Appendix N: Test Data for E-UTRA Band 41

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

N.1 Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	20.94	PASS
Band41	5MHz	QPSK	39675	1RB#12	20.98	PASS
Band41	5MHz	QPSK	39675	1RB#24	21.01	PASS
Band41	5MHz	QPSK	39675	12RB#0	19.95	PASS
Band41	5MHz	QPSK	39675	12RB#6	19.94	PASS
Band41	5MHz	QPSK	39675	12RB#13	19.88	PASS
Band41	5MHz	QPSK	39675	25RB#0	19.94	PASS
Band41	5MHz	QPSK	40620	1RB#0	21.05	PASS
Band41	5MHz	QPSK	40620	1RB#12	21.10	PASS
Band41	5MHz	QPSK	40620	1RB#24	20.95	PASS
Band41	5MHz	QPSK	40620	12RB#0	19.88	PASS
Band41	5MHz	QPSK	40620	12RB#6	19.87	PASS
Band41	5MHz	QPSK	40620	12RB#13	19.80	PASS
Band41	5MHz	QPSK	40620	25RB#0	19.88	PASS
Band41	5MHz	QPSK	41565	1RB#0	20.71	PASS
Band41	5MHz	QPSK	41565	1RB#12	20.78	PASS
Band41	5MHz	QPSK	41565	1RB#24	20.65	PASS
Band41	5MHz	QPSK	41565	12RB#0	19.50	PASS
Band41	5MHz	QPSK	41565	12RB#6	19.50	PASS
Band41	5MHz	QPSK	41565	12RB#13	19.56	PASS
Band41	5MHz	QPSK	41565	25RB#0	19.63	PASS
Band41	5MHz	16QAM	39675	1RB#0	20.42	PASS
Band41	5MHz	16QAM	39675	1RB#12	20.34	PASS
Band41	5MHz	16QAM	39675	1RB#24	20.40	PASS
Band41	5MHz	16QAM	39675	12RB#0	19.26	PASS
Band41	5MHz	16QAM	39675	12RB#6	19.24	PASS
Band41	5MHz	16QAM	39675	12RB#13	19.26	PASS
Band41	5MHz	16QAM	39675	25RB#0	19.32	PASS

Band41	5MHz	16QAM	40620	1RB#0	20.34	PASS
Band41	5MHz	16QAM	40620	1RB#12	20.50	PASS
Band41	5MHz	16QAM	40620	1RB#24	20.34	PASS
Band41	5MHz	16QAM	40620	12RB#0	19.19	PASS
Band41	5MHz	16QAM	40620	12RB#6	19.29	PASS
Band41	5MHz	16QAM	40620	12RB#13	19.20	PASS
Band41	5MHz	16QAM	40620	25RB#0	19.27	PASS
Band41	5MHz	16QAM	41565	1RB#0	19.99	PASS
Band41	5MHz	16QAM	41565	1RB#12	19.95	PASS
Band41	5MHz	16QAM	41565	1RB#24	20.09	PASS
Band41	5MHz	16QAM	41565	12RB#0	18.86	PASS
Band41	5MHz	16QAM	41565	12RB#6	18.84	PASS
Band41	5MHz	16QAM	41565	12RB#13	18.93	PASS
Band41	5MHz	16QAM	41565	25RB#0	18.97	PASS
Band41	10MHz	QPSK	39700	1RB#0	21.41	PASS
Band41	10MHz	QPSK	39700	1RB#24	21.33	PASS
Band41	10MHz	QPSK	39700	1RB#49	21.27	PASS
Band41	10MHz	QPSK	39700	25RB#0	20.32	PASS
Band41	10MHz	QPSK	39700	25RB#12	20.34	PASS
Band41	10MHz	QPSK	39700	25RB#25	20.20	PASS
Band41	10MHz	QPSK	39700	50RB#0	20.19	PASS
Band41	10MHz	QPSK	40620	1RB#0	21.42	PASS
Band41	10MHz	QPSK	40620	1RB#24	21.25	PASS
Band41	10MHz	QPSK	40620	1RB#49	21.27	PASS
Band41	10MHz	QPSK	40620	25RB#0	20.26	PASS
Band41	10MHz	QPSK	40620	25RB#12	20.22	PASS
Band41	10MHz	QPSK	40620	25RB#25	20.13	PASS
Band41	10MHz	QPSK	40620	50RB#0	20.17	PASS
Band41	10MHz	QPSK	41540	1RB#0	20.92	PASS
Band41	10MHz	QPSK	41540	1RB#24	20.90	PASS
Band41	10MHz	QPSK	41540	1RB#49	20.92	PASS
Band41	10MHz	QPSK	41540	25RB#0	19.86	PASS
Band41	10MHz	QPSK	41540	25RB#12	19.87	PASS
Band41	10MHz	QPSK	41540	25RB#25	19.84	PASS
Band41	10MHz	QPSK	41540	50RB#0	19.76	PASS

Band41	10MHz	16QAM	39700	1RB#0	20.93	PASS
Band41	10MHz	16QAM	39700	1RB#24	20.88	PASS
Band41	10MHz	16QAM	39700	1RB#49	20.81	PASS
Band41	10MHz	16QAM	39700	25RB#0	19.64	PASS
Band41	10MHz	16QAM	39700	25RB#12	19.64	PASS
Band41	10MHz	16QAM	39700	25RB#25	19.50	PASS
Band41	10MHz	16QAM	39700	50RB#0	19.62	PASS
Band41	10MHz	16QAM	40620	1RB#0	21.00	PASS
Band41	10MHz	16QAM	40620	1RB#24	20.99	PASS
Band41	10MHz	16QAM	40620	1RB#49	20.92	PASS
Band41	10MHz	16QAM	40620	25RB#0	19.57	PASS
Band41	10MHz	16QAM	40620	25RB#12	19.53	PASS
Band41	10MHz	16QAM	40620	25RB#25	19.51	PASS
Band41	10MHz	16QAM	40620	50RB#0	19.59	PASS
Band41	10MHz	16QAM	41540	1RB#0	20.44	PASS
Band41	10MHz	16QAM	41540	1RB#24	20.41	PASS
Band41	10MHz	16QAM	41540	1RB#49	20.44	PASS
Band41	10MHz	16QAM	41540	25RB#0	19.11	PASS
Band41	10MHz	16QAM	41540	25RB#12	19.12	PASS
Band41	10MHz	16QAM	41540	25RB#25	19.09	PASS
Band41	10MHz	16QAM	41540	50RB#0	19.12	PASS
Band41	15MHz	QPSK	39725	1RB#0	21.39	PASS
Band41	15MHz	QPSK	39725	1RB#38	21.21	PASS
Band41	15MHz	QPSK	39725	1RB#74	21.07	PASS
Band41	15MHz	QPSK	39725	38RB#0	20.24	PASS
Band41	15MHz	QPSK	39725	38RB#18	20.27	PASS
Band41	15MHz	QPSK	39725	38RB#37	20.21	PASS
Band41	15MHz	QPSK	39725	75RB#0	20.21	PASS
Band41	15MHz	QPSK	40620	1RB#0	21.42	PASS
Band41	15MHz	QPSK	40620	1RB#38	21.33	PASS
Band41	15MHz	QPSK	40620	1RB#74	21.22	PASS
Band41	15MHz	QPSK	40620	38RB#0	20.21	PASS
Band41	15MHz	QPSK	40620	38RB#18	20.22	PASS
Band41	15MHz	QPSK	40620	38RB#37	20.22	PASS
Band41	15MHz	QPSK	40620	75RB#0	20.21	PASS

Band41	15MHz	QPSK	41515	1RB#0	20.96	PASS
Band41	15MHz	QPSK	41515	1RB#38	20.88	PASS
Band41	15MHz	QPSK	41515	1RB#74	21.06	PASS
Band41	15MHz	QPSK	41515	38RB#0	19.88	PASS
Band41	15MHz	QPSK	41515	38RB#18	19.88	PASS
Band41	15MHz	QPSK	41515	38RB#37	19.88	PASS
Band41	15MHz	QPSK	41515	75RB#0	19.88	PASS
Band41	15MHz	16QAM	39725	1RB#0	21.10	PASS
Band41	15MHz	16QAM	39725	1RB#38	20.87	PASS
Band41	15MHz	16QAM	39725	1RB#74	20.66	PASS
Band41	15MHz	16QAM	39725	38RB#0	20.19	PASS
Band41	15MHz	16QAM	39725	38RB#18	20.21	PASS
Band41	15MHz	16QAM	39725	38RB#37	20.21	PASS
Band41	15MHz	16QAM	39725	75RB#0	19.56	PASS
Band41	15MHz	16QAM	40620	1RB#0	21.08	PASS
Band41	15MHz	16QAM	40620	1RB#38	20.95	PASS
Band41	15MHz	16QAM	40620	1RB#74	20.69	PASS
Band41	15MHz	16QAM	40620	38RB#0	20.21	PASS
Band41	15MHz	16QAM	40620	38RB#18	20.22	PASS
Band41	15MHz	16QAM	40620	38RB#37	20.21	PASS
Band41	15MHz	16QAM	40620	75RB#0	19.67	PASS
Band41	15MHz	16QAM	41515	1RB#0	20.35	PASS
Band41	15MHz	16QAM	41515	1RB#38	20.38	PASS
Band41	15MHz	16QAM	41515	1RB#74	20.48	PASS
Band41	15MHz	16QAM	41515	38RB#0	19.88	PASS
Band41	15MHz	16QAM	41515	38RB#18	19.88	PASS
Band41	15MHz	16QAM	41515	38RB#37	19.88	PASS
Band41	15MHz	16QAM	41515	75RB#0	19.15	PASS
Band41	20MHz	QPSK	39750	1RB#0	21.04	PASS
Band41	20MHz	QPSK	39750	1RB#49	20.74	PASS
Band41	20MHz	QPSK	39750	1RB#99	20.58	PASS
Band41	20MHz	QPSK	39750	50RB#0	20.04	PASS
Band41	20MHz	QPSK	39750	50RB#25	20.06	PASS
Band41	20MHz	QPSK	39750	50RB#50	19.74	PASS
Band41	20MHz	QPSK	39750	100RB#0	19.92	PASS

Band41	20MHz	QPSK	40620	1RB#0	21.50	PASS
Band41	20MHz	QPSK	40620	1RB#49	21.26	PASS
Band41	20MHz	QPSK	40620	1RB#99	21.22	PASS
Band41	20MHz	QPSK	40620	50RB#0	20.32	PASS
Band41	20MHz	QPSK	40620	50RB#25	20.30	PASS
Band41	20MHz	QPSK	40620	50RB#50	20.05	PASS
Band41	20MHz	QPSK	40620	100RB#0	20.05	PASS
Band41	20MHz	QPSK	41490	1RB#0	20.94	PASS
Band41	20MHz	QPSK	41490	1RB#49	20.95	PASS
Band41	20MHz	QPSK	41490	1RB#99	21.07	PASS
Band41	20MHz	QPSK	41490	50RB#0	19.93	PASS
Band41	20MHz	QPSK	41490	50RB#25	19.94	PASS
Band41	20MHz	QPSK	41490	50RB#50	19.97	PASS
Band41	20MHz	QPSK	41490	100RB#0	19.89	PASS
Band41	20MHz	16QAM	39750	1RB#0	20.66	PASS
Band41	20MHz	16QAM	39750	1RB#49	20.63	PASS
Band41	20MHz	16QAM	39750	1RB#99	20.63	PASS
Band41	20MHz	16QAM	39750	50RB#0	19.44	PASS
Band41	20MHz	16QAM	39750	50RB#25	19.44	PASS
Band41	20MHz	16QAM	39750	50RB#50	19.27	PASS
Band41	20MHz	16QAM	39750	100RB#0	19.34	PASS
Band41	20MHz	16QAM	40620	1RB#0	21.23	PASS
Band41	20MHz	16QAM	40620	1RB#49	20.90	PASS
Band41	20MHz	16QAM	40620	1RB#99	20.94	PASS
Band41	20MHz	16QAM	40620	50RB#0	19.81	PASS
Band41	20MHz	16QAM	40620	50RB#25	19.66	PASS
Band41	20MHz	16QAM	40620	50RB#50	19.56	PASS
Band41	20MHz	16QAM	40620	100RB#0	19.50	PASS
Band41	20MHz	16QAM	41490	1RB#0	20.57	PASS
Band41	20MHz	16QAM	41490	1RB#49	20.46	PASS
Band41	20MHz	16QAM	41490	1RB#99	20.64	PASS
Band41	20MHz	16QAM	41490	50RB#0	19.28	PASS
Band41	20MHz	16QAM	41490	50RB#25	19.24	PASS
Band41	20MHz	16QAM	41490	50RB#50	19.39	PASS
Band41	20MHz	16QAM	41490	100RB#0	19.29	PASS

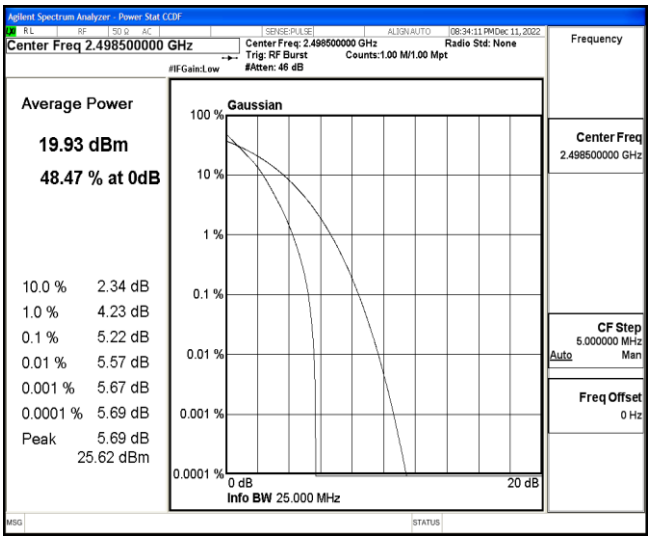
N.2 Peak-to-Average Ratio(CCDF)

Test Result

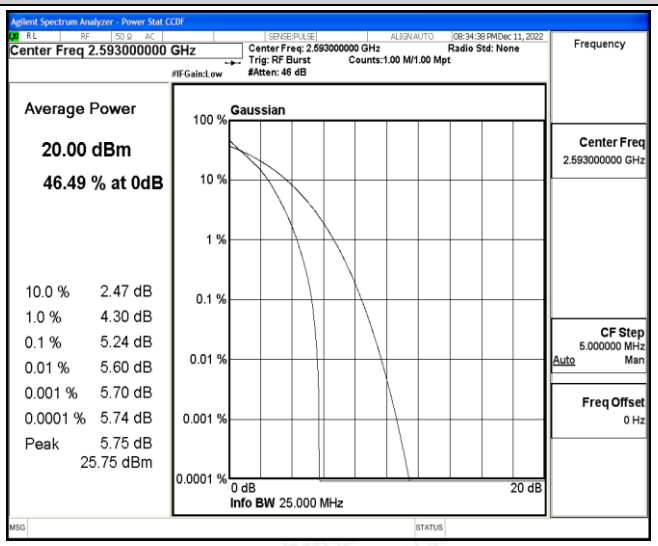
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	5.22	13	PASS
Band41	5MHz	QPSK	40620	25RB#0	5.24	13	PASS
Band41	5MHz	QPSK	41565	25RB#0	5.20	13	PASS
Band41	5MHz	16QAM	39675	25RB#0	5.82	13	PASS
Band41	5MHz	16QAM	40620	25RB#0	5.87	13	PASS
Band41	5MHz	16QAM	41565	25RB#0	5.86	13	PASS
Band41	10MHz	QPSK	39700	50RB#0	5.30	13	PASS
Band41	10MHz	QPSK	40620	50RB#0	5.31	13	PASS
Band41	10MHz	QPSK	41540	50RB#0	5.20	13	PASS
Band41	10MHz	16QAM	39700	50RB#0	5.95	13	PASS
Band41	10MHz	16QAM	40620	50RB#0	5.95	13	PASS
Band41	10MHz	16QAM	41540	50RB#0	5.89	13	PASS
Band41	15MHz	QPSK	39725	75RB#0	5.51	13	PASS
Band41	15MHz	QPSK	40620	75RB#0	5.53	13	PASS
Band41	15MHz	QPSK	41515	75RB#0	5.42	13	PASS
Band41	15MHz	16QAM	39725	75RB#0	6.06	13	PASS
Band41	15MHz	16QAM	40620	75RB#0	6.06	13	PASS
Band41	15MHz	16QAM	41515	75RB#0	6.03	13	PASS
Band41	20MHz	QPSK	39750	100RB#0	5.29	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	5.29	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	5.26	13	PASS
Band41	20MHz	16QAM	39750	100RB#0	5.97	13	PASS
Band41	20MHz	16QAM	40620	100RB#0	6.01	13	PASS
Band41	20MHz	16QAM	41490	100RB#0	5.96	13	PASS

Test Graphs

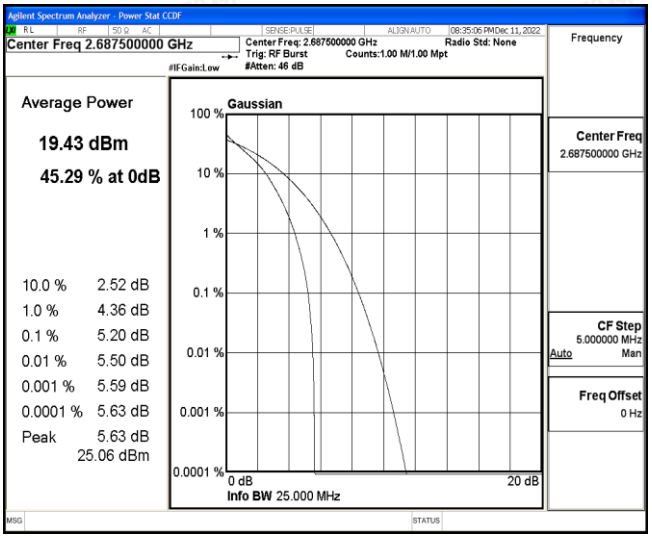
Band41-5MHz-QPSK-39675-25RB#0



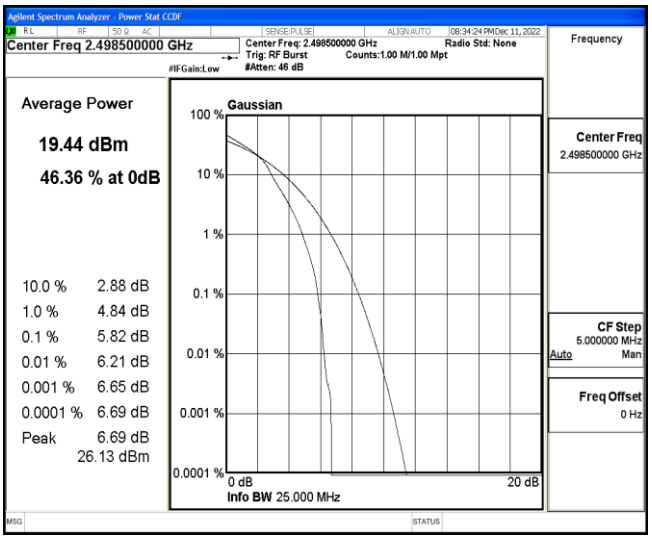
Band41-5MHz-QPSK-40620-25RB#0



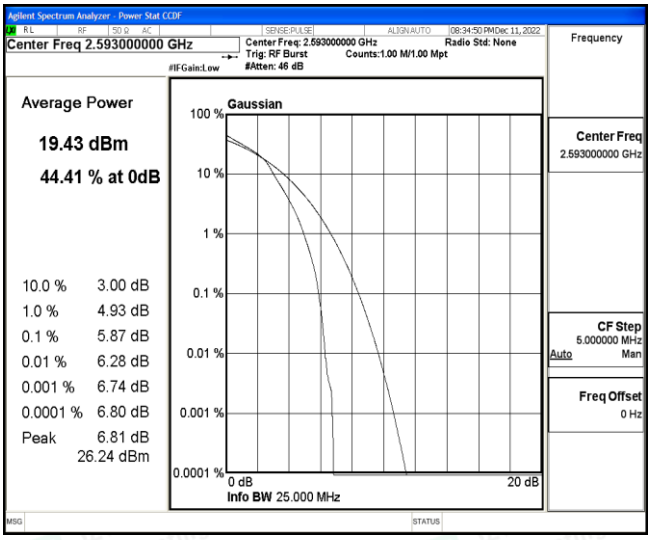
Band41-5MHz-QPSK-41565-25RB#0



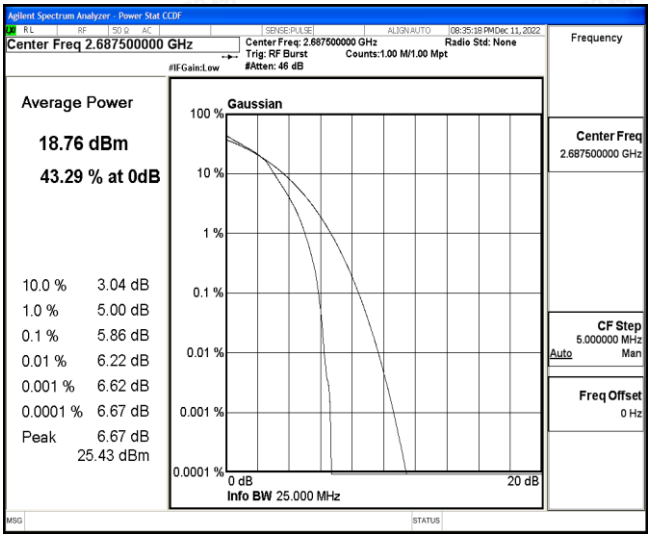
Band41-5MHz-16QAM-39675-25RB#0



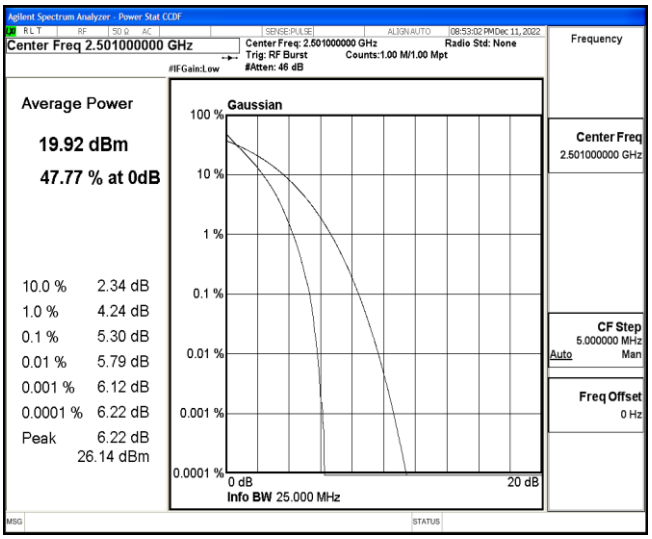
Band41-5MHz-16QAM-40620-25RB#0



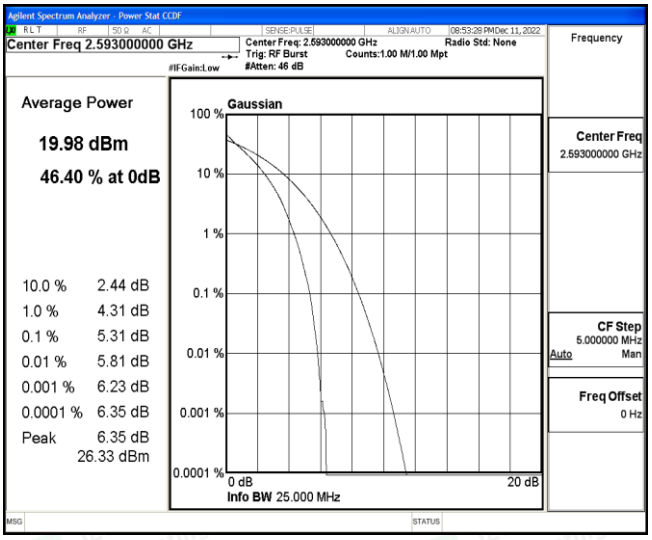
Band41-5MHz-16QAM-41565-25RB#0



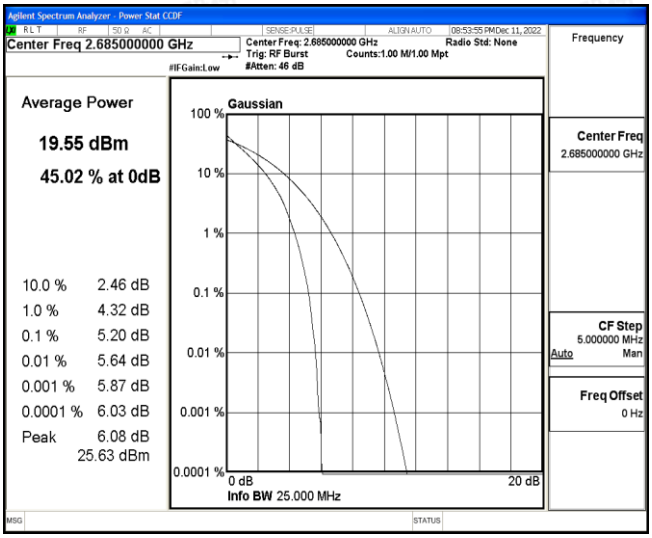
Band41-10MHz-QPSK-39700-50RB#0



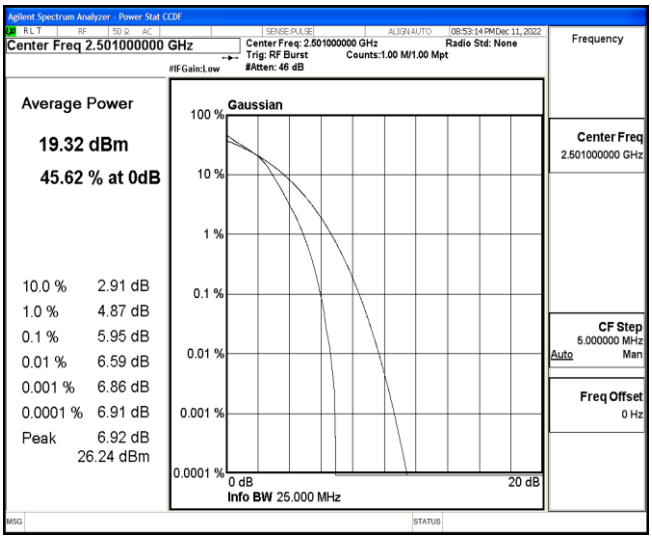
Band41-10MHz-QPSK-40620-50RB#0



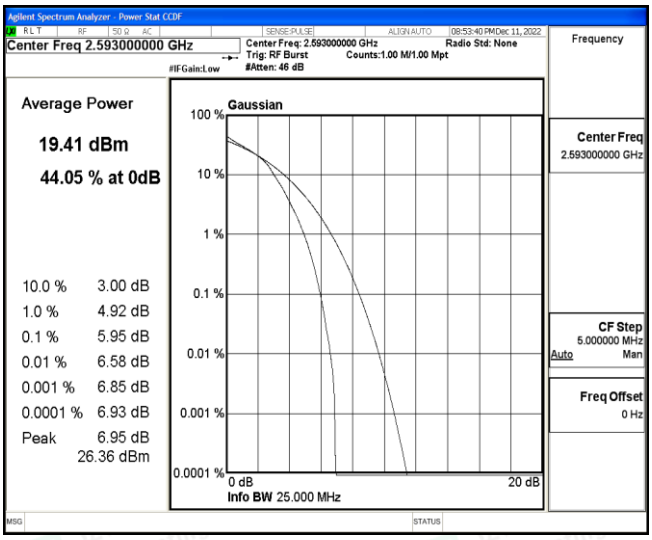
Band41-10MHz-QPSK-41540-50RB#0



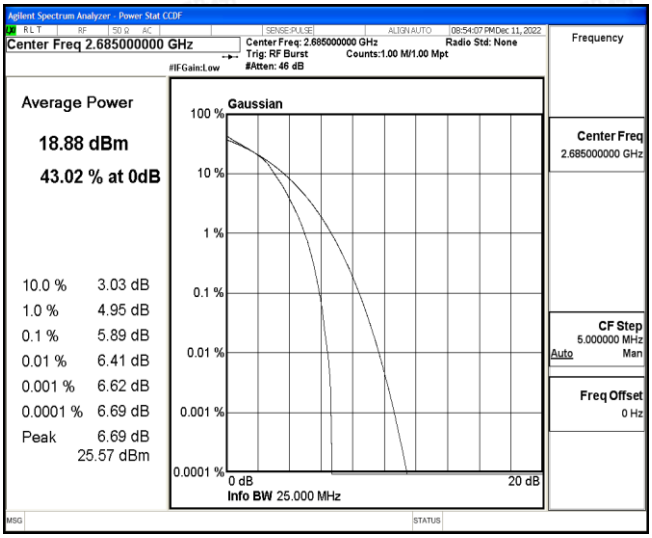
Band41-10MHz-16QAM-39700-50RB#0



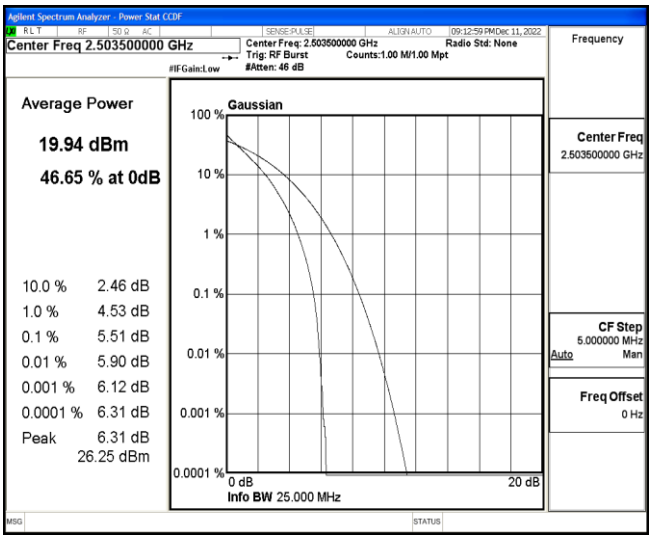
Band41-10MHz-16QAM-40620-50RB#0



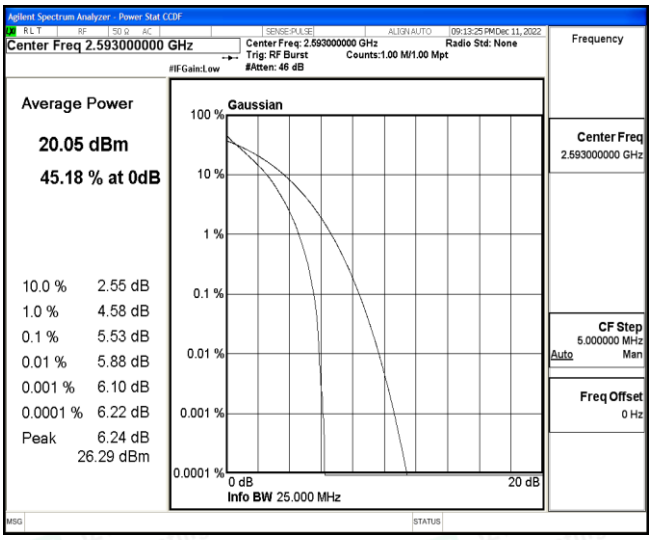
Band41-10MHz-16QAM-41540-50RB#0



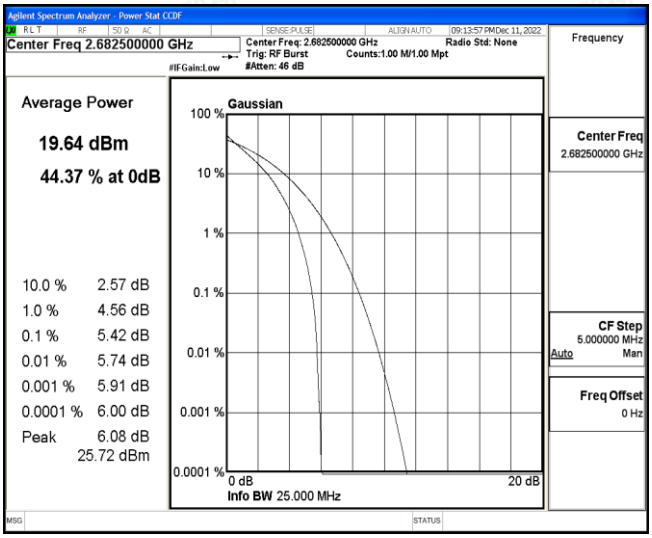
Band41-15MHz-QPSK-39725-75RB#0



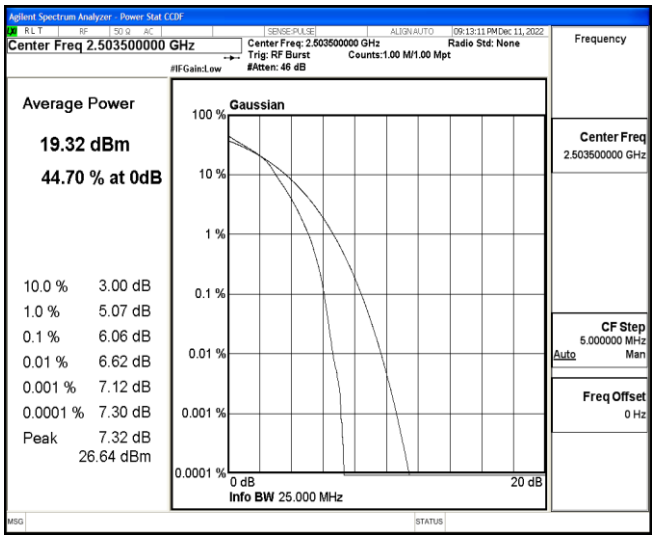
Band41-15MHz-QPSK-40620-75RB#0



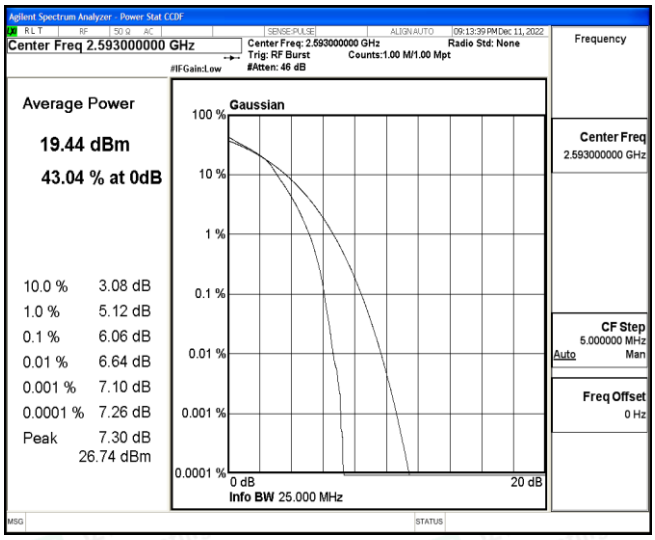
Band41-15MHz-QPSK-41515-75RB#0



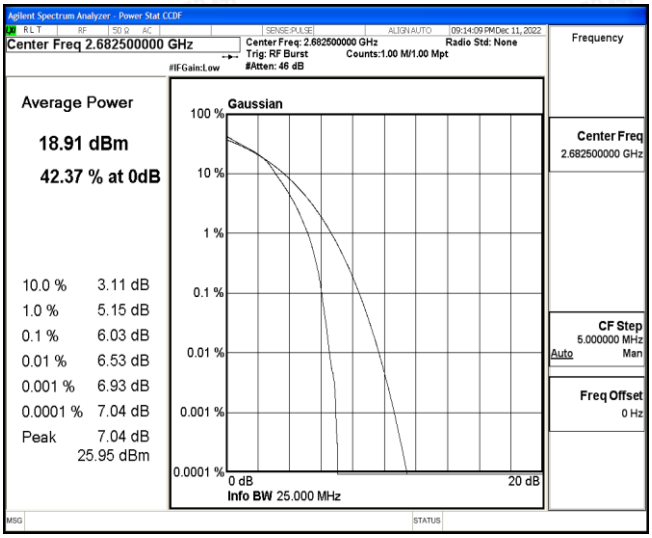
Band41-15MHz-16QAM-39725-75RB#0



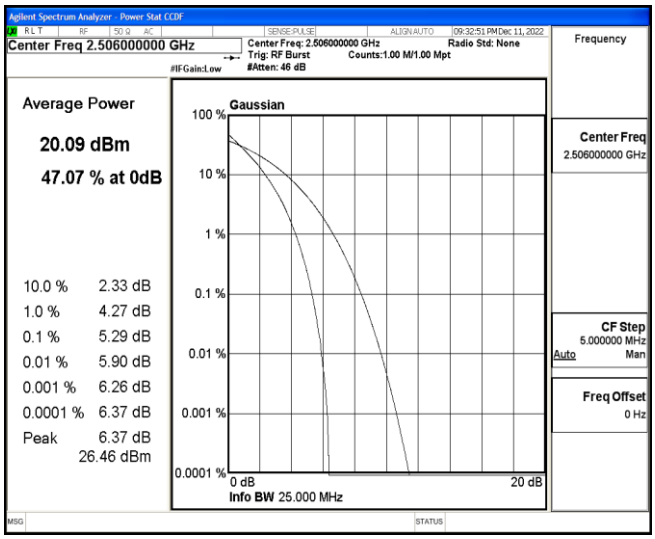
Band41-15MHz-16QAM-40620-75RB#0



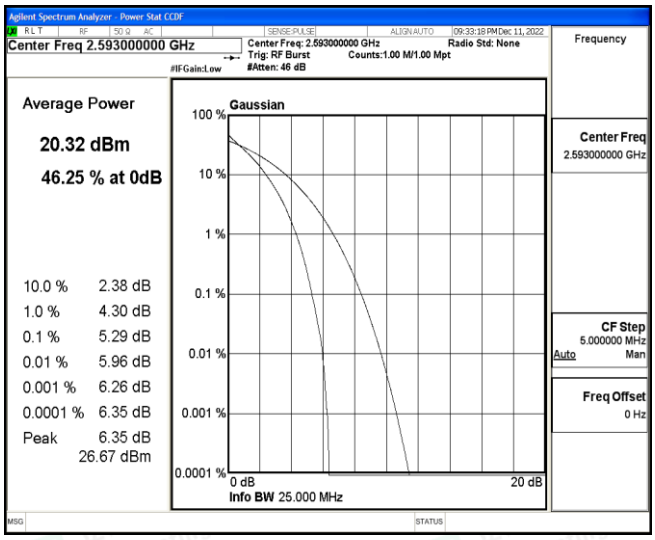
Band41-15MHz-16QAM-41515-75RB#0



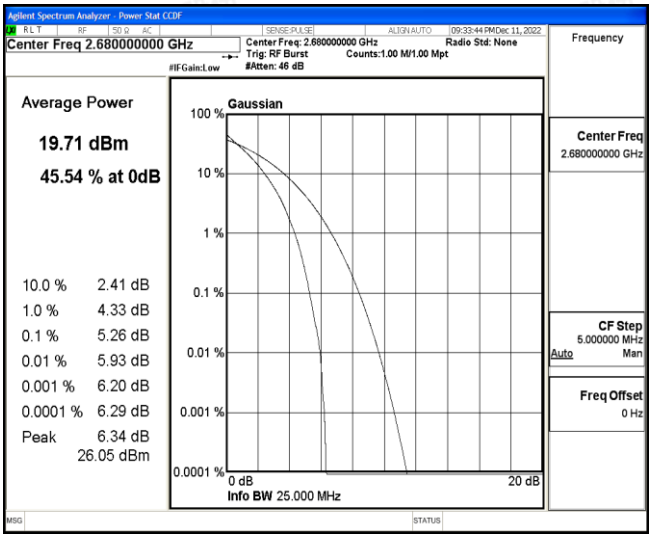
Band41-20MHz-QPSK-39750-100RB#0



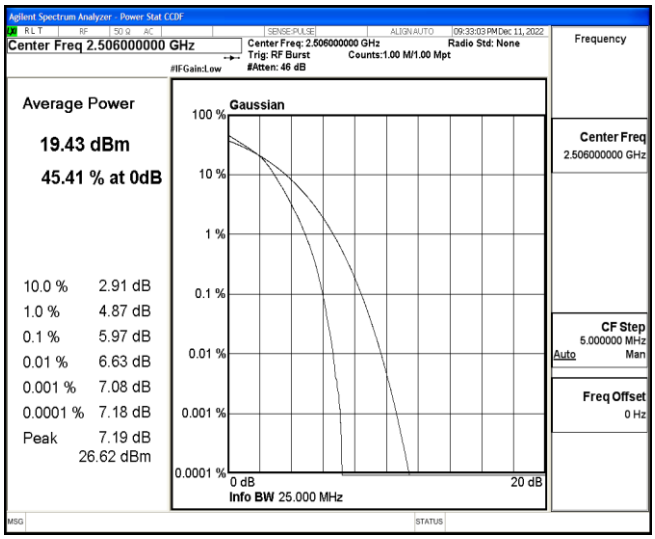
Band41-20MHz-QPSK-40620-100RB#0



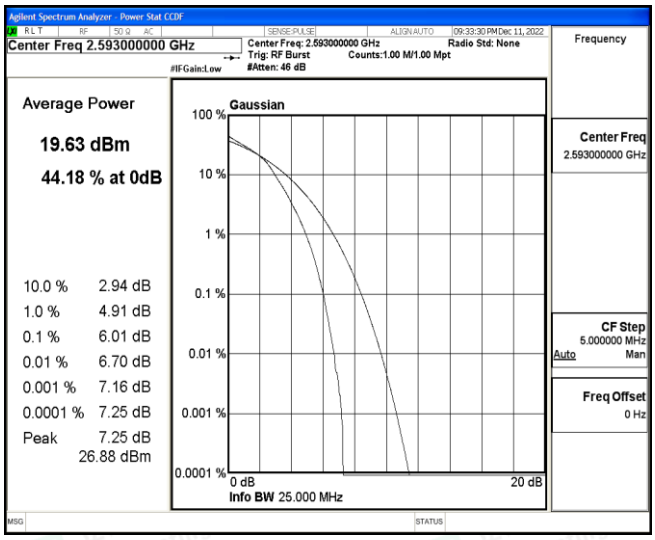
Band41-20MHz-QPSK-41490-100RB#0



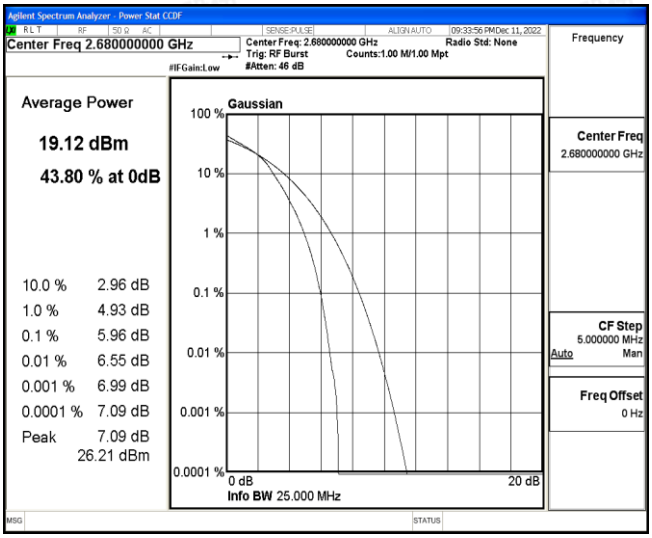
Band41-20MHz-16QAM-39750-100RB#0



Band41-20MHz-16QAM-40620-100RB#0



Band41-20MHz-16QAM-41490-100RB#0


Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 2.680000000 GHz
Center Freq: 2.680000000 GHz
Trig: RF Burst
#Atten: 46 dB
Counts:1.00 M/1.00 Mpt
Radio Std: None
Frequency
Average Power
19.12 dBm
43.80 % at 0dB
10.0 % 2.96 dB
1.0 % 4.93 dB
0.1 % 5.96 dB
0.01 % 6.55 dB
0.001 % 6.99 dB
0.0001 % 7.09 dB
Peak 7.09 dB
26.21 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
2.680000000 GHz
CF Step
5.000000 MHz
Auto Man
Freq Offset
0 Hz

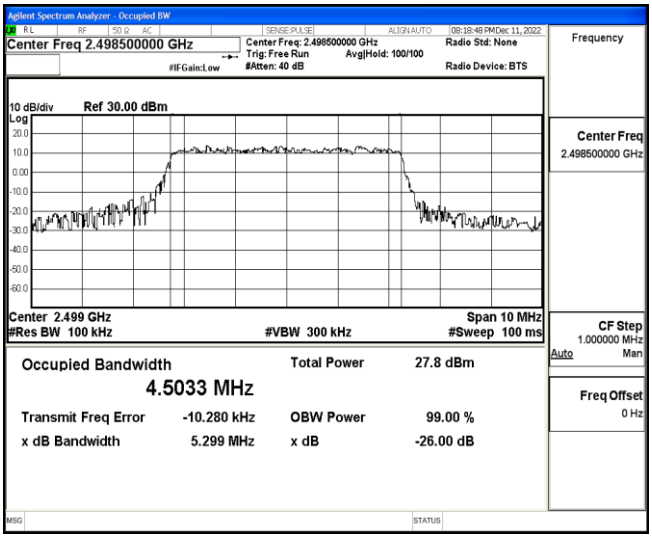
N.3 26dB Bandwidth and Occupied Bandwidth

Test Result

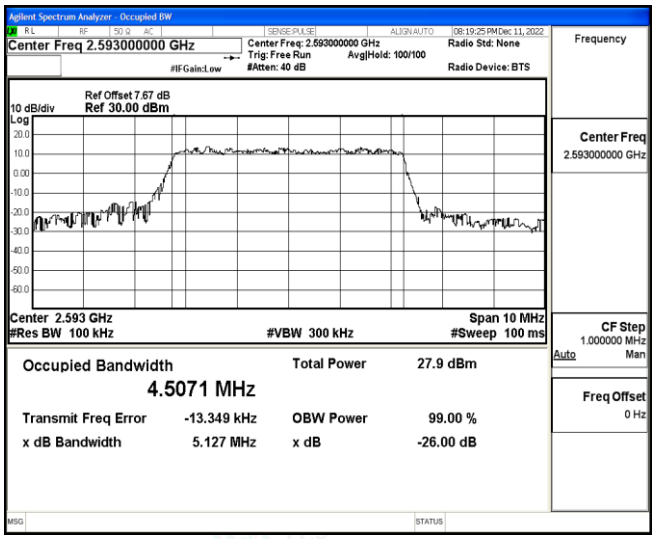
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.5033	5.299	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.5071	5.127	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.5191	5.204	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.5261	5.474	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.5172	5.402	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.5277	5.354	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.9883	9.815	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.9946	10.05	PASS
Band41	10MHz	QPSK	41540	50RB#0	8.9914	9.997	PASS
Band41	10MHz	16QAM	39700	50RB#0	9.0056	10.04	PASS
Band41	10MHz	16QAM	40620	50RB#0	8.9634	10.18	PASS
Band41	10MHz	16QAM	41540	50RB#0	8.9981	9.912	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.541	15.93	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.527	16.02	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.523	15.78	PASS
Band41	15MHz	16QAM	39725	75RB#0	13.503	14.87	PASS
Band41	15MHz	16QAM	40620	75RB#0	13.487	15.76	PASS
Band41	15MHz	16QAM	41515	75RB#0	13.494	15.17	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.969	20.25	PASS
Band41	20MHz	QPSK	40620	100RB#0	18.029	19.71	PASS
Band41	20MHz	QPSK	41490	100RB#0	18.009	19.95	PASS
Band41	20MHz	16QAM	39750	100RB#0	18.040	20.28	PASS
Band41	20MHz	16QAM	40620	100RB#0	17.966	20.47	PASS
Band41	20MHz	16QAM	41490	100RB#0	17.978	19.91	PASS

Test Graphs

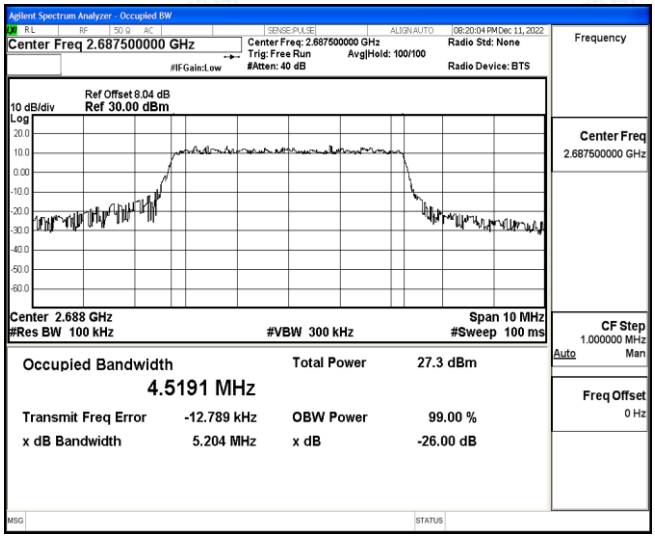
Band41-5MHz-QPSK-39675-25RB#0



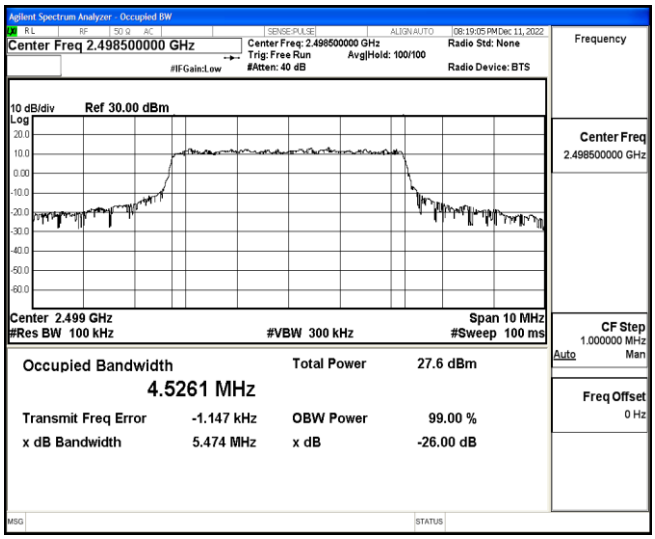
Band41-5MHz-QPSK-40620-25RB#0



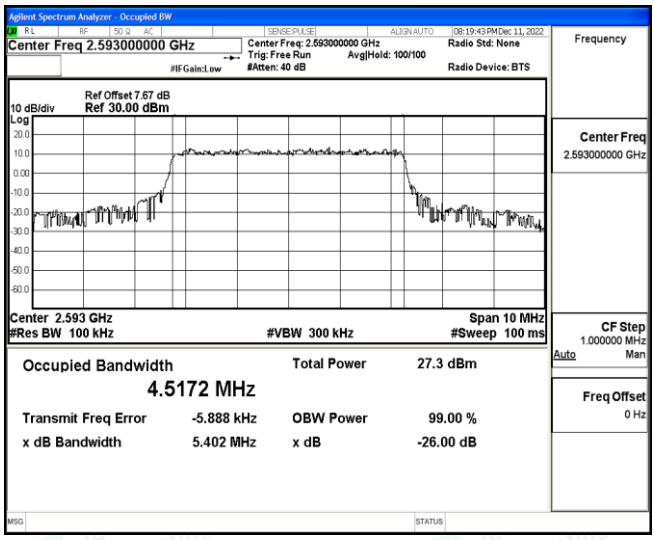
Band41-5MHz-QPSK-41565-25RB#0



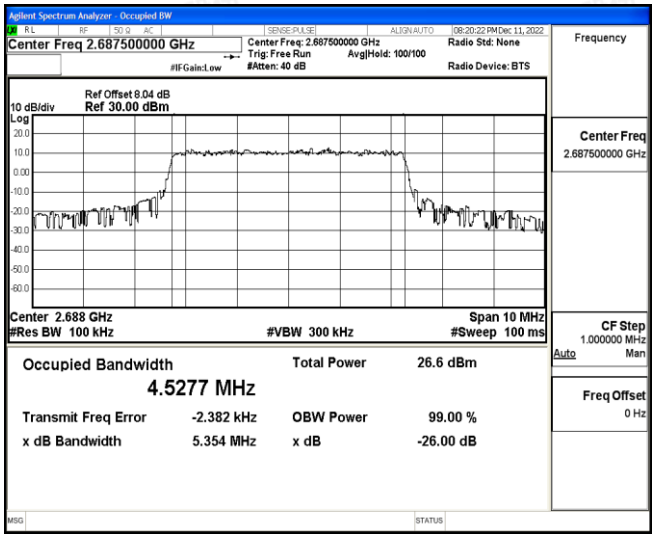
Band41-5MHz-16QAM-39675-25RB#0



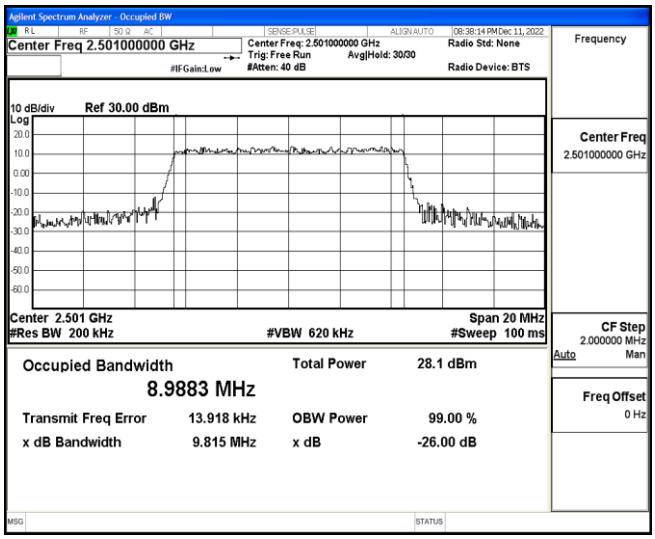
Band41-5MHz-16QAM-40620-25RB#0



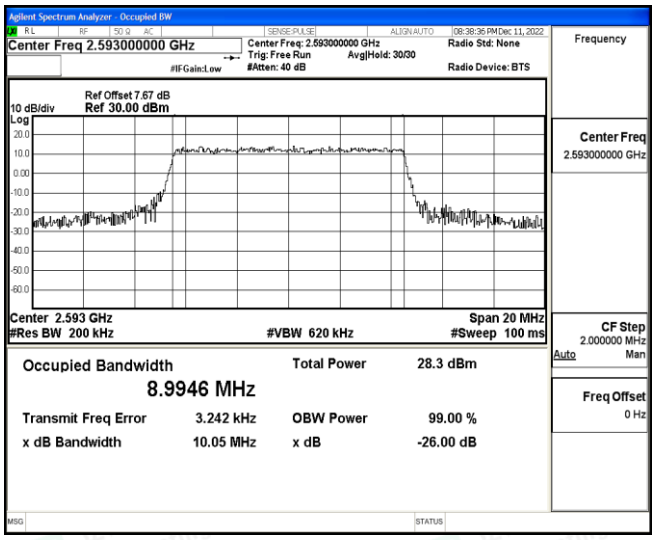
Band41-5MHz-16QAM-41565-25RB#0



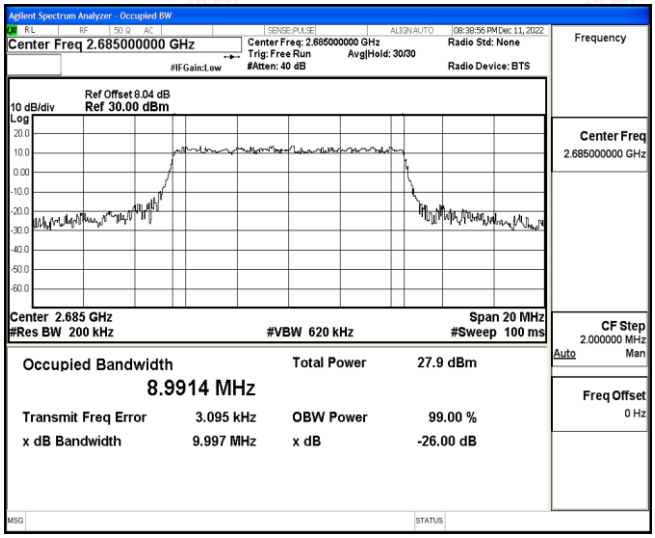
Band41-10MHz-QPSK-39700-50RB#0



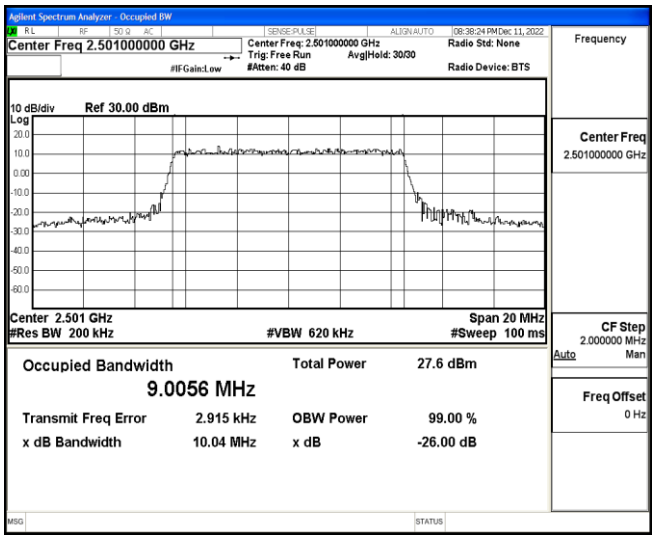
Band41-10MHz-QPSK-40620-50RB#0



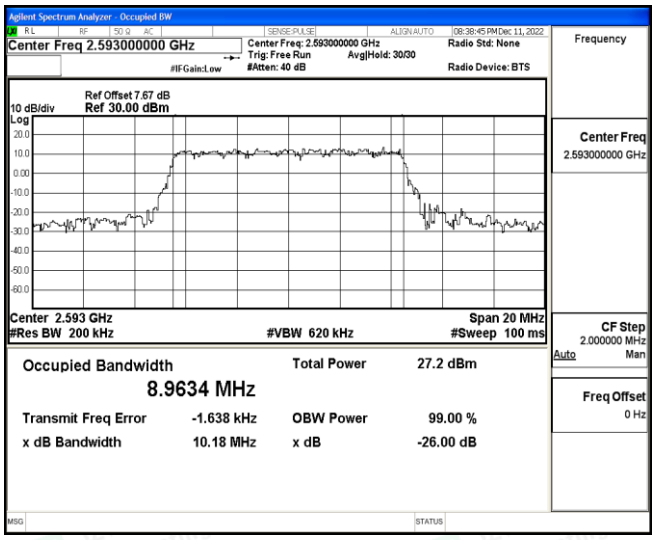
Band41-10MHz-QPSK-41540-50RB#0



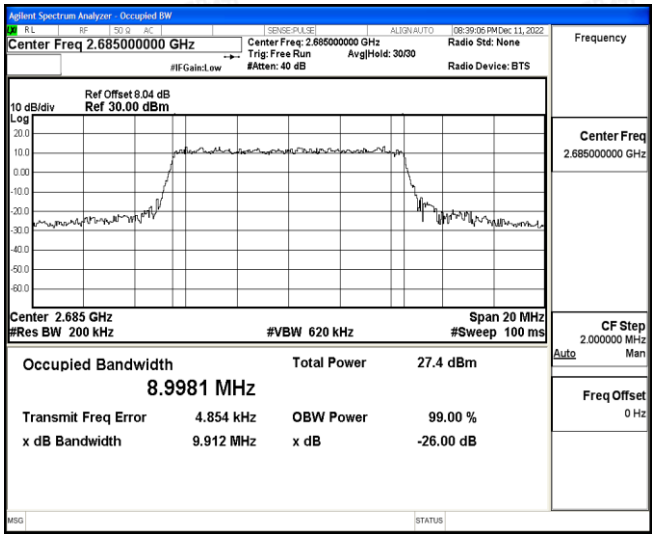
Band41-10MHz-16QAM-39700-50RB#0



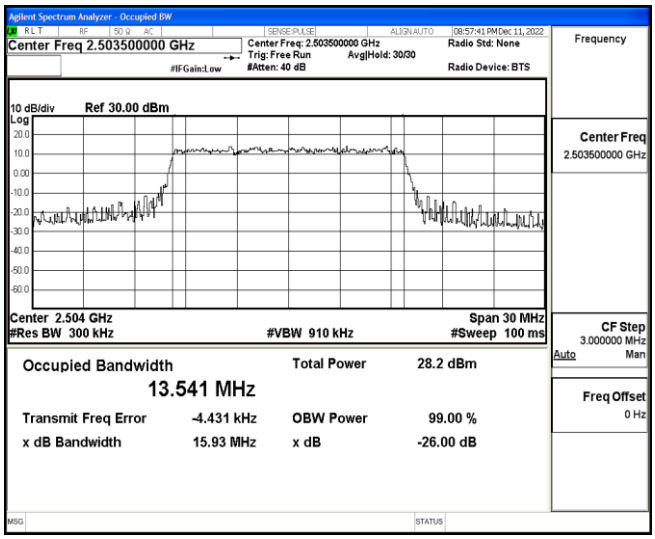
Band41-10MHz-16QAM-40620-50RB#0



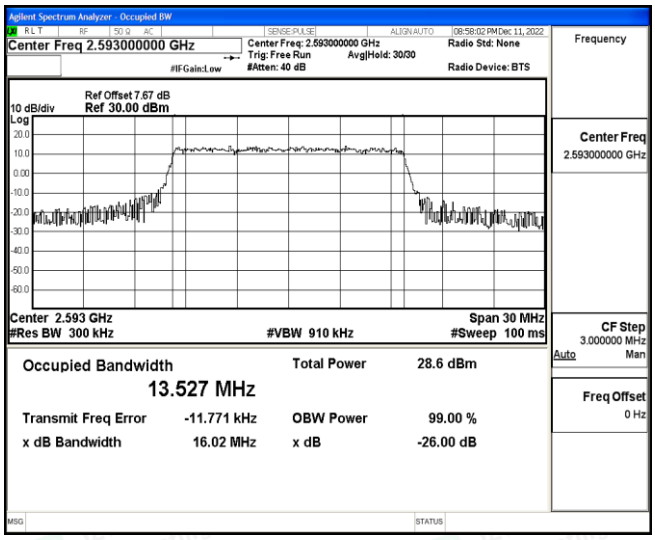
Band41-10MHz-16QAM-41540-50RB#0



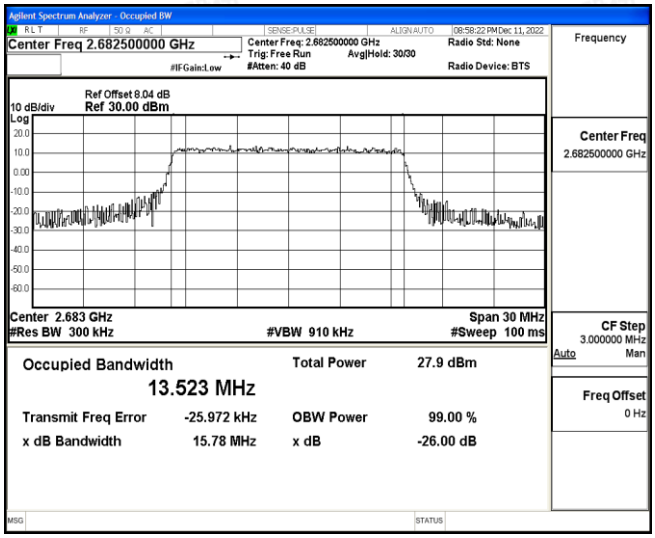
Band41-15MHz-QPSK-39725-75RB#0



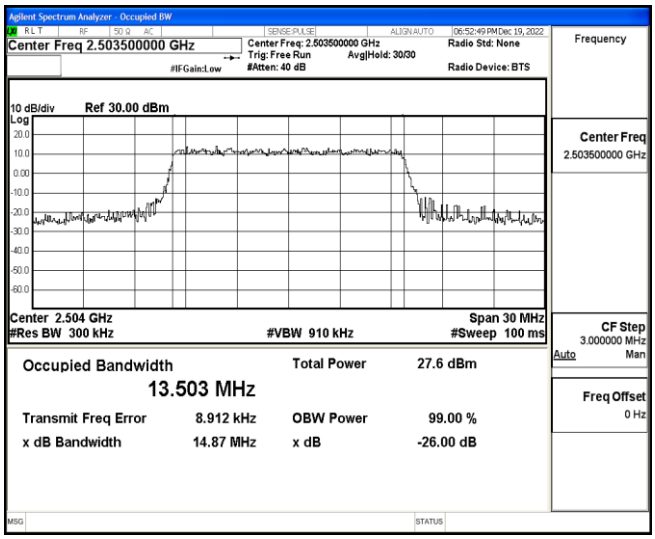
Band41-15MHz-QPSK-40620-75RB#0



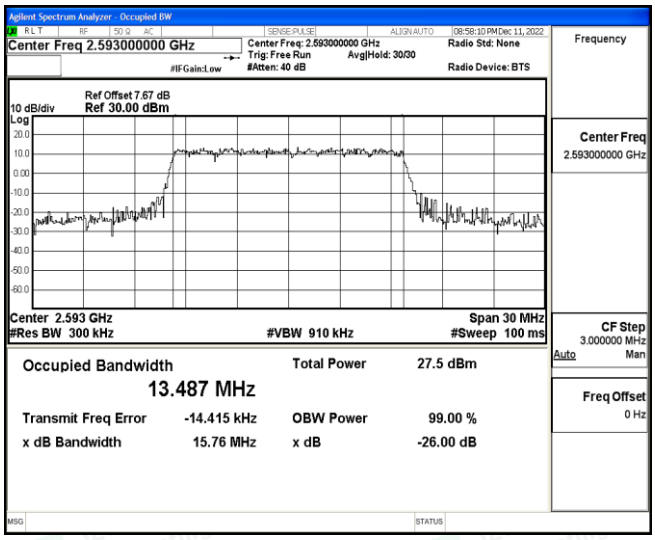
Band41-15MHz-QPSK-41515-75RB#0



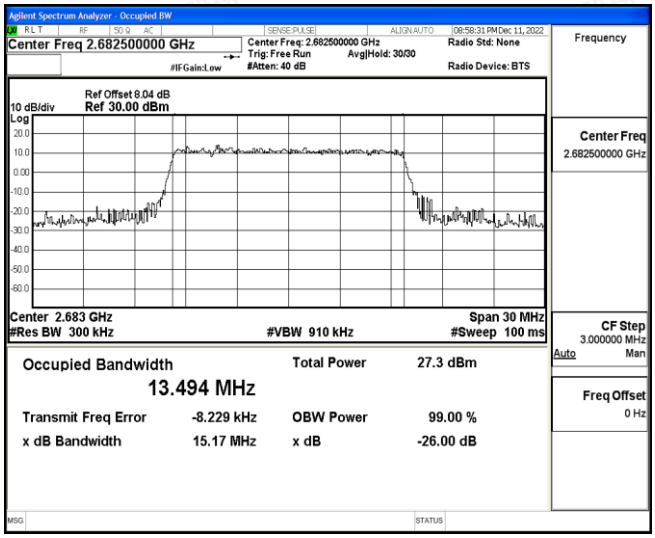
Band41-15MHz-16QAM-39725-75RB#0



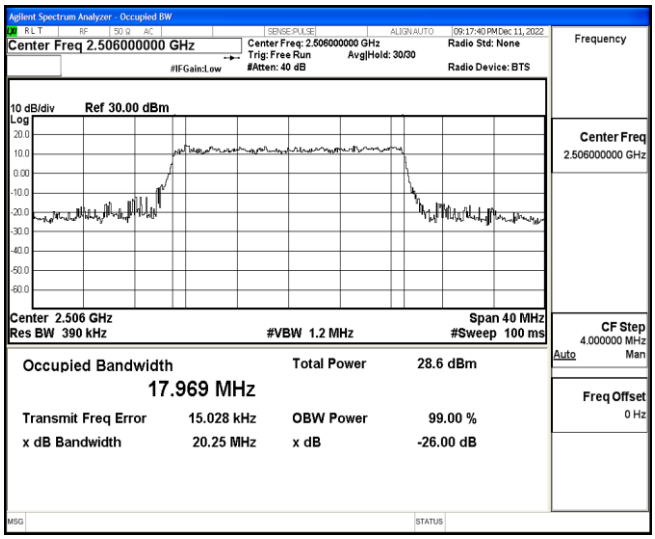
Band41-15MHz-16QAM-40620-75RB#0



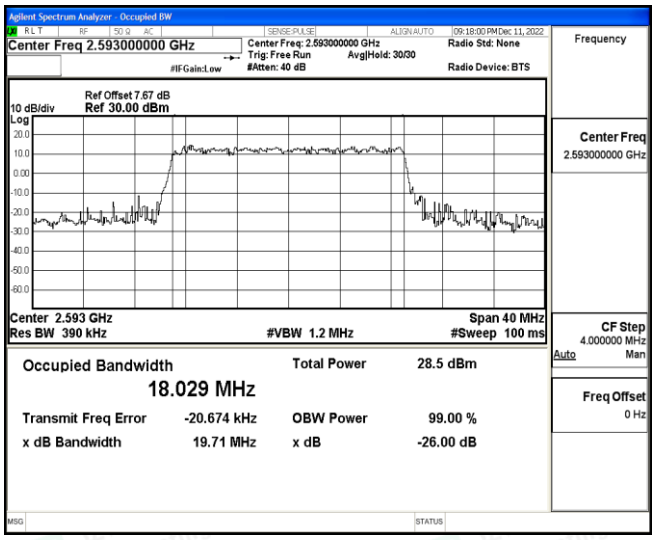
Band41-15MHz-16QAM-41515-75RB#0



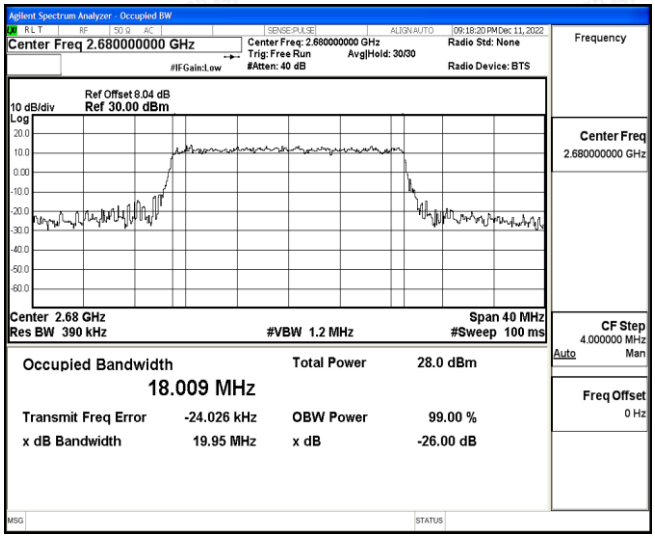
Band41-20MHz-QPSK-39750-100RB#0



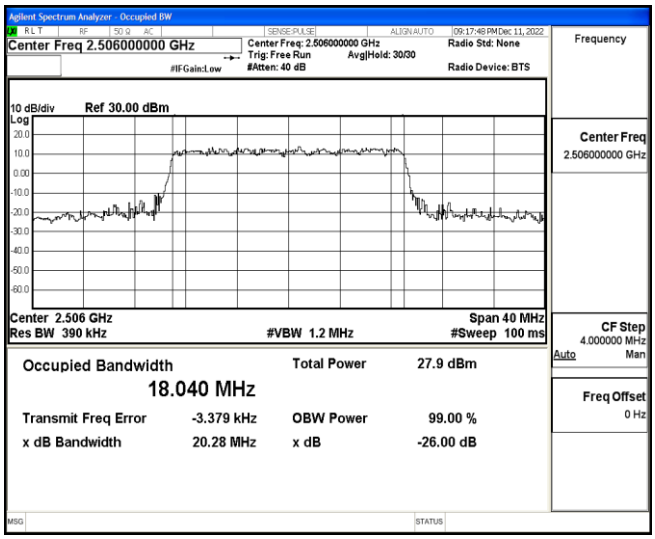
Band41-20MHz-QPSK-40620-100RB#0



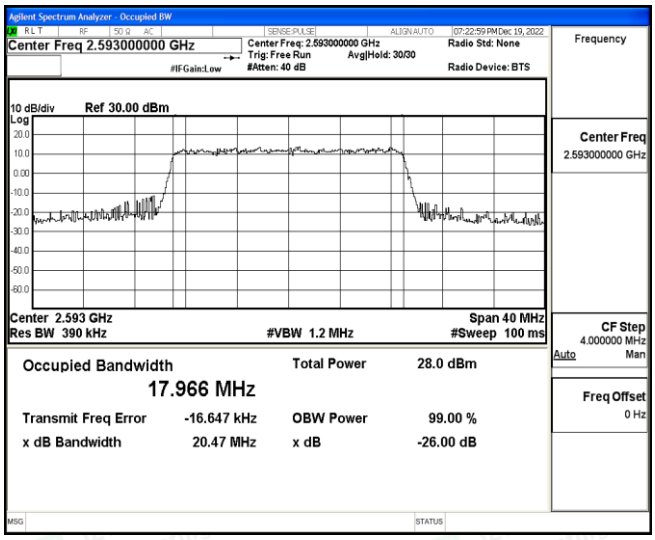
Band41-20MHz-QPSK-41490-100RB#0



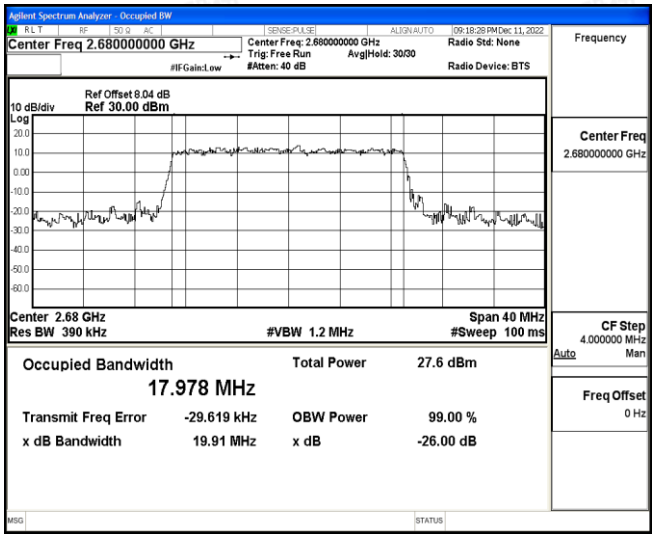
Band41-20MHz-16QAM-39750-100RB#0



Band41-20MHz-16QAM-40620-100RB#0



Band41-20MHz-16QAM-41490-100RB#0


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.680000000 GHz
Center Freq: 2.680000000 GHz
Trig: Free Run
Avg|Hold: 30/30
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
09:18:28 PM Dec 11, 2022
Frequency
Ref Offset 8.04 dB
10 dB/div
Ref 30.00 dBm
Log
Center Freq
2.680000000 GHz
Center 2.68 GHz
Res BW 390 kHz
#VBW 1.2 MHz
Span 40 MHz
#Sweep 100 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.978 MHz
Total Power 27.6 dBm
Transmit Freq Error -29.619 kHz
OBW Power 99.00 %
x dB Bandwidth 19.91 MHz
x dB -26.00 dB
Freq Offset
0 Hz

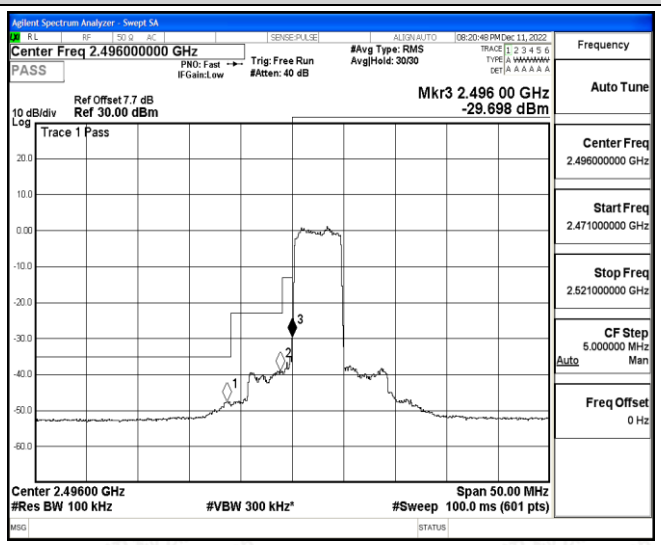
N.4 Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	-47.52,-38.89,-29.70	PASS
Band41	5MHz	QPSK	41565	25RB#0	-33.32,-39.58,-46.21,-48.05	PASS
Band41	5MHz	16QAM	39675	25RB#0	-47.49,-37.57,-31.06	PASS
Band41	5MHz	16QAM	41565	25RB#0	-33.15,-38.85,-46.52,-48.53	PASS
Band41	10MHz	QPSK	39700	50RB#0	-45.69,-37.24,-33.95	PASS
Band41	10MHz	QPSK	41540	50RB#0	-35.15,-37.90,-39.87,-43.83	PASS
Band41	10MHz	16QAM	39700	50RB#0	-45.53,-36.22,-34.20	PASS
Band41	10MHz	16QAM	41540	50RB#0	-34.70,-37.95,-39.81,-45.26	PASS
Band41	15MHz	QPSK	39725	75RB#0	-46.80,-34.32,-33.43	PASS
Band41	15MHz	QPSK	41515	75RB#0	-36.82,-36.53,-38.38,-43.52	PASS
Band41	15MHz	16QAM	39725	75RB#0	-47.17,-33.52,-33.44	PASS
Band41	15MHz	16QAM	41515	75RB#0	-36.42,-36.98,-38.51,-43.91	PASS
Band41	20MHz	QPSK	39750	100RB#0	-46.57,-33.47,-32.11	PASS
Band41	20MHz	QPSK	41490	100RB#0	-34.88,-36.66,-38.27,-43.27	PASS
Band41	20MHz	16QAM	39750	100RB#0	-46.59,-33.34,-33.14	PASS
Band41	20MHz	16QAM	41490	100RB#0	-36.32,-36.28,-37.49,-43.81	PASS

Test Graphs

Band41-5MHz-QPSK-39675-25RB#0



Band41-5MHz-QPSK-41565-25RB#0