

# LTE Test Data

General Description of EUT	
<b>Product Name:</b>	4G multimode engineering gateway
<b>Test Model:</b>	UX33-US
<b>Sample ID:</b>	202305-0073-2-2#
Environmental Conditions	
<b>Temperature:</b>	25°C
<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	DC 5V
<b>Test Engineer:</b>	Zhou zhen
Note: For a more detailed features description, please refer to the report <b>TBR-C-202305-0073-113</b> . The report only show the worst case data.	



## Contents

<b>LTE Test Data</b> .....	1
1: Conducted Power Output Data .....	3
Test Result .....	3
2: Peak-to-Average Ratio(CCDF).....	7
Test Result .....	7
Test Graphs.....	9
3: 26dB Bandwidth and Occupied Bandwidth .....	17
Test Result .....	17
Test Graphs.....	18
4: Band Edge .....	22
Test Result .....	22
Test Graphs.....	23
5: Conducted Spurious Emission.....	29
Test Result .....	29
Test Graphs.....	35
6: Frequency Stability .....	78
Test Result .....	78



# 1: Conducted Power Output Data

## Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	24.63	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.67	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	24.51	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.73	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	24.52	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.60	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	24.47	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	23.39	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	24.44	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	23.37	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	24.44	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	23.39	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	23.54	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	22.62	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	24.60	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	23.57	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	24.72	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.81	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	24.73	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	23.68	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	24.61	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	23.58	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	24.61	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	23.57	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	24.73	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	23.76	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	23.75	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	22.79	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	24.50	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	23.75	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	24.85	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	23.99	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	24.92	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	23.80	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	24.67	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	23.52	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	24.73	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	23.58	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	24.63	PASS



Band12	1.4MHz	16QAM	23173	3RB#3	23.45	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	23.65	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	22.38	PASS
Band12	3MHz	QPSK	23025	1RB#0	24.72	PASS
Band12	3MHz	16QAM	23025	1RB#0	23.85	PASS
Band12	3MHz	QPSK	23025	1RB#8	24.49	PASS
Band12	3MHz	16QAM	23025	1RB#8	23.84	PASS
Band12	3MHz	QPSK	23025	1RB#14	24.57	PASS
Band12	3MHz	16QAM	23025	1RB#14	23.40	PASS
Band12	3MHz	QPSK	23025	8RB#0	23.59	PASS
Band12	3MHz	16QAM	23025	8RB#0	22.58	PASS
Band12	3MHz	QPSK	23025	8RB#4	23.60	PASS
Band12	3MHz	16QAM	23025	8RB#4	22.58	PASS
Band12	3MHz	QPSK	23025	8RB#7	23.44	PASS
Band12	3MHz	16QAM	23025	8RB#7	22.51	PASS
Band12	3MHz	QPSK	23025	15RB#0	23.47	PASS
Band12	3MHz	16QAM	23025	15RB#0	22.63	PASS
Band12	3MHz	QPSK	23095	1RB#0	24.51	PASS
Band12	3MHz	16QAM	23095	1RB#0	23.49	PASS
Band12	3MHz	QPSK	23095	1RB#8	24.82	PASS
Band12	3MHz	16QAM	23095	1RB#8	24.06	PASS
Band12	3MHz	QPSK	23095	1RB#14	24.67	PASS
Band12	3MHz	16QAM	23095	1RB#14	23.83	PASS
Band12	3MHz	QPSK	23095	8RB#0	23.72	PASS
Band12	3MHz	16QAM	23095	8RB#0	22.68	PASS
Band12	3MHz	QPSK	23095	8RB#4	23.69	PASS
Band12	3MHz	16QAM	23095	8RB#4	22.69	PASS
Band12	3MHz	QPSK	23095	8RB#7	23.90	PASS
Band12	3MHz	16QAM	23095	8RB#7	22.83	PASS
Band12	3MHz	QPSK	23095	15RB#0	23.83	PASS
Band12	3MHz	16QAM	23095	15RB#0	22.67	PASS
Band12	3MHz	QPSK	23165	1RB#0	24.87	PASS
Band12	3MHz	16QAM	23165	1RB#0	23.87	PASS
Band12	3MHz	QPSK	23165	1RB#8	24.96	PASS
Band12	3MHz	16QAM	23165	1RB#8	23.90	PASS
Band12	3MHz	QPSK	23165	1RB#14	24.78	PASS
Band12	3MHz	16QAM	23165	1RB#14	23.96	PASS
Band12	3MHz	QPSK	23165	8RB#0	23.76	PASS
Band12	3MHz	16QAM	23165	8RB#0	22.62	PASS
Band12	3MHz	QPSK	23165	8RB#4	23.69	PASS
Band12	3MHz	16QAM	23165	8RB#4	22.73	PASS
Band12	3MHz	QPSK	23165	8RB#7	23.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	22.71	PASS
Band12	3MHz	QPSK	23165	15RB#0	23.68	PASS



Band12	3MHz	16QAM	23165	15RB#0	22.56	PASS
Band12	5MHz	QPSK	23035	1RB#0	24.52	PASS
Band12	5MHz	16QAM	23035	1RB#0	23.07	PASS
Band12	5MHz	QPSK	23035	1RB#12	24.67	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.85	PASS
Band12	5MHz	QPSK	23035	1RB#24	24.70	PASS
Band12	5MHz	16QAM	23035	1RB#24	23.39	PASS
Band12	5MHz	QPSK	23035	12RB#0	23.56	PASS
Band12	5MHz	16QAM	23035	12RB#0	22.62	PASS
Band12	5MHz	QPSK	23035	12RB#6	23.57	PASS
Band12	5MHz	16QAM	23035	12RB#6	22.62	PASS
Band12	5MHz	QPSK	23035	12RB#13	23.52	PASS
Band12	5MHz	16QAM	23035	12RB#13	22.47	PASS
Band12	5MHz	QPSK	23035	25RB#0	23.54	PASS
Band12	5MHz	16QAM	23035	25RB#0	22.61	PASS
Band12	5MHz	QPSK	23095	1RB#0	24.62	PASS
Band12	5MHz	16QAM	23095	1RB#0	23.63	PASS
Band12	5MHz	QPSK	23095	1RB#12	24.95	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.93	PASS
Band12	5MHz	QPSK	23095	1RB#24	24.66	PASS
Band12	5MHz	16QAM	23095	1RB#24	23.73	PASS
Band12	5MHz	QPSK	23095	12RB#0	23.66	PASS
Band12	5MHz	16QAM	23095	12RB#0	22.47	PASS
Band12	5MHz	QPSK	23095	12RB#6	23.56	PASS
Band12	5MHz	16QAM	23095	12RB#6	22.58	PASS
Band12	5MHz	QPSK	23095	12RB#13	23.85	PASS
Band12	5MHz	16QAM	23095	12RB#13	22.87	PASS
Band12	5MHz	QPSK	23095	25RB#0	23.72	PASS
Band12	5MHz	16QAM	23095	25RB#0	22.63	PASS
Band12	5MHz	QPSK	23155	1RB#0	24.54	PASS
Band12	5MHz	16QAM	23155	1RB#0	23.79	PASS
Band12	5MHz	QPSK	23155	1RB#12	24.65	PASS
Band12	5MHz	16QAM	23155	1RB#12	23.88	PASS
Band12	5MHz	QPSK	23155	1RB#24	24.62	PASS
Band12	5MHz	16QAM	23155	1RB#24	23.74	PASS
Band12	5MHz	QPSK	23155	12RB#0	23.71	PASS
Band12	5MHz	16QAM	23155	12RB#0	22.52	PASS
Band12	5MHz	QPSK	23155	12RB#6	23.74	PASS
Band12	5MHz	16QAM	23155	12RB#6	22.71	PASS
Band12	5MHz	QPSK	23155	12RB#13	23.78	PASS
Band12	5MHz	16QAM	23155	12RB#13	22.54	PASS
Band12	5MHz	QPSK	23155	25RB#0	23.71	PASS
Band12	5MHz	16QAM	23155	25RB#0	22.69	PASS
Band12	10MHz	QPSK	23060	1RB#0	24.60	PASS



Band12	10MHz	16QAM	23060	1RB#0	23.60	PASS
Band12	10MHz	QPSK	23060	1RB#24	24.75	PASS
Band12	10MHz	16QAM	23060	1RB#24	23.74	PASS
Band12	10MHz	QPSK	23060	1RB#49	24.70	PASS
Band12	10MHz	16QAM	23060	1RB#49	23.91	PASS
Band12	10MHz	QPSK	23060	25RB#0	23.56	PASS
Band12	10MHz	16QAM	23060	25RB#0	22.47	PASS
Band12	10MHz	QPSK	23060	25RB#12	23.60	PASS
Band12	10MHz	16QAM	23060	25RB#12	22.60	PASS
Band12	10MHz	QPSK	23060	25RB#25	23.64	PASS
Band12	10MHz	16QAM	23060	25RB#25	22.62	PASS
Band12	10MHz	QPSK	23095	1RB#0	24.63	PASS
Band12	10MHz	16QAM	23095	1RB#0	23.59	PASS
Band12	10MHz	QPSK	23095	1RB#24	24.82	PASS
Band12	10MHz	16QAM	23095	1RB#24	24.15	PASS
Band12	10MHz	QPSK	23095	1RB#49	24.70	PASS
Band12	10MHz	16QAM	23095	1RB#49	23.56	PASS
Band12	10MHz	QPSK	23095	25RB#0	23.57	PASS
Band12	10MHz	16QAM	23095	25RB#0	22.68	PASS
Band12	10MHz	QPSK	23095	25RB#12	23.62	PASS
Band12	10MHz	16QAM	23095	25RB#12	22.68	PASS
Band12	10MHz	QPSK	23095	25RB#25	23.79	PASS
Band12	10MHz	16QAM	23095	25RB#25	22.70	PASS
Band12	10MHz	QPSK	23130	1RB#0	24.90	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.63	PASS
Band12	10MHz	QPSK	23130	1RB#24	24.91	PASS
Band12	10MHz	16QAM	23130	1RB#24	24.03	PASS
Band12	10MHz	QPSK	23130	1RB#49	24.60	PASS
Band12	10MHz	16QAM	23130	1RB#49	23.53	PASS
Band12	10MHz	QPSK	23130	25RB#0	23.83	PASS
Band12	10MHz	16QAM	23130	25RB#0	22.74	PASS
Band12	10MHz	QPSK	23130	25RB#12	23.75	PASS
Band12	10MHz	16QAM	23130	25RB#12	22.75	PASS
Band12	10MHz	QPSK	23130	25RB#25	23.75	PASS
Band12	10MHz	16QAM	23130	25RB#25	22.83	PASS
Band12	10MHz	QPSK	23060	50RB#0	23.78	PASS
Band12	10MHz	QPSK	23095	50RB#0	23.81	PASS
Band12	10MHz	QPSK	23130	50RB#0	23.77	PASS



## 2: Peak-to-Average Ratio(CCDF)

### Test Result

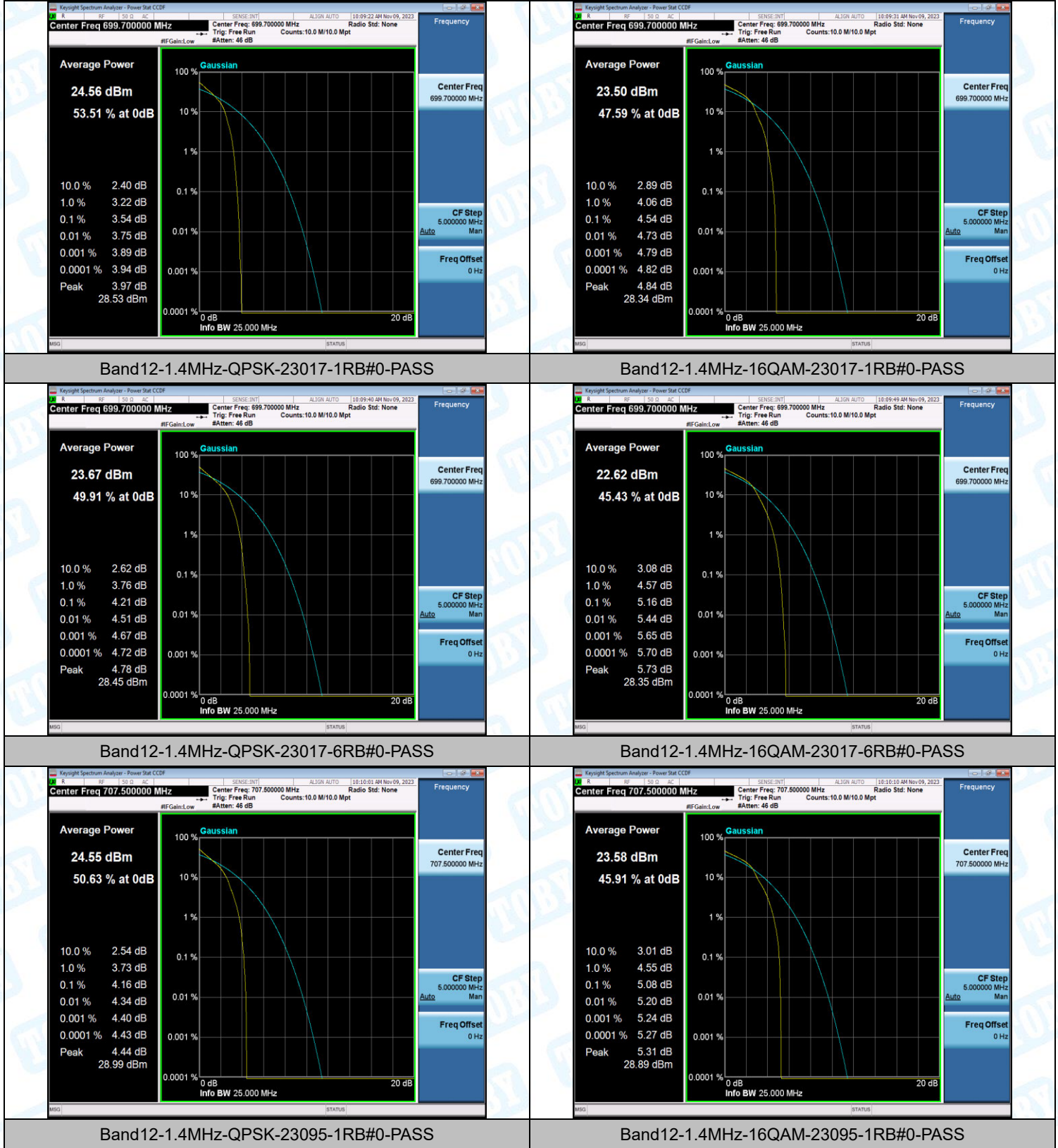
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	3.54	13	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	4.54	13	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	4.21	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	5.16	13	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	4.16	13	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	5.08	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	5.00	13	PASS
Band12	3MHz	QPSK	23025	1RB#0	4.85	13	PASS
Band12	3MHz	16QAM	23025	1RB#0	5.33	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.62	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.16	13	PASS
Band12	3MHz	QPSK	23095	1RB#0	5.02	13	PASS
Band12	3MHz	16QAM	23095	1RB#0	5.53	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	5.81	13	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	3.24	13	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	4.27	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	4.04	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	4.95	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.34	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	6.17	13	PASS
Band12	3MHz	QPSK	23165	1RB#0	4.81	13	PASS
Band12	3MHz	16QAM	23165	1RB#0	5.29	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	5.57	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	6.11	13	PASS
Band12	5MHz	QPSK	23035	1RB#0	4.86	13	PASS
Band12	5MHz	16QAM	23035	1RB#0	5.51	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.46	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.22	13	PASS
Band12	5MHz	QPSK	23095	1RB#0	5.04	13	PASS
Band12	5MHz	16QAM	23095	1RB#0	5.72	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.29	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	6.14	13	PASS
Band12	5MHz	QPSK	23155	1RB#0	4.40	13	PASS
Band12	5MHz	16QAM	23155	1RB#0	5.37	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	5.23	13	PASS
Band12	5MHz	16QAM	23155	25RB#0	6.01	13	PASS
Band12	10MHz	QPSK	23060	1RB#0	4.80	13	PASS
Band12	10MHz	16QAM	23060	1RB#0	5.34	13	PASS
Band12	10MHz	QPSK	23095	1RB#0	5.00	13	PASS



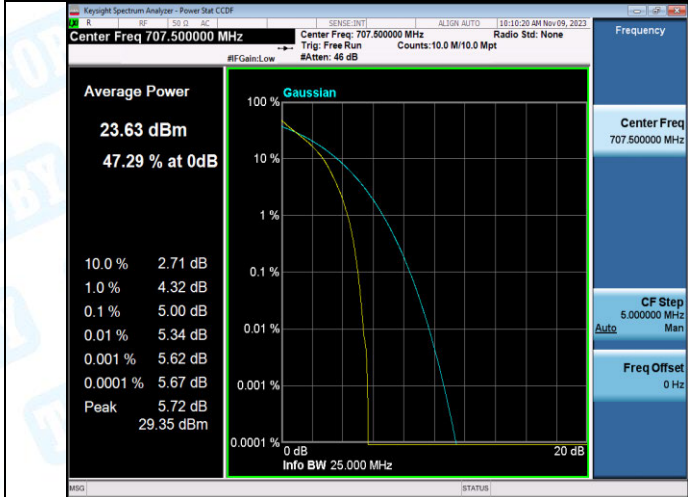
Band12	10MHz	16QAM	23095	1RB#0	5.79	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.49	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.29	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.26	13	PASS
Band12	10MHz	QPSK	23130	1RB#0	4.71	13	PASS
Band12	10MHz	16QAM	23130	1RB#0	5.52	13	PASS



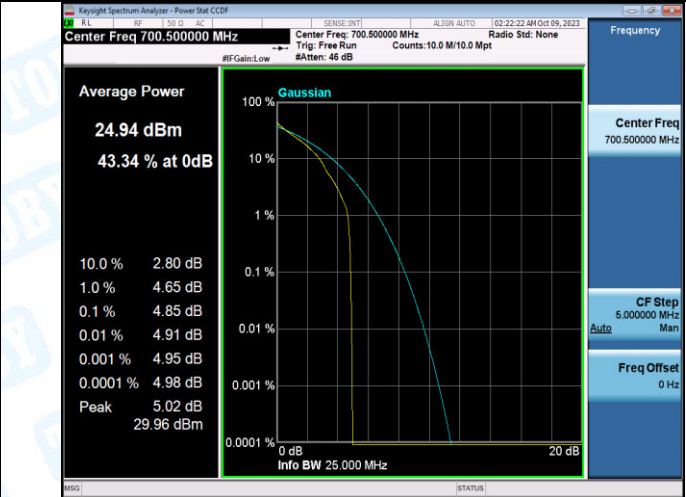
**Test Graphs**







Band12-1.4MHz-QPSK-23095-6RB#0-PASS



Band12-3MHz-QPSK-23025-1RB#0-PASS



Band12-3MHz-16QAM-23025-1RB#0-PASS



Band12-3MHz-QPSK-23025-15RB#0-PASS

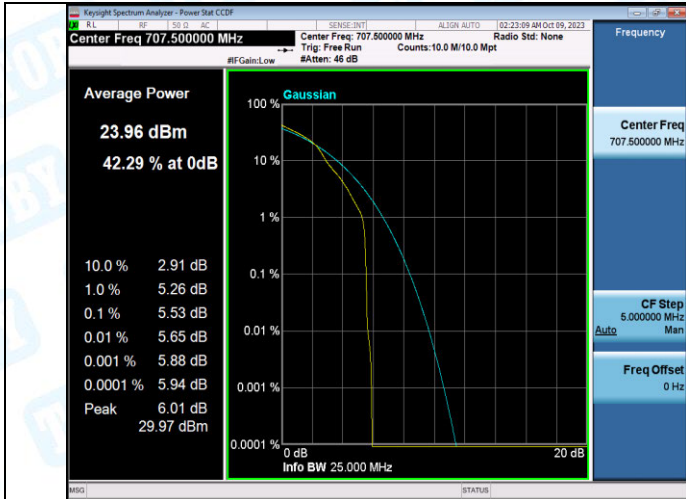


Band12-3MHz-16QAM-23025-15RB#0-PASS

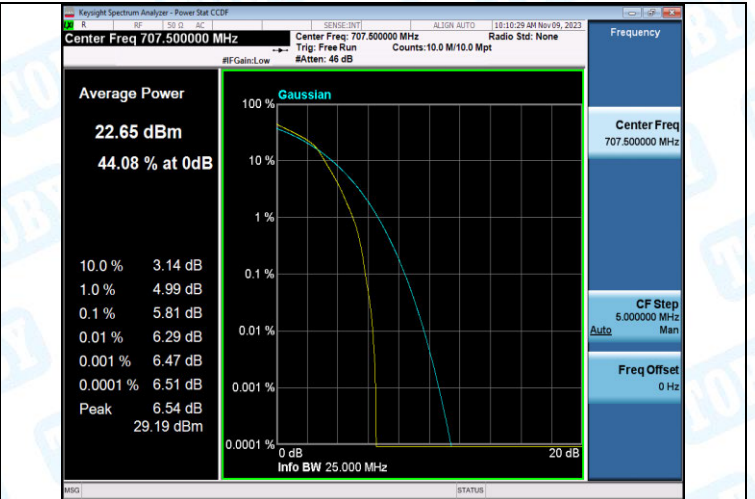


Band12-3MHz-QPSK-23095-1RB#0-PASS





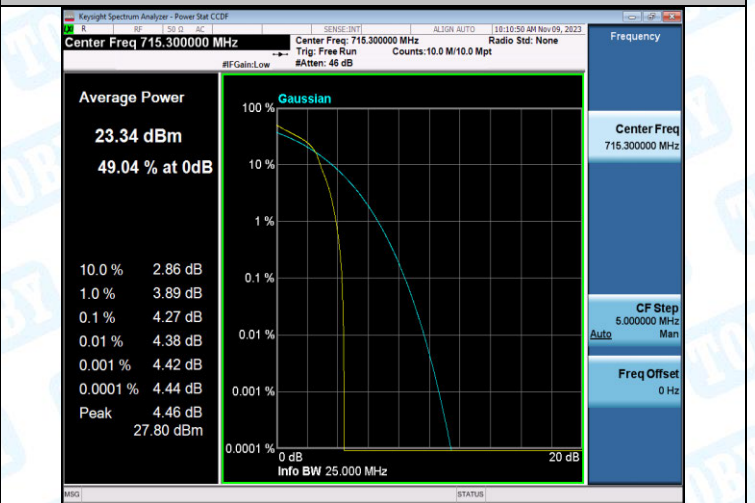
Band12-3MHz-16QAM-23095-1RB#0-PASS



Band12-1.4MHz-16QAM-23095-6RB#0-PASS



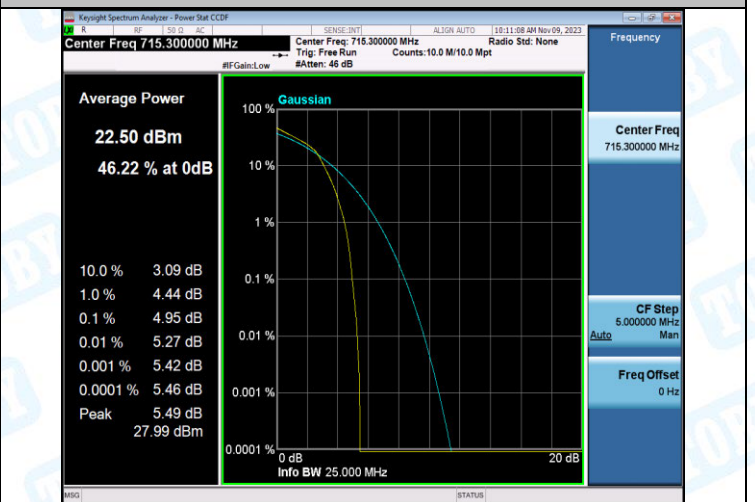
Band12-1.4MHz-QPSK-23173-1RB#0-PASS



Band12-1.4MHz-16QAM-23173-1RB#0-PASS

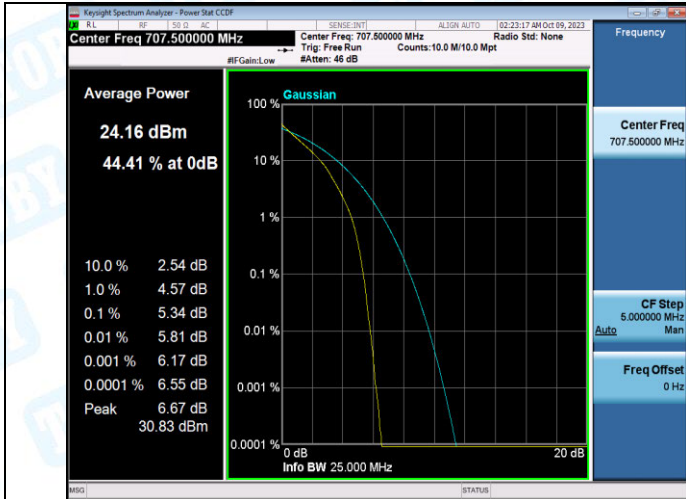


Band12-1.4MHz-QPSK-23173-6RB#0-PASS

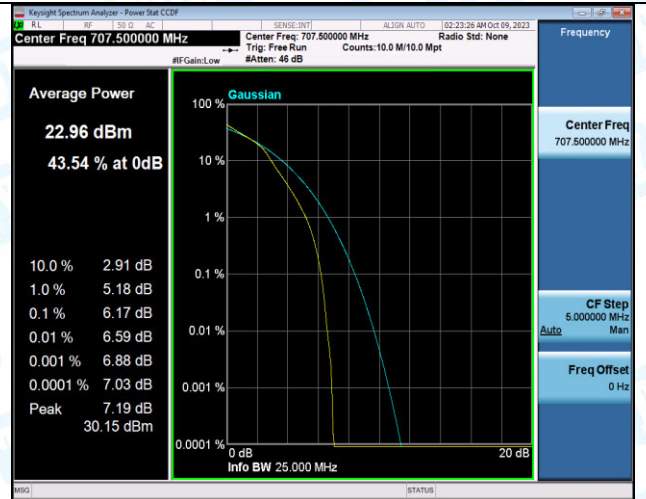


Band12-1.4MHz-16QAM-23173-6RB#0-PASS





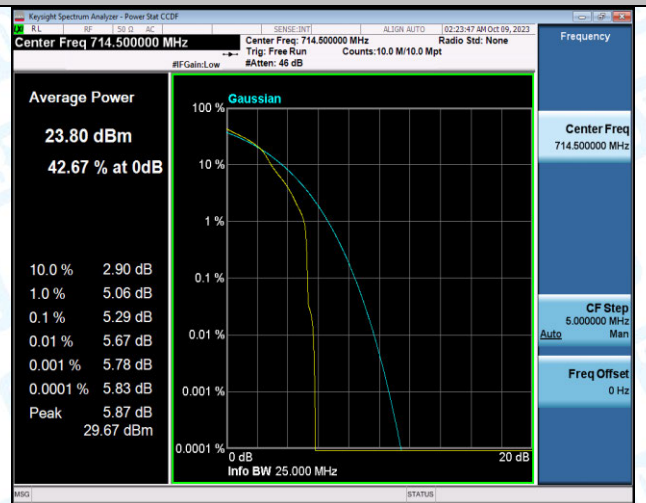
Band12-3MHz-QPSK-23095-15RB#0-PASS



Band12-3MHz-16QAM-23095-15RB#0-PASS



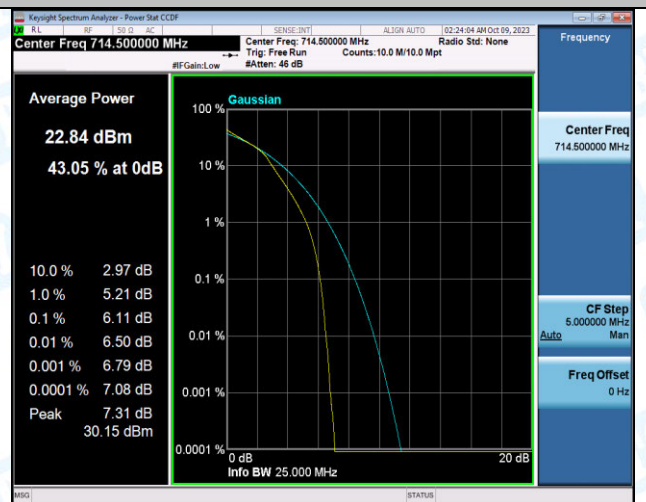
Band12-3MHz-QPSK-23165-1RB#0-PASS



Band12-3MHz-16QAM-23165-1RB#0-PASS

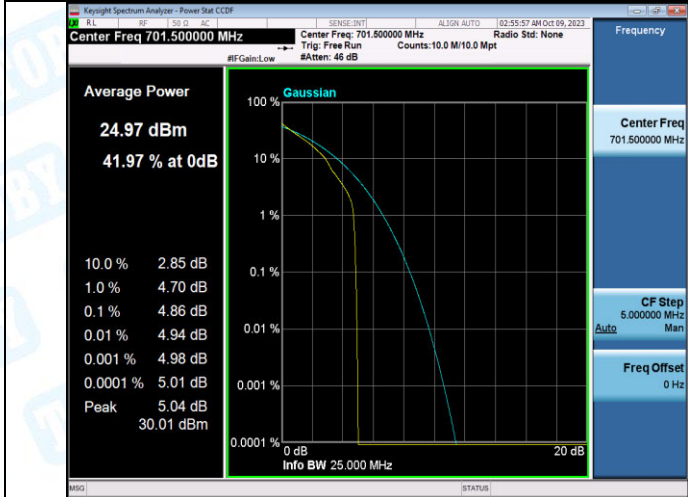


Band12-3MHz-QPSK-23165-15RB#0-PASS

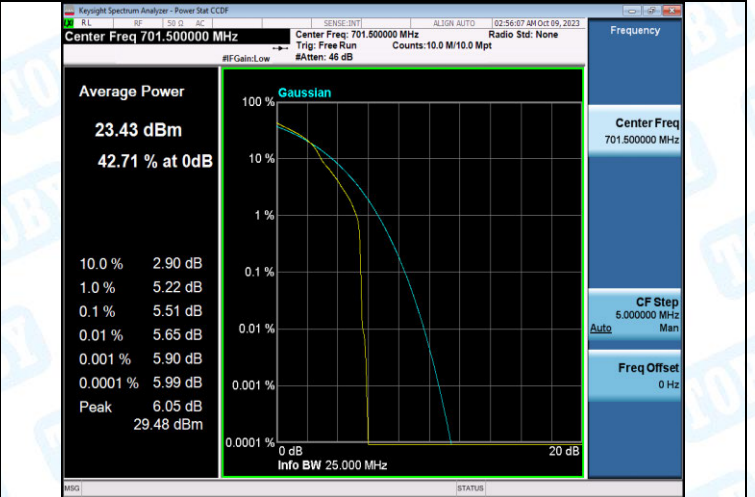


Band12-3MHz-16QAM-23165-15RB#0-PASS





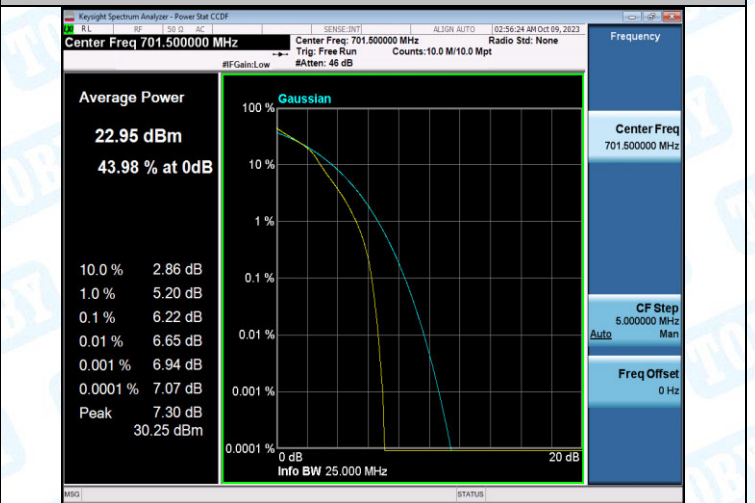
Band12-5MHz-QPSK-23035-1RB#0-PASS



Band12-5MHz-16QAM-23035-1RB#0-PASS



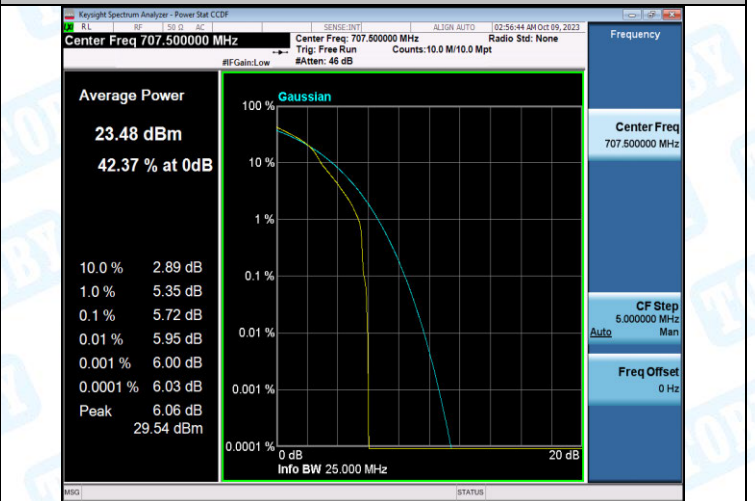
Band12-5MHz-QPSK-23035-25RB#0-PASS



Band12-5MHz-16QAM-23035-25RB#0-PASS

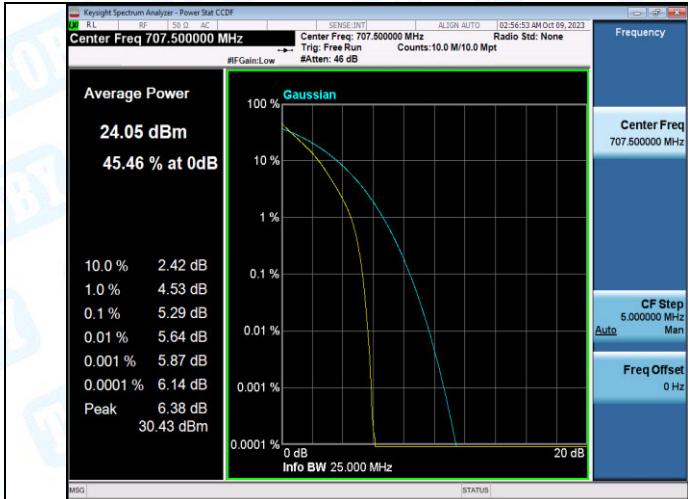


Band12-5MHz-QPSK-23095-1RB#0-PASS

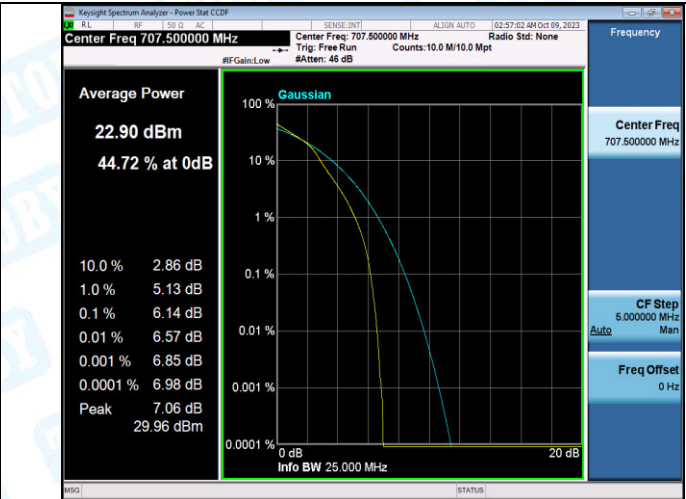


Band12-5MHz-16QAM-23095-1RB#0-PASS





Band12-5MHz-QPSK-23095-25RB#0-PASS



Band12-5MHz-16QAM-23095-25RB#0-PASS



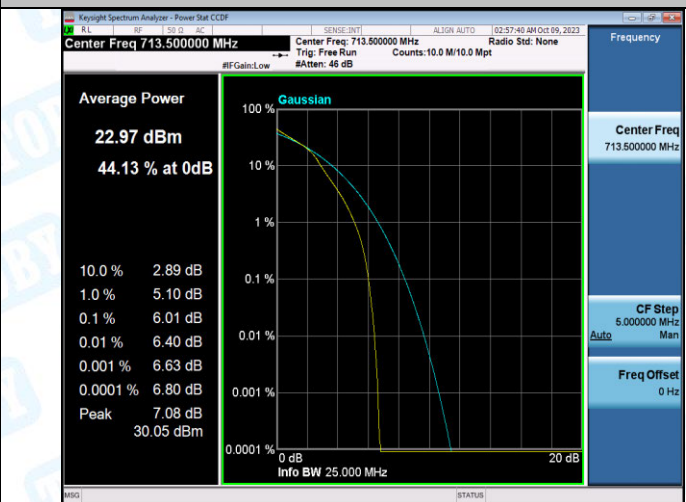
Band12-5MHz-QPSK-23155-1RB#0-PASS



Band12-5MHz-16QAM-23155-1RB#0-PASS

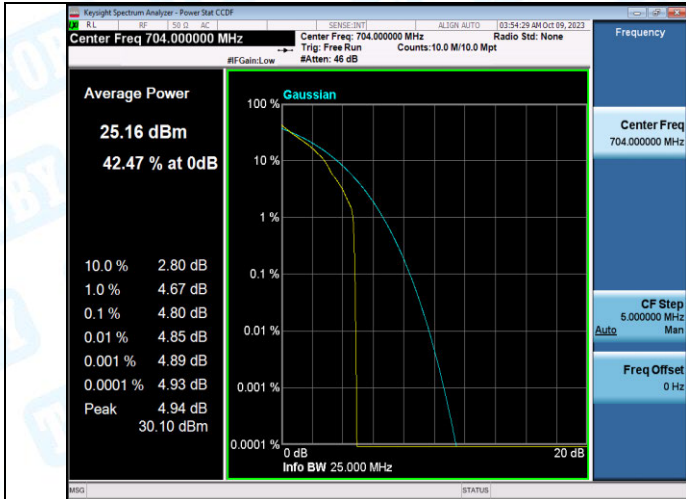


Band12-5MHz-QPSK-23155-25RB#0-PASS

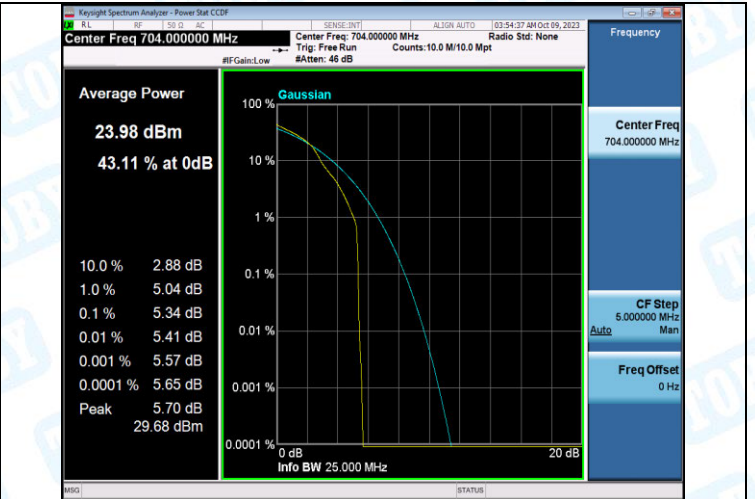


Band12-5MHz-16QAM-23155-25RB#0-PASS

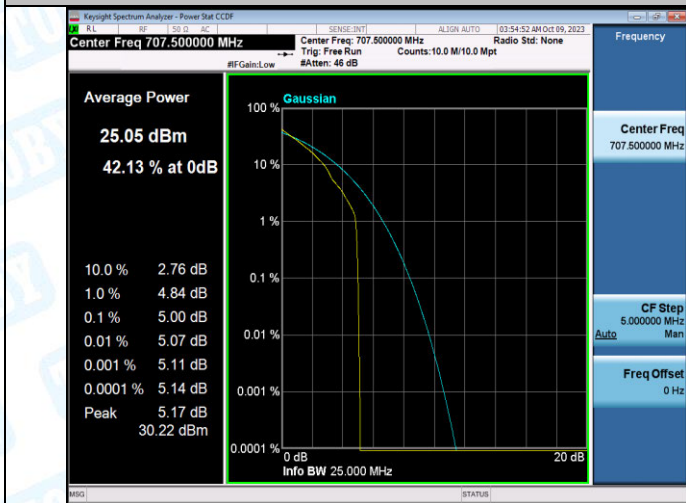




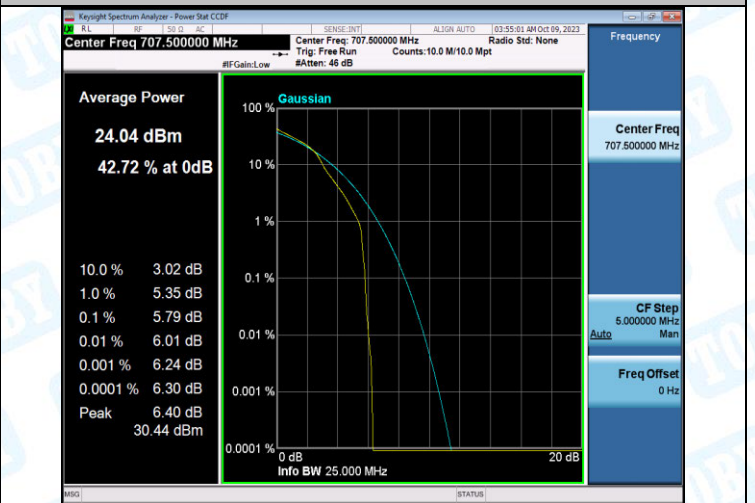
Band12-10MHz-QPSK-23060-1RB#0-PASS



Band12-10MHz-16QAM-23060-1RB#0-PASS



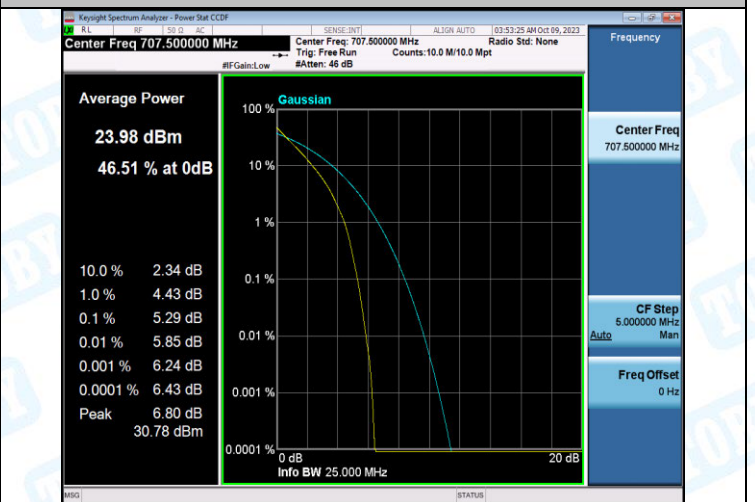
Band12-10MHz-QPSK-23095-1RB#0-PASS



Band12-10MHz-16QAM-23095-1RB#0-PASS

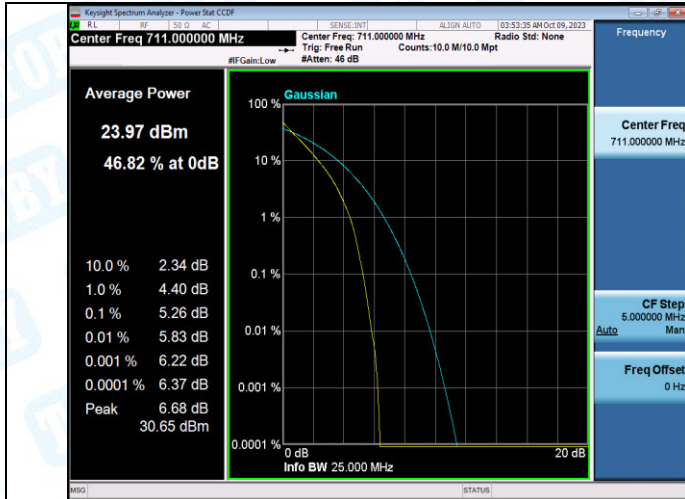


Band12-10MHz-QPSK-23060-50RB#0-PASS

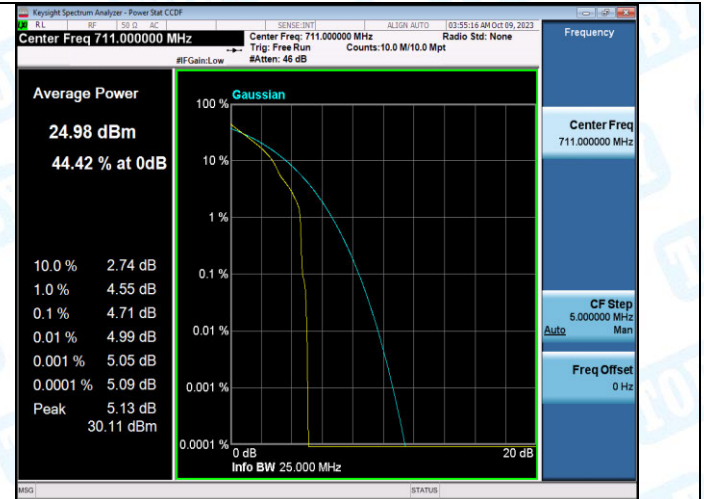


Band12-10MHz-QPSK-23095-50RB#0-PASS

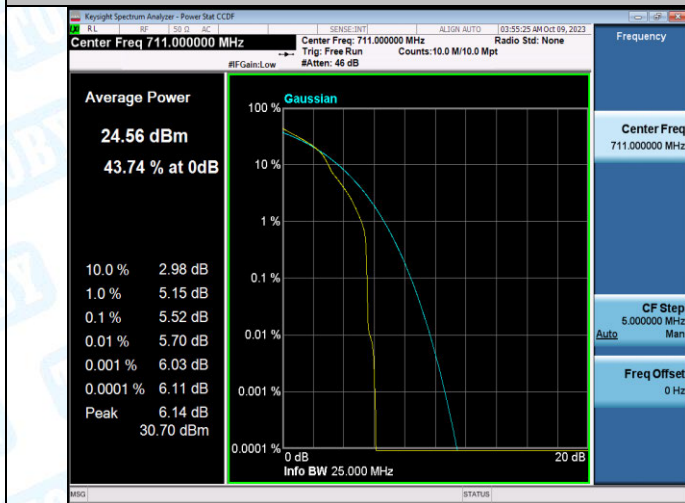




Band12-10MHz-QPSK-23130-50RB#0-PASS



Band12-10MHz-QPSK-23130-1RB#0-PASS



Band12-10MHz-16QAM-23130-1RB#0-PASS



### 3: 26dB Bandwidth and Occupied Bandwidth

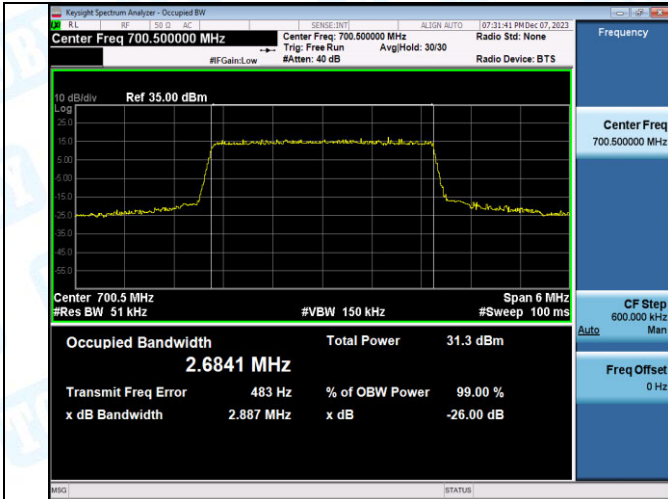
#### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0937	1.286	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.0988	1.309	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0930	1.278	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.1008	1.310	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0946	1.281	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.1007	1.297	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.6841	2.887	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.6883	2.902	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.6909	2.899	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.6821	2.905	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.6894	2.890	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.6857	2.895	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.5107	5.154	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.5127	5.072	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.5338	5.189	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.5283	5.127	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.5234	5.195	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.5177	5.085	PASS
Band12	10MHz	QPSK	23060	50RB#0	9.0227	10.11	PASS
Band12	10MHz	QPSK	23095	50RB#0	9.0401	10.16	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.9843	10.06	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.9769	6.105	PASS
Band12	10MHz	16QAM	23095	27RB#0	5.0413	7.253	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.0316	6.083	PASS

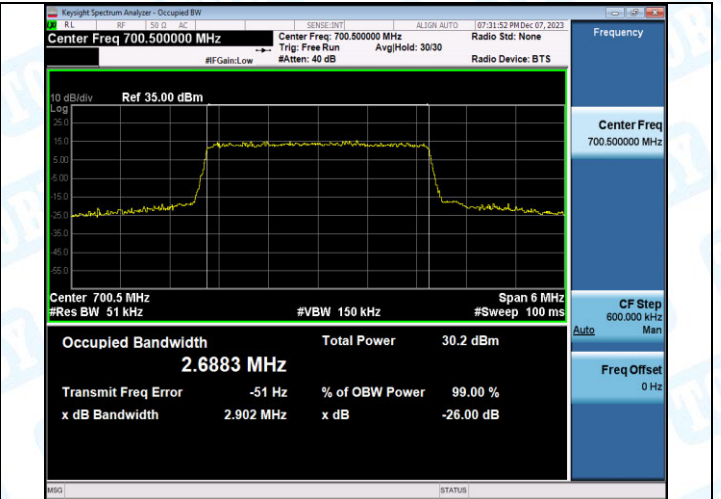


Test Graphs





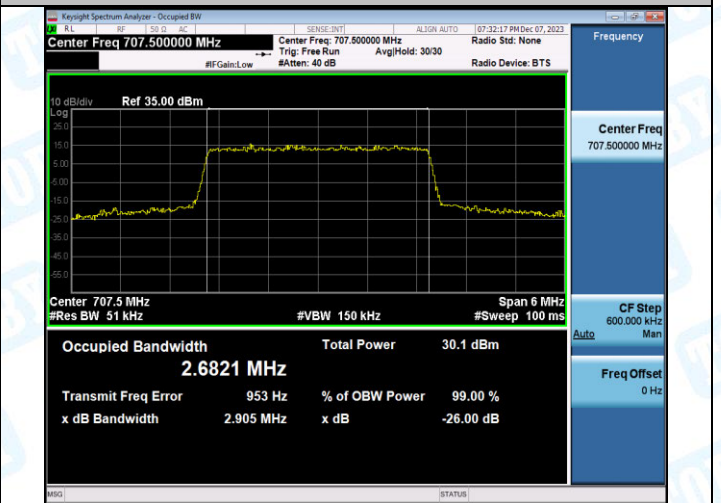
Band12-3MHz-QPSK-23095-15RB#0-PASS



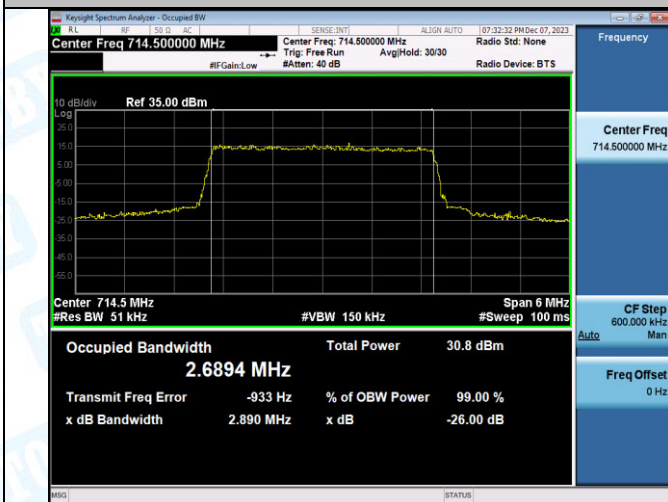
Band12-3MHz-16QAM-23095-15RB#0-PASS



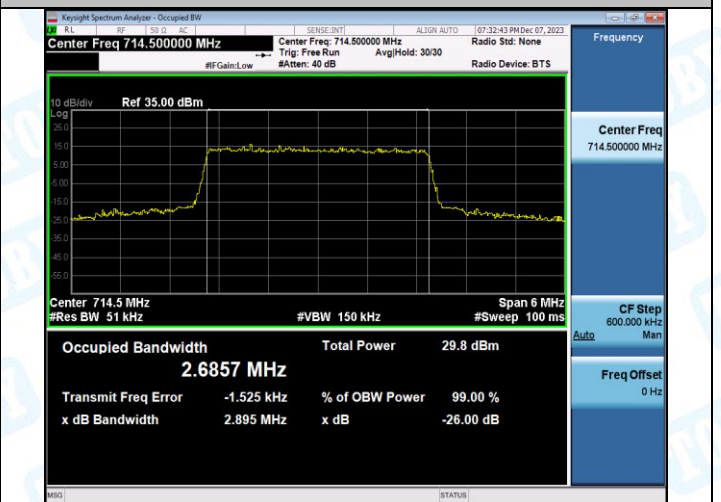
Band12-3MHz-QPSK-23165-15RB#0-PASS



Band12-3MHz-16QAM-23165-15RB#0-PASS



Band12-5MHz-QPSK-23035-25RB#0-PASS



Band12-5MHz-16QAM-23035-25RB#0-PASS