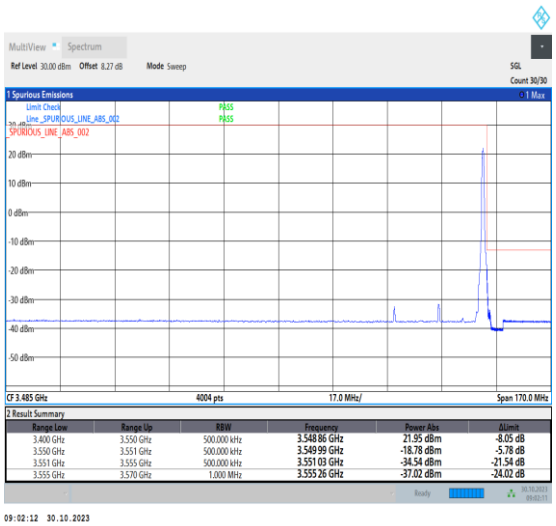
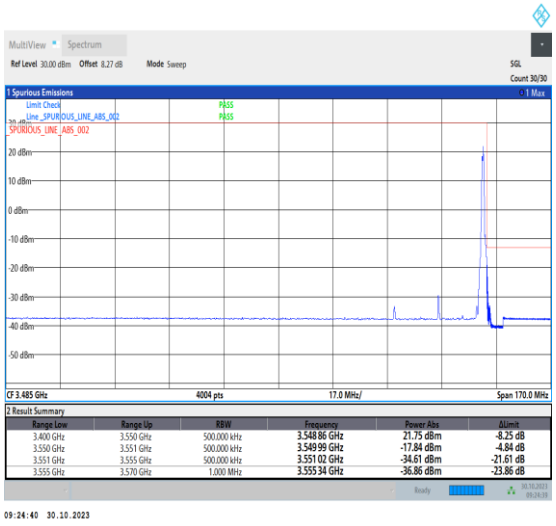
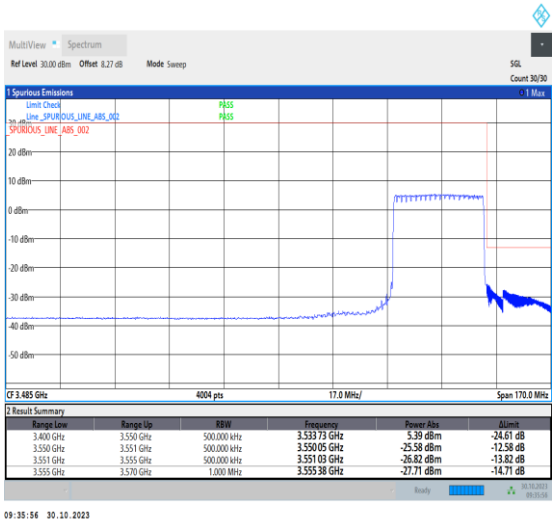


1-N77-3450-3550-30-30-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@77-Ant2-1--PASS-see graph

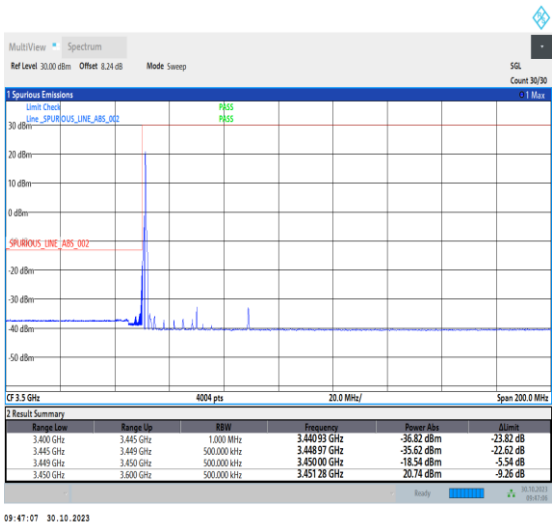
1-N77-3450-3550-30-30-H-3-DFT-PI2BPSK-Outer_Full-75@0-Ant2-1--PASS-see graph



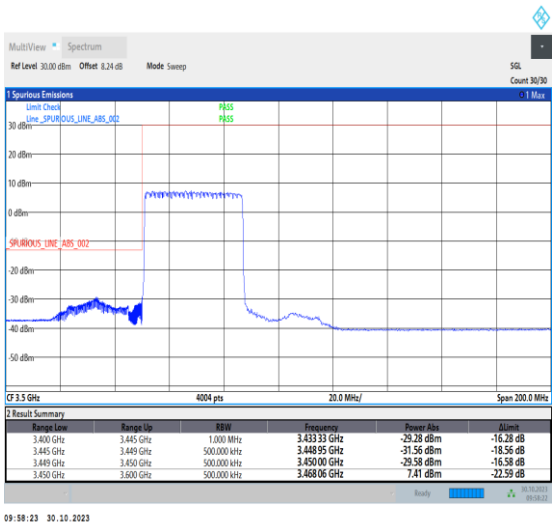
1-N77-3450-3550-30-30-H-5-CP-QPSK-Edge_1RB_Right-1@77-Ant2-1--PASS-see graph



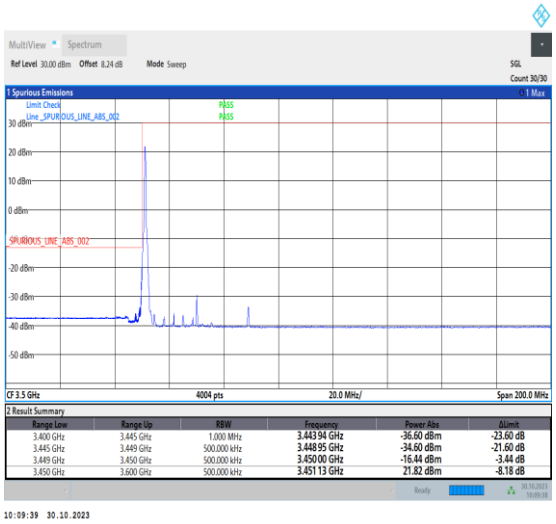
1-N77-3450-3550-30-30-H-6-CP-QPSK-Outer_Full-78@0-Ant2-1--PASS-see graph



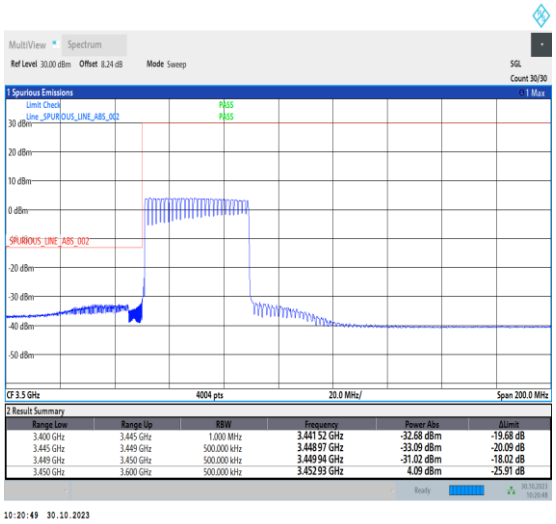
1-N77-3450-3550-30-40-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



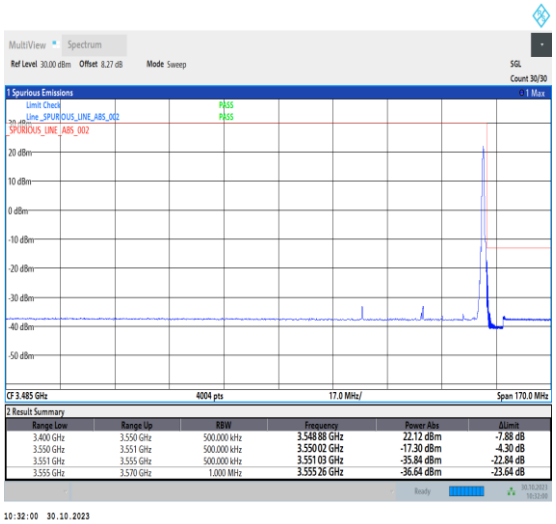
1-N77-3450-3550-30-40-L-3-DFT-PI2BPSK-Outer_Full-100@0-Ant2-1--PASS-see graph



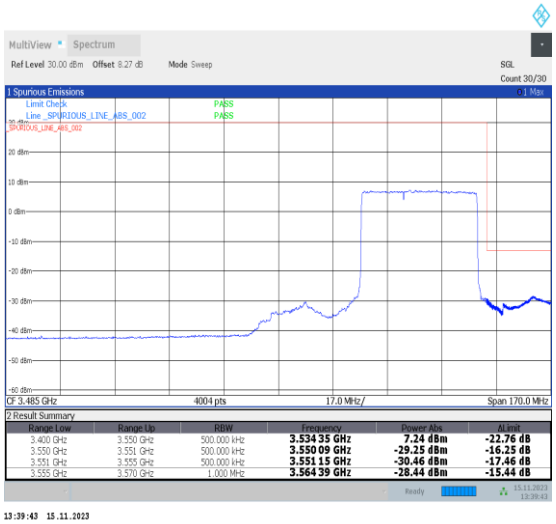
1-N77-3450-3550-30-40-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



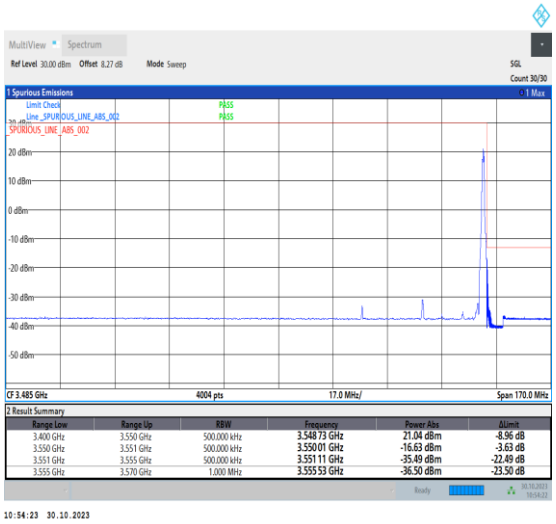
1-N77-3450-3550-30-40-L-6-CP-QPSK-Outer_Full-106@0-Ant2-1--PASS-see graph



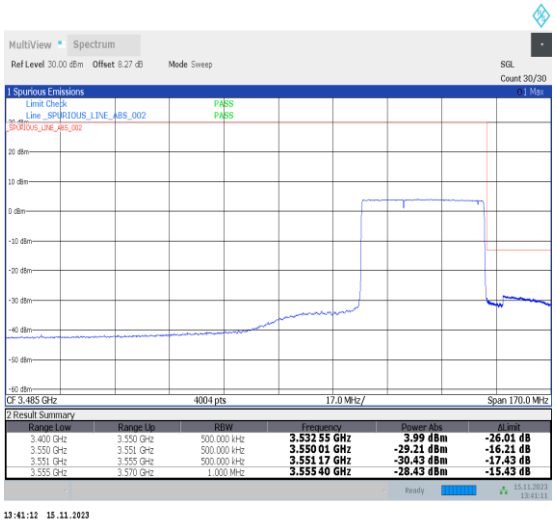
1-N77-3450-3550-30-40-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@105-Ant2-1--PASS-see graph



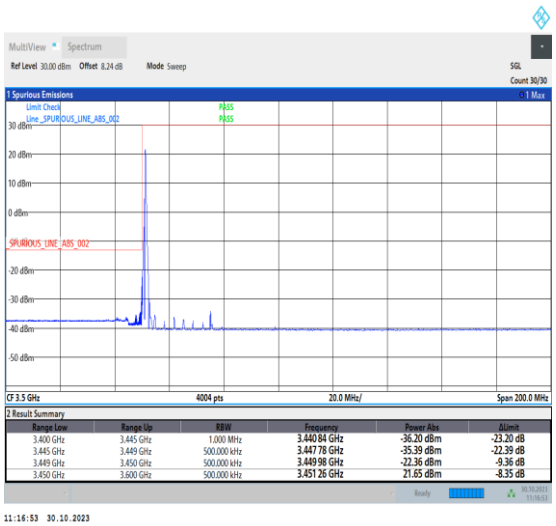
1-N77-3450-3550-30-40-H-3-DFT-PI2BPSK-Outer_Full-100@0-Ant2-1--PASS-see graph



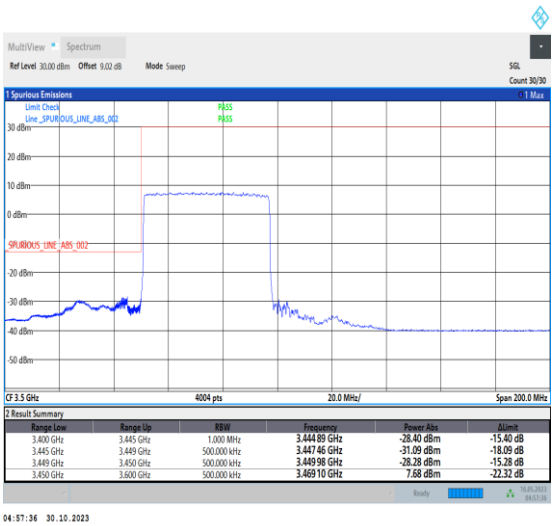
1-N77-3450-3550-30-40-H-5-CP-QPSK-Edge_1RB_Right-1@105-Ant2-1--PASS-see graph



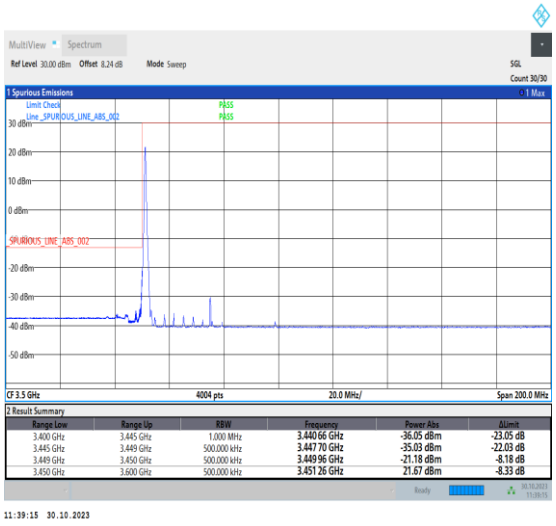
1-N77-3450-3550-30-40-H-6-CP-QPSK-Outer_Full-106@0-Ant2-1--PASS-see graph



1-N77-3450-3550-30-50-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph

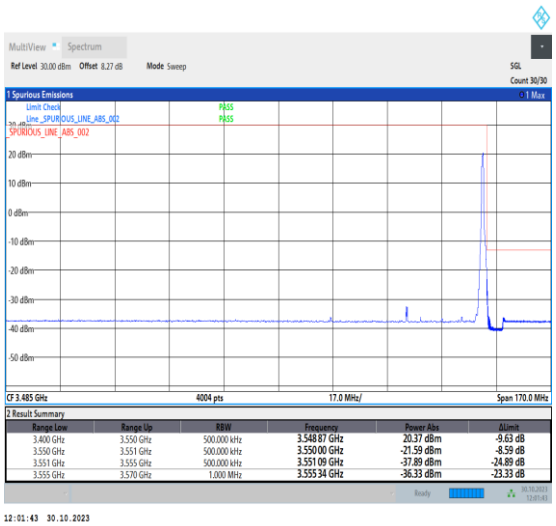


1-N77-3450-3550-30-50-L-3-DFT-PI2BPSK-Outer_Full-128@0-Ant2-1--PASS-see graph



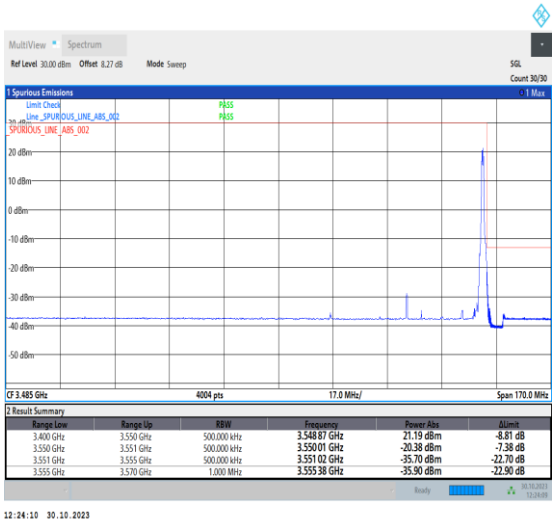
1-N77-3450-3550-30-50-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph

1-N77-3450-3550-30-50-L-6-CP-QPSK-Outer_Full-133@0-Ant2-1--PASS-see graph



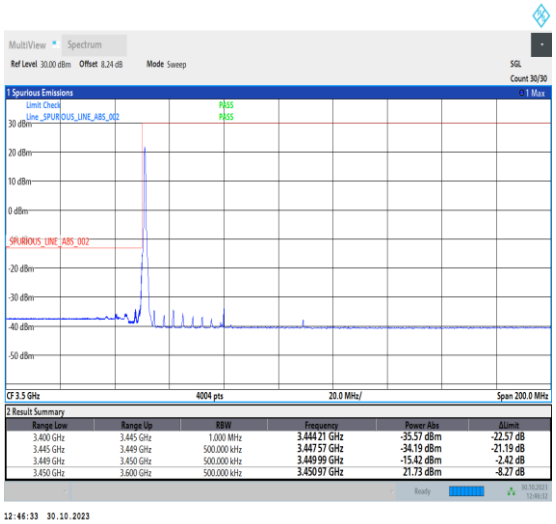
1-N77-3450-3550-30-50-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@132-Ant2-1--PASS-see graph

1-N77-3450-3550-30-50-H-3-DFT-PI2BPSK-Outer_Full-128@0-Ant2-1--PASS-see graph

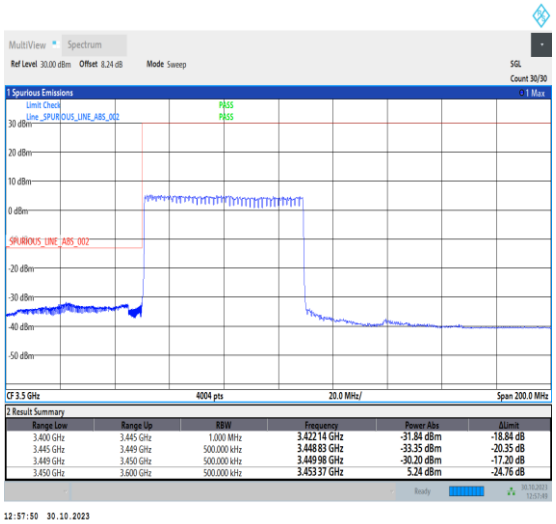


1-N77-3450-3550-30-50-H-5-CP-QPSK-Edge_1RB_Right-1@132-Ant2-1--PASS-see graph

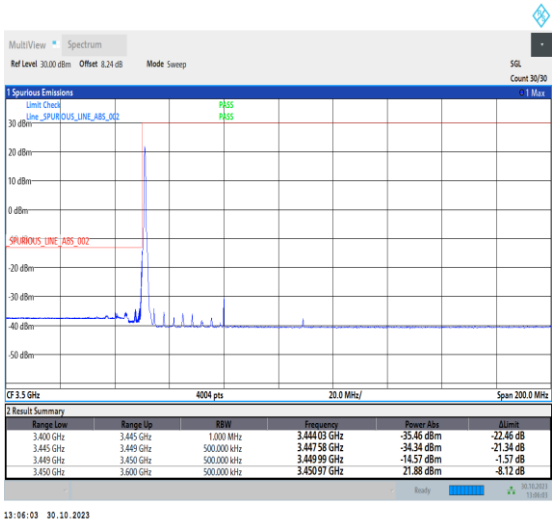
1-N77-3450-3550-30-50-H-6-CP-QPSK-Outer_Full-133@0-Ant2-1--PASS-see graph



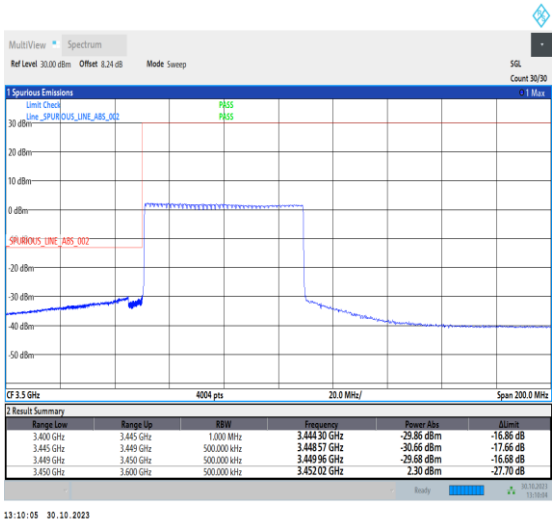
1-N77-3450-3550-30-60-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



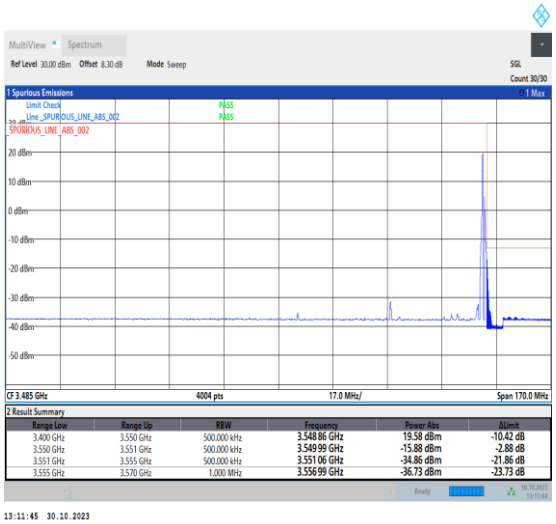
1-N77-3450-3550-30-60-L-3-DFT-PI2BPSK-Outer_Full-162@0-Ant2-1--PASS-see graph



1-N77-3450-3550-30-60-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph

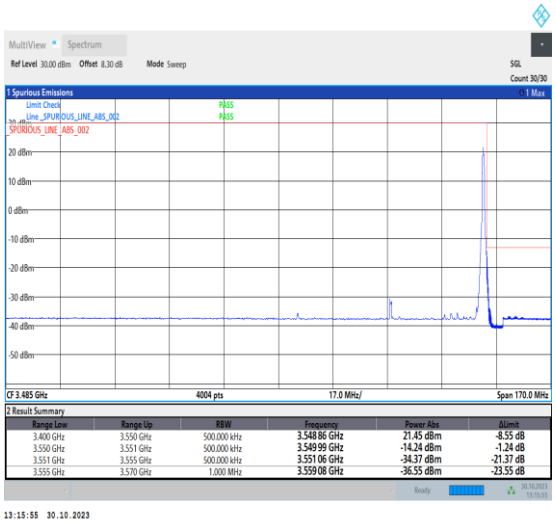


1-N77-3450-3550-30-60-L-6-CP-QPSK-Outer_Full-162@0-Ant2-1--PASS-see graph



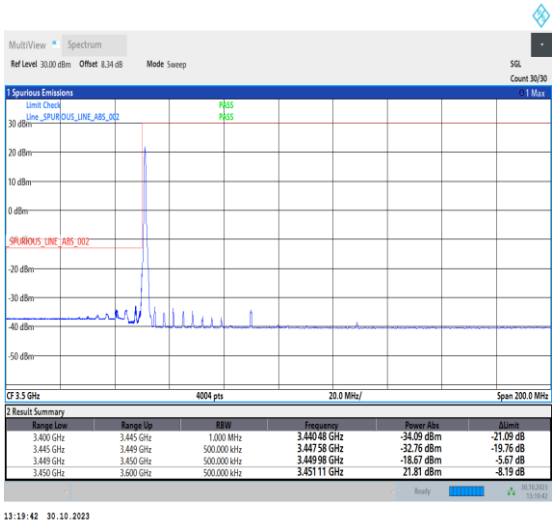
1-N77-3450-3550-30-60-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@161-Ant2-1--PASS-see graph

1-N77-3450-3550-30-60-H-3-DFT-PI2BPSK-Outer_Full-162@0-Ant2-1--PASS-see graph

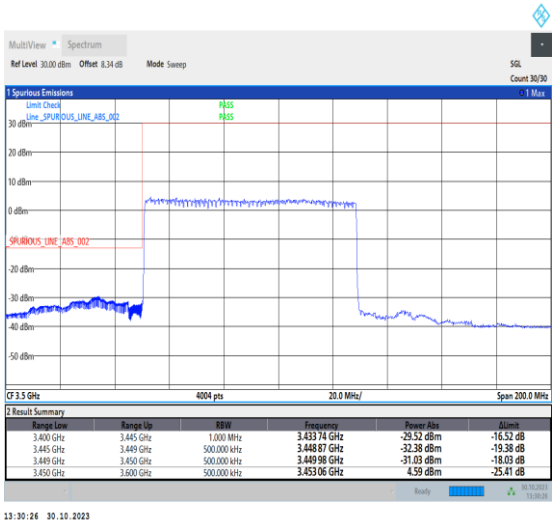


1-N77-3450-3550-30-60-H-5-CP-QPSK-Edge_1RB_Right-1@161-Ant2-1--PASS-see graph

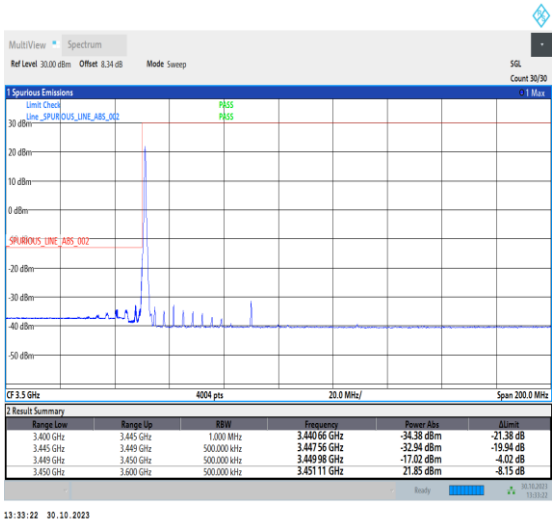
1-N77-3450-3550-30-60-H-6-CP-QPSK-Outer_Full-162@0-Ant2-1--PASS-see graph



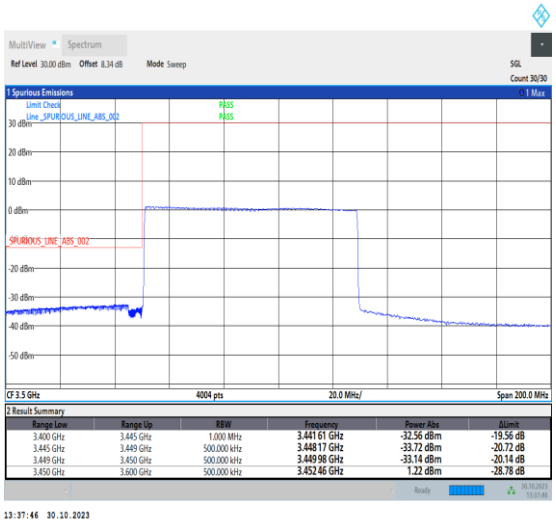
1-N77-3450-3550-30-80-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



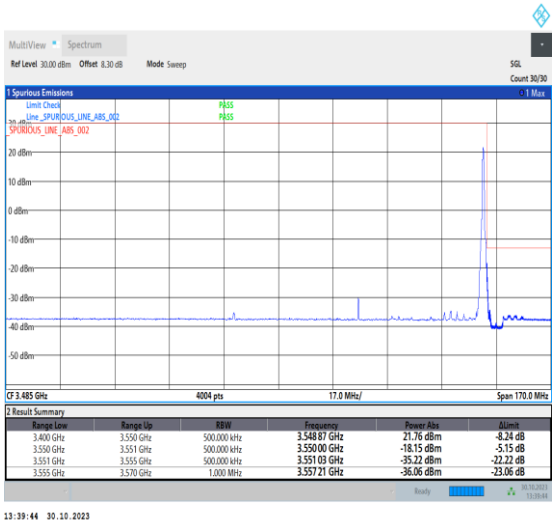
1-N77-3450-3550-30-80-L-3-DFT-PI2BPSK-Outer_Full-216@0-Ant2-1--PASS-see graph



1-N77-3450-3550-30-80-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph

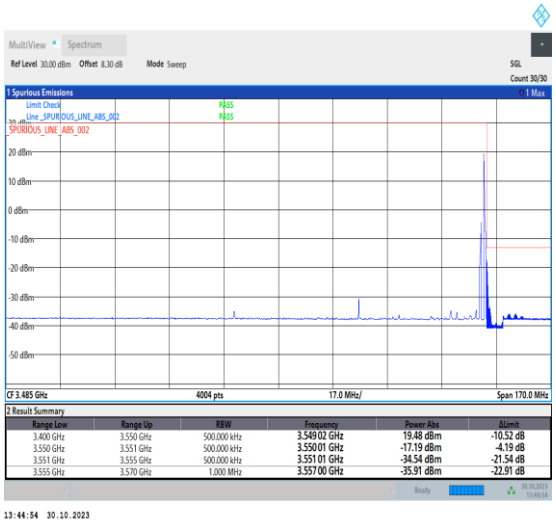


1-N77-3450-3550-30-80-L-6-CP-QPSK-Outer_Full-217@0-Ant2-1--PASS-see graph

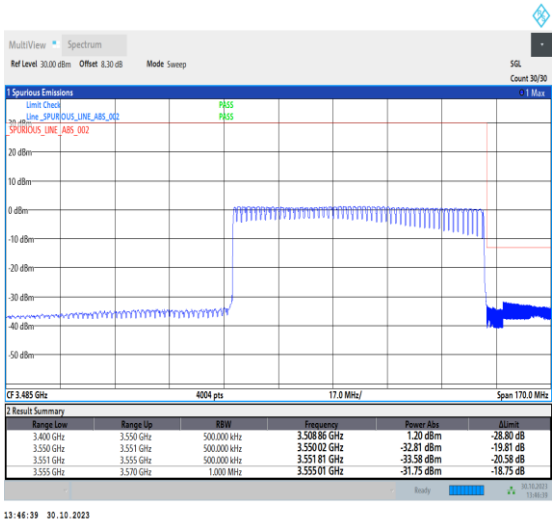


1-N77-3450-3550-30-80-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@216-Ant2-1--PASS-see graph

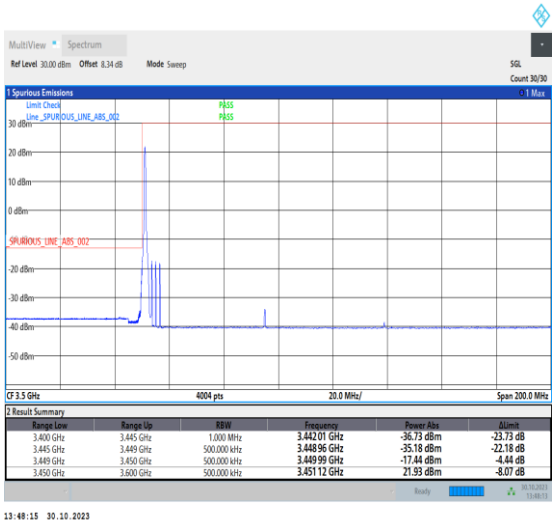
1-N77-3450-3550-30-80-H-3-DFT-PI2BPSK-Outer_Full-216@0-Ant2-1--PASS-see graph



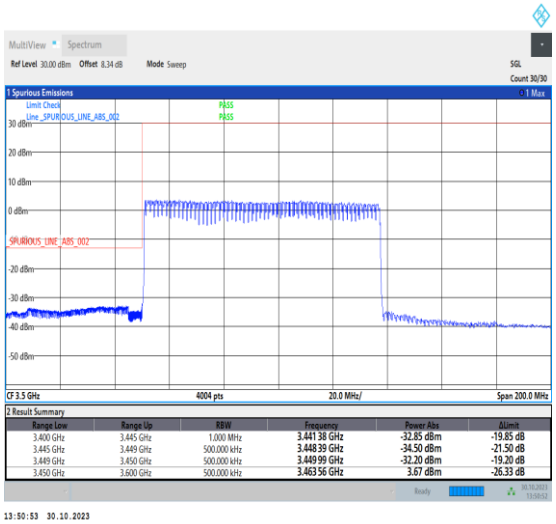
1-N77-3450-3550-30-80-H-5-CP-QPSK-Edge_1RB_Right-1@216-Ant2-1--PASS-see graph



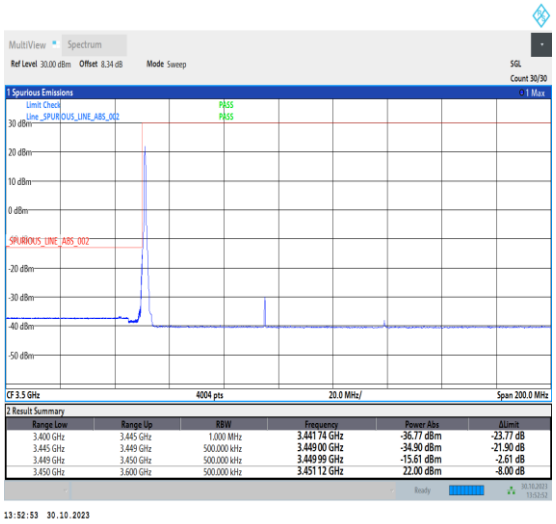
1-N77-3450-3550-30-80-H-6-CP-QPSK-Outer_Full-217@0-Ant2-1--PASS-see graph



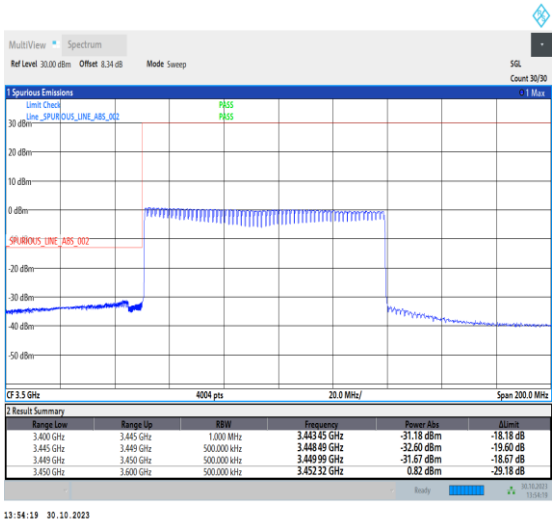
1-N77-3450-3550-30-90-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



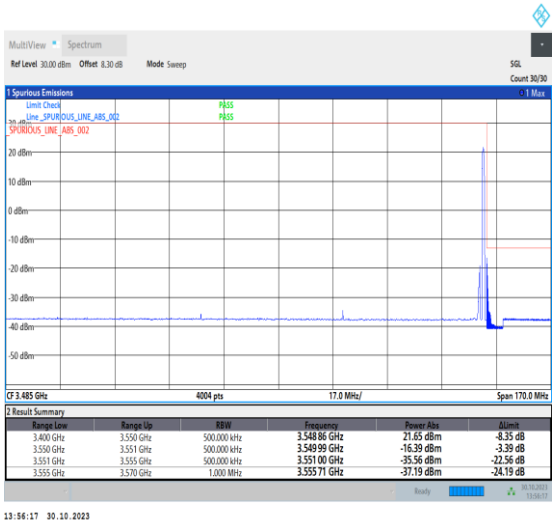
1-N77-3450-3550-30-90-L-3-DFT-PI2BPSK-Outer_Full-240@0-Ant2-1--PASS-see graph



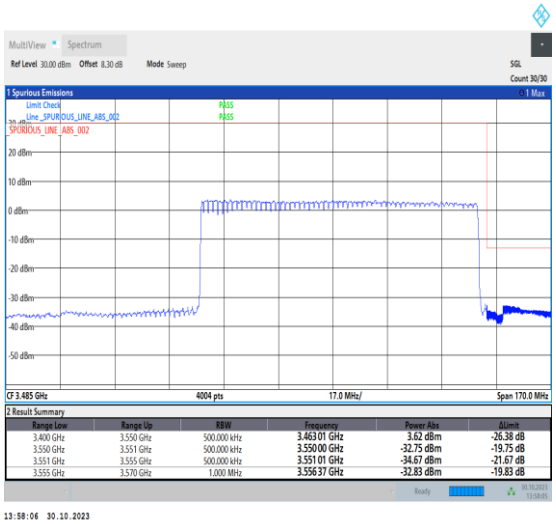
1-N77-3450-3550-30-90-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



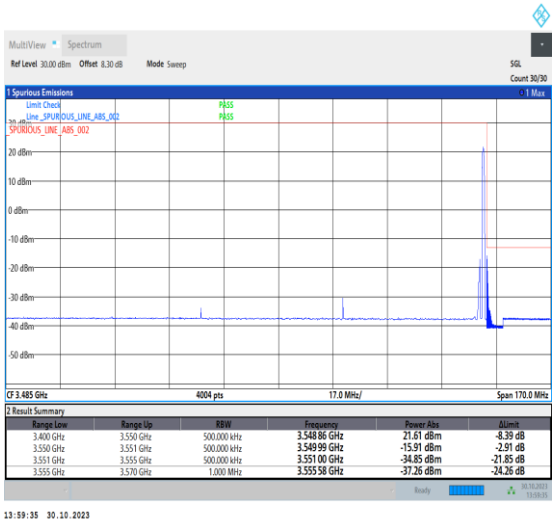
1-N77-3450-3550-30-90-L-6-CP-QPSK-Outer_Full-245@0-Ant2-1--PASS-see graph



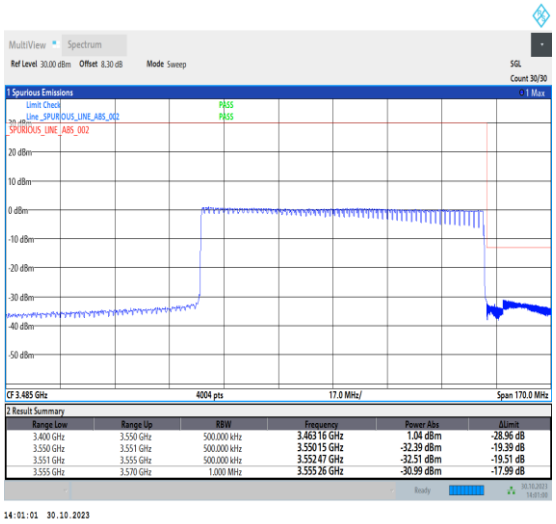
1-N77-3450-3550-30-90-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@244-Ant2-1--PASS-see graph



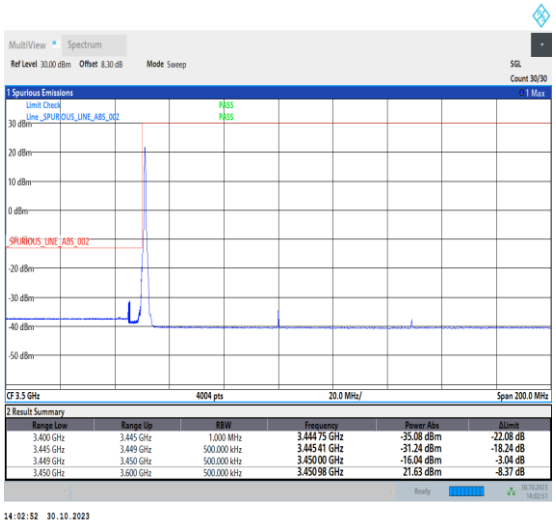
1-N77-3450-3550-30-90-H-3-DFT-PI2BPSK-Outer_Full-240@0-Ant2-1--PASS-see graph



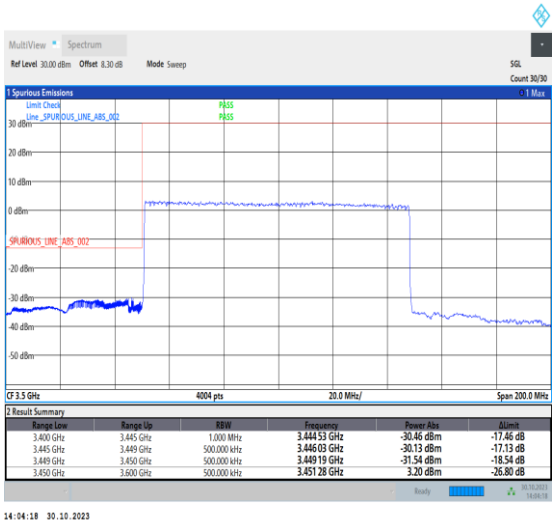
1-N77-3450-3550-30-90-H-5-CP-QPSK-Edge_1RB_Right-1@244-Ant2-1--PASS-see graph



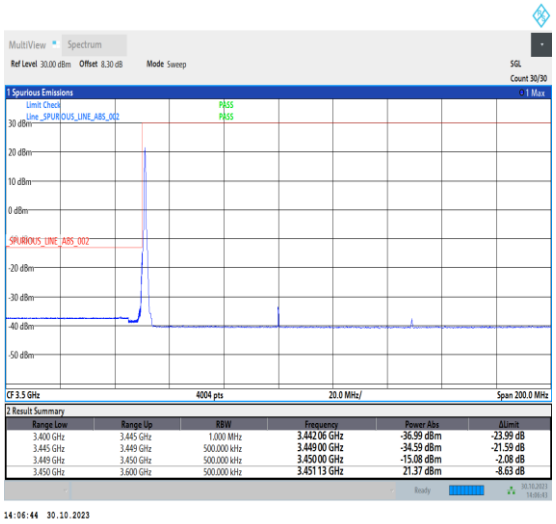
1-N77-3450-3550-30-90-H-6-CP-QPSK-Outer_Full-245@0-Ant2-1--PASS-see graph



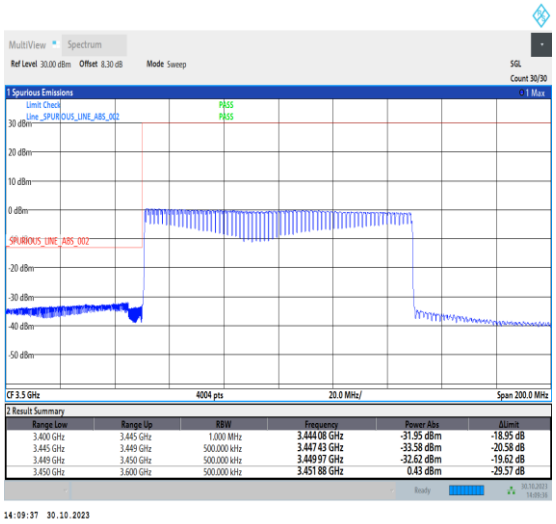
1-N77-3450-3550-30-100-L-1-DFT-PI2BPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



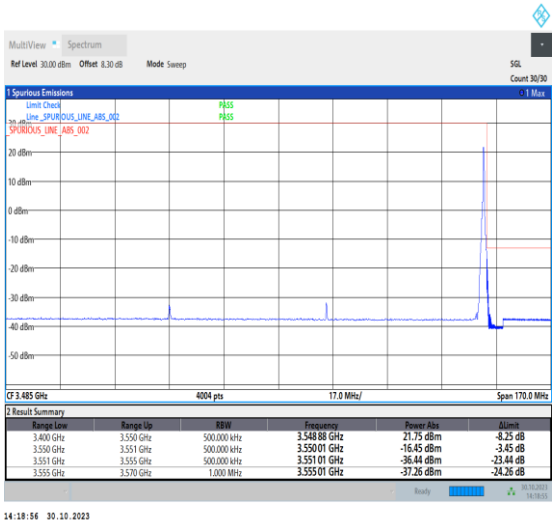
1-N77-3450-3550-30-100-L-3-DFT-PI2BPSK-Outer_Full-270@0-Ant2-1--PASS-see graph



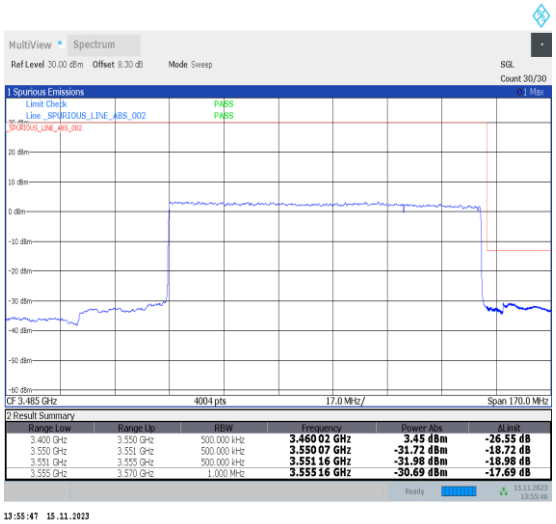
1-N77-3450-3550-30-100-L-4-CP-QPSK-Edge_1RB_Left-1@0-Ant2-1--PASS-see graph



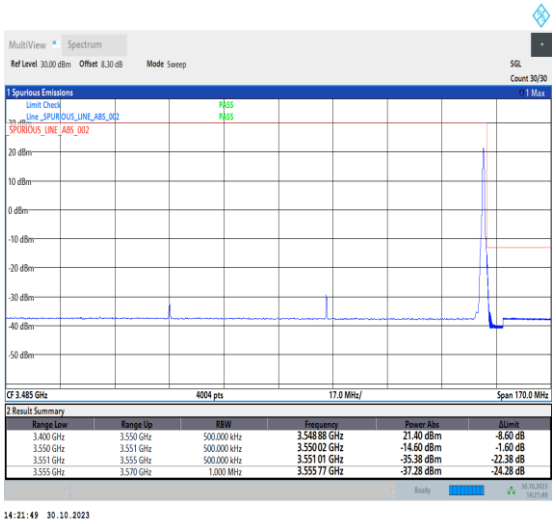
1-N77-3450-3550-30-100-L-6-CP-QPSK-Outer_Full-273@0-Ant2-1--PASS-see graph



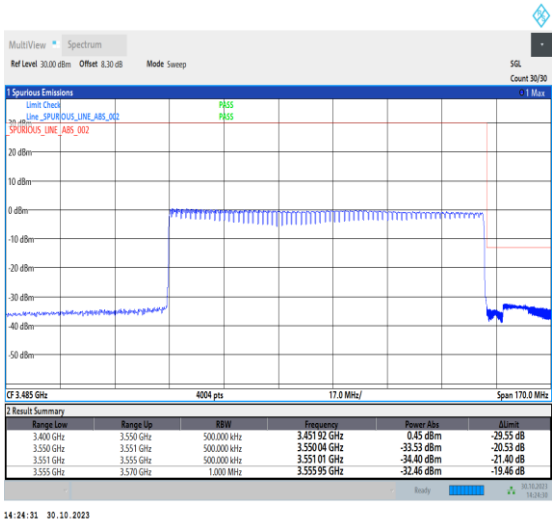
1-N77-3450-3550-30-100-H-2-DFT-PI2BPSK-Edge_1RB_Right-1@272-Ant2-1--PASS-see graph



1-N77-3450-3550-30-100-H-3-DFT-PI2BPSK-Outer_Full-270@0-Ant2-1--PASS-see graph



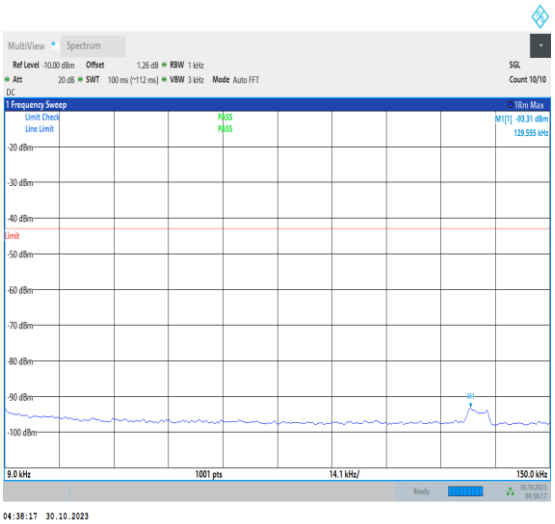
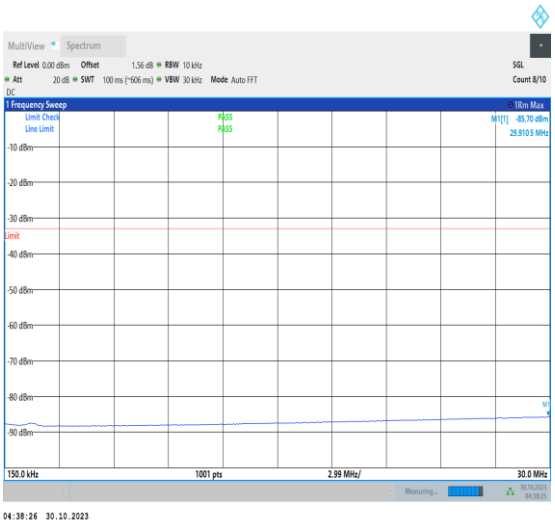
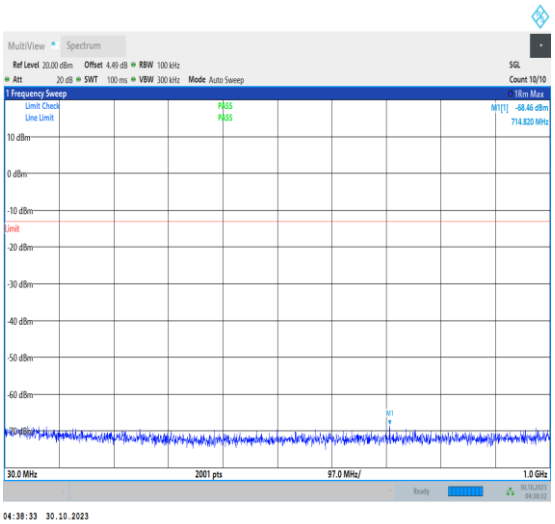
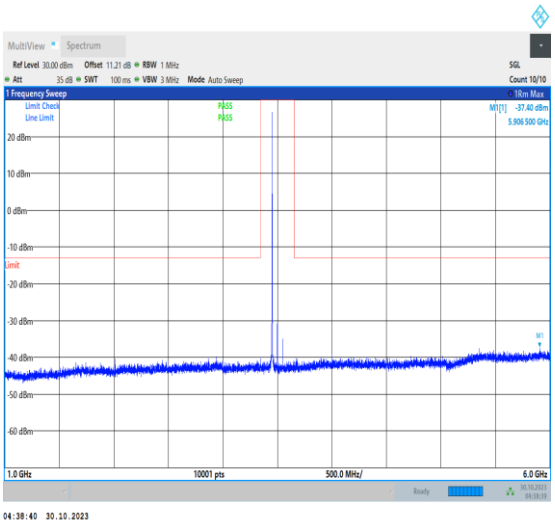
1-N77-3450-3550-30-100-H-5-CP-QPSK-Edge_1RB_Right-1@272-Ant2-1--PASS-see graph

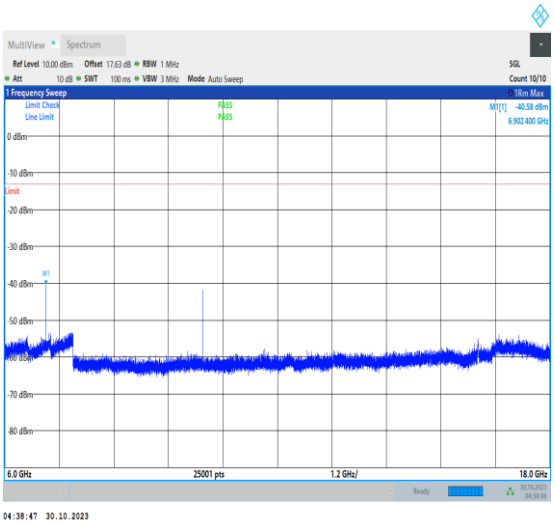


1-N77-3450-3550-30-100-H-6-CP-QPSK-Outer_Full-273@0-Ant2-1--PASS-see graph

Conducted Spurious Emission for SA

Test Graphs

	
1-N77-3450-3550-30-100-L-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-0.009-0.15-Ant2-0.13--93.31--43-PASS	1-N77-3450-3550-30-100-L-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-0.15-30-Ant2-29.91--85.70--33-PASS
	
1-N77-3450-3550-30-100-L-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-30-1000-Ant2-714.82--68.46--13-PASS	1-N77-3450-3550-30-100-L-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-1000-6000-Ant2-5906.50--37.40--13-PASS



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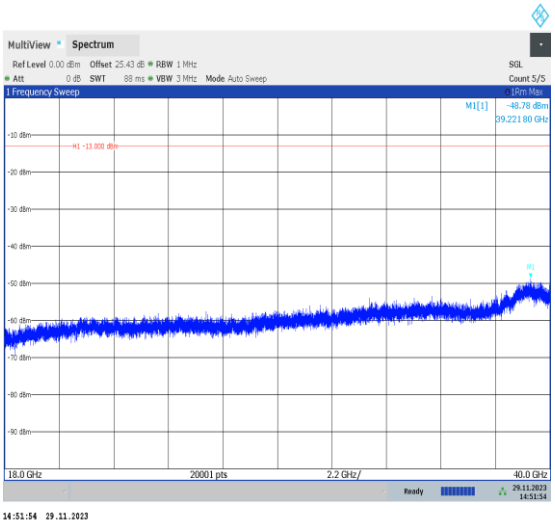

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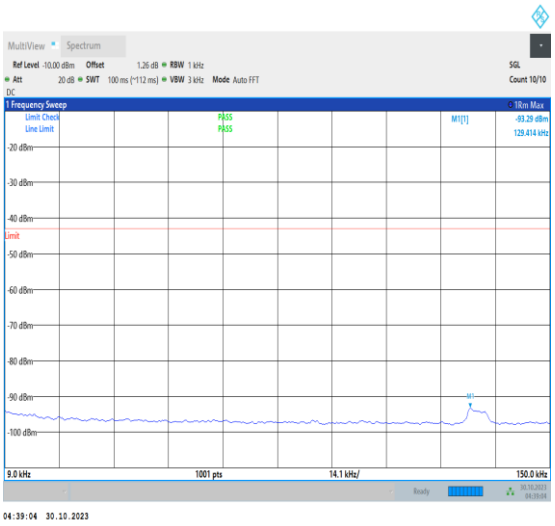

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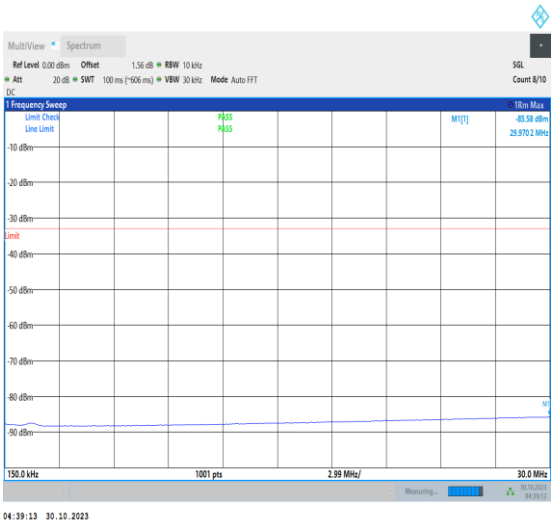

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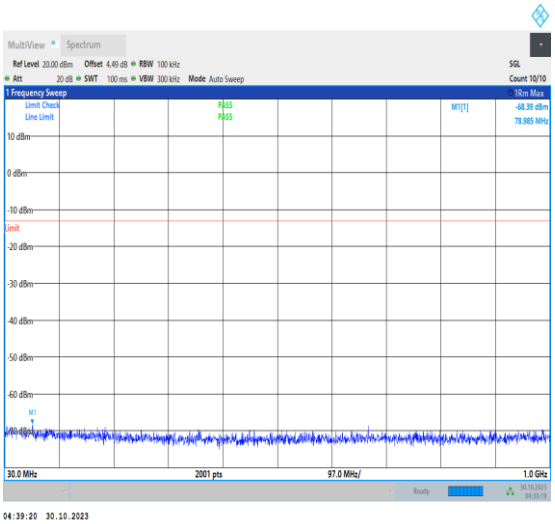	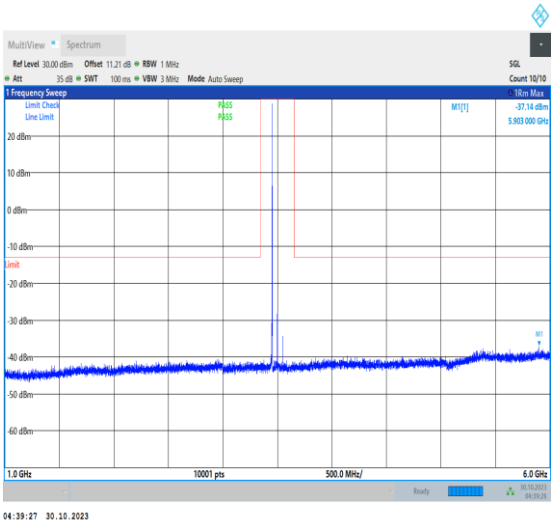
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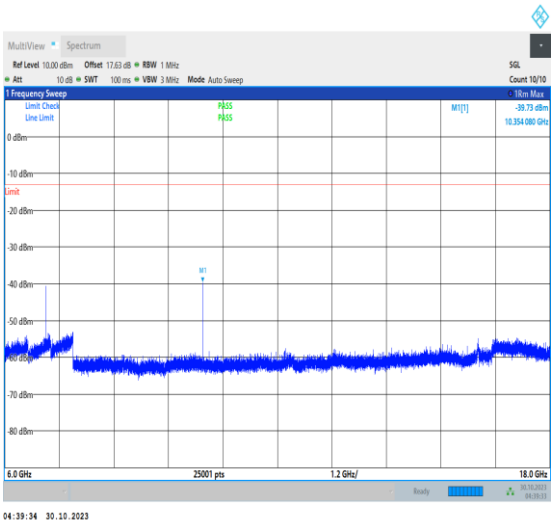
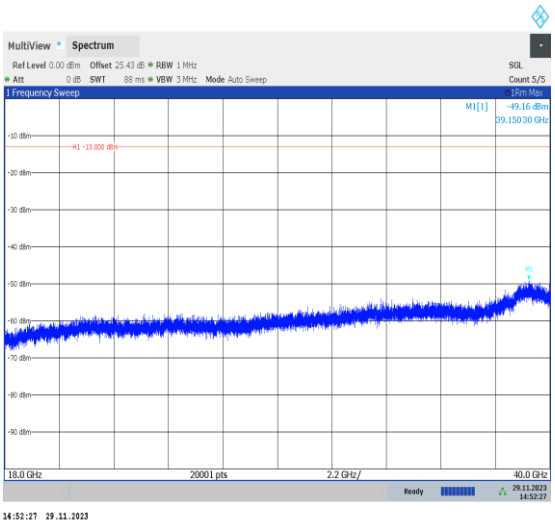
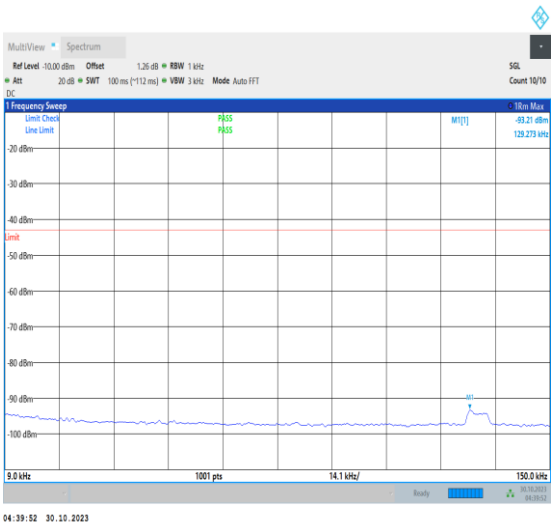
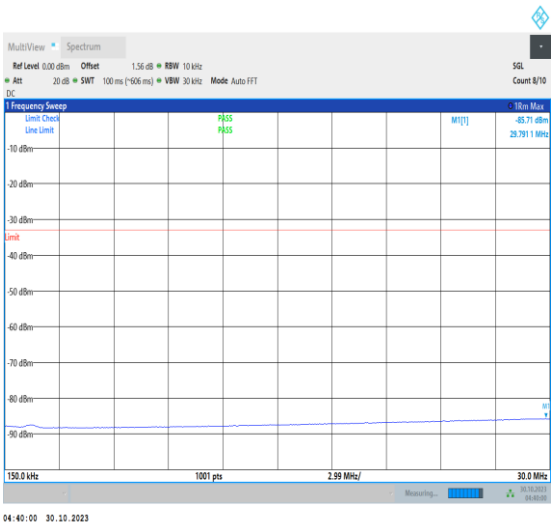
	
1-N77-3450-3550-30-100-M-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-6000-18000-Ant2-10354.08--39.73--13-PASS	1-N77-3450-3550-30-100-M-1-DFT-PI2BPSK-Inner_1RB_Left-1@1-18000-40000-Ant2-18000.00--56.13--13-PASS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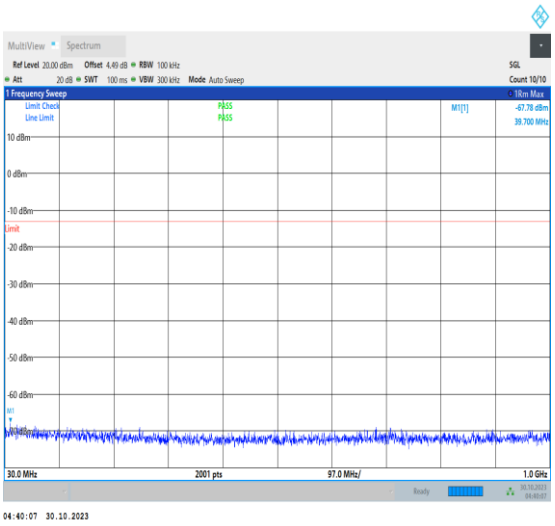	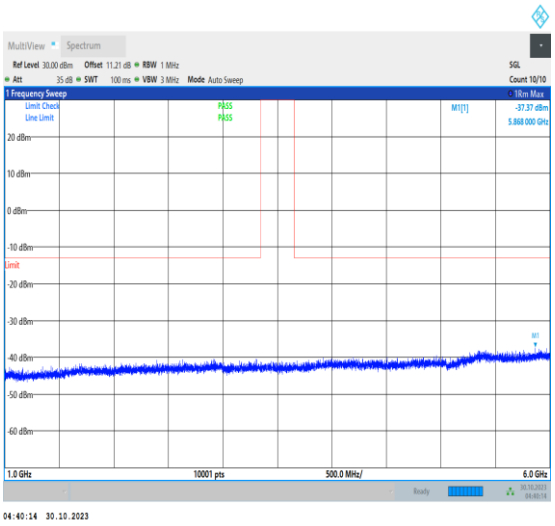
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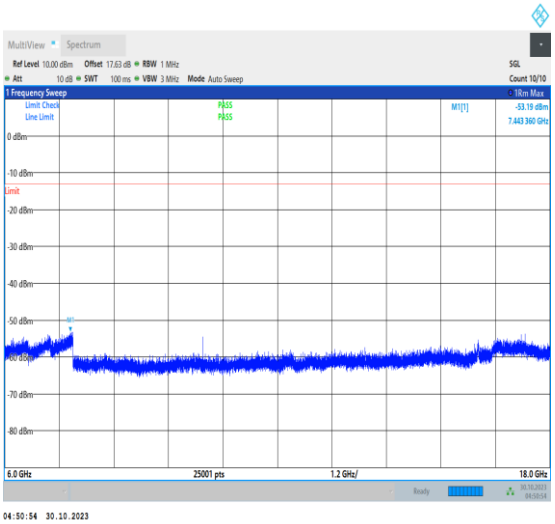	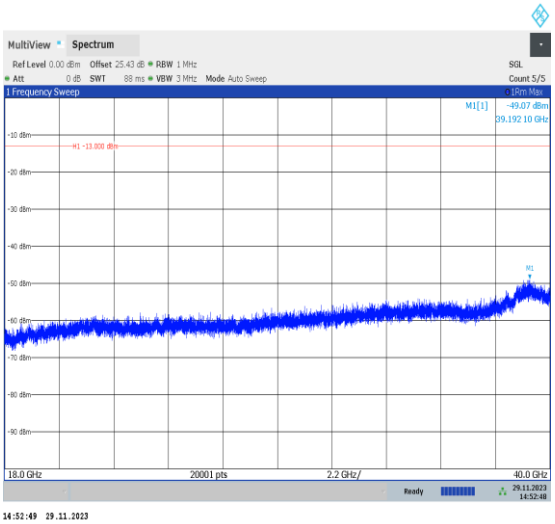
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Field Strength of Spurious Radiation

Test Band = SA Band77_ TM1
Test Channel = Mid 3450-3550

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7857.575	39.69	-42.67	36.74	-61.50	-13.00	48.50	Horizontal
2	8843.7	37.91	-41.04	36.38	-62.01	-13.00	49.01	Horizontal
3	10512.35	34.56	-38.67	38.46	-60.91	-13.00	47.91	Horizontal
4	11156.925	33.01	-37.10	38.72	-60.63	-13.00	47.63	Horizontal
5	13394.25	30.09	-36.12	39.81	-61.48	-13.00	48.48	Horizontal
6	13974.425	30.26	-34.98	40.85	-59.13	-13.00	46.13	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	8069.75	38.10	-41.58	36.77	-61.97	-13.00	48.97	Vertical
2	8763.2	38.13	-41.21	36.42	-61.93	-13.00	48.93	Vertical
3	10098.925	35.06	-38.71	38.25	-60.66	-13.00	47.66	Vertical
4	11022.95	32.90	-37.63	38.70	-61.28	-13.00	48.28	Vertical
5	13451.75	30.25	-36.37	39.91	-61.47	-13.00	48.47	Vertical
6	14835.775	29.64	-35.05	41.23	-59.43	-13.00	46.43	Vertical

Test Band = NSA 2A_N77A_ TM1
Test Channel = Mid 3450-3550

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	8248	38.48	-42.02	36.68	-62.12	-13.00	49.12	Horizontal
2	9227.225	36.49	-39.98	36.73	-62.02	-13.00	49.02	Horizontal
3	10082.25	33.96	-38.82	38.24	-61.88	-13.00	48.88	Horizontal
4	11480.65	30.99	-36.70	38.75	-62.23	-13.00	49.23	Horizontal
5	12814.65	31.05	-36.66	39.04	-61.82	-13.00	48.82	Horizontal
6	14316.55	29.87	-35.73	41.03	-60.09	-13.00	47.09	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7639.075	39.28	-42.82	36.66	-62.15	-13.00	49.15	Vertical
2	8690.175	38.17	-41.30	36.45	-61.93	-13.00	48.93	Vertical
3	10338.125	34.62	-38.87	38.37	-61.15	-13.00	48.15	Vertical
4	10531.9	33.70	-38.52	38.47	-61.61	-13.00	48.61	Vertical
5	12220.1	31.36	-37.02	38.87	-62.05	-13.00	49.05	Vertical
6	13647.825	30.62	-36.02	40.27	-60.39	-13.00	47.39	Vertical

Test Band = NSA 14A-N77A_ TM1

Test Channel = Mid 3450-3550

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7380.9	40.62	-42.89	36.07	-61.47	-13.00	48.47	Horizontal
2	8966.175	38.59	-40.88	36.52	-61.03	-13.00	48.03	Horizontal
3	10120.2	35.78	-38.82	38.51	-59.79	-13.00	46.79	Horizontal
4	12231.025	33.52	-36.96	39.17	-59.53	-13.00	46.53	Horizontal
5	13428.75	33.05	-36.24	40.00	-58.45	-13.00	45.45	Horizontal
6	13649.55	33.19	-36.02	40.31	-57.78	-13.00	44.78	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7609.75	40.18	-42.76	36.55	-61.29	-13.00	48.29	Vertical
2	9524.5	38.48	-39.77	37.55	-59.00	-13.00	46.00	Vertical
3	11181.075	33.20	-36.82	38.69	-60.19	-13.00	47.19	Vertical
4	12237.35	33.43	-36.93	39.17	-59.59	-13.00	46.59	Vertical
5	13589.175	33.45	-36.11	40.22	-57.69	-13.00	44.69	Vertical
6	14617.85	32.48	-35.24	41.29	-56.73	-13.00	43.73	Vertical

Test Band = NSA 12A-N77A_ TM1

Test Channel = Mid 3450-3550

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7589.05	40.37	-42.79	36.52	-61.15	-13.00	48.15	Horizontal
2	8399.225	39.07	-41.37	36.86	-60.70	-13.00	47.70	Horizontal
3	10094.9	36.29	-38.73	38.51	-59.20	-13.00	46.20	Horizontal
4	11181.65	33.27	-36.81	38.69	-60.11	-13.00	47.11	Horizontal
5	13467.85	33.35	-36.46	40.05	-58.32	-13.00	45.32	Horizontal
6	15028.4	31.73	-34.44	41.54	-56.43	-13.00	43.43	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	7373.425	41.32	-42.93	36.05	-60.83	-13.00	47.83	Vertical
2	8390.025	38.88	-41.42	36.87	-60.93	-13.00	47.93	Vertical
3	9558.425	38.30	-39.52	37.62	-58.86	-13.00	45.86	Vertical
4	10654.375	34.20	-37.73	38.57	-60.22	-13.00	47.22	Vertical
5	11177.625	33.17	-36.86	38.69	-60.26	-13.00	47.26	Vertical
6	12109.125	33.71	-37.18	39.13	-59.60	-13.00	46.60	Vertical

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & AMP. The basic equation with a sample calculation is as follows:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Level = Reading Level + AF + Factor -95.26

Margin = Limit – Level

Frequency Stability for SA

Test Result

Frequency Error VS. Voltage

Voltage										
Band	SCS	Band width	Modulation	Channel	RB Config	Voltage	Temperature	Deviation (Hz)	Deviation (ppm)	Verdict
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	VH	NT	-8.400000	-0.002365	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	VN	NT	-15.400000	-0.004400	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	VL	NT	-6.100000	-0.001743	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	VH	NT	-15.700000	-0.004486	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	VN	NT	-35.800000	-0.010229	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	VL	NT	-29.100000	-0.008314	PASS

Frequency Error VS. Temperature

Temperature										
Band	SCS	Band width	Modulation	Channel	RB Config	Voltage	Temperature	Deviation (Hz)	Deviation (ppm)	Verdict
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	-30	-22.600000	-0.006457	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	-20	-21.900000	-0.006257	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	-10	-8.000000	-0.002286	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	0	-12.300000	-0.002358	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	10	-17.500000	-0.005000	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	20	-20.900000	-0.005971	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	30	-27.800000	-0.007943	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	40	-22.200000	-0.006343	PASS
N77-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	NV	50	-16.400000	-0.005362	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	-30	-20.800000	-0.005943	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	-20	-15.700000	-0.004486	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	-10	-12.300000	-0.004253	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	0	-9.500000	-0.002714	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	10	-17.900000	-0.005114	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	20	-14.800000	-0.004229	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	30	-30.500000	-0.008714	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	40	-13.500000	-0.003263	PASS
N77-3450-3550	30	100	CP-QPSK	M	Outer_Full	NV	50	-21.100000	-0.006029	PASS

---End of Attachment---