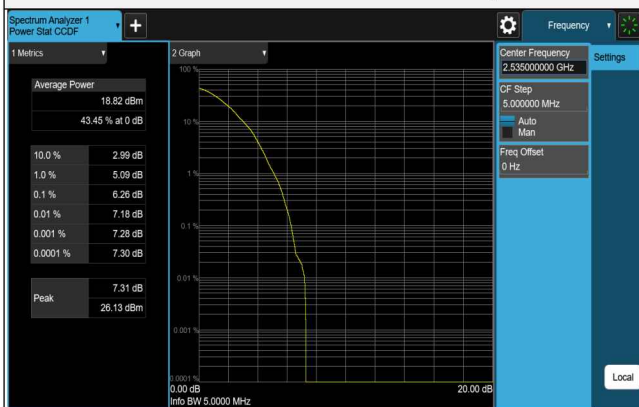


LTE Band 7 (Channel Bandwidth 5MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	20775	2502.5	4.60	13	Pass
QPSK	21100	2535	4.93	13	Pass
QPSK	21425	2567.5	4.93	13	Pass
16QAM	20775	2502.5	5.63	13	Pass
16QAM	21100	2535	6.12	13	Pass
16QAM	21425	2567.5	6.10	13	Pass
64QAM	20775	2502.5	6.08	13	Pass
64QAM	21100	2535	6.26	13	Pass
64QAM	21425	2567.5	6.23	13	Pass

Spectrum Plot of Worst Value

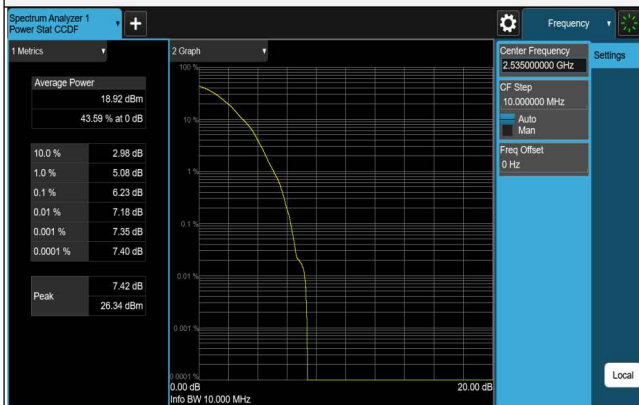


64QAM CH 21100 (2535MHz)

LTE Band 7 (Channel Bandwidth 10MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	20800	2505	4.51	13	Pass
QPSK	21100	2535	4.94	13	Pass
QPSK	21400	2565	4.99	13	Pass
16QAM	20800	2505	5.69	13	Pass
16QAM	21100	2535	6.21	13	Pass
16QAM	21400	2565	6.08	13	Pass
64QAM	20800	2505	6.06	13	Pass
64QAM	21100	2535	6.23	13	Pass
64QAM	21400	2565	6.21	13	Pass

Spectrum Plot of Worst Value

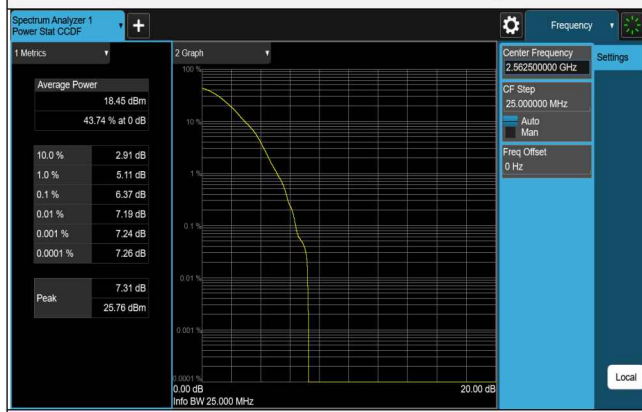


64QAM CH 21100 (2535MHz)

LTE Band 7 (Channel Bandwidth 15MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	20825	2507.5	4.55	13	Pass
QPSK	21100	2535	4.92	13	Pass
QPSK	21375	2562.5	4.83	13	Pass
16QAM	20825	2507.5	5.56	13	Pass
16QAM	21100	2535	6.13	13	Pass
16QAM	21375	2562.5	5.97	13	Pass
64QAM	20825	2507.5	6.01	13	Pass
64QAM	21100	2535	6.31	13	Pass
64QAM	21375	2562.5	6.37	13	Pass

Spectrum Plot of Worst Value

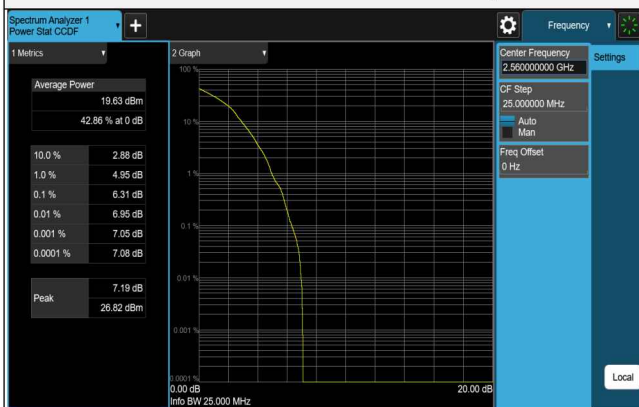


64QAM CH 21375 (2562.5MHz)

LTE Band 7 (Channel Bandwidth 20MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	20850	2510	4.53	13	Pass
QPSK	21100	2535	4.96	13	Pass
QPSK	21350	2560	4.91	13	Pass
16QAM	20850	2510	5.59	13	Pass
16QAM	21100	2535	6.23	13	Pass
16QAM	21350	2560	6.31	13	Pass
64QAM	20850	2510	6.17	13	Pass
64QAM	21100	2535	6.21	13	Pass
64QAM	21350	2560	6.19	13	Pass

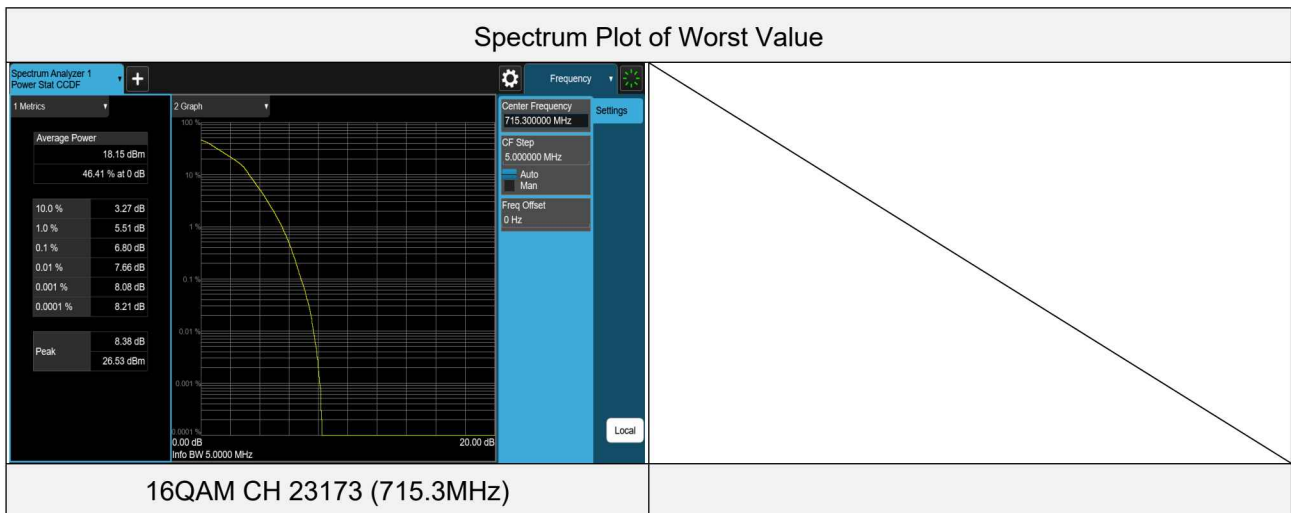
Spectrum Plot of Worst Value



16QAM CH 21350 (2560MHz)

LTE Band 12 (Channel Bandwidth 1.4MHz)

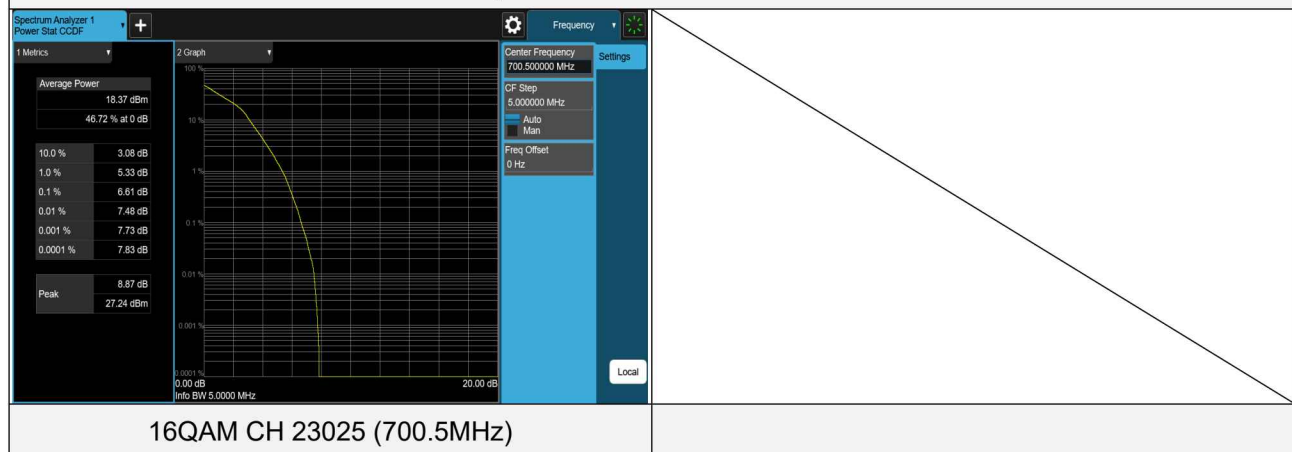
Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23017	699.7	5.40	13	Pass
QPSK	23095	707.5	5.62	13	Pass
QPSK	23173	715.3	5.61	13	Pass
16QAM	23017	699.7	6.26	13	Pass
16QAM	23095	707.5	6.32	13	Pass
16QAM	23173	715.3	6.80	13	Pass
64QAM	23017	699.7	6.38	13	Pass
64QAM	23095	707.5	6.41	13	Pass
64QAM	23173	715.3	6.44	13	Pass



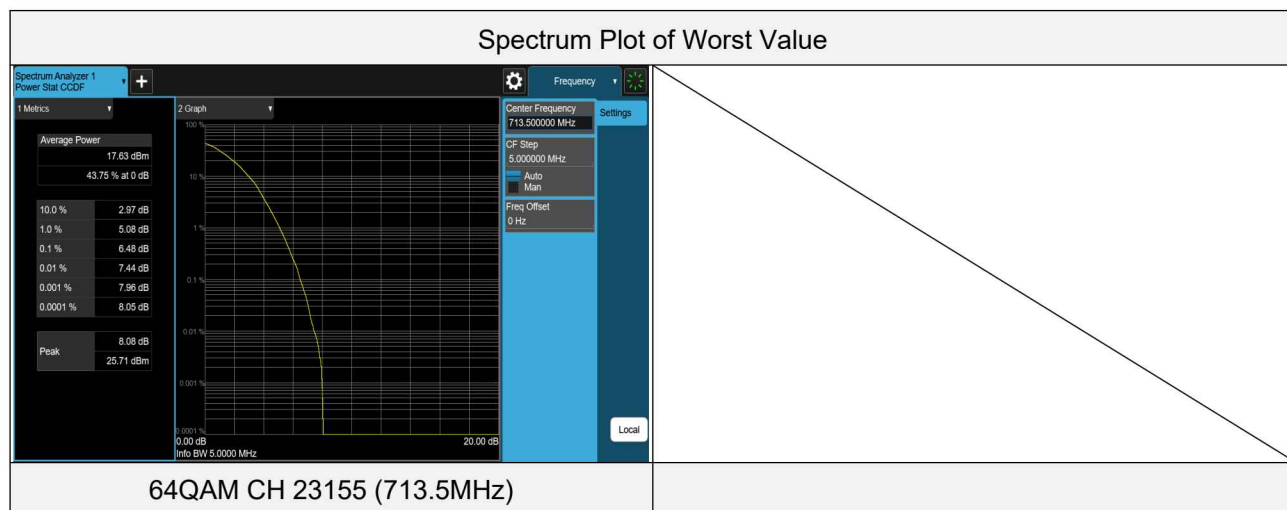
LTE Band 12 (Channel Bandwidth 3MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23025	700.5	5.52	13	Pass
QPSK	23095	707.5	5.58	13	Pass
QPSK	23165	714.5	5.58	13	Pass
16QAM	23025	700.5	6.61	13	Pass
16QAM	23095	707.5	6.40	13	Pass
16QAM	23165	714.5	6.41	13	Pass
64QAM	23025	700.5	6.34	13	Pass
64QAM	23095	707.5	6.45	13	Pass
64QAM	23165	714.5	6.47	13	Pass

Spectrum Plot of Worst Value



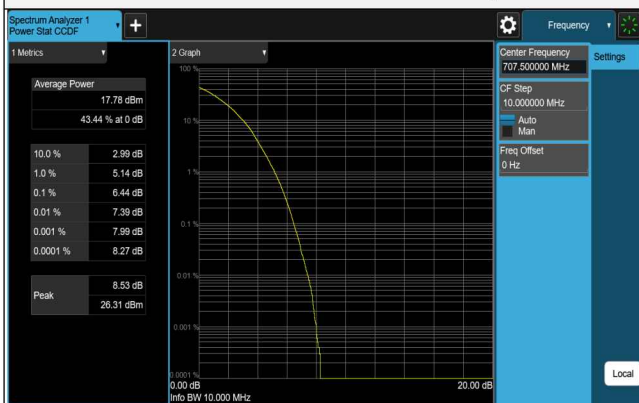
Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23035	701.5	5.62	13	Pass
QPSK	23095	707.5	5.70	13	Pass
QPSK	23155	713.5	5.65	13	Pass
16QAM	23035	701.5	6.31	13	Pass
16QAM	23095	707.5	6.27	13	Pass
16QAM	23155	713.5	6.20	13	Pass
64QAM	23035	701.5	6.42	13	Pass
64QAM	23095	707.5	6.48	13	Pass
64QAM	23155	713.5	6.48	13	Pass



LTE Band 12 (Channel Bandwidth 10MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23060	704	5.81	13	Pass
QPSK	23095	707.5	5.79	13	Pass
QPSK	23130	711	5.64	13	Pass
16QAM	23060	704	6.32	13	Pass
16QAM	23095	707.5	6.37	13	Pass
16QAM	23130	711	6.34	13	Pass
64QAM	23060	704	6.42	13	Pass
64QAM	23095	707.5	6.44	13	Pass
64QAM	23130	711	6.40	13	Pass

Spectrum Plot of Worst Value

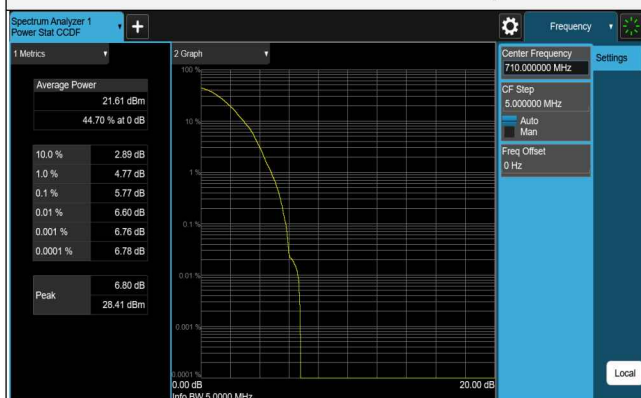


64QAM CH 23095 (707.5MHz)

LTE Band 17 (Channel Bandwidth 5MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23755	706.5	3.97	13	Pass
QPSK	23790	710	4.46	13	Pass
QPSK	23825	713.5	4.12	13	Pass
16QAM	23755	706.5	4.91	13	Pass
16QAM	23790	710	5.52	13	Pass
16QAM	23825	713.5	5.18	13	Pass
64QAM	23755	706.5	5.50	13	Pass
64QAM	23790	710	5.77	13	Pass
64QAM	23825	713.5	5.54	13	Pass

Spectrum Plot of Worst Value

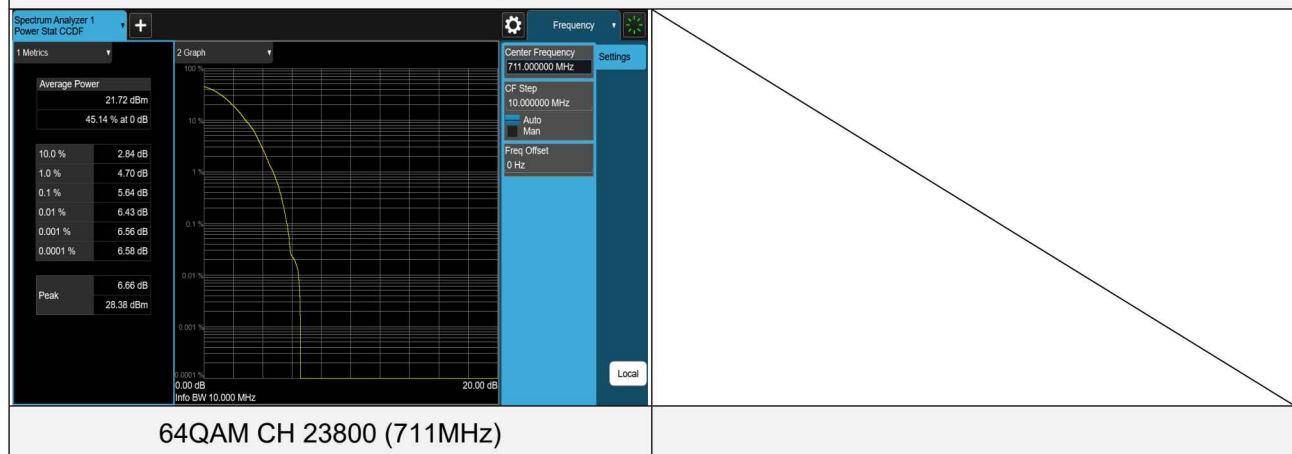


64QAM CH 23790 (710MHz)

LTE Band 17 (Channel Bandwidth 10MHz)

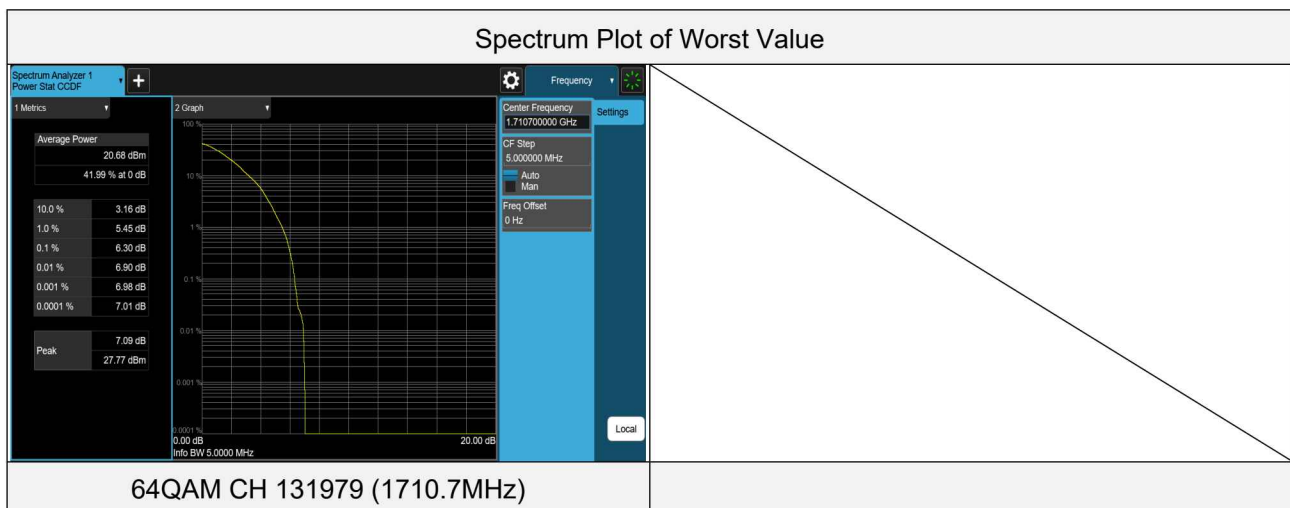
Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	23780	709	4.15	13	Pass
QPSK	23790	710	4.25	13	Pass
QPSK	23800	711	4.40	13	Pass
16QAM	23780	709	5.11	13	Pass
16QAM	23790	710	5.32	13	Pass
16QAM	23800	711	5.37	13	Pass
64QAM	23780	709	5.49	13	Pass
64QAM	23790	710	5.57	13	Pass
64QAM	23800	711	5.64	13	Pass

Spectrum Plot of Worst Value



LTE Band 66 (Channel Bandwidth 1.4MHz)

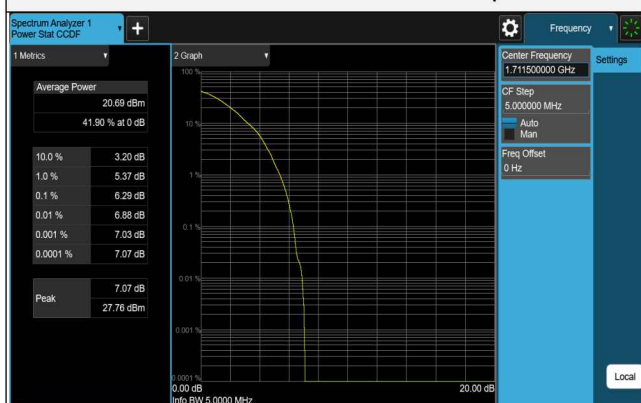
Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	131979	1710.7	4.63	13	Pass
QPSK	132322	1745	4.46	13	Pass
QPSK	132665	1779.3	3.74	13	Pass
16QAM	131979	1710.7	5.65	13	Pass
16QAM	132322	1745	5.59	13	Pass
16QAM	132665	1779.3	4.86	13	Pass
64QAM	131979	1710.7	6.30	13	Pass
64QAM	132322	1745	6.06	13	Pass
64QAM	132665	1779.3	5.53	13	Pass



LTE Band 66 (Channel Bandwidth 3MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	131987	1711.5	4.54	13	Pass
QPSK	132322	1745	4.42	13	Pass
QPSK	132657	1778.5	3.92	13	Pass
16QAM	131987	1711.5	5.53	13	Pass
16QAM	132322	1745	5.43	13	Pass
16QAM	132657	1778.5	4.92	13	Pass
64QAM	131987	1711.5	6.29	13	Pass
64QAM	132322	1745	6.07	13	Pass
64QAM	132657	1778.5	5.64	13	Pass

Spectrum Plot of Worst Value

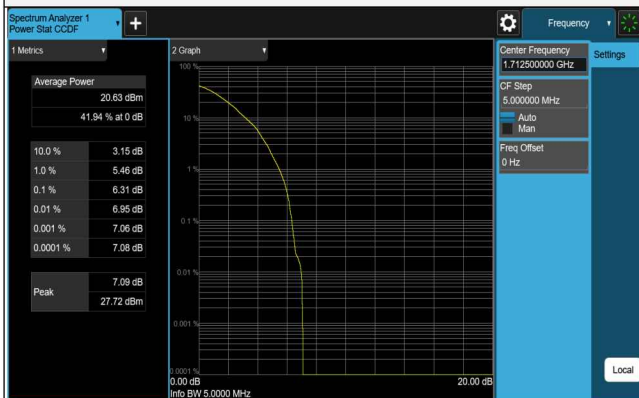


64QAM CH 131987 (1711.5MHz)

LTE Band 66 (Channel Bandwidth 5MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	131997	1712.5	4.61	13	Pass
QPSK	132322	1745	4.57	13	Pass
QPSK	132647	1777.5	4.19	13	Pass
16QAM	131997	1712.5	5.66	13	Pass
16QAM	132322	1745	5.58	13	Pass
16QAM	132647	1777.5	5.22	13	Pass
64QAM	131997	1712.5	6.31	13	Pass
64QAM	132322	1745	6.12	13	Pass
64QAM	132647	1777.5	5.81	13	Pass

Spectrum Plot of Worst Value

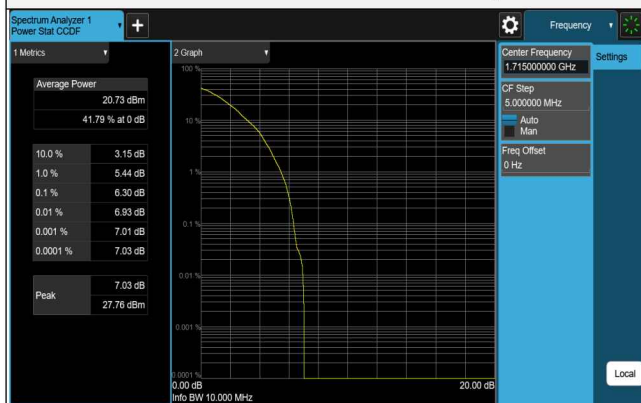


64QAM CH 131997 (1712.5MHz)

LTE Band 66 (Channel Bandwidth 10MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	132022	1715	4.70	13	Pass
QPSK	132322	1745	4.56	13	Pass
QPSK	132622	1775	4.40	13	Pass
16QAM	132022	1715	5.66	13	Pass
16QAM	132322	1745	5.58	13	Pass
16QAM	132622	1775	5.37	13	Pass
64QAM	132022	1715	6.30	13	Pass
64QAM	132322	1745	6.09	13	Pass
64QAM	132622	1775	5.98	13	Pass

Spectrum Plot of Worst Value

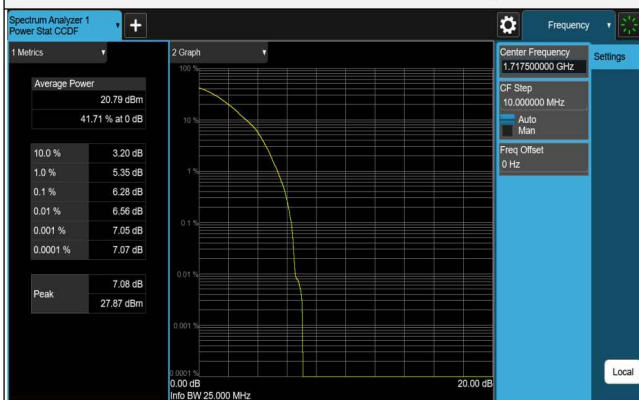


64QAM CH 132022 (1715MHz)

LTE Band 66 (Channel Bandwidth 15MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	132047	1717.5	4.72	13	Pass
QPSK	132322	1745	4.57	13	Pass
QPSK	132597	1772.5	4.60	13	Pass
16QAM	132047	1717.5	6.04	13	Pass
16QAM	132322	1745	5.88	13	Pass
16QAM	132597	1772.5	5.53	13	Pass
64QAM	132047	1717.5	6.28	13	Pass
64QAM	132322	1745	6.14	13	Pass
64QAM	132597	1772.5	6.22	13	Pass

Spectrum Plot of Worst Value

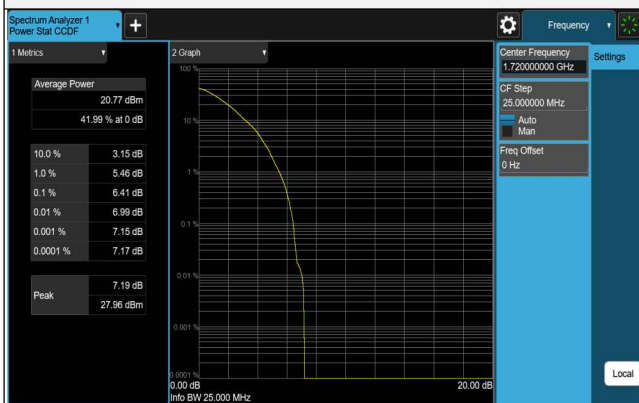


64QAM CH 132047 (1717.5MHz)

LTE Band 66 (Channel Bandwidth 20MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value (dB)	Limit (dB)	Result
QPSK	132072	1720	4.84	13	Pass
QPSK	132322	1745	4.79	13	Pass
QPSK	132572	1770	4.72	13	Pass
16QAM	132072	1720	5.82	13	Pass
16QAM	132322	1745	5.81	13	Pass
16QAM	132572	1770	5.80	13	Pass
64QAM	132072	1720	6.41	13	Pass
64QAM	132322	1745	6.22	13	Pass
64QAM	132572	1770	6.26	13	Pass

Spectrum Plot of Worst Value



64QAM CH 132072 (1720MHz)

4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

For LTE Band 4, LTE Band 66:

According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz 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 $43 + 10 \log (P)$ dB.

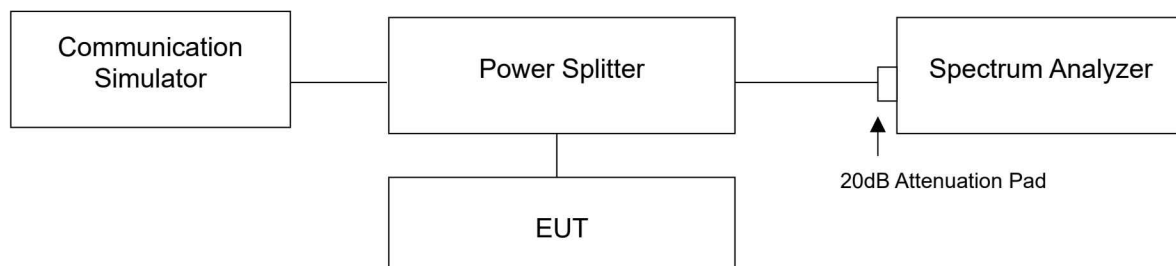
For LTE Band 7:

According to FCC 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to -25dBm .

For LTE Band 12, LTE Band 17:

According to 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. The limit of emissions is equal to -13 dBm .

4.7.2 Test Setup



4.7.3 Test Procedure

- All measurements were done at low, middle and high channels operational frequency range.
- Measuring frequency range is from 9kHz to 8GHz / 9GHz / 18GHz / 26GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.