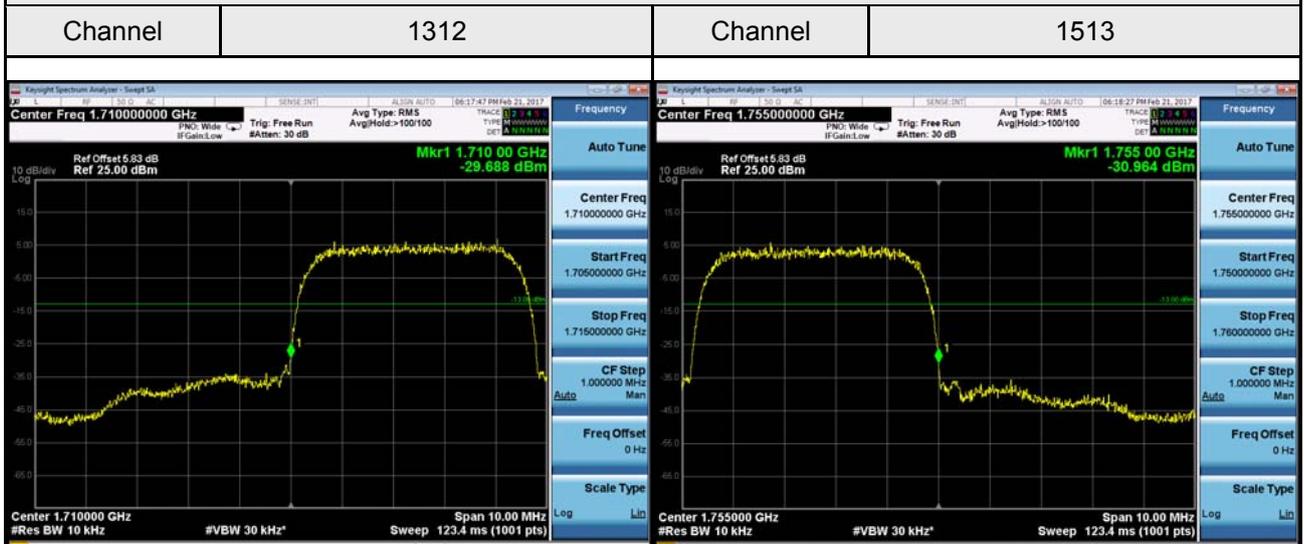
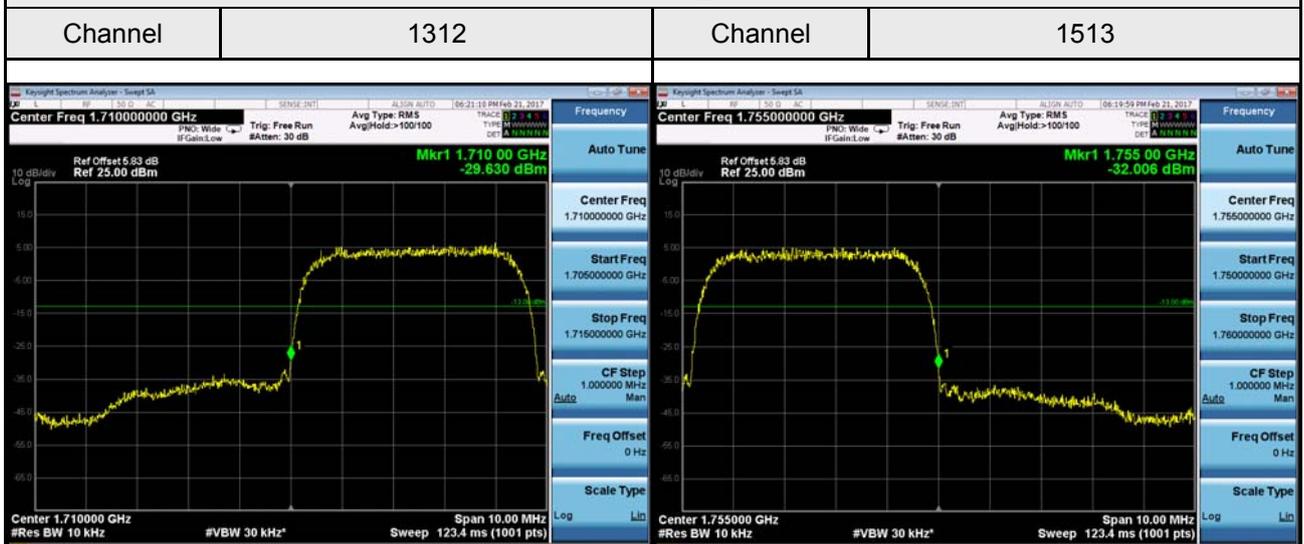


## ATTACHMENT E - BAND EDGE

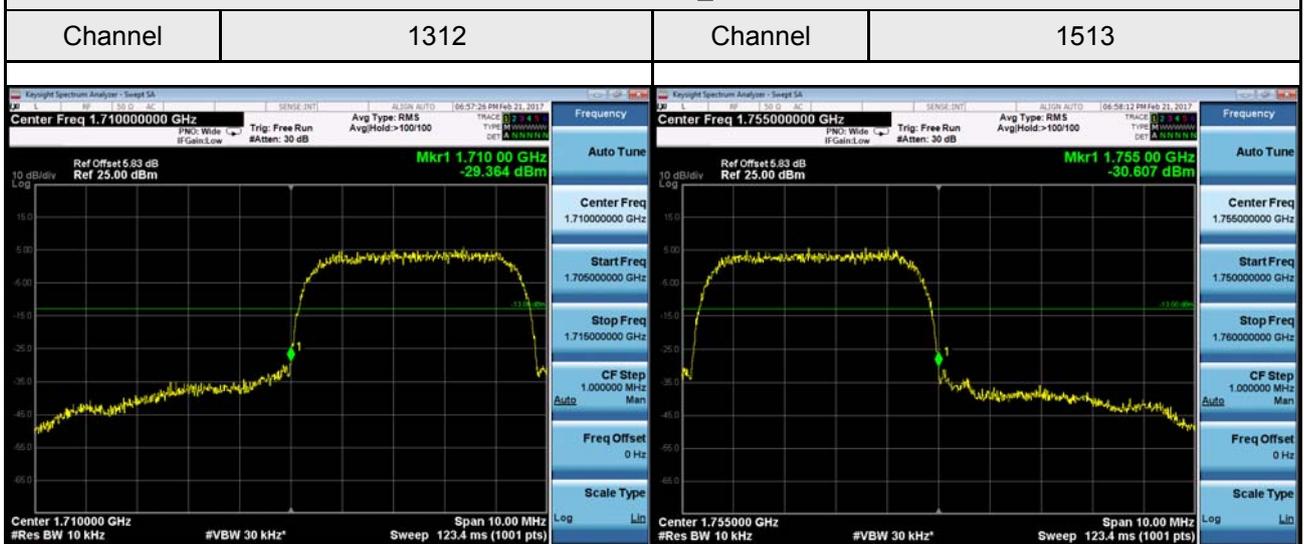
### WCDMA Band 4\_WCDMA



### WCDMA Band 4\_HSDPA



### WCDMA Band 4\_HSUPA



LTE Band 4\_5M

1RB0

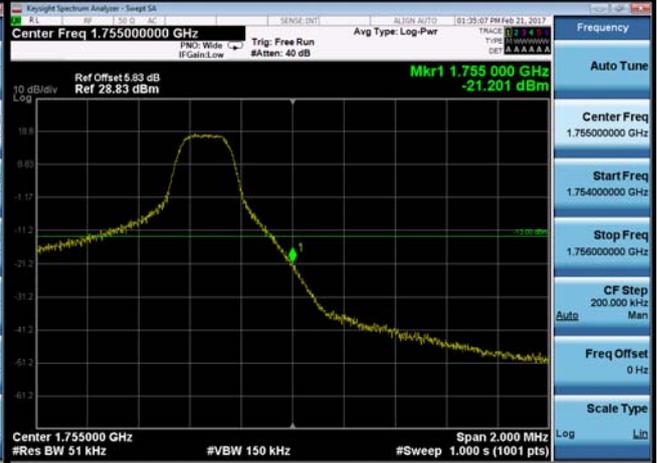
1RB24

Channel

19975

Channel

20375



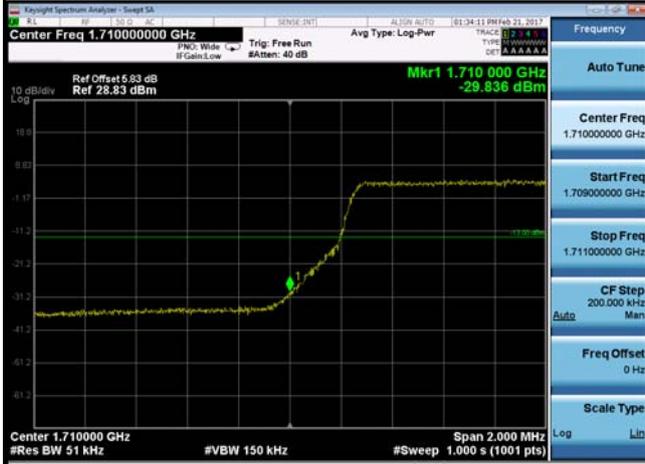
25RB0

Channel

19975

Channel

20375



LTE Band 4\_10M

1RB0

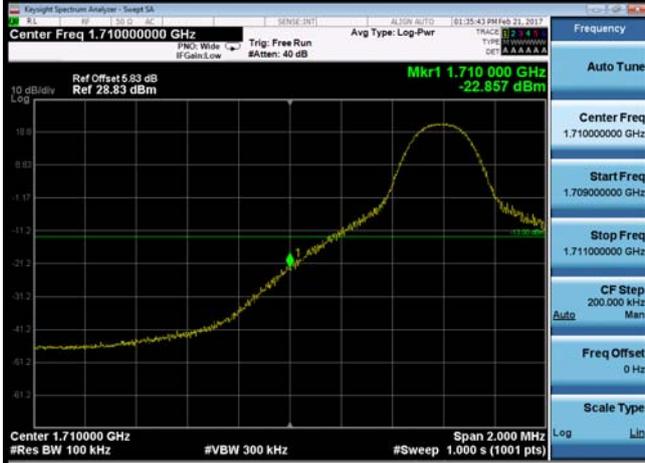
1RB49

Channel

2000

Channel

20350



50RB0

Channel

2000

Channel

20350



LTE Band 4\_15M

1RB0

1RB74

Channel

20025

Channel

20325



75RB0

Channel

20025

Channel

20325



LTE Band 4\_20M

1RB0

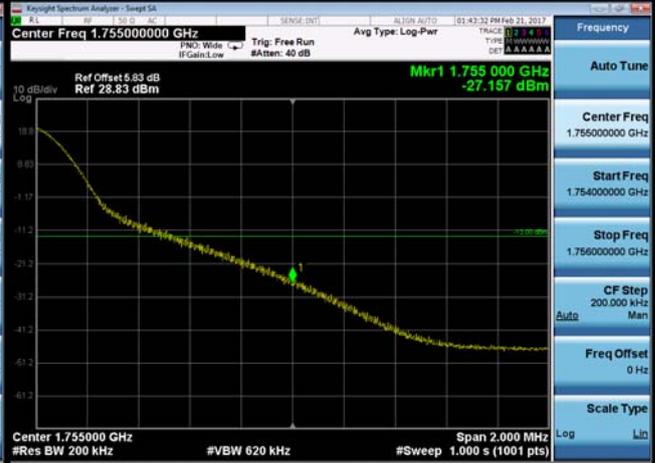
1RB99

Channel

20050

Channel

20300



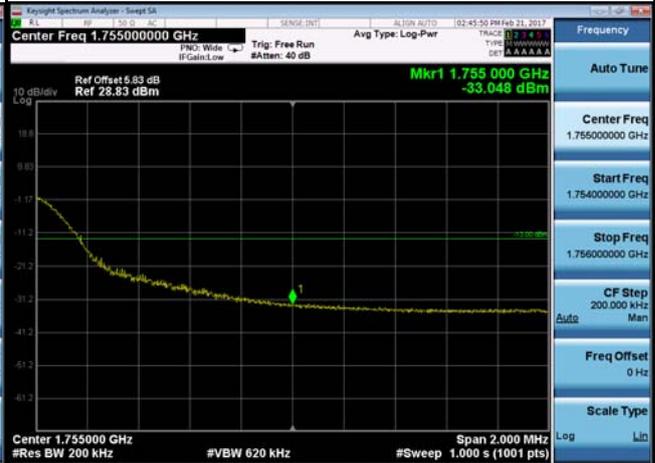
100RB0

Channel

20050

Channel

20300



LTE Band 7\_5M

1RB0

1RB24

Channel

20775

Channel

21425



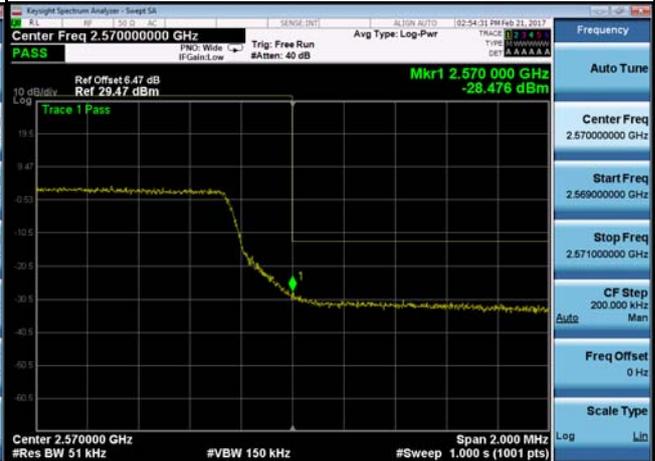
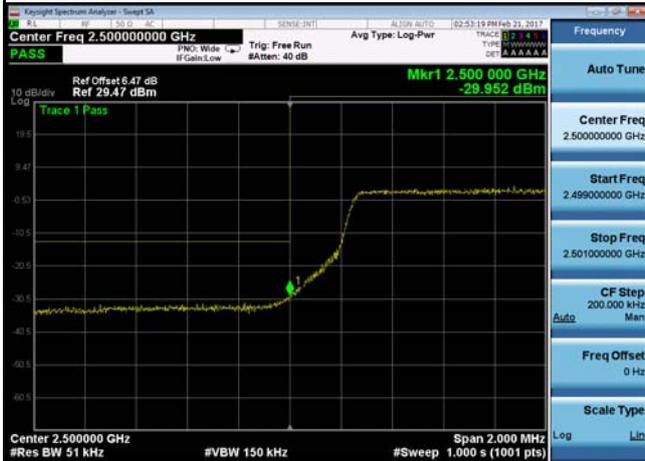
25RB0

Channel

20775

Channel

21425



LTE Band 7\_10M

1RB0

1RB49

Channel

20800

Channel

21400



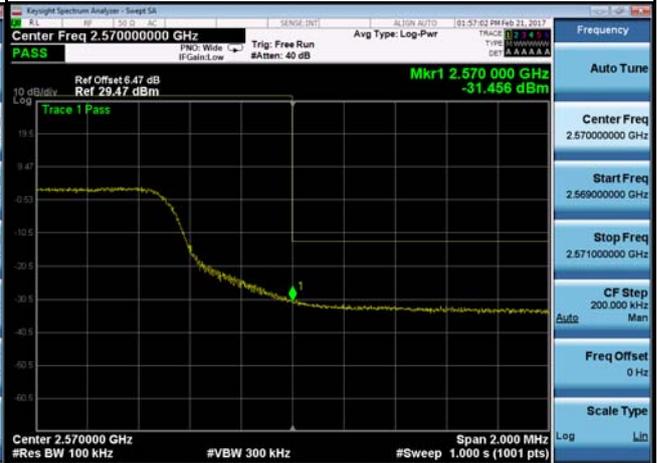
50RB0

Channel

20800

Channel

21400



LTE Band 7\_15M

1RB0

1RB74

Channel

20825

Channel

21375



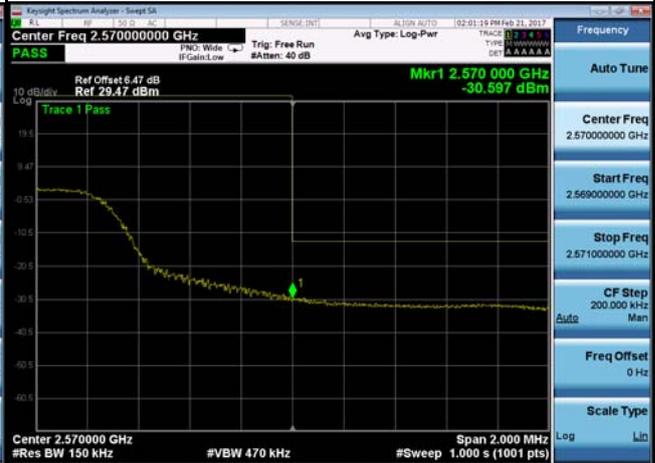
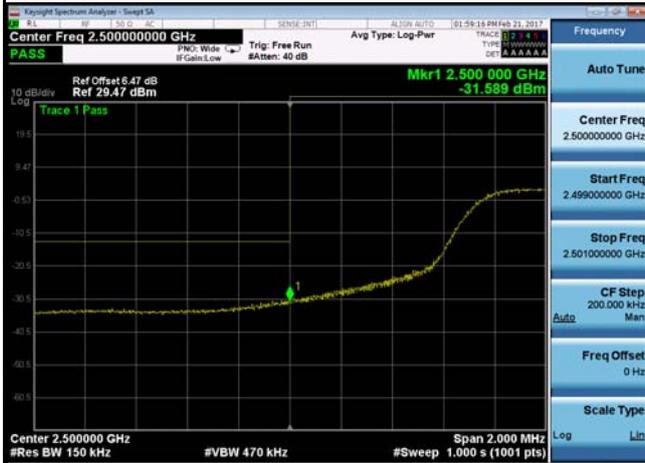
75RB0

Channel

20825

Channel

21375



LTE Band 7\_20M

1RB0

1RB99

Channel

20850

Channel

21350



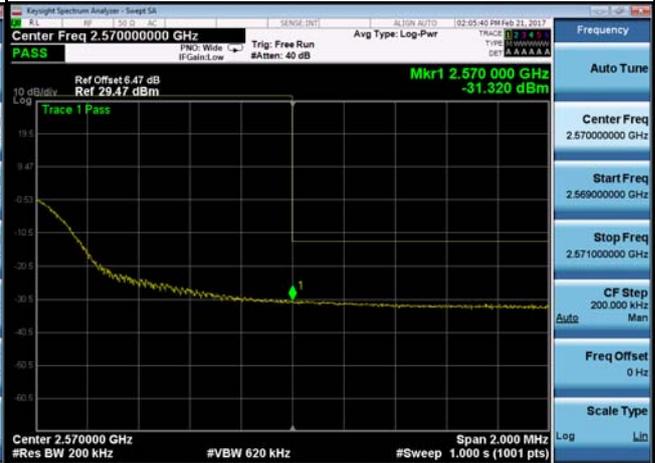
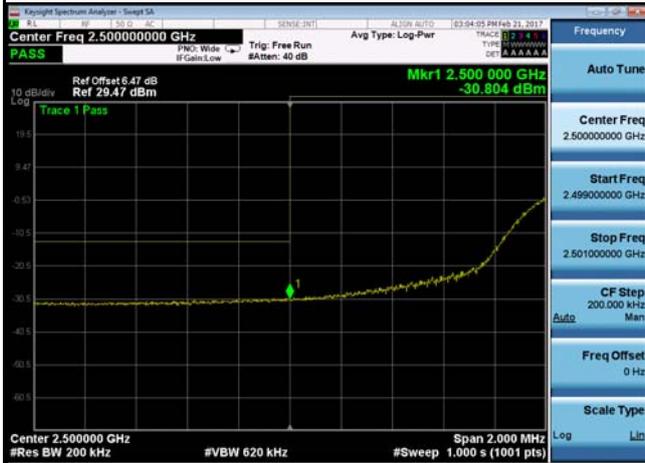
100RB0

Channel

20850

Channel

21350



LTE Band 12\_5M

1RB0

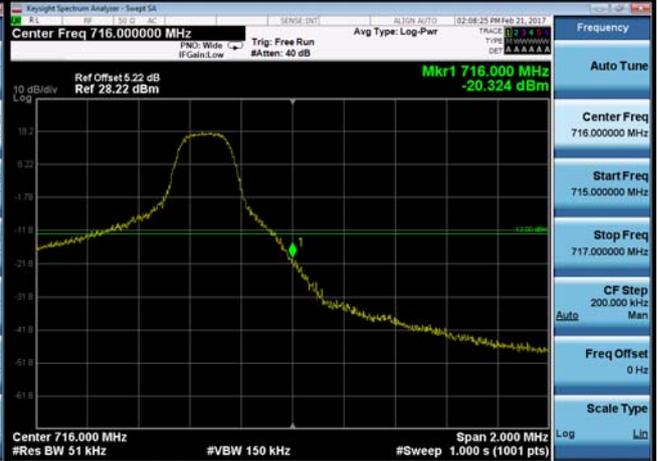
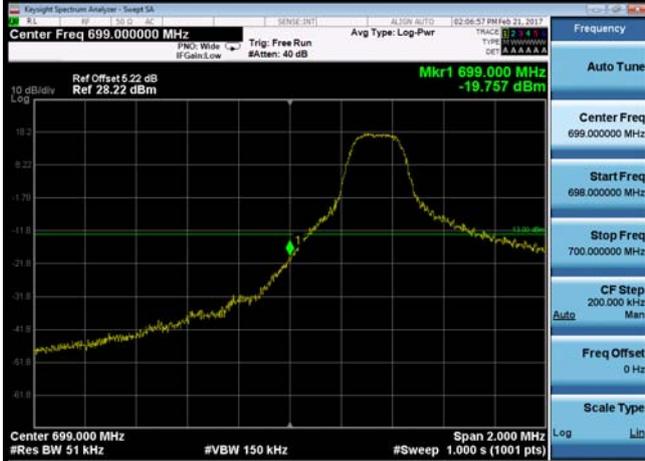
1RB24

Channel

23035

Channel

23155



25RB0

Channel

23035

Channel

23155



LTE Band 12\_10M

1RB0

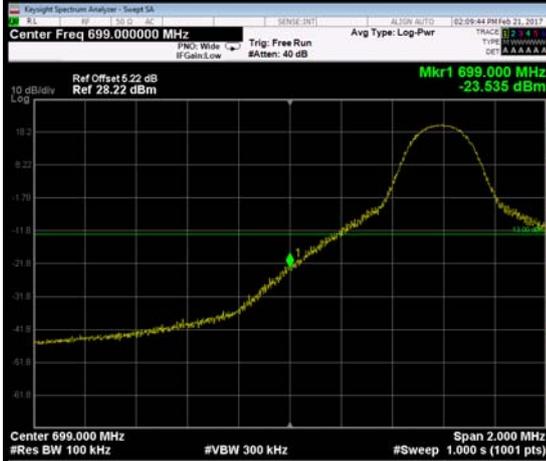
1RB49

Channel

23060

Channel

20350



50RB0

Channel

23060

Channel

20350



LTE Band 13\_5M

1RB0

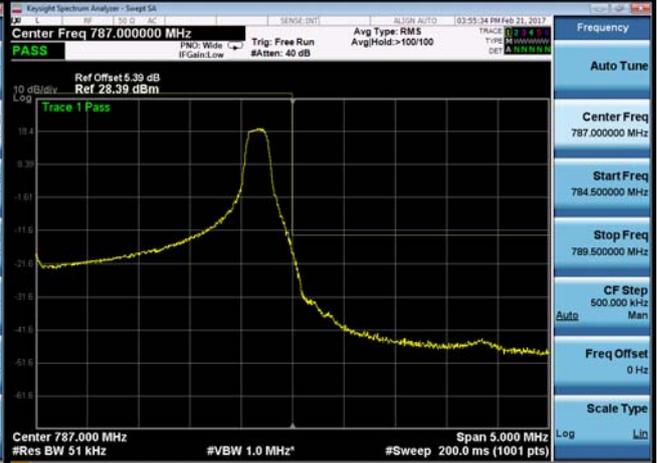
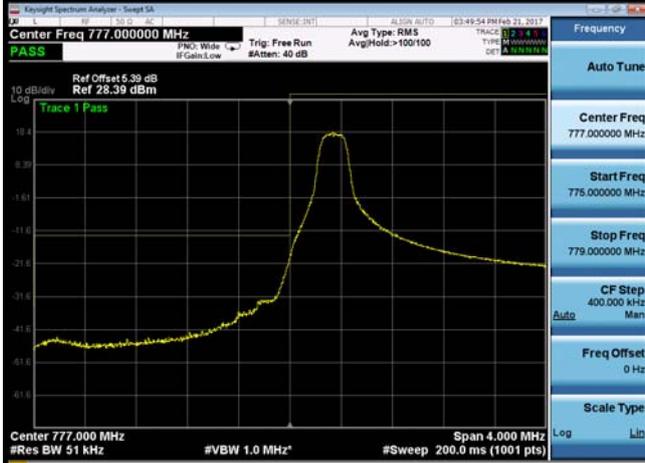
1RB24

Channel

23205

Channel

23255



25RB0

Channel

23205

Channel

23255



LTE Band 13\_10M

1RB0

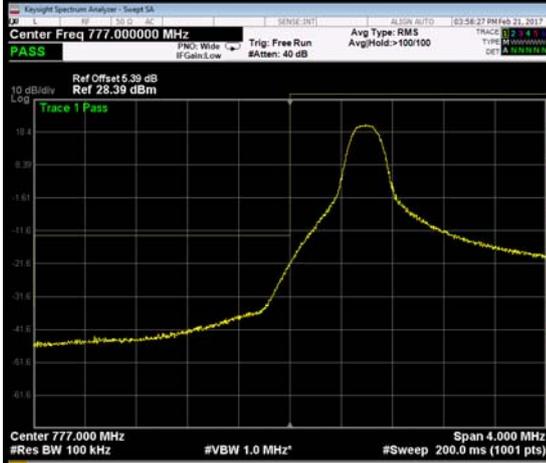
1RB49

Channel

23230

Channel

23230



50RB0

Channel

23230

Channel

23230



LTE Band 17\_5M

1RB0

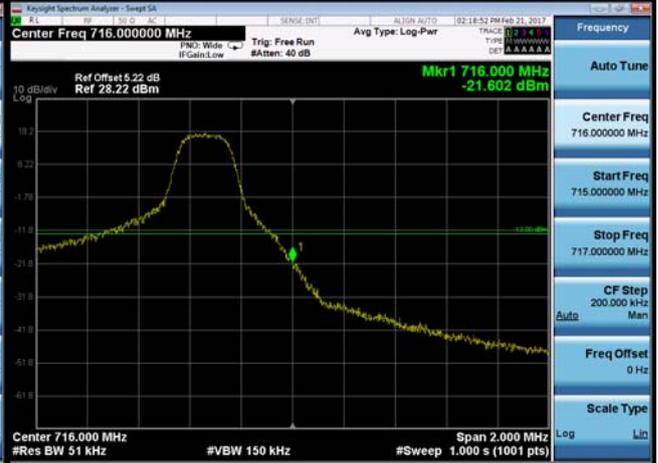
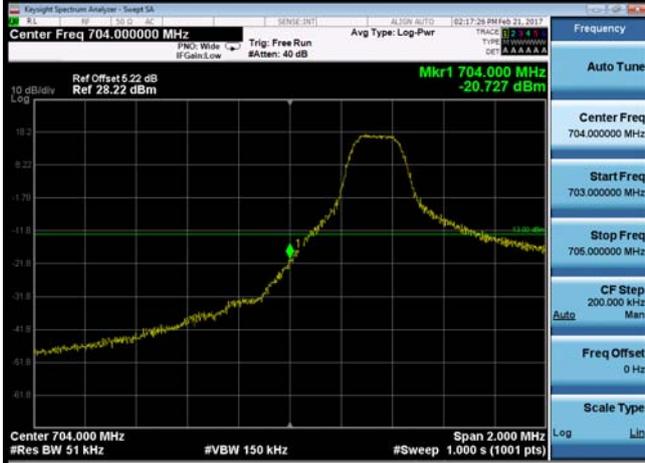
1RB24

Channel

23755

Channel

23825



25RB0

Channel

23755

Channel

23825



LTE Band 17\_10M

1RB0

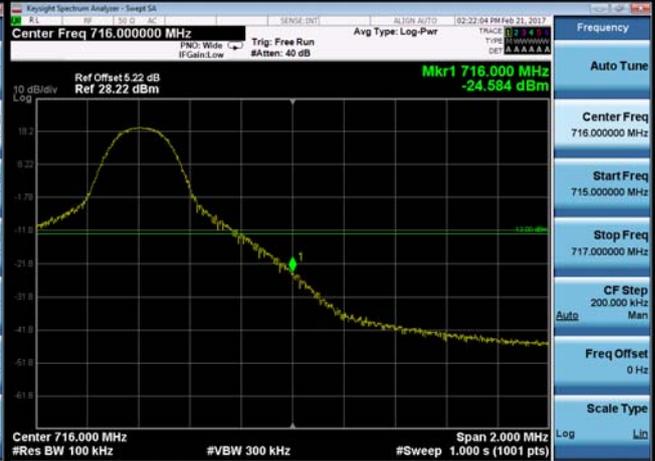
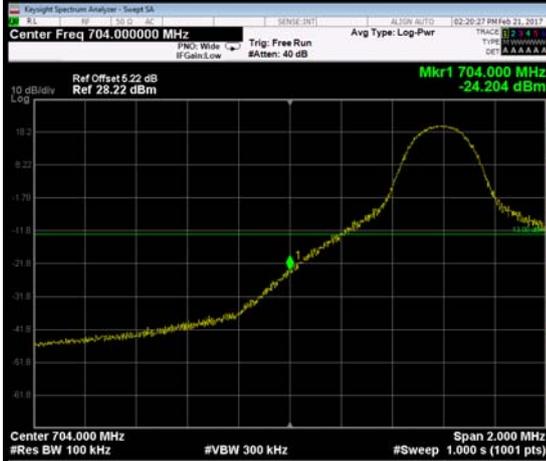
1RB49

Channel

23780

Channel

23800



50RB0

Channel

23780

Channel

23800

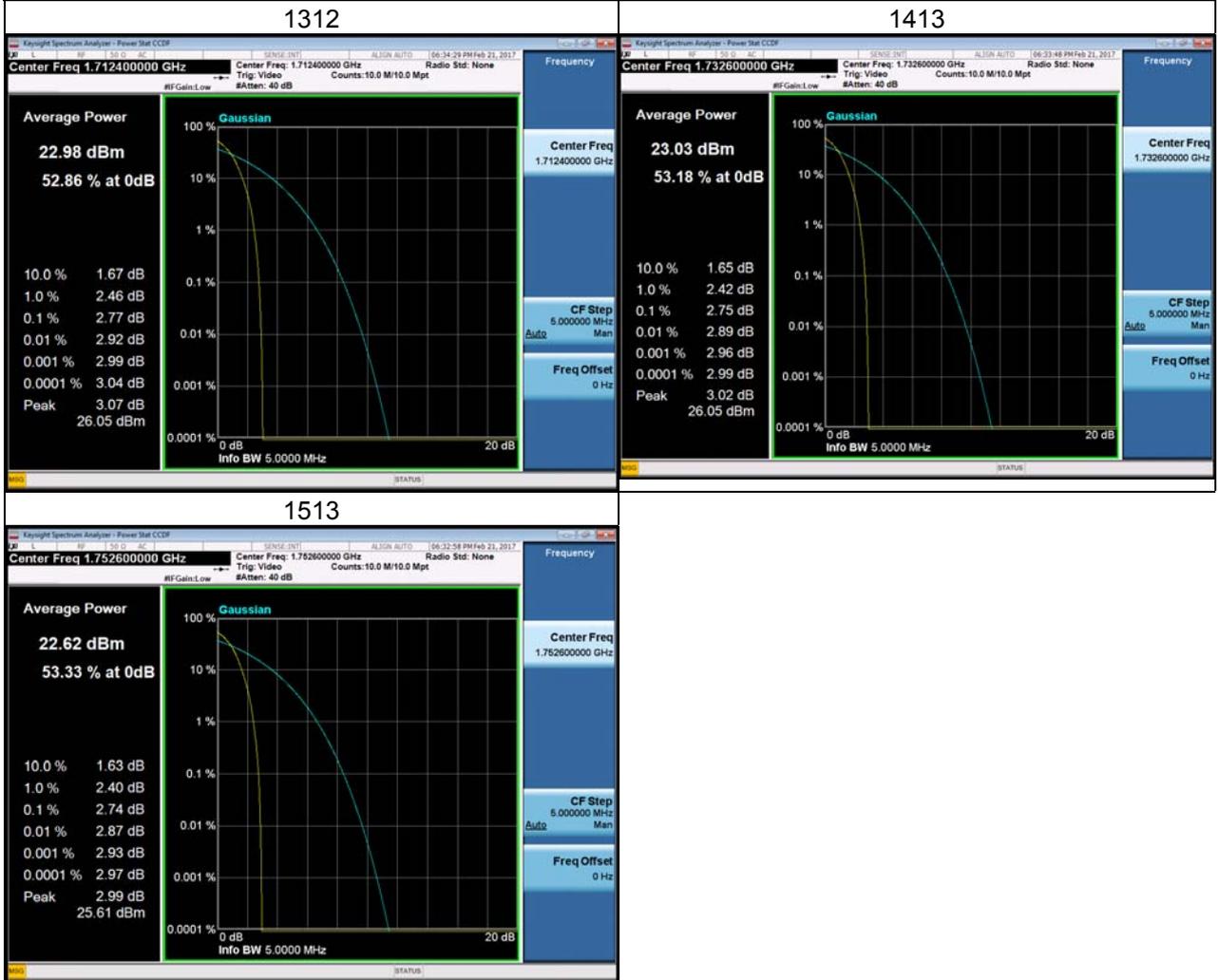


## ATTACHMENT F - PEAK TO AVERAGE RATIO

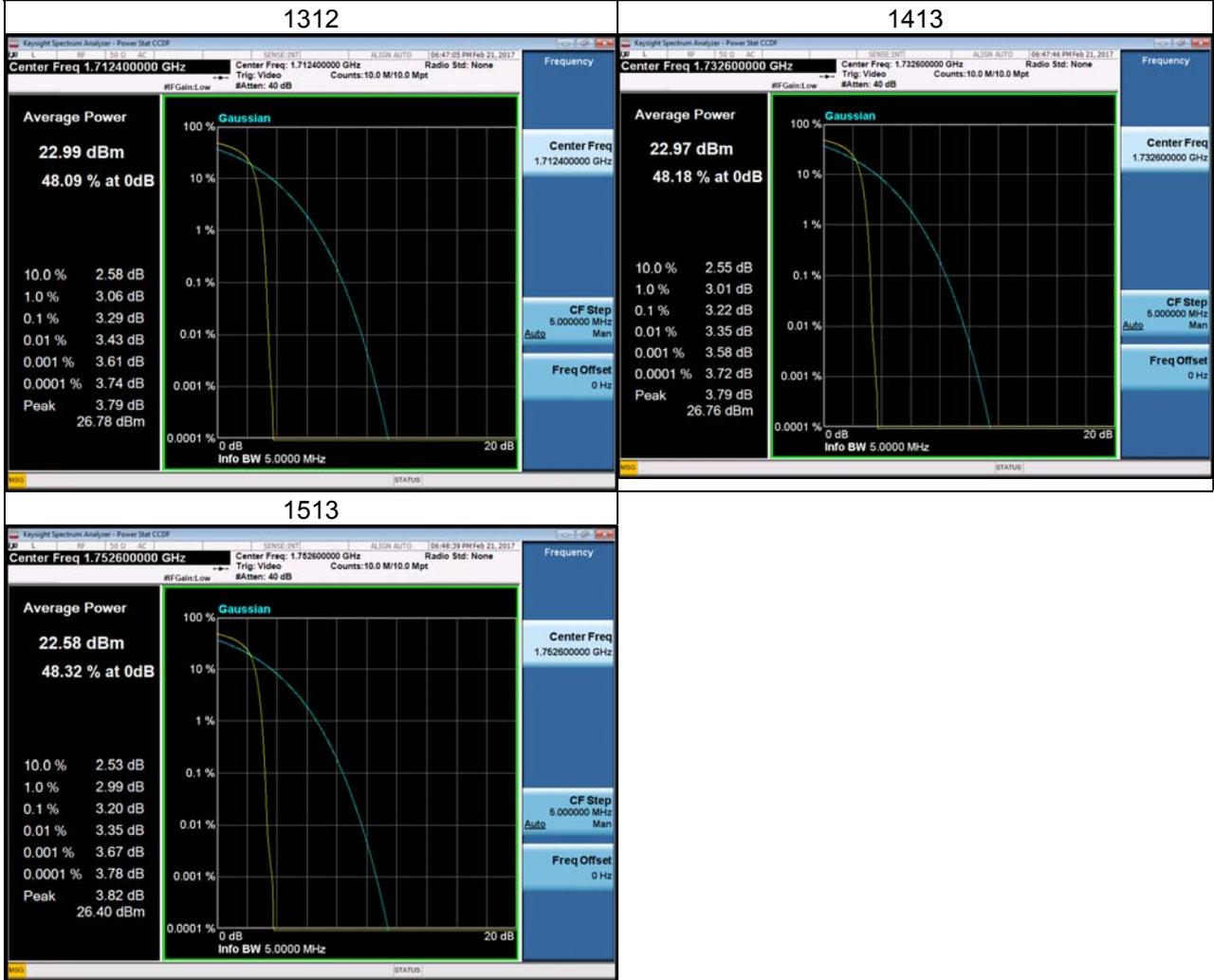
### WCDMA Band 4 Spectrum Plot\_WCDMA



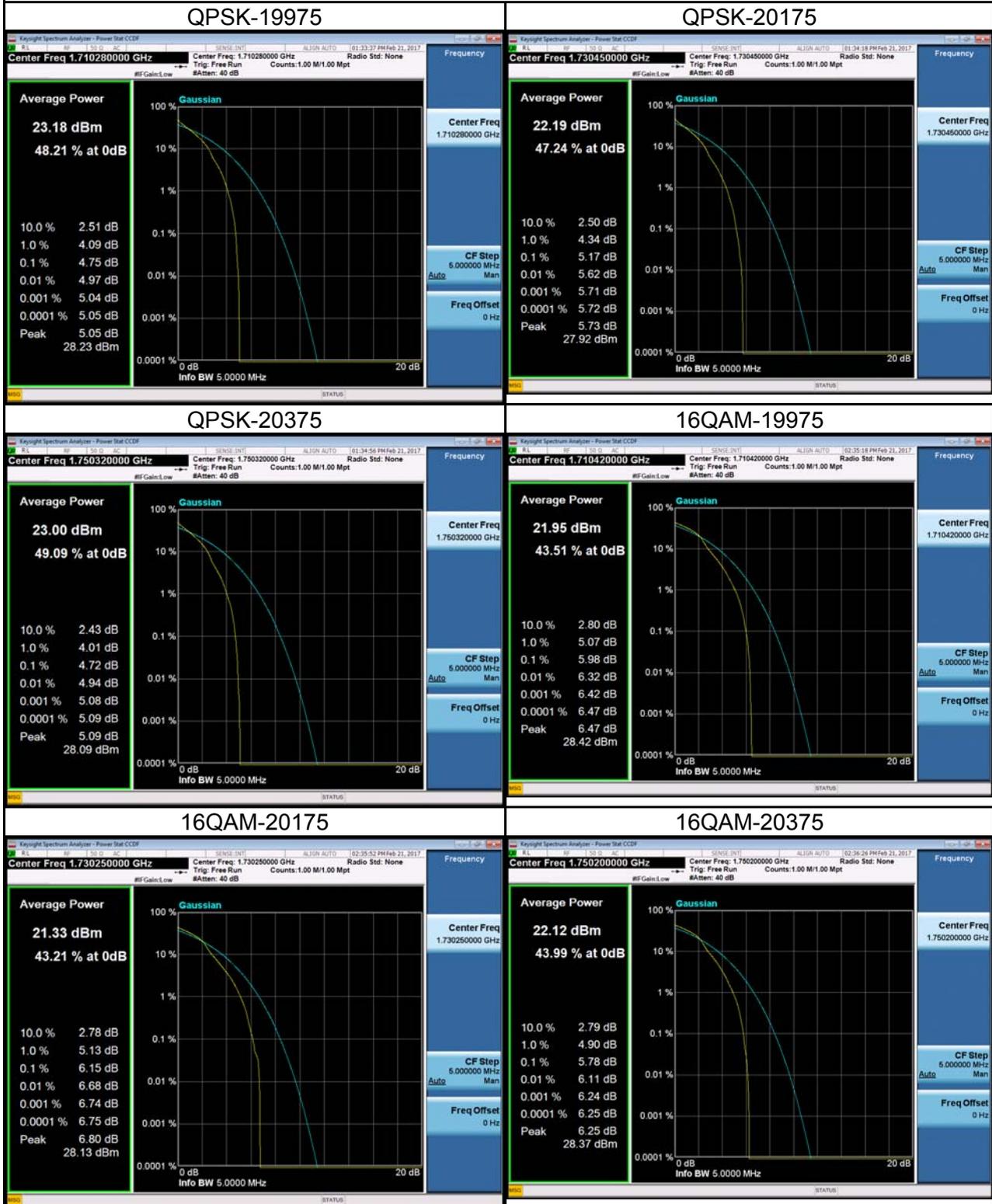
### WCDMA Band 4 Spectrum Plot\_HSDPA



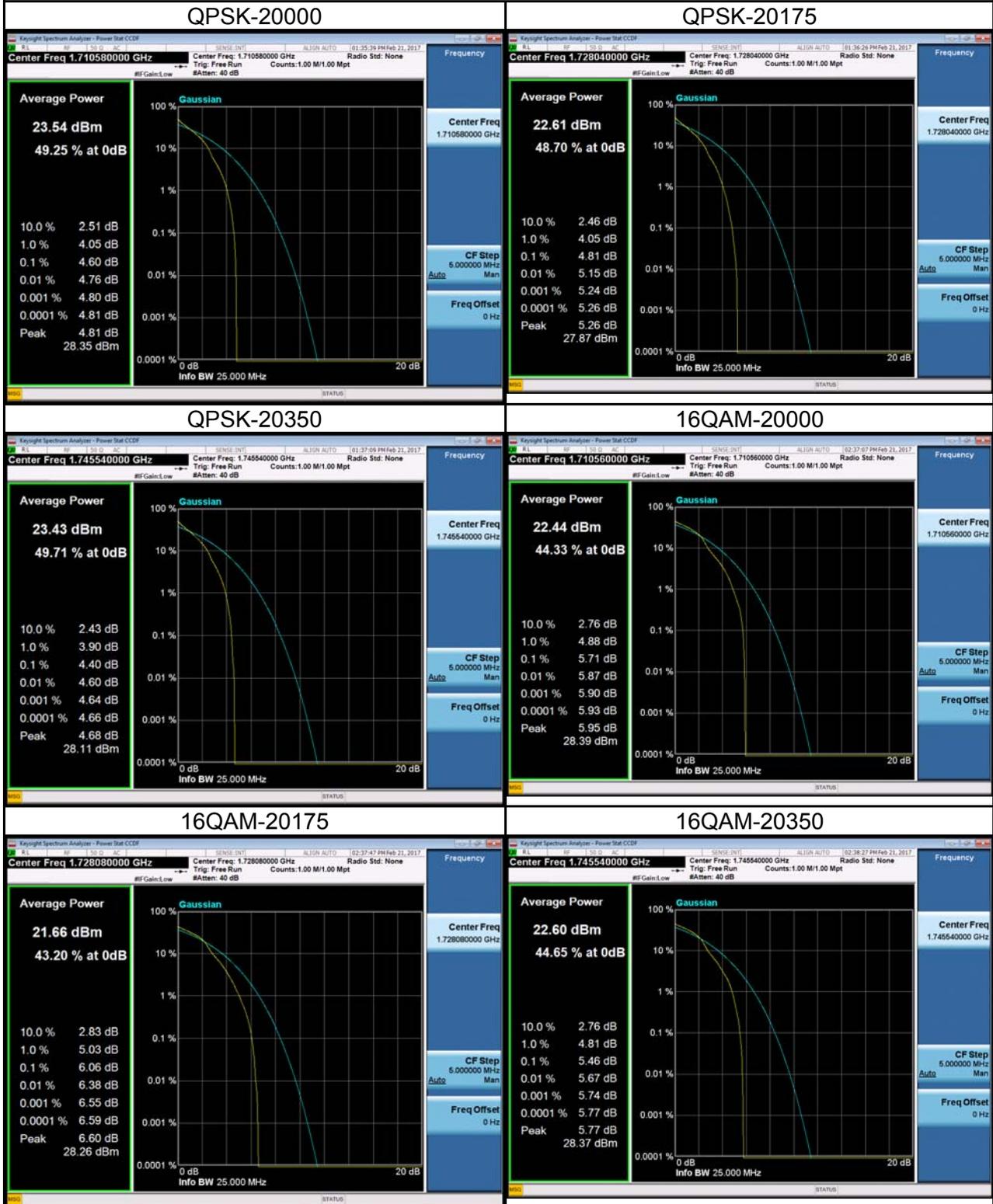
### WCDMA Band 4 Spectrum Plot\_HSUPA



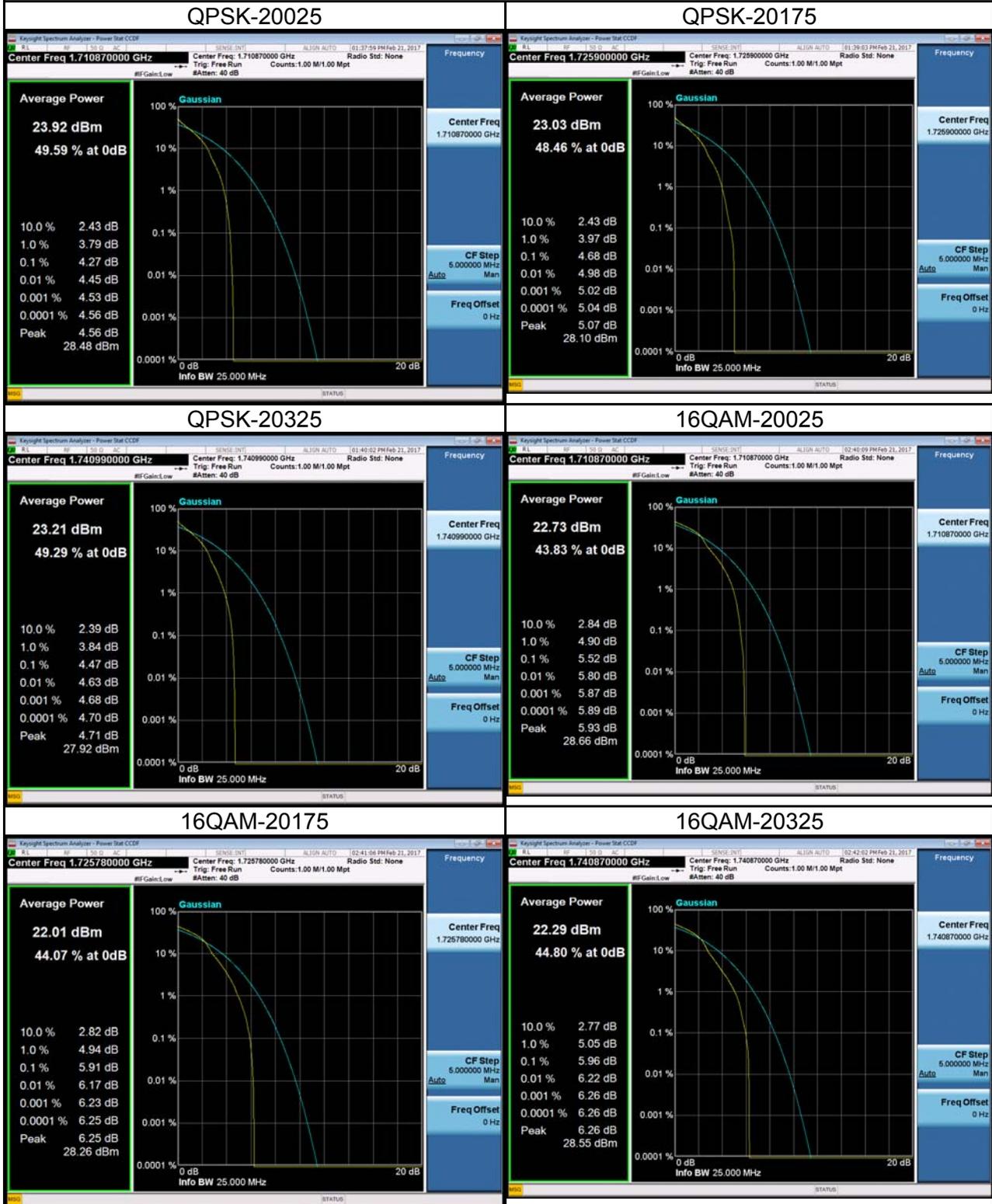
### LTE Band 4 Spectrum Plot\_5M



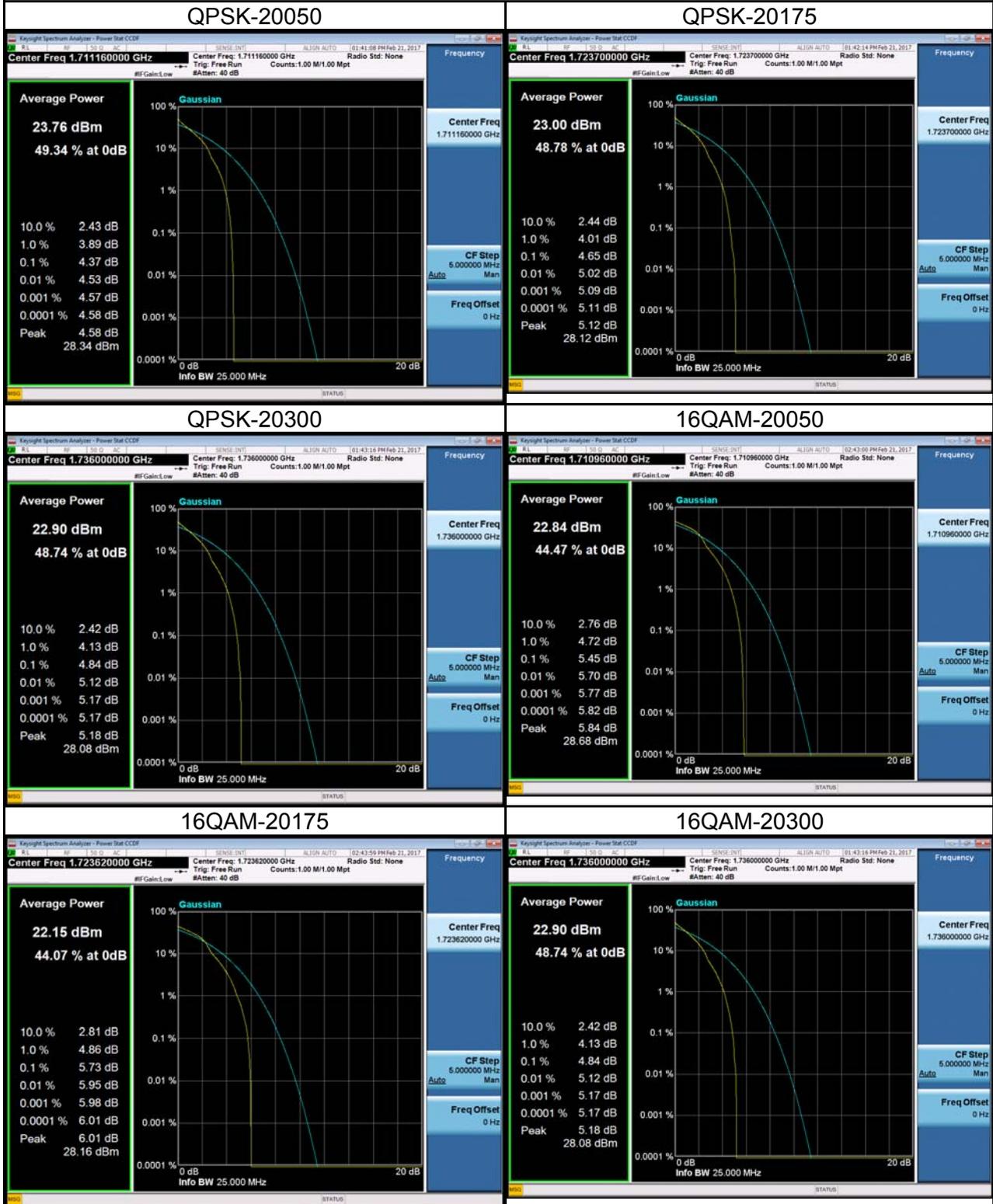
### LTE Band 4 Spectrum Plot\_10M



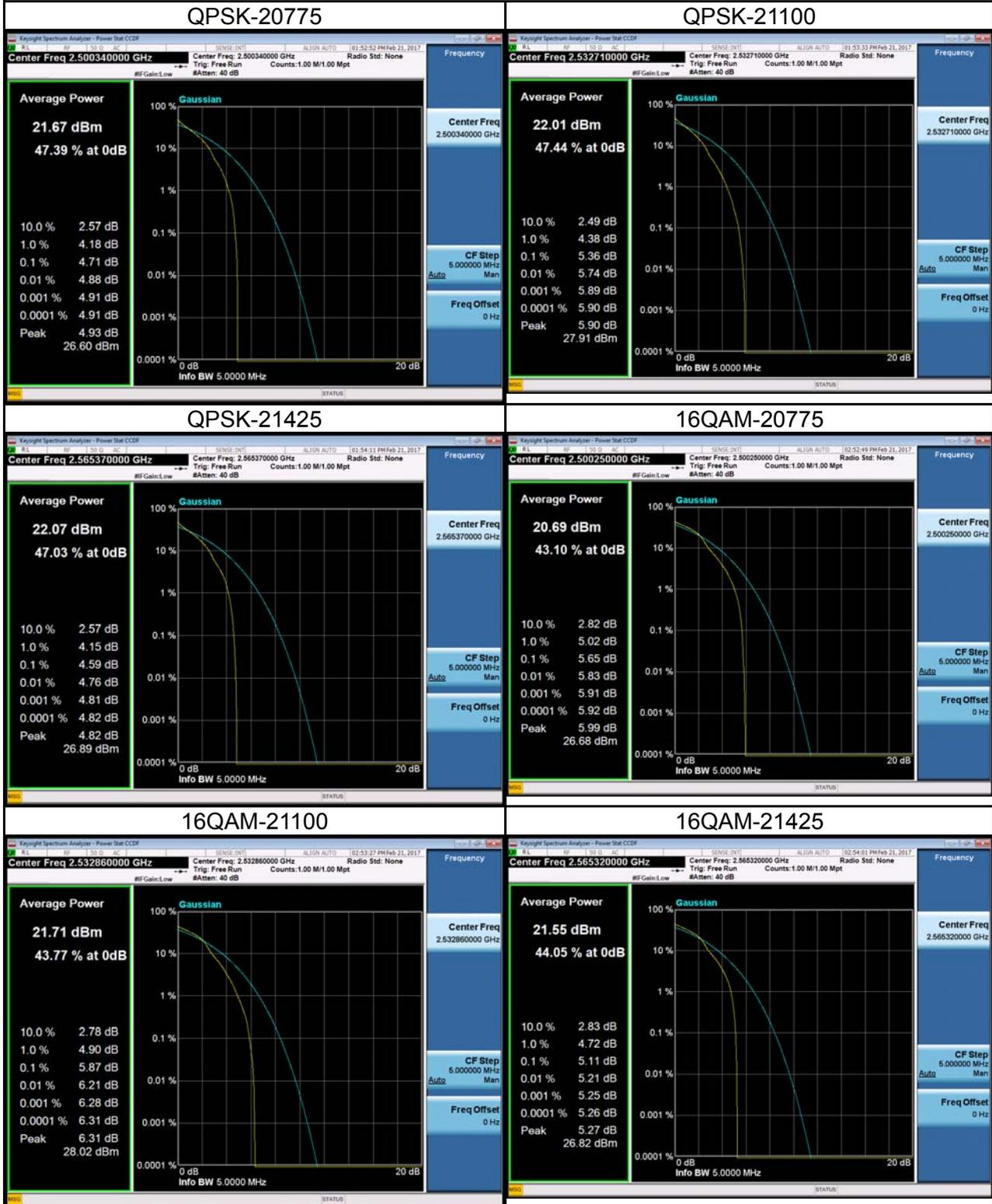
### LTE Band 4 Spectrum Plot\_15M



### LTE Band 4 Spectrum Plot\_20M



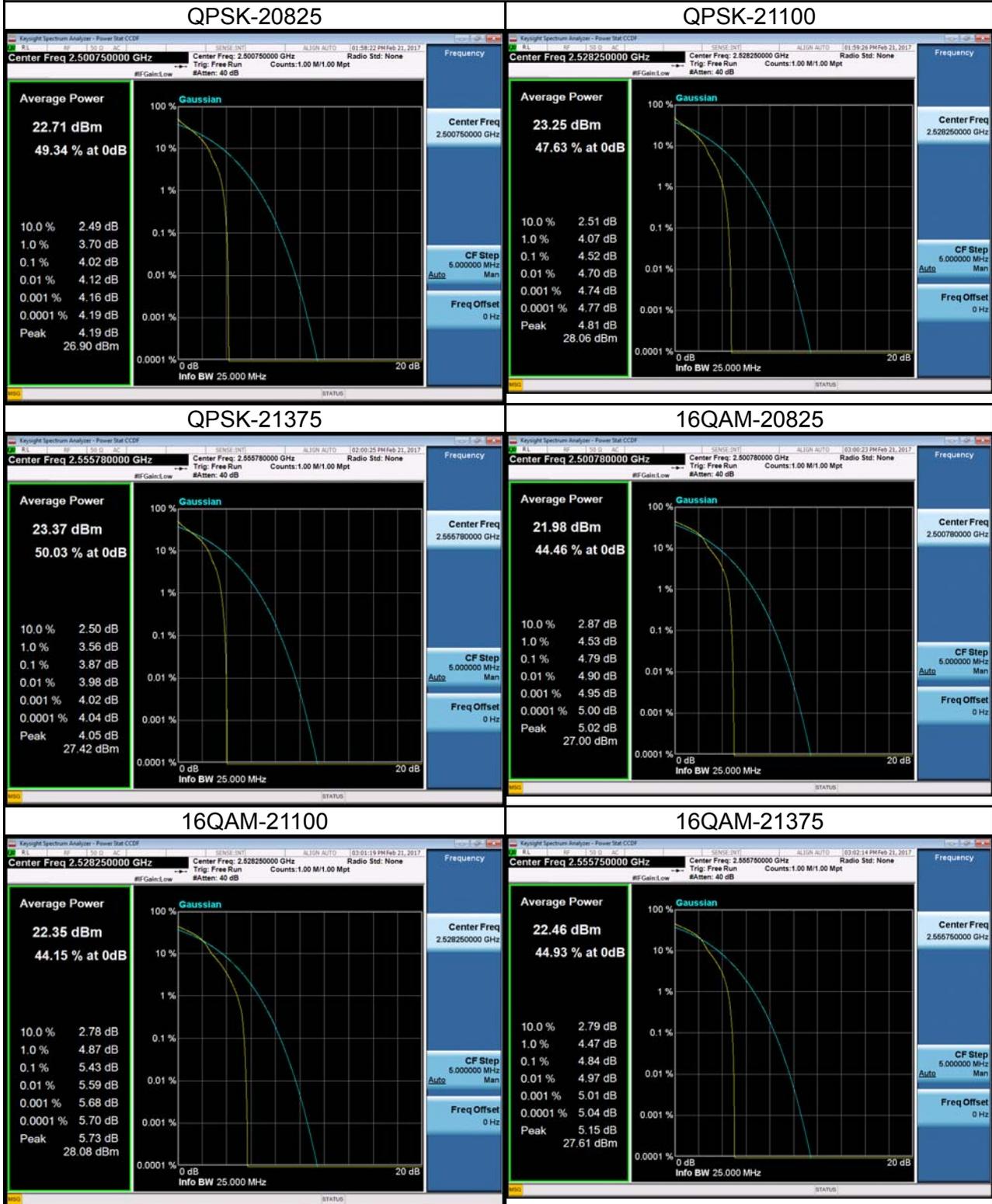
### LTE Band 7 Spectrum Plot\_5M



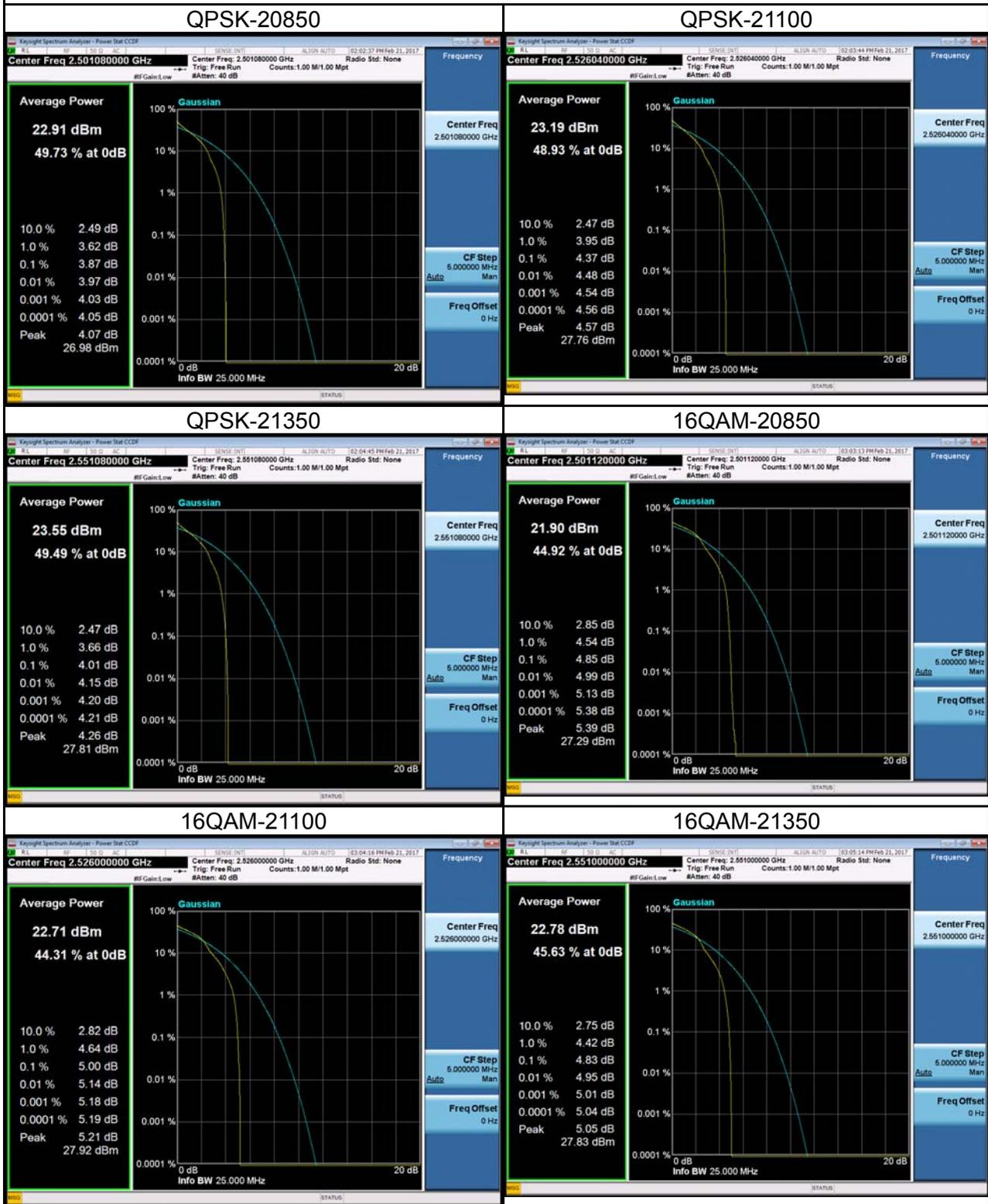
### LTE Band 7 Spectrum Plot\_10M



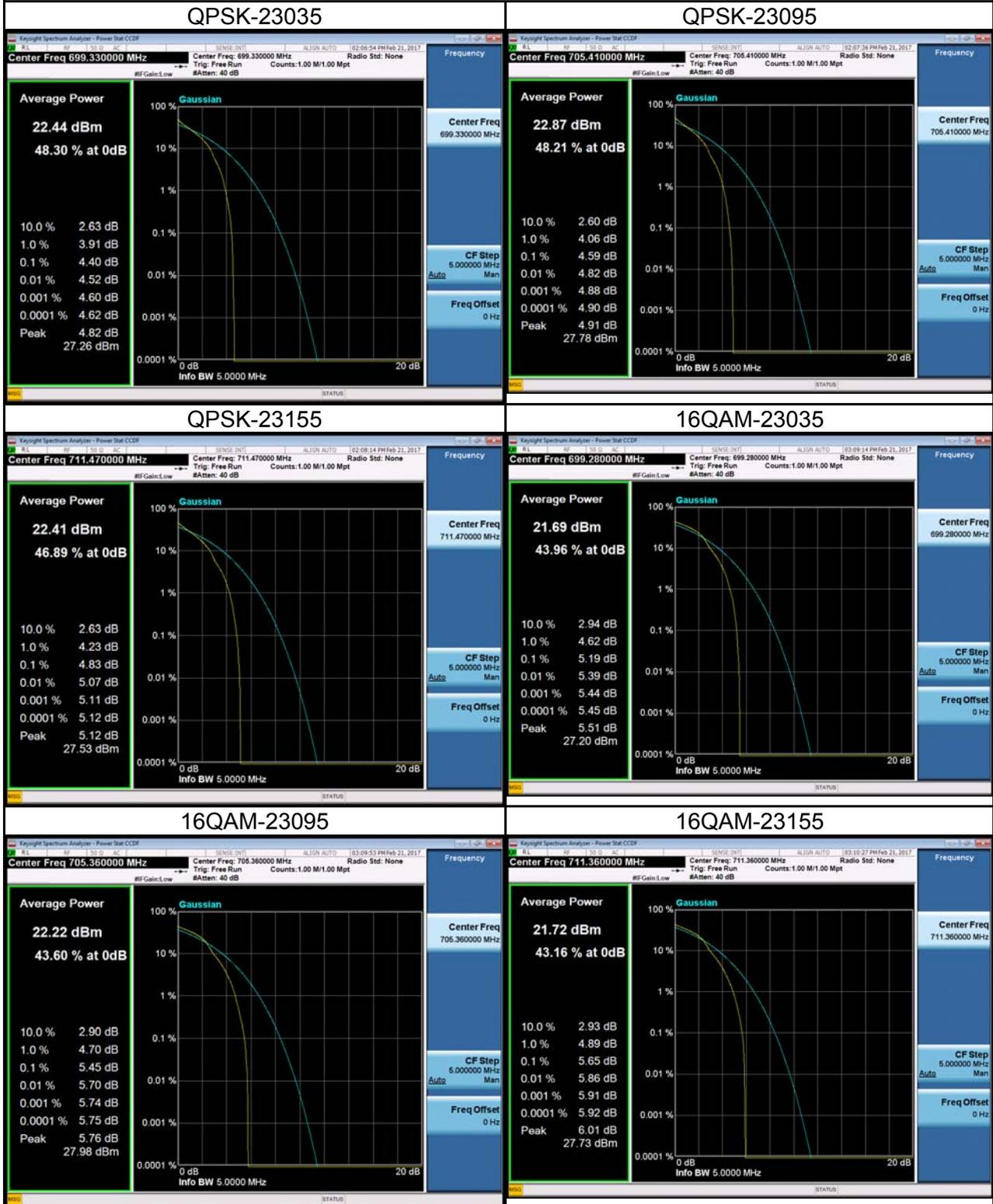
### LTE Band 7 Spectrum Plot\_15M



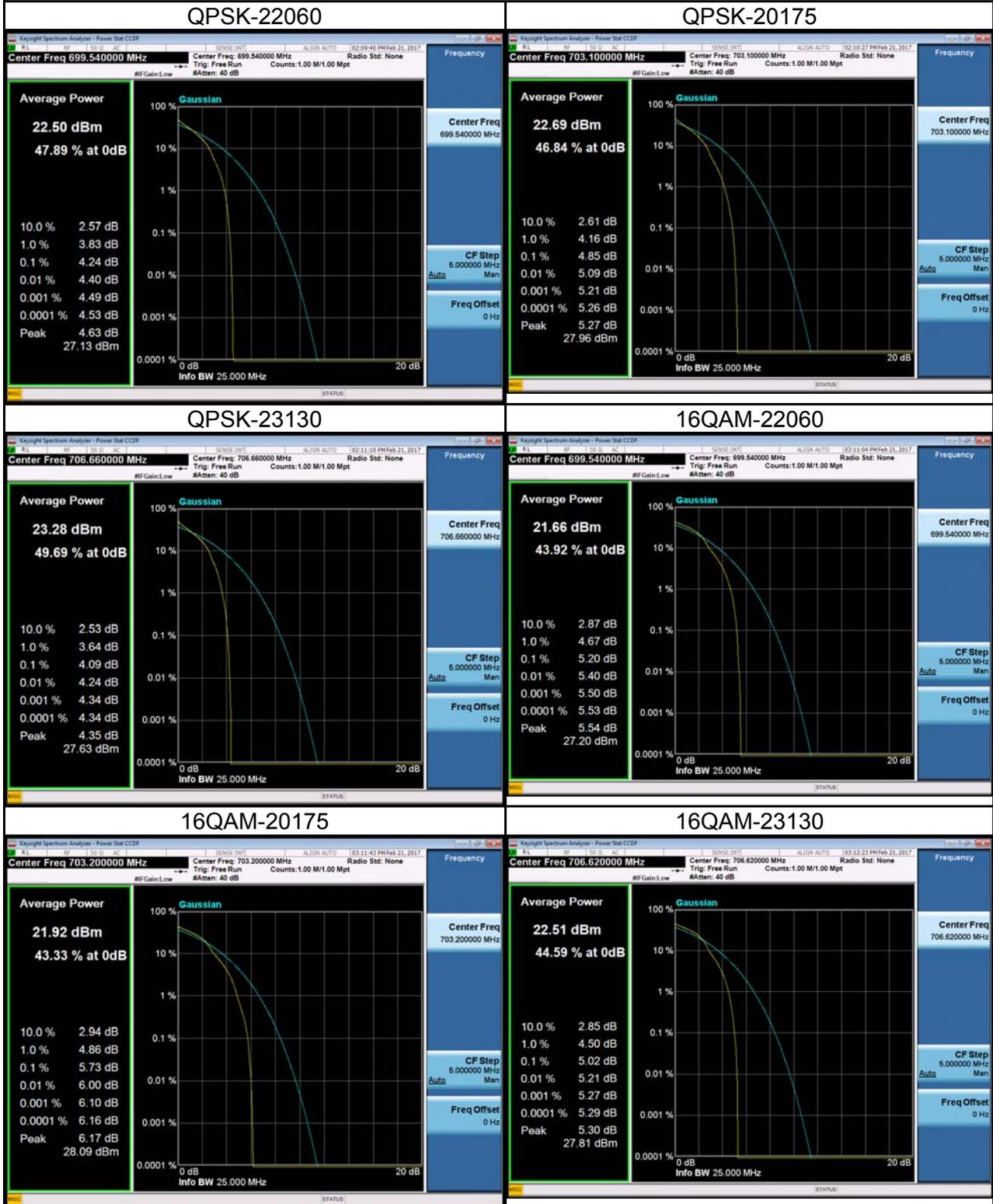
### LTE Band 7 Spectrum Plot\_20M



### LTE Band 12 Spectrum Plot\_5M



### LTE Band 12 Spectrum Plot\_10M



### LTE Band 13 Spectrum Plot\_5M



### LTE Band 13 Spectrum Plot\_10M



### LTE Band 17 Spectrum Plot\_5M



### LTE Band 17 Spectrum Plot\_10M



## ATTACHMENT G - FREQUENCY STABILITY

Test Mode:	WCDMA Band 4_CH1413
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	5.58	0.003220593	2.5
-20	6.64	0.003832391	2.5
-10	8.25	0.00476163	2.5
0	5.84	0.003370657	2.5
10	6.93	0.003999769	2.5
20	8.05	0.004646196	2.5
30	7.26	0.004190234	2.5
40	6.98	0.004028627	2.5
50	5.1	0.002943553	2.5
Max. Deviation (ppm)	8.25	0.00476163	2.5

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	9.38	0.005413829	2.5
4.0	5.62	0.00324368	2.5
4.2	7.36	0.004247951	2.5
Max. Deviation (ppm)	9.38	0.005413829	2.5

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	3.21	0.001852814	2.5
-20	-5.42	0.003128427	2.5
-10	-3.81	0.002199134	2.5
0	1.83	0.001056277	2.5
10	2.36	0.001362193	2.5
20	-2.55	0.001471861	2.5
30	-6.05	0.003492063	2.5
40	6.67	0.003849928	2.5
50	3.08	0.001777778	2.5
Max. Deviation (ppm)	6.67	0.003849928	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	5.12	0.002955267	2.5
4.0	-4.39	0.002533911	2.5
4.2	-2.76	0.001593074	2.5
Max. Deviation (ppm)	5.12	0.002955267	2.5

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	2.18	0.001258297	2.5
-20	-1.10	0.000634921	2.5
-10	5.89	0.003399711	2.5
0	-5.61	0.003238095	2.5
10	2.25	0.001298701	2.5
20	3.77	0.002176046	2.5
30	1.49	0.000860029	2.5
40	4.83	0.002787879	2.5
50	4.47	0.002580087	2.5
Max. Deviation (ppm)	5.89	0.003399711	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-1.75	0.001010101	2.5
4.0	-2.61	0.001506494	2.5
4.2	4.17	0.002406926	2.5
Max. Deviation (ppm)	4.17	0.002406926	2.5

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	2.67	0.001541126	2.5
-20	3.46	0.001997114	2.5
-10	-5.27	0.003041847	2.5
0	-1.60	0.000923521	2.5
10	2.81	0.001621934	2.5
20	3.37	0.001945166	2.5
30	4.69	0.002707071	2.5
40	5.25	0.003030303	2.5
50	6.33	0.00365368	2.5
Max. Deviation (ppm)	6.33	0.00365368	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	3.31	0.001910534	2.5
4.0	2.60	0.001500722	2.5
4.2	3.69	0.00212987	2.5
Max. Deviation (ppm)	3.69	0.00212987	2.5

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	1.30	0.000750361	2.5
-20	4.49	0.002591631	2.5
-10	3.75	0.002164502	2.5
0	2.60	0.001500722	2.5
10	-5.13	0.002961039	2.5
20	5.62	0.003243867	2.5
30	4.93	0.002845599	2.5
40	-5.41	0.003122655	2.5
50	-4.81	0.002776335	2.5
Max. Deviation (ppm)	5.62	0.003243867	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	5.21	0.003007215	2.5
4.0	-4.54	0.002620491	2.5
4.2	5.52	0.003186147	2.5
Max. Deviation (ppm)	5.52	0.003186147	2.5

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	4.61	0.00181854	2.5
-20	5.50	0.002169625	2.5
-10	3.97	0.001566075	2.5
0	-2.80	0.001104536	2.5
10	-6.73	0.002654832	2.5
20	2.29	0.000903353	2.5
30	5.11	0.002015779	2.5
40	-4.61	0.00181854	2.5
50	2.56	0.001009862	2.5
Max. Deviation (ppm)	6.73	0.002654832	2.5

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	3.34	0.001317554	2.5
4.0	4.49	0.001771203	2.5
4.2	5.21	0.002055227	2.5
Max. Deviation (ppm)	5.21	0.002055227	2.5

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	-6.36	0.002508876	2.5
-20	5.14	0.002027613	2.5
-10	4.50	0.001775148	2.5
0	-6.03	0.002378698	2.5
10	-5.19	0.002047337	2.5
20	4.07	0.001605523	2.5
30	3.86	0.001522682	2.5
40	2.71	0.001069034	2.5
50	-3.99	0.001573964	2.5
Max. Deviation (ppm)	6.36	0.002508876	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	2.06	0.000812623	2.5
4.0	-4.70	0.001854043	2.5
4.2	2.31	0.000911243	2.5
Max. Deviation (ppm)	4.70	0.001854043	2.5

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	2.58	0.001017751	2.5
-20	7.44	0.002934911	2.5
-10	2.74	0.001080868	2.5
0	-2.06	0.000812623	2.5
10	-6.34	0.002500986	2.5
20	5.19	0.002047337	2.5
30	2.76	0.001088757	2.5
40	-5.16	0.002035503	2.5
50	2.18	0.000859961	2.5
Max. Deviation (ppm)	7.44	0.002934911	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-5.19	0.002047337	2.5
4.0	-4.27	0.001684418	2.5
4.2	5.35	0.002110454	2.5
Max. Deviation (ppm)	5.35	0.002110454	2.5

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	-3.33	0.001313609	2.5
-20	-2.59	0.001021696	2.5
-10	-6.87	0.002710059	2.5
0	5.49	0.00216568	2.5
10	6.20	0.002445759	2.5
20	4.07	0.001605523	2.5
30	1.93	0.000761341	2.5
40	2.16	0.000852071	2.5
50	3.43	0.001353057	2.5
Max. Deviation (ppm)	6.87	0.002710059	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	2.38	0.000938856	2.5
4.0	1.59	0.000627219	2.5
4.2	4.61	0.00181854	2.5
Max. Deviation (ppm)	4.61	0.00181854	2.5

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	3.22	0.004551237	2.5
-20	-5.30	0.007491166	2.5
-10	5.14	0.007265018	2.5
0	4.68	0.006614841	2.5
10	-5.92	0.008367491	2.5
20	4.66	0.006586572	2.5
30	-5.22	0.007378092	2.5
40	-3.87	0.005469965	2.5
50	5.03	0.007109541	2.5
Max. Deviation (ppm)	5.92	0.008367491	2.5

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	4.57	0.006459364	2.5
4.0	5.02	0.007095406	2.5
4.2	3.28	0.004636042	2.5
Max. Deviation (ppm)	5.02	0.007095406	2.5

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	1.19	0.001681979	2.5
-20	-5.24	0.00740636	2.5
-10	-6.21	0.008777385	2.5
0	5.06	0.007151943	2.5
10	4.26	0.006015548	2.5
20	3.15	0.004452297	2.5
30	5.62	0.007943463	2.5
40	1.84	0.002600707	2.5
50	5.68	0.008028269	2.5
Max. Deviation (ppm)	6.21	0.008777385	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-5.18	0.007321555	2.5
4.0	-4.29	0.006063604	2.5
4.2	3.50	0.004946996	2.5
Max. Deviation (ppm)	5.18	0.007321555	2.5

Test Mode:	LTE Band 13_CH23230_5M
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### Temperature vs. Frequency Stability

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-30	-1.17	0.001496164	2.5
-20	3.65	0.004667519	2.5
-10	-6.06	0.007749361	2.5
0	2.81	0.00359335	2.5
10	5.92	0.007570332	2.5
20	4.33	0.005537084	2.5
30	-4.16	0.005319693	2.5
40	5.70	0.007289003	2.5
50	2.80	0.003580563	2.5
Max. Deviation (ppm)	6.06	0.007749361	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	2.25	0.002877238	2.5
4.0	2.37	0.003030691	2.5
4.2	-3.09	0.003951407	2.5
Max. Deviation (ppm)	3.09	0.003951407	2.5

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	2.26	0.002890026	2.5
-20	3.59	0.004590793	2.5
-10	4.25	0.005434783	2.5
0	-5.14	0.00657289	2.5
10	-6.26	0.008005115	2.5
20	-3.19	0.004079284	2.5
30	2.84	0.003631714	2.5
40	4.81	0.006150895	2.5
50	3.55	0.004539642	2.5
Max. Deviation (ppm)	6.26	0.008005115	2.5

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	-3.60	0.004603581	2.5
4.0	2.59	0.00331202	2.5
4.2	3.91	0.005	2.5
Max. Deviation (ppm)	3.91	0.005	2.5

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	3.08	0.004338028	2.5
-20	5.16	0.007267606	2.5
-10	-4.67	0.006577465	2.5
0	3.59	0.005056338	2.5
10	-2.64	0.00371831	2.5
20	4.66	0.00656338	2.5
30	5.67	0.007985915	2.5
40	6.15	0.008661972	2.5
50	2.84	0.004	2.5
Max. Deviation (ppm)	6.15	0.008661972	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	1.49	0.002098592	2.5
4.0	2.55	0.003591549	2.5
4.2	-4.01	0.005647887	2.5
Max. Deviation (ppm)	4.01	0.005647887	2.5

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	3.38	0.004760563	2.5
-20	-3.37	0.004746479	2.5
-10	4.51	0.006352113	2.5
0	6.62	0.009323944	2.5
10	-5.29	0.007450704	2.5
20	-4.76	0.006704225	2.5
30	5.83	0.008211268	2.5
40	4.62	0.006507042	2.5
50	1.31	0.00184507	2.5
Max. Deviation (ppm)	6.62	0.009323944	2.5

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
3.8	4.68	0.006591549	2.5
4.0	-2.69	0.003788732	2.5
4.2	3.94	0.005549296	2.5
Max. Deviation (ppm)	4.68	0.006591549	2.5