

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	23.84	-0.5	23.34	215.77	2
40620	2593.0	23.83	-0.5	23.33	215.28	2
41515	2682.5	23.4	-0.5	22.9	194.98	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	22.93	-0.5	22.43	174.98	2
40620	2593.0	23.01	-0.5	22.51	178.24	2
41515	2682.5	22.44	-0.5	21.94	156.31	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	21.57	-0.5	21.07	127.94	2
40620	2593.0	21.56	-0.5	21.06	127.64	2
41515	2682.5	21.49	-0.5	20.99	125.6	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	23.96	-0.5	23.46	221.82	2
40620	2593.0	23.94	-0.5	23.44	220.8	2
41490	2680.0	23.49	-0.5	22.99	199.07	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	22.99	-0.5	22.49	177.42	2
40620	2593.0	23.02	-0.5	22.52	178.65	2
41490	2680.0	22.54	-0.5	22.04	159.96	2

CHANNEL BANDWIDTH: 20 MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	21.62	-0.5	21.12	129.42	2
40620	2593.0	21.57	-0.5	21.07	127.94	2
41490	2680.0	21.5	-0.5	21	125.89	2

LTE BAND 66

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	24.166	-1.5	22.666	184.76	1
132322	1745	24.25	-1.5	22.75	188.36	1
132665	1779.3	24.12	-1.5	22.62	182.81	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	23.3	-1.5	21.8	151.36	1
132322	1745	23.22	-1.5	21.72	148.59	1
132665	1779.3	23.26	-1.5	21.76	149.97	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	22.35	-1.5	20.85	121.62	1
132322	1745	22.3	-1.5	20.8	120.23	1
132665	1779.3	22.32	-1.5	20.82	120.78	1

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	24.15	-1.5	22.65	184.08	1
132322	1745	24.08	-1.5	22.58	181.13	1
132657	1778.5	23.9	-1.5	22.4	173.78	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	23	-1.5	21.5	141.25	1
132322	1745	22.89	-1.5	21.39	137.72	1
132657	1778.5	22.81	-1.5	21.31	135.21	1

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	22.09	-1.5	20.59	114.55	1
132322	1745	21.99	-1.5	20.49	111.94	1
132657	1778.5	22.13	-1.5	20.63	115.61	1

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	24.21	-1.5	22.71	186.64	1
132322	1745	24.05	-1.5	22.55	179.89	1
132647	1777.5	23.9	-1.5	22.4	173.78	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	22.98	-1.5	21.48	140.6	1
132322	1745	22.92	-1.5	21.42	138.68	1
132647	1777.5	22.78	-1.5	21.28	134.28	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	21.95	-1.5	20.45	110.92	1
132322	1745	21.96	-1.5	20.46	111.17	1
132647	1777.5	22.11	-1.5	20.61	115.08	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	24.18	-1.5	22.68	185.35	1
132322	1745	24.14	-1.5	22.64	183.65	1
132622	1775	23.9	-1.5	22.4	173.78	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	22.92	-1.5	21.42	138.68	1
132322	1745	22.93	-1.5	21.43	139	1
132622	1775	22.83	-1.5	21.33	135.83	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	21.96	-1.5	20.46	111.17	1
132322	1745	21.87	-1.5	20.37	108.89	1
132622	1775	22.12	-1.5	20.62	115.35	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	24.12	-1.5	22.62	182.81	1
132322	1745	24.1	-1.5	22.6	181.97	1
132597	1772.5	23.84	-1.5	22.34	171.4	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	22.92	-1.5	21.42	138.68	1
132322	1745	22.85	-1.5	21.35	136.46	1
132597	1772.5	22.75	-1.5	21.25	133.35	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	22	-1.5	20.5	112.2	1
132322	1745	21.98	-1.5	20.48	111.69	1
132597	1772.5	22.06	-1.5	20.56	113.76	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	24.236	-1.5	22.736	187.76	1
132322	1745	24.26	-1.5	22.76	188.8	1
132572	1770	24.22	-1.5	22.72	187.07	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	23.34	-1.5	21.84	152.76	1
132322	1745	23.35	-1.5	21.85	153.11	1
132572	1770	23.32	-1.5	21.82	152.05	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	22.44	-1.5	20.94	124.17	1
132322	1745	22.45	-1.5	20.95	124.45	1
132572	1770	22.41	-1.5	20.91	123.31	1

REMARKS: EIRP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

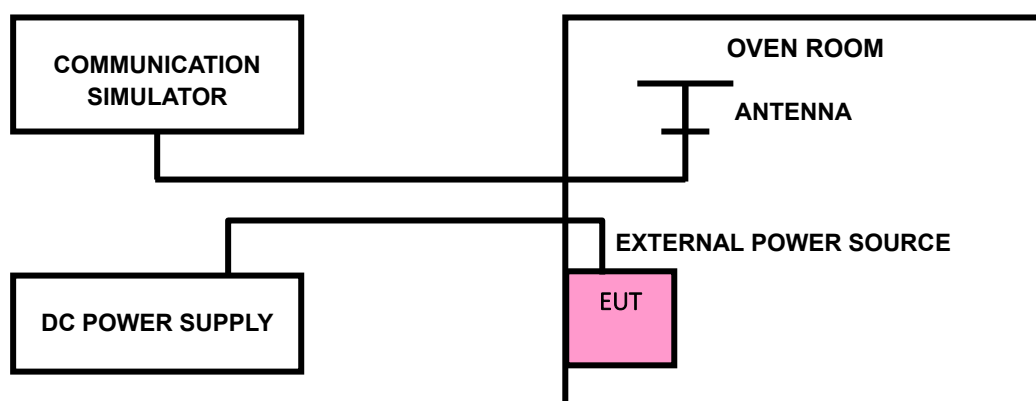
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- The device is placed in the oven room. The oven room could control the temperatures and humidity. Power warms up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be recording the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be holding $\pm 0.5^{\circ}\text{C}$ during the measurement testing. Each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP





Test Report No.: W7L-P24050016RF08

3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

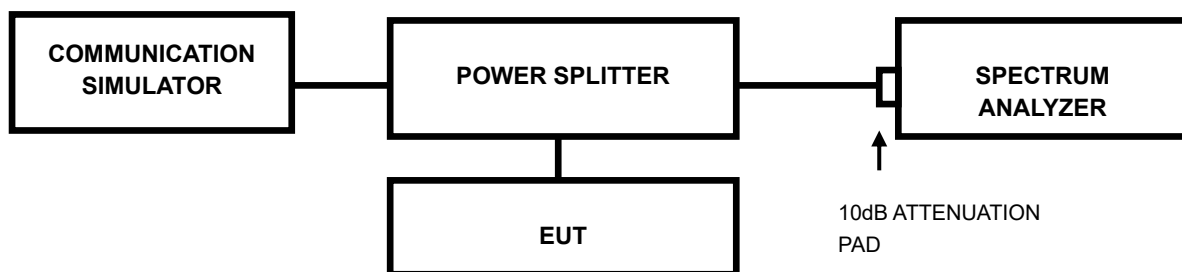
Note: LV = Low voltage (3.6V); NV = Normal voltage (3.84V); HV= High voltage (4.4V).
NT = Normal temperature (25°C)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band is such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage. 0.5 % of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.



Test Report No.: W7L-P24050016RF08

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

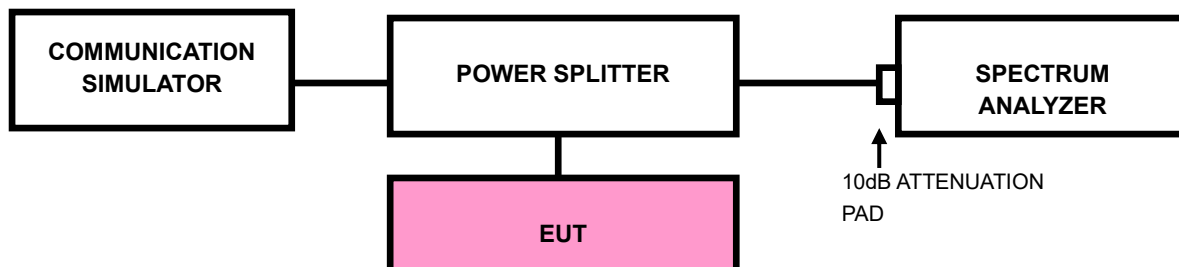
3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC Part 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 1-megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC Part 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

- a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
- c) Set the resolution bandwidth (RBW) $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- e) Set the video bandwidth (VBW) to $\geq 3 \times$ RBW.
- f) Select the average power (RMS) display detector.
- g) Set the number of measurement points to ≥ 1001 .
- h) Use auto-coupled sweep time.
- i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 30/100KHz.
- k) Record the max trace plot into the test report.



Test Report No.: W7L-P24050016RF08

3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit is equal to -13dBm .

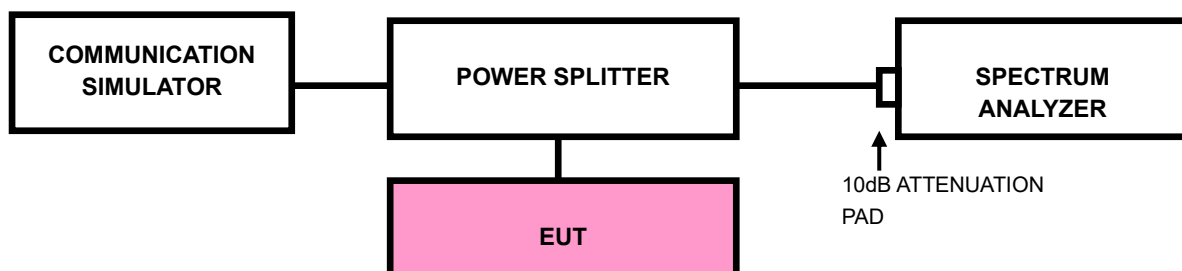
For: Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle, and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

3.5.3 TEST SETUP





Test Report No.: W7L-P24050016RF08

3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit is equal to -13dBm .

For: Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.6.2 TEST PROCEDURES

- a. The substitute method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G.
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

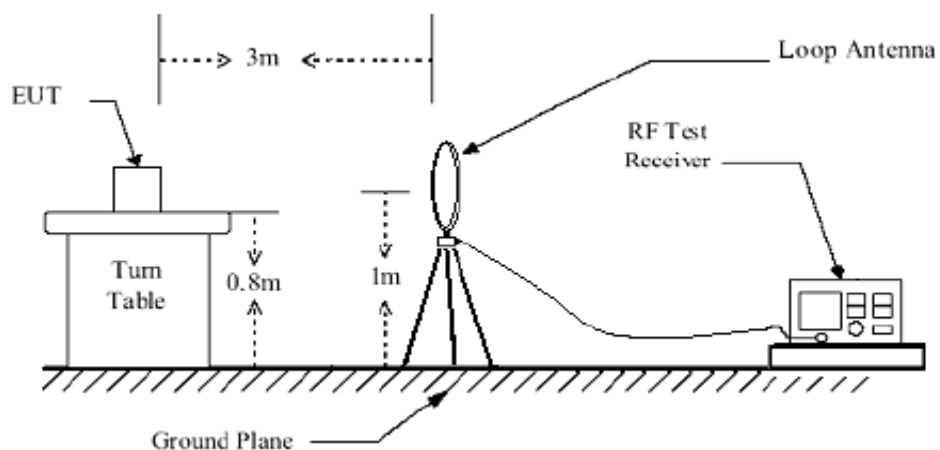
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

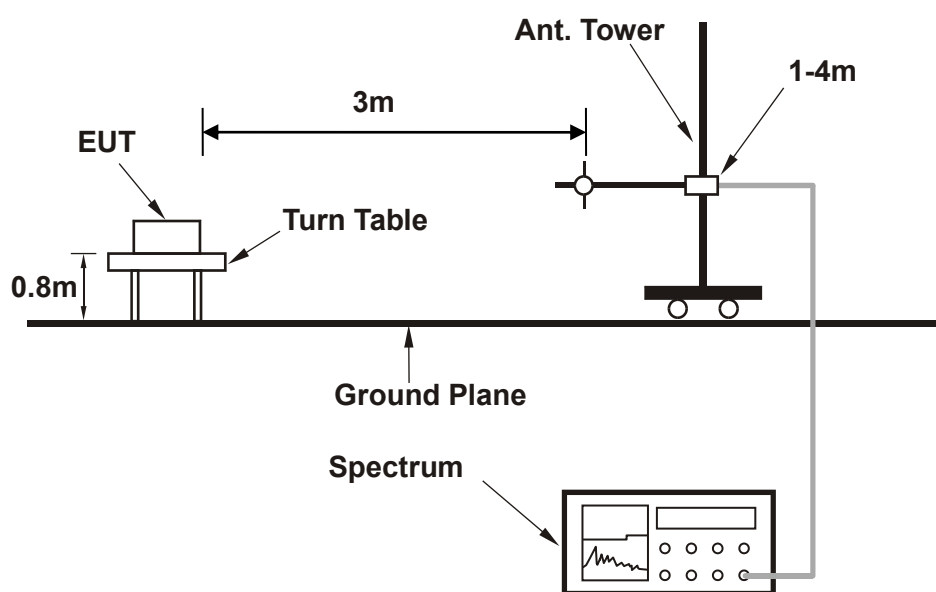
No deviation

3.6.4 TEST SETUP

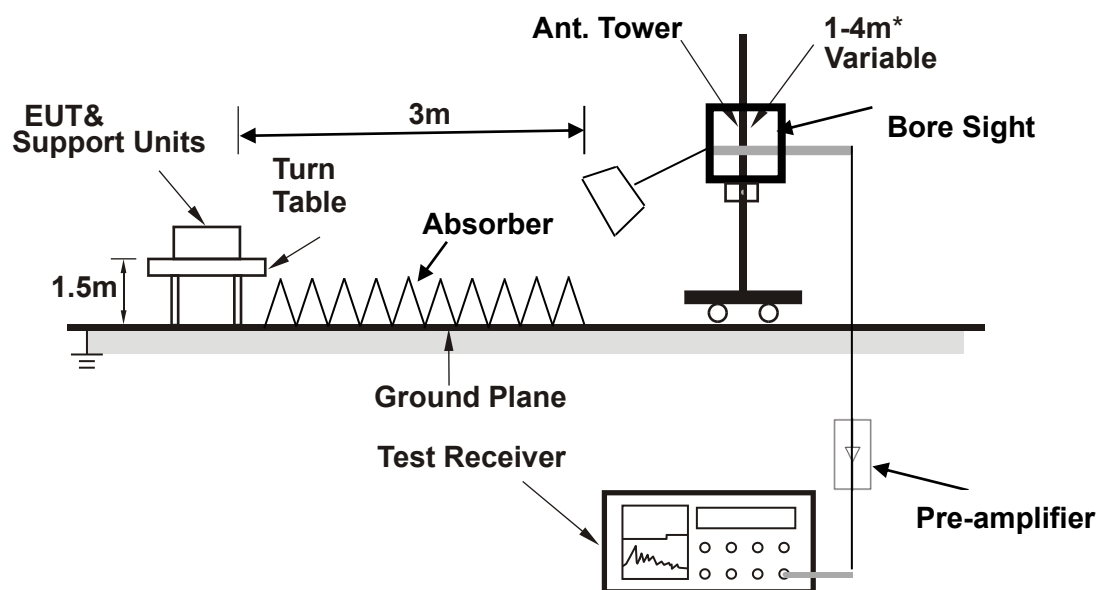
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

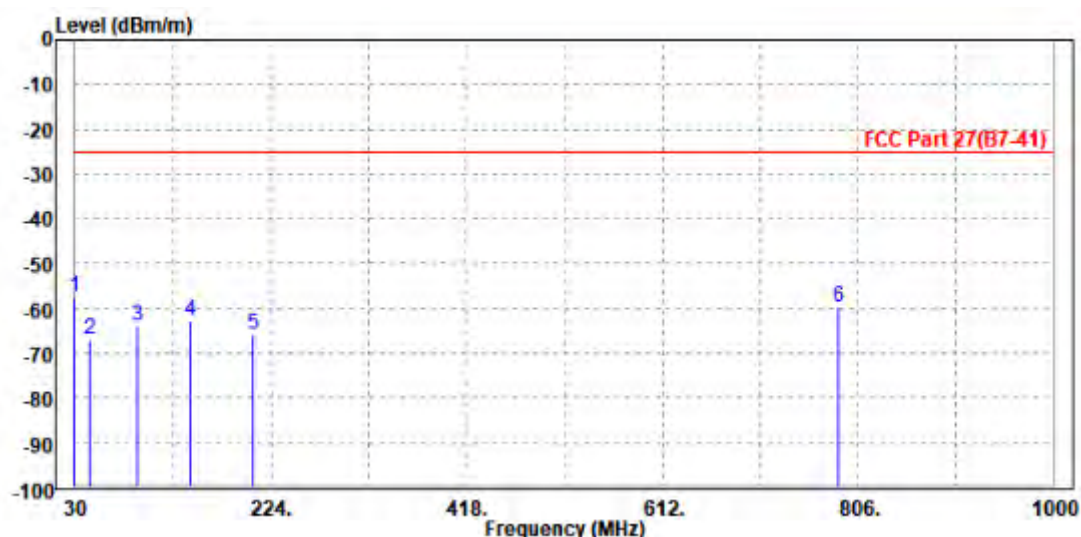
30 MHz – 1GHz data:

LTE Band 41(Ant0) (UP):

CHANNEL BANDWIDTH: 10MHz / QPSK

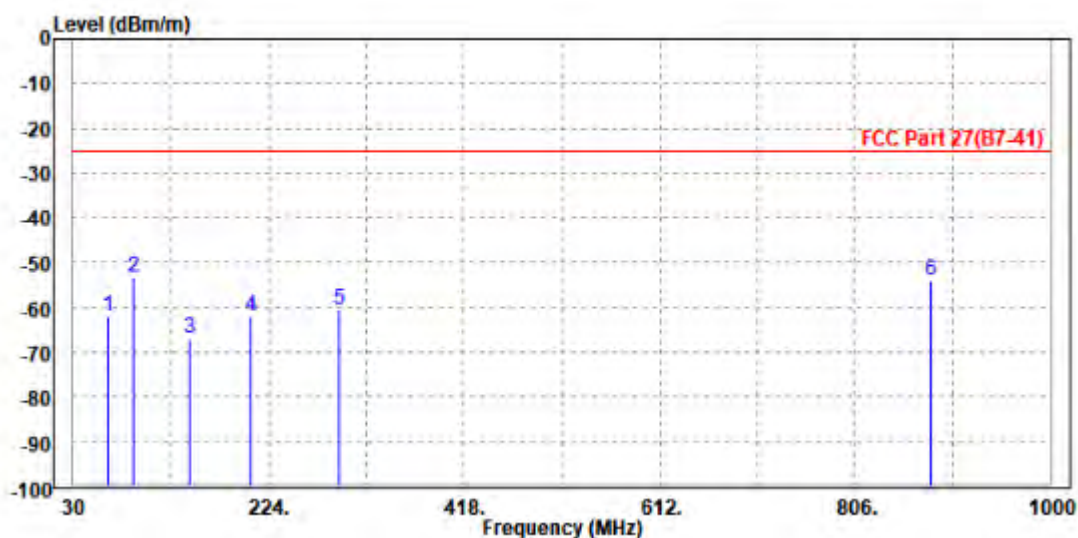
MODE	TX channel 40620	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	30.000	-57.46	-55.48	-25.00	-32.46	-1.98	Peak	Horizontal
2	43.580	-66.82	-58.03	-25.00	-41.82	-8.79	Peak	Horizontal
3	91.110	-64.06	-51.30	-25.00	-39.06	-12.76	Peak	Horizontal
4	144.460	-62.66	-47.97	-25.00	-37.66	-14.69	Peak	Horizontal
5	205.570	-65.69	-50.79	-25.00	-40.69	-14.90	Peak	Horizontal
6	786.600	-59.61	-64.69	-25.00	-34.61	5.08	Peak	Horizontal



MODE	TX channel 40620	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	64.920	-61.93	-42.54	-25.00	-36.93	-19.39	Peak	Vertical
2 PP	90.140	-53.06	-35.69	-25.00	-28.06	-17.37	Peak	Vertical
3	145.430	-66.85	-52.95	-25.00	-41.85	-13.90	Peak	Vertical
4	205.570	-62.06	-53.49	-25.00	-37.06	-8.57	Peak	Vertical
5	294.810	-60.40	-56.96	-25.00	-35.40	-3.44	Peak	Vertical
6	880.690	-53.81	-64.57	-25.00	-28.81	10.76	Peak	Vertical





Test Report No.: W7L-P24050016RF08

ABOVE 1GHz

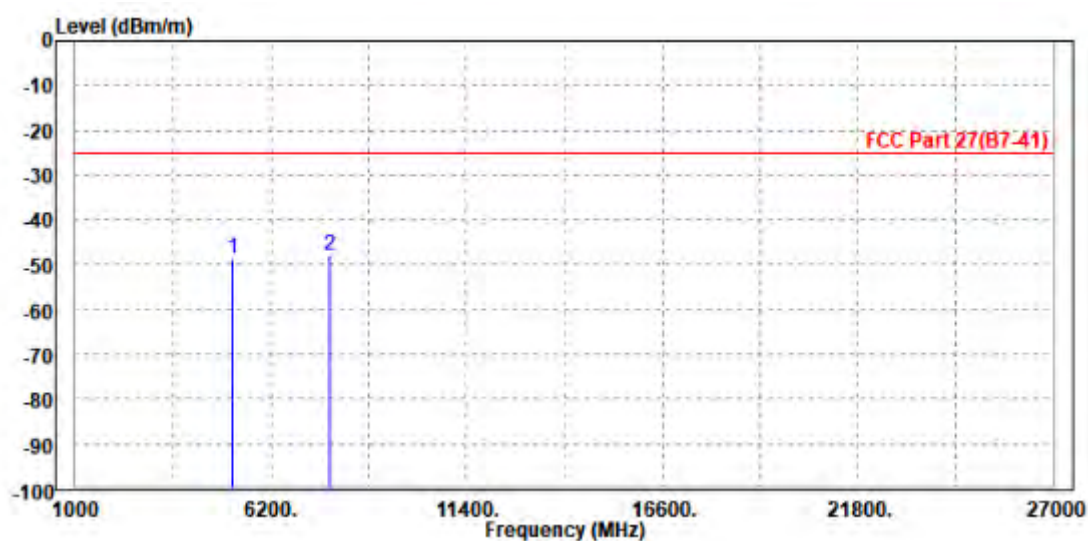
Note: For higher frequency, the emission is too low to be detected.

LTE BAND 41(Ant0) (UP):

CHANNEL BANDWIDTH: 5MHz / QPSK

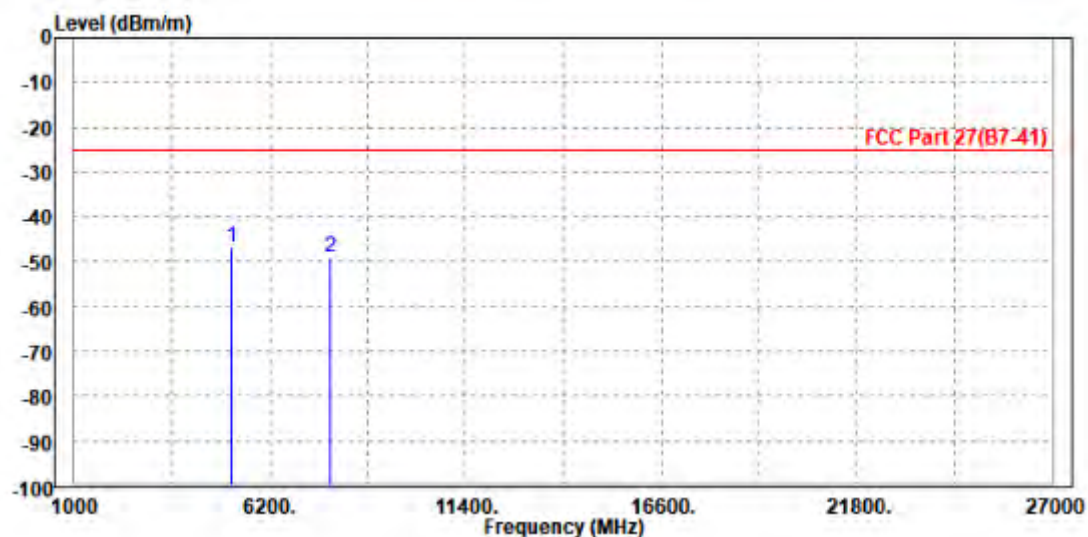
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5186.000	-48.62	-59.96	-25.00	-23.62	11.34	Peak	Horizontal
2 PP	7779.000	-47.87	-62.69	-25.00	-22.87	14.82	Peak	Horizontal



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-46.95	-58.68	-25.00	-21.95	11.73	Peak	Vertical
2		7786.000	-48.91	-63.17	-25.00	-23.91	14.26	Peak	Vertical





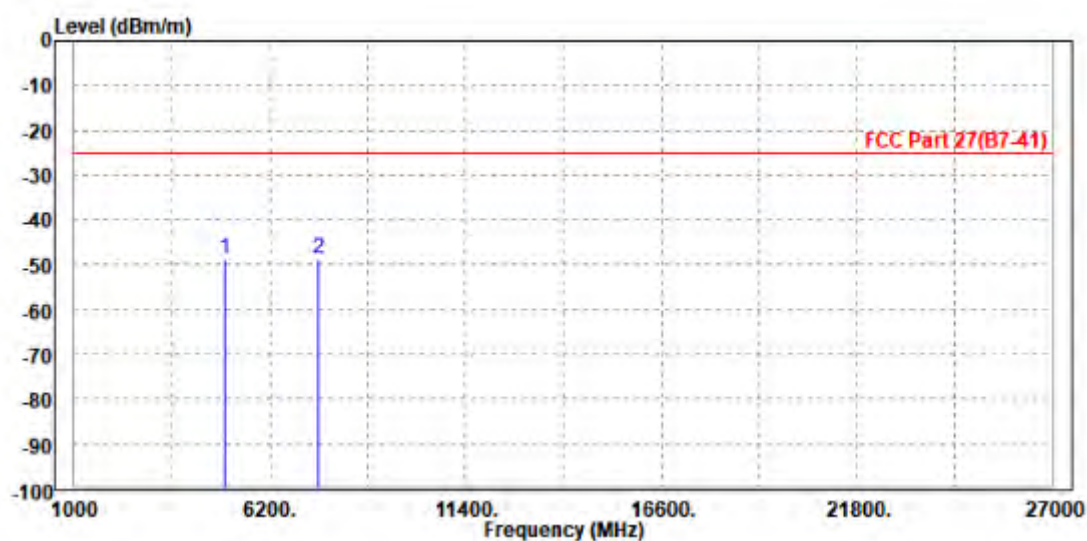
Test Report No.: W7L-P24050016RF08

CHANNEL BANDWIDTH: 10MHz / QPSK

CH39700

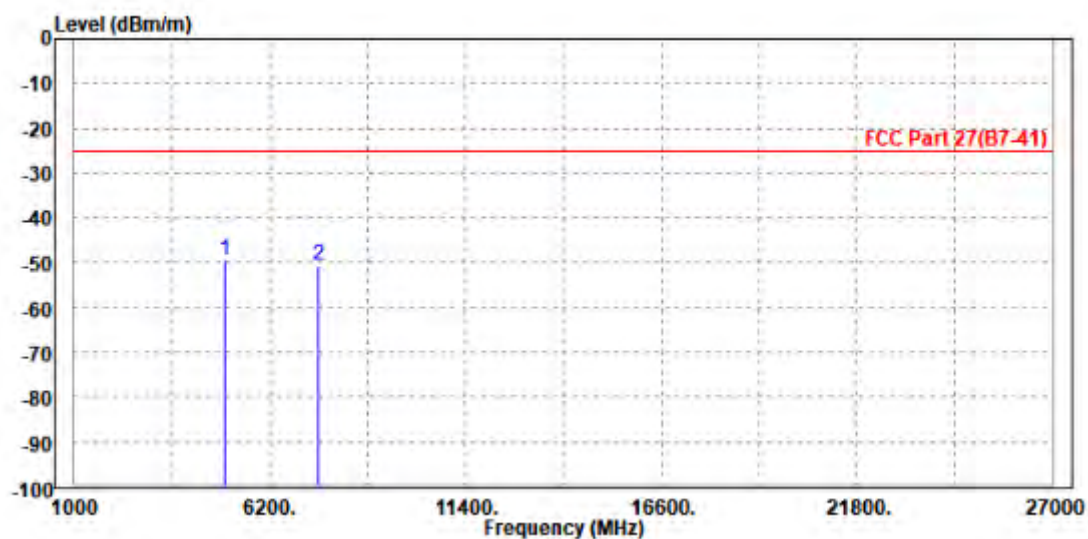
MODE	TX channel 39700	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5002.000	-48.51	-59.57	-25.00	-23.51	11.06	Peak	Horizontal
2	7503.000	-48.78	-63.13	-25.00	-23.78	14.35	Peak	Horizontal



MODE	TX channel 39700	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5002.000	-49.42	-60.79	-25.00	-24.42	11.37	Peak	Vertical
2	7500.000	-50.53	-63.55	-25.00	-25.53	13.02	Peak	Vertical





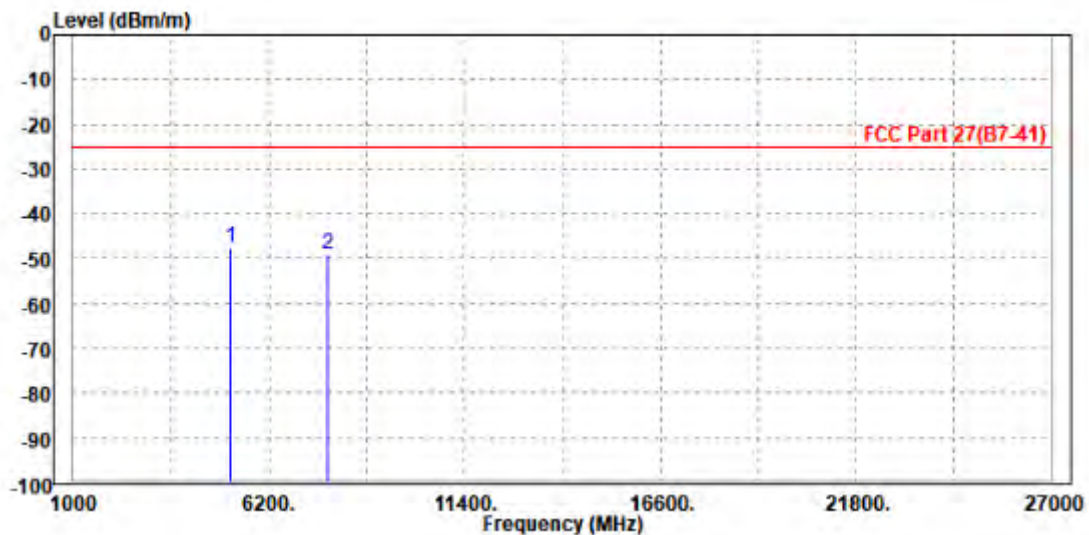
BUREAU
VERITAS

Test Report No.: W7L-P24050016RF08

CH40620

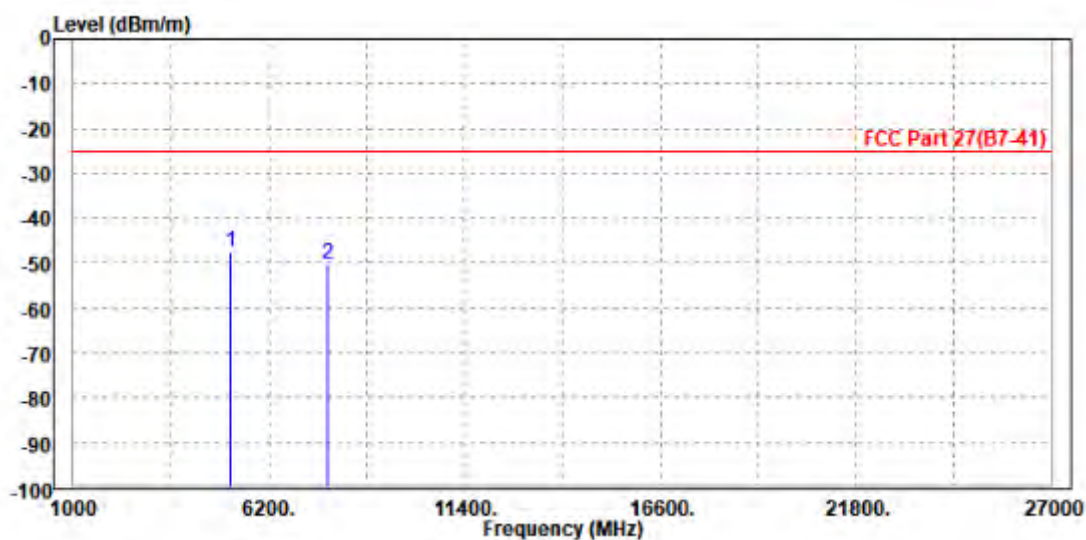
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-47.47	-58.81	-25.00	-22.47	11.34	Peak	Horizontal
2		7779.000	-49.02	-63.84	-25.00	-24.02	14.82	Peak	Horizontal



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

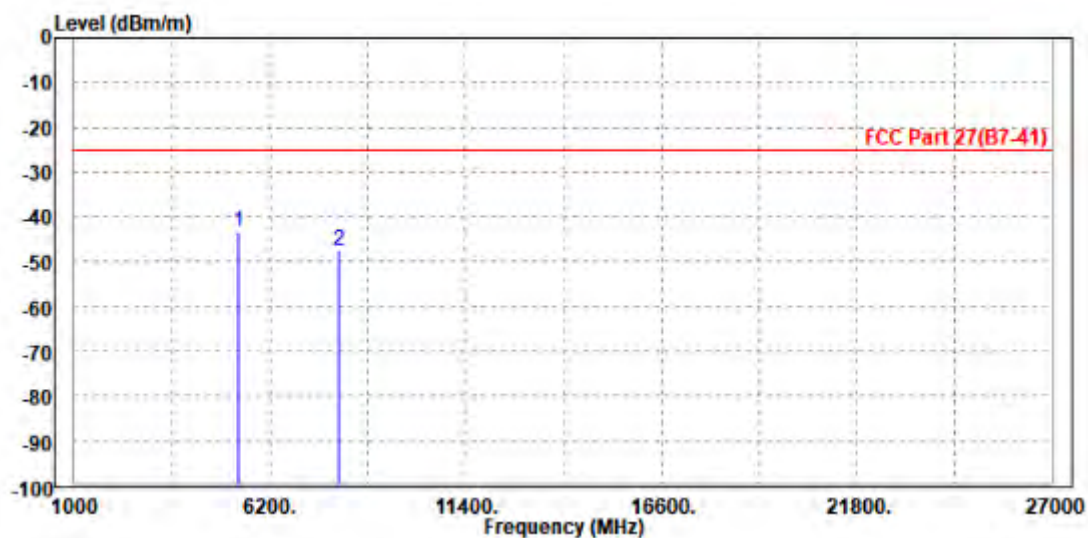
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-47.59	-59.32	-25.00	-22.59	11.73	Peak	Vertical
2		7779.000	-50.16	-64.39	-25.00	-25.16	14.23	Peak	Vertical



CH41540

MODE	TX channel 41540	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5370.000	-43.23	-54.84	-25.00	-18.23	11.61	Peak	Horizontal
2	8046.000	-47.58	-62.86	-25.00	-22.58	15.28	Peak	Horizontal

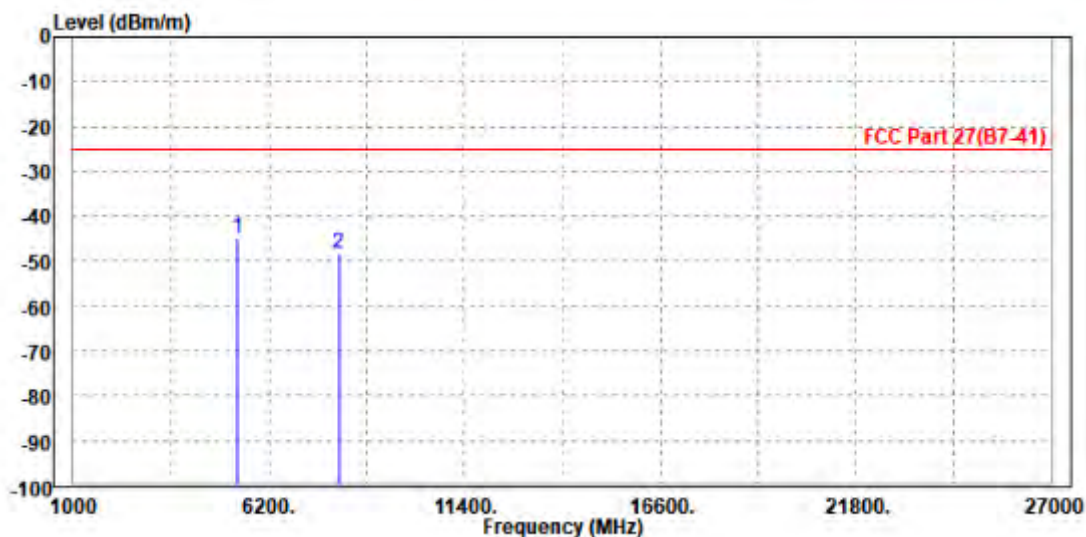




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MODE	TX channel 41540	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

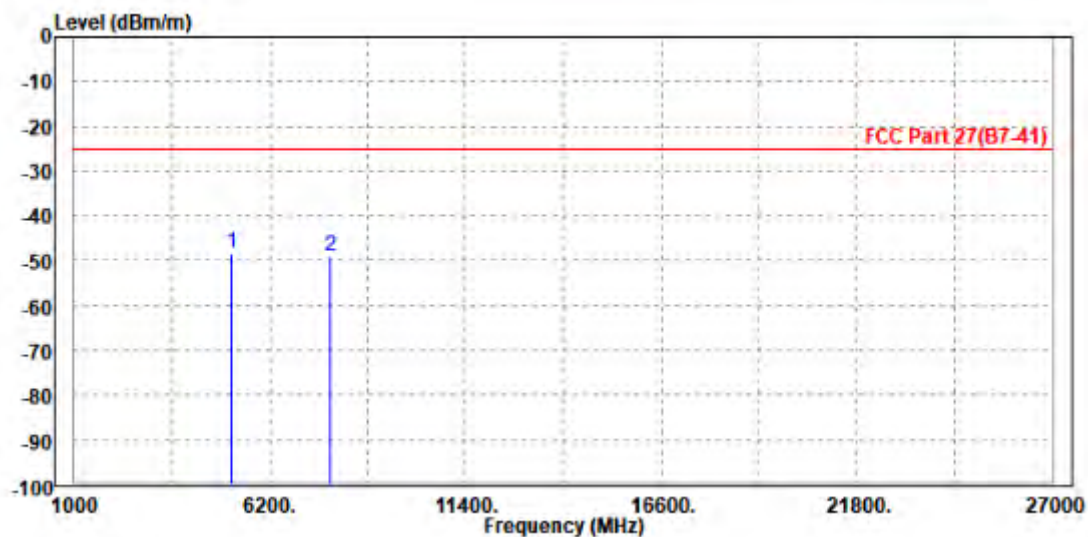
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5368.000	-44.76	-56.84	-25.00	-19.76	12.08	Peak	Vertical
2		8055.000	-48.26	-63.64	-25.00	-23.26	15.38	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

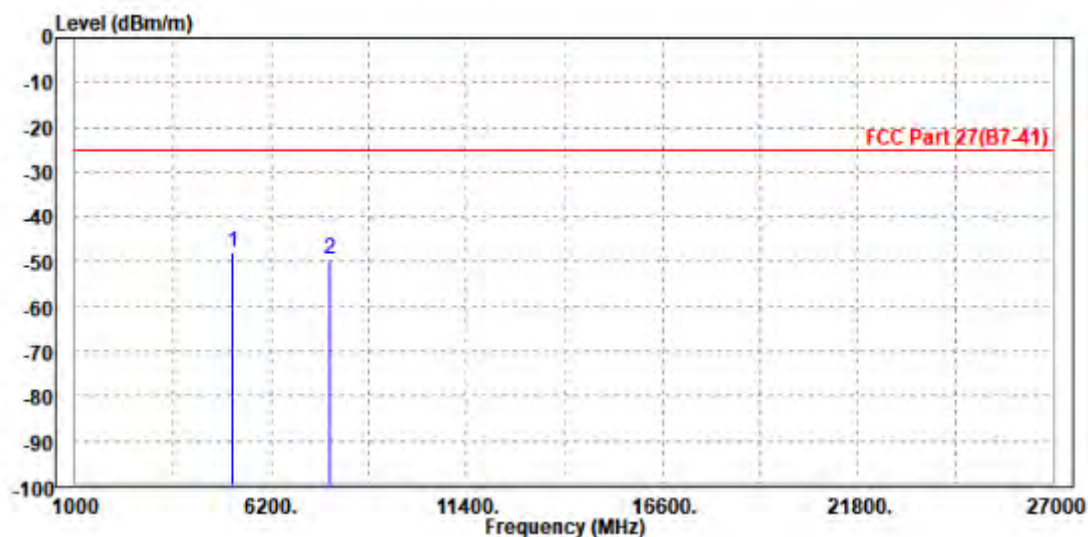
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5186.000	-48.24	-59.58	-25.00	-23.24	11.34	Peak	Horizontal
2	7786.000	-49.08	-63.91	-25.00	-24.08	14.83	Peak	Horizontal



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

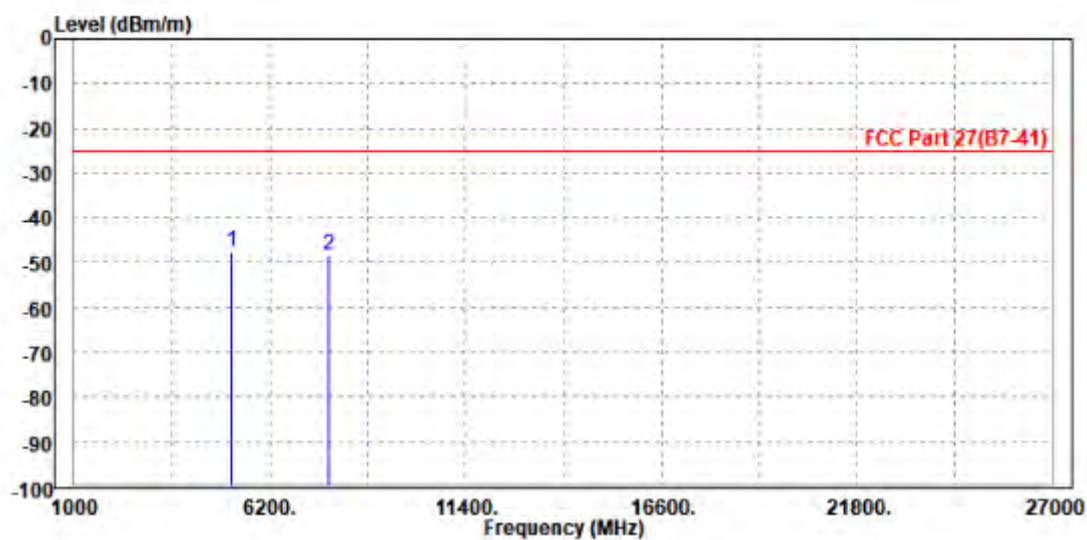
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-47.88	-59.61	-25.00	-22.88	11.73	Peak	Vertical
2		7779.000	-49.37	-63.60	-25.00	-24.37	14.23	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

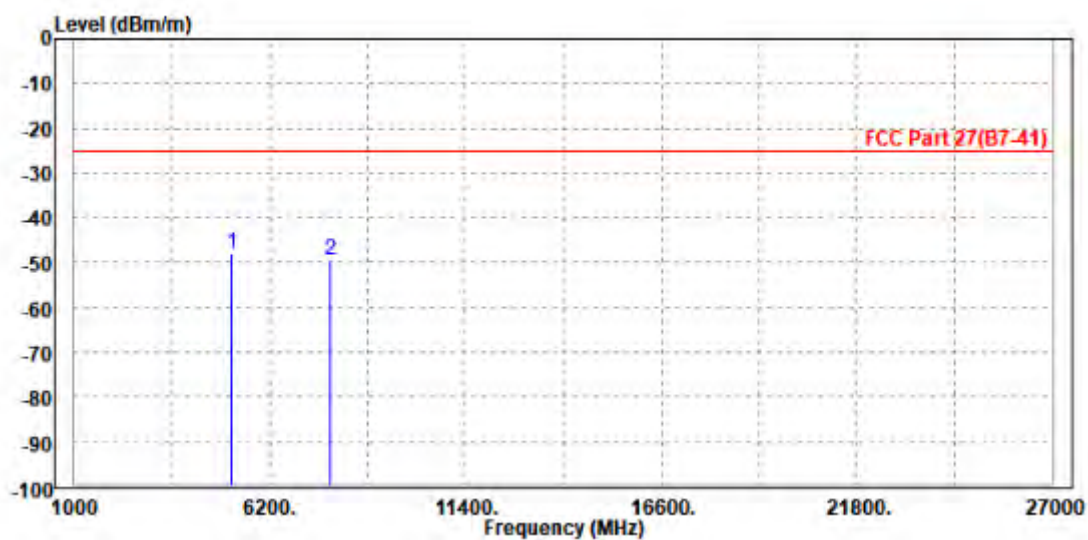
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-47.48	-58.82	-25.00	-22.48	11.34	Peak	Horizontal
2		7779.000	-48.47	-63.29	-25.00	-23.47	14.82	Peak	Horizontal



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5186.000	-47.88	-59.61	-25.00	-22.88	11.73	Peak	Vertical
2	7786.000	-49.40	-63.66	-25.00	-24.40	14.26	Peak	Vertical

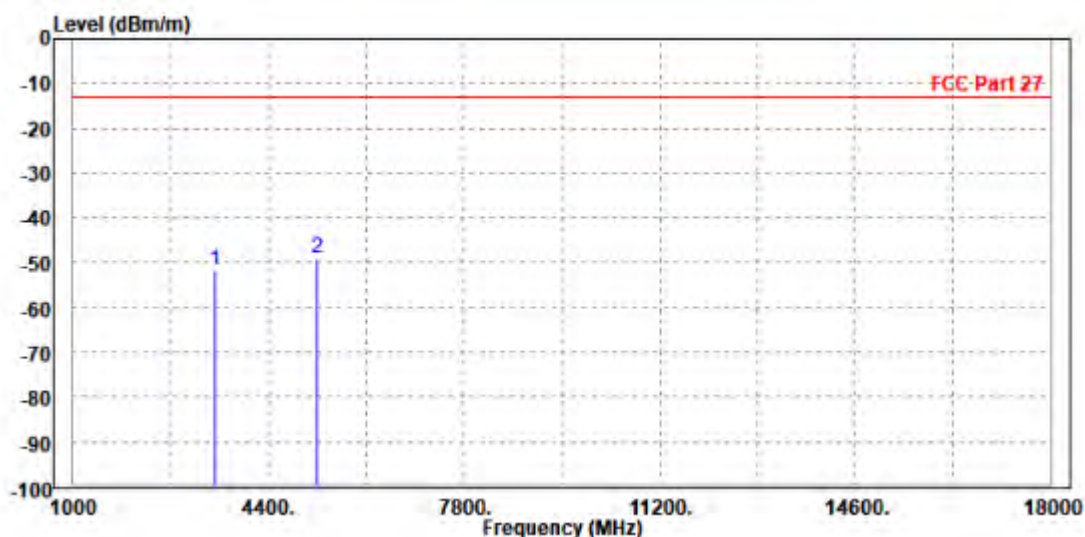


LTE B66(Ant1) (DOWN):

CHANNEL BANDWIDTH: 1.4MHz / QPSK

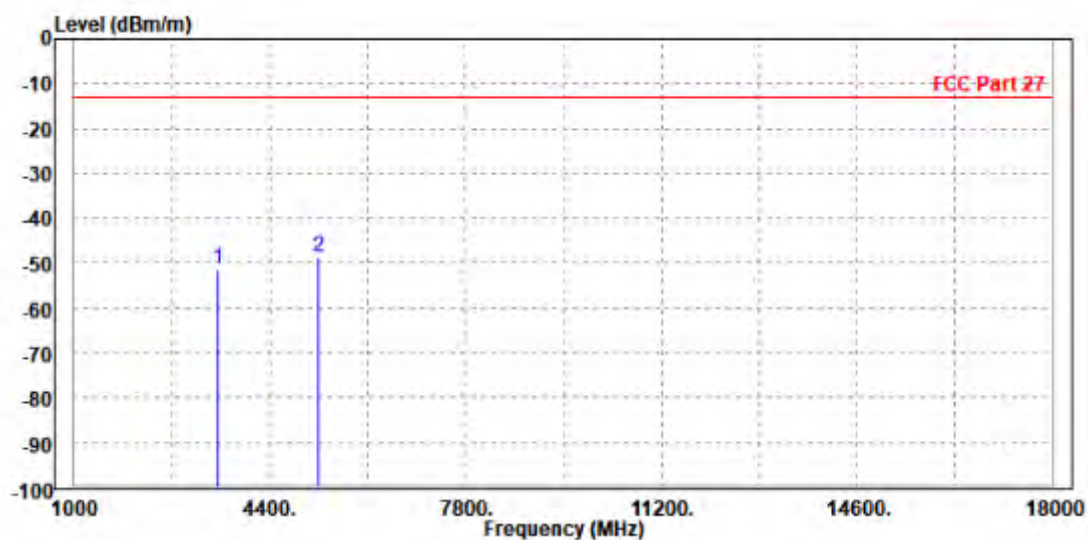
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.53	-60.08	-13.00	-38.53	8.55	Peak	Horizontal
2	PP 5235.000	-49.13	-60.54	-13.00	-36.13	11.41	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-51.31	-59.95	-13.00	-38.31	8.64	Peak	Vertical
2 PP	5233.000	-48.66	-60.48	-13.00	-35.66	11.82	Peak	Vertical



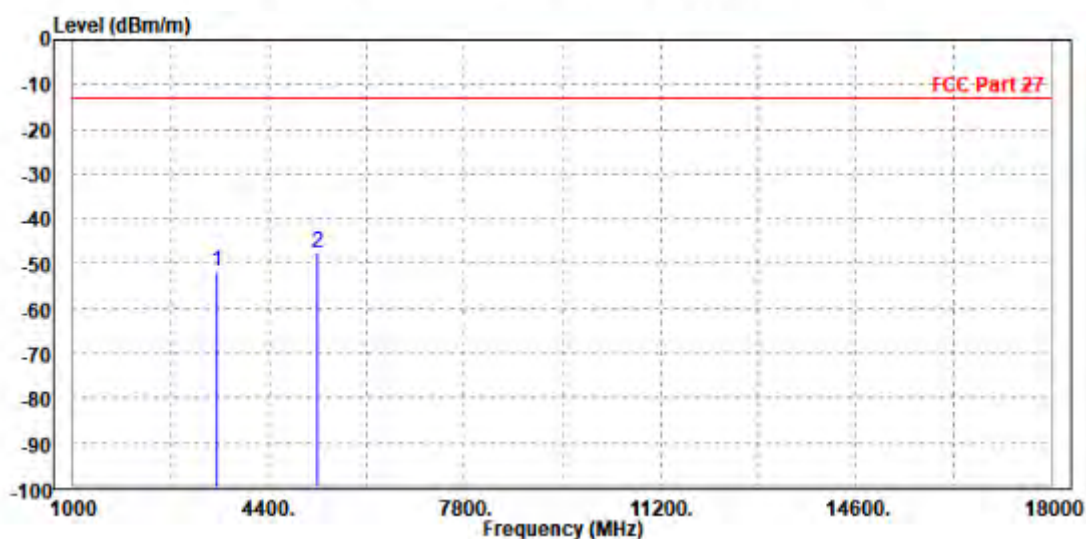


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CHANNEL BANDWIDTH: 3MHz / QPSK

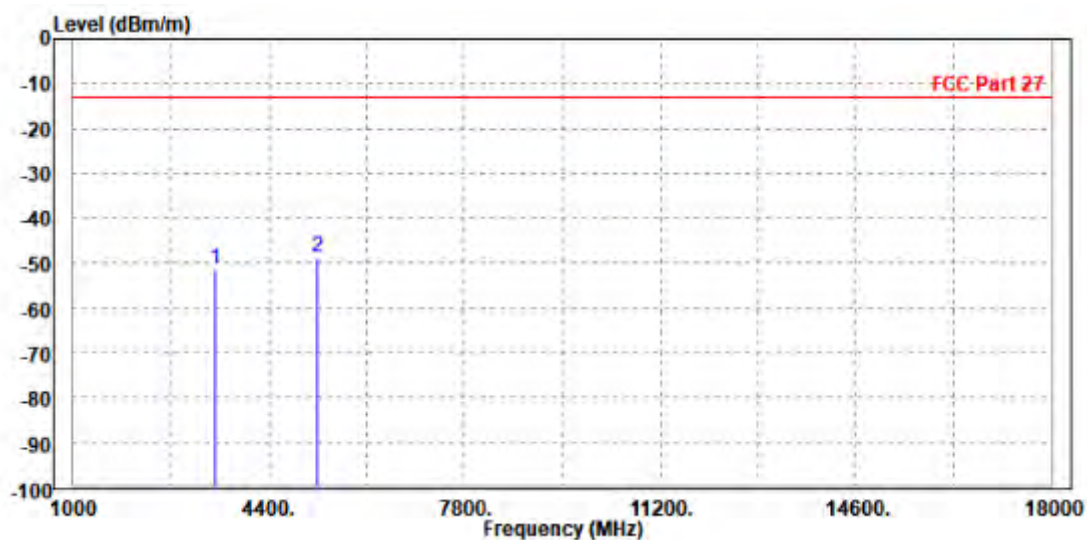
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-51.57	-60.12	-13.00	-38.57	8.55	Peak	Horizontal
2 PP	5233.000	-47.72	-59.12	-13.00	-34.72	11.40	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.29	-59.94	-13.00	-38.29	8.65	Peak	Vertical
2 PP	5235.000	-48.57	-60.40	-13.00	-35.57	11.83	Peak	Vertical



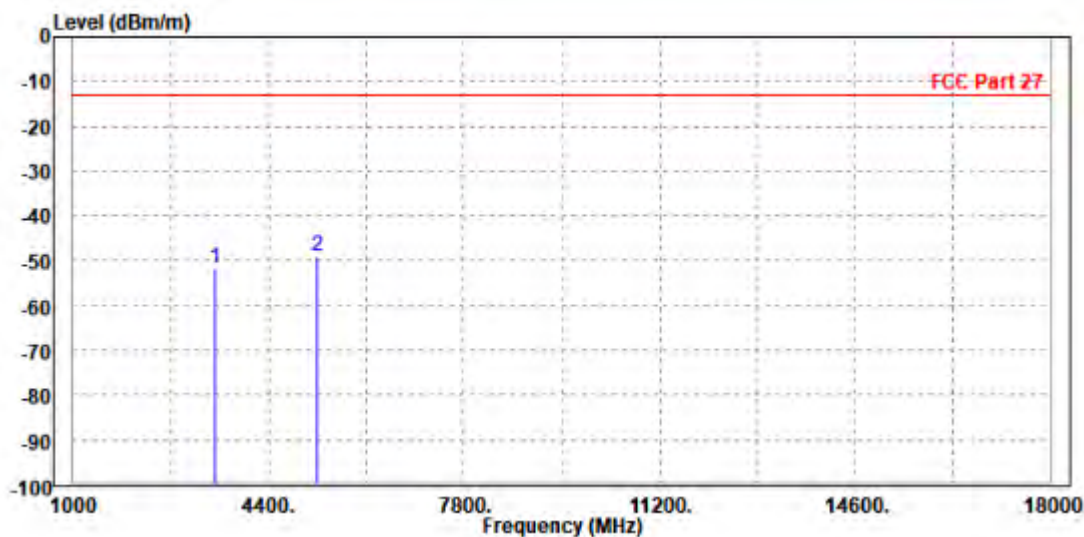


Test Report No.: W7L-P24050016RF08

CHANNEL BANDWIDTH: 5MHz / QPSK

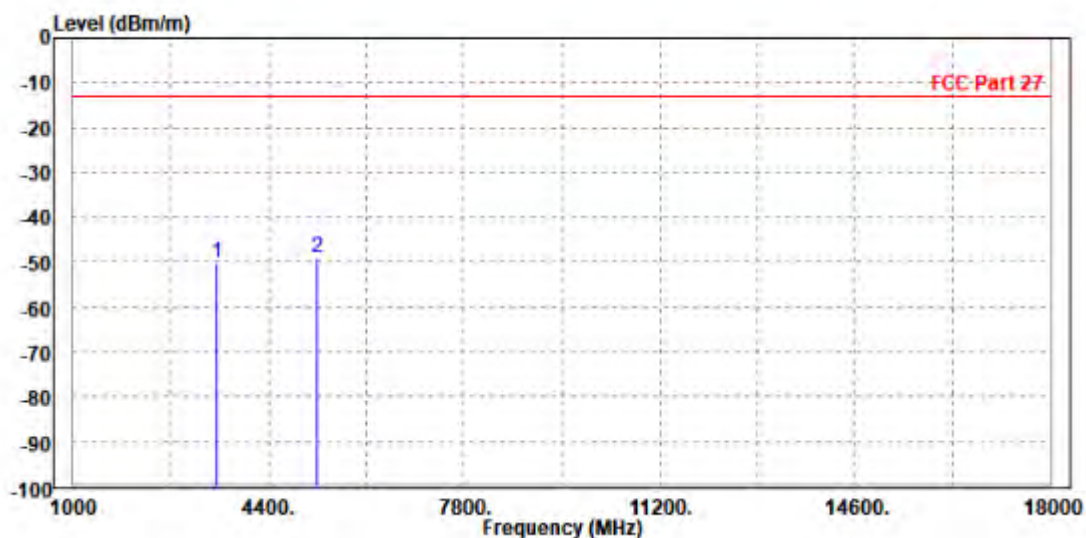
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.58	-60.13	-13.00	-38.58	8.55	Peak	Horizontal
2 PP	5235.000	-49.16	-60.57	-13.00	-36.16	11.41	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

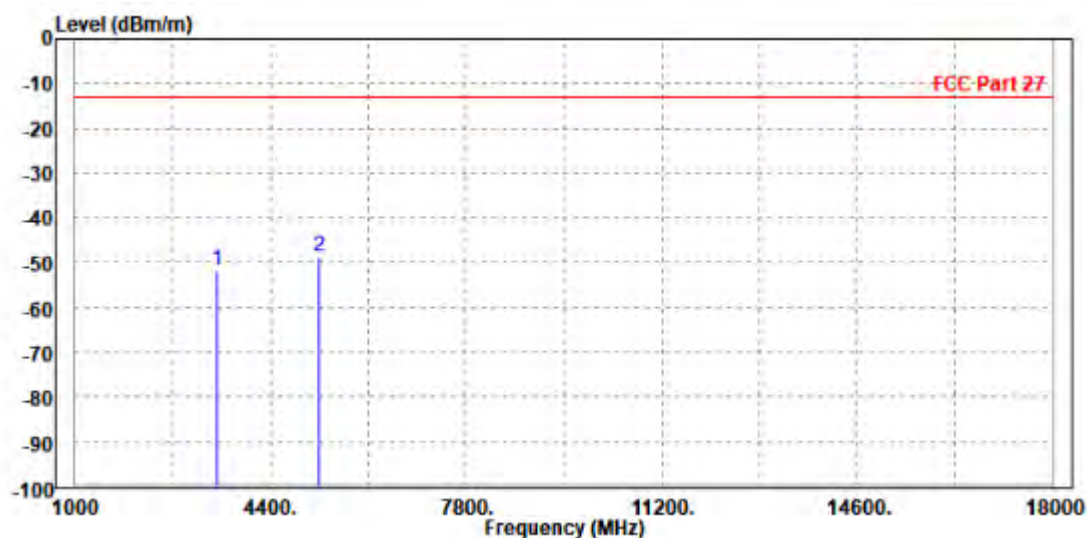
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-50.19	-58.83	-13.00	-37.19	8.64	Peak	Vertical
2 PP	5233.000	-48.94	-60.76	-13.00	-35.94	11.82	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

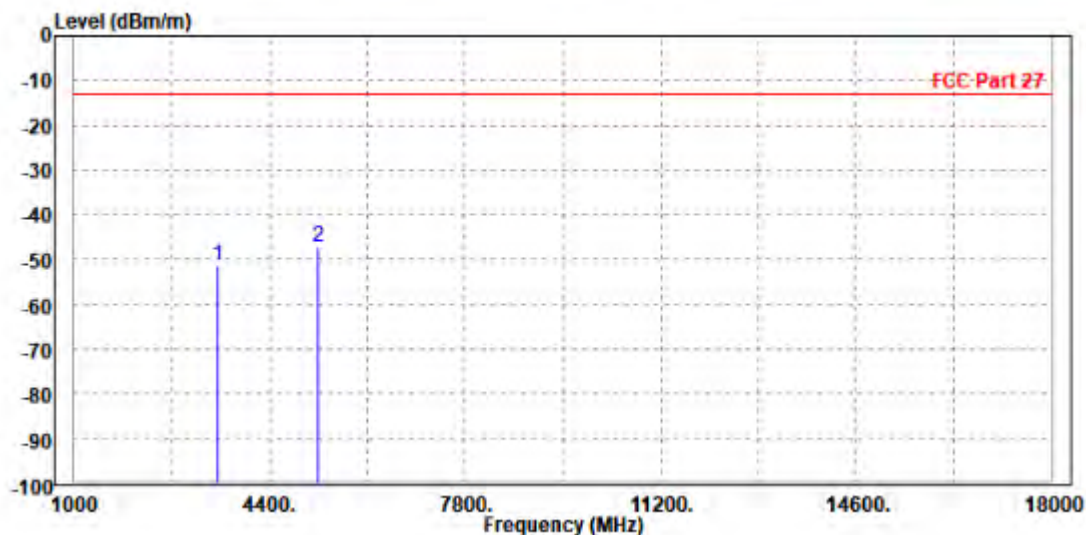
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.58	-60.13	-13.00	-38.58	8.55	Peak	Horizontal
2 PP	5235.000	-48.81	-60.22	-13.00	-35.81	11.41	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

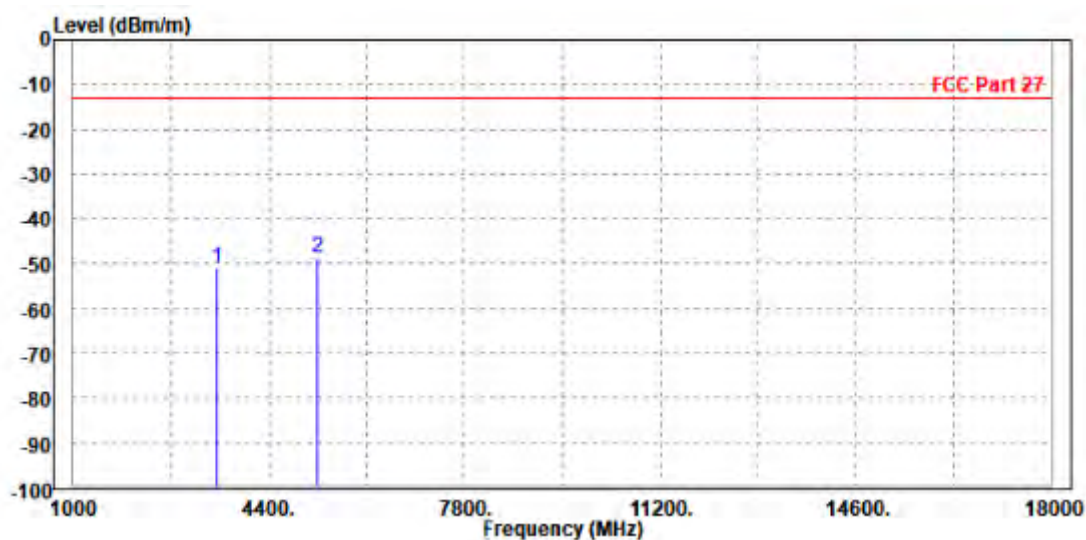
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-51.31	-59.95	-13.00	-38.31	8.64	Peak	Vertical
2 PP	5233.000	-47.21	-59.03	-13.00	-34.21	11.82	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

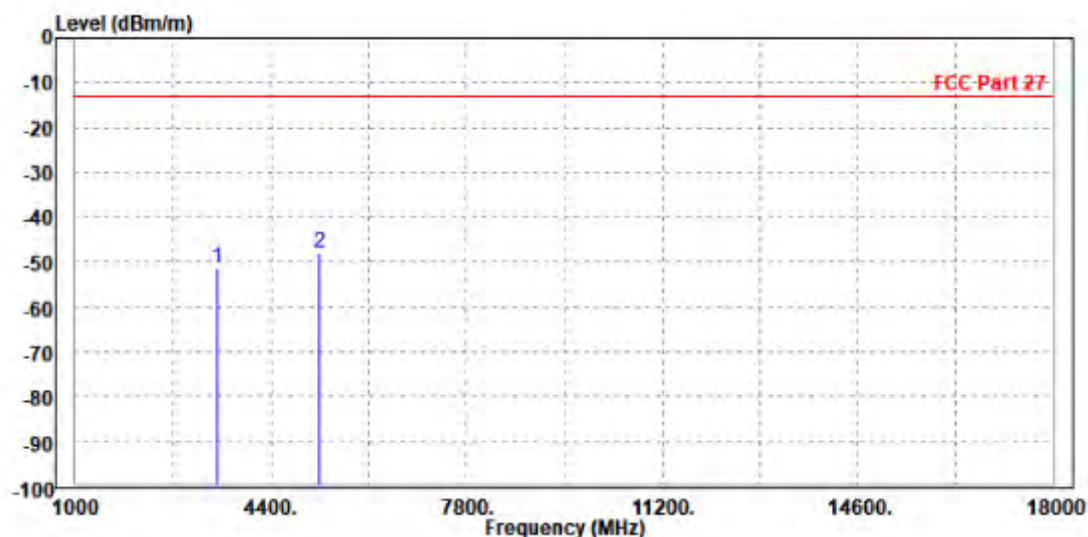
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-50.99	-59.54	-13.00	-37.99	8.55	Peak	Horizontal
2 PP	5233.000	-48.56	-59.96	-13.00	-35.56	11.40	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.27	-59.92	-13.00	-38.27	8.65	Peak	Vertical
2 PP	5235.000	-47.81	-59.64	-13.00	-34.81	11.83	Peak	Vertical

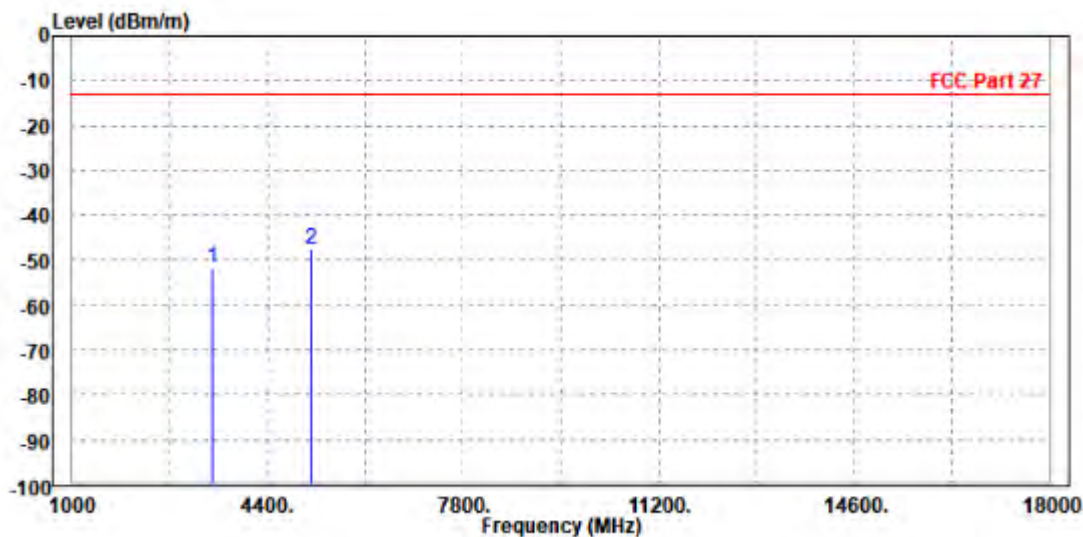


CHANNEL BANDWIDTH: 20MHz / QPSK

CH132072

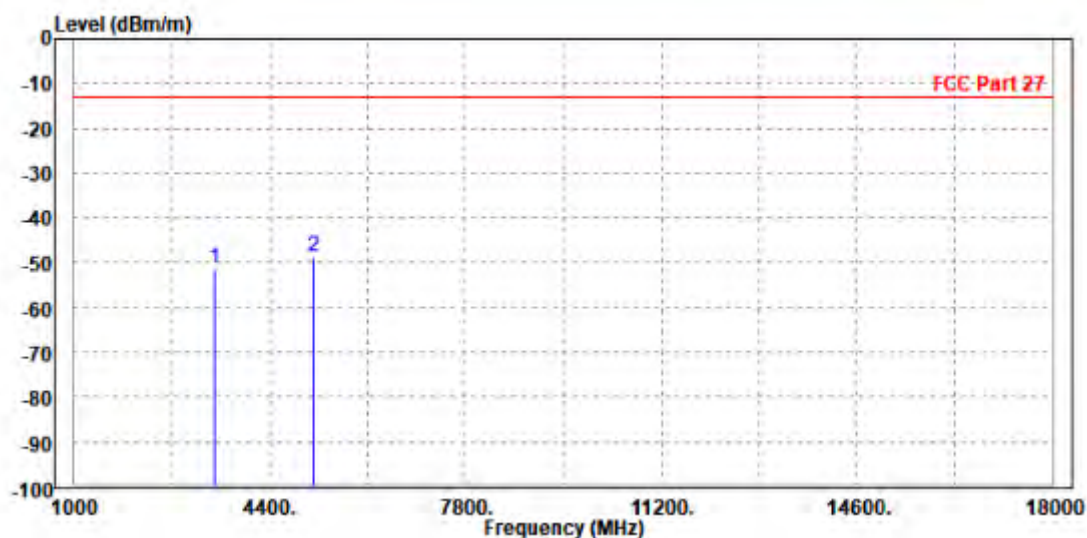
MODE	TX channel 132072	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3440.000	-51.59	-60.11	-13.00	-38.59	8.52	Peak	Horizontal
2 PP	5165.000	-47.61	-58.91	-13.00	-34.61	11.30	Peak	Horizontal



MODE	TX channel 132072	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3448.000	-51.26	-59.92	-13.00	-38.26	8.66	Peak	Vertical
2 PP	5160.000	-48.65	-60.33	-13.00	-35.65	11.68	Peak	Vertical



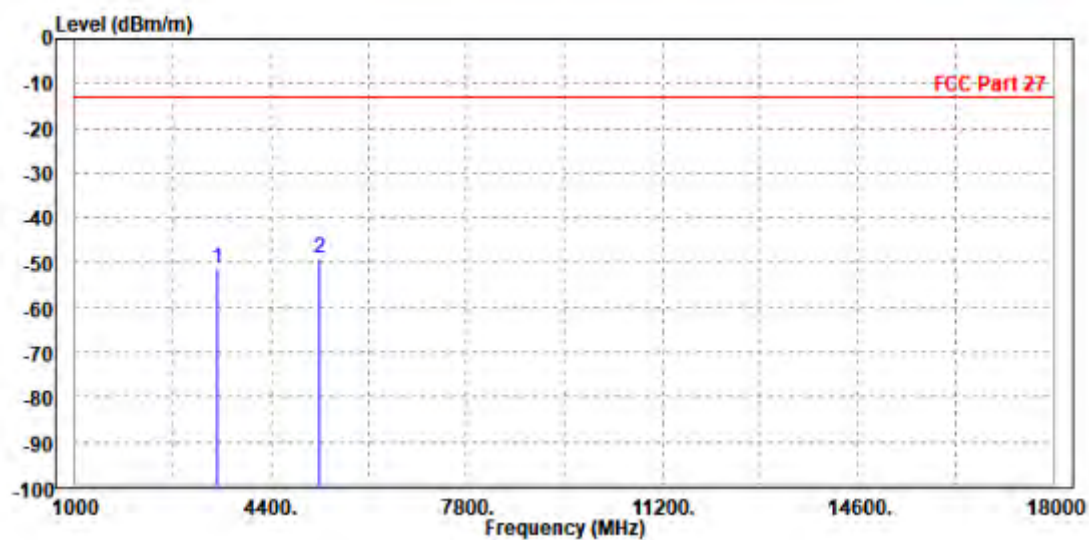


Test Report No.: W7L-P24050016RF08

CH132322

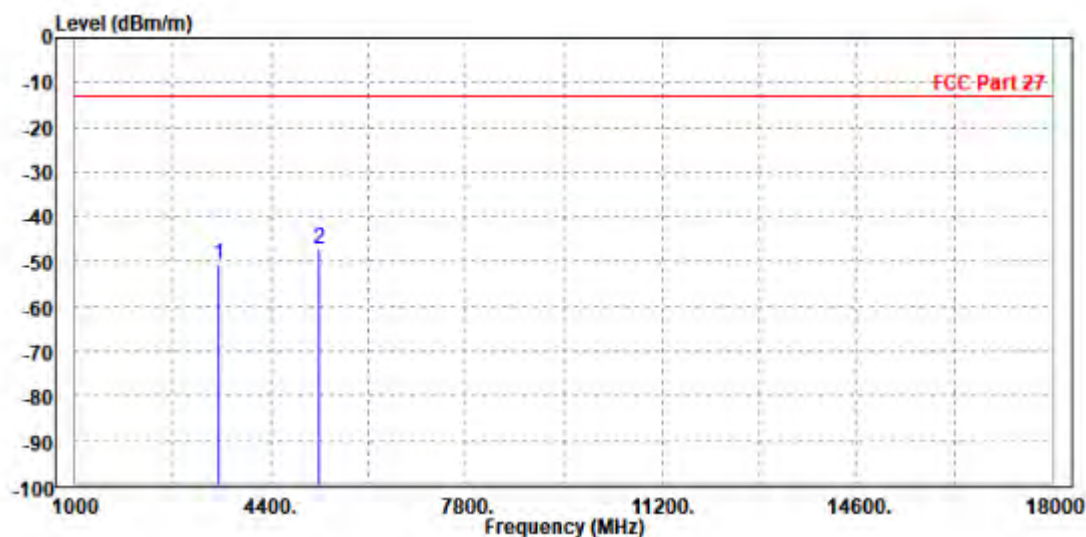
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3482.000	-51.15	-59.70	-13.00	-38.15	8.55	Peak	Horizontal
2 PP	5235.000	-49.06	-60.47	-13.00	-36.06	11.41	Peak	Horizontal



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

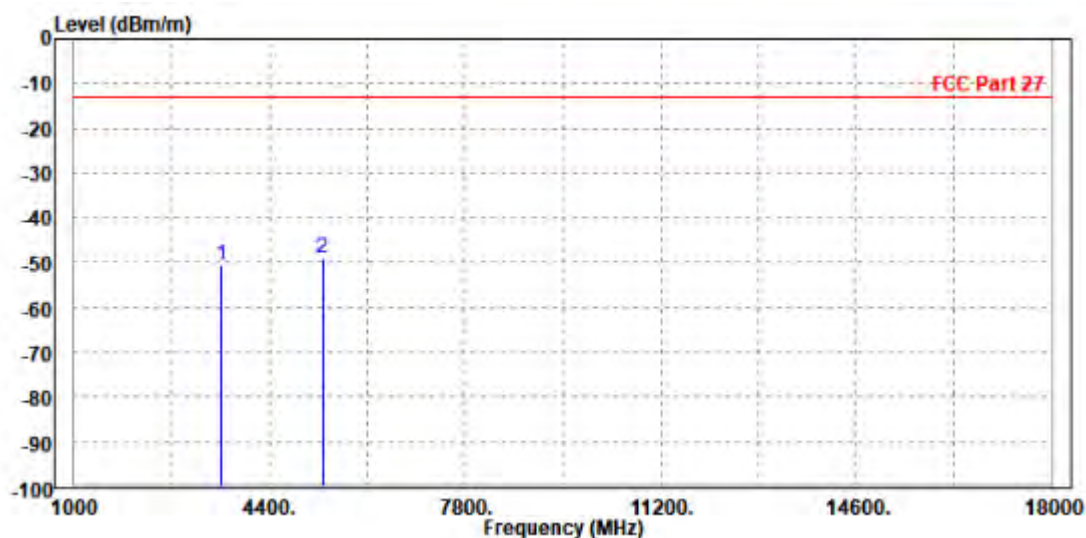
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3490.000	-50.71	-59.35	-13.00	-37.71	8.64	Peak	Vertical
2 PP	5233.000	-47.01	-58.83	-13.00	-34.01	11.82	Peak	Vertical



CH132572

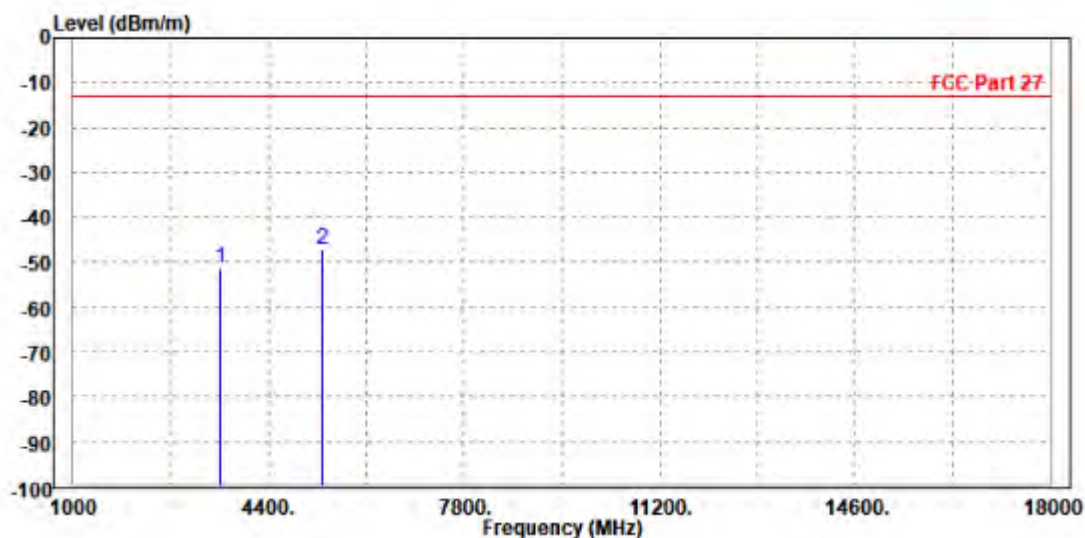
MODE	TX channel 132572	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3550.000	-50.62	-59.14	-13.00	-37.62	8.52	Peak	Horizontal
2 PP	5317.500	-48.96	-60.49	-13.00	-35.96	11.53	Peak	Horizontal



MODE	TX channel 132572	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3545.000	-51.39	-60.03	-13.00	-38.39	8.64	Peak	Vertical
2 PP	5318.000	-46.97	-58.96	-13.00	-33.97	11.99	Peak	Vertical

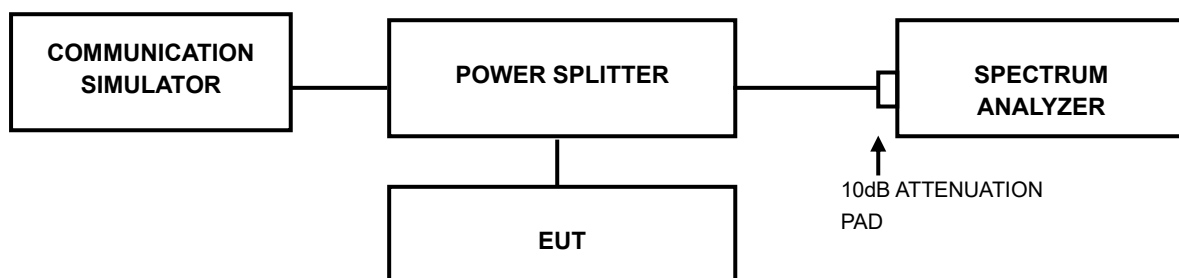


3.7 PEAK TO AVERAGE RATIO

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 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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5 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 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:

Shenzhen EMC/RF Lab:

Tel: +86-755-88696566

Fax: +86-755-88696577

Email: customerservice.sw@cn.bureauveritas.com

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.



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6 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.

7 APPENDIX

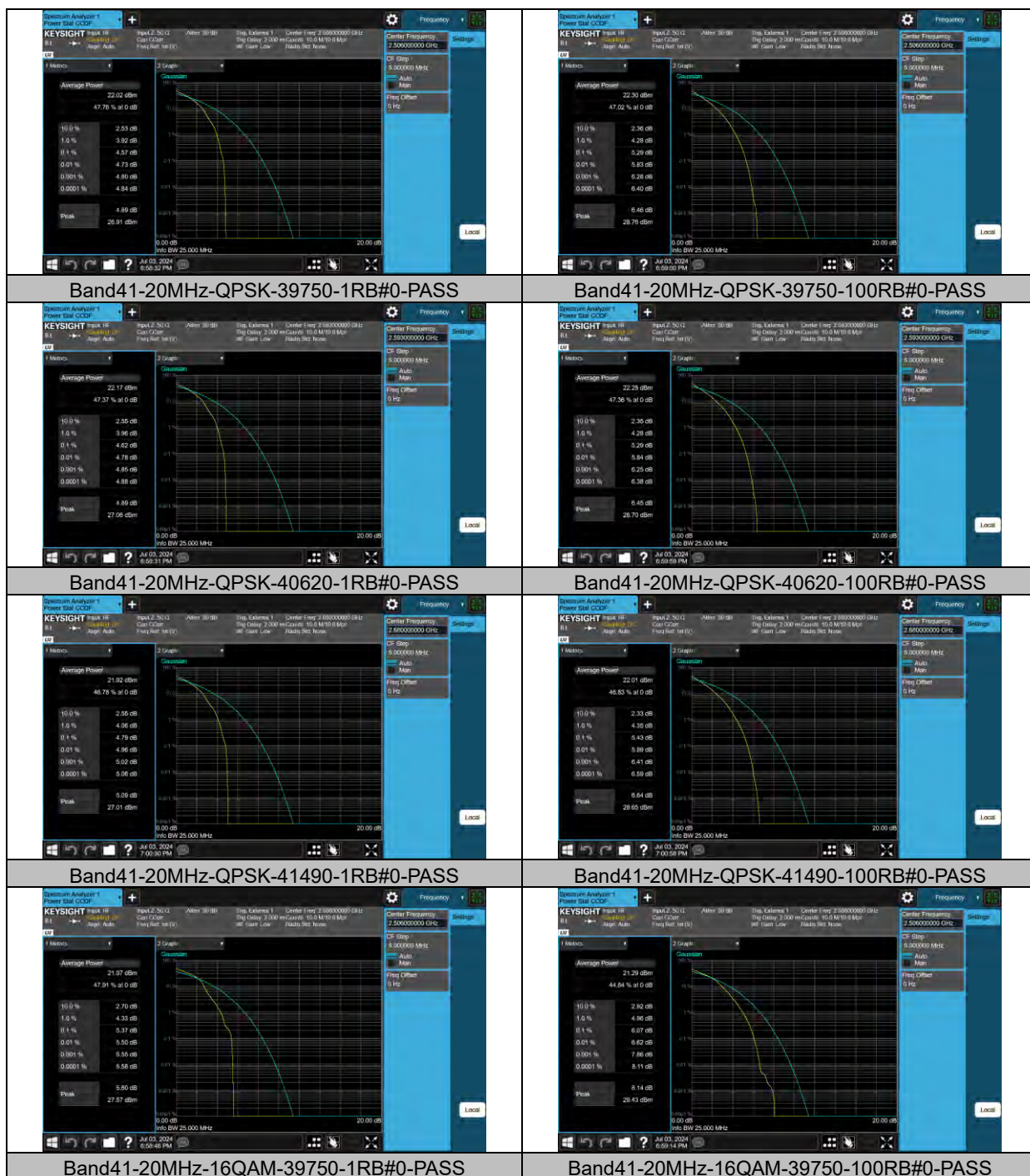
LTE BAND41 (INCLUDING LTE BAND38)

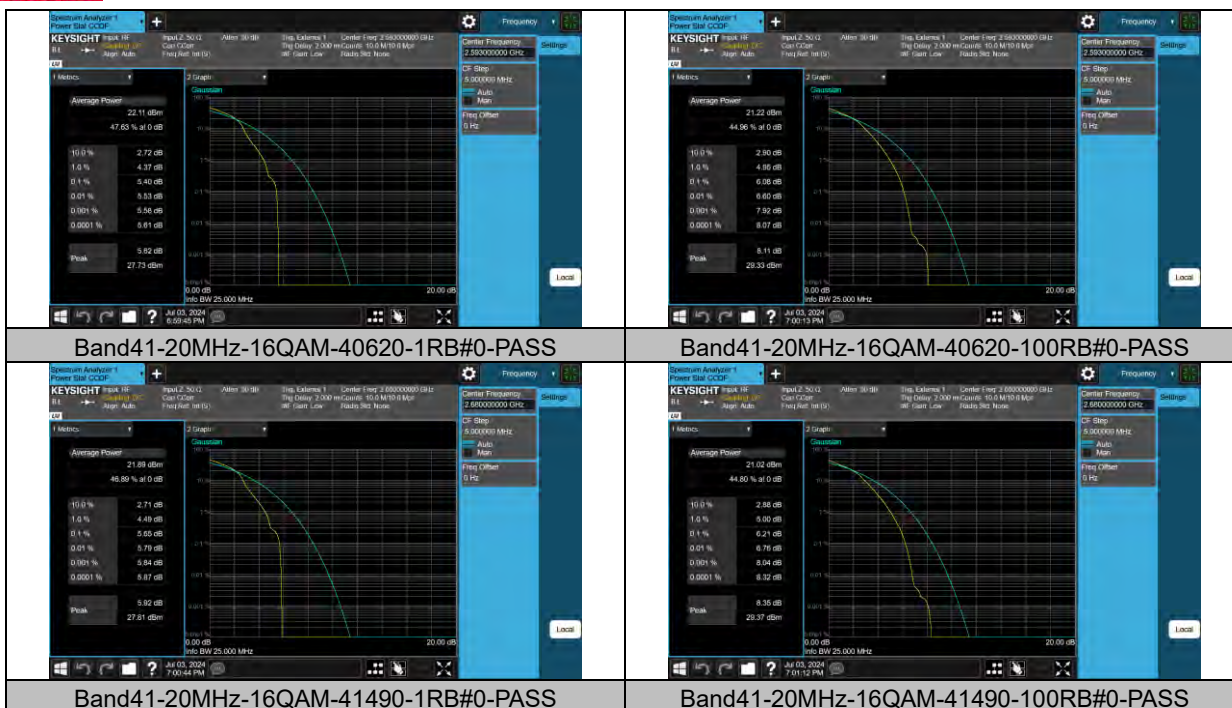
PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	20MHz	QPSK	39750	1RB#0	4.57	13	PASS
Band41	20MHz	QPSK	39750	100RB#0	5.29	13	PASS
Band41	20MHz	QPSK	40620	1RB#0	4.62	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	5.29	13	PASS
Band41	20MHz	QPSK	41490	1RB#0	4.79	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	5.43	13	PASS
Band41	20MHz	16QAM	39750	1RB#0	5.37	13	PASS
Band41	20MHz	16QAM	39750	100RB#0	6.07	13	PASS
Band41	20MHz	16QAM	40620	1RB#0	5.40	13	PASS
Band41	20MHz	16QAM	40620	100RB#0	6.08	13	PASS
Band41	20MHz	16QAM	41490	1RB#0	5.65	13	PASS
Band41	20MHz	16QAM	41490	100RB#0	6.21	13	PASS

Test Graphs



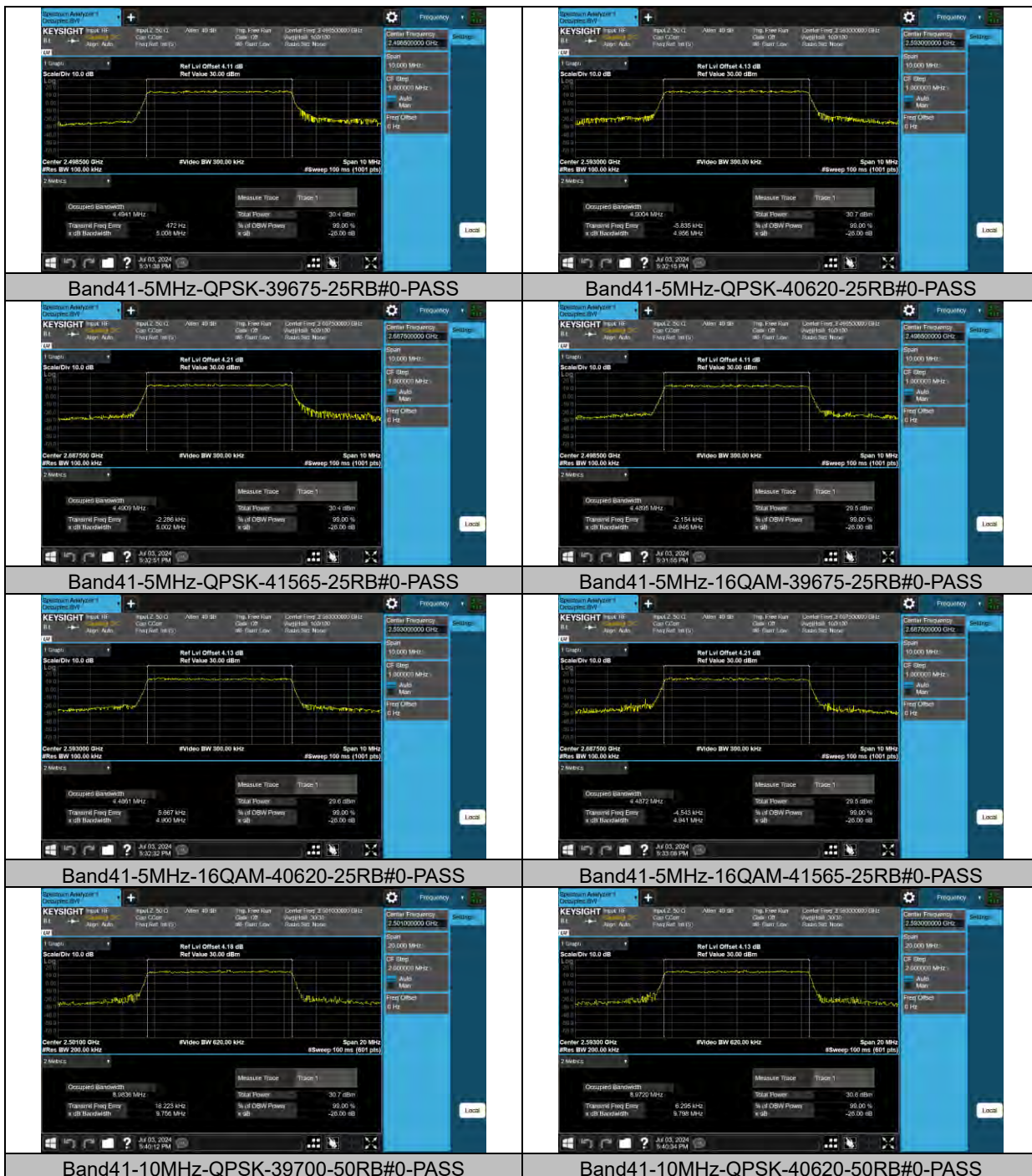


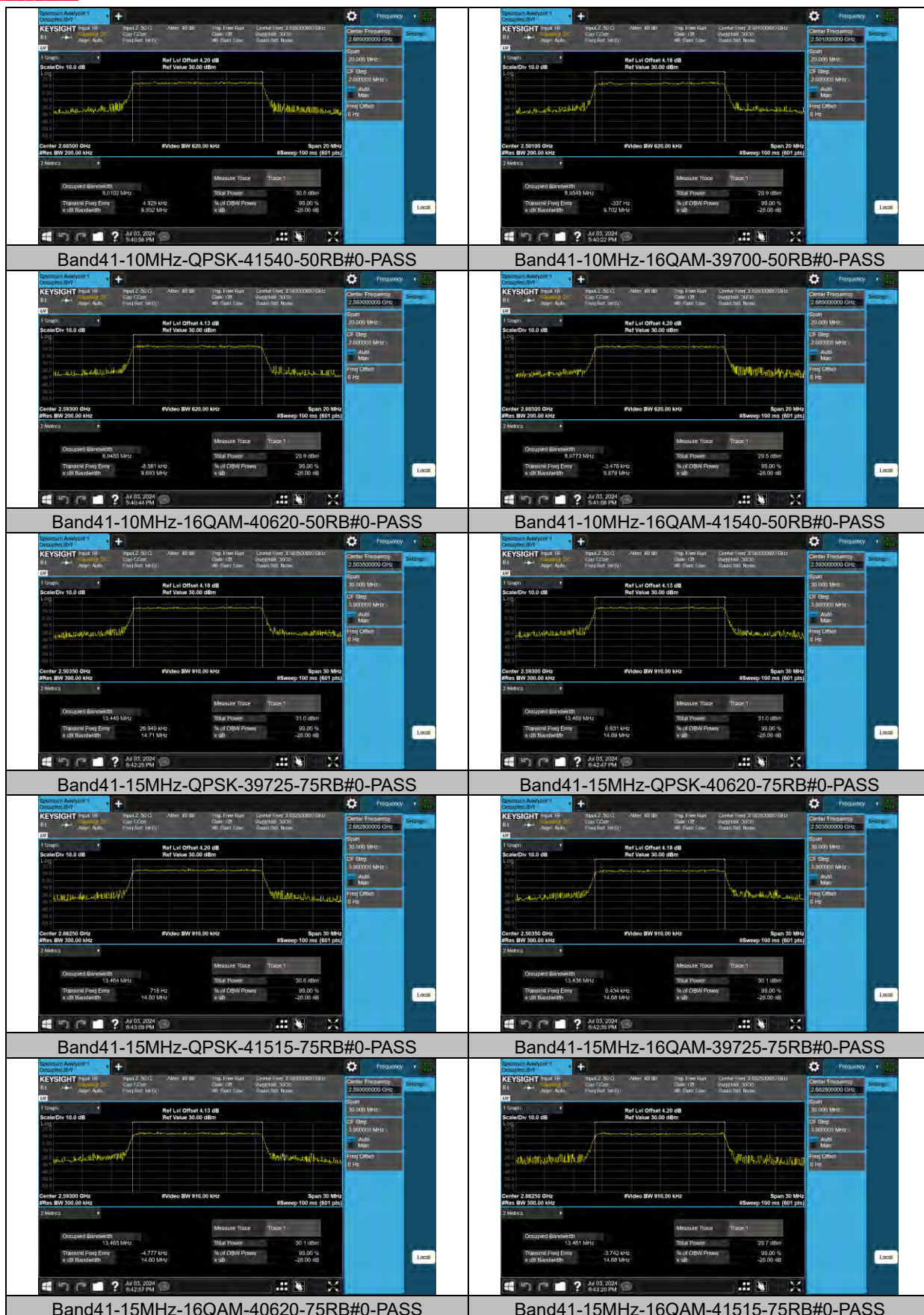
26DB BANDWIDTH AND OCCUPIED BANDWIDTH

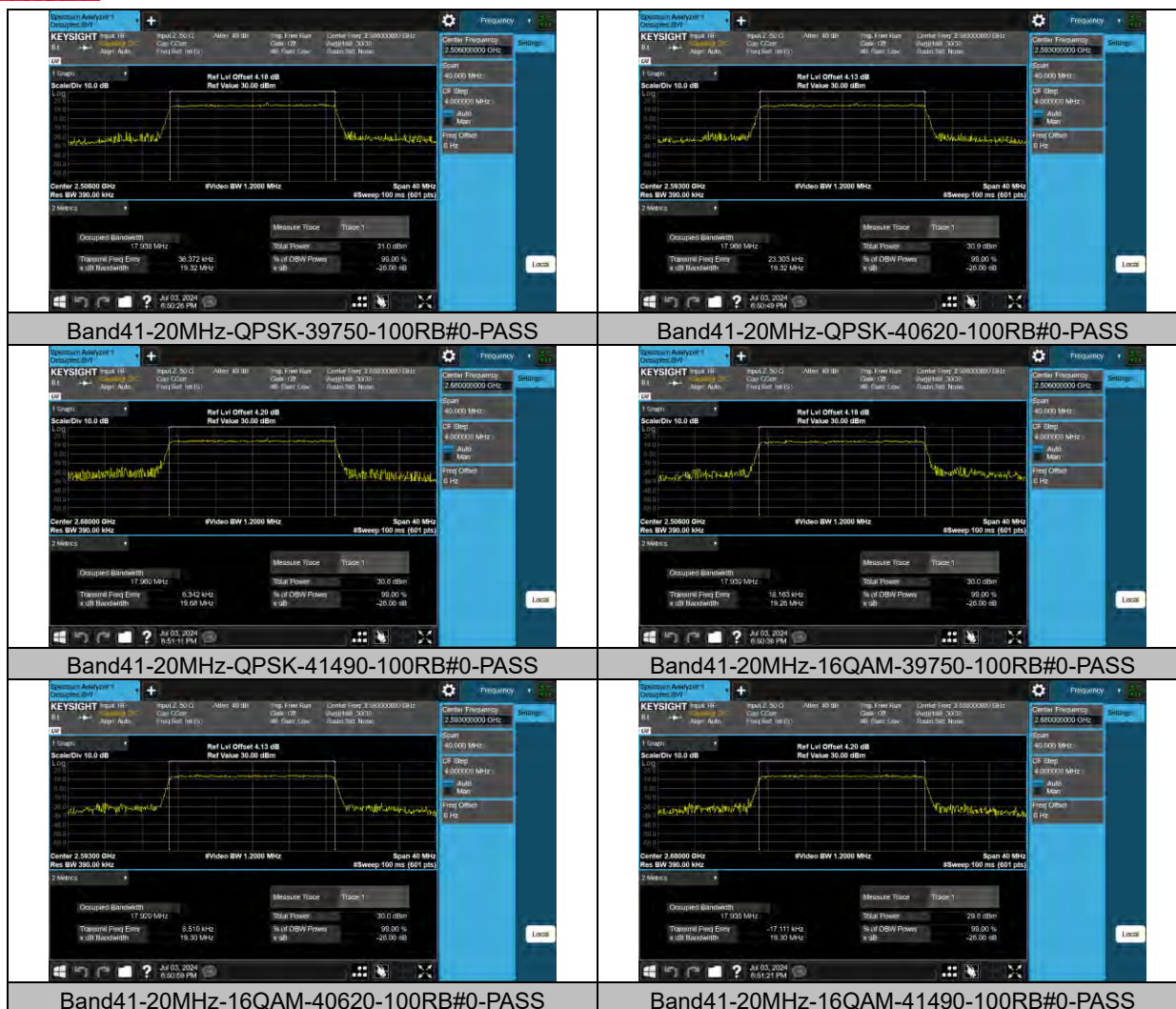
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.4941	5.008	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.5004	4.956	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.4909	5.002	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.4895	4.946	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.4861	4.900	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.4872	4.941	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.9836	9.756	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.9720	9.798	PASS
Band41	10MHz	QPSK	41540	50RB#0	9.0102	9.932	PASS
Band41	10MHz	16QAM	39700	50RB#0	8.9549	9.702	PASS
Band41	10MHz	16QAM	40620	50RB#0	8.9485	9.693	PASS
Band41	10MHz	16QAM	41540	50RB#0	8.9773	9.879	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.449	14.71	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.469	14.69	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.464	14.50	PASS
Band41	15MHz	16QAM	39725	75RB#0	13.436	14.68	PASS
Band41	15MHz	16QAM	40620	75RB#0	13.465	14.60	PASS
Band41	15MHz	16QAM	41515	75RB#0	13.461	14.68	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.938	19.32	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.966	19.32	PASS
Band41	20MHz	QPSK	41490	100RB#0	17.960	19.68	PASS
Band41	20MHz	16QAM	39750	100RB#0	17.930	19.26	PASS
Band41	20MHz	16QAM	40620	100RB#0	17.920	19.30	PASS
Band41	20MHz	16QAM	41490	100RB#0	17.935	19.30	PASS

Test Graphs





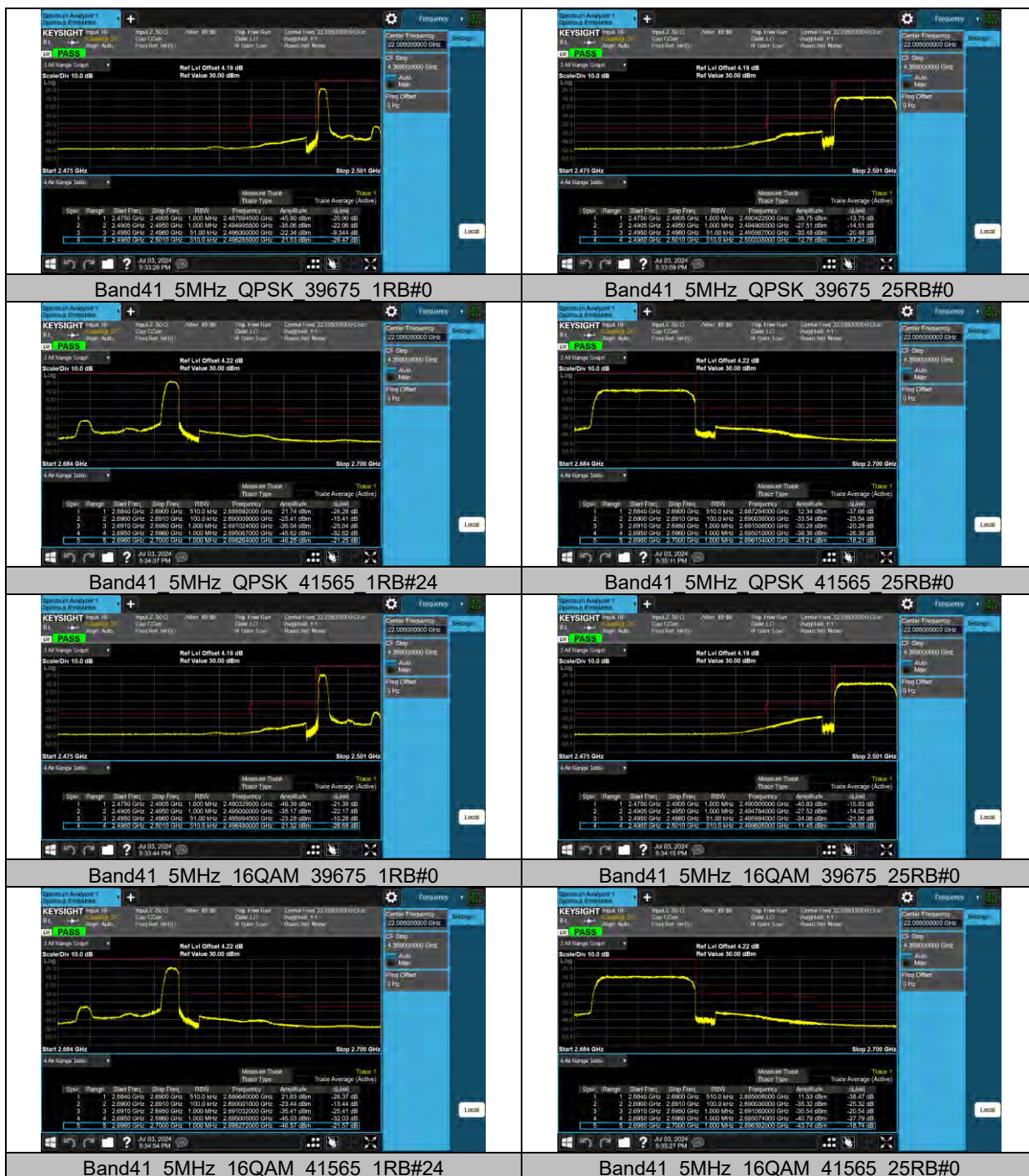


BAND EDGE

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	-22.34	PASS
Band41	5MHz	QPSK	39675	25RB#0	-38.75	PASS
Band41	5MHz	QPSK	41565	1RB#24	-25.41	PASS
Band41	5MHz	QPSK	41565	25RB#0	-43.21	PASS
Band41	5MHz	16QAM	39675	1RB#0	-23.28	PASS
Band41	5MHz	16QAM	39675	25RB#0	-27.52	PASS
Band41	5MHz	16QAM	41565	1RB#24	-23.44	PASS
Band41	5MHz	16QAM	41565	25RB#0	-43.74	PASS
Band41	10MHz	QPSK	39700	1RB#0	-30.05	PASS
Band41	10MHz	QPSK	39700	50RB#0	-32.89	PASS
Band41	10MHz	QPSK	41540	1RB#49	-31.45	PASS
Band41	10MHz	QPSK	41540	50RB#0	-42.94	PASS
Band41	10MHz	16QAM	39700	1RB#0	-30.13	PASS
Band41	10MHz	16QAM	39700	50RB#0	-33.22	PASS
Band41	10MHz	16QAM	41540	1RB#49	-30.12	PASS
Band41	10MHz	16QAM	41540	50RB#0	-43.27	PASS
Band41	15MHz	QPSK	39725	1RB#0	-45.45	PASS
Band41	15MHz	QPSK	39725	75RB#0	-30.37	PASS
Band41	15MHz	QPSK	41515	1RB#74	-47.46	PASS
Band41	15MHz	QPSK	41515	75RB#0	-41.80	PASS
Band41	15MHz	16QAM	39725	1RB#0	-44.53	PASS
Band41	15MHz	16QAM	39725	75RB#0	-33.96	PASS
Band41	15MHz	16QAM	41515	1RB#74	-47.65	PASS
Band41	15MHz	16QAM	41515	75RB#0	-43.81	PASS
Band41	20MHz	QPSK	39750	1RB#0	-45.14	PASS
Band41	20MHz	QPSK	39750	100RB#0	-35.68	PASS
Band41	20MHz	QPSK	41490	1RB#99	-47.48	PASS
Band41	20MHz	QPSK	41490	100RB#0	-45.01	PASS
Band41	20MHz	16QAM	39750	1RB#0	-44.40	PASS
Band41	20MHz	16QAM	39750	100RB#0	-34.66	PASS
Band41	20MHz	16QAM	41490	1RB#99	-47.29	PASS
Band41	20MHz	16QAM	41490	100RB#0	-45.23	PASS

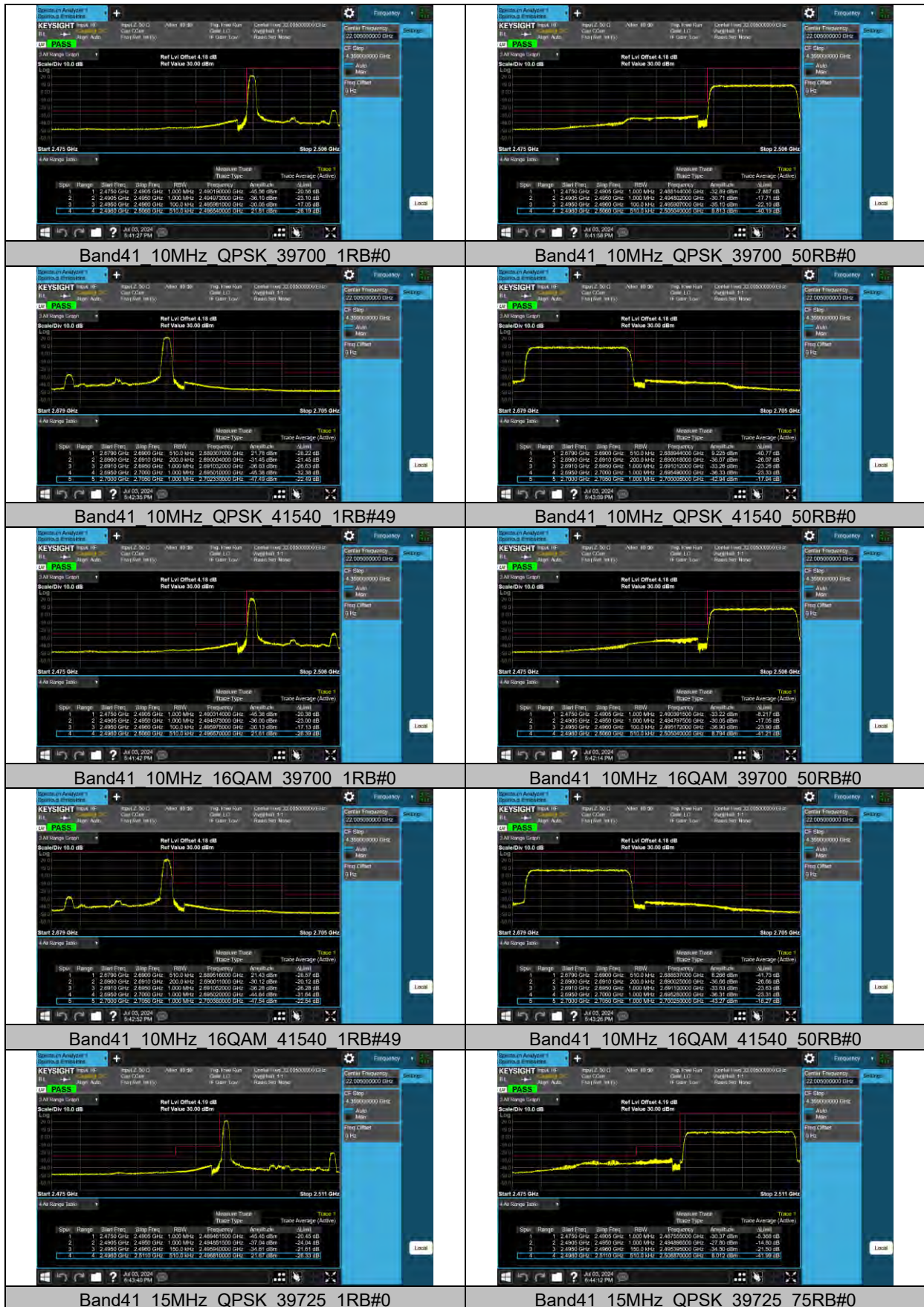
Test Graphs

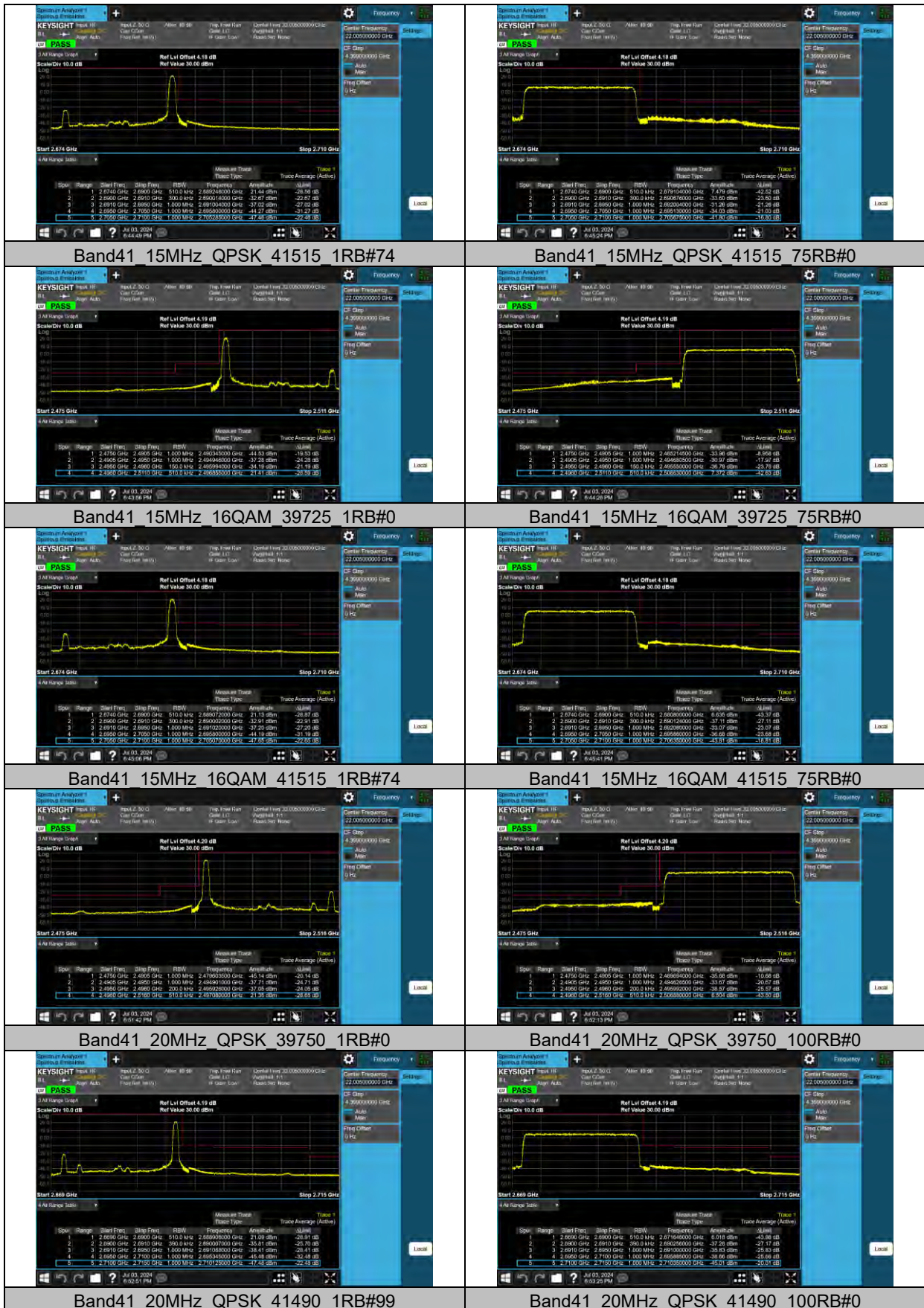




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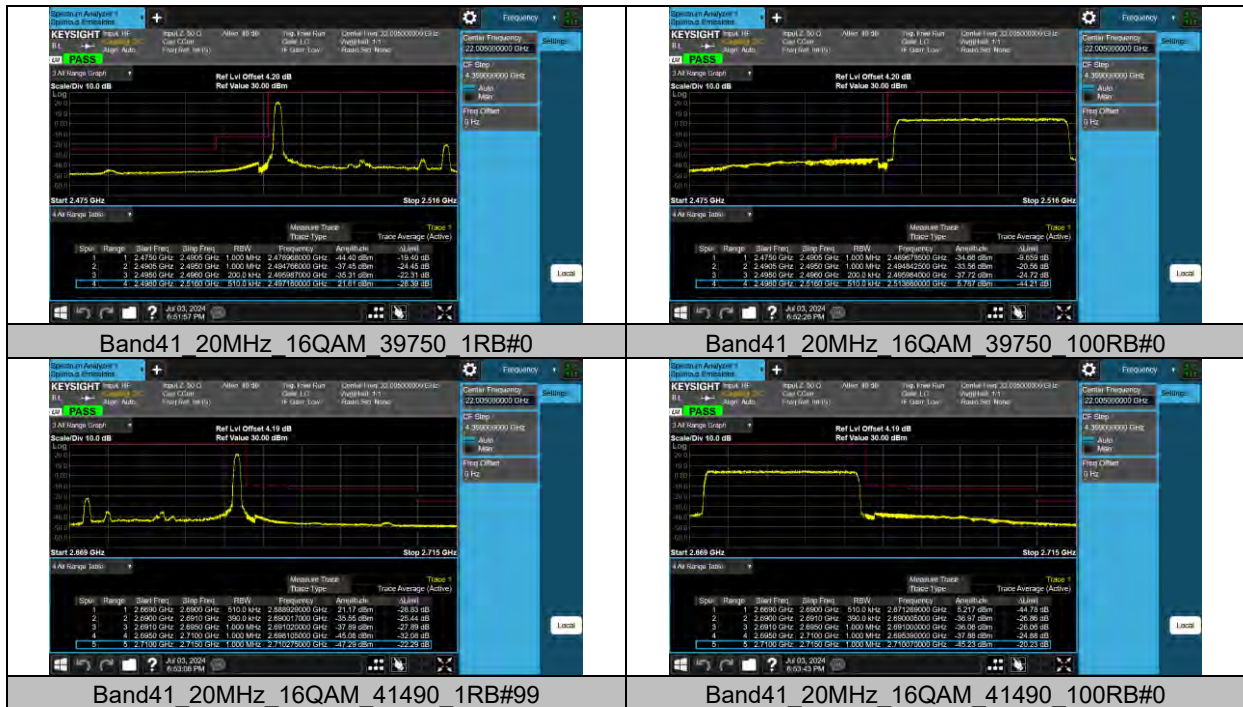






BUREAU
VERITAS

Test Report No.: W7L-P24050016RF08



CONDUCTED SPURIOUS EMISSION

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	30~1000	-57.44	PASS
Band41	5MHz	QPSK	39675	1RB#0	1000~10000	-47.11	PASS
Band41	5MHz	QPSK	39675	1RB#0	10000~20000	-54.63	PASS
Band41	5MHz	QPSK	39675	1RB#0	20000~27000	-52.90	PASS
Band41	5MHz	QPSK	40620	1RB#0	30~1000	-55.11	PASS
Band41	5MHz	QPSK	40620	1RB#0	1000~10000	-47.12	PASS
Band41	5MHz	QPSK	40620	1RB#0	10000~20000	-54.86	PASS
Band41	5MHz	QPSK	40620	1RB#0	20000~27000	-52.69	PASS
Band41	5MHz	QPSK	41565	1RB#0	30~1000	-53.61	PASS
Band41	5MHz	QPSK	41565	1RB#0	1000~10000	-45.80	PASS
Band41	5MHz	QPSK	41565	1RB#0	10000~20000	-54.67	PASS
Band41	5MHz	QPSK	41565	1RB#0	20000~27000	-52.53	PASS
Band41	10MHz	QPSK	39700	1RB#0	30~1000	-57.52	PASS
Band41	10MHz	QPSK	39700	1RB#0	1000~10000	-46.90	PASS
Band41	10MHz	QPSK	39700	1RB#0	10000~20000	-54.36	PASS
Band41	10MHz	QPSK	39700	1RB#0	20000~27000	-52.60	PASS
Band41	10MHz	QPSK	40620	1RB#0	30~1000	-57.53	PASS
Band41	10MHz	QPSK	40620	1RB#0	1000~10000	-46.95	PASS
Band41	10MHz	QPSK	40620	1RB#0	10000~20000	-54.68	PASS
Band41	10MHz	QPSK	40620	1RB#0	20000~27000	-52.63	PASS
Band41	10MHz	QPSK	41540	1RB#0	30~1000	-52.71	PASS
Band41	10MHz	QPSK	41540	1RB#0	1000~10000	-45.74	PASS
Band41	10MHz	QPSK	41540	1RB#0	10000~20000	-54.46	PASS
Band41	10MHz	QPSK	41540	1RB#0	20000~27000	-52.63	PASS
Band41	15MHz	QPSK	39725	1RB#0	30~1000	-57.53	PASS
Band41	15MHz	QPSK	39725	1RB#0	1000~10000	-47.03	PASS
Band41	15MHz	QPSK	39725	1RB#0	10000~20000	-54.97	PASS
Band41	15MHz	QPSK	39725	1RB#0	20000~27000	-52.98	PASS
Band41	15MHz	QPSK	40620	1RB#0	30~1000	-57.62	PASS
Band41	15MHz	QPSK	40620	1RB#0	1000~10000	-47.18	PASS
Band41	15MHz	QPSK	40620	1RB#0	10000~20000	-54.70	PASS
Band41	15MHz	QPSK	40620	1RB#0	20000~27000	-52.78	PASS
Band41	15MHz	QPSK	41515	1RB#0	30~1000	-53.39	PASS
Band41	15MHz	QPSK	41515	1RB#0	1000~10000	-44.19	PASS
Band41	15MHz	QPSK	41515	1RB#0	10000~20000	-54.75	PASS
Band41	15MHz	QPSK	41515	1RB#0	20000~27000	-52.55	PASS
Band41	20MHz	QPSK	39750	1RB#0	30~1000	-57.25	PASS
Band41	20MHz	QPSK	39750	1RB#0	1000~10000	-47.30	PASS
Band41	20MHz	QPSK	39750	1RB#0	10000~20000	-54.80	PASS
Band41	20MHz	QPSK	39750	1RB#0	20000~27000	-52.84	PASS
Band41	20MHz	QPSK	40620	1RB#0	30~1000	-57.45	PASS
Band41	20MHz	QPSK	40620	1RB#0	1000~10000	-47.14	PASS
Band41	20MHz	QPSK	40620	1RB#0	10000~20000	-54.29	PASS
Band41	20MHz	QPSK	40620	1RB#0	20000~27000	-52.68	PASS

Band41	20MHz	QPSK	41490	1RB#0	30~1000	-53.51	PASS
Band41	20MHz	QPSK	41490	1RB#0	1000~10000	-46.92	PASS
Band41	20MHz	QPSK	41490	1RB#0	10000~20000	-54.81	PASS
Band41	20MHz	QPSK	41490	1RB#0	20000~27000	-52.79	PASS

Test Graphs



Band41 5MHz QPSK 39675 1RB#0 30~1000 30~1000



Band41 5MHz QPSK 39675 1RB#0 1000~10000 1000~10000



Band41 5MHz QPSK 39675 1RB#0 10000~20000 10000~20000



Band41 5MHz QPSK 39675 1RB#0 20000~27000 20000~27000



Band41 5MHz QPSK 40620 1RB#0 30~1000 30~1000



Band41 5MHz QPSK 40620 1RB#0 1000~10000 1000~10000

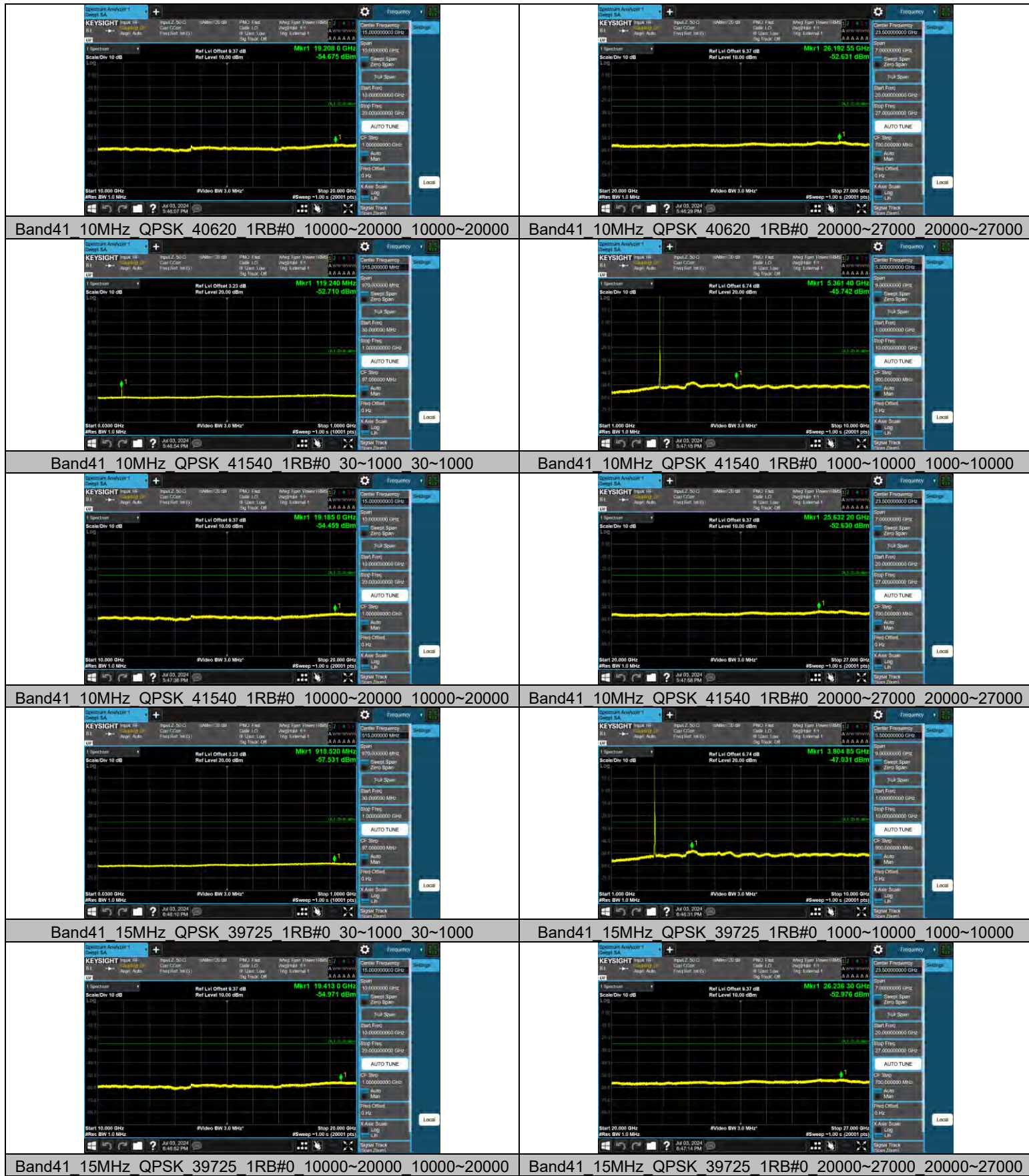


Band41 5MHz QPSK 40620 1RB#0 10000~20000 10000~20000

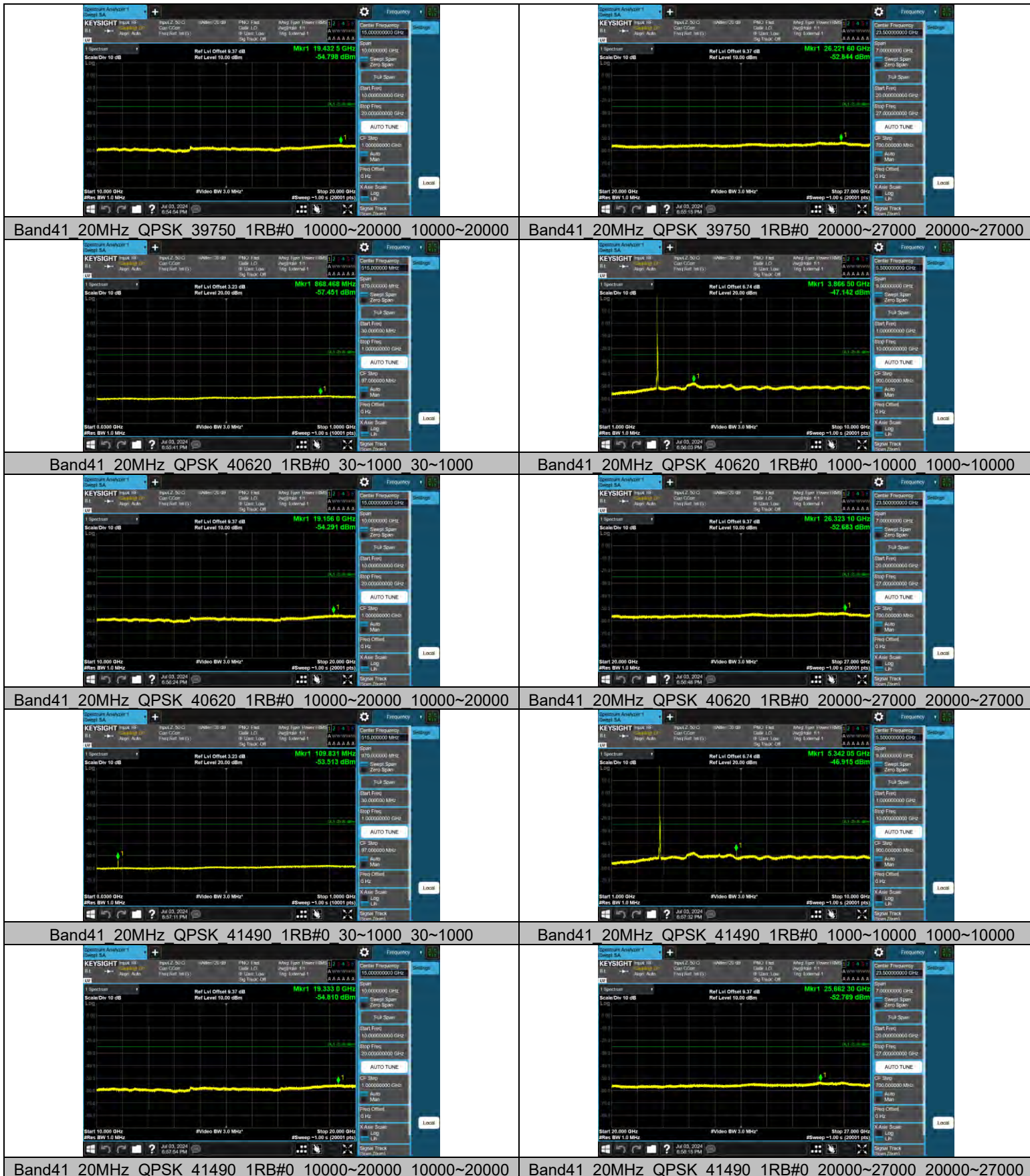


Band41 5MHz QPSK 40620 1RB#0 20000~27000 20000~27000









FREQUENCY STABILITY

Test Result

Voltage												
Band	Bandwidth	Modulation	Channel	RB Configuration	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
Band4 1	10MHz	QPSK	39700	50RB #0	VN	NT	5210.00	2.083167	2496.53881	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	VL	NT	5280.00	2.111156	2496.53893	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	VH	NT	5430.00	2.171132	2496.53918	---	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	VN	NT	-1310.00	-0.487896	---	2689.46624	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	VL	NT	-1560.00	-0.581006	---	2689.46619	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	VH	NT	-1540.00	-0.573557	---	2689.46611	2496-2690	PASS

Temperature												
Band	Bandwidth	Modulation	Channel	RB Configuration	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
Band4 1	10MHz	QPSK	39700	50RB #0	NV	-30	5170.00	2.067173	2496.53897	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	-20	5400.00	2.159136	2496.53925	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	-10	5200.00	2.079168	2496.53885	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	0	5380.00	2.151140	2496.53918	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	10	5430.00	2.171132	2496.53928	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	20	5070.00	2.027189	2496.53867	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	30	5370.00	2.147141	2496.53912	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	40	5350.00	2.139144	2496.53915	---	2496-2690	PASS
Band4 1	10MHz	QPSK	39700	50RB #0	NV	50	5200.00	2.079168	2496.53895	---	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	NV	-30	-1510.00	-0.562384	---	2689.46614	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	NV	-20	-1470.00	-0.547486	---	2689.46608	2496-2690	PASS
Band4 1	10MHz	QPSK	41540	50RB #0	NV	-10	-1420.00	-0.528864	---	2689.46608	2496-2690	PASS
Band4	10MHz	QPSK	41540	50RB	NV	0	-1720.	-0.640	---	2689.	2496-	PASS



BUREAU
VERITAS

Test Report No.: W7L-P24050016RF08

1	z			#0			00	596		46588	2690	
Band4 1	10MH z	QPSK	41540	50RB #0	NV	10	-1600. 00	-0.595 903	---	2689. 46595	2496- 2690	PASS
Band4 1	10MH z	QPSK	41540	50RB #0	NV	20	-1300. 00	-0.484 171	---	2689. 46625	2496- 2690	PASS
Band4 1	10MH z	QPSK	41540	50RB #0	NV	30	-1800. 00	-0.670 391	---	2689. 4658	2496- 2690	PASS
Band4 1	10MH z	QPSK	41540	50RB #0	NV	40	-1430. 00	-0.532 588	---	2689. 46622	2496- 2690	PASS
Band4 1	10MH z	QPSK	41540	50RB #0	NV	50	-1590. 00	-0.592 179	---	2689. 46641	2496- 2690	PASS



Test Report No.: W7L-P24050016RF08

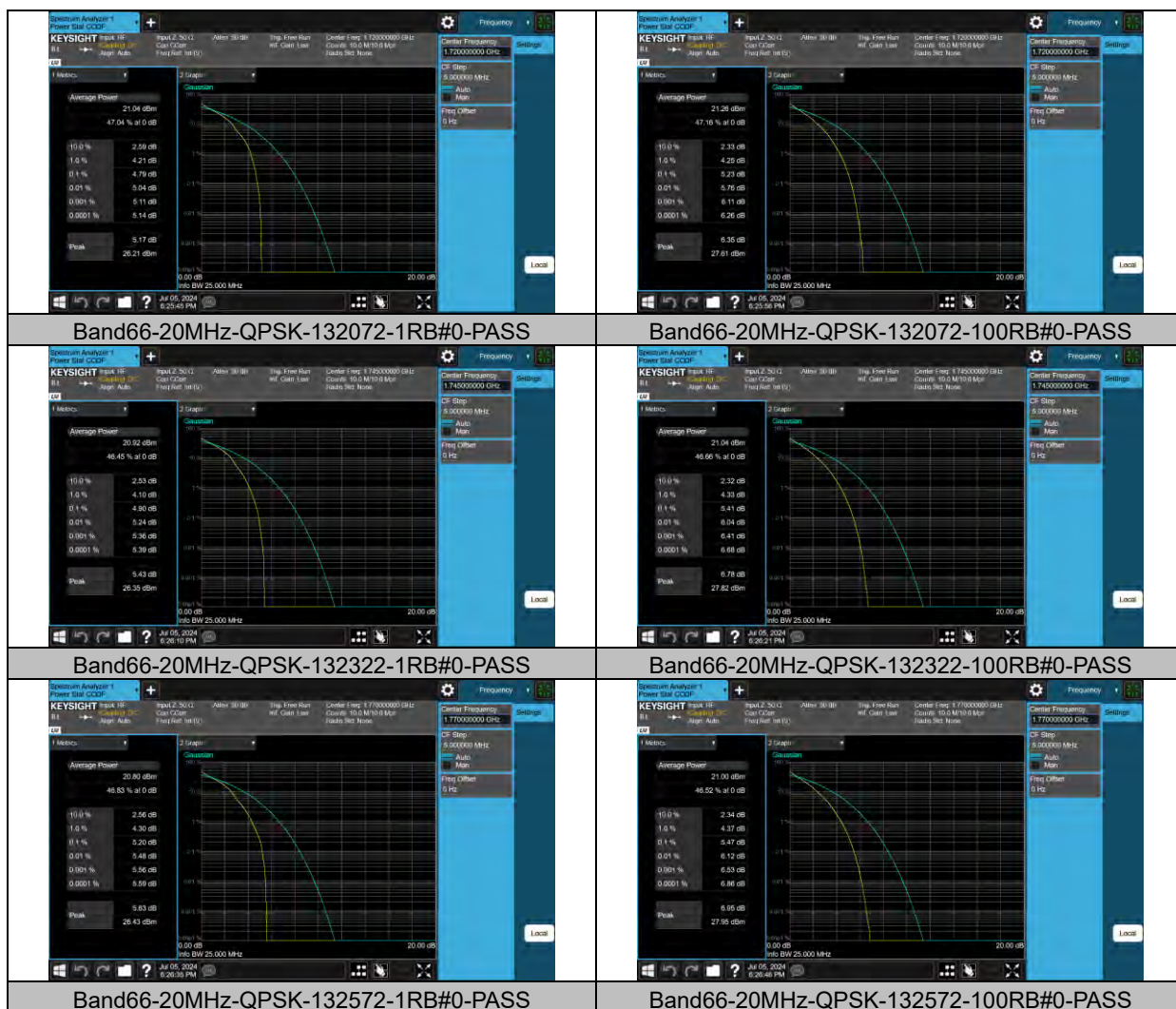
LTE BAND66 (INCLUDING LTE BAND4).

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band66	20MHz	QPSK	132072	1RB#0	4.79	13	PASS
Band66	20MHz	QPSK	132072	100RB#0	5.23	13	PASS
Band66	20MHz	QPSK	132322	1RB#0	4.90	13	PASS
Band66	20MHz	QPSK	132322	100RB#0	5.41	13	PASS
Band66	20MHz	QPSK	132572	1RB#0	5.20	13	PASS
Band66	20MHz	QPSK	132572	100RB#0	5.47	13	PASS

Test Graphs

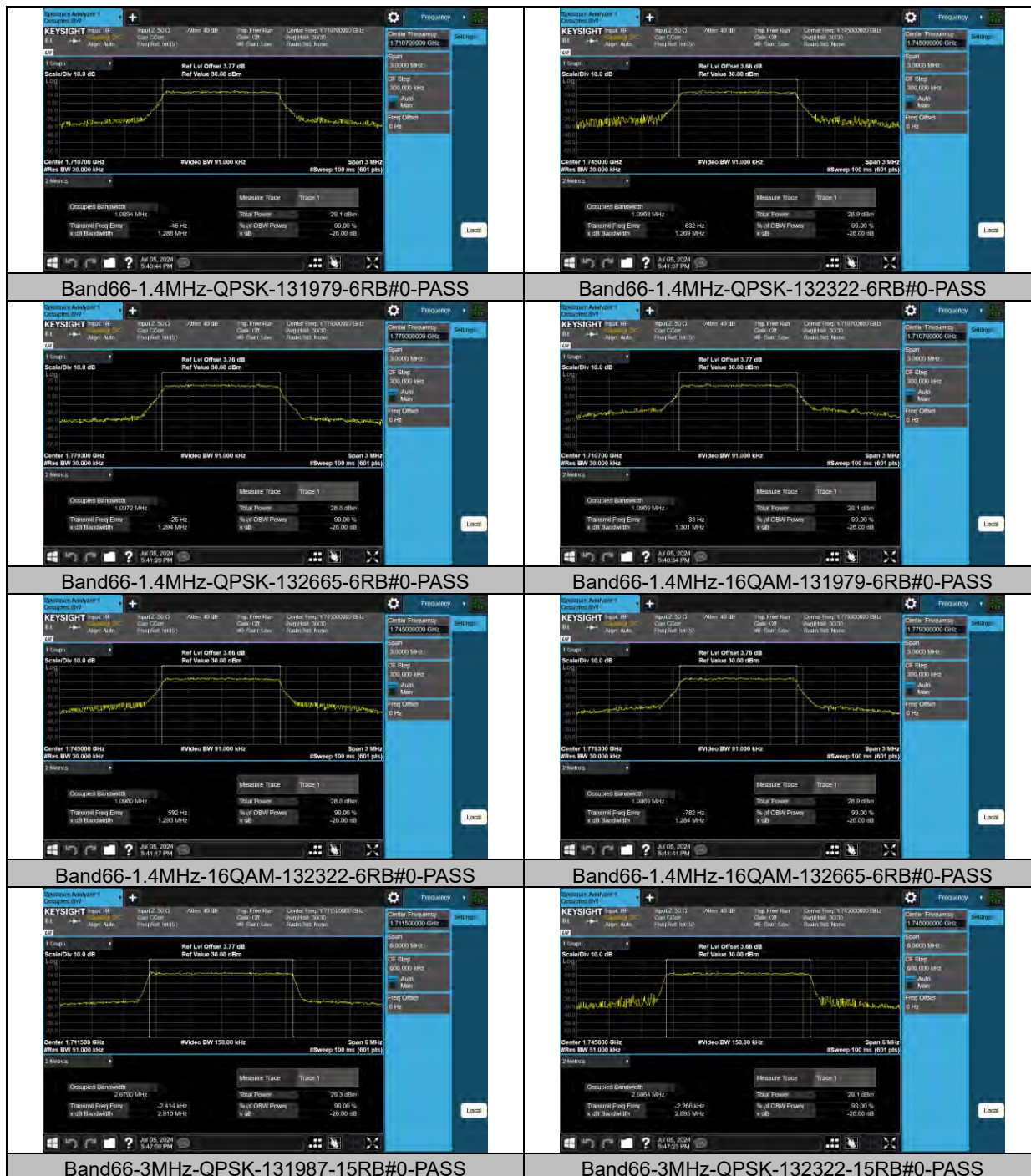


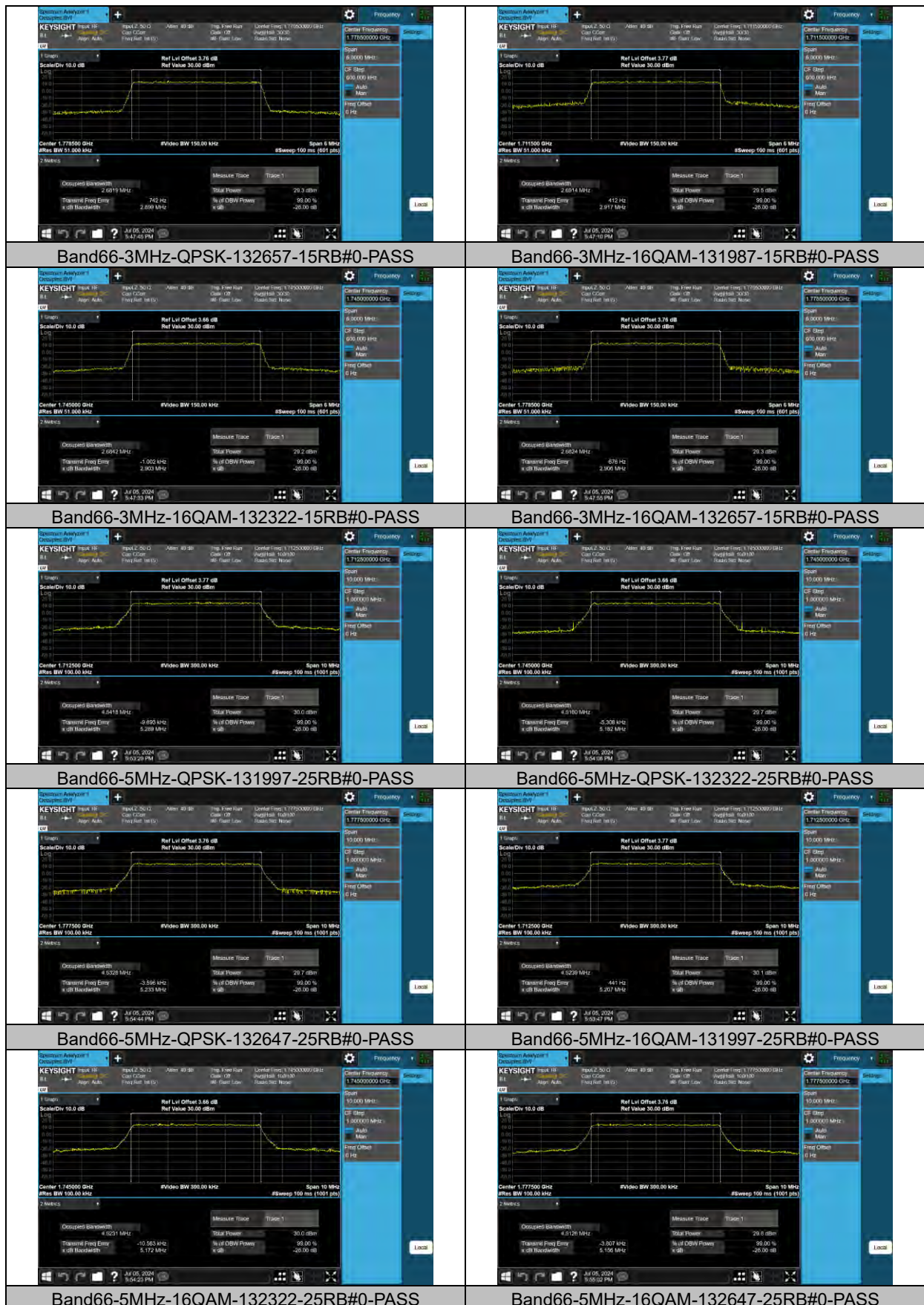
26DB BANDWIDTH AND OCCUPIED BANDWIDTH

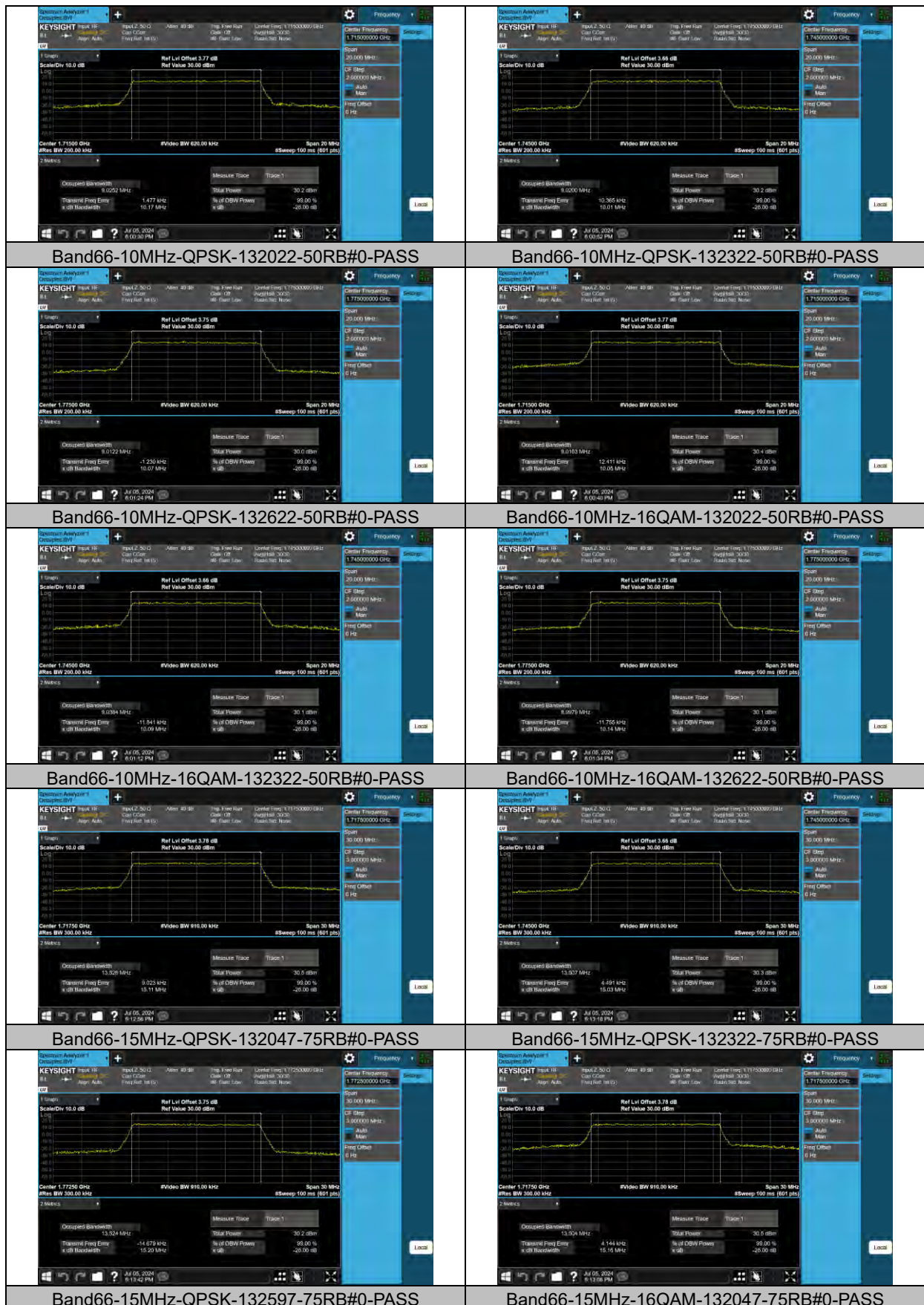
Test Result

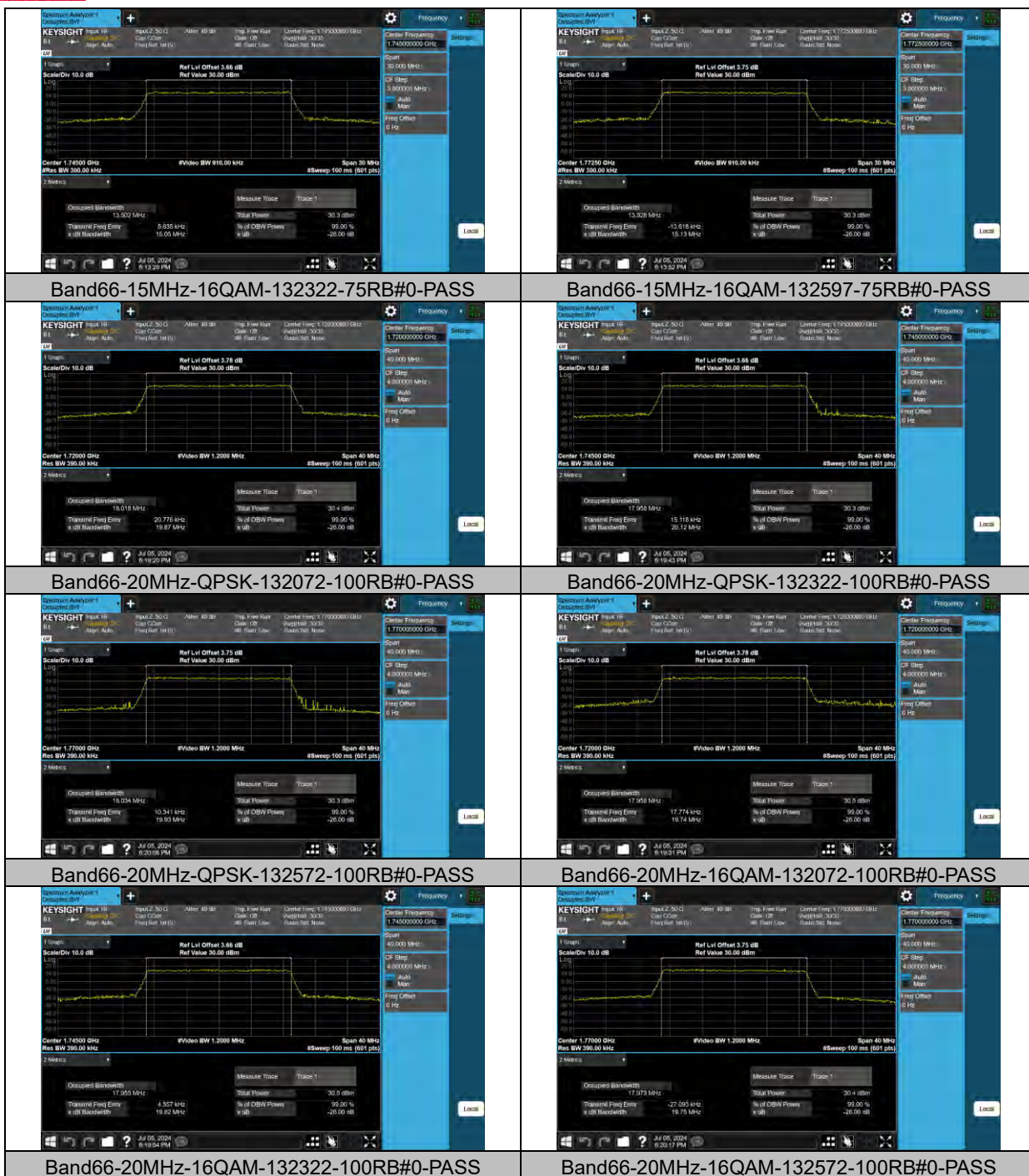
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band66	1.4MHz	QPSK	131979	6RB#0	1.0894	1.288	PASS
Band66	1.4MHz	QPSK	132322	6RB#0	1.0963	1.269	PASS
Band66	1.4MHz	QPSK	132665	6RB#0	1.0972	1.294	PASS
Band66	1.4MHz	16QAM	131979	6RB#0	1.0969	1.301	PASS
Band66	1.4MHz	16QAM	132322	6RB#0	1.0960	1.293	PASS
Band66	1.4MHz	16QAM	132665	6RB#0	1.0869	1.284	PASS
Band66	3MHz	QPSK	131987	15RB#0	2.6790	2.910	PASS
Band66	3MHz	QPSK	132322	15RB#0	2.6864	2.895	PASS
Band66	3MHz	QPSK	132657	15RB#0	2.6819	2.899	PASS
Band66	3MHz	16QAM	131987	15RB#0	2.6914	2.917	PASS
Band66	3MHz	16QAM	132322	15RB#0	2.6842	2.903	PASS
Band66	3MHz	16QAM	132657	15RB#0	2.6824	2.906	PASS
Band66	5MHz	QPSK	131997	25RB#0	4.5418	5.289	PASS
Band66	5MHz	QPSK	132322	25RB#0	4.5160	5.182	PASS
Band66	5MHz	QPSK	132647	25RB#0	4.5328	5.233	PASS
Band66	5MHz	16QAM	131997	25RB#0	4.5239	5.207	PASS
Band66	5MHz	16QAM	132322	25RB#0	4.5231	5.172	PASS
Band66	5MHz	16QAM	132647	25RB#0	4.5126	5.156	PASS
Band66	10MHz	QPSK	132022	50RB#0	9.0252	10.17	PASS
Band66	10MHz	QPSK	132322	50RB#0	9.0200	10.01	PASS
Band66	10MHz	QPSK	132622	50RB#0	9.0122	10.07	PASS
Band66	10MHz	16QAM	132022	50RB#0	9.0163	10.05	PASS
Band66	10MHz	16QAM	132322	50RB#0	9.0384	10.09	PASS
Band66	10MHz	16QAM	132622	50RB#0	8.9979	10.14	PASS
Band66	15MHz	QPSK	132047	75RB#0	13.526	15.11	PASS
Band66	15MHz	QPSK	132322	75RB#0	13.507	15.03	PASS
Band66	15MHz	QPSK	132597	75RB#0	13.524	15.20	PASS
Band66	15MHz	16QAM	132047	75RB#0	13.504	15.16	PASS
Band66	15MHz	16QAM	132322	75RB#0	13.502	15.05	PASS
Band66	15MHz	16QAM	132597	75RB#0	13.528	15.13	PASS
Band66	20MHz	QPSK	132072	100RB#0	18.018	19.87	PASS
Band66	20MHz	QPSK	132322	100RB#0	17.958	20.12	PASS
Band66	20MHz	QPSK	132572	100RB#0	18.034	19.93	PASS
Band66	20MHz	16QAM	132072	100RB#0	17.958	19.74	PASS
Band66	20MHz	16QAM	132322	100RB#0	17.955	19.82	PASS
Band66	20MHz	16QAM	132572	100RB#0	17.973	19.75	PASS

Test Graphs









BAND EDGE

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band66	1.4MHz	QPSK	131979	1RB#0	-30.94	PASS
Band66	1.4MHz	QPSK	131979	6RB#0	-32.52	PASS
Band66	1.4MHz	QPSK	132665	1RB#5	-29.82	PASS
Band66	1.4MHz	QPSK	132665	6RB#0	-34.60	PASS
Band66	1.4MHz	16QAM	131979	1RB#0	-22.65	PASS
Band66	1.4MHz	16QAM	131979	6RB#0	-31.23	PASS
Band66	1.4MHz	16QAM	132665	1RB#5	-29.38	PASS
Band66	1.4MHz	16QAM	132665	6RB#0	-33.15	PASS
Band66	3MHz	QPSK	131987	1RB#0	-29.15	PASS
Band66	3MHz	QPSK	131987	15RB#0	-31.65	PASS
Band66	3MHz	QPSK	132657	1RB#14	-30.04	PASS
Band66	3MHz	QPSK	132657	15RB#0	-33.86	PASS
Band66	3MHz	16QAM	131987	1RB#0	-26.98	PASS
Band66	3MHz	16QAM	131987	15RB#0	-29.07	PASS
Band66	3MHz	16QAM	132657	1RB#14	-29.16	PASS
Band66	3MHz	16QAM	132657	15RB#0	-32.32	PASS
Band66	5MHz	QPSK	131997	1RB#0	-25.18	PASS
Band66	5MHz	QPSK	131997	25RB#0	-31.55	PASS
Band66	5MHz	QPSK	132647	1RB#24	-26.21	PASS
Band66	5MHz	QPSK	132647	25RB#0	-33.80	PASS
Band66	5MHz	16QAM	131997	1RB#0	-24.08	PASS
Band66	5MHz	16QAM	131997	25RB#0	-28.92	PASS
Band66	5MHz	16QAM	132647	1RB#24	-24.60	PASS
Band66	5MHz	16QAM	132647	25RB#0	-32.70	PASS
Band66	10MHz	QPSK	132022	1RB#0	-33.48	PASS
Band66	10MHz	QPSK	132022	50RB#0	-32.15	PASS
Band66	10MHz	QPSK	132622	1RB#49	-33.69	PASS
Band66	10MHz	QPSK	132622	50RB#0	-35.48	PASS
Band66	10MHz	16QAM	132022	1RB#0	-34.17	PASS
Band66	10MHz	16QAM	132022	50RB#0	-28.98	PASS
Band66	10MHz	16QAM	132622	1RB#49	-34.42	PASS
Band66	10MHz	16QAM	132622	50RB#0	-33.89	PASS
Band66	15MHz	QPSK	132047	1RB#0	-39.19	PASS
Band66	15MHz	QPSK	132047	75RB#0	-30.03	PASS
Band66	15MHz	QPSK	132597	1RB#74	-39.76	PASS
Band66	15MHz	QPSK	132597	75RB#0	-35.58	PASS
Band66	15MHz	16QAM	132047	1RB#0	-37.39	PASS
Band66	15MHz	16QAM	132047	75RB#0	-28.10	PASS
Band66	15MHz	16QAM	132597	1RB#74	-38.79	PASS
Band66	15MHz	16QAM	132597	75RB#0	-34.13	PASS
Band66	20MHz	QPSK	132072	1RB#0	-42.42	PASS
Band66	20MHz	QPSK	132072	100RB#0	-34.36	PASS
Band66	20MHz	QPSK	132572	1RB#99	-42.29	PASS
Band66	20MHz	QPSK	132572	100RB#0	-37.51	PASS

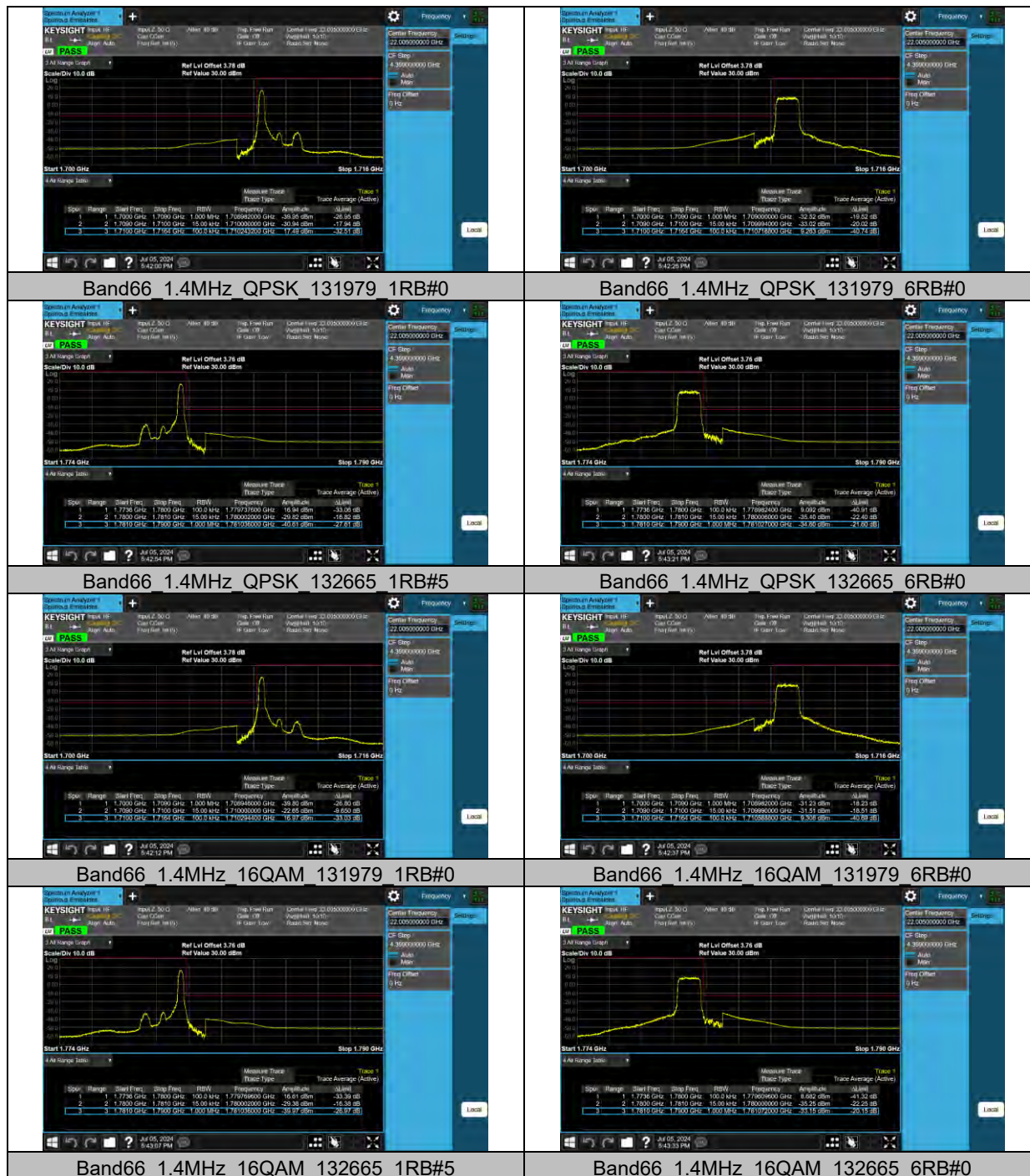


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Band66	20MHz	16QAM	132072	1RB#0	-42.21	PASS
Band66	20MHz	16QAM	132072	100RB#0	-31.35	PASS
Band66	20MHz	16QAM	132572	1RB#99	-42.90	PASS
Band66	20MHz	16QAM	132572	100RB#0	-36.19	PASS

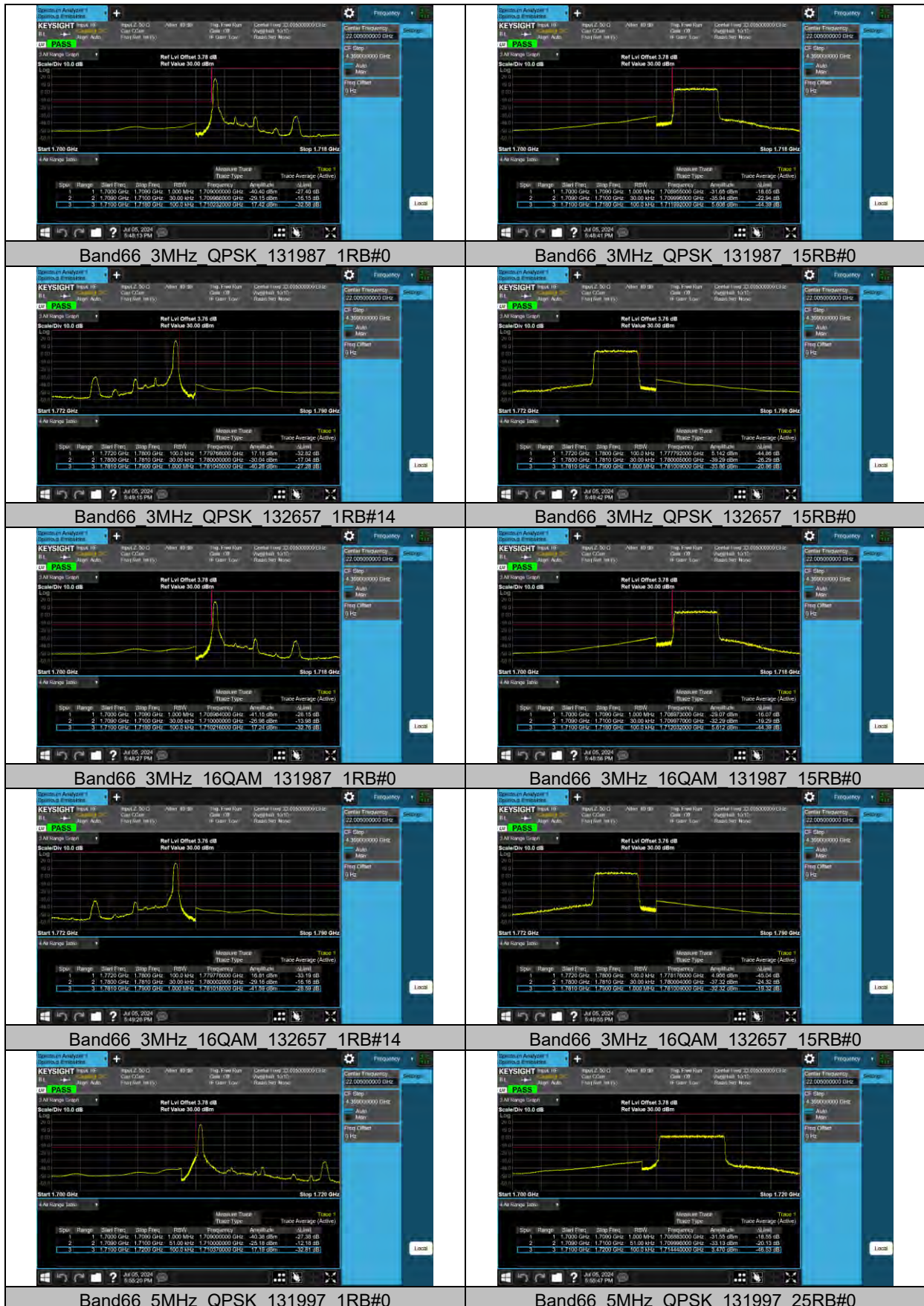
Test Graphs





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