

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 17

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	706.5	23755	5	1	0	23.44
QPSK	706.5	23755	5	1	12	23.27
QPSK	706.5	23755	5	1	24	23.12
QPSK	706.5	23755	5	12	0	22.32
QPSK	706.5	23755	5	12	7	22.38
QPSK	706.5	23755	5	12	13	22.48
QPSK	706.5	23755	5	25	0	22.09
QPSK	710	23790	5	1	0	23.58
QPSK	710	23790	5	1	12	23.63
QPSK	710	23790	5	1	24	23.47
QPSK	710	23790	5	12	0	22.27
QPSK	710	23790	5	12	7	22.43
QPSK	710	23790	5	12	13	22.26
QPSK	710	23790	5	25	0	22.30
QPSK	713.5	23825	5	1	0	23.56
QPSK	713.5	23825	5	1	12	23.56
QPSK	713.5	23825	5	1	24	23.60
QPSK	713.5	23825	5	12	0	22.34
QPSK	713.5	23825	5	12	7	22.18
QPSK	713.5	23825	5	12	13	22.26
QPSK	713.5	23825	5	25	0	22.30

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
16QAM	706.5	23755	5	1	0	22.84
16QAM	706.5	23755	5	1	12	22.63
16QAM	706.5	23755	5	1	24	22.92
16QAM	706.5	23755	5	12	0	21.30
16QAM	706.5	23755	5	12	7	21.20
16QAM	706.5	23755	5	12	13	21.34
16QAM	706.5	23755	5	25	0	21.50
16QAM	710	23790	5	1	0	22.31
16QAM	710	23790	5	1	12	22.44
16QAM	710	23790	5	1	24	22.12
16QAM	710	23790	5	12	0	21.47
16QAM	710	23790	5	12	7	21.39
16QAM	710	23790	5	12	13	21.41
16QAM	710	23790	5	25	0	21.73
16QAM	713.5	23825	5	1	0	22.74
16QAM	713.5	23825	5	1	12	22.57
16QAM	713.5	23825	5	1	24	22.66
16QAM	713.5	23825	5	12	0	21.36
16QAM	713.5	23825	5	12	7	21.42
16QAM	713.5	23825	5	12	13	21.45
16QAM	713.5	23825	5	25	0	21.61

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	709	23780	10	1	0	23.39
QPSK	709	23780	10	1	25	23.47
QPSK	709	23780	10	1	49	23.49
QPSK	709	23780	10	25	0	22.30
QPSK	709	23780	10	25	12	22.27
QPSK	709	23780	10	25	25	22.37
QPSK	709	23780	10	50	0	22.35
QPSK	710	23790	10	1	0	23.47
QPSK	710	23790	10	1	25	23.30
QPSK	710	23790	10	1	49	23.33
QPSK	710	23790	10	25	0	22.36
QPSK	710	23790	10	25	12	22.37
QPSK	710	23790	10	25	25	22.34
QPSK	710	23790	10	50	0	22.31
QPSK	711	23800	10	1	0	23.26
QPSK	711	23800	10	1	25	23.41
QPSK	711	23800	10	1	49	23.20
QPSK	711	23800	10	25	0	22.41
QPSK	711	23800	10	25	12	22.34
QPSK	711	23800	10	25	25	22.27
QPSK	711	23800	10	50	0	22.24

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
16QAM	709	23780	10	1	0	23.08
16QAM	709	23780	10	1	25	22.82
16QAM	709	23780	10	1	49	23.11
16QAM	709	23780	10	25	0	21.72
16QAM	709	23780	10	25	12	21.79
16QAM	709	23780	10	25	25	21.62
16QAM	709	23780	10	50	0	21.46
16QAM	710	23790	10	1	0	23.25
16QAM	710	23790	10	1	25	22.83
16QAM	710	23790	10	1	49	23.00
16QAM	710	23790	10	25	0	21.29
16QAM	710	23790	10	25	12	21.35
16QAM	710	23790	10	25	25	21.30
16QAM	710	23790	10	50	0	21.43
16QAM	711	23800	10	1	0	22.20
16QAM	711	23800	10	1	25	22.92
16QAM	711	23800	10	1	49	22.60
16QAM	711	23800	10	25	0	21.68
16QAM	711	23800	10	25	12	21.49
16QAM	711	23800	10	25	25	21.69
16QAM	711	23800	10	50	0	21.47

2 Occupied Bandwidth

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)	
17	QPSK	706.5	23755	5	25	0	4.458	Fig.1
17	QPSK	710	23790	5	25	0	4.462	Fig.2
17	QPSK	713.5	23825	5	25	0	4.463	Fig.3
17	QPSK	709	23780	10	50	0	8.918	Fig.4
17	QPSK	710	23790	10	50	0	8.917	Fig.5
17	QPSK	711	23800	10	50	0	8.919	Fig.6

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)	
17	16QAM	706.5	23755	5	25	0	4.446	Fig.7
17	16QAM	710	23790	5	25	0	4.455	Fig.8
17	16QAM	713.5	23825	5	25	0	4.457	Fig.9
17	16QAM	709	23780	10	50	0	8.898	Fig.10
17	16QAM	710	23790	10	50	0	8.928	Fig.11
17	16QAM	711	23800	10	50	0	8.909	Fig.12

Test Mode: QPSK

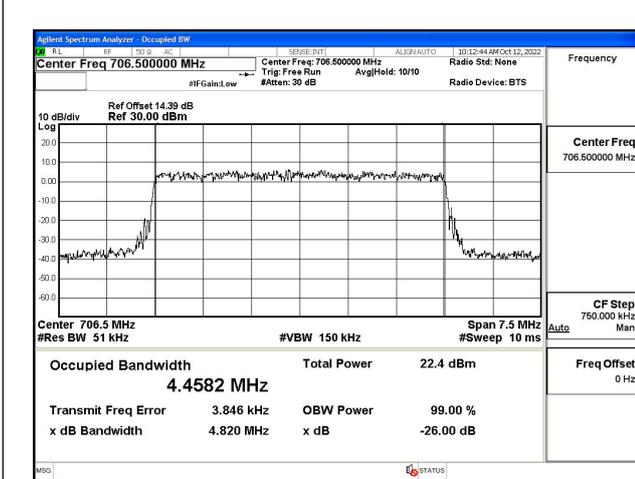


Fig.1

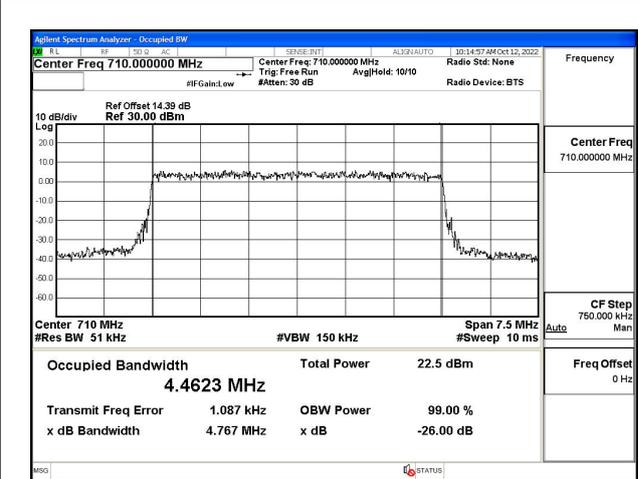


Fig.2

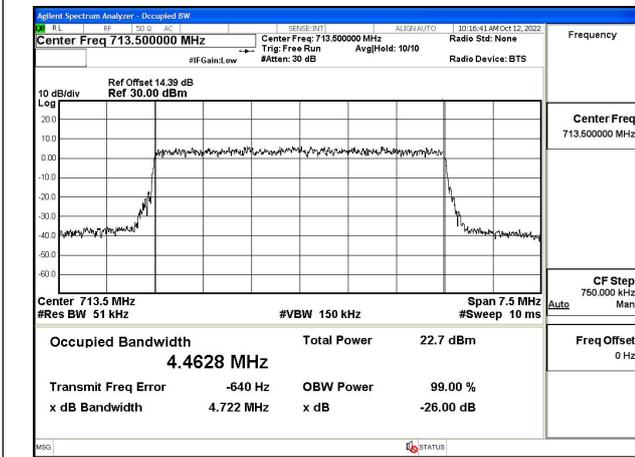


Fig.3

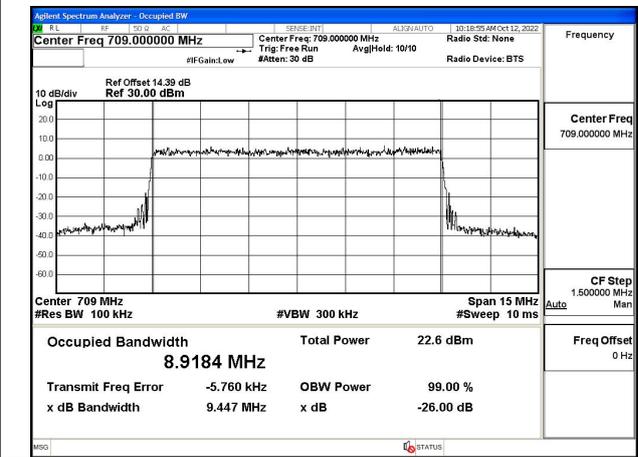


Fig.4

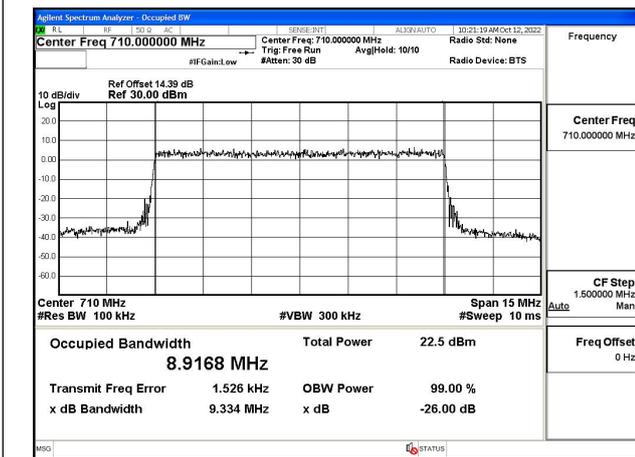


Fig.5

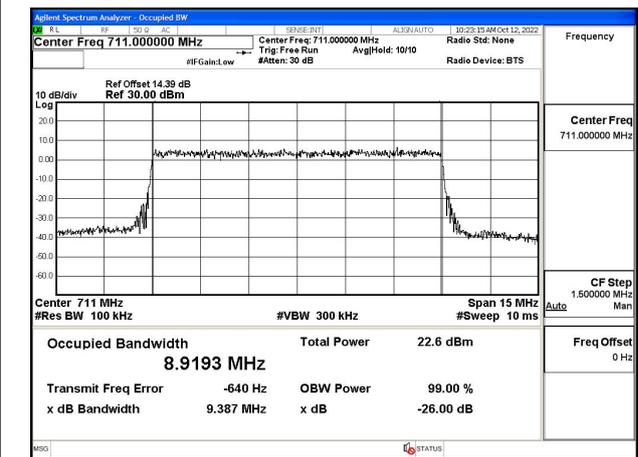


Fig.6

Test Mode: 16QAM

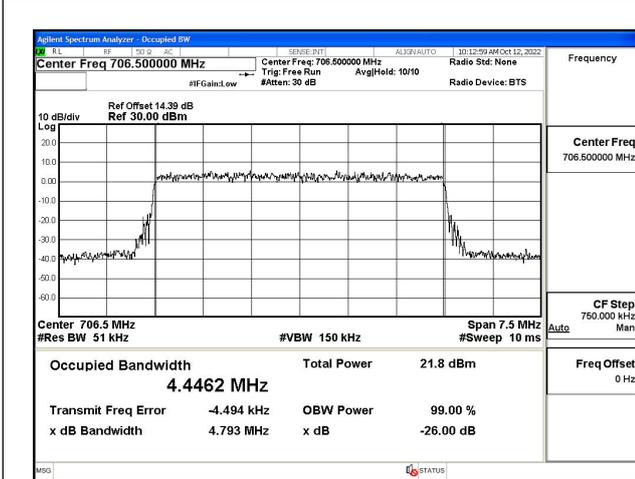


Fig.7

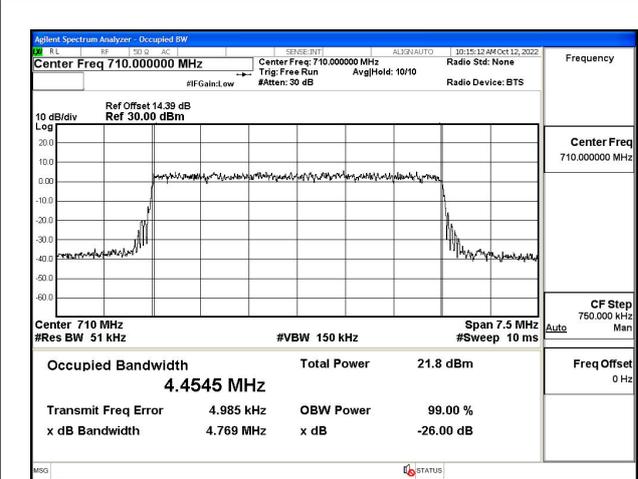


Fig.8

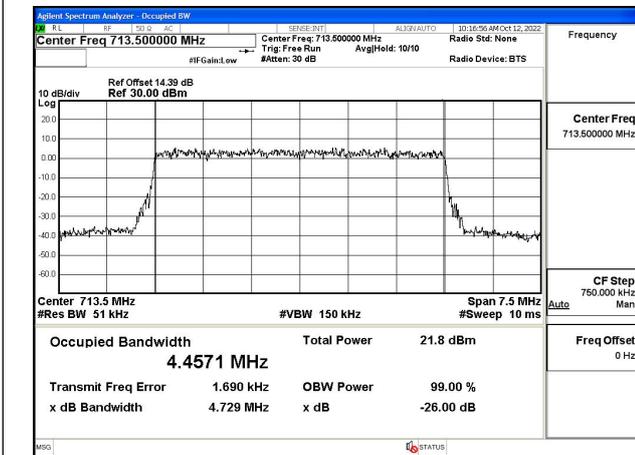


Fig.9

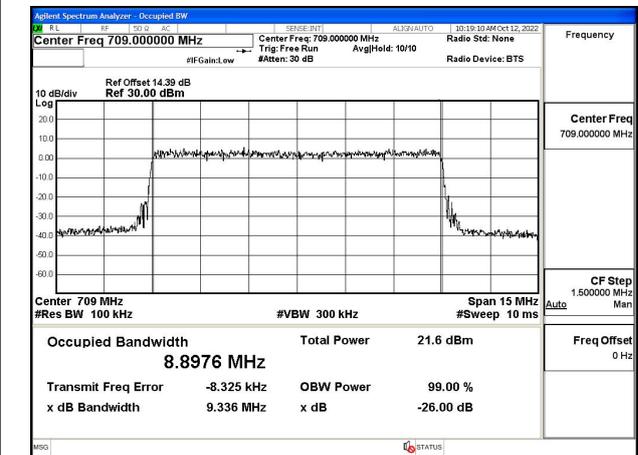


Fig.10

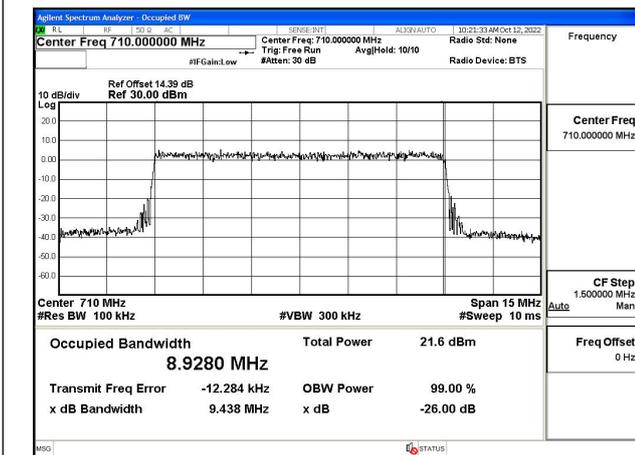


Fig.11

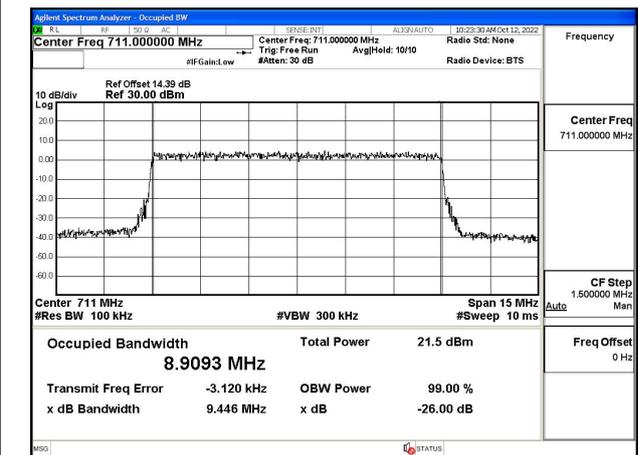


Fig.12

3 Emission Bandwidth

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)	
17	QPSK	706.5	23755	5	25	0	4.820	Fig.1
17	QPSK	710	23790	5	25	0	4.767	Fig.2
17	QPSK	713.5	23825	5	25	0	4.722	Fig.3
17	QPSK	709	23780	10	50	0	9.447	Fig.4
17	QPSK	710	23790	10	50	0	9.334	Fig.5
17	QPSK	711	23800	10	50	0	9.387	Fig.6

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)	
17	16QAM	706.5	23755	5	25	0	4.793	Fig.7
17	16QAM	710	23790	5	25	0	4.769	Fig.8
17	16QAM	713.5	23825	5	25	0	4.729	Fig.9
17	16QAM	709	23780	10	50	0	9.336	Fig.10
17	16QAM	710	23790	10	50	0	9.438	Fig.11
17	16QAM	711	23800	10	50	0	9.446	Fig.12

Test Mode: QPSK

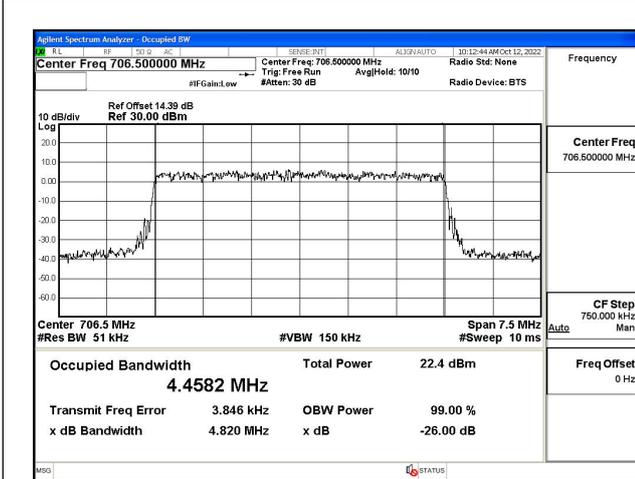


Fig.1

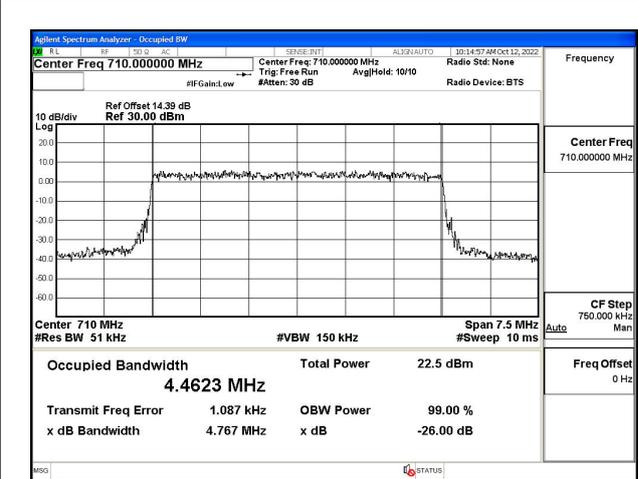


Fig.2

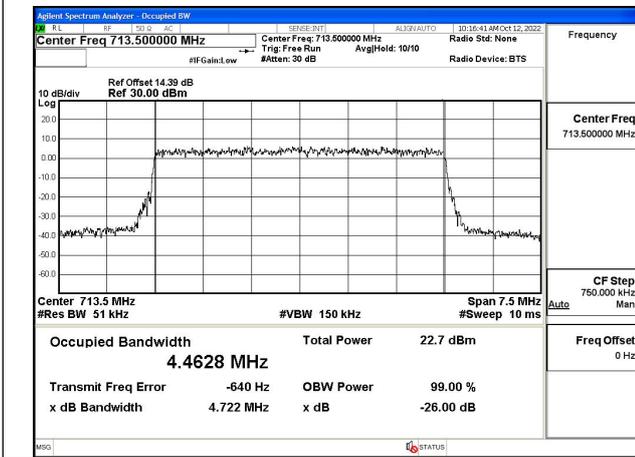


Fig.3

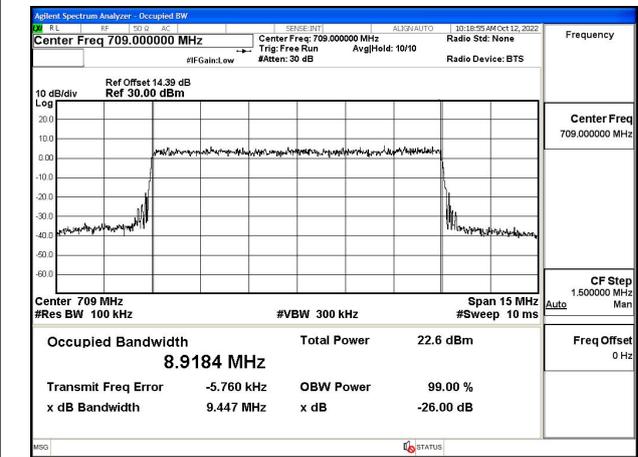


Fig.4

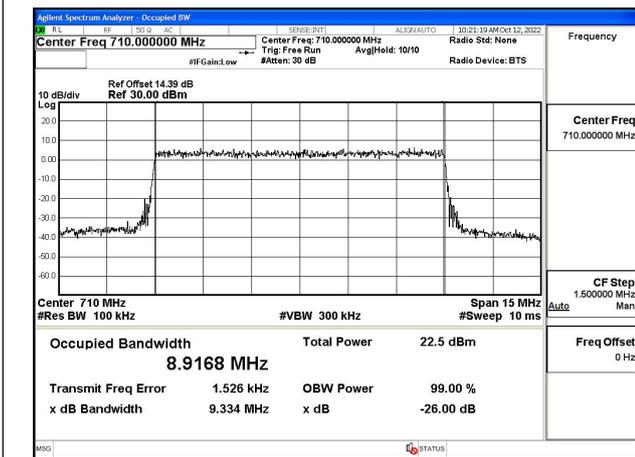


Fig.5

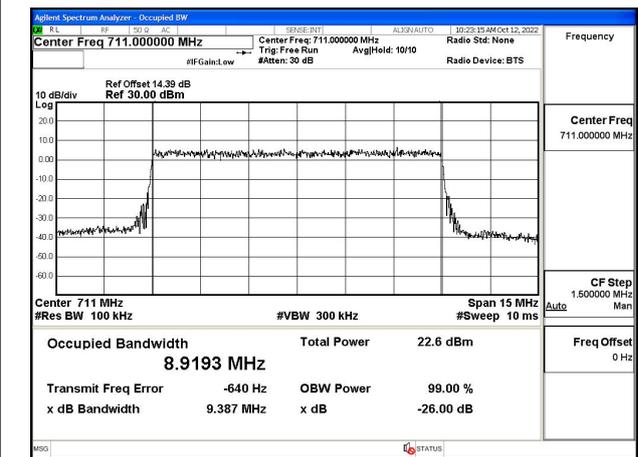


Fig.6

Test Mode: 16QAM

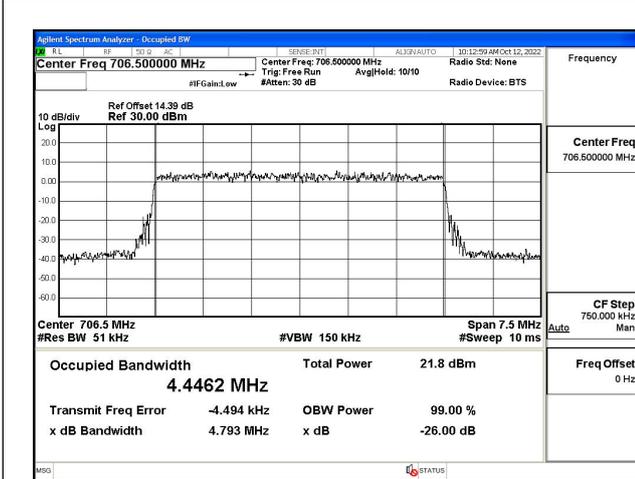


Fig.7

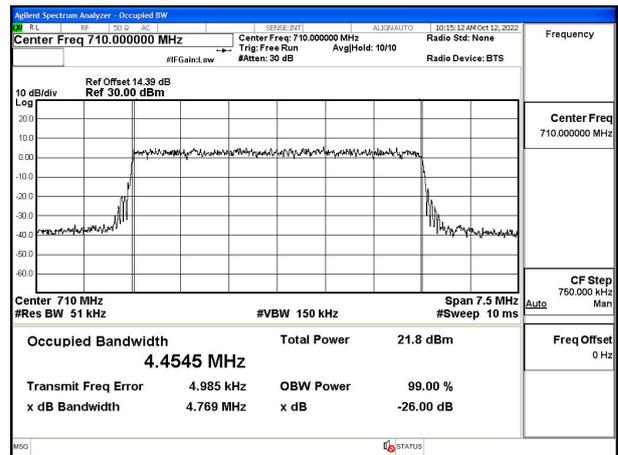


Fig.8

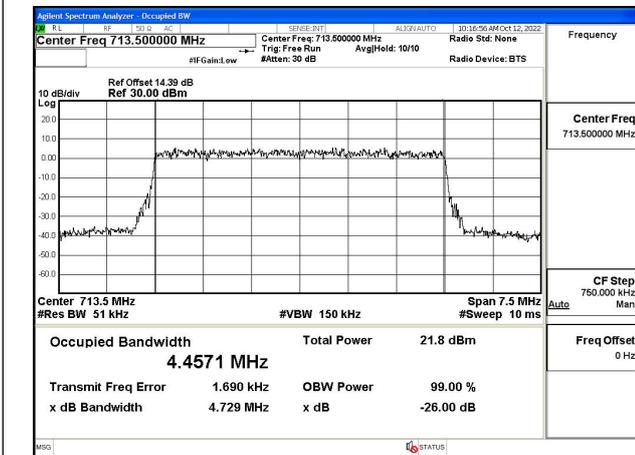


Fig.9

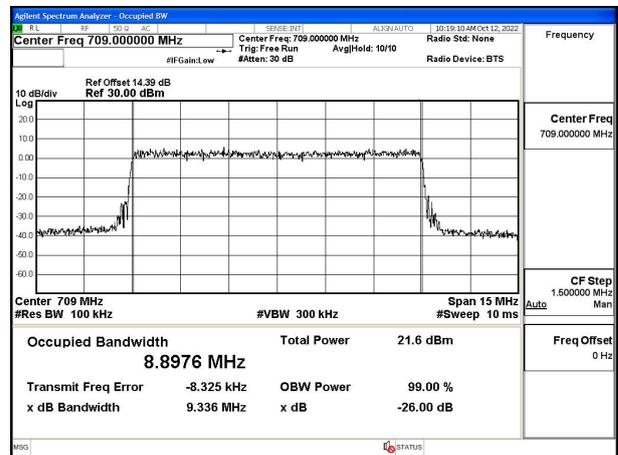


Fig.10

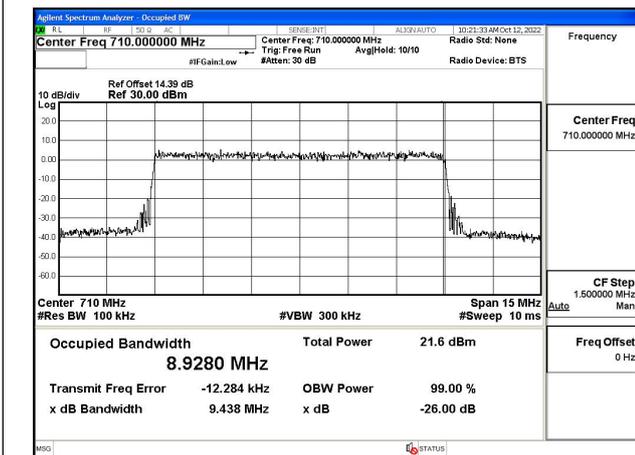


Fig.11

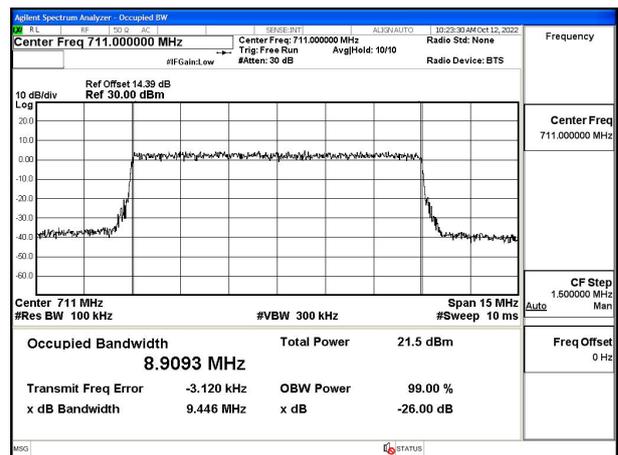


Fig.12

4 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
17	706.5	23755	5	1	24	Fig.1	Fig.2	---
17	706.5	23755	5	25	0	Fig.3	Fig.4	---
17	710	23790	5	1	24	Fig.5	Fig.6	---
17	710	23790	5	25	0	Fig.7	Fig.8	---
17	713.5	23825	5	1	24	Fig.9	Fig.10	---
17	713.5	23825	5	25	0	Fig.11	Fig.12	---
17	709	23780	10	1	49	Fig.13	Fig.14	---
17	709	23780	10	50	0	Fig.15	Fig.16	---
17	710	23790	10	1	49	Fig.17	Fig.18	---
17	710	23790	10	50	0	Fig.19	Fig.20	---
17	711	23800	10	1	49	Fig.21	Fig.22	---
17	711	23800	10	50	0	Fig.23	Fig.24	---

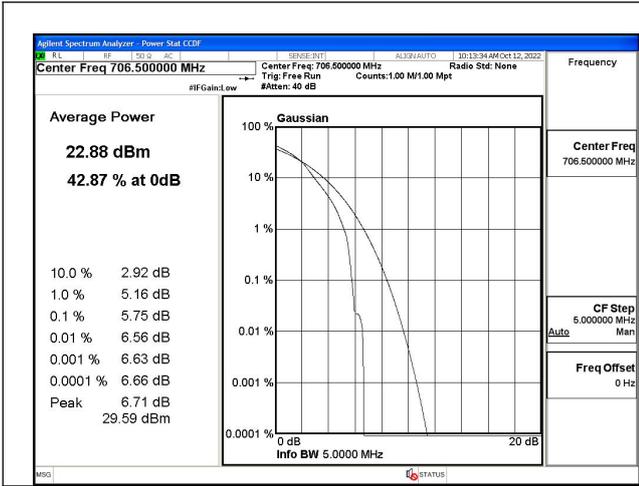


Fig.1

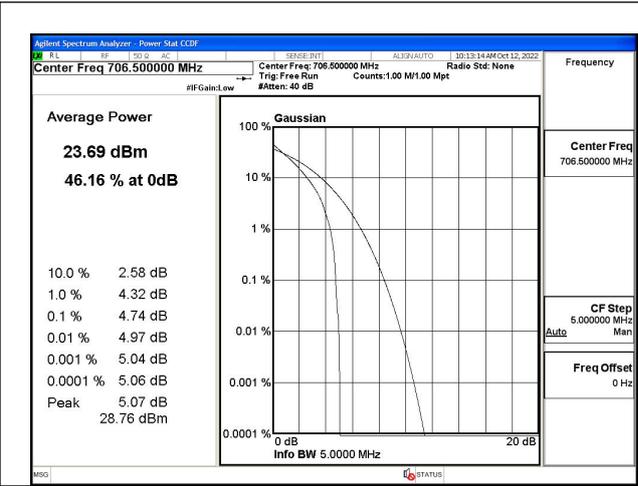


Fig.2

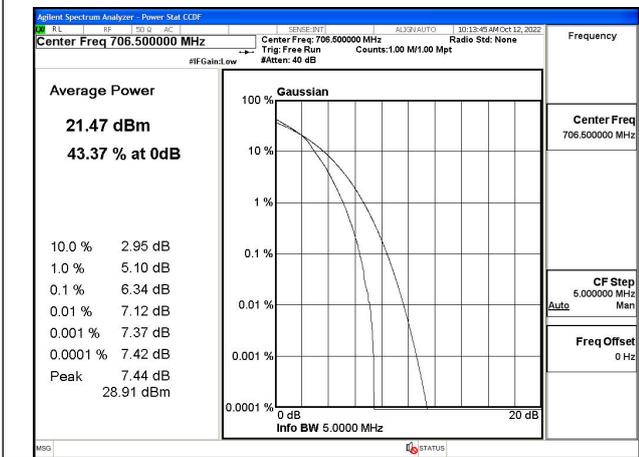


Fig.3

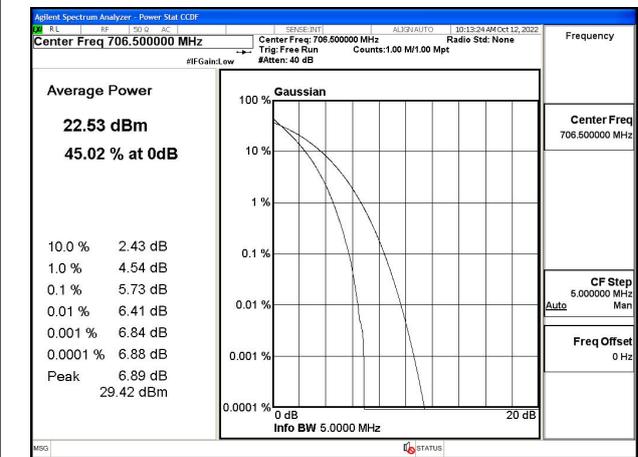


Fig.4

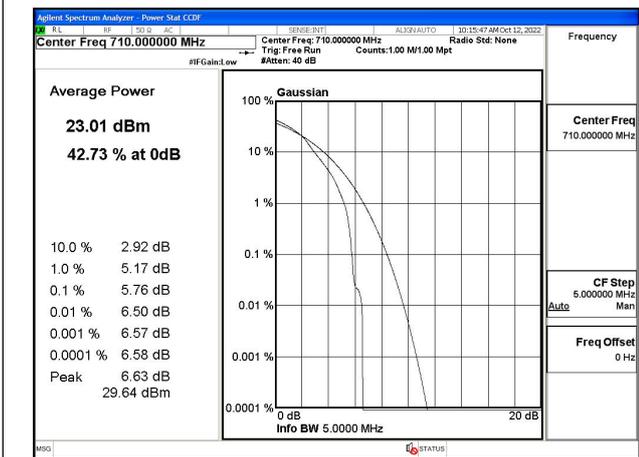


Fig.5

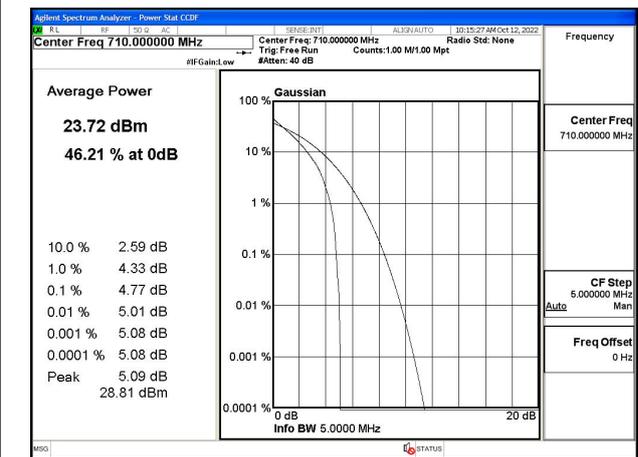


Fig.6

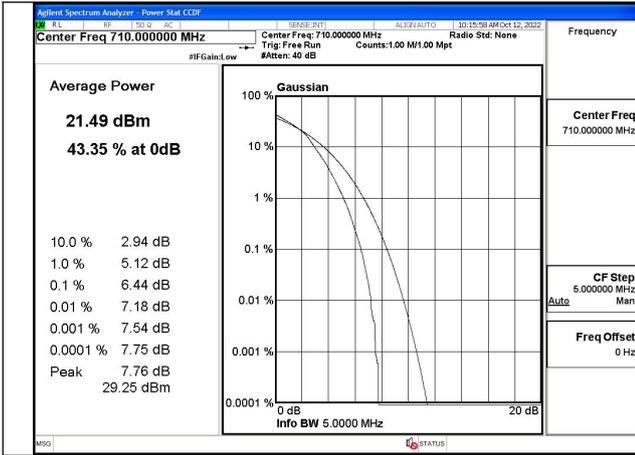


Fig.7

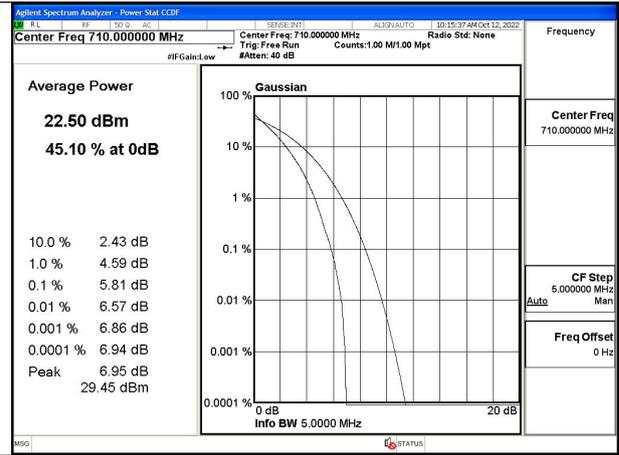


Fig.8

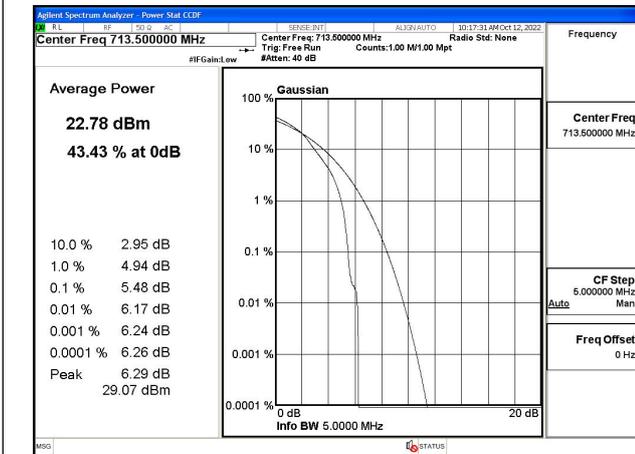


Fig.9

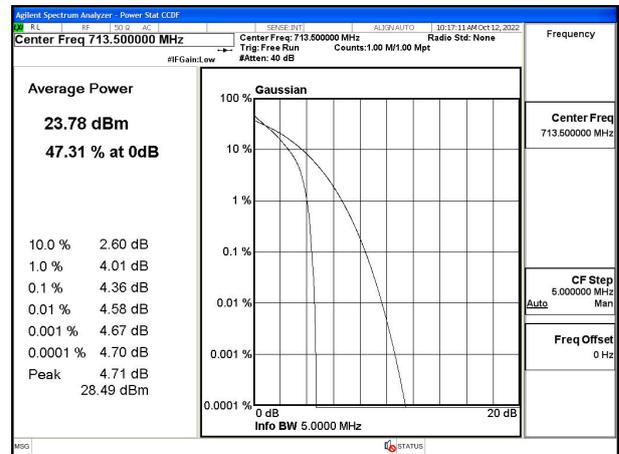


Fig.10

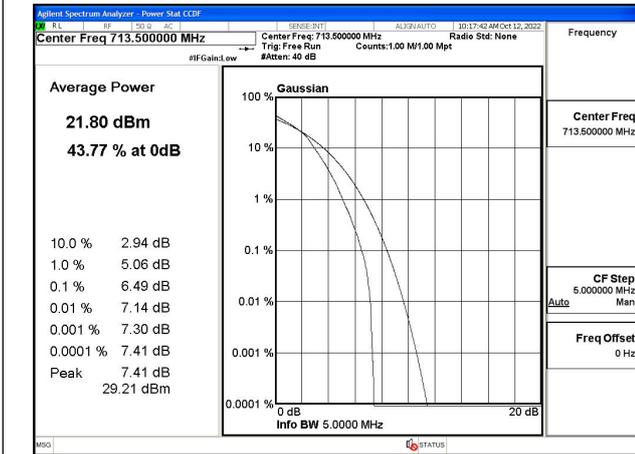


Fig.11

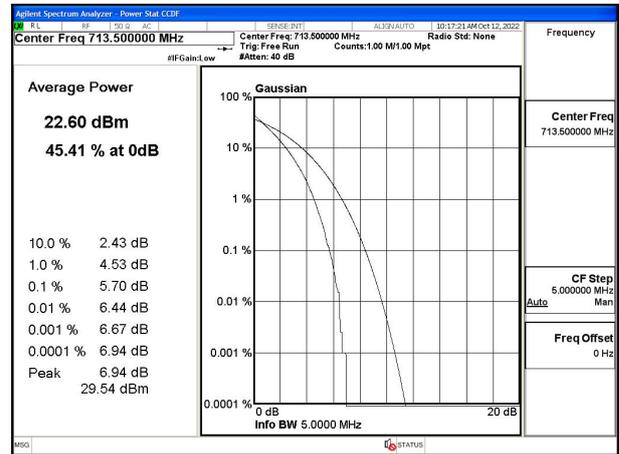


Fig.12

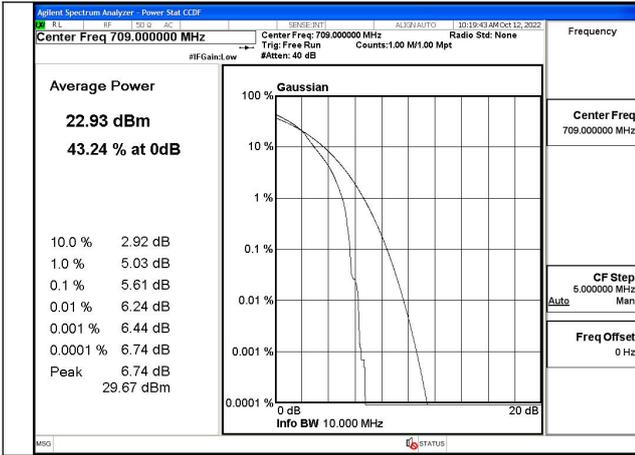


Fig. 13

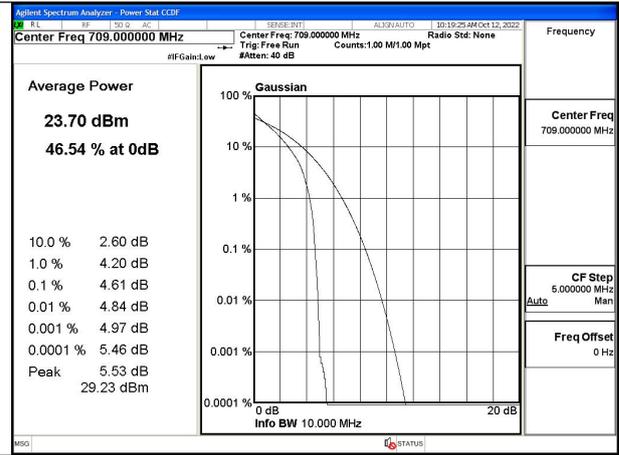


Fig. 14

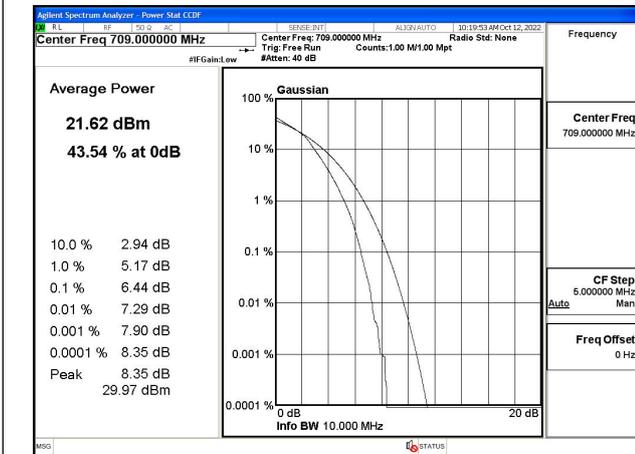


Fig. 15

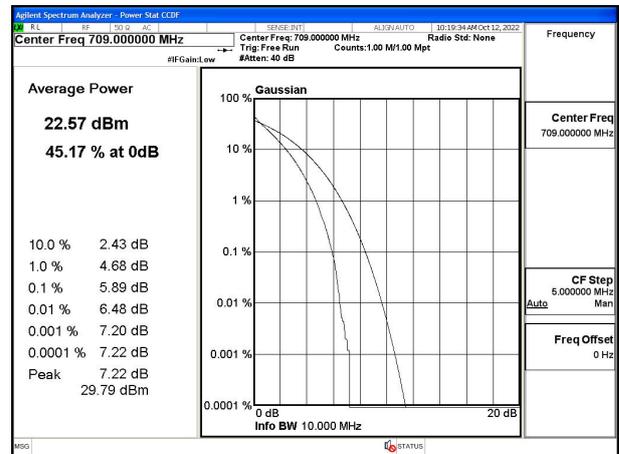


Fig. 16

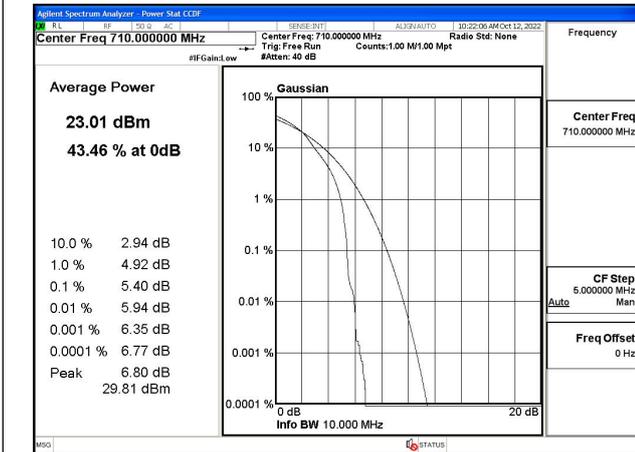


Fig. 17

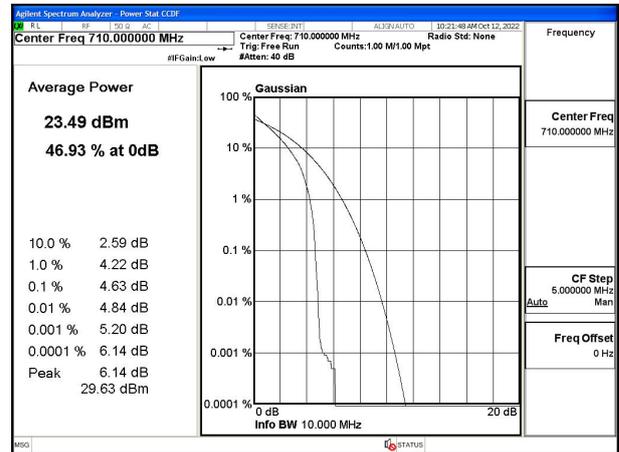


Fig. 18

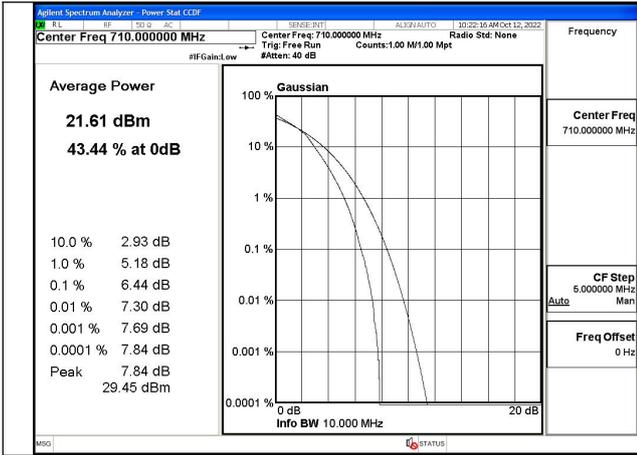


Fig.19

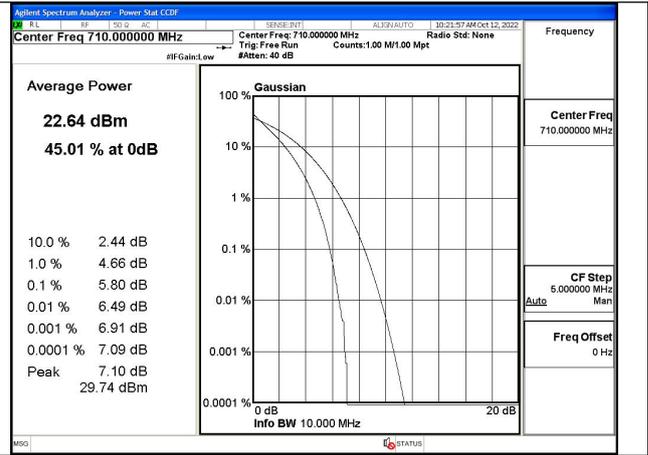


Fig.20

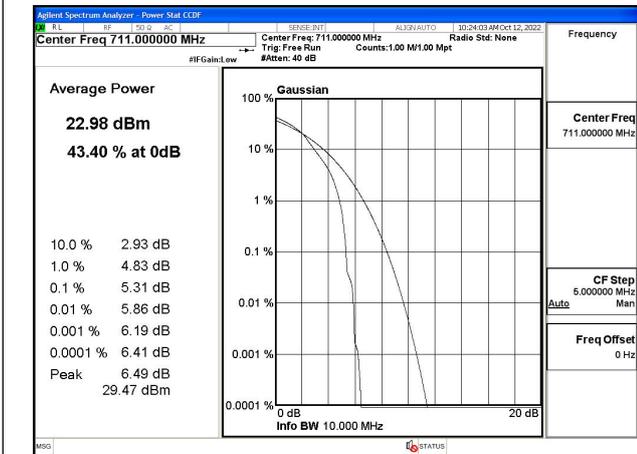


Fig.21

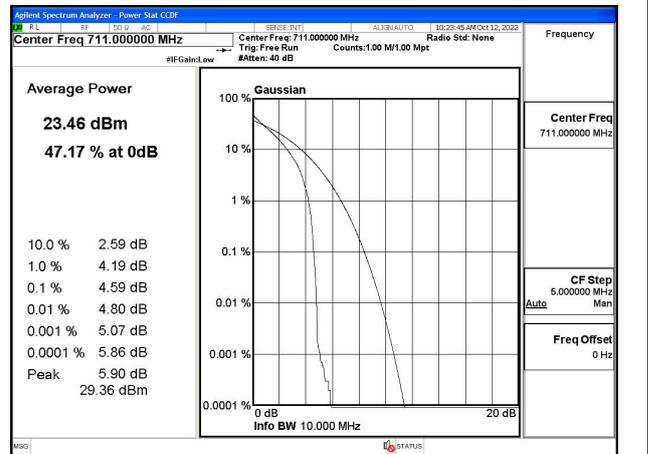


Fig.22

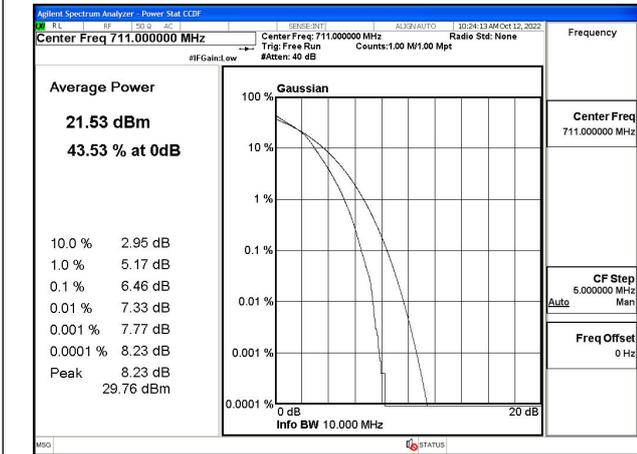


Fig.23

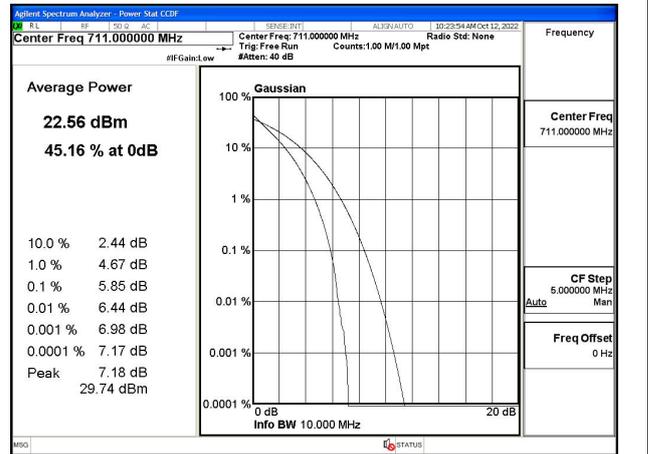


Fig.24

5 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
17	709	23780	10	1	0	Fig.1
17	710	23790	10	1	0	Fig.2
17	711	23800	10	1	0	Fig.3

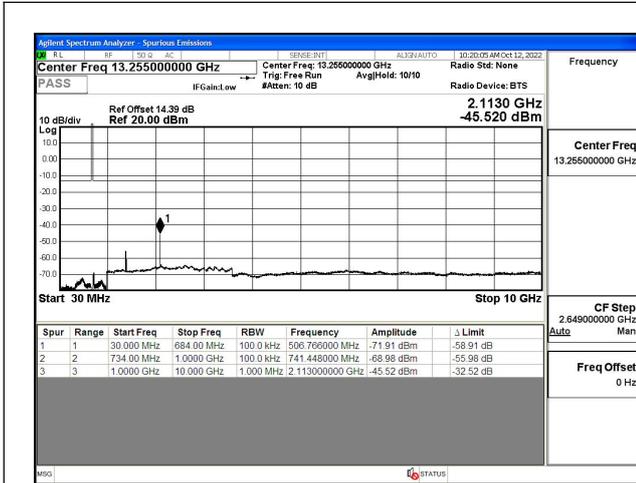


Fig.1

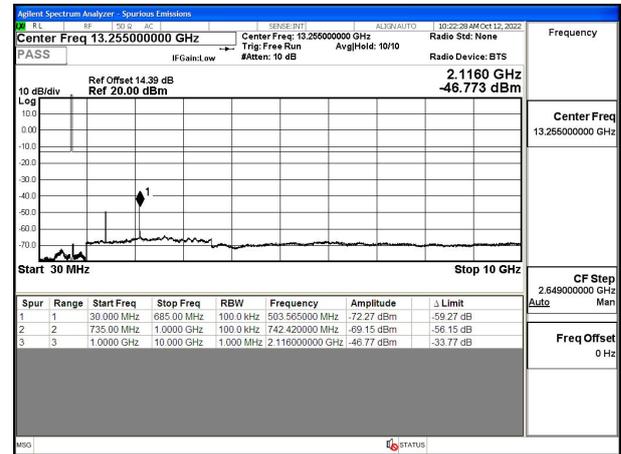


Fig.2

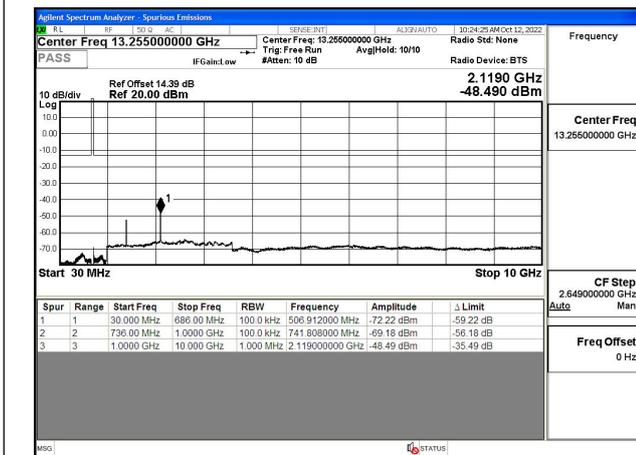


Fig.3

6 Band Edges Compliance

Band	Mode	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
17	QPSK	706.5	23755	5	1	0	Fig.1
17	QPSK	706.5	23755	5	25	0	Fig.2
17	QPSK	713.5	23825	5	1	24	Fig.3
17	QPSK	713.5	23825	5	25	0	Fig.4
17	QPSK	709	23780	10	1	0	Fig.5
17	QPSK	709	23780	10	50	0	Fig.6
17	QPSK	711	23800	10	1	49	Fig.7
17	QPSK	711	23800	10	50	0	Fig.8

Test Mode: QPSK

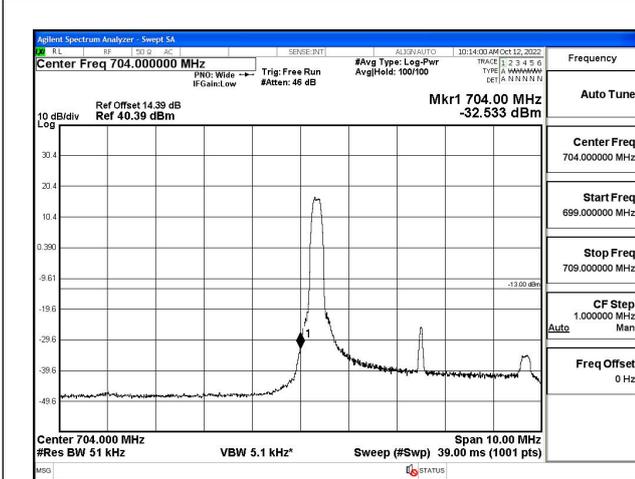


Fig.1

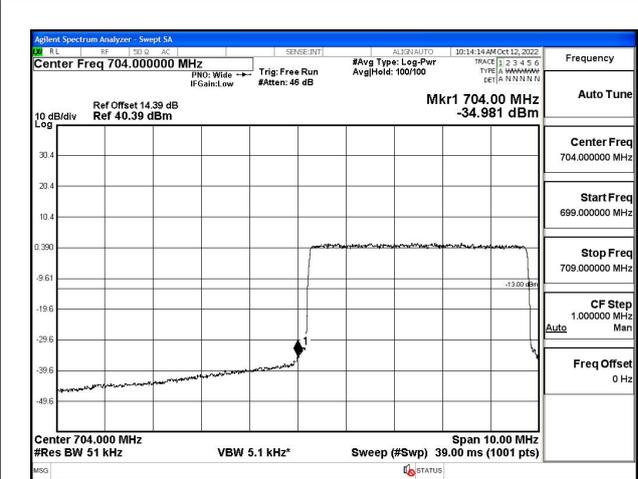


Fig.2

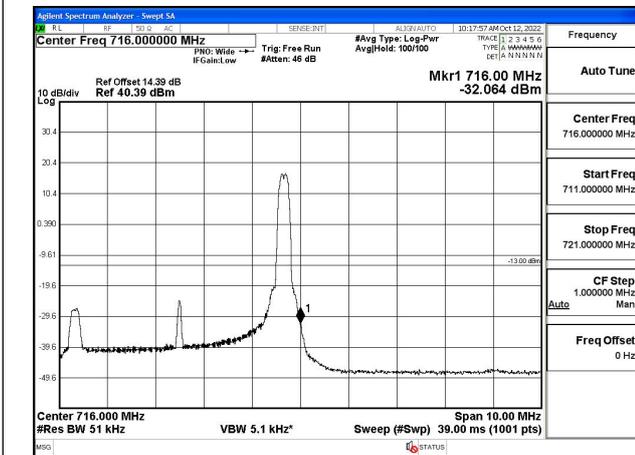


Fig.3

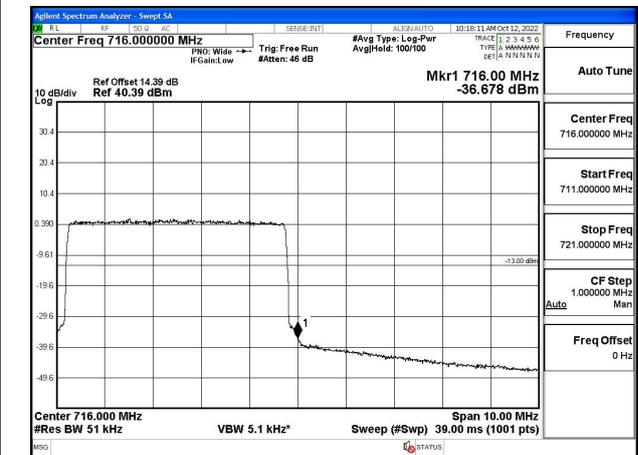


Fig.4

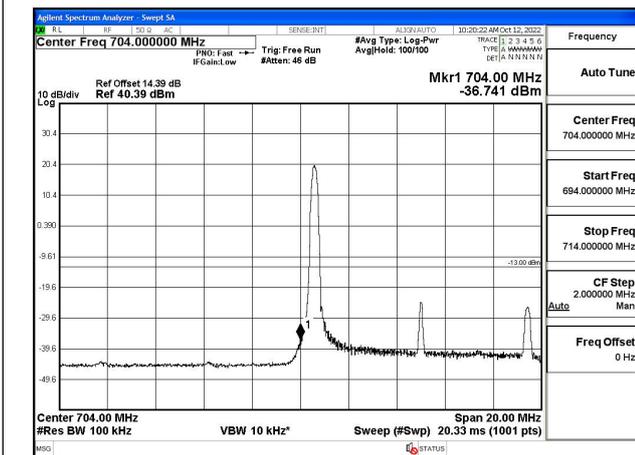


Fig.5

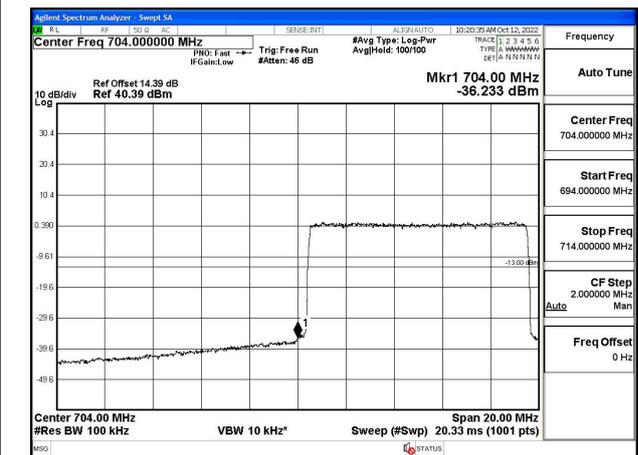


Fig.6

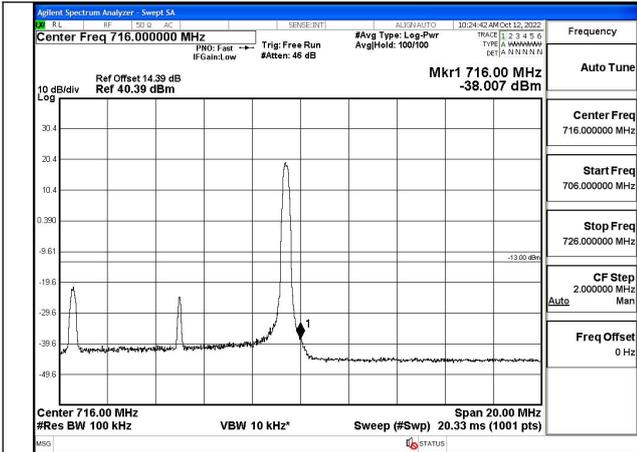


Fig.7

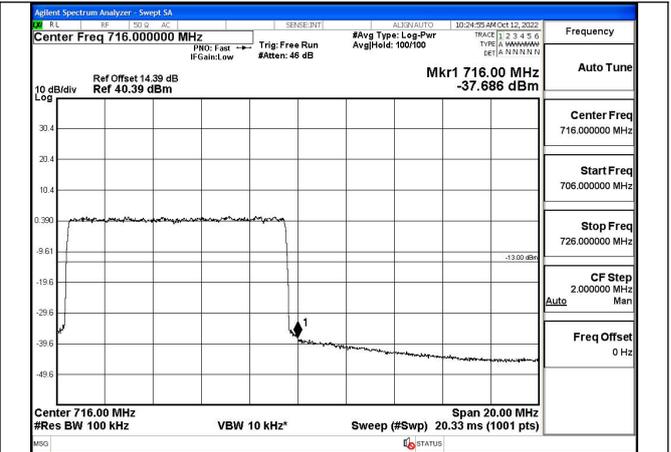


Fig.8

7 Frequency Stability

Temperature(°C)	Voltage	Test Result (ppm) Band 17 Low Channel QPSK	
		5M	10M
-20	NV	-0.004	-0.003
-10	NV	-0.003	-0.006
0	NV	0.009	0.006
+10	NV	-0.002	-0.003
+20	NV	0.009	0.006
+30	NV	-0.003	-0.003
+40	NV	-0.005	0.003
+50	NV	0.004	0.005
+60	NV	0.005	0.007
+20	LV	0.001	-0.002
+20	HV	0.004	0.002

Temperature(°C)	Voltage	Test Result (ppm) Band 17 High Channel QPSK	
		5M	10M
-20	NV	0.002	0.006
-10	NV	0.005	0.002
0	NV	0.003	0.005
+10	NV	0.001	0.002
+20	NV	-0.002	0.002
+30	NV	-0.005	0.004
+40	NV	-0.001	0.001
+50	NV	-0.005	0.002
+60	NV	0.007	0.002
+20	LV	0.001	-0.003
+20	HV	0.001	-0.008

8 Effective Radiated Power and Effective Isotropic Radiated Power

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	706.5	23755	5	1	0	23.44	17.73	0.059
QPSK	706.5	23755	5	1	12	23.27	17.56	0.057
QPSK	706.5	23755	5	1	24	23.12	17.41	0.055
QPSK	706.5	23755	5	12	0	22.32	16.61	0.046
QPSK	706.5	23755	5	12	7	22.38	16.67	0.046
QPSK	706.5	23755	5	12	13	22.48	16.77	0.048
QPSK	706.5	23755	5	25	0	22.09	16.38	0.043
QPSK	710	23790	5	1	0	23.58	17.87	0.061
QPSK	710	23790	5	1	12	23.63	17.92	0.062
QPSK	710	23790	5	1	24	23.47	17.76	0.060
QPSK	710	23790	5	12	0	22.27	16.56	0.045
QPSK	710	23790	5	12	7	22.43	16.72	0.047
QPSK	710	23790	5	12	13	22.26	16.55	0.045
QPSK	710	23790	5	25	0	22.30	16.59	0.046
QPSK	713.5	23825	5	1	0	23.56	17.85	0.061
QPSK	713.5	23825	5	1	12	23.56	17.85	0.061
QPSK	713.5	23825	5	1	24	23.60	17.89	0.062
QPSK	713.5	23825	5	12	0	22.34	16.63	0.046
QPSK	713.5	23825	5	12	7	22.18	16.47	0.044
QPSK	713.5	23825	5	12	13	22.26	16.55	0.045
QPSK	713.5	23825	5	25	0	22.30	16.59	0.046

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
16QAM	706.5	23755	5	1	0	22.84	17.13	0.052
16QAM	706.5	23755	5	1	12	22.63	16.92	0.049
16QAM	706.5	23755	5	1	24	22.92	17.21	0.053
16QAM	706.5	23755	5	12	0	21.30	15.59	0.036
16QAM	706.5	23755	5	12	7	21.20	15.49	0.035
16QAM	706.5	23755	5	12	13	21.34	15.63	0.037
16QAM	706.5	23755	5	25	0	21.50	15.79	0.038
16QAM	710	23790	5	1	0	22.31	16.60	0.046
16QAM	710	23790	5	1	12	22.44	16.73	0.047
16QAM	710	23790	5	1	24	22.12	16.41	0.044
16QAM	710	23790	5	12	0	21.47	15.76	0.038
16QAM	710	23790	5	12	7	21.39	15.68	0.037
16QAM	710	23790	5	12	13	21.41	15.70	0.037
16QAM	710	23790	5	25	0	21.73	16.02	0.040
16QAM	713.5	23825	5	1	0	22.74	17.03	0.050
16QAM	713.5	23825	5	1	12	22.57	16.86	0.049
16QAM	713.5	23825	5	1	24	22.66	16.95	0.050
16QAM	713.5	23825	5	12	0	21.36	15.65	0.037
16QAM	713.5	23825	5	12	7	21.42	15.71	0.037
16QAM	713.5	23825	5	12	13	21.45	15.74	0.037
16QAM	713.5	23825	5	25	0	21.61	15.90	0.039

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	709	23780	10	1	0	23.39	17.68	0.059
QPSK	709	23780	10	1	25	23.47	17.76	0.060
QPSK	709	23780	10	1	49	23.49	17.78	0.060
QPSK	709	23780	10	25	0	22.30	16.59	0.046
QPSK	709	23780	10	25	12	22.27	16.56	0.045
QPSK	709	23780	10	25	25	22.37	16.66	0.046
QPSK	709	23780	10	50	0	22.35	16.64	0.046
QPSK	710	23790	10	1	0	23.47	17.76	0.060
QPSK	710	23790	10	1	25	23.30	17.59	0.057
QPSK	710	23790	10	1	49	23.33	17.62	0.058
QPSK	710	23790	10	25	0	22.36	16.65	0.046
QPSK	710	23790	10	25	12	22.37	16.66	0.046
QPSK	710	23790	10	25	25	22.34	16.63	0.046
QPSK	710	23790	10	50	0	22.31	16.60	0.046
QPSK	711	23800	10	1	0	23.26	17.55	0.057
QPSK	711	23800	10	1	25	23.41	17.70	0.059
QPSK	711	23800	10	1	49	23.20	17.49	0.056
QPSK	711	23800	10	25	0	22.41	16.70	0.047
QPSK	711	23800	10	25	12	22.34	16.63	0.046
QPSK	711	23800	10	25	25	22.27	16.56	0.045
QPSK	711	23800	10	50	0	22.24	16.53	0.045

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
16QAM	709	23780	10	1	0	23.08	17.37	0.055
16QAM	709	23780	10	1	25	22.82	17.11	0.051
16QAM	709	23780	10	1	49	23.11	17.40	0.055
16QAM	709	23780	10	25	0	21.72	16.01	0.040
16QAM	709	23780	10	25	12	21.79	16.08	0.041
16QAM	709	23780	10	25	25	21.62	15.91	0.039
16QAM	709	23780	10	50	0	21.46	15.75	0.038
16QAM	710	23790	10	1	0	23.25	17.54	0.057
16QAM	710	23790	10	1	25	22.83	17.12	0.052
16QAM	710	23790	10	1	49	23.00	17.29	0.054
16QAM	710	23790	10	25	0	21.29	15.58	0.036
16QAM	710	23790	10	25	12	21.35	15.64	0.037
16QAM	710	23790	10	25	25	21.30	15.59	0.036
16QAM	710	23790	10	50	0	21.43	15.72	0.037
16QAM	711	23800	10	1	0	22.20	16.49	0.045
16QAM	711	23800	10	1	25	22.92	17.21	0.053
16QAM	711	23800	10	1	49	22.60	16.89	0.049
16QAM	711	23800	10	25	0	21.68	15.97	0.040
16QAM	711	23800	10	25	12	21.49	15.78	0.038
16QAM	711	23800	10	25	25	21.69	15.98	0.040
16QAM	711	23800	10	50	0	21.47	15.76	0.038