Appendix F: Test Data for E-UTRA Band 5

Product Name: 4G Phone

Test Model: mindphone 1

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

F.1 Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	22.51	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	22.55	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	22.48	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	22.55	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	22.44	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	22.54	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	21.52	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	22.62	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	22.51	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	22.48	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	22.47	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	22.68	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	22.47	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	21.50	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	22.57	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	22.58	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	22.64	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	22.49	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	22.55	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	22.57	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.64	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	22.00	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	21.66	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	21.67	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	21.01	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	21.26	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	21.25	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.00	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	21.14	PASS

Band5	1.4MHz	16QAM	20525	1RB#2	21.21	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.11	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	21.28	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	21.17	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	21.22	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.12	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	21.93	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	21.65	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.61	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	21.25	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	21.26	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	21.15	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	20.91	PASS
Band5	3MHz	QPSK	20415	1RB#0	22.51	PASS
Band5	3MHz	QPSK	20415	1RB#8	22.48	PASS
Band5	3MHz	QPSK	20415	1RB#14	22.44	PASS
Band5	3MHz	QPSK	20415	8RB#0	21.48	PASS
Band5	3MHz	QPSK	20415	8RB#4	21.49	PASS
Band5	3MHz	QPSK	20415	8RB#7	21.60	PASS
Band5	3MHz	QPSK	20415	15RB#0	21.41	PASS
Band5	3MHz	QPSK	20525	1RB#0	22.59	PASS
Band5	3MHz	QPSK	20525	1RB#8	22.68	PASS
Band5	3MHz	QPSK	20525	1RB#14	22.48	PASS
Band5	3MHz	QPSK	20525	8RB#0	21.51	PASS
Band5	3MHz	QPSK	20525	8RB#4	21.51	PASS
Band5	3MHz	QPSK	20525	8RB#7	21.61	PASS
Band5	3MHz	QPSK	20525	15RB#0	21.62	PASS
Band5	3MHz	QPSK	20635	1RB#0	22.65	PASS
Band5	3MHz	QPSK	20635	1RB#8	22.66	PASS
Band5	3MHz	QPSK	20635	1RB#14	22.66	PASS
Band5	3MHz	QPSK	20635	8RB#0	21.57	PASS
Band5	3MHz	QPSK	20635	8RB#4	21.44	PASS
Band5	3MHz	QPSK	20635	8RB#7	21.55	PASS
Band5	3MHz	QPSK	20635	15RB#0	21.52	PASS
Band5	3MHz	16QAM	20415	1RB#0	21.21	PASS

Band5	3MHz	16QAM	20415	1RB#8	21.16	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.44	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.00	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.00	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.06	PASS
Band5	3MHz	16QAM	20415	15RB#0	20.82	PASS
Band5	3MHz	16QAM	20525	1RB#0	21.14	PASS
Band5	3MHz	16QAM	20525	1RB#8	21.14	PASS
Band5	3MHz	16QAM	20525	1RB#14	21.15	PASS
Band5	3MHz	16QAM	20525	8RB#0	20.65	PASS
Band5	3MHz	16QAM	20525	8RB#4	20.65	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.20	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.01	PASS
Band5	3MHz	16QAM	20635	1RB#0	21.63	PASS
Band5	3MHz	16QAM	20635	1RB#8	21.61	PASS
Band5	3MHz	16QAM	20635	1RB#14	21.56	PASS
Band5	3MHz	16QAM	20635	8RB#0	20.66	PASS
Band5	3MHz	16QAM	20635	8RB#4	20.60	PASS
Band5	3MHz	16QAM	20635	8RB#7	20.93	PASS
Band5	3MHz	16QAM	20635	15RB#0	20.56	PASS
Band5	5MHz	QPSK	20425	1RB#0	22.38	PASS
Band5	5MHz	QPSK	20425	1RB#12	22.43	PASS
Band5	5MHz	QPSK	20425	1RB#24	22.56	PASS
Band5	5MHz	QPSK	20425	12RB#0	21.39	PASS
Band5	5MHz	QPSK	20425	12RB#6	21.40	PASS
Band5	5MHz	QPSK	20425	12RB#13	21.55	PASS
Band5	5MHz	QPSK	20425	25RB#0	21.58	PASS
Band5	5MHz	QPSK	20525	1RB#0	22.53	PASS
Band5	5MHz	QPSK	20525	1RB#12	22.46	PASS
Band5	5MHz	QPSK	20525	1RB#24	22.69	PASS
Band5	5MHz	QPSK	20525	12RB#0	21.52	PASS
Band5	5MHz	QPSK	20525	12RB#6	21.52	PASS
Band5	5MHz	QPSK	20525	12RB#13	21.60	PASS
Band5	5MHz	QPSK	20525	25RB#0	21.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	22.76	PASS

Band5	5MHz	QPSK	20625	1RB#12	22.66	PASS
Band5	5MHz	QPSK	20625	1RB#24	22.70	PASS
Band5	5MHz	QPSK	20625	12RB#0	21.56	PASS
Band5	5MHz	QPSK	20625	12RB#6	21.49	PASS
Band5	5MHz	QPSK	20625	12RB#13	21.55	PASS
Band5	5MHz	QPSK	20625	25RB#0	21.55	PASS
Band5	5MHz	16QAM	20425	1RB#0	20.81	PASS
Band5	5MHz	16QAM	20425	1RB#12	20.91	PASS
Band5	5MHz	16QAM	20425	1RB#24	20.84	PASS
Band5	5MHz	16QAM	20425	12RB#0	20.82	PASS
Band5	5MHz	16QAM	20425	12RB#6	20.78	PASS
Band5	5MHz	16QAM	20425	12RB#13	20.85	PASS
Band5	5MHz	16QAM	20425	25RB#0	20.91	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.68	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.67	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.78	PASS
Band5	5MHz	16QAM	20525	12RB#0	20.60	PASS
Band5	5MHz	16QAM	20525	12RB#6	20.60	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.17	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.02	PASS
Band5	5MHz	16QAM	20625	1RB#0	21.30	PASS
Band5	5MHz	16QAM	20625	1RB#12	21.43	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.42	PASS
Band5	5MHz	16QAM	20625	12RB#0	20.53	PASS
Band5	5MHz	16QAM	20625	12RB#6	20.41	PASS
Band5	5MHz	16QAM	20625	12RB#13	20.57	PASS
Band5	5MHz	16QAM	20625	25RB#0	20.66	PASS
Band5	10MHz	QPSK	20450	1RB#0	22.54	PASS
Band5	10MHz	QPSK	20450	1RB#24	22.50	PASS
Band5	10MHz	QPSK	20450	1RB#49	22.61	PASS
Band5	10MHz	QPSK	20450	25RB#0	21.55	PASS
Band5	10MHz	QPSK	20450	25RB#12	21.58	PASS
Band5	10MHz	QPSK	20450	25RB#25	21.53	PASS
Band5	10MHz	QPSK	20450	50RB#0	21.56	PASS
Band5	10MHz	QPSK	20525	1RB#0	22.43	PASS

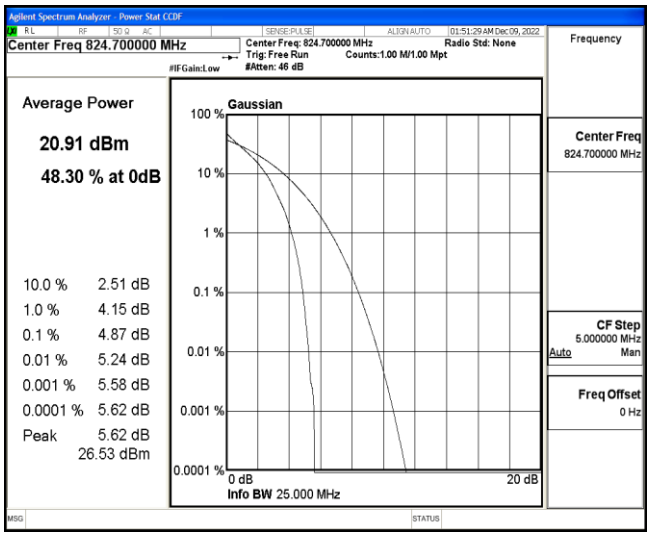
Band5	10MHz	QPSK	20525	1RB#24	22.36	PASS
Band5	10MHz	QPSK	20525	1RB#49	22.43	PASS
Band5	10MHz	QPSK	20525	25RB#0	21.67	PASS
Band5	10MHz	QPSK	20525	25RB#12	21.52	PASS
Band5	10MHz	QPSK	20525	25RB#25	21.61	PASS
Band5	10MHz	QPSK	20525	50RB#0	21.39	PASS
Band5	10MHz	QPSK	20600	1RB#0	22.77	PASS
Band5	10MHz	QPSK	20600	1RB#24	22.64	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.57	PASS
Band5	10MHz	QPSK	20600	25RB#0	21.59	PASS
Band5	10MHz	QPSK	20600	25RB#12	21.87	PASS
Band5	10MHz	QPSK	20600	25RB#25	21.55	PASS
Band5	10MHz	QPSK	20600	50RB#0	21.63	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.58	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.41	PASS
Band5	10MHz	16QAM	20450	1RB#49	21.54	PASS
Band5	10MHz	16QAM	20450	25RB#0	20.84	PASS
Band5	10MHz	16QAM	20450	25RB#12	20.85	PASS
Band5	10MHz	16QAM	20450	25RB#25	20.98	PASS
Band5	10MHz	16QAM	20450	50RB#0	20.99	PASS
Band5	10MHz	16QAM	20525	1RB#0	21.46	PASS
Band5	10MHz	16QAM	20525	1RB#24	21.33	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.45	PASS
Band5	10MHz	16QAM	20525	25RB#0	20.69	PASS
Band5	10MHz	16QAM	20525	25RB#12	20.68	PASS
Band5	10MHz	16QAM	20525	25RB#25	20.79	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.10	PASS
Band5	10MHz	16QAM	20600	1RB#0	22.16	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.06	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.31	PASS
Band5	10MHz	16QAM	20600	25RB#0	20.74	PASS
Band5	10MHz	16QAM	20600	25RB#12	20.66	PASS
Band5	10MHz	16QAM	20600	25RB#25	20.68	PASS
Band5	10MHz	16QAM	20600	50RB#0	20.64	PASS

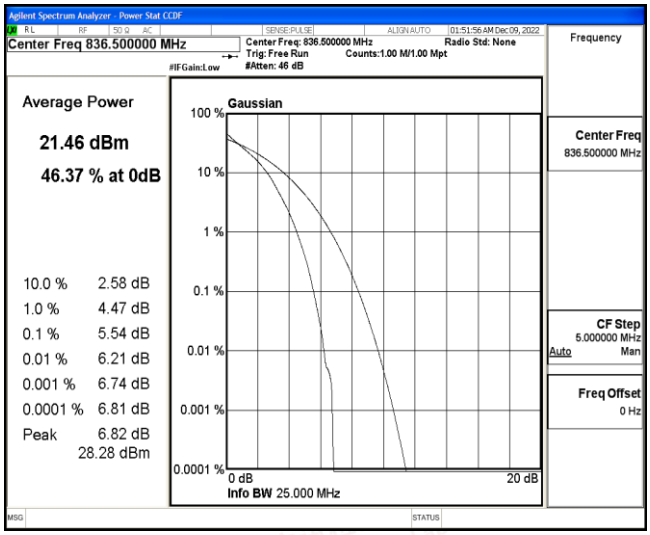
F.2 Peak-to-Average Ratio(CCDF)

Test Result

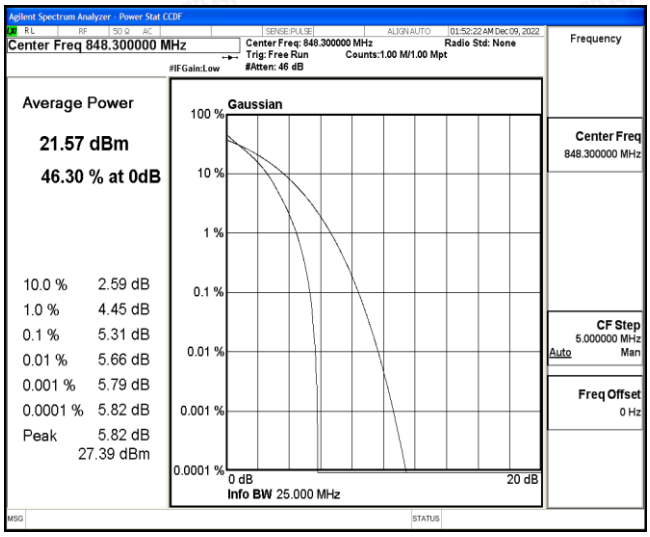
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	4.87	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.54	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.31	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	5.47	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.12	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	5.90	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	4.96	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.70	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.34	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	5.58	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.24	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.20	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.93	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.58	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.33	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	5.59	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.11	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	6.08	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.44	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.49	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.29	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	6.06	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.11	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.04	13	PASS

Test Graphs

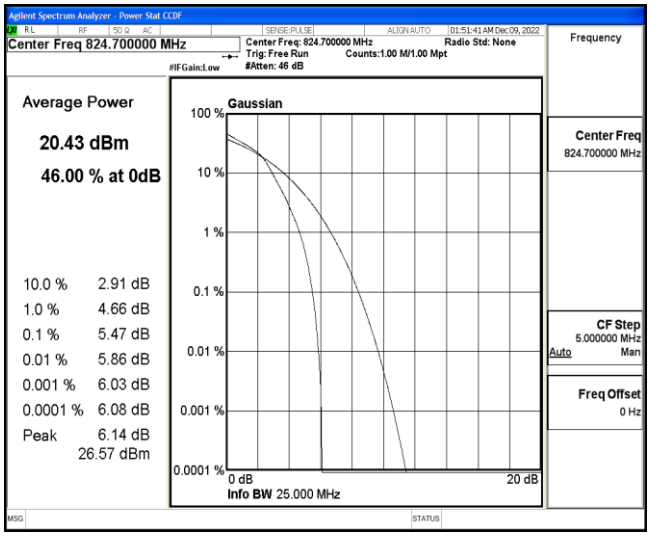
Band5-1.4MHz-QPSK-20407-6RB#0


Band5-1.4MHz-QPSK-20525-6RB#0


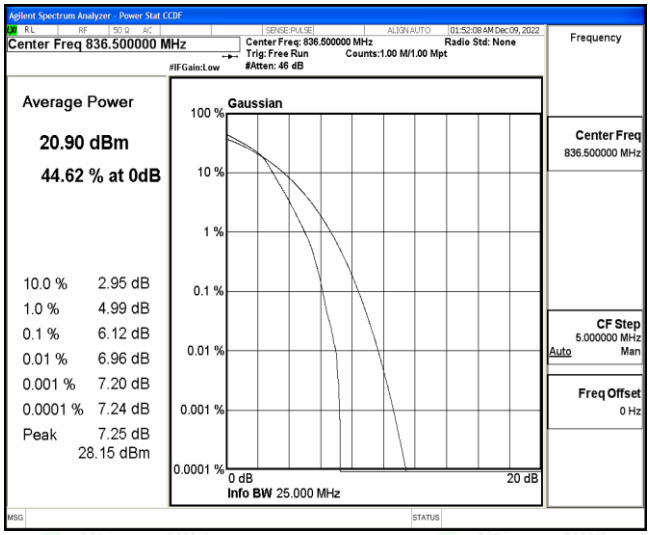
Band5-1.4MHz-QPSK-20643-6RB#0



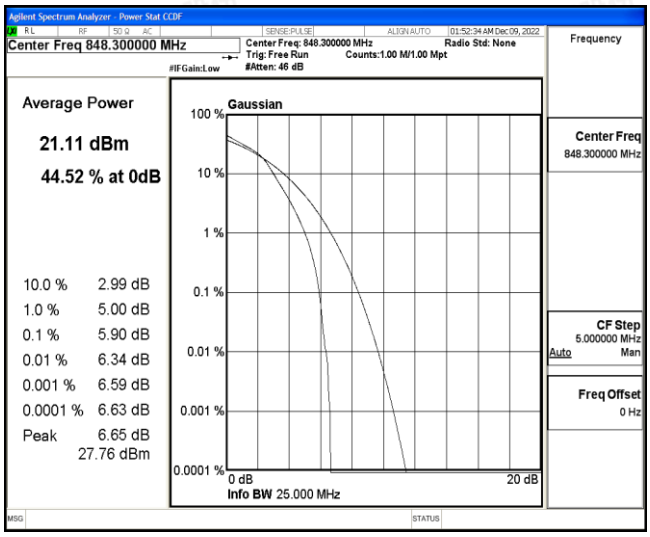
Band5-1.4MHz-16QAM-20407-6RB#0



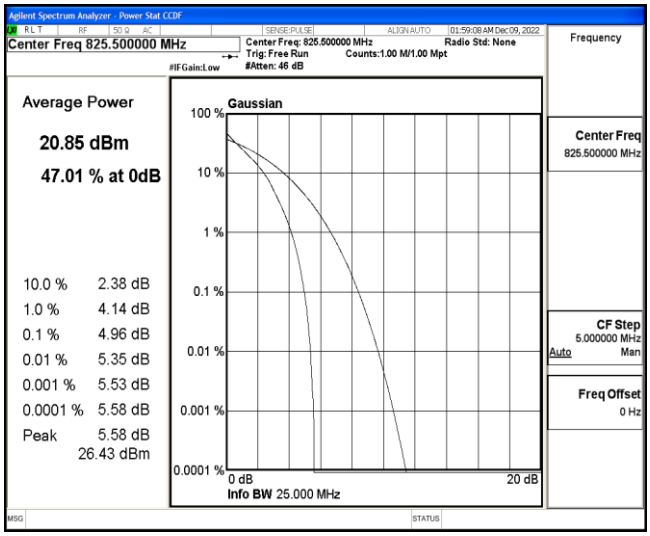
Band5-1.4MHz-16QAM-20525-6RB#0



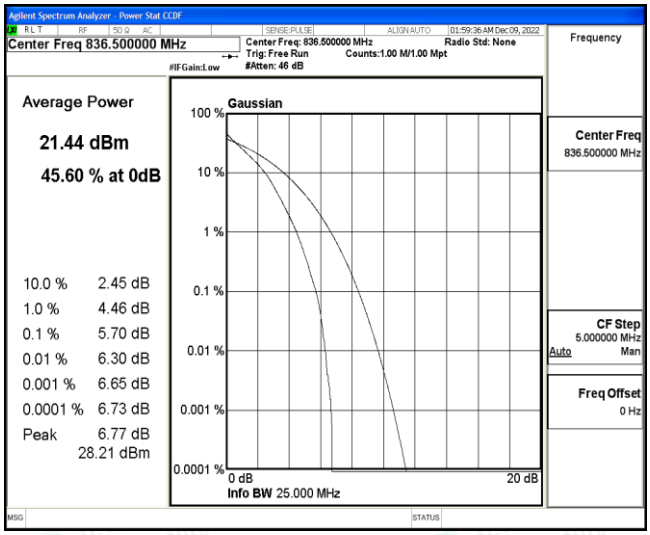
Band5-1.4MHz-16QAM-20643-6RB#0



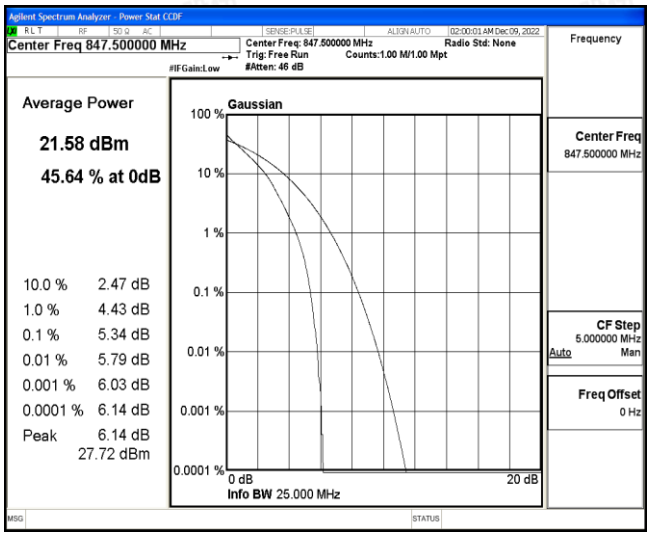
Band5-3MHz-QPSK-20415-15RB#0



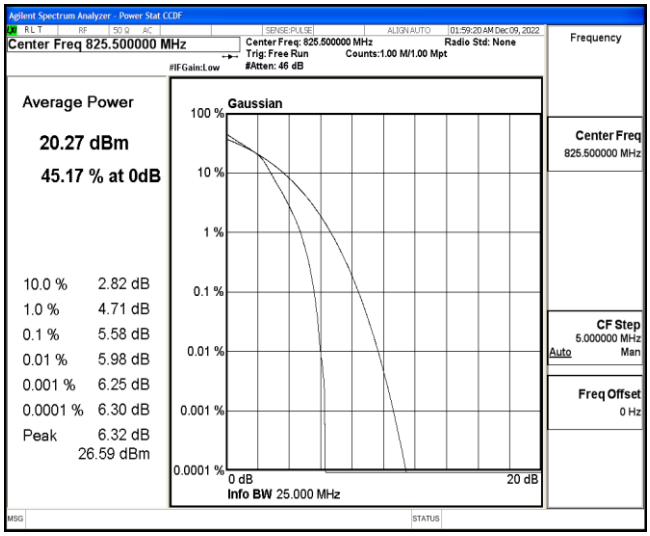
Band5-3MHz-QPSK-20525-15RB#0



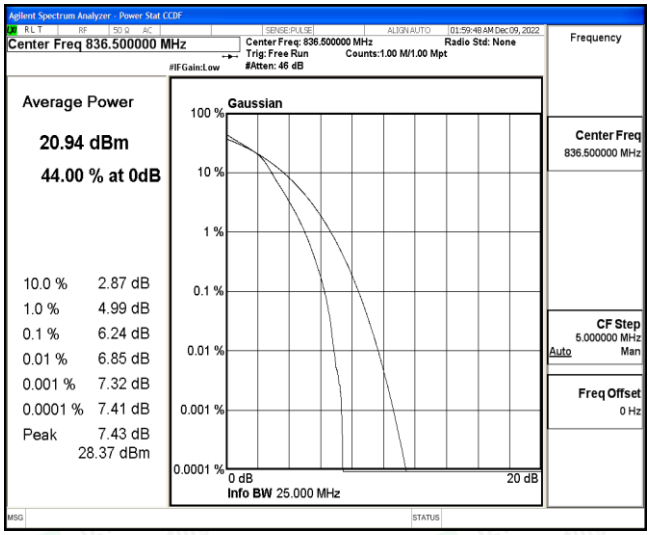
Band5-3MHz-QPSK-20635-15RB#0



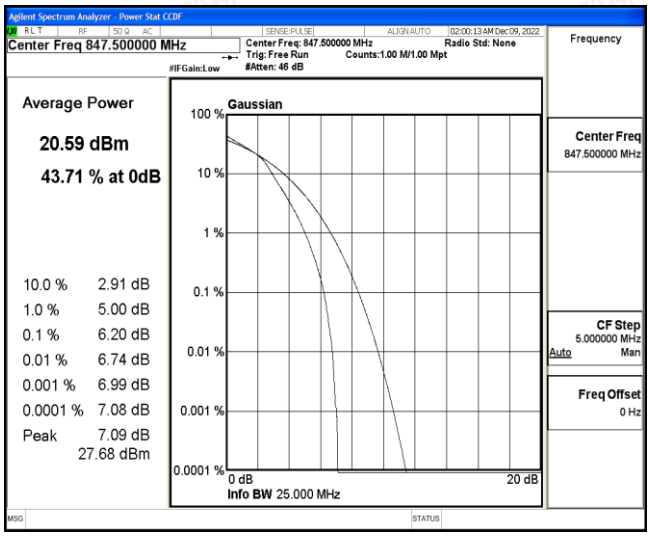
Band5-3MHz-16QAM-20415-15RB#0



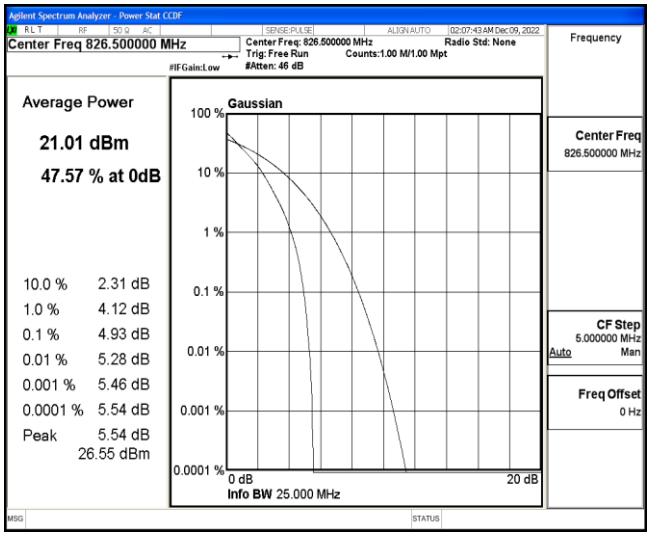
Band5-3MHz-16QAM-20525-15RB#0



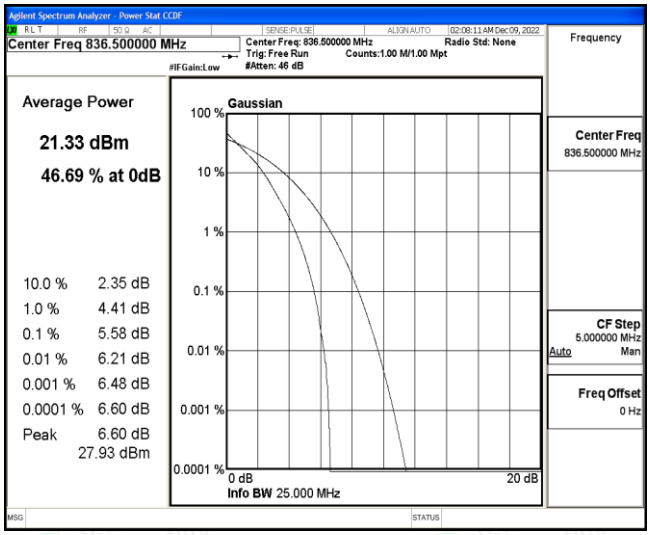
Band5-3MHz-16QAM-20635-15RB#0



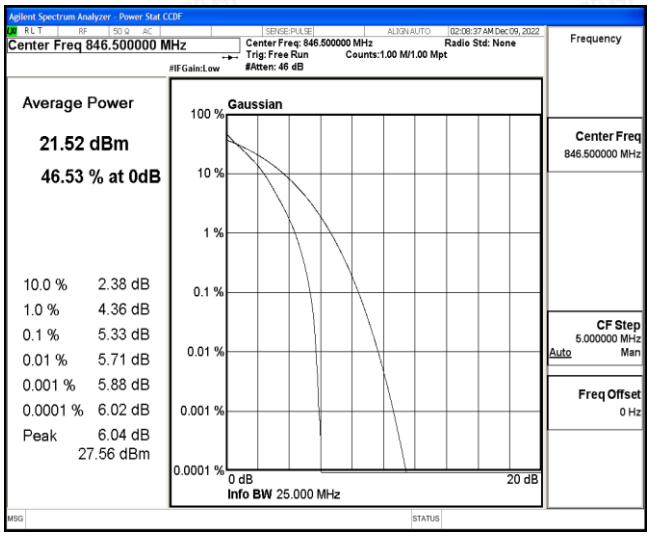
Band5-5MHz-QPSK-20425-25RB#0



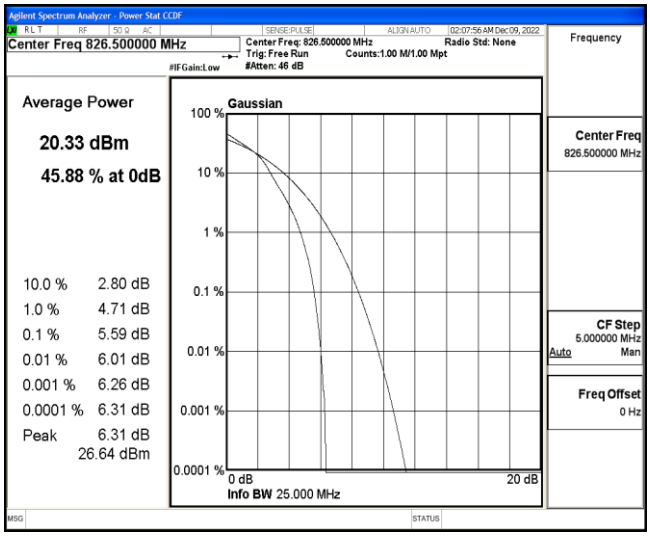
Band5-5MHz-QPSK-20525-25RB#0



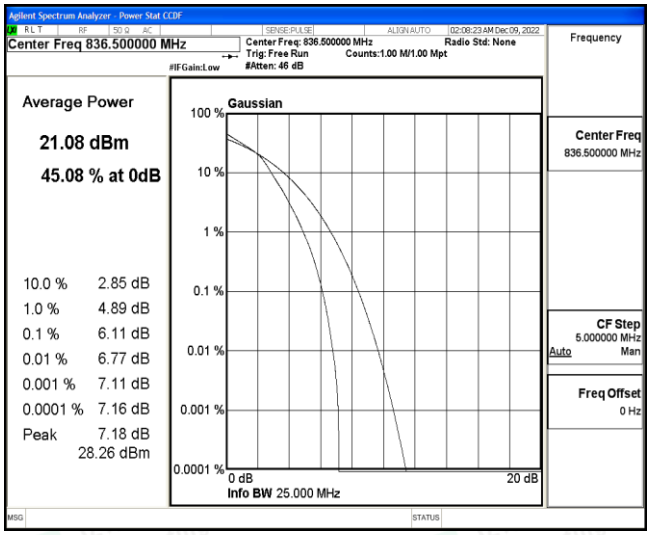
Band5-5MHz-QPSK-20625-25RB#0



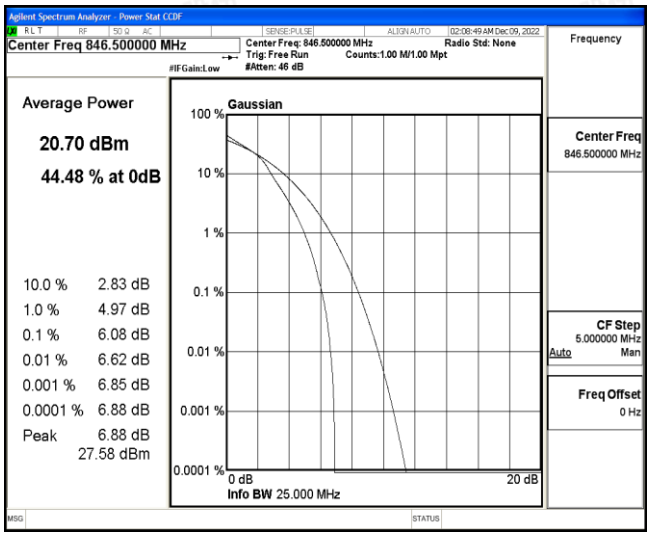
Band5-5MHz-16QAM-20425-25RB#0



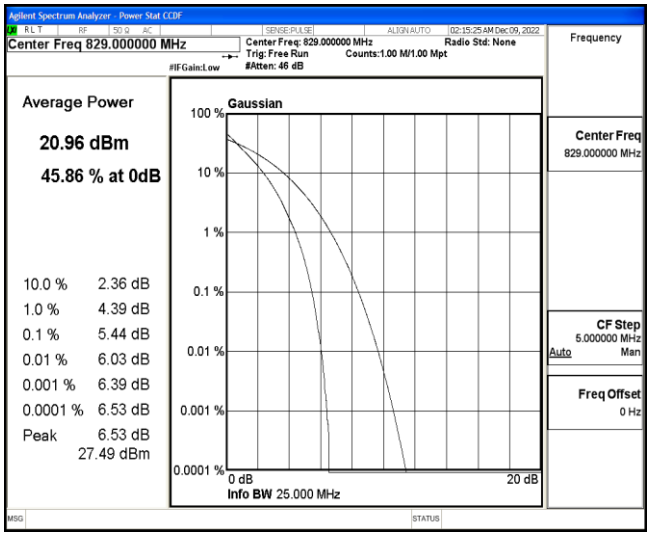
Band5-5MHz-16QAM-20525-25RB#0



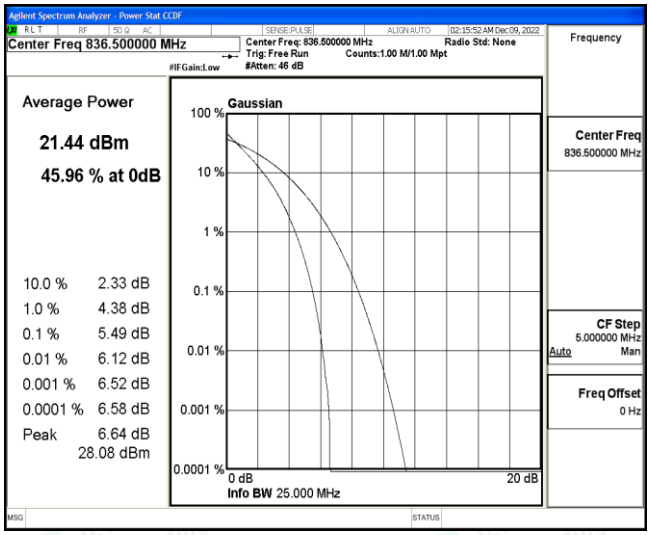
Band5-5MHz-16QAM-20625-25RB#0



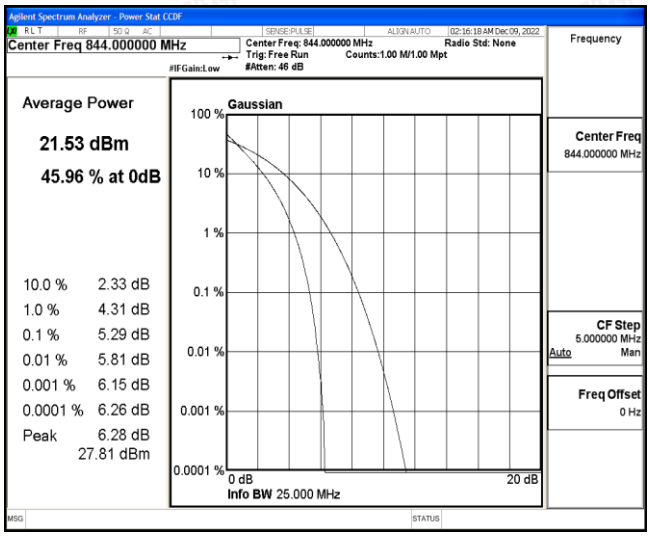
Band5-10MHz-QPSK-20450-50RB#0



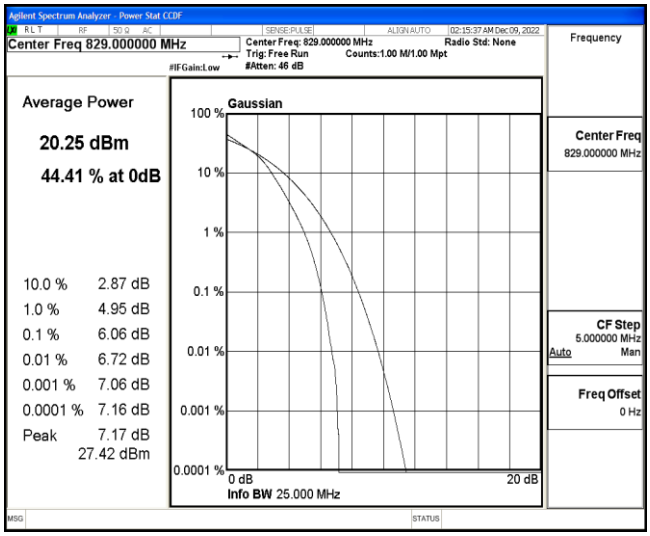
Band5-10MHz-QPSK-20525-50RB#0



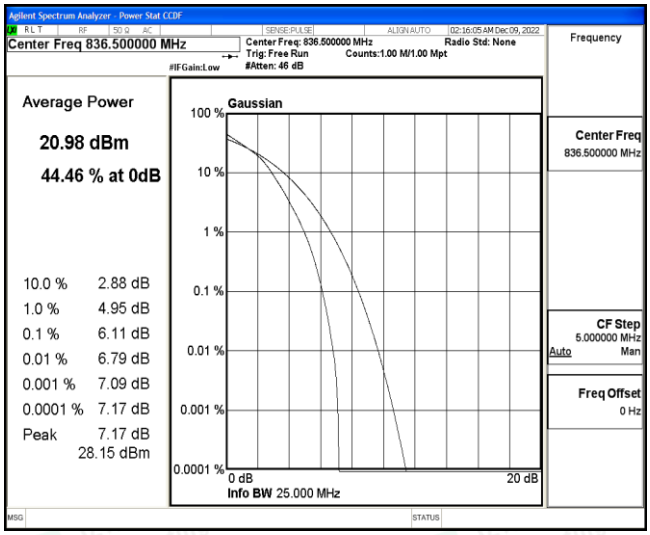
Band5-10MHz-QPSK-20600-50RB#0



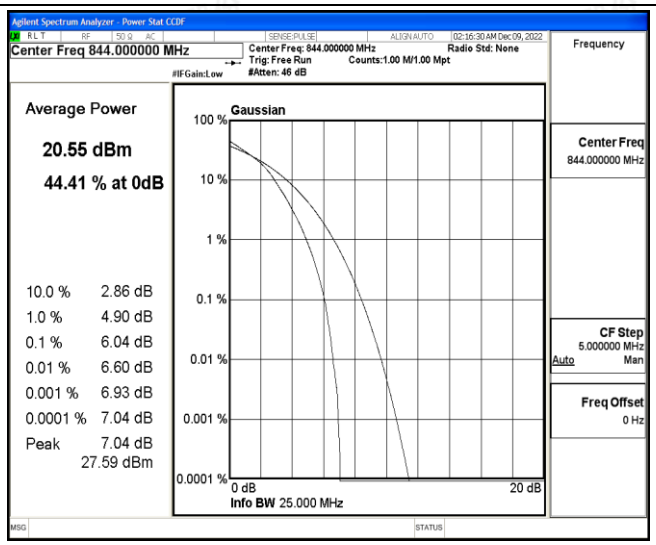
Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-50RB#0



Band5-10MHz-16QAM-20600-50RB#0

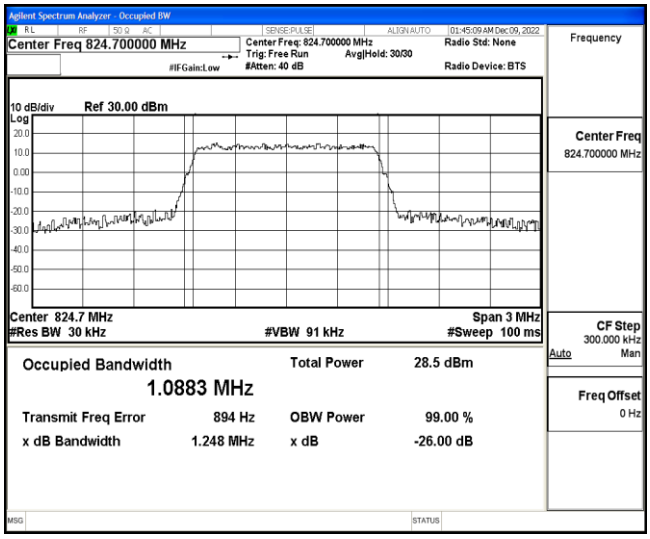

Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 844.000000 MHz
Center Freq: 844.000000 MHz
Trig: Free Run
Counts:1.00 M/1.00 Mpt
#Atten: 46 dB
Radio Std: None
Frequency
Average Power
20.55 dBm
44.41 % at 0dB
10.0 % 2.86 dB
1.0 % 4.90 dB
0.1 % 6.04 dB
0.01 % 6.60 dB
0.001 % 6.93 dB
0.0001 % 7.04 dB
Peak 7.04 dB
27.59 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
844.000000 MHz
CF Step
5.000000 MHz
Auto Man
Freq Offset
0 Hz

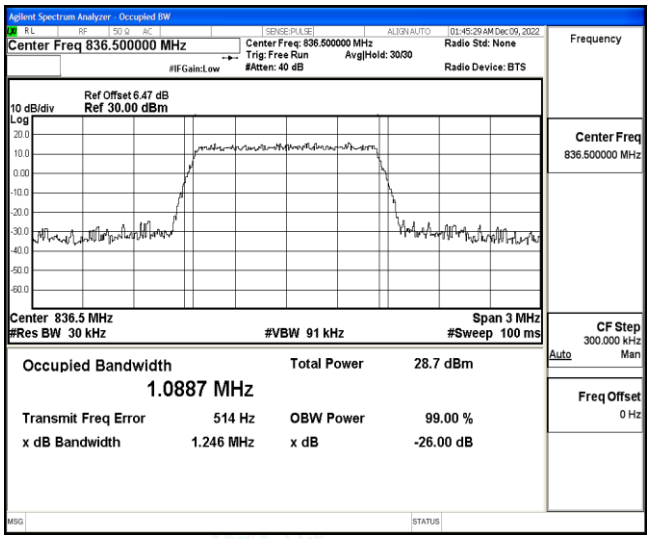
F.3 26dB Bandwidth and Occupied Bandwidth

Test Result

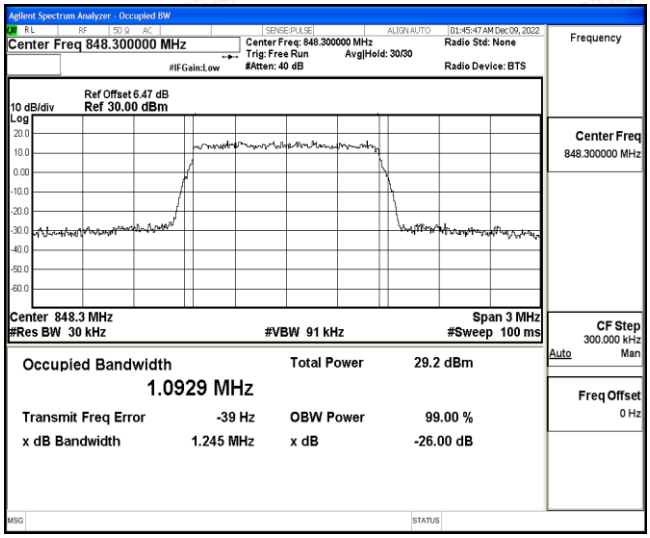
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0883	1.248	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0887	1.246	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0929	1.245	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.1054	1.249	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0966	1.248	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0982	1.242	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.7088	3.045	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.7045	3.020	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.7108	3.027	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6989	3.019	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.7159	3.030	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.7068	3.038	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5091	4.964	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.5114	4.972	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5081	4.964	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4973	4.946	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.5072	4.957	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.5279	5.026	PASS
Band5	10MHz	QPSK	20450	50RB#0	9.0172	9.908	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9805	9.817	PASS
Band5	10MHz	QPSK	20600	50RB#0	9.0029	9.900	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9932	9.913	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.9904	9.896	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9993	9.858	PASS

Test Graphs

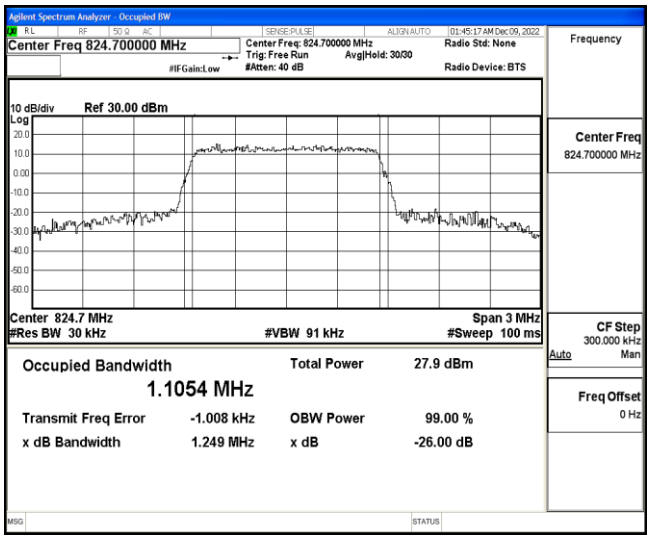
Band5-1.4MHz-QPSK-20407-6RB#0


Band5-1.4MHz-QPSK-20525-6RB#0


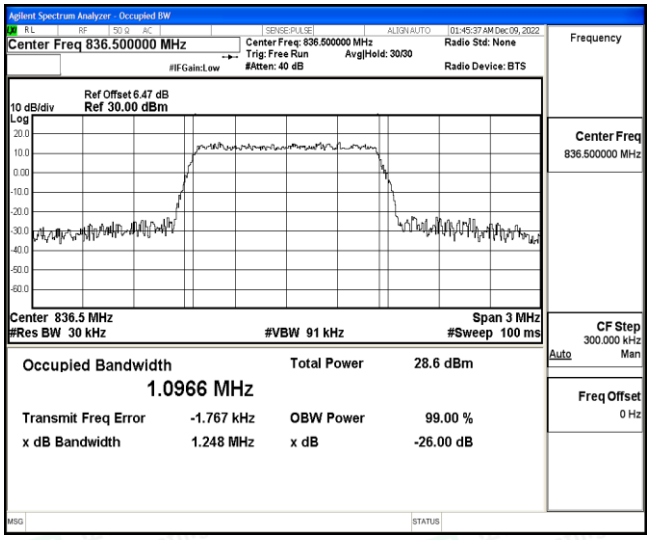
Band5-1.4MHz-QPSK-20643-6RB#0



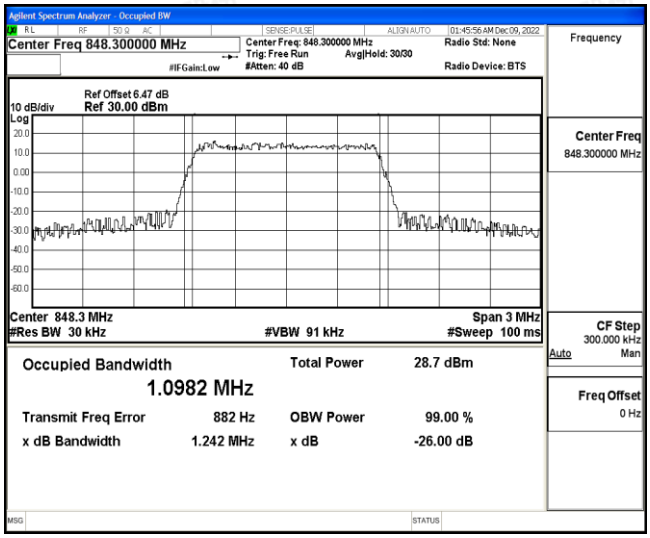
Band5-1.4MHz-16QAM-20407-6RB#0



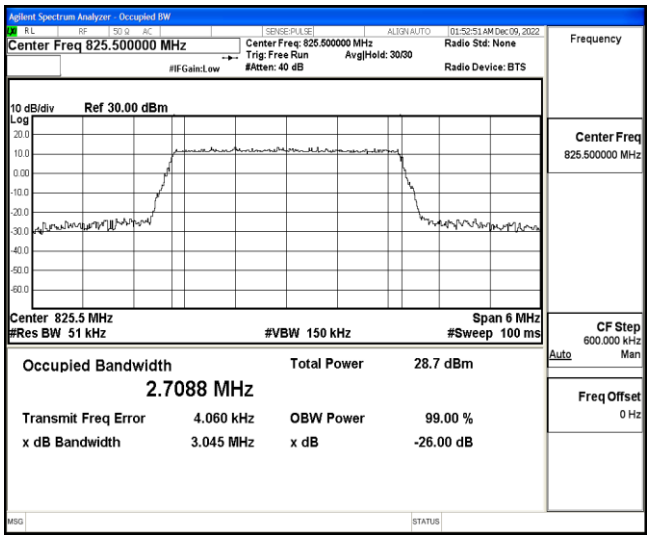
Band5-1.4MHz-16QAM-20525-6RB#0



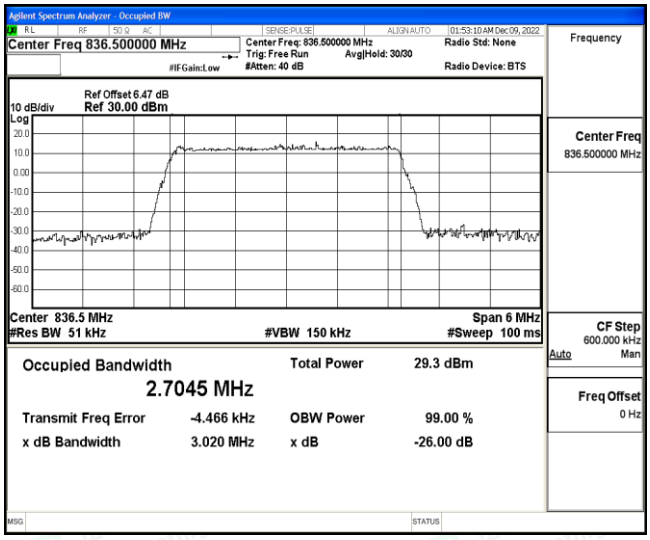
Band5-1.4MHz-16QAM-20643-6RB#0



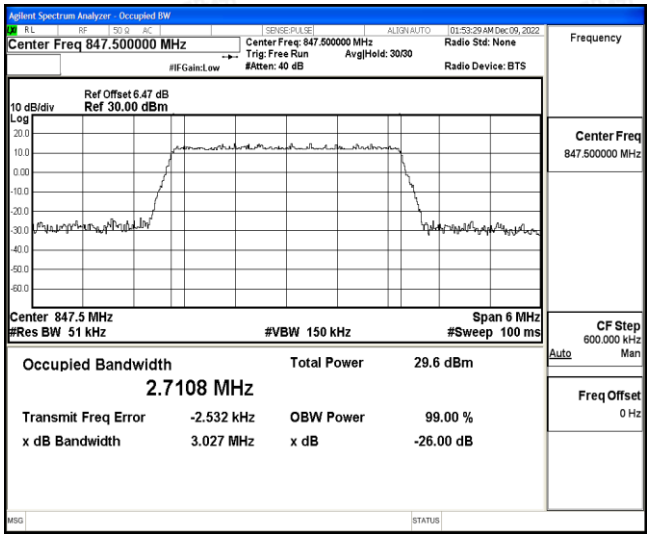
Band5-3MHz-QPSK-20415-15RB#0



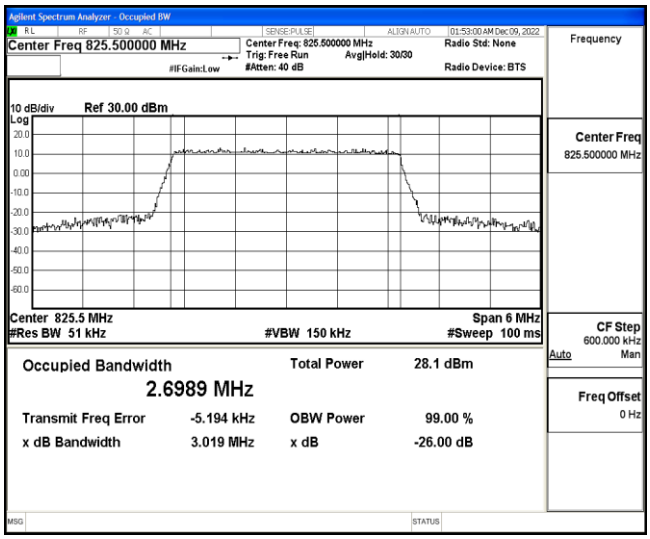
Band5-3MHz-QPSK-20525-15RB#0



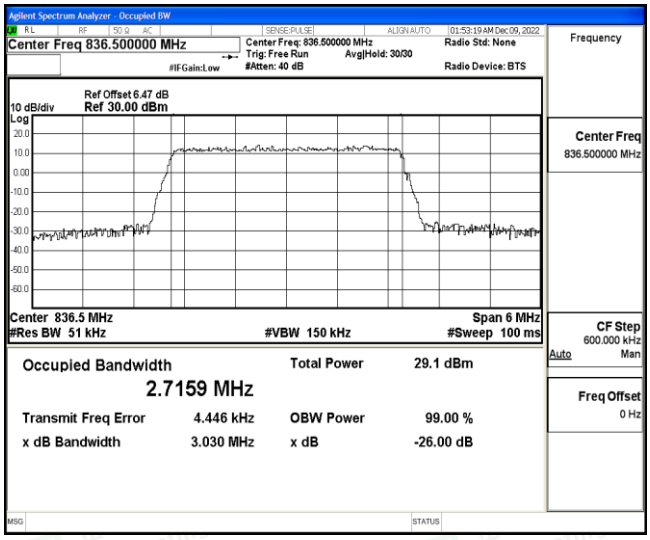
Band5-3MHz-QPSK-20635-15RB#0



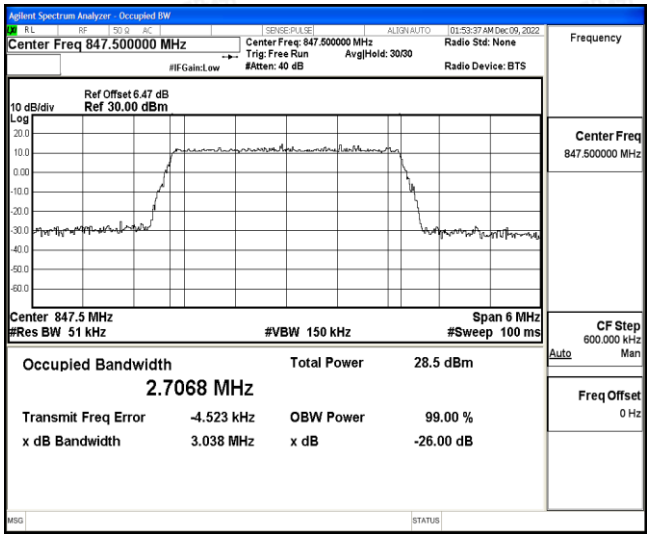
Band5-3MHz-16QAM-20415-15RB#0



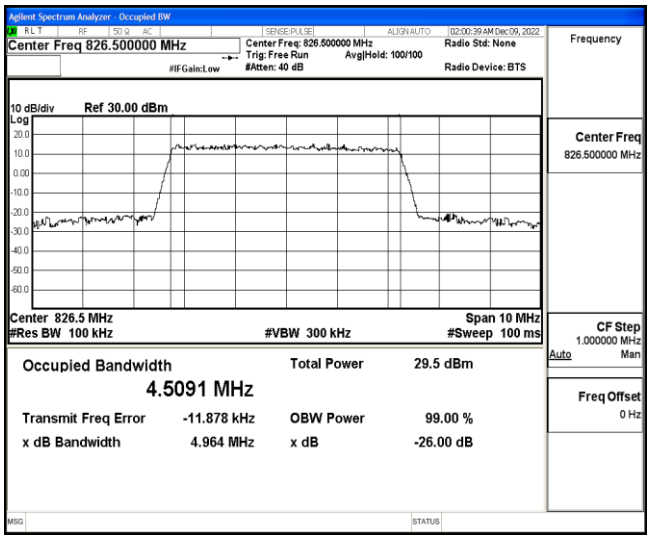
Band5-3MHz-16QAM-20525-15RB#0



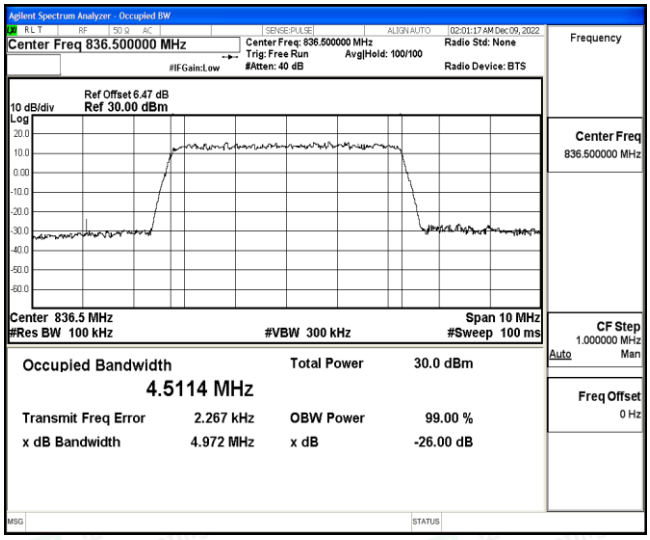
Band5-3MHz-16QAM-20635-15RB#0



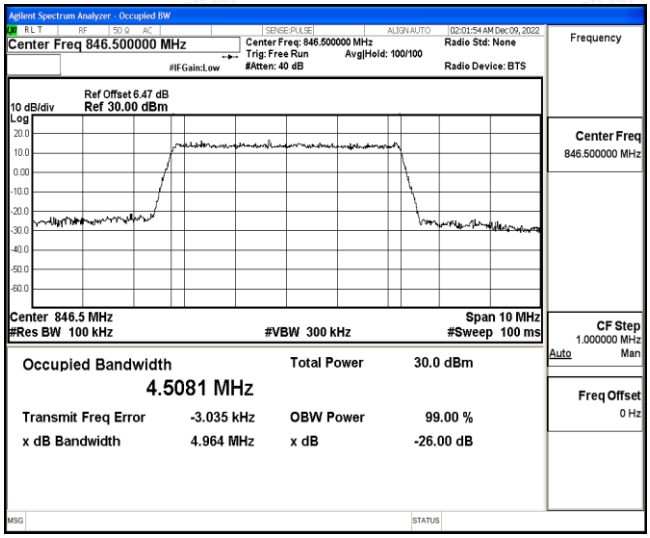
Band5-5MHz-QPSK-20425-25RB#0



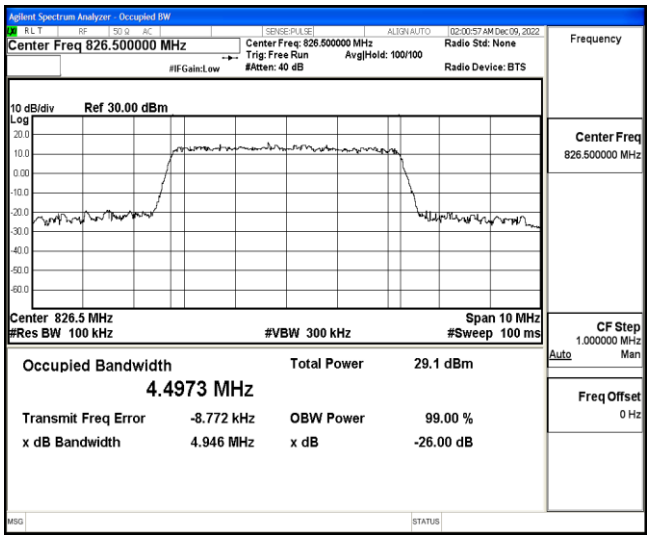
Band5-5MHz-QPSK-20525-25RB#0



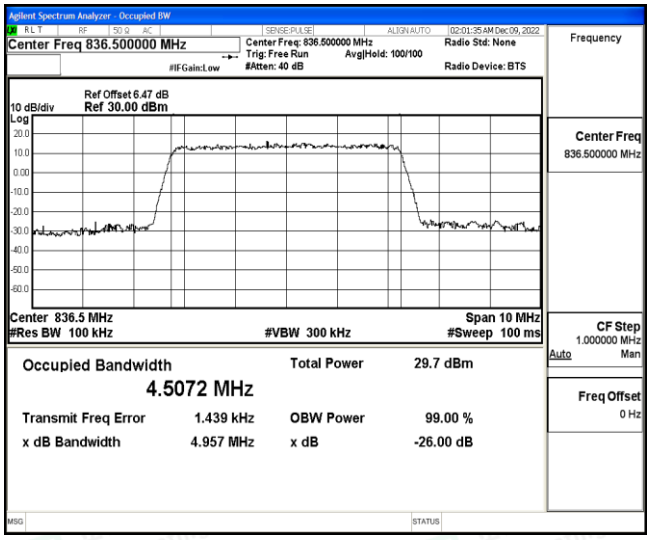
Band5-5MHz-QPSK-20625-25RB#0



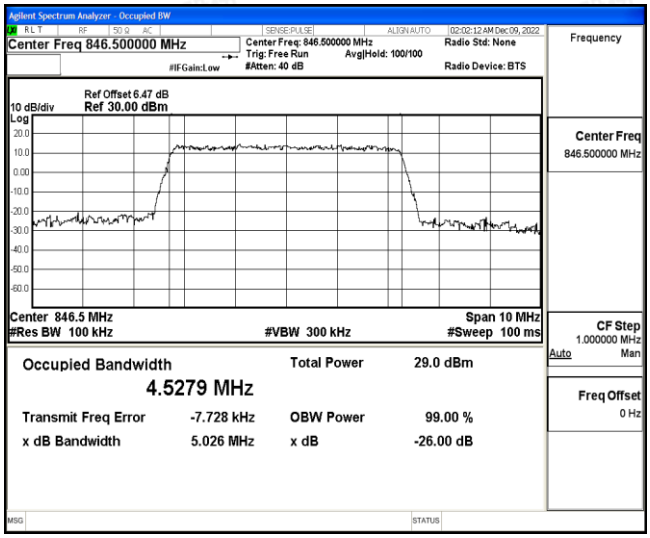
Band5-5MHz-16QAM-20425-25RB#0



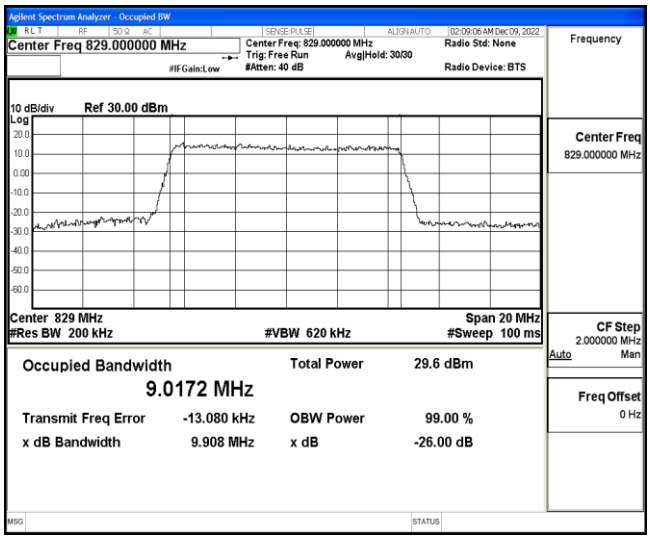
Band5-5MHz-16QAM-20525-25RB#0



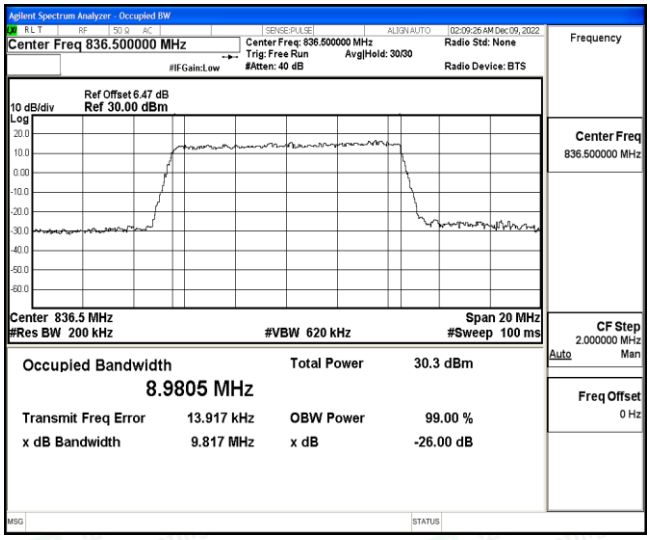
Band5-5MHz-16QAM-20625-25RB#0



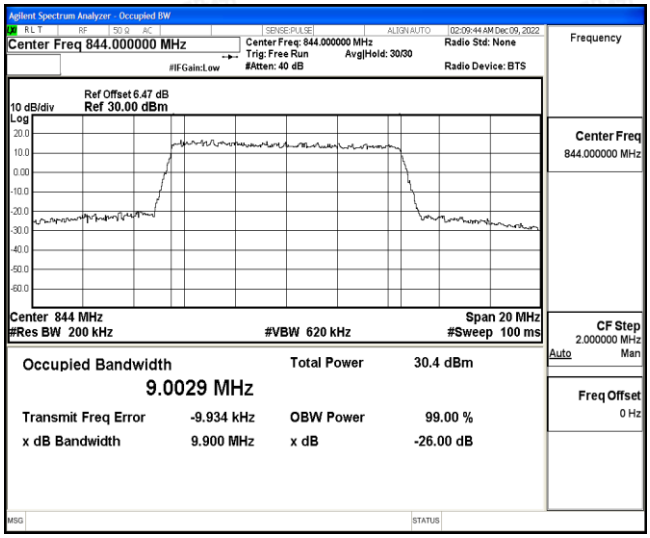
Band5-10MHz-QPSK-20450-50RB#0



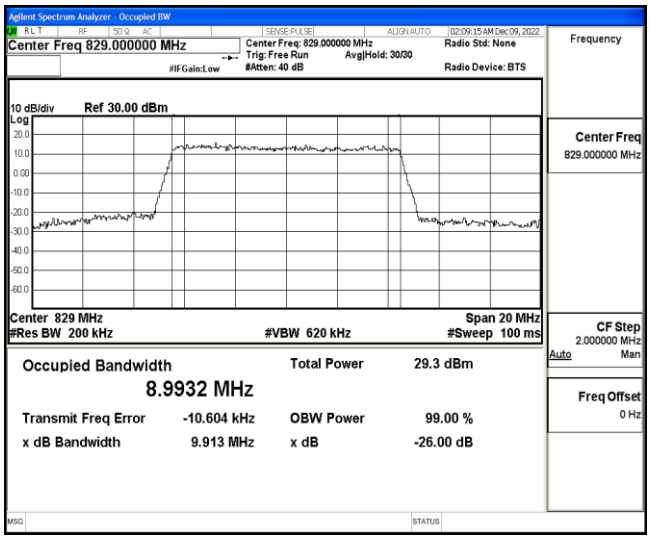
Band5-10MHz-QPSK-20525-50RB#0



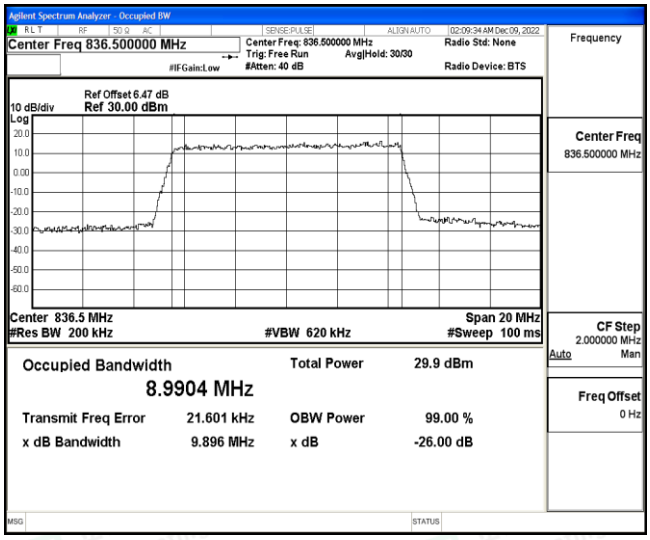
Band5-10MHz-QPSK-20600-50RB#0



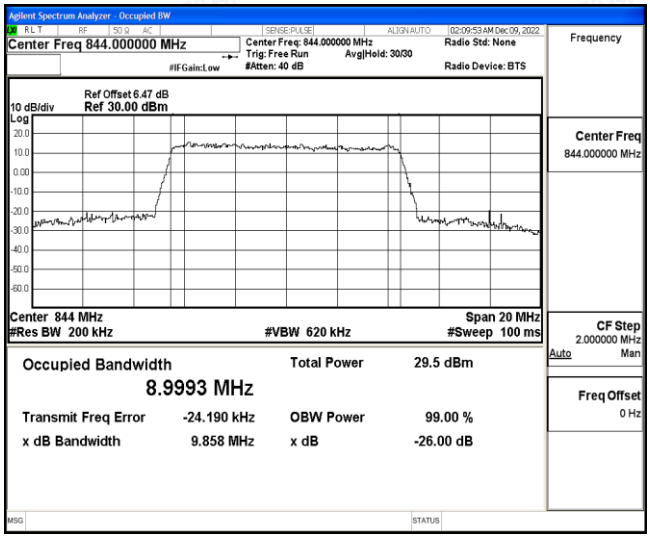
Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-50RB#0



Band5-10MHz-16QAM-20600-50RB#0


Agilent Spectrum Analyzer - Occupied BW
Center Freq 844.000000 MHz
Center Freq: 844.000000 MHz
Trig: Free Run
Avg|Hold: 30/30
#IFGain:Low
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
02:09:53 AM Dec 09, 2022
Frequency
Ref Offset 6.47 dB
10 dB/div
Ref 30.00 dBm
Log
Center Freq
844.000000 MHz
Center 844 MHz
#Res BW 200 kHz
#VBW 620 kHz
Span 20 MHz
#Sweep 100 ms
CF Step
2.000000 MHz
Auto
Man
Occupied Bandwidth
8.9993 MHz
Total Power 29.5 dBm
Transmit Freq Error -24.190 kHz
OBW Power 99.00 %
x dB Bandwidth 9.858 MHz
x dB -26.00 dB
Freq Offset
0 Hz
MSG
STATUS

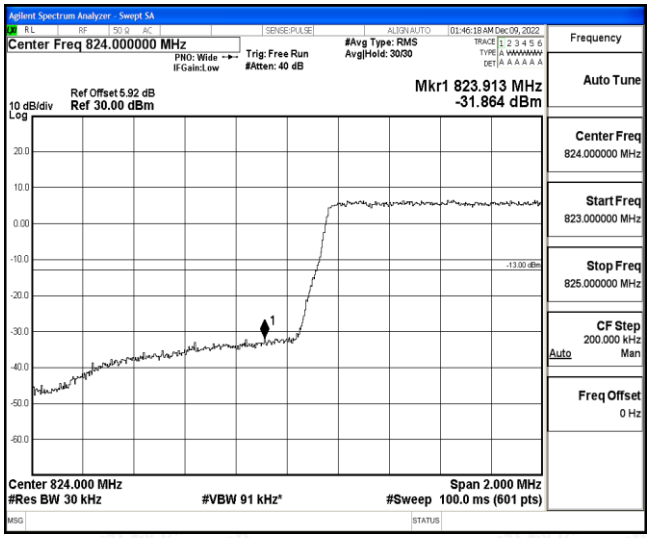
F.4 Band Edge

Test Result

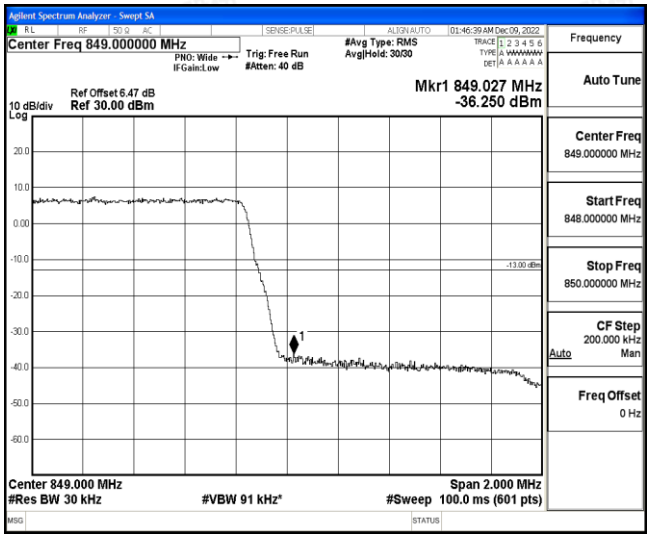
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	-31.86	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-36.25	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-31.92	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-35.71	PASS
Band5	3MHz	QPSK	20415	15RB#0	-23.19	PASS
Band5	3MHz	QPSK	20635	15RB#0	-23.12	PASS
Band5	3MHz	16QAM	20415	15RB#0	-24.30	PASS
Band5	3MHz	16QAM	20635	15RB#0	-24.19	PASS
Band5	5MHz	QPSK	20425	25RB#0	-27.38	PASS
Band5	5MHz	QPSK	20625	25RB#0	-27.64	PASS
Band5	5MHz	16QAM	20425	25RB#0	-28.01	PASS
Band5	5MHz	16QAM	20625	25RB#0	-29.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	-30.14	PASS
Band5	10MHz	QPSK	20600	50RB#0	-30.20	PASS
Band5	10MHz	16QAM	20450	50RB#0	-30.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	-30.90	PASS

Test Graphs

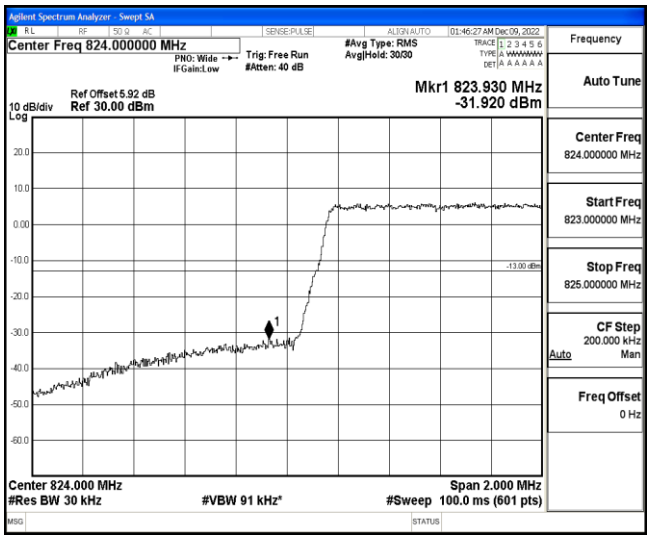
Band5-1.4MHz-QPSK-20407-6RB#0



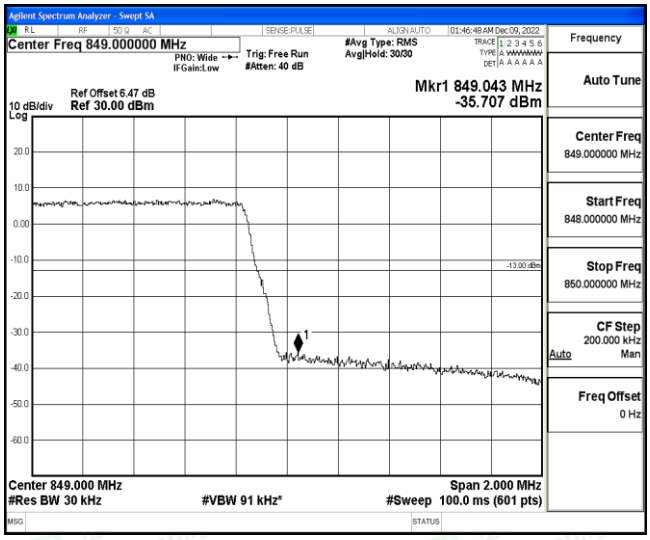
Band5-1.4MHz-QPSK-20643-6RB#0



Band5-1.4MHz-16QAM-20407-6RB#0



Band5-1.4MHz-16QAM-20643-6RB#0



Band5-3MHz-QPSK-20415-15RB#0