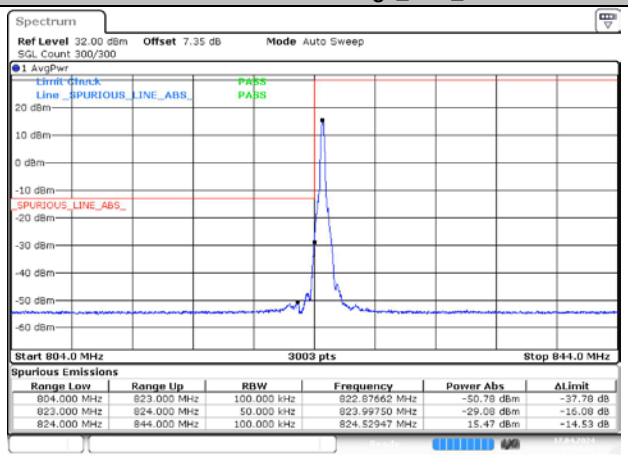
n5A / 15KHz / 20MHz

LCH / DFT-Pi2BPSK / Edge_1RB_Left

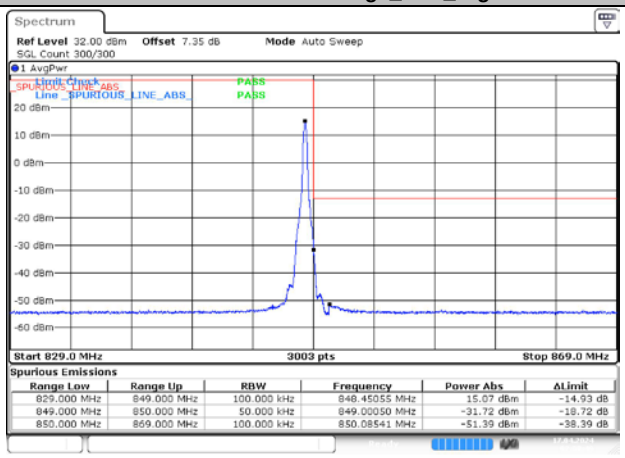


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
804.000 MHz	823.000 MHz	100.000 kHz	822.87662 MHz	-50.78 dBm	-37.78 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99750 MHz	-29.08 dBm	-16.08 dB
824.000 MHz	844.000 MHz	100.000 kHz	824.52947 MHz	15.47 dBm	-14.53 dB

Date: 17.APR.2024 02:04:25

HCH / DFT-Pi2BPSK / Edge_1RB_Right

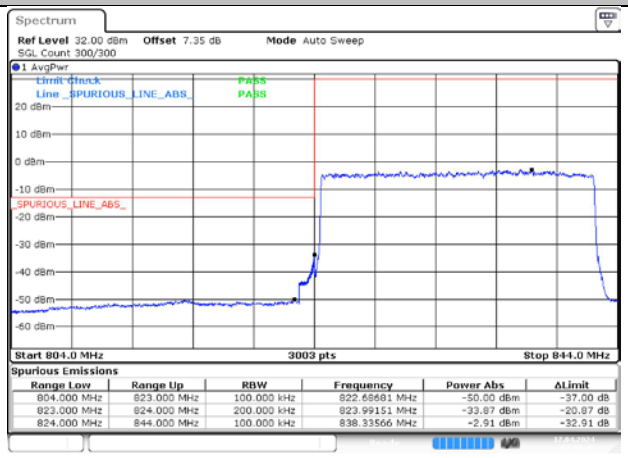


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	848.45055 MHz	15.07 dBm	-14.93 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00050 MHz	-31.72 dBm	-18.72 dB
850.000 MHz	869.000 MHz	100.000 kHz	850.08541 MHz	-51.39 dBm	-38.39 dB

Date: 17.APR.2024 02:08:50

LCH / DFT-Pi2BPSK / Outer_Full

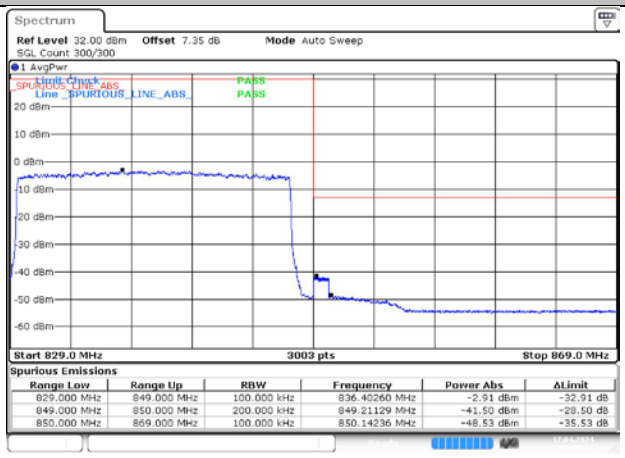


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
804.000 MHz	823.000 MHz	100.000 kHz	822.68681 MHz	-50.00 dBm	-37.00 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.99151 MHz	-33.87 dBm	-20.87 dB
824.000 MHz	844.000 MHz	100.000 kHz	838.33566 MHz	-2.91 dBm	-32.91 dB

Date: 17.APR.2024 02:04:46

HCH / DFT-Pi2BPSK / Outer_Full

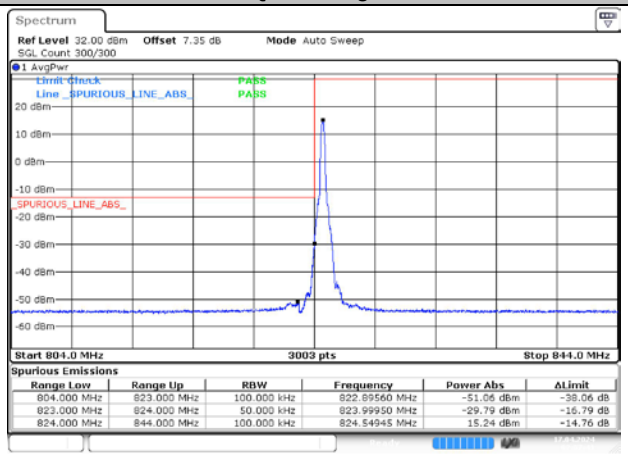


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	836.40260 MHz	-2.91 dBm	-32.91 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.21129 MHz	-41.50 dBm	-28.50 dB
850.000 MHz	869.000 MHz	100.000 kHz	850.14236 MHz	-48.53 dBm	-35.53 dB

Date: 17.APR.2024 02:09:18

LCH / DFT-QPSK / Edge_1RB_Left

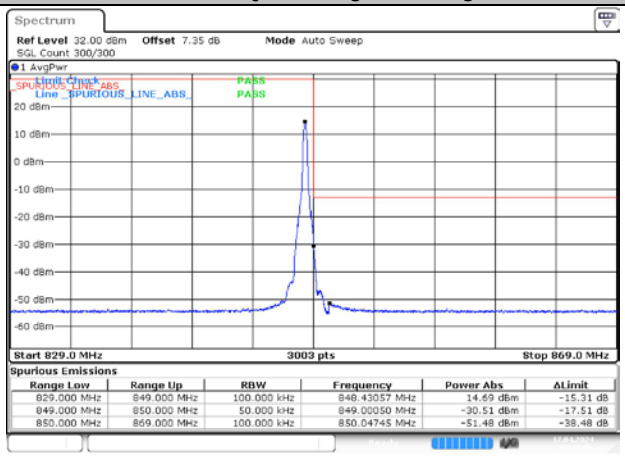


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
804.000 MHz	823.000 MHz	100.000 kHz	822.89560 MHz	-51.06 dBm	-38.06 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99950 MHz	-29.79 dBm	-16.79 dB
824.000 MHz	844.000 MHz	100.000 kHz	824.54945 MHz	15.24 dBm	-14.76 dB

Date: 17.APR.2024 02:07:41

HCH / DFT-QPSK / Edge_1RB_Right

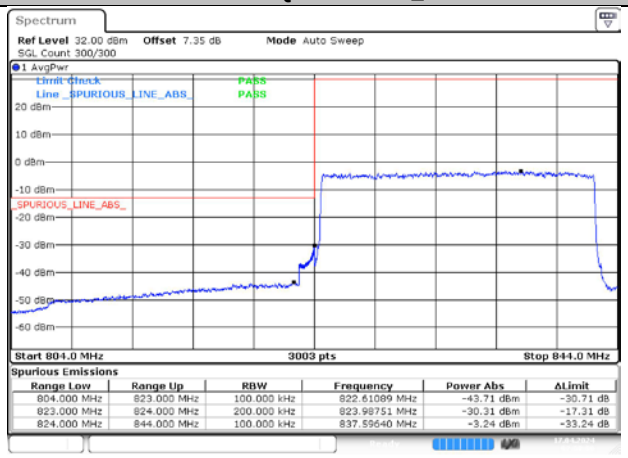


Spurious Emissions

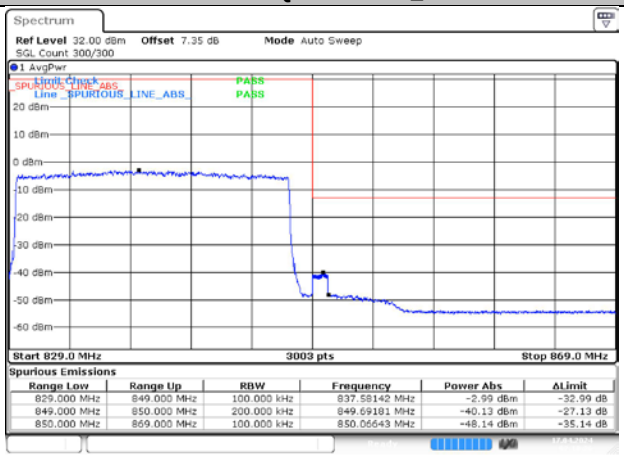
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	848.43057 MHz	14.69 dBm	-15.31 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00050 MHz	-30.51 dBm	-17.51 dB
850.000 MHz	869.000 MHz	100.000 kHz	850.04745 MHz	-51.48 dBm	-38.48 dB

Date: 17.APR.2024 02:10:10

LCH / DFT-QPSK / Outer_Full



HCH / DFT-QPSK / Outer_Full

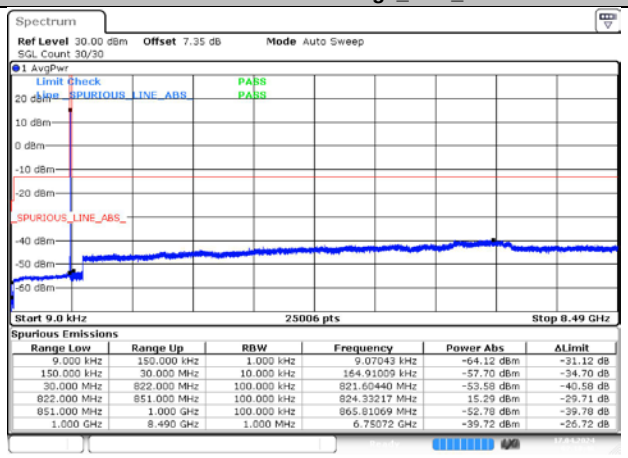


6. Conducted Spurious Emission

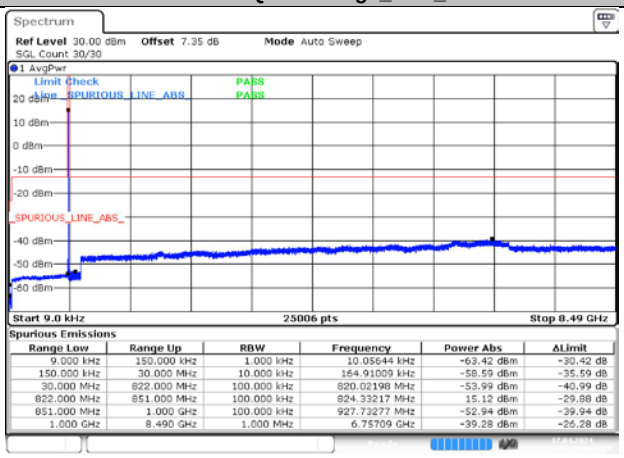
6.1. Test Plots

n5A / 15KHz / 5MHz

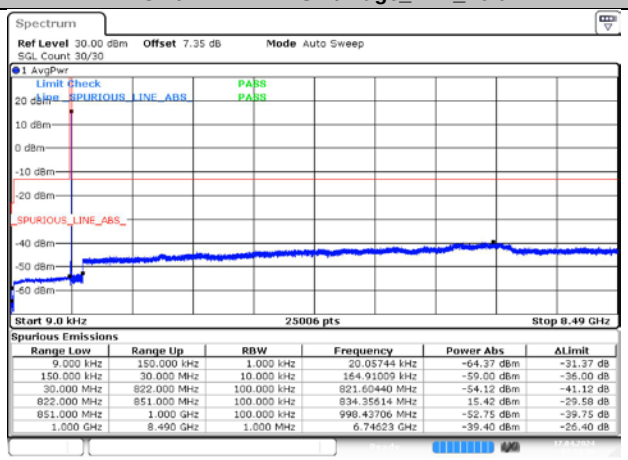
LCH / DFT-Pi2BPSK / Edge_1RB_Left



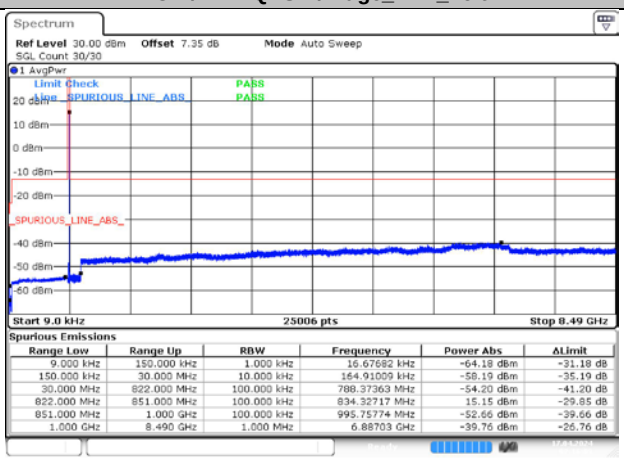
LCH / DFT-QPSK / Edge_1RB_Left



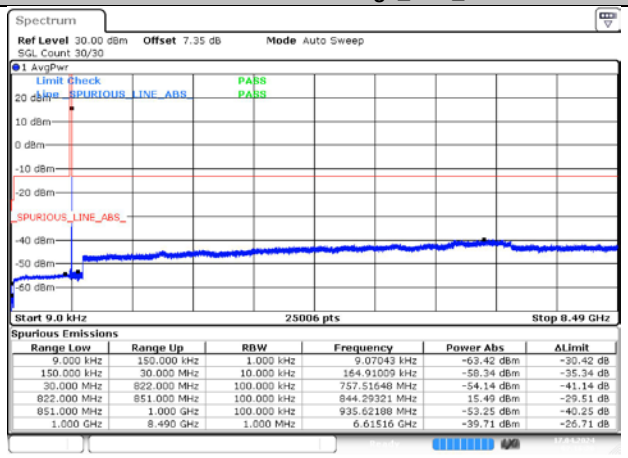
MCH / DFT-Pi2BPSK / Edge_1RB_Left



MCH / DFT-QPSK / Edge_1RB_Left



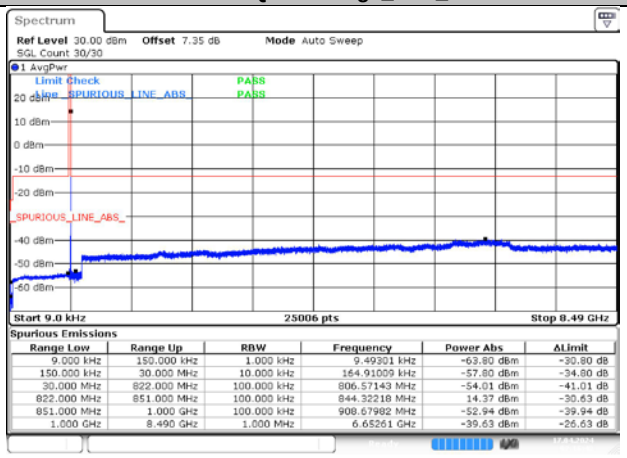
HCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.42 dBm	-30.42 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.34 dBm	-35.34 dB
30.000 MHz	822.000 MHz	100.000 kHz	757.51648 MHz	-54.14 dBm	-41.14 dB
822.000 MHz	851.000 MHz	100.000 kHz	844.29321 MHz	15.49 dBm	-29.51 dB
851.000 MHz	1.000 GHz	100.000 kHz	935.62188 MHz	-53.25 dBm	-40.25 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.61516 GHz	-39.71 dBm	-26.71 dB

HCH / DFT-QPSK / Edge_1RB_Left

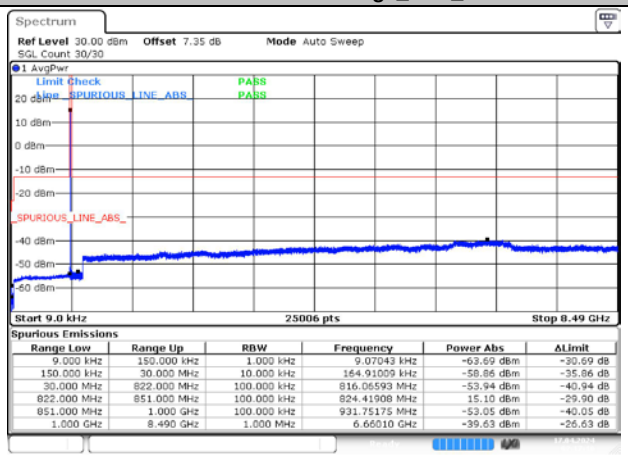


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.49301 kHz	-63.80 dBm	-30.80 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.80 dBm	-34.80 dB
30.000 MHz	822.000 MHz	100.000 kHz	806.57143 MHz	-54.01 dBm	-41.01 dB
822.000 MHz	851.000 MHz	100.000 kHz	844.32218 MHz	14.37 dBm	-30.63 dB
851.000 MHz	1.000 GHz	100.000 kHz	908.67982 MHz	-52.94 dBm	-39.94 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.65261 GHz	-39.63 dBm	-26.63 dB

n5A / 15KHz / 10MHz

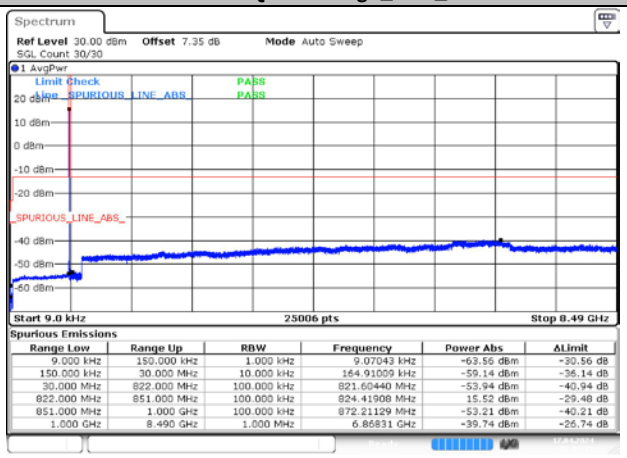
LCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.69 dBm	-30.69 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.86 dBm	-35.86 dB
30.000 MHz	822.000 MHz	100.000 kHz	816.06593 MHz	-53.94 dBm	-40.94 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.41908 MHz	15.10 dBm	-29.90 dB
851.000 MHz	1.000 GHz	100.000 kHz	931.75175 MHz	-53.05 dBm	-40.05 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.66010 GHz	-39.63 dBm	-26.63 dB

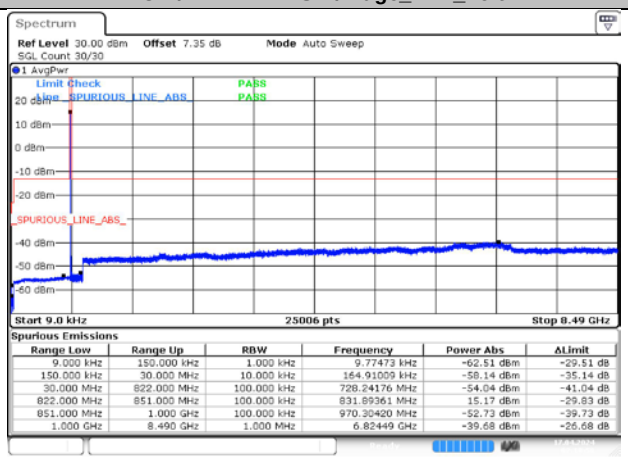
LCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.56 dBm	-30.56 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-59.14 dBm	-36.14 dB
30.000 MHz	822.000 MHz	100.000 kHz	821.60440 MHz	-53.94 dBm	-40.94 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.41908 MHz	15.52 dBm	-29.48 dB
851.000 MHz	1.000 GHz	100.000 kHz	872.21129 MHz	-53.21 dBm	-40.21 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.86831 GHz	-39.74 dBm	-26.74 dB

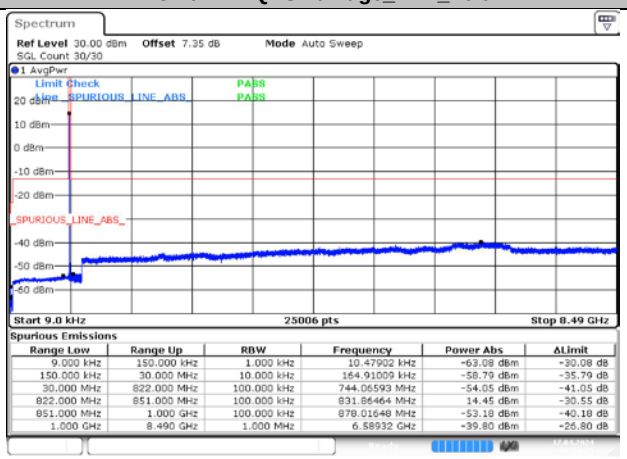
MCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.77473 kHz	-62.51 dBm	-29.51 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.14 dBm	-35.14 dB
30.000 MHz	822.000 MHz	100.000 kHz	728.24176 MHz	-54.04 dBm	-41.04 dB
822.000 MHz	851.000 MHz	100.000 kHz	831.89361 MHz	15.17 dBm	-29.83 dB
851.000 MHz	1.000 GHz	100.000 kHz	970.30420 MHz	-52.73 dBm	-39.73 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.82449 GHz	-39.68 dBm	-26.68 dB

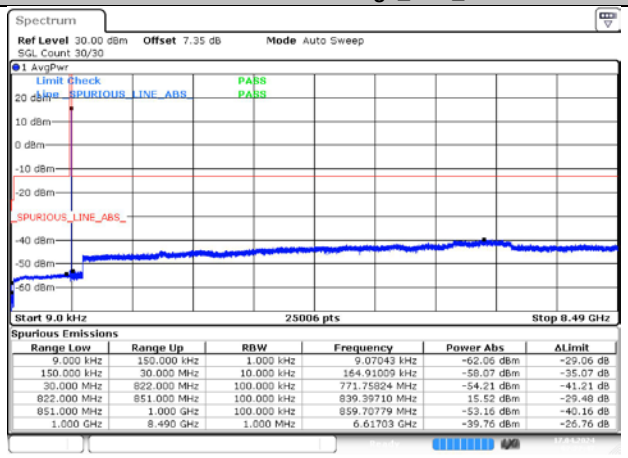
MCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	10.47902 kHz	-63.08 dBm	-30.08 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.79 dBm	-35.79 dB
30.000 MHz	822.000 MHz	100.000 kHz	744.06593 MHz	-54.05 dBm	-41.05 dB
822.000 MHz	851.000 MHz	100.000 kHz	831.86464 MHz	14.45 dBm	-30.55 dB
851.000 MHz	1.000 GHz	100.000 kHz	878.01648 MHz	-53.18 dBm	-40.18 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.58932 GHz	-39.80 dBm	-26.80 dB

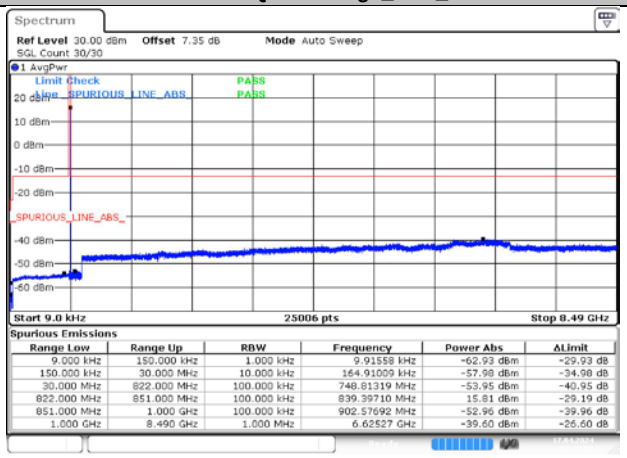
HCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-62.06 dBm	-29.06 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.07 dBm	-35.07 dB
30.000 MHz	822.000 MHz	100.000 kHz	771.75824 MHz	-54.21 dBm	-41.21 dB
822.000 MHz	851.000 MHz	100.000 kHz	839.39710 MHz	15.52 dBm	-29.48 dB
851.000 MHz	1.000 GHz	100.000 kHz	859.70779 MHz	-53.16 dBm	-40.16 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.61703 GHz	-39.76 dBm	-26.76 dB

HCH / DFT-QPSK / Edge_1RB_Left



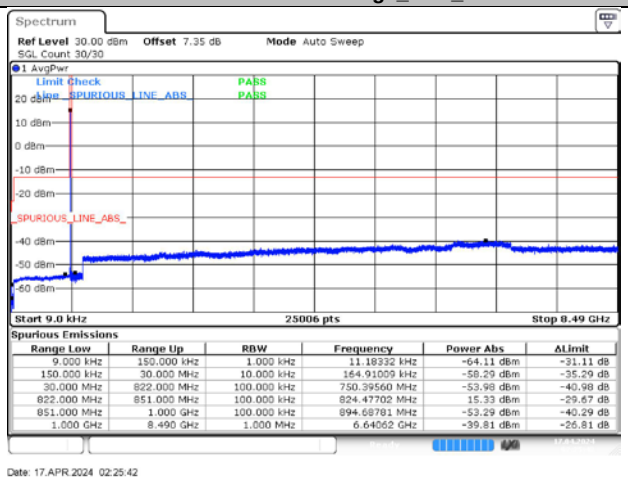
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.91558 kHz	-62.93 dBm	-29.93 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.98 dBm	-34.98 dB
30.000 MHz	822.000 MHz	100.000 kHz	748.81319 MHz	-53.95 dBm	-40.95 dB
822.000 MHz	851.000 MHz	100.000 kHz	839.39710 MHz	15.81 dBm	-29.19 dB
851.000 MHz	1.000 GHz	100.000 kHz	902.57692 MHz	-52.96 dBm	-39.96 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.62527 GHz	-39.60 dBm	-26.60 dB

6.1.1. Bandwidth:15MHz

n5A / 15KHz / 15MHz

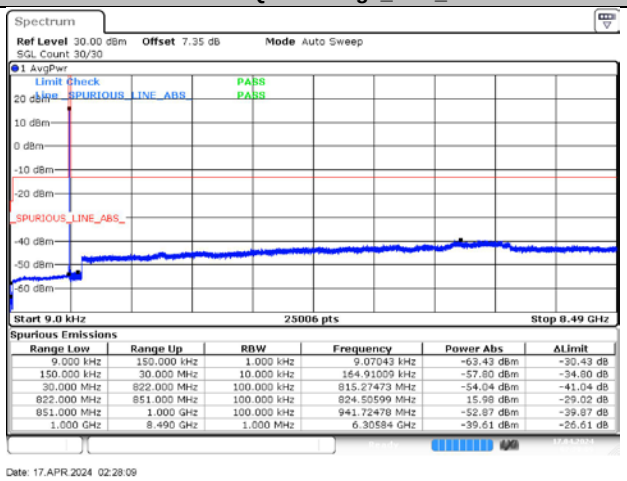
LCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.18332 kHz	-64.11 dBm	-31.11 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.29 dBm	-35.29 dB
30.000 MHz	822.000 MHz	100.000 kHz	750.39560 MHz	-53.98 dBm	-40.98 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.47702 MHz	15.33 dBm	-29.67 dB
851.000 MHz	1.000 GHz	100.000 kHz	894.68781 MHz	-53.29 dBm	-40.29 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.64062 GHz	-39.81 dBm	-26.81 dB

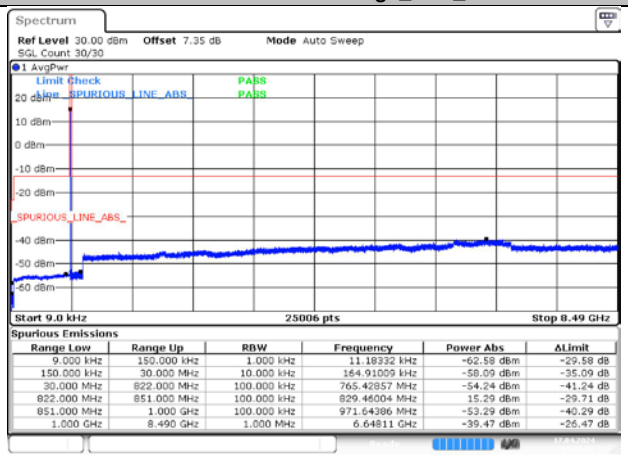
LCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.43 dBm	-30.43 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.80 dBm	-34.80 dB
30.000 MHz	822.000 MHz	100.000 kHz	815.27473 MHz	-54.04 dBm	-41.04 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.50599 MHz	15.98 dBm	-29.02 dB
851.000 MHz	1.000 GHz	100.000 kHz	941.72478 MHz	-52.87 dBm	-39.87 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.30584 GHz	-39.61 dBm	-26.61 dB

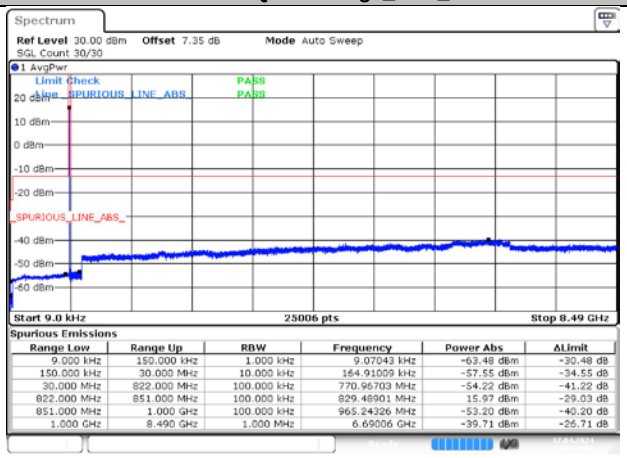
MCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.18332 kHz	-62.58 dBm	-29.58 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.09 dBm	-35.09 dB
30.000 MHz	822.000 MHz	100.000 kHz	765.42857 MHz	-54.24 dBm	-41.24 dB
822.000 MHz	851.000 MHz	100.000 kHz	829.46004 MHz	15.29 dBm	-29.71 dB
851.000 MHz	1.000 GHz	100.000 kHz	971.64386 MHz	-53.29 dBm	-40.29 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.64811 GHz	-39.47 dBm	-26.47 dB

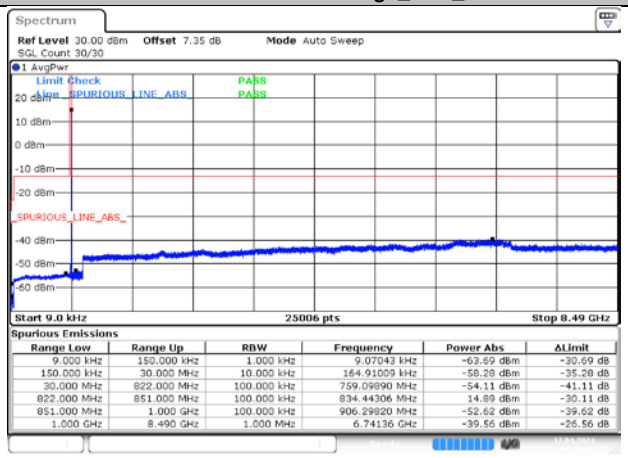
MCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.48 dBm	-30.48 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.55 dBm	-34.55 dB
30.000 MHz	822.000 MHz	100.000 kHz	770.96703 MHz	-54.22 dBm	-41.22 dB
822.000 MHz	851.000 MHz	100.000 kHz	829.48901 MHz	15.97 dBm	-29.03 dB
851.000 MHz	1.000 GHz	100.000 kHz	965.24326 MHz	-53.20 dBm	-40.20 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.69006 GHz	-39.71 dBm	-26.71 dB

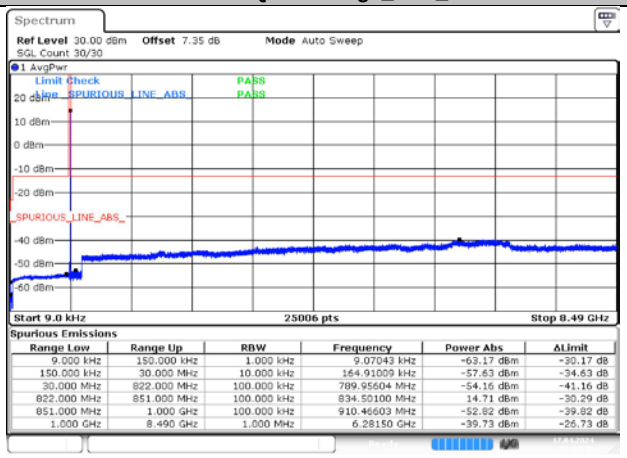
HCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.69 dBm	-30.69 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.28 dBm	-35.28 dB
30.000 MHz	822.000 MHz	100.000 kHz	759.09890 MHz	-54.11 dBm	-41.11 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.44306 MHz	14.89 dBm	-30.11 dB
851.000 MHz	1.000 GHz	100.000 kHz	906.29820 MHz	-52.62 dBm	-39.62 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.74136 GHz	-39.56 dBm	-26.56 dB

HCH / DFT-QPSK / Edge_1RB_Left

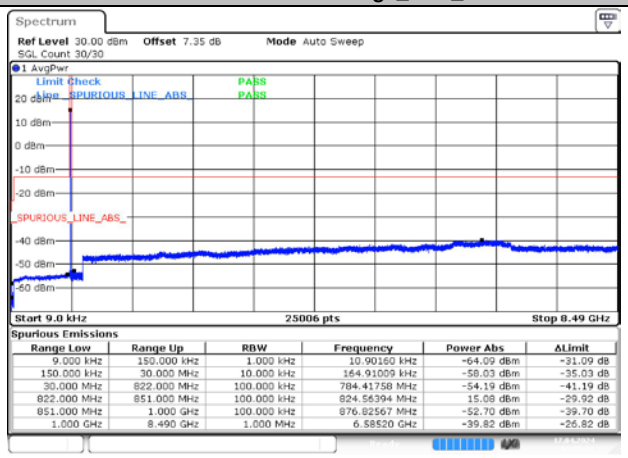


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.17 dBm	-30.17 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.63 dBm	-34.63 dB
30.000 MHz	822.000 MHz	100.000 kHz	789.95604 MHz	-54.16 dBm	-41.16 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.50100 MHz	14.71 dBm	-30.29 dB
851.000 MHz	1.000 GHz	100.000 kHz	910.46603 MHz	-52.82 dBm	-39.82 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.28150 GHz	-39.73 dBm	-26.73 dB

n5A / 15KHz / 20MHz

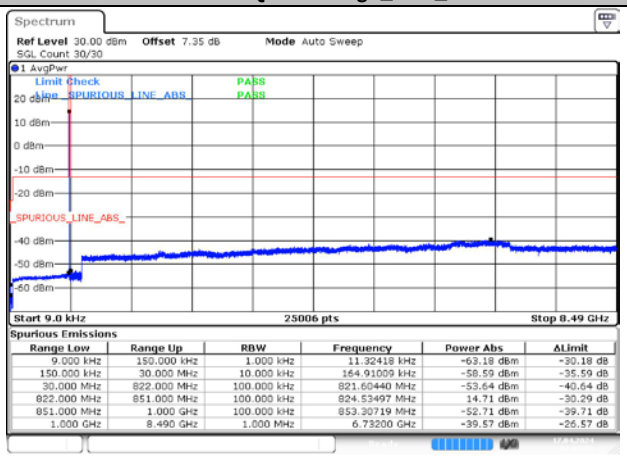
LCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	10.90160 kHz	-64.09 dBm	-31.09 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.03 dBm	-35.03 dB
30.000 MHz	822.000 MHz	100.000 kHz	784.41758 MHz	-54.19 dBm	-41.19 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.56394 MHz	15.08 dBm	-29.92 dB
851.000 MHz	1.000 GHz	100.000 kHz	876.82567 MHz	-52.70 dBm	-39.70 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.58520 GHz	-39.82 dBm	-26.82 dB

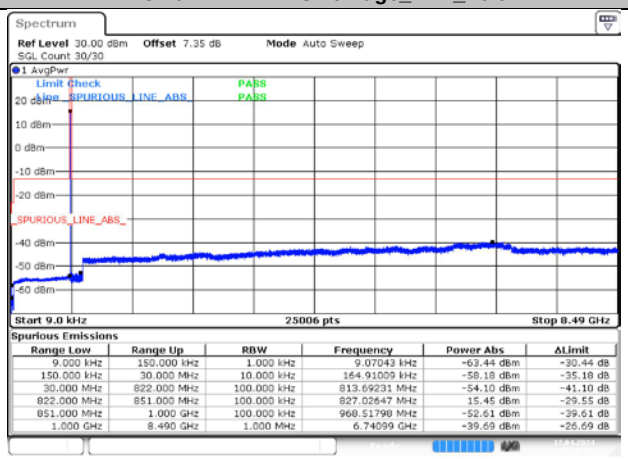
LCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.32418 kHz	-63.18 dBm	-30.18 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.59 dBm	-35.59 dB
30.000 MHz	822.000 MHz	100.000 kHz	821.60440 MHz	-53.64 dBm	-40.64 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.53497 MHz	14.71 dBm	-30.29 dB
851.000 MHz	1.000 GHz	100.000 kHz	853.30719 MHz	-52.71 dBm	-39.71 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.73200 GHz	-39.57 dBm	-26.57 dB

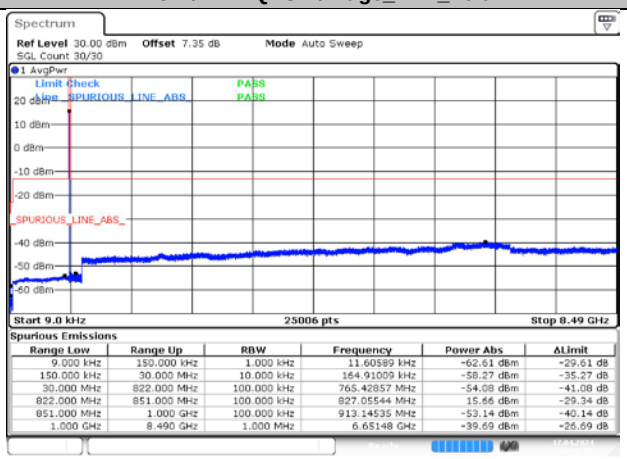
MCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

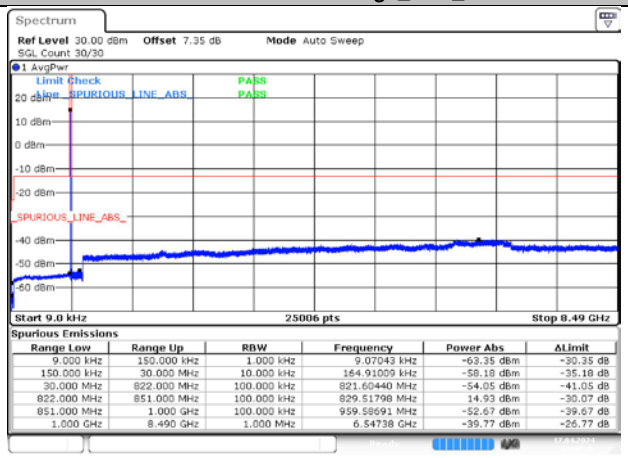
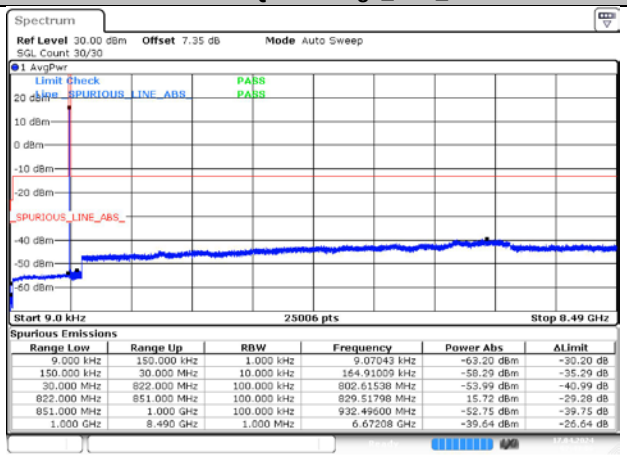
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.44 dBm	-30.44 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.18 dBm	-35.18 dB
30.000 MHz	822.000 MHz	100.000 kHz	813.69231 MHz	-54.10 dBm	-41.10 dB
822.000 MHz	851.000 MHz	100.000 kHz	827.02647 MHz	15.45 dBm	-29.55 dB
851.000 MHz	1.000 GHz	100.000 kHz	968.51798 MHz	-52.61 dBm	-39.61 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.74099 GHz	-39.69 dBm	-26.69 dB

MCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.60589 kHz	-62.61 dBm	-29.61 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.27 dBm	-35.27 dB
30.000 MHz	822.000 MHz	100.000 kHz	765.42857 MHz	-54.08 dBm	-41.08 dB
822.000 MHz	851.000 MHz	100.000 kHz	827.05544 MHz	15.66 dBm	-29.34 dB
851.000 MHz	1.000 GHz	100.000 kHz	913.14535 MHz	-53.14 dBm	-40.14 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.65148 GHz	-39.69 dBm	-26.69 dB

HCH / DFT-Pi2BPSK / Edge_1RB_Left	HCH / DFT-QPSK / Edge_1RB_Left
	

7. Frequency Stability

7.1. Test Results

7.1.1. Frequency Error Vs Voltage

SCS	Bandwidth	Channel	RB Config	Modulation	Temperature	Voltage	Deviation Result		Verdict
							(Hz)	(ppm)	
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	LV	-6.10	-0.007292	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	NV	-10.50	-0.012552	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	HV	-6.90	-0.008249	Pass

7.1.2. Frequency Error Vs Temperature

SCS	Bandwidth	Channel	RB Config	Modulation	Temperature	Voltage	Deviation Result		Verdict
							(Hz)	(ppm)	
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-30℃	NV	-12.00	-0.014345	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-20℃	NV	-9.40	-0.011237	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-10℃	NV	-9.80	-0.011715	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	0℃	NV	-7.10	-0.008488	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	10℃	NV	-6.70	-0.008010	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	20℃	NV	-6.80	-0.008129	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	30℃	NV	-12.70	-0.015182	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	40℃	NV	-10.90	-0.013030	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	50℃	NV	-9.10	-0.010879	Pass

The End