

Band26_1.4MHz_16QAM_26697_6RB#0

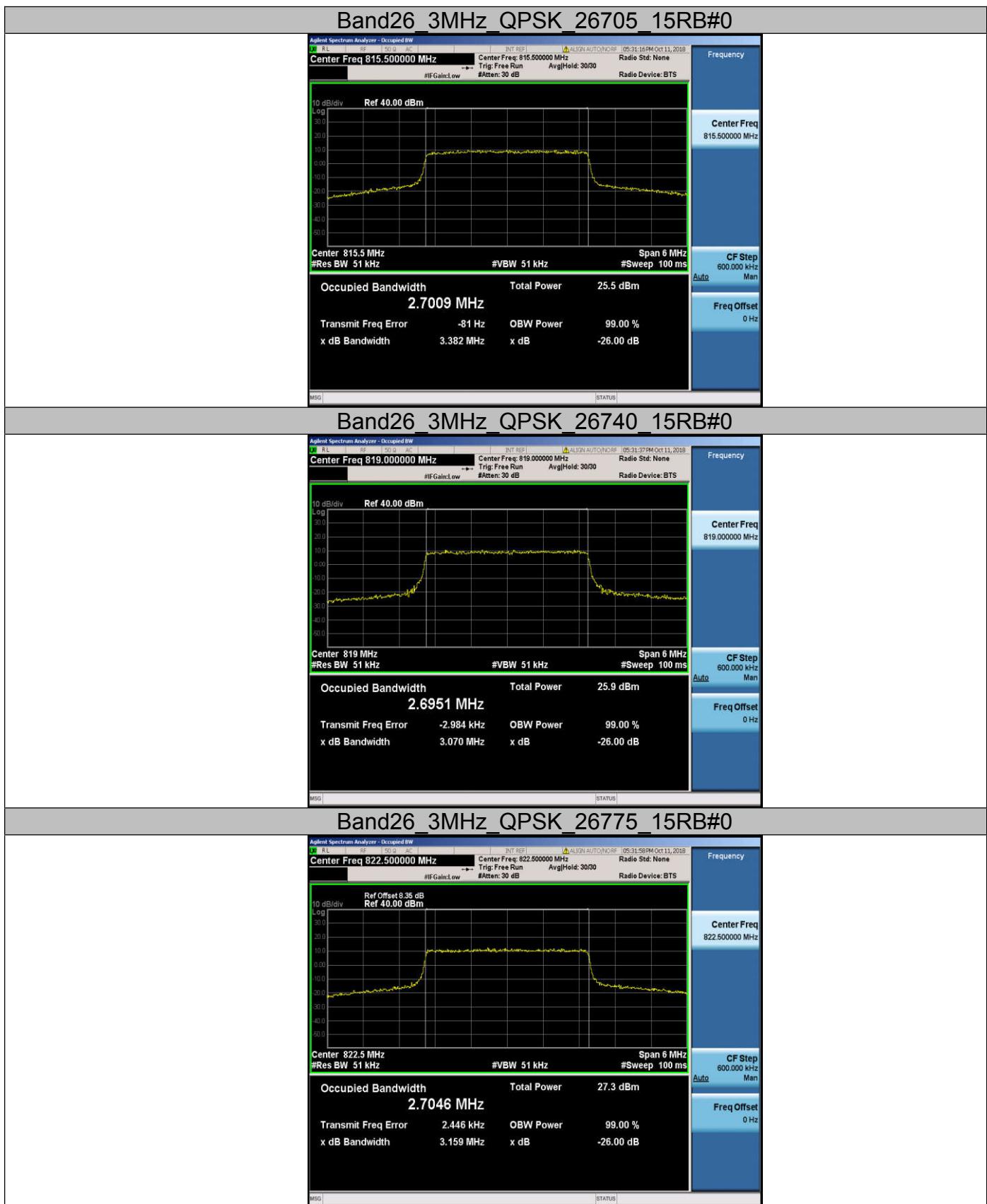


Band26_1.4MHz_16QAM_26740_6RB#0



Band26_1.4MHz_16QAM_26783_6RB#0





Band26_3MHz_16QAM_26705_15RB#0

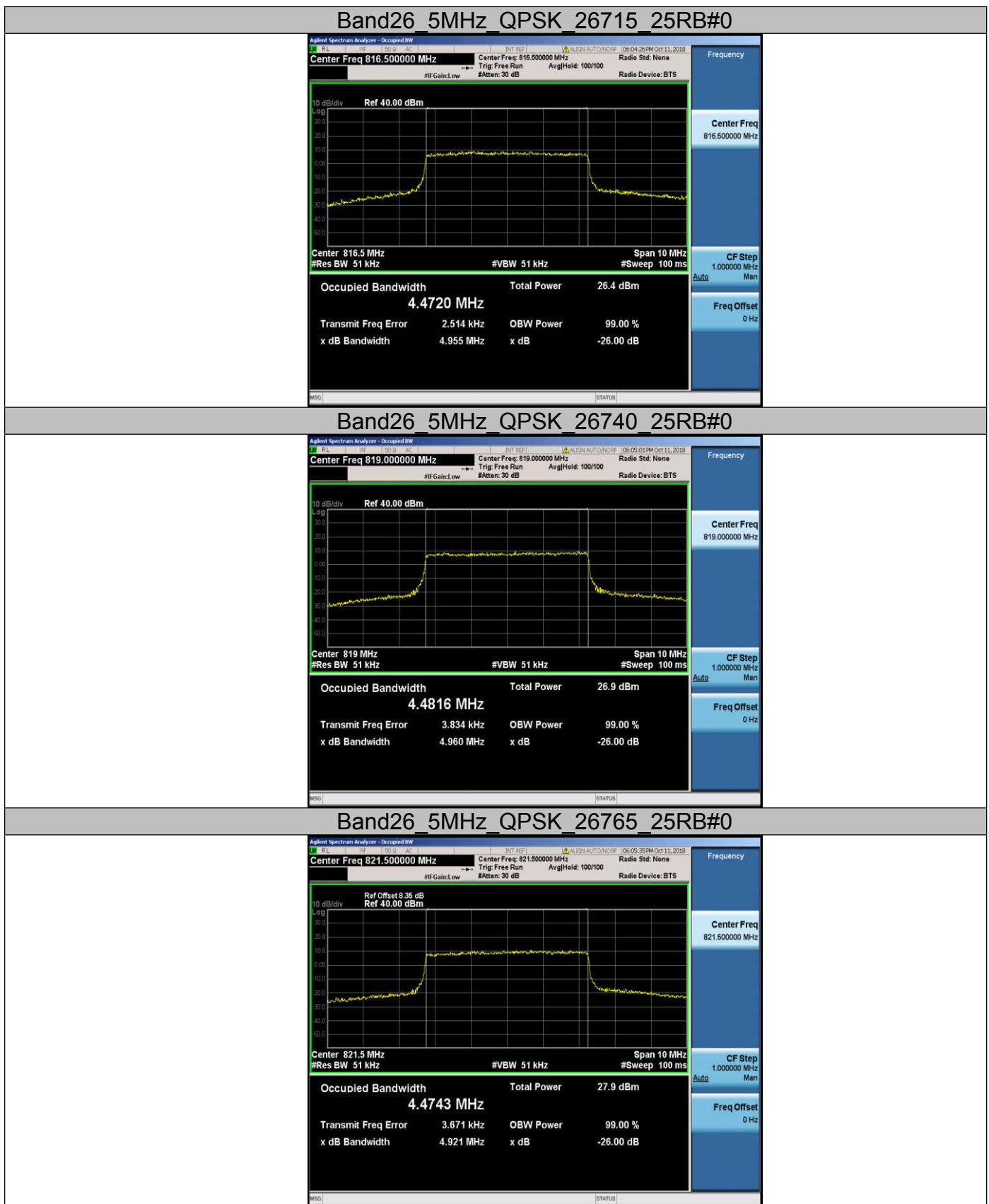


Band26_3MHz_16QAM_26740_15RB#0



Band26_3MHz_16QAM_26775_15RB#0

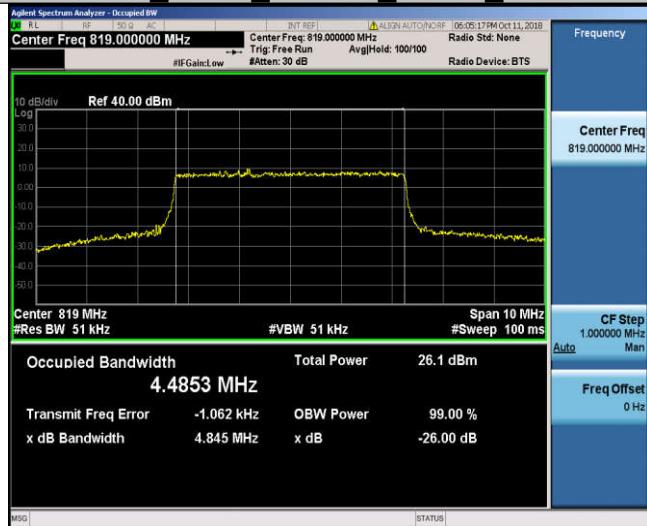




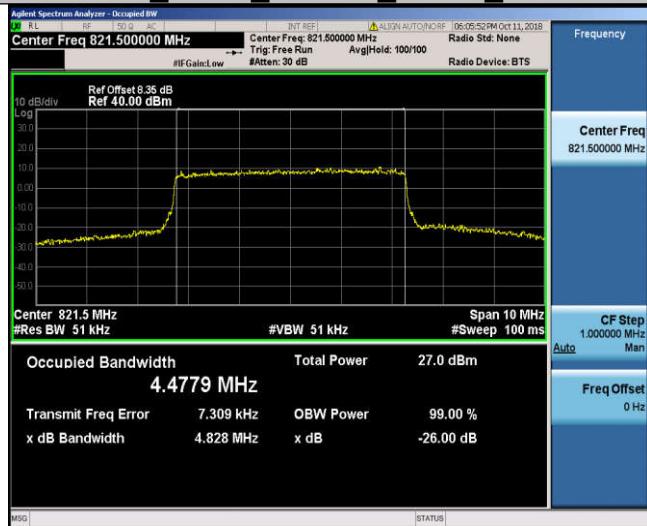
Band26_5MHz_16QAM_26715_25RB#0

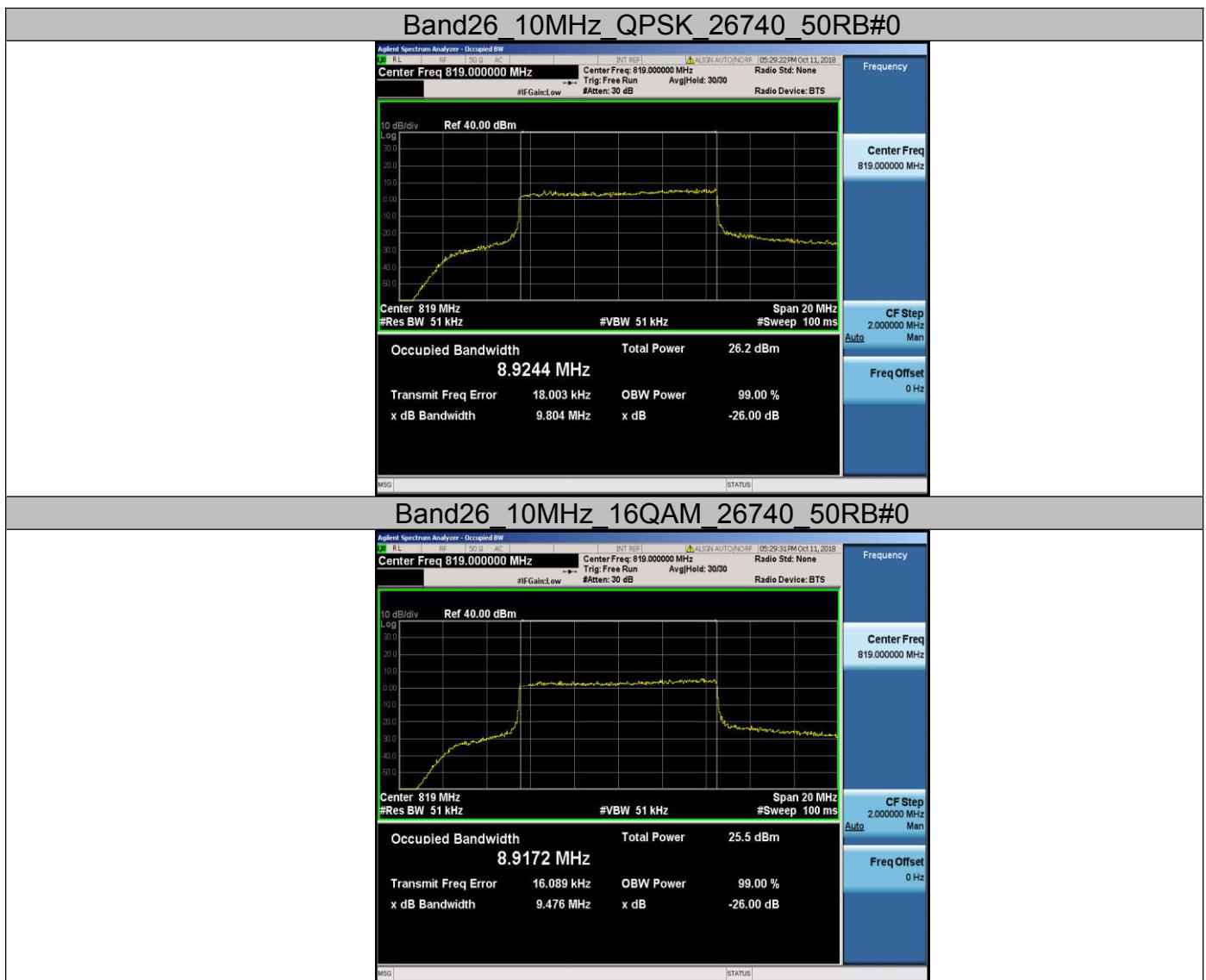


Band26_5MHz_16QAM_26740_25RB#0



Band26_5MHz_16QAM_26765_25RB#0





5.4. Spurious Emission at Antenna Terminal

5.4.1. Test Standard

FCC: CFR Part 2.1051, CFR Part 27.53, CFR Part 90.669

5.4.2. Test Limit

The radio frequency voltage or power generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in FCC 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

(a) Out of band emissions. 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. For all power levels +30dBm to 0dBm, this becomes a constant specification of -13dBm.

FCC 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 90.669

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(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.

(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.

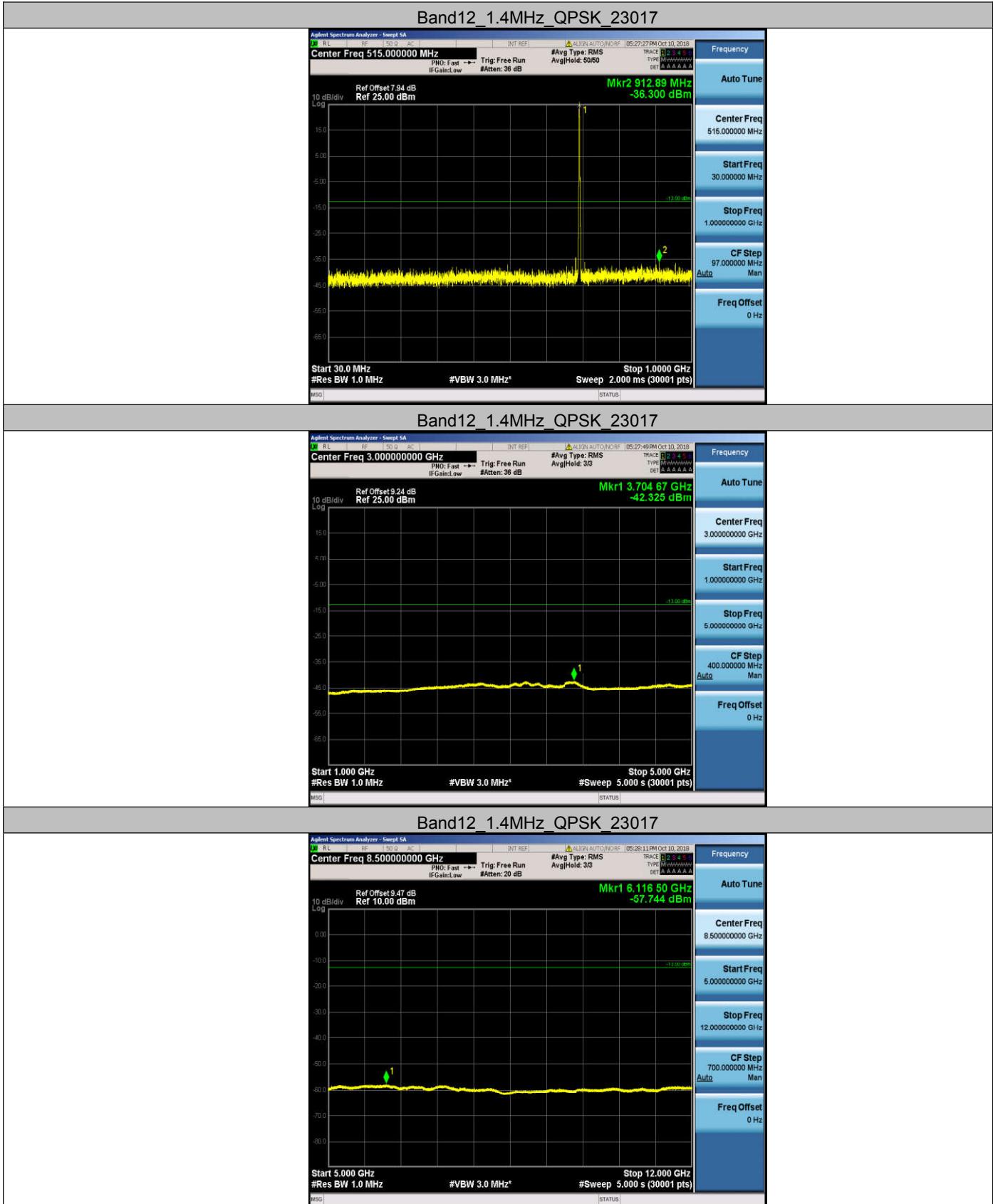
The power of any emission shall be attenuated below the mean output power P (dBW) by at least $43 + 10 \log_{10}(p)$, measured in a 100 kHz bandwidth for frequencies less than or equal to 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

5.4.3. Test Procedure

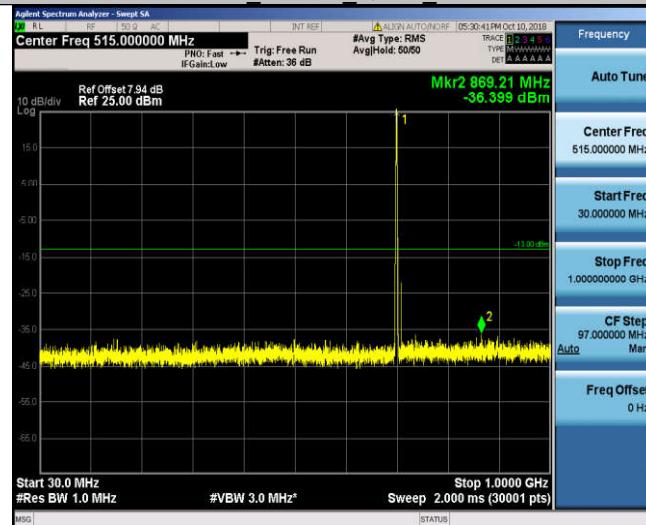
1. Connect the equipment as shown in the above diagram.
2. Set the spectrum analyzer to measure peak hold with the required settings.
3. Set the signal generator to a known output power and record the path loss in dB (LOSS) for frequencies up to the tenth harmonic of the EUT's carrier frequency.
LOSS = Generator Output Power (dBm) – Analyzer reading (dBm).
4. Replace the signal generator with the EUT.
5. Adjust the settings of the Wideband Radio Communication Tester (CMW500) to set the EUT to its maximum power at the required channel.
6. Set the spectrum analyzer to measure peak hold with the required settings. Offset the spectrum analyzer reference level by the path loss measured above.
7. Measure and record all spurious emissions up to the tenth harmonic of the carrier frequency.
8. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.
9. If necessary steps 6 and 7 may be performed with the spectrum analyzer set to average detector.
(Note: Step 3 above is performed prior to testing and LOSS is recorded by test software. Steps 2, 6, and 7 above are performed with test software.)

5.4.4. Test Data

LTE Band 12:



Band12_1.4MHz_QPSK_23095



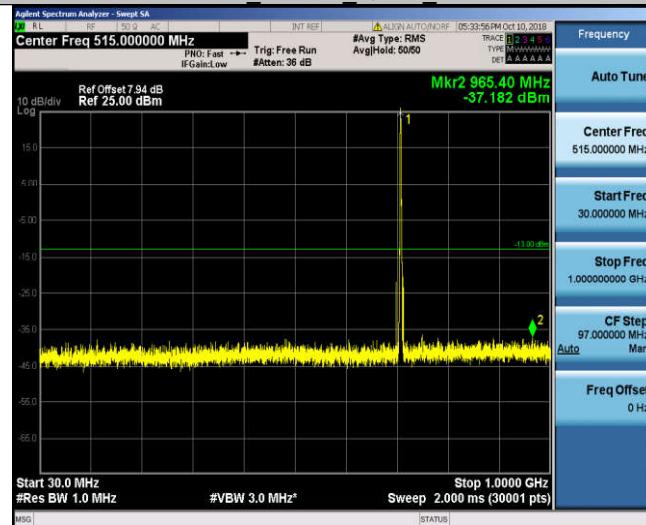
Band12_1.4MHz_QPSK_23095



Band12_1.4MHz_QPSK_23095



Band12_1.4MHz_QPSK_23173



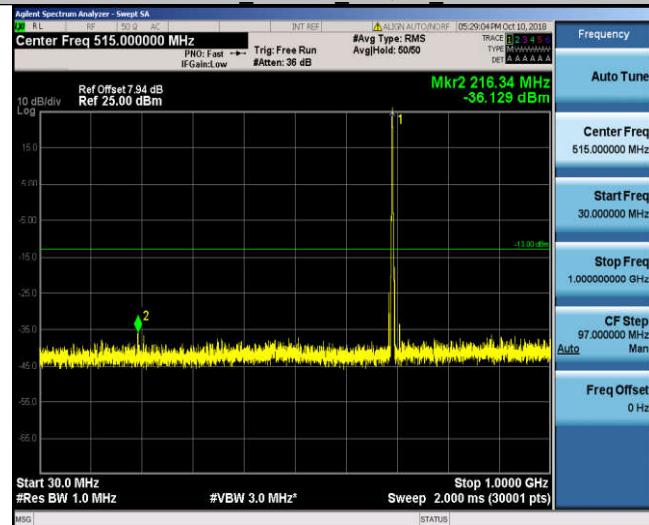
Band12_1.4MHz_QPSK_23173



Band12_1.4MHz_QPSK_23173



Band12 1.4MHz_16QAM_23017



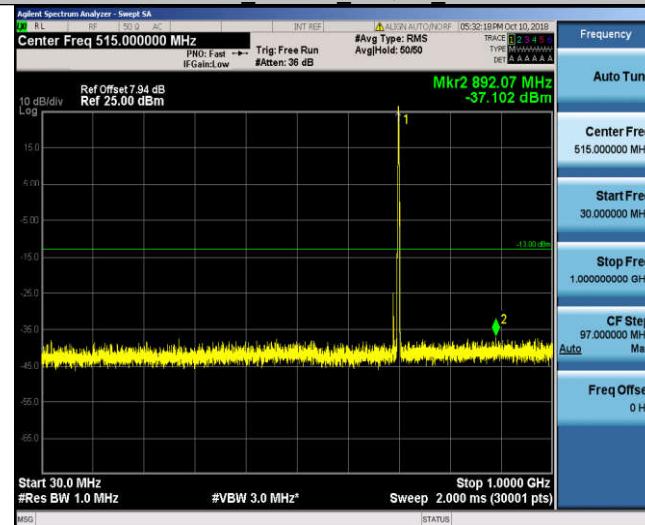
Band12 1.4MHz_16QAM_23017



Band12 1.4MHz_16QAM_23017



Band12_1.4MHz_16QAM_23095



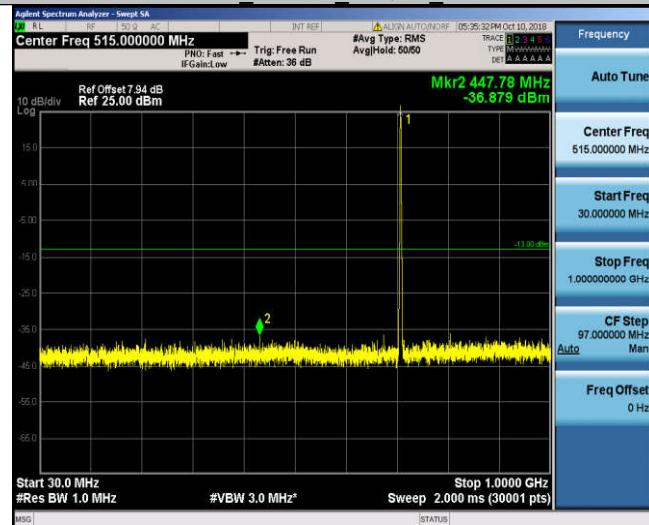
Band12_1.4MHz_16QAM_23095



Band12_1.4MHz_16QAM_23095



Band12_1.4MHz_16QAM_23173



Band12_1.4MHz_16QAM_23173



Band12_1.4MHz_16QAM_23173



