



REPORT No.: SZ23040024S01

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		32.42	32.46	32.43	33.00	23.42	23.46	23.43	24.00	0.06
GPRS 1 Tx slot		32.40	32.45	32.41	33.00	23.40	23.45	23.41	24.00	
GPRS 2 Tx slots		30.36	30.41	30.40	31.00	24.36	24.41	24.40	25.00	
GPRS 3 Tx slots		28.26	28.34	28.35	29.00	24.00	24.08	24.09	24.74	
GPRS 4 Tx slots		26.10	26.16	26.15	27.00	23.10	23.16	23.15	24.00	0.06
EDGE 1 Tx slot		25.88	25.94	25.92	26.50	18.88	18.94	18.92	17.50	0.06
EDGE 2 Tx slots		24.01	24.03	24.05	25.00	18.01	18.03	18.05	19.00	0.04
EDGE 3 Tx slots		21.63	21.68	21.67	22.50	17.37	17.42	17.41	18.24	0.05
EDGE 4 Tx slots		18.92	18.95	18.96	19.50	15.92	15.95	15.96	16.50	0.04
Mode			Max.	32.46			Max.	24.41		
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		29.21	29.26	29.19	30.00	20.21	20.26	20.19	21.00	0.17
GPRS 1 Tx slot		29.13	29.26	29.09	30.00	20.13	20.26	20.09	21.00	
GPRS 2 Tx slots		26.80	26.83	26.77	27.50	20.80	20.83	20.77	21.50	
GPRS 3 Tx slots		25.18	25.24	25.16	26.00	20.92	20.98	20.90	21.74	
GPRS 4 Tx slots		23.11	23.22	23.09	24.00	20.11	20.22	20.09	21.00	0.13
EDGE 1 Tx slot		26.29	26.31	26.25	27.00	17.29	17.31	17.25	18.00	0.06
EDGE 2 Tx slots		24.22	24.28	24.24	25.00	18.22	18.28	18.24	19.00	0.06
EDGE 3 Tx slots		21.18	21.22	21.16	22.00	16.92	16.96	16.90	17.74	0.06
EDGE 4 Tx slots		18.10	18.11	18.06	19.00	15.10	15.11	15.06	16.00	0.05
Mode			Max.	29.26			Max.	20.98		
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	
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	22.26	22.31	22.30	23.00	22.29	22.36	22.33	23.00	22.40	22.44	22.43	23.00
3GPP Rel 6	HSDPA Subtest-1	22.07	22.01	21.97	23.00	21.95	22.16	21.94	23.00	21.72	21.83	21.74	23.00
3GPP Rel 6	HSDPA Subtest-2	22.09	22.10	22.08	23.00	21.86	22.09	21.89	23.00	21.38	21.55	21.47	23.00
3GPP Rel 6	HSDPA Subtest-3	22.23	22.24	22.19	22.50	21.25	21.48	21.31	22.50	21.10	21.23	21.17	22.50
3GPP Rel 6	HSDPA Subtest-4	21.89	21.89	21.87	22.50	21.26	21.49	21.33	22.50	20.80	20.98	21.03	22.50
3GPP Rel 6	HSUPA Subtest-1	21.39	21.56	21.56	23.00	21.88	22.24	22.03	23.00	19.95	20.14	20.27	23.00
3GPP Rel 6	HSUPA Subtest-2	19.76	19.93	19.82	21.00	19.86	20.03	19.95	21.00	19.44	19.87	19.69	21.00
3GPP Rel 6	HSUPA Subtest-3	20.21	20.38	20.45	22.00	20.27	20.60	20.41	22.00	19.91	20.19	20.32	22.00
3GPP Rel 6	HSUPA Subtest-4	20.31	20.41	20.45	21.00	20.31	20.56	20.40	21.00	19.63	19.94	19.75	21.00
3GPP Rel 6	HSUPA Subtest-5	21.84	21.89	21.97	23.00	21.78	22.11	21.93	23.00	21.41	21.69	21.51	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.89	21.91	21.91	23.00	21.98	21.97	21.97	23.00	21.95	21.97	21.93	23.00
Attenuator		Cable Loss			0.8	Cable Loss			0.8	Cable Loss			0.6
Mode			Max.	22.31			Max.	22.36			Max.	22.44	



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	23.56	23.72	23.63	
20	QPSK	1	49	23.60	23.65	23.52	24.5
20	QPSK	1	99	23.53	23.58	23.61	
20	QPSK	50	0	22.69	22.71	22.58	
20	QPSK	50	24	22.55	22.59	22.63	23.5
20	QPSK	50	50	22.62	22.61	22.57	
20	QPSK	100	0	22.63	22.65	22.60	
20	16QAM	1	0	22.67	22.65	22.54	23.5
20	16QAM	1	49	22.59	22.61	22.64	
20	16QAM	1	99	22.53	22.54	22.58	
20	16QAM	50	0	21.70	21.72	21.66	22.5
20	16QAM	50	24	21.68	21.64	21.53	
20	16QAM	50	50	21.57	21.52	21.55	
20	16QAM	100	0	21.56	21.60	21.59	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	23.57	23.70	23.56	24.5
15	QPSK	1	37	23.62	23.58	23.64	
15	QPSK	1	74	23.63	23.62	23.52	
15	QPSK	36	0	22.84	22.70	22.60	23.5
15	QPSK	36	20	22.82	22.71	22.74	
15	QPSK	36	39	22.75	22.66	22.63	
15	QPSK	75	0	22.73	22.68	22.74	23.5
15	16QAM	1	0	22.78	22.60	22.61	
15	16QAM	1	37	22.47	22.65	22.51	
15	16QAM	1	74	22.51	22.41	22.55	22.5
15	16QAM	36	0	21.66	21.55	21.74	
15	16QAM	36	20	21.75	21.46	21.53	
15	16QAM	36	39	21.59	21.52	21.64	22.5
15	16QAM	75	0	21.45	21.61	21.59	
Channel				18650	18900	19150	
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	23.56	23.69	23.63	24.5
10	QPSK	1	25	23.67	23.66	23.57	
10	QPSK	1	49	23.63	23.55	23.68	
10	QPSK	25	0	22.67	22.51	22.64	23.5
10	QPSK	25	12	22.55	22.68	22.49	
10	QPSK	25	25	22.46	22.65	22.48	
10	QPSK	50	0	22.54	22.48	22.54	23.5
10	16QAM	1	0	22.58	22.57	22.58	
10	16QAM	1	25	22.55	22.72	22.67	
10	16QAM	1	49	22.63	22.54	22.58	22.5
10	16QAM	25	0	21.84	21.85	21.81	
10	16QAM	25	12	21.78	21.74	21.49	
10	16QAM	25	25	21.58	21.63	21.53	22.5
10	16QAM	50	0	21.40	21.44	21.57	
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	23.60	23.67	23.50	24.5
5	QPSK	1	12	23.57	23.60	23.56	
5	QPSK	1	24	23.45	23.61	23.52	
5	QPSK	12	0	22.74	22.74	22.55	23.5
5	QPSK	12	7	22.52	22.42	22.43	
5	QPSK	12	13	22.48	22.72	22.51	
5	QPSK	25	0	22.62	22.53	22.41	23.5
5	16QAM	1	0	22.59	22.78	22.59	
5	16QAM	1	12	22.39	22.49	22.65	
5	16QAM	1	24	22.41	22.49	22.47	22.5
5	16QAM	12	0	21.77	21.63	21.62	
5	16QAM	12	7	21.50	21.56	21.42	
5	16QAM	12	13	21.67	21.34	21.68	22.5
5	16QAM	25	0	21.40	21.46	21.59	
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	23.59	23.69	23.64	24.5
3	QPSK	1	8	23.47	23.68	23.53	
3	QPSK	1	14	23.52	23.63	23.55	
3	QPSK	8	0	22.79	22.80	22.47	23.5
3	QPSK	8	4	22.47	22.41	22.47	
3	QPSK	8	7	22.75	22.45	22.45	
3	QPSK	15	0	22.76	22.65	22.46	23.5
3	16QAM	1	0	22.58	22.58	22.58	
3	16QAM	1	8	22.40	22.56	22.75	
3	16QAM	1	14	22.36	22.36	22.48	22.5
3	16QAM	8	0	21.63	21.53	21.69	
3	16QAM	8	4	21.51	21.71	21.64	
3	16QAM	8	7	21.57	21.36	21.50	22.5
3	16QAM	15	0	21.48	21.63	21.58	
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	23.62	23.68	23.63	24.5
1.4	QPSK	1	3	23.63	23.60	23.66	
1.4	QPSK	1	5	23.56	23.58	23.62	
1.4	QPSK	3	0	22.56	22.55	22.65	23.5
1.4	QPSK	3	1	22.60	22.51	22.66	
1.4	QPSK	3	3	22.59	22.58	22.57	
1.4	QPSK	6	0	22.63	22.51	22.54	23.5
1.4	16QAM	1	0	22.66	22.73	22.48	
1.4	16QAM	1	3	22.43	22.49	22.76	
1.4	16QAM	1	5	22.54	22.45	22.71	23.5
1.4	16QAM	3	0	21.83	21.55	21.73	
1.4	16QAM	3	1	21.55	21.68	21.59	
1.4	16QAM	3	3	21.70	21.67	21.69	22.5
1.4	16QAM	6	0	21.47	21.52	21.40	

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	23.62	23.80	23.63	24.5	
20	QPSK	1	49	23.72	23.64	23.70		
20	QPSK	1	99	23.70	23.71	23.51		
20	QPSK	50	0	22.70	22.75	22.71	23.5	
20	QPSK	50	24	22.62	22.75	22.80		
20	QPSK	50	50	22.70	22.53	22.76		
20	QPSK	100	0	22.56	22.84	22.71	23.5	
20	16QAM	1	0	22.79	22.67	22.48		
20	16QAM	1	49	22.61	22.76	22.76		
20	16QAM	1	99	22.53	22.45	22.53	22.5	
20	16QAM	50	0	21.71	21.90	21.66		
20	16QAM	50	24	21.75	21.55	21.62		
20	16QAM	50	50	21.52	21.46	21.53	22.5	
20	16QAM	100	0	21.71	21.58	21.59		
Channel				20025	20175	20325	Tune-up limit (dBm)	
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.56	23.77	23.67	24.5	
15	QPSK	1	37	23.57	23.62	23.54		
15	QPSK	1	74	23.66	23.55	23.57		
15	QPSK	36	0	22.83	22.79	22.62	23.5	
15	QPSK	36	20	22.51	22.52	22.60		
15	QPSK	36	39	22.61	22.59	22.53		
15	QPSK	75	0	22.66	22.67	22.70	23.5	
15	16QAM	1	0	22.74	22.58	22.57		
15	16QAM	1	37	22.74	22.72	22.82		
15	16QAM	1	74	22.49	22.52	22.60	22.5	
15	16QAM	36	0	21.64	21.81	21.64		
15	16QAM	36	20	21.77	21.59	21.57		
15	16QAM	36	39	21.74	21.42	21.62	22.5	
15	16QAM	75	0	21.54	21.54	21.62		
Channel				20000	20175	20350	Tune-up limit (dBm)	
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	23.67	23.79	23.63	24.5	
10	QPSK	1	25	23.73	23.58	23.64		
10	QPSK	1	49	23.64	23.54	23.73		
10	QPSK	25	0	22.89	22.85	22.50	23.5	
10	QPSK	25	12	22.71	22.72	22.55		
10	QPSK	25	25	22.59	22.69	22.49		
10	QPSK	50	0	22.58	22.79	22.73	23.5	
10	16QAM	1	0	22.85	22.74	22.47		
10	16QAM	1	25	22.56	22.53	22.62		
10	16QAM	1	49	22.44	22.45	22.49	22.5	
10	16QAM	25	0	21.79	21.89	21.69		
10	16QAM	25	12	21.84	21.65	21.60		
10	16QAM	25	25	21.53	21.52	21.57	22.5	
10	16QAM	50	0	21.62	21.55	21.65		
Channel				19975	20175	20375	Tune-up limit (dBm)	
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	23.62	23.78	23.77	24.5	
5	QPSK	1	12	23.70	23.65	23.58		
5	QPSK	1	24	23.63	23.58	23.51		
5	QPSK	12	0	22.72	22.84	22.51	23.5	
5	QPSK	12	7	22.65	22.76	22.79		
5	QPSK	12	13	22.65	22.80	22.56		
5	QPSK	25	0	22.63	22.58	22.56	23.5	
5	16QAM	1	0	22.57	22.77	22.57		
5	16QAM	1	12	22.71	22.67	22.65		
5	16QAM	1	24	22.69	22.54	22.54	22.5	
5	16QAM	12	0	21.80	21.85	21.69		
5	16QAM	12	7	21.84	21.72	21.70		
5	16QAM	12	13	21.50	21.66	21.57	22.5	
5	16QAM	25	0	21.63	21.56	21.70		
Channel				19965	20175	20385	Tune-up limit (dBm)	
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	23.60	23.76	23.74	24.5	
3	QPSK	1	8	23.66	23.69	23.62		
3	QPSK	1	14	23.58	23.57	23.58		
3	QPSK	8	0	22.60	22.65	22.60	23.5	
3	QPSK	8	4	22.58	22.57	22.75		
3	QPSK	8	7	22.79	22.59	22.57		
3	QPSK	15	0	22.58	22.55	22.56	23.5	
3	16QAM	1	0	22.69	22.57	22.66		
3	16QAM	1	8	22.49	22.58	22.80		
3	16QAM	1	14	22.58	22.54	22.50	22.5	
3	16QAM	8	0	21.71	21.67	21.81		
3	16QAM	8	4	21.81	21.71	21.63		
3	16QAM	8	7	21.77	21.56	21.58	22.5	
3	16QAM	15	0	21.62	21.65	21.72		
Channel				19957	20175	20393	Tune-up limit (dBm)	
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	23.52	23.78	23.68	24.5	
1.4	QPSK	1	3	23.69	23.71	23.72		
1.4	QPSK	1	5	23.60	23.55	23.77		
1.4	QPSK	3	0	22.60	22.68	22.73		
1.4	QPSK	3	1	22.67	22.78	22.78	23.5	
1.4	QPSK	3	3	22.56	22.57	22.55		
1.4	QPSK	6	0	22.60	22.60	22.72		
1.4	16QAM	1	0	22.74	22.73	22.51		
1.4	16QAM	1	3	22.56	22.52	22.60	23.5	
1.4	16QAM	1	5	22.73	22.73	22.66		
1.4	16QAM	3	0	21.72	21.87	21.75		
1.4	16QAM	3	1	21.58	21.68	21.55		
1.4	16QAM	3	3	21.52	21.60	21.50	22.5	
1.4	16QAM	6	0	21.66	21.77	21.69		



Band 5 (Cellular 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	23.37	23.42	23.26	24
10	QPSK	1	25	23.34	23.35	23.40	
10	QPSK	1	49	23.24	23.37	23.27	
10	QPSK	25	0	22.43	22.44	22.23	23
10	QPSK	25	12	22.39	22.24	22.37	
10	QPSK	25	25	22.47	22.39	22.45	
10	QPSK	50	0	22.31	22.39	22.25	23
10	16QAM	1	0	22.39	22.46	22.34	
10	16QAM	1	25	22.28	22.41	22.24	
10	16QAM	1	49	22.19	22.24	22.46	22
10	16QAM	25	0	21.47	21.50	21.51	
10	16QAM	25	12	21.41	21.26	21.19	
10	16QAM	25	25	21.24	21.21	21.37	22
10	16QAM	50	0	21.23	21.32	21.29	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	23.24	23.40	23.31	
5	QPSK	1	12	23.33	23.33	23.24	24
5	QPSK	1	24	23.28	23.25	23.29	
5	QPSK	12	0	22.29	22.43	22.47	
5	QPSK	12	7	22.17	22.49	22.34	23
5	QPSK	12	13	22.42	22.32	22.40	
5	QPSK	25	0	22.36	22.55	22.23	
5	16QAM	1	0	22.51	22.39	22.19	23
5	16QAM	1	12	22.37	22.30	22.31	
5	16QAM	1	24	22.15	22.42	22.18	
5	16QAM	12	0	21.41	21.48	21.44	22
5	16QAM	12	7	21.49	21.41	21.23	
5	16QAM	12	13	21.32	21.20	21.20	
5	16QAM	25	0	21.42	21.42	21.45	
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	23.32	23.39	23.30	
3	QPSK	1	8	23.21	23.37	23.32	24
3	QPSK	1	14	23.31	23.25	23.29	
3	QPSK	8	0	22.53	22.32	22.30	
3	QPSK	8	4	22.16	22.31	22.48	23
3	QPSK	8	7	22.44	22.40	22.40	
3	QPSK	15	0	22.29	22.37	22.43	
3	16QAM	1	0	22.32	22.39	22.24	23
3	16QAM	1	8	22.19	22.43	22.46	
3	16QAM	1	14	22.19	22.34	22.33	
3	16QAM	8	0	21.57	21.50	21.35	22
3	16QAM	8	4	21.31	21.53	21.28	
3	16QAM	8	7	21.35	21.24	21.17	
3	16QAM	15	0	21.32	21.30	21.22	
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	23.27	23.38	23.29	
1.4	QPSK	1	3	23.30	23.37	23.28	24
1.4	QPSK	1	5	23.32	23.31	23.25	
1.4	QPSK	3	0	22.40	22.54	22.18	
1.4	QPSK	3	1	22.22	22.39	22.51	23
1.4	QPSK	3	3	22.25	22.47	22.45	
1.4	QPSK	6	0	22.49	22.29	22.49	
1.4	16QAM	1	0	22.39	22.44	22.24	23
1.4	16QAM	1	3	22.22	22.34	22.36	
1.4	16QAM	1	5	22.16	22.44	22.39	
1.4	16QAM	3	0	21.46	21.43	21.56	23
1.4	16QAM	3	1	21.41	21.38	21.33	
1.4	16QAM	3	3	21.42	21.35	21.36	
1.4	16QAM	6	0	21.25	21.20	21.26	22

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	23.11	23.25	23.21	24
20	QPSK	1	49	23.21	23.17	23.18	
20	QPSK	1	99	23.23	23.03	23.17	
20	QPSK	50	0	22.32	22.36	22.15	23
20	QPSK	50	24	22.06	22.22	22.14	
20	QPSK	50	50	22.23	22.24	22.25	
20	QPSK	100	0	22.26	22.05	22.29	23
20	16QAM	1	0	22.35	22.26	22.12	
20	16QAM	1	49	22.26	22.30	22.23	
20	16QAM	1	99	22.00	22.21	22.02	22
20	16QAM	50	0	21.36	21.30	21.19	
20	16QAM	50	24	21.15	21.22	21.21	
20	16QAM	50	50	21.03	21.02	21.07	22
20	16QAM	100	0	21.13	21.30	21.10	
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	23.16	23.22	23.18	
15	QPSK	1	37	23.04	23.13	23.14	24
15	QPSK	1	74	23.12	23.18	23.06	
15	QPSK	36	0	22.35	22.16	22.09	
15	QPSK	36	20	22.05	22.26	22.22	23
15	QPSK	36	39	22.19	22.30	22.20	
15	QPSK	75	0	22.06	22.08	22.05	
15	16QAM	1	0	22.12	22.16	22.10	23
15	16QAM	1	37	22.13	22.23	22.31	
15	16QAM	1	74	22.20	22.05	22.26	
15	16QAM	36	0	21.29	21.13	21.13	22
15	16QAM	36	20	21.13	21.05	21.12	
15	16QAM	36	39	21.27	21.10	21.11	
15	16QAM	75	0	21.06	21.12	21.24	
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	23.16	23.20	23.11	
10	QPSK	1	25	23.13	23.15	23.14	24
10	QPSK	1	49	23.11	23.09	23.09	
10	QPSK	25	0	22.35	22.41	22.17	
10	QPSK	25	12	22.07	22.09	22.30	23
10	QPSK	25	25	22.03	22.23	22.01	
10	QPSK	50	0	22.31	22.07	22.27	
10	16QAM	1	0	22.20	22.18	22.05	23
10	16QAM	1	25	22.24	22.06	22.33	
10	16QAM	1	49	22.22	22.08	22.06	
10	16QAM	25	0	21.29	21.24	21.27	22
10	16QAM	25	12	21.15	21.06	21.08	
10	16QAM	25	25	21.17	21.07	21.19	
10	16QAM	50	0	21.04	21.05	21.18	
Channel				20775	21100	21425	
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	23.05	23.21	23.07	
5	QPSK	1	12	23.09	23.19	23.06	24
5	QPSK	1	24	23.10	23.12	23.13	
5	QPSK	12	0	22.26	22.32	22.15	
5	QPSK	12	7	22.12	22.10	22.24	23
5	QPSK	12	13	22.28	22.21	22.05	
5	QPSK	25	0	22.32	22.15	22.27	
5	16QAM	1	0	22.32	22.15	22.07	23
5	16QAM	1	12	22.26	22.20	22.26	
5	16QAM	1	24	22.18	22.05	22.15	
5	16QAM	12	0	21.20	21.19	21.10	22
5	16QAM	12	7	21.37	21.31	21.17	
5	16QAM	12	13	21.13	21.22	21.00	
5	16QAM	25	0	21.07	21.30	21.05	



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				23090	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.22	23.38	23.37	24
10	QPSK	1	25	23.34	23.33	23.28	
10	QPSK	1	49	23.29	23.37	23.29	
10	QPSK	25	0	22.37	22.44	22.28	23
10	QPSK	25	12	22.19	22.31	22.41	
10	QPSK	25	25	22.32	22.37	22.31	
10	QPSK	50	0	22.47	22.36	22.25	23
10	16QAM	1	0	22.32	22.41	22.43	
10	16QAM	1	25	22.47	22.28	22.44	
10	16QAM	1	49	22.40	22.36	22.38	22
10	16QAM	25	0	21.43	21.55	21.50	
10	16QAM	25	12	21.51	21.52	21.28	
10	16QAM	25	25	21.33	21.24	21.26	22
10	16QAM	50	0	21.18	21.43	21.29	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	23.29	23.37	23.27	24
5	QPSK	1	12	23.34	23.32	23.14	
5	QPSK	1	24	23.18	23.37	23.34	
5	QPSK	12	0	22.30	22.32	22.36	23
5	QPSK	12	7	22.22	22.19	22.30	
5	QPSK	12	13	22.35	22.32	22.28	
5	QPSK	25	0	22.35	22.26	22.43	23
5	16QAM	1	0	22.54	22.28	22.42	
5	16QAM	1	12	22.44	22.41	22.26	
5	16QAM	1	24	22.42	22.29	22.22	22
5	16QAM	12	0	21.37	21.43	21.41	
5	16QAM	12	7	21.30	21.30	21.16	
5	16QAM	12	13	21.37	21.40	21.44	22
5	16QAM	25	0	21.43	21.42	21.35	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	23.28	23.35	23.31	24
3	QPSK	1	8	23.26	23.29	23.33	
3	QPSK	1	14	23.24	23.32	23.22	
3	QPSK	8	0	22.41	22.46	22.45	23
3	QPSK	8	4	22.34	22.35	22.52	
3	QPSK	8	7	22.41	22.23	22.34	
3	QPSK	15	0	22.41	22.33	22.27	23
3	16QAM	1	0	22.39	22.28	22.36	
3	16QAM	1	8	22.42	22.51	22.25	
3	16QAM	1	14	22.27	22.32	22.43	22
3	16QAM	8	0	21.47	21.36	21.50	
3	16QAM	8	4	21.52	21.48	21.41	
3	16QAM	8	7	21.45	21.36	21.24	22
3	16QAM	15	0	21.36	21.20	21.22	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.26	23.36	23.34	24
1.4	QPSK	1	3	23.19	23.28	23.14	
1.4	QPSK	1	5	23.22	23.29	23.22	
1.4	QPSK	3	0	22.34	22.39	22.35	23
1.4	QPSK	3	1	22.17	22.23	22.33	
1.4	QPSK	3	3	22.16	22.28	22.30	
1.4	QPSK	6	0	22.33	22.48	22.20	23
1.4	16QAM	1	0	22.30	22.32	22.30	
1.4	16QAM	1	3	22.25	22.47	22.44	
1.4	16QAM	1	5	22.40	22.33	22.20	23
1.4	16QAM	3	0	21.39	21.37	21.39	
1.4	16QAM	3	1	21.40	21.44	21.40	
1.4	16QAM	3	3	21.29	21.12	21.28	22
1.4	16QAM	6	0	21.27	21.20	21.25	

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	23.30	23.35	23.27	24
10	QPSK	1	25	23.23	23.33	23.28	
10	QPSK	1	49	23.33	23.28	23.17	
10	QPSK	25	0	22.35	22.39	22.28	23
10	QPSK	25	12	22.21	22.30	22.30	
10	QPSK	25	25	22.29	22.31	22.34	
10	QPSK	50	0	22.36	22.29	22.33	23
10	16QAM	1	0	22.47	22.41	22.29	
10	16QAM	1	25	22.20	22.28	22.51	
10	16QAM	1	49	22.42	22.36	22.45	22
10	16QAM	25	0	21.37	21.41	21.47	
10	16QAM	25	12	21.55	21.24	21.30	
10	16QAM	25	25	21.45	21.28	21.32	22
10	16QAM	50	0	21.37	21.37	21.44	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.25	23.32	23.26	24
5	QPSK	1	12	23.20	23.25	23.19	
5	QPSK	1	24	23.22	23.23	23.23	
5	QPSK	12	0	22.30	22.43	22.48	23
5	QPSK	12	7	22.32	22.28	22.36	
5	QPSK	12	13	22.41	22.29	22.25	
5	QPSK	25	0	22.44	22.40	22.50	23
5	16QAM	1	0	22.30	22.51	22.35	
5	16QAM	1	12	22.48	22.43	22.35	
5	16QAM	1	24	22.16	22.26	22.48	22
5	16QAM	12	0	21.39	21.44	21.52	
5	16QAM	12	7	21.39	21.36	21.41	
5	16QAM	12	13	21.33	21.28	21.32	22
5	16QAM	25	0	21.32	21.28	21.21	



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	23.65	23.65	23.71	24.5
20	QPSK	1	49	23.63	23.67	23.81	
20	QPSK	1	99	23.61	23.73	23.68	
20	QPSK	50	0	22.78	22.83	22.65	23.5
20	QPSK	50	24	22.75	22.71	22.74	
20	QPSK	50	50	22.76	22.76	22.59	
20	QPSK	100	0	22.76	22.73	22.63	23.5
20	16QAM	1	0	22.92	22.82	22.55	
20	16QAM	1	49	22.75	22.69	22.91	
20	16QAM	1	99	22.64	22.63	22.80	22.5
20	16QAM	50	0	21.90	22.02	21.91	
20	16QAM	50	24	21.98	21.81	21.59	
20	16QAM	50	50	21.72	21.53	21.68	22.5
20	16QAM	100	0	21.66	21.84	21.73	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.67	23.83	23.72	24.5
15	QPSK	1	37	23.77	23.72	23.61	
15	QPSK	1	74	23.57	23.77	23.69	
15	QPSK	36	0	22.85	22.90	22.67	23.5
15	QPSK	36	20	22.55	22.76	22.75	
15	QPSK	36	39	22.67	22.82	22.67	
15	QPSK	75	0	22.70	22.74	22.85	23.5
15	16QAM	1	0	22.85	22.84	22.66	
15	16QAM	1	37	22.61	22.77	22.70	
15	16QAM	1	74	22.55	22.63	22.86	22.5
15	16QAM	36	0	21.73	21.99	21.73	
15	16QAM	36	20	21.88	21.64	21.77	
15	16QAM	36	39	21.78	21.80	21.78	22.5
15	16QAM	75	0	21.58	21.69	21.89	
Channel				132022	132322	132622	
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.74	23.80	23.77	24.5
10	QPSK	1	25	23.70	23.65	23.54	
10	QPSK	1	49	23.71	23.69	23.72	
10	QPSK	25	0	22.91	22.95	22.75	23.5
10	QPSK	25	12	22.66	22.85	22.78	
10	QPSK	25	25	22.70	22.85	22.81	
10	QPSK	50	0	22.85	22.70	22.63	23.5
10	16QAM	1	0	22.90	22.86	22.54	
10	16QAM	1	25	22.60	22.90	22.87	
10	16QAM	1	49	22.60	22.79	22.68	22.5
10	16QAM	25	0	21.74	21.83	21.88	
10	16QAM	25	12	21.84	21.73	21.83	
10	16QAM	25	25	21.74	21.79	21.61	22.5
10	16QAM	50	0	21.63	21.74	21.84	
Channel				131997	132322	132647	
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.75	23.81	23.72	24.5
5	QPSK	1	12	23.72	23.72	23.63	
5	QPSK	1	24	23.78	23.70	23.73	
5	QPSK	12	0	22.96	22.88	22.76	23.5
5	QPSK	12	7	22.63	22.64	22.88	
5	QPSK	12	13	22.85	22.64	22.67	
5	QPSK	25	0	22.91	22.90	22.66	23.5
5	16QAM	1	0	22.73	22.66	22.81	
5	16QAM	1	12	22.74	22.77	22.69	
5	16QAM	1	24	22.65	22.69	22.59	22.5
5	16QAM	12	0	21.96	21.81	21.77	
5	16QAM	12	7	21.88	21.67	21.65	
5	16QAM	12	13	21.69	21.58	21.79	22.5
5	16QAM	25	0	21.66	21.73	21.76	
Channel				131987	132322	132657	
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.67	23.82	23.68	24.5
3	QPSK	1	8	23.69	23.79	23.79	
3	QPSK	1	14	23.79	23.70	23.72	
3	QPSK	8	0	22.99	22.89	22.60	23.5
3	QPSK	8	4	22.66	22.59	22.90	
3	QPSK	8	7	22.82	22.86	22.66	
3	QPSK	15	0	22.93	22.87	22.85	23.5
3	16QAM	1	0	22.97	22.93	22.59	
3	16QAM	1	8	22.88	22.91	22.79	
3	16QAM	1	14	22.67	22.74	22.77	22.5
3	16QAM	8	0	21.85	21.99	21.90	
3	16QAM	8	4	21.93	21.89	21.53	
3	16QAM	8	7	21.62	21.60	21.62	22.5
3	16QAM	15	0	21.56	21.84	21.63	
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.68	23.80	23.72	24.5
1.4	QPSK	1	3	23.61	23.77	23.71	
1.4	QPSK	1	5	23.61	23.76	23.63	
1.4	QPSK	3	0	22.85	22.72	22.66	23.5
1.4	QPSK	3	1	22.57	22.72	22.86	
1.4	QPSK	3	3	22.92	22.79	22.86	
1.4	QPSK	6	0	22.70	22.66	22.71	23.5
1.4	16QAM	1	0	22.80	22.80	22.68	
1.4	16QAM	1	3	22.87	22.73	22.86	
1.4	16QAM	1	5	22.64	22.67	22.83	23.5
1.4	16QAM	3	0	21.74	21.88	21.94	
1.4	16QAM	3	1	21.83	21.87	21.59	
1.4	16QAM	3	3	21.58	21.81	21.63	22.5
1.4	16QAM	6	0	21.84	21.77	21.77	

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	23.32	23.42	23.37	24
20	QPSK	1	49	23.35	23.38	23.15	
20	QPSK	1	99	23.25	23.26	23.27	
20	QPSK	50	0	22.35	22.39	22.35	23
20	QPSK	50	24	22.35	22.22	22.29	
20	QPSK	50	50	22.24	22.34	22.29	
20	QPSK	100	0	22.19	22.31	22.32	23
20	16QAM	1	0	22.41	22.40	22.23	
20	16QAM	1	49	22.28	22.33	22.27	
20	16QAM	1	99	22.16	22.29	22.18	22
20	16QAM	50	0	21.32	21.41	21.31	
20	16QAM	50	24	21.27	21.32	21.24	
20	16QAM	50	50	21.25	21.33	21.43	22
20	16QAM	100	0	21.25	21.32	21.41	
Channel				133197	133297	133397	
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	23.21	23.40	23.26	24
15	QPSK	1	37	23.13	23.33	23.21	
15	QPSK	1	74	23.27	23.31	23.24	
15	QPSK	36	0	22.31	22.31	22.30	23
15	QPSK	36	20	22.28	22.34	22.40	
15	QPSK	36	39	22.36	22.19	22.34	
15	QPSK	75	0	22.28	22.14	22.21	23
15	16QAM	1	0	22.33	22.38	22.20	
15	16QAM	1	37	22.41	22.43	22.28	
15	16QAM	1	74	22.14	22.25	22.41	22
15	16QAM	36	0	21.33	21.36	21.35	
15	16QAM	36	20	21.25	21.20	21.32	
15	16QAM	36	39	21.27	21.39	21.20	22
15	16QAM	75	0	21.23	21.19	21.23	
Channel				133172	133272	133422	
Frequency (MHz)				668	678	693	
10	QPSK	1	0	23.19	23.37	23.29	24
10	QPSK	1	25	23.32	23.33	23.33	
10	QPSK	1	49	23.17	23.32	23.41	
10	QPSK	25	0	22.36	22.38	22.20	23
10	QPSK	25	12	22.37	22.19	22.26	
10	QPSK	25	25	22.33	22.30	22.36	
10	QPSK	50	0	22.36	22.34	22.29	23
10	16QAM	1	0	22.29	22.29	22.15	
10	16QAM	1	25	22.35	22.24	22.24	
10	16QAM	1	49	22.36	22.39	22.43	22
10	16QAM	25	0	21.42	21.39	21.33	
10	16QAM	25	12	21.24	21.33	21.22	
10	16QAM	25	25	21.26	21.14	21.22	22
10	16QAM	50	0	21.44	21.37	21.27	
Channel				133147	133247	133447	
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	23.18	23.38	23.33	24
5	QPSK	1	12	23.22	23.31	23.26	
5	QPSK	1	24	23.17	23.29	23.22	
5	QPSK	12	0	22.41	22.38	22.26	23
5	QPSK	12	7	22.25	22.22	22.29	
5	QPSK	12	13	22.31	22.22	22.33	
5	QPSK	25	0	22.26	22.36	22.31	23
5	16QAM	1	0	22.43	22.29	22.41	
5	16QAM	1	12	22.39	22.33	22.39	
5	16QAM	1	24	22.39	22.33	22.45	22
5	16QAM	12	0	21.38	21.40	21.42	
5	16QAM	12	7	21.40	21.35	21.17	
5	16QAM	12	13	21.32	21.20	21.19	22
5	16QAM	25	0	21.27	21.49	21.28	

2.4GHz WLAN ANT 1

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN ANT 1	802.11b 1Mbps	CH 1	2412	15.61	16.00	99.71
		CH 7	2442	15.20	15.00	
		CH 13	2472	15.51	13.00	
	802.11g 6Mbps	CH 1	2412	13.51	14.00	98.48
		CH 7	2442	13.22	14.00	
		CH 13	2472	11.18	9.00	
	802.11n-HT20 MCS0	CH 1	2412	11.57	12.00	98.27
		CH 7	2442	11.00	13.00	
		CH 13	2472	10.12	8.00	

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	7.00	4.70	4.85
	CH 39	2441	5.41	3.53	3.47
	CH 78	2480	3.43	1.88	1.68
Tune-up Limit			8	5.5	5.5
Duty Cycle %			77.6	77.07	77.07

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	-0.22
	CH 19	2440	-1.65
	CH 39	2480	-3.29
Tune-up Limit			0
Duty Cycle %			63.15



Reduced 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	30.42	30.46	30.43	31.00	21.42	21.46	21.43	22.00	0.06
GPRS 1 Tx slot	30.40	30.45	30.41	31.00	21.40	21.45	21.41	22.00	
GPRS 2 Tx slots	28.36	28.41	28.40	29.00	22.36	22.41	22.40	23.00	0.05
GPRS 3 Tx slots	26.26	26.34	26.35	27.00	22.00	22.08	22.09	22.74	0.09
GPRS 4 Tx slots	24.10	24.16	24.15	25.00	21.10	21.16	21.15	22.00	0.06
EDGE 1 Tx slot	23.88	23.94	23.92	24.50	14.88	14.94	14.92	15.50	0.06
EDGE 2 Tx slots	22.01	22.03	22.05	23.00	16.01	16.03	16.05	17.00	0.04
EDGE 3 Tx slots	19.63	19.68	19.67	20.50	15.37	15.42	15.41	16.24	0.05
EDGE 4 Tx slots	16.92	16.95	16.96	17.50	13.92	13.95	13.96	14.50	0.04
Mode		Max.	30.46			Max.	22.41		
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	26.71	26.76	26.69	27.50	17.71	17.76	17.69	18.50	0.17
GPRS 1 Tx slot	26.63	26.76	26.59	27.50	17.63	17.76	17.59	18.50	
GPRS 2 Tx slots	24.30	24.33	24.27	25.00	18.30	18.33	18.27	19.00	0.06
GPRS 3 Tx slots	22.68	22.74	22.66	23.50	18.42	18.48	18.40	19.24	0.08
GPRS 4 Tx slots	20.61	20.72	20.59	21.50	17.61	17.72	17.59	18.50	0.13
EDGE 1 Tx slot	23.79	23.81	23.75	24.50	14.79	14.81	14.75	15.50	0.06
EDGE 2 Tx slots	21.72	21.78	21.74	22.50	15.72	15.78	15.74	16.50	0.06
EDGE 3 Tx slots	18.68	18.72	18.66	19.50	14.42	14.46	14.40	15.24	0.06
EDGE 4 Tx slots	15.60	15.61	15.56	16.50	12.60	12.61	12.56	13.50	0.05
Mode		Max.	26.76			Max.	18.48		
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	
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	15.76	15.81	15.80	16.50	15.79	15.86	15.83	16.50	16.90	16.94	16.93	17.50
3GPP Rel 6 HSDPA Subtest-1	15.57	15.51	15.47	16.50	15.45	15.66	15.44	16.50	16.22	16.33	16.24	17.50
3GPP Rel 6 HSDPA Subtest-2	15.59	15.60	15.58	16.50	15.36	15.59	15.39	16.50	15.88	16.05	15.97	17.50
3GPP Rel 6 HSDPA Subtest-3	15.73	15.74	15.69	16.00	14.75	14.98	14.81	16.00	15.60	15.73	15.67	17.00
3GPP Rel 6 HSDPA Subtest-4	15.39	15.39	15.37	16.00	14.76	14.99	14.83	16.00	15.30	15.48	15.53	17.00
3GPP Rel 6 HSUPA Subtest-1	14.89	15.06	15.06	16.50	15.38	15.74	15.53	16.50	14.45	14.64	14.77	17.50
3GPP Rel 6 HSUPA Subtest-2	13.26	13.43	13.32	14.50	13.36	13.53	13.45	14.50	13.94	14.37	14.19	15.50
3GPP Rel 6 HSUPA Subtest-3	13.71	13.88	13.95	15.50	13.77	14.10	13.91	15.50	14.41	14.69	14.82	16.50
3GPP Rel 6 HSUPA Subtest-4	13.81	13.91	13.95	14.50	13.81	14.06	13.90	14.50	14.13	14.44	14.25	15.50
3GPP Rel 6 HSUPA Subtest-5	15.34	15.39	15.47	16.50	15.28	15.61	15.43	16.50	15.91	16.19	16.01	17.50
3GPP Rel 7 HSPA+ (16QAM) Subtest-1	15.39	15.41	15.41	16.50	15.48	15.47	15.47	16.50	16.45	16.47	16.43	17.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode		Max.	15.81			Max.	15.86			Max.	16.94	



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	17.56	17.72	17.63	
20	QPSK	1	49	17.60	17.65	17.52	18.5
20	QPSK	1	99	17.53	17.58	17.61	
20	QPSK	50	0	16.69	16.71	16.58	
20	QPSK	50	24	16.55	16.59	16.63	17.5
20	QPSK	50	50	16.62	16.61	16.57	
20	QPSK	100	0	16.63	16.65	16.60	
20	16QAM	1	0	16.67	16.65	16.54	17.5
20	16QAM	1	49	16.59	16.61	16.64	
20	16QAM	1	99	16.53	16.54	16.58	
20	16QAM	50	0	15.70	15.72	15.66	16.5
20	16QAM	50	24	15.68	15.64	15.53	
20	16QAM	50	50	15.57	15.52	15.55	
20	16QAM	100	0	15.56	15.60	15.59	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	17.57	17.70	17.56	18.5
15	QPSK	1	37	17.62	17.58	17.64	
15	QPSK	1	74	17.63	17.62	17.52	
15	QPSK	36	0	16.84	16.70	16.60	17.5
15	QPSK	36	20	16.62	16.71	16.74	
15	QPSK	36	39	16.75	16.66	16.63	
15	QPSK	75	0	16.73	16.68	16.74	17.5
15	16QAM	1	0	16.78	16.60	16.61	
15	16QAM	1	37	16.47	16.65	16.51	
15	16QAM	1	74	16.51	16.41	16.55	16.5
15	16QAM	36	0	15.66	15.55	15.74	
15	16QAM	36	20	15.75	15.46	15.53	
15	16QAM	36	39	15.59	15.52	15.64	
15	16QAM	75	0	15.45	15.61	15.59	
Channel				18650	18900	19150	
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	17.56	17.69	17.63	
10	QPSK	1	25	17.67	17.66	17.57	18.5
10	QPSK	1	49	17.63	17.55	17.68	
10	QPSK	25	0	16.67	16.51	16.64	17.5
10	QPSK	25	12	16.55	16.68	16.49	
10	QPSK	25	25	16.46	16.65	16.48	
10	QPSK	50	0	16.54	16.48	16.54	17.5
10	16QAM	1	0	16.58	16.57	16.58	
10	16QAM	1	25	16.55	16.72	16.67	
10	16QAM	1	49	16.63	16.54	16.58	16.5
10	16QAM	25	0	15.84	15.85	15.81	
10	16QAM	25	12	15.78	15.74	15.49	
10	16QAM	25	25	15.58	15.63	15.53	
10	16QAM	50	0	15.40	15.44	15.57	
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	17.60	17.67	17.50	
5	QPSK	1	12	17.57	17.60	17.56	18.5
5	QPSK	1	24	17.45	17.61	17.52	
5	QPSK	12	0	16.74	16.74	16.55	17.5
5	QPSK	12	7	16.52	16.42	16.43	
5	QPSK	12	13	16.48	16.72	16.51	
5	QPSK	25	0	16.62	16.53	16.41	17.5
5	16QAM	1	0	16.59	16.78	16.59	
5	16QAM	1	12	16.39	16.49	16.65	
5	16QAM	1	24	16.41	16.49	16.47	16.5
5	16QAM	12	0	15.77	15.63	15.62	
5	16QAM	12	7	15.50	15.56	15.42	
5	16QAM	12	13	15.67	15.34	15.68	
5	16QAM	25	0	15.40	15.46	15.59	
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	17.59	17.69	17.64	18.5
3	QPSK	1	8	17.47	17.68	17.53	
3	QPSK	1	14	17.52	17.63	17.55	
3	QPSK	8	0	16.79	16.80	16.47	17.5
3	QPSK	8	4	16.47	16.41	16.47	
3	QPSK	8	7	16.75	16.45	16.45	
3	QPSK	15	0	16.76	16.65	16.46	17.5
3	16QAM	1	0	16.58	16.58	16.58	
3	16QAM	1	8	16.40	16.56	16.75	
3	16QAM	1	14	16.36	16.36	16.48	16.5
3	16QAM	8	0	15.63	15.53	15.69	
3	16QAM	8	4	15.51	15.71	15.64	
3	16QAM	8	7	15.57	15.36	15.50	
3	16QAM	15	0	15.48	15.63	15.58	
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	17.62	17.68	17.63	18.5
1.4	QPSK	1	3	17.63	17.60	17.66	
1.4	QPSK	1	5	17.56	17.58	17.62	
1.4	QPSK	3	0	16.56	16.55	16.65	17.5
1.4	QPSK	3	1	16.60	16.51	16.66	
1.4	QPSK	3	3	16.59	16.58	16.57	
1.4	QPSK	6	0	16.63	16.51	16.54	17.5
1.4	16QAM	1	0	16.66	16.73	16.48	
1.4	16QAM	1	3	16.43	16.49	16.76	
1.4	16QAM	1	5	16.54	16.45	16.71	16.5
1.4	16QAM	3	0	15.83	15.55	15.73	
1.4	16QAM	3	1	15.55	15.68	15.59	
1.4	16QAM	3	3	15.70	15.67	15.69	
1.4	16QAM	6	0	15.47	15.52	15.40	

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	17.62	17.80	17.63	18.5
20	QPSK	1	49	17.72	17.64	17.70	
20	QPSK	1	99	17.70	17.71	17.51	
20	QPSK	50	0	16.70	16.75	16.71	17.5
20	QPSK	50	24	16.62	16.75	16.80	
20	QPSK	50	50	16.70	16.53	16.76	
20	QPSK	100	0	16.56	16.84	16.71	17.5
20	16QAM	1	0	16.79	16.67	16.48	
20	16QAM	1	49	16.61	16.76	16.76	
20	16QAM	1	99	16.53	16.45	16.53	16.5
20	16QAM	50	0	15.71	15.90	15.66	
20	16QAM	50	24	15.75	15.55	15.62	
20	16QAM	50	50	15.52	15.46	15.53	16.5
20	16QAM	100	0	15.71	15.58	15.59	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	17.56	17.77	17.67	18.5
15	QPSK	1	37	17.57	17.62	17.54	
15	QPSK	1	74	17.66	17.55	17.57	
15	QPSK	36	0	16.83	16.79	16.82	17.5
15	QPSK	36	20	16.51	16.52	16.60	
15	QPSK	36	39	16.61	16.59	16.53	
15	QPSK	75	0	16.66	16.67	16.70	17.5
15	16QAM	1	0	16.74	16.58	16.57	
15	16QAM	1	37	16.74	16.72	16.82	
15	16QAM	1	74	16.49	16.52	16.60	16.5
15	16QAM	36	0	15.64	15.81	15.64	
15	16QAM	36	20	15.77	15.59	15.57	
15	16QAM	36	39	15.74	15.42	15.62	16.5
15	16QAM	75	0	15.54	15.54	15.62	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	17.67	17.79	17.63	18.5
10	QPSK	1	25	17.73	17.58	17.64	
10	QPSK	1	49	17.64	17.54	17.73	
10	QPSK	25	0	16.89	16.85	16.50	17.5
10	QPSK	25	12	16.71	16.72	16.55	
10	QPSK	25	25	16.59	16.69	16.49	
10	QPSK	50	0	16.58	16.79	16.73	17.5
10	16QAM	1	0	16.85	16.74	16.47	
10	16QAM	1	25	16.56	16.53	16.62	
10	16QAM	1	49	16.44	16.45	16.49	16.5
10	16QAM	25	0	15.79	15.89	15.69	
10	16QAM	25	12	15.84	15.65	15.60	
10	16QAM	25	25	15.53	15.52	15.57	16.5
10	16QAM	50	0	15.62	15.55	15.65	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	17.62	17.78	17.77	18.5
5	QPSK	1	12	17.70	17.65	17.58	
5	QPSK	1	24	17.63	17.58	17.51	
5	QPSK	12	0	16.72	16.84	16.51	17.5
5	QPSK	12	7	16.85	16.76	16.79	
5	QPSK	12	13	16.85	16.80	16.56	
5	QPSK	25	0	16.63	16.58	16.56	17.5
5	16QAM	1	0	16.57	16.77	16.57	
5	16QAM	1	12	16.71	16.67	16.65	
5	16QAM	1	24	16.69	16.54	16.54	16.5
5	16QAM	12	0	15.80	15.85	15.69	
5	16QAM	12	7	15.64	15.72	15.70	
5	16QAM	12	13	15.50	15.66	15.57	16.5
5	16QAM	25	0	15.63	15.56	15.70	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	17.60	17.76	17.74	18.5
3	QPSK	1	8	17.66	17.69	17.62	
3	QPSK	1	14	17.58	17.57	17.58	
3	QPSK	8	0	16.60	16.65	16.60	17.5
3	QPSK	8	4	16.58	16.57	16.75	
3	QPSK	8	7	16.79	16.59	16.57	
3	QPSK	15	0	16.58	16.55	16.56	17.5
3	16QAM	1	0	16.69	16.57	16.66	
3	16QAM	1	8	16.49	16.58	16.80	
3	16QAM	1	14	16.58	16.54	16.50	16.5
3	16QAM	8	0	15.71	15.67	15.81	
3	16QAM	8	4	15.81	15.71	15.63	
3	16QAM	8	7	15.77	15.56	15.58	16.5
3	16QAM	15	0	15.62	15.65	15.72	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	17.52	17.78	17.68	18.5
1.4	QPSK	1	3	17.69	17.71	17.72	
1.4	QPSK	1	5	17.60	17.55	17.77	
1.4	QPSK	3	0	16.60	16.68	16.73	17.5
1.4	QPSK	3	1	16.67	16.78	16.78	
1.4	QPSK	3	3	16.56	16.57	16.55	
1.4	QPSK	6	0	16.60	16.60	16.72	17.5
1.4	16QAM	1	0	16.74	16.73	16.51	
1.4	16QAM	1	3	16.56	16.52	16.60	
1.4	16QAM	1	5	16.73	16.73	16.66	17.5
1.4	16QAM	3	0	15.72	15.87	15.75	
1.4	16QAM	3	1	15.58	15.68	15.55	
1.4	16QAM	3	3	15.52	15.60	15.50	16.5
1.4	16QAM	6	0	15.66	15.77	15.69	



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	17.37	17.42	17.26	18
10	QPSK	1	25	17.34	17.35	17.40	
10	QPSK	1	49	17.24	17.37	17.27	
10	QPSK	25	0	16.43	16.44	16.23	17
10	QPSK	25	12	16.39	16.24	16.37	
10	QPSK	25	25	16.47	16.39	16.45	
10	QPSK	50	0	16.31	16.39	16.25	17
10	16QAM	1	0	16.39	16.46	16.34	
10	16QAM	1	25	16.28	16.41	16.24	
10	16QAM	1	49	16.19	16.24	16.46	16
10	16QAM	25	0	15.47	15.50	15.51	
10	16QAM	25	12	15.41	15.26	15.19	
10	16QAM	25	25	15.24	15.21	15.37	16
10	16QAM	50	0	15.23	15.32	15.29	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	17.24	17.40	17.31	18
5	QPSK	1	12	17.33	17.33	17.24	
5	QPSK	1	24	17.28	17.25	17.29	
5	QPSK	12	0	16.29	16.43	16.47	17
5	QPSK	12	7	16.17	16.49	16.34	
5	QPSK	12	13	16.42	16.32	16.40	
5	QPSK	25	0	16.36	16.55	16.23	17
5	16QAM	1	0	16.51	16.39	16.19	
5	16QAM	1	12	16.37	16.30	16.31	
5	16QAM	1	24	16.15	16.42	16.18	16
5	16QAM	12	0	15.41	15.48	15.44	
5	16QAM	12	7	15.49	15.41	15.23	
5	16QAM	12	13	15.32	15.20	15.20	16
5	16QAM	25	0	15.42	15.42	15.45	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	17.32	17.39	17.30	18
3	QPSK	1	8	17.21	17.37	17.32	
3	QPSK	1	14	17.31	17.25	17.29	
3	QPSK	8	0	16.53	16.32	16.30	17
3	QPSK	8	4	16.16	16.31	16.48	
3	QPSK	8	7	16.44	16.40	16.40	
3	QPSK	15	0	16.29	16.37	16.43	17
3	16QAM	1	0	16.32	16.39	16.24	
3	16QAM	1	8	16.19	16.43	16.46	
3	16QAM	1	14	16.19	16.34	16.33	16
3	16QAM	8	0	15.57	15.50	15.35	
3	16QAM	8	4	15.31	15.53	15.28	
3	16QAM	8	7	15.35	15.24	15.17	16
3	16QAM	15	0	15.32	15.30	15.22	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	17.27	17.38	17.29	18
1.4	QPSK	1	3	17.30	17.37	17.28	
1.4	QPSK	1	5	17.32	17.31	17.25	
1.4	QPSK	3	0	16.40	16.54	16.18	17
1.4	QPSK	3	1	16.22	16.39	16.51	
1.4	QPSK	3	3	16.25	16.47	16.45	
1.4	QPSK	6	0	16.49	16.29	16.49	17
1.4	16QAM	1	0	16.39	16.44	16.24	
1.4	16QAM	1	3	16.22	16.34	16.36	
1.4	16QAM	1	5	16.16	16.44	16.39	17
1.4	16QAM	3	0	15.46	15.43	15.56	
1.4	16QAM	3	1	15.41	15.38	15.33	
1.4	16QAM	3	3	15.42	15.35	15.36	16
1.4	16QAM	6	0	15.25	15.20	15.26	

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	18.11	18.25	18.21	19
20	QPSK	1	49	18.21	18.17	18.18	
20	QPSK	1	99	18.23	18.03	18.17	
20	QPSK	50	0	17.32	17.36	17.15	18
20	QPSK	50	24	17.06	17.22	17.14	
20	QPSK	50	50	17.23	17.24	17.25	
20	QPSK	100	0	17.26	17.05	17.29	18
20	16QAM	1	0	17.35	17.26	17.12	
20	16QAM	1	49	17.26	17.30	17.23	
20	16QAM	1	99	17.00	17.21	17.02	17
20	16QAM	50	0	16.36	16.30	16.19	
20	16QAM	50	24	16.15	16.22	16.21	
20	16QAM	50	50	16.03	16.02	16.07	17
20	16QAM	100	0	16.13	16.30	16.10	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	18.16	18.22	18.18	19
15	QPSK	1	37	18.04	18.13	18.14	
15	QPSK	1	74	18.12	18.18	18.06	
15	QPSK	36	0	17.35	17.16	17.09	18
15	QPSK	36	20	17.05	17.26	17.22	
15	QPSK	36	39	17.19	17.30	17.20	
15	QPSK	75	0	17.06	17.08	17.05	18
15	16QAM	1	0	17.12	17.16	17.10	
15	16QAM	1	37	17.13	17.23	17.31	
15	16QAM	1	74	17.20	17.05	17.26	17
15	16QAM	36	0	16.29	16.13	16.13	
15	16QAM	36	20	16.13	16.05	16.12	
15	16QAM	36	39	16.27	16.10	16.11	17
15	16QAM	75	0	16.06	16.12	16.24	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	18.16	18.20	18.11	19
10	QPSK	1	25	18.13	18.15	18.14	
10	QPSK	1	49	18.11	18.09	18.09	
10	QPSK	25	0	17.35	17.41	17.17	18
10	QPSK	25	12	17.07	17.09	17.30	
10	QPSK	25	25	17.03	17.23	17.01	
10	QPSK	50	0	17.31	17.07	17.27	18
10	16QAM	1	0	17.20	17.18	17.05	
10	16QAM	1	25	17.24	17.06	17.33	
10	16QAM	1	49	17.22	17.08	17.06	17
10	16QAM	25	0	16.29	16.24	16.27	
10	16QAM	25	12	16.15	16.06	16.08	
10	16QAM	25	25	16.17	16.07	16.19	17
10	16QAM	50	0	16.04	16.05	16.18	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	18.05	18.21	18.07	19
5	QPSK	1	12	18.09	18.19	18.06	
5	QPSK	1	24	18.10	18.12	18.13	
5	QPSK	12	0	17.26	17.32	17.15	18
5	QPSK	12	7	17.12	17.10	17.24	
5	QPSK	12	13	17.28	17.21	17.05	
5	QPSK	25	0	17.32	17.15	17.27	18
5	16QAM	1	0	17.32	17.15	17.07	
5	16QAM	1	12	17.26	17.20	17.26	
5	16QAM	1	24	17.18	17.05	17.15	17
5	16QAM	12	0	16.20	16.19	16.10	
5	16QAM	12	7	16.37	16.31	16.17	
5	16QAM	12	13	16.13	16.22	16.00	17
5	16QAM	25	0	16.07	16.30	16.05	



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				23090	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	17.72	17.88	17.87	18.5
10	QPSK	1	25	17.84	17.83	17.78	
10	QPSK	1	49	17.79	17.87	17.79	
10	QPSK	25	0	16.87	16.94	16.78	17.5
10	QPSK	25	12	16.69	16.81	16.91	
10	QPSK	25	25	16.82	16.87	16.81	
10	QPSK	50	0	16.97	16.86	16.75	17.5
10	16QAM	1	0	16.82	16.91	16.93	
10	16QAM	1	25	16.97	16.78	16.94	
10	16QAM	1	49	16.90	16.86	16.88	16.5
10	16QAM	25	0	15.93	16.05	16.00	
10	16QAM	25	12	16.01	16.02	15.78	
10	16QAM	25	25	15.83	15.74	15.76	16.5
10	16QAM	50	0	15.68	15.93	15.79	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	17.79	17.87	17.77	18.5
5	QPSK	1	12	17.84	17.82	17.64	
5	QPSK	1	24	17.68	17.87	17.84	
5	QPSK	12	0	16.80	16.82	16.86	17.5
5	QPSK	12	7	16.72	16.69	16.80	
5	QPSK	12	13	16.85	16.82	16.78	
5	QPSK	25	0	16.85	16.76	16.93	17.5
5	16QAM	1	0	17.04	16.78	16.92	
5	16QAM	1	12	16.94	16.91	16.76	
5	16QAM	1	24	16.92	16.79	16.72	16.5
5	16QAM	12	0	15.87	15.93	15.91	
5	16QAM	12	7	15.80	15.80	15.66	
5	16QAM	12	13	15.87	15.90	15.94	16.5
5	16QAM	25	0	15.93	15.92	15.85	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	17.78	17.85	17.81	18.5
3	QPSK	1	8	17.76	17.79	17.63	
3	QPSK	1	14	17.74	17.82	17.72	
3	QPSK	8	0	16.91	16.96	16.95	17.5
3	QPSK	8	4	16.84	16.85	17.02	
3	QPSK	8	7	16.91	16.73	16.84	
3	QPSK	15	0	16.91	16.83	16.77	17.5
3	16QAM	1	0	16.89	16.78	16.86	
3	16QAM	1	8	16.92	17.01	16.75	
3	16QAM	1	14	16.77	16.82	16.93	16.5
3	16QAM	8	0	15.97	15.86	16.00	
3	16QAM	8	4	16.02	15.98	15.91	
3	16QAM	8	7	15.95	15.86	15.74	16.5
3	16QAM	15	0	15.86	15.70	15.72	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	17.76	17.86	17.84	18.5
1.4	QPSK	1	3	17.69	17.78	17.64	
1.4	QPSK	1	5	17.72	17.79	17.72	
1.4	QPSK	3	0	16.84	16.89	16.85	17.5
1.4	QPSK	3	1	16.67	16.73	16.83	
1.4	QPSK	3	3	16.66	16.78	16.80	
1.4	QPSK	6	0	16.83	16.98	16.70	17.5
1.4	16QAM	1	0	16.80	16.82	16.80	
1.4	16QAM	1	3	16.75	16.97	16.94	
1.4	16QAM	1	5	16.90	16.83	16.70	17.5
1.4	16QAM	3	0	15.89	15.87	15.89	
1.4	16QAM	3	1	15.90	15.94	15.90	
1.4	16QAM	3	3	15.79	15.62	15.78	16.5
1.4	16QAM	6	0	15.77	15.70	15.75	

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	16.80	16.85	16.77	17.5
10	QPSK	1	25	16.73	16.83	16.78	
10	QPSK	1	49	16.83	16.78	16.67	
10	QPSK	25	0	15.85	15.89	15.78	16.5
10	QPSK	25	12	15.71	15.80	15.80	
10	QPSK	25	25	15.79	15.81	15.84	
10	QPSK	50	0	15.86	15.79	15.83	16.5
10	16QAM	1	0	15.97	15.91	15.79	
10	16QAM	1	25	15.70	15.78	16.01	
10	16QAM	1	49	15.92	15.86	15.95	15.5
10	16QAM	25	0	14.87	14.91	14.97	
10	16QAM	25	12	15.05	14.74	14.80	
10	16QAM	25	25	14.95	14.78	14.82	15.5
10	16QAM	50	0	14.87	14.87	14.94	
Channel				23756	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	16.75	16.82	16.76	17.5
5	QPSK	1	12	16.70	16.75	16.69	
5	QPSK	1	24	16.72	16.73	16.73	
5	QPSK	12	0	15.80	15.93	15.98	16.5
5	QPSK	12	7	15.82	15.78	15.86	
5	QPSK	12	13	15.91	15.79	15.75	
5	QPSK	25	0	15.94	15.90	16.00	16.5
5	16QAM	1	0	15.80	16.01	15.85	
5	16QAM	1	12	15.98	15.93	15.85	
5	16QAM	1	24	15.66	15.76	15.98	15.5
5	16QAM	12	0	14.89	14.94	15.02	
5	16QAM	12	7	14.89	14.86	14.91	
5	16QAM	12	13	14.83	14.78	14.82	15.5
5	16QAM	25	0	14.82	14.78	14.71	



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	18.65	18.85	18.71	19.5
20	QPSK	1	49	18.63	18.67	18.81	
20	QPSK	1	99	18.61	18.73	18.68	
20	QPSK	50	0	17.78	17.83	17.65	18.5
20	QPSK	50	24	17.75	17.71	17.74	
20	QPSK	50	50	17.76	17.76	17.59	
20	QPSK	100	0	17.76	17.73	17.63	18.5
20	16QAM	1	0	17.92	17.82	17.55	
20	16QAM	1	49	17.75	17.69	17.91	
20	16QAM	1	99	17.64	17.63	17.80	17.5
20	16QAM	50	0	16.90	17.02	16.91	
20	16QAM	50	24	16.98	16.81	16.59	
20	16QAM	50	50	16.72	16.53	16.68	17.5
20	16QAM	100	0	16.66	16.84	16.73	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	18.67	18.83	18.72	19.5
15	QPSK	1	37	18.77	18.72	18.61	
15	QPSK	1	74	18.57	18.77	18.69	
15	QPSK	36	0	17.85	17.90	17.67	18.5
15	QPSK	36	20	17.55	17.76	17.75	
15	QPSK	36	39	17.67	17.82	17.67	
15	QPSK	75	0	17.70	17.74	17.85	18.5
15	16QAM	1	0	17.85	17.84	17.66	
15	16QAM	1	37	17.61	17.77	17.70	
15	16QAM	1	74	17.55	17.63	17.86	17.5
15	16QAM	36	0	16.73	16.99	16.73	
15	16QAM	36	20	16.88	16.64	16.77	
15	16QAM	36	39	16.78	16.80	16.78	17.5
15	16QAM	75	0	16.58	16.69	16.89	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	18.74	18.80	18.77	19.5
10	QPSK	1	25	18.70	18.65	18.54	
10	QPSK	1	49	18.71	18.69	18.72	
10	QPSK	25	0	17.91	17.95	17.75	18.5
10	QPSK	25	12	17.66	17.85	17.78	
10	QPSK	25	25	17.70	17.85	17.81	
10	QPSK	50	0	17.85	17.70	17.63	18.5
10	16QAM	1	0	17.90	17.86	17.54	
10	16QAM	1	25	17.60	17.90	17.87	
10	16QAM	1	49	17.60	17.79	17.68	17.5
10	16QAM	25	0	16.74	16.83	16.88	
10	16QAM	25	12	16.84	16.73	16.83	
10	16QAM	25	25	16.74	16.79	16.61	17.5
10	16QAM	50	0	16.63	16.74	16.84	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	18.75	18.81	18.72	19.5
5	QPSK	1	12	18.72	18.72	18.63	
5	QPSK	1	24	18.78	18.70	18.73	
5	QPSK	12	0	17.96	17.88	17.76	18.5
5	QPSK	12	7	17.63	17.64	17.88	
5	QPSK	12	13	17.85	17.64	17.67	
5	QPSK	25	0	17.91	17.90	17.66	18.5
5	16QAM	1	0	17.73	17.66	17.81	
5	16QAM	1	12	17.74	17.77	17.69	
5	16QAM	1	24	17.65	17.69	17.59	17.5
5	16QAM	12	0	16.96	16.81	16.77	
5	16QAM	12	7	16.88	16.67	16.65	
5	16QAM	12	13	16.69	16.58	16.79	17.5
5	16QAM	25	0	16.66	16.73	16.76	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	18.67	18.82	18.68	19.5
3	QPSK	1	8	18.69	18.79	18.79	
3	QPSK	1	14	18.79	18.70	18.72	
3	QPSK	8	0	17.99	17.89	17.60	18.5
3	QPSK	8	4	17.66	17.59	17.90	
3	QPSK	8	7	17.82	17.86	17.66	
3	QPSK	15	0	17.93	17.87	17.85	18.5
3	16QAM	1	0	17.97	17.93	17.59	
3	16QAM	1	8	17.88	17.91	17.79	
3	16QAM	1	14	17.67	17.74	17.77	17.5
3	16QAM	8	0	16.85	16.99	16.90	
3	16QAM	8	4	16.93	16.89	16.53	
3	16QAM	8	7	16.62	16.60	16.62	17.5
3	16QAM	15	0	16.56	16.84	16.63	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	18.68	18.80	18.72	19.5
1.4	QPSK	1	3	18.61	18.77	18.71	
1.4	QPSK	1	5	18.61	18.76	18.63	
1.4	QPSK	3	0	17.85	17.72	17.66	18.5
1.4	QPSK	3	1	17.57	17.72	17.86	
1.4	QPSK	3	3	17.92	17.79	17.86	
1.4	QPSK	6	0	17.70	17.66	17.71	18.5
1.4	16QAM	1	0	17.80	17.80	17.68	
1.4	16QAM	1	3	17.87	17.73	17.86	
1.4	16QAM	1	5	17.64	17.67	17.83	18.5
1.4	16QAM	3	0	16.74	16.88	16.94	
1.4	16QAM	3	1	16.83	16.87	16.59	
1.4	16QAM	3	3	16.58	16.81	16.63	17.5
1.4	16QAM	6	0	16.84	16.77	16.77	

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	16.82	16.92	16.87	17.5
20	QPSK	1	49	16.85	16.88	16.65	
20	QPSK	1	99	16.75	16.76	16.77	
20	QPSK	50	0	15.85	15.89	15.85	16.5
20	QPSK	50	24	15.85	15.72	15.79	
20	QPSK	50	50	15.74	15.84	15.79	
20	QPSK	100	0	15.69	15.81	15.82	16.5
20	16QAM	1	0	15.91	15.90	15.73	
20	16QAM	1	49	15.78	15.83	15.77	
20	16QAM	1	99	15.66	15.79	15.68	15.5
20	16QAM	50	0	14.82	14.91	14.81	
20	16QAM	50	24	14.77	14.82	14.74	
20	16QAM	50	50	14.75	14.83	14.93	15.5
20	16QAM	100	0	14.75	14.82	14.91	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	16.71	16.90	16.76	17.5
15	QPSK	1	37	16.63	16.83	16.71	
15	QPSK	1	74	16.77	16.81	16.74	
15	QPSK	36	0	15.81	15.81	15.80	16.5
15	QPSK	36	20	15.78	15.84	15.90	
15	QPSK	36	39	15.86	15.69	15.84	
15	QPSK	75	0	15.78	15.64	15.71	16.5
15	16QAM	1	0	15.83	15.88	15.70	
15	16QAM	1	37	15.91	15.93	15.78	
15	16QAM	1	74	15.64	15.75	15.91	15.5
15	16QAM	36	0	14.83	14.86	14.85	
15	16QAM	36	20	14.75	14.70	14.82	
15	16QAM	36	39	14.77	14.69	14.70	15.5
15	16QAM	75	0	14.73	14.69	14.73	
Channel				133172	133272	133422	Tune-up limit (dBm)
Frequency (MHz)				668	678	693	
10	QPSK	1	0	16.69	16.87	16.79	17.5
10	QPSK	1	25	16.82	16.83	16.83	
10	QPSK	1	49	16.67	16.82	16.91	
10	QPSK	25	0	15.86	15.88	15.70	16.5
10	QPSK	25	12	15.87	15.69	15.76	
10	QPSK	25	25	15.83	15.80	15.86	
10	QPSK	50	0	15.86	15.84	15.79	16.5
10	16QAM	1	0	15.79	15.79	15.65	
10	16QAM	1	25	15.85	15.74	15.74	
10	16QAM	1	49	15.86	15.89	15.93	15.5
10	16QAM	25	0	14.92	14.89	14.83	
10	16QAM	25	12	14.74	14.83	14.72	
10	16QAM	25	25	14.76	14.64	14.72	15.5
10	16QAM	50	0	14.94	14.87	14.77	
Channel				133147	133247	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	16.68	16.88	16.83	17.5
5	QPSK	1	12	16.72	16.81	16.76	
5	QPSK	1	24	16.67	16.79	16.72	
5	QPSK	12	0	15.91	15.88	15.76	16.5
5	QPSK	12	7	15.75	15.72	15.79	
5	QPSK	12	13	15.81	15.72	15.83	
5	QPSK	25	0	15.76	15.86	15.81	16.5
5	16QAM	1	0	15.93	15.79	15.91	
5	16QAM	1	12	15.89	15.83	15.89	
5	16QAM	1	24	15.89	15.83	15.95	15.5
5	16QAM	12	0	14.88	14.90	14.92	
5	16QAM	12	7	14.90	14.85	14.67	
5	16QAM	12	13	14.82	14.70	14.69	15.5
5	16QAM	25	0	14.77	14.99	14.78	