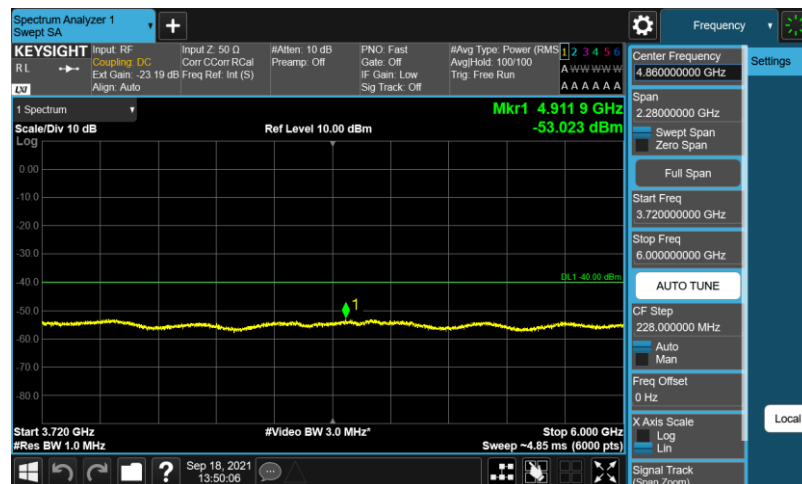


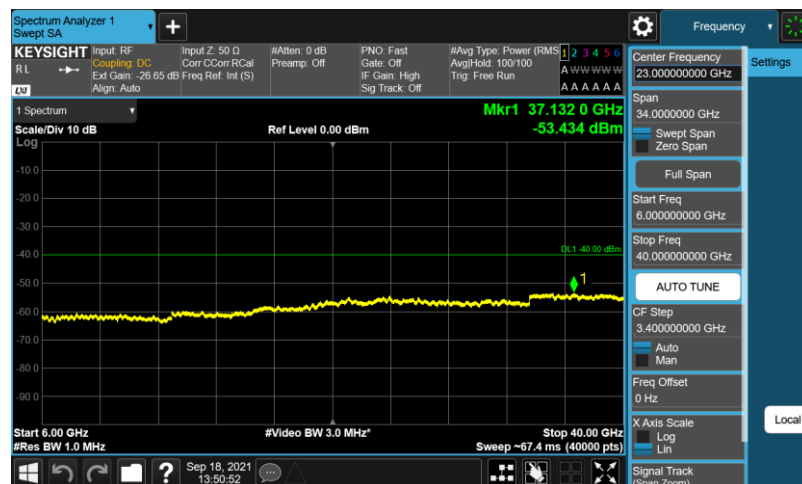
Band48-20MHz-256QAM-55990-E-TM3.1A-30-3530



Band48-20MHz-256QAM-55990-E-TM3.1A-3720-6000



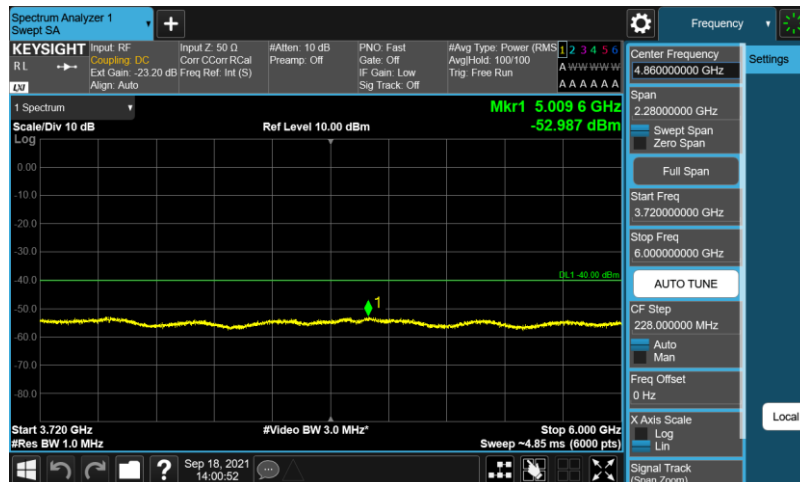
Band48-20MHz-256QAM-55990-TM3.1A-6000-40000



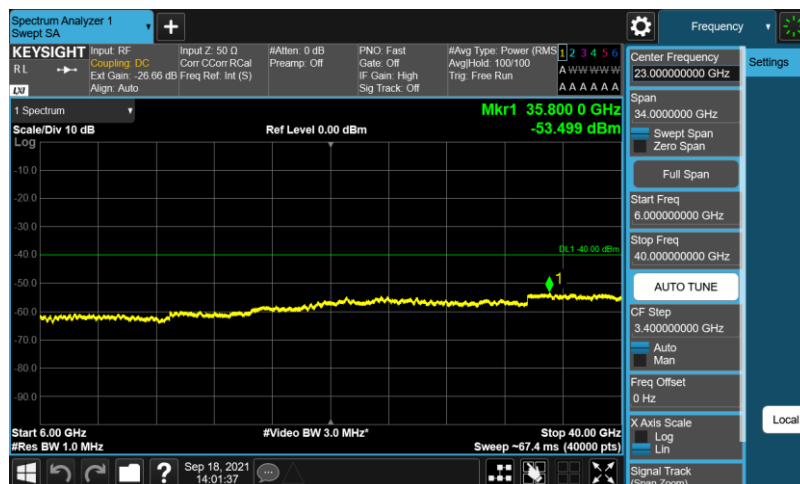
Band48-20MHz-256QAM-56640-E-TM3.1A-30-3530



Band48-20MHz-256QAM-56640-E-TM3.1A-3720-6000



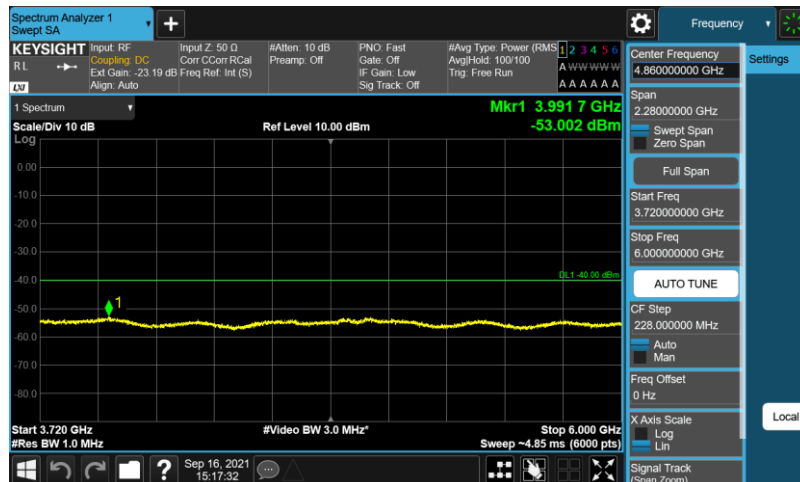
Band48-20MHz-256QAM-56640-E-TM3.1A-6000-40000



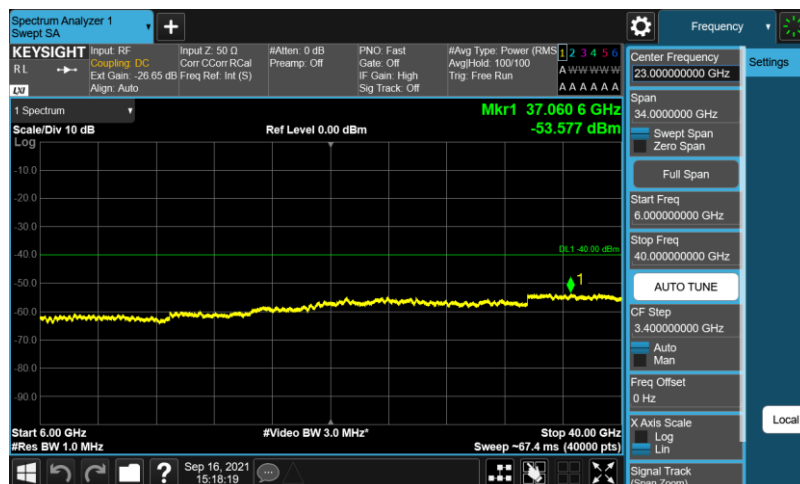
Band48-20MHz-QPSK-55340-E-TM1.1-30-3530



Band48-20MHz-QPSK-55340-E-TM1.1-3720-6000



Band48-20MHz-QPSK-55340-E-TM1.1-6000-40000



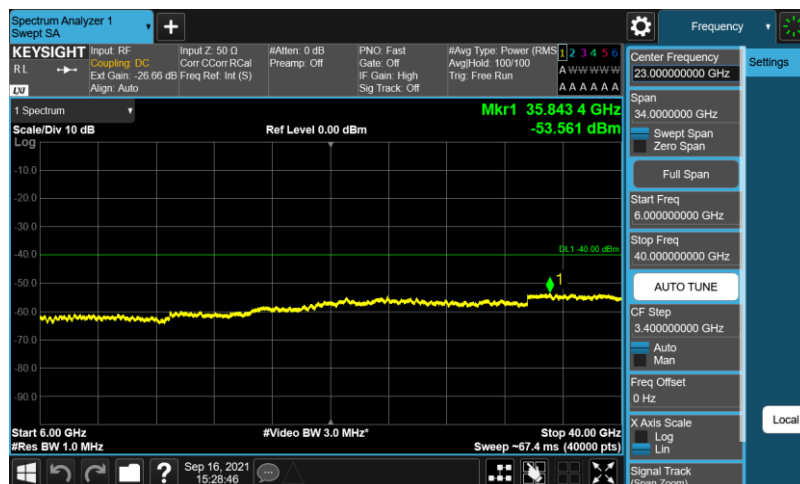
Band48-20MHz-QPSK-55990-E-TM1.1-30-3530



Band48-20MHz-QPSK-55990-E-TM1.1-3720-6000



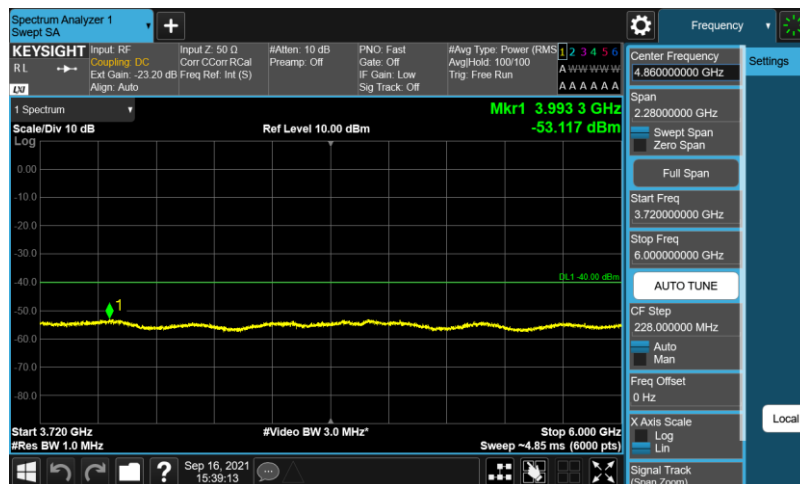
Band48-20MHz-QPSK-55990-E-TM1.1-6000-40000



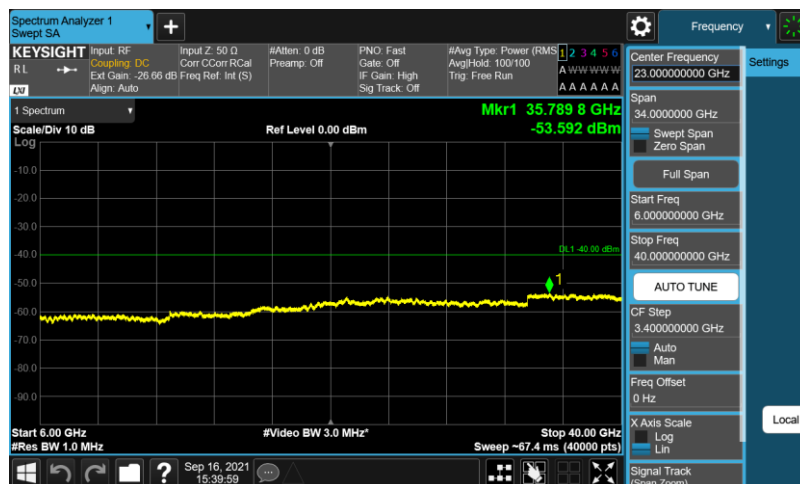
Band48-20MHz-QPSK-56640-E-TM1.1-30-3530



Band48-20MHz-QPSK-56640-E-TM1.1-3720-6000



Band48-20MHz-QPSK-56640-E-TM1.1-6000-40000



Antenna 7:

Appendix A: Effective (Isotropic) Radiated Power Output Data

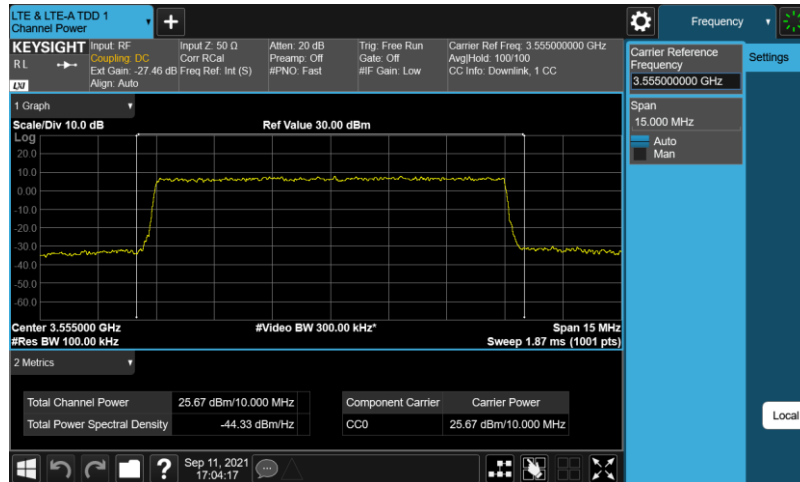
Test Result

Band	Bandwidth	Modulation	Channel	Mode	Power (dBm/10MHz)
Band48	10MHz	256QAM	55290	E-TM3.1A	25.67
Band48	10MHz	256QAM	55990	E-TM3.1A	24.51
Band48	10MHz	256QAM	56690	E-TM3.1A	25.23
Band48	10MHz	QPSK	55290	E-TM1.1	25.68
Band48	10MHz	QPSK	55990	E-TM1.1	25.20
Band48	10MHz	QPSK	56690	E-TM1.1	25.16
Band48	20MHz	256QAM	55340	E-TM3.1A	22.90
Band48	20MHz	256QAM	55990	E-TM3.1A	22.84
Band48	20MHz	256QAM	56640	E-TM3.1A	22.90
Band48	20MHz	QPSK	55340	E-TM1.1	23.50
Band48	20MHz	QPSK	55990	E-TM1.1	22.59
Band48	20MHz	QPSK	56640	E-TM1.1	23.28

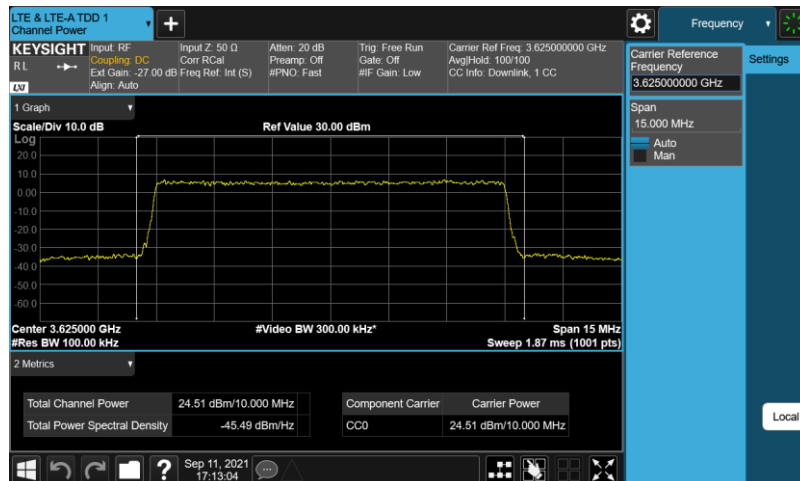
Band	Bandwidth	Modulation	Channel	Mode	Power (dBm/20MHz)
Band48	20MHz	256QAM	55340	E-TM3.1A	25.36
Band48	20MHz	256QAM	55990	E-TM3.1A	25.52
Band48	20MHz	256QAM	56640	E-TM3.1A	25.61
Band48	20MHz	QPSK	55340	E-TM1.1	26.10
Band48	20MHz	QPSK	55990	E-TM1.1	25.26
Band48	20MHz	QPSK	56640	E-TM1.1	25.86

Test Graphs

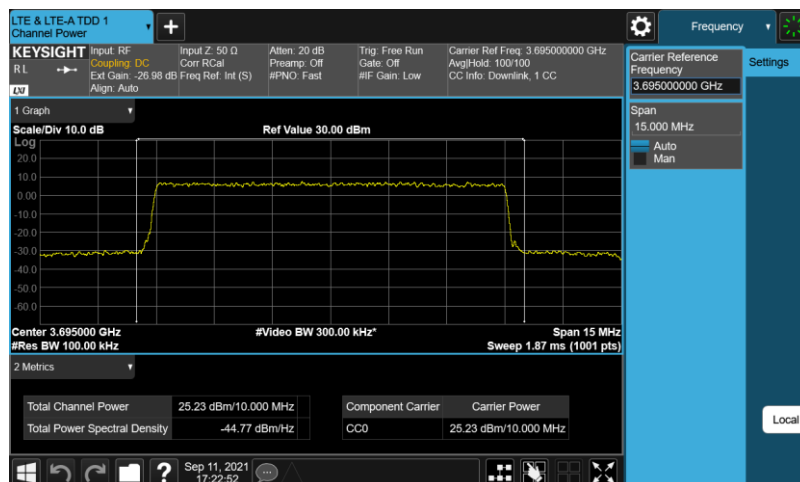
Band48-10MHz-256QAM-55290-E-TM3.1A-10



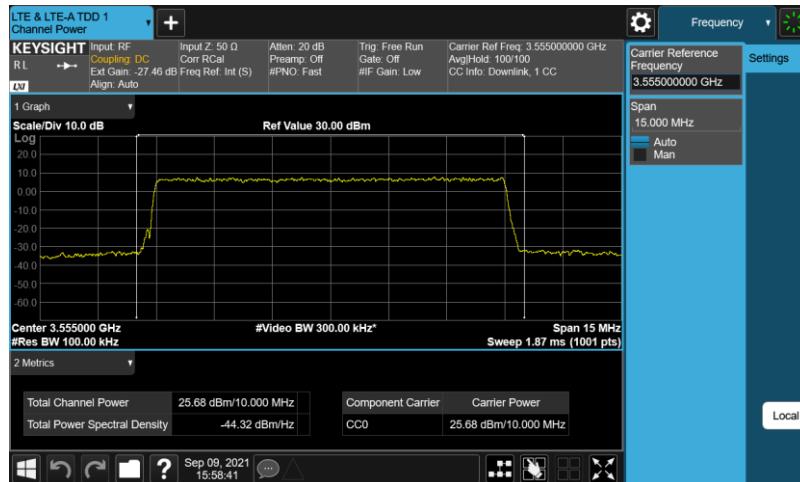
Band48-10MHz-256QAM-55990-E-TM3.1A-10



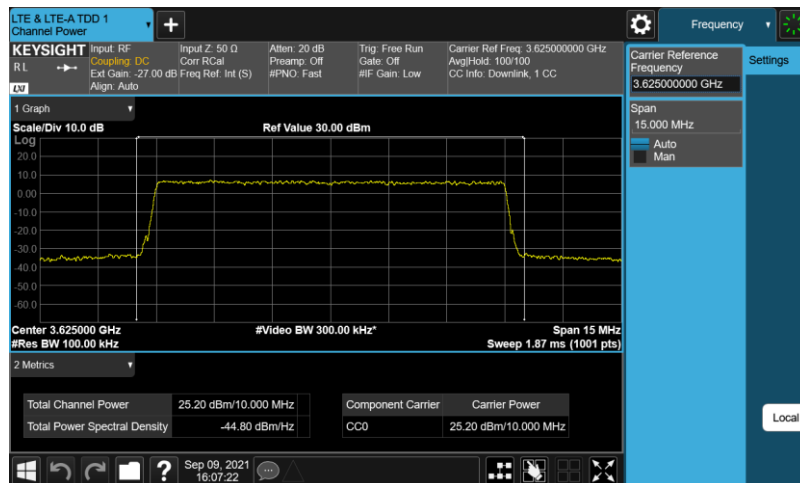
Band48-10MHz-256QAM-56690-E-TM3.1A-10



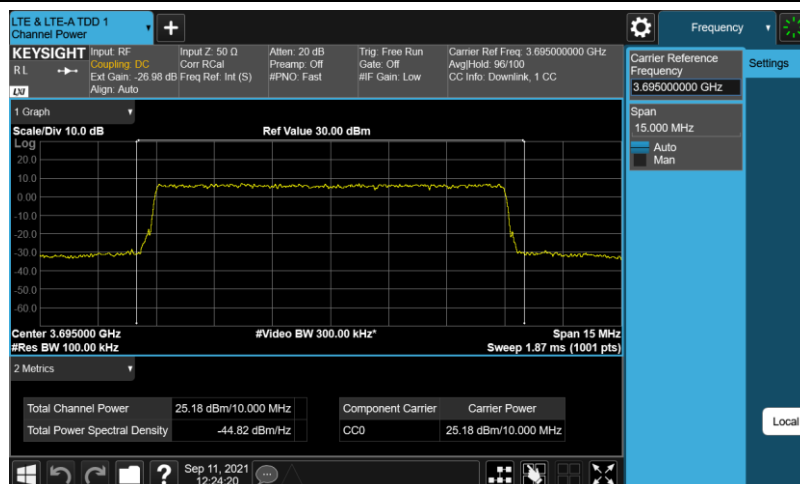
Band48-10MHz-QPSK-55290-E-TM1.1-10



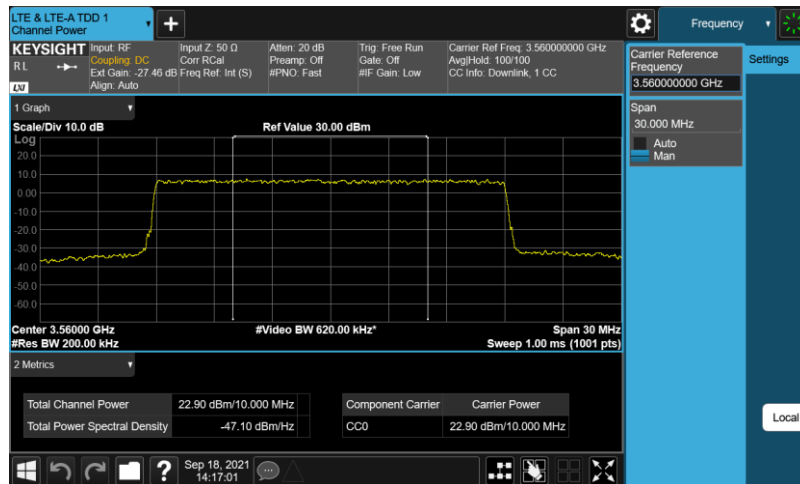
Band48-10MHz-QPSK-55990-E-TM1.1-10



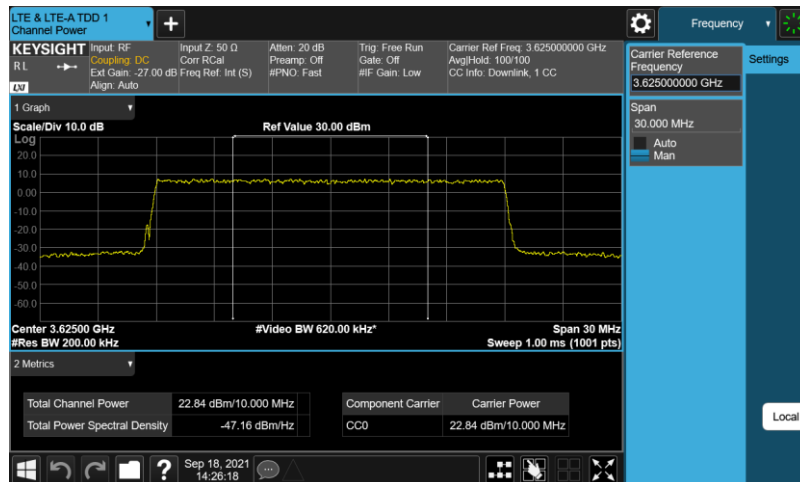
Band48-10MHz-QPSK-56690-E-TM1.1-10



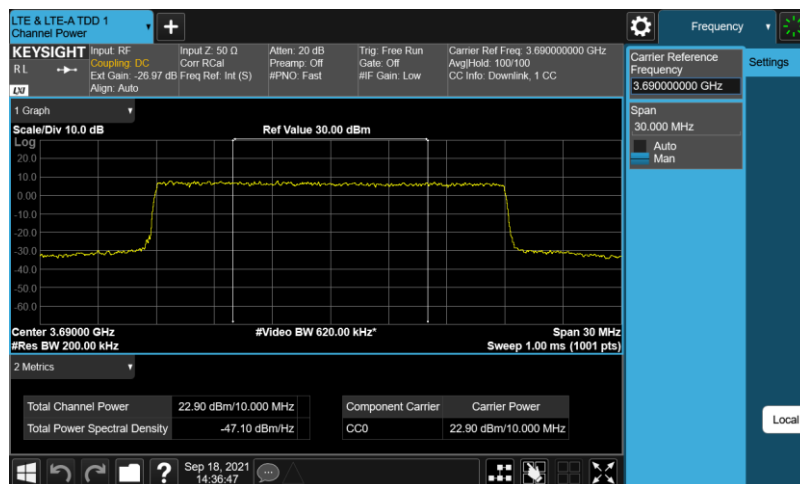
Band48-20MHz-256QAM-55340-E-TM3.1A-10



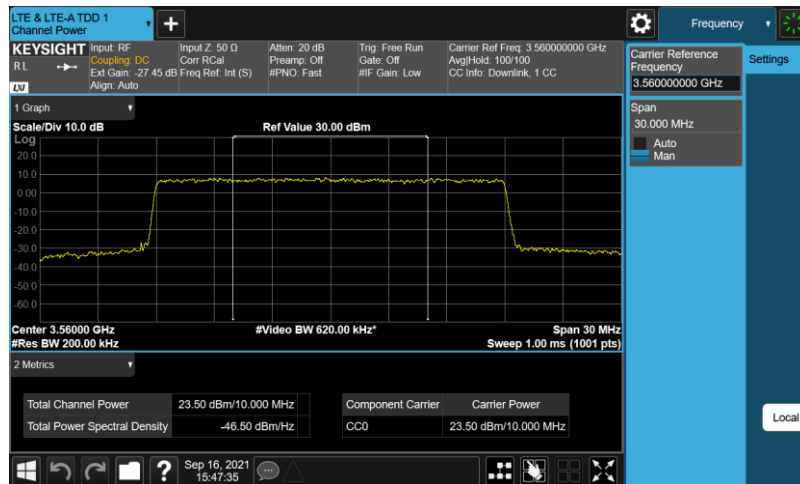
Band48-20MHz-256QAM-55990-E-TM3.1A-10



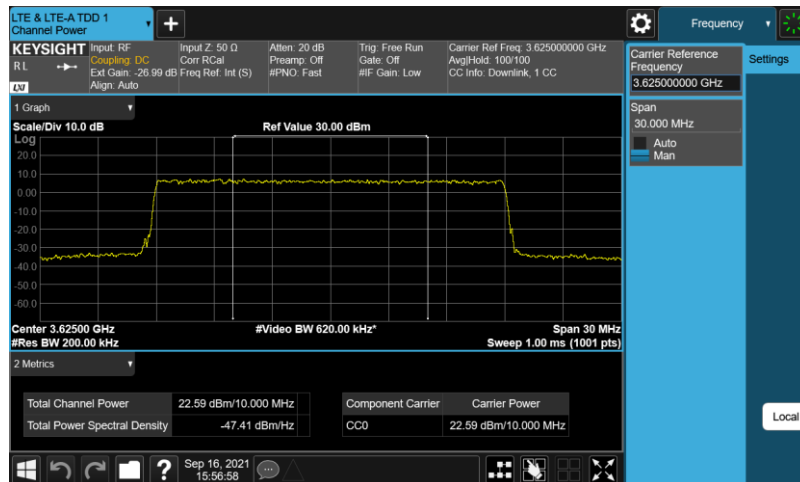
Band48-20MHz-256QAM-56640-E-TM3.1A-10



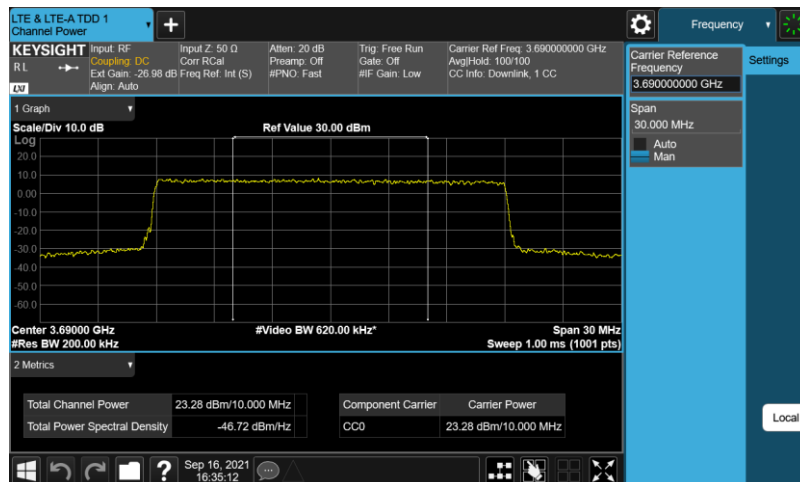
Band48-20MHz-QPSK-55340-E-TM1.1-10



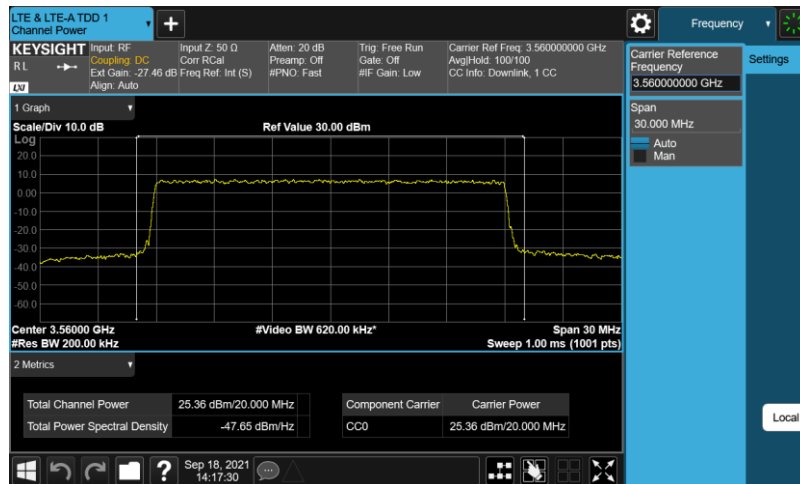
Band48-20MHz-QPSK-55990-E-TM1.1-10



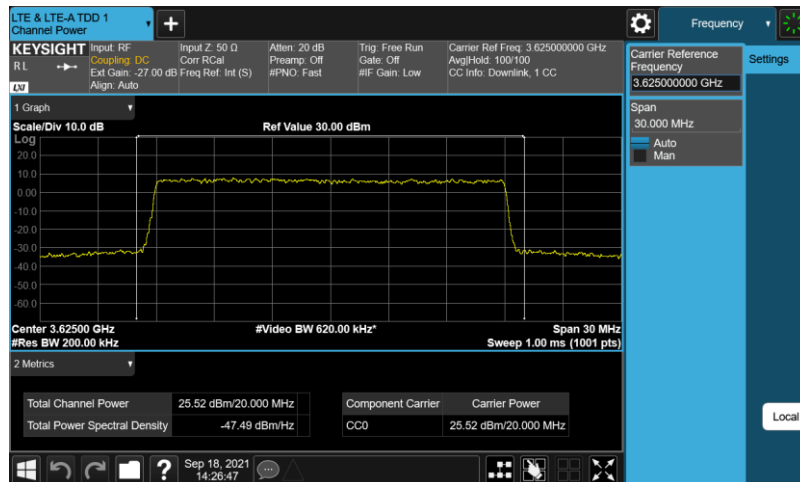
Band48-20MHz-QPSK-56640-E-TM1.1-10



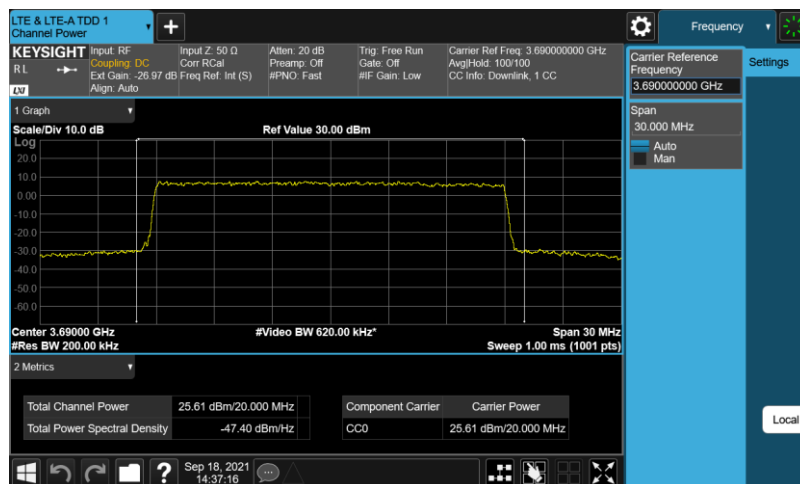
Band48-20MHz-256QAM-55340-E-TM3.1A-20



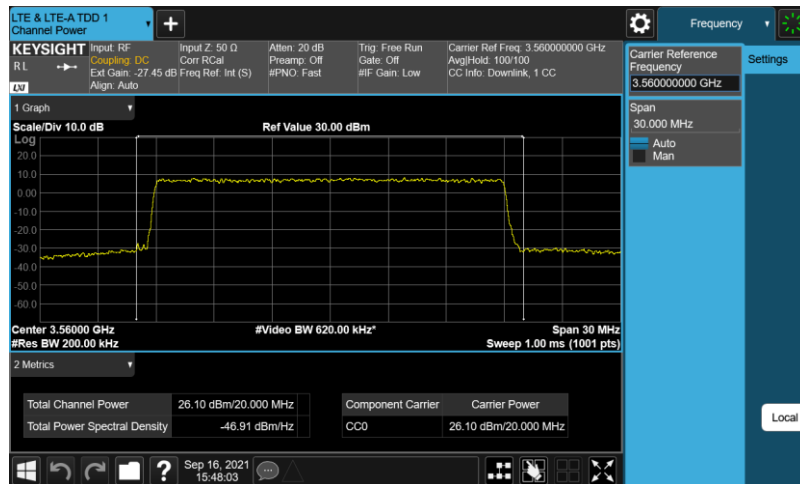
Band48-20MHz-256QAM-55990-E-TM3.1A-20



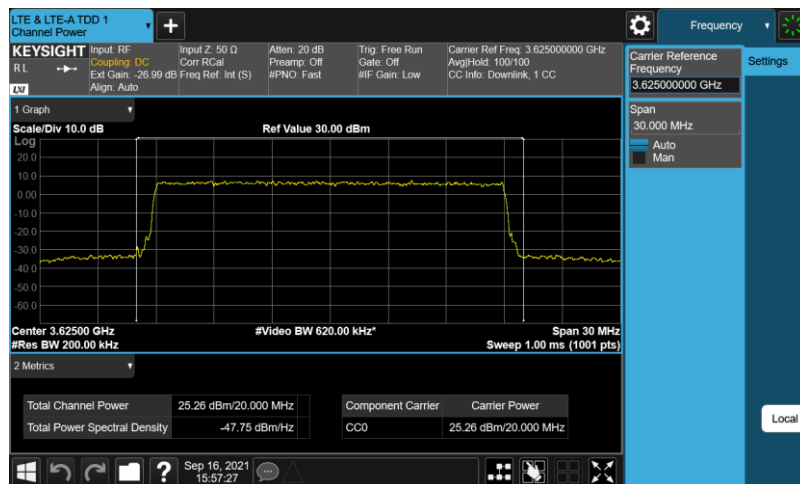
Band48-20MHz-256QAM-56640-E-TM3.1A-20



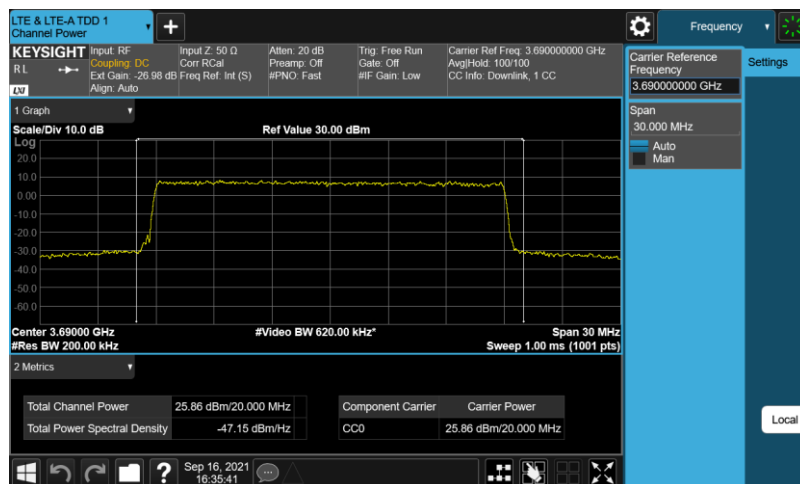
Band48-20MHz-QPSK-55340-E-TM1.1-20



Band48-20MHz-QPSK-55990-E-TM1.1-20



Band48-20MHz-QPSK-56640-E-TM1.1-20



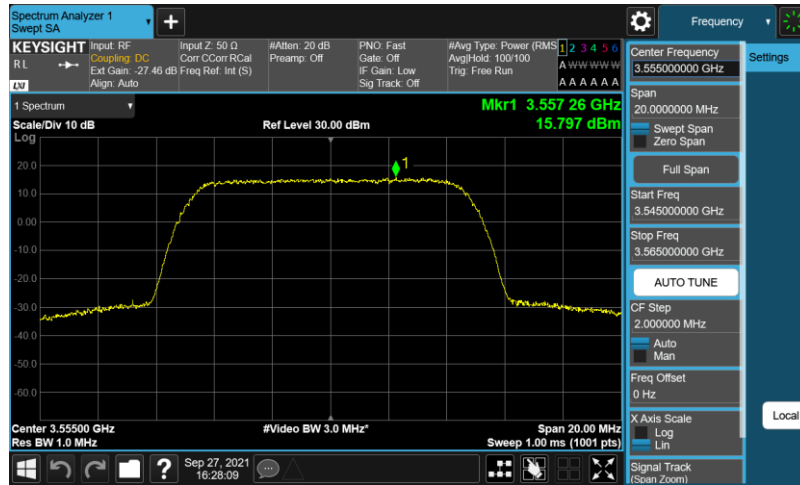
Appendix B: Power Spectral Density

Test Result

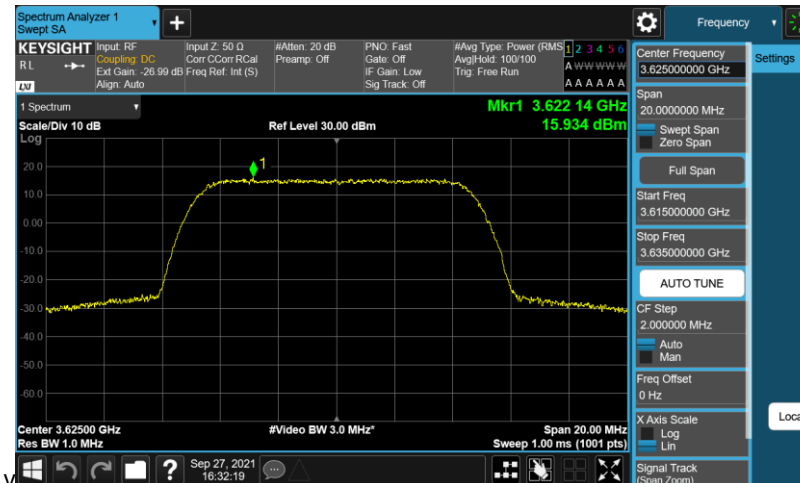
Band	Bandwidth	Modulation	Channel	Mode	PSD (dBm/MHz)
Band48	10MHz	256QAM	55290	E-TM3.1A	15.80
Band48	10MHz	256QAM	55990	E-TM3.1A	15.93
Band48	10MHz	256QAM	56690	E-TM3.1A	15.58
Band48	10MHz	QPSK	55290	E-TM1.1	16.05
Band48	10MHz	QPSK	55990	E-TM1.1	15.28
Band48	10MHz	QPSK	56690	E-TM1.1	15.56
Band48	20MHz	256QAM	55340	E-TM3.1A	13.08
Band48	20MHz	256QAM	55990	E-TM3.1A	13.26
Band48	20MHz	256QAM	56640	E-TM3.1A	13.33
Band48	20MHz	QPSK	55340	E-TM1.1	12.51
Band48	20MHz	QPSK	55990	E-TM1.1	12.67
Band48	20MHz	QPSK	56640	E-TM1.1	12.43

Test Graphs

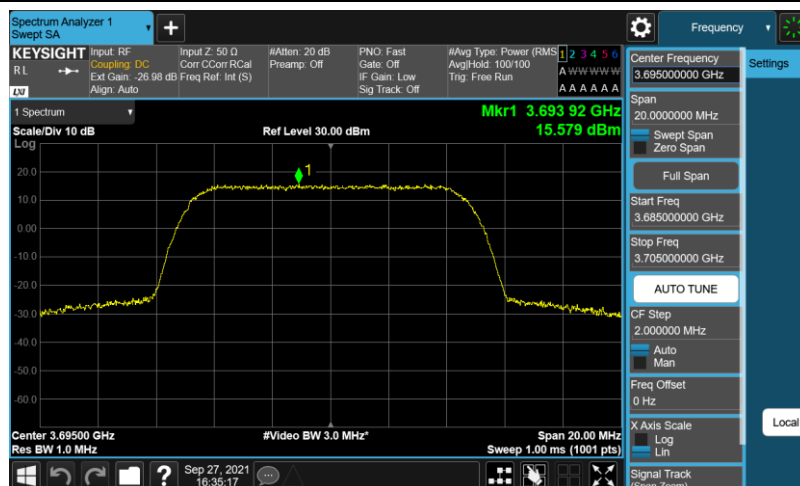
Band48-10MHz-256QAM-55290-E-TM3.1A



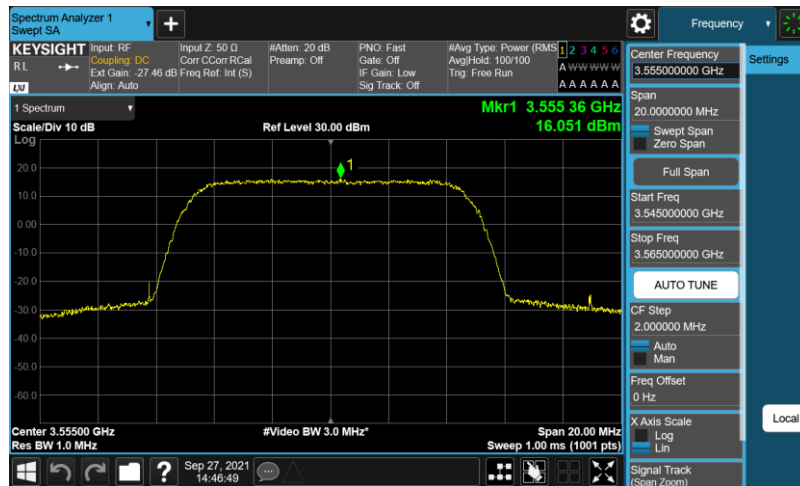
Band48-10MHz-256QAM-55990-E-TM3.1A



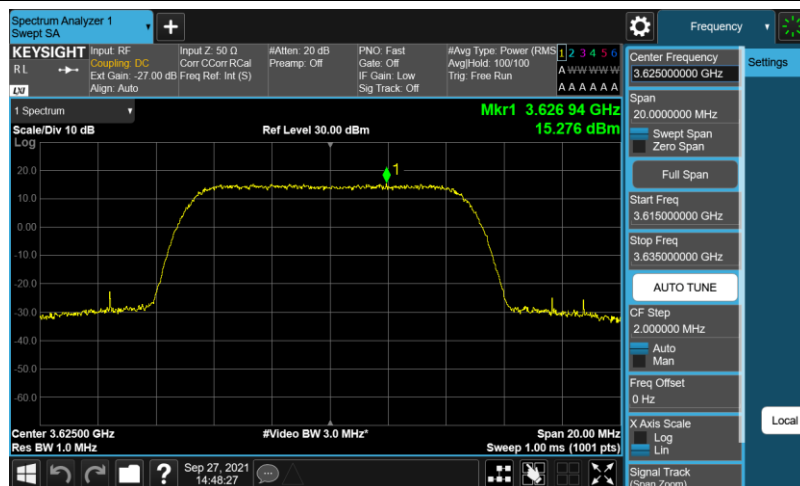
Band48-10MHz-256QAM-56690-E-TM3.1A



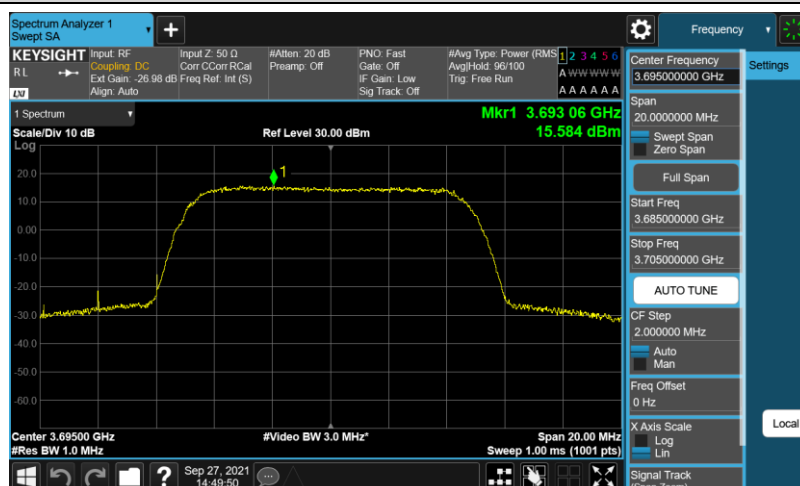
Band48-10MHz-QPSK-55290-E-TM1.1



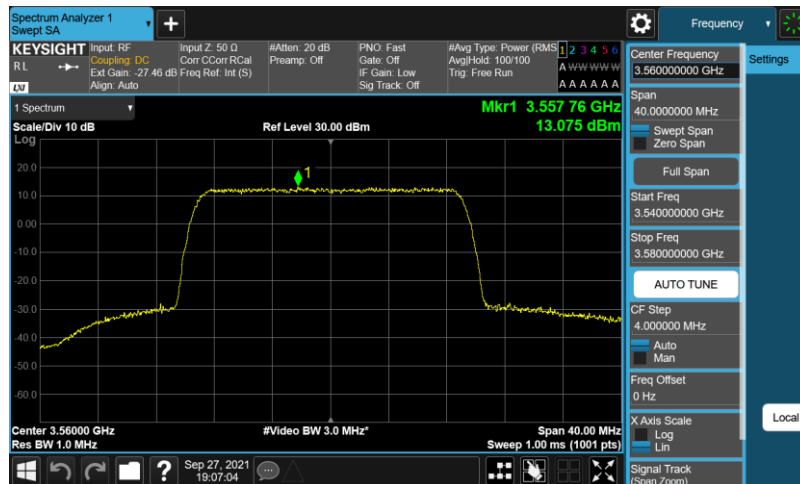
Band48-10MHz-QPSK-55990-E-TM1.1



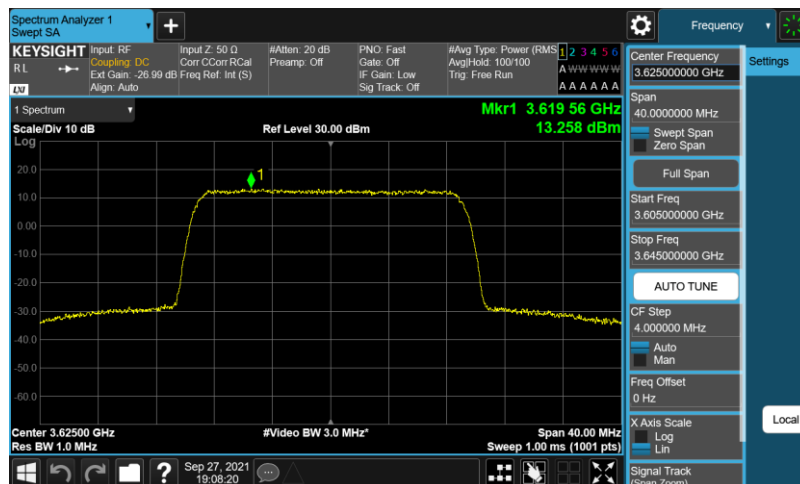
Band48-10MHz-QPSK-56690-E-TM1.1



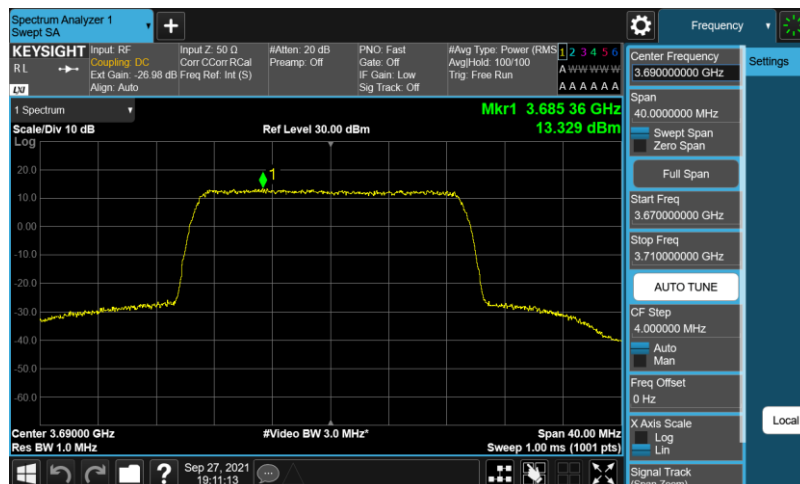
Band48-20MHz-256QAM-55340-E-TM3.1A



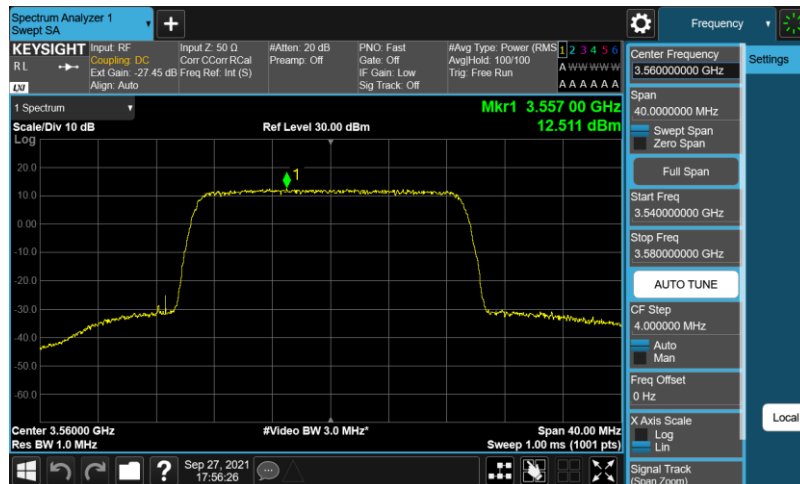
Band48-20MHz-256QAM-55990-E-TM3.1A



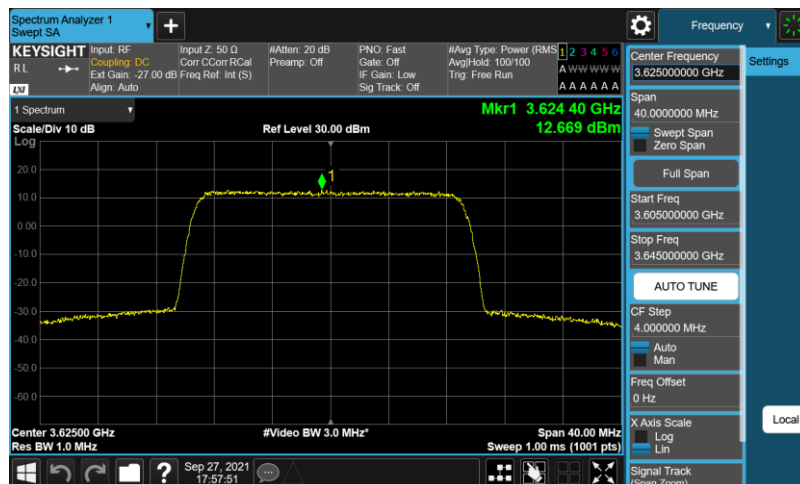
Band48-20MHz-256QAM-56640-E-TM3.1A



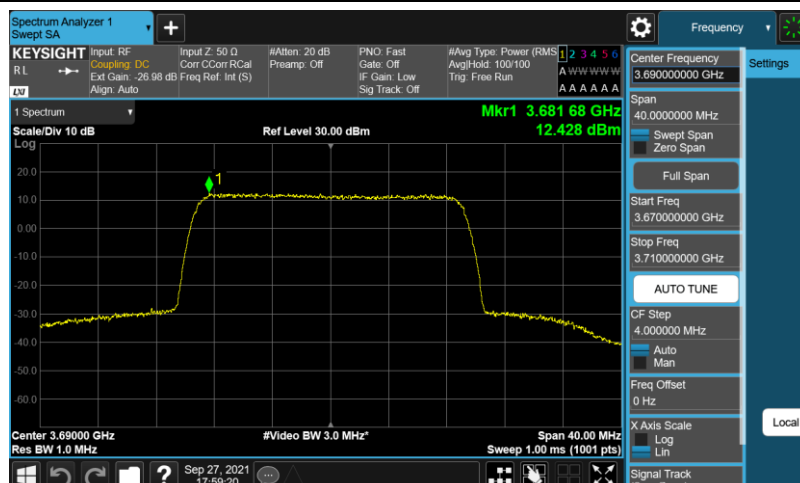
Band48-20MHz-QPSK-55340-E-TM1.1



Band48-20MHz-QPSK-55990-E-TM1.1



Band48-20MHz-QPSK-56640-E-TM1.1



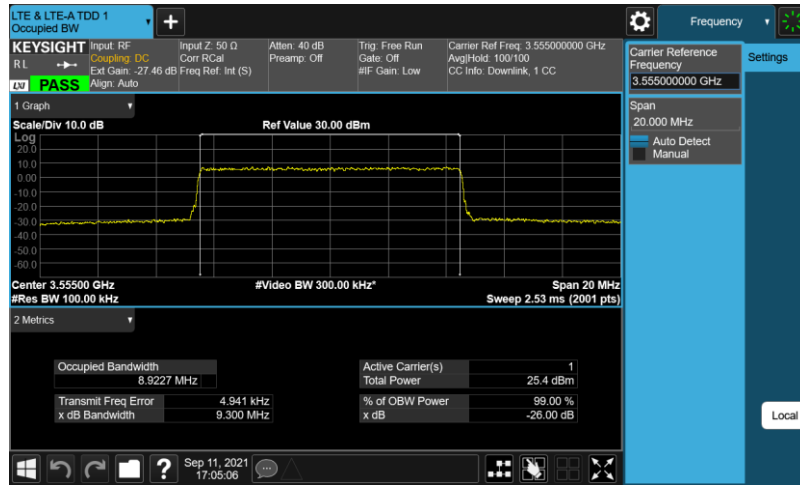
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

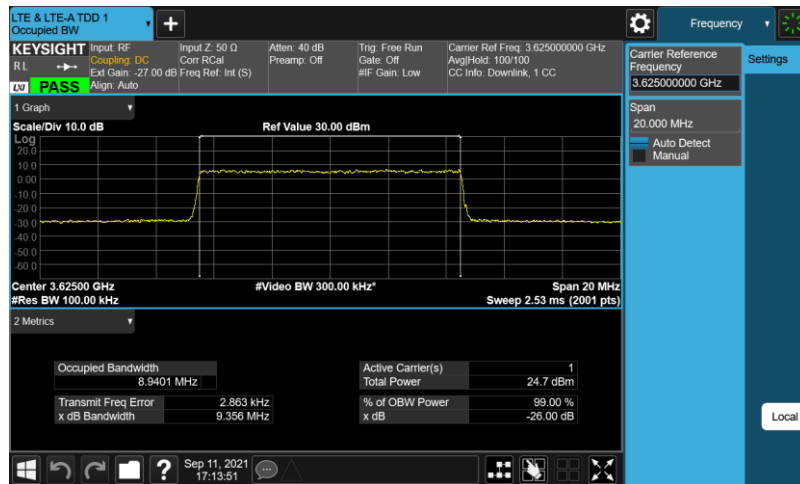
Band	Bandwidth	Modulation	Channel	Mode	99%(MHz)	EBW(MHz)
Band48	10MHz	256QAM	55290	E-TM3.1A	8.9227	9.300
Band48	10MHz	256QAM	55990	E-TM3.1A	8.9401	9.356
Band48	10MHz	256QAM	56690	E-TM3.1A	8.9231	9.350
Band48	10MHz	QPSK	55290	E-TM1.1	8.9353	9.348
Band48	10MHz	QPSK	55990	E-TM1.1	8.9400	9.296
Band48	10MHz	QPSK	56690	E-TM1.1	8.9455	9.365
Band48	20MHz	256QAM	55340	E-TM3.1A	17.856	18.55
Band48	20MHz	256QAM	55990	E-TM3.1A	17.854	18.59
Band48	20MHz	256QAM	56640	E-TM3.1A	17.853	18.54
Band48	20MHz	QPSK	55340	E-TM1.1	17.872	18.68
Band48	20MHz	QPSK	55990	E-TM1.1	17.878	18.62
Band48	20MHz	QPSK	56640	E-TM1.1	17.864	18.55

Test Graphs

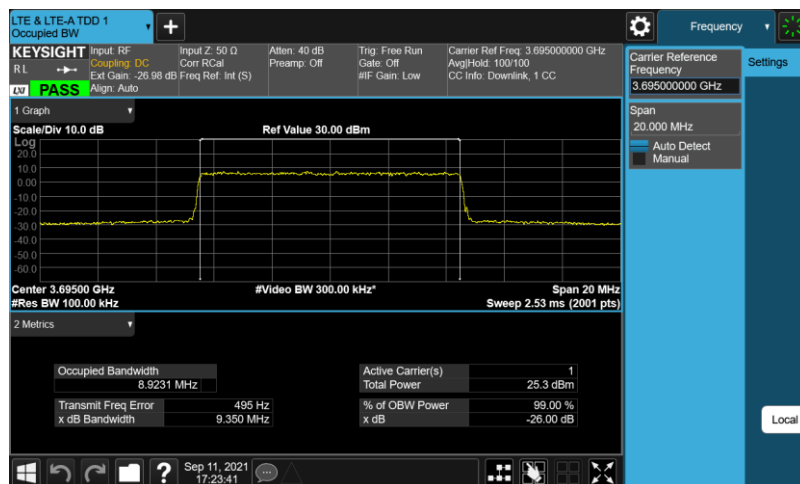
Band48-10MHz-256QAM-55290-E-TM3.1A



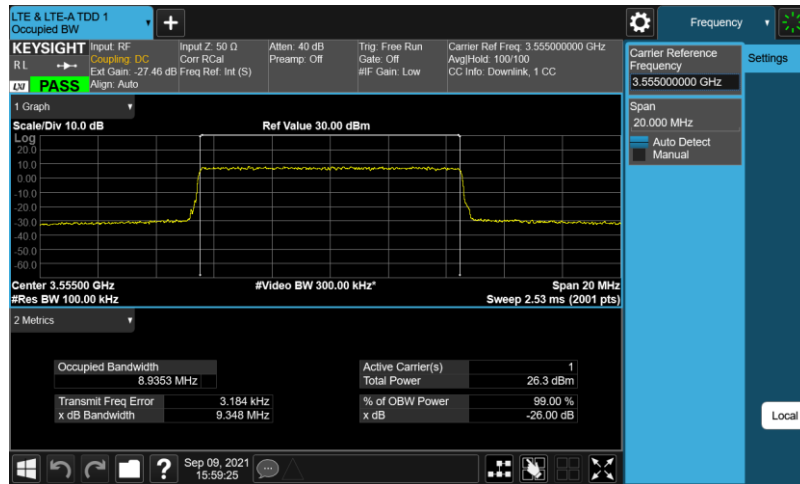
Band48-10MHz-256QAM-55990-E-TM3.1A



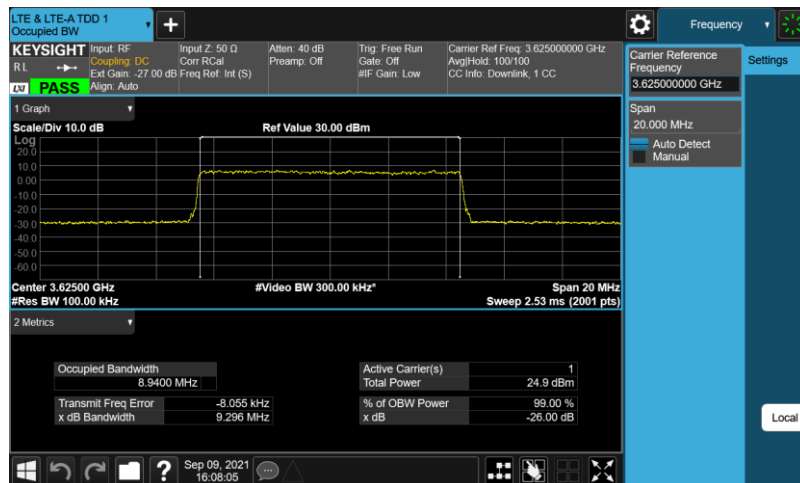
Band48-10MHz-256QAM-56690-E-TM3.1A



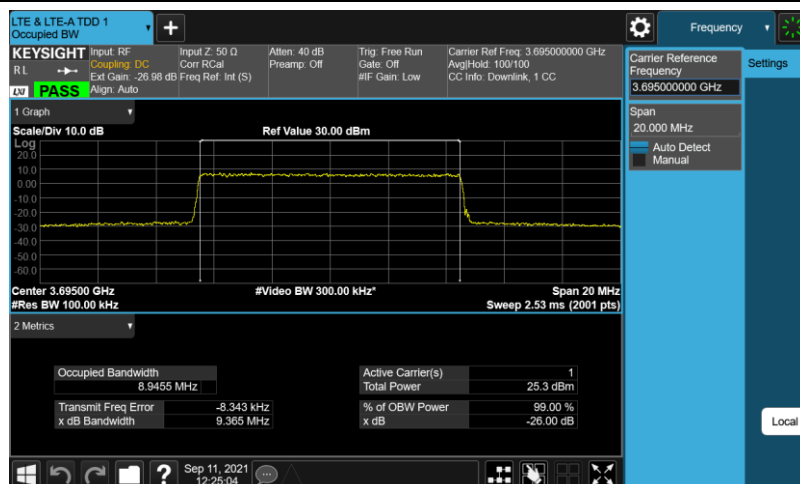
Band48-10MHz-QPSK-55290-E-TM1.1



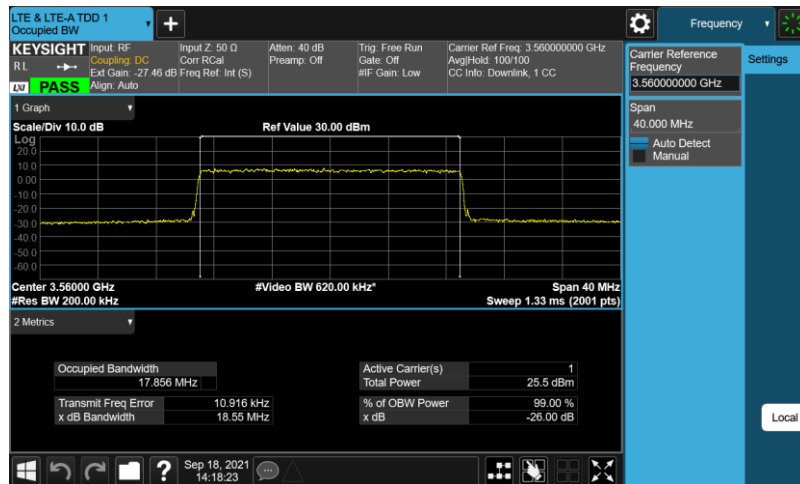
Band48-10MHz-QPSK-55990-E-TM1.1



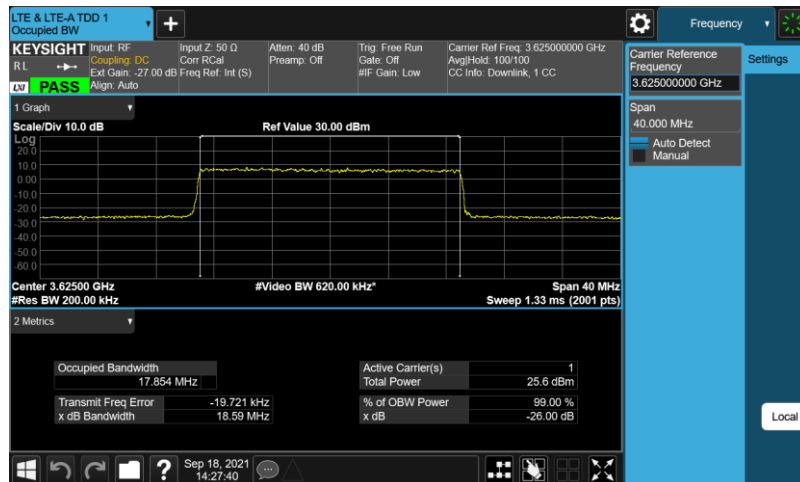
Band48-10MHz-QPSK-56690-E-TM1.1



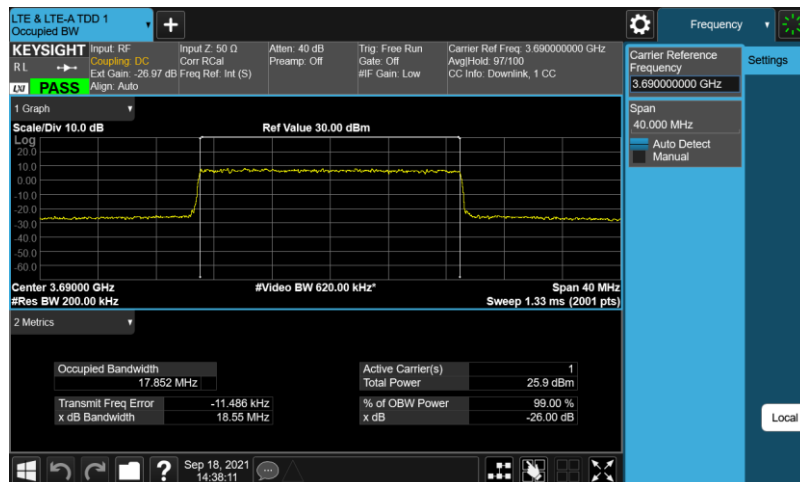
Band48-20MHz-256QAM-55340-E-TM3.1A



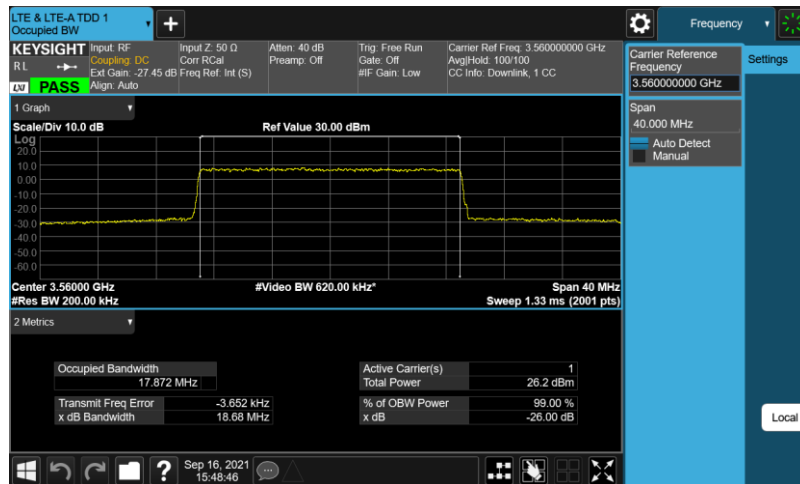
Band48-20MHz-256QAM-55990-E-TM3.1A



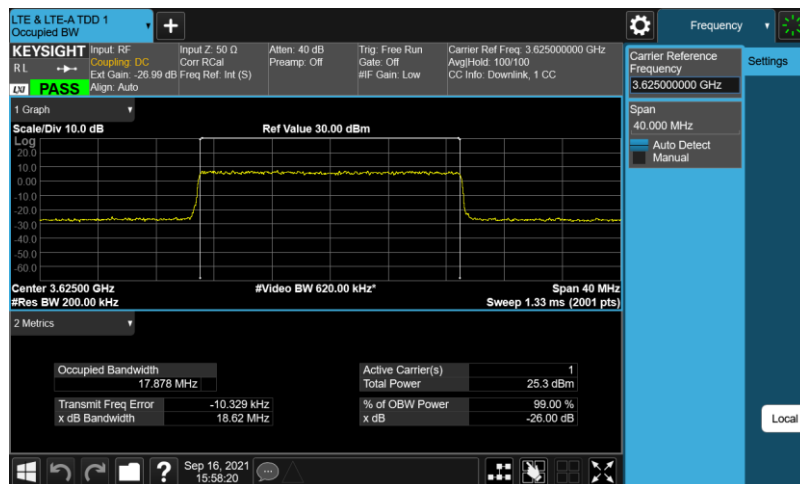
Band48-20MHz-256QAM-56640-E-TM3.1A



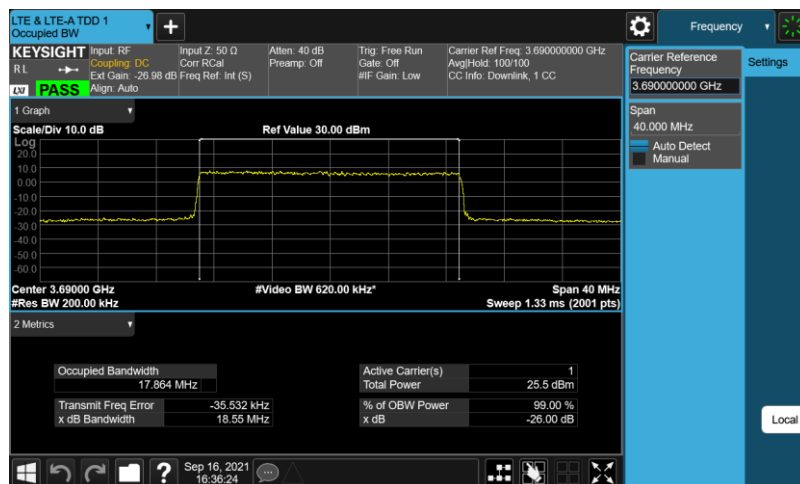
Band48-20MHz-QPSK-55340-E-TM1.1



Band48-20MHz-QPSK-55990-E-TM1.1



Band48-20MHz-QPSK-56640-E-TM1.1



Appendix D: Frequency Stability

Test Result

Voltage measurement									
Band	Bandwidth	Modulation	Channel	Mode	Voltage [Vac]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
Band48	10MHz	256QAM	55990	E-TM3.1A	102	25	55	0.015	within the authorized bands
Band48	10MHz	256QAM	55990	E-TM3.1A	120	25	58	0.016	
Band48	10MHz	256QAM	55990	E-TM3.1A	138	25	60	0.017	
Band48	10MHz	QPSK	55990	E-TM1.1	102	25	62	0.017	
Band48	10MHz	QPSK	55990	E-TM1.1	120	25	66	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	138	25	66	0.018	
Band48	20MHz	256QAM	55990	E-TM3.1A	102	25	58	0.016	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	25	60	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	138	25	62	0.017	
Band48	20MHz	QPSK	55990	E-TM1.1	102	25	61	0.017	
Band48	20MHz	QPSK	55990	E-TM1.1	120	25	59	0.016	
Band48	20MHz	QPSK	55990	E-TM1.1	138	25	60	0.017	

Temperature measurement									
Band	Bandwidth	Modulation	Channel	Mode	Voltage [Vac]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
Band48	10MHz	256QAM	55990	E-TM3.1A	120	-30	56	0.015	within the authorized bands
Band48	10MHz	256QAM	55990	E-TM3.1A	120	-20	55	0.015	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	-10	53	0.015	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	0	53	0.015	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	10	58	0.016	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	20	57	0.016	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	30	55	0.015	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	40	55	0.015	
Band48	10MHz	256QAM	55990	E-TM3.1A	120	50	58	0.016	
Band48	10MHz	QPSK	55990	E-TM1.1	120	-30	65	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	120	-20	64	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	120	-10	68	0.019	
Band48	10MHz	QPSK	55990	E-TM1.1	120	0	65	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	120	10	66	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	120	20	66	0.018	
Band48	10MHz	QPSK	55990	E-TM1.1	120	30	63	0.017	

Band48	10MHz	QPSK	55990	E-TM1.1	120	40	59	0.016	
Band48	10MHz	QPSK	55990	E-TM1.1	120	50	62	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	-30	62	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	-20	65	0.018	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	-10	66	0.018	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	0	66	0.018	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	10	58	0.016	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	20	61	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	30	63	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	40	61	0.017	
Band48	20MHz	256QAM	55990	E-TM3.1A	120	50	65	0.018	
Band48	20MHz	QPSK	55990	E-TM1.1	120	-30	58	0.016	
Band48	20MHz	QPSK	55990	E-TM1.1	120	-20	59	0.016	
Band48	20MHz	QPSK	55990	E-TM1.1	120	-10	63	0.017	
Band48	20MHz	QPSK	55990	E-TM1.1	120	0	61	0.017	
Band48	20MHz	QPSK	55990	E-TM1.1	120	10	61	0.017	
Band48	20MHz	QPSK	55990	E-TM1.1	120	20	59	0.016	
Band48	20MHz	QPSK	55990	E-TM1.1	120	30	55	0.015	
Band48	20MHz	QPSK	55990	E-TM1.1	120	40	58	0.016	
Band48	20MHz	QPSK	55990	E-TM1.1	120	50	60	0.017	

Appendix E: Peak-to-Average Ratio(CCDF)

Test Result

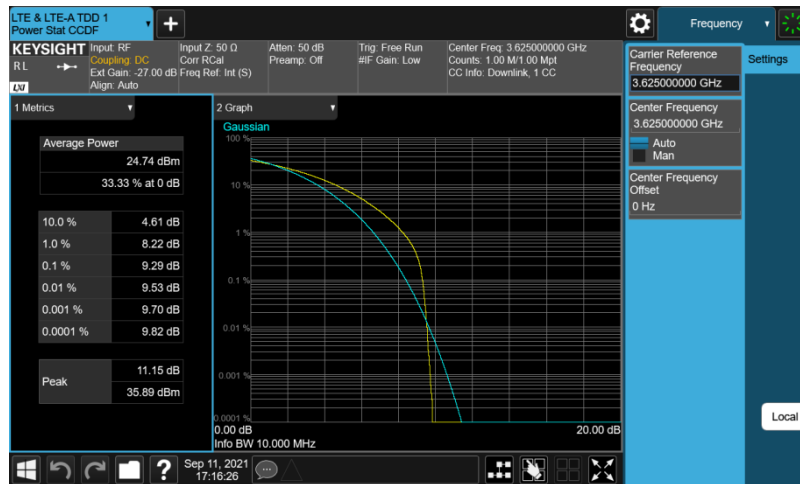
Band	Bandwidth	Modulation	Channel	Mode	Result(dBm)
Band48	10MHz	256QAM	55290	E-TM3.1A	9.25
Band48	10MHz	256QAM	55990	E-TM3.1A	9.29
Band48	10MHz	256QAM	56690	E-TM3.1A	9.35
Band48	10MHz	QPSK	55290	E-TM1.1	9.36
Band48	10MHz	QPSK	55990	E-TM1.1	9.23
Band48	10MHz	QPSK	56690	E-TM1.1	9.35
Band48	20MHz	256QAM	55340	E-TM3.1A	9.24
Band48	20MHz	256QAM	55990	E-TM3.1A	9.08
Band48	20MHz	256QAM	56640	E-TM3.1A	9.39
Band48	20MHz	QPSK	55340	E-TM1.1	8.82
Band48	20MHz	QPSK	55990	E-TM1.1	10.21
Band48	20MHz	QPSK	56640	E-TM1.1	9.36

Test Graphs

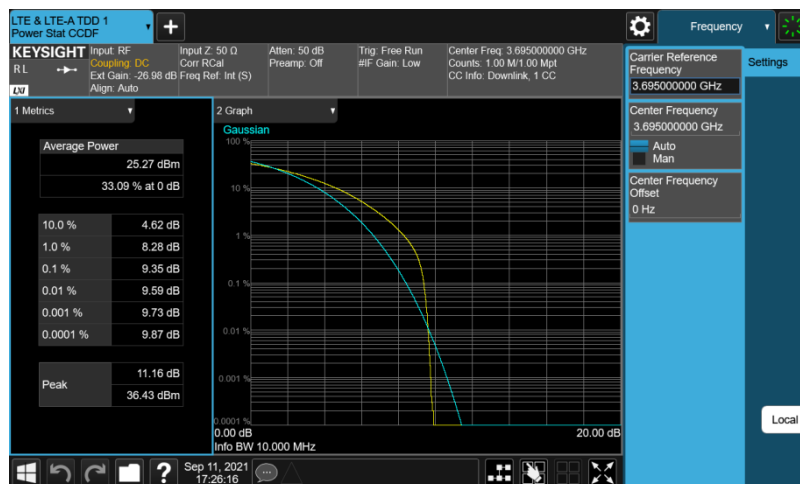
Band48-10MHz-256QAM-55290-E-TM3.1A



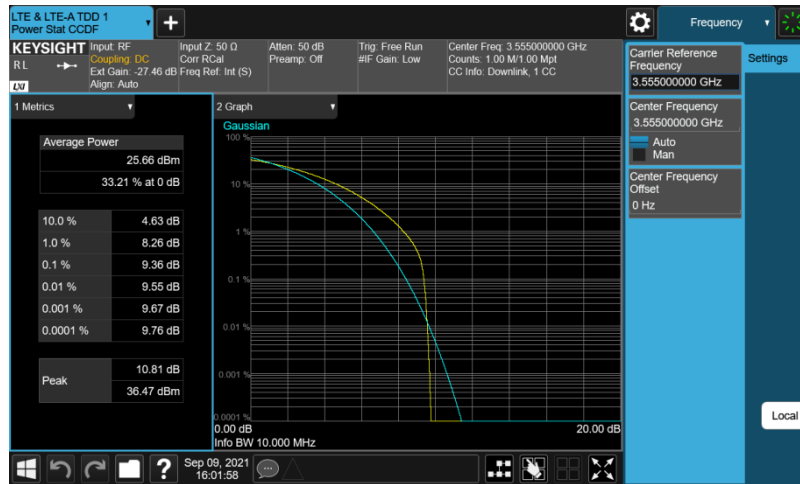
Band48-10MHz-256QAM-55990-E-TM3.1A



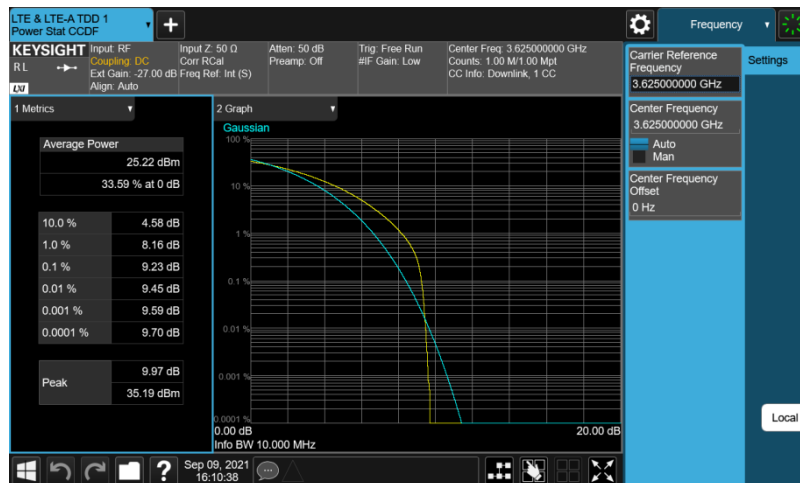
Band48-10MHz-256QAM-56690-E-TM3.1A



Band48-10MHz-QPSK-55290-E-TM1.1



Band48-10MHz-QPSK-55990-E-TM1.1



Band48-10MHz-QPSK-56690-E-TM1.1

