



REPORT No.: SZ22050264S01

## 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
	128	189	251		128	189	251		
TX Channel	824.2	836.4	848.8		824.2	836.4	848.8		
Frequency (MHz)	824.2	836.4	848.8	34.00	23.51	23.60	23.54	25.00	0.11
GSM 1 Tx slot	32.51	32.60	32.54	34.00	23.49	23.60	23.53	25.00	
GPRS 1 Tx slot	31.21	31.33	31.28	32.50	25.21	25.33	25.28	26.50	0.12
GPRS 2 Tx slots	29.19	29.27	29.25	30.50	24.93	25.01	24.99	26.24	0.08
GPRS 3 Tx slots	27.12	27.20	27.16	28.50	24.12	24.20	24.16	25.50	0.08
GPRS 4 Tx slots	27.16	27.22	27.13	28.50	18.16	18.22	18.13	19.50	0.09
EDGE 1 Tx slot	27.11	27.13	27.05	28.50	21.11	21.13	21.05	22.50	0.08
EDGE 2 Tx slots	26.90	26.96	26.84	28.00	22.64	22.70	22.58	23.74	0.12
EDGE 3 Tx slots	26.78	26.80	26.72	28.00	23.78	23.80	23.72	25.00	0.08
EDGE 4 Tx slots									
Mode		Max.	32.60			Max.	25.33		
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		
TX Channel	1850.2	1880	1909.8		1850.2	1880	1909.8		
Frequency (MHz)	1850.2	1880	1909.8	31.00	20.66	20.73	20.71	22.00	0.08
GSM 1 Tx slot	29.66	29.73	29.71	31.00	20.65	20.71	20.70	22.00	
GPRS 1 Tx slot	29.65	29.71	29.70	31.00	22.58	22.56	22.62	24.00	0.06
GPRS 2 Tx slots	26.41	26.40	26.43	27.50	22.15	22.14	22.17	23.24	0.03
GPRS 3 Tx slots	24.54	24.55	24.59	26.00	21.54	21.55	21.59	23.00	0.05
GPRS 4 Tx slots	25.50	25.56	25.48	27.00	16.50	16.56	16.48	18.00	0.08
EDGE 1 Tx slot	25.39	25.44	25.40	26.50	19.39	19.44	19.40	20.50	0.05
EDGE 2 Tx slots	25.28	25.34	25.31	26.50	21.02	21.08	21.05	22.24	0.06
EDGE 3 Tx slots	24.47	24.52	24.49	26.00	21.47	21.52	21.49	23.00	0.05
EDGE 4 Tx slots									
Mode		Max.	29.73			Max.	22.62		
Attenuator	Cable Loss : 0.8								

Band	WCDMA Band II			Tune-up Limit (dBm)	WCDMA Band IV			Tune-up Limit (dBm)	WCDMA Band V			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)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99 RMC 12.2Kbps	22.64	22.83	22.80	24.00	22.71	22.76	22.75	24.00	22.93	22.95	22.87	24.00
3GPP Rel 6 HSDPA Subtest-1	21.88	22.06	22.07	23.00	22.03	22.08	22.02	23.00	22.26	22.16	22.15	23.00
3GPP Rel 6 HSDPA Subtest-2	21.90	22.22	22.14	23.00	22.10	22.10	22.04	23.00	22.27	22.20	22.13	23.00
3GPP Rel 6 HSDPA Subtest-3	21.48	21.61	21.61	22.50	21.55	21.60	21.51	22.50	21.76	21.69	21.63	22.50
3GPP Rel 6 HSDPA Subtest-4	21.49	21.62	21.56	22.50	21.59	21.59	21.60	22.50	21.80	21.89	21.67	22.50
3GPP Rel 8 DC-HSDPA Subtest-1	21.94	22.14	22.08	23.00	22.05	22.14	22.04	23.00	22.18	22.15	22.11	23.00
3GPP Rel 8 DC-HSDPA Subtest-2	21.98	22.12	22.13	23.00	22.06	22.16	22.02	23.00	22.26	22.20	22.13	23.00
3GPP Rel 8 DC-HSDPA Subtest-3	21.47	21.70	21.63	22.50	21.57	21.68	21.54	22.50	21.74	21.70	21.66	22.50
3GPP Rel 8 DC-HSDPA Subtest-4	21.49	21.66	21.67	22.50	21.55	21.66	21.58	22.50	21.76	21.69	21.65	22.50
3GPP Rel 6 HSUPA Subtest-1	21.92	22.14	22.17	23.00	22.09	22.13	22.02	23.00	22.25	22.22	22.14	23.00
3GPP Rel 6 HSUPA Subtest-2	21.41	21.67	21.60	22.50	21.56	21.61	21.54	22.50	21.75	21.78	21.82	22.50
3GPP Rel 6 HSUPA Subtest-3	21.97	22.14	22.15	23.00	22.05	22.13	22.03	23.00	22.24	22.14	22.14	23.00
3GPP Rel 6 HSUPA Subtest-4	21.91	22.13	22.09	23.00	22.08	22.08	22.01	23.00	22.25	22.20	22.13	23.00
3GPP Rel 6 HSUPA Subtest-5	21.96	22.14	22.11	23.00	22.11	22.10	22.13	23.00	22.34	22.22	22.13	23.00
3GPP Rel 7 HSPA+ (16QAM) Subtest-1	21.56	21.61	21.59	22.50	21.56	21.60	21.57	22.50	21.85	21.64	21.73	22.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode		Max.	22.83			Max.	22.76			Max.	22.95	

Band	CDMA2000 BC0			Tune-up Limit (dBm)	CDMA2000 BC1			Tune-up Limit (dBm)
	1013	384	777		25	600	1175	
TX Channel	824.7	836.52	848.31		1851.25	1880	1908.75	
Frequency (MHz)	824.7	836.52	848.31	22.50	21.39	21.47	21.51	22.50
RC1 SO55	21.66	21.59	21.52	22.50	21.59	21.55	21.54	22.50
RC3 SO55	21.69	21.61	21.68	22.50	21.60	21.73	21.67	22.50
RC3 SO32 (F+SCH)	21.75	21.58	21.67	22.50	21.60	21.73	21.67	22.50
RC3 SO32 (+SCH)	21.63	21.51	21.57	22.50	21.58	21.63	21.52	22.50
Attenuator		Cable Loss	0.6			Cable Loss	0.8	
Mode		Max.	21.75			Max.	21.73	



3	QPSK	8	0	22.09	22.18	22.14	23
3	QPSK	8	4	21.95	21.97	21.98	
3	QPSK	8	7	21.89	21.97	21.91	
3	QPSK	15	0	21.97	21.97	21.94	23
3	16QAM	1	0	21.99	22.04	22.02	
3	16QAM	1	8	21.94	21.92	21.90	
3	16QAM	1	14	21.80	21.81	21.84	22
3	16QAM	8	0	21.16	21.30	21.31	
3	16QAM	8	4	21.01	21.17	21.09	
3	16QAM	8	7	21.07	20.99	21.14	23
3	16QAM	15	0	20.97	21.02	21.11	
3	64QAM	1	0	21.99	22.01	22.05	
3	64QAM	1	8	21.81	21.91	21.98	22
3	64QAM	1	14	21.95	21.83	21.91	
3	64QAM	8	0	21.19	21.24	21.26	
3	64QAM	8	4	21.15	21.09	21.12	23
3	64QAM	8	7	21.07	21.07	21.03	
3	64QAM	15	0	21.09	21.06	21.11	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.92	23.12	23.06	24
1.4	QPSK	1	3	22.84	22.94	22.99	
1.4	QPSK	1	5	22.83	22.92	22.77	
1.4	QPSK	3	0	22.04	22.18	22.15	23
1.4	QPSK	3	1	22.07	22.08	22.04	
1.4	QPSK	3	3	22.11	22.05	22.01	
1.4	QPSK	6	0	21.96	21.94	21.97	22
1.4	16QAM	1	0	21.91	21.99	22.03	
1.4	16QAM	1	3	21.83	21.88	21.98	
1.4	16QAM	1	5	21.74	21.85	21.94	23
1.4	16QAM	3	0	21.15	21.26	21.26	
1.4	16QAM	3	1	21.03	21.19	21.09	
1.4	16QAM	3	3	21.00	21.07	21.07	22
1.4	16QAM	6	0	20.96	21.05	21.07	
1.4	64QAM	1	0	21.91	22.05	21.96	
1.4	64QAM	1	3	21.89	21.86	22.02	23
1.4	64QAM	1	5	21.98	21.82	21.92	
1.4	64QAM	3	0	21.18	21.24	21.33	
1.4	64QAM	3	1	21.10	21.06	21.12	22
1.4	64QAM	3	3	21.08	21.14	21.11	
1.4	64QAM	6	0	21.11	21.14	21.08	

3	QPSK	8	0	21.92	22.06	22.07	23
3	QPSK	8	4	21.90	21.98	21.86	
3	QPSK	8	7	21.77	21.76	21.79	
3	QPSK	15	0	21.75	21.94	21.84	23
3	16QAM	1	0	21.77	21.93	22.10	
3	16QAM	1	8	21.73	21.85	21.97	
3	16QAM	1	14	21.74	21.82	21.75	22
3	16QAM	8	0	21.06	21.22	21.16	
3	16QAM	8	4	20.82	21.00	20.94	
3	16QAM	8	7	21.01	20.93	21.02	23
3	16QAM	15	0	20.95	21.01	21.03	
3	64QAM	1	0	21.84	21.96	22.06	
3	64QAM	1	8	21.69	21.81	21.84	22
3	64QAM	1	14	21.89	21.70	21.72	
3	64QAM	8	0	21.17	21.02	21.27	
3	64QAM	8	4	21.09	21.13	21.17	23
3	64QAM	8	7	20.92	21.05	21.02	
3	64QAM	15	0	20.96	21.02	20.91	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.87	23.08	22.87	24
1.4	QPSK	1	3	22.82	23.03	22.93	
1.4	QPSK	1	5	22.79	22.83	22.67	
1.4	QPSK	3	0	22.11	22.05	22.01	23
1.4	QPSK	3	1	22.03	22.07	22.08	
1.4	QPSK	3	3	22.07	22.05	22.02	
1.4	QPSK	6	0	21.77	21.91	21.88	22
1.4	16QAM	1	0	21.86	21.94	22.03	
1.4	16QAM	1	3	21.74	21.85	22.01	
1.4	16QAM	1	5	21.71	21.79	21.79	23
1.4	16QAM	3	0	21.13	21.11	21.13	
1.4	16QAM	3	1	21.04	21.01	21.08	
1.4	16QAM	3	3	21.09	21.02	21.05	22
1.4	16QAM	6	0	20.92	20.99	21.07	
1.4	64QAM	1	0	21.87	21.92	22.07	
1.4	64QAM	1	3	21.73	21.81	21.88	23
1.4	64QAM	1	5	21.89	21.81	21.72	
1.4	64QAM	3	0	21.11	21.06	21.16	
1.4	64QAM	3	1	21.11	21.06	21.13	22
1.4	64QAM	3	3	21.02	21.08	21.04	
1.4	64QAM	6	0	20.99	20.99	21.02	



Band 12 (700MHz Low Band)							
Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.09	23.13	23.07	24
10	QPSK	1	25	23.09	23.05	23.06	
10	QPSK	1	49	23.05	23.08	23.09	
10	QPSK	25	0	22.12	22.18	22.14	23
10	QPSK	25	12	22.16	22.08	22.16	
10	QPSK	25	25	22.09	22.07	22.13	
10	QPSK	50	0	22.05	22.04	22.11	23
10	16QAM	1	0	22.47	22.46	22.37	
10	16QAM	1	25	22.03	22.20	22.38	
10	16QAM	1	49	22.20	22.27	22.33	22
10	16QAM	25	0	21.02	21.17	21.01	
10	16QAM	25	12	21.13	21.12	21.15	
10	16QAM	25	25	21.12	21.23	21.08	23
10	16QAM	50	0	21.14	21.12	21.16	
10	64QAM	1	0	22.02	22.12	22.18	
10	64QAM	1	25	22.01	22.18	22.37	22
10	64QAM	1	49	22.32	22.35	22.14	
10	64QAM	25	0	20.93	21.13	21.11	
10	64QAM	25	12	21.23	21.08	21.19	22
10	64QAM	25	25	21.03	21.16	21.20	
10	64QAM	50	0	21.16	21.11	20.83	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.97	23.02	22.92	24
5	QPSK	1	12	23.00	22.95	22.97	
5	QPSK	1	24	22.98	22.93	23.07	
5	QPSK	12	0	22.04	21.91	21.97	23
5	QPSK	12	7	22.12	21.93	22.04	
5	QPSK	12	13	22.04	22.02	22.11	
5	QPSK	25	0	21.97	22.02	22.12	23
5	16QAM	1	0	22.35	22.33	22.25	
5	16QAM	1	12	21.95	22.15	22.25	
5	16QAM	1	24	22.05	22.12	22.22	22
5	16QAM	12	0	20.91	21.16	20.99	
5	16QAM	12	7	21.07	21.09	21.05	
5	16QAM	12	13	21.11	21.14	20.97	23
5	16QAM	25	0	21.01	20.97	21.13	
5	64QAM	1	0	21.94	21.98	22.15	
5	64QAM	1	12	21.99	22.04	22.30	22
5	64QAM	1	24	22.25	22.32	22.08	
5	64QAM	12	0	20.89	20.99	21.06	
5	64QAM	12	7	21.13	21.07	21.13	22
5	64QAM	12	13	20.98	21.08	21.14	
5	64QAM	25	0	21.05	21.01	20.68	
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.98	23.01	22.97	24
3	QPSK	1	8	23.08	23.04	22.96	
3	QPSK	1	14	23.02	23.01	22.96	
3	QPSK	8	0	21.99	21.99	21.97	23
3	QPSK	8	4	22.01	22.03	22.08	
3	QPSK	8	7	21.95	22.05	22.12	
3	QPSK	15	0	21.94	22.03	22.08	23
3	16QAM	1	0	22.25	22.30	22.27	
3	16QAM	1	8	21.93	22.05	22.28	
3	16QAM	1	14	22.12	22.24	22.29	22
3	16QAM	8	0	20.99	21.05	20.88	
3	16QAM	8	4	21.11	21.06	21.12	
3	16QAM	8	7	21.03	21.15	21.07	23
3	16QAM	15	0	21.07	21.05	21.06	
3	64QAM	1	0	21.95	22.10	22.08	
3	64QAM	1	8	21.92	22.12	22.25	22
3	64QAM	1	14	22.28	22.22	22.05	
3	64QAM	8	0	20.91	21.04	20.98	
3	64QAM	8	4	21.21	21.00	21.06	23
3	64QAM	8	7	20.96	21.12	21.06	
3	64QAM	15	0	21.01	21.07	20.69	
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.03	23.07	23.00	24
1.4	QPSK	1	3	22.97	22.95	22.99	
1.4	QPSK	1	5	23.00	23.06	23.04	
1.4	QPSK	3	0	22.06	22.05	22.01	23
1.4	QPSK	3	1	22.02	22.04	22.09	
1.4	QPSK	3	3	22.04	22.05	22.02	
1.4	QPSK	6	0	21.99	22.02	22.16	23
1.4	16QAM	1	0	22.25	22.31	22.30	
1.4	16QAM	1	3	22.00	22.15	22.24	
1.4	16QAM	1	5	22.06	22.20	22.19	22
1.4	16QAM	3	0	21.02	21.11	21.05	
1.4	16QAM	3	1	21.07	21.06	21.08	
1.4	16QAM	3	3	21.07	21.17	21.05	23
1.4	16QAM	6	0	21.03	20.98	21.11	
1.4	64QAM	1	0	22.01	22.07	22.07	
1.4	64QAM	1	3	21.87	22.10	22.29	22
1.4	64QAM	1	5	22.22	22.21	22.00	
1.4	64QAM	3	0	20.87	21.07	21.07	
1.4	64QAM	3	1	21.16	21.02	21.15	23
1.4	64QAM	3	3	20.92	21.14	21.19	
1.4	64QAM	6	0	21.05	21.02	20.78	

Band 17 (700MHz Band)							
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	23.13	23.22	23.10	24
10	QPSK	1	25	23.05	23.07	23.05	
10	QPSK	1	49	22.97	22.92	23.08	
10	QPSK	25	0	22.03	22.09	22.05	23
10	QPSK	25	12	22.02	22.08	22.05	
10	QPSK	25	25	22.09	22.06	22.01	
10	QPSK	50	0	22.02	22.08	22.03	23
10	16QAM	1	0	22.22	22.44	22.37	
10	16QAM	1	25	22.35	22.41	22.23	
10	16QAM	1	49	22.38	22.24	22.19	22
10	16QAM	25	0	21.15	21.17	21.11	
10	16QAM	25	12	21.25	21.18	21.22	
10	16QAM	25	25	21.16	21.13	21.23	23
10	16QAM	50	0	21.12	21.08	21.01	
10	64QAM	1	0	22.28	22.15	22.16	
10	64QAM	1	25	22.22	22.26	22.02	22
10	64QAM	1	49	22.03	22.14	22.19	
10	64QAM	25	0	21.11	21.09	21.13	
10	64QAM	25	12	21.28	21.21	21.18	23
10	64QAM	25	25	21.08	21.10	21.13	
10	64QAM	50	0	21.14	21.08	21.06	
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.10	23.15	23.08	24
5	QPSK	1	12	22.93	23.05	22.90	
5	QPSK	1	24	22.87	22.88	23.00	
5	QPSK	12	0	22.03	22.05	22.05	23
5	QPSK	12	7	22.12	22.00	22.21	
5	QPSK	12	13	22.01	22.09	22.08	
5	QPSK	25	0	21.89	22.06	21.99	23
5	16QAM	1	0	22.08	22.40	22.27	
5	16QAM	1	12	22.30	22.38	22.16	
5	16QAM	1	24	22.23	22.13	22.17	22
5	16QAM	12	0	21.02	21.14	21.10	
5	16QAM	12	7	21.21	21.06	21.08	
5	16QAM	12	13	21.10	21.08	21.08	23
5	16QAM	25	0	21.05	20.93	20.91	
5	64QAM	1	0	22.17	22.06	22.03	
5	64QAM	1	12	22.19	22.22	22.00	22
5	64QAM	1	24	21.89	22.12	22.09	
5	64QAM	12	0	21.04	20.97	21.00	
5	64QAM	12	7	21.16	21.19	21.16	23
5	64QAM	12	13	20.95	20.95	21.04	
5	64QAM	25	0	21.05	21.00	21.00	

Band 18 (835MHz Band)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23925	23925	23925	
Frequency (MHz)				822.5	822.5	822.5	
15	QPSK	1	0		23.17		24
15	QPSK	1	37		23.14		
15	QPSK	1	74		23.04		
15	QPSK	36	0		22.23		23
15	QPSK	36	20		22.17		
15	QPSK	36	39		22.18		
15	QPSK	75	0		22.11		23
15	16QAM	1	0		22.15		
15	16QAM	1	37		22.08		
15	16QAM	1	74		22.13		22
15	16QAM	36	0		21.18		
15	16QAM	36	20		21.25		
15	16QAM	36	39		21.11		23
15	16QAM	75	0		21.27		
15	64QAM	1	0		22.22		
15	64QAM	1	25		22.27		22
15	64QAM	1	49		22.25		
15	64QAM	25	0		21.16		
15	64QAM	25	12		21.18		23
15	64QAM	25	25		21.20		
15	64QAM	50	0		21.10		
Channel				23900	23925	23950	Tune-up limit (dBm)
Frequency (MHz)				820	822.5	825	
10	QPSK	1	0	23.01	23.06	22.98	24
10	QPSK	1	25	22.88	23.01	22.93	
10	QPSK	1	49	22.97	23.00	22.93	
10	QPSK	25	0	22.06	22.15	22.01	23
10	QPSK	25	12	21.97	22.09	21.94	
10	QPSK	25	25	21.78	22.17	22.00	
10	QPSK	50	0	21.82	21.97	21.97	23
10	16QAM	1	0	21.96	22.05	21.90	
10	16QAM	1	25	21.83	22.00	21.80	
10	16QAM	1	49	21.85	21.99	22.02	22
10	16QAM	25	0	21.03	21.04	21.04	
10	16QAM	25	12	20.83	21.17	20.91	
10	16QAM	25	25	20.98	21.04	20.81	23
10	16QAM	50	0	21.05	21.26	21.04	
10	64QAM	1	0	21.89	22.19	21.99	
10	64QAM	1	25	22.03	22.16	22.04	22
10	64QAM	1	49	21.98	22.12	21.92	
10	64QAM	25	0	21.01	21.09	21.09	
10	64QAM	25	12	20.99	21.16	20.96	23
10	64QAM	25	25	20.94	21.06	21.01	
10	64QAM	50	0	21.05	21.08	20.88	
Channel				23875	23925	23975	Tune-up limit (dBm)
Frequency (MHz)				817.5	822.5	827.5	
5	QPSK	1	0	22.91	23.14	22.93	24
5	QPSK	1	12	22.92	23.00	22.98	
5	QPSK	1	24	22.85	23.02	22.80	
5	QPSK	12	0	22.06	22.16	22.01	23
5	QPSK	12	7	21.97	22.07	21.92	
5	QPSK	12	13	21.85	22.06	21.90	
5	QPSK	25	0	21.89	21.99	21.88	23
5	16QAM	1	0	21.90	22.01	21.93	
5	16QAM	1	12	21.94	22.04	21.83	
5	16QAM	1	24	21.98	22.05	22.02	22
5	16QAM	12	0	20.89	21.10	20.94	
5	16QAM	12	7	20.94	21.12	20.96	
5	16QAM	12	13	20.90	21.02	20.82	23
5	16QAM	25	0	20.96	21.12	21.01	
5	64QAM	1	0	21.86	22.07	22.08	
5	64QAM	1	12	21.99	22.22	22.03	22
5	64QAM	1	24	21.89	22.19	21.87	
5	64QAM	12	0	21.09	21.08	20.98	
5	64QAM	12	7	20.89	21.09	20.94	23
5	64QAM	12	13	20.94	21.05	21.02	
5	64QAM	25	0	20.98	21.07	20.95	

Band 19 (835MHz Band)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				24075	24075	24075	
Frequency (MHz)				837.5	837.5	837.5	
15	QPSK	1	0		23.08		24
15	QPSK	1	37		23.05		
15	QPSK	1	74		22.95		
15	QPSK	36	0		22.14		23
15	QPSK	36	20		22.08		
15	QPSK	36	39		22.09		
15	QPSK	75	0		22.02		23
15	16QAM	1	0		22.06		
15	16QAM	1	37		21.99		
15	16QAM	1	74		22.04		22
15	16QAM	36	0		21.09		
15	16QAM	36	20		21.16		
15	16QAM	36	39		21.02		23
15	16QAM	75	0		21.18		
15	64QAM	1	0		22.13		
15	64QAM	1	25		22.18		22
15	64QAM	1	49		22.16		
15	64QAM	25	0		21.07		
15	64QAM	25	12		21.09		23
15	64QAM	25	25		21.11		
15	64QAM	50	0		21.01		
Channel				24050	24075	24100	Tune-up limit (dBm)
Frequency (MHz)				835	837.5	840	
10	QPSK	1	0	23.01	23.04	22.87	24
10	QPSK	1	25	22.75	22.99	23.00	
10	QPSK	1	49	22.79	22.83	22.78	
10	QPSK	25	0	21.96	22.03	21.89	23
10	QPSK	25	12	21.86	21.97	21.82	
10	QPSK	25	25	21.80	22.01	21.91	
10	QPSK	50	0	21.78	21.96	21.87	23
10	16QAM	1	0	21.87	21.97	21.81	
10	16QAM	1	25	21.76	21.94	21.69	
10	16QAM	1	49	21.85	22.02	21.83	22
10	16QAM	25	0	20.93	21.06	20.93	
10	16QAM	25	12	20.83	21.07	20.85	
10	16QAM	25	25	20.90	20.95	20.82	23
10	16QAM	50	0	20.97	21.14	20.90	
10	64QAM	1	0	21.79	21.99	21.95	
10	64QAM	1	25	21.96	22.12	21.98	22
10	64QAM	1	49	21.88	22.09	21.88	
10	64QAM	25	0	20.90	21.04	20.99	
10	64QAM	25	12	20.82	20.96	20.91	23
10	64QAM	25	25	20.81	20.97	20.96	
10	64QAM	50	0	20.95	20.99	20.86	
Channel				24025	24075	24125	Tune-up limit (dBm)
Frequency (MHz)				832.5	837.5	842.5	
5	QPSK	1	0	22.96	23.03	22.95	24
5	QPSK	1	12	22.72	22.99	22.87	
5	QPSK	1	24	22.79	22.87	22.84	
5	QPSK	12	0	21.93	22.02	21.92	23
5	QPSK	12	7	21.81	22.07	21.89	
5	QPSK	12	13	21.80	21.99	21.93	
5	QPSK	25	0	21.74	21.95	21.87	23
5	16QAM	1	0	21.73	22.02	21.85	
5	16QAM	1	12	21.75	21.98	21.81	
5	16QAM	1	24	21.84	22.00	21.95	22
5	16QAM	12	0	20.93	21.06	20.97	
5	16QAM	12	7	20.87	21.03	20.75	
5	16QAM	12	13	20.94	21.00	20.71	23
5	16QAM	25	0	20.92	21.16	20.90	
5	64QAM	1	0	21.78	21.99	22.00	
5	64QAM	1	12	21.85	22.14	22.05	22
5	64QAM	1	24	21.81	22.02	21.85	
5	64QAM	12	0	20.91	21.01	20.95	
5	64QAM	12	7	20.91	21.02	20.87	23
5	64QAM	12	13	20.86	21.03	20.93	
5	64QAM	25	0	20.84	20.99	20.81	

**Band 26 for FCC  
(only on channel required)**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	23.12	23.23	23.20	24
15	QPSK	1	37	23.04	22.92	23.13	
15	QPSK	1	74	22.92	23.10	23.07	
15	QPSK	36	0	22.10	22.15	22.14	23
15	QPSK	36	20	22.09	22.07	22.08	
15	QPSK	36	39	22.02	22.12	22.09	
15	QPSK	75	0	22.06	22.11	22.02	23
15	16QAM	1	0	22.20	22.13	22.32	
15	16QAM	1	37	22.25	22.31	21.96	
15	16QAM	1	74	22.19	22.21	22.07	22
15	16QAM	36	0	21.11	21.23	21.13	
15	16QAM	36	20	21.18	21.22	21.18	
15	16QAM	36	39	21.16	21.08	21.30	23
15	16QAM	75	0	21.06	21.19	21.22	
15	64QAM	1	0	22.17	22.34	22.09	
15	64QAM	1	37	22.11	22.27	21.97	22
15	64QAM	1	74	22.15	22.25	22.11	
15	64QAM	36	0	21.10	21.14	21.06	
15	64QAM	36	20	21.12	21.20	21.27	23
15	64QAM	36	39	21.19	21.18	21.14	
15	64QAM	75	0	21.06	21.31	21.15	
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	22.97	23.15	23.11	24
10	QPSK	1	25	22.94	22.77	23.04	
10	QPSK	1	49	22.90	23.05	22.97	
10	QPSK	25	0	22.02	22.09	22.11	23
10	QPSK	25	12	21.96	22.03	22.04	
10	QPSK	25	25	22.11	22.20	22.18	
10	QPSK	50	0	22.10	22.13	22.17	23
10	16QAM	1	0	22.09	21.98	22.18	
10	16QAM	1	25	22.19	22.17	21.88	
10	16QAM	1	49	22.11	22.12	21.97	22
10	16QAM	25	0	20.96	21.22	21.10	
10	16QAM	25	12	21.14	21.15	21.15	
10	16QAM	25	25	21.05	21.03	21.19	23
10	16QAM	50	0	21.02	21.06	21.11	
10	64QAM	1	0	22.09	22.25	21.97	
10	64QAM	1	25	22.05	22.26	21.96	22
10	64QAM	1	49	22.02	22.17	22.06	
10	64QAM	25	0	21.05	21.07	20.96	
10	64QAM	25	12	21.01	21.11	21.21	23
10	64QAM	25	25	21.16	21.12	21.12	
10	64QAM	50	0	20.95	21.19	21.06	
Channel				26715	26865	27015	
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	22.98	23.09	23.17	24
5	QPSK	1	12	22.93	22.86	23.01	
5	QPSK	1	24	22.91	23.03	22.97	
5	QPSK	12	0	22.05	22.12	22.00	23
5	QPSK	12	7	21.95	22.09	22.05	
5	QPSK	12	13	22.14	22.09	22.12	
5	QPSK	25	0	22.03	22.06	22.20	23
5	16QAM	1	0	22.18	22.01	22.28	
5	16QAM	1	12	22.10	22.29	21.90	
5	16QAM	1	24	22.12	22.15	21.96	22
5	16QAM	12	0	21.07	21.22	21.05	
5	16QAM	12	7	21.15	21.21	21.09	
5	16QAM	12	13	21.03	21.05	21.29	23
5	16QAM	25	0	21.01	21.07	21.14	
5	64QAM	1	0	22.16	22.32	22.05	
5	64QAM	1	12	21.99	22.18	21.94	22
5	64QAM	1	24	22.03	22.12	21.98	
5	64QAM	12	0	20.95	21.12	21.00	
5	64QAM	12	7	21.05	21.14	21.20	23
5	64QAM	12	13	21.17	21.06	21.05	
5	64QAM	25	0	20.95	21.16	21.06	
Channel				26705	26865	27025	
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	23.09	23.14	23.12	24
3	QPSK	1	8	23.02	22.86	23.01	
3	QPSK	1	14	22.83	23.09	22.94	
3	QPSK	8	0	22.02	22.03	22.01	23
3	QPSK	8	4	22.06	22.08	21.98	
3	QPSK	8	7	22.18	22.08	22.18	
3	QPSK	15	0	22.04	22.12	22.11	23
3	16QAM	1	0	22.17	22.08	22.26	
3	16QAM	1	8	22.22	22.25	21.94	
3	16QAM	1	14	22.17	22.08	21.96	22
3	16QAM	8	0	21.07	21.20	21.02	
3	16QAM	8	4	21.09	21.17	21.10	
3	16QAM	8	7	21.12	20.98	21.20	23
3	16QAM	15	0	20.97	21.13	21.12	
3	64QAM	1	0	22.12	22.25	22.08	
3	64QAM	1	8	22.09	22.23	21.92	22
3	64QAM	1	14	22.07	22.10	22.06	
3	64QAM	8	0	20.98	21.12	21.02	
3	64QAM	8	4	21.01	21.19	21.26	23
3	64QAM	8	7	21.16	21.05	21.02	
3	64QAM	15	0	20.98	21.20	21.00	
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.07	23.10	23.08	24
1.4	QPSK	1	3	22.96	22.91	23.02	
1.4	QPSK	1	5	22.85	23.01	22.94	

**Band 66**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.07	23.26	23.21	24
20	QPSK	1	49	23.10	22.91	23.15	
20	QPSK	1	99	23.01	23.07	23.15	
20	QPSK	50	0	22.05	22.10	22.03	23
20	QPSK	50	24	22.07	22.03	22.09	
20	QPSK	50	50	22.02	22.06	22.02	
20	QPSK	100	0	22.06	22.08	22.07	23
20	16QAM	1	0	22.27	22.18	22.30	
20	16QAM	1	49	22.28	22.40	22.00	
20	16QAM	1	99	22.24	22.17	22.03	22
20	16QAM	50	0	21.10	21.18	21.15	
20	16QAM	50	24	21.26	21.31	21.15	
20	16QAM	50	50	21.20	21.03	21.32	23
20	16QAM	100	0	21.03	21.23	21.28	
20	64QAM	1	0	22.24	22.32	22.14	
20	64QAM	1	49	22.15	22.29	21.92	22
20	64QAM	1	99	22.14	22.27	22.08	
20	64QAM	50	0	21.18	21.22	21.13	
20	64QAM	50	24	21.08	21.25	21.29	23
20	64QAM	50	50	21.27	21.20	21.09	
20	64QAM	100	0	21.07	21.40	21.24	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.99	23.20	23.14	24
15	QPSK	1	37	23.06	22.89	23.06	
15	QPSK	1	74	23.01	23.07	23.09	
15	QPSK	36	0	22.09	22.01	22.17	23
15	QPSK	36	20	22.09	22.16	22.03	
15	QPSK	36	39	22.20	22.25	22.16	
15	QPSK	75	0	22.20	22.15	22.13	23
15	16QAM	1	0	22.25	22.19	22.31	
15	16QAM	1	37	22.22	22.30	22.01	
15	16QAM	1	74	22.26	22.07	22.01	22
15	16QAM	36	0	21.14	21.13	21.16	
15	16QAM	36	20	21.26	21.26	21.10	
15	16QAM	36	39	21.21	21.07	21.26	23
15	16QAM	75	0	20.95	21.27	21.18	
15	64QAM	1	0	22.23	22.35	22.04	
15	64QAM	1	37	22.07	22.23	21.92	22
15	64QAM	1	74	22.08	22.24	22.10	
15	64QAM	36	0	21.08	21.19	21.14	
15	64QAM	36	20	21.03	21.20	21.25	23
15	64QAM	36	39	21.23	21.19	21.04	
15	64QAM	75	0	21.09	21.39	21.21	
Channel				132022	132322	132622	
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.04	23.15	23.11	24
10	QPSK	1	25	23.04	22.89	23.07	
10	QPSK	1	49	22.98	22.97	23.05	
10	QPSK	25	0	22.07	22.08	22.26	23
10	QPSK	25	12	22.07	22.10	22.14	
10	QPSK	25	25	22.13	22.24	22.21	
10	QPSK	50	0	22.09	22.03	22.10	23
10	16QAM	1	0	22.25	22.17	22.24	
10	16QAM	1	25	22.31	22.39	21.96	
10	16QAM	1	49	22.28	22.13	22.06	22
10	16QAM	25	0	21.05	21.11	21.11	
10	16QAM	25	12	21.29	21.31	21.14	
10	16QAM	25	25	21.21	21.01	21.30	23
10	16QAM	50	0	20.95	21.19	21.32	
10	64QAM	1	0	22.14	22.42	22.18	
10	64QAM	1	25	22.11	22.21	21.97	22
10	64QAM	1	49	22.07	22.18	22.03	
10	64QAM	25	0	21.08	21.22	21.10	
10	64QAM	25	12	21.10	21.21	21.24	23
10	64QAM	25	25	21.23	21.14	21.02	
10	64QAM	50	0	20.97	21.31	21.16	
Channel				131997	132322	132647	
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.00	23.18	23.20	24
5	QPSK	1	12	23.06	22.94	23.15	
5	QPSK	1	24	23.04	23.07	23.10	
5	QPSK	12	0	22.12	22.14	22.24	23
5	QPSK	12	7	22.09	22.18	22.05	
5	QPSK	12	13	22.23	22.24	22.12	
5	QPSK	25	0	22.18	22.15	22.14	23
5	16QAM	1	0	22.29	22.11	22.24	
5	16QAM	1	12	22.26	22.30	22.01	
5	16QAM	1	24	22.19	22.17	22.07	22
5	16QAM	12	0	21.00	21.16	21.18	
5	16QAM	12	7	21.25	21.22	21.05	
5	16QAM	12	13	21.13	21.04	21.34	23
5	16QAM	25	0	21.07	21.23	21.29	
5	64QAM	1	0	22.20	22.35	22.18	
5	64QAM	1	12	22.18	22.23	21.95	22
5	64QAM	1	24	22.11	22.19	22.06	
5	64QAM	12	0	21.15	21.16	21.12	
5	64QAM	12	7	21.00	21.27	21.22	23
5	64QAM	12	13	21.20	21.10	20.99	
5	64QAM	25	0	21.01	21.43	21.15	



1.4	QPSK	3	0	22.00	22.03	22.07	23
1.4	QPSK	3	1	22.04	22.09	21.98	
1.4	QPSK	3	3	22.16	22.20	22.15	
1.4	QPSK	6	0	22.08	22.05	22.18	23
1.4	16QAM	1	0	22.06	22.04	22.29	
1.4	16QAM	1	3	22.22	22.24	21.92	
1.4	16QAM	1	5	22.07	22.19	22.02	23
1.4	16QAM	3	0	21.02	21.13	21.04	
1.4	16QAM	3	1	21.11	21.10	21.17	
1.4	16QAM	3	3	21.05	20.93	21.24	22
1.4	16QAM	6	0	21.03	21.17	21.08	
1.4	64QAM	1	0	22.16	22.23	22.06	
1.4	64QAM	1	3	22.04	22.25	21.94	23
1.4	64QAM	1	5	22.00	22.17	22.09	
1.4	64QAM	3	0	20.98	21.10	20.91	
1.4	64QAM	3	1	21.00	21.17	21.17	23
1.4	64QAM	3	3	21.18	21.11	21.13	
1.4	64QAM	6	0	20.91	21.16	21.11	

3	QPSK	8	0	22.09	22.05	22.25	23
3	QPSK	8	4	22.13	22.16	22.01	
3	QPSK	8	7	22.13	22.18	22.17	
3	QPSK	15	0	22.13	22.13	22.09	23
3	16QAM	1	0	22.23	22.10	22.23	
3	16QAM	1	8	22.22	22.32	21.98	
3	16QAM	1	14	22.21	22.08	21.99	22
3	16QAM	8	0	21.13	21.18	21.09	
3	16QAM	8	4	21.26	21.30	21.12	
3	16QAM	8	7	21.10	20.96	21.30	23
3	16QAM	15	0	20.99	21.19	21.25	
3	64QAM	1	0	22.26	22.43	22.08	
3	64QAM	1	8	22.14	22.24	21.98	22
3	64QAM	1	14	22.12	22.30	21.99	
3	64QAM	8	0	21.13	21.20	21.11	
3	64QAM	8	4	21.01	21.24	21.20	22
3	64QAM	8	7	21.18	21.16	21.13	
3	64QAM	15	0	21.10	21.42	21.15	
Channel				131979	132322	132685	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.04	23.19	23.22	24
1.4	QPSK	1	3	23.05	22.90	23.16	
1.4	QPSK	1	5	22.98	23.06	23.14	
1.4	QPSK	3	0	22.11	22.13	22.20	23
1.4	QPSK	3	1	22.07	22.20	22.00	
1.4	QPSK	3	3	22.12	22.30	22.14	
1.4	QPSK	6	0	22.15	22.15	22.17	23
1.4	16QAM	1	0	22.28	22.13	22.32	
1.4	16QAM	1	3	22.24	22.31	22.01	
1.4	16QAM	1	5	22.24	22.12	22.07	23
1.4	16QAM	3	0	21.07	21.14	21.14	
1.4	16QAM	3	1	21.28	21.21	21.10	
1.4	16QAM	3	3	21.20	21.00	21.23	22
1.4	16QAM	6	0	20.95	21.18	21.25	
1.4	64QAM	1	0	22.14	22.37	22.09	
1.4	64QAM	1	3	22.06	22.26	21.96	23
1.4	64QAM	1	5	22.09	22.25	22.07	
1.4	64QAM	3	0	21.20	21.19	21.09	
1.4	64QAM	3	1	21.10	21.20	21.31	22
1.4	64QAM	3	3	21.19	21.23	21.10	
1.4	64QAM	6	0	21.07	21.36	21.22	

Band 38(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2590	2595	2610	
20	QPSK	1	0	23.17	23.32	23.27	24
20	QPSK	1	49	23.20	23.11	23.25	
20	QPSK	1	99	23.11	23.17	23.15	
20	QPSK	50	0	22.15	22.20	22.13	23
20	QPSK	50	24	22.17	22.16	22.08	
20	QPSK	50	50	22.13	22.13	22.09	
20	QPSK	100	0	22.06	22.12	22.17	23
20	16QAM	1	0	22.37	22.28	22.40	
20	16QAM	1	49	22.38	22.50	22.10	
20	16QAM	1	99	22.34	22.27	22.13	23
20	16QAM	50	0	21.20	21.28	21.25	
20	16QAM	50	24	21.36	21.41	21.25	
20	16QAM	50	50	21.30	21.13	21.42	22
20	16QAM	100	0	21.13	21.33	21.38	
20	64QAM	1	0	22.25	22.14	22.24	
20	64QAM	1	49	22.25	22.39	22.02	23
20	64QAM	1	99	22.24	22.37	22.18	
20	64QAM	50	0	21.28	21.32	21.23	
20	64QAM	50	24	21.18	21.35	21.39	22
20	64QAM	50	50	21.37	21.30	21.19	
20	64QAM	100	0	21.17	21.50	21.34	
Channel				37825	38000	38175	
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	23.16	23.29	23.23	24
15	QPSK	1	37	23.22	22.91	23.22	
15	QPSK	1	74	23.11	23.15	23.24	
15	QPSK	36	0	22.25	22.19	22.31	23
15	QPSK	36	20	22.29	22.23	22.13	
15	QPSK	36	39	22.21	22.36	22.27	
15	QPSK	75	0	22.21	22.13	22.20	23
15	16QAM	1	0	22.33	22.26	22.35	
15	16QAM	1	37	22.32	22.40	22.10	
15	16QAM	1	74	22.35	22.16	22.13	23
15	16QAM	36	0	21.22	21.26	21.22	
15	16QAM	36	20	21.29	21.37	21.17	
15	16QAM	36	39	21.25	21.05	21.41	22
15	16QAM	75	0	21.11	21.26	21.33	
15	64QAM	1	0	22.35	22.42	22.16	
15	64QAM	1	37	22.20	22.35	22.00	23
15	64QAM	1	74	22.26	22.40	22.13	
15	64QAM	36	0	21.18	21.30	21.17	
15	64QAM	36	20	21.19	21.38	21.41	22
15	64QAM	36	39	21.38	21.30	21.15	
15	64QAM	75	0	21.20	21.41	21.38	
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	23.07	23.20	23.21	24
10	QPSK	1	25	23.12	22.93	23.16	
10	QPSK	1	49	23.12	23.20	23.28	
10	QPSK	25	0	22.15	22.13	22.24	23
10	QPSK	25	12	22.19	22.16	22.17	
10	QPSK	25	25	22.31	22.40	22.23	
10	QPSK	50	0	22.28	22.16	22.17	23
10	16QAM	1	0	22.40	22.32	22.42	
10	16QAM	1	25	22.33	22.43	22.01	
10	16QAM	1	49	22.31	22.22	22.04	23
10	16QAM	25	0	21.21	21.30	21.18	
10	16QAM	25	12	21.36	21.37	21.18	
10	16QAM	25	25	21.23	21.12	21.39	22
10	16QAM	50	0	21.06	21.31	21.30	
10	64QAM	1	0	22.37	22.45	22.27	
10	64QAM	1	25	22.16	22.32	22.02	23
10	64QAM	1	49	22.17	22.30	22.10	
10	64QAM	25	0	21.32	21.34	21.14	
10	64QAM	25	12	21.15	21.30	21.36	22
10	64QAM	25	25	21.40	21.33	21.10	
10	64QAM	50	0	21.13	21.49	21.35	
Channel				37775	38000	38225	
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	23.16	23.24	23.23	24
5	QPSK	1	12	23.10	23.03	23.26	
5	QPSK	1	24	23.13	23.09	23.18	
5	QPSK	12	0	22.25	22.24	22.37	23
5	QPSK	12	7	22.20	22.28	22.22	
5	QPSK	12	13	22.30	22.36	22.24	
5	QPSK	25	0	22.28	22.25	22.22	23
5	16QAM	1	0	22.33	22.29	22.33	
5	16QAM	1	12	22.30	22.54	22.09	
5	16QAM	1	24	22.27	22.23	22.15	23
5	16QAM	12	0	21.15	21.19	21.26	
5	16QAM	12	7	21.30	21.31	21.21	
5	16QAM	12	13	21.33	21.03	21.34	22
5	16QAM	25	0	21.16	21.37	21.32	
5	64QAM	1	0	22.25	22.42	22.28	
5	64QAM	1	12	22.20	22.37	22.06	23
5	64QAM	1	24	22.28	22.34	22.17	
5	64QAM	12	0	21.26	21.35	21.18	
5	64QAM	12	7	21.09	21.31	21.33	22
5	64QAM	12	13	21.37	21.33	21.13	
5	64QAM	25	0	21.20	21.41	21.24	

Band 40 (2.3G Band-1) Part 27D-1 2305MHz ~ 2315MHz							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				38750			
Frequency (MHz)				2310			
10	QPSK	1	0	23.11			24
10	QPSK	1	25	22.92			
10	QPSK	1	49	22.98			
10	QPSK	25	0	22.14			23
10	QPSK	25	12	22.12			
10	QPSK	25	25	22.09			
10	QPSK	50	0	22.06			23
10	16QAM	1	0	22.15			
10	16QAM	1	25	22.13			
10	16QAM	1	49	22.19			23
10	16QAM	25	0	21.17			
10	16QAM	25	12	21.25			
10	16QAM	25	25	21.23			22
10	16QAM	50	0	21.09			
10	64QAM	1	0	22.27			
10	64QAM	1	25	22.29			23
10	64QAM	1	49	21.99			
10	64QAM	25	0	21.03			
10	64QAM	25	12	21.29			22
10	64QAM	25	25	21.12			
10	64QAM	50	0	21.22			
Channel				38725	38750	38775	
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	23.05	23.08	23.03	24
5	QPSK	1	12	22.97	22.93	23.00	
5	QPSK	1	24	22.91	22.97	22.89	
5	QPSK	12	0	22.03	22.02	22.00	23
5	QPSK	12	7	22.22	22.13	22.05	
5	QPSK	12	13	22.19	22.12	22.10	
5	QPSK	25	0	22.28	22.18	21.86	23
5	16QAM	1	0	22.46	22.42	22.44	
5	16QAM	1	12	22.23	22.46	22.23	
5	16QAM	1	24	22.34	22.37	22.09	22
5	16QAM	12	0	21.13	21.12	21.00	
5	16QAM	12	7	21.20	21.01	20.99	
5	16QAM	12	13	21.19	21.20	20.97	22
5	16QAM	25	0	21.05	21.12	20.92	
5	64QAM	1	0	22.20	22.12	22.00	
5	64QAM	1	12	22.26	22.15	21.94	23
5	64QAM	1	24	21.95	22.21	22.13	
5	64QAM	12	0	21.10	21.20	20.98	
5	64QAM	12	7	21.25	21.05	21.10	22
5	64QAM	12	13	21.12	21.14	21.13	
5	64QAM	25	0	21.11	21.16	20.97	

### Band 40 (2.3G Band-2)

#### Part 27D-2 2350MHz ~ 2360MHz

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				39200			
Frequency (MHz)				2355			
10	QPSK	1	0	23.08			24
10	QPSK	1	25	23.01			
10	QPSK	1	49	22.92			
10	QPSK	25	0	21.88			23
10	QPSK	25	12	21.83			
10	QPSK	25	25	21.80			
10	QPSK	50	0	21.86			23
10	16QAM	1	0	22.35			
10	16QAM	1	25	22.28			
10	16QAM	1	49	22.10			22
10	16QAM	25	0	21.06			
10	16QAM	25	12	21.07			
10	16QAM	25	25	20.98			23
10	16QAM	50	0	20.93			
10	64QAM	1	0	21.99			
10	64QAM	1	25	21.93			23
10	64QAM	1	49	22.08			
10	64QAM	25	0	21.11			
10	64QAM	25	12	21.09			22
10	64QAM	25	25	21.02			
10	64QAM	50	0	20.96			
Channel				39175	39200	39225	
Frequency (MHz)				2352.5	2355	2357.5	
5	QPSK	1	0	23.00	23.06	23.03	24
5	QPSK	1	12	22.95	22.94	22.98	
5	QPSK	1	24	22.89	22.96	22.89	
5	QPSK	12	0	22.07	22.06	22.02	23
5	QPSK	12	7	22.12	22.09	22.12	
5	QPSK	12	13	22.14	22.10	22.04	
5	QPSK	25	0	22.26	22.17	21.87	23
5	16QAM	1	0	22.45	22.36	22.38	
5	16QAM	1	12	22.20	22.40	22.23	
5	16QAM	1	24	22.35	22.39	22.07	22
5	16QAM	12	0	21.14	21.09	20.99	
5	16QAM	12	7	21.19	21.00	21.09	
5	16QAM	12	13	21.19	21.12	21.08	23
5	16QAM	25	0	21.09	21.19	20.99	
5	64QAM	1	0	22.27	22.21	21.93	
5	64QAM	1	12	22.31	22.06	21.92	22
5	64QAM	1	24	21.92	22.36	22.12	
5	64QAM	12	0	21.01	21.25	20.97	
5	64QAM	12	7	21.18	21.11	21.09	22
5	64QAM	12	13	21.15	21.24	21.11	
5	64QAM	25	0	21.19	21.07	20.95	

## Band 41 (2496~2690MHz)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.92	23.03	23.11	23.06	22.96	24
20	QPSK	1	49	22.91	22.92	22.95	22.97	22.95	
20	QPSK	1	99	22.90	22.85	22.90	22.94	22.95	
20	QPSK	50	0	21.95	22.00	22.13	21.89	22.06	23
20	QPSK	50	24	22.08	22.13	22.10	22.05	22.05	
20	QPSK	50	50	22.05	22.12	22.09	22.03	21.99	
20	QPSK	100	0	22.09	22.01	22.10	21.88	22.06	23
20	16QAM	1	0	22.38	22.40	22.47	22.38	22.34	
20	16QAM	1	49	22.20	22.31	22.45	22.24	22.20	
20	16QAM	1	99	22.16	22.32	22.39	22.19	22.05	22
20	16QAM	50	0	21.05	21.16	21.26	21.01	20.98	
20	16QAM	50	24	21.04	21.14	21.11	20.99	20.97	
20	16QAM	50	50	21.01	21.16	21.13	21.06	21.05	23
20	16QAM	100	0	21.04	21.11	21.10	20.95	21.06	
20	64QAM	1	0	22.10	22.14	22.35	21.99	22.04	
20	64QAM	1	49	22.13	22.22	22.10	21.94	22.12	22
20	64QAM	1	99	22.02	21.97	22.20	22.06	21.94	
20	64QAM	50	0	21.02	21.01	21.17	21.09	21.11	
20	64QAM	50	24	21.06	21.11	21.13	21.02	21.15	22
20	64QAM	50	50	21.03	21.12	21.12	21.11	21.03	
20	64QAM	100	0	21.09	21.10	21.07	20.92	21.09	
Channel				39725	40173	40620	41068	41515	
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	22.93	22.97	23.02	22.98	22.91	24
15	QPSK	1	37	23.02	22.89	22.88	22.94	22.92	
15	QPSK	1	74	22.90	22.87	22.88	22.90	22.96	
15	QPSK	36	0	21.94	22.07	22.07	21.94	21.98	23
15	QPSK	36	20	22.09	22.20	22.06	22.10	22.11	
15	QPSK	36	39	22.13	22.14	22.15	22.12	22.08	
15	QPSK	75	0	21.86	22.21	22.12	21.96	21.94	23
15	16QAM	1	0	22.29	22.41	22.39	22.40	22.35	
15	16QAM	1	37	22.26	22.23	22.42	22.30	22.23	
15	16QAM	1	74	22.02	22.34	22.47	22.07	22.15	22
15	16QAM	36	0	21.07	21.07	21.09	21.00	21.07	
15	16QAM	36	20	21.03	21.20	21.10	21.08	21.10	
15	16QAM	36	39	21.04	21.19	21.10	21.05	21.00	23
15	16QAM	75	0	20.98	21.14	21.13	21.03	21.02	
15	64QAM	1	0	21.92	22.31	22.42	22.03	22.00	
15	64QAM	1	37	21.99	22.38	22.08	22.00	22.01	22
15	64QAM	1	74	22.09	21.93	22.35	22.09	22.11	
15	64QAM	36	0	21.06	21.01	21.19	21.02	21.01	
15	64QAM	36	20	21.06	21.16	21.06	21.02	21.00	22
15	64QAM	36	39	20.99	21.11	21.10	21.12	21.07	
15	64QAM	75	0	21.03	21.21	21.14	20.97	20.91	
Channel				39700	40160	40620	41080	41540	
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	22.97	22.99	23.06	22.95	22.97	24
10	QPSK	1	25	22.84	22.90	22.90	23.03	22.92	
10	QPSK	1	49	22.92	22.88	22.88	22.88	22.95	
10	QPSK	25	0	21.99	22.04	22.04	21.90	22.11	23
10	QPSK	25	12	22.25	22.18	22.13	22.02	22.24	
10	QPSK	25	25	22.19	22.22	22.10	22.01	22.14	
10	QPSK	50	0	22.19	22.26	22.10	21.94	22.15	23
10	16QAM	1	0	22.32	22.31	22.45	22.39	22.35	
10	16QAM	1	25	22.19	22.28	22.42	22.31	22.17	
10	16QAM	1	49	22.31	22.30	22.35	22.15	22.30	22
10	16QAM	25	0	21.05	21.16	21.12	21.04	21.16	
10	16QAM	25	12	21.15	21.17	21.14	21.03	21.23	
10	16QAM	25	25	21.24	21.22	21.18	20.96	21.18	23
10	16QAM	50	0	21.06	21.15	21.15	21.01	21.11	
10	16QAM	1	0	21.98	22.38	22.15	21.89	21.85	
10	16QAM	1	25	21.92	22.36	22.09	21.94	21.95	22
10	16QAM	1	49	22.04	21.89	22.28	22.08	22.01	
10	16QAM	25	0	21.02	21.00	21.12	21.11	21.07	
10	16QAM	25	12	21.10	21.20	21.10	21.09	21.09	22
10	16QAM	25	25	21.00	21.16	21.14	21.04	21.12	
10	16QAM	50	0	20.91	21.18	21.05	21.00	20.90	
Channel				39675	40148	40620	41093	41565	
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	22.97	23.01	23.06	22.99	22.98	24
5	QPSK	1	12	22.94	22.95	22.83	22.99	23.02	
5	QPSK	1	24	22.93	22.93	22.92	23.02	22.96	
5	QPSK	12	0	22.01	22.07	22.05	21.85	21.91	23
5	QPSK	12	7	22.08	22.13	22.05	22.10	22.11	
5	QPSK	12	13	22.03	22.08	22.10	21.99	22.05	
5	QPSK	25	0	21.94	22.17	22.17	21.87	21.91	23
5	16QAM	1	0	22.29	22.39	22.47	22.36	22.31	
5	16QAM	1	12	22.18	22.20	22.31	22.23	22.23	
5	16QAM	1	24	22.03	22.36	22.28	22.13	22.10	22
5	16QAM	12	0	21.01	21.12	21.05	21.02	21.12	
5	16QAM	12	7	21.09	21.23	21.04	21.12	21.08	
5	16QAM	12	13	21.09	21.17	21.07	21.06	20.98	22
5	16QAM	25	0	20.98	21.17	21.13	21.01	20.98	
5	64QAM	1	0	22.01	22.37	22.19	21.96	22.02	
5	64QAM	1	12	22.00	22.35	22.16	21.97	21.98	23
5	64QAM	1	24	22.04	21.99	22.33	22.08	22.06	
5	64QAM	12	0	20.98	21.00	21.24	21.00	21.08	
5	64QAM	12	7	21.04	21.29	21.09	20.97	21.07	22
5	64QAM	12	13	21.09	21.17	21.10	21.09	21.07	
5	64QAM	25	0	21.02	21.21	21.11	20.96	21.03	

**n41 (2496 ~ 2690MHz)**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)	
Channel				509202	513900	518598	523296	528000	25.00	
Frequency (MHz)				2546	2569.5	2593	2616.5	2640		
100	DFT-s-OFDM Pi/2 BPSK	1	1	23.96	23.04	23.41	23.25	23.54	25.50	
100		1	136	23.09	23.06	23.50	23.35	23.23		
100		1	272	23.12	23.45	23.21	23.35	23.29		
100		135	1	23.44	23.56	23.76	23.77	23.77		
100		135	67	23.47	23.50	23.98	23.76	23.85		
100		135	136	23.45	23.53	23.41	23.93	23.89		
100		270	0	23.43	23.52	23.44	23.96	23.90	25.50	
100	DFT-s-OFDM QPSK	1	1	24.02	23.92	24.12	24.06	24.07		
100		1	136	23.89	23.71	23.99	24.00	23.93		
100		1	272	23.89	23.99	24.03	23.98	23.89		
100		135	1	23.82	23.51	23.82	23.73	23.77		
100		135	67	23.41	23.47	23.59	23.60	23.76		
100		135	136	23.44	23.19	23.67	23.68	23.71		
100		270	0	23.49	23.46	23.57	23.77	23.59	25.00	
100	DFT-s-OFDM 16QAM	1	1	22.90	23.01	23.08	23.05	23.09		
100	DFT-s-OFDM 64QAM	1	1	21.13	21.25	21.43	21.26	21.47		
100	DFT-s-OFDM 256QAM	1	1	18.32	18.36	18.52	18.43	18.60		
Channel				508200	513402	518598	523800	529000		25.00
Frequency (MHz)				2541	2567	2593	2619	2645		
90	DFT-s-OFDM Pi/2 BPSK	1	1	23.21	23.28	23.64	23.62	23.41	25.00	
Channel				507204	512904	518598	524298	529998	25.00	
Frequency (MHz)				2536	2564.5	2593	2621.5	2650		
80	DFT-s-OFDM Pi/2 BPSK	1	1	23.96	24.09	23.98	24.03	24.05	25.50	
Channel				505200	511902	518598	525300	531996	25.00	
Frequency (MHz)				2526	2559.5	2593	2626.5	2660		
60	DFT-s-OFDM Pi/2 BPSK	1	1	23.87	23.66	24.11	24.06	24.08	25.50	
Channel				504204	511404	518598	525798	532598	25.00	
Frequency (MHz)				2521	2557	2593	2629	2665		
50	DFT-s-OFDM Pi/2 BPSK	1	1	24.00	23.91	23.63	23.87	23.99	25.00	
Channel				503202	510900	518598	526296	534000	25.00	
Frequency (MHz)				2516	2554.5	2593	2631.5	2670		
40	DFT-s-OFDM Pi/2 BPSK	1	1	23.96	23.89	24.02	24.11	24.02	25.50	
Channel				502200	510402	518598	526800	534996	25.00	
Frequency (MHz)				2511	2552	2593	2634	2675		
30	DFT-s-OFDM Pi/2 BPSK	1	1	23.85	24.03	24.03	24.06	24.08	25.50	
Channel				501204	509898	518598	527298	535998	25.00	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	DFT-s-OFDM Pi/2 BPSK	1	1	24.06	24.05	24.00	24.10	24.06	25.50	
Channel				500202	513900	518598	523296	528000	25.00	
Frequency (MHz)				2546	2569.5	2593	2616.5	2640		
100	CP-OFDM QPSK	1	1	23.38	23.40	23.44	23.45	23.56	25.00	
100	CP-OFDM 16QAM	1	1	22.93	23.09	23.11	23.03	23.05	24.50	
100	CP-OFDM 64QAM	1	1	21.31	21.36	21.45	21.42	21.53	23.00	
100	CP-OFDM 256QAM	1	1	18.35	18.42	18.53	18.56	18.52	20.00	

**n77 (3700 MHz ~ 3980 MHz)**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)	
Channel				650000	653000	656000	659000	662000	24.00	
Frequency (MHz)				3750	3795	3840	3885	3930		
100	DFT-s-OFDM Pi/2 BPSK	1	1	22.57	22.37	22.44	22.42	22.34	24.00	
100		1	136	22.70	22.46	22.44	22.42	22.46		
100		1	271	22.70	22.57	22.45	22.63	22.63		
100		135	1	22.02	21.82	21.97	21.91	22.02		
100		135	67	22.62	22.39	22.43	22.49	22.55		
100		135	136	22.10	21.96	21.93	22.04	22.02		
100		270	0	22.02	21.97	21.91	22.02	22.13	23.50	
100	DFT-s-OFDM QPSK	1	1	23.17	23.09	23.20	23.12	23.13		
100		1	136	22.67	22.71	22.87	22.92	23.01		
100		1	271	22.71	22.60	22.69	22.71	22.66		
100		135	1	21.34	21.43	21.44	21.34	21.40		
100		135	67	21.37	21.30	21.25	21.29	21.25		
100		135	136	21.35	21.29	21.37	21.26	21.30		
100		270	0	21.33	21.41	21.38	21.44	21.25	23.00	
100	DFT-s-OFDM 16QAM	1	1	21.41	21.38	21.34	21.29	21.32		
100	DFT-s-OFDM 64QAM	1	1	19.84	19.62	19.89	19.52	19.53		
100	DFT-s-OFDM 256QAM	1	1	17.92	17.83	17.93	17.78	17.79		
Channel				649334	652668	656000	659332	662666		24.00
Frequency (MHz)				3740	3790	3840	3890	3940		
80	DFT-s-OFDM Pi/2 BPSK	1	1	22.58	22.35	22.45	22.35	22.49	24.00	
Channel				648668	652334	656000	659666	663332	24.00	
Frequency (MHz)				3730	3785	3840	3895	3950		
60	DFT-s-OFDM Pi/2 BPSK	1	1	22.62	22.49	22.47	22.62	22.56	24.00	
Channel				648000	652000	656000	660000	664000	24.00	
Frequency (MHz)				3720	3780	3840	3900	3960		
40	DFT-s-OFDM Pi/2 BPSK	1	1	23.00	23.02	23.11	23.02	23.02	24.50	
Channel				647668	651834	656000	660166	664332	24.00	
Frequency (MHz)				3715	3777.5	3840	3902.5	3965		
30	DFT-s-OFDM Pi/2 BPSK	1	1	22.87	22.95	22.72	22.95	23.12	24.50	
Channel				647334	651668	656000	660332	664666	24.00	
Frequency (MHz)				3710	3775	3840	3905	3970		
20	DFT-s-OFDM Pi/2 BPSK	1	1	22.99	22.59	22.72	22.97	23.01	24.50	
Channel				650000	653000	656000	659000	662000	24.00	
Frequency (MHz)				3750	3795	3840	3885	3930		
100	CP-OFDM QPSK	1	1	21.05	20.88	21.03	21.06	21.00	22.50	
100	CP-OFDM 16QAM	1	1	20.55	20.46	20.52	20.47	20.60	22.00	
100	CP-OFDM 64QAM	1	1	18.85	18.76	18.99	18.72	18.93	20.50	
100	CP-OFDM 256QAM	1	1	16.00	15.93	16.16	15.96	15.74	17.50	

n77 (3450 MHz ~ 3550 MHz)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			
Frequency (MHz)						3500.01			
100	DFT-s-OFDM Pi/2 BPSK	1	1			22.08			24.00
100		1	136			22.10			
100		1	271			22.45			
100		135	1			21.95			23.50
100		135	67			22.17			
100		135	136			21.69			
100		270	0			21.90			
100	DFT-s-OFDM QPSK	1	1			22.70			24.00
100		1	136			22.12			
100		1	271			22.44			
100		135	1			21.18			22.50
100		135	67			21.17			
100		135	136			21.15			
100		270	0			21.16			
100	DFT-s-OFDM 16QAM	1	1			15.77			17.00
100	DFT-s-OFDM 64QAM	1	1			18.05			19.50
100	DFT-s-OFDM 256QAM	1	1			15.86			17.50
Channel				632668	633000	633334	633666	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM Pi/2 BPSK	1	1	22.32	22.37	22.25	22.25	22.40	24.00
Channel				632000	632668	633334	634000	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM Pi/2 BPSK	1	1	22.62	22.35	22.55	22.62	22.43	24.00
Channel				631334	632334	633334	634332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM Pi/2 BPSK	1	1	22.50	22.49	22.62	22.31	22.45	24.00
Channel				631000	632168	633334	634500	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM Pi/2 BPSK	1	1	22.66	22.65	22.55	22.32	22.43	24.00
Channel				630668	632000	633334	634666	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM Pi/2 BPSK	1	1	22.50	22.62	22.43	22.52	22.51	24.00
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			
Frequency (MHz)						3500.01			
100	CP-OFDM QPSK	1	1			20.85			22.00
100	CP-OFDM 16QAM	1	1			20.35			22.00
100	CP-OFDM 64QAM	1	1			18.64			20.00
100	CP-OFDM 256QAM	1	1			15.77			17.00

CA Configuration	PCC					SCC				Power	
	Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation /RB/Offset)	Band	BW (MHz)	DL Channel	DL Fre. (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
CA_2A-2A	2	20	18700	1860	QPSK/1#0	2	20	1100	1900	22.78	24.00
CA_4A-4A	4	20	20050	1720	QPSK/1#0	4	20	2300	1745	22.85	24.00
CA_5A-5A	5	10	20450	829	QPSK/1#0	5	10	2600	844	23.01	24.00





**Reduced Power Level 1**

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		
TX Channel	824.2	836.4	848.8		824.2	836.4	848.8		
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot	29.51	29.60	29.54	31.00	20.51	20.60	20.54	22.00	0.11
GPRS 1 Tx slot	29.49	29.60	29.53	31.00	20.49	20.60	20.53	22.00	
GPRS 2 Tx slots	28.21	28.33	28.28	29.50	22.21	22.33	22.28	23.50	0.12
GPRS 3 Tx slots	26.19	26.27	26.25	27.50	21.93	22.01	21.99	23.24	0.08
GPRS 4 Tx slots	24.12	24.20	24.16	25.50	21.12	21.20	21.16	22.50	0.08
EDGE 1 Tx slot	24.16	24.22	24.13	25.50	15.16	15.22	15.13	16.50	0.09
EDGE 2 Tx slots	24.11	24.13	24.05	25.50	18.11	18.13	18.05	19.50	0.08
EDGE 3 Tx slots	23.90	23.96	23.84	25.00	19.64	19.70	19.58	20.74	0.12
EDGE 4 Tx slots	23.78	23.80	23.72	25.00	20.78	20.80	20.72	22.00	0.08
Mode		Max.	29.60			Max.	22.33		
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		
TX Channel	1850.2	1880	1909.8		1850.2	1880	1909.8		
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8		
GSM 1 Tx slot	25.16	25.23	25.21	26.50	16.16	16.23	16.21	17.50	0.08
GPRS 1 Tx slot	25.15	25.21	25.20	26.50	16.15	16.21	16.20	17.50	
GPRS 2 Tx slots	24.28	24.26	24.32	25.50	18.28	18.26	18.32	19.50	0.06
GPRS 3 Tx slots	21.91	21.90	21.93	23.00	17.65	17.64	17.67	18.74	0.03
GPRS 4 Tx slots	20.04	20.05	20.09	21.50	17.04	17.05	17.09	18.50	0.05
EDGE 1 Tx slot	21.00	21.06	20.98	22.50	12.00	12.06	11.98	13.50	0.08
EDGE 2 Tx slots	20.89	20.94	20.90	22.00	14.89	14.94	14.90	16.00	0.05
EDGE 3 Tx slots	20.78	20.84	20.81	22.00	16.52	16.58	16.55	17.74	0.06
EDGE 4 Tx slots	19.97	20.02	19.99	21.50	16.97	17.02	16.99	18.50	0.05
Mode		Max.	25.23			Max.	18.32		
Attenuator	Cable Loss : 0.8								

Band	WCDMA Band II			Tune-up Limit (dBm)	WCDMA Band IV			Tune-up Limit (dBm)	WCDMA Band V			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	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	17.64	17.83	17.80	19.00	19.71	19.76	19.75	21.00	19.93	19.95	19.87	21.00
3GPP Rel 6	HSDPA Subtest-1	16.88	17.06	17.07	18.00	19.03	19.08	19.02	20.00	19.26	19.16	19.15	20.00
3GPP Rel 6	HSDPA Subtest-2	16.90	17.22	17.14	18.00	19.10	19.10	19.04	20.00	19.27	19.20	19.13	20.00
3GPP Rel 6	HSDPA Subtest-3	16.48	16.61	16.61	17.50	18.55	18.60	18.51	19.50	18.76	18.69	18.63	19.50
3GPP Rel 6	HSDPA Subtest-4	16.49	16.62	16.56	17.50	18.59	18.59	18.60	19.50	18.80	18.89	18.67	19.50
3GPP Rel 8	DC-HSDPA Subtest-1	16.94	17.14	17.08	18.00	19.05	19.14	19.04	20.00	19.18	19.15	19.11	20.00
3GPP Rel 8	DC-HSDPA Subtest-2	16.98	17.12	17.13	18.00	19.06	19.16	19.02	20.00	19.26	19.20	19.13	20.00
3GPP Rel 8	DC-HSDPA Subtest-3	16.47	16.70	16.63	17.50	18.57	18.68	18.54	19.50	18.74	18.70	18.66	19.50
3GPP Rel 8	DC-HSDPA Subtest-4	16.49	16.66	16.67	17.50	18.55	18.66	18.58	19.50	18.76	18.69	18.65	19.50
3GPP Rel 6	HSUPA Subtest-1	16.92	17.14	17.17	18.00	19.09	19.13	19.02	20.00	19.25	19.22	19.14	20.00
3GPP Rel 6	HSUPA Subtest-2	16.41	16.67	16.60	17.50	18.56	18.61	18.54	19.50	18.75	18.78	18.82	19.50
3GPP Rel 6	HSUPA Subtest-3	16.97	17.14	17.15	18.00	19.05	19.13	19.03	20.00	19.24	19.14	19.14	20.00
3GPP Rel 6	HSUPA Subtest-4	16.91	17.13	17.09	18.00	19.08	19.08	19.01	20.00	19.25	19.20	19.13	20.00
3GPP Rel 6	HSUPA Subtest-5	16.96	17.14	17.11	18.00	19.11	19.10	19.13	20.00	19.34	19.22	19.13	20.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	16.56	16.61	16.59	17.50	18.56	18.60	18.57	19.50	18.85	18.64	18.73	19.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6		
Mode		Max.	17.83			Max.	19.76			Max.	19.95		

CDMA2000 BC1			Tune-up Limit (dBm)
25	800	1176	
1851.25	1880	1908.75	
19.89	19.97	20.01	21.00
20.09	20.05	20.04	21.00
20.10	20.23	20.17	21.00
20.08	20.13	20.02	21.00
	Cable Loss	0.8	
	Max.	20.23	



3	QPSK	15	0	16.88	16.96	17.01	18
3	16QAM	1	0	16.96	17.01	17.1	
3	16QAM	1	8	16.88	16.96	16.97	
3	16QAM	1	14	16.82	16.81	16.91	17
3	16QAM	8	0	16.14	16.25	16.29	
3	16QAM	8	4	15.96	16.14	16.14	
3	16QAM	8	7	15.99	16.08	16.07	18
3	16QAM	15	0	15.93	15.99	16.07	
3	64QAM	1	0	16.93	17.01	17.06	
3	64QAM	1	8	16.84	16.96	16.94	17
3	64QAM	1	14	16.94	16.9	16.87	
3	64QAM	8	0	16.25	16.21	16.34	
3	64QAM	8	4	16.15	16.07	16.12	18
3	64QAM	8	7	16.07	16.11	16	
3	64QAM	15	0	16.1	16.12	16.12	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	18	18.1	18.01	19
1.4	QPSK	1	3	17.9	17.99	17.97	
1.4	QPSK	1	5	17.84	17.91	17.8	
1.4	QPSK	3	0	17.86	17.91	17.92	18
1.4	QPSK	3	1	17.75	17.86	17.85	
1.4	QPSK	3	3	17.72	17.71	17.82	
1.4	QPSK	6	0	16.89	16.99	16.98	18
1.4	16QAM	1	0	16.95	17.01	17.05	
1.4	16QAM	1	3	16.87	16.93	17.01	
1.4	16QAM	1	5	16.85	16.81	16.93	17
1.4	16QAM	3	0	16.13	16.29	16.24	
1.4	16QAM	3	1	16.01	16.14	16.16	
1.4	16QAM	3	3	16.00	16.04	16.05	18
1.4	16QAM	6	0	15.94	16.06	16.12	
1.4	64QAM	1	0	16.93	16.99	17.06	
1.4	64QAM	1	3	16.83	16.97	16.94	17
1.4	64QAM	1	5	16.95	16.86	16.86	
1.4	64QAM	3	0	16.22	16.23	16.32	
1.4	64QAM	3	1	16.20	16.08	16.16	18
1.4	64QAM	3	3	16.09	16.17	16.03	
1.4	64QAM	6	0	16.09	16.06	16.08	

3	QPSK	15	0	16.75	16.94	16.84	18
3	16QAM	1	0	16.77	16.93	17.10	
3	16QAM	1	8	16.73	16.85	16.97	
3	16QAM	1	14	16.74	16.82	16.75	17
3	16QAM	8	0	16.06	16.22	16.16	
3	16QAM	8	4	15.82	16.00	15.94	
3	16QAM	8	7	16.01	15.93	16.02	18
3	16QAM	15	0	15.95	16.01	16.03	
3	64QAM	1	0	16.84	16.96	17.06	
3	64QAM	1	8	16.69	16.81	16.84	17
3	64QAM	1	14	16.89	16.70	16.72	
3	64QAM	8	0	16.17	16.02	16.27	
3	64QAM	8	4	16.09	16.13	16.17	18
3	64QAM	8	7	15.92	16.05	16.02	
3	64QAM	15	0	15.96	16.02	15.91	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	17.87	18.08	17.87	19
1.4	QPSK	1	3	17.82	18.03	17.93	
1.4	QPSK	1	5	17.79	17.83	17.67	
1.4	QPSK	3	0	17.11	17.05	17.01	18
1.4	QPSK	3	1	17.03	17.07	17.08	
1.4	QPSK	3	3	17.07	17.05	17.02	
1.4	QPSK	6	0	16.77	16.91	16.88	17
1.4	16QAM	1	0	16.86	16.94	17.03	
1.4	16QAM	1	3	16.74	16.85	17.01	
1.4	16QAM	1	5	16.71	16.79	16.79	18
1.4	16QAM	3	0	16.13	16.11	16.13	
1.4	16QAM	3	1	16.04	16.01	16.08	
1.4	16QAM	3	3	16.09	16.02	16.05	17
1.4	16QAM	6	0	15.92	15.99	16.07	
1.4	64QAM	1	0	16.87	16.92	17.07	
1.4	64QAM	1	3	16.73	16.81	16.88	18
1.4	64QAM	1	5	16.89	16.81	16.72	
1.4	64QAM	3	0	16.11	16.06	16.16	
1.4	64QAM	3	1	16.11	16.06	16.13	17
1.4	64QAM	3	3	16.02	16.08	16.04	
1.4	64QAM	6	0	15.99	15.99	16.02	



Band 12 (700MHz Low Band) 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	20.09	20.13	20.07	
10	QPSK	1	25	20.09	20.05	20.06	
10	QPSK	1	49	20.05	20.08	20.09	
10	QPSK	25	0	19.12	19.18	19.14	20
10	QPSK	25	12	19.16	19.08	19.16	
10	QPSK	25	25	19.09	19.07	19.13	
10	QPSK	50	0	19.05	19.04	19.11	20
10	16QAM	1	0	19.47	19.46	19.37	
10	16QAM	1	25	19.03	19.20	19.38	
10	16QAM	1	49	19.20	19.27	19.33	19
10	16QAM	25	0	18.02	18.17	18.01	
10	16QAM	25	12	18.13	18.12	18.15	
10	16QAM	25	25	18.12	18.23	18.08	20
10	16QAM	50	0	18.14	18.12	18.16	
10	64QAM	1	0	19.02	19.12	19.18	
10	64QAM	1	25	19.01	19.18	19.37	19
10	64QAM	1	49	19.32	19.35	19.14	
10	64QAM	25	0	17.93	18.13	18.11	
10	64QAM	25	12	18.23	18.08	18.19	20
10	64QAM	25	25	18.03	18.16	18.20	
10	64QAM	50	0	18.16	18.11	17.83	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	19.97	20.02	19.92	
5	QPSK	1	12	20.00	19.95	19.97	
5	QPSK	1	24	19.98	19.93	20.07	
5	QPSK	12	0	19.04	18.91	18.97	20
5	QPSK	12	7	19.12	18.93	19.04	
5	QPSK	12	13	19.04	19.02	19.11	
5	QPSK	25	0	18.97	19.02	19.12	20
5	16QAM	1	0	19.35	19.33	19.25	
5	16QAM	1	12	18.95	19.15	19.25	
5	16QAM	1	24	19.05	19.12	19.22	19
5	16QAM	12	0	17.91	18.16	17.99	
5	16QAM	12	7	18.07	18.09	18.05	
5	16QAM	12	13	18.11	18.14	17.97	20
5	16QAM	25	0	18.01	17.97	18.13	
5	64QAM	1	0	18.94	18.98	19.15	
5	64QAM	1	12	18.99	19.04	19.30	19
5	64QAM	1	24	19.25	19.32	19.08	
5	64QAM	12	0	17.89	17.99	18.06	
5	64QAM	12	7	18.13	18.07	18.13	20
5	64QAM	12	13	17.96	18.08	18.14	
5	64QAM	25	0	18.05	18.01	17.68	
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	19.98	20.01	19.97	
3	QPSK	1	8	20.08	20.04	19.96	
3	QPSK	1	14	20.02	20.01	19.96	
3	QPSK	8	0	18.99	18.99	18.97	20
3	QPSK	8	4	19.01	19.03	19.08	
3	QPSK	8	7	18.95	19.05	19.12	
3	QPSK	15	0	18.94	19.03	19.08	20
3	16QAM	1	0	19.25	19.30	19.27	
3	16QAM	1	8	18.93	19.05	19.28	
3	16QAM	1	14	19.12	19.24	19.29	19
3	16QAM	8	0	17.99	18.05	17.88	
3	16QAM	8	4	18.11	18.06	18.12	
3	16QAM	8	7	18.03	18.15	18.07	20
3	16QAM	15	0	18.07	18.05	18.06	
3	64QAM	1	0	18.95	19.10	19.08	
3	64QAM	1	8	18.92	19.12	19.25	19
3	64QAM	1	14	19.26	19.22	19.05	
3	64QAM	8	0	17.91	18.04	17.98	
3	64QAM	8	4	18.21	18.00	18.06	20
3	64QAM	8	7	17.96	18.12	18.06	
3	64QAM	15	0	18.01	18.07	17.69	
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	20.03	20.07	20.00	
1.4	QPSK	1	3	19.97	19.95	19.99	
1.4	QPSK	1	5	20.00	20.06	20.04	
1.4	QPSK	3	0	19.06	19.05	19.01	20
1.4	QPSK	3	1	19.02	19.04	19.09	
1.4	QPSK	3	3	19.04	19.05	19.02	
1.4	QPSK	6	0	18.99	19.02	19.16	20
1.4	16QAM	1	0	19.25	19.31	19.30	
1.4	16QAM	1	3	19.00	19.15	19.24	
1.4	16QAM	1	5	19.06	19.20	19.19	19
1.4	16QAM	3	0	18.02	18.11	18.05	
1.4	16QAM	3	1	18.07	18.06	18.08	
1.4	16QAM	3	3	18.07	18.17	18.05	20
1.4	16QAM	6	0	18.03	17.98	18.11	
1.4	64QAM	1	0	19.01	19.07	19.07	
1.4	64QAM	1	3	18.87	19.10	19.29	19
1.4	64QAM	1	5	19.22	19.21	19.00	
1.4	64QAM	3	0	17.87	18.07	18.07	
1.4	64QAM	3	1	18.16	18.02	18.15	19
1.4	64QAM	3	3	17.92	18.14	18.19	
1.4	64QAM	6	0	18.05	18.02	17.78	

Band 17 (700MHz Band) 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	20.13	20.22	20.10	
10	QPSK	1	25	20.05	20.07	20.05	
10	QPSK	1	49	19.97	19.92	20.08	
10	QPSK	25	0	19.03	19.09	19.05	20
10	QPSK	25	12	19.02	19.08	19.05	
10	QPSK	25	25	19.09	19.06	19.01	
10	QPSK	50	0	19.02	19.08	19.03	20
10	16QAM	1	0	19.22	19.44	19.37	
10	16QAM	1	25	19.35	19.41	19.23	
10	16QAM	1	49	19.38	19.24	19.19	19
10	16QAM	25	0	18.15	18.17	18.11	
10	16QAM	25	12	18.25	18.18	18.22	
10	16QAM	25	25	18.16	18.13	18.23	20
10	16QAM	50	0	18.12	18.08	18.01	
10	64QAM	1	0	19.28	19.15	19.16	
10	64QAM	1	25	19.22	19.26	19.02	19
10	64QAM	1	49	19.03	19.14	19.19	
10	64QAM	25	0	18.11	18.09	18.13	
10	64QAM	25	12	18.28	18.21	18.18	20
10	64QAM	25	25	18.08	18.10	18.13	
10	64QAM	50	0	18.14	18.08	18.06	
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	20.10	20.15	20.08	
5	QPSK	1	12	19.93	20.05	19.90	
5	QPSK	1	24	19.97	19.88	20.00	
5	QPSK	12	0	19.03	19.05	19.05	20
5	QPSK	12	7	19.12	19.00	19.21	
5	QPSK	12	13	19.01	19.09	19.08	
5	QPSK	25	0	18.89	19.06	18.99	20
5	16QAM	1	0	19.08	19.40	19.27	
5	16QAM	1	12	19.30	19.38	19.16	
5	16QAM	1	24	19.23	19.13	19.17	19
5	16QAM	12	0	18.02	18.14	18.10	
5	16QAM	12	7	18.21	18.06	18.08	
5	16QAM	12	13	18.10	18.08	18.08	20
5	16QAM	25	0	18.05	17.93	17.91	
5	64QAM	1	0	19.17	19.06	19.03	
5	64QAM	1	12	19.19	19.22	19.00	19
5	64QAM	1	24	18.89	19.17	19.09	
5	64QAM	12	0	18.04	17.97	18.00	
5	64QAM	12	7	18.16	18.19	18.16	20
5	64QAM	12	13	17.95	17.95	18.04	
5	64QAM	25	0	18.05	18.00	18.00	

Band 18 (835MHz Band)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23925	23925	23925	
Frequency (MHz)				822.5	822.5	822.5	
15	QPSK	1	0		20.17		21
15	QPSK	1	37		20.14		
15	QPSK	1	74		20.04		
15	QPSK	36	0		19.23		20
15	QPSK	36	20		19.17		
15	QPSK	36	39		19.18		
15	QPSK	75	0		19.11		20
15	16QAM	1	0		19.15		
15	16QAM	1	37		19.08		
15	16QAM	1	74		19.13		19
15	16QAM	36	0		18.18		
15	16QAM	36	20		18.25		
15	16QAM	36	39		18.11		20
15	16QAM	75	0		18.27		
15	64QAM	1	0		19.22		
15	64QAM	1	25		19.27		19
15	64QAM	1	49		19.25		
15	64QAM	25	0		18.16		
15	64QAM	25	12		18.18		19
15	64QAM	25	25		18.20		
15	64QAM	50	0		18.10		
Channel				23900	23925	23950	
Frequency (MHz)				820	822.5	825	
10	QPSK	1	0	20.01	20.06	19.98	21
10	QPSK	1	25	19.88	20.01	19.93	
10	QPSK	1	49	19.97	20.00	19.93	
10	QPSK	25	0	19.06	19.15	19.01	20
10	QPSK	25	12	18.97	19.09	18.94	
10	QPSK	25	25	18.78	19.17	19.00	
10	QPSK	50	0	18.82	18.97	18.97	20
10	16QAM	1	0	18.96	19.05	18.90	
10	16QAM	1	25	18.83	19.00	18.80	
10	16QAM	1	49	18.85	18.99	19.02	19
10	16QAM	25	0	18.03	18.04	18.04	
10	16QAM	25	12	17.83	18.17	17.91	
10	16QAM	25	25	17.98	18.04	17.81	20
10	16QAM	50	0	18.05	18.26	18.04	
10	64QAM	1	0	18.89	19.19	18.99	
10	64QAM	1	25	19.03	19.16	19.04	19
10	64QAM	1	49	18.98	19.12	18.92	
10	64QAM	25	0	18.01	18.09	18.09	
10	64QAM	25	12	17.99	18.16	17.96	20
10	64QAM	25	25	17.94	18.06	18.01	
10	64QAM	50	0	18.05	18.08	17.88	
Channel				23875	23925	23975	
Frequency (MHz)				817.5	822.5	827.5	
5	QPSK	1	0	19.91	20.14	19.93	24
5	QPSK	1	12	19.92	20.00	19.98	
5	QPSK	1	24	19.85	20.02	19.80	
5	QPSK	12	0	19.06	19.16	19.01	23
5	QPSK	12	7	18.97	19.07	18.92	
5	QPSK	12	13	18.85	19.06	18.90	
5	QPSK	25	0	18.89	18.99	18.88	23
5	16QAM	1	0	18.90	19.01	18.93	
5	16QAM	1	12	18.94	19.04	18.83	
5	16QAM	1	24	18.98	19.05	19.02	22
5	16QAM	12	0	17.89	18.10	17.94	
5	16QAM	12	7	17.94	18.12	17.96	
5	16QAM	12	13	17.90	18.02	17.82	23
5	16QAM	25	0	17.96	18.12	18.01	
5	64QAM	1	0	18.86	19.07	19.08	
5	64QAM	1	12	18.99	19.22	19.03	22
5	64QAM	1	24	18.89	19.19	18.87	
5	64QAM	12	0	18.09	18.08	17.98	
5	64QAM	12	7	17.89	18.09	17.94	19
5	64QAM	12	13	17.94	18.05	18.02	
5	64QAM	25	0	17.98	18.07	17.95	

Band 19 (835MHz Band)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				24075	24075	24075	
Frequency (MHz)				837.5	837.5	837.5	
15	QPSK	1	0		20.08		21
15	QPSK	1	37		20.05		
15	QPSK	1	74		19.95		
15	QPSK	36	0		19.14		20
15	QPSK	36	20		19.08		
15	QPSK	36	39		19.09		
15	QPSK	75	0		19.02		20
15	16QAM	1	0		19.06		
15	16QAM	1	37		18.99		
15	16QAM	1	74		19.04		19
15	16QAM	36	0		18.09		
15	16QAM	36	20		18.16		
15	16QAM	36	39		18.02		20
15	16QAM	75	0		18.18		
15	64QAM	1	0		19.13		
15	64QAM	1	25		19.18		19
15	64QAM	1	49		19.16		
15	64QAM	25	0		18.07		
15	64QAM	25	12		18.09		19
15	64QAM	25	25		18.11		
15	64QAM	50	0		18.01		
Channel				24050	24075	24100	
Frequency (MHz)				835	837.5	840	
10	QPSK	1	0	20.01	20.04	19.87	21
10	QPSK	1	25	19.75	19.99	20.00	
10	QPSK	1	49	19.79	19.93	19.78	
10	QPSK	25	0	18.96	19.03	18.89	20
10	QPSK	25	12	18.86	18.97	18.82	
10	QPSK	25	25	18.80	19.01	18.91	
10	QPSK	50	0	18.78	18.96	18.87	20
10	16QAM	1	0	18.87	18.97	18.81	
10	16QAM	1	25	18.76	18.94	18.69	
10	16QAM	1	49	18.85	19.02	18.83	19
10	16QAM	25	0	17.93	18.06	17.93	
10	16QAM	25	12	17.83	18.07	17.85	
10	16QAM	25	25	17.90	17.95	17.82	20
10	16QAM	50	0	17.97	18.14	17.90	
10	64QAM	1	0	18.79	18.99	18.95	
10	64QAM	1	25	18.96	19.12	18.98	19
10	64QAM	1	49	18.88	19.09	18.88	
10	64QAM	25	0	17.90	18.04	17.99	
10	64QAM	25	12	17.82	17.96	17.91	20
10	64QAM	25	25	17.81	17.97	17.96	
10	64QAM	50	0	17.95	17.99	17.86	
Channel				24025	24075	24125	
Frequency (MHz)				832.5	837.5	842.5	
5	QPSK	1	0	19.96	20.03	19.95	21
5	QPSK	1	12	19.72	19.99	19.87	
5	QPSK	1	24	19.79	19.87	19.84	
5	QPSK	12	0	18.93	19.02	18.92	20
5	QPSK	12	7	18.81	19.07	18.89	
5	QPSK	12	13	18.80	18.99	18.93	
5	QPSK	25	0	18.74	18.95	18.87	20
5	16QAM	1	0	18.73	19.02	18.85	
5	16QAM	1	12	18.75	18.98	18.81	
5	16QAM	1	24	18.84	19.00	18.95	19
5	16QAM	12	0	17.83	18.06	17.97	
5	16QAM	12	7	17.87	18.03	17.75	
5	16QAM	12	13	17.94	18.00	17.71	20
5	16QAM	25	0	17.92	18.16	17.90	
5	64QAM	1	0	18.78	18.99	19.00	
5	64QAM	1	12	18.85	19.14	19.05	19
5	64QAM	1	24	18.81	19.02	18.85	
5	64QAM	12	0	17.91	18.01	17.95	
5	64QAM	12	7	17.91	18.02	17.87	19
5	64QAM	12	13	17.86	18.03	17.93	
5	64QAM	25	0	17.84	17.99	17.81	



1.4	QPSK	6	0	21.09	21.06	21.19	22
1.4	16QAM	1	0	21.07	21.05	21.30	22
1.4	16QAM	1	3	21.23	21.25	20.93	
1.4	16QAM	1	5	21.08	21.20	21.03	
1.4	16QAM	3	0	20.03	20.14	20.05	
1.4	16QAM	3	1	20.12	20.11	20.18	
1.4	16QAM	3	3	20.06	19.94	20.25	
1.4	16QAM	6	0	20.04	20.18	20.09	21
1.4	64QAM	1	0	21.17	21.24	21.07	22
1.4	64QAM	1	3	21.05	21.28	20.95	
1.4	64QAM	1	5	21.01	21.18	21.10	
1.4	64QAM	3	0	19.99	20.11	19.92	
1.4	64QAM	3	1	20.01	20.18	20.18	
1.4	64QAM	3	3	20.19	20.12	20.14	
1.4	64QAM	6	0	19.92	20.17	20.12	21

3	QPSK	15	0	17.14	17.14	17.10	18
3	16QAM	1	0	17.24	17.11	17.24	
3	16QAM	1	8	17.23	17.33	16.99	
3	16QAM	1	14	17.22	17.09	17.00	17
3	16QAM	8	0	16.14	16.19	16.10	
3	16QAM	8	4	16.27	16.31	16.13	
3	16QAM	8	7	16.11	15.97	16.31	18
3	16QAM	15	0	16.00	16.20	16.26	
3	64QAM	1	0	17.27	17.44	17.09	
3	64QAM	1	8	17.15	17.25	16.99	17
3	64QAM	1	14	17.13	17.31	17.00	
3	64QAM	8	0	16.14	16.21	16.12	
3	64QAM	8	4	16.02	16.25	16.21	18
3	64QAM	8	7	16.19	16.17	16.14	
3	64QAM	15	0	16.11	16.43	16.16	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	18.05	18.20	18.23	19
1.4	QPSK	1	3	18.06	17.91	18.17	
1.4	QPSK	1	5	17.99	18.07	18.15	
1.4	QPSK	3	0	17.12	17.14	17.21	
1.4	QPSK	3	1	17.08	17.21	17.01	
1.4	QPSK	3	3	17.13	17.31	17.15	
1.4	QPSK	6	0	17.16	17.16	17.18	18
1.4	16QAM	1	0	17.29	17.14	17.33	18
1.4	16QAM	1	3	17.25	17.32	17.02	
1.4	16QAM	1	5	17.25	17.13	17.08	
1.4	16QAM	3	0	16.08	16.15	16.15	
1.4	16QAM	3	1	16.29	16.22	16.11	
1.4	16QAM	3	3	16.21	16.01	16.24	
1.4	16QAM	6	0	15.96	16.19	16.26	17
1.4	64QAM	1	0	17.15	17.38	17.10	18
1.4	64QAM	1	3	17.07	17.27	16.97	
1.4	64QAM	1	5	17.10	17.26	17.08	
1.4	64QAM	3	0	16.21	16.20	16.10	
1.4	64QAM	3	1	16.11	16.21	16.32	
1.4	64QAM	3	3	16.20	16.24	16.11	
1.4	64QAM	6	0	16.08	16.37	16.23	17



Band 38(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	20.67	20.82	20.77	21.5
20	QPSK	1	49	20.70	20.61	20.75	
20	QPSK	1	99	20.61	20.67	20.65	
20	QPSK	50	0	19.65	19.70	19.63	20.5
20	QPSK	50	24	19.67	19.66	19.58	
20	QPSK	50	50	19.63	19.63	19.59	
20	QPSK	100	0	19.58	19.62	19.67	20.5
20	16QAM	1	0	19.87	19.78	19.90	
20	16QAM	1	49	19.88	20.00	19.60	
20	16QAM	1	99	19.84	19.77	19.63	19.5
20	16QAM	50	0	18.70	18.78	18.75	
20	16QAM	50	24	18.86	18.91	18.75	
20	16QAM	50	50	18.80	18.63	18.92	20.5
20	16QAM	100	0	18.63	18.83	18.88	
20	64QAM	1	0	19.75	19.84	19.74	
20	64QAM	1	49	19.75	19.89	19.52	19.5
20	64QAM	1	99	19.74	19.87	19.68	
20	64QAM	50	0	18.78	18.82	18.73	
20	64QAM	50	24	18.68	18.85	18.89	
20	64QAM	50	50	18.87	18.80	18.69	
20	64QAM	100	0	18.67	19.00	18.84	
Channel				37825	38000	38175	
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	20.66	20.79	20.73	21.5
15	QPSK	1	37	20.72	20.41	20.72	
15	QPSK	1	74	20.61	20.65	20.74	
15	QPSK	36	0	19.75	19.69	19.81	20.5
15	QPSK	36	20	19.79	19.73	19.63	
15	QPSK	36	39	19.71	19.86	19.77	
15	QPSK	75	0	19.71	19.63	19.70	20.5
15	16QAM	1	0	19.83	19.76	19.85	
15	16QAM	1	37	19.82	19.90	19.60	
15	16QAM	1	74	19.85	19.68	19.63	19.5
15	16QAM	36	0	18.72	18.76	18.72	
15	16QAM	36	20	18.79	18.87	18.67	
15	16QAM	36	39	18.75	18.55	18.91	20.5
15	16QAM	75	0	18.61	18.76	18.83	
15	64QAM	1	0	19.85	19.92	19.66	
15	64QAM	1	37	19.70	19.85	19.50	19.5
15	64QAM	1	74	19.76	19.90	19.63	
15	64QAM	36	0	18.68	18.80	18.67	
15	64QAM	36	20	18.69	18.88	18.91	
15	64QAM	36	39	18.88	18.80	18.65	
15	64QAM	75	0	18.70	18.91	18.88	
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	20.57	20.70	20.71	21.5
10	QPSK	1	25	20.62	20.43	20.66	
10	QPSK	1	49	20.62	20.70	20.78	
10	QPSK	25	0	19.65	19.63	19.74	20.5
10	QPSK	25	12	19.69	19.66	19.67	
10	QPSK	25	25	19.81	19.90	19.73	
10	QPSK	50	0	19.78	19.66	19.67	20.5
10	16QAM	1	0	19.90	19.82	19.92	
10	16QAM	1	25	19.83	19.93	19.51	
10	16QAM	1	49	19.81	19.72	19.54	19.5
10	16QAM	25	0	18.71	18.80	18.68	
10	16QAM	25	12	18.86	18.87	18.68	
10	16QAM	25	25	18.73	18.62	18.89	23
10	16QAM	50	0	18.56	18.81	18.80	
10	64QAM	1	0	19.87	19.95	19.77	
10	64QAM	1	25	19.66	19.82	19.52	22
10	64QAM	1	49	19.67	19.80	19.60	
10	64QAM	25	0	18.82	18.84	18.64	
10	64QAM	25	12	18.65	18.80	18.86	
10	64QAM	25	25	18.90	18.83	18.60	
10	64QAM	50	0	18.63	18.98	18.85	
Channel				37775	38000	38225	
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	20.66	20.74	20.73	21.5
5	QPSK	1	12	20.60	20.53	20.76	
5	QPSK	1	24	20.63	20.59	20.68	
5	QPSK	12	0	19.75	19.74	19.87	20.5
5	QPSK	12	7	19.70	19.78	19.72	
5	QPSK	12	13	19.80	19.86	19.74	
5	QPSK	25	0	19.78	19.75	19.72	20.5
5	16QAM	1	0	19.83	19.79	19.83	
5	16QAM	1	12	19.80	20.04	19.59	
5	16QAM	1	24	19.77	19.73	19.65	19.5
5	16QAM	12	0	18.65	18.69	18.76	
5	16QAM	12	7	18.80	18.81	18.71	
5	16QAM	12	13	18.83	18.53	18.84	20.5
5	16QAM	25	0	18.66	18.87	18.82	
5	64QAM	1	0	19.75	19.82	19.78	
5	64QAM	1	12	19.70	19.87	19.56	19.5
5	64QAM	1	24	19.78	19.84	19.67	
5	64QAM	12	0	18.76	18.85	18.68	
5	64QAM	12	7	18.59	18.81	18.83	
5	64QAM	12	13	18.87	18.83	18.63	
5	64QAM	25	0	18.70	18.91	18.74	

Band 40 (2.3G Band-1) Part 27D-1 2305MHz ~ 2315MHz							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				38750			
Frequency (MHz)				2310			
10	QPSK	1	0	20.11			21
10	QPSK	1	25	19.92			
10	QPSK	1	49	19.98			
10	QPSK	25	0	19.14			20
10	QPSK	25	12	19.12			
10	QPSK	25	25	19.09			
10	QPSK	50	0	19.06			20
10	16QAM	1	0	19.15			
10	16QAM	1	25	19.13			
10	16QAM	1	49	19.19			19
10	16QAM	25	0	18.17			
10	16QAM	25	12	18.25			
10	16QAM	25	25	18.23			20
10	16QAM	50	0	18.09			
10	64QAM	1	0	19.27			
10	64QAM	1	25	19.29			19
10	64QAM	1	49	18.99			
10	64QAM	25	0	18.03			
10	64QAM	25	12	18.29			20
10	64QAM	25	25	18.12			
10	64QAM	50	0	18.22			
Channel				38725	38750	38775	
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	20.05	20.06	20.03	21
5	QPSK	1	12	19.97	19.93	20.00	
5	QPSK	1	24	19.91	19.97	19.89	
5	QPSK	12	0	19.03	19.02	19.00	20
5	QPSK	12	7	19.22	19.13	19.05	
5	QPSK	12	13	19.19	19.12	19.10	
5	QPSK	25	0	19.28	19.18	18.86	20
5	16QAM	1	0	19.46	19.42	19.44	
5	16QAM	1	12	19.23	19.46	19.23	
5	16QAM	1	24	19.34	19.37	19.09	19
5	16QAM	12	0	18.13	18.12	18.00	
5	16QAM	12	7	18.20	18.01	17.99	
5	16QAM	12	13	18.19	18.20	17.97	20
5	16QAM	25	0	18.05	18.12	17.92	
5	64QAM	1	0	19.20	19.12	19.00	
5	64QAM	1	12	19.26	19.15	18.94	19
5	64QAM	1	24	18.95	19.21	19.13	
5	64QAM	12	0	18.10	18.20	17.98	
5	64QAM	12	7	18.25	18.05	18.10	
5	64QAM	12	13	18.12	18.14	18.13	
5	64QAM	25	0	18.11	18.16	17.97	

**Band 40 (2.3G Band-2)**  
**Part 27D-2 2350MHz ~ 2360MHz**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				39200			
Frequency (MHz)				2355			
10	QPSK	1	0	20.08			21
10	QPSK	1	25	20.01			
10	QPSK	1	49	19.92			
10	QPSK	25	0	18.98			20
10	QPSK	25	12	18.83			
10	QPSK	25	25	18.80			
10	QPSK	50	0	18.86			20
10	16QAM	1	0	19.35			
10	16QAM	1	25	19.28			
10	16QAM	1	49	19.10			19
10	16QAM	25	0	18.06			
10	16QAM	25	12	18.07			
10	16QAM	25	25	17.98			20
10	16QAM	50	0	17.93			
10	64QAM	1	0	18.99			
10	64QAM	1	25	18.93			19
10	64QAM	1	49	19.08			
10	64QAM	25	0	18.11			
10	64QAM	25	12	18.09			19
10	64QAM	25	25	18.02			
10	64QAM	50	0	17.96			
Channel				39175	39200	39225	
Frequency (MHz)				2352.5	2355	2357.5	
5	QPSK	1	0	20.00	20.06	20.03	21
5	QPSK	1	12	19.95	19.94	19.98	
5	QPSK	1	24	19.89	19.96	19.89	
5	QPSK	12	0	19.07	19.06	19.02	20
5	QPSK	12	7	19.12	19.09	19.12	
5	QPSK	12	13	19.14	19.10	19.04	
5	QPSK	25	0	19.26	19.17	18.87	20
5	16QAM	1	0	19.45	19.36	19.38	
5	16QAM	1	12	19.20	19.40	19.23	
5	16QAM	1	24	19.35	19.39	19.07	19
5	16QAM	12	0	18.14	18.09	17.99	
5	16QAM	12	7	18.19	18.00	18.09	
5	16QAM	12	13	18.19	18.12	18.08	20
5	16QAM	25	0	18.09	18.19	17.99	
5	64QAM	1	0	19.27	19.21	18.93	
5	64QAM	1	12	19.31	19.06	18.92	19
5	64QAM	1	24	18.92	19.36	19.12	
5	64QAM	12	0	18.01	18.25	17.97	
5	64QAM	12	7	18.18	18.11	18.09	19
5	64QAM	12	13	18.15	18.24	18.11	
5	64QAM	25	0	18.19	18.07	17.95	

## Band 41 (2496~2690MHz)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	21
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	19.92	20.03	20.11	20.06	19.96	21
20	QPSK	1	49	19.91	19.92	19.95	19.97	19.95	
20	QPSK	1	99	19.90	19.85	19.90	19.94	19.95	
20	QPSK	50	0	18.95	19.00	19.13	18.89	19.06	20
20	QPSK	50	24	19.08	19.13	19.10	19.05	19.05	
20	QPSK	50	50	19.05	19.12	19.09	19.03	18.99	
20	QPSK	100	0	19.09	19.01	19.10	18.88	19.06	20
20	16QAM	1	0	19.38	19.40	19.47	19.38	19.34	
20	16QAM	1	49	19.20	19.31	19.45	19.24	19.20	
20	16QAM	1	99	19.16	19.32	19.39	19.19	19.05	19
20	16QAM	50	0	18.05	18.16	18.26	18.01	17.98	
20	16QAM	50	24	18.04	18.14	18.11	17.99	17.97	
20	16QAM	50	50	18.01	18.16	18.13	18.06	18.05	19
20	16QAM	100	0	18.04	18.11	18.10	17.95	18.06	
20	64QAM	1	0	19.10	19.14	19.35	18.99	19.04	
20	64QAM	1	49	19.13	19.22	19.10	18.94	19.12	20
20	64QAM	1	99	19.02	18.97	19.20	19.06	18.94	
20	64QAM	50	0	18.02	18.01	18.17	18.09	18.11	
20	64QAM	50	24	18.06	18.11	18.13	18.02	18.15	19
20	64QAM	50	50	18.03	18.12	18.12	18.11	18.03	
20	64QAM	100	0	18.09	18.10	18.07	17.92	18.09	
Channel				39725	40173	40620	41068	41515	21
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	19.93	19.97	20.02	19.98	19.91	21
15	QPSK	1	37	20.02	19.89	19.88	19.94	19.92	
15	QPSK	1	74	19.90	19.87	19.88	19.90	19.96	
15	QPSK	36	0	18.94	19.07	19.07	18.94	18.98	20
15	QPSK	36	20	19.09	19.20	19.06	19.10	19.11	
15	QPSK	36	39	19.13	19.14	19.15	19.12	19.08	
15	QPSK	75	0	18.86	19.21	19.12	18.96	18.94	20
15	16QAM	1	0	19.29	19.41	19.39	19.40	19.35	
15	16QAM	1	37	19.26	19.23	19.42	19.30	19.23	
15	16QAM	1	74	19.02	19.34	19.47	19.07	19.15	19
15	16QAM	36	0	18.07	18.07	18.09	18.00	18.07	
15	16QAM	36	20	18.03	18.20	18.10	18.08	18.10	
15	16QAM	36	39	18.04	18.19	18.10	18.05	18.00	19
15	16QAM	75	0	17.98	18.14	18.13	18.03	18.02	
15	64QAM	1	0	18.92	19.31	19.42	19.03	19.00	
15	64QAM	1	37	18.99	19.38	19.08	19.00	19.01	20
15	64QAM	1	74	19.09	18.93	19.35	19.09	19.11	
15	64QAM	36	0	18.06	18.01	18.19	18.02	18.01	
15	64QAM	36	20	18.06	18.16	18.06	18.02	18.00	19
15	64QAM	36	39	17.99	18.11	18.10	18.12	18.07	
15	64QAM	75	0	18.03	18.21	18.14	17.97	17.91	
Channel				39700	40160	40620	41080	41540	21
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	19.97	19.99	20.06	19.95	19.97	21
10	QPSK	1	25	19.84	19.90	19.90	20.03	19.92	
10	QPSK	1	49	19.92	19.88	19.88	19.88	19.95	
10	QPSK	25	0	18.99	19.04	19.04	18.90	19.11	20
10	QPSK	25	12	19.25	19.18	19.13	19.02	19.24	
10	QPSK	25	25	19.19	19.22	19.10	19.01	19.14	
10	QPSK	50	0	19.19	19.26	19.10	18.94	19.15	20
10	16QAM	1	0	19.32	19.31	19.45	19.39	19.35	
10	16QAM	1	25	19.19	19.28	19.42	19.31	19.17	
10	16QAM	1	49	19.31	19.30	19.35	19.15	19.30	19
10	16QAM	25	0	18.05	18.16	18.12	18.04	18.16	
10	16QAM	25	12	18.15	18.17	18.14	18.03	18.23	
10	16QAM	25	25	18.24	18.22	18.18	17.98	18.18	23
10	16QAM	50	0	18.06	18.15	18.15	18.01	18.11	
10	16QAM	1	0	18.98	19.38	19.15	18.89	18.95	
10	16QAM	1	25	18.92	19.36	19.09	18.94	18.95	22
10	16QAM	1	49	19.04	18.89	19.28	19.08	19.01	
10	16QAM	25	0	18.02	18.00	18.12	18.11	18.07	
10	16QAM	25	12	18.10	18.20	18.10	18.09	18.09	22
10	16QAM	25	25	18.00	18.16	18.14	18.04	18.12	
10	16QAM	50	0	17.91	18.18	18.05	18.00	17.90	
Channel				39675	40148	40620	41093	41565	21
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	19.97	20.01	20.06	19.99	19.98	21
5	QPSK	1	12	19.94	19.95	19.83	19.99	20.02	
5	QPSK	1	24	19.93	19.93	19.92	20.02	19.96	
5	QPSK	12	0	19.01	19.07	19.05	18.95	18.91	20
5	QPSK	12	7	19.08	19.13	19.05	19.10	19.11	
5	QPSK	12	13	19.03	19.08	19.10	18.99	19.05	
5	QPSK	25	0	18.94	19.17	19.17	18.87	18.91	20
5	16QAM	1	0	19.29	19.39	19.47	19.36	19.31	
5	16QAM	1	12	19.18	19.20	19.31	19.23	19.23	
5	16QAM	1	24	19.03	19.36	19.28	19.13	19.10	19
5	16QAM	12	0	18.01	18.12	18.05	18.02	18.12	
5	16QAM	12	7	18.09	18.23	18.04	18.12	18.08	
5	16QAM	12	13	18.09	18.17	18.07	18.06	17.98	19
5	16QAM	25	0	17.98	18.17	18.13	18.01	17.98	
5	64QAM	1	0	19.01	19.37	19.19	18.96	19.02	
5	64QAM	1	12	19.00	19.35	19.16	18.97	18.98	20
5	64QAM	1	24	19.04	18.99	19.33	19.08	19.06	
5	64QAM	12	0	17.98	18.00	18.24	18.00	18.08	
5	64QAM	12	7	18.04	18.29	18.09	17.97	18.07	19
5	64QAM	12	13	18.09	18.17	18.10	18.09	18.07	
5	64QAM	25	0	18.02	18.21	18.11	17.96	18.03	

**n41 (2496 ~ 2690MHz)**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				509202	513900	518598	523296	528000	15.00
Frequency (MHz)				2546	2569.5	2593	2616.5	2640	
100	DFT-s-OFDM Pi/2 BPSK	1	1	14.51	13.59	13.96	13.80	14.09	15.00
100		1	136	13.64	13.61	14.05	13.90	13.78	
100		1	272	13.67	14.00	13.76	13.90	13.84	
100		135	1	13.99	14.11	14.31	14.32	14.32	
100		135	67	14.02	14.05	14.53	14.31	14.40	
100		135	136	14.00	14.08	13.96	14.48	14.44	
100		270	0	13.98	14.07	13.99	14.51	14.45	
100		1	1	14.57	14.50	14.67	14.61	14.62	
100		1	136	14.44	14.26	14.54	14.55	14.48	
100		1	272	14.44	14.54	14.58	14.53	14.44	
100	DFT-s-OFDM QPSK	135	1	14.37	14.06	14.30	14.28	14.32	15.00
100		135	67	13.96	14.02	14.14	14.15	14.31	
100		135	136	13.99	13.74	14.22	14.23	14.28	
100		270	0	14.04	14.01	14.12	14.32	14.14	
100		1	1	13.45	13.56	13.63	13.60	13.64	
100	DFT-s-OFDM 16QAM	1	1	11.68	11.80	11.98	11.81	12.02	13.00
100	DFT-s-OFDM 64QAM	1	1	8.87	8.91	9.07	8.98	9.15	10.50
Channel				509200	513402	518598	523800	529996	Tune-up limit (dBm)
Frequency (MHz)				2541	2567	2593	2619	2645	
90	DFT-s-OFDM Pi/2 BPSK	1	1	13.76	13.83	14.19	14.17	13.96	15.00
Channel				507204	512904	518598	524298	529998	Tune-up limit (dBm)
Frequency (MHz)				2536	2564.5	2593	2621.5	2650	
80	DFT-s-OFDM Pi/2 BPSK	1	1	14.51	14.64	14.53	14.58	14.60	15.50
Channel				505200	511902	518598	525300	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2559.5	2593	2626.5	2660	
60	DFT-s-OFDM Pi/2 BPSK	1	1	14.42	14.21	14.66	14.61	14.63	15.50
Channel				504204	511404	518598	525798	532998	Tune-up limit (dBm)
Frequency (MHz)				2521	2557	2593	2629	2665	
50	DFT-s-OFDM Pi/2 BPSK	1	1	14.55	14.46	14.18	14.42	14.54	15.50
Channel				503202	510900	518598	526296	534000	Tune-up limit (dBm)
Frequency (MHz)				2516	2544.5	2593	2631.5	2670	
40	DFT-s-OFDM Pi/2 BPSK	1	1	14.50	14.44	14.57	14.66	14.57	15.50
Channel				502200	510402	518598	526800	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2552	2593	2634	2675	
30	DFT-s-OFDM Pi/2 BPSK	1	1	14.40	14.58	14.58	14.61	14.63	15.50
Channel				501204	509898	518598	527298	535998	Tune-up limit (dBm)
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	DFT-s-OFDM Pi/2 BPSK	1	1	14.61	14.60	14.55	14.65	14.61	15.50
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				509202	513900	518598	523296	528000	15.00
Frequency (MHz)				2546	2569.5	2593	2616.5	2640	
100	CP-OFDM QPSK	1	1	13.93	13.95	13.99	14.00	14.11	15.00
100	CP-OFDM 16QAM	1	1	13.48	13.64	13.66	13.58	13.60	14.50
100	CP-OFDM 64QAM	1	1	11.86	11.91	12.00	11.97	12.08	13.00
100	CP-OFDM 256QAM	1	1	8.90	8.97	9.08	9.11	9.07	10.00

**n77 (3700 MHz ~ 3980 MHz)**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				650000	653000	656000	659000	662000	17.00
Frequency (MHz)				3750	3795	3840	3885	3930	
100	DFT-s-OFDM Pi/2 BPSK	1	1	16.02	15.82	15.89	15.72	15.79	17.00
100		1	136	16.15	15.91	15.89	15.87	15.91	
100		1	271	16.15	16.02	15.90	16.08	16.08	
100		135	1	14.97	14.77	14.82	14.86	14.97	
100		135	67	15.57	15.34	15.38	15.44	15.50	
100		135	136	15.05	14.91	14.88	14.99	14.97	
100		270	0	14.97	14.92	14.86	14.97	15.08	
100		1	1	17.12	17.04	17.15	17.07	17.08	
100		1	136	16.62	16.66	16.62	16.87	16.96	
100		1	271	16.66	16.55	16.64	16.66	16.61	
100	DFT-s-OFDM QPSK	135	1	15.29	15.38	15.39	15.29	15.35	16.00
100		135	67	15.32	15.25	15.20	15.24	15.20	
100		135	136	15.30	15.24	15.32	15.21	15.25	
100		270	0	15.28	15.36	15.33	15.39	15.20	
100		1	1	15.36	15.33	15.29	15.24	15.27	
100	DFT-s-OFDM 16QAM	1	1	13.74	13.52	13.59	13.42	13.43	14.00
100	DFT-s-OFDM 64QAM	1	1	11.06	11.07	11.08	11.13	11.14	12.00
Channel				649334	652668	656000	659332	662666	Tune-up limit (dBm)
Frequency (MHz)				3740	3790	3840	3890	3940	
80	DFT-s-OFDM Pi/2 BPSK	1	1	15.58	15.35	15.45	15.35	15.49	17.00
Channel				648668	652334	656000	659666	663332	Tune-up limit (dBm)
Frequency (MHz)				3730	3785	3840	3895	3950	
60	DFT-s-OFDM Pi/2 BPSK	1	1	15.62	15.49	15.47	15.62	15.56	17.00
Channel				648000	652000	656000	660000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3780	3840	3900	3960	
40	DFT-s-OFDM Pi/2 BPSK	1	1	16.20	16.22	16.31	16.22	16.22	17.50
Channel				647668	651834	656000	660166	664332	Tune-up limit (dBm)
Frequency (MHz)				3715	3777.5	3840	3902.5	3965	
30	DFT-s-OFDM Pi/2 BPSK	1	1	16.07	16.15	15.92	16.15	16.32	17.50
Channel				647334	651668	656000	660332	664666	Tune-up limit (dBm)
Frequency (MHz)				3710	3775	3840	3905	3970	
20	DFT-s-OFDM Pi/2 BPSK	1	1	16.19	15.79	15.92	16.17	16.21	17.50
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				650000	653000	656000	659000	662000	15.00
Frequency (MHz)				3750	3795	3840	3885	3930	
100	CP-OFDM QPSK	1	1	14.05	13.88	14.03	14.06	14.00	15.50
100	CP-OFDM 16QAM	1	1	13.55	13.46	13.52	13.47	13.60	15.00
100	CP-OFDM 64QAM	1	1	11.85	11.76	11.99	11.72	11.93	13.50
100	CP-OFDM 256QAM	1	1	9.00	8.93	9.16	8.96	8.74	10.50

n77 (3450 MHz ~ 3550 MHz)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			
Frequency (MHz)						3500.01			
100	DFT-s-OFDM Pi/2 BPSK	1	1			15.54			16.50
100		1	136			15.56			
100		1	271			15.91			
100		135	1			15.41			16.50
100		135	67			15.63			
100		135	136			15.15			
100		270	0			15.36			
100	DFT-s-OFDM QPSK	1	1			16.16			17.00
100		1	136			15.58			
100		1	271			15.90			
100		135	1			14.94			16.00
100		135	67			14.93			
100		135	136			14.80			
100		270	0			14.82			
100	DFT-s-OFDM 16QAM	1	1			9.23			10.50
100	DFT-s-OFDM 64QAM	1	1			11.51			12.50
100	DFT-s-OFDM 256QAM	1	1			9.32			10.50
Channel				632668	633000	633334	633666	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM Pi/2 BPSK	1	1	15.78	15.83	15.71	15.71	15.86	17.00
Channel				632000	632668	633334	634000	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
80	DFT-s-OFDM Pi/2 BPSK	1	1	16.08	15.81	16.01	16.08	15.89	17.00
Channel				631334	632334	633334	634332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM Pi/2 BPSK	1	1	15.96	15.95	16.08	15.77	15.91	17.00
Channel				631000	632168	633334	634500	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM Pi/2 BPSK	1	1	16.12	16.11	16.01	15.78	15.89	17.00
Channel				630668	632000	633334	634666	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM Pi/2 BPSK	1	1	15.96	16.08	15.89	15.98	15.97	17.00
Channel						633334			Tune-up limit (dBm)
Frequency (MHz)						3500.01			
100	CP-OFDM QPSK	1	1			14.31			15.50
100	CP-OFDM 16QAM	1	1			13.81			14.50
100	CP-OFDM 64QAM	1	1			12.10			13.00
100	CP-OFDM 256QAM	1	1			9.23			10.00

## n41 (2496 ~ 2690MHz)(Reduced Power Level 2)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)	
Channel				509202	513900	518598	523296	528000	Tune-up limit (dBm)	
Frequency (MHz)				2546	2569.5	2593	2616.5	2640		
100	DFT-s-OFDM PI/2 BPSK	1	1	11.32	10.99	11.14	11.15	10.90	12.00	
100		1	136	10.45	10.97	11.09	11.25	10.59		
100		1	272	10.48	11.37	11.23	11.16	10.65		
100		DFT-s-OFDM PI/2 BPSK	135	1	10.80	11.11	11.21	11.17	11.13	12.50
100			135	67	10.83	11.07	11.15	10.90	11.21	
100			135	136	10.81	11.07	11.29	11.35	11.25	
100			270	0	10.79	11.11	11.16	11.36	11.26	
100	DFT-s-OFDM QPSK	1	1	11.38	10.86	11.50	11.22	11.43	12.50	
100		1	136	11.25	11.04	11.17	11.17	11.29		
100		1	272	11.25	11.37	11.29	11.31	11.25		
100		DFT-s-OFDM QPSK	135	1	11.18	11.10	11.20	11.02	11.13	12.00
100			135	67	10.77	11.05	11.07	11.00	11.12	
100			135	136	10.80	11.06	11.08	11.06	11.07	
100			270	0	10.85	11.11	11.00	11.02	10.96	
100	DFT-s-OFDM 16QAM	1	1	10.26	11.11	10.84	11.15	10.45	12.00	
100	DFT-s-OFDM 64QAM	1	1	8.49	8.28	8.41	8.36	8.83	10.00	
100	DFT-s-OFDM 256QAM	1	1	5.68	6.48	6.31	6.38	5.96	7.50	
Channel				508200	513402	518598	523800	528996	Tune-up limit (dBm)	
Frequency (MHz)				2541	2567	2593	2619	2645		
90	DFT-s-OFDM PI/2 BPSK	1	1	10.76	10.83	11.19	11.17	10.96	12.00	
Channel				507204	512904	518598	524298	529998	Tune-up limit (dBm)	
Frequency (MHz)				2536	2564.5	2593	2621.5	2650		
80	DFT-s-OFDM PI/2 BPSK	1	1	11.32	11.45	11.34	11.39	11.41	12.50	
Channel				505200	511902	518598	525300	531996	Tune-up limit (dBm)	
Frequency (MHz)				2526	2559.5	2593	2626.5	2660		
60	DFT-s-OFDM PI/2 BPSK	1	1	11.42	11.21	11.31	11.32	11.44	12.50	
Channel				504204	511404	518598	525798	532998	Tune-up limit (dBm)	
Frequency (MHz)				2521	2557	2593	2629	2665		
50	DFT-s-OFDM PI/2 BPSK	1	1	11.36	11.27	11.18	11.42	11.54	12.50	
Channel				503202	510900	518598	526296	534000	Tune-up limit (dBm)	
Frequency (MHz)				2516	2554.5	2593	2631.5	2670		
40	DFT-s-OFDM PI/2 BPSK	1	1	11.31	11.25	11.38	11.47	11.38	12.50	
Channel				502200	510402	518598	526800	534996	Tune-up limit (dBm)	
Frequency (MHz)				2511	2552	2593	2634	2675		
30	DFT-s-OFDM PI/2 BPSK	1	1	11.21	11.39	11.39	11.42	11.44	12.50	
Channel				501204	509898	518598	527298	535998	Tune-up limit (dBm)	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	DFT-s-OFDM PI/2 BPSK	1	1	11.42	11.41	11.36	11.46	11.42	12.50	
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)	
Channel				509202	513900	518598	523296	528000	Tune-up limit (dBm)	
Frequency (MHz)				2546	2569.5	2593	2616.5	2640		
100	CP-OFDM QPSK	1	1	10.93	10.95	10.99	11.00	11.11	12.00	
100	CP-OFDM 16QAM	1	1	10.48	10.64	10.66	10.58	10.60	11.50	
100	CP-OFDM 64QAM	1	1	8.86	8.91	9.00	8.97	9.08	10.00	
100	CP-OFDM 256QAM	1	1	5.90	5.97	6.08	6.11	6.07	7.00	

2.4GHz WLAN ANT 1

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power Level	Power Setting	Duty Cycle %
802.11b 1Mbps	CH 1	2412	13.91	13.00	13.00	100.00
	CH 6	2437	13.45	14.50	13.00	
	CH 11	2462	13.48	14.50	13.00	
802.11g 6Mbps	CH 1	2412	12.88	13.00	12.00	99.43
	CH 6	2437	12.54	13.50	12.00	
	CH 11	2462	12.58	13.50	12.00	
802.11n-HT20 MCS0	CH 1	2412	11.96	12.50	11.00	99.71
	CH 6	2437	11.30	12.50	11.00	
	CH 11	2462	11.32	12.50	11.00	
802.11n-HEW20 MCS0-RLSD42	CH 1	2412	10.82	11.50	11.00	99.73
	CH 6	2437	11.11	12.00	11.00	
	CH 11	2462	11.38	12.00	11.00	
802.11n-HEW20 MCS0-RLSD	CH 1	2412	7.20	8.00	8.00	99.71
	CH 6	2437	8.58	10.50	8.00	
	CH 11	2462	8.44	10.50	8.00	
802.11n-HEW40 MCS0	CH 1	2412	10.00	11.00	11.00	99.53
	CH 6	2437	11.14	12.00	11.00	
	CH 11	2462	10.71	11.50	11.00	

2.4GHz WLAN ANT 2

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power Level	Power Setting	Duty Cycle %
802.11b 1Mbps	CH 1	2412	13.21	14.00	13.00	100.00
	CH 6	2437	13.48	14.50	13.00	
	CH 11	2462	13.12	14.00	13.00	
802.11g 6Mbps	CH 1	2412	12.32	13.00	12.00	99.43
	CH 6	2437	12.88	13.50	12.00	
	CH 11	2462	12.30	13.00	12.00	
802.11n-HT20 MCS0	CH 1	2412	10.38	12.00	11.00	99.71
	CH 6	2437	11.54	12.50	11.00	
	CH 11	2462	11.00	12.00	11.00	
802.11n-HEW20 MCS0-RLSD42	CH 1	2412	11.25	12.00	11.00	99.73
	CH 6	2437	11.98	13.00	11.00	
	CH 11	2462	11.35	12.50	11.00	
802.11n-HEW20 MCS0-RLSD	CH 1	2412	8.05	9.50	8.00	99.71
	CH 6	2437	9.35	10.50	8.00	
	CH 11	2462	9.47	10.50	8.00	
802.11n-HEW40 MCS0	CH 1	2412	11.32	12.00	11.00	99.53
	CH 6	2437	11.32	12.00	11.00	
	CH 11	2462	10.98	12.00	11.00	

2.4GHz WLAN ANT 1+2

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power Level	Power Setting	Duty Cycle %
802.11b 1Mbps	CH 1	2412	-	N/A	13.00	100.00
	CH 6	2437	-	N/A	13.00	
	CH 11	2462	-	N/A	13.00	
802.11g 6Mbps	CH 1	2412	-	N/A	12.00	99.43
	CH 6	2437	-	N/A	12.00	
	CH 11	2462	-	N/A	12.00	
802.11n-HT20 MCS0	CH 1	2412	13.20	14.50	11.00	99.71
	CH 6	2437	13.42	14.50	11.00	
	CH 11	2462	13.22	14.50	11.00	
802.11n-HEW20 MCS0-RLSD42	CH 1	2412	13.12	14.50	11.00	99.73
	CH 6	2437	13.50	14.50	11.00	
	CH 11	2462	13.02	14.50	11.00	
802.11n-HEW20 MCS0-RLSD	CH 1	2412	10.00	11.00	8.00	99.71
	CH 6	2437	11.46	12.50	8.00	
	CH 11	2462	11.46	12.50	8.00	
802.11n-HEW40 MCS0	CH 1	2412	13.22	14.50	11.00	99.53
	CH 6	2437	13.22	14.50	11.00	
	CH 11	2462	12.90	14.50	11.00	