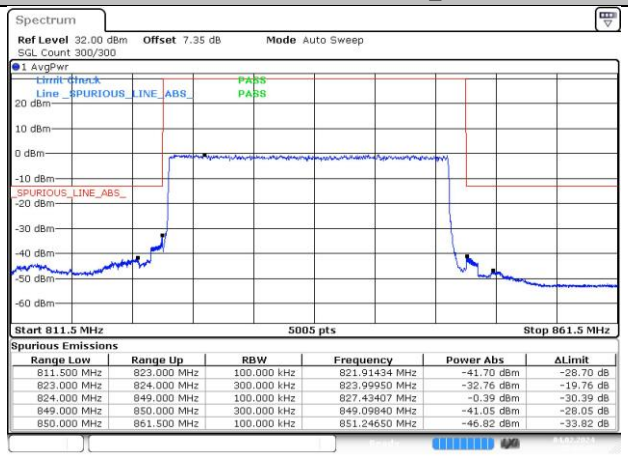
MCH / DFT-Pi2BPSK / Outer_Full

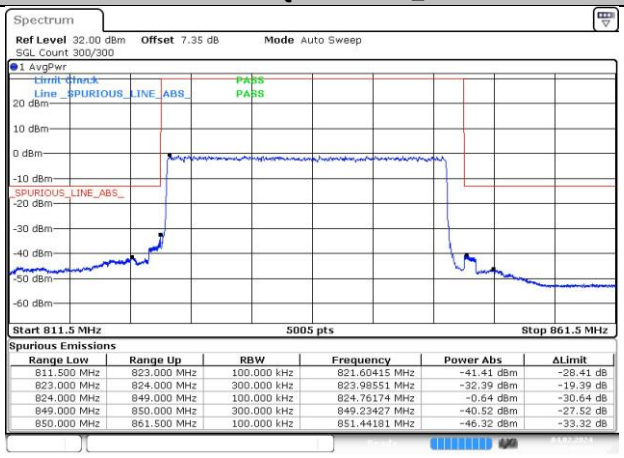


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
811.500 MHz	823.000 MHz	100.000 kHz	821.91434 MHz	-41.70 dBm	-28.70 dB
823.000 MHz	824.000 MHz	300.000 kHz	823.99950 MHz	-32.76 dBm	-19.76 dB
824.000 MHz	849.000 MHz	100.000 kHz	827.43407 MHz	-0.39 dBm	-30.39 dB
849.000 MHz	850.000 MHz	300.000 kHz	849.09840 MHz	-41.05 dBm	-28.05 dB
850.000 MHz	861.500 MHz	100.000 kHz	851.24650 MHz	-46.82 dBm	-33.82 dB

Date: 4.FEB.2024 15:04:27

MCH / DFT-QPSK / Outer_Full



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
811.500 MHz	823.000 MHz	100.000 kHz	821.60415 MHz	-41.41 dBm	-28.41 dB
823.000 MHz	824.000 MHz	300.000 kHz	823.98551 MHz	-32.39 dBm	-19.39 dB
824.000 MHz	849.000 MHz	100.000 kHz	824.76174 MHz	-0.64 dBm	-30.64 dB
849.000 MHz	850.000 MHz	300.000 kHz	849.23427 MHz	-40.52 dBm	-27.52 dB
850.000 MHz	861.500 MHz	100.000 kHz	851.44181 MHz	-46.32 dBm	-33.32 dB

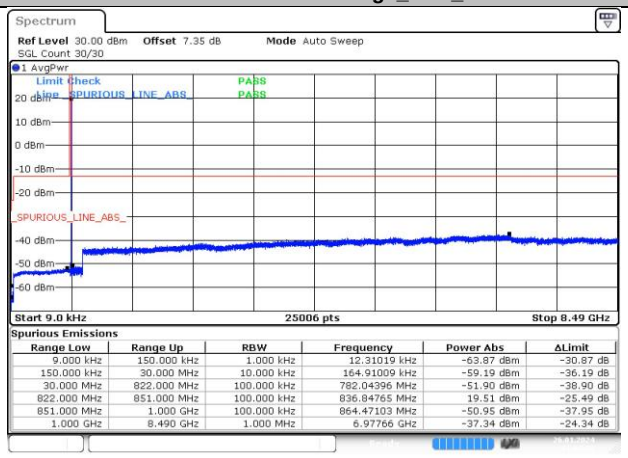
Date: 4.FEB.2024 15:07:53

6. Conducted Spurious Emission

6.1. Test Plots

n5A / 15KHz / 5MHz

LCH / DFT-Pi2BPSK / Edge_1RB_Left

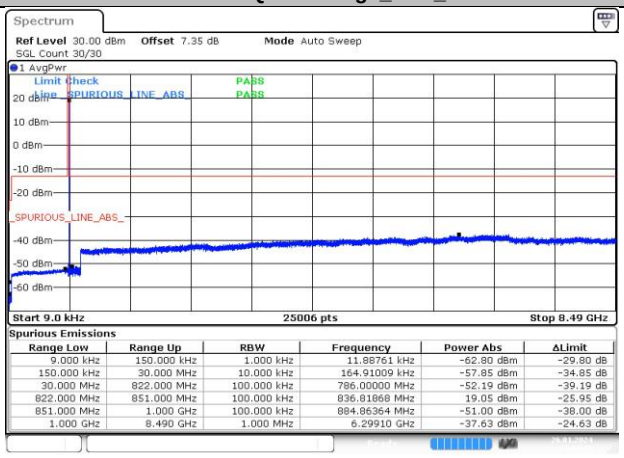


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	12.31019 kHz	-63.87 dBm	-30.87 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-59.19 dBm	-36.19 dB
30.000 MHz	822.000 MHz	100.000 kHz	782.04396 MHz	-51.90 dBm	-38.90 dB
822.000 MHz	851.000 MHz	100.000 kHz	836.84765 MHz	19.51 dBm	-25.49 dB
851.000 MHz	1.000 GHz	100.000 kHz	864.47103 MHz	-50.95 dBm	-37.95 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.97766 GHz	-37.34 dBm	-24.34 dB

Date: 26.JAN.2024 11:04:06

LCH / DFT-QPSK / Edge_1RB_Left

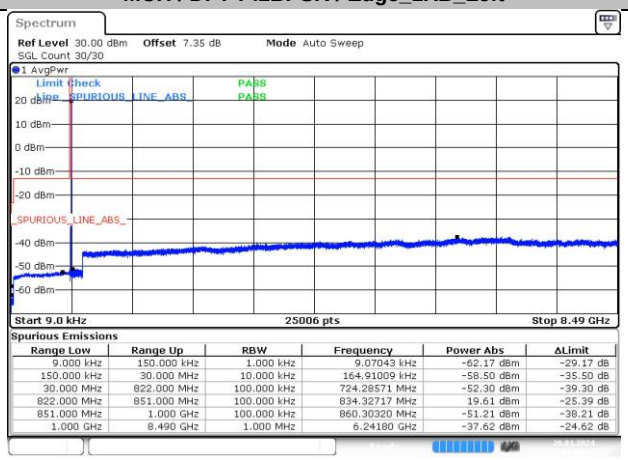


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.88761 kHz	-62.80 dBm	-29.80 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.85 dBm	-34.85 dB
30.000 MHz	822.000 MHz	100.000 kHz	786.00000 MHz	-52.19 dBm	-39.19 dB
822.000 MHz	851.000 MHz	100.000 kHz	836.81868 MHz	19.05 dBm	-25.95 dB
851.000 MHz	1.000 GHz	100.000 kHz	884.86364 MHz	-51.00 dBm	-38.00 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.29910 GHz	-37.63 dBm	-24.63 dB

Date: 26.JAN.2024 11:04:27

MCH / DFT-Pi2BPSK / Edge_1RB_Left

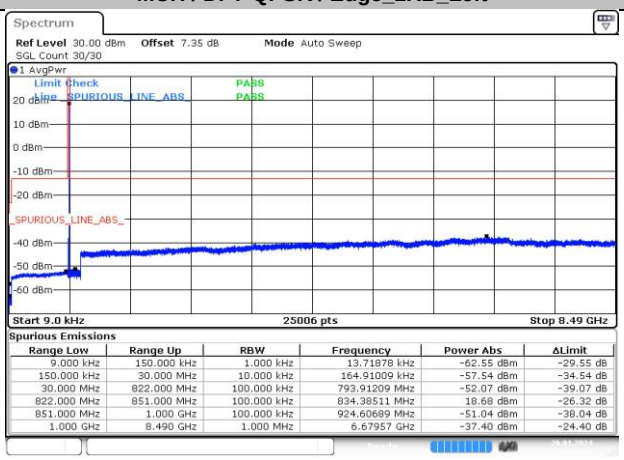


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-62.17 dBm	-29.17 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.50 dBm	-35.50 dB
30.000 MHz	822.000 MHz	100.000 kHz	724.28571 MHz	-52.30 dBm	-39.30 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.32717 MHz	19.61 dBm	-25.39 dB
851.000 MHz	1.000 GHz	100.000 kHz	860.30320 MHz	-51.21 dBm	-38.21 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.24180 GHz	-37.62 dBm	-24.62 dB

Date: 26.JAN.2024 11:05:02

MCH / DFT-QPSK / Edge_1RB_Left

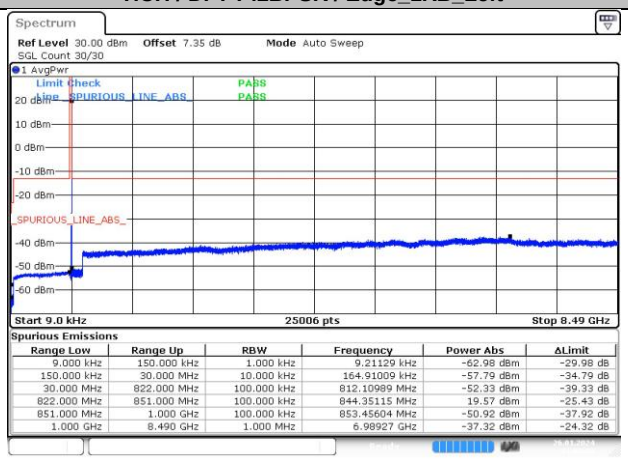


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	13.71878 kHz	-62.55 dBm	-29.55 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.54 dBm	-34.54 dB
30.000 MHz	822.000 MHz	100.000 kHz	793.91209 MHz	-52.07 dBm	-39.07 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.38511 MHz	18.68 dBm	-26.32 dB
851.000 MHz	1.000 GHz	100.000 kHz	924.60689 MHz	-51.04 dBm	-38.04 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.67957 GHz	-37.40 dBm	-24.40 dB

Date: 26.JAN.2024 11:05:36

HCH / DFT-Pi2BPSK / Edge_1RB_Left

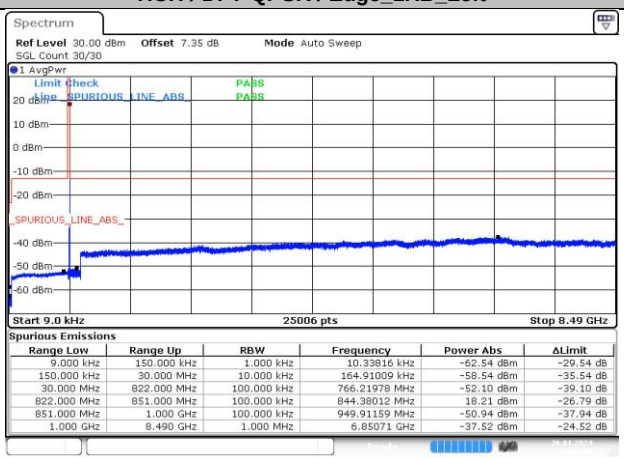


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.21129 kHz	-62.98 dBm	-29.98 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.79 dBm	-34.79 dB
30.000 MHz	822.000 MHz	100.000 kHz	812.10989 MHz	-52.33 dBm	-39.33 dB
822.000 MHz	851.000 MHz	100.000 kHz	844.35115 MHz	19.57 dBm	-25.43 dB
851.000 MHz	1.000 GHz	100.000 kHz	853.45604 MHz	-50.92 dBm	-37.92 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.98927 GHz	-37.32 dBm	-24.32 dB

Date: 26.JAN.2024 11:05:53

HCH / DFT-QPSK / Edge_1RB_Left



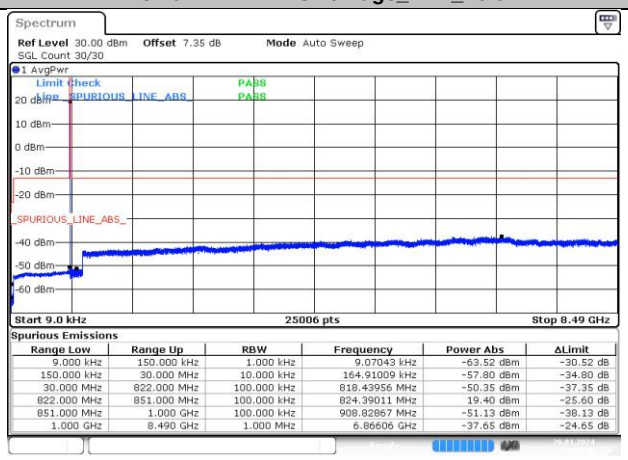
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	10.33816 kHz	-62.54 dBm	-29.54 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.54 dBm	-35.54 dB
30.000 MHz	822.000 MHz	100.000 kHz	766.21978 MHz	-52.10 dBm	-39.10 dB
822.000 MHz	851.000 MHz	100.000 kHz	844.38012 MHz	18.21 dBm	-26.79 dB
851.000 MHz	1.000 GHz	100.000 kHz	949.91159 MHz	-50.94 dBm	-37.94 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.85071 GHz	-37.52 dBm	-24.52 dB

Date: 26.JAN.2024 11:06:12

n5A / 15KHz / 10MHz

LCH / DFT-Pi2BPSK / Edge_1RB_Left

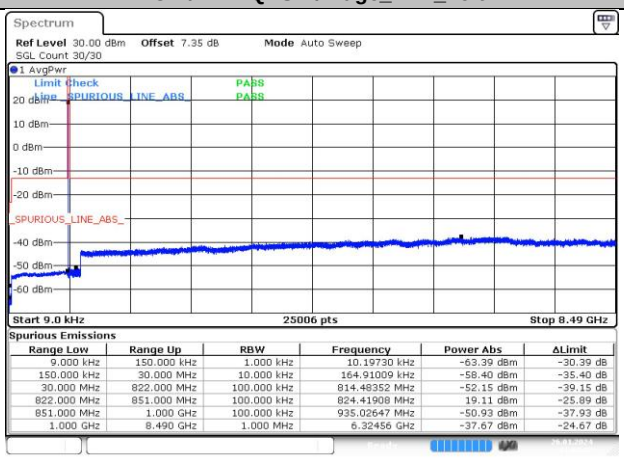


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.52 dBm	-30.52 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	818.43956 MHz	-50.35 dBm	-37.35 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.39011 MHz	19.40 dBm	-25.60 dB
851.000 MHz	1.000 GHz	100.000 kHz	908.82867 MHz	-51.13 dBm	-38.13 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.86606 GHz	-37.65 dBm	-24.65 dB

Date: 26.JAN.2024 11:06:48

LCH / DFT-QPSK / Edge_1RB_Left

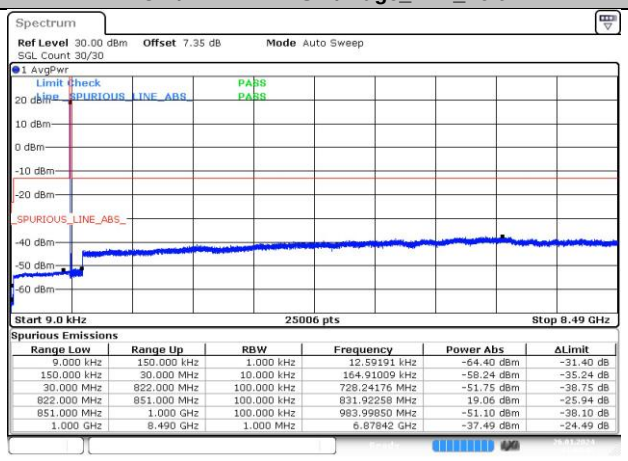


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	10.19730 kHz	-63.39 dBm	-30.39 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.40 dBm	-35.40 dB
30.000 MHz	822.000 MHz	100.000 kHz	814.48352 MHz	-52.15 dBm	-39.15 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.41908 MHz	19.11 dBm	-25.89 dB
851.000 MHz	1.000 GHz	100.000 kHz	935.02647 MHz	-50.93 dBm	-37.93 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.32456 GHz	-37.67 dBm	-24.67 dB

Date: 26.JAN.2024 11:07:07

MCH / DFT-Pi2BPSK / Edge_1RB_Left

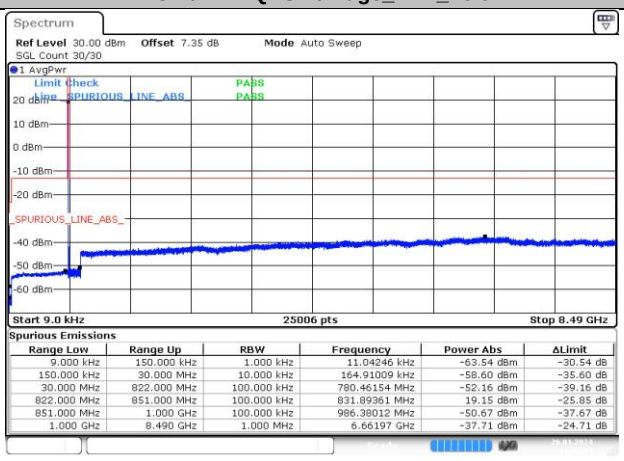


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	12.59191 kHz	-64.40 dBm	-31.40 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.24 dBm	-35.24 dB
30.000 MHz	822.000 MHz	100.000 kHz	728.24176 MHz	-51.75 dBm	-38.75 dB
822.000 MHz	851.000 MHz	100.000 kHz	831.92258 MHz	19.06 dBm	-25.94 dB
851.000 MHz	1.000 GHz	100.000 kHz	983.99850 MHz	-51.10 dBm	-38.10 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.87842 GHz	-37.49 dBm	-24.49 dB

Date: 26.JAN.2024 11:07:42

MCH / DFT-QPSK / Edge_1RB_Left

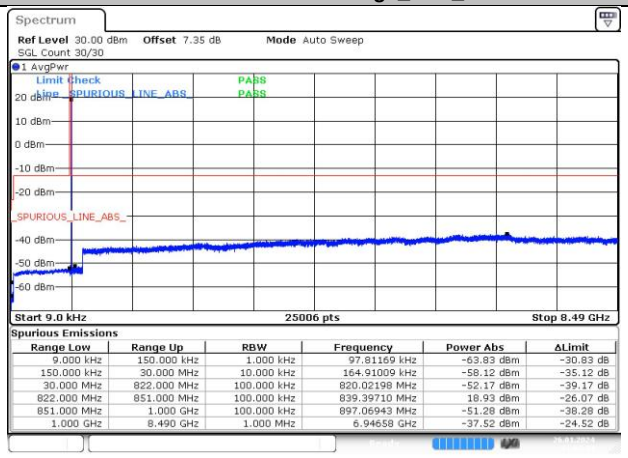


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.04246 kHz	-63.54 dBm	-30.54 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.60 dBm	-35.60 dB
30.000 MHz	822.000 MHz	100.000 kHz	780.46154 MHz	-52.16 dBm	-39.16 dB
822.000 MHz	851.000 MHz	100.000 kHz	831.89361 MHz	19.15 dBm	-25.85 dB
851.000 MHz	1.000 GHz	100.000 kHz	986.38012 MHz	-50.67 dBm	-37.67 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.66197 GHz	-37.71 dBm	-24.71 dB

Date: 26.JAN.2024 11:08:17

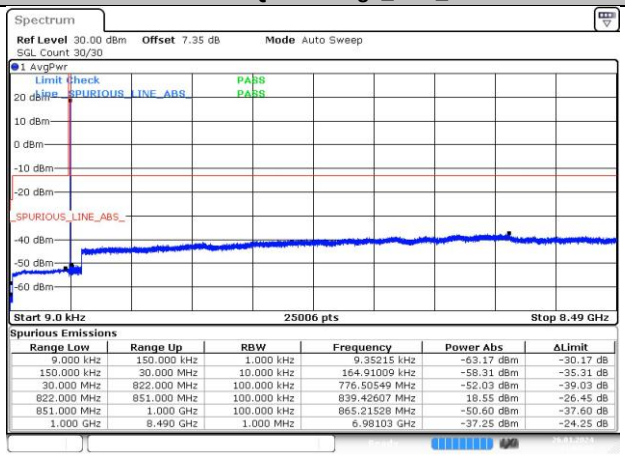
HCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	97.81169 kHz	-63.83 dBm	-30.83 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.12 dBm	-35.12 dB
30.000 MHz	822.000 MHz	100.000 kHz	820.02198 MHz	-52.17 dBm	-39.17 dB
822.000 MHz	851.000 MHz	100.000 kHz	839.39710 MHz	18.93 dBm	-26.07 dB
851.000 MHz	1.000 GHz	100.000 kHz	897.06943 MHz	-51.28 dBm	-38.28 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.94658 GHz	-37.52 dBm	-24.52 dB

HCH / DFT-QPSK / Edge_1RB_Left



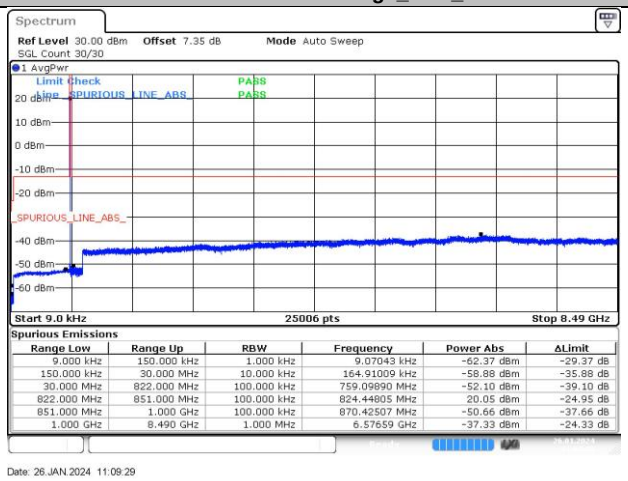
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.35215 kHz	-63.17 dBm	-30.17 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.31 dBm	-35.31 dB
30.000 MHz	822.000 MHz	100.000 kHz	776.50549 MHz	-52.03 dBm	-39.03 dB
822.000 MHz	851.000 MHz	100.000 kHz	839.42607 MHz	18.55 dBm	-26.45 dB
851.000 MHz	1.000 GHz	100.000 kHz	865.21528 MHz	-50.60 dBm	-37.60 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.98103 GHz	-37.25 dBm	-24.25 dB

6.1.1. Bandwidth:15MHz

n5A / 15KHz / 15MHz

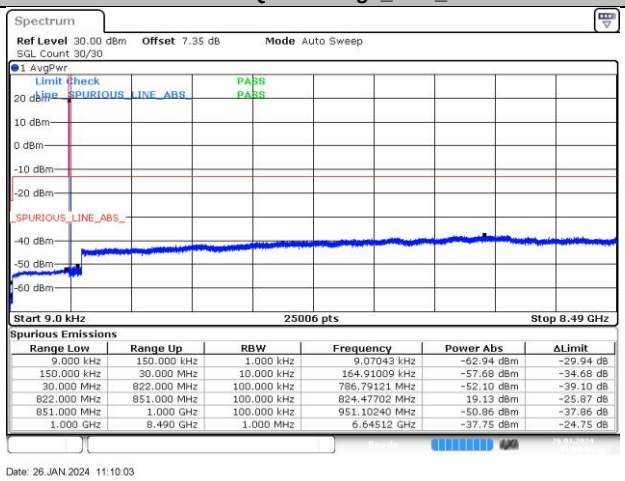
LCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-62.37 dBm	-29.37 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.88 dBm	-35.88 dB
30.000 MHz	822.000 MHz	100.000 kHz	759.09890 MHz	-52.10 dBm	-39.10 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.44805 MHz	20.05 dBm	-24.95 dB
851.000 MHz	1.000 GHz	100.000 kHz	870.42507 MHz	-50.66 dBm	-37.66 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.57659 GHz	-37.33 dBm	-24.33 dB

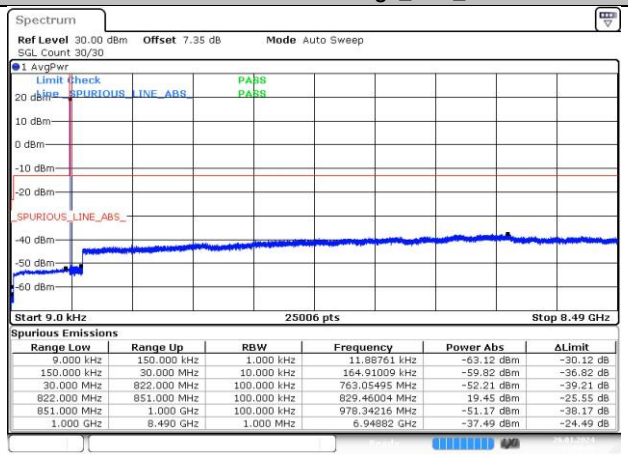
LCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-62.94 dBm	-29.94 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.68 dBm	-34.68 dB
30.000 MHz	822.000 MHz	100.000 kHz	786.79121 MHz	-52.10 dBm	-39.10 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.47702 MHz	19.13 dBm	-25.87 dB
851.000 MHz	1.000 GHz	100.000 kHz	951.10240 MHz	-50.86 dBm	-37.86 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.64512 GHz	-37.75 dBm	-24.75 dB

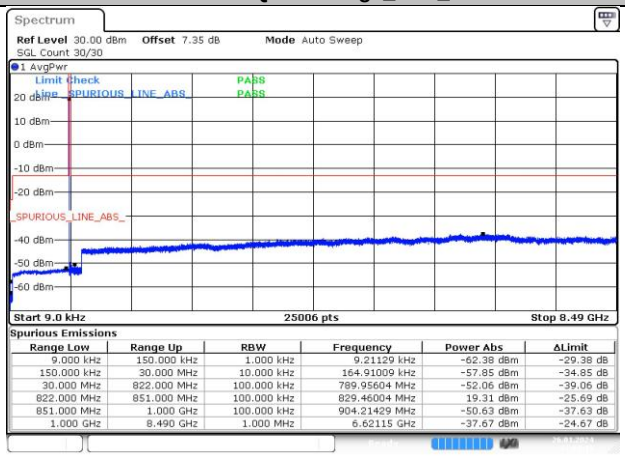
MCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.88761 kHz	-63.12 dBm	-30.12 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-59.82 dBm	-36.82 dB
30.000 MHz	822.000 MHz	100.000 kHz	763.05495 MHz	-52.21 dBm	-39.21 dB
822.000 MHz	851.000 MHz	100.000 kHz	829.46004 MHz	19.45 dBm	-25.55 dB
851.000 MHz	1.000 GHz	100.000 kHz	978.34216 MHz	-51.17 dBm	-38.17 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.94882 GHz	-37.49 dBm	-24.49 dB

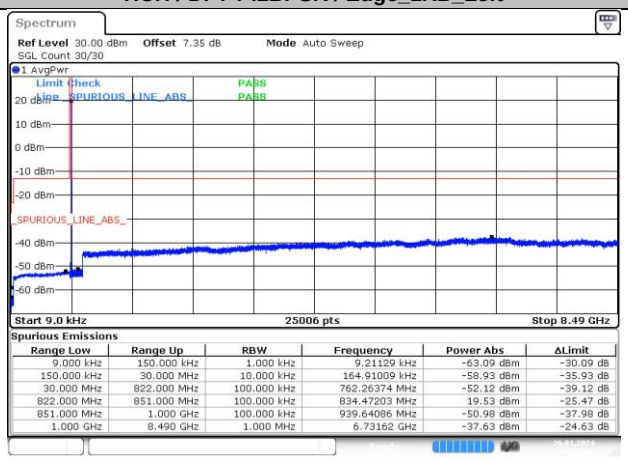
MCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.21129 kHz	-62.38 dBm	-29.38 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-57.85 dBm	-34.85 dB
30.000 MHz	822.000 MHz	100.000 kHz	789.95604 MHz	-52.06 dBm	-39.06 dB
822.000 MHz	851.000 MHz	100.000 kHz	829.46004 MHz	19.31 dBm	-25.69 dB
851.000 MHz	1.000 GHz	100.000 kHz	904.21429 MHz	-50.63 dBm	-37.63 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.62115 GHz	-37.67 dBm	-24.67 dB

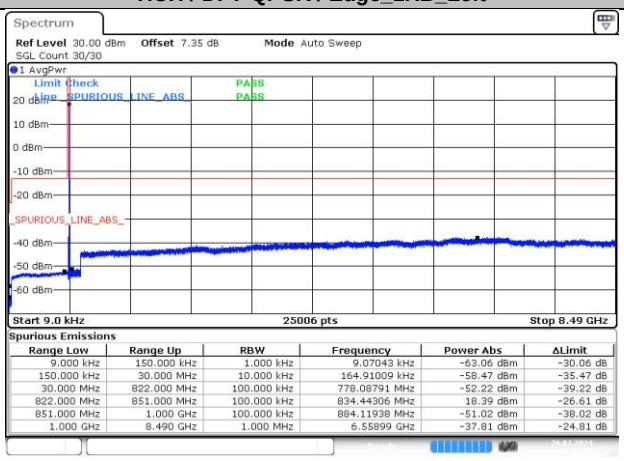
HCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.21129 kHz	-63.09 dBm	-30.09 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.93 dBm	-35.93 dB
30.000 MHz	822.000 MHz	100.000 kHz	762.26374 MHz	-52.12 dBm	-39.12 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.47203 MHz	19.53 dBm	-25.47 dB
851.000 MHz	1.000 GHz	100.000 kHz	939.64086 MHz	-50.98 dBm	-37.98 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.73162 GHz	-37.63 dBm	-24.63 dB

HCH / DFT-QPSK / Edge_1RB_Left

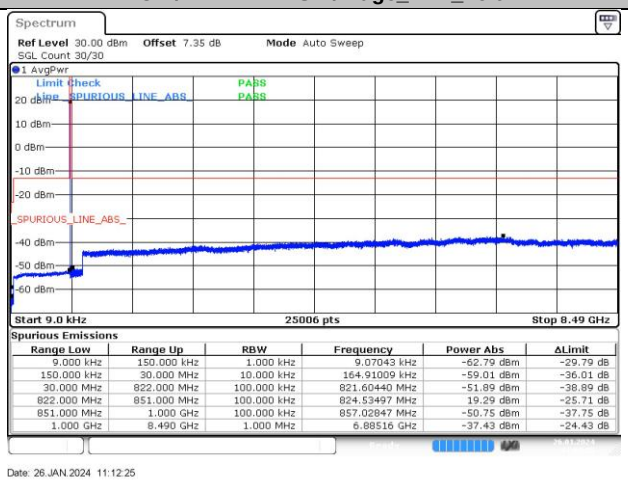


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-63.06 dBm	-30.06 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.47 dBm	-35.47 dB
30.000 MHz	822.000 MHz	100.000 kHz	778.08791 MHz	-52.22 dBm	-39.22 dB
822.000 MHz	851.000 MHz	100.000 kHz	834.44306 MHz	18.39 dBm	-26.61 dB
851.000 MHz	1.000 GHz	100.000 kHz	884.11938 MHz	-51.02 dBm	-38.02 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.55899 GHz	-37.81 dBm	-24.81 dB

n5A / 15KHz / 20MHz

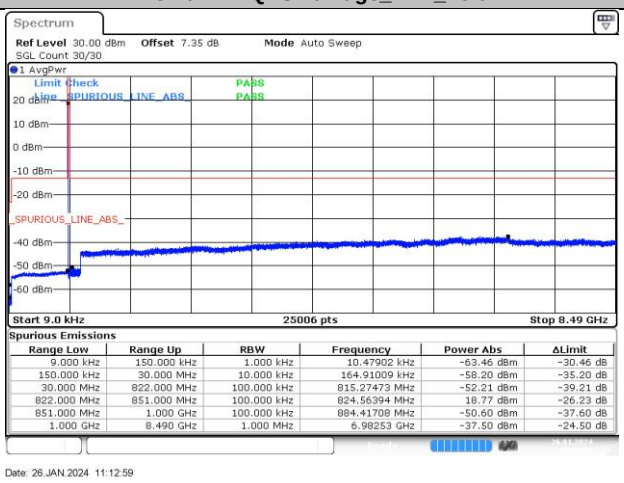
LCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	9.07043 kHz	-62.79 dBm	-29.79 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-59.01 dBm	-36.01 dB
30.000 MHz	822.000 MHz	100.000 kHz	821.60440 MHz	-51.89 dBm	-38.89 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.53497 MHz	19.29 dBm	-25.71 dB
851.000 MHz	1.000 GHz	100.000 kHz	857.02847 MHz	-50.75 dBm	-37.75 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.88516 GHz	-37.43 dBm	-24.43 dB

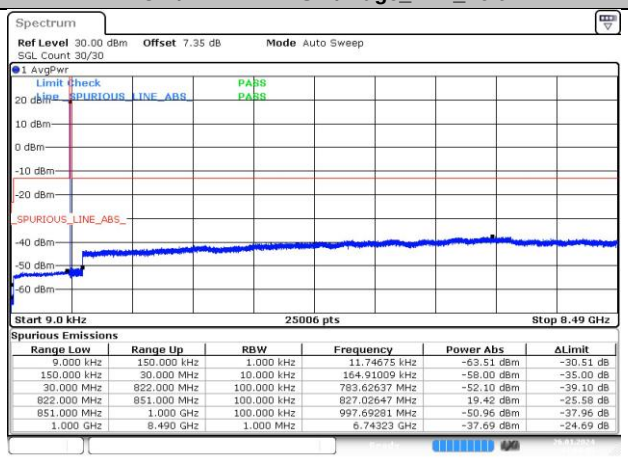
LCH / DFT-QPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	10.47902 kHz	-63.46 dBm	-30.46 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.20 dBm	-35.20 dB
30.000 MHz	822.000 MHz	100.000 kHz	815.27473 MHz	-52.21 dBm	-39.21 dB
822.000 MHz	851.000 MHz	100.000 kHz	824.56394 MHz	18.77 dBm	-26.23 dB
851.000 MHz	1.000 GHz	100.000 kHz	884.41708 MHz	-50.60 dBm	-37.60 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.98253 GHz	-37.50 dBm	-24.50 dB

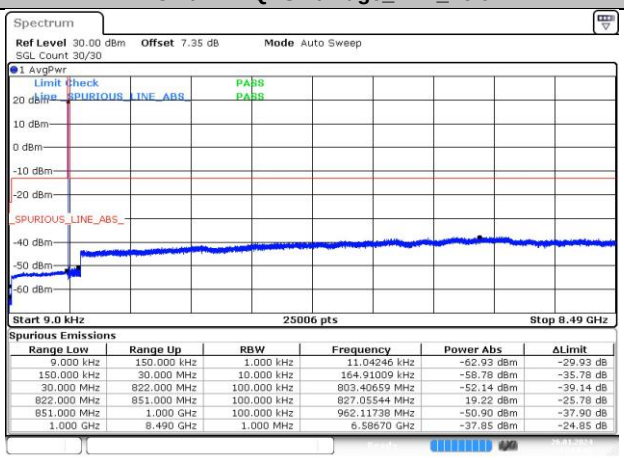
MCH / DFT-Pi2BPSK / Edge_1RB_Left



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.74675 kHz	-63.51 dBm	-30.51 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.00 dBm	-35.00 dB
30.000 MHz	822.000 MHz	100.000 kHz	783.62637 MHz	-52.10 dBm	-39.10 dB
822.000 MHz	851.000 MHz	100.000 kHz	827.02647 MHz	19.42 dBm	-25.58 dB
851.000 MHz	1.000 GHz	100.000 kHz	997.69281 MHz	-50.96 dBm	-37.96 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.74323 GHz	-37.69 dBm	-24.69 dB

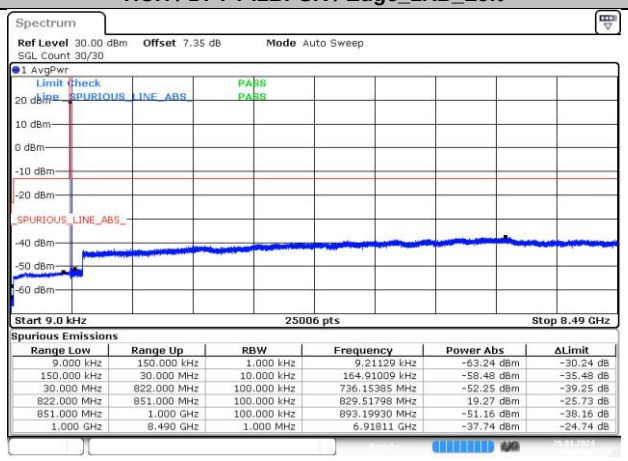
MCH / DFT-QPSK / Edge_1RB_Left



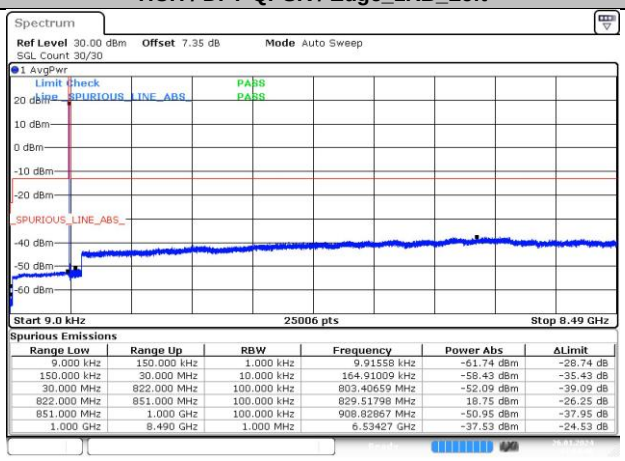
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
9.000 kHz	150.000 kHz	1.000 kHz	11.04246 kHz	-62.93 dBm	-29.93 dB
150.000 kHz	30.000 MHz	10.000 kHz	164.91009 kHz	-58.78 dBm	-35.78 dB
30.000 MHz	822.000 MHz	100.000 kHz	803.40659 MHz	-52.14 dBm	-39.14 dB
822.000 MHz	851.000 MHz	100.000 kHz	827.05544 MHz	19.22 dBm	-25.78 dB
851.000 MHz	1.000 GHz	100.000 kHz	962.11738 MHz	-50.90 dBm	-37.90 dB
1.000 GHz	8.490 GHz	1.000 MHz	6.58670 GHz	-37.85 dBm	-24.85 dB

HCH / DFT-Pi2BPSK / Edge_1RB_Left

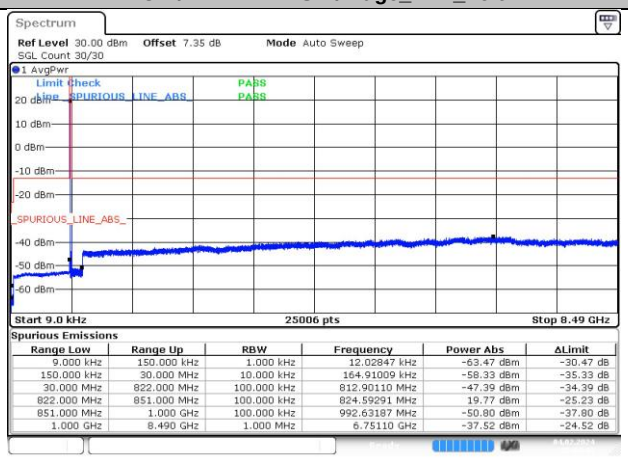


HCH / DFT-QPSK / Edge_1RB_Left

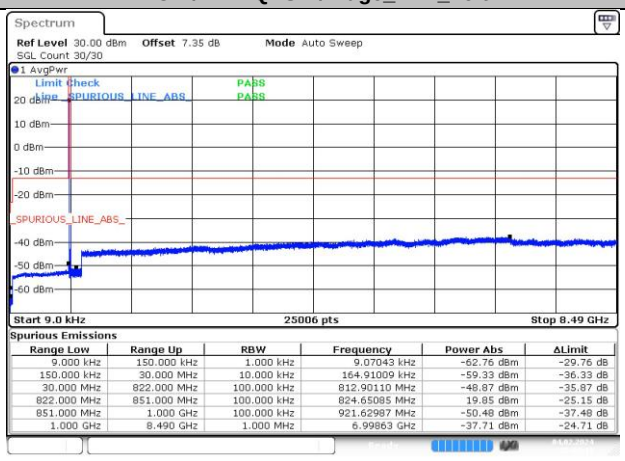


n5A / 15KHz / 25MHz

MCH / DFT-Pi2BPSK / Edge_1RB_Left



MCH / 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	25MHz	MCH	Outer_Full	DFT-QPSK	NT	LV	-3.50	-0.004184	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	NT	NV	-2.90	-0.003467	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	NT	HV	-1.90	-0.002271	Pass

7.1.2. Frequency Error Vs Temperature

SCS	Bandwidth	Channel	RB Config	Modulation	Temperature	Voltage	Deviation Result		Verdict
							(Hz)	(ppm)	
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	-30℃	NV	-0.20	-0.000239	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	-20℃	NV	-0.70	-0.000837	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	-10℃	NV	-5.10	-0.006097	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	0℃	NV	-3.10	-0.003706	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	10℃	NV	-1.90	-0.002271	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	20℃	NV	-2.40	-0.002869	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	30℃	NV	0.90	0.001076	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	40℃	NV	-3.30	-0.003945	Pass
15KHz	25MHz	MCH	Outer_Full	DFT-QPSK	50℃	NV	-3.40	-0.004065	Pass

The End