

Appendix for WCDMA Band 4

Product Name: 5G Indoor CPE

Model No: TITAN 5000

Appendix A: Average Power Output Data

Test Result

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	22.56	30.00	PASS
Band4	1413	22.59	30.00	PASS
Band4	1513	23.15	30.00	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	1	21.54	30.00	PASS
Band4	1413	1	21.62	30.00	PASS
Band4	1513	1	22.17	30.00	PASS
Band4	1312	2	21.10	30.00	PASS
Band4	1413	2	21.15	30.00	PASS
Band4	1513	2	21.66	30.00	PASS
Band4	1312	3	21.02	30.00	PASS
Band4	1413	3	21.15	30.00	PASS
Band4	1513	3	21.66	30.00	PASS
Band4	1312	4	21.01	30.00	PASS
Band4	1413	4	21.13	30.00	PASS
Band4	1513	4	21.67	30.00	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	1	21.59	30.00	PASS
Band4	1413	1	21.62	30.00	PASS
Band4	1513	1	22.21	30.00	PASS
Band4	1312	2	19.62	30.00	PASS
Band4	1413	2	19.58	30.00	PASS
Band4	1513	2	20.15	30.00	PASS
Band4	1312	3	20.57	30.00	PASS
Band4	1413	3	20.70	30.00	PASS
Band4	1513	3	21.14	30.00	PASS
Band4	1312	4	19.51	30.00	PASS
Band4	1413	4	19.64	30.00	PASS
Band4	1513	4	20.19	30.00	PASS
Band4	1312	5	21.72	30.00	PASS
Band4	1413	5	21.65	30.00	PASS
Band4	1513	5	22.26	30.00	PASS

Appendix B:Peak-to-Average Ratio

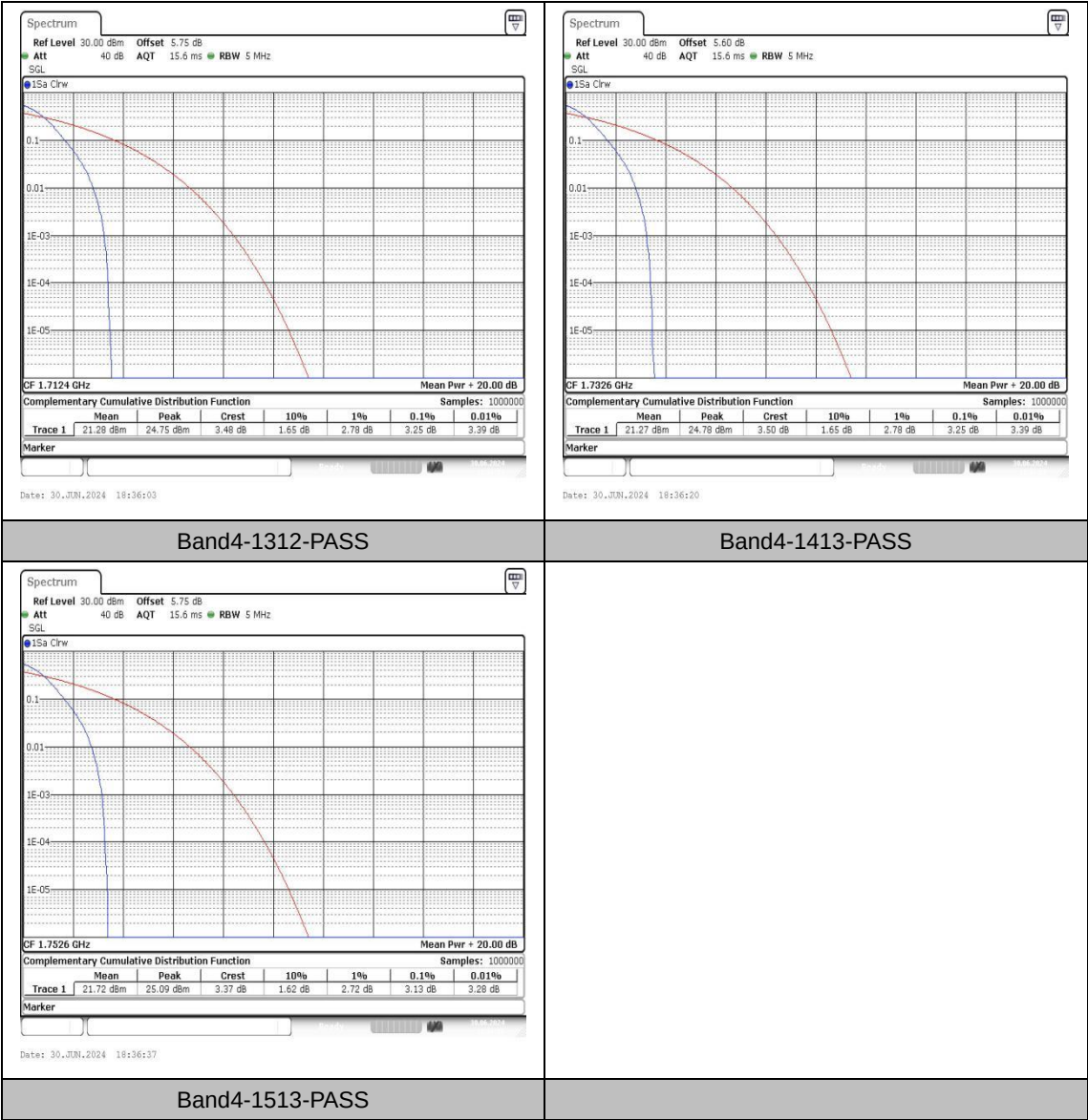
Test Result

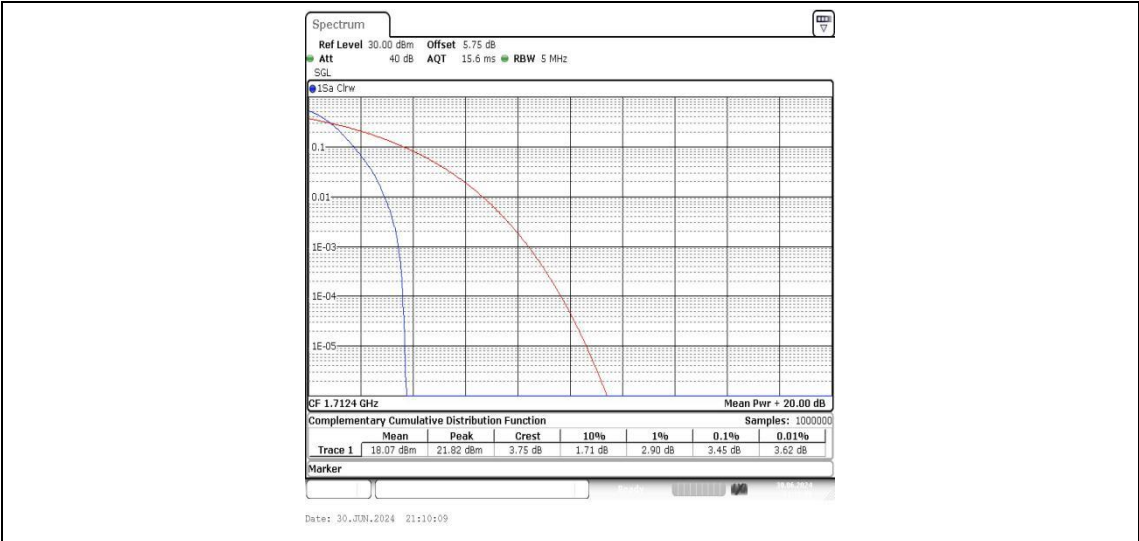
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	3.25	13	PASS
Band4	1413	3.25	13	PASS
Band4	1513	3.13	13	PASS

Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	1	3.45	13	PASS
Band4	1413	1	3.33	13	PASS
Band4	1513	1	3.28	13	PASS
Band4	1312	2	3.54	13	PASS
Band4	1413	2	3.51	13	PASS
Band4	1513	2	3.48	13	PASS
Band4	1312	3	3.68	13	PASS
Band4	1413	3	3.65	13	PASS
Band4	1513	3	3.62	13	PASS

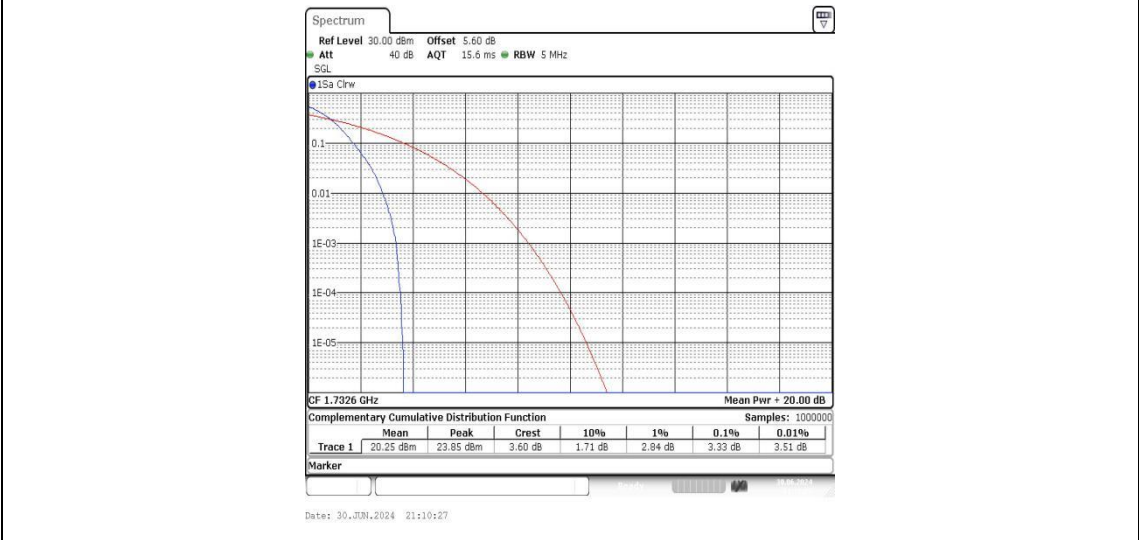
Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	1	4.55	13	PASS
Band4	1413	1	4.55	13	PASS
Band4	1513	1	4.41	13	PASS
Band4	1312	2	5.48	13	PASS
Band4	1413	2	5.48	13	PASS
Band4	1513	2	5.45	13	PASS
Band4	1312	3	5.36	13	PASS
Band4	1413	3	5.36	13	PASS
Band4	1513	3	5.25	13	PASS
Band4	1312	4	5.48	13	PASS
Band4	1413	4	5.48	13	PASS
Band4	1513	4	5.45	13	PASS
Band4	1312	5	4.26	13	PASS
Band4	1413	5	4.26	13	PASS
Band4	1513	5	4.17	13	PASS

Test Graphs

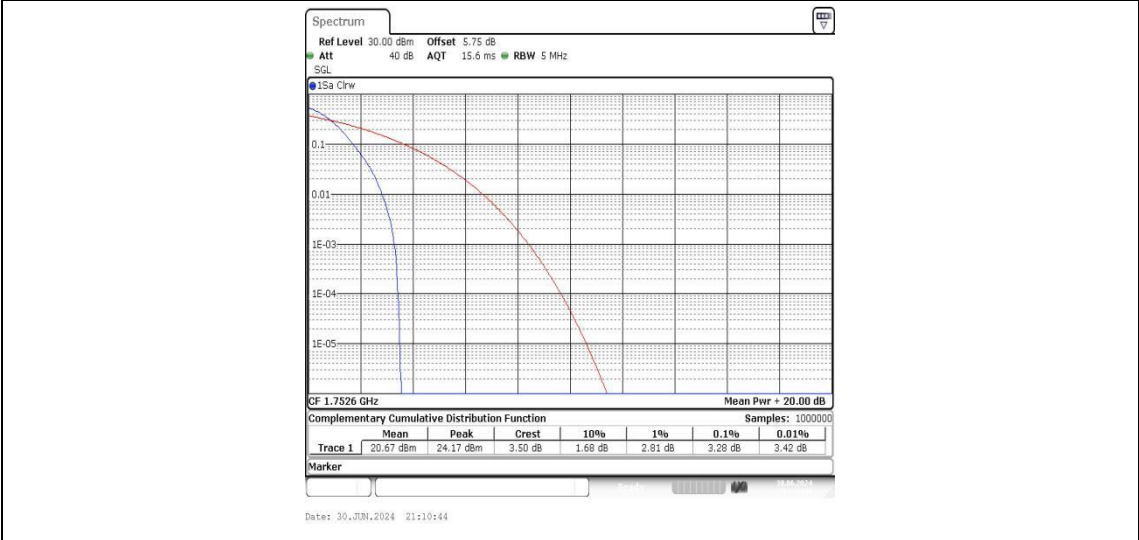




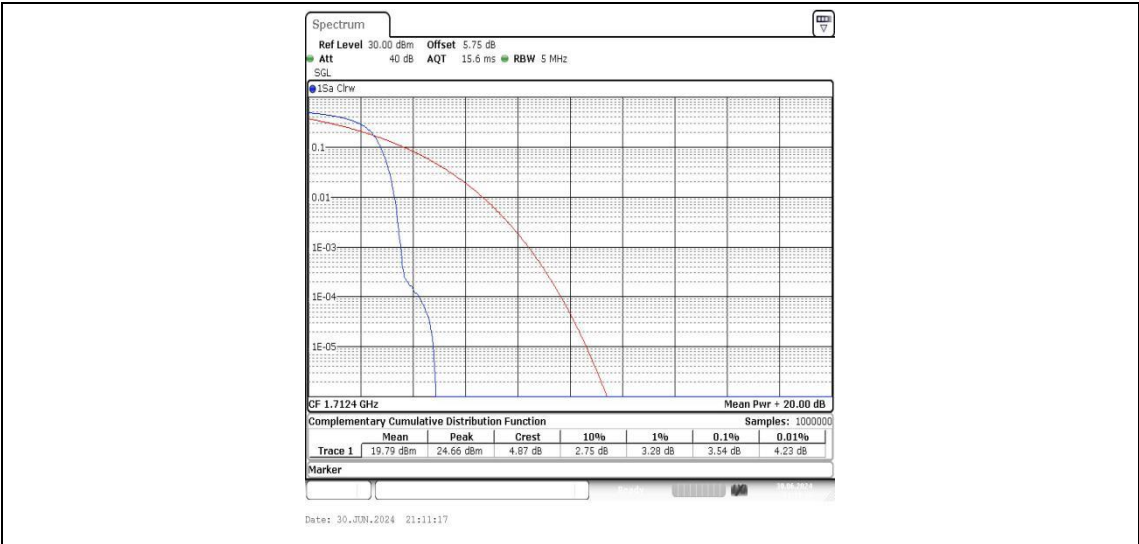
Band4-1312-1-PASS



Band4-1413-1-PASS



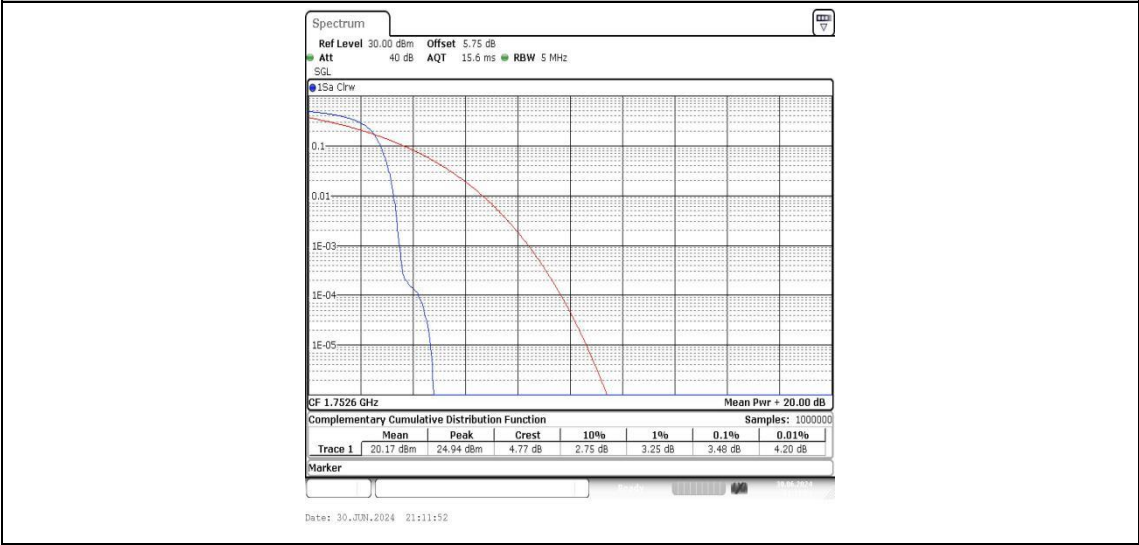
Band4-1513-1-PASS



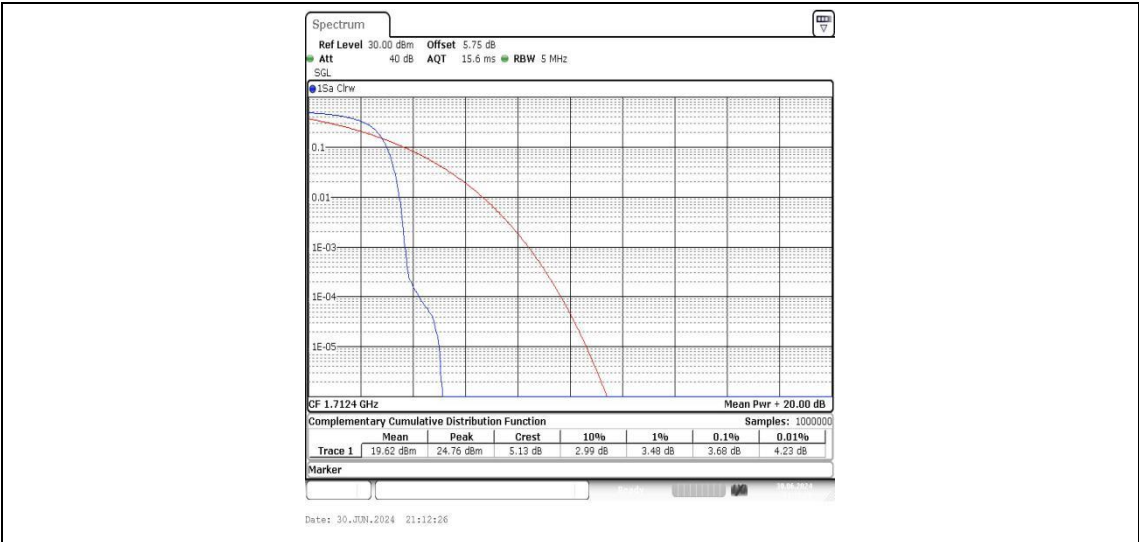
Band4-1312-2-PASS



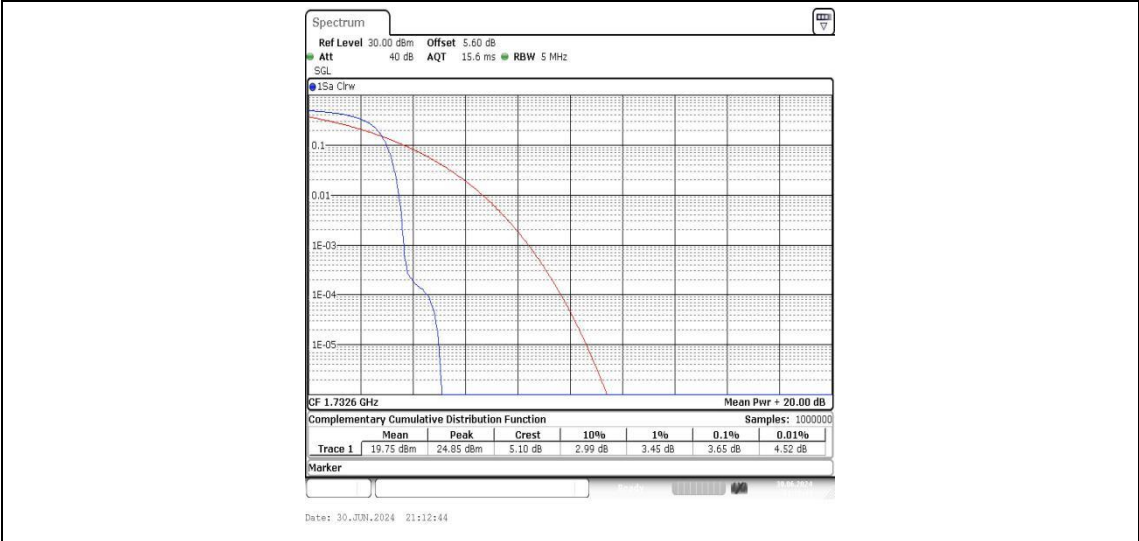
Band4-1413-2-PASS



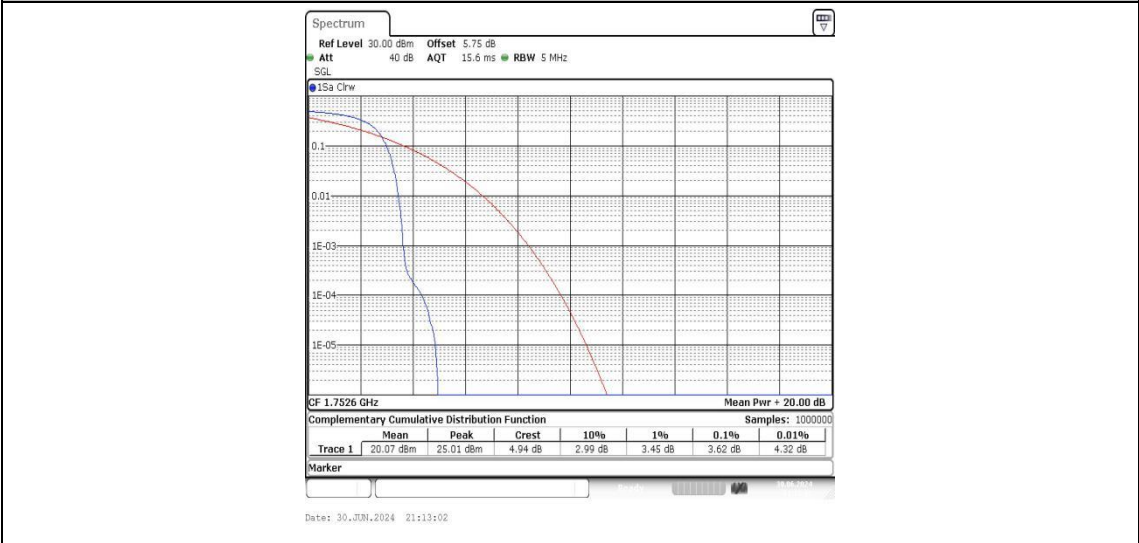
Band4-1513-2-PASS



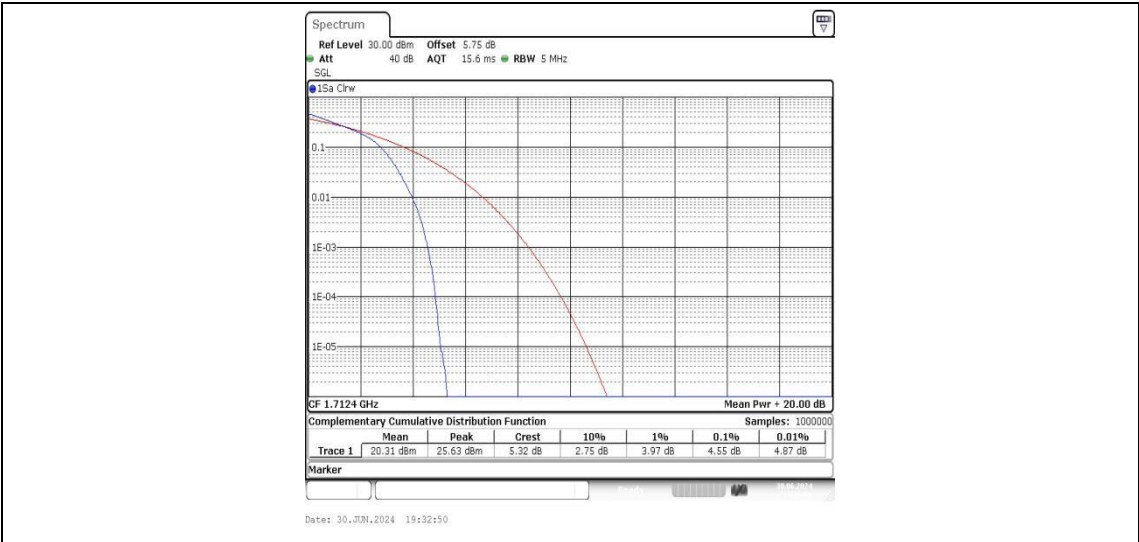
Band4-1312-3-PASS



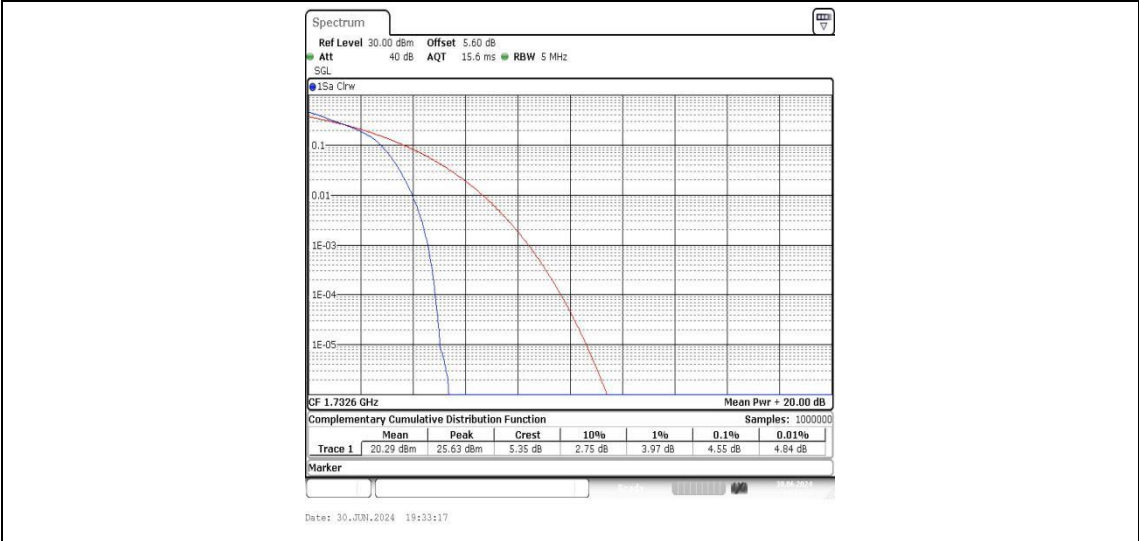
Band4-1413-3-PASS



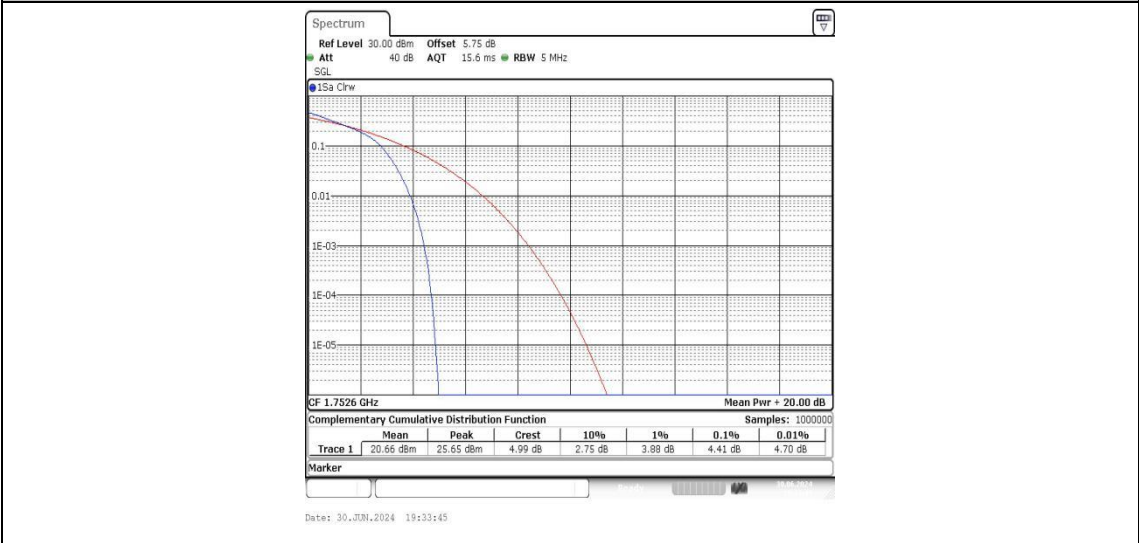
Band4-1513-3-PASS



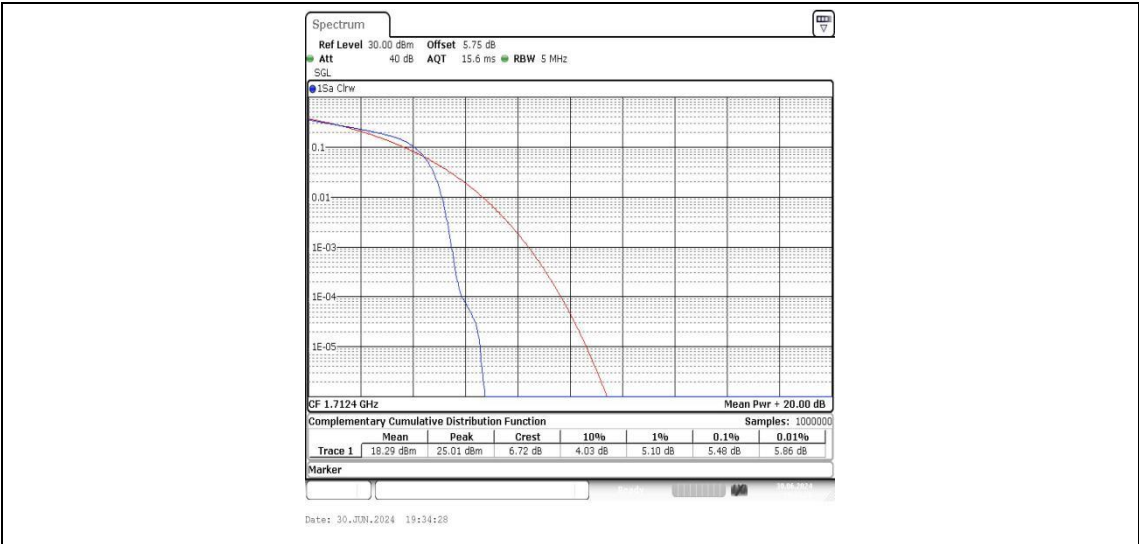
Band4-1312-1-PASS



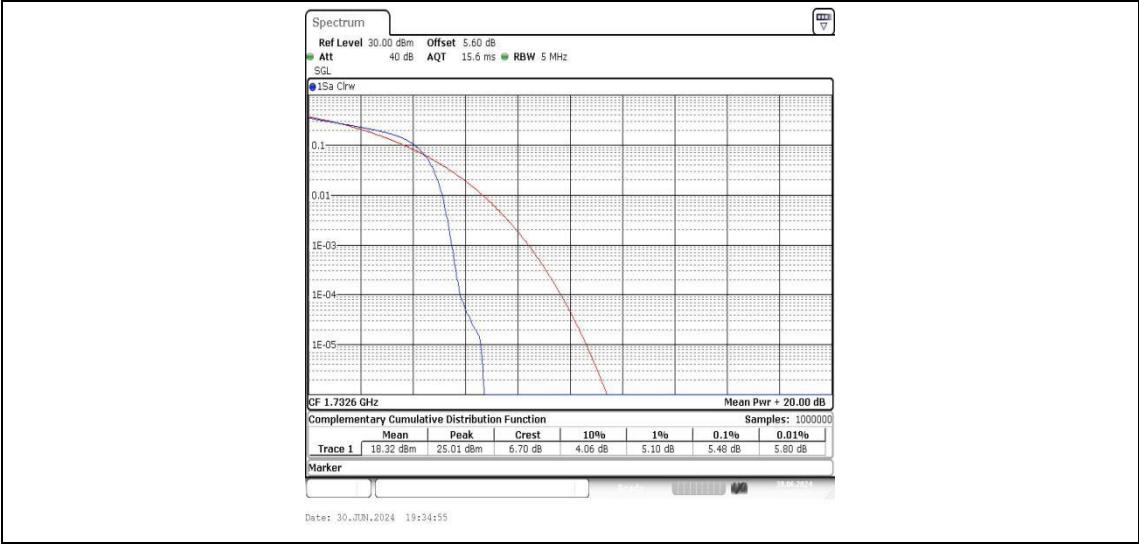
Band4-1413-1-PASS



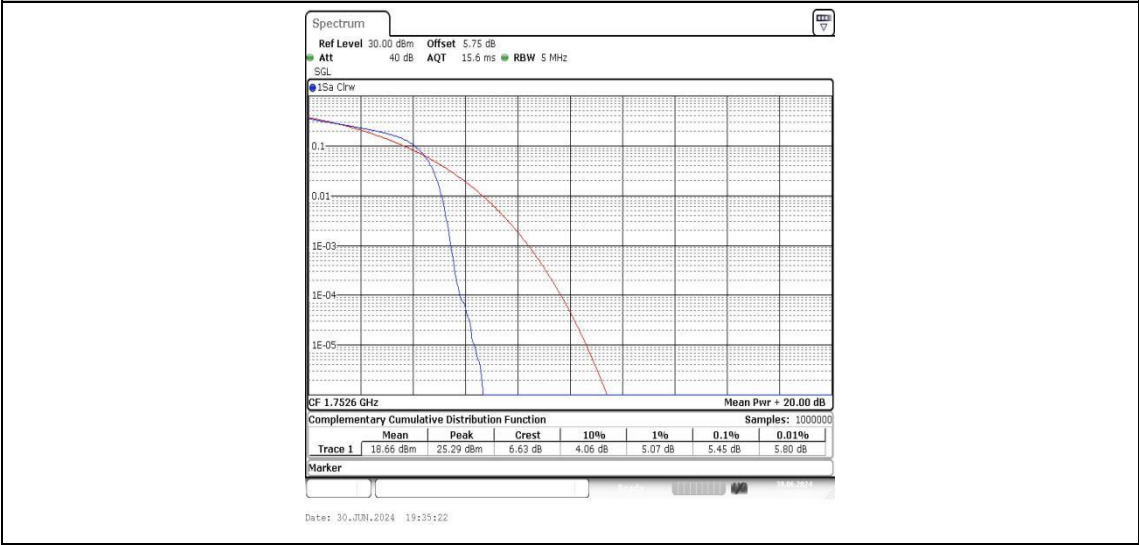
Band4-1513-1-PASS



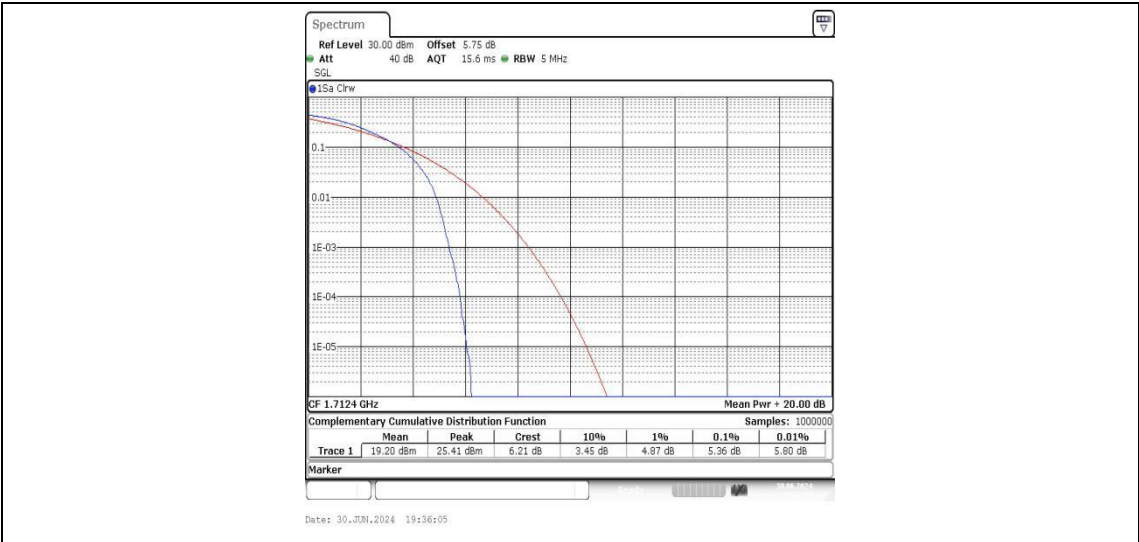
Band4-1312-2-PASS



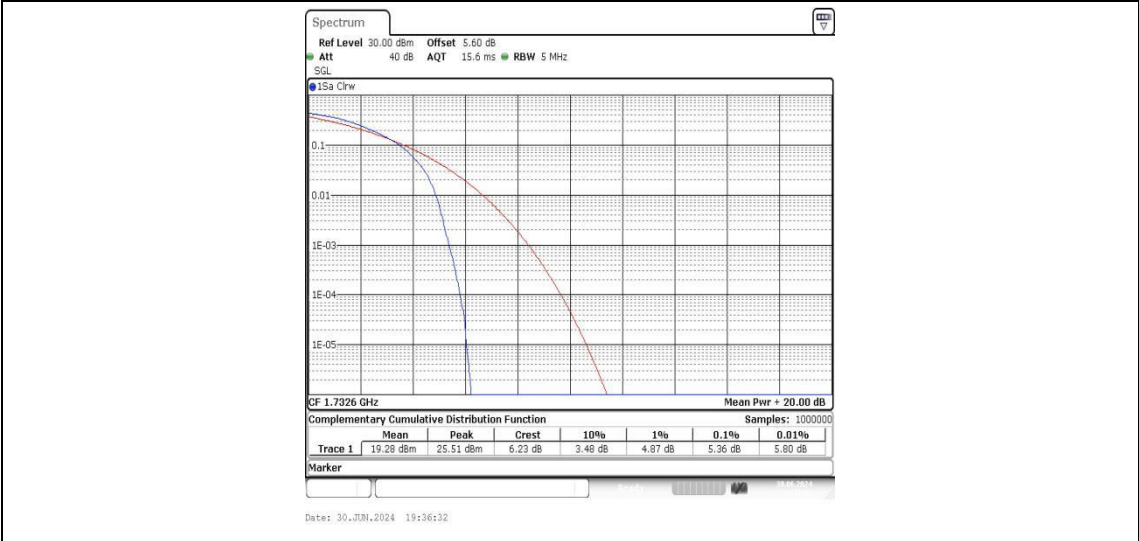
Band4-1413-2-PASS



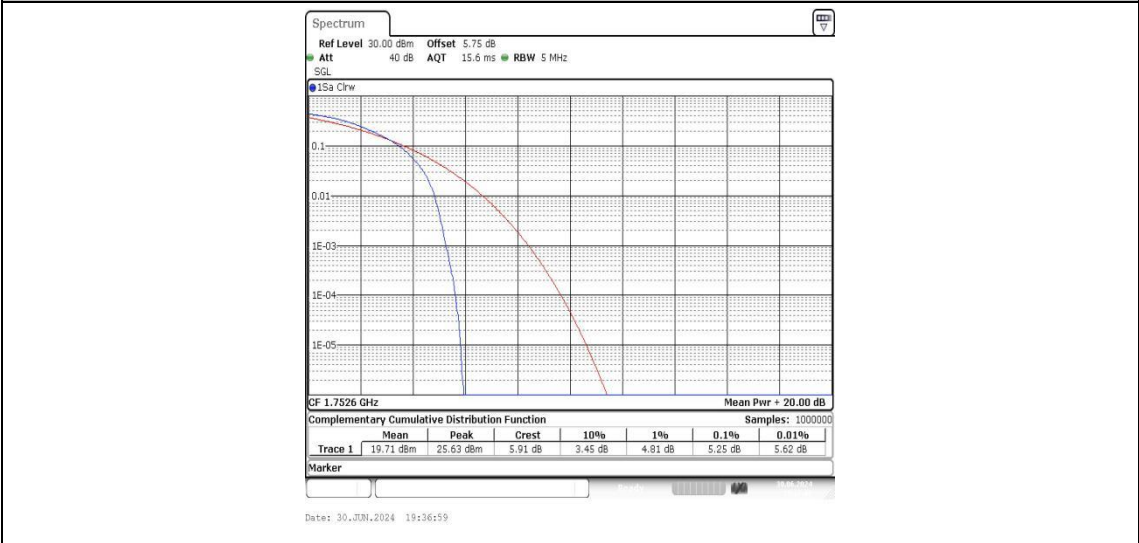
Band4-1513-2-PASS



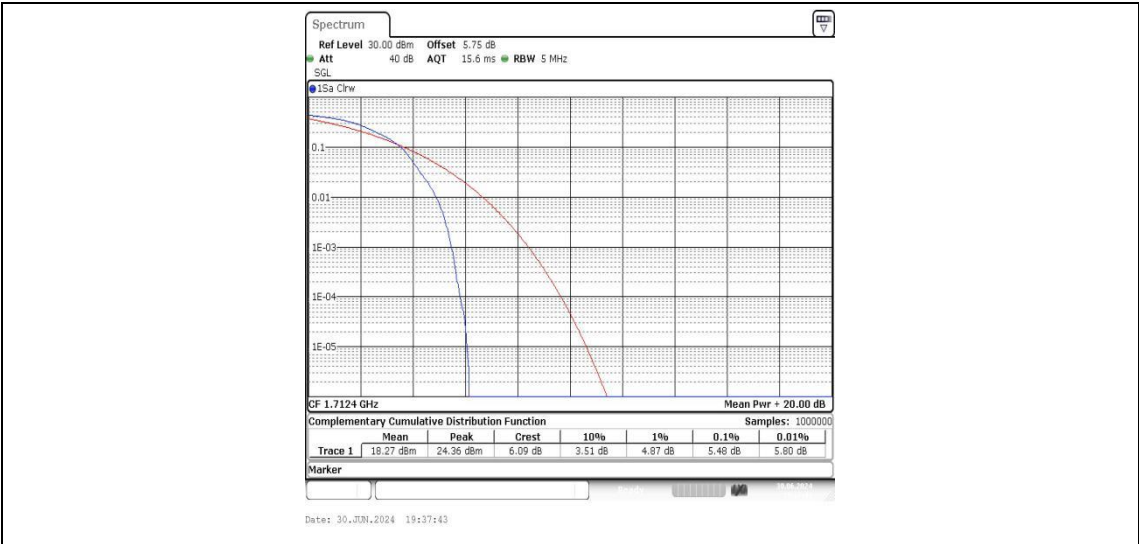
Band4-1312-3-PASS



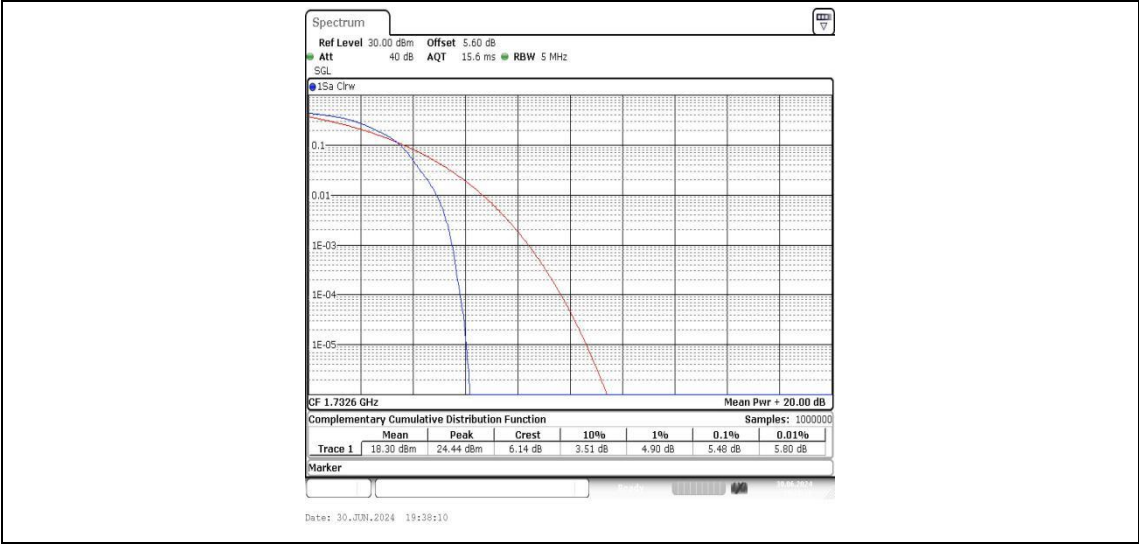
Band4-1413-3-PASS



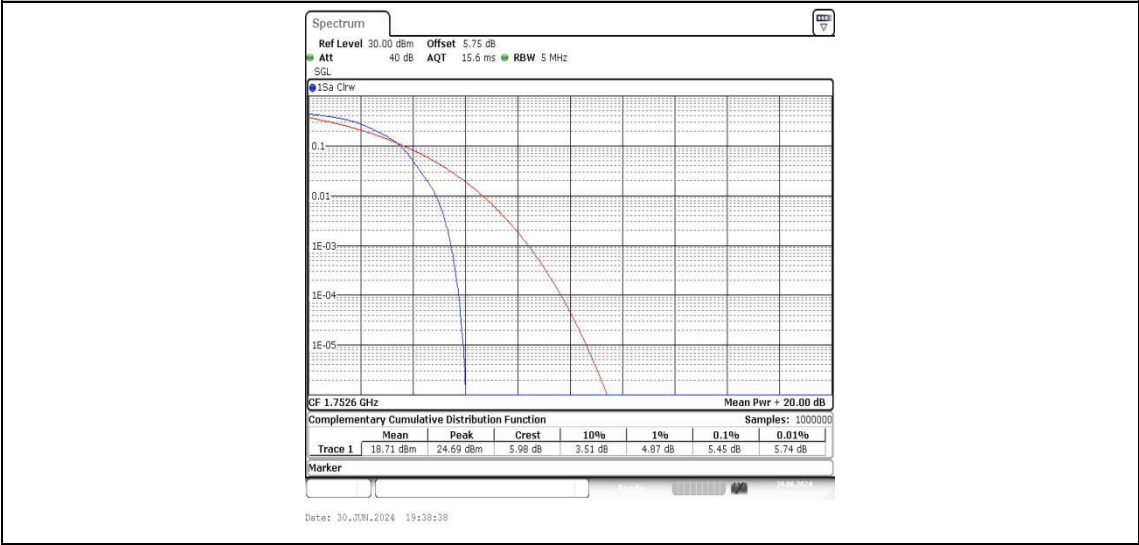
Band4-1513-3-PASS



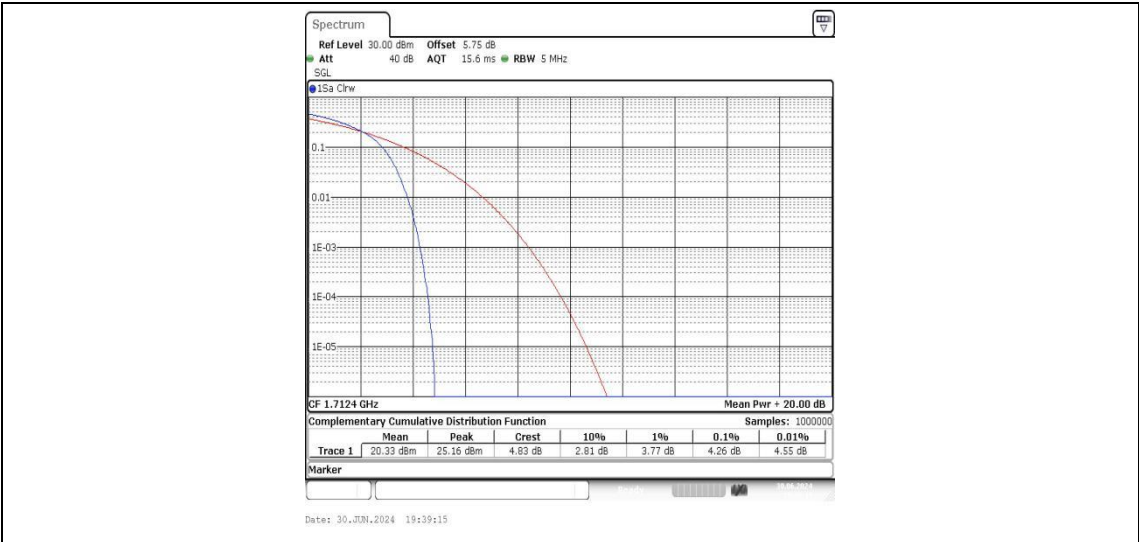
Band4-1312-4-PASS



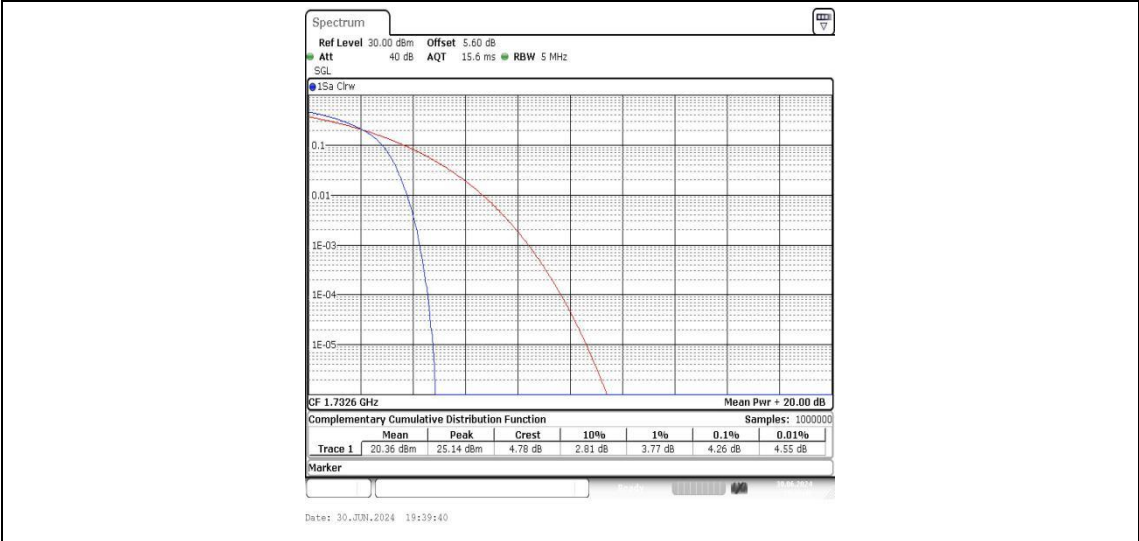
Band4-1413-4-PASS



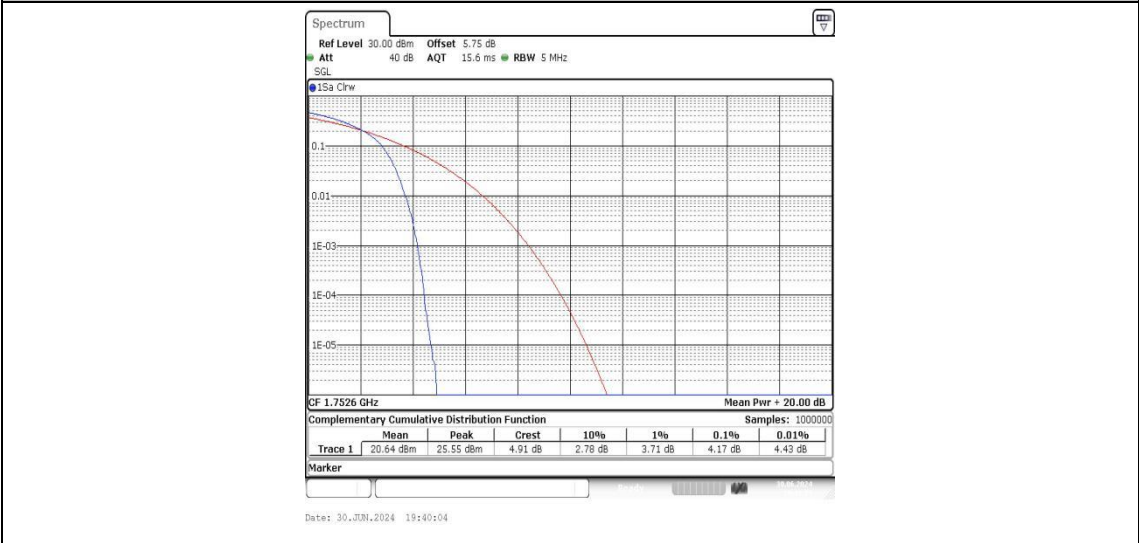
Band4-1513-4-PASS



Band4-1312-5-PASS



Band4-1413-5-PASS



Band4-1513-5-PASS

Appendix C:26dB Bandwidth and Occupied Bandwidth

Test Result

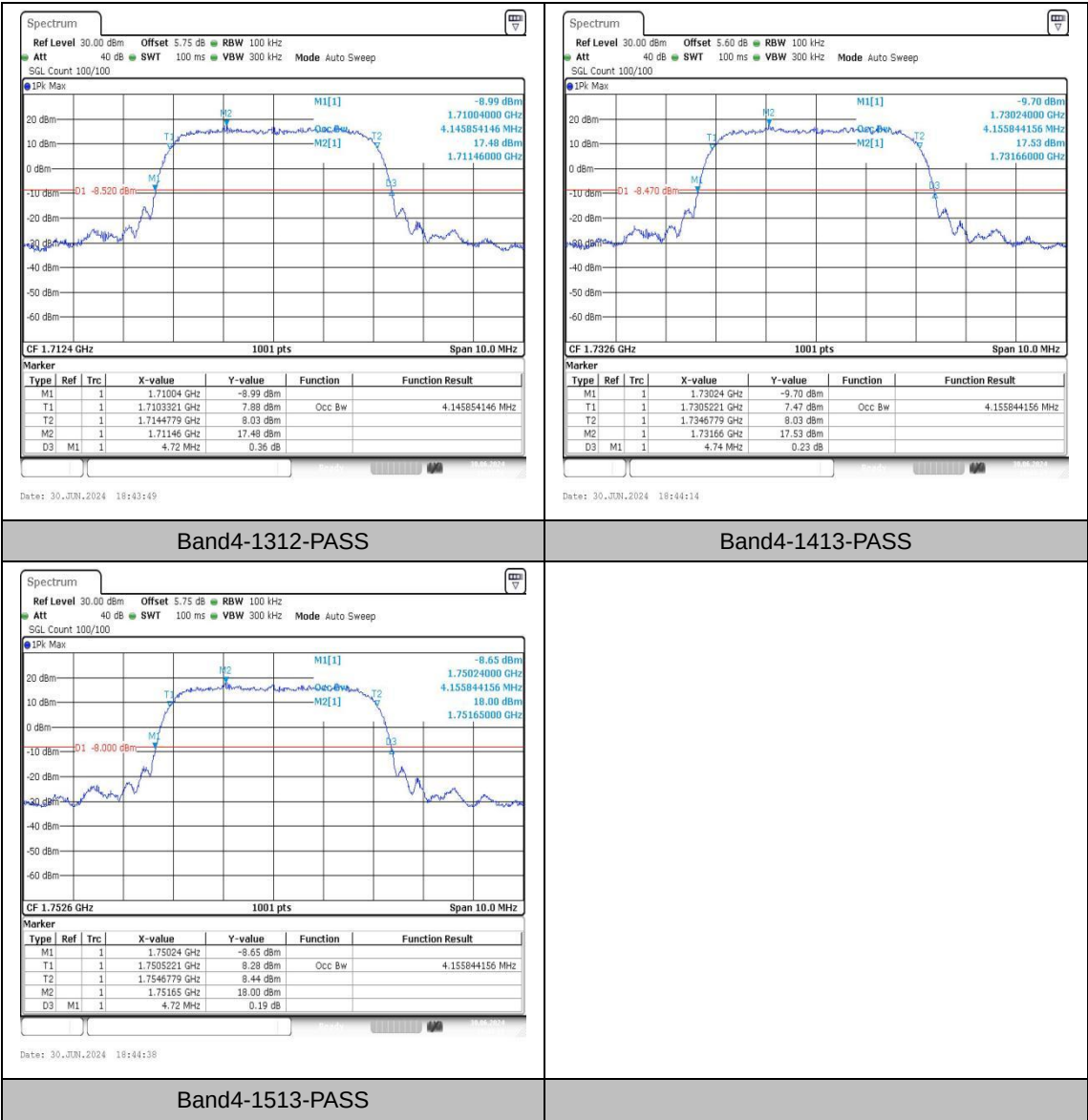
Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(MHz)	Verdict
Band4	1312	4.146	4.72	---	PASS
Band4	1413	4.156	4.74	---	PASS
Band4	1513	4.156	4.72	---	PASS

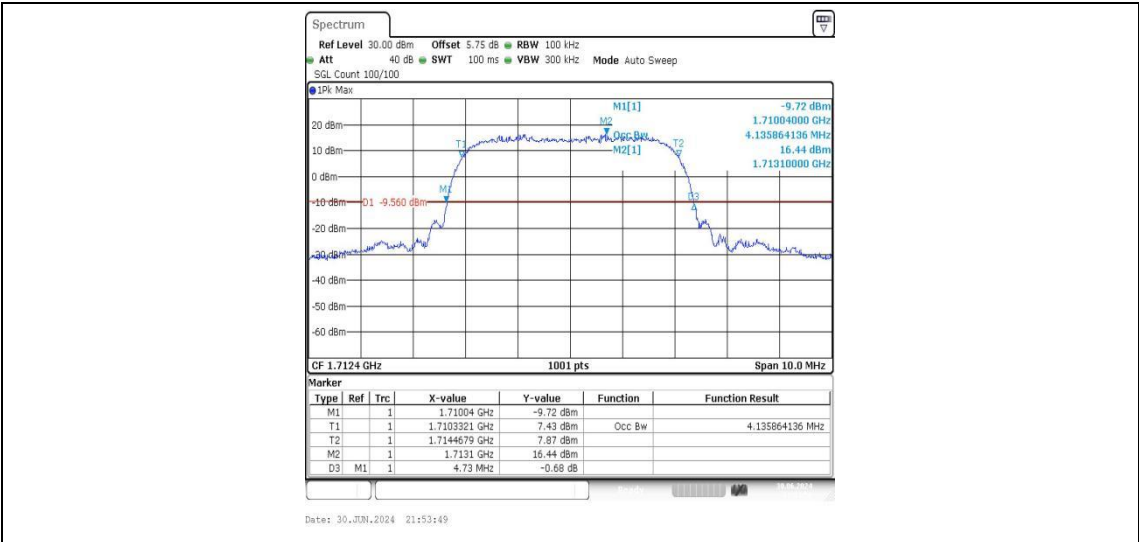
Band	Channel	SubTest	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(MHz)	Verdict
Band4	1312	1	4.136	4.73	---	PASS
Band4	1413	1	4.146	4.74	---	PASS
Band4	1513	1	4.146	4.74	---	PASS
Band4	1312	2	4.156	4.74	---	PASS
Band4	1413	2	4.146	4.75	---	PASS
Band4	1513	2	4.146	4.74	---	PASS
Band4	1312	3	4.156	4.75	---	PASS
Band4	1413	3	4.156	4.76	---	PASS
Band4	1513	3	4.146	4.75	---	PASS

Band	Channel	SubTest	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(MHz)	Verdict
Band4	1312	1	4.176	4.75	---	PASS
Band4	1413	1	4.176	4.74	---	PASS
Band4	1513	1	4.176	4.74	---	PASS
Band4	1312	2	4.166	4.75	---	PASS
Band4	1413	2	4.166	4.77	---	PASS
Band4	1513	2	4.166	4.76	---	PASS
Band4	1312	3	4.186	4.77	---	PASS
Band4	1413	3	4.176	4.76	---	PASS
Band4	1513	3	4.186	4.76	---	PASS
Band4	1312	4	4.166	4.77	---	PASS
Band4	1413	4	4.176	4.75	---	PASS
Band4	1513	4	4.176	4.77	---	PASS
Band4	1312	5	4.156	4.75	---	PASS
Band4	1413	5	4.156	4.73	---	PASS

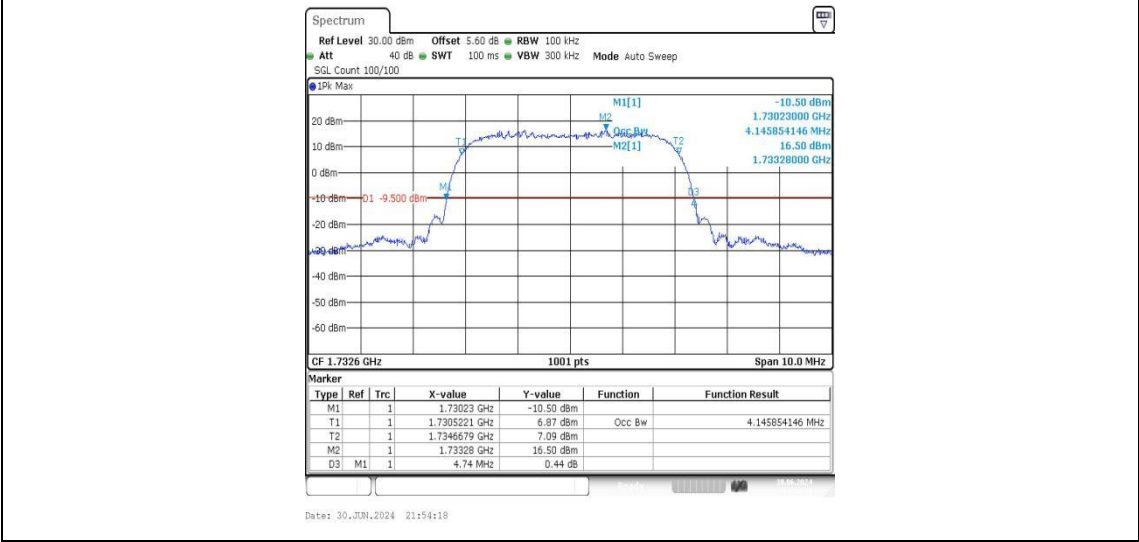
Band4	1513	5	4.166	4.74	---	PASS
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Test Graphs

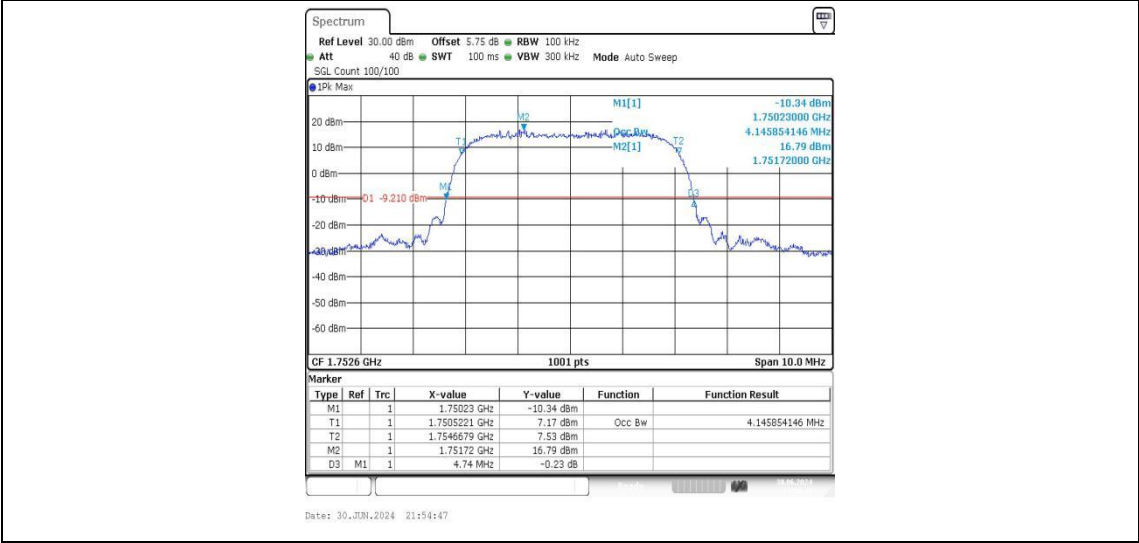




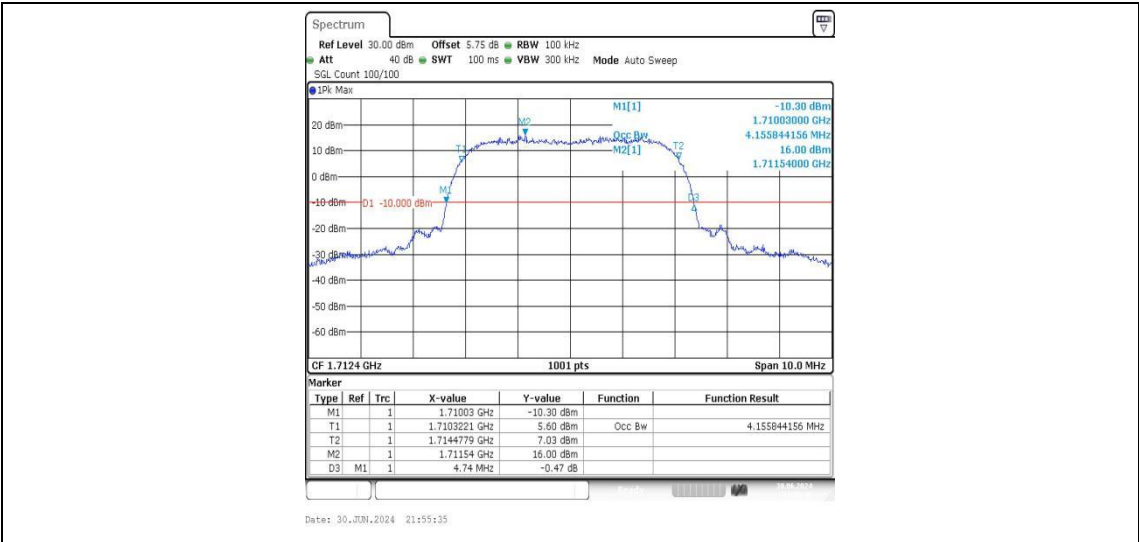
Band4-1312-1-PASS



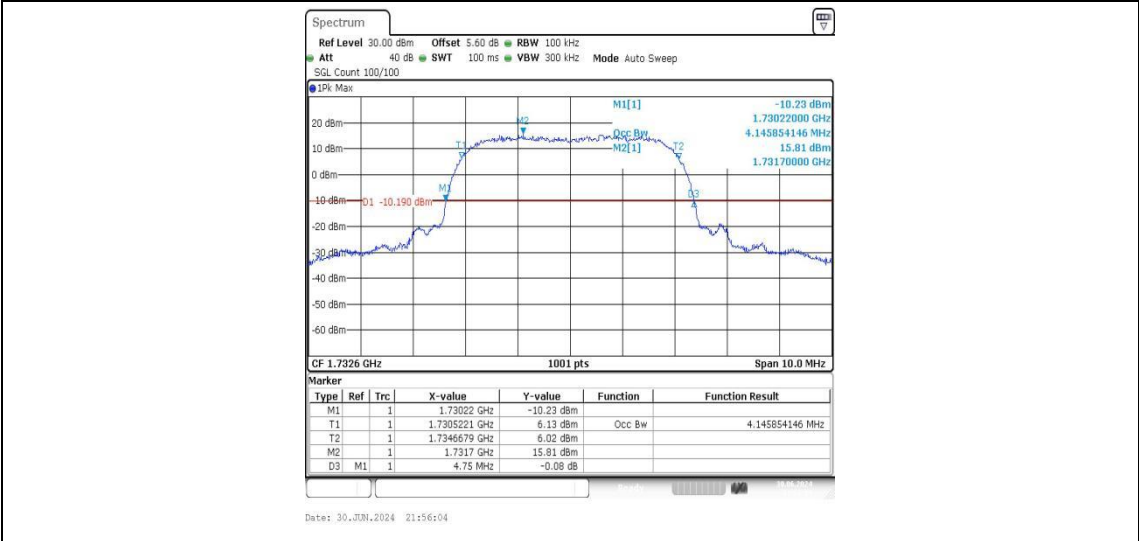
Band4-1413-1-PASS



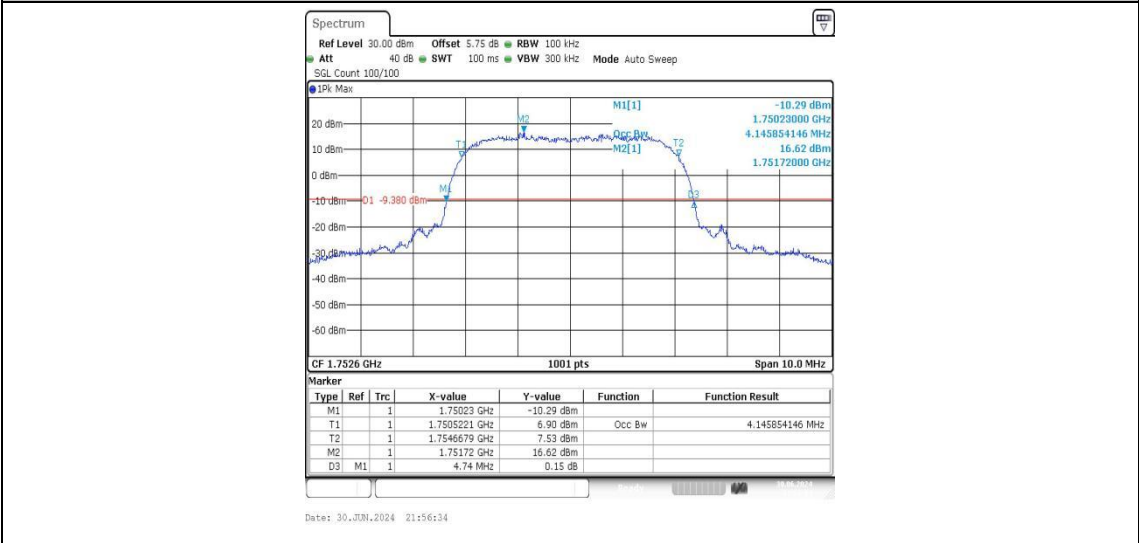
Band4-1513-1-PASS



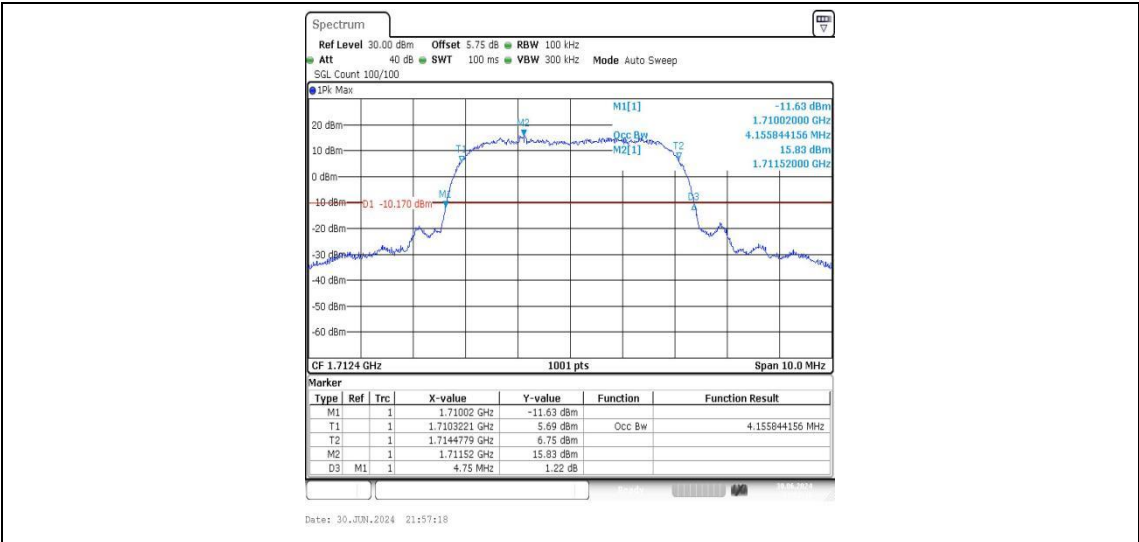
Band4-1312-2-PASS



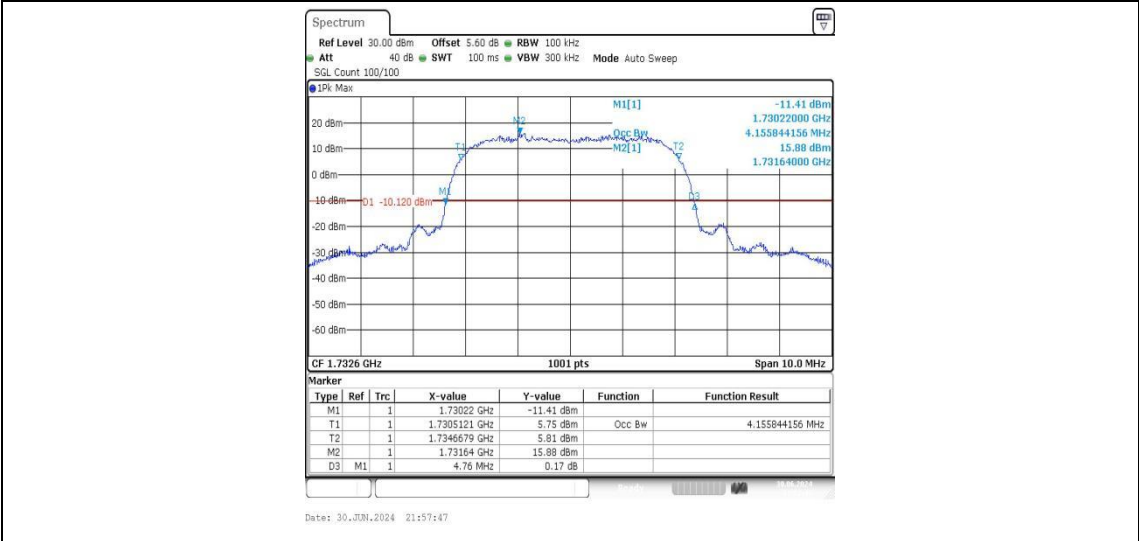
Band4-1413-2-PASS



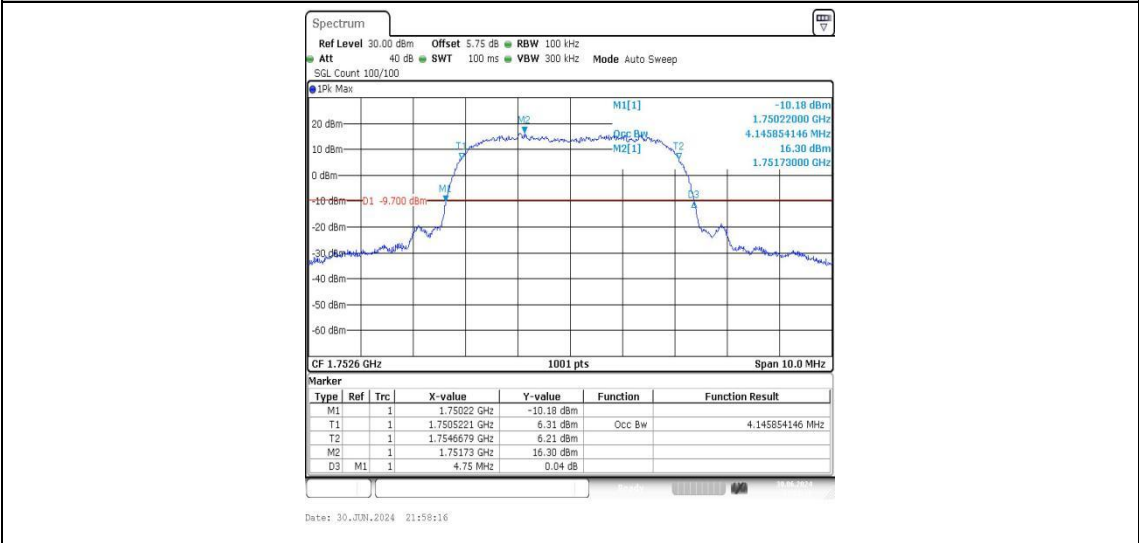
Band4-1513-2-PASS



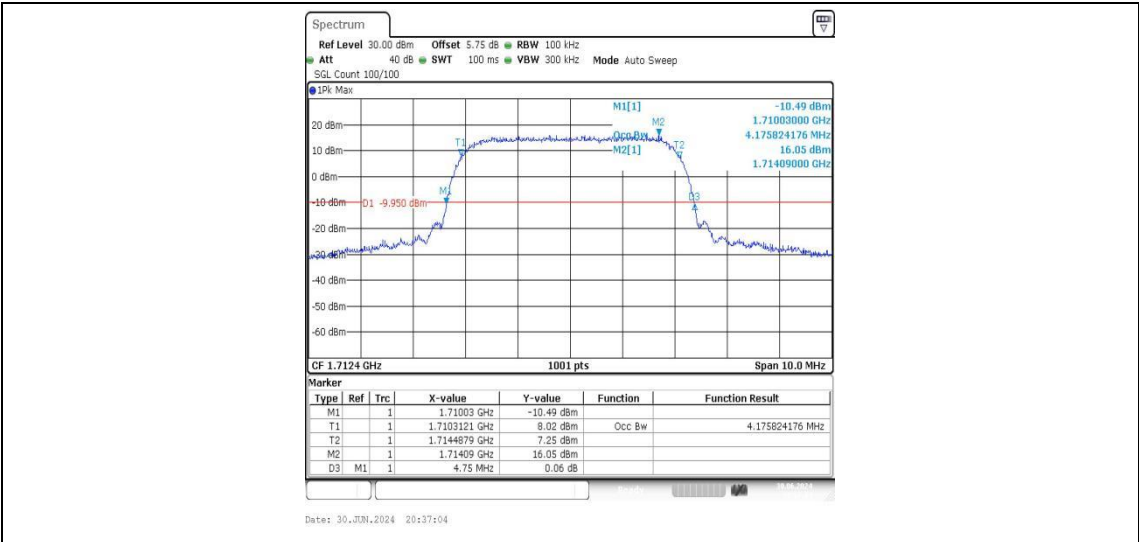
Band4-1312-3-PASS



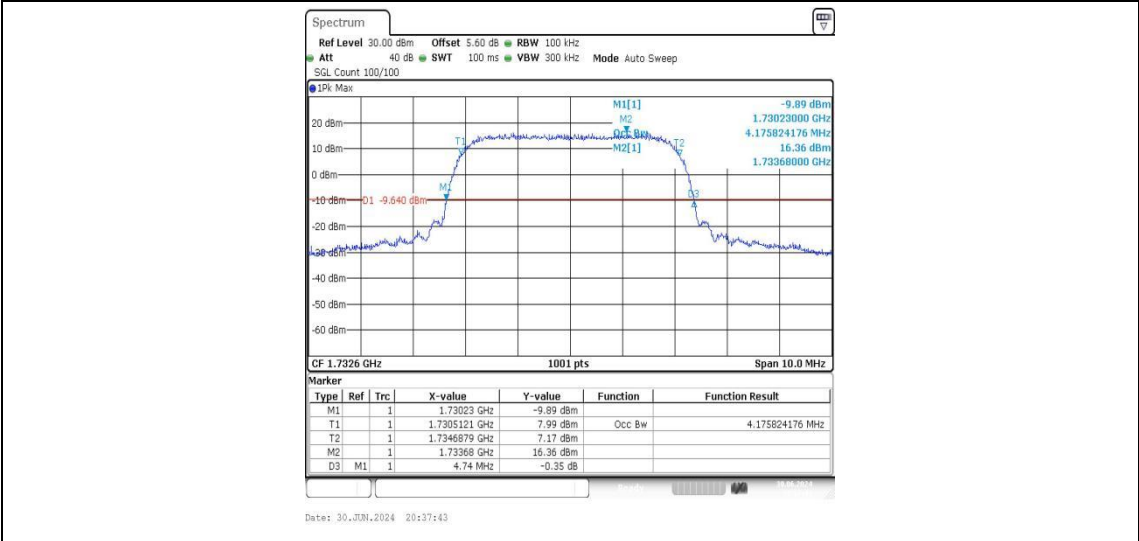
Band4-1413-3-PASS



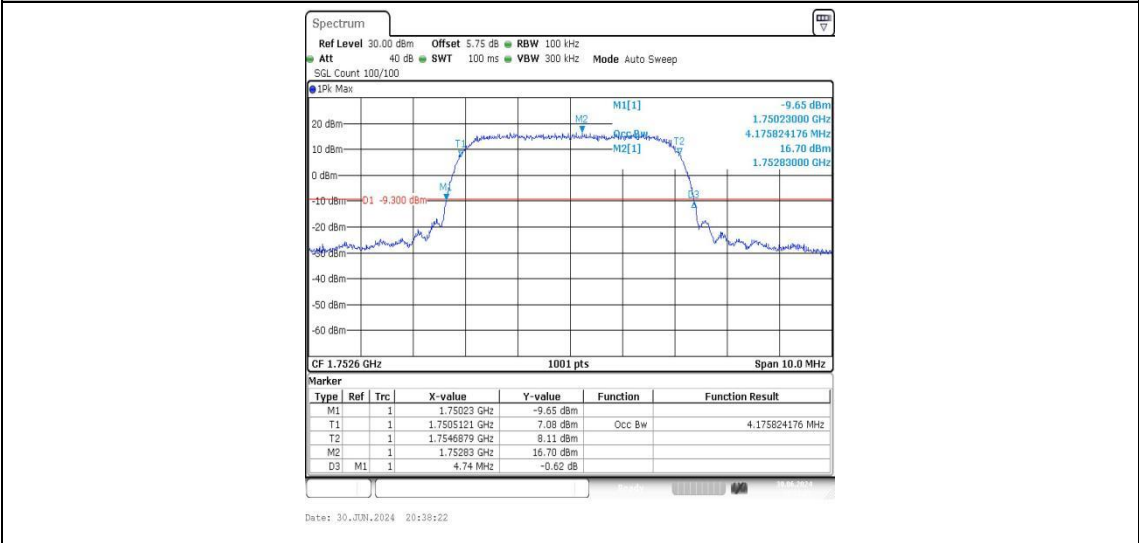
Band4-1513-3-PASS



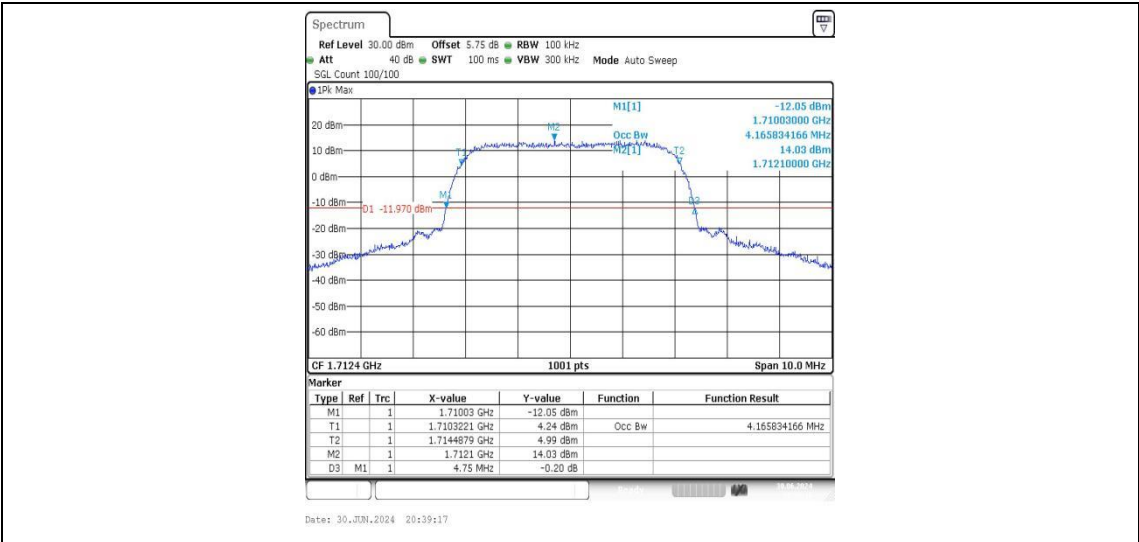
Band4-1312-1-PASS



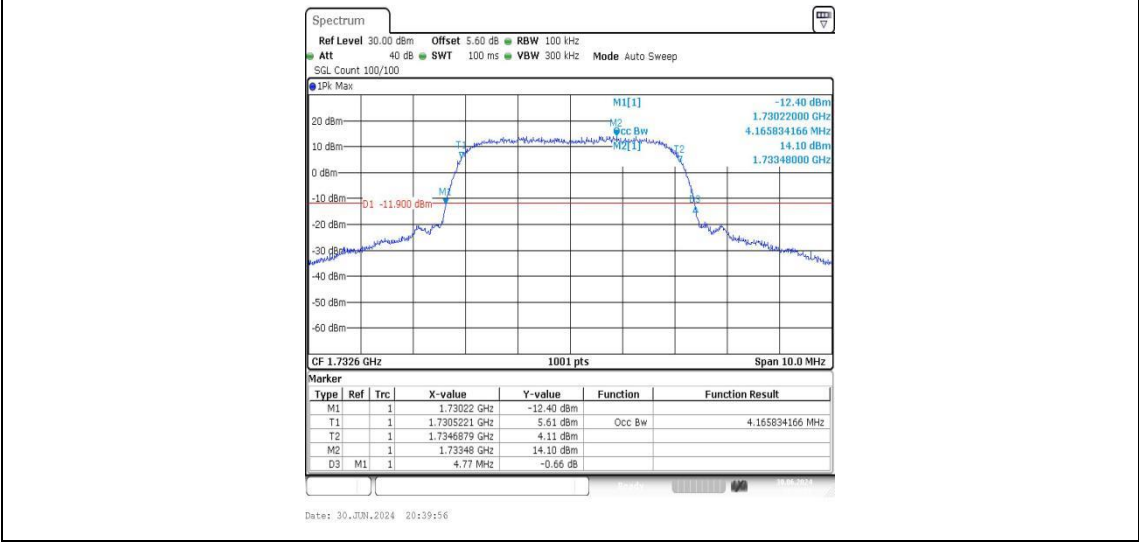
Band4-1413-1-PASS



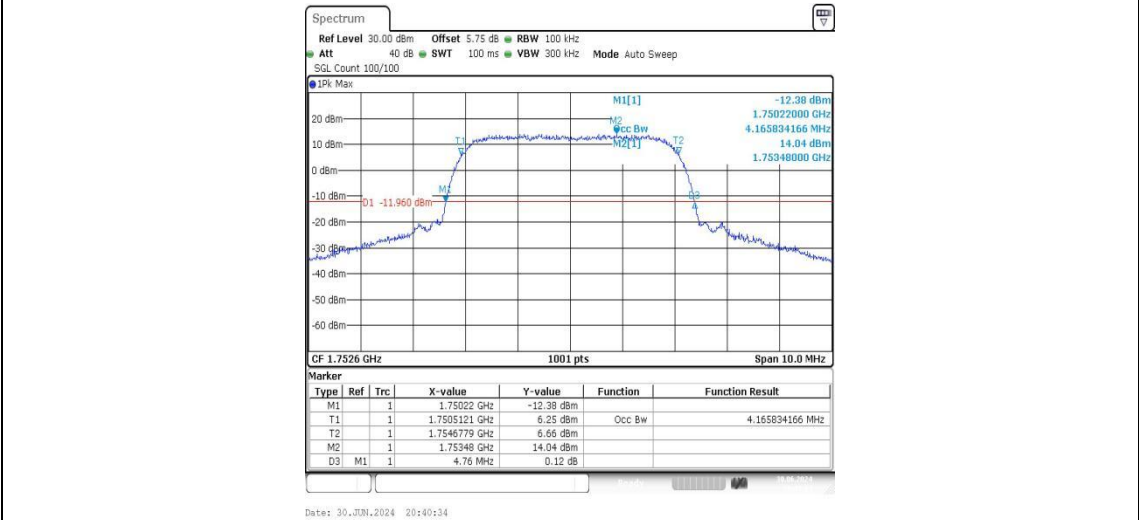
Band4-1513-1-PASS



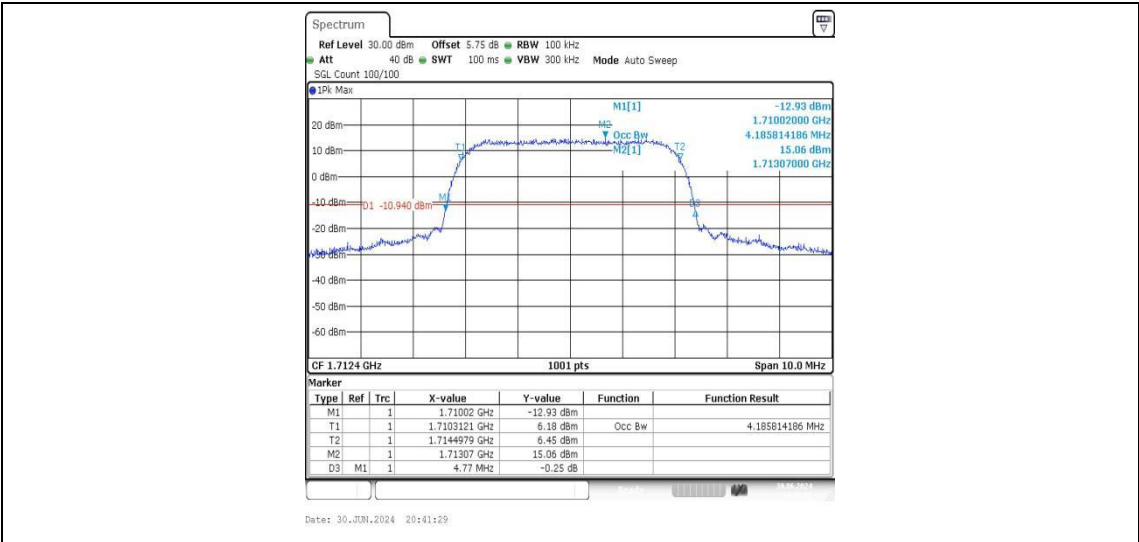
Band4-1312-2-PASS



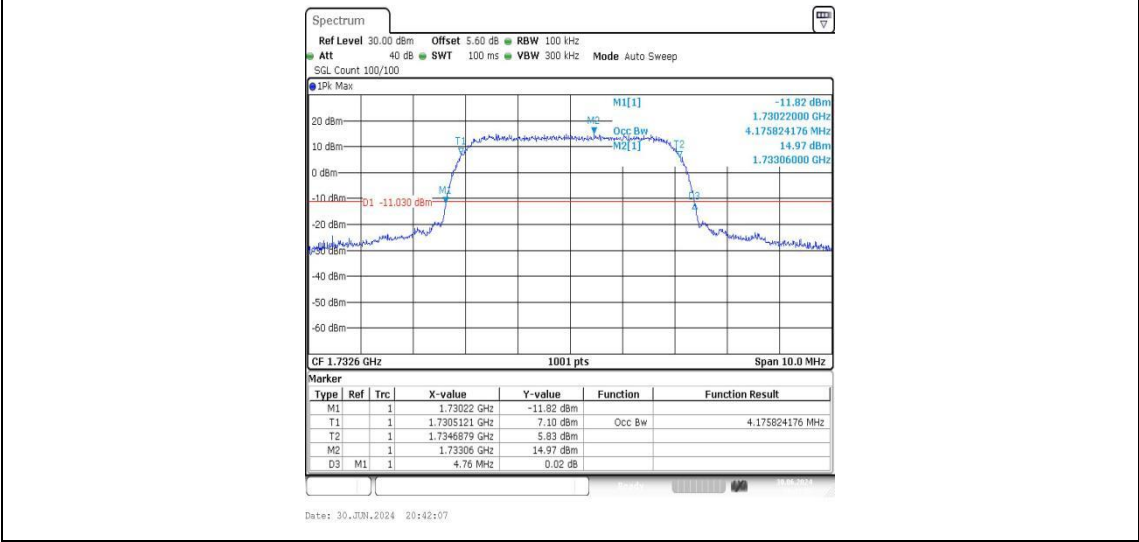
Band4-1413-2-PASS



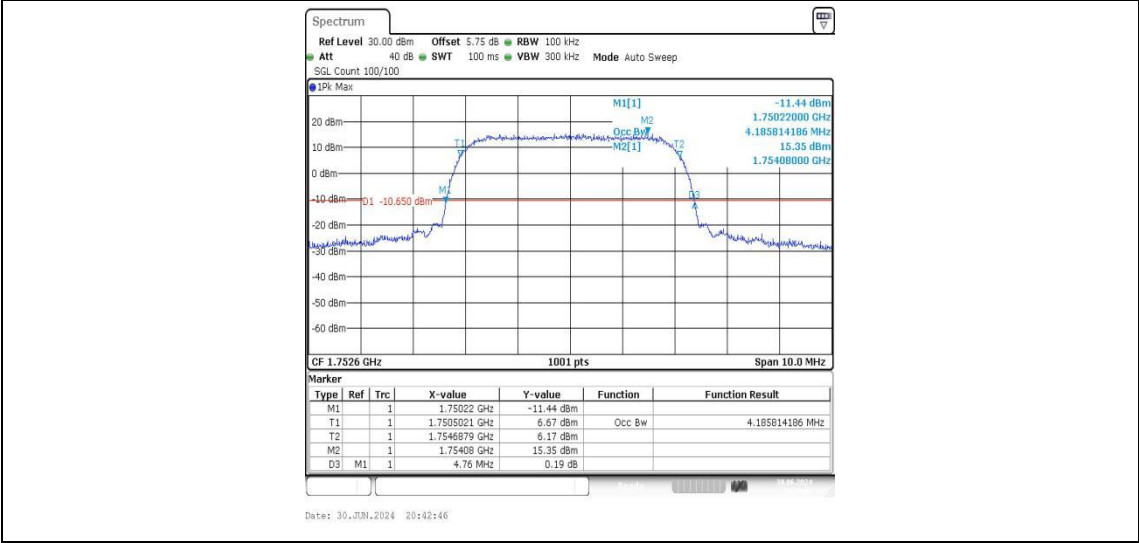
Band4-1513-2-PASS



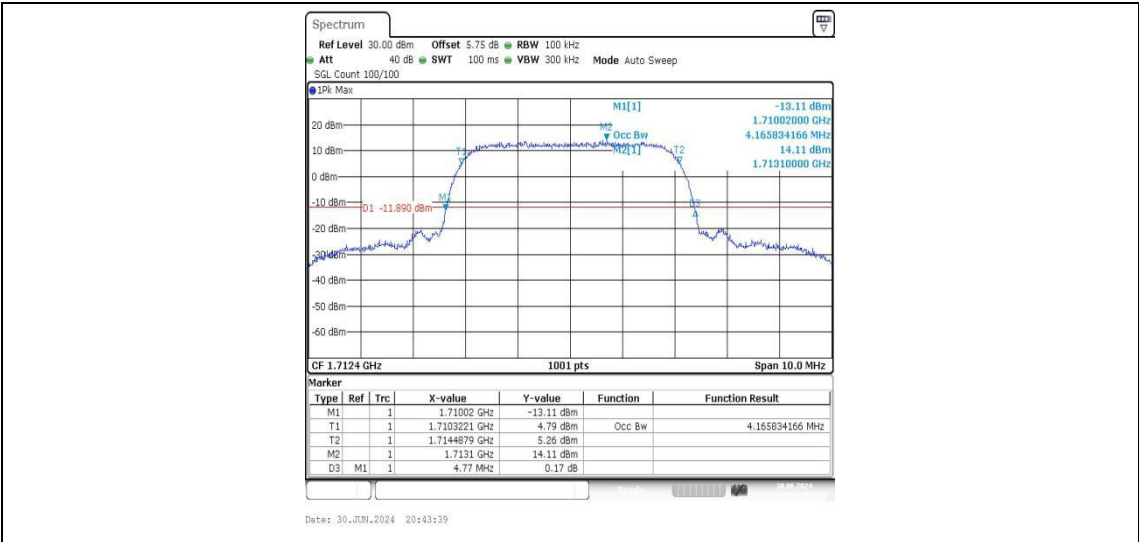
Band4-1312-3-PASS



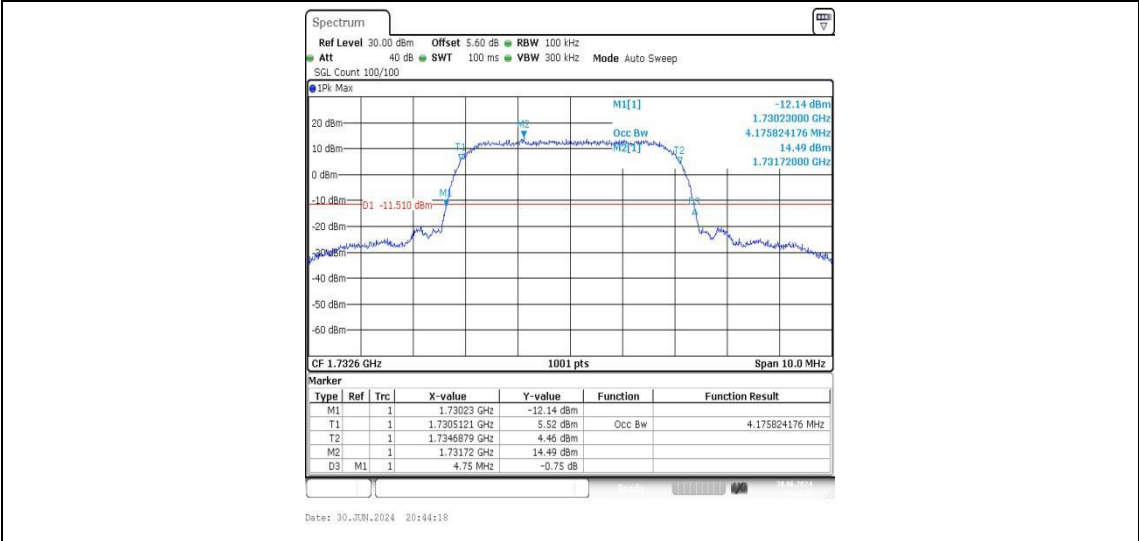
Band4-1413-3-PASS



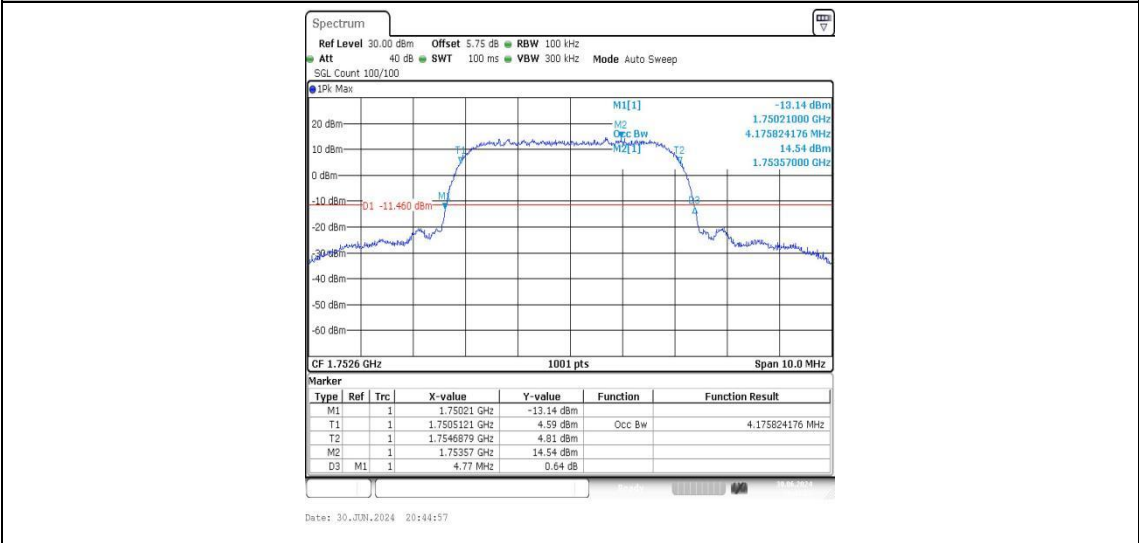
Band4-1513-3-PASS



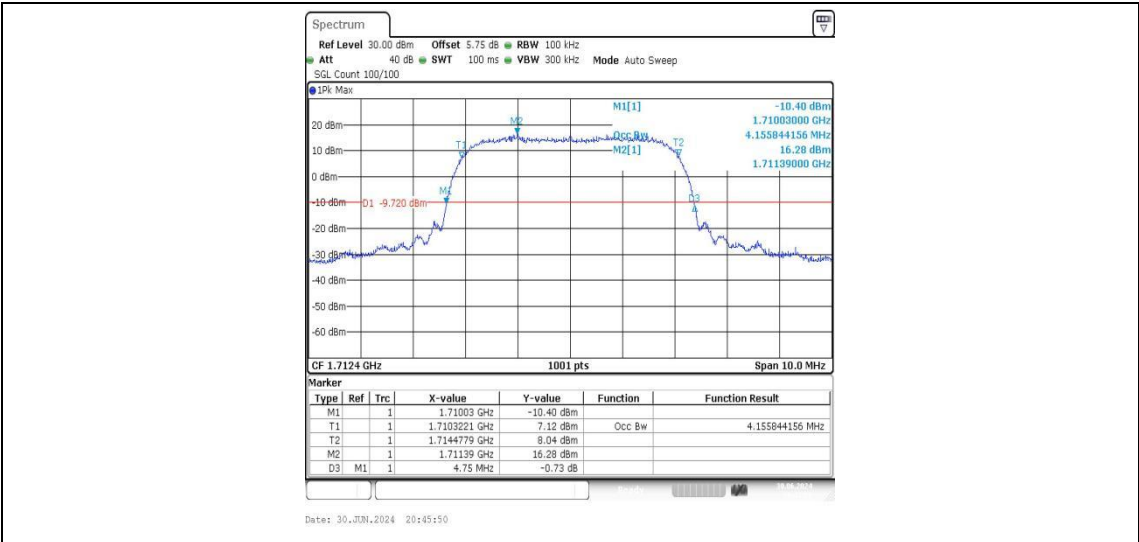
Band4-1312-4-PASS



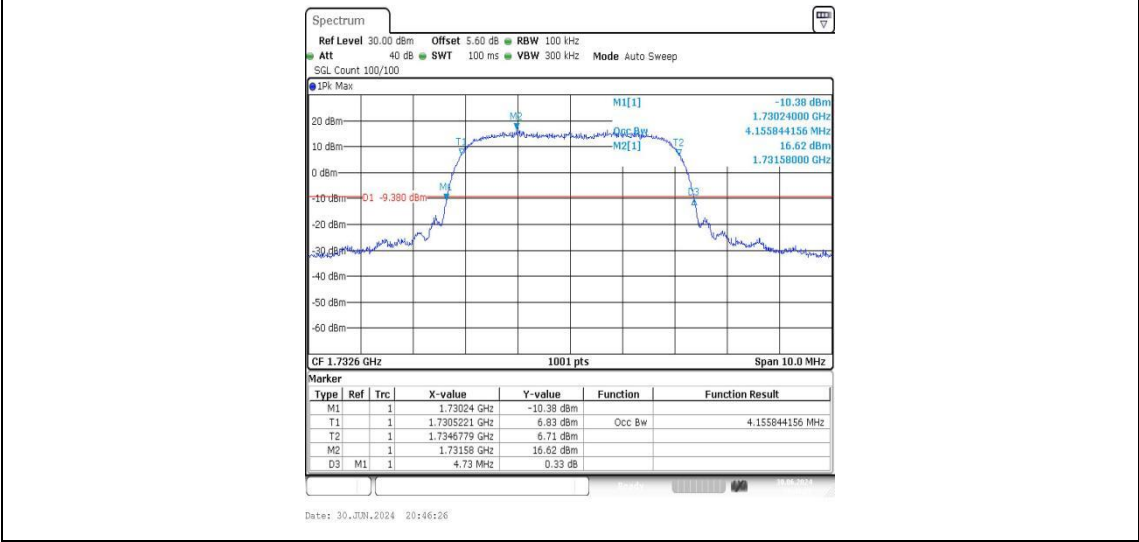
Band4-1413-4-PASS



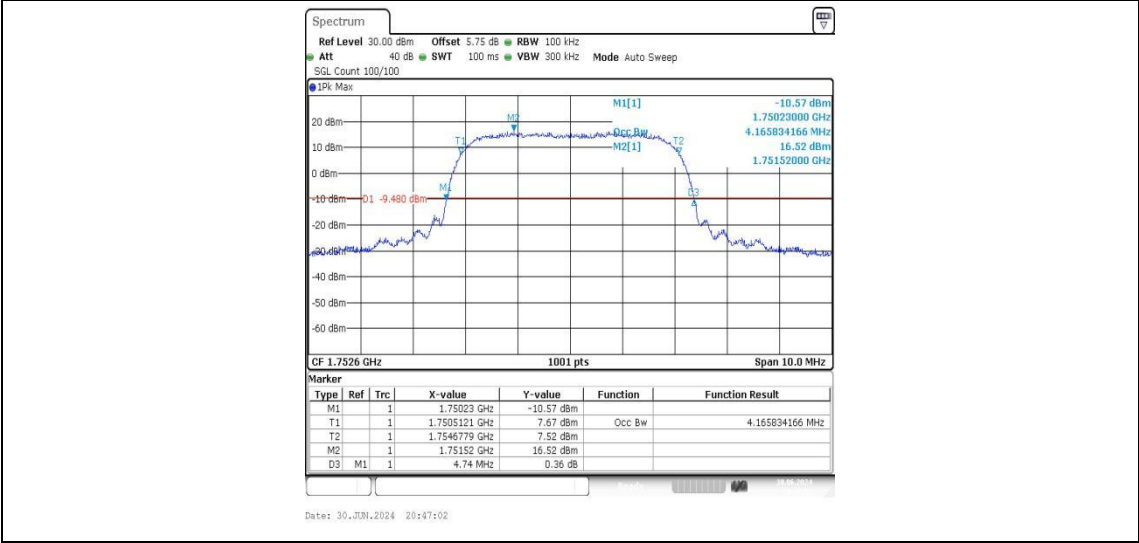
Band4-1513-4-PASS



Band4-1312-5-PASS



Band4-1413-5-PASS



Band4-1513-5-PASS

Appendix D:Band Edge

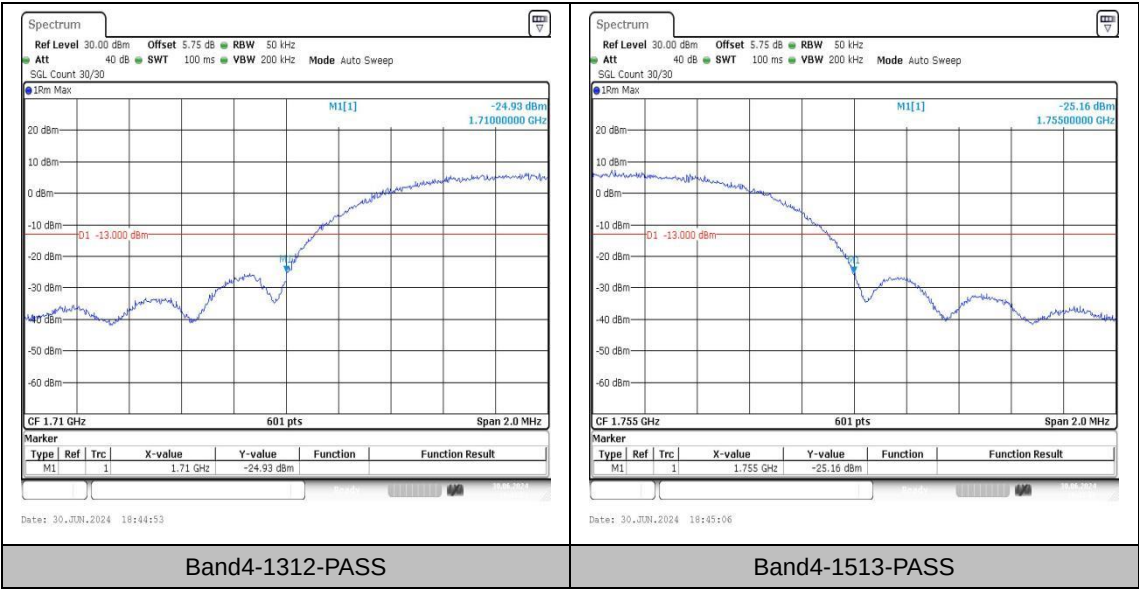
Test Result

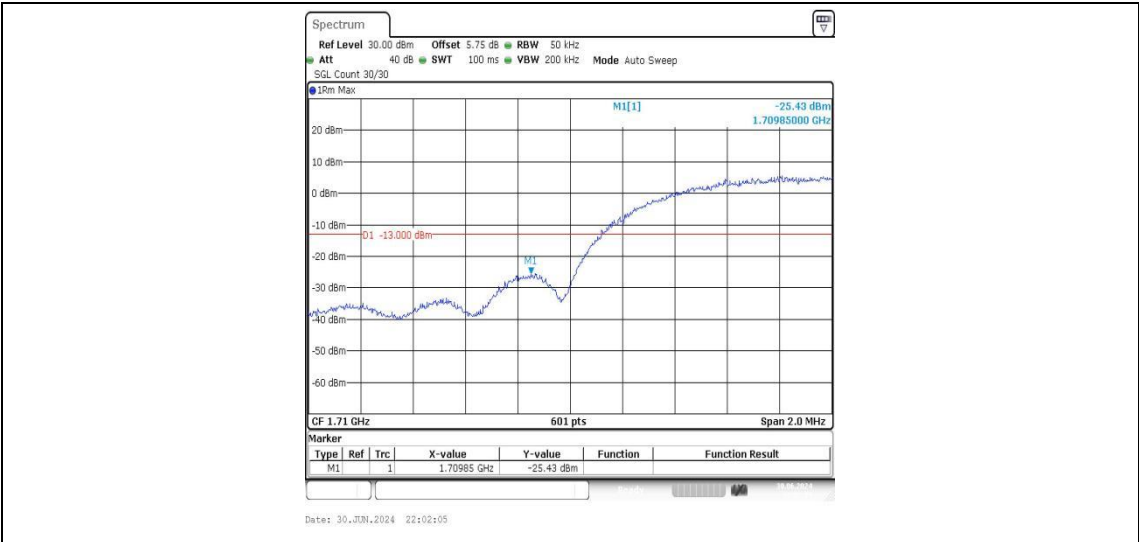
Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band4	1312	1710.00	-24.93	-13	PASS
Band4	1513	1755.00	-24.82	-13	PASS

Band	Channel	SubTest	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band4	1312	1	1709.85	-25.43	-13	PASS
Band4	1513	1	1755.15	-25.24	-13	PASS
Band4	1312	2	1709.99	-25.92	-13	PASS
Band4	1513	2	1755.00	-25.33	-13	PASS
Band4	1312	3	1710.00	-25.21	-13	PASS
Band4	1513	3	1755.00	-23.81	-13	PASS

Band	Channel	SubTest	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band4	1312	1	1709.83	-26.42	-13	PASS
Band4	1513	1	1755.00	-26.05	-13	PASS
Band4	1312	2	1710.00	-26.34	-13	PASS
Band4	1513	2	1755.00	-26.57	-13	PASS
Band4	1312	3	1710.00	-26.58	-13	PASS
Band4	1513	3	1755.00	-25.89	-13	PASS
Band4	1312	4	1709.86	-27.75	-13	PASS
Band4	1513	4	1755.14	-26.77	-13	PASS
Band4	1312	5	1709.85	-26.75	-13	PASS
Band4	1513	5	1755.00	-26.81	-13	PASS

Test Graphs

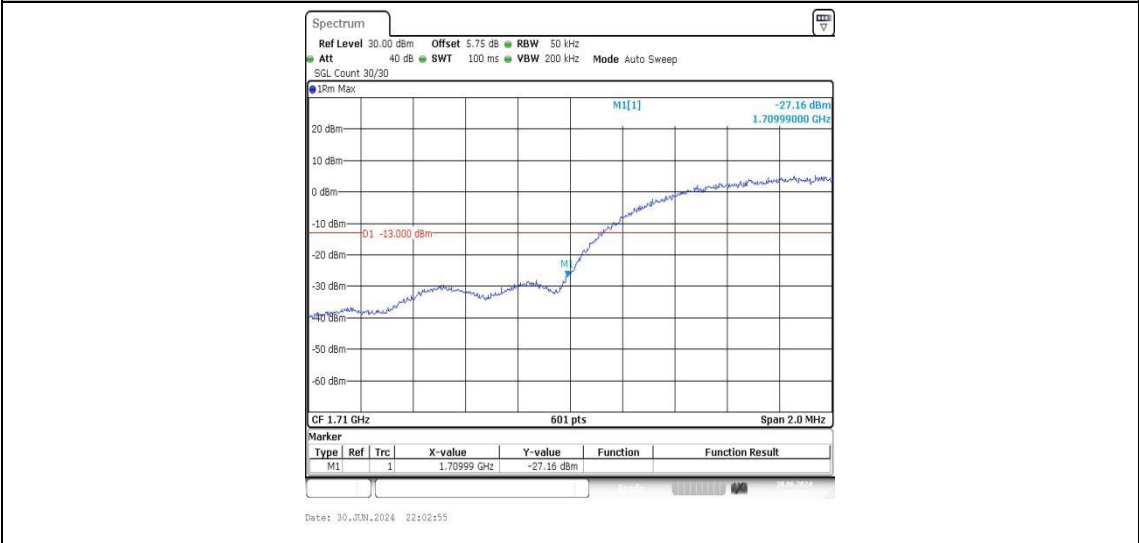




Band4-1312-1-PASS



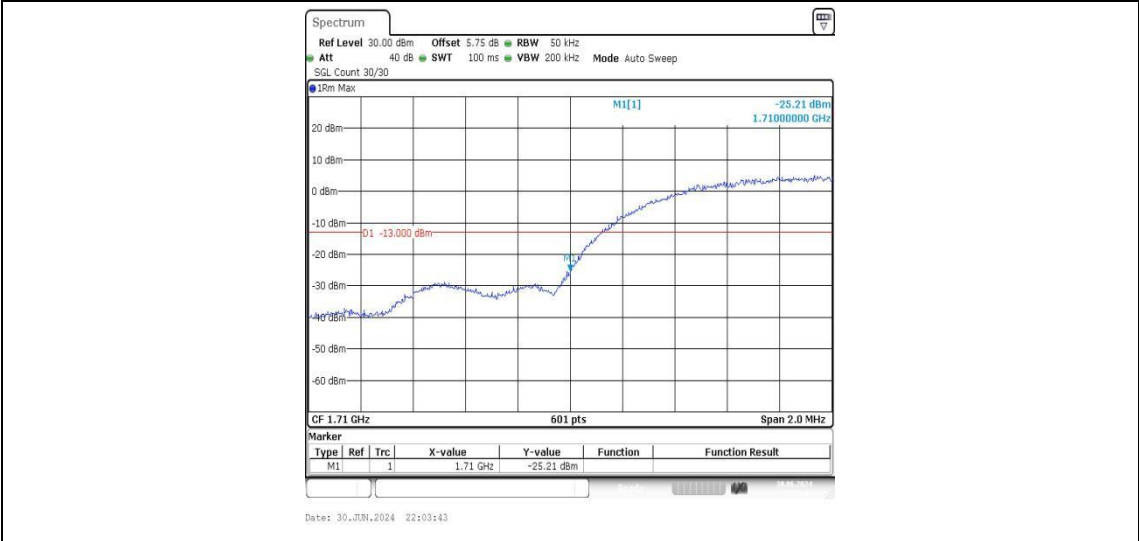
Band4-1513-1-PASS



Band4-1312-2-PASS



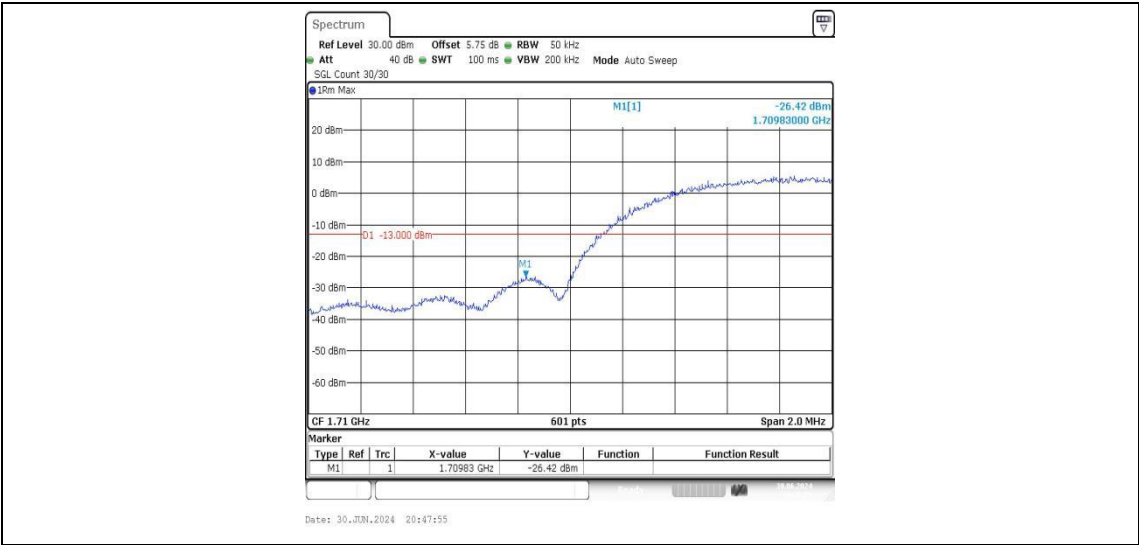
Band4-1513-2-PASS



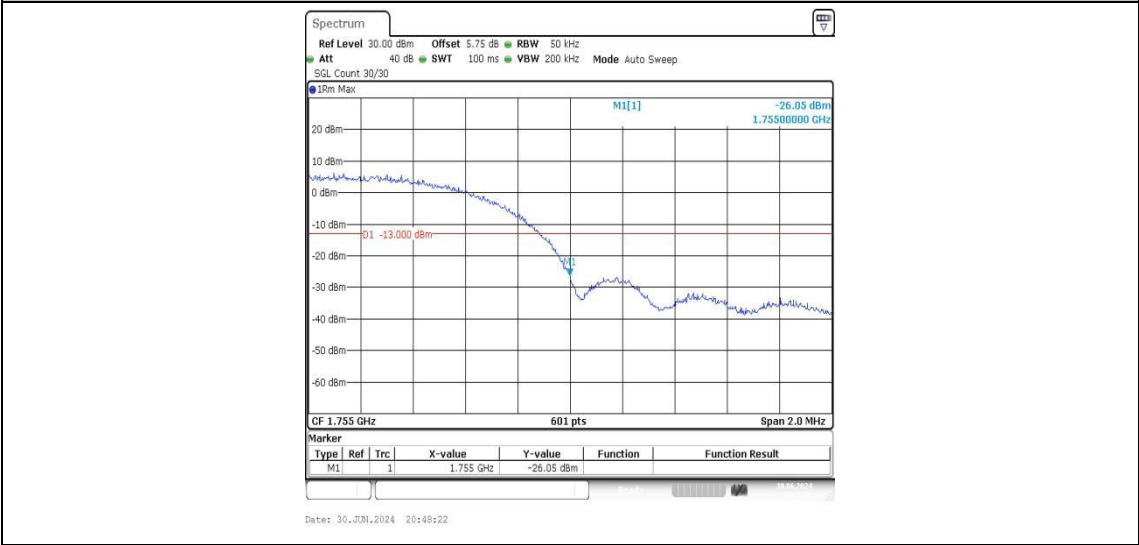
Band4-1312-3-PASS



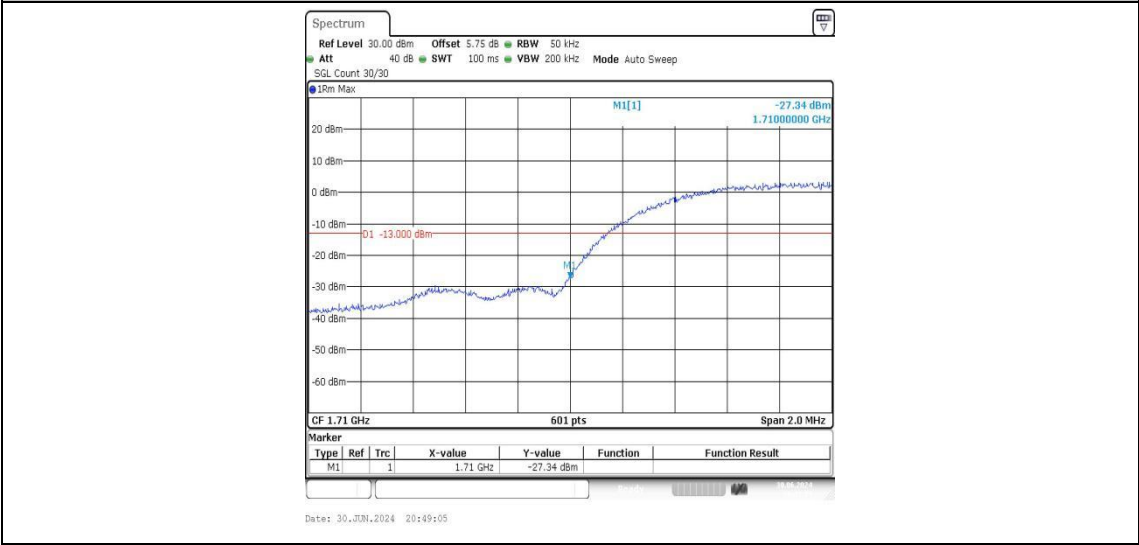
Band4-1513-3-PASS

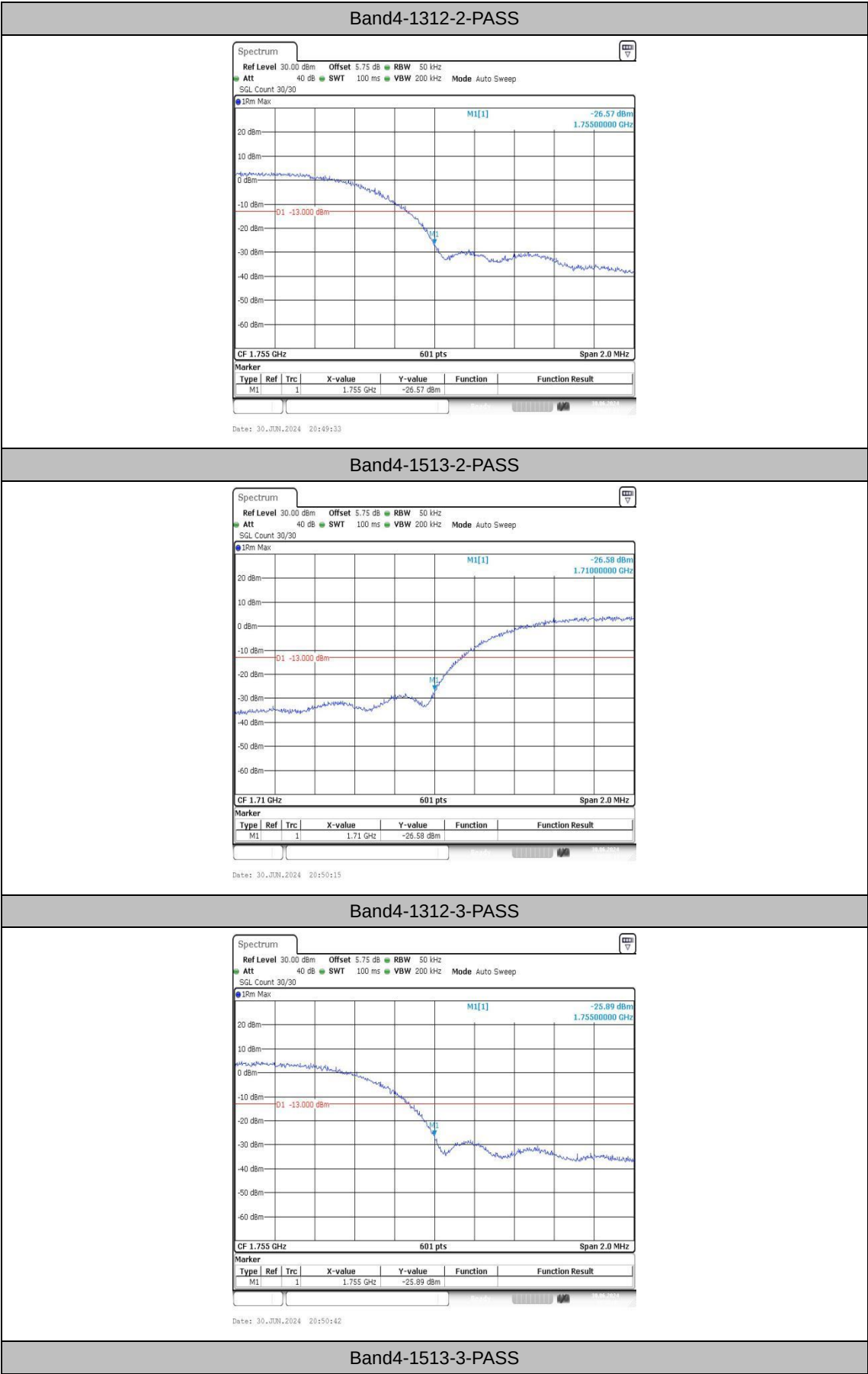


Band4-1312-1-PASS



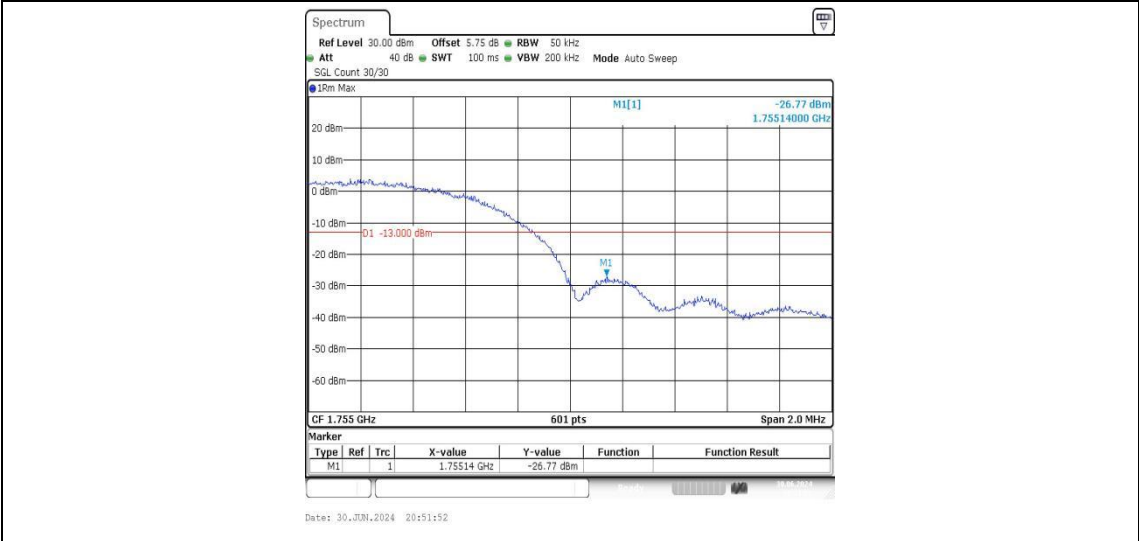
Band4-1513-1-PASS







Band4-1312-4-PASS



Band4-1513-4-PASS



Band4-1312-5-PASS



Appendix E:Conducted Spurious Emission

Test Result

Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band4	1312	0.009~0.15MHz	0.01	-76	-43	PASS
Band4	1312	0.15~30MHz	20.83	-72.01	-33	PASS
Band4	1312	30~1000MHz	990.06	-53.37	-13	PASS
Band4	1312	1000~20000MHz	6842.5	-44.01	-13	PASS
Band4	1413	0.009~0.15MHz	0.01	-76.01	-43	PASS
Band4	1413	0.15~30MHz	21.22	-72.91	-33	PASS
Band4	1413	30~1000MHz	969.7	-53.35	-13	PASS
Band4	1413	1000~20000MHz	6491	-43.8	-13	PASS
Band4	1513	0.009~0.15MHz	0.01	-76.17	-43	PASS
Band4	1513	0.15~30MHz	0.34	-71.9	-33	PASS
Band4	1513	30~1000MHz	982.79	-53.3	-13	PASS
Band4	1513	1000~20000MHz	6519.5	-44.12	-13	PASS

Band	Channel	SubTest	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band4	1312	1	0.009~0.15MHz	0.01	-76.29	-43	PASS
Band4	1312	1	0.15~30MHz	0.2	-71.56	-33	PASS
Band4	1312	1	30~1000MHz	951.28	-53.44	-13	PASS
Band4	1312	1	1000~20000MHz	6956.5	-44	-13	PASS
Band4	1413	1	0.009~0.15MHz	0.01	-76.39	-43	PASS
Band4	1413	1	0.15~30MHz	0.28	-72.87	-33	PASS
Band4	1413	1	30~1000MHz	980.85	-53.39	-13	PASS
Band4	1413	1	1000~20000MHz	6842.5	-44.03	-13	PASS
Band4	1513	1	0.009~0.15MHz	0.01	-76.2	-43	PASS
Band4	1513	1	0.15~30MHz	0.17	-72.01	-33	PASS
Band4	1513	1	30~1000MHz	999.27	-53.38	-13	PASS
Band4	1513	1	1000~20000MHz	6519.5	-43.98	-13	PASS
Band4	1312	2	0.009~0.15MHz	0.01	-76.18	-43	PASS
Band4	1312	2	0.15~30MHz	0.97	-71.56	-33	PASS
Band4	1312	2	30~1000MHz	998.3	-53.28	-13	PASS
Band4	1312	2	1000~20000MHz	6861.5	-43.78	-13	PASS
Band4	1413	2	0.009~0.15MHz	0.01	-76.17	-43	PASS
Band4	1413	2	0.15~30MHz	0.17	-71.98	-33	PASS
Band4	1413	2	30~1000MHz	992.49	-53.37	-13	PASS
Band4	1413	2	1000~20000MHz	6804.5	-43.78	-13	PASS
Band4	1513	2	0.009~0.15MHz	0.01	-76.28	-43	PASS
Band4	1513	2	0.15~30MHz	0.17	-70.82	-33	PASS

Band4	1513	2	30~1000MHz	998.3	-53.36	-13	PASS
Band4	1513	2	1000~20000MHz	6481.5	-44.13	-13	PASS
Band4	1312	3	0.009~0.15MHz	0.01	-76.31	-43	PASS
Band4	1312	3	0.15~30MHz	20.65	-72.82	-33	PASS
Band4	1312	3	30~1000MHz	997.33	-53.38	-13	PASS
Band4	1312	3	1000~20000MHz	6842.5	-43.96	-13	PASS
Band4	1413	3	0.009~0.15MHz	0.01	-76.05	-43	PASS
Band4	1413	3	0.15~30MHz	0.17	-71.11	-33	PASS
Band4	1413	3	30~1000MHz	980.37	-53.4	-13	PASS
Band4	1413	3	1000~20000MHz	6823.5	-43.94	-13	PASS
Band4	1513	3	0.009~0.15MHz	0.01	-76.18	-43	PASS
Band4	1513	3	0.15~30MHz	0.97	-71.77	-33	PASS
Band4	1513	3	30~1000MHz	935.28	-53.32	-13	PASS
Band4	1513	3	1000~20000MHz	6871	-44	-13	PASS
Band4	1312	4	0.009~0.15MHz	0.01	-76.33	-43	PASS
Band4	1312	4	0.15~30MHz	0.94	-71.55	-33	PASS
Band4	1312	4	30~1000MHz	994.43	-53.33	-13	PASS
Band4	1312	4	1000~20000MHz	6909	-44.08	-13	PASS
Band4	1413	4	0.009~0.15MHz	0.01	-76.14	-43	PASS
Band4	1413	4	0.15~30MHz	0.97	-70.87	-33	PASS
Band4	1413	4	30~1000MHz	974.55	-53.32	-13	PASS
Band4	1413	4	1000~20000MHz	6557.5	-44	-13	PASS
Band4	1513	4	0.009~0.15MHz	0.01	-76.48	-43	PASS
Band4	1513	4	0.15~30MHz	0.17	-72.37	-33	PASS
Band4	1513	4	30~1000MHz	954.19	-53.34	-13	PASS
Band4	1513	4	1000~20000MHz	6909	-44	-13	PASS

Band	Channel	SubTest	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band4	1312	1	0.009~0.15MHz	0.01	-76.28	-43	PASS
Band4	1312	1	0.15~30MHz	20.56	-72.39	-33	PASS
Band4	1312	1	30~1000MHz	952.74	-53.26	-13	PASS
Band4	1312	1	1000~20000MHz	6795	-43.9	-13	PASS
Band4	1413	1	0.009~0.15MHz	0.01	-76.4	-43	PASS
Band4	1413	1	0.15~30MHz	0.17	-72.65	-33	PASS
Band4	1413	1	30~1000MHz	996.85	-53.33	-13	PASS
Band4	1413	1	1000~20000MHz	6500.5	-44.04	-13	PASS
Band4	1513	1	0.009~0.15MHz	0.01	-76.29	-43	PASS
Band4	1513	1	0.15~30MHz	25.24	-72.13	-33	PASS
Band4	1513	1	30~1000MHz	983.28	-53.36	-13	PASS
Band4	1513	1	1000~20000MHz	6529	-43.93	-13	PASS

Band4	1312	2	0.009~0.15MHz	0.01	-76.24	-43	PASS
Band4	1312	2	0.15~30MHz	20.5	-71.94	-33	PASS
Band4	1312	2	30~1000MHz	987.64	-53.27	-13	PASS
Band4	1312	2	1000~20000MHz	6918.5	-44.06	-13	PASS
Band4	1413	2	0.009~0.15MHz	0.01	-76.23	-43	PASS
Band4	1413	2	0.15~30MHz	29.51	-72.78	-33	PASS
Band4	1413	2	30~1000MHz	997.82	-53.19	-13	PASS
Band4	1413	2	1000~20000MHz	6871	-44	-13	PASS
Band4	1513	2	0.009~0.15MHz	0.01	-76.24	-43	PASS
Band4	1513	2	0.15~30MHz	18.5	-72.15	-33	PASS
Band4	1513	2	30~1000MHz	998.3	-53.43	-13	PASS
Band4	1513	2	1000~20000MHz	6529	-43.93	-13	PASS
Band4	1312	3	0.009~0.15MHz	0.01	-76.2	-43	PASS
Band4	1312	3	0.15~30MHz	0.31	-72.18	-33	PASS
Band4	1312	3	30~1000MHz	915.89	-53.34	-13	PASS
Band4	1312	3	1000~20000MHz	6586	-43.97	-13	PASS
Band4	1413	3	0.009~0.15MHz	0.01	-76.26	-43	PASS
Band4	1413	3	0.15~30MHz	0.25	-72.81	-33	PASS
Band4	1413	3	30~1000MHz	959.52	-53.36	-13	PASS
Band4	1413	3	1000~20000MHz	6567	-43.95	-13	PASS
Band4	1513	3	0.009~0.15MHz	0.01	-76.42	-43	PASS
Band4	1513	3	0.15~30MHz	21.34	-72.04	-33	PASS
Band4	1513	3	30~1000MHz	974.55	-53.42	-13	PASS
Band4	1513	3	1000~20000MHz	6785.5	-44.06	-13	PASS
Band4	1312	4	0.009~0.15MHz	0.01	-76.15	-43	PASS
Band4	1312	4	0.15~30MHz	0.55	-72.37	-33	PASS
Band4	1312	4	30~1000MHz	970.67	-53.31	-13	PASS
Band4	1312	4	1000~20000MHz	6538.5	-44.06	-13	PASS
Band4	1413	4	0.009~0.15MHz	0.01	-76.22	-43	PASS
Band4	1413	4	0.15~30MHz	17.37	-72.84	-33	PASS
Band4	1413	4	30~1000MHz	981.82	-53.42	-13	PASS
Band4	1413	4	1000~20000MHz	6500.5	-43.83	-13	PASS
Band4	1513	4	0.009~0.15MHz	0.01	-76.07	-43	PASS
Band4	1513	4	0.15~30MHz	0.55	-72.07	-33	PASS
Band4	1513	4	30~1000MHz	969.7	-53.44	-13	PASS
Band4	1513	4	1000~20000MHz	6833	-44	-13	PASS
Band4	1312	5	0.009~0.15MHz	0.01	-76.13	-43	PASS
Band4	1312	5	0.15~30MHz	29.54	-72.45	-33	PASS
Band4	1312	5	30~1000MHz	987.64	-53.4	-13	PASS
Band4	1312	5	1000~20000MHz	6852	-44.06	-13	PASS
Band4	1413	5	0.009~0.15MHz	0.01	-76.29	-43	PASS
Band4	1413	5	0.15~30MHz	0.37	-72.27	-33	PASS

Band4	1413	5	30~1000MHz	977.94	-53.17	-13	PASS
Band4	1413	5	1000~20000MHz	6918.5	-43.97	-13	PASS
Band4	1513	5	0.009~0.15MHz	0.01	-76.18	-43	PASS
Band4	1513	5	0.15~30MHz	26.77	-72.66	-33	PASS
Band4	1513	5	30~1000MHz	992	-53.46	-13	PASS
Band4	1513	5	1000~20000MHz	6548	-43.97	-13	PASS