REPORT No.: SZ22030249S01

RF EXPOSURE EVALUATION REPORT

APPLICANT	:	Reliance Communications LLC
PRODUCT NAME	:	Orbic 4G Module
MODEL NAME	:	RC101ML
BRAND NAME	:	Orbic
FCC ID	:	2ABGH-RC101ML
STANDARD(S)	:	FCC 47CFR Part 2(2.1091)
RECEIPT DATE	:	2021-08-30
TEST DATE	:	2021-09-22
ISSUE DATE	:	2022-03-29

Edited by: Xie Yiyun

Xie Yiyun (Rapporteur)

Approved by: Shen Junsheng

Shen Junsheng (Supervisor)

MORLAB

Shenzhen Morlab Communications Technology Co., Ltd.
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555 Fax: 86-755-36698525
Http://www.morlab.cn E-mail: service@morlab.cn

DIRECTORY

Change History		
Version	Date	Reason for Change
1.0	2022-03-29	First edition

1. Technical Information

Note: Provide by applicant.

1.1 Applicant and Manufacturer Information

Applicant:	Reliance Communications LLC
Applicant Address:	91 Colin Drive, Unit 1, HOLBROOK, New York 11741, United States
Manufacturer:	Unimaxcomm
Manufacturer Address:	35F,HBC HuiLong Center Building-II Minzhi Street,Longhua, Shenzhen, P.R. China 518110

1.2 Equipment under Test (EUT) Description

Product Name:	Orbic 4G Module
Product Serial No.:	4#
Hardware Version:	QMO2_V1.0_0611
Software Version:	ORB101ML_V1.0.0.9_VT-NA
Frequency Bands:	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 29: 717 MHz ~ 728 MHz (RX) LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz
Modulation Mode:	WCDMA: QPSK,16QAM,64QAM LTE: QPSK,16QAM,64QAM
Antenna Gain:	WCDMA Band II, LTE Band 2/25: 2.3dBi

	WCDMA Band IV, LTE Band 4/66: 2.1dBi WCDMA Band V, LTE Band 5/26: - 0.3dBi LTE Band 7: 2.7dBi LTE Band 12: -2.8dBi LTE Band 13: -0.7dBi LTE Band 14: -0.6dBi LTE Band 17: -2.8dBi LTE Band 41: 2.7dBi LTE Band 48: 2.0dBi

Note:

1. This report was updated based on the original report SZ21080277S01, model name RC101ML, both of them are different from CA_48C added by software, others are the same as before. Therefore CA_48C requires SAR measurements and its latest verification results will be recorded in this report. The other test results in this report still refer to the test results in the original test report.
2. When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

1.3 Applied Reference Documents

Leading reference documents for testing:

Identity	Document Title	Method determination /Remark
FCC 47CFR Part 2(2.1091)	Radio Frequency Radiation Exposure Assessment: mobile devices	No deviation
KDB 447498 D01v06	General RF Exposure Guidance	No deviation
Note 1: The test item is not applicable. **Note 2:** Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table. **Note 3：** The test results of these test items in this report refer to the test report (Report No: SZ21080277S01).		

2. Device Category and RF Exposure Limit

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

General Population/Uncontrolled Exposure:

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz* = Plane-wave equivalent power density

3. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
R&S	Network Emulator	CMW500	165755	2021.02.25	2022.02.24

Note:

The EUT was connected to Base Station Anritsu MT8820C referred to the Setup Configuration. For the maximum power, it was established between EUT and Base Station with following setting:

1. For WCDMA testing, Power Ctrl Mode = All Up bits, and the transmitted maximum output power was recorded.
2. For LTE testing, the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and different configurations which are requested to be reported to FCC.

4. Conducted Power List

Remark: The output power of WCDMA/LTE refers to the annex B of this report.

5. LTE Carrier Aggregation

➢ **Uplink Carrier Aggregation Configuration**

<Intra-band>

2CC Uplink Carrier Aggregation for Intra-band				
No.	Combination	MIMO	Restriction	Completely Covered by Measurement Superset
1	CA_7C	7C	-	No
2	CA_41C	41C	-	No
3	CA_48C	48C	-	No

Note:

1. According to the 3GPP 36.101 table 6.2.2A-1 specifics that the aggregation maximum allowed output power is equivalent to the signal carrier scenario for intra-band contiguous carrier aggregation scenarios. When the non-contiguous RB allocation is applied the MPR shell complies with the table 6.2.3A defined in 3GPP 36.101.
2. According to the TCB Workshop publication, the output power of uplink CA would be measured with the wideband signal integration over the component carriers.

6. RF Exposure Assessment

➢ **Standalone Transmission Assessment:**

Bands	Frequency (MHz)	Tune-up Power(dBm)	Antenna Gain(dBi)	EIRP (mW)	Power Density (mW/cm²)	Limit for MPE (mW/cm²)
WCDMA II	1880	21.5	2.3	239.88	0.048	1.0
WCDMA IV	1755	21.0	2.1	204.17	0.041	1.0
WCDMA V	849	22.0	-0.3	147.91	0.029	0.566
LTE Band 2	1880	22.0	2.3	269.15	0.054	1.0
LTE Band 4	1745	22.0	2.1	257.04	0.051	1.0
LTE Band 5	849	23.0	-0.3	186.21	0.037	0.566
LTE Band 7	2510	22.5	2.7	331.13	0.066	1.0
LTE Band 12	716	23.0	-2.8	104.71	0.021	0.477
LTE Band 13	787	23.0	-0.7	169.82	0.034	0.525
LTE Band 14	798	23.0	-0.6	173.78	0.035	0.532
LTE Band 17	711	23.5	-2.8	117.49	0.023	0.474
LTE Band 25	1915	22.5	2.3	302.0	0.06	1.0
LTE Band 26	849	23.0	-0.3	186.21	0.037	0.566
LTE Band 41	2690	24.5	2.7	524.81	0.104	1.0
LTE Band 48	3700	24.0	2.0	398.11	0.079	1.0
LTE Band 66	1780	22.0	2.1	257.04	0.051	1.0
LTE Band 71	698	23.5	-2.8	117.49	0.023	0.465

Note:

1. According to KDB 447498, SAR test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring assessment, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.
2. MPE calculate method

   $$\text{Power Density} = EIRP/4\pi R^2$$

   Where: EIRP = P+G

   P = Output Power (dBm)

   G = Antenna Gain (dBi)

   R = Separation Distance (20cm)
3. Uplink CA would not be evaluated since the output power is less than the single band.

➢ **Conclusion:**

According to FCC 47 CFR §2.1091, this device complies with human exposure basic restrictions.

Annex A General Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

The FCC designation number is CN1192, the test firm registration number is 226174.

Annex B Conducted Power

Conducted Power

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	20.89	20.96	20.54	21.50	20.66	20.34	20.19	21.00	21.63	21.57	21.66	22.00
3GPP Rel 6	HSDPA Subtest-1	20.66	20.86	20.51	22.00	20.24	20.18	20.65	21.00	20.75	20.52	20.53	21.50
3GPP Rel 6	HSDPA Subtest-2	20.76	20.85	20.34	22.00	20.19	20.16	20.65	21.00	20.76	20.53	20.55	21.50
3GPP Rel 6	HSDPA Subtest-3	20.48	20.35	19.86	21.50	19.68	19.57	20.13	20.50	20.23	20.02	20.02	21.00
3GPP Rel 6	HSDPA Subtest-4	20.29	20.34	19.86	21.50	19.69	19.58	20.14	20.50	20.23	20.02	20.01	21.00
3GPP Rel 8	DC-HSDPA Subtest-1	20.59	20.66	20.83	22.00	20.06	20.61	20.43	21.00	20.42	20.63	19.88	21.00
3GPP Rel 8	DC-HSDPA Subtest-2	20.67	20.66	20.86	22.00	20.08	20.60	20.45	21.00	20.55	20.44	19.80	21.00
3GPP Rel 8	DC-HSDPA Subtest-3	20.39	20.34	20.40	21.50	19.71	19.95	20.07	20.50	20.03	19.94	19.39	20.50
3GPP Rel 8	DC-HSDPA Subtest-4	20.07	20.35	20.40	21.50	19.51	19.74	19.86	20.50	20.03	19.95	19.30	20.50
3GPP Rel 6	HSUPA Subtest-1	19.46	19.66	16.38	20.00	19.41	18.58	19.37	20.00	19.08	20.10	19.29	20.50
3GPP Rel 6	HSUPA Subtest-2	18.90	19.13	15.82	18.00	18.86	18.01	18.81	19.00	18.55	19.56	18.76	20.00
3GPP Rel 6	HSUPA Subtest-3	19.46	19.69	16.37	19.00	19.44	18.66	19.43	20.00	19.12	20.11	19.31	20.50
3GPP Rel 6	HSUPA Subtest-4	19.42	19.68	16.35	18.00	19.42	18.63	19.38	20.00	19.06	20.07	19.26	20.50
3GPP Rel 6	HSUPA Subtest-5	19.41	19.67	16.35	20.00	19.40	18.63	19.42	20.00	19.10	20.08	19.29	20.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	19.64	19.68	16.55	20.00	19.50	18.74	19.44	20.00	19.08	20.05	20.63	21.00
Attenuator			Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode			Max.	20.96			Max.	20.66			Max.	21.66	

Band 2 (1900MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	21.39	21.50	21.33	22
20	QPSK	1	49	21.22	21.37	21.14	
20	QPSK	1	99	21.07	21.13	21.06	
20	QPSK	50	0	20.24	20.37	20.17	21
20	QPSK	50	24	20.14	20.11	20.09	
20	QPSK	50	50	20.04	20.02	20.07	
20	QPSK	100	0	20.26	20.35	20.20	
20	16QAM	1	0	20.94	20.95	20.74	21.5
20	16QAM	1	49	20.74	20.77	20.63	
20	16QAM	1	99	20.53	20.55	20.46	
20	16QAM	50	0	19.60	19.45	19.40	20
20	16QAM	50	24	19.44	19.31	19.25	
20	16QAM	50	50	19.27	19.15	19.11	
20	16QAM	100	0	19.60	19.42	19.22	
20	64QAM	1	0	19.59	19.53	19.31	20
20	64QAM	1	49	19.42	19.38	19.23	
20	64QAM	1	99	19.28	19.19	19.15	
20	64QAM	50	0	18.64	18.76	18.51	19.5
20	64QAM	50	24	18.43	18.65	18.47	
20	64QAM	50	50	18.81	18.92	18.73	
20	64QAM	100	0	18.69	18.73	18.56	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	21.35	21.46	21.29	22
15	QPSK	1	37	21.18	21.33	21.10	
15	QPSK	1	74	21.03	21.09	21.02	
15	QPSK	36	0	20.33	20.20	20.13	21
15	QPSK	36	20	20.10	20.07	20.05	
15	QPSK	36	39	20.00	19.98	20.03	
15	QPSK	75	0	20.31	20.22	20.16	
15	16QAM	1	0	20.90	20.91	20.70	21.5
15	16QAM	1	37	20.70	20.73	20.59	
15	16QAM	1	74	20.49	20.51	20.42	
15	16QAM	36	0	19.56	19.41	19.36	20
15	16QAM	36	20	19.40	19.27	19.21	
15	16QAM	36	39	19.23	19.11	19.07	
15	16QAM	75	0	19.56	19.38	19.18	
15	64QAM	1	0	19.55	19.49	19.27	20
15	64QAM	1	37	19.38	19.34	19.19	
15	64QAM	1	74	19.24	19.15	19.11	
15	64QAM	36	0	18.60	18.72	18.47	19.5
15	64QAM	36	20	18.39	18.61	18.43	
15	64QAM	36	39	18.77	18.88	18.69	
15	64QAM	75	0	18.65	18.69	18.52	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	21.31	21.42	21.25	22
10	QPSK	1	25	21.14	21.29	21.06	
10	QPSK	1	49	20.99	21.05	20.98	
10	QPSK	25	0	20.29	20.16	20.09	21
10	QPSK	25	12	20.06	20.03	20.01	
10	QPSK	25	25	19.96	19.94	19.99	
10	QPSK	50	0	20.27	20.18	20.12	
10	16QAM	1	0	20.86	20.87	20.66	21.5
10	16QAM	1	25	20.66	20.69	20.55	
10	16QAM	1	49	20.45	20.47	20.38	
10	16QAM	25	0	19.52	19.37	19.32	20
10	16QAM	25	12	19.36	19.23	19.17	
10	16QAM	25	25	19.19	19.07	19.03	
10	16QAM	50	0	19.52	19.34	19.14	
10	64QAM	1	0	19.51	19.45	19.23	20
10	64QAM	1	25	19.34	19.30	19.15	
10	64QAM	1	49	19.20	19.11	19.07	
10	64QAM	25	0	18.56	18.68	18.43	19.5
10	64QAM	25	12	18.35	18.57	18.39	
10	64QAM	25	25	18.73	18.84	18.65	
10	64QAM	50	0	18.61	18.65	18.48	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	21.28	21.39	21.22	22
5	QPSK	1	12	21.11	21.26	21.03	
5	QPSK	1	24	20.96	21.02	20.95	
5	QPSK	12	0	20.26	20.13	20.06	21
5	QPSK	12	7	20.03	20.00	19.98	
5	QPSK	12	13	19.93	19.91	19.96	
5	QPSK	25	0	20.24	20.15	20.09	
5	16QAM	1	0	20.83	20.84	20.63	21.5
5	16QAM	1	12	20.63	20.66	20.52	
5	16QAM	1	24	20.42	20.44	20.35	
5	16QAM	12	0	19.49	19.34	19.29	20
5	16QAM	12	7	19.33	19.20	19.14	
5	16QAM	12	13	19.16	19.04	19.00	
5	16QAM	25	0	19.49	19.31	19.11	
5	64QAM	1	0	19.48	19.42	19.20	20
5	64QAM	1	12	19.31	19.27	19.12	
5	64QAM	1	24	19.17	19.08	19.04	
5	64QAM	12	0	18.53	18.65	18.40	19.5
5	64QAM	12	7	18.32	18.54	18.36	
5	64QAM	12	13	18.70	18.81	18.62	
5	64QAM	25	0	18.58	18.62	18.45	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	21.25	21.36	21.19	22
3	QPSK	1	8	21.08	21.23	21.00	
3	QPSK	1	14	20.93	20.99	20.92	
3	QPSK	8	0	20.23	20.10	20.03	21
3	QPSK	8	4	20.00	19.97	19.95	
3	QPSK	8	7	19.90	19.88	19.93	
3	QPSK	15	0	20.21	20.12	20.06	

Band 4 (AWS Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	21.26	21.32	21.30	22
20	QPSK	1	49	21.11	21.13	21.15	
20	QPSK	1	99	20.83	20.92	20.87	
20	QPSK	50	0	20.16	20.24	20.21	21
20	QPSK	50	24	20.07	20.15	20.12	
20	QPSK	50	50	19.98	20.08	20.07	
20	QPSK	100	0	20.22	20.33	20.32	
20	16QAM	1	0	20.51	20.57	20.50	21
20	16QAM	1	49	20.23	20.28	20.35	
20	16QAM	1	99	20.11	20.14	20.22	
20	16QAM	50	0	19.28	19.29	19.25	20
20	16QAM	50	24	19.13	19.16	19.17	
20	16QAM	50	50	19.03	19.07	19.04	
20	16QAM	100	0	19.31	19.28	19.29	
20	64QAM	1	0	19.43	19.55	19.34	20
20	64QAM	1	49	19.27	19.41	19.18	
20	64QAM	1	99	19.13	19.22	19.11	
20	64QAM	50	0	19.31	19.44	19.23	20
20	64QAM	50	24	19.22	19.35	19.14	
20	64QAM	50	50	19.12	19.27	19.04	
20	64QAM	100	0	19.33	19.42	19.18	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	21.20	21.26	21.24	22
15	QPSK	1	37	21.05	21.07	21.09	
15	QPSK	1	74	20.77	20.86	20.81	
15	QPSK	36	0	20.10	20.18	20.15	21
15	QPSK	36	20	20.01	20.09	20.06	
15	QPSK	36	39	19.92	20.02	20.01	
15	QPSK	75	0	20.16	20.17	20.26	
15	16QAM	1	0	20.45	20.51	20.44	21
15	16QAM	1	37	20.17	20.22	20.29	
15	16QAM	1	74	20.05	20.08	20.16	
15	16QAM	36	0	19.22	19.23	19.19	20
15	16QAM	36	20	19.07	19.10	19.11	
15	16QAM	36	39	18.97	19.01	18.98	
15	16QAM	75	0	19.25	19.22	19.23	
15	64QAM	1	0	19.37	19.49	19.28	20
15	64QAM	1	37	19.21	19.35	19.12	
15	64QAM	1	74	19.07	19.16	19.05	
15	64QAM	36	0	19.25	19.38	19.17	20
15	64QAM	36	20	19.16	19.29	19.08	
15	64QAM	36	39	19.06	19.21	18.98	
15	64QAM	75	0	19.27	19.36	19.12	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	21.15	21.21	21.19	22
10	QPSK	1	25	21.00	21.02	21.04	
10	QPSK	1	49	20.72	20.81	20.76	
10	QPSK	25	0	20.05	20.13	20.10	21
10	QPSK	25	12	19.96	20.04	20.01	
10	QPSK	25	25	19.87	19.97	19.96	
10	QPSK	50	0	20.11	20.12	20.21	
10	16QAM	1	0	20.40	20.46	20.39	21
10	16QAM	1	25	20.12	20.17	20.24	
10	16QAM	1	49	20.00	20.03	20.11	
10	16QAM	25	0	19.17	19.18	19.14	20
10	16QAM	25	12	19.02	19.05	19.06	
10	16QAM	25	25	18.92	18.96	18.93	
10	16QAM	50	0	19.20	19.17	19.18	
10	64QAM	1	0	19.32	19.44	19.23	20
10	64QAM	1	25	19.16	19.30	19.07	
10	64QAM	1	49	19.02	19.11	19.00	
10	64QAM	25	0	19.20	19.33	19.12	20
10	64QAM	25	12	19.11	19.24	19.03	
10	64QAM	25	25	19.01	19.16	18.93	
10	64QAM	50	0	19.22	19.31	19.07	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	21.11	21.16	21.14	22
5	QPSK	1	12	20.95	20.97	20.99	
5	QPSK	1	24	20.67	20.76	20.71	
5	QPSK	12	0	20.00	20.08	20.05	21
5	QPSK	12	7	19.91	19.99	19.96	
5	QPSK	12	13	19.82	19.92	19.91	
5	QPSK	25	0	20.06	20.07	20.16	
5	16QAM	1	0	20.35	20.41	20.34	21
5	16QAM	1	12	20.07	20.12	20.19	
5	16QAM	1	24	19.95	19.98	20.06	
5	16QAM	12	0	19.12	19.13	19.09	20
5	16QAM	12	7	18.97	19.00	19.01	
5	16QAM	12	13	18.87	18.91	18.88	
5	16QAM	25	0	19.15	19.12	19.13	
5	64QAM	1	0	19.27	19.39	19.18	20
5	64QAM	1	12	19.11	19.25	19.02	
5	64QAM	1	24	18.97	19.06	18.95	
5	64QAM	12	0	19.15	19.28	19.07	20
5	64QAM	12	7	19.06	19.19	18.98	
5	64QAM	12	13	18.96	19.11	18.88	
5	64QAM	25	0	19.17	19.26	19.02	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	21.07	21.11	21.09	22
3	QPSK	1	8	20.90	20.92	20.94	
3	QPSK	1	14	20.62	20.71	20.66	
3	QPSK	8	0	19.95	20.03	20.00	21
3	QPSK	8	4	19.86	19.94	19.91	
3	QPSK	8	7	19.77	19.87	19.86	
3	QPSK	15	0	20.01	20.02	20.11	

3	16QAM	1	0	20.80	20.81	20.60	21.5
3	16QAM	1	8	20.60	20.63	20.49	
3	16QAM	1	14	20.39	20.41	20.32	
3	16QAM	8	0	19.46	19.31	19.26	20
3	16QAM	8	4	19.30	19.17	19.11	
3	16QAM	8	7	19.13	19.01	18.97	
3	16QAM	15	0	19.46	19.28	19.08	
3	64QAM	1	0	19.45	19.39	19.17	20
3	64QAM	1	8	19.28	19.24	19.09	
3	64QAM	1	14	19.14	19.05	19.01	
3	64QAM	8	0	18.50	18.62	18.37	19
3	64QAM	8	4	18.29	18.51	18.33	
3	64QAM	8	7	18.67	18.78	18.59	
3	64QAM	15	0	18.55	18.59	18.42	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	21.22	21.33	21.16	22
1.4	QPSK	1	3	21.05	21.20	20.97	
1.4	QPSK	1	5	20.90	20.96	20.89	
1.4	QPSK	3	0	20.20	20.07	20.00	
1.4	QPSK	3	1	19.97	19.94	19.92	
1.4	QPSK	3	3	19.87	19.85	19.90	
1.4	QPSK	6	0	20.18	20.09	20.03	20.5
1.4	16QAM	1	0	20.77	20.78	20.57	21.5
1.4	16QAM	1	3	20.57	20.60	20.46	
1.4	16QAM	1	5	20.36	20.38	20.29	
1.4	16QAM	3	0	19.43	19.28	19.23	
1.4	16QAM	3	1	19.27	19.14	19.08	
1.4	16QAM	3	3	19.10	18.98	18.94	
1.4	16QAM	6	0	19.43	19.25	19.05	20
1.4	64QAM	1	0	19.42	19.36	19.14	20
1.4	64QAM	1	3	19.25	19.21	19.06	
1.4	64QAM	1	5	19.11	19.02	18.98	
1.4	64QAM	3	0	18.47	18.59	18.34	
1.4	64QAM	3	1	18.26	18.48	18.30	
1.4	64QAM	3	3	18.64	18.75	18.56	
1.4	64QAM	6	0	18.52	18.56	18.39	19

3	16QAM	1	0	20.30	20.36	20.29	21
3	16QAM	1	8	20.02	20.07	20.14	
3	16QAM	1	14	19.90	19.93	20.01	
3	16QAM	8	0	19.07	19.08	19.04	20
3	16QAM	8	4	18.92	18.95	18.96	
3	16QAM	8	7	18.82	18.86	18.83	
3	16QAM	15	0	19.10	19.07	19.08	
3	64QAM	1	0	19.22	19.34	19.13	20
3	64QAM	1	8	19.06	19.20	19.09	
3	64QAM	1	14	19.02	19.01	19.05	
3	64QAM	8	0	19.10	19.23	19.02	20
3	64QAM	8	4	19.01	19.14	18.93	
3	64QAM	8	7	18.91	19.06	18.83	
3	64QAM	15	0	19.12	19.21	18.97	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.06	21.11	21.09	22
1.4	QPSK	1	3	20.90	20.92	20.94	
1.4	QPSK	1	5	20.62	20.71	20.66	
1.4	QPSK	3	0	19.95	20.03	20.00	
1.4	QPSK	3	1	19.86	19.94	19.91	
1.4	QPSK	3	3	19.77	19.87	19.86	
1.4	QPSK	6	0	20.01	20.02	20.11	21
1.4	16QAM	1	0	20.30	20.36	20.29	21
1.4	16QAM	1	3	20.02	20.07	20.14	
1.4	16QAM	1	5	19.90	19.93	20.01	
1.4	16QAM	3	0	19.07	19.08	19.04	
1.4	16QAM	3	1	18.92	18.95	18.96	
1.4	16QAM	3	3	18.82	18.86	18.83	
1.4	16QAM	6	0	19.10	19.07	19.08	20
1.4	16QAM	1	0	19.22	19.34	19.13	20
1.4	16QAM	1	3	19.06	19.20	18.97	
1.4	16QAM	1	5	18.92	19.01	18.90	
1.4	16QAM	3	0	19.10	19.23	19.02	
1.4	16QAM	3	1	19.01	19.14	18.93	
1.4	16QAM	3	3	18.91	19.06	18.83	
1.4	16QAM	6	0	19.12	19.21	18.97	20

Band 5 (Celluar Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	22.50	22.60	22.57	
10	QPSK	1	25	22.31	22.47	22.35	23
10	QPSK	1	49	22.27	22.31	22.26	
10	QPSK	25	0	21.39	21.40	21.32	
10	QPSK	25	12	21.23	21.28	21.15	22
10	QPSK	25	25	21.11	21.14	21.07	
10	QPSK	50	0	21.37	21.38	21.35	
10	16QAM	1	0	21.82	21.85	21.68	
10	16QAM	1	25	21.67	21.77	21.53	22
10	16QAM	1	49	21.46	21.52	21.41	
10	16QAM	25	0	20.34	20.44	20.37	
10	16QAM	25	12	20.25	20.31	20.21	21
10	16QAM	25	25	20.17	20.23	20.16	
10	16QAM	50	0	20.41	20.43	20.39	
10	64QAM	1	0	20.79	20.88	20.83	
10	64QAM	1	25	20.61	20.75	20.72	21.5
10	64QAM	1	49	20.56	20.59	20.53	
10	64QAM	25	0	19.84	19.93	19.75	
10	64QAM	25	12	19.73	19.88	19.65	20.5
10	64QAM	25	25	19.55	19.66	19.53	
10	64QAM	50	0	19.89	19.94	19.77	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	22.44	22.57	22.51	
5	QPSK	1	12	22.25	22.41	22.29	23
5	QPSK	1	24	22.21	22.25	22.20	
5	QPSK	12	0	21.33	21.34	21.26	
5	QPSK	12	7	21.17	21.22	21.09	22
5	QPSK	12	13	21.05	21.08	21.01	
5	QPSK	25	0	21.31	21.30	21.29	
5	16QAM	1	0	21.76	21.79	21.62	
5	16QAM	1	12	21.61	21.71	21.47	22
5	16QAM	1	24	21.40	21.46	21.35	
5	16QAM	12	0	20.28	20.38	20.31	
5	16QAM	12	7	20.19	20.25	20.15	21
5	16QAM	12	13	20.11	20.17	20.10	
5	16QAM	25	0	20.35	20.37	20.33	
5	64QAM	1	0	20.73	20.82	20.77	
5	64QAM	1	12	20.55	20.69	20.66	21
5	64QAM	1	24	20.50	20.53	20.47	
5	64QAM	12	0	19.78	19.87	19.69	
5	64QAM	12	7	19.67	19.82	19.59	20.5
5	64QAM	12	13	19.49	19.60	19.47	
5	64QAM	25	0	19.83	19.88	19.71	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.45	22.56	22.52	
3	QPSK	1	8	22.26	22.42	22.30	23
3	QPSK	1	14	22.22	22.26	22.21	
3	QPSK	8	0	21.34	21.35	21.27	
3	QPSK	8	4	21.18	21.23	21.10	22
3	QPSK	8	7	21.06	21.09	21.02	
3	QPSK	15	0	21.32	21.31	21.30	
3	16QAM	1	0	21.77	21.80	21.63	
3	16QAM	1	8	21.62	21.72	21.48	22
3	16QAM	1	14	21.41	21.47	21.36	
3	16QAM	8	0	20.29	20.39	20.32	
3	16QAM	8	4	20.20	20.26	20.16	21
3	16QAM	8	7	20.12	20.18	20.11	
3	16QAM	15	0	20.36	20.38	20.34	
3	64QAM	1	0	20.74	20.83	20.78	
3	64QAM	1	8	20.56	20.70	20.67	21
3	64QAM	1	14	20.51	20.54	20.48	
3	64QAM	8	0	19.79	19.88	19.70	
3	64QAM	8	4	19.68	19.83	19.60	20.5
3	64QAM	8	7	19.50	19.61	19.48	
3	64QAM	15	0	19.84	19.89	19.72	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	22.46	22.55	22.53	
1.4	QPSK	1	3	22.27	22.43	22.31	
1.4	QPSK	1	5	22.23	22.27	22.22	23
1.4	QPSK	3	0	21.35	21.36	21.28	
1.4	QPSK	3	1	21.19	21.24	21.11	
1.4	QPSK	3	3	21.07	21.10	21.03	
1.4	QPSK	6	0	21.33	21.32	21.31	22
1.4	16QAM	1	0	21.78	21.81	21.64	
1.4	16QAM	1	3	21.63	21.73	21.49	
1.4	16QAM	1	5	21.42	21.48	21.37	22
1.4	16QAM	3	0	20.30	20.40	20.33	
1.4	16QAM	3	1	20.21	20.27	20.17	
1.4	16QAM	3	3	20.13	20.19	20.12	
1.4	16QAM	6	0	20.37	20.39	20.35	21
1.4	64QAM	1	0	20.75	20.84	20.79	
1.4	64QAM	1	3	20.57	20.71	20.68	
1.4	64QAM	1	5	20.52	20.55	20.49	21
1.4	64QAM	3	0	19.80	19.89	19.71	
1.4	64QAM	3	1	19.69	19.84	19.61	
1.4	64QAM	3	3	19.51	19.62	19.49	
1.4	64QAM	6	0	19.85	19.90	19.73	20.5

Band 7 (2600MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	21.84	21.95	21.76	
20	QPSK	1	49	21.67	21.73	21.54	22.5
20	QPSK	1	99	21.50	21.52	21.45	
20	QPSK	50	0	20.96	20.98	20.82	
20	QPSK	50	24	20.73	20.81	20.60	21.5
20	QPSK	50	50	20.60	20.75	20.53	
20	QPSK	100	0	20.95	21.07	20.87	
20	16QAM	1	0	20.93	21.17	21.07	
20	16QAM	1	49	20.86	20.94	20.82	21.5
20	16QAM	1	99	20.68	20.78	20.67	
20	16QAM	50	0	19.87	19.85	19.83	
20	16QAM	50	24	19.60	19.72	19.56	20.5
20	16QAM	50	50	19.56	19.67	19.42	
20	16QAM	100	0	19.76	19.95	19.68	
20	64QAM	1	0	19.73	19.89	19.77	
20	64QAM	1	49	19.65	19.71	19.54	20.5
20	64QAM	1	99	19.41	19.55	19.43	
20	64QAM	50	0	18.64	18.91	18.85	
20	64QAM	50	24	18.51	18.84	18.73	19.5
20	64QAM	50	50	18.43	18.69	18.67	
20	64QAM	100	0	18.57	18.83	18.79	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	21.81	21.92	21.73	
15	QPSK	1	37	21.64	21.70	21.51	22.5
15	QPSK	1	74	21.47	21.49	21.42	
15	QPSK	36	0	20.93	20.90	20.79	
15	QPSK	36	20	20.70	20.78	20.57	21.5
15	QPSK	36	39	20.57	20.72	20.50	
15	QPSK	75	0	20.92	21.04	20.84	
15	16QAM	1	0	20.90	21.14	21.04	
15	16QAM	1	37	20.83	20.91	20.79	21.5
15	16QAM	1	74	20.65	20.75	20.64	
15	16QAM	36	0	19.84	19.82	19.80	
15	16QAM	36	20	19.57	19.69	19.53	20.5
15	16QAM	36	39	19.53	19.64	19.39	
15	16QAM	75	0	19.73	19.92	19.65	
15	64QAM	1	0	19.70	19.86	19.74	
15	64QAM	1	37	19.62	19.68	19.51	20.5
15	64QAM	1	74	19.38	19.52	19.40	
15	64QAM	36	0	18.61	18.88	18.82	
15	64QAM	36	20	18.48	18.81	18.70	19.5
15	64QAM	36	39	18.40	18.66	18.64	
15	64QAM	75	0	18.54	18.80	18.76	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	21.76	21.87	21.68	
10	QPSK	1	25	21.59	21.65	21.46	22.5
10	QPSK	1	49	21.42	21.44	21.37	
10	QPSK	25	0	20.88	20.85	20.74	
10	QPSK	25	12	20.65	20.73	20.52	21.5
10	QPSK	25	25	20.52	20.67	20.45	
10	QPSK	50	0	20.87	20.99	20.79	
10	16QAM	1	0	20.85	21.09	20.99	
10	16QAM	1	25	20.78	20.86	20.74	21.5
10	16QAM	1	49	20.60	20.70	20.59	
10	16QAM	25	0	19.79	19.77	19.75	
10	16QAM	25	12	19.52	19.64	19.48	20.5
10	16QAM	25	25	19.48	19.59	19.34	
10	16QAM	50	0	19.68	19.87	19.60	
10	64QAM	1	0	19.65	19.81	19.69	
10	64QAM	1	25	19.57	19.63	19.46	20.5
10	64QAM	1	49	19.33	19.47	19.35	
10	64QAM	25	0	18.56	18.83	18.77	
10	64QAM	25	12	18.43	18.76	18.65	19.5
10	64QAM	25	25	18.35	18.61	18.59	
10	64QAM	50	0	18.49	18.75	18.71	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	21.71	21.82	21.63	
5	QPSK	1	12	21.54	21.60	21.41	22.5
5	QPSK	1	24	21.37	21.39	21.32	
5	QPSK	12	0	20.83	20.80	20.69	
5	QPSK	12	7	20.60	20.68	20.47	21.5
5	QPSK	12	13	20.47	20.62	20.40	
5	QPSK	25	0	20.82	20.94	20.74	
5	16QAM	1	0	20.80	21.04	20.94	
5	16QAM	1	12	20.73	20.81	20.69	21.5
5	16QAM	1	24	20.55	20.65	20.54	
5	16QAM	12	0	19.74	19.72	19.70	
5	16QAM	12	7	19.47	19.59	19.43	20.5
5	16QAM	12	13	19.43	19.54	19.29	
5	16QAM	25	0	19.63	19.82	19.55	
5	64QAM	1	0	19.60	19.76	19.64	
5	64QAM	1	12	19.52	19.58	19.41	20.5
5	64QAM	1	24	19.28	19.42	19.30	
5	64QAM	12	0	18.51	18.78	18.72	
5	64QAM	12	7	18.38	18.71	18.60	19.5
5	64QAM	12	13	18.30	18.56	18.54	
5	64QAM	25	0	18.44	18.70	18.66	

Band 12 (700MHz Low Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	22.58	22.65	22.54	
10	QPSK	1	25	22.35	22.43	22.37	23
10	QPSK	1	49	22.23	22.27	22.21	
10	QPSK	25	0	21.59	21.64	21.60	
10	QPSK	25	12	21.43	21.59	21.53	22
10	QPSK	25	25	21.37	21.44	21.41	
10	QPSK	50	0	21.61	21.62	21.52	
10	16QAM	1	0	21.89	21.85	21.90	
10	16QAM	1	25	21.76	21.73	21.82	22
10	16QAM	1	49	21.66	21.63	21.75	
10	16QAM	25	0	20.61	20.62	20.56	
10	16QAM	25	12	20.43	20.52	20.41	21
10	16QAM	25	25	20.26	20.32	20.24	
10	16QAM	50	0	20.57	20.51	20.54	
10	64QAM	1	0	20.71	20.79	20.63	
10	64QAM	1	25	20.53	20.65	20.49	21
10	64QAM	1	49	20.41	20.53	20.37	
10	64QAM	25	0	19.76	19.85	19.74	
10	64QAM	25	12	19.64	19.73	19.61	20
10	64QAM	25	25	19.41	19.52	19.43	
10	64QAM	50	0	19.87	19.93	19.78	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.52	22.59	22.48	
5	QPSK	1	12	22.29	22.37	22.31	23
5	QPSK	1	24	22.17	22.21	22.15	
5	QPSK	12	0	21.53	21.58	21.54	
5	QPSK	12	7	21.37	21.53	21.47	22
5	QPSK	12	13	21.31	21.38	21.35	
5	QPSK	25	0	21.55	21.44	21.46	
5	16QAM	1	0	21.83	21.79	21.84	
5	16QAM	1	12	21.70	21.67	21.76	22
5	16QAM	1	24	21.60	21.57	21.69	
5	16QAM	12	0	20.55	20.56	20.50	
5	16QAM	12	7	20.37	20.46	20.35	21
5	16QAM	12	13	20.20	20.26	20.18	
5	16QAM	25	0	20.51	20.45	20.48	
5	64QAM	1	0	20.65	20.73	20.57	
5	64QAM	1	12	20.47	20.59	20.43	21
5	64QAM	1	24	20.35	20.47	20.31	
5	64QAM	12	0	19.70	19.79	19.68	
5	64QAM	12	7	19.58	19.67	19.55	20
5	64QAM	12	13	19.35	19.46	19.37	
5	64QAM	25	0	19.81	19.87	19.72	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.55	22.62	22.51	
3	QPSK	1	8	22.32	22.40	22.34	23
3	QPSK	1	14	22.20	22.24	22.18	
3	QPSK	8	0	21.56	21.61	21.57	
3	QPSK	8	4	21.40	21.56	21.50	22
3	QPSK	8	7	21.34	21.41	21.38	
3	QPSK	15	0	21.58	21.47	21.49	
3	16QAM	1	0	21.86	21.82	21.87	
3	16QAM	1	8	21.73	21.70	21.79	22
3	16QAM	1	14	21.63	21.60	21.72	
3	16QAM	8	0	20.58	20.59	20.53	
3	16QAM	8	4	20.40	20.49	20.38	21
3	16QAM	8	7	20.23	20.29	20.21	
3	16QAM	15	0	20.54	20.48	20.51	
3	64QAM	1	0	20.68	20.76	20.60	
3	64QAM	1	8	20.50	20.62	20.46	21
3	64QAM	1	14	20.38	20.50	20.34	
3	64QAM	8	0	19.73	19.82	19.71	
3	64QAM	8	4	19.61	19.70	19.58	20
3	64QAM	8	7	19.38	19.49	19.40	
3	64QAM	15	0	19.84	19.90	19.75	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	22.48	22.55	22.44	
1.4	QPSK	1	3	22.25	22.33	22.27	
1.4	QPSK	1	5	22.13	22.17	22.11	23.5
1.4	QPSK	3	0	21.49	21.54	21.50	
1.4	QPSK	3	1	21.33	21.49	21.43	
1.4	QPSK	3	3	21.27	21.34	21.31	
1.4	QPSK	6	0	21.51	21.40	21.42	22.5
1.4	16QAM	1	0	21.79	21.75	21.80	
1.4	16QAM	1	3	21.66	21.63	21.72	
1.4	16QAM	1	5	21.56	21.53	21.65	22.5
1.4	16QAM	3	0	20.51	20.52	20.46	
1.4	16QAM	3	1	20.33	20.42	20.31	
1.4	16QAM	3	3	20.16	20.22	20.14	
1.4	16QAM	6	0	20.47	20.41	20.44	21.5
1.4	64QAM	1	0	20.61	20.69	20.53	
1.4	64QAM	1	3	20.43	20.55	20.39	
1.4	64QAM	1	5	20.31	20.43	20.27	21.5
1.4	64QAM	3	0	19.66	19.75	19.64	
1.4	64QAM	3	1	19.54	19.63	19.51	
1.4	64QAM	3	3	19.31	19.42	19.33	
1.4	64QAM	6	0	19.77	19.83	19.68	20.5

Band 13(700MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0	22.65			
10	QPSK	1	25	22.34			23
10	QPSK	1	49	22.16			
10	QPSK	25	0	21.60			
10	QPSK	25	12	21.56			22
10	QPSK	25	25	21.43			
10	QPSK	50	0	21.57			
10	16QAM	1	0	21.47			
10	16QAM	1	25	21.23			22
10	16QAM	1	49	20.98			
10	16QAM	25	0	20.18			
10	16QAM	25	12	20.13			21
10	16QAM	25	25	20.07			
10	16QAM	50	0	20.09			
10	64QAM	1	0	19.93			
10	64QAM	1	25	19.87			20.5
10	64QAM	1	49	19.64			
10	64QAM	25	0	18.55			
10	64QAM	25	12	18.43			19
10	64QAM	25	25	18.37			
10	64QAM	50	0	18.45			
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	22.63	22.25	22.29	
5	QPSK	1	12	22.45	22.24	22.23	23
5	QPSK	1	24	22.28	22.21	22.18	
5	QPSK	12	0	21.34	21.55	21.16	
5	QPSK	12	7	21.31	21.43	21.15	22
5	QPSK	12	13	21.29	21.21	21.14	
5	QPSK	25	0	21.16	21.15	21.23	
5	16QAM	1	0	21.55	21.39	21.36	
5	16QAM	1	12	21.38	21.35	21.28	22
5	16QAM	1	24	21.34	21.28	21.19	
5	16QAM	12	0	20.19	20.09	20.23	
5	16QAM	12	7	20.15	19.98	20.19	21
5	16QAM	12	13	20.08	19.79	20.08	
5	16QAM	25	0	20.21	20.13	20.25	
5	64QAM	1	0	20.23	20.12	20.19	
5	64QAM	1	12	20.21	20.09	20.15	21
5	64QAM	1	24	20.18	20.05	20.17	
5	64QAM	12	0	19.97	19.98	19.89	
5	64QAM	12	7	19.89	19.76	19.72	20.5
5	64QAM	12	13	19.65	19.69	19.52	
5	64QAM	25	0	19.56	19.53	19.46	

Band 14 (700MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23330			
Frequency (MHz)				793			
10	QPSK	1	0	22.54			23
10	QPSK	1	25	22.31			
10	QPSK	1	49	21.97			
10	QPSK	25	0	21.16			22
10	QPSK	25	12	21.14			
10	QPSK	25	25	21.11			
10	QPSK	50	0	21.09			
10	16QAM	1	0	21.53			22
10	16QAM	1	25	21.38			
10	16QAM	1	49	21.15			
10	16QAM	25	0	20.12			21
10	16QAM	25	12	20.08			
10	16QAM	25	25	19.97			
10	16QAM	50	0	19.83			
10	64QAM	1	0	20.17			21
10	64QAM	1	25	20.03			
10	64QAM	1	49	19.95			
10	64QAM	25	0	19.12			20
10	64QAM	25	12	18.97			
10	64QAM	25	25	18.83			
10	64QAM	50	0	19.09			
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	22.41	22.50	22.34	23
5	QPSK	1	12	22.33	22.35	22.21	
5	QPSK	1	24	22.15	22.18	22.17	
5	QPSK	12	0	21.28	21.16	21.17	22
5	QPSK	12	7	21.15	21.12	21.13	
5	QPSK	12	13	21.14	21.10	21.09	
5	QPSK	25	0	21.17	21.11	21.01	
5	16QAM	1	0	21.48	21.51	21.29	22
5	16QAM	1	12	21.29	21.35	21.20	
5	16QAM	1	24	21.18	21.23	21.18	
5	16QAM	12	0	20.13	20.17	20.19	21
5	16QAM	12	7	20.08	20.09	20.12	
5	16QAM	12	13	20.06	20.02	20.09	
5	16QAM	25	0	20.16	20.25	20.15	
5	64QAM	1	0	20.12	20.15	20.19	21
5	64QAM	1	12	20.08	20.12	20.14	
5	64QAM	1	24	20.02	20.09	20.07	
5	64QAM	12	0	19.98	19.76	19.83	20.5
5	64QAM	12	7	19.75	19.68	19.69	
5	64QAM	12	13	19.63	19.51	19.53	
5	64QAM	25	0	19.49	19.45	19.47	

Band 17 (700MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	22.74	22.78	22.60	23.5
10	QPSK	1	25	22.56	22.62	22.41	
10	QPSK	1	49	22.37	22.46	22.35	
10	QPSK	25	0	21.53	21.57	21.52	22.5
10	QPSK	25	12	21.24	21.35	21.22	
10	QPSK	25	25	21.18	21.24	21.08	
10	QPSK	50	0	21.52	21.53	21.51	
10	16QAM	1	0	21.85	21.91	21.89	22.5
10	16QAM	1	25	21.69	21.75	21.68	
10	16QAM	1	49	21.46	21.63	21.55	
10	16QAM	25	0	20.56	20.61	20.55	21.5
10	16QAM	25	12	20.43	20.55	20.37	
10	16QAM	25	25	20.27	20.38	20.24	
10	16QAM	50	0	20.53	20.63	20.59	
10	64QAM	1	0	20.71	20.83	20.65	21.5
10	64QAM	1	25	20.53	20.61	20.44	
10	64QAM	1	49	20.41	20.45	20.38	
10	64QAM	25	0	19.63	19.81	19.55	20.5
10	64QAM	25	12	19.51	19.65	19.41	
10	64QAM	25	25	19.39	19.43	19.34	
10	64QAM	50	0	19.66	19.78	19.62	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	22.68	22.72	22.54	23.5
5	QPSK	1	12	22.50	22.56	22.35	
5	QPSK	1	24	22.31	22.40	22.29	
5	QPSK	12	0	21.47	21.41	21.46	22.5
5	QPSK	12	7	21.18	21.29	21.16	
5	QPSK	12	13	21.12	21.18	21.02	
5	QPSK	25	0	21.46	21.47	21.45	
5	16QAM	1	0	21.79	21.85	21.83	22.5
5	16QAM	1	12	21.63	21.69	21.62	
5	16QAM	1	24	21.40	21.57	21.49	
5	16QAM	12	0	20.50	20.55	20.49	21.5
5	16QAM	12	7	20.37	20.49	20.31	
5	16QAM	12	13	20.21	20.32	20.18	
5	16QAM	25	0	20.47	20.57	20.53	
5	64QAM	1	0	20.65	20.77	20.59	21.5
5	64QAM	1	12	20.47	20.55	20.38	
5	64QAM	1	24	20.35	20.39	20.32	
5	64QAM	12	0	19.57	19.75	19.49	20.5
5	64QAM	12	7	19.45	19.59	19.35	
5	64QAM	12	13	19.33	19.37	19.28	
5	64QAM	25	0	19.60	19.72	19.56	

Band 25 (1900MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26140	26365	26590	
Frequency (MHz)				1860	1882.5	1905	
20	QPSK	1	0	21.50	21.86	21.53	22.5
20	QPSK	1	49	21.49	21.84	21.49	
20	QPSK	1	99	21.48	21.80	21.45	
20	QPSK	50	0	20.86	20.87	20.64	21.5
20	QPSK	50	24	20.78	20.60	20.59	
20	QPSK	50	50	20.72	20.76	20.57	
20	QPSK	100	0	20.67	20.68	20.52	
20	16QAM	1	0	20.56	20.87	20.78	21.5
20	16QAM	1	49	20.45	20.68	20.65	
20	16QAM	1	99	20.37	20.59	20.51	
20	16QAM	50	0	19.88	19.50	19.47	20.5
20	16QAM	50	24	19.83	19.48	19.43	
20	16QAM	50	50	19.76	19.45	19.38	
20	16QAM	100	0	19.78	19.52	19.40	
20	64QAM	1	0	19.72	19.43	19.48	20.5
20	64QAM	1	49	19.63	19.31	19.39	
20	64QAM	1	99	19.46	19.28	19.26	
20	64QAM	50	0	18.62	18.31	18.32	19.5
20	64QAM	50	24	18.41	18.24	18.27	
20	64QAM	50	50	18.26	18.19	18.18	
20	64QAM	100	0	18.59	18.27	18.13	
Channel				26115	26365	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	QPSK	1	0	21.47	21.81	21.48	22.5
15	QPSK	1	37	21.44	21.79	21.44	
15	QPSK	1	74	21.43	21.75	21.40	
15	QPSK	36	0	20.81	20.52	20.39	21.5
15	QPSK	36	20	20.73	20.45	20.34	
15	QPSK	36	39	20.67	20.41	20.32	
15	QPSK	75	0	20.62	20.52	20.17	
15	16QAM	1	0	20.51	20.82	20.73	21.5
15	16QAM	1	37	20.40	20.63	20.60	
15	16QAM	1	74	20.32	20.54	20.46	
15	16QAM	36	0	19.83	19.45	19.42	20.5
15	16QAM	36	20	19.78	19.43	19.38	
15	16QAM	36	39	19.71	19.40	19.33	
15	16QAM	75	0	19.73	19.47	19.35	
15	64QAM	1	0	19.67	19.38	19.43	20.5
15	64QAM	1	37	19.58	19.26	19.34	
15	64QAM	1	74	19.41	19.23	19.21	
15	64QAM	36	0	18.57	18.26	18.27	19.5
15	64QAM	36	20	18.36	18.19	18.22	
15	64QAM	36	39	18.21	18.14	18.13	
15	64QAM	75	0	18.54	18.22	18.08	
Channel				26090	26365	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	QPSK	1	0	21.44	21.76	21.43	22.5
10	QPSK	1	25	21.39	21.74	21.39	
10	QPSK	1	49	21.38	21.70	21.35	
10	QPSK	25	0	20.76	20.47	20.34	21.5
10	QPSK	25	12	20.68	20.40	20.29	
10	QPSK	25	25	20.62	20.36	20.27	
10	QPSK	50	0	20.57	20.47	20.12	
10	16QAM	1	0	20.46	20.77	20.68	21.5
10	16QAM	1	25	20.35	20.58	20.55	
10	16QAM	1	49	20.27	20.49	20.41	
10	16QAM	25	0	19.78	19.40	19.37	20.5
10	16QAM	25	12	19.73	19.38	19.33	
10	16QAM	25	25	19.66	19.35	19.28	
10	16QAM	50	0	19.68	19.42	19.30	
10	64QAM	1	0	19.62	19.33	19.38	20.5
10	64QAM	1	25	19.53	19.21	19.29	
10	64QAM	1	49	19.36	19.18	19.16	
10	64QAM	25	0	18.52	18.21	18.22	19.5
10	64QAM	25	12	18.31	18.14	18.17	
10	64QAM	25	25	18.16	18.09	18.08	
10	64QAM	50	0	18.49	18.17	18.03	
Channel				26065	26365	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	QPSK	1	0	21.40	21.72	21.39	22.5
5	QPSK	1	12	21.35	21.70	21.35	
5	QPSK	1	24	21.34	21.66	21.31	
5	QPSK	12	0	20.72	20.43	20.30	21.5
5	QPSK	12	7	20.64	20.36	20.25	
5	QPSK	12	13	20.58	20.32	20.23	
5	QPSK	25	0	20.53	20.43	20.08	
5	16QAM	1	0	20.42	20.73	20.64	21.5
5	16QAM	1	12	20.31	20.54	20.51	
5	16QAM	1	24	20.23	20.45	20.37	
5	16QAM	12	0	19.74	19.36	19.33	20.5
5	16QAM	12	7	19.69	19.34	19.29	
5	16QAM	12	13	19.62	19.31	19.24	
5	16QAM	25	0	19.64	19.38	19.26	
5	64QAM	1	0	19.58	19.29	19.34	20.5
5	64QAM	1	12	19.49	19.17	19.25	
5	64QAM	1	24	19.32	19.14	19.12	
5	64QAM	12	0	18.48	18.17	18.18	19.5
5	64QAM	12	7	18.27	18.10	18.13	
5	64QAM	12	13	18.12	18.05	18.04	
5	64QAM	25	0	18.45	18.13	17.99	
Channel				26055	26365	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1882.5	1913.5	
3	QPSK	1	0	21.36	21.68	21.35	22.5
3	QPSK	1	8	21.31	21.66	21.31	
3	QPSK	1	14	21.30	21.62	21.27	
3	QPSK	8	0	20.68	20.39	20.26	21.5
3	QPSK	8	4	20.60	20.32	20.21	
3	QPSK	8	7	20.54	20.28	20.19	
3	QPSK	15	0	20.49	20.39	20.04	

Band 26 for FCC

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	22.49	22.56	22.54	23
15	QPSK	1	37	22.37	22.41	22.38	
15	QPSK	1	74	22.23	22.36	22.27	
15	QPSK	36	0	21.48	21.58	21.44	22
15	QPSK	36	20	21.35	21.43	21.31	
15	QPSK	36	39	21.23	21.32	21.22	
15	QPSK	75	0	21.46	21.47	21.43	
15	16QAM	1	0	21.87	21.86	21.83	22
15	16QAM	1	37	21.76	21.79	21.74	
15	16QAM	1	74	21.59	21.68	21.65	
15	16QAM	36	0	20.43	20.53	20.44	21
15	16QAM	36	20	20.32	20.41	20.32	
15	16QAM	36	39	20.19	20.25	20.21	
15	16QAM	75	0	20.49	20.48	20.38	
15	64QAM	1	0	20.83	20.91	20.74	21
15	64QAM	1	37	20.77	20.84	20.67	
15	64QAM	1	74	20.63	20.71	20.58	
15	64QAM	36	0	19.37	19.41	19.32	20
15	64QAM	36	20	19.18	19.24	19.15	
15	64QAM	36	39	19.11	19.16	19.08	
15	64QAM	75	0	19.06	19.09	19.03	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	22.43	22.50	22.48	23
10	QPSK	1	25	22.31	22.35	22.32	
10	QPSK	1	49	22.17	22.30	22.21	
10	QPSK	25	0	21.42	21.52	21.38	22
10	QPSK	25	12	21.29	21.37	21.25	
10	QPSK	25	25	21.17	21.26	21.16	
10	QPSK	50	0	21.40	21.41	21.37	
10	16QAM	1	0	21.81	21.80	21.77	22
10	16QAM	1	25	21.70	21.73	21.68	
10	16QAM	1	49	21.53	21.62	21.59	
10	16QAM	25	0	20.37	20.47	20.38	21
10	16QAM	25	12	20.26	20.35	20.26	
10	16QAM	25	25	20.13	20.19	20.15	
10	16QAM	50	0	20.43	20.42	20.32	
10	64QAM	1	0	20.77	20.85	20.68	21
10	64QAM	1	25	20.71	20.78	20.61	
10	64QAM	1	49	20.57	20.65	20.52	
10	64QAM	25	0	19.31	19.35	19.26	20
10	64QAM	25	12	19.12	19.18	19.09	
10	64QAM	25	25	19.05	19.10	19.02	
10	64QAM	50	0	19.00	19.03	18.97	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	22.40	22.47	22.45	23
5	QPSK	1	12	22.28	22.32	22.29	
5	QPSK	1	24	22.14	22.27	22.18	
5	QPSK	12	0	21.39	21.49	21.35	22
5	QPSK	12	7	21.26	21.34	21.22	
5	QPSK	12	13	21.14	21.23	21.13	
5	QPSK	25	0	21.37	21.38	21.34	
5	16QAM	1	0	21.78	21.77	21.74	22
5	16QAM	1	12	21.67	21.70	21.65	
5	16QAM	1	24	21.50	21.59	21.56	
5	16QAM	12	0	20.34	20.44	20.35	21
5	16QAM	12	7	20.23	20.32	20.23	
5	16QAM	12	13	20.10	20.16	20.12	
5	16QAM	25	0	20.40	20.39	20.29	
5	64QAM	1	0	20.74	20.82	20.65	21
5	64QAM	1	12	20.68	20.75	20.58	
5	64QAM	1	24	20.54	20.62	20.49	
5	64QAM	12	0	19.28	19.32	19.23	20
5	64QAM	12	7	19.09	19.15	19.06	
5	64QAM	12	13	19.02	19.07	18.99	
5	64QAM	25	0	18.97	19.00	18.94	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	22.37	22.44	22.42	23
3	QPSK	1	8	22.25	22.29	22.26	
3	QPSK	1	14	22.11	22.24	22.15	
3	QPSK	8	0	21.36	21.46	21.32	22
3	QPSK	8	4	21.23	21.31	21.19	
3	QPSK	8	7	21.11	21.20	21.10	
3	QPSK	15	0	21.34	21.35	21.31	
3	16QAM	1	0	21.75	21.74	21.71	22
3	16QAM	1	8	21.64	21.67	21.62	
3	16QAM	1	14	21.47	21.56	21.53	
3	16QAM	8	0	20.31	20.41	20.32	21
3	16QAM	8	4	20.20	20.29	20.20	
3	16QAM	8	7	20.07	20.13	20.09	
3	16QAM	15	0	20.37	20.36	20.26	
3	64QAM	1	0	20.71	20.79	20.62	21
3	64QAM	1	8	20.65	20.72	20.55	
3	64QAM	1	14	20.51	20.59	20.46	
3	64QAM	8	0	19.25	19.29	19.20	20
3	64QAM	8	4	19.06	19.12	19.03	
3	64QAM	8	7	18.99	19.04	18.96	
3	64QAM	15	0	18.94	18.97	18.91	
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	22.36	22.43	22.41	23
1.4	QPSK	1	3	22.24	22.28	22.25	
1.4	QPSK	1	5	22.10	22.23	22.14	
1.4	QPSK	3	22	21.35	21.45	21.31	
1.4	QPSK	3	1	21.22	21.30	21.18	
1.4	QPSK	3	3	21.10	21.19	21.09	
1.4	QPSK	6	0	21.33	21.34	21.30	22

3	16QAM	1	0	20.38	20.69	20.60	21.5
3	16QAM	1	8	20.27	20.50	20.47	
3	16QAM	1	14	20.19	20.41	20.33	
3	16QAM	8	0	19.70	19.32	19.29	20.5
3	16QAM	8	4	19.65	19.30	19.25	
3	16QAM	8	7	19.58	19.27	19.20	
3	16QAM	15	0	19.60	19.34	19.22	
3	16QAM	1	0	19.54	19.25	19.30	20
3	16QAM	1	8	19.45	19.13	19.21	
3	16QAM	1	14	19.28	19.10	19.08	
3	16QAM	8	0	18.44	18.13	18.14	19
3	16QAM	8	4	18.23	18.06	18.09	
3	16QAM	8	7	18.08	18.01	18.00	
3	16QAM	15	0	18.41	18.09	17.95	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	21.30	21.62	21.29	22.5
1.4	QPSK	1	3	21.25	21.60	21.25	
1.4	QPSK	1	5	21.24	21.56	21.21	
1.4	QPSK	3	0	20.62	20.33	20.20	
1.4	QPSK	3	1	20.54	20.26	20.15	
1.4	QPSK	3	3	20.48	20.22	20.13	
1.4	QPSK	6	0	20.43	20.33	19.98	21.5
1.4	16QAM	1	0	20.32	20.63	20.54	21.5
1.4	16QAM	1	3	20.21	20.44	20.41	
1.4	16QAM	1	5	20.13	20.35	20.27	
1.4	16QAM	3	0	19.64	19.26	19.23	
1.4	16QAM	3	1	19.59	19.24	19.19	
1.4	16QAM	3	3	19.52	19.21	19.14	
1.4	16QAM	6	0	19.54	19.28	19.16	20.5
1.4	16QAM	1	0	19.48	19.19	19.24	20.5
1.4	16QAM	1	3	19.39	19.07	19.15	
1.4	16QAM	1	5	19.22	19.04	19.02	
1.4	16QAM	3	0	18.38	18.07	18.08	
1.4	16QAM	3	1	18.17	18.00	18.03	
1.4	16QAM	3	3	18.02	17.95	17.94	
1.4	16QAM	6	0	18.35	18.03	17.89	19

1.4	16QAM	1	0	21.74	21.73	21.70	22
1.4	16QAM	1	3	21.63	21.66	21.61	
1.4	16QAM	1	5	21.46	21.55	21.52	
1.4	16QAM	3	0	20.30	20.40	20.31	
1.4	16QAM	3	1	20.19	20.28	20.19	
1.4	16QAM	3	3	20.06	20.12	20.08	
1.4	16QAM	6	0	20.36	20.35	20.25	21
1.4	16QAM	1	0	20.70	20.78	20.61	21
1.4	16QAM	1	3	20.64	20.71	20.54	
1.4	16QAM	1	5	20.50	20.58	20.45	
1.4	16QAM	3	0	19.24	19.28	19.19	
1.4	16QAM	3	1	19.05	19.11	19.02	
1.4	16QAM	3	3	18.98	19.03	18.95	
1.4	16QAM	6	0	18.93	18.96	18.90	19.5

Band 66

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	21.24	21.54	21.30	22
20	QPSK	1	49	21.15	21.46	21.23	
20	QPSK	1	99	21.14	21.37	21.15	
20	QPSK	50	0	20.17	20.53	20.49	21
20	QPSK	50	24	20.16	20.45	20.36	
20	QPSK	50	50	20.23	20.38	20.25	
20	QPSK	100	0	20.20	20.49	20.47	
20	16QAM	1	0	20.69	20.88	20.96	21
20	16QAM	1	49	20.55	20.67	20.78	
20	16QAM	1	99	20.47	20.51	20.59	
20	16QAM	50	0	19.25	19.40	19.56	20
20	16QAM	50	24	19.18	19.23	19.30	
20	16QAM	50	50	19.12	19.14	19.16	
20	16QAM	100	0	19.16	19.33	19.50	
20	64QAM	1	0	19.35	19.60	19.55	20
20	64QAM	1	49	19.27	19.46	19.34	
20	64QAM	1	99	19.19	19.28	19.20	
20	64QAM	50	0	18.08	18.10	18.13	19
20	64QAM	50	24	17.97	17.82	17.91	
20	64QAM	50	50	17.84	17.67	17.72	
20	64QAM	100	0	17.96	18.09	18.29	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	21.18	21.48	21.24	22
15	QPSK	1	37	21.09	21.40	21.17	
15	QPSK	1	74	21.08	21.31	21.09	
15	QPSK	36	0	20.11	20.27	20.43	21
15	QPSK	36	20	20.10	20.19	20.30	
15	QPSK	36	39	20.07	20.12	20.19	
15	QPSK	75	0	20.14	20.23	20.41	
15	16QAM	1	0	20.63	20.82	20.90	21
15	16QAM	1	37	20.49	20.61	20.72	
15	16QAM	1	74	20.41	20.45	20.53	
15	16QAM	36	0	19.19	19.34	19.50	20
15	16QAM	36	20	19.12	19.17	19.24	
15	16QAM	36	39	19.06	19.08	19.10	
15	16QAM	75	0	19.10	19.27	19.44	
15	64QAM	1	0	19.29	19.54	19.49	20
15	64QAM	1	37	19.21	19.40	19.28	
15	64QAM	1	74	19.13	19.22	19.14	
15	64QAM	36	0	18.02	18.04	18.07	19
15	64QAM	36	20	17.91	17.76	17.85	
15	64QAM	36	39	17.78	17.61	17.66	
15	64QAM	75	0	17.90	18.03	18.23	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	21.15	21.45	21.21	22
10	QPSK	1	25	21.06	21.37	21.14	
10	QPSK	1	49	21.05	21.28	21.06	
10	QPSK	25	0	20.08	20.24	20.40	21
10	QPSK	25	12	20.07	20.16	20.27	
10	QPSK	25	25	20.04	20.09	20.16	
10	QPSK	50	0	20.11	20.20	20.38	
10	16QAM	1	0	20.60	20.79	20.87	21
10	16QAM	1	25	20.46	20.58	20.69	
10	16QAM	1	49	20.38	20.42	20.50	
10	16QAM	25	0	19.16	19.31	19.47	20
10	16QAM	25	12	19.09	19.14	19.21	
10	16QAM	25	25	19.03	19.05	19.07	
10	16QAM	50	0	19.07	19.24	19.41	
10	64QAM	1	0	19.26	19.51	19.46	20
10	64QAM	1	25	19.18	19.37	19.25	
10	64QAM	1	49	19.10	19.19	19.11	
10	64QAM	25	0	17.99	18.01	18.04	19
10	64QAM	25	12	17.88	17.73	17.82	
10	64QAM	25	25	17.75	17.58	17.63	
10	64QAM	50	0	17.87	18.00	18.20	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	21.11	21.41	21.17	22
5	QPSK	1	12	21.02	21.33	21.10	
5	QPSK	1	24	21.01	21.24	21.02	
5	QPSK	12	0	20.04	20.20	20.36	21
5	QPSK	12	7	20.03	20.12	20.23	
5	QPSK	12	13	20.00	20.05	20.12	
5	QPSK	25	0	20.07	20.16	20.34	
5	16QAM	1	0	20.56	20.75	20.83	21
5	16QAM	1	12	20.42	20.54	20.65	
5	16QAM	1	24	20.34	20.38	20.46	
5	16QAM	12	0	19.12	19.27	19.43	20
5	16QAM	12	7	19.05	19.10	19.17	
5	16QAM	12	13	18.99	19.01	19.03	
5	16QAM	25	0	19.03	19.20	19.37	
5	64QAM	1	0	19.22	19.47	19.42	20
5	64QAM	1	12	19.14	19.33	19.21	
5	64QAM	1	24	19.06	19.15	19.07	
5	64QAM	12	0	17.95	17.97	18.00	19
5	64QAM	12	7	17.84	17.69	17.78	
5	64QAM	12	13	17.71	17.54	17.59	
5	64QAM	25	0	17.83	17.96	18.16	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	21.08	21.38	21.14	22
3	QPSK	1	8	20.99	21.30	21.07	
3	QPSK	1	14	20.98	21.21	20.99	
3	QPSK	8	0	20.01	20.17	20.33	21
3	QPSK	8	4	20.00	20.09	20.20	
3	QPSK	8	7	19.97	20.02	20.09	
3	QPSK	15	0	20.04	20.13	20.31	

Band 71

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				133222	133322	133372	
Frequency (MHz)				673	683	688	
20	QPSK	1	0	22.77	22.97	22.81	23.5
20	QPSK	1	49	22.64	22.74	22.71	
20	QPSK	1	99	22.61	22.58	22.57	
20	QPSK	50	0	22.09	22.13	22.12	23
20	QPSK	50	24	21.95	21.99	22.06	
20	QPSK	50	50	22.08	22.17	21.90	
20	QPSK	100	0	22.02	22.04	22.01	
20	16QAM	1	0	22.26	22.43	22.39	23
20	16QAM	1	49	22.12	22.27	22.30	
20	16QAM	1	99	21.94	22.25	22.15	
20	16QAM	50	0	21.31	21.47	21.40	22.5
20	16QAM	50	24	21.17	21.34	21.33	
20	16QAM	50	50	21.15	21.20	21.25	
20	16QAM	100	0	20.99	21.02	21.11	
20	64QAM	1	0	22.09	22.14	21.95	22.5
20	64QAM	1	49	21.99	22.03	21.84	
20	64QAM	1	99	21.86	21.93	21.71	
20	64QAM	50	0	20.75	20.83	20.84	21.5
20	64QAM	50	24	20.72	20.77	20.80	
20	64QAM	50	50	20.65	20.71	20.51	
20	64QAM	100	0	20.62	20.74	20.53	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	22.72	22.91	22.74	23.5
15	QPSK	1	37	22.57	22.72	22.63	
15	QPSK	1	74	22.57	22.53	22.52	
15	QPSK	36	0	22.01	22.06	22.09	23
15	QPSK	36	20	21.91	21.94	22.02	
15	QPSK	36	39	22.04	22.10	21.84	
15	QPSK	75	0	21.96	21.97	21.96	
15	16QAM	1	0	22.19	22.39	22.34	23
15	16QAM	1	37	22.07	22.25	22.26	
15	16QAM	1	74	21.91	22.21	22.13	
15	16QAM	36	0	21.27	21.39	21.34	22.5
15	16QAM	36	20	21.16	21.31	21.27	
15	16QAM	36	39	21.07	21.13	21.19	
15	16QAM	75	0	20.94	20.97	21.06	
15	64QAM	1	0	22.02	22.07	21.91	22.5
15	64QAM	1	37	21.95	22.01	21.76	
15	64QAM	1	74	21.78	21.87	21.65	
15	64QAM	36	0	20.72	20.76	20.76	21.5
15	64QAM	36	20	20.69	20.75	20.79	
15	64QAM	36	39	20.63	20.67	20.47	
15	64QAM	75	0	20.57	20.68	20.50	
Channel				133172	133272	133422	Tune-up limit (dBm)
Frequency (MHz)				668	678	693	
10	QPSK	1	0	22.67	22.88	22.68	23.5
10	QPSK	1	25	22.55	22.66	22.59	
10	QPSK	1	49	22.54	22.47	22.45	
10	QPSK	25	0	21.96	22.03	22.05	23
10	QPSK	25	12	21.87	21.90	21.95	
10	QPSK	25	25	22.00	22.08	21.83	
10	QPSK	50	0	21.92	21.92	21.89	
10	16QAM	1	0	22.17	22.36	22.26	23
10	16QAM	1	25	22.04	22.23	22.18	
10	16QAM	1	49	21.89	22.19	22.07	
10	16QAM	25	0	21.25	21.38	21.29	22.5
10	16QAM	25	12	21.13	21.24	21.23	
10	16QAM	25	25	21.02	21.10	21.18	
10	16QAM	50	0	20.92	20.93	20.99	
10	64QAM	1	0	21.96	22.01	21.88	22.5
10	64QAM	1	25	21.93	21.98	21.69	
10	64QAM	1	49	21.76	21.81	21.57	
10	64QAM	25	0	20.67	20.69	20.70	21.5
10	64QAM	25	12	20.67	20.68	20.76	
10	64QAM	25	25	20.57	20.60	20.40	
10	64QAM	50	0	20.50	20.66	20.47	
Channel				133147	133247	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	22.65	22.82	22.65	23.5
5	QPSK	1	12	22.53	22.63	22.52	
5	QPSK	1	24	22.49	22.41	22.41	
5	QPSK	12	0	21.93	21.97	21.99	23
5	QPSK	12	7	21.80	21.86	21.93	
5	QPSK	12	13	21.98	22.06	21.77	
5	QPSK	25	0	21.91	21.86	21.87	
5	16QAM	1	0	22.09	22.31	22.21	23
5	16QAM	1	12	21.98	22.19	22.17	
5	16QAM	1	24	21.84	22.15	22.00	
5	16QAM	12	0	21.18	21.35	21.28	22.5
5	16QAM	12	7	21.05	21.22	21.16	
5	16QAM	12	13	20.97	21.05	21.17	
5	16QAM	25	0	20.86	20.88	20.96	
5	64QAM	1	0	21.90	21.94	21.86	22.5
5	64QAM	1	12	21.87	21.93	21.63	
5	64QAM	1	24	21.73	21.78	21.53	
5	64QAM	12	0	20.62	20.66	20.66	21.5
5	64QAM	12	7	20.62	20.67	20.70	
5	64QAM	12	13	20.53	20.54	20.36	
5	64QAM	25	0	20.47	20.60	20.41	

3	16QAM	1	0	20.53	20.72	20.80	21
3	16QAM	1	8	20.39	20.51	20.62	
3	16QAM	1	14	20.31	20.35	20.43	
3	16QAM	8	0	19.09	19.24	19.40	20
3	16QAM	8	4	19.02	19.07	19.14	
3	16QAM	8	7	18.96	18.98	19.00	
3	16QAM	15	0	19.00	19.17	19.34	
3	64QAM	1	0	19.19	19.44	19.39	20
3	64QAM	1	8	19.11	19.30	19.18	
3	64QAM	1	14	19.03	19.12	19.04	
3	64QAM	8	0	17.92	17.94	17.97	18.5
3	64QAM	8	4	17.81	17.66	17.75	
3	64QAM	8	7	17.68	17.51	17.56	
3	64QAM	15	0	17.80	17.93	18.13	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	21.05	21.35	21.11	22
1.4	QPSK	1	3	20.96	21.27	21.04	
1.4	QPSK	1	5	20.95	21.18	20.96	
1.4	QPSK	3	0	19.98	20.14	20.30	
1.4	QPSK	3	1	19.97	20.06	20.17	
1.4	QPSK	3	3	19.94	19.99	20.06	
1.4	QPSK	6	0	20.01	20.10	20.28	21
1.4	16QAM	1	0	20.50	20.69	20.77	21
1.4	16QAM	1	3	20.36	20.48	20.59	
1.4	16QAM	1	5	20.28	20.32	20.40	
1.4	16QAM	3	0	19.06	19.21	19.37	
1.4	16QAM	3	1	18.99	19.04	19.11	
1.4	16QAM	3	3	18.93	18.95	18.97	
1.4	16QAM	6	0	18.97	19.14	19.31	20
1.4	64QAM	1	0	19.16	19.41	19.36	20
1.4	64QAM	1	3	19.08	19.27	19.15	
1.4	64QAM	1	5	19.00	19.09	19.01	
1.4	64QAM	3	0	17.89	17.91	17.94	
1.4	64QAM	3	1	17.78	17.63	17.72	
1.4	64QAM	3	3	17.65	17.48	17.53	
1.4	64QAM	6	0	17.77	17.90	18.10	18.5

Band 41 (2496~2690MHz)

BW [MHz]	Modulation	RB Size	RB Offset	for IC Low channel	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)
Channel				39790	39750	40185	40620	41055	41490	
Frequency (MHz)				2510	2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.53	23.37	23.85	22.98	23.17	22.93	24.5
20	QPSK	1	49	23.35	23.16	23.23	22.57	22.78	22.55	
20	QPSK	1	99	23.14	23.08	23.16	22.52	22.55	22.67	
20	QPSK	50	0	23.55	23.10	23.79	23.05	23.57	23.25	24
20	QPSK	50	24	23.31	22.89	23.68	22.87	23.26	22.98	
20	QPSK	50	50	23.26	22.68	23.45	22.68	23.13	22.67	
20	QPSK	100	0	23.20	23.51	23.68	23.23	23.42	22.67	
20	16QAM	1	0	21.53	22.60	22.80	22.05	21.76	21.19	23
20	16QAM	1	49	22.78	22.35	22.56	21.78	21.54	21.56	
20	16QAM	1	99	22.46	22.13	22.43	21.43	21.27	21.35	
20	16QAM	50	0	22.09	21.80	22.38	22.36	22.89	22.02	23
20	16QAM	50	24	21.75	21.67	22.21	22.25	22.67	21.83	
20	16QAM	50	50	21.37	21.43	21.14	22.13	22.54	21.76	
20	16QAM	100	0	22.16	22.39	22.32	22.69	22.78	21.67	
20	64QAM	1	0	21.90	21.98	21.89	21.95	21.92	21.90	22.5
20	64QAM	1	49	21.84	21.87	21.75	21.86	21.83	21.85	
20	64QAM	1	99	21.67	21.72	21.68	21.72	21.76	21.73	
20	64QAM	50	0	20.75	20.85	20.82	20.86	20.15	20.13	21.5
20	64QAM	50	24	20.53	20.75	20.68	20.75	20.11	20.11	
20	64QAM	50	50	20.46	20.57	20.53	20.61	20.09	20.07	
20	64QAM	100	0	20.37	20.42	20.40	20.53	20.05	20.05	
Channel				39765	39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.50	23.34	23.42	22.95	22.84	22.40	24.5
15	QPSK	1	37	23.32	23.13	23.20	22.54	22.45	22.22	
15	QPSK	1	74	23.11	23.05	23.13	22.45	22.22	22.14	
15	QPSK	36	0	23.52	23.07	23.82	23.02	23.54	23.22	24
15	QPSK	36	20	23.28	22.86	23.65	22.84	23.23	22.95	
15	QPSK	36	39	23.23	22.65	23.42	22.65	23.10	22.64	
15	QPSK	75	0	23.17	23.48	23.61	23.20	23.39	22.64	
15	16QAM	1	0	21.00	22.57	22.77	22.02	21.73	21.76	23
15	16QAM	1	37	22.75	22.32	22.53	21.75	21.51	21.53	
15	16QAM	1	74	22.43	22.10	22.40	21.40	21.24	21.32	
15	16QAM	36	0	22.06	21.77	22.35	22.33	22.86	21.99	23
15	16QAM	36	20	21.72	21.64	22.18	22.22	22.64	21.80	
15	16QAM	36	39	21.34	21.40	21.11	22.10	22.51	21.73	
15	16QAM	75	0	22.13	22.36	22.29	22.66	22.75	21.64	
15	64QAM	1	0	21.87	21.95	21.86	21.92	21.89	21.87	22.5
15	64QAM	1	37	21.81	21.84	21.72	21.83	21.80	21.82	
15	64QAM	1	74	21.64	21.69	21.65	21.69	21.73	21.70	
15	64QAM	36	0	20.72	20.82	20.79	20.83	20.12	20.10	21.5
15	64QAM	36	20	20.50	20.72	20.65	20.72	20.08	20.08	
15	64QAM	36	39	20.43	20.54	20.50	20.58	20.06	20.04	
15	64QAM	75	0	20.34	20.39	20.37	20.50	20.02	20.02	
Channel				39740	39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2505	2501	2547	2593	2639	2685	
10	QPSK	1	0	23.47	23.31	23.39	22.92	22.81	22.37	24.5
10	QPSK	1	25	23.29	23.10	23.17	22.51	22.42	22.19	
10	QPSK	1	49	23.08	23.02	23.10	22.26	22.19	22.11	
10	QPSK	25	0	23.49	23.04	23.79	22.99	23.51	23.19	24
10	QPSK	25	12	23.25	22.83	23.62	22.81	23.20	22.92	
10	QPSK	25	25	23.20	22.62	23.39	22.62	23.07	22.61	
10	QPSK	50	0	23.14	23.45	23.58	23.17	23.36	22.61	
10	16QAM	1	0	20.97	22.54	22.74	21.99	21.70	20.73	23
10	16QAM	1	25	22.72	22.29	22.50	21.72	21.48	20.50	
10	16QAM	1	49	22.40	22.07	22.37	21.37	21.21	20.29	
10	16QAM	25	0	22.03	21.74	22.32	22.30	22.83	21.96	23
10	16QAM	25	12	21.69	21.61	22.15	22.19	22.61	21.77	
10	16QAM	25	25	21.31	21.37	21.08	22.07	22.48	21.70	
10	16QAM	50	0	22.10	22.33	22.26	22.63	22.72	21.61	
10	16QAM	1	0	21.84	21.92	21.83	21.89	21.86	21.84	22.5
10	16QAM	1	25	21.78	21.81	21.69	21.80	21.77	21.79	
10	16QAM	1	49	21.61	21.66	21.62	21.66	21.70	21.67	
10	16QAM	25	0	20.69	20.79	20.76	20.80	20.09	20.07	21.5
10	16QAM	25	12	20.47	20.69	20.62	20.69	20.05	20.05	
10	16QAM	25	25	20.40	20.51	20.47	20.55	20.03	20.01	
10	16QAM	50	0	20.31	20.36	20.34	20.47	19.99	19.99	
Channel				39715	39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	23.43	23.27	23.35	22.88	22.77	22.33	24.5
5	QPSK	1	12	23.25	23.06	23.13	22.47	22.38	22.15	
5	QPSK	1	24	23.04	22.98	23.06	22.22	22.15	22.07	
5	QPSK	12	0	23.45	23.00	23.75	22.95	23.47	23.15	24
5	QPSK	12	7	23.21	22.79	23.58	22.77	23.16	22.88	
5	QPSK	12	13	23.16	22.58	23.35	22.58	23.03	22.57	
5	QPSK	25	0	23.10	23.41	23.54	23.13	23.32	22.57	
5	16QAM	1	0	20.93	22.50	22.70	21.95	21.66	20.69	23.5
5	16QAM	1	12	22.68	22.25	22.46	21.68	21.44	20.46	
5	16QAM	1	24	22.36	22.03	22.33	21.33	21.17	20.25	
5	16QAM	12	0	21.99	21.70	22.28	22.26	22.79	21.92	23
5	16QAM	12	7	21.65	21.57	22.11	22.15	22.57	21.73	
5	16QAM	12	13	21.27	21.33	21.04	22.03	22.44	21.66	
5	16QAM	25	0	22.06	22.29	22.22	22.59	22.68	21.57	
5	64QAM	1	0	21.80	21.88	21.79	21.85	21.82	21.80	22.5
5	64QAM	1	12	21.74	21.77	21.65	21.76	21.73	21.75	
5	64QAM	1	24	21.57	21.62	21.58	21.62	21.66	21.63	
5	64QAM	12	0	20.65	20.75	20.72	20.76	20.05	20.03	21.5
5	64QAM	12	7	20.43	20.65	20.58	20.65	20.01	20.01	
5	64QAM	12	13	20.36	20.47	20.43	20.51	19.99	19.97	
5	64QAM	25	0	20.27	20.32	20.30	20.43	19.95	19.95	

Band 48 (3.5G Band)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Middle-Low Channel	High Channel	Tune-up limit (dBm)
Channel				55340	55990	56640	
Frequency (MHz)				3560	3625	3690	
20	QPSK	1	0	23.29	22.41	21.47	24
20	QPSK	1	49	22.98	22.36	21.35	
20	QPSK	1	99	22.67	22.18	21.21	
20	QPSK	50	0	21.77	21.44	20.73	23
20	QPSK	50	24	21.56	21.32	20.56	
20	QPSK	50	50	21.34	21.23	20.38	
20	QPSK	100	0	21.79	21.40	20.66	
20	16QAM	1	0	22.42	22.53	20.80	23
20	16QAM	1	49	22.36	22.35	20.69	
20	16QAM	1	99	22.24	22.18	20.35	
20	16QAM	50	0	20.86	20.53	19.77	22
20	16QAM	50	24	20.68	20.36	19.56	
20	16QAM	50	50	20.47	20.19	19.39	
20	16QAM	100	0	20.85	20.44	19.68	
20	64QAM	1	0	20.95	20.52	19.81	22
20	64QAM	1	49	20.78	20.35	19.67	
20	64QAM	1	99	20.63	20.17	19.46	
20	64QAM	50	0	19.84	19.48	18.77	21
20	64QAM	50	24	19.75	19.35	18.58	
20	64QAM	50	50	19.59	19.23	18.32	
20	64QAM	100	0	19.85	19.44	18.69	
Channel				55315	55990	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3625	3692.5	
15	QPSK	1	0	23.26	22.38	21.44	24
15	QPSK	1	37	22.95	22.33	21.32	
15	QPSK	1	74	22.64	22.15	21.18	
15	QPSK	36	0	21.74	21.41	20.70	23
15	QPSK	36	20	21.53	21.29	20.53	
15	QPSK	36	39	21.31	21.20	20.35	
15	QPSK	75	0	21.76	21.37	20.63	
15	16QAM	1	0	22.39	22.50	20.77	23
15	16QAM	1	37	22.33	22.32	20.66	
15	16QAM	1	74	22.21	22.15	20.32	
15	16QAM	36	0	20.83	20.50	19.74	22
15	16QAM	36	20	20.65	20.33	19.53	
15	16QAM	36	39	20.44	20.16	19.36	
15	16QAM	75	0	20.82	20.41	19.65	
15	64QAM	1	0	20.92	20.49	19.78	22
15	64QAM	1	37	20.75	20.32	19.64	
15	64QAM	1	74	20.60	20.14	19.43	
15	64QAM	36	0	19.81	19.45	18.74	21.5
15	64QAM	36	20	19.72	19.32	18.55	
15	64QAM	36	39	19.56	19.20	18.29	
15	64QAM	75	0	19.82	19.41	18.66	
Channel				55290	55990	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3625	3695	
10	QPSK	1	0	23.21	22.33	21.39	24
10	QPSK	1	25	22.90	22.28	21.27	
10	QPSK	1	49	22.59	22.10	21.13	
10	QPSK	25	0	21.69	21.36	20.65	23
10	QPSK	25	12	21.48	21.24	20.48	
10	QPSK	25	25	21.26	21.15	20.30	
10	QPSK	50	0	21.71	21.32	20.58	
10	16QAM	1	0	22.34	22.45	20.72	23
10	16QAM	1	25	22.28	22.27	20.61	
10	16QAM	1	49	22.16	22.10	20.27	
10	16QAM	25	0	20.78	20.45	19.69	21.5
10	16QAM	25	12	20.60	20.28	19.48	
10	16QAM	25	25	20.39	20.11	19.31	
10	16QAM	50	0	20.77	20.36	19.60	
10	64QAM	1	0	20.87	20.44	19.73	21.5
10	64QAM	1	25	20.70	20.27	19.59	
10	64QAM	1	49	20.55	20.09	19.38	
10	64QAM	25	0	19.76	19.40	18.69	20.5
10	64QAM	25	12	19.67	19.27	18.50	
10	64QAM	25	25	19.51	19.15	18.24	
10	64QAM	50	0	19.77	19.36	18.61	
Channel				55265	55990	56175	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3625	3697.5	
5	QPSK	1	0	23.15	22.27	21.33	23.5
5	QPSK	1	12	22.84	22.22	21.21	
5	QPSK	1	24	22.53	22.04	21.07	
5	QPSK	12	0	21.63	21.30	20.59	22.5
5	QPSK	12	7	21.42	21.18	20.42	
5	QPSK	12	13	21.20	21.09	20.24	
5	QPSK	25	0	21.65	21.26	20.52	
5	16QAM	1	0	22.28	22.39	20.66	22.5
5	16QAM	1	12	22.22	22.21	20.55	
5	16QAM	1	24	22.10	22.04	20.21	
5	16QAM	12	0	20.72	20.39	19.63	21.5
5	16QAM	12	7	20.54	20.22	19.42	
5	16QAM	12	13	20.33	20.05	19.25	
5	16QAM	25	0	20.71	20.30	19.54	
5	64QAM	1	0	20.81	20.38	19.67	21.5
5	64QAM	1	12	20.64	20.21	19.53	
5	64QAM	1	24	20.49	20.03	19.32	
5	64QAM	12	0	19.70	19.34	18.63	20.5
5	64QAM	12	7	19.61	19.21	18.44	
5	64QAM	12	13	19.45	19.09	18.18	
5	64QAM	25	0	19.71	19.30	18.55	

CA Full Power											
CA_7C Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level(dB)	Measured Power(dBm)	Tune-up Power(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
20850	20850	21048	QPSK	1	0	100	0	1	0	20.01	20.5
21100	21001	21199	QPSK	1	0	100	0	1	0	19.92	20.5
21350	21152	21350	QPSK	1	0	100	0	1	0	19.82	20.5
20850	20850	21048	16QAM	1	0	100	0	1	0	19.14	20.0
21100	21001	21199	16QAM	1	0	100	0	1	0	19.11	20.0
21350	21152	21350	16QAM	1	0	100	0	1	0	19.05	20.0
20850	20850	21048	64QAM	1	0	100	0	1	0	18.24	19.0
21100	21001	21199	64QAM	1	0	100	0	1	0	18.02	19.0
21350	21152	21350	64QAM	1	0	100	0	1	0	18.05	19.0

CA_41C Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level(dB)	Measured Power(dBm)	Tune-up Power(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
39750	39750	39948	QPSK	1	0	100	0	1	0	20.44	21.0
40620	40521	40719	QPSK	1	0	100	0	1	0	20.12	21.0
41490	41292	41490	QPSK	1	0	100	0	1	0	20.64	21.0
39750	39750	39948	16QAM	1	0	100	0	1	0	19.21	20.0
40620	40521	40719	16QAM	1	0	100	0	1	0	19.18	20.0
41490	41292	41490	16QAM	1	0	100	0	1	0	19.34	20.0
39750	39750	39948	64QAM	1	0	100	0	1	0	19.45	19.0
40620	40521	40719	64QAM	1	0	100	0	1	0	18.24	19.0
41490	41292	41490	64QAM	1	0	100	0	1	0	18.44	19.0

CA_48C Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level(dB)	Measured Power(dBm)	Measured Power(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
55340	55340	55538	QPSK	1	0	100	0	1	0	18.9	19.5
55990	55891	56089	QPSK	1	0	100	0	1	0	19.13	20.0
56640	56442	56640	QPSK	1	0	100	0	1	0	19.36	20.0
55340	55340	55538	16QAM	1	0	100	0	1	0	16.22	17.0
55990	55891	56089	16QAM	1	0	100	0	1	0	16.52	17.0
56640	56442	56640	16QAM	1	0	100	0	1	0	16.55	17.0
55340	55340	55538	64QAM	1	0	100	0	1	0	15.98	17.0
55990	55891	56089	64QAM	1	0	100	0	1	0	16.72	17.0
56640	56442	56640	64QAM	1	0	100	0	1	0	16.49	17.0