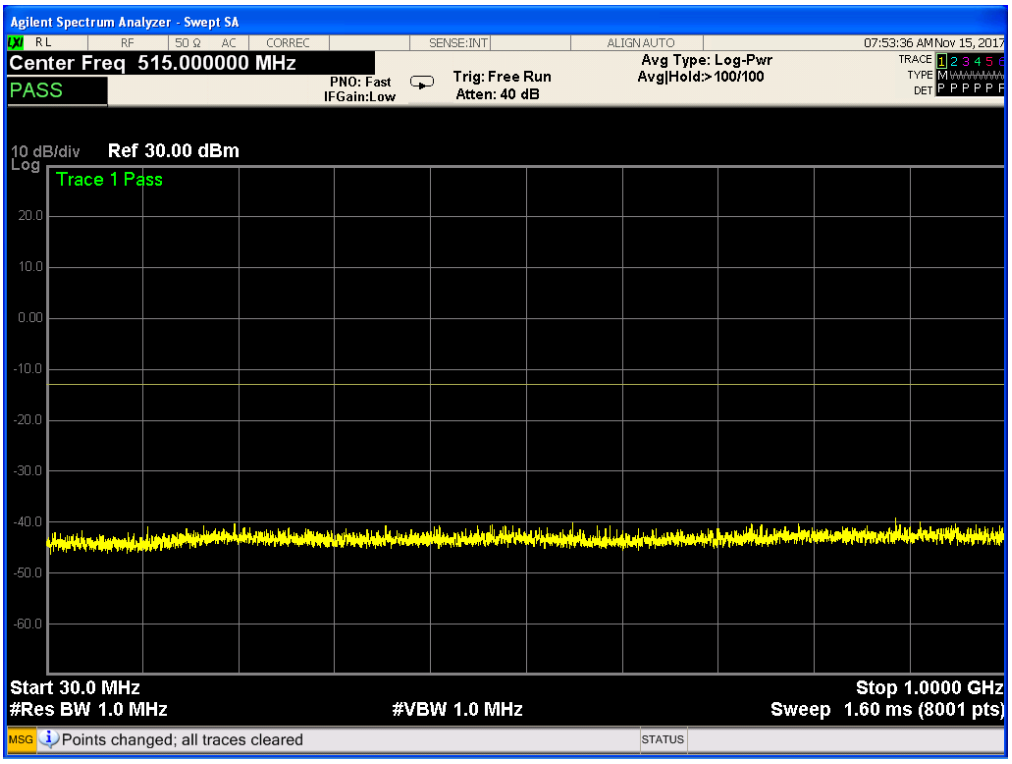
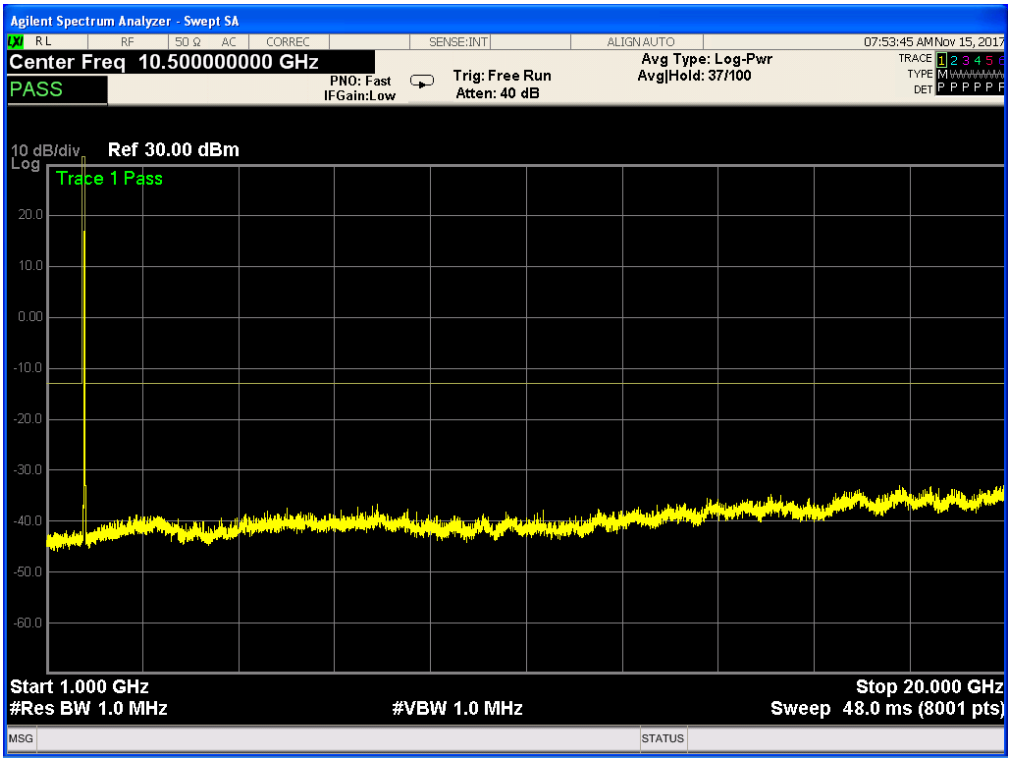
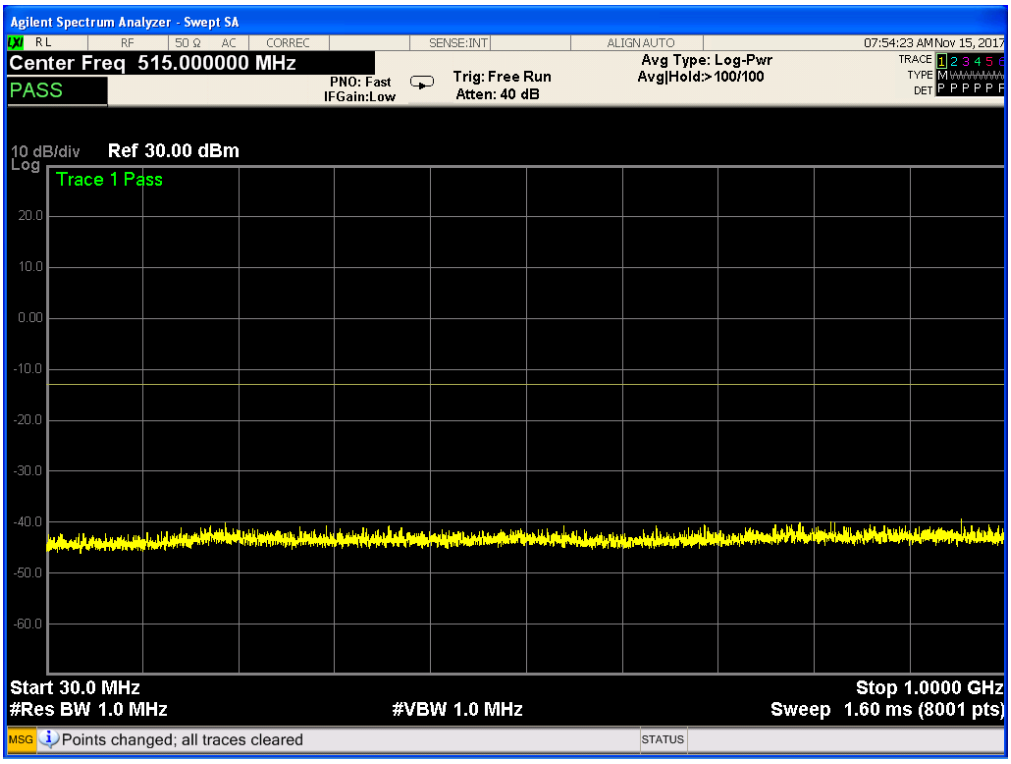
Band 4,UL Channel 20350,UL Frequency 1750.0,BW 10.0,NO. RB 50,RB POS. Low,16QAM



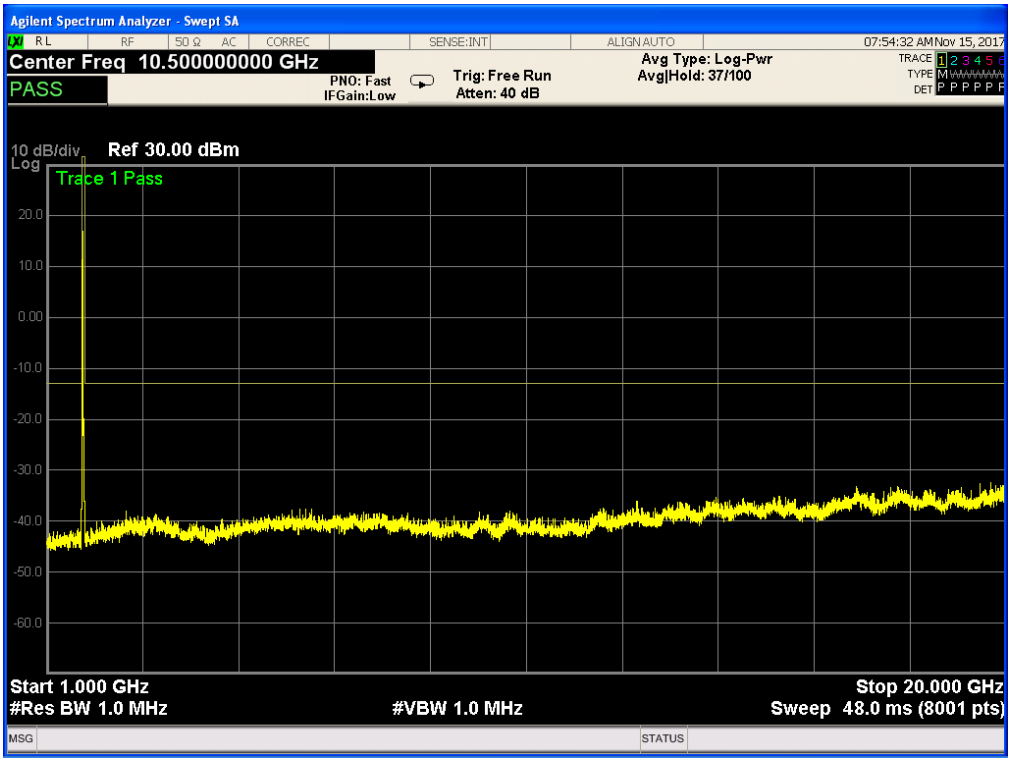
Band 4,UL Channel 20350,UL Frequency 1750.0,BW 10.0,NO. RB 50,RB POS. Low,16QAM



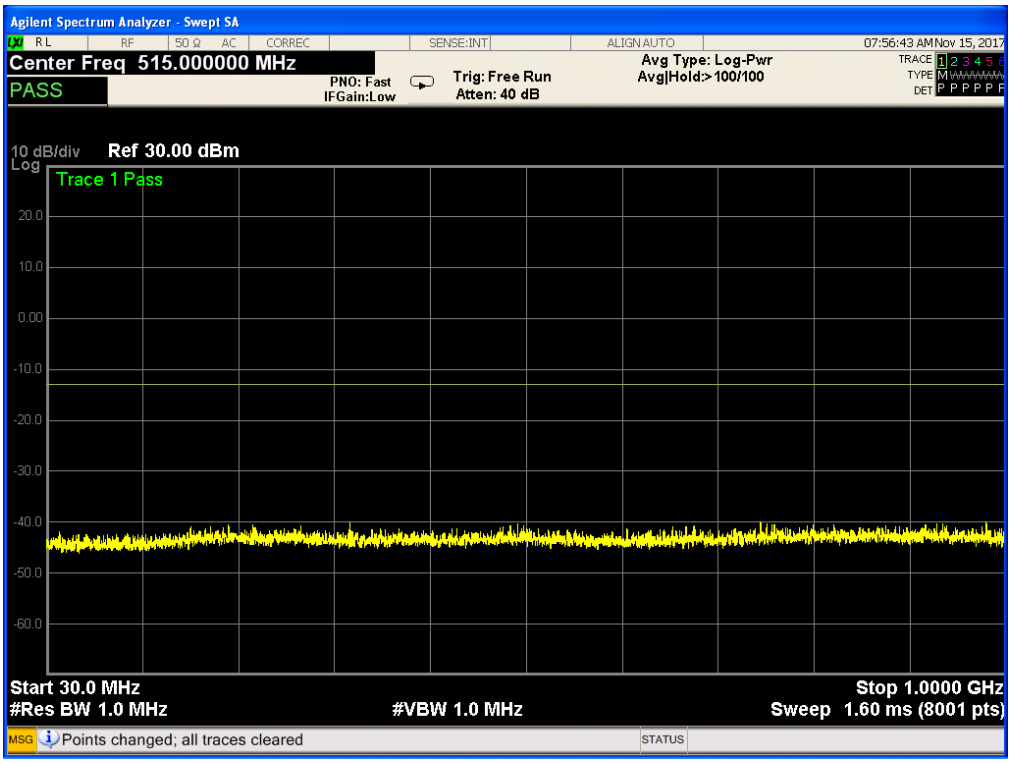
Band 4,UL Channel 20325,UL Frequency 1747.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



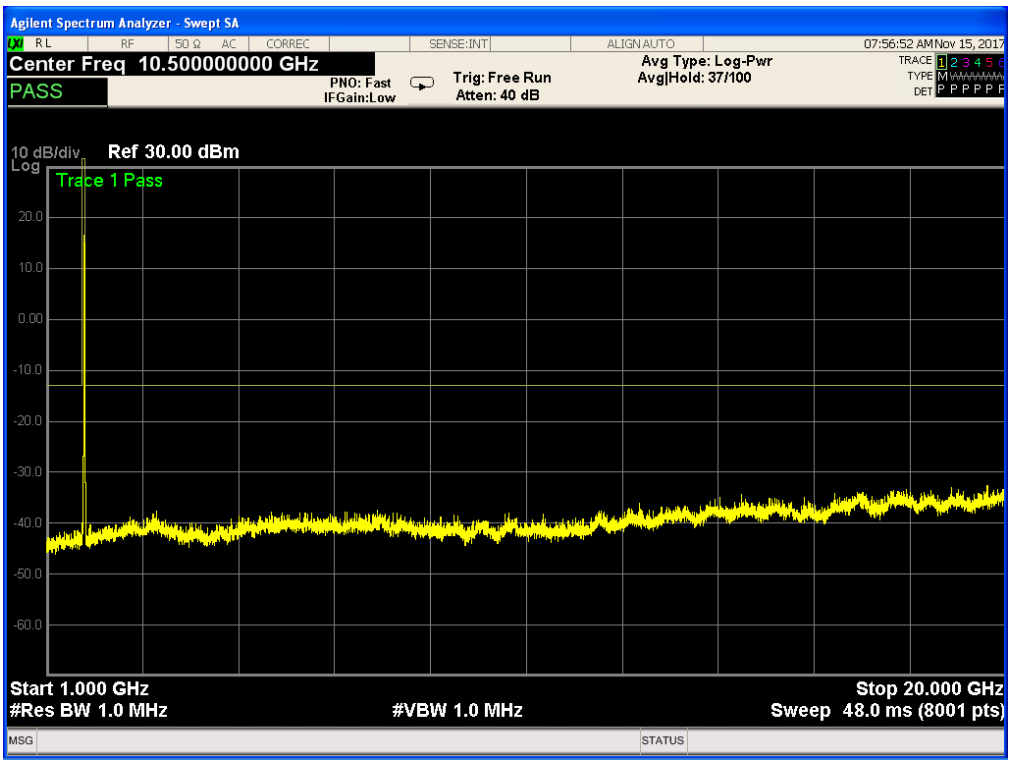
Band 4,UL Channel 20325,UL Frequency 1747.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



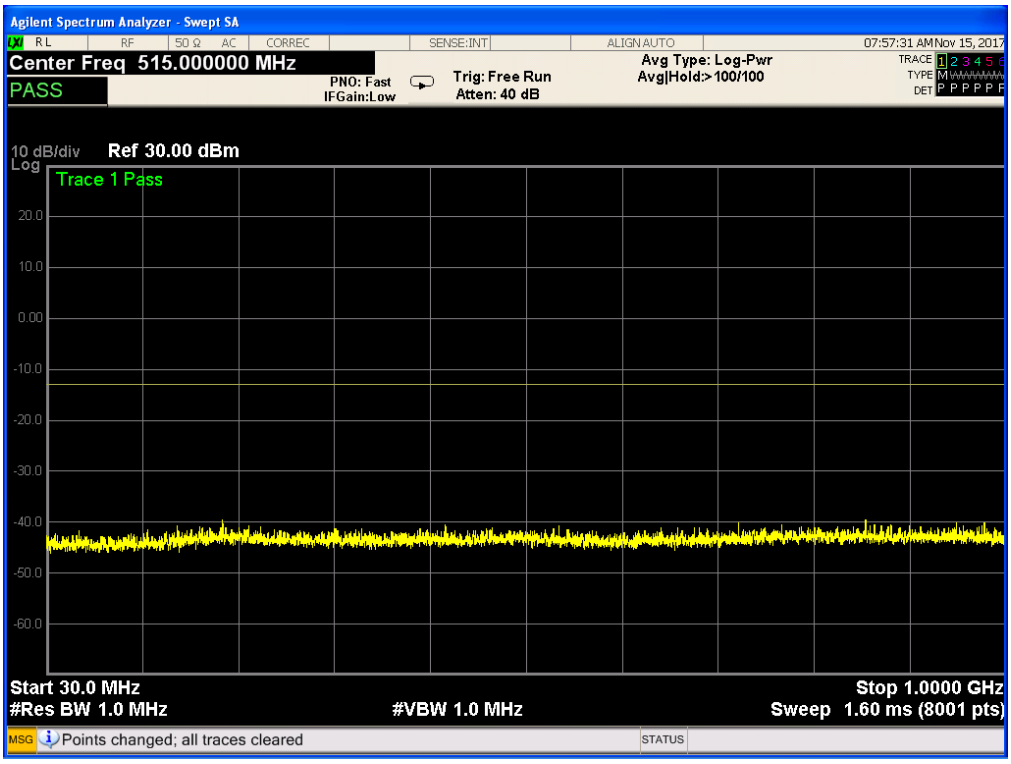
Band 4,UL Channel 20325,UL Frequency 1747.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



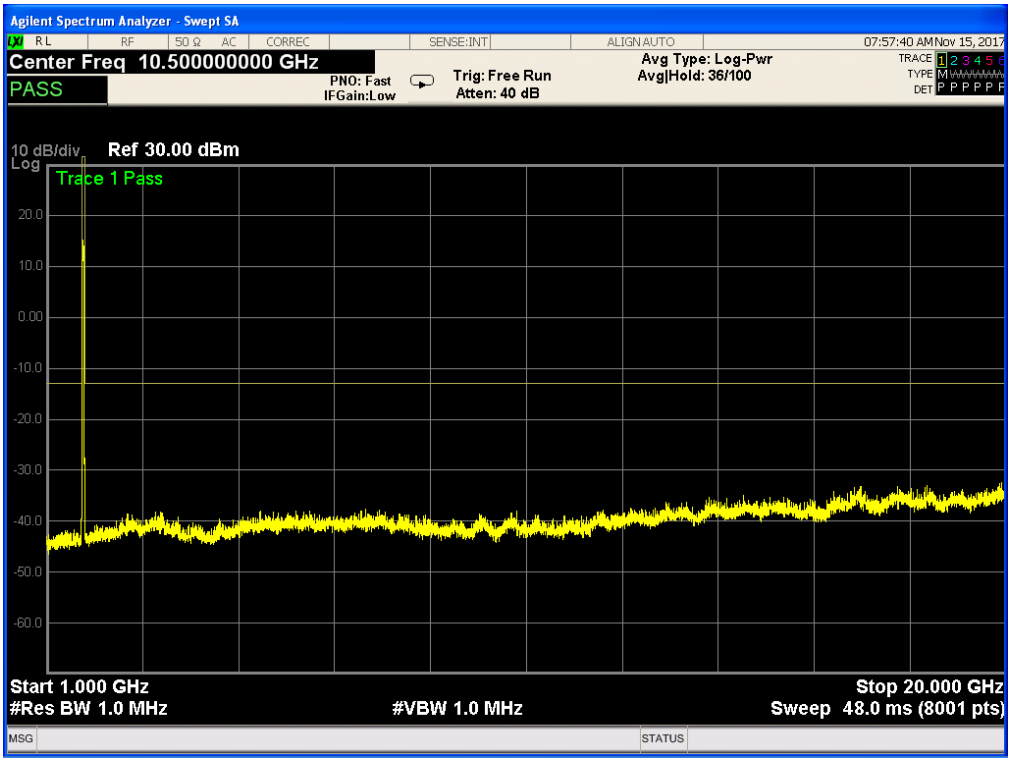
Band 4,UL Channel 20325,UL Frequency 1747.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



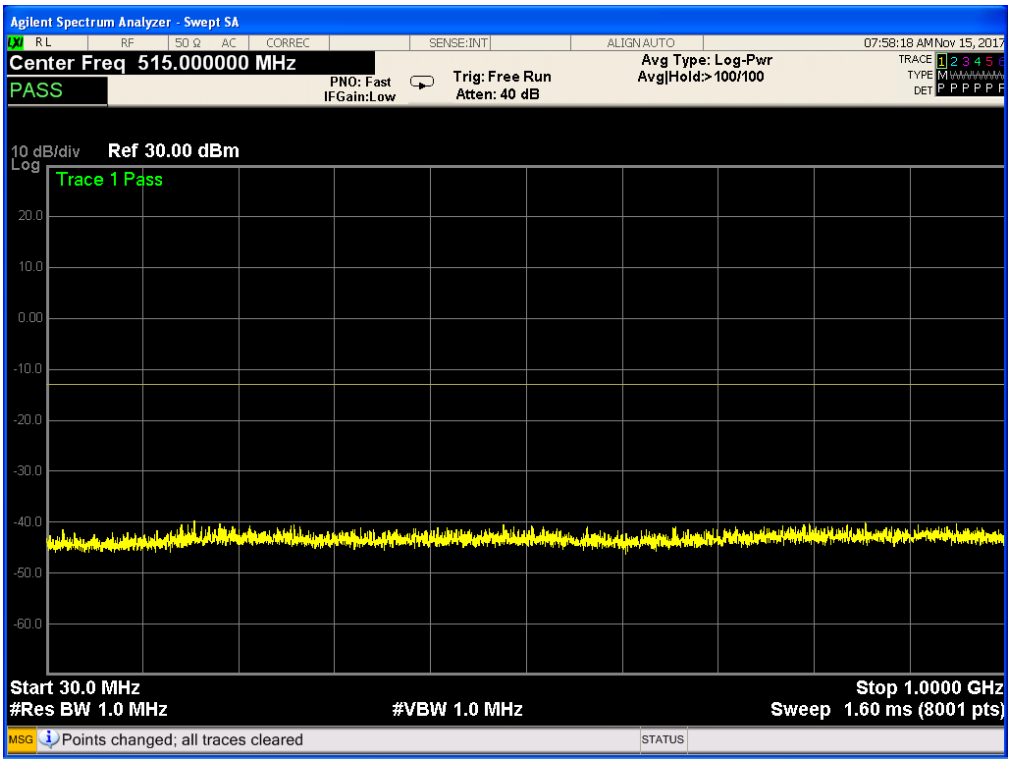
Band 4,UL Channel 20050,UL Frequency 1720.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



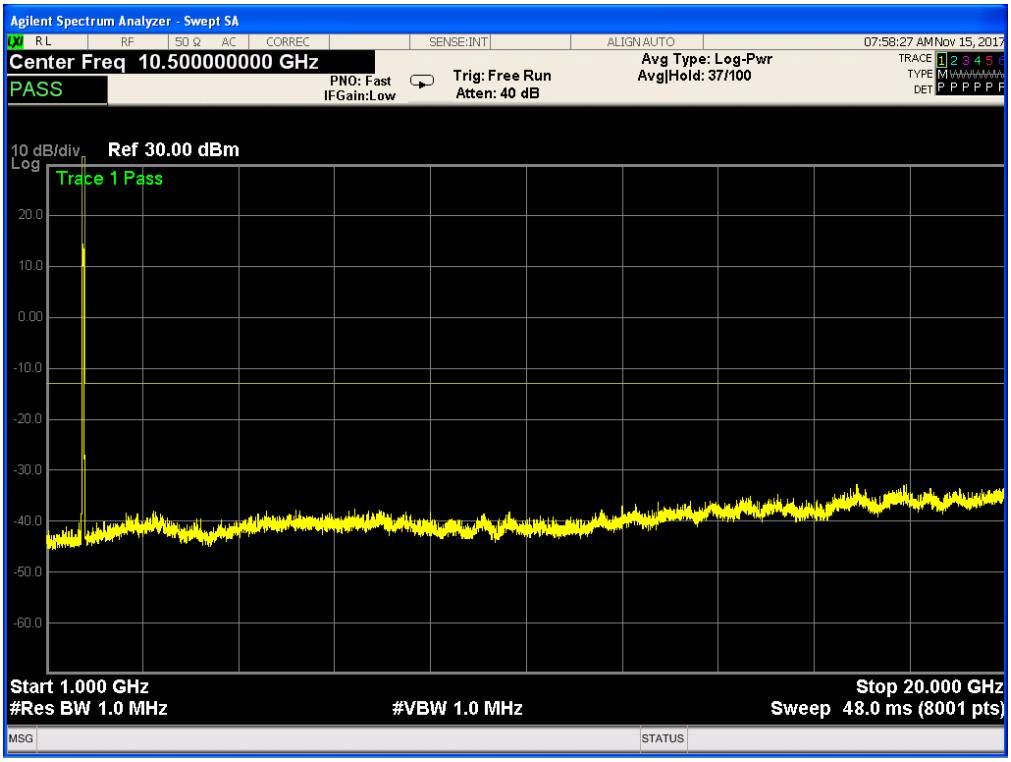
Band 4,UL Channel 20050,UL Frequency 1720.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



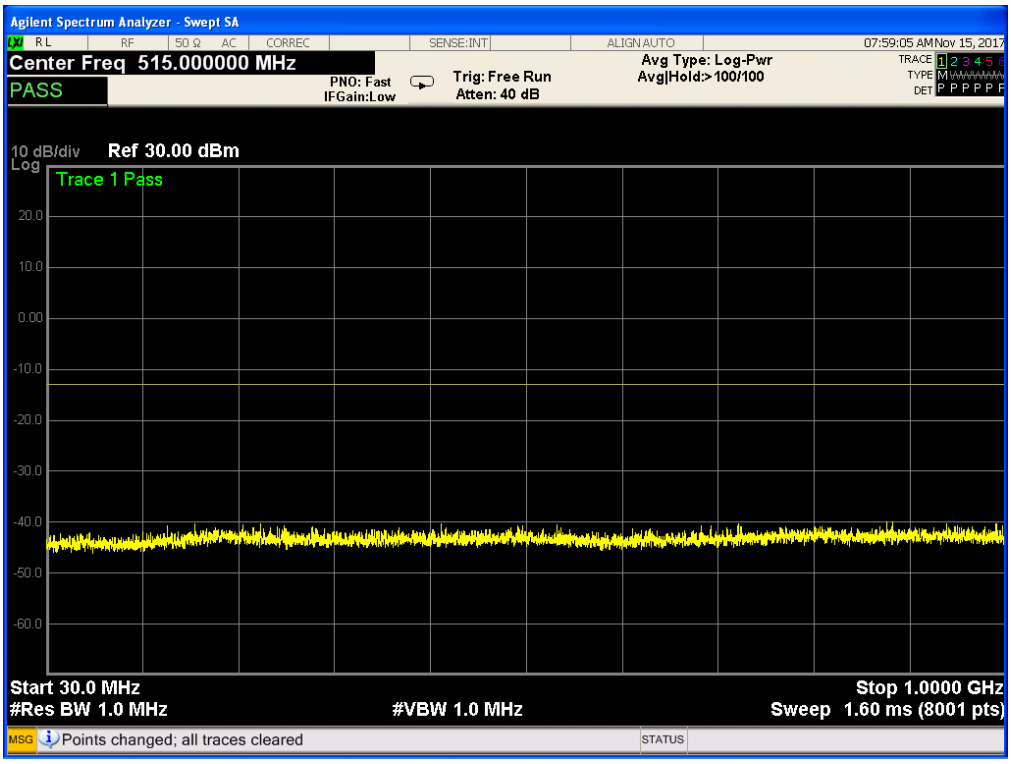
Band 4,UL Channel 20050,UL Frequency 1720.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



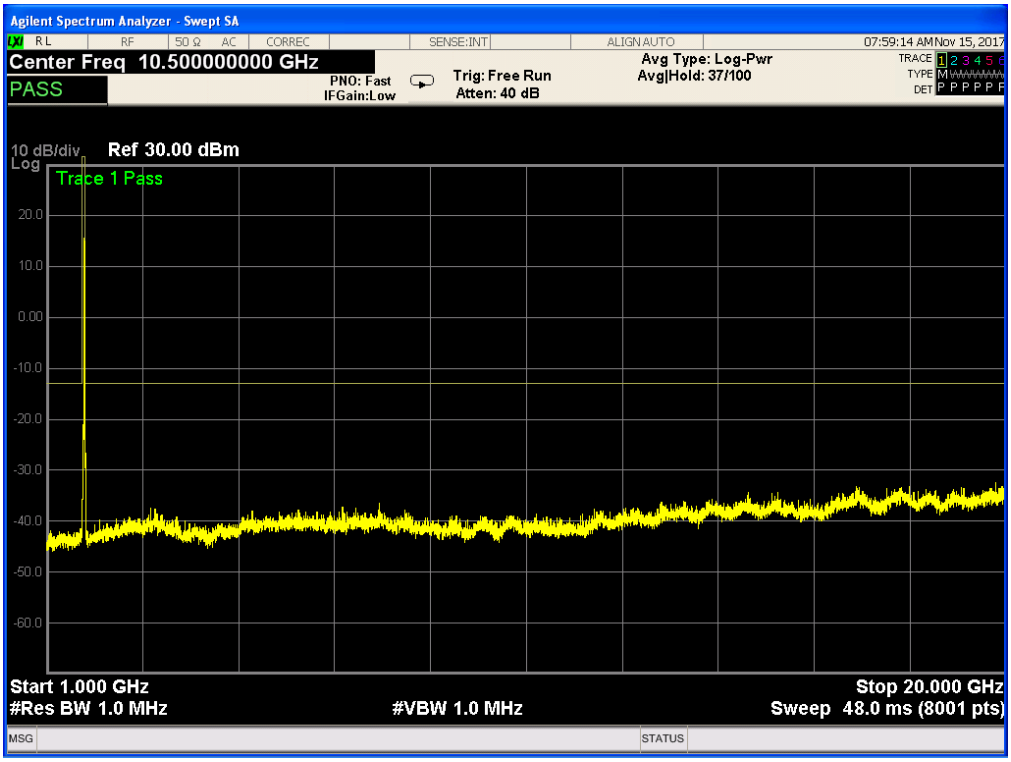
Band 4,UL Channel 20050,UL Frequency 1720.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



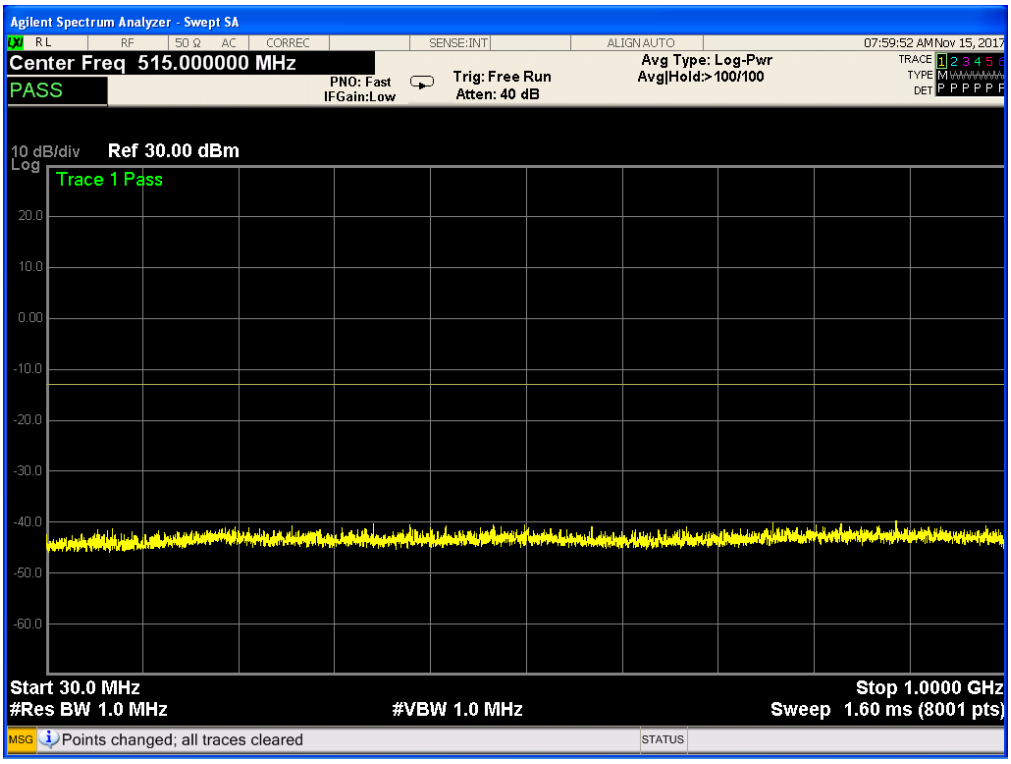
Band 4,UL Channel 20300,UL Frequency 1745.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



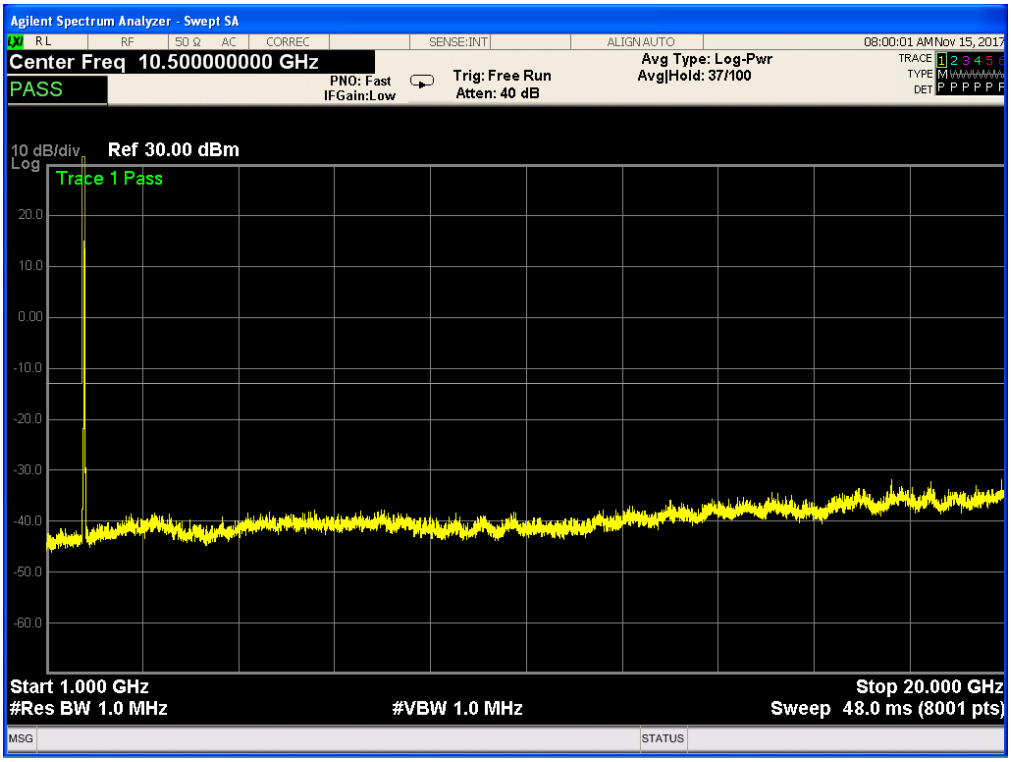
Band 4,UL Channel 20300,UL Frequency 1745.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



Band 4,UL Channel 20300,UL Frequency 1745.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM

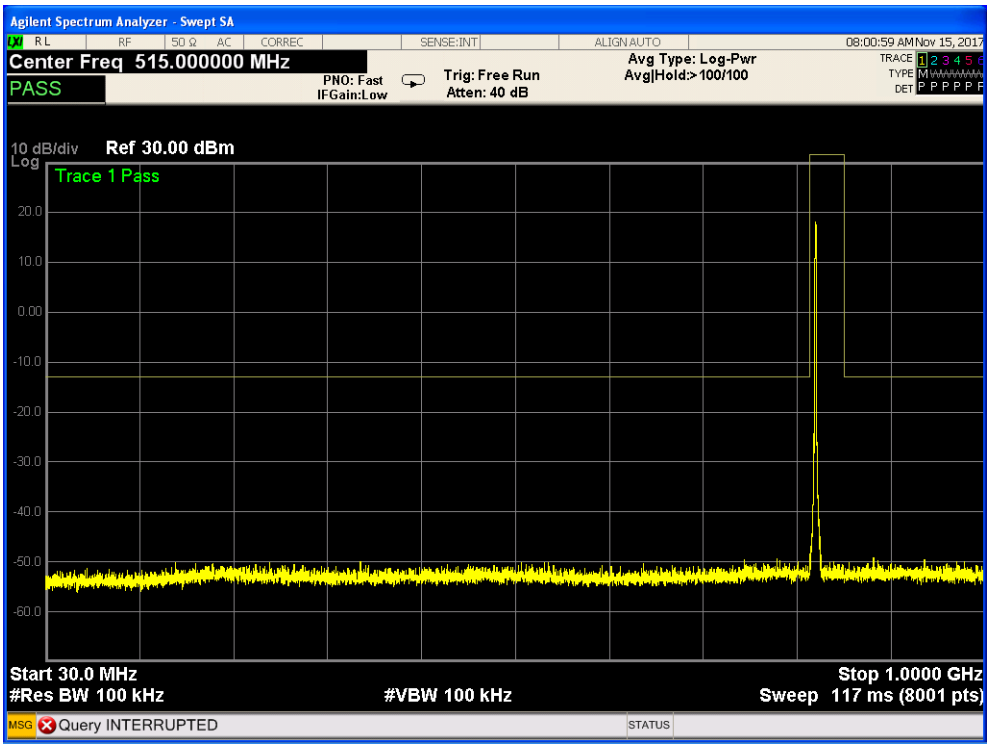


Band 4,UL Channel 20300,UL Frequency 1745.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM

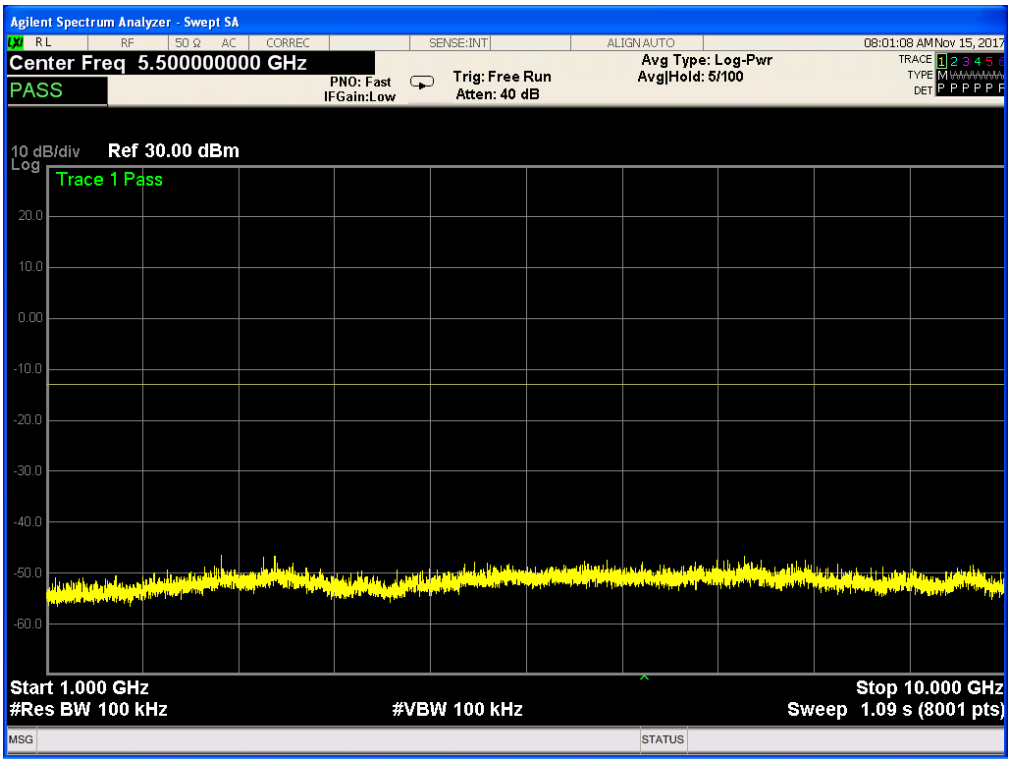


7.3 LTE BAND 5

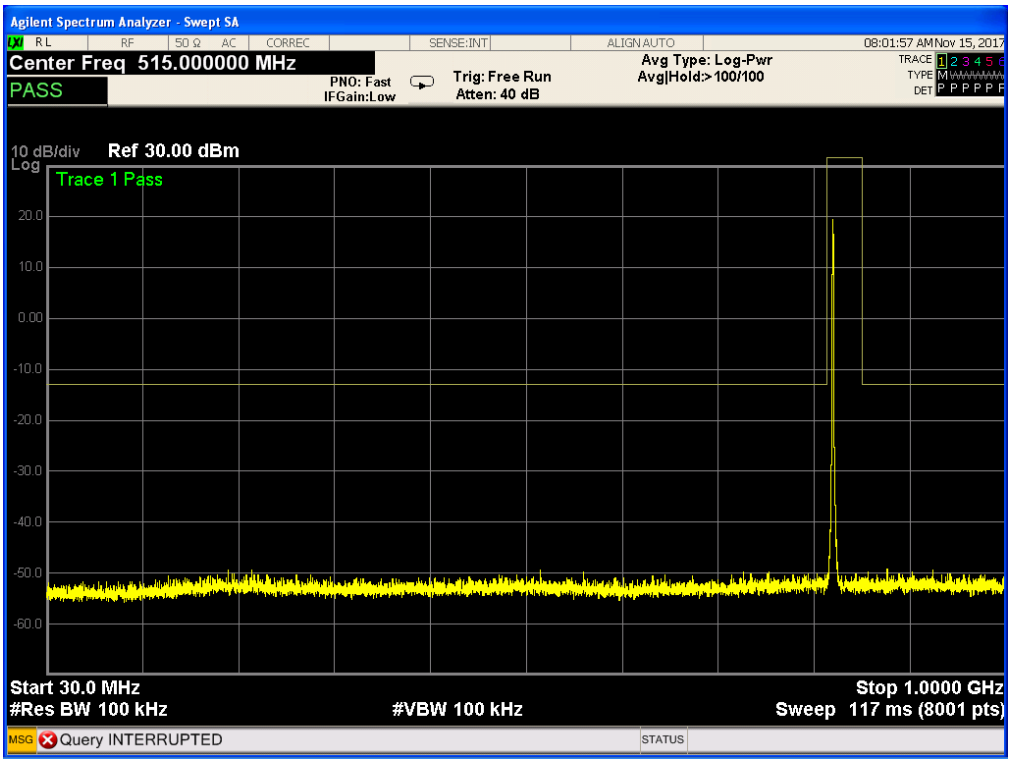
Band 5,UL Channel 20407,UL Frequency 824.7,BW 1.4,NO. RB 6,RB POS. Low,QPSK



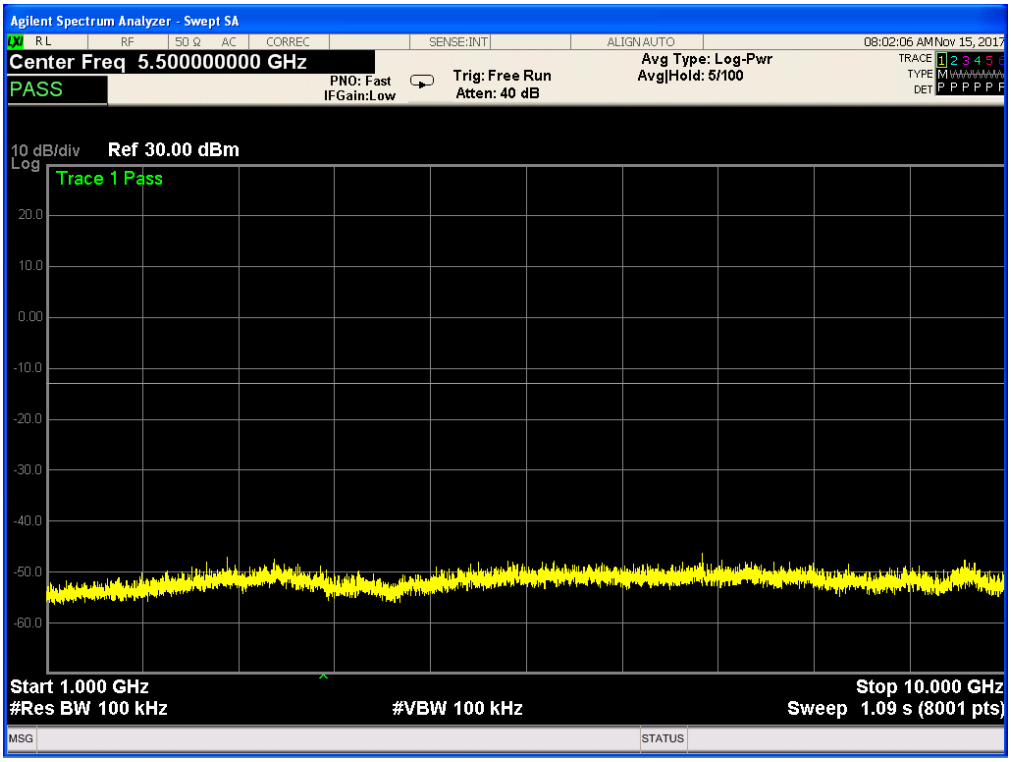
Band 5,UL Channel 20407,UL Frequency 824.7,BW 1.4,NO. RB 6,RB POS. Low,QPSK



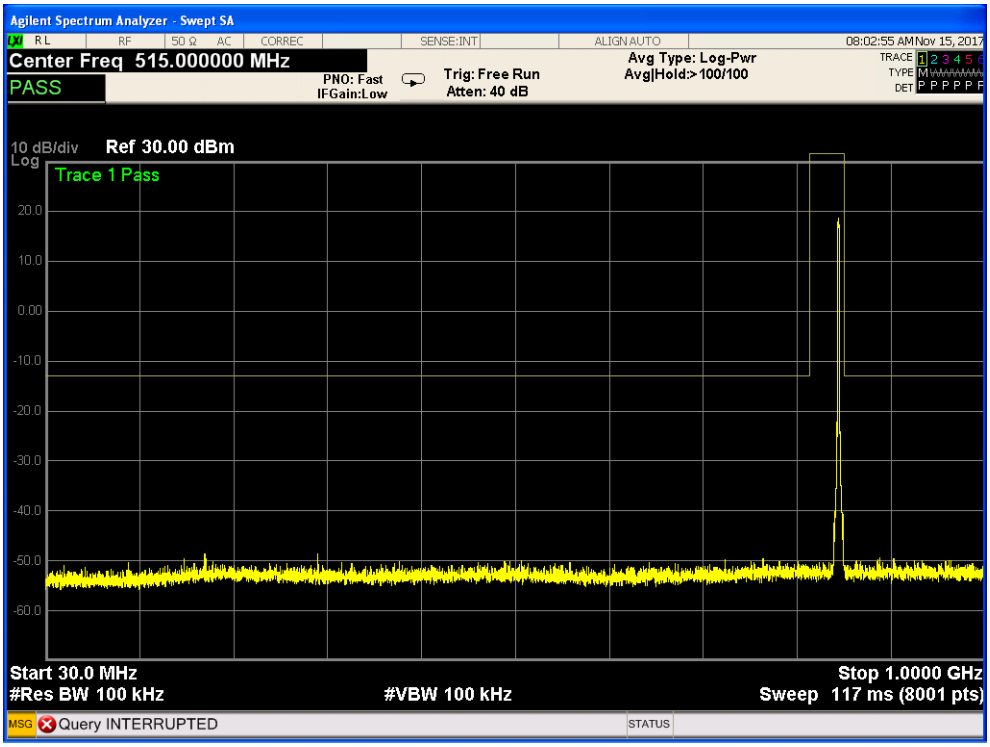
Band 5,UL Channel 20407,UL Frequency 824.7,BW 1.4,NO. RB 6,RB POS. Low,16-QAM



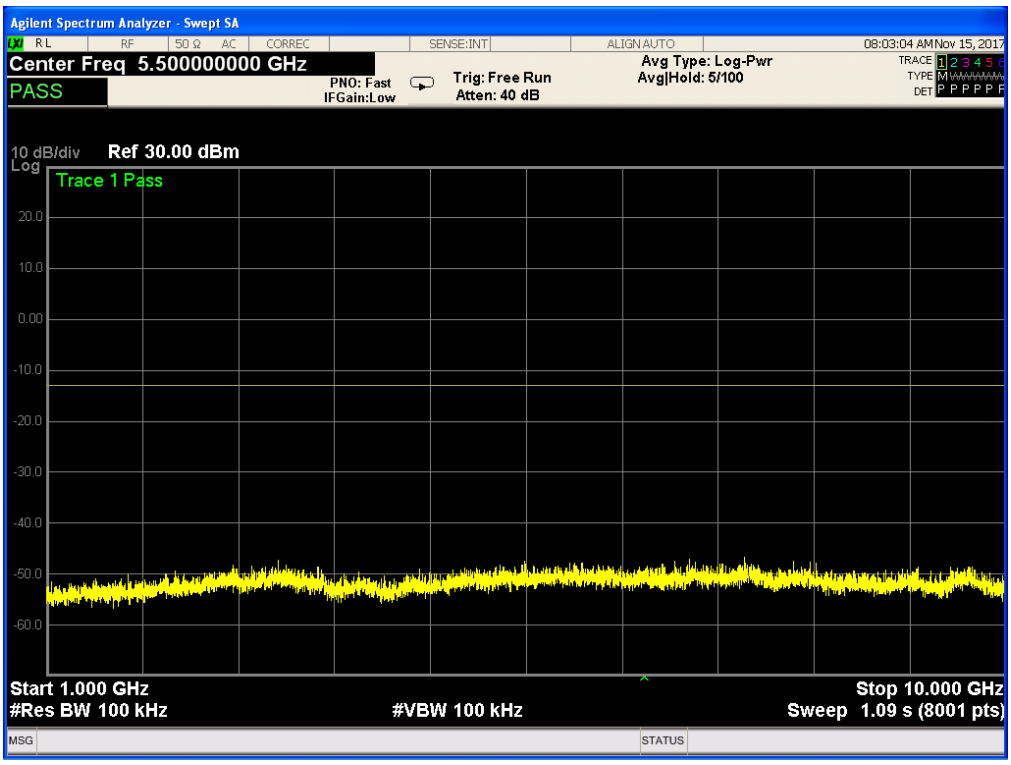
Band 5,UL Channel 20407,UL Frequency 824.7,BW 1.4,NO. RB 6,RB POS. Low,16-QAM



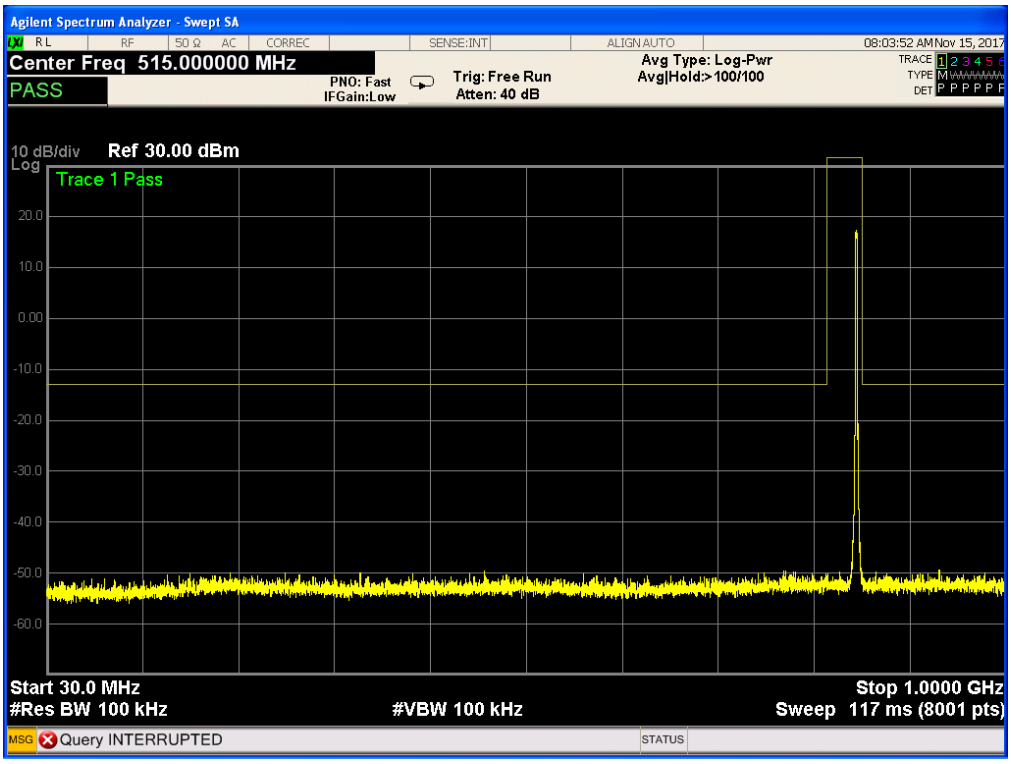
Band 5,UL Channel 20643,UL Frequency 848.3,BW 1.4,NO. RB 6,RB POS. Low,QPSK



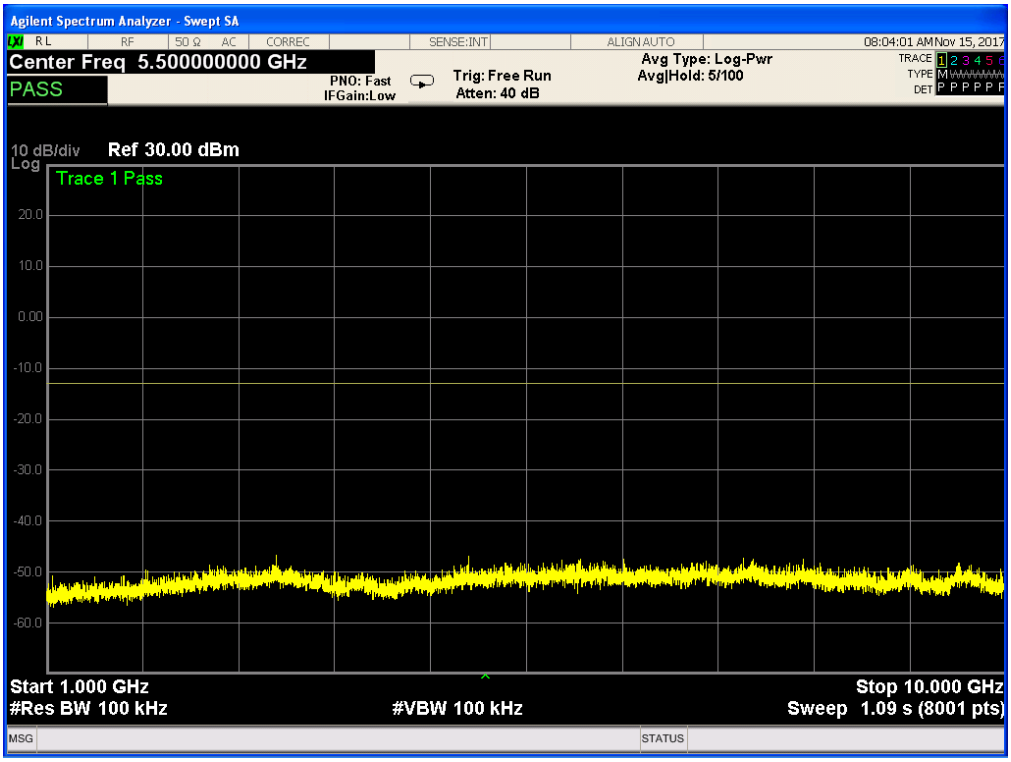
Band 5,UL Channel 20643,UL Frequency 848.3,BW 1.4,NO. RB 6,RB POS. Low,QPSK



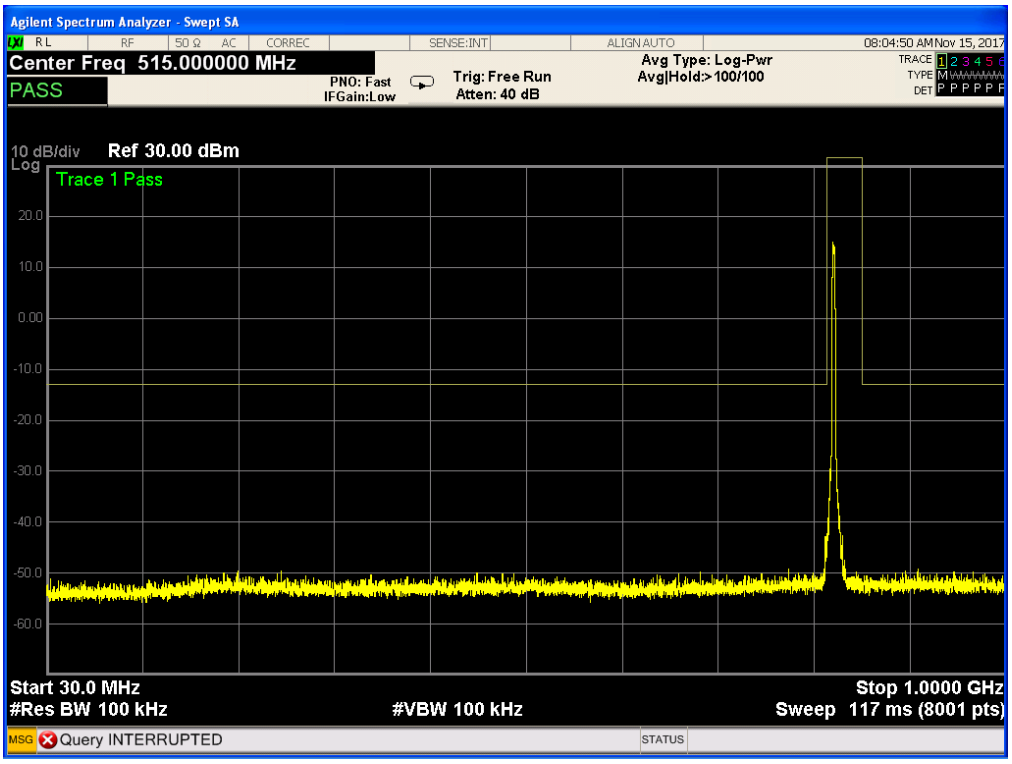
Band 5,UL Channel 20643,UL Frequency 848.3,BW 1.4,NO. RB 6,RB POS. Low,16-QAM



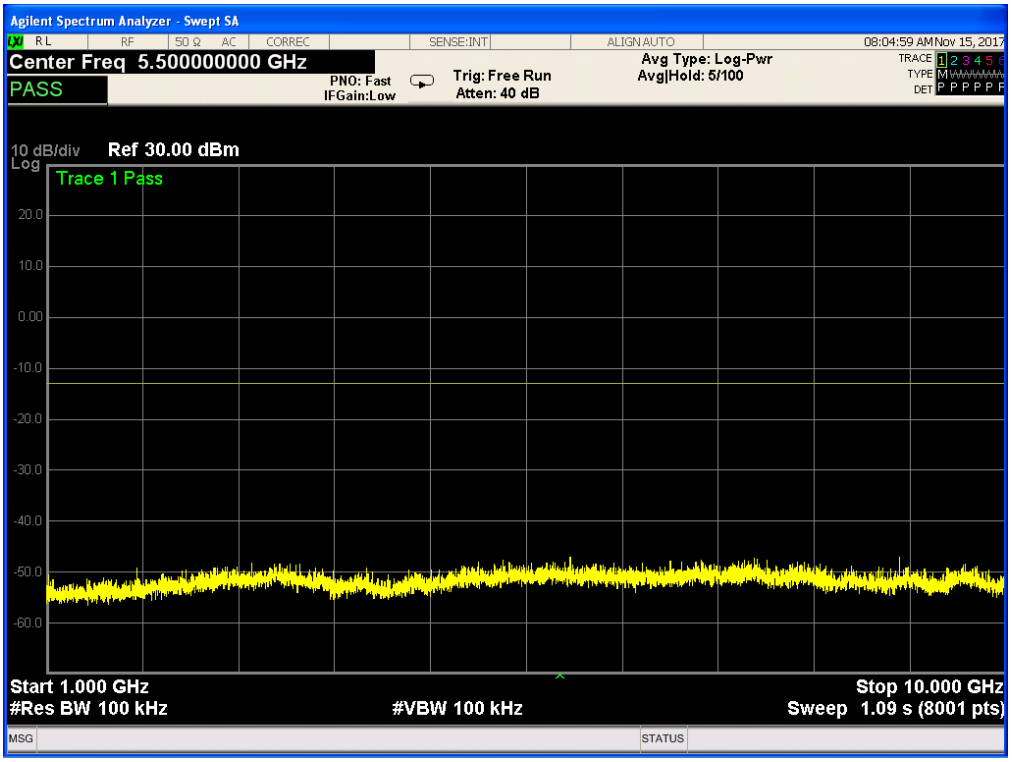
Band 5,UL Channel 20643,UL Frequency 848.3,BW 1.4,NO. RB 6,RB POS. Low,16-QAM



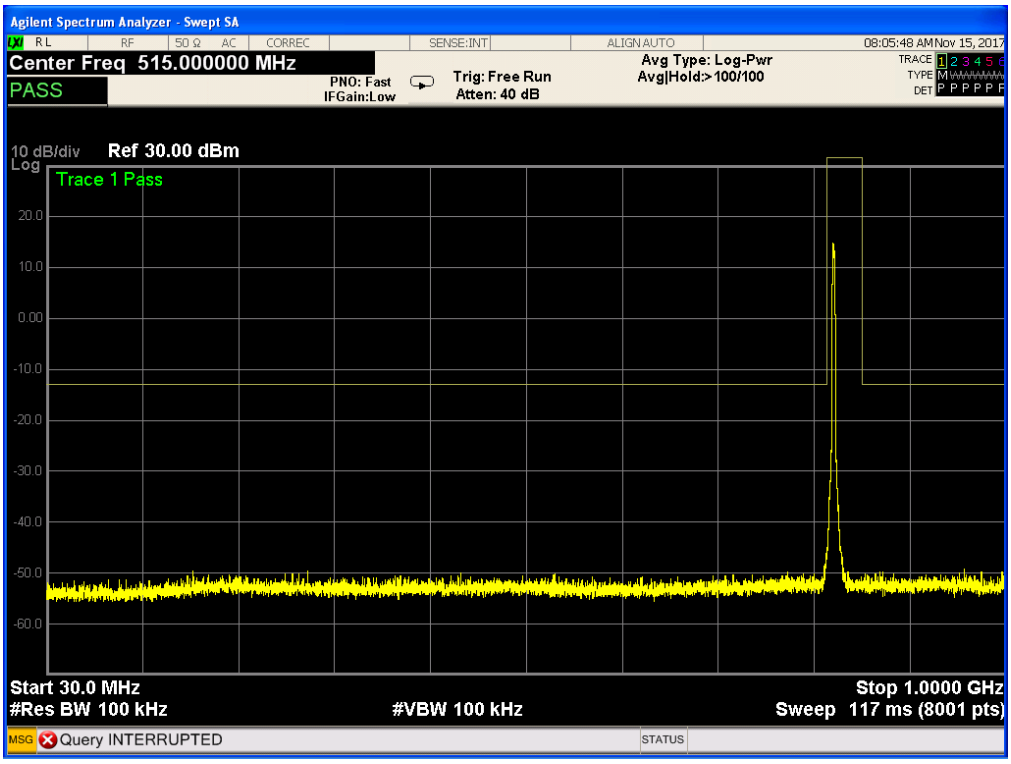
Band 5,UL Channel 20415,UL Frequency 825.5,BW 3.0,NO. RB 15,RB POS. Low,QPSK



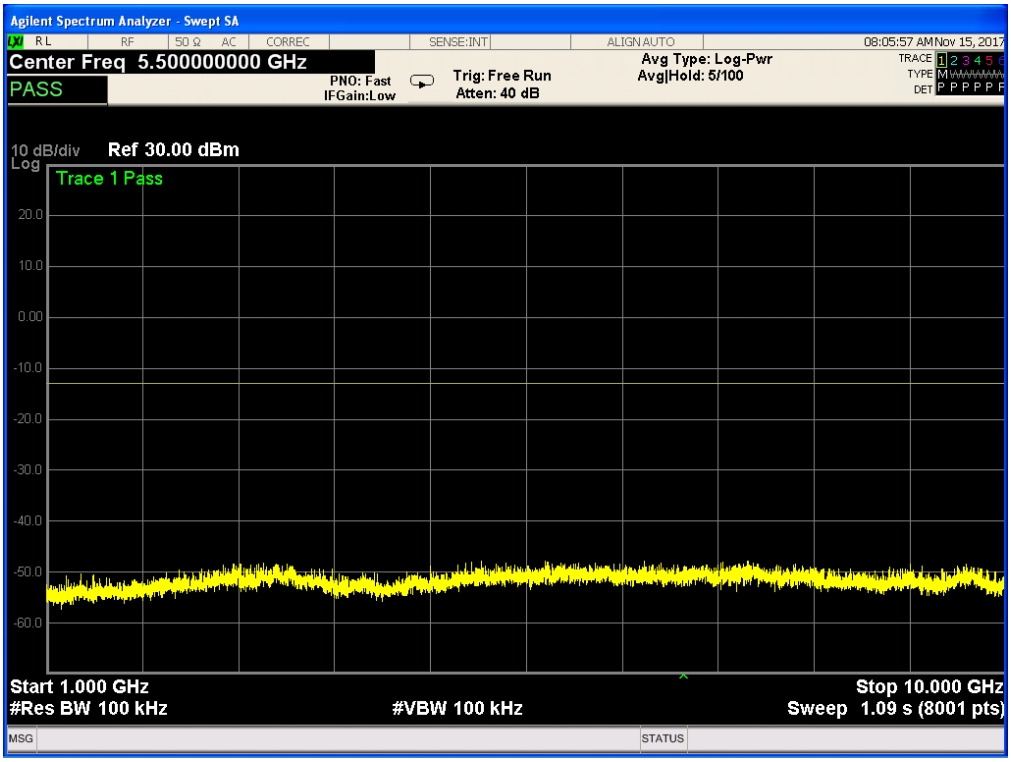
Band 5,UL Channel 20415,UL Frequency 825.5,BW 3.0,NO. RB 15,RB POS. Low,QPSK



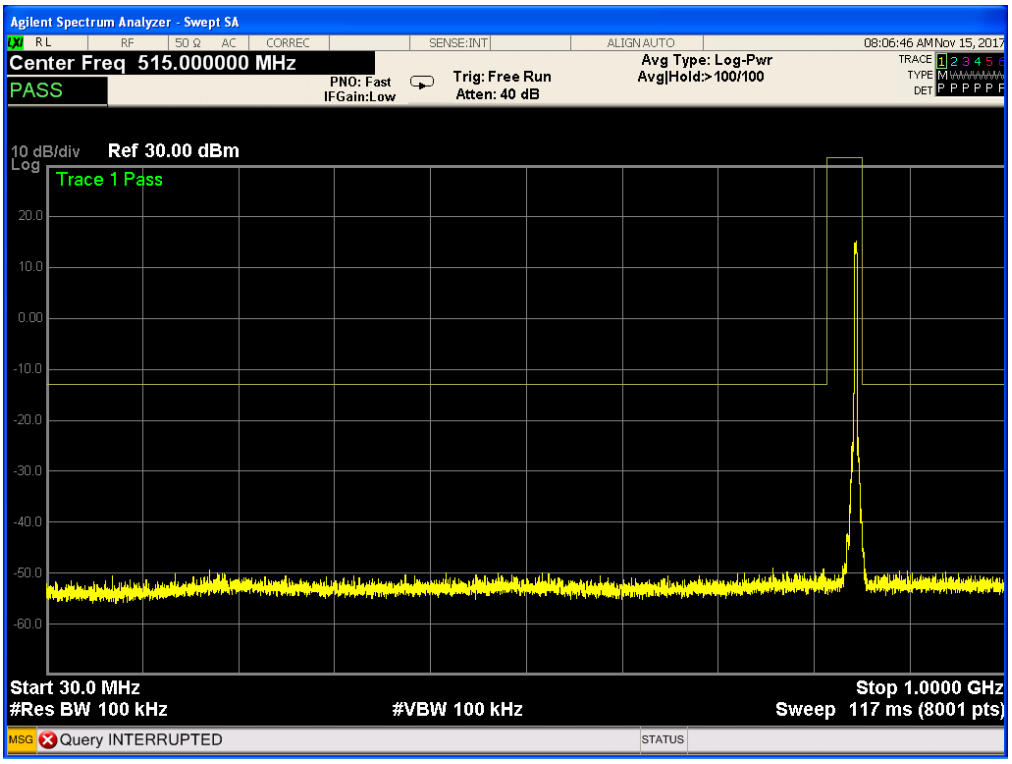
Band 5,UL Channel 20415,UL Frequency 825.5,BW 3.0,NO. RB 15,RB POS. Low,16-QAM



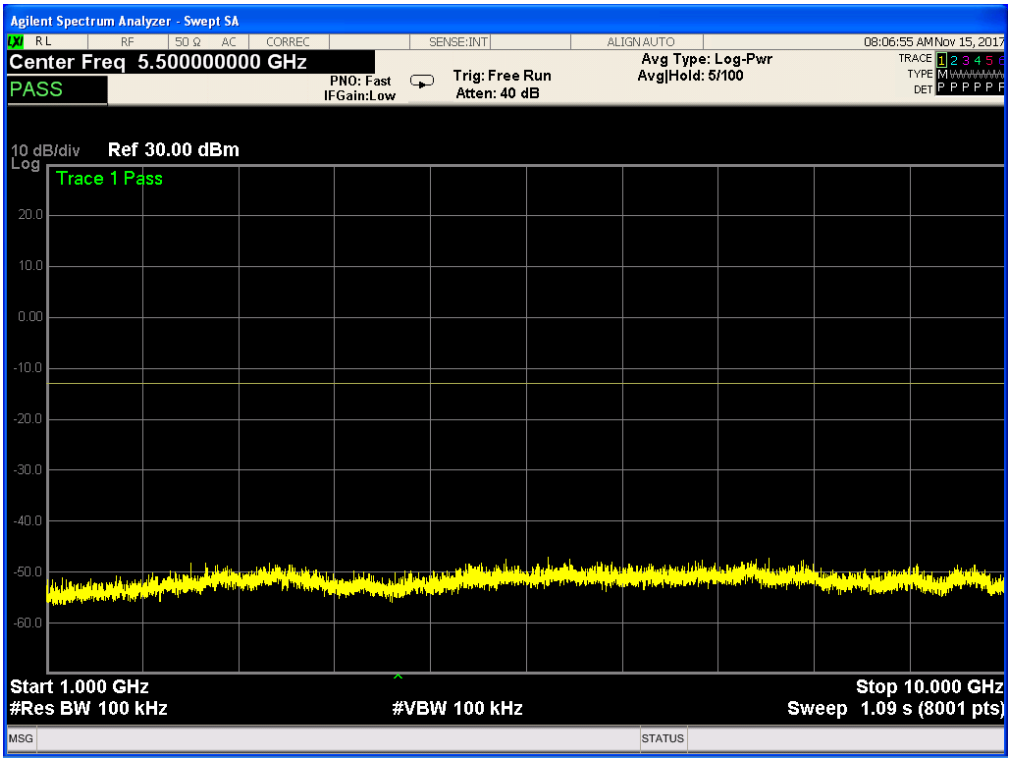
Band 5,UL Channel 20415,UL Frequency 825.5,BW 3.0,NO. RB 15,RB POS. Low,16-QAM



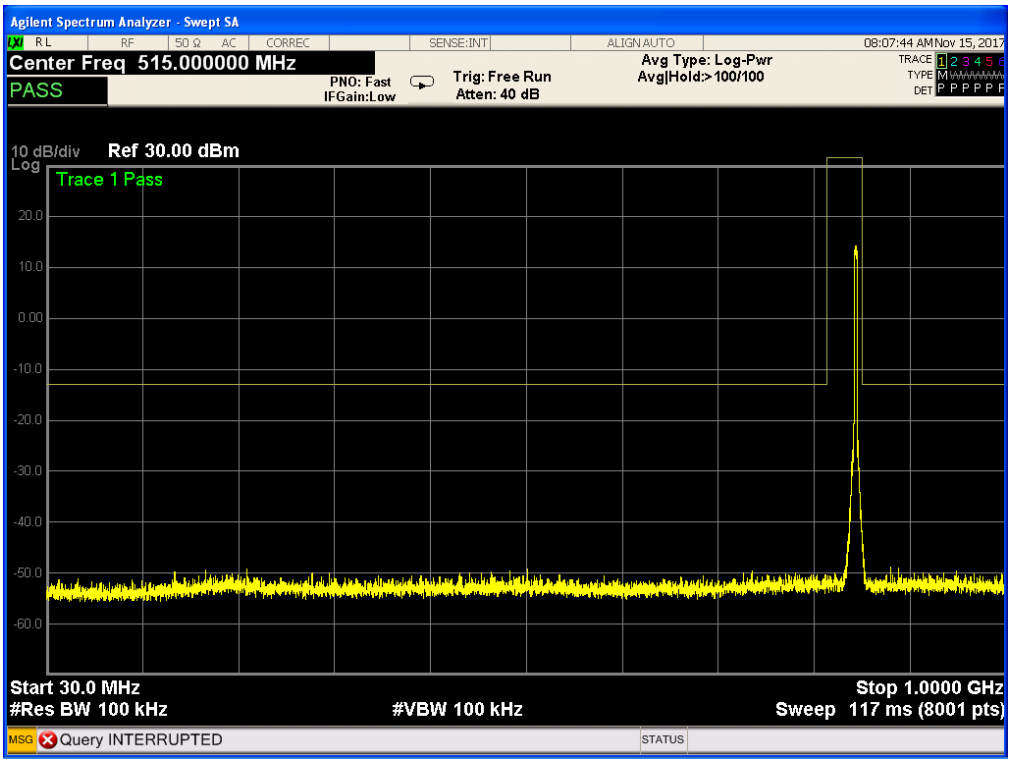
Band 5,UL Channel 20635,UL Frequency 847.5,BW 3.0,NO. RB 15,RB POS. Low,QPSK



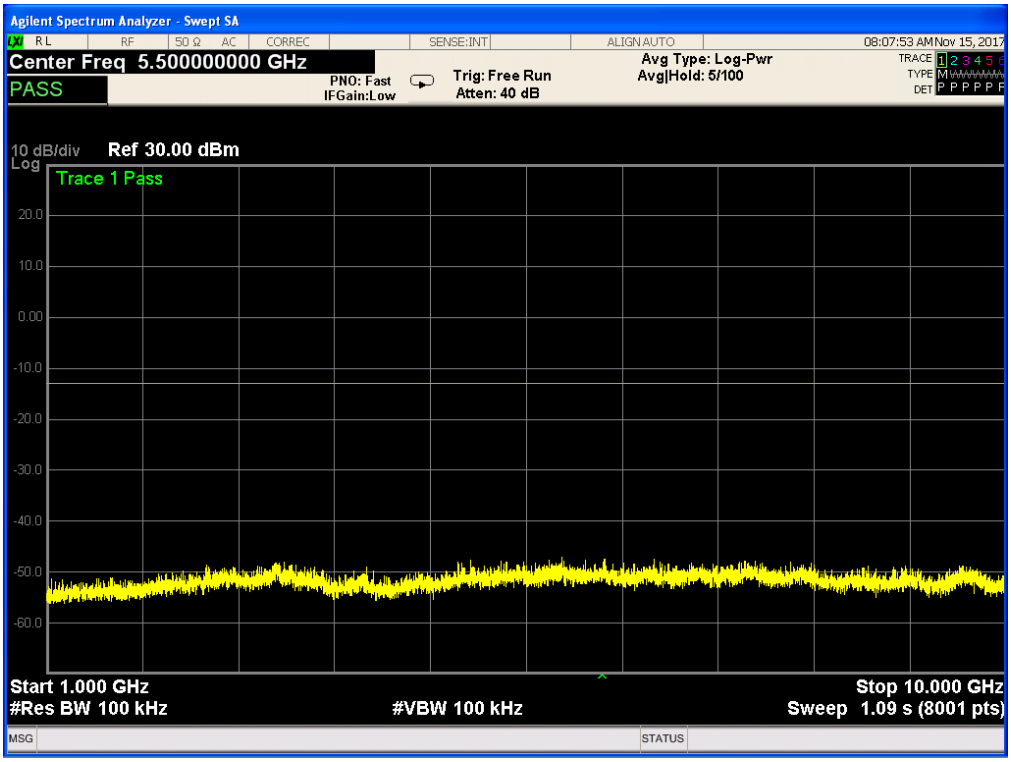
Band 5,UL Channel 20635,UL Frequency 847.5,BW 3.0,NO. RB 15,RB POS. Low,QPSK



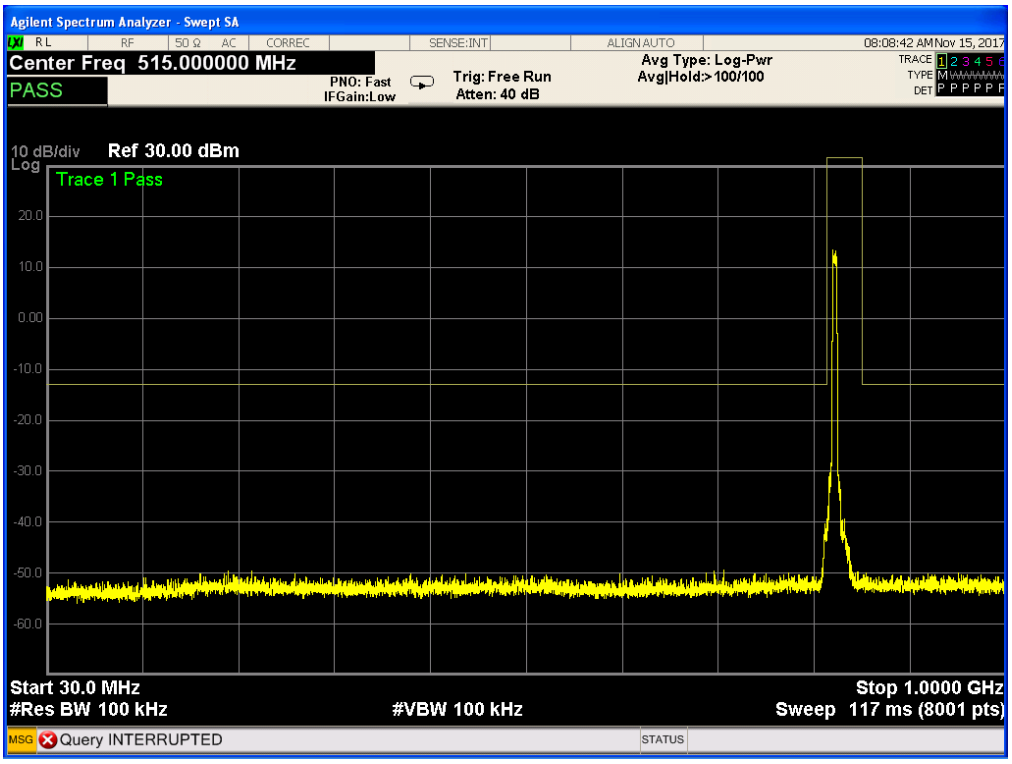
Band 5,UL Channel 20635,UL Frequency 847.5,BW 3.0,NO. RB 15,RB POS. Low,16-QAM



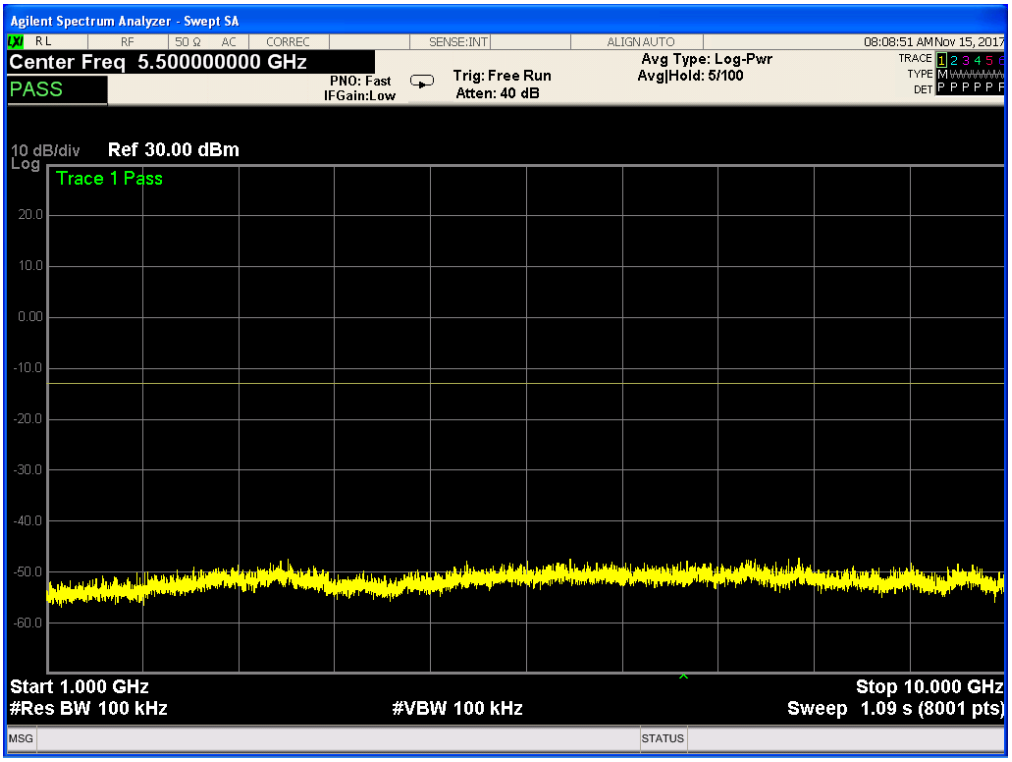
Band 5,UL Channel 20635,UL Frequency 847.5,BW 3.0,NO. RB 15,RB POS. Low,16-QAM



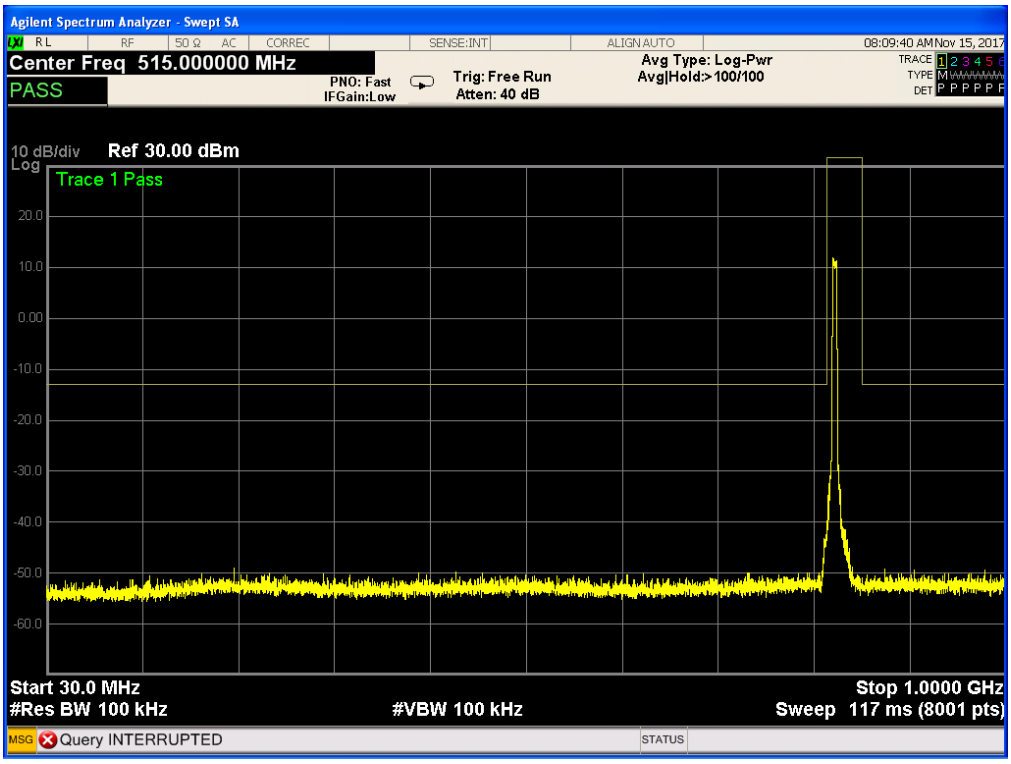
Band 5,UL Channel 20425,UL Frequency 826.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



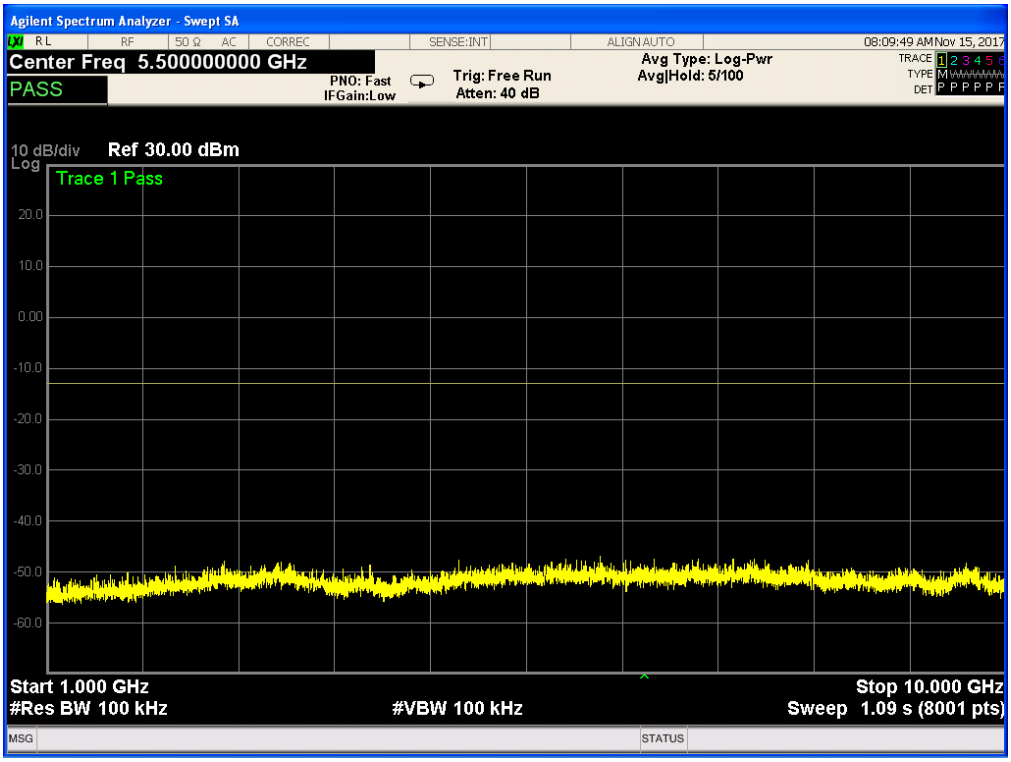
Band 5,UL Channel 20425,UL Frequency 826.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



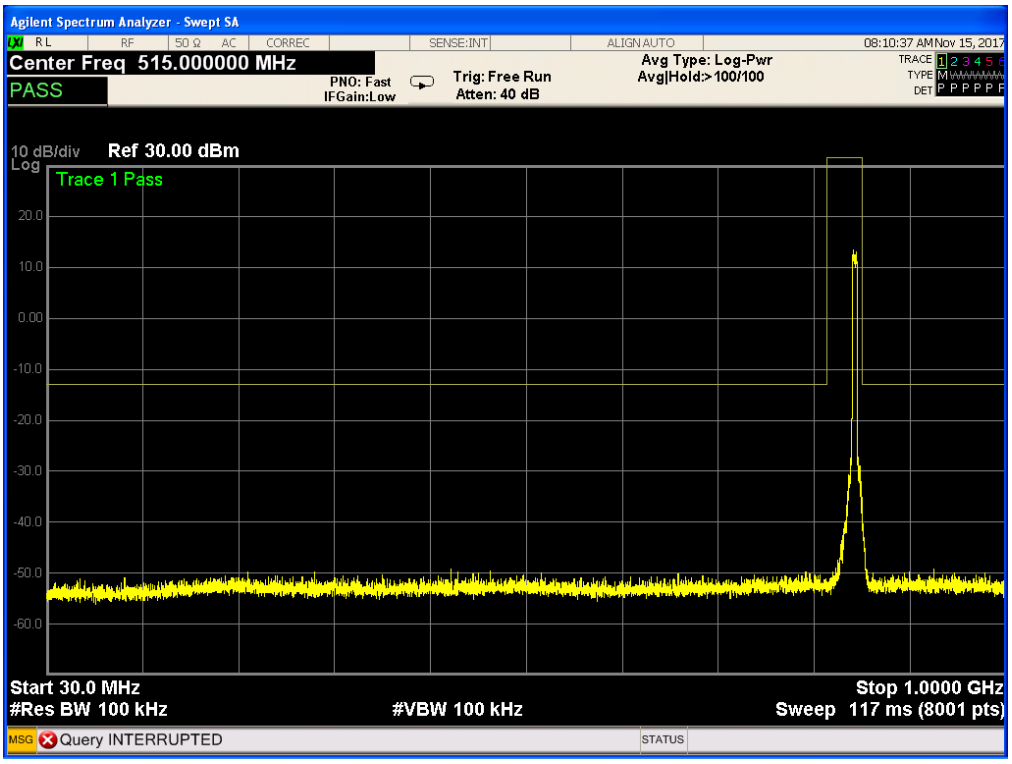
Band 5,UL Channel 20425,UL Frequency 826.5,BW 5.0,NO. RB 25,RB POS. Low,16-QAM



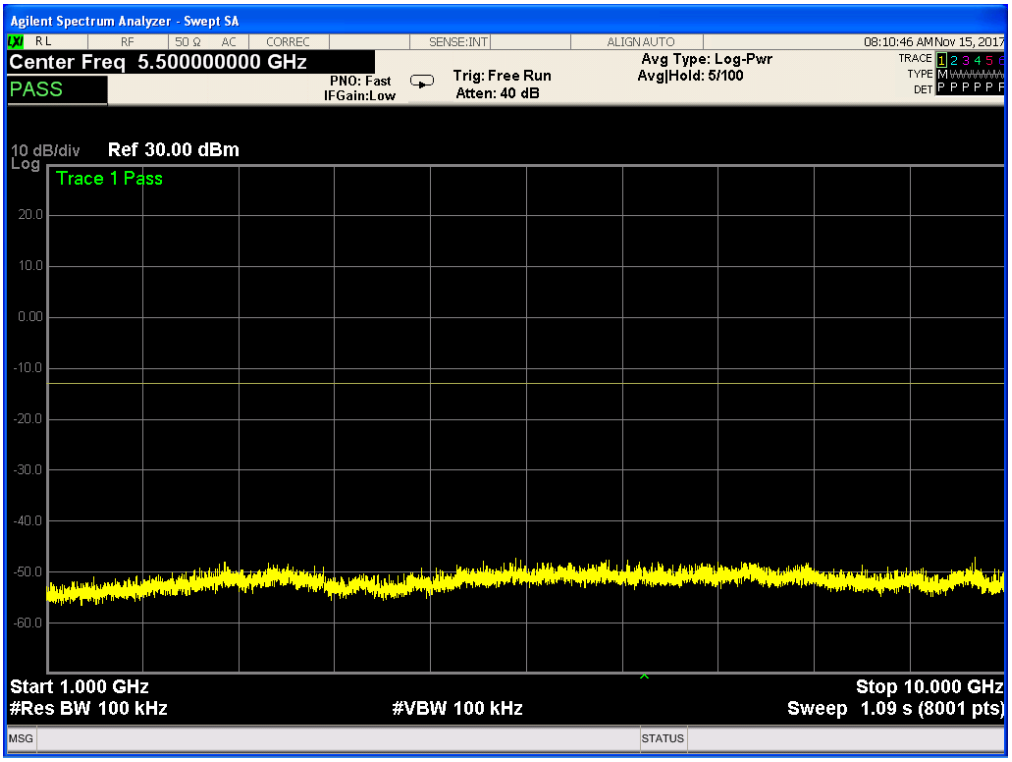
Band 5,UL Channel 20425,UL Frequency 826.5,BW 5.0,NO. RB 25,RB POS. Low,16-QAM



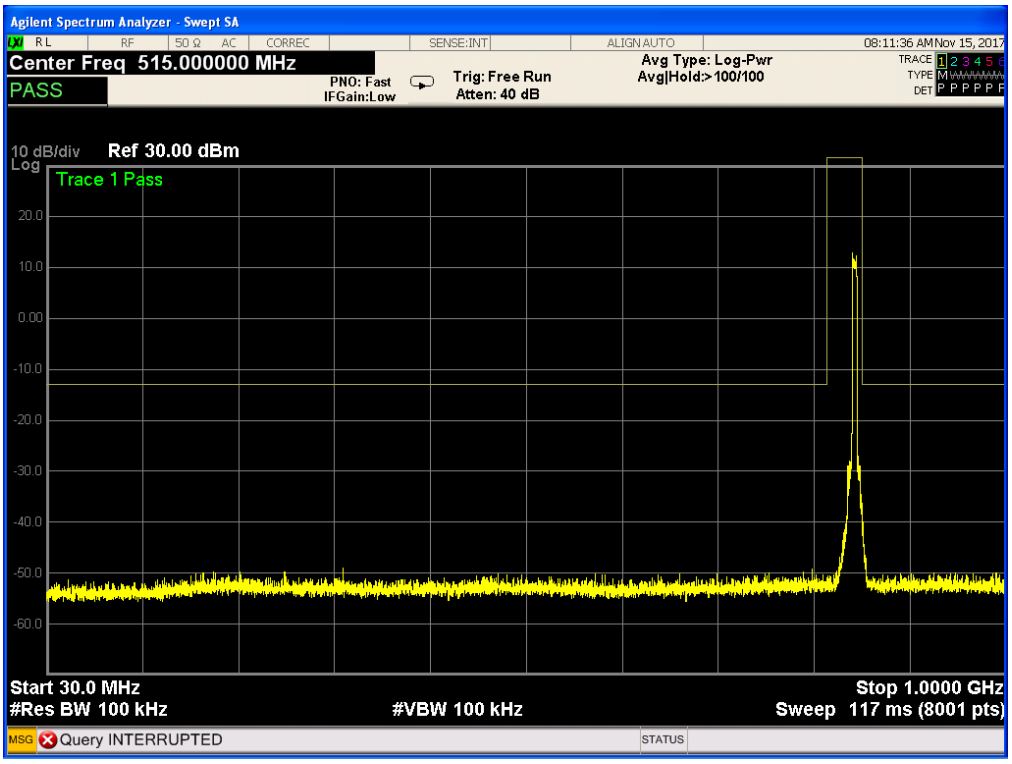
Band 5,UL Channel 20625,UL Frequency 846.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



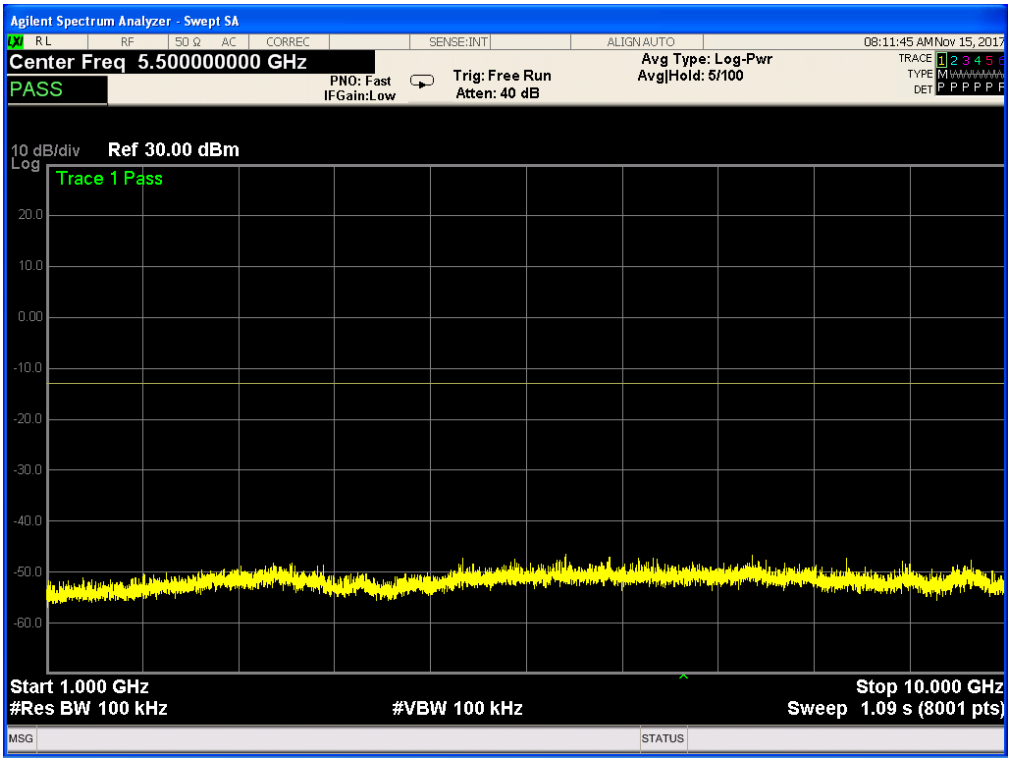
Band 5,UL Channel 20625,UL Frequency 846.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



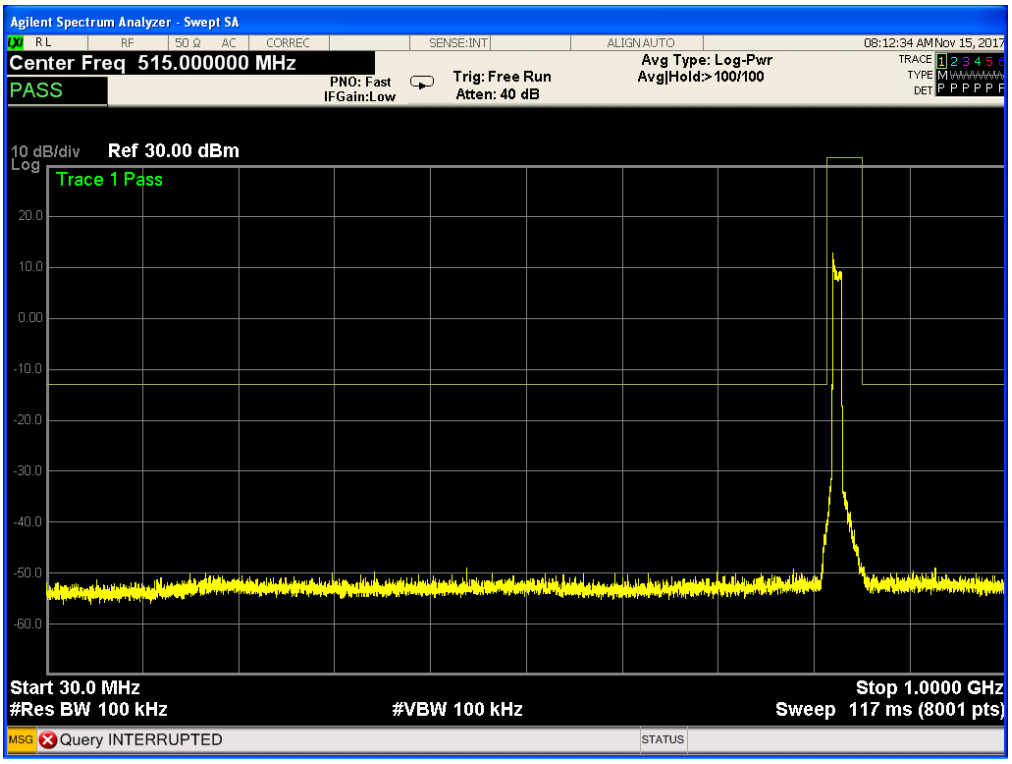
Band 5,UL Channel 20625,UL Frequency 846.5,BW 5.0,NO. RB 25,RB POS. Low,16QAM



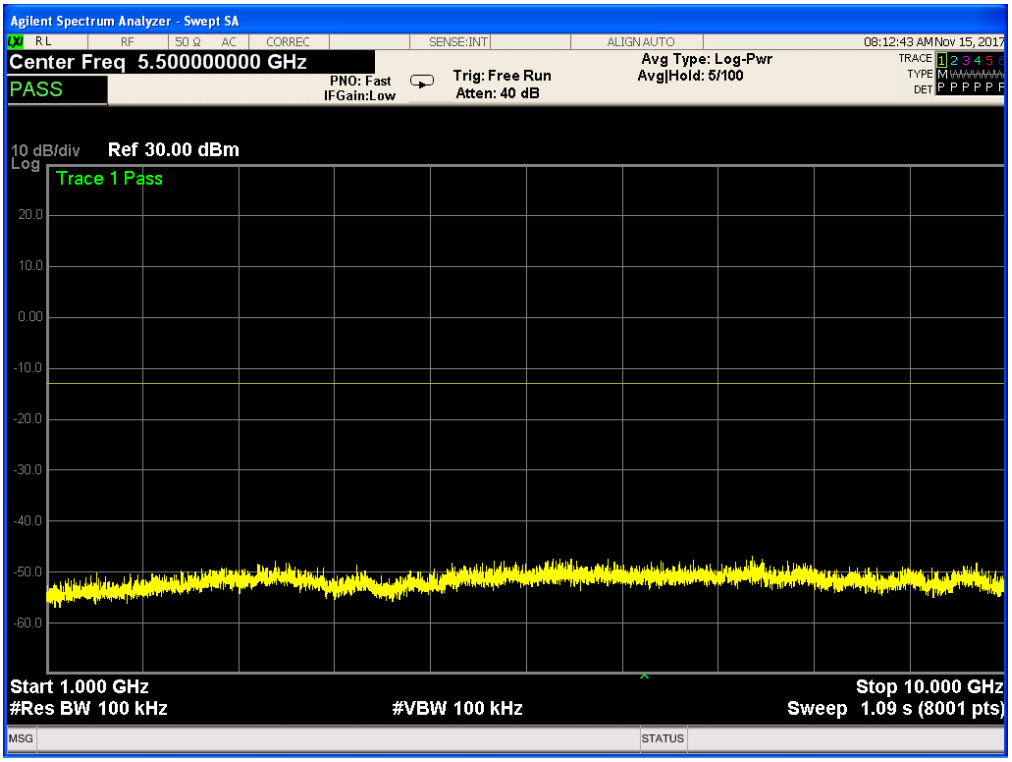
Band 5,UL Channel 20625,UL Frequency 846.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



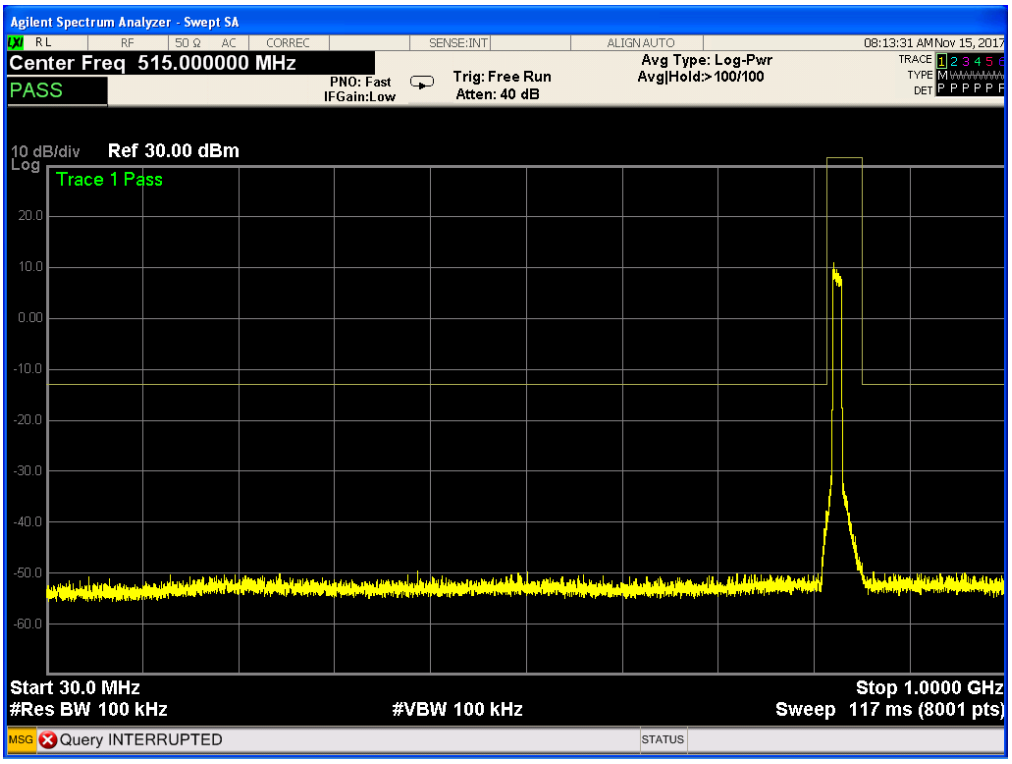
Band 5,UL Channel 20450,UL Frequency 829.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



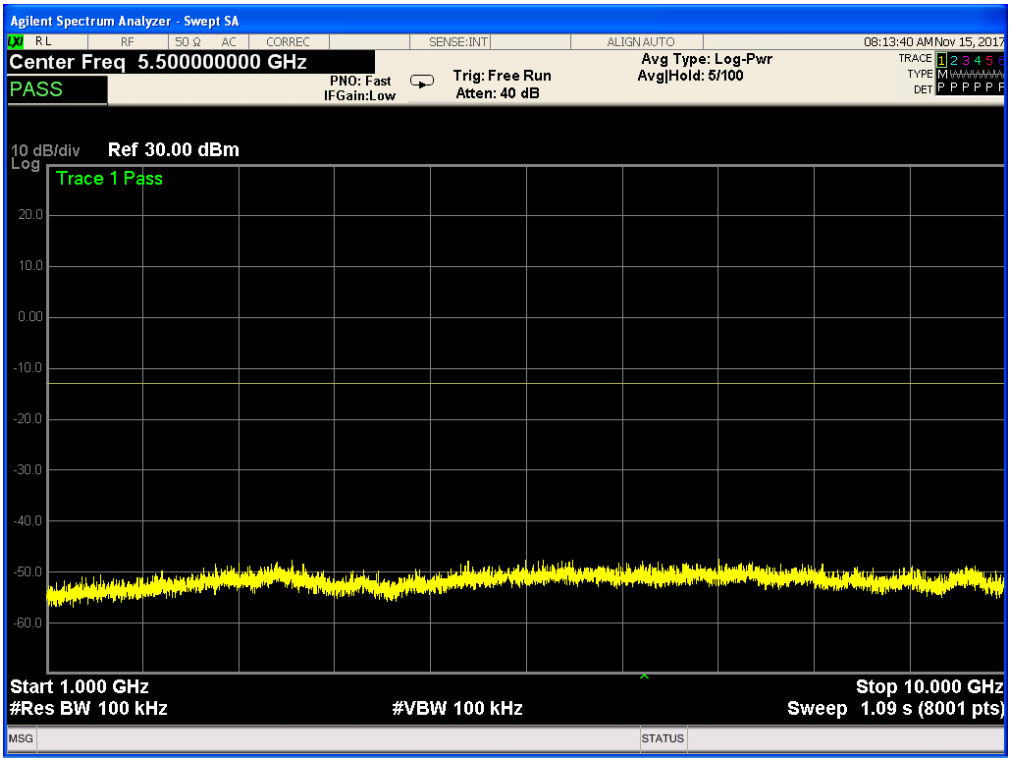
Band 5,UL Channel 20450,UL Frequency 829.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



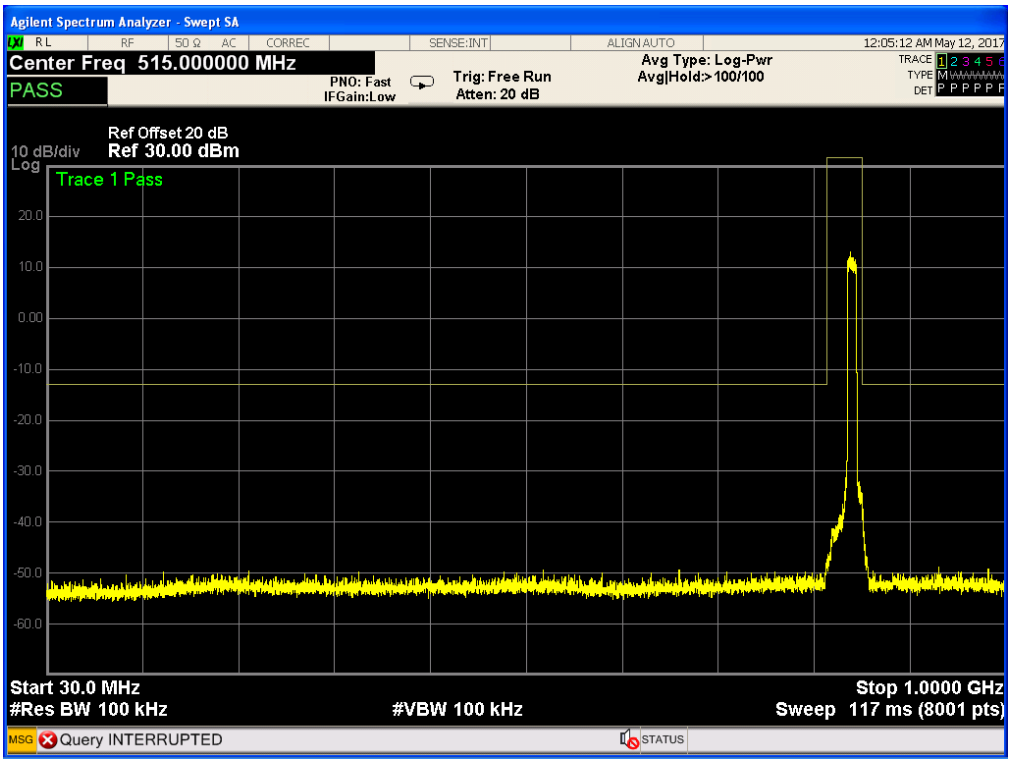
Band 5,UL Channel 20450,UL Frequency 829.0,BW 10.0,NO. RB 50,RB POS. Low,16-QAM



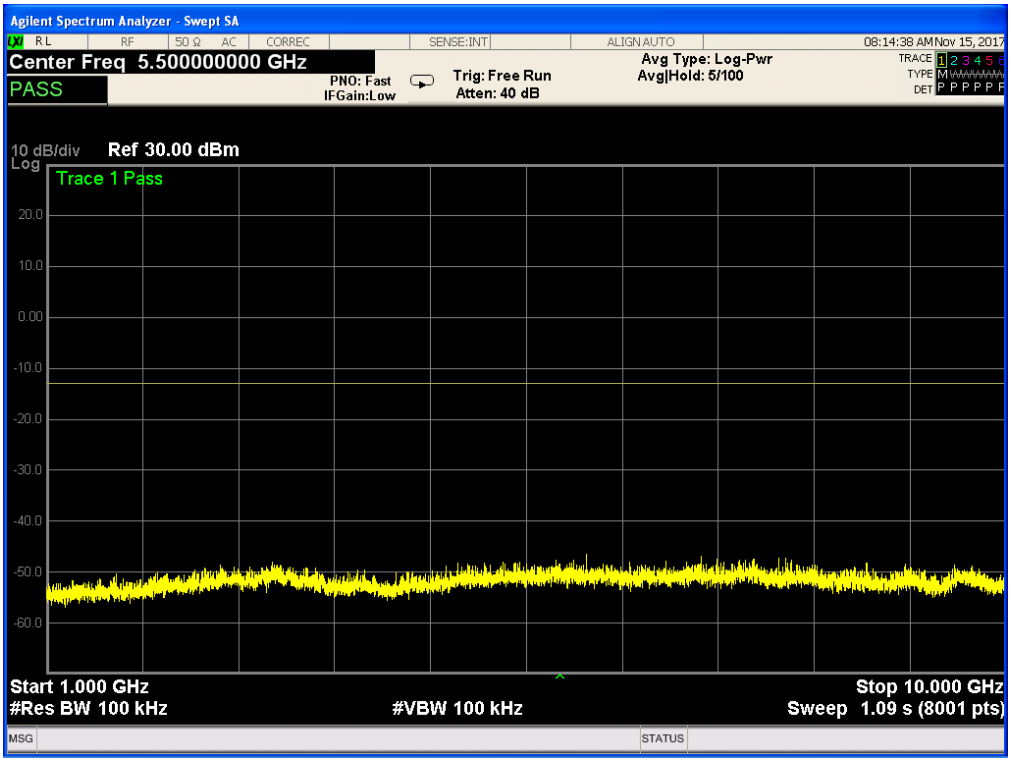
Band 5,UL Channel 20450,UL Frequency 829.0,BW 10.0,NO. RB 50,RB POS. Low,16-QAM



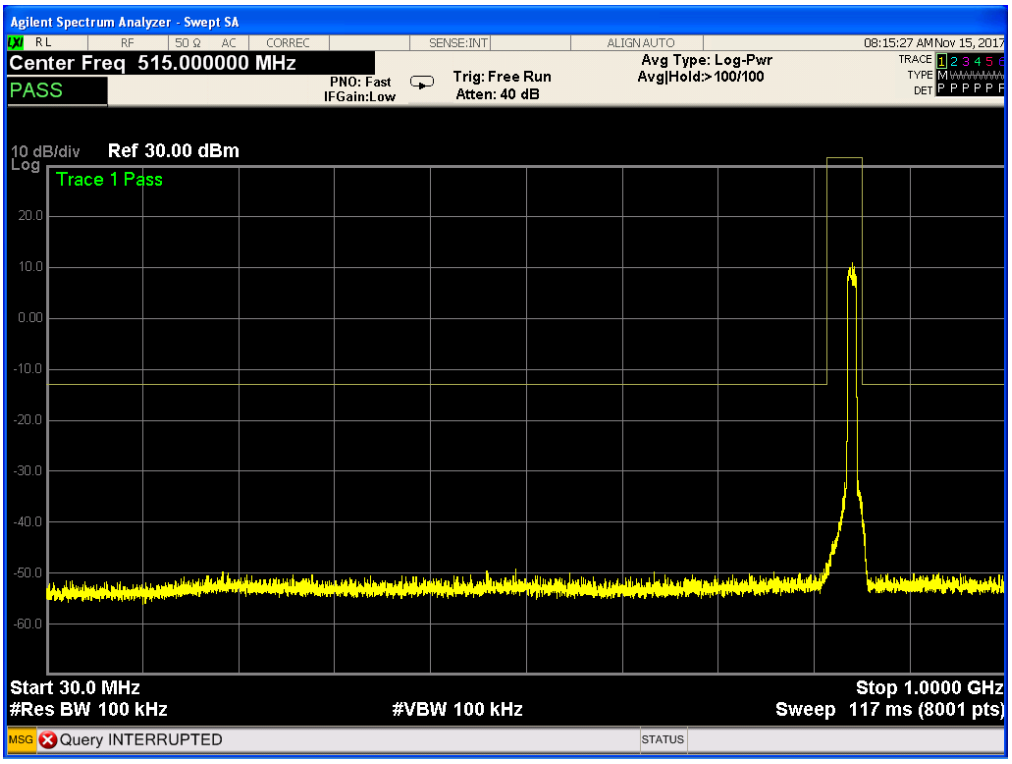
Band 5,UL Channel 20600,UL Frequency 844.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



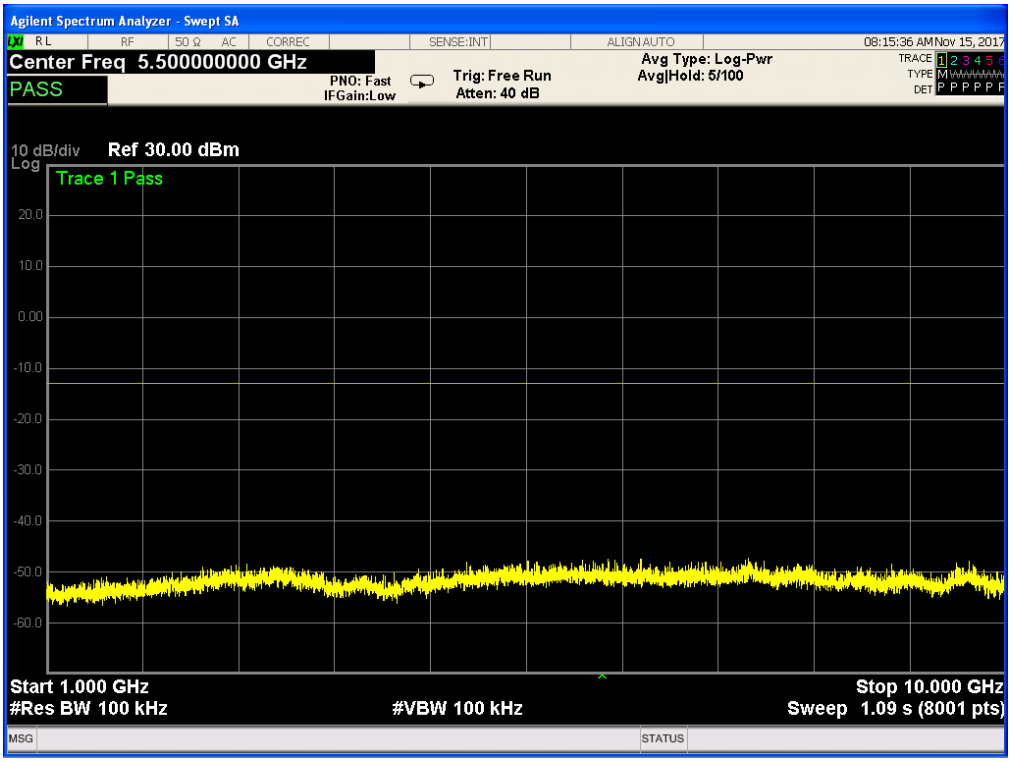
Band 5,UL Channel 20600,UL Frequency 844.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



Band 5,UL Channel 20600,UL Frequency 844.0,BW 10.0,NO. RB 50,RB POS. Low,16-QAM

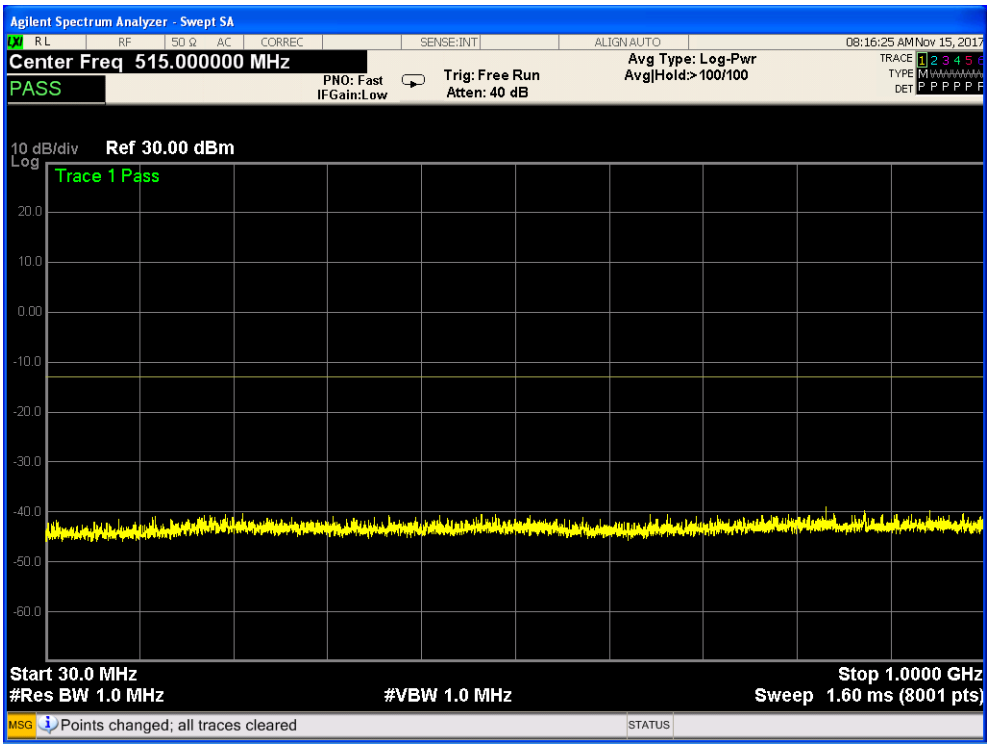


Band 5,UL Channel 20600,UL Frequency 844.0,BW 10.0,NO. RB 50,RB POS. Low,16-QAM

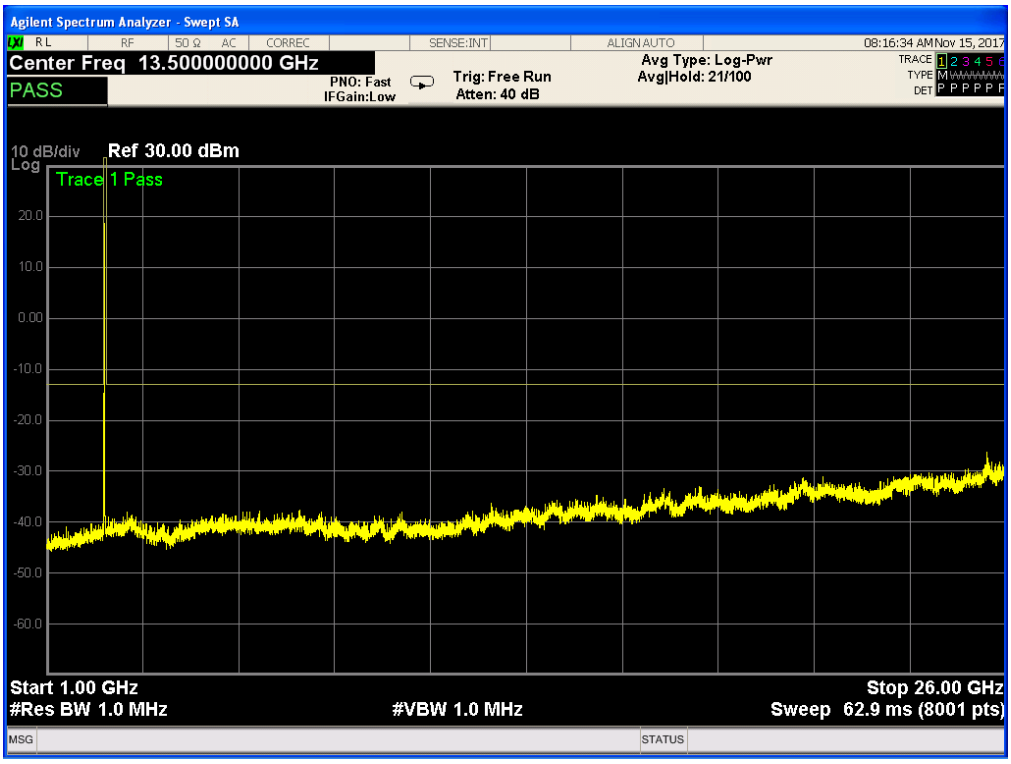


7.4 LTE BAND 7

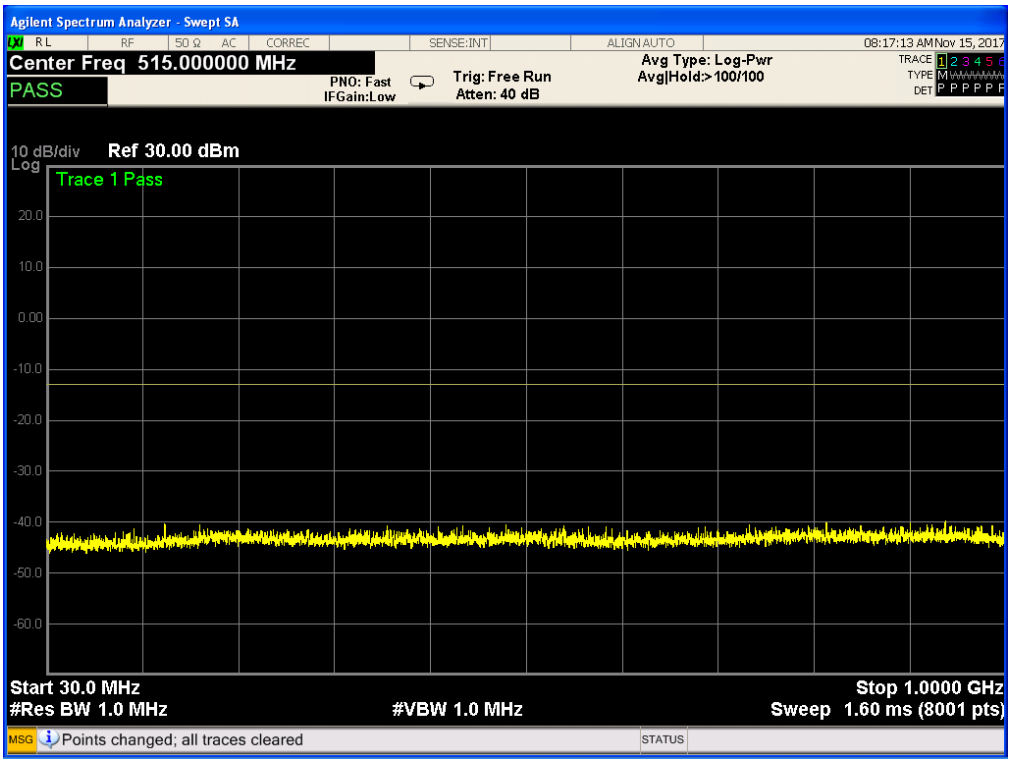
Band 7,UL Channel 20775,UL Frequency 2502.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



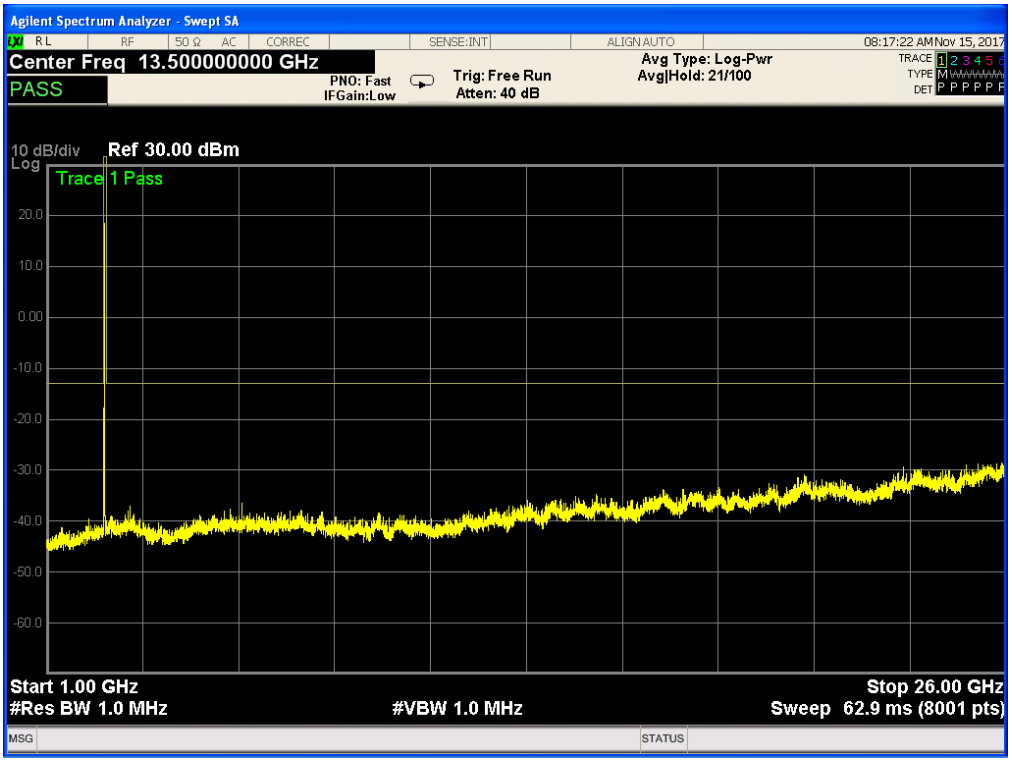
Band 7,UL Channel 20775,UL Frequency 2502.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



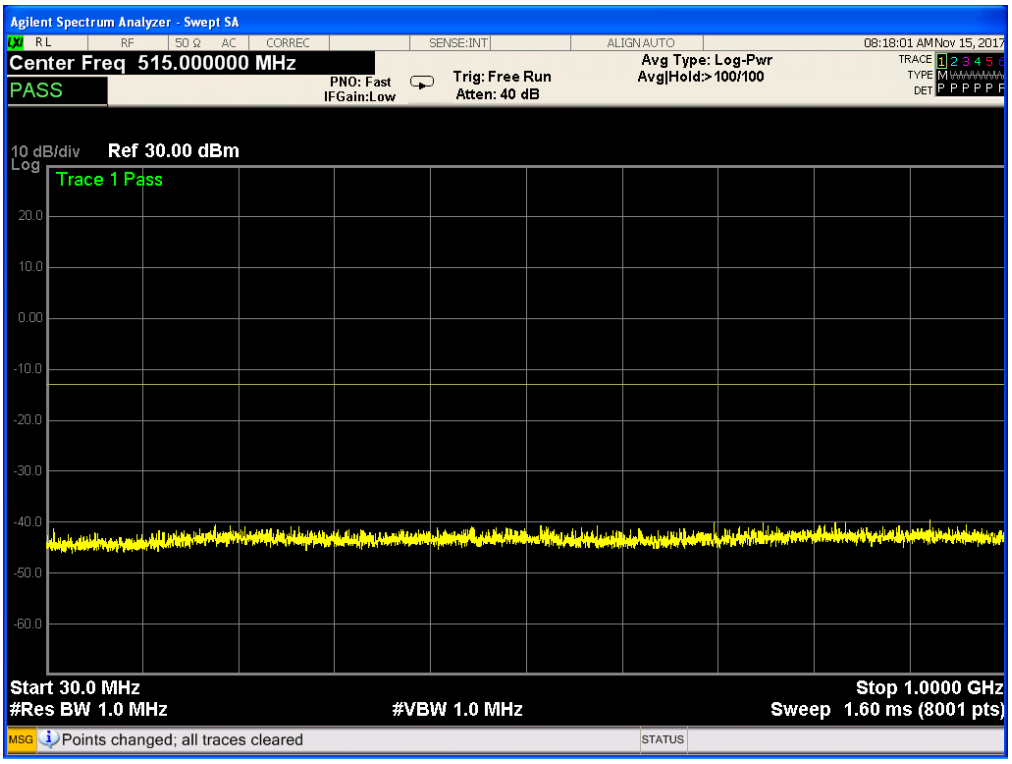
Band 7,UL Channel 20775,UL Frequency 2502.5,BW 5.0,NO. RB 25,RB POS. Low,16QAM



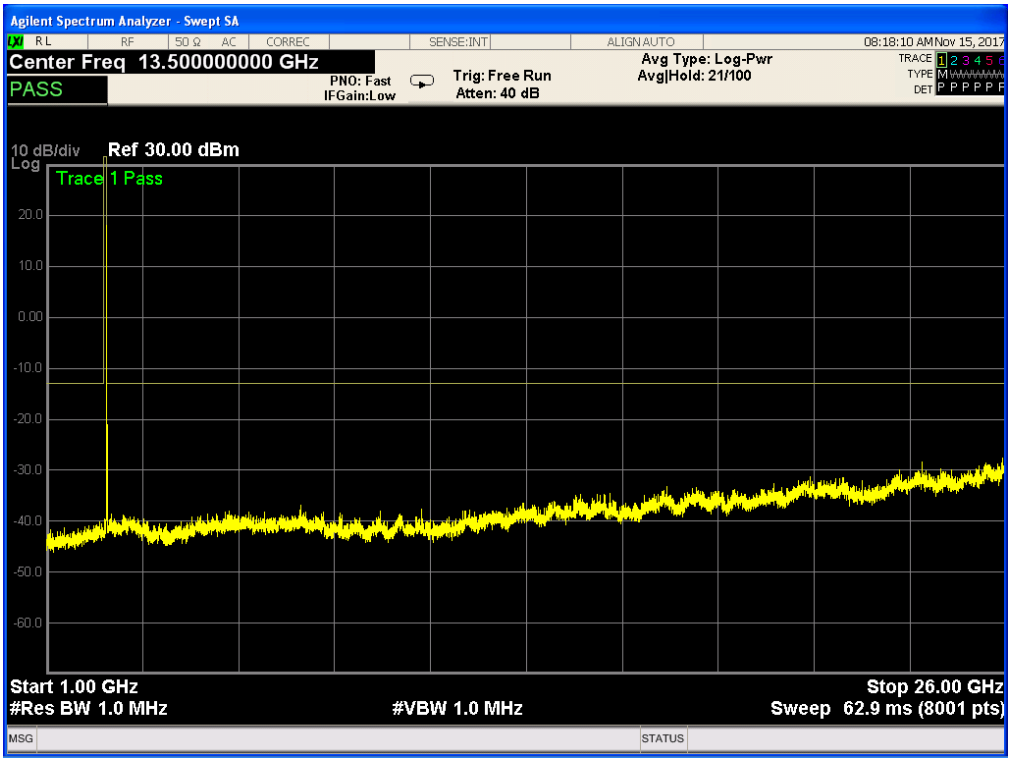
Band 7,UL Channel 20775,UL Frequency 2502.5,BW 5.0,NO. RB 25,RB POS. Low,16QAM



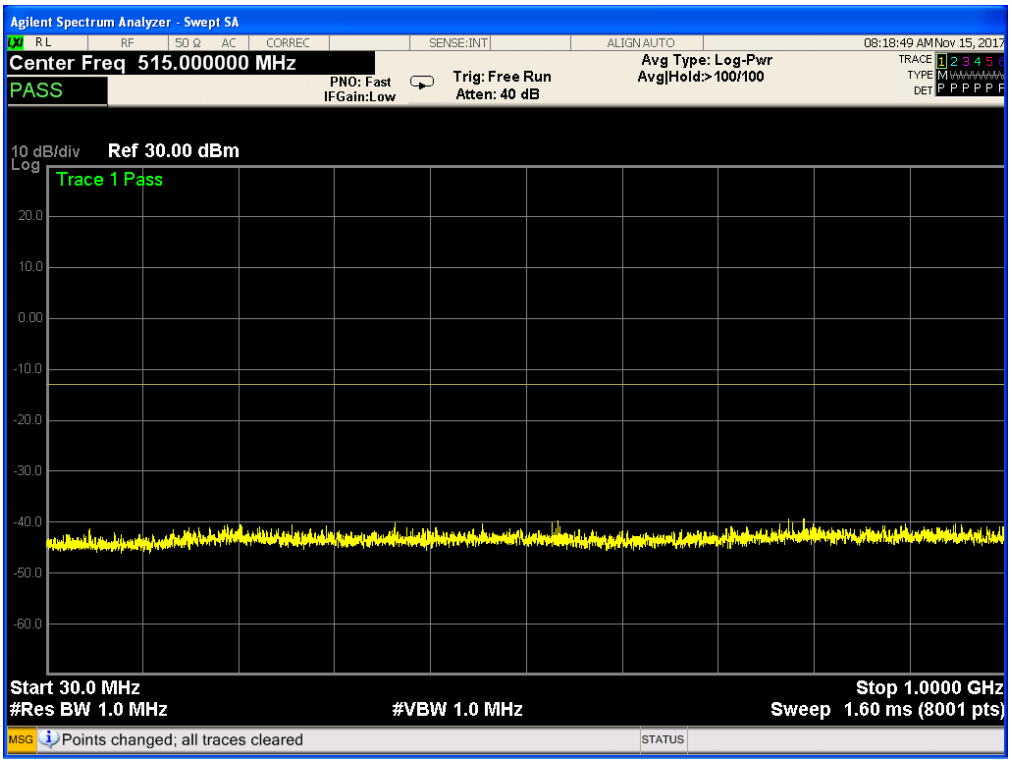
Band 7,UL Channel 21425,UL Frequency 2567.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



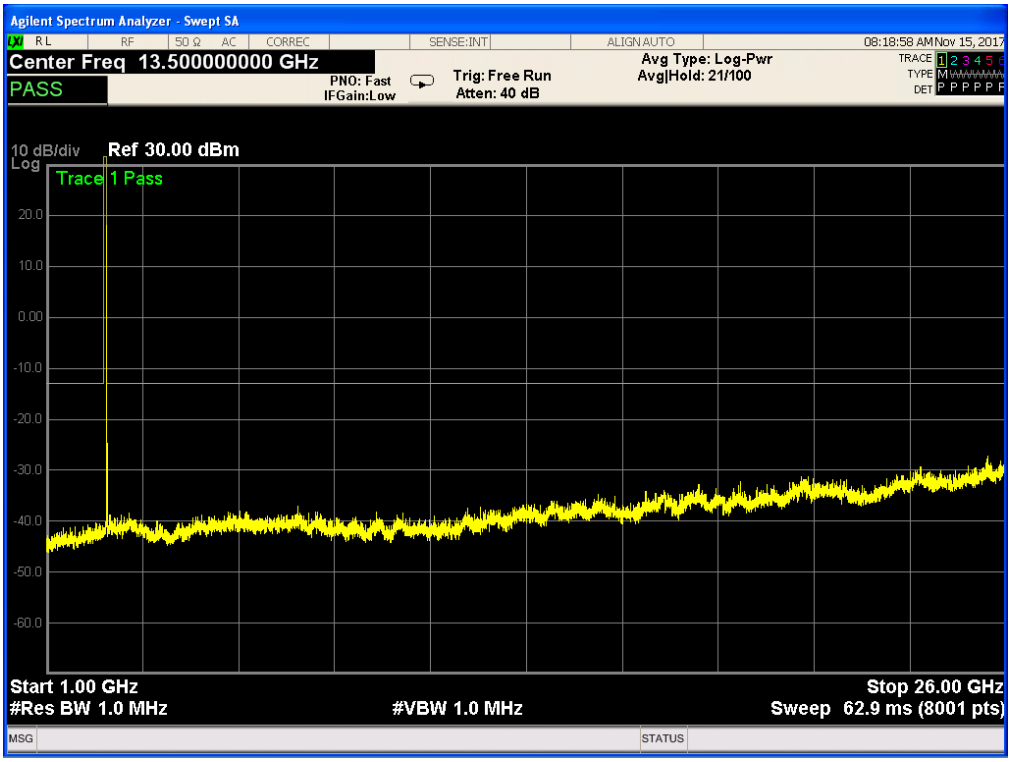
Band 7,UL Channel 21425,UL Frequency 2567.5,BW 5.0,NO. RB 25,RB POS. Low,QPSK



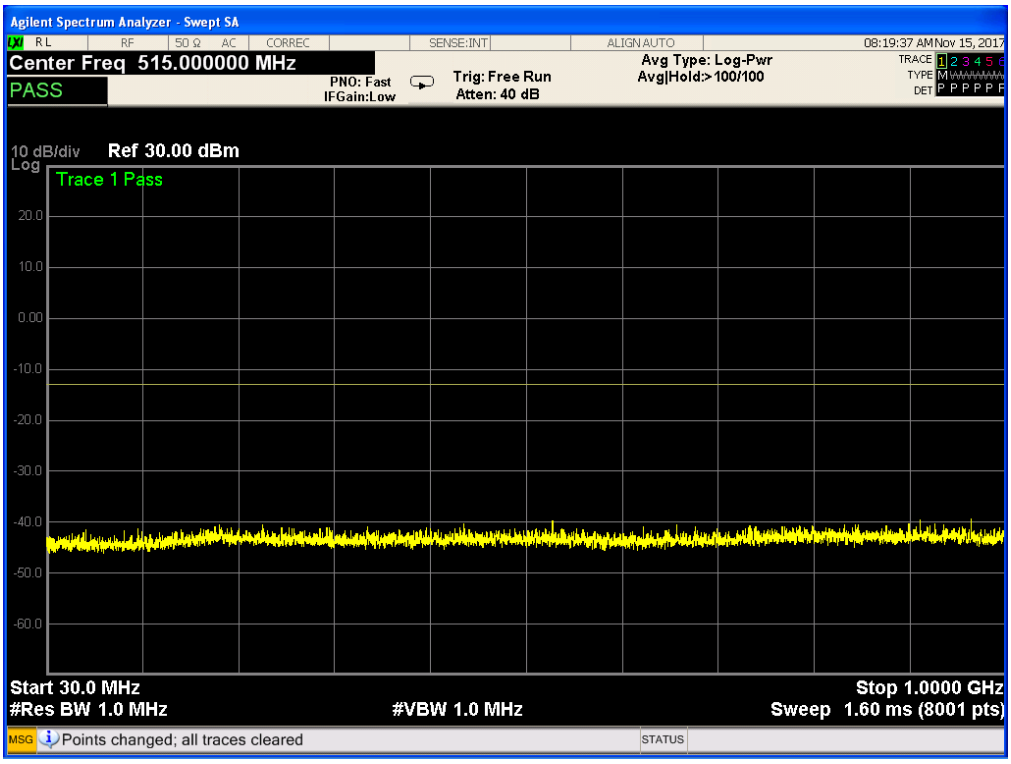
Band 7,UL Channel 21425,UL Frequency 2567.5,BW 5.0,NO. RB 25,RB POS. Low,16QAM



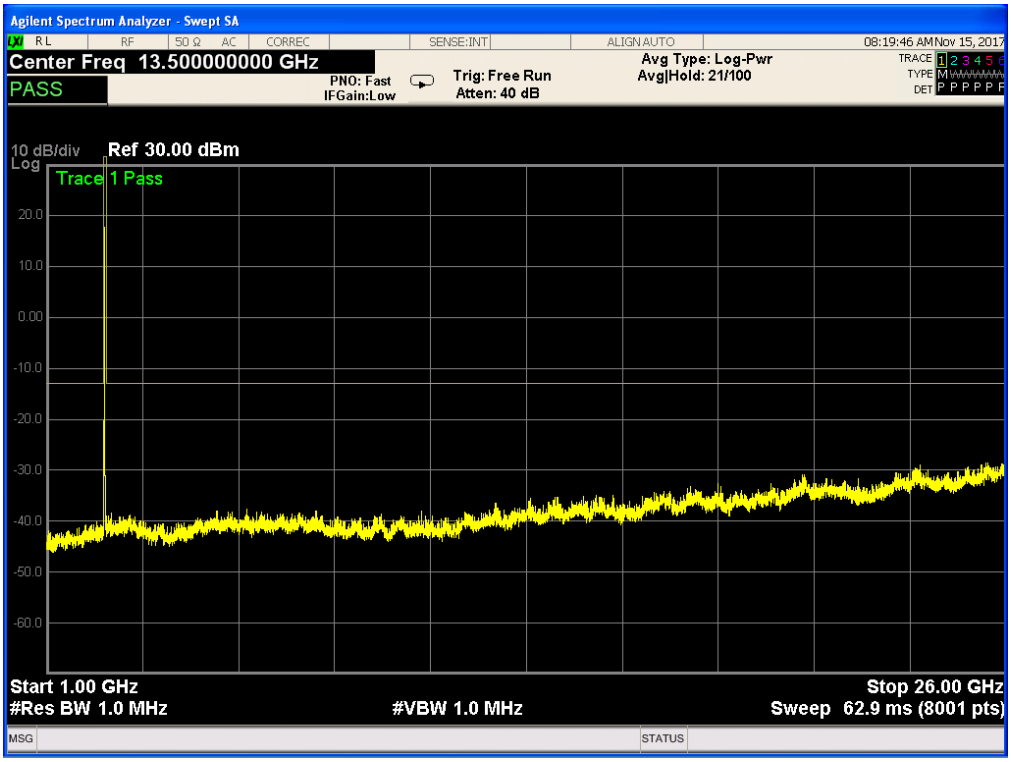
Band 7,UL Channel 21425,UL Frequency 2567.5,BW 5.0,NO. RB 25,RB POS. Low,16QAM



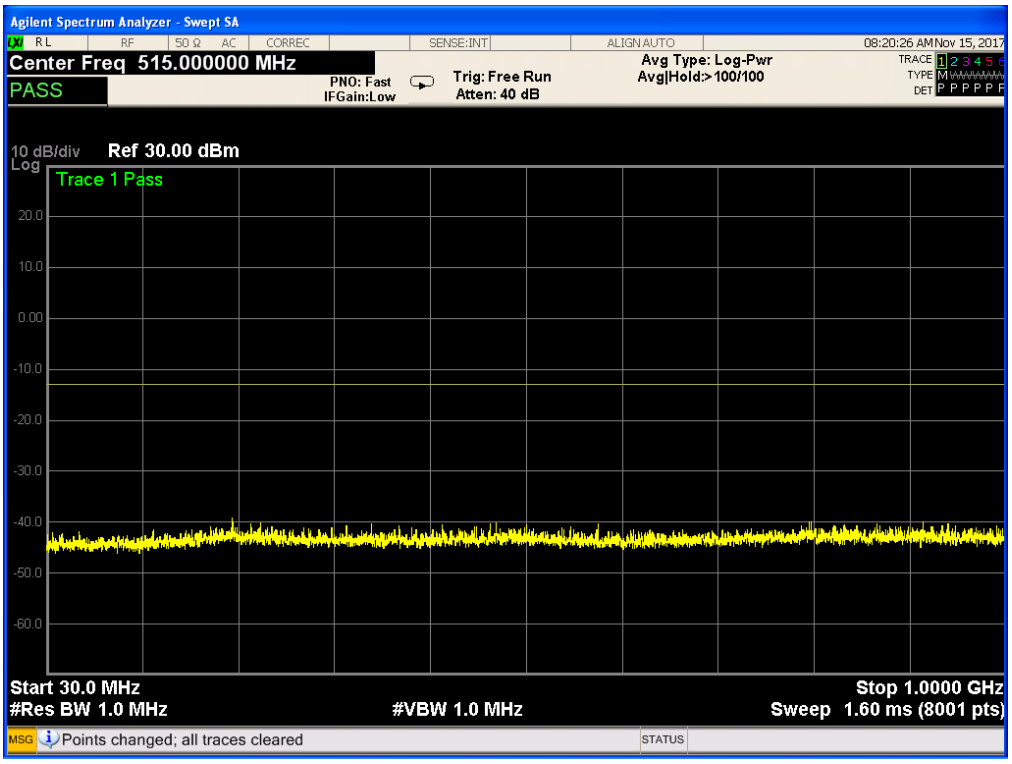
Band 7,UL Channel 20800,UL Frequency 2505.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



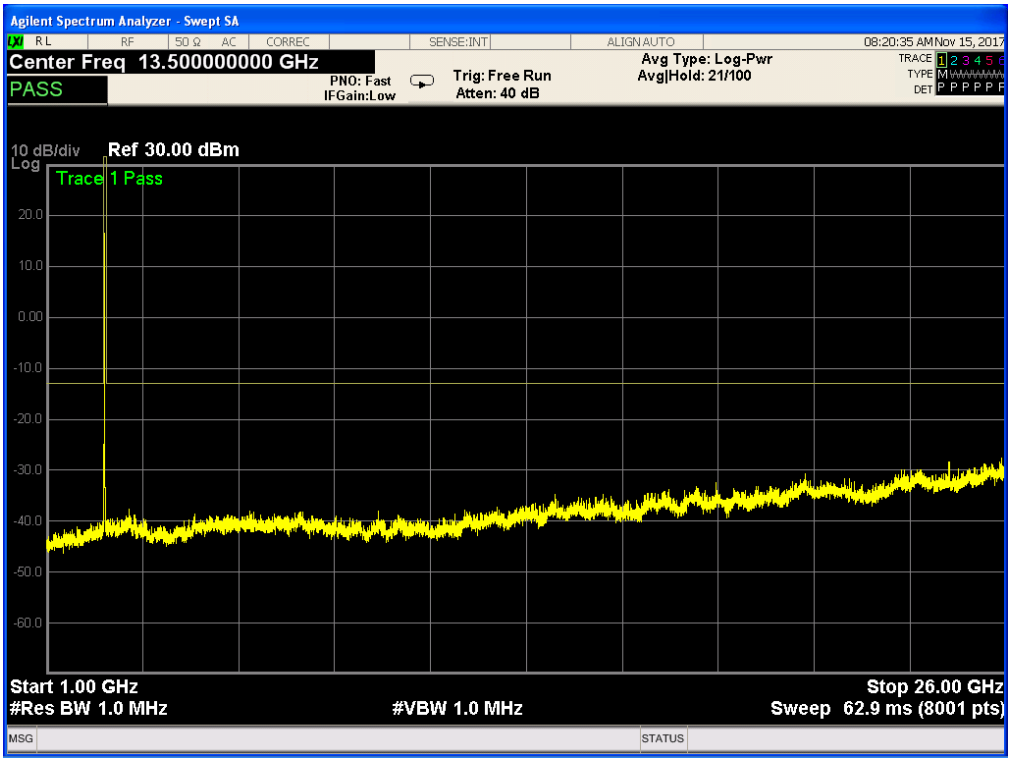
Band 7,UL Channel 20800,UL Frequency 2505.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



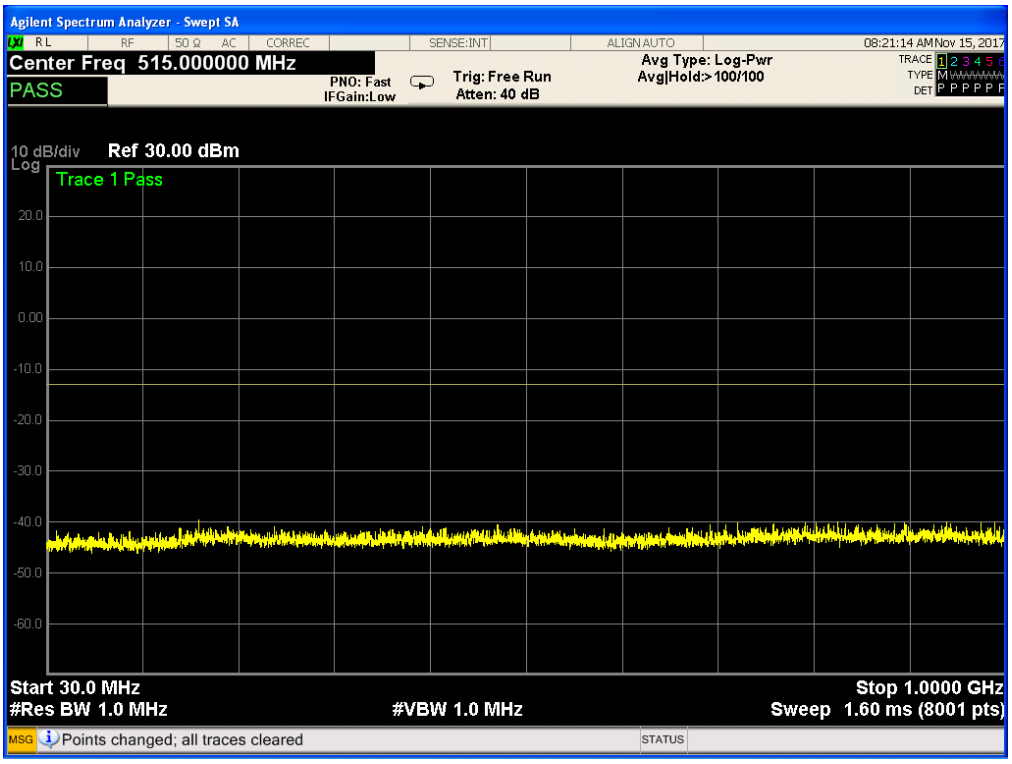
Band 7,UL Channel 20800,UL Frequency 2505.0,BW 10.0,NO. RB 25,RB POS. Low,16QAM



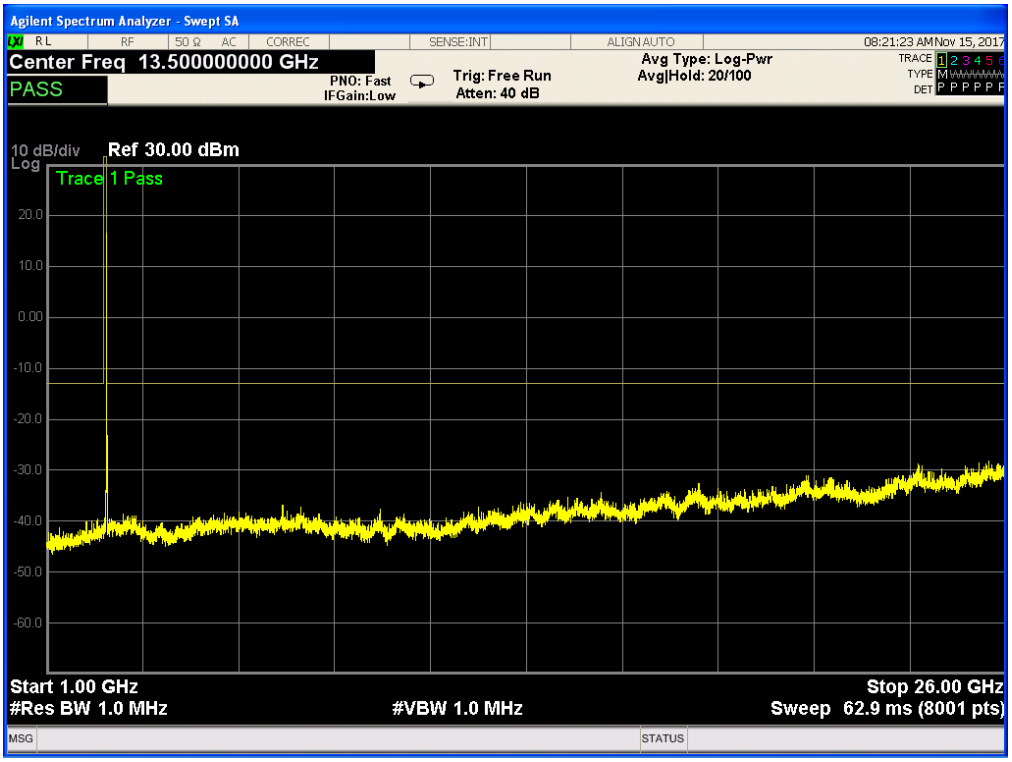
Band 7,UL Channel 20800,UL Frequency 2505.0,BW 10.0,NO. RB 25,RB POS. Low,16QAM



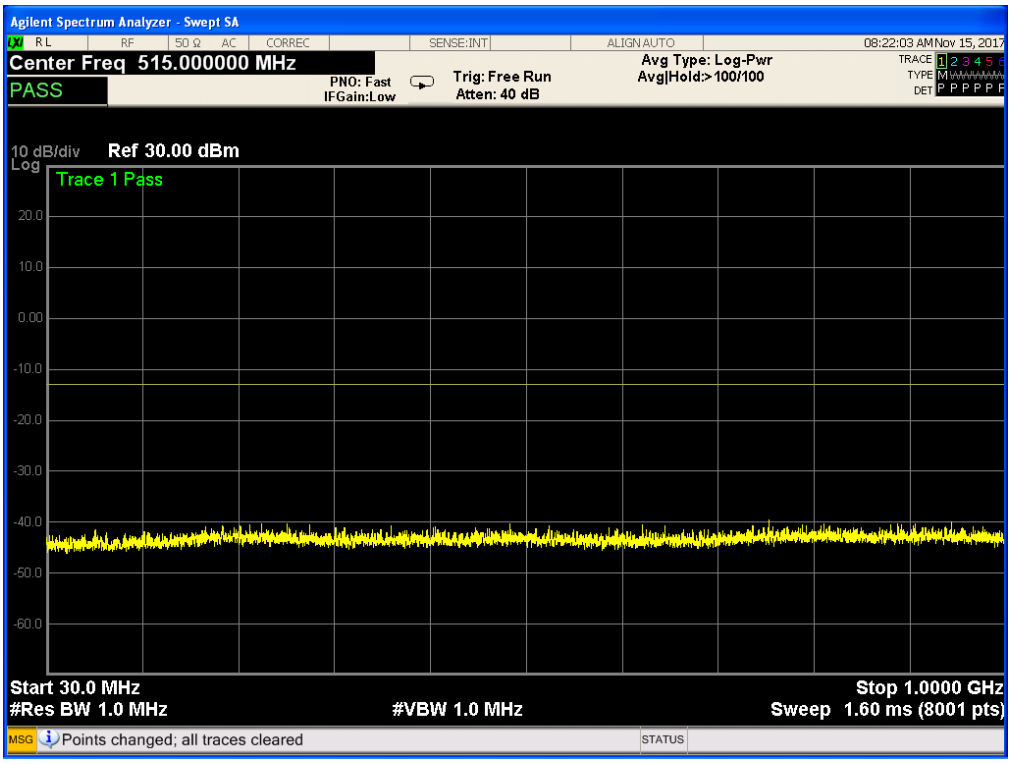
Band 7,UL Channel 21400,UL Frequency 2565.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



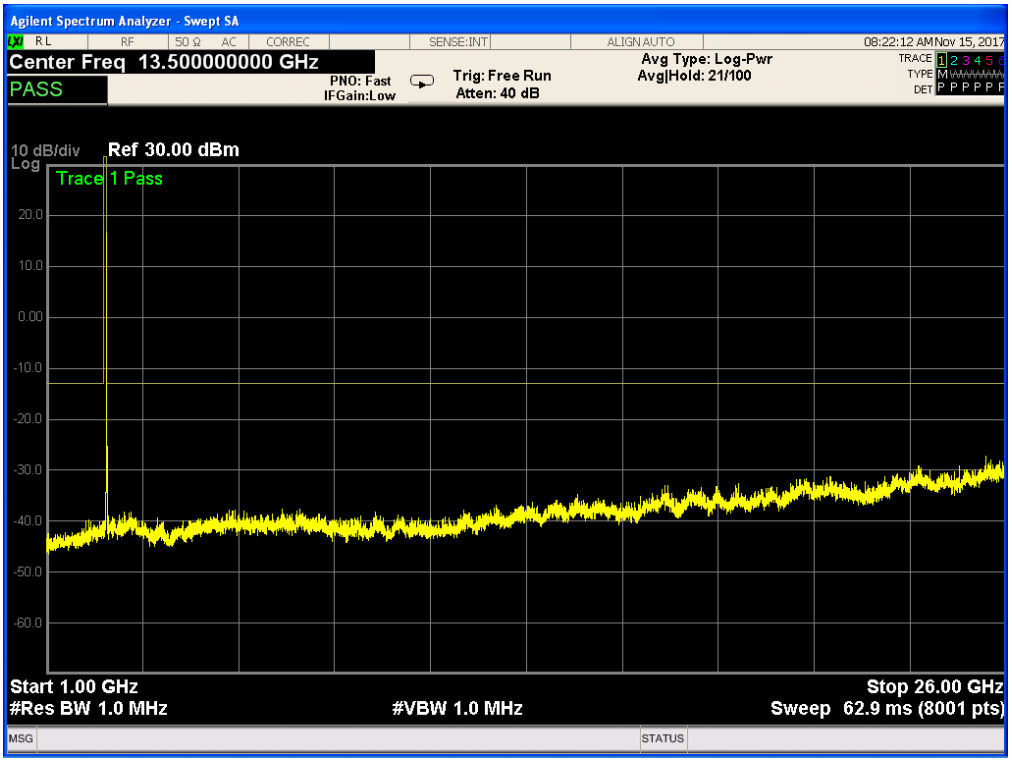
Band 7,UL Channel 21400,UL Frequency 2565.0,BW 10.0,NO. RB 50,RB POS. Low,QPSK



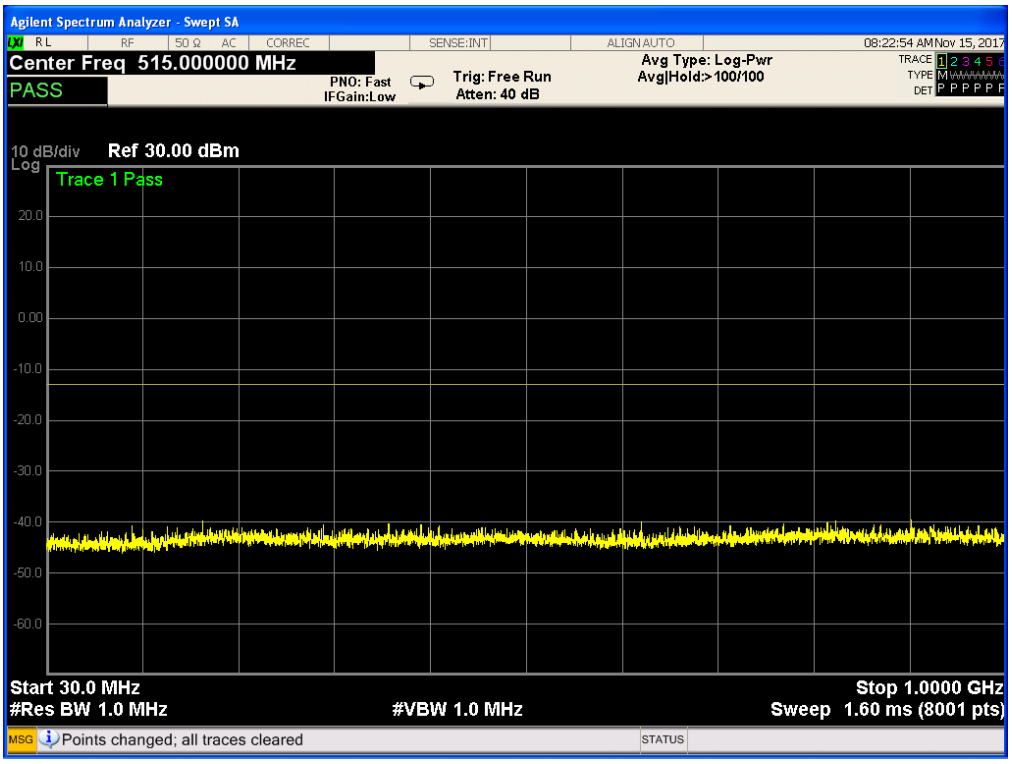
Band 7,UL Channel 21400,UL Frequency 2565.0,BW 10.0,NO. RB 50,RB POS. Low,16QAM



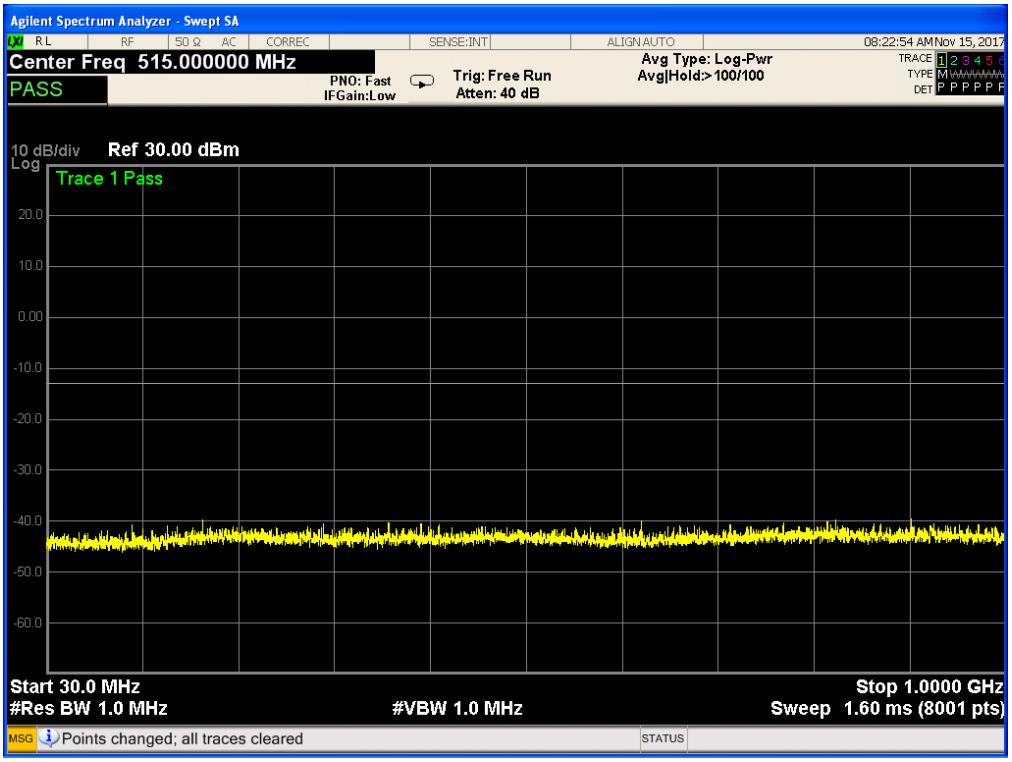
Band 7,UL Channel 21400,UL Frequency 2565.0,BW 10.0,NO. RB 50,RB POS. Low,16QAM



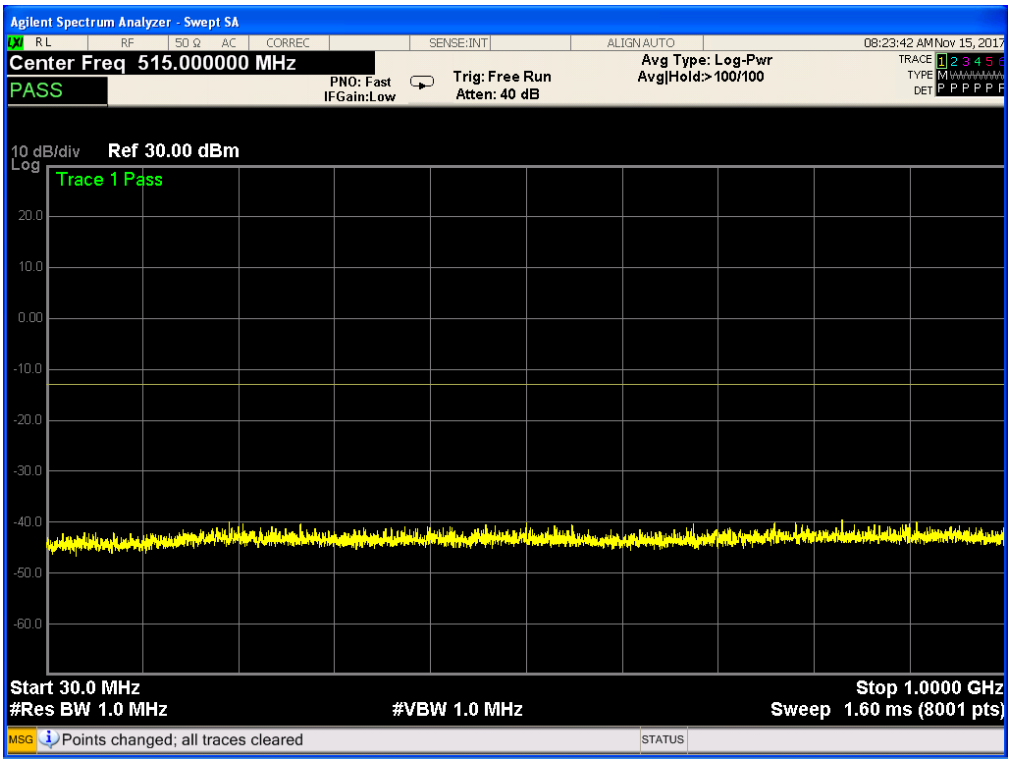
Band 7,UL Channel 20825,UL Frequency 2507.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



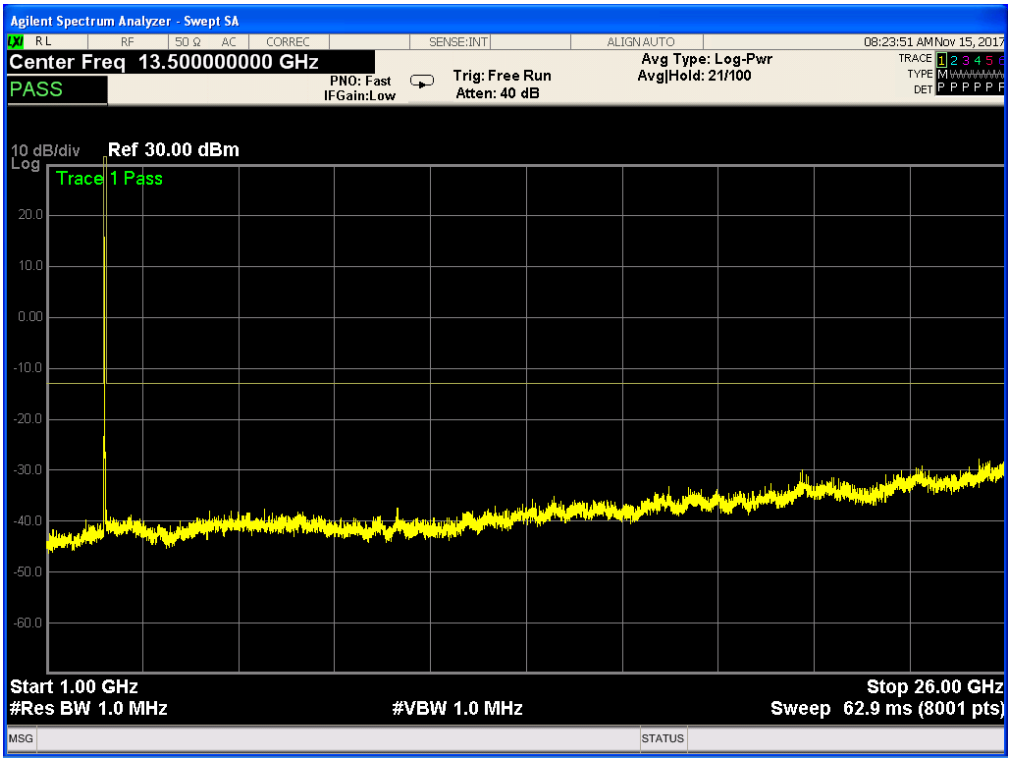
Band 7,UL Channel 20825,UL Frequency 2507.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



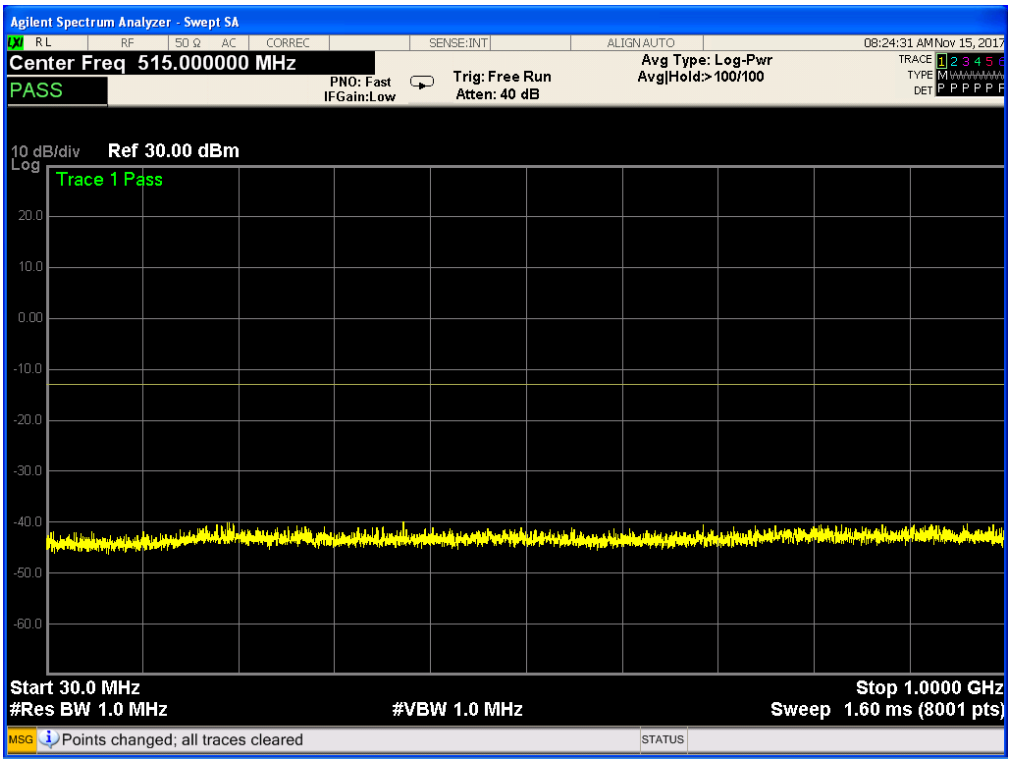
Band 7,UL Channel 20825,UL Frequency 2507.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



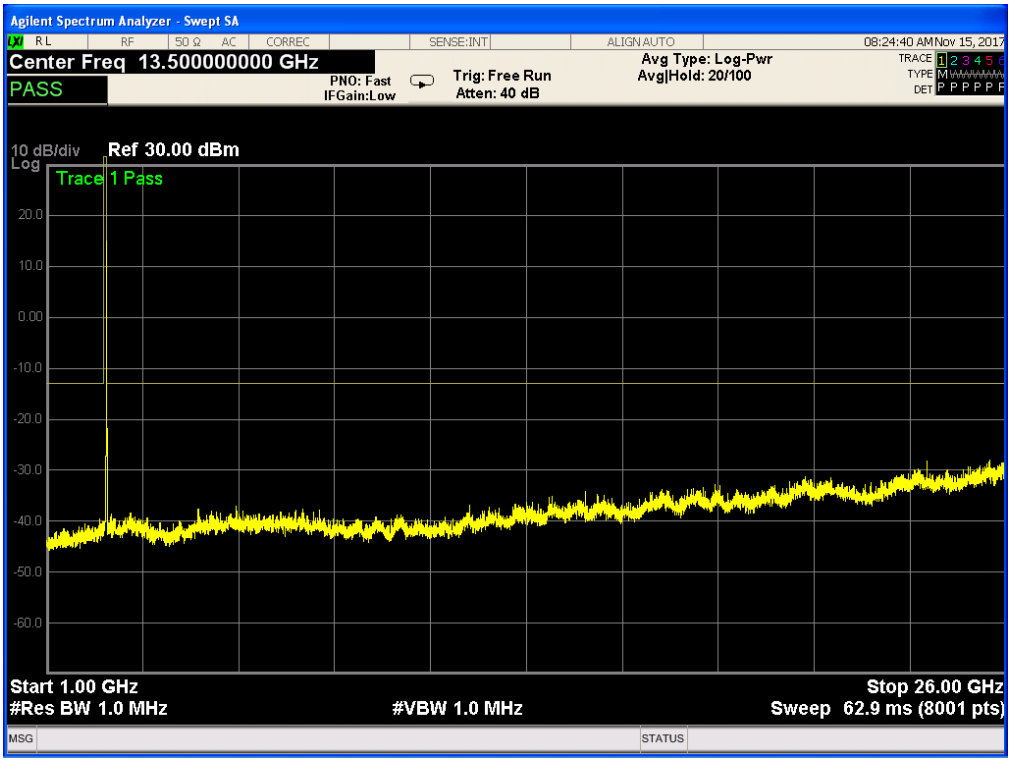
Band 7,UL Channel 20825,UL Frequency 2507.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



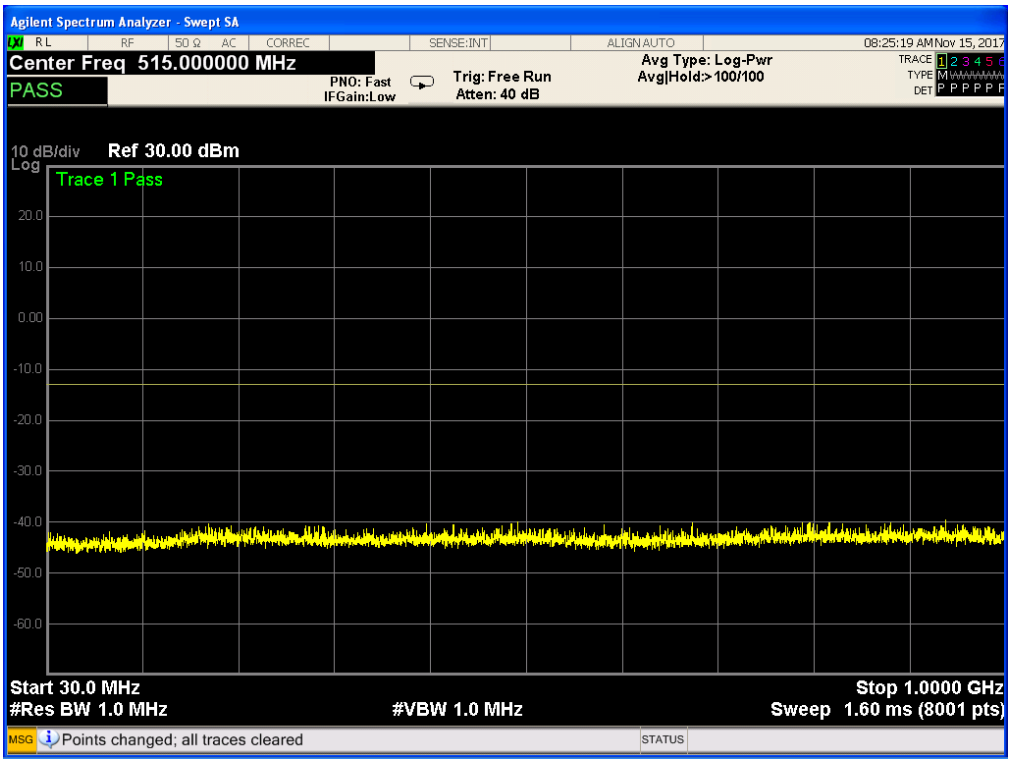
Band 7,UL Channel 21375,UL Frequency 2562.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



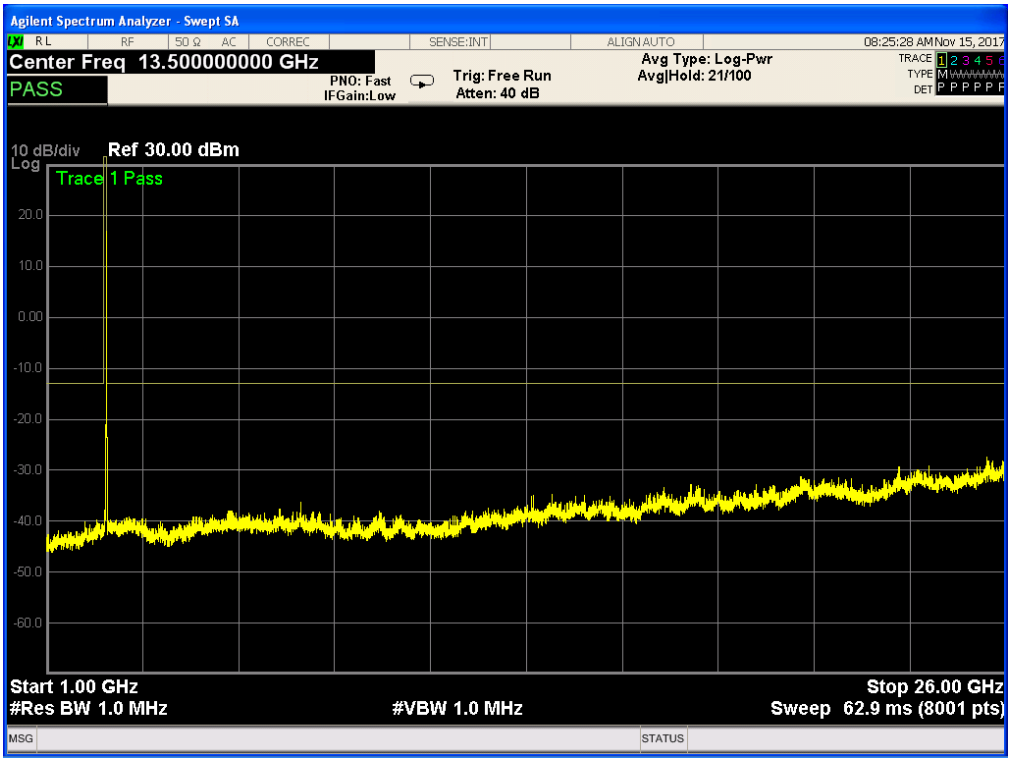
Band 7,UL Channel 21375,UL Frequency 2562.5,BW 15.0,NO. RB 75,RB POS. Low,QPSK



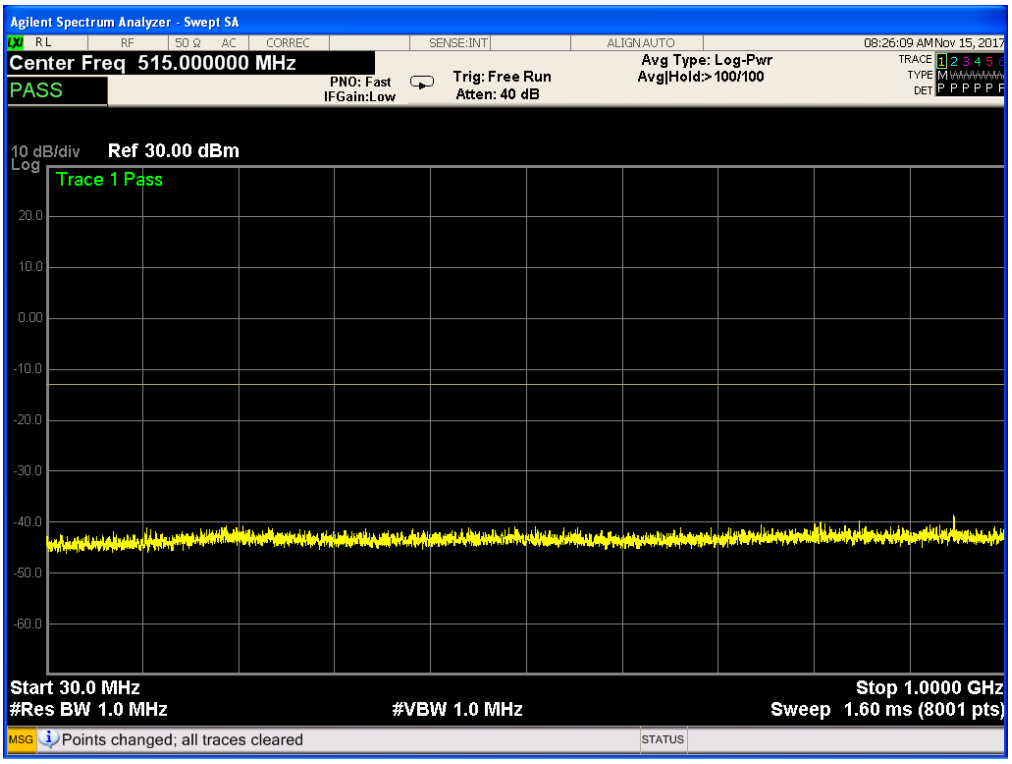
Band 7,UL Channel 21375,UL Frequency 2562.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



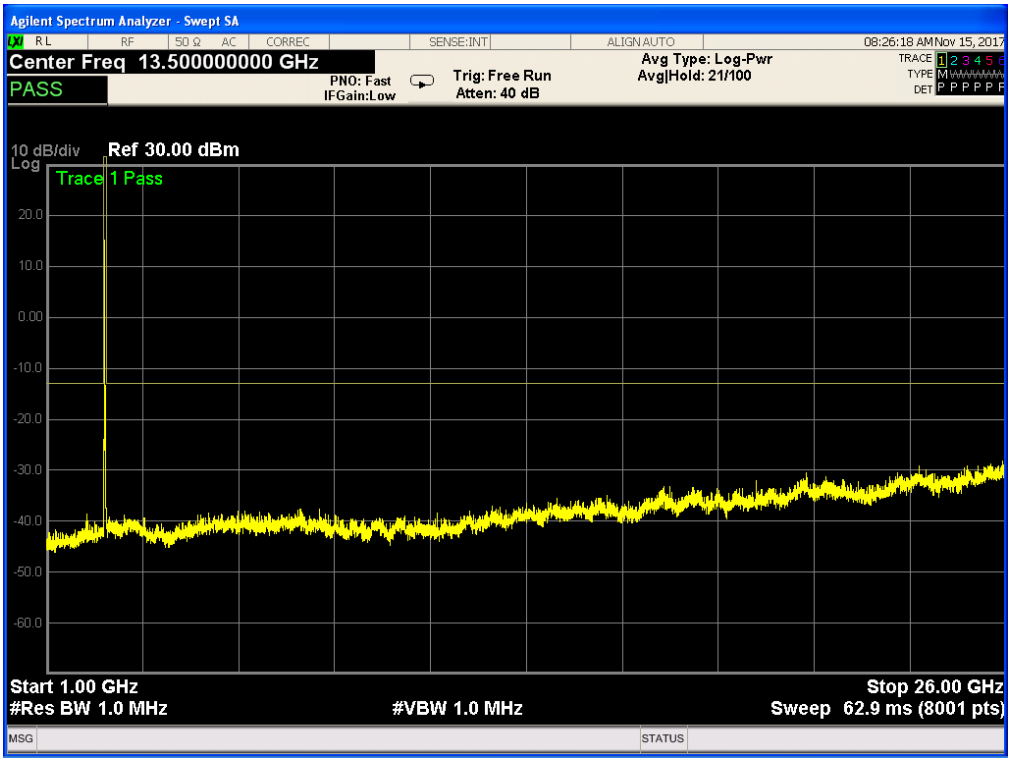
Band 7,UL Channel 21375,UL Frequency 2562.5,BW 15.0,NO. RB 75,RB POS. Low,16QAM



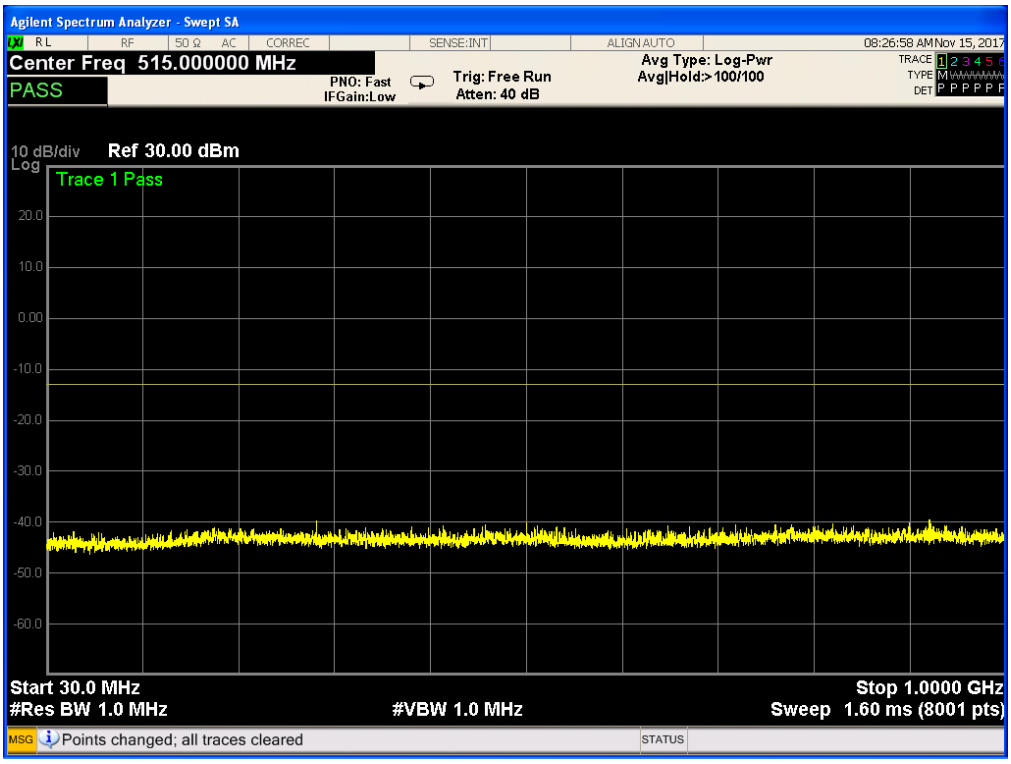
Band 7,UL Channel 20850,UL Frequency 2510.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



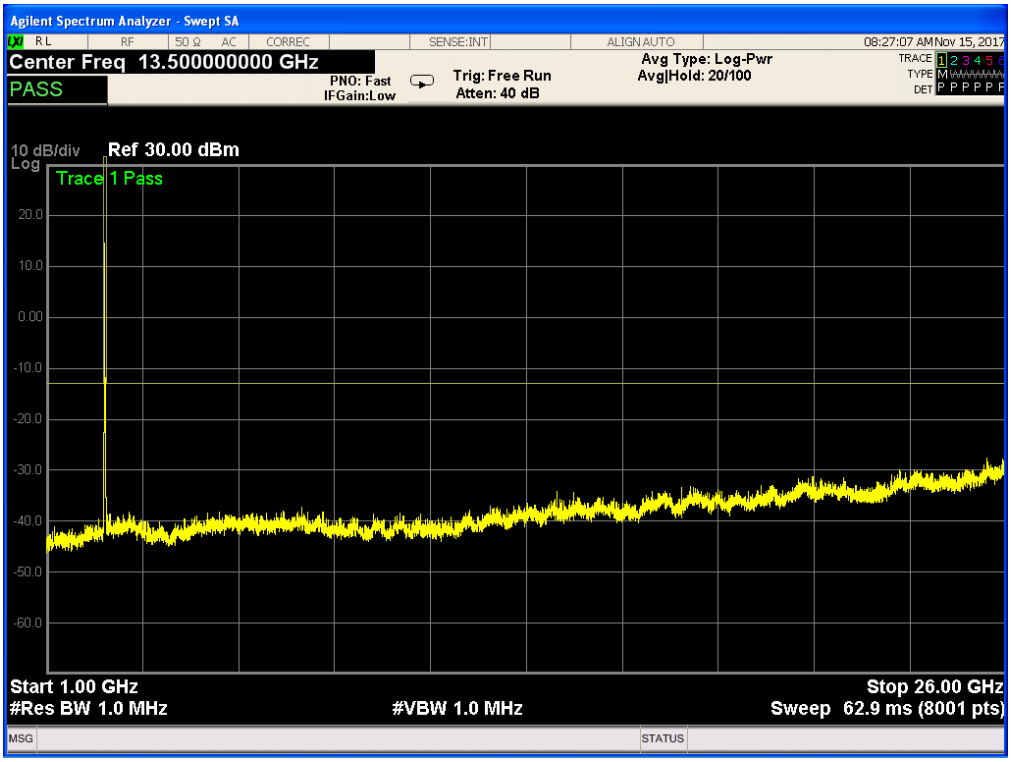
Band 7,UL Channel 20850,UL Frequency 2510.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



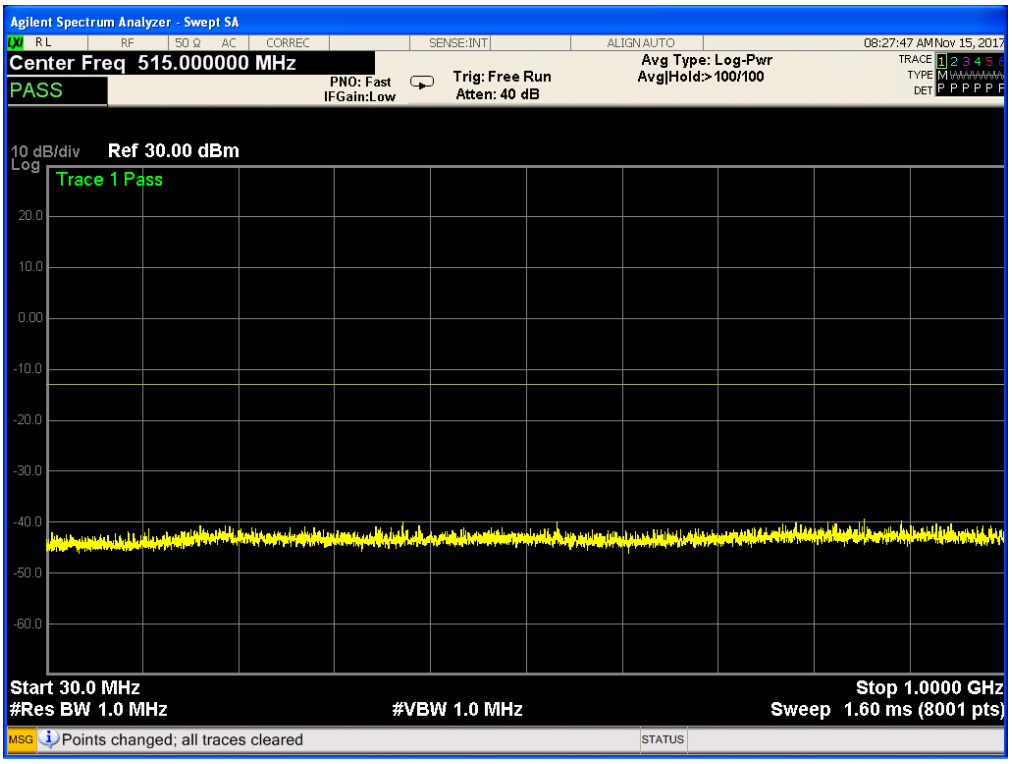
Band 7,UL Channel 20850,UL Frequency 2510.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



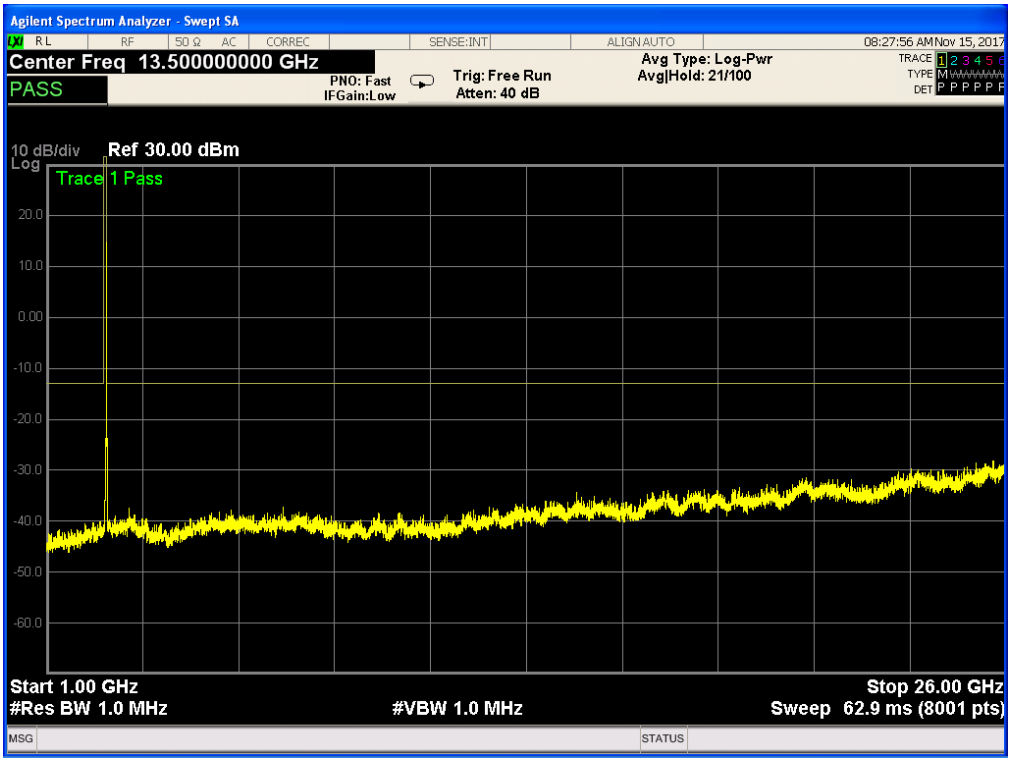
Band 7,UL Channel 20850,UL Frequency 2510.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



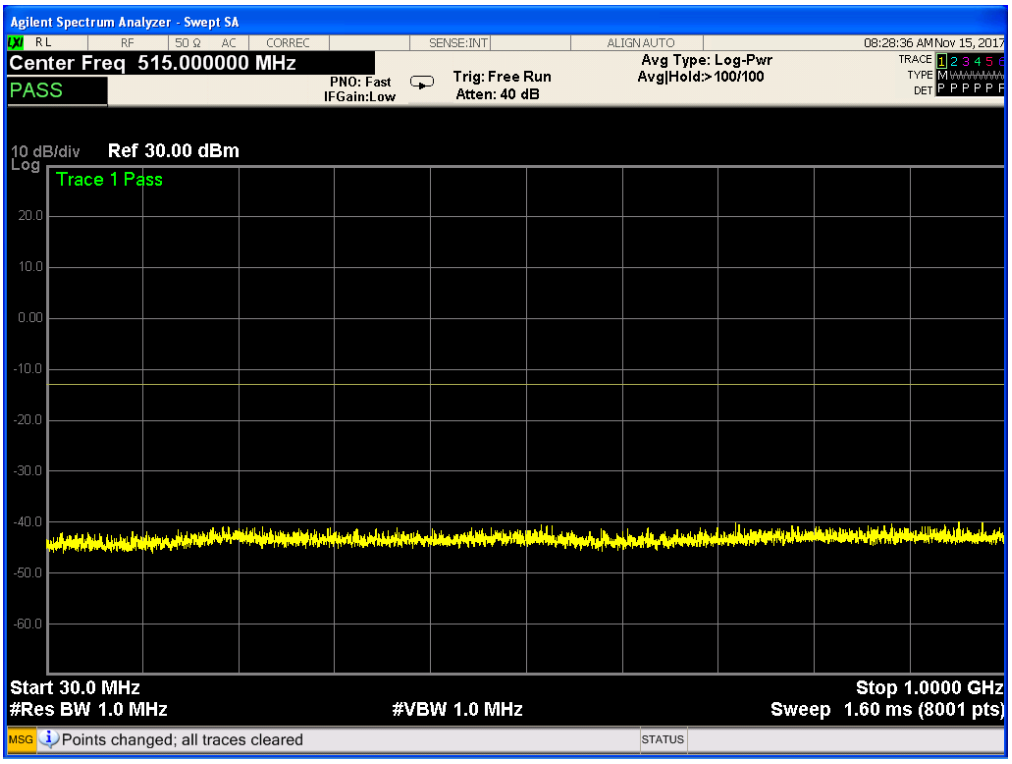
Band 7,UL Channel 21350,UL Frequency 2560.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



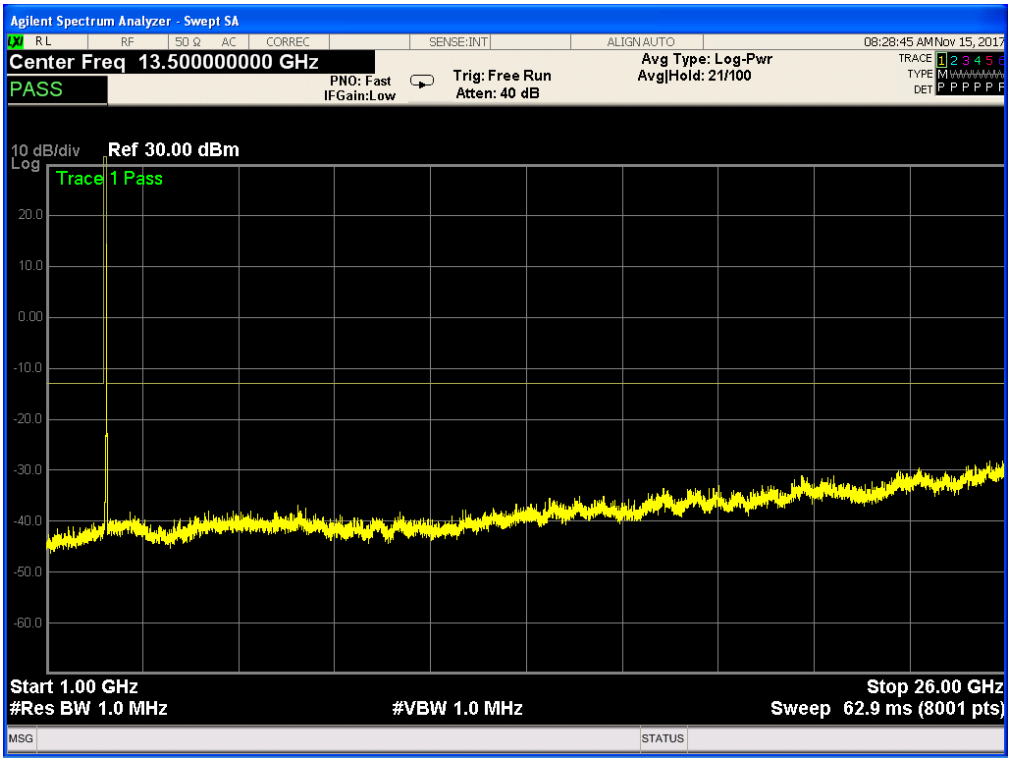
Band 7,UL Channel 21350,UL Frequency 2560.0,BW 20.0,NO. RB 100,RB POS. Low,QPSK



Band 7,UL Channel 21350,UL Frequency 2560.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



Band 7,UL Channel 21350,UL Frequency 2560.0,BW 20.0,NO. RB 100,RB POS. Low,16QAM



8. Radiated Spurious Emission

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232 and §27.50

LIMITS:

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.
27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.
27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17
KDB 971168 v02r01 RF power output using broadband peak and average power meter method.
KDB 971168 D01 Power Meas License Digital Systems v02r01, “Measurement Guidance for Certification of Licensed Digital Transmitters”

MODES TESTED

- ☐ LTE Band 2
- LTE Band 4
- LTE Band 5
- ☐ LTE Band7

RESULTS

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/ RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1850.7	-1.95	3.76	28.24	22.53	179.061	Horizontal	Pass
		1880	-1.52	3.91	28.22	22.79	190.015	Horizontal	Pass
		1909.3	-2.62	3.93	28.2	21.65	146.355	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	-2.81	3.76	28.24	21.67	146.783	Horizontal	Pass
		1880	-2.74	3.91	28.22	21.57	143.475	Horizontal	Pass
		1909.3	-2.08	3.93	28.2	22.19	165.685	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	-2.03	3.77	28.23	22.43	174.806	Horizontal	Pass
		1880	-2.53	3.91	28.24	21.80	151.485	Horizontal	Pass
		1908.5	-2.16	3.94	28.25	22.15	163.983	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-2.88	3.77	28.23	21.58	143.961	Horizontal	Pass
		1880	-2.25	3.91	28.24	22.08	161.384	Horizontal	Pass
		1908.5	-2.50	3.94	28.25	21.81	151.746	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	-2.73	3.77	28.31	21.81	151.715	Horizontal	Pass
		1880	-2.96	3.91	28.22	21.35	136.540	Horizontal	Pass
		1907.5	-2.85	3.94	28.2	21.41	138.310	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-2.95	3.77	28.31	21.59	144.163	Horizontal	Pass
		1880	-2.71	3.91	28.22	21.60	144.572	Horizontal	Pass
		1907.5	-2.03	3.94	28.2	22.23	167.218	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	-2.45	3.79	28.33	22.09	161.883	Horizontal	Pass
		1880	-2.89	3.95	28.22	21.38	137.409	Horizontal	Pass
		1905	-2.39	3.97	28.19	21.83	152.525	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	-2.47	3.79	28.33	22.07	161.166	Horizontal	Pass
		1880	-2.96	3.95	28.22	21.31	135.239	Horizontal	Pass
		1905	-2.94	3.97	28.19	21.28	134.250	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	-2.88	3.79	28.34	21.67	146.925	Horizontal	Pass
		1880	-2.61	3.95	28.22	21.66	146.567	Horizontal	Pass
		1902.5	-2.90	3.97	28.18	21.31	135.200	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-2.92	3.79	28.34	21.63	145.452	Horizontal	Pass
		1880	-2.47	3.95	28.22	21.80	151.508	Horizontal	Pass
		1902.5	-2.12	3.97	28.18	22.09	161.632	Horizontal	Pass

20.0MHz Band QPSK	100/0	1860	-2.68	3.81	28.35	21.86	153.549	Horizontal	Pass
		1880	-2.13	3.96	28.22	22.13	163.244	Horizontal	Pass
		1900	-2.86	4	28.16	21.30	134.970	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1860	-2.33	3.81	28.35	22.21	166.521	Horizontal	Pass
		1880	-2.83	3.96	28.22	21.43	139.089	Horizontal	Pass
		1900	-2.17	4	28.16	21.99	158.235	Horizontal	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Radiated Power (EIRP) for Band 2									
Mode	RB/ RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1850.7	-2.17	3.76	28.24	22.31	170.216	Vertical	Pass
		1880	-2.57	3.91	28.22	21.74	149.269	Vertical	Pass
		1909.3	-2.23	3.93	28.2	22.04	159.990	Vertical	Pass
1.4MHz Band 16 QAM	6/0	1850.7	-2.50	3.76	28.24	21.98	157.655	Vertical	Pass
		1880	-2.24	3.91	28.22	22.07	161.037	Vertical	Pass
		1909.3	-2.50	3.93	28.2	21.77	150.310	Vertical	Pass
3.0MHz Band QPSK	15/0	1851.5	-2.50	3.77	28.23	21.96	156.972	Vertical	Pass
		1880	-2.53	3.91	28.24	21.80	151.347	Vertical	Pass
		1908.5	-2.14	3.94	28.25	22.17	164.942	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-2.88	3.77	28.23	21.58	143.730	Vertical	Pass
		1880	-2.72	3.91	28.24	21.61	144.790	Vertical	Pass
		1908.5	-2.66	3.94	28.25	21.65	146.129	Vertical	Pass
5.0MHz Band QPSK	25/0	1852.5	-2.16	3.77	28.31	22.38	172.897	Vertical	Pass
		1880	-2.03	3.91	28.22	22.28	168.871	Vertical	Pass
		1907.5	-2.80	3.94	28.2	21.46	139.810	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-2.99	3.77	28.31	21.55	142.797	Vertical	Pass
		1880	-2.06	3.91	28.22	22.25	168.039	Vertical	Pass
		1907.5	-2.41	3.94	28.2	21.85	153.064	Vertical	Pass
10.0MHz Band QPSK	50/0	1855	-2.35	3.79	28.33	22.19	165.402	Vertical	Pass
		1880	-2.74	3.95	28.22	21.53	142.379	Vertical	Pass
		1905	-2.15	3.97	28.19	22.07	161.018	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1855	-2.48	3.79	28.33	22.06	160.867	Vertical	Pass
		1880	-2.88	3.95	28.22	21.39	137.777	Vertical	Pass
		1905	-2.01	3.97	28.19	22.21	166.245	Vertical	Pass
15.0MHz Band QPSK	75/0	1857.5	-2.01	3.79	28.34	22.54	179.410	Vertical	Pass
		1880	-2.80	3.95	28.22	21.47	140.359	Vertical	Pass
		1902.5	-2.36	3.97	28.18	21.85	153.152	Vertical	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-2.60	3.79	28.34	21.95	156.748	Vertical	Pass
		1880	-2.02	3.95	28.22	22.25	167.924	Vertical	Pass
		1902.5	-2.07	3.97	28.18	22.14	163.591	Vertical	Pass
20.0MHz Band	100/0	1860	-2.82	3.81	28.35	21.72	148.702	Vertical	Pass
		1880	-2.41	3.96	28.22	21.85	153.050	Vertical	Pass

QPSK		1900	-2.27	4	28.16	21.89	154.663	Vertical	Pass
20.0MHz Band 16 QAM	100/0	1860	-2.15	3.81	28.35	22.39	173.429	Vertical	Pass
		1880	-2.94	3.96	28.22	21.32	135.447	Vertical	Pass
		1900	-2.78	4	28.16	21.38	137.451	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1710.7	-2.40	3.12	27.58	22.06	160.670	Horizontal	Pass
		1732.5	-2.66	3.27	27.61	21.68	147.295	Horizontal	Pass
		1754.3	-2.22	3.29	27.63	22.12	163.041	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1710.7	-2.56	3.12	27.58	21.90	154.820	Horizontal	Pass
		1732.5	-2.12	3.27	27.61	22.22	166.593	Horizontal	Pass
		1754.3	-2.24	3.29	27.63	22.10	162.203	Horizontal	Pass
3.0MHz Band QPSK	15/0	1711.5	-2.94	3.13	27.61	21.54	142.613	Horizontal	Pass
		1732.5	-2.58	3.27	27.61	21.76	150.029	Horizontal	Pass
		1753.5	-2.32	3.3	27.62	22.00	158.533	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-2.03	3.13	27.61	22.45	175.698	Horizontal	Pass
		1732.5	-2.55	3.27	27.61	21.79	151.129	Horizontal	Pass
		1753.5	-2.81	3.3	27.62	21.51	141.436	Horizontal	Pass
5.0MHz Band QPSK	25/0	1712.5	-2.13	3.13	27.63	22.37	172.474	Horizontal	Pass
		1732.5	-2.86	3.27	27.61	21.48	140.496	Horizontal	Pass
		1752.5	-2.46	3.3	27.6	21.84	152.880	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-2.97	3.13	27.63	21.53	142.335	Horizontal	Pass
		1732.5	-2.45	3.27	27.61	21.89	154.515	Horizontal	Pass
		1752.5	-2.76	3.3	27.6	21.54	142.409	Horizontal	Pass
10.0MHz Band QPSK	50/0	1715	-2.00	3.15	27.64	22.49	177.332	Horizontal	Pass
		1732.5	-2.88	3.31	27.61	21.42	138.666	Horizontal	Pass
		1750	-2.84	3.33	27.59	21.42	138.691	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1715	-2.44	3.15	27.64	22.05	160.391	Horizontal	Pass
		1732.5	-2.28	3.31	27.61	22.02	159.289	Horizontal	Pass
		1750	-2.69	3.33	27.59	21.57	143.616	Horizontal	Pass
15.0MHz Band QPSK	75/0	1717.5	-2.20	3.15	27.65	22.30	169.927	Horizontal	Pass
		1732.5	-2.02	3.31	27.61	22.28	168.942	Horizontal	Pass
		1747.5	-2.05	3.33	27.57	22.19	165.533	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1717.5	-2.63	3.15	27.65	21.87	153.914	Horizontal	Pass
		1732.5	-2.52	3.31	27.61	21.78	150.652	Horizontal	Pass
		1747.5	-2.46	3.33	27.57	21.78	150.801	Horizontal	Pass

20.0MHz Band QPSK	100/0	1720	-2.17	3.17	27.66	22.32	170.452	Horizontal	Pass
		1732.5	-2.74	3.32	27.61	21.55	142.848	Horizontal	Pass
		1745	-2.22	3.36	27.56	21.98	157.730	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1720	-2.29	3.17	27.66	22.20	165.932	Horizontal	Pass
		1732.5	-2.75	3.32	27.61	21.54	142.461	Horizontal	Pass
		1745	-2.89	3.36	27.56	21.31	135.076	Horizontal	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1710.7	-2.59	3.12	27.58	21.87	153.708	Vertical	Pass
		1732.5	-2.73	3.27	27.61	21.61	145.042	Vertical	Pass
		1754.3	-2.25	3.29	27.63	22.09	161.863	Vertical	Pass
1.4MHz Band 16 QAM	6/0	1710.7	-2.73	3.12	27.58	21.73	148.869	Vertical	Pass
		1732.5	-2.89	3.27	27.61	21.45	139.532	Vertical	Pass
		1754.3	-2.20	3.29	27.63	22.14	163.713	Vertical	Pass
3.0MHz Band QPSK	15/0	1711.5	-2.54	3.13	27.61	21.94	156.238	Vertical	Pass
		1732.5	-2.99	3.27	27.61	21.35	136.404	Vertical	Pass
		1753.5	-2.91	3.3	27.62	21.41	138.237	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-2.05	3.13	27.61	22.43	174.982	Vertical	Pass
		1732.5	-2.25	3.27	27.61	22.09	161.658	Vertical	Pass
		1753.5	-2.71	3.3	27.62	21.61	144.990	Vertical	Pass
5.0MHz Band QPSK	25/0	1712.5	-2.09	3.13	27.63	22.41	174.044	Vertical	Pass
		1732.5	-2.00	3.27	27.61	22.34	171.376	Vertical	Pass
		1752.5	-2.95	3.3	27.6	21.35	136.473	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-2.41	3.13	27.63	22.09	161.941	Vertical	Pass
		1732.5	-2.66	3.27	27.61	21.68	147.105	Vertical	Pass
		1752.5	-2.34	3.3	27.6	21.96	156.894	Vertical	Pass
10.0MHz Band QPSK	50/0	1715	-2.80	3.15	27.64	21.69	147.427	Vertical	Pass
		1732.5	-2.38	3.31	27.61	21.92	155.507	Vertical	Pass
		1750	-2.12	3.33	27.59	22.14	163.709	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1715	-2.85	3.15	27.64	21.64	145.979	Vertical	Pass
		1732.5	-2.05	3.31	27.61	22.25	167.896	Vertical	Pass
		1750	-2.98	3.33	27.59	21.28	134.139	Vertical	Pass
15.0MHz Band QPSK	75/0	1717.5	-2.95	3.15	27.65	21.55	142.746	Vertical	Pass
		1732.5	-2.63	3.31	27.61	21.67	146.995	Vertical	Pass
		1747.5	-2.18	3.33	27.57	22.06	160.636	Vertical	Pass
15.0MHz Band 16 QAM	75/0	1717.5	-2.37	3.15	27.65	22.13	163.432	Vertical	Pass
		1732.5	-2.13	3.31	27.61	22.17	164.946	Vertical	Pass
		1747.5	-2.20	3.33	27.57	22.04	160.023	Vertical	Pass
20.0MH	100/0	1720	-2.20	3.17	27.66	22.29	169.324	Vertical	Pass

z Band		1732.5	-2.45	3.32	27.61	21.84	152.826	Vertical	Pass
QPSK		1745	-2.24	3.36	27.56	21.96	156.964	Vertical	Pass
20.0MH	100/0	1720	-2.28	3.17	27.66	22.21	166.411	Vertical	Pass
z Band		1732.5	-2.07	3.32	27.61	22.22	166.756	Vertical	Pass
16 QAM		1745	-2.87	3.36	27.56	21.33	135.895	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/ RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	7.58	2.01	19.68	2.15	23.10	204.174	Horizontal	Pass
		836.5	7.36	2.01	19.77	2.15	22.97	197.987	Horizontal	Pass
		848.3	7.05	2.02	19.82	2.15	22.70	186.017	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	7.85	2.01	19.68	2.15	23.37	217.338	Horizontal	Pass
		836.5	7.32	2.01	19.77	2.15	22.93	196.412	Horizontal	Pass
		848.3	7.20	2.02	19.82	2.15	22.85	192.836	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	7.66	2.01	19.7	2.15	23.20	209.123	Horizontal	Pass
		836.5	7.71	2.01	19.77	2.15	23.32	214.763	Horizontal	Pass
		847.5	7.90	2.02	19.81	2.15	23.54	226.141	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	7.25	2.01	19.7	2.15	22.79	190.061	Horizontal	Pass
		836.5	7.82	2.01	19.77	2.15	23.43	220.417	Horizontal	Pass
		847.5	7.98	2.02	19.81	2.15	23.62	229.921	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	7.47	2.01	19.71	2.15	23.02	200.276	Horizontal	Pass
		836.5	7.52	2.01	19.77	2.15	23.13	205.712	Horizontal	Pass
		846.5	7.53	2.02	19.79	2.15	23.15	206.324	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	7.14	2.01	19.71	2.15	22.69	185.629	Horizontal	Pass
		836.5	7.01	2.01	19.77	2.15	22.62	182.828	Horizontal	Pass
		846.5	7.51	2.02	19.79	2.15	23.13	205.410	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	7.47	2.01	19.73	2.15	23.04	201.335	Horizontal	Pass
		836.5	7.32	2.01	19.77	2.15	22.93	196.198	Horizontal	Pass
		844	7.12	2.02	19.78	2.15	22.73	187.297	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	7.39	2.01	19.73	2.15	22.96	197.769	Horizontal	Pass
		836.5	7.82	2.01	19.77	2.15	23.43	220.079	Horizontal	Pass
		844	7.24	2.02	19.78	2.15	22.85	192.551	Horizontal	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/ RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	7.66	2.01	19.68	2.15	23.18	207.861	Vertical	Pass
		836.5	7.91	2.01	19.77	2.15	23.52	224.874	Vertical	Pass
		848.3	7.06	2.02	19.82	2.15	22.71	186.484	Vertical	Pass
1.4MHz Band 16 QAM	6/0	824.7	7.69	2.01	19.68	2.15	23.21	209.294	Vertical	Pass
		836.5	7.09	2.01	19.77	2.15	22.70	186.418	Vertical	Pass
		848.3	7.47	2.02	19.82	2.15	23.12	204.975	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	7.16	2.01	19.7	2.15	22.70	186.149	Vertical	Pass
		836.5	7.30	2.01	19.77	2.15	22.91	195.268	Vertical	Pass
		847.5	7.35	2.02	19.81	2.15	22.99	198.868	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	7.21	2.01	19.7	2.15	22.75	188.335	Vertical	Pass
		836.5	7.02	2.01	19.77	2.15	22.63	183.133	Vertical	Pass
		847.5	7.22	2.02	19.81	2.15	22.86	193.220	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	7.77	2.01	19.71	2.15	23.32	214.968	Vertical	Pass
		836.5	7.38	2.01	19.77	2.15	22.99	199.294	Vertical	Pass
		846.5	7.34	2.02	19.79	2.15	22.96	197.642	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	7.56	2.01	19.71	2.15	23.11	204.755	Vertical	Pass
		836.5	7.46	2.01	19.77	2.15	23.07	202.861	Vertical	Pass
		846.5	7.88	2.02	19.79	2.15	23.50	223.816	Vertical	Pass
10.0MHz Band QPSK	50/0	829	7.06	2.01	19.73	2.15	22.63	183.060	Vertical	Pass
		836.5	7.32	2.01	19.77	2.15	22.93	196.195	Vertical	Pass
		844	7.00	2.02	19.78	2.15	22.61	182.501	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	7.79	2.01	19.73	2.15	23.36	216.746	Vertical	Pass
		836.5	7.72	2.01	19.77	2.15	23.33	215.360	Vertical	Pass
		844	7.26	2.02	19.78	2.15	22.87	193.837	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)
ERP=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/ RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	25/0	2502.5	-0.22	4.54	27.75	22.99	199.164	Horizontal	Pass
		2535	-0.77	4.69	27.72	22.26	168.177	Horizontal	Pass
		2567.5	-0.05	4.71	27.71	22.95	197.315	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	2502.5	-0.01	4.54	27.75	23.20	208.743	Horizontal	Pass
		2535	-0.62	4.69	27.72	22.41	174.053	Horizontal	Pass
		2567.5	-0.01	4.71	27.71	22.99	199.269	Horizontal	Pass
10.0MHz Band QPSK	50/0	2505	-0.39	4.55	27.76	22.82	191.570	Horizontal	Pass
		2535	-0.78	4.69	27.72	22.25	167.830	Horizontal	Pass
		2565	-0.93	4.72	27.7	22.05	160.163	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	2505	-0.81	4.55	27.76	22.40	173.980	Horizontal	Pass
		2535	-0.20	4.69	27.72	22.83	191.693	Horizontal	Pass
		2565	-0.40	4.72	27.7	22.58	180.932	Horizontal	Pass
15.0MHz Band QPSK	75/0	2507.5	-0.19	4.55	27.77	23.03	200.789	Horizontal	Pass
		2535	-0.06	4.69	27.72	22.97	198.235	Horizontal	Pass
		2562.5	-0.07	4.72	27.69	22.90	194.927	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	2507.5	-0.91	4.55	27.77	22.31	170.053	Horizontal	Pass
		2535	-0.46	4.69	27.72	22.57	180.829	Horizontal	Pass
		2562.5	-0.08	4.72	27.69	22.89	194.709	Horizontal	Pass
20.0MHz Band QPSK	100/0	2510	-0.85	4.57	27.78	22.36	171.991	Horizontal	Pass
		2535	-0.24	4.73	27.72	22.75	188.269	Horizontal	Pass
		2560	-0.88	4.75	27.68	22.05	160.315	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	2510	-0.35	4.57	27.78	22.86	193.371	Horizontal	Pass
		2535	-0.91	4.73	27.72	22.08	161.258	Horizontal	Pass
		2560	-0.39	4.75	27.68	22.54	179.634	Horizontal	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Radiated Power (EIRP) for Band 7									
Mode	RB/ RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	25/0	2502.5	-0.39	4.54	27.75	22.82	191.293	Vertical	Pass
		2535	-0.06	4.69	27.72	22.97	198.348	Vertical	Pass
		2567.5	-0.55	4.71	27.71	22.45	175.867	Vertical	Pass
5.0MHz Band 16 QAM	25/0	2502.5	-0.14	4.54	27.75	23.07	202.774	Vertical	Pass
		2535	-0.51	4.69	27.72	22.52	178.573	Vertical	Pass
		2567.5	-0.49	4.71	27.71	22.51	178.095	Vertical	Pass
10.0MHz Band QPSK	50/0	2505	-0.73	4.55	27.76	22.48	176.885	Vertical	Pass
		2535	-0.34	4.69	27.72	22.69	185.943	Vertical	Pass
		2565	-0.03	4.72	27.7	22.95	197.181	Vertical	Pass
10.0MHz Band 16 QAM	50/0	2505	-0.14	4.55	27.76	23.07	202.894	Vertical	Pass
		2535	-0.09	4.69	27.72	22.94	196.623	Vertical	Pass
		2565	-0.48	4.72	27.7	22.50	177.672	Vertical	Pass
15.0MHz Band QPSK	75/0	2507.5	-0.52	4.55	27.77	22.70	186.044	Vertical	Pass
		2535	-0.28	4.69	27.72	22.75	188.307	Vertical	Pass
		2562.5	-0.50	4.72	27.69	22.47	176.460	Vertical	Pass
15.0MHz Band 16 QAM	75/0	2507.5	-0.03	4.55	27.77	23.19	208.230	Vertical	Pass
		2535	-0.81	4.69	27.72	22.22	166.673	Vertical	Pass
		2562.5	-0.38	4.72	27.69	22.59	181.541	Vertical	Pass
20.0MHz Band QPSK	100/0	2510	-0.54	4.57	27.78	22.67	184.770	Vertical	Pass
		2535	-0.89	4.73	27.72	22.10	162.145	Vertical	Pass
		2560	-0.72	4.75	27.68	22.21	166.364	Vertical	Pass
20.0MHz Band 16 QAM	100/0	2510	-0.57	4.57	27.78	22.64	183.830	Vertical	Pass
		2535	-0.75	4.73	27.72	22.24	167.657	Vertical	Pass
		2560	-0.42	4.75	27.68	22.51	178.080	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

9. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238 and §27.53

LIMIT

§22.917 (e) and §24.238 (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.

§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.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz 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.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:
a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB; and
b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB at the channel edges and 55 + 10 Log10 (p) at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

- ☐ LTE Band 2
- LTE Band 4
- LTE Band 5
- ☐ LTE Band7

RESULTS

PASS

9.1 LTE BAND 2

QPSK EIRP POWER FOR LTE BAND 2 (1.4.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-52.59	4.04	33.51	-23.12	-13	-10.12	Horizontal
3701.4	-49.80	4.04	33.51	-20.33	-13	-7.33	Vertical
5552.1	-51.10	5.24	35.84	-20.50	-13	-7.50	Vertical
5552.1	-52.63	5.24	35.84	-22.03	-13	-9.03	Horizontal
Test Results for Mid Channel 1732.5MHz							
3760	-49.97	4.04	33.56	-20.45	-13	-7.45	Horizontal
3760	-52.23	4.04	33.56	-22.71	-13	-9.71	Vertical
5640	-50.74	5.24	35.91	-20.07	-13	-7.07	Vertical
5640	-51.11	5.24	35.91	-20.44	-13	-7.44	Horizontal
Test Results for High Channel 1754.3MHz							
3818.6	-56.68	4.04	34	-26.72	-13	-13.72	Horizontal
3818.6	-53.52	4.04	34	-23.56	-13	-10.56	Vertical
5727.9	-49.97	5.24	36.04	-19.17	-13	-6.17	Vertical
5727.9	-48.52	5.24	36.04	-17.72	-13	-4.72	Horizontal

QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720	-54.26	4.07	33.54	-24.79	-13	-11.79	Horizontal
3720	-49.98	4.07	33.54	-20.51	-13	-7.51	Vertical
5580	-53.37	5.28	35.86	-22.79	-13	-9.79	Vertical
5580	-55.54	5.28	35.86	-24.96	-13	-11.96	Horizontal
Test Results for Mid Channel 1732.5MHz							
3760	-49.63	4.04	33.56	-20.11	-13	-7.11	Horizontal
3760	-50.24	4.04	33.56	-20.72	-13	-7.72	Vertical
5640	-55.57	5.24	35.91	-24.90	-13	-11.90	Vertical
5640	-54.96	5.24	35.91	-24.29	-13	-11.29	Horizontal
Test Results for High Channel 1754.3MHz							
3800	-50.63	4.04	34	-20.67	-13	-7.67	Horizontal
3800	-51.14	4.04	34	-21.18	-13	-8.18	Vertical
5700	-54.47	5.24	36.04	-23.67	-13	-10.67	Vertical
5700	-52.29	5.24	36.04	-21.49	-13	-8.49	Horizontal

Note: 1. Absolute Level = SG Level- Cable Loss+ Antenna Gain
2. Over Limit= Absolute Level (dBm)-Limit(dBm)

9.2 LTE BAND 4

QPSK EIRP POWER FOR LTE BAND 4 (1.4.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-53.41	4.02	29.8	-27.63	-13	-14.63	Horizontal
3421.4	-51.18	4.02	29.8	-25.40	-13	-12.40	Vertical
5132.1	-50.59	5.24	35.84	-19.99	-13	-6.99	Vertical
5132.1	-54.46	5.24	35.84	-23.86	-13	-10.86	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465	-50.22	4.03	30	-24.25	-13	-11.25	Horizontal
3465	-49.96	4.03	30	-23.99	-13	-10.99	Vertical
5197.5	-49.84	5.25	35.86	-19.23	-13	-6.23	Vertical
5197.5	-50.57	5.25	35.86	-19.96	-13	-6.96	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-49.52	4.05	30.01	-23.56	-13	-10.56	Horizontal
3508.6	-50.13	4.05	30.01	-24.17	-13	-11.17	Vertical
5262.9	-51.16	5.26	35.86	-20.56	-13	-7.56	Vertical
5262.9	-52.28	5.26	35.86	-21.68	-13	-8.68	Horizontal

QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440	-53.26	4.02	29.8	-27.48	-13	-14.48	Horizontal
3440	-52.25	4.02	29.8	-26.47	-13	-13.47	Vertical
5160	-55.59	5.24	35.84	-24.99	-13	-11.99	Vertical
5160	-54.46	5.24	35.84	-23.86	-13	-10.86	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465	-49.97	4.03	30	-24.00	-13	-11.00	Horizontal
3465	-51.13	4.03	30	-25.16	-13	-12.16	Vertical
5197.5	-50.44	5.25	35.86	-19.83	-13	-6.83	Vertical
5197.5	-53.32	5.25	35.86	-22.71	-13	-9.71	Horizontal
Test Results for High Channel 1754.3MHz							
2490	-49.97	2.91	27.68	-25.20	-13	-12.20	Horizontal
3490	-48.52	2.91	27.68	-23.75	-13	-10.75	Vertical
5235	-52.27	5.26	35.86	-21.67	-13	-8.67	Vertical
5235	-53.34	5.26	35.86	-22.74	-13	-9.74	Horizontal

Note: 1. Absolute Level = SG Level- Cable Loss+ Antenna Gain
2. Over Limit= Absolute Level (dBm)-Limit(dBm)

9.3 LTE BAND 5

QPSK EIRP POWER FOR LTE BAND 5 (1.4.0MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1649.4	-49.59	2.78	27.5	-24.87	-13	-11.87	Horizontal
1649.4	-48.74	2.78	27.5	-24.02	-13	-11.02	Vertical
2474.1	-51.13	2.9	27.8	-26.23	-13	-13.23	Vertical
2474.1	-52.24	2.9	27.8	-27.34	-13	-14.34	Horizontal
Test Results For Mid Channel 836.5MHz							
1673	-48.52	2.8	27.48	-23.84	-13	-10.84	Horizontal
1673	-47.63	2.8	27.48	-22.95	-13	-9.95	Vertical
2509.5	-49.96	2.91	27.7	-25.17	-13	-12.17	Vertical
2509.5	-50.13	2.91	27.7	-25.34	-13	-12.34	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-49.64	2.82	27.43	-25.03	-13	-12.03	Horizontal
1696.6	-50.21	2.82	27.43	-25.60	-13	-12.60	Vertical
2544.9	-48.87	2.92	27.74	-24.05	-13	-11.05	Vertical
2544.9	-51.13	2.92	27.74	-26.31	-13	-13.31	Horizontal

QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1658	-49.97	2.78	27.5	-25.25	-13	-12.25	Horizontal
1658	-48.52	2.78	27.5	-23.80	-13	-10.80	Vertical
2487	-49.99	2.9	27.8	-25.09	-13	-12.09	Vertical
2487	-50.24	2.9	27.8	-25.34	-13	-12.34	Horizontal
Test Results for Mid Channel 836.5MHz							
1673	-51.13	2.8	27.48	-26.45	-13	-13.45	Horizontal
1673	-52.24	2.8	27.48	-27.56	-13	-14.56	Vertical
2509.5	-49.97	2.91	27.7	-25.18	-13	-12.18	Vertical
2509.5	-50.65	2.91	27.7	-25.86	-13	-12.86	Horizontal
Test Results for High Channel 848.3MHz							
1688	-48.74	2.82	27.43	-24.13	-13	-11.13	Horizontal
1688	-49.94	2.82	27.43	-25.33	-13	-12.33	Vertical
2532	-50.32	2.92	27.74	-25.50	-13	-12.50	Vertical

2532	-51.16	2.92	27.74	-26.34	-13	-13.34	Horizontal

Note: 1. Absolute Level = SG Level- Cable Loss+ Antenna Gain
2. Over Limit= Absolute Level (dBm)-Limit(dBm)

9.4 LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5005	-50.13	5.23	35.81	-19.55	-13	-6.55	Horizontal
5005	-51.13	5.23	35.81	-20.55	-13	-7.55	Vertical
7507.5	-53.69	5.67	36.85	-22.51	-13	-9.51	Vertical
7507.5	-54.47	5.67	36.85	-23.29	-13	-10.29	Horizontal
Test Results for Mid Channel 1732.5MHz							
5070	-50.28	5.23	35.82	-19.69	-13	-6.69	Horizontal
5070	-52.23	5.23	35.82	-21.64	-13	-8.64	Vertical
7605	-53.37	5.67	36.85	-22.19	-13	-9.19	Vertical
7605	-52.16	5.67	36.85	-20.98	-13	-7.98	Horizontal
Test Results for High Channel 1754.3MHz							
5135	-49.98	5.24	35.83	-19.39	-13	-6.39	Horizontal
5135	-50.57	5.24	35.83	-19.98	-13	-6.98	Vertical
7702.5	-51.14	5.68	36.87	-19.95	-13	-6.95	Vertical
7702.5	-52.58	5.68	36.87	-21.39	-13	-8.39	Horizontal

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5020	-52.33	5.23	35.82	-21.74	-13	-8.74	Horizontal
5020	-51.17	5.23	35.82	-20.58	-13	-7.58	Vertical
7530	-54.48	5.67	36.86	-23.29	-13	-10.29	Vertical
7530	-55.59	5.67	36.86	-24.40	-13	-11.40	Horizontal
Test Results for Mid Channel 1732.5MHz							
5070	-52.24	5.23	35.82	-21.65	-13	-8.65	Horizontal
5070	-53.36	5.23	35.82	-22.77	-13	-9.77	Vertical
7605	-54.47	5.67	36.85	-23.29	-13	-10.29	Vertical
7605	-55.63	5.67	36.85	-24.45	-13	-11.45	Horizontal
Test Results for High Channel 1754.3MHz							
5120	-51.12	5.24	35.83	-20.53	-13	-7.53	Horizontal
5120	-53.32	5.24	35.83	-22.73	-13	-9.73	Vertical
7680	-52.28	5.7	36.88	-21.10	-13	-8.10	Vertical
7680	-54.46	5.7	36.88	-23.28	-13	-10.28	Horizontal

Note: 1. Absolute Level = SG Level- Cable Loss+ Antenna Gain
2. Over Limit= Absolute Level (dBm)-Limit(dBm)

10. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =low voltage, 36VDC, Normal, 3.8VDC and High voltage, 4.4VDC.

Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to -30ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

MODES TESTED

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band7

RESULTS

See the following pages.

10.1 LTE BAND 2

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 QPSK, (CH *18900* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1880	-11.4	-0.006064	2.5
3.8	1880	-9.9	-0.005288	2.5
4.3	1880	-15.4	-0.008191	2.5

Frequency error vs. Temperature

Temperature [° C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 QPSK, (CH *18900* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1880	-5	-0.002660	2.5
Extreme (50C)	1880	-1.9	-0.001011	2.5
Extreme (40C)	1880	4.5	0.002394	2.5
Extreme (30C)	1880	6.3	0.003351	2.5
Extreme (10C)	1880	-2.9	-0.001543	2.5
Extreme (0C)	1880	-3.3	-0.001755	2.5
Extreme (-10C)	1880	4.4	0.002340	2.5
Extreme (-20C)	1880	7.2	0.003830	2.5
Extreme (-30C)	1880	6.9	0.003670	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 16QAM, (CH *18900* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1880	-10.9	-0.005798	2.5
3.8	1880	-8.5	-0.004521	2.5
4.3	1880	6.5	0.003457	2.5

Frequency error vs. Temperature

Temperature [° C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 16QAM, (CH *18900* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1880	-11.5	-0.006117	2.5
Extreme (50C)	1880	-19.6	-0.010426	2.5
Extreme (40C)	1880	-17.4	-0.009255	2.5
Extreme (30C)	1880	-5.2	-0.002766	2.5
Extreme (10C)	1880	-9.5	-0.005053	2.5
Extreme (0C)	1880	-8.8	-0.004681	2.5
Extreme (-10C)	1880	-8.2	-0.004362	2.5
Extreme (-20C)	1880	-7.9	-0.004202	2.5
Extreme (-30C)	1880	-7.7	-0.004096	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.2 LTE BAND 4

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 QPSK, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1732.5	12.2	0.007068	2.5
3.8	1732.5	8.8	0.005053	2.5
4.3	1732.5	10.1	0.005830	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 QPSK, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1732.5	8.5	0.004906	2.5
Extreme (50C)	1732.5	7.9	0.004560	2.5
Extreme (40C)	1732.5	11.3	0.006522	2.5
Extreme (30C)	1732.5	10.4	0.006003	2.5
Extreme (10C)	1732.5	6.9	0.003983	2.5
Extreme (0C)	1732.5	7.4	0.004271	2.5
Extreme (-10C)	1732.5	7.9	0.004560	2.5
Extreme (-20C)	1732.5	8.5	0.004906	2.5
Extreme (-30C)	1732.5	9.3	0.005368	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 16QAM, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1732.5	6.3	0.003636	2.5
3.8	1732.5	5.5	0.003175	2.5
4.3	1732.5	6.9	0.003983	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 16QAM, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1732.5	7.4	0.004271	2.5
Extreme (50C)	1732.5	7.1	0.004098	2.5
Extreme (40C)	1732.5	6.3	0.003636	2.5
Extreme (30C)	1732.5	5.9	0.003405	2.5
Extreme (10C)	1732.5	6.6	0.003810	2.5
Extreme (0C)	1732.5	7.3	0.004214	2.5
Extreme (-10C)	1732.5	7.9	0.004560	2.5
Extreme (-20C)	1732.5	8.8	0.005079	2.5
Extreme (-30C)	1732.5	8.4	0.004848	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.3 LTE BAND 5

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 QPSK, (CH 20175 RB size 100 RB Offset 0 10MHz BANDWIDTH)				
3.4	2535	-11.8	-0.004644	2.5
3.8	2535	-15.8	-0.006224	2.5
4.3	2535	-5.8	-0.002288	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 QPSK, (CH 20175 RB size 100 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	2535	-11.4	-0.004497	2.5
Extreme (50C)	2535	-15.7	-0.006193	2.5
Extreme (40C)	2535	-13.6	-0.005365	2.5
Extreme (30C)	2535	-12.2	-0.004813	2.5
Extreme (10C)	2535	-12.8	-0.005049	2.5
Extreme (0C)	2535	-13.4	-0.005286	2.5
Extreme (-10C)	2535	-14.4	-0.005680	2.5
Extreme (-20C)	2535	-14.2	-0.005602	2.5
Extreme (-30C)	2535	-14.7	-0.005799	2.5

16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 16QAM, (CH 20175 RB size 100 RB Offset 0 10MHz BANDWIDTH)				
3.4	2535	-13.5	-0.005325	2.5
3.8	2535	-8.7	-0.003432	2.5
4.3	2535	-9.6	-0.003787	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 16QAM, (CH 20175 RB size 100 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	2535	-10.1	-0.003984	2.5
Extreme (50C)	2535	-11.4	-0.004497	2.5
Extreme (40C)	2535	-10.2	-0.004024	2.5
Extreme (30C)	2535	-8.6	-0.003393	2.5
Extreme (10C)	2535	-9.9	-0.003905	2.5
Extreme (0C)	2535	-10.3	-0.004063	2.5
Extreme (-10C)	2535	-12.7	-0.005010	2.5
Extreme (-20C)	2535	-10.3	-0.004063	2.5
Extreme (-30C)	2535	-8.5	-0.003353	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.4 LTE BAND 7

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 7 QPSK, (CH *21100* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	836.5	-3.6	-0.004275	2.5
3.8	836.5	9.7	0.011560	2.5
4.3	836.5	4.5	0.005380	2.5

Frequency error vs. Temperature

Temperature [° C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 7 QPSK, (CH *21100* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	836.5	8.6	0.010281	2.5
Extreme (50C)	836.5	5.5	0.006575	2.5
Extreme (40C)	836.5	5.9	0.007053	2.5
Extreme (30C)	836.5	6.7	0.008010	2.5
Extreme (10C)	836.5	7.3	0.008727	2.5
Extreme (0C)	836.5	7.1	0.008488	2.5
Extreme (-10C)	836.5	4.2	0.005021	2.5
Extreme (-20C)	836.5	4.8	0.005738	2.5
Extreme (-30C)	836.5	5	0.005977	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 7 16QAM, (CH *21100* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	836.5	6.3	0.007531	2.5
3.8	836.5	5.9	0.007053	2.5
4.3	836.5	6.7	0.008010	2.5

Frequency error vs. Temperature

Temperature [° C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 7 16QAM, (CH *21100* RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	836.5	7.7	0.009205	2.5
Extreme (50C)	836.5	8.5	0.010161	2.5
Extreme (40C)	836.5	-6.9	-0.008249	2.5
Extreme (30C)	836.5	-1.5	-0.001793	2.5
Extreme (10C)	836.5	-4.3	-0.005140	2.5
Extreme (0C)	836.5	5.2	0.006216	2.5
Extreme (-10C)	836.5	5.9	0.007053	2.5
Extreme (-20C)	836.5	6.6	0.007890	2.5
Extreme (-30C)	836.5	6.1	0.007292	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

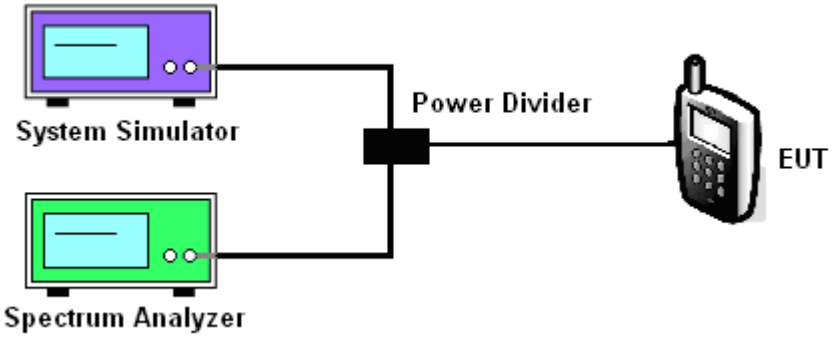
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. For GSM/EGPRS operating modes:
   a. Set the RBW = 1MHz, VBW = 1MHz, Peak detector in spectrum analyzer.
   b. Set EUT in maximum power output, and triggered the burst signal.
   c. Measured respectively the Peak level and Mean level, and the deviation was recorded as Peak to Average Ratio.
4. For UMTS operating modes:
   a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
   b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

11.4 Test Setup



MODES TESTED

- ☐ LTE Band2
- LTE Band 4
- LTE Band 5
- ☐ LTE Band7

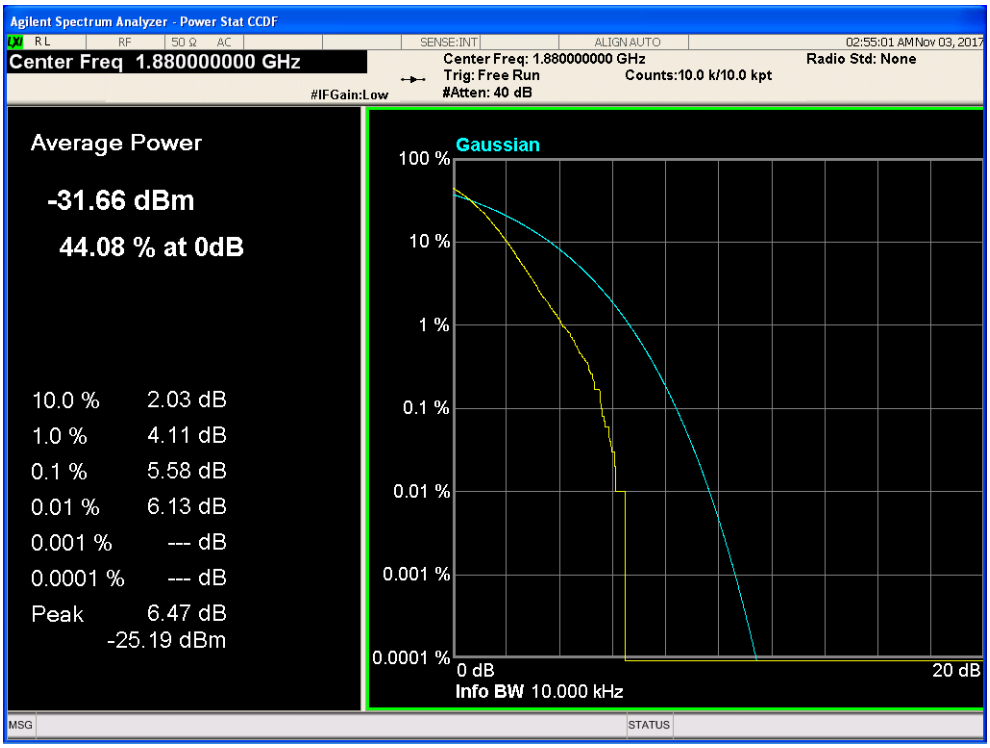
BAND	CHANNEL	Frequency [MHz]	BANDWIDTH	NO. RB	RB POS.	MODULATION	PAR [dB]
2	18900	1880.0	1.4	1	Low	QPSK	5.58
2	18900	1880.0	1.4	1	Low	16QAM	4.43
2	18900	1880.0	3.0	1	Low	QPSK	1.73
2	18900	1880.0	3.0	1	Low	16QAM	1.23
2	18900	1880.0	5.0	1	Low	QPSK	1.44
2	18900	1880.0	5.0	1	Low	16QAM	1.46
2	18900	1880.0	10.0	1	Low	QPSK	1.52
2	18900	1880.0	10.0	1	Low	16QAM	1.21
2	18900	1880.0	15.0	1	Low	QPSK	1.44
2	18900	1880.0	15.0	1	Low	16QAM	1.23
2	18900	1880.0	20.0	1	Low	QPSK	1.43
2	18900	1880.0	20.0	1	Low	16QAM	1.29
4	20175	1732.5	1.4	1	Low	QPSK	4.06
4	20175	1732.5	1.4	1	Low	16QAM	4.15
4	20175	1732.5	3.0	1	Low	QPSK	1.23
4	20175	1732.5	3.0	1	Low	16QAM	1.39
4	20175	1732.5	5.0	1	Low	QPSK	1.32
4	20175	1732.5	5.0	1	Low	16QAM	1.33
4	20175	1732.5	10.0	1	Low	QPSK	1.29
4	20175	1732.5	10.0	1	Low	16QAM	1.40

4	20175	1732.5	15.0	1	Low	QPSK	1.18
4	20175	1732.5	15.0	1	Low	16QAM	1.21
4	20175	1732.5	20.0	1	Low	QPSK	1.21
4	20175	1732.5	20.0	1	Low	16QAM	1.14
5	20407	824.7	1.4	1	Low	QPSK	8.67
5	20407	824.7	1.4	1	Low	16-QAM	6.65
5	20525	836.5	1.4	1	Low	QPSK	1.75
5	20525	836.5	1.4	1	Low	16-QAM	1.75
5	20643	848.3	1.4	1	Low	QPSK	2.84
5	20643	848.3	1.4	1	Low	16-QAM	2.38
5	20415	825.5	3.0	1	Low	QPSK	1.84
5	20415	825.5	3.0	1	Low	16-QAM	1.75
5	20525	836.5	3.0	1	Low	QPSK	3.59
5	20525	836.5	3.0	1	Low	16-QAM	4.11
5	20635	847.5	3.0	1	Low	QPSK	4.47
5	20635	847.5	3.0	1	Low	16-QAM	4.52
5	20425	826.5	5.0	1	Low	QPSK	3.75
5	20425	826.5	5.0	1	Low	16-QAM	3.53
5	20525	836.5	5.0	1	Low	QPSK	3.19
5	20525	836.5	5.0	1	Low	16-QAM	3.62
5	20625	846.5	5.0	1	Low	QPSK	5.71
5	20625	846.5	5.0	1	Low	16-QAM	4.73

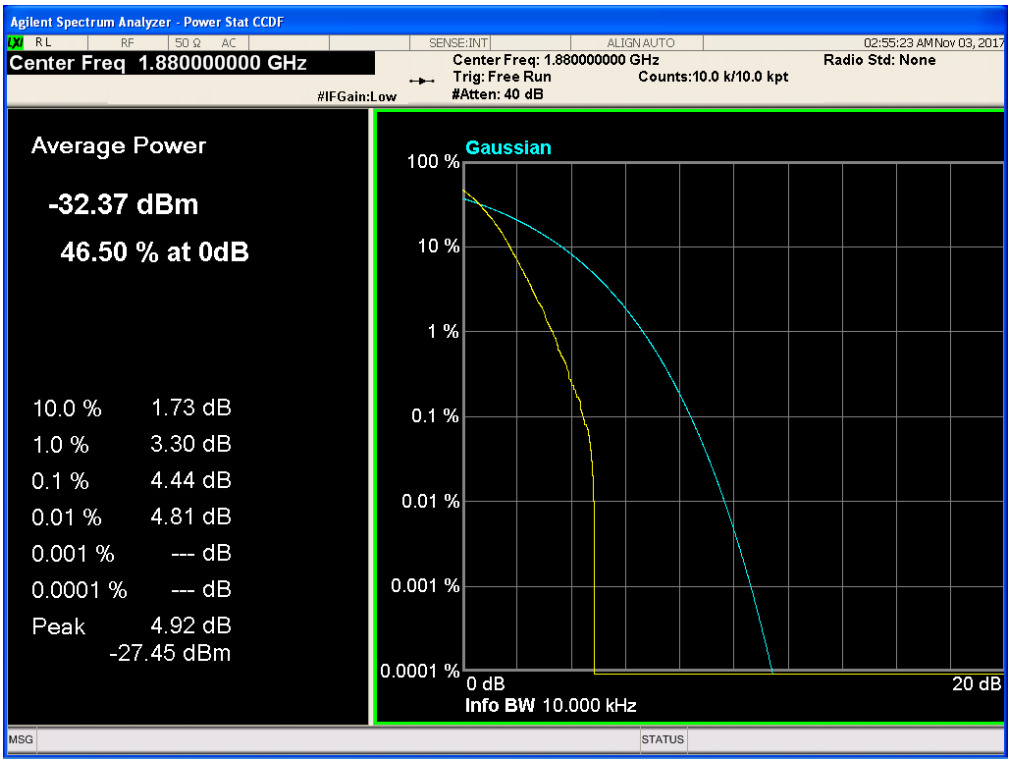
5	20407	824.7	1.4	1	Low	QPSK	5.76
5	20407	824.7	1.4	1	Low	16-QAM	5.24
5	20450	829.0	10.0	1	Low	QPSK	8.28
5	20450	829.0	10.0	1	Low	16-QAM	8.43
5	20525	836.5	10.0	1	Low	QPSK	4.92
5	20525	836.5	10.0	1	Low	16-QAM	5.41
7	21100	2535.0	5.0	1	Low	QPSK	1.39
7	21100	2535.0	5.0	1	Low	16QAM	1.39
7	21100	2535.0	10.0	1	Low	QPSK	1.22
7	21100	2535.0	10.0	1	Low	16QAM	1.30
7	21100	2535.0	15.0	1	Low	QPSK	1.30
7	21100	2535.0	15.0	1	Low	16QAM	1.21
7	21100	2535.0	20.0	1	Low	QPSK	1.25
7	21100	2535.0	20.0	1	Low	16QAM	1.35

11.5 LTE BAND 2

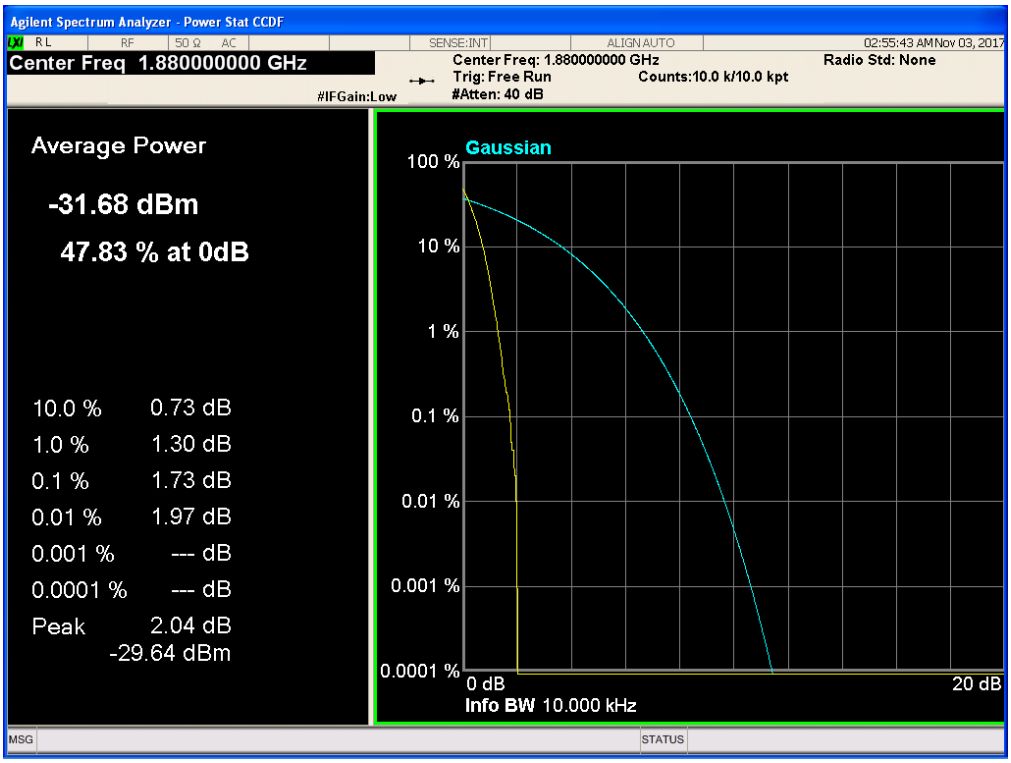
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 1.4,NO. RB 1,RB POS. Low,QPSK



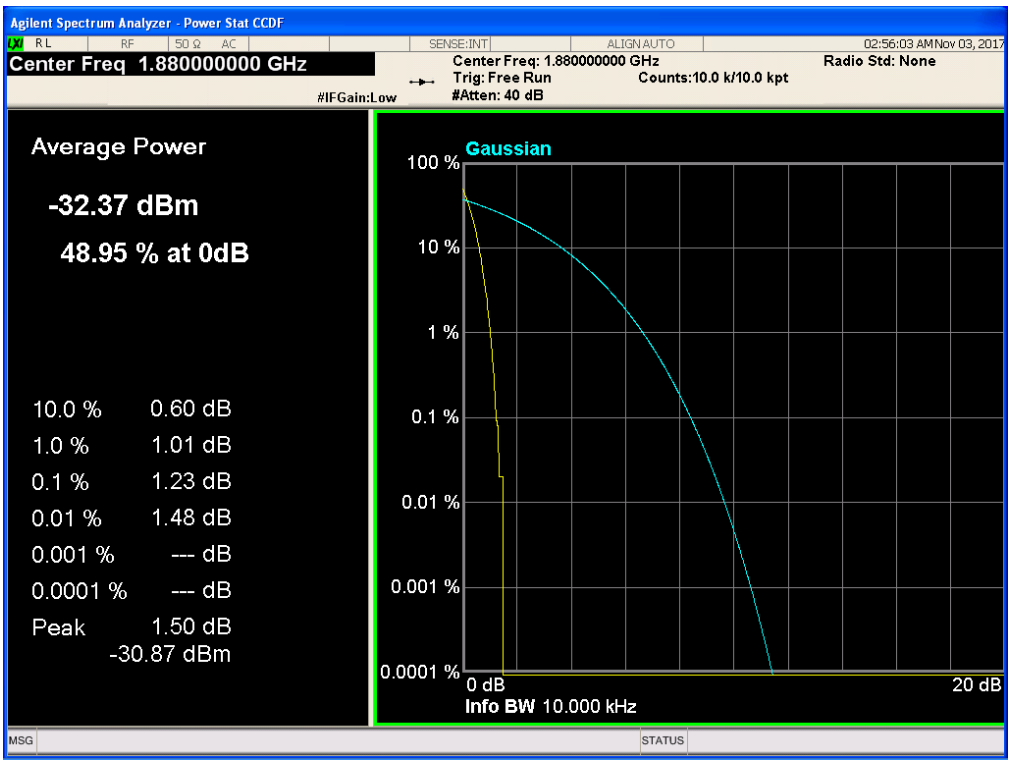
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 1.4,NO. RB 1,RB POS. Low,16-QAM



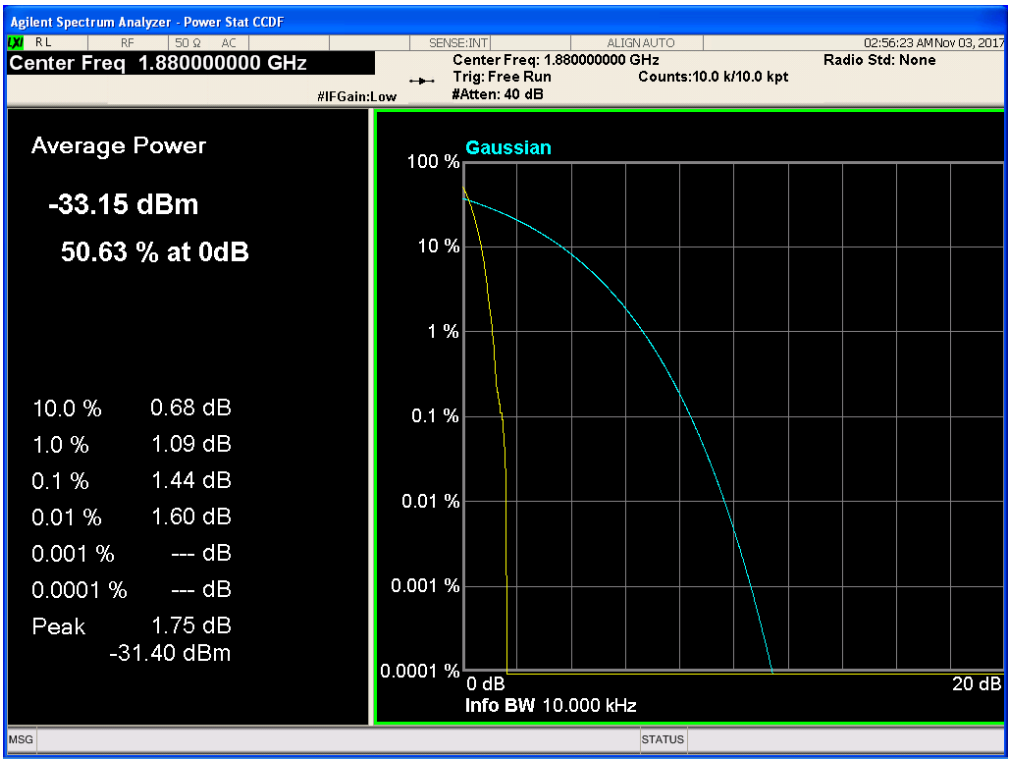
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 3.0,NO. RB 1,RB POS. Low,QPSK



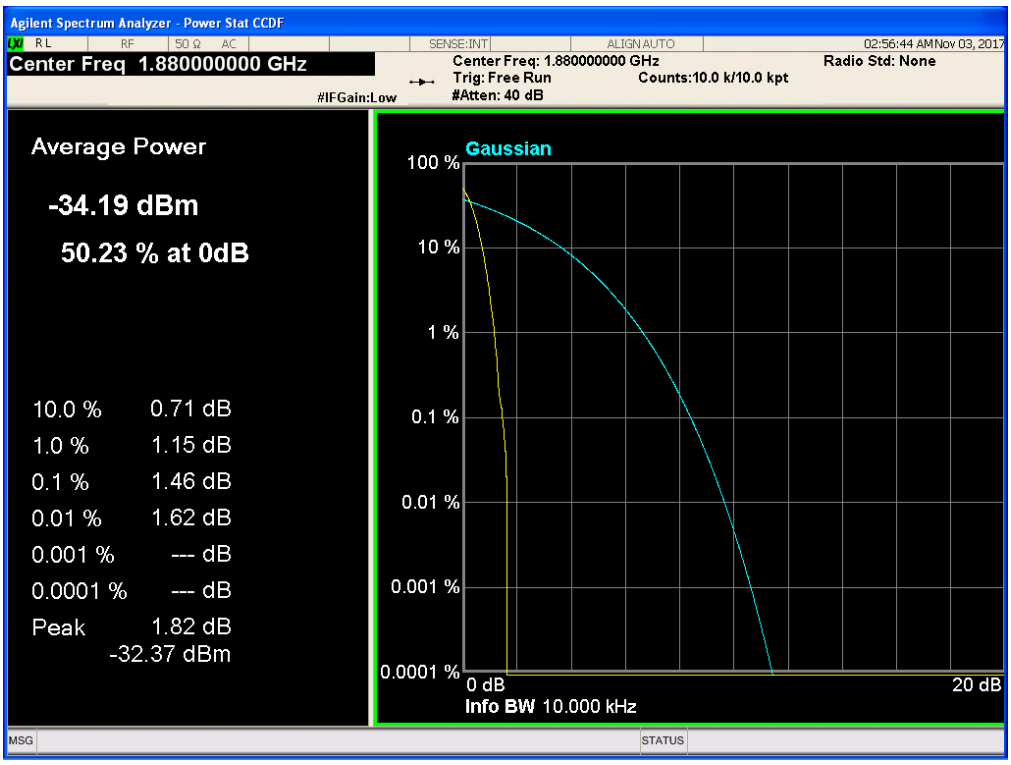
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 3.0,NO. RB 1,RB POS. Low,16-QAM



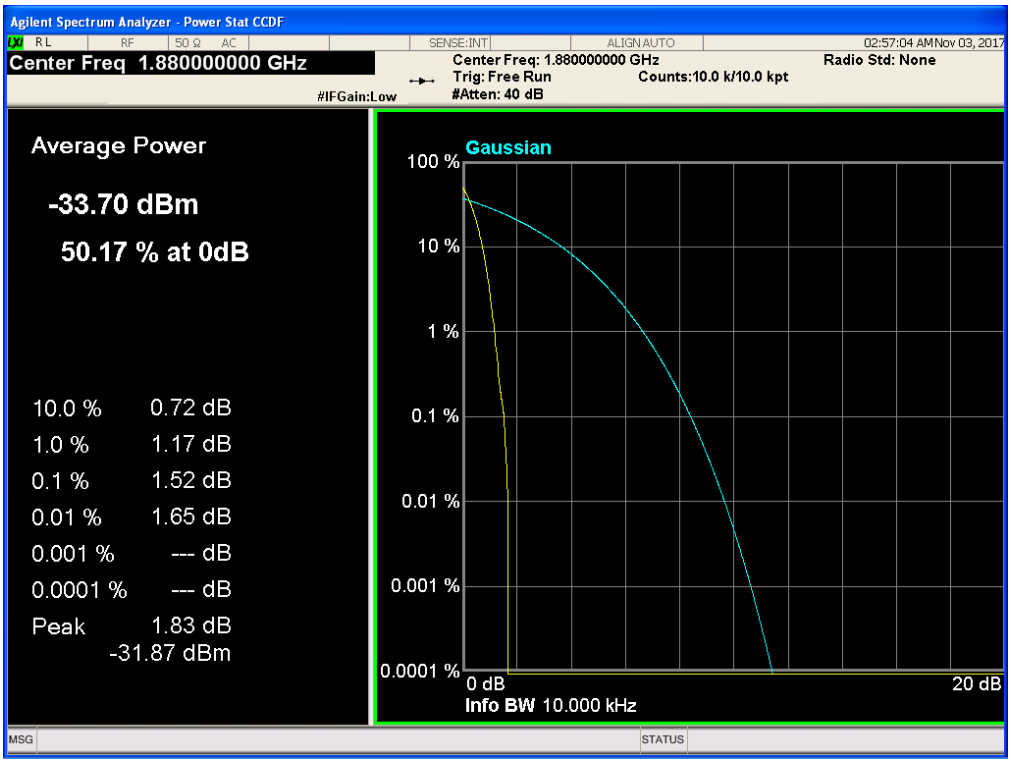
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 5.0,NO. RB 1,RB POS. Low,QPSK



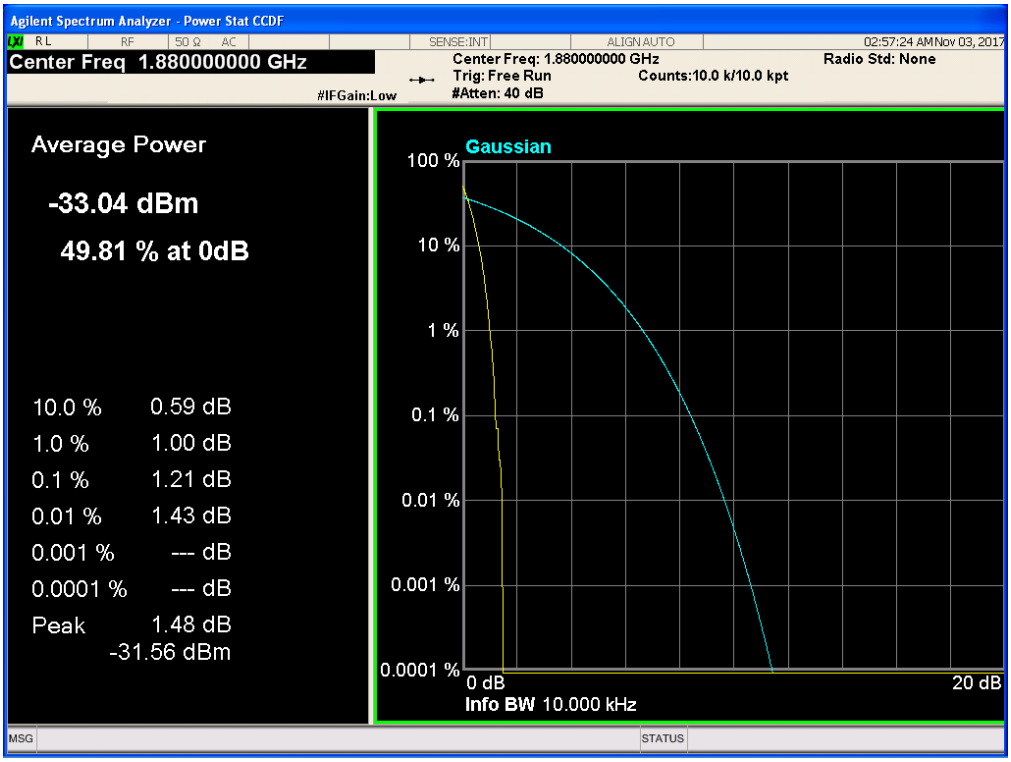
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 5.0,NO. RB 1,RB POS. Low,16-QAM



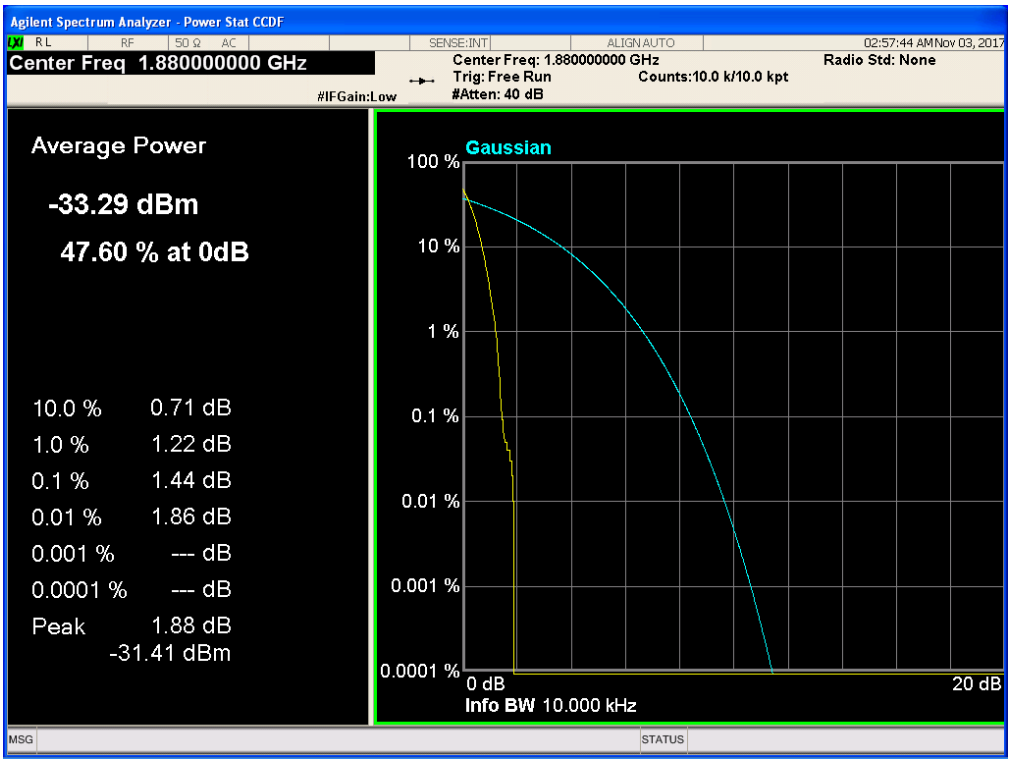
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 10.0,NO. RB 1,RB POS. Low,QPSK



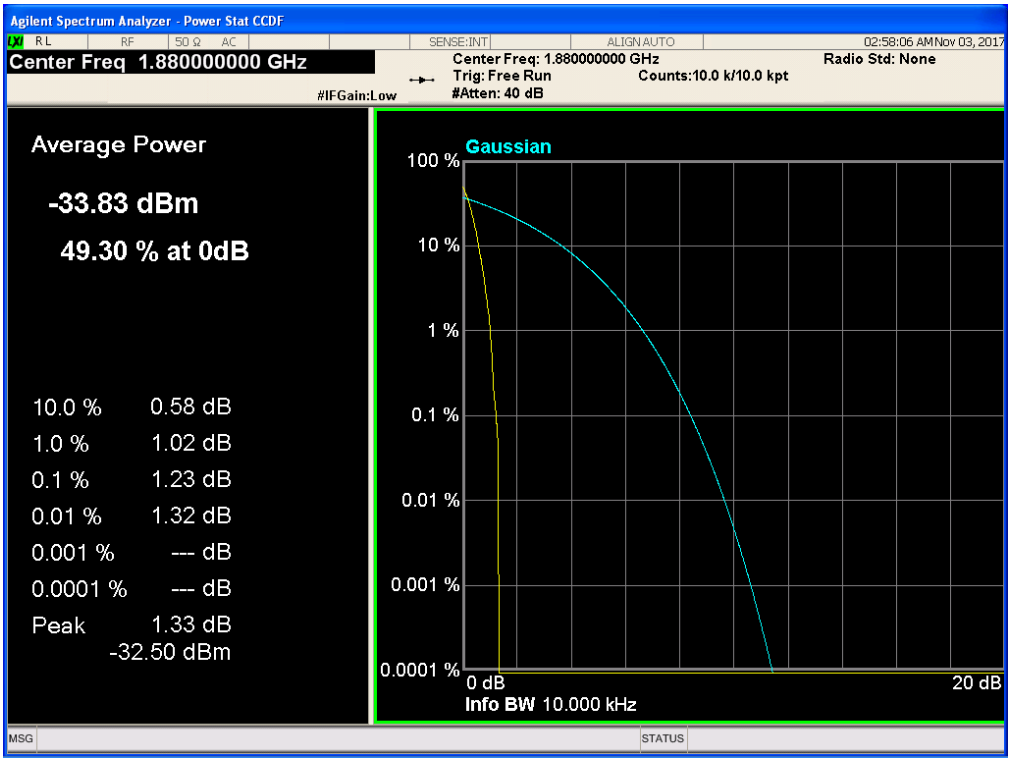
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 10.0,NO. RB 1,RB POS. Low,16-QAM



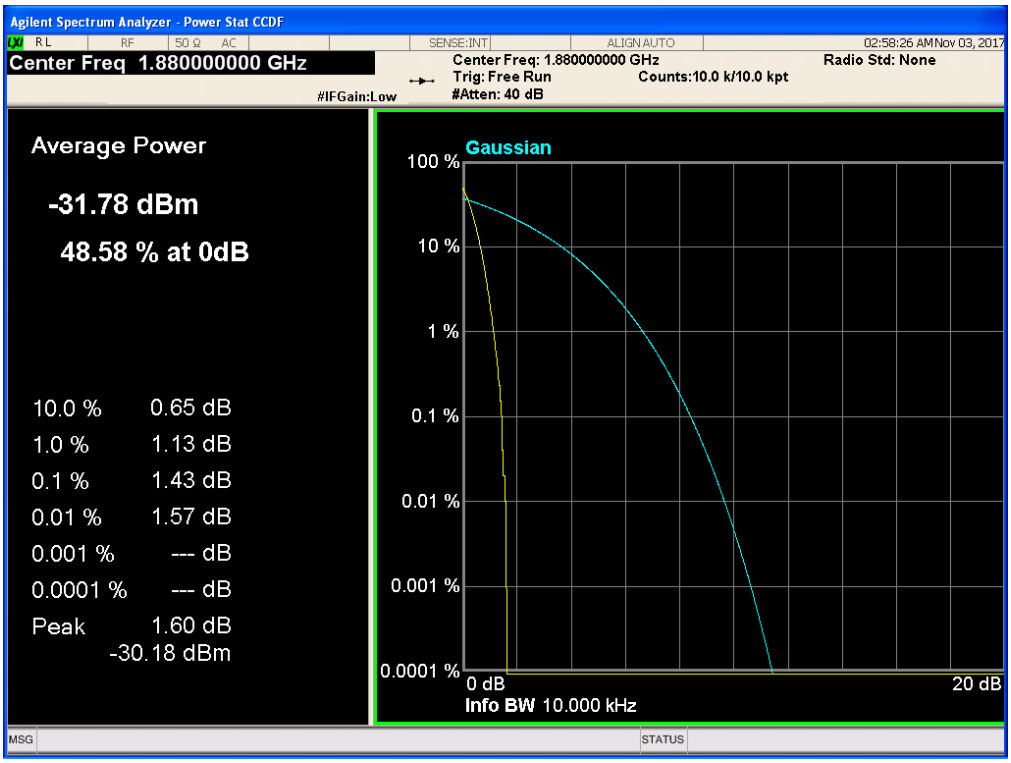
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 15.0,NO. RB 1,RB POS. Low,QPSK



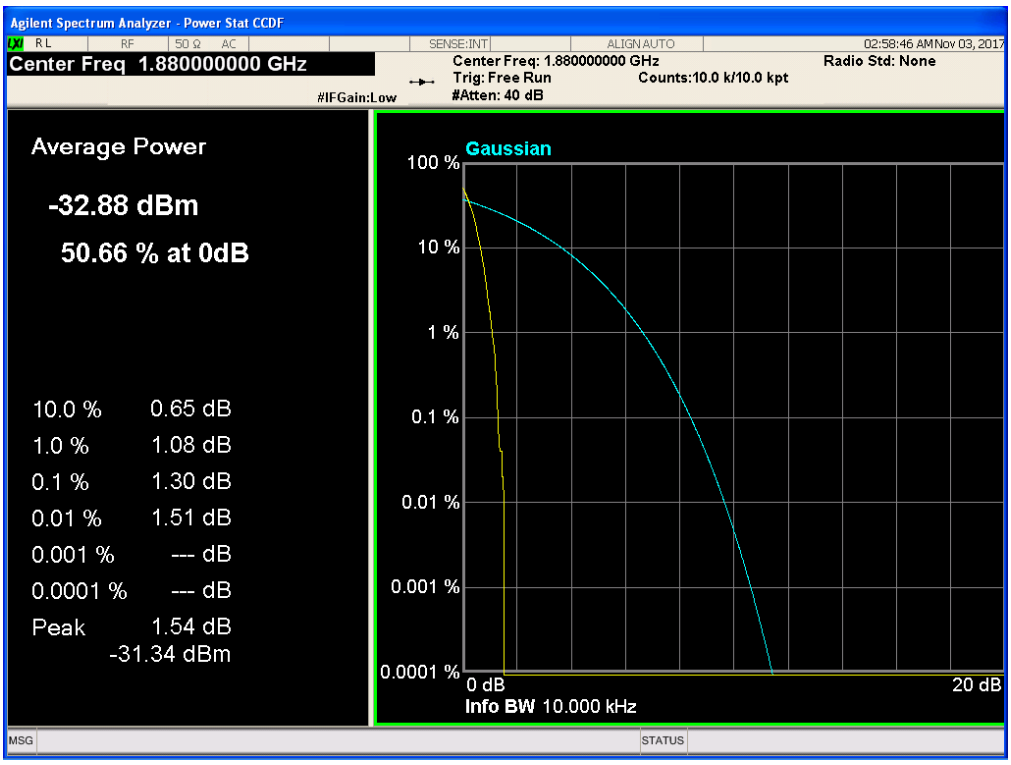
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 15.0,NO. RB 1,RB POS. Low,16-QAM



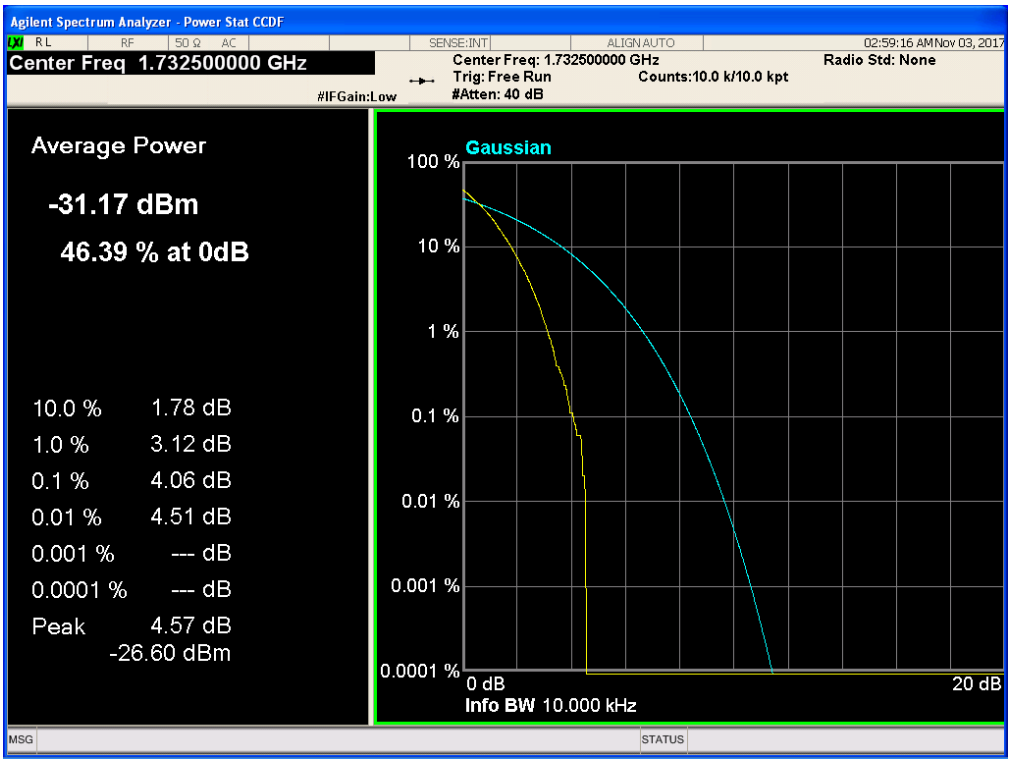
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 20.0,NO. RB 1,RB POS. Low,QPSK



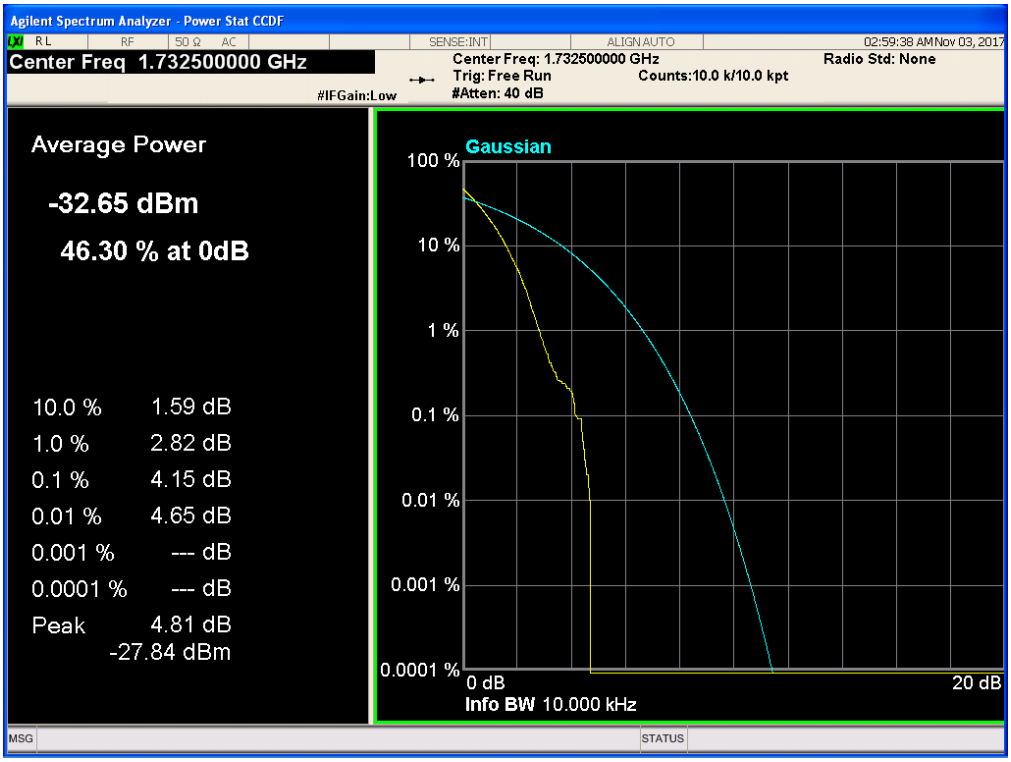
Band 2,UL Channel 18900,UL Frequency 1880.0,BW 20.0,NO. RB 1,RB POS. Low,16-QAM



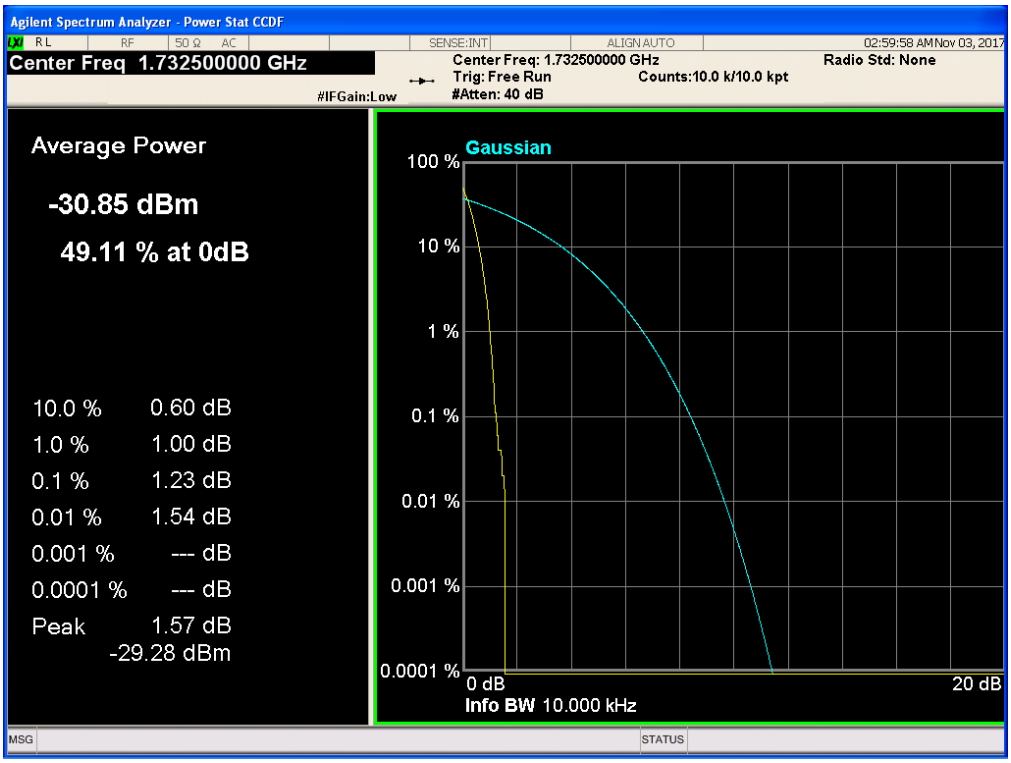
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 1.4,NO. RB 1,RB POS. Low,QPSK



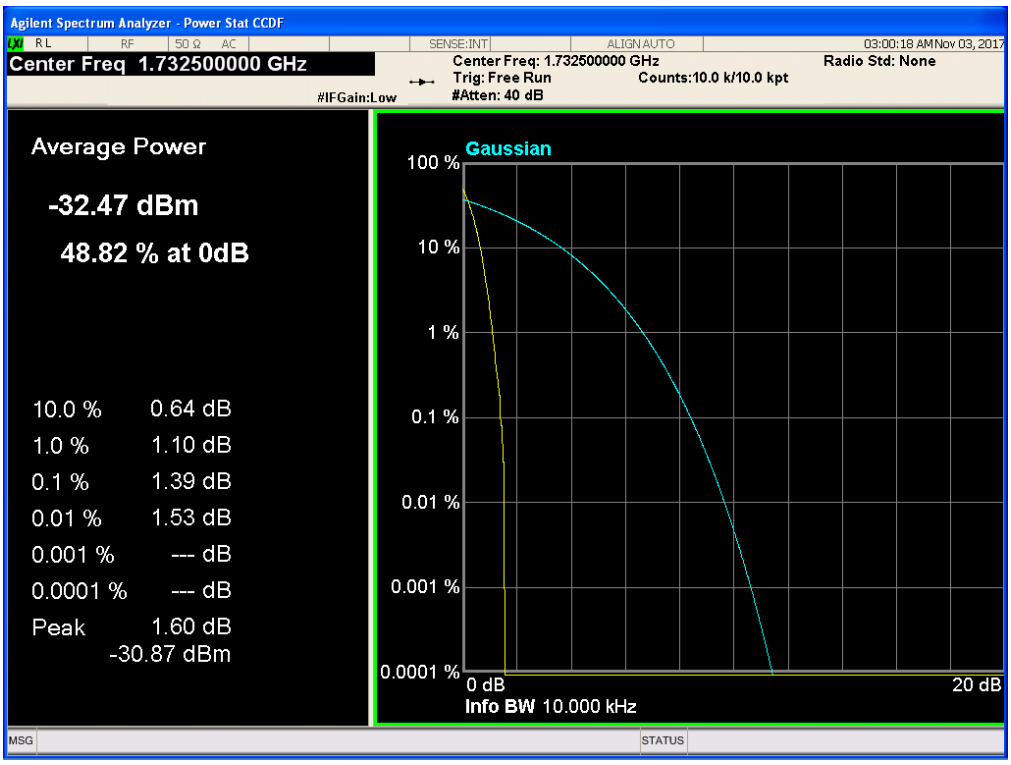
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 1.4,NO. RB 1,RB POS. Low,16-QAM



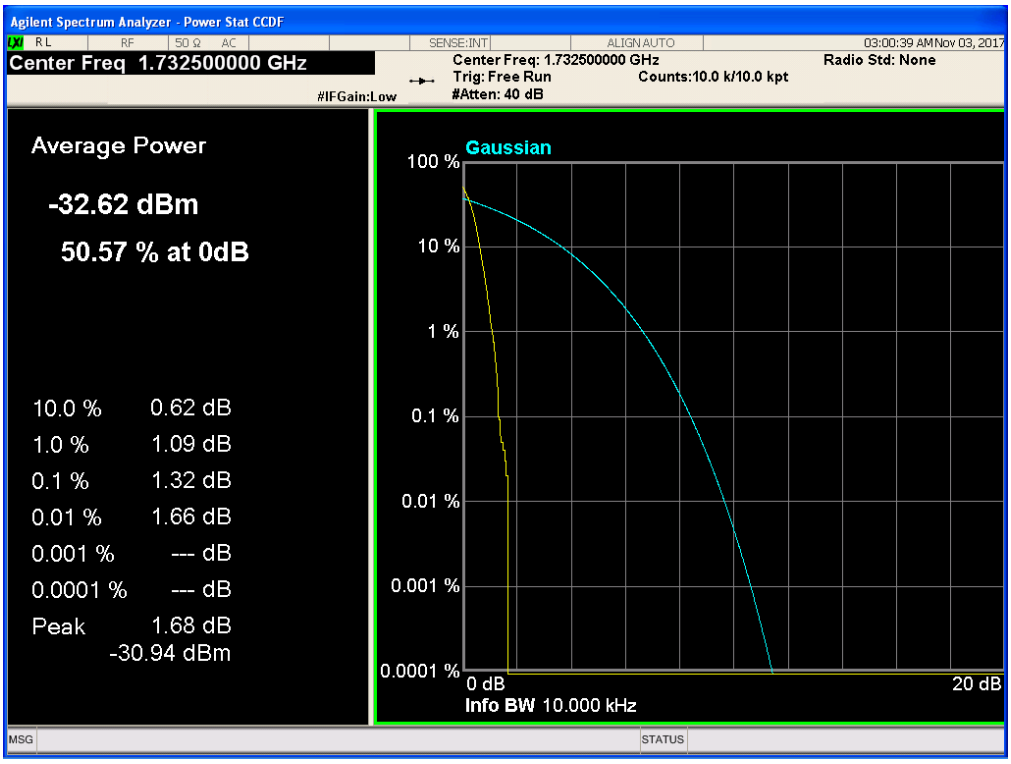
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 3.0,NO. RB 1,RB POS. Low,QPSK



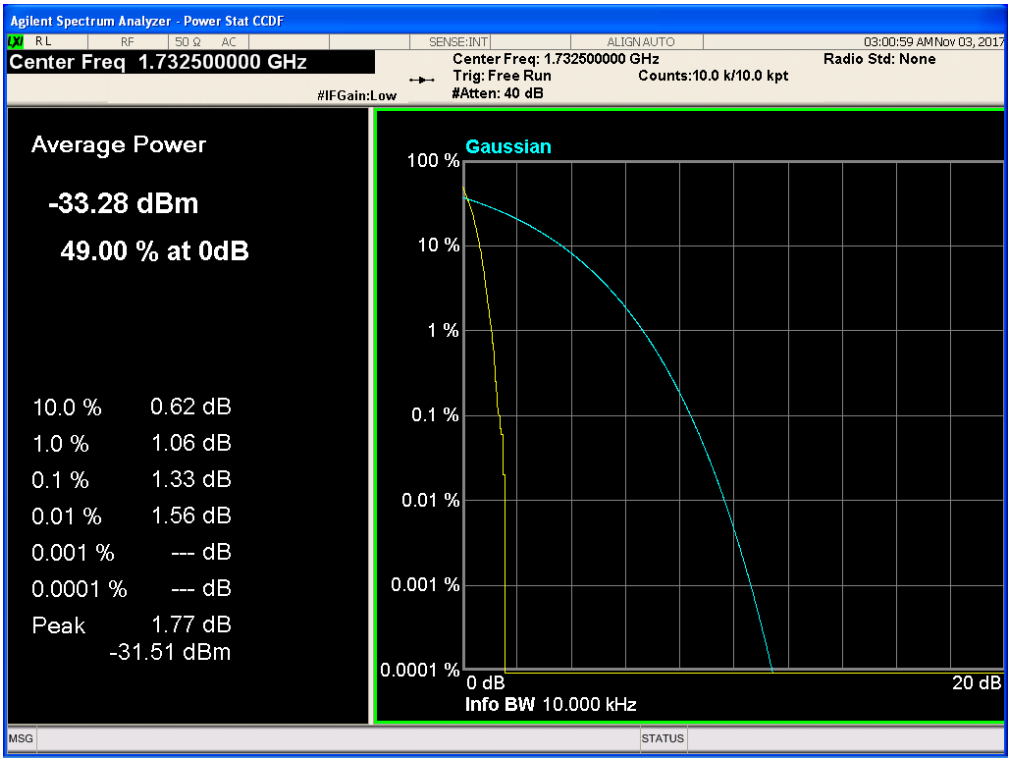
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 3.0,NO. RB 1,RB POS. Low,16-QAM



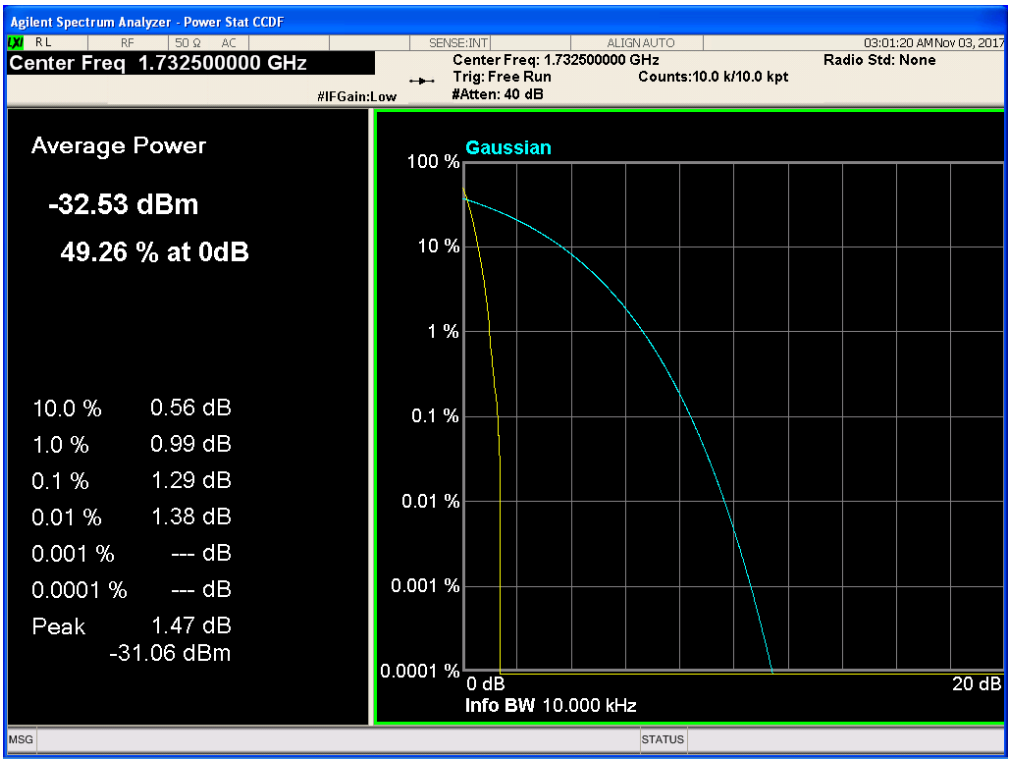
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 5.0,NO. RB 1,RB POS. Low,QPSK



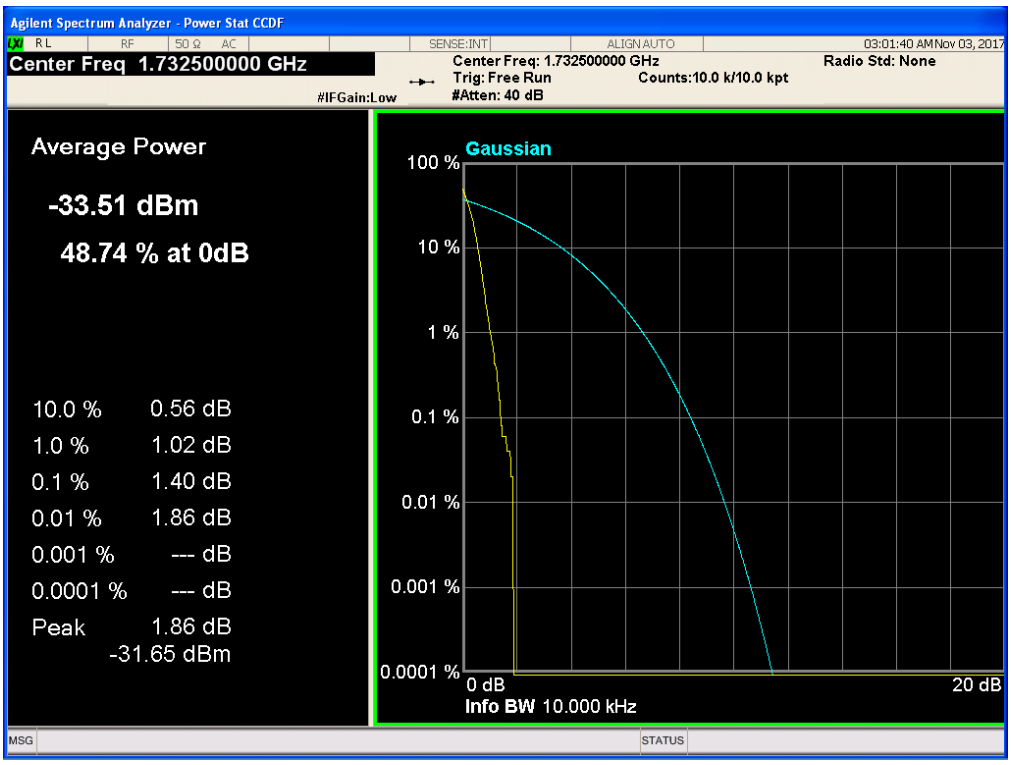
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 5.0,NO. RB 1,RB POS. Low,16-QAM



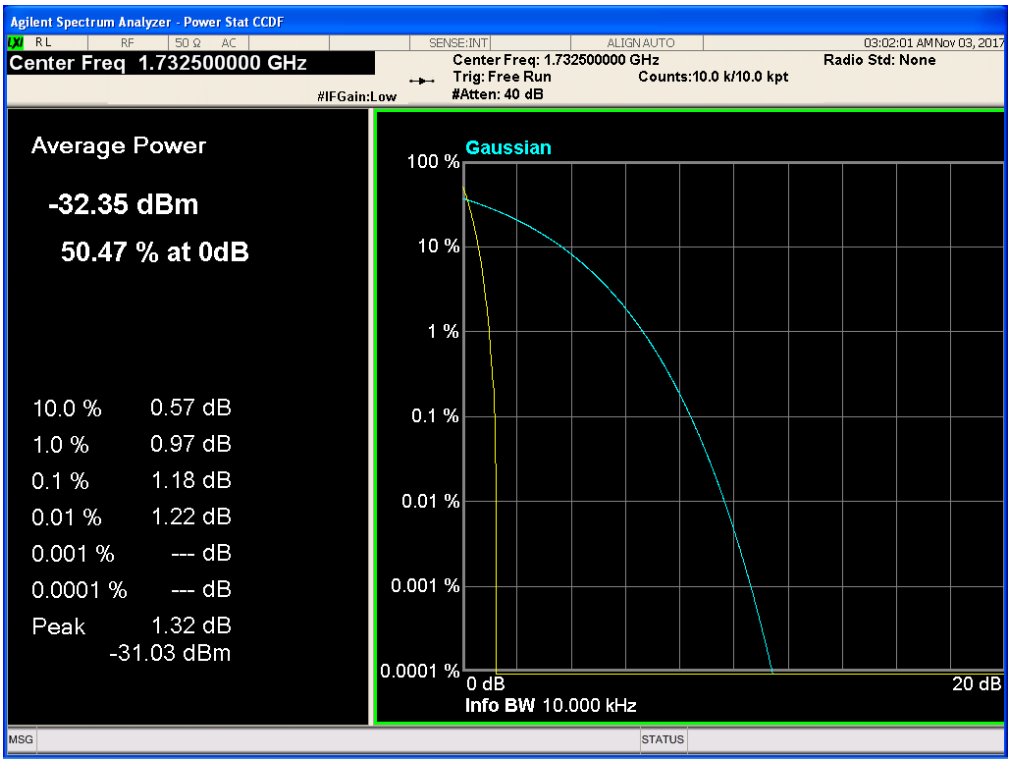
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 10.0,NO. RB 1,RB POS. Low,QPSK



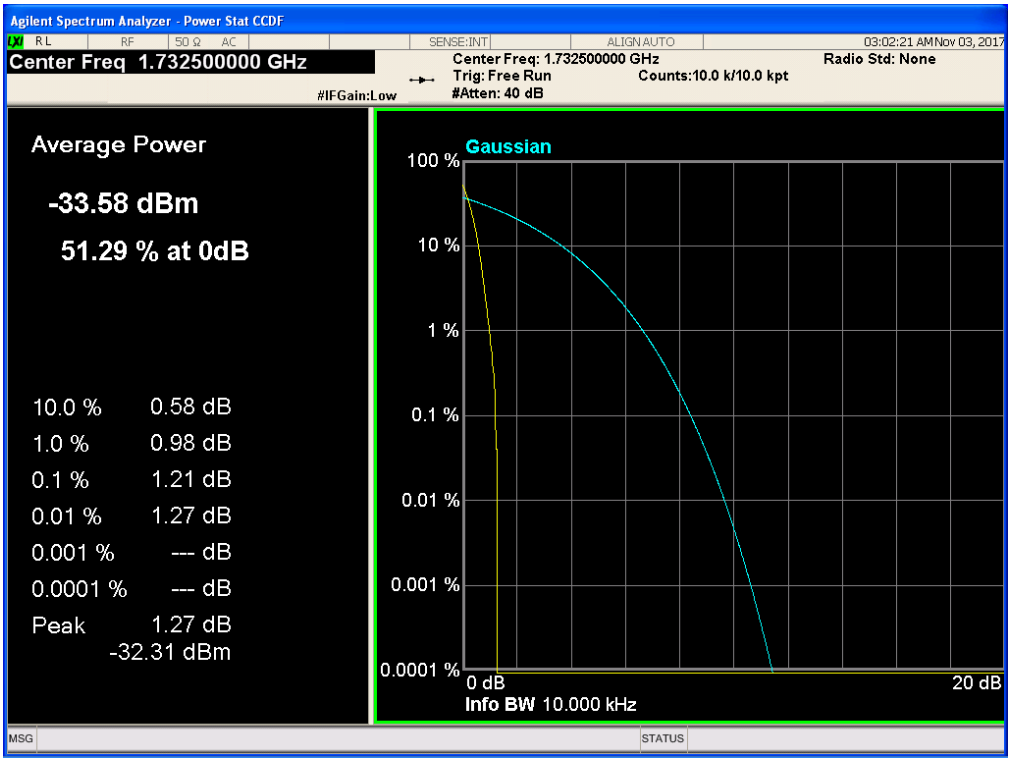
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 10.0,NO. RB 1,RB POS. Low,16-QAM



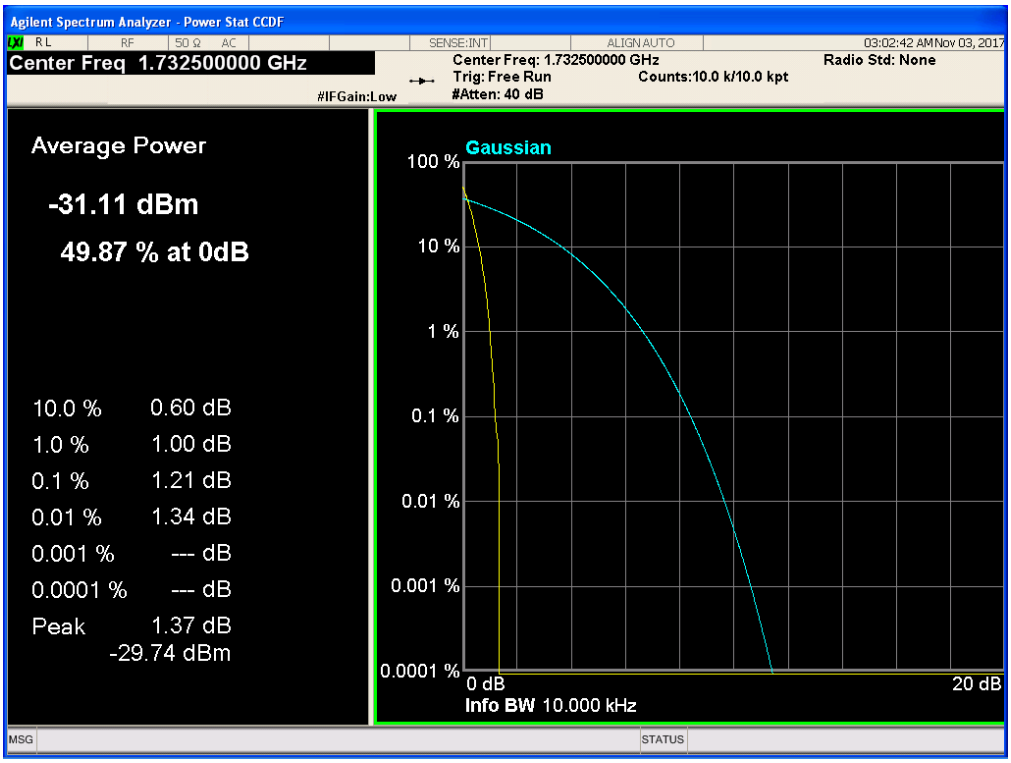
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 15.0,NO. RB 1,RB POS. Low,QPSK



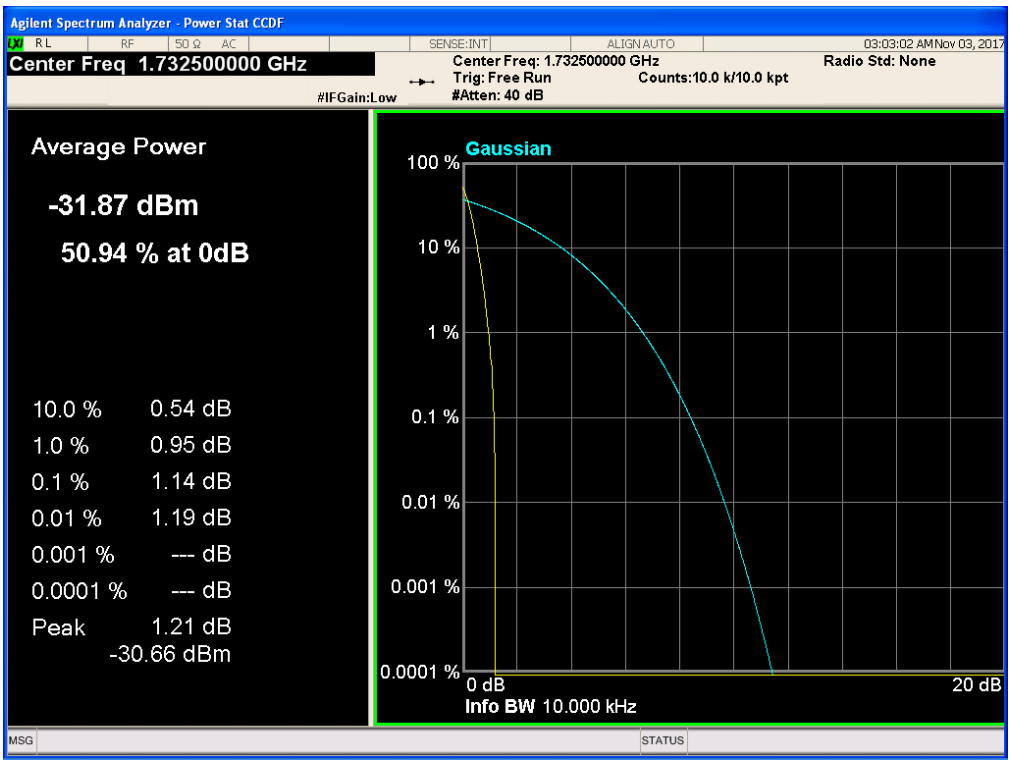
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 15.0,NO. RB 1,RB POS. Low,16-QAM



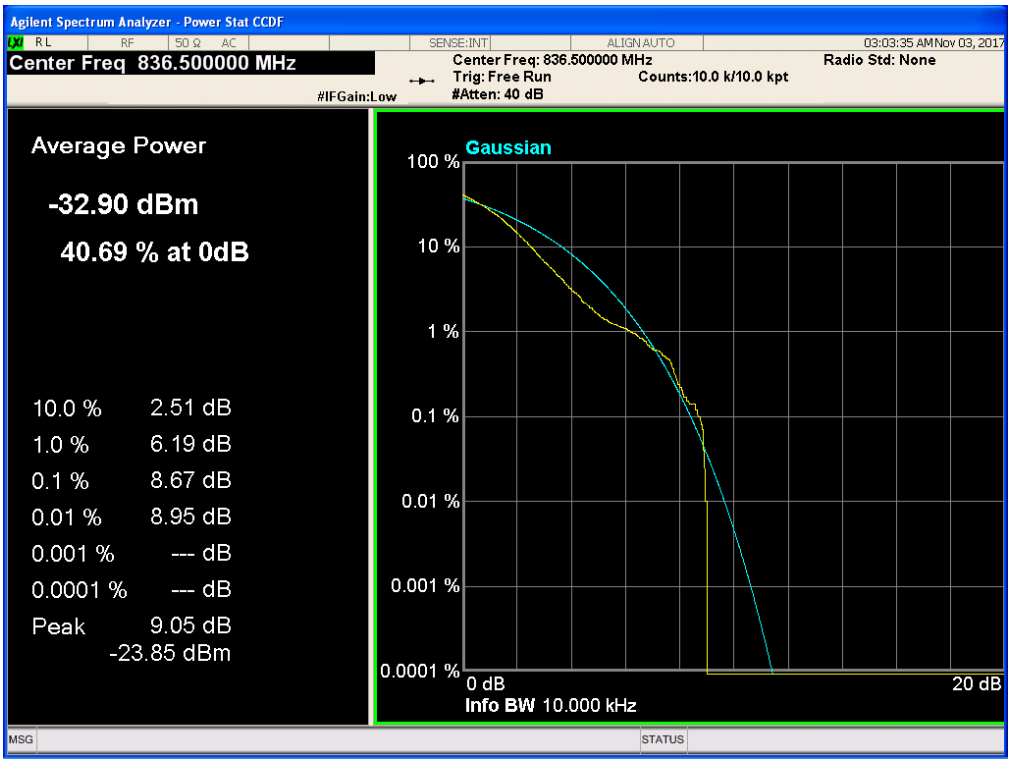
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 20.0,NO. RB 1,RB POS. Low,QPSK



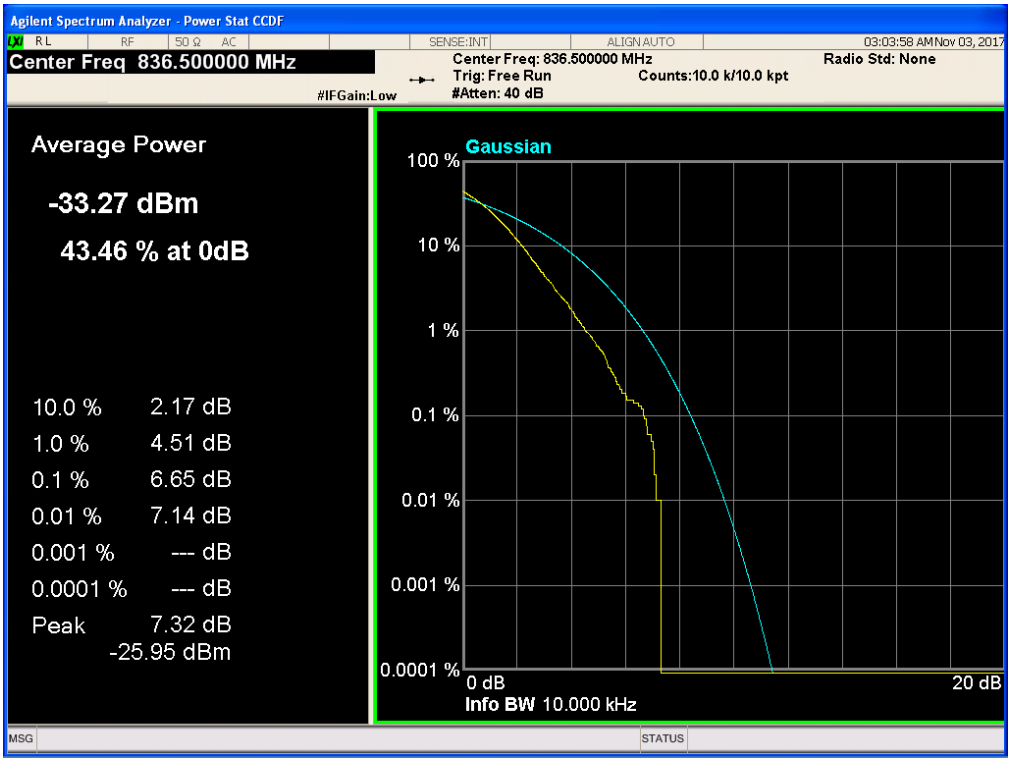
Band 4,UL Channel 20175,UL Frequency 1732.5,BW 20.0,NO. RB 1,RB POS. Low,16-QAM



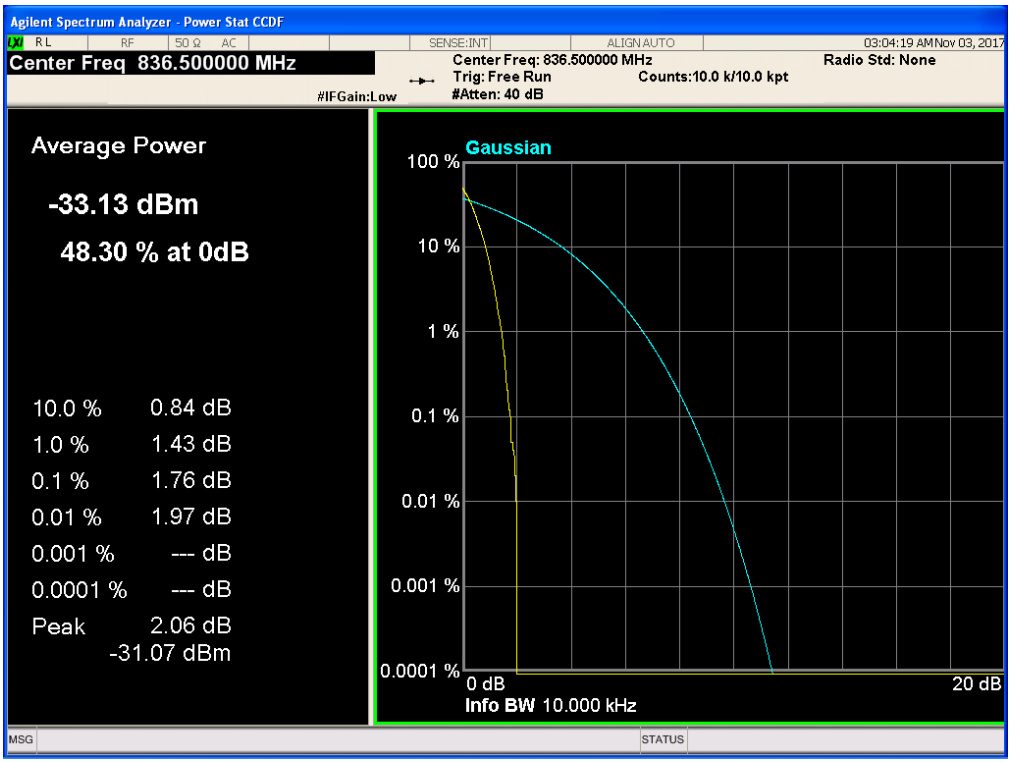
Band 5,UL Channel 20525,UL Frequency 836.5,BW 1.4,NO. RB 1,RB POS. Low,QPSK



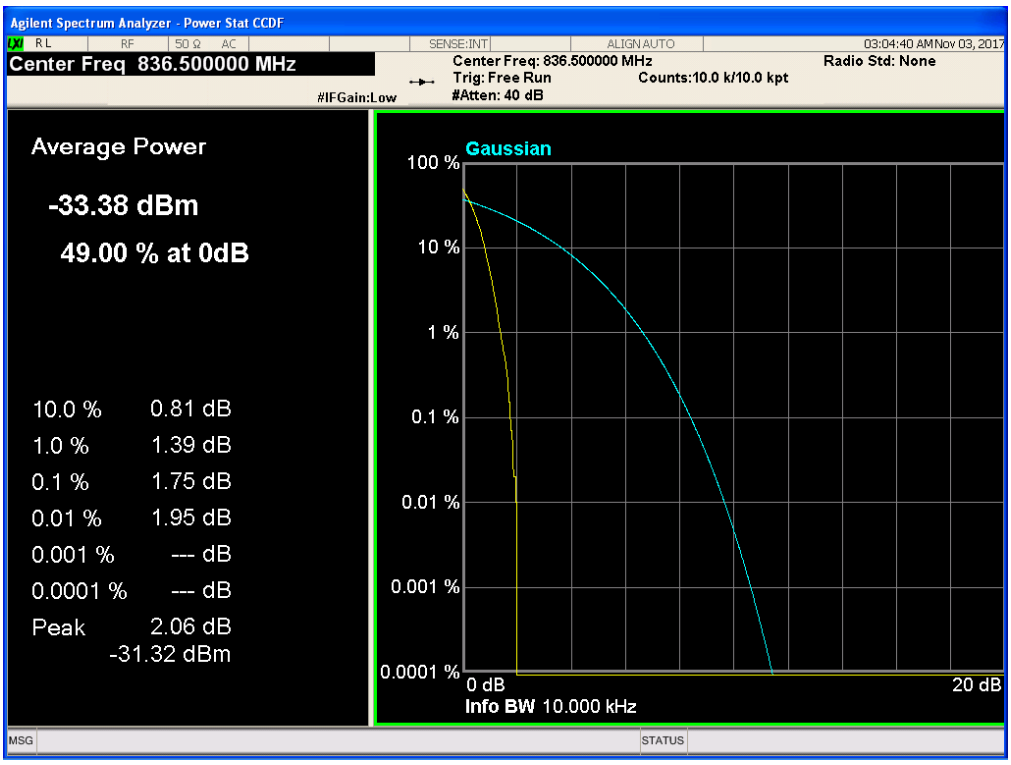
Band 5,UL Channel 20525,UL Frequency 836.5,BW 1.4,NO. RB 1,RB POS. Low,16-QAM



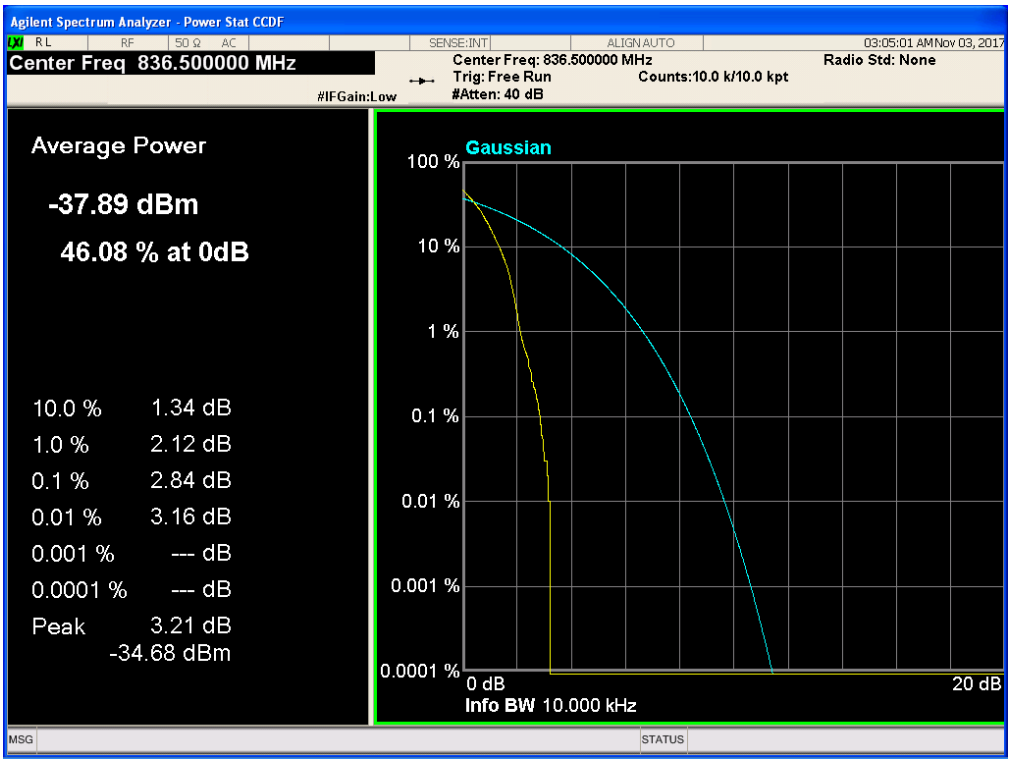
Band 5,UL Channel 20525,UL Frequency 836.5,BW 3.0,NO. RB 1,RB POS. Low,QPSK



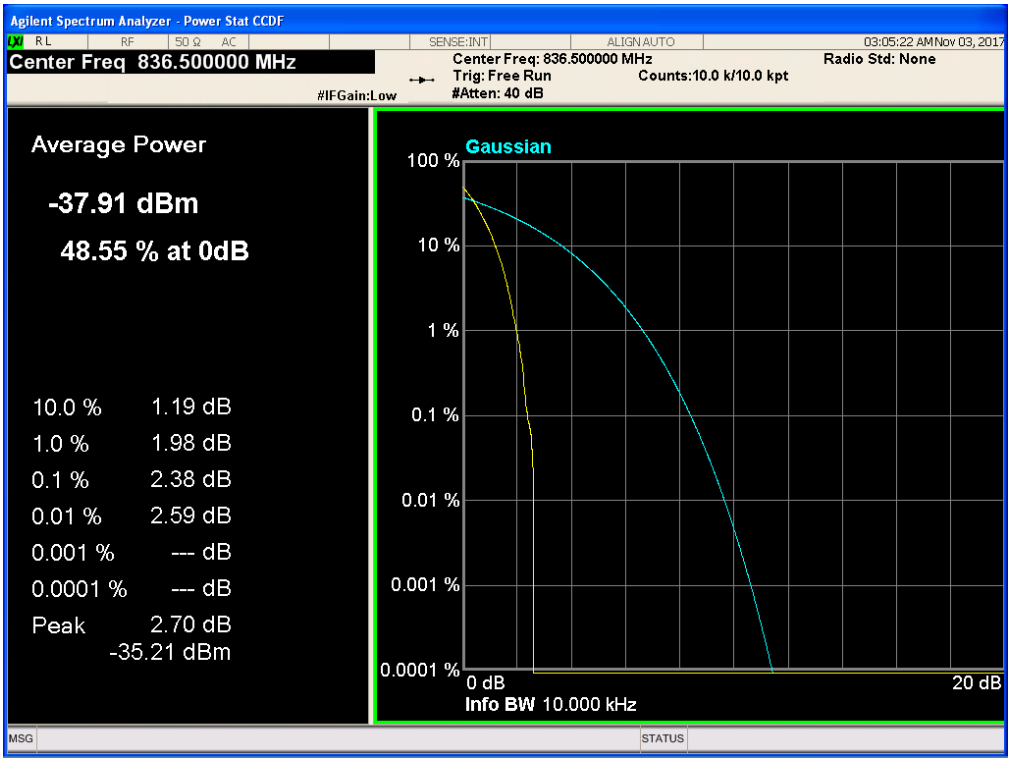
Band 5,UL Channel 20525,UL Frequency 836.5,BW 3.0,NO. RB 1,RB POS. Low,16-QAM



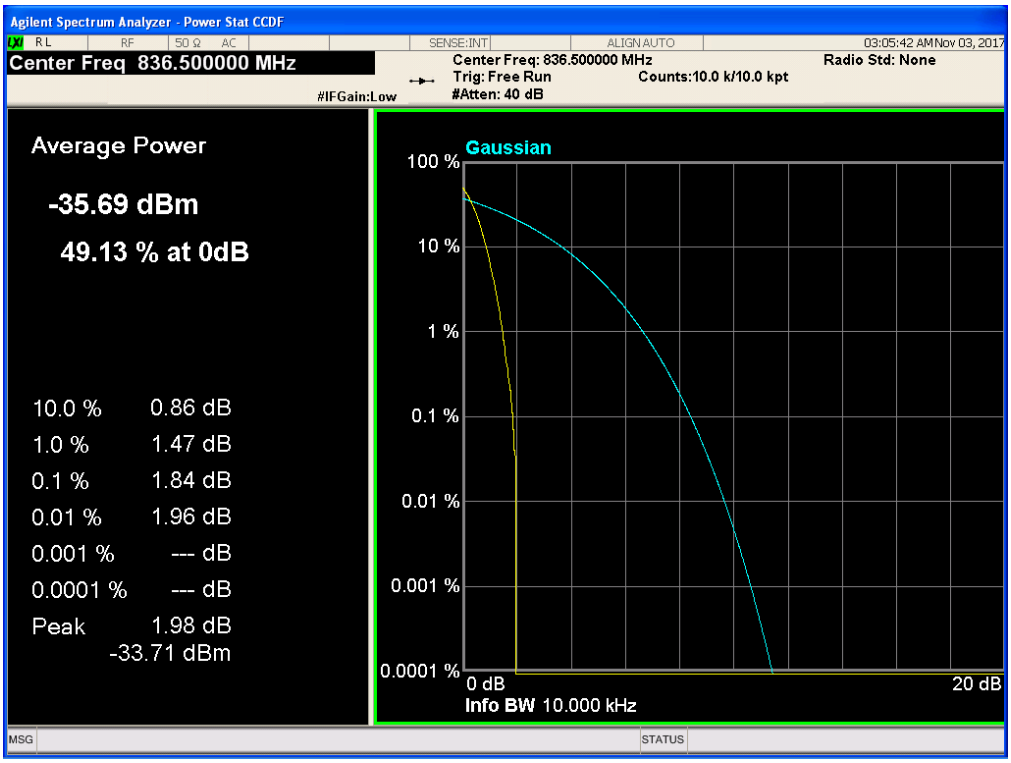
Band 5,UL Channel 20525,UL Frequency 836.5,BW 5.0,NO. RB 1,RB POS. Low,QPSK



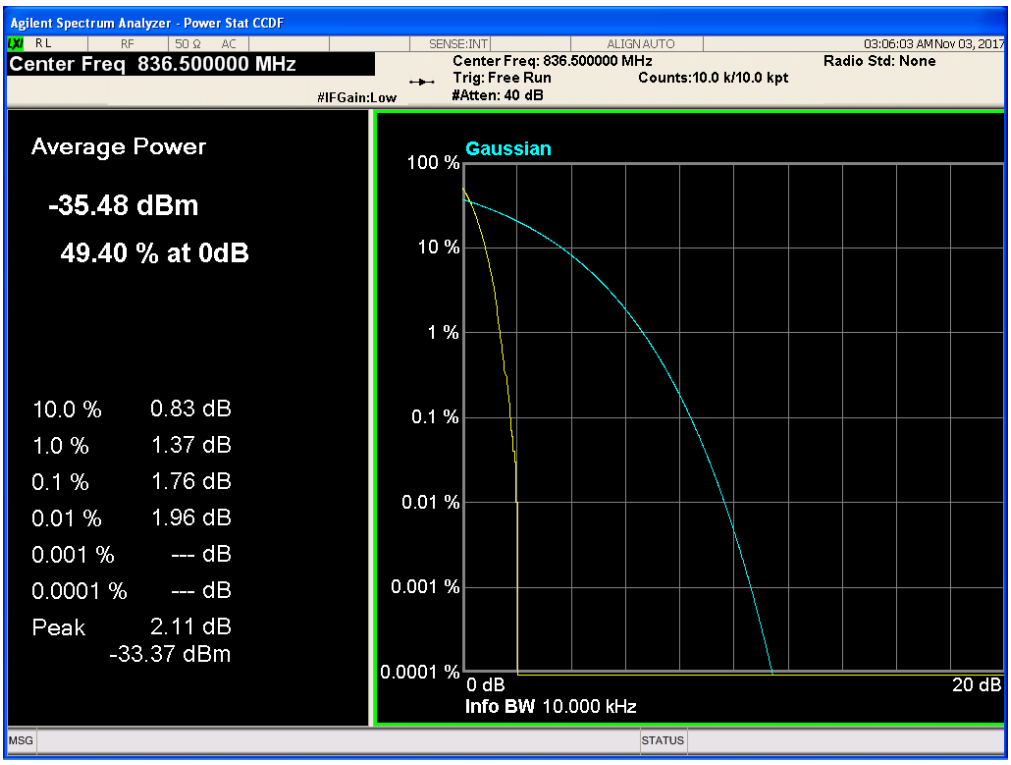
Band 5,UL Channel 20525,UL Frequency 836.5,BW 5.0,NO. RB 1,RB POS. Low,16-QAM



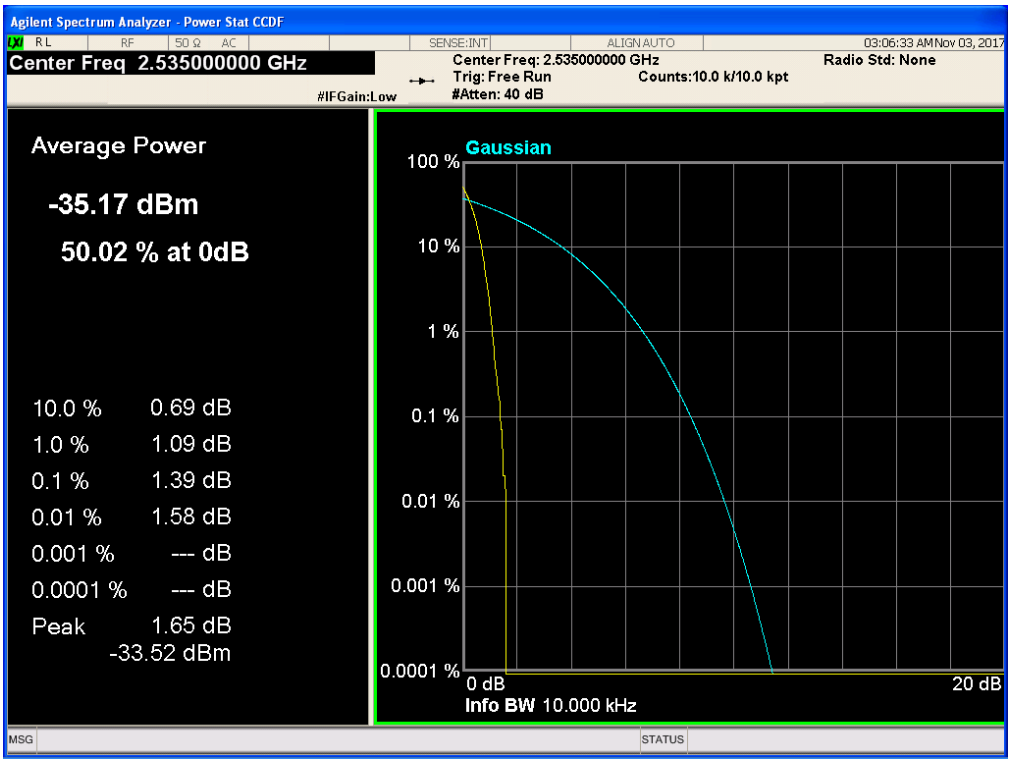
Band 5,UL Channel 20525,UL Frequency 836.5,BW 10.0,NO. RB 1,RB POS. Low,QPSK



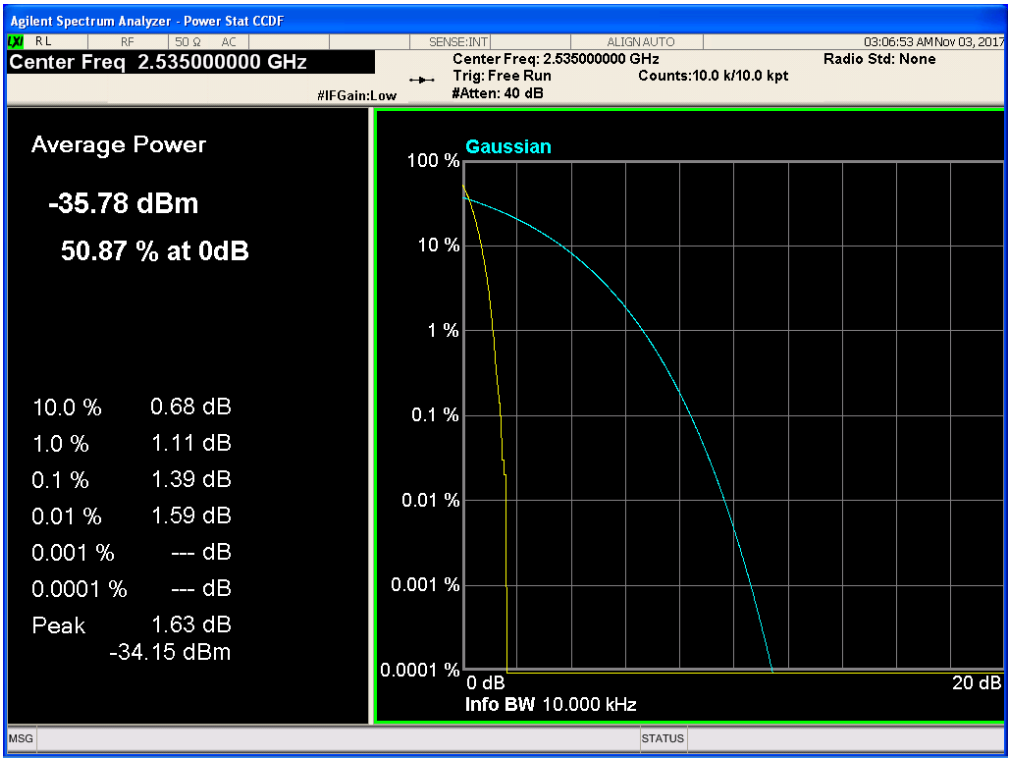
Band 5,UL Channel 20525,UL Frequency 836.5,BW 10.0,NO. RB 1,RB POS. Low,16-QAM



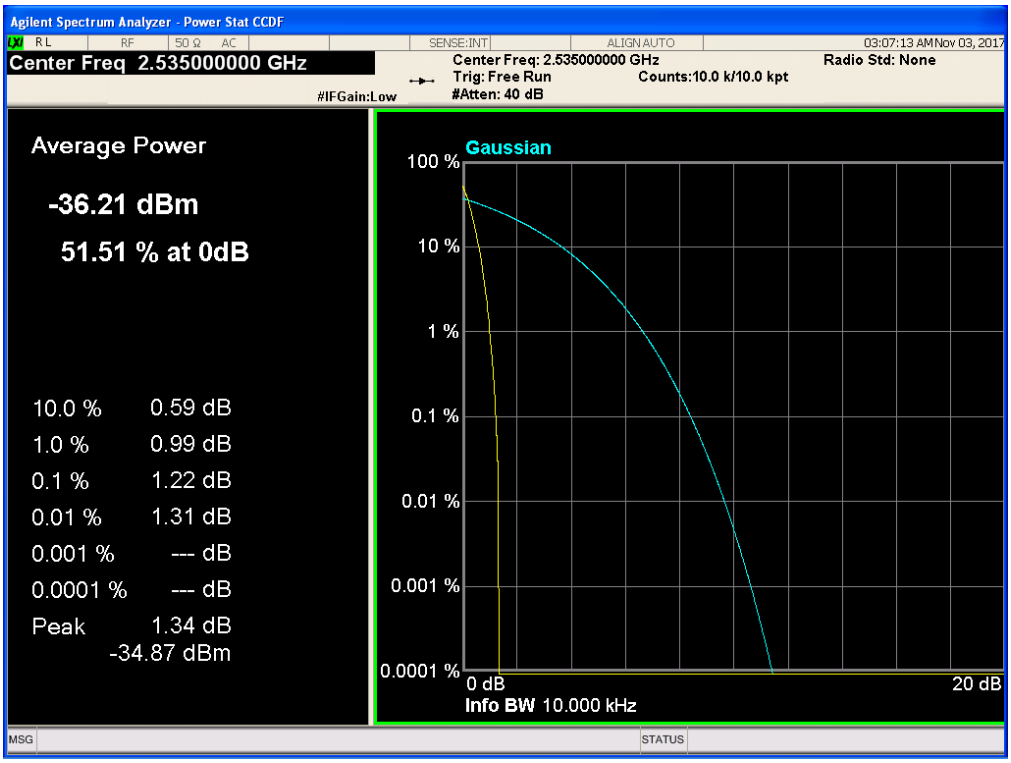
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 5.0,NO. RB 1,RB POS. Low,QPSK



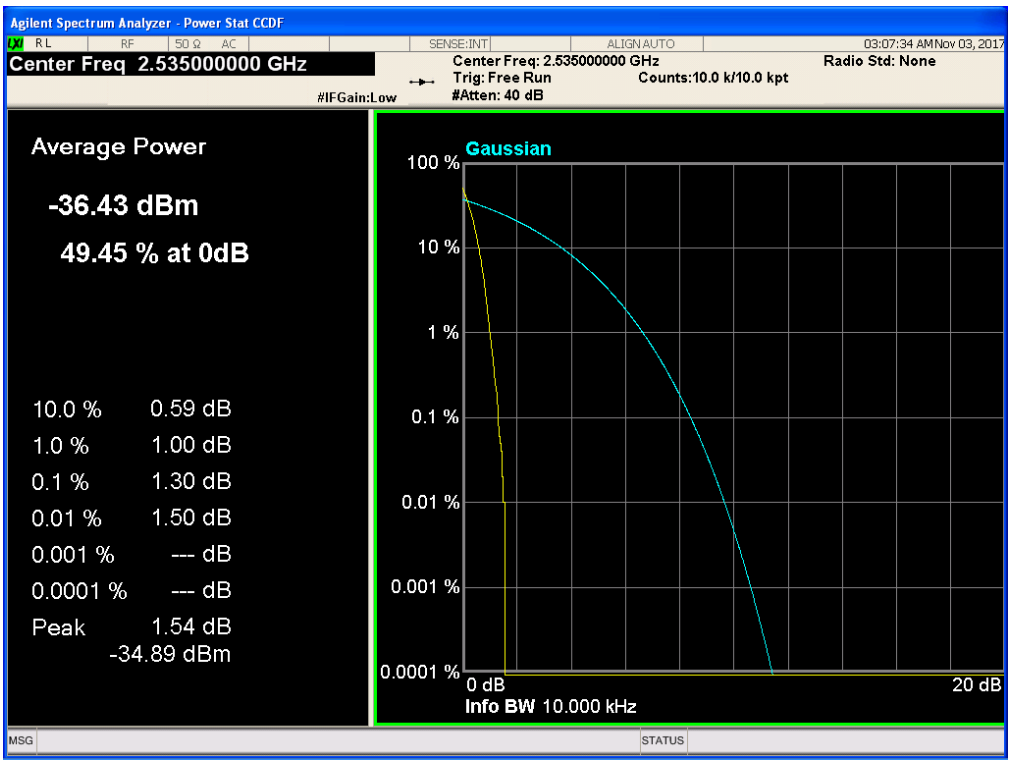
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 5.0,NO. RB 1,RB POS. Low,16-QAM



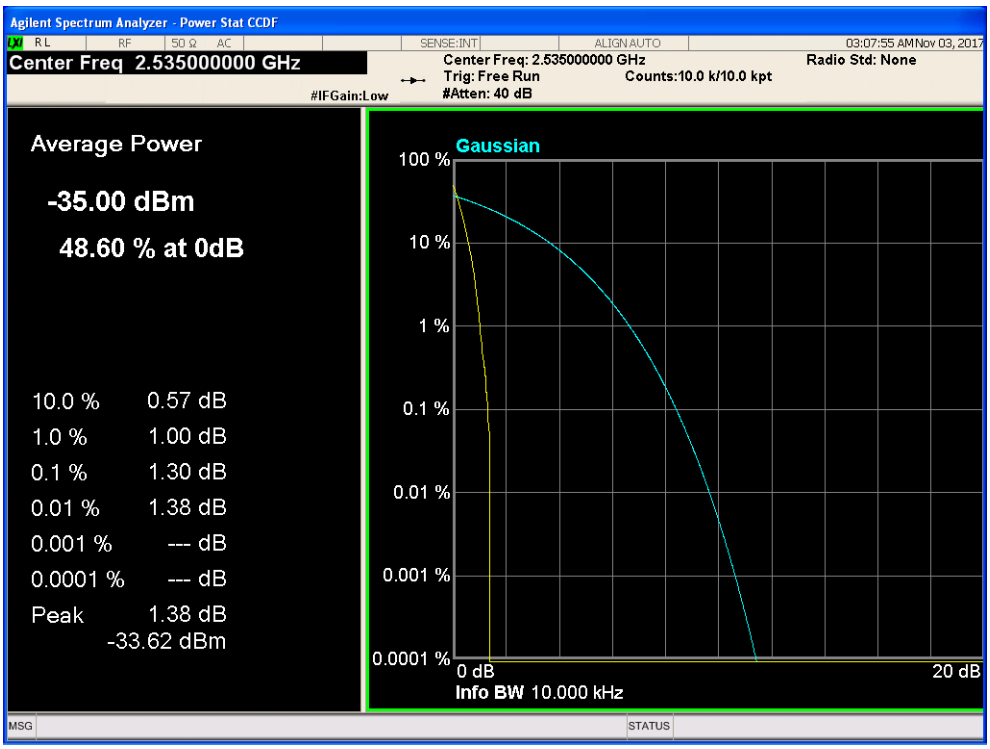
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 10.0,NO. RB 1,RB POS. Low,QPSK



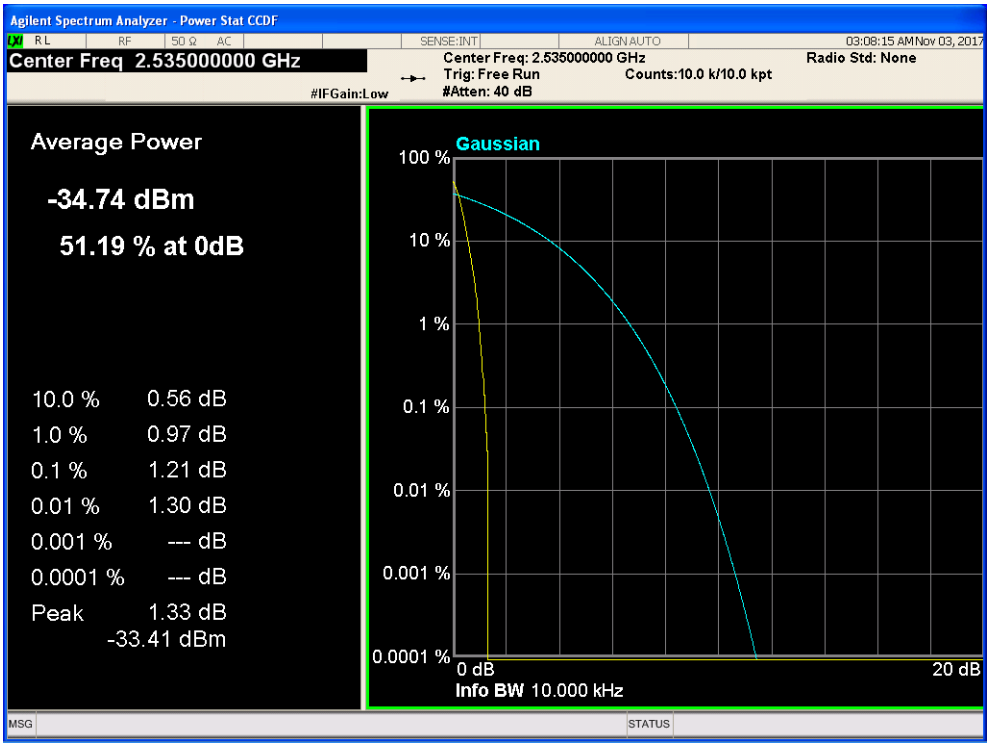
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 10.0,NO. RB 1,RB POS. Low,16-QAM



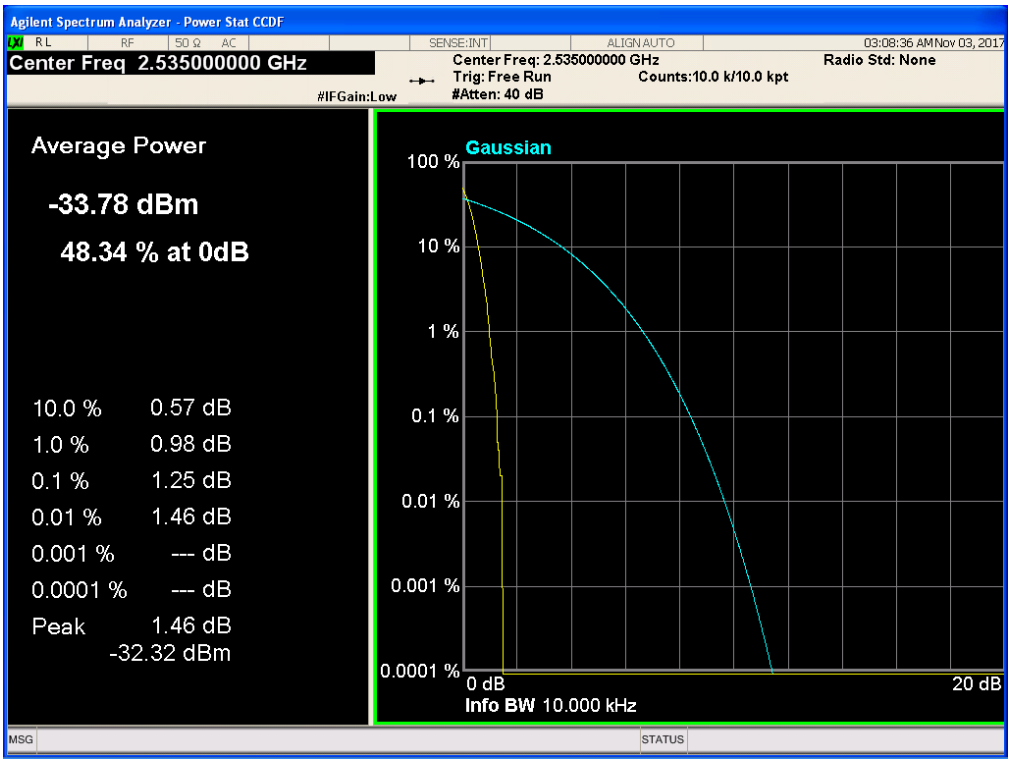
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 15.0,NO. RB 1,RB POS. Low,QPSK



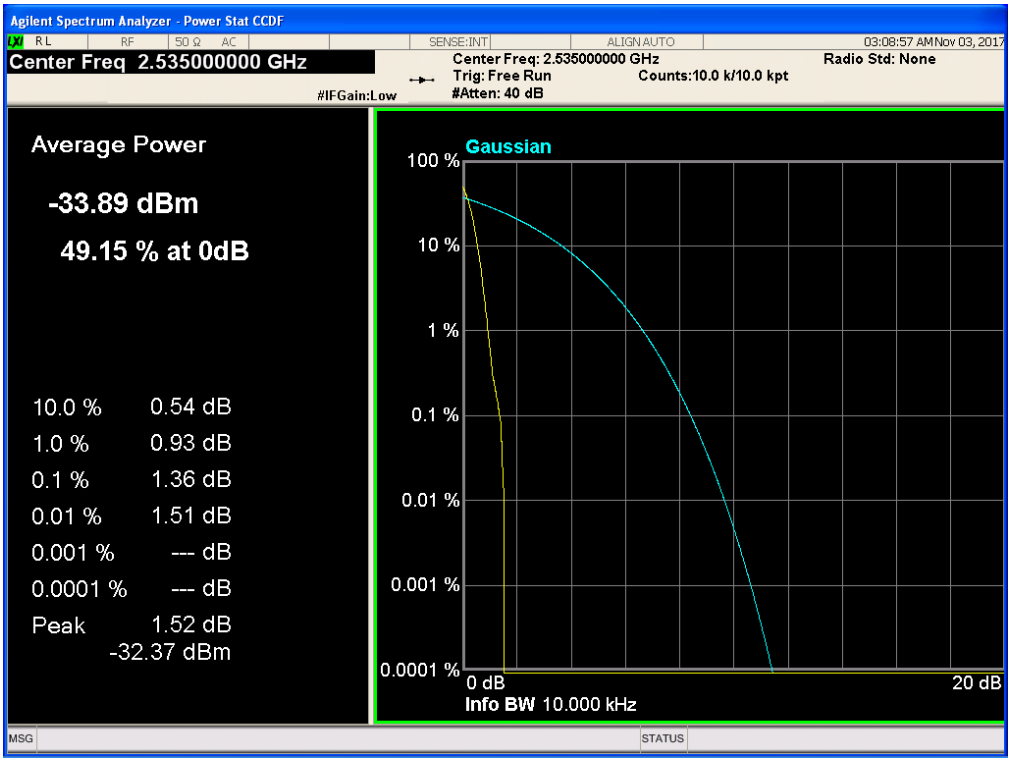
Band 7,UL Channel 21100,UL Frequency 2535.0,BW 15.0,NO. RB 1,RB POS. Low,16-QAM



Band 7,UL Channel 21100,UL Frequency 2535.0,BW 20.0,NO. RB 1,RB POS. Low,QPSK



Band 7,UL Channel 21100,UL Frequency 2535.0,BW 20.0,NO. RB 1,RB POS. Low,16-QAM



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