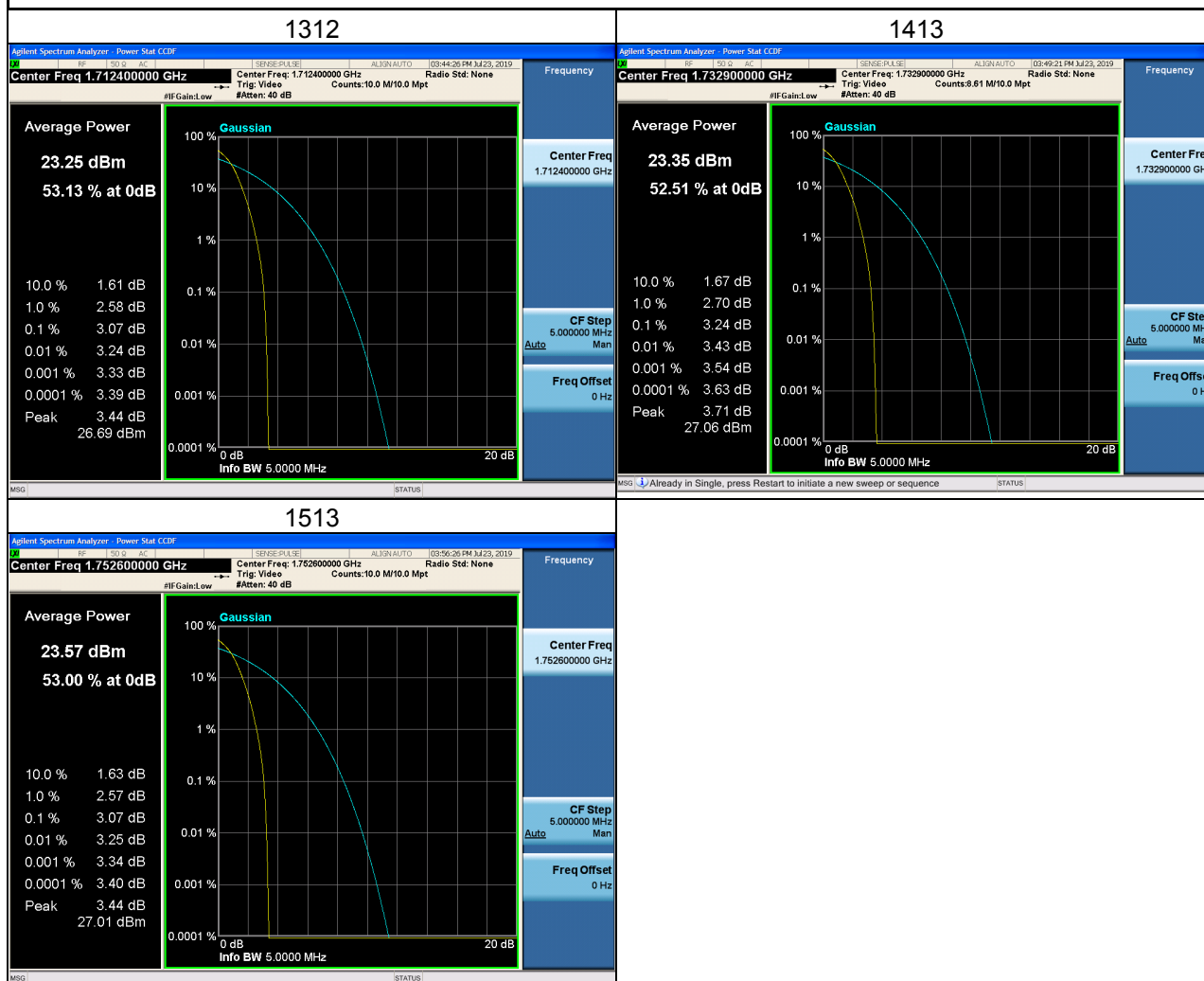
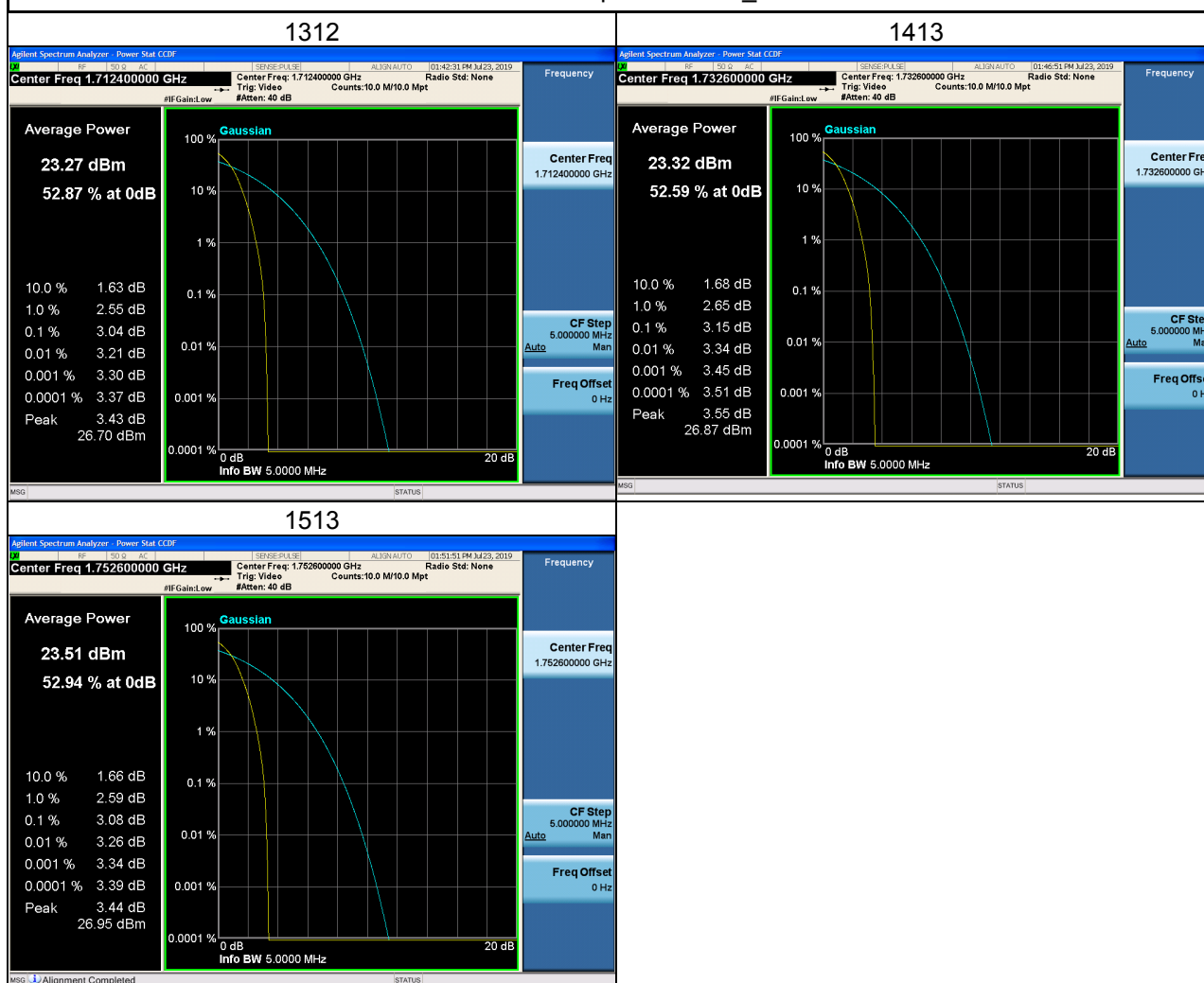


APPENDIX H - PEAK TO AVERAGE RATIO

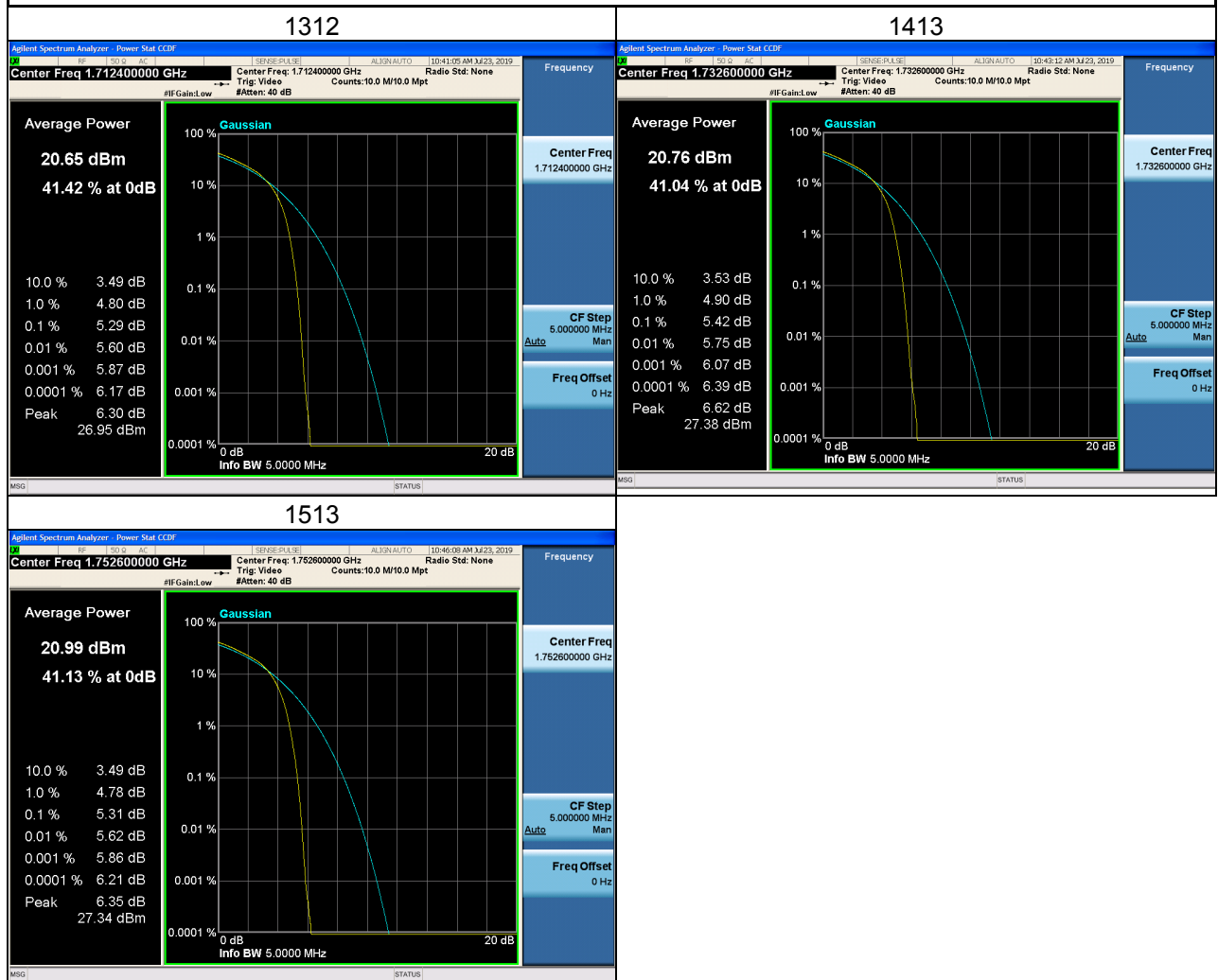
WCDMA Band IV Spectrum Plot_WCDMA



WCDMA Band IV Spectrum Plot_HSDPA

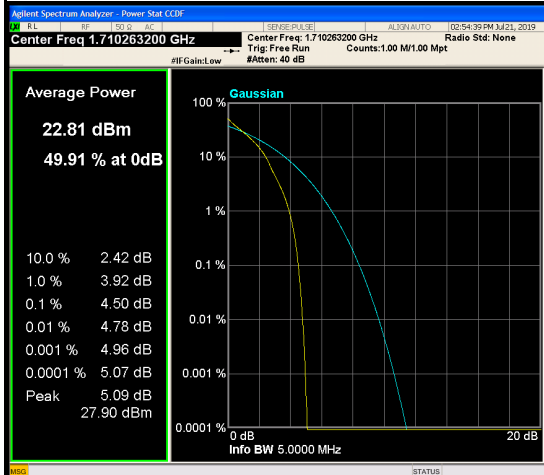


WCDMA Band IV Spectrum Plot_HSUPA

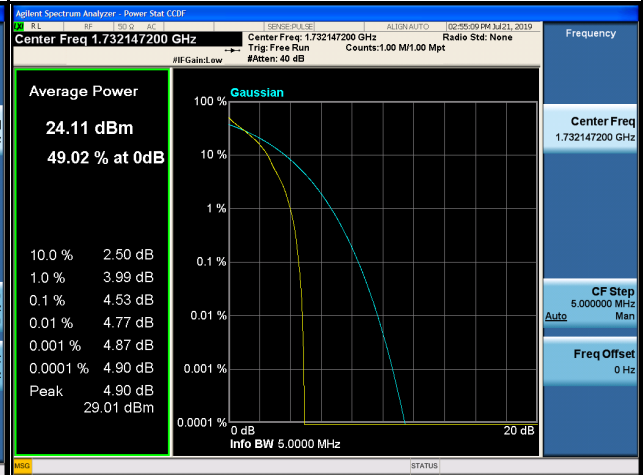


LTE Band 4 Spectrum Plot_1.4M

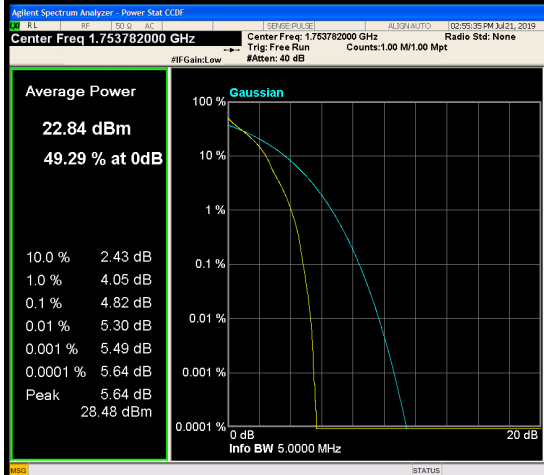
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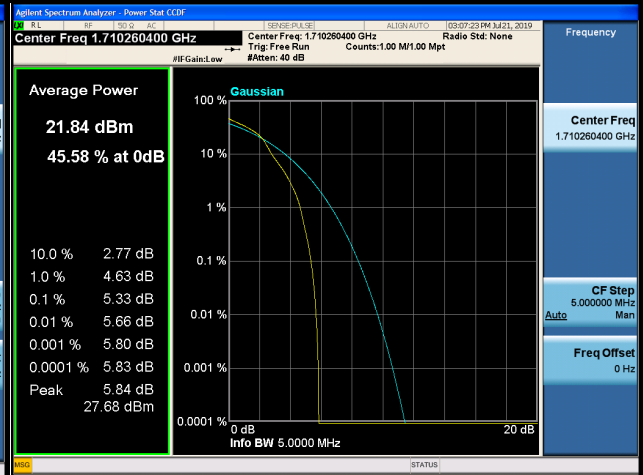
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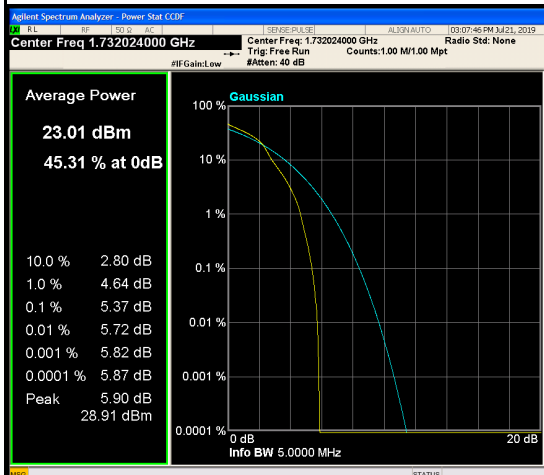
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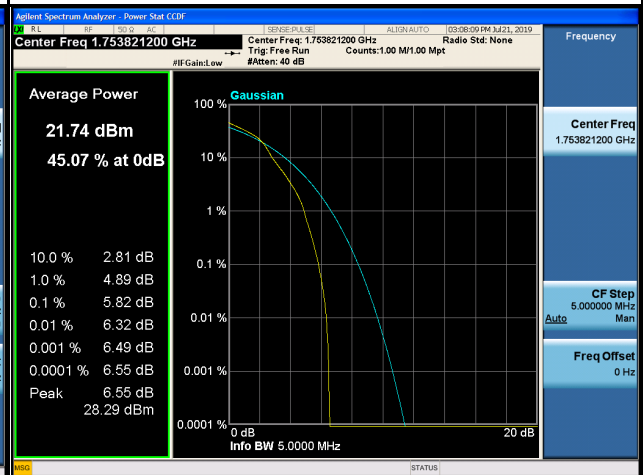
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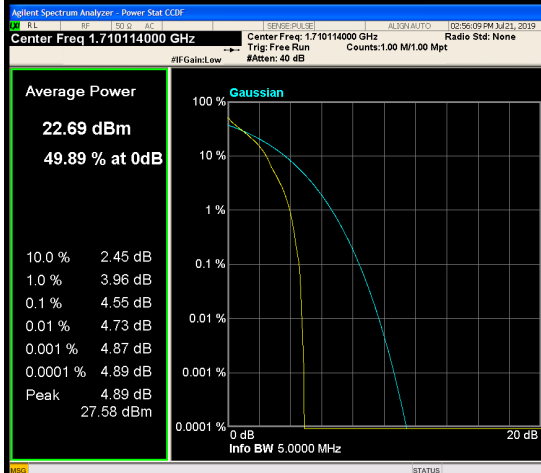


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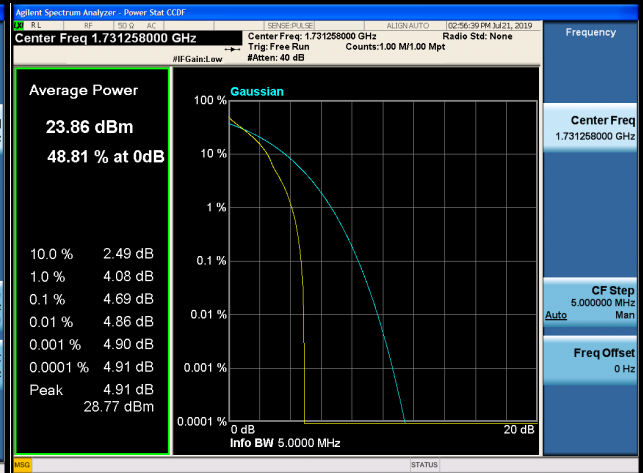


LTE Band 4 Spectrum Plot_3M

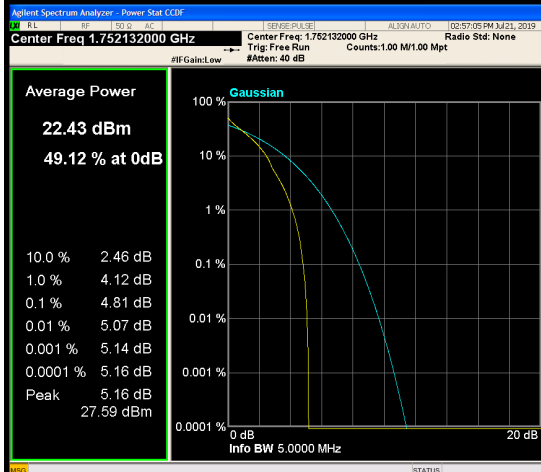
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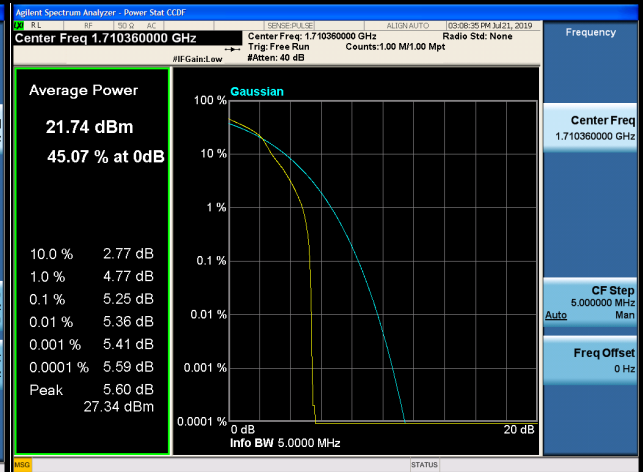
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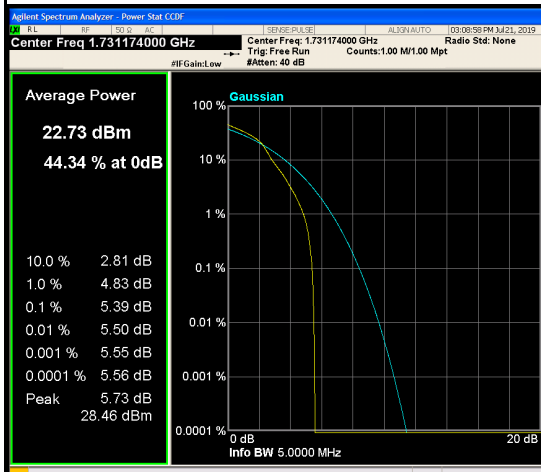
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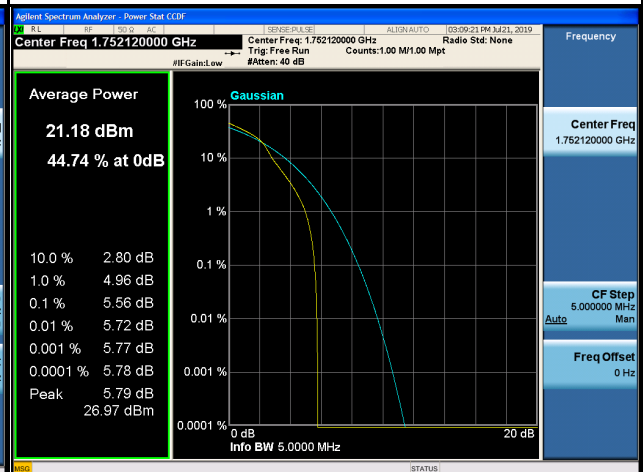
16QAM-19965



16QAM-20175

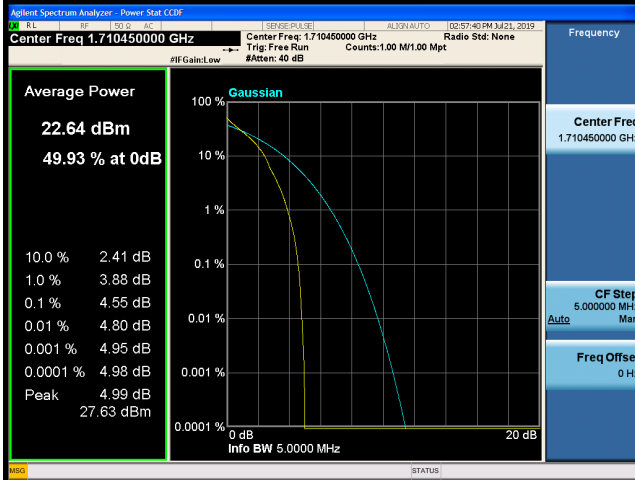


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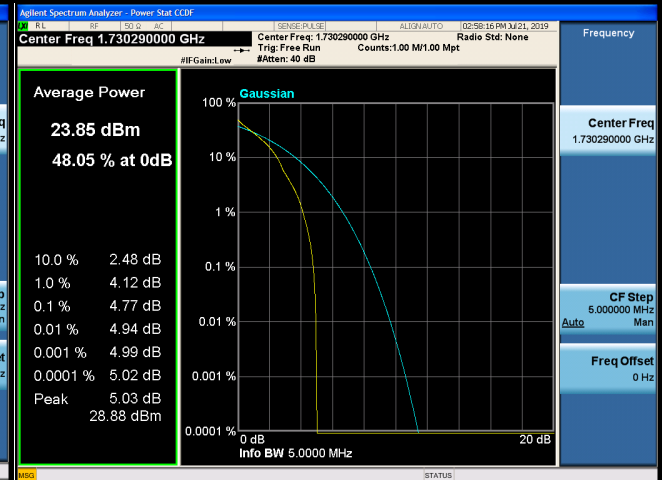


LTE Band 4 Spectrum Plot_5M

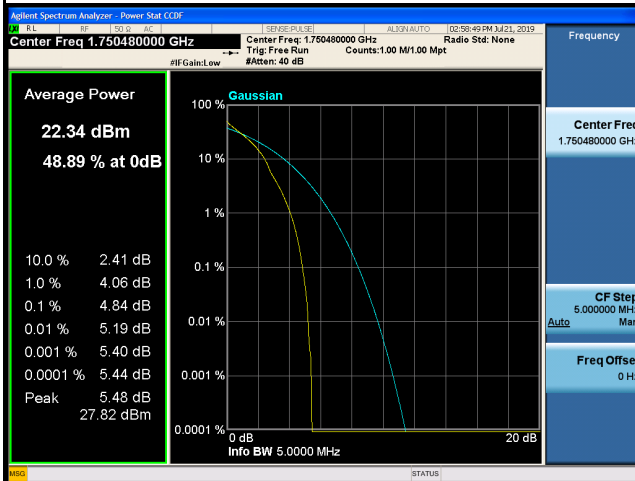
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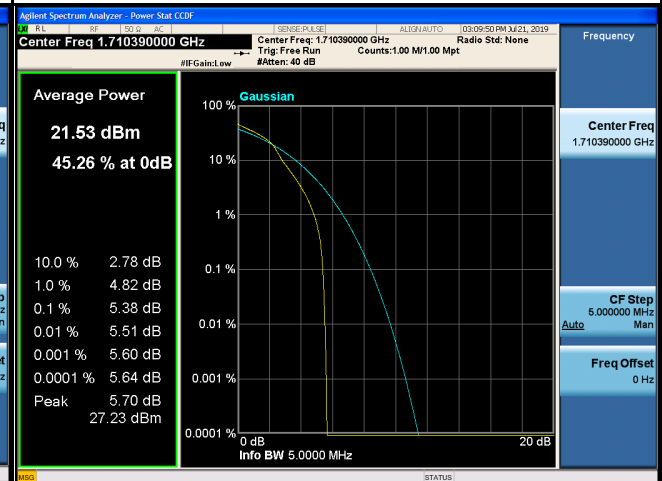
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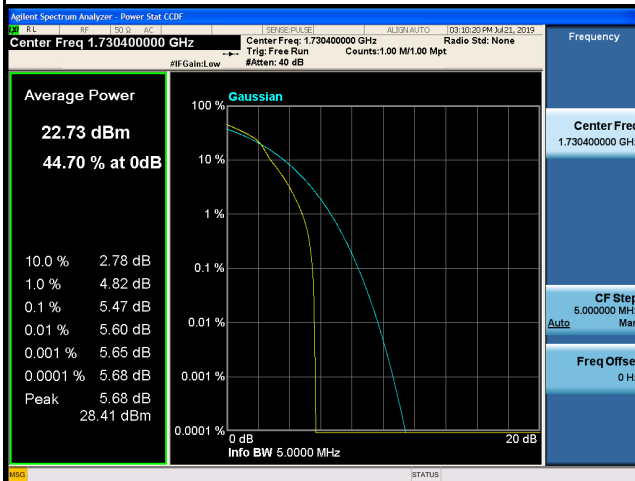
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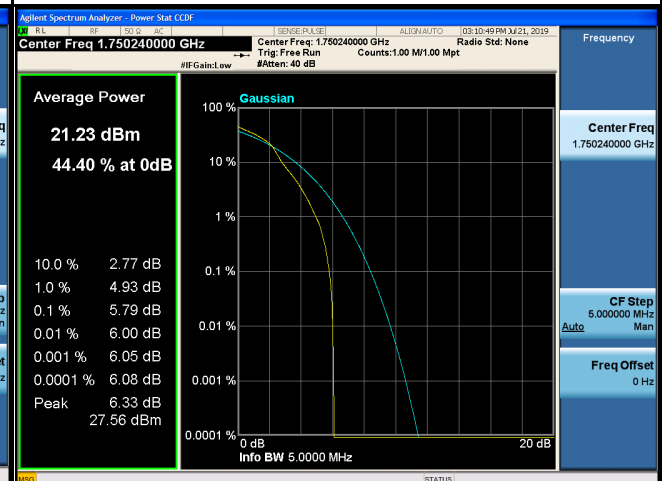
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16QAM-20175

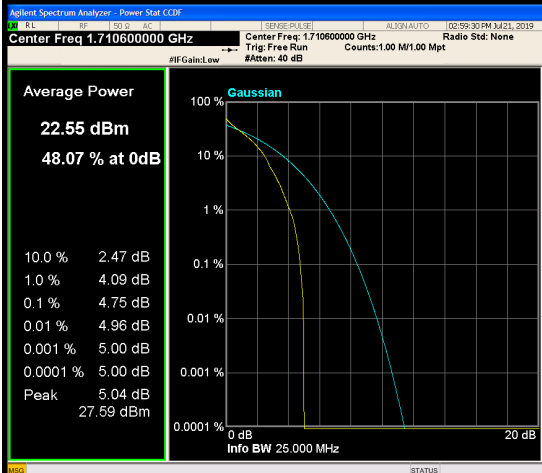


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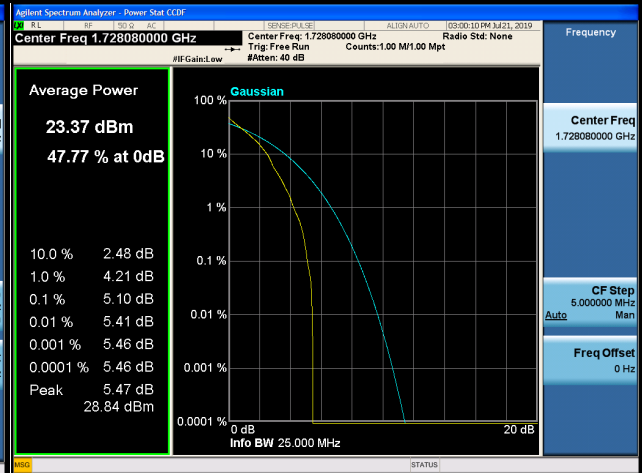


LTE Band 4 Spectrum Plot_10M

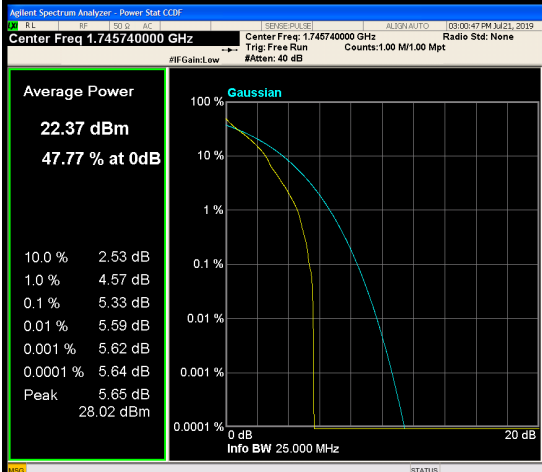
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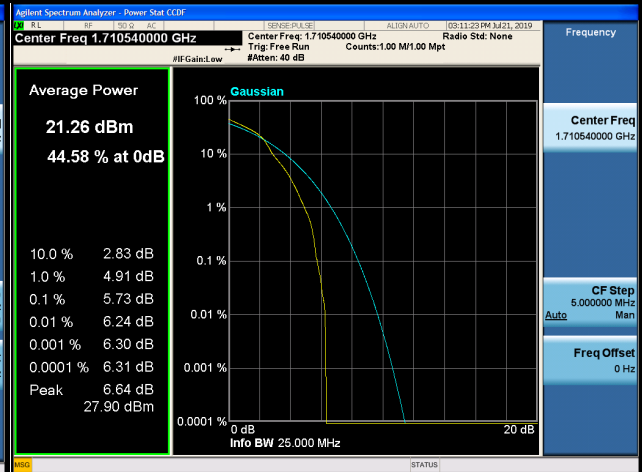
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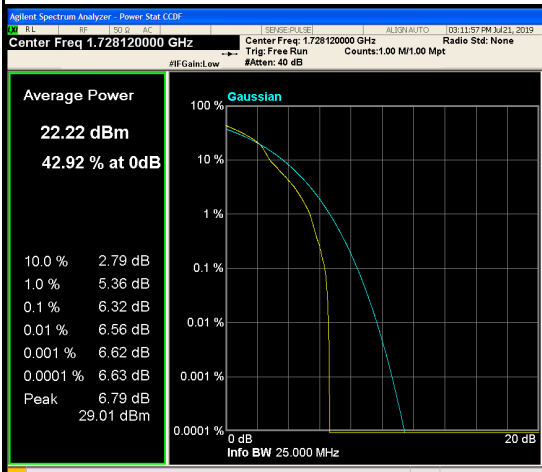
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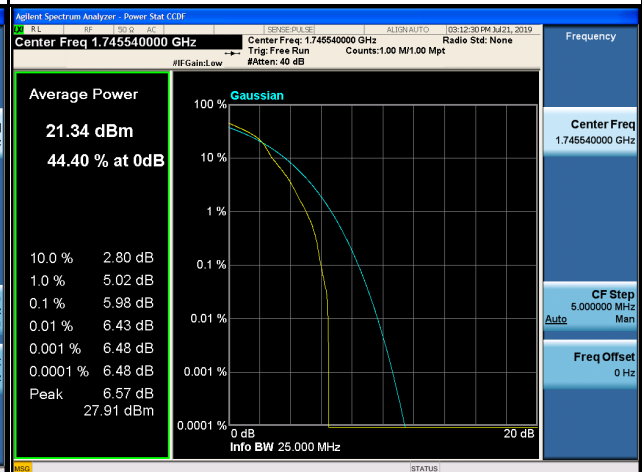
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16QAM-20175

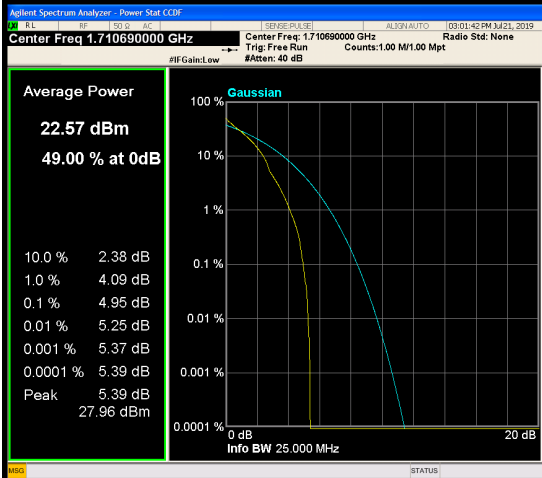


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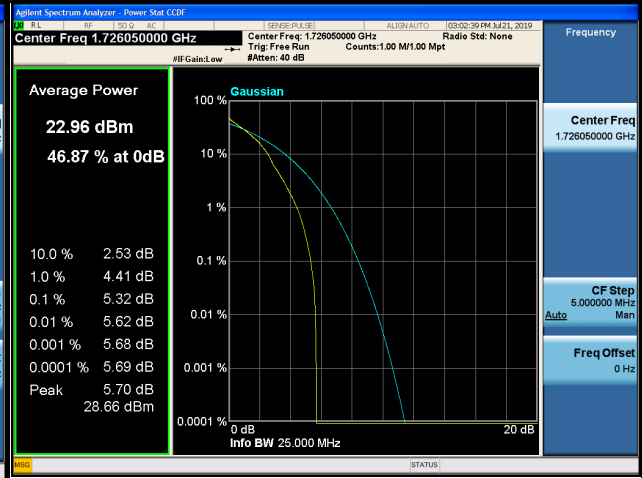


LTE Band 4 Spectrum Plot_15M

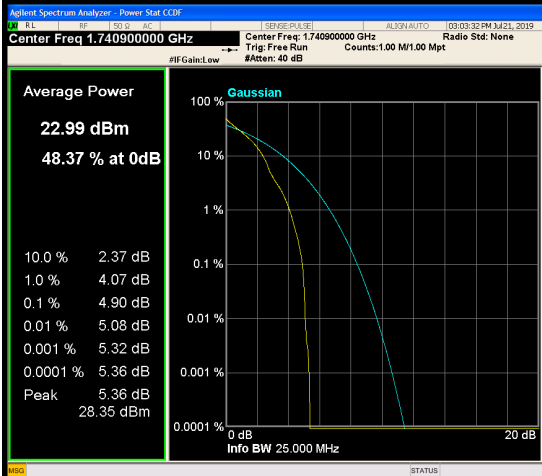
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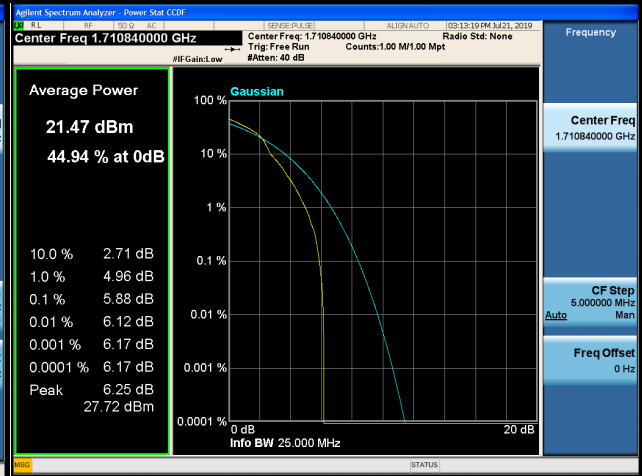
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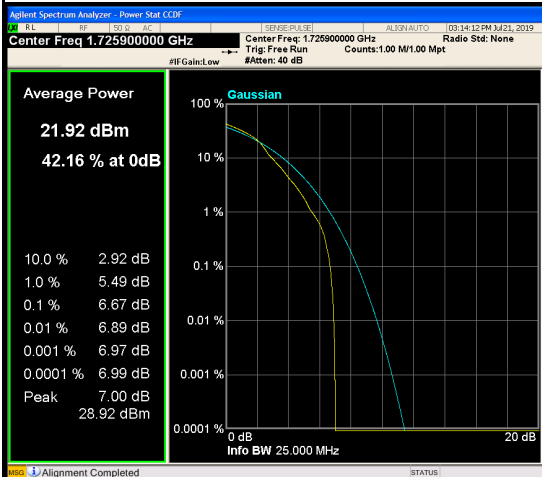
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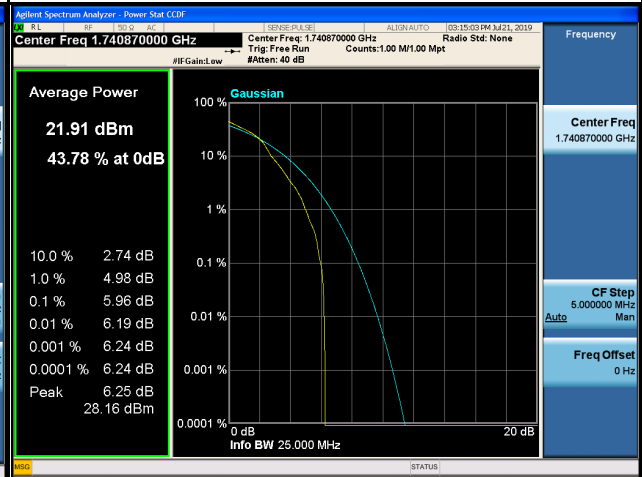
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16QAM-20175

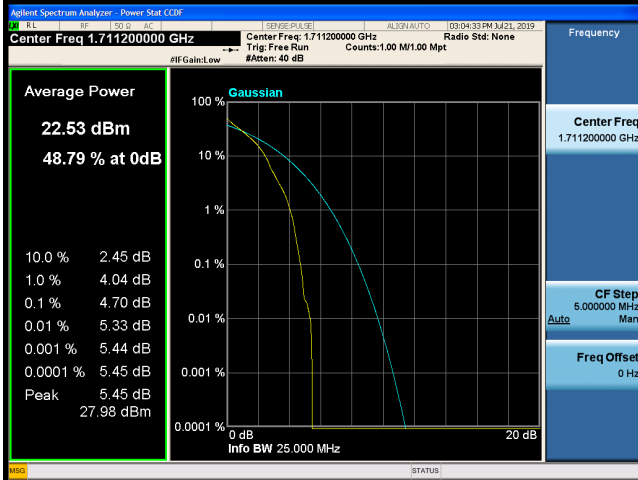


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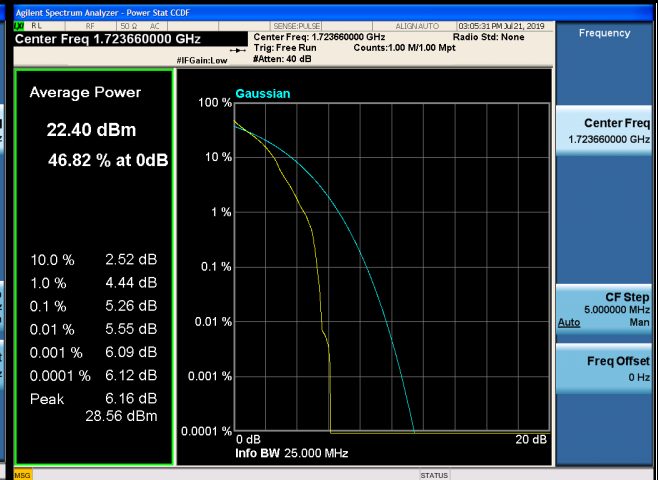


LTE Band 4 Spectrum Plot_20M

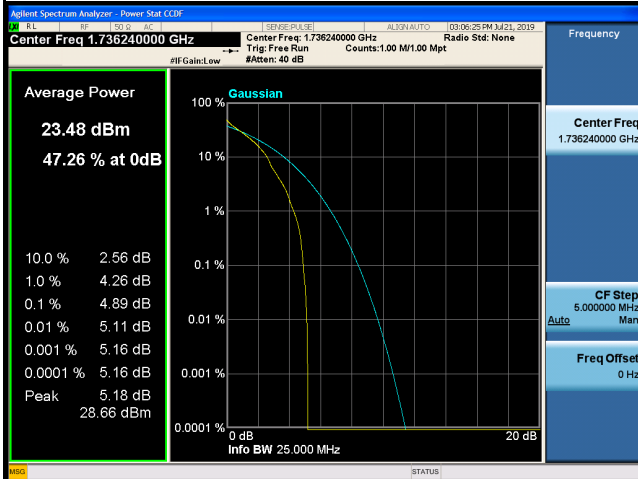
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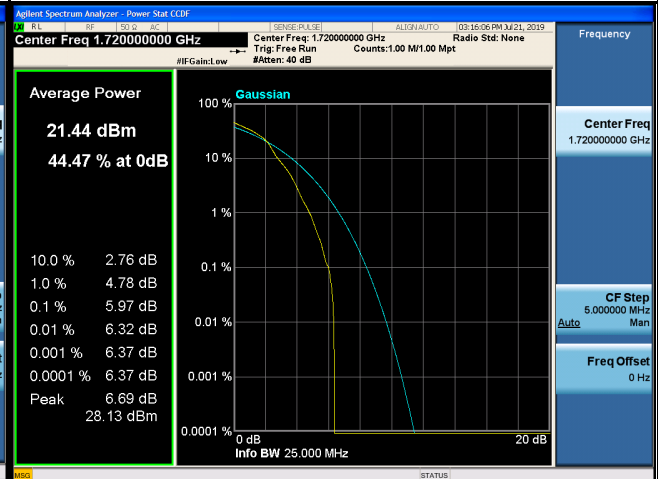
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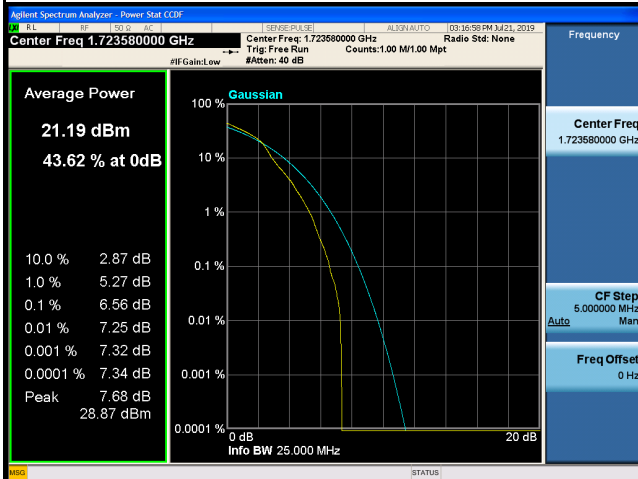
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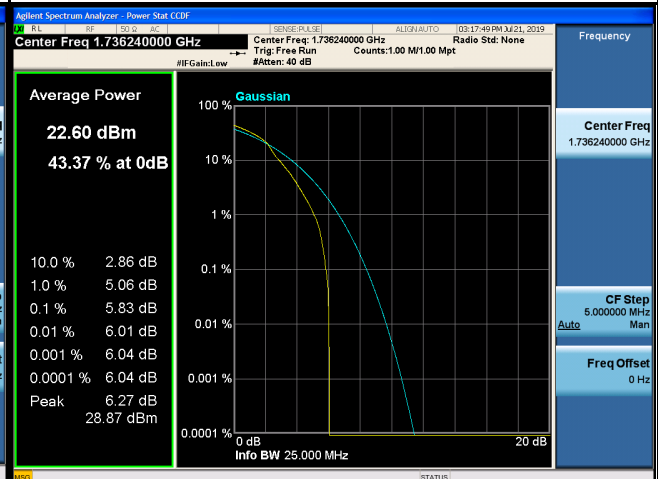
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16QAM-20175

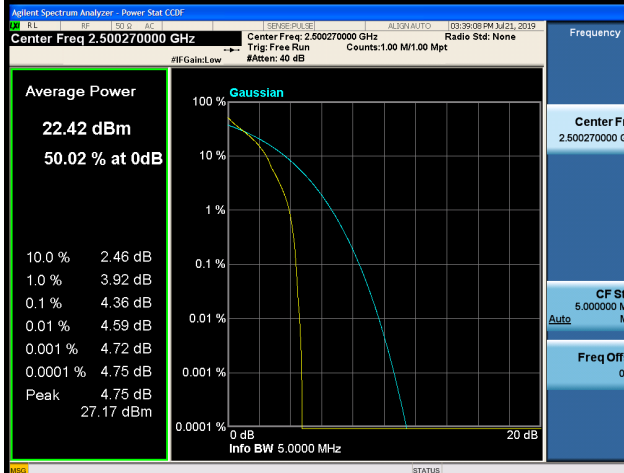


16QAM-20300

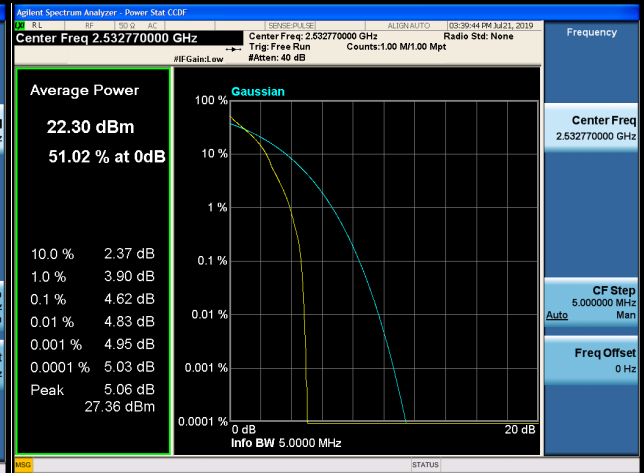


LTE Band 7 Spectrum Plot_5M

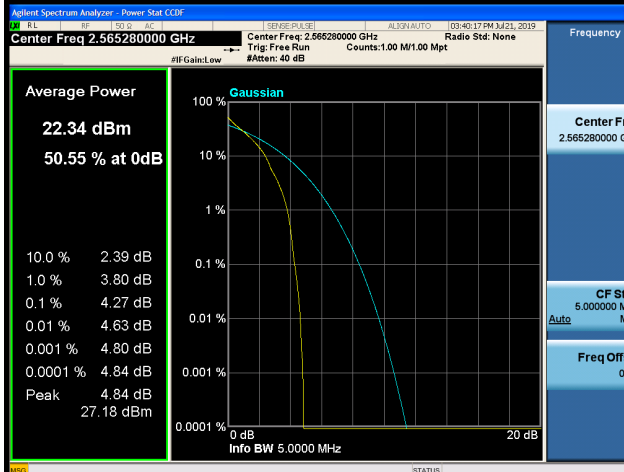
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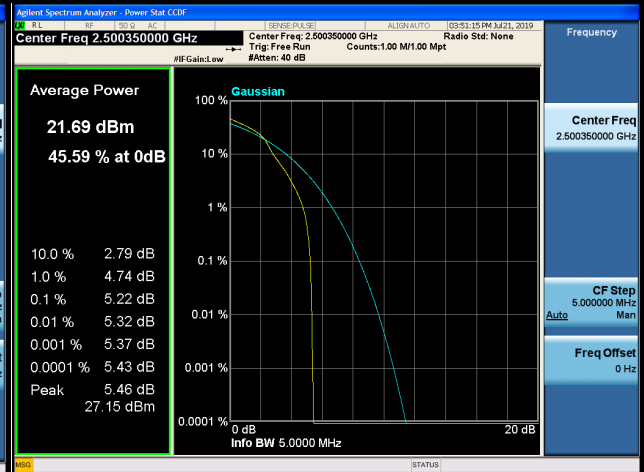
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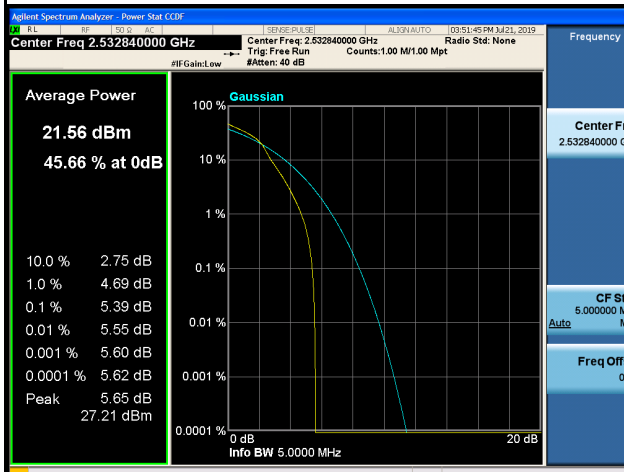
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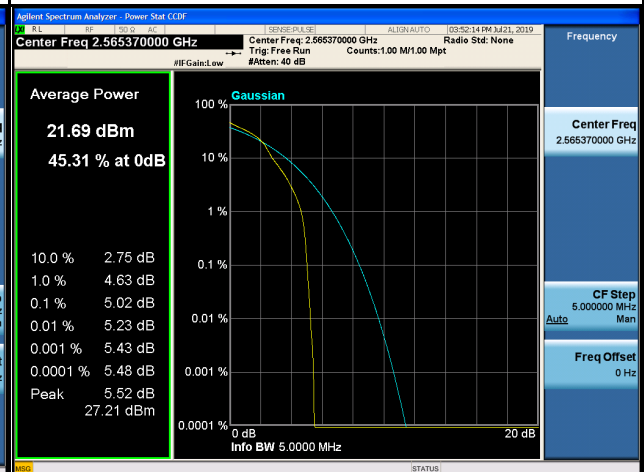
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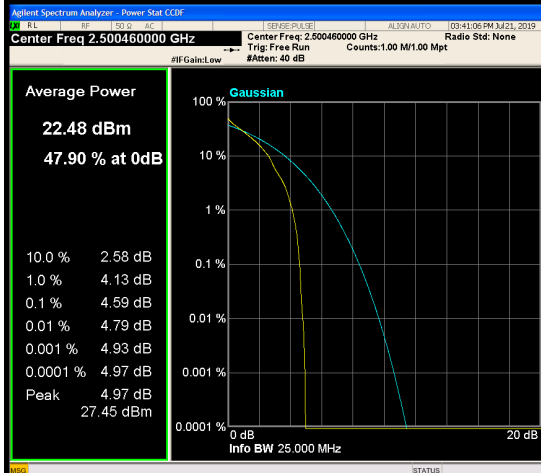


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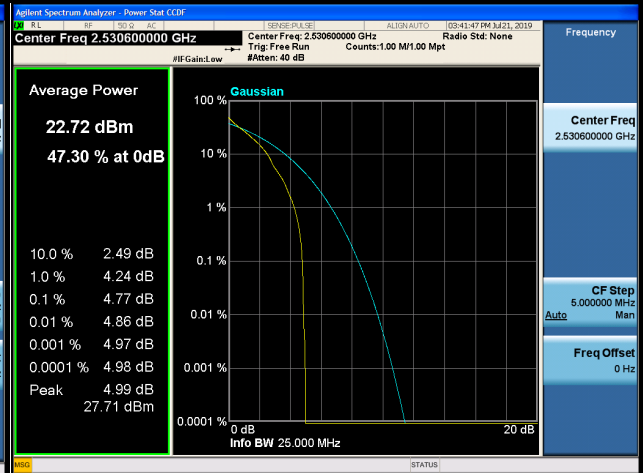


LTE Band 7 Spectrum Plot_10M

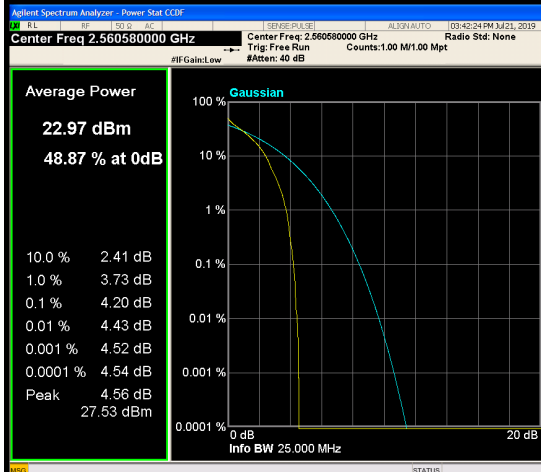
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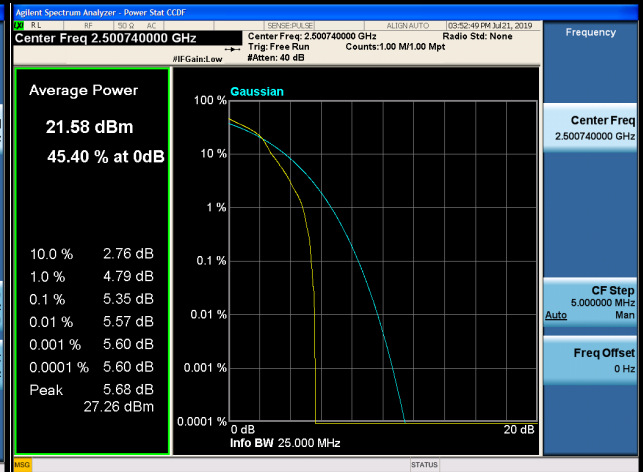
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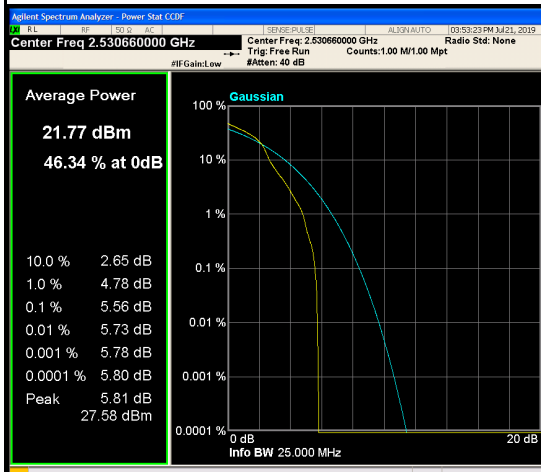
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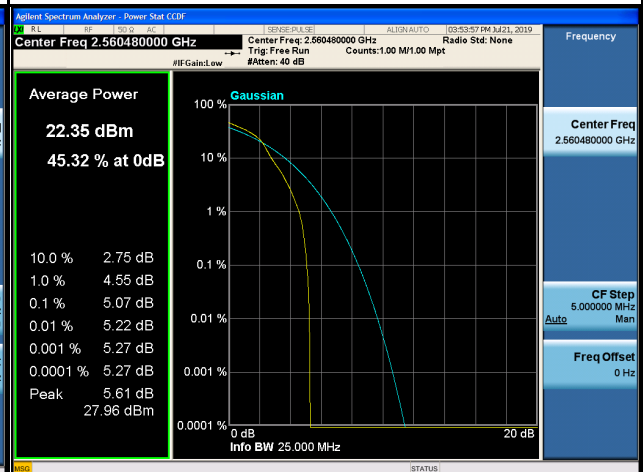
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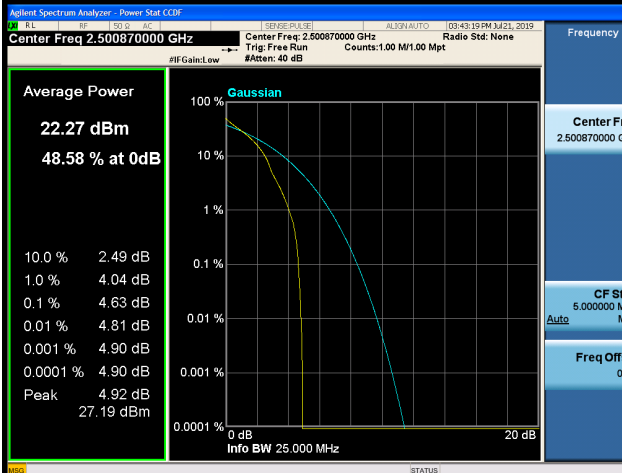


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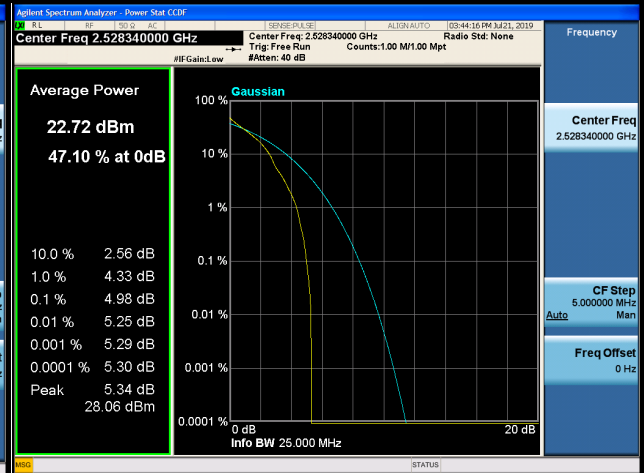


LTE Band 7 Spectrum Plot_15M

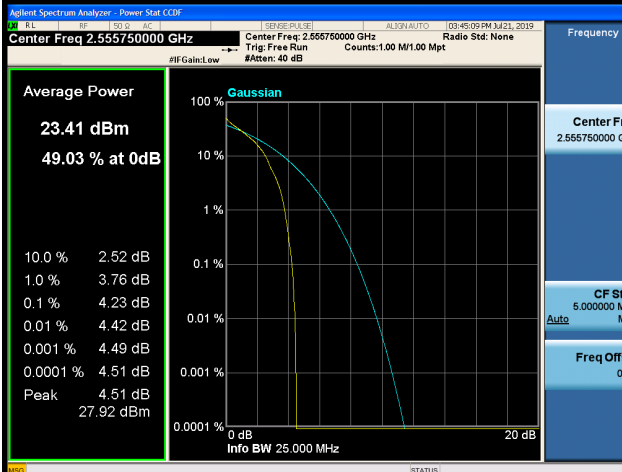
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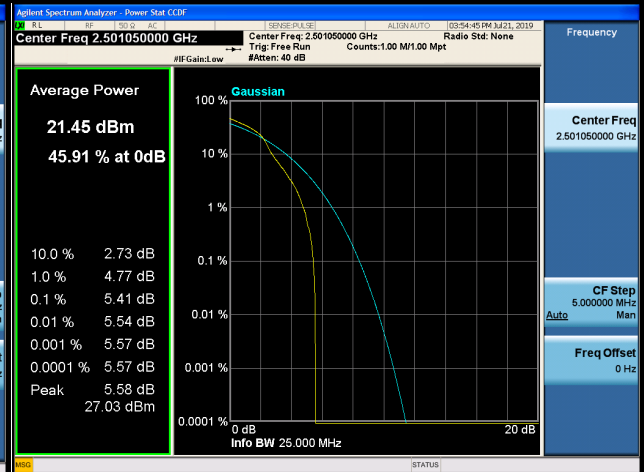
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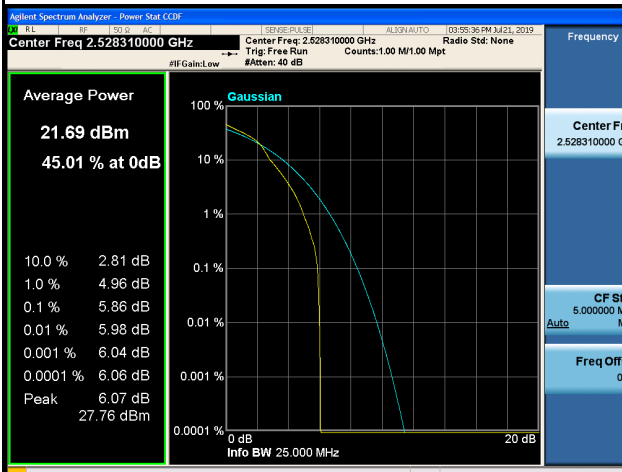
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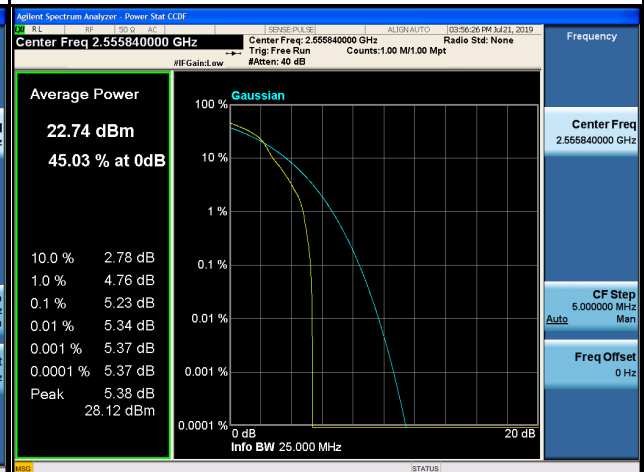
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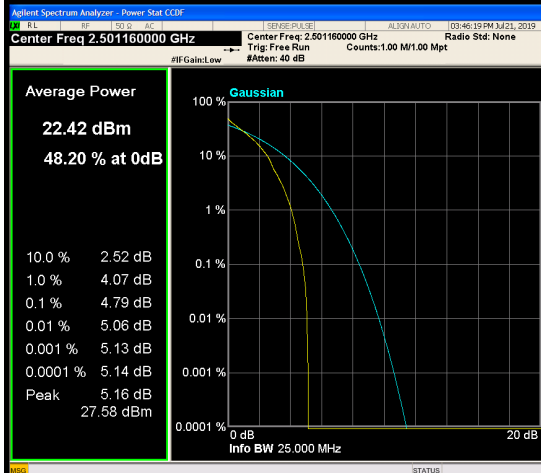


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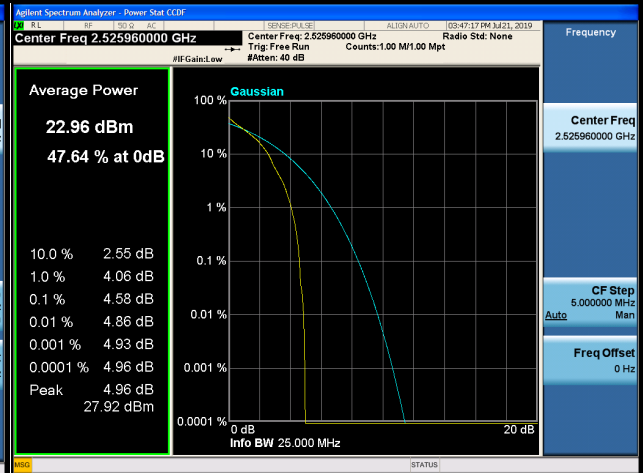


LTE Band 7 Spectrum Plot_20M

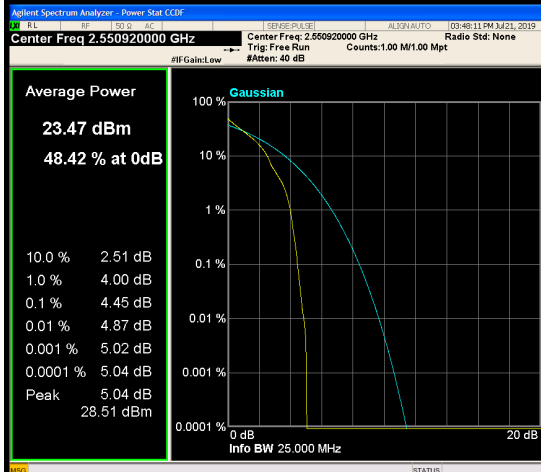
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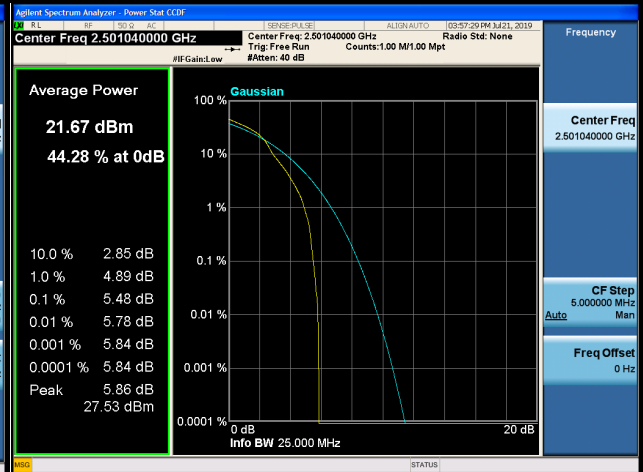
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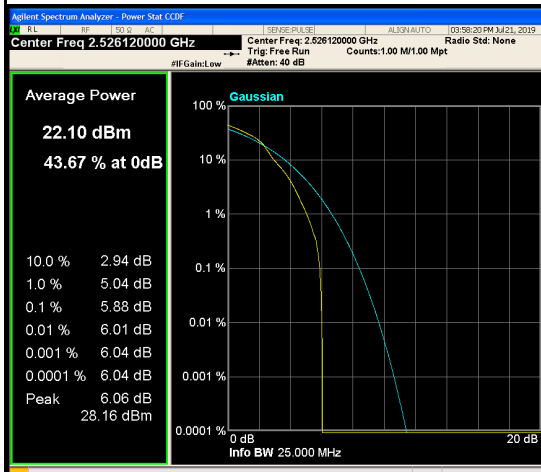
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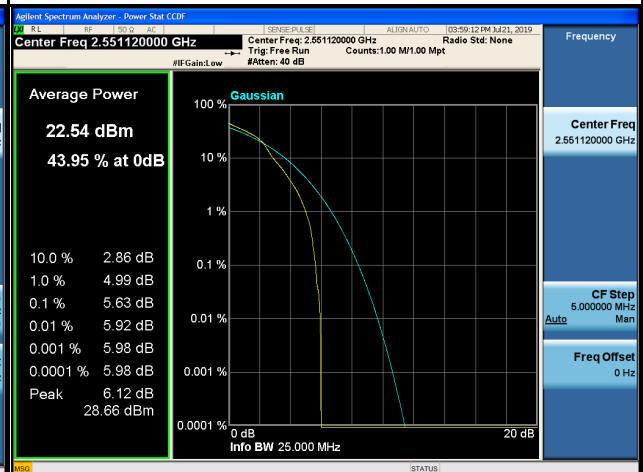
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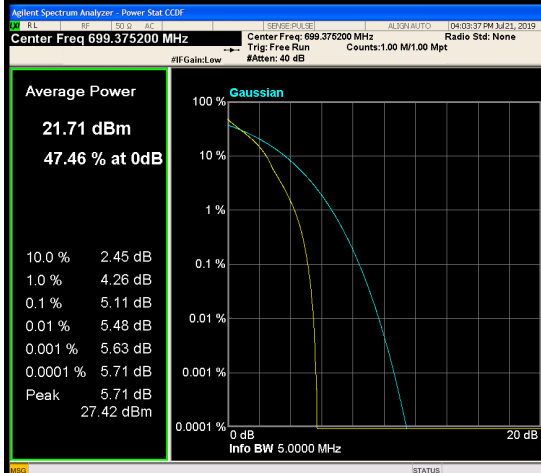


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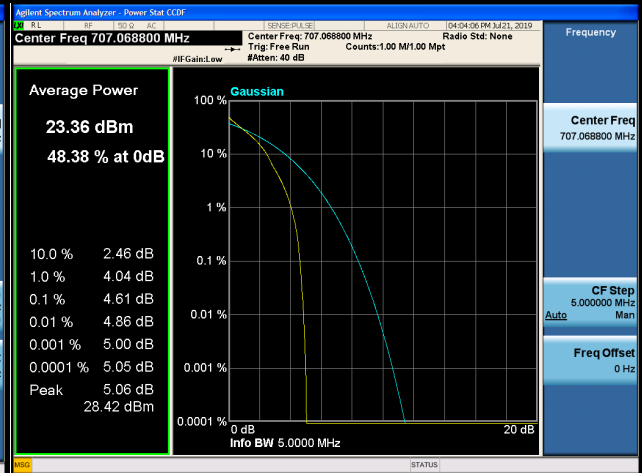


LTE Band 12 Spectrum Plot_1.4M

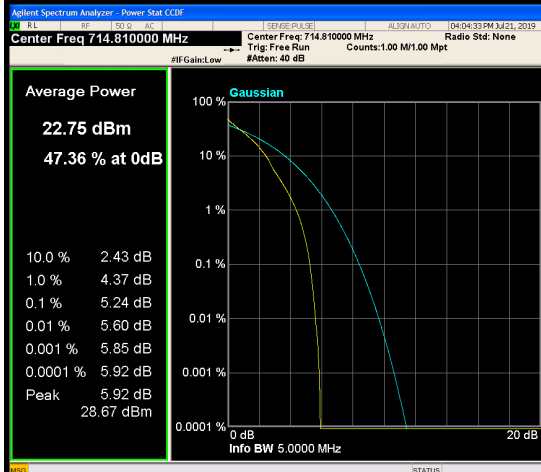
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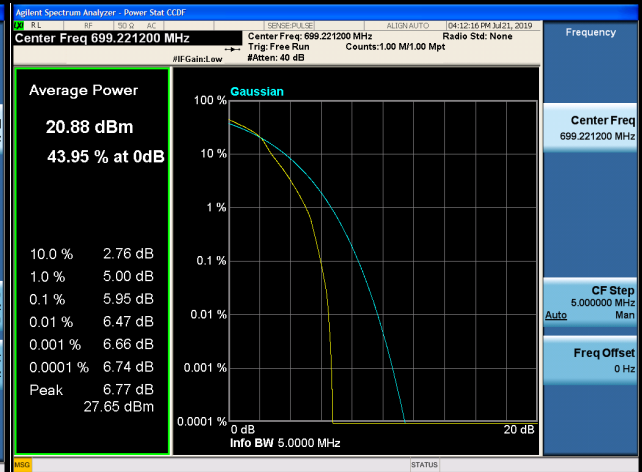
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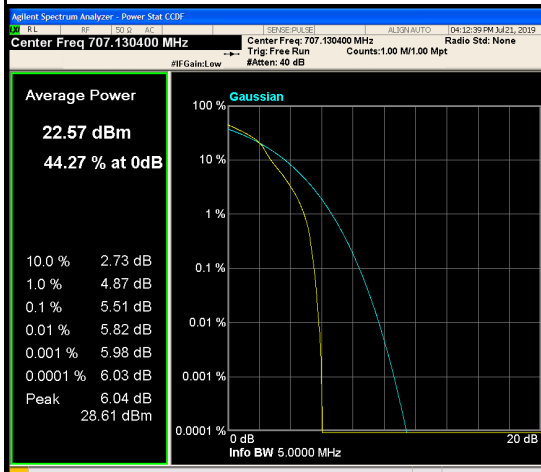
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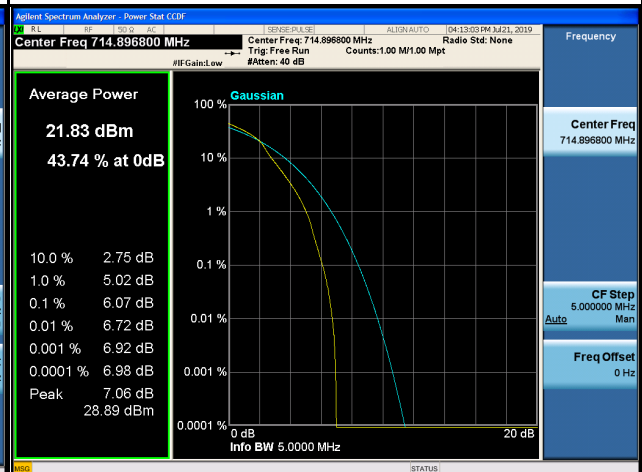
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16QAM23095



16QAM-23173

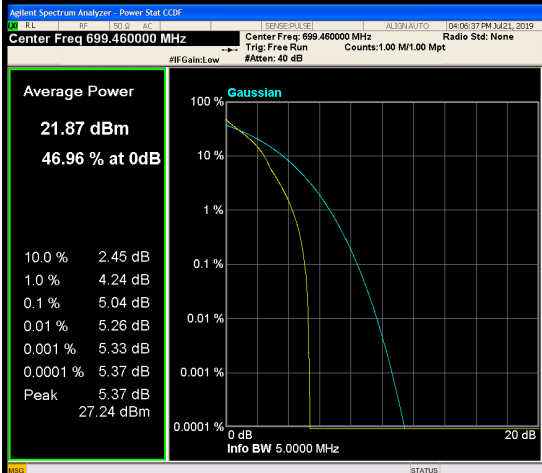


LTE Band 12 Spectrum Plot_3M

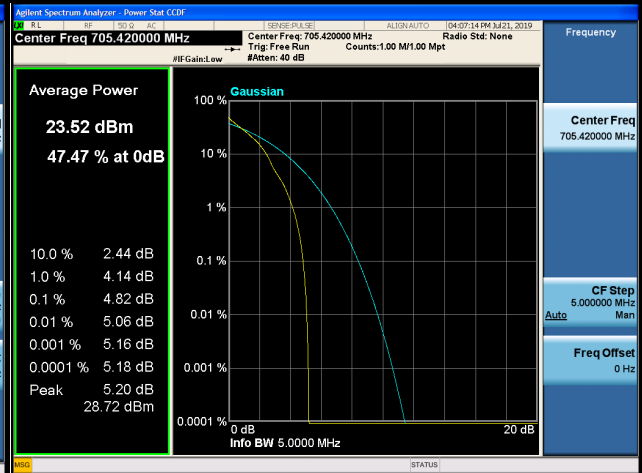


LTE Band 12 Spectrum Plot_5M

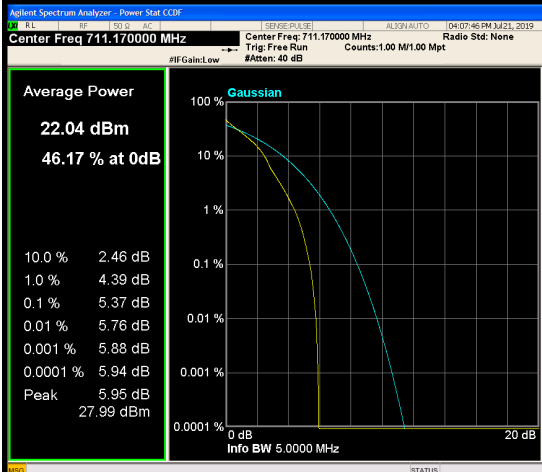
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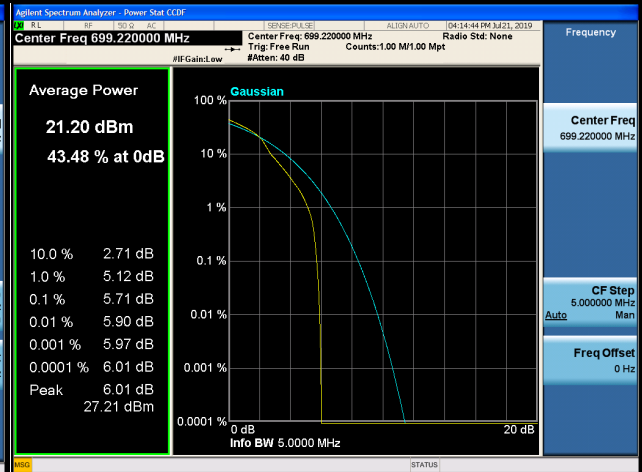
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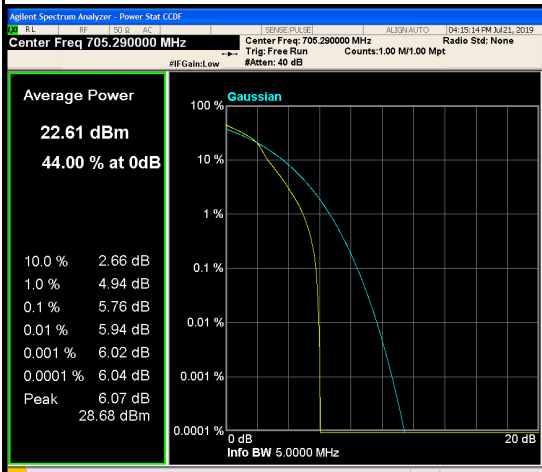
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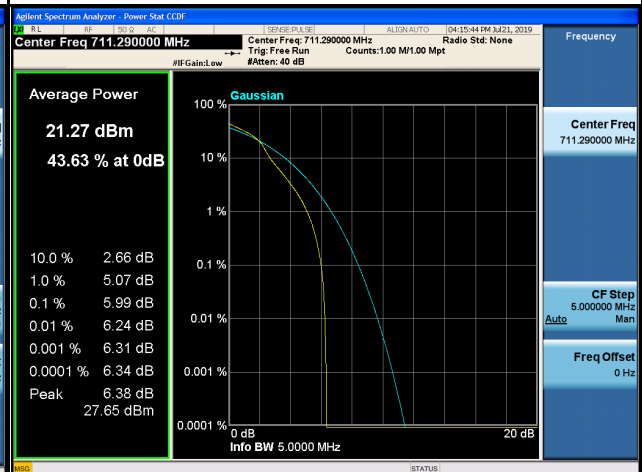
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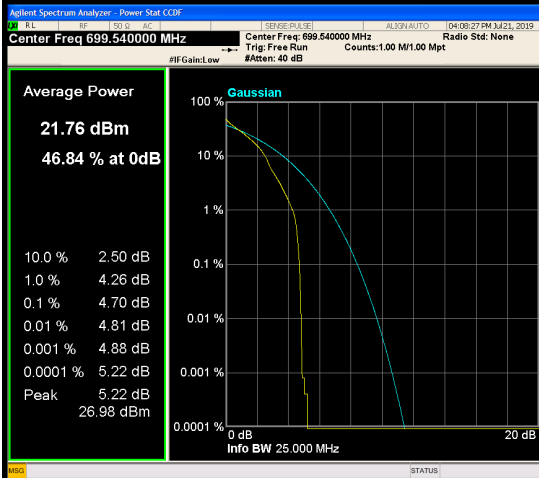


16QAM-23155

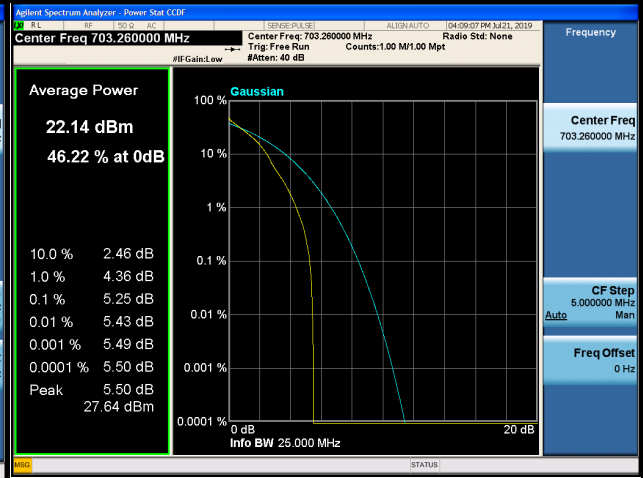


LTE Band 12 Spectrum Plot_10M

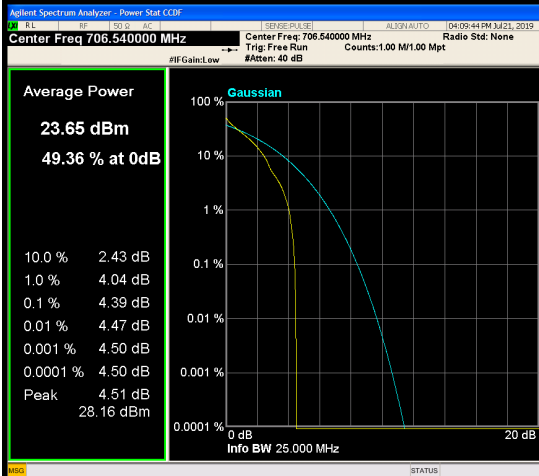
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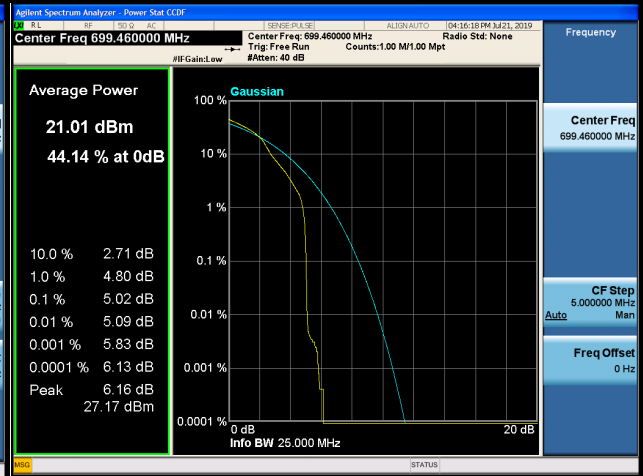
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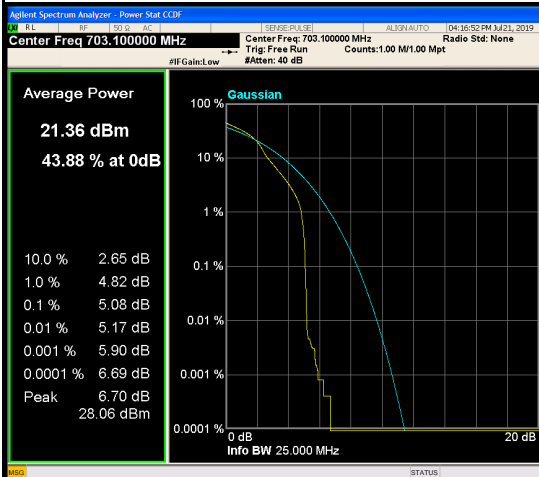
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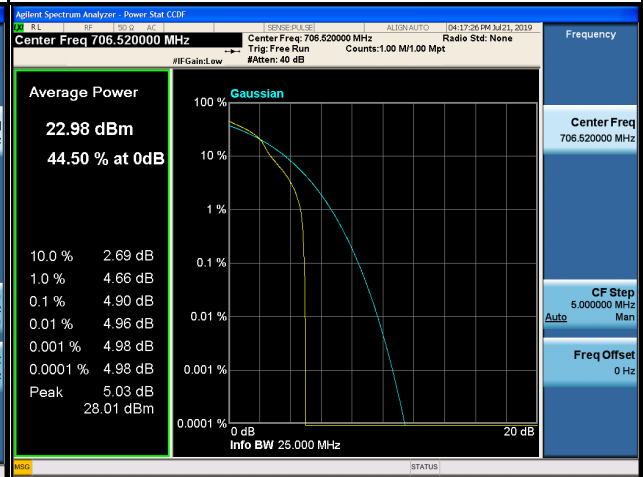
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16QAM-23095



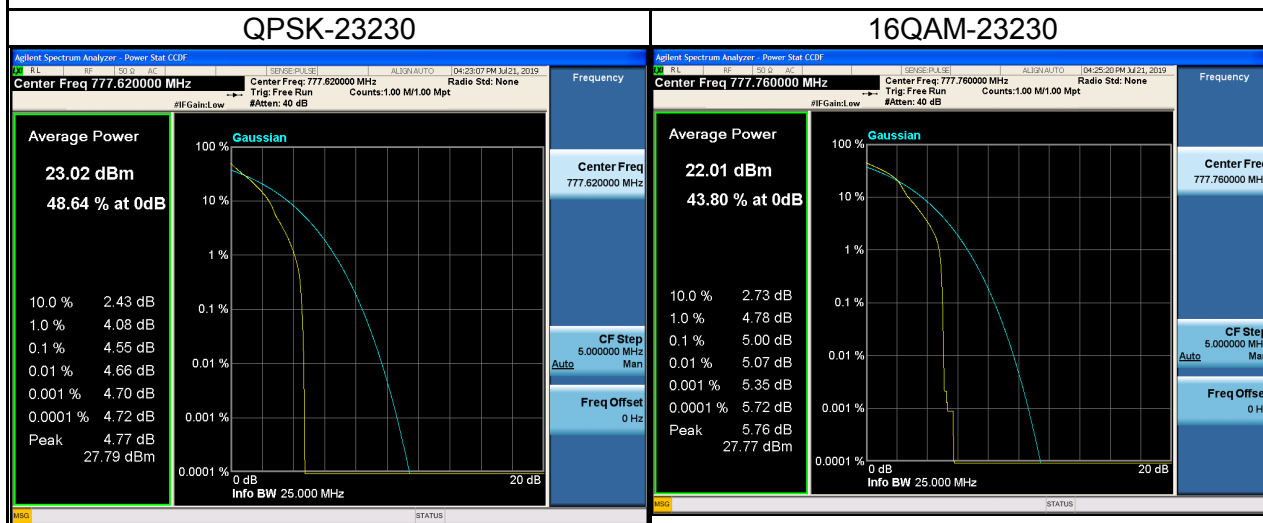
16QAM-23130



LTE Band 13 Spectrum Plot_5M



LTE Band 13 Spectrum Plot_10M



APPENDIX I - FREQUENCY STABILITY

Test Mode:	WCDMA Band IV _CH1413
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	4.01	0.002314441	±2.5
-20	4.92	0.002839663	
-10	7.09	0.004092116	
0	6.21	0.003584209	
10	3.08	0.001777675	
20	3.22	0.001858479	
30	5.68	0.00327831	
40	2.43	0.001402516	
50	4.99	0.002880065	
60	4.94	0.002851206	
75	2.11	0.001217823	
Max. Deviation (ppm)	7.09	0.004092116	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	1.06	0.000611797	±2.5
4.0	3.97	0.002291354	
4.2	1.03	0.000594482	
Max. Deviation (ppm)	3.97	0.002291354	

Test Mode:	LTE Band 4_CH20175_1.4M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	4.46	0.002574315	±2.5
-20	-5.45	-0.003145743	
-10	3.53	0.002037518	
0	-6.18	-0.0035671	
10	-3.47	-0.002002886	
20	0.65	0.00037518	
30	-5.40	-0.003116883	
40	-0.33	-0.000190476	
50	2.75	0.001587302	
60	2.39	0.001379509	
75	4.65	0.002683983	
Max. Deviation (ppm)	-6.18	-0.0035671	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	3.47	0.002002886	±2.5
4.0	-0.74	-0.000427128	
4.2	6.22	0.003590188	
Max. Deviation (ppm)	6.22	0.003590188	

Test Mode: LTE Band 4_CH20175_3M

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	1.85	0.001067821	±2.5
-20	3.31	0.001910534	
-10	-4.09	-0.00236075	
0	1.04	0.000600289	
10	-2.57	-0.001483405	
20	-4.51	-0.002603175	
30	4.82	0.002782107	
40	2.32	0.001339105	
50	3.21	0.001852814	
60	2.61	0.001506494	
75	-0.22	-0.000126984	
Max. Deviation (ppm)	4.82	0.002782107	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	5.36	0.003093795	±2.5
4.0	6.19	0.003572872	
4.2	6.16	0.003555556	
Max. Deviation (ppm)	6.19	0.003572872	

Test Mode:	LTE Band 4_CH20175_5M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-1.79	-0.001033189	±2.5
-20	6.71	0.003873016	
-10	0.64	0.000369408	
0	6.32	0.003647908	
10	-3.20	-0.001847042	
20	6.52	0.003763348	
30	-4.14	-0.00238961	
40	1.36	0.000784993	
50	-0.37	-0.000213564	
60	-4.74	-0.002735931	
75	3.81	0.002199134	
Max. Deviation (ppm)	6.71	0.003873016	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	5.23	0.003018759	±2.5
4.0	4.15	0.002395382	
4.2	2.32	0.001339105	
Max. Deviation (ppm)	5.23	0.003018759	

Test Mode:	LTE Band 4_CH20175_10M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-3.04	-0.00175469	±2.5
-20	4.79	0.002764791	
-10	-4.09	-0.00236075	
0	-6.01	-0.003468975	
10	-6.41	-0.003699856	
20	2.45	0.001414141	
30	4.23	0.002441558	
40	3.92	0.002262626	
50	2.44	0.001408369	
60	-6.46	-0.003728716	
75	-6.88	-0.00397114	
Max. Deviation (ppm)	-6.88	-0.00397114	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	4.30	0.002481962	±2.5
4.0	4.37	0.002522367	
4.2	3.41	0.001968254	
Max. Deviation (ppm)	4.37	0.002522367	

Test Mode:	LTE Band 4_CH20175_15M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-1.46	-0.000842713	±2.5
-20	3.48	0.002008658	
-10	4.62	0.002666667	
0	-1.66	-0.000958153	
10	4.34	0.002505051	
20	3.16	0.001823954	
30	1.47	0.000848485	
40	4.76	0.002747475	
50	-5.69	-0.003284271	
60	-0.37	-0.000213564	
75	6.84	0.003948052	
Max. Deviation (ppm)	6.84	0.003948052	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-2.52	-0.001454545	±2.5
4.0	-6.15	-0.003549784	
4.2	-5.36	-0.003093795	
Max. Deviation (ppm)	-6.15	-0.003549784	

Test Mode:	LTE Band 4_CH20175_20M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	4.58	0.002643579	±2.5
-20	4.84	0.002793651	
-10	-0.79	-0.000455988	
0	4.44	0.002562771	
10	2.15	0.001240981	
20	5.80	0.003347763	
30	-6.87	-0.003965368	
40	-0.44	-0.000253968	
50	-0.84	-0.000484848	
60	2.67	0.001541126	
75	6.30	0.003636364	
Max. Deviation (ppm)	-6.87	-0.003965368	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-6.29	-0.003630592	±2.5
4.0	6.24	0.003601732	
4.2	0.83	0.000479076	
Max. Deviation (ppm)	-6.29	-0.003630592	

Test Mode:	LTE Band 7_CH21100_5M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-4.33	-0.001708087	±2.5
-20	-4.60	-0.001814596	
-10	-3.84	-0.001514793	
0	1.82	0.000717949	
10	-6.61	-0.002607495	
20	4.14	0.001633136	
30	-0.90	-0.00035503	
40	6.21	0.002449704	
50	-3.86	-0.001522682	
60	5.78	0.002280079	
75	-2.21	-0.000871795	
Max. Deviation (ppm)	-6.61	-0.002607495	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-2.56	-0.001009862	±2.5
4.0	3.29	0.00129783	
4.2	-4.13	-0.001629191	
Max. Deviation (ppm)	-4.13	-0.001629191	

Test Mode:	LTE Band 7_CH21100_10M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-0.39	-0.000153846	±2.5
-20	2.85	0.00112426	
-10	2.59	0.001021696	
0	6.60	0.00260355	
10	-3.04	-0.001199211	
20	-2.11	-0.000832347	
30	-4.72	-0.001861933	
40	-2.50	-0.000986193	
50	6.64	0.002619329	
60	-5.13	-0.002023669	
75	5.38	0.002122288	
Max. Deviation (ppm)	6.64	0.002619329	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	4.97	0.001960552	±2.5
4.0	3.12	0.001230769	
4.2	0.94	0.000370809	
Max. Deviation (ppm)	4.97	0.001960552	

Test Mode:	LTE Band 7_CH21100_15M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	3.06	0.001207101	±2.5
-20	2.01	0.000792899	
-10	-0.76	-0.000299803	
0	-1.45	-0.000571992	
10	1.99	0.00078501	
20	-2.79	-0.001100592	
30	-2.16	-0.000852071	
40	3.84	0.001514793	
50	-0.30	-0.000118343	
60	2.91	0.001147929	
75	2.43	0.00095858	
Max. Deviation (ppm)	3.84	0.001514793	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-1.35	-0.000532544	±2.5
4.0	-1.82	-0.000717949	
4.2	5.72	0.00225641	
Max. Deviation (ppm)	5.72	0.00225641	

Test Mode: LTE Band 7_CH21100_20M

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-0.65	-0.00025641	±2.5
-20	6.46	0.002548323	
-10	1.07	0.000422091	
0	-0.54	-0.000213018	
10	1.77	0.000698225	
20	1.87	0.000737673	
30	3.08	0.00121499	
40	3.51	0.001384615	
50	-4.72	-0.001861933	
60	-3.29	-0.00129783	
75	1.17	0.000461538	
Max. Deviation (ppm)	6.46	0.002548323	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	3.08	0.00121499	±2.5
4.0	1.13	0.000445759	
4.2	4.43	0.001747535	
Max. Deviation (ppm)	4.43	0.001747535	

Test Mode: LTE Band 12_CH23095_1.4M

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-2.45	-0.003462898	±2.5
-20	3.85	0.005441696	
-10	-4.85	-0.006855124	
0	6.14	0.008678445	
10	0.76	0.001074205	
20	-3.13	-0.004424028	
30	-5.23	-0.007392226	
40	4.10	0.005795053	
50	6.55	0.009257951	
60	-2.03	-0.002869258	
75	-2.52	-0.003561837	
Max. Deviation (ppm)	6.55	0.009257951	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	2.19	0.003095406	±2.5
4.0	2.25	0.003180212	
4.2	5.66	0.008	
Max. Deviation (ppm)	5.66	0.008	

Test Mode:	LTE Band 12_CH23095_3M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	3.36	0.004749117	±2.5
-20	-2.20	-0.003109541	
-10	-2.09	-0.002954064	
0	1.94	0.002742049	
10	1.54	0.002176678	
20	2.79	0.003943463	
30	-4.58	-0.006473498	
40	-6.14	-0.008678445	
50	-0.20	-0.000282686	
60	-5.59	-0.00790106	
75	5.39	0.007618375	
Max. Deviation (ppm)	-6.14	-0.008678445	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-6.01	0.0084947	±2.5
4.0	-0.77	0.001088339	
4.2	5.61	0.007929329	
Max. Deviation (ppm)	-6.01	0.0084947	

Test Mode:	LTE Band 12_CH23095_5M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-3.39	-0.004791519	±2.5
-20	5.23	0.007392226	
-10	-0.65	-0.000918728	
0	6.19	0.008749117	
10	0.98	0.001385159	
20	4.11	0.005809187	
30	-2.52	-0.003561837	
40	0.56	0.000791519	
50	-5.49	-0.007759717	
60	-0.79	-0.001116608	
75	-3.85	-0.005441696	
Max. Deviation (ppm)	6.19	0.008749117	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-5.02	-0.007095406	±2.5
4.0	0.59	0.000833922	
4.2	4.81	0.006798587	
Max. Deviation (ppm)	-5.02	-0.007095406	

Test Mode:	LTE Band 12_CH23095_10M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-2.91	-0.004113074	±2.5
-20	-6.95	-0.009823322	
-10	-2.46	-0.003477032	
0	3.41	0.004819788	
10	5.49	0.007759717	
20	3.28	0.004636042	
30	5.45	0.00770318	
40	-5.35	-0.007561837	
50	-4.85	-0.006855124	
60	-3.39	-0.004791519	
75	2.22	0.003137809	
Max. Deviation (ppm)	-6.95	-0.009823322	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	4.42	0.00624735	±2.5
4.0	-4.64	-0.006558304	
4.2	-3.24	-0.004579505	
Max. Deviation (ppm)	-4.64	-0.006558304	

Test Mode: LTE Band 13_CH23230_5M

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	0.98	0.001253197	±2.5
-20	-2.11	-0.00269821	
-10	5.85	0.007480818	
0	6.80	0.008695652	
10	-6.53	-0.008350384	
20	4.66	0.005959079	
30	6.57	0.008401535	
40	0.15	0.000191816	
50	0.58	0.000741688	
60	4.96	0.006342711	
75	-5.21	-0.006662404	
Max. Deviation (ppm)	6.8	0.008695652	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-3.18	-0.004066496	±2.5
4.0	-6.98	-0.008925831	
4.2	6.95	0.008887468	
Max. Deviation (ppm)	-6.98	-0.008925831	

Test Mode:	LTE Band 13_CH23230_10M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	3.36	0.004296675	±2.5
-20	-2.95	-0.003772379	
-10	-5.83	-0.007455243	
0	5.61	0.007173913	
10	-6.33	-0.008094629	
20	-3.32	-0.004245524	
30	0.54	0.000690537	
40	2.92	0.003734015	
50	6.69	0.008554987	
60	-6.13	-0.007838875	
75	4.12	0.005268542	
Max. Deviation (ppm)	6.69	0.008554987	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-3.33	-0.004258312	±2.5
4.0	6.40	0.008184143	
4.2	6.16	0.007877238	
Max. Deviation (ppm)	6.4	0.008184143	

End of Test Report