

5.5.8 LTE Band 26 (Part 90S)

LTE Band 26								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 1.4 MHz								
Lowest	6	0	1.286	1.301	1.307	1.0946	1.1007	1.0992
Middle	6	0	1.323	1.302	1.294	1.1102	1.0923	1.0962
Highest	6	0	1.286	1.265	1.270	1.0955	1.0886	1.0902
Channel Bandwidth: 3 MHz								
Lowest	15	0	2.904	2.919	2.903	2.6847	2.6868	2.6861
Middle	15	0	2.884	2.925	2.927	2.6767	2.6850	2.6872
Highest	15	0	2.898	2.912	2.911	2.6896	2.6842	2.6841
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.179	5.153	5.203	4.5316	4.5339	4.5431
Middle	25	0	5.179	5.424	5.424	4.5374	4.5326	4.5326
Highest	25	0	5.078	5.200	5.185	4.5174	4.5374	4.5390
Channel Bandwidth: 10 MHz								
Middle	50	0	10.24	10.03	10.08	9.0317	9.0136	9.0236
Channel Bandwidth: 15 MHz								
Lowest	75	0	14.87	15.00	15.05	13.497	13.528	13.520

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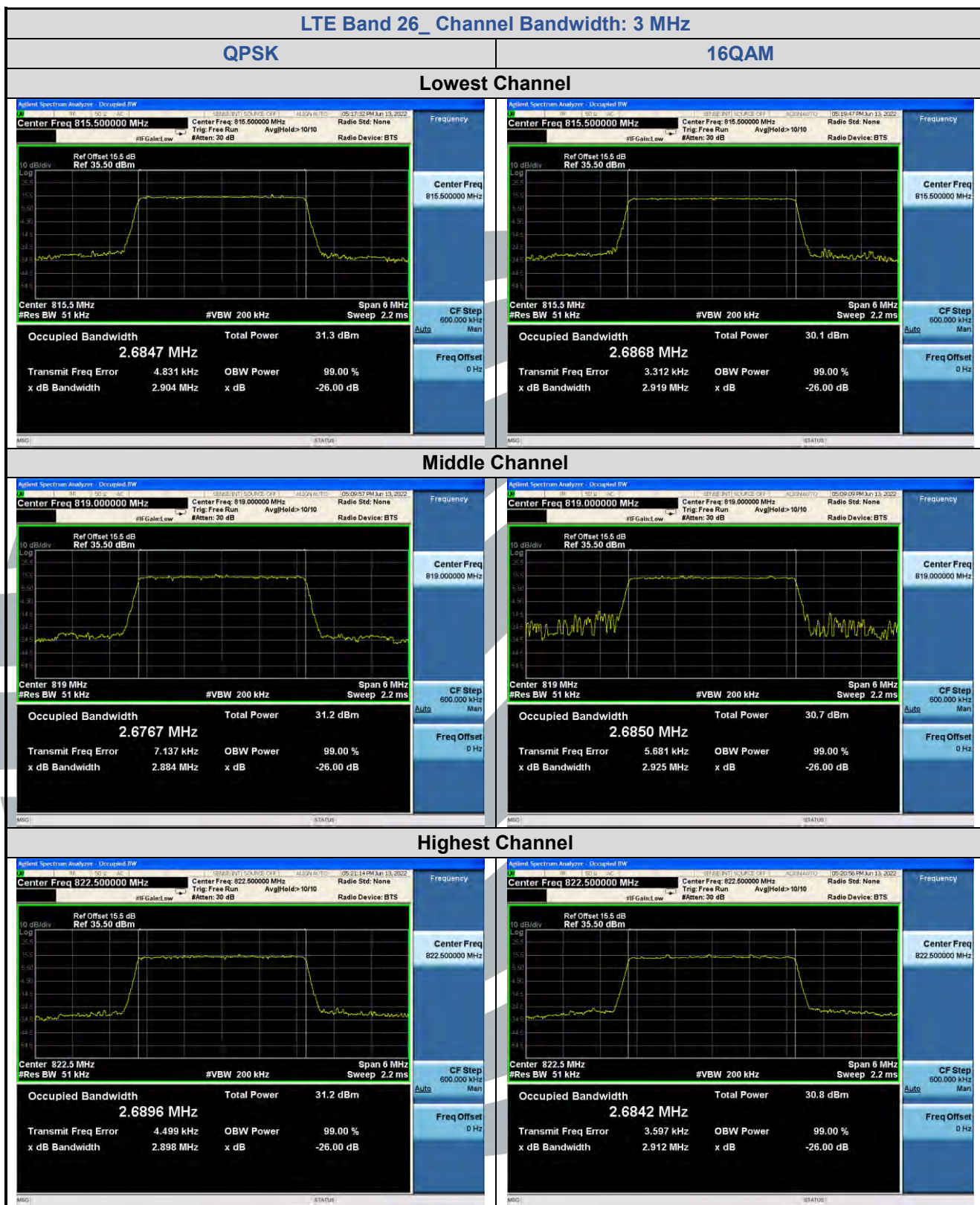
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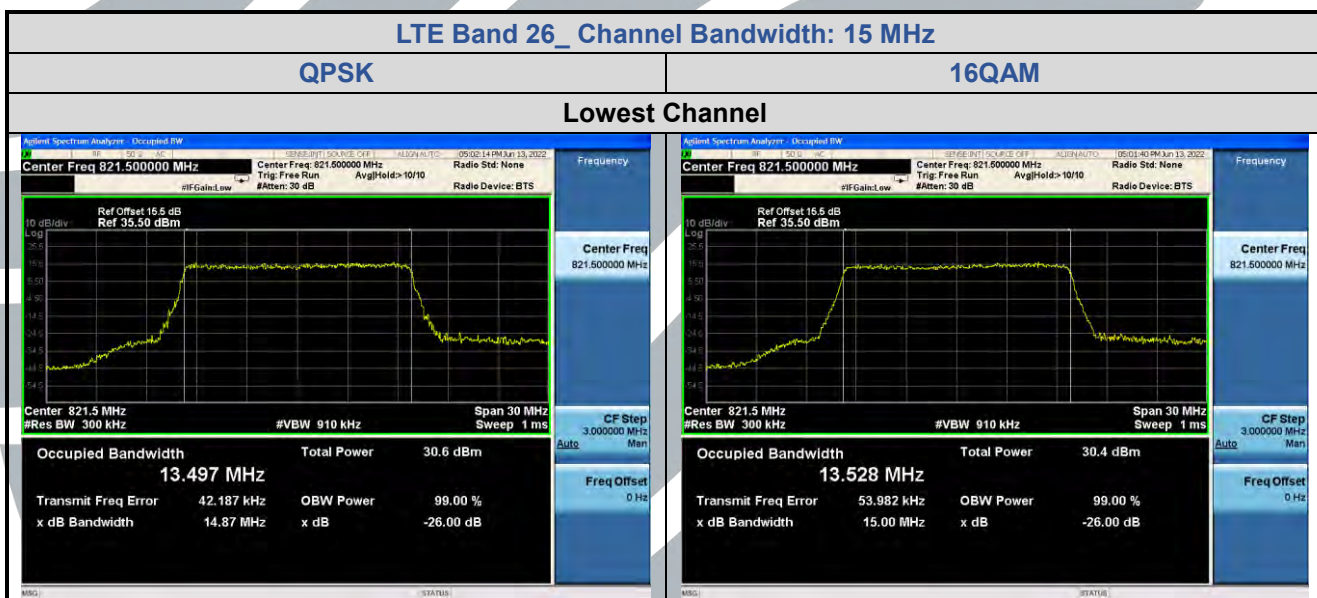
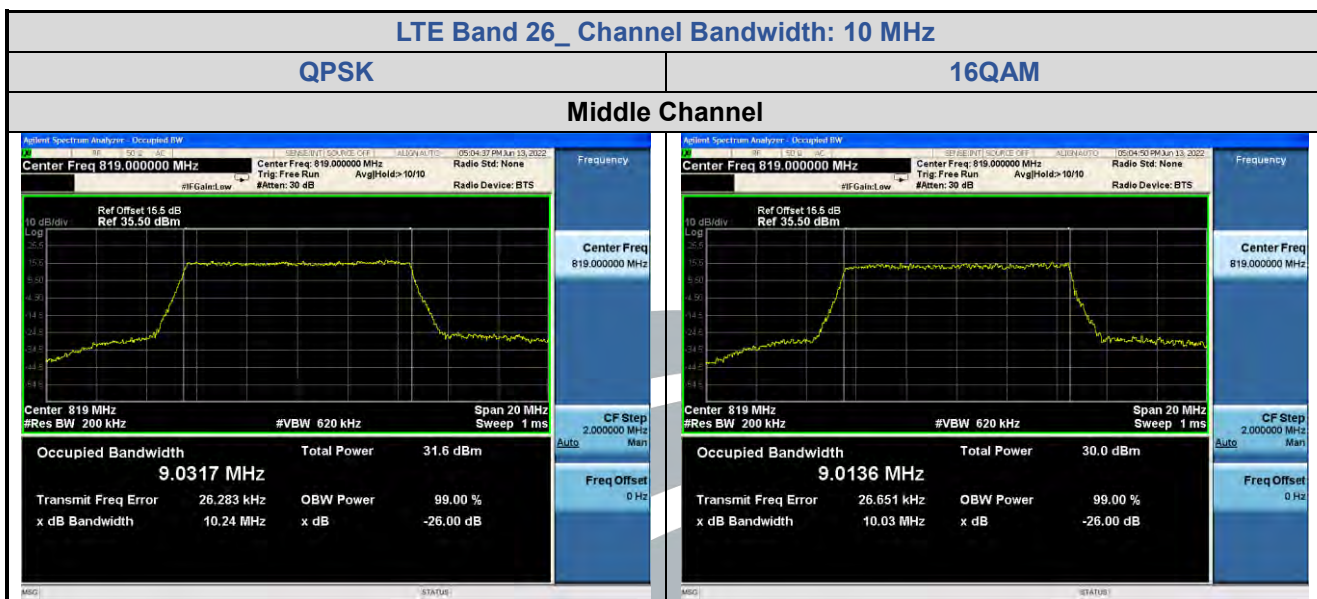
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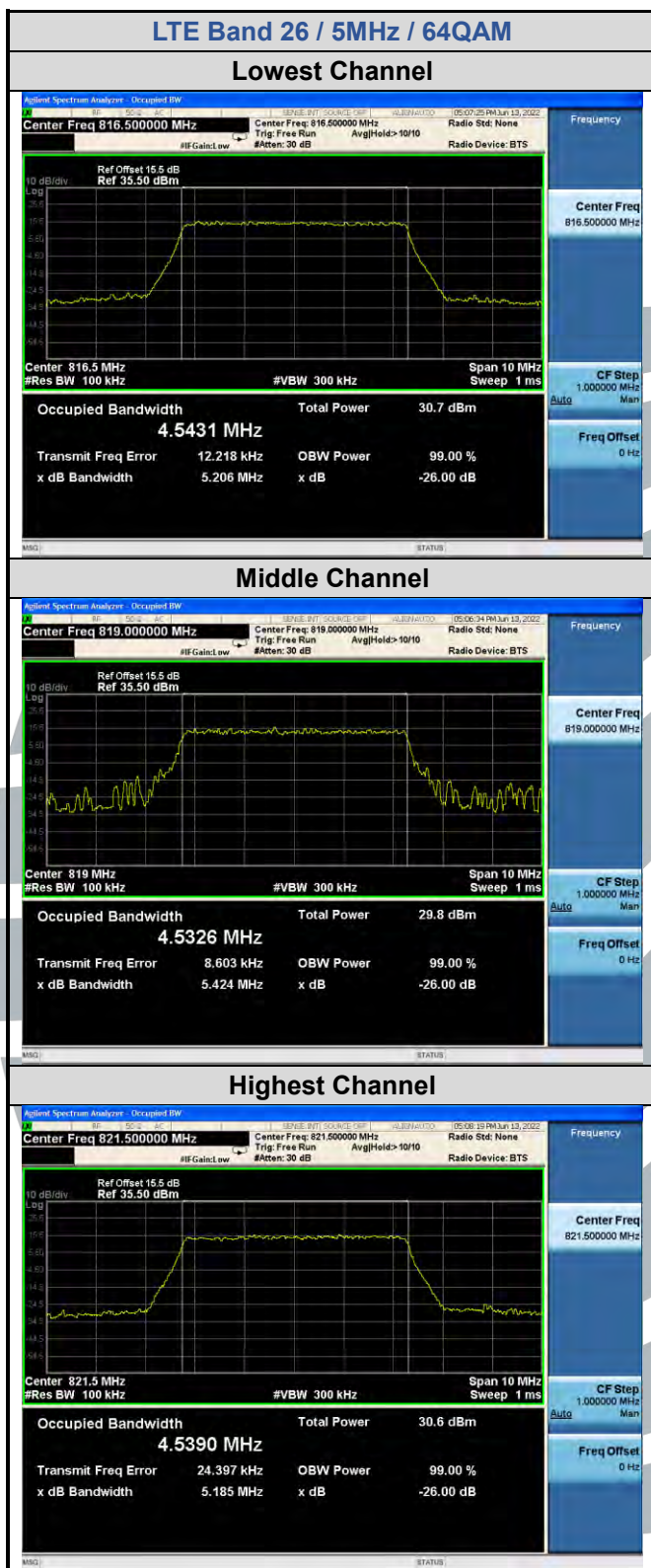


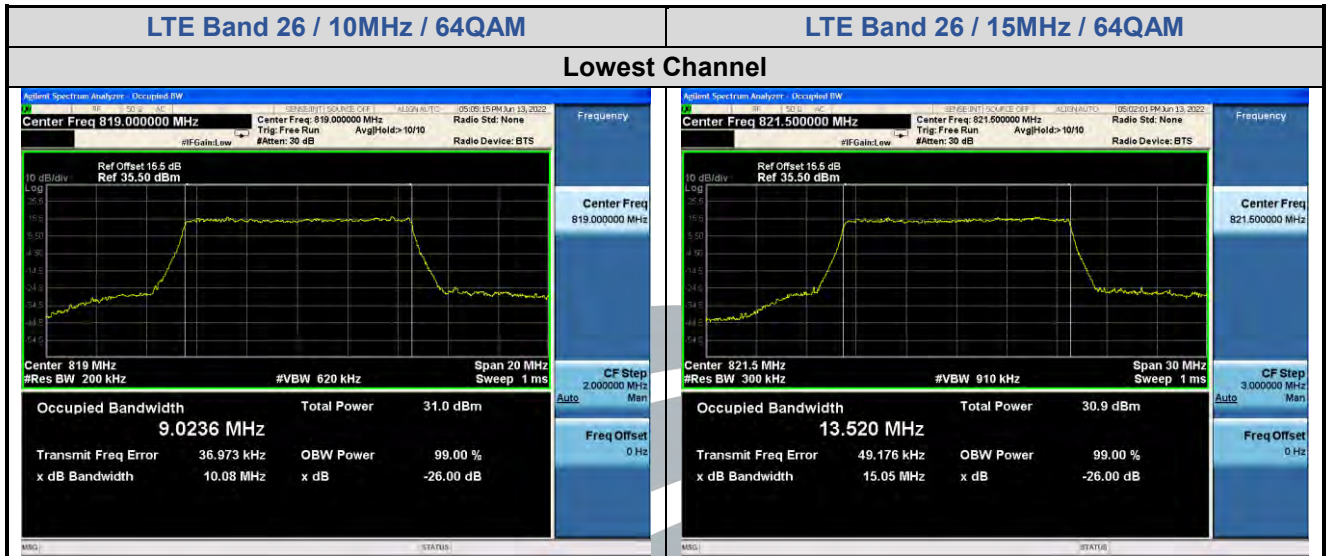












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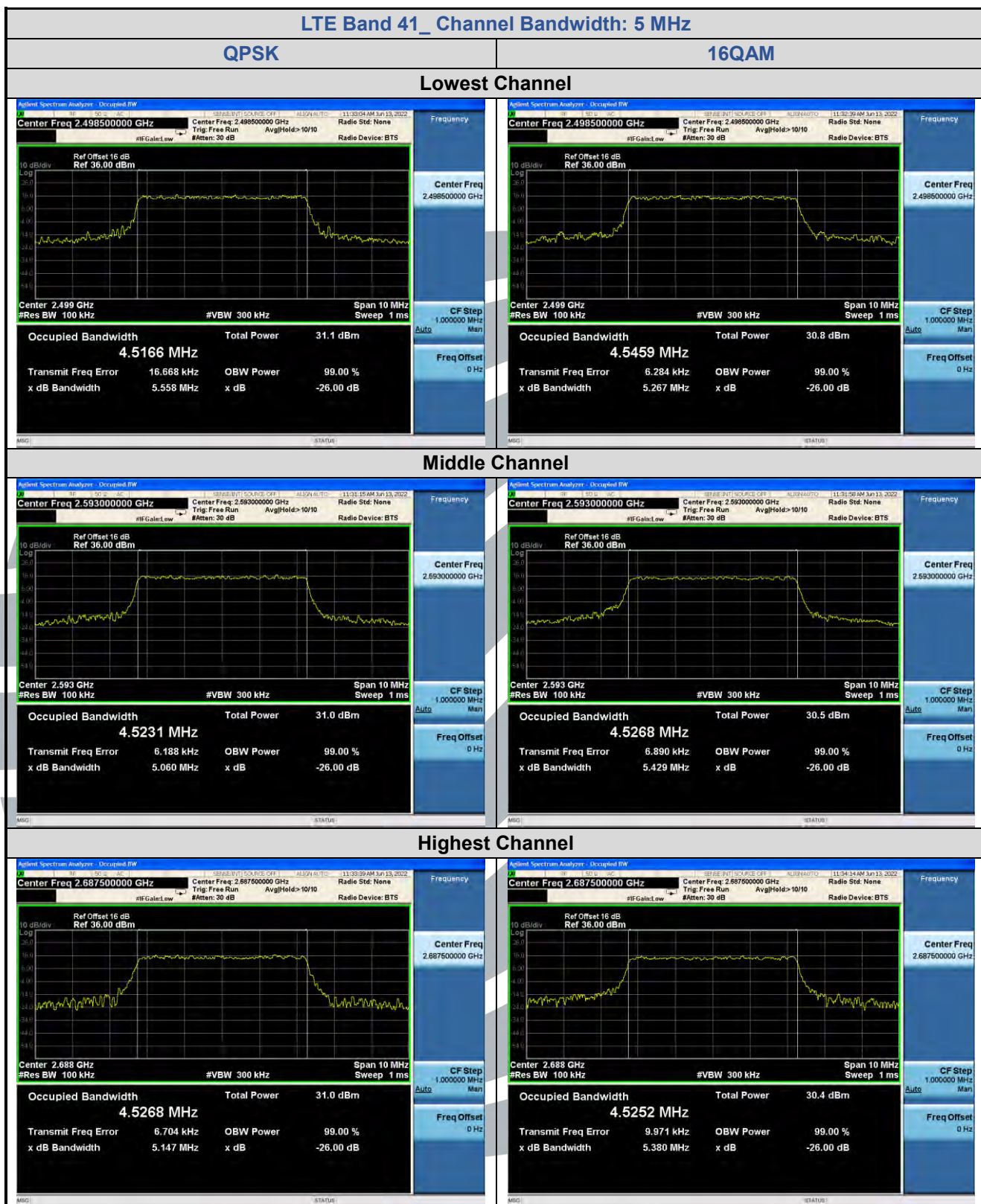
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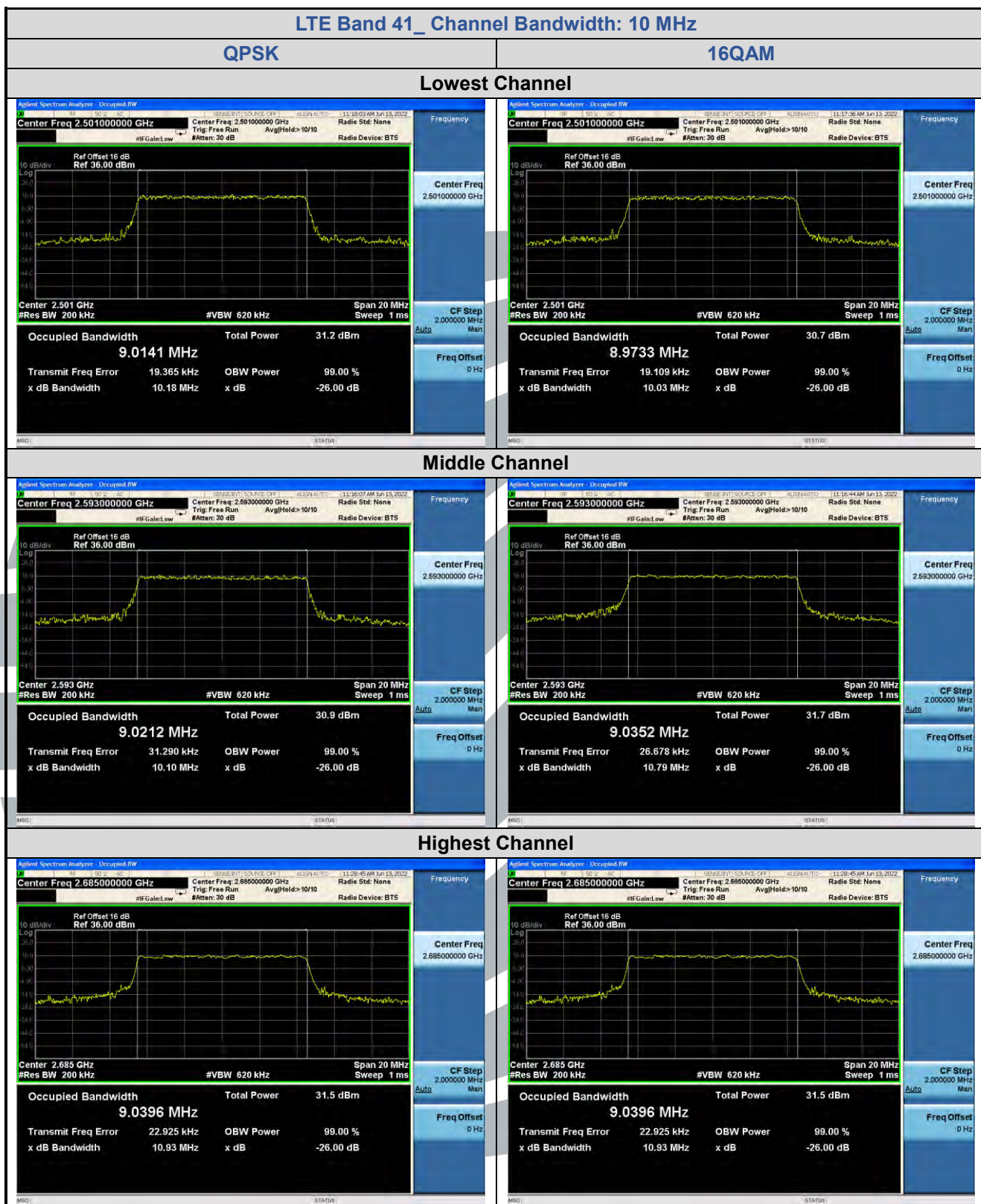
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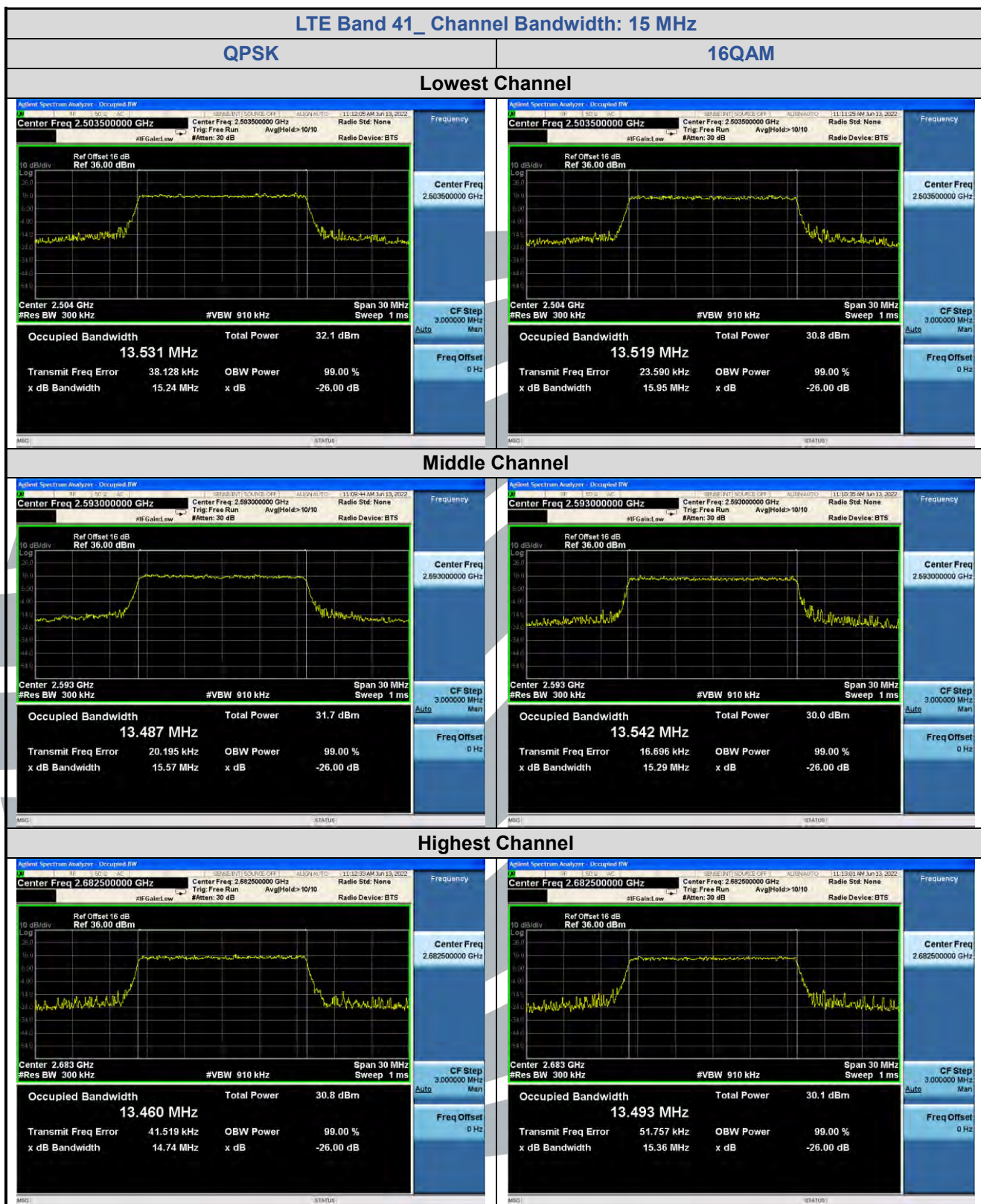
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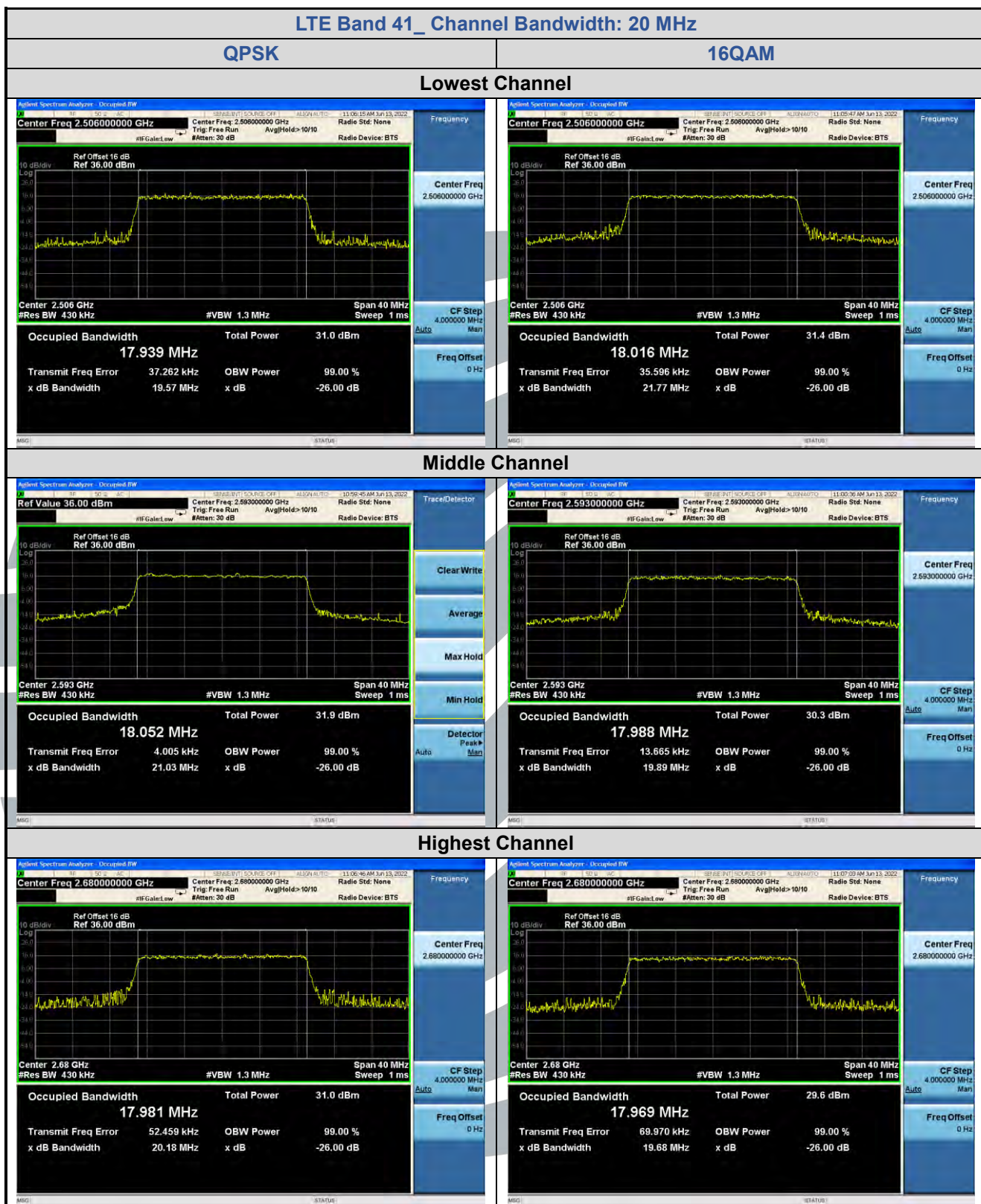
5.5.9 LTE Band 41

LTE Band 41								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.558	5.267	5.290	4.5166	4.5459	4.5450
Middle	25	0	5.060	5.429	5.429	4.5231	4.5268	4.5266
Highest	25	0	5.147	5.380	5.410	4.5268	4.5252	4.5317
Channel Bandwidth: 10 MHz								
Lowest	50	0	10.18	10.03	10.03	9.0141	8.9733	8.9733
Middle	50	0	10.10	10.79	10.79	9.0212	9.0352	9.0352
Highest	50	0	10.93	10.93	11.11	9.0396	9.0396	9.0182
Channel Bandwidth: 15 MHz								
Lowest	75	0	15.24	15.95	15.87	13.531	13.519	13.520
Middle	75	0	15.57	15.29	16.55	13.487	13.542	13.588
Highest	75	0	14.74	15.36	15.36	13.460	13.493	13.518
Channel Bandwidth: 20 MHz								
Lowest	100	0	19.57	21.77	22.02	17.939	18.016	18.039
Middle	100	0	21.03	19.89	20.27	18.052	17.988	17.998
Highest	100	0	20.18	19.68	19.73	17.981	17.969	17.964

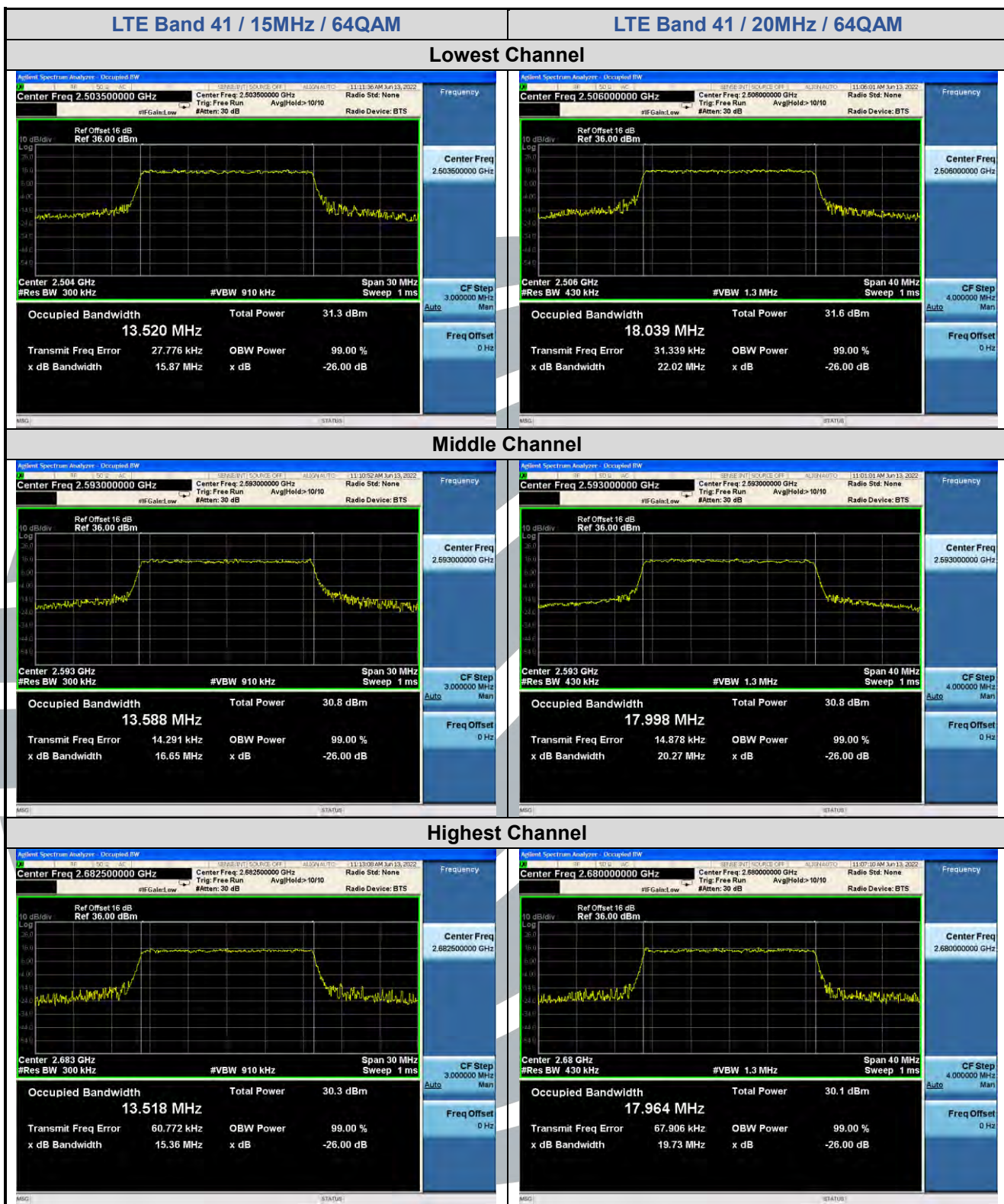








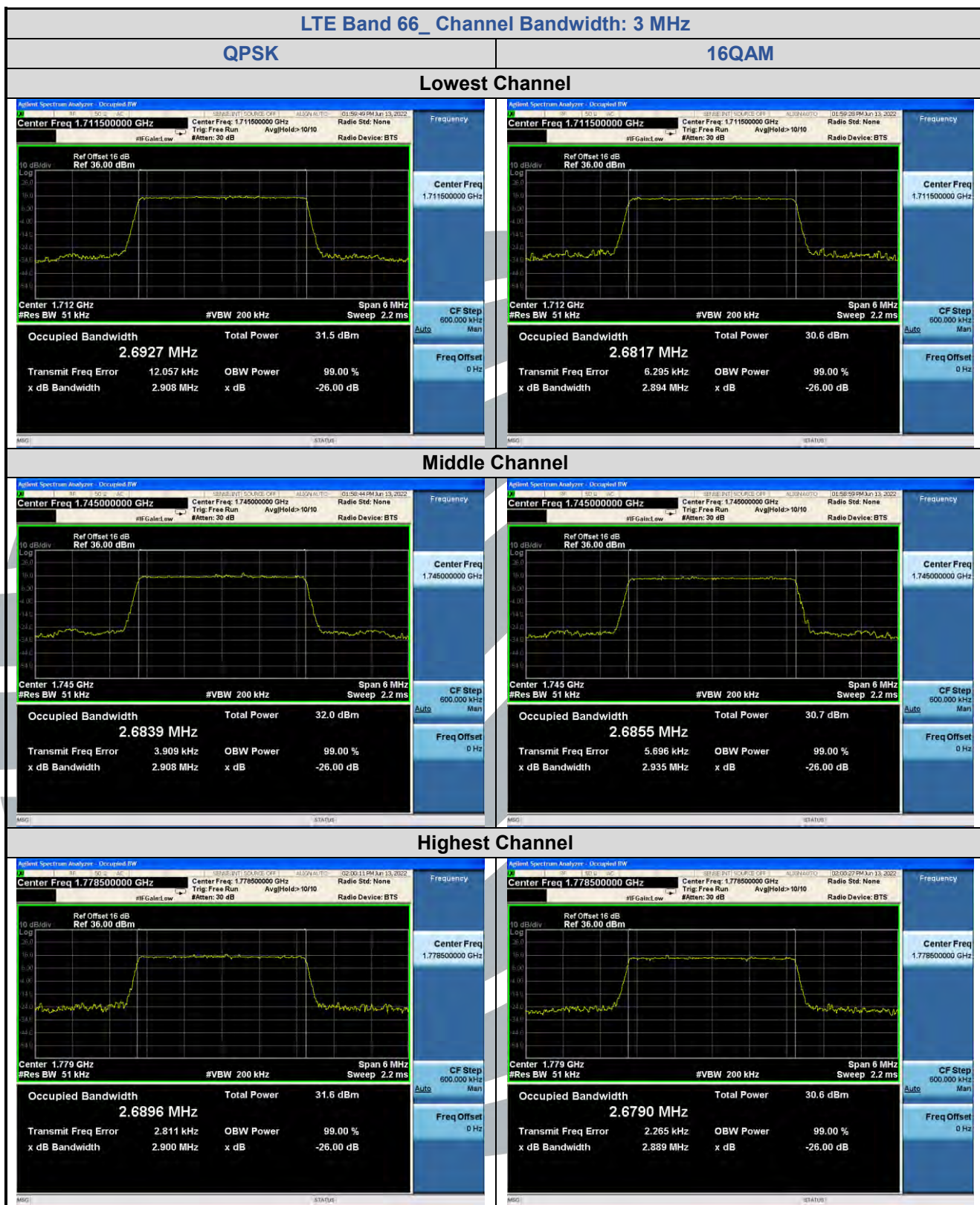


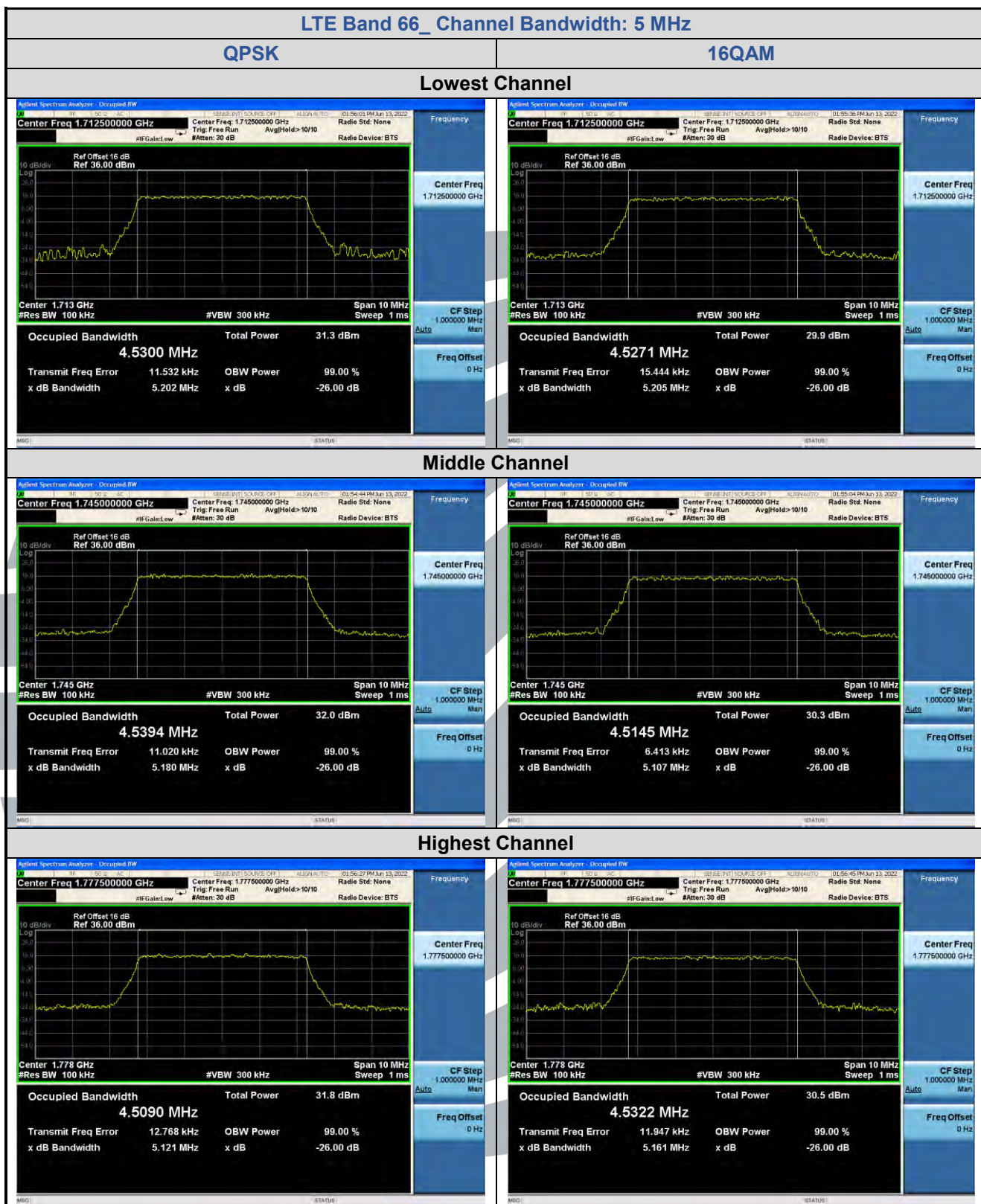


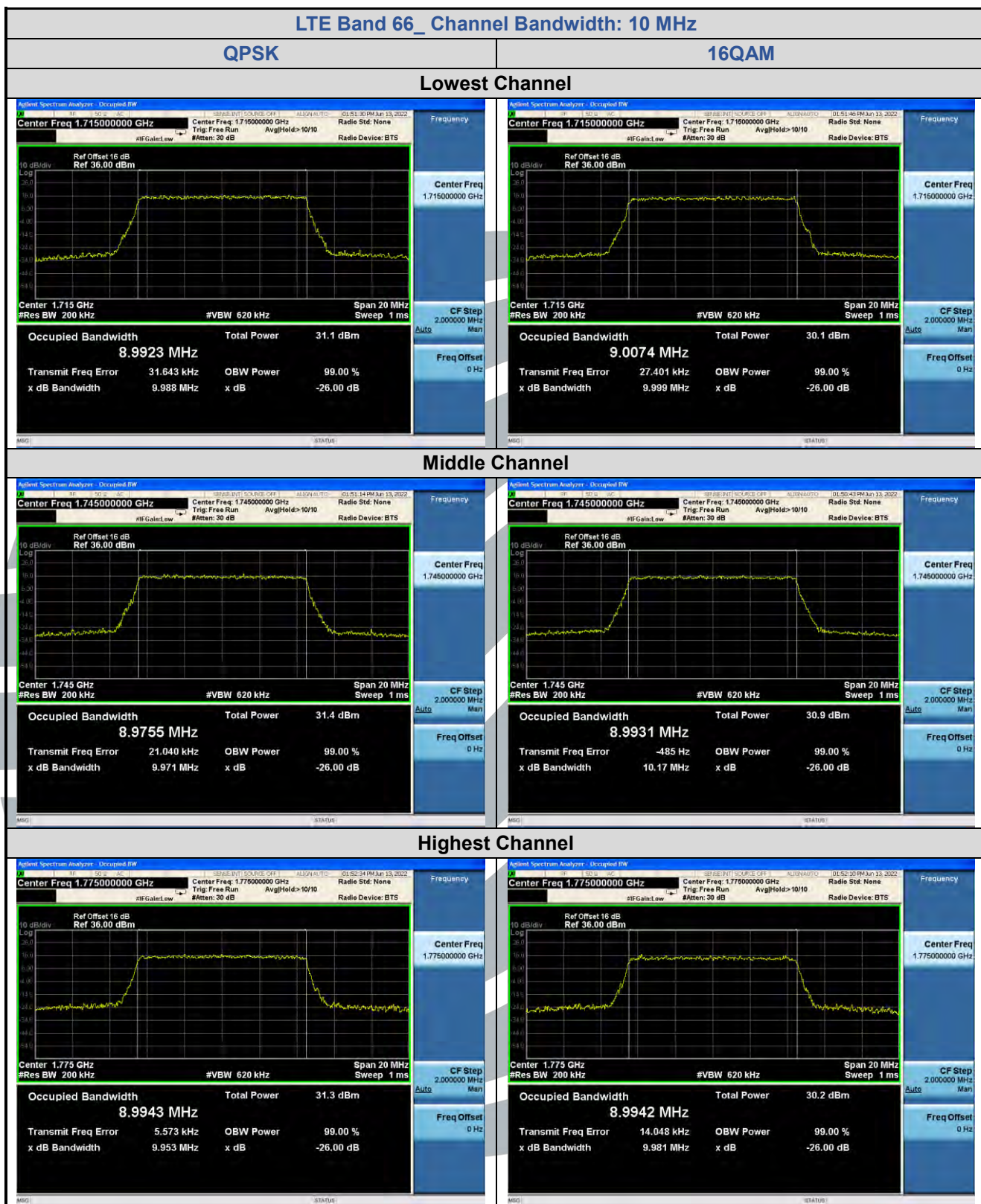
5.5.10 LTE Band 66

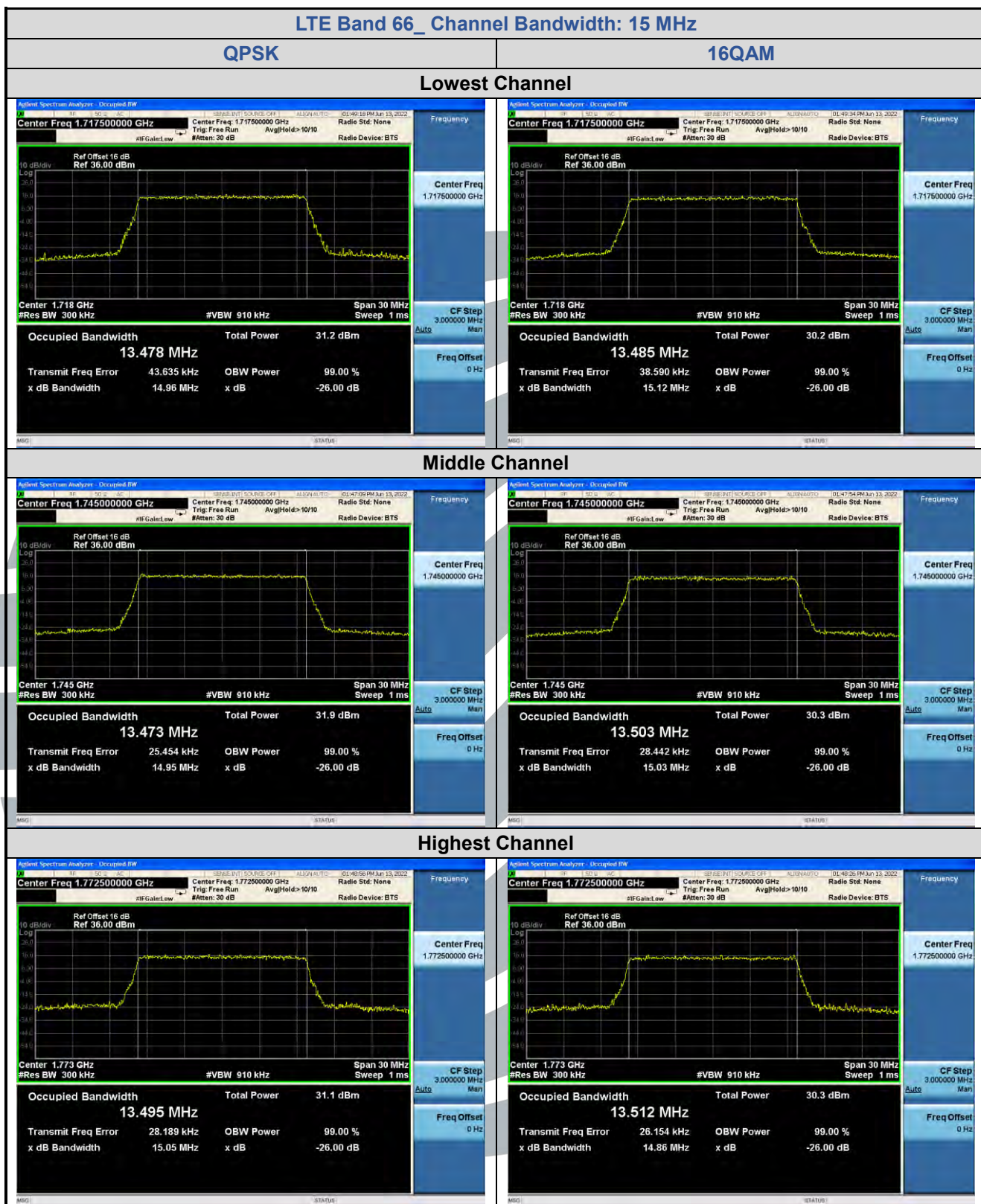
LTE Band 66								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 1.4 MHz								
Lowest	6	0	1.286	1.278	1.278	1.0924	1.0909	1.0904
Middle	6	0	1.286	1.313	1.313	1.0957	1.0997	1.1001
Highest	6	0	1.286	1.284	1.286	1.0999	1.0907	1.0943
Channel Bandwidth: 3 MHz								
Lowest	15	0	2.908	2.894	2.906	2.6927	2.6817	2.6882
Middle	15	0	2.908	2.935	2.930	2.6839	2.6855	2.6861
Highest	15	0	2.900	2.889	2.913	2.6896	2.6790	2.6840
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.202	5.205	5.183	4.5300	4.5271	4.5399
Middle	25	0	5.180	5.107	5.164	4.5394	4.5145	4.5088
Highest	25	0	5.121	5.161	5.224	4.5090	4.5322	4.5399
Channel Bandwidth: 10 MHz								
Lowest	50	0	9.988	9.999	9.987	8.9923	9.0074	8.9997
Middle	50	0	9.971	10.17	10.17	8.9755	8.9931	8.9989
Highest	50	0	9.953	9.981	10.10	8.9943	8.9942	8.9914
Channel Bandwidth: 15 MHz								
Lowest	75	0	14.96	15.12	15.03	13.478	13.485	13.496
Middle	75	0	14.95	15.03	15.02	13.473	13.503	13.516
Highest	75	0	15.05	14.86	15.06	13.495	13.512	13.501
Channel Bandwidth: 20 MHz								
Lowest	100	0	19.66	19.70	19.80	17.966	17.979	18.031
Middle	100	0	19.52	19.77	19.86	18.054	17.989	18.001
Highest	100	0	18.84	20.10	20.22	18.003	17.992	18.008

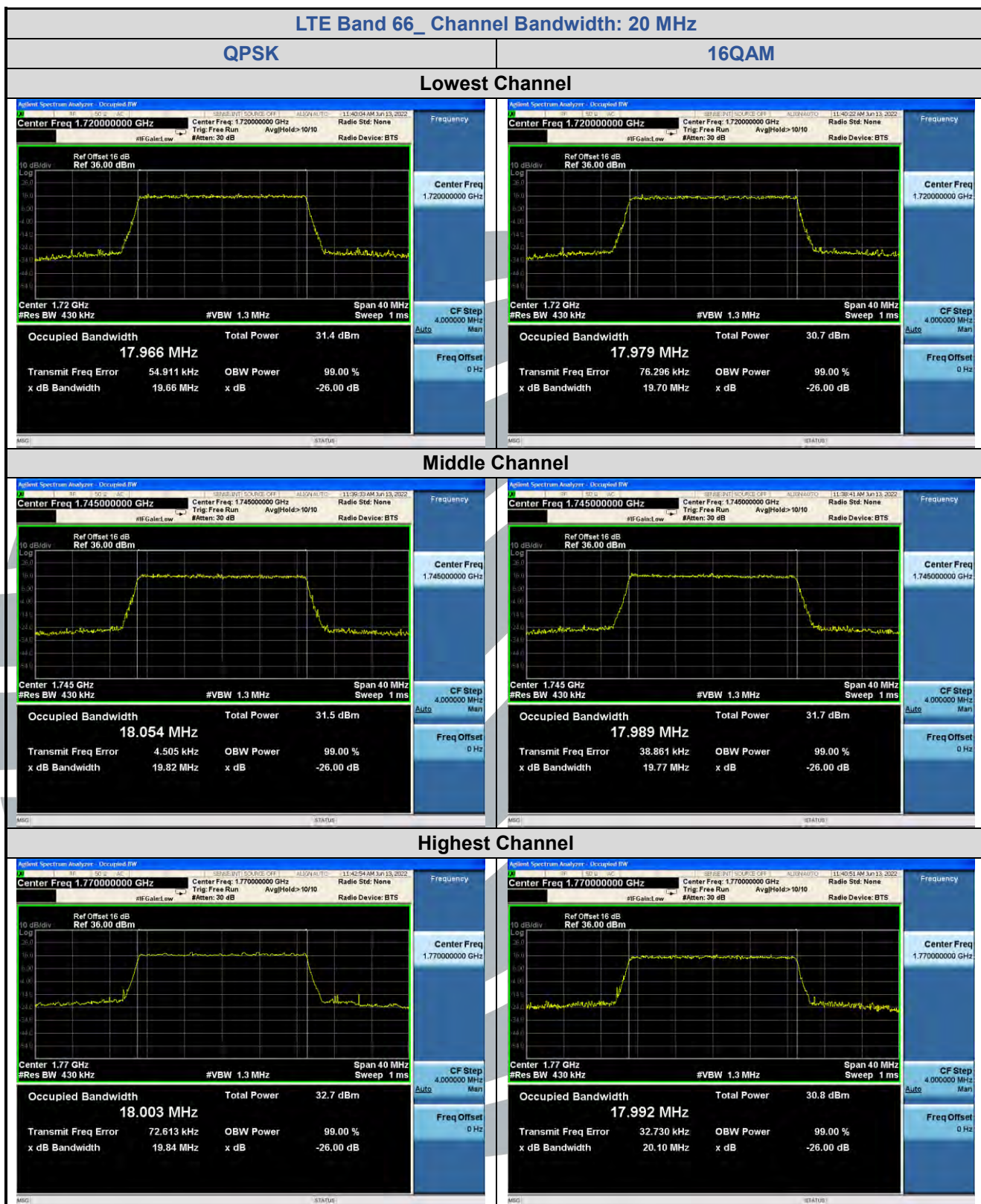


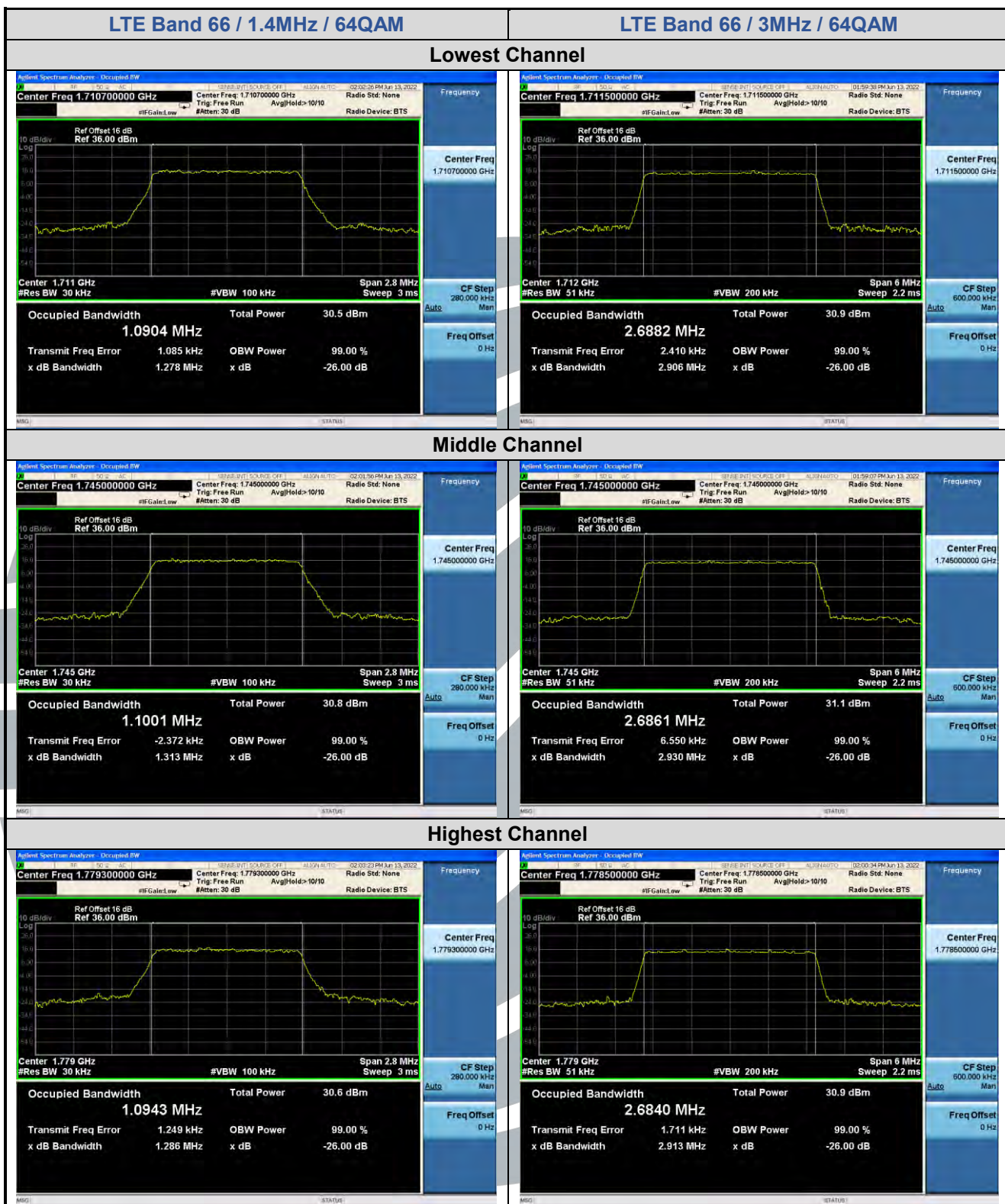
















5.5.11 LTE Band 71

LTE Band 71								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.118	5.207	5.680	4.5226	4.5522	4.5601
Middle	25	0	5.175	5.163	5.149	4.5434	4.5440	4.5434
Highest	25	0	5.116	5.177	5.287	4.5298	4.5481	4.5720
Channel Bandwidth: 10 MHz								
Lowest	50	0	9.930	10.19	10.10	9.0241	9.0232	9.0257
Middle	50	0	10.22	10.17	10.17	9.0491	9.0499	9.0450
Highest	50	0	10.04	9.970	10.06	9.0226	9.0492	9.0651
Channel Bandwidth: 15 MHz								
Lowest	75	0	14.85	15.05	15.26	13.505	13.496	13.508
Middle	75	0	15.06	14.99	15.03	13.531	13.538	13.553
Highest	75	0	14.92	15.01	15.09	13.504	13.542	13.545
Channel Bandwidth: 20 MHz								
Lowest	100	0	19.63	19.98	19.98	17.999	18.077	18.070
Middle	100	0	19.79	19.37	19.77	17.955	17.994	18.025
Highest	100	0	19.51	19.69	19.74	18.001	18.002	18.024

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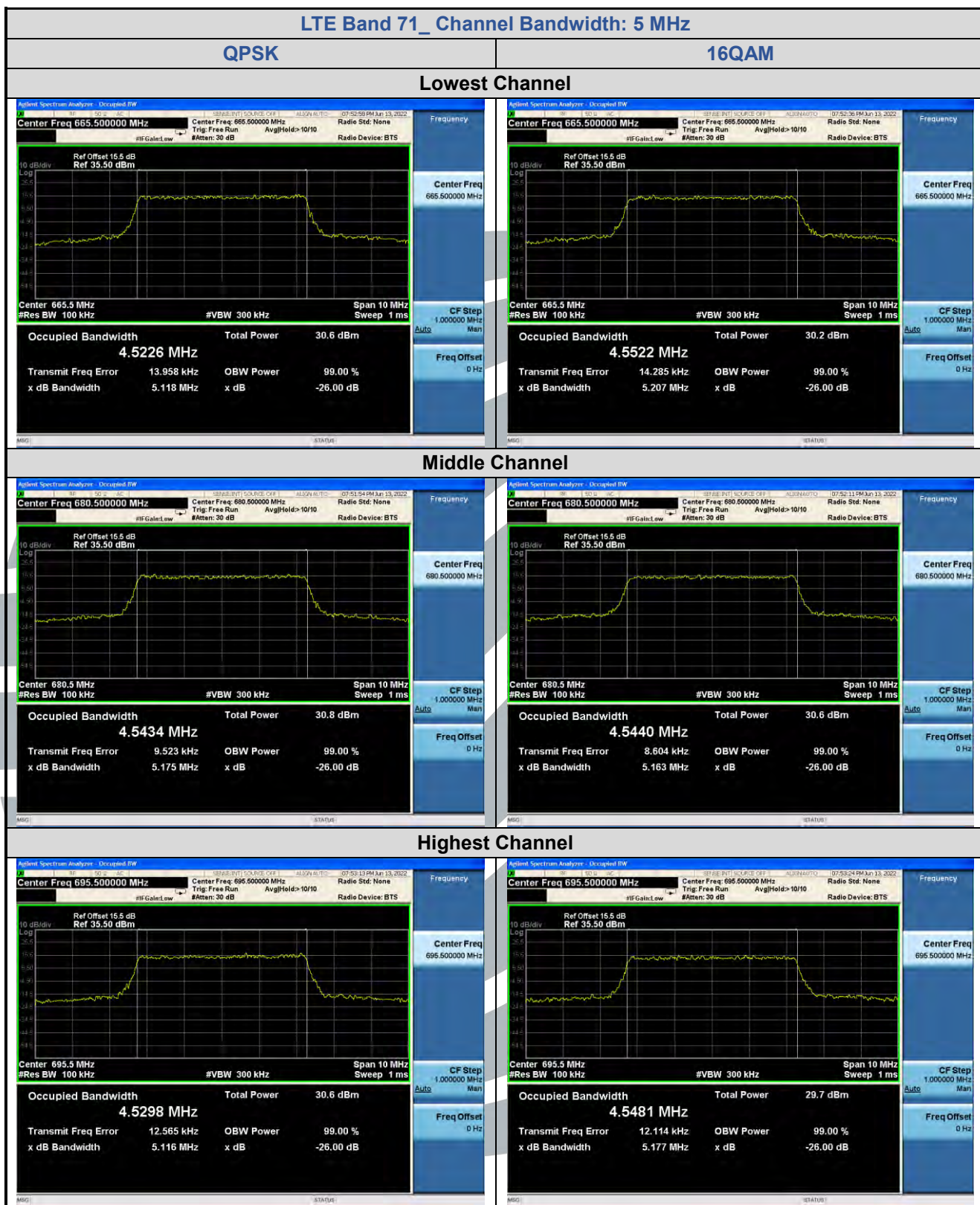
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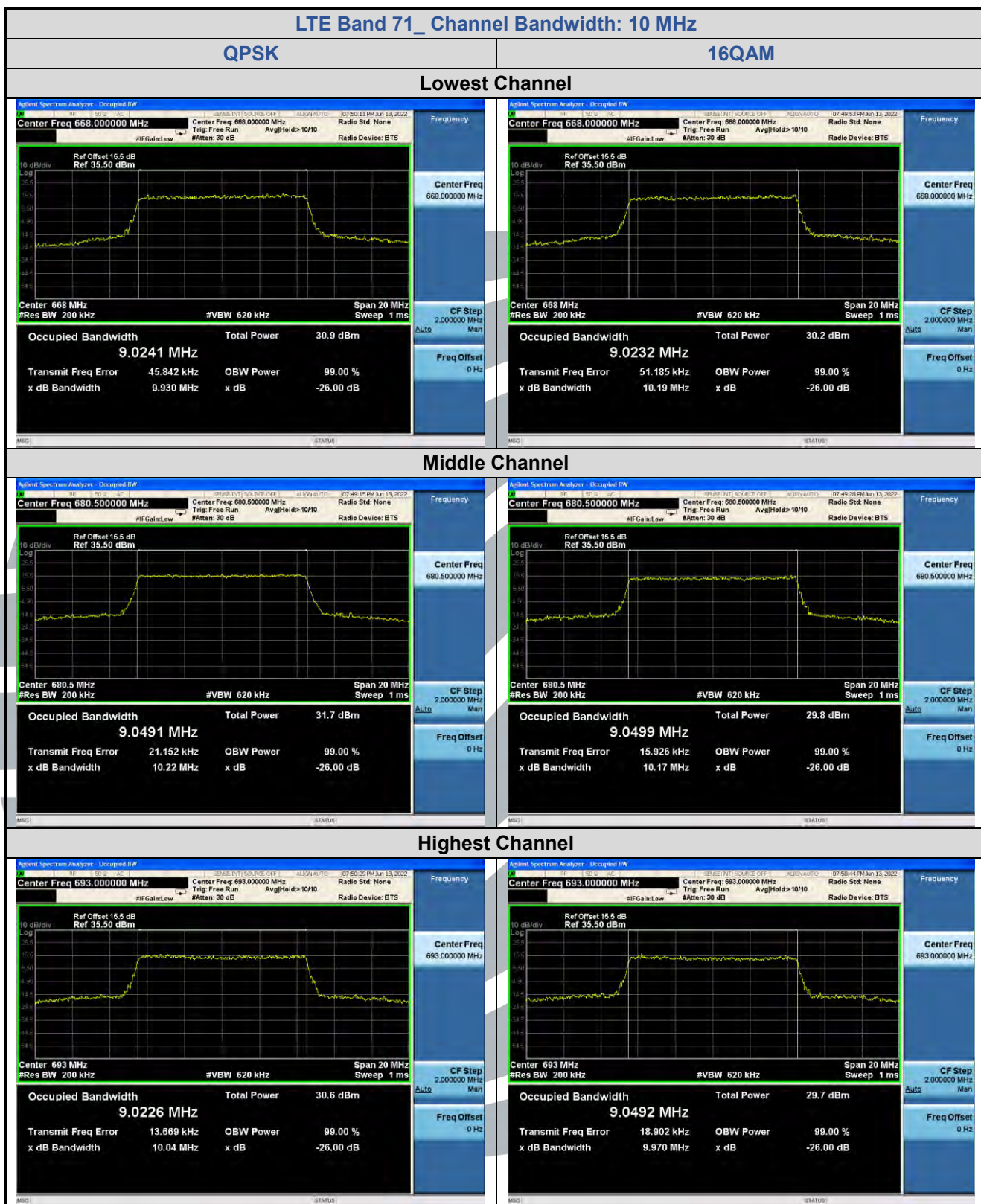
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5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: LTE Band 2 & LTE Band 25: FCC 47 CFR Part 24.238(a)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)(1)
LTE Band 5 & LTE Band 26: FCC 47 CFR Part 22.917(a)
LTE Band 41: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12 & Band 71: FCC 47 CFR Part 27.53(g)
LTE Band 13: FCC 47 CFR Part 27.53(c)(2)
LTE Band 26: FCC 47 CFR Part 90.691

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a):

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 equal to -13 dBm.

FCC 47 CFR Part 27.53(m)(4):

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 than $43 + 10 \log(P)$ 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.

FCC 47 CFR Part 27.53(g):

For operations in the 600 MHz band and the 698-746 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. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC 47 CFR Part 27.53(c)(2):

On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

FCC 47 CFR Part 90.691:

(a)(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(a)(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.

For each band edge measurement:

- 1) Set the spectrum analyzer span to include the block edge frequency.
- 2) Set a marker to point the corresponding band edge frequency in each test case.
- 3) Set display line at -13 dBm
- 4) Set resolution bandwidth to at least 1% of emission bandwidth.
- 5) Set spectrum analyzer with RMS detector.
- 6) Record the max trace plot into the test report

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

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Test Setup: Refer to section 4.2.2 for details.
Instruments Used: Refer to section 3 for details
Test Mode: Link mode
Test Results: Pass

5.6.1 LTE Band 2

