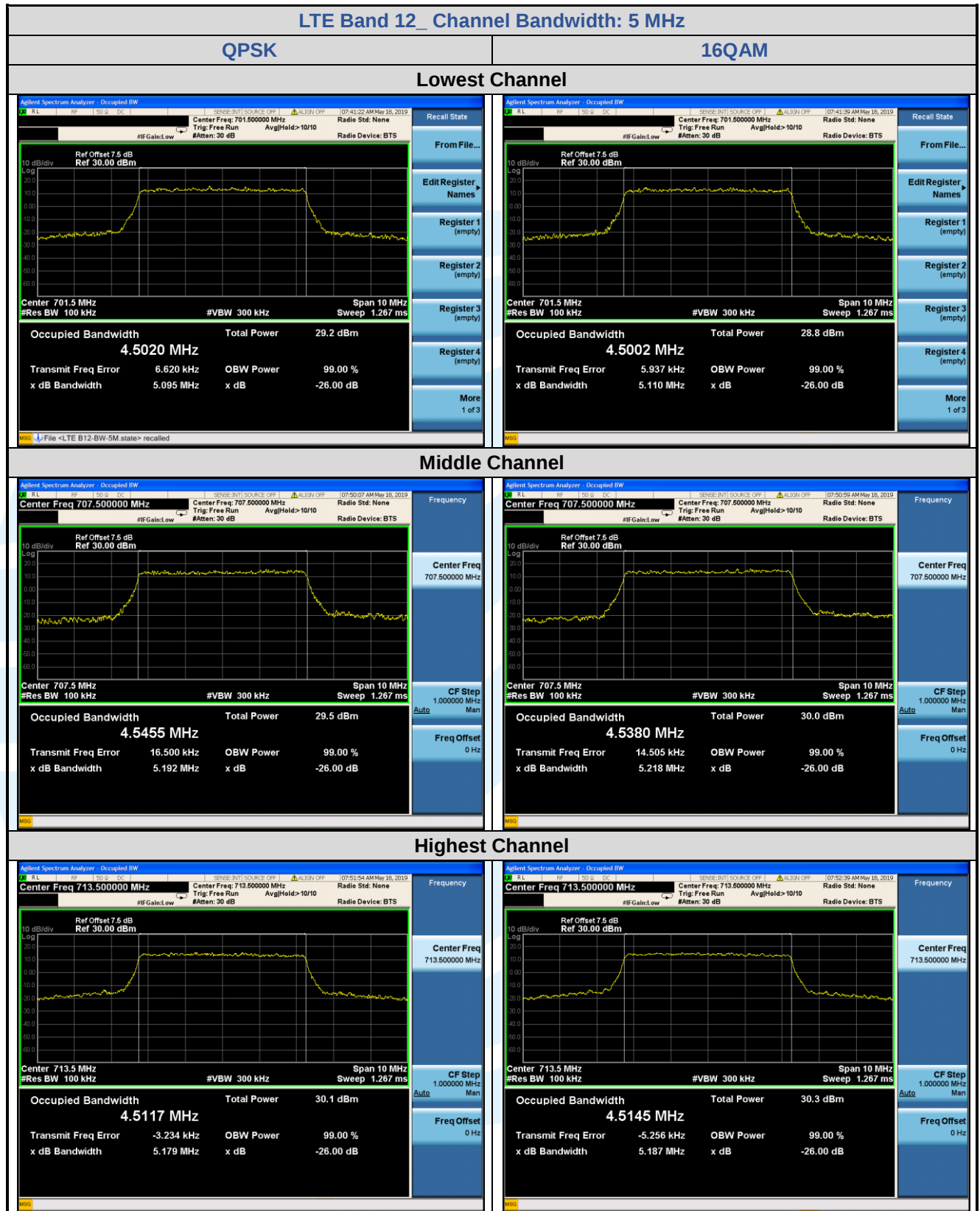
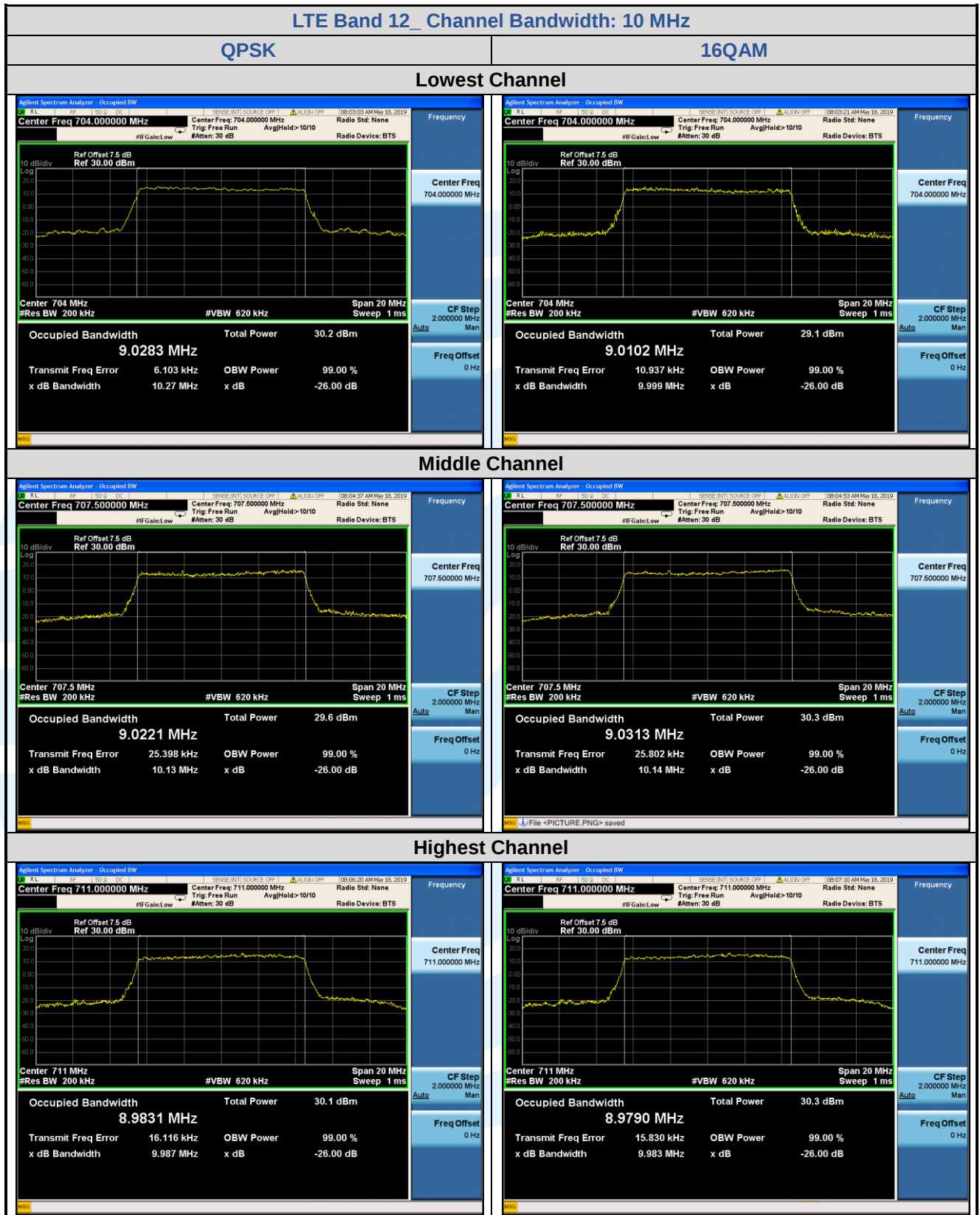
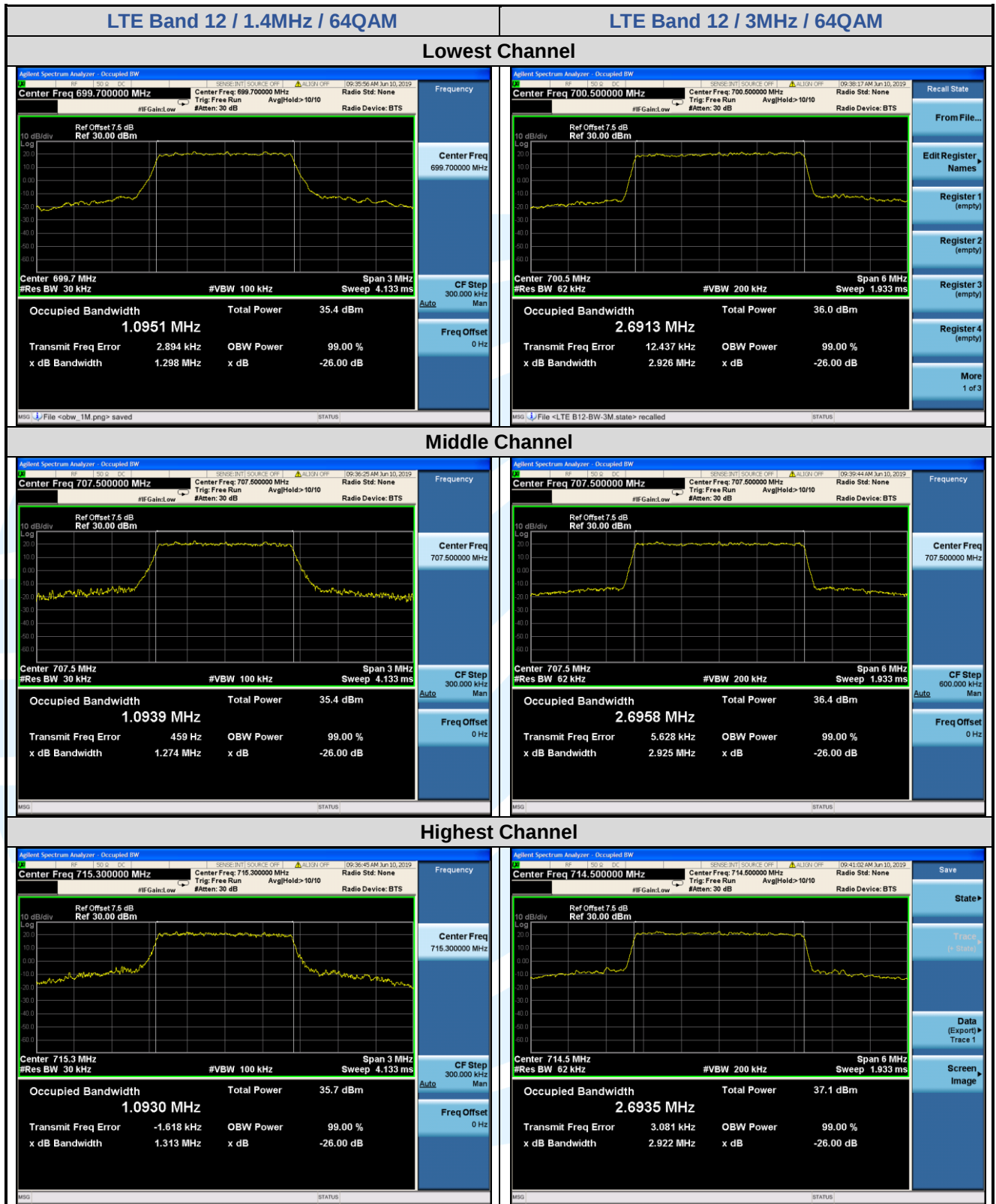
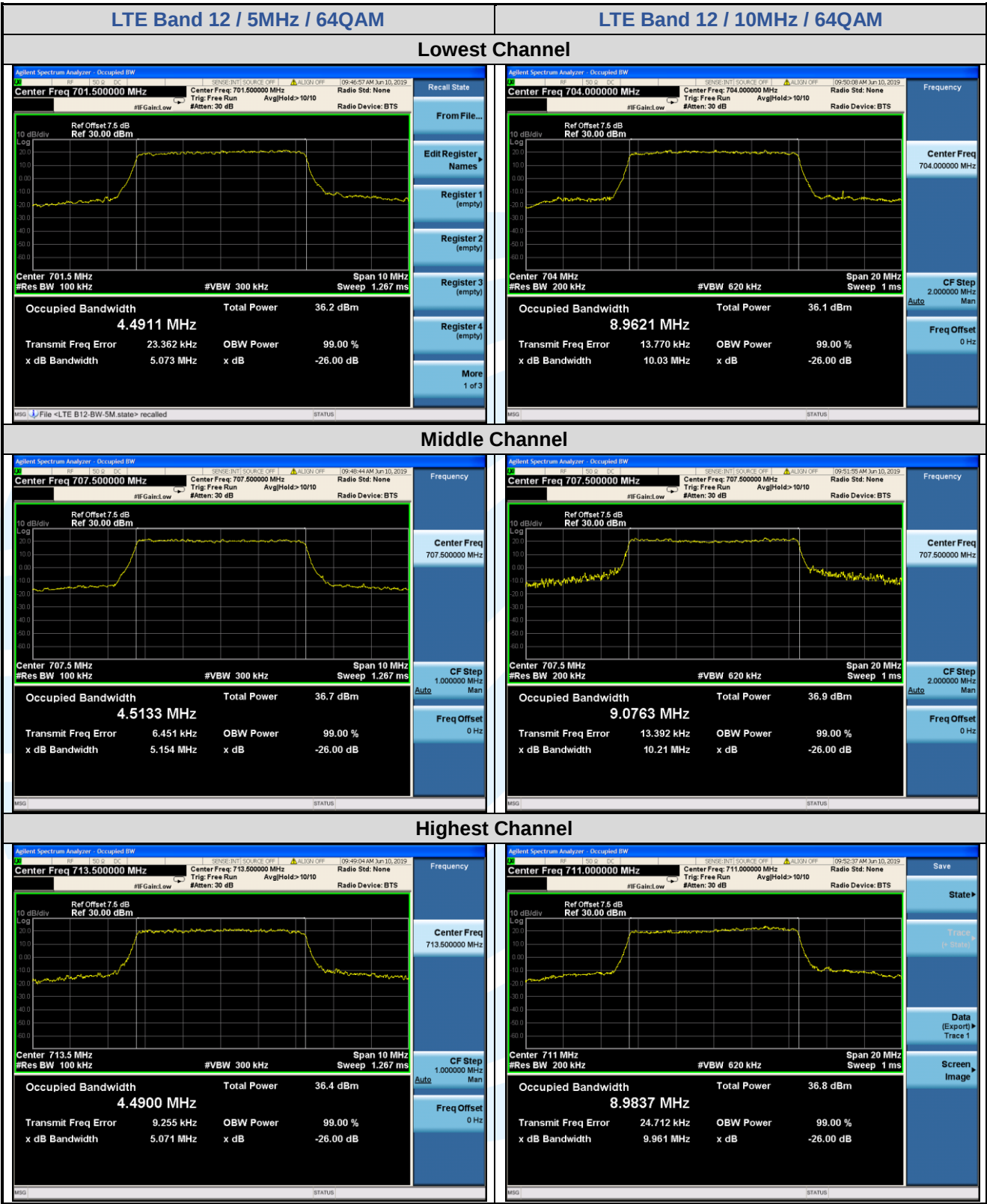










Middle Channel

Agilent Spectrum Analyzer - Occupied BW

Center Freq 707.500000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Ref Offset 7.5 dB

Ref 30.00 dBm

10 dB/div

Log

Center 707.5 MHz

#Res BW 100 kHz

#VBW 300 kHz

Span 10 MHz

Sweep 1.267 ms

Occupied Bandwidth 4.5133 MHz

Total Power 36.7 dBm

Transmit Freq Error 6.451 kHz

OBW Power 99.00 %

x dB Bandwidth 5.154 MHz

x dB -26.00 dB

Frequency

Center Freq 707.500000 MHz

CF Step 1.000000 MHz

Auto

Man

Freq Offset 0 Hz

Center Freq 707.500000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Ref Offset 7.5 dB

Ref 30.00 dBm

10 dB/div

Log

Center 707.5 MHz

#Res BW 200 kHz

#VBW 620 kHz

Span 20 MHz

Sweep 1 ms

Occupied Bandwidth 9.0763 MHz

Total Power 36.9 dBm

Transmit Freq Error 13.392 kHz

OBW Power 99.00 %

x dB Bandwidth 10.21 MHz

x dB -26.00 dB

Frequency

Center Freq 707.500000 MHz

CF Step 2.000000 MHz

Auto

Man

Freq Offset 0 Hz

Highest Channel

Agilent Spectrum Analyzer - Occupied BW

Center Freq 713.500000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Ref Offset 7.5 dB

Ref 30.00 dBm

10 dB/div

Log

Center 713.5 MHz

#Res BW 100 kHz

#VBW 300 kHz

Span 10 MHz

Sweep 1.267 ms

Occupied Bandwidth 4.4900 MHz

Total Power 36.4 dBm

Transmit Freq Error 9.255 kHz

OBW Power 99.00 %

x dB Bandwidth 5.071 MHz

x dB -26.00 dB

Frequency

Center Freq 713.500000 MHz

CF Step 1.000000 MHz

Auto

Man

Freq Offset 0 Hz

Center Freq 711.000000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Ref Offset 7.5 dB

Ref 30.00 dBm

10 dB/div

Log

Center 711 MHz

#Res BW 200 kHz

#VBW 620 kHz

Span 20 MHz

Sweep 1 ms

Occupied Bandwidth 8.9837 MHz

Total Power 36.8 dBm

Transmit Freq Error 24.712 kHz

OBW Power 99.00 %

x dB Bandwidth 9.961 MHz

x dB -26.00 dB

Save

State

Trace 6

Trace 1

Data (Export)

Screen Image

LTE Band 13

LTE Band 13								
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	5.171	5.230	5.223	4.5223	4.5203	4.5123
Middle	25	0	5.310	5.393	5.258	4.5263	4.5161	4.5157
Highest	25	0	5.268	5.190	5.259	4.5200	4.5100	4.5024
Channel Bandwidth: 10 MHz								
Middle	50	0	10.20	10.01	10.52	9.0180	8.9953	9.0209

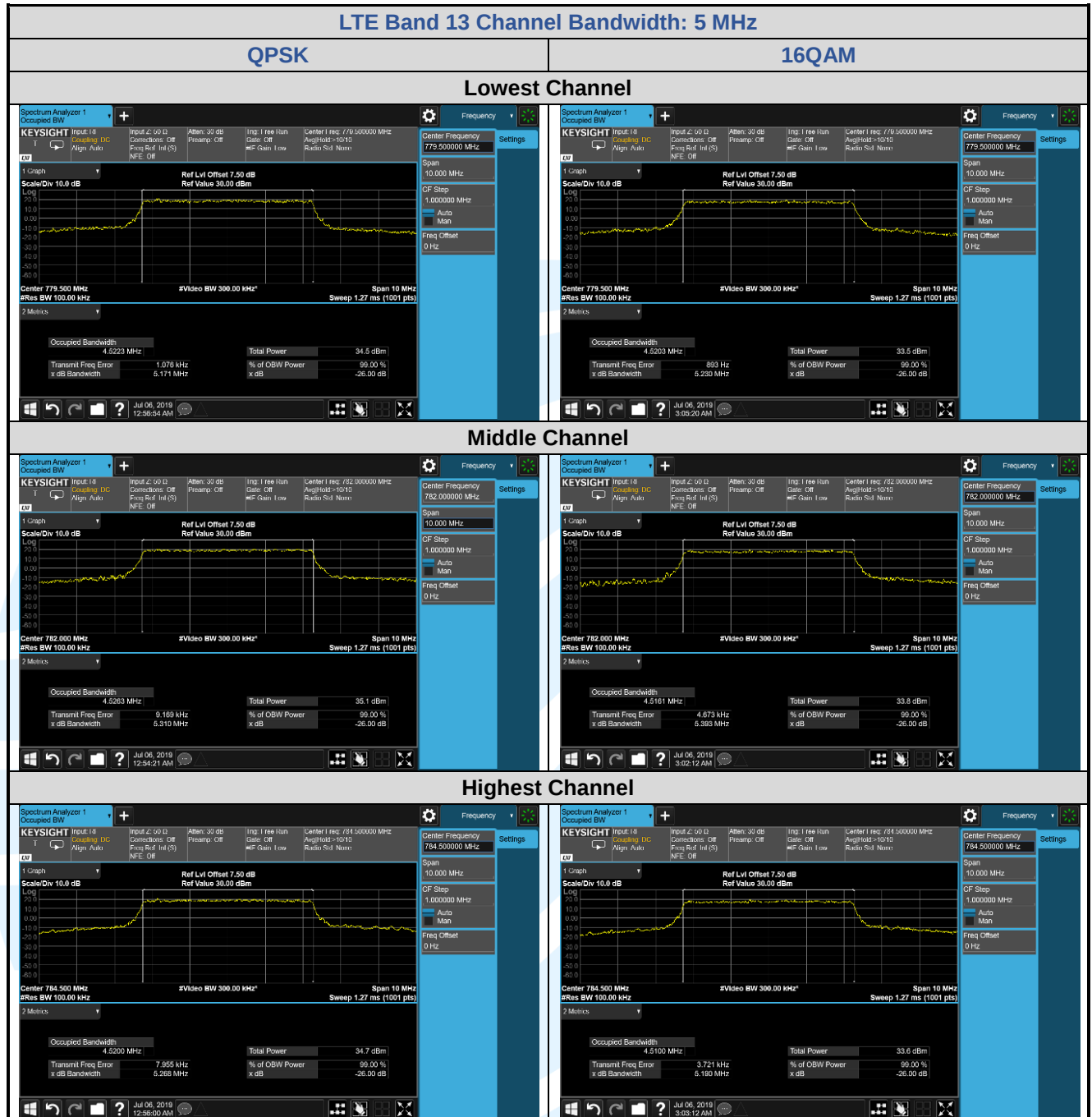
Shenzhen UnionTrust Quality and Technology Co., Ltd.

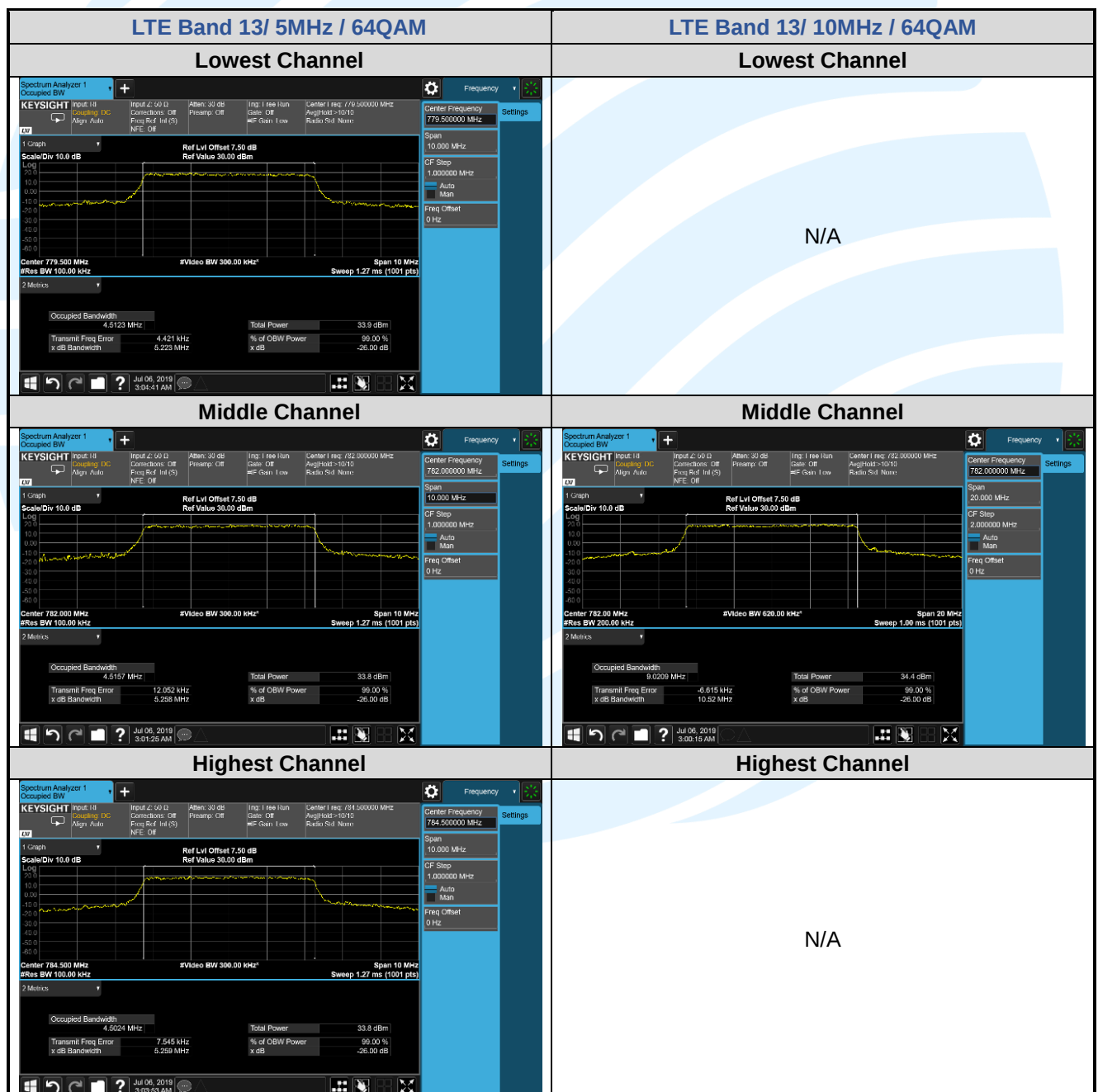
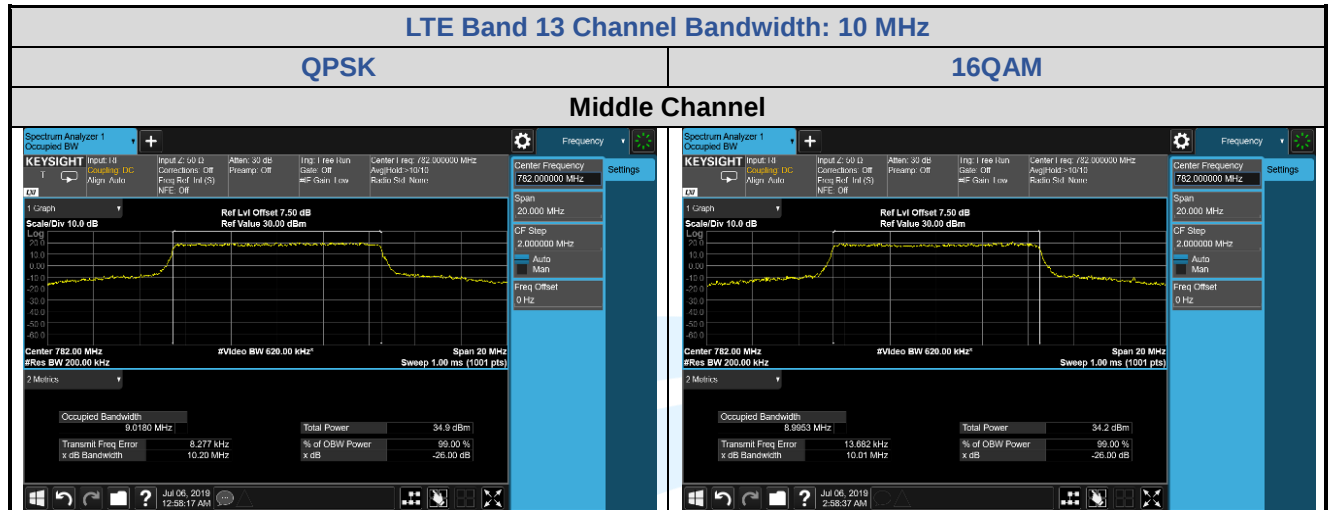
Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China

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Fax: +86-755-28230886

E-mail: info@uttlab.com
[Http://www.uttlab.com](http://www.uttlab.com)





LTE Band 17

LTE Band 17								
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	5.618	5.215	5.151	4.5237	4.5213	4.5100
Middle	25	0	5.134	5.174	5.104	4.5218	4.5177	4.5067
Highest	25	0	5.142	5.137	5.112	4.5105	4.5045	4.4868
Channel Bandwidth: 10 MHz								
Lowest	50	0	10.10	10.12	10.08	9.0314	9.0320	9.0472
Middle	50	0	10.07	10.03	10.02	8.9998	8.9973	9.0166
Highest	50	0	10.12	10.15	9.939	9.0027	9.0036	8.9854

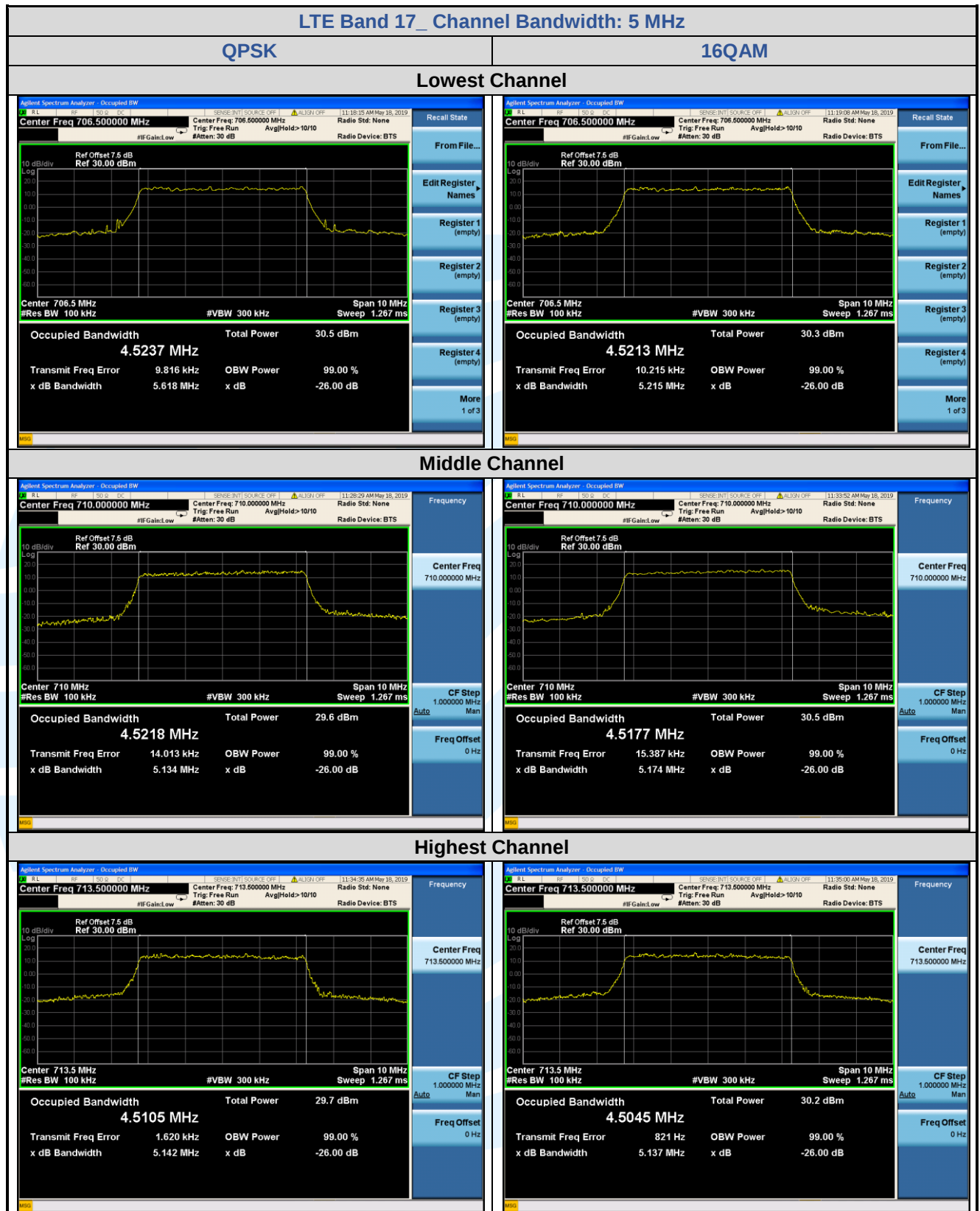
Shenzhen UnionTrust Quality and Technology Co., Ltd.

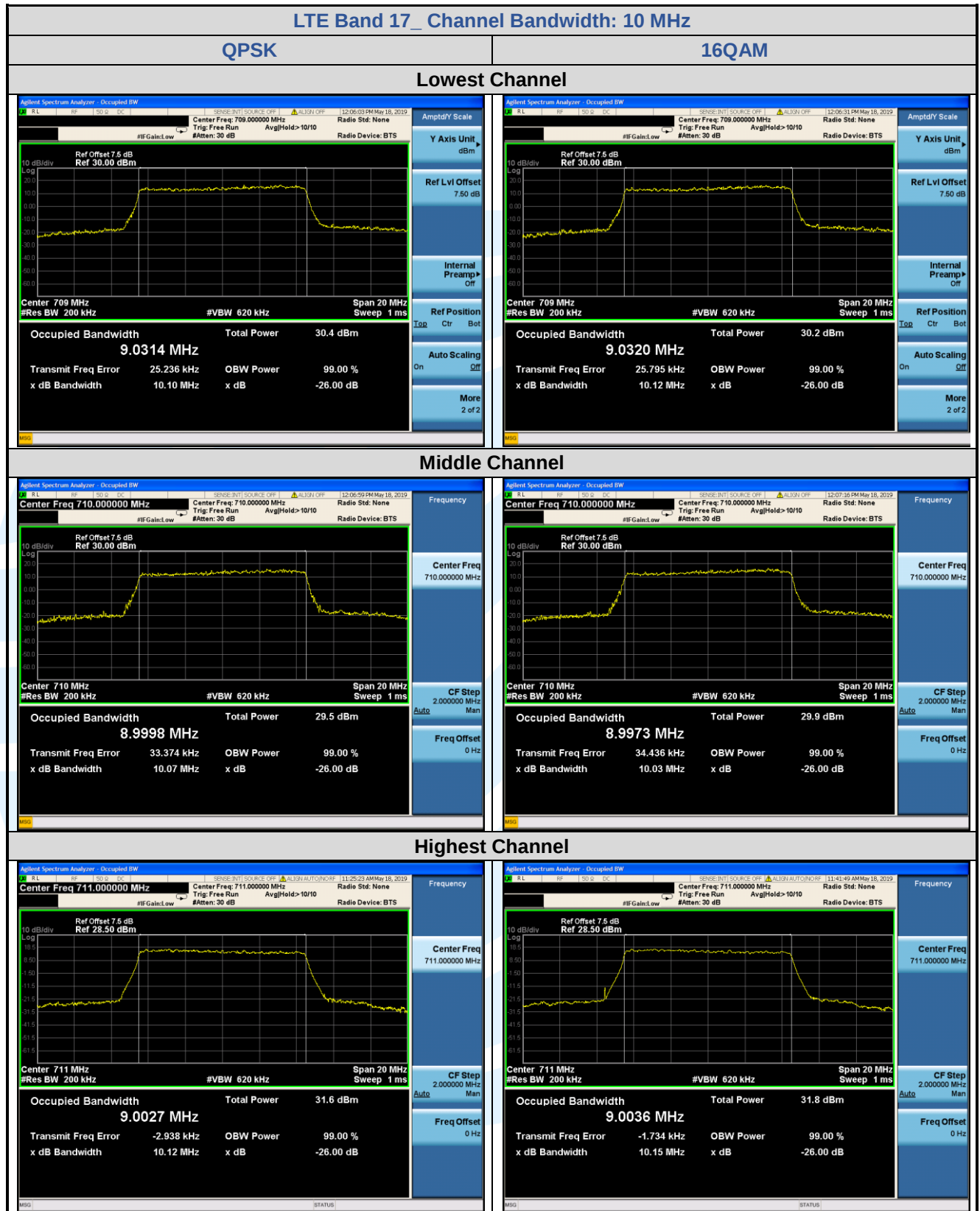
Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China

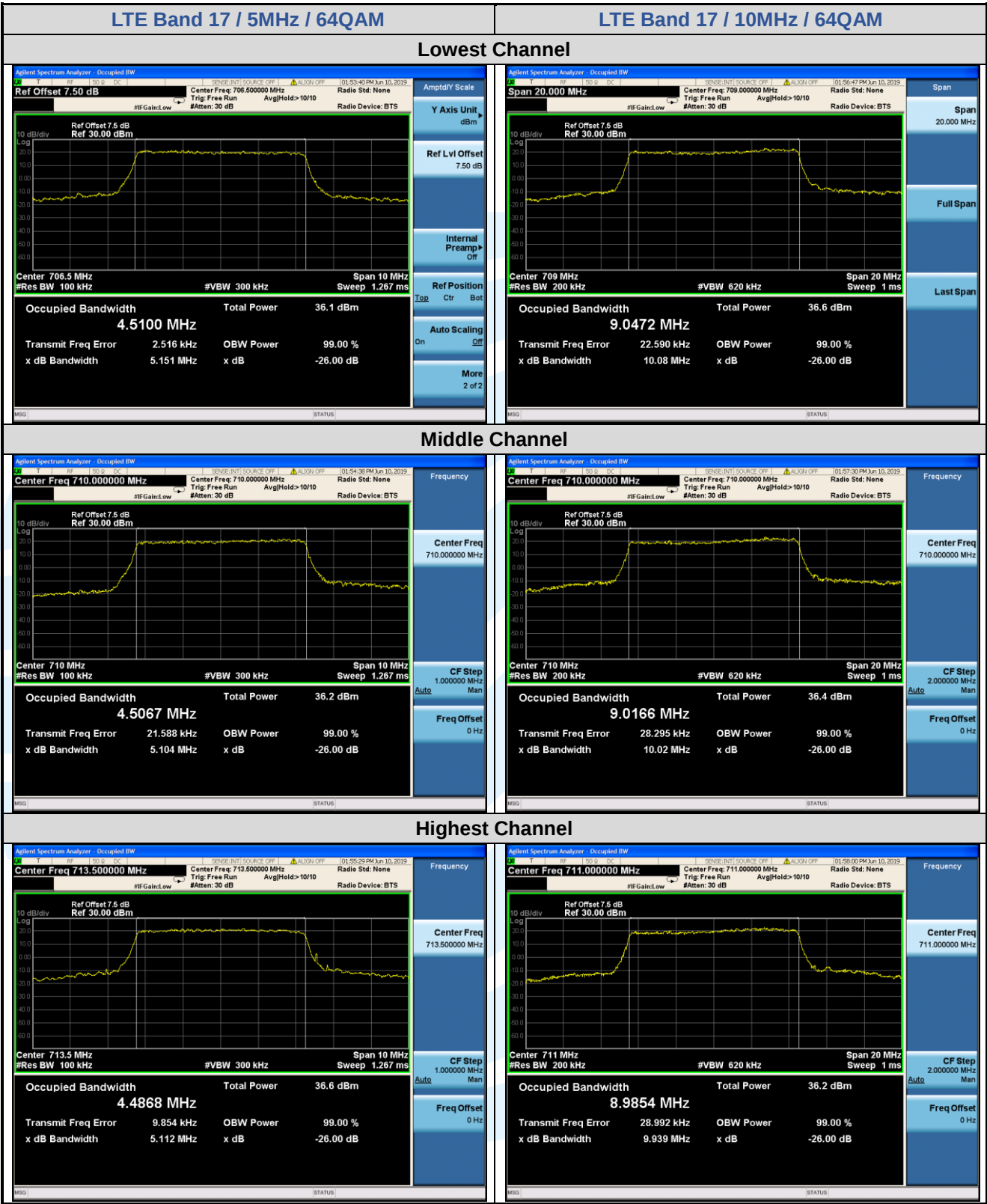
Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com
[Http://www.uttlab.com](http://www.uttlab.com)







Highest Channel

Agilent Spectrum Analyzer - Occupied BW

Center Freq: 713.500000 MHz

Center Freq: 713.500000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Y Axis Unit: dBm

Ref Lvl Offset: 7.50 dB

Internal Preamp: Off

Ref Position: Top

Auto Scaling: On

More: 2 of 2

10 dB/div

Log

Ref Offset 7.5 dB

Ref 30.00 dBm

Center 713.5 MHz

#Res BW 100 kHz

#VBW 300 kHz

Span 10 MHz

Sweep 1.267 ms

Occupied Bandwidth: 4.4868 MHz

Total Power: 36.6 dBm

Transmit Freq Error: 9.854 kHz

OBW Power: 99.00 %

x dB Bandwidth: 5.112 MHz

x dB: -26.00 dB

MSG

STATUS

Agilent Spectrum Analyzer - Occupied BW

Center Freq: 711.000000 MHz

Center Freq: 711.000000 MHz

Trig: Free Run

AvgHold>10/10

Radio Std: None

Radio Device: BTS

Y Axis Unit: dBm

Ref Lvl Offset: 7.50 dB

Internal Preamp: Off

Ref Position: Top

Auto Scaling: On

More: 2 of 2

10 dB/div

Log

Ref Offset 7.5 dB

Ref 30.00 dBm

Center 711 MHz

#Res BW 200 kHz

#VBW 620 kHz

Span 20 MHz

Sweep 1 ms

Occupied Bandwidth: 8.9854 MHz

Total Power: 36.2 dBm

Transmit Freq Error: 28.992 kHz

OBW Power: 99.00 %

x dB Bandwidth: 9.939 MHz

x dB: -26.00 dB

MSG

STATUS

Frequency: 713.500000 MHz

Center Freq: 713.500000 MHz

CF Step: 1.000000 MHz

Freq Offset: 0 Hz

5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: FCC 47 CFR Part 2.1051,
GSM 850 & WCDMA Band V & LTE Band 5: FCC 47 CFR Part 22.917(a),
GSM 1900 & WCDMA Band II & LTE Band 2: FCC 47 CFR Part 24.238(a),
WCDMA Band IV & LTE Band 4: FCC 47 CFR Part 27.53(h)(1),
LTE Band 12 & Band 17: FCC 47 CFR Part 27.53(g)
LTE Band 13: FCC 47 CFR Part 27.53(c)(2)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)

Test Method: ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 22 & FCC 47 CFR Part 24: 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(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(h)(1): Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB. The emission limit equal to -13 dBm.

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 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.

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.

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

The test plots as follows:

