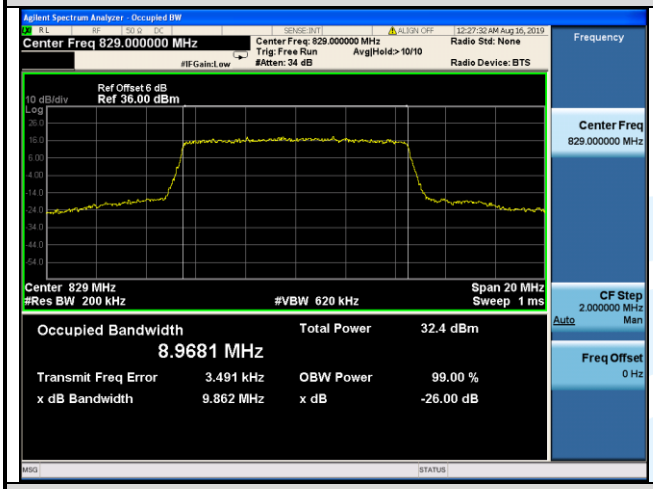
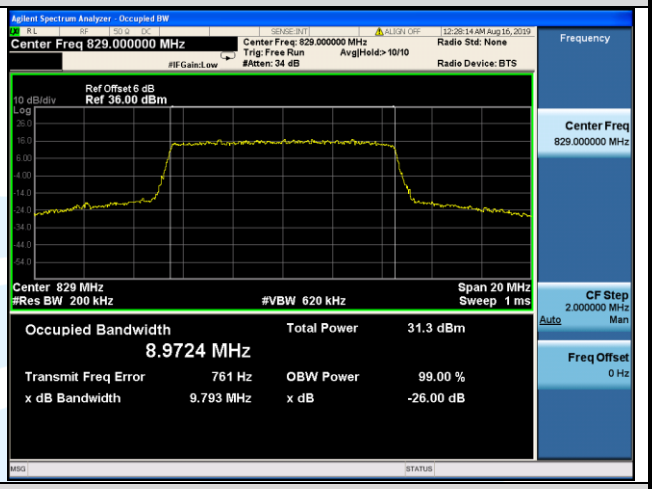
LTE Band 5_ Channel Bandwidth: 10 MHz

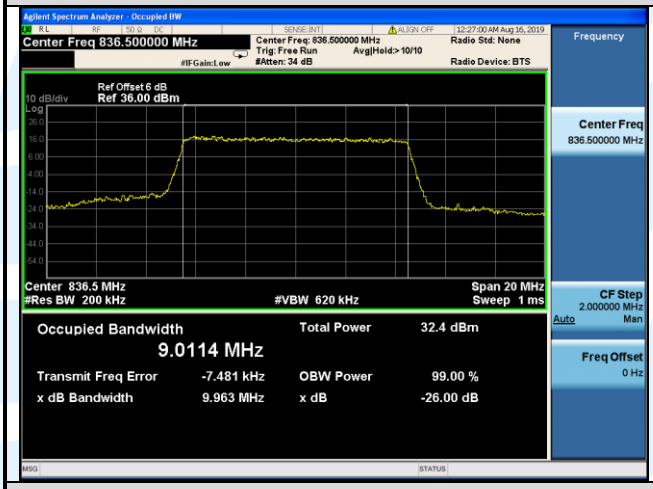
QPSK	16QAM

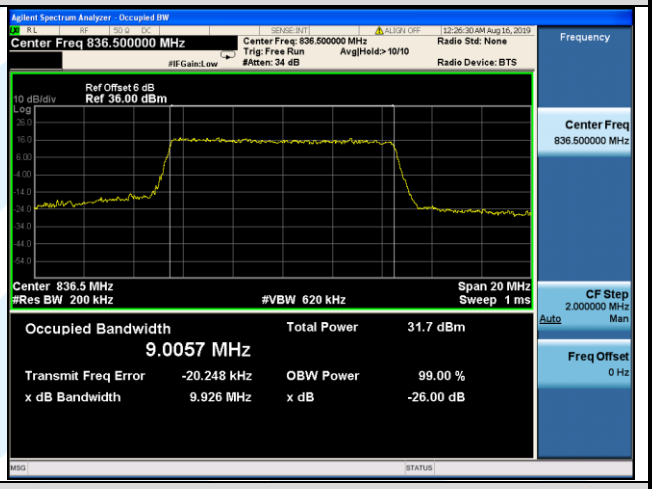
Lowest Channel



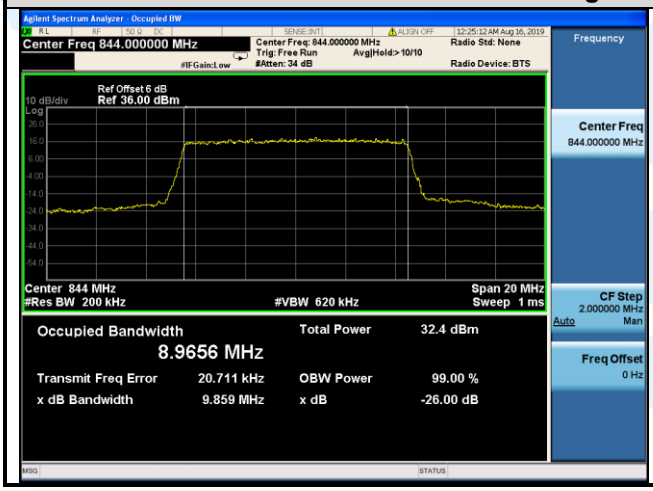


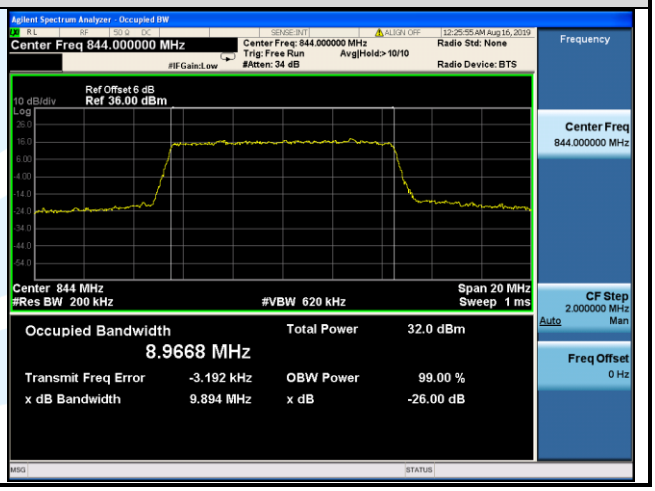
Middle Channel





Highest Channel





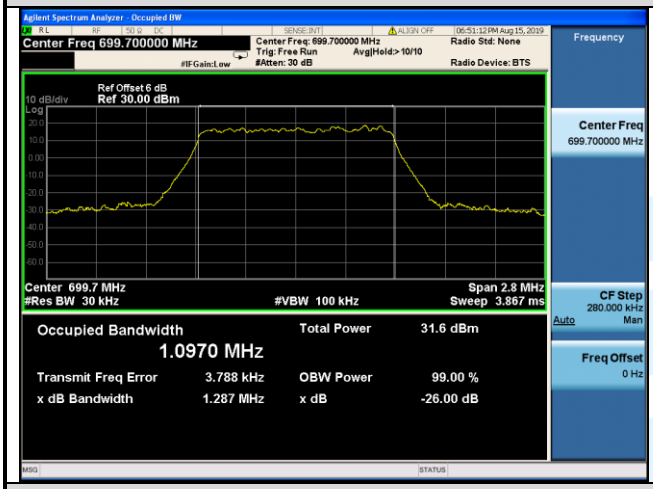
5.5.4 LTE Band 12

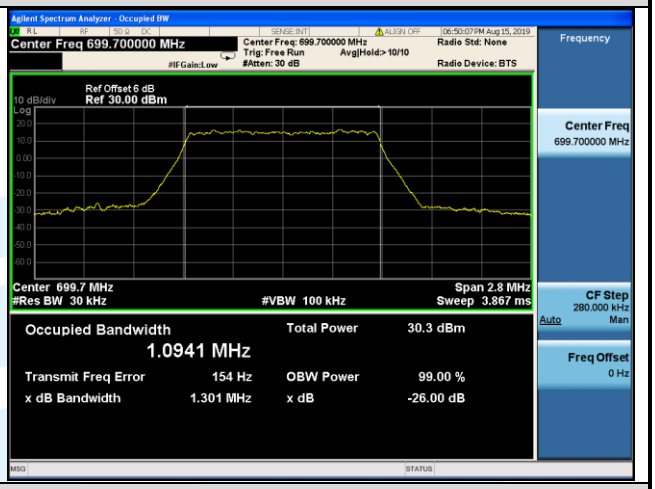
LTE Band 12								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 1.4 MHz								
Lowest	6	0	1.29	1.30	/	1.10	1.09	/
Middle	6	0	1.29	1.30	/	1.10	1.09	/
Highest	6	0	1.29	1.30	/	1.10	1.09	/
Channel Bandwidth: 3 MHz								
Lowest	15	0	3.00	2.97	/	2.70	2.69	/
Middle	15	0	3.00	2.98	/	2.71	2.70	/
Highest	15	0	3.00	2.97	/	2.70	2.69	/
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.01	5.03	/	4.50	4.52	/
Middle	25	0	5.01	4.96	/	4.51	4.50	/
Highest	25	0	5.01	4.96	/	4.50	4.49	/
Channel Bandwidth: 10 MHz								
Lowest	50	0	9.84	9.91	/	8.96	8.95	/
Middle	50	0	9.93	9.93	/	9.01	9.01	/
Highest	50	0	9.90	9.87	/	8.98	8.98	/

LTE Band 12_ Channel Bandwidth: 1.4 MHz

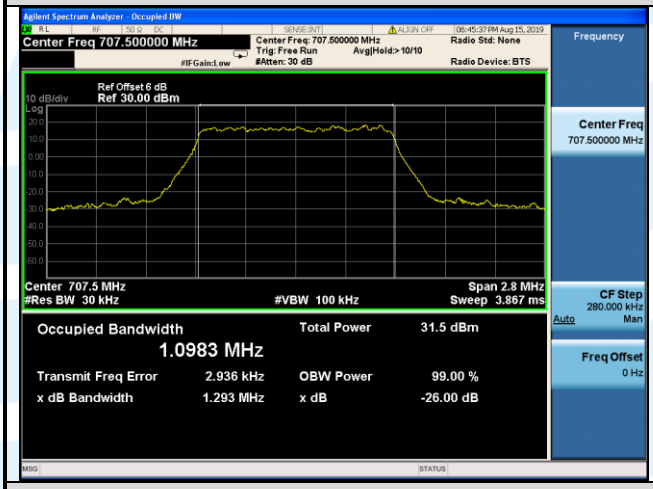
QPSK	16QAM

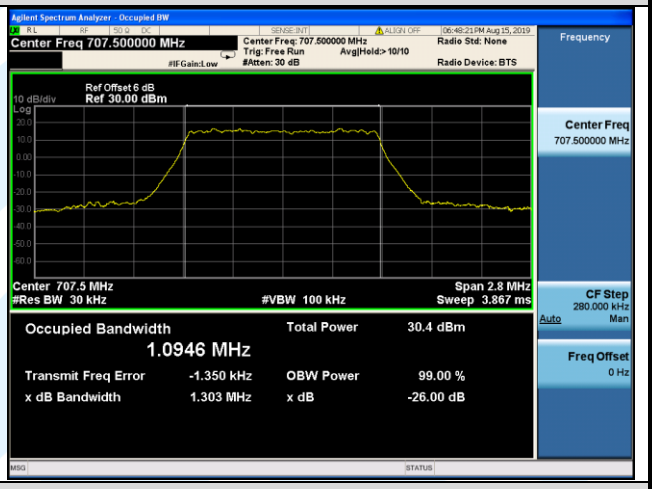
Lowest Channel



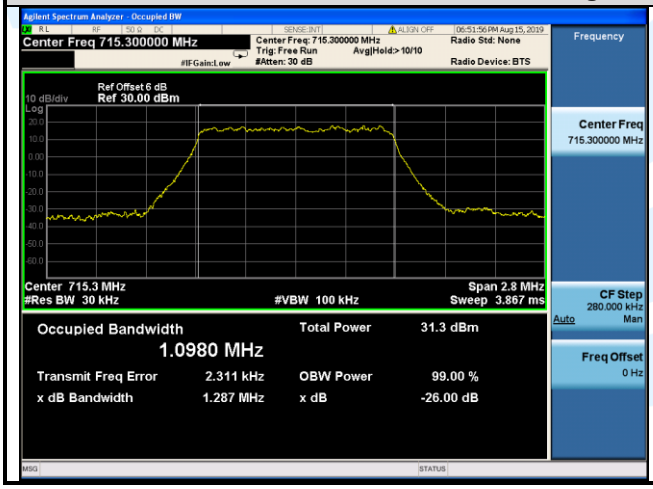


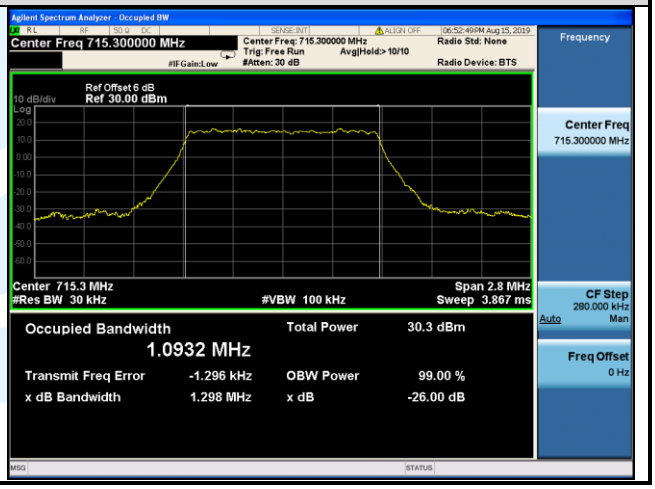
Middle Channel





Highest Channel

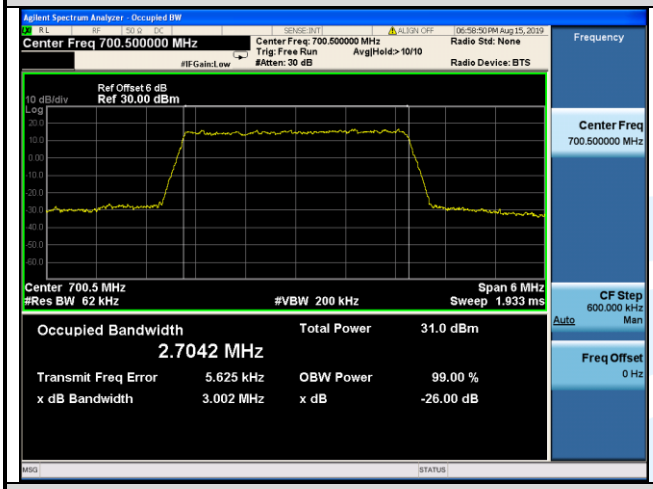


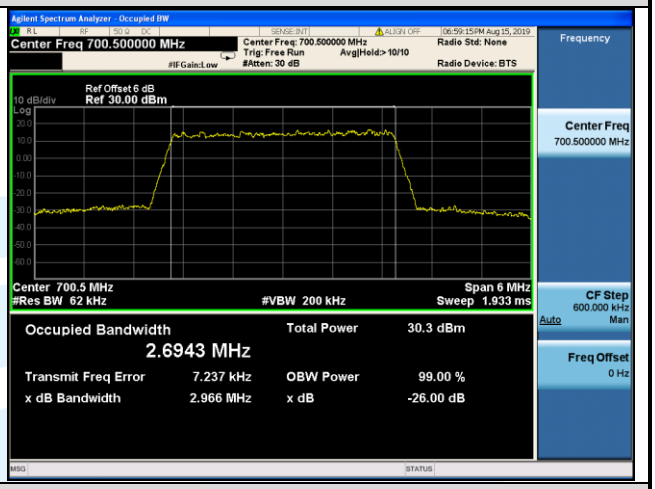


LTE Band 12_ Channel Bandwidth: 3 MHz

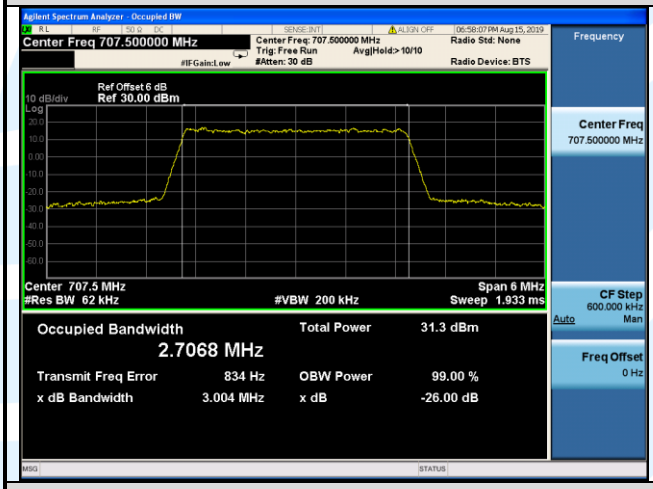
QPSK	16QAM

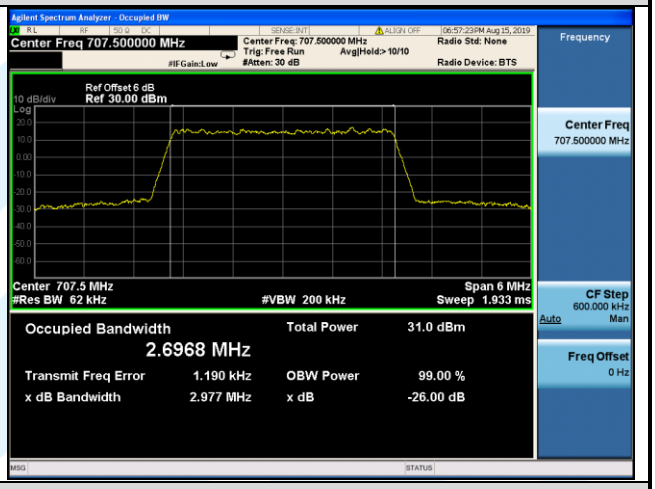
Lowest Channel



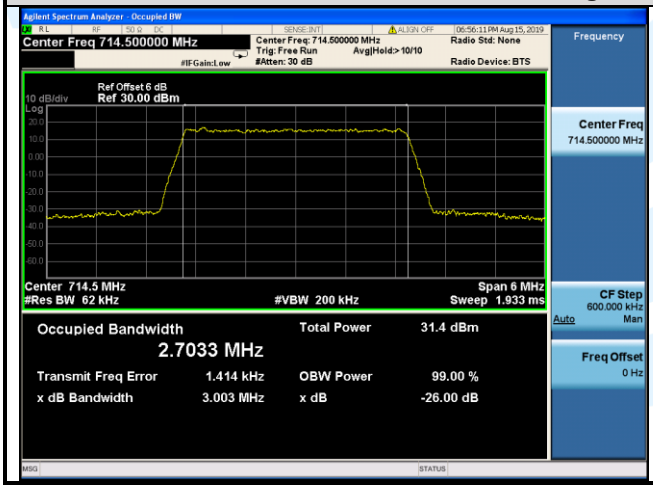


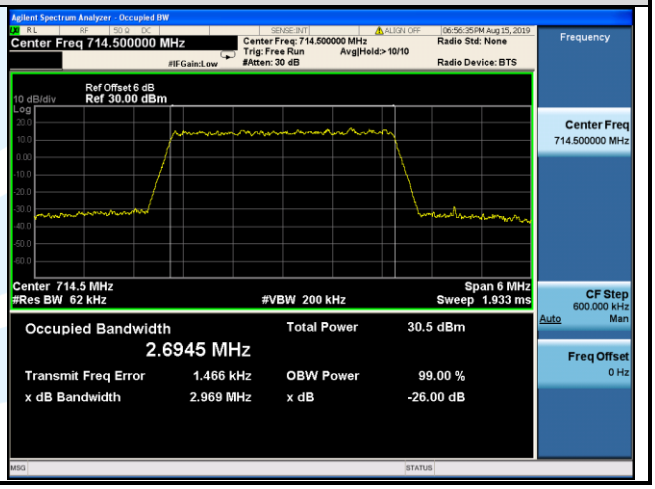
Middle Channel



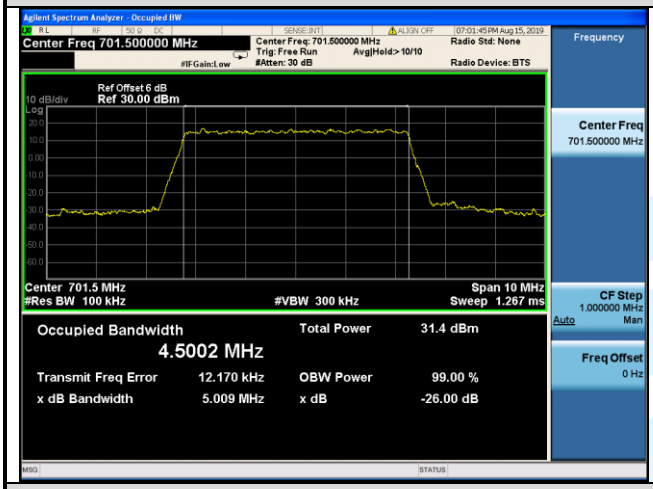
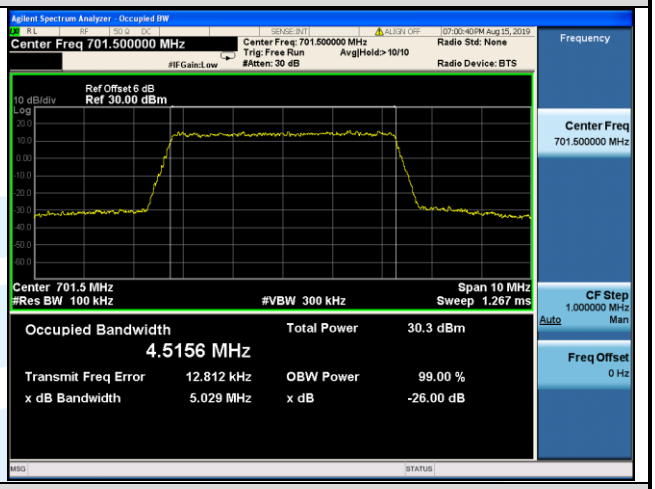
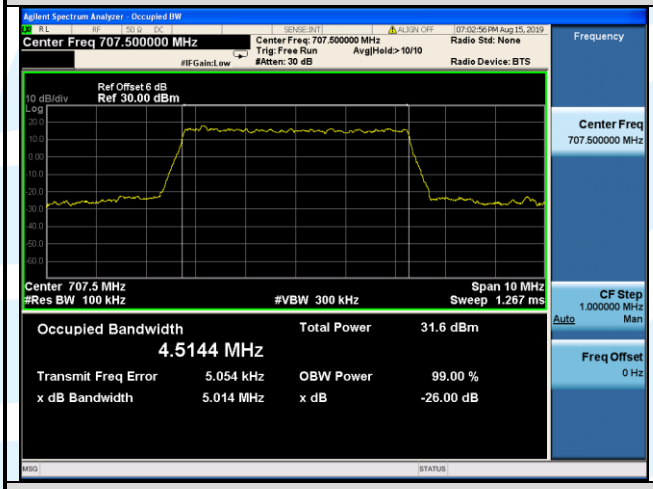
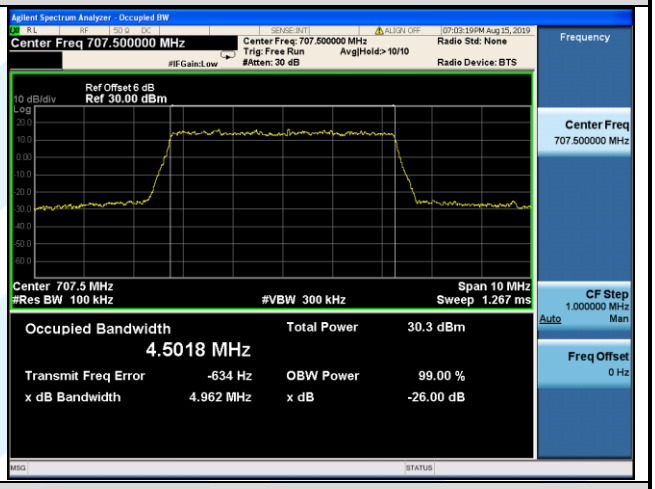
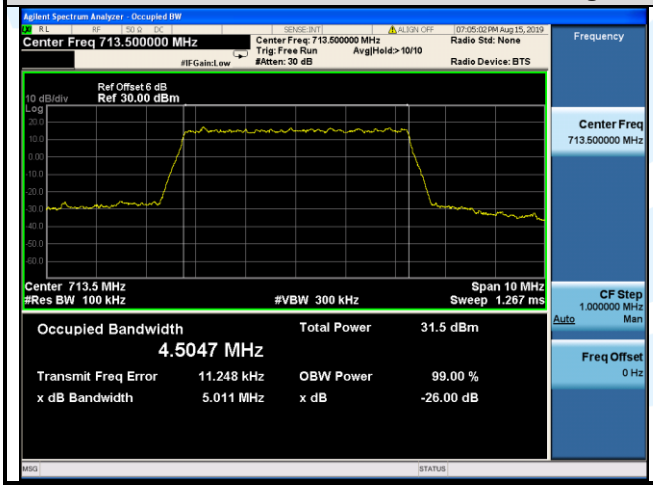
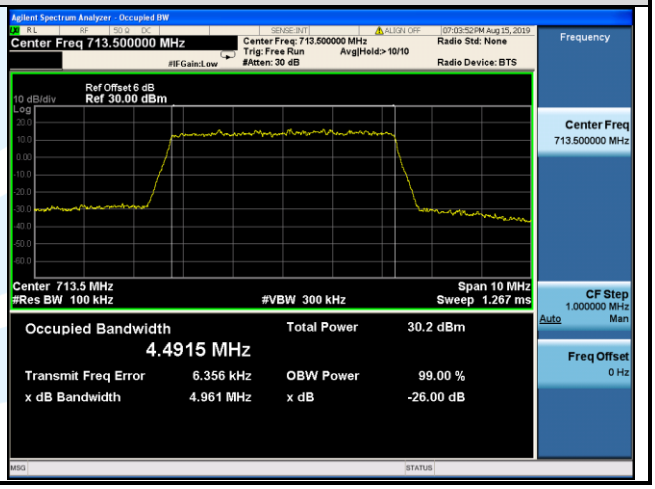


Highest Channel





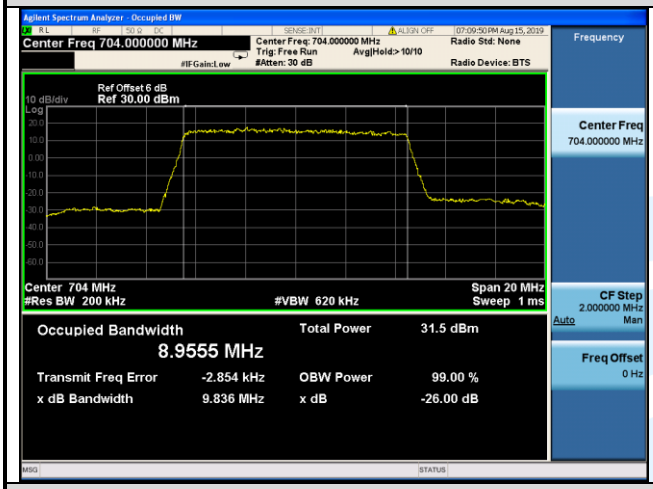
LTE Band 12_ Channel Bandwidth: 5 MHz

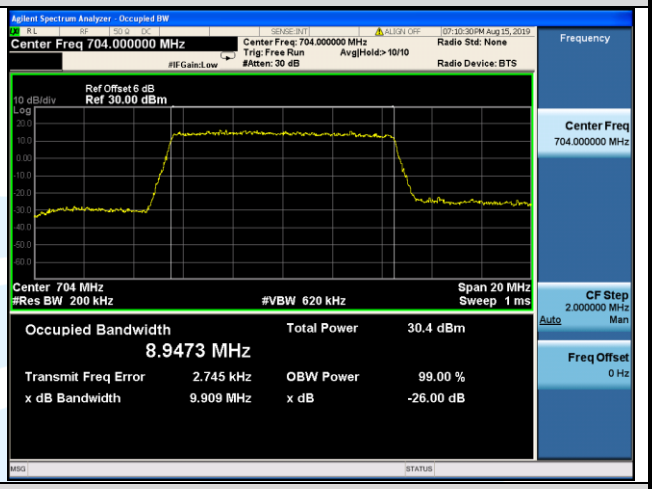
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

LTE Band 12_ Channel Bandwidth: 10 MHz

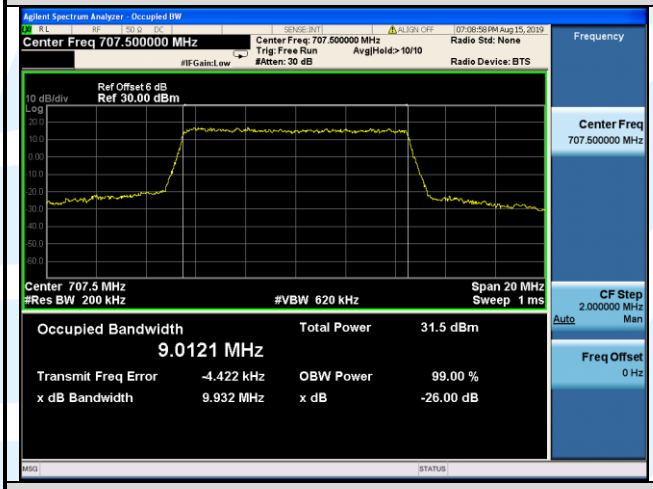
QPSK	16QAM

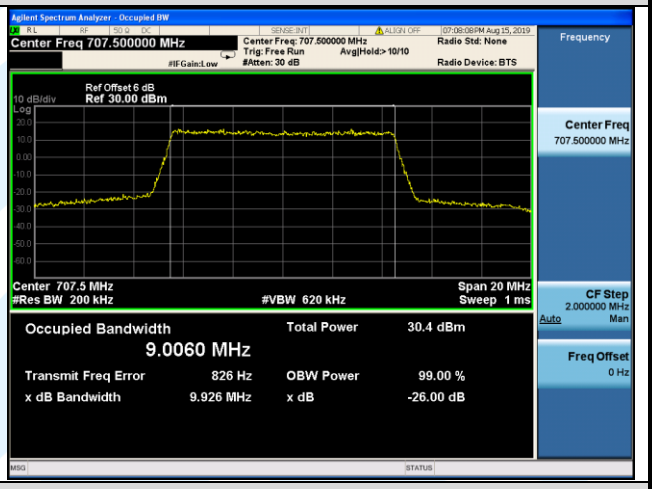
Lowest Channel



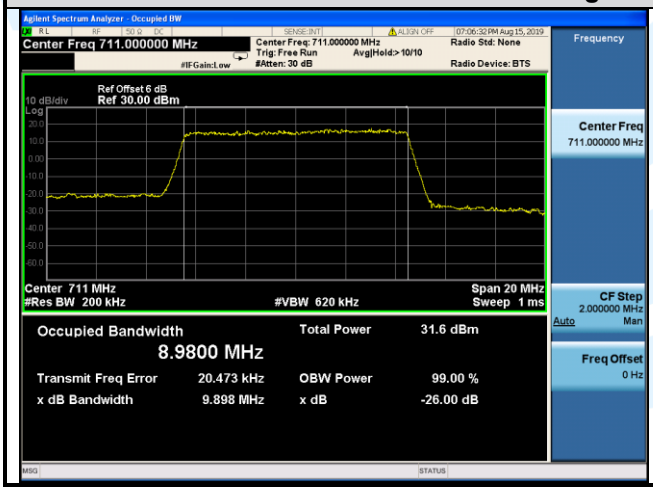


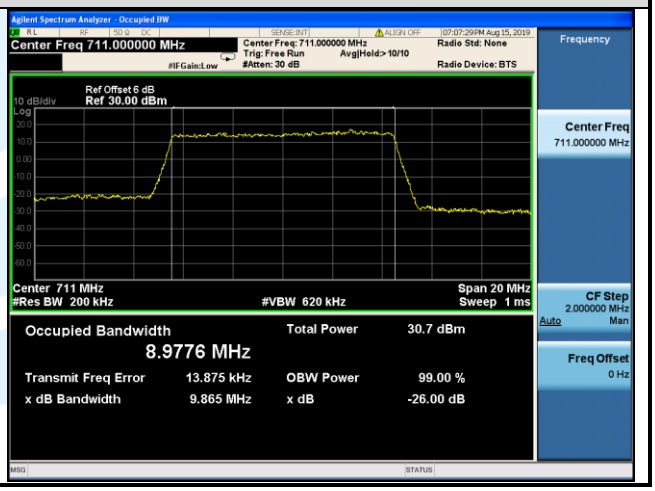
Middle Channel





Highest Channel





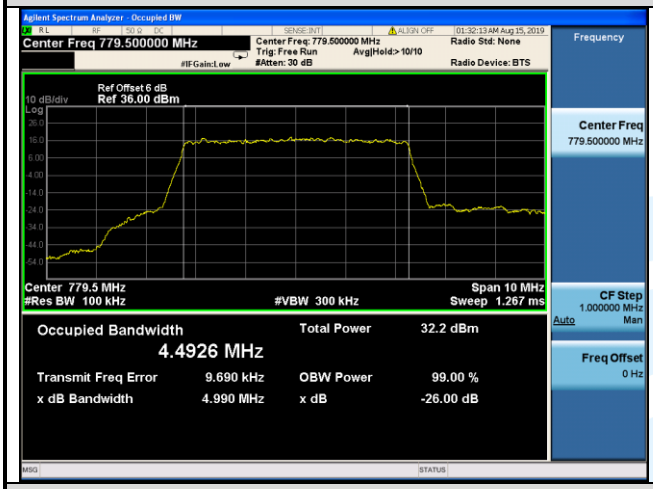
5.5.5 LTE Band 13

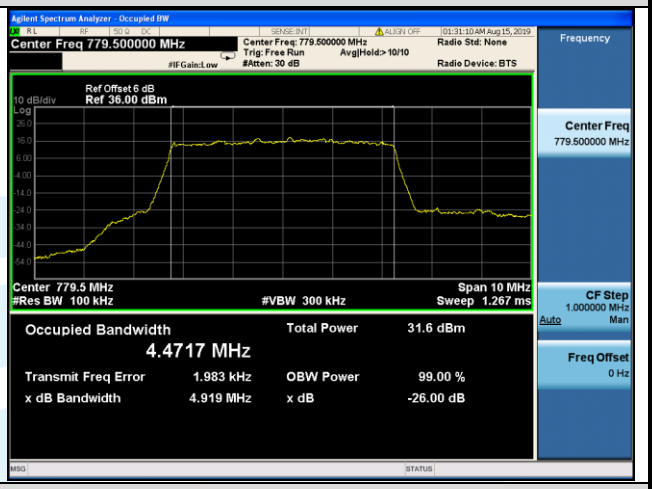
LTE Band 13								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 5 MHz								
Lowest	25	0	4.99	4.92	/	4.49	4.47	/
Middle	25	0	4.99	4.96	/	4.52	4.51	/
Highest	25	0	5.01	4.95	/	4.50	4.48	/
Channel Bandwidth: 10 MHz								
Middle	50	0	9.77	9.79	/	8.95	8.96	/

LTE Band 13_ Channel Bandwidth: 5 MHz

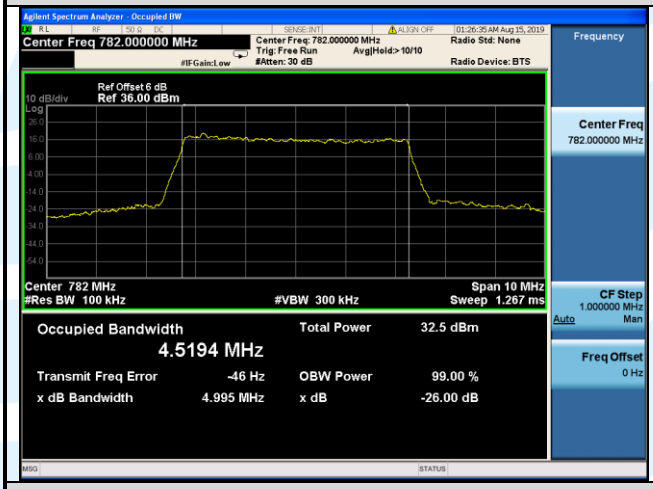
QPSK	16QAM

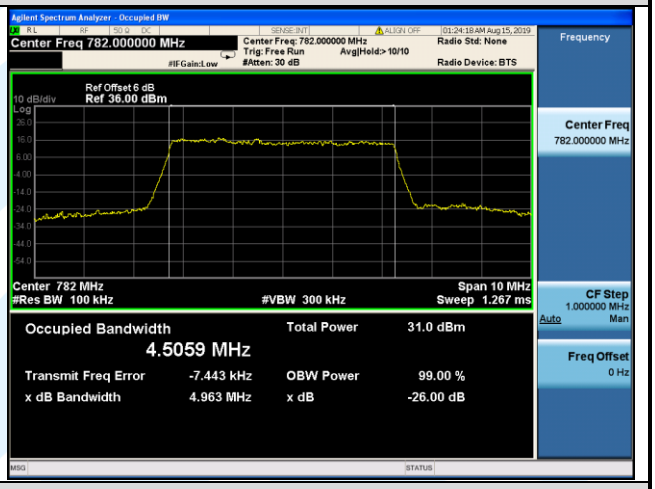
Lowest Channel



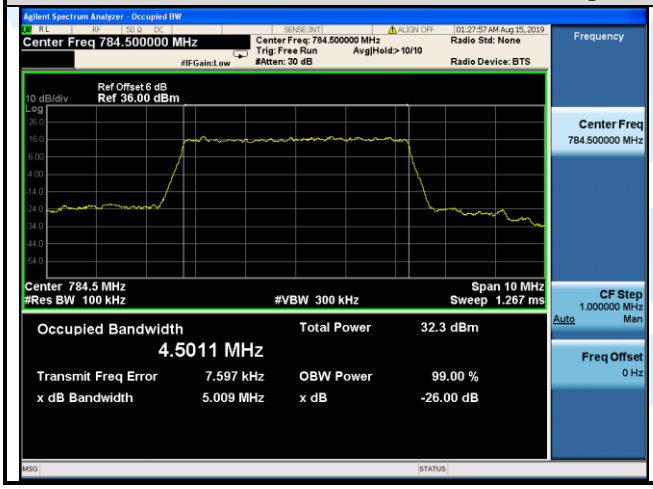


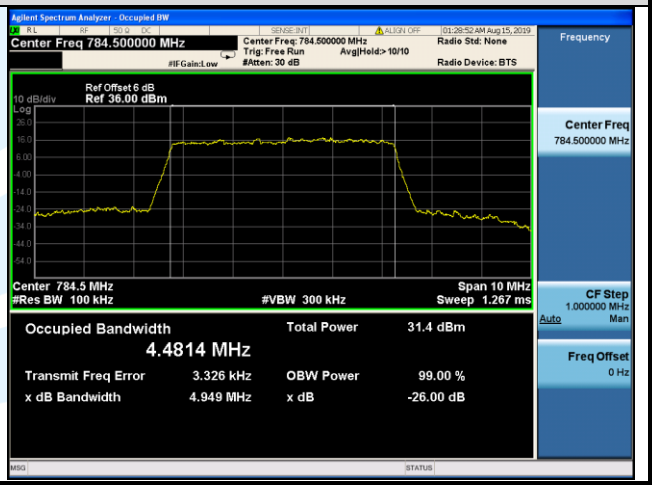
Middle Channel

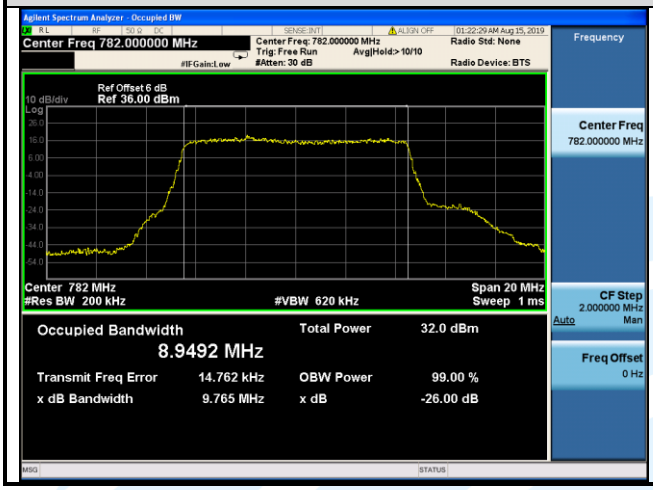
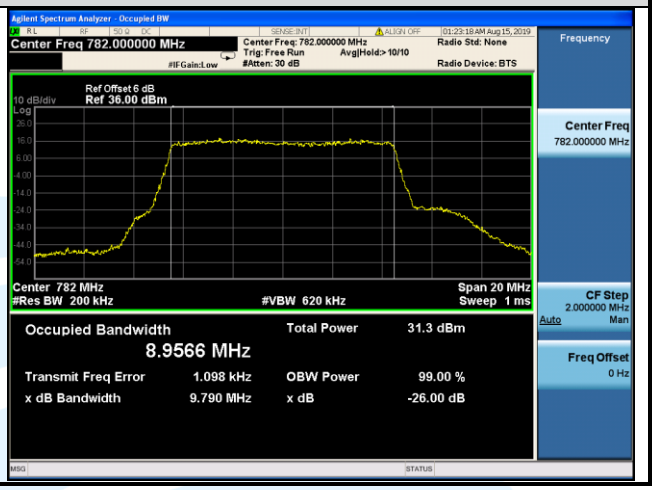




Highest Channel





LTE Band 13_ Channel Bandwidth: 10 MHz	
QPSK	16QAM
Middle Channel	
	

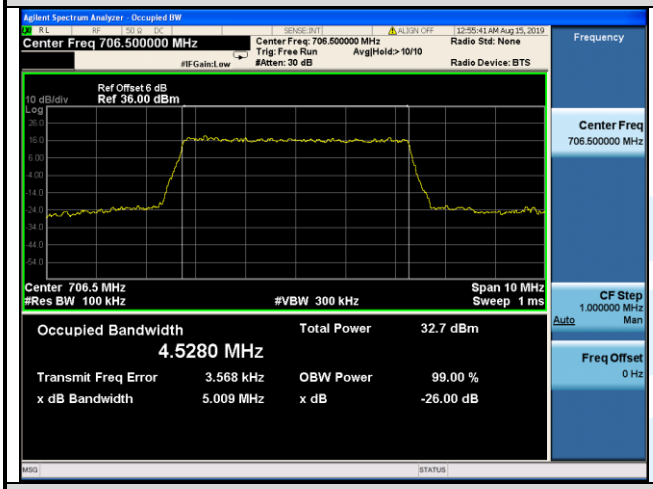
5.5.6 LTE Band 17

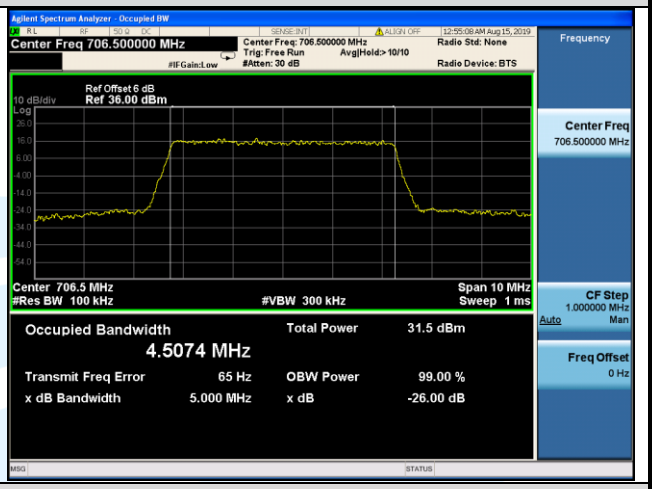
LTE Band 17								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 1.4 MHz								
Channel Bandwidth: 5 MHz								
Lowest	25	0	5.01	5.00	/	4.53	4.51	/
Middle	25	0	4.99	4.99	/	4.53	4.51	/
Highest	25	0	4.98	4.97	/	4.52	4.50	/
Channel Bandwidth: 10 MHz								
Lowest	50	0	9.96	9.86	/	9.01	9.01	/
Middle	50	0	9.95	9.91	/	9.01	9.00	/
Highest	50	0	9.87	9.81	/	9.00	8.99	/

LTE Band 17_ Channel Bandwidth: 5 MHz

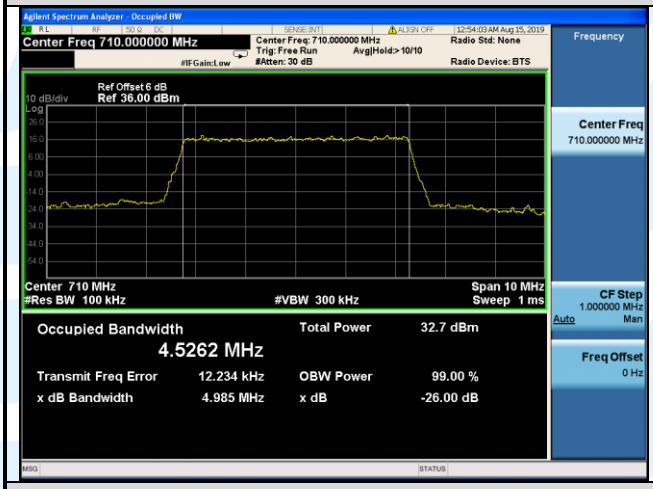
QPSK	16QAM

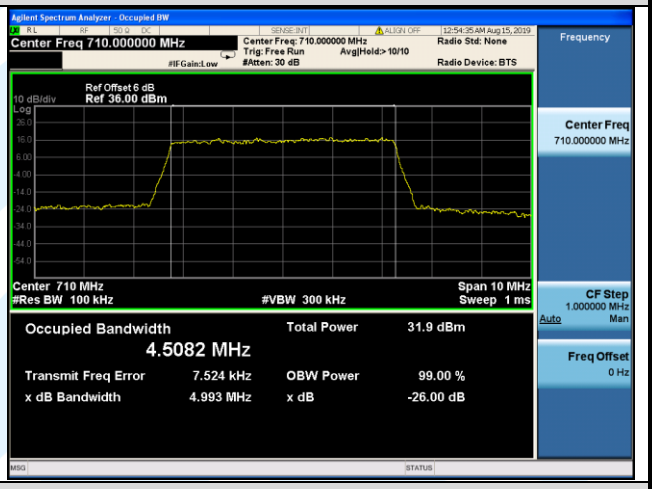
Lowest Channel



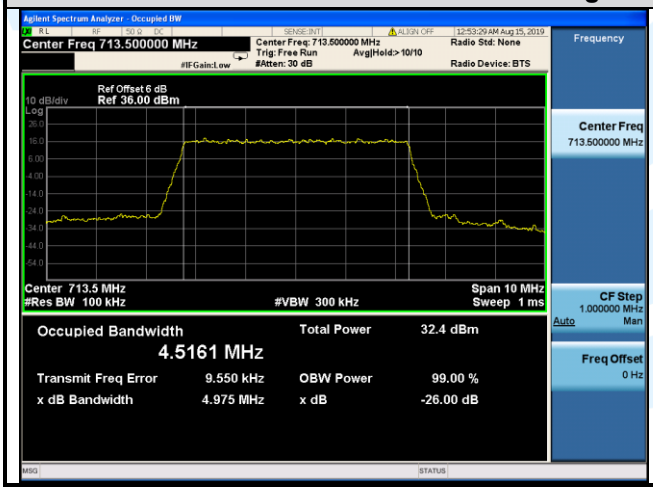


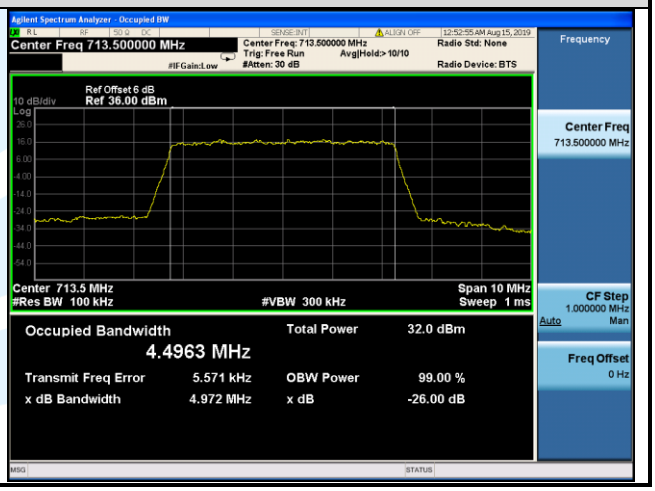
Middle Channel





Highest Channel

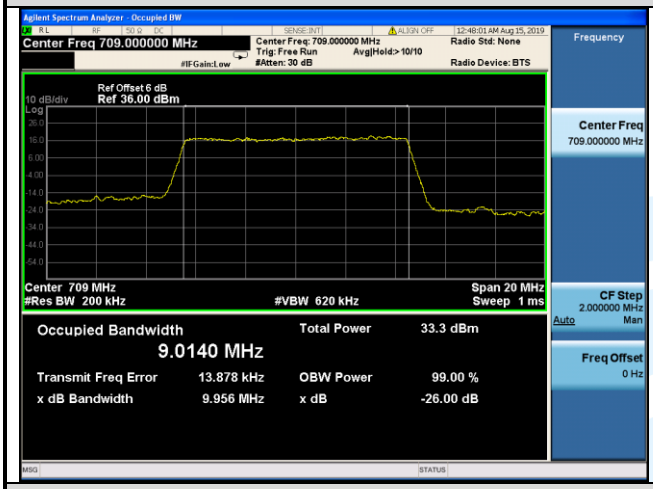


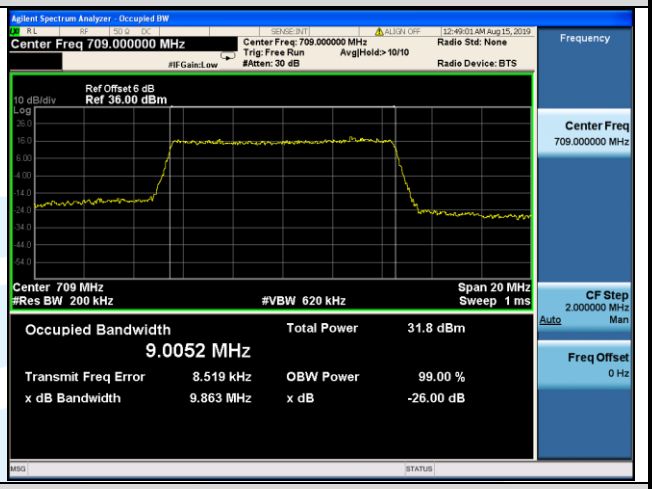


LTE Band 17_ Channel Bandwidth: 10MHz

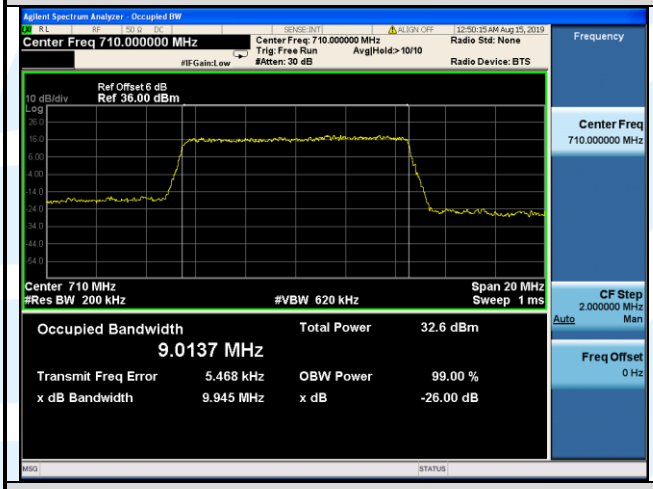
QPSK	16QAM

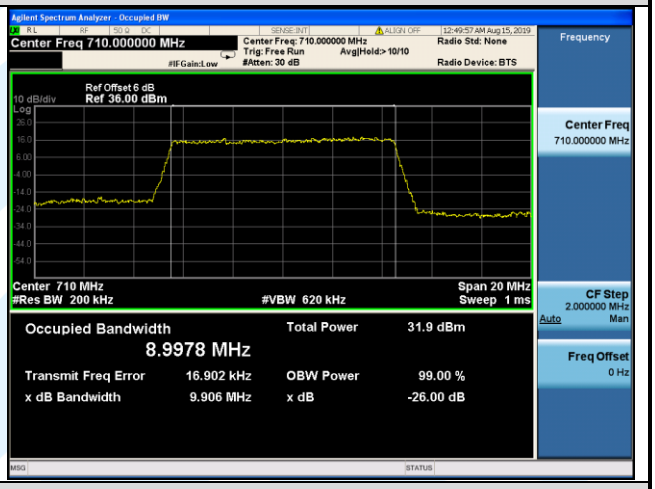
Lowest Channel



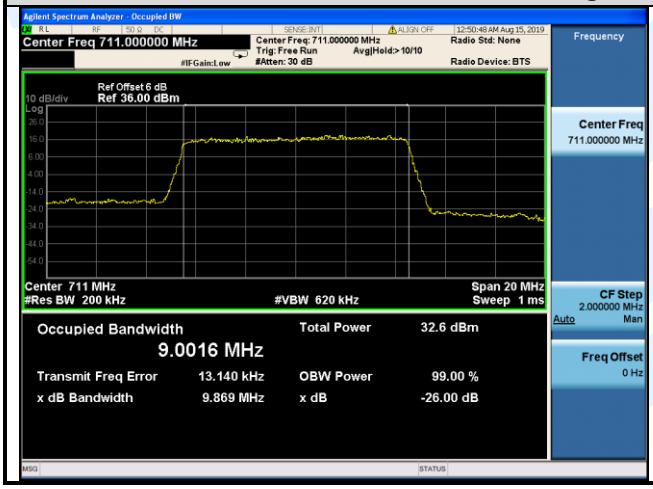


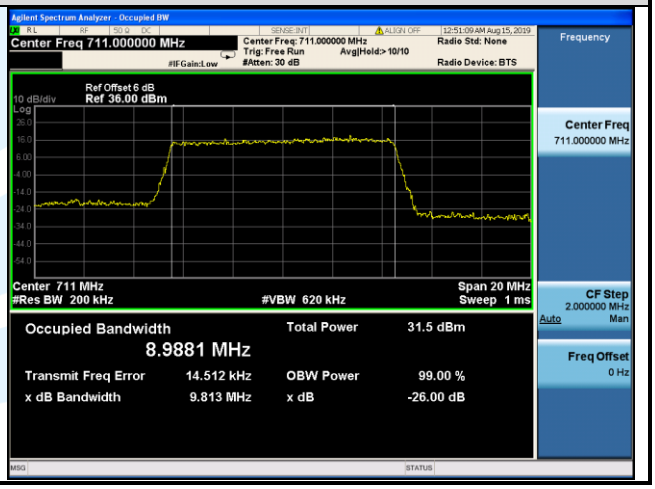
Middle Channel





Highest Channel





5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: **LTE Band 2:** FCC 47 CFR Part 24.238(a)
LTE Band 4: FCC 47 CFR Part 27.53(h)(1)
LTE Band 5: FCC 47 CFR Part 22.917(a)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12&17: FCC 47 CFR Part 27.53(g)
LTE Band 13: FCC 47 CFR Part 27.53(c)(2)

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 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.

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;

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

5.6.1 LTE Band 2

LTE Band 2 / 1.4 MHz / QPSK	
1 RB	Full RB
Lowest Channel	
Highest Channel	