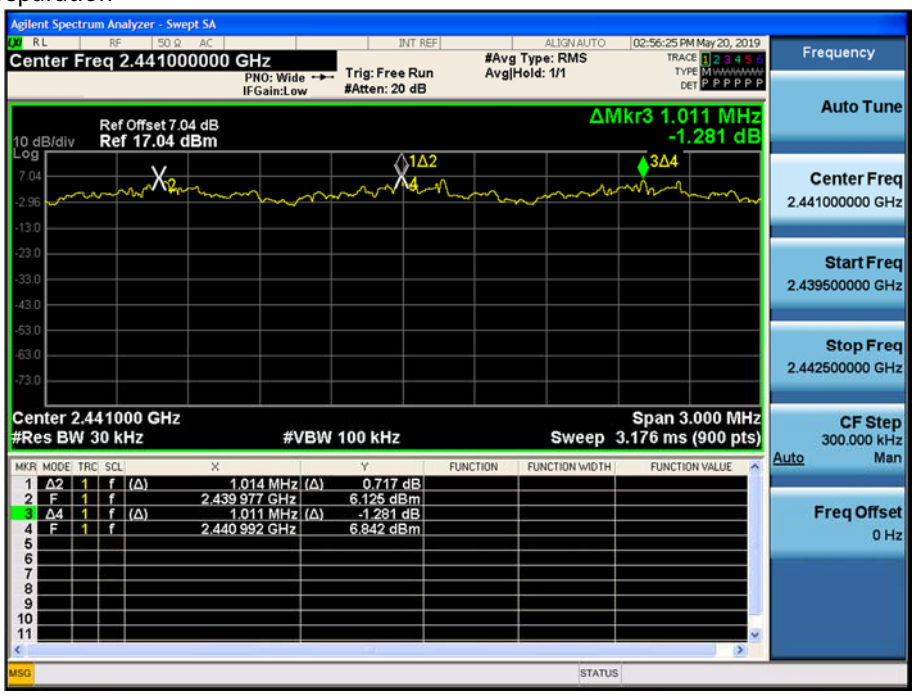
Test Plots (GFSK)

Channel Separation

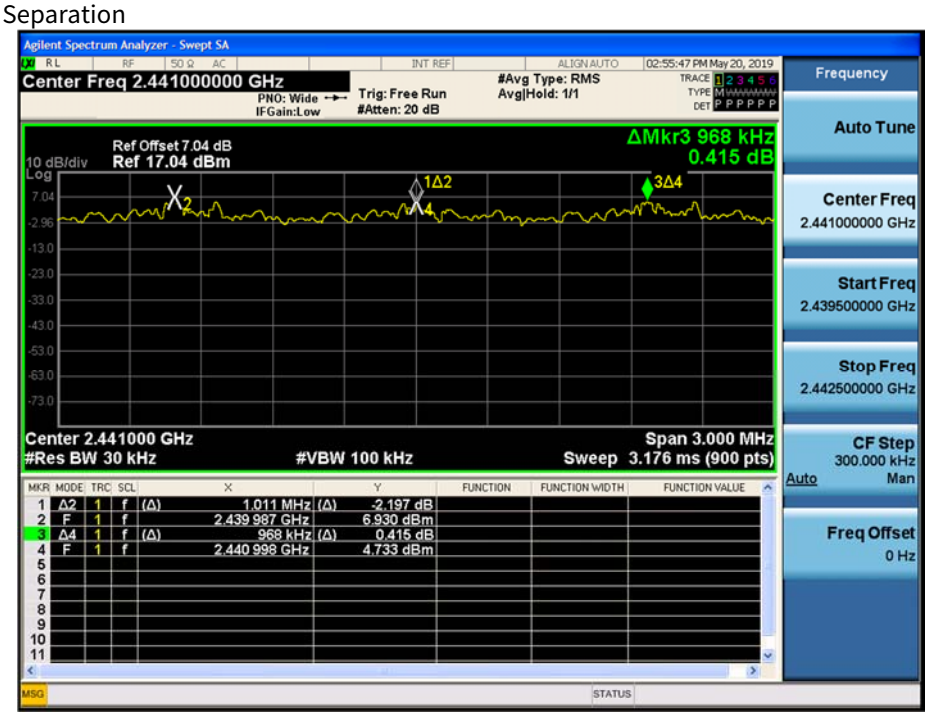
Test Plots (8DPSK)

Channel Separation



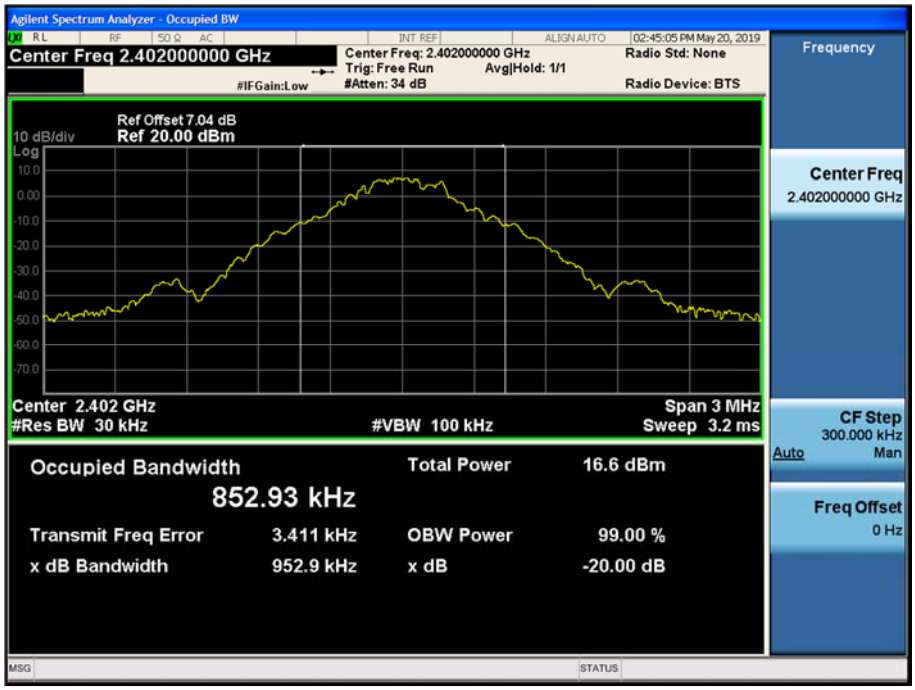
Test Plots (π/4DQPSK)

Channel Separation



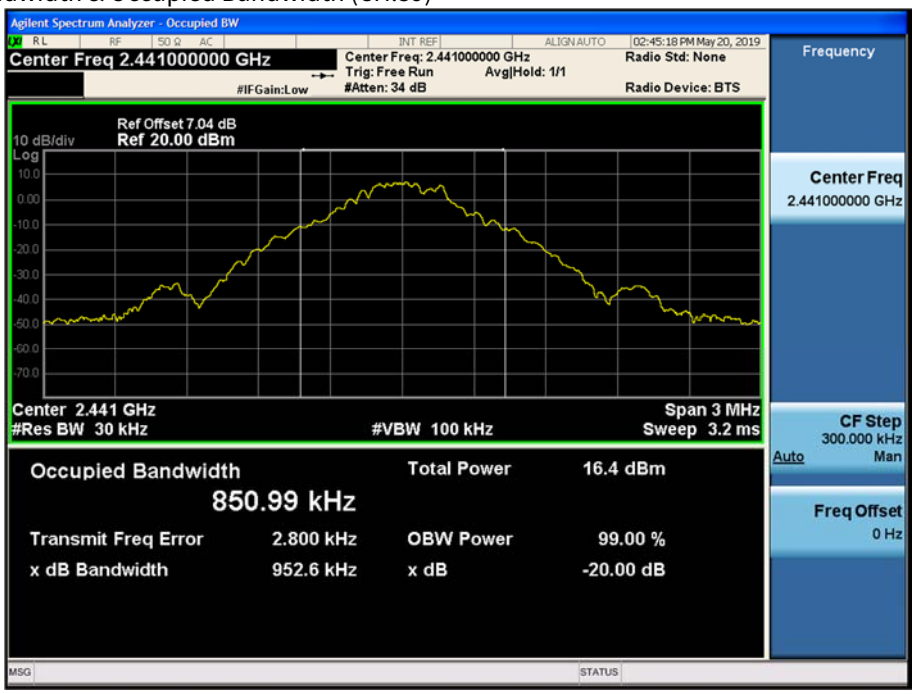
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



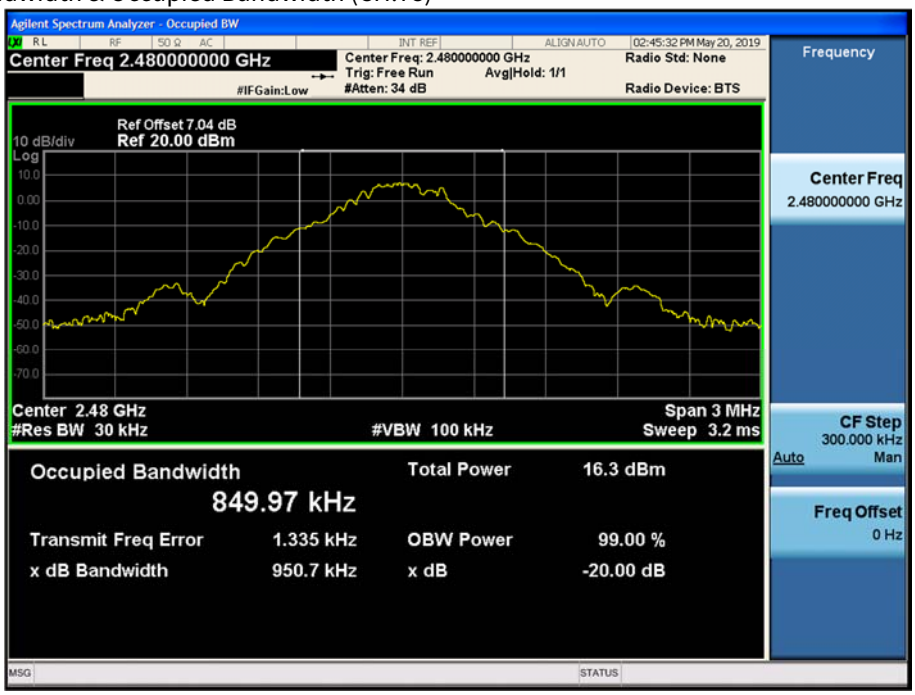
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



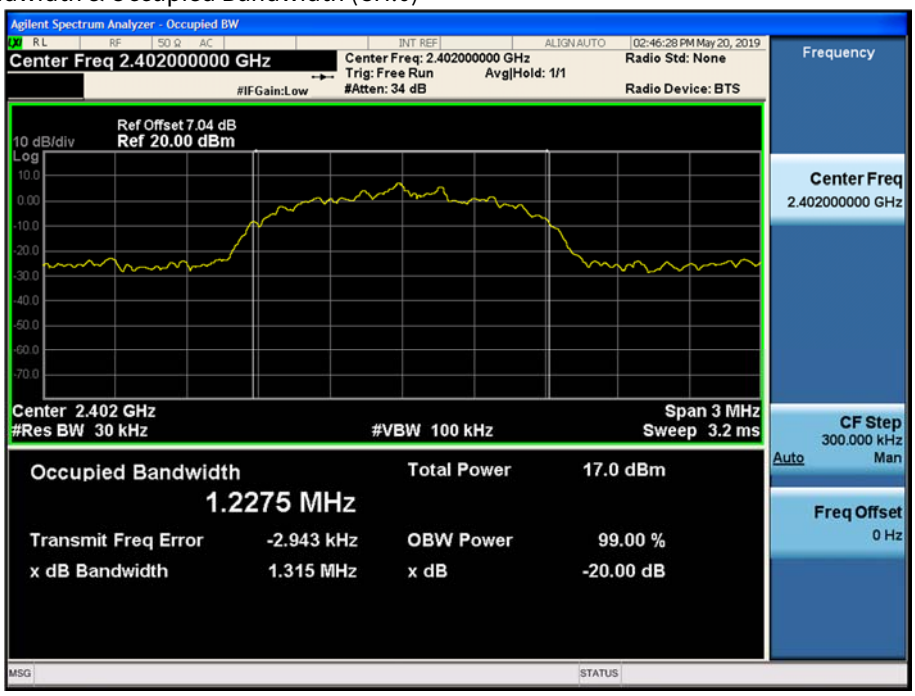
Test Plots (GFSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



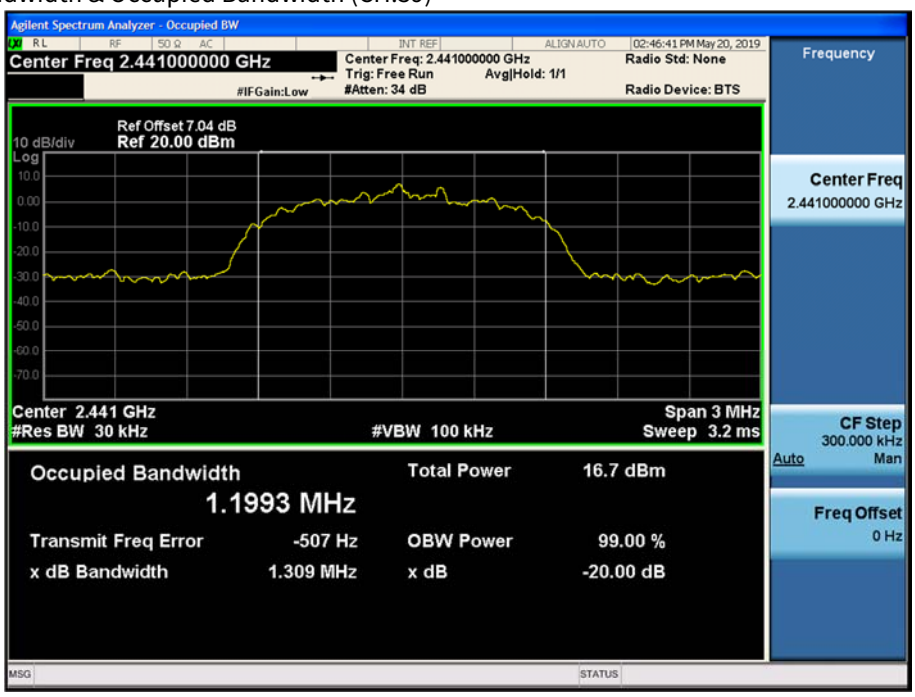
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



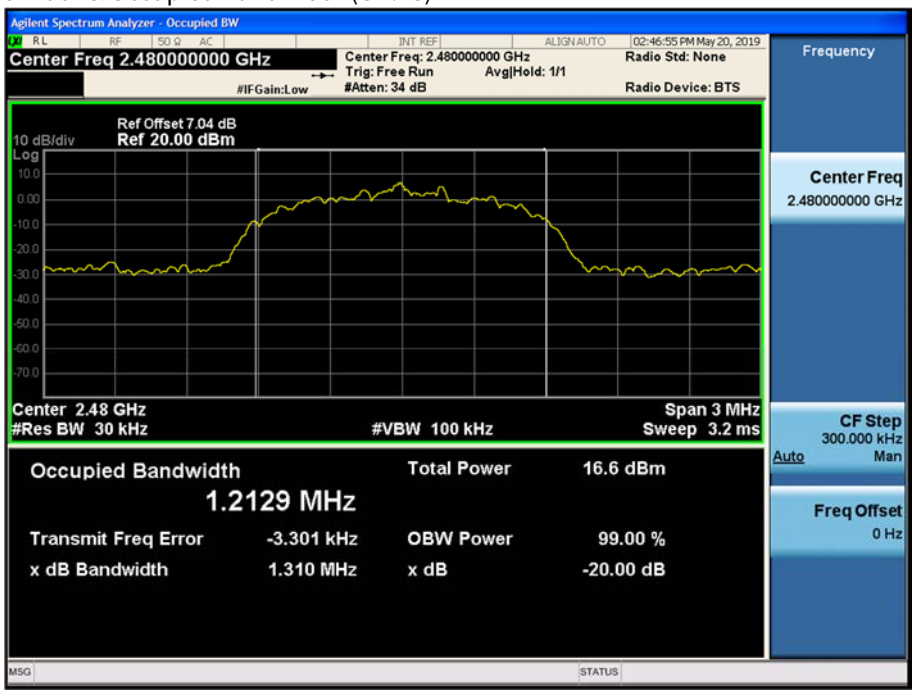
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



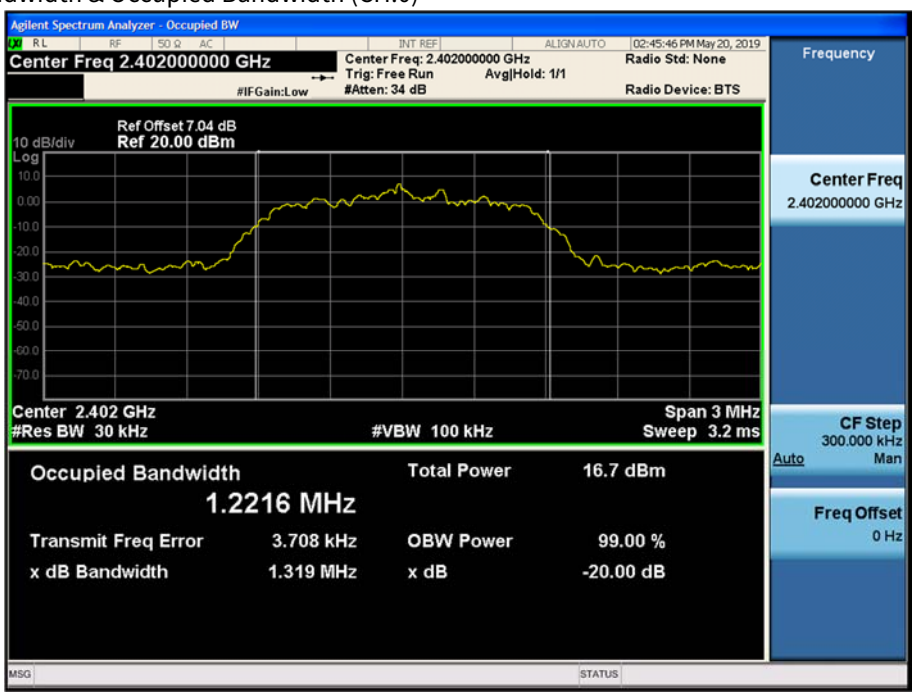
Test Plots (8DPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



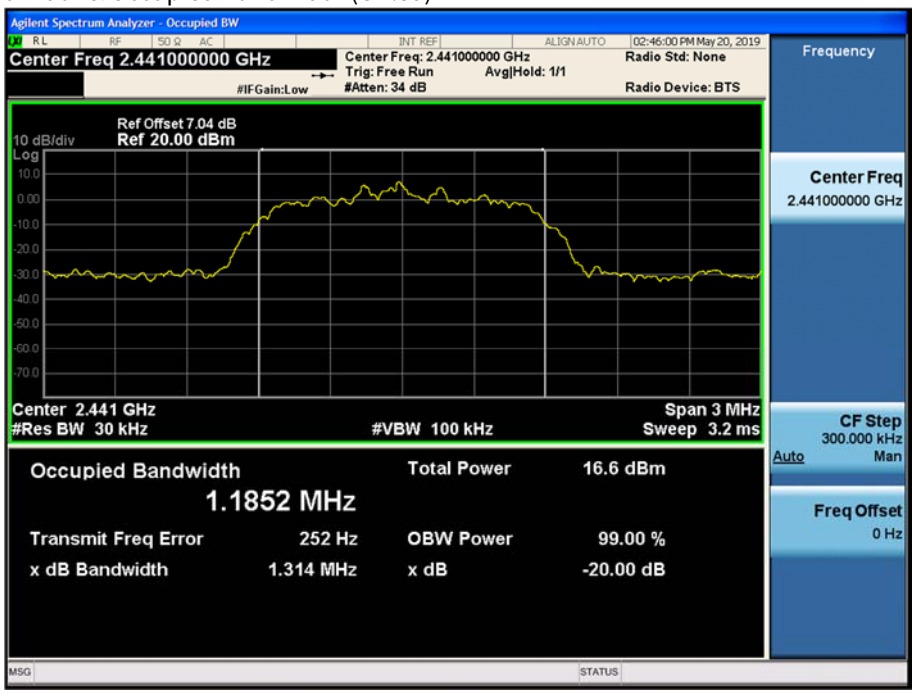
Test Plots (π/4DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.0)



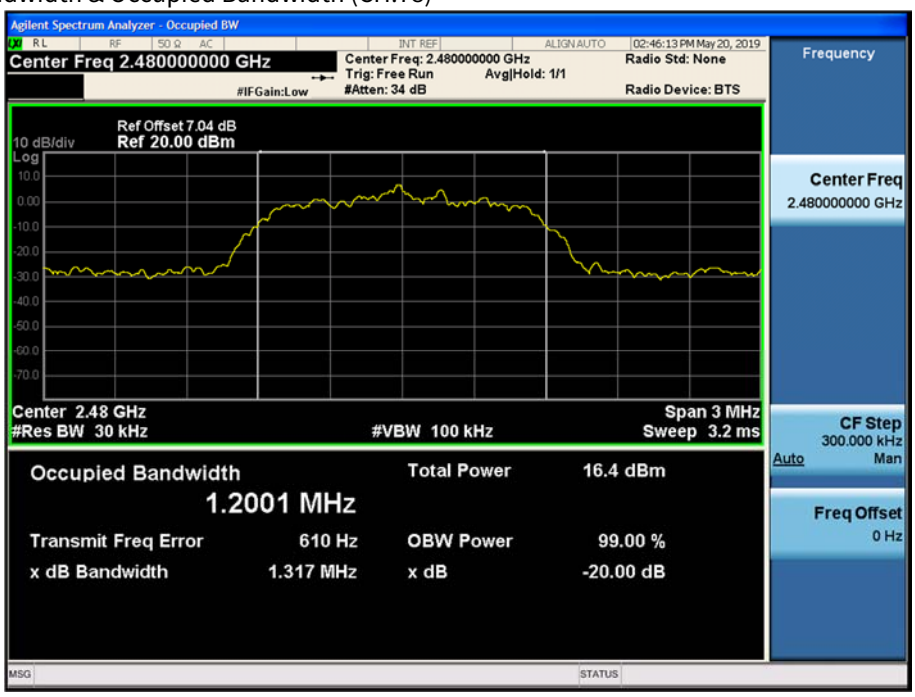
Test Plots (π/4DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.39)



Test Plots (π/4DQPSK)

20 dB Bandwidth & Occupied Bandwidth (CH.78)



10.4 NUMBER OF HOPPING FREQUENCY

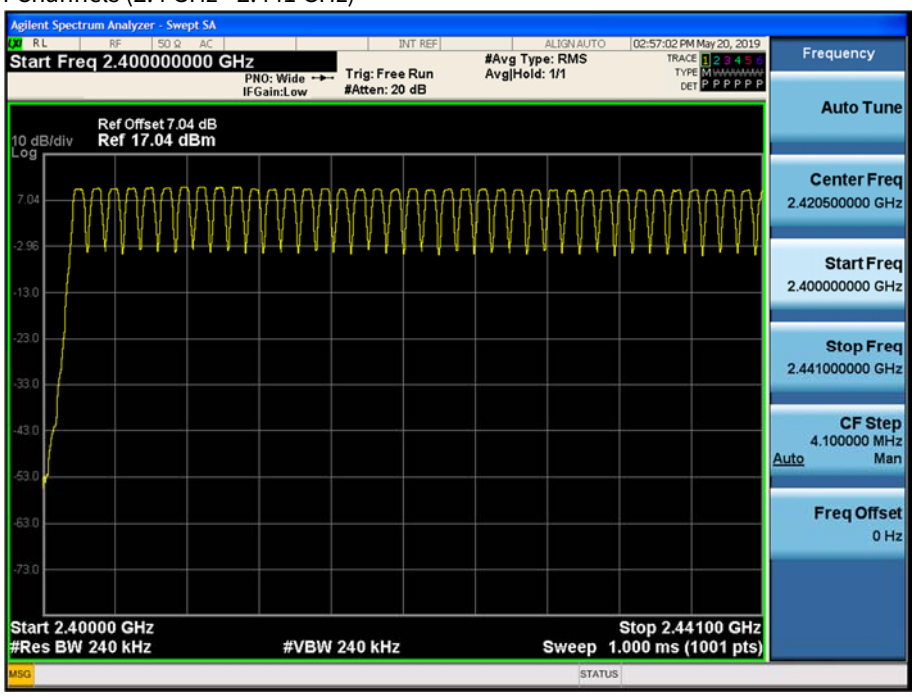
Result (No. of CH)			Limit
GFSK	8DPSK	π/4DQPSK	
79	79	79	>15

Note :

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

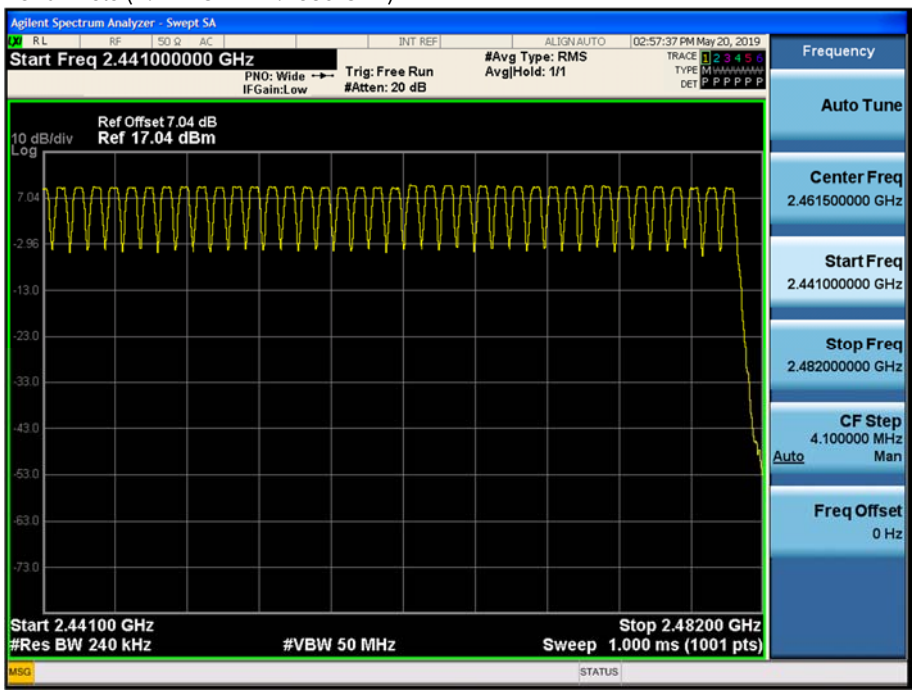
Test Plots (GFSK)

Number of Channels (2.4 GHz - 2.441 GHz)



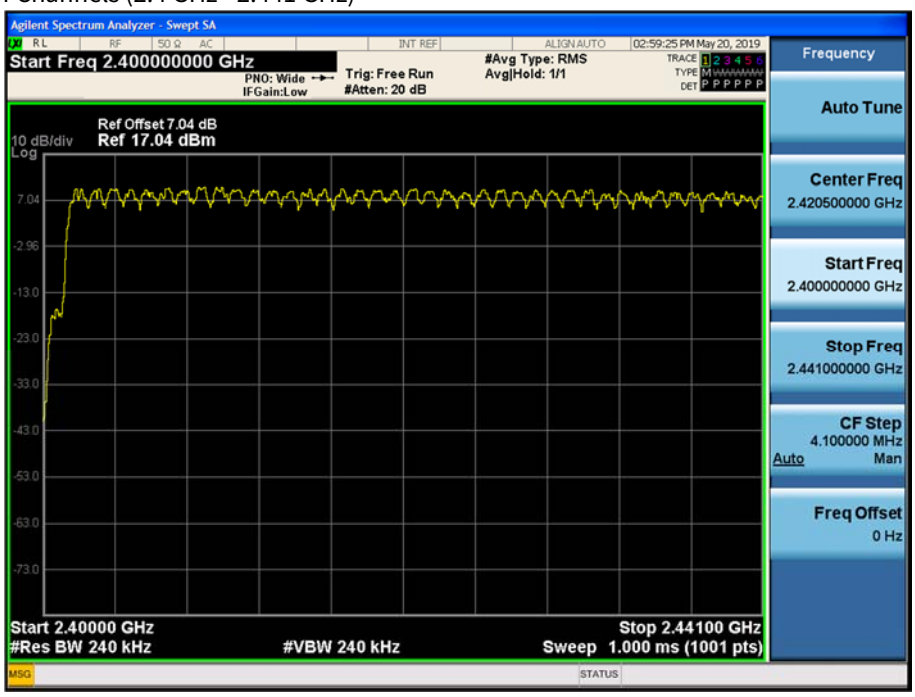
Test Plots (GFSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



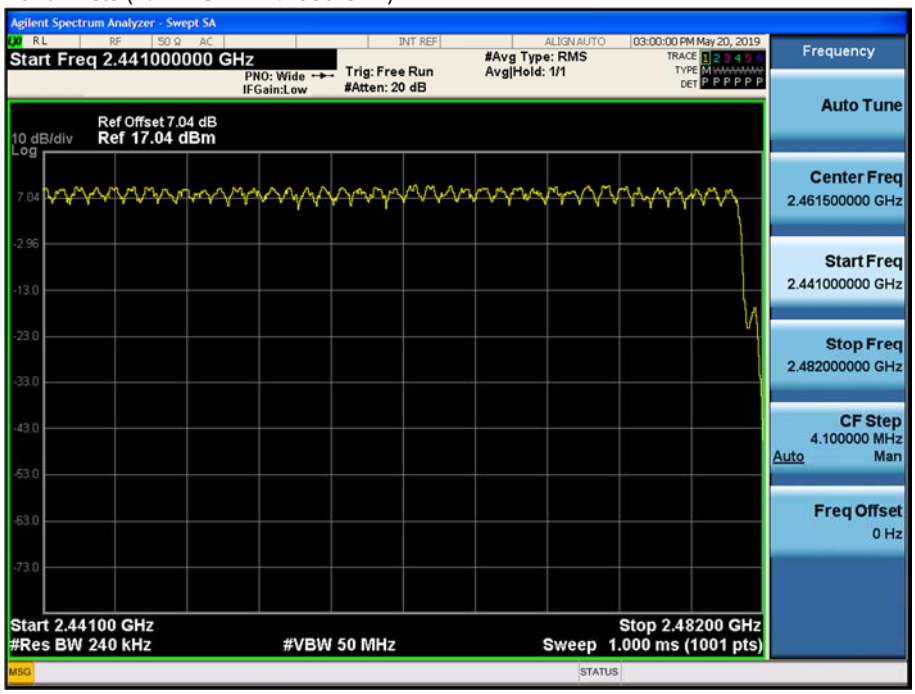
Test Plots (8DPSK)

Number of Channels (2.4 GHz - 2.441 GHz)



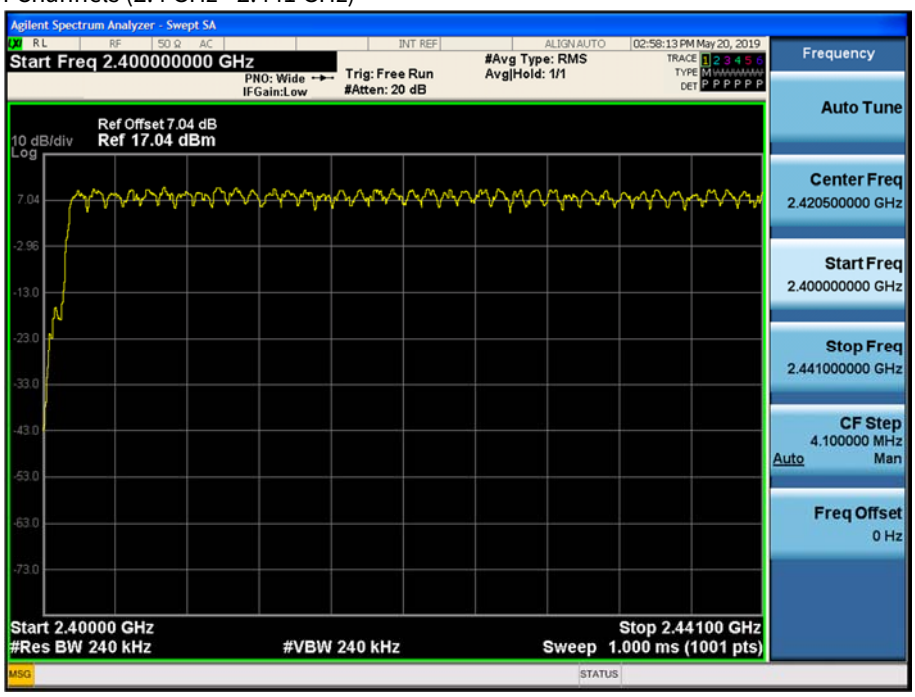
Test Plots (8DPSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



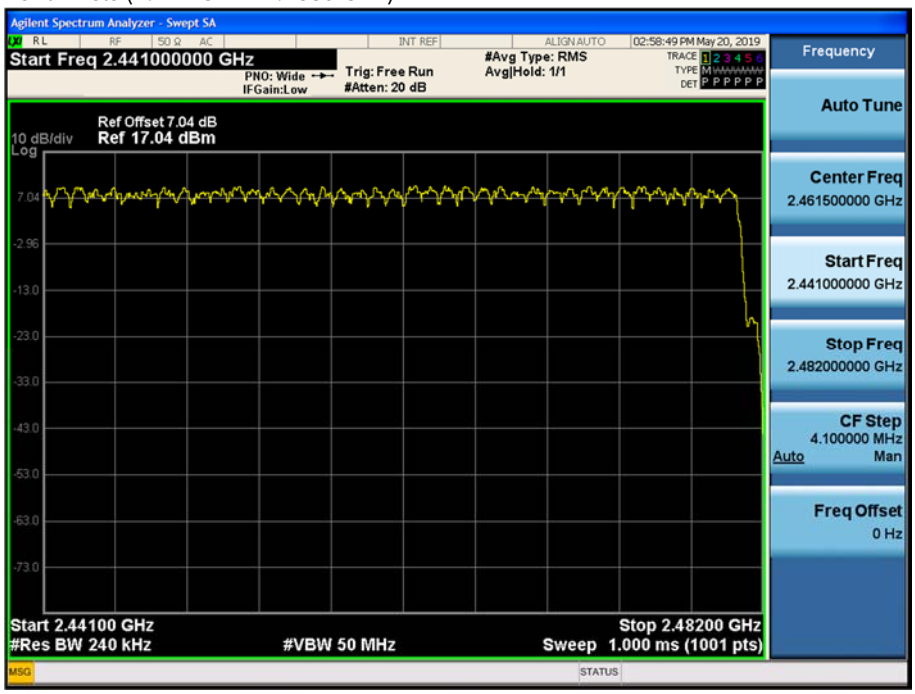
Test Plots (π/4DQPSK)

Number of Channels (2.4 GHz - 2.441 GHz)



Test Plots (π/4DQPSK)

Number of Channels (2.441 GHz - 2.4835 GHz)



10.5 TIME OF OCCUPANCY (DWELL TIME)

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

Non-AFH Mode

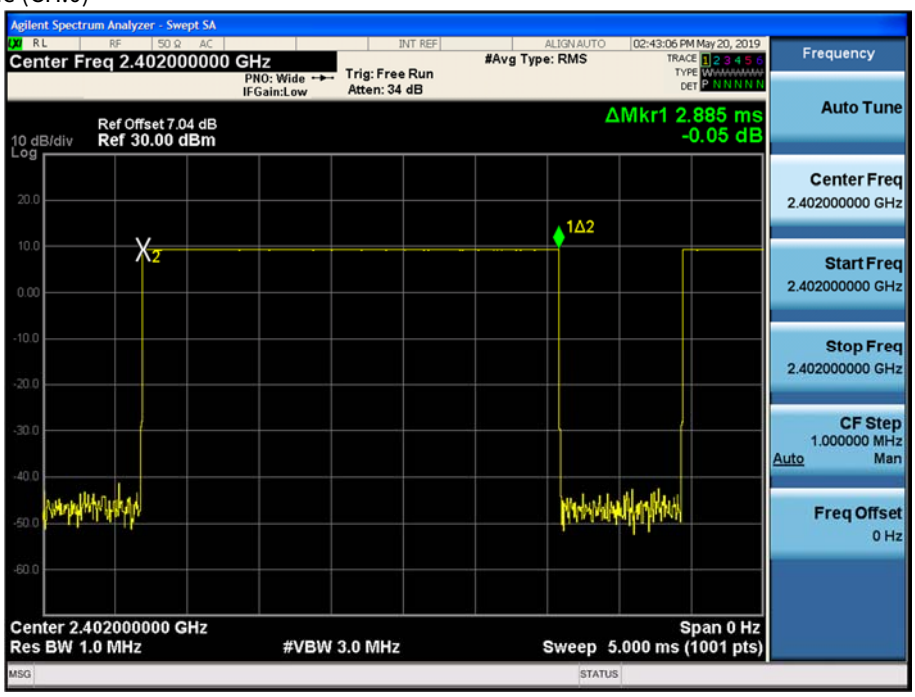
	Channel	GFSK	8DPSK	π/4DQPSK	Period Time (s)	Limit (ms)
Total of Dwell (ms)	Low	307.73	308.27	307.73	31.6	400
	Mid	307.73	308.27	307.73	31.6	
	High	307.73	308.27	308.27	31.6	

AFH Mode

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

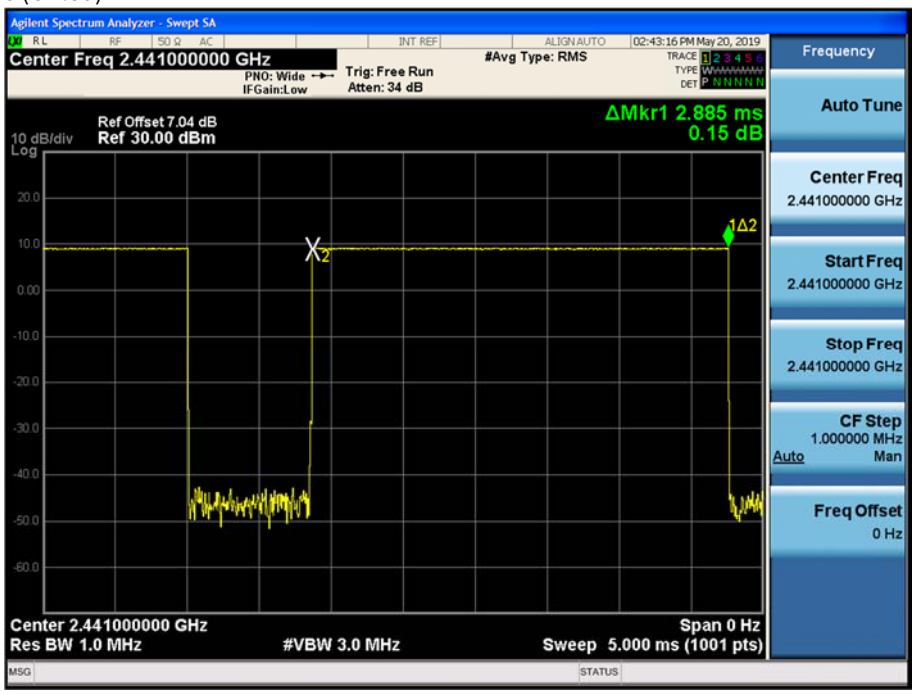
Test Plots (GFSK)

Dwell Time (CH.0)



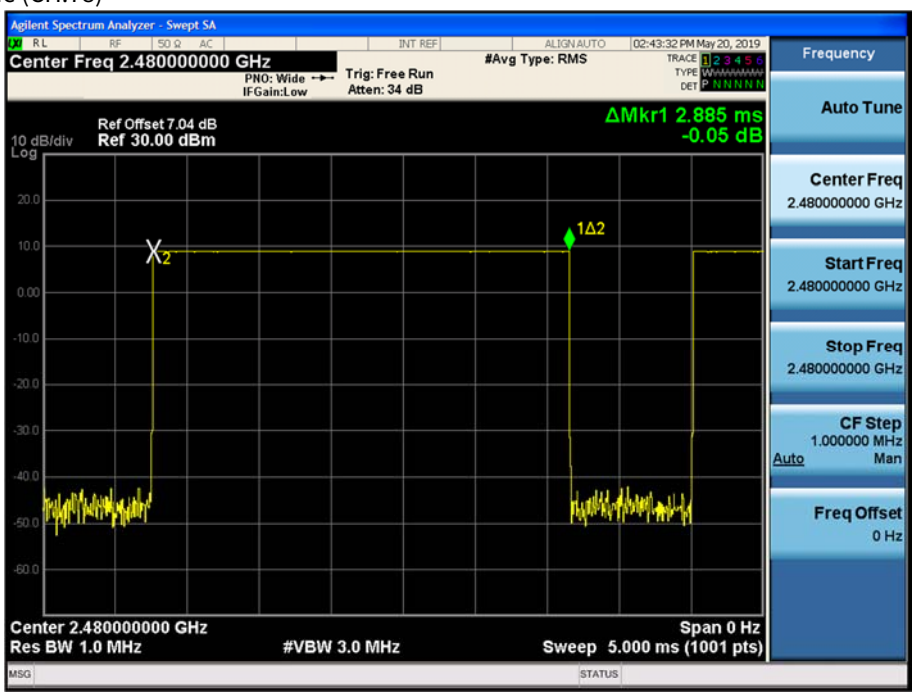
Test Plots (GFSK)

Dwell Time (CH.39)



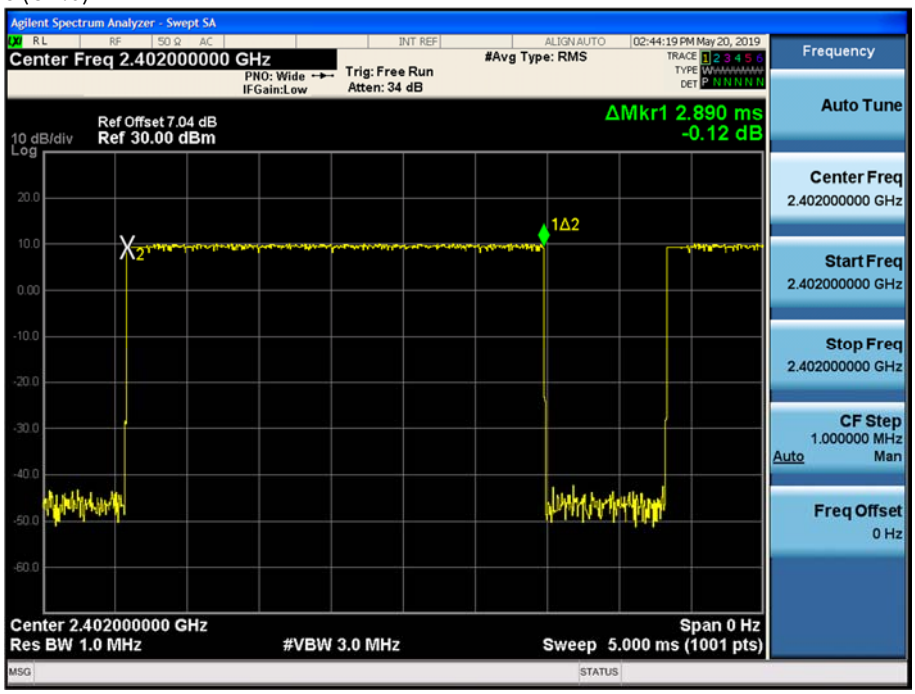
Test Plots (GFSK)

Dwell Time (CH.78)



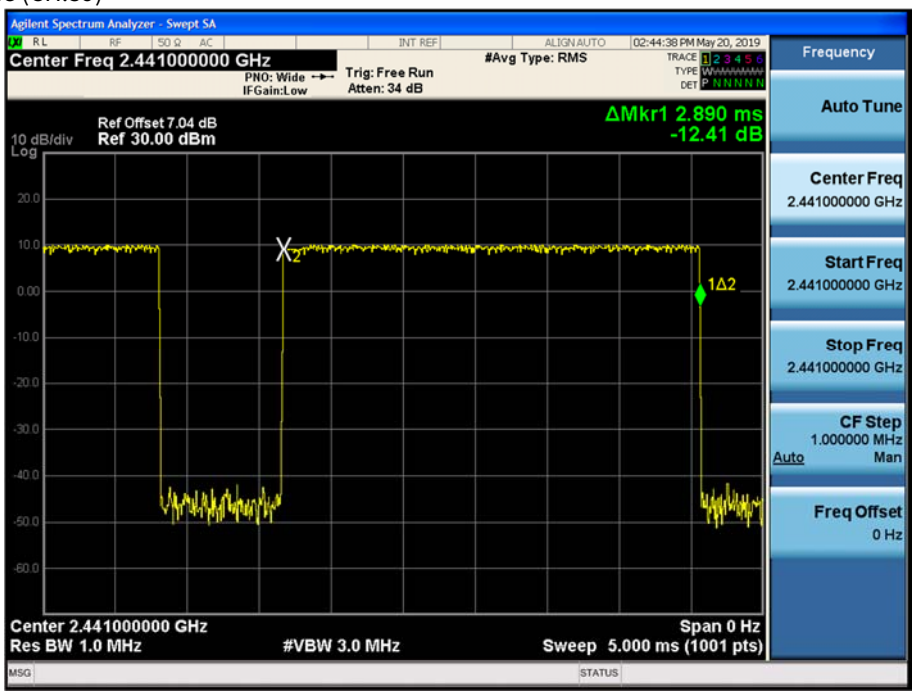
Test Plots (8DPSK)

Dwell Time (CH.0)



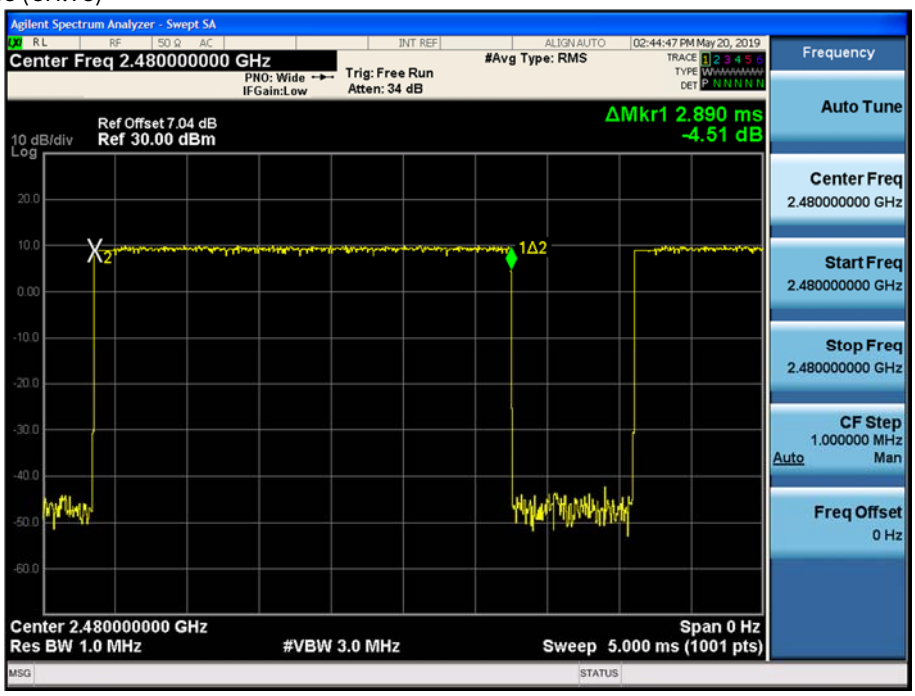
Test Plots (8DPSK)

Dwell Time (CH.39)



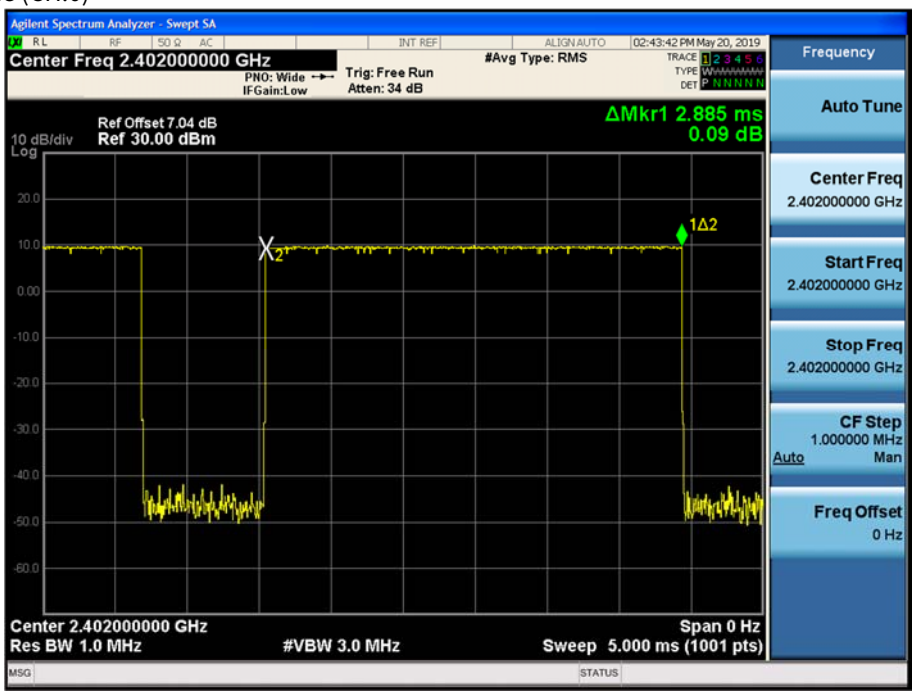
Test Plots (8DPSK)

Dwell Time (CH.78)



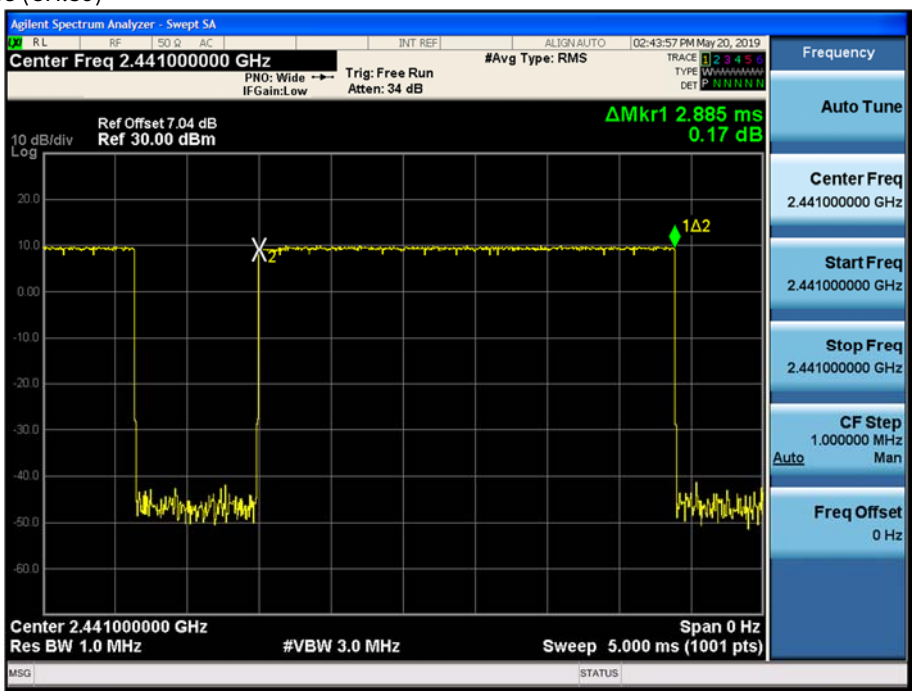
Test Plots (π/4DQPSK)

Dwell Time (CH.0)



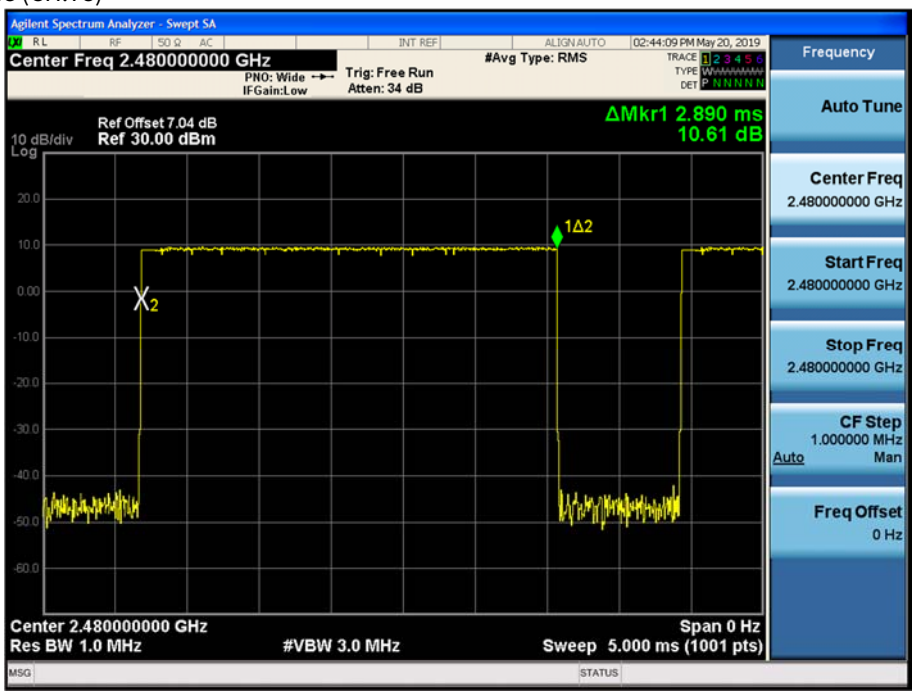
Test Plots (π/4DQPSK)

Dwell Time (CH.39)



Test Plots (π/4DQPSK)

Dwell Time (CH.78)



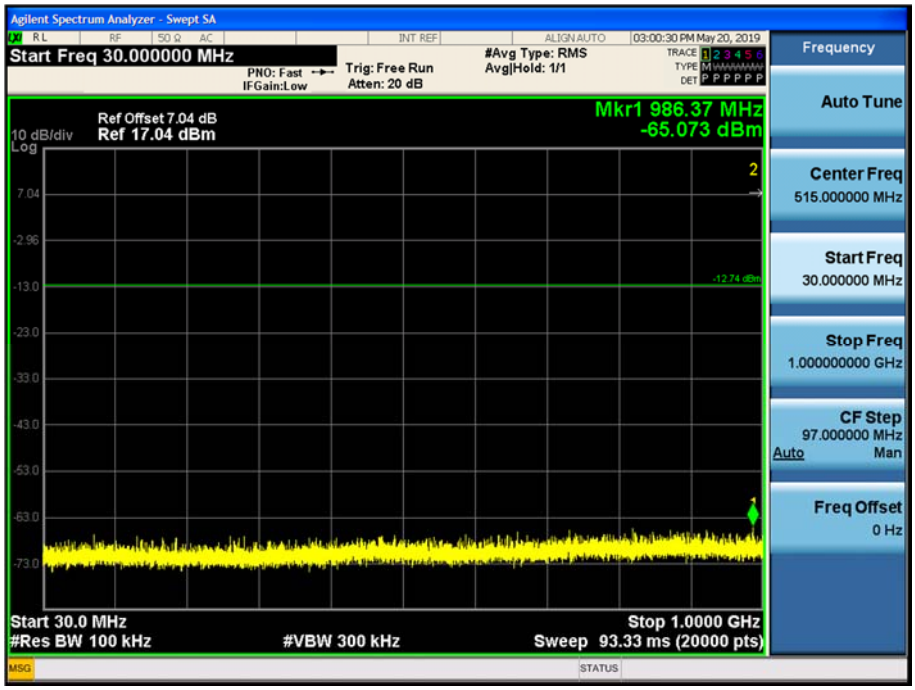
10.6 SPURIOUS EMISSIONS

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.

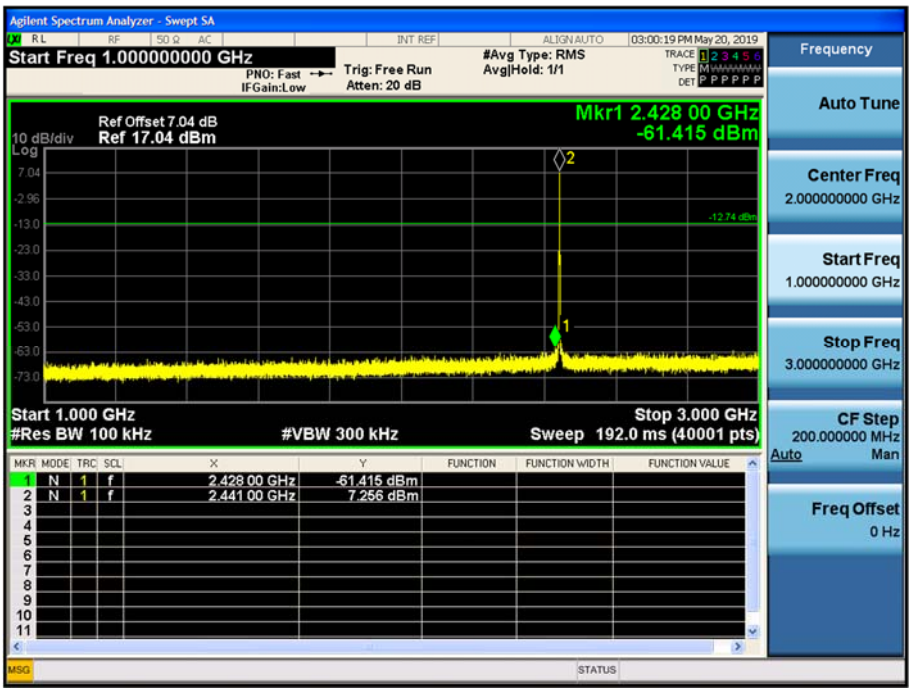
Test Plots (8DPSK)- 30 MHz - 1 GHz

Spurious Emission (CH.39)



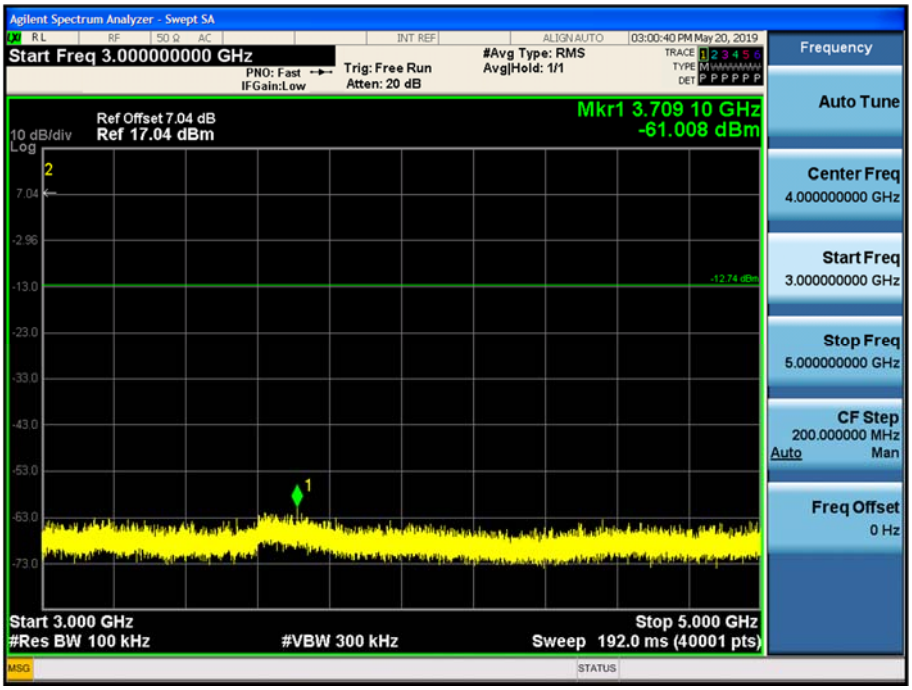
Test Plots (8DPSK)- 1 GHz – 3 GHz

Spurious Emission (CH.39)



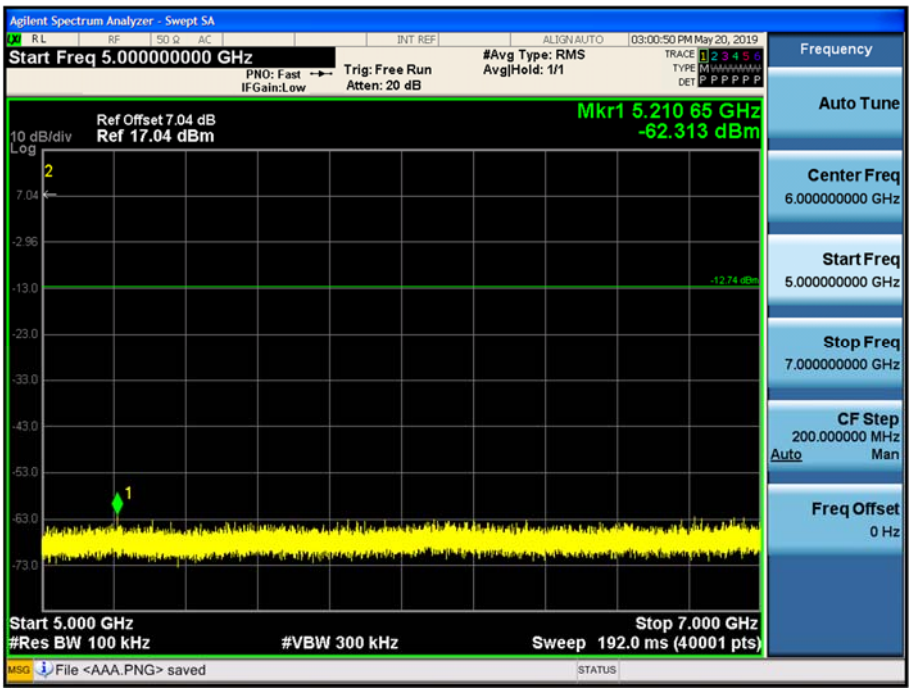
Test Plots(8DPSK)- 3 GHz - 5 GHz

Spurious Emission (CH.39)



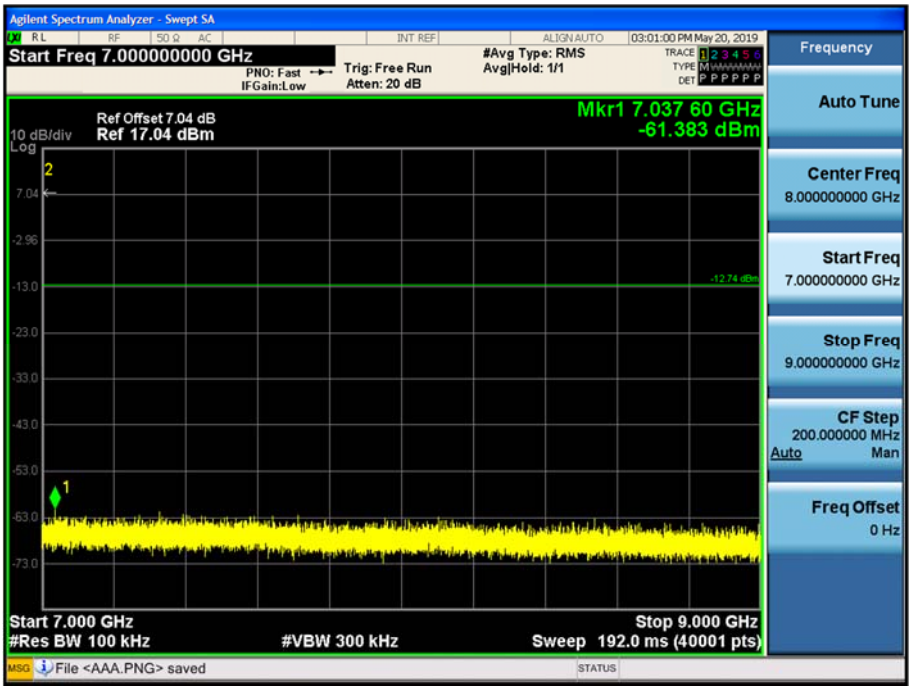
Test Plots (8DPSK)- 5 GHz - 7 GHz

Spurious Emission (CH.39)



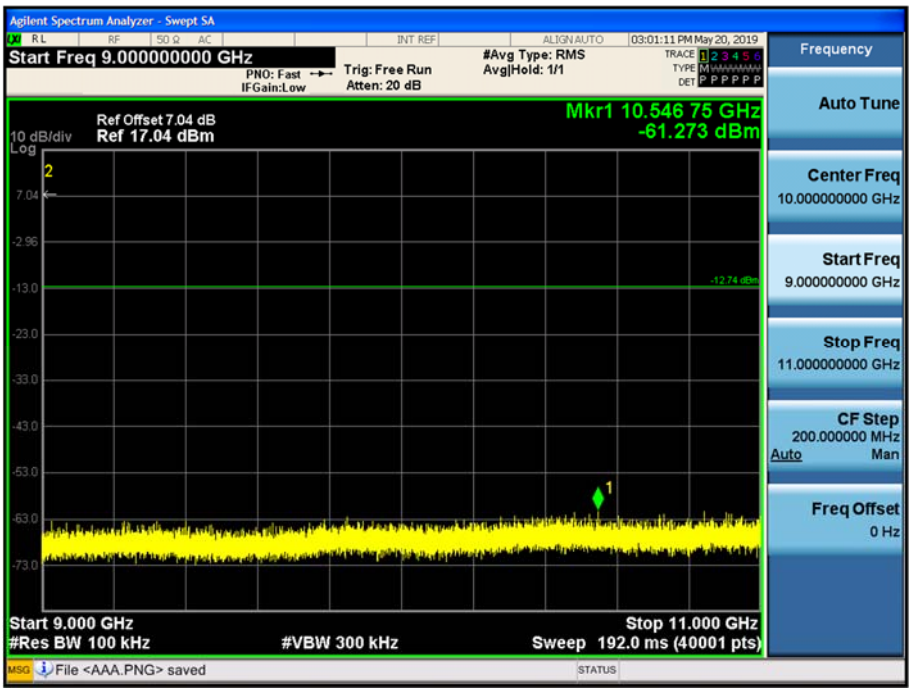
Test Plots(8DPSK)- 7 GHz - 9 GHz

Spurious Emission (CH.39)



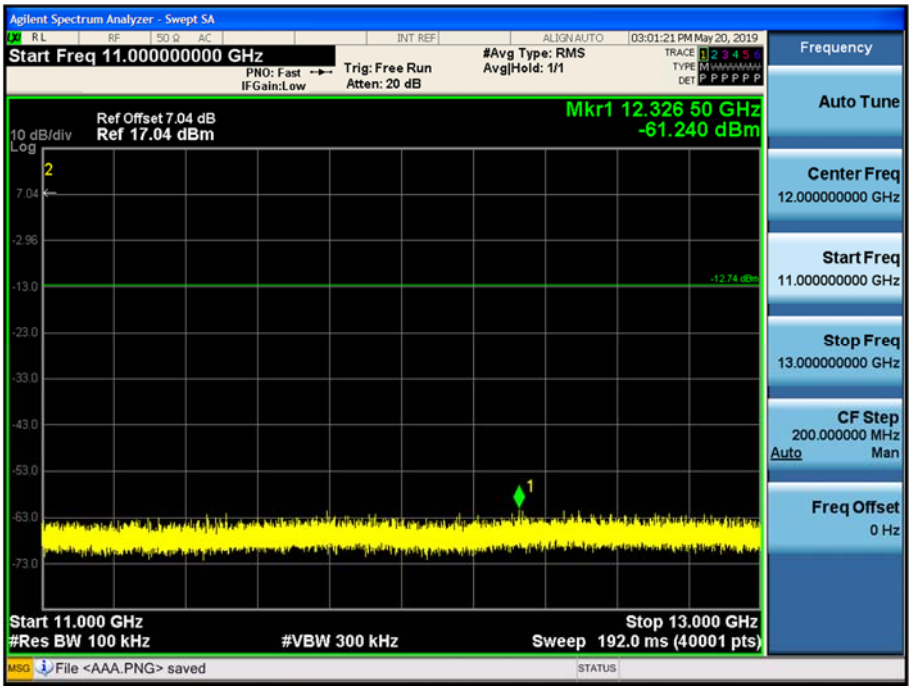
Test Plots(8DPSK)- 9 GHz - 11 GHz

Spurious Emission (CH.39)



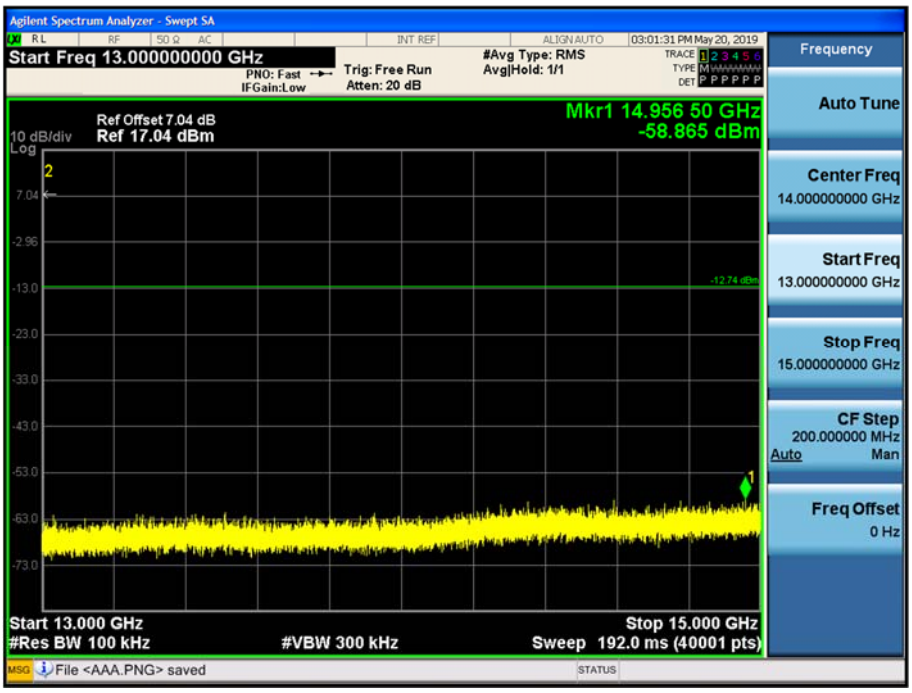
Test Plots(8DPSK) 11 GHz - 13 GHz

Spurious Emission (CH.39)



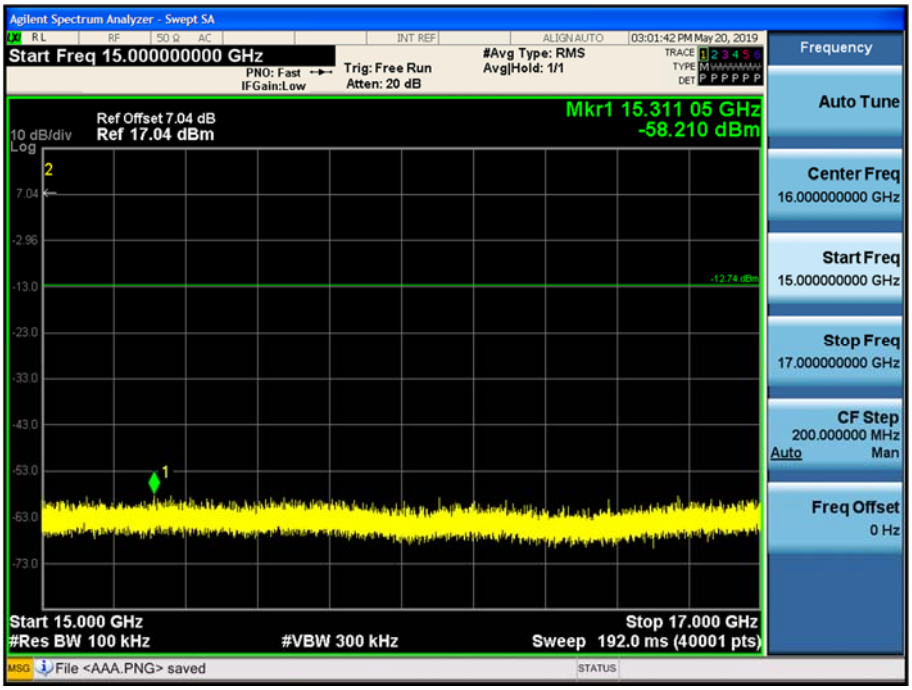
Test Plots (8DPSK)- 13 GHz – 15 GHz

Spurious Emission (CH.39)



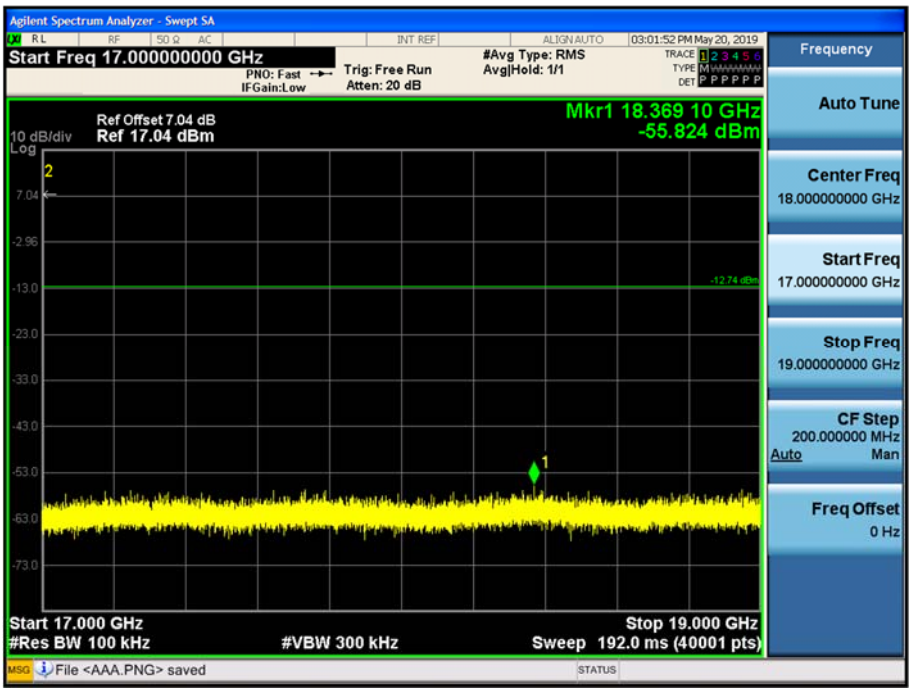
Test Plots(8DPSK)– 15 GHz - 17 GHz

Spurious Emission (CH.39)



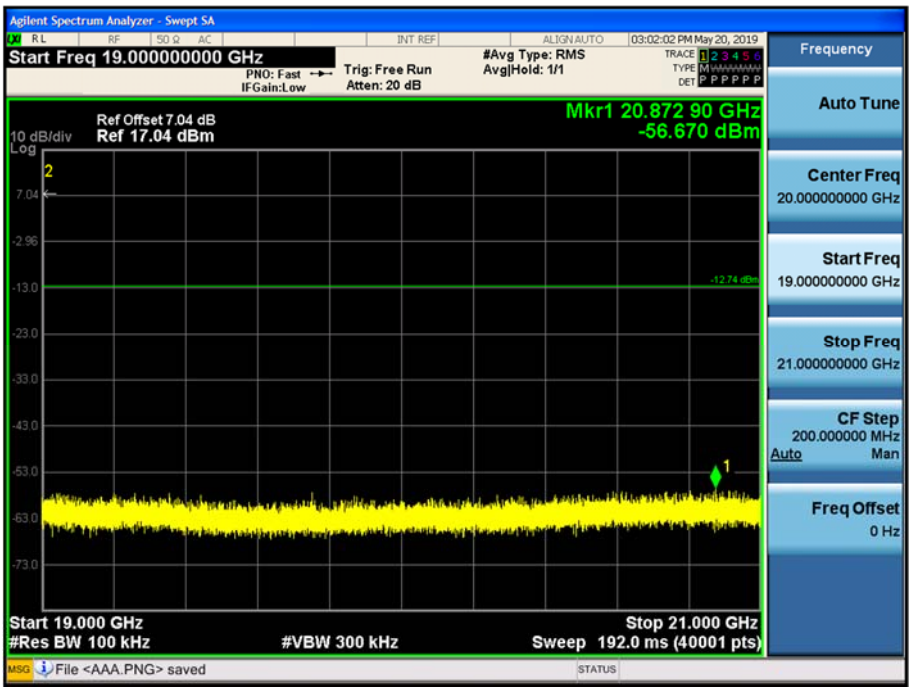
Test Plots(8DPSK)- 17 GHz - 19 GHz

Spurious Emission (CH.39)



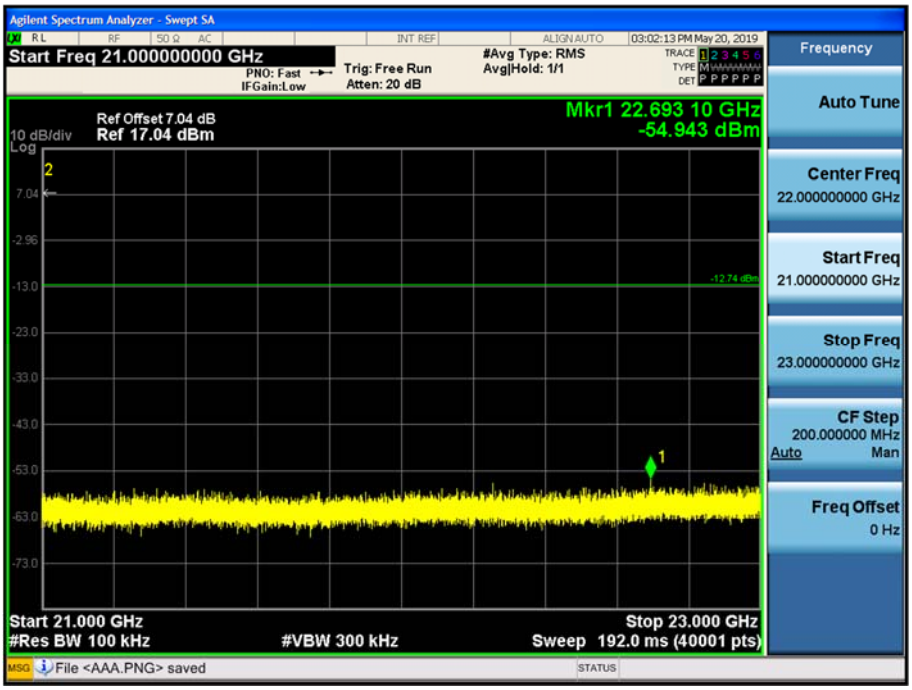
Test Plots (8DPSK)- 19 GHz - 21 GHz

Spurious Emission (CH.39)



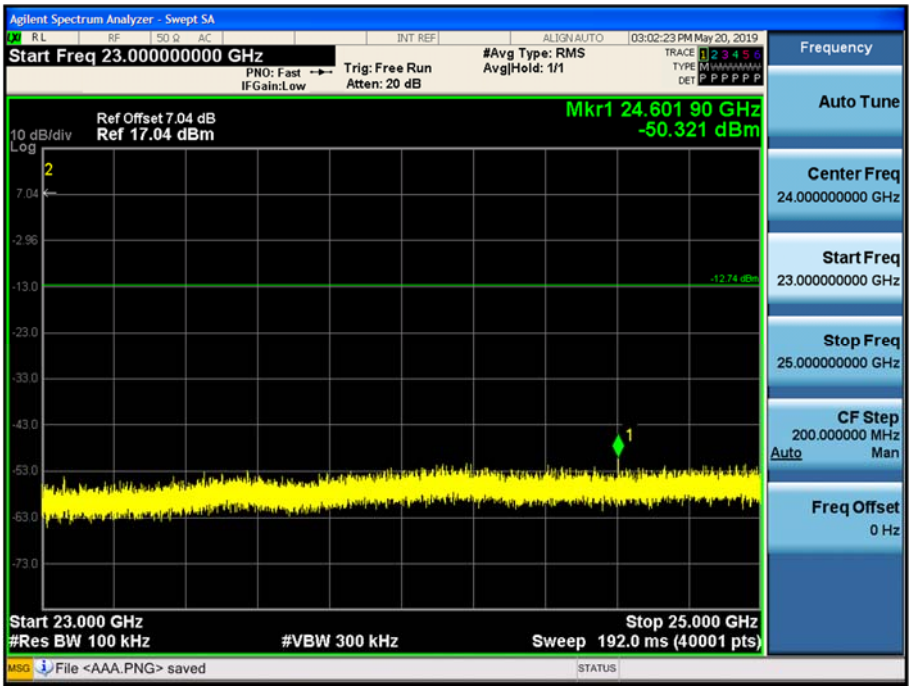
Test Plots (8DPSK)- 21 GHz - 23 GHz

Spurious Emission (CH.39)



Test Plots (8DPSK)- 23 GHz - 25 GHz

Spurious Emission (CH.39)



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*log (specific distance / 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	50.36	0.44	V	50.80	73.98	23.18	PK
4804	36.58	0.44	V	37.02	53.98	16.96	AV
7206	46.89	9.25	V	56.135	73.98	17.85	PK
7206	33.60	9.25	V	42.845	53.98	11.14	AV
4804	50.08	0.44	H	50.52	73.98	23.46	PK
4804	36.92	0.44	H	37.36	53.98	16.62	AV
7206	46.04	9.25	H	55.285	73.98	18.70	PK
7206	32.87	9.25	H	42.115	53.98	11.87	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	49.63	0.44	V	50.07	73.98	23.91	PK
4804	36.23	0.44	V	36.67	53.98	17.31	AV
7206	45.99	9.25	V	55.235	73.98	18.75	PK
7206	31.95	9.25	V	41.195	53.98	12.79	AV
4804	49.47	0.44	H	49.91	73.98	24.07	PK
4804	35.91	0.44	H	36.35	53.98	17.63	AV
7206	46.20	9.25	H	55.445	73.98	18.54	PK
7206	32.21	9.25	H	41.455	53.98	12.53	AV

Operation Mode: CH Low(π/4DQPSK)

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	49.82	0.44	V	50.26	73.98	23.72	PK
4804	36.21	0.44	V	36.65	53.98	17.33	AV
7206	45.80	9.25	V	55.045	73.98	18.94	PK
7206	32.19	9.25	V	41.435	53.98	12.55	AV
4804	49.72	0.44	H	50.16	73.98	23.82	PK
4804	35.98	0.44	H	36.42	53.98	17.56	AV
7206	45.89	9.25	H	55.135	73.98	18.85	PK
7206	32.41	9.25	H	41.655	53.98	12.33	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	49.80	0.96	V	50.76	73.98	23.22	PK
4882	37.88	0.96	V	38.84	53.98	15.14	AV
7323	45.99	9.14	V	55.13	73.98	18.85	PK
7323	31.98	9.14	V	41.12	53.98	12.86	AV
4882	49.50	0.96	H	50.46	73.98	23.52	PK
4882	37.14	0.96	H	38.1	53.98	15.88	AV
7323	46.17	9.14	H	55.31	73.98	18.67	PK
7323	32.22	9.14	H	41.36	53.98	12.62	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	49.52	0.96	V	50.48	73.98	23.50	PK
4882	36.99	0.96	V	37.95	53.98	16.03	AV
7323	45.87	9.14	V	55.01	73.98	18.97	PK
7323	31.95	9.14	V	41.09	53.98	12.89	AV
4882	49.31	0.96	H	50.27	73.98	23.71	PK
4882	36.79	0.96	H	37.75	53.98	16.23	AV
7323	46.02	9.14	H	55.16	73.98	18.82	PK
7323	32.22	9.14	H	41.36	53.98	12.62	AV

Operation Mode: CH Mid(π/4DQPSK)

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	49.73	0.96	V	50.69	73.98	23.29	PK
4882	36.97	0.96	V	37.93	53.98	16.05	AV
7323	45.86	9.14	V	55	73.98	18.98	PK
7323	31.85	9.14	V	40.99	53.98	12.99	AV
4882	49.52	0.96	H	50.48	73.98	23.50	PK
4882	36.54	0.96	H	37.5	53.98	16.48	AV
7323	45.97	9.14	H	55.11	73.98	18.87	PK
7323	32.19	9.14	H	41.33	53.98	12.65	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	51.61	0.66	V	52.27	73.98	21.71	PK
4960	41.34	0.66	V	42.00	53.98	11.98	AV
7440	45.96	10.16	V	56.12	73.98	17.86	PK
7440	32.97	10.16	V	43.13	53.98	10.85	AV
4960	51.42	0.66	H	52.08	73.98	21.90	PK
4960	41.02	0.66	H	41.68	53.98	12.30	AV
7440	46.73	10.16	H	56.89	73.98	17.09	PK
7440	33.32	10.16	H	43.48	53.98	10.50	AV

Operation Mode: CH High(8DPSK)

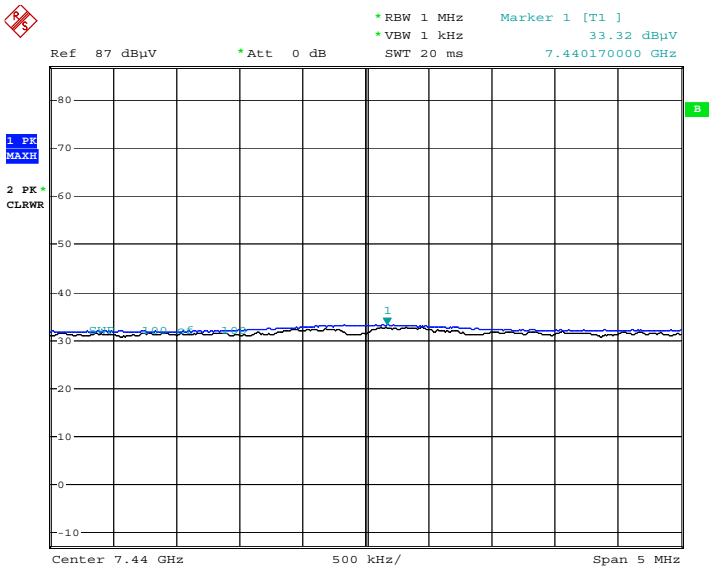
Frequency [MHz]	Reading [dBuV]	A.F + C.L - A.G + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	51.64	0.66	V	52.30	73.98	21.68	PK
4960	40.07	0.66	V	40.73	53.98	13.25	AV
7440	46.41	10.16	V	56.57	73.98	17.41	PK
7440	32.77	10.16	V	42.93	53.98	11.05	AV
4960	50.77	0.66	H	51.43	73.98	22.55	PK
4960	39.53	0.66	H	40.19	53.98	13.79	AV
7440	46.69	10.16	H	56.85	73.98	17.13	PK
7440	33.08	10.16	H	43.24	53.98	10.74	AV

Operation Mode: CH High (π/4DQPSK)

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	51.61	0.66	V	52.27	73.98	21.71	PK
4960	39.80	0.66	V	40.46	53.98	13.52	AV
7440	46.58	10.16	V	56.74	73.98	17.24	PK
7440	32.59	10.16	V	42.75	53.98	11.23	AV
4960	51.44	0.66	H	52.1	73.98	21.88	PK
4960	39.65	0.66	H	40.31	53.98	13.67	AV
7440	47.02	10.16	H	57.18	73.98	16.80	PK
7440	32.94	10.16	H	43.1	53.98	10.88	AV

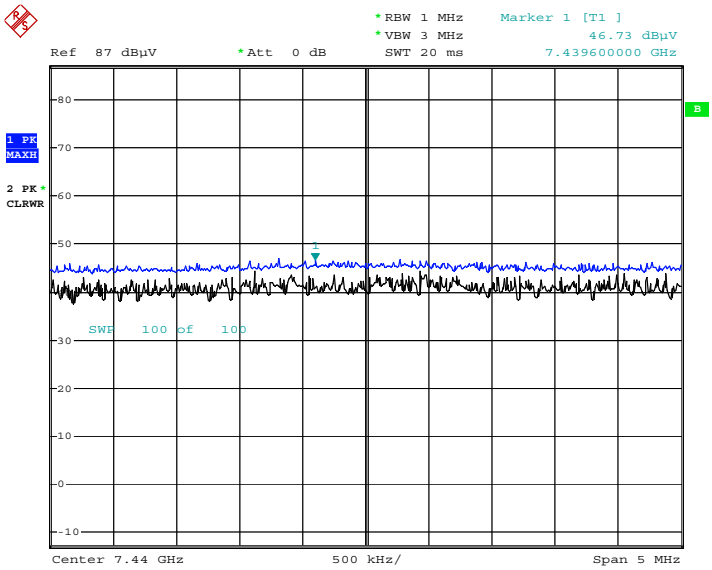
RESULT PLOTS (Worst case : X-V)

Radiated Spurious Emissions plot – Average Reading (GFSK, Ch.0 3rd Harmonic)



Date: 21.MAY.2019 17:46:09

Radiated Spurious Emissions plot – Peak Reading (GFSK, Ch.0 3rd Harmonic)



Date: 21.MAY.2019 17:48:26

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 [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	18.74	33.39	H	52.13	73.98	21.85	PK
2390.0	9.40	33.39	H	42.79	53.98	11.19	AV
2390.0	18.55	33.39	V	51.94	73.98	22.04	PK
2390.0	9.05	33.39	V	42.44	53.98	11.54	AV
2483.5	22.97	33.39	H	56.36	73.98	17.62	PK
2483.5	12.04	33.39	H	45.43	53.98	8.56	AV
2483.5	22.85	33.39	V	56.24	73.98	17.74	PK
2483.5	12.01	33.39	V	45.40	53.98	8.58	AV

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

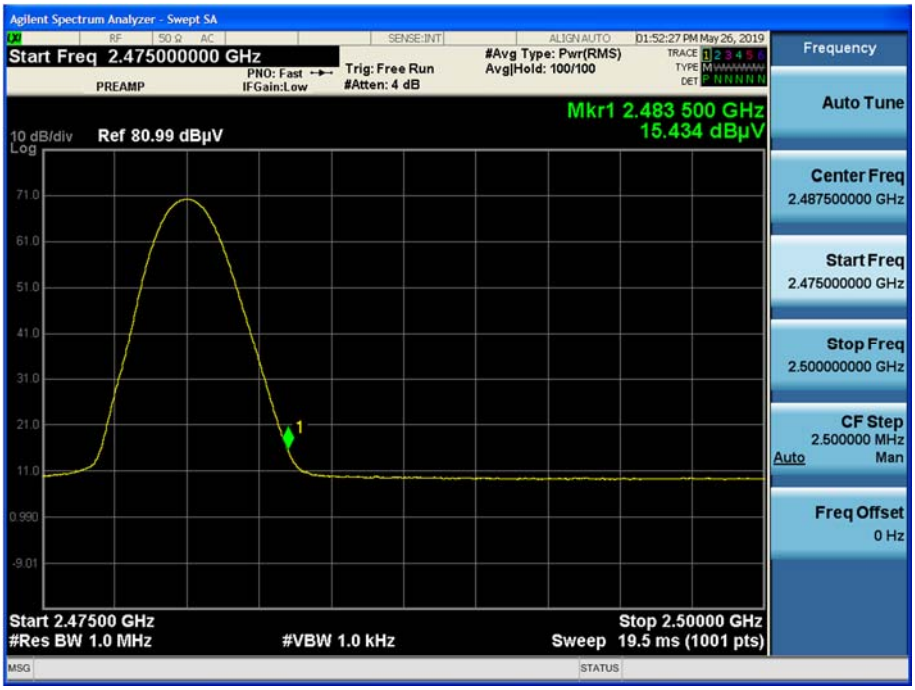
Frequency [MHz]	Reading [dBuV]	A.F + C.L + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	19.38	33.39	H	52.77	73.98	21.21	PK
2390.0	9.43	33.39	H	42.82	53.98	11.16	AV
2390.0	19.22	33.39	V	52.61	73.98	21.38	PK
2390.0	9.34	33.39	V	42.73	53.98	11.25	AV
2483.5	24.65	33.39	H	58.04	73.98	15.94	PK
2483.5	15.43	33.39	H	48.82	53.98	5.16	AV
2483.5	24.49	33.39	V	57.88	73.98	16.10	PK
2483.5	15.21	33.39	V	48.60	53.98	5.38	AV

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

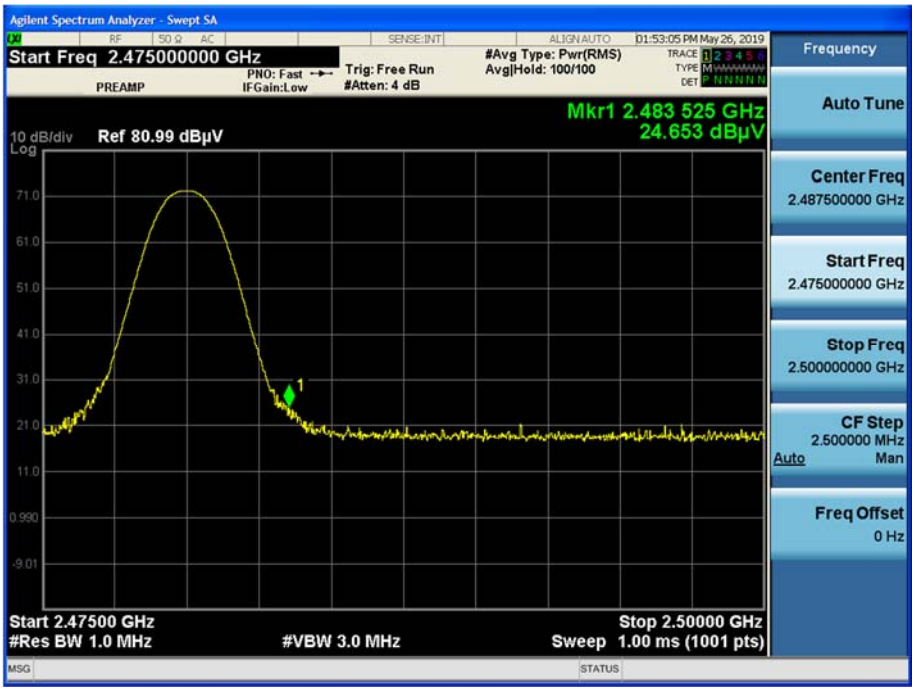
Frequency [MHz]	Reading [dBuV]	A.F + C.L + D.F [dB]	Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	19.12	33.39	H	52.51	73.98	21.47	PK
2390.0	9.40	33.39	H	42.79	53.98	11.19	AV
2390.0	19.09	33.39	V	52.48	73.98	21.51	PK
2390.0	9.38	33.39	V	42.77	53.98	11.21	AV
2483.5	24.59	33.39	H	57.98	73.98	16.00	PK
2483.5	15.32	33.39	H	48.71	53.98	5.27	AV
2483.5	24.15	33.39	V	57.54	73.98	16.44	PK
2483.5	15.15	33.39	V	48.54	53.98	5.44	AV

RESULT PLOTS (Worst case : X-H)

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



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



Note:

Plot of worst case are only reported.

10.7 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions (Line 1)

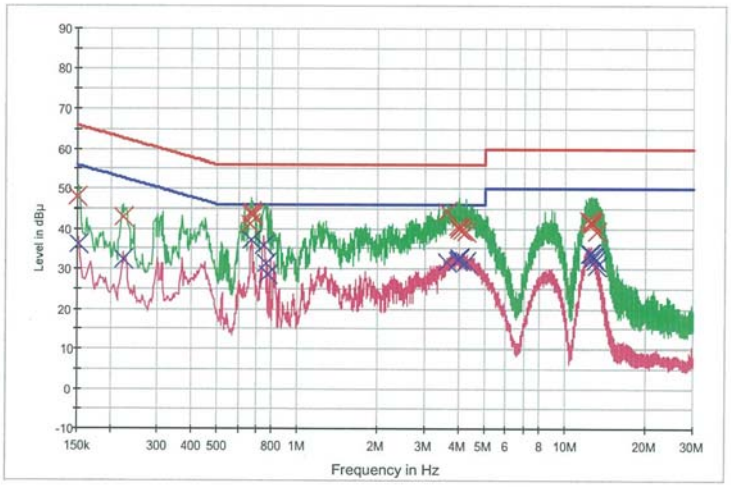
Test 1 / 2

HCT TEST Report

Common Information

EUT:	SM-T727V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	BT MODE

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	47.9	9.000	Off	L1	9.7	18.1	66.0
0.222000	42.9	9.000	Off	L1	9.7	19.8	62.7
0.660000	41.3	9.000	Off	L1	9.8	14.7	56.0
0.670000	43.7	9.000	Off	L1	9.8	12.3	56.0
0.674000	44.2	9.000	Off	L1	9.8	11.8	56.0
0.680000	43.1	9.000	Off	L1	9.8	12.9	56.0
3.630000	44.2	9.000	Off	L1	9.9	11.8	56.0
3.962000	40.5	9.000	Off	L1	10.0	15.5	56.0
3.992000	40.1	9.000	Off	L1	10.0	15.9	56.0
4.006000	39.9	9.000	Off	L1	10.0	16.1	56.0
4.088000	39.4	9.000	Off	L1	10.0	16.6	56.0
4.260000	39.2	9.000	Off	L1	10.0	16.8	56.0
12.174000	42.2	9.000	Off	L1	10.3	17.8	60.0
12.396000	41.7	9.000	Off	L1	10.3	18.3	60.0
12.426000	41.9	9.000	Off	L1	10.3	18.1	60.0
12.498000	41.4	9.000	Off	L1	10.3	18.6	60.0
12.666000	41.2	9.000	Off	L1	10.3	18.8	60.0
13.138000	39.3	9.000	Off	L1	10.3	20.7	60.0

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Test 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	36.2	9.000	Off	L1	9.7	19.7	55.9
0.222000	32.3	9.000	Off	L1	9.7	20.5	52.7
0.674000	37.1	9.000	Off	L1	9.8	8.9	46.0
0.748000	35.9	9.000	Off	L1	9.8	10.1	46.0
0.758000	31.4	9.000	Off	L1	9.8	14.6	46.0
0.770000	28.7	9.000	Off	L1	9.8	17.3	46.0
3.630000	31.8	9.000	Off	L1	9.9	14.2	46.0
3.962000	32.1	9.000	Off	L1	10.0	13.9	46.0
3.992000	32.6	9.000	Off	L1	10.0	13.4	46.0
3.996000	32.6	9.000	Off	L1	10.0	13.4	46.0
4.006000	32.2	9.000	Off	L1	10.0	13.8	46.0
4.260000	31.7	9.000	Off	L1	10.0	14.3	46.0
12.268000	33.8	9.000	Off	L1	10.3	16.2	50.0
12.426000	33.9	9.000	Off	L1	10.3	16.1	50.0
12.666000	33.1	9.000	Off	L1	10.3	16.9	50.0
12.728000	32.9	9.000	Off	L1	10.3	17.1	50.0
12.864000	31.9	9.000	Off	L1	10.3	18.1	50.0
13.048000	30.6	9.000	Off	L1	10.3	19.4	50.0

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Conducted Emissions (Line 2)

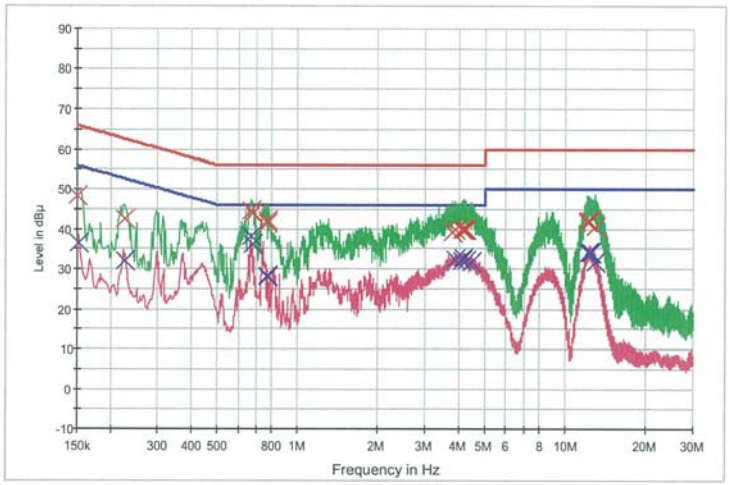
Test 1 / 2

HCT TEST Report

Common Information

EUT:	SM-T727V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	BT MODE

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	48.2	9.000	Off	N	9.8	17.8	66.0
0.226000	42.5	9.000	Off	N	9.9	20.1	62.6
0.670000	44.5	9.000	Off	N	9.9	11.5	56.0
0.676000	44.0	9.000	Off	N	9.9	12.0	56.0
0.768000	42.2	9.000	Off	N	9.9	13.8	56.0
0.772000	41.7	9.000	Off	N	9.9	14.3	56.0
3.788000	39.1	9.000	Off	N	10.2	16.9	56.0
3.864000	40.0	9.000	Off	N	10.2	16.0	56.0
4.102000	39.9	9.000	Off	N	10.2	16.1	56.0
4.134000	39.9	9.000	Off	N	10.2	16.1	56.0
4.202000	39.7	9.000	Off	N	10.2	16.3	56.0
4.264000	39.8	9.000	Off	N	10.2	16.2	56.0
12.110000	41.8	9.000	Off	N	10.5	18.2	60.0
12.134000	42.0	9.000	Off	N	10.5	18.0	60.0
12.148000	42.3	9.000	Off	N	10.5	17.7	60.0
12.174000	42.3	9.000	Off	N	10.5	17.7	60.0
12.366000	42.0	9.000	Off	N	10.6	18.0	60.0
12.930000	40.5	9.000	Off	N	10.6	19.5	60.0

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Test

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	36.5	9.000	Off	N	9.8	19.4	55.9
0.226000	32.1	9.000	Off	N	9.9	20.5	52.6
0.672000	38.2	9.000	Off	N	9.9	7.8	46.0
0.676000	36.2	9.000	Off	N	9.9	9.8	46.0
0.768000	27.9	9.000	Off	N	9.9	18.1	46.0
0.772000	28.4	9.000	Off	N	9.9	17.6	46.0
3.864000	32.4	9.000	Off	N	10.2	13.6	46.0
4.102000	32.1	9.000	Off	N	10.2	13.9	46.0
4.112000	32.0	9.000	Off	N	10.2	14.0	46.0
4.134000	32.6	9.000	Off	N	10.2	13.4	46.0
4.264000	32.0	9.000	Off	N	10.2	14.0	46.0
4.458000	31.8	9.000	Off	N	10.2	14.2	46.0
12.134000	34.1	9.000	Off	N	10.5	15.9	50.0
12.174000	34.0	9.000	Off	N	10.5	16.0	50.0
12.266000	33.9	9.000	Off	N	10.5	16.1	50.0
12.366000	34.2	9.000	Off	N	10.6	15.8	50.0
12.418000	34.1	9.000	Off	N	10.6	15.9	50.0
12.930000	31.7	9.000	Off	N	10.6	18.3	50.0

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5 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	06/27/2018	Annual	100033
ESPAC	SU-642 /Temperature Chamber	03/12/2019	Annual	0093008124
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY51110085
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY52090906
Agilent	N9030A / Signal Analyzer	01/10/2019	Annual	MY49431210
Rohde & Schwarz	OSP 120 / Power Measurement Set	07/26/2018	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	06/07/2018	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/26/2018	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	07/10/2018	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

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	08/01/2017	Biennial	1151
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	06/08/2018	Annual	MY51110085
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	06/07/2018	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	06/29/2018	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2019	Annual	2
Api tech.	18B-03 / Attenuator (3 dB)	06/07/2018	Annual	1
Agilent	8493C-10 / Attenuator(10 dB)	07/17/2018	Annual	08285
CERNEX	CBLU1183540 / Power Amplifier	07/10/2018	Annual	22964
CERNEX	CBL06185030 / Power Amplifier	07/10/2018	Annual	22965
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/29/2018	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.

6 ANNEX A_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-1905-FC042-P