



REPORT No.: SZ23040144S01

Annex E Conducted Power

Note:

Conducted power unit: dBm.

The target power was recorded in the manufacture document.

Full Power

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band IV (dBm)			Tune-up Limit (dBm)	WCDMA Band V (dBm)			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	23.05	23.12	23.07	24.00	23.08	23.15	23.09	24.00	23.23	23.26	23.22	24.00
3GPP Rel 6	HSDPA Subtest-1	21.95	22.00	21.98	23.00	22.24	22.24	22.22	23.00	22.41	22.32	22.44	23.00
3GPP Rel 6	HSDPA Subtest-2	21.93	21.97	21.92	22.50	22.26	22.20	22.20	23.00	22.47	22.36	22.46	23.00
3GPP Rel 6	HSDPA Subtest-3	21.48	21.50	21.96	22.50	21.78	21.68	21.65	22.50	21.89	21.81	21.90	22.50
3GPP Rel 6	HSDPA Subtest-4	21.47	21.35	21.37	22.00	21.78	21.67	21.64	22.50	21.88	21.82	21.92	22.50
3GPP Rel 8	DC-HSDPA Subtest-1	21.93	22.04	21.86	23.00	22.23	22.21	22.20	23.00	22.43	22.20	22.56	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	21.90	21.94	22.03	23.00	22.20	22.31	22.23	23.00	22.40	22.26	22.44	23.00
3GPP Rel 8	DC-HSDPA Subtest-3	21.57	21.52	21.90	22.50	21.78	21.68	21.73	22.50	21.82	21.87	22.00	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	21.44	21.40	21.35	22.00	21.78	21.74	21.59	22.50	21.83	21.82	21.84	22.50
3GPP Rel 6	HSUPA Subtest-1	21.70	21.69	21.68	22.50	22.50	21.94	21.81	23.50	22.28	22.07	22.21	23.00
3GPP Rel 6	HSUPA Subtest-2	21.20	21.18	21.25	22.00	21.50	21.49	21.41	22.50	21.72	21.65	21.69	22.50
3GPP Rel 6	HSUPA Subtest-3	21.75	21.67	21.65	22.50	21.97	21.89	21.74	22.50	22.16	22.07	22.15	23.00
3GPP Rel 6	HSUPA Subtest-4	21.68	21.72	21.73	22.50	21.97	21.92	21.87	22.50	22.17	22.05	22.18	23.00
3GPP Rel 6	HSUPA Subtest-5	21.74	21.64	21.65	22.50	21.98	21.92	21.80	22.50	22.25	22.11	22.16	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.09	21.02	21.03	22.00	21.42	21.35	21.19	22.00	21.61	21.62	21.18	22.50
Attenuator			Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode			Max.	23.12			Max.	23.15			Max.	23.26	



Band 2 (1900MHz Band) (dBm) Part 24E							
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	23.15	23.23	23.12	24
20	QPSK	1	49	23.04	23.09	23.06	
20	QPSK	1	99	23.11	23.15	23.13	
20	QPSK	50	0	22.22	22.35	22.27	
20	QPSK	50	24	22.13	22.26	22.18	23
20	QPSK	50	50	22.15	22.16	22.22	
20	QPSK	100	0	22.14	22.20	22.19	
20	16QAM	1	0	22.19	22.28	22.13	
20	16QAM	1	49	22.08	22.18	22.20	23
20	16QAM	1	99	22.16	22.15	22.07	
20	16QAM	50	0	21.18	21.29	21.23	
20	16QAM	50	24	21.17	21.16	21.10	
20	16QAM	50	50	21.20	21.24	21.16	22
20	16QAM	100	0	21.15	21.21	21.12	
20	64QAM	1	0	21.14	21.26	21.15	
20	64QAM	1	49	21.20	21.23	21.09	
20	64QAM	1	99	21.16	21.11	21.13	21
20	64QAM	50	0	20.31	20.37	20.33	
20	64QAM	50	24	20.19	20.27	20.30	
20	64QAM	50	50	20.15	20.18	20.14	
20	64QAM	100	0	20.23	20.25	20.21	Tune-up limit (dBm)
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	23.07	23.20	23.08	24
15	QPSK	1	37	23.12	23.08	23.07	
15	QPSK	1	74	23.06	23.09	23.11	
15	QPSK	36	0	22.05	22.31	22.30	
15	QPSK	36	20	22.11	22.23	22.21	23
15	QPSK	36	39	22.15	22.11	22.29	
15	QPSK	75	0	22.08	22.12	22.03	
15	16QAM	1	0	22.23	22.28	22.15	
15	16QAM	1	37	22.16	22.05	22.27	23
15	16QAM	1	74	22.17	22.27	22.06	
15	16QAM	36	0	20.98	21.12	21.22	
15	16QAM	36	20	21.16	21.00	20.96	
15	16QAM	36	39	21.01	21.28	21.16	22
15	16QAM	75	0	21.27	21.22	21.00	
15	64QAM	1	0	21.09	21.34	21.20	
15	64QAM	1	37	21.24	21.25	21.06	
15	64QAM	1	74	21.21	21.01	21.04	21
15	64QAM	36	0	20.21	20.32	20.12	
15	64QAM	36	20	20.17	20.21	20.38	
15	64QAM	36	39	20.06	20.18	20.23	
15	64QAM	75	0	20.11	20.25	20.16	Tune-up limit (dBm)
Channel				18650	18900	19150	
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	23.16	23.18	23.03	24
10	QPSK	1	25	23.05	23.17	23.12	
10	QPSK	1	49	23.11	23.12	23.06	
10	QPSK	25	0	22.06	22.18	22.30	
10	QPSK	25	12	22.05	22.18	22.27	23
10	QPSK	25	25	22.05	22.24	22.06	
10	QPSK	50	0	22.20	22.27	22.27	
10	16QAM	1	0	22.11	22.33	22.20	
10	16QAM	1	25	22.13	22.09	22.34	23
10	16QAM	1	49	22.12	22.19	22.13	
10	16QAM	25	0	21.08	21.15	21.28	
10	16QAM	25	12	21.27	21.25	21.09	
10	16QAM	25	25	21.15	21.25	21.15	22
10	16QAM	50	0	21.20	21.33	21.15	
10	64QAM	1	0	21.29	21.08	21.24	
10	64QAM	1	25	21.17	21.07	21.08	
10	64QAM	1	49	21.26	21.00	21.13	21
10	64QAM	25	0	20.43	20.34	20.22	
10	64QAM	25	12	20.13	20.21	20.30	
10	64QAM	25	25	20.08	20.15	20.21	
10	64QAM	50	0	20.20	20.28	20.08	Tune-up limit (dBm)
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	23.15	23.18	23.16	24
5	QPSK	1	12	23.06	23.15	23.14	
5	QPSK	1	24	23.12	23.15	23.16	
5	QPSK	12	0	22.17	22.24	22.08	
5	QPSK	12	7	22.09	22.23	22.02	23
5	QPSK	12	13	22.14	22.02	22.06	
5	QPSK	25	0	22.12	22.31	22.19	
5	16QAM	1	0	22.06	22.24	22.07	
5	16QAM	1	12	22.09	22.19	22.30	23
5	16QAM	1	24	22.28	22.24	21.99	
5	16QAM	12	0	21.24	21.14	21.09	
5	16QAM	12	7	21.03	21.04	21.08	
5	16QAM	12	13	21.24	21.34	21.02	22
5	16QAM	25	0	21.20	21.26	21.16	
5	64QAM	1	0	21.11	21.28	21.05	
5	64QAM	1	12	21.13	21.05	21.09	
5	64QAM	1	24	21.23	21.13	21.11	21
5	64QAM	12	0	20.13	20.22	20.26	
5	64QAM	12	7	20.10	20.14	20.22	
5	64QAM	12	13	20.09	20.01	20.19	
5	64QAM	25	0	20.21	20.16	20.17	Tune-up limit (dBm)
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	23.13	23.19	23.08	24
3	QPSK	1	8	23.09	23.15	23.05	
3	QPSK	1	14	23.07	23.13	23.09	
3	QPSK	8	0	22.20	22.39	22.32	
3	QPSK	8	4	22.26	22.41	22.08	23
3	QPSK	8	7	22.25	22.20	22.15	

Band 4 (AWS Band) (dBm) Part 27L (only on channel required)							
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	23.25	23.34	23.20	24
20	QPSK	1	49	23.18	23.21	23.23	
20	QPSK	1	99	23.27	23.23	23.17	
20	QPSK	50	0	22.30	22.38	22.28	
20	QPSK	50	24	22.34	22.23	22.29	23
20	QPSK	50	50	22.20	22.14	22.27	
20	QPSK	100	0	22.12	22.22	22.18	
20	16QAM	1	0	22.26	22.36	22.09	
20	16QAM	1	49	22.10	22.40	22.19	23
20	16QAM	1	99	22.09	22.35	22.17	
20	16QAM	50	0	21.28	21.36	21.42	
20	16QAM	50	24	21.21	21.24	21.18	
20	16QAM	50	50	21.17	21.33	21.30	22
20	16QAM	100	0	21.26	21.29	21.23	
20	64QAM	1	0	21.30	21.22	21.30	
20	64QAM	1	49	21.39	21.41	21.25	
20	64QAM	1	99	21.34	21.23	21.14	22
20	64QAM	50	0	20.36	20.40	20.43	
20	64QAM	50	24	20.15	20.41	20.33	
20	64QAM	50	50	20.12	20.34	20.32	
20	64QAM	100	0	20.37	20.24	20.11	Tune-up limit (dBm)
Channel				20025	20175	20325	
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	23.10	23.30	23.24	24
15	QPSK	1	37	23.19	23.04	23.15	
15	QPSK	1	74	23.11	23.05	23.20	
15	QPSK	36	0	22.22	22.35	22.33	
15	QPSK	36	20	22.37	22.36	22.21	23
15	QPSK	36	39	22.10	22.21	22.25	
15	QPSK	75	0	22.27	22.29	22.39	
15	16QAM	1	0	22.26	22.39	22.24	
15	16QAM	1	37	22.15	22.11	22.14	23
15	16QAM	1	74	22.15	22.10	22.09	
15	16QAM	36	0	21.41	21.22	21.42	
15	16QAM	36	20	21.10	21.29	21.29	
15	16QAM	36	39	21.13	21.24	21.19	22
15	16QAM	75	0	21.40	21.41	21.21	
15	64QAM	1	0	21.18	21.25	21.37	
15	64QAM	1	37	21.34	21.23	21.08	
15	64QAM	1	74	21.15	21.17	21.10	22
15	64QAM	36	0	20.54	20.46	20.40	
15	64QAM	36	20	20.31	20.35	20.37	
15	64QAM	36	39	20.33	20.27	20.30	
15	64QAM	75	0	20.31	20.44	20.24	Tune-up limit (dBm)
Channel				20000	20175	20350	
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	23.17	23.29	23.12	24
10	QPSK	1	25	23.11	23.11	23.18	
10	QPSK	1	49	23.28	23.24	23.15	
10	QPSK	25	0	22.15	22.45	22.39	
10	QPSK	25	12	22.11	22.33	22.14	23
10	QPSK	25	25	22.28	22.26	22.34	
10	QPSK	50	0	22.24	22.45	22.40	
10	16QAM	1	0	22.09	22.36	22.10	
10	16QAM	1	25	22.25	22.11	22.27	23
10	16QAM	1	49	22.34	22.26	22.16	
10	16QAM	25	0	21.25	21.33	21.19	
10	16QAM	25	12	21.38	21.30	21.16	
10	16QAM	25	25	21.17	21.22	21.40	22
10	16QAM	50	0	21.34	21.37	21.16	
10	64QAM	1	0	21.28	21.19	21.12	
10	64QAM	1	25	21.24	21.25	21.27	
10	64QAM	1	49	21.31	21.07	21.34	22
10	64QAM	25	0	20.42	20.38	20.27	
10	64QAM	25	12	20.31	20.27	20.21	
10	64QAM	25	25	20.06	20.15	20.07	
10	64QAM	50	0	20.41	20.35	20.27	Tune-up limit (dBm)
Channel				19975	20175	20375	
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	23.22	23.30	23.25	24
5	QPSK	1	12	23.16	23.18	23.12	
5	QPSK	1	24	23.12	23.23	23.22	
5	QPSK	12	0	22.32	22.40	22.31	
5	QPSK	12	7	22.29	22.32	22.24	23
5	QPSK	12	13	22.23	22.31	22.24	
5	QPSK	25	0	22.31	22.15	22.16	
5	16QAM	1	0	22.10	22.34	22.36	
5	16QAM	1	12	22.13	22.32	22.35	23
5	16QAM	1	24	22.09	22.21	22.18	
5	16QAM	12	0	21.34	21.43	21.23	
5	16QAM	12	7	21.16	21.30	21.27	
5	16QAM	12	13	21.43	21.30	21.39	22
5	16QAM	25	0	21.30	21.46	21.18	
5	64QAM	1	0	21.35	21.26	21.23	
5	64QAM	1	12	21.31	21.25	21.14	
5	64QAM	1	24	21.37	21.28	21.13	22
5	64QAM	12	0	20.26	20.40	20.31	
5	64QAM	12	7	20.09	20.38	20.30	
5	64QAM	12	13	20.08	20.34	20.17	
5	64QAM	25	0	20.34	20.37	20.15	Tune-up limit (dBm)
Channel				19965	20175	20385	
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	23.12	23.28	23.22	24
3	QPSK	1	8	23.16	23.12	23.16	
3	QPSK	1	14	23.14	23.22	23.10	
3	QPSK	8	0	22.22	22.38	22.28	
3	QPSK	8	4	22.35	22.32	22.12	23
3	QPSK	8	7	22.11	22.13	22.22	



3	QPSK	15	0	22.02	22.31	22.23	23
3	16QAM	1	0	22.04	22.17	22.08	
3	16QAM	1	8	22.19	21.99	22.10	
3	16QAM	1	14	22.23	22.04	22.11	22
3	16QAM	8	0	21.02	21.22	21.23	
3	16QAM	8	4	21.31	21.24	21.18	
3	16QAM	8	7	21.19	21.22	20.98	22
3	16QAM	15	0	21.05	21.35	21.18	
3	64QAM	1	0	21.02	21.37	21.01	
3	64QAM	1	8	21.23	21.04	21.08	22
3	64QAM	1	14	21.03	21.15	21.13	
3	64QAM	8	0	20.32	20.39	20.21	
3	64QAM	8	4	20.09	20.34	20.29	21
3	64QAM	8	7	20.07	20.06	20.21	
3	64QAM	15	0	20.10	20.31	20.18	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	23.17	23.17	23.12	24
1.4	QPSK	1	3	23.13	23.04	23.06	
1.4	QPSK	1	5	23.12	23.02	23.09	
1.4	QPSK	3	0	22.36	22.43	22.32	24
1.4	QPSK	3	1	22.20	22.11	22.05	
1.4	QPSK	3	3	22.16	22.28	22.36	
1.4	QPSK	6	0	22.21	22.11	22.30	23
1.4	16QAM	1	0	22.08	22.34	22.15	
1.4	16QAM	1	3	22.13	22.05	22.13	
1.4	16QAM	1	5	22.06	22.05	22.16	23
1.4	16QAM	3	0	21.24	21.38	21.04	
1.4	16QAM	3	1	21.11	21.09	21.05	
1.4	16QAM	3	3	21.22	21.35	21.22	22
1.4	16QAM	6	0	21.23	21.31	20.99	
1.4	64QAM	1	0	21.05	21.30	21.15	
1.4	64QAM	1	3	21.05	21.31	21.24	22
1.4	64QAM	1	5	21.27	21.18	21.25	
1.4	64QAM	3	0	20.24	20.23	20.17	
1.4	64QAM	3	1	20.09	20.25	20.13	21
1.4	64QAM	3	3	20.26	20.32	20.12	
1.4	64QAM	6	0	20.21	20.38	20.19	

3	QPSK	15	0	22.10	22.13	22.12	23
3	16QAM	1	0	22.24	22.29	22.21	
3	16QAM	1	8	22.18	22.26	22.15	
3	16QAM	1	14	22.36	22.29	22.14	22
3	16QAM	8	0	21.34	21.35	21.33	
3	16QAM	8	4	21.37	21.28	21.16	
3	16QAM	8	7	21.31	21.47	21.18	22
3	16QAM	15	0	21.08	21.17	21.30	
3	64QAM	1	0	21.09	21.41	21.25	
3	64QAM	1	8	21.33	21.35	21.03	21
3	64QAM	1	14	21.19	21.05	21.20	
3	64QAM	8	0	20.36	20.41	20.40	
3	64QAM	8	4	20.18	20.34	20.20	21
3	64QAM	8	7	20.20	20.14	20.18	
3	64QAM	15	0	20.39	20.35	20.26	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	23.16	23.29	23.21	24
1.4	QPSK	1	3	23.19	23.27	23.20	
1.4	QPSK	1	5	23.11	23.21	23.24	
1.4	QPSK	3	0	22.31	22.39	22.24	24
1.4	QPSK	3	1	22.35	22.20	22.41	
1.4	QPSK	3	3	22.28	22.28	22.28	
1.4	QPSK	6	0	22.15	22.26	22.20	23
1.4	16QAM	1	0	22.24	22.31	22.23	
1.4	16QAM	1	3	21.98	22.10	22.12	
1.4	16QAM	1	5	22.25	22.06	22.06	23
1.4	16QAM	3	0	21.20	21.33	21.27	
1.4	16QAM	3	1	21.27	21.11	21.08	
1.4	16QAM	3	3	21.33	21.35	21.41	22
1.4	16QAM	6	0	21.12	21.28	21.23	
1.4	64QAM	1	0	21.11	21.16	21.27	
1.4	64QAM	1	3	21.27	21.38	21.27	22
1.4	64QAM	1	5	21.16	21.15	21.13	
1.4	64QAM	3	0	20.35	20.34	20.31	
1.4	64QAM	3	1	20.30	20.20	20.38	21
1.4	64QAM	3	3	20.18	20.09	20.34	
1.4	64QAM	6	0	20.15	20.30	20.28	



Band 5 (Celluar Band) (dBm) Part 22H(only on channel required)									
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	23.57	23.60	23.53	24.5		
10	QPSK	1	25	23.51	23.53	23.51			
10	QPSK	1	49	23.51	23.57	23.50			
10	QPSK	25	0	22.62	22.86	22.73			
10	QPSK	25	12	22.57	22.80	22.66	23.5		
10	QPSK	25	25	22.61	22.53	22.58			
10	QPSK	50	0	22.66	22.61	22.57			
10	16QAM	1	0	22.52	22.63	22.58			
10	16QAM	1	25	22.51	22.52	22.53	23.5		
10	16QAM	1	49	22.71	22.63	22.55			
10	16QAM	25	0	21.53	21.84	21.55			
10	16QAM	25	12	21.51	21.66	21.52			
10	16QAM	25	25	21.57	21.67	21.56	22.5		
10	16QAM	50	0	21.57	21.52	21.58			
10	64QAM	1	0	21.35	21.54	21.59			
10	64QAM	1	25	21.40	21.67	21.58			
10	64QAM	1	49	21.61	21.53	21.56	22.5		
10	64QAM	25	0	20.59	20.85	20.86			
10	64QAM	25	12	20.72	20.62	20.61			
10	64QAM	25	25	20.52	20.53	20.52			
10	64QAM	50	0	20.65	20.59	20.53	21.5		
Channel				20425	20525	20625			
Frequency (MHz)				826.5	836.5	846.5			
5	QPSK	1	0	23.49	23.57	23.55	24.5		
5	QPSK	1	12	23.54	23.53	23.53			
5	QPSK	1	24	23.56	23.52	23.56			
5	QPSK	12	0	22.60	22.73	22.71			
5	QPSK	12	7	22.59	22.71	22.65	23.5		
5	QPSK	12	13	22.56	22.70	22.58			
5	QPSK	25	0	22.57	22.61	22.60			
5	16QAM	1	0	22.53	22.65	22.53			
5	16QAM	1	12	22.57	22.67	22.52	23.5		
5	16QAM	1	24	22.53	22.54	22.57			
5	16QAM	12	0	21.41	21.65	21.65			
5	16QAM	12	7	21.50	21.57	21.50			
5	16QAM	12	13	21.52	21.53	21.45	22.5		
5	16QAM	25	0	21.58	21.52	21.56			
5	64QAM	1	0	21.55	21.62	21.58			
5	64QAM	1	12	21.63	21.78	21.60			
5	64QAM	1	24	21.61	21.53	21.60	22.5		
5	64QAM	12	0	20.53	20.80	20.58			
5	64QAM	12	7	20.50	20.47	20.57			
5	64QAM	12	13	20.63	20.52	20.55			
5	64QAM	25	0	20.78	20.63	20.69	21.5		
Channel				20415	20525	20635			
Frequency (MHz)				825.5	836.5	847.5			
3	QPSK	1	0	23.51	23.58	23.53	24.5		
3	QPSK	1	8	23.54	23.50	23.51			
3	QPSK	1	14	23.55	23.55	23.47			
3	QPSK	8	0	22.43	22.67	22.57			
3	QPSK	8	4	22.66	22.59	22.57	23.5		
3	QPSK	8	7	22.59	22.55	22.61			
3	QPSK	15	0	22.48	22.50	22.52			
3	16QAM	1	0	22.46	22.75	22.53			
3	16QAM	1	8	22.66	22.48	22.75	23.5		
3	16QAM	1	14	22.59	22.56	22.53			
3	16QAM	8	0	21.50	21.68	21.57			
3	16QAM	8	4	21.46	21.69	21.51			
3	16QAM	8	7	21.48	21.48	21.69	22.5		
3	16QAM	15	0	21.57	21.59	21.49			
3	64QAM	1	0	21.63	21.80	21.52			
3	64QAM	1	8	21.58	21.78	21.60			
3	64QAM	1	14	21.71	21.54	21.55	22.5		
3	64QAM	8	0	20.64	20.64	20.70			
3	64QAM	8	4	20.73	20.48	20.72			
3	64QAM	8	7	20.59	20.55	20.59			
3	64QAM	15	0	20.61	20.72	20.52	21.5		
Channel				20407	20525	20643			
Frequency (MHz)				824.7	836.5	848.3			
1.4	QPSK	1	0	23.56	23.59	23.57	24.5		
1.4	QPSK	1	3	23.52	23.48	23.49			
1.4	QPSK	1	5	23.55	23.55	23.55			
1.4	QPSK	3	0	22.57	22.66	22.75			
1.4	QPSK	3	1	22.63	22.56	22.51	23.5		
1.4	QPSK	3	3	22.61	22.52	22.59			
1.4	QPSK	6	0	22.51	22.43	22.66			
1.4	16QAM	1	0	22.56	22.70	22.61			
1.4	16QAM	1	3	22.52	22.48	22.48	23.5		
1.4	16QAM	1	5	22.51	22.62	22.60			
1.4	16QAM	3	0	21.66	21.63	21.69			
1.4	16QAM	3	1	21.57	21.58	21.61			
1.4	16QAM	3	3	21.53	21.59	21.64	22.5		
1.4	16QAM	6	0	21.57	21.57	21.51			
1.4	64QAM	1	0	21.40	21.72	21.44			
1.4	64QAM	1	3	21.50	21.45	21.38			
1.4	64QAM	1	5	21.70	21.61	21.46	22.5		
1.4	64QAM	3	0	20.54	20.78	20.83			
1.4	64QAM	3	1	20.51	20.78	20.65			
1.4	64QAM	3	3	20.53	20.68	20.63			
1.4	64QAM	6	0	20.72	20.69	20.52	21.5		

Band 7 (2600MHz Band) (dBm)							
Part 27							
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	21.30	21.48	21.46	22
20	QPSK	1	49	21.18	21.31	21.34	
20	QPSK	1	99	21.37	21.47	21.27	
20	QPSK	50	0	20.42	20.47	20.37	
20	QPSK	50	24	20.34	20.27	20.46	21
20	QPSK	50	50	20.17	20.36	20.44	
20	QPSK	100	0	20.18	20.34	20.37	
20	16QAM	1	0	20.45	20.28	20.17	
20	16QAM	1	49	20.26	20.22	20.31	21
20	16QAM	1	99	20.17	20.38	20.28	
20	16QAM	50	0	19.35	19.41	19.35	
20	16QAM	50	24	19.35	19.19	19.27	
20	16QAM	50	50	19.34	19.47	19.36	20
20	16QAM	100	0	19.49	19.32	19.44	
20	64QAM	1	0	19.39	19.50	19.21	
20	64QAM	1	49	19.54	19.45	19.11	
20	64QAM	1	99	19.31	19.45	19.16	20
20	64QAM	50	0	18.54	18.49	18.44	
20	64QAM	50	24	18.40	18.52	18.48	
20	64QAM	50	50	18.31	18.26	18.42	
20	64QAM	100	0	18.47	18.29	18.55	19
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	21.19	21.45	21.41	22
15	QPSK	1	37	21.12	21.22	21.19	
15	QPSK	1	74	21.13	21.40	21.13	
15	QPSK	36	0	20.43	20.49	20.41	
15	QPSK	36	20	20.33	20.40	20.40	21
15	QPSK	36	39	20.40	20.36	20.22	
15	QPSK	75	0	20.48	20.33	20.39	
15	16QAM	1	0	20.36	20.39	20.18	
15	16QAM	1	37	20.20	20.19	20.28	21
15	16QAM	1	74	20.37	20.38	20.40	
15	16QAM	36	0	19.47	19.52	19.47	
15	16QAM	36	20	19.51	19.19	19.29	
15	16QAM	36	39	19.26	19.24	19.30	20
15	16QAM	75	0	19.39	19.45	19.27	
15	64QAM	1	0	19.28	19.52	19.40	
15	64QAM	1	37	19.38	19.34	19.21	
15	64QAM	1	74	19.22	19.18	19.29	20
15	64QAM	36	0	18.34	18.51	18.54	
15	64QAM	36	20	18.46	18.39	18.48	
15	64QAM	36	39	18.35	18.24	18.49	
15	64QAM	75	0	18.41	18.50	18.27	19
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	21.30	21.46	21.43	22
10	QPSK	1	25	21.14	21.26	21.33	
10	QPSK	1	49	21.11	21.32	21.23	
10	QPSK	25	0	20.48	20.55	20.52	
10	QPSK	25	12	20.23	20.40	20.52	21
10	QPSK	25	25	20.48	20.43	20.42	
10	QPSK	50	0	20.25	20.33	20.23	
10	16QAM	1	0	20.26	20.34	20.28	
10	16QAM	1	25	20.28	20.33	20.31	21
10	16QAM	1	49	20.37	20.17	20.40	
10	16QAM	25	0	19.34	19.38	19.51	
10	16QAM	25	12	19.52	19.19	19.44	
10	16QAM	25	25	19.32	19.34	19.35	20
10	16QAM	50	0	19.22	19.35	19.47	
10	64QAM	1	0	19.22	19.36	19.42	
10	64QAM	1	25	19.42	19.34	19.14	
10	64QAM	1	49	19.39	19.30	19.32	20
10	64QAM	25	0	18.36	18.40	18.44	
10	64QAM	25	12	18.19	18.48	18.58	
10	64QAM	25	25	18.50	18.34	18.41	
10	64QAM	50	0	18.50	18.44	18.39	19
Channel				20775	21100	21425	
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	21.21	21.45	21.30	22
5	QPSK	1	12	21.30	21.31	21.26	
5	QPSK	1	24	21.21	21.26	21.42	
5	QPSK	12	0	20.52	20.49	20.41	
5	QPSK	12	7	20.17	20.54	20.26	21
5	QPSK	12	13	20.50	20.16	20.41	
5	QPSK	25	0	20.49	20.47	20.38	
5	16QAM	1	0	20.30	20.42	20.25	
5	16QAM	1	12	20.23	20.38	20.38	21
5	16QAM	1	24	20.20	20.40	20.27	
5	16QAM	12	0	19.52	19.29	19.52	
5	16QAM	12	7	19.48	19.47	19.40	
5	16QAM	12	13	19.21	19.40	19.25	20
5	16QAM	25	0	19.48	19.28	19.25	
5	64QAM	1	0	19.23	19.54	19.15	
5	64QAM	1	12	19.48	19.38	19.39	
5	64QAM	1	24	19.37	19.39	19.38	20
5	64QAM	12	0	18.54	18.41	18.40	
5	64QAM	12	7	18.28	18.32	18.53	
5	64QAM	12	13	18.16	18.23	18.27	
5	64QAM	25	0	18.29	18.39	18.34	19



Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)								
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	23.87	23.91	23.80	24.5	
10	QPSK	1	25	23.69	23.77	23.57		
10	QPSK	1	49	23.63	23.69	23.69		
10	QPSK	25	0	22.88	22.92	22.91		
10	QPSK	25	12	22.85	22.85	22.69	23.5	
10	QPSK	25	25	22.70	22.67	22.87		
10	QPSK	50	0	22.85	22.83	22.90		
10	16QAM	1	0	22.68	22.86	22.77		
10	16QAM	1	25	22.67	22.77	22.78	23.5	
10	16QAM	1	49	22.66	22.85	22.85		
10	16QAM	25	0	21.86	21.85	21.93		
10	16QAM	25	12	21.94	21.90	21.86		
10	16QAM	25	25	21.74	21.93	21.95	22.5	
10	16QAM	50	0	21.75	21.88	21.86		
10	64QAM	1	0	21.83	21.87	21.93		
10	64QAM	1	25	21.92	21.84	21.93		
10	64QAM	1	49	21.79	21.95	21.95	21.5	
10	64QAM	25	0	20.95	20.87	20.88		
10	64QAM	25	12	20.97	20.88	20.99		
10	64QAM	25	25	20.71	20.82	20.87		
10	64QAM	50	0	20.95	20.89	20.90	Tune-up limit (dBm)	
Channel				23035	23095	23155		
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	23.85	23.99	23.66	24.5	
5	QPSK	1	12	23.77	23.71	23.84		
5	QPSK	1	24	23.85	23.67	23.83		
5	QPSK	12	0	22.75	22.93	22.69		
5	QPSK	12	7	22.91	22.81	22.90	23.5	
5	QPSK	12	13	22.68	22.79	22.80		
5	QPSK	25	0	22.83	22.95	22.90		
5	16QAM	1	0	22.73	22.80	22.98		
5	16QAM	1	12	22.77	22.89	22.77	23.5	
5	16QAM	1	24	22.80	22.66	22.86		
5	16QAM	12	0	21.88	21.85	21.81		
5	16QAM	12	7	21.88	21.88	21.90		
5	16QAM	12	13	21.79	21.74	21.67	22.5	
5	16QAM	25	0	21.68	21.86	21.78		
5	64QAM	1	0	21.82	21.82	21.84		
5	64QAM	1	12	21.79	21.73	21.61		
5	64QAM	1	24	21.81	21.64	21.84	22.5	
5	64QAM	12	0	20.78	20.91	20.94		
5	64QAM	12	7	20.86	20.79	20.77		
5	64QAM	12	13	20.74	20.68	20.89		
5	64QAM	25	0	20.86	20.83	20.79	Tune-up limit (dBm)	
Channel				23025	23095	23165		
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	23.82	23.87	23.83	24.5	
3	QPSK	1	8	23.85	23.76	23.61		
3	QPSK	1	14	23.61	23.77	23.70		
3	QPSK	8	0	22.76	22.85	22.82		
3	QPSK	8	4	22.63	22.80	22.84	23.5	
3	QPSK	8	7	22.74	22.82	22.77		
3	QPSK	15	0	22.73	22.83	22.75		
3	16QAM	1	0	22.82	22.91	22.70		
3	16QAM	1	8	22.69	22.80	22.76	23.5	
3	16QAM	1	14	22.73	22.74	22.68		
3	16QAM	8	0	21.88	21.92	21.81		
3	16QAM	8	4	21.83	21.80	21.74		
3	16QAM	8	7	21.78	21.80	21.73	22.5	
3	16QAM	15	0	21.70	21.71	21.80		
3	64QAM	1	0	21.77	21.86	21.84		
3	64QAM	1	8	21.86	21.79	21.60		
3	64QAM	1	14	21.67	21.82	21.83	21.5	
3	64QAM	8	0	20.82	20.85	20.68		
3	64QAM	8	4	20.71	20.81	20.77		
3	64QAM	8	7	20.70	20.81	20.89		
3	64QAM	15	0	20.80	20.79	20.73	Tune-up limit (dBm)	
Channel				23017	23095	23173		
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	23.71	23.88	23.73	24.5	
1.4	QPSK	1	3	23.86	23.70	23.67		
1.4	QPSK	1	5	23.85	23.87	23.68		
1.4	QPSK	3	0	22.84	22.81	22.90		
1.4	QPSK	3	1	22.93	22.90	22.81	23.5	
1.4	QPSK	3	3	22.86	22.78	22.85		
1.4	QPSK	6	0	22.77	22.81	22.80		
1.4	16QAM	1	0	22.77	22.84	22.79		
1.4	16QAM	1	3	22.68	22.78	22.70	23.5	
1.4	16QAM	1	5	22.80	22.88	22.82		
1.4	16QAM	3	0	21.83	21.89	21.87		
1.4	16QAM	3	1	21.86	21.95	21.94		
1.4	16QAM	3	3	21.81	21.84	21.80	22.5	
1.4	16QAM	6	0	21.71	21.90	21.68		
1.4	64QAM	1	0	21.90	21.90	21.77		
1.4	64QAM	1	3	21.87	21.80	21.79		
1.4	64QAM	1	5	21.71	21.87	21.73	22.5	
1.4	64QAM	3	0	20.83	20.78	20.69		
1.4	64QAM	3	1	20.80	20.81	20.77		
1.4	64QAM	3	3	20.98	20.87	20.81		
1.4	64QAM	6	0	20.77	20.81	20.84	21.5	

Band 13(700MHz Band) (dBm) Part 27F							
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		23.87		24.5
10	QPSK	1	25		23.68		
10	QPSK	1	49		23.81		
10	QPSK	25	0		22.76		
10	QPSK	25	12		22.69		23.5
10	QPSK	25	25		22.66		
10	QPSK	50	0		22.63		
10	16QAM	1	0		22.77		
10	16QAM	1	25		22.74		23.5
10	16QAM	1	49		22.78		
10	16QAM	25	0		21.81		
10	16QAM	25	12		21.70		
10	16QAM	25	25		21.72		22.5
10	16QAM	50	0		21.79		
10	64QAM	1	0		21.90		
10	64QAM	1	25		21.76		
10	64QAM	1	49		21.86		22.5
10	64QAM	25	0		20.88		
10	64QAM	25	12		20.69		
10	64QAM	25	25		20.71		
10	64QAM	50	0		20.75		21.5
Channel				23205	23230	23255	
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	23.82	23.85	23.76	24.5
5	QPSK	1	12	23.79	23.81	23.81	
5	QPSK	1	24	23.61	23.77	23.69	
5	QPSK	12	0	22.85	22.91	22.86	
5	QPSK	12	7	22.67	22.75	22.84	23.5
5	QPSK	12	13	22.70	22.74	22.71	
5	QPSK	25	0	22.76	22.84	22.79	
5	16QAM	1	0	22.85	22.86	22.73	
5	16QAM	1	12	22.69	22.68	22.80	23.5
5	16QAM	1	24	22.68	22.77	22.60	
5	16QAM	12	0	21.94	21.90	21.86	
5	16QAM	12	7	21.82	21.84	21.78	
5	16QAM	12	13	21.84	21.88	21.81	22.5
5	16QAM	25	0	21.69	21.98	21.73	
5	64QAM	1	0	21.88	21.83	21.72	
5	64QAM	1	12	21.82	21.73	21.86	
5	64QAM	1	24	21.93	21.62	21.79	21.5
5	64QAM	12	0	20.97	20.92	20.84	
5	64QAM	12	7	20.79	20.90	20.98	
5	64QAM	12	13	20.94	20.85	20.80	
5	64QAM	25	0	20.82	20.94	20.78	



Band 14 (700MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23330			Tune-up limit (dBm)
Frequency (MHz)				793			
10	QPSK	1	0		23.95		24.5
10	QPSK	1	25		23.73		
10	QPSK	1	49		23.66		
10	QPSK	25	0		22.93		23.5
10	QPSK	25	12		22.77		
10	QPSK	25	25		22.83		
10	QPSK	50	0		22.81		23.5
10	16QAM	1	0		22.85		
10	16QAM	1	25		22.79		
10	16QAM	1	49		22.75		22.5
10	16QAM	25	0		21.88		
10	16QAM	25	12		21.85		
10	16QAM	25	25		21.79		22.5
10	16QAM	50	0		21.89		
10	64QAM	1	0		21.89		
10	64QAM	1	25		21.80		22.5
10	64QAM	1	49		21.73		
10	64QAM	25	0		20.92		
10	64QAM	25	12		20.83		21.5
10	64QAM	25	25		20.71		
10	64QAM	50	0		20.76		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	23.86	23.89	23.85	24.5
5	QPSK	1	12	23.79	23.69	23.75	
5	QPSK	1	24	23.86	23.72	23.77	
5	QPSK	12	0	22.81	22.90	22.85	23.5
5	QPSK	12	7	22.69	22.87	22.88	
5	QPSK	12	13	22.87	22.68	22.79	
5	QPSK	25	0	22.86	22.91	22.78	23.5
5	16QAM	1	0	22.87	22.88	22.83	
5	16QAM	1	12	22.80	22.76	22.84	
5	16QAM	1	24	22.70	22.89	22.83	22.5
5	16QAM	12	0	21.77	21.81	21.97	
5	16QAM	12	7	21.93	21.72	21.72	
5	16QAM	12	13	21.93	21.86	21.72	22.5
5	16QAM	25	0	21.83	21.89	21.87	
5	64QAM	1	0	21.86	21.90	21.70	
5	64QAM	1	12	21.71	21.84	21.77	22.5
5	64QAM	1	24	21.84	21.93	21.71	
5	64QAM	12	0	20.86	20.93	20.84	21.5
5	64QAM	12	7	20.85	20.92	20.91	
5	64QAM	12	13	20.83	20.84	20.86	
5	64QAM	25	0	20.75	20.88	20.83	

Band 17 (700MHz Band) (dBm) Part 27H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	Tune-up limit (dBm)
Frequency (MHz)				709	710	711	
10	QPSK	1	0	23.70	23.86	23.66	24.5
10	QPSK	1	25	23.83	23.75	23.73	
10	QPSK	1	49	23.84	23.73	23.67	
10	QPSK	25	0	22.84	22.92	22.80	23.5
10	QPSK	25	12	22.82	22.90	22.84	
10	QPSK	25	25	22.81	22.82	22.86	
10	QPSK	50	0	22.76	22.80	22.73	23.5
10	16QAM	1	0	22.69	22.81	22.63	
10	16QAM	1	25	22.82	22.81	22.74	
10	16QAM	1	49	22.74	22.69	22.78	22.5
10	16QAM	25	0	21.78	21.90	21.84	
10	16QAM	25	12	21.86	21.77	21.62	
10	16QAM	25	25	21.84	21.93	21.84	22.5
10	16QAM	50	0	21.77	21.72	21.87	
10	64QAM	1	0	21.89	21.80	21.92	
10	64QAM	1	25	21.95	21.98	21.90	22.5
10	64QAM	1	49	21.80	21.82	21.67	
10	64QAM	25	0	20.86	20.86	20.95	
10	64QAM	25	12	20.91	20.89	20.83	21.5
10	64QAM	25	25	20.91	20.92	20.77	
10	64QAM	50	0	20.79	20.98	20.93	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.77	23.83	23.75	24.5
5	QPSK	1	12	23.57	23.81	23.73	
5	QPSK	1	24	23.79	23.75	23.75	
5	QPSK	12	0	22.82	22.83	22.81	23.5
5	QPSK	12	7	22.90	22.77	22.79	
5	QPSK	12	13	22.79	22.80	22.73	
5	QPSK	25	0	22.77	22.81	22.66	23.5
5	16QAM	1	0	22.80	22.91	22.70	
5	16QAM	1	12	22.92	22.94	22.84	
5	16QAM	1	24	22.89	22.68	22.76	22.5
5	16QAM	12	0	21.93	21.90	21.77	
5	16QAM	12	7	21.79	21.75	21.75	
5	16QAM	12	13	21.95	21.83	21.83	22.5
5	16QAM	25	0	21.89	21.90	21.91	
5	64QAM	1	0	21.88	21.84	21.91	
5	64QAM	1	12	21.69	21.94	21.69	22.5
5	64QAM	1	24	21.72	21.62	21.79	
5	64QAM	12	0	20.88	20.85	20.86	21.5
5	64QAM	12	7	20.83	20.95	20.97	
5	64QAM	12	13	20.77	20.78	20.94	
5	64QAM	25	0	20.77	20.85	20.82	



Band 18 (835MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23925	23925	23925	
Frequency (MHz)				822.5	822.5	822.5	
15	QPSK	1	0		22.90		24.5
15	QPSK	1	37		22.69		
15	QPSK	1	74		22.78		
15	QPSK	36	0		21.93		23.5
15	QPSK	36	20		21.82		
15	QPSK	36	39		21.68		
15	QPSK	75	0		21.71		23.5
15	16QAM	1	0		21.81		
15	16QAM	1	37		21.73		
15	16QAM	1	74		21.77		22.5
15	16QAM	36	0		20.84		
15	16QAM	36	20		20.91		
15	16QAM	36	39		20.88		22.5
15	16QAM	75	0		20.80		
15	64QAM	1	0		20.94		
15	64QAM	1	25		20.94		22.5
15	64QAM	1	49		20.89		
15	64QAM	25	0		19.81		
15	64QAM	25	12		19.78		21.5
15	64QAM	25	25		19.73		
15	64QAM	50	0		19.84		
Channel				23900	23925	23950	
Frequency (MHz)				820	822.5	825	
10	QPSK	1	0	23.76	23.86	23.72	24.5
10	QPSK	1	25	23.78	23.63	23.63	
10	QPSK	1	49	23.66	23.80	23.80	
10	QPSK	25	0	22.77	22.87	22.81	23.5
10	QPSK	25	12	22.81	22.83	22.83	
10	QPSK	25	25	22.86	22.76	22.82	
10	QPSK	50	0	22.71	22.74	22.72	23.5
10	16QAM	1	0	22.87	22.91	22.75	
10	16QAM	1	25	22.91	22.78	22.91	
10	16QAM	1	49	22.69	22.89	22.67	22.5
10	16QAM	25	0	21.90	21.95	21.98	
10	16QAM	25	12	21.82	21.79	21.91	
10	16QAM	25	25	21.84	21.91	21.79	22.5
10	16QAM	50	0	21.79	21.83	21.70	
10	64QAM	1	0	21.75	21.77	21.79	
10	64QAM	1	25	21.83	21.80	21.59	22.5
10	64QAM	1	49	21.69	21.86	21.74	
10	64QAM	25	0	21.88	21.84	21.82	
10	64QAM	25	12	20.69	20.86	20.86	21.5
10	64QAM	25	25	20.69	21.82	20.64	
10	64QAM	50	0	20.84	20.94	20.74	
Channel				23875	23925	23975	
Frequency (MHz)				817.5	822.5	827.5	
5	QPSK	1	0	23.82	23.85	23.84	24.5
5	QPSK	1	12	23.78	23.80	23.83	
5	QPSK	1	24	23.68	23.75	23.63	
5	QPSK	12	0	22.86	22.87	22.86	23.5
5	QPSK	12	7	22.84	22.80	22.68	
5	QPSK	12	13	22.75	22.77	22.84	
5	QPSK	25	0	22.65	22.79	22.76	23.5
5	16QAM	1	0	22.66	22.87	22.80	
5	16QAM	1	12	22.80	22.71	22.91	
5	16QAM	1	24	22.68	22.83	22.62	22.5
5	16QAM	12	0	21.77	21.88	21.84	
5	16QAM	12	7	21.75	21.69	21.70	
5	16QAM	12	13	21.78	21.87	21.79	22.5
5	16QAM	25	0	21.66	21.82	21.79	
5	64QAM	1	0	21.76	21.90	21.84	
5	64QAM	1	12	21.82	21.88	21.63	22.5
5	64QAM	1	24	21.83	21.66	21.77	
5	64QAM	12	0	20.90	20.88	20.85	
5	64QAM	12	7	20.86	20.97	20.87	21.5
5	64QAM	12	13	20.72	20.93	20.79	
5	64QAM	25	0	20.80	20.88	20.79	

Band 19 (835MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				24075	24075	24075	
Frequency (MHz)				837.5	837.5	837.5	
15	QPSK	1	0		22.84		24.5
15	QPSK	1	37		22.71		
15	QPSK	1	74		22.68		
15	QPSK	36	0		21.91		23.5
15	QPSK	36	20		21.67		
15	QPSK	36	39		21.59		
15	QPSK	75	0		21.67		23.5
15	16QAM	1	0		21.73		
15	16QAM	1	37		21.60		
15	16QAM	1	74		21.74		22.5
15	16QAM	36	0		20.87		
15	16QAM	36	20		20.56		
15	16QAM	36	39		20.78		22.5
15	16QAM	75	0		20.75		
15	64QAM	1	0		20.85		
15	64QAM	1	25		20.82		22.5
15	64QAM	1	49		20.65		
15	64QAM	25	0		19.82		
15	64QAM	25	12		19.77		21.5
15	64QAM	25	25		19.93		
15	64QAM	50	0		19.70		
Channel				24050	24075	24100	
Frequency (MHz)				835	837.5	840	
10	QPSK	1	0	23.55	23.81	23.74	24.5
10	QPSK	1	25	23.55	23.65	23.62	
10	QPSK	1	49	23.59	23.66	23.77	
10	QPSK	25	0	22.71	22.83	22.74	23.5
10	QPSK	25	12	22.63	22.69	22.79	
10	QPSK	25	25	22.59	22.67	22.70	
10	QPSK	50	0	22.68	22.71	22.64	23.5
10	16QAM	1	0	22.73	22.75	22.82	
10	16QAM	1	25	22.78	22.87	22.86	
10	16QAM	1	49	22.70	22.86	22.69	22.5
10	16QAM	25	0	21.79	21.87	21.82	
10	16QAM	25	12	21.70	21.81	21.60	
10	16QAM	25	25	21.83	21.80	21.77	22.5
10	16QAM	50	0	21.70	21.61	21.63	
10	64QAM	1	0	21.74	21.88	21.89	
10	64QAM	1	25	21.76	21.73	21.54	22.5
10	64QAM	1	49	21.88	21.86	21.67	
10	64QAM	25	0	20.83	20.90	20.75	
10	64QAM	25	12	20.82	20.77	20.97	21.5
10	64QAM	25	25	20.84	20.67	20.73	
10	64QAM	50	0	20.67	20.74	20.70	
Channel				24025	24075	24125	
Frequency (MHz)				832.5	837.5	842.5	
5	QPSK	1	0	23.71	23.80	23.75	24.5
5	QPSK	1	12	23.57	23.59	23.79	
5	QPSK	1	24	23.63	23.71	23.78	
5	QPSK	12	0	22.69	22.85	22.78	23.5
5	QPSK	12	7	22.83	22.88	22.59	
5	QPSK	12	13	22.62	22.84	22.81	
5	QPSK	25	0	22.63	22.76	22.93	23.5
5	16QAM	1	0	22.69	22.94	22.60	
5	16QAM	1	12	22.75	22.65	22.65	
5	16QAM	1	24	22.66	22.58	22.82	22.5
5	16QAM	12	0	21.63	21.69	21.75	
5	16QAM	12	7	21.64	21.58	21.70	
5	16QAM	12	13	21.83	21.91	21.67	22.5
5	16QAM	25	0	21.73	21.77	21.79	
5	64QAM	1	0	21.67	21.66	21.71	
5	64QAM	1	12	21.66	21.66	21.54	22.5
5	64QAM	1	24	21.60	21.52	21.58	
5	64QAM	12	0	20.88	20.92	20.76	
5	64QAM	12	7	20.65	20.77	20.94	21.5
5	64QAM	12	13	20.69	20.82	20.85	
5	64QAM	25	0	20.63	20.99	20.79	



Band 25 (1900MHz Band) (dBm) Part 24E							
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	23.37	23.42	23.28	24
20	QPSK	1	49	23.21	23.16	23.29	
20	QPSK	1	99	23.31	23.33	23.31	
20	QPSK	50	0	22.36	22.45	22.43	
20	QPSK	50	24	22.17	22.43	22.28	23
20	QPSK	50	50	22.32	22.39	22.34	
20	QPSK	100	0	22.38	22.30	22.24	
20	16QAM	1	0	22.32	22.43	22.22	
20	16QAM	1	49	22.12	22.41	22.22	23
20	16QAM	1	99	22.33	22.35	22.27	
20	16QAM	50	0	21.24	21.29	21.41	
20	16QAM	50	24	21.21	21.34	21.11	
20	16QAM	50	50	21.34	21.36	21.25	22
20	16QAM	100	0	21.43	21.25	21.35	
20	64QAM	1	0	21.20	21.38	21.24	
20	64QAM	1	49	21.29	21.38	21.18	
20	64QAM	1	99	21.34	21.32	21.27	22
20	64QAM	50	0	20.34	20.40	20.38	
20	64QAM	50	24	20.37	20.41	20.35	
20	64QAM	50	50	20.37	20.37	20.17	
20	64QAM	100	0	20.32	20.28	20.35	21
Channel				26115	26365	26615	
Frequency (MHz)				1857.5	1882.5	1907.5	Tune-up limit (dBm)
15	QPSK	1	0	23.16	23.39	23.19	24
15	QPSK	1	37	23.34	23.33	23.23	
15	QPSK	1	74	23.12	23.22	23.36	
15	QPSK	36	0	23.39	22.44	22.41	
15	QPSK	36	20	22.33	22.38	22.35	23
15	QPSK	36	39	22.30	22.30	22.26	
15	QPSK	75	0	22.35	22.20	22.32	
15	16QAM	1	0	22.41	22.40	22.42	
15	16QAM	1	37	22.18	22.20	22.34	23
15	16QAM	1	74	22.19	22.27	22.17	
15	16QAM	36	0	21.40	21.44	21.29	
15	16QAM	36	20	21.31	21.19	21.18	
15	16QAM	36	39	21.31	21.34	21.37	22
15	16QAM	75	0	21.28	21.23	21.20	
15	64QAM	1	0	21.23	21.42	21.29	
15	64QAM	1	37	21.44	21.34	21.25	
15	64QAM	1	74	21.46	21.37	21.38	22
15	64QAM	36	0	20.34	20.41	20.39	
15	64QAM	36	20	20.29	20.40	20.22	
15	64QAM	36	39	20.28	20.32	20.18	
15	64QAM	75	0	20.29	20.36	20.30	21
Channel				26090	26365	26640	
Frequency (MHz)				1855	1882.5	1910	Tune-up limit (dBm)
10	QPSK	1	0	23.31	23.40	23.28	24
10	QPSK	1	25	23.15	23.35	23.14	
10	QPSK	1	49	23.36	23.25	23.27	
10	QPSK	25	0	22.26	22.39	22.41	
10	QPSK	25	12	22.24	22.33	22.40	23
10	QPSK	25	25	22.23	22.30	22.35	
10	QPSK	50	0	22.32	22.28	22.42	
10	16QAM	1	0	22.33	22.38	22.21	
10	16QAM	1	25	22.29	22.22	22.32	23
10	16QAM	1	49	22.30	22.21	22.39	
10	16QAM	25	0	21.19	21.42	21.25	
10	16QAM	25	12	21.36	21.28	21.45	
10	16QAM	25	25	21.34	21.45	21.25	22
10	16QAM	50	0	21.29	21.31	21.26	
10	64QAM	1	0	21.29	21.26	21.17	
10	64QAM	1	25	21.31	21.33	21.34	
10	64QAM	1	49	21.30	21.13	21.34	22
10	64QAM	25	0	20.37	20.37	20.40	
10	64QAM	25	12	20.23	20.29	20.32	
10	64QAM	25	25	20.25	20.22	20.43	
10	64QAM	50	0	20.43	20.41	20.40	21
Channel				26065	26365	26665	
Frequency (MHz)				1852.5	1882.5	1912.5	Tune-up limit (dBm)
5	QPSK	1	0	23.29	23.37	23.26	24
5	QPSK	1	12	23.14	23.20	23.21	
5	QPSK	1	24	23.33	23.28	23.15	
5	QPSK	12	0	22.32	22.38	22.37	
5	QPSK	12	7	22.38	22.30	22.26	23
5	QPSK	12	13	22.29	22.37	22.26	
5	QPSK	25	0	22.19	22.23	22.36	
5	16QAM	1	0	22.44	22.45	22.36	
5	16QAM	1	12	22.34	22.39	22.30	23
5	16QAM	1	24	22.43	22.36	22.41	
5	16QAM	12	0	21.41	21.37	21.31	
5	16QAM	12	7	21.28	21.33	21.15	
5	16QAM	12	13	21.34	21.40	21.16	22
5	16QAM	25	0	21.29	21.22	21.26	
5	64QAM	1	0	21.16	21.41	21.24	
5	64QAM	1	12	21.43	21.34	21.25	
5	64QAM	1	24	21.22	21.36	21.26	22
5	64QAM	12	0	20.38	20.36	20.33	
5	64QAM	12	7	20.34	20.32	20.36	
5	64QAM	12	13	20.38	20.23	20.16	
5	64QAM	25	0	20.39	20.33	20.27	21
Channel				26055	26365	26675	
Frequency (MHz)				1851.5	1882.5	1913.5	Tune-up limit (dBm)
3	QPSK	1	0	23.22	23.38	23.22	24
3	QPSK	1	8	23.31	23.15	23.11	
3	QPSK	1	14	23.25	23.29	23.42	
3	QPSK	8	0	22.33	22.37	22.36	
3	QPSK	8	4	22.29	22.30	22.28	23
3	QPSK	8	7	22.24	22.17	22.33	

Band 26 for FCC (dBm) (only on channel required)							
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	23.79	23.88	23.80	24.5
15	QPSK	1	37	23.58	23.77	23.79	
15	QPSK	1	74	23.60	23.71	23.81	
15	QPSK	36	0	22.86	22.90	22.71	
15	QPSK	36	20	22.65	22.85	22.60	23.5
15	QPSK	36	39	22.58	22.71	22.86	
15	QPSK	75	0	22.58	22.73	22.77	
15	16QAM	1	0	22.82	22.76	22.80	
15	16QAM	1	37	22.83	22.80	22.81	23.5
15	16QAM	1	74	22.87	22.70	22.59	
15	16QAM	36	0	21.86	21.70	21.66	
15	16QAM	36	20	21.77	21.58	21.68	
15	16QAM	36	39	21.83	21.87	21.89	22.5
15	16QAM	75	0	21.81	21.65	21.61	
15	64QAM	1	0	21.81	21.93	21.77	
15	64QAM	1	37	21.80	21.90	21.61	
15	64QAM	1	74	21.84	21.83	21.55	21.5
15	64QAM	36	0	20.72	20.81	20.85	
15	64QAM	36	20	20.75	20.72	20.78	
15	64QAM	36	39	20.84	20.64	20.71	
15	64QAM	75	0	20.69	20.76	20.83	
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	Tune-up limit (dBm)
10	QPSK	1	0	23.63	23.85	23.67	24.5
10	QPSK	1	25	23.62	23.79	23.79	
10	QPSK	1	49	23.70	23.68	23.69	
10	QPSK	25	0	22.86	22.80	22.83	
10	QPSK	25	12	22.66	22.79	22.91	23.5
10	QPSK	25	25	22.66	22.80	22.70	
10	QPSK	50	0	22.59	22.70	22.86	
10	16QAM	1	0	22.73	22.72	22.78	
10	16QAM	1	25	22.69	22.86	22.90	23.5
10	16QAM	1	49	22.66	22.76	22.82	
10	16QAM	25	0	21.66	21.75	21.88	
10	16QAM	25	12	21.89	21.61	21.54	
10	16QAM	25	25	21.75	21.86	21.81	22.5
10	16QAM	50	0	21.71	21.75	21.64	
10	64QAM	1	0	21.86	21.86	21.72	
10	64QAM	1	25	21.69	21.70	21.56	
10	64QAM	1	49	21.83	21.71	21.59	22.5
10	64QAM	25	0	20.96	20.77	20.87	
10	64QAM	25	12	20.66	20.75	20.85	
10	64QAM	25	25	20.62	20.69	20.82	
10	64QAM	50	0	20.77	20.79	20.88	21.5
Channel				26715	26865	27015	
Frequency (MHz)				816.5	831.5	846.5	Tune-up limit (dBm)
5	QPSK	1	0	23.72	23.86	23.53	24.5
5	QPSK	1	12	23.74	23.54	23.58	
5	QPSK	1	24	23.85	23.63	23.83	
5	QPSK	12	0	22.92	22.93	22.95	
5	QPSK	12	7	22.87	22.78	22.59	23.5
5	QPSK	12	13	22.84	22.66	22.88	
5	QPSK	25	0	22.61	22.80	22.77	
5	16QAM	1	0	22.85	22.86	22.85	
5	16QAM	1	12	22.54	22.73	22.73	23.5
5	16QAM	1	24	22.81	22.71	22.58	
5	16QAM	12	0	21.72	21.75	21.87	
5	16QAM	12	7	21.81	21.56	21.52	
5	16QAM	12	13	21.84	21.77	21.69	22.5
5	16QAM	25	0	21.74	21.83	21.73	
5	64QAM	1	0	21.81	21.67	21.76	
5	64QAM	1	12	21.65	21.75	21.58	
5	64QAM	1	24	21.81	21.82	21.59	22.5
5	64QAM	12	0	20.71	20.85	20.82	
5	64QAM	12	7	20.73	20.80	20.79	
5	64QAM	12	13	20.86	20.81	20.64	
5	64QAM	25	0	20.66	20.71	20.75	21.5
Channel				26705	26865	27025	
Frequency (MHz)				815.5	831.5	847.5	Tune-up limit (dBm)
3	QPSK	1	0	23.82	23.85	23.80	24.5
3	QPSK	1	8	23.63	23.57	23.52	
3	QPSK	1	14	23.56	23.74	23.59	
3	QPSK	8	0	22.83	22.86	22.87	
3	QPSK	8	4	22.56	22.78	22.81	23.5
3	QPSK	8	7	22.86	22.59	22.69	
3	QPSK	15	0	22.74	22.91	22.77	
3	16QAM	1	0	22.69	22.80	22.57	
3	16QAM	1	8	22.71	22.69	22.79	23.5
3	16QAM	1	14	22.63	22.56	22.77	
3	16QAM	8	0	21.81	21.78	21.84	
3	16QAM	8	4	21.75	21.83	21.62	
3	16QAM	8	7	21.93	21.75	21.62	22.5
3	16QAM	15	0	21.90	21.71	21.76	
3	64QAM	1	0	21.68	21.85	21.74	
3	64QAM	1	8	21.73	21.82	21.59	
3	64QAM	1	14	21.69	21.66	21.79	22.5
3	64QAM	8	0	20.78	20.94	20.89	
3	64QAM	8	4	20.84	20.80	20.74	
3	64QAM	8	7	20.73	20.83	20.88	
3	64QAM	15	0	20.87	20.97	20.90	21.5
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	Tune-up limit (dBm)
1.4	QPSK	1	0	23.58	23.86	23.81	24.5
1.4	QPSK	1	3	23.64	23.82	23.66	
1.4	QPSK	1	5	23.57	23.84	23.80	
1.4	QPSK	3	0	22.71	22.78	22.81	
1.4	QPSK	3	1	22.53	22.75	22.77	
1.4	QPSK	3	3	22.55	22.84	22.76	



3	QPSK	15	0	22.22	22.44	22.25	23
3	16QAM	1	0	22.39	22.33	22.34	
3	16QAM	1	8	22.41	22.29	22.26	
3	16QAM	1	14	22.33	22.23	22.08	22
3	16QAM	8	0	21.19	21.40	21.39	
3	16QAM	8	4	21.25	21.23	21.15	
3	16QAM	8	7	21.31	21.33	21.41	22
3	16QAM	15	0	21.35	21.37	21.13	
3	64QAM	1	0	21.34	21.33	21.39	
3	64QAM	1	8	21.36	21.39	21.16	22
3	64QAM	1	14	21.18	21.20	21.25	
3	64QAM	8	0	20.35	20.39	20.34	
3	64QAM	8	4	20.28	20.42	20.38	21
3	64QAM	8	7	20.32	20.27	20.28	
3	64QAM	15	0	20.38	20.26	20.33	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	23.31	23.37	23.20	24
1.4	QPSK	1	3	23.19	23.35	23.23	
1.4	QPSK	1	5	23.32	23.24	23.24	
1.4	QPSK	3	0	22.42	22.45	22.34	
1.4	QPSK	3	1	22.21	22.32	22.36	
1.4	QPSK	3	3	22.31	22.36	22.31	23
1.4	QPSK	6	0	22.36	22.31	22.28	
1.4	16QAM	1	0	22.34	22.35	22.36	22
1.4	16QAM	1	3	22.11	22.18	22.38	
1.4	16QAM	1	5	22.33	22.36	22.21	
1.4	16QAM	3	0	21.42	21.32	21.36	
1.4	16QAM	3	1	21.18	21.37	21.42	
1.4	16QAM	3	3	21.42	21.43	21.39	21
1.4	16QAM	6	0	21.24	21.29	21.19	
1.4	64QAM	1	0	21.23	21.35	21.32	22
1.4	64QAM	1	3	21.23	21.37	21.16	
1.4	64QAM	1	5	21.41	21.44	21.42	
1.4	64QAM	3	0	20.37	20.41	20.33	
1.4	64QAM	3	1	20.33	20.34	20.31	
1.4	64QAM	3	3	20.32	20.45	20.28	21
1.4	64QAM	6	0	20.42	20.43	20.36	

1.4	QPSK	6	0	22.82	22.85	22.94	23.5
1.4	16QAM	1	0	22.62	22.69	22.56	23.5
1.4	16QAM	1	3	22.72	22.79	22.65	
1.4	16QAM	1	5	22.67	22.87	22.60	
1.4	16QAM	3	0	21.80	21.88	21.86	
1.4	16QAM	3	1	21.79	21.69	21.61	
1.4	16QAM	3	3	21.73	21.82	21.82	22.5
1.4	16QAM	6	0	21.84	21.87	21.76	
1.4	64QAM	1	0	21.80	21.72	21.56	22.5
1.4	64QAM	1	3	21.70	21.79	21.63	
1.4	64QAM	1	5	21.68	21.77	21.63	
1.4	64QAM	3	0	20.75	20.80	20.77	
1.4	64QAM	3	1	20.64	20.84	20.71	
1.4	64QAM	3	3	20.65	20.82	20.54	21.5
1.4	64QAM	6	0	20.79	20.76	20.88	



Band 30 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				27710			23.5
Frequency (MHz)				2310			
10	QPSK	1	0		22.88		22.5
10	QPSK	1	25		22.78		
10	QPSK	1	49		22.71		
10	QPSK	25	0		21.90		
10	QPSK	25	12		21.82		22.5
10	QPSK	25	25		21.89		
10	QPSK	50	0		21.82		
10	16QAM	1	0		21.87		
10	16QAM	1	25		21.84		22.5
10	16QAM	1	49		21.95		
10	16QAM	25	0		20.99		
10	16QAM	25	12		21.01		
10	16QAM	25	25		20.74		21.5
10	16QAM	50	0		20.84		
10	64QAM	1	0		20.95		
10	64QAM	1	25		20.96		
10	64QAM	1	49		20.89		21.5
10	64QAM	25	0		19.92		
10	64QAM	25	12		19.98		
10	64QAM	25	25		19.94		
10	64QAM	50	0		19.93		20.5
Channel				27685	27710	27735	
Frequency (MHz)				2307.5	2310	2312.5	Tune-up limit (dBm)
5	QPSK	1	0	22.74	22.85	22.64	23.5
5	QPSK	1	12	22.69	22.65	22.62	
5	QPSK	1	24	22.81	22.77	22.79	
5	QPSK	12	0	21.80	22.01	21.82	
5	QPSK	12	7	21.89	21.98	22.02	22.5
5	QPSK	12	13	21.77	21.85	21.96	
5	QPSK	25	0	21.75	21.71	21.96	
5	16QAM	1	0	21.91	21.87	21.74	
5	16QAM	1	12	21.70	21.97	22.02	22.5
5	16QAM	1	24	21.90	21.96	21.74	
5	16QAM	12	0	20.75	20.96	20.97	
5	16QAM	12	7	20.77	20.81	20.63	
5	16QAM	12	13	20.81	20.83	20.72	21.5
5	16QAM	25	0	20.76	20.71	20.68	
5	64QAM	1	0	20.84	20.81	20.65	
5	64QAM	1	12	21.00	20.90	20.71	
5	64QAM	1	24	20.80	20.70	20.83	21.5
5	64QAM	12	0	19.89	19.93	19.85	
5	64QAM	12	7	19.98	19.79	19.69	
5	64QAM	12	13	19.67	19.81	19.75	
5	64QAM	25	0	19.81	19.79	19.87	20.5
5	64QAM	25	0	19.81	19.79	19.87	

Band 66 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	24
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.36	23.41	23.32	23
20	QPSK	1	49	23.24	23.37	23.13	
20	QPSK	1	99	23.15	23.35	23.20	
20	QPSK	50	0	22.33	22.40	22.39	
20	QPSK	50	24	22.21	22.27	22.19	23
20	QPSK	50	50	22.22	22.24	22.31	
20	QPSK	100	0	22.28	22.24	22.22	
20	16QAM	1	0	22.19	22.28	22.30	
20	16QAM	1	49	22.28	22.19	22.35	22
20	16QAM	1	99	22.34	22.22	22.26	
20	16QAM	50	0	21.22	21.38	21.38	
20	16QAM	50	24	21.39	21.42	21.34	
20	16QAM	50	50	21.33	21.25	21.41	22
20	16QAM	100	0	21.44	21.35	21.40	
20	64QAM	1	0	21.18	21.33	21.21	
20	64QAM	1	49	21.24	21.40	21.16	
20	64QAM	1	99	21.36	21.19	21.34	21
20	64QAM	50	0	20.41	20.39	20.32	
20	64QAM	50	24	20.39	20.28	20.30	
20	64QAM	50	50	20.27	20.25	20.28	
20	64QAM	100	0	20.23	20.31	20.27	24
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	23
15	QPSK	1	0	23.32	23.38	23.29	
15	QPSK	1	37	23.07	23.21	23.15	23
15	QPSK	1	74	23.11	23.30	23.24	
15	QPSK	36	0	22.29	22.44	22.39	
15	QPSK	36	20	22.31	22.35	22.24	
15	QPSK	36	39	22.37	22.24	22.37	23
15	QPSK	75	0	22.26	22.28	22.35	
15	16QAM	1	0	22.33	22.33	22.33	
15	16QAM	1	37	22.30	22.25	22.35	
15	16QAM	1	74	22.31	22.17	22.16	22
15	16QAM	36	0	21.36	21.42	21.38	
15	16QAM	36	20	21.21	21.20	21.22	
15	16QAM	36	39	21.35	21.27	21.20	
15	16QAM	75	0	21.42	21.23	21.40	22
15	64QAM	1	0	21.15	21.40	21.27	
15	64QAM	1	37	21.33	21.23	21.23	
15	64QAM	1	74	21.25	21.20	21.26	
15	64QAM	36	0	20.44	20.39	20.34	21
15	64QAM	36	20	20.45	20.26	20.33	
15	64QAM	36	39	20.26	20.31	20.22	
15	64QAM	75	0	20.40	20.39	20.48	
Channel				132022	132322	132622	24
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.32	23.38	23.19	23
10	QPSK	1	25	23.20	23.32	23.23	
10	QPSK	1	49	23.24	23.20	23.25	
10	QPSK	25	0	22.27	22.42	22.35	
10	QPSK	25	12	22.25	22.27	22.40	23
10	QPSK	25	25	22.35	22.24	22.41	
10	QPSK	50	0	22.40	22.38	22.20	
10	16QAM	1	0	22.22	22.28	22.13	
10	16QAM	1	25	22.13	22.34	22.49	23
10	16QAM	1	49	22.28	22.16	22.27	
10	16QAM	25	0	21.18	21.31	21.23	
10	16QAM	25	12	21.44	21.20	21.13	
10	16QAM	25	25	21.32	21.36	21.45	22
10	16QAM	50	0	21.18	21.41	21.20	
10	64QAM	1	0	21.28	21.41	21.20	
10	64QAM	1	25	21.37	21.31	21.44	
10	64QAM	1	49	21.30	21.12	21.30	21
10	64QAM	25	0	20.31	20.42	20.44	
10	64QAM	25	12	20.29	20.30	20.43	
10	64QAM	25	25	20.23	20.40	20.38	
10	64QAM	50	0	20.44	20.26	20.35	24
Channel				131997	132322	132647	
Frequency (MHz)				1712.5	1745	1777.5	24
5	QPSK	1	0	23.37	23.36	23.22	
5	QPSK	1	12	23.14	23.22	23.17	23
5	QPSK	1	24	23.22	23.32	23.24	
5	QPSK	12	0	22.36	22.29	22.29	
5	QPSK	12	7	22.30	22.33	22.23	
5	QPSK	12	13	22.25	22.31	22.29	23
5	QPSK	25	0	22.29	22.26	22.33	
5	16QAM	1	0	22.19	22.31	22.14	
5	16QAM	1	12	22.12	22.40	22.26	
5	16QAM	1	24	22.37	22.15	22.37	22
5	16QAM	12	0	21.22	21.32	21.28	
5	16QAM	12	7	21.33	21.39	21.30	
5	16QAM	12	13	21.30	21.28	21.43	
5	16QAM	25	0	21.17	21.24	21.28	22
5	64QAM	1	0	21.37	21.33	21.26	
5	64QAM	1	12	21.26	21.41	21.38	
5	64QAM	1	24	21.17	21.21	21.21	
5	64QAM	12	0	20.41	20.39	20.48	21
5	64QAM	12	7	20.33	20.32	20.33	
5	64QAM	12	13	20.21	20.20	20.25	
5	64QAM	25	0	20.40	20.28	20.47	
Channel				131997	132322	132657	24
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.33	23.39	23.34	24
3	QPSK	1	8	23.38	23.15	23.33	
3	QPSK	1	14	23.25	23.27	23.28	
3	QPSK	8	0	22.39	22.28	22.36	
3	QPSK	8	4	22.26	22.29	22.24	23
3	QPSK	8	7	22.39	22.25	22.23	



3	QPSK	15	0	22.44	22.52	22.49	23
3	16QAM	1	0	22.39	22.39	22.21	
3	16QAM	1	8	22.40	22.33	22.43	
3	16QAM	1	14	22.40	22.40	22.16	22
3	16QAM	8	0	21.42	21.44	21.26	
3	16QAM	8	4	21.47	21.47	21.26	
3	16QAM	8	7	21.21	21.32	21.23	
3	16QAM	15	0	21.25	21.33	21.16	
3	64QAM	1	0	21.18	21.37	21.28	22
3	64QAM	1	8	21.32	21.31	21.13	
3	64QAM	1	14	21.30	21.22	21.25	
3	64QAM	8	0	20.42	20.38	20.30	21
3	64QAM	8	4	20.27	20.27	20.39	
3	64QAM	8	7	20.35	20.40	20.33	
3	64QAM	15	0	20.30	20.54	20.37	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.17	23.37	23.36	24
1.4	QPSK	1	3	23.15	23.26	23.18	
1.4	QPSK	1	5	23.29	23.24	23.13	
1.4	QPSK	3	0	22.36	22.41	22.45	
1.4	QPSK	3	1	22.21	22.41	22.46	
1.4	QPSK	3	3	22.18	22.35	22.45	
1.4	QPSK	6	0	22.40	22.35	22.19	23
1.4	16QAM	1	0	22.38	22.60	22.17	23
1.4	16QAM	1	3	22.12	22.51	22.37	
1.4	16QAM	1	5	22.20	22.46	22.15	
1.4	16QAM	3	0	21.27	21.62	21.33	
1.4	16QAM	3	1	21.46	21.40	21.30	
1.4	16QAM	3	3	21.54	21.50	21.22	
1.4	16QAM	6	0	21.20	21.31	21.17	22
1.4	64QAM	1	0	21.30	21.51	21.38	22
1.4	64QAM	1	3	21.40	21.40	21.39	
1.4	64QAM	1	5	21.27	21.32	21.37	
1.4	64QAM	3	0	20.47	20.56	20.44	
1.4	64QAM	3	1	20.32	20.45	20.41	
1.4	64QAM	3	3	20.28	20.22	20.46	
1.4	64QAM	6	0	20.57	20.43	20.54	21



Band 71 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				133222	133322	133372	Tune-up limit (dBm)
Frequency (MHz)				673	683	688	
20	QPSK	1	0	22.76	22.80	22.74	24.5
20	QPSK	1	49	22.68	22.75	22.66	
20	QPSK	1	99	22.73	22.65	22.70	
20	QPSK	50	0	21.73	21.87	21.86	23.5
20	QPSK	50	24	21.85	21.77	21.83	
20	QPSK	50	50	21.84	21.70	21.71	
20	QPSK	100	0	21.64	21.79	21.74	23.5
20	16QAM	1	0	21.90	21.91	21.76	
20	16QAM	1	49	21.82	21.74	21.88	
20	16QAM	1	99	21.76	21.79	21.77	22.5
20	16QAM	50	0	20.90	20.84	20.95	
20	16QAM	50	24	20.74	20.71	20.90	
20	16QAM	50	50	20.85	20.72	20.77	22.5
20	16QAM	100	0	20.74	20.77	20.84	
20	64QAM	1	0	20.77	20.76	20.71	
20	64QAM	1	49	20.80	20.93	20.81	21.5
20	64QAM	1	99	20.79	20.93	20.72	
20	64QAM	50	0	19.83	19.76	19.76	
20	64QAM	50	24	19.76	19.84	19.82	21.5
20	64QAM	50	50	19.65	19.68	19.76	
20	64QAM	100	0	19.81	19.75	19.80	
Channel				133197	133322	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	683	690.5	
15	QPSK	1	0	23.59	23.70	23.57	24.5
15	QPSK	1	37	23.64	23.60	23.63	
15	QPSK	1	74	23.61	23.57	23.57	
15	QPSK	36	0	22.63	22.76	22.74	23.5
15	QPSK	36	20	22.72	22.69	22.71	
15	QPSK	36	39	22.60	22.59	22.62	
15	QPSK	75	0	22.68	22.61	22.73	23.5
15	16QAM	1	0	22.65	22.77	22.82	
15	16QAM	1	37	22.58	22.82	22.73	
15	16QAM	1	74	22.61	22.68	22.82	22.5
15	16QAM	36	0	21.69	21.72	21.82	
15	16QAM	36	20	21.75	21.69	21.75	
15	16QAM	36	39	21.73	21.71	21.61	22.5
15	16QAM	75	0	21.55	21.72	21.64	
15	64QAM	1	0	21.62	21.76	21.65	
15	64QAM	1	37	21.60	21.85	21.76	21.5
15	64QAM	1	74	21.79	21.64	21.71	
15	64QAM	36	0	20.74	20.77	20.63	
15	64QAM	36	20	20.62	20.69	20.82	21.5
15	64QAM	36	39	20.82	20.83	20.68	
15	64QAM	75	0	20.86	20.73	20.70	
Channel				133172	133322	133422	Tune-up limit (dBm)
Frequency (MHz)				668	683	693	
10	QPSK	1	0	23.64	23.68	23.54	24.5
10	QPSK	1	25	23.66	23.57	23.59	
10	QPSK	1	49	23.61	23.63	23.61	
10	QPSK	25	0	22.62	22.83	22.84	23.5
10	QPSK	25	12	22.61	22.69	22.65	
10	QPSK	25	25	22.75	22.80	22.66	
10	QPSK	50	0	22.59	22.68	22.74	23.5
10	16QAM	1	0	22.83	22.73	22.84	
10	16QAM	1	25	22.65	22.63	22.72	
10	16QAM	1	49	22.67	22.75	22.70	22.5
10	16QAM	25	0	21.76	21.69	21.84	
10	16QAM	25	12	21.72	21.68	21.57	
10	16QAM	25	25	21.74	21.77	21.76	22.5
10	16QAM	50	0	21.57	21.80	21.61	
10	64QAM	1	0	21.60	21.72	21.61	
10	64QAM	1	25	21.82	21.76	21.67	21.5
10	64QAM	1	49	21.72	21.58	21.74	
10	64QAM	25	0	20.56	20.80	20.84	
10	64QAM	25	12	20.77	20.86	20.75	21.5
10	64QAM	25	25	20.79	20.73	20.86	
10	64QAM	50	0	20.85	20.83	20.79	
Channel				133147	133322	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	683	695.5	
5	QPSK	1	0	23.66	23.67	23.59	24.5
5	QPSK	1	12	23.45	23.51	23.51	
5	QPSK	1	24	23.59	23.61	23.57	
5	QPSK	12	0	22.94	22.83	22.69	23.5
5	QPSK	12	7	22.70	22.80	22.85	
5	QPSK	12	13	22.71	22.60	22.63	
5	QPSK	25	0	22.75	22.71	22.80	23.5
5	16QAM	1	0	22.77	22.75	22.80	
5	16QAM	1	12	22.68	22.66	22.87	
5	16QAM	1	24	22.58	22.79	22.70	22.5
5	16QAM	12	0	21.63	21.76	21.66	
5	16QAM	12	7	21.58	21.80	21.63	
5	16QAM	12	13	21.80	21.77	21.73	22.5
5	16QAM	25	0	21.81	21.70	21.58	
5	64QAM	1	0	21.72	21.71	21.88	
5	64QAM	1	12	21.75	21.71	21.66	21.5
5	64QAM	1	24	21.64	21.54	21.74	
5	64QAM	12	0	20.78	20.84	20.86	
5	64QAM	12	7	20.77	20.73	20.72	21.5
5	64QAM	12	13	20.67	20.71	20.68	
5	64QAM	25	0	20.64	20.79	20.78	



Band 41 PC2 (2496~2690MHz) (dBm)											
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)		
Channel				39750	40185	40600	41055	41460			
Frequency (MHz)				2506	2549.5	2593	2636.5	2680			
20	QPSK	1	0	26.20	26.23	26.43	26.41	26.16	27		
20	QPSK	1	49	26.04	26.14	26.16	26.28	26.31			
20	QPSK	1	99	26.21	26.20	26.30	26.22	26.28			
20	QPSK	50	0	25.41	25.44	25.46	25.43	25.26			
20	QPSK	50	24	25.33	25.43	25.39	25.37	25.30	26		
20	QPSK	50	50	25.26	25.29	25.28	25.39	25.23			
20	QPSK	100	0	25.16	25.25	25.22	25.23	25.24			
20	16QAM	1	0	25.39	25.43	25.40	25.39	25.35			
20	16QAM	1	49	25.38	25.40	25.22	25.27	25.44	28		
20	16QAM	1	99	25.46	25.45	25.26	25.47	25.41			
20	16QAM	50	0	24.30	24.36	24.27	24.44	24.26			
20	16QAM	50	24	24.27	24.37	24.10	24.21	24.28			
20	16QAM	50	50	24.23	24.41	24.37	24.36	24.21	25		
20	16QAM	100	0	24.28	24.23	24.21	24.32	24.36			
20	64QAM	1	0	24.43	24.44	24.42	24.39	24.36			
20	64QAM	1	49	24.22	24.37	24.22	24.36	24.38			
20	64QAM	1	99	24.42	24.35	24.39	24.13	24.15	24		
20	64QAM	50	0	23.45	23.47	23.35	23.46	23.36			
20	64QAM	50	24	23.32	23.32	23.44	23.41	23.44			
20	64QAM	50	50	23.23	23.33	23.22	23.47	23.43			
20	64QAM	100	0	23.34	23.37	23.38	23.33	23.39	Tune-up limit (dBm)		
Channel				39725	40173	40600	41068	41515			
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5			
15	QPSK	1	0	26.30	26.29	26.40	26.35	26.25	27		
15	QPSK	1	37	26.37	26.11	26.31	26.10	26.12			
15	QPSK	1	74	26.33	26.21	26.36	26.29	26.20			
15	QPSK	36	0	25.24	25.46	25.48	25.40	25.35			
15	QPSK	36	20	25.39	25.35	25.38	25.31	25.32	26		
15	QPSK	36	39	25.30	25.45	25.27	25.44	25.43			
15	QPSK	75	0	25.38	25.31	25.29	25.28	25.40			
15	16QAM	1	0	25.20	25.32	25.43	25.39	25.30			
15	16QAM	1	37	25.11	25.20	25.33	25.41	25.43	28		
15	16QAM	1	74	25.35	25.20	25.07	25.30	25.15			
15	16QAM	36	0	24.20	24.34	24.47	24.34	24.31			
15	16QAM	36	20	24.23	24.17	24.18	24.39	24.18			
15	16QAM	36	39	24.27	24.32	24.23	24.24	24.30	25		
15	16QAM	75	0	24.44	24.32	24.43	24.27	24.24			
15	64QAM	1	0	24.45	24.38	24.20	24.28	24.21			
15	64QAM	1	37	24.30	24.26	24.38	24.29	24.12			
15	64QAM	1	74	24.19	24.16	24.42	24.18	24.14	24		
15	64QAM	36	0	23.31	23.40	23.41	23.37	23.34			
15	64QAM	36	20	23.32	23.45	23.36	23.38	23.39			
15	64QAM	36	39	23.43	23.25	23.34	23.18	23.16			
15	64QAM	75	0	23.25	23.36	23.42	23.40	23.36	Tune-up limit (dBm)		
Channel				39700	40160	40600	41068	41540			
Frequency (MHz)				2501	2547	2593	2639	2685			
10	QPSK	1	0	26.15	26.32	26.41	26.34	26.12	27		
10	QPSK	1	25	26.14	26.19	26.12	26.16	26.30			
10	QPSK	1	49	26.40	26.33	26.39	26.36	26.20			
10	QPSK	25	0	25.32	25.46	25.48	25.37	25.38			
10	QPSK	25	12	25.28	25.47	25.30	25.43	25.44	26		
10	QPSK	25	25	25.44	25.18	25.22	25.29	25.44			
10	QPSK	50	0	25.19	25.33	25.42	25.30	25.25			
10	16QAM	1	0	25.31	25.39	25.45	25.40	25.40			
10	16QAM	1	25	25.16	25.46	25.38	25.27	25.30	28		
10	16QAM	1	49	25.42	25.21	25.07	25.18	25.19			
10	16QAM	25	0	24.20	24.40	24.24	24.32	24.20			
10	16QAM	25	12	24.49	24.28	24.42	24.47	24.15			
10	16QAM	25	25	24.34	24.35	24.29	24.28	24.36	25		
10	16QAM	50	0	24.48	24.28	24.41	24.41	24.13			
10	64QAM	1	0	24.39	24.34	24.26	24.36	24.34			
10	64QAM	1	25	24.51	24.29	24.44	24.38	24.18			
10	64QAM	1	49	24.39	24.46	24.26	24.44	24.35	24		
10	64QAM	25	0	23.34	23.43	23.37	23.47	23.45			
10	64QAM	25	12	23.52	23.39	23.37	23.29	23.49			
10	64QAM	25	25	23.32	23.47	23.28	23.41	23.49			
10	64QAM	50	0	23.28	23.26	23.37	23.44	23.30	Tune-up limit (dBm)		
Channel				39675	40148	40600	41063	41565			
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5			
5	QPSK	1	0	26.15	26.32	26.39	26.29	26.33	27		
5	QPSK	1	12	26.16	26.33	26.37	26.31	26.08			
5	QPSK	1	24	26.14	26.23	26.28	26.31	26.25			
5	QPSK	12	0	25.49	25.37	25.37	25.32	25.44			
5	QPSK	12	7	25.48	25.40	25.52	25.56	25.29	26		
5	QPSK	12	13	25.48	25.43	25.43	25.47	25.36			
5	QPSK	25	0	25.19	25.34	25.42	25.51	25.25			
5	16QAM	1	0	25.28	25.40	25.48	25.30	25.26			
5	16QAM	1	12	25.30	25.20	25.30	25.41	25.33	28		
5	16QAM	1	24	25.30	25.20	25.07	25.23	25.32			
5	16QAM	12	0	24.19	24.36	24.51	24.37	24.51			
5	16QAM	12	7	24.35	24.50	24.14	24.40	24.15			
5	16QAM	12	13	24.40	24.43	24.46	24.58	24.42	25		
5	16QAM	25	0	24.32	24.35	24.39	24.41	24.34			
5	64QAM	1	0	24.48	24.38	24.27	24.34	24.37			
5	64QAM	1	12	24.43	24.31	24.09	24.37	24.12			
5	64QAM	1	24	24.25	24.34	24.25	24.15	24.30	24		
5	64QAM	12	0	23.55	23.51	23.46	23.45	23.37			
5	64QAM	12	7	23.35	23.53	23.43	23.43	23.52			
5	64QAM	12	13	23.16	23.32	23.41	23.36	23.14			
5	64QAM	25	0	23.28	23.44	23.48	23.55	23.22	Tune-up limit (dBm)		

Band 41 PC3 (2496~2690MHz) (dBm)										
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel		Tune-up limit (dBm)
Channel				39750	40185	40600	41055	41460		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	23.35	23.41	23.45	23.39	23.28	24	
20	QPSK	1	49	23.20	23.33	23.40	23.29	23.28		
20	QPSK	1	99	23.14	23.32	23.33	23.32	23.19		
20	QPSK	50	0	22.38	22.39	22.46	22.37	22.28		
20	QPSK	50	24	22.26	22.31	22.25	22.36	22.30	23	
20	QPSK	50	50	22.33	22.20	22.31	22.36	22.25		
20	QPSK	100	0	22.38	22.35	22.42	22.38	22.26		
20	16QAM	1	0	22.20	22.40	22.43	22.39	22.19		
20	16QAM	1	49	22.10	22.28	22.22	22.39	22.23	23	
20	16QAM	1	99	22.29	22.42	22.18	22.21	22.09		
20	16QAM	50	0	21.20	21.29	21.24	21.35	21.33		
20	16QAM	50	24	21.22	21.28	21.38	21.16	21.26		
20	16QAM	50	50	21.27	21.59	21.30	21.36	21.26	22	
20	16QAM	100	0	21.28	21.35	21.33	21.29	21.20		
20	64QAM	1	0	21.23	21.34	21.38	21.32	21.18		
20	64QAM	1	49	21.24	21.28	21.23	21.35	21.28		
20	64QAM	1	99	21.33	21.34	21.26	21.19	21.30	21	
20	64QAM	50	0	20.36	20.42	20.46	20.40	20.35		
20	64QAM	50	24	20.29	20.38	20.34	20.33	20.38		
20	64QAM	50	50	20.39	20.31	20.32	20.19	20.25		
20	64QAM	100	0	20.36	20.39	20.28	20.36	20.33		
Channel				39725 <th>40175<th>40600<th>41098<th>41515<th></th><th>Tune-up limit (dBm)</th></th></th></th></th>	40175 <th>40600<th>41098<th>41515<th></th><th>Tune-up limit (dBm)</th></th></th></th>	40600 <th>41098<th>41515<th></th><th>Tune-up limit (dBm)</th></th></th>	41098 <th>41515<th></th><th>Tune-up limit (dBm)</th></th>	41515 <th></th> <th>Tune-up limit (dBm)</th>		Tune-up limit (dBm)
Frequency (MHz)				2503.5 <th>2548.5<th>2593<th>2639.5<th>2690.5<th></th><th></th></th></th></th></th>	2548.5 <th>2593<th>2639.5<th>2690.5<th></th><th></th></th></th></th>	2593 <th>2639.5<th>2690.5<th></th><th></th></th></th>	2639.5 <th>2690.5<th></th><th></th></th>	2690.5 <th></th> <th></th>		
15	QPSK	1	0	23.31	23.36	23.41	23.36	23.24	24	
15	QPSK	1	37	23.39	23.42	23.59	23.09	23.14		
15	QPSK	1	74	23.30	23.38	23.37	23.18	23.40		
15	QPSK	36	0	22.44	22.44	22.51	22.39	22.40		
15	QPSK	36	20	22.39	22.51	22.39	22.30	22.22	23	
15	QPSK	36	39	22.18	22.39	22.47	22.33	22.39		
15	QPSK	75	0	22.23	22.25	22.41	22.36	22.41		
15	16QAM	1	0	22.40	22.46	22.42	22.48	22.42		
15	16QAM	1	37	22.38	22.21	22.23	22.25	22.27	23	
15	16QAM	1	74	22.19	22.47	22.29	22.15	22.08		
15	16QAM	36	0	21.39	21.36	21.27	21.32	21.23		
15	16QAM	36	20	21.26	21.38	21.30	21.23	21.20		
15	16QAM	36	39	21.36	21.41	21.22	21.33	21.38	22	
15	16QAM	75	0	21.38	21.56	21.31	21.45	21.40		
15	64QAM	1	0	21.20	21.44	21.40	21.50	21.31		
15	64QAM	1	37	21.39	21.42	21.26	21.48	21.14		
15	64QAM	1	74	21.45	21.22	21.45	21.40	21.18	22	
15	64QAM	36	0	20.46	20.48	20.45	20.45	20.33		
15	64QAM	36	20	20.44	20.28	20.44	20.42	20.40		
15	64QAM	36	39	20.23	20.37	20.18	20.19	20.17		
15	64QAM	75	0	20.23	20.36	20.40	20.39	20.35		
Channel				39700 <th>40160<th>40600<th>41090<th>41540</th></th></th></th>	40160 <th>40600<th>41090<th>41540</th></th></th>	40600 <th>41090<th>41540</th></th>	41090 <th>41540</th>	41540		
Frequency (MHz)				2501 <th>2547<th>2593<th>2639<th>2685</th></th></th></th>	2547 <th>2593<th>2639<th>2685</th></th></th>	2593 <th>2639<th>2685</th></th>	2639 <th>2685</th>	2685		
10	QPSK	1	0	23.23	23.38	23.42	23.40	23.35	24	
10	QPSK	1	25	23.07	23.29	23.41	23.33	23.30		
10	QPSK	1	49	23.14	23.16	23.34	23.29	23.22		
10	QPSK	25	0	22.25	22.31	22.43	22.31	22.28		
10	QPSK	25	12	22.38	22.40	22.27	22.40	22.27	23	
10	QPSK	25	25	22.41	22.16	22.31	22.38	22.26		
10	QPSK	50	0	22.39	22.20	22.39	22.43	22.23		
10	16QAM	1	0	22.48	22.29	22.36	22.30	22.26		
10	16QAM	1	25	22.26	22.18	22.44	22.42	22.35	23	
10	16QAM	1	49	22.36	22.17	22.07	22.48	22.19		
10	16QAM	25	0	21.23	21.39	21.31	21.46	21.30		
10	16QAM	25	12	21.45	21.30	21.18	21.21	21.38		
10	16QAM	25	25	21.33	21.38	21.31	21.31	21.48	22	
10	16QAM	50	0	21.22	21.42	21.25	21.43	21.38		
10	64QAM	1	0	21.32	21.35	21.41	21.29	21.16		
10	64QAM	1	25	21.21	21.24	21.41	21.23	21.40		
10	64QAM	1	49	21.41	21.17	21.25	21.41	21.47	22	
10	64QAM	25	0	20.37	20.42	20.38	20.31	20.33		
10	64QAM	25	12	20.41	20.32	20.35	20.32	20.48		
10	64QAM	25	25	20.21	20.22	20.34	20.21	20.19		
10	64QAM	50	0	20.26	20.39	20.27	20.25	20.28	21	
Channel				39675 <th>40148<th>40600<th>41093<th>41565</th></th></th></th>	40148 <th>40600<th>41093<th>41565</th></th></th>	40600 <th>41093<th>41565</th></th>	41093 <th>41565</th>	41565		
Frequency (MHz)				2498.5 <th>2545.8<th>2593<th>2640.3<th>2687.5</th></th></th></th>	2545.8 <th>2593<th>2640.3<th>2687.5</th></th></th>	2593 <th>2640.3<th>2687.5</th></th>	2640.3 <th>2687.5</th>	2687.5		
5	QPSK	1	0	23.19	23.23	23.41	23.40	23.35	24	
5	QPSK	1	23	23.07	23.24	23.39	23.33	23.21		
5	QPSK	1	24	23.38	23.25	23.18	23.36	23.35		
5	QPSK	12	0	22.20	22.37	22.42	22.41	22.35		
5	QPSK	12	7	22.14	22.43	22.19	22.33	22.40	23	
5	QPSK	12	13	22.45	22.22	22.45	22.23	22.20		
5	QPSK	25	0	22.29	22.30	22.47	22.45	22.29		
5	16QAM	1	0	22.26	22.31	22.26	22.47	22.29		
5	16QAM	1	23	22.33	22.22	22.33	22.45	22.25	23	
5	16QAM	1	24	22.21	22.40	22.19	22.30	22.32		
5	16QAM	12	0	21.40	21.38	21.25	21.48	21.39		
5	64QAM	1	7	21.41	21.30	21.26	21.49	21.43		
5	16QAM	12	13	21.28	21.33	21.38	21.43	21.24	22	
5	16QAM	25	0	21.38	21.34	21.18	21.33	21.25		
5	64QAM	1	0	21.28	21.27	21.47	21.46	21.46		
5	64QAM	1	12	21.20	21.30	21.39	21.43	21.16		
5	64QAM	24	0	21.27	21.28	21.43	21.37	21.37	22	
5	64QAM	12	0	20.33	20.45	20.43	20.41	20.42		
5	64QAM	12	13	20.41	20.35	20.38	20.28	20.45		
5	64QAM	25	0	20.23	20.27	20.40	20.27	20.28		
5	64QAM	12	7	20.29	20.35	20.38	20.26	20.48	21	
5	64QAM	25	0	20.23	20.27	20.40	20.27	20.28		

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 limit(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
20850	20850	21048	QPSK	1	0	0	0	1	0	20.26	21.00
21100	21001	21199	QPSK	1	0	0	0	1	0	20.25	21.00
21350	21152	21350	QPSK	1	0	0	0	1	0	20.07	21.00
20850	20850	21048	16QAM	1	0	0	0	1	0	19.58	19.50
21100	21001	21199	16QAM	1	0	0	0	1	0	19.69	19.50
21350	21152	21350	16QAM	1	0	0	0	1	0	19.46	19.50
20850	20850	21048	64QAM	1	0	0	0	1	0	18.24	18.50
21100	21001	21199	64QAM	1	0	0	0	1	0	18.14	18.50
21350	21152	21350	64QAM	1	0	0	0	1	0	18.18	18.50
20850	20850	21048	QPSK	50	0	0	0	1	0	19.97	20.50
21100	21001	21199	QPSK	50	0	0	0	1	0	19.89	20.50
21350	21152	21350	QPSK	50	0	0	0	1	0	19.91	20.50

CA_41C_PC 3											
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 limit(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
39750	39750	39948	QPSK	1	0	0	0	1	0	22.87	23.50
40521	40521	40719	QPSK	1	0	0	0	1	0	22.79	23.50
41292	41292	41490	QPSK	1	0	0	0	1	0	22.81	23.50
39750	39750	39948	16QAM	1	0	0	0	1	0	21.88	22.50
40521	40521	40719	16QAM	1	0	0	0	1	0	21.99	22.50
41292	41292	41490	16QAM	1	0	0	0	1	0	21.76	22.50
39750	39750	39948	64QAM	1	0	0	0	1	0	20.54	21.50
40521	40521	40719	64QAM	1	0	0	0	1	0	20.44	21.50
41292	41292	41490	64QAM	1	0	0	0	1	0	20.48	21.50
39750	39750	39948	QPSK	50	0	0	0	1	0	22.36	23.00
40521	40521	40719	QPSK	50	0	0	0	1	0	22.22	23.00
41292	41292	41490	QPSK	50	0	0	0	1	0	22.28	23.00



2CC LTE Downlink												
Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation/RB/Offset)	Band	BW (MHz)	DL Channel	DL Fre. (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
Intra-band & Inter-band	CA_12A-30A	12	10	23095	707.5	QPSK/1#0	30	10	27710	2310.0	23.56	23.91
	CA_25A-25A	25	10	26140	1860	QPSK/1#0	25	10	26590	1905.0	23.36	23.42
	CA_25A-26A	25	10	26140	1860	QPSK/1#0	26	10	26865	831.5	23.16	23.42
	CA_26A-41A	26	10	26865	831.5	QPSK/1#0	41	20	38750	2310.0	23.61	23.88
	CA30A_29A	30	10	27710	2310.0	QPSK/1#0	29	10	9715	722.5	23.01	23.77
	CA_2A-12A	2	10	18700	1860	QPSK/1#0	12	10	23095	707.5	22.84	23.23
	CA_2A-13A	2	10	18700	1860	QPSK/1#0	13	10	23230	782.0	22.94	23.23
	CA_2A-17A	2	10	18700	1860	QPSK/1#0	17	10	23790	710.0	23.16	23.23
	CA_2A-29A	2	10	18700	1860	QPSK/1#0	29	10	9715	722.5	22.92	23.23
	CA_2A-2A	2	10	18700	1860	QPSK/1#0	2	10	19100	1900.0	22.96	23.23
	CA_2A-4A	2	10	18700	1860	QPSK/1#0	4	10	20050	1720.0	22.85	23.23
	CA_2A-5A	2	10	18700	1860	QPSK/1#0	5	10	20450	829.0	22.76	23.23
	CA_2C	2	20	18700	1860	QPSK/1#0	2	20	18898	1879.8	23.10	23.23
	CA_41A-41A	41	20	39750	2506.0	QPSK/1#0	41	20	41490	2680.0	26.21	26.43
	CA_41C	41	20	39750	2506.0	QPSK/1#0	41	20	41365	2667.5	26.33	26.43
	CA_4A-12A	4	10	20050	1720.0	QPSK/1#0	12	10	23095	707.5	23.29	23.34
	CA_4A-13A	4	10	20050	1720.0	QPSK/1#0	13	10	23230	782.0	23.20	23.34
	CA_4A-17A	4	10	20050	1720.0	QPSK/1#0	17	10	23790	710.0	23.33	23.34
	CA_4A-29A	4	10	20050	1720.0	QPSK/1#0	29	10	9715	722.5	23.44	23.34
	CA_4A-4A	4	20	20050	1720.0	QPSK/1#0	4	20	20300	1745.0	23.37	23.34
	CA_4A-5A	4	10	20050	1720.0	QPSK/1#0	5	10	20450	829.0	23.25	23.34
	CA_5A-30A	5	10	20450	829.0	QPSK/1#0	30	10	27710	2310.0	23.15	23.60
	CA_5A-7A	5	10	20450	829.0	QPSK/1#0	7	10	21350	2560.0	23.72	23.60
	CA_7A-20A	7	10	21000	2525	QPSK/1#0	20	10	24300	847.0	22.86	23.38
	CA_7A-7A	7	10	21000	2525	QPSK/1#0	7	10	21350	2560.0	22.89	23.38
	CA_7C	7	20	21001	2525.1	QPSK/1#0	7	10	21199	2544.9	22.94	23.38
	CA_5A-5A	5	10	20450	829	QPSK/1#0	5	10	20600	844.0	23.33	23.60
	CA_5B	5	10	20476	831.6	QPSK/1#0	5	10	20575	841.5	23.28	23.60
	CA_12A-66A	12	10	23095	707.5	QPSK/1#0	66	20	67236	2190.0	23.63	23.91
	CA_13A-66A	13	10	23230	782.0	QPSK/1#0	66	20	67236	2190.0	23.58	23.87
	CA_66A_29A	66	10	132072	1720	QPSK/1#0	29	10	9715	722.5	22.88	23.41
	CA_2A-66A	2	10	18700	1860	QPSK/1#0	66	20	67236	2190.0	22.72	23.23
	CA_5A-66A	5	10	20450	829.0	QPSK/1#0	66	20	67236	2190.0	23.12	23.60
	CA_66A-66A	66	20	132072	1720	QPSK/1#0	66	20	67236	2190.0	23.13	23.41
	CA_66B	66	10	132373	1750.1	QPSK/1#0	66	10	132472	1760.0	23.25	23.41
	CA_66C	66	20	132323	1745.1	QPSK/1#0	66	20	132521	1764.9	23.33	23.41
	CA_5A-41A	5	10	20450	829	QPSK/1#0	41	10	38750	2310.0	23.46	23.60
	CA_66A-71A	66	10	132072	1720	QPSK/1#0	71	10	133297	680.5	22.94	23.41
	CA_4A-71A	4	10	20050	1720.0	QPSK/1#0	71	10	133297	680.5	23.18	23.34
	CA_2A-71A	2	10	18700	1860	QPSK/1#0	71	10	133297	680.5	22.78	23.23
	CA_14A-66A	14	10	23330	793	QPSK/1#0	66	20	67236	2190.0	23.27	23.95
	CA_14A-30A	14	10	23330	793	QPSK/1#0	30	10	27710	2310.0	23.36	23.95
	CA_2A-14A	2	10	18700	1860	QPSK/1#0	2	10	18898	1879.8	22.96	23.23



2.4GHz WLAN ANT 1

2.4GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Power Setting	Duty Cycle %
	802.11b 1Mbps	CH 1	2412	9.89	11.50	10.00	98.55
		CH 6	2437	10.54	12.50	10.00	
		CH 11	2462	10.01	12.00	10.00	
	802.11g 9Mbps	CH 1	2412	9.68	11.50	10.00	98.26
		CH 6	2437	10.20	12.00	10.00	
		CH 11	2462	9.76	11.50	10.00	
	802.11n-HT20 MCS0	CH 1	2412	9.53	11.50	10.00	98.13
		CH 6	2437	10.06	12.00	10.00	
		CH 11	2462	9.52	11.50	10.00	
	802.11n-HT40 MCS0	CH 3	2422	8.26	10.00	9.50	94.89
		CH 6	2437	9.71	11.50	9.50	
		CH 9	2452	9.90	11.50	9.50	

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 36	5180	6.73	8.50	9.00	98.21
		CH 44	5220	6.79	8.50	9.00	
		CH 48	5240	6.73	8.50	9.00	
	802.11n-HT20 MCS0	CH 36	5180	6.59	8.50	9.00	98.08
		CH 44	5220	6.21	8.00	9.00	
		CH 48	5240	6.32	8.00	9.00	
	802.11n-HT40 MCS0	CH 38	5190	6.45	8.00	9.00	96.37
		CH 46	5230	5.86	7.50	9.00	
		CH 36	5180	6.42	8.00	9.00	
	802.11ac-VHT20 MCS0	CH 44	5220	6.03	8.00	9.00	98.09
		CH 48	5240	6.14	8.00	9.00	
		CH 38	5190	6.39	8.00	9.00	
	802.11ac-VHT40 MCS0	CH 46	5230	5.83	7.50	9.00	96.35
		CH 42	5210	5.91	7.50	9.00	
		CH 42	5210	5.91	7.50	9.00	

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 52	5260	7.13	9.00	9.00	98.21
		CH 60	5300	7.07	9.00	9.00	
		CH 64	5320	6.77	8.50	9.00	
	802.11n-HT20 MCS0	CH 52	5260	6.63	8.50	9.00	98.08
		CH 60	5300	6.54	8.50	9.00	
		CH 64	5320	6.22	8.00	9.00	
	802.11n-HT40 MCS0	CH 54	5270	6.45	8.00	9.00	96.37
		CH 62	5310	6.38	8.00	9.00	
		CH 52	5260	6.48	8.00	9.00	
	802.11ac-VHT20 MCS0	CH 60	5300	6.49	8.00	9.00	98.09
		CH 64	5320	6.12	8.00	9.00	
		CH 54	5270	6.41	8.00	9.00	
	802.11ac-VHT40 MCS0	CH 62	5310	6.37	8.00	9.00	96.35
		CH 58	5290	6.57	8.50	9.00	
		CH 58	5290	6.57	8.50	9.00	

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 100	5930	5.58	8.50	8.00	98.21
		CH 120	5950	5.85	8.50	8.00	
		CH 144	5720	5.25	8.00	8.00	
	802.11n-HT20 MCS0	CH 100	5930	5.19	8.00	8.00	98.08
		CH 120	5950	6.44	8.00	8.00	
		CH 144	5720	5.38	9.00	8.00	
	802.11n-HT40 MCS0	CH 102	5510	6.08	8.00	8.00	96.37
		CH 126	5930	5.62	7.50	8.00	
		CH 142	5710	5.42	7.00	8.00	
	802.11ac-VHT20 MCS0	CH 100	5930	6.31	8.00	8.00	98.09
		CH 120	5950	6.36	8.00	8.00	
		CH 144	5720	5.52	7.50	8.00	
	802.11ac-VHT40 MCS0	CH 102	5510	6.07	8.00	8.00	96.25
		CH 126	5930	5.58	7.50	8.00	
		CH 142	5710	5.35	7.00	8.00	
	802.11ac-VHT80 MCS0	CH 106	5630	6.46	8.00	8.00	92.68
		CH 122	5610	6.16	8.00	8.00	
		CH 138	5690	5.53	7.50	8.00	

5GHz WLAN ANT 1

5.8GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 149	5745	5.87	7.50	8.00	98.21
		CH 157	5785	5.51	7.50	8.00	
		CH 165	5825	5.91	7.50	8.00	
	802.11n-HT20 MCS0	CH 149	5745	5.32	7.00	8.00	98.08
		CH 157	5785	5.04	7.00	8.00	
		CH 165	5825	5.01	7.00	8.00	
	802.11n-HT40 MCS0	CH 151	5755	5.30	7.00	8.00	96.37
		CH 159	5795	4.93	6.50	8.00	
		CH 149	5745	5.38	7.00	8.00	
	802.11ac-VHT20 MCS0	CH 157	5785	5.06	7.00	8.00	98.09
		CH 165	5825	5.03	7.00	8.00	
		CH 151	5755	5.19	7.00	8.00	
	802.11ac-VHT40 MCS0	CH 159	5795	4.89	6.50	8.00	96.25
		CH 155	5775	4.75	6.50	8.00	
		CH 155	5775	4.75	6.50	8.00	

Mode	Channel	Frequency (MHz)	Average power (dBm)			
			1Mbps	Time-up	2Mbps	Time-up
			4Mbps	Time-up	5.5Mbps	Time-up
			8Mbps	Time-up	9Mbps	Time-up
BR / EDR	CH 55	2402	7.78	8.50	4.69	5.50
	CH 56	2441	8.09	9.00	4.77	5.50
	CH 78	2480	8.65	9.50	5.65	6.50
	Duty Cycle %		76.96		77.13	

Mode	Channel	Frequency (MHz)	Average power (dBm)			
			1Mbps	Time-up	2Mbps	Time-up
			4Mbps	Time-up	5.5Mbps	Time-up
			8Mbps	Time-up	9Mbps	Time-up
LE	CH 55	2402	7.96			
	CH 56	2440	7.91			
	CH 58	2480	7.85			
	Time-up Limit		9			
Duty Cycle %			63.49			

Reduced Power

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band IV (dBm)			Tune-up Limit (dBm)	WCDMA Band V (dBm)			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	14.05	14.12	14.07	15.00	14.08	14.15	14.09	15.00	21.23	21.26	21.22	22.00
3GPP Rel 6	HSDPA Subtest-1	12.95	13.00	12.98	14.00	13.24	13.24	13.22	14.00	20.41	20.32	20.44	21.00
3GPP Rel 6	HSDPA Subtest-2	12.93	12.97	12.92	13.50	13.26	13.20	13.20	14.00	20.47	20.36	20.46	21.00
3GPP Rel 6	HSDPA Subtest-3	12.48	12.50	12.96	13.50	12.78	12.68	12.65	13.50	19.89	19.81	19.90	20.50
3GPP Rel 6	HSDPA Subtest-4	12.47	12.35	12.37	13.00	12.78	12.67	12.64	13.50	19.88	19.82	19.92	20.50
3GPP Rel 8	DC-HSDPA Subtest-1	12.93	13.04	12.86	14.00	13.23	13.21	13.20	14.00	20.43	20.20	20.56	21.50
3GPP Rel 8	DC-HSDPA Subtest-2	12.90	12.94	13.03	14.00	13.20	13.31	13.23	14.00	20.40	20.26	20.44	21.00
3GPP Rel 8	DC-HSDPA Subtest-3	12.57	12.52	12.90	13.50	12.78	12.68	12.73	13.50	19.82	19.87	20.00	21.00
3GPP Rel 8	DC-HSDPA Subtest-4	12.44	12.40	12.35	13.00	12.78	12.74	12.59	13.50	19.83	19.82	19.84	20.50
3GPP Rel 6	HSUPA Subtest-1	12.70	12.69	12.68	13.50	13.50	12.94	12.81	14.50	20.28	20.07	20.21	21.00
3GPP Rel 6	HSUPA Subtest-2	12.20	12.18	12.25	13.00	12.50	12.49	12.41	13.50	19.72	19.65	19.69	20.50
3GPP Rel 6	HSUPA Subtest-3	12.75	12.67	12.65	13.50	12.97	12.89	12.74	13.50	20.16	20.07	20.15	21.00
3GPP Rel 6	HSUPA Subtest-4	12.68	12.72	12.73	13.50	12.97	12.92	12.87	13.50	20.17	20.05	20.18	21.00
3GPP Rel 6	HSUPA Subtest-5	12.74	12.64	12.65	13.50	12.98	12.92	12.80	13.50	20.25	20.11	20.16	21.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	12.09	12.02	12.03	13.00	12.42	12.35	12.19	13.00	19.61	19.62	19.18	20.50
Attenuator		Cable Loss				Cable Loss				Cable Loss			
Mode		Max.				Max.				Max.			



Band 2 (1900MHz Band) (dBm) Part 24E							
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	14.15	14.23	14.12	15
20	QPSK	1	49	14.04	14.09	14.06	
20	QPSK	1	99	14.11	14.15	14.13	
20	QPSK	50	0	13.22	13.35	13.27	
20	QPSK	50	24	13.13	13.26	13.18	14
20	QPSK	50	50	13.15	13.16	13.22	
20	QPSK	100	0	13.14	13.20	13.19	
20	16QAM	1	0	13.19	13.28	13.13	
20	16QAM	1	49	13.08	13.18	13.20	14
20	16QAM	1	99	13.16	13.15	13.07	
20	16QAM	50	0	12.18	12.29	12.23	
20	16QAM	50	24	12.17	12.16	12.10	
20	16QAM	50	50	12.20	12.24	12.16	13
20	16QAM	100	0	12.15	12.21	12.12	
20	64QAM	1	0	12.14	12.26	12.15	
20	64QAM	1	49	12.20	12.23	12.09	
20	64QAM	1	99	12.16	12.11	12.13	13
20	64QAM	50	0	11.31	11.37	11.33	
20	64QAM	50	24	11.19	11.27	11.30	
20	64QAM	50	50	11.15	11.18	11.14	
20	64QAM	100	0	11.23	11.25	11.21	12
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	Tune-up limit (dBm)
15	QPSK	1	0	14.07	14.20	14.08	15
15	QPSK	1	37	14.12	14.08	14.07	
15	QPSK	1	74	14.06	14.09	14.11	
15	QPSK	36	0	13.05	13.31	13.30	
15	QPSK	36	20	13.11	13.23	13.21	14
15	QPSK	36	39	13.15	13.11	13.29	
15	QPSK	75	0	13.08	13.12	13.03	
15	16QAM	1	0	13.23	13.28	13.15	
15	16QAM	1	37	13.16	13.05	13.27	14
15	16QAM	1	74	13.17	13.27	13.06	
15	16QAM	36	0	11.98	12.12	12.22	
15	16QAM	36	20	12.16	12.00	11.96	
15	16QAM	36	39	12.01	12.28	12.16	13
15	16QAM	75	0	12.27	12.22	12.00	
15	64QAM	1	0	12.09	12.34	12.20	
15	64QAM	1	37	12.24	12.25	12.06	
15	64QAM	1	74	12.21	12.01	12.04	13
15	64QAM	36	0	11.21	11.32	11.12	
15	64QAM	36	20	11.17	11.21	11.38	
15	64QAM	36	39	11.06	11.18	11.23	
15	64QAM	75	0	11.11	11.25	11.16	12
Channel				18650	18900	19150	
Frequency (MHz)				1855	1880	1905	Tune-up limit (dBm)
10	QPSK	1	0	14.16	14.18	14.03	15
10	QPSK	1	25	14.05	14.17	14.12	
10	QPSK	1	49	14.11	14.12	14.06	
10	QPSK	25	0	13.06	13.18	13.30	
10	QPSK	25	12	13.05	13.18	13.27	14
10	QPSK	25	25	13.05	13.24	13.06	
10	QPSK	50	0	13.20	13.27	13.27	
10	16QAM	1	0	13.11	13.33	13.20	
10	16QAM	1	25	13.13	13.09	13.34	14
10	16QAM	1	49	13.12	13.19	13.13	
10	16QAM	25	0	12.08	12.15	12.28	
10	16QAM	25	12	12.27	12.25	12.09	
10	16QAM	25	25	12.15	12.25	12.15	13
10	16QAM	50	0	12.20	12.33	12.15	
10	64QAM	1	0	12.29	12.08	12.24	
10	64QAM	1	25	12.17	12.07	12.08	
10	64QAM	1	49	12.26	12.00	12.13	13
10	64QAM	25	0	11.43	11.34	11.22	
10	64QAM	25	12	11.13	11.21	11.30	
10	64QAM	25	25	11.08	11.15	11.21	
10	64QAM	50	0	11.20	11.28	11.08	12
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	Tune-up limit (dBm)
5	QPSK	1	0	14.15	14.18	14.16	15
5	QPSK	1	12	14.06	14.15	14.14	
5	QPSK	1	24	14.12	14.15	14.16	
5	QPSK	12	0	13.17	13.24	13.08	
5	QPSK	12	7	13.09	13.23	13.02	14
5	QPSK	12	13	13.14	13.02	13.06	
5	QPSK	25	0	13.12	13.31	13.19	
5	16QAM	1	0	13.06	13.24	13.07	
5	16QAM	1	12	13.09	13.19	13.30	14
5	16QAM	1	24	13.28	13.24	12.99	
5	16QAM	12	0	12.24	12.14	12.09	
5	16QAM	12	7	12.03	12.04	12.08	
5	16QAM	12	13	12.24	12.34	12.02	13
5	16QAM	25	0	12.20	12.26	12.16	
5	64QAM	1	0	12.11	12.28	12.05	
5	64QAM	1	12	12.13	12.05	12.09	
5	64QAM	1	24	12.23	12.13	12.11	13
5	64QAM	12	0	11.13	11.22	11.26	
5	64QAM	12	7	11.10	11.14	11.22	
5	64QAM	12	13	11.09	11.01	11.19	
5	64QAM	25	0	11.21	11.16	11.17	12
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	Tune-up limit (dBm)
3	QPSK	1	0	14.13	14.19	14.08	15
3	QPSK	1	8	14.09	14.15	14.05	
3	QPSK	1	14	14.07	14.13	14.09	
3	QPSK	8	0	13.20	13.39	13.32	
3	QPSK	8	4	13.26	13.41	13.08	14
3	QPSK	8	7	13.25	13.20	13.15	

Band 4 (AWS Band) (dBm) Part 27L (only on channel required)							
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	14.25	14.34	14.20	15
20	QPSK	1	49	14.18	14.21	14.23	
20	QPSK	1	99	14.27	14.23	14.17	
20	QPSK	50	0	13.30	13.38	13.28	
20	QPSK	50	24	13.34	13.23	13.29	14
20	QPSK	50	50	13.20	13.14	13.27	
20	QPSK	100	0	13.12	13.22	13.18	
20	16QAM	1	0	13.26	13.36	13.09	
20	16QAM	1	49	13.10	13.40	13.19	14
20	16QAM	1	99	13.09	13.35	13.17	
20	16QAM	50	0	12.28	12.36	12.42	
20	16QAM	50	24	12.21	12.24	12.18	
20	16QAM	50	50	12.17	12.33	12.30	13
20	16QAM	100	0	12.26	12.29	12.23	
20	64QAM	1	0	12.30	12.22	12.30	
20	64QAM	1	49	12.39	12.41	12.25	
20	64QAM	1	99	12.34	12.23	12.14	13
20	64QAM	50	0	11.36	11.40	11.43	
20	64QAM	50	24	11.15	11.41	11.33	
20	64QAM	50	50	11.12	11.34	11.32	
20	64QAM	100	0	11.37	11.24	11.11	12
Channel				20025	20175	20325	
Frequency (MHz)				1717.5	1732.5	1747.5	Tune-up limit (dBm)
15	QPSK	1	0	14.10	14.30	14.24	15
15	QPSK	1	37	14.19	14.04	14.15	
15	QPSK	1	74	14.11	14.05	14.20	
15	QPSK	36	0	13.22	13.35	13.33	
15	QPSK	36	20	13.37	13.36	13.21	14
15	QPSK	36	39	13.10	13.21	13.25	
15	QPSK	75	0	13.27	13.29	13.39	
15	16QAM	1	0	13.26	13.39	13.24	
15	16QAM	1	37	13.15	13.11	13.14	14
15	16QAM	1	74	13.15	13.10	13.09	
15	16QAM	36	0	12.41	12.22	12.42	
15	16QAM	36	20	12.10	12.29	12.29	
15	16QAM	36	39	12.13	12.24	12.19	13
15	16QAM	75	0	12.40	12.41	12.21	
15	64QAM	1	0	12.18	12.25	12.37	
15	64QAM	1	37	12.34	12.23	12.08	
15	64QAM	1	74	12.15	12.17	12.10	13
15	64QAM	36	0	11.54	11.46	11.40	
15	64QAM	36	20	11.31	11.35	11.37	
15	64QAM	36	39	11.33	11.27	11.30	
15	64QAM	75	0	11.31	11.44	11.24	12
Channel				20000	20175	20350	
Frequency (MHz)				1715	1732.5	1750	Tune-up limit (dBm)
10	QPSK	1	0	14.17	14.29	14.12	15
10	QPSK	1	25	14.11	14.11	14.18	
10	QPSK	1	49	14.28	14.24	14.15	
10	QPSK	25	0	13.15	13.45	13.39	
10	QPSK	25	12	13.11	13.33	13.14	14
10	QPSK	25	25	13.28	13.26	13.34	
10	QPSK	50	0	13.24	13.45	13.40	
10	16QAM	1	0	13.09	13.36	13.10	
10	16QAM	1	25	13.25	13.11	13.27	14
10	16QAM	1	49	13.34	13.26	13.16	
10	16QAM	25	0	12.25	12.33	12.19	
10	16QAM	25	12	12.38	12.30	12.16	
10	16QAM	25	25	12.17	12.22	12.40	13
10	16QAM	50	0	12.34	12.37	12.16	
10	64QAM	1	0	12.28	12.19	12.12	
10	64QAM	1	25	12.24	12.25	12.27	
10	64QAM	1	49	12.31	12.07	12.34	13
10	64QAM	25	0	11.42	11.38	11.27	
10	64QAM	25	12	11.31	11.27	11.21	
10	64QAM	25	25	11.06	11.15	11.07	
10	64QAM	50	0	11.41	11.35	11.27	12
Channel				19975	20175	20375	
Frequency (MHz)				1712.5	1732.5	1752.5	Tune-up limit (dBm)
5	QPSK	1	0	14.22	14.30	14.25	15
5	QPSK	1	12	14.16	14.18	14.12	
5	QPSK	1	24	14.12	14.23	14.22	
5	QPSK	12	0	13.32	13.40	13.31	
5	QPSK	12	7	13.29	13.32	13.24	14
5	QPSK	12	13	13.23	13.31	13.24	
5	QPSK	25	0	13.31	13.15	13.16	
5	16QAM	1	0	13.10	13.34	13.36	
5	16QAM	1	12	13.13	13.32	13.35	14
5	16QAM	1	24	13.09	13.21	13.18	
5	16QAM	12	0	12.24	12.43	12.23	
5	16QAM	12	7	12.16	12.30	12.27	
5	16QAM	12	13	12.43	12.30	12.39	13
5	16QAM	25	0	12.30	12.46	12.18	
5	64QAM	1	0	12.35	12.26	12.23	
5	64QAM	1	12	12.31	12.25	12.14	
5	64QAM	1	24	12.17	12.28	12.13	13
5	64QAM	12	0	11.26	11.40	11.31	
5	64QAM	12	7	11.09	11.38	11.30	
5	64QAM	12	13	11.08	11.34	11.17	
5	64QAM	25	0	11.34	11.37	11.15	12
Channel				19965	20175	20385	
Frequency (MHz)				1711.5	1732.5	1753.5	Tune-up limit (dBm)
3	QPSK	1	0	14.12	14.28	14.22	15
3	QPSK	1	8	14.16	14.12	14.16	
3	QPSK	1	14	14.14	14.22	14.10	
3	QPSK	8	0	13.22	13.38	13.28	
3	QPSK	8	4	13.35	13.32	13.12	14
3	QPSK	8	7	13.11	13.13	13.22	



3	QPSK	15	0	13.02	13.31	13.23	14
3	16QAM	1	0	13.04	13.17	13.08	
3	16QAM	1	8	13.19	12.99	13.10	
3	16QAM	1	14	13.23	13.04	13.11	13
3	16QAM	8	0	12.02	12.22	12.23	
3	16QAM	8	4	12.31	12.24	12.18	
3	16QAM	8	7	12.19	12.22	11.98	13
3	16QAM	15	0	12.05	12.35	12.18	
3	64QAM	1	0	12.02	12.37	12.01	
3	64QAM	1	8	12.23	12.04	12.08	12
3	64QAM	1	14	12.03	12.15	12.13	
3	64QAM	8	0	11.32	11.39	11.21	
3	64QAM	8	4	11.09	11.34	11.29	12
3	64QAM	8	7	11.07	11.06	11.21	
3	64QAM	15	0	11.10	11.31	11.18	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	14.17	14.17	14.12	15
1.4	QPSK	1	3	14.13	14.04	14.06	
1.4	QPSK	1	5	14.12	14.02	14.09	
1.4	QPSK	3	0	13.36	13.43	13.32	14
1.4	QPSK	3	1	13.20	13.11	13.05	
1.4	QPSK	3	3	13.16	13.28	13.36	
1.4	QPSK	6	0	13.21	13.11	13.30	14
1.4	16QAM	1	0	13.08	13.34	13.15	
1.4	16QAM	1	3	13.13	13.05	13.13	
1.4	16QAM	1	5	13.06	13.05	13.16	13
1.4	16QAM	3	0	12.24	12.38	12.04	
1.4	16QAM	3	1	12.11	12.09	12.05	
1.4	16QAM	3	3	12.22	12.35	12.22	13
1.4	16QAM	6	0	12.23	12.31	11.99	
1.4	64QAM	1	0	12.05	12.30	12.15	
1.4	64QAM	1	3	12.05	12.31	12.24	13
1.4	64QAM	1	5	12.27	12.18	12.25	
1.4	64QAM	3	0	11.24	11.23	11.17	
1.4	64QAM	3	1	11.09	11.25	11.13	12
1.4	64QAM	3	3	11.26	11.32	11.12	
1.4	64QAM	6	0	11.21	11.38	11.19	

3	QPSK	15	0	13.10	13.13	13.12	14
3	16QAM	1	0	13.24	13.29	13.21	
3	16QAM	1	8	13.18	13.26	13.15	
3	16QAM	1	14	13.36	13.29	13.14	13
3	16QAM	8	0	12.34	12.35	12.33	
3	16QAM	8	4	12.37	12.28	12.16	
3	16QAM	8	7	12.31	12.47	12.18	13
3	16QAM	15	0	12.08	12.17	12.30	
3	64QAM	1	0	12.09	12.41	12.25	
3	64QAM	1	8	12.33	12.35	12.03	12
3	64QAM	1	14	12.19	12.05	12.20	
3	64QAM	8	0	11.38	11.41	11.40	
3	64QAM	8	4	11.18	11.34	11.20	15
3	64QAM	8	7	11.20	11.14	11.18	
3	64QAM	15	0	11.39	11.35	11.26	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	14.16	14.29	14.21	15
1.4	QPSK	1	3	14.19	14.27	14.20	
1.4	QPSK	1	5	14.11	14.21	14.24	
1.4	QPSK	3	0	13.31	13.39	13.24	14
1.4	QPSK	3	1	13.35	13.20	13.41	
1.4	QPSK	3	3	13.28	13.28	13.28	
1.4	QPSK	6	0	13.15	13.26	13.20	14
1.4	16QAM	1	0	13.24	13.31	13.23	
1.4	16QAM	1	3	12.98	13.10	13.12	
1.4	16QAM	1	5	13.25	13.06	13.06	13
1.4	16QAM	3	0	12.20	12.33	12.27	
1.4	16QAM	3	1	12.27	12.11	12.08	
1.4	16QAM	3	3	12.33	12.35	12.41	13
1.4	16QAM	6	0	12.12	12.28	12.23	
1.4	64QAM	1	0	12.11	12.16	12.27	
1.4	64QAM	1	3	12.27	12.38	12.27	13
1.4	64QAM	1	5	12.16	12.15	12.13	
1.4	64QAM	3	0	11.35	11.34	11.31	
1.4	64QAM	3	1	11.30	11.20	11.38	12
1.4	64QAM	3	3	11.18	11.09	11.34	
1.4	64QAM	6	0	11.15	11.30	11.28	



Band 5 (Celluar Band) (dBm) Part 22H(only on channel required)							
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	20.07	20.10	20.03	21
10	QPSK	1	25	20.01	20.03	20.01	
10	QPSK	1	49	20.01	20.07	20.00	
10	QPSK	25	0	19.12	19.36	19.23	20
10	QPSK	25	12	19.07	19.30	19.16	
10	QPSK	25	25	19.11	19.03	19.08	
10	QPSK	50	0	19.16	19.11	19.07	20
10	16QAM	1	0	19.02	19.13	19.08	
10	16QAM	1	25	19.01	19.02	19.03	
10	16QAM	1	49	19.21	19.13	19.05	19
10	16QAM	25	0	18.03	18.34	18.05	
10	16QAM	25	12	18.01	18.16	18.02	
10	16QAM	25	25	18.07	18.17	18.06	19
10	16QAM	50	0	18.07	18.02	18.08	
10	64QAM	1	0	17.85	18.04	18.09	
10	64QAM	1	25	17.90	18.17	18.08	19
10	64QAM	1	49	18.11	18.03	18.06	
10	64QAM	25	0	17.09	17.35	17.36	
10	64QAM	25	12	17.22	17.12	17.11	18
10	64QAM	25	25	17.02	17.03	17.02	
10	64QAM	50	0	17.15	17.09	17.03	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	19.99	20.07	20.05	21
5	QPSK	1	12	20.04	20.03	20.03	
5	QPSK	1	24	20.06	20.02	20.06	
5	QPSK	12	0	19.10	19.23	19.21	20
5	QPSK	12	7	19.09	19.21	19.15	
5	QPSK	12	13	19.06	19.20	19.08	
5	QPSK	25	0	19.07	19.11	19.10	20
5	16QAM	1	0	19.03	19.15	19.03	
5	16QAM	1	12	19.07	19.17	19.02	
5	16QAM	1	24	19.03	19.04	19.07	19
5	16QAM	12	0	17.91	18.15	18.15	
5	16QAM	12	7	18.00	18.07	18.00	
5	16QAM	12	13	18.02	18.03	17.95	19
5	16QAM	25	0	18.08	18.02	18.06	
5	64QAM	1	0	18.05	18.32	18.08	
5	64QAM	1	12	18.13	18.28	18.10	19
5	64QAM	1	24	18.11	18.03	18.10	
5	64QAM	12	0	17.03	17.30	17.08	
5	64QAM	12	7	17.00	16.97	17.07	18
5	64QAM	12	13	17.13	17.02	17.05	
5	64QAM	25	0	17.28	17.13	17.19	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	20.01	20.08	20.03	21
3	QPSK	1	8	20.04	20.00	20.01	
3	QPSK	1	14	20.05	20.05	19.97	
3	QPSK	8	0	18.93	19.17	19.07	20
3	QPSK	8	4	19.16	19.09	19.07	
3	QPSK	8	7	19.09	19.05	19.11	
3	QPSK	15	0	18.98	19.00	19.02	20
3	16QAM	1	0	18.96	19.25	19.03	
3	16QAM	1	8	19.16	18.98	19.25	
3	16QAM	1	14	19.09	19.06	19.03	19
3	16QAM	8	0	18.00	18.18	18.07	
3	16QAM	8	4	17.96	18.19	18.01	
3	16QAM	8	7	17.98	17.98	18.19	19
3	16QAM	15	0	18.07	18.09	17.99	
3	64QAM	1	0	18.13	18.30	18.02	
3	64QAM	1	8	18.08	18.28	18.10	19
3	64QAM	1	14	18.21	18.04	18.05	
3	64QAM	8	0	17.14	17.14	17.20	
3	64QAM	8	4	17.23	16.98	17.22	18
3	64QAM	8	7	17.09	17.05	17.09	
3	64QAM	15	0	17.11	17.22	17.02	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	20.06	20.09	20.07	21
1.4	QPSK	1	3	20.02	19.98	19.99	
1.4	QPSK	1	5	20.05	20.05	20.05	
1.4	QPSK	3	0	19.07	19.16	19.25	20
1.4	QPSK	3	1	19.13	19.06	19.01	
1.4	QPSK	3	3	19.11	19.02	19.09	
1.4	QPSK	6	0	19.01	18.93	19.16	20
1.4	16QAM	1	0	19.06	19.20	19.11	
1.4	16QAM	1	3	19.02	18.98	18.98	
1.4	16QAM	1	5	19.01	19.12	19.10	20
1.4	16QAM	3	0	18.16	18.13	18.19	
1.4	16QAM	3	1	18.07	18.08	18.11	
1.4	16QAM	3	3	18.03	18.09	18.14	19
1.4	16QAM	6	0	18.07	18.07	18.01	
1.4	64QAM	1	0	17.90	18.22	17.94	
1.4	64QAM	1	3	18.00	17.95	17.88	19
1.4	64QAM	1	5	18.20	18.11	17.96	
1.4	64QAM	3	0	17.04	17.28	17.33	
1.4	64QAM	3	1	17.01	17.28	17.15	18
1.4	64QAM	3	3	17.03	17.18	17.13	
1.4	64QAM	6	0	17.22	17.19	17.02	

Band 7 (2600MHz Band) (dBm)							
Part 27							
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	10.80	10.98	10.96	11.5
20	QPSK	1	49	10.68	10.81	10.84	
20	QPSK	1	99	10.87	10.97	10.77	
20	QPSK	50	0	9.92	9.97	9.87	10.5
20	QPSK	50	24	9.84	9.77	9.96	
20	QPSK	50	50	9.67	9.86	9.94	
20	QPSK	100	0	9.68	9.84	9.87	10.5
20	16QAM	1	0	9.95	9.78	9.67	
20	16QAM	1	49	9.76	9.72	9.81	
20	16QAM	1	99	9.67	9.88	9.78	9.5
20	16QAM	50	0	8.85	8.91	8.85	
20	16QAM	50	24	8.85	8.69	8.77	
20	16QAM	50	50	8.84	8.97	8.86	9.5
20	16QAM	100	0	8.99	8.82	8.94	
20	64QAM	1	0	8.89	9.00	8.71	
20	64QAM	1	49	9.04	8.95	8.61	9.5
20	64QAM	1	99	8.81	8.95	8.66	
20	64QAM	50	0	8.04	7.99	7.94	
20	64QAM	50	24	7.90	8.02	7.98	8.5
20	64QAM	50	50	7.81	7.76	7.92	
20	64QAM	100	0	7.97	7.79	8.05	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	10.69	10.95	10.91	11.5
15	QPSK	1	37	10.62	10.72	10.69	
15	QPSK	1	74	10.63	10.90	10.63	
15	QPSK	36	0	9.93	9.99	9.91	10.5
15	QPSK	36	20	9.83	9.90	9.90	
15	QPSK	36	39	9.90	9.86	9.72	
15	QPSK	75	0	9.98	9.83	9.89	10.5
15	16QAM	1	0	9.86	9.89	9.68	
15	16QAM	1	37	9.70	9.69	9.78	
15	16QAM	1	74	9.87	9.88	9.90	9.5
15	16QAM	36	0	8.97	9.02	8.97	
15	16QAM	36	20	9.01	8.69	8.79	
15	16QAM	36	39	8.76	8.74	8.80	9.5
15	16QAM	75	0	8.89	8.95	8.77	
15	64QAM	1	0	8.78	9.02	8.90	
15	64QAM	1	37	8.88	8.84	8.71	9.5
15	64QAM	1	74	8.72	8.68	8.79	
15	64QAM	36	0	7.84	8.01	8.04	
15	64QAM	36	20	7.96	7.89	7.98	8.5
15	64QAM	36	39	7.85	7.74	7.99	
15	64QAM	75	0	7.91	8.00	7.77	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	10.80	10.96	10.93	11.5
10	QPSK	1	25	10.64	10.76	10.83	
10	QPSK	1	49	10.61	10.82	10.73	
10	QPSK	25	0	9.98	10.05	10.02	10.5
10	QPSK	25	12	9.73	9.90	10.02	
10	QPSK	25	25	9.98	9.93	9.92	
10	QPSK	50	0	9.75	9.83	9.73	10.5
10	16QAM	1	0	9.76	9.84	9.78	
10	16QAM	1	25	9.78	9.83	9.81	
10	16QAM	1	49	9.87	9.67	9.90	9.5
10	16QAM	25	0	8.84	8.88	9.01	
10	16QAM	25	12	9.02	8.69	8.94	
10	16QAM	25	25	8.82	8.84	8.85	9.5
10	16QAM	50	0	8.72	8.85	8.97	
10	64QAM	1	0	8.72	8.86	8.92	
10	64QAM	1	25	8.92	8.84	8.64	9.5
10	64QAM	1	49	8.89	8.80	8.82	
10	64QAM	25	0	7.86	7.90	7.94	
10	64QAM	25	12	7.69	7.98	8.08	8.5
10	64QAM	25	25	8.00	7.84	7.91	
10	64QAM	50	0	8.00	7.94	7.89	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	10.71	10.95	10.80	11.5
5	QPSK	1	12	10.80	10.81	10.76	
5	QPSK	1	24	10.71	10.76	10.92	
5	QPSK	12	0	10.02	9.99	9.91	10.5
5	QPSK	12	7	9.67	10.04	9.76	
5	QPSK	12	13	10.00	9.66	9.91	
5	QPSK	25	0	9.99	9.97	9.88	10.5
5	16QAM	1	0	9.80	9.92	9.75	
5	16QAM	1	12	9.73	9.88	9.88	
5	16QAM	1	24	9.70	9.90	9.77	9.5
5	16QAM	12	0	9.02	8.79	9.02	
5	16QAM	12	7	8.98	8.97	8.90	
5	16QAM	12	13	8.71	8.90	8.75	9.5
5	16QAM	25	0	8.98	8.78	8.75	
5	64QAM	1	0	8.73	9.04	8.65	
5	64QAM	1	12	8.98	8.88	8.89	9.5
5	64QAM	1	24	8.67	8.89	8.88	
5	64QAM	12	0	8.04	7.91	7.90	
5	64QAM	12	7	7.78	7.82	8.03	8.5
5	64QAM	12	13	7.66	7.73	7.77	
5	64QAM	25	0	7.79	7.89	7.84	



Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)								
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	17.87	17.91	17.80	18.5	
10	QPSK	1	25	17.69	17.77	17.57		
10	QPSK	1	49	17.63	17.69	17.69		
10	QPSK	25	0	16.88	16.92	16.91	17.5	
10	QPSK	25	12	16.85	16.85	16.69		
10	QPSK	25	25	16.70	16.67	16.87		
10	QPSK	50	0	16.85	16.83	16.90	17.5	
10	16QAM	1	0	16.68	16.86	16.77		
10	16QAM	1	25	16.67	16.77	16.78		
10	16QAM	1	49	16.66	16.85	16.85	16.5	
10	16QAM	25	0	15.86	15.85	15.93		
10	16QAM	25	12	15.94	15.90	15.86		
10	16QAM	25	25	15.74	15.93	15.95	16.5	
10	16QAM	50	0	15.75	15.88	15.86		
10	64QAM	1	0	15.83	15.87	15.93		
10	64QAM	1	25	15.92	15.84	15.93	16.5	
10	64QAM	1	49	15.79	15.95	15.95		
10	64QAM	25	0	14.95	14.87	14.88		
10	64QAM	25	12	14.97	14.88	14.99	15.5	
10	64QAM	25	25	14.71	14.82	14.87		
10	64QAM	50	0	14.95	14.89	14.90		
Channel				23035	23095	23155	Tune-up limit (dBm)	
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	17.85	17.89	17.66	18.5	
5	QPSK	1	12	17.77	17.71	17.84		
5	QPSK	1	24	17.85	17.67	17.83		
5	QPSK	12	0	16.75	16.93	16.69	17.5	
5	QPSK	12	7	16.91	16.81	16.90		
5	QPSK	12	13	16.68	16.79	16.80		
5	QPSK	25	0	16.83	16.95	16.90	17.5	
5	16QAM	1	0	16.73	16.80	16.98		
5	16QAM	1	12	16.77	16.89	16.77		
5	16QAM	1	24	16.80	16.66	16.86	16.5	
5	16QAM	12	0	15.88	15.85	15.81		
5	16QAM	12	7	15.88	15.88	15.90		
5	16QAM	12	13	15.79	15.74	15.67	16.5	
5	16QAM	25	0	15.68	15.86	15.78		
5	64QAM	1	0	15.82	15.82	15.84		
5	64QAM	1	12	15.79	15.73	15.61	16.5	
5	64QAM	1	24	15.81	15.64	15.84		
5	64QAM	12	0	14.78	14.91	14.94		
5	64QAM	12	7	14.86	14.79	14.77	15.5	
5	64QAM	12	13	14.74	14.68	14.89		
5	64QAM	25	0	14.86	14.83	14.79		
Channel				23025	23095	23165	Tune-up limit (dBm)	
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	17.82	17.87	17.83	18.5	
3	QPSK	1	8	17.85	17.76	17.61		
3	QPSK	1	14	17.61	17.77	17.70		
3	QPSK	8	0	16.76	16.85	16.82	17.5	
3	QPSK	8	4	16.63	16.80	16.84		
3	QPSK	8	7	16.74	16.82	16.77		
3	QPSK	15	0	16.73	16.83	16.75	17.5	
3	16QAM	1	0	16.82	16.91	16.70		
3	16QAM	1	8	16.69	16.80	16.76		
3	16QAM	1	14	16.73	16.74	16.68	16.5	
3	16QAM	8	0	15.88	15.92	15.81		
3	16QAM	8	4	15.83	15.80	15.74		
3	16QAM	8	7	15.78	15.80	15.73	16.5	
3	16QAM	15	0	15.70	15.71	15.80		
3	64QAM	1	0	15.77	15.86	15.84		
3	64QAM	1	8	15.86	15.79	15.60	16.5	
3	64QAM	1	14	15.67	15.82	15.83		
3	64QAM	8	0	14.82	14.85	14.68		
3	64QAM	8	4	14.71	14.81	14.77	15.5	
3	64QAM	8	7	14.70	14.81	14.89		
3	64QAM	15	0	14.80	14.79	14.73		
Channel				23017	23095	23173	Tune-up limit (dBm)	
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	17.71	17.88	17.73	18.5	
1.4	QPSK	1	3	17.86	17.70	17.67		
1.4	QPSK	1	5	17.85	17.87	17.68		
1.4	QPSK	3	0	16.84	16.81	16.90	17.5	
1.4	QPSK	3	1	16.93	16.90	16.81		
1.4	QPSK	3	3	16.86	16.78	16.85		
1.4	QPSK	6	0	16.77	16.81	16.80	17.5	
1.4	16QAM	1	0	16.77	16.84	16.79		
1.4	16QAM	1	3	16.68	16.78	16.70		
1.4	16QAM	1	5	16.80	16.88	16.82	17.5	
1.4	16QAM	3	0	15.83	15.89	15.87		
1.4	16QAM	3	1	15.86	15.95	15.94		
1.4	16QAM	3	3	15.81	15.84	15.80	16.5	
1.4	16QAM	6	0	15.71	15.90	15.68		
1.4	64QAM	1	0	15.90	15.90	15.77		
1.4	64QAM	1	3	15.87	15.80	15.79	16.5	
1.4	64QAM	1	5	15.71	15.87	15.73		
1.4	64QAM	3	0	14.83	14.78	14.69		
1.4	64QAM	3	1	14.80	14.81	14.77	15.5	
1.4	64QAM	3	3	14.98	14.87	14.81		
1.4	64QAM	6	0	14.77	14.81	14.84		

Band 13(700MHz Band) (dBm) Part 27F							
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		18.87		19.5
10	QPSK	1	25		18.68		
10	QPSK	1	49		18.81		
10	QPSK	25	0		17.76		18.5
10	QPSK	25	12		17.69		
10	QPSK	25	25		17.66		
10	QPSK	50	0		17.63		18.5
10	16QAM	1	0		17.77		
10	16QAM	1	25		17.74		
10	16QAM	1	49		17.78		17.5
10	16QAM	25	0		16.81		
10	16QAM	25	12		16.70		
10	16QAM	25	25		16.72		17.5
10	16QAM	50	0		16.79		
10	64QAM	1	0		16.90		
10	64QAM	1	25		16.76		17.5
10	64QAM	1	49		16.86		
10	64QAM	25	0		15.88		
10	64QAM	25	12		15.69		16.5
10	64QAM	25	25		15.71		
10	64QAM	50	0		15.75		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	18.82	18.85	18.76	19.5
5	QPSK	1	12	18.79	18.81	18.81	
5	QPSK	1	24	18.61	18.77	18.69	
5	QPSK	12	0	17.85	17.91	17.86	18.5
5	QPSK	12	7	17.67	17.75	17.84	
5	QPSK	12	13	17.70	17.74	17.71	
5	QPSK	25	0	17.76	17.84	17.79	18.5
5	16QAM	1	0	17.85	17.86	17.73	
5	16QAM	1	12	17.69	17.68	17.80	
5	16QAM	1	24	17.68	17.77	17.60	17.5
5	16QAM	12	0	16.94	16.90	16.86	
5	16QAM	12	7	16.82	16.84	16.78	
5	16QAM	12	13	16.84	16.88	16.81	17.5
5	16QAM	25	0	16.69	16.98	16.73	
5	64QAM	1	0	16.88	16.83	16.72	
5	64QAM	1	12	16.82	16.73	16.86	17.5
5	64QAM	1	24	16.93	16.62	16.79	
5	64QAM	12	0	15.97	15.92	15.84	
5	64QAM	12	7	15.79	15.90	15.98	16.5
5	64QAM	12	13	15.94	15.85	15.80	
5	64QAM	25	0	15.82	15.94	15.78	



Band 14 (700MHz Band) (dBm)							
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		19.45		20
10	QPSK	1	25		19.23		
10	QPSK	1	49		19.16		
10	QPSK	25	0		18.43		19
10	QPSK	25	12		18.27		
10	QPSK	25	25		18.33		
10	QPSK	50	0		18.31		19
10	16QAM	1	0		18.35		
10	16QAM	1	25		18.29		
10	16QAM	1	49		18.25		18
10	16QAM	25	0		17.38		
10	16QAM	25	12		17.35		
10	16QAM	25	25		17.29		18
10	16QAM	50	0		17.39		
10	64QAM	1	0		17.39		
10	64QAM	1	25		17.30		18
10	64QAM	1	49		17.23		
10	64QAM	25	0		16.42		
10	64QAM	25	12		16.33		17
10	64QAM	25	25		16.21		
10	64QAM	50	0		16.26		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	19.36	19.39	19.35	20
5	QPSK	1	12	19.29	19.19	19.25	
5	QPSK	1	24	19.36	19.22	19.27	
5	QPSK	12	0	18.31	18.40	18.35	19
5	QPSK	12	7	18.19	18.37	18.38	
5	QPSK	12	13	18.37	18.18	18.29	
5	QPSK	25	0	18.36	18.41	18.28	19
5	16QAM	1	0	18.37	18.38	18.33	
5	16QAM	1	12	18.30	18.26	18.34	
5	16QAM	1	24	18.20	18.39	18.33	18
5	16QAM	12	0	17.27	17.31	17.47	
5	16QAM	12	7	17.43	17.22	17.22	
5	16QAM	12	13	17.43	17.36	17.22	18
5	16QAM	25	0	17.33	17.39	17.37	
5	64QAM	1	0	17.36	17.40	17.20	
5	64QAM	1	12	17.21	17.34	17.27	18
5	64QAM	1	24	17.34	17.43	17.21	
5	64QAM	12	0	16.36	16.43	16.34	17
5	64QAM	12	7	16.35	16.42	16.41	
5	64QAM	12	13	16.33	16.34	16.36	
5	64QAM	25	0	16.25	16.38	16.33	

Band 17 (700MHz Band) (dBm) Part 27H(only on channel required)							
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	17.70	17.86	17.66	18.5
10	QPSK	1	25	17.83	17.75	17.73	
10	QPSK	1	49	17.84	17.73	17.67	
10	QPSK	25	0	16.84	16.92	16.80	17.5
10	QPSK	25	12	16.82	16.90	16.84	
10	QPSK	25	25	16.81	16.82	16.86	
10	QPSK	50	0	16.76	16.80	16.73	17.5
10	16QAM	1	0	16.69	16.81	16.63	
10	16QAM	1	25	16.82	16.81	16.74	
10	16QAM	1	49	16.74	16.69	16.78	16.5
10	16QAM	25	0	15.78	15.90	15.84	
10	16QAM	25	12	15.86	15.77	15.62	
10	16QAM	25	25	15.84	15.93	15.84	16.5
10	16QAM	50	0	15.77	15.72	15.87	
10	64QAM	1	0	15.89	15.80	15.92	
10	64QAM	1	25	15.95	15.98	15.90	16.5
10	64QAM	1	49	15.80	15.82	15.67	
10	64QAM	25	0	14.86	14.86	14.95	
10	64QAM	25	12	14.91	14.89	14.83	15.5
10	64QAM	25	25	14.91	14.92	14.77	
10	64QAM	50	0	14.79	14.98	14.93	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	17.77	17.83	17.75	18.5
5	QPSK	1	12	17.57	17.81	17.73	
5	QPSK	1	24	17.79	17.75	17.75	
5	QPSK	12	0	16.82	16.83	16.81	17.5
5	QPSK	12	7	16.90	16.77	16.79	
5	QPSK	12	13	16.79	16.80	16.73	
5	QPSK	25	0	16.77	16.81	16.66	17.5
5	16QAM	1	0	16.80	16.91	16.70	
5	16QAM	1	12	16.92	16.94	16.84	
5	16QAM	1	24	16.89	16.68	16.76	16.5
5	16QAM	12	0	15.93	15.90	15.77	
5	16QAM	12	7	15.79	15.75	15.75	
5	16QAM	12	13	15.95	15.83	15.83	16.5
5	16QAM	25	0	15.89	15.90	15.91	
5	64QAM	1	0	15.88	15.84	15.91	
5	64QAM	1	12	15.69	15.94	15.69	15.5
5	64QAM	1	24	15.72	15.62	15.79	
5	64QAM	12	0	14.88	14.85	14.86	
5	64QAM	12	7	14.83	14.95	14.97	15.5
5	64QAM	12	13	14.77	14.78	14.94	
5	64QAM	25	0	14.77	14.85	14.82	



Band 18 (835MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23925	23925	23925	
Frequency (MHz)				822.5	822.5	822.5	
15	QPSK	1	0		19.90		21.5
15	QPSK	1	37		19.69		
15	QPSK	1	74		19.78		
15	QPSK	36	0		18.93		20.5
15	QPSK	36	20		18.82		
15	QPSK	36	39		18.68		
15	QPSK	75	0		18.71		20.5
15	16QAM	1	0		18.81		
15	16QAM	1	37		18.73		
15	16QAM	1	74		18.77		19.5
15	16QAM	36	0		17.84		
15	16QAM	36	20		17.91		
15	16QAM	36	39		17.88		19.5
15	16QAM	75	0		17.80		
15	64QAM	1	0		17.94		
15	64QAM	1	25		17.94		18.5
15	64QAM	1	49		17.89		
15	64QAM	25	0		16.81		
15	64QAM	25	12		16.78		18.5
15	64QAM	25	25		16.73		
15	64QAM	50	0		16.84		
Channel				23900	23925	23950	Tune-up limit (dBm)
Frequency (MHz)				820	822.5	825	
10	QPSK	1	0	20.76	20.86	20.72	21.5
10	QPSK	1	25	20.78	20.63	20.63	
10	QPSK	1	49	20.66	20.80	20.80	
10	QPSK	25	0	19.77	19.87	19.81	20.5
10	QPSK	25	12	19.81	19.83	19.83	
10	QPSK	25	25	19.86	19.76	19.82	
10	QPSK	50	0	19.71	19.74	19.72	20.5
10	16QAM	1	0	19.87	19.91	19.75	
10	16QAM	1	25	19.91	19.78	19.91	
10	16QAM	1	49	19.69	19.89	19.67	19.5
10	16QAM	25	0	18.90	18.95	18.98	
10	16QAM	25	12	18.82	18.79	18.91	
10	16QAM	25	25	18.84	18.91	18.79	19.5
10	16QAM	50	0	18.79	18.83	18.70	
10	64QAM	1	0	18.75	18.77	18.79	
10	64QAM	1	25	18.83	18.80	18.59	18.5
10	64QAM	1	49	18.69	18.86	18.74	
10	64QAM	25	0	18.88	18.84	18.82	
10	64QAM	25	12	17.69	17.86	17.86	18.5
10	64QAM	25	25	17.69	18.82	17.64	
10	64QAM	50	0	17.84	17.94	17.74	
Channel				23875	23925	23975	Tune-up limit (dBm)
Frequency (MHz)				817.5	822.5	827.5	
5	QPSK	1	0	20.82	20.85	20.84	24.5
5	QPSK	1	12	20.78	20.80	20.83	
5	QPSK	1	24	20.68	20.75	20.63	
5	QPSK	12	0	19.86	19.87	19.86	23.5
5	QPSK	12	7	19.84	19.80	19.68	
5	QPSK	12	13	19.75	19.77	19.84	
5	QPSK	25	0	19.65	19.79	19.76	23.5
5	16QAM	1	0	19.66	19.87	19.80	
5	16QAM	1	12	19.80	19.71	19.91	
5	16QAM	1	24	19.68	19.83	19.62	22.5
5	16QAM	12	0	18.77	18.88	18.84	
5	16QAM	12	7	18.75	18.69	18.70	
5	16QAM	12	13	18.78	18.87	18.79	22.5
5	16QAM	25	0	18.66	18.82	18.79	
5	64QAM	1	0	18.76	18.90	18.84	
5	64QAM	1	12	18.82	18.88	18.63	21.5
5	64QAM	1	24	18.83	18.66	18.77	
5	64QAM	12	0	17.90	17.88	17.85	
5	64QAM	12	7	17.86	17.97	17.87	21.5
5	64QAM	12	13	17.72	17.93	17.79	
5	64QAM	25	0	17.80	17.88	17.79	

Band 19 (835MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				24075	24075	24075	
Frequency (MHz)				837.5	837.5	837.5	
15	QPSK	1	0		19.84		21.5
15	QPSK	1	37		19.71		
15	QPSK	1	74		19.68		
15	QPSK	36	0		18.91		20.5
15	QPSK	36	20		18.67		
15	QPSK	36	39		18.59		
15	QPSK	75	0		18.67		20.5
15	16QAM	1	0		18.73		
15	16QAM	1	37		18.60		
15	16QAM	1	74		18.74		19.5
15	16QAM	36	0		17.87		
15	16QAM	36	20		17.56		
15	16QAM	36	39		17.78		19.5
15	16QAM	75	0		17.75		
15	64QAM	1	0		17.85		
15	64QAM	1	25		17.82		18.5
15	64QAM	1	49		17.65		
15	64QAM	25	0		16.82		
15	64QAM	25	12		16.77		18.5
15	64QAM	25	25		16.93		
15	64QAM	50	0		16.70		
Channel				24050	24075	24100	Tune-up limit (dBm)
Frequency (MHz)				835	837.5	840	
10	QPSK	1	0	20.55	20.81	20.74	21.5
10	QPSK	1	25	20.55	20.65	20.62	
10	QPSK	1	49	20.59	20.66	20.77	
10	QPSK	25	0	19.71	19.83	19.74	20.5
10	QPSK	25	12	19.63	19.69	19.79	
10	QPSK	25	25	19.59	19.67	19.70	
10	QPSK	50	0	19.68	19.71	19.64	20.5
10	16QAM	1	0	19.73	19.75	19.82	
10	16QAM	1	25	19.78	19.87	19.86	
10	16QAM	1	49	19.70	19.86	19.69	19.5
10	16QAM	25	0	18.79	18.87	18.82	
10	16QAM	25	12	18.70	18.81	18.60	
10	16QAM	25	25	18.83	18.80	18.77	19.5
10	16QAM	50	0	18.70	18.81	18.63	
10	64QAM	1	0	18.74	18.88	18.89	
10	64QAM	1	25	18.76	18.73	18.54	18.5
10	64QAM	1	49	18.88	18.86	18.67	
10	64QAM	25	0	17.83	17.90	17.75	
10	64QAM	25	12	17.82	17.77	17.97	18.5
10	64QAM	25	25	17.84	17.67	17.73	
10	64QAM	50	0	17.67	17.74	17.70	
Channel				24025	24075	24125	Tune-up limit (dBm)
Frequency (MHz)				832.5	837.5	842.5	
5	QPSK	1	0	20.71	20.80	20.75	24.5
5	QPSK	1	12	20.57	20.59	20.79	
5	QPSK	1	24	20.63	20.71	20.78	
5	QPSK	12	0	19.69	19.85	19.78	23.5
5	QPSK	12	7	19.83	19.88	19.59	
5	QPSK	12	13	19.62	19.84	19.81	
5	QPSK	25	0	19.63	19.76	19.93	23.5
5	16QAM	1	0	19.69	19.94	19.60	
5	16QAM	1	12	19.75	19.65	19.65	
5	16QAM	1	24	19.66	19.58	19.82	22.5
5	16QAM	12	0	18.63	18.69	18.75	
5	16QAM	12	7	18.64	18.58	18.70	
5	16QAM	12	13	18.83	18.91	18.67	22.5
5	16QAM	25	0	18.73	18.77	18.79	
5	64QAM	1	0	18.67	18.66	18.71	
5	64QAM	1	12	18.66	18.66	18.54	21.5
5	64QAM	1	24	18.60	18.52	18.58	
5	64QAM	12	0	17.88	17.92	17.76	
5	64QAM	12	7	17.65	17.77	17.94	21.5
5	64QAM	12	13	17.69	17.82	17.85	
5	64QAM	25	0	17.63	17.99	17.79	



Band 25 (1900MHz Band) (dBm) Part 24E									
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	14.37	14.42	14.28	15		
20	QPSK	1	49	14.21	14.16	14.29			
20	QPSK	1	99	14.31	14.33	14.31			
20	QPSK	50	0	13.36	13.45	13.43			
20	QPSK	50	24	13.17	13.43	13.28			
20	QPSK	50	50	13.32	13.39	13.34	14.5		
20	QPSK	100	0	13.38	13.30	13.24			
20	16QAM	1	0	13.32	13.43	13.22			
20	16QAM	1	49	13.12	13.41	13.22			
20	16QAM	1	99	13.33	13.35	13.27			
20	16QAM	50	0	12.24	12.29	12.41	13		
20	16QAM	50	24	12.21	12.34	12.11			
20	16QAM	50	50	12.34	12.36	12.25			
20	16QAM	100	0	12.43	12.25	12.35			
20	64QAM	1	0	12.20	12.38	12.24			
20	64QAM	1	49	12.29	12.38	12.18	13		
20	64QAM	1	99	12.34	12.32	12.27			
20	64QAM	50	0	11.34	11.40	11.38			
20	64QAM	50	24	11.37	11.41	11.35			
20	64QAM	50	50	11.37	11.37	11.17			
20	64QAM	100	0	11.32	11.28	11.35	12		
Channel				26115	26365	26615			
Frequency (MHz)				1857.5	1882.5	1907.5			
15	QPSK	1	0	14.16	14.39	14.19	15		
15	QPSK	1	37	14.34	14.33	14.23			
15	QPSK	1	74	14.12	14.22	14.36			
15	QPSK	36	0	14.39	13.44	13.41			
15	QPSK	36	20	13.33	13.38	13.35			
15	QPSK	36	39	13.30	13.30	13.26	14		
15	QPSK	75	0	13.35	13.20	13.32			
15	16QAM	1	0	13.41	13.40	13.42			
15	16QAM	1	37	13.18	13.20	13.34			
15	16QAM	1	74	13.19	13.27	13.17			
15	16QAM	36	0	12.40	12.44	12.29	13		
15	16QAM	36	20	12.31	12.19	12.18			
15	16QAM	36	39	12.31	12.34	12.37			
15	16QAM	75	0	12.28	12.23	12.20			
15	64QAM	1	0	12.23	12.42	12.29			
15	64QAM	1	37	12.44	12.34	12.25	13		
15	64QAM	1	74	12.46	12.37	12.38			
15	64QAM	36	0	11.34	11.41	11.39			
15	64QAM	36	20	11.29	11.40	11.22			
15	64QAM	36	39	11.28	11.32	11.18			
15	64QAM	75	0	11.29	11.36	11.30	12		
Channel				26090	26365	26640			
Frequency (MHz)				1855	1882.5	1910			
10	QPSK	1	0	14.31	14.40	14.28	15		
10	QPSK	1	25	14.15	14.35	14.14			
10	QPSK	1	49	14.36	14.25	14.27			
10	QPSK	25	0	13.26	13.39	13.41			
10	QPSK	25	12	13.24	13.33	13.40			
10	QPSK	25	25	13.23	13.30	13.35	14		
10	QPSK	50	0	13.32	13.28	13.42			
10	16QAM	1	0	13.33	13.38	13.21			
10	16QAM	1	25	13.29	13.22	13.32			
10	16QAM	1	49	13.30	13.21	13.39			
10	16QAM	25	0	12.19	12.42	12.25	13		
10	16QAM	25	12	12.36	12.28	12.45			
10	16QAM	25	25	12.34	12.45	12.25			
10	16QAM	50	0	12.29	12.31	12.26			
10	64QAM	1	0	12.29	12.26	12.17			
10	64QAM	1	25	12.31	12.33	12.34	13		
10	64QAM	1	49	12.30	12.13	12.34			
10	64QAM	25	0	11.37	11.37	11.40			
10	64QAM	25	12	11.23	11.29	11.32			
10	64QAM	25	25	11.25	11.22	11.43			
10	64QAM	50	0	11.43	11.41	11.40	12		
Channel				26065	26365	26665			
Frequency (MHz)				1852.5	1882.5	1912.5			
5	QPSK	1	0	14.29	14.37	14.26	15		
5	QPSK	1	12	14.14	14.20	14.21			
5	QPSK	1	24	14.33	14.28	14.15			
5	QPSK	12	0	13.32	13.38	13.37			
5	QPSK	12	7	13.38	13.30	13.26			
5	QPSK	12	13	13.29	13.37	13.26	14		
5	QPSK	25	0	13.19	13.23	13.36			
5	16QAM	1	0	13.44	13.45	13.36			
5	16QAM	1	12	13.34	13.39	13.30			
5	16QAM	1	24	13.43	13.36	13.41			
5	16QAM	12	0	12.41	12.37	12.31	13		
5	16QAM	12	7	12.28	12.33	12.15			
5	16QAM	12	13	12.34	12.40	12.16			
5	16QAM	25	0	12.29	12.22	12.26			
5	64QAM	1	0	12.16	12.41	12.24			
5	64QAM	1	12	12.43	12.34	12.25	13		
5	64QAM	1	24	12.22	12.36	12.26			
5	64QAM	12	0	11.38	11.36	11.33			
5	64QAM	12	7	11.34	11.32	11.36			
5	64QAM	12	13	11.38	11.23	11.16			
5	64QAM	25	0	11.39	11.33	11.27	12		
Channel				26055	26365	26675			
Frequency (MHz)				1851.5	1882.5	1913.5			
3	QPSK	1	0	14.22	14.38	14.22	15		
3	QPSK	1	8	14.31	14.15	14.11			
3	QPSK	1	14	14.25	14.29	14.10			
3	QPSK	8	0	13.33	13.37	13.36			
3	QPSK	8	4	13.29	13.30	13.28			
3	QPSK	8	7	13.24	13.17	13.33	14		

Band 26 for FCC (dBm) (only on channel required)							
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	20.29	20.38	20.30	21
15	QPSK	1	37	20.08	20.27	20.29	
15	QPSK	1	74	20.10	20.21	20.31	
15	QPSK	36	0	19.36	19.40	19.21	
15	QPSK	36	20	19.15	19.35	19.10	20
15	QPSK	36	39	19.08	19.21	19.36	
15	QPSK	75	0	19.08	19.23	19.27	
15	16QAM	1	0	19.32	19.26	19.10	
15	16QAM	1	37	19.33	19.30	19.31	20
15	16QAM	1	74	19.37	19.20	19.09	
15	16QAM	36	0	18.36	18.20	18.16	
15	16QAM	36	20	18.27	18.08	18.18	
15	16QAM	36	39	18.33	18.37	18.39	19
15	16QAM	75	0	18.31	18.15	18.11	
15	64QAM	1	0	18.11	18.43	18.27	
15	64QAM	1	37	18.30	18.40	18.11	
15	64QAM	1	74	18.34	18.33	18.05	19
15	64QAM	36	0	17.22	17.31	17.35	
15	64QAM	36	20	17.25	17.22	17.28	
15	64QAM	36	39	17.34	17.14	17.21	
15	64QAM	75	0	17.19	17.26	17.33	18
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	20.13	20.35	20.17	
10	QPSK	1	25	20.12	20.29	20.29	
10	QPSK	1	49	20.20	20.18	20.19	
10	QPSK	25	0	19.36	19.30	19.33	
10	QPSK	25	12	19.16	19.29	19.41	20
10	QPSK	25	25	19.16	19.30	19.20	
10	QPSK	50	0	19.09	19.20	19.36	
10	16QAM	1	0	19.23	19.22	19.28	
10	16QAM	1	25	19.19	19.36	19.40	20
10	16QAM	1	49	19.16	19.26	19.32	
10	16QAM	25	0	18.16	18.25	18.38	
10	16QAM	25	12	18.39	18.11	18.04	
10	16QAM	25	25	18.25	18.36	18.31	19
10	16QAM	50	0	18.21	18.25	18.14	
10	64QAM	1	0	18.36	18.36	18.22	
10	64QAM	1	25	18.19	18.20	18.06	
10	64QAM	1	49	18.33	18.21	18.09	19
10	64QAM	25	0	17.46	17.27	17.37	
10	64QAM	25	12	17.16	17.25	17.35	
10	64QAM	25	25	17.12	17.19	17.32	
10	64QAM	50	0	17.27	17.29	17.38	18
Channel				26715	26865	27015	
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	20.22	20.36	20.03	
5	QPSK	1	12	20.24	20.04	20.08	
5	QPSK	1	24	20.35	20.13	20.33	
5	QPSK	12	0	19.42	19.43	19.45	
5	QPSK	12	7	19.37	19.28	19.09	20
5	QPSK	12	13	19.34	19.16	19.38	
5	QPSK	25	0	19.11	19.30	19.27	
5	16QAM	1	0	19.35	19.36	19.35	
5	16QAM	1	12	19.04	19.23	19.23	20
5	16QAM	1	24	19.31	19.21	19.08	
5	16QAM	12	0	18.22	18.25	18.37	
5	16QAM	12	7	18.31	18.06	18.02	
5	16QAM	12	13	18.34	18.27	18.19	19
5	16QAM	25	0	18.24	18.33	18.23	
5	64QAM	1	0	18.11	18.17	18.26	
5	64QAM	1	12	18.15	18.25	18.08	
5	64QAM	1	24	18.31	18.32	18.09	19
5	64QAM	12	0	17.21	17.35	17.32	
5	64QAM	12	7	17.23	17.30	17.29	
5	64QAM	12	13	17.36	17.31	17.14	
5	64QAM	25	0	17.16	17.21	17.25	18
Channel				26705	26865	27025	
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	20.32	20.35	20.30	
3	QPSK	1	8	20.13	20.07	20.02	
3	QPSK	1	14	20.06	20.24	20.09	
3	QPSK	8	0	19.33	19.36	19.37	
3	QPSK	8	4	19.06	19.28	19.31	20
3	QPSK	8	7	19.36	19.09	19.19	
3	QPSK	15	0	19.24	19.41	19.27	
3	16QAM	1	0	19.19	19.30	19.07	
3	16QAM	1	8	19.21	19.19	19.29	20
3	16QAM	1	14	19.13	19.06	19.27	
3	16QAM	8	0	18.31	18.28	18.44	
3	16QAM	8	4	18.25	18.33	18.12	
3	16QAM	8	7	18.43	18.25	18.12	19
3	16QAM	15	0	18.40	18.21	18.26	
3	64QAM	1	0	18.18	18.35	18.24	
3	64QAM	1	8	18.23	18.32	18.09	
3	64QAM	1	14	18.19	18.16	18.29	19
3	64QAM	8	0	17.28	17.44	17.39	
3	64QAM	8	4	17.34	17.30	17.24	
3	64QAM	8	7	17.23	17.33	17.38	
3	64QAM	15	0	17.37	17.47	17.40	18
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	20.08	20.36	20.31	
1.4	QPSK	1	3	20.14	20.32	20.16	
1.4	QPSK	1	5	20.07	20.34	20.30	
1.4	QPSK	3	0	19.21	19.28	19.31	
1.4	QPSK	3	1	19.03	19.25	19.27	
1.4	QPSK	3	3	19.05	19.34	19.26	



3	QPSK	15	0	13.22	13.44	13.25	14
3	16QAM	1	0	13.39	13.33	13.34	
3	16QAM	1	8	13.41	13.29	13.26	
3	16QAM	1	14	13.33	13.23	13.08	13
3	16QAM	8	0	12.19	12.40	12.39	
3	16QAM	8	4	12.25	12.23	12.15	
3	16QAM	8	7	12.31	12.33	12.41	13
3	16QAM	15	0	12.35	12.37	12.13	
3	64QAM	1	0	12.34	12.33	12.39	
3	64QAM	1	8	12.36	12.39	12.16	13
3	64QAM	1	14	12.18	12.20	12.25	
3	64QAM	8	0	11.35	11.39	11.34	
3	64QAM	8	4	11.28	11.42	11.38	12
3	64QAM	8	7	11.32	11.27	11.28	
3	64QAM	15	0	11.38	11.26	11.33	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	14.31	14.37	14.20	15
1.4	QPSK	1	3	14.19	14.35	14.23	
1.4	QPSK	1	5	14.32	14.24	14.24	
1.4	QPSK	3	0	13.42	13.45	13.34	
1.4	QPSK	3	1	13.21	13.32	13.36	
1.4	QPSK	3	3	13.31	13.36	13.31	14
1.4	QPSK	6	0	13.36	13.31	13.28	
1.4	16QAM	1	0	13.34	13.35	13.36	
1.4	16QAM	1	3	13.11	13.18	13.38	13
1.4	16QAM	1	5	13.33	13.36	13.21	
1.4	16QAM	3	0	12.42	12.32	12.36	
1.4	16QAM	3	1	12.18	12.37	12.42	
1.4	16QAM	3	3	12.42	12.43	12.39	
1.4	16QAM	6	0	12.24	12.29	12.19	12
1.4	64QAM	1	0	12.23	12.35	12.32	
1.4	64QAM	1	3	12.23	12.37	12.16	
1.4	64QAM	1	5	12.41	12.44	12.42	13
1.4	64QAM	3	0	11.37	11.41	11.33	
1.4	64QAM	3	1	11.33	11.34	11.31	
1.4	64QAM	3	3	11.32	11.45	11.26	
1.4	64QAM	6	0	11.42	11.43	11.36	
1.4	64QAM	6	0	11.42	11.43	11.36	12

1.4	QPSK	6	0	19.32	19.35	19.44	20
1.4	16QAM	1	0	19.12	19.19	19.06	20
1.4	16QAM	1	3	19.22	19.29	19.15	
1.4	16QAM	1	5	19.17	19.37	19.10	
1.4	16QAM	3	0	18.30	18.38	18.36	
1.4	16QAM	3	1	18.29	18.19	18.11	
1.4	16QAM	3	3	18.23	18.32	18.32	
1.4	16QAM	6	0	18.34	18.37	18.26	19
1.4	64QAM	1	0	18.30	18.22	18.06	19
1.4	64QAM	1	3	18.20	18.29	18.13	
1.4	64QAM	1	5	18.18	18.27	18.13	
1.4	64QAM	3	0	17.25	17.30	17.27	
1.4	64QAM	3	1	17.14	17.34	17.21	
1.4	64QAM	3	3	17.15	17.32	17.04	
1.4	64QAM	6	0	17.29	17.26	17.38	18



Band 30 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				27710			13.5
Frequency (MHz)				2310			
10	QPSK	1	0		12.88		12.5
10	QPSK	1	25		12.78		
10	QPSK	1	49		12.71		
10	QPSK	25	0		11.90		12.5
10	QPSK	25	12		11.82		
10	QPSK	25	25		11.89		
10	QPSK	50	0		11.82		12.5
10	16QAM	1	0		11.87		
10	16QAM	1	25		11.84		
10	16QAM	1	49		11.95		11.5
10	16QAM	25	0		10.99		
10	16QAM	25	12		11.01		
10	16QAM	25	25		10.74		11.5
10	16QAM	50	0		10.84		
10	64QAM	1	0		10.95		
10	64QAM	1	25		10.96		11.5
10	64QAM	1	49		10.89		
10	64QAM	25	0		9.92		
10	64QAM	25	12		9.98		10.5
10	64QAM	25	25		9.94		
10	64QAM	50	0		9.93		
Channel				27685	27710	27735	13.5
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	12.74	12.85	12.64	12.5
5	QPSK	1	12	12.69	12.65	12.62	
5	QPSK	1	24	12.81	12.77	12.79	
5	QPSK	12	0	11.80	12.01	11.82	12.5
5	QPSK	12	7	11.89	11.98	12.02	
5	QPSK	12	13	11.77	11.85	11.96	
5	QPSK	25	0	11.75	11.71	11.96	12.5
5	16QAM	1	0	11.91	11.87	11.74	
5	16QAM	1	12	11.70	11.97	12.02	
5	16QAM	1	24	11.90	11.96	11.74	11.5
5	16QAM	12	0	10.75	10.96	10.97	
5	16QAM	12	7	10.77	10.81	10.63	
5	16QAM	12	13	10.81	10.83	10.72	11.5
5	16QAM	25	0	10.76	10.71	10.68	
5	64QAM	1	0	10.84	10.81	10.65	
5	64QAM	1	12	11.00	10.90	10.71	11.5
5	64QAM	1	24	10.80	10.70	10.83	
5	64QAM	12	0	9.89	9.93	9.85	
5	64QAM	12	7	9.98	9.79	9.69	10.5
5	64QAM	12	13	9.67	9.81	9.75	
5	64QAM	25	0	9.81	9.79	9.87	

Band 66 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	15
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	14.36	14.41	14.32	14
20	QPSK	1	49	14.24	14.37	14.13	
20	QPSK	1	99	14.15	14.35	14.20	
20	QPSK	50	0	13.33	13.40	13.39	14
20	QPSK	50	24	13.21	13.27	13.19	
20	QPSK	50	50	13.22	13.24	13.31	
20	QPSK	100	0	13.28	13.24	13.22	14
20	16QAM	1	0	13.19	13.28	13.30	
20	16QAM	1	49	13.28	13.19	13.35	
20	16QAM	1	99	13.34	13.22	13.26	13
20	16QAM	50	0	12.22	12.38	12.38	
20	16QAM	50	24	12.39	12.42	12.34	
20	16QAM	50	50	12.33	12.25	12.41	13
20	16QAM	100	0	12.44	12.35	12.40	
20	64QAM	1	0	12.18	12.33	12.21	
20	64QAM	1	49	12.24	12.40	12.16	13
20	64QAM	1	99	12.36	12.19	12.34	
20	64QAM	50	0	11.41	11.39	11.32	
20	64QAM	50	24	11.39	11.28	11.30	12
20	64QAM	50	50	11.27	11.25	11.28	
20	64QAM	100	0	11.23	11.31	11.27	
Channel				132047	132322	132597	15
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	14.32	14.38	14.29	15
15	QPSK	1	37	14.07	14.21	14.15	
15	QPSK	1	74	14.11	14.30	14.24	
15	QPSK	36	0	13.29	13.44	13.39	14
15	QPSK	36	20	13.31	13.35	13.24	
15	QPSK	36	39	13.37	13.24	13.37	
15	QPSK	75	0	13.26	13.28	13.35	14
15	16QAM	1	0	13.33	13.33	13.33	
15	16QAM	1	37	13.30	13.25	13.35	
15	16QAM	1	74	13.31	13.17	13.16	13
15	16QAM	36	0	12.36	12.42	12.38	
15	16QAM	36	20	12.21	12.20	12.22	
15	16QAM	36	39	12.35	12.27	12.20	13
15	16QAM	75	0	12.42	12.23	12.40	
15	64QAM	1	0	12.15	12.40	12.27	
15	64QAM	1	37	12.33	12.23	12.23	13
15	64QAM	1	74	12.25	12.20	12.26	
15	64QAM	36	0	11.44	11.39	11.34	
15	64QAM	36	20	11.45	11.26	11.33	12
15	64QAM	36	39	11.26	11.31	11.22	
15	64QAM	75	0	11.40	11.39	11.48	
Channel				132022	132322	132622	15
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	14.32	14.38	14.19	15
10	QPSK	1	25	14.20	14.32	14.23	
10	QPSK	1	49	14.24	14.20	14.25	
10	QPSK	25	0	13.27	13.42	13.35	14
10	QPSK	25	12	13.25	13.27	13.40	
10	QPSK	25	25	13.35	13.24	13.41	
10	QPSK	50	0	13.40	13.38	13.20	14
10	16QAM	1	0	13.22	13.28	13.13	
10	16QAM	1	25	13.13	13.34	13.49	
10	16QAM	1	49	13.28	13.16	13.27	13
10	16QAM	25	0	12.18	12.31	12.23	
10	16QAM	25	12	12.44	12.20	12.13	
10	16QAM	25	25	12.32	12.36	12.45	13
10	16QAM	50	0	12.18	12.41	12.20	
10	64QAM	1	0	12.28	12.41	12.20	
10	64QAM	1	25	12.37	12.31	12.44	13
10	64QAM	1	49	12.30	12.12	12.30	
10	64QAM	25	0	11.31	11.42	11.44	
10	64QAM	25	12	11.29	11.30	11.43	12
10	64QAM	25	25	11.23	11.40	11.38	
10	64QAM	50	0	11.44	11.26	11.35	
Channel				131997	132322	132647	15
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	14.37	14.36	14.22	15
5	QPSK	1	12	14.14	14.22	14.17	
5	QPSK	1	24	14.22	14.32	14.24	
5	QPSK	12	0	13.36	13.29	13.29	14
5	QPSK	12	7	13.30	13.33	13.23	
5	QPSK	12	13	13.25	13.31	13.29	
5	QPSK	25	0	13.29	13.26	13.33	14
5	16QAM	1	0	13.19	13.31	13.14	
5	16QAM	1	12	13.12	13.40	13.26	
5	16QAM	1	24	13.37	13.15	13.37	13
5	16QAM	12	0	12.22	12.32	12.28	
5	16QAM	12	7	12.33	12.39	12.30	
5	16QAM	12	13	12.30	12.28	12.43	13
5	16QAM	25	0	12.17	12.24	12.28	
5	64QAM	1	0	12.37	12.33	12.26	
5	64QAM	1	12	12.26	12.41	12.38	13
5	64QAM	1	24	12.17	12.21	12.21	
5	64QAM	12	0	11.41	11.39	11.48	
5	64QAM	12	7	11.33	11.32	11.33	12
5	64QAM	12	13	11.21	11.20	11.25	
5	64QAM	25	0	11.40	11.28	11.47	
Channel				131997	132322	132657	15
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	14.33	14.39	14.34	15
3	QPSK	1	8	14.38	14.15	14.33	
3	QPSK	1	14	14.25	14.27	14.28	
3	QPSK	8	0	13.39	13.28	13.36	14
3	QPSK	8	4	13.26	13.29	13.24	
3	QPSK	8	7	13.39	13.25	13.23	



3	QPSK	15	0	13.44	13.52	13.49	14
3	16QAM	1	0	13.39	13.39	13.21	
3	16QAM	1	8	13.40	13.33	13.43	
3	16QAM	1	14	13.40	13.40	13.16	13
3	16QAM	8	0	12.42	12.44	12.26	
3	16QAM	8	4	12.47	12.47	12.26	
3	16QAM	8	7	12.21	12.32	12.23	
3	16QAM	15	0	12.25	12.33	12.16	
3	64QAM	1	0	12.18	12.37	12.28	13
3	64QAM	1	8	12.32	12.31	12.13	
3	64QAM	1	14	12.30	12.22	12.25	
3	64QAM	8	0	11.42	11.38	11.30	12
3	64QAM	8	4	11.27	11.27	11.39	
3	64QAM	8	7	11.35	11.40	11.33	
3	64QAM						
3	64QAM	15	0	11.30	11.54	11.37	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	14.17	14.37	14.36	15
1.4	QPSK	1	3	14.15	14.26	14.18	
1.4	QPSK	1	5	14.29	14.24	14.13	
1.4	QPSK	3	0	13.36	13.41	13.45	
1.4	QPSK	3	1	13.21	13.41	13.46	
1.4	QPSK	3	3	13.18	13.35	13.45	
1.4	QPSK	6	0	13.40	13.35	13.19	14
1.4	16QAM	1	0	13.38	13.60	13.17	14
1.4	16QAM	1	3	13.12	13.51	13.37	
1.4	16QAM	1	5	13.20	13.46	13.15	
1.4	16QAM	3	0	12.27	12.62	12.33	
1.4	16QAM	3	1	12.46	12.40	12.30	
1.4	16QAM	3	3	12.54	12.50	12.22	
1.4	16QAM	6	0	12.20	12.31	12.17	13
1.4	64QAM	1	0	12.30	12.51	12.38	13
1.4	64QAM	1	3	12.40	12.40	12.39	
1.4	64QAM	1	5	12.27	12.32	12.37	
1.4	64QAM	3	0	11.47	11.56	11.44	
1.4	64QAM	3	1	11.32	11.45	11.41	
1.4	64QAM	3	3	11.28	11.22	11.46	
1.4	64QAM	6	0	11.57	11.43	11.54	12



Band 71 (dBm)							
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	16.26	16.30	16.24	18
20	QPSK	1	49	16.18	16.25	16.16	
20	QPSK	1	99	16.23	16.15	16.20	
20	QPSK	50	0	15.23	15.37	15.36	17
20	QPSK	50	24	15.35	15.27	15.33	
20	QPSK	50	50	15.34	15.20	15.21	
20	QPSK	100	0	15.14	15.29	15.24	17
20	16QAM	1	0	15.40	15.41	15.26	
20	16QAM	1	49	15.32	15.24	15.38	
20	16QAM	1	99	15.26	15.29	15.27	16
20	16QAM	50	0	14.40	14.34	14.45	
20	16QAM	50	24	14.24	14.21	14.40	
20	16QAM	50	50	14.35	14.22	14.27	16
20	16QAM	100	0	14.24	14.27	14.34	
20	64QAM	1	0	14.27	14.26	14.21	
20	64QAM	1	49	14.30	14.43	14.31	15
20	64QAM	1	99	14.29	14.43	14.22	
20	64QAM	50	0	13.33	13.26	13.26	
20	64QAM	50	24	13.26	13.34	13.32	15
20	64QAM	50	50	13.15	13.18	13.26	
20	64QAM	100	0	13.31	13.25	13.30	
Channel				133197	133322	133397	
Frequency (MHz)				670.5	683	690.5	
15	QPSK	1	0	17.09	17.20	17.07	18
15	QPSK	1	37	17.14	17.10	17.13	
15	QPSK	1	74	17.11	17.07	17.07	
15	QPSK	36	0	16.13	16.26	16.24	17
15	QPSK	36	20	16.22	16.19	16.21	
15	QPSK	36	39	16.10	16.09	16.12	
15	QPSK	75	0	16.18	16.11	16.23	17
15	16QAM	1	0	16.15	16.27	16.32	
15	16QAM	1	37	16.08	16.32	16.23	
15	16QAM	1	74	16.11	16.18	16.32	16
15	16QAM	36	0	15.19	15.22	15.32	
15	16QAM	36	20	15.25	15.19	15.25	
15	16QAM	36	39	15.23	15.21	15.11	16
15	16QAM	75	0	15.05	15.22	15.14	
15	64QAM	1	0	15.12	15.26	15.15	
15	64QAM	1	37	15.10	15.35	15.26	15
15	64QAM	1	74	15.29	15.14	15.21	
15	64QAM	36	0	14.24	14.27	14.13	
15	64QAM	36	20	14.12	14.19	14.32	15
15	64QAM	36	39	14.32	14.33	14.18	
15	64QAM	75	0	14.36	14.23	14.20	
Channel				133172	133322	133422	
Frequency (MHz)				668	683	693	
10	QPSK	1	0	17.14	17.18	17.04	18
10	QPSK	1	25	17.16	17.07	17.09	
10	QPSK	1	49	17.11	17.13	17.11	
10	QPSK	25	0	16.12	16.33	16.34	17
10	QPSK	25	12	16.11	16.19	16.15	
10	QPSK	25	25	16.25	16.30	16.16	
10	QPSK	50	0	16.09	16.18	16.24	17
10	16QAM	1	0	16.33	16.23	16.34	
10	16QAM	1	25	16.15	16.13	16.22	
10	16QAM	1	49	16.17	16.25	16.20	16
10	16QAM	25	0	15.26	15.19	15.34	
10	16QAM	25	12	15.22	15.18	15.07	
10	16QAM	25	25	15.24	15.27	15.26	16
10	16QAM	50	0	15.07	15.30	15.11	
10	64QAM	1	0	15.10	15.22	15.11	
10	64QAM	1	25	15.32	15.26	15.17	15
10	64QAM	1	49	15.22	15.08	15.24	
10	64QAM	25	0	14.06	14.30	14.34	
10	64QAM	25	12	14.27	14.36	14.25	15
10	64QAM	25	25	14.29	14.23	14.36	
10	64QAM	50	0	14.35	14.33	14.29	
Channel				133147	133322	133447	
Frequency (MHz)				665.5	683	695.5	
5	QPSK	1	0	17.16	17.17	17.09	18
5	QPSK	1	12	16.95	17.01	17.01	
5	QPSK	1	24	17.09	17.11	17.07	
5	QPSK	12	0	16.44	16.33	16.19	17
5	QPSK	12	7	16.20	16.30	16.35	
5	QPSK	12	13	16.21	16.10	16.13	
5	QPSK	25	0	16.25	16.21	16.30	17
5	16QAM	1	0	16.27	16.25	16.30	
5	16QAM	1	12	16.18	16.16	16.37	
5	16QAM	1	24	16.08	16.29	16.20	16
5	16QAM	12	0	15.13	15.26	15.16	
5	16QAM	12	7	15.08	15.30	15.13	
5	16QAM	12	13	15.30	15.27	15.23	16
5	16QAM	25	0	15.31	15.20	15.08	
5	64QAM	1	0	15.22	15.21	15.38	
5	64QAM	1	12	15.25	15.21	15.16	15
5	64QAM	1	24	15.14	15.04	15.24	
5	64QAM	12	0	14.28	14.34	14.36	
5	64QAM	12	7	14.27	14.23	14.22	15
5	64QAM	12	13	14.17	14.21	14.18	
5	64QAM	25	0	14.14	14.29	14.28	



Band 41 PC2 (2496~2690MHz) (dBm)											
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Turn-up limit (dBm)		
Channel				39750	40185	40620	41055	41490			
Frequency (MHz)				2506	2549.5	2593	2636.5	2680			
20	QPSK	1	0	16.20	16.23	16.43	16.41	16.16	17		
20	QPSK	1	49	16.04	16.14	16.16	16.28	16.31			
20	QPSK	1	99	16.21	16.20	16.30	16.22	16.28			
20	QPSK	50	0	15.41	15.44	15.46	15.43	15.26			
20	QPSK	50	24	15.33	15.43	15.39	15.37	15.30			
20	QPSK	50	50	15.26	15.29	15.28	15.39	15.23	16		
20	QPSK	100	0	15.16	15.25	15.22	15.23	15.24			
20	16QAM	1	0	15.39	15.43	15.40	15.39	15.35			
20	16QAM	1	49	15.38	15.40	15.22	15.27	15.44			
20	16QAM	1	99	15.46	15.45	15.26	15.47	15.41			
20	16QAM	50	0	14.30	14.36	14.27	14.44	14.26	15		
20	16QAM	50	24	14.27	14.37	14.10	14.21	14.28			
20	16QAM	50	50	14.23	14.41	14.37	14.36	14.21			
20	16QAM	100	0	14.28	14.23	14.21	14.32	14.36			
20	64QAM	1	0	14.43	14.44	14.42	14.39	14.36			
20	64QAM	1	49	14.22	14.37	14.22	14.36	14.38	14		
20	64QAM	1	99	14.42	14.35	14.39	14.13	14.15			
20	64QAM	50	0	13.45	13.47	13.35	13.46	13.36			
20	64QAM	50	24	13.32	13.32	13.44	13.41	13.44			
20	64QAM	50	50	13.23	13.33	13.22	13.47	13.43			
20	64QAM	100	0	13.34	13.37	13.38	13.33	13.39	Turn-up limit (dBm)		
Channel				39725	40173	40620	41068	41515			
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5			
15	QPSK	1	0	16.30	16.29	16.40	16.35	16.25	17		
15	QPSK	1	37	16.37	16.11	16.31	16.10	16.12			
15	QPSK	1	74	16.33	16.21	16.36	16.29	16.20			
15	QPSK	36	0	15.24	15.46	15.48	15.40	15.35			
15	QPSK	36	20	15.39	15.35	15.38	15.31	15.32			
15	QPSK	36	39	15.30	15.45	15.27	15.44	15.43	16		
15	QPSK	75	0	15.38	15.31	15.29	15.26	15.40			
15	16QAM	1	0	15.20	15.32	15.43	15.39	15.30			
15	16QAM	1	37	15.11	15.20	15.33	15.41	15.43			
15	16QAM	1	74	15.35	15.20	15.07	15.30	15.15			
15	16QAM	36	0	14.20	14.34	14.47	14.34	14.31	15		
15	16QAM	36	20	14.23	14.17	14.18	14.39	14.18			
15	16QAM	36	39	14.27	14.32	14.23	14.24	14.30			
15	16QAM	75	0	14.44	14.36	14.43	14.27	14.24			
15	64QAM	1	0	14.45	14.38	14.20	14.28	14.21			
15	64QAM	1	37	14.30	14.26	14.38	14.29	14.12	14		
15	64QAM	1	74	14.19	14.16	14.42	14.18	14.14			
15	64QAM	36	0	13.31	13.40	13.41	13.37	13.34			
15	64QAM	36	20	13.32	13.45	13.36	13.38	13.39			
15	64QAM	36	39	13.43	13.25	13.34	13.18	13.16			
15	64QAM	75	0	13.25	13.36	13.42	13.40	13.36	Turn-up limit (dBm)		
Channel				39700	40160	40620	41089	41540			
Frequency (MHz)				2501	2547	2593	2639	2685			
10	QPSK	1	0	16.15	16.32	16.41	16.34	16.12	17		
10	QPSK	1	25	16.14	16.19	16.12	16.16	16.30			
10	QPSK	1	49	16.40	16.33	16.39	16.36	16.20			
10	QPSK	25	0	15.32	15.46	15.48	15.37	15.38			
10	QPSK	25	12	15.28	15.47	15.30	15.43	15.44			
10	QPSK	25	25	15.44	15.18	15.22	15.29	15.44	16		
10	QPSK	50	0	15.19	15.33	15.42	15.30	15.25			
10	16QAM	1	0	15.31	15.39	15.45	15.40	15.40			
10	16QAM	1	25	15.16	15.46	15.38	15.27	15.30			
10	16QAM	1	49	15.42	15.21	15.07	15.18	15.19			
10	16QAM	25	0	14.20	14.40	14.24	14.32	14.20	15		
10	16QAM	25	12	14.49	14.28	14.42	14.47	14.15			
10	16QAM	25	25	14.34	14.35	14.29	14.28	14.36			
10	16QAM	50	0	14.48	14.28	14.41	14.41	14.13			
10	64QAM	1	0	14.39	14.34	14.26	14.36	14.34			
10	64QAM	1	25	14.51	14.29	14.44	14.38	14.18	14		
10	64QAM	1	49	14.39	14.46	14.26	14.44	14.35			
10	64QAM	25	0	13.34	13.43	13.37	13.47	13.45			
10	64QAM	25	12	13.52	13.39	13.37	13.29	13.49			
10	64QAM	25	25	13.32	13.47	13.28	13.41	13.49			
10	64QAM	50	0	13.28	13.26	13.37	13.44	13.30	Turn-up limit (dBm)		
Channel				39675	40148	40620	41093	41565			
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5			
5	QPSK	1	0	16.15	16.32	16.39	16.29	16.33	17		
5	QPSK	1	12	16.16	16.33	16.37	16.31	16.08			
5	QPSK	1	24	16.14	16.23	16.28	16.31	16.25			
5	QPSK	12	0	15.49	15.37	15.37	15.32	15.44			
5	QPSK	12	7	15.48	15.40	15.52	15.56	15.29			
5	QPSK	12	13	15.48	15.43	15.43	15.47	15.36	16		
5	QPSK	25	0	15.19	15.34	15.42	15.51	15.25			
5	16QAM	1	0	15.28	15.40	15.48	15.30	15.26			
5	16QAM	1	12	15.30	15.20	15.30	15.41	15.33			
5	16QAM	1	24	15.30	15.20	15.07	15.23	15.32			
5	16QAM	12	0	14.19	14.36	14.51	14.37	14.51	15		
5	16QAM	12	7	14.35	14.50	14.14	14.40	14.15			
5	16QAM	12	13	14.40	14.43	14.48	14.58	14.42			
5	16QAM	25	0	14.32	14.35	14.39	14.41	14.34			
5	64QAM	1	0	14.48	14.36	14.27	14.34	14.37			
5	64QAM	1	12	14.43	14.31	14.09	14.37	14.12	14		
5	64QAM	1	24	14.25	14.34	14.25	14.15	14.30			
5	64QAM	12	0	13.55	13.51	13.46	13.45	13.37			
5	64QAM	12	7	13.35	13.53	13.43	13.43	13.52			
5	64QAM	12	13	13.16	13.32	13.41	13.36	13.14			
5	64QAM	25	0	13.28	13.44	13.48	13.55	13.22	Turn-up limit (dBm)		

Band 41 PC3 (2496~2690MHz) (dBm)										
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel		Turn-up limit (dBm)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	16.35	16.41	16.45	16.39	16.28	17	
20	QPSK	1	49	16.20	16.33	16.40	16.29	16.28		
20	QPSK	1	99	16.14	16.32	16.33	16.22	16.19		
20	QPSK	50	0	15.38	15.39	15.46	15.37	15.28		
20	QPSK	50	24	15.26	15.31	15.25	15.36	15.30		
20	QPSK	50	50	15.33	15.20	15.31	15.36	15.25	16	
20	QPSK	100	0	15.38	15.35	15.42	15.38	15.26		
20	16QAM	1	0	15.20	15.40	15.43	15.39	15.19		
20	16QAM	1	49	15.10	15.28	15.22	15.39	15.23		
20	16QAM	1	99	15.29	15.42	15.18	15.21	15.09		
20	16QAM	50	0	14.20	14.29	14.24	14.35	14.33	15	
20	16QAM	50	24	14.22	14.28	14.38	14.16	14.26		
20	16QAM	50	50	14.27	14.59	14.30	14.36	14.28		
20	16QAM	100	0	14.28	14.35	14.33	14.29	14.20		
20	64QAM	1	0	14.23	14.34	14.38	14.32	14.18		
20	64QAM	1	49	14.24	14.28	14.23	14.35	14.28	14	
20	64QAM	1	99	14.33	14.34	14.26	14.19	14.30		
20	64QAM	50	0	13.36	13.42	13.46	13.40	13.35		
20	64QAM	50	24	13.29	13.38	13.34	13.33	13.38		
20	64QAM	50	50	13.39	13.31	13.32	13.19	13.25		
20	64QAM	100	0	13.36	13.39	13.28	13.36	13.33		
Channel				39750	40175	40620	41068	41515		Turn-up limit (dBm)
Frequency (MHz)				2506.5	2549.5	2593	2636.5	2690.5		
15	QPSK	1	0	16.31	16.26	16.41	16.39	16.24	17	
15	QPSK	1	37	16.39	16.42	16.09	16.09	16.14		
15	QPSK	1	74	16.30	16.38	16.37	16.18	16.40		
15	QPSK	36	0	15.44	15.44	15.51	15.39	15.40		
15	QPSK	36	20	15.39	15.51	15.39	15.30	15.22		
15	QPSK	36	39	15.18	15.39	15.47	15.33	15.39	16	
15	QPSK	75	0	15.23	15.25	15.41	15.36	15.41		
15	16QAM	1	0	15.40	15.46	15.42	15.48	15.42		
15	16QAM	1	37	15.38	15.21	16.23	15.25	15.27		
15	16QAM	1	74	15.19	15.47	15.09	15.15	15.08		
15	16QAM	36	0	14.39	14.36	14.27	14.32	14.23	15	
15	16QAM	36	20	14.26	14.38	14.30	14.23	14.20		
15	16QAM	36	39	14.36	14.41	14.22	14.33	14.38		
15	16QAM	75	0	14.38	14.56	14.31	14.45	14.40		
15	64QAM	1	0	14.20	14.44	14.40	14.50	14.31		
15	64QAM	1	37	14.39	14.42	14.26	14.48	14.14	14	
15	64QAM	1	74	14.45	14.22	14.45	14.40	14.18		
15	64QAM	36	0	13.46	13.48	13.45	13.46	13.33		
15	64QAM	36	20	13.44	13.28	13.44	13.42	13.30		
15	64QAM	36	39	13.23	13.37	13.18	13.19	13.17		
15	64QAM	75	0	13.23	13.36	13.40	13.39	13.35		
Channel				39750	40160	40620	41066	41560		Turn-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	16.01	16.38	16.42	16.40	16.35	17	
10	QPSK	1	25	16.07	16.29	16.41	16.33	16.30		
10	QPSK	1	49	16.14	16.16	16.34	16.29	16.22		
10	QPSK	25	0	15.25	15.41	15.43	15.31	15.38		
10	QPSK	25	12	15.38	15.40	15.27	15.40	15.27		
10	QPSK	25	25	15.41	15.18	15.31	15.39	15.34	16	
10	QPSK	50	0	15.39	15.20	15.39	15.43	15.23		
10	16QAM	1	0	15.48	15.29	15.36	15.30	15.26		
10	16QAM	1	25	15.26	15.18	15.44	15.42	15.35		
10	16QAM	1	49	15.36	15.17	15.07	15.48	15.19		
10	16QAM	25	0	14.23	14.39	14.31	14.46	14.30	15	
10	16QAM	25	12	14.45	14.30	14.18	14.21	14.38		
10	16QAM	25	25	14.33	14.38	14.31	14.31	14.48		
10	16QAM	50	0	14.22	14.42	14.25	14.43	14.38		
10	64QAM	1	0	14.32	14.35	14.41	14.41	14.16		
10	64QAM	1	25	14.21	14.24	14.41	14.23	14.40	14	
10	64QAM	1	49	14.41	14.17	14.25	14.41	14.47		
10	64QAM	25	0	13.37	13.42	13.38	13.31	13.33		
10	64QAM	25	12	13.41	13.32	13.35	13.32	13.48		
10	64QAM	25	25	13.21	13.22	13.34	13.21	13.19		
10	64QAM	50	0	13.26	13.39	13.27	13.25	13.18		
Channel				39675	40148	40620	41093	41565		Turn-up limit (dBm)
Frequency (MHz)				2498.5	2567.5	2593	2640.30	2687.5		
5	QPSK	1	0	16.19	16.23	16.41	16.40	16.35	16	
5	QPSK	1	16	16.09	16.24	16.39	16.31	16.19		
5	QPSK	1	24	16.38	16.25	16.18	16.36	16.35		
5	QPSK	12	0	15.20	15.37	15.42	15.41	15.35		
5	QPSK	12	7	15.14	15.43	15.19	15.33	15.40		
5	QPSK	12	13	15.45	15.22	15.45	15.23	15.20	15	
5	QPSK	25	0	15.29	15.30	15.47	15.45	15.39		
5	16QAM	1	0	15.26	15.31	15.26	15.47	15.39		
5	16QAM	1	13	15.33	15.44	15.22	15.35	15.25		
5	16QAM	1	24	15.21	15.40	15.19	15.30	15.32		
5	16QAM	12	0	14.40	14.38	14.25	14.48	14.39	14	
5	16QAM	12	7	14.41	14.30	14.26	14.49	14.43		
5	16QAM	12	13	14.28	14.33	14.33	14.43	14.24		
5	16QAM	25	0	14.38	14.34	14.18	14.33	14.25		
5	64QAM	1	0	14.28	14.27	14.47	14.46	14.46		
5	64QAM	1	12	14.30	14.30	14.39	14.43	14.16	13	
5	64QAM	24	14.27	14.28	14.38	14.43	14.37	14.37		
5	64QAM	12	0	13.33	13.45	13.43	13.41	13.42		
5	64QAM	12	13	13.41	13.35	13.38	13.28	13.45		
5	64QAM	12	13	13.25	13.19	13.32	13.26	13.28		
5	64QAM	25	0	13.30	13.27	13.40	13.27	13.34		

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 limit(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
20850	20850	21048	QPSK	1	0	0	0	1	0	9.76	10.50
21100	21001	21199	QPSK	1	0	0	0	1	0	9.75	10.50
21350	21152	21350	QPSK	1	0	0	0	1	0	9.57	10.50
20850	20850	21048	16QAM	1	0	0	0	1	0	9.08	9.00
21100	21001	21199	16QAM	1	0	0	0	1	0	9.19	9.00
21350	21152	21350	16QAM	1	0	0	0	1	0	8.96	9.00
20850	20850	21048	64QAM	1	0	0	0	1	0	7.74	8.00
21100	21001	21199	64QAM	1	0	0	0	1	0	7.64	8.00
21350	21152	21350	64QAM	1	0	0	0	1	0	7.68	8.00
20850	20850	21048	QPSK	50	0	0	0	1	0	9.47	10.00
21100	21001	21199	QPSK	50	0	0	0	1	0	9.39	10.00
21350	21152	21350	QPSK	50	0	0	0	1	0	9.41	10.00

CA_41C_PC 3											
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 limit(dBm)
				RB Size	RB Offset	RB Size	RB Offset				
39750	39750	39948	QPSK	1	0	0	0	1	0	15.87	16.50
40521	40521	40719	QPSK	1	0	0	0	1	0	15.79	16.50
41292	41292	41490	QPSK	1	0	0	0	1	0	15.81	16.50
39750	39750	39948	16QAM	1	0	0	0	1	0	14.88	15.50
40521	40521	40719	16QAM	1	0	0	0	1	0	14.99	15.50
41292	41292	41490	16QAM	1	0	0	0	1	0	14.76	15.50
39750	39750	39948	64QAM	1	0	0	0	1	0	13.54	14.50
40521	40521	40719	64QAM	1	0	0	0	1	0	13.44	14.50
41292	41292	41490	64QAM	1	0	0	0	1	0	13.48	14.50
39750	39750	39948	QPSK	50	0	0	0	1	0	15.36	16.00
40521	40521	40719	QPSK	50	0	0	0	1	0	15.22	16.00
41292	41292	41490	QPSK	50	0	0	0	1	0	15.28	16.00