



REPORT No.: SZ23060021S01

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	31.90	31.95	31.88	33.00	22.90	22.95	22.88	24.00	0.09
GPRS 1 Tx slot	31.93	31.97	31.90	33.00	22.93	22.97	22.90	24.00	
GPRS 2 Tx slots	31.21	31.07	31.18	32.00	25.21	25.07	25.18	26.00	0.14
GPRS 3 Tx slots	29.72	29.52	29.52	30.50	25.46	25.26	25.26	26.24	0.20
GPRS 4 Tx slots	28.47	28.54	28.32	29.50	25.47	25.54	25.32	26.50	0.22
EDGE 1 Tx slot	28.01	28.07	27.95	29.00	19.01	19.07	18.95	20.00	0.12
EDGE 2 Tx slots	26.89	27.03	26.93	28.00	20.89	21.03	20.93	22.00	0.14
EDGE 3 Tx slots	24.61	24.65	24.58	25.50	20.35	20.39	20.32	21.24	0.07
EDGE 4 Tx slots	23.68	23.75	23.71	24.50	20.68	20.75	20.71	21.50	0.07
Mode		Max.	31.97			Max.	25.54		
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	30.07	30.11	30.02	31.00	21.07	21.11	21.02	22.00	0.13
GPRS 1 Tx slot	30.11	30.15	30.05	31.00	21.11	21.15	21.05	22.00	
GPRS 2 Tx slots	29.50	29.52	29.45	30.50	23.50	23.52	23.45	24.50	0.07
GPRS 3 Tx slots	27.71	27.81	27.76	28.50	23.45	23.55	23.50	24.24	0.10
GPRS 4 Tx slots	26.54	26.68	26.55	27.50	23.54	23.68	23.55	24.50	0.14
EDGE 1 Tx slot	24.74	24.93	24.90	26.00	15.74	15.93	15.90	17.00	0.19
EDGE 2 Tx slots	23.65	23.84	23.74	24.50	17.65	17.84	17.74	18.50	0.19
EDGE 3 Tx slots	21.46	21.54	21.50	22.50	17.20	17.28	17.24	18.24	0.08
EDGE 4 Tx slots	20.33	20.51	20.48	21.50	17.33	17.51	17.48	18.50	0.18
Mode		Max.	30.15			Max.	23.68		
Attenuator	Cable Loss : 0.8								

Band	WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band IV (dBm)			Tune-up Limit (dBm)	WCDMA Band V (dBm)			Tune-up Limit (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99 RMC 12.2Kbps	23.38	23.42	23.32	24.50	23.35	23.40	23.34	24.50	23.07	23.13	23.10	24.00
3GPP Rel 5 HSDPA Subtest-1	20.44	20.16	20.20	21.00	22.47	22.57	22.40	23.50	20.47	20.37	20.34	21.50
3GPP Rel 5 HSDPA Subtest-2	19.01	18.96	18.93	20.00	20.93	20.74	20.80	22.00	19.64	19.72	19.51	20.50
3GPP Rel 5 HSDPA Subtest-3	17.59	17.47	17.36	18.50	19.14	19.39	19.62	20.00	18.12	18.14	18.32	19.00
3GPP Rel 5 HSDPA Subtest-4	17.19	17.34	17.29	18.50	19.39	19.14	19.12	20.00	17.40	17.51	17.53	18.50
3GPP Rel 6 HSUPA Subtest-1	18.37	18.11	18.15	20.00	18.31	18.42	18.21	20.00	18.48	18.39	18.33	19.50
3GPP Rel 6 HSUPA Subtest-2	18.36	18.13	18.17	20.00	18.29	18.42	18.23	19.00	18.45	18.39	18.35	19.50
3GPP Rel 6 HSUPA Subtest-3	19.40	19.12	19.14	20.00	19.26	19.36	19.18	20.00	19.41	19.36	19.30	20.50
3GPP Rel 6 HSUPA Subtest-4	17.92	17.67	17.68	18.00	17.82	17.95	17.71	18.00	17.97	17.87	17.87	19.00
3GPP Rel 6 HSUPA Subtest-5	19.42	19.16	19.16	20.00	19.23	19.37	19.17	20.00	19.41	19.51	19.47	20.50
3GPP Rel 7 HSPA+ (16QAM) Subtest-1	21.50	21.52	21.56	22.50	21.41	21.56	21.46	22.50	21.38	21.43	21.32	22.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode		Max.	23.42			Max.	23.40			Max.	23.13	

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	23.32	23.35	23.26	
20	QPSK	1	49	23.52	23.57	23.50	24.5
20	QPSK	1	99	23.28	23.31	23.25	
20	QPSK	50	0	22.54	22.61	22.58	
20	QPSK	50	24	22.50	22.57	22.53	23.5
20	QPSK	50	50	22.54	22.55	22.50	
20	QPSK	100	0	22.54	22.56	22.55	
20	16QAM	1	0	22.61	22.68	22.60	23.5
20	16QAM	1	49	22.78	22.82	22.75	
20	16QAM	1	99	22.42	22.52	22.44	
20	16QAM	50	0	21.48	21.58	21.51	22.5
20	16QAM	50	24	21.45	21.55	21.45	
20	16QAM	50	50	21.43	21.52	21.43	
20	16QAM	100	0	21.53	21.57	21.49	22.5
20	64QAM	1	0	21.55	21.56	21.47	
20	64QAM	1	49	21.64	21.73	21.68	
20	64QAM	1	99	21.35	21.45	21.38	21.5
20	64QAM	50	0	20.83	20.89	20.59	
20	64QAM	50	24	20.58	20.65	20.60	
20	64QAM	50	50	20.61	20.63	20.61	21.5
20	64QAM	100	0	20.60	20.66	20.56	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	23.28	23.34	23.16	
15	QPSK	1	37	23.49	23.52	23.44	24.5
15	QPSK	1	74	23.22	23.23	23.22	
15	QPSK	36	0	22.49	22.52	22.53	
15	QPSK	36	20	22.47	22.47	22.44	23.5
15	QPSK	36	39	22.49	22.52	22.45	
15	QPSK	75	0	22.44	22.47	22.54	
15	16QAM	1	0	22.54	22.67	22.56	23.5
15	16QAM	1	37	22.74	22.76	22.70	
15	16QAM	1	74	22.36	22.43	22.37	
15	16QAM	36	0	21.38	21.51	21.50	22.5
15	16QAM	36	20	21.36	21.47	21.40	
15	16QAM	36	39	21.40	21.47	21.42	
15	16QAM	75	0	21.48	21.51	21.40	22.5
15	64QAM	1	0	21.45	21.47	21.40	
15	64QAM	1	37	21.62	21.65	21.61	
15	64QAM	1	74	21.28	21.37	21.32	21.5
15	64QAM	36	0	20.58	20.63	20.52	
15	64QAM	36	20	20.50	20.63	20.55	
15	64QAM	36	39	20.55	20.58	20.55	21.5
15	64QAM	75	0	20.54	20.62	20.46	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	23.22	23.33	23.17	
10	QPSK	1	25	23.51	23.51	23.42	24.5
10	QPSK	1	49	23.22	23.28	23.19	
10	QPSK	25	0	22.51	22.55	22.48	
10	QPSK	25	12	22.40	22.56	22.48	23.5
10	QPSK	25	25	22.45	22.48	22.45	
10	QPSK	50	0	22.49	22.52	22.53	
10	16QAM	1	0	22.56	22.61	22.55	23.5
10	16QAM	1	25	22.72	22.72	22.65	
10	16QAM	1	49	22.35	22.47	22.35	
10	16QAM	25	0	21.40	21.56	21.46	22.5
10	16QAM	25	12	21.40	21.45	21.42	
10	16QAM	25	25	21.39	21.42	21.33	
10	16QAM	50	0	21.45	21.52	21.42	22.5
10	64QAM	1	0	21.46	21.51	21.38	
10	64QAM	1	25	21.55	21.68	21.67	
10	64QAM	1	49	21.28	21.38	21.33	21.5
10	64QAM	25	0	20.55	20.59	20.56	
10	64QAM	25	12	20.57	20.60	20.55	
10	64QAM	25	25	20.51	20.61	20.54	21.5
10	64QAM	50	0	20.57	20.59	20.52	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	23.26	23.34	23.24	
5	QPSK	1	12	23.51	23.55	23.44	24.5
5	QPSK	1	24	23.21	23.27	23.20	
5	QPSK	12	0	22.45	22.54	22.49	
5	QPSK	12	7	22.48	22.55	22.51	23.5
5	QPSK	12	13	22.52	22.51	22.47	
5	QPSK	25	0	22.44	22.53	22.53	
5	16QAM	1	0	22.59	22.62	22.52	23.5
5	16QAM	1	12	22.76	22.74	22.66	
5	16QAM	1	24	22.34	22.44	22.34	
5	16QAM	12	0	21.39	21.50	21.46	22.5
5	16QAM	12	7	21.40	21.53	21.44	
5	16QAM	12	13	21.38	21.49	21.34	
5	16QAM	25	0	21.43	21.55	21.43	22.5
5	64QAM	1	0	21.49	21.47	21.44	
5	64QAM	1	12	21.60	21.72	21.61	
5	64QAM	1	24	21.32	21.37	21.32	21.5
5	64QAM	12	0	20.59	20.61	20.53	
5	64QAM	12	7	20.54	20.63	20.52	
5	64QAM	12	13	20.53	20.57	20.58	21.5
5	64QAM	25	0	20.55	20.58	20.53	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	23.26	23.29	23.22	
3	QPSK	1	8	23.45	23.54	23.41	24.5
3	QPSK	1	14	23.25	23.30	23.18	
3	QPSK	8	0	22.49	22.59	22.51	
3	QPSK	8	4	22.42	22.56	22.47	23.5
3	QPSK	8	7	22.52	22.45	22.43	

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	23.28	23.35	23.30	24.5
20	QPSK	1	49	23.56	23.62	23.58	
20	QPSK	1	99	23.33	23.34	23.24	
20	QPSK	50	0	22.68	22.75	22.72	23.5
20	QPSK	50	24	22.66	22.68	22.60	
20	QPSK	50	50	22.68	22.70	22.66	
20	QPSK	100	0	22.70	22.71	22.66	23.5
20	16QAM	1	0	22.63	22.70	22.63	
20	16QAM	1	49	22.78	22.85	22.83	
20	16QAM	1	99	22.67	22.68	22.67	22.5
20	16QAM	50	0	21.63	21.64	21.63	
20	16QAM	50	24	21.59	21.68	21.64	
20	16QAM	50	50	21.70	21.75	21.66	22.5
20	16QAM	100	0	21.67	21.69	21.61	
20	64QAM	1	0	21.56	21.65	21.64	
20	64QAM	1	49	21.69	21.72	21.67	22.5
20	64QAM	1	99	21.48	21.58	21.57	
20	64QAM	50	0	20.61	20.64	20.55	
20	64QAM	50	24	20.63	20.67	20.64	21.5
20	64QAM	50	50	20.66	20.71	20.61	
20	64QAM	100	0	20.67	20.68	20.66	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	23.22	23.26	23.29	
15	QPSK	1	37	23.50	23.55	23.55	
15	QPSK	1	74	23.32	23.26	23.20	
15	QPSK	36	0	22.85	22.72	22.82	23.5
15	QPSK	36	20	22.80	22.66	22.51	
15	QPSK	36	39	22.85	22.63	22.61	
15	QPSK	75	0	22.62	22.70	22.56	23.5
15	16QAM	1	0	22.60	22.62	22.60	
15	16QAM	1	37	22.70	22.76	22.82	
15	16QAM	1	74	22.66	22.66	22.59	22.5
15	16QAM	36	0	21.62	21.56	21.60	
15	16QAM	36	20	21.50	21.64	21.60	
15	16QAM	36	39	21.66	21.65	21.59	22.5
15	16QAM	75	0	21.64	21.61	21.51	
15	64QAM	1	0	21.52	21.58	21.57	
15	64QAM	1	37	21.62	21.62	21.63	22.5
15	64QAM	1	74	21.45	21.55	21.56	
15	64QAM	36	0	20.58	20.56	20.47	
15	64QAM	36	20	20.59	20.62	20.63	21.5
15	64QAM	36	39	20.63	20.61	20.52	
15	64QAM	75	0	20.60	20.61	20.57	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	23.21	23.31	23.24	
10	QPSK	1	25	23.53	23.61	23.56	
10	QPSK	1	49	23.24	23.25	23.23	
10	QPSK	25	0	22.67	22.72	22.64	23.5
10	QPSK	25	12	22.65	22.58	22.54	
10	QPSK	25	25	22.63	22.62	22.62	
10	QPSK	50	0	22.69	22.67	22.60	23.5
10	16QAM	1	0	22.58	22.64	22.59	
10	16QAM	1	25	22.74	22.80	22.80	
10	16QAM	1	49	22.64	22.62	22.60	22.5
10	16QAM	25	0	21.54	21.55	21.62	
10	16QAM	25	12	21.53	21.60	21.59	
10	16QAM	25	25	21.62	21.69	21.65	22.5
10	16QAM	50	0	21.60	21.61	21.60	
10	64QAM	1	0	21.46	21.56	21.60	
10	64QAM	1	25	21.68	21.63	21.66	22.5
10	64QAM	1	49	21.45	21.48	21.47	
10	64QAM	25	0	20.60	20.57	20.49	
10	64QAM	25	12	20.59	20.64	20.63	21.5
10	64QAM	25	25	20.62	20.63	20.58	
10	64QAM	50	0	20.64	20.64	20.63	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	23.18	23.28	23.28	
5	QPSK	1	12	23.53	23.60	23.55	
5	QPSK	1	24	23.31	23.28	23.23	
5	QPSK	12	0	22.63	22.73	22.70	23.5
5	QPSK	12	7	22.58	22.66	22.52	
5	QPSK	12	13	22.67	22.62	22.57	
5	QPSK	25	0	22.61	22.65	22.64	23.5
5	16QAM	1	0	22.62	22.60	22.58	
5	16QAM	1	12	22.68	22.75	22.73	
5	16QAM	1	24	22.62	22.66	22.59	22.5
5	16QAM	12	0	21.60	21.55	21.58	
5	16QAM	12	7	21.58	21.58	21.55	
5	16QAM	12	13	21.60	21.69	21.64	22.5
5	16QAM	25	0	21.63	21.60	21.57	
5	64QAM	1	0	21.50	21.58	21.62	
5	64QAM	1	12	21.66	21.65	21.60	22.5
5	64QAM	1	24	21.38	21.57	21.53	
5	64QAM	12	0	20.58	20.61	20.46	
5	64QAM	12	7	20.58	20.59	20.54	21.5
5	64QAM	12	13	20.56	20.66	20.52	
5	64QAM	25	0	20.57	20.65	20.62	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	23.27	23.26	23.22	
3	QPSK	1	8	23.54	23.53	23.56	
3	QPSK	1	14	23.23	23.33	23.21	
3	QPSK	8	0	22.62	22.68	22.65	23.5
3	QPSK	8	4	22.60	22.59	22.55	
3	QPSK	8	7	22.67	22.66	22.59	

3	QPSK	15	0	22.44	22.50	22.47	23.5
3	16QAM	1	0	22.55	22.59	22.50	
3	16QAM	1	8	22.71	22.76	22.71	
3	16QAM	1	14	22.38	22.47	22.36	22.5
3	16QAM	8	0	21.39	21.57	21.45	
3	16QAM	8	4	21.41	21.52	21.36	
3	16QAM	8	7	21.37	21.48	21.36	22.5
3	16QAM	15	0	21.50	21.55	21.41	
3	64QAM	1	0	21.50	21.52	21.43	
3	64QAM	1	8	21.55	21.69	21.58	21.5
3	64QAM	1	14	21.28	21.44	21.34	
3	64QAM	8	0	20.58	20.62	20.49	
3	64QAM	8	4	20.56	20.64	20.51	21.5
3	64QAM	8	7	20.57	20.55	20.54	
3	64QAM	15	0	20.56	20.65	20.50	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	23.29	23.29	23.18	24.5
1.4	QPSK	1	3	23.43	23.52	23.49	
1.4	QPSK	1	5	23.24	23.26	23.17	
1.4	QPSK	3	0	23.34	23.36	23.31	
1.4	QPSK	3	1	23.26	23.37	23.27	
1.4	QPSK	3	3	23.36	23.33	23.31	
1.4	QPSK	6	0	22.44	22.50	22.45	23.5
1.4	16QAM	1	0	22.57	22.58	22.59	23.5
1.4	16QAM	1	3	22.68	22.79	22.65	
1.4	16QAM	1	5	22.33	22.47	22.40	
1.4	16QAM	3	0	22.23	22.39	22.29	
1.4	16QAM	3	1	22.18	22.34	22.26	
1.4	16QAM	3	3	22.20	22.28	22.17	
1.4	16QAM	6	0	21.49	21.49	21.48	22.5
1.4	64QAM	1	0	21.51	21.54	21.45	22.5
1.4	64QAM	1	3	21.59	21.67	21.63	
1.4	64QAM	1	5	21.31	21.37	21.29	
1.4	64QAM	3	0	21.36	21.43	21.35	
1.4	64QAM	3	1	21.36	21.40	21.33	
1.4	64QAM	3	3	21.42	21.41	21.41	
1.4	64QAM	6	0	20.57	20.61	20.49	21.5

3	QPSK	15	0	22.67	22.68	22.65	23.5
3	16QAM	1	0	22.61	22.60	22.59	
3	16QAM	1	8	22.72	22.82	22.76	
3	16QAM	1	14	22.85	22.59	22.66	22.5
3	16QAM	8	0	21.56	21.54	21.61	
3	16QAM	8	4	21.53	21.63	21.57	
3	16QAM	8	7	21.64	21.74	21.60	22.5
3	16QAM	15	0	21.66	21.64	21.54	
3	64QAM	1	0	21.51	21.60	21.59	
3	64QAM	1	8	21.63	21.68	21.59	21.5
3	64QAM	1	14	21.41	21.56	21.55	
3	64QAM	8	0	20.51	20.55	20.49	
3	64QAM	8	4	20.62	20.60	20.62	21.5
3	64QAM	8	7	20.57	20.67	20.54	
3	64QAM	15	0	20.58	20.61	20.59	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	23.18	23.27	23.23	24.5
1.4	QPSK	1	3	23.47	23.54	23.51	
1.4	QPSK	1	5	23.26	23.31	23.21	
1.4	QPSK	3	0	23.43	23.48	23.48	
1.4	QPSK	3	1	23.44	23.43	23.40	
1.4	QPSK	3	3	23.47	23.49	23.46	
1.4	QPSK	6	0	22.66	22.64	22.63	23.5
1.4	16QAM	1	0	22.61	22.64	22.62	23.5
1.4	16QAM	1	3	22.71	22.78	22.75	
1.4	16QAM	1	5	22.62	22.62	22.57	
1.4	16QAM	3	0	22.44	22.46	22.42	
1.4	16QAM	3	1	22.40	22.41	22.40	
1.4	16QAM	3	3	22.52	22.57	22.41	
1.4	16QAM	6	0	21.60	21.60	21.60	22.5
1.4	64QAM	1	0	21.55	21.59	21.60	22.5
1.4	64QAM	1	3	21.67	21.66	21.58	
1.4	64QAM	1	5	21.38	21.49	21.50	
1.4	64QAM	3	0	21.40	21.43	21.28	
1.4	64QAM	3	1	21.37	21.48	21.42	
1.4	64QAM	3	3	21.46	21.48	21.38	
1.4	64QAM	6	0	20.62	20.60	20.64	21.5



Band 5 (Celluar Band) (dBm) Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	23.40	23.45	23.42	24.5
10	QPSK	1	25	23.49	23.55	23.51	
10	QPSK	1	49	23.32	23.37	23.28	
10	QPSK	25	0	22.60	22.62	22.59	23.5
10	QPSK	25	12	22.45	22.53	22.47	
10	QPSK	25	25	22.36	22.44	22.35	
10	QPSK	50	0	22.42	22.50	22.42	23.5
10	16QAM	1	0	22.58	22.62	22.55	
10	16QAM	1	25	22.77	22.85	22.83	
10	16QAM	1	49	22.56	22.65	22.58	22.5
10	16QAM	25	0	21.65	21.66	21.60	
10	16QAM	25	12	21.52	21.58	21.49	
10	16QAM	25	25	21.44	21.50	21.49	22.5
10	16QAM	50	0	21.57	21.58	21.51	
10	64QAM	1	0	21.67	21.69	21.63	
10	64QAM	1	25	21.72	21.81	21.77	22.5
10	64QAM	1	49	21.59	21.65	21.58	
10	64QAM	25	0	20.60	20.65	20.58	
10	64QAM	25	12	20.43	20.53	20.49	21.5
10	64QAM	25	25	20.43	20.49	20.46	
10	64QAM	50	0	20.55	20.56	20.51	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	23.32	23.43	23.41	24.5
5	QPSK	1	12	23.43	23.53	23.44	
5	QPSK	1	24	23.28	23.34	23.19	
5	QPSK	12	0	22.53	22.59	22.52	23.5
5	QPSK	12	7	22.36	22.44	22.40	
5	QPSK	12	13	22.26	22.34	22.33	
5	QPSK	25	0	22.36	22.41	22.32	23.5
5	16QAM	1	0	22.56	22.55	22.51	
5	16QAM	1	12	22.71	22.77	22.75	
5	16QAM	1	24	22.50	22.57	22.51	22.5
5	16QAM	12	0	21.64	21.61	21.54	
5	16QAM	12	7	21.44	21.51	21.48	
5	16QAM	12	13	21.36	21.42	21.47	22.5
5	16QAM	25	0	21.52	21.55	21.43	
5	64QAM	1	0	21.59	21.62	21.62	
5	64QAM	1	12	21.71	21.75	21.75	22.5
5	64QAM	1	24	21.51	21.60	21.57	
5	64QAM	12	0	20.51	20.56	20.54	
5	64QAM	12	7	20.40	20.50	20.48	21.5
5	64QAM	12	13	20.35	20.48	20.39	
5	64QAM	25	0	20.48	20.52	20.49	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	23.32	23.40	23.38	24.5
3	QPSK	1	8	23.48	23.46	23.45	
3	QPSK	1	14	23.24	23.34	23.20	
3	QPSK	8	0	22.52	22.52	22.50	23.5
3	QPSK	8	4	22.43	22.45	22.41	
3	QPSK	8	7	22.34	22.40	22.25	
3	QPSK	15	0	22.36	22.49	22.28	23.5
3	16QAM	1	0	22.50	22.54	22.47	
3	16QAM	1	8	22.68	22.80	22.81	
3	16QAM	1	14	22.48	22.62	22.51	22.5
3	16QAM	8	0	21.60	21.62	21.59	
3	16QAM	8	4	21.43	21.55	21.41	
3	16QAM	8	7	21.39	21.46	21.48	22.5
3	16QAM	15	0	21.51	21.48	21.48	
3	64QAM	1	0	21.61	21.66	21.60	
3	64QAM	1	8	21.68	21.76	21.74	22.5
3	64QAM	1	14	21.51	21.61	21.54	
3	64QAM	8	0	20.58	20.55	20.55	
3	64QAM	8	4	20.37	20.50	20.44	21.5
3	64QAM	8	7	20.33	20.41	20.39	
3	64QAM	15	0	20.53	20.47	20.43	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	23.37	23.43	23.37	24.5
1.4	QPSK	1	3	23.39	23.52	23.41	
1.4	QPSK	1	5	23.26	23.27	23.24	
1.4	QPSK	3	0	23.34	23.38	23.30	23.5
1.4	QPSK	3	1	23.16	23.28	23.24	
1.4	QPSK	3	3	23.09	23.14	23.10	
1.4	QPSK	6	0	22.34	22.42	22.36	23.5
1.4	16QAM	1	0	22.48	22.55	22.54	
1.4	16QAM	1	3	22.70	22.81	22.76	
1.4	16QAM	1	5	22.52	22.62	22.48	23.5
1.4	16QAM	3	0	22.37	22.45	22.35	
1.4	16QAM	3	1	22.22	22.33	22.24	
1.4	16QAM	3	3	22.16	22.26	22.27	22.5
1.4	16QAM	6	0	21.56	21.53	21.50	
1.4	64QAM	1	0	21.58	21.59	21.55	
1.4	64QAM	1	3	21.64	21.72	21.70	22.5
1.4	64QAM	1	5	21.58	21.59	21.49	
1.4	64QAM	3	0	21.36	21.36	21.34	
1.4	64QAM	3	1	21.22	21.25	21.23	21.5
1.4	64QAM	3	3	21.19	21.23	21.23	
1.4	64QAM	6	0	20.54	20.54	20.43	

Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.18	23.24	23.22	24.5
10	QPSK	1	25	23.35	23.40	23.37	
10	QPSK	1	49	23.23	23.26	23.24	
10	QPSK	25	0	22.38	22.46	22.36	23.5
10	QPSK	25	12	22.33	22.40	22.34	
10	QPSK	25	25	22.34	22.37	22.27	
10	QPSK	50	0	22.26	22.28	22.20	23.5
10	16QAM	1	0	22.57	22.62	22.53	
10	16QAM	1	25	22.72	22.76	22.72	
10	16QAM	1	49	22.51	22.58	22.57	23.5
10	16QAM	25	0	21.43	21.47	21.37	
10	16QAM	25	12	21.43	21.45	21.43	
10	16QAM	25	25	21.38	21.42	21.40	22.5
10	16QAM	50	0	21.34	21.44	21.42	
10	64QAM	1	0	21.37	21.45	21.37	
10	64QAM	1	25	21.61	21.62	21.54	22.5
10	64QAM	1	49	21.43	21.48	21.38	
10	64QAM	25	0	20.34	20.40	20.33	
10	64QAM	25	12	20.34	20.43	20.37	21.5
10	64QAM	25	25	20.36	20.41	20.37	
10	64QAM	50	0	20.30	20.40	20.39	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	23.14	23.16	23.16	24.5
5	QPSK	1	12	23.28	23.32	23.29	
5	QPSK	1	24	23.15	23.23	23.17	
5	QPSK	12	0	22.32	22.42	22.35	23.5
5	QPSK	12	7	22.31	22.39	22.30	
5	QPSK	12	13	22.26	22.30	22.26	
5	QPSK	25	0	22.17	22.18	22.10	23.5
5	16QAM	1	0	22.55	22.52	22.51	
5	16QAM	1	12	22.63	22.70	22.67	
5	16QAM	1	24	22.49	22.53	22.51	22.5
5	16QAM	12	0	21.38	21.40	21.28	
5	16QAM	12	7	21.35	21.36	21.34	
5	16QAM	12	13	21.32	21.38	21.36	22.5
5	16QAM	25	0	21.25	21.37	21.37	
5	64QAM	1	0	21.34	21.38	21.27	
5	64QAM	1	12	21.60	21.55	21.49	22.5
5	64QAM	1	24	21.34	21.41	21.36	
5	64QAM	12	0	20.25	20.36	20.28	
5	64QAM	12	7	20.27	20.41	20.34	21.5
5	64QAM	12	13	20.35	20.35	20.33	
5	64QAM	25	0	20.26	20.38	20.35	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	23.09	23.17	23.13	24.5
3	QPSK	1	8	23.32	23.32	23.27	
3	QPSK	1	14	23.18	23.19	23.16	
3	QPSK	8	0	22.35	22.44	22.27	23.5
3	QPSK	8	4	22.31	22.32	22.27	
3	QPSK	8	7	22.30	22.32	22.22	
3	QPSK	15	0	22.17	22.26	22.13	23.5
3	16QAM	1	0	22.55	22.61	22.43	
3	16QAM	1	8	22.62	22.67	22.62	
3	16QAM	1	14	22.44	22.55	22.51	22.5
3	16QAM	8	0	21.33	21.42	21.31	
3	16QAM	8	4	21.38	21.42	21.38	
3	16QAM	8	7	21.35	21.41	21.35	22.5
3	16QAM	15	0	21.25	21.42	21.34	
3	64QAM	1	0	21.32	21.41	21.36	
3	64QAM	1	8	21.52	21.59	21.49	22.5
3	64QAM	1	14	21.38	21.47	21.28	
3	64QAM	8	0	20.29	20.33	20.26	
3	64QAM	8	4	20.26	20.35	20.29	21.5
3	64QAM	8	7	20.33	20.32	20.36	
3	64QAM	15	0	20.27	20.35	20.34	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.08	23.21	23.14	24.5
1.4	QPSK	1	3	23.28	23.31	23.31	
1.4	QPSK	1	5	23.19	23.24	23.15	
1.4	QPSK	3	0	23.16	23.23	23.11	
1.4	QPSK	3	1	23.06	23.11	23.11	
1.4	QPSK	3	3	23.13	23.11	23.03	23.5
1.4	QPSK	6	0	22.20	22.18	22.15	
1.4	16QAM	1	0	22.48	22.56	22.44	
1.4	16QAM	1	3	22.65	22.73	22.64	
1.4	16QAM	1	5	22.44	22.57	22.49	
1.4	16QAM	3	0	22.15	22.24	22.09	23.5
1.4	16QAM	3	1	22.21	22.19	22.19	
1.4	16QAM	3	3	22.17	22.13	22.11	
1.4	16QAM	6	0	21.27	21.43	21.33	
1.4	64QAM	1	0	21.35	21.42	21.32	
1.4	64QAM	1	3	21.56	21.52	21.44	22.5
1.4	64QAM	1	5	21.39	21.43	21.32	
1.4	64QAM	3	0	21.04	21.18	21.07	
1.4	64QAM	3	1	21.01	21.13	21.09	
1.4	64QAM	3	3	21.07	21.19	21.12	
1.4	64QAM	6	0	20.28	20.30	20.33	21.5



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	23.21	23.24	23.22	24.5
10	QPSK	1	25	23.33	23.38	23.34	
10	QPSK	1	49	23.21	23.25	23.21	
10	QPSK	25	0	22.41	22.43	22.34	23.5
10	QPSK	25	12	22.36	22.38	22.32	
10	QPSK	25	25	22.35	22.41	22.38	
10	QPSK	50	0	22.35	22.40	22.30	23.5
10	16QAM	1	0	22.48	22.55	22.46	
10	16QAM	1	25	22.62	22.72	22.63	
10	16QAM	1	49	22.50	22.58	22.57	22.5
10	16QAM	25	0	21.39	21.45	21.42	
10	16QAM	25	12	21.34	21.42	21.33	
10	16QAM	25	25	21.40	21.43	21.37	22.5
10	16QAM	50	0	21.38	21.40	21.32	
10	64QAM	1	0	21.40	21.42	21.36	
10	64QAM	1	25	21.55	21.62	21.55	22.5
10	64QAM	1	49	21.40	21.43	21.40	
10	64QAM	25	0	20.31	20.41	20.36	
10	64QAM	25	12	20.33	20.38	20.34	21.5
10	64QAM	25	25	20.34	20.43	20.40	
10	64QAM	50	0	20.38	20.39	20.29	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.18	23.16	23.17	24.5
5	QPSK	1	12	23.31	23.35	23.27	
5	QPSK	1	24	23.15	23.17	23.17	
5	QPSK	12	0	22.37	22.33	22.27	23.5
5	QPSK	12	7	22.28	22.34	22.22	
5	QPSK	12	13	22.31	22.39	22.32	
5	QPSK	25	0	22.30	22.39	22.29	23.5
5	16QAM	1	0	22.43	22.52	22.38	
5	16QAM	1	12	22.52	22.66	22.62	
5	16QAM	1	24	22.48	22.51	22.52	22.5
5	16QAM	12	0	21.29	21.43	21.33	
5	16QAM	12	7	21.33	21.33	21.29	
5	16QAM	12	13	21.39	21.34	21.32	22.5
5	16QAM	25	0	21.31	21.34	21.25	
5	64QAM	1	0	21.31	21.39	21.35	
5	64QAM	1	12	21.46	21.61	21.50	22.5
5	64QAM	1	24	21.38	21.42	21.37	
5	64QAM	12	0	20.22	20.31	20.33	
5	64QAM	12	7	20.23	20.34	20.32	21.5
5	64QAM	12	13	20.26	20.35	20.37	
5	64QAM	25	0	20.35	20.30	20.20	

Band 25 (1900MHz Band) (dBm) Part 24E							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26140	26365	26590	
Frequency (MHz)				1860	1882.5	1905	
20	QPSK	1	0	23.32	23.35	23.26	24.5
20	QPSK	1	49	23.60	23.64	23.56	
20	QPSK	1	99	23.22	23.28	23.24	
20	QPSK	50	0	22.66	22.71	22.62	23.5
20	QPSK	50	24	22.58	22.63	22.60	
20	QPSK	50	50	22.62	22.68	22.63	
20	QPSK	100	0	22.60	22.62	22.59	23.5
20	16QAM	1	0	22.57	22.58	22.50	
20	16QAM	1	49	22.89	22.93	22.89	
20	16QAM	1	99	22.48	22.52	22.48	22.5
20	16QAM	50	0	21.67	21.69	21.62	
20	16QAM	50	24	21.57	21.63	21.56	
20	16QAM	50	50	21.60	21.67	21.63	22.5
20	16QAM	100	0	21.56	21.61	21.52	
20	64QAM	1	0	20.85	20.95	20.94	
20	64QAM	1	49	21.32	21.34	21.33	22.5
20	64QAM	1	99	20.89	20.92	20.86	
20	64QAM	50	0	20.01	20.10	20.01	
20	64QAM	50	24	20.06	20.11	20.01	21.5
20	64QAM	50	50	20.14	20.19	20.17	
20	64QAM	100	0	20.08	20.15	20.10	
Channel				26115	26365	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	QPSK	1	0	23.28	23.31	23.17	24.5
15	QPSK	1	37	23.56	23.63	23.49	
15	QPSK	1	74	23.15	23.22	23.18	
15	QPSK	36	0	22.63	22.63	22.60	23.5
15	QPSK	36	20	22.49	22.55	22.57	
15	QPSK	36	39	22.56	22.59	22.58	
15	QPSK	75	0	22.56	22.52	22.53	23.5
15	16QAM	1	0	22.51	22.55	22.47	
15	16QAM	1	37	22.79	22.85	22.86	
15	16QAM	1	74	22.47	22.48	22.46	22.5
15	16QAM	36	0	21.65	21.60	21.57	
15	16QAM	36	20	21.56	21.54	21.48	
15	16QAM	36	39	21.57	21.62	21.57	22.5
15	16QAM	75	0	21.52	21.52	21.42	
15	64QAM	1	0	20.84	20.88	20.92	
15	64QAM	1	37	21.23	21.32	21.32	22.5
15	64QAM	1	74	20.79	20.85	20.82	
15	64QAM	36	0	19.95	20.03	19.98	
15	64QAM	36	20	19.98	20.10	19.98	21.5
15	64QAM	36	39	20.10	20.18	20.12	
15	64QAM	75	0	20.02	20.07	20.06	
Channel				26090	26365	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	QPSK	1	0	23.23	23.30	23.20	24.5
10	QPSK	1	25	23.51	23.59	23.54	
10	QPSK	1	49	23.18	23.18	23.20	
10	QPSK	25	0	22.63	22.70	22.58	23.5
10	QPSK	25	12	22.53	22.59	22.54	
10	QPSK	25	25	22.61	22.59	22.56	
10	QPSK	50	0	22.55	22.56	22.50	23.5
10	16QAM	1	0	22.53	22.55	22.46	
10	16QAM	1	25	22.79	22.90	22.83	
10	16QAM	1	49	22.41	22.45	22.41	22.5
10	16QAM	25	0	21.64	21.65	21.57	
10	16QAM	25	12	21.56	21.60	21.53	
10	16QAM	25	25	21.57	21.63	21.58	22.5
10	16QAM	50	0	21.48	21.55	21.46	
10	64QAM	1	0	20.80	20.87	20.85	
10	64QAM	1	25	21.27	21.31	21.27	21.5
10	64QAM	1	49	20.80	20.84	20.78	
10	64QAM	25	0	19.91	20.05	19.98	
10	64QAM	25	12	20.05	20.08	19.91	21.5
10	64QAM	25	25	20.08	20.16	20.15	
10	64QAM	50	0	20.07	20.14	20.01	
Channel				26065	26365	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	QPSK	1	0	23.25	23.34	23.21	24.5
5	QPSK	1	12	23.54	23.54	23.46	
5	QPSK	1	24	23.12	23.18	23.23	
5	QPSK	12	0	22.62	22.63	22.54	23.5
5	QPSK	12	7	22.55	22.58	22.54	
5	QPSK	12	13	22.55	22.63	22.61	
5	QPSK	25	0	22.54	22.56	22.58	23.5
5	16QAM	1	0	22.52	22.51	22.45	
5	16QAM	1	12	22.86	22.90	22.86	
5	16QAM	1	24	22.43	22.45	22.43	22.5
5	16QAM	12	0	21.65	21.68	21.53	
5	16QAM	12	7	21.50	21.59	21.49	
5	16QAM	12	13	21.50	21.64	21.61	22.5
5	16QAM	25	0	21.49	21.58	21.50	
5	64QAM	1	0	20.82	20.92	20.85	
5	64QAM	1	12	21.24	21.25	21.28	22.5
5	64QAM	1	24	20.87	20.91	20.81	
5	64QAM	12	0	19.93	20.01	19.94	
5	64QAM	12	7	19.97	20.04	19.92	21.5
5	64QAM	12	13	20.11	20.10	20.08	
5	64QAM	25	0	20.04	20.10	20.01	
Channel				26055	26365	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1882.5	1913.5	
3	QPSK	1	0	23.28	23.26	23.16	24.5
3	QPSK	1	8	23.56	23.58	23.48	
3	QPSK	1	14	23.19	23.23	23.17	
3	QPSK	8	0	22.60	22.66	22.52	23.5
3	QPSK	8	4	22.54	22.59	22.54	
3	QPSK	8	7	22.61	22.63	22.53	

3	QPSK	15	0	22.51	22.58	22.50	23.5
3	16QAM	1	0	22.55	22.52	22.47	
3	16QAM	1	8	22.79	22.86	22.84	
3	16QAM	1	14	22.39	22.44	22.47	22.5
3	16QAM	8	0	21.63	21.61	21.55	
3	16QAM	8	4	21.47	21.57	21.49	
3	16QAM	8	7	21.52	21.66	21.55	
3	16QAM	15	0	21.53	21.60	21.51	
3	64QAM	1	0	20.85	20.93	20.90	22.5
3	64QAM	1	8	21.22	21.32	21.29	
3	64QAM	1	14	20.84	20.90	20.84	
3	64QAM	8	0	19.91	20.02	19.93	21.5
3	64QAM	8	4	20.02	20.04	19.96	
3	64QAM	8	7	20.04	20.09	20.08	
3	64QAM	15	0	20.03	20.05	20.08	
3	64QAM	15	0	20.03	20.05	20.08	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	23.22	23.27	23.19	24.5
1.4	QPSK	1	3	23.52	23.62	23.55	
1.4	QPSK	1	5	23.16	23.20	23.15	
1.4	QPSK	3	0	23.10	23.12	23.09	
1.4	QPSK	3	1	23.22	23.30	23.29	
1.4	QPSK	3	3	23.29	23.28	23.30	
1.4	QPSK	6	0	22.51	22.56	22.57	
1.4	16QAM	1	0	22.55	22.55	22.51	22.5
1.4	16QAM	1	3	22.88	22.92	22.82	
1.4	16QAM	1	5	22.46	22.47	22.46	
1.4	16QAM	3	0	22.28	22.33	22.28	
1.4	16QAM	3	1	22.19	22.26	22.18	
1.4	16QAM	3	3	22.20	22.27	22.29	
1.4	16QAM	6	0	21.49	21.51	21.49	
1.4	64QAM	1	0	20.83	20.88	20.93	22.5
1.4	64QAM	1	3	21.29	21.25	21.30	
1.4	64QAM	1	5	20.88	20.87	20.85	
1.4	64QAM	3	0	20.63	20.72	20.66	
1.4	64QAM	3	1	20.69	20.71	20.67	
1.4	64QAM	3	3	20.83	20.88	20.77	
1.4	64QAM	6	0	20.05	20.12	20.03	21.5



Band 26 for FCC (dBm) (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	23.11	23.15	23.05	24.5
15	QPSK	1	37	23.29	23.33	23.25	
15	QPSK	1	74	22.91	22.96	22.92	
15	QPSK	36	0	22.31	22.35	22.27	23.5
15	QPSK	36	20	22.28	22.34	22.27	
15	QPSK	36	39	22.28	22.30	22.28	
15	QPSK	75	0	22.21	22.31	22.22	23.5
15	16QAM	1	0	22.31	22.40	22.36	
15	16QAM	1	37	22.59	22.65	22.61	
15	16QAM	1	74	22.22	22.32	22.31	22.5
15	16QAM	36	0	21.32	21.35	21.33	
15	16QAM	36	20	21.25	21.32	21.26	
15	16QAM	36	39	21.23	21.28	21.26	22.5
15	16QAM	75	0	21.28	21.30	21.21	
15	64QAM	1	0	21.28	21.38	21.35	
15	64QAM	1	37	21.52	21.61	21.51	22.5
15	64QAM	1	74	21.26	21.30	21.29	
15	64QAM	36	0	20.33	20.35	20.27	
15	64QAM	36	20	20.29	20.32	20.28	21.5
15	64QAM	36	39	20.23	20.30	20.28	
15	64QAM	75	0	20.29	20.31	20.22	
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	23.03	23.10	23.04	24.5
10	QPSK	1	25	23.25	23.26	23.21	
10	QPSK	1	49	22.84	22.92	22.82	
10	QPSK	25	0	22.28	22.30	22.24	23.5
10	QPSK	25	12	22.25	22.26	22.21	
10	QPSK	25	25	22.23	22.25	22.27	
10	QPSK	50	0	22.17	22.23	22.18	23.5
10	16QAM	1	0	22.26	22.35	22.31	
10	16QAM	1	25	22.53	22.57	22.60	
10	16QAM	1	49	22.19	22.25	22.23	22.5
10	16QAM	25	0	21.29	21.27	21.30	
10	16QAM	25	12	21.24	21.30	21.24	
10	16QAM	25	25	21.13	21.19	21.16	22.5
10	16QAM	50	0	21.21	21.26	21.11	
10	64QAM	1	0	21.25	21.34	21.30	
10	64QAM	1	25	21.45	21.55	21.50	22.5
10	64QAM	1	49	21.22	21.27	21.19	
10	64QAM	25	0	20.24	20.33	20.25	
10	64QAM	25	12	20.20	20.28	20.23	21.5
10	64QAM	25	25	20.16	20.21	20.12	
10	64QAM	50	0	20.24	20.24	20.12	
Channel				26715	26865	27015	
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	23.08	23.13	23.04	24.5
5	QPSK	1	12	23.28	23.32	23.20	
5	QPSK	1	24	22.84	22.91	22.87	
5	QPSK	12	0	22.22	22.31	22.19	23.5
5	QPSK	12	7	22.22	22.29	22.17	
5	QPSK	12	13	22.21	22.25	22.19	
5	QPSK	25	0	22.18	22.29	22.19	23.5
5	16QAM	1	0	22.30	22.36	22.35	
5	16QAM	1	12	22.51	22.58	22.55	
5	16QAM	1	24	22.20	22.26	22.28	22.5
5	16QAM	12	0	21.30	21.29	21.26	
5	16QAM	12	7	21.18	21.25	21.25	
5	16QAM	12	13	21.13	21.21	21.18	22.5
5	16QAM	25	0	21.20	21.28	21.17	
5	64QAM	1	0	21.18	21.36	21.25	
5	64QAM	1	12	21.44	21.57	21.43	22.5
5	64QAM	1	24	21.21	21.26	21.24	
5	64QAM	12	0	20.30	20.27	20.17	
5	64QAM	12	7	20.24	20.31	20.24	21.5
5	64QAM	12	13	20.21	20.20	20.21	
5	64QAM	25	0	20.28	20.24	20.13	
Channel				26705	26865	27025	
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	23.02	23.12	23.00	24.5
3	QPSK	1	8	23.28	23.23	23.19	
3	QPSK	1	14	22.81	22.86	22.82	
3	QPSK	8	0	22.29	22.31	22.23	23.5
3	QPSK	8	4	22.25	22.26	22.19	
3	QPSK	8	7	22.20	22.27	22.20	
3	QPSK	15	0	22.16	22.21	22.18	23.5
3	16QAM	1	0	22.30	22.37	22.35	
3	16QAM	1	8	22.52	22.58	22.51	
3	16QAM	1	14	22.12	22.30	22.23	22.5
3	16QAM	8	0	21.31	21.32	21.27	
3	16QAM	8	4	21.21	21.22	21.19	
3	16QAM	8	7	21.16	21.18	21.24	22.5
3	16QAM	15	0	21.19	21.21	21.15	
3	64QAM	1	0	21.23	21.36	21.32	
3	64QAM	1	8	21.45	21.55	21.50	22.5
3	64QAM	1	14	21.16	21.28	21.27	
3	64QAM	8	0	20.27	20.25	20.18	
3	64QAM	8	4	20.27	20.24	20.19	21.5
3	64QAM	8	7	20.18	20.24	20.16	
3	64QAM	15	0	20.26	20.24	20.14	
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.07	23.14	22.95	24.5
1.4	QPSK	1	3	23.24	23.28	23.18	
1.4	QPSK	1	5	22.83	22.87	22.84	
1.4	QPSK	3	0	22.93	23.04	22.88	
1.4	QPSK	3	1	22.94	22.96	22.96	
1.4	QPSK	3	3	22.97	22.91	22.93	

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	23.43	23.48	23.45	24.5
20	QPSK	1	49	23.68	23.72	23.66	
20	QPSK	1	99	23.33	23.40	23.36	
20	QPSK	50	0	22.85	22.88	22.79	23.5
20	QPSK	50	24	22.74	22.84	22.83	
20	QPSK	50	50	22.75	22.82	22.81	
20	QPSK	100	0	22.75	22.80	22.71	23.5
20	16QAM	1	0	22.70	22.76	22.71	
20	16QAM	1	49	23.01	23.05	23.01	
20	16QAM	1	99	22.60	22.65	22.56	22.5
20	16QAM	50	0	21.78	21.82	21.72	
20	16QAM	50	24	21.76	21.80	21.73	
20	16QAM	50	50	21.75	21.80	21.71	22.5
20	16QAM	100	0	21.69	21.77	21.75	
20	64QAM	1	0	21.65	21.68	21.58	
20	64QAM	1	49	21.97	21.98	21.95	22.5
20	64QAM	1	99	21.54	21.61	21.53	
20	64QAM	50	0	20.80	20.81	20.75	
20	64QAM	50	24	20.69	20.79	20.71	21.5
20	64QAM	50	50	20.75	20.77	20.69	
20	64QAM	100	0	20.71	20.75	20.71	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.35	23.42	23.39	24.5
15	QPSK	1	37	23.64	23.62	23.61	
15	QPSK	1	74	23.29	23.39	23.27	
15	QPSK	36	0	22.81	22.80	22.74	23.5
15	QPSK	36	20	22.73	22.78	22.73	
15	QPSK	36	39	22.72	22.75	22.73	
15	QPSK	75	0	22.68	22.71	22.67	23.5
15	16QAM	1	0	22.68	22.71	22.62	
15	16QAM	1	37	22.96	23.01	22.97	
15	16QAM	1	74	22.51	22.62	22.52	22.5
15	16QAM	36	0	21.76	21.76	21.65	
15	16QAM	36	20	21.70	21.76	21.68	
15	16QAM	36	39	21.74	21.71	21.62	22.5
15	16QAM	75	0	21.66	21.69	21.73	
15	64QAM	1	0	21.63	21.61	21.57	
15	64QAM	1	37	21.88	21.97	21.88	22.5
15	64QAM	1	74	21.53	21.59	21.50	
15	64QAM	36	0	20.79	20.73	20.68	
15	64QAM	36	20	20.65	20.74	20.69	21.5
15	64QAM	36	39	20.71	20.67	20.60	
15	64QAM	75	0	20.64	20.67	20.62	
Channel				132022	132322	132622	
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.34	23.47	23.40	24.5
10	QPSK	1	25	23.63	23.69	23.58	
10	QPSK	1	49	23.31	23.30	23.31	
10	QPSK	25	0	22.77	22.87	22.75	23.5
10	QPSK	25	12	22.71	22.78	22.81	
10	QPSK	25	25	22.65	22.73	22.75	
10	QPSK	50	0	22.74	22.73	22.64	23.5
10	16QAM	1	0	22.66	22.70	22.68	
10	16QAM	1	25	22.97	22.98	22.92	
10	16QAM	1	49	22.52	22.59	22.50	22.5
10	16QAM	25	0	21.77	21.72	21.66	



1.4	QPSK	6	0	22.19	22.22	22.13	23.5
1.4	16QAM	1	0	22.26	22.34	22.33	23.5
1.4	16QAM	1	3	22.50	22.64	22.60	
1.4	16QAM	1	5	22.21	22.30	22.29	
1.4	16QAM	3	0	21.92	22.04	21.99	
1.4	16QAM	3	1	21.89	21.94	21.94	
1.4	16QAM	3	3	21.92	21.90	21.91	22.5
1.4	16QAM	6	0	21.18	21.29	21.13	
1.4	64QAM	1	0	21.19	21.34	21.33	22.5
1.4	64QAM	1	3	21.44	21.53	21.49	
1.4	64QAM	1	5	21.17	21.23	21.22	
1.4	64QAM	3	0	21.00	21.04	20.87	
1.4	64QAM	3	1	20.95	20.98	20.90	
1.4	64QAM	3	3	20.86	20.90	20.86	
1.4	64QAM	6	0	20.25	20.21	20.13	21.5

3	QPSK	15	0	22.65	22.70	22.66	23.5
3	16QAM	1	0	22.63	22.74	22.65	
3	16QAM	1	8	22.99	23.03	22.98	
3	16QAM	1	14	22.55	22.56	22.52	
3	16QAM	8	0	21.76	21.80	21.64	22.5
3	16QAM	8	4	21.73	21.75	21.64	
3	16QAM	8	7	21.68	21.79	21.61	
3	16QAM	15	0	21.63	21.73	21.72	
3	64QAM	1	0	21.60	21.62	21.51	22.5
3	64QAM	1	8	21.96	21.92	21.93	
3	64QAM	1	14	21.46	21.59	21.45	
3	64QAM	8	0	20.76	20.80	20.68	
3	64QAM	8	4	20.62	20.75	20.69	21.5
3	64QAM	8	7	20.69	20.70	20.68	
3	64QAM	15	0	20.70	20.70	20.65	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.42	23.45	23.36	24.5
1.4	QPSK	1	3	23.60	23.64	23.65	
1.4	QPSK	1	5	23.24	23.30	23.31	
1.4	QPSK	3	0	23.38	23.36	23.32	
1.4	QPSK	3	1	23.24	23.31	23.30	
1.4	QPSK	3	3	23.28	23.35	23.34	
1.4	QPSK	6	0	22.65	22.70	22.65	23.5
1.4	16QAM	1	0	22.67	22.69	22.66	23.5
1.4	16QAM	1	3	22.92	22.96	22.92	
1.4	16QAM	1	5	22.58	22.61	22.52	
1.4	16QAM	3	0	22.32	22.27	22.20	
1.4	16QAM	3	1	22.25	22.34	22.27	
1.4	16QAM	3	3	22.25	22.32	22.23	
1.4	16QAM	6	0	21.67	21.72	21.66	22.5
1.4	64QAM	1	0	21.57	21.65	21.51	22.5
1.4	64QAM	1	3	21.96	21.91	21.94	
1.4	64QAM	1	5	21.45	21.58	21.44	
1.4	64QAM	3	0	21.33	21.34	21.29	
1.4	64QAM	3	1	21.19	21.30	21.25	
1.4	64QAM	3	3	21.25	21.24	21.15	
1.4	64QAM	6	0	20.62	20.74	20.61	21.5



Band 71 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				133222	133322	133372	
Frequency (MHz)				673	683	688	
20	QPSK	1	0	23.18	23.20	23.15	24.5
20	QPSK	1	49	23.52	23.57	23.50	
20	QPSK	1	99	23.22	23.29	23.22	
20	QPSK	50	0	22.61	22.65	22.55	23.5
20	QPSK	50	24	22.55	22.59	22.55	
20	QPSK	50	50	22.57	22.60	22.52	
20	QPSK	100	0	22.60	22.63	22.55	23.5
20	16QAM	1	0	22.43	22.52	22.51	
20	16QAM	1	49	22.84	22.85	22.79	
20	16QAM	1	99	22.50	22.56	22.47	22.5
20	16QAM	50	0	21.53	21.63	21.62	
20	16QAM	50	24	21.56	21.59	21.51	
20	16QAM	50	50	21.63	21.65	21.56	22.5
20	16QAM	100	0	21.61	21.64	21.61	
20	64QAM	1	0	21.34	21.35	21.32	
20	64QAM	1	49	21.58	21.68	21.62	22.5
20	64QAM	1	99	21.40	21.44	21.39	
20	64QAM	50	0	20.53	20.61	20.51	
20	64QAM	50	24	20.52	20.57	20.56	21.5
20	64QAM	50	50	20.49	20.55	20.50	
20	64QAM	100	0	20.58	20.60	20.50	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	23.14	23.18	23.11	24.5
15	QPSK	1	37	23.43	23.48	23.48	
15	QPSK	1	74	23.16	23.24	23.21	
15	QPSK	36	0	22.53	22.63	22.52	23.5
15	QPSK	36	20	22.51	22.49	22.48	
15	QPSK	36	39	22.55	22.52	22.43	
15	QPSK	75	0	22.55	22.55	22.45	23.5
15	16QAM	1	0	22.40	22.44	22.49	
15	16QAM	1	37	22.83	22.77	22.71	
15	16QAM	1	74	22.46	22.51	22.40	22.5
15	16QAM	36	0	21.47	21.62	21.57	
15	16QAM	36	20	21.48	21.50	21.41	
15	16QAM	36	39	21.62	21.56	21.54	22.5
15	16QAM	75	0	21.53	21.61	21.60	
15	64QAM	1	0	21.25	21.31	21.31	
15	64QAM	1	37	21.50	21.66	21.54	22.5
15	64QAM	1	74	21.38	21.36	21.33	
15	64QAM	36	0	20.50	20.53	20.41	21.5
15	64QAM	36	20	20.50	20.55	20.47	
15	64QAM	36	39	20.41	20.47	20.49	
15	64QAM	75	0	20.50	20.55	20.45	Tune-up limit (dBm)
Channel				133172	133272	133422	
Frequency (MHz)				668	678	693	
10	QPSK	1	0	23.17	23.10	23.05	24.5
10	QPSK	1	25	23.46	23.52	23.40	
10	QPSK	1	49	23.20	23.28	23.12	
10	QPSK	25	0	22.55	22.62	22.48	23.5
10	QPSK	25	12	22.50	22.54	22.50	
10	QPSK	25	25	22.52	22.56	22.47	
10	QPSK	50	0	22.59	22.62	22.48	23.5
10	16QAM	1	0	22.40	22.46	22.42	
10	16QAM	1	25	22.80	22.84	22.73	
10	16QAM	1	49	22.48	22.52	22.40	22.5
10	16QAM	25	0	21.43	21.54	21.59	
10	16QAM	25	12	21.54	21.53	21.46	
10	16QAM	25	25	21.59	21.58	21.52	22.5
10	16QAM	50	0	21.55	21.54	21.55	
10	64QAM	1	0	21.31	21.29	21.25	
10	64QAM	1	25	21.53	21.65	21.53	22.5
10	64QAM	1	49	21.38	21.42	21.32	
10	64QAM	25	0	20.50	20.51	20.46	
10	64QAM	25	12	20.46	20.56	20.48	21.5
10	64QAM	25	25	20.48	20.49	20.48	
10	64QAM	50	0	20.56	20.55	20.42	
Channel				133147	133247	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	23.13	23.18	23.14	24.5
5	QPSK	1	12	23.42	23.56	23.48	
5	QPSK	1	24	23.20	23.27	23.16	
5	QPSK	12	0	22.56	22.58	22.52	23.5
5	QPSK	12	7	22.48	22.58	22.52	
5	QPSK	12	13	22.55	22.56	22.48	
5	QPSK	25	0	22.50	22.53	22.53	23.5
5	16QAM	1	0	22.33	22.50	22.41	
5	16QAM	1	12	22.75	22.82	22.78	
5	16QAM	1	24	22.47	22.49	22.37	22.5
5	16QAM	12	0	21.43	21.56	21.60	
5	16QAM	12	7	21.54	21.49	21.50	
5	16QAM	12	13	21.61	21.63	21.48	22.5
5	16QAM	25	0	21.60	21.62	21.57	
5	64QAM	1	0	21.32	21.29	21.29	
5	64QAM	1	12	21.57	21.64	21.56	22.5
5	64QAM	1	24	21.34	21.42	21.30	
5	64QAM	12	0	20.52	20.59	20.44	
5	64QAM	12	7	20.44	20.54	20.51	21.5
5	64QAM	12	13	20.43	20.46	20.43	
5	64QAM	25	0	20.51	20.50	20.43	



Band 41 (2535~2655MHz) (dBm)-PC2										
BW (MHz)	Modulation	RB Size	RB Offset	Low channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)	
Channel				40140	40390	40640	40890	41140		
Frequency (MHz)				2545	2570	2595	2620	2645		
20	QPSK	1	0	24.97	24.81	24.64	24.60	24.63	26	
20	QPSK	1	49	24.92	25.05	25.25	24.87	24.96		
20	QPSK	1	99	24.75	24.48	24.46	24.45	24.47		
20	QPSK	50	0	24.00	23.97	24.27	23.93	24.01		
20	QPSK	50	24	24.17	23.89	23.87	23.88	23.88	25	
20	QPSK	50	50	24.12	23.86	23.86	23.80	23.82		
20	QPSK	100	0	24.26	23.96	23.93	23.80	23.95		
20	16QAM	1	0	23.87	23.96	23.81	23.56	23.52		
20	16QAM	1	49	24.24	23.88	23.83	23.90	23.83	25	
20	16QAM	1	99	23.86	23.53	23.55	23.51	23.55		
20	16QAM	50	0	23.16	22.84	22.89	22.88	22.88		
20	16QAM	50	24	23.20	22.90	22.84	22.83	22.87		
20	16QAM	50	50	23.11	22.81	22.86	22.81	22.78	24	
20	16QAM	100	0	23.20	22.92	22.88	22.87	22.88		
20	64QAM	1	0	22.40	22.73	22.85	22.77	22.79		
20	64QAM	1	49	23.10	23.07	23.18	22.97	23.17		
20	64QAM	1	99	22.70	22.70	22.77	22.86	22.67	24	
20	64QAM	50	0	22.04	22.06	22.13	21.79	22.09		
20	64QAM	50	24	22.05	22.04	22.08	21.77	22.04		
20	64QAM	50	50	22.02	22.02	22.10	21.76	22.03		
20	64QAM	100	0	21.91	22.05	21.96	21.79	21.92	23	
Channel				40115	40378	40640	40903	41165		
Frequency (MHz)				2542.5	2568.8	2595	2621.3	2647.5		
15	QPSK	1	0	24.91	24.72	24.62	24.57	24.54	26	
15	QPSK	1	37	25.19	24.95	24.82	24.85	24.86		
15	QPSK	1	74	24.73	24.47	24.40	24.39	24.43		
15	QPSK	36	0	24.21	23.93	23.92	23.90	23.91		
15	QPSK	36	20	24.19	23.88	23.79	23.84	23.87	25	
15	QPSK	36	36	24.08	23.82	23.82	23.75	23.81		
15	QPSK	75	0	24.21	23.94	23.84	23.85	23.94		
15	16QAM	1	0	23.78	23.55	23.56	23.49	23.50		
15	16QAM	1	37	24.17	23.83	23.73	23.81	23.76	25	
15	16QAM	1	74	23.82	23.48	23.47	23.47	23.52		
15	16QAM	36	0	23.12	22.77	22.85	22.81	22.83		
15	16QAM	36	20	23.12	22.80	22.83	22.74	22.84		
15	16QAM	36	39	23.02	22.77	22.78	22.80	22.68	24	
15	16QAM	75	0	23.15	22.88	22.78	22.83	22.81		
15	64QAM	1	0	22.78	22.63	22.83	22.76	22.78		
15	64QAM	1	37	23.07	23.00	23.15	22.90	23.15		
15	64QAM	1	74	22.68	22.61	22.76	22.80	22.64	24	
15	64QAM	36	0	22.02	22.02	22.12	22.04			
15	64QAM	36	20	22.01	22.02	22.06	21.70	21.95		
15	64QAM	36	39	21.93	21.97	22.07	21.71	21.95		
15	64QAM	75	0	21.81	22.02	21.94	21.69	21.83	23	
Channel				40090	40365	40640	40915	41190		
Frequency (MHz)				2540	2567.5	2595	2622.5	2650		
10	QPSK	1	0	24.89	24.80	24.54	24.51	24.58	26	
10	QPSK	1	25	25.21	24.96	24.85	24.77	24.91		
10	QPSK	1	49	24.74	24.44	24.43	24.38	24.45		
10	QPSK	25	0	24.17	23.95	23.95	23.90	23.93		
10	QPSK	25	12	24.21	23.88	23.83	23.82	23.80	25	
10	QPSK	25	25	24.02	23.82	23.78	23.78	23.77		
10	QPSK	50	0	24.25	23.94	23.90	23.87	23.87		
10	16QAM	1	0	23.85	23.49	23.57	23.53	23.50		
10	16QAM	1	25	24.23	23.79	23.78	23.81	23.77	25	
10	16QAM	1	49	23.83	23.45	23.46	23.45	23.50		
10	16QAM	25	0	23.11	22.76	22.84	22.86	22.85		
10	16QAM	25	12	23.11	22.87	22.76	22.79	22.81		
10	16QAM	25	25	23.05	22.73	22.78	22.76	22.71	24	
10	16QAM	50	0	23.13	22.91	22.82	22.80	22.85		
10	64QAM	1	0	22.74	22.67	22.76	22.71	22.69		
10	64QAM	1	25	23.04	22.97	23.17	22.88	23.14		
10	64QAM	1	49	22.68	22.67	22.72	22.76	22.64	24	
10	64QAM	25	0	22.02	22.02	22.06	21.72	22.03		
10	64QAM	25	12	22.00	22.03	22.02	21.72	22.01		
10	64QAM	25	25	21.95	21.97	22.06	21.68	21.96		
10	64QAM	50	0	21.86	21.98	21.91	21.69	21.82	23	
Channel				40065	40353	40640	40928	41215		
Frequency (MHz)				2537.5	2566.3	2595	2623.80	2652.5		
5	QPSK	1	0	24.88	24.75	24.55	24.55	24.60	26	
5	QPSK	1	12	25.17	25.04	24.88	24.82	24.94		
5	QPSK	1	24	24.74	24.43	24.39	24.39	24.44		
5	QPSK	12	0	24.20	23.95	23.91	23.90	23.99		
5	QPSK	12	7	24.20	23.85	23.78	23.87	23.87	25	
5	QPSK	12	13	24.09	23.77	23.81	23.76	23.73		
5	QPSK	25	0	24.23	23.88	23.86	23.81	23.87		
5	16QAM	1	0	23.77	23.49	23.52	23.46	23.50		
5	16QAM	1	12	24.18	23.73	23.82	23.83	23.73	25	
5	16QAM	1	24	23.76	23.48	23.48	23.48	23.46		
5	16QAM	12	0	23.13	22.80	22.81	22.82	22.78		
5	16QAM	12	7	23.12	22.87	22.76	22.73	22.84		
5	16QAM	12	13	23.04	22.78	22.77	22.73	22.69	24	
5	16QAM	25	0	23.10	22.82	22.86	22.78	22.80		
5	64QAM	1	0	22.75	22.72	22.78	22.72	22.75		
5	64QAM	1	12	23.03	23.00	23.12	22.96	23.09		
5	64QAM	1	24	22.62	22.69	22.76	22.81	22.68	24	
5	64QAM	12	0	22.03	22.01	22.12	21.69	22.07		
5	64QAM	12	7	21.98	21.97	22.04	21.68	21.98		
5	64QAM	12	13	21.96	21.97	22.06	21.75	22.00		
5	64QAM	25	0	21.86	22.03	21.89	21.75	21.91	23	

Band 41 (2535~2655MHz) (dBm)-PC3										
BW [MHz]	Modulation	RB Size	RB Offset	Low channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)	
Channel				40140	40390	40640	40890	41140		
Frequency (MHz)				2545	2570	2595	2620	2645		
20	QPSK	1	0	22.12	22.08	22.15	22.10	22.13	23.5	
20	QPSK	1	49	22.44	22.31	22.49	22.43	22.41		
20	QPSK	1	99	22.11	22.08	22.13	22.04	22.08		
20	QPSK	50	0	21.25	21.25	21.41	21.27	21.19		
20	QPSK	50	24	21.31	21.25	21.33	21.24	21.23	22.5	
20	QPSK	50	50	21.26	21.23	21.31	21.25	21.26		
20	QPSK	100	0	21.31	21.29	21.40	21.36	21.34		
20	16QAM	1	0	21.26	21.34	21.36	21.29	21.27		
20	16QAM	1	49	21.40	21.35	21.42	21.40	21.39	22.5	
20	16QAM	1	99	21.24	21.26	21.34	21.27	21.33		
20	16QAM	50	0	20.26	20.22	20.32	20.23	20.28		
20	16QAM	50	24	20.28	20.34	20.37	20.35	20.34		
20	16QAM	50	50	20.24	20.33	20.34	20.25	20.31	21.5	
20	16QAM	100	0	20.33	20.36	20.37	20.31	20.34		
20	64QAM	1	0	20.28	20.36	20.39	20.30	20.29		
20	64QAM	1	49	20.41	20.38	20.46	20.47	20.48		
20	64QAM	1	99	20.31	20.30	20.40	20.35	20.41	21.5	
20	64QAM	50	0	19.31	19.31	19.33	19.26	19.31		
20	64QAM	50	24	19.35	19.43	19.44	19.37	19.44		
20	64QAM	50	50	19.32	19.40	19.36	19.26	19.35		
20	64QAM	100	0	19.38	19.46	19.44	19.38	19.42	20.5	
Channel				40115	40378	40640	40903	41165		
Frequency (MHz)				2542.5	2568.8	2595	2621.3	2647.5		
15	QPSK	1	0	22.02	22.00	22.09	22.00	22.10	23.5	
15	QPSK	1	37	22.35	22.25	22.44	22.36	22.38		
15	QPSK	1	74	22.04	22.03	22.09	21.95	21.98	22.5	
15	QPSK	36	0	21.22	21.21	21.22	21.24	21.10		
15	QPSK	36	20	21.29	21.22	21.30	21.22	21.19		
15	QPSK	36	39	21.24	21.20	21.27	21.15	21.24		
15	QPSK	72	0	21.37	21.37	21.37	21.31	21.34	22.5	
15	16QAM	1	0	21.17	21.24	21.31	21.20	21.21		
15	16QAM	1	37	21.38	21.30	21.32	21.36	21.27		
15	16QAM	1	74	21.16	21.18	21.30	21.20	21.29		
15	16QAM	36	0	20.23	20.21	20.25	20.20	20.27	21.5	
15	16QAM	36	20	20.26	20.30	20.27	20.31	20.30		
15	16QAM	36	39	20.15	20.32	20.26	20.24	20.30		
15	16QAM	75	0	20.27	20.32	20.36	20.27	20.24		
15	16QAM	75	0	20.35	20.45	20.45	20.45	20.45	21.5	
15	64QAM	1	37	20.47	20.44	20.48	20.46	20.44		
15	64QAM	1	74	20.31	20.30	20.38	20.30	20.38		
15	64QAM	36	0	19.29	19.32	19.35	19.29	19.31		
15	64QAM	36	20	19.35	19.37	19.45	19.44	19.44	20.5	
15	64QAM	36	39	19.34	19.34	19.43	19.32	19.40		
15	64QAM	75	0	19.37	19.44	19.44	19.35	19.39		
Channel				40900	40365	40640	40915	41130		
Frequency (MHz)				2540	2567.5	2595	2622.5	2650		
10	QPSK	1	0	22.10	21.88	22.09	22.04	22.11	23.5	
10	QPSK	1	25	22.37	22.30	22.44	22.38	22.36		
10	QPSK	1	49	22.10	22.01	22.03	22.01	22.07	22.5	
10	QPSK	25	0	21.19	21.22	21.27	21.15	21.13		
10	QPSK	25	13	21.29	21.23	21.25	21.14	21.14		
10	QPSK	25	26	21.21	21.16	21.28	21.21	21.17		
10	QPSK	50	0	21.23	21.38	21.34	21.35	21.26	22.5	
10	16QAM	1	0	21.21	21.26	21.29	21.25	21.25		
10	16QAM	1	25	21.32	21.30	21.36	21.35	21.34		
10	16QAM	1	49	21.22	21.18	21.31	21.25	21.28		
10	16QAM	25	0	20.24	20.16	20.27	20.17	20.20	21.5	
10	16QAM	25	12	20.27	20.30	20.27	20.29	20.25		
10	16QAM	25	25	20.14	20.28	20.27	20.20	20.27		
10	QPSK	25	13	20.27	20.27	20.29	20.21	20.32		
10	64QAM	1	0	20.30	20.36	20.44	20.33	20.37	21.5	
10	64QAM	1	25	20.44	20.38	20.51	20.48	20.46		
10	64QAM	1	49	20.31	20.34	20.36	20.29	20.36		
10	64QAM	25	0	19.29	19.28	19.34	19.29	19.34		
10	64QAM	25	12	19.34	19.37	19.42	19.43	19.41	20.5	
10	64QAM	25	25	19.25	19.34	19.39	19.35	19.33		
10	64QAM	50	0	19.39	19.43	19.41	19.39	19.36		
Channel				40865	40353	40640	40928	41215		
Frequency (MHz)				2537.5	2565	2595	2630.5	2655.5		
5	QPSK	1	0	22.02	22.07	22.05	22.00	22.08	23.5	
5	QPSK	1	12	22.34	22.29	22.48	22.41	22.33		
5	QPSK	1	24	22.02	22.05	22.10	21.95	22.07		
5	QPSK	12	0	21.20	21.17	21.26	21.19	21.09		
5	QPSK	12	7	21.28	21.21	21.26	21.18	21.15	22.5	
5	QPSK	12	13	21.19	21.17	21.24	21.22	21.20		
5	QPSK	25	0	21.27	21.32	21.36	21.35	21.27		
5	QPSK	1	10	21.17	21.24	21.30	21.25	21.19		
5	16QAM	1	0	21.36	21.27	21.31	21.21	21.29	22.5	
5	16QAM	1	24	21.17	21.24	21.30	21.25	21.30		
5	16QAM	12	0	20.17	20.20	20.28	20.21	20.24		
5	16QAM	12	13	20.19	20.33	20.30	20.23	20.33		
5	16QAM	12	13	20.17	20.29	20.24	20.20	20.26	21.5	
5	16QAM	25	0	20.28	20.30	20.32	20.27	20.32		
5	64QAM	1	0	20.30	20.39	20.42	20.32	20.29		
5	64QAM	1	12	20.46	20.48	20.45	20.48	20.48		
5	64QAM	1	24	20.32	20.27	20.39	20.34	20.35	21.5	
5	64QAM	12	0	19.32	19.28	19.42	19.28	19.29		
5	64QAM	12	7	19.38	19.35	19.45	19.39	19.44		
5	64QAM	12	13	19.31	19.34	19.36	19.26	19.36		
5	64QAM	25	0	19.43	19.44	19.47	19.33	19.48	20.5	



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	19.71	20.50	19.50	99.58
		CH 7	2442	19.57	20.50	19.50	
		CH 13	2472	17.49	18.50	17.50	
	802.11g 6Mbps	CH 1	2412	17.50	18.50	17.50	96.90
		CH 7	2442	17.36	18.50	17.50	
		CH 13	2472	12.89	14.00	13.00	
	802.11n-HT20 MCS0	CH 1	2412	17.39	18.50	17.50	96.69
		CH 7	2442	17.19	18.00	17.50	
		CH 13	2472	11.81	12.50	12.00	
	802.11n-HT40 MCS0	CH 3	2422	14.75	15.50	15.00	93.64
		CH 7	2442	16.51	17.50	16.50	
		CH 11	2462	9.87	11.00	10.00	

5GHz WLAN ANT 1

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 1	802.11a 6Mbps	CH 36	5180	14.68	15.50	15.00	96.90
		CH 44	5220	16.11	17.00	16.00	
		CH 48	5240	15.83	17.00	16.00	
	802.11n-HT20 MCS0	CH 36	5180	15.91	17.00	16.00	96.69
		CH 44	5220	16.01	17.00	16.00	
		CH 48	5240	15.73	16.50	16.00	
	802.11n-HT40 MCS0	CH 36	5180	12.54	13.50	13.00	93.64
		CH 46	5230	15.51	16.50	16.00	
		CH 36	5180	15.94	17.00	16.00	96.68
	802.11ac-VHT20 MCS0	CH 44	5220	15.78	17.00	16.00	
		CH 48	5240	15.73	17.00	16.00	
	802.11ac-VHT40 MCS0	CH 38	5190	15.68	16.50	16.00	93.68
		CH 46	5230	15.55	16.50	16.00	
		CH 42	5210	12.14	13.00	12.50	87.92

5GHz WLAN ANT 1

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.3GHz WLAN ANT 1	802.11a 6Mbps	CH 52	5260	16.97	17.00	16.00	96.90
		CH 60	5300	15.98	17.00	16.00	
		CH 64	5320	15.69	16.50	16.00	
	802.11n-HT20 MCS0	CH 52	5260	15.81	17.00	16.00	96.69
		CH 60	5300	15.78	17.00	16.00	
		CH 64	5320	15.30	16.50	16.00	
	802.11n-HT40 MCS0	CH 54	5270	15.47	16.50	16.00	93.64
		CH 62	5310	13.74	14.50	14.50	
		CH 52	5260	15.81	17.00	16.00	96.68
	802.11ac-VHT20 MCS0	CH 60	5300	15.56	16.50	16.00	
		CH 64	5320	15.31	16.50	16.00	
	802.11ac-VHT40 MCS0	CH 54	5270	15.44	16.50	16.00	93.68
		CH 62	5310	15.45	16.50	16.00	
		CH 58	5290	12.43	13.50	13.00	87.92

5GHz WLAN ANT 1

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.5GHz WLAN ANT 1	802.11a 6Mbps	CH 100	5500	16.82	17.50	16.00	96.90
		CH 120	5600	16.82	17.50	16.00	
		CH 144	5720	15.82	17.00	16.00	
	802.11n-HT20 MCS0	CH 100	5500	16.23	17.00	16.00	96.69
		CH 120	5600	16.32	17.00	16.00	
		CH 144	5720	15.69	16.50	16.00	
	802.11n-HT40 MCS0	CH 102	5510	14.58	15.50	15.00	93.64
		CH 126	5630	16.32	17.00	16.00	
		CH 142	5710	15.63	16.50	16.00	96.68
	802.11ac-VHT20 MCS0	CH 100	5500	16.22	17.00	16.00	
		CH 120	5600	16.31	17.00	16.00	
		CH 144	5720	15.73	16.50	16.00	
	802.11ac-VHT40 MCS0	CH 102	5510	16.25	17.00	16.00	93.68
		CH 126	5630	16.12	17.00	16.00	
		CH 142	5710	15.57	16.50	16.00	87.92
	802.11ac-VHT80 MCS0	CH 106	5530	11.96	13.00	12.50	
		CH 122	5610	15.62	16.50	16.00	
		CH 138	5690	15.26	16.50	16.00	

5GHz WLAN ANT 1

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN ANT 1	802.11a 6Mbps	CH 149	5745	16.73	16.50	16.00	96.90
		CH 157	5785	15.59	16.50	16.00	
		CH 165	5825	15.48	16.50	16.00	
	802.11n-HT20 MCS0	CH 149	5745	15.65	16.50	16.00	96.69
		CH 157	5785	15.21	16.00	16.00	
		CH 165	5825	15.34	16.00	16.00	93.64
	802.11n-HT40 MCS0	CH 151	5755	15.43	16.50	16.00	
		CH 159	5795	15.19	16.00	16.00	
		CH 149	5745	15.64	16.50	16.00	96.68
	802.11ac-VHT20 MCS0	CH 157	5785	15.21	16.00	16.00	
		CH 165	5825	15.31	16.00	16.00	
	802.11ac-VHT40 MCS0	CH 151	5755	15.47	16.50	16.00	93.68
		CH 159	5795	15.18	16.00	16.00	
		CH 155	5775	14.84	15.50	16.00	87.92

Mode	Channel	Frequency (MHz)	Average power (dBm)			
BR / EDR	CH 00	2402	10.54	11.50	8.91	10.00
	CH 39	2441	9.57	10.50	5.93	7.00
	CH 78	2480	11.34	12.50	8.65	9.50
	Duty Cycle %		76.91		77.01	

Mode	Channel	Frequency (MHz)	Average power (dBm)	
LE	CH 00	2402	-4.05	-6.80
	CH 19	2440	-3.26	-6.04
	CH 39	2480	-3.30	-6.18
	Tune-up Limit		0.5	0.5
Duty Cycle %		61.9	32.26	

Reduced Power

GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel		512	661	810		512	661	810	
Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot		26.50	26.55	26.48	27.50	17.50	17.55	17.48	18.50
GPRS 1 Tx slot		26.53	26.58	26.51	27.50	17.53	17.58	17.51	18.50
GPRS 2 Tx slots		23.44	23.49	23.42	24.50	17.44	17.49	17.42	18.50
GPRS 3 Tx slots		21.65	21.72	21.68	22.50	17.39	17.46	17.42	18.24
GPRS 4 Tx slots		20.66	20.69	20.64	21.50	17.66	17.69	17.64	18.50
EDGE 1 Tx slot		20.10	20.14	20.11	21.00	11.10	11.14	11.11	12.00
EDGE 2 Tx slots		18.08	18.12	18.10	19.00	12.08	12.12	12.10	13.00
EDGE 3 Tx slots		16.20	16.22	16.17	17.00	11.94	11.96	11.91	12.74
EDGE 4 Tx slots		14.59	14.63	14.60	15.50	11.59	11.63	11.60	12.50
Mode			Max.	26.58			Max.	17.69	
Attenuator		Cable Loss : 0.8							

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band IV (dBm)			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513	
Rx Channel		9662	9800	9938		1537	1638	1738	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	21.42	21.45	21.39	22.50	21.37	21.39	21.35	22.50
3GPP Rel 5	HSDPA Subtest-1	18.44	18.16	18.20	19.00	20.47	20.57	20.40	21.50
3GPP Rel 5	HSDPA Subtest-2	17.01	16.96	16.93	18.00	18.93	18.74	18.80	20.00
3GPP Rel 5	HSDPA Subtest-3	15.59	15.47	15.36	16.50	17.14	17.39	17.62	18.00
3GPP Rel 5	HSDPA Subtest-4	15.19	15.34	15.29	16.50	17.39	17.14	17.12	18.00
3GPP Rel 6	HSUPA Subtest-1	16.37	16.11	16.15	18.00	16.31	16.42	16.21	18.00
3GPP Rel 6	HSUPA Subtest-2	16.36	16.13	16.17	18.00	16.29	16.42	16.23	17.00
3GPP Rel 6	HSUPA Subtest-3	17.40	17.12	17.14	18.00	17.26	17.36	17.18	18.00
3GPP Rel 6	HSUPA Subtest-4	15.92	15.67	15.68	16.00	15.82	15.95	15.71	16.00
3GPP Rel 6	HSUPA Subtest-5	17.42	17.16	17.16	18.00	17.23	17.37	17.17	18.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	19.50	19.52	19.56	20.50	19.41	19.56	19.46	20.50
Attenuator		Cable Loss				Cable Loss			
Mode			Max.	21.45			Max.	21.39	

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	20.32	20.35	20.26	21.5
20	QPSK	1	49	20.46	20.49	20.44	
20	QPSK	1	99	20.28	20.31	20.25	
20	QPSK	50	0	19.54	19.61	19.58	20.5
20	QPSK	50	24	19.50	19.57	19.53	
20	QPSK	50	50	19.54	19.55	19.50	
20	QPSK	100	0	19.54	19.56	19.55	20.5
20	16QAM	1	0	19.61	19.68	19.60	
20	16QAM	1	49	19.78	19.82	19.75	
20	16QAM	1	99	19.42	19.52	19.44	19.5
20	16QAM	50	0	18.48	18.58	18.51	
20	16QAM	50	24	18.45	18.55	18.45	
20	16QAM	50	50	18.43	18.52	18.43	19.5
20	16QAM	100	0	18.53	18.57	18.49	
20	64QAM	1	0	18.55	18.56	18.47	
20	64QAM	1	49	18.64	18.73	18.68	19.5
20	64QAM	1	99	18.35	18.45	18.38	
20	64QAM	50	0	17.83	17.89	17.59	
20	64QAM	50	24	17.58	17.65	17.60	18.5
20	64QAM	50	50	17.61	17.63	17.61	
20	64QAM	100	0	17.60	17.66	17.56	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	20.28	20.34	20.16	21.5
15	QPSK	1	37	20.40	20.47	20.44	
15	QPSK	1	74	20.22	20.23	20.22	
15	QPSK	36	0	19.49	19.52	19.53	20.5
15	QPSK	36	20	19.47	19.47	19.44	
15	QPSK	36	39	19.49	19.52	19.45	
15	QPSK	75	0	19.44	19.47	19.54	20.5
15	16QAM	1	0	19.54	19.67	19.56	
15	16QAM	1	37	19.74	19.76	19.70	
15	16QAM	1	74	19.36	19.43	19.37	19.5
15	16QAM	36	0	18.38	18.51	18.50	
15	16QAM	36	20	18.36	18.47	18.40	
15	16QAM	36	39	18.40	18.47	18.42	19.5
15	16QAM	75	0	18.48	18.51	18.40	
15	64QAM	1	0	18.45	18.47	18.40	
15	64QAM	1	37	18.62	18.65	18.61	19.5
15	64QAM	1	74	18.28	18.37	18.32	
15	64QAM	36	0	17.58	17.63	17.52	
15	64QAM	36	20	17.50	17.63	17.55	18.5
15	64QAM	36	39	17.55	17.58	17.55	
15	64QAM	75	0	17.54	17.62	17.46	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	20.22	20.33	20.17	21.5
10	QPSK	1	25	20.41	20.46	20.42	
10	QPSK	1	49	20.22	20.28	20.19	
10	QPSK	25	0	19.51	19.55	19.48	20.5
10	QPSK	25	12	19.40	19.56	19.48	
10	QPSK	25	25	19.45	19.48	19.45	
10	QPSK	50	0	19.49	19.52	19.53	20.5
10	16QAM	1	0	19.56	19.61	19.55	
10	16QAM	1	25	19.72	19.72	19.65	
10	16QAM	1	49	19.35	19.47	19.35	19.5
10	16QAM	25	0	18.40	18.56	18.46	
10	16QAM	25	12	18.40	18.45	18.42	
10	16QAM	25	25	18.39	18.42	18.33	19.5
10	16QAM	50	0	18.45	18.52	18.42	
10	64QAM	1	0	18.46	18.51	18.38	
10	64QAM	1	25	18.55	18.68	18.67	19.5
10	64QAM	1	49	18.28	18.38	18.33	
10	64QAM	25	0	17.55	17.59	17.56	
10	64QAM	25	12	17.57	17.60	17.55	18.5
10	64QAM	25	25	17.51	17.61	17.54	
10	64QAM	50	0	17.57	17.59	17.52	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	20.26	20.34	20.24	21.5
5	QPSK	1	12	20.44	20.47	20.44	
5	QPSK	1	24	20.21	20.27	20.20	
5	QPSK	12	0	19.45	19.54	19.49	20.5
5	QPSK	12	7	19.48	19.55	19.51	
5	QPSK	12	13	19.52	19.51	19.47	
5	QPSK	25	0	19.44	19.53	19.53	20.5
5	16QAM	1	0	19.59	19.62	19.52	
5	16QAM	1	12	19.76	19.74	19.66	
5	16QAM	1	24	19.34	19.44	19.34	19.5
5	16QAM	12	0	18.39	18.50	18.46	
5	16QAM	12	7	18.40	18.53	18.44	
5	16QAM	12	13	18.38	18.49	18.34	19.5
5	16QAM	25	0	18.43	18.55	18.43	
5	64QAM	1	0	18.49	18.47	18.44	
5	64QAM	1	12	18.60	18.72	18.61	19.5
5	64QAM	1	24	18.32	18.37	18.32	
5	64QAM	12	0	17.59	17.61	17.53	
5	64QAM	12	7	17.54	17.63	17.52	18.5
5	64QAM	12	13	17.53	17.57	17.58	
5	64QAM	25	0	17.55	17.58	17.53	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	20.26	20.29	20.22	21.5
3	QPSK	1	8	20.45	20.48	20.41	
3	QPSK	1	14	20.25	20.30	20.18	
3	QPSK	8	0	19.49	19.59	19.51	20.5
3	QPSK	8	4	19.42	19.56	19.47	
3	QPSK	8	8	19.52	19.45	19.43	

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	20.28	20.35	20.30	21.5
20	QPSK	1	49	20.55	20.59	20.56	
20	QPSK	1	99	20.33	20.34	20.24	
20	QPSK	50	0	19.68	19.75	19.72	20.5
20	QPSK	50	24	19.66	19.68	19.60	
20	QPSK	50	50	19.68	19.70	19.66	
20	QPSK	100	0	19.70	19.71	19.66	20.5
20	16QAM	1	0	19.63	19.70	19.63	
20	16QAM	1	49	19.78	19.85	19.83	
20	16QAM	1	99	19.67	19.68	19.67	19.5
20	16QAM	50	0	18.63	18.64	18.63	
20	16QAM	50	24	18.59	18.68	18.64	
20	16QAM	50	50	18.70	18.75	18.66	19.5
20	16QAM	100	0	18.67	18.69	18.61	
20	64QAM	1	0	17.85	17.95	17.94	
20	64QAM	1	49	18.32	18.34	18.33	19.5
20	64QAM	1	99	17.89	17.92	17.86	
20	64QAM	50	0	17.01	17.10	17.01	
20	64QAM	50	24	17.06	17.11	17.01	18.5
20	64QAM	50	50	17.14	17.19	17.17	
20	64QAM	100	0	17.08	17.15	17.10	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	20.22	20.26	20.29	21.5
15	QPSK	1	37	20.50	20.55	20.55	
15	QPSK	1	74	20.32	20.26	20.20	
15	QPSK	36	0	19.65	19.72	19.62	20.5
15	QPSK	36	20	19.60	19.66	19.51	
15	QPSK	36	39	19.65	19.63	19.61	
15	QPSK	75	0	19.62	19.70	19.56	20.5
15	16QAM	1	0	19.60	19.62	19.60	
15	16QAM	1	37	19.70	19.76	19.82	
15	16QAM	1	74	19.66	19.66	19.59	19.5
15	16QAM	36	0	18.62	18.56	18.60	
15	16QAM	36	20	18.50	18.64	18.60	
15	16QAM	36	39	18.66	18.65	18.59	19.5
15	16QAM	75	0	18.64	18.61	18.51	
15	64QAM	1	0	17.84	17.88	17.92	
15	64QAM	1	37	18.23	18.32	18.32	19.5
15	64QAM	1	74	17.79	17.85	17.82	
15	64QAM	36	0	16.95	17.03	16.98	
15	64QAM	36	20	16.98	17.10	16.98	18.5
15	64QAM	36	39	17.10	17.18	17.12	
15	64QAM	75	0	17.02	17.07	17.06	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	20.21	20.31	20.24	21.5
10	QPSK	1	25	20.48	20.56	20.51	
10	QPSK	1	49	20.24	20.25	20.23	
10	QPSK	25	0	19.67	19.72	19.64	20.5
10	QPSK	25	12	19.65	19.58	19.54	
10	QPSK	25	25	19.63	19.62	19.62	
10	QPSK	50	0	19.69	19.67	19.60	20.5
10	16QAM	1	0	19.58	19.64	19.59	
10	16QAM	1	25	19.74	19.80	19.80	
10	16QAM	1	49	19.64	19.62	19.60	19.5
10	16QAM	25	0	18.54	18.55	18.62	
10	16QAM	25	12	18.53	18.60	18.59	
10	16QAM	25	25	18.62	18.69	18.65	19.5
10	16QAM	50	0	18.60	18.61	18.60	
10	64QAM	1	0	17.80	17.87	17.85	
10	64QAM	1	25	18.27	18.31	18.27	19.5
10	64QAM	1	49	17.80	17.84	17.78	
10	64QAM	25	0	16.91	17.05	16.98	
10	64QAM	25	12	17.05	17.08	16.91	18.5
10	64QAM	25	25	17.08	17.16	17.15	
10	64QAM	50	0	17.07	17.14	17.01	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	20.18	20.28	20.28	21.5
5	QPSK	1	12	20.48	20.55	20.50	
5	QPSK	1	24	20.31	20.28	20.23	
5	QPSK	12	0	19.63	19.73	19.70	20.5
5	QPSK	12	7	19.58	19.66	19.52	
5	QPSK	12	13	19.67	19.62	19.57	
5	QPSK	25	0	19.61	19.65	19.64	20.5
5	16QAM	1	0	19.62	19.60	19.58	
5	16QAM	1	12	19.68	19.75	19.73	
5	16QAM	1	24	19.62	19.66	19.59	19.5
5	16QAM	12	0	18.60	18.55	18.58	
5	16QAM	12	7	18.58	18.58	18.55	
5	16QAM	12	13	18.60	18.69	18.64	19.5
5	16QAM	25	0	18.63	18.60	18.57	
5	64QAM	1	0	17.82	17.92	17.85	
5	64QAM	1	12	18.24	18.25	18.28	19.5
5	64QAM	1	24	17.87	17.91	17.81	
5	64QAM	12	0	16.93	17.01	16.94	
5	64QAM	12	7	16.97	17.04	16.92	18.5
5	64QAM	12	13	17.11	17.10	17.08	
5	64QAM	25	0	17.04	17.10	17.01	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	20.27	20.26	20.22	21.5
3	QPSK	1	8	20.49	20.48	20.51	
3	QPSK	1	14	20.23	20.33	20.21	
3	QPSK	8	0	19.62	19.68	19.65	20.5
3	QPSK	8	4	19.60	19.59	19.55	
3	QPSK	8	7	19.67	19.66	19.59	

3	QPSK	15	0	19.44	19.50	19.47	20.5
3	16QAM	1	0	19.55	19.59	19.50	
3	16QAM	1	8	19.71	19.76	19.71	
3	16QAM	1	14	19.38	19.47	19.36	19.5
3	16QAM	8	0	18.39	18.57	18.45	
3	16QAM	8	4	18.41	18.52	18.36	
3	16QAM	8	7	18.37	18.48	18.36	19.5
3	16QAM	15	0	18.50	18.55	18.41	
3	64QAM	1	0	18.50	18.52	18.43	
3	64QAM	1	8	18.55	18.69	18.58	18.5
3	64QAM	1	14	18.28	18.44	18.34	
3	64QAM	8	0	17.58	17.62	17.49	
3	64QAM	8	4	17.56	17.64	17.51	18.5
3	64QAM	8	7	17.57	17.55	17.54	
3	64QAM	15	0	17.56	17.65	17.50	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	20.29	20.29	20.18	21.5
1.4	QPSK	1	3	20.43	20.45	20.40	
1.4	QPSK	1	5	20.24	20.26	20.17	
1.4	QPSK	3	0	20.34	20.36	20.31	20.5
1.4	QPSK	3	1	20.26	20.37	20.27	
1.4	QPSK	3	3	20.36	20.33	20.31	
1.4	QPSK	6	0	19.44	19.50	19.45	20.5
1.4	16QAM	1	0	19.57	19.58	19.59	
1.4	16QAM	1	3	19.68	19.79	19.65	
1.4	16QAM	1	5	19.33	19.47	19.40	19.5
1.4	16QAM	3	0	19.23	19.39	19.29	
1.4	16QAM	3	1	19.18	19.34	19.26	
1.4	16QAM	3	3	19.20	19.28	19.17	19.5
1.4	16QAM	6	0	18.49	18.49	18.48	
1.4	64QAM	1	0	18.51	18.54	18.45	
1.4	64QAM	1	3	18.59	18.67	18.63	18.5
1.4	64QAM	1	5	18.31	18.37	18.29	
1.4	64QAM	3	0	18.36	18.43	18.35	
1.4	64QAM	3	1	18.36	18.40	18.33	18.5
1.4	64QAM	3	3	18.42	18.41	18.41	
1.4	64QAM	6	0	17.57	17.61	17.49	

3	QPSK	15	0	19.67	19.68	19.65	20.5
3	16QAM	1	0	19.61	19.60	19.59	
3	16QAM	1	8	19.72	19.82	19.76	
3	16QAM	1	14	19.85	19.59	19.66	19.5
3	16QAM	8	0	18.56	18.54	18.61	
3	16QAM	8	4	18.53	18.63	18.57	
3	16QAM	8	7	18.64	18.74	18.60	19.5
3	16QAM	15	0	18.66	18.64	18.54	
3	64QAM	1	0	17.85	17.93	17.90	
3	64QAM	1	8	18.22	18.32	18.29	18.5
3	64QAM	1	14	17.84	17.90	17.84	
3	64QAM	8	0	16.91	17.02	16.93	
3	64QAM	8	4	17.02	17.04	16.96	18.5
3	64QAM	8	7	17.04	17.09	17.08	
3	64QAM	15	0	17.03	17.05	17.08	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	20.18	20.27	20.23	21.5
1.4	QPSK	1	3	20.47	20.54	20.51	
1.4	QPSK	1	5	20.26	20.31	20.21	
1.4	QPSK	3	0	20.43	20.48	20.48	20.5
1.4	QPSK	3	1	20.44	20.43	20.40	
1.4	QPSK	3	3	20.47	20.49	20.46	
1.4	QPSK	6	0	19.66	19.64	19.63	20.5
1.4	16QAM	1	0	19.61	19.64	19.62	
1.4	16QAM	1	3	19.71	19.78	19.75	
1.4	16QAM	1	5	19.62	19.62	19.57	19.5
1.4	16QAM	3	0	19.44	19.46	19.42	
1.4	16QAM	3	1	19.40	19.41	19.40	
1.4	16QAM	3	3	19.52	19.57	19.41	19.5
1.4	16QAM	6	0	18.60	18.60	18.60	
1.4	64QAM	1	0	17.83	17.88	17.93	
1.4	64QAM	1	3	18.29	18.25	18.30	19.5
1.4	64QAM	1	5	17.88	17.87	17.85	
1.4	64QAM	3	0	17.63	17.72	17.66	
1.4	64QAM	3	1	17.69	17.71	17.67	18.5
1.4	64QAM	3	3	17.83	17.88	17.77	
1.4	64QAM	6	0	17.05	17.12	17.03	



Band 25 (1900MHz Band) (dBm)							
Part 24E							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26140	26365	26590	
Frequency (MHz)				1860	1882.5	1905	
20	QPSK	1	0	20.32	20.35	20.26	21.5
20	QPSK	1	49	20.58	20.61	20.55	
20	QPSK	1	99	20.22	20.28	20.24	
20	QPSK	50	0	19.66	19.71	19.62	20.5
20	QPSK	50	24	19.58	19.63	19.60	
20	QPSK	50	50	19.62	19.68	19.63	
20	QPSK	100	0	19.60	19.62	19.59	20.5
20	16QAM	1	0	19.57	19.58	19.50	
20	16QAM	1	49	19.89	19.93	19.89	
20	16QAM	1	99	19.48	19.52	19.48	19.5
20	16QAM	50	0	18.67	18.69	18.62	
20	16QAM	50	24	18.57	18.63	18.56	
20	16QAM	50	50	18.60	18.67	18.63	19.5
20	16QAM	100	0	18.56	18.61	18.52	
20	64QAM	1	0	18.56	18.65	18.64	
20	64QAM	1	49	18.69	18.72	18.67	19.5
20	64QAM	1	99	18.48	18.58	18.57	
20	64QAM	50	0	17.61	17.64	17.55	
20	64QAM	50	24	17.63	17.67	17.64	18.5
20	64QAM	50	50	17.66	17.71	17.61	
20	64QAM	100	0	17.67	17.68	17.66	
Channel				26115	26365	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	QPSK	1	0	20.28	20.31	20.17	21.5
15	QPSK	1	37	20.56	20.58	20.49	
15	QPSK	1	74	20.15	20.22	20.18	
15	QPSK	36	0	19.63	19.63	19.60	20.5
15	QPSK	36	20	19.49	19.55	19.57	
15	QPSK	36	39	19.56	19.59	19.58	
15	QPSK	75	0	19.56	19.52	19.53	20.5
15	16QAM	1	0	19.51	19.55	19.47	
15	16QAM	1	37	19.79	19.85	19.86	
15	16QAM	1	74	19.47	19.48	19.46	19.5
15	16QAM	36	0	18.65	18.60	18.57	
15	16QAM	36	20	18.56	18.54	18.48	
15	16QAM	36	39	18.57	18.62	18.57	19.5
15	16QAM	75	0	18.52	18.52	18.42	
15	64QAM	1	0	18.52	18.58	18.57	
15	64QAM	1	37	18.62	18.62	18.63	19.5
15	64QAM	1	74	18.45	18.55	18.56	
15	64QAM	36	0	17.58	17.56	17.47	
15	64QAM	36	20	17.59	17.62	17.63	18.5
15	64QAM	36	39	17.63	17.61	17.52	
15	64QAM	75	0	17.60	17.61	17.57	
Channel				26090	26365	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	QPSK	1	0	20.23	20.30	20.20	21.5
10	QPSK	1	25	20.51	20.59	20.54	
10	QPSK	1	49	20.18	20.18	20.20	
10	QPSK	25	0	19.63	19.70	19.58	20.5
10	QPSK	25	12	19.53	19.59	19.54	
10	QPSK	25	25	19.61	19.59	19.56	
10	QPSK	50	0	19.55	19.56	19.50	20.5
10	16QAM	1	0	19.53	19.55	19.46	
10	16QAM	1	25	19.79	19.90	19.83	
10	16QAM	1	49	19.41	19.45	19.41	19.5
10	16QAM	25	0	18.64	18.65	18.57	
10	16QAM	25	12	18.56	18.60	18.53	
10	16QAM	25	25	18.57	18.63	18.58	19.5
10	16QAM	50	0	18.48	18.55	18.46	
10	64QAM	1	0	18.46	18.56	18.60	
10	64QAM	1	25	18.68	18.63	18.66	19.5
10	64QAM	1	49	18.45	18.48	18.47	
10	64QAM	25	0	17.60	17.57	17.49	
10	64QAM	25	12	17.59	17.64	17.63	18.5
10	64QAM	25	25	17.62	17.63	17.58	
10	64QAM	50	0	17.64	17.64	17.63	
Channel				26065	26365	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	QPSK	1	0	20.25	20.34	20.21	21.5
5	QPSK	1	12	20.54	20.54	20.46	
5	QPSK	1	24	20.12	20.18	20.23	
5	QPSK	12	0	19.62	19.63	19.54	20.5
5	QPSK	12	7	19.55	19.58	19.54	
5	QPSK	12	13	19.55	19.63	19.61	
5	QPSK	25	0	19.54	19.56	19.58	20.5
5	16QAM	1	0	19.52	19.51	19.45	
5	16QAM	1	12	19.86	19.90	19.86	
5	16QAM	1	24	19.43	19.45	19.43	19.5
5	16QAM	12	0	18.65	18.68	18.53	
5	16QAM	12	7	18.50	18.59	18.49	
5	16QAM	12	13	18.50	18.64	18.61	19.5
5	16QAM	25	0	18.49	18.58	18.50	
5	64QAM	1	0	18.50	18.58	18.62	
5	64QAM	1	12	18.66	18.65	18.60	19.5
5	64QAM	1	24	18.38	18.57	18.53	
5	64QAM	12	0	17.58	17.61	17.46	
5	64QAM	12	7	17.58	17.59	17.54	18.5
5	64QAM	12	13	17.56	17.66	17.52	
5	64QAM	25	0	17.57	17.65	17.62	
Channel				26059	26365	26679	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1882.5	1913.5	
3	QPSK	1	0	20.28	20.26	20.16	21.5
3	QPSK	1	8	20.56	20.58	20.48	
3	QPSK	1	14	20.19	20.23	20.17	
3	QPSK	8	0	19.60	19.66	19.52	20.5
3	QPSK	8	4	19.54	19.59	19.54	
3	QPSK	8	7	19.61	19.63	19.53	

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	20.43	20.48	20.45	21.5
20	QPSK	1	49	20.65	20.68	20.63	
20	QPSK	1	99	20.33	20.40	20.36	
20	QPSK	50	0	19.85	19.88	19.79	20.5
20	QPSK	50	24	19.74	19.84	19.83	
20	QPSK	50	50	19.75	19.82	19.81	
20	QPSK	100	0	19.75	19.80	19.71	20.5
20	16QAM	1	0	19.70	19.76	19.71	
20	16QAM	1	49	20.01	20.05	20.01	
20	16QAM	1	99	19.60	19.65	19.56	19.5
20	16QAM	50	0	18.78	18.82	18.72	
20	16QAM	50	24	18.76	18.80	18.73	
20	16QAM	50	50	18.75	18.80	18.71	19.5
20	16QAM	100	0	18.69	18.77	18.75	
20	64QAM	1	0	18.65	18.68	18.58	
20	64QAM	1	49	18.97	18.98	18.95	19.5
20	64QAM	1	99	18.54	18.61	18.53	
20	64QAM	50	0	17.80	17.81	17.75	
20	64QAM	50	24	17.69	17.79	17.71	18.5
20	64QAM	50	50	17.75	17.77	17.69	
20	64QAM	100	0	17.71	17.75	17.71	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	20.35	20.42	20.39	21.5
15	QPSK	1	37	20.64	20.62	20.61	
15	QPSK	1	74	20.29	20.39	20.27	
15	QPSK	36	0	19.81	19.80	19.74	20.5
15	QPSK	36	20	19.73	19.78	19.73	
15	QPSK	36	39	19.72	19.75	19.73	
15	QPSK	75	0	19.68	19.71	19.67	20.5
15	16QAM	1	0	19.68	19.71	19.62	
15	16QAM	1	37	19.96	20.01	19.97	
15	16QAM	1	74	19.51	19.62	19.52	19.5
15	16QAM	36	0	18.76	18.76	18.65	
15	16QAM	36	20	18.70	18.76	18.68	
15	16QAM	36	39	18.74	18.71	18.62	19.5
15	16QAM	75	0	18.66	18.69	18.73	
15	64QAM	1	0	18.63	18.61	18.57	
15	64QAM	1	37	18.88	18.97	18.88	19.5
15	64QAM	1	74	18.53	18.59	18.50	
15	64QAM	36	0	17.79	17.73	17.68	
15	64QAM	36	20	17.65	17.74	17.69	18.5
15	64QAM	36	39	17.71	17.67	17.60	
15	64QAM	75	0	17.64	17.67	17.62	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	20.34	20.47	20.40	21.5
10	QPSK	1	25	20.63	20.64	20.58	
10	QPSK	1	49	20.31	20.30	20.31	
10	QPSK	25	0	19.77	19.87	19.75	20.5
10	QPSK	25	12	19.71	19.78	19.81	
10	QPSK	25	25	19.65	19.73	19.75	
10	QPSK	50	0	19.74	19.73	19.64	20.5
10	16QAM	1	0	19.66	19.70	19.68	
10	16QAM	1	25	19.97	19.98	19.92	20.5
10	16QAM	1	49	19.52	19.59	19.50	
10	16QAM	25	0	18.77	18.72	18.66	
10	16QAM	25	12	18.66	18.76	18.63	19.5
10	16QAM	25	25	18.69	18.73	18.70	
10	16QAM	50	0	18.64	18.67	18.68	
10	64QAM	1	0	18.58	18.59	18.54	19.5
10	64QAM	1	25	18.88	18.89	18.91	
10	64QAM	1	49	18.48	18.55	18.45	
10	64QAM	25	0	17.75	17.77	17.74	18.5
10	64QAM	25	12	17.59	17.73	17.68	
10	64QAM	25	25	17.68	17.72	17.65	
10	64QAM	50	0	17.63	17.66	17.69	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	20.41	20.44	20.37	21.5
5	QPSK	1	12	20.66	20.62	20.57	
5	QPSK	1	24	20.32	20.31	20.31	
5	QPSK	12	0	19.82	19.79	19.75	20.5
5	QPSK	12	7	19.71	19.76	19.71	
5	QPSK	12	13	19.74	19.80	19.72	
5	QPSK	25	0	19.70	19.77	19.64	20.5
5	16QAM	1	0	19.61	19.71	19.70	
5	16QAM	1	12	19.94	19.95	19.99	
5	16QAM	1	24	19.53	19.60	19.55	19.5
5	16QAM	12	0	18.72	18.76	18.71	
5	16QAM	12	7	18.73	18.74	18.67	
5	16QAM	12	13	18.68	18.76	18.62	19.5
5	16QAM	25	0	18.68	18.72	18.69	
5	64QAM	1	0	18.55	18.64	18.55	
5	64QAM	1	12	18.95	18.90	18.87	18.5
5	64QAM	1	24	18.48	18.60	18.49	
5	64QAM	12	0	17.78	17.80	17.72	
5	64QAM	12	7	17.64	17.72	17.69	18.5
5	64QAM	12	13	17.67	17.68	17.64	
5	64QAM	25	0	17.69	17.67	17.70	
Channel				131967	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	20.40	20.43	20.44	21.5
3	QPSK	1	8	20.60	20.65	20.63	
3	QPSK	1	14	20.25	20.34	20.32	
3	QPSK	8	0	19.78	19.84	19.74	20.5
3	QPSK	8	4	19.69	19.76	19.75	
3	QPSK	8	7	19.69	19.79	19.78	



3	QPSK	15	0	19.51	19.58	19.50	20.5
3	16QAM	1	0	19.55	19.52	19.47	
3	16QAM	1	8	19.79	19.86	19.84	
3	16QAM	1	14	19.39	19.44	19.47	19.5
3	16QAM	8	0	18.63	18.61	18.55	
3	16QAM	8	4	18.47	18.57	18.49	
3	16QAM	8	7	18.52	18.66	18.55	19.5
3	16QAM	15	0	18.53	18.60	18.51	
3	64QAM	1	0	18.51	18.60	18.59	
3	64QAM	1	8	18.63	18.68	18.59	18.5
3	64QAM	1	14	18.41	18.56	18.55	
3	64QAM	8	0	17.51	17.55	17.49	
3	64QAM	8	4	17.62	17.60	17.62	18.5
3	64QAM	8	7	17.57	17.67	17.54	
3	64QAM	15	0	17.58	17.61	17.59	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	20.22	20.27	20.19	21.5
1.4	QPSK	1	3	20.52	20.60	20.55	
1.4	QPSK	1	5	20.16	20.20	20.15	
1.4	QPSK	3	0	20.10	20.12	20.09	
1.4	QPSK	3	1	20.22	20.30	20.29	
1.4	QPSK	3	3	20.29	20.28	20.30	
1.4	QPSK	6	0	19.51	19.56	19.57	20.5
1.4	16QAM	1	0	19.55	19.55	19.51	19.5
1.4	16QAM	1	3	19.88	19.92	19.82	
1.4	16QAM	1	5	19.46	19.47	19.46	
1.4	16QAM	3	0	19.28	19.33	19.28	
1.4	16QAM	3	1	19.19	19.26	19.18	
1.4	16QAM	3	3	19.20	19.27	19.29	
1.4	16QAM	6	0	18.49	18.51	18.49	18.5
1.4	64QAM	1	0	18.55	18.59	18.60	19.5
1.4	64QAM	1	3	18.67	18.66	18.58	
1.4	64QAM	1	5	18.38	18.49	18.50	
1.4	64QAM	3	0	18.40	18.43	18.28	
1.4	64QAM	3	1	18.37	18.48	18.42	
1.4	64QAM	3	3	18.46	18.48	18.38	
1.4	64QAM	6	0	17.62	17.60	17.64	18.5

3	QPSK	15	0	19.65	19.70	19.66	20.5
3	16QAM	1	0	19.63	19.74	19.65	
3	16QAM	1	8	19.99	20.03	19.98	
3	16QAM	1	14	19.55	19.56	19.52	19.5
3	16QAM	8	0	18.76	18.80	18.64	
3	16QAM	8	4	18.73	18.75	18.64	
3	16QAM	8	7	18.68	18.79	18.61	19.5
3	16QAM	15	0	18.63	18.73	18.72	
3	64QAM	1	0	18.60	18.62	18.51	
3	64QAM	1	8	18.96	18.92	18.93	18.5
3	64QAM	1	14	18.46	18.59	18.45	
3	64QAM	8	0	17.76	17.80	17.68	
3	64QAM	8	4	17.62	17.75	17.69	18.5
3	64QAM	8	7	17.69	17.70	17.68	
3	64QAM	15	0	17.70	17.70	17.65	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	20.42	20.45	20.36	21.5
1.4	QPSK	1	3	20.60	20.64	20.65	
1.4	QPSK	1	5	20.24	20.30	20.31	
1.4	QPSK	3	0	20.38	20.36	20.32	
1.4	QPSK	3	1	20.24	20.31	20.30	
1.4	QPSK	3	3	20.28	20.35	20.34	
1.4	QPSK	6	0	19.65	19.70	19.65	20.5
1.4	16QAM	1	0	19.67	19.69	19.66	20.5
1.4	16QAM	1	3	19.92	19.96	19.92	
1.4	16QAM	1	5	19.58	19.61	19.52	
1.4	16QAM	3	0	19.32	19.27	19.20	
1.4	16QAM	3	1	19.25	19.34	19.27	
1.4	16QAM	3	3	19.25	19.32	19.23	
1.4	16QAM	6	0	18.67	18.72	18.66	19.5
1.4	64QAM	1	0	18.57	18.65	18.51	19.5
1.4	64QAM	1	3	18.96	18.91	18.94	
1.4	64QAM	1	5	18.45	18.58	18.44	
1.4	64QAM	3	0	18.33	18.34	18.29	
1.4	64QAM	3	1	18.19	18.30	18.25	
1.4	64QAM	3	3	18.25	18.24	18.15	
1.4	64QAM	6	0	17.62	17.74	17.61	18.5