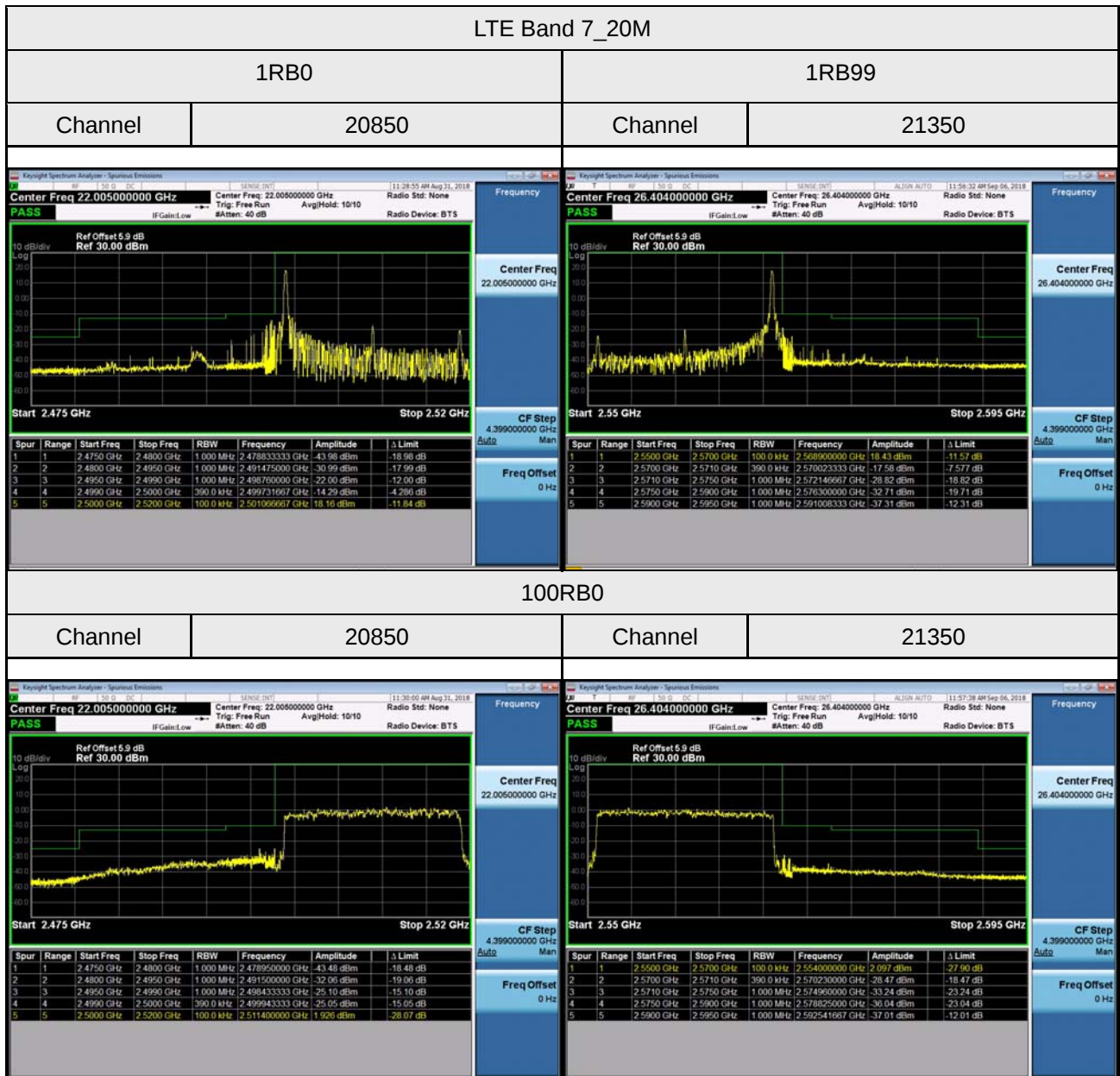
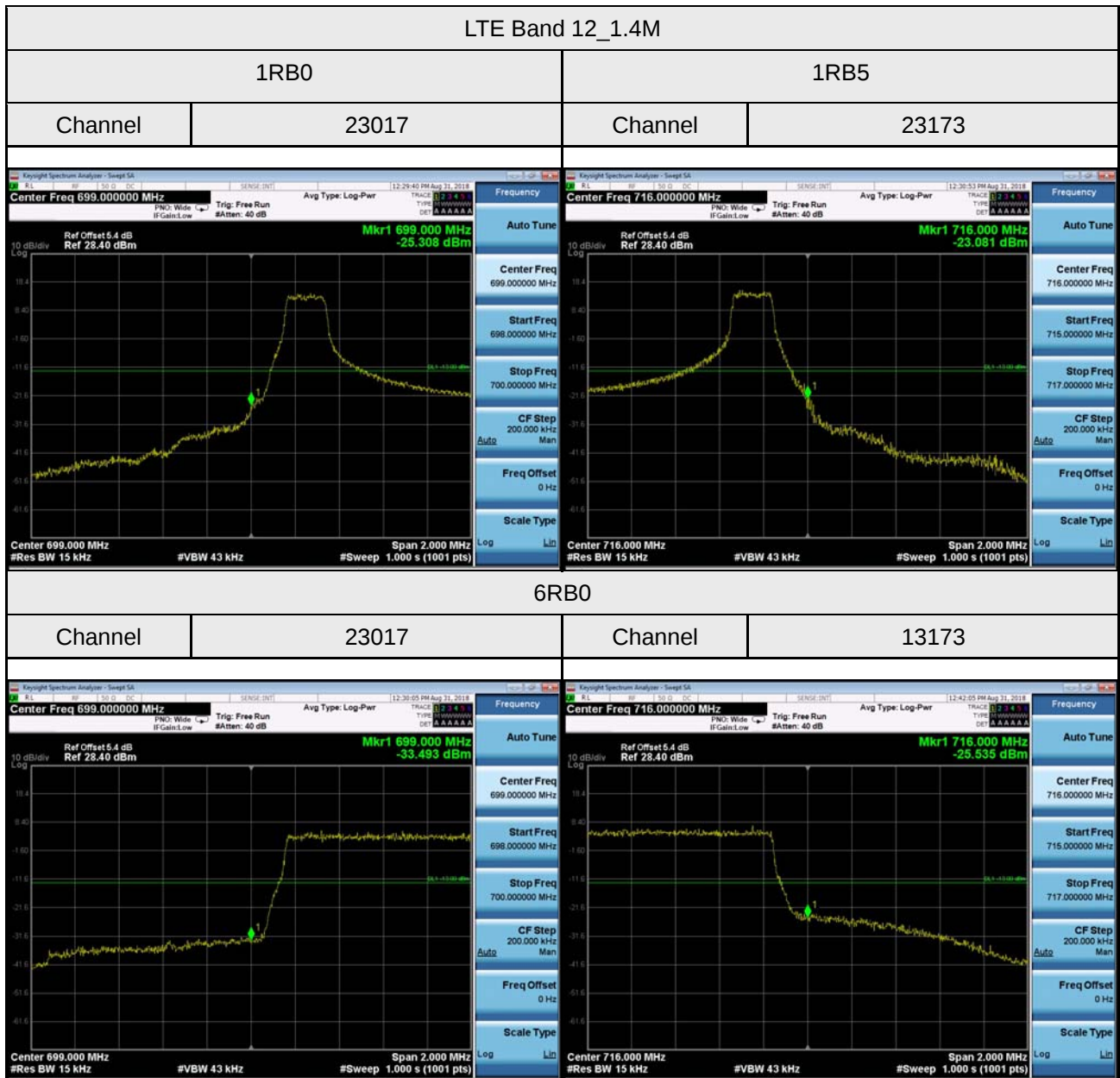
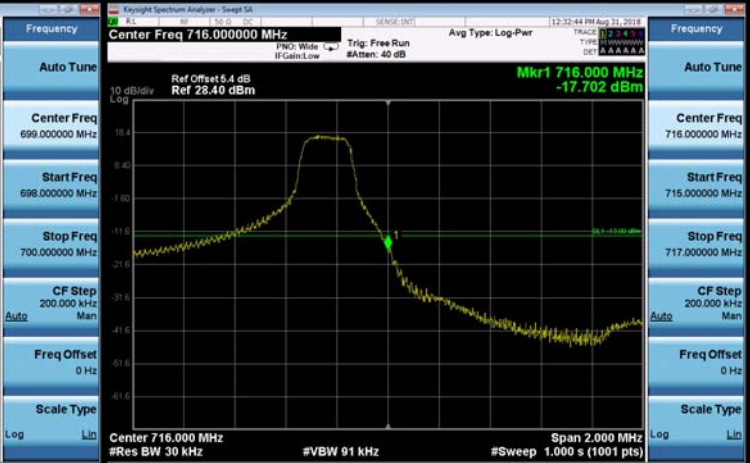
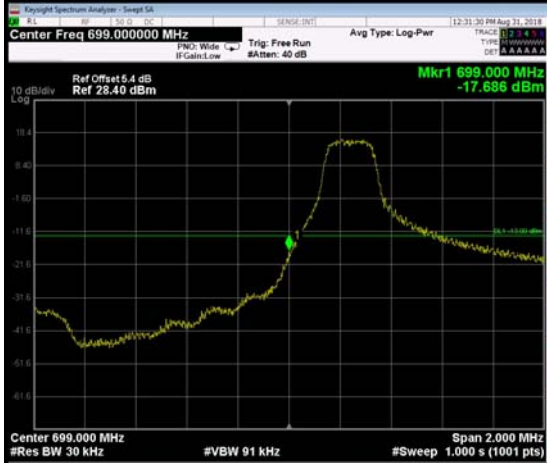






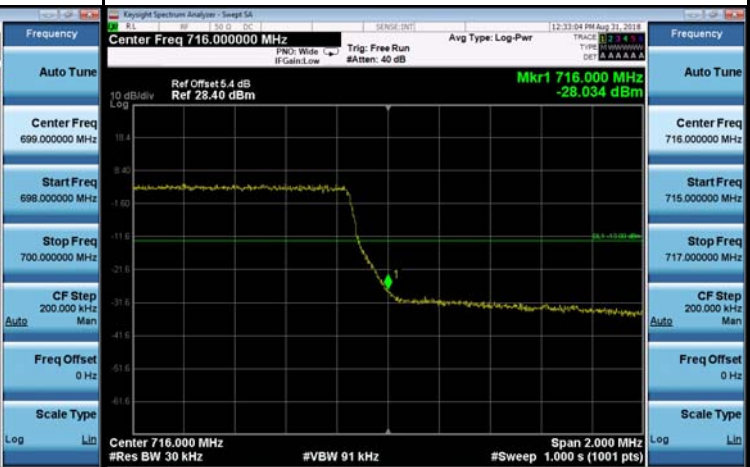
LTE Band 12_3M

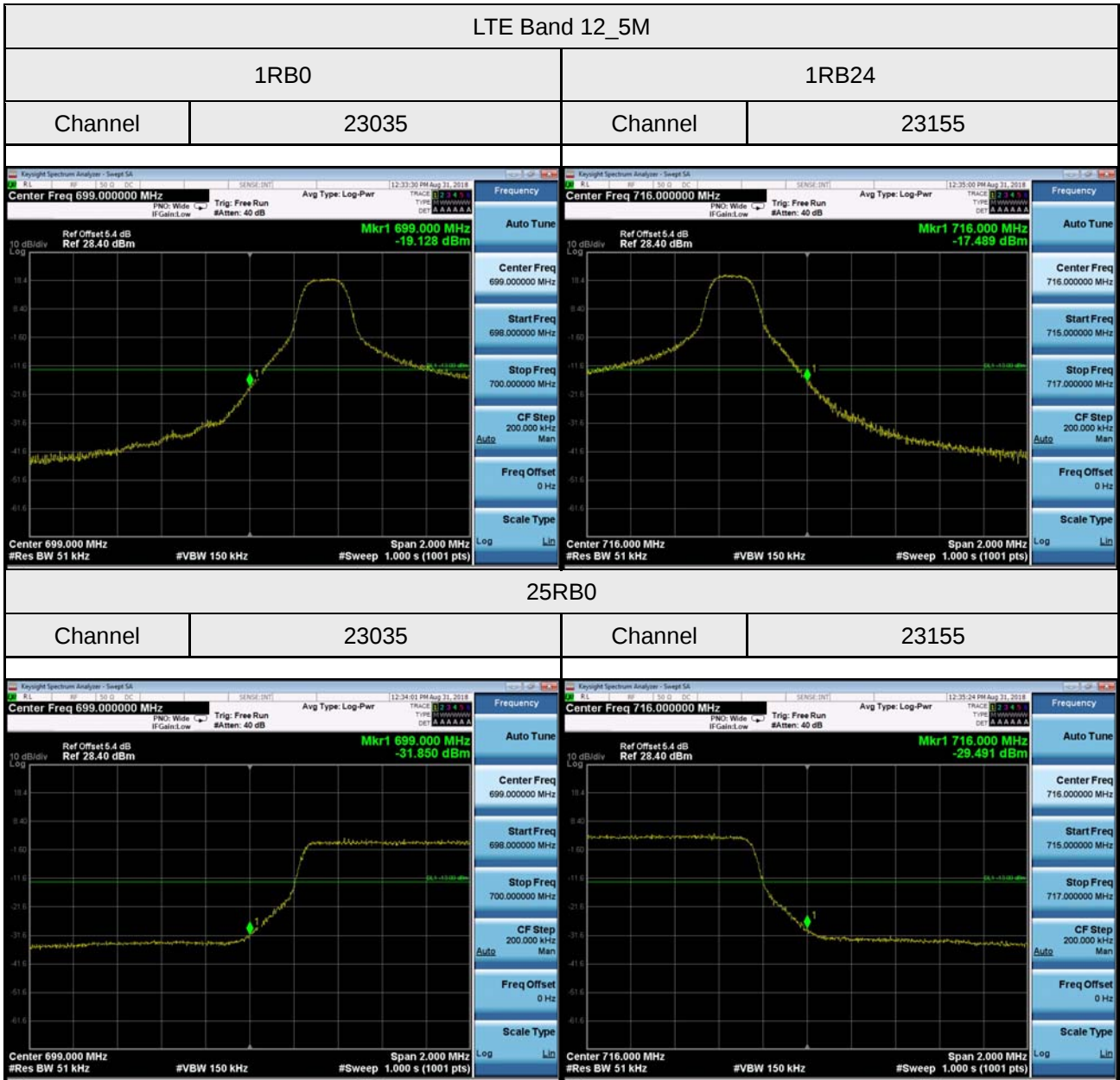
1RB0		1RB14	
Channel	23025	Channel	23165



15RB0

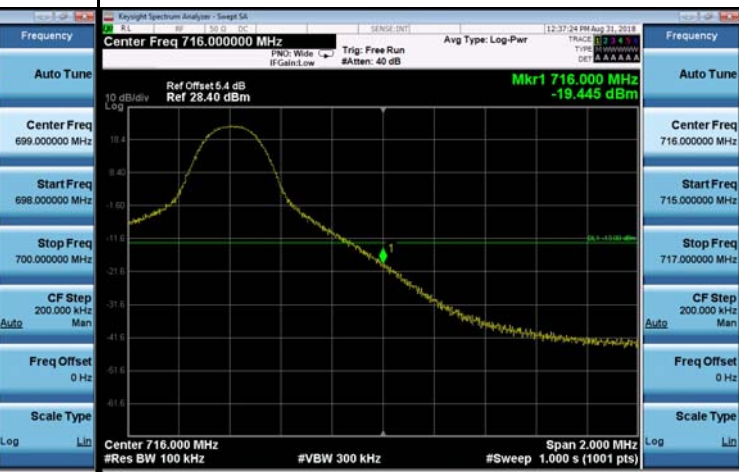
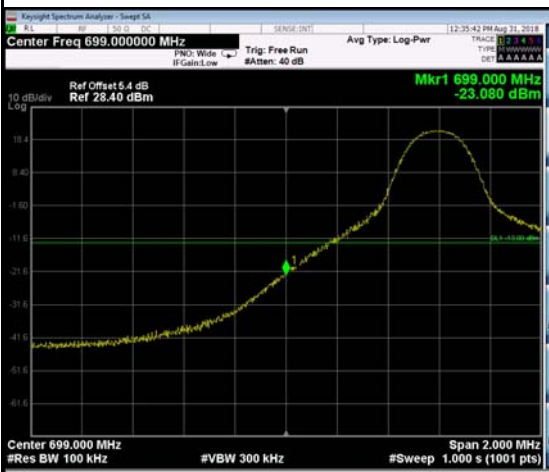
23025		23165	
Channel	23025	Channel	23165





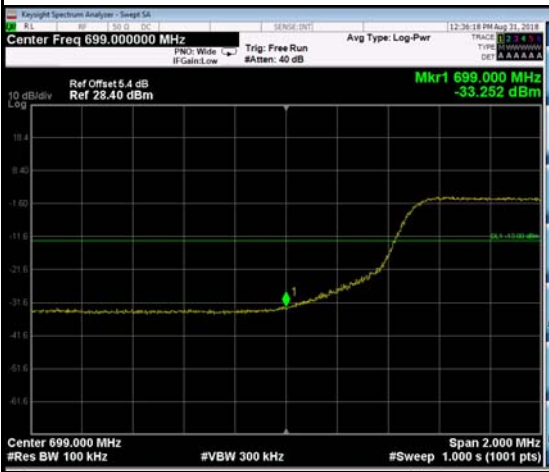
LTE Band 12_10M

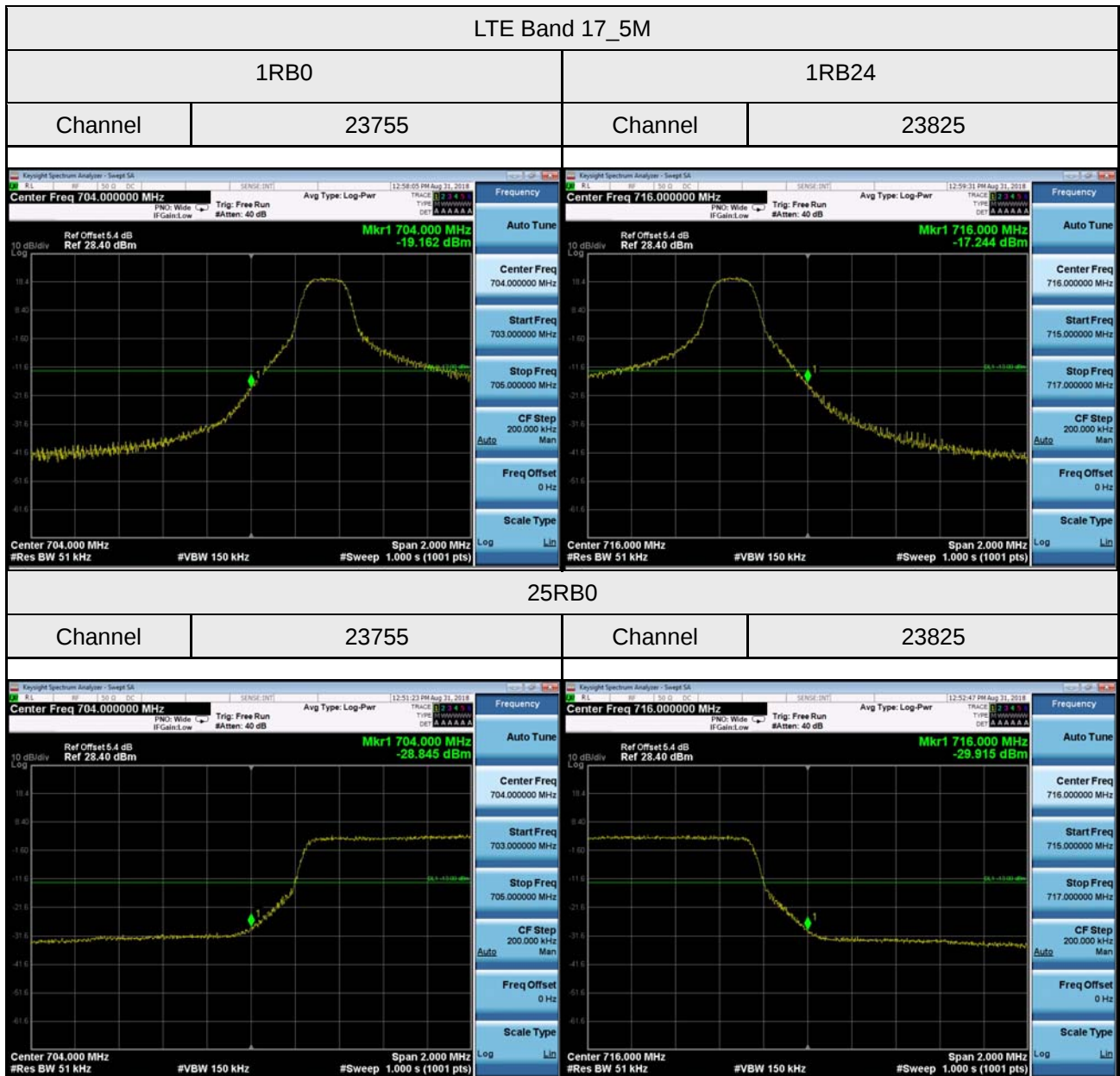
1RB0		1RB49	
Channel	23060	Channel	20350

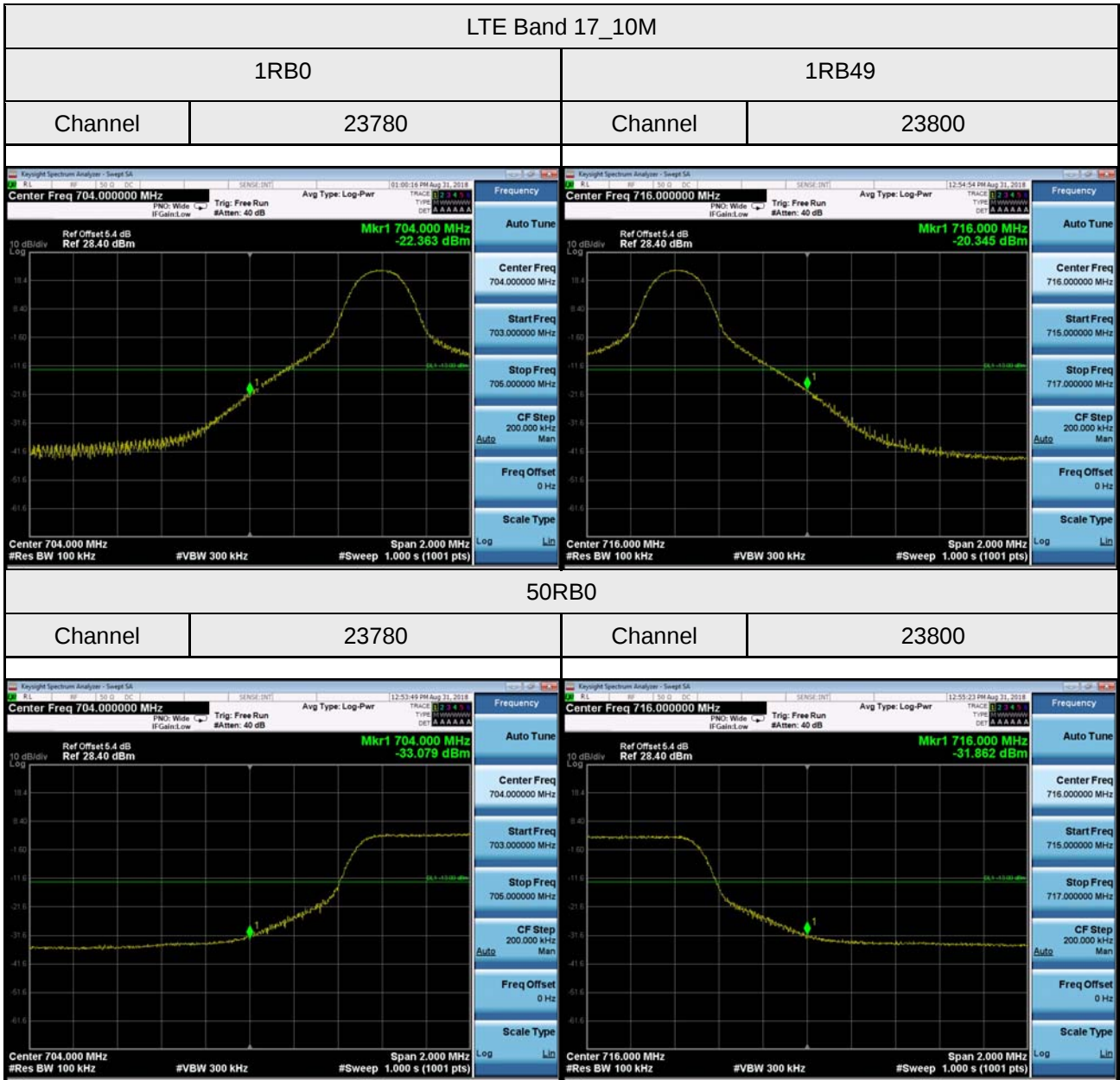


50RB0

Channel	23060	Channel	20350
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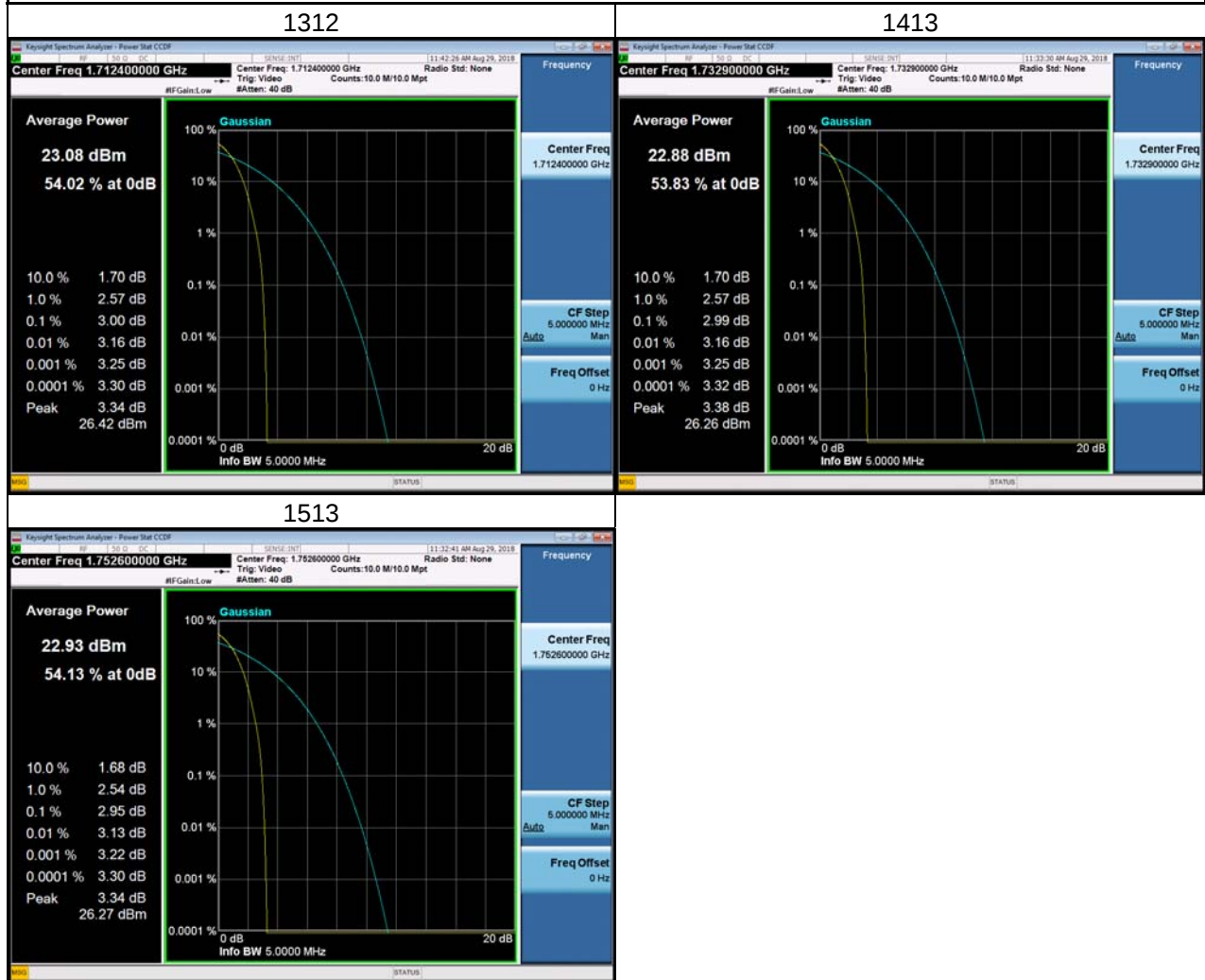






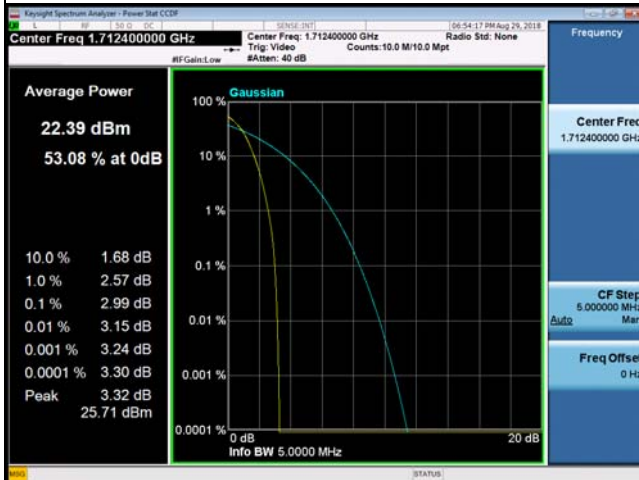
APPENDIX H - PEAK TO AVERAGE RATIO

WCDMA Band IV Spectrum Plot_WCDMA

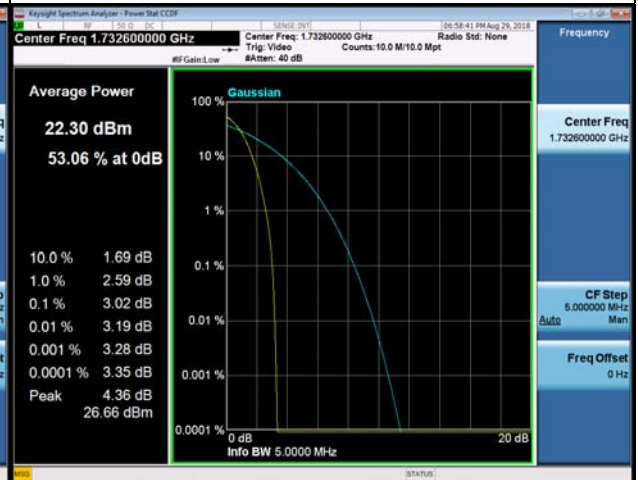


WCDMA Band IV Spectrum Plot_HSDPA

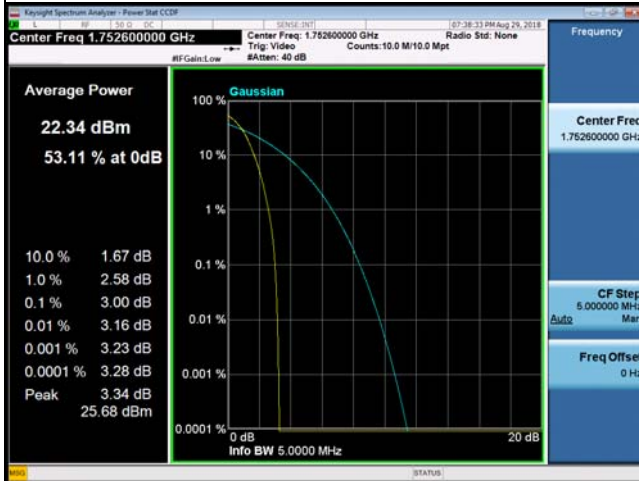
1312



1413

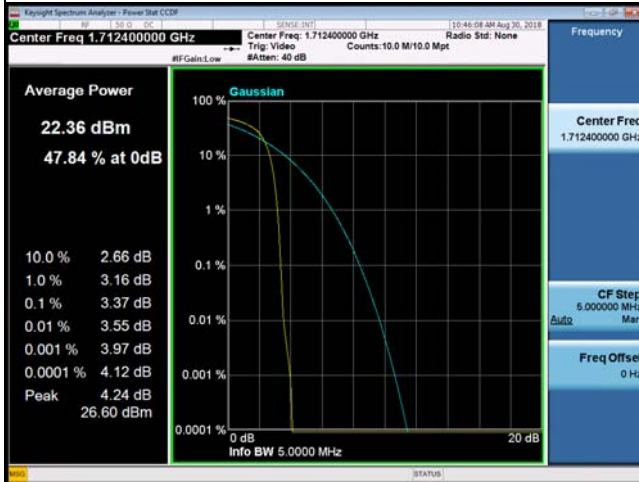


1513

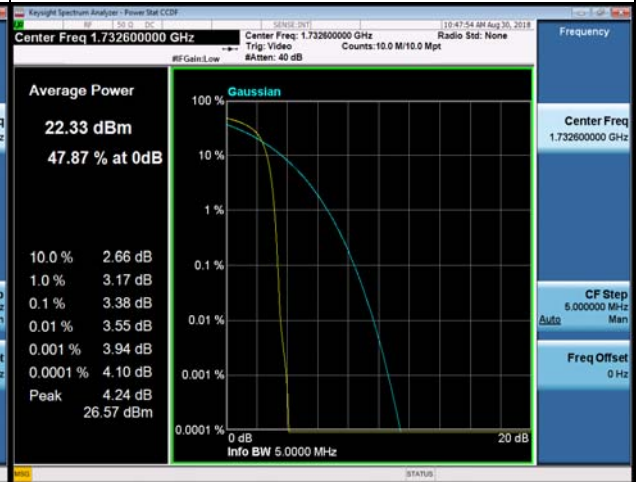


WCDMA Band IV Spectrum Plot_HSUPA

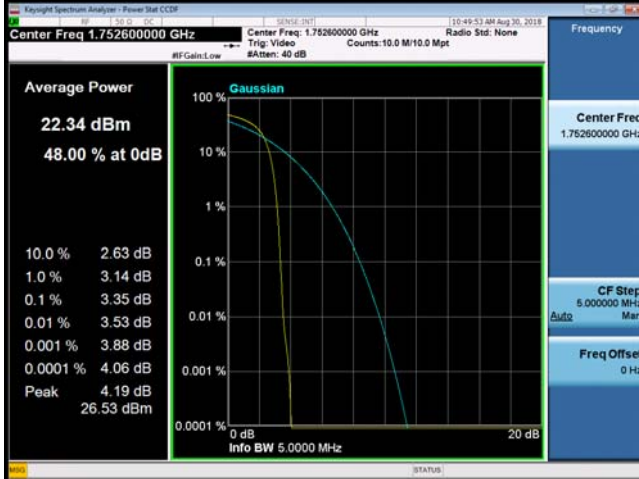
1312



1413



1513



LTE Band 4 Spectrum Plot_1.4M

QPSK-19957



QPSK-20175



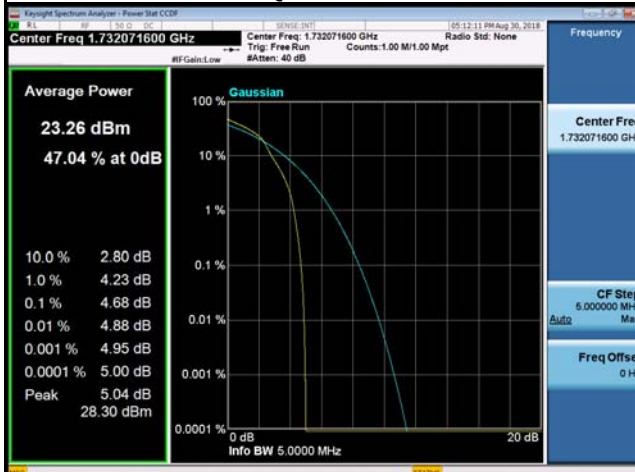
QPSK-20393



16QAM-19957



16QAM-20175

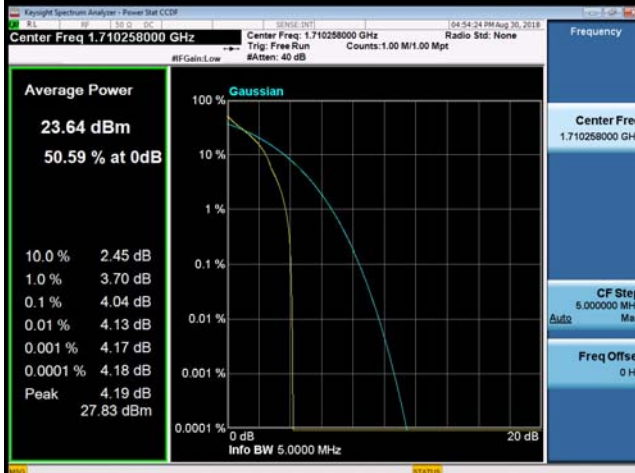


16QAM-20393



LTE Band 4 Spectrum Plot_3M

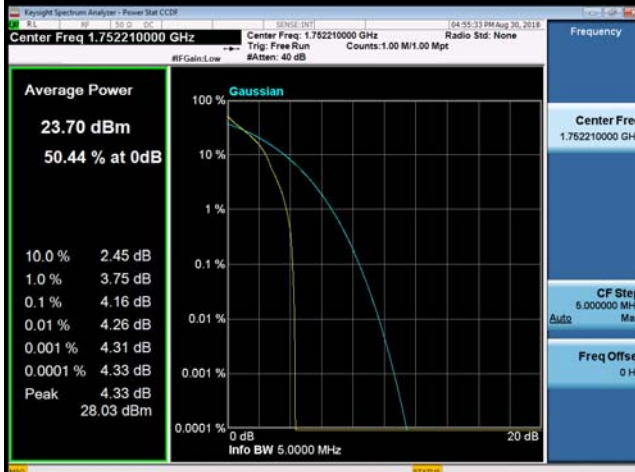
QPSK-19965



QPSK-20175



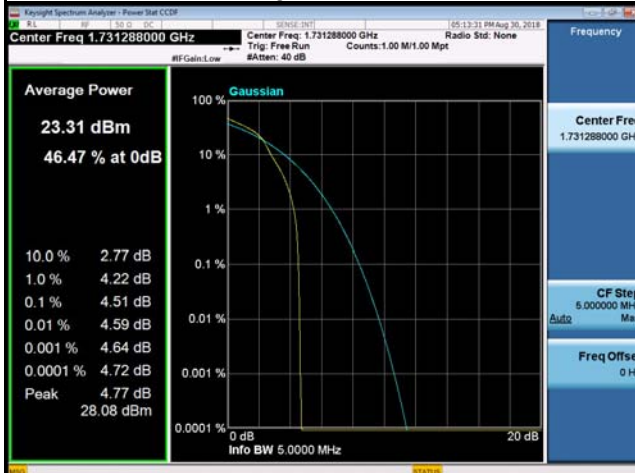
QPSK-20385



16QAM-19965



16QAM-20175

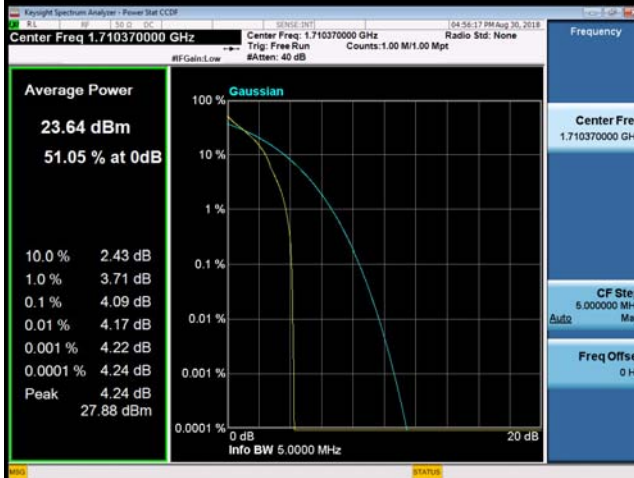


16QAM-20385



LTE Band 4 Spectrum Plot_5M

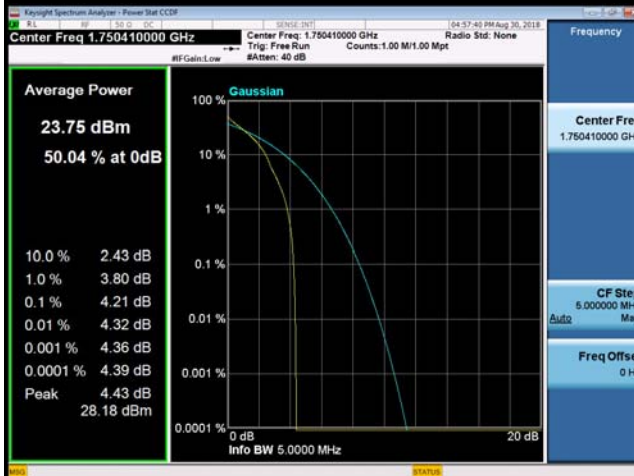
QPSK-19975



QPSK-20175



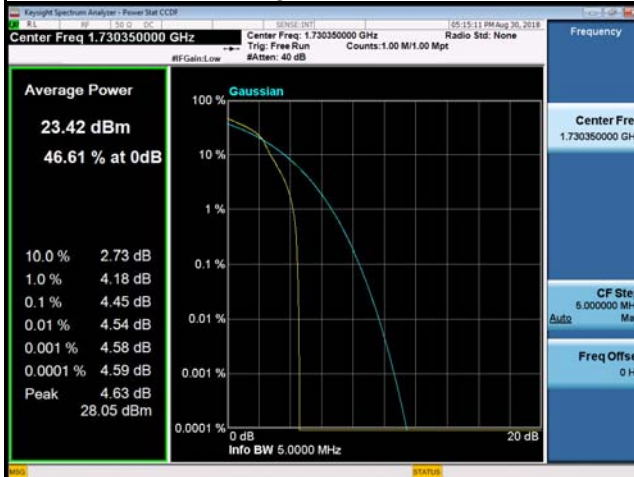
QPSK-20375



16QAM-19975



16QAM-20175

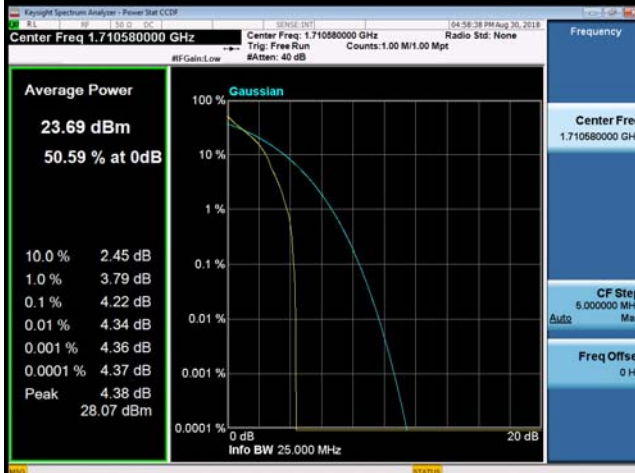


16QAM-20375



LTE Band 4 Spectrum Plot_10M

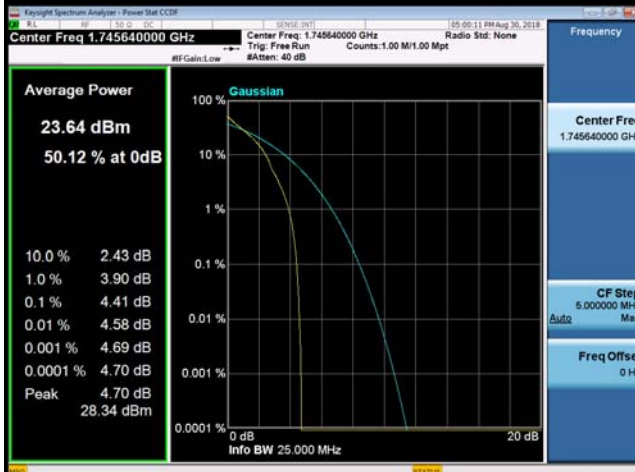
QPSK-20000



QPSK-20175



QPSK-20350



16QAM-20000



16QAM-20175

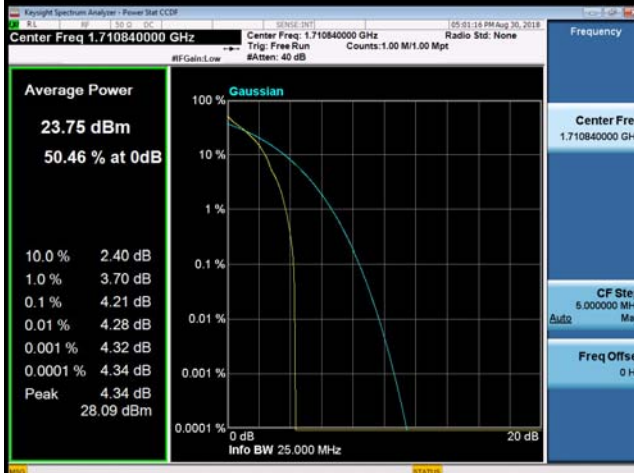


16QAM-20350



LTE Band 4 Spectrum Plot_15M

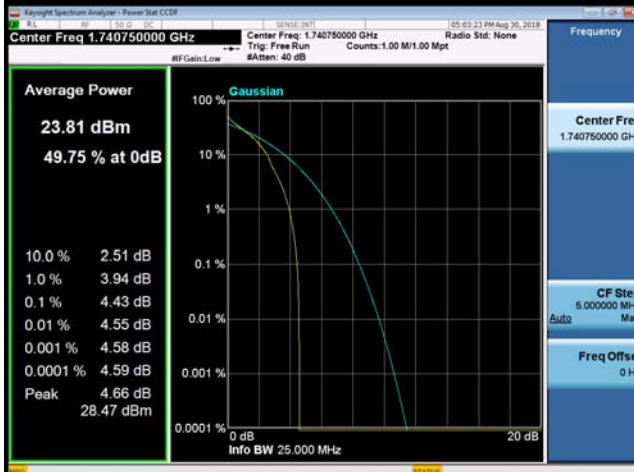
QPSK-20025



QPSK-20175



QPSK-20325



16QAM-20025



16QAM-20175

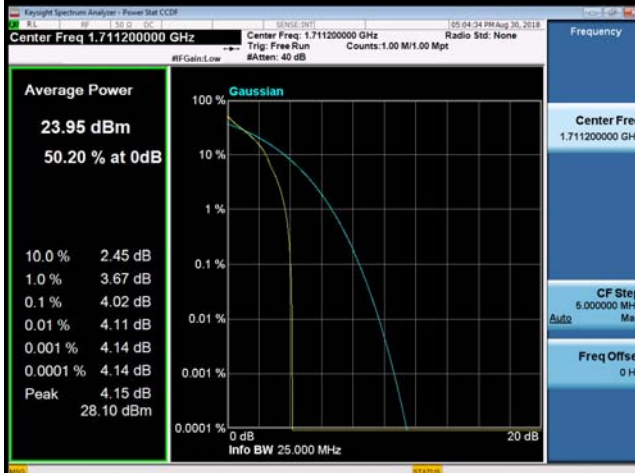


16QAM-20325



LTE Band 4 Spectrum Plot_20M

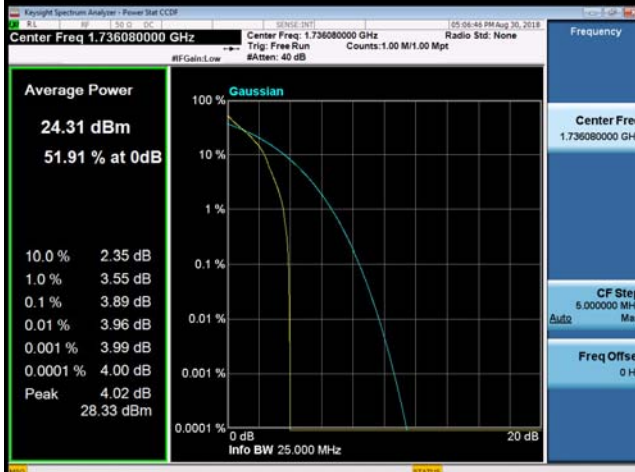
QPSK-20050



QPSK-20175



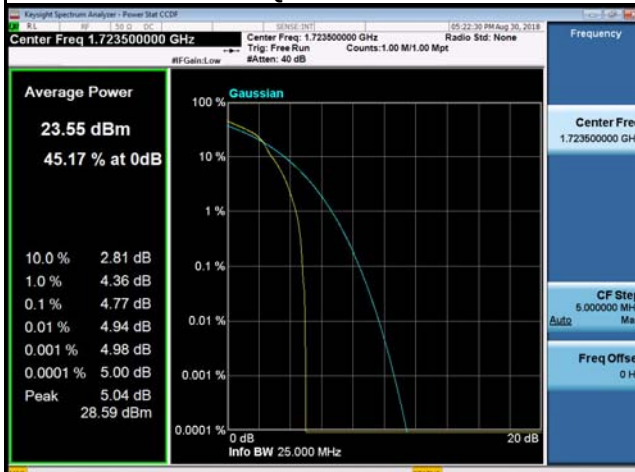
QPSK-20300



16QAM-20050



16QAM-20175

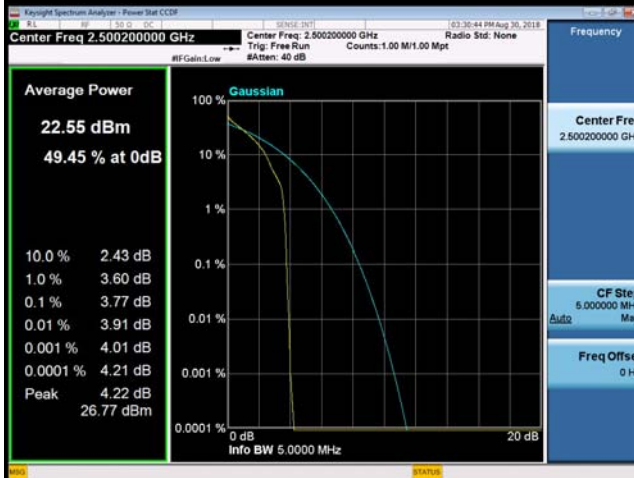


16QAM-20300



LTE Band 7 Spectrum Plot_5M

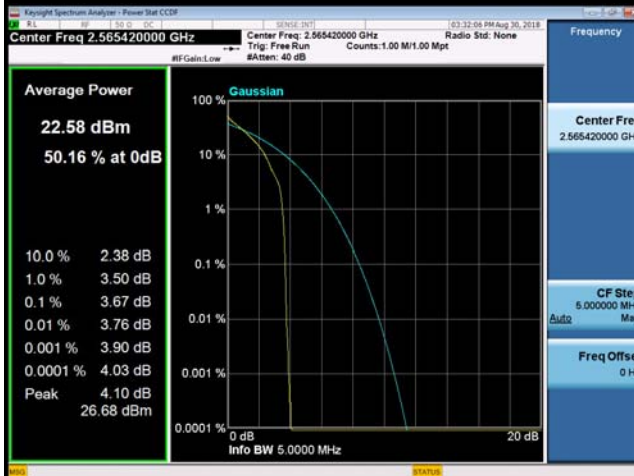
QPSK-20775



QPSK-21100



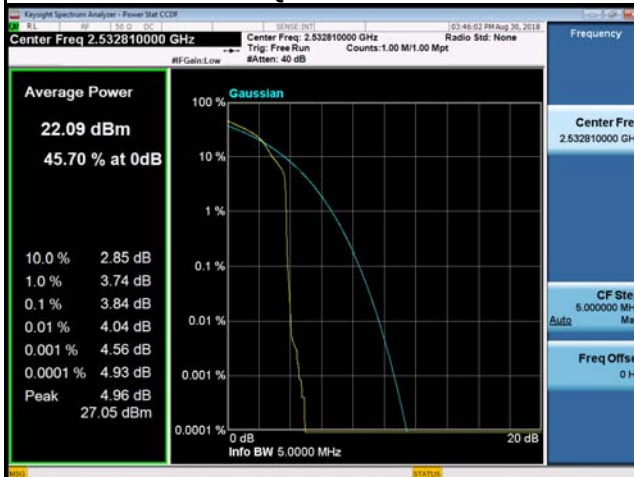
QPSK-21425



16QAM-20775



16QAM-21100

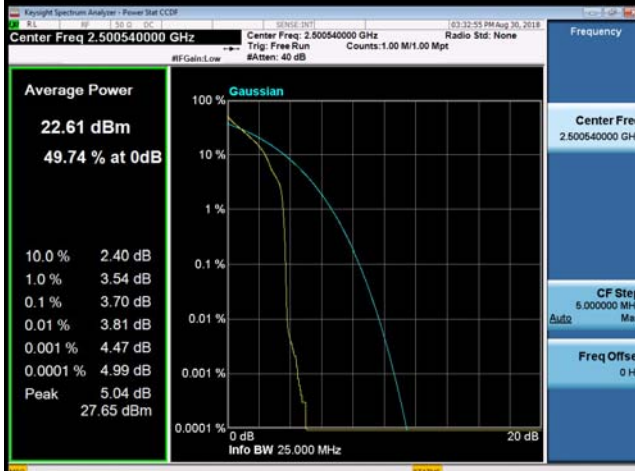


16QAM-21425



LTE Band 7 Spectrum Plot_10M

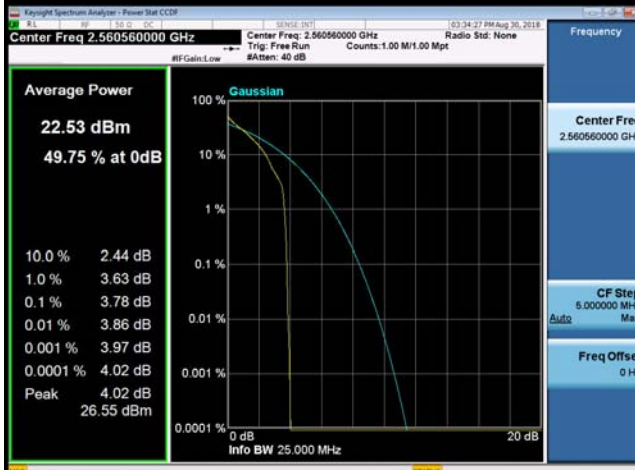
QPSK-20800



QPSK-21100



QPSK-21400



16QAM-20800



16QAM-21100

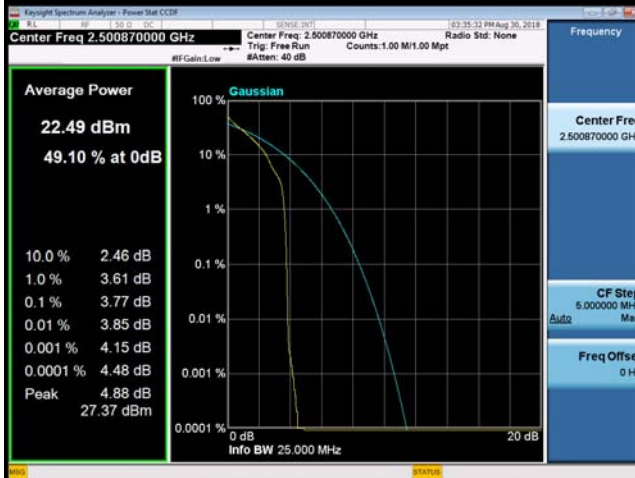


16QAM-21400



LTE Band 7 Spectrum Plot_15M

QPSK-20825



QPSK-21100



QPSK-21375



16QAM-20825



16QAM-21100

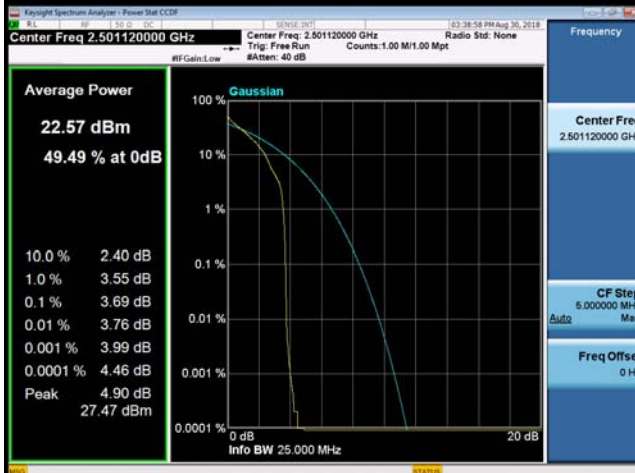


16QAM-21375



LTE Band 7 Spectrum Plot_20M

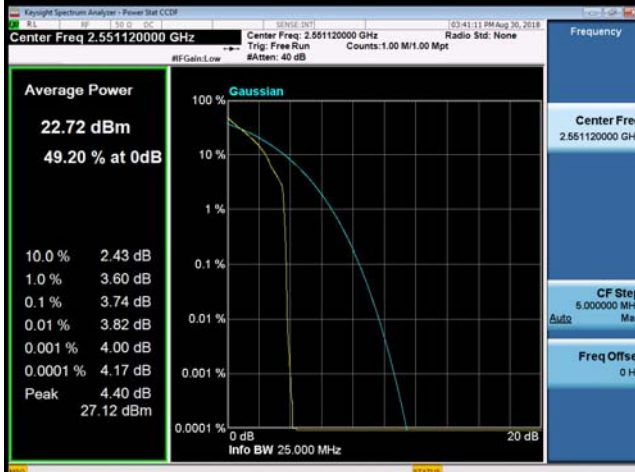
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QPSK-21100



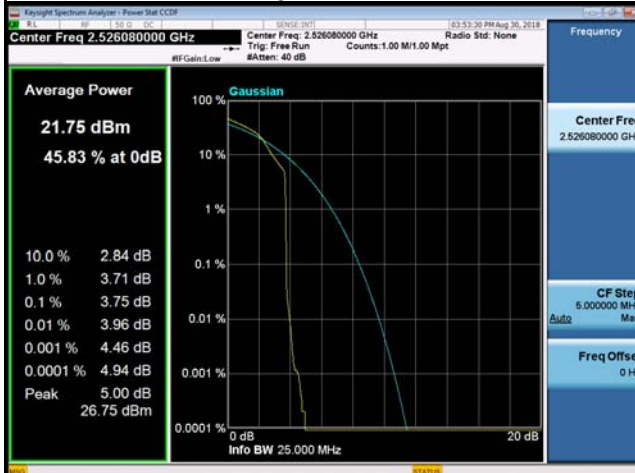
QPSK-21350



16QAM-20850



16QAM-21100

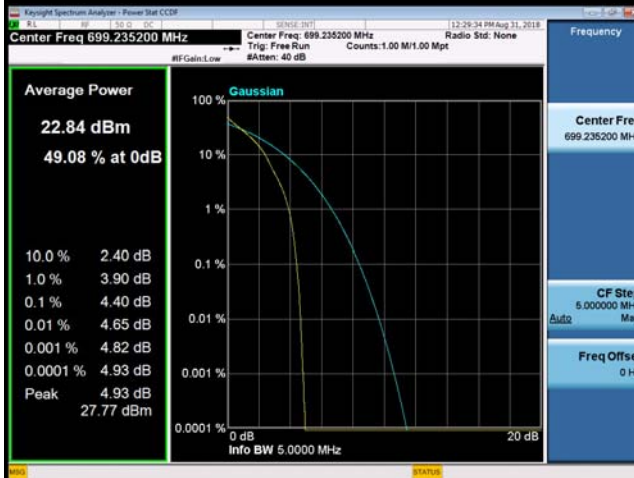


16QAM-21350



LTE Band 12 Spectrum Plot_1.4M

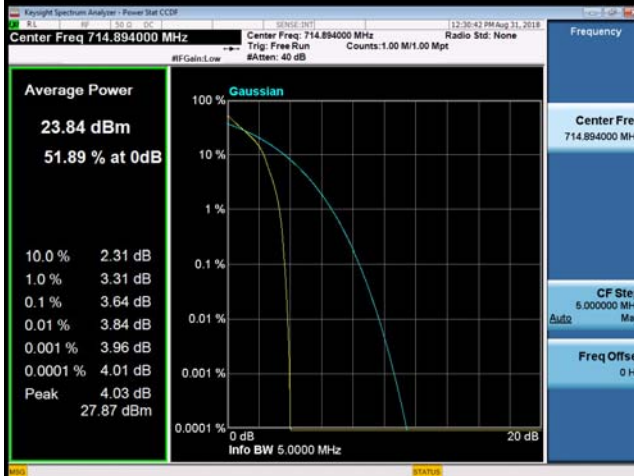
QPSK-23017



QPSK-23095



QPSK-23173



16QAM-23017



16QAM-23095

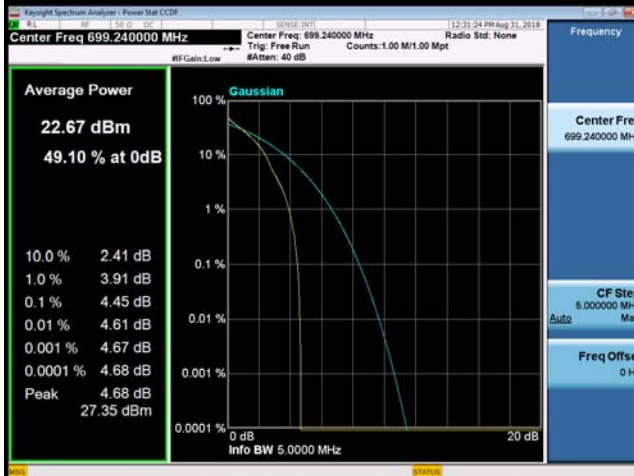


16QAM-23173



LTE Band 12 Spectrum Plot_3M

QPSK-23025



QPSK-23095



QPSK-23165



16QAM-23025



16QAM-23095

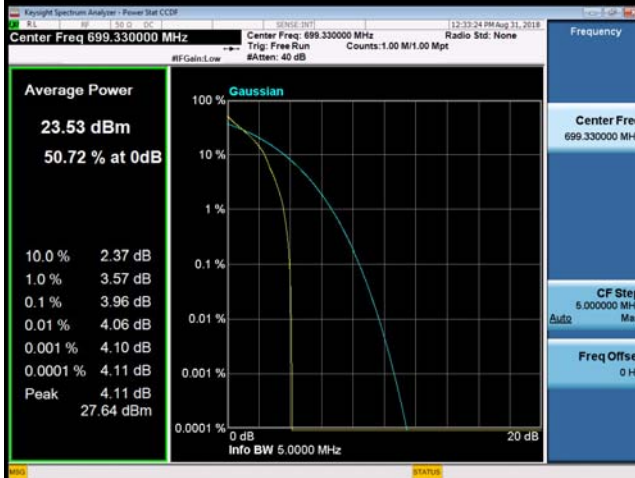


16QAM-23165



LTE Band 12 Spectrum Plot_5M

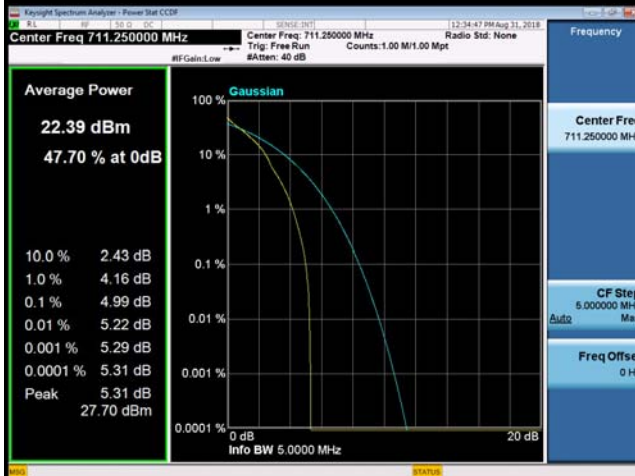
QPSK-23035



QPSK-23095



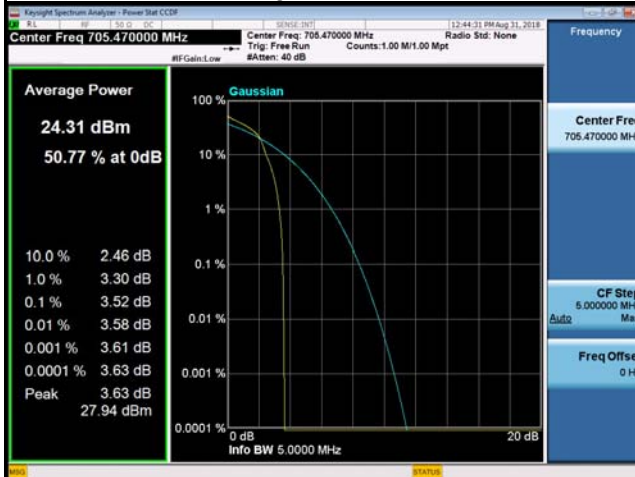
QPSK-23155



16QAM-23035



16QAM-23095

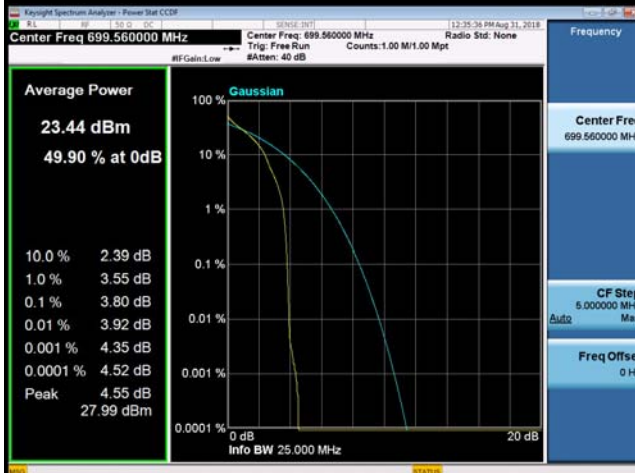


16QAM-23155



LTE Band 12 Spectrum Plot_10M

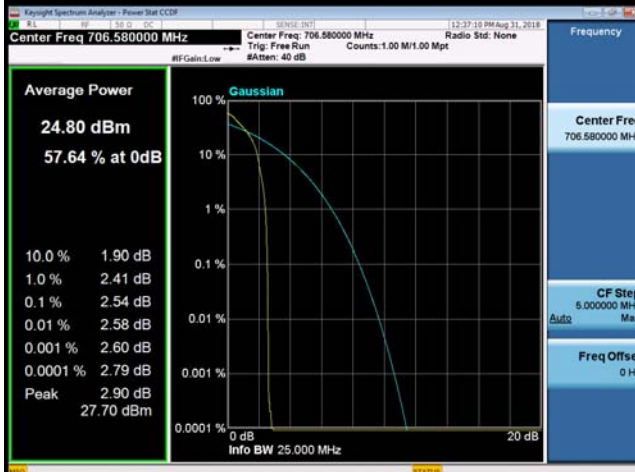
QPSK-22060



QPSK-20175



QPSK-23130



16QAM-22060



16QAM-20175



16QAM-23130

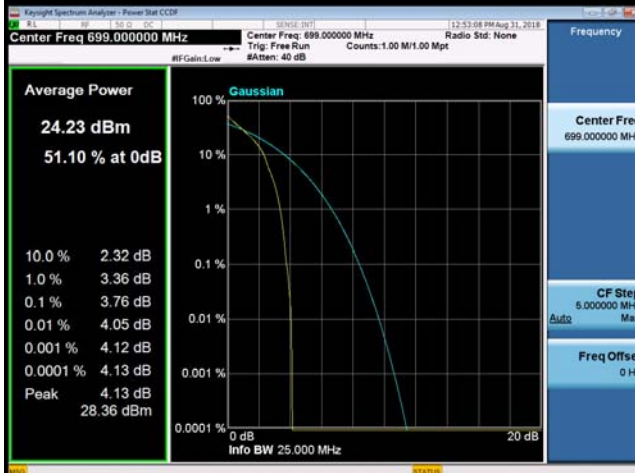


LTE Band 17 Spectrum Plot_5M



LTE Band 17 Spectrum Plot_10M

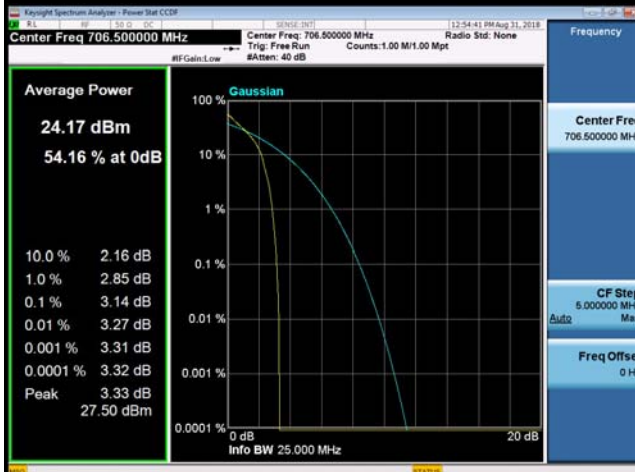
QPSK-23780



QPSK-23790



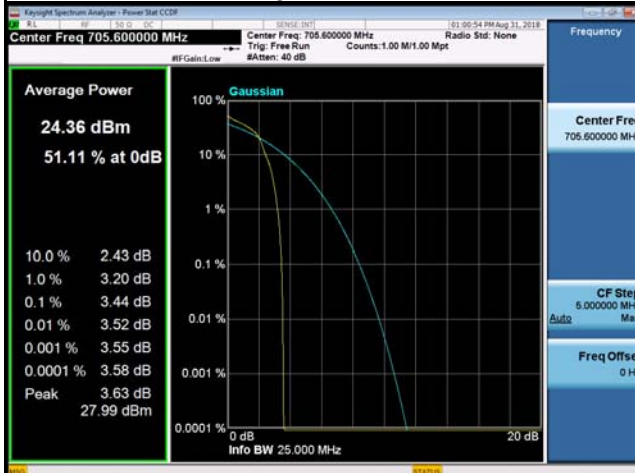
QPSK-23800



16QAM-23780



16QAM-23790



16QAM-23800



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	7.06	0.004074801	± 2.5
-20	7.92	0.004571165	
-10	7.57	0.004369156	
0	7.09	0.004092116	
10	6.17	0.003561122	
20	7.23	0.004172919	
30	6.40	0.00369387	
40	6.02	0.003474547	
50	6.69	0.003861249	
Max. Deviation (ppm)	7.92	0.004571165	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	8.50	0.004905922	± 2.5
3.82	6.97	0.004022856	
3.60	8.64	0.004986725	
Max. Deviation (ppm)	8.64	0.004986725	

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	2.89	0.00166811	± 2.5
-20	-2.77	-0.001598846	
-10	-3.80	-0.002193362	
0	4.58	0.002643579	
10	-5.83	-0.003365079	
20	-4.17	-0.002406926	
30	3.58	0.002066378	
40	2.74	0.00158153	
50	-6.50	-0.003751804	
Max. Deviation (ppm)	-6.50	-0.003751804	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-7.28	-0.00420202	± 2.5
3.82	-2.77	-0.001598846	
3.60	-2.23	-0.001287157	
Max. Deviation (ppm)	-7.28	-0.00420202	

Test Mode:	LTE Band 4_CH20175_3M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-4.14	-0.00238961	± 2.5
-20	4.27	0.002464646	
-10	-4.14	-0.00238961	
0	1.21	0.000698413	
10	-5.67	-0.003272727	
20	-2.23	-0.001287157	
30	3.86	0.002227994	
40	6.31	0.003642136	
50	-6.03	-0.003480519	
Max. Deviation (ppm)	6.31	0.003642136	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	6.10	0.003520924	± 2.5
3.82	-6.23	-0.00359596	
3.60	3.93	0.002268398	
Max. Deviation (ppm)	-6.23	-0.00359596	

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	-3.05	-0.001760462	± 2.5
-20	5.95	0.003434343	
-10	-3.16	-0.001823954	
0	-4.48	-0.002585859	
10	5.20	0.003001443	
20	-2.85	-0.001645022	
30	-0.67	-0.000386724	
40	-6.09	-0.003515152	
50	-3.47	-0.002002886	
Max. Deviation (ppm)	-6.09	-0.003515152	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	3.95	0.002279942	± 2.5
3.82	3.36	0.001939394	
3.60	4.12	0.002378066	
Max. Deviation (ppm)	4.12	0.002378066	

Test Mode:	LTE Band 4_CH20175_10M
------------	------------------------

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	3.09	0.00178355	± 2.5
-20	6.19	0.003572872	
-10	5.28	0.003047619	
0	3.62	0.002089466	
10	-6.39	-0.003688312	
20	0.19	0.000109668	
30	4.96	0.002862915	
40	0.64	0.000369408	
50	6.62	0.003821068	
Max. Deviation (ppm)	6.62	0.003821068	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-2.45	-0.001414141	± 2.5
3.82	-3.94	-0.00227417	
3.60	4.50	0.002597403	
Max. Deviation (ppm)	4.50	0.002597403	

Test Mode:	LTE Band 4_CH20175_15M
------------	------------------------

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	4.12	0.002378066	± 2.5
-20	1.93	0.001113997	
-10	-5.37	-0.00309899	
0	4.25	0.002453102	
10	-2.51	-0.001448773	
20	3.21	0.001852814	
30	-3.83	-0.002210678	
40	-2.74	-0.00158153	
50	-6.73	-0.00388456	
Max. Deviation (ppm)	-6.73	-0.00388456	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	6.58	0.00379798	± 2.5
3.82	2.58	0.001489177	
3.60	-3.35	-0.001933622	
Max. Deviation (ppm)	6.58	0.00379798	

Test Mode: LTE Band 4_CH20175_20M

Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	3.97	0.002291486	± 2.5
-20	4.96	0.002862915	
-10	3.86	0.002227994	
0	-2.80	-0.001616162	
10	-7.21	-0.004161616	
20	6.85	0.003953824	
30	-2.64	-0.00152381	
40	5.47	0.003157287	
50	-3.42	-0.001974026	
Max. Deviation (ppm)	-7.21	-0.004161616	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	5.50	0.003174603	± 2.5
3.82	-3.57	-0.002060606	
3.60	2.58	0.001489177	
Max. Deviation (ppm)	5.50	0.003174603	

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	3.37	0.001329389	± 2.5
-20	7.24	0.002856016	
-10	-1.81	-0.000714004	
0	4.48	0.001767258	
10	-5.75	-0.002268245	
20	4.40	0.0017357	
30	5.49	0.00216568	
40	-1.99	-0.00078501	
50	-0.18	-7.10059E-05	
Max. Deviation (ppm)	7.24	0.002856016	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-1.88	-0.000741617	± 2.5
3.82	0.75	0.000295858	
3.60	1.98	0.000781065	
Max. Deviation (ppm)	1.98	0.000781065	

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	5.00	0.001972387	± 2.5
-20	3.37	0.001329389	
-10	4.23	0.001668639	
0	2.40	0.000946746	
10	-1.78	-0.00070217	
20	4.67	0.001842209	
30	2.84	0.001120316	
40	3.25	0.001282051	
50	-1.20	-0.000473373	
Max. Deviation (ppm)	5.00	0.001972387	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-3.03	-0.001195266	± 2.5
3.82	3.56	0.001404339	
3.60	-3.58	-0.001412229	
Max. Deviation (ppm)	-3.58	-0.001412229	

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	6.03	0.002378698	± 2.5
-20	-3.33	-0.001313609	
-10	-1.87	-0.000737673	
0	3.45	0.001360947	
10	3.85	0.001518738	
20	-1.87	-0.000737673	
30	4.57	0.001802761	
40	4.92	0.001940828	
50	2.16	0.000852071	
Max. Deviation (ppm)	6.03	0.002378698	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	3.31	0.00130572	± 2.5
3.82	-6.25	-0.002465483	
3.60	2.42	0.000954635	
Max. Deviation (ppm)	-6.25	-0.002465483	

Test Mode:	LTE Band 7_CH21100_20M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-5.98	-0.002358974	± 2.5
-20	-4.63	-0.00182643	
-10	3.53	0.001392505	
0	1.39	0.000548323	
10	6.69	0.002639053	
20	-7.18	-0.002832347	
30	2.52	0.000994083	
40	-3.24	-0.001278107	
50	-4.20	-0.001656805	
Max. Deviation (ppm)	-7.18	-0.002832347	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-4.36	-0.001719921	± 2.5
3.82	5.13	0.002023669	
3.60	4.60	0.001814596	
Max. Deviation (ppm)	5.13	0.002023669	

Test Mode:	LTE Band 12_CH23095_1.4M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-3.40	0.004805654	±2.5
-20	-2.05	0.002897527	
-10	6.11	0.008636042	
0	3.97	0.005611307	
10	9.27	0.013102473	
20	-4.60	0.006501767	
30	5.10	0.007208481	
40	-0.66	0.000932862	
50	-1.62	0.002289753	
Max. Deviation (ppm)	9.27	0.013102473	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	2.41	0.00340636	±2.5
3.82	-7.15	0.010106007	
3.60	1.52	0.00214841	
Max. Deviation (ppm)	-7.15	0.010106007	

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	6.93	0.009795053	±2.5
-20	-2.43	0.003434629	
-10	-0.97	0.001371025	
0	4.35	0.00614841	
10	4.75	0.006713781	
20	-0.97	0.001371025	
30	5.47	0.007731449	
40	5.82	0.008226148	
50	3.90	0.005512367	
Max. Deviation (ppm)	6.93	0.009795053	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-6.94	0.009809187	±2.5
3.82	2.55	0.00360424	
3.60	2.02	0.002855124	
Max. Deviation (ppm)	-6.94	0.009809187	

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	4.27	0.006035336	± 2.5
-20	8.14	0.0115053	
-10	-0.91	-0.001286219	
0	5.38	0.00760424	
10	-4.85	-0.006855124	
20	5.30	0.007491166	
30	6.39	0.009031802	
40	-1.09	-0.001540636	
50	0.72	0.001017668	
Max. Deviation (ppm)	8.14	0.0115053	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-2.78	-0.003929329	± 2.5
3.82	-0.15	-0.000212014	
3.60	1.08	0.001526502	
Max. Deviation (ppm)	-2.78	-0.003929329	

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	5.90	0.008339223	±2.5
-20	4.27	0.006035336	
-10	5.13	0.007250883	
0	3.30	0.004664311	
10	-0.88	-0.001243816	
20	5.57	0.007872792	
30	3.74	0.005286219	
40	4.15	0.005865724	
50	-0.30	-0.000424028	
Max. Deviation (ppm)	5.90	0.008339223	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-3.93	-0.00555477	±2.5
3.82	2.66	0.003759717	
3.60	-4.48	-0.006332155	
Max. Deviation (ppm)	-4.48	-0.006332155	

Test Mode:	LTE Band 17_CH23790_5M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	4.21	0.005929577	± 2.5
-20	8.08	0.011380282	
-10	-0.97	-0.001366197	
0	5.32	0.007492958	
10	-4.91	-0.006915493	
20	5.24	0.007380282	
30	6.33	0.008915493	
40	-1.15	-0.001619718	
50	0.66	0.000929577	
Max. Deviation (ppm)	8.08	0.011380282	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-2.72	-0.003830986	± 2.5
3.82	-0.09	-0.000126761	
3.60	1.14	0.001605634	
Max. Deviation (ppm)	-2.72	-0.003830986	

Test Mode:	LTE Band 17_CH23790_10M
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Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	2.48	0.003492958	± 2.5
-20	0.85	0.001197183	
-10	1.71	0.002408451	
0	-0.12	-0.000169014	
10	-4.30	-0.006056338	
20	2.15	0.003028169	
30	0.32	0.000450704	
40	0.73	0.001028169	
50	-3.72	-0.005239437	
Max. Deviation (ppm)	-4.30	-0.006056338	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.35	-0.51	-0.00071831	± 2.5
3.82	6.08	0.00856338	
3.60	-1.06	-0.001492958	
Max. Deviation (ppm)	6.08	0.00856338	