



REPORT No.: SZ23050338S01

Annex E Conducted Power

Note:

Conducted power unit: dBm

The target power was recorded in the manufacture document.



Full Power

GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
TX Channel		128	189	251		128	189	251		
Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot		32.34	32.35	32.31	33.00	23.34	23.35	23.31	24.00	0.06
GPRS 1 Tx slot		32.33	32.36	32.30	33.00	23.33	23.36	23.30	24.00	
GPRS 2 Tx slots		31.58	31.66	31.67	32.50	25.58	25.66	25.67	26.50	0.09
GPRS 3 Tx slots		30.21	30.24	30.21	31.00	25.95	25.98	25.95	26.74	0.03
GPRS 4 Tx slots		29.18	29.27	29.16	30.00	26.18	26.27	26.16	27.00	0.11
EDGE 1 Tx slot		26.31	26.36	26.28	27.00	17.31	17.36	17.28	18.00	0.08
EDGE 2 Tx slots		25.21	25.28	25.37	26.00	19.21	19.28	19.37	20.00	0.16
EDGE 3 Tx slots		23.36	23.41	23.36	24.00	19.10	19.15	19.10	19.74	0.05
EDGE 4 Tx slots		22.28	22.43	22.28	23.00	19.28	19.43	19.28	20.00	0.15
Mode			Max.	32.36			Max.	26.27		
Attenuator		Cable Loss : 0.6								

GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
TX Channel		512	661	810		512	661	810		
Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8		
GSM 1 Tx slot		29.61	29.66	29.53	30.50	20.61	20.66	20.53	21.50	0.16
GPRS 1 Tx slot		29.62	29.67	29.51	30.50	20.62	20.67	20.51	21.50	
GPRS 2 Tx slots		28.94	28.67	28.59	29.50	22.94	22.67	22.59	23.50	0.35
GPRS 3 Tx slots		27.11	27.26	27.24	28.00	22.85	23.00	22.98	23.74	0.15
GPRS 4 Tx slots		26.18	26.23	26.21	27.00	23.18	23.23	23.21	24.00	0.05
EDGE 1 Tx slot		26.42	26.43	26.37	27.00	17.42	17.43	17.37	18.00	0.06
EDGE 2 Tx slots		25.33	25.39	25.34	26.00	19.33	19.39	19.34	20.00	0.06
EDGE 3 Tx slots		23.22	23.20	23.18	24.00	18.96	18.94	18.92	19.74	0.04
EDGE 4 Tx slots		21.21	21.26	21.31	22.00	18.21	18.26	18.31	19.00	0.10
Mode			Max.	29.67			Max.	23.23		
Attenuator		Cable Loss : 0.8								

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	22.56	22.59	22.48	23.50	22.48	22.57	22.46	23.50	22.56	22.59	22.43	23.50
3GPP Rel 5	HSDPA Subtest-1	21.30	21.35	21.45	22.50	21.48	21.34	21.44	22.50	21.47	21.51	21.53	22.50
3GPP Rel 5	HSDPA Subtest-2	21.26	21.28	21.42	22.50	21.45	21.33	21.44	22.50	21.43	21.49	21.52	22.50
3GPP Rel 5	HSDPA Subtest-3	20.78	20.87	20.96	21.50	20.95	20.85	20.91	21.50	20.95	20.96	21.04	22.00
3GPP Rel 5	HSDPA Subtest-4	20.74	20.83	20.94	21.50	20.94	20.85	20.89	21.50	20.93	20.98	21.00	22.00
3GPP Rel 6	HSUPA Subtest-1	19.18	19.25	19.38	20.50	19.47	19.41	19.41	20.50	19.49	19.49	19.48	20.50
3GPP Rel 6	HSUPA Subtest-2	19.19	19.30	19.36	20.50	19.45	19.39	19.42	20.50	19.45	19.47	19.45	20.50
3GPP Rel 6	HSUPA Subtest-3	20.17	20.25	20.38	21.50	20.45	20.43	20.39	21.50	20.45	20.49	20.47	21.50
3GPP Rel 6	HSUPA Subtest-4	18.71	18.80	18.91	19.50	18.99	18.91	18.95	19.50	18.97	18.98	19.01	19.50
3GPP Rel 6	HSUPA Subtest-5	20.14	20.21	20.33	21.50	20.42	20.39	20.33	21.50	20.46	20.48	20.43	21.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.61	20.54	20.67	21.50	20.85	20.94	20.78	21.50	20.86	20.87	20.95	21.50
Attenuator			Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode			Max.	22.59			Max.	22.57			Max.	22.59	



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	22.54	22.57	22.51	
20	QPSK	1	49	22.52	22.46	22.39	23.5
20	QPSK	1	99	22.46	22.42	22.40	
20	QPSK	50	0	21.37	21.46	21.39	
20	QPSK	50	24	21.38	21.43	21.43	22.5
20	QPSK	50	50	21.43	21.39	21.45	
20	QPSK	100	0	21.36	21.45	21.41	
20	16QAM	1	0	21.42	21.42	21.44	22.5
20	16QAM	1	49	21.26	21.56	21.52	
20	16QAM	1	99	21.51	21.36	21.76	
20	16QAM	50	0	21.44	21.41	21.39	22.5
20	16QAM	50	24	21.40	21.45	21.46	
20	16QAM	50	50	21.48	21.45	21.52	
20	16QAM	100	0	21.51	21.52	21.39	21.5
20	64QAM	1	0	20.46	20.65	20.39	
20	64QAM	1	49	20.41	20.59	20.50	
20	64QAM	1	99	20.36	20.69	20.69	21.5
20	64QAM	50	0	20.46	20.38	20.43	
20	64QAM	50	24	20.49	20.43	20.48	
20	64QAM	50	50	20.48	20.49	20.43	21.5
20	64QAM	100	0	20.38	20.33	20.34	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.35	22.38	22.29	
15	QPSK	1	37	22.14	22.50	22.38	23.5
15	QPSK	1	74	22.51	22.43	22.51	
15	QPSK	36	0	21.23	21.32	21.31	
15	QPSK	36	20	21.22	21.41	21.38	22.5
15	QPSK	36	39	21.34	21.35	21.32	
15	QPSK	75	0	21.26	21.32	21.28	
15	16QAM	1	0	21.35	21.43	21.37	22.5
15	16QAM	1	37	21.48	21.51	21.37	
15	16QAM	1	74	21.43	21.55	21.55	
15	16QAM	36	0	21.22	21.27	21.30	22.5
15	16QAM	36	20	21.31	21.24	21.37	
15	16QAM	36	39	21.36	21.45	21.42	
15	16QAM	75	0	21.23	21.25	21.34	21.5
15	64QAM	1	0	20.43	20.19	20.25	
15	64QAM	1	37	20.42	20.23	20.65	
15	64QAM	1	74	20.31	20.35	20.50	21.5
15	64QAM	36	0	20.16	20.33	20.21	
15	64QAM	36	20	20.36	20.38	20.28	
15	64QAM	36	39	20.24	20.29	20.38	21.5
15	64QAM	75	0	20.23	20.30	20.29	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.39	22.38	22.48	
10	QPSK	1	25	22.43	22.46	22.41	23.5
10	QPSK	1	49	22.39	22.40	22.39	
10	QPSK	25	0	21.41	21.42	21.38	
10	QPSK	25	12	21.37	21.49	21.42	22.5
10	QPSK	25	25	21.28	21.41	21.37	
10	QPSK	50	0	21.34	21.43	21.41	
10	16QAM	1	0	21.82	21.75	21.74	22.5
10	16QAM	1	25	21.51	21.47	21.54	
10	16QAM	1	49	21.46	21.54	21.33	
10	16QAM	25	0	21.36	21.35	21.32	22.5
10	16QAM	25	12	21.52	21.32	21.32	
10	16QAM	25	25	21.32	21.52	21.62	
10	16QAM	50	0	21.89	21.82	21.86	21.5
10	64QAM	1	0	20.40	20.45	20.45	
10	64QAM	1	25	20.43	20.48	20.52	
10	64QAM	1	49	20.10	20.23	20.20	21.5
10	64QAM	25	0	20.40	20.44	20.45	
10	64QAM	25	12	20.43	20.41	20.42	
10	64QAM	25	25	20.36	20.14	20.36	21.5
10	64QAM	50	0	20.37	20.37	20.34	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.39	22.44	22.38	
5	QPSK	1	12	22.38	22.33	22.36	23.5
5	QPSK	1	24	22.34	22.42	22.43	
5	QPSK	12	0	21.47	21.38	21.45	
5	QPSK	12	7	21.48	21.53	21.45	22.5
5	QPSK	12	13	21.26	21.25	21.28	
5	QPSK	25	0	21.25	21.23	21.25	
5	16QAM	1	0	21.38	21.28	21.66	22.5
5	16QAM	1	12	21.36	21.29	21.66	
5	16QAM	1	24	21.39	21.26	21.65	
5	16QAM	12	0	21.48	21.62	21.48	22.5
5	16QAM	12	7	21.38	21.38	21.18	
5	16QAM	12	13	21.18	21.51	21.28	
5	16QAM	25	0	21.28	21.74	21.72	21.5
5	64QAM	1	0	20.48	20.20	20.25	
5	64QAM	1	12	20.64	20.30	20.41	
5	64QAM	1	24	20.65	20.29	20.31	21.5
5	64QAM	12	0	20.30	20.23	20.22	
5	64QAM	12	7	20.36	20.20	20.20	
5	64QAM	12	13	20.33	20.29	20.27	21.5
5	64QAM	25	0	20.40	20.20	20.27	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.33	22.40	22.32	
3	QPSK	1	8	22.43	22.46	22.29	23.5
3	QPSK	1	14	22.44	22.31	22.31	
3	QPSK	8	0	21.35	21.30	21.32	
3	QPSK	8	4	21.41	21.35	21.36	22.5
3	QPSK	8	7	21.41	21.35	21.31	

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	22.53	22.61	22.60	
20	QPSK	1	49	22.39	22.47	22.46	23.5
20	QPSK	1	99	22.31	22.44	22.56	
20	QPSK	50	0	21.61	21.65	21.62	
20	QPSK	50	24	21.52	21.60	21.60	22.5
20	QPSK	50	50	21.41	21.52	21.53	
20	QPSK	100	0	21.51	21.55	21.62	
20	16QAM	1	0	21.38	21.68	21.55	22.5
20	16QAM	1	49	21.53	21.30	21.44	
20	16QAM	1	99	21.32	21.54	21.38	
20	16QAM	50	0	21.51	21.44	21.58	22.5
20	16QAM	50	24	21.77	21.88	21.77	
20	16QAM	50	50	21.73	21.74	21.74	
20	16QAM	100	0	21.75	21.83	21.84	21.5
20	64QAM	1	0	20.49	20.60	20.82	
20	64QAM	1	49	20.53	20.46	20.34	
20	64QAM	1	99	20.80	20.37	20.84	21.5
20	64QAM	50	0	20.50	20.59	20.54	
20	64QAM	50	24	20.52	20.63	20.57	
20	64QAM	50	50	20.56	20.51	20.53	21.5
20	64QAM	100	0	20.59	20.57	20.66	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.40	22.44	22.54	
15	QPSK	1	37	22.44	22.53	22.45	23.5
15	QPSK	1	74	22.31	22.53	22.56	
15	QPSK	36	0	21.46	21.53	21.56	
15	QPSK	36	20	21.50	21.63	21.59	22.5
15	QPSK	36	39	21.55	21.54	21.63	
15	QPSK	75	0	21.50	21.52	21.53	
15	16QAM	1	0	21.44	21.66	21.38	22.5
15	16QAM	1	37	21.52	21.52	21.36	
15	16QAM	1	74	21.38	21.68	21.47	
15	16QAM	36	0	21.39	21.41	21.60	22.5
15	16QAM	36	20	21.34	21.41	21.47	
15	16QAM	36	39	21.30	21.39	21.45	
15	16QAM	75	0	21.41	21.42	21.51	21.5
15	64QAM	1	0	20.36	20.67	20.72	
15	64QAM	1	37	20.78	20.54	20.60	
15	64QAM	1	74	20.82	20.53	20.57	21.5
15	64QAM	36	0	20.47	20.54	20.58	
15	64QAM	36	20	20.53	20.55	20.57	
15	64QAM	36	39	20.56	20.52	20.54	21.5
15	64QAM	75	0	20.49	20.60	20.53	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.52	22.51	22.34	
10	QPSK	1	25	22.50	22.43	22.44	23.5
10	QPSK	1	49	22.38	22.21	22.44	
10	QPSK	25	0	21.29	21.51	21.53	
10	QPSK	25	12	21.41	21.47	21.51	22.5
10	QPSK	25	25	21.30	21.41	21.48	
10	QPSK	50	0	21.36	21.46	21.38	
10	16QAM	1	0	21.35	21.50	21.26	22.5
10	16QAM	1	25	21.62	21.36	21.68	
10	16QAM	1	49	21.69	21.59	21.58	
10	16QAM	25	0	21.35	21.34	21.33	22.5
10	16QAM	25	12	21.27	21.37	21.34	
10	16QAM	25	25	21.61	21.52	21.61	
10	16QAM	50	0	21.55	21.59	21.71	21.5
10	64QAM	1	0	20.41	20.49	20.39	
10	64QAM	1	25	20.48	20.77	20.86	
10	64QAM	1	49	20.46	20.50	20.45	21.5
10	64QAM	25	0	20.30	20.44	20.43	
10	64QAM	25	12	20.39	20.50	20.54	
10	64QAM	25	25	20.27	20.39	20.41	21.5
10	64QAM	50	0	20.33	20.40	20.39	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.49	22.44	22.49	
5	QPSK	1	12	22.48	22.43	22.40	23.5
5	QPSK	1	24	22.23	22.35	22.34	
5	QPSK	12	0	21.37	21.37	21.41	
5	QPSK	12	7	21.37	21.48	21.45	22.5
5	QPSK	12	13	21.32	21.49	21.41	
5	QPSK	25	0	21.35	21.39	21.45	
5	16QAM	1	0	21.25	21.66	21.34	22.5
5	16QAM	1	12	21.36	21.71	21.30	
5	16QAM	1	24	21.30	21.65	21.25	
5	16QAM	12	0	21.29	21.23	21.26	22.5
5	16QAM	12	7	21.32	21.36	21.34	
5	16QAM	12	13	21.59	21.66	21.70	
5	16QAM	25	0	21.60	21.71	21.64	21.5
5	64QAM	1	0	20.37	20.81	20.79	
5	64QAM	1	12	20.75	20.51	20.78	
5	64QAM	1	24	20.71	20.41	20.48	21.5
5	64QAM	12	0	20.38	20.45	20.47	
5	64QAM	12	7	20.37	20.46	20.52	
5	64QAM	12	13	20.38	20.44	20.43	21.5
5	64QAM	25	0	20.33	20.47	20.38	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.34	22.35	22.47	
3	QPSK	1	8	22.43	22.57	22.51	23.5
3	QPSK	1	14	22.23	22.42	22.42	
3	QPSK	8	0	21.35	21.41	21.42	
3	QPSK	8	4	21.41	21.49	21.51	22.5
3	QPSK	8	7	21.37	21.47	21.47	



3	QPSK	15	0	21.33	21.41	21.34	22.5
3	16QAM	1	0	21.49	21.40	21.34	
3	16QAM	1	8	21.53	21.47	21.43	
3	16QAM	1	14	21.25	21.22	21.10	22.5
3	16QAM	8	0	21.68	21.81	21.73	
3	16QAM	8	4	21.75	21.72	21.78	
3	16QAM	8	7	21.65	21.70	21.73	21.5
3	16QAM	15	0	21.68	21.72	21.67	
3	64QAM	1	0	20.42	20.35	20.38	
3	64QAM	1	8	20.84	20.83	20.43	21.5
3	64QAM	1	14	20.45	20.81	20.45	
3	64QAM	8	0	20.37	20.39	20.23	
3	64QAM	8	4	20.47	20.37	20.37	21.5
3	64QAM	8	7	20.57	20.46	20.32	
3	64QAM	15	0	20.42	20.42	20.40	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.39	22.42	22.37	23.5
1.4	QPSK	1	3	22.29	22.27	22.26	
1.4	QPSK	1	5	22.26	22.24	22.22	
1.4	QPSK	3	0	22.26	22.26	22.22	22.5
1.4	QPSK	3	1	22.30	22.27	22.25	
1.4	QPSK	3	3	22.32	22.36	22.25	
1.4	QPSK	6	0	21.31	21.29	21.28	22.5
1.4	16QAM	1	0	21.34	21.34	21.28	
1.4	16QAM	1	3	21.30	21.50	21.48	
1.4	16QAM	1	5	21.18	21.38	21.06	22.5
1.4	16QAM	3	0	21.20	21.25	21.22	
1.4	16QAM	3	1	21.38	21.20	21.25	
1.4	16QAM	3	3	21.40	21.37	21.11	22.5
1.4	16QAM	6	0	21.41	21.34	21.29	
1.4	64QAM	1	0	20.29	20.21	20.24	
1.4	64QAM	1	3	20.31	20.52	20.40	21.5
1.4	64QAM	1	5	20.29	20.64	20.23	
1.4	64QAM	3	0	20.32	20.38	20.39	
1.4	64QAM	3	1	20.41	20.38	20.59	21.5
1.4	64QAM	3	3	20.33	20.47	20.24	
1.4	64QAM	6	0	20.38	20.41	20.30	

3	QPSK	15	0	21.37	21.43	21.37	22.5
3	16QAM	1	0	21.45	21.54	21.58	
3	16QAM	1	8	21.67	21.67	21.41	
3	16QAM	1	14	21.58	21.36	21.44	22.5
3	16QAM	8	0	21.37	21.38	21.47	
3	16QAM	8	4	21.47	21.47	21.48	
3	16QAM	8	7	21.69	21.77	21.81	21.5
3	16QAM	15	0	21.69	21.67	21.74	
3	64QAM	1	0	20.36	20.45	20.43	
3	64QAM	1	8	20.55	20.43	20.59	21.5
3	64QAM	1	14	20.36	20.43	20.26	
3	64QAM	8	0	20.34	20.38	20.32	
3	64QAM	8	4	20.46	20.44	20.48	21.5
3	64QAM	8	7	20.40	20.47	20.59	
3	64QAM	15	0	20.36	20.44	20.35	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.49	22.54	22.52	23.5
1.4	QPSK	1	3	22.43	22.43	22.47	
1.4	QPSK	1	5	22.29	22.38	22.40	
1.4	QPSK	3	0	22.37	22.34	22.33	22.5
1.4	QPSK	3	1	22.33	22.43	22.48	
1.4	QPSK	3	3	22.32	22.39	22.38	
1.4	QPSK	6	0	21.40	21.42	21.38	22.5
1.4	16QAM	1	0	21.34	21.81	21.47	
1.4	16QAM	1	3	21.47	21.55	21.59	
1.4	16QAM	1	5	21.53	21.69	21.49	22.5
1.4	16QAM	3	0	21.56	21.60	21.51	
1.4	16QAM	3	1	21.57	21.60	21.62	
1.4	16QAM	3	3	21.56	21.68	21.57	22.5
1.4	16QAM	6	0	21.47	21.48	21.39	
1.4	64QAM	1	0	20.25	20.19	20.33	
1.4	64QAM	1	3	20.51	20.49	20.61	21.5
1.4	64QAM	1	5	20.42	20.38	20.22	
1.4	64QAM	3	0	20.33	20.31	20.50	
1.4	64QAM	3	1	20.24	20.39	20.36	21.5
1.4	64QAM	3	3	20.30	20.47	20.35	
1.4	64QAM	6	0	20.29	20.30	20.37	21.5



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	23.5
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	22.57	22.58	22.50	23.5
10	QPSK	1	25	22.43	22.46	22.26	
10	QPSK	1	49	22.35	22.47	22.15	
10	QPSK	25	0	21.53	21.55	21.36	22.5
10	QPSK	25	12	21.29	21.31	21.36	
10	QPSK	25	25	21.29	21.40	21.45	
10	QPSK	50	0	21.35	21.23	21.37	22.5
10	16QAM	1	0	21.39	21.58	21.29	
10	16QAM	1	25	21.62	21.65	21.33	
10	16QAM	1	49	21.45	21.51	21.58	22.5
10	16QAM	25	0	21.54	21.55	21.37	
10	16QAM	25	12	21.48	21.56	21.34	
10	16QAM	25	25	21.51	21.44	21.47	21.5
10	16QAM	50	0	21.52	21.43	21.33	
10	64QAM	1	0	20.48	20.58	20.46	
10	64QAM	1	25	20.45	20.65	20.45	21.5
10	64QAM	1	49	20.34	20.56	20.47	
10	64QAM	25	0	20.45	20.56	20.23	
10	64QAM	25	12	20.44	20.61	20.32	21.5
10	64QAM	25	25	20.56	20.45	20.15	
10	64QAM	50	0	20.52	20.48	20.34	
Channel				20425	20525	20625	23.5
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	22.39	22.35	22.33	23.5
5	QPSK	1	12	22.29	22.40	22.24	
5	QPSK	1	24	22.29	22.24	22.24	
5	QPSK	12	0	21.44	21.49	21.35	22.5
5	QPSK	12	7	21.51	21.52	21.44	
5	QPSK	12	13	21.56	21.40	21.35	
5	QPSK	25	0	21.47	21.43	21.35	22.5
5	16QAM	1	0	21.76	21.69	21.45	
5	16QAM	1	12	21.46	21.68	21.44	
5	16QAM	1	24	21.33	21.68	21.51	22.5
5	16QAM	12	0	21.42	21.51	21.50	
5	16QAM	12	7	21.49	21.52	21.34	
5	16QAM	12	13	21.49	21.40	21.45	21.5
5	16QAM	25	0	21.50	21.55	21.50	
5	64QAM	1	0	20.57	20.45	20.56	
5	64QAM	1	12	20.45	20.39	20.53	21.5
5	64QAM	1	24	20.59	20.43	20.37	
5	64QAM	12	0	20.31	20.45	20.25	
5	64QAM	12	7	20.35	20.51	20.29	21.5
5	64QAM	12	13	20.53	20.48	20.05	
5	64QAM	25	0	20.41	20.48	20.09	
Channel				20415	20525	20635	23.5
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.38	22.39	22.24	23.5
3	QPSK	1	8	22.34	22.35	22.26	
3	QPSK	1	14	22.35	22.33	22.07	
3	QPSK	8	0	21.37	21.50	21.48	22.5
3	QPSK	8	4	21.51	21.57	21.54	
3	QPSK	8	7	21.46	21.48	21.35	
3	QPSK	15	0	21.44	21.50	21.49	22.5
3	16QAM	1	0	21.46	21.57	21.64	
3	16QAM	1	8	21.39	21.65	21.49	
3	16QAM	1	14	21.44	21.70	21.45	22.5
3	16QAM	8	0	21.40	21.49	21.23	
3	16QAM	8	4	21.56	21.67	21.24	
3	16QAM	8	7	21.48	21.54	21.28	21.5
3	16QAM	15	0	21.42	21.44	20.99	
3	64QAM	1	0	20.37	20.25	20.46	
3	64QAM	1	8	20.25	20.49	20.25	21.5
3	64QAM	1	14	20.27	20.45	20.26	
3	64QAM	8	0	20.37	20.47	20.45	
3	64QAM	8	4	20.59	20.43	20.37	21.5
3	64QAM	8	7	20.54	20.46	20.43	
3	64QAM	15	0	20.43	20.53	20.33	
Channel				20407	20525	20643	23.5
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	22.39	22.36	22.40	23.5
1.4	QPSK	1	3	22.42	22.35	22.42	
1.4	QPSK	1	5	22.31	22.25	22.26	
1.4	QPSK	3	0	22.32	22.38	22.34	22.5
1.4	QPSK	3	1	22.38	22.25	22.35	
1.4	QPSK	3	3	22.39	22.31	22.31	
1.4	QPSK	6	0	21.42	21.41	21.40	22.5
1.4	16QAM	1	0	21.55	21.36	21.53	
1.4	16QAM	1	3	21.35	21.59	21.48	
1.4	16QAM	1	5	21.74	21.42	21.48	22.5
1.4	16QAM	3	0	21.27	21.25	21.39	
1.4	16QAM	3	1	21.30	21.57	21.43	
1.4	16QAM	3	3	21.38	21.49	21.37	22.5
1.4	16QAM	6	0	21.57	21.44	21.48	
1.4	64QAM	1	0	20.10	20.27	20.29	
1.4	64QAM	1	3	20.41	20.42	20.37	21.5
1.4	64QAM	1	5	20.36	20.35	20.23	
1.4	64QAM	3	0	20.02	20.29	20.30	
1.4	64QAM	3	1	20.30	20.24	20.25	21.5
1.4	64QAM	3	3	20.20	20.37	20.41	
1.4	64QAM	6	0	20.41	20.53	20.42	

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	22.38	22.54	22.43	23.5
10	QPSK	1	25	22.24	22.37	22.40	
10	QPSK	1	49	22.34	22.35	22.34	
10	QPSK	25	0	21.63	21.73	21.64	22.5
10	QPSK	25	12	21.60	21.54	21.33	
10	QPSK	25	25	21.65	21.71	21.64	
10	QPSK	50	0	21.66	21.68	21.59	22.5
10	16QAM	1	0	21.59	21.14	21.27	
10	16QAM	1	25	21.34	21.29	21.43	
10	16QAM	1	49	21.43	21.48	21.37	22.5
10	16QAM	25	0	21.32	21.34	21.28	
10	16QAM	25	12	21.36	21.40	21.29	
10	16QAM	25	25	21.41	21.42	21.36	21.5
10	16QAM	50	0	21.31	21.39	21.44	
10	64QAM	1	0	20.34	20.46	20.80	
10	64QAM	1	25	20.78	20.84	20.43	21.5
10	64QAM	1	49	20.80	20.48	20.41	
10	64QAM	25	0	20.31	20.25	20.22	
10	64QAM	25	12	20.36	20.39	20.31	21.5
10	64QAM	25	25	20.41	20.38	20.38	
10	64QAM	50	0	20.33	20.26	20.37	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.13	22.46	22.24	23.5
5	QPSK	1	12	22.29	22.45	22.29	
5	QPSK	1	24	22.25	22.44	22.30	
5	QPSK	12	0	21.36	21.43	21.42	22.5
5	QPSK	12	7	21.47	21.49	21.46	
5	QPSK	12	13	21.42	21.45	21.42	
5	QPSK	25	0	21.38	21.50	21.46	22.5
5	16QAM	1	0	21.39	21.41	21.43	
5	16QAM	1	12	21.56	21.51	21.52	
5	16QAM	1	24	21.52	21.50	21.46	22.5
5	16QAM	12	0	21.26	21.23	21.26	
5	16QAM	12	7	21.40	21.45	21.29	
5	16QAM	12	13	21.35	21.32	21.37	22.5
5	16QAM	25	0	21.36	21.32	21.34	
5	64QAM	1	0	20.32	20.33	20.38	
5	64QAM	1	12	20.77	20.47	20.40	21.5
5	64QAM	1	24	20.75	20.44	20.49	
5	64QAM	12	0	20.29	20.31	20.26	
5	64QAM	12	7	20.39	20.27	20.33	21.5
5	64QAM	12	13	20.26	20.36	20.41	
5	64QAM	25	0	20.41	20.37	20.34	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.21	22.48	22.15	23.5
3	QPSK	1	8	22.39	22.38	22.28	
3	QPSK	1	14	22.33	22.44	22.39	
3	QPSK	8	0	21.44	21.42	21.42	22.5
3	QPSK	8	4	21.47	21.50	21.51	
3	QPSK	8	7	21.42	21.50	21.44	
3	QPSK	15	0	21.41	21.49	21.35	22.5
3	16QAM	1	0	21.42	21.78	21.37	
3	16QAM	1	8	21.62	21.60	21.55	
3	16QAM	1	14	21.45	21.50	21.36	22.5
3	16QAM	8	0	21.42	21.31	21.34	
3	16QAM	8	4	21.47	21.44	21.55	
3	16QAM	8	7	21.31	21.34	21.40	21.5
3	16QAM	15	0	21.29	21.22	21.21	
3	64QAM	1	0	20.33	20.67	20.66	
3	64QAM	1	8	20.62	20.52	20.53	21.5
3	64QAM	1	14	20.55	20.40	20.51	
3	64QAM	8	0	20.22	20.30	20.21	
3	64QAM	8	4	20.31	20.35	20.34	21.5
3	64QAM	8	7	20.30	20.22	20.37	
3	64QAM	15	0	20.29	20.31	20.23	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	22.24	22.41	22.21	23.5
1.4	QPSK	1	3	22.35	22.34	22.36	
1.4	QPSK	1	5	22.24	22.29	22.25	
1.4	QPSK	3	0	22.19	22.32	22.30	22.5
1.4	QPSK	3	1	22.40	22.40	22.07	
1.4	QPSK	3	3	22.35	22.37	22.33	
1.4	QPSK	6	0	21.41	21.38	21.36	22.5
1.4	16QAM	1	0	21.45	21.39	21.24	
1.4	16QAM	1	3	21.26	21.69	21.36	
1.4	16QAM	1	5	21.38	21.39	21.38	22.5
1.4	16QAM	3	0	21.22	21.25	21.26	
1.4	16QAM	3	1	21.23	21.46	21.30	
1.4	16QAM	3	3	21.21	21.35	21.35	22.5
1.4	16QAM	6	0	21.14	21.34	21.24	
1.4	64QAM	1	0	20.17	20.32	20.16	
1.4	64QAM	1	3	20.29	20.22	20.27	21.5
1.4	64QAM	1	5	20.45	20.48	20.44	
1.4	64QAM	3	0	20.35	20.36	20.19	
1.4	64QAM	3	1	20.33	20.57	20.42	21.5
1.4	64QAM	3	3	20.35	20.19	20.35	
1.4	64QAM	6	0	20.31	20.32	20.19	



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	22.43	22.46	22.43	23.5
10	QPSK	1	25	22.31	22.27	22.33	
10	QPSK	1	49	22.24	22.27	22.22	
10	QPSK	25	0	21.54	21.60	21.52	22.5
10	QPSK	25	12	21.39	21.33	21.47	
10	QPSK	25	25	21.37	21.37	21.46	
10	QPSK	50	0	21.50	21.37	21.38	22.5
10	16QAM	1	0	21.23	21.42	21.56	
10	16QAM	1	25	21.44	21.73	21.57	
10	16QAM	1	49	21.40	21.65	21.70	22.5
10	16QAM	25	0	21.34	21.58	21.57	
10	16QAM	25	12	21.40	21.55	21.53	
10	16QAM	25	25	21.23	21.49	21.54	21.5
10	16QAM	50	0	21.27	21.56	21.53	
10	64QAM	1	0	20.24	20.57	20.25	
10	64QAM	1	25	20.47	20.37	20.27	21.5
10	64QAM	1	49	20.21	20.24	20.24	
10	64QAM	25	0	20.39	20.56	20.54	
10	64QAM	25	12	20.31	20.39	20.56	21.5
10	64QAM	25	25	20.25	20.46	20.62	
10	64QAM	50	0	20.32	20.55	20.56	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	22.37	22.33	22.29	23.5
5	QPSK	1	12	22.36	22.32	22.31	
5	QPSK	1	24	22.28	22.34	22.33	
5	QPSK	12	0	21.44	21.62	21.78	22.5
5	QPSK	12	7	21.56	21.65	21.73	
5	QPSK	12	13	21.39	21.67	21.73	
5	QPSK	25	0	21.42	21.59	21.72	22.5
5	16QAM	1	0	21.90	21.95	21.67	
5	16QAM	1	12	22.07	21.63	22.00	
5	16QAM	1	24	21.91	21.96	22.12	22.5
5	16QAM	12	0	21.35	21.38	21.59	
5	16QAM	12	7	21.35	21.42	21.54	
5	16QAM	12	13	21.26	21.51	21.54	21.5
5	16QAM	25	0	21.36	21.48	21.52	
5	64QAM	1	0	20.16	20.17	20.17	
5	64QAM	1	12	20.20	20.17	20.25	21.5
5	64QAM	1	24	20.25	20.25	20.17	
5	64QAM	12	0	20.31	20.36	20.60	
5	64QAM	12	7	20.44	20.52	20.46	21.5
5	64QAM	12	13	20.29	20.47	20.49	
5	64QAM	25	0	20.26	20.45	20.61	

Band 66 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.50	22.56	22.54	23.5
20	QPSK	1	49	22.35	22.34	22.30	
20	QPSK	1	99	22.28	22.27	22.30	
20	QPSK	50	0	21.61	21.68	21.64	22.5
20	QPSK	50	24	21.42	21.44	21.57	
20	QPSK	50	50	21.46	21.54	21.42	
20	QPSK	100	0	21.44	21.44	21.36	22.5
20	16QAM	1	0	21.49	21.25	21.53	
20	16QAM	1	49	21.54	21.28	21.34	
20	16QAM	1	99	21.54	21.72	21.51	22.5
20	16QAM	50	0	21.66	21.63	21.60	
20	16QAM	50	24	21.55	21.55	21.56	
20	16QAM	50	50	21.52	21.44	21.40	21.5
20	16QAM	100	0	21.48	21.51	21.57	
20	64QAM	1	0	20.81	20.58	20.91	
20	64QAM	1	49	20.58	20.91	20.90	21.5
20	64QAM	1	99	20.81	20.93	21.01	
20	64QAM	50	0	20.77	20.67	20.80	
20	64QAM	50	24	20.71	20.65	20.77	21.5
20	64QAM	50	50	20.73	20.61	20.67	
20	64QAM	100	0	20.72	20.72	20.70	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.48	22.52	22.50	23.5
15	QPSK	1	37	22.52	22.48	22.46	
15	QPSK	1	74	22.46	22.42	22.40	
15	QPSK	36	0	21.55	21.52	21.56	22.5
15	QPSK	36	20	21.55	21.47	21.57	
15	QPSK	36	39	21.41	21.46	21.43	
15	QPSK	75	0	21.50	21.54	21.47	22.5
15	16QAM	1	0	21.49	21.36	21.66	
15	16QAM	1	37	21.36	21.66	21.59	
15	16QAM	1	74	21.46	21.36	21.36	22.5
15	16QAM	36	0	21.67	21.67	21.58	
15	16QAM	36	20	21.70	21.69	21.75	
15	16QAM	36	39	21.62	21.77	21.71	21.5
15	16QAM	75	0	21.72	21.70	21.66	
15	64QAM	1	0	21.03	20.93	21.03	
15	64QAM	1	37	21.05	20.83	20.93	21.5
15	64QAM	1	74	20.70	20.96	21.03	
15	64QAM	36	0	20.82	20.81	20.94	
15	64QAM	36	20	20.92	20.88	20.89	21.5
15	64QAM	36	39	20.81	20.75	20.79	
15	64QAM	75	0	20.83	20.85	20.82	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.51	22.51	22.52	23.5
10	QPSK	1	25	22.41	22.39	22.47	
10	QPSK	1	49	22.55	22.43	22.33	
10	QPSK	25	0	21.86	21.79	21.86	22.5
10	QPSK	25	12	21.83	22.02	21.80	
10	QPSK	25	25	21.79	21.75	21.67	
10	QPSK	50	0	21.87	21.72	21.91	22.5
10	16QAM	1	0	21.79	21.79	21.99	
10	16QAM	1	25	21.79	21.88	22.00	
10	16QAM	1	49	21.62	21.82	21.70	22.5
10	16QAM	25	0	21.63	21.80	21.68	
10	16QAM	25	12	21.62	21.82	21.73	
10	16QAM	25	25	21.53	21.58	21.58	21.5
10	16QAM	50	0	21.69	21.73	21.74	
10	64QAM	1	0	20.86	20.86	20.53	
10	64QAM	1	25	20.53	20.66	20.56	21.5
10	64QAM	1	49	20.53	20.53	20.53	
10	64QAM	25	0	20.86	20.84	20.86	
10	64QAM	25	12	20.85	20.89	20.93	21.5
10	64QAM	25	25	20.85	20.78	20.80	
10	64QAM	50	0	20.75	20.85	20.86	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.40	22.43	22.48	23.5
5	QPSK	1	12	22.43	22.43	22.42	
5	QPSK	1	24	22.51	22.41	22.47	
5	QPSK	12	0	21.55	21.57	21.53	22.5
5	QPSK	12	7	21.57	21.65	21.58	
5	QPSK	12	13	21.43	21.49	21.50	
5	QPSK	25	0	21.53	21.54	21.53	22.5
5	16QAM	1	0	22.02	21.71	21.72	
5	16QAM	1	12	21.65	21.94	21.89	
5	16QAM	1	24	21.77	21.66	22.01	22.5
5	16QAM	12	0	21.66	21.77	21.73	
5	16QAM	12	7	21.83	21.75	21.87	
5	16QAM	12	13	21.74	21.68	21.75	21.5
5	16QAM	25	0	21.75	21.77	21.69	
5	64QAM	1	0	20.53	20.93	20.73	
5	64QAM	1	12	20.83	20.83	20.83	21.5
5	64QAM	1	24	20.66	20.70	20.66	
5	64QAM	12	0	20.90	20.65	20.86	
5	64QAM	12	7	20.98	20.57	20.88	21.5
5	64QAM	12	13	20.81	20.93	20.88	
5	64QAM	25	0	20.88	20.96	20.83	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.47	22.38	22.37	23.5
3	QPSK	1	8	22.34	22.35	22.43	
3	QPSK	1	14	22.25	22.06	22.36	
3	QPSK	8	0	21.81	21.78	21.82	22.5
3	QPSK	8	4	21.76	21.68	21.78	
3	QPSK	8	7	21.62	21.67	21.64	



3	QPSK	15	0	21.71	21.75	21.68	22.5
3	16QAM	1	0	21.40	21.81	21.57	
3	16QAM	1	8	21.73	21.67	21.66	
3	16QAM	1	14	21.77	21.66	21.36	22.5
3	16QAM	8	0	21.58	21.58	21.49	
3	16QAM	8	4	21.61	21.60	21.66	
3	16QAM	8	7	21.53	21.68	21.62	21.5
3	16QAM	15	0	21.63	21.61	21.57	
3	64QAM	1	0	20.94	20.84	20.94	
3	64QAM	1	8	20.96	20.74	20.84	21.5
3	64QAM	1	14	20.61	20.87	20.94	
3	64QAM	8	0	20.73	20.72	20.85	
3	64QAM	8	4	20.83	20.79	20.80	21.5
3	64QAM	8	7	20.72	20.66	20.70	
3	64QAM	15	0	20.74	20.76	20.73	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.41	22.32	22.33	23.5
1.4	QPSK	1	3	22.47	22.49	22.49	
1.4	QPSK	1	5	22.39	22.27	22.43	
1.4	QPSK	3	0	22.38	22.31	22.38	
1.4	QPSK	3	1	22.35	22.41	22.32	
1.4	QPSK	3	3	22.36	22.32	22.24	22.5
1.4	QPSK	6	0	21.84	21.69	21.88	
1.4	16QAM	1	0	21.71	21.71	21.91	22.5
1.4	16QAM	1	3	21.71	21.80	21.92	
1.4	16QAM	1	5	21.54	21.74	21.62	
1.4	16QAM	3	0	21.49	21.46	21.72	
1.4	16QAM	3	1	21.58	21.48	21.60	
1.4	16QAM	3	3	21.59	21.60	21.54	22.5
1.4	16QAM	6	0	21.48	21.39	21.40	
1.4	64QAM	1	0	20.99	20.84	21.00	21.5
1.4	64QAM	1	3	20.72	20.81	20.81	
1.4	64QAM	1	5	20.69	20.69	20.80	
1.4	64QAM	3	0	20.78	20.76	20.78	
1.4	64QAM	3	1	20.77	20.81	20.85	
1.4	64QAM	3	3	20.77	20.70	20.72	21.5
1.4	64QAM	6	0	20.67	20.77	20.78	



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	22.44	22.46	22.45	
20	QPSK	1	49	22.42	22.39	22.45	23.5
20	QPSK	1	99	22.40	22.38	22.40	
20	QPSK	50	0	21.58	21.66	21.54	
20	QPSK	50	24	21.47	21.41	21.26	22.5
20	QPSK	50	50	21.49	21.28	21.34	
20	QPSK	100	0	21.55	21.29	21.36	
20	16QAM	1	0	21.27	21.42	21.70	22.5
20	16QAM	1	49	21.23	21.34	21.48	
20	16QAM	1	99	21.38	21.27	21.28	
20	16QAM	50	0	21.38	21.24	21.27	22.5
20	16QAM	50	24	21.33	21.13	21.28	
20	16QAM	50	50	21.40	21.20	21.28	
20	16QAM	100	0	21.28	21.30	21.30	21.5
20	64QAM	1	0	20.70	20.57	20.39	
20	64QAM	1	49	20.35	20.39	20.49	
20	64QAM	1	99	20.39	20.35	20.67	21.5
20	64QAM	50	0	20.75	20.56	20.55	
20	64QAM	50	24	20.84	20.56	20.47	
20	64QAM	50	50	20.82	20.62	20.38	
20	64QAM	100	0	20.76	20.59	20.52	
Channel				133197	133297	133397	
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	22.36	22.40	22.37	
15	QPSK	1	37	22.39	22.38	22.31	23.5
15	QPSK	1	74	22.25	22.38	22.30	
15	QPSK	36	0	21.60	21.41	21.27	
15	QPSK	36	20	21.56	21.38	21.17	22.5
15	QPSK	36	39	21.55	21.39	21.24	
15	QPSK	75	0	21.56	21.44	21.26	
15	16QAM	1	0	21.28	21.60	21.37	22.5
15	16QAM	1	37	21.37	21.46	21.51	
15	16QAM	1	74	21.31	21.30	21.28	
15	16QAM	36	0	21.32	21.46	21.75	22.5
15	16QAM	36	20	21.33	21.49	21.57	
15	16QAM	36	39	21.50	21.38	21.44	
15	16QAM	75	0	21.67	21.54	21.56	21.5
15	64QAM	1	0	20.65	20.65	20.47	
15	64QAM	1	37	20.75	20.47	20.49	
15	64QAM	1	74	20.47	20.46	20.46	21.5
15	64QAM	36	0	20.82	20.59	20.54	
15	64QAM	36	20	20.58	20.60	20.53	
15	64QAM	36	39	20.48	20.61	20.36	
15	64QAM	75	0	20.78	20.57	20.50	
Channel				133172	133272	133422	
Frequency (MHz)				668	678	693	
10	QPSK	1	0	22.35	22.40	22.36	
10	QPSK	1	25	22.30	22.34	22.36	23.5
10	QPSK	1	49	22.26	22.38	22.38	
10	QPSK	25	0	21.54	21.36	21.25	
10	QPSK	25	12	21.64	21.35	21.35	22.5
10	QPSK	25	25	21.53	21.30	21.24	
10	QPSK	50	0	21.57	21.38	21.43	
10	16QAM	1	0	21.28	21.28	21.29	22.5
10	16QAM	1	25	21.32	21.22	21.19	
10	16QAM	1	49	21.37	21.37	21.42	
10	16QAM	25	0	21.65	21.47	21.45	22.5
10	16QAM	25	12	21.50	21.52	21.21	
10	16QAM	25	25	21.62	21.47	21.26	
10	16QAM	50	0	21.17	21.31	21.28	21.5
10	64QAM	1	0	20.66	20.48	20.46	
10	64QAM	1	25	20.55	20.66	20.47	
10	64QAM	1	49	20.49	20.46	20.46	21.5
10	64QAM	25	0	20.76	20.54	20.37	
10	64QAM	25	12	20.35	20.67	20.38	
10	64QAM	25	25	20.75	20.64	20.30	
10	64QAM	50	0	20.75	20.54	20.36	
Channel				133147	133247	133447	
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	22.39	22.36	22.41	
5	QPSK	1	12	22.30	22.38	22.30	23.5
5	QPSK	1	24	22.35	22.31	22.37	
5	QPSK	12	0	21.44	21.28	21.47	
5	QPSK	12	7	21.61	21.35	21.24	22.5
5	QPSK	12	13	21.61	21.34	21.45	
5	QPSK	25	0	21.46	21.26	21.36	
5	16QAM	1	0	21.57	21.51	21.52	22.5
5	16QAM	1	12	21.56	21.45	21.48	
5	16QAM	1	24	21.54	21.39	21.39	
5	16QAM	12	0	21.63	21.26	21.33	22.5
5	16QAM	12	7	21.57	21.24	21.28	
5	16QAM	12	13	21.33	21.30	21.24	
5	16QAM	25	0	21.40	21.27	21.37	21.5
5	64QAM	1	0	20.35	20.79	20.58	
5	64QAM	1	12	20.65	20.75	20.49	
5	64QAM	1	24	20.59	20.75	20.65	21.5
5	64QAM	12	0	20.48	20.53	20.43	
5	64QAM	12	7	20.48	20.57	20.43	
5	64QAM	12	13	20.75	20.63	20.42	
5	64QAM	25	0	20.75	20.61	20.40	



2.4GHz WLAN ANT 1

2.4GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Turn-Up Limit	Power Setting	Duty Cycle %
	802.11b 1Mbps	CH 1	2412	18.14	19.00	19.50	99.95
		CH 7	2442	18.11	19.00	19.50	
		CH 13	2472	8.94	9.50	10.50	
	802.11g 6Mbps	CH 1	2412	15.63	16.50	17.50	96.94
		CH 7	2442	16.02	17.00	17.50	
		CH 13	2472	7.09	8.00	9.00	
	802.11n-HT20 MCS0	CH 1	2412	15.61	16.50	17.50	96.88
		CH 7	2442	15.93	16.50	17.50	
		CH 13	2472	6.95	7.00	8.00	
	802.11n-HT40 MCS0	CH 3	2422	14.90	15.50	16.50	93.93
		CH 7	2442	14.95	15.50	16.50	
		CH 11	2462	4.02	5.00	6.00	

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Turn-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 36	5180	14.72	15.50	16.00	96.94
		CH 44	5220	14.83	15.50	16.00	
		CH 48	5240	15.30	16.00	16.00	
	802.11n-HT20 MCS0	CH 36	5180	14.68	15.50	16.00	96.73
		CH 44	5220	14.86	15.50	16.00	
		CH 48	5240	14.74	15.50	16.00	
	802.11n-HT40 MCS0	CH 38	5190	13.97	14.50	15.00	93.64
		CH 46	5230	14.64	15.50	16.00	
		CH 36	5180	14.62	15.50	16.00	96.76
	802.11ac-VHT20 MCS0	CH 44	5220	14.85	15.50	16.00	
		CH 48	5240	14.73	15.50	16.00	
	802.11ac-VHT40 MCS0	CH 38	5190	14.46	15.00	16.00	93.68
		CH 46	5230	14.73	15.50	16.00	
		CH 42	5210	13.22	14.00	14.00	88.06

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Turn-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 52	5260	15.60	16.50	16.00	96.94
		CH 60	5300	15.56	16.50	16.00	
		CH 64	5320	14.48	15.50	16.00	
	802.11n-HT20 MCS0	CH 52	5260	14.85	15.50	16.00	96.73
		CH 60	5300	14.77	15.50	16.00	
		CH 64	5320	14.51	15.50	16.00	
	802.11n-HT40 MCS0	CH 54	5270	14.73	15.50	16.00	93.64
		CH 62	5310	14.63	15.50	15.50	
		CH 52	5260	14.83	15.50	16.00	96.76
	802.11ac-VHT20 MCS0	CH 60	5300	14.83	15.50	16.00	
		CH 64	5320	14.48	15.50	16.00	
	802.11ac-VHT40 MCS0	CH 54	5270	14.55	15.50	16.00	93.68
		CH 62	5310	14.55	15.50	16.00	
		CH 58	5290	13.19	14.00	14.00	88.06

5GHz WLAN ANT 1

5.5GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Turn-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 100	5800	15.74	16.50	16.00	96.94
		CH 120	5900	15.58	16.00	16.00	
		CH 144	5730	15.31	16.00	16.00	
	802.11n-HT20 MCS0	CH 100	5800	15.03	16.00	16.00	96.73
		CH 120	5900	15.32	16.00	16.00	
		CH 144	5730	14.99	15.50	16.00	
	802.11n-HT40 MCS0	CH 102	5810	14.95	15.50	16.00	93.64
		CH 126	5930	15.24	16.00	16.00	
		CH 142	5710	14.97	15.50	16.00	96.76
	802.11ac-VHT20 MCS0	CH 100	5800	15.22	16.00	16.00	
		CH 120	5900	15.24	16.00	16.00	
		CH 144	5730	15.10	16.00	16.00	93.68
	802.11ac-VHT40 MCS0	CH 102	5810	14.94	15.50	16.00	
		CH 126	5930	15.20	16.00	16.00	
		CH 142	5710	14.97	15.50	16.00	88.06
	802.11ac-VHT80 MCS0	CH 106	5830	15.06	16.00	16.00	
		CH 122	5810	15.19	16.00	16.00	
		CH 138	5690	15.07	16.00	16.00	

5GHz WLAN ANT 1

5.8GHz WLAN ANT 1	Mode	Channel	Frequency (MHz)	Average power (dBm)	Turn-Up Limit	Power Setting	Duty Cycle %
	802.11a 6Mbps	CH 149	5745	14.97	15.50	16.00	96.94
		CH 157	5785	14.90	15.50	16.00	
		CH 165	5825	15.04	16.00	16.00	
	802.11n-HT20 MCS0	CH 149	5745	14.89	15.50	16.00	96.73
		CH 157	5785	14.86	15.50	16.00	
		CH 165	5825	14.89	15.50	16.00	93.64
	802.11n-HT40 MCS0	CH 151	5755	14.95	15.50	16.00	
		CH 159	5795	14.85	15.50	16.00	
		CH 149	5745	14.92	15.50	16.00	96.76
	802.11ac-VHT20 MCS0	CH 157	5785	14.85	15.50	16.00	
		CH 165	5825	14.90	15.50	16.00	
	802.11ac-VHT40 MCS0	CH 151	5755	14.94	15.50	16.00	93.68
		CH 159	5795	14.87	15.50	16.00	
		CH 155	5775	14.88	15.50	16.00	88.06

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 55	2402	7.04	4.53	4.87
	CH 56	2441	11.16	9.26	9.22
	CH 58	2480	7.95	4.89	5.01
Turn-up Limit			12	10	10
Duty Cycle %			77.07	77.19	77.13

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	3Mbps
LE	CH 55	2402	-9.94	-9.71
	CH 56	2440	-4.55	-7.41
	CH 58	2480	-4.47	-7.34
Turn-up Limit			0.5	0.5
Duty Cycle %			61.9	32.26



Reduced Power

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
	128	189	251		128	189	251		
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot	31.66	31.76	31.58	32.00	22.66	22.76	22.58	23.00	0.19
GPRS 1 Tx slot	31.67	31.77	31.59	32.00	22.67	22.77	22.59	23.00	
GPRS 2 Tx slots	29.11	29.19	29.12	30.00	23.11	23.19	23.12	24.00	0.08
GPRS 3 Tx slots	27.41	27.46	27.32	28.00	23.15	23.20	23.06	23.74	0.14
GPRS 4 Tx slots	26.18	26.22	26.17	27.00	23.18	23.22	23.17	24.00	0.05
EDGE 1 Tx slot	25.10	25.12	25.11	26.00	16.10	16.12	16.11	17.00	0.02
EDGE 2 Tx slots	23.40	23.44	23.39	24.00	17.40	17.44	17.39	18.00	0.05
EDGE 3 Tx slots	21.22	21.25	21.23	22.00	16.96	16.99	16.97	17.74	0.03
EDGE 4 Tx slots	19.31	19.34	19.36	20.00	16.31	16.34	16.36	17.00	0.05
Mode		Max.	31.77			Max.	23.22		
Attenuator	Cable Loss : 0.6								

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
	512	661	810		512	661	810		
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8		
GSM 1 Tx slot	28.14	28.18	28.22	29.00	19.14	19.18	19.22	20.00	
GPRS 1 Tx slot	28.15	28.19	28.23	29.00	19.15	19.19	19.23	20.00	0.09
GPRS 2 Tx slots	25.11	25.13	25.15	26.00	19.11	19.13	19.15	20.00	0.04
GPRS 3 Tx slots	23.12	23.14	23.10	24.00	18.86	18.88	18.84	19.74	0.04
GPRS 4 Tx slots	22.48	22.53	22.44	23.00	19.48	19.53	19.44	20.00	0.09
EDGE 1 Tx slot	24.42	24.66	24.45	25.00	15.42	15.66	15.45	16.00	0.24
EDGE 2 Tx slots	21.37	21.48	21.47	22.00	15.37	15.48	15.47	16.00	0.11
EDGE 3 Tx slots	19.48	19.51	19.42	20.00	15.22	15.25	15.16	15.74	0.09
EDGE 4 Tx slots	18.22	18.28	18.21	19.00	15.22	15.28	15.21	16.00	0.07
Mode		Max.	28.23			Max.	19.53		
Attenuator	Cable Loss : 0.8								

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)
	9262	9400	9538		1312	1413	1513		4132	4182	4233	
TX Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Rx Channel	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
Frequency (MHz)												
3GPP Rel 99 RMC 12.2Kbps	18.56	18.59	18.48	19.50	18.48	18.57	18.46	19.50	18.56	18.59	18.43	19.50
3GPP Rel 5 HSDPA Subtest-1	17.30	17.35	17.45	18.50	17.48	17.34	17.44	18.50	17.47	17.51	17.53	18.50
3GPP Rel 5 HSDPA Subtest-2	17.26	17.28	17.42	18.50	17.45	17.33	17.44	18.50	17.43	17.49	17.52	18.50
3GPP Rel 5 HSDPA Subtest-3	16.78	16.87	16.96	17.50	16.95	16.85	16.91	17.50	16.95	16.96	17.04	18.00
3GPP Rel 5 HSDPA Subtest-4	16.74	16.83	16.94	17.50	16.94	16.85	16.89	17.50	16.93	16.98	17.00	18.00
3GPP Rel 6 HSUPA Subtest-1	15.18	15.25	15.38	16.50	15.47	15.41	15.41	16.50	15.49	15.49	15.48	16.50
3GPP Rel 6 HSUPA Subtest-2	15.19	15.30	15.36	16.50	15.45	15.39	15.42	16.50	15.45	15.47	15.45	16.50
3GPP Rel 6 HSUPA Subtest-3	16.17	16.25	16.38	17.50	16.45	16.43	16.39	17.50	16.45	16.49	16.47	17.50
3GPP Rel 6 HSUPA Subtest-4	14.71	14.80	14.91	15.50	14.99	14.91	14.95	15.50	14.97	14.98	15.01	15.50
3GPP Rel 6 HSUPA Subtest-5	16.14	16.21	16.33	17.50	16.42	16.39	16.33	17.50	16.46	16.48	16.43	17.50
3GPP Rel 7 HSPA+ (16QAM) Subtest-1	16.61	16.54	16.67	17.50	16.85	16.94	16.78	17.50	16.86	16.87	16.95	17.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode		Max.	18.59			Max.	18.57			Max.	18.59	



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	18.54	18.57	18.51	
20	QPSK	1	49	18.52	18.46	18.39	19.5
20	QPSK	1	99	18.46	18.42	18.40	
20	QPSK	50	0	17.37	17.46	17.39	
20	QPSK	50	24	17.38	17.43	17.43	18.5
20	QPSK	50	50	17.43	17.39	17.45	
20	QPSK	100	0	17.36	17.45	17.41	
20	16QAM	1	0	17.42	17.42	17.44	18.5
20	16QAM	1	49	17.26	17.56	17.52	
20	16QAM	1	99	17.51	17.36	17.76	
20	16QAM	50	0	17.44	17.41	17.39	18.5
20	16QAM	50	24	17.40	17.45	17.46	
20	16QAM	50	50	17.48	17.45	17.52	
20	16QAM	100	0	17.51	17.52	17.39	17.5
20	64QAM	1	0	16.46	16.65	16.39	
20	64QAM	1	49	16.41	16.59	16.50	
20	64QAM	1	99	16.36	16.69	16.69	17.5
20	64QAM	50	0	16.46	16.38	16.43	
20	64QAM	50	24	16.49	16.43	16.48	
20	64QAM	50	50	16.48	16.49	16.43	17.5
20	64QAM	100	0	16.36	16.33	16.34	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	18.35	18.38	18.29	
15	QPSK	1	37	18.14	18.50	18.38	19.5
15	QPSK	1	74	18.51	18.43	18.51	
15	QPSK	36	0	17.23	17.32	17.31	
15	QPSK	36	20	17.22	17.41	17.38	18.5
15	QPSK	36	39	17.34	17.35	17.32	
15	QPSK	75	0	17.26	17.32	17.28	
15	16QAM	1	0	17.35	17.43	17.37	18.5
15	16QAM	1	37	17.48	17.51	17.37	
15	16QAM	1	74	17.43	17.55	17.55	
15	16QAM	36	0	17.22	17.27	17.30	18.5
15	16QAM	36	20	17.31	17.24	17.37	
15	16QAM	36	39	17.36	17.45	17.42	
15	16QAM	75	0	17.23	17.25	17.34	17.5
15	64QAM	1	0	16.43	16.19	16.25	
15	64QAM	1	37	16.42	16.23	16.65	
15	64QAM	1	74	16.31	16.35	16.50	17.5
15	64QAM	36	0	16.16	16.33	16.21	
15	64QAM	36	20	16.36	16.38	16.28	
15	64QAM	36	39	16.24	16.29	16.38	17.5
15	64QAM	75	0	16.23	16.30	16.29	
Channel				18650	18900	19150	
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	18.39	18.38	18.48	
10	QPSK	1	25	18.43	18.46	18.41	19.5
10	QPSK	1	49	18.39	18.40	18.39	
10	QPSK	25	0	17.41	17.42	17.38	
10	QPSK	25	12	17.37	17.49	17.42	18.5
10	QPSK	25	25	17.28	17.41	17.37	
10	QPSK	50	0	17.34	17.43	17.41	
10	16QAM	1	0	17.82	17.75	17.74	18.5
10	16QAM	1	25	17.51	17.47	17.54	
10	16QAM	1	49	17.46	17.54	17.33	
10	16QAM	25	0	17.36	17.35	17.32	18.5
10	16QAM	25	12	17.52	17.32	17.32	
10	16QAM	25	25	17.32	17.52	17.62	
10	16QAM	50	0	17.89	17.82	17.86	17.5
10	64QAM	1	0	16.40	16.45	16.45	
10	64QAM	1	25	16.43	16.48	16.52	
10	64QAM	1	49	16.10	16.23	16.20	17.5
10	64QAM	25	0	16.40	16.44	16.45	
10	64QAM	25	12	16.43	16.41	16.42	
10	64QAM	25	25	16.36	16.14	16.36	17.5
10	64QAM	50	0	16.37	16.37	16.34	
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	18.39	18.44	18.38	
5	QPSK	1	12	18.38	18.33	18.36	19.5
5	QPSK	1	24	18.34	18.42	18.43	
5	QPSK	12	0	17.47	17.38	17.45	
5	QPSK	12	7	17.48	17.53	17.45	18.5
5	QPSK	12	13	17.26	17.25	17.28	
5	QPSK	25	0	17.25	17.23	17.25	
5	16QAM	1	0	17.38	17.28	17.66	18.5
5	16QAM	1	12	17.36	17.29	17.66	
5	16QAM	1	24	17.39	17.26	17.65	
5	16QAM	12	0	17.48	17.62	17.48	18.5
5	16QAM	12	7	17.38	17.38	17.18	
5	16QAM	12	13	17.18	17.51	17.28	
5	16QAM	25	0	17.28	17.74	17.72	17.5
5	64QAM	1	0	16.48	16.20	16.25	
5	64QAM	1	12	16.64	16.30	16.41	
5	64QAM	1	24	16.65	16.29	16.31	17.5
5	64QAM	12	0	16.30	16.23	16.22	
5	64QAM	12	7	16.36	16.20	16.20	
5	64QAM	12	13	16.33	16.29	16.27	17.5
5	64QAM	25	0	16.40	16.20	16.27	
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	18.33	18.40	18.32	
3	QPSK	1	8	18.43	18.46	18.29	19.5
3	QPSK	1	14	18.44	18.31	18.31	
3	QPSK	8	0	17.35	17.30	17.32	
3	QPSK	8	4	17.41	17.35	17.36	18.5
3	QPSK	8	7	17.41	17.35	17.31	

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	18.53	18.61	18.60	19.5
20	QPSK	1	49	18.39	18.47	18.46	
20	QPSK	1	99	18.31	18.44	18.56	
20	QPSK	50	0	17.61	17.65	17.62	18.5
20	QPSK	50	24	17.52	17.60	17.60	
20	QPSK	50	50	17.41	17.52	17.53	
20	QPSK	100	0	17.51	17.55	17.62	18.5
20	16QAM	1	0	17.38	17.68	17.55	
20	16QAM	1	49	17.53	17.30	17.44	
20	16QAM	1	99	17.32	17.54	17.38	18.5
20	16QAM	50	0	17.51	17.44	17.58	
20	16QAM	50	24	17.77	17.88	17.77	
20	16QAM	50	50	17.73	17.74	17.74	18.5
20	16QAM	100	0	17.75	17.83	17.84	
20	64QAM	1	0	16.49	16.60	16.82	
20	64QAM	1	49	16.53	16.46	16.34	17.5
20	64QAM	1	99	16.80	16.37	16.84	
20	64QAM	50	0	16.50	16.59	16.54	
20	64QAM	50	24	16.52	16.63	16.57	17.5
20	64QAM	50	50	16.56	16.51	16.53	
20	64QAM	100	0	16.59	16.57	16.66	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	18.40	18.44	18.54	
15	QPSK	1	37	18.44	18.53	18.45	
15	QPSK	1	74	18.31	18.53	18.56	
15	QPSK	36	0	17.46	17.53	17.56	18.5
15	QPSK	36	20	17.50	17.63	17.59	
15	QPSK	36	39	17.55	17.54	17.63	
15	QPSK	75	0	17.50	17.52	17.53	18.5
15	16QAM	1	0	17.44	17.66	17.38	
15	16QAM	1	37	17.52	17.52	17.36	
15	16QAM	1	74	17.38	17.68	17.47	18.5
15	16QAM	36	0	17.39	17.41	17.60	
15	16QAM	36	20	17.34	17.41	17.47	
15	16QAM	36	39	17.30	17.39	17.45	17.5
15	16QAM	75	0	17.41	17.42	17.51	
15	64QAM	1	0	16.36	16.67	16.72	
15	64QAM	1	37	16.78	16.54	16.60	17.5
15	64QAM	1	74	16.82	16.53	16.57	
15	64QAM	36	0	16.47	16.54	16.58	
15	64QAM	36	20	16.53	16.55	16.57	17.5
15	64QAM	36	39	16.56	16.52	16.54	
15	64QAM	75	0	16.49	16.60	16.53	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	18.52	18.51	18.34	
10	QPSK	1	25	18.50	18.43	18.44	
10	QPSK	1	49	18.38	18.21	18.44	
10	QPSK	25	0	17.29	17.51	17.53	18.5
10	QPSK	25	12	17.41	17.47	17.51	
10	QPSK	25	25	17.30	17.41	17.48	
10	QPSK	50	0	17.36	17.46	17.38	18.5
10	16QAM	1	0	17.35	17.50	17.26	
10	16QAM	1	25	17.62	17.36	17.68	
10	16QAM	1	49	17.69	17.59	17.58	18.5
10	16QAM	25	0	17.35	17.34	17.33	
10	16QAM	25	12	17.27	17.37	17.34	
10	16QAM	25	25	17.61	17.52	17.61	17.5
10	16QAM	50	0	17.55	17.59	17.71	
10	64QAM	1	0	16.41	16.49	16.39	
10	64QAM	1	25	16.48	16.77	16.86	17.5
10	64QAM	1	49	16.46	16.50	16.45	
10	64QAM	25	0	16.30	16.44	16.43	
10	64QAM	25	12	16.39	16.50	16.54	17.5
10	64QAM	25	25	16.27	16.39	16.41	
10	64QAM	50	0	16.33	16.40	16.39	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	18.49	18.44	18.49	
5	QPSK	1	12	18.48	18.43	18.40	
5	QPSK	1	24	18.23	18.35	18.34	
5	QPSK	12	0	17.37	17.37	17.41	18.5
5	QPSK	12	7	17.37	17.48	17.45	
5	QPSK	12	13	17.32	17.49	17.41	
5	QPSK	25	0	17.35	17.39	17.45	18.5
5	16QAM	1	0	17.25	17.66	17.34	
5	16QAM	1	12	17.36	17.71	17.30	
5	16QAM	1	24	17.30	17.65	17.25	18.5
5	16QAM	12	0	17.29	17.23	17.26	
5	16QAM	12	7	17.32	17.36	17.34	
5	16QAM	12	13	17.59	17.66	17.70	17.5
5	16QAM	25	0	17.60	17.71	17.64	
5	64QAM	1	0	16.37	16.81	16.79	
5	64QAM	1	12	16.75	16.51	16.78	17.5
5	64QAM	1	24	16.71	16.41	16.48	
5	64QAM	12	0	16.38	16.45	16.47	
5	64QAM	12	7	16.37	16.46	16.52	17.5
5	64QAM	12	13	16.38	16.44	16.43	
5	64QAM	25	0	16.33	16.47	16.38	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	18.34	18.35	18.47	
3	QPSK	1	8	18.43	18.57	18.51	
3	QPSK	1	14	18.23	18.42	18.42	
3	QPSK	8	0	17.35	17.41	17.42	18.5
3	QPSK	8	4	17.41	17.49	17.51	
3	QPSK	8	7	17.37	17.47	17.47	



3	QPSK	15	0	17.33	17.41	17.34	18.5
3	16QAM	1	0	17.49	17.40	17.34	
3	16QAM	1	8	17.53	17.47	17.43	
3	16QAM	1	14	17.25	17.22	17.10	18.5
3	16QAM	8	0	17.68	17.81	17.73	
3	16QAM	8	4	17.75	17.72	17.78	
3	16QAM	8	7	17.65	17.70	17.73	17.5
3	16QAM	15	0	17.68	17.72	17.67	
3	64QAM	1	0	16.42	16.35	16.38	
3	64QAM	1	8	16.84	16.83	16.43	17.5
3	64QAM	1	14	16.45	16.81	16.45	
3	64QAM	8	0	16.37	16.39	16.23	
3	64QAM	8	4	16.47	16.37	16.37	17.5
3	64QAM	8	7	16.57	16.46	16.32	
3	64QAM	15	0	16.42	16.42	16.40	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	18.39	18.42	18.37	19.5
1.4	QPSK	1	3	18.29	18.27	18.26	
1.4	QPSK	1	5	18.26	18.24	18.22	
1.4	QPSK	3	0	18.26	18.26	18.22	
1.4	QPSK	3	1	18.30	18.27	18.25	
1.4	QPSK	3	3	18.32	18.38	18.25	
1.4	QPSK	6	0	17.31	17.29	17.28	18.5
1.4	16QAM	1	0	17.34	17.34	17.28	18.5
1.4	16QAM	1	3	17.30	17.50	17.48	
1.4	16QAM	1	5	17.18	17.38	17.06	
1.4	16QAM	3	0	17.20	17.25	17.22	
1.4	16QAM	3	1	17.38	17.20	17.25	
1.4	16QAM	3	3	17.40	17.37	17.11	
1.4	16QAM	6	0	17.41	17.34	17.29	18.5
1.4	64QAM	1	0	16.29	16.21	16.24	17.5
1.4	64QAM	1	3	16.31	16.52	16.40	
1.4	64QAM	1	5	16.29	16.64	16.23	
1.4	64QAM	3	0	16.32	16.38	16.39	
1.4	64QAM	3	1	16.41	16.38	16.59	
1.4	64QAM	3	3	16.33	16.47	16.24	
1.4	64QAM	6	0	16.38	16.41	16.30	17.5

3	QPSK	15	0	17.37	17.43	17.37	18.5
3	16QAM	1	0	17.45	17.54	17.58	
3	16QAM	1	8	17.67	17.67	17.41	
3	16QAM	1	14	17.58	17.36	17.44	18.5
3	16QAM	8	0	17.37	17.38	17.47	
3	16QAM	8	4	17.47	17.47	17.48	
3	16QAM	8	7	17.69	17.77	17.81	17.5
3	16QAM	15	0	17.69	17.67	17.74	
3	64QAM	1	0	16.36	16.45	16.43	
3	64QAM	1	8	16.55	16.43	16.59	17.5
3	64QAM	1	14	16.36	16.43	16.26	
3	64QAM	8	0	16.34	16.38	16.32	
3	64QAM	8	4	16.46	16.44	16.48	17.5
3	64QAM	8	7	16.40	16.47	16.59	
3	64QAM	15	0	16.36	16.44	16.35	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	18.49	18.54	18.52	19.5
1.4	QPSK	1	3	18.43	18.43	18.47	
1.4	QPSK	1	5	18.29	18.38	18.40	
1.4	QPSK	3	0	18.37	18.34	18.33	
1.4	QPSK	3	1	18.33	18.43	18.48	
1.4	QPSK	3	3	18.32	18.39	18.38	
1.4	QPSK	6	0	17.40	17.42	17.38	18.5
1.4	16QAM	1	0	17.34	17.81	17.47	18.5
1.4	16QAM	1	3	17.47	17.55	17.59	
1.4	16QAM	1	5	17.53	17.69	17.49	
1.4	16QAM	3	0	17.56	17.60	17.51	
1.4	16QAM	3	1	17.57	17.60	17.62	
1.4	16QAM	3	3	17.56	17.68	17.57	
1.4	16QAM	6	0	17.47	17.48	17.39	18.5
1.4	64QAM	1	0	16.25	16.19	16.33	17.5
1.4	64QAM	1	3	16.51	16.49	16.61	
1.4	64QAM	1	5	16.42	16.38	16.22	
1.4	64QAM	3	0	16.33	16.31	16.50	
1.4	64QAM	3	1	16.24	16.39	16.36	
1.4	64QAM	3	3	16.30	16.47	16.35	
1.4	64QAM	6	0	16.29	16.30	16.37	17.5



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	18.57	18.58	18.50	19.5
10	QPSK	1	25	18.43	18.46	18.26	
10	QPSK	1	49	18.35	18.47	18.15	
10	QPSK	25	0	17.53	17.55	17.36	18.5
10	QPSK	25	12	17.29	17.31	17.36	
10	QPSK	25	25	17.29	17.40	17.45	
10	QPSK	50	0	17.35	17.23	17.37	18.5
10	16QAM	1	0	17.39	17.58	17.29	
10	16QAM	1	25	17.62	17.65	17.33	
10	16QAM	1	49	17.45	17.51	17.58	18.5
10	16QAM	25	0	17.54	17.55	17.37	
10	16QAM	25	12	17.48	17.56	17.34	
10	16QAM	25	25	17.51	17.44	17.47	18.5
10	16QAM	50	0	17.52	17.43	17.33	
10	64QAM	1	0	16.48	16.58	16.46	17.5
10	64QAM	1	25	16.45	16.65	16.45	
10	64QAM	1	49	16.34	16.56	16.47	
10	64QAM	25	0	16.45	16.56	16.23	17.5
10	64QAM	25	12	16.44	16.61	16.32	
10	64QAM	25	25	16.56	16.45	16.15	
10	64QAM	50	0	16.52	16.48	16.34	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	18.39	18.35	18.33	19.5
5	QPSK	1	12	18.29	18.40	18.24	
5	QPSK	1	24	18.29	18.24	18.24	
5	QPSK	12	0	17.44	17.49	17.35	18.5
5	QPSK	12	7	17.51	17.52	17.44	
5	QPSK	12	13	17.56	17.40	17.35	
5	QPSK	25	0	17.47	17.43	17.35	18.5
5	16QAM	1	0	17.76	17.69	17.45	
5	16QAM	1	12	17.46	17.68	17.44	
5	16QAM	1	24	17.33	17.68	17.51	18.5
5	16QAM	12	0	17.42	17.51	17.50	
5	16QAM	12	7	17.49	17.52	17.34	
5	16QAM	12	13	17.49	17.40	17.45	18.5
5	16QAM	25	0	17.50	17.55	17.50	
5	64QAM	1	0	16.57	16.45	16.56	
5	64QAM	1	12	16.45	16.39	16.53	17.5
5	64QAM	1	24	16.59	16.43	16.37	
5	64QAM	12	0	16.31	16.45	16.25	
5	64QAM	12	7	16.35	16.51	16.29	17.5
5	64QAM	12	13	16.53	16.48	16.05	
5	64QAM	25	0	16.41	16.48	16.09	
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	18.38	18.39	18.24	19.5
3	QPSK	1	8	18.34	18.35	18.26	
3	QPSK	1	14	18.35	18.33	18.07	
3	QPSK	8	0	17.37	17.50	17.48	18.5
3	QPSK	8	4	17.51	17.57	17.54	
3	QPSK	8	7	17.46	17.48	17.35	
3	QPSK	15	0	17.44	17.50	17.49	18.5
3	16QAM	1	0	17.46	17.57	17.64	
3	16QAM	1	8	17.39	17.65	17.49	
3	16QAM	1	14	17.44	17.70	17.45	18.5
3	16QAM	8	0	17.40	17.49	17.23	
3	16QAM	8	4	17.56	17.67	17.24	
3	16QAM	8	7	17.48	17.54	17.28	18.5
3	16QAM	15	0	17.42	17.44	16.99	
3	64QAM	1	0	16.37	16.25	16.46	
3	64QAM	1	8	16.25	16.49	16.25	17.5
3	64QAM	1	14	16.27	16.45	16.26	
3	64QAM	8	0	16.37	16.47	16.45	
3	64QAM	8	4	16.59	16.43	16.37	17.5
3	64QAM	8	7	16.54	16.46	16.43	
3	64QAM	15	0	16.43	16.53	16.33	
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	18.39	18.36	18.40	19.5
1.4	QPSK	1	3	18.42	18.35	18.42	
1.4	QPSK	1	5	18.31	18.25	18.26	
1.4	QPSK	3	0	18.32	18.38	18.34	18.5
1.4	QPSK	3	1	18.38	18.25	18.35	
1.4	QPSK	3	3	18.39	18.31	18.31	
1.4	QPSK	6	0	17.42	17.41	17.40	18.5
1.4	16QAM	1	0	17.55	17.36	17.53	
1.4	16QAM	1	3	17.35	17.59	17.48	
1.4	16QAM	1	5	17.74	17.42	17.48	18.5
1.4	16QAM	3	0	17.27	17.25	17.39	
1.4	16QAM	3	1	17.30	17.57	17.43	
1.4	16QAM	3	3	17.38	17.49	17.37	18.5
1.4	16QAM	6	0	17.57	17.44	17.48	
1.4	64QAM	1	0	16.10	16.27	16.29	
1.4	64QAM	1	3	16.41	16.42	16.37	17.5
1.4	64QAM	1	5	16.36	16.35	16.23	
1.4	64QAM	3	0	16.02	16.29	16.30	
1.4	64QAM	3	1	16.30	16.24	16.25	17.5
1.4	64QAM	3	3	16.20	16.37	16.41	
1.4	64QAM	6	0	16.41	16.53	16.42	

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	18.38	18.54	18.43	19.5
10	QPSK	1	25	18.24	18.37	18.40	
10	QPSK	1	49	18.34	18.35	18.34	
10	QPSK	25	0	17.63	17.73	17.64	18.5
10	QPSK	25	12	17.60	17.54	17.33	
10	QPSK	25	25	17.65	17.71	17.64	
10	QPSK	50	0	17.66	17.68	17.59	18.5
10	16QAM	1	0	17.59	17.14	17.27	
10	16QAM	1	25	17.34	17.29	17.43	
10	16QAM	1	49	17.43	17.48	17.37	18.5
10	16QAM	25	0	17.32	17.34	17.28	
10	16QAM	25	12	17.36	17.40	17.29	
10	16QAM	25	25	17.41	17.42	17.36	18.5
10	16QAM	50	0	17.31	17.39	17.44	
10	64QAM	1	0	16.34	16.46	16.80	17.5
10	64QAM	1	25	16.78	16.84	16.43	
10	64QAM	1	49	16.80	16.48	16.41	
10	64QAM	25	0	16.31	16.25	16.22	17.5
10	64QAM	25	12	16.36	16.39	16.31	
10	64QAM	25	25	16.41	16.38	16.38	
10	64QAM	50	0	16.33	16.26	16.37	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	18.13	18.46	18.24	19.5
5	QPSK	1	12	18.29	18.45	18.29	
5	QPSK	1	24	18.25	18.44	18.30	
5	QPSK	12	0	17.36	17.43	17.42	18.5
5	QPSK	12	7	17.47	17.49	17.46	
5	QPSK	12	13	17.42	17.45	17.42	
5	QPSK	25	0	17.38	17.50	17.46	18.5
5	16QAM	1	0	17.39	17.41	17.43	
5	16QAM	1	12	17.56	17.51	17.52	
5	16QAM	1	24	17.52	17.50	17.46	18.5
5	16QAM	12	0	17.26	17.23	17.26	
5	16QAM	12	7	17.40	17.45	17.29	
5	16QAM	12	13	17.35	17.32	17.37	18.5
5	16QAM	25	0	17.36	17.32	17.34	
5	64QAM	1	0	16.32	16.33	16.38	
5	64QAM	1	12	16.77	16.47	16.40	17.5
5	64QAM	1	24	16.75	16.44	16.49	
5	64QAM	12	0	16.29	16.31	16.26	
5	64QAM	12	7	16.39	16.27	16.33	17.5
5	64QAM	12	13	16.26	16.36	16.41	
5	64QAM	25	0	16.41	16.37	16.34	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	18.21	18.48	18.15	19.5
3	QPSK	1	8	18.39	18.38	18.28	
3	QPSK	1	14	18.33	18.44	18.39	
3	QPSK	8	0	17.44	17.42	17.42	18.5
3	QPSK	8	4	17.47	17.50	17.51	
3	QPSK	8	7	17.42	17.50	17.44	
3	QPSK	15	0	17.41	17.49	17.35	18.5
3	16QAM	1	0	17.42	17.78	17.37	
3	16QAM	1	8	17.62	17.60	17.55	
3	16QAM	1	14	17.45	17.50	17.36	18.5
3	16QAM	8	0	17.42	17.31	17.34	
3	16QAM	8	4	17.47	17.44	17.55	
3	16QAM	8	7	17.31	17.34	17.40	18.5
3	16QAM	15	0	17.29	17.22	17.21	
3	64QAM	1	0	16.33	16.67	16.66	
3	64QAM	1	8	16.62	16.52	16.53	17.5
3	64QAM	1	14	16.55	16.40	16.51	
3	64QAM	8	0	16.22	16.30	16.21	
3	64QAM	8	4	16.31	16.35	16.34	17.5
3	64QAM	8	7	16.30	16.22	16.37	
3	64QAM	15	0	16.29	16.31	16.23	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	18.24	18.41	18.21	19.5
1.4	QPSK	1	3	18.35	18.34	18.36	
1.4	QPSK	1	5	18.24	18.29	18.25	
1.4	QPSK	3	0	18.19	18.32	18.30	18.5
1.4	QPSK	3	1	18.40	18.40	18.07	
1.4	QPSK	3	3	18.35	18.37	18.33	
1.4	QPSK	6	0	17.41	17.38	17.36	18.5
1.4	16QAM	1	0	17.45	17.39	17.24	
1.4	16QAM	1	3	17.26	17.69	17.36	
1.4	16QAM	1	5	17.38	17.39	17.38	18.5
1.4	16QAM	3	0	17.22	17.25	17.26	
1.4	16QAM	3	1	17.28	17.46	17.30	
1.4	16QAM	3	3	17.21	17.35	17.35	18.5
1.4	16QAM	6	0	17.14	17.34	17.24	
1.4	64QAM	1	0	16.17	16.32	16.16	
1.4	64QAM	1	3	16.29	16.22	16.27	17.5
1.4	64QAM	1	5	16.45	16.48	16.44	
1.4	64QAM	3	0	16.35	16.36	16.19	
1.4	64QAM	3	1	16.33	16.57	16.42	17.5
1.4	64QAM	3	3	16.35	16.19	16.35	
1.4	64QAM	6	0	16.31	16.32	16.19	



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	18.43	18.46	18.43	19.5
10	QPSK	1	25	18.31	18.27	18.33	
10	QPSK	1	49	18.24	18.27	18.22	
10	QPSK	25	0	17.54	17.60	17.52	18.5
10	QPSK	25	12	17.39	17.33	17.47	
10	QPSK	25	25	17.37	17.37	17.46	
10	QPSK	50	0	17.50	17.37	17.38	18.5
10	16QAM	1	0	17.23	17.42	17.56	
10	16QAM	1	25	17.44	17.73	17.57	
10	16QAM	1	49	17.40	17.65	17.70	18.5
10	16QAM	25	0	17.34	17.58	17.57	
10	16QAM	25	12	17.40	17.55	17.53	
10	16QAM	25	25	17.23	17.49	17.54	17.5
10	16QAM	50	0	17.27	17.56	17.53	
10	64QAM	1	0	16.24	16.57	16.25	
10	64QAM	1	25	16.47	16.37	16.27	17.5
10	64QAM	1	49	16.21	16.24	16.24	
10	64QAM	25	0	16.39	16.56	16.54	
10	64QAM	25	12	16.31	16.39	16.56	17.5
10	64QAM	25	25	16.25	16.46	16.62	
10	64QAM	50	0	16.32	16.55	16.56	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	18.37	18.33	18.29	19.5
5	QPSK	1	12	18.36	18.32	18.31	
5	QPSK	1	24	18.28	18.34	18.33	
5	QPSK	12	0	17.44	17.62	17.78	18.5
5	QPSK	12	7	17.56	17.65	17.73	
5	QPSK	12	13	17.39	17.67	17.73	
5	QPSK	25	0	17.42	17.59	17.72	18.5
5	16QAM	1	0	17.90	17.95	17.67	
5	16QAM	1	12	18.07	17.63	18.00	
5	16QAM	1	24	17.91	17.96	18.12	18.5
5	16QAM	12	0	17.35	17.38	17.59	
5	16QAM	12	7	17.35	17.42	17.54	
5	16QAM	12	13	17.26	17.51	17.54	17.5
5	16QAM	25	0	17.36	17.48	17.52	
5	64QAM	1	0	16.16	16.17	16.17	
5	64QAM	1	12	16.20	16.17	16.25	17.5
5	64QAM	1	24	16.25	16.25	16.17	
5	64QAM	12	0	16.31	16.36	16.60	
5	64QAM	12	7	16.44	16.52	16.46	17.5
5	64QAM	12	13	16.29	16.47	16.49	
5	64QAM	25	0	16.26	16.45	16.61	

Band 66 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	18.50	18.56	18.54	19.5
20	QPSK	1	49	18.35	18.34	18.30	
20	QPSK	1	99	18.28	18.27	18.30	
20	QPSK	50	0	17.61	17.68	17.64	18.5
20	QPSK	50	24	17.42	17.44	17.57	
20	QPSK	50	50	17.46	17.54	17.42	
20	QPSK	100	0	17.44	17.44	17.36	18.5
20	16QAM	1	0	17.49	17.25	17.53	
20	16QAM	1	49	17.54	17.28	17.34	
20	16QAM	1	99	17.54	17.72	17.51	18.5
20	16QAM	50	0	17.66	17.63	17.60	
20	16QAM	50	24	17.55	17.55	17.56	
20	16QAM	50	50	17.52	17.44	17.40	17.5
20	16QAM	100	0	17.48	17.51	17.57	
20	64QAM	1	0	16.81	16.58	16.91	
20	64QAM	1	49	16.58	16.91	16.90	17.5
20	64QAM	1	99	16.81	16.93	17.01	
20	64QAM	50	0	16.77	16.67	16.80	
20	64QAM	50	24	16.71	16.65	16.77	17.5
20	64QAM	50	50	16.73	16.61	16.67	
20	64QAM	100	0	16.72	16.72	16.70	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	18.48	18.52	18.50	19.5
15	QPSK	1	37	18.52	18.48	18.46	
15	QPSK	1	74	18.46	18.42	18.40	
15	QPSK	36	0	17.55	17.52	17.56	18.5
15	QPSK	36	20	17.55	17.47	17.57	
15	QPSK	36	39	17.41	17.46	17.43	
15	QPSK	75	0	17.50	17.54	17.47	18.5
15	16QAM	1	0	17.49	17.36	17.66	
15	16QAM	1	37	17.36	17.66	17.59	
15	16QAM	1	74	17.46	17.36	17.36	18.5
15	16QAM	36	0	17.67	17.67	17.58	
15	16QAM	36	20	17.70	17.69	17.75	
15	16QAM	36	39	17.62	17.77	17.71	17.5
15	16QAM	75	0	17.72	17.70	17.66	
15	64QAM	1	0	17.03	16.93	17.03	
15	64QAM	1	37	17.05	16.83	16.93	17.5
15	64QAM	1	74	16.70	16.96	17.03	
15	64QAM	36	0	16.82	16.81	16.94	
15	64QAM	36	20	16.92	16.88	16.89	17.5
15	64QAM	36	39	16.81	16.75	16.79	
15	64QAM	75	0	16.83	16.85	16.82	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	18.51	18.51	18.52	19.5
10	QPSK	1	25	18.41	18.39	18.47	
10	QPSK	1	49	18.55	18.43	18.33	
10	QPSK	25	0	17.86	17.79	17.86	18.5
10	QPSK	25	12	17.83	18.02	17.80	
10	QPSK	25	25	17.79	17.75	17.67	
10	QPSK	50	0	17.87	17.72	17.91	18.5
10	16QAM	1	0	17.79	17.79	17.99	
10	16QAM	1	25	17.79	17.88	18.00	
10	16QAM	1	49	17.62	17.82	17.70	18.5
10	16QAM	25	0	17.63	17.80	17.68	
10	16QAM	25	12	17.62	17.82	17.73	
10	16QAM	25	25	17.53	17.58	17.58	17.5
10	16QAM	50	0	17.69	17.73	17.74	
10	64QAM	1	0	16.86	16.86	16.53	
10	64QAM	1	25	16.53	16.66	16.56	17.5
10	64QAM	1	49	16.53	16.53	16.53	
10	64QAM	25	0	16.86	16.84	16.86	
10	64QAM	25	12	16.85	16.89	16.93	17.5
10	64QAM	25	25	16.85	16.78	16.80	
10	64QAM	50	0	16.75	16.85	16.86	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	18.40	18.43	18.48	19.5
5	QPSK	1	12	18.43	18.43	18.42	
5	QPSK	1	24	18.51	18.41	18.47	
5	QPSK	12	0	17.55	17.57	17.53	18.5
5	QPSK	12	7	17.57	17.65	17.58	
5	QPSK	12	13	17.43	17.49	17.50	
5	QPSK	25	0	17.53	17.54	17.53	18.5
5	16QAM	1	0	18.02	17.71	17.72	
5	16QAM	1	12	17.65	17.94	17.89	
5	16QAM	1	24	17.77	17.66	18.01	18.5
5	16QAM	12	0	17.66	17.77	17.73	
5	16QAM	12	7	17.83	17.75	17.87	
5	16QAM	12	13	17.74	17.68	17.75	17.5
5	16QAM	25	0	17.75	17.77	17.69	
5	64QAM	1	0	16.53	16.93	16.73	
5	64QAM	1	12	16.83	16.83	16.83	17.5
5	64QAM	1	24	16.66	16.70	16.66	
5	64QAM	12	0	16.90	16.65	16.86	
5	64QAM	12	7	16.98	16.57	16.88	17.5
5	64QAM	12	13	16.81	16.93	16.88	
5	64QAM	25	0	16.88	16.96	16.83	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	18.47	18.38	18.37	19.5
3	QPSK	1	8	18.34	18.35	18.43	
3	QPSK	1	14	18.25	18.06	18.36	
3	QPSK	8	0	17.81	17.78	17.82	18.5
3	QPSK	8	4	17.76	17.68	17.78	
3	QPSK	8	7	17.62	17.67	17.64	



3	QPSK	15	0	17.71	17.75	17.68	18.5
3	16QAM	1	0	17.40	17.81	17.57	
3	16QAM	1	8	17.73	17.67	17.66	
3	16QAM	1	14	17.77	17.66	17.36	18.5
3	16QAM	8	0	17.58	17.58	17.49	
3	16QAM	8	4	17.61	17.60	17.66	
3	16QAM	8	7	17.53	17.68	17.62	
3	16QAM	15	0	17.63	17.61	17.57	
3	64QAM	1	0	16.94	16.84	16.94	17.5
3	64QAM	1	8	16.96	16.74	16.84	
3	64QAM	1	14	16.61	16.87	16.94	
3	64QAM	8	0	16.73	16.72	16.85	17.5
3	64QAM	8	4	16.83	16.79	16.80	
3	64QAM	8	7	16.72	16.66	16.70	
3	64QAM	15	0	16.74	16.76	16.73	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	18.41	18.32	18.33	19.5
1.4	QPSK	1	3	18.47	18.49	18.49	
1.4	QPSK	1	5	18.39	18.27	18.43	
1.4	QPSK	3	0	18.38	18.31	18.38	
1.4	QPSK	3	1	18.35	18.41	18.32	
1.4	QPSK	3	3	18.36	18.32	18.24	
1.4	QPSK	6	0	17.84	17.69	17.88	18.5
1.4	16QAM	1	0	17.71	17.71	17.91	18.5
1.4	16QAM	1	3	17.71	17.80	17.92	
1.4	16QAM	1	5	17.54	17.74	17.62	
1.4	16QAM	3	0	17.49	17.46	17.72	
1.4	16QAM	3	1	17.58	17.48	17.60	
1.4	16QAM	3	3	17.59	17.60	17.54	
1.4	16QAM	6	0	17.48	17.39	17.40	18.5
1.4	64QAM	1	0	16.99	16.84	17.00	17.5
1.4	64QAM	1	3	16.72	16.81	16.81	
1.4	64QAM	1	5	16.69	16.69	16.80	
1.4	64QAM	3	0	16.78	16.76	16.78	
1.4	64QAM	3	1	16.77	16.81	16.85	
1.4	64QAM	3	3	16.77	16.70	16.72	
1.4	64QAM	6	0	16.67	16.77	16.78	17.5



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)				573	583	588	
20	QPSK	1	0	18.44	18.45	18.45	
20	QPSK	1	49	18.42	18.39	18.45	19.5
20	QPSK	1	99	18.40	18.38	18.40	
20	QPSK	50	0	17.58	17.66	17.54	
20	QPSK	50	24	17.47	17.41	17.26	18.5
20	QPSK	50	50	17.49	17.28	17.34	
20	QPSK	100	0	17.55	17.29	17.36	
20	16QAM	1	0	17.27	17.42	17.70	18.5
20	16QAM	1	49	17.23	17.34	17.48	
20	16QAM	1	99	17.38	17.27	17.28	
20	16QAM	50	0	17.38	17.24	17.27	18.5
20	16QAM	50	24	17.33	17.13	17.28	
20	16QAM	50	50	17.40	17.20	17.28	
20	16QAM	100	0	17.28	17.30	17.30	17.5
20	64QAM	1	0	16.70	16.57	16.39	
20	64QAM	1	49	16.35	16.39	16.49	
20	64QAM	1	99	16.39	16.35	16.67	17.5
20	64QAM	50	0	16.75	16.56	16.55	
20	64QAM	50	24	16.84	16.56	16.47	
20	64QAM	50	50	16.82	16.62	16.38	
20	64QAM	100	0	16.76	16.59	16.52	
Channel				133197	133297	133397	
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	18.36	18.40	18.37	
15	QPSK	1	37	18.39	18.38	18.31	19.5
15	QPSK	1	74	18.25	18.38	18.30	
15	QPSK	36	0	17.60	17.41	17.27	
15	QPSK	36	20	17.56	17.38	17.17	18.5
15	QPSK	36	39	17.55	17.39	17.24	
15	QPSK	75	0	17.56	17.44	17.26	
15	16QAM	1	0	17.28	17.60	17.37	18.5
15	16QAM	1	37	17.37	17.46	17.51	
15	16QAM	1	74	17.31	17.30	17.28	
15	16QAM	36	0	17.32	17.46	17.75	18.5
15	16QAM	36	20	17.33	17.49	17.57	
15	16QAM	36	39	17.50	17.38	17.44	
15	16QAM	75	0	17.67	17.54	17.56	17.5
15	64QAM	1	0	16.65	16.65	16.47	
15	64QAM	1	37	16.75	16.47	16.49	
15	64QAM	1	74	16.47	16.46	16.46	17.5
15	64QAM	36	0	16.82	16.59	16.54	
15	64QAM	36	20	16.58	16.60	16.53	
15	64QAM	36	39	16.48	16.61	16.36	
15	64QAM	75	0	16.78	16.57	16.50	
Channel				133172	133272	133422	
Frequency (MHz)				668	678	693	
10	QPSK	1	0	18.35	18.40	18.36	
10	QPSK	1	25	18.30	18.34	18.36	19.5
10	QPSK	1	49	18.26	18.38	18.38	
10	QPSK	25	0	17.54	17.36	17.25	
10	QPSK	25	12	17.64	17.35	17.35	18.5
10	QPSK	25	25	17.53	17.30	17.24	
10	QPSK	50	0	17.57	17.38	17.43	
10	16QAM	1	0	17.28	17.28	17.29	18.5
10	16QAM	1	25	17.32	17.22	17.19	
10	16QAM	1	49	17.37	17.37	17.42	
10	16QAM	25	0	17.65	17.47	17.45	18.5
10	16QAM	25	12	17.50	17.52	17.21	
10	16QAM	25	25	17.62	17.47	17.26	
10	16QAM	50	0	17.17	17.31	17.28	17.5
10	64QAM	1	0	16.66	16.48	16.46	
10	64QAM	1	25	16.55	16.66	16.47	
10	64QAM	1	49	16.49	16.46	16.46	18.5
10	64QAM	25	0	16.76	16.54	16.37	
10	64QAM	25	12	16.35	16.67	16.38	
10	64QAM	25	25	16.75	16.64	16.30	17.5
10	64QAM	50	0	16.75	16.54	16.36	
Channel				133147	133247	133447	
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	18.39	18.36	18.41	
5	QPSK	1	12	18.30	18.38	18.30	19.5
5	QPSK	1	24	18.35	18.31	18.37	
5	QPSK	12	0	17.44	17.28	17.47	
5	QPSK	12	7	17.61	17.35	17.24	18.5
5	QPSK	12	13	17.61	17.34	17.45	
5	QPSK	25	0	17.46	17.26	17.36	
5	16QAM	1	0	17.57	17.51	17.52	18.5
5	16QAM	1	12	17.56	17.45	17.48	
5	16QAM	1	24	17.54	17.39	17.39	
5	16QAM	12	0	17.63	17.26	17.33	18.5
5	16QAM	12	7	17.57	17.24	17.28	
5	16QAM	12	13	17.33	17.30	17.24	
5	16QAM	25	0	17.40	17.27	17.37	17.5
5	64QAM	1	0	16.35	16.79	16.58	
5	64QAM	1	12	16.65	16.75	16.49	
5	64QAM	1	24	16.59	16.75	16.65	17.5
5	64QAM	12	0	16.48	16.53	16.43	
5	64QAM	12	7	16.48	16.57	16.43	
5	64QAM	12	13	16.75	16.63	16.42	
5	64QAM	25	0	16.75	16.61	16.40	