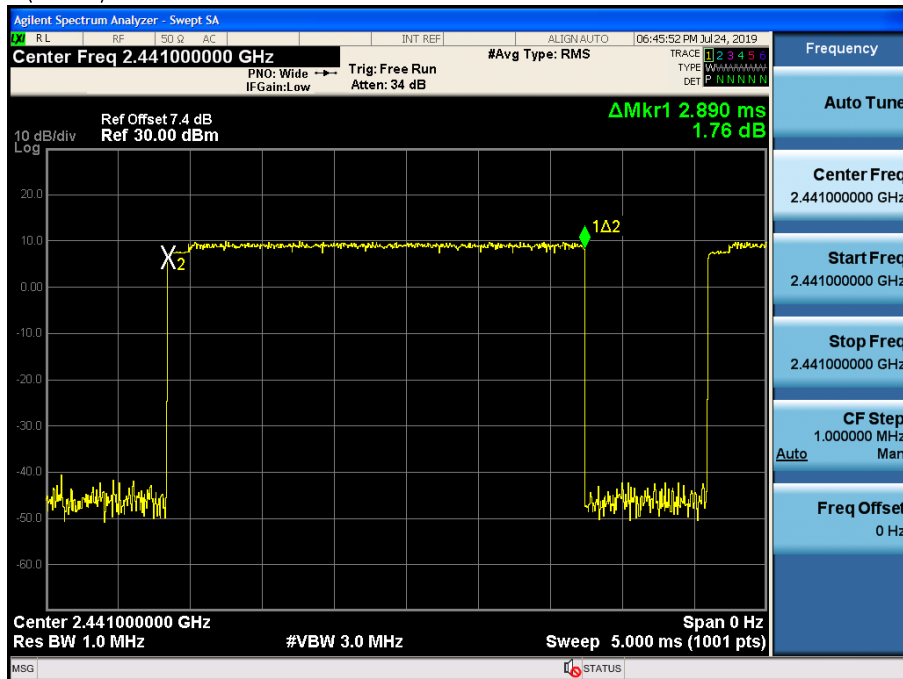


Test Plots ($\pi/4$ DQPSK)

Dwell Time (CH.0)

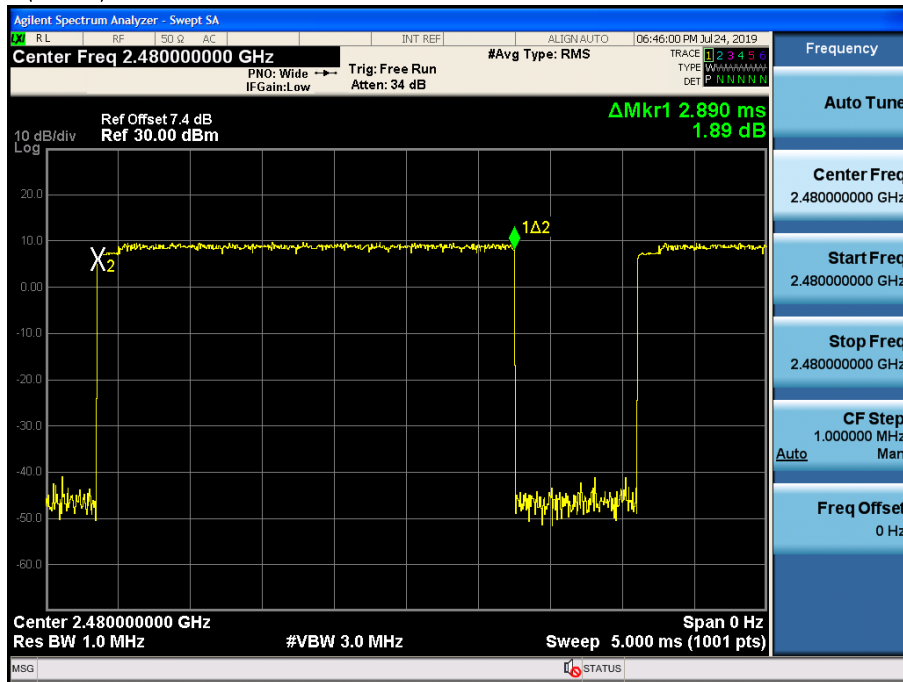

Test Plots ($\pi/4$ DQPSK)

Dwell Time (CH.39)



Test Plots ($\pi/4$ DQPSK)

Dwell Time (CH.78)



10.6 SPURIOUS EMISSIONS

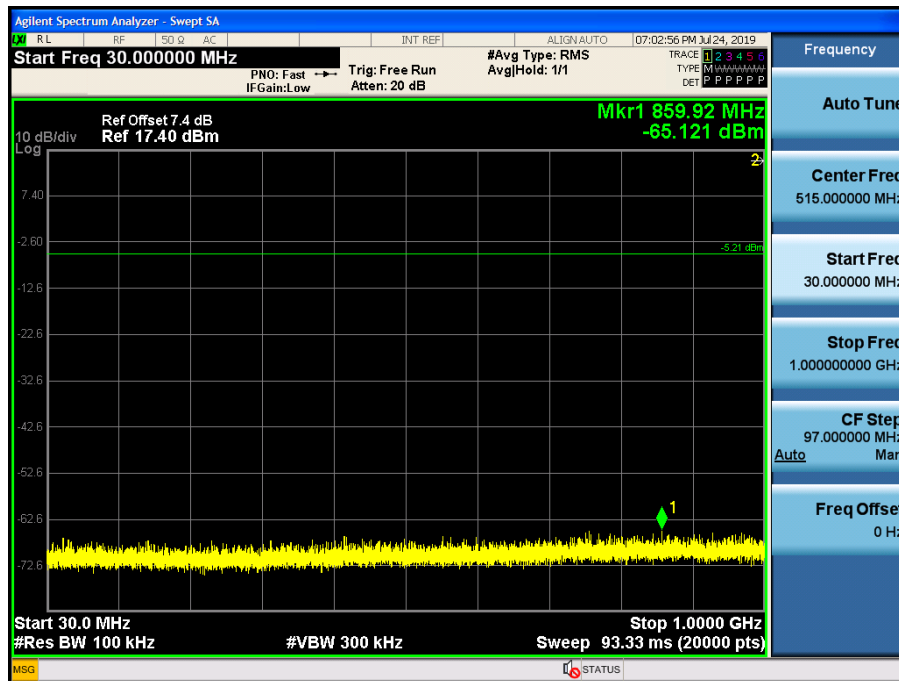
10.6.1 CONDUCTED SPURIOUS EMISSIONS

Test Result : please refer to the plot below.

In order to simplify the report, attached plots were only the worst case channel and data rate.

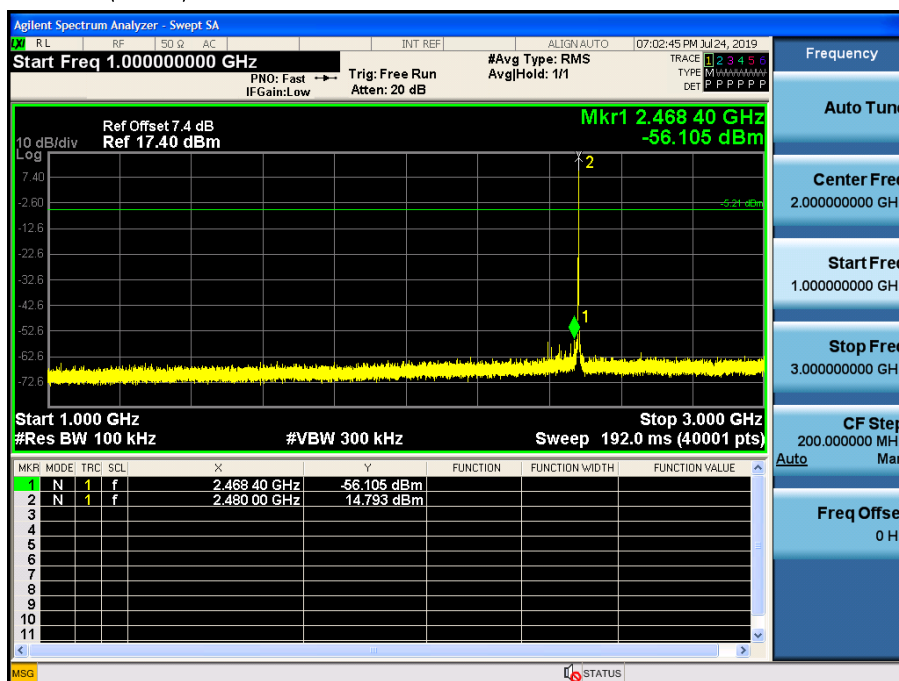
Test Plots (GFSK)- 30 MHz - 1 GHz

Spurious Emission (CH.78)



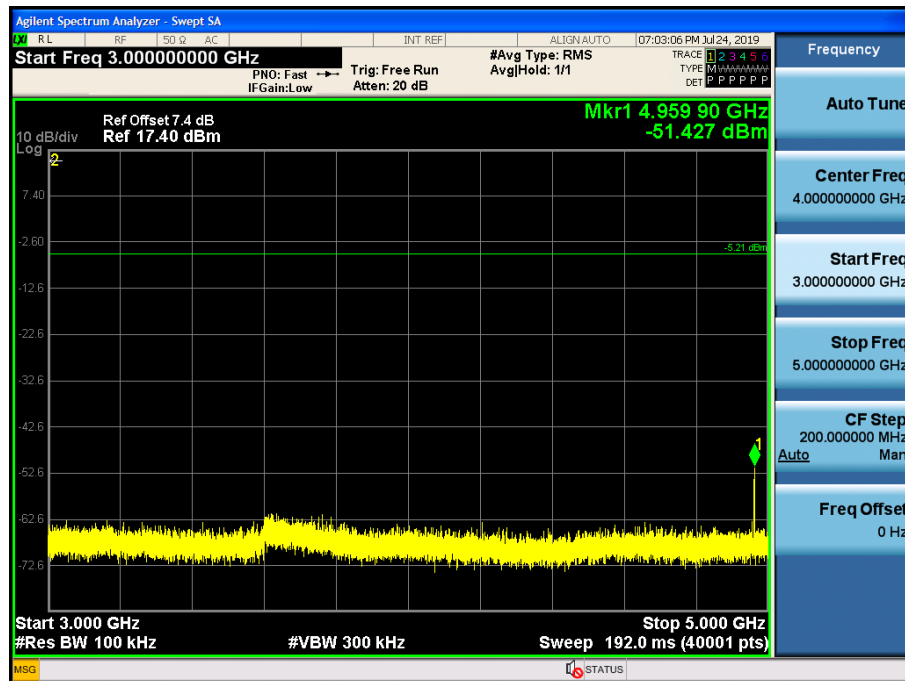
Test Plots (GFSK)- 1 GHz – 3 GHz

Spurious Emission (CH.78)



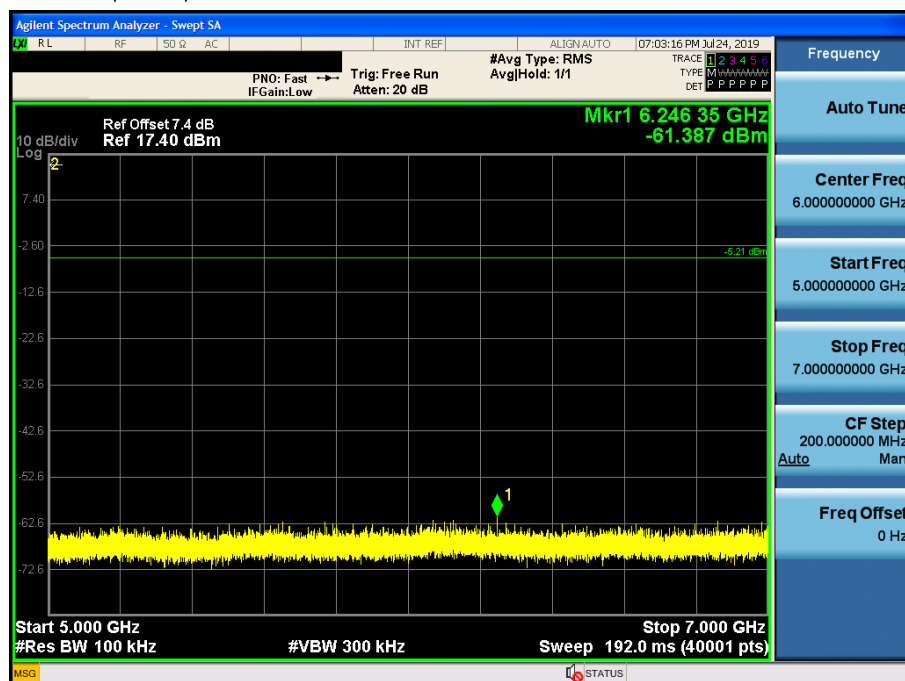
Test Plots(8DPSK)- 3 GHz - 5 GHz

Spurious Emission (CH.78)



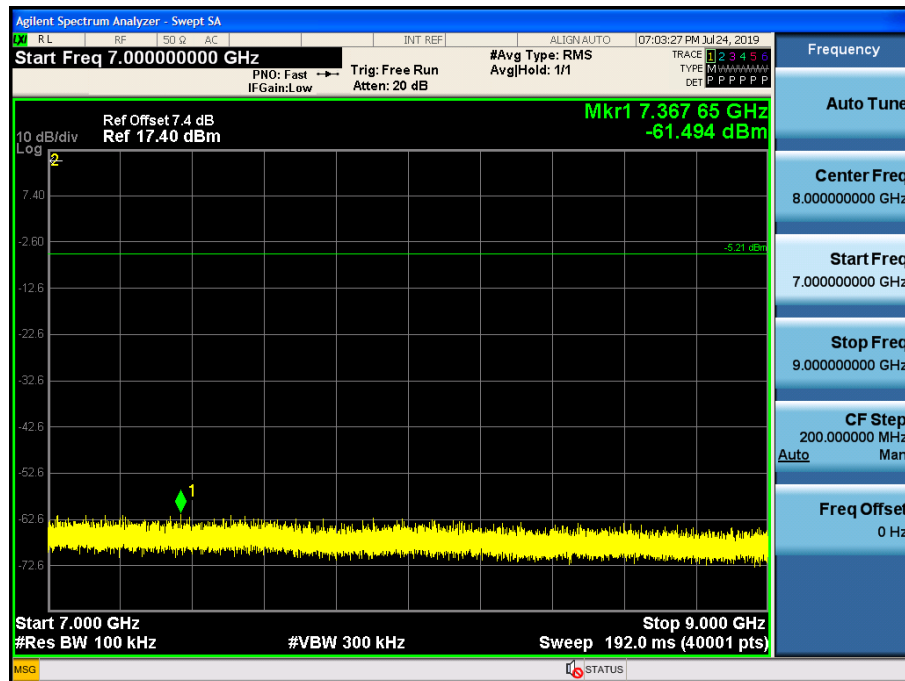
Test Plots (GFSK)- 5 GHz - 7 GHz

Spurious Emission (CH.78)



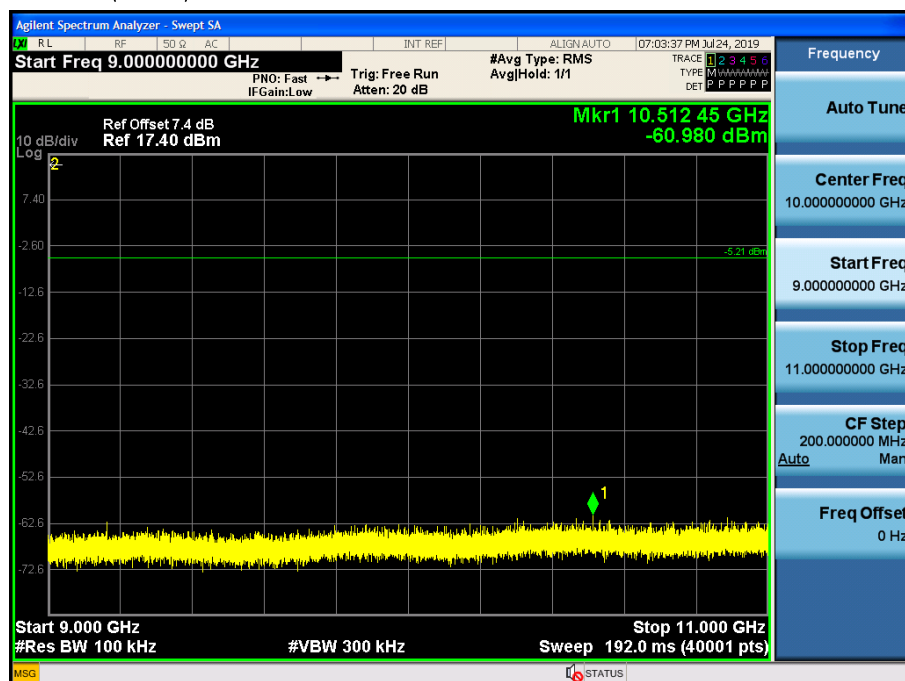
Test Plots(8DPSK)- 7 GHz - 9 GHz

Spurious Emission (CH.78)



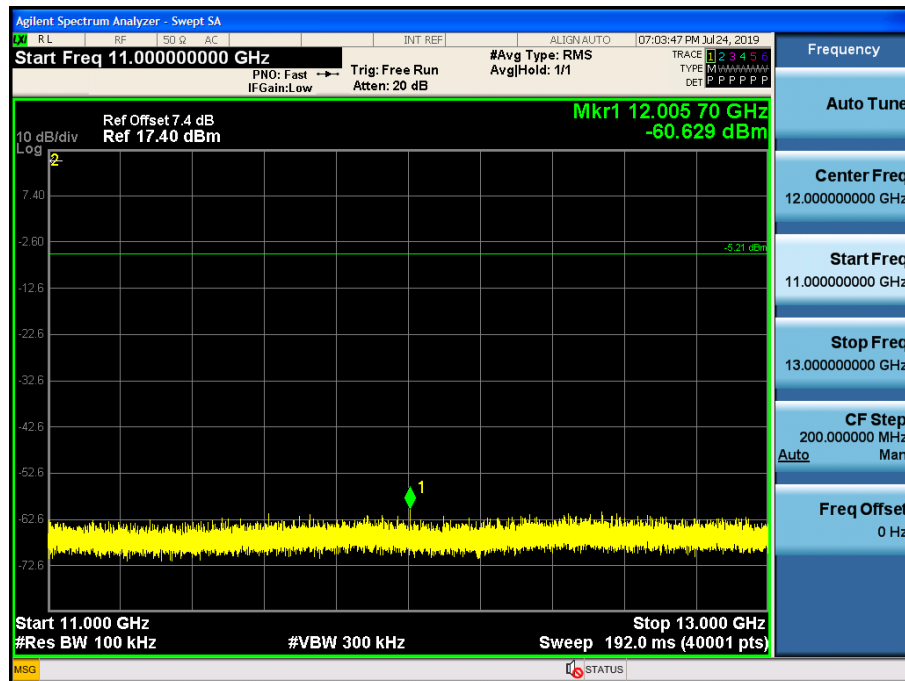
Test Plots(8DPSK)- 9 GHz - 11 GHz

Spurious Emission (CH.78)



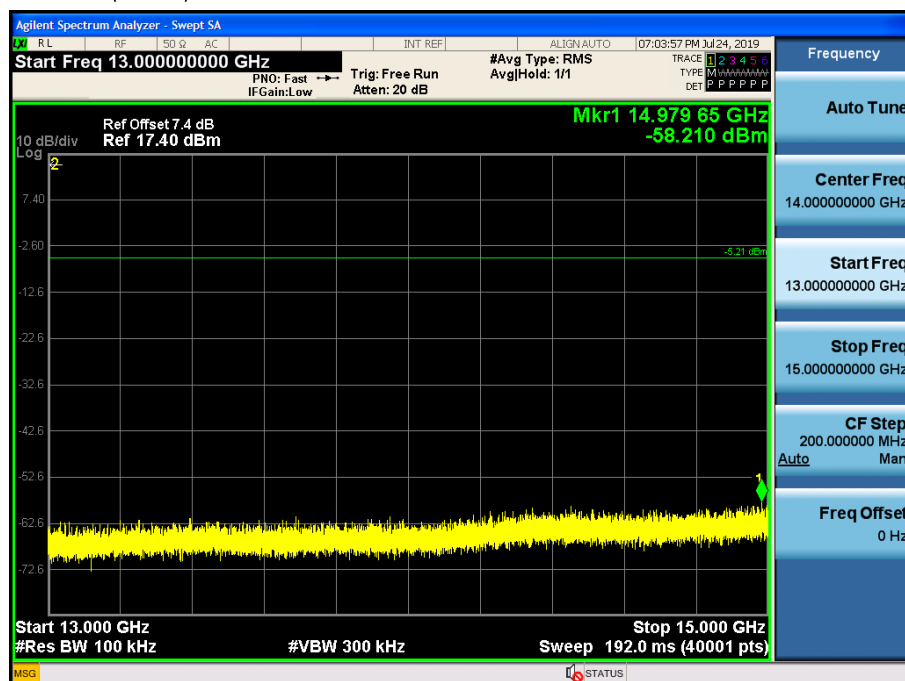
Test Plots(8DPSK) 11 GHz - 13 GHz

Spurious Emission (CH.78)



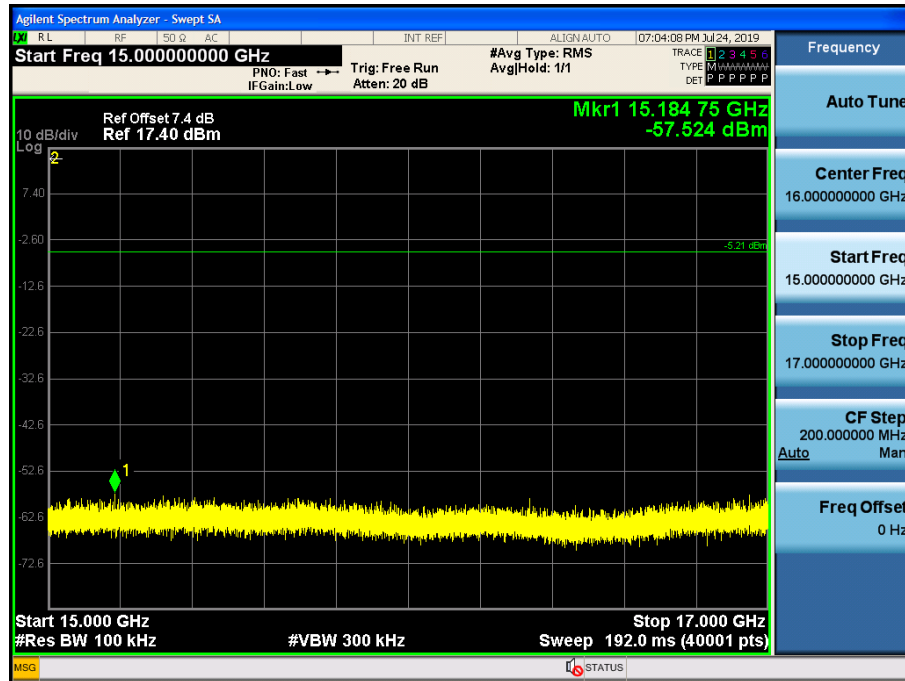
Test Plots (GFSK)- 13 GHz – 15 GHz

Spurious Emission (CH.78)



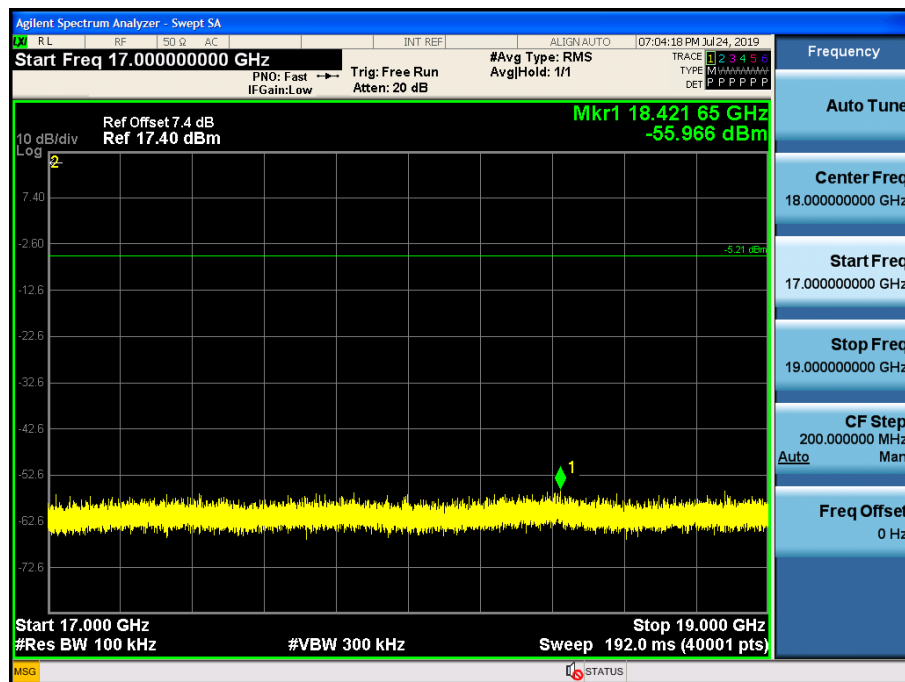
Test Plots(8DPSK)- 15 GHz - 17 GHz

Spurious Emission (CH.78)



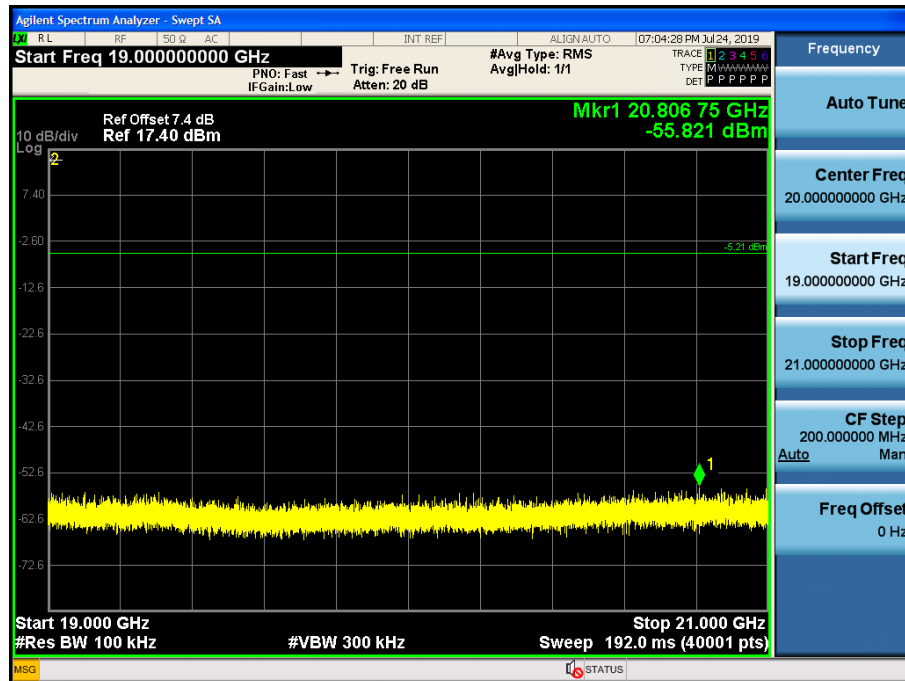
Test Plots(8DPSK)- 17 GHz - 19 GHz

Spurious Emission (CH.78)



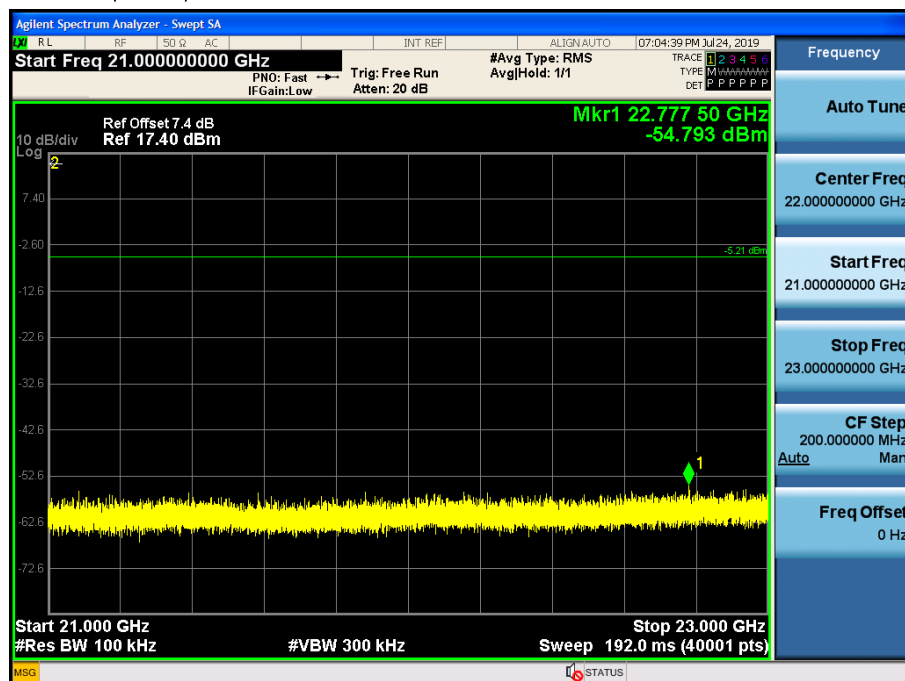
Test Plots (GFSK)- 19 GHz - 21 GHz

Spurious Emission (CH.78)



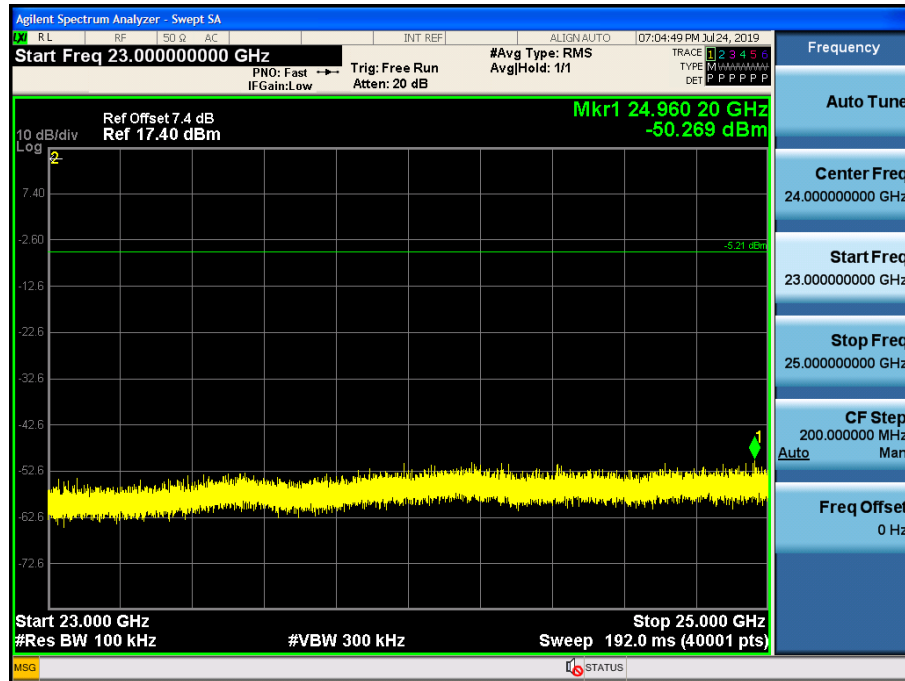
Test Plots (GFSK)- 21 GHz - 23 GHz

Spurious Emission (CH.78)



Test Plots (GFSK)- 23 GHz - 25 GHz

Spurious Emission (CH.78)



10.6.2 RADIATED SPURIOUS EMISSIONS

Frequency Range : 9 kHz – 30MHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor = $40 \cdot \log(\text{specific distance} / \text{test distance})$ (dB)
3. Limit line = specific Limits (dBuV) + Distance extrapolation factor
4. Radiated test is performed with hopping off.

Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
2. Radiated test is performed with hopping off.

Frequency Range : Above 1 GHz

Operation Mode: CH Low(GFSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	48.44	0.44	V	48.88	73.98	25.10	PK
4804	35.18	0.44	V	35.62	53.98	18.36	AV
7206	47.34	9.25	V	56.585	73.98	17.40	PK
7206	34.21	9.25	V	43.455	53.98	10.53	AV
4804	48.75	0.44	H	49.19	73.98	24.79	PK
4804	35.24	0.44	H	35.68	53.98	18.30	AV
7206	47.62	9.25	H	56.865	73.98	17.12	PK
7206	34.25	9.25	H	43.495	53.98	10.49	AV

Operation Mode: CH Low(8DPSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	47.52	0.44	V	47.96	73.98	26.02	PK
4804	34.65	0.44	V	35.09	53.98	18.89	AV
7206	46.92	9.25	V	56.165	73.98	17.82	PK
7206	34.26	9.25	V	43.505	53.98	10.48	AV
4804	48.11	0.44	H	48.55	73.98	25.43	PK
4804	34.86	0.44	H	35.3	53.98	18.68	AV
7206	47.98	9.25	H	57.225	73.98	16.76	PK
7206	34.32	9.25	H	43.565	53.98	10.42	AV

Operation Mode: CH Low($\pi/4$ DQPSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	47.77	0.44	V	48.21	73.98	25.77	PK
4804	34.71	0.44	V	35.15	53.98	18.83	AV
7206	47.05	9.25	V	56.295	73.98	17.69	PK
7206	34.25	9.25	V	43.495	53.98	10.49	AV
4804	47.95	0.44	H	48.39	73.98	25.59	PK
4804	34.89	0.44	H	35.33	53.98	18.65	AV
7206	47.55	9.25	H	56.795	73.98	17.19	PK
7206	34.27	9.25	H	43.515	53.98	10.47	AV

Operation Mode: CH Mid(GFSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4882	48.23	0.96	V	49.19	73.98	24.79	PK
4882	35.31	0.96	V	36.27	53.98	17.71	AV
7323	47.36	9.14	V	56.5	73.98	17.48	PK
7323	34.38	9.14	V	43.52	53.98	10.46	AV
4882	48.30	0.96	H	49.26	73.98	24.72	PK
4882	35.40	0.96	H	36.36	53.98	17.62	AV
7323	47.61	9.14	H	56.75	73.98	17.23	PK
7323	34.49	9.14	H	43.63	53.98	10.35	AV

Operation Mode: CH Mid(8DPSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4882	47.45	0.96	V	48.41	73.98	25.57	PK
4882	35.37	0.96	V	36.33	53.98	17.65	AV
7323	48.12	9.14	V	57.26	73.98	16.72	PK
7323	34.51	9.14	V	43.65	53.98	10.33	AV
4882	48.52	0.96	H	49.48	73.98	24.50	PK
4882	35.59	0.96	H	36.55	53.98	17.43	AV
7323	47.91	9.14	H	57.05	73.98	16.93	PK
7323	33.41	9.14	H	42.55	53.98	11.43	AV

Operation Mode: CH Mid($\pi/4$ DQPSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4882	48.31	0.96	V	49.27	73.98	24.71	PK
4882	35.20	0.96	V	36.16	53.98	17.82	AV
7323	47.44	9.14	V	56.58	73.98	17.40	PK
7323	34.48	9.14	V	43.62	53.98	10.36	AV
4882	48.40	0.96	H	49.36	73.98	24.62	PK
4882	35.33	0.96	H	36.29	53.98	17.69	AV
7323	47.88	9.14	H	57.02	73.98	16.96	PK
7323	34.31	9.14	H	43.45	53.98	10.53	AV

Operation Mode: CH High(GFSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	48.08	0.66	V	48.74	73.98	25.24	PK
4960	36.31	0.66	V	36.97	53.98	17.01	AV
7440	45.96	10.16	V	56.12	73.98	17.86	PK
7440	33.35	10.16	V	43.51	53.98	10.47	AV
4960	48.51	0.66	H	49.17	73.98	24.81	PK
4960	36.49	0.66	H	37.15	53.98	16.83	AV
7440	47.09	10.16	H	57.25	73.98	16.73	PK
7440	33.67	10.16	H	43.83	53.98	10.15	AV

Operation Mode: CH High(8DPSK)

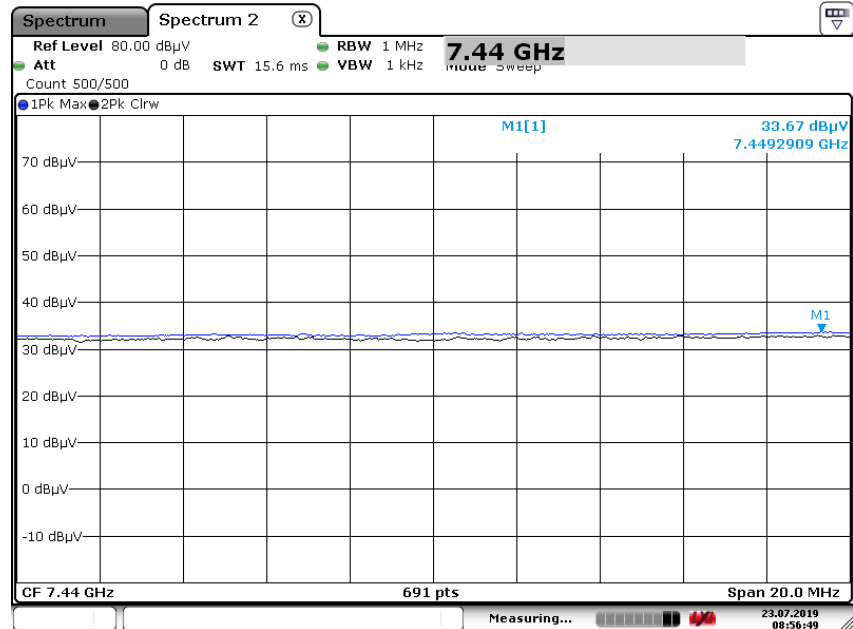
Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	48.12	0.66	V	48.78	73.98	25.20	PK
4960	35.34	0.66	V	36.00	53.98	17.98	AV
7440	45.09	10.16	V	55.25	73.98	18.73	PK
7440	33.41	10.16	V	43.57	53.98	10.41	AV
4960	48.55	0.66	H	49.21	73.98	24.77	PK
4960	35.40	0.66	H	36.06	53.98	17.92	AV
7440	45.12	10.16	H	55.28	73.98	18.70	PK
7440	33.49	10.16	H	43.65	53.98	10.33	AV

Operation Mode: CH High($\pi/4$ DQPSK)

Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	47.73	0.66	V	48.39	73.98	25.59	PK
4960	35.07	0.66	V	35.73	53.98	18.25	AV
7440	45.61	10.16	V	55.77	73.98	18.21	PK
7440	33.44	10.16	V	43.6	53.98	10.38	AV
4960	48.55	0.66	H	49.21	73.98	24.77	PK
4960	35.32	0.66	H	35.98	53.98	18.00	AV
7440	45.35	10.16	H	55.51	73.98	18.47	PK
7440	33.51	10.16	H	43.67	53.98	10.31	AV

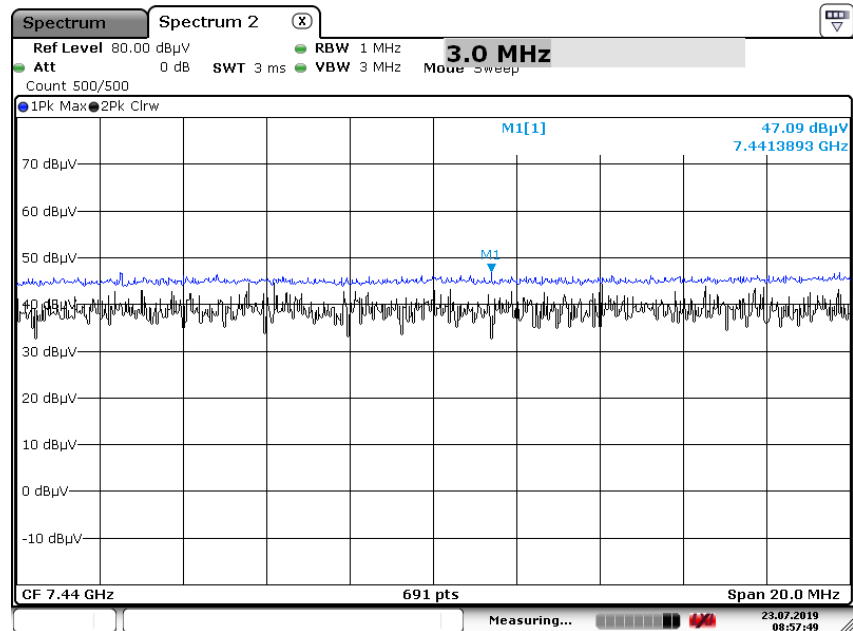
RESULT PLOTS (Worst case : Z-H)

Radiated Spurious Emissions plot – Average Reading (GFSK, Ch.78 3rd Harmonic)



Date: 23.JUL.2019 08:56:49

Radiated Spurious Emissions plot – Peak Reading (GFSK, Ch.78 3rd Harmonic)



Date: 23.JUL.2019 08:57:49

Note:

Plot of worst case are only reported.

10.6.3 RADIATED RESTRICTED BAND EDGES

Operation Mode	Normal(GFSK)
Operating Frequency	2402 MHz, 2480 MHz
Channel No	CH 0, CH 78

Frequency [MHz]	Reading [dBuV]	A.F + C.L + D.F -AMP+ATT [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	19.98	33.39	H	53.37	73.98	20.62	PK
2390.0	9.74	33.39	H	43.13	53.98	10.85	AV
2390.0	20.10	33.39	V	53.49	73.98	20.49	PK
2390.0	9.83	33.39	V	43.22	53.98	10.76	AV
2483.5	24.48	33.39	H	57.87	73.98	16.11	PK
2483.5	12.03	33.39	H	45.42	53.98	8.56	AV
2483.5	25.25	33.39	V	58.64	73.98	15.35	PK
2483.5	12.14	33.39	V	45.53	53.98	8.45	AV

Operation Mode	EDR(8DPSK)
Operating Frequency	2402 MHz, 2480 MHz
Channel No	CH 0, CH 78

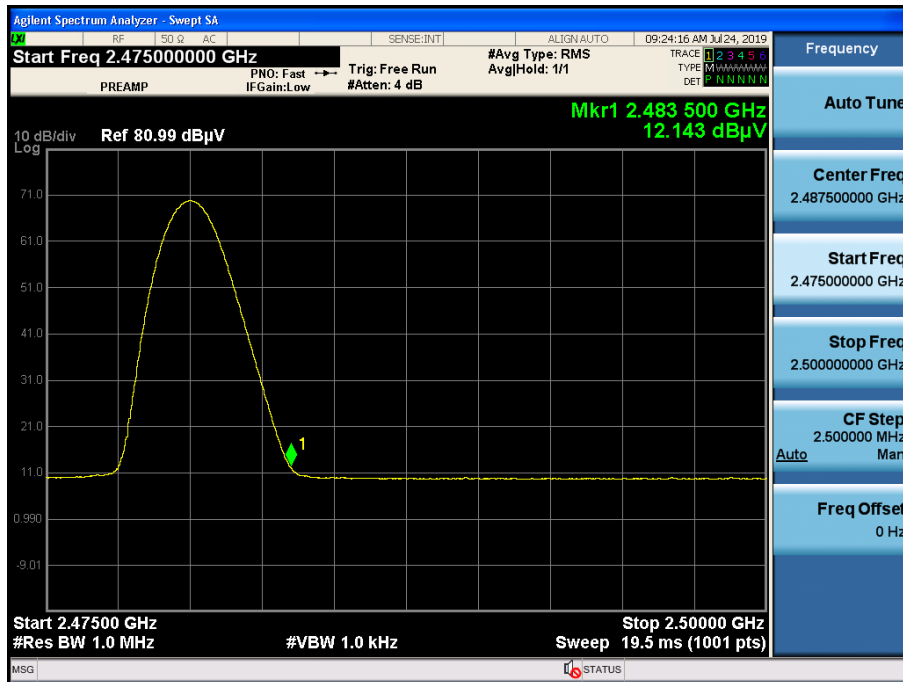
Frequency [MHz]	Reading [dBuV]	A.F + C.L + D.F -AMP+ATT [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	20.25	33.39	H	53.64	73.98	20.34	PK
2390.0	9.75	33.39	H	43.14	53.98	10.84	AV
2390.0	20.34	33.39	V	53.73	73.98	20.25	PK
2390.0	9.82	33.39	V	43.21	53.98	10.77	AV
2483.5	23.93	33.39	H	57.32	73.98	16.66	PK
2483.5	10.78	33.39	H	44.17	53.98	9.81	AV
2483.5	24.47	33.39	V	57.86	73.98	16.12	PK
2483.5	10.82	33.39	V	44.21	53.98	9.77	AV

Operation Mode	EDR(π /4DQPSK)
Operating Frequency	2402 MHz, 2480 MHz
Channel No	CH 0, CH 78

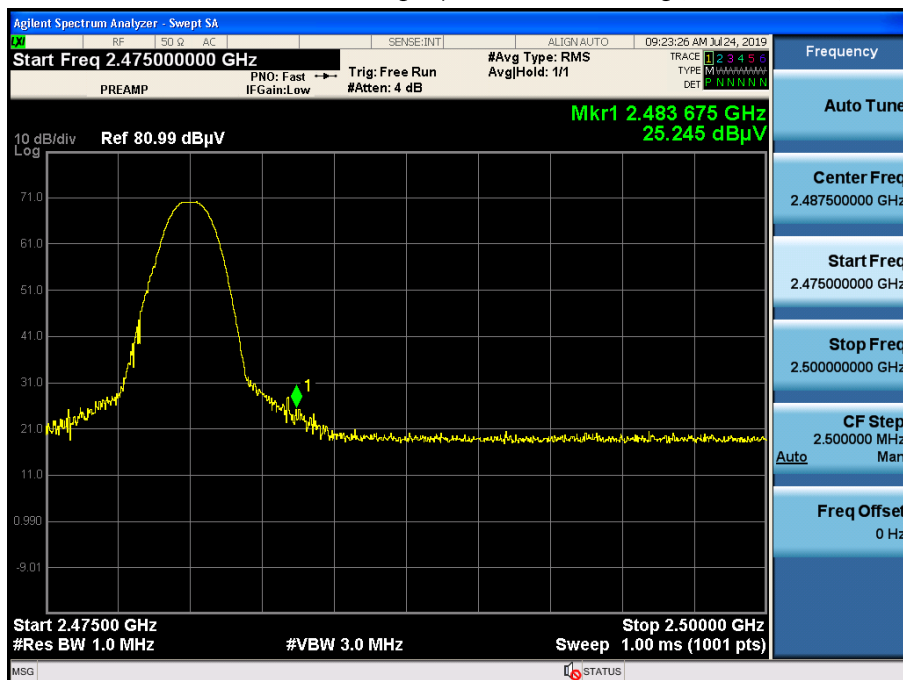
Frequency [MHz]	Reading [dBuV]	A.F + C.L + D.F -AMP+ATT [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	20.14	33.39	H	53.53	73.98	20.45	PK
2390.0	9.82	33.39	H	43.21	53.98	10.77	AV
2390.0	20.16	33.39	V	53.55	73.98	20.43	PK
2390.0	9.84	33.39	V	43.23	53.98	10.75	AV
2483.5	23.52	33.39	H	56.91	73.98	17.07	PK
2483.5	10.60	33.39	H	43.99	53.98	9.99	AV
2483.5	24.90	33.39	V	58.29	73.98	15.69	PK
2483.5	10.81	33.39	V	44.20	53.98	9.78	AV

RESULT PLOTS (Worst case : Y-V)

Radiated Restricted Band Edges plot – Peak Reading (GFSK, Ch.78)



Radiated Restricted Band Edges plot – Peak Reading (8DPSK, Ch.78)



Note:

Plot of worst case are only reported.

10.7 RECEIVER SPURIOUS EMISSIONS

Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.

Frequency Range : Above 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

10.8 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions (Line 1)

BT L1

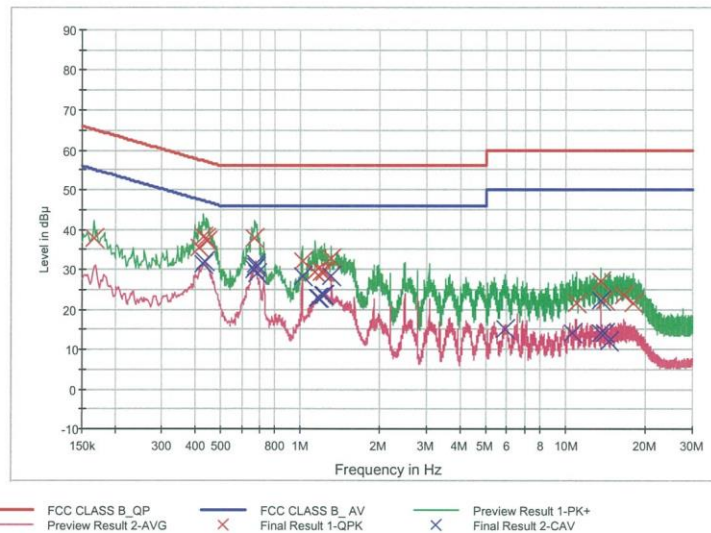
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HCT TEST Report

Common Information

EUT: SM-R825U
Manufacturer: SAMSUNG
Test Site: SHIELD ROOM
Operating Conditions: BT L1

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.166000	37.8	9.000	Off	L1	9.7	27.3	65.2
0.414000	35.4	9.000	Off	L1	9.7	22.1	57.6
0.432000	38.3	9.000	Off	L1	9.7	19.0	57.2
0.442000	37.8	9.000	Off	L1	9.7	19.2	57.0
0.446000	37.1	9.000	Off	L1	9.7	19.8	56.9
0.670000	37.6	9.000	Off	L1	9.8	18.4	56.0
1.016000	31.9	9.000	Off	L1	9.8	24.1	56.0
1.020000	31.9	9.000	Off	L1	9.8	24.1	56.0
1.140000	29.2	9.000	Off	L1	9.8	26.8	56.0
1.208000	29.4	9.000	Off	L1	9.8	26.6	56.0
1.228000	29.4	9.000	Off	L1	9.8	26.6	56.0
1.308000	32.7	9.000	Off	L1	9.9	23.3	56.0
10.912000	21.4	9.000	Off	L1	10.3	38.6	60.0
13.560000	27.0	9.000	Off	L1	10.4	33.0	60.0
13.620000	22.0	9.000	Off	L1	10.4	38.0	60.0
14.096000	22.3	9.000	Off	L1	10.4	37.7	60.0
16.442000	23.6	9.000	Off	L1	10.5	36.4	60.0
17.888000	21.4	9.000	Off	L1	10.5	38.6	60.0

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BT L1

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.432000	31.5	9.000	Off	L1	9.7	15.7	47.2
0.436000	32.0	9.000	Off	L1	9.7	15.2	47.1
0.670000	30.0	9.000	Off	L1	9.8	16.0	46.0
0.678000	31.4	9.000	Off	L1	9.8	14.6	46.0
0.682000	30.5	9.000	Off	L1	9.8	15.5	46.0
0.686000	29.1	9.000	Off	L1	9.8	16.9	46.0
1.018000	28.4	9.000	Off	L1	9.8	17.6	46.0
1.166000	23.0	9.000	Off	L1	9.8	23.0	46.0
1.182000	22.8	9.000	Off	L1	9.8	23.2	46.0
1.214000	23.7	9.000	Off	L1	9.8	22.3	46.0
1.228000	23.5	9.000	Off	L1	9.8	22.5	46.0
1.308000	28.2	9.000	Off	L1	9.9	17.8	46.0
5.920000	15.2	9.000	Off	L1	10.1	34.8	50.0
10.616000	14.1	9.000	Off	L1	10.3	35.9	50.0
13.560000	22.2	9.000	Off	L1	10.4	27.8	50.0
13.620000	14.2	9.000	Off	L1	10.4	35.8	50.0
14.096000	13.9	9.000	Off	L1	10.4	36.1	50.0
14.602000	12.1	9.000	Off	L1	10.4	37.9	50.0

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Conducted Emissions (Line 2)

BT N

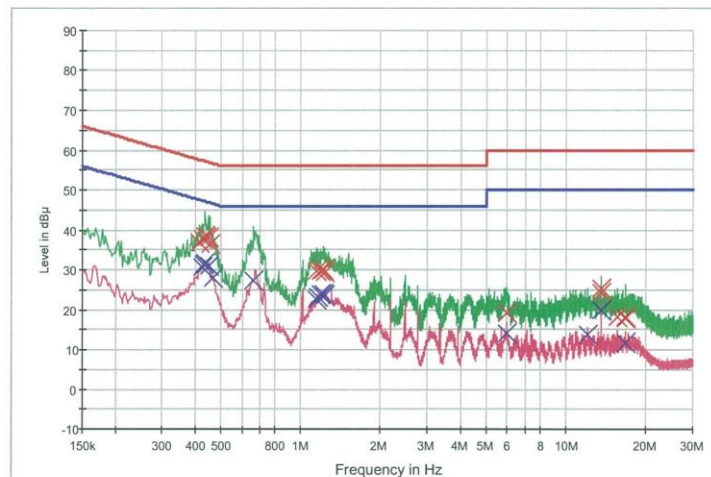
1 / 2

HCT TEST Report

Common Information

EUT: SM-R825U
Manufacturer: SAMSUNG
Test Site: SHIELD ROOM
Operating Conditions: BT N

FCC CLASS B_Exten Cable



— FCC CLASS B_QP — FCC CLASS B_AV — Preview Result 1-PK+
— Preview Result 2-AVG — Final Result 1-QPK — Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.416000	36.7	9.000	Off	N	9.9	20.8	57.5
0.424000	38.0	9.000	Off	N	9.9	19.4	57.4
0.436000	38.6	9.000	Off	N	9.9	18.6	57.1
0.440000	38.0	9.000	Off	N	9.9	19.1	57.1
0.448000	38.0	9.000	Off	N	9.9	18.9	56.9
0.456000	36.3	9.000	Off	N	9.9	20.5	56.8
1.144000	29.6	9.000	Off	N	10.0	26.4	56.0
1.148000	29.7	9.000	Off	N	10.0	26.3	56.0
1.192000	29.8	9.000	Off	N	10.0	26.2	56.0
1.214000	30.1	9.000	Off	N	10.0	26.0	56.0
1.226000	29.4	9.000	Off	N	10.0	26.6	56.0
1.236000	29.3	9.000	Off	N	10.0	26.7	56.0
5.968000	19.1	9.000	Off	N	10.3	40.9	60.0
13.558000	24.2	9.000	Off	N	10.6	35.8	60.0
13.562000	25.4	9.000	Off	N	10.6	34.6	60.0
15.554000	18.1	9.000	Off	N	10.7	41.9	60.0
16.748000	18.0	9.000	Off	N	10.7	42.0	60.0
16.754000	17.7	9.000	Off	N	10.7	42.3	60.0

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BT N

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.424000	30.8	9.000	Off	N	9.9	16.6	47.4
0.432000	31.4	9.000	Off	N	9.9	15.8	47.2
0.436000	31.7	9.000	Off	N	9.9	15.4	47.1
0.448000	31.1	9.000	Off	N	9.9	15.8	46.9
0.464000	28.1	9.000	Off	N	9.9	18.6	46.6
0.664000	27.4	9.000	Off	N	9.9	18.6	46.0
1.144000	22.4	9.000	Off	N	10.0	23.6	46.0
1.148000	22.7	9.000	Off	N	10.0	23.3	46.0
1.166000	23.3	9.000	Off	N	10.0	22.7	46.0
1.192000	23.7	9.000	Off	N	10.0	22.3	46.0
1.214000	24.0	9.000	Off	N	10.0	22.0	46.0
1.226000	23.5	9.000	Off	N	10.0	22.5	46.0
5.964000	14.0	9.000	Off	N	10.3	36.0	50.0
5.968000	13.9	9.000	Off	N	10.3	36.1	50.0
12.072000	13.6	9.000	Off	N	10.5	36.4	50.0
13.558000	19.7	9.000	Off	N	10.6	30.3	50.0
13.562000	19.9	9.000	Off	N	10.6	30.1	50.0
16.748000	11.6	9.000	Off	N	10.7	38.4	50.0

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11. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/12/2018	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/18/2019	Annual	100033
ESPAC	SU-642 / Temperature Chamber	03/12/2019	Annual	0093008124
Agilent	N9020A / Signal Analyzer	05/23/2019	Annual	MY51110085
Agilent	N9020A / Signal Analyzer	05/24/2019	Annual	MY52090906
Agilent	N9030A / Signal Analyzer	01/10/2019	Annual	MY49431210
Rohde & Schwarz	OSP 120 / Power Measurement Set	07/24/2019	Annual	101231
Agilent	N1911A / Power Meter	04/10/2019	Annual	MY45100523
Agilent	N1921A / Power Sensor	04/10/2019	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/20/2018	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	05/24/2019	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/18/2019	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	07/02/2019	Annual	07560
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	N/A	N/A
Rohde & Schwarz	CBT / Bluetooth Tester	05/16/2019	Annual	100422

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	08/23/2018	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	03/22/2019	Biennial	760
Schwarzbeck	VULB 9160 / TRILOG Antenna	08/09/2018	Biennial	9160-3368
Schwarzbeck	BBHA 9120D / Horn Antenna	04/29/2019	Biennial	9120D-937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	09/03/2018	Annual	100688
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/28/2018	Annual	101068-SZ
Agilent	N9020A / Signal Analyzer	05/23/2019	Annual	MY51110085
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	05/23/2019	Annual	8
Wainwright Instruments	WHKX7.0/18G-8SS / High Pass Filter	05/03/2019	Annual	29
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	06/19/2019	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2019	Annual	2
Api tech.	18B-03 / Attenuator (3 dB)	06/04/2019	Annual	1
Agilent	8493C-10 / Attenuator(10 dB)	07/15/2019	Annual	08285
CERNEX	CBLU1183540 / Power Amplifier	07/01/2019	Annual	22964
CERNEX	CBL06185030 / Power Amplifier	07/01/2019	Annual	22965
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/18/2019	Annual	25956
TESCOM	TC-3000C / Bluetooth Tester	03/26/2019	Annual	3000C000276

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

12. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1907-FI021-P