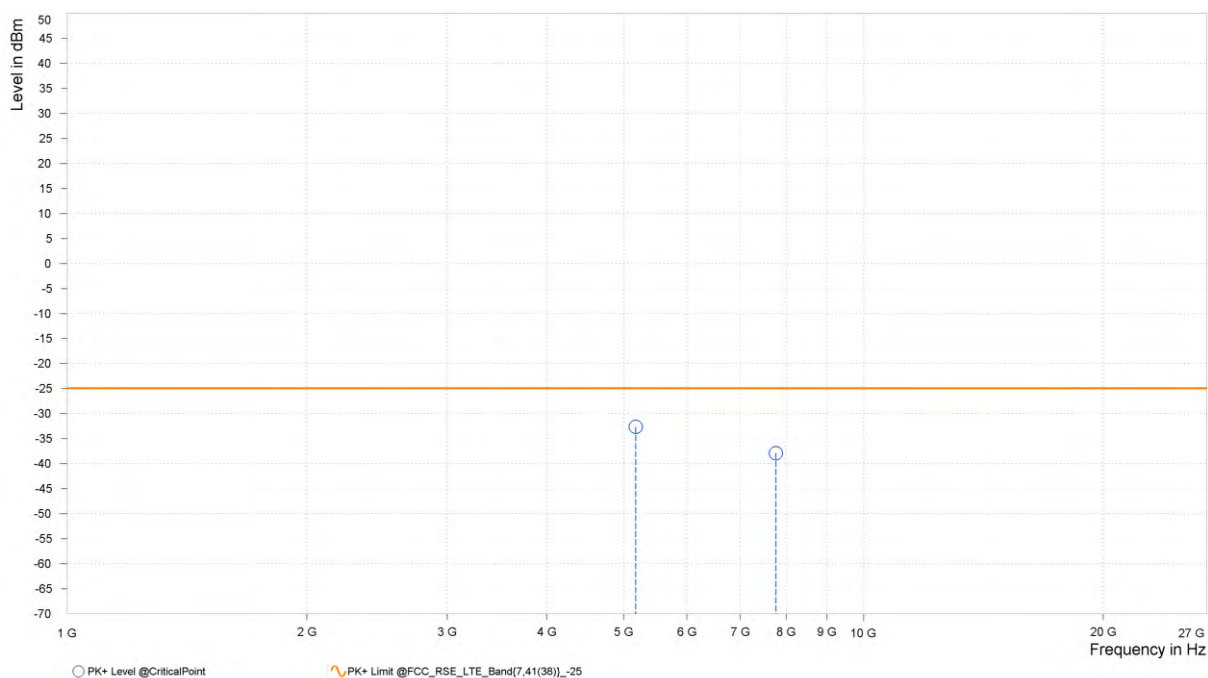


MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

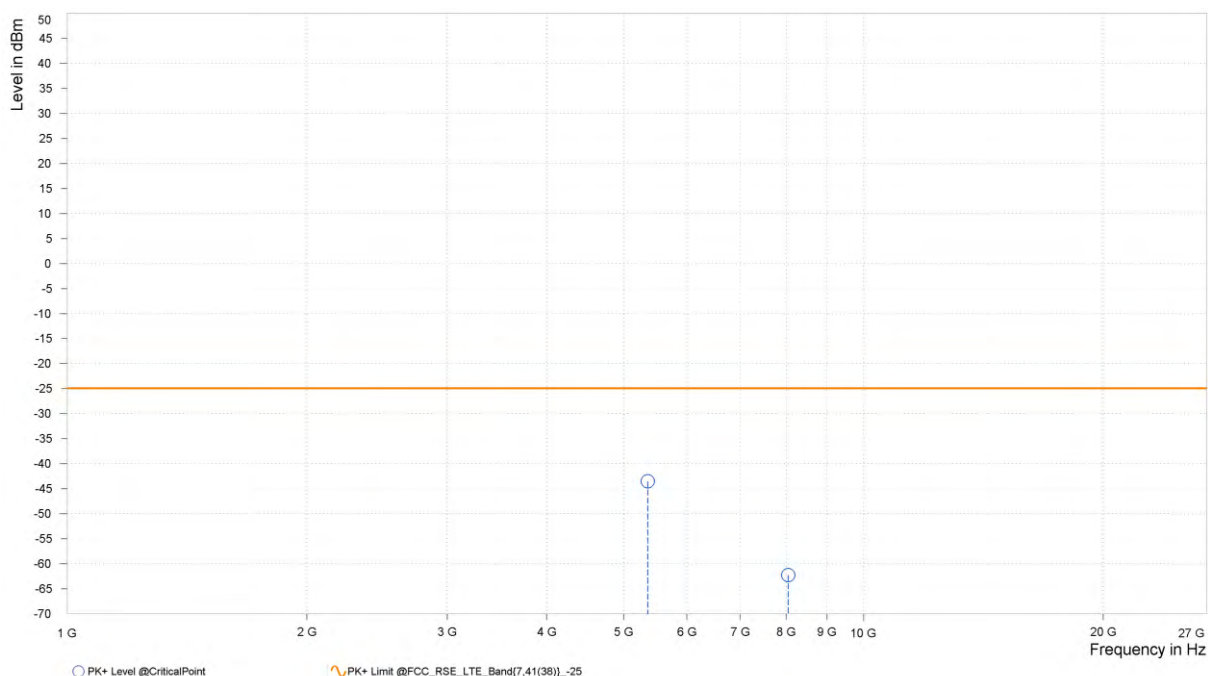
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,177.000	-32.65	-25.00	7.65	18.01	V	269.6	2.00
2	7,765.500	-37.91	-25.00	12.91	22.24	V	88	2.00



CH41190

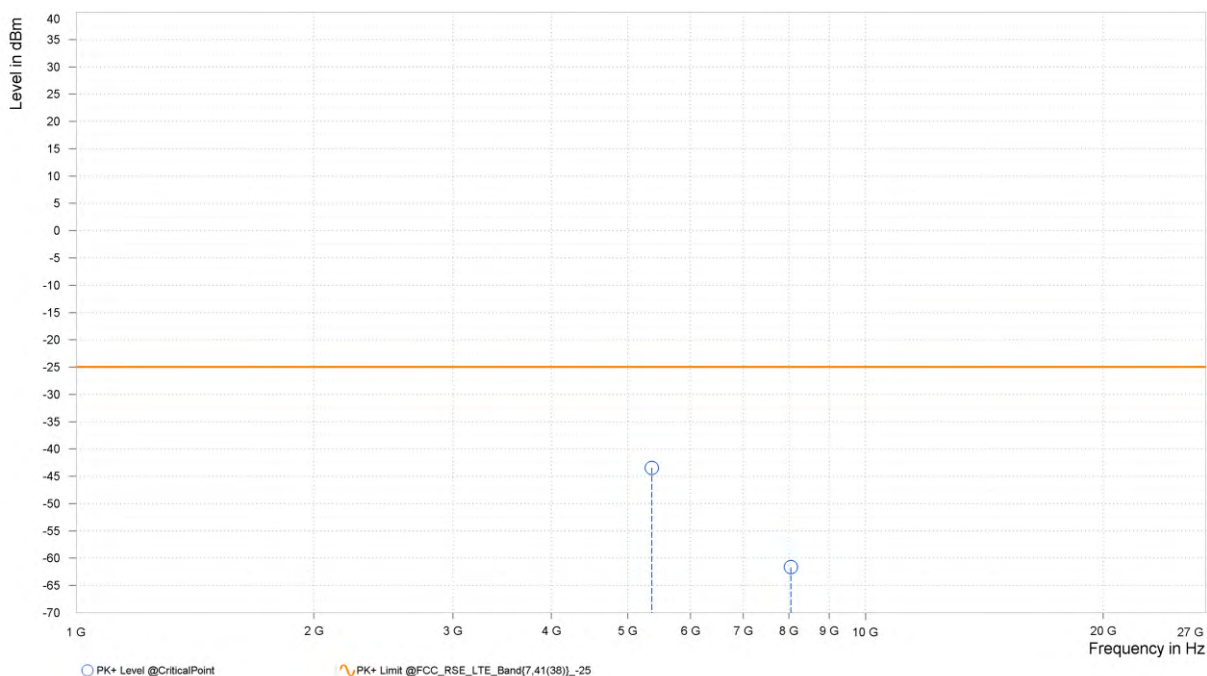
NAME			
MODE	TX channel 41190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,361.000	-43.55	-25.00	18.55	17.38	H	359.1	1.00
3	8,041.500	-62.30	-25.00	37.30	20.55	H	178.9	1.00



MODE	TX channel 41190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

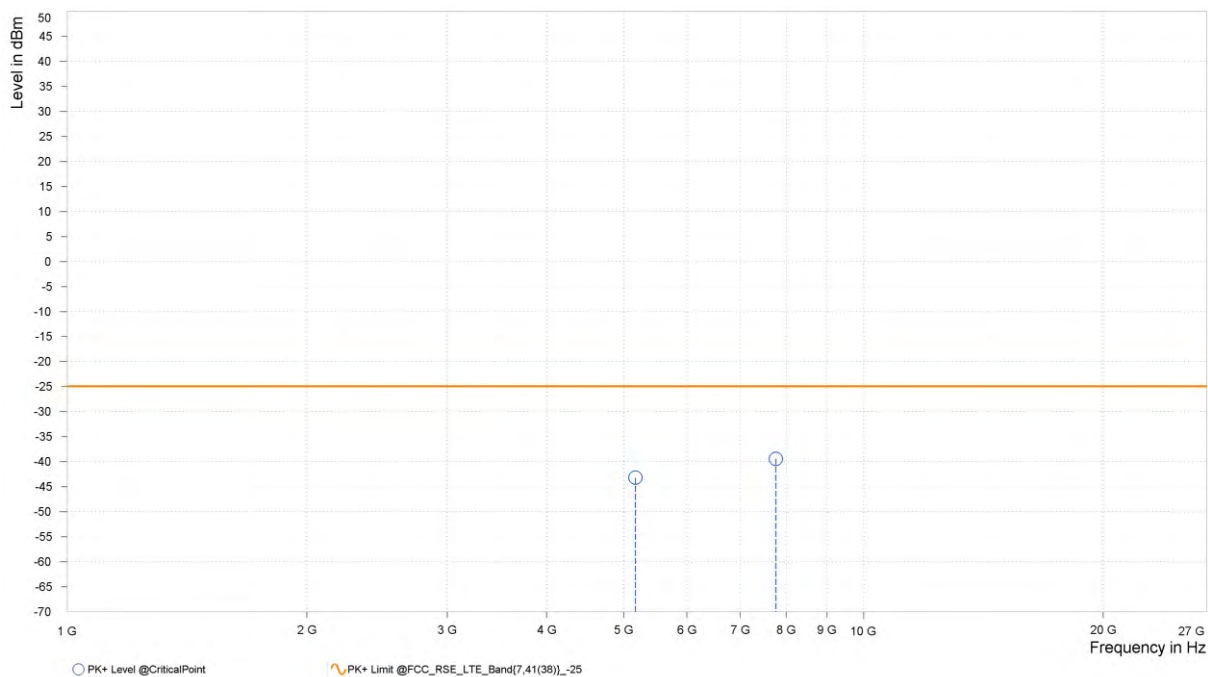
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,361.000	-43.45	-25.00	18.45	17.21	V	273.2	1.00
3	8,041.500	-61.63	-25.00	36.63	20.52	V	31.8	2.00



CHANNEL BANDWIDTH: 15MHz / QPSK

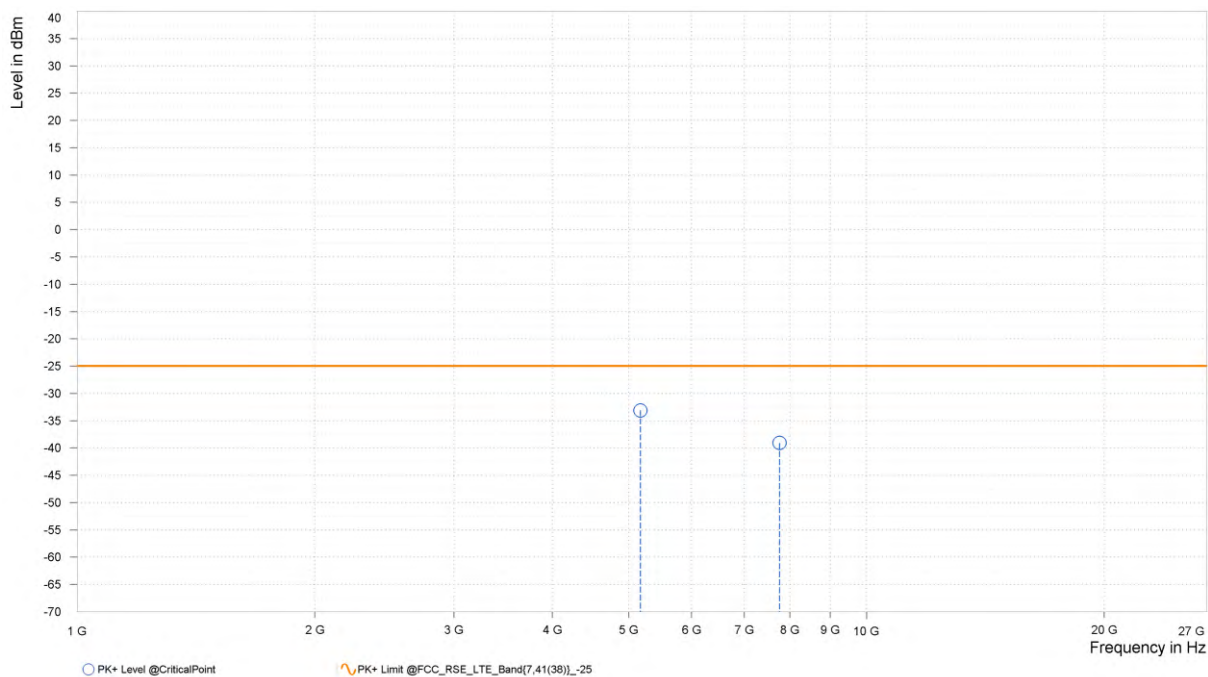
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,172.500	-43.21	-25.00	18.21	18.03	H	85.6	2.00
2	7,758.750	-39.43	-25.00	14.43	22.22	H	1	1.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

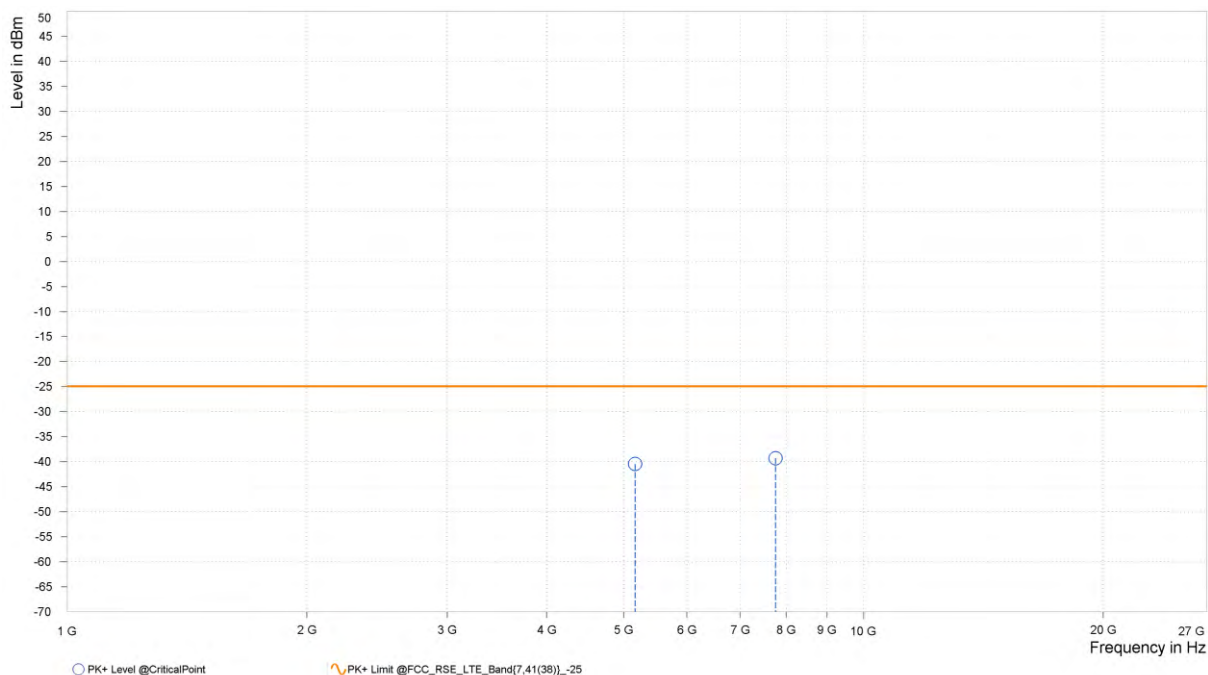
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,172.500	-33.12	-25.00	8.12	17.95	V	269.6	2.00
2	7,758.750	-39.08	-25.00	14.08	22.25	V	86.8	2.00



CHANNEL BANDWIDTH: 20MHz / QPSK

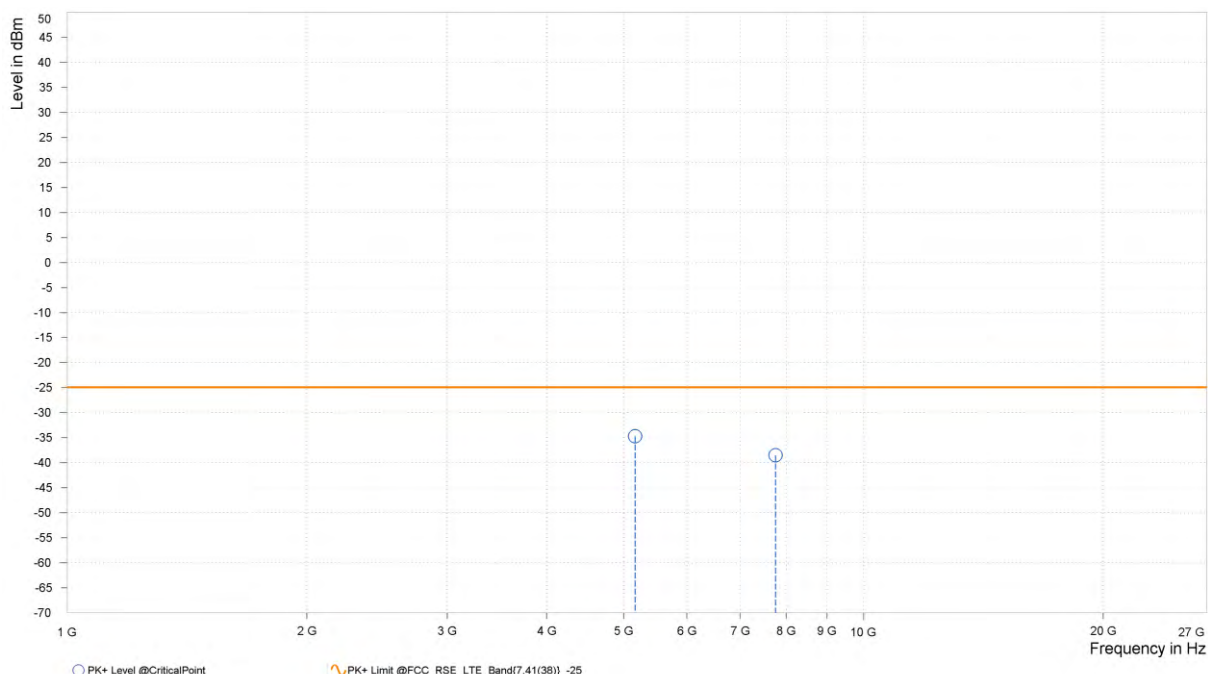
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,168.000	-40.46	-25.00	15.46	17.98	H	269.6	2.00
2	7,752.000	-39.29	-25.00	14.29	22.24	H	1	1.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	5,168.000	-34.73	-25.00	9.73	17.89	V	269.6	2.00
2	7,752.000	-38.55	-25.00	13.55	22.26	V	84.4	2.00

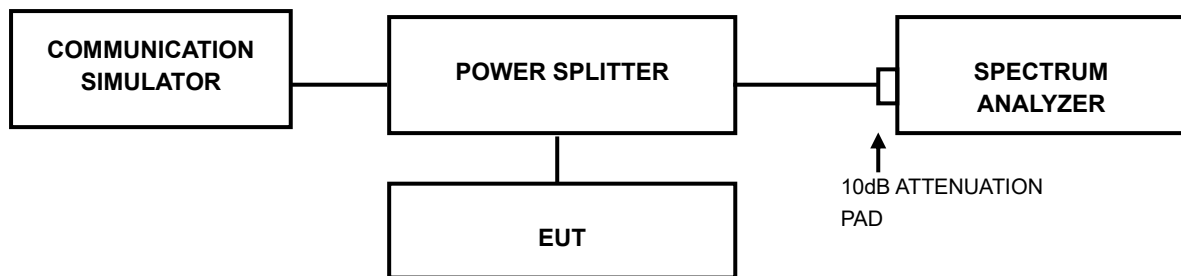


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



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3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



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4 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



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5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.



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6 Appendix

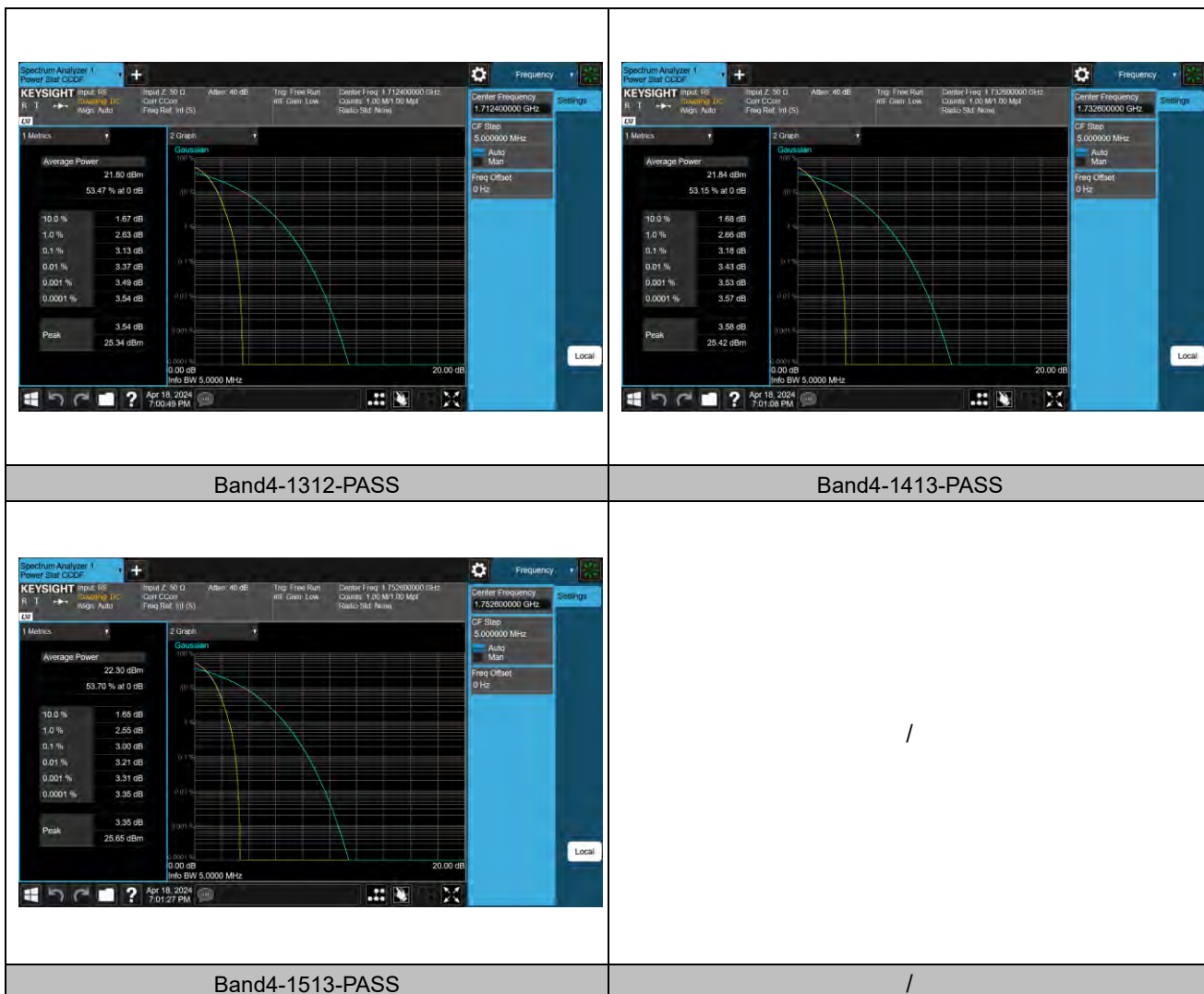
WCDMA BAND4

PEAK-TO-AVERAGE RATIO

Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band4	1312	3.13	13	PASS
Band4	1413	3.18	13	PASS
Band4	1513	3	13	PASS

Test Graphs

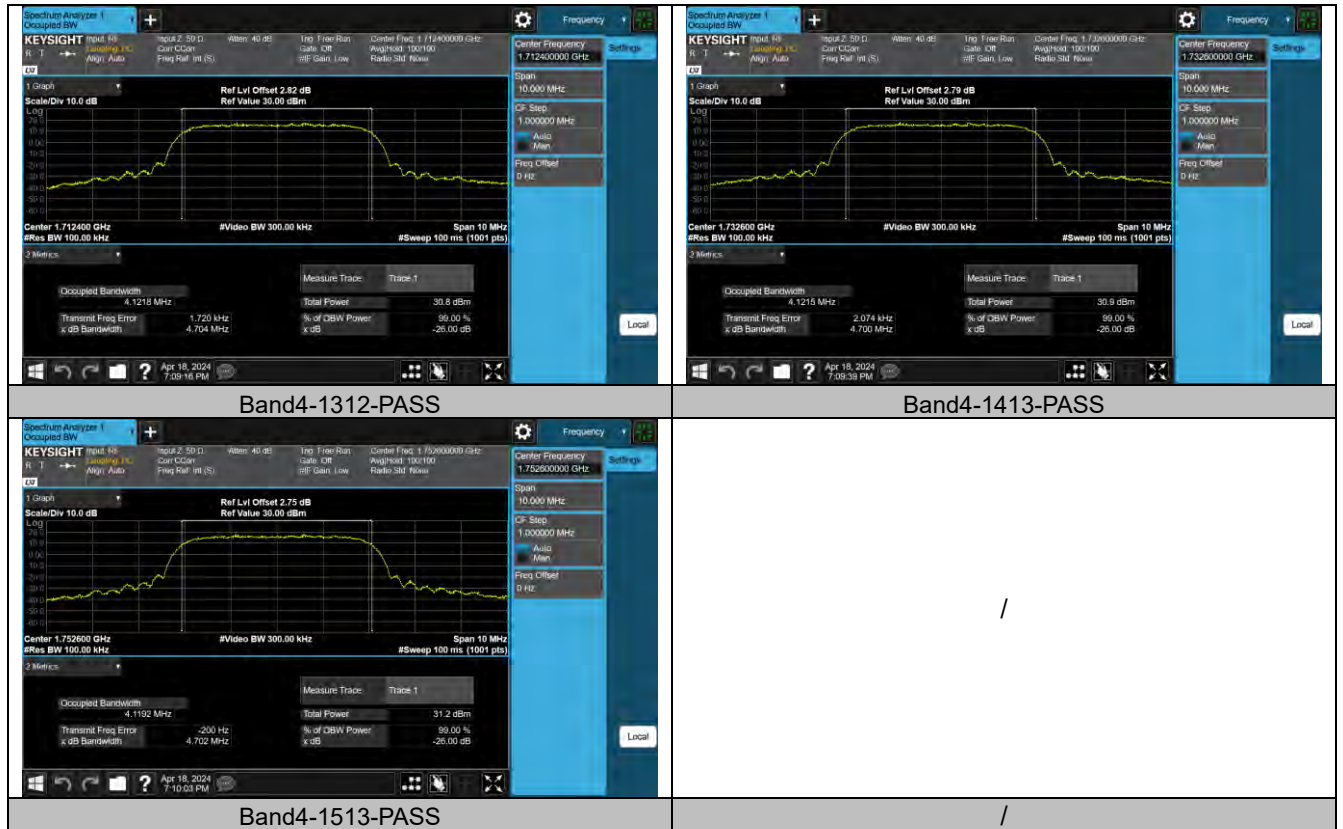


26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band4	1312	4.1218	4.704	---	PASS
Band4	1413	4.1215	4.700	---	PASS
Band4	1513	4.1192	4.702	---	PASS

Test Graphs





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BAND EDGE

Test Result

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band4	1312	1710.00	-29.16	-13	PASS
Band4	1513	1755.00	-28.43	-13	PASS



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Test Graphs

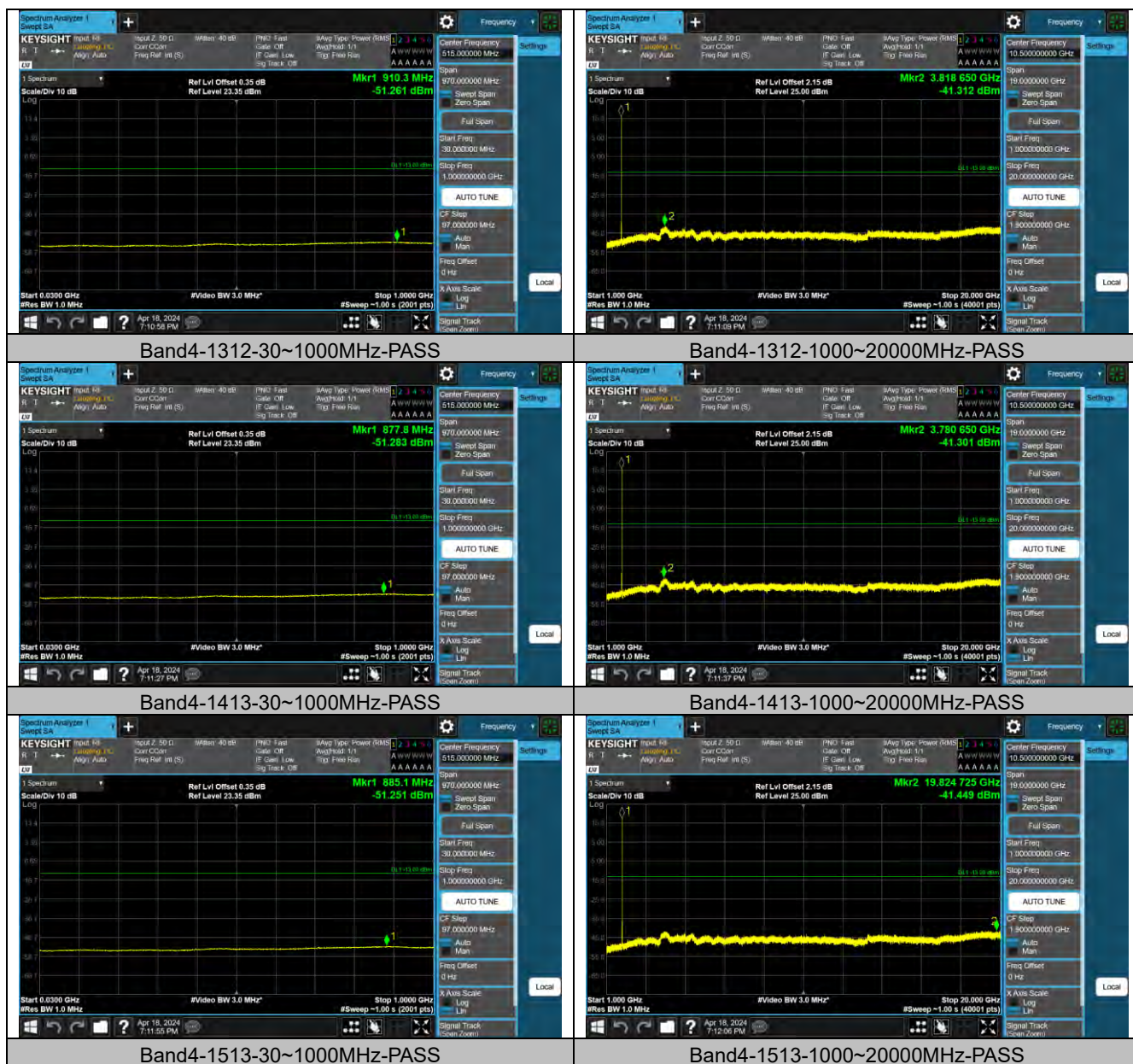


CONDUCTED SPURIOUS EMISSION

Test Result

Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band4	1312	30~1000MHz	910.28	-51.26	-13	PASS
Band4	1312	1000~20000MHz	3818.65	-41.31	-13	PASS
Band4	1413	30~1000MHz	877.78	-51.28	-13	PASS
Band4	1413	1000~20000MHz	3780.65	-41.3	-13	PASS
Band4	1513	30~1000MHz	885.06	-51.25	-13	PASS
Band4	1513	1000~20000MHz	19824.73	-41.45	-13	PASS

Test Graphs



FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band4	1312	VN	NT	10.19	0.005951	±2.5	PASS
Band4	1312	VL	NT	9.54	0.005571	±2.5	PASS
Band4	1312	VH	NT	10.97	0.006406	±2.5	PASS
Band4	1413	VN	NT	0.31	0.000179	±2.5	PASS
Band4	1413	VL	NT	0.11	0.000063	±2.5	PASS
Band4	1413	VH	NT	-0.10	-0.000058	±2.5	PASS
Band4	1513	VN	NT	-11.00	-0.006276	±2.5	PASS
Band4	1513	VL	NT	-10.76	-0.006139	±2.5	PASS
Band4	1513	VH	NT	-9.06	-0.005169	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band4	1312	NV	-30	10.70	0.006249	±2.5	PASS
Band4	1312	NV	-20	11.34	0.006622	±2.5	PASS
Band4	1312	NV	-10	11.54	0.006739	±2.5	PASS
Band4	1312	NV	0	11.29	0.006593	±2.5	PASS
Band4	1312	NV	10	11.22	0.006552	±2.5	PASS
Band4	1312	NV	20	9.72	0.005676	±2.5	PASS
Band4	1312	NV	30	11.27	0.006581	±2.5	PASS
Band4	1312	NV	40	11.66	0.006809	±2.5	PASS
Band4	1312	NV	50	10.83	0.006324	±2.5	PASS
Band4	1413	NV	-30	1.08	0.000623	±2.5	PASS
Band4	1413	NV	-20	-0.83	-0.000479	±2.5	PASS
Band4	1413	NV	-10	0.79	0.000456	±2.5	PASS
Band4	1413	NV	0	0.58	0.000335	±2.5	PASS
Band4	1413	NV	10	0.72	0.000416	±2.5	PASS
Band4	1413	NV	20	-0.39	-0.000225	±2.5	PASS
Band4	1413	NV	30	-0.21	-0.000121	±2.5	PASS
Band4	1413	NV	40	-0.84	-0.000485	±2.5	PASS
Band4	1413	NV	50	-0.07	-0.000040	±2.5	PASS
Band4	1513	NV	-30	-10.89	-0.006214	±2.5	PASS
Band4	1513	NV	-20	-10.10	-0.005763	±2.5	PASS
Band4	1513	NV	-10	-9.55	-0.005449	±2.5	PASS
Band4	1513	NV	0	-8.65	-0.004936	±2.5	PASS
Band4	1513	NV	10	-10.41	-0.005940	±2.5	PASS
Band4	1513	NV	20	-9.35	-0.005335	±2.5	PASS
Band4	1513	NV	30	-9.87	-0.005632	±2.5	PASS
Band4	1513	NV	40	-9.93	-0.005666	±2.5	PASS
Band4	1513	NV	50	-10.48	-0.005980	±2.5	PASS

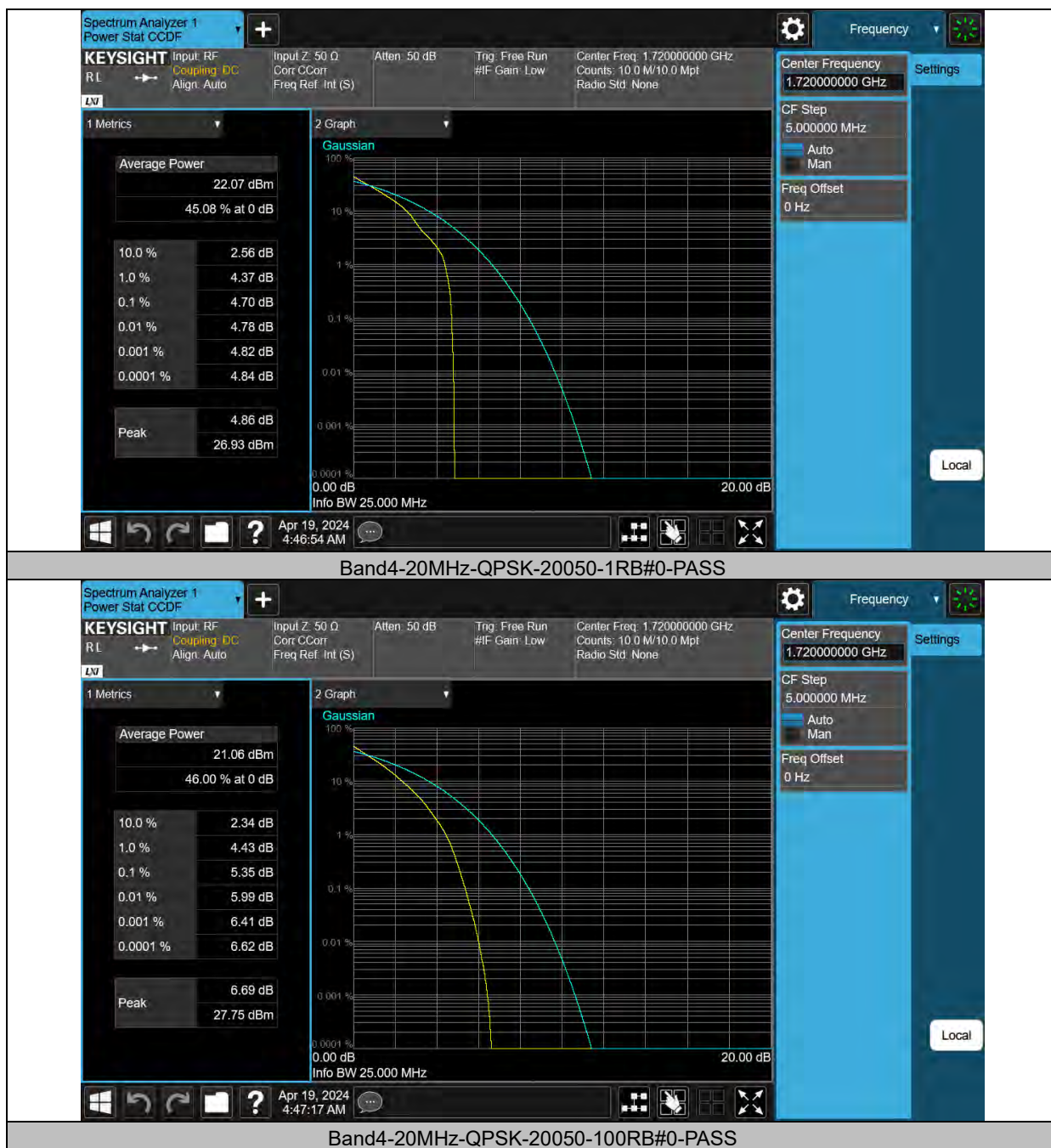
LTE BAND4

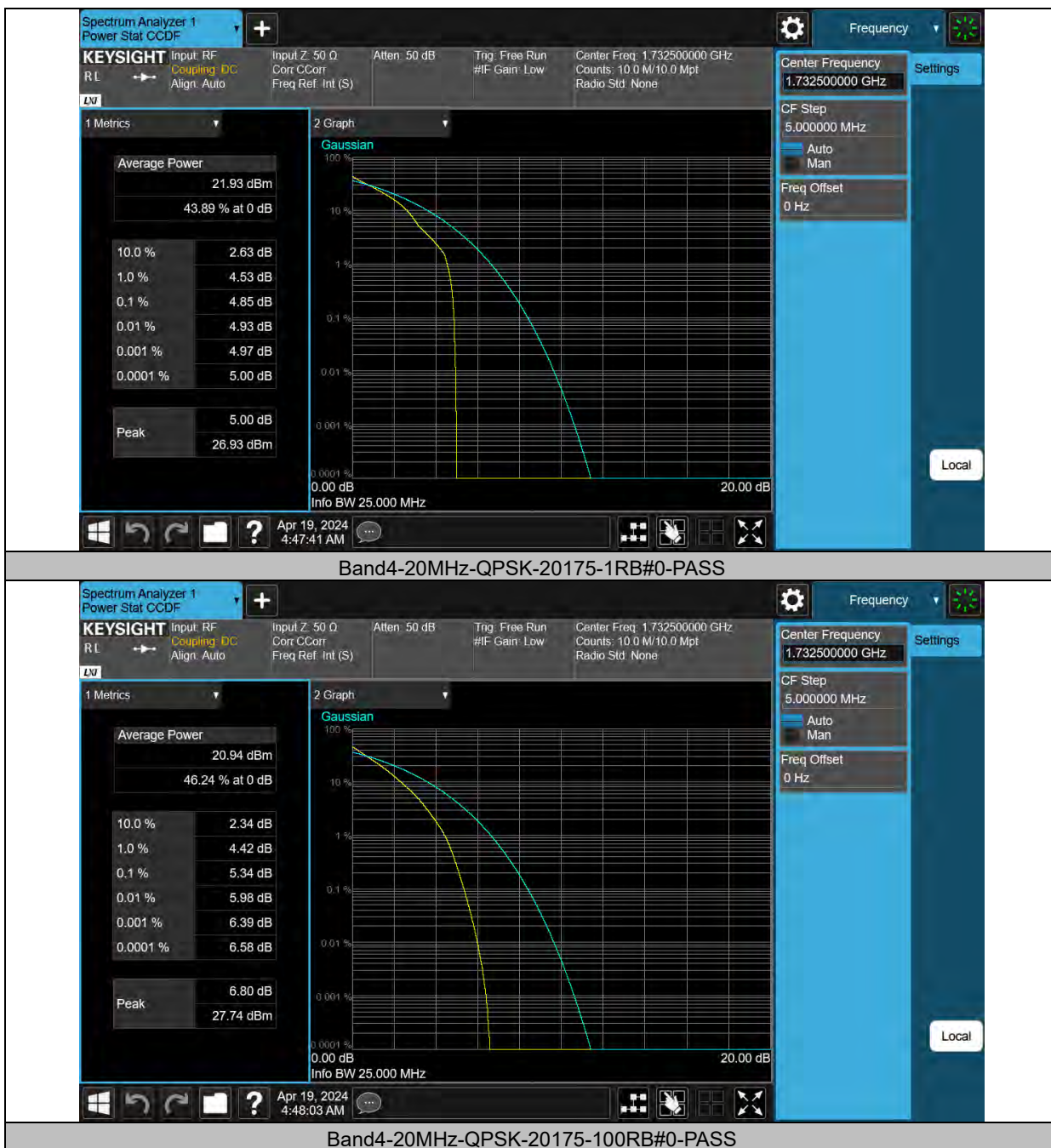
PEAK-TO-AVERAGE RATIO(CCDF)

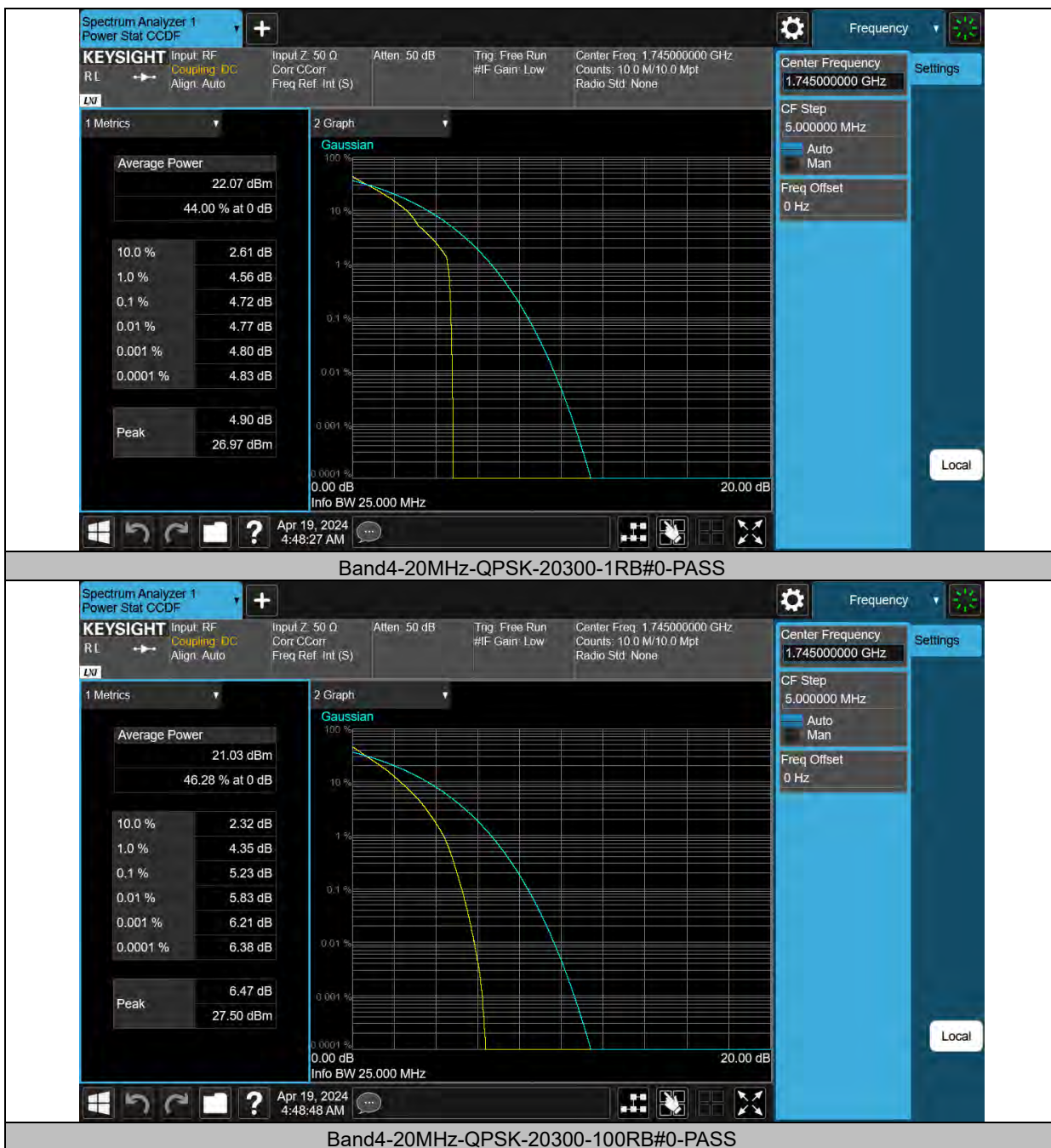
Test Result

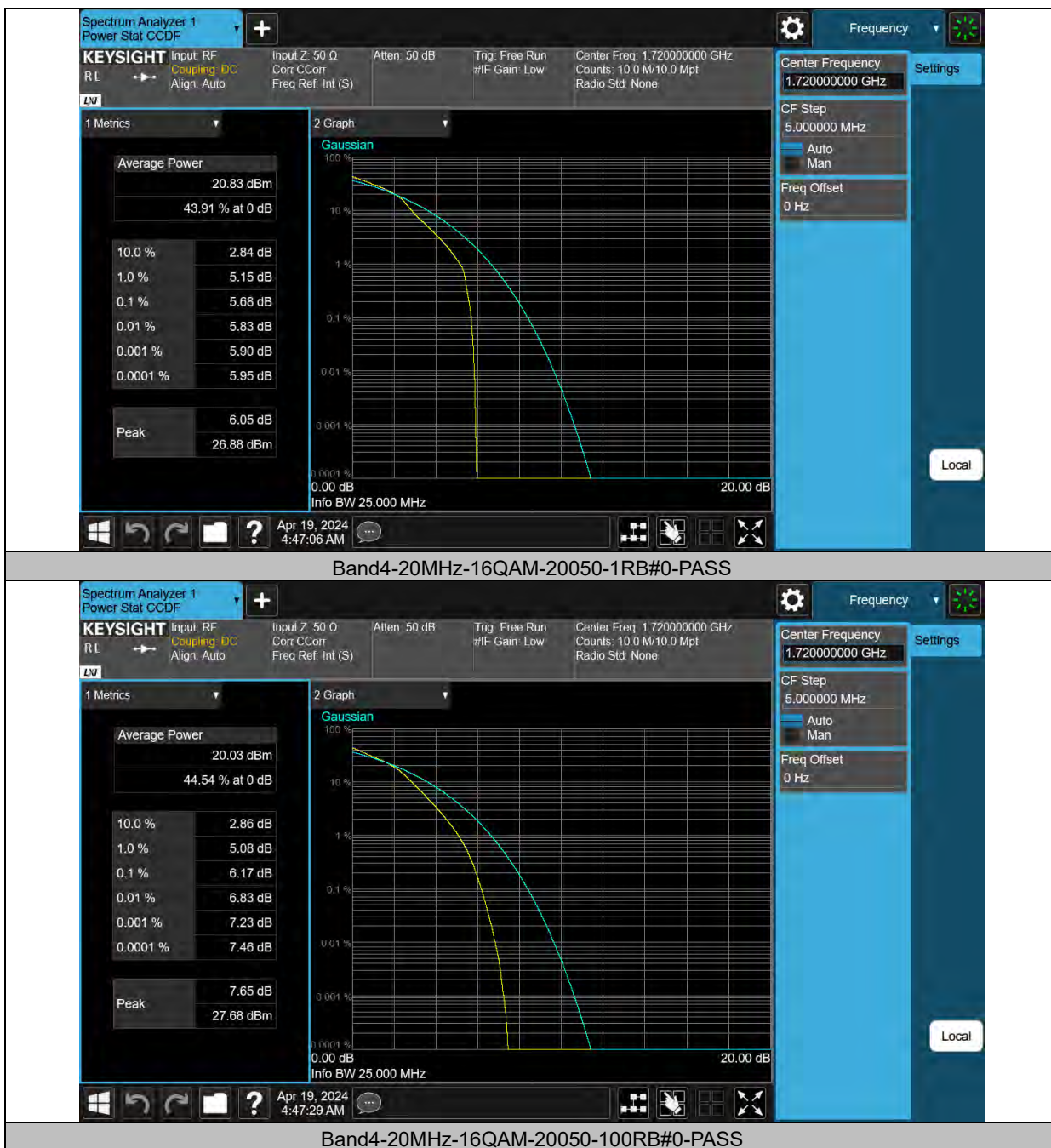
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band4	20MHz	QPSK	20050	1RB#0	4.70	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	5.35	13	PASS
Band4	20MHz	QPSK	20175	1RB#0	4.85	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.34	13	PASS
Band4	20MHz	QPSK	20300	1RB#0	4.72	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.23	13	PASS
Band4	20MHz	16QAM	20050	1RB#0	5.68	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	6.17	13	PASS
Band4	20MHz	16QAM	20175	1RB#0	5.78	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.16	13	PASS
Band4	20MHz	16QAM	20300	1RB#0	5.69	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.04	13	PASS

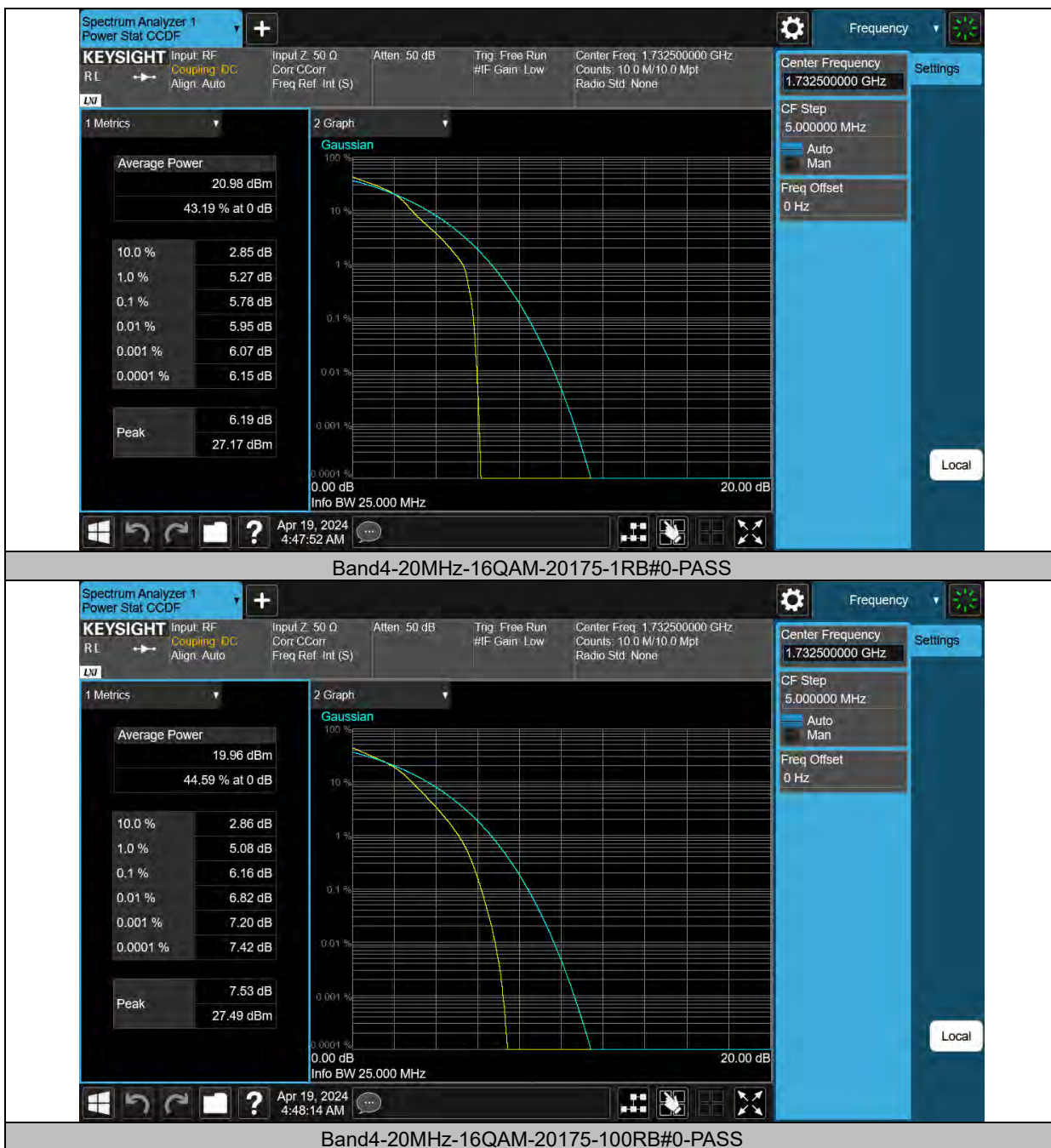
Test Graphs

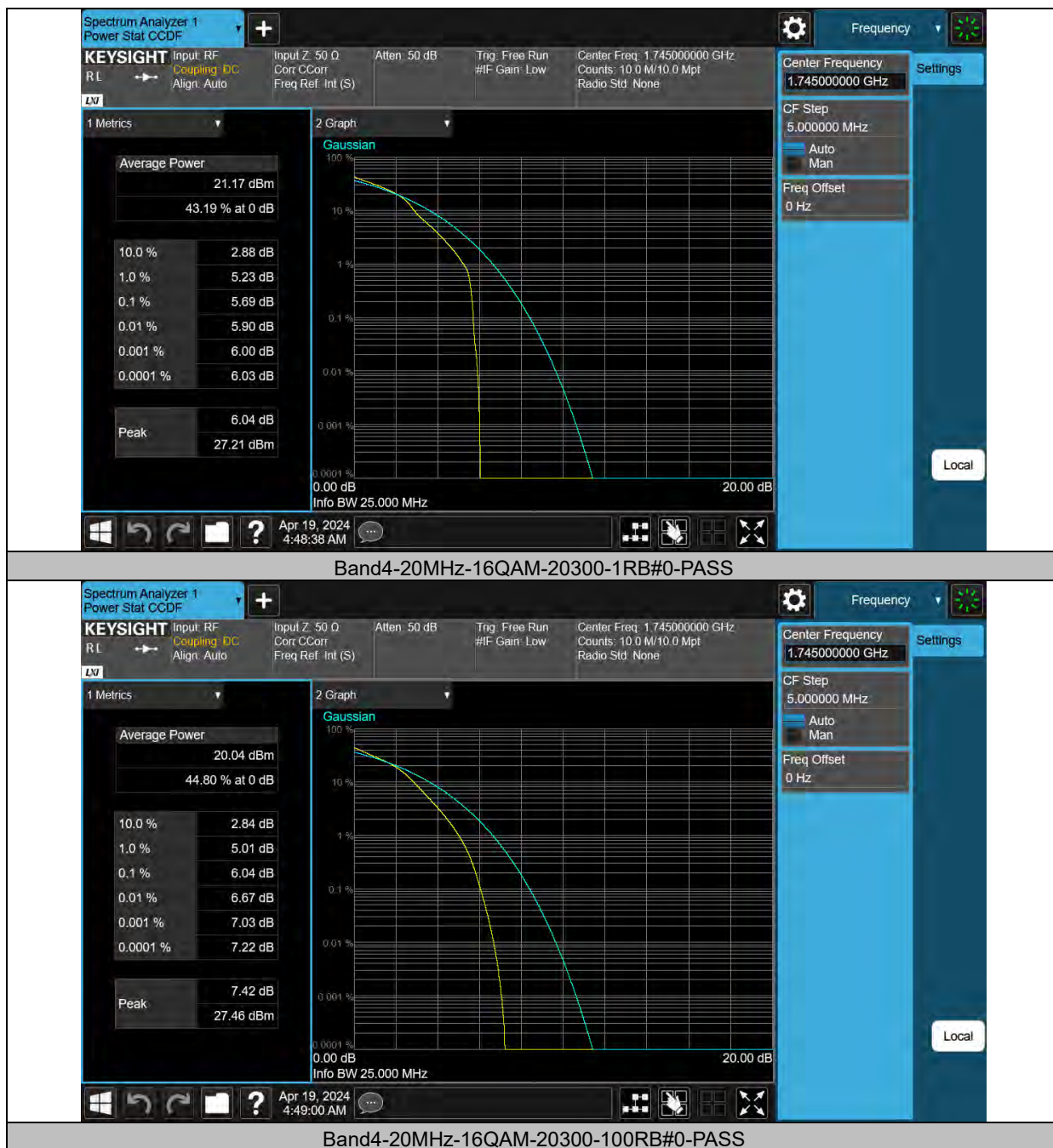












26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0975	1.287	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0954	1.310	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0959	1.286	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0901	1.291	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0982	1.296	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0931	1.292	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.7000	2.970	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.7007	2.982	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.7011	2.983	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.7099	2.975	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6941	2.979	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6994	2.979	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.5063	5.027	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.5121	4.999	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.5127	5.021	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.5119	5.003	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.5096	5.021	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.5055	4.995	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9743	9.982	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9565	9.892	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9789	9.875	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9673	9.927	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9622	9.896	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9573	9.895	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.436	14.71	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.456	14.64	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.469	14.73	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.438	14.70	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.456	14.76	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.436	14.64	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.904	19.60	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.884	19.57	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.883	19.45	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.895	19.43	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.880	19.53	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.902	19.40	PASS

Test Graphs





































BAND EDGE

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	-30.84	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	-35.68	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	-30.21	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	-31.56	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	-29.06	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	-37.34	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	-28.59	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	-33.13	PASS
Band4	3MHz	QPSK	19965	1RB#0	-26.35	PASS
Band4	3MHz	QPSK	19965	15RB#0	-33.67	PASS
Band4	3MHz	QPSK	20385	1RB#14	-25.88	PASS
Band4	3MHz	QPSK	20385	15RB#0	-30.35	PASS
Band4	3MHz	16QAM	19965	1RB#0	-29.25	PASS
Band4	3MHz	16QAM	19965	15RB#0	-36.64	PASS
Band4	3MHz	16QAM	20385	1RB#14	-28.74	PASS
Band4	3MHz	16QAM	20385	15RB#0	-30.59	PASS
Band4	5MHz	QPSK	19975	1RB#0	-28.73	PASS
Band4	5MHz	QPSK	19975	1RB#24	-59.17	PASS
Band4	5MHz	QPSK	19975	25RB#0	-37.71	PASS
Band4	5MHz	QPSK	20375	1RB#0	-42.06	PASS
Band4	5MHz	QPSK	20375	1RB#24	-29.75	PASS
Band4	5MHz	QPSK	20375	25RB#0	-32.94	PASS
Band4	5MHz	16QAM	19975	1RB#0	-31.40	PASS
Band4	5MHz	16QAM	19975	1RB#24	-60.33	PASS
Band4	5MHz	16QAM	19975	25RB#0	-38.67	PASS
Band4	5MHz	16QAM	20375	1RB#0	-43.22	PASS
Band4	5MHz	16QAM	20375	1RB#24	-31.13	PASS
Band4	5MHz	16QAM	20375	25RB#0	-32.61	PASS
Band4	10MHz	QPSK	20000	1RB#0	-39.76	PASS
Band4	10MHz	QPSK	20000	50RB#0	-39.43	PASS
Band4	10MHz	QPSK	20350	1RB#49	-39.97	PASS
Band4	10MHz	QPSK	20350	50RB#0	-34.76	PASS
Band4	10MHz	16QAM	20000	1RB#0	-41.22	PASS
Band4	10MHz	16QAM	20000	50RB#0	-41.33	PASS
Band4	10MHz	16QAM	20350	1RB#49	-40.91	PASS
Band4	10MHz	16QAM	20350	50RB#0	-34.52	PASS
Band4	15MHz	QPSK	20025	1RB#0	-40.98	PASS
Band4	15MHz	QPSK	20025	75RB#0	-40.43	PASS
Band4	15MHz	QPSK	20325	1RB#74	-40.62	PASS
Band4	15MHz	QPSK	20325	75RB#0	-36.97	PASS
Band4	15MHz	16QAM	20025	1RB#0	-42.76	PASS
Band4	15MHz	16QAM	20025	75RB#0	-42.70	PASS
Band4	15MHz	16QAM	20325	1RB#74	-41.91	PASS
Band4	15MHz	16QAM	20325	75RB#0	-33.36	PASS
Band4	20MHz	QPSK	20050	1RB#0	-42.76	PASS

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Band4	20MHz	QPSK	20050	100RB#0	-40.01	PASS
Band4	20MHz	QPSK	20300	1RB#99	-41.07	PASS
Band4	20MHz	QPSK	20300	100RB#0	-31.84	PASS
Band4	20MHz	16QAM	20050	1RB#0	-44.03	PASS
Band4	20MHz	16QAM	20050	100RB#0	-41.88	PASS
Band4	20MHz	16QAM	20300	1RB#99	-41.87	PASS
Band4	20MHz	16QAM	20300	100RB#0	-33.17	PASS

Test Graphs







BUREAU
VERITAS

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BUREAU
VERITAS

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BUREAU
VERITAS

Test Report No.: PSU-QSU2403110115RF03







BUREAU
VERITAS

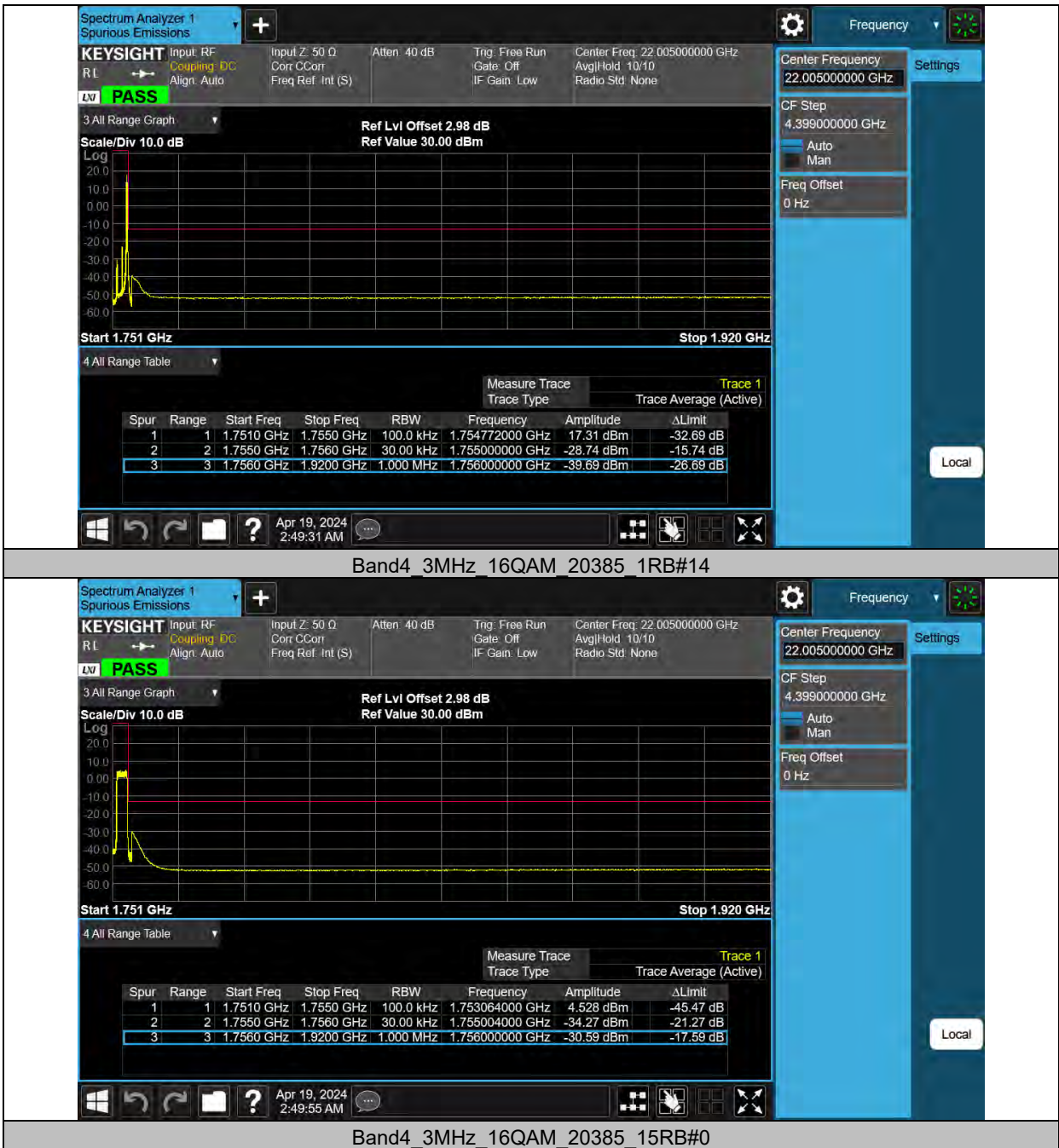
Test Report No.: PSU-QSU2403110115RF03





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VERITAS

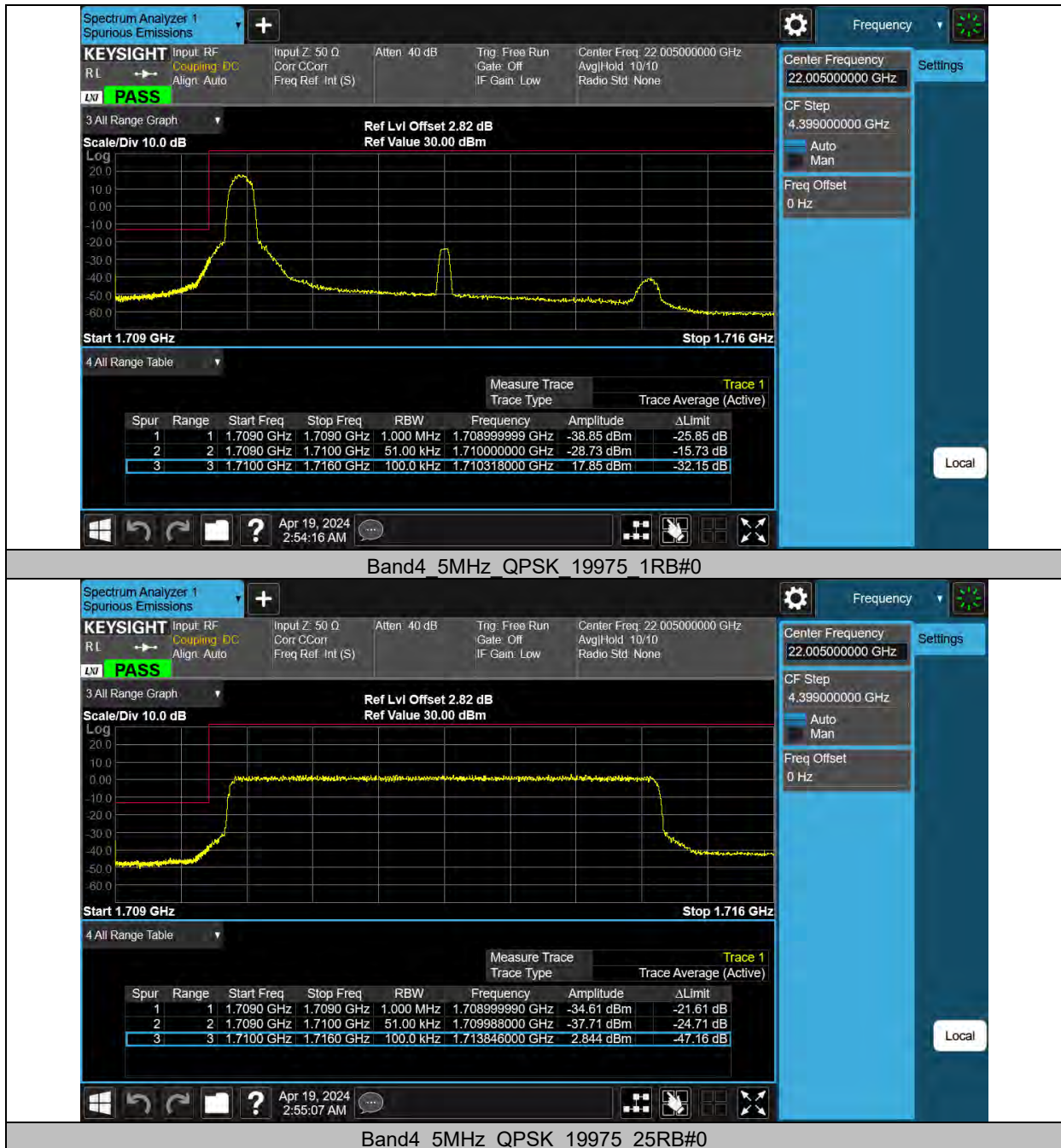
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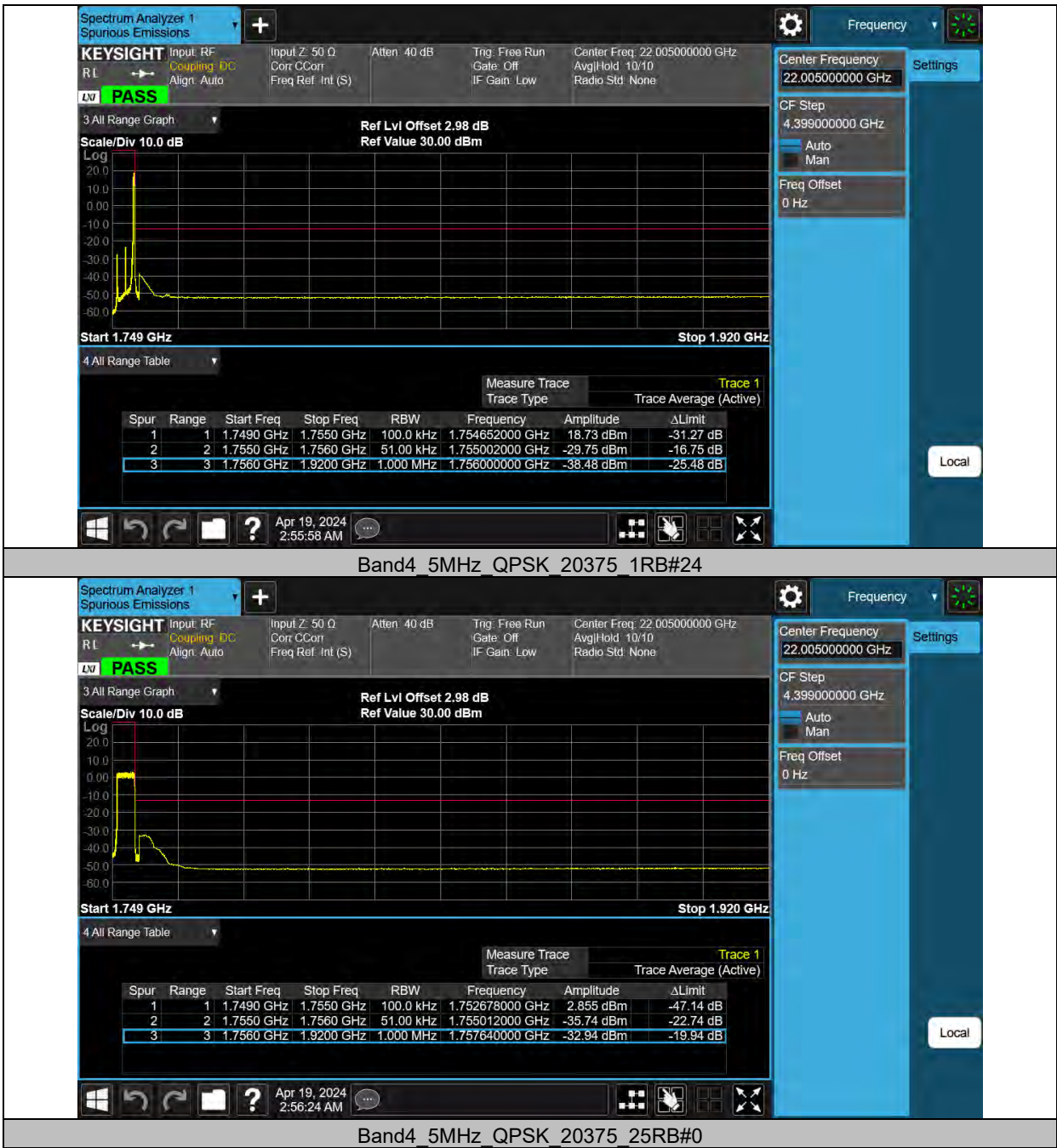
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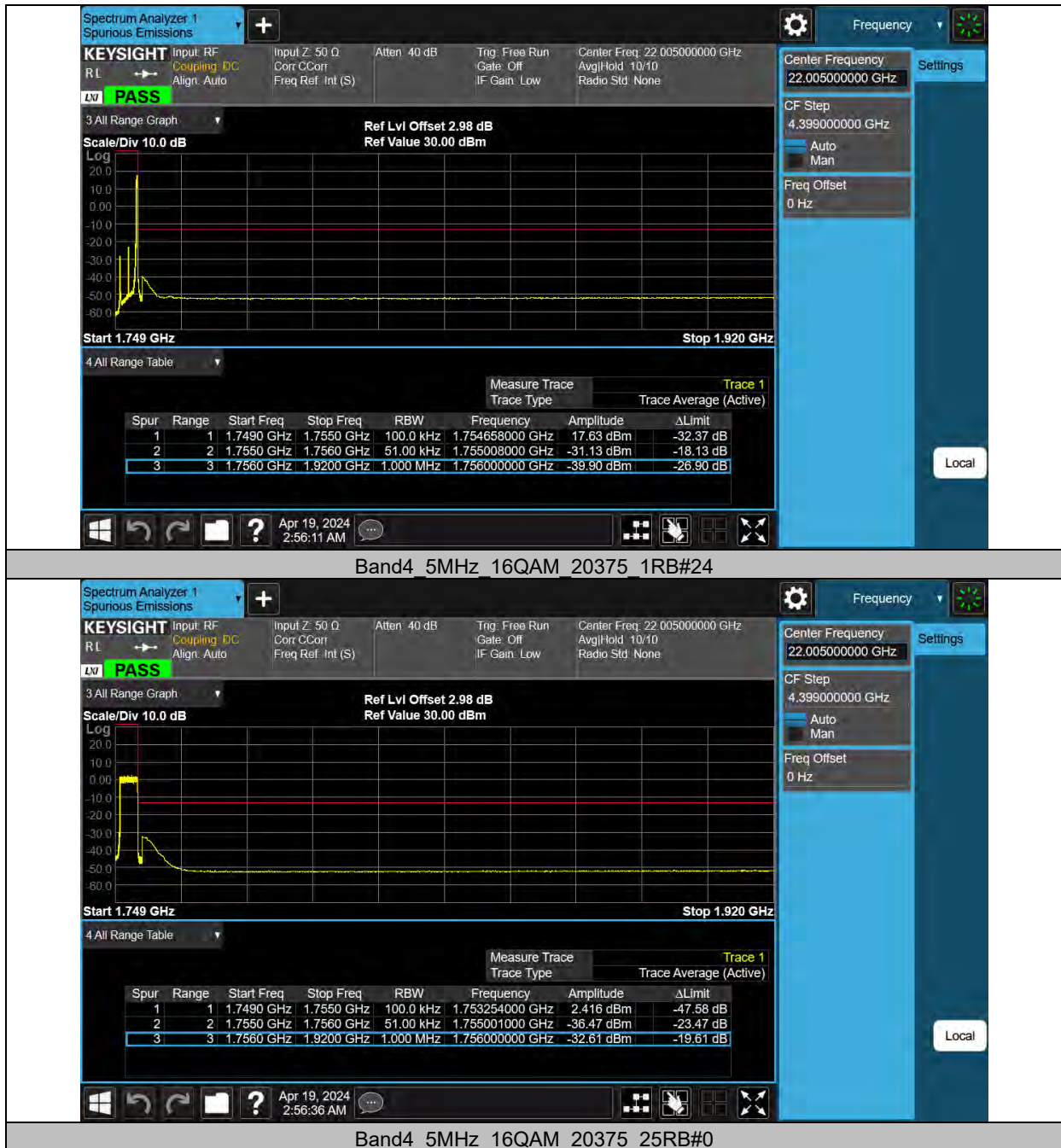
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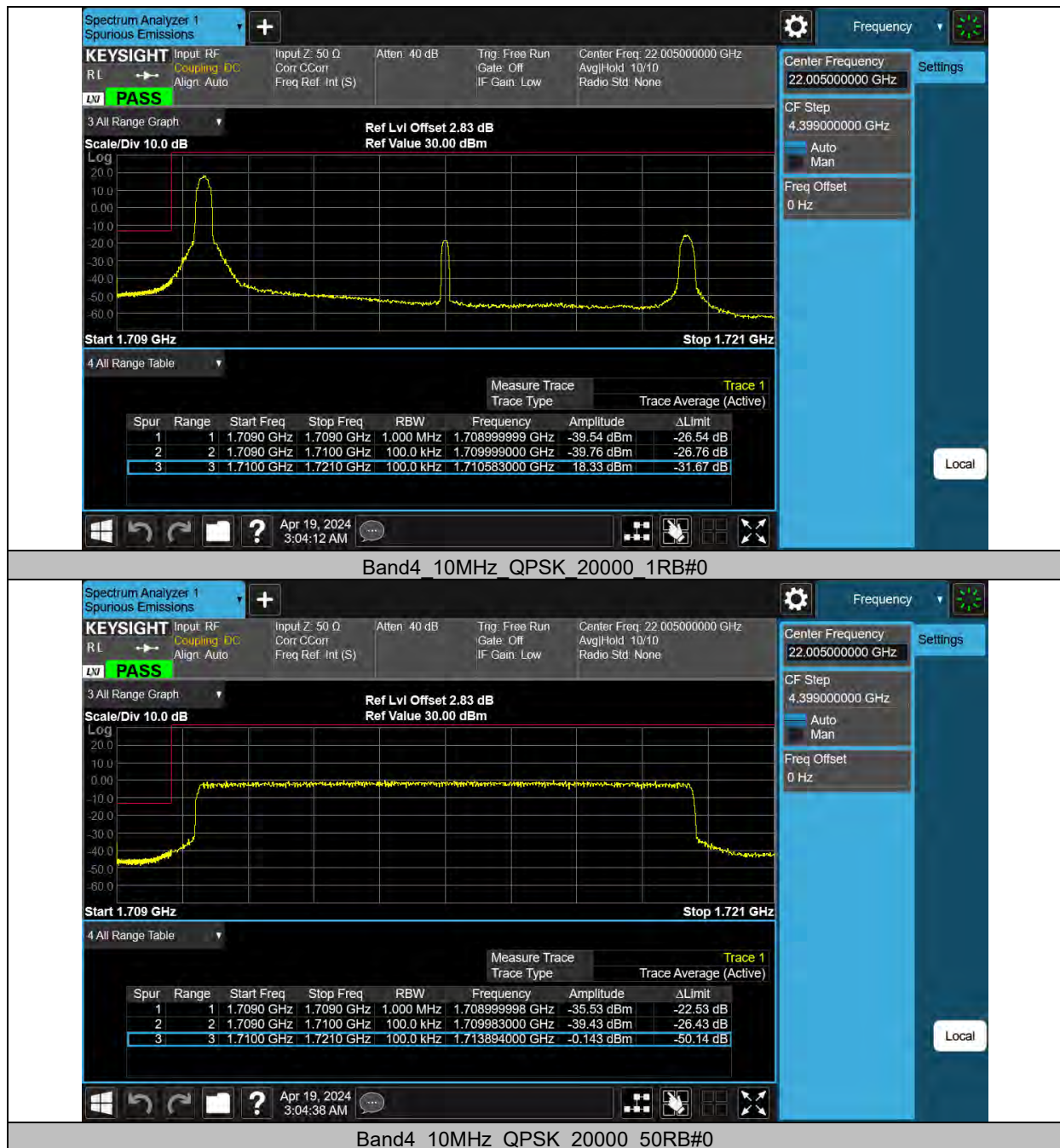
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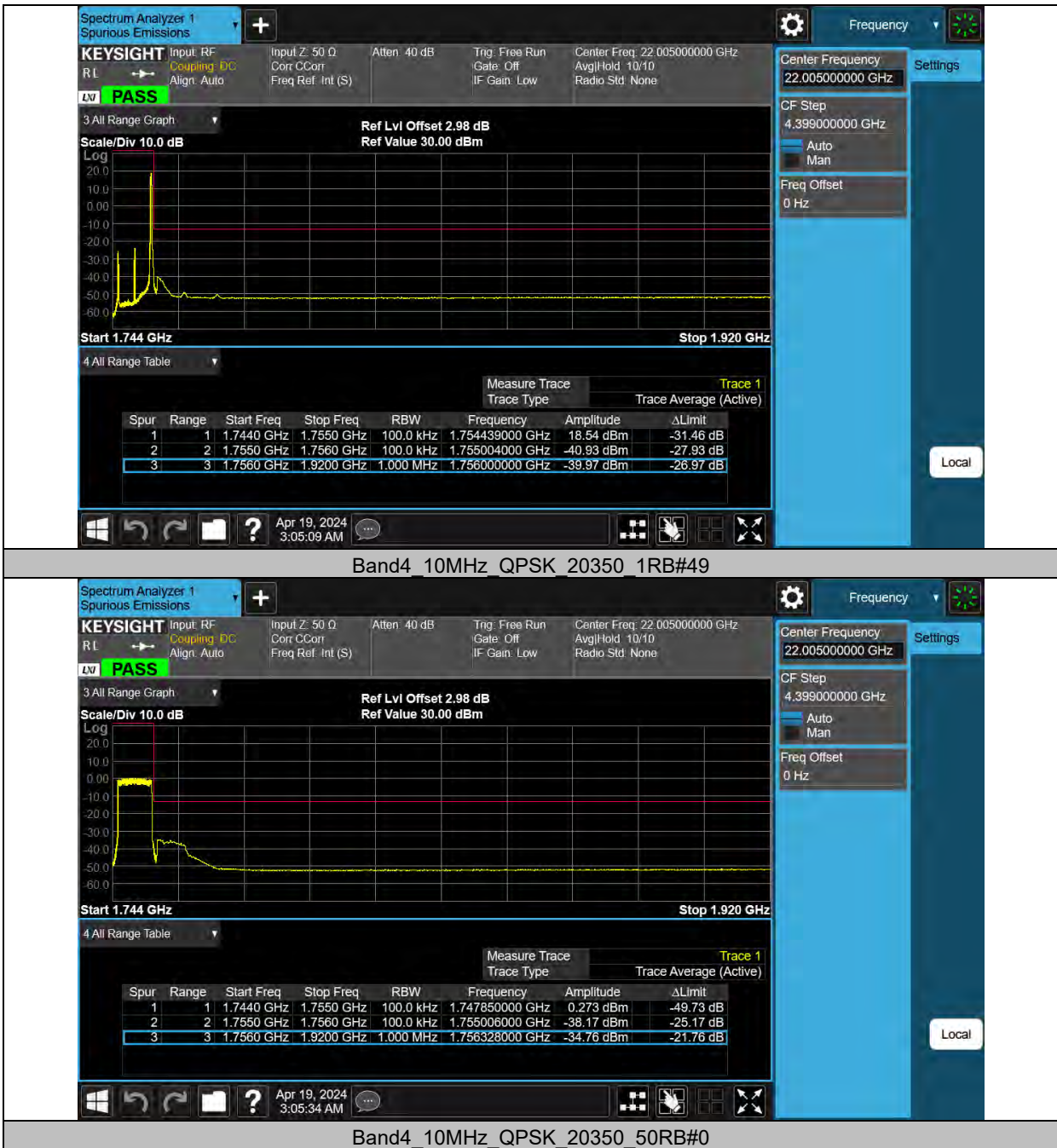
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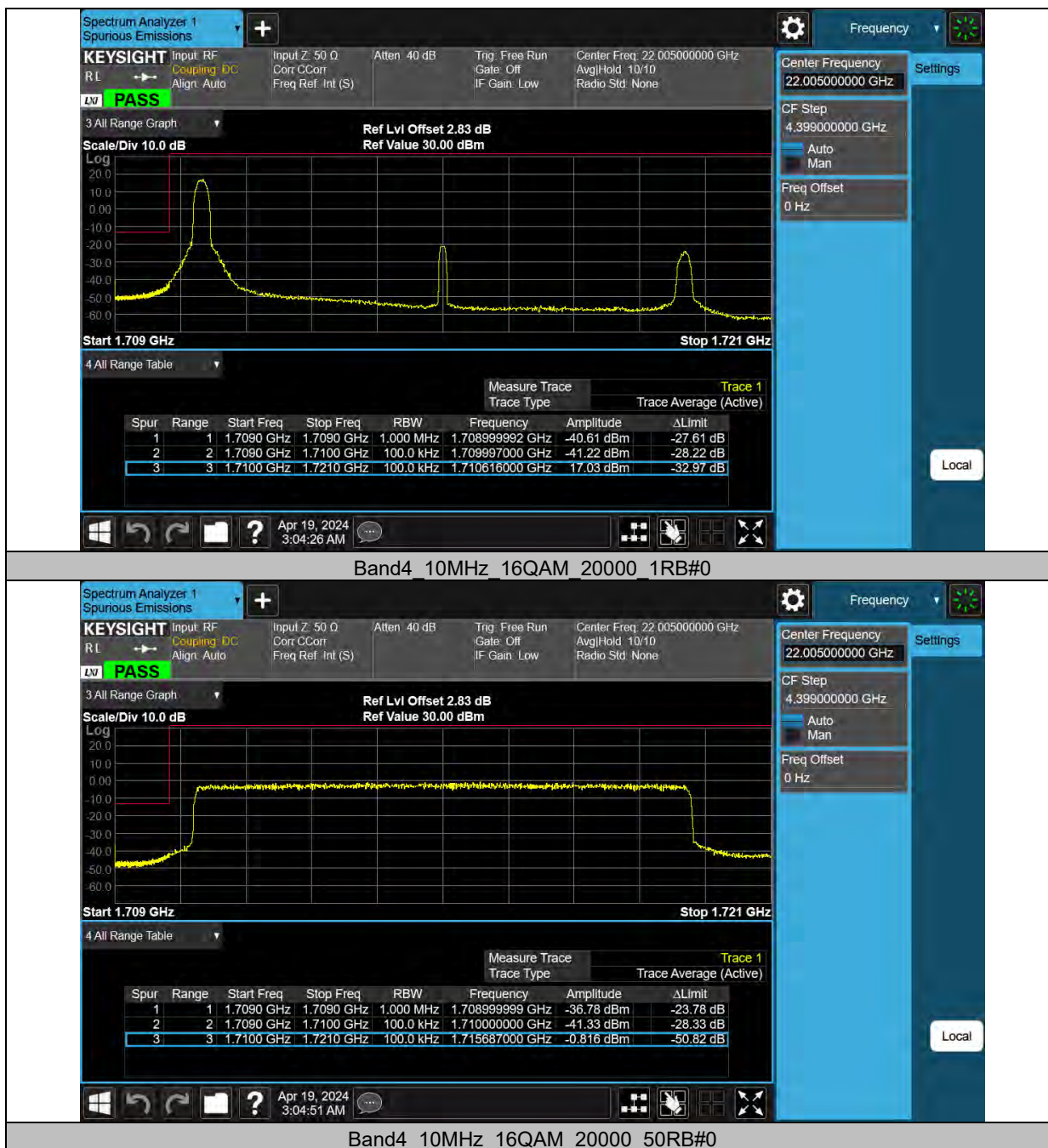




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