

LTE Band 12\_10M

1RB0

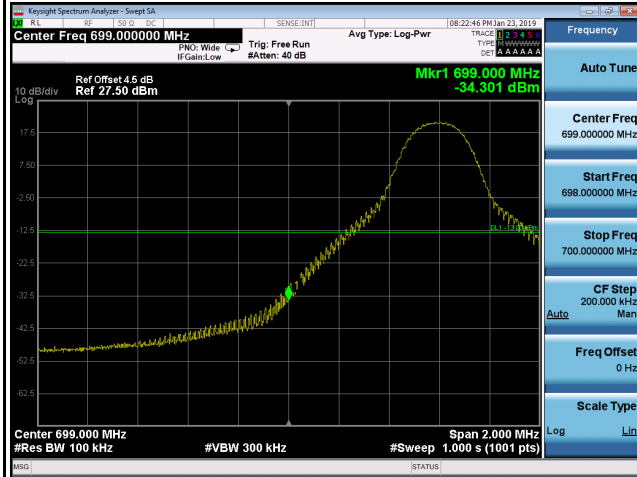
1RB49

Channel

23060

Channel

20350



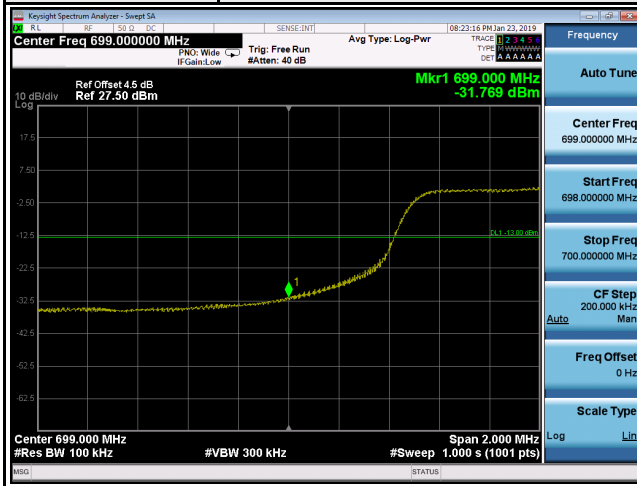
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Channel

23060

Channel

20350



LTE Band 66\_1.4M

1RB0

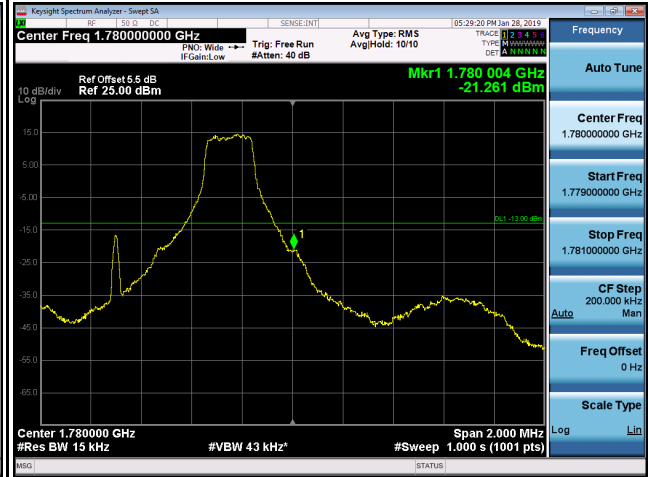
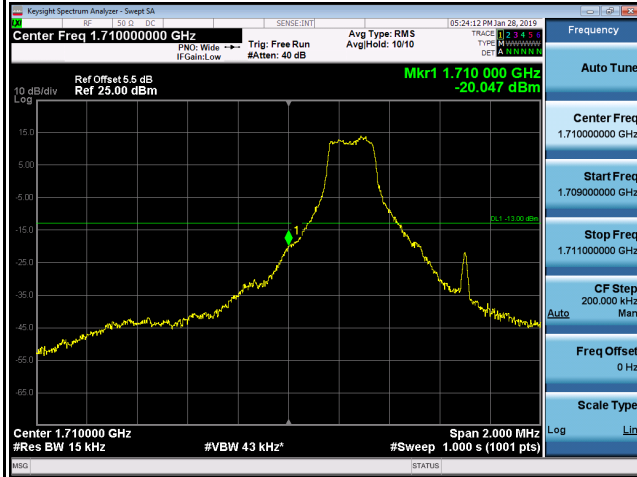
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Channel

131979

Channel

132665



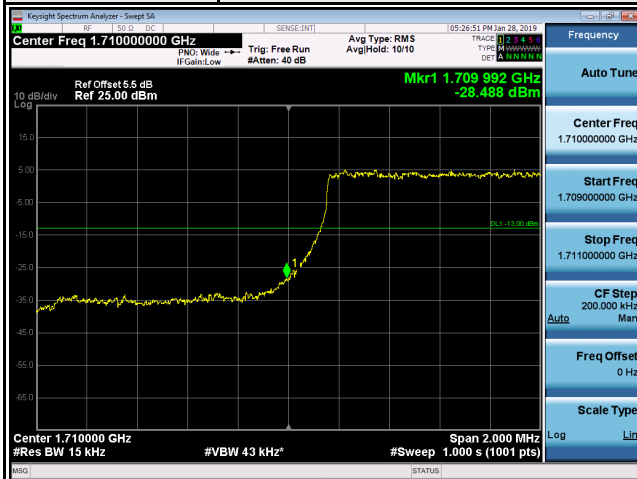
6RB0

Channel

131979

Channel

132665



LTE Band 66\_3M

1RB0

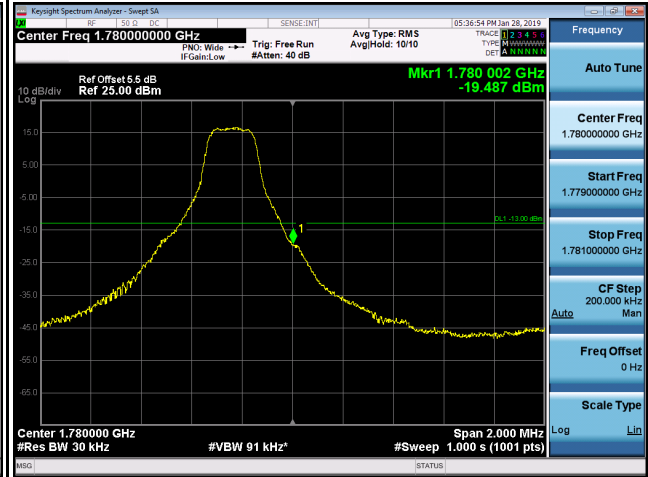
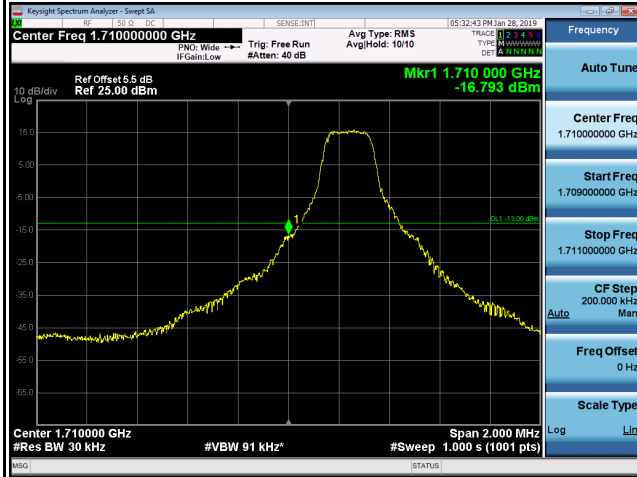
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Channel

131987

Channel

132657



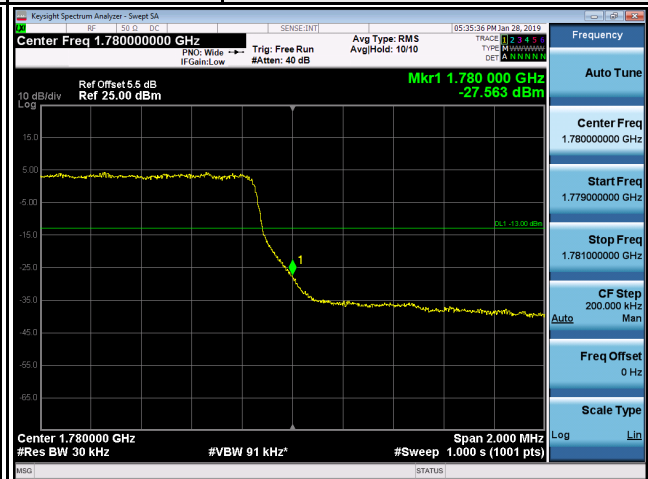
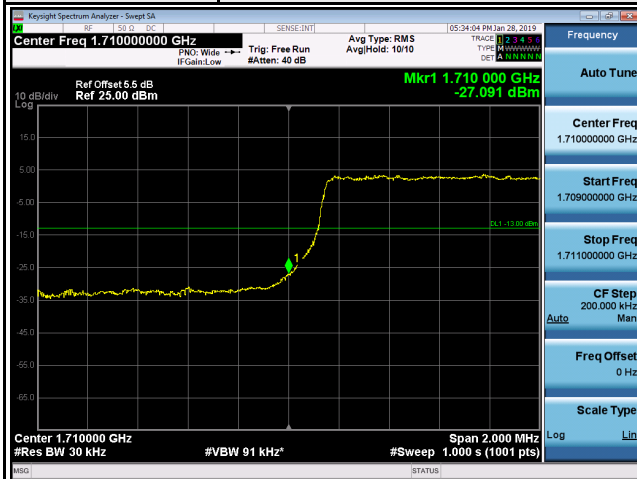
15RB0

Channel

131987

Channel

132657



LTE Band 66\_5M

1RB0

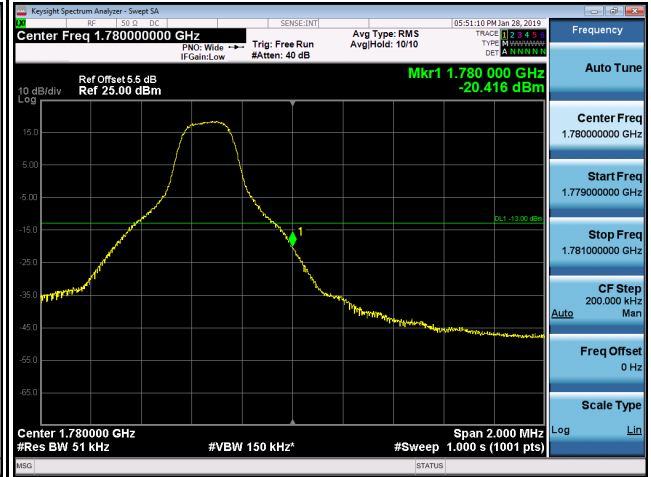
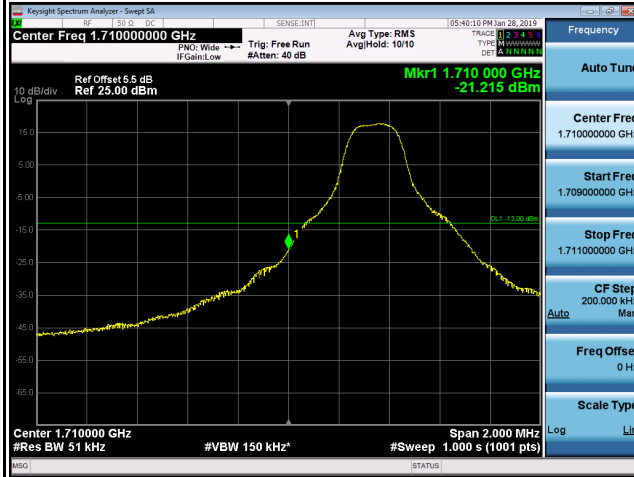
1RB24

Channel

131997

Channel

132647



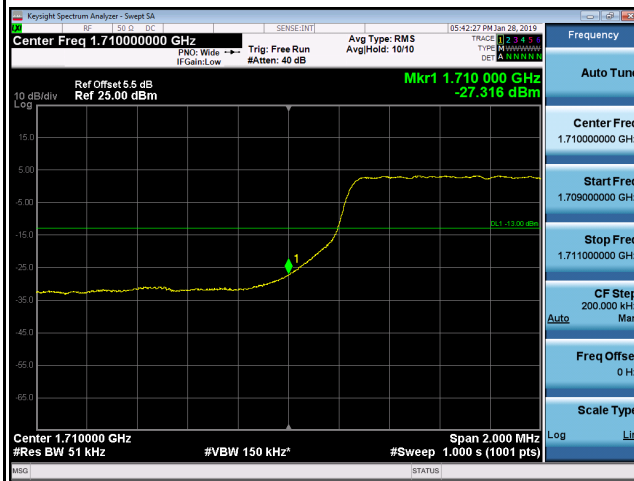
25RB0

Channel

131997

Channel

132647



LTE Band 66\_10M

1RB0

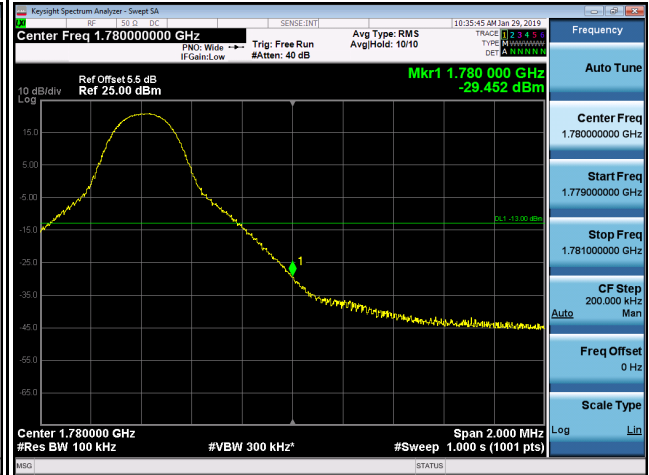
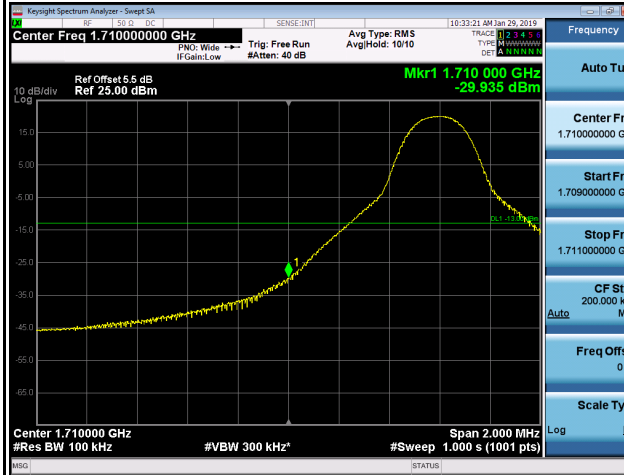
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Channel

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Channel

132622



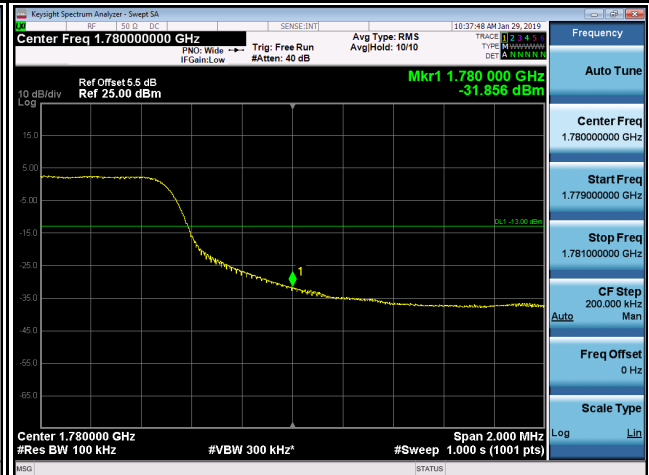
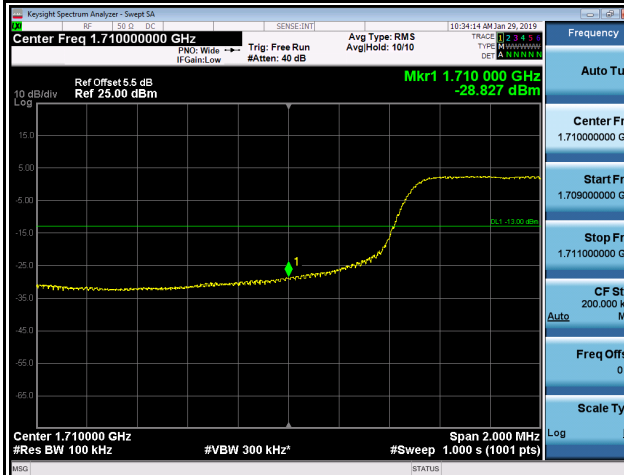
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Channel

132022

Channel

132622



LTE Band 66\_15M

1RB0

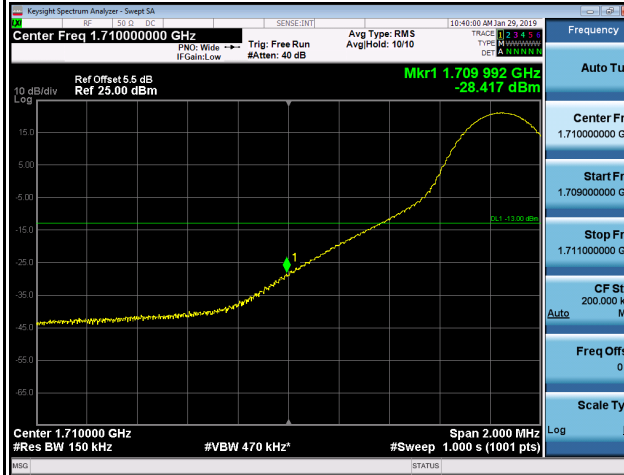
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Channel

132047

Channel

132597



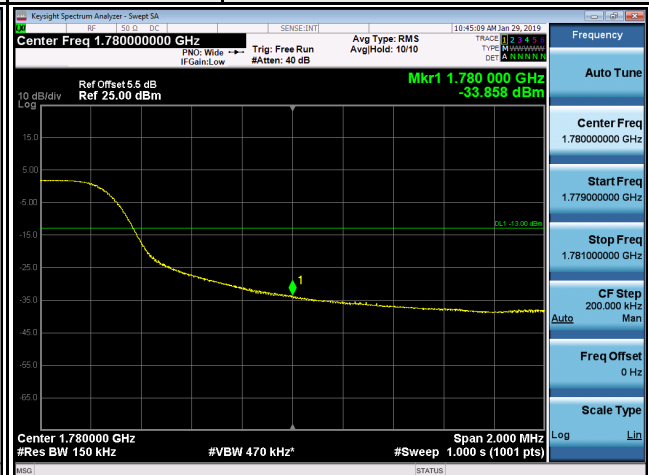
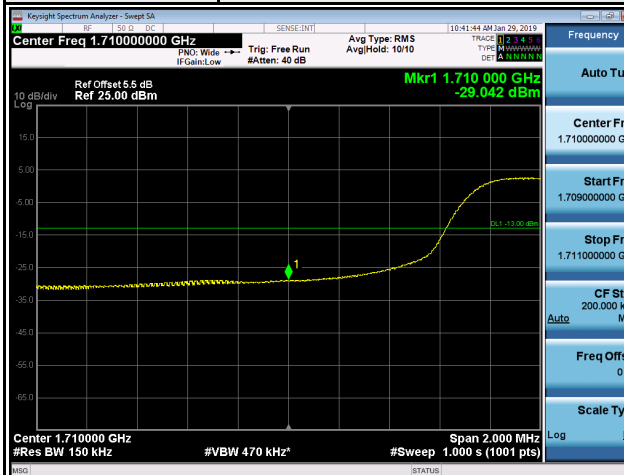
75RB0

Channel

132047

Channel

132597



LTE Band 66\_20M

1RB0

1RB99

Channel

132072

Channel

132572



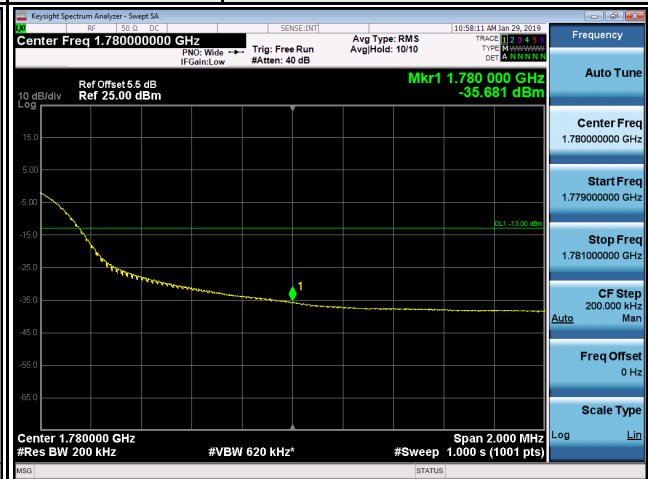
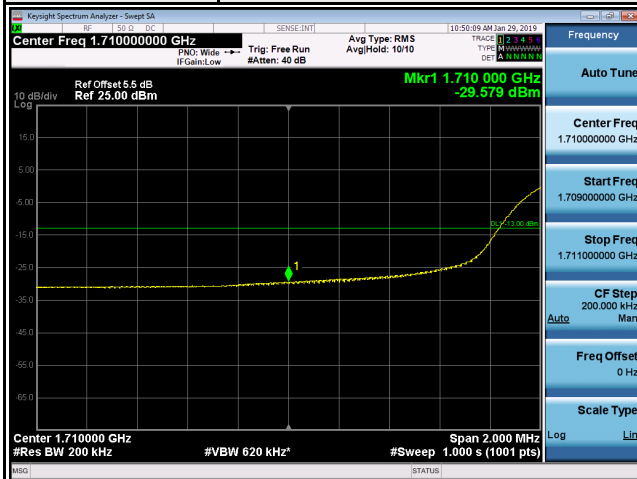
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Channel

132072

Channel

132572



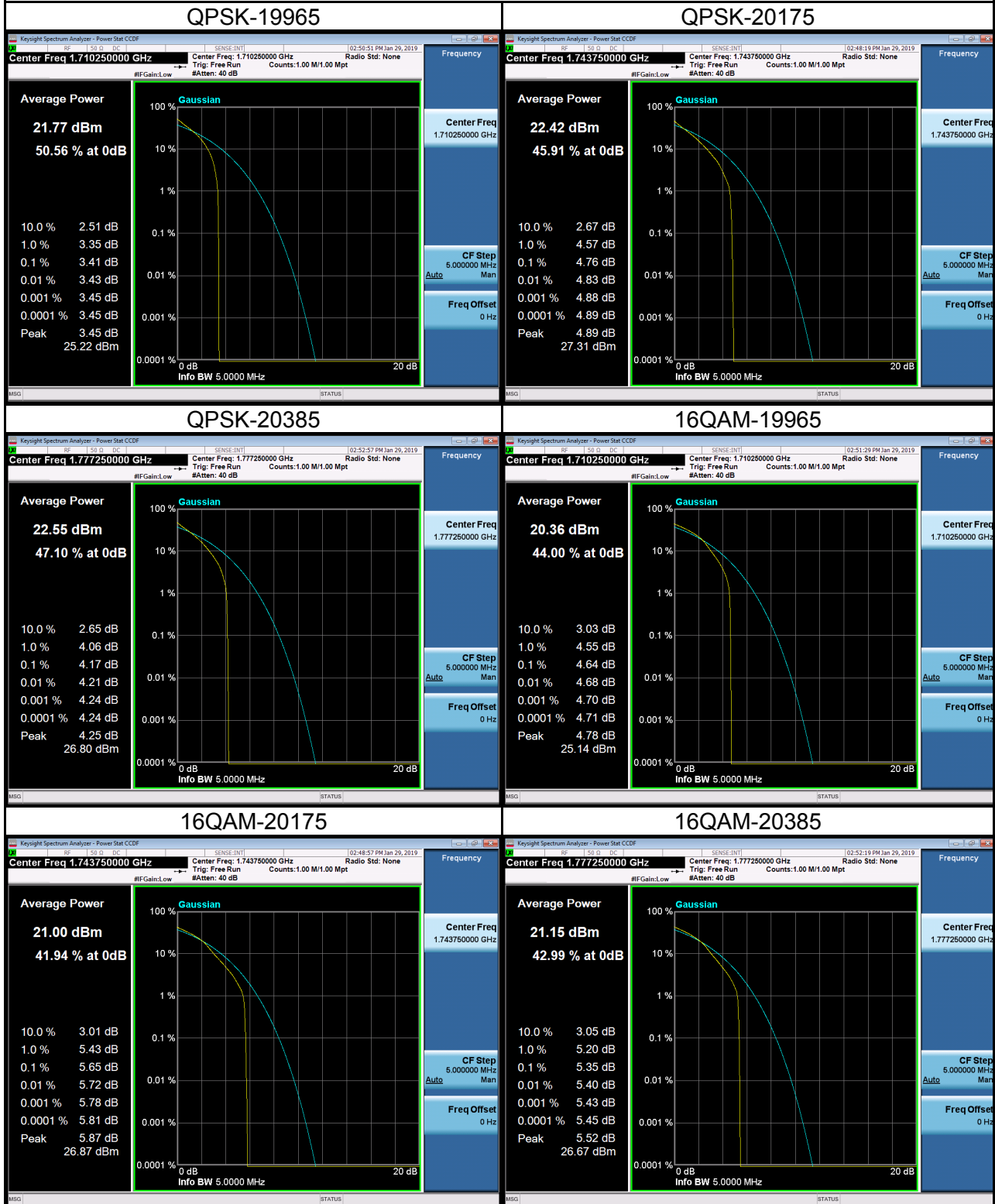
## APPENDIX H - PEAK TO AVERAGE RATIO



### LTE Band 4 Spectrum Plot\_1.4M

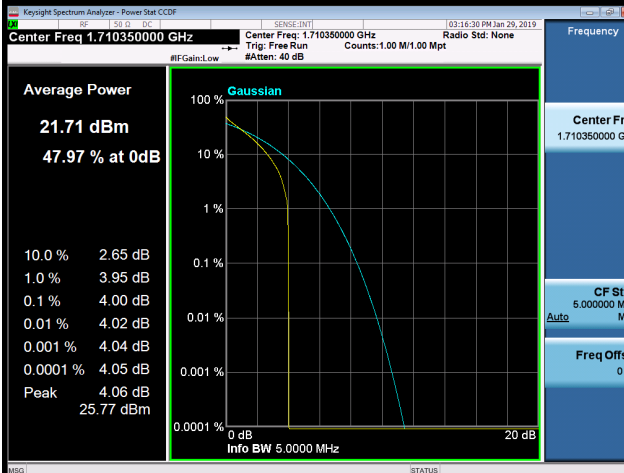


### LTE Band 4 Spectrum Plot\_3M

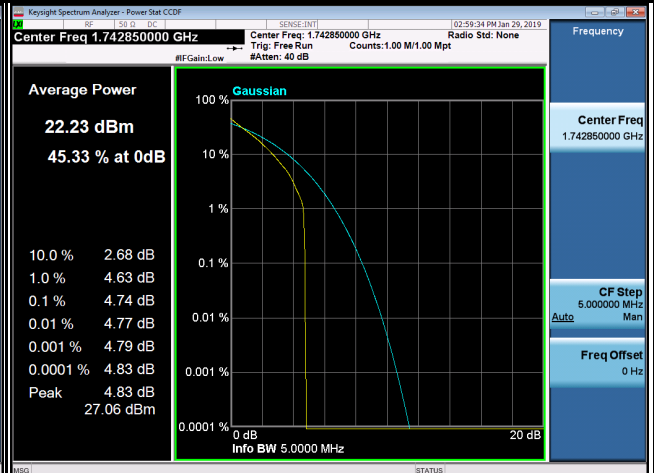


### LTE Band 4 Spectrum Plot\_5M

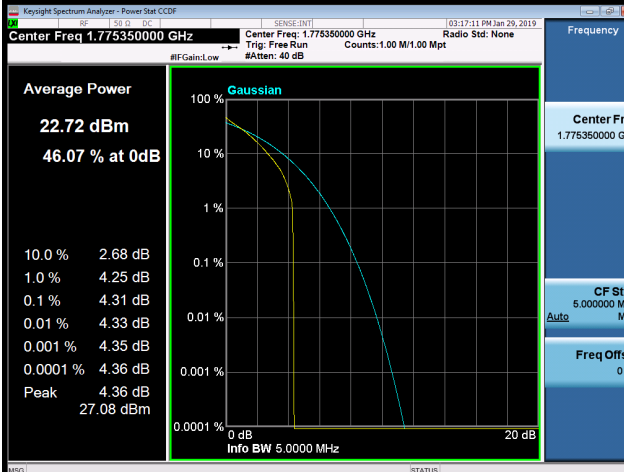
#### QPSK-19975



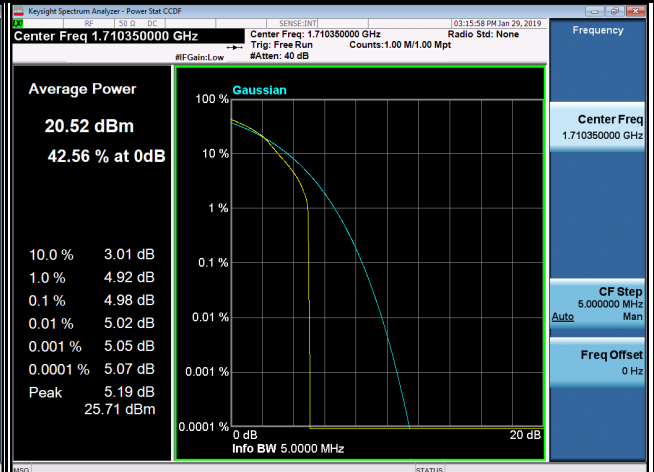
#### QPSK-20175



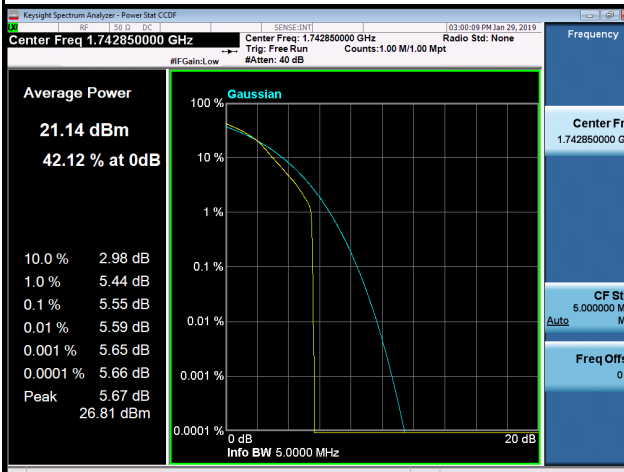
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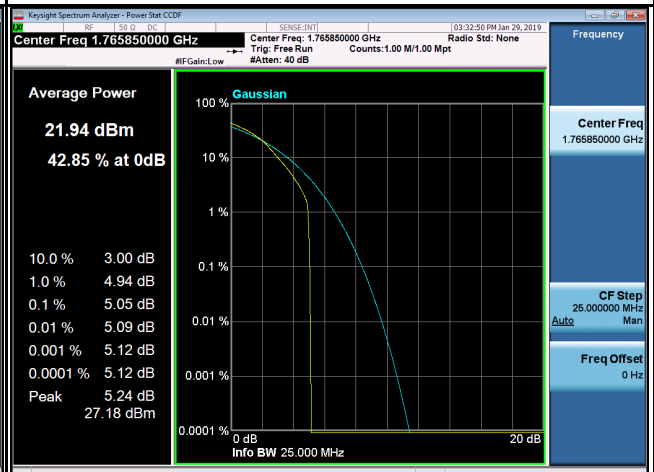
#### 16QAM-19975



#### 16QAM-20175



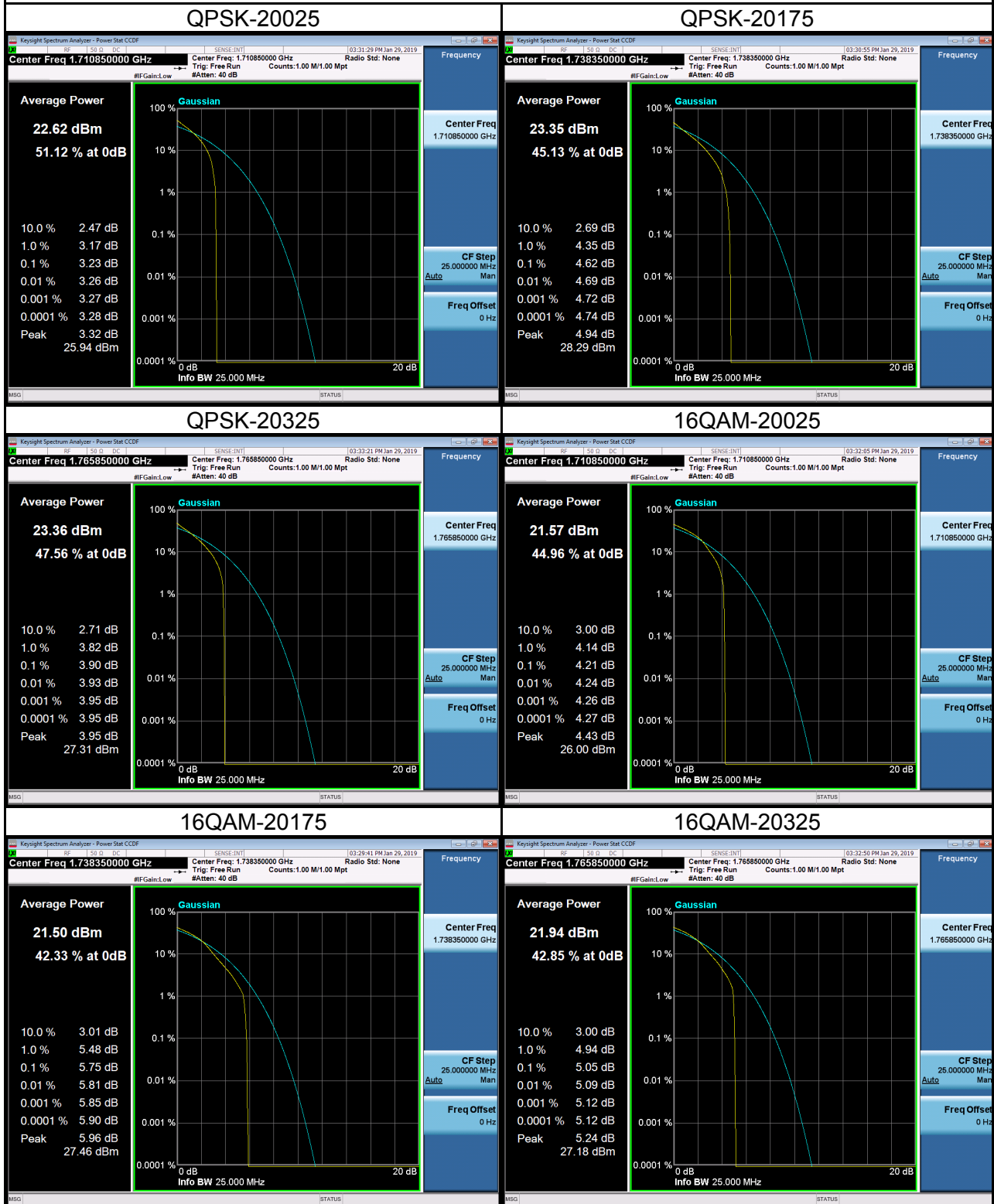
#### 16QAM-20375



### LTE Band 4 Spectrum Plot\_10M

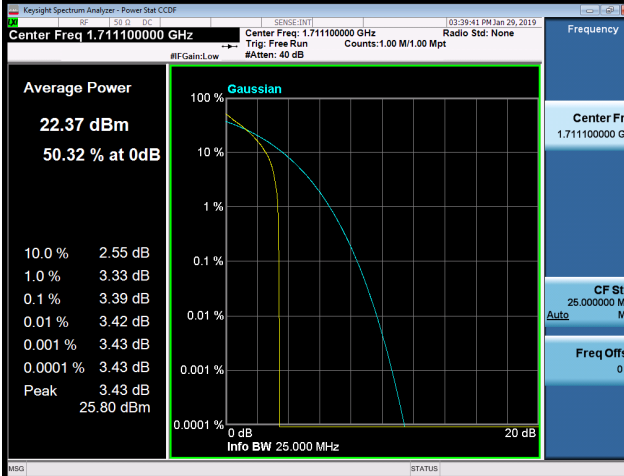


### LTE Band 4 Spectrum Plot\_15M

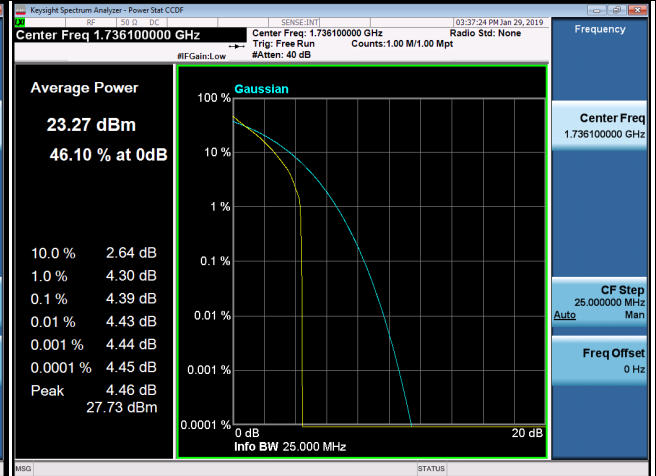


### LTE Band 4 Spectrum Plot\_20M

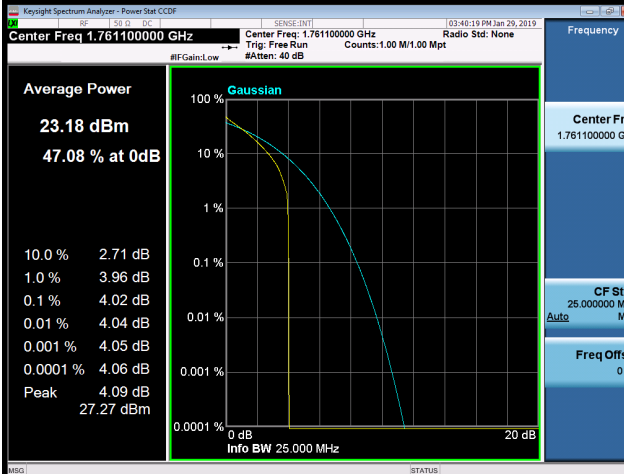
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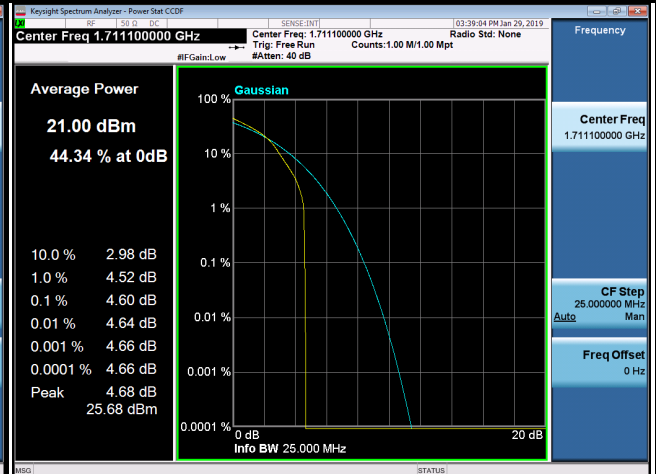
#### QPSK-20175



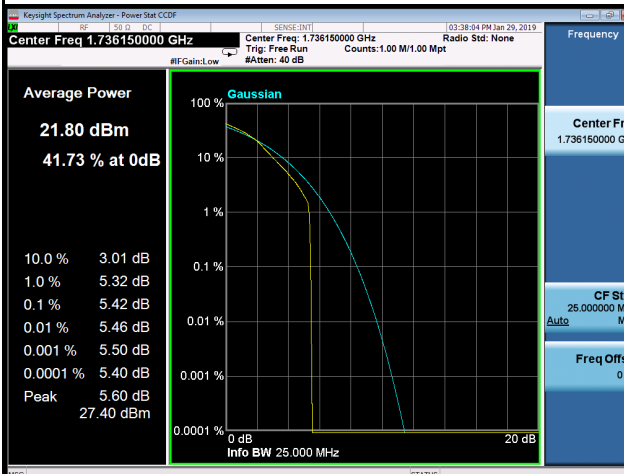
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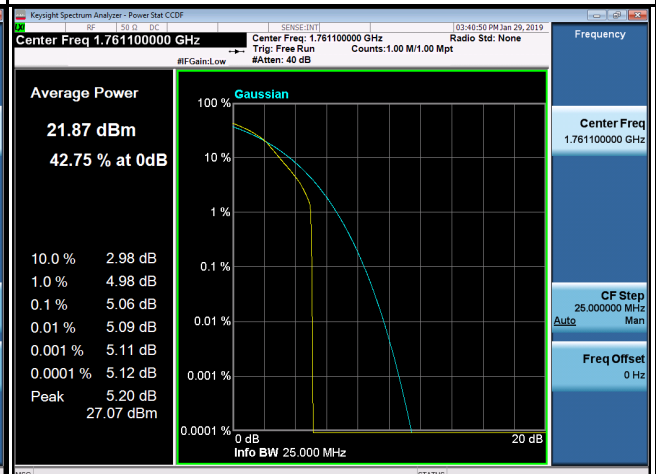
#### 16QAM-20050



#### 16QAM-20175



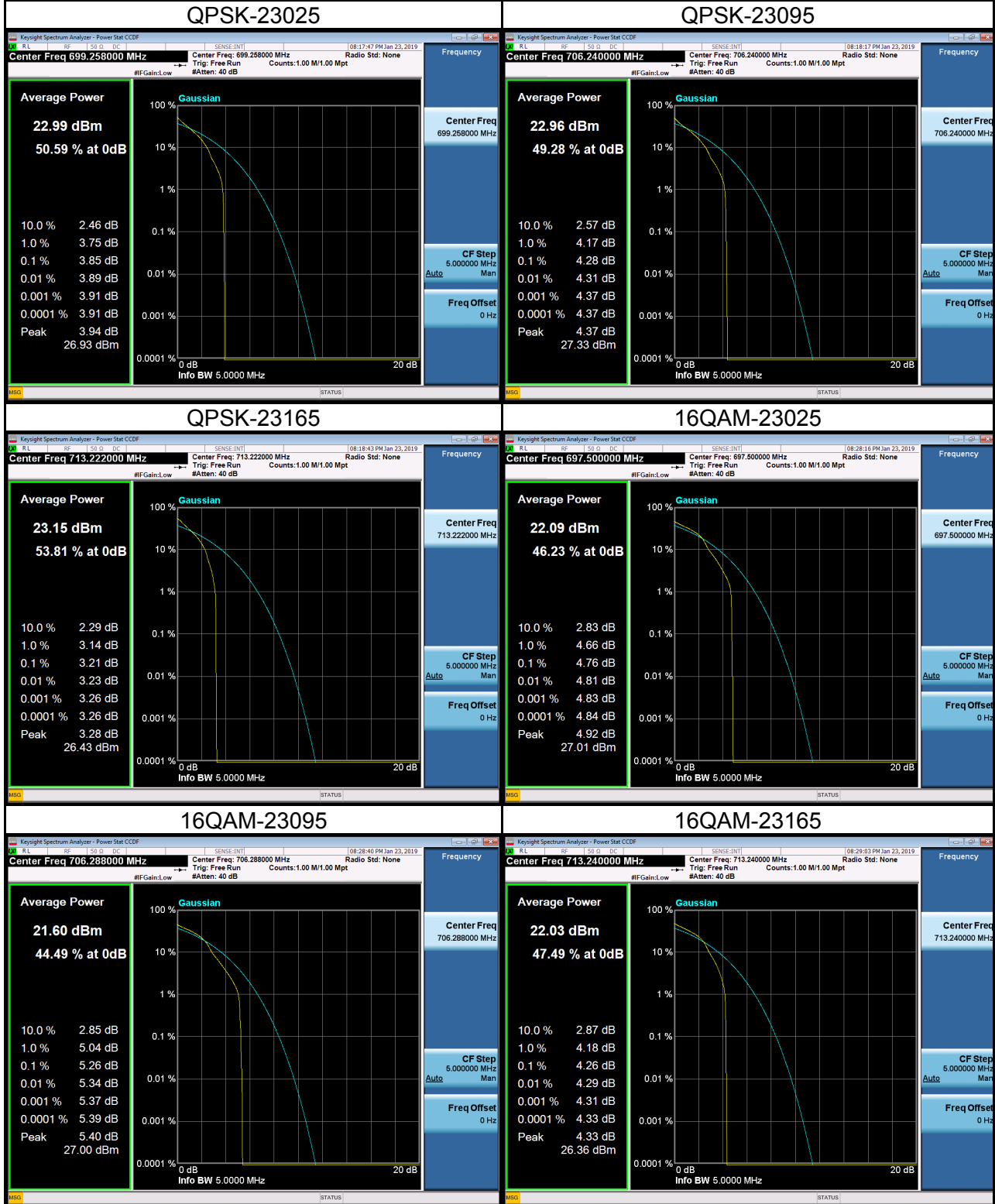
#### 16QAM-20300



### LTE Band 12 Spectrum Plot\_1.4M



### LTE Band 12 Spectrum Plot\_3M





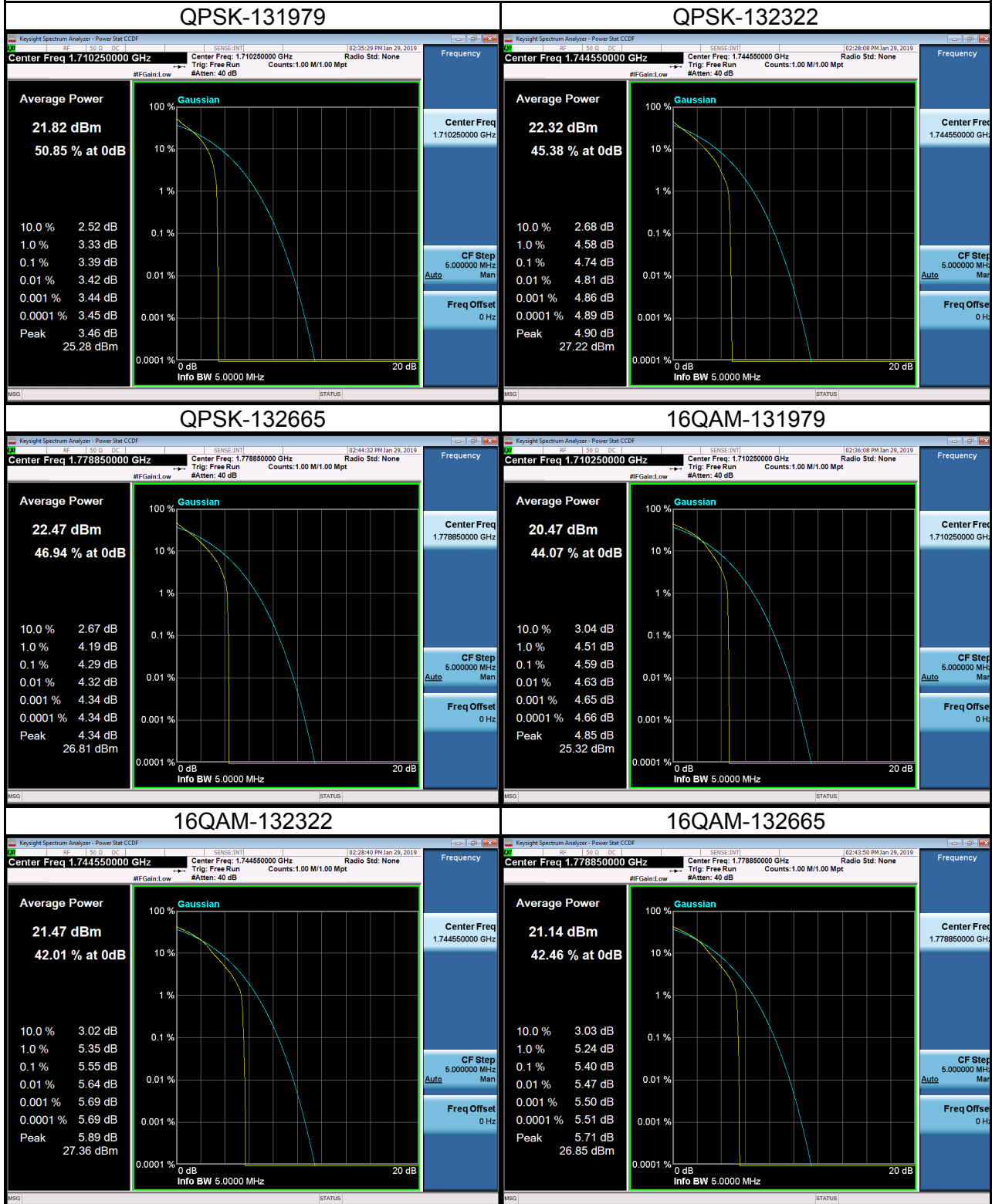
### LTE Band 12 Spectrum Plot\_5M



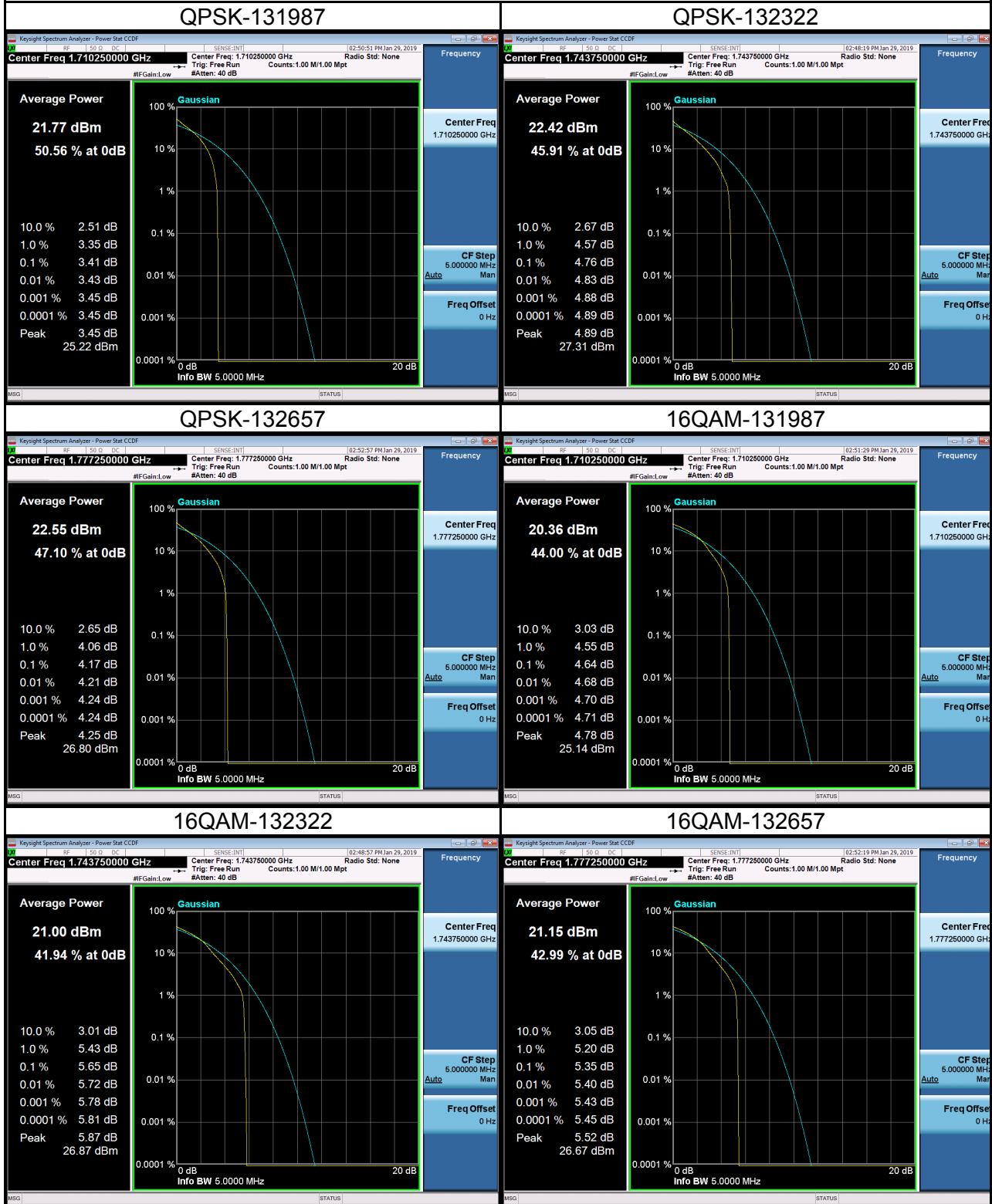
### LTE Band 12 Spectrum Plot\_10M



### LTE Band 66 Spectrum Plot\_1.4M



### LTE Band 66 Spectrum Plot\_3M



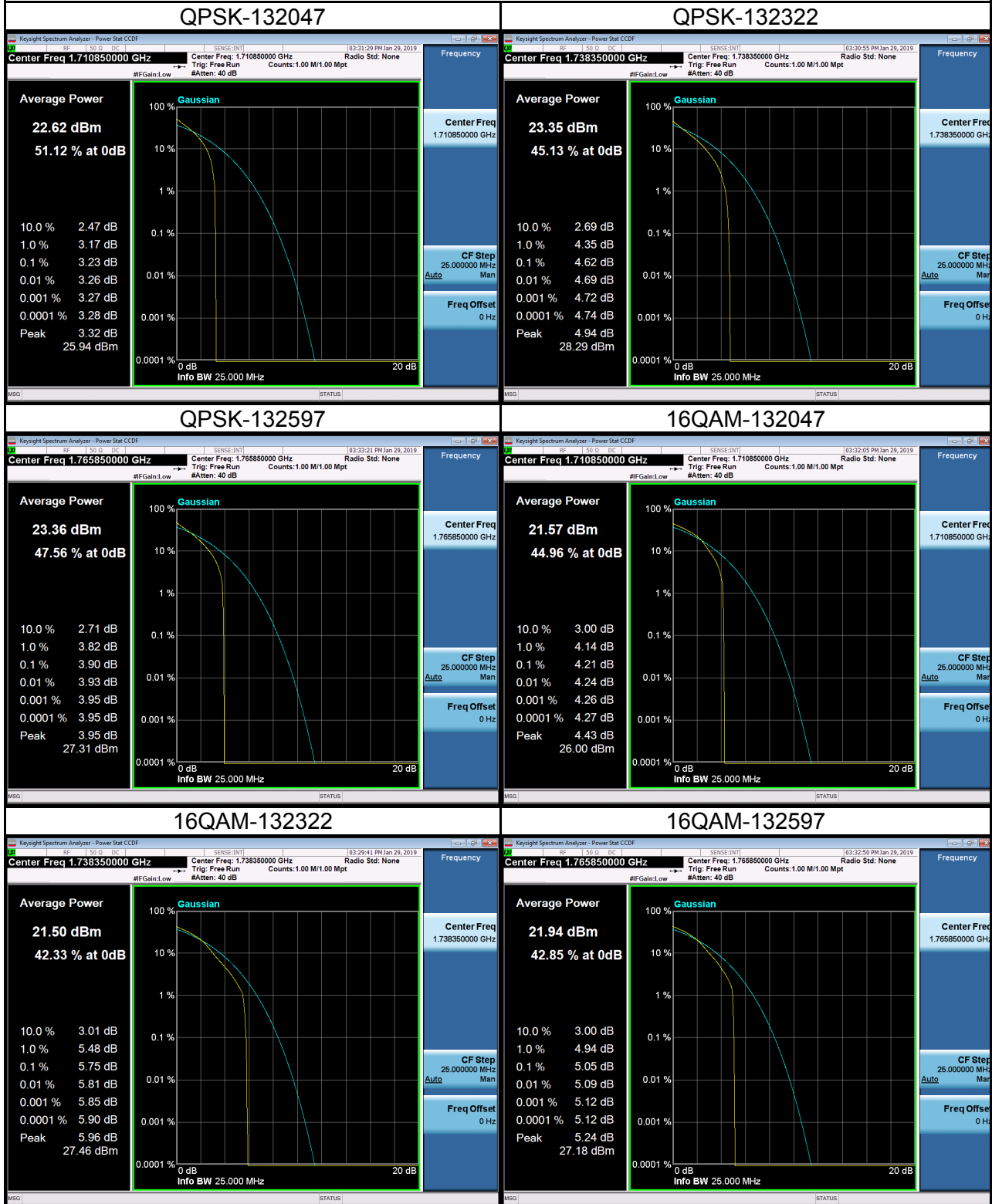
### LTE Band 66 Spectrum Plot\_5M



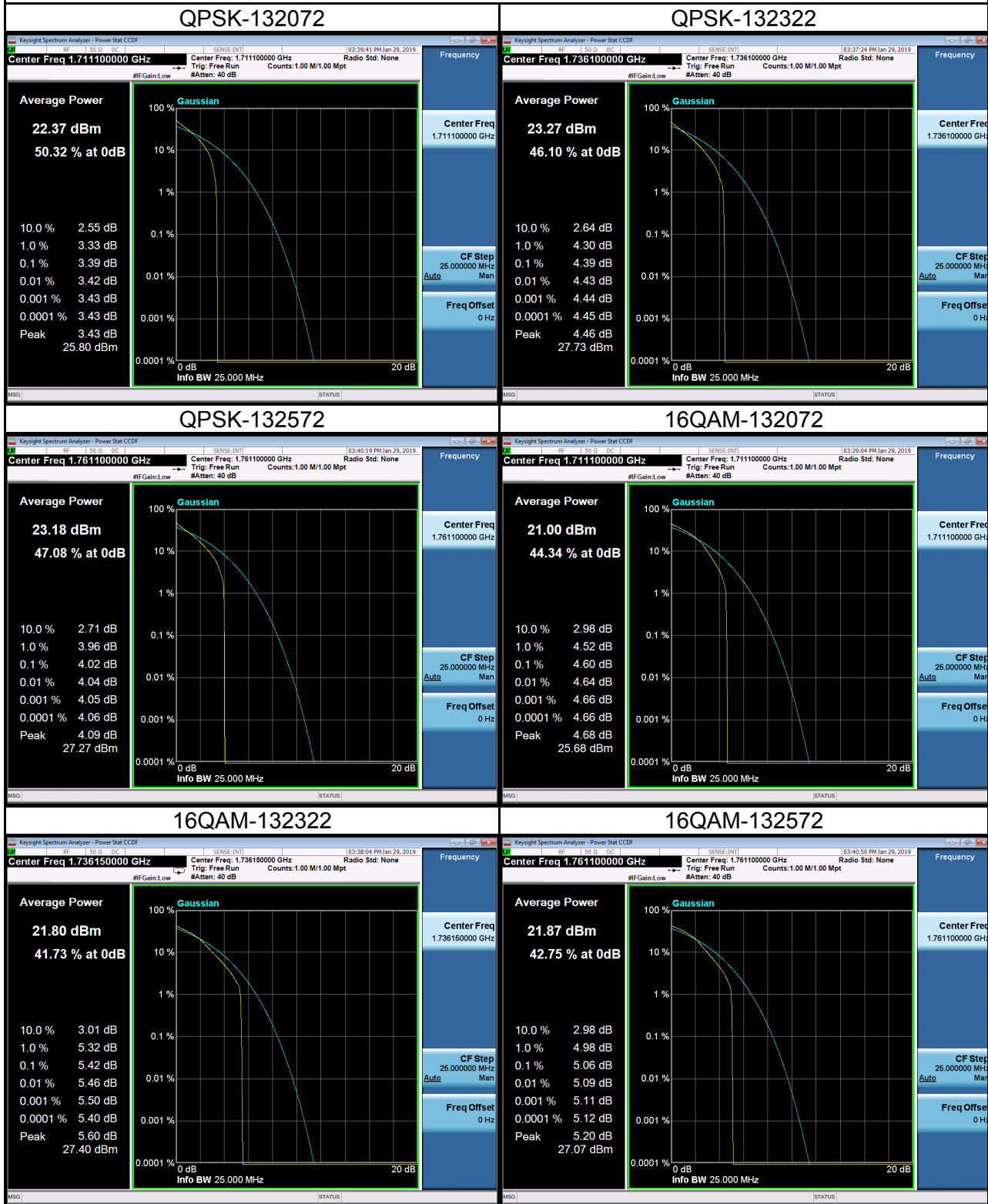
### LTE Band 66 Spectrum Plot\_10M



### LTE Band 66 Spectrum Plot\_15M



### LTE Band 66 Spectrum Plot\_20M





## APPENDIX I - FREQUENCY STABILITY

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)
-10	5.18	0.002968481	± 2.5
0	-4.84	-0.002773639	
10	5.05	0.002893983	
20	-2.57	-0.001472779	
30	-0.72	-0.000412607	
40	0.24	0.000137536	
50	1.85	0.001060172	
55	-2.27	-0.00130086	
Max. Deviation (ppm)	5.18	0.002968481	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	5.52	0.003163324	± 2.5
12	-1.56	-0.000893983	
10.8	4.05	0.002320917	
Max. Deviation (ppm)	5.52	0.003163324	

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)
-10	3.82	0.002189112	± 2.5
0	-6.03	-0.003455587	
10	-4.36	-0.002498567	
20	-3.96	-0.002269341	
30	4.36	0.002498567	
40	3.52	0.002017192	
50	-2.78	-0.001593123	
55	-5.28	-0.003025788	
Max. Deviation (ppm)	-6.03	-0.003455587	

### Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	3.27	0.001873926	± 2.5
12	-7.01	-0.004017192	
10.8	-4.84	-0.002773639	
Max. Deviation (ppm)	-7.01	-0.004017192	

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)
-10	2.80	0.001604585	± 2.5
0	4.01	0.002297994	
10	-6.55	-0.003753582	
20	-4.28	-0.002452722	
30	1.77	0.001014327	
40	-9.31	-0.005335244	
50	-2.75	-0.001575931	
55	4.74	0.002716332	
Max. Deviation (ppm)	-9.31	-0.005335244	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-1.47	-0.000842407	± 2.5
12	-4.96	-0.002842407	
10.8	2.59	0.001484241	
Max. Deviation (ppm)	-4.96	-0.002842407	

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)
-10	4.39	0.002515759	± 2.5
0	-1.69	-0.000968481	
10	-2.67	-0.001530086	
20	-1.73	-0.000991404	
30	2.49	0.001426934	
40	4.05	0.002320917	
50	4.64	0.002659026	
55	4.96	0.002842407	
Max. Deviation (ppm)	4.96	0.002842407	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	4.77	0.002733524	± 2.5
12	4.40	0.00252149	
10.8	3.32	0.001902579	
Max. Deviation (ppm)	4.77	0.002733524	

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)
-10	2.07	0.001186246	± 2.5
0	5.70	0.003266476	
10	3.78	0.002166189	
20	-2.10	-0.001203438	
30	-4.28	-0.002452722	
40	6.01	0.003444126	
50	4.48	0.002567335	
55	1.50	0.000859599	
Max. Deviation (ppm)	6.01	0.003444126	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	6.12	0.003507163	± 2.5
12	-1.70	-0.000974212	
10.8	1.55	0.000888252	
Max. Deviation (ppm)	6.12	0.003507163	

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)
-10	4.06	0.002326648	± 2.5
0	3.40	0.001948424	
10	-2.82	-0.001616046	
20	-1.66	-0.000951289	
30	7.17	0.004108883	
40	2.87	0.001644699	
50	5.84	0.003346705	
55	-2.96	-0.001696275	
Max. Deviation (ppm)	7.17	0.004108883	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-2.18	-0.001249284	± 2.5
12	3.22	0.001845272	
10.8	5.94	0.003404011	
Max. Deviation (ppm)	5.94	0.003404011	

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)
-10	-2.15	0.003038869	± 2.5
0	6.42	0.009074205	
10	3.78	0.005342756	
20	8.41	0.011886926	
30	-5.14	0.007265018	
40	5.40	0.007632509	
50	-0.60	0.000848057	
55	-2.62	0.00370318	
Max. Deviation (ppm)	8.41	0.011886926	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	2.42	0.003420495	± 2.5
12	-7.65	0.010812721	
10.8	1.62	0.002289753	
Max. Deviation (ppm)	-7.65	0.010812721	



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)
-10	-2.48	0.0035053	± 2.5
0	-1.20	0.001696113	
10	4.52	0.006388693	
20	4.57	0.006459364	
30	-0.95	0.001342756	
40	5.43	0.007674912	
50	5.84	0.008254417	
55	4.10	0.005795053	
Max. Deviation (ppm)	5.84	0.008254417	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-6.94	0.009809187	± 2.5
12	2.64	0.003731449	
10.8	2.20	0.003109541	
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)
-10	8.10	0.011448763	± 2.5
0	-0.93	-0.001314488	
10	5.48	0.007745583	
20	-4.58	-0.006473498	
30	5.40	0.007632509	
40	6.93	0.009795053	
50	-1.90	-0.002685512	
55	0.84	0.001187279	
Max. Deviation (ppm)	8.1	0.011448763	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-3.46	-0.004890459	± 2.5
12	-0.65	-0.000918728	
10.8	1.10	0.00155477	
Max. Deviation (ppm)	-3.46	-0.004890459	

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)
-10	4.81	0.006798587	± 2.5
0	5.61	0.007929329	
10	3.40	0.004805654	
20	-0.98	-0.001385159	
30	5.62	0.007943463	
40	3.74	0.005286219	
50	4.16	0.005879859	
55	-0.40	-0.000565371	
Max. Deviation (ppm)	5.62	0.007943463	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-4.30	-0.006077739	± 2.5
12	2.65	0.003745583	
10.8	-4.83	-0.006826855	
Max. Deviation (ppm)	-4.83	-0.006826855	

Test Mode:	LTE Band 66_CH132322_1.4M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	5.18	0.002968481	± 2.5
0	-4.84	-0.002773639	
10	5.05	0.002893983	
20	-2.57	-0.001472779	
30	-0.72	-0.000412607	
40	0.24	0.000137536	
50	1.85	0.001060172	
55	-2.27	-0.00130086	
Max. Deviation (ppm)	5.18	0.002968481	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	5.52	0.003163324	± 2.5
12	-1.56	-0.000893983	
10.8	4.05	0.002320917	
Max. Deviation (ppm)	5.52	0.003163324	

Test Mode:	LTE Band 66_CH132322_3M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	3.82	0.002189112	± 2.5
0	-6.03	-0.003455587	
10	-4.36	-0.002498567	
20	-3.96	-0.002269341	
30	4.36	0.002498567	
40	3.52	0.002017192	
50	-2.78	-0.001593123	
55	-5.28	-0.003025788	
Max. Deviation (ppm)	-6.03	-0.003455587	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	3.27	0.001873926	± 2.5
12	-7.01	-0.004017192	
10.8	-4.84	-0.002773639	
Max. Deviation (ppm)	-7.01	-0.004017192	

Test Mode:	LTE Band 66_CH132322_5M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	2.80	0.001604585	± 2.5
0	4.01	0.002297994	
10	-6.55	-0.003753582	
20	-4.28	-0.002452722	
30	1.77	0.001014327	
40	-9.31	-0.005335244	
50	-2.75	-0.001575931	
55	4.74	0.002716332	
Max. Deviation (ppm)	-9.31	-0.005335244	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-1.47	-0.000842407	± 2.5
12	-4.96	-0.002842407	
10.8	2.59	0.001484241	
Max. Deviation (ppm)	-4.96	-0.002842407	

Test Mode:	LTE Band 66_CH132322_10M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	4.39	0.002515759	± 2.5
0	-1.69	-0.000968481	
10	-2.67	-0.001530086	
20	-1.73	-0.000991404	
30	2.49	0.001426934	
40	4.05	0.002320917	
50	4.64	0.002659026	
55	4.96	0.002842407	
Max. Deviation (ppm)	4.96	0.002842407	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	4.77	0.002733524	± 2.5
12	4.40	0.00252149	
10.8	3.32	0.001902579	
Max. Deviation (ppm)	4.77	0.002733524	

Test Mode:	LTE Band 66_CH132322_15M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	2.07	0.001186246	± 2.5
0	5.70	0.003266476	
10	3.78	0.002166189	
20	-2.10	-0.001203438	
30	-4.28	-0.002452722	
40	6.01	0.003444126	
50	4.48	0.002567335	
55	1.50	0.000859599	
Max. Deviation (ppm)	6.01	0.003444126	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	6.12	0.003507163	± 2.5
12	-1.70	-0.000974212	
10.8	1.55	0.000888252	
Max. Deviation (ppm)	6.12	0.003507163	



Test Mode:	LTE Band 66_CH132322_20M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-10	4.06	0.002326648	± 2.5
0	3.40	0.001948424	
10	-2.82	-0.001616046	
20	-1.66	-0.000951289	
30	7.17	0.004108883	
40	2.87	0.001644699	
50	5.84	0.003346705	
55	-2.96	-0.001696275	
Max. Deviation (ppm)	7.17	0.004108883	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
13.2	-2.18	-0.001249284	± 2.5
12	3.22	0.001845272	
10.8	5.94	0.003404011	
Max. Deviation (ppm)	5.94	0.003404011	

**End of Test Report**