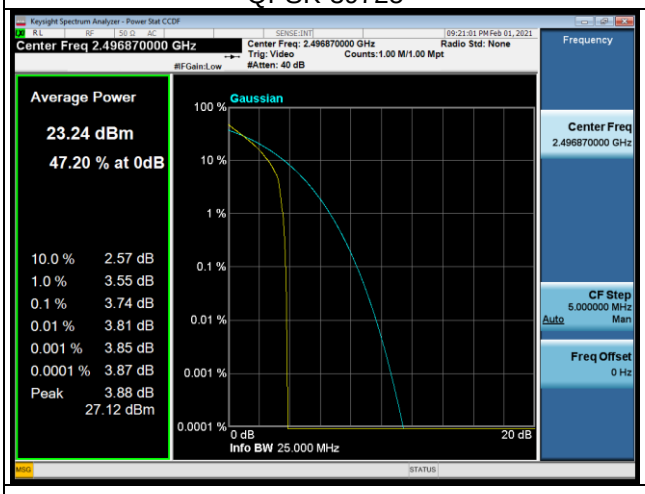
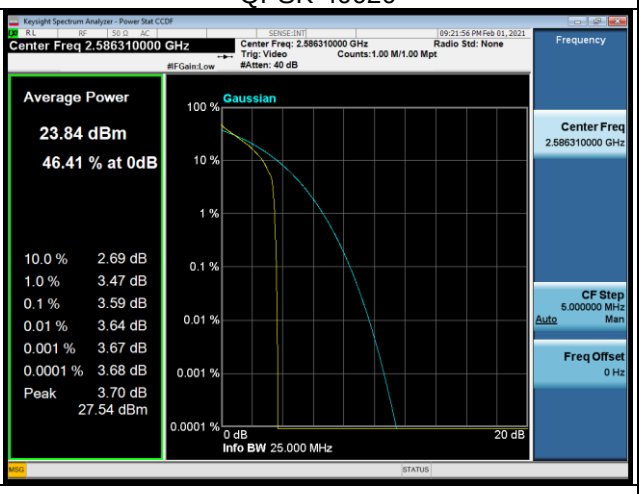
LTE Band 41_15M Spectrum Plot

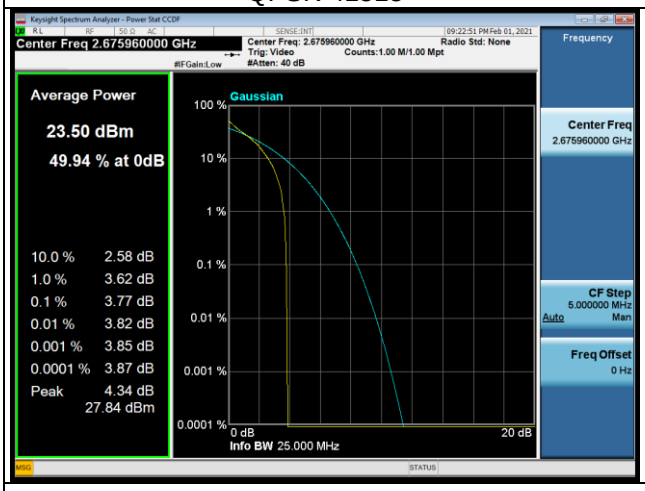
QPSK-39725



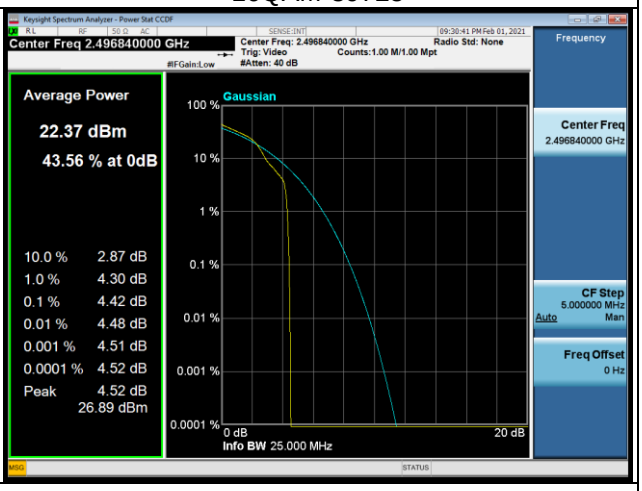
QPSK-40620



QPSK-41515



16QAM-39725



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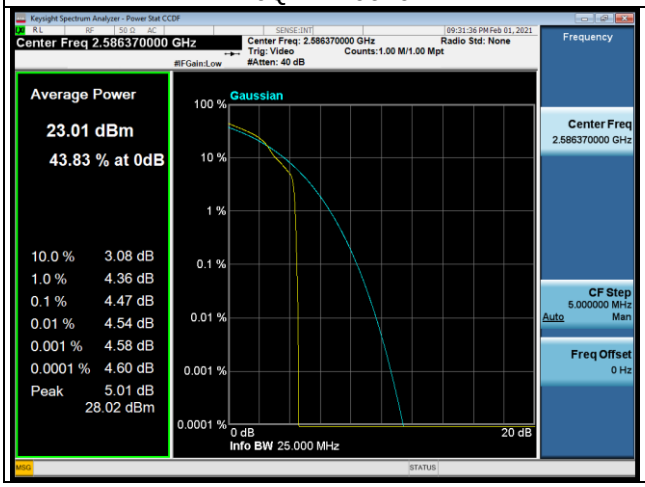

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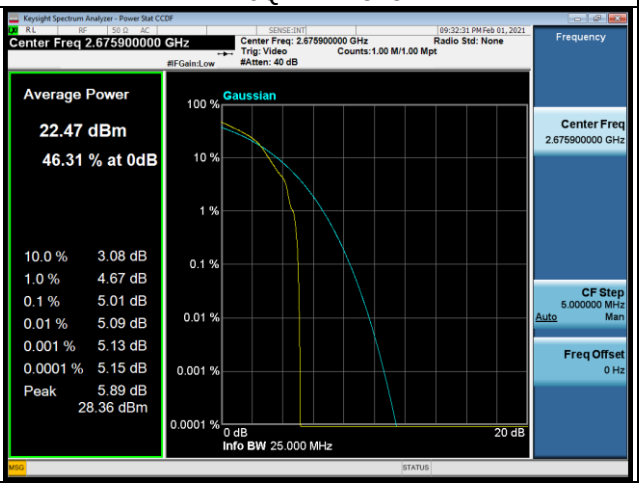
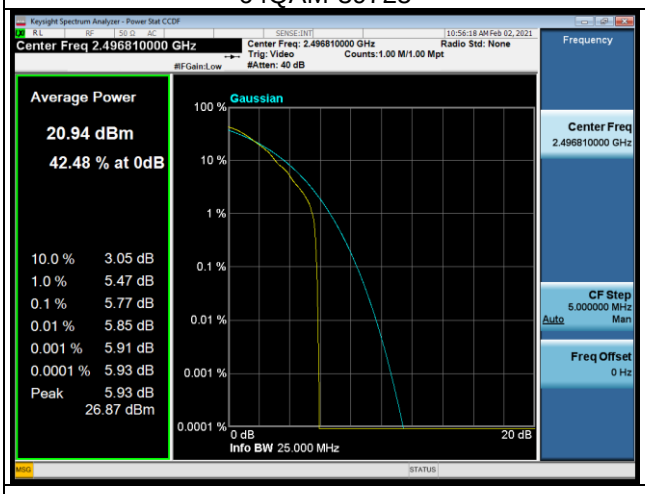
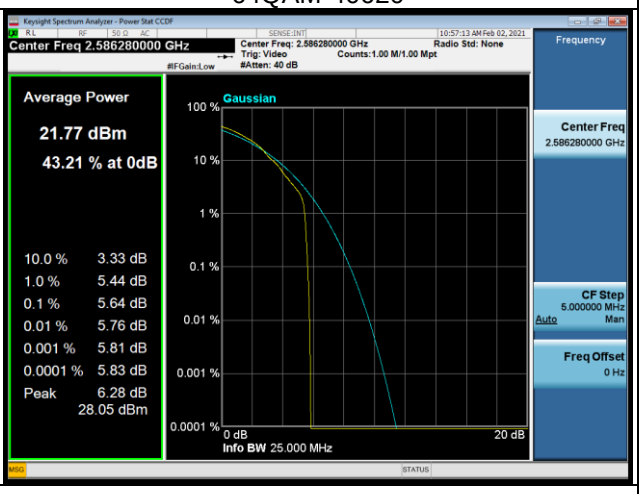


LTE Band 41_15M Spectrum Plot	
64QAM-39725	64QAM-40620
	
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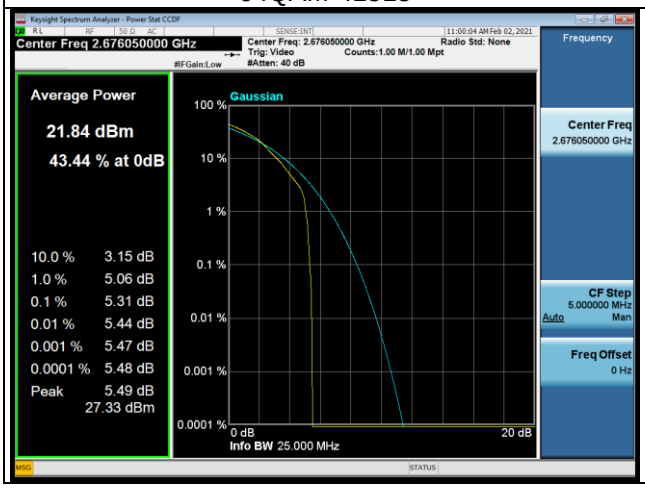
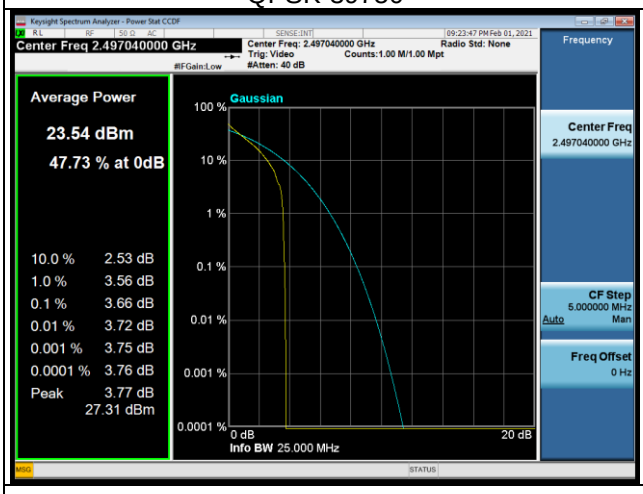
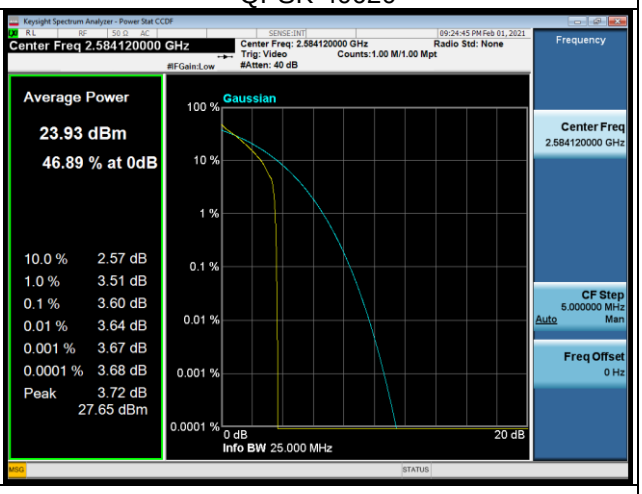
	-

LTE Band 41_20M Spectrum Plot

QPSK-39750



QPSK-40620



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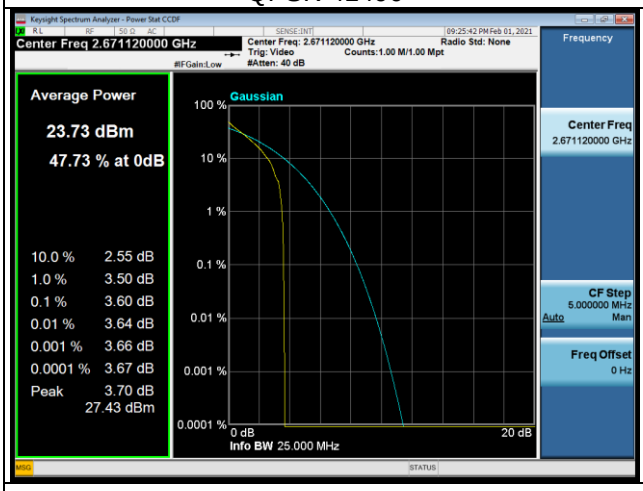

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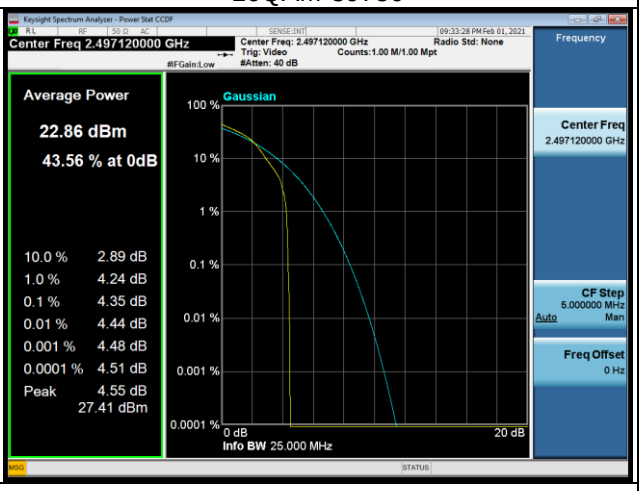

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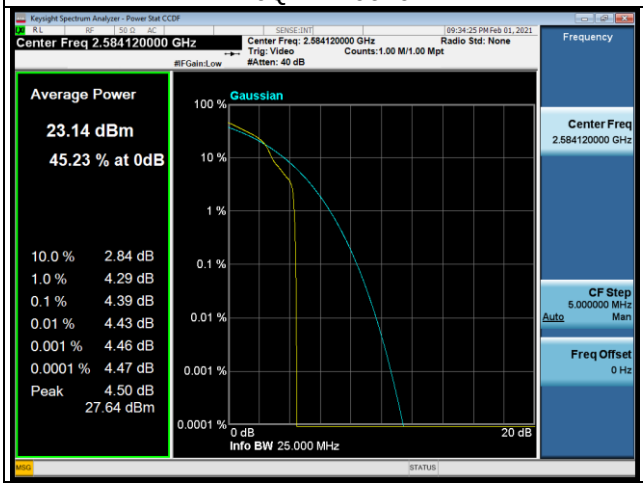

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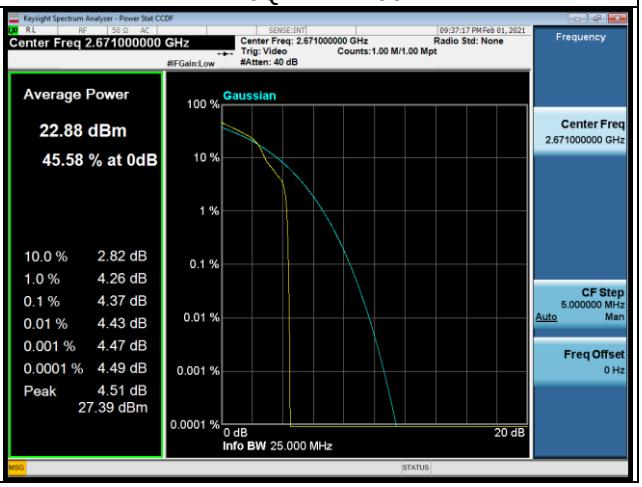
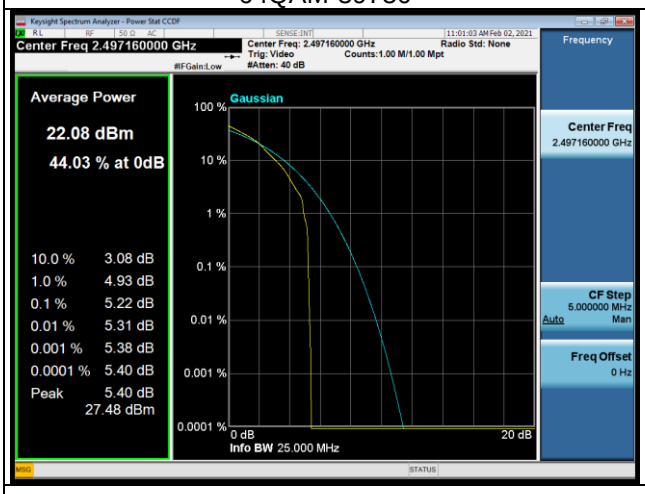
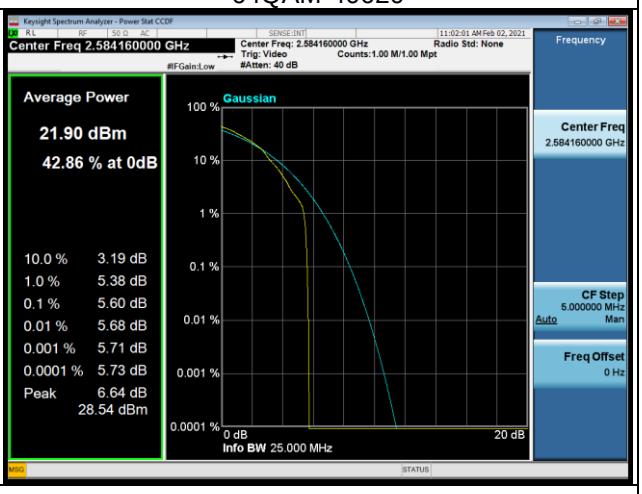
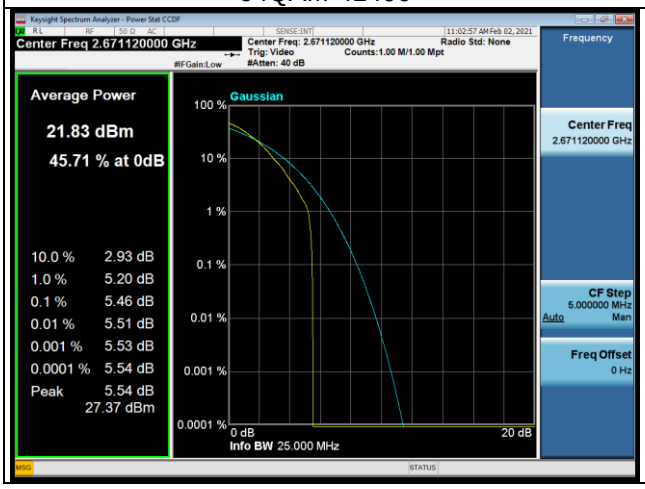
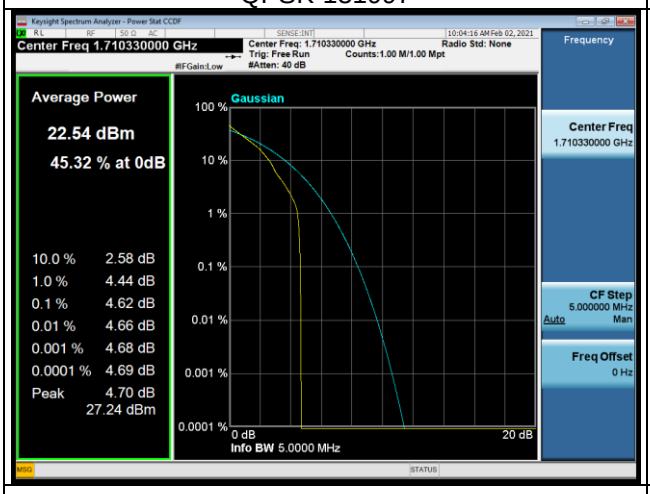


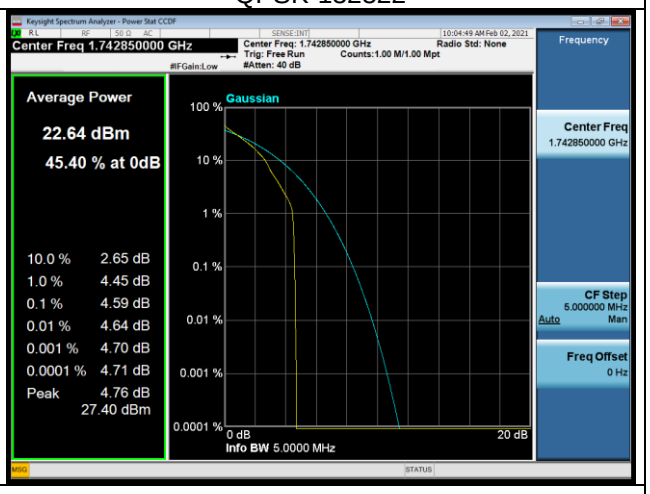
LTE Band 41_20M Spectrum Plot	
64QAM-39750	64QAM-40620
	
64QAM-41490	-
	-

LTE Band 66_5M Spectrum Plot

QPSK-131997



QPSK-132322



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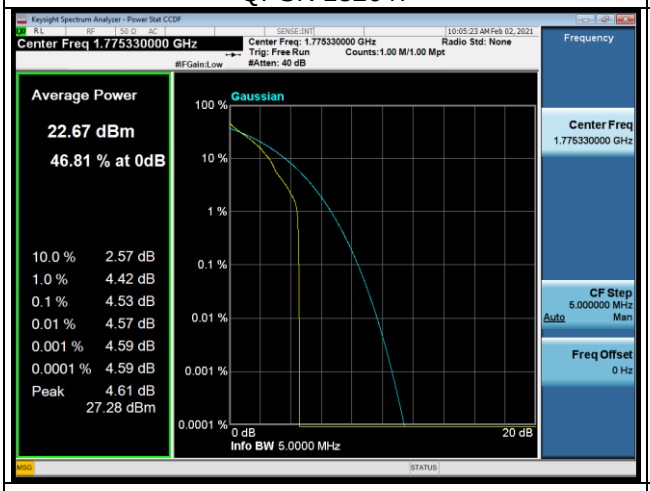

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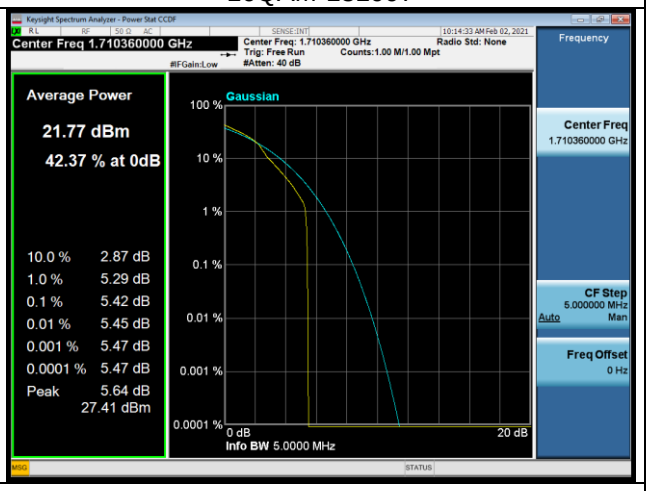

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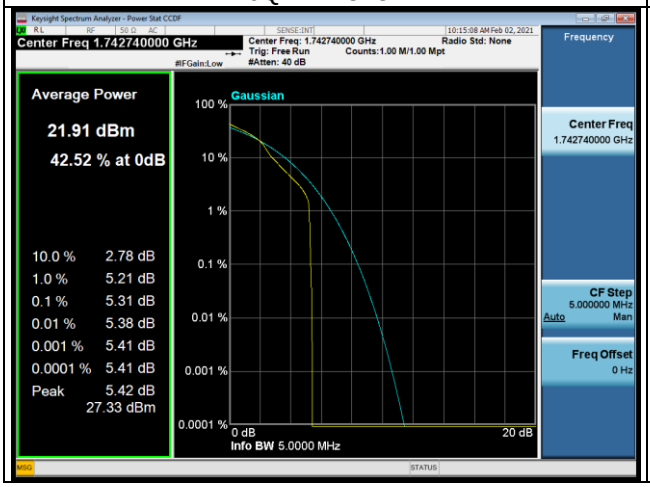

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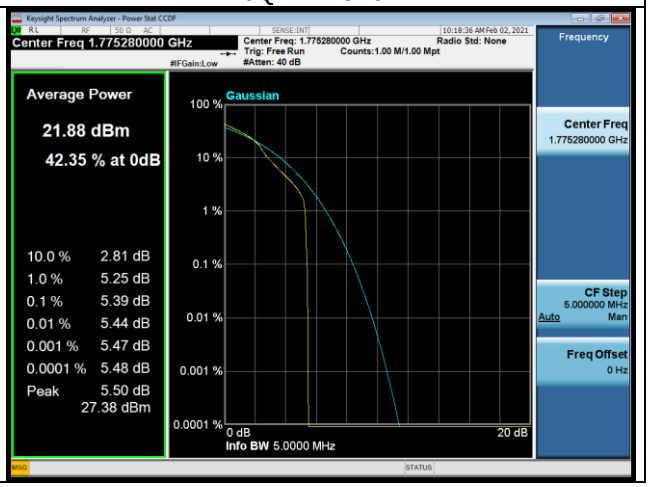
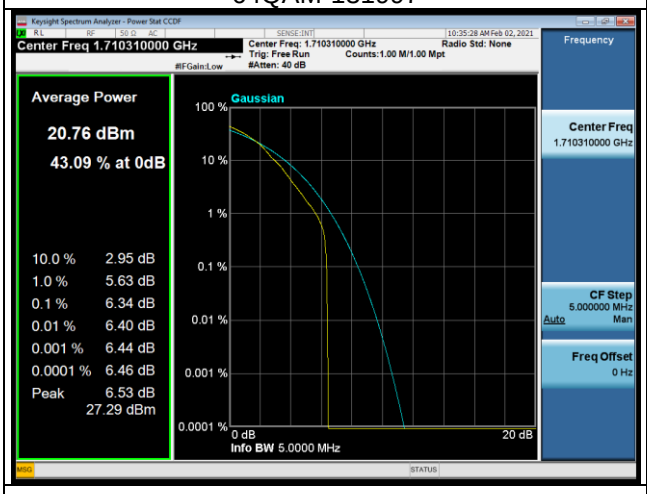
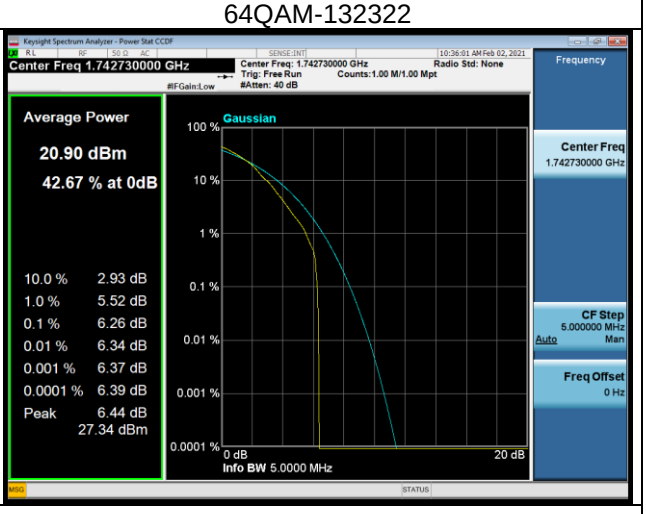


LTE Band 66_5M Spectrum Plot	
64QAM-131997	64QAM-132322
	
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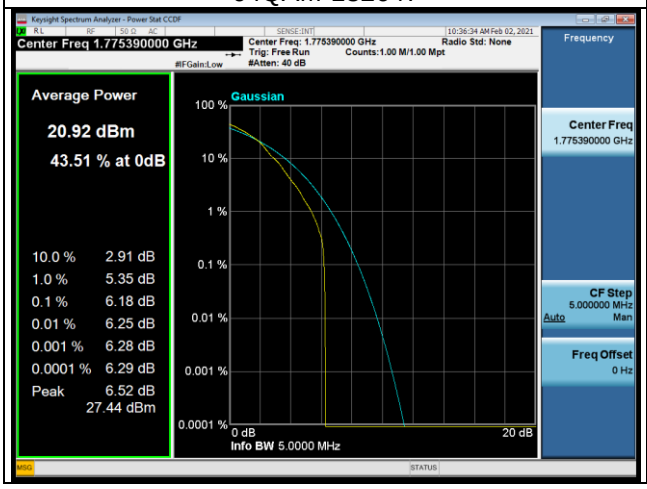
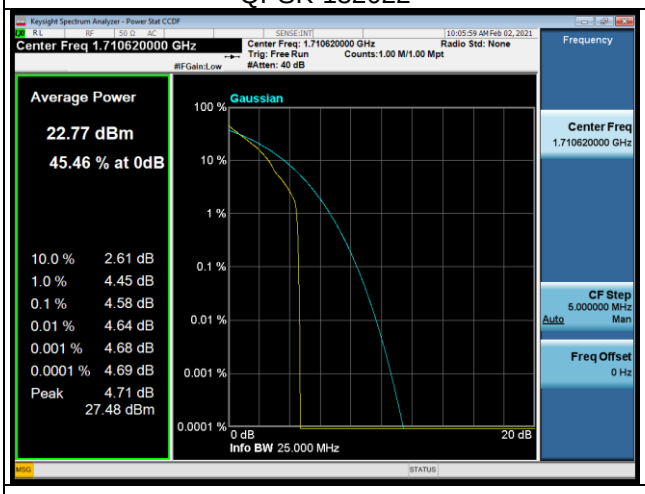
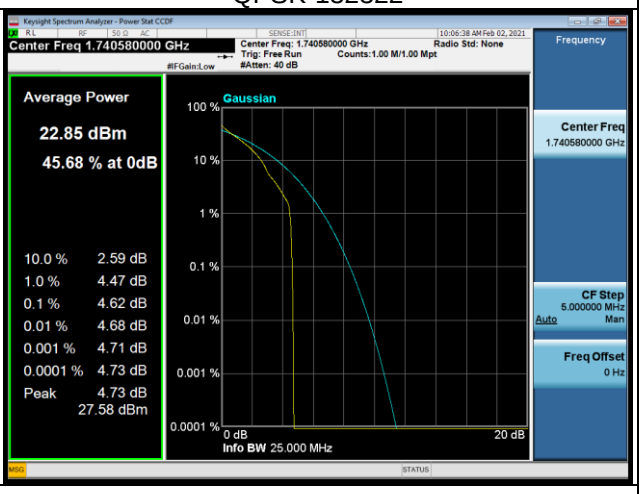
	-

LTE Band 66_10M Spectrum Plot

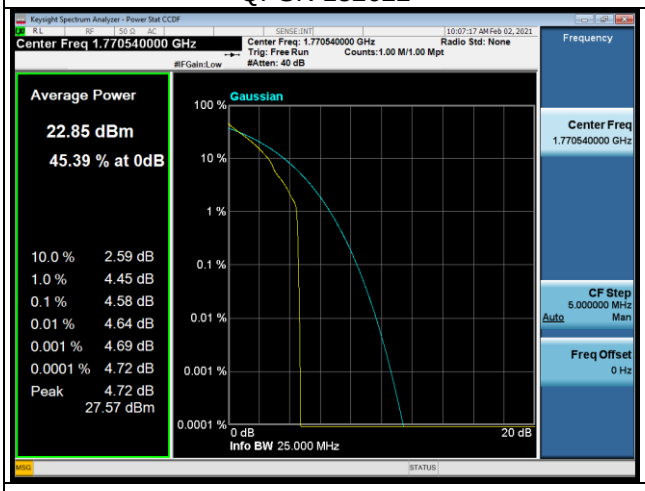
QPSK-132022



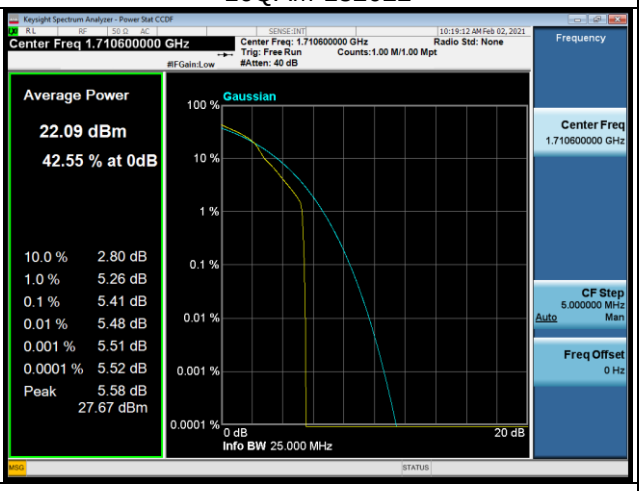
QPSK-132322



QPSK-132622



16QAM-132022



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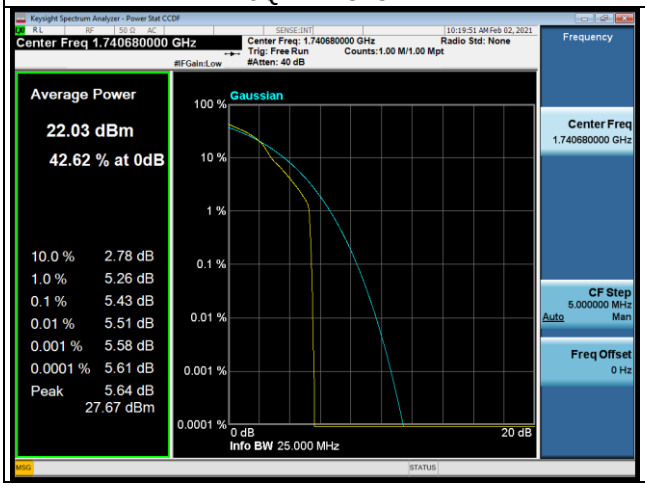

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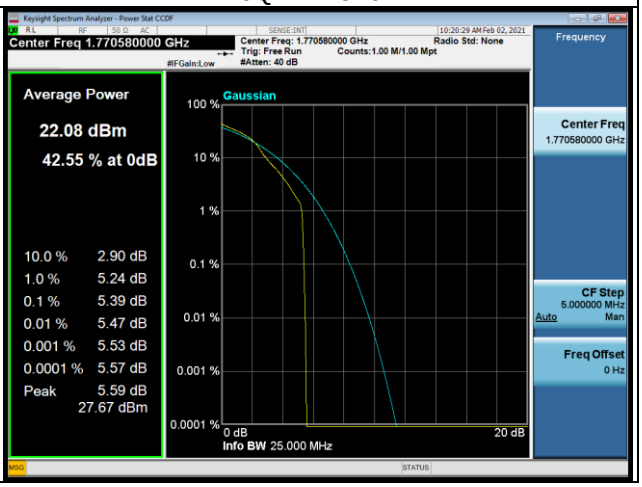
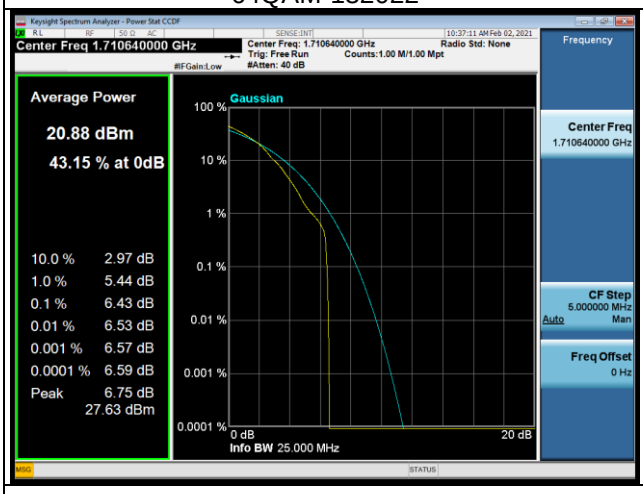
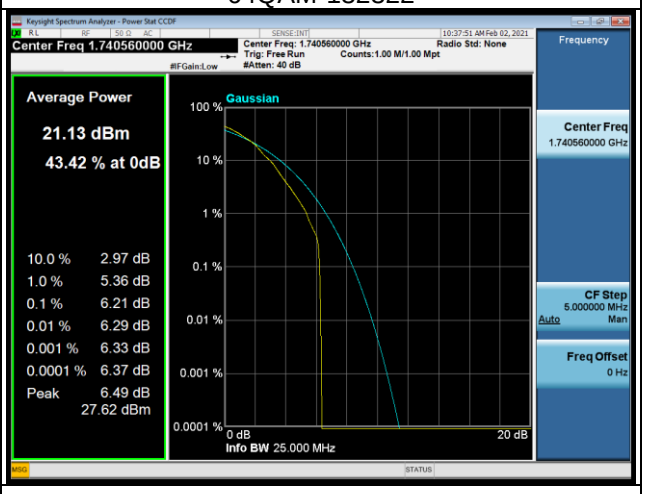


LTE Band 66_10M Spectrum Plot	
64QAM-132022	64QAM-132322
	
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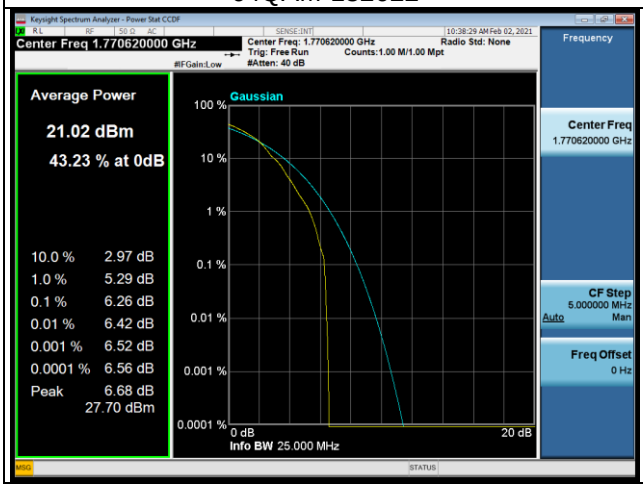
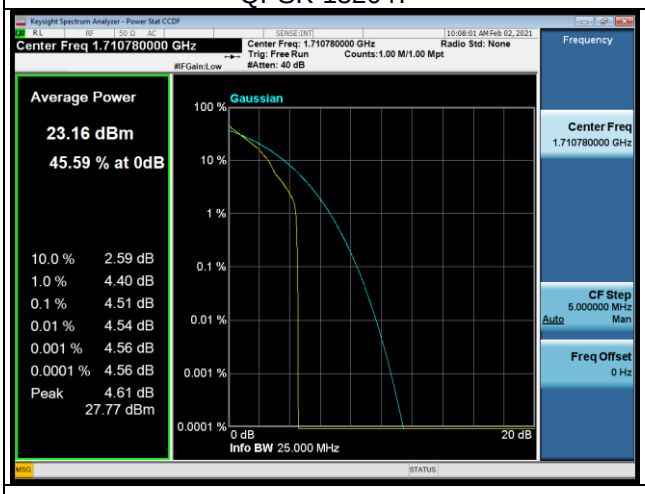
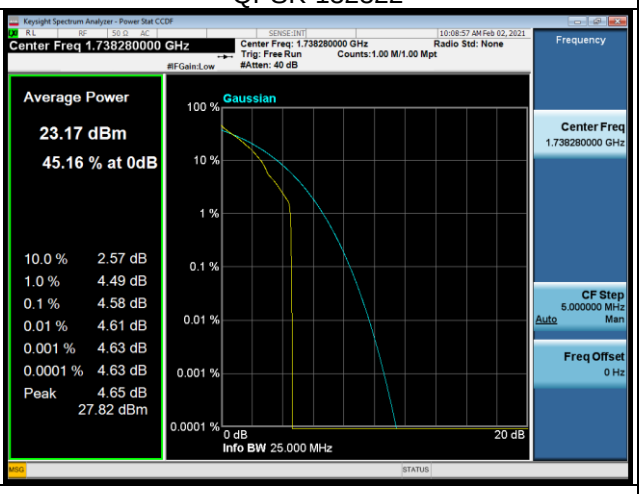
	-

LTE Band 66_15M Spectrum Plot

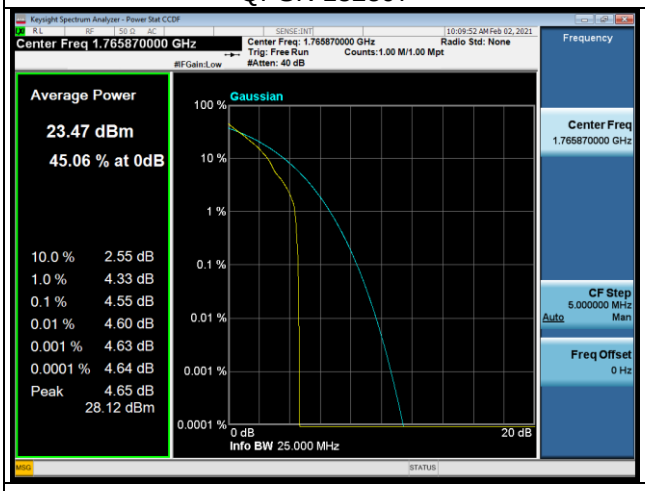
QPSK-132047



QPSK-132322



QPSK-132597



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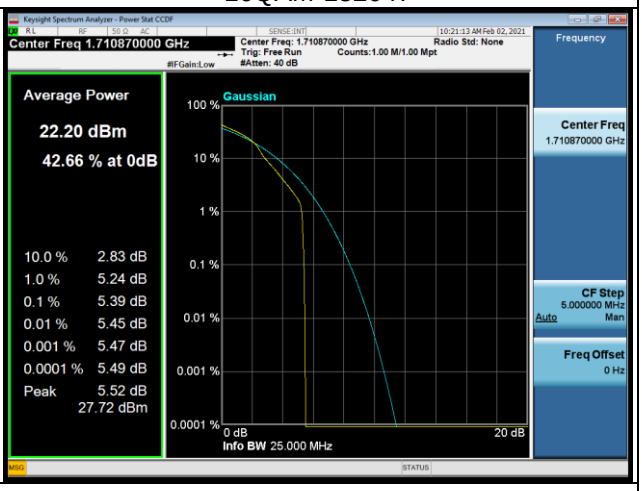

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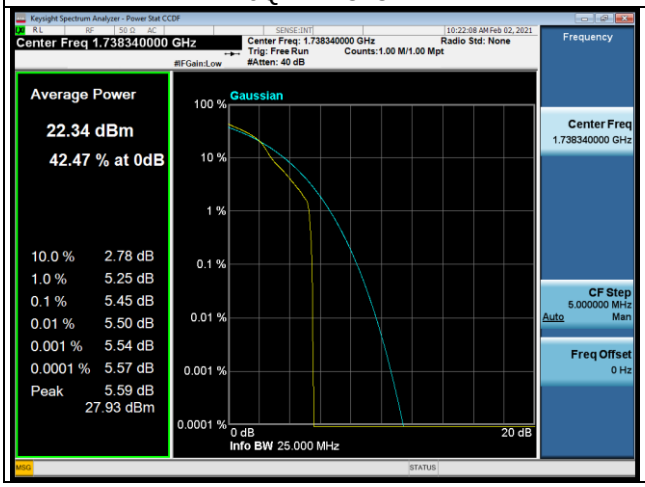

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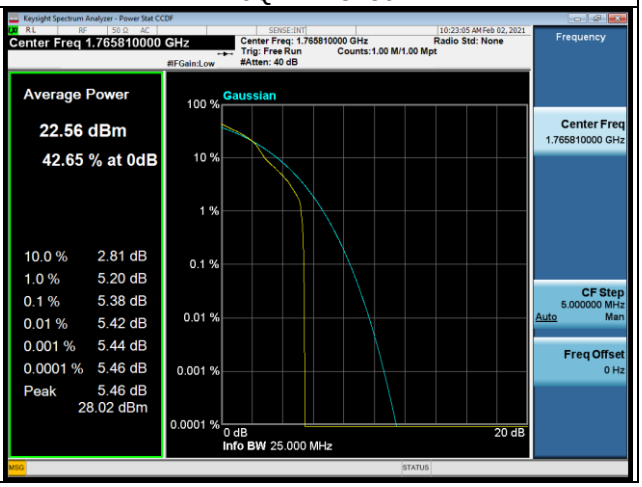
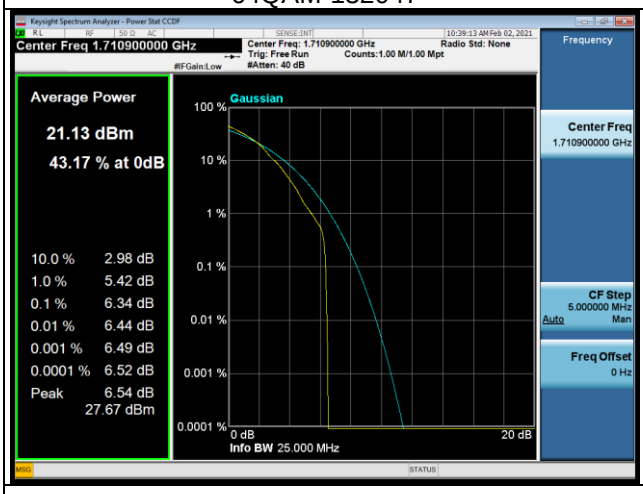
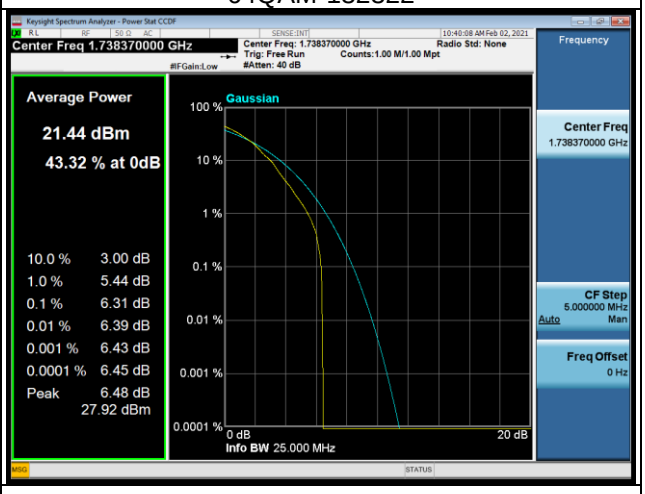


LTE Band 66_15M Spectrum Plot	
64QAM-132047	64QAM-132322
	
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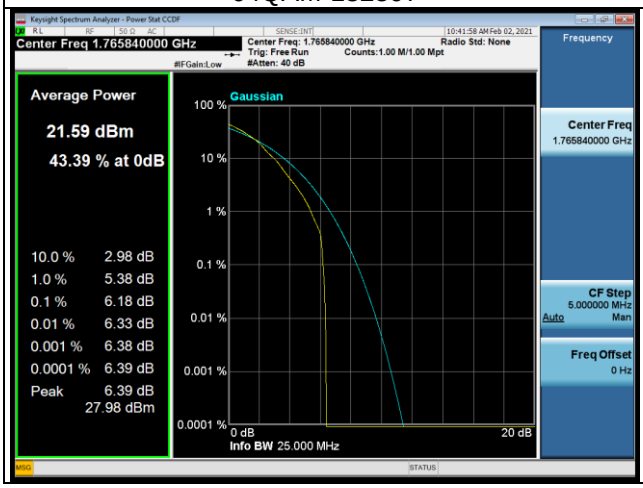
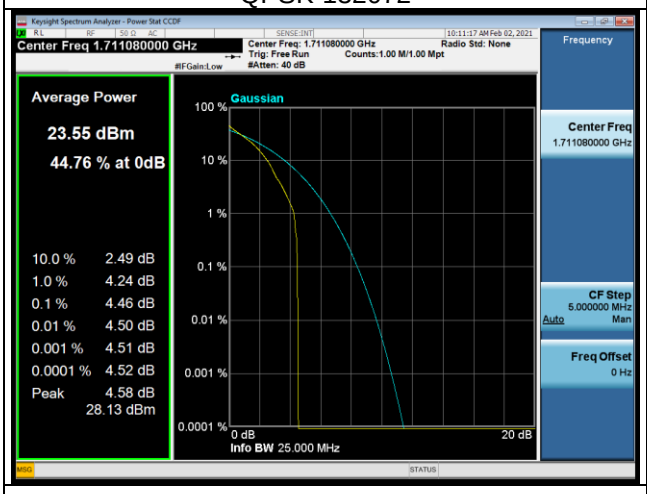
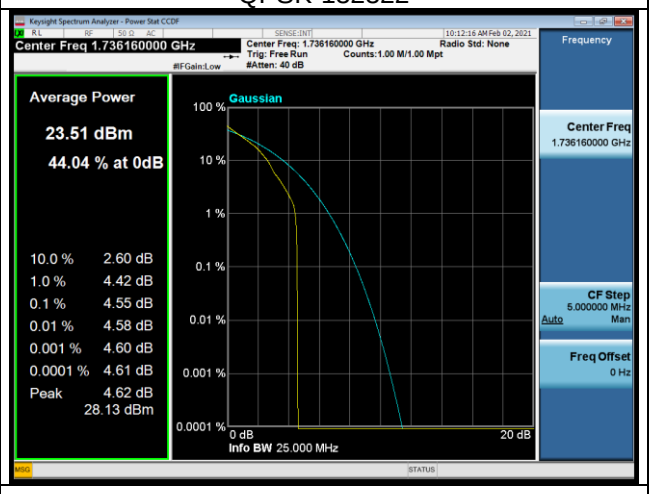
	-

LTE Band 66_20M Spectrum Plot	
QPSK-132072	QPSK-132322
	
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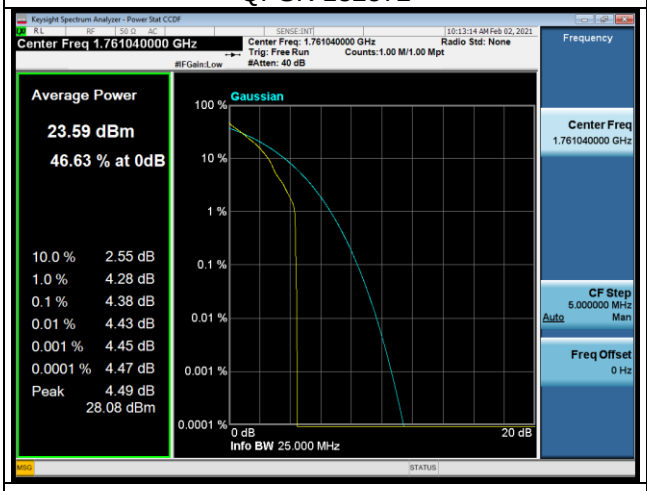
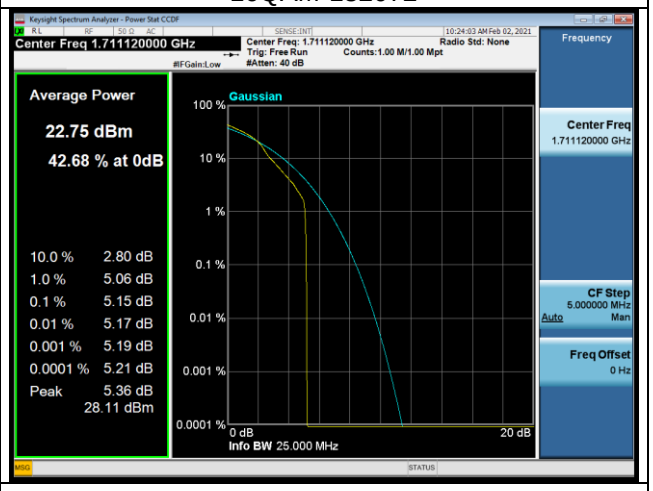
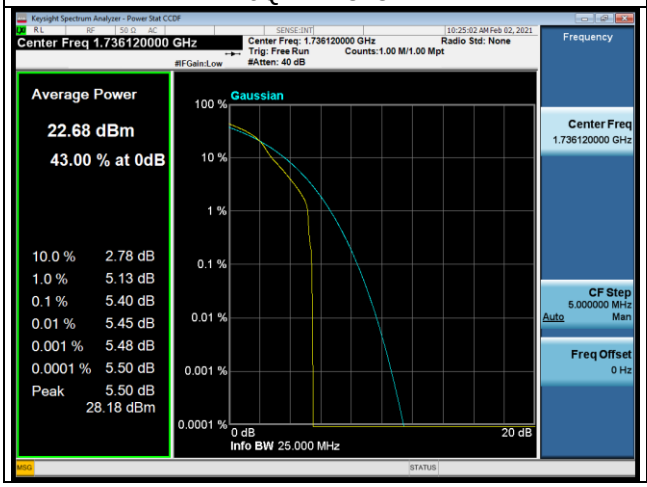
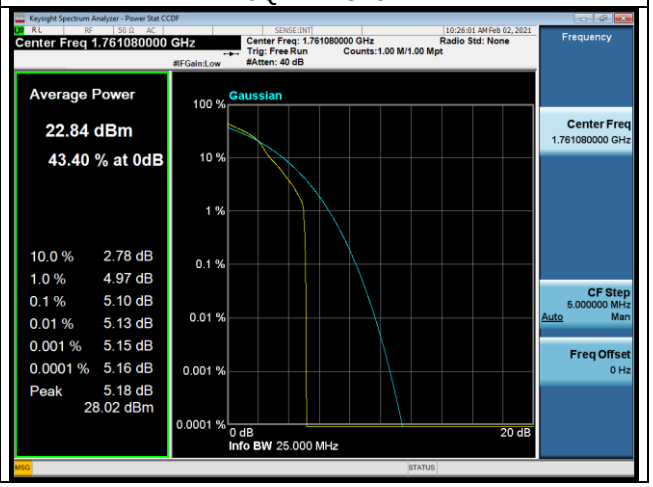
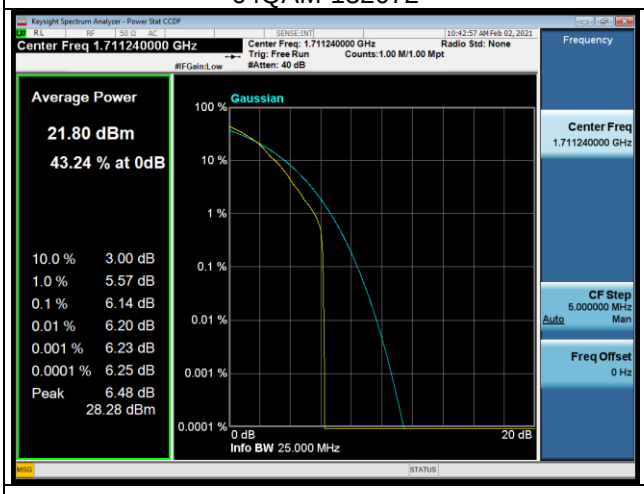
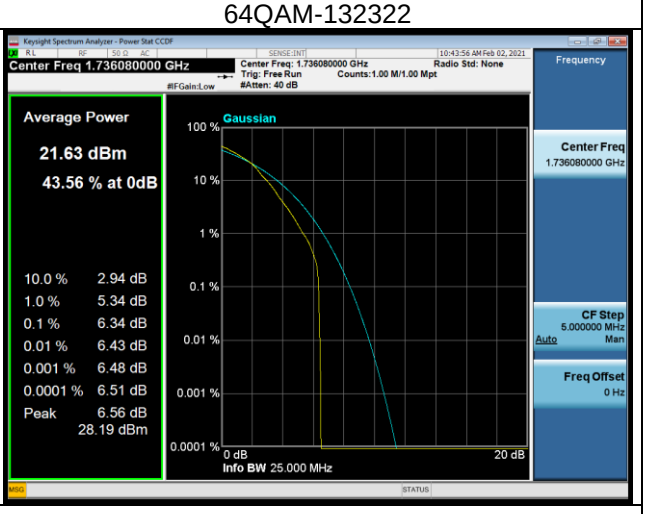
	
16QAM-132322	16QAM-132572
	

LTE Band 66_20M Spectrum Plot	
64QAM-132072	64QAM-132322
	
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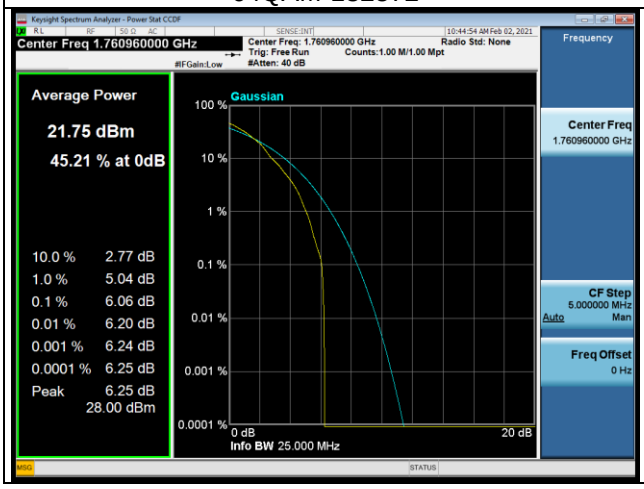	-

APPENDIX I - FREQUENCY STABILITY

Test Mode	WCDMA Band IV _CH1413

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	6.13	0.003538035	±2.5
10	4.66	0.002687291	
20	3.65	0.002106661	
30	3.26	0.001881565	
40	3.15	0.001818077	
45	4.52	0.002608796	
Max. Deviation (ppm)	6.13	0.003538035	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	2.25	0.001298626	±2.5
120	3.24	0.001870022	
102	4.26	0.002458733	
Max. Deviation (ppm)	4.26	0.002458733	

Test Mode	LTE Band 4_CH20175_1.4M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-4.06	-0.002343434	±2.5
10	-1.00	-0.000577201	
20	-5.57	-0.003215007	
30	-2.35	-0.001356421	
40	-1.39	-0.000802309	
45	4.00	0.002308802	
Max. Deviation (ppm)	-5.57	-0.003215007	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	2.53	0.001460317	±2.5
120	-5.40	-0.003116883	
102	-4.63	-0.002672439	
Max. Deviation (ppm)	-5.4	-0.003116883	

Test Mode	LTE Band 4_CH20175_3M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-0.30	-0.00017316	±2.5
10	-3.47	-0.002002886	
20	-4.94	-0.002851371	
30	1.58	0.000911977	
40	-3.61	-0.002083694	
45	-3.89	-0.00224531	
Max. Deviation (ppm)	-4.94	-0.002851371	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-6.23	-0.00359596	±2.5
120	-1.41	-0.000813853	
102	-0.67	-0.000386724	
Max. Deviation (ppm)	-6.23	-0.00359596	

Test Mode	LTE Band 4_CH20175_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	5.92	0.003417027	±2.5
10	2.87	0.001656566	
20	-1.41	-0.000813853	
30	-4.06	-0.002343434	
40	-5.00	-0.002886003	
45	6.90	0.003982684	
Max. Deviation (ppm)	6.9	0.003982684	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	5.54	0.003197691	±2.5
120	1.35	0.000779221	
102	-2.78	-0.001604618	
Max. Deviation (ppm)	5.54	0.003197691	

Test Mode	LTE Band 4_CH20175_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	1.51	0.000871573	±2.5
10	-0.75	-0.0004329	
20	-5.16	-0.002978355	
30	-6.61	-0.003815296	
40	-4.36	-0.002516595	
45	-4.42	-0.002551227	
Max. Deviation (ppm)	-6.61	-0.003815296	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	0.34	0.000196248	±2.5
120	6.90	0.003982684	
102	1.06	0.000611833	
Max. Deviation (ppm)	6.9	0.003982684	

Test Mode	LTE Band 4_CH20175_15M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	4.12	0.002378066	±2.5
10	2.76	0.001593074	
20	1.62	0.000935065	
30	-3.80	-0.002193362	
40	-6.41	-0.003699856	
45	-3.35	-0.001933622	
Max. Deviation (ppm)	-6.41	-0.003699856	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	1.63	0.000940837	±2.5
120	4.73	0.002730159	
102	4.59	0.002649351	
Max. Deviation (ppm)	4.73	0.002730159	

Test Mode	LTE Band 4_CH20175_20M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	1.37	0.000790765	±2.5
10	0.95	0.000548341	
20	-4.22	-0.002435786	
30	6.03	0.003480519	
40	-0.75	-0.0004329	
45	-3.76	-0.002170274	
Max. Deviation (ppm)	6.03	0.003480519	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-6.21	-0.003584416	±2.5
120	3.15	0.001818182	
102	6.85	0.003953824	
Max. Deviation (ppm)	6.85	0.003953824	

Test Mode	LTE Band 7_CH21100_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	0.49	0.000193294	±2.5
10	0.72	0.000284024	
20	4.29	0.001692308	
30	-3.99	-0.001573964	
40	-3.14	-0.001238659	
45	-4.69	-0.001850099	
Max. Deviation (ppm)	-4.69	-0.001850099	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	2.45	0.000966469	±2.5
120	4.33	0.001708087	
102	2.42	0.000954635	
Max. Deviation (ppm)	4.33	0.001708087	

Test Mode	LTE Band 7_CH21100_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-6.59	-0.002599606	±2.5
10	-6.71	-0.002646943	
20	3.65	0.001439842	
30	-1.40	-0.000552268	
40	5.19	0.002047337	
45	-2.36	-0.000930966	
Max. Deviation (ppm)	-6.71	-0.002646943	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-5.19	-0.002047337	±2.5
120	-2.76	-0.001088757	
102	2.77	0.001092702	
Max. Deviation (ppm)	-5.19	-0.002047337	

Test Mode	LTE Band 7_CH21100_15M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	1.49	0.000587771	±2.5
10	3.24	0.001278107	
20	-0.42	-0.00016568	
30	6.48	0.002556213	
40	-4.09	-0.001613412	
45	-5.65	-0.002228797	
Max. Deviation (ppm)	6.48	0.002556213	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-2.82	-0.001112426	±2.5
120	2.42	0.000954635	
102	-0.33	-0.000130178	
Max. Deviation (ppm)	-2.82	-0.001112426	

Test Mode	LTE Band 7_CH21100_20M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-2.03	-0.000800789	±2.5
10	-1.28	-0.000504931	
20	-3.72	-0.001467456	
30	-6.11	-0.002410256	
40	2.15	0.000848126	
45	-6.59	-0.002599606	
Max. Deviation (ppm)	-6.59	-0.002599606	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	2.47	0.000974359	±2.5
120	0.92	0.000362919	
102	6.85	0.00270217	
Max. Deviation (ppm)	6.85	0.00270217	

Test Mode	LTE Band 12_CH23095_1.4M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	4.08	0.005766784	±2.5
10	5.14	0.007268518	
20	3.22	0.004551237	
30	-1.75	0.002473498	
40	-5.28	0.007462898	
45	-1.80	0.00254417	
Max. Deviation (ppm)	-5.28	0.007462898	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	1.11	0.001568905	±2.5
120	-1.21	0.001710247	
102	-5.84	0.008254417	
Max. Deviation (ppm)	-5.84	0.008254417	

Test Mode	LTE Band 12_CH23095_3M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	7.00	0.009893993	±2.5
10	-3.10	0.004381625	
20	5.24	0.00740636	
30	-1.28	0.001809187	
40	-5.07	0.007166078	
45	2.72	0.003844523	
Max. Deviation (ppm)	7	0.009893993	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	3.11	0.00439576	±2.5
120	1.84	0.002600707	
102	5.32	0.007519435	
Max. Deviation (ppm)	5.32	0.007519435	

Test Mode	LTE Band 12_CH23095_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	1.44	0.002035336	±2.5
10	5.80	0.00819788	
20	0.73	0.001031802	
30	5.68	0.008028269	
40	-4.40	-0.006219081	
45	-2.73	-0.003858657	
Max. Deviation (ppm)	5.8	0.00819788	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-3.59	-0.005074205	±2.5
120	-5.17	-0.00730742	
102	5.85	0.008268551	
Max. Deviation (ppm)	5.85	0.008268551	

Test Mode	LTE Band 12_CH23095_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	0.38	0.000537102	±2.5
10	-2.44	-0.003448763	
20	3.88	0.005484099	
30	-6.57	-0.009286219	
40	-4.29	-0.006063604	
45	2.04	0.002883392	
Max. Deviation (ppm)	-6.57	-0.009286219	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	3.38	0.004777385	±2.5
120	2.37	0.003349823	
102	6.71	0.009484099	
Max. Deviation (ppm)	6.71	0.009484099	

Test Mode	LTE Band 13_CH23230_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-5.26	-0.006726343	±2.5
10	2.16	0.002762148	
20	-0.63	-0.000805627	
30	3.16	0.004040921	
40	-6.88	-0.008797954	
45	-1.65	-0.002109974	
Max. Deviation (ppm)	-6.88	-0.008797954	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	2.78	0.003554987	±2.5
120	4.16	0.005319693	
102	-5.74	-0.007340153	
Max. Deviation (ppm)	-5.74	-0.007340153	

Test Mode	LTE Band 13_CH23230_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	2.42	0.003094629	±2.5
10	-2.85	-0.003644501	
20	-2.02	-0.00258312	
30	5.99	0.007659847	
40	-6.13	-0.007838875	
45	-3.91	-0.005	
Max. Deviation (ppm)	-6.13	-0.007838875	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	6.37	0.00814578	±2.5
120	-3.03	-0.00387468	
102	-4.14	-0.005294118	
Max. Deviation (ppm)	6.37	0.00814578	

Test Mode	LTE Band 17_CH23790_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-5.51	-0.007760563	±2.5
10	-6.47	-0.009112676	
20	-6.52	-0.009183099	
30	7.06	0.009943662	
40	5.85	0.008239437	
45	1.64	0.002309859	
Max. Deviation (ppm)	7.06	0.009943662	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	5.90	0.008309859	±2.5
120	-0.84	-0.001183099	
102	-3.46	-0.004873239	
Max. Deviation (ppm)	5.9	0.008309859	

Test Mode	LTE Band 17_CH23790_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	3.13	0.004408451	±2.5
10	-4.76	-0.006704225	
20	-2.46	-0.003464789	
30	4.87	0.006859155	
40	-4.22	-0.005943662	
45	-0.64	-0.000901408	
Max. Deviation (ppm)	4.87	0.006859155	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-1.13	-0.001591549	±2.5
120	-5.60	-0.007887324	
102	1.02	0.00143662	
Max. Deviation (ppm)	-5.6	-0.007887324	

Test Mode	LTE Band 41_CH40620_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	6.19	0.002387196	±2.5
10	-0.34	-0.000131122	
20	0.79	0.000304666	
30	2.65	0.001021982	
40	-6.84	-0.002637871	
45	6.05	0.002333205	
Max. Deviation (ppm)	-6.84	-0.002637871	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-2.24	-0.000863864	±2.5
120	6.85	0.002641728	
102	-1.77	-0.000682607	
Max. Deviation (ppm)	6.85	0.002641728	

Test Mode	LTE Band 41_CH40620_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	5.31	0.002047821	±2.5
10	6.20	0.002391053	
20	-5.53	-0.002132665	
30	-7.24	-0.002792133	
40	4.56	0.001758581	
45	-1.76	-0.00067875	
Max. Deviation (ppm)	-7.24	-0.002792133	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	6.38	0.00246047	±2.5
120	-2.93	-0.001129965	
102	0.45	0.000173544	
Max. Deviation (ppm)	6.38	0.00246047	

Test Mode	LTE Band 41_CH40620_15M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-0.54	-0.000208253	±2.5
10	-0.28	-0.000107983	
20	-4.07	-0.00156961	
30	6.43	0.002479753	
40	-3.48	-0.001342075	
45	-5.13	-0.001978403	
Max. Deviation (ppm)	6.43	0.002479753	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-2.99	-0.001153105	±2.5
120	-5.17	-0.00199383	
102	-1.03	-0.000397223	
Max. Deviation (ppm)	-5.17	-0.00199383	

Test Mode	LTE Band 41_CH40620_20M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	1.03	0.000397223	±2.5
10	1.30	0.00050135	
20	1.18	0.000455071	
30	0.58	0.000223679	
40	-4.10	-0.00158118	
45	-5.38	-0.002074817	
Max. Deviation (ppm)	-5.38	-0.002074817	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	1.71	0.000659468	±2.5
120	5.85	0.002256074	
102	2.31	0.00089086	
Max. Deviation (ppm)	5.85	0.002256074	

Test Mode	LTE Band 66_CH132322_5M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-4.09	-0.00234384	±2.5
10	-4.69	-0.002687679	
20	-3.15	-0.001805158	
30	-6.20	-0.003553009	
40	-2.04	-0.001169054	
45	-4.21	-0.002412607	
Max. Deviation (ppm)	-6.2	-0.003553009	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-7.95	-0.004555874	±2.5
120	-2.11	-0.001209169	
102	-0.81	-0.000464183	
Max. Deviation (ppm)	-7.95	-0.004555874	

Test Mode	LTE Band 66_CH132322_10M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-2.04	-0.001169054	±2.5
10	6.49	0.003719198	
20	6.46	0.003702006	
30	-5.50	-0.003151862	
40	2.91	0.001667622	
45	5.21	0.002985673	
Max. Deviation (ppm)	6.49	0.003719198	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	0.89	0.000510029	±2.5
120	5.60	0.003209169	
102	-5.29	-0.003031519	
Max. Deviation (ppm)	5.6	0.003209169	

Test Mode	LTE Band 66_CH132322_15M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-5.43	-0.003111748	±2.5
10	7.54	0.004320917	
20	-7.21	-0.004131805	
30	-1.85	-0.001060172	
40	-7.52	-0.004309456	
45	6.44	0.003690544	
Max. Deviation (ppm)	7.54	0.004320917	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	0.61	0.00034957	±2.5
120	7.82	0.004481375	
102	7.88	0.004515759	
Max. Deviation (ppm)	7.88	0.004515759	

Test Mode	LTE Band 66_CH132322_20M

Temperature vs. Frequency Stabiility

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
0	-6.99	-0.004005731	±2.5
10	-4.28	-0.002452722	
20	7.68	0.004401146	
30	1.80	0.001031519	
40	-3.76	-0.002154728	
45	3.21	0.001839542	
Max. Deviation (ppm)	7.68	0.004401146	

Voltage vs. Frequency Stability

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
138	-4.32	-0.002475645	±2.5
120	6.46	0.003702006	
102	5.81	0.003329513	
Max. Deviation (ppm)	6.46	0.003702006	

End of Test Report