

Appendix Test Data for LTE band 14(Conducted Measurement)

Product Name: LEARNING CAMERA



Trade Mark:

Test Model: DEX-01

FCC ID: 2BOSD-DEX-01

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

Appendix A: RF output power

Test Result

Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limit (dB)	AntGain (dBi)	EIRP (dBm)	Limit (dBm)	Conclusion
14	5	790.5	QPSK	25	LOW	21.93	28.62	6.69	13	-0.2	19.58	34.8	Pass
14	5	790.5	QPSK	12	LOW	21.87	28.1	6.23	13	-0.2	19.52	34.8	Pass
14	5	790.5	QPSK	12	MID	21.85	28.21	6.36	13	-0.2	19.50	34.8	Pass
14	5	790.5	QPSK	12	HIGH	21.89	28.21	6.32	13	-0.2	19.54	34.8	Pass
14	5	790.5	QPSK	1	LOW	22.73	28.37	5.64	13	-0.2	20.38	34.8	Pass
14	5	790.5	QPSK	1	MID	22.83	28.34	5.51	13	-0.2	20.48	34.8	Pass
14	5	790.5	QPSK	1	HIGH	22.66	27.97	5.31	13	-0.2	20.31	34.8	Pass
14	5	790.5	16QAM	25	LOW	20.97	28.97	8	13	-0.2	18.62	34.8	Pass
14	5	790.5	16QAM	12	LOW	20.89	28.42	7.53	13	-0.2	18.54	34.8	Pass
14	5	790.5	16QAM	12	MID	20.87	28.37	7.5	13	-0.2	18.52	34.8	Pass
14	5	790.5	16QAM	12	HIGH	20.88	28.17	7.29	13	-0.2	18.53	34.8	Pass
14	5	790.5	16QAM	1	LOW	21.85	28.36	6.51	13	-0.2	19.50	34.8	Pass
14	5	790.5	16QAM	1	MID	21.96	28.34	6.38	13	-0.2	19.61	34.8	Pass
14	5	790.5	16QAM	1	HIGH	21.83	27.99	6.16	13	-0.2	19.48	34.8	Pass
14	5	793	QPSK	25	LOW	21.85	28.2	6.35	13	-0.2	19.50	34.8	Pass
14	5	793	QPSK	12	LOW	21.81	27.96	6.15	13	-0.2	19.46	34.8	Pass
14	5	793	QPSK	12	MID	21.73	27.81	6.08	13	-0.2	19.38	34.8	Pass
14	5	793	QPSK	12	HIGH	21.92	27.74	5.82	13	-0.2	19.57	34.8	Pass
14	5	793	QPSK	1	LOW	22.71	28.93	6.22	13	-0.2	20.36	34.8	Pass
14	5	793	QPSK	1	MID	22.79	28.57	5.78	13	-0.2	20.44	34.8	Pass

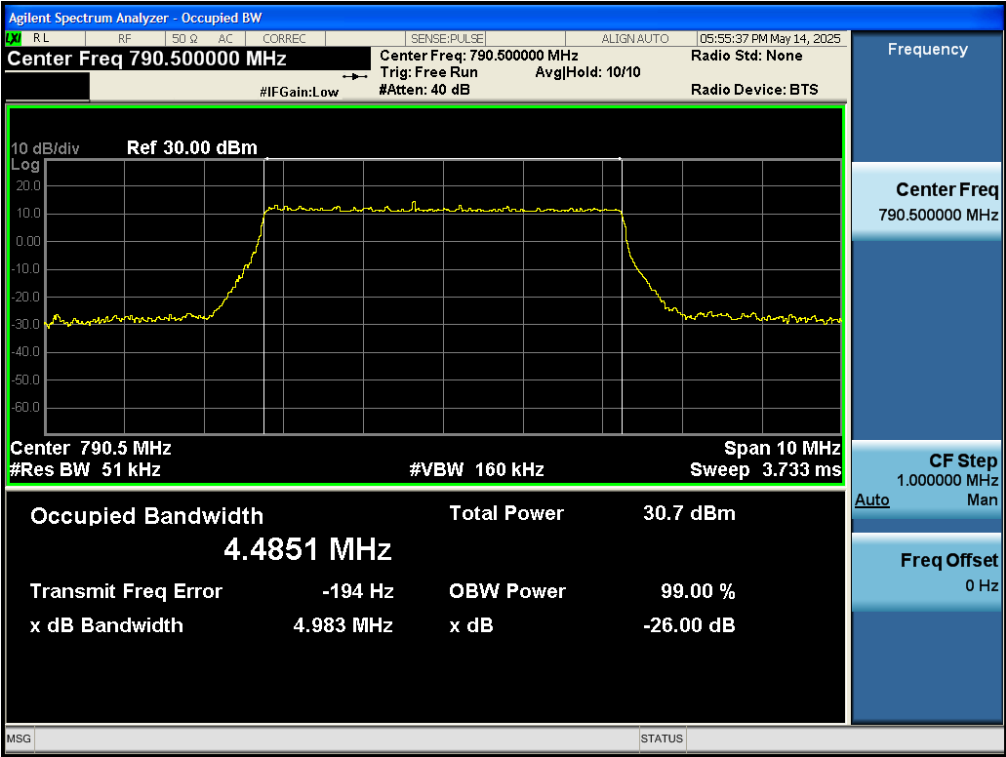
Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limit (dB)	AntGain (dBi)	EIRP (dBm)	Limit (dBm)	Conclusion
14	5	793	QPSK	1	HIGH	22.7	28.2	5.5	13	-0.2	20.35	34.8	Pass
14	5	793	16QAM	25	LOW	20.93	28.34	7.41	13	-0.2	18.58	34.8	Pass
14	5	793	16QAM	12	LOW	20.77	28.66	7.89	13	-0.2	18.42	34.8	Pass
14	5	793	16QAM	12	MID	20.77	28.57	7.80	13	-0.2	18.42	34.8	Pass
14	5	793	16QAM	12	HIGH	20.97	28.31	7.34	13	-0.2	18.62	34.8	Pass
14	5	793	16QAM	1	LOW	21.64	27.39	5.75	13	-0.2	19.29	34.8	Pass
14	5	793	16QAM	1	MID	21.74	27.27	5.53	13	-0.2	19.39	34.8	Pass
14	5	793	16QAM	1	HIGH	21.62	26.99	5.37	13	-0.2	19.27	34.8	Pass
14	5	795.5	QPSK	25	LOW	21.75	27.75	6	13	-0.2	19.40	34.8	Pass
14	5	795.5	QPSK	12	LOW	21.69	28.03	6.34	13	-0.2	19.34	34.8	Pass
14	5	795.5	QPSK	12	MID	21.68	27.99	6.31	13	-0.2	19.33	34.8	Pass
14	5	795.5	QPSK	12	HIGH	21.84	28	6.16	13	-0.2	19.49	34.8	Pass
14	5	795.5	QPSK	1	LOW	22.72	28.04	5.32	13	-0.2	20.37	34.8	Pass
14	5	795.5	QPSK	1	MID	22.76	27.8	5.04	13	-0.2	20.41	34.8	Pass
14	5	795.5	QPSK	1	HIGH	22.72	27.94	5.22	13	-0.2	20.37	34.8	Pass
14	5	795.5	16QAM	25	LOW	20.81	27.85	7.04	13	-0.2	18.46	34.8	Pass
14	5	795.5	16QAM	12	LOW	20.76	27.72	6.96	13	-0.2	18.41	34.8	Pass
14	5	795.5	16QAM	12	MID	20.75	27.69	6.94	13	-0.2	18.40	34.8	Pass
14	5	795.5	16QAM	12	HIGH	20.83	27.61	6.78	13	-0.2	18.48	34.8	Pass
14	5	795.5	16QAM	1	LOW	22.05	27.8	5.75	13	-0.2	19.70	34.8	Pass
14	5	795.5	16QAM	1	MID	22.09	27.58	5.49	13	-0.2	19.74	34.8	Pass
14	5	795.5	16QAM	1	HIGH	22.03	27.67	5.64	13	-0.2	19.68	34.8	Pass
14	10	793	QPSK	50	LOW	22.04	28.46	6.42	13	-0.2	19.69	34.8	Pass
14	10	793	QPSK	25	LOW	21.85	28.32	6.47	13	-0.2	19.50	34.8	Pass
14	10	793	QPSK	25	MID	21.88	28.45	6.57	13	-0.2	19.53	34.8	Pass
14	10	793	QPSK	25	HIGH	22.09	28.25	6.16	13	-0.2	19.74	34.8	Pass
14	10	793	QPSK	1	LOW	22.83	28.62	5.79	13	-0.2	20.48	34.8	Pass
14	10	793	QPSK	1	MID	23	28.28	5.28	13	-0.2	20.65	34.8	Pass
14	10	793	QPSK	1	HIGH	22.76	27.93	5.17	13	-0.2	20.41	34.8	Pass
14	10	793	16QAM	50	LOW	21.03	28.32	7.29	13	-0.2	18.68	34.8	Pass
14	10	793	16QAM	25	LOW	20.97	28.78	7.81	13	-0.2	18.62	34.8	Pass
14	10	793	16QAM	25	MID	20.93	28.84	7.91	13	-0.2	18.58	34.8	Pass
14	10	793	16QAM	25	HIGH	21.17	28.44	7.27	13	-0.2	18.82	34.8	Pass
14	10	793	16QAM	1	LOW	22	27.26	5.26	13	-0.2	19.65	34.8	Pass
14	10	793	16QAM	1	MID	22.15	27.16	5.01	13	-0.2	19.8	34.8	Pass
14	10	793	16QAM	1	HIGH	21.96	26.88	4.92	13	-0.2	19.61	34.8	Pass

Appendix B: Occupied bandwidth

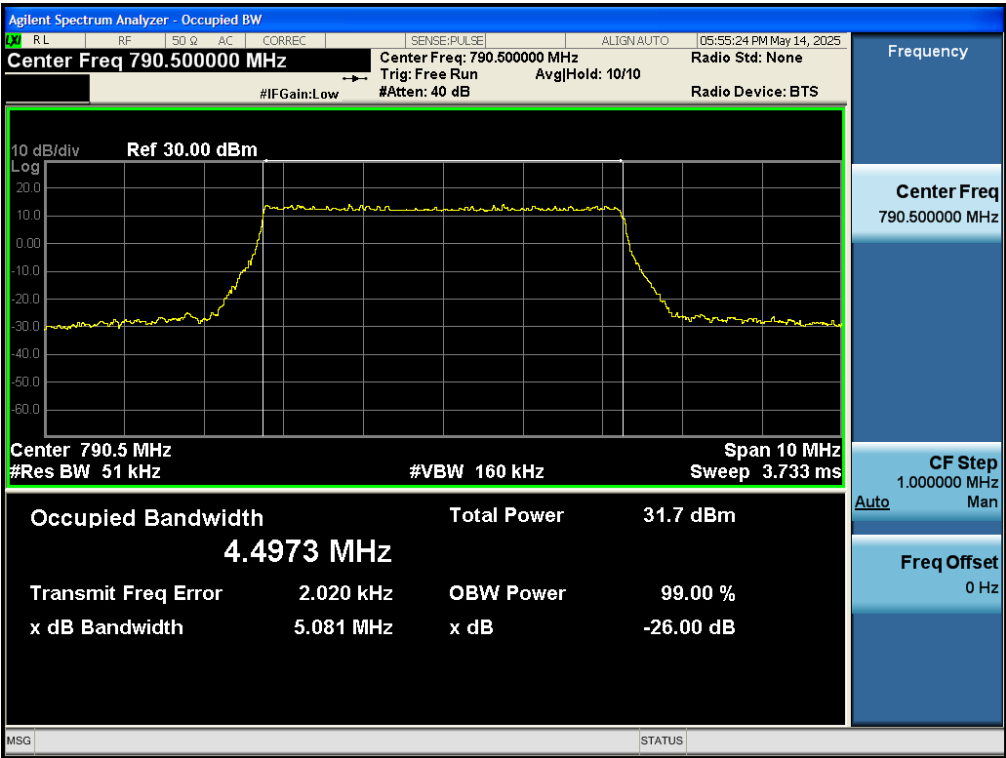
Test Result

Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Occupied Bandwidth (MHz)	Emission Bandwidth (MHz)	Limit
14	5	790.5	QPSK	25	LOW	4.497	5.081	No limit
14	5	790.5	16QAM	25	LOW	4.485	4.983	No limit
14	5	793	QPSK	25	LOW	4.493	5.008	No limit
14	5	793	16QAM	25	LOW	4.493	5.043	No limit
14	5	795.5	QPSK	25	LOW	4.471	5.031	No limit
14	5	795.5	16QAM	25	LOW	4.479	4.989	No limit
14	10	793	QPSK	50	LOW	8.99	9.878	No limit
14	10	793	16QAM	50	LOW	8.987	9.629	No limit

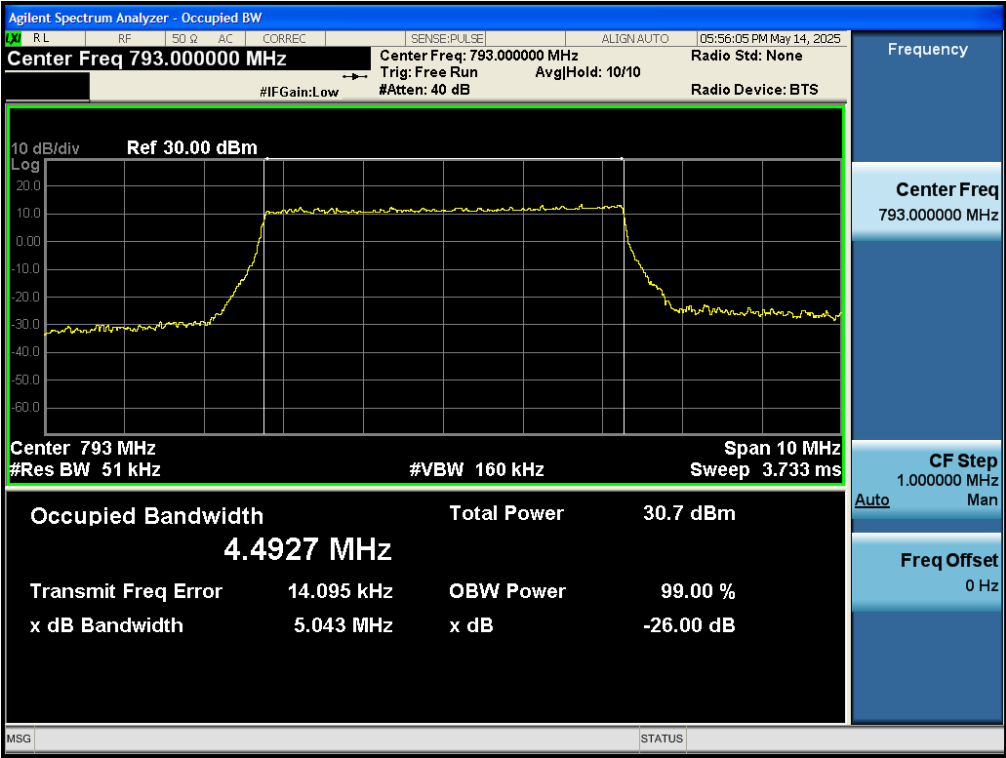
Test Graphs



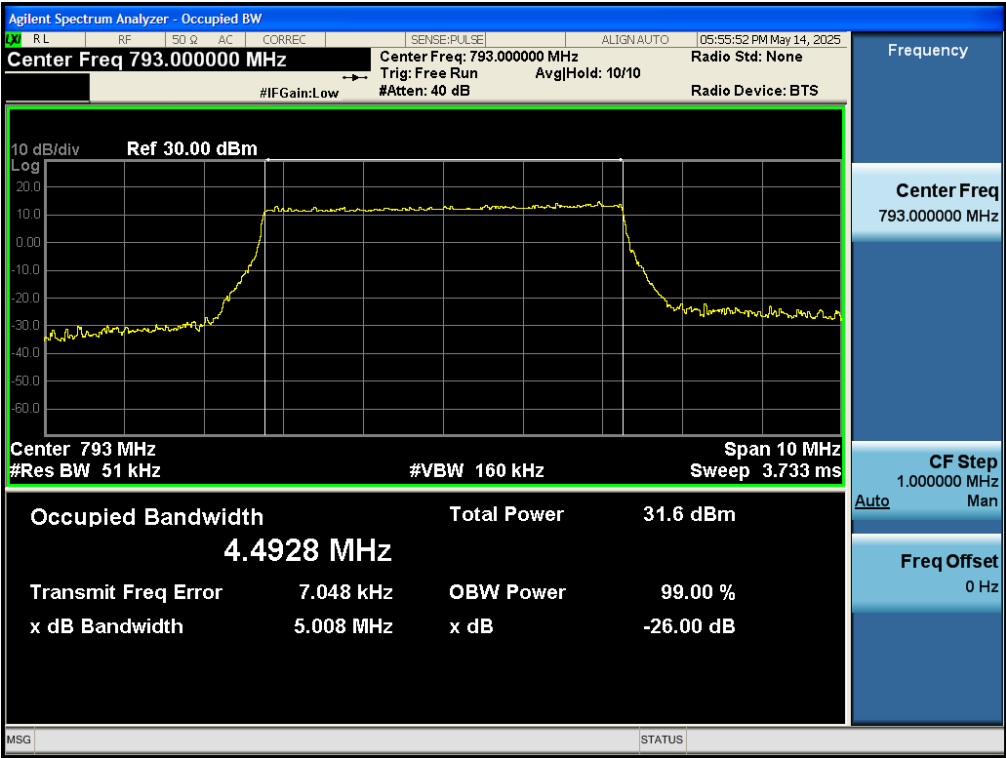
Test_Graph_band14_790.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



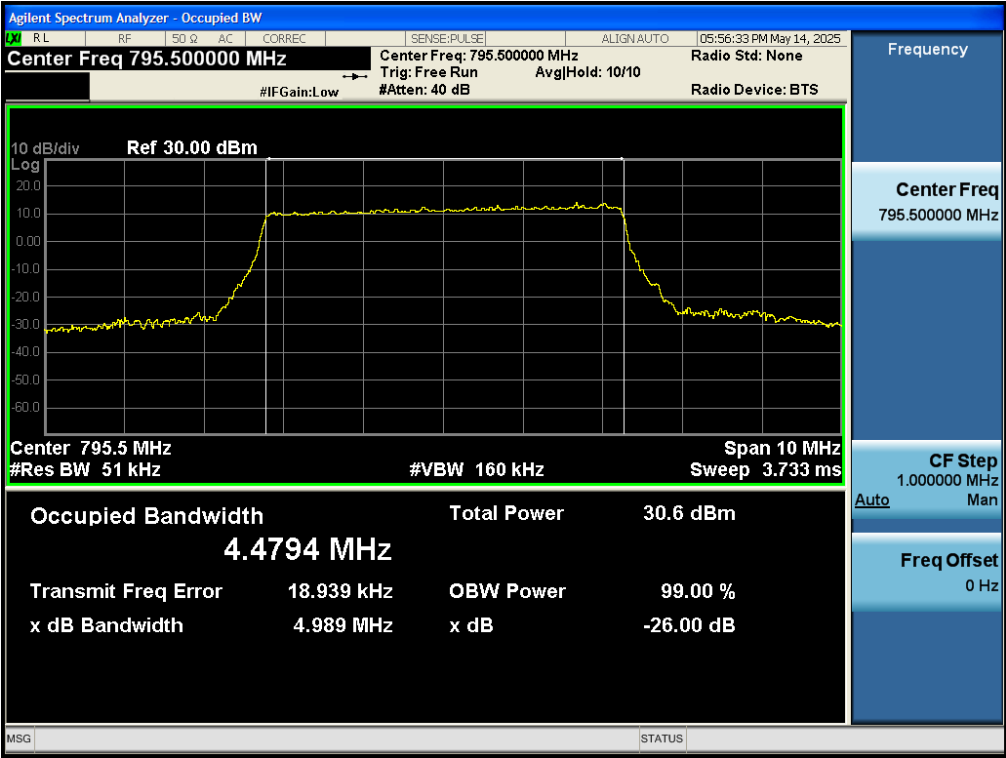
Test_Graph_band14_790.5MHz_5M_QPSK_25RB#LOW_OBW&EBW



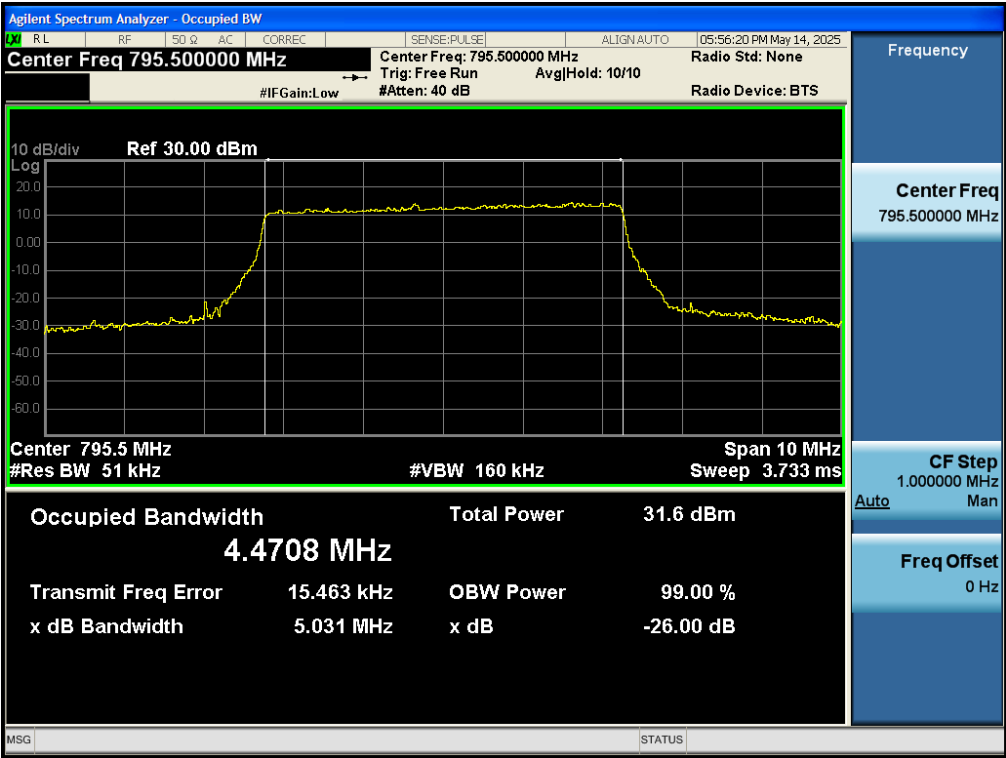
Test_Graph_band14_793MHz_5M_16QAM_25RB#LOW_OBW&EBW



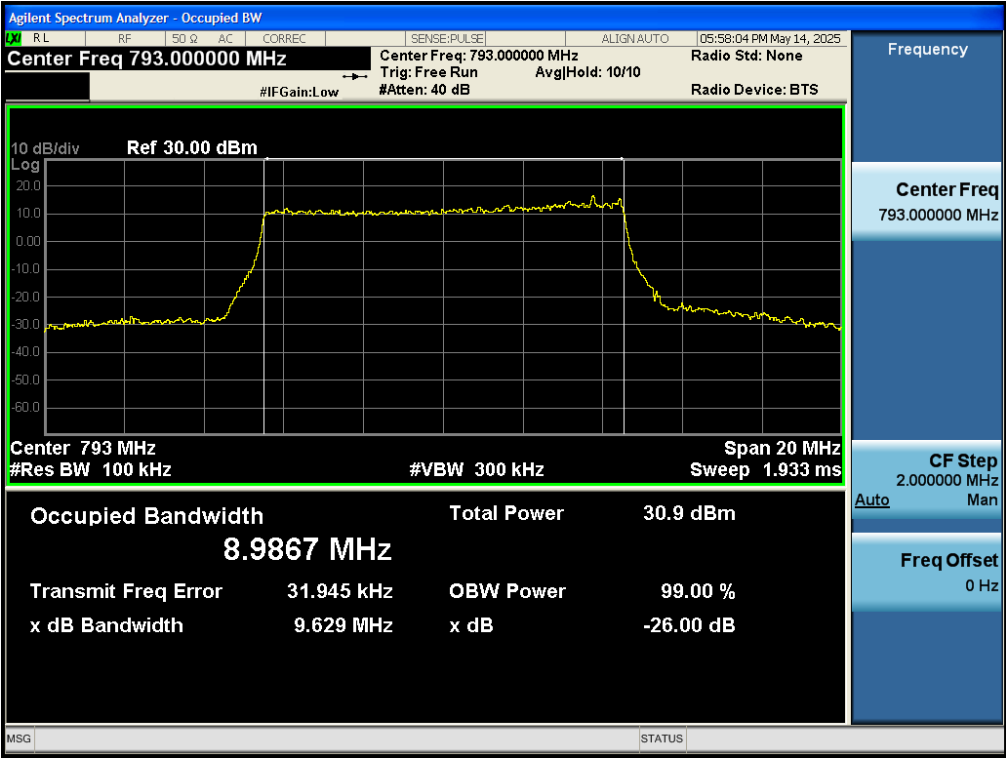
Test_Graph_band14_793MHz_5M_QPSK_25RB#LOW_OBW&EBW



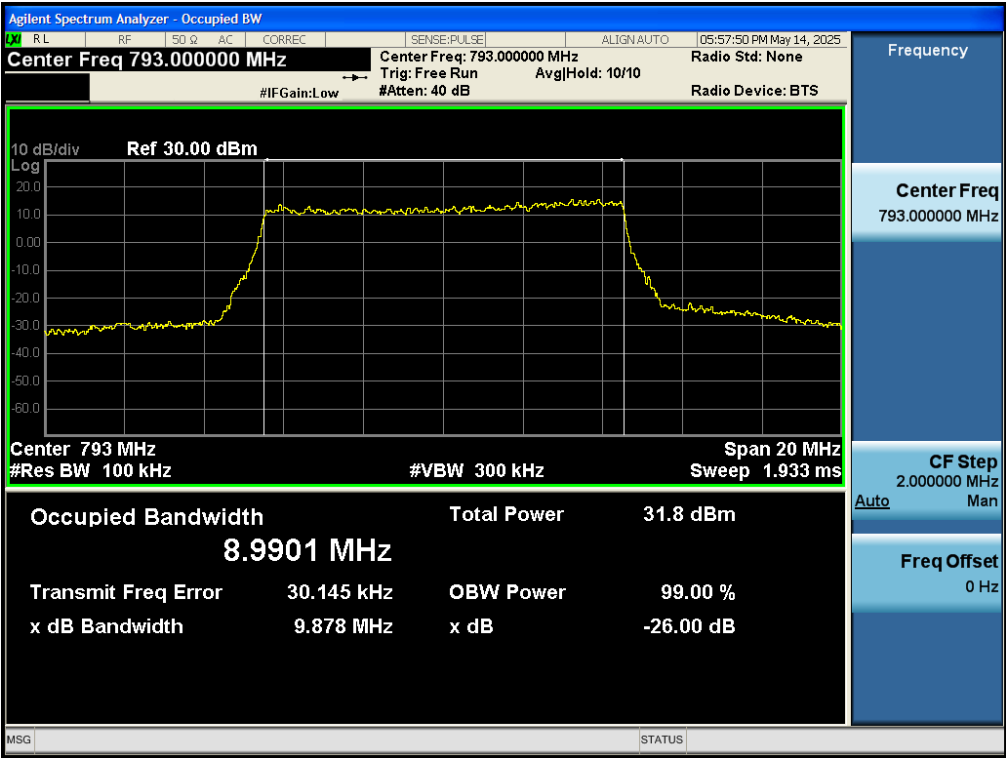
Test_Graph_band14_795.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



Test_Graph_band14_795.5MHz_5M_QPSK_25RB#LOW_OBW&EBW



Test_Graph_band14_793MHz_10M_16QAM_50RB#LOW_OBW&EBW



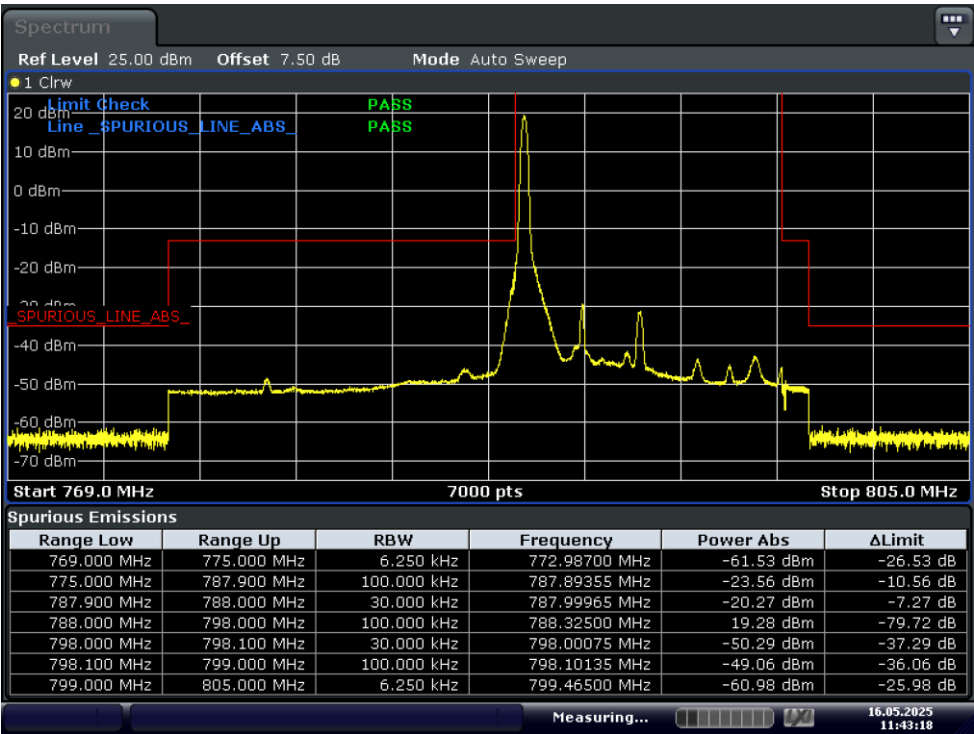
Test_Graph_band14_793MHz_10M_QPSK_50RB#LOW_OBW&EBW

Appendix C: Band edge emissions

Test Result

Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Conclusion
14	5	790.5	QPSK	1	LOW	
14	5	790.5	QPSK	25	LOW	
14	5	790.5	16QAM	1	LOW	
14	5	790.5	16QAM	25	LOW	
14	5	795.5	QPSK	1	HIGH	
14	5	795.5	QPSK	25	LOW	
14	5	795.5	16QAM	1	HIGH	
14	5	795.5	16QAM	25	LOW	
14	10	793	QPSK	1	LOW	
14	10	793	QPSK	50	LOW	
14	10	793	16QAM	1	LOW	
14	10	793	16QAM	50	LOW	

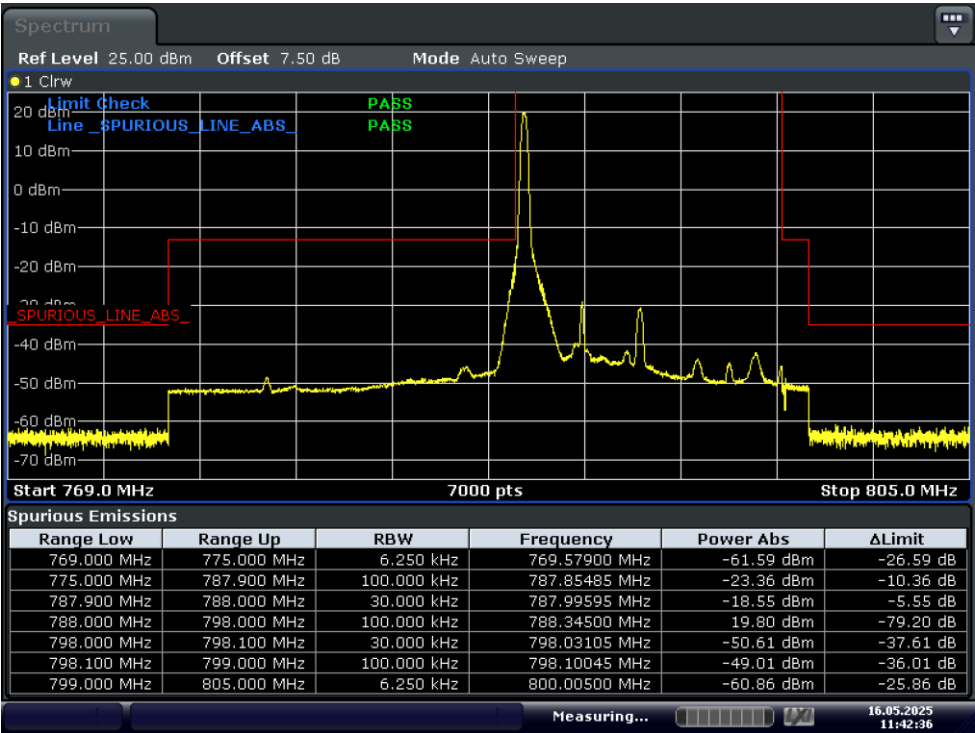
Test Graphs



Test_Graph_band14_790.5MHz_5M_16QAM_1RB#LOW_Band edge



Test_Graph_band14_790.5MHz_5M_16QAM_25RB#LOW_Band edge



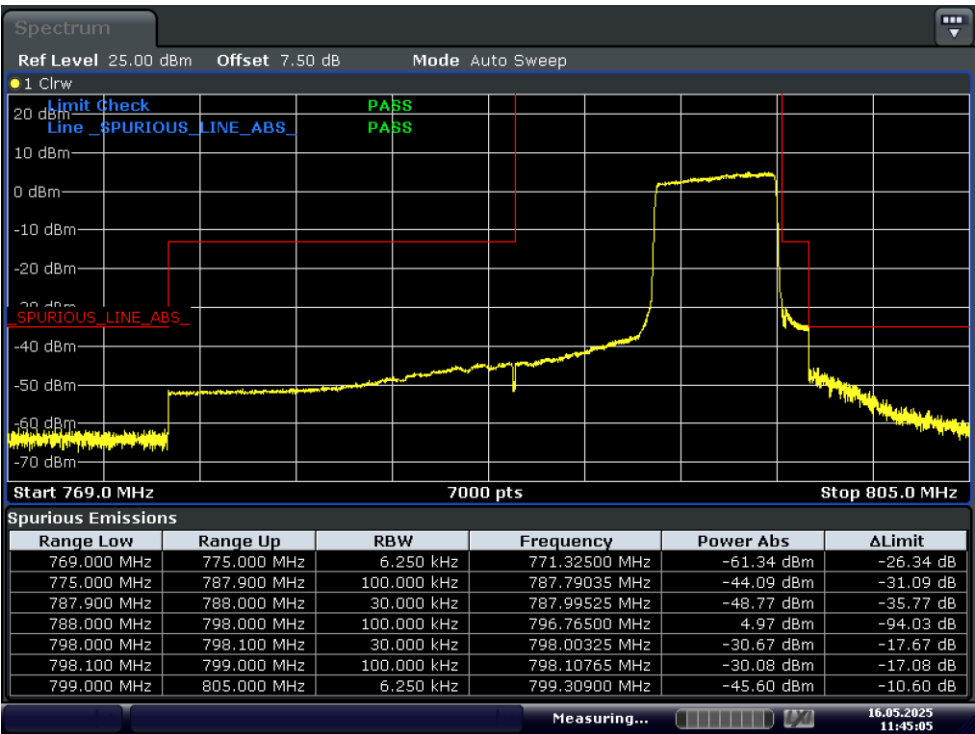
Test_Graph_band14_790.5MHz_5M_QPSK_1RB#LOW_Band edge



Test_Graph_band14_790.5MHz_5M_QPSK_25RB#LOW_Band edge



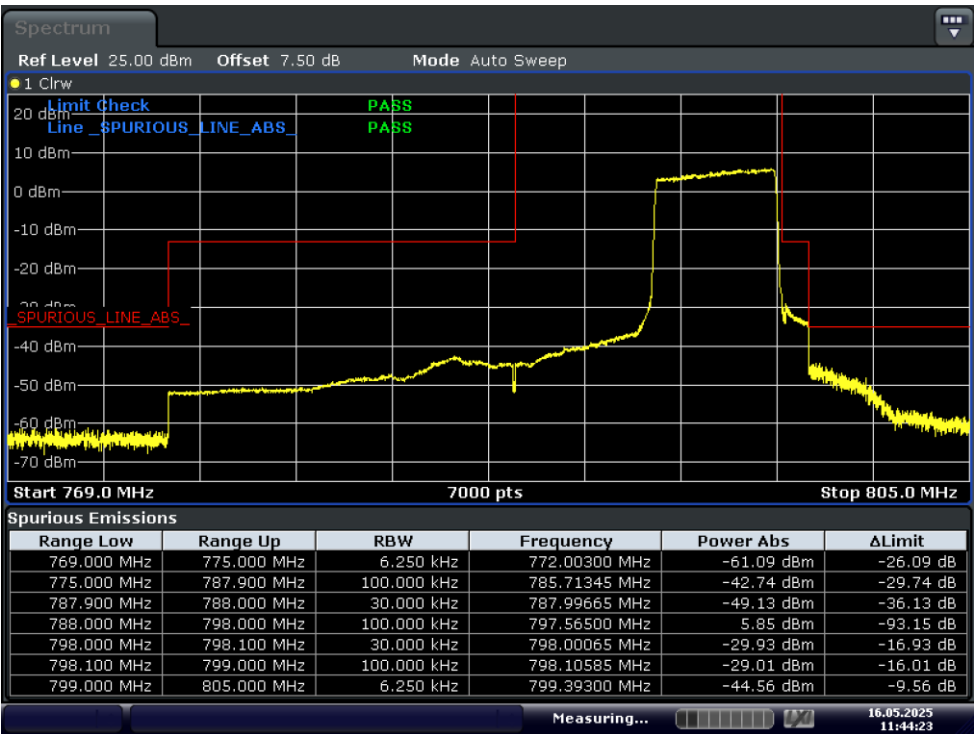
Test_Graph_band14_795.5MHz_5M_16QAM_1RB#HIGH_Band edge



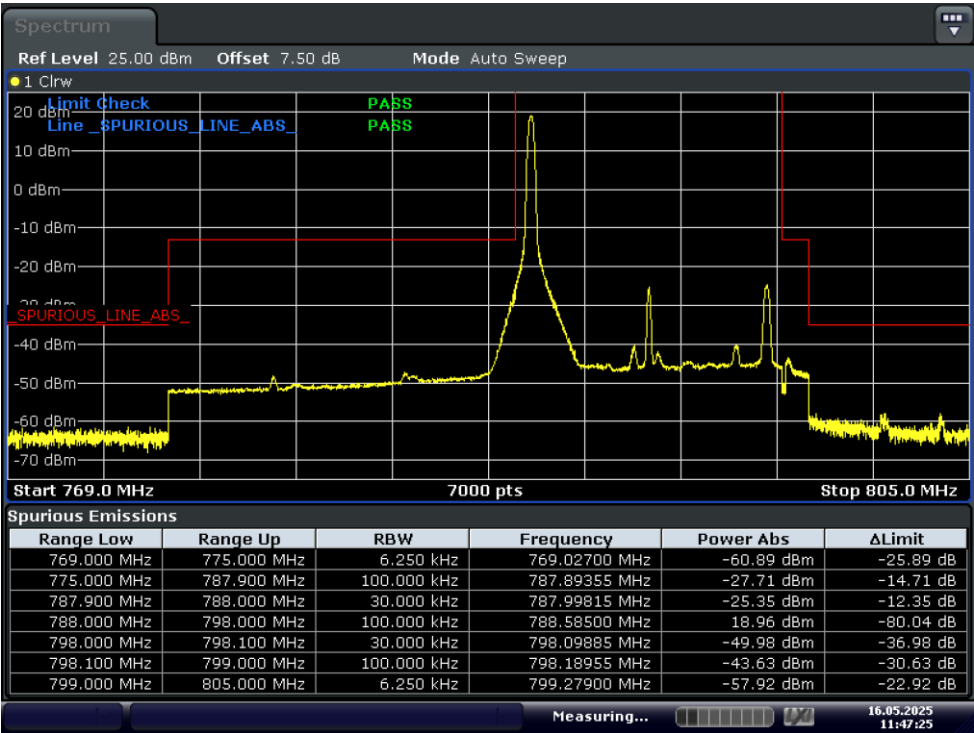
Test_Graph_band14_795.5MHz_5M_16QAM_25RB#LOW_Band edge



Test_Graph_band14_795.5MHz_5M_QPSK_1RB#HIGH_Band edge



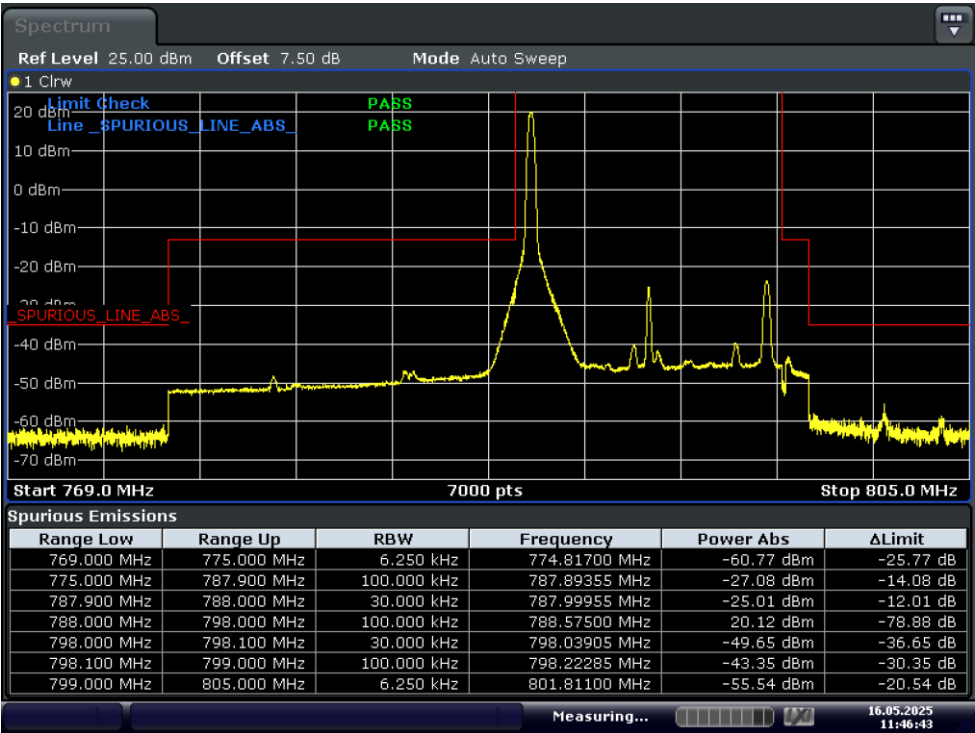
Test_Graph_band14_795.5MHz_5M_QPSK_25RB#LOW_Band edge



Test_Graph_band14_793MHz_10M_16QAM_1RB#LOW_Band edge



Test_Graph_band14_793MHz_10M_16QAM_50RB#LOW_Band edge



Test_Graph_band14_793MHz_10M_QPSK_1RB#LOW_Band edge



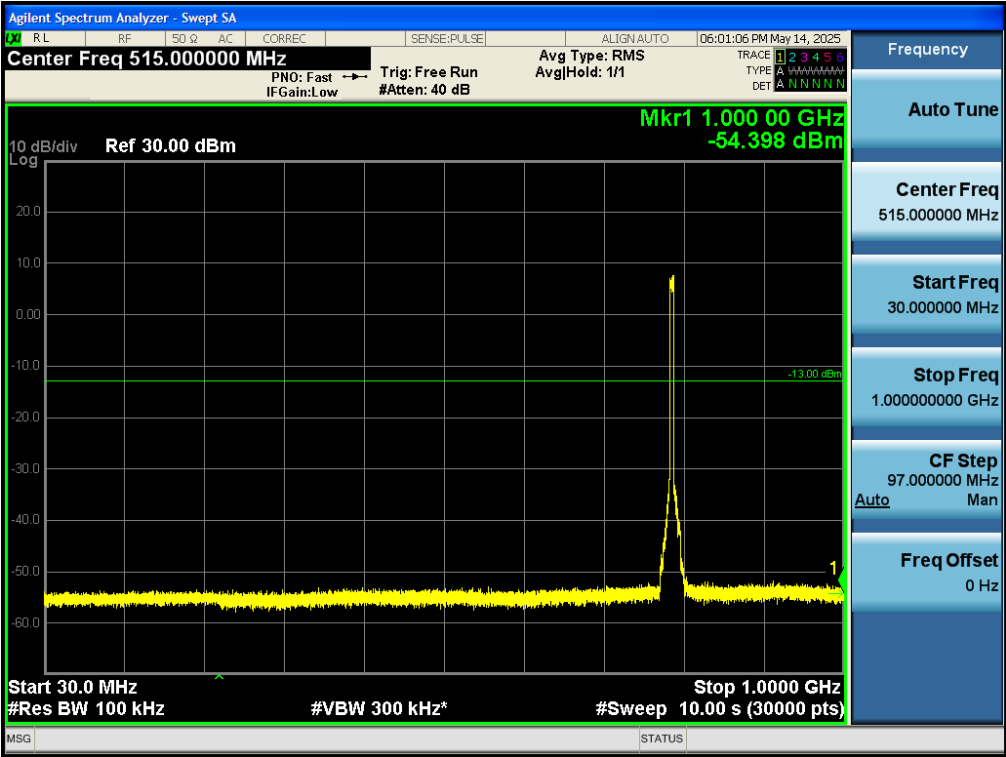
Test_Graph_band14_793MHz_10M_QPSK_50RB#LOW_Band edge

Appendix D: Unwanted spurious emissions at antenna terminals

Test Result

Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Conclusion
14	5	790.5	QPSK	25	LOW	Pass
14	5	793	QPSK	25	LOW	Pass
14	5	795.5	QPSK	25	LOW	Pass
14	10	793	QPSK	50	LOW	Pass

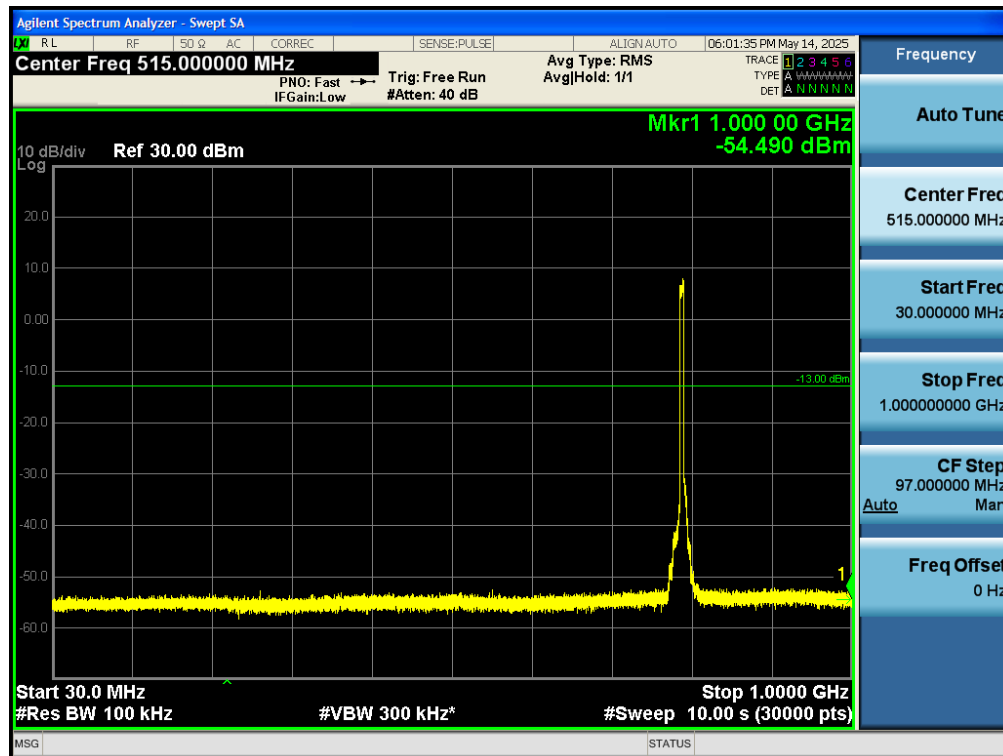
Test Graphs



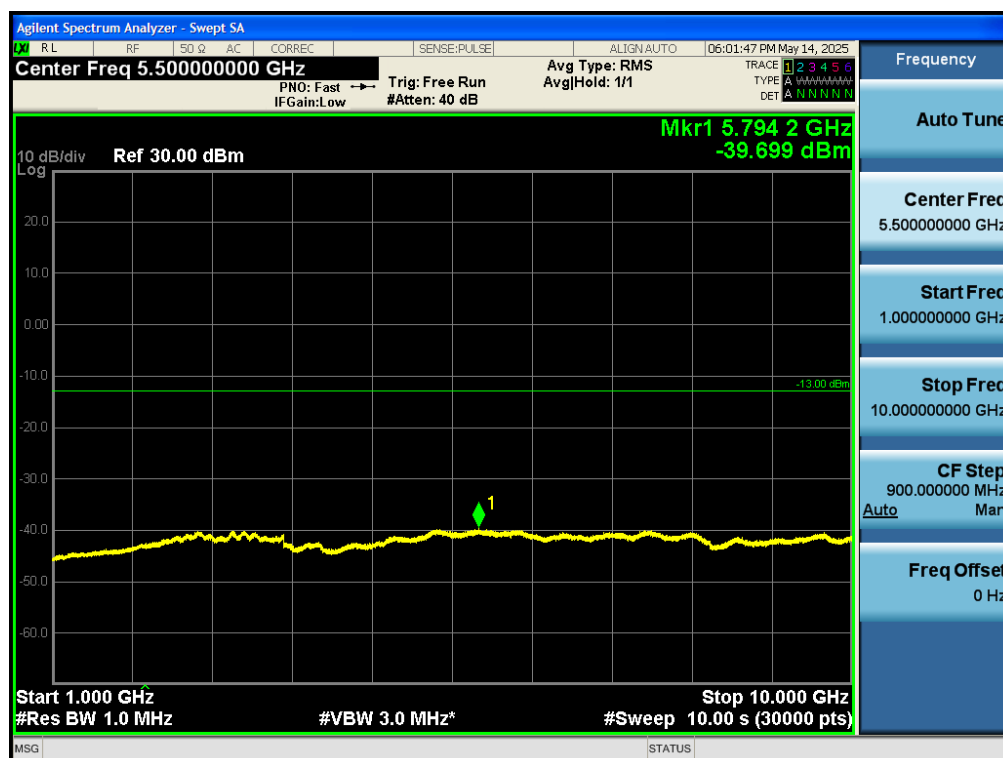
Test_Graph_band14_790.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX



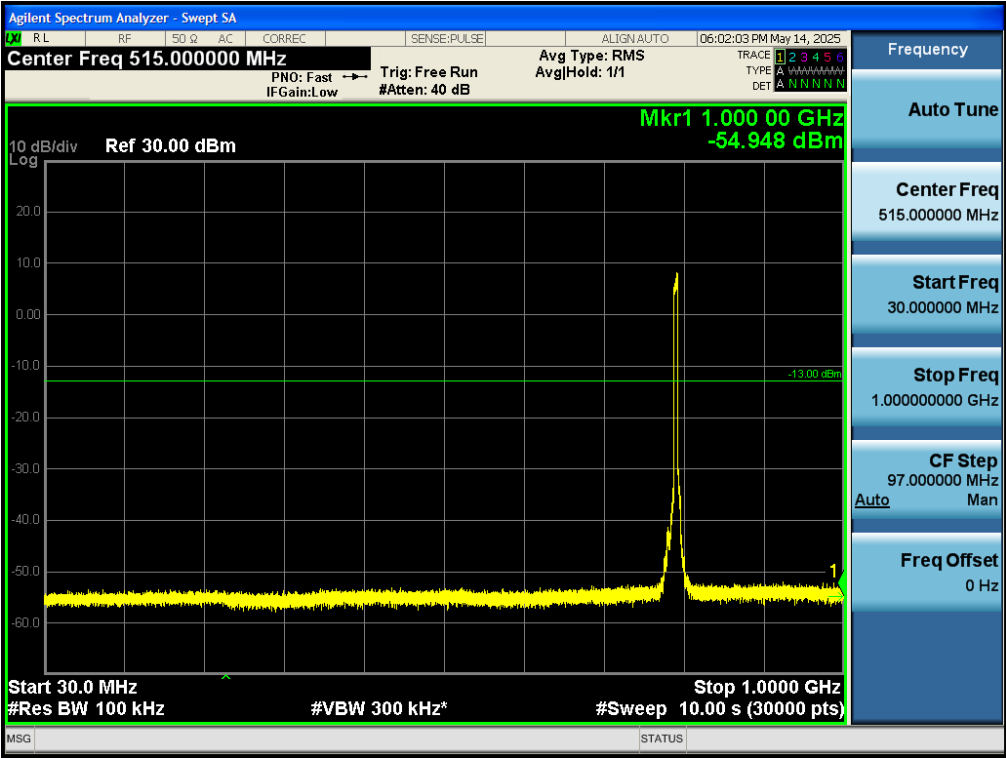
Test_Graph_band14_790.5MHz_5M_QPSK_25RB#LOW_1G_10G_TX



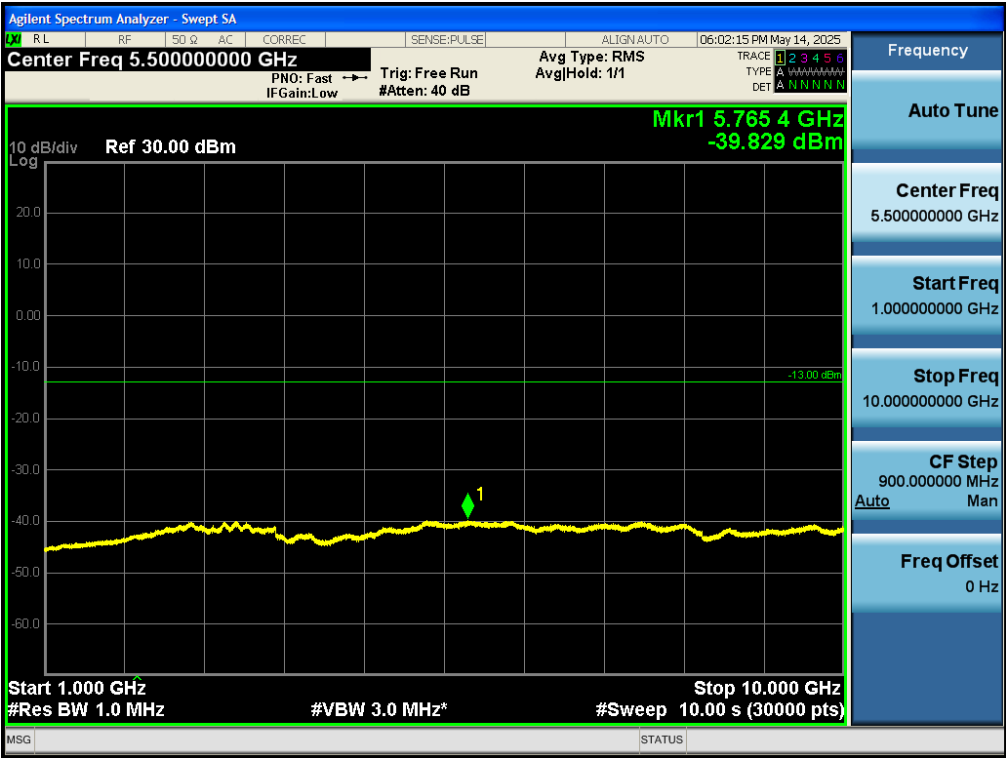
Test_Graph_band14_793MHz_5M_QPSK_25RB#LOW_30M_1G_TX



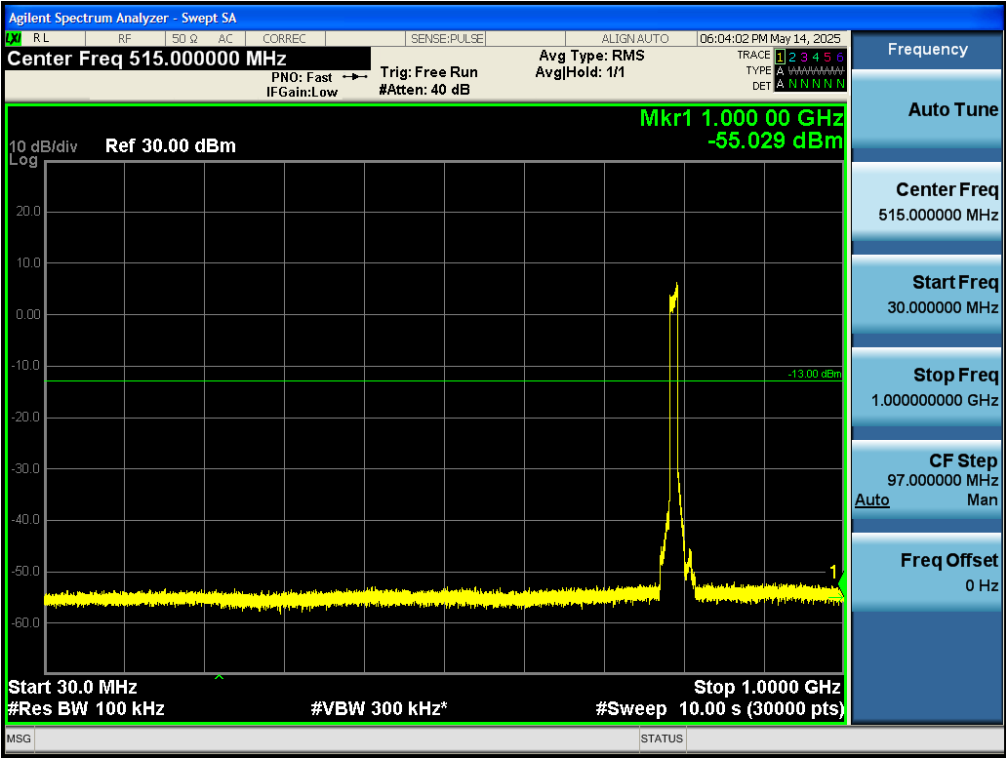
Test_Graph_band14_793MHz_5M_QPSK_25RB#LOW_1G_10G_TX



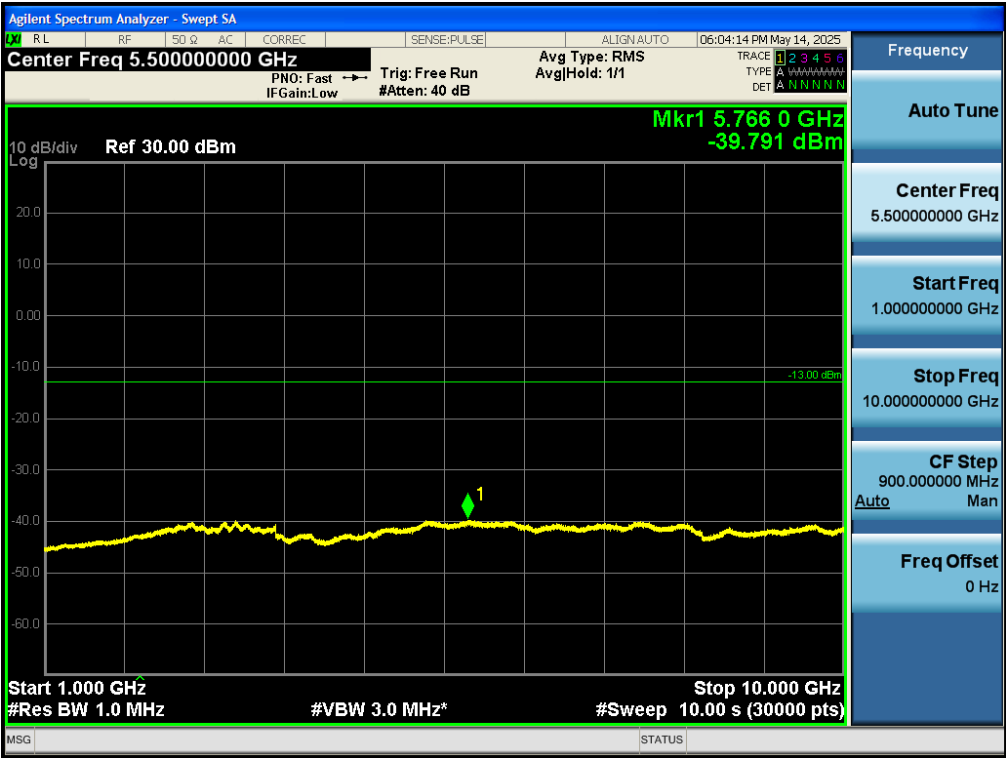
Test_Graph_band14_795.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX



Test_Graph_band14_795.5MHz_5M_QPSK_25RB#LOW_1G_10G_TX



Test_Graph_band14_793MHz_10M_QPSK_50RB#LOW_30M_1G_TX



Test_Graph_band14_793MHz_10M_QPSK_50RB#LOW_1G_10G_TX

Appendix E: Frequency stability

Test Result

Test Conditions (LTE Band 14(QPSK) /BW 10MHz)		Frequency Range		Frequency Error	Verdict
Temperature (°C)	Voltage (Volt)	>788 Freq Reading @ Low End (MHz)	<798 Freq Reading @ High End (MHz)	Middle Channel	
				≤2.5ppm	
50	Normal Voltage	788.5874	797.4330	0.0070	PASS
40	Normal Voltage	788.5875	797.4331	0.0065	
30	Normal Voltage	788.5876	797.4331	0.0063	
20(Ref.)	Normal Voltage	788.5876	797.4332	0.0068	
10	Normal Voltage	788.5875	797.4331	0.0070	
0	Normal Voltage	788.5874	797.4331	0.0065	
-10	Normal Voltage	788.5876	797.4330	0.0064	
-20	Normal Voltage	788.5876	797.4331	0.0061	
-30	Normal Voltage	788.5876	797.4331	0.0065	
20	+15%	788.5876	797.4330	0.0067	
20	-15%	788.5874	797.4331	0.0060	
20	Battery End Point	788.5874	797.4331	0.0069	