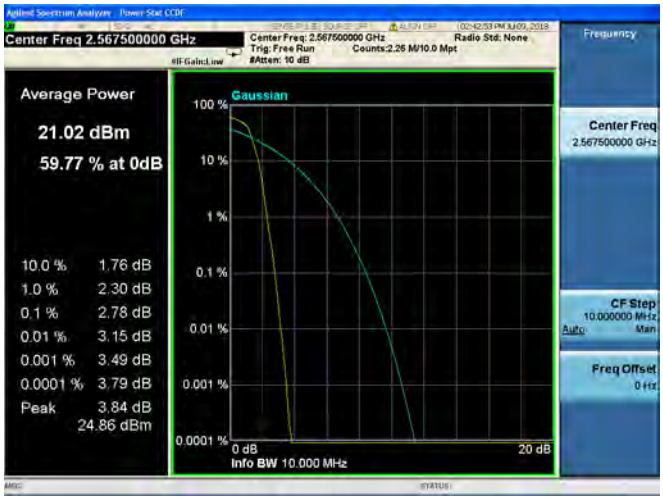
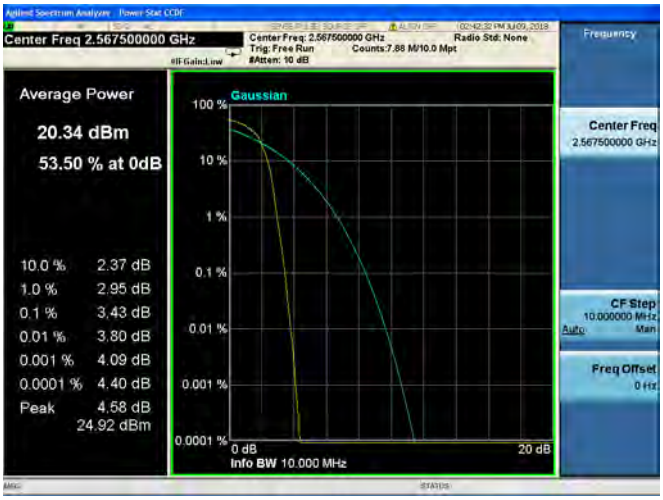
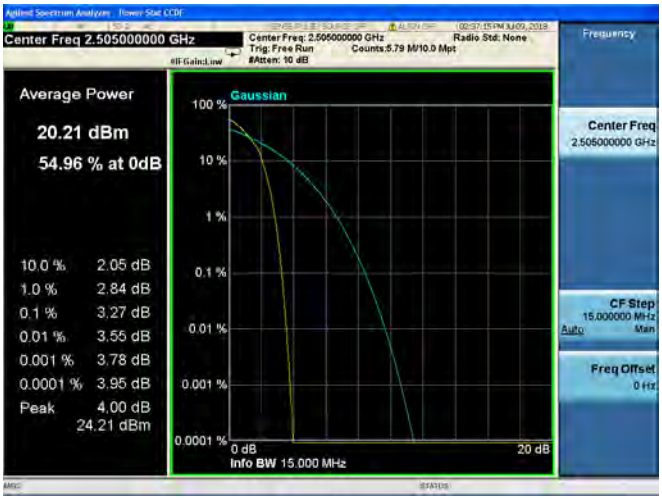
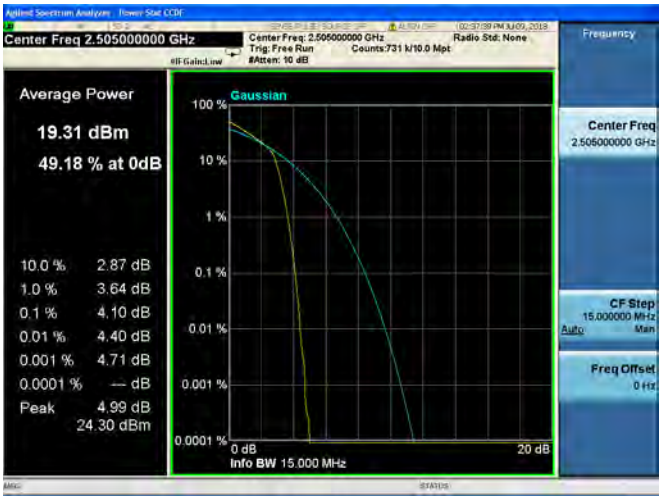
5MHz/QPSK/High CH	5MHz/16QAM/High CH
	

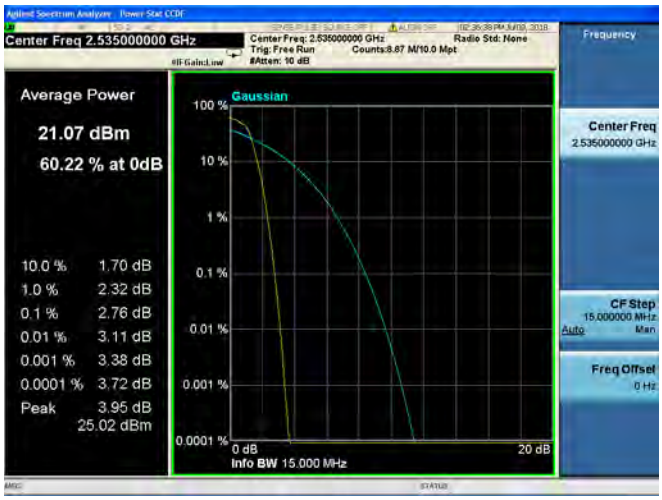
10MHz/QPSK/Low CH



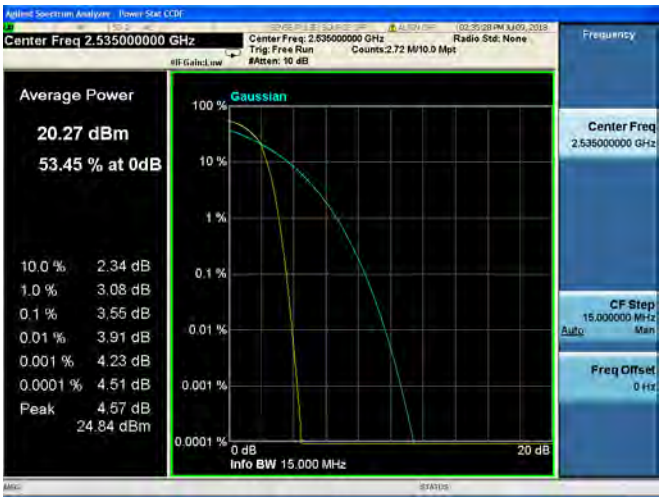
10MHz/16QAM/Low CH



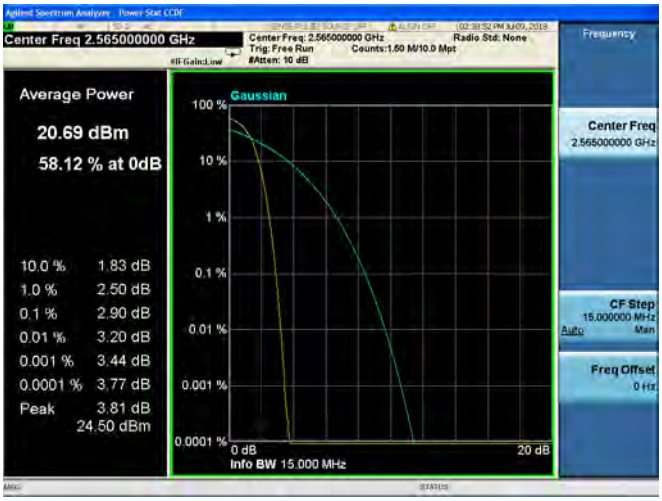
10MHz/QPSK/Mid CH



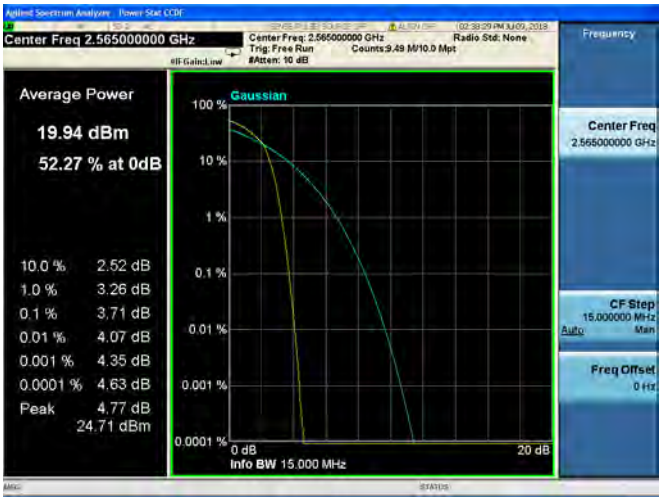
10MHz/16QAM/Mid CH



10MHz/QPSK/High CH

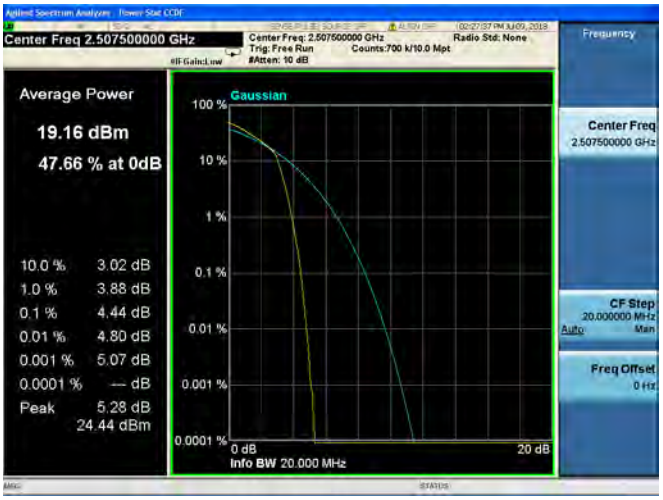


10MHz/16QAM/High CH

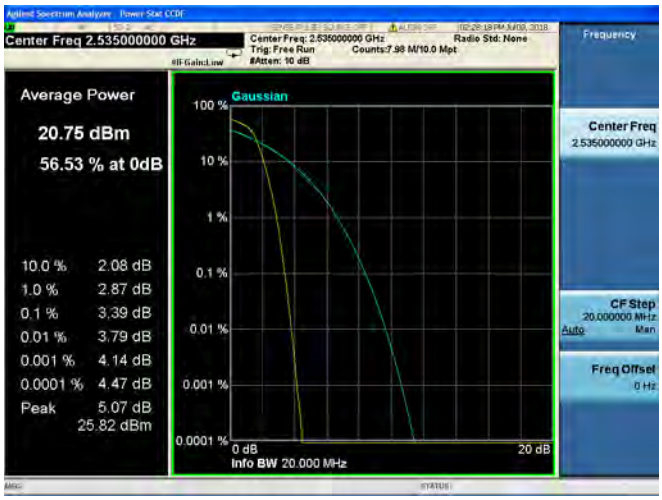


15MHz/QPSK/Low CH

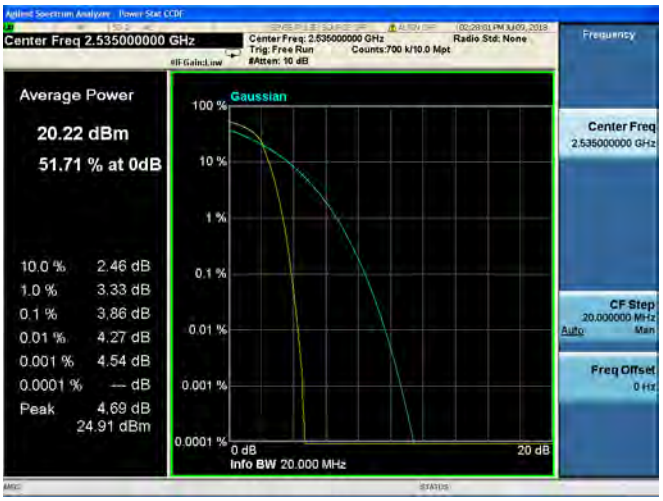
15MHz/16QAM/Low CH



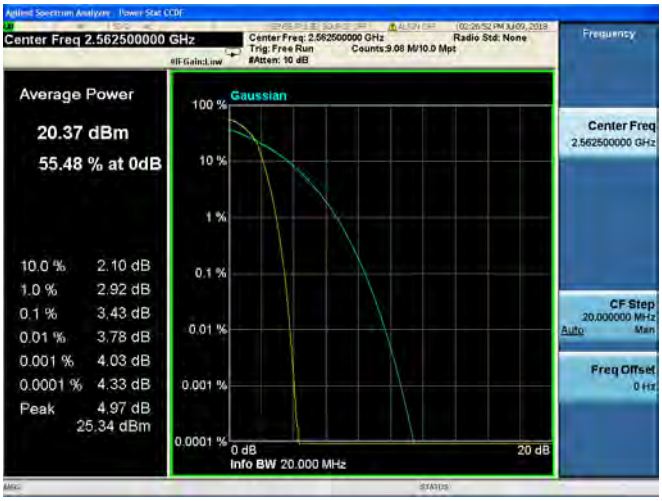
15MHz/QPSK/Mid CH



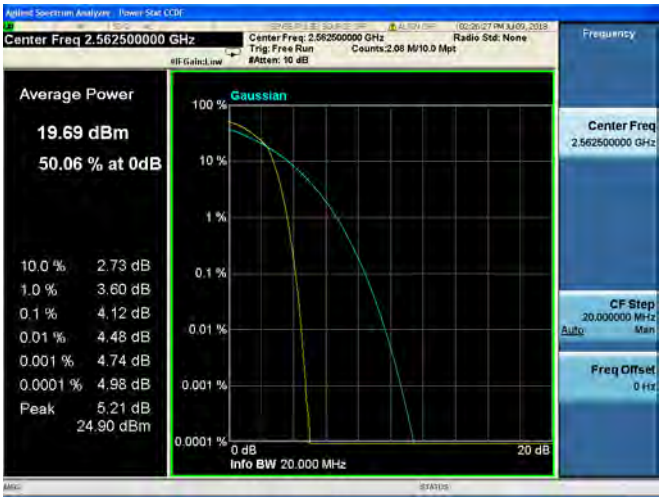
15MHz/16QAM/Mid CH



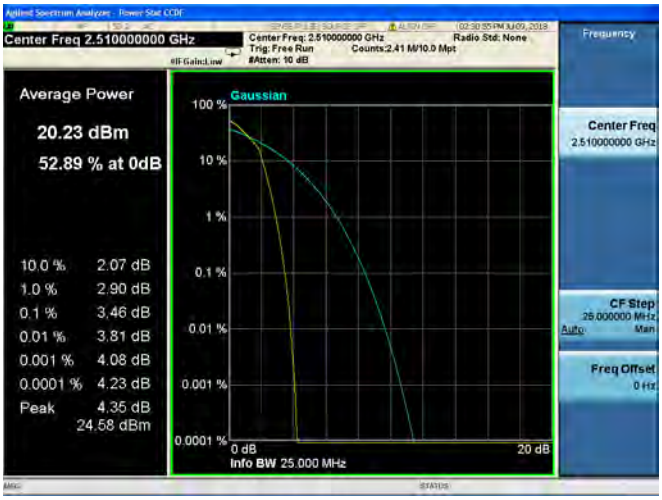
15MHz/QPSK/High CH



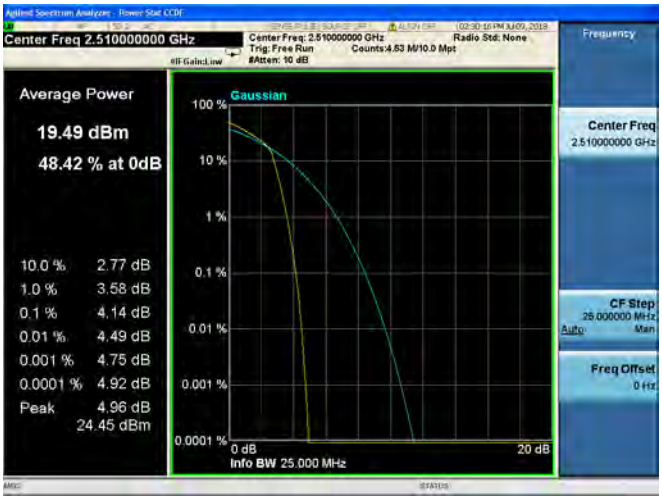
15MHz/16QAM/High CH



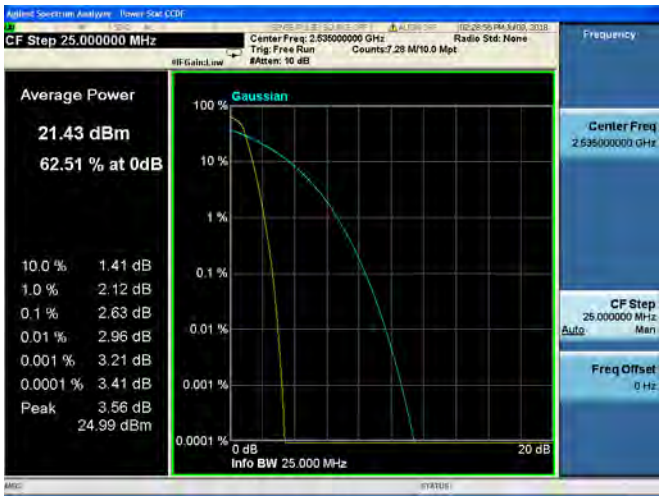
20MHz/QPSK/Low CH



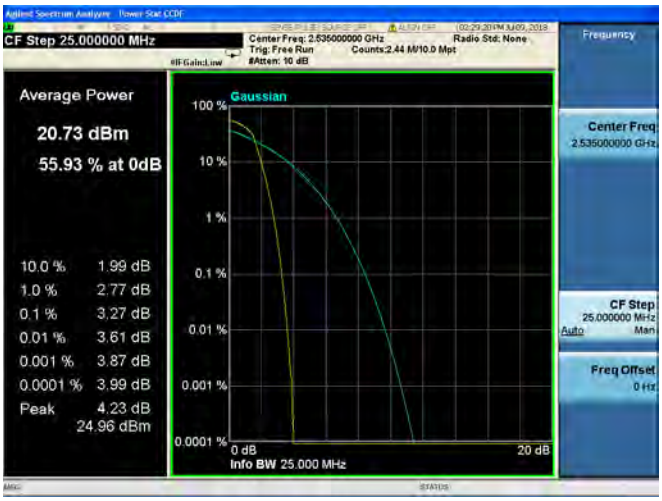
20MHz/16QAM/Low CH



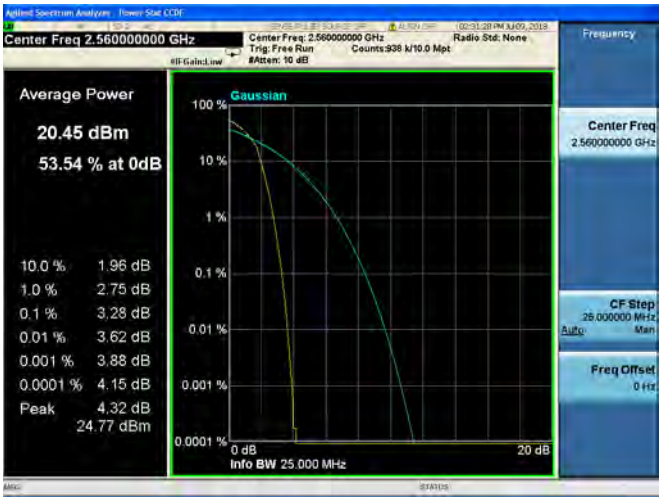
20MHz/QPSK/Mid CH



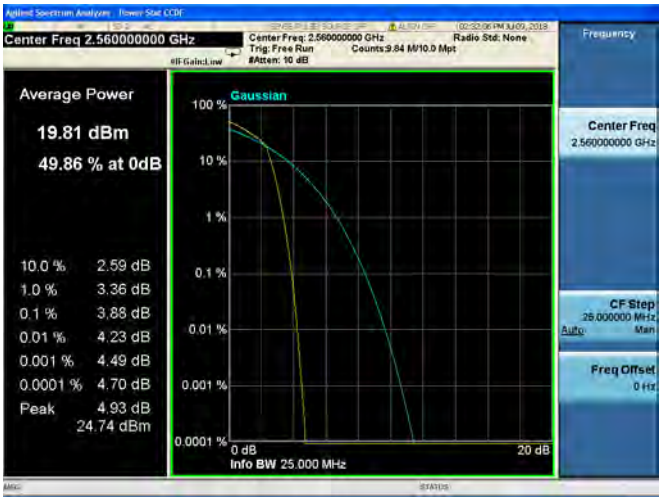
20MHz/16QAM/Mid CH



20MHz/QPSK/High CH



20MHz/16QAM/High CH

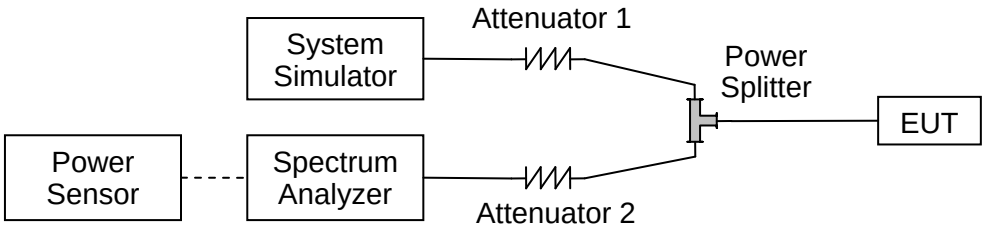


2.5. Conducted Spurious Emissions

2.5.1. Requirement

According to FCC section 2.1051, 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. This calculated to be -13dBm.

2.5.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.5.3. Test procedure

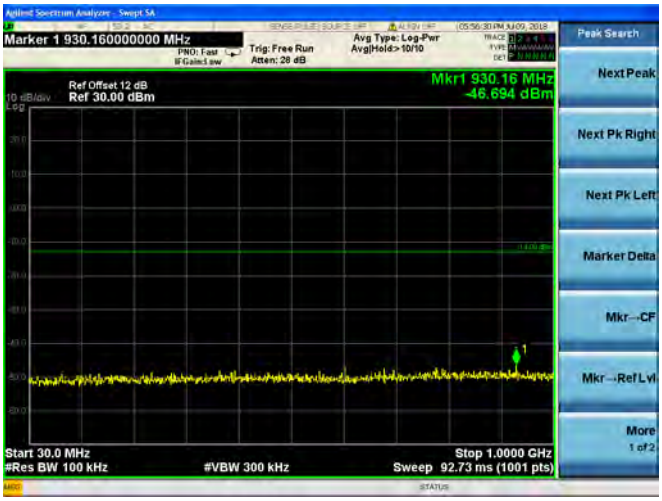
KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

2.5.4. Test Result

LTE Band 2 1.4MHz BW Low Channel

QPSK

16QAM



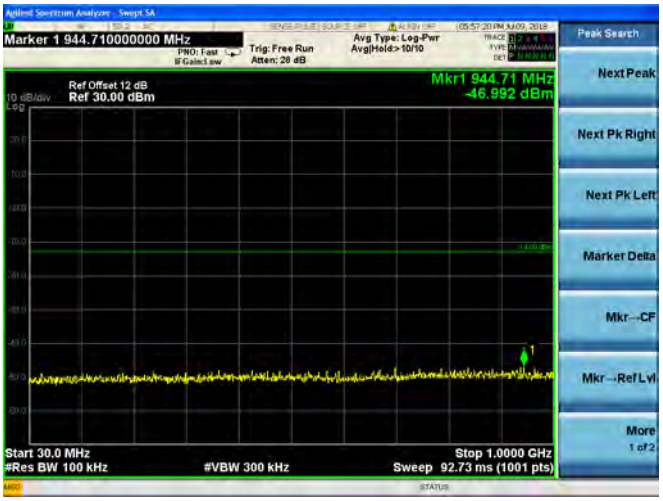
LTE Band 2 1.4MHz BW Mid Channel

QPSK

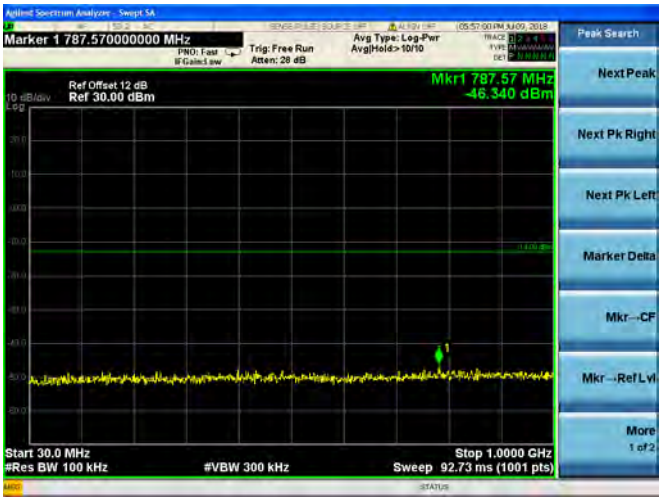
16QAM

LTE Band 2 1.4MHz BW High Channel

QPSK



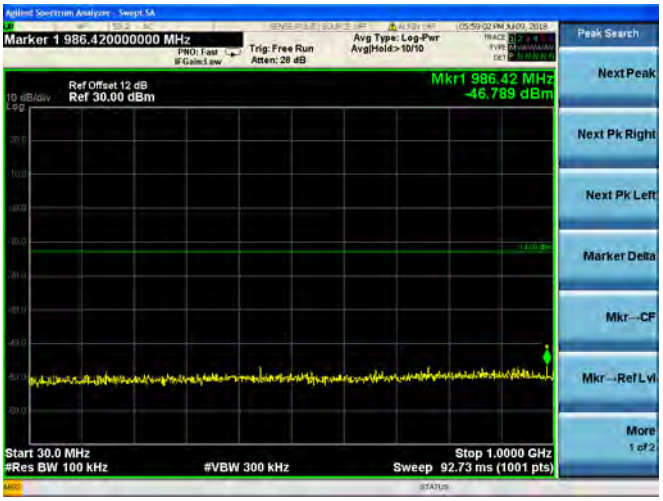
16QAM



LTE Band 2 3MHz BW Low Channel

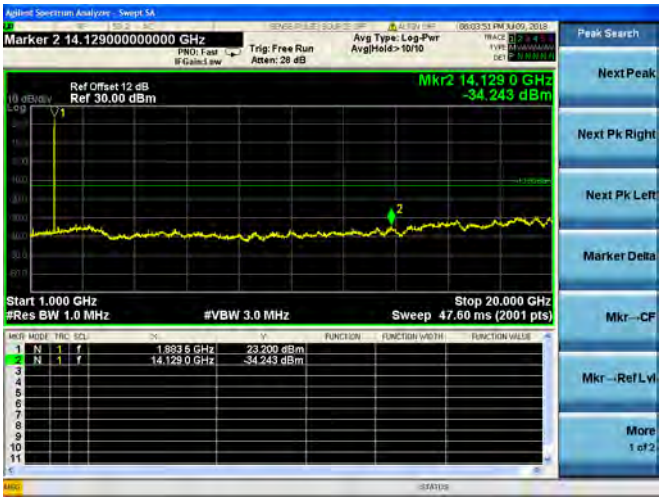
QPSK

16QAM

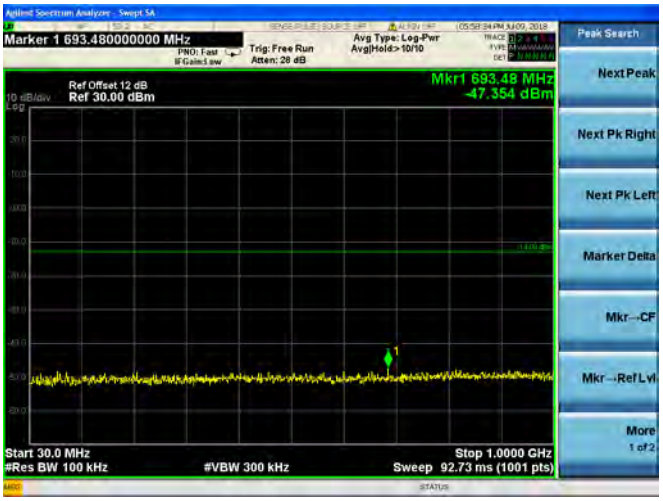


LTE Band 2 3MHz BW Mid Channel

QPSK

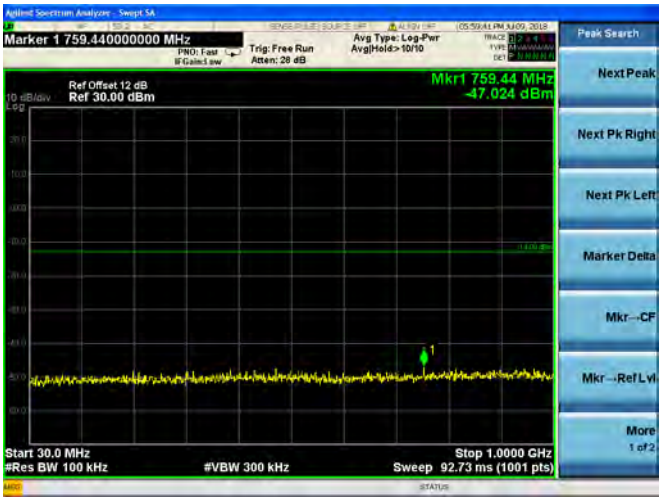


16QAM



LTE Band 2 3MHz BW High Channel

QPSK



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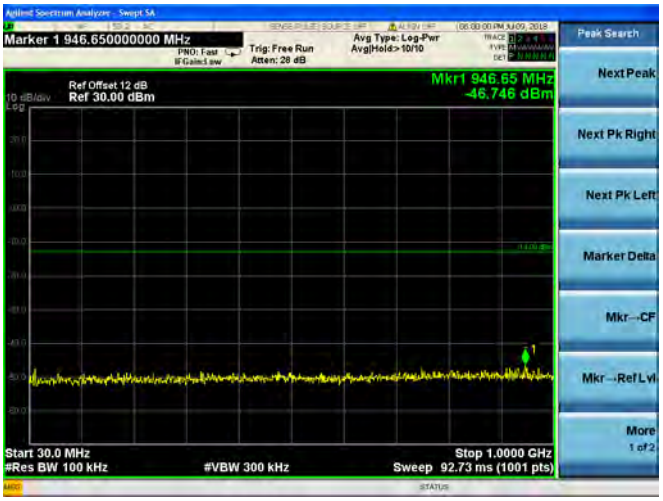
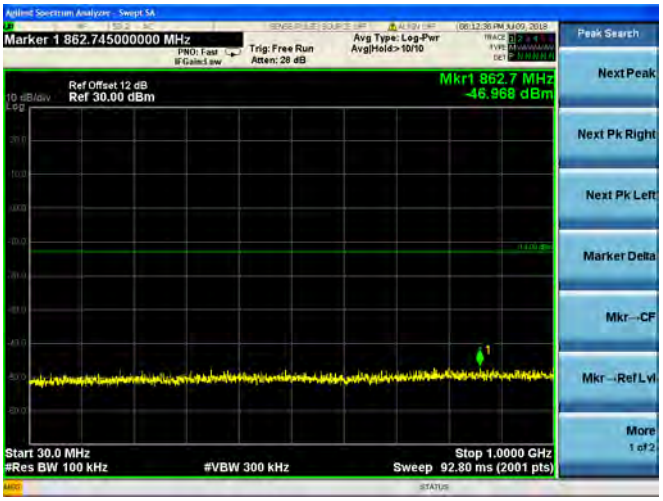
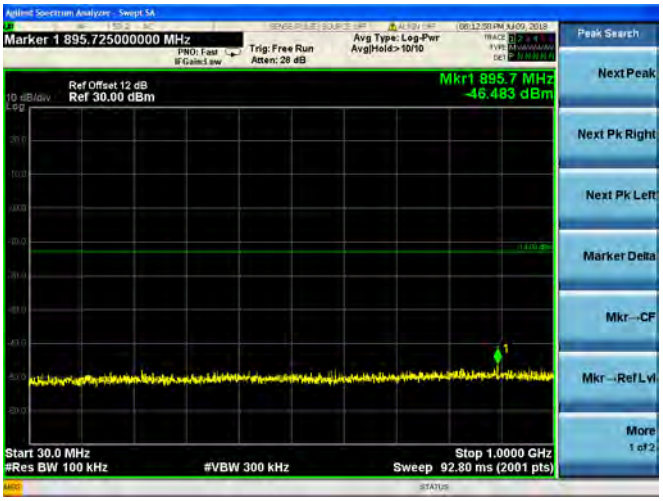


LTE Band 2 5MHz BW Low Channel

QPSK

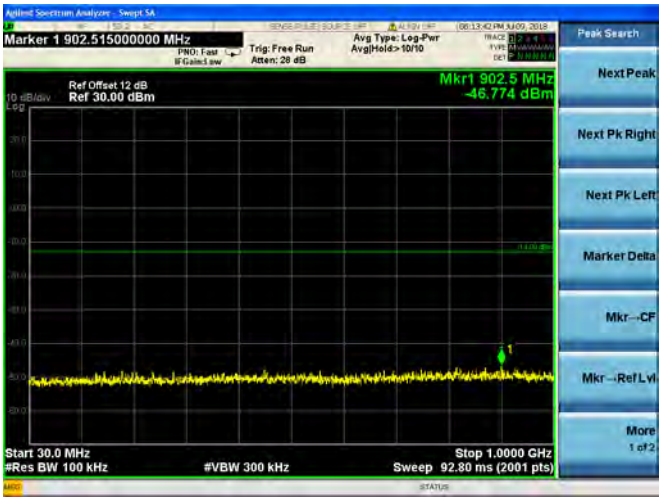


16QAM



LTE Band 2 5MHz BW Mid Channel

QPSK



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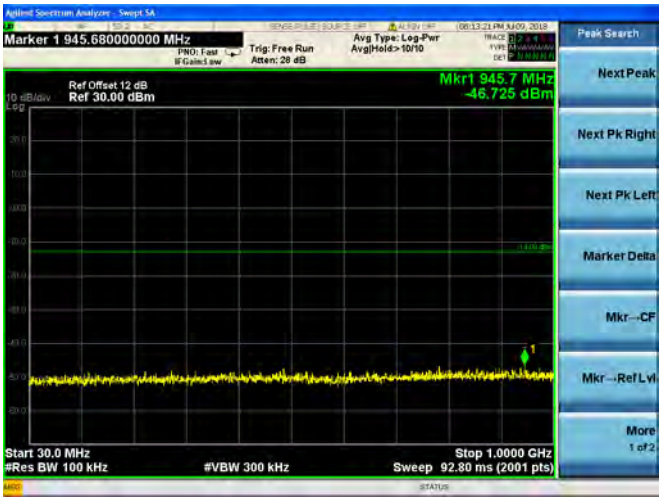
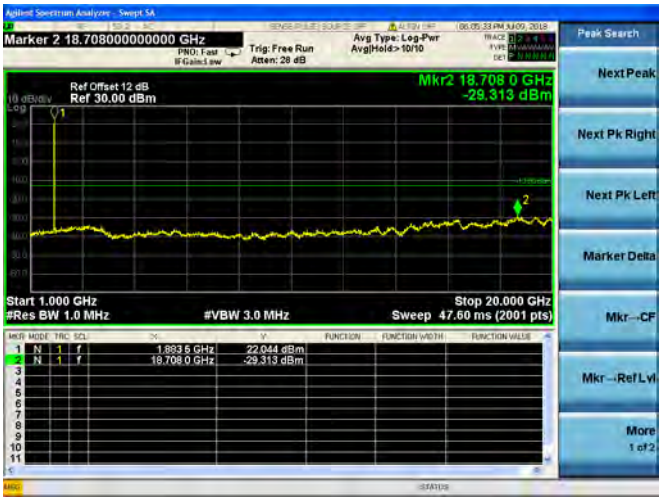
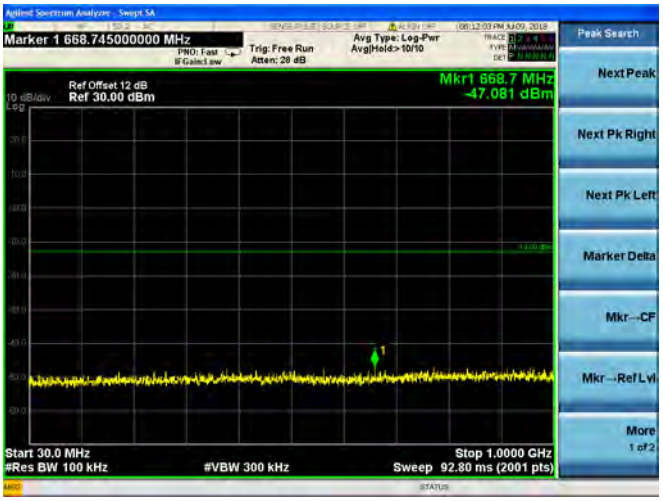
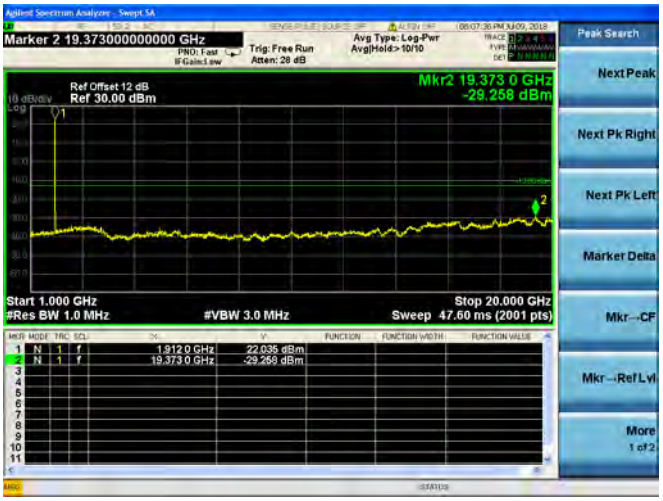




LTE Band 2 5MHz BW High Channel

QPSK





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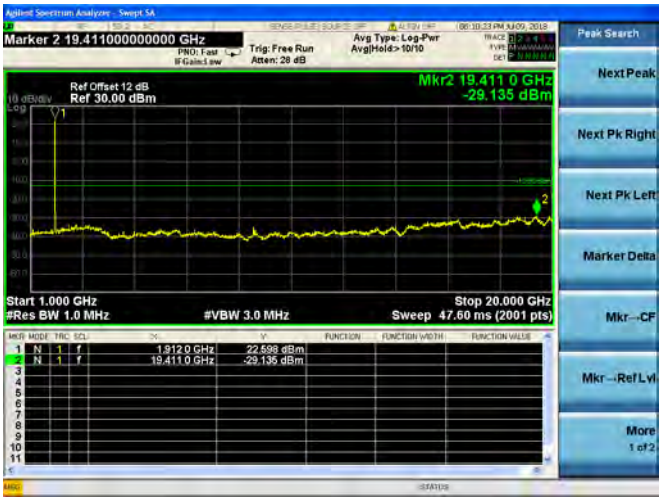
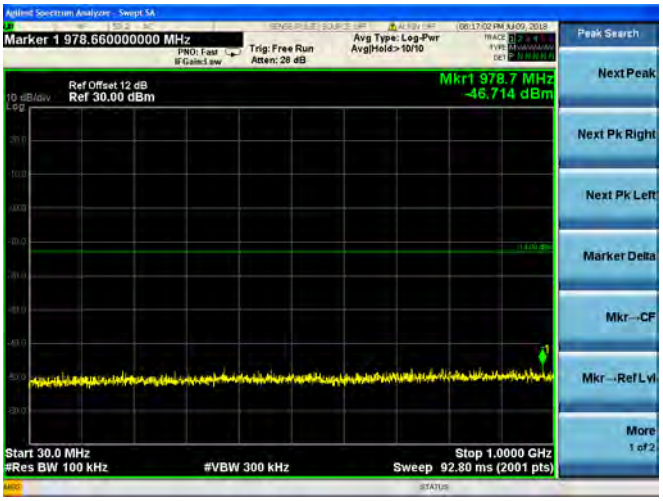


LTE Band 2 10MHz BW Low Channel

QPSK



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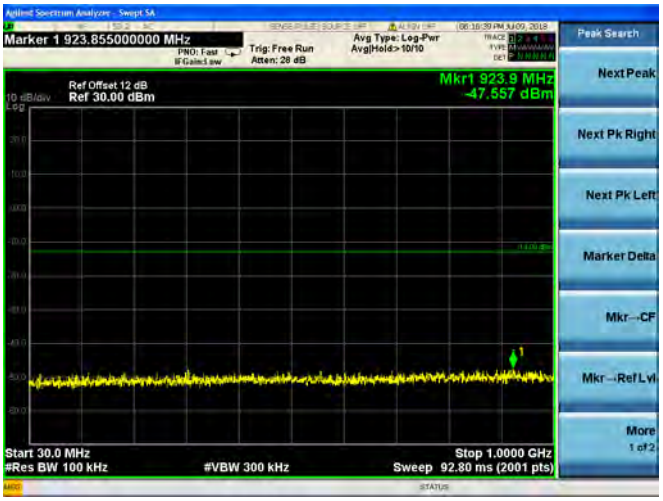
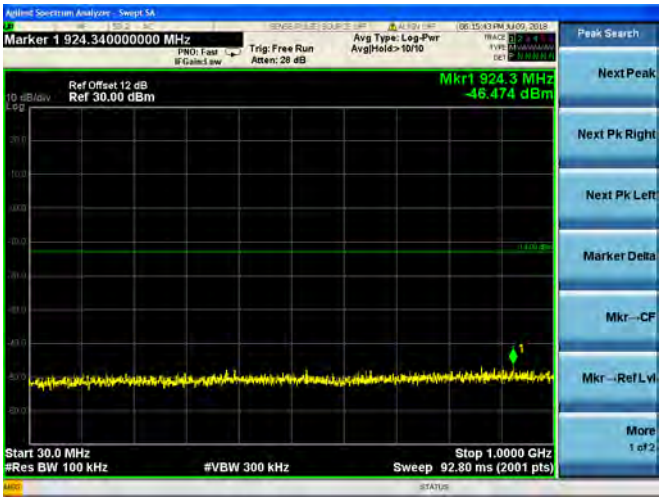
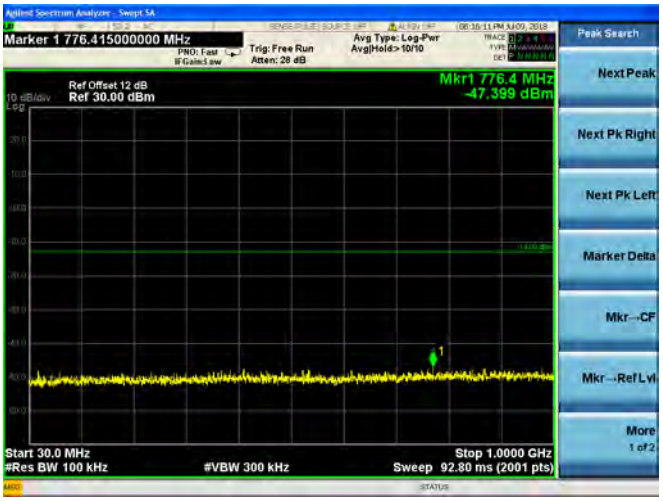


LTE Band 2 10MHz BW Mid Channel

QPSK

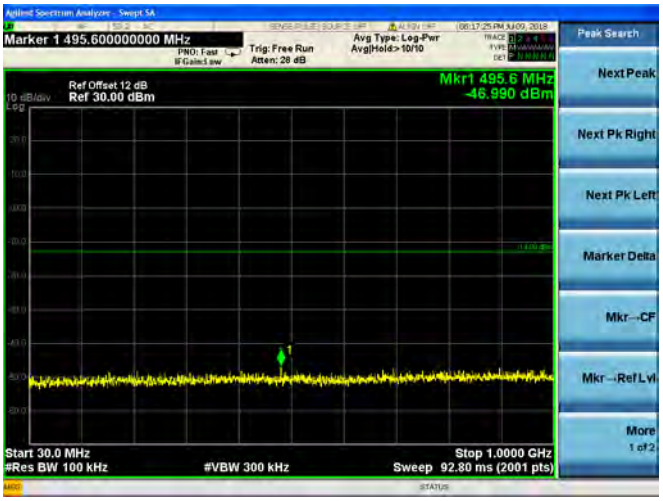


16QAM



LTE Band 2 10MHz BW High Channel

QPSK



16QAM

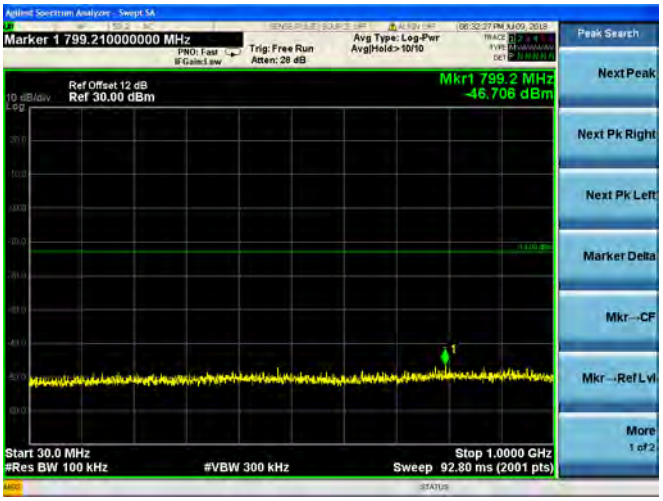
LTE Band 2 15MHz BW Low Channel

QPSK

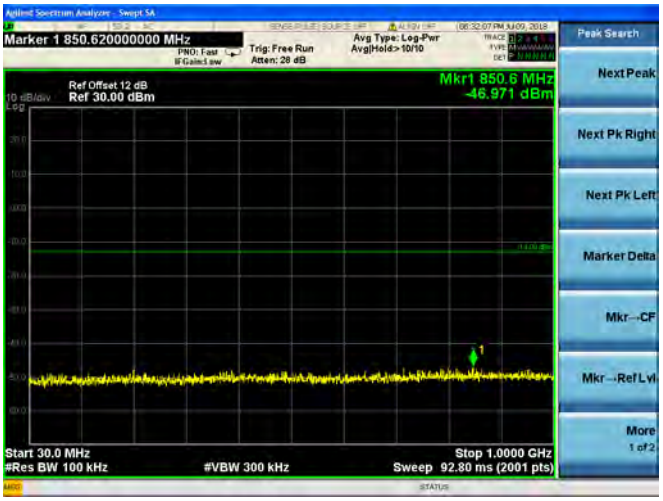
16QAM

LTE Band 2 15MHz BW Mid Channel

QPSK

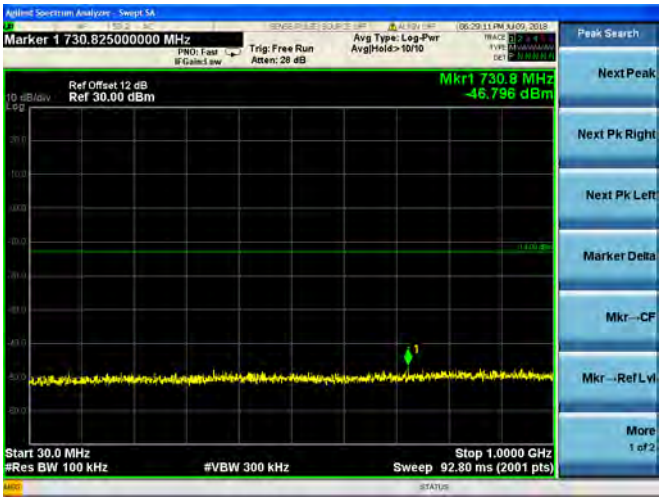


16QAM



LTE Band 2 15MHz BW High Channel

QPSK



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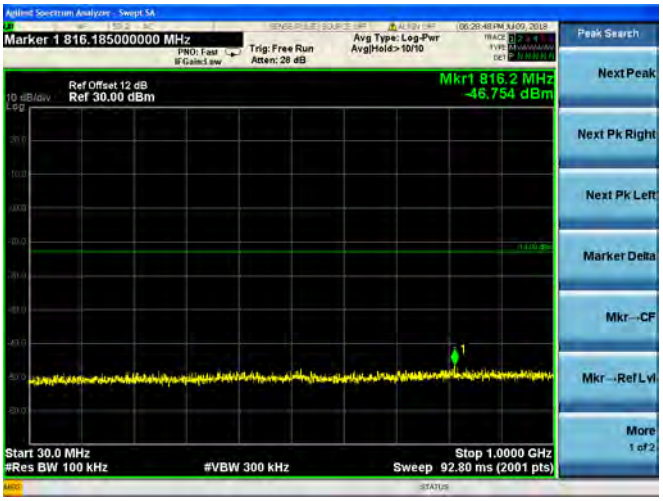
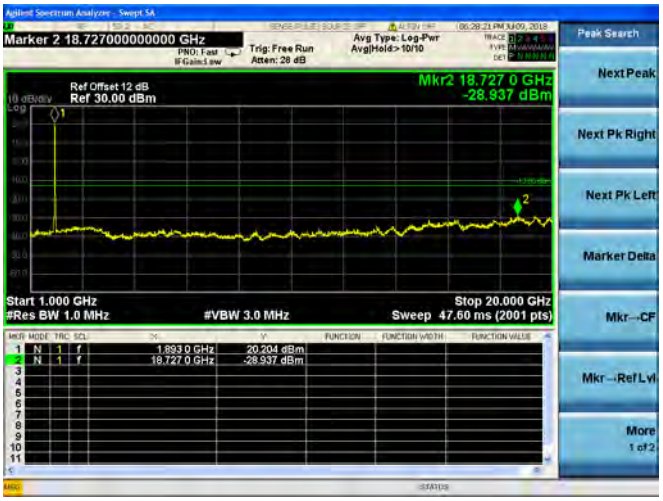
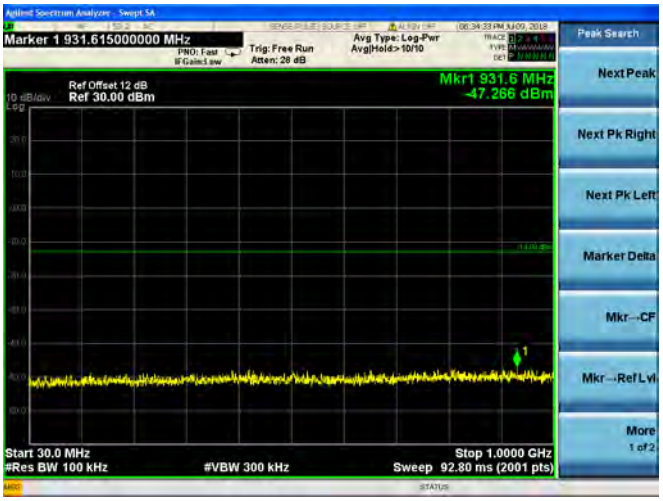


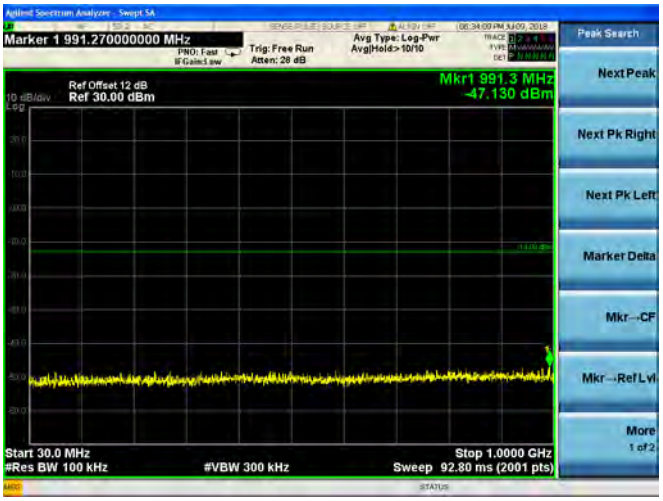


LTE Band 2 20MHz BW Low Channel

QPSK

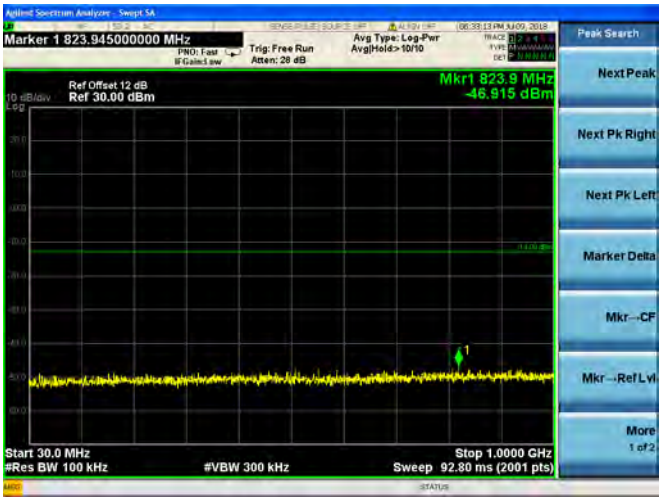


16QAM

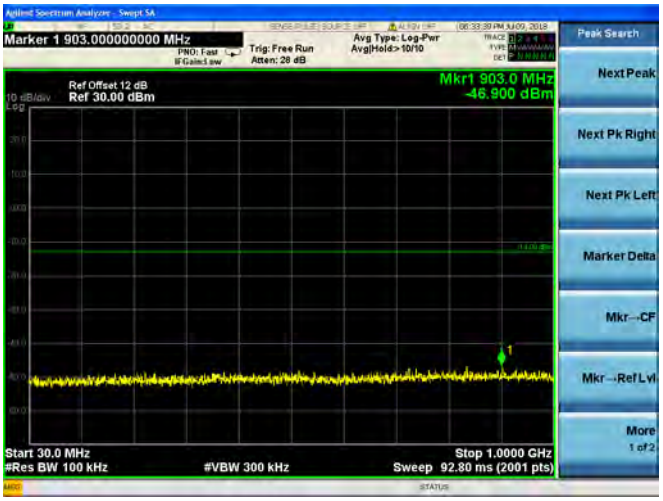


LTE Band 2 20MHz BW Mid Channel

QPSK

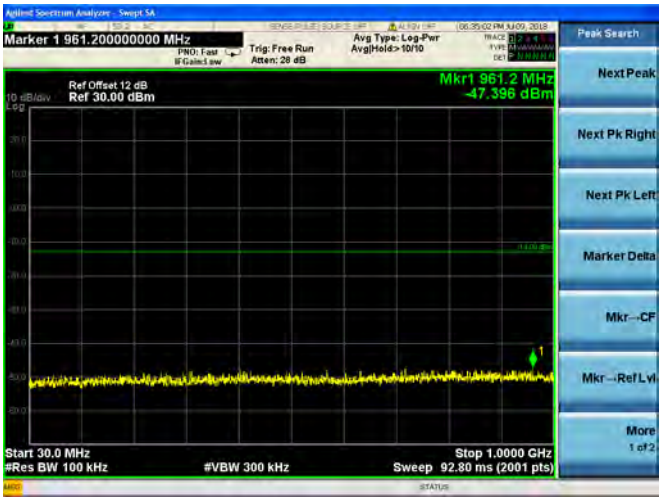


16QAM

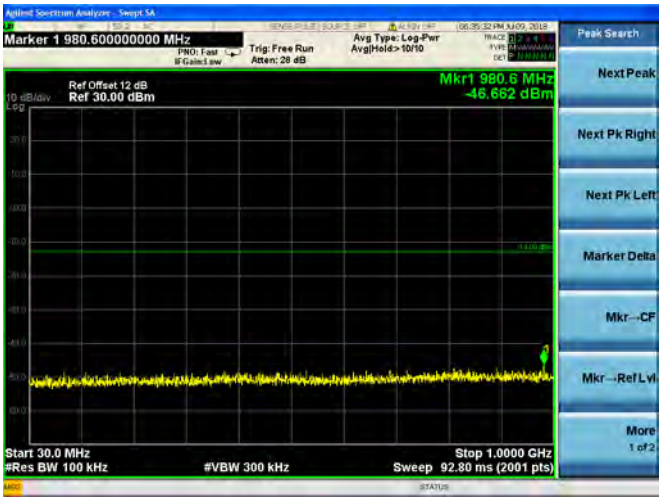


LTE Band 2 20MHz BW High Channel

QPSK

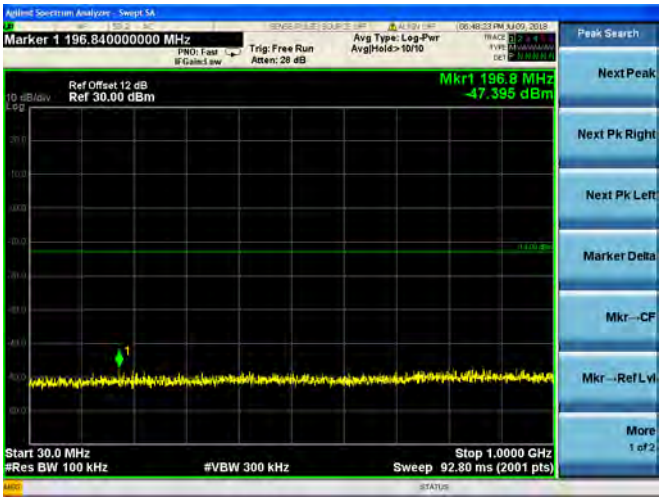


16QAM

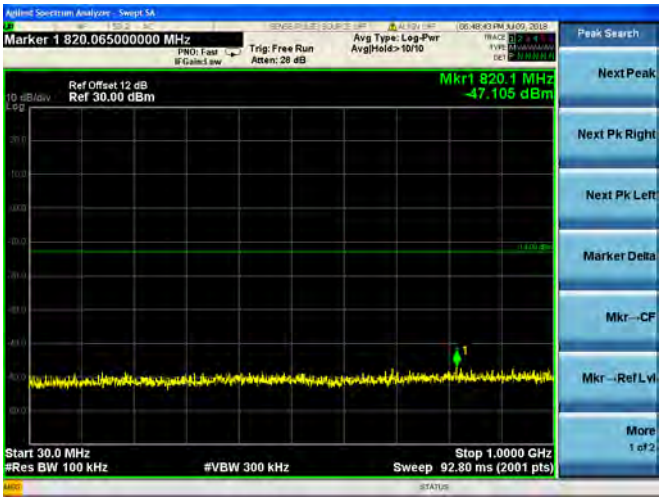


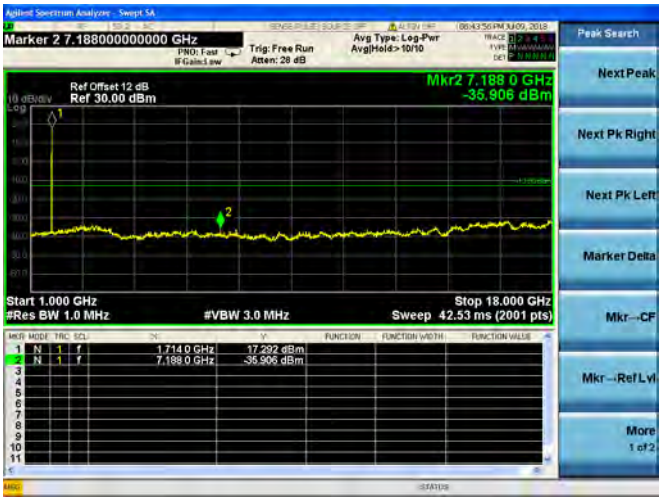
LTE Band 4 1.4MHz BW Low Channel

QPSK



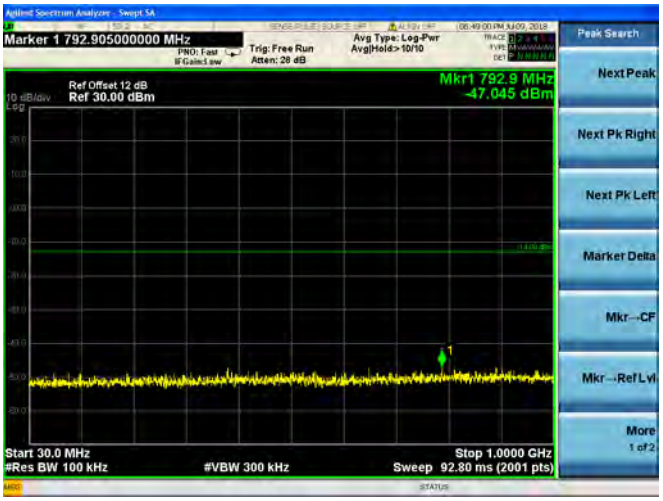
16QAM





LTE Band 4 1.4MHz BW Mid Channel

QPSK



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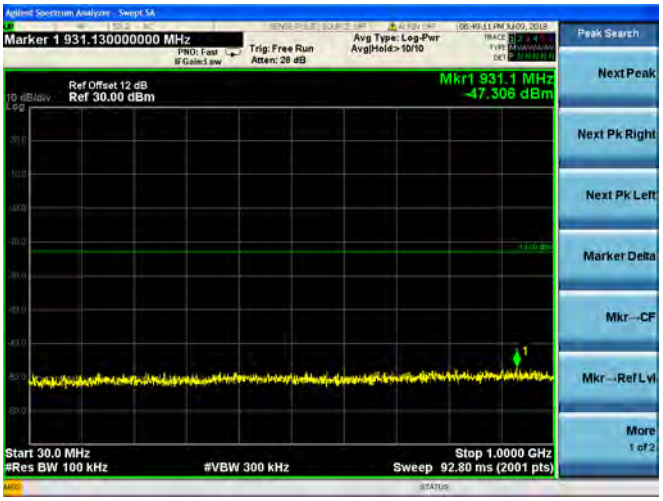
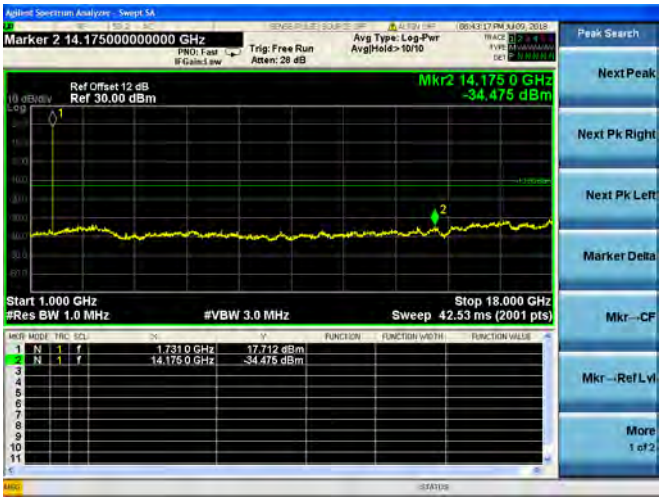
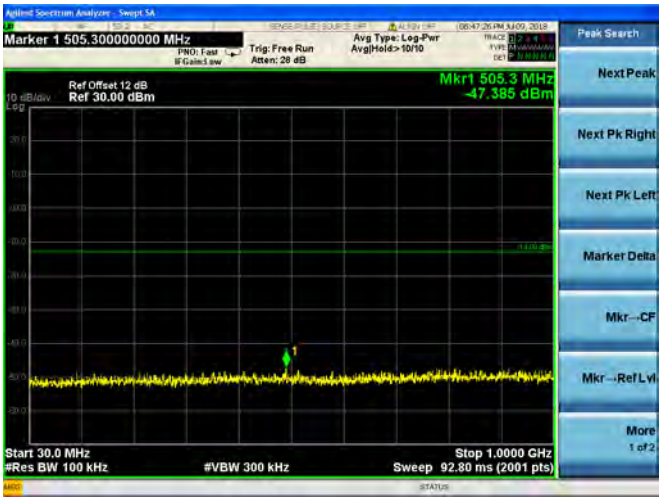
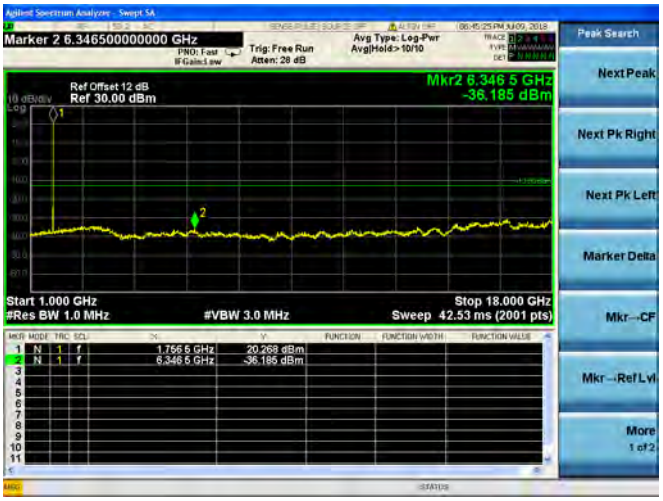




LTE Band 4 1.4MHz BW High Channel

QPSK





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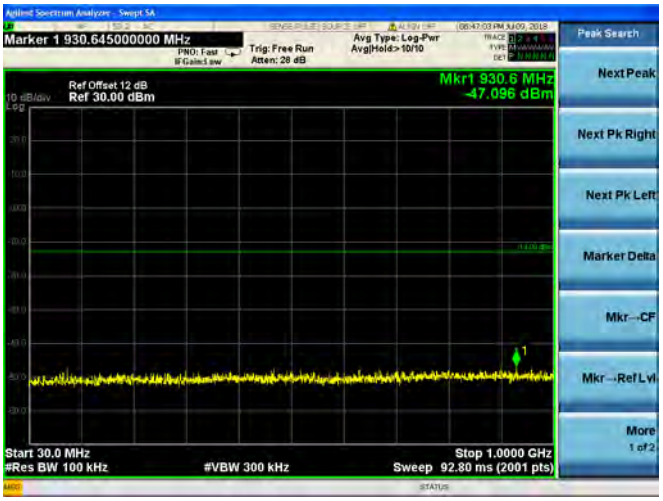
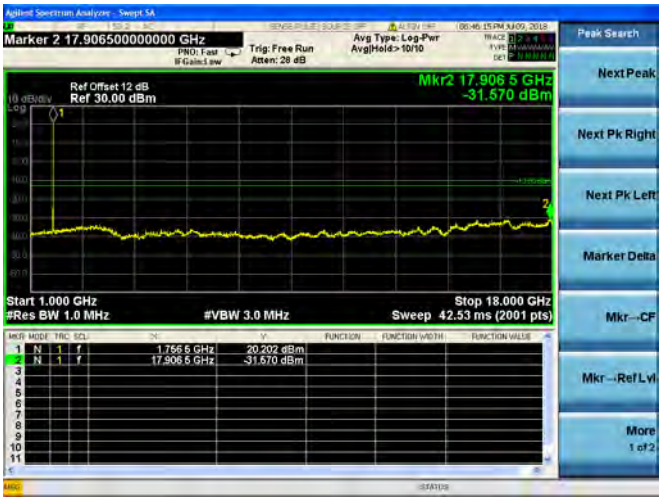
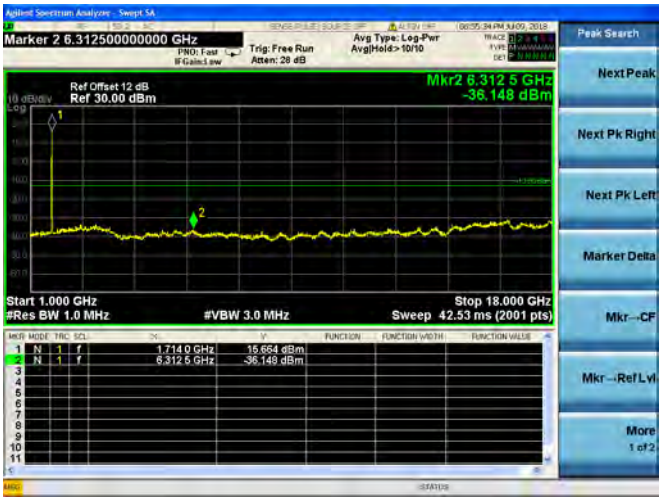




LTE Band 4 3MHz BW Low Channel

QPSK



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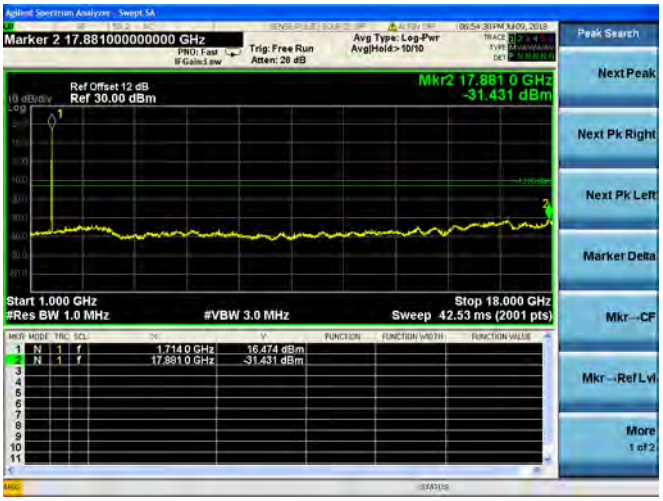
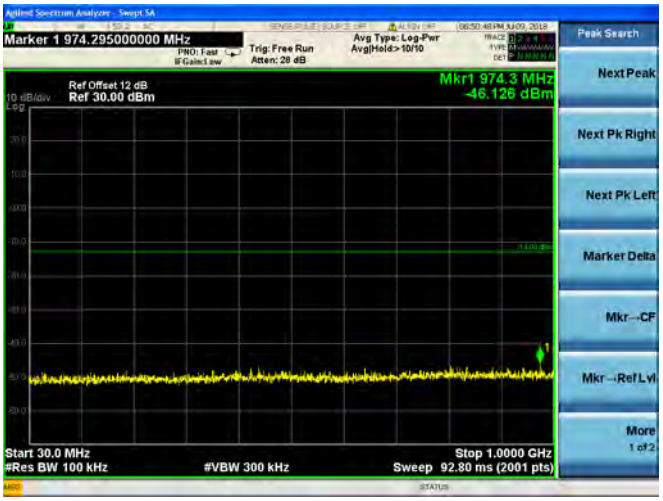


LTE Band 4 3MHz BW Mid Channel

QPSK



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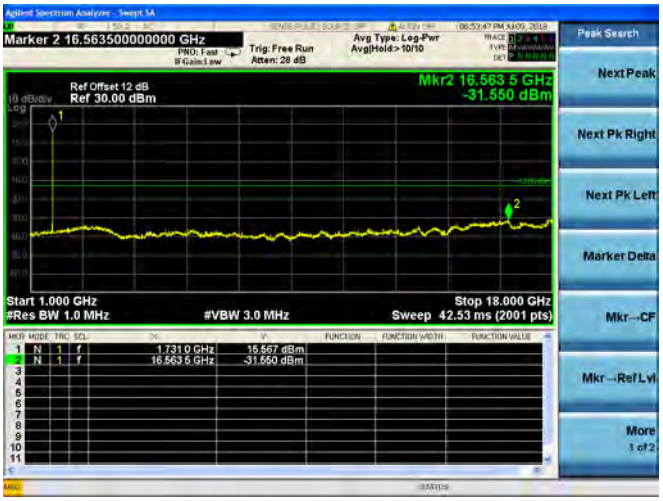
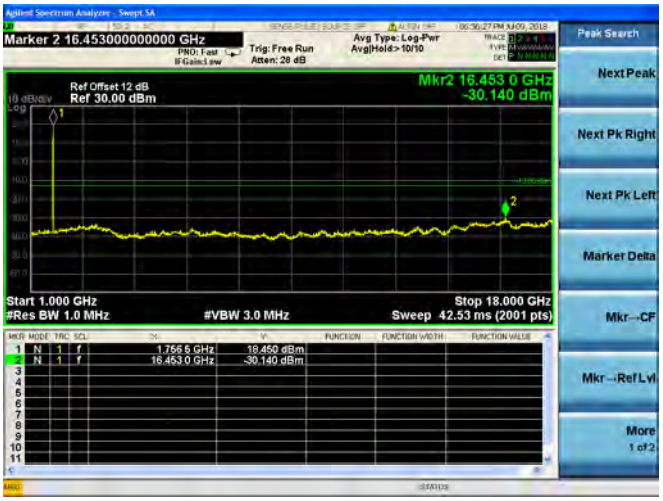


LTE Band 4 3MHz BW High Channel

QPSK



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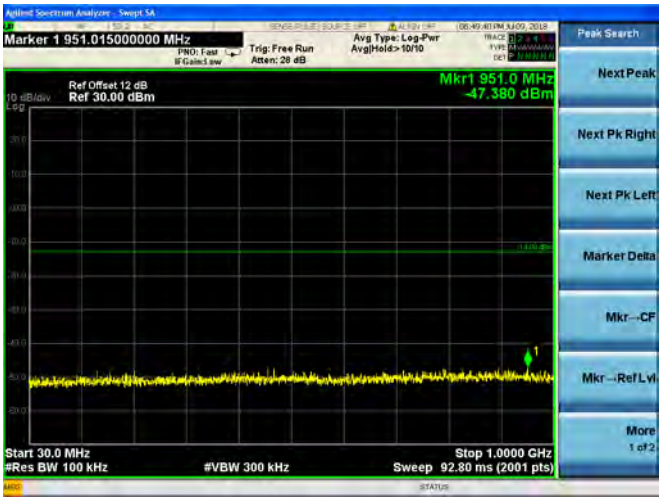
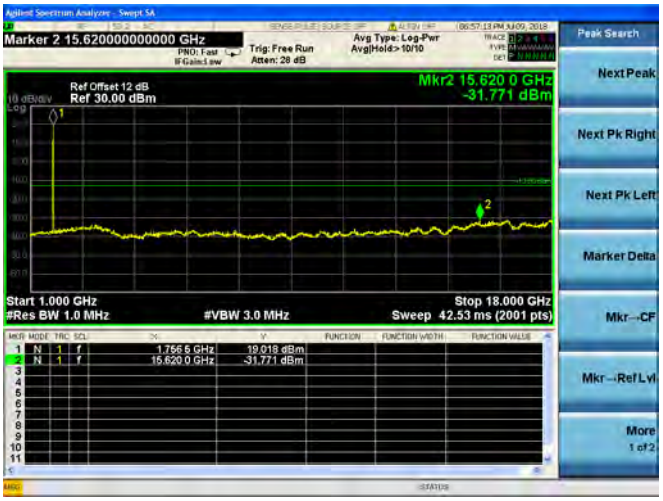
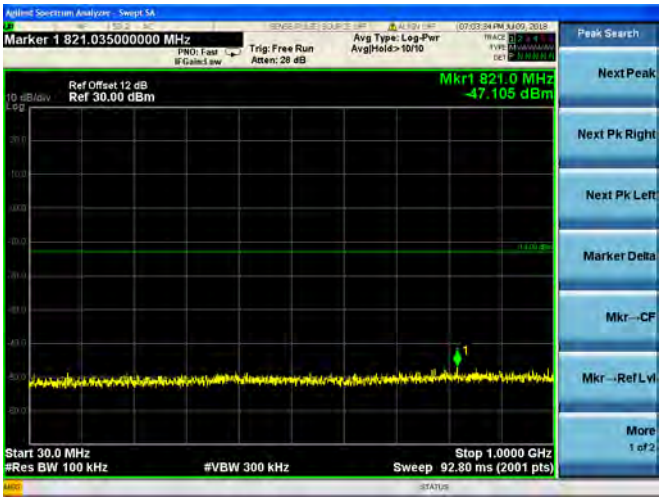
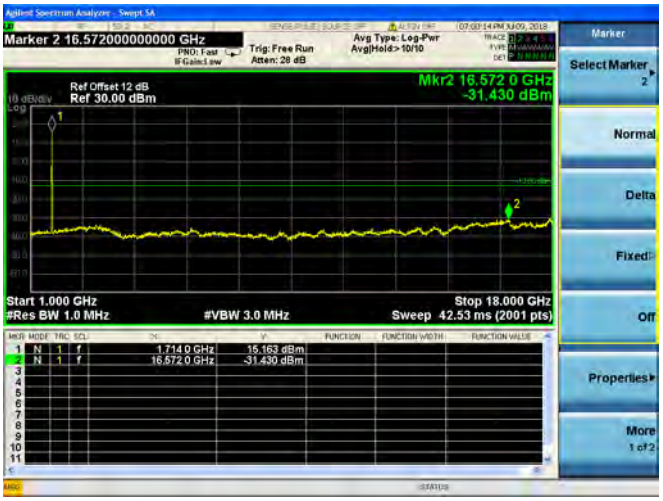




LTE Band 4 5MHz BW Low Channel

QPSK





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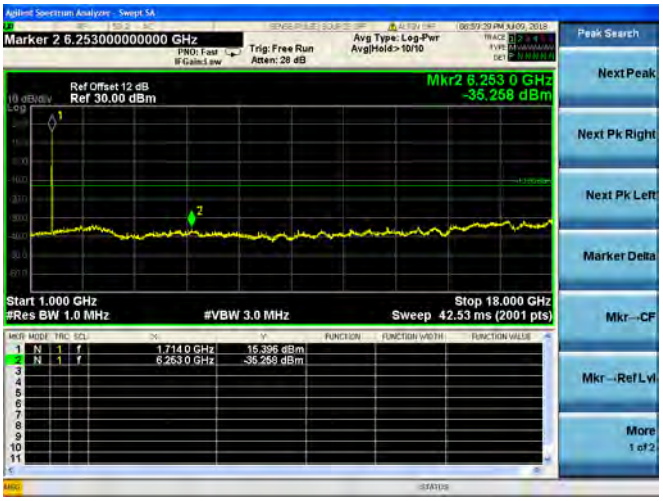
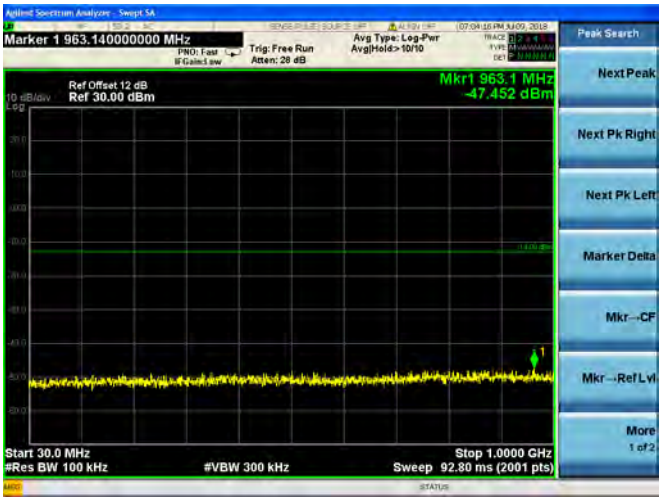


LTE Band 4 5MHz BW Mid Channel

QPSK



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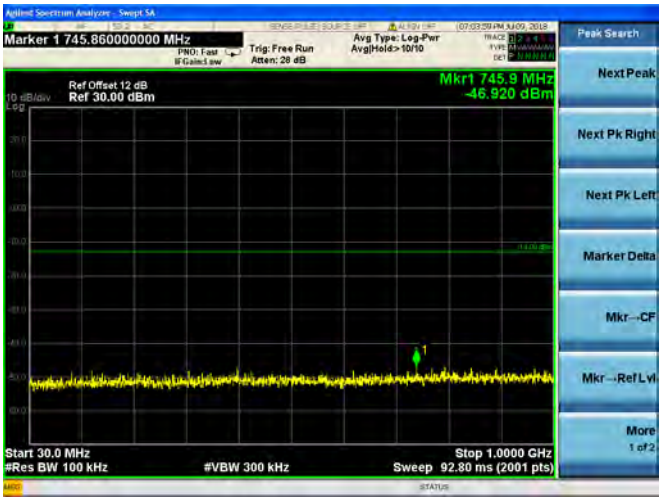
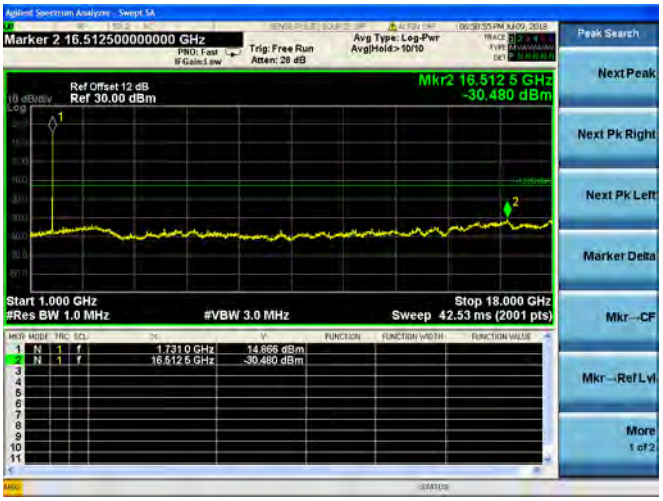
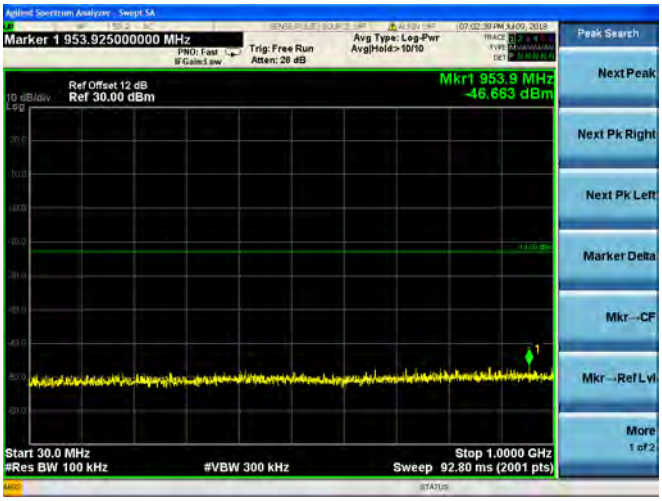
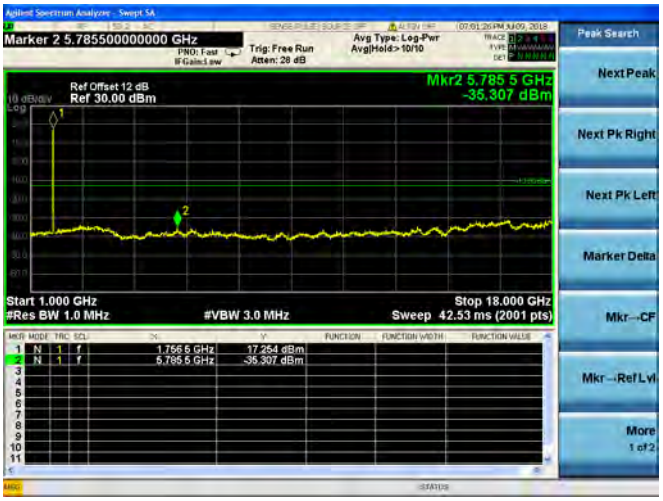




LTE Band 4 5MHz BW High Channel

QPSK





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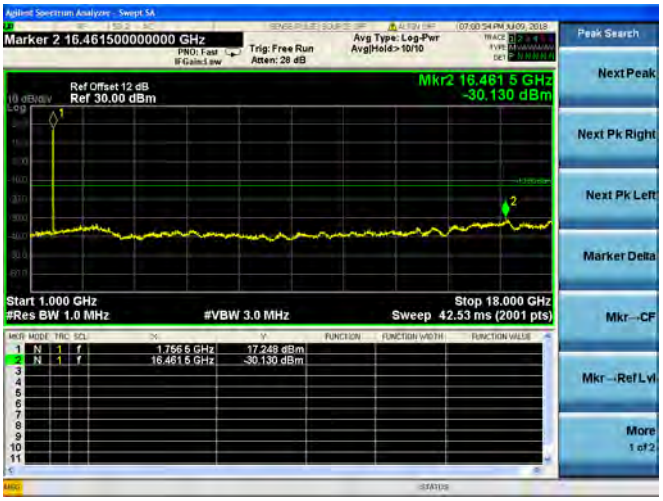
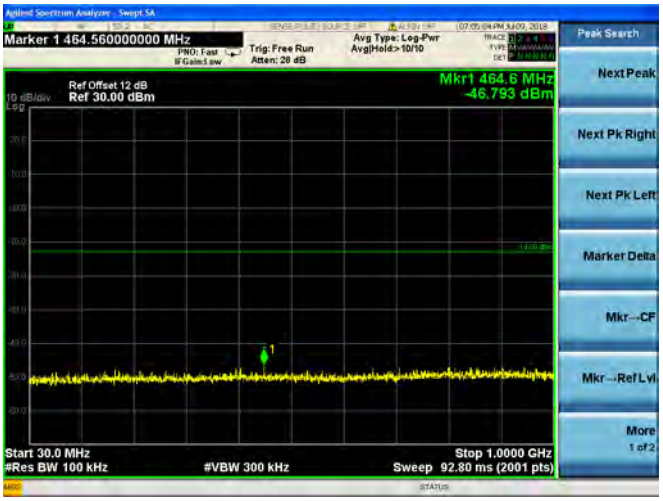
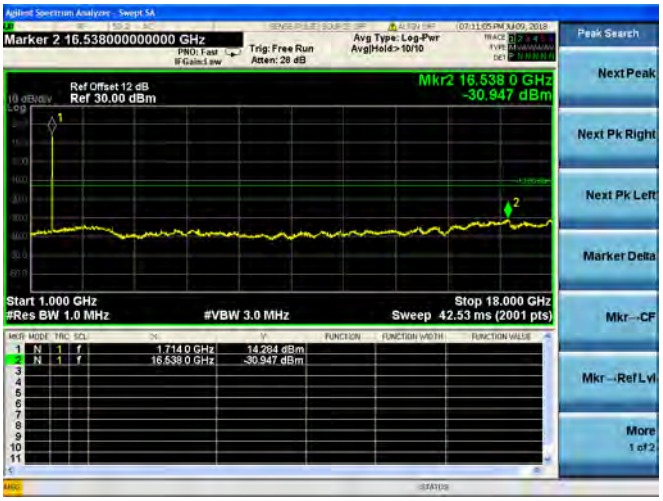


LTE Band 4 10MHz BW Low Channel

QPSK





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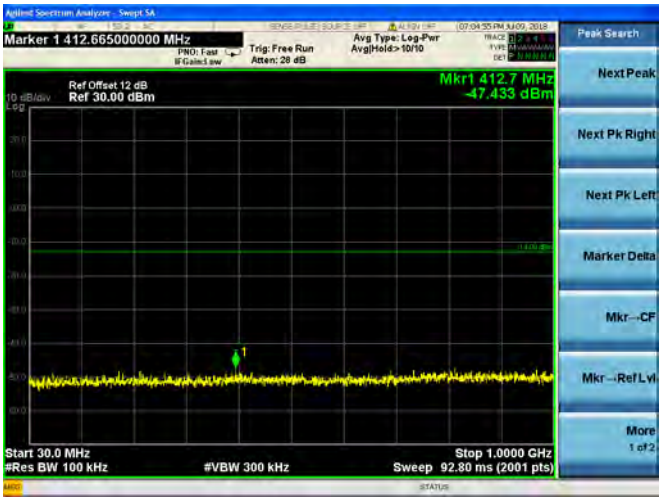
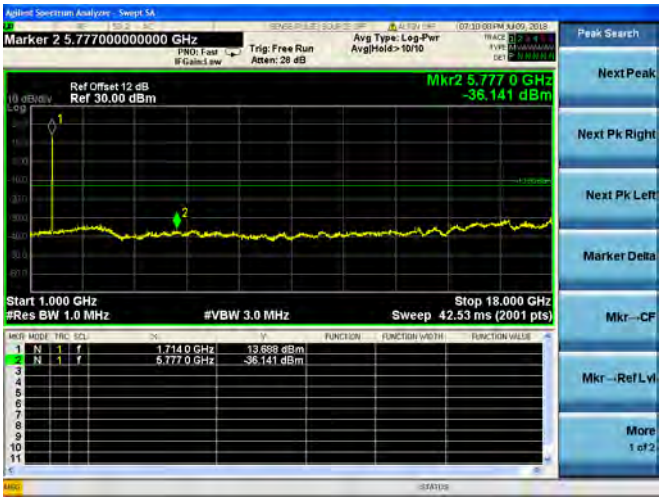
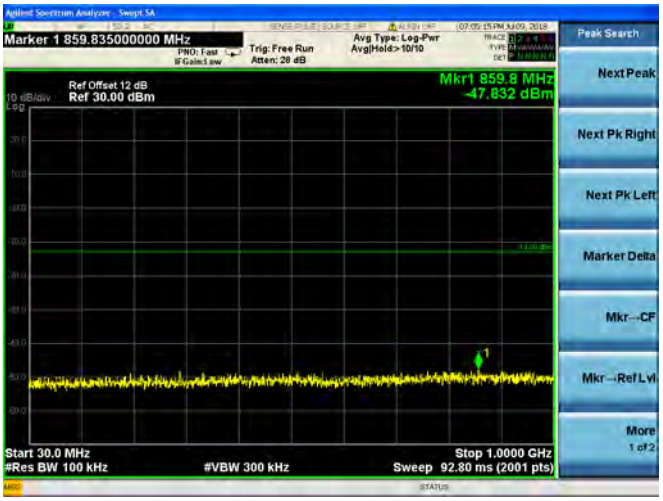


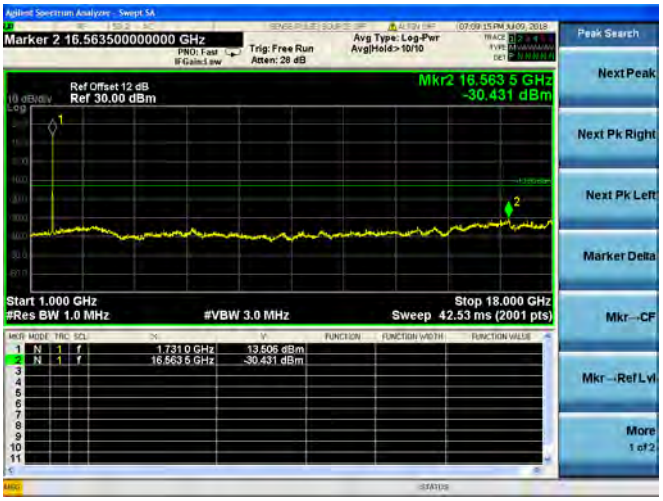


LTE Band 4 10MHz BW Mid Channel

QPSK

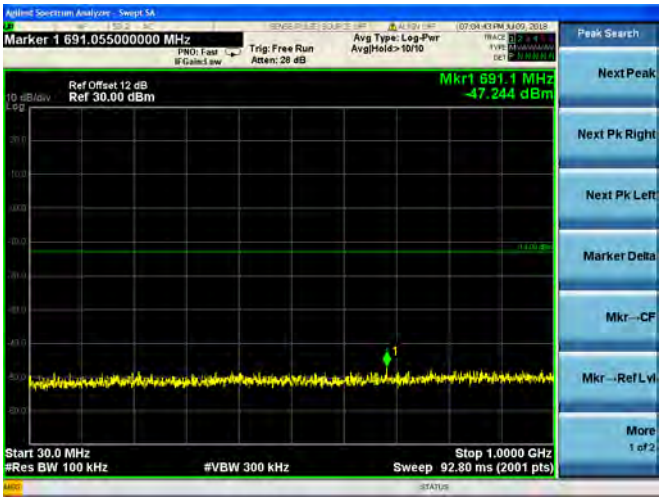
16QAM





LTE Band 4 10MHz BW High Channel

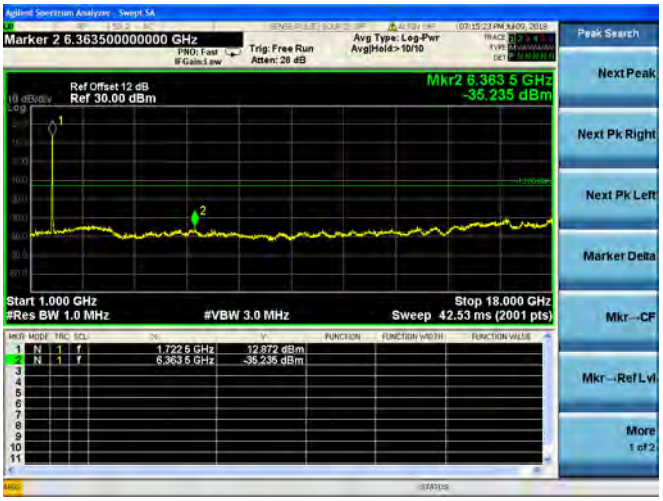
QPSK



16QAM

LTE Band 4 15MHz BW Low Channel

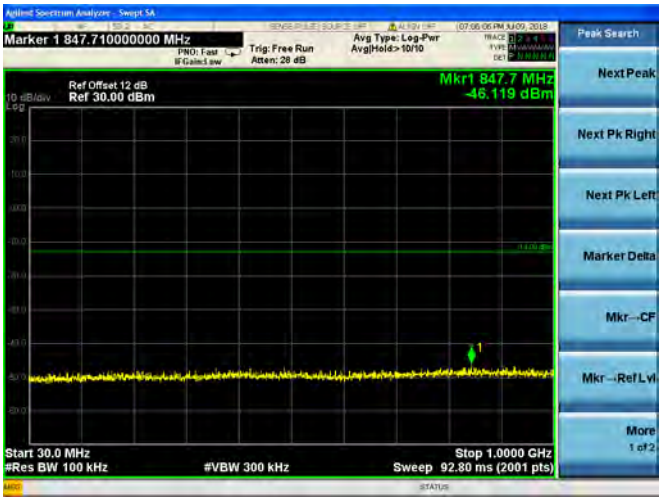
QPSK

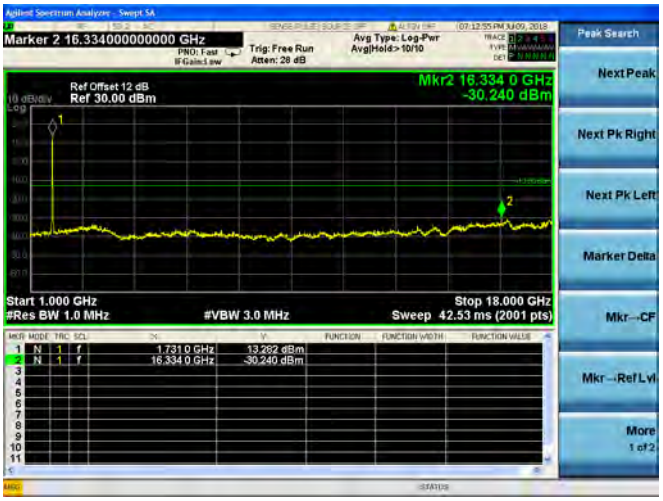


16QAM

LTE Band 4 15MHz BW Mid Channel

QPSK

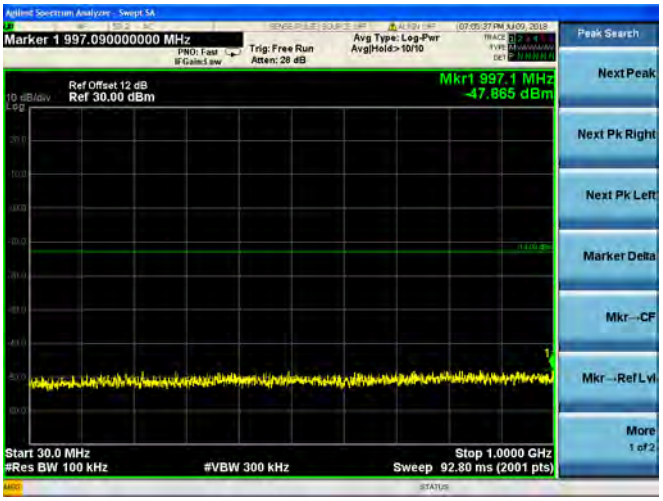


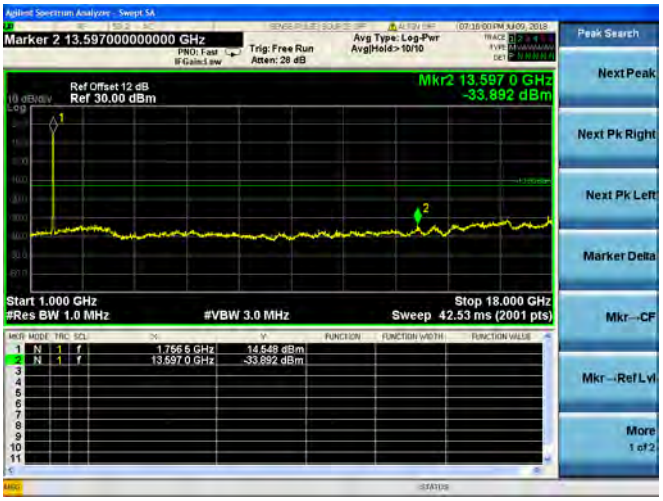


16QAM

LTE Band 4 15MHz BW High Channel

QPSK





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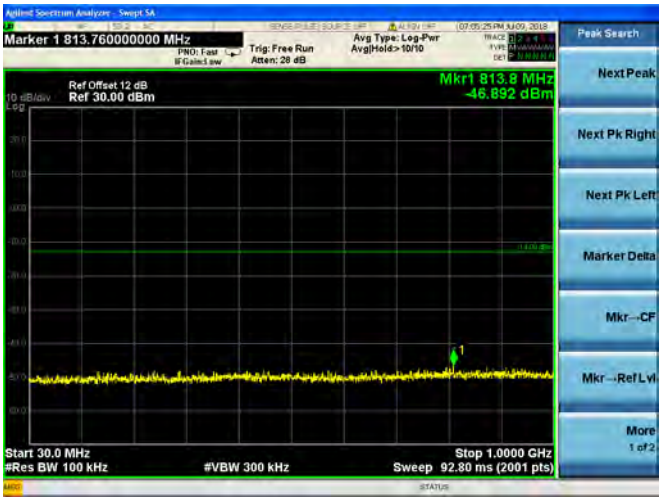
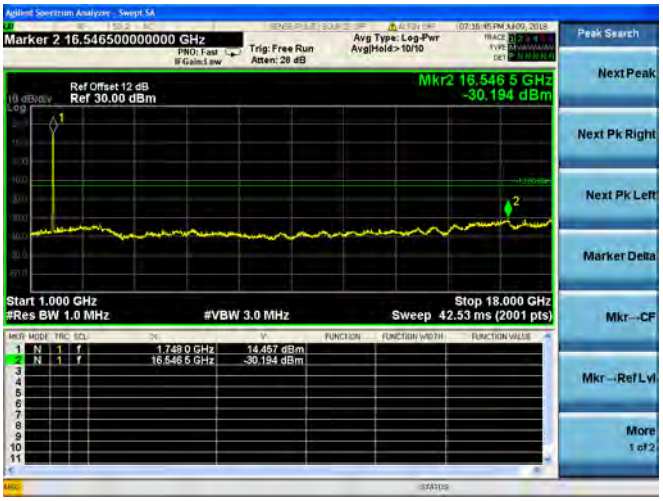
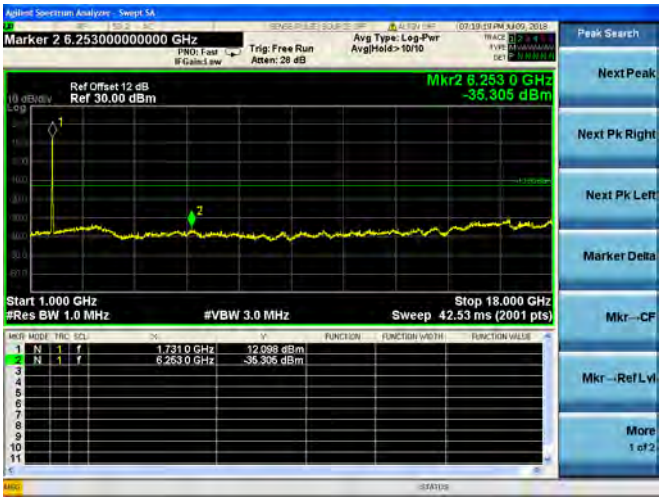




LTE Band 4 20MHz BW Low Channel

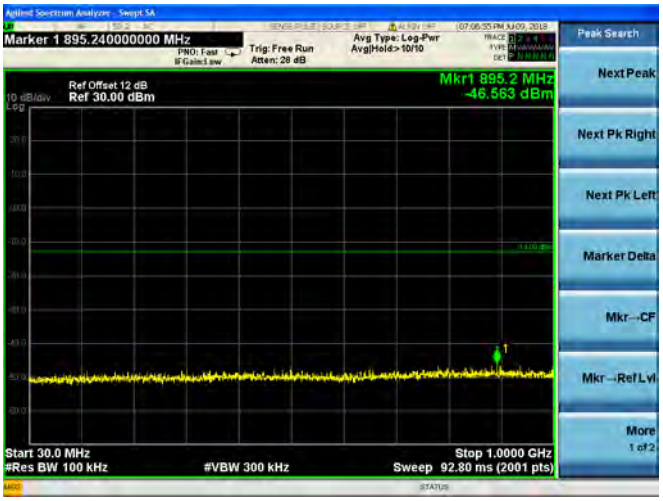
QPSK

16QAM



LTE Band 4 20MHz BW Mid Channel

QPSK



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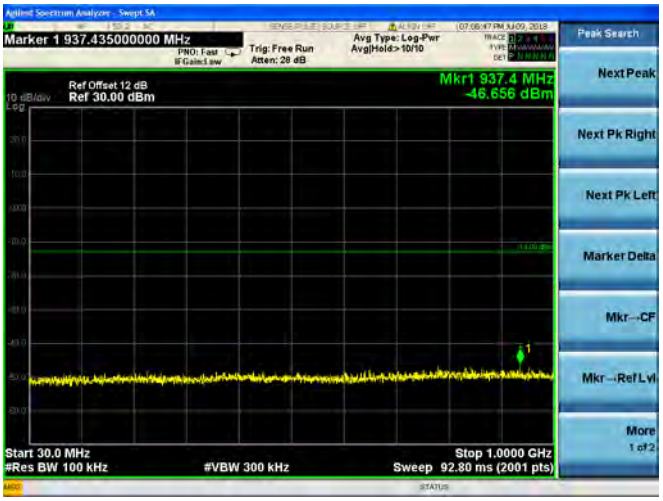
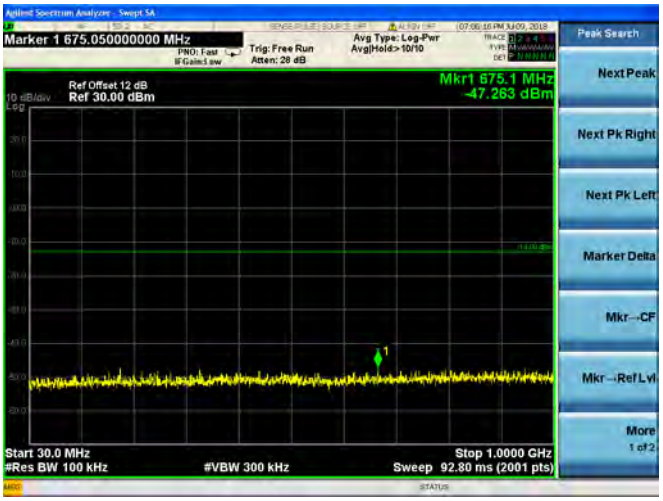


LTE Band 4 20MHz BW High Channel

QPSK



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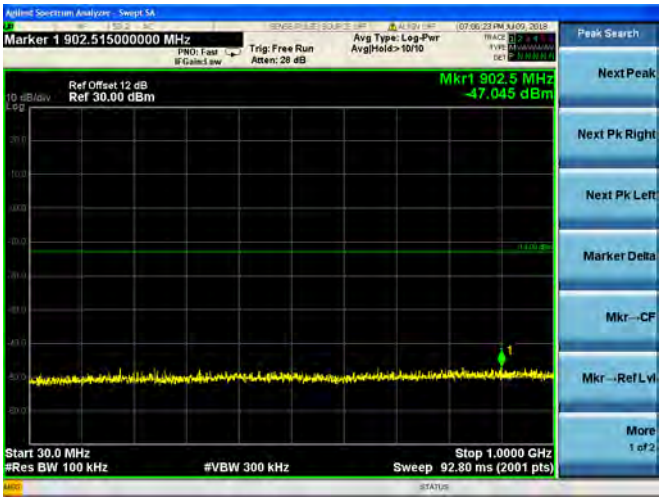
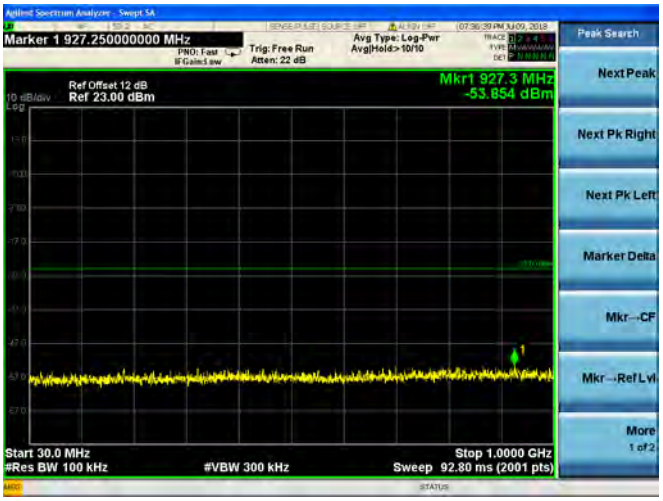


LTE Band 7 5MHz BW Low Channel

QPSK



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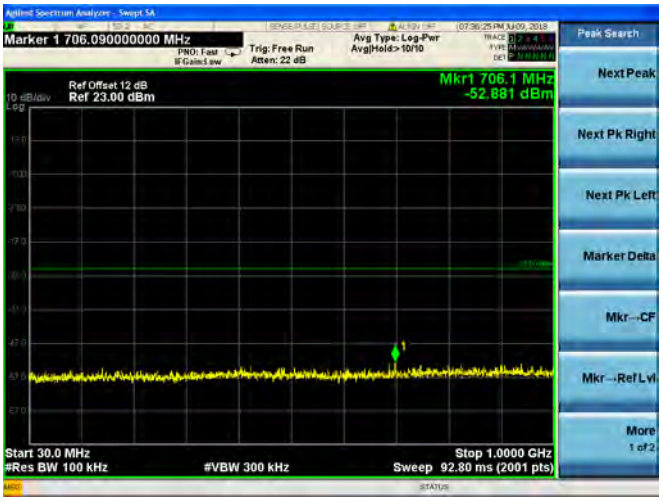
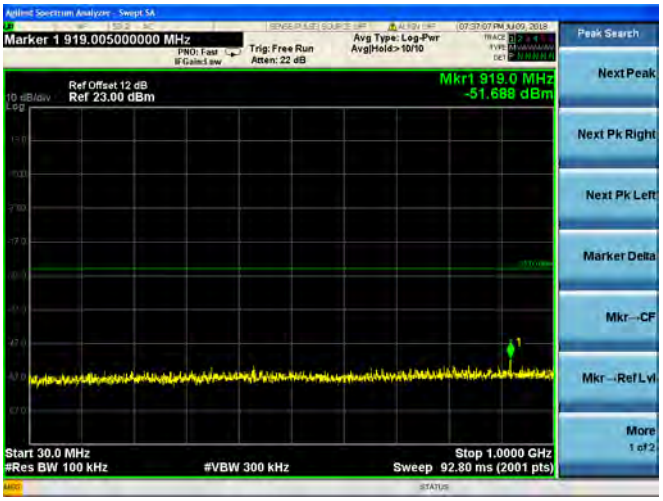


LTE Band 7 5MHz BW Mid Channel

QPSK



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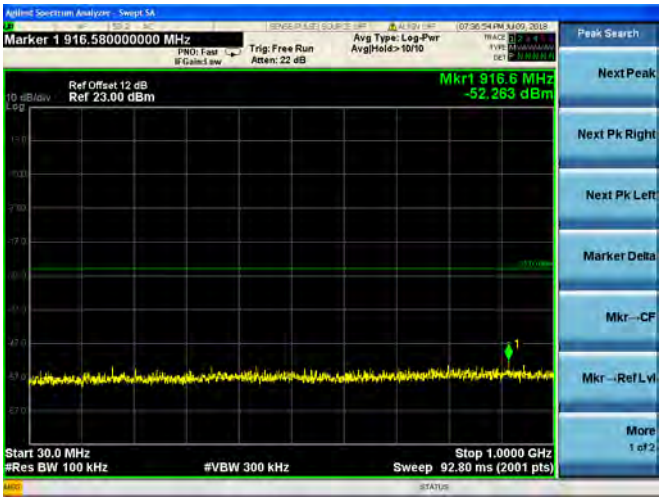
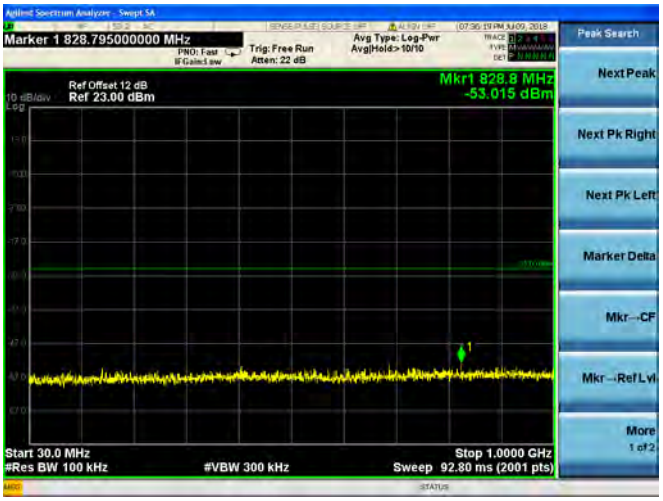


LTE Band 7 5MHz BW High Channel

QPSK



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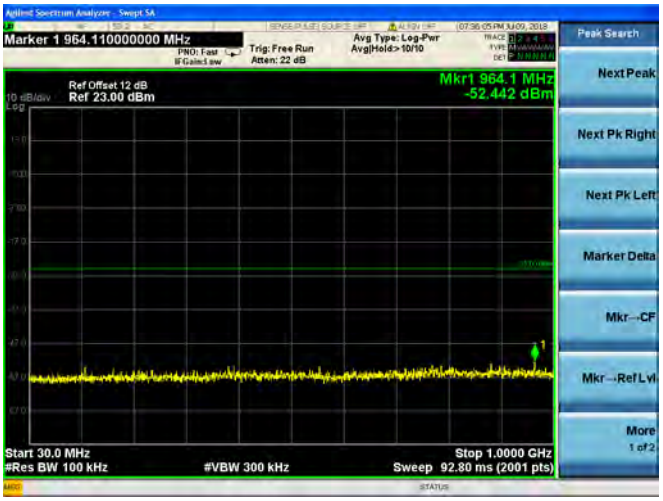
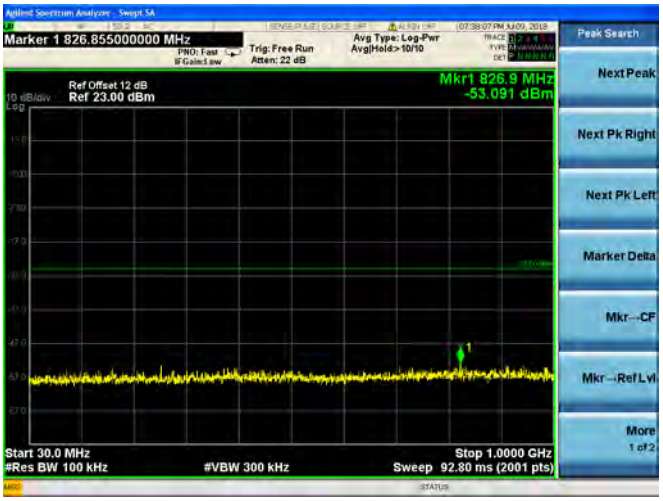


LTE Band 7 10MHz BW Low Channel

QPSK



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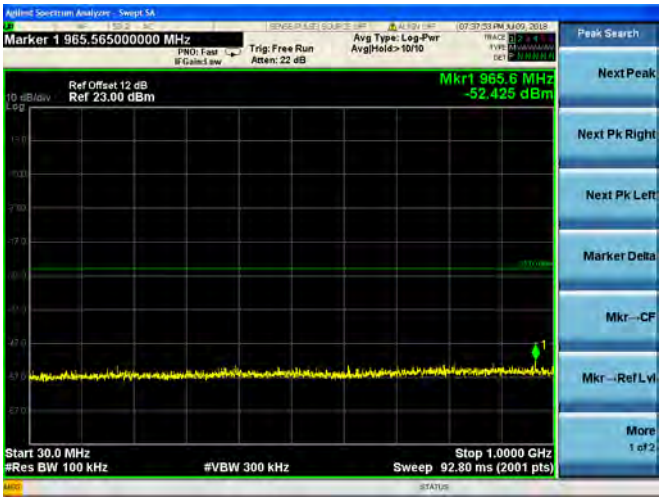
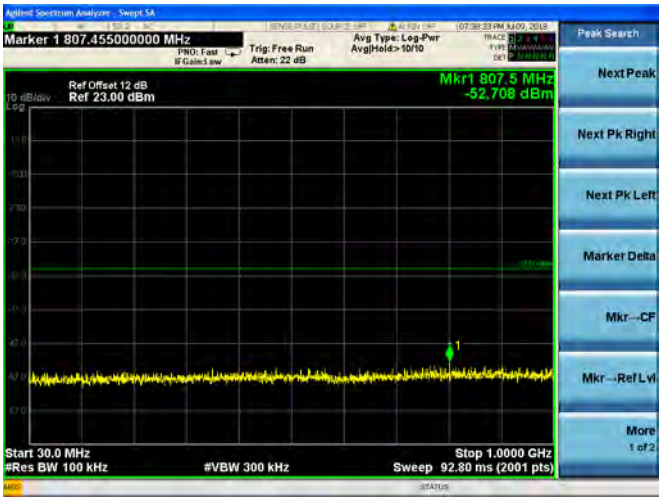


LTE Band 7 10MHz BW Mid Channel

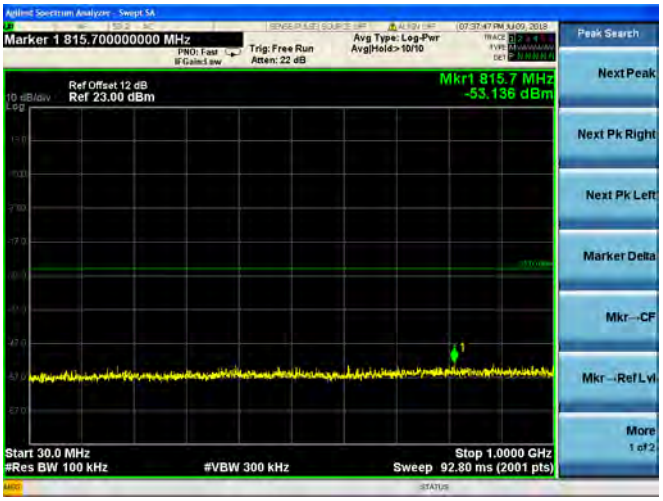
QPSK



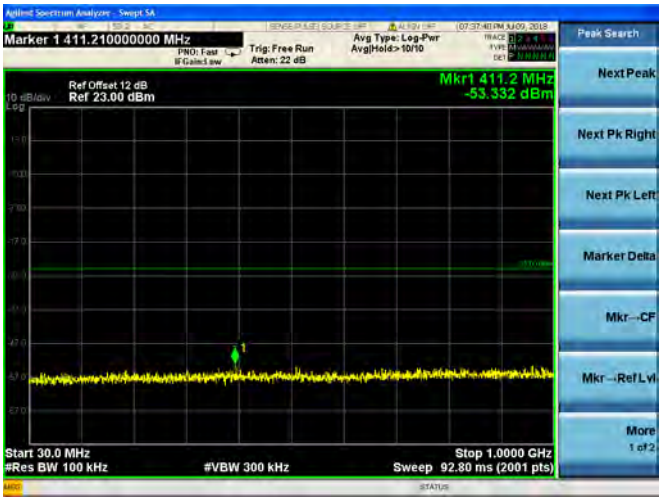
16QAM

LTE Band 7 10MHz BW High Channel

QPSK

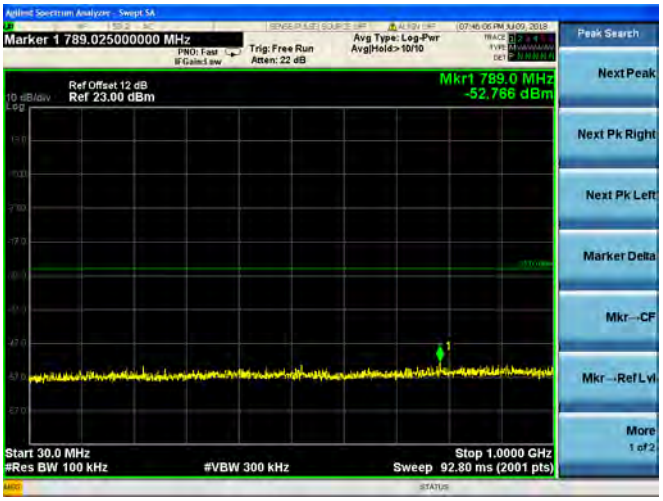


16QAM



LTE Band 7 15MHz BW Low Channel

QPSK



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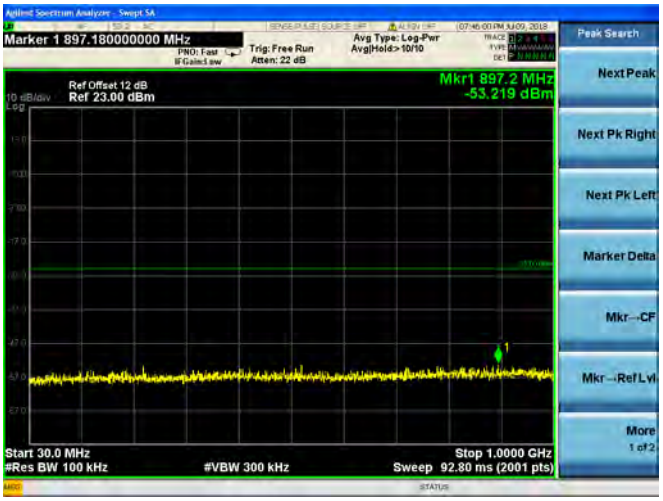
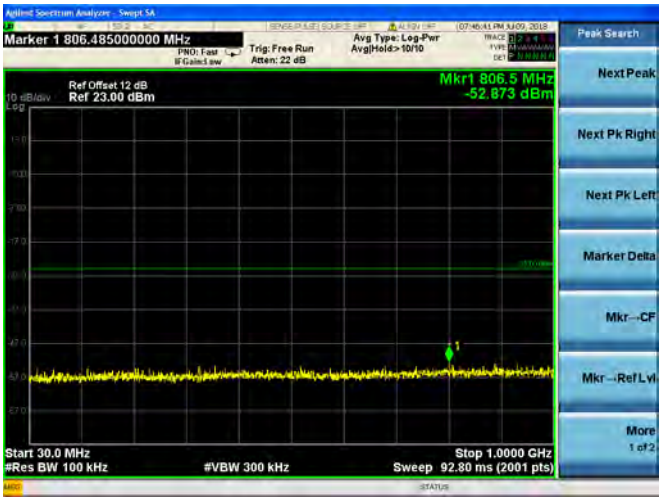


LTE Band 7 15MHz BW Mid Channel

QPSK



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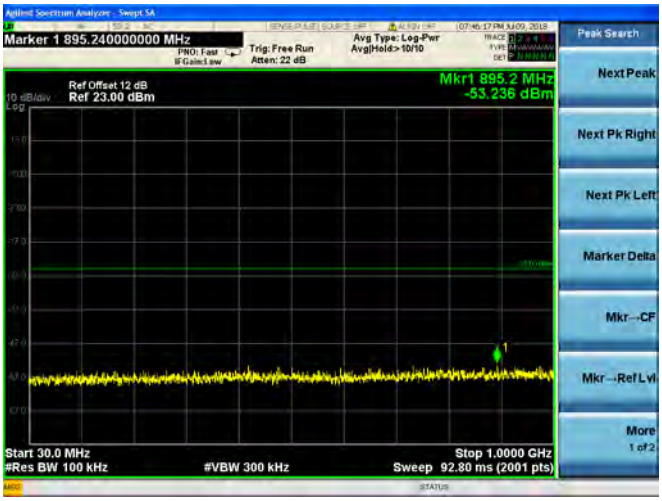
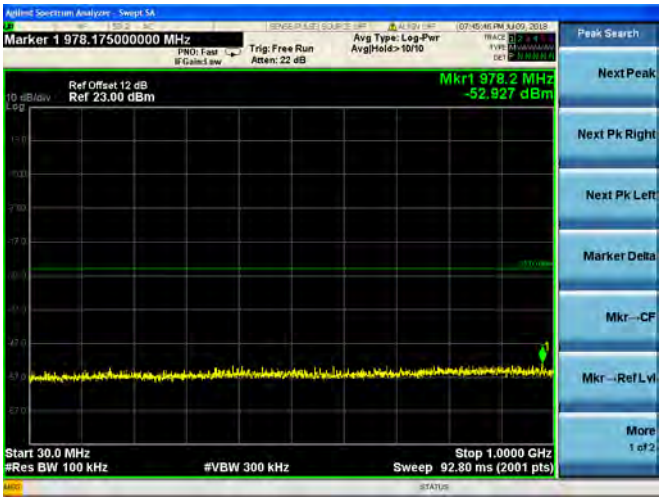


LTE Band 7 15MHz BW High Channel

QPSK



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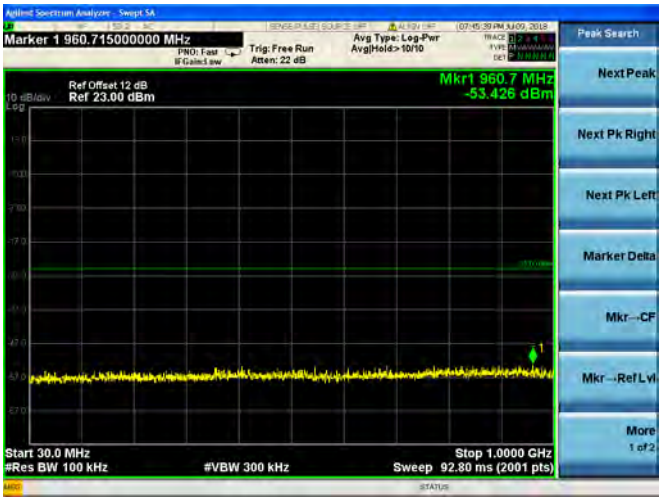
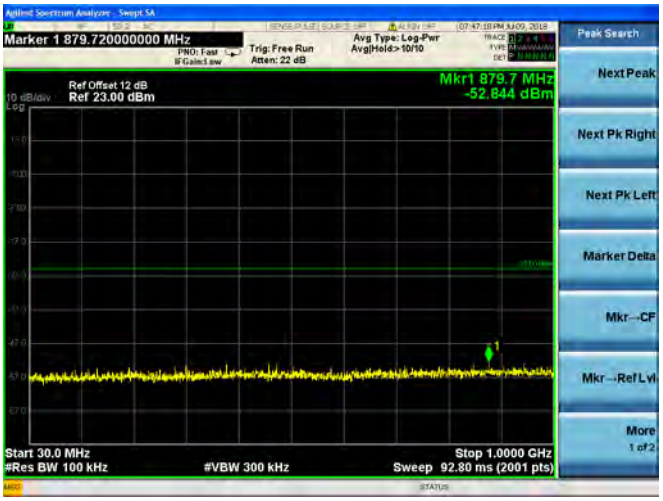


LTE Band 7 20MHz BW Low Channel

QPSK



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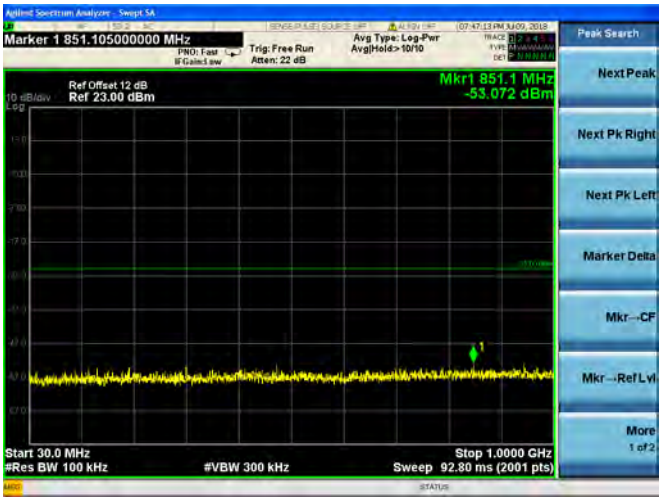
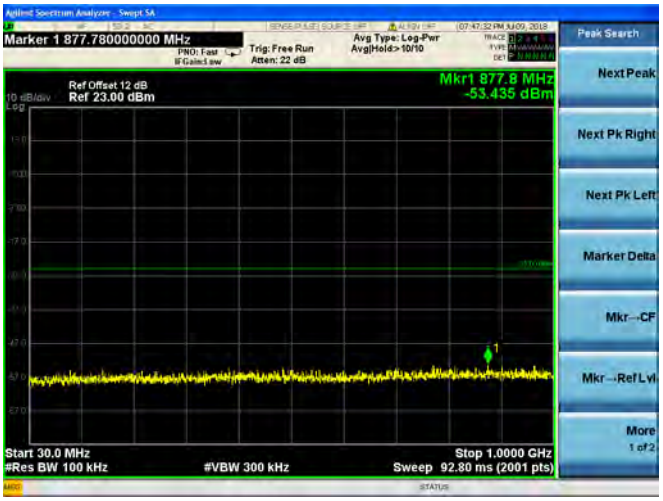


LTE Band 7 20MHz BW Mid Channel

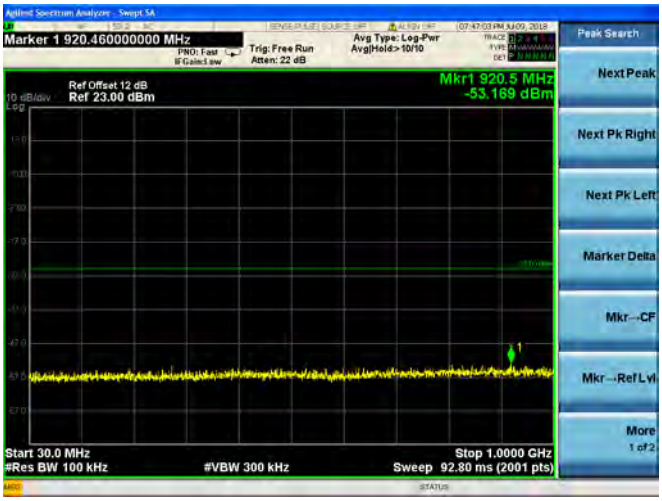
QPSK

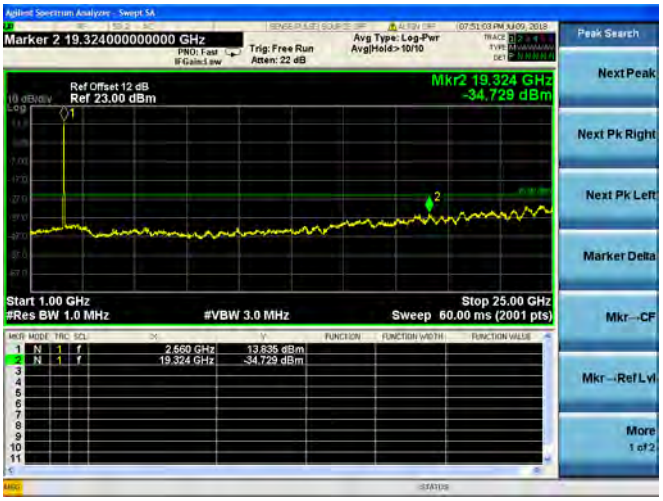
16QAM



LTE Band 7 20MHz BW High Channel

QPSK





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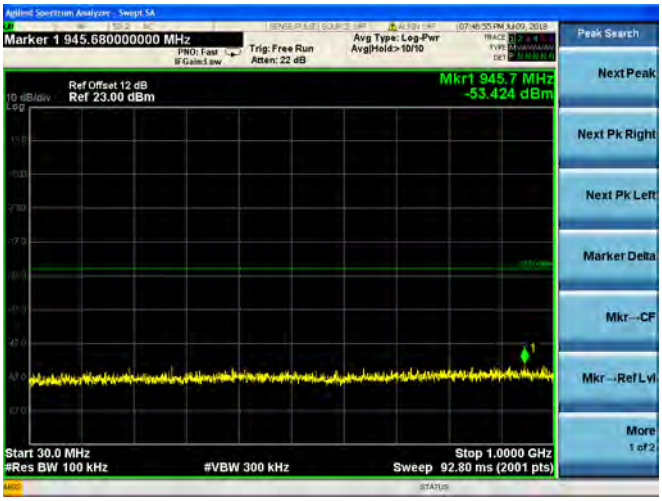
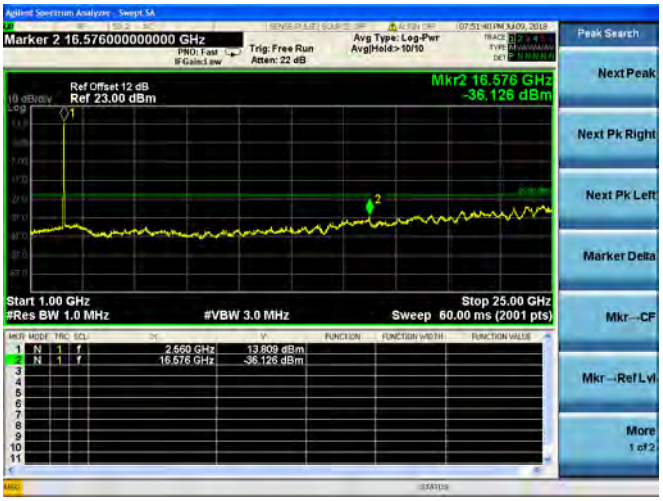




2.6. Band Edge

2.6.1. Requirement

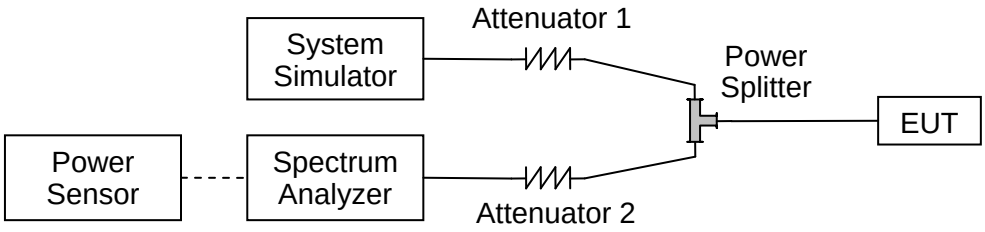
According to FCC section 24.238(a),The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC section 27.53(g), For operations in 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.

According to FCC section 27.53(h), For operations in the 1710–1755MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.

According to FCC section 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.

2.6.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.6.3. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

2.6.4. Test Result

The center frequency of spectrum is the band edge frequency and span is 2MHz, Record the max trace into the test report.

LTE Band 2

Channel Bandwidth: 1.4MHz

Channel	18607	RB Size 1	RB Offset 0	Channel	18607	RB Size 6	RB Offset 0

Channel Bandwidth: 1.4MHz

Channel	19192	RB Size 1	RB Offset 5	Channel	19192	RB Size 6	RB Offset 0

LTE Band 2

Channel Bandwidth: 3MHz

Channel	18165	RB Size 1	RB Offset 0	Channel	18165	RB Size 15	RB Offset 0

Channel Bandwidth: 3MHz

Channel	19184	RB Size 1	RB Offset 14	Channel	19184	RB Size 15	RB Offset 0

LTE Band 2

Channel Bandwidth: 5MHz

Channel	18625	RB Size 1	RB Offset 0	Channel	18625	RB Size 25	RB Offset 0

Channel Bandwidth: 5MHz

Channel	19175	RB Size 1	RB Offset 24	Channel	19175	RB Size 25	RB Offset 0

LTE Band 2

Channel Bandwidth: 10MHz

Channel	18650	RB Size 1	RB Offset 0	Channel	18650	RB Size 50	RB Offset 0

Channel Bandwidth: 10MHz

Channel	19150	RB Size 1	RB Offset 49	Channel	19150	RB Size 50	RB Offset 0

LTE Band 2

Channel Bandwidth: 15MHz

Channel	18675	RB Size 1	RB Offset 0	Channel	18675	RB Size 75	RB Offset 0

Channel Bandwidth: 15MHz

Channel	19125	RB Size 1	RB Offset 74	Channel	19125	RB Size 75	RB Offset 0