



REPORT No.: SZ24030059S01

Annex E Conducted Power

Note:

Conducted power unit: dBm

The target power was recorded in the manufacturer's document.



Full Power for ANT 1 & ANT 3 & ANT 4 & ANT 5 & ANT 6 & ANT 8

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
TX Channel	128	189	251		128	189	251		
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot	32.08	32.30	32.48	33.30	23.08	23.30	23.48	24.30	0.45
GPRS 1 Tx slot	32.09	32.32	32.53	33.30	23.09	23.32	23.53	24.30	
GPRS 2 Tx slots	29.11	29.31	29.55	30.30	23.11	23.31	23.55	24.30	0.44
GPRS 3 Tx slots	27.19	27.36	27.62	28.30	22.93	23.10	23.36	24.04	0.43
GPRS 4 Tx slots	25.04	25.29	25.51	26.30	22.04	22.29	22.51	23.30	0.47
EDGE 1 Tx slot	26.65	26.88	27.04	28.00	17.65	17.88	18.04	19.00	0.39
EDGE 2 Tx slots	24.72	24.91	25.09	26.00	18.72	18.91	19.09	20.00	0.37
EDGE 3 Tx slots	22.76	22.97	23.12	24.00	18.50	18.71	18.86	19.74	0.36
EDGE 4 Tx slots	21.11	21.19	21.40	22.00	18.11	18.19	18.40	19.00	0.29
Mode		Max.	32.53			Max.	23.55		
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	30.81	30.99	31.25	32.00	21.81	21.99	22.25	23.00	0.47
GPRS 1 Tx slot	30.83	31.04	31.28	32.00	21.83	22.04	22.28	23.00	
GPRS 2 Tx slots	29.45	29.60	29.74	30.50	23.45	23.60	23.74	24.50	0.29
GPRS 3 Tx slots	27.49	27.62	27.83	28.50	23.23	23.36	23.57	24.24	0.34
GPRS 4 Tx slots	26.44	26.59	26.81	27.50	23.44	23.59	23.81	24.50	0.37
EDGE 1 Tx slot	27.09	27.24	27.52	28.50	18.09	18.24	18.52	19.50	0.43
EDGE 2 Tx slots	25.56	25.71	25.89	26.50	19.56	19.71	19.89	20.50	0.33
EDGE 3 Tx slots	23.67	23.86	23.98	24.50	19.41	19.60	19.72	20.24	0.31
EDGE 4 Tx slots	22.68	22.80	22.95	23.50	19.68	19.80	19.95	20.50	0.27
Mode		Max.	31.28			Max.	23.81		
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	24.99	25.07	24.91	26.00	24.44	24.53	24.66	25.50	24.62	24.65	24.51	25.50
3GPP Rel 5	HSDPA Subtest-1	24.76	24.35	24.19	25.50	24.03	24.20	23.95	25.00	23.74	23.91	24.06	25.00
3GPP Rel 5	HSDPA Subtest-2	24.67	24.42	24.24	25.50	24.05	24.28	23.95	25.00	23.69	23.87	24.10	25.00
3GPP Rel 5	HSDPA Subtest-3	24.20	23.84	23.70	25.00	23.58	23.71	23.52	24.50	23.22	23.30	23.53	24.50
3GPP Rel 5	HSDPA Subtest-4	24.21	23.85	23.67	25.00	23.61	23.82	23.50	24.50	23.23	23.34	23.53	24.50
3GPP Rel 8	DC-HSDPA Subtest-1	24.69	24.43	24.25	25.50	24.12	24.32	24.02	25.00	23.76	23.92	24.09	25.00
3GPP Rel 8	DC-HSDPA Subtest-2	24.74	24.46	24.29	25.50	24.12	24.34	24.06	25.00	23.68	23.94	24.09	25.00
3GPP Rel 8	DC-HSDPA Subtest-3	24.17	23.93	23.83	25.00	23.54	23.76	23.56	24.50	23.22	23.38	23.59	24.50
3GPP Rel 8	DC-HSDPA Subtest-4	24.21	23.94	23.81	25.00	23.59	23.77	23.45	24.50	23.24	23.38	23.56	24.50
3GPP Rel 6	HSUPA Subtest-1	24.82	24.51	24.25	25.50	24.01	24.20	24.01	25.00	23.75	23.91	24.06	25.00
3GPP Rel 6	HSUPA Subtest-2	24.19	23.97	23.76	25.00	23.58	23.66	23.54	24.50	23.20	23.38	23.53	24.50
3GPP Rel 6	HSUPA Subtest-3	24.66	24.38	24.27	25.50	24.08	24.26	23.94	25.00	23.60	23.92	24.03	25.00
3GPP Rel 6	HSUPA Subtest-4	24.76	24.37	24.20	25.50	24.08	24.25	24.01	25.00	23.64	23.91	24.08	25.00
3GPP Rel 6	HSUPA Subtest-5	24.80	24.43	24.23	25.50	24.08	24.23	23.93	25.00	23.70	23.83	24.13	25.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	24.19	23.81	23.73	25.00	23.54	23.75	23.59	24.50	23.18	23.34	23.58	24.50
Attenuator		Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6		
Mode		Max.	25.07			Max.	24.66			Max.	24.65		



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	23.84	23.85	23.75	
20	QPSK	1	49	23.74	23.57	23.65	24.8
20	QPSK	1	99	23.73	23.67	23.52	
20	QPSK	50	0	22.80	22.82	22.71	
20	QPSK	50	24	22.75	22.74	22.69	23.8
20	QPSK	50	50	22.71	22.59	22.54	
20	QPSK	100	0	22.88	22.82	22.64	
20	16QAM	1	0	22.95	22.87	22.81	23.8
20	16QAM	1	49	22.90	22.86	22.87	
20	16QAM	1	99	22.82	22.82	22.86	
20	16QAM	50	0	21.86	21.66	21.70	22.8
20	16QAM	50	24	21.84	21.62	21.67	
20	16QAM	50	50	21.84	21.53	21.56	
20	16QAM	100	0	21.75	21.66	21.66	22.8
20	64QAM	1	0	21.91	21.71	21.62	
20	64QAM	1	49	21.83	21.75	21.71	
20	64QAM	1	99	21.80	21.71	21.66	21.8
20	64QAM	50	0	20.78	20.69	20.71	
20	64QAM	50	24	20.63	20.58	20.57	
20	64QAM	50	50	20.53	20.55	20.58	
20	64QAM	100	0	20.51	20.46	20.55	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	24.8
15	QPSK	1	0	23.80	23.74	23.63	
15	QPSK	1	37	23.60	23.71	23.51	
15	QPSK	1	74	23.59	23.52	23.57	23.8
15	QPSK	36	0	22.88	22.75	22.72	
15	QPSK	36	20	22.87	22.80	22.64	
15	QPSK	36	39	22.77	22.56	22.61	23.8
15	QPSK	75	0	22.65	22.67	22.59	
15	16QAM	1	0	22.89	22.80	22.72	
15	16QAM	1	37	22.84	22.73	22.75	22.8
15	16QAM	1	74	22.80	22.77	22.73	
15	16QAM	36	0	21.74	21.61	21.56	
15	16QAM	36	20	21.76	21.55	21.56	22.8
15	16QAM	36	39	21.72	21.52	21.58	
15	16QAM	75	0	21.79	21.54	21.53	
15	64QAM	1	0	21.84	21.67	21.66	22.8
15	64QAM	1	37	21.83	21.66	21.74	
15	64QAM	1	74	21.69	21.60	21.77	
15	64QAM	36	0	20.82	20.56	20.63	21.8
15	64QAM	36	20	20.73	20.62	20.56	
15	64QAM	36	39	20.62	20.51	20.60	
15	64QAM	75	0	20.69	20.56	20.50	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	24.8
10	QPSK	1	0	23.81	23.74	23.70	
10	QPSK	1	25	23.80	23.65	23.68	
10	QPSK	1	49	23.75	23.63	23.61	23.8
10	QPSK	25	0	22.85	22.82	22.61	
10	QPSK	25	12	22.80	22.66	22.70	
10	QPSK	25	25	22.74	22.58	22.65	23.8
10	QPSK	50	0	22.67	22.60	22.51	
10	16QAM	1	0	22.95	22.86	22.85	
10	16QAM	1	25	22.87	22.69	22.89	22.8
10	16QAM	1	49	22.69	22.83	22.83	
10	16QAM	25	0	21.86	21.61	21.71	
10	16QAM	25	12	21.70	21.52	21.54	22.8
10	16QAM	25	25	21.65	21.63	21.60	
10	16QAM	50	0	21.66	21.60	21.67	
10	64QAM	1	0	21.90	21.61	21.81	22.8
10	64QAM	1	25	21.83	21.53	21.70	
10	64QAM	1	49	21.80	21.55	21.56	
10	64QAM	25	0	20.84	20.63	20.69	21.8
10	64QAM	25	12	20.64	20.52	20.64	
10	64QAM	25	25	20.54	20.60	20.55	
10	64QAM	50	0	20.68	20.56	20.59	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	24.8
5	QPSK	1	0	23.82	23.77	23.68	
5	QPSK	1	12	23.73	23.76	23.68	
5	QPSK	1	24	23.76	23.66	23.53	23.8
5	QPSK	12	0	22.80	22.78	22.83	
5	QPSK	12	7	22.79	22.76	22.67	
5	QPSK	12	13	22.71	22.58	22.52	23.8
5	QPSK	25	0	22.79	22.70	22.58	
5	16QAM	1	0	22.95	22.86	22.80	
5	16QAM	1	12	22.81	22.73	22.68	22.8
5	16QAM	1	24	22.88	22.75	22.71	
5	16QAM	12	0	21.93	21.67	21.81	
5	16QAM	12	7	21.85	21.56	21.56	22.8
5	16QAM	12	13	21.84	21.59	21.61	
5	16QAM	25	0	21.87	21.56	21.50	
5	64QAM	1	0	21.88	21.66	21.75	22.8
5	64QAM	1	12	21.82	21.59	21.77	
5	64QAM	1	24	21.80	21.70	21.53	
5	64QAM	12	0	20.80	20.60	20.61	21.8
5	64QAM	12	7	20.71	20.63	20.64	
5	64QAM	12	13	20.52	20.50	20.62	
5	64QAM	25	0	20.56	20.58	20.51	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	24.8
3	QPSK	1	0	23.78	23.75	23.66	
3	QPSK	1	8	23.60	23.74	23.70	
3	QPSK	1	14	23.70	23.64	23.51	23.8
3	QPSK	8	0	22.85	22.78	22.65	
3	QPSK	8	4	22.70	22.75	22.58	
3	QPSK	8	7	22.75	22.57	22.53	

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	23.21	23.33	23.30	
20	QPSK	1	49	23.16	23.21	23.02	24.3
20	QPSK	1	99	23.09	23.08	23.00	
20	QPSK	50	0	22.25	22.31	22.10	23.3
20	QPSK	50	24	22.23	22.20	22.22	
20	QPSK	50	50	22.20	22.10	21.95	
20	QPSK	100	0	22.15	22.17	22.11	23.3
20	16QAM	1	0	22.46	22.53	22.50	
20	16QAM	1	49	22.33	22.30	22.41	
20	16QAM	1	99	22.27	22.27	22.21	22.3
20	16QAM	50	0	21.31	21.35	21.21	
20	16QAM	50	24	21.25	21.21	21.05	
20	16QAM	50	50	21.17	21.04	21.02	22.3
20	16QAM	100	0	21.19	21.14	21.25	
20	64QAM	1	0	21.33	21.40	21.34	
20	64QAM	1	49	21.32	21.15	21.29	22.3
20	64QAM	1	99	21.26	21.13	21.25	
20	64QAM	50	0	20.15	20.24	20.14	21.3
20	64QAM	50	24	20.19	19.93	20.09	
20	64QAM	50	50	20.20	19.92	20.15	
20	64QAM	100	0	20.17	19.98	19.99	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	24.3
15	QPSK	1	0	23.19	23.26	23.20	
15	QPSK	1	37	23.10	23.16	23.13	
15	QPSK	1	74	23.15	23.22	22.99	23.3
15	QPSK	36	0	22.30	22.32	22.13	
15	QPSK	36	20	22.23	22.08	22.14	
15	QPSK	36	39	22.24	22.20	21.94	23.3
15	QPSK	75	0	22.22	22.20	22.19	
15	16QAM	1	0	22.46	22.51	22.41	
15	16QAM	1	37	22.35	22.35	22.32	23.3
15	16QAM	1	74	22.32	22.34	22.39	
15	16QAM	36	0	21.31	21.34	21.24	
15	16QAM	36	20	21.28	21.19	21.23	22.3
15	16QAM	36	39	21.32	20.98	21.02	
15	16QAM	75	0	21.17	21.04	21.01	
15	64QAM	1	0	21.36	21.39	21.17	22.3
15	64QAM	1	37	21.35	21.22	21.13	
15	64QAM	1	74	21.21	21.12	21.23	
15	64QAM	36	0	20.24	20.26	20.07	21.3
15	64QAM	36	20	20.20	20.07	20.14	
15	64QAM	36	39	20.26	19.93	20.12	
15	64QAM	75	0	20.05	20.05	20.11	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	24.3
10	QPSK	1	0	23.25	23.30	23.15	
10	QPSK	1	25	23.20	23.15	23.07	
10	QPSK	1	49	23.13	23.01	23.02	23.3
10	QPSK	25	0	22.21	22.22	22.19	
10	QPSK	25	12	22.14	22.12	22.14	
10	QPSK	25	25	22.15	21.97	22.00	23.3
10	QPSK	50	0	22.05	22.09	22.07	
10	16QAM	1	0	22.36	22.37	22.27	
10	16QAM	1	25	22.30	22.14	22.23	23.3
10	16QAM	1	49	22.24	22.22	22.20	
10	16QAM	25	0	21.30	21.33	21.28	
10	16QAM	25	12	21.25	21.10	21.17	22.3
10	16QAM	25	25	21.12	21.12	20.93	
10	16QAM	50	0	21.13	21.33	21.12	
10	64QAM	1	0	21.30	21.27	21.22	22.3
10	64QAM	1	25	21.22	21.10	21.16	
10	64QAM	1	49	21.15	21.15	21.19	
10	64QAM	25	0	20.31	20.32	20.21	21.3
10	64QAM	25	12	20.20	19.98	20.08	
10	64QAM	25	25	20.09	19.99	19.93	
10	64QAM	50	0	20.12	19.92	20.06	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	24.3
5	QPSK	1	0	23.23	23.27	23.25	
5	QPSK	1	12	23.20	23.19	23.07	
5	QPSK	1	24	23.05	23.21	23.10	23.3
5	QPSK	12	0	22.19	22.26	22.24	
5	QPSK	12	7	22.16	22.21	22.05	
5	QPSK	12	13	22.15	22.19	22.01	23.3
5	QPSK	25	0	22.10	22.15	22.13	
5	16QAM	1	0	22.22	22.36	22.34	
5	16QAM	1	12	22.20	22.33	22.26	23.3
5	16QAM	1	24	22.16	22.21	22.10	
5	16QAM	12	0	21.22	21.20	21.15	
5	16QAM	12	7	21.15	21.19	21.13	22.3
5	16QAM	12	13	21.09	21.10	21.09	
5	16QAM	25	0	21.26	21.07	21.15	
5	64QAM	1	0	21.22	21.34	21.20	22.3
5	64QAM	1	12	21.25	21.24	21.25	
5	64QAM	1	24	21.23	21.20	21.24	
5	64QAM	12	0	20.18	20.25	20.12	21.3
5	64QAM	12	7	20.24	19.93	19.98	
5	64QAM	12	13	20.09	19.96	20.07	
5	64QAM	25	0	20.06	19.95	20.09	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	24.3
3	QPSK	1	0	23.17	23.28	23.22	
3	QPSK	1	8	23.22	23.27	23.18	
3	QPSK	1	14	23.09	23.22	23.11	23.3
3	QPSK	8	0	22.16	22.33	22.18	
3	QPSK	8	4	22.15	22.08	22.21	
3	QPSK	8	7	22.18	21.98	22.01	



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3	QPSK	15	0	22.72	22.64	22.59	23.8
3	16QAM	1	0	22.96	22.85	22.82	
3	16QAM	1	8	22.81	22.80	22.73	
3	16QAM	1	14	22.77	22.76	22.74	22.8
3	16QAM	8	0	21.88	21.70	21.58	
3	16QAM	8	4	21.85	21.59	21.58	
3	16QAM	8	7	21.66	21.63	21.62	22.8
3	16QAM	15	0	21.76	21.58	21.53	
3	64QAM	1	0	21.85	21.76	21.64	
3	64QAM	1	8	21.75	21.61	21.63	21.8
3	64QAM	1	14	21.80	21.67	21.76	
3	64QAM	8	0	20.85	20.65	20.57	
3	64QAM	8	4	20.77	20.57	20.66	21.8
3	64QAM	8	7	20.58	20.59	20.55	
3	64QAM	15	0	20.68	20.51	20.61	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	23.79	23.76	23.71	24.8
1.4	QPSK	1	3	23.76	23.71	23.62	
1.4	QPSK	1	5	23.68	23.50	23.58	
1.4	QPSK	3	0	22.89	22.73	22.76	
1.4	QPSK	3	1	22.88	22.57	22.60	
1.4	QPSK	3	3	22.78	22.55	22.56	
1.4	QPSK	6	0	22.74	22.65	22.66	23.8
1.4	16QAM	1	0	22.97	22.96	22.88	23.8
1.4	16QAM	1	3	22.90	22.90	22.80	
1.4	16QAM	1	5	22.84	22.95	22.85	
1.4	16QAM	3	0	21.78	21.67	21.63	
1.4	16QAM	3	1	21.72	21.58	21.65	
1.4	16QAM	3	3	21.73	21.64	21.52	
1.4	16QAM	6	0	21.64	21.52	21.46	22.8
1.4	64QAM	1	0	21.85	21.72	21.70	22.8
1.4	64QAM	1	3	21.84	21.72	21.74	
1.4	64QAM	1	5	21.72	21.46	21.61	
1.4	64QAM	3	0	20.89	20.66	20.67	
1.4	64QAM	3	1	20.68	20.57	20.55	
1.4	64QAM	3	3	20.58	20.50	20.52	
1.4	64QAM	6	0	20.56	20.51	20.52	21.8

3	QPSK	15	0	22.11	22.10	21.98	23.3
3	16QAM	1	0	22.33	22.36	22.31	
3	16QAM	1	8	22.21	22.30	22.29	
3	16QAM	1	14	22.10	22.22	22.19	22.3
3	16QAM	8	0	21.23	21.13	21.24	
3	16QAM	8	4	21.18	21.12	21.00	
3	16QAM	8	7	21.14	21.04	21.00	22.3
3	16QAM	15	0	21.07	21.10	21.00	
3	64QAM	1	0	21.16	21.29	21.28	
3	64QAM	1	8	21.12	21.10	21.21	21.3
3	64QAM	1	14	21.15	21.12	21.17	
3	64QAM	8	0	20.27	20.30	20.06	
3	64QAM	8	4	20.24	19.99	20.02	21.3
3	64QAM	8	7	20.22	20.05	19.98	
3	64QAM	15	0	20.08	19.98	20.05	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	23.15	23.26	23.24	24.3
1.4	QPSK	1	3	23.15	23.12	23.07	
1.4	QPSK	1	5	23.13	23.13	22.97	
1.4	QPSK	3	0	22.22	22.24	22.20	
1.4	QPSK	3	1	22.18	22.13	22.06	
1.4	QPSK	3	3	22.15	22.19	22.11	
1.4	QPSK	6	0	22.24	22.16	22.11	23.3
1.4	16QAM	1	0	22.37	22.39	22.30	23.3
1.4	16QAM	1	3	22.16	22.35	22.33	
1.4	16QAM	1	5	22.09	22.23	22.19	
1.4	16QAM	3	0	21.22	21.29	21.25	
1.4	16QAM	3	1	21.20	21.03	21.14	
1.4	16QAM	3	3	21.24	21.05	20.91	
1.4	16QAM	6	0	21.26	21.32	21.07	22.3
1.4	64QAM	1	0	21.30	21.20	21.27	22.3
1.4	64QAM	1	3	21.22	21.04	21.13	
1.4	64QAM	1	5	21.25	21.05	21.03	
1.4	64QAM	3	0	20.28	20.32	20.22	
1.4	64QAM	3	1	20.21	20.13	20.19	
1.4	64QAM	3	3	20.11	19.95	20.05	
1.4	64QAM	6	0	20.06	19.81	20.04	21.3



Band 5 (Cellular Band) (dBm) Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	24.45	24.47	24.36	25.3
10	QPSK	1	25	24.33	24.36	24.15	
10	QPSK	1	49	24.30	24.27	24.26	
10	QPSK	25	0	23.35	23.38	23.25	24.3
10	QPSK	25	12	23.32	23.16	23.19	
10	QPSK	25	25	23.16	23.06	23.17	
10	QPSK	50	0	23.21	23.24	23.22	24.3
10	16QAM	1	0	23.51	23.54	23.55	
10	16QAM	1	25	23.39	23.49	23.49	
10	16QAM	1	49	23.45	23.52	23.48	23.3
10	16QAM	25	0	22.33	22.38	22.31	
10	16QAM	25	12	22.31	22.21	22.17	
10	16QAM	25	25	22.24	22.19	22.05	23.3
10	16QAM	50	0	22.33	22.30	22.15	
10	64QAM	1	0	22.40	22.43	22.34	
10	64QAM	1	25	22.36	22.26	22.32	23.3
10	64QAM	1	49	22.36	22.29	22.27	
10	64QAM	25	0	21.17	21.22	21.31	
10	64QAM	25	12	21.28	21.06	21.21	22.3
10	64QAM	25	25	21.19	20.97	21.23	
10	64QAM	50	0	21.10	21.07	21.05	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	24.38	24.44	24.33	25.3
5	QPSK	1	12	24.31	24.25	24.22	
5	QPSK	1	24	24.23	24.29	24.23	
5	QPSK	12	0	23.35	23.40	23.39	24.3
5	QPSK	12	7	23.36	23.37	23.35	
5	QPSK	12	13	23.19	23.28	23.21	
5	QPSK	25	0	23.38	23.29	23.22	24.3
5	16QAM	1	0	23.40	23.45	23.39	
5	16QAM	1	12	23.27	23.42	23.39	
5	16QAM	1	24	23.32	23.34	23.31	23.3
5	16QAM	12	0	22.33	22.34	22.18	
5	16QAM	12	7	22.30	22.17	22.10	
5	16QAM	12	13	22.19	22.22	22.15	23.3
5	16QAM	25	0	22.23	22.23	22.12	
5	64QAM	1	0	22.36	22.40	22.31	
5	64QAM	1	12	22.37	22.33	22.30	23.3
5	64QAM	1	24	22.36	22.07	22.31	
5	64QAM	12	0	21.32	21.30	21.25	
5	64QAM	12	7	21.26	21.17	21.11	22.3
5	64QAM	12	13	21.25	20.98	21.24	
5	64QAM	25	0	21.02	21.11	21.07	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	24.36	24.39	24.35	25.3
3	QPSK	1	8	24.33	24.30	24.10	
3	QPSK	1	14	24.16	24.09	24.09	
3	QPSK	8	0	23.30	23.35	23.31	24.3
3	QPSK	8	4	23.34	23.29	23.26	
3	QPSK	8	7	23.29	23.18	23.07	
3	QPSK	15	0	23.19	23.18	23.11	24.3
3	16QAM	1	0	23.56	23.60	23.56	
3	16QAM	1	8	23.50	23.55	23.48	
3	16QAM	1	14	23.48	23.33	23.33	23.3
3	16QAM	8	0	22.33	22.40	22.26	
3	16QAM	8	4	22.20	22.28	22.09	
3	16QAM	8	7	22.28	22.21	22.07	23.3
3	16QAM	15	0	22.26	22.27	22.27	
3	64QAM	1	0	22.26	22.25	22.38	
3	64QAM	1	8	22.24	22.16	22.29	23.3
3	64QAM	1	14	22.30	22.29	22.24	
3	64QAM	8	0	21.16	21.24	21.27	
3	64QAM	8	4	21.23	21.14	21.31	22.3
3	64QAM	8	7	21.26	21.12	21.11	
3	64QAM	15	0	21.23	21.14	21.26	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	24.32	24.38	24.27	25.3
1.4	QPSK	1	3	24.24	24.29	24.10	
1.4	QPSK	1	5	24.30	24.23	24.05	
1.4	QPSK	3	0	23.32	23.35	23.31	24.3
1.4	QPSK	3	1	23.33	23.20	23.18	
1.4	QPSK	3	3	23.18	23.17	23.08	
1.4	QPSK	6	0	23.24	23.30	23.12	24.3
1.4	16QAM	1	0	23.50	23.58	23.47	
1.4	16QAM	1	3	23.54	23.42	23.48	
1.4	16QAM	1	5	23.52	23.35	23.32	24.3
1.4	16QAM	3	0	22.32	22.33	22.33	
1.4	16QAM	3	1	22.18	22.22	22.33	
1.4	16QAM	3	3	22.28	22.22	22.00	23.3
1.4	16QAM	6	0	22.35	22.08	22.17	
1.4	64QAM	1	0	22.41	22.20	22.21	
1.4	64QAM	1	3	22.29	22.25	22.25	23.3
1.4	64QAM	1	5	22.26	22.25	22.26	
1.4	64QAM	3	0	21.30	21.28	21.18	
1.4	64QAM	3	1	21.09	21.09	21.07	22.3
1.4	64QAM	3	3	21.07	21.13	21.22	
1.4	64QAM	6	0	21.23	20.97	21.09	

Band 7 (2600MHz Band) (dBm)							
Part 27							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20850	21100	21350	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	23.72	23.85	23.80	24.8
20	QPSK	1	49	23.71	23.79	23.71	
20	QPSK	1	99	23.51	23.71	23.63	
20	QPSK	50	0	22.71	22.79	22.74	23.8
20	QPSK	50	24	22.65	22.70	22.74	
20	QPSK	50	50	22.66	22.56	22.63	
20	QPSK	100	0	22.72	22.74	22.69	23.8
20	16QAM	1	0	22.71	22.90	22.85	
20	16QAM	1	49	22.74	22.82	22.80	
20	16QAM	1	99	22.73	22.77	22.76	22.8
20	16QAM	50	0	21.79	21.85	21.73	
20	16QAM	50	24	21.69	21.61	21.59	
20	16QAM	50	50	21.63	21.48	21.55	22.8
20	16QAM	100	0	21.76	21.81	21.56	
20	64QAM	1	0	21.70	21.65	21.62	
20	64QAM	1	49	21.66	21.72	21.69	22.8
20	64QAM	1	99	21.56	21.56	21.60	
20	64QAM	50	0	20.55	20.61	20.77	21.8
20	64QAM	50	24	20.69	20.52	20.55	
20	64QAM	50	50	20.66	20.49	20.53	
20	64QAM	100	0	20.54	20.55	20.66	Tune-up limit (dBm)
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	Tune-up limit (dBm)
15	QPSK	1	0	23.76	23.82	23.77	24.8
15	QPSK	1	37	23.74	23.59	23.51	
15	QPSK	1	74	23.51	23.68	23.61	
15	QPSK	36	0	22.72	22.84	22.65	23.8
15	QPSK	36	20	22.70	22.62	22.71	
15	QPSK	36	39	22.66	22.52	22.52	
15	QPSK	75	0	22.64	22.68	22.65	23.8
15	16QAM	1	0	22.92	22.95	22.94	
15	16QAM	1	37	22.89	22.79	22.80	
15	16QAM	1	74	22.93	22.70	22.75	22.8
15	16QAM	36	0	21.66	21.72	21.70	
15	16QAM	36	20	21.63	21.61	21.64	
15	16QAM	36	39	21.67	21.58	21.53	22.8
15	16QAM	75	0	21.57	21.54	21.58	
15	64QAM	1	0	21.66	21.67	21.70	
15	64QAM	1	37	21.64	21.75	21.80	22.8
15	64QAM	1	74	21.60	21.65	21.75	
15	64QAM	36	0	20.67	20.78	20.77	21.8
15	64QAM	36	20	20.55	20.59	20.66	
15	64QAM	36	39	20.65	20.57	20.56	
15	64QAM	75	0	20.56	20.54	20.60	Tune-up limit (dBm)
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	Tune-up limit (dBm)
10	QPSK	1	0	23.74	23.80	23.75	24.8
10	QPSK	1	25	23.71	23.72	23.70	
10	QPSK	1	49	23.62	23.61	23.52	
10	QPSK	25	0	22.70	22.77	22.62	23.8
10	QPSK	25	12	22.65	22.69	22.61	
10	QPSK	25	25	22.65	22.64	22.62	
10	QPSK	50	0	22.62	22.69	22.54	23.8
10	16QAM	1	0	22.82	22.93	22.85	
10	16QAM	1	25	22.92	22.90	22.85	
10	16QAM	1	49	22.84	22.72	22.80	22.8
10	16QAM	25	0	21.77	21.83	21.78	
10	16QAM	25	12	21.73	21.70	21.63	
10	16QAM	25	25	21.64	21.53	21.51	22.8
10	16QAM	50	0	21.58	21.63	21.55	
10	64QAM	1	0	21.75	21.76	21.66	
10	64QAM	1	25	21.71	21.66	21.64	22.8
10	64QAM	1	49	21.65	21.53	21.65	
10	64QAM	25	0	20.65	20.73	20.69	21.8
10	64QAM	25	12	20.72	20.58	20.56	
10	64QAM	25	25	20.60	20.49	20.54	
10	64QAM	50	0	20.64	20.60	20.59	Tune-up limit (dBm)
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	Tune-up limit (dBm)
5	QPSK	1	0	23.71	23.79	23.73	24.8
5	QPSK	1	12	23.62	23.72	23.68	
5	QPSK	1	24	23.67	23.63	23.55	
5	QPSK	12	0	22.69	22.74	22.65	23.8
5	QPSK	12	7	22.64	22.59	22.66	
5	QPSK	12	13	22.72	22.70	22.62	
5	QPSK	25	0	22.59	22.62	22.65	23.8
5	16QAM	1	0	22.86	22.92	22.87	
5	16QAM	1	12	22.84	22.81	22.78	
5	16QAM	1	24	22.81	22.84	22.82	22.8
5	16QAM	12	0	21.68	21.73	21.67	
5	16QAM	12	7	21.70	21.60	21.64	
5	16QAM	12	13	21.54	21.58	21.56	22.8
5	16QAM	25	0	21.59	21.57	21.52	
5	64QAM	1	0	21.68	21.77	21.62	
5	64QAM	1	12	21.70	21.69	21.69	22.8
5	64QAM	1	24	21.73	21.55	21.68	
5	64QAM	12	0	20.60	20.70	20.59	21.8
5	64QAM	12	7	20.52	20.53	20.56	
5	64QAM	12	13	20.53	20.50	20.54	
5	64QAM	25	0	20.51	20.57	20.56	



Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23090	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.82	23.90	23.83	24.8
10	QPSK	1	25	23.64	23.77	23.70	
10	QPSK	1	49	23.66	23.76	23.72	
10	QPSK	25	0	22.75	22.88	22.80	23.8
10	QPSK	25	12	22.80	22.83	22.85	
10	QPSK	25	25	22.66	22.73	22.76	
10	QPSK	50	0	22.63	22.83	22.74	23.8
10	16QAM	1	0	22.87	22.95	22.90	
10	16QAM	1	25	22.81	22.93	22.87	
10	16QAM	1	49	22.84	22.83	22.93	22.8
10	16QAM	25	0	21.63	21.88	21.67	
10	16QAM	25	12	21.65	21.70	21.60	
10	16QAM	25	25	21.60	21.58	21.59	22.8
10	16QAM	50	0	21.65	21.62	21.74	
10	64QAM	1	0	21.87	21.89	21.85	
10	64QAM	1	25	21.75	21.64	21.77	21.8
10	64QAM	1	49	21.67	21.70	21.77	
10	64QAM	25	0	20.73	20.86	20.84	
10	64QAM	25	12	20.51	20.62	20.72	21.8
10	64QAM	25	25	20.55	20.52	20.56	
10	64QAM	50	0	20.66	20.63	20.64	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	23.84	23.86	23.79	24.8
5	QPSK	1	12	23.83	23.81	23.64	
5	QPSK	1	24	23.75	23.61	23.62	
5	QPSK	12	0	22.79	22.85	22.84	23.8
5	QPSK	12	7	22.69	22.76	22.75	
5	QPSK	12	13	22.59	22.78	22.69	
5	QPSK	25	0	22.68	22.72	22.66	23.8
5	16QAM	1	0	22.92	22.99	22.94	
5	16QAM	1	12	22.88	22.95	22.90	
5	16QAM	1	24	22.93	22.80	22.95	22.8
5	16QAM	12	0	21.75	21.86	21.75	
5	16QAM	12	7	21.81	21.63	21.59	
5	16QAM	12	13	21.54	21.50	21.52	22.8
5	16QAM	25	0	21.75	21.69	21.63	
5	64QAM	1	0	21.85	21.87	21.76	
5	64QAM	1	12	21.65	21.82	21.69	21.8
5	64QAM	1	24	21.62	21.65	21.71	
5	64QAM	12	0	20.78	20.79	20.67	
5	64QAM	12	7	20.66	20.65	20.70	21.8
5	64QAM	12	13	20.55	20.52	20.56	
5	64QAM	25	0	20.56	20.65	20.60	
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	23.81	23.87	23.80	24.8
3	QPSK	1	8	23.65	23.66	23.77	
3	QPSK	1	14	23.63	23.67	23.64	
3	QPSK	8	0	22.77	22.91	22.70	23.8
3	QPSK	8	4	22.85	22.68	22.81	
3	QPSK	8	7	22.62	22.58	22.57	
3	QPSK	15	0	22.73	22.68	22.69	23.8
3	16QAM	1	0	22.88	22.96	22.93	
3	16QAM	1	8	22.91	22.89	22.86	
3	16QAM	1	14	22.86	22.90	22.85	22.8
3	16QAM	8	0	21.68	21.85	21.70	
3	16QAM	8	4	21.83	21.76	21.77	
3	16QAM	8	7	21.73	21.51	21.63	22.8
3	16QAM	15	0	21.58	21.71	21.56	
3	64QAM	1	0	21.87	21.91	21.79	
3	64QAM	1	8	21.81	21.82	21.89	21.8
3	64QAM	1	14	21.73	21.79	21.68	
3	64QAM	8	0	20.79	20.85	20.70	
3	64QAM	8	4	20.68	20.70	20.63	21.8
3	64QAM	8	7	20.57	20.59	20.68	
3	64QAM	15	0	20.53	20.66	20.70	
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.72	23.85	23.80	24.8
1.4	QPSK	1	3	23.69	23.68	23.79	
1.4	QPSK	1	5	23.61	23.63	23.61	
1.4	QPSK	3	0	22.80	22.83	22.79	23.8
1.4	QPSK	3	1	22.65	22.79	22.64	
1.4	QPSK	3	3	22.63	22.61	22.73	
1.4	QPSK	6	0	22.82	22.79	22.62	23.8
1.4	16QAM	1	0	22.96	22.98	22.88	
1.4	16QAM	1	3	22.92	22.90	22.90	
1.4	16QAM	1	5	22.93	22.86	22.79	22.8
1.4	16QAM	3	0	21.85	21.92	21.66	
1.4	16QAM	3	1	21.58	21.79	21.69	
1.4	16QAM	3	3	21.63	21.68	21.58	22.8
1.4	16QAM	6	0	21.78	21.69	21.57	
1.4	64QAM	1	0	21.87	21.90	21.72	
1.4	64QAM	1	3	21.86	21.65	21.79	21.8
1.4	64QAM	1	5	21.72	21.62	21.88	
1.4	64QAM	3	0	20.56	20.59	20.73	
1.4	64QAM	3	1	20.59	20.64	20.63	21.8
1.4	64QAM	3	3	20.54	20.51	20.73	
1.4	64QAM	6	0	20.64	20.67	20.67	

Band 13(700MHz Band) (dBm) Part 27F							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		24.69		25.8
10	QPSK	1	25		24.64		
10	QPSK	1	49		24.59		
10	QPSK	25	0		23.78		24.8
10	QPSK	25	12		23.74		
10	QPSK	25	25		23.69		
10	QPSK	50	0		23.70		24.8
10	16QAM	1	0		23.86		
10	16QAM	1	25		23.79		
10	16QAM	1	49		23.81		23.8
10	16QAM	25	0		22.85		
10	16QAM	25	12		22.82		
10	16QAM	25	25		22.68		23.8
10	16QAM	50	0		22.67		
10	64QAM	1	0		22.89		
10	64QAM	1	25		22.81		23.8
10	64QAM	1	49		22.77		
10	64QAM	25	0		21.72		
10	64QAM	25	12		21.65		22.8
10	64QAM	25	25		21.55		
10	64QAM	50	0		21.66		
Channel				23205	23230	23255	
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	24.62	24.66	24.59	25.8
5	QPSK	1	12	24.61	24.64	24.60	
5	QPSK	1	24	24.57	24.50	24.52	
5	QPSK	12	0	23.78	23.81	23.73	24.8
5	QPSK	12	7	23.66	23.76	23.62	
5	QPSK	12	13	23.52	23.60	23.60	
5	QPSK	25	0	23.71	23.71	23.59	24.8
5	16QAM	1	0	23.78	23.84	23.83	
5	16QAM	1	12	23.72	23.82	23.72	
5	16QAM	1	24	23.71	23.78	23.73	23.8
5	16QAM	12	0	22.68	22.75	22.66	
5	16QAM	12	7	22.58	22.64	22.69	
5	16QAM	12	13	22.53	22.63	22.58	23.8
5	16QAM	25	0	22.65	22.66	22.62	
5	64QAM	1	0	22.76	22.82	22.68	
5	64QAM	1	12	22.67	22.69	22.72	23.8
5	64QAM	1	24	22.70	22.54	22.57	
5	64QAM	12	0	21.72	21.75	21.59	
5	64QAM	12	7	21.51	21.62	21.56	22.8
5	64QAM	12	13	21.50	21.49	21.53	
5	64QAM	25	0	21.59	21.54	21.65	



Band 14 (700MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23330			Tune-up limit (dBm)
Frequency (MHz)				793			
10	QPSK	1	0		23.91		24.8
10	QPSK	1	25		23.89		
10	QPSK	1	49		23.85		
10	QPSK	25	0		23.04		23.8
10	QPSK	25	12		23.00		
10	QPSK	25	25		22.91		
10	QPSK	50	0		22.86		23.8
10	16QAM	1	0		22.83		
10	16QAM	1	25		23.10		
10	16QAM	1	49		22.90		22.8
10	16QAM	25	0		21.79		
10	16QAM	25	12		21.76		
10	16QAM	25	25		21.84		22.8
10	16QAM	50	0		21.78		
10	64QAM	1	0		22.01		
10	64QAM	1	25		21.79		22.8
10	64QAM	1	49		21.76		
10	64QAM	25	0		21.84		
10	64QAM	25	12		21.79		22.8
10	64QAM	25	25		21.84		
10	64QAM	50	0		21.81		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	23.62	23.63	23.55	24.8
5	QPSK	1	12	23.58	23.58	23.51	
5	QPSK	1	24	23.48	23.55	23.29	
5	QPSK	12	0	22.70	22.76	22.52	23.8
5	QPSK	12	7	22.74	22.72	22.67	
5	QPSK	12	13	22.60	22.62	22.59	
5	QPSK	25	0	22.64	22.62	22.67	23.8
5	16QAM	1	0	22.78	22.69	22.64	
5	16QAM	1	12	22.77	22.97	22.83	
5	16QAM	1	24	22.76	22.73	22.69	22.8
5	16QAM	12	0	21.69	21.65	21.56	
5	16QAM	12	7	21.63	21.62	21.54	
5	16QAM	12	13	21.68	21.67	21.61	22.8
5	16QAM	25	0	21.77	21.58	21.55	
5	64QAM	1	0	21.63	21.70	21.63	
5	64QAM	1	12	21.46	21.53	21.55	22.8
5	64QAM	1	24	21.66	21.42	21.58	
5	64QAM	12	0	21.59	21.55	21.48	
5	64QAM	12	7	21.70	21.49	21.53	22.8
5	64QAM	12	13	21.50	21.50	21.44	
5	64QAM	25	0	21.68	21.66	21.69	

Band 17 (700MHz Band) (dBm) Part 27H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	Tune-up limit (dBm)
Frequency (MHz)				709	710	711	
10	QPSK	1	0	23.75	23.77	23.62	24.8
10	QPSK	1	25	23.74	23.76	23.72	
10	QPSK	1	49	23.65	23.73	23.75	
10	QPSK	25	0	22.85	22.86	22.84	23.8
10	QPSK	25	12	22.82	22.81	22.81	
10	QPSK	25	25	22.83	22.77	22.78	
10	QPSK	50	0	22.84	22.82	22.82	23.8
10	16QAM	1	0	22.96	23.12	22.79	
10	16QAM	1	25	22.78	22.84	22.89	
10	16QAM	1	49	22.92	22.98	23.00	22.8
10	16QAM	25	0	21.85	21.89	21.77	
10	16QAM	25	12	21.91	21.93	21.92	
10	16QAM	25	25	21.93	21.87	21.86	22.8
10	16QAM	50	0	21.78	21.82	21.83	
10	64QAM	1	0	21.83	22.02	21.91	
10	64QAM	1	25	22.06	22.10	21.97	22.8
10	64QAM	1	49	21.91	21.90	21.88	
10	64QAM	25	0	21.79	21.91	21.80	
10	64QAM	25	12	21.78	21.85	21.82	22.8
10	64QAM	25	25	21.86	21.89	21.85	
10	64QAM	50	0	21.82	21.78	21.83	
Channel				23756	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.74	23.75	23.61	24.8
5	QPSK	1	12	23.67	23.70	23.71	
5	QPSK	1	24	23.62	23.66	23.69	
5	QPSK	12	0	22.78	22.81	22.81	23.8
5	QPSK	12	7	22.73	22.71	22.73	
5	QPSK	12	13	22.73	22.70	22.76	
5	QPSK	25	0	22.79	22.75	22.77	23.8
5	16QAM	1	0	22.93	23.02	22.72	
5	16QAM	1	12	22.77	22.77	22.79	
5	16QAM	1	24	22.83	22.91	22.90	22.8
5	16QAM	12	0	21.82	21.85	21.70	
5	16QAM	12	7	21.83	21.84	21.88	
5	16QAM	12	13	21.92	21.83	21.78	22.8
5	16QAM	25	0	21.74	21.81	21.74	
5	64QAM	1	0	21.80	22.01	21.67	
5	64QAM	1	12	22.05	22.05	21.89	22.8
5	64QAM	1	24	21.83	21.89	21.84	
5	64QAM	12	0	21.69	21.84	21.70	
5	64QAM	12	7	21.69	21.80	21.79	22.8
5	64QAM	12	13	21.83	21.85	21.76	
5	64QAM	25	0	21.73	21.77	21.81	



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	23.75	23.77	23.70	24.8
20	QPSK	1	49	23.74	23.76	23.69	
20	QPSK	1	99	23.66	23.73	23.70	
20	QPSK	50	0	22.80	22.92	22.81	23.8
20	QPSK	50	24	22.84	22.78	22.76	
20	QPSK	50	50	22.81	22.84	22.77	
20	QPSK	100	0	22.84	22.85	22.74	23.8
20	16QAM	1	0	23.11	23.02	22.85	
20	16QAM	1	49	22.99	23.08	23.03	
20	16QAM	1	99	23.09	22.86	23.13	22.8
20	16QAM	50	0	21.92	21.87	21.91	
20	16QAM	50	24	22.01	21.86	21.85	
20	16QAM	50	50	21.88	21.91	21.93	22.8
20	16QAM	100	0	21.86	21.88	21.84	
20	64QAM	1	0	21.96	22.10	22.05	
20	64QAM	1	49	21.99	22.03	21.93	22.8
20	64QAM	1	99	22.09	21.97	21.79	
20	64QAM	50	0	21.94	21.83	21.83	
20	64QAM	50	24	21.77	21.78	21.85	22.8
20	64QAM	50	50	21.90	21.83	21.88	
20	64QAM	100	0	21.82	21.85	21.84	
Channel				26115	26365	26615	
Frequency (MHz)				1857.5	1882.5	1907.5	
15	QPSK	1	0	23.67	23.72	23.63	24.8
15	QPSK	1	37	23.71	23.72	23.66	
15	QPSK	1	74	23.57	23.72	23.69	
15	QPSK	36	0	22.76	22.82	22.71	23.8
15	QPSK	36	20	22.90	22.71	22.72	
15	QPSK	36	39	22.80	22.77	22.68	
15	QPSK	75	0	22.79	22.77	22.64	23.8
15	16QAM	1	0	23.07	22.96	22.79	
15	16QAM	1	37	23.06	23.18	22.98	
15	16QAM	1	74	23.11	23.26	23.12	22.8
15	16QAM	36	0	21.91	21.78	21.85	
15	16QAM	36	20	21.97	21.77	21.77	
15	16QAM	36	39	21.84	21.89	21.91	22.8
15	16QAM	75	0	21.76	21.84	21.83	
15	64QAM	1	0	21.93	22.09	22.00	
15	64QAM	1	37	21.93	21.93	21.88	22.8
15	64QAM	1	74	22.07	21.92	21.73	
15	64QAM	36	0	21.91	21.73	21.76	
15	64QAM	36	20	21.68	21.75	21.78	22.8
15	64QAM	36	39	21.86	21.81	21.80	
15	64QAM	75	0	21.76	21.82	21.83	
Channel				26090	26365	26640	
Frequency (MHz)				1855	1882.5	1910	
10	QPSK	1	0	23.74	23.75	23.68	24.8
10	QPSK	1	25	23.67	23.71	23.63	
10	QPSK	1	49	23.58	23.72	23.62	
10	QPSK	25	0	22.74	22.91	22.76	23.8
10	QPSK	25	12	22.82	22.69	22.75	
10	QPSK	25	25	22.72	22.82	22.70	
10	QPSK	50	0	22.75	22.81	22.68	23.8
10	16QAM	1	0	23.05	22.97	22.78	
10	16QAM	1	25	23.05	23.22	23.02	
10	16QAM	1	49	23.07	23.27	23.08	22.8
10	16QAM	25	0	21.84	21.83	21.86	
10	16QAM	25	12	21.93	21.79	21.81	
10	16QAM	25	25	21.87	21.82	21.89	22.8
10	16QAM	50	0	21.85	21.82	21.75	
10	64QAM	1	0	21.86	22.01	22.03	
10	64QAM	1	25	21.97	22.02	21.91	22.8
10	64QAM	1	49	22.04	21.90	21.69	
10	64QAM	25	0	21.93	21.73	21.74	
10	64QAM	25	12	21.69	21.75	21.79	22.8
10	64QAM	25	25	21.86	21.81	21.82	
10	64QAM	50	0	21.75	21.76	21.82	
Channel				26065	26365	26665	
Frequency (MHz)				1852.5	1882.5	1912.5	
5	QPSK	1	0	23.73	23.73	23.64	24.8
5	QPSK	1	12	23.64	23.66	23.68	
5	QPSK	1	24	23.65	23.71	23.61	
5	QPSK	12	0	22.71	22.87	22.75	23.8
5	QPSK	12	7	22.85	22.73	22.67	
5	QPSK	12	13	22.78	22.78	22.67	
5	QPSK	25	0	22.82	22.81	22.66	23.8
5	16QAM	1	0	23.01	23.00	22.81	
5	16QAM	1	12	23.04	23.20	23.01	
5	16QAM	1	24	23.09	23.20	23.05	22.8
5	16QAM	12	0	21.90	21.80	21.87	
5	16QAM	12	7	21.91	21.81	21.77	
5	16QAM	12	13	21.83	21.83	21.89	22.8
5	16QAM	25	0	21.77	21.79	21.75	
5	64QAM	1	0	21.87	22.07	21.99	
5	64QAM	1	12	21.90	21.98	21.88	22.8
5	64QAM	1	24	22.06	21.94	21.75	
5	64QAM	12	0	21.92	21.82	21.80	
5	64QAM	12	7	21.74	21.71	21.79	22.8
5	64QAM	12	13	21.86	21.74	21.87	
5	64QAM	25	0	21.81	21.82	21.75	
Channel				26055	26365	26675	
Frequency (MHz)				1851.5	1882.5	1913.5	
3	QPSK	1	0	23.64	23.74	23.60	24.8
3	QPSK	1	8	23.68	23.73	23.64	
3	QPSK	1	14	23.60	23.63	23.61	
3	QPSK	8	0	22.73	22.85	22.77	23.8
3	QPSK	8	4	22.81	22.75	22.74	
3	QPSK	8	7	22.77	22.76	22.74	

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	23.89	23.90	23.85	24.8
15	QPSK	1	37	23.87	23.81	23.88	
15	QPSK	1	74	23.86	23.88	23.55	
15	QPSK	36	0	22.98	23.01	22.92	23.8
15	QPSK	36	20	22.94	22.98	22.84	
15	QPSK	36	39	22.99	23.00	22.94	
15	QPSK	75	0	22.96	22.90	22.87	23.8
15	16QAM	1	0	22.98	22.82	22.96	
15	16QAM	1	37	22.82	22.85	22.83	
15	16QAM	1	74	22.69	22.79	22.74	22.8
15	16QAM	36	0	21.95	21.96	21.89	
15	16QAM	36	20	21.68	21.89	21.88	
15	16QAM	36	39	21.94	21.97	21.95	22.8
15	16QAM	75	0	22.00	21.99	21.93	
15	64QAM	1	0	21.85	21.97	21.98	
15	64QAM	1	37	22.01	21.97	21.94	22.8
15	64QAM	1	74	21.84	21.82	21.70	
15	64QAM	36	0	21.98	21.88	21.92	
15	64QAM	36	20	21.89	21.91	21.80	22.8
15	64QAM	36	39	21.93	21.95	21.91	
15	64QAM	75	0	21.89	21.99	21.84	
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	23.79	23.87	23.82	24.8
10	QPSK	1	25	23.81	23.75	23.78	
10	QPSK	1	49	23.82	23.84	23.49	
10	QPSK	25	0	22.92	22.96	22.83	23.8
10	QPSK	25	12	22.90	22.96	22.76	
10	QPSK	25	25	22.98	22.95	22.86	
10	QPSK	50	0	22.94	22.83	23.20	23.8
10	16QAM	1	0	22.93	22.81	22.86	
10	16QAM	1	25	22.74	22.83	22.76	
10	16QAM	1	49	22.59	22.70	22.72	22.8
10	16QAM	25	0	21.85	21.95	21.79	
10	16QAM	25	12	21.87	21.87	21.85	
10	16QAM	25	25	21.86	21.87	21.88	22.8
10	16QAM	50	0	21.92	21.93	21.88	
10	64QAM	1	0	21.79	21.91	21.96	
10	64QAM	1	25	21.99	21.94	21.85	22.8
10	64QAM	1	49	21.81	21.81	21.66	
10	64QAM	25	0	21.91	21.82	21.85	
10	64QAM	25	12	21.86	21.90	21.79	22.8
10	64QAM	25	25	21.84	21.94	21.84	
10	64QAM	50	0	21.82	21.92	21.75	
Channel				26715	26865	27015	
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	23.85	23.88	23.82	24.8
5	QPSK	1	12	23.82	23.75	23.84	
5	QPSK	1	24	23.78	23.79	23.50	
5	QPSK	12	0	22.88	22.99	22.83	23.8
5	QPSK	12	7	22.87	22.89	22.76	
5	QPSK	12	13	22.94	22.95	22.89	
5	QPSK	25	0	22.93	22.84	23.18	23.8
5	16QAM	1	0	22.93	22.78	22.93	
5	16QAM	1	12	22.76	22.83	22.78	
5	16QAM	1	24	22.64	22.72	22.64	22.8
5	16QAM	12	0	21.94	21.88	21.87	
5	16QAM	12	7	21.85	21.88	21.84	
5	16QAM	12	13	21.92	21.91	21.91	22.8
5	16QAM	25	0	21.90	21.95	21.89	
5	64QAM	1	0	21.77	21.95	21.91	
5	64QAM	1	12	21.92	21.93	21.85	22.8
5	64QAM	1	24	21.78	21.77	21.64	
5	64QAM	12	0	21.90	21.81	21.88	
5	64QAM	12	7	21.79	21.89	21.73	22.8
5	64QAM	12	13	21.84	21.94	21.86	
5	64QAM	25	0	21.81	21.92	21.81	
Channel				26705	26865	27025	
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	23.80	23.84	23.83	24.8
3	QPSK	1	8	23.79	23.75	23.78	
3	QPSK	1	14	23.83	23.84	23.45	
3	QPSK	8	0	22.92	22.94	22.82	23.8
3	QPSK	8	4	22.87	22.95	22.74	
3	QPSK	8	7	22.94	22.93	22.90	
3	QPSK	15	0	22.90	22.90	23.25	23.8
3	16QAM	1	0	22.95	22.72	22.94	
3	16QAM	1	8	22.81	22.80	22.75	
3	16QAM	1	14	22.82	22.89	22.73	22.8
3	16QAM	8	0	21.90	21.93	21.81	
3	16QAM	8	4	21.65	21.80	21.86	
3	16QAM	8	7	21.87	21.92	21.92	22.8
3	16QAM	15	0	21.92	21.95	21.83	
3	64QAM	1	0	21.81	21.92	21.97	
3	64QAM	1	8	21.96	21.90	21.91	22.8
3	64QAM	1	14	21.75	21.72	21.86	
3	64QAM	8	0	21.94	21.85	21.87	
3	64QAM	8	4	21.79	21.83	21.73	22.8
3	64QAM	8	7	21.90	21.89	21.88	
3	64QAM	15	0	21.87	21.93	21.77	
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.81	23.85	23.82	24.8
1.4	QPSK	1	3	23.81	23.80	23.79	
1.4	QPSK	1	5	23.83	23.79	23.75	
1.4	QPSK	3	0	23.89	23.74	23.70	
1.4	QPSK	3	1	23.76	23.77	23.69	
1.4	QPSK	3	3	23.74	23.73	23.70	



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3	QPSK	15	0	22.74	22.76	22.68	23.8
3	16QAM	1	0	23.01	23.01	22.78	
3	16QAM	1	8	23.05	23.19	23.01	
3	16QAM	1	14	23.11	23.22	23.10	22.8
3	16QAM	8	0	21.85	21.78	21.84	
3	16QAM	8	4	21.98	21.78	21.79	
3	16QAM	8	7	21.78	21.84	21.90	22.8
3	16QAM	15	0	21.77	21.80	21.81	
3	64QAM	1	0	21.95	22.03	22.03	
3	64QAM	1	8	21.95	21.97	21.84	22.8
3	64QAM	1	14	22.07	21.92	21.69	
3	64QAM	8	0	21.88	21.73	21.73	
3	64QAM	8	4	21.72	21.71	21.75	22.8
3	64QAM	8	7	21.81	21.75	21.84	
3	64QAM	15	0	21.75	21.77	21.81	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	23.64	23.72	23.61	24.8
1.4	QPSK	1	3	23.64	23.67	23.60	
1.4	QPSK	1	5	23.60	23.71	23.65	
1.4	QPSK	3	0	23.74	23.69	23.74	
1.4	QPSK	3	1	23.73	23.73	23.71	
1.4	QPSK	3	3	23.71	23.75	23.75	23.8
1.4	QPSK	6	0	22.75	22.75	22.64	
1.4	16QAM	1	0	23.02	22.99	22.76	
1.4	16QAM	1	3	23.11	23.19	23.02	22.8
1.4	16QAM	1	5	23.06	23.22	23.12	
1.4	16QAM	3	0	22.84	22.84	22.87	
1.4	16QAM	3	1	22.99	22.78	22.75	
1.4	16QAM	3	3	22.81	22.88	22.83	
1.4	16QAM	6	0	21.79	21.78	21.75	22.8
1.4	64QAM	1	0	21.86	22.01	22.04	22.8
1.4	64QAM	1	3	21.96	21.98	21.90	
1.4	64QAM	1	5	22.02	21.96	21.74	
1.4	64QAM	3	0	21.86	21.79	21.82	
1.4	64QAM	3	1	21.73	21.77	21.83	
1.4	64QAM	3	3	21.83	21.76	21.83	22.8
1.4	64QAM	6	0	21.73	21.75	21.76	

1.4	QPSK	6	0	22.90	22.84	22.84	23.8
1.4	16QAM	1	0	22.97	22.72	22.94	23.8
1.4	16QAM	1	3	22.74	22.77	22.78	
1.4	16QAM	1	5	22.85	22.78	22.64	
1.4	16QAM	3	0	22.93	22.86	22.79	
1.4	16QAM	3	1	22.74	22.79	22.82	
1.4	16QAM	3	3	22.92	22.88	22.92	
1.4	16QAM	6	0	21.96	21.89	21.91	22.8
1.4	64QAM	1	0	21.80	21.96	21.89	22.8
1.4	64QAM	1	3	22.00	21.91	21.92	
1.4	64QAM	1	5	21.83	21.77	21.63	
1.4	64QAM	3	0	21.88	21.82	21.86	
1.4	64QAM	3	1	21.86	21.88	21.79	
1.4	64QAM	3	3	21.85	21.90	21.84	
1.4	64QAM	6	0	21.80	21.92	21.82	22.8



Band 30 (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		23.77		24.8
10	QPSK	1	25		23.68		
10	QPSK	1	49		23.70		
10	QPSK	25	0		22.76		23.8
10	QPSK	25	12		22.64		
10	QPSK	25	25		22.68		
10	QPSK	50	0		22.66		23.8
10	16QAM	1	0		22.88		
10	16QAM	1	25		22.73		
10	16QAM	1	49		22.66		22.8
10	16QAM	25	0		21.71		
10	16QAM	25	12		21.72		
10	16QAM	25	25		21.76		22.8
10	16QAM	50	0		21.77		
10	64QAM	1	0		21.78		
10	64QAM	1	25		21.84		22.8
10	64QAM	1	49		21.97		
10	64QAM	25	0		21.87		
10	64QAM	25	12		21.80		22.8
10	64QAM	25	25		21.76		
10	64QAM	50	0		21.71		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	23.52	23.67	23.55	24.8
5	QPSK	1	12	23.60	23.67	23.60	
5	QPSK	1	24	23.54	23.65	23.66	
5	QPSK	12	0	22.68	22.69	22.71	23.8
5	QPSK	12	7	22.64	22.59	22.68	
5	QPSK	12	13	22.65	22.60	22.64	
5	QPSK	25	0	22.66	22.63	22.68	23.8
5	16QAM	1	0	22.87	22.83	22.65	
5	16QAM	1	12	22.56	22.71	22.71	
5	16QAM	1	24	22.66	22.65	22.70	22.8
5	16QAM	12	0	21.60	21.69	21.74	
5	16QAM	12	7	21.66	21.64	21.61	
5	16QAM	12	13	21.71	21.68	21.72	22.8
5	16QAM	25	0	21.81	21.67	21.72	
5	64QAM	1	0	21.81	21.70	21.64	
5	64QAM	1	12	21.81	21.77	21.80	22.8
5	64QAM	1	24	21.91	21.93	21.81	
5	64QAM	12	0	21.63	21.82	21.68	
5	64QAM	12	7	21.67	21.77	21.75	22.8
5	64QAM	12	13	21.65	21.71	21.61	
5	64QAM	25	0	21.72	21.68	21.73	



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	23.29	23.39	23.36	
20	QPSK	1	49	23.23	23.23	23.20	24.3
20	QPSK	1	99	23.17	23.24	23.16	
20	QPSK	50	0	22.19	22.35	22.32	
20	QPSK	50	24	22.32	22.33	22.30	23.3
20	QPSK	50	50	22.28	22.13	22.20	
20	QPSK	100	0	22.29	22.13	22.07	
20	16QAM	1	0	22.51	22.55	22.49	23.3
20	16QAM	1	49	22.48	22.52	22.45	
20	16QAM	1	99	22.52	22.44	22.51	
20	16QAM	50	0	21.30	21.36	21.31	22.3
20	16QAM	50	24	21.21	21.11	21.34	
20	16QAM	50	50	21.18	21.06	21.18	
20	16QAM	100	0	21.28	21.06	21.19	22.3
20	64QAM	1	0	21.33	21.27	21.22	
20	64QAM	1	49	21.21	21.36	21.30	
20	64QAM	1	99	21.18	21.31	21.32	21.3
20	64QAM	50	0	20.17	20.40	20.34	
20	64QAM	50	24	20.30	20.19	20.20	
20	64QAM	50	50	20.26	20.14	20.21	
20	64QAM	100	0	20.26	20.20	20.05	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.34	23.36	23.32	
15	QPSK	1	37	23.27	23.18	23.28	24.3
15	QPSK	1	74	23.25	23.24	23.04	
15	QPSK	36	0	22.30	22.39	22.21	
15	QPSK	36	20	22.28	22.14	22.21	23.3
15	QPSK	36	39	22.37	22.26	22.13	
15	QPSK	75	0	22.26	22.14	22.09	
15	16QAM	1	0	22.63	22.66	22.53	23.3
15	16QAM	1	37	22.50	22.51	22.46	
15	16QAM	1	74	22.43	22.33	22.42	
15	16QAM	36	0	21.41	21.12	21.38	22.3
15	16QAM	36	20	21.39	21.33	21.15	
15	16QAM	36	39	21.35	21.12	21.22	
15	16QAM	75	0	21.27	21.11	21.07	22.3
15	64QAM	1	0	21.34	21.30	21.39	
15	64QAM	1	37	21.25	21.24	21.33	
15	64QAM	1	74	21.23	21.16	21.31	21.3
15	64QAM	36	0	20.21	20.09	20.31	
15	64QAM	36	20	20.31	20.10	20.18	
15	64QAM	36	39	20.09	19.97	20.09	
15	64QAM	75	0	20.05	20.00	20.11	
Channel				132022	132322	132622	
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.33	23.35	23.33	
10	QPSK	1	25	23.28	23.28	23.21	24.3
10	QPSK	1	49	23.20	23.29	23.24	
10	QPSK	25	0	22.39	22.43	22.32	
10	QPSK	25	12	22.25	22.28	22.36	23.3
10	QPSK	25	25	22.34	22.17	22.26	
10	QPSK	50	0	22.37	22.10	22.13	
10	16QAM	1	0	22.53	22.56	22.51	23.3
10	16QAM	1	25	22.51	22.55	22.45	
10	16QAM	1	49	22.46	22.32	22.36	
10	16QAM	25	0	21.34	21.35	21.31	22.3
10	16QAM	25	12	21.20	21.10	21.21	
10	16QAM	25	25	21.13	21.18	21.04	
10	16QAM	50	0	21.29	21.18	21.21	22.3
10	64QAM	1	0	21.39	21.25	21.32	
10	64QAM	1	25	21.25	21.32	21.23	
10	64QAM	1	49	21.20	21.23	21.15	21.3
10	64QAM	25	0	20.24	20.27	20.13	
10	64QAM	25	12	20.25	20.05	20.14	
10	64QAM	25	25	20.20	19.96	20.23	
10	64QAM	50	0	20.23	20.02	20.15	
Channel				131997	132322	132647	
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.32	23.33	23.27	
5	QPSK	1	12	23.20	23.28	23.22	24.3
5	QPSK	1	24	23.24	23.17	23.04	
5	QPSK	12	0	22.31	22.35	22.31	
5	QPSK	12	7	22.29	22.29	22.18	23.3
5	QPSK	12	13	22.17	22.14	22.08	
5	QPSK	25	0	22.20	22.31	22.27	
5	16QAM	1	0	22.52	22.54	22.42	23.3
5	16QAM	1	12	22.50	22.42	22.47	
5	16QAM	1	24	22.40	22.39	22.49	
5	16QAM	12	0	21.36	21.37	21.30	22.3
5	16QAM	12	7	21.26	21.20	21.30	
5	16QAM	12	13	21.30	21.20	21.09	
5	16QAM	25	0	21.13	21.14	21.28	22.3
5	64QAM	1	0	21.27	21.31	21.38	
5	64QAM	1	12	21.33	21.30	21.19	
5	64QAM	1	24	21.16	21.28	21.28	21.3
5	64QAM	12	0	20.18	20.24	20.36	
5	64QAM	12	7	20.27	20.10	20.30	
5	64QAM	12	13	20.09	20.13	20.06	
5	64QAM	25	0	20.10	19.92	20.12	
Channel				131987	132322	132657	
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.31	23.35	23.27	
3	QPSK	1	8	23.21	23.32	23.32	24.3
3	QPSK	1	14	23.24	23.32	23.22	
3	QPSK	8	0	22.36	22.43	22.33	
3	QPSK	8	4	22.30	22.25	22.25	23.3
3	QPSK	8	7	22.19	22.12	22.11	



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3	QPSK	15	0	22.33	22.15	22.13	23.3
3	16QAM	1	0	22.49	22.53	22.66	
3	16QAM	1	8	22.51	22.39	22.39	
3	16QAM	1	14	22.45	22.44	22.43	22.3
3	16QAM	8	0	21.31	21.46	21.44	
3	16QAM	8	4	21.42	21.24	21.27	
3	16QAM	8	7	21.25	21.21	21.15	22.3
3	16QAM	15	0	21.26	21.25	21.04	
3	64QAM	1	0	21.38	21.32	21.23	
3	64QAM	1	8	21.32	21.22	21.26	21.3
3	64QAM	1	14	21.27	21.13	21.17	
3	64QAM	8	0	20.31	20.28	20.17	
3	64QAM	8	4	20.29	20.20	20.19	21.3
3	64QAM	8	7	20.04	20.01	20.03	
3	64QAM	15	0	20.19	20.11	20.20	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.28	23.34	23.19	24.3
1.4	QPSK	1	3	23.25	23.16	23.14	
1.4	QPSK	1	5	23.27	23.15	23.20	
1.4	QPSK	3	0	22.36	22.39	22.35	
1.4	QPSK	3	1	22.37	22.17	22.34	
1.4	QPSK	3	3	22.26	22.30	22.08	23.3
1.4	QPSK	6	0	22.22	22.26	22.17	
1.4	16QAM	1	0	22.43	22.59	22.53	23.3
1.4	16QAM	1	3	22.52	22.41	22.38	
1.4	16QAM	1	5	22.41	22.50	22.50	
1.4	16QAM	3	0	21.22	21.35	21.30	
1.4	16QAM	3	1	21.23	21.12	21.25	
1.4	16QAM	3	3	21.12	21.00	21.15	22.3
1.4	16QAM	6	0	21.28	21.18	21.18	
1.4	64QAM	1	0	21.29	21.36	21.30	22.3
1.4	64QAM	1	3	21.26	21.33	21.23	
1.4	64QAM	1	5	21.16	21.24	21.34	
1.4	64QAM	3	0	20.22	20.18	20.24	
1.4	64QAM	3	1	20.34	20.05	20.12	
1.4	64QAM	3	3	20.08	20.04	20.16	21.3
1.4	64QAM	6	0	20.04	20.08	20.04	



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	23.80	23.92	23.83	
20	QPSK	1	49	23.61	23.73	23.58	24.8
20	QPSK	1	99	23.69	23.69	23.66	
20	QPSK	50	0	22.81	22.86	22.84	
20	QPSK	50	24	22.74	22.82	22.81	23.8
20	QPSK	50	50	22.85	22.80	22.82	
20	QPSK	100	0	22.81	22.86	22.83	
20	16QAM	1	0	23.11	23.06	23.08	23.8
20	16QAM	1	49	22.98	23.07	22.84	
20	16QAM	1	99	22.92	22.99	23.07	
20	16QAM	50	0	21.78	21.71	21.70	22.8
20	16QAM	50	24	21.90	21.85	21.73	
20	16QAM	50	50	21.83	21.82	21.79	
20	16QAM	100	0	21.84	21.81	21.71	22.8
20	64QAM	1	0	22.07	22.04	22.05	
20	64QAM	1	49	21.95	22.05	21.79	
20	64QAM	1	99	21.86	21.99	22.00	22.8
20	64QAM	50	0	21.75	21.70	21.70	
20	64QAM	50	24	21.82	21.80	21.72	
20	64QAM	50	50	21.75	21.76	21.76	
20	64QAM	100	0	21.86	21.75	21.64	
Channel				133197	133297	133397	
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	23.51	23.71	23.67	
15	QPSK	1	37	23.59	23.66	23.48	24.8
15	QPSK	1	74	23.63	23.68	23.62	
15	QPSK	36	0	22.59	22.63	22.62	
15	QPSK	36	20	22.65	22.78	22.80	23.8
15	QPSK	36	39	22.76	22.76	22.77	
15	QPSK	75	0	22.61	22.65	22.77	
15	16QAM	1	0	23.09	22.99	23.06	23.8
15	16QAM	1	37	22.93	23.03	22.80	
15	16QAM	1	74	22.87	22.90	23.00	
15	16QAM	36	0	21.76	21.66	21.68	22.8
15	16QAM	36	20	21.79	21.83	21.72	
15	16QAM	36	39	21.77	21.73	21.71	
15	16QAM	75	0	21.77	21.73	21.61	22.8
15	64QAM	1	0	22.02	22.00	21.98	
15	64QAM	1	37	21.86	21.95	21.75	
15	64QAM	1	74	21.75	21.94	21.98	22.8
15	64QAM	36	0	21.63	21.69	21.62	
15	64QAM	36	20	21.72	21.70	21.71	
15	64QAM	36	39	21.66	21.74	21.66	
15	64QAM	75	0	21.84	21.73	21.57	
Channel				133172	133272	133422	
Frequency (MHz)				668	678	693	
10	QPSK	1	0	23.61	23.71	23.69	
10	QPSK	1	25	23.49	23.70	23.50	24.8
10	QPSK	1	49	23.59	23.63	23.57	
10	QPSK	25	0	22.59	22.67	22.68	
10	QPSK	25	12	22.67	22.75	22.73	23.8
10	QPSK	25	25	22.76	22.75	22.76	
10	QPSK	50	0	22.67	22.56	22.82	
10	16QAM	1	0	23.10	23.00	23.04	23.8
10	16QAM	1	25	22.91	23.03	22.76	
10	16QAM	1	49	22.88	22.94	22.99	
10	16QAM	25	0	21.66	21.68	21.62	22.8
10	16QAM	25	12	21.87	21.79	21.68	
10	16QAM	25	25	21.72	21.79	21.72	
10	16QAM	50	0	21.79	21.72	21.67	22.8
10	64QAM	1	0	21.95	22.02	21.95	
10	64QAM	1	25	21.93	21.99	21.73	
10	64QAM	1	49	21.75	21.96	21.94	22.8
10	64QAM	25	0	21.73	21.69	21.61	
10	64QAM	25	12	21.78	21.77	21.62	
10	64QAM	25	25	21.64	21.74	21.67	
10	64QAM	50	0	21.78	21.65	21.63	
Channel				133147	133247	133447	
Frequency (MHz)				665.5	675.5	695.5	
5	QPSK	1	0	23.57	23.74	23.68	
5	QPSK	1	12	23.58	23.65	23.52	24.8
5	QPSK	1	24	23.64	23.61	23.61	
5	QPSK	12	0	22.67	22.70	22.68	
5	QPSK	12	7	22.68	22.78	22.72	23.8
5	QPSK	12	13	22.79	22.76	22.75	
5	QPSK	25	0	22.63	22.62	22.82	
5	16QAM	1	0	23.05	23.02	23.05	23.8
5	16QAM	1	12	22.86	23.03	22.78	
5	16QAM	1	24	22.85	22.96	22.97	
5	16QAM	12	0	21.73	21.61	21.64	22.8
5	16QAM	12	7	21.84	21.78	21.63	
5	16QAM	12	13	21.71	21.80	21.75	
5	16QAM	25	0	21.83	21.78	21.66	22.8
5	64QAM	1	0	21.97	21.96	22.02	
5	64QAM	1	12	21.83	22.02	21.76	
5	64QAM	1	24	21.77	21.91	21.98	22.8
5	64QAM	12	0	21.72	21.61	21.64	
5	64QAM	12	7	21.80	21.77	21.64	
5	64QAM	12	13	21.73	21.75	21.72	
5	64QAM	25	0	21.74	21.74	21.59	



Band 41 (2496~2690MHz) (dBm)									
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.79	23.70	23.85	23.69	23.68	24.8
20	QPSK	1	49	23.70	23.77	23.60	23.62	23.58	
20	QPSK	1	99	23.79	23.64	23.75	23.65	23.57	
20	QPSK	50	0	23.02	22.97	23.03	22.88	22.76	23.8
20	QPSK	50	24	22.98	22.95	22.89	22.74	22.71	
20	QPSK	50	50	23.00	22.89	22.85	22.68	22.58	
20	QPSK	100	0	22.99	22.95	22.90	22.80	22.68	23.8
20	16QAM	1	0	23.07	23.09	23.03	22.97	22.98	
20	16QAM	1	49	23.00	22.87	22.97	22.90	22.93	
20	16QAM	1	99	22.93	22.79	23.02	22.86	22.90	22.8
20	16QAM	50	0	22.08	22.04	21.90	21.84	21.75	
20	16QAM	50	24	22.02	21.87	21.93	21.81	21.78	
20	16QAM	50	50	21.99	21.75	21.78	21.70	21.74	22.8
20	16QAM	100	0	21.90	21.87	21.93	21.87	21.88	
20	64QAM	1	0	21.98	22.05	21.96	21.86	21.90	
20	64QAM	1	49	21.97	21.69	21.87	21.78	21.80	22.8
20	64QAM	1	99	21.91	21.82	21.91	21.82	21.85	
20	64QAM	50	0	22.03	21.97	21.84	21.77	21.61	
20	64QAM	50	24	21.93	21.88	21.87	21.75	21.79	22.8
20	64QAM	50	50	21.80	21.81	21.82	21.71	21.73	
20	64QAM	100	0	21.99	21.94	21.98	21.89	21.88	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.74	23.59	23.84	23.63	23.59	24.8
15	QPSK	1	37	23.69	23.67	23.58	23.57	23.59	
15	QPSK	1	74	23.70	23.58	23.65	23.60	23.56	
15	QPSK	36	0	22.91	22.89	22.99	22.81	22.75	23.8
15	QPSK	36	20	22.87	22.87	22.85	22.65	22.65	
15	QPSK	36	39	22.99	22.88	22.82	22.59	22.56	
15	QPSK	75	0	22.90	22.89	22.82	22.70	22.61	23.8
15	16QAM	1	0	23.03	22.97	22.92	22.85	22.92	
15	16QAM	1	37	22.91	22.80	22.95	22.80	22.83	
15	16QAM	1	74	22.89	22.67	22.92	22.85	22.78	22.8
15	16QAM	36	0	22.01	21.96	21.82	21.74	21.70	
15	16QAM	36	20	22.01	21.78	21.87	21.72	21.75	
15	16QAM	36	39	21.88	21.63	21.69	21.63	21.73	22.8
15	16QAM	75	0	21.86	21.81	21.92	21.78	21.85	
15	64QAM	1	0	21.87	21.94	21.90	21.76	21.80	
15	64QAM	1	37	21.94	21.61	21.83	21.66	21.71	22.8
15	64QAM	1	74	21.88	21.79	21.80	21.71	21.81	
15	64QAM	36	0	21.91	21.96	21.74	21.74	21.56	
15	64QAM	36	20	21.82	21.76	21.77	21.66	21.75	22.8
15	64QAM	36	39	21.75	21.77	21.74	21.70	21.69	
15	64QAM	75	0	21.92	21.85	21.86	21.82	21.86	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	23.70	23.65	23.80	23.63	23.59	24.8
10	QPSK	1	25	23.62	23.67	23.56	23.62	23.58	
10	QPSK	1	49	23.75	23.59	23.65	23.63	23.60	
10	QPSK	25	0	22.98	22.90	22.95	22.83	22.69	23.8
10	QPSK	25	12	22.97	22.86	22.88	22.72	22.61	
10	QPSK	25	25	22.99	22.80	22.83	22.65	22.56	
10	QPSK	50	0	22.95	22.87	22.89	22.71	22.63	23.8
10	16QAM	1	0	23.03	22.98	22.94	22.85	22.91	
10	16QAM	1	25	22.94	22.84	22.87	22.86	22.84	
10	16QAM	1	49	22.90	22.73	23.01	22.84	22.84	22.8
10	16QAM	25	0	21.97	22.00	21.82	21.79	21.66	
10	16QAM	25	12	21.99	21.83	21.88	21.77	21.67	
10	16QAM	25	25	21.92	21.68	21.71	21.69	21.64	22.8
10	16QAM	50	0	21.80	21.81	21.89	21.84	21.86	
10	64QAM	1	0	21.93	21.98	21.86	21.79	21.84	
10	64QAM	1	25	21.94	21.59	21.79	21.73	21.71	22.8
10	64QAM	1	49	21.79	21.74	21.83	21.81	21.75	
10	64QAM	25	0	21.92	21.94	21.74	21.70	21.60	
10	64QAM	25	12	21.89	21.81	21.77	21.73	21.77	22.8
10	64QAM	25	25	21.79	21.70	21.79	21.68	21.66	
10	64QAM	50	0	21.98	21.92	21.94	21.79	21.84	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	23.68	23.59	23.82	23.61	23.67	24.8
5	QPSK	1	12	23.68	23.67	23.60	23.59	23.63	
5	QPSK	1	24	23.74	23.57	23.63	23.61	23.62	
5	QPSK	12	0	22.98	22.91	22.96	22.82	22.70	23.8
5	QPSK	12	7	22.90	22.94	22.81	22.67	22.67	
5	QPSK	12	13	22.88	22.80	22.78	22.65	22.57	
5	QPSK	25	0	22.88	22.93	22.83	22.70	22.57	23.8
5	16QAM	1	0	22.97	23.01	22.97	22.96	22.96	
5	16QAM	1	12	22.90	22.78	22.86	22.81	22.86	
5	16QAM	1	24	22.82	22.76	22.90	22.87	22.80	22.8
5	16QAM	12	0	21.97	21.93	21.86	21.72	21.64	
5	16QAM	12	7	21.91	21.81	21.86	21.80	21.69	
5	16QAM	12	13	21.91	21.67	21.71	21.60	21.66	22.8
5	16QAM	25	0	21.85	21.85	21.88	21.85	21.82	
5	64QAM	1	0	21.92	21.95	21.88	21.78	21.81	
5	64QAM	1	12	21.86	21.59	21.80	21.66	21.76	22.8
5	64QAM	1	24	21.81	21.72	21.89	21.78	21.83	
5	64QAM	12	0	21.96	21.91	21.81	21.65	21.59	
5	64QAM	12	7	21.81	21.83	21.75	21.67	21.69	22.8
5	64QAM	12	13	21.71	21.71	21.71	21.67	21.64	
5	64QAM	25	0	21.91	21.86	21.93	21.78	21.85	



Band 48 (3.5G Band) (dBm)									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Middle-Low Channel	Middle-Low Channel	Middle-High Channel	High Channel	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	23.93	23.91	23.98	23.88	23.95	24.8
20	QPSK	1	49	23.87	23.76	23.87	23.84	23.85	
20	QPSK	1	99	23.89	23.83	23.75	23.71	23.82	
20	QPSK	50	0	22.86	22.80	22.89	22.82	22.88	23.8
20	QPSK	50	24	22.82	22.73	22.80	22.76	22.84	
20	QPSK	50	50	22.79	22.65	22.69	22.64	22.73	
20	QPSK	100	0	22.73	22.73	22.73	22.70	22.80	23.8
20	16QAM	1	0	23.22	23.18	23.20	23.13	23.16	
20	16QAM	1	49	23.20	23.00	23.06	23.15	23.09	
20	16QAM	1	99	22.98	22.99	23.11	23.01	23.03	22.8
20	16QAM	50	0	21.79	21.83	21.85	21.80	21.75	
20	16QAM	50	24	21.72	21.78	21.71	21.74	21.78	
20	16QAM	50	50	21.65	21.65	21.70	21.69	21.69	22.8
20	16QAM	100	0	21.89	21.65	21.58	21.87	21.81	
20	64QAM	1	0	21.80	21.71	21.83	21.86	21.84	
20	64QAM	1	49	21.86	21.82	21.86	21.91	21.80	22.8
20	64QAM	1	99	21.88	21.67	21.74	21.88	21.81	
20	64QAM	50	0	20.85	20.74	20.89	20.83	20.72	
20	64QAM	50	24	20.82	20.74	20.79	20.67	20.70	21.8
20	64QAM	50	50	20.74	20.65	20.69	20.86	20.65	
20	64QAM	100	0	20.76	20.68	20.82	20.71	20.72	
Channel				55315	55820	55990	56160	56665	
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	23.84	23.90	23.95	23.82	23.86	24.8
15	QPSK	1	37	23.81	23.74	23.71	23.73	23.81	
15	QPSK	1	74	23.80	23.68	23.72	23.66	23.84	
15	QPSK	36	0	22.80	22.83	22.86	22.84	22.80	23.8
15	QPSK	36	20	22.83	22.81	22.85	22.78	22.84	
15	QPSK	36	39	22.74	22.69	22.76	22.76	22.70	
15	QPSK	75	0	22.69	22.85	22.71	22.70	22.76	23.8
15	16QAM	1	0	23.03	23.09	23.10	23.08	22.98	
15	16QAM	1	37	23.06	23.06	23.00	22.94	23.02	
15	16QAM	1	74	22.95	22.91	22.95	23.07	23.01	22.8
15	16QAM	36	0	21.96	21.72	21.92	21.81	21.84	
15	16QAM	36	20	21.93	21.76	21.84	21.80	21.84	
15	16QAM	36	39	21.71	21.70	21.75	21.89	21.72	22.8
15	16QAM	75	0	21.79	21.69	21.76	21.69	21.63	
15	64QAM	1	0	21.93	21.81	21.89	21.88	21.93	
15	64QAM	1	37	21.91	21.81	21.87	21.85	21.68	22.8
15	64QAM	1	74	21.94	21.64	21.69	21.81	21.84	
15	64QAM	36	0	20.83	20.78	20.76	20.84	20.76	
15	64QAM	36	20	20.75	20.69	20.84	20.70	20.64	21.8
15	64QAM	36	39	20.73	20.57	20.77	20.71	20.58	
15	64QAM	75	0	20.62	20.58	20.73	20.71	20.66	
Channel				55290	55815	55990	56165	56690	
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	23.89	23.79	23.93	23.82	23.83	24.8
10	QPSK	1	25	23.81	23.76	23.84	23.73	23.82	
10	QPSK	1	49	23.73	23.78	23.71	23.75	23.66	
10	QPSK	25	0	22.94	22.92	22.95	22.82	22.80	23.8
10	QPSK	25	12	22.80	22.82	22.74	22.82	22.87	
10	QPSK	25	25	22.76	22.83	22.70	22.70	22.75	
10	QPSK	50	0	22.86	22.87	22.77	22.68	22.73	23.8
10	16QAM	1	0	23.08	23.07	23.15	23.06	23.01	
10	16QAM	1	25	23.03	23.04	23.04	23.07	23.09	
10	16QAM	1	49	23.00	22.87	23.01	23.01	23.00	22.8
10	16QAM	25	0	21.77	21.83	21.84	21.94	21.72	
10	16QAM	25	12	21.85	21.84	21.75	21.89	21.78	
10	16QAM	25	25	21.76	21.72	21.72	21.84	21.69	22.8
10	16QAM	50	0	21.69	21.68	21.81	21.86	21.75	
10	64QAM	1	0	22.05	21.75	21.82	21.86	21.90	
10	64QAM	1	25	21.77	21.86	21.79	21.84	21.77	22.8
10	64QAM	1	49	21.83	21.69	21.77	21.74	21.80	
10	64QAM	25	0	20.84	20.66	20.89	20.90	20.67	
10	64QAM	25	12	20.67	20.77	20.80	20.63	20.74	21.8
10	64QAM	25	25	20.69	20.72	20.62	20.84	20.62	
10	64QAM	50	0	20.63	20.71	20.70	20.78	20.70	
Channel				55265	55810	55990	56170	56175	
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	23.84	23.82	23.90	23.83	23.84	24.8
5	QPSK	1	12	23.81	23.88	23.85	23.84	23.85	
5	QPSK	1	24	23.88	23.87	23.73	23.76	23.71	
5	QPSK	12	0	22.86	22.82	22.89	22.85	22.76	23.8
5	QPSK	12	7	23.82	22.88	22.77	22.77	22.87	
5	QPSK	12	13	22.88	22.85	22.79	22.64	22.73	
5	QPSK	25	0	22.83	22.80	22.68	22.92	22.86	23.8
5	16QAM	1	0	23.02	23.06	23.08	23.03	23.03	
5	16QAM	1	12	23.06	23.04	22.91	23.06	23.02	
5	16QAM	1	24	23.01	23.04	22.88	23.03	23.04	22.8
5	16QAM	12	0	21.80	21.73	21.95	21.94	21.82	
5	16QAM	12	7	21.79	21.76	21.76	21.95	21.81	
5	16QAM	12	13	21.67	21.70	21.69	21.79	21.74	22.8
5	16QAM	25	0	21.91	21.82	21.72	21.84	21.79	
5	64QAM	1	0	21.90	21.95	21.87	21.96	21.84	
5	64QAM	1	12	21.81	21.87	21.76	21.87	21.76	22.8
5	64QAM	1	24	21.89	21.84	21.90	21.82	21.82	
5	64QAM	12	0	20.87	20.72	20.92	20.90	20.73	
5	64QAM	12	7	20.69	20.70	20.70	20.80	20.61	21.8
5	64QAM	12	13	20.68	20.72	20.73	20.71	20.67	
5	64QAM	25	0	20.60	20.66	20.69	20.65	20.50	

n2 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	24.00
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.87	22.83	22.53	24.00
20		1	53	22.93	22.62	22.57	
20		1	104	22.66	22.54	22.51	
20		50	1	23.08	22.80	22.64	24.00
20		50	25	23.02	22.80	22.63	
20		50	50	22.98	22.77	22.67	
20		100	0	22.98	22.80	22.61	
20	DFT-s-OFDM QPSK	1	1	23.07	23.13	23.02	24.00
20		1	53	22.92	22.72	22.95	
20		1	104	22.76	22.67	22.63	
20		50	1	23.05	23.08	23.07	24.00
20		50	25	23.03	22.69	22.68	
20		50	50	22.95	22.69	22.74	
20		100	0	23.01	22.79	22.63	
20	DFT-s-OFDM 16QAM	1	1	23.11	22.97	22.71	24.00
20	DFT-s-OFDM 64QAM	1	1	21.58	21.50	21.22	22.50
20	DFT-s-OFDM 256QAM	1	1	19.20	19.16	18.90	20.00
20	CP-OFDM QPSK	1	1	22.48	22.39	22.15	23.50
20	CP-OFDM 16QAM	1	1	21.98	21.95	21.68	23.00
20	CP-OFDM 64QAM	1	1	20.64	20.56	20.25	21.50
20	CP-OFDM 256QAM	1	1	17.31	17.23	16.90	18.00
Channel				371500	376000	380500	24.00
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	23.09	22.83	22.59	24.00
Channel				371000	376000	381000	24.00
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	23.08	22.81	22.70	24.00
Channel				370500	376000	381500	24.00
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	23.06	22.63	22.59	24.00

n5 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	23.61	23.67	23.67	24.50
20		1	53	23.53	23.51	23.55	
20		1	104	23.27	23.21	23.29	
20		50	1	23.72	23.71	23.72	24.50
20		50	25	23.62	23.66	23.59	
20		50	50	23.62	23.51	23.49	
20		100	0	23.70	23.62	23.54	
20	DFT-s-OFDM QPSK	1	1	23.77	23.82	23.81	24.50
20		1	53	23.60	23.60	23.68	
20		1	104	23.35	23.24	23.32	
20		50	1	23.71	23.73	23.64	24.50
20		50	25	23.65	23.65	23.56	
20		50	50	23.50	23.54	23.31	
20		100	0	23.69	23.67	23.51	
20	DFT-s-OFDM 16QAM	1	1	23.72	23.76	23.75	23.50
20	DFT-s-OFDM 64QAM	1	1	22.14	22.33	22.36	22.50
20	DFT-s-OFDM 256QAM	1	1	19.98	20.07	20.00	19.50
20	CP-OFDM QPSK	1	1	23.21	23.31	23.11	25.00
20	CP-OFDM 16QAM	1	1	22.80	22.82	22.77	24.00
20	CP-OFDM 64QAM	1	1	21.27	21.42	21.32	23.00
20	CP-OFDM 256QAM	1	1	18.01	18.11	18.10	19.00
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	23.75	23.79	23.57	24.50
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	23.53	23.35	23.48	24.50
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	23.59	23.52	23.28	24.50

n25 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	iddle Channel	High Channel	Tune-up
Channel				372000	376500	381000	limit
Frequency (MHz)				1860	1882.5	1905	(dBm)
20	DFT-s-OFDM PI/2 BPSK	1	1	23.64	23.63	23.51	24.8
20		1	53	23.73	23.63	23.49	
20		1	104	23.75	23.56	23.63	
20		50	1	23.81	23.62	23.48	24.8
20		50	25	23.85	23.66	23.60	
20		50	50	23.74	23.60	23.68	
20		100	0	23.87	23.66	23.56	
20	DFT-s-OFDM QPSK	1	1	23.88	23.89	23.86	24.8
20		1	53	23.81	23.49	23.52	
20		1	104	23.72	23.54	23.64	
20		50	1	23.71	23.74	23.65	24.8
20		50	25	23.86	23.66	23.60	
20		50	50	23.77	23.53	23.49	
20		100	0	23.55	23.68	23.48	
20	DFT-s-OFDM 16QAM	1	1	23.74	23.58	23.48	24.8
20	DFT-s-OFDM 64QAM	1	1	22.16	22.08	21.89	23.8
20	DFT-s-OFDM 256QAM	1	1	19.88	19.70	19.54	20.8
20	CP-OFDM QPSK	1	1	22.69	22.64	22.68	23.8
20	CP-OFDM 16QAM	1	1	22.62	22.50	22.37	23.8
20	CP-OFDM 64QAM	1	1	20.88	20.76	20.51	21.8
20	CP-OFDM 256QAM	1	1	17.92	17.77	17.59	18.8
Channel				371500	376500	381500	Tune-up
Frequency (MHz)				1857.5	1882.5	1907.5	limit
15	DFT-s-OFDM QPSK	1	1	23.82	23.64	23.48	24.8
Channel				371000	376500	382000	Tune-up
Frequency (MHz)				1855	1882.5	1910	limit
10	DFT-s-OFDM QPSK	1	1	23.73	23.54	23.46	24.8
Channel				370500	376500	382500	Tune-up
Frequency (MHz)				1852.5	1882.5	1912.5	limit
5	DFT-s-OFDM QPSK	1	1	23.74	23.59	23.55	24.8

n26(814-824MHz) (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	iddle Channel	High Channel	Tune-up limit (dBm)
Channel					163800		
Frequency (MHz)					819		
10	DFT-s-OFDM PI/2 BPSK	1	1		23.03		24.8
10		1	26		23.15		
10		1	50		23.25		
10		25	1		23.15		24.8
10	DFT-s-OFDM QPSK	25	12		23.18		
10		25	25		23.26		
10		50	0		23.21		
10		1	1		23.75		24.8
10	DFT-s-OFDM 16QAM	1	26		23.16		
10		1	50		23.24		
10		25	1		23.64		24.8
10		25	12		23.19		
10	DFT-s-OFDM 64QAM	25	25		23.25		
10		50	0		23.59		
10	DFT-s-OFDM 256QAM	1	1		22.99		23.8
10	DFT-s-OFDM 64QAM	1	1		21.53		22.8
10	DFT-s-OFDM 256QAM	1	1		19.30		20.8
10	CP-OFDM QPSK	1	1		22.43		23.8
10	CP-OFDM 16QAM	1	1		21.93		22.8
10	CP-OFDM 64QAM	1	1		20.26		21.8
10	CP-OFDM 256QAM	1	1		17.42		18.8
Channel				163300	163800	164300	Tune-up
Frequency (MHz)				816.5	819	821.5	limit
5	DFT-s-OFDM QPSK	1	1	23.01	23.05	23.13	24.8

n26(824-849MHz) (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	iddle Channel	High Channel	Tune-up
Channel				166800	167300	167800	limit
Frequency (MHz)				834	836.5	839	(dBm)
20	DFT-s-OFDM PI/2 BPSK	1	1	23.21	23.24	23.21	24.8
20		1	53	23.22	23.11	23.05	
20		1	104	23.08	23.02	23.31	
20		50	1	23.27	23.29	23.29	24.8
20		50	25	23.31	23.23	23.17	
20		50	50	23.17	23.06	23.18	
20	DFT-s-OFDM QPSK	100	0	23.30	23.22	23.23	24.8
20		1	1	23.72	23.77	23.69	
20		1	53	23.26	23.10	23.06	
20		1	104	23.13	23.00	23.28	24.8
20		50	1	23.30	23.32	23.28	
20		50	25	23.30	23.22	23.22	
20	DFT-s-OFDM 16QAM	50	50	23.17	23.12	23.13	24.8
20		100	0	23.30	23.22	23.27	
20		1	1	23.15	23.16	23.16	23.8
20	DFT-s-OFDM 64QAM	1	1	21.67	21.67	21.65	22.8
20	DFT-s-OFDM 256QAM	1	1	19.52	19.59	19.59	20.8
20	CP-OFDM QPSK	1	1	22.66	22.68	22.67	23.8
20	CP-OFDM 16QAM	1	1	22.14	22.14	22.14	23.8
20	CP-OFDM 64QAM	1	1	20.43	20.47	20.45	21.8
20	CP-OFDM 256QAM	1	1	17.73	17.73	17.64	18.8
Channel				166300	167300	168300	Tune-up
Frequency (MHz)				831.5	836.5	841.5	limit
15	DFT-s-OFDM QPSK	1	1	23.24	23.17	23.17	24.8
Channel				165800	167300	168800	Tune-up
Frequency (MHz)				829	836.5	844	limit
10	DFT-s-OFDM QPSK	1	1	23.29	23.11	23.10	24.8
Channel				165300	167300	169300	Tune-up
Frequency (MHz)				826.5	836.5	846.5	limit
5	DFT-s-OFDM QPSK	1	1	23.27	23.12	22.99	24.8



n41 (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High/Middle Channel	High Channel	Tune-up
Channel				509202	513900	518598	523296	528000	limit
Frequency (MHz)				2546.01	2569.5	2592.99	2616.48	2640	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	24.05	24.10	24.15	24.22	24.13	25
100		1	136	24.15	24.23	24.21	24.07	23.95	
100		1	271	24.25	24.18	24.06	23.63	23.39	
100		135	1	23.69	23.61	23.66	23.69	23.60	25
100		135	67	24.25	24.22	24.22	24.17	24.03	
100		135	136	23.69	23.76	23.58	23.49	23.12	
100		270	0	23.65	23.72	23.75	23.70	23.53	
100	DFT-s-OFDM QPSK	1	1	24.47	24.46	24.58	24.55	24.56	25
100		1	136	24.16	24.24	24.12	24.06	23.97	
100		1	271	24.46	24.09	24.00	23.59	23.39	
100		135	1	23.16	23.22	23.17	23.19	23.12	25
100		135	67	24.20	24.17	24.22	24.13	24.05	
100		135	136	23.18	23.25	23.13	22.98	22.62	
100		270	0	23.14	23.22	23.22	23.20	23.06	
100	DFT-s-OFDM 16QAM	1	1	23.00	22.99	23.12	23.04	23.00	24
100	DFT-s-OFDM 64QAM	1	1	21.58	21.59	21.70	21.61	21.63	22
100	DFT-s-OFDM 256QAM	1	1	19.39	19.37	19.43	19.48	19.39	20
100	CP-OFDM QPSK	1	1	22.59	22.60	22.67	22.61	22.63	23
100	CP-OFDM 16QAM	1	1	22.10	22.16	22.21	22.13	22.13	23
100	CP-OFDM 64QAM	1	1	20.18	20.20	20.23	20.23	20.25	21
100	CP-OFDM 256QAM	1	1	17.48	17.42	17.42	17.50	17.46	18
Channel				508200	513402	518598	523800	528996	Tune-up
Frequency (MHz)				2541	2567.01	2592.99	2619	2644.98	limit
90	DFT-s-OFDM QPSK	1	1	24.09	24.02	24.09	24.19	24.11	25
Channel				507204	512904	518598	524298	529998	Tune-up
Frequency (MHz)				2536.02	2564.52	2592.99	2621.49	2649.99	limit
80	DFT-s-OFDM QPSK	1	1	24.13	24.14	24.19	24.21	24.13	25
Channel				506202	512400	518598	524796	531000	Tune-up
Frequency (MHz)				2531.01	2562	2592.99	2623.98	2655	limit
70	DFT-s-OFDM QPSK	1	1	24.15	24.19	24.25	24.26	24.19	25
Channel				505200	511902	518598	525798	531996	Tune-up
Frequency (MHz)				2526	2559.51	2592.99	2626.5	2659.98	limit
60	DFT-s-OFDM QPSK	1	1	24.20	24.27	24.22	24.22	24.15	25
Channel				504204	511404	518598	525798	532998	Tune-up
Frequency (MHz)				2521.02	2557.02	2592.99	2626.5	2664.98	limit
50	DFT-s-OFDM QPSK	1	1	24.27	24.36	24.34	24.31	24.16	25
Channel				503202	510900	518598	526296	534000	Tune-up
Frequency (MHz)				2516.01	2554.5	2592.99	2631.48	2670	limit
40	DFT-s-OFDM QPSK	1	1	24.40	24.43	24.26	24.38	24.11	25
Channel				502200	510402	518598	526800	534996	Tune-up
Frequency (MHz)				2511	2552.01	2592.99	2634	2674.98	limit
30	DFT-s-OFDM QPSK	1	1	24.34	24.32	24.39	24.26	23.87	25
Channel				501204	509904	518598	527298	535998	Tune-up
Frequency (MHz)				2506.02	2549.52	2592.99	2636.49	2679.98	limit
20	DFT-s-OFDM QPSK	1	1	24.32	24.38	24.45	24.24	23.81	25



n48 (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				638000	639834	641666	643500	645332	
Frequency (MHz)				3570	3597.51	3624.99	3652.5	3679.98	
40	DFT-s-OFDM PI/2 BPSK	1	1	24.92	24.63	23.81	23.62	25.48	27.5
40		1	53	25.69	24.19	22.82	25.01	26.20	
40		1	104	24.58	25.35	24.41	26.01	26.25	
40		50	1	24.41	24.01	22.81	23.83	25.36	27.5
40		50	25	24.83	24.31	23.24	24.95	26.18	
40		50	50	24.14	23.31	22.98	24.81	25.43	
40		100	0	24.25	23.78	22.83	24.41	25.69	
40	DFT-s-OFDM QPSK	1	1	26.55	26.61	26.73	26.63	26.47	27.5
40		1	53	24.83	24.18	22.83	25.04	26.22	
40		1	104	25.58	23.33	24.41	26.04	26.70	
40		50	1	25.72	25.66	25.83	25.53	25.67	26.5
40		50	25	24.87	24.30	25.11	24.92	25.58	
40		50	50	24.56	25.26	25.45	25.38	25.50	
40		100	0	25.55	25.30	25.35	24.78	25.19	
40	DFT-s-OFDM 16QAM	1	1	23.81	23.49	23.66	23.53	24.36	25.5
40	DFT-s-OFDM 64QAM	1	1	22.40	22.06	22.26	22.10	22.33	25.5
40	DFT-s-OFDM 256QAM	1	1	20.25	19.98	19.14	18.93	20.76	21.5
40	CP-OFDM QPSK	1	1	23.44	23.13	22.30	22.15	23.97	25
40	CP-OFDM 16QAM	1	1	22.89	22.60	21.86	21.69	23.54	24.5
40	CP-OFDM 64QAM	1	1	21.02	20.69	19.88	19.69	21.57	23
40	CP-OFDM 256QAM	1	1	18.25	17.99	17.05	16.94	18.75	19.5
Channel				637334	639500	641666	643832	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3592.5	3624.99	3657.48	3690	
20	DFT-s-OFDM QPSK	1	1	24.75	24.39	23.14	24.67	26.29	27.5

n66 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.81	22.65	22.57	23.5
20		1	53	22.73	22.60	22.51	
20		1	104	22.63	22.66	22.53	
20		50	1	22.88	22.71	22.66	23.5
20	DFT-s-OFDM QPSK	50	25	22.87	22.66	22.61	
20		50	50	22.79	22.67	22.60	
20		100	0	22.83	22.68	22.65	
20		1	1	22.88	22.90	22.86	23.5
20	DFT-s-OFDM 16QAM	1	53	22.81	22.59	22.49	
20		1	104	22.66	22.64	22.52	
20		50	1	22.80	22.84	22.79	23.5
20		50	25	22.78	22.74	22.59	
20	DFT-s-OFDM 64QAM	50	50	22.76	22.68	22.56	
20		100	0	22.82	22.74	22.56	
20	DFT-s-OFDM 256QAM	1	1	22.81	22.76	22.66	23.5
20	CP-OFDM QPSK	1	1	21.46	21.24	21.17	21.5
20	CP-OFDM 16QAM	1	1	19.09	18.90	18.81	19.5
20	CP-OFDM 64QAM	1	1	22.47	22.29	22.19	23
20	CP-OFDM 256QAM	1	1	22.01	21.70	21.67	23
20		1	1	20.56	20.35	20.28	21
20		1	1	17.09	16.92	16.79	18
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	22.96	22.84	22.76	23.5
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	22.78	22.65	22.57	23.5
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	22.83	22.69	22.73	23.5

n71 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up
Channel				134600	136100	137600	limit (dBm)
Frequency (MHz)				673	680.5	688	
20	DFT-s-OFDM PI/2 BPSK	1	1	23.31	23.34	23.41	24.8
20		1	53	23.31	23.53	23.52	
20		1	104	23.42	23.43	23.27	
20		50	1	23.34	23.38	23.52	24.8
20		50	25	23.35	23.44	23.44	
20		50	50	23.42	23.45	23.37	
20	DFT-s-OFDM QPSK	100	0	23.30	23.37	23.38	24.8
20		1	1	23.71	23.76	23.74	
20		1	53	23.31	23.46	23.43	
20		1	104	23.42	23.45	23.20	24.8
20		50	1	23.39	23.34	23.49	
20		50	25	23.36	23.43	23.40	
20	DFT-s-OFDM 16QAM	50	50	23.43	23.44	23.36	24.8
20		100	0	23.34	23.41	23.42	
20	DFT-s-OFDM 64QAM	1	1	23.29	23.32	23.42	24.8
20	DFT-s-OFDM 256QAM	1	1	21.83	21.80	21.86	22.8
20	CP-OFDM QPSK	1	1	19.30	19.36	19.34	20.8
20	CP-OFDM 16QAM	1	1	22.74	22.73	22.82	23.8
20	CP-OFDM 64QAM	1	1	22.21	22.24	22.34	23.8
20	CP-OFDM 256QAM	1	1	20.54	20.57	20.57	21.8
20	CP-OFDM 256QAM	1	1	17.36	17.44	17.41	18.8
Channel				134100	136100	138100	Tune-up
Frequency (MHz)				670.5	680.5	690.5	limit
15	DFT-s-OFDM QPSK	1	1	23.31	23.31	23.44	24.8
Channel				133600	136100	138600	Tune-up
Frequency (MHz)				668	680.5	693	limit
10	DFT-s-OFDM QPSK	1	1	23.28	23.35	23.40	24.8
Channel				133100	136100	139100	Tune-up
Frequency (MHz)				665.5	680.5	695.5	limit
5	DFT-s-OFDM QPSK	1	1	23.29	23.28	23.28	24.8



n77(3450-3550MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	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			26.82			27.5
100		1	136			26.17			
100		1	271			25.95			
100		135	1			26.22			
100	DFT-s-OFDM PI/2 BPSK	135	67			26.51			27.5
100		135	136			25.49			
100		270	0			25.95			
100		1	1			26.93			
100	DFT-s-OFDM QPSK	1	136			26.45			27.5
100		1	271			25.89			
100		135	1			26.51			
100		135	67			26.49			
100	DFT-s-OFDM QPSK	135	136			25.96			27
100		270	0			26.42			
100	DFT-s-OFDM 16QAM	1	1			25.83			26.5
100	DFT-s-OFDM 64QAM	1	1			24.47			25.5
100	DFT-s-OFDM 256QAM	1	1			22.28			22.5
100	CP-OFDM QPSK	1	1			25.42			26.5
100	CP-OFDM 16QAM	1	1			24.91			25.5
100	CP-OFDM 64QAM	1	1			23.03			24
100	CP-OFDM 256QAM	1	1			20.29			21
Channel				632668	633000	633334	633666	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	26.83	26.84	26.82	26.68	26.59	27.5
Channel				632000	632668	633334	634000	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.03	26.85	26.62	26.48	26.54	27.5
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 QPSK	1	1	26.89	26.83	26.86	26.82	26.69	27.5
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 QPSK	1	1	26.84	26.85	26.80	26.81	26.45	27.5
Channel				630668	632000	633334	634666	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	26.81	26.84	26.75	26.59	26.19	27.5



n77(3700-3980MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				650000	653000	656000	659000	662000	
Frequency (MHz)				3750	3795	3840	3885	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	26.08	27.68	27.80	27.69	26.75	29.50
100		1	136	27.77	27.91	27.68	26.71	27.65	
100		1	271	27.57	27.59	26.68	26.56	26.45	
100		135	1	27.02	27.55	27.30	26.54	26.76	28.50
100		135	67	27.87	27.92	27.70	26.73	25.71	
100		135	136	27.02	27.26	26.38	25.50	25.09	
100		270	0	27.01	27.49	27.17	26.26	26.68	
100	DFT-s-OFDM QPSK	1	1	28.52	28.65	28.67	28.57	28.62	29.50
100		1	136	28.13	27.89	27.71	26.72	25.52	
100		1	271	27.58	27.55	26.70	25.54	25.41	
100		135	1	27.54	27.63	27.87	27.75	27.79	28.50
100		135	67	27.25	26.68	27.66	26.75	25.69	
100		135	136	26.54	26.75	25.88	25.03	25.22	
100		270	0	27.44	27.01	26.69	25.76	25.34	
100	DFT-s-OFDM 16QAM	1	1	26.93	27.56	26.43	26.58	25.66	28.50
100	DFT-s-OFDM 64QAM	1	1	26.80	26.31	25.34	25.40	24.35	27.50
100	DFT-s-OFDM 256QAM	1	1	21.37	23.94	23.15	23.01	22.05	23.50
100	CP-OFDM QPSK	1	1	24.57	27.15	26.32	26.21	25.25	25.00
100	CP-OFDM 16QAM	1	1	24.07	24.22	25.89	25.74	24.77	24.00
100	CP-OFDM 64QAM	1	1	22.17	24.84	23.89	23.85	22.85	23.00
100	CP-OFDM 256QAM	1	1	20.39	22.00	21.06	21.04	20.08	22.00
Channel				649334	652668	656000	659332	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	
80	DFT-s-OFDM QPSK	1	1	26.05	28.52	27.91	27.34	26.22	29.50
Channel				648668	652334	656000	659666	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	
60	DFT-s-OFDM QPSK	1	1	26.09	28.34	27.86	26.85	25.57	29.50
Channel				648000	652000	656000	660000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3780	3840	3900	3960	
40	DFT-s-OFDM QPSK	1	1	26.50	28.50	28.07	27.13	24.94	29.50
Channel				647668	651834	656000	660166	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	
30	DFT-s-OFDM QPSK	1	1	26.42	28.29	27.95	26.79	24.98	29.50
Channel				647334	651668	656000	660332	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	
20	DFT-s-OFDM QPSK	1	1	26.34	28.25	27.99	26.64	25.36	29.50



n78(3450-3550MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	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			27.99			29.00
100		1	136			26.84			
100		1	271			26.15			
100		135	1			26.85			
100		135	67			27.05			28.00
100		135	136			25.74			
100		270	0			26.45			
100									
100	DFT-s-OFDM QPSK	1	1			28.02			29.00
100		1	136			26.89			
100		1	271			26.12			
100		135	1			27.03			
100		135	67			26.88			28.00
100		135	136			26.08			
100		270	0			26.73			
100									
100	DFT-s-OFDM 16QAM	1	1			26.82			27.50
100	DFT-s-OFDM 64QAM	1	1			25.50			26.50
100	DFT-s-OFDM 256QAM	1	1			23.37			24.50
100	CP-OFDM QPSK	1	1			26.29			27.50
100	CP-OFDM 16QAM	1	1			25.83			26.50
100	CP-OFDM 64QAM	1	1			24.19			25.00
100	CP-OFDM 256QAM	1	1			21.30			22.00
Channel				633000	633166	633334	633500	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	27.98	27.94	27.81	27.70	27.66	29.00
Channel				632668	633000	633334	633666	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	27.98	27.90	27.75	27.62	27.38	29.00
Channel				632334	632634	633334	633832	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	27.99	27.85	27.63	27.37	27.15	29.00
Channel				632000	632666	633334	634000	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	27.94	27.73	27.48	27.16	27.12	29.00
Channel				631668	632500	633334	634166	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	27.93	27.64	27.26	27.08	26.99	29.00
Channel				631334	636672	633334	634334	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	27.99	27.10	27.43	27.30	27.04	29.00
Channel				631000	632166	633334	634500	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	27.96	27.68	27.32	27.09	26.63	29.00
Channel				630668	632000	633334	634668	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	27.90	27.59	27.30	26.89	26.40	29.00



n78(3700-3800MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						650000			28.50
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			26.51			28.50
100		1	136			27.71			
100		1	271			27.60			
100		135	1			27.10			
100		135	67			27.68			
100		135	136			26.88			
100		270	0			27.00			
100	DFT-s-OFDM QPSK	1	1			27.73			28.50
100		1	136			26.89			
100		1	271			27.09			
100		135	1			27.61			
100		135	67			27.49			
100		135	136			27.37			
100		270	0			27.41			
100	DFT-s-OFDM 16QAM	1	1			25.38			26.50
100	DFT-s-OFDM 64QAM	1	1			24.07			25.00
100	DFT-s-OFDM 256QAM	1	1			21.78			22.50
100	CP-OFDM QPSK	1	1			24.98			26.00
100	CP-OFDM 16QAM	1	1			24.62			25.50
100	CP-OFDM 64QAM	1	1			22.69			23.50
100	CP-OFDM 256QAM	1	1			19.81			20.50
Channel				649668	649834	650000	650166	650332	28.50
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	26.47	26.51	26.65	26.73	26.92	28.50
Channel				649334	649666	650000	650334	650666	28.50
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	26.52	26.74	26.95	27.14	27.43	28.50
Channel				649000	649500	650000	650500	651000	28.50
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	26.53	26.86	27.18	27.55	27.68	28.50
Channel				648668	649334	650000	650666	651332	28.50
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	26.42	26.89	27.43	27.62	27.58	28.50
Channel				648334	649166	650000	650834	651666	28.50
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	26.59	27.15	27.67	27.66	27.68	28.50
Channel				648000	649000	650000	651000	652000	28.50
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	26.80	27.57	27.63	27.63	27.89	28.50
Channel				647668	648834	650000	651166	652332	28.50
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	26.68	27.56	27.67	27.59	27.51	28.50
Channel				647334	648666	650000	651334	652666	28.50
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	26.66	27.60	27.66	27.66	27.54	28.50



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2CC LTE Uplink												
Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation/RB/OF set)	Band	BW (MHz)	UL Channel	UL Fre. (MHz)	Measured Power(dBm)	Tune-up limit(dBm)
Inter-band	CA_2A-4A	2	20	18700	1860	QPSK/1#0	4	20	20300	2145	23.62	24.8
	CA_2A-5A	2	20	18700	1860	QPSK/1#0	5	10	20600	844	23.58	24.8
	CA_2A-66A	2	20	18700	1860	QPSK/1#0	66	20	67236	2190	23.56	24.8
	CA_4A-5A	4	10	20175	1732.5	QPSK/1#0	5	10	20450	829	23.23	24.3
	CA_5A-66A	5	10	20450	829	QPSK/1#0	66	20	66886	2155	24.35	25.30



2CC LTE Downlink													
Configure	CA Configuration	Ant	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.9 TX (dBm)
Intra-band & Inter-band	CA_4A-5A	Ant 1	4	10	20175	1732.5	QPSK1#0	5	10	20450	829	23.29	23.33

3CC LTE Downlink																	
Configure	CA Configuration	Ant	PCC					SCC			SCC			Power			
			Band	B/W (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation/RB/Offset)	Band	B/W (MHz)	DL Channel	DL Fre. (MHz)	Band	B/W (MHz)	DL Channel	DL Fre. (MHz)	CA TX (dBm)	Rel 8 TX (dBm)
Intra-band & Inter-band	CA_2A-4A-5A	Ant 1	2	20	18700	1860	QPSK11#0	4	20	20300	2145	5	10	20600	844	23.58	23.85
	CA_2A-66A-66A	Ant 1	2	20	18700	1860	QPSK11#0	66	20	66886	2155	66	20	67236	2190	23.42	23.85
	CA_4A-4A-5A	Ant 1	4	20	20050	1720	QPSK11#0	4	20	20300	1745	5	10	20600	844	23.15	23.33
	CA_5A-66A-66A	Ant 1	5	10	20450	829	QPSK11#0	66	20	66886	2155	66	20	67236	2190	24.42	24.47

4CC LTE Downlink																					
Configure	CA Configuration	Ant	PCC					SCC			SCC			SCC			Power				
			Band	BW (MHz)	UL Channel	UL Freq. (MHz)	UL Mode (Modulation/RB/Offset)	Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Band	BW (MHz)	DL Channel	DL Freq. (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
Intra-band & Inter-band	CA_2A-2A-4A-4A	Ant 1	2	20	18700	1860	QPSK1RB0	2	20	19100	1900	4	20	20050	1720	4	20	20300	1745	23.85	
	CA_2A-2A-4A-5A	Ant 1	2	20	18700	1860	QPSK1RB0	2	20	19100	1900	4	20	20300	1745	5	10	20600	844	23.58	23.85
	CA_2A-2A-6A-66A	Ant 1	2	20	18700	1860	QPSK1RB0	2	20	19100	1900	5	10	20600	844	66	20	67236	2190	23.61	23.85
	CA_2A-2A-66A-66A	Ant 1	2	20	18700	1860	QPSK1RB0	2	20	19100	1900	66	20	66886	2155	66	20	67236	2190	23.57	23.85
	CA_2A-4A-4A-5A	Ant 1	2	20	18700	1860	QPSK1RB0	4	20	20050	1720	4	20	20300	1745	5	10	20600	844	23.56	23.85
	CA_2A-5A-66A-66A	Ant 1	2	20	18700	1860	QPSK1RB0	5	10	20600	844	66	20	66886	2155	66	20	67236	2190	23.51	23.85
	CA_5A-5A-66A-66A	Ant 1	5	10	20450	829	QPSK1RB0	5	10	20600	844.0	66	20	66886	2155	66	20	67236	2190	24.46	24.47

2.4GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN ANT 8	802.11b 1Mbps	CH 1	2412	20.25	21.00	19.50	98.77
		CH 6	2437	19.65	20.50		
		CH 11	2462	20.31	21.00		
	802.11g 6Mbps	CH 1	2412	18.51	19.50	18.50	98.26
		CH 6	2437	18.30	19.50		
		CH 11	2462	18.55	19.50		
	802.11n-HT20 MCS0	CH 1	2412	18.42	19.50	18.50	98.13
		CH 6	2437	18.08	19.00		
		CH 11	2462	18.48	19.50		
	802.11n-HT40 MCS0	CH 3	2422	18.83	19.50	18.50	94.90
		CH 6	2437	18.79	19.50		
		CH 9	2452	19.25	20.00		

5GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 8	802.11a 6Mbps	CH 36	5180	18.11	19.00	18.50	98.26
		CH 44	5220	18.14	19.00		
		CH 48	5240	17.94	19.00		
	802.11n-HT20 MCS0	CH 36	5180	17.44	18.50	18.00	98.13
		CH 44	5220	17.54	18.50		
		CH 48	5240	17.26	18.00		
	802.11n-HT40 MCS0	CH 38	5190	18.06	19.00	18.00	96.47
		CH 46	5230	17.94	19.00		
	802.11ac-VHT20 MCS0	CH 36	5180	17.40	18.50	18.00	98.13
		CH 44	5220	17.56	18.50		
		CH 48	5240	17.28	18.00		
	802.11ac-VHT40 MCS0	CH 38	5190	18.07	19.00	18.00	96.30
		CH 46	5230	17.94	19.00		
	802.11ac-VHT80 MCS0	CH 42	5210	18.36	19.00	18.00	93.09

5GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN ANT 8	802.11a 6Mbps	CH 149	5745	19.16	20.00	18.50	98.26
		CH 157	5785	19.09	20.00		
		CH 165	5825	19.22	20.00		
	802.11n-HT20 MCS0	CH 149	5745	18.46	19.50	18.00	98.13
		CH 157	5785	18.44	19.50		
		CH 165	5825	18.53	19.50		
	802.11n-HT40 MCS0	CH 151	5755	19.30	20.00	18.00	96.47
		CH 159	5795	19.03	20.00		
	802.11ac-VHT20 MCS0	CH 149	5745	18.50	19.50	18.00	98.13
		CH 157	5785	18.42	19.50		
		CH 165	5825	18.54	19.50		
	802.11ac-VHT40 MCS0	CH 151	5755	19.31	20.00	18.00	96.30
		CH 159	5795	19.03	20.00		
	802.11ac-VHT80 MCS0	CH 155	5775	19.06	20.00	18.00	92.68

Mode	Channel	Frequency (MHz)	1Mbps		2Mbps		3Mbps	
			Average power (dBm)	Tune-up Limit	Average power (dBm)	Tune-up Limit	Average power (dBm)	Tune-up Limit
BR / EDR	CH 00	2402	11.88	13.00	10.44	11.50	10.45	11.50
	CH 39	2441	11.84	13.00	9.72	10.50	9.73	10.50
	CH 78	2480	11.71	13.00	10.57	11.50	10.48	11.50
Duty Cycle %			76.96		77.25		77.28	
Power Setting			Default		Default		Default	

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-up Limit
			GFSK	
LE	CH 00	2402	6.81	8.00
	CH 19	2440	6.43	7.50
	CH 39	2480	8.01	9.00
Duty Cycle %			61.9	
Power Setting			Default	



Reduced Power Level 1 for ANT 1 & ANT 4 & ANT 5 & ANT 6 & ANT 8

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	31.08	31.30	31.48	32.30	22.08	22.30	22.48	23.30	0.45
GPRS 1 Tx slot	31.09	31.32	31.53	32.30	22.09	22.32	22.53	23.30	
GPRS 2 Tx slots	28.11	28.31	28.55	29.30	22.11	22.31	22.55	23.30	0.44
GPRS 3 Tx slots	26.19	26.36	26.62	27.30	21.93	22.10	22.36	23.04	0.43
GPRS 4 Tx slots	24.04	24.29	24.51	25.30	21.04	21.29	21.51	22.30	0.47
EDGE 1 Tx slot	25.65	25.88	26.04	27.00	16.65	16.88	17.04	18.00	0.39
EDGE 2 Tx slots	23.72	23.91	24.09	25.00	17.72	17.91	18.09	19.00	0.37
EDGE 3 Tx slots	21.76	21.97	22.12	23.00	17.50	17.71	17.86	18.74	0.36
EDGE 4 Tx slots	20.11	20.19	20.40	21.00	17.11	17.19	17.40	18.00	0.29
Mode		Max.	31.53			Max.	22.55		
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	27.31	27.49	27.75	28.50	18.31	18.49	18.75	19.50	0.47
GPRS 1 Tx slot	27.33	27.54	27.78	28.50	18.33	18.54	18.78	19.50	
GPRS 2 Tx slots	25.95	26.10	26.24	27.00	19.95	20.10	20.24	21.00	0.29
GPRS 3 Tx slots	23.99	24.12	24.33	25.00	19.73	19.86	20.07	20.74	0.34
GPRS 4 Tx slots	22.94	23.09	23.31	24.00	19.94	20.09	20.31	21.00	0.37
EDGE 1 Tx slot	23.59	23.74	24.02	25.00	14.59	14.74	15.02	16.00	0.43
EDGE 2 Tx slots	22.06	22.21	22.39	23.00	16.06	16.21	16.39	17.00	0.33
EDGE 3 Tx slots	20.17	20.36	20.48	21.00	15.91	16.10	16.22	16.74	0.31
EDGE 4 Tx slots	19.18	19.30	19.45	20.00	16.18	16.30	16.45	17.00	0.27
Mode		Max.	27.78			Max.	20.31		
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	19.49	19.57	19.41	20.50	18.44	18.53	18.66	19.50	22.12	22.15	22.01	23.00
3GPP Rel 5	HSDPA Subtest-1	19.26	18.85	18.69	20.00	18.03	18.20	17.95	19.00	21.24	21.41	21.56	22.50
3GPP Rel 5	HSDPA Subtest-2	19.17	18.92	18.74	20.00	18.05	18.28	17.95	19.00	21.19	21.37	21.60	22.50
3GPP Rel 5	HSDPA Subtest-3	18.70	18.34	18.20	19.50	17.58	17.71	17.52	18.50	20.72	20.80	21.03	22.00
3GPP Rel 5	HSDPA Subtest-4	18.71	18.35	18.17	19.50	17.61	17.82	17.50	18.50	20.73	20.84	21.03	22.00
3GPP Rel 8	DC-HSDPA Subtest-1	19.19	18.93	18.75	20.00	18.12	18.32	18.02	19.00	21.26	21.42	21.59	22.50
3GPP Rel 8	DC-HSDPA Subtest-2	19.24	18.96	18.79	20.00	18.12	18.34	18.06	19.00	21.18	21.44	21.59	22.50
3GPP Rel 8	DC-HSDPA Subtest-3	18.67	18.43	18.33	19.50	17.54	17.76	17.56	18.50	20.72	20.88	21.09	22.00
3GPP Rel 8	DC-HSDPA Subtest-4	18.71	18.44	18.31	19.50	17.59	17.77	17.45	18.50	20.74	20.88	21.06	22.00
3GPP Rel 6	HSUPA Subtest-1	19.32	19.01	18.75	20.00	18.01	18.20	18.01	19.00	21.25	21.41	21.56	22.50
3GPP Rel 6	HSUPA Subtest-2	18.69	18.47	18.26	19.50	17.58	17.66	17.54	18.50	20.70	20.88	21.03	22.00
3GPP Rel 6	HSUPA Subtest-3	19.16	18.88	18.77	20.00	18.08	18.26	17.94	19.00	21.10	21.42	21.53	22.50
3GPP Rel 6	HSUPA Subtest-4	19.26	18.87	18.70	20.00	18.08	18.25	18.01	19.00	21.14	21.41	21.58	22.50
3GPP Rel 6	HSUPA Subtest-5	19.30	18.93	18.73	20.00	18.08	18.23	17.93	19.00	21.20	21.33	21.63	22.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	18.69	18.31	18.23	19.50	17.54	17.75	17.59	18.50	20.68	20.84	21.08	22.00
Attenuator		Cable Loss			0.8	Cable Loss			0.8	Cable Loss			0.6
Mode		Max.			19.57	Max.			18.66	Max.			22.15



Band 2 (1900MHz Band) (dBm)_ANT 4							
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	19.84	19.85	19.75	
20	QPSK	1	49	19.74	19.57	19.65	20.8
20	QPSK	1	99	19.73	19.67	19.52	
20	QPSK	50	0	18.80	18.82	18.71	
20	QPSK	50	24	18.75	18.74	18.69	19.8
20	QPSK	50	50	18.71	18.59	18.54	
20	QPSK	100	0	18.73	18.78	18.64	
20	16QAM	1	0	18.95	18.87	18.81	19.8
20	16QAM	1	49	18.90	18.86	18.87	
20	16QAM	1	99	18.82	18.82	18.86	
20	16QAM	50	0	17.86	17.66	17.70	18.8
20	16QAM	50	24	17.84	17.62	17.67	
20	16QAM	50	50	17.84	17.53	17.56	
20	16QAM	100	0	17.75	17.66	17.66	18.8
20	64QAM	1	0	17.91	17.71	17.62	
20	64QAM	1	49	17.83	17.75	17.71	
20	64QAM	1	99	17.80	17.71	17.66	17.8
20	64QAM	50	0	16.78	16.69	16.71	
20	64QAM	50	24	16.63	16.58	16.57	
20	64QAM	50	50	16.53	16.55	16.58	
20	64QAM	100	0	16.51	16.46	16.55	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	19.80	19.74	19.63	20.8
15	QPSK	1	37	19.60	19.71	19.51	
15	QPSK	1	74	19.59	19.52	19.57	
15	QPSK	36	0	18.88	18.75	18.72	19.8
15	QPSK	36	20	18.87	18.80	18.64	
15	QPSK	36	39	18.77	18.56	18.61	
15	QPSK	75	0	18.65	18.67	18.59	19.8
15	16QAM	1	0	18.89	18.80	18.72	
15	16QAM	1	37	18.84	18.73	18.75	
15	16QAM	1	74	18.80	18.77	18.73	18.8
15	16QAM	36	0	17.74	17.61	17.56	
15	16QAM	36	20	17.76	17.55	17.56	
15	16QAM	36	39	17.72	17.52	17.58	18.8
15	16QAM	75	0	17.79	17.54	17.53	
15	64QAM	1	0	17.84	17.67	17.66	
15	64QAM	1	37	17.83	17.66	17.74	17.8
15	64QAM	1	74	17.69	17.60	17.77	
15	64QAM	36	0	16.82	16.56	16.63	
15	64QAM	36	20	16.73	16.62	16.56	
15	64QAM	36	39	16.62	16.51	16.60	
15	64QAM	75	0	16.69	16.56	16.50	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	19.81	19.74	19.70	20.8
10	QPSK	1	25	19.80	19.65	19.68	
10	QPSK	1	49	19.75	19.63	19.61	
10	QPSK	25	0	18.85	18.82	18.61	19.8
10	QPSK	25	12	18.80	18.66	18.70	
10	QPSK	25	25	18.74	18.58	18.65	
10	QPSK	50	0	18.67	18.60	18.51	19.8
10	16QAM	1	0	18.95	18.86	18.85	
10	16QAM	1	25	18.87	18.69	18.89	
10	16QAM	1	49	18.69	18.83	18.83	18.8
10	16QAM	25	0	17.86	17.61	17.71	
10	16QAM	25	12	17.70	17.52	17.54	
10	16QAM	25	25	17.65	17.63	17.60	18.8
10	16QAM	50	0	17.66	17.60	17.67	
10	64QAM	1	0	17.90	17.61	17.81	
10	64QAM	1	25	17.83	17.53	17.70	17.8
10	64QAM	1	49	17.80	17.55	17.56	
10	64QAM	25	0	16.84	16.63	16.69	
10	64QAM	25	12	16.64	16.52	16.64	
10	64QAM	25	25	16.54	16.60	16.55	
10	64QAM	50	0	16.68	16.56	16.59	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	19.82	19.77	19.68	20.8
5	QPSK	1	12	19.73	19.76	19.68	
5	QPSK	1	24	19.76	19.66	19.53	
5	QPSK	12	0	18.80	18.78	18.83	19.8
5	QPSK	12	7	18.79	18.76	18.67	
5	QPSK	12	13	18.71	18.58	18.52	
5	QPSK	25	0	18.79	18.70	18.58	19.8
5	16QAM	1	0	18.95	18.86	18.80	
5	16QAM	1	12	18.81	18.73	18.68	
5	16QAM	1	24	18.88	18.75	18.71	18.8
5	16QAM	12	0	17.93	17.67	17.81	
5	16QAM	12	7	17.85	17.56	17.56	
5	16QAM	12	13	17.84	17.59	17.61	18.8
5	16QAM	25	0	17.87	17.56	17.50	
5	64QAM	1	0	17.88	17.66	17.75	
5	64QAM	1	12	17.82	17.59	17.77	17.8
5	64QAM	1	24	17.80	17.70	17.53	
5	64QAM	12	0	16.80	16.60	16.61	
5	64QAM	12	7	16.71	16.63	16.64	
5	64QAM	12	13	16.52	16.50	16.62	
5	64QAM	25	0	16.56	16.58	16.51	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	19.78	19.75	19.66	20.8
3	QPSK	1	8	19.60	19.74	19.70	
3	QPSK	1	14	19.70	19.64	19.51	
3	QPSK	8	0	18.85	18.78	18.65	19.8
3	QPSK	8	4	18.70	18.75	18.58	
3	QPSK	8	7	18.75	18.57	18.53	

Band 4 (AWS Band) (dBm)_ANT 4							
Part 27L (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	17.71	17.83	17.80	
20	QPSK	1	49	17.66	17.71	17.52	18.8
20	QPSK	1	99	17.59	17.58	17.50	
20	QPSK	50	0	16.75	16.81	16.60	17.8
20	QPSK	50	24	16.73	16.70	16.72	
20	QPSK	50	50	16.70	16.60	16.45	
20	QPSK	100	0	16.65	16.67	16.61	17.8
20	16QAM	1	0	16.96	17.03	17.00	
20	16QAM	1	49	16.83	16.80	16.91	
20	16QAM	1	99	16.77	16.77	16.71	16.8
20	16QAM	50	0	15.81	15.85	15.71	
20	16QAM	50	24	15.75	15.71	15.55	
20	16QAM	50	50	15.67	15.54	15.52	16.8
20	16QAM	100	0	15.69	15.64	15.75	
20	64QAM	1	0	15.83	15.90	15.84	
20	64QAM	1	49	15.82	15.65	15.79	16.8
20	64QAM	1	99	15.76	15.63	15.75	
20	64QAM	50	0	14.65	14.74	14.64	15.8
20	64QAM	50	24	14.69	14.43	14.59	
20	64QAM	50	50	14.70	14.42	14.65	
20	64QAM	100	0	14.67	14.48	14.49	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	17.69	17.76	17.70	18.8
15	QPSK	1	37	17.60	17.66	17.63	
15	QPSK	1	74	17.65	17.72	17.49	
15	QPSK	36	0	16.80	16.82	16.83	17.8
15	QPSK	36	20	16.73	16.58	16.64	
15	QPSK	36	39	16.74	16.70	16.44	
15	QPSK	75	0	16.72	16.70	16.69	17.8
15	16QAM	1	0	16.96	17.01	16.91	
15	16QAM	1	37	16.85	16.85	16.82	
15	16QAM	1	74	16.82	16.84	16.89	16.8
15	16QAM	36	0	15.81	15.84	15.74	
15	16QAM	36	20	15.78	15.69	15.73	
15	16QAM	36	39	15.82	15.48	15.52	16.8
15	16QAM	75	0	15.67	15.54	15.51	
15	64QAM	1	0	15.86	15.89	15.67	
15	64QAM	1	37	15.85	15.72	15.63	16.8
15	64QAM	1	74	15.71	15.62	15.73	
15	64QAM	36	0	14.74	14.76	14.57	15.8
15	64QAM	36	20	14.70	14.57	14.64	
15	64QAM	36	39	14.76	14.43	14.62	
15	64QAM	75	0	14.55	14.55	14.61	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	17.75	17.80	17.65	18.8
10	QPSK	1	25	17.70	17.65	17.57	
10	QPSK	1	49	17.63	17.51	17.52	
10	QPSK	25	0	16.71	16.72	16.69	17.8
10	QPSK	25	12	16.64	16.62	16.64	
10	QPSK	25	25	16.65	16.47	16.50	
10	QPSK	50	0	16.55	16.59	16.57	17.8
10	16QAM	1	0	16.86	16.87	16.77	
10	16QAM	1	25	16.80	16.64	16.73	
10	16QAM	1	49	16.74	16.72	16.70	16.8
10	16QAM	25	0	15.80	15.83	15.78	
10	16QAM	25	12	15.75	15.60	15.67	
10	16QAM	25	25	15.62	15.62	15.43	16.8
10	16QAM	50	0	15.63	15.83	15.62	
10	64QAM	1	0	15.80	15.77	15.72	
10	64QAM	1	25	15.72	15.60	15.66	16.8
10	64QAM	1	49	15.65	15.65	15.69	
10	64QAM	25	0	14.81	14.82	14.71	
10	64QAM	25	12	14.70	14.48	14.58	15.8
10	64QAM	25	25	14.59	14.49	14.43	
10	64QAM	50	0	14.62	14.42	14.56	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	17.73	17.77	17.75	18.8
5	QPSK	1	12	17.70	17.69	17.57	
5	QPSK	1	24	17.55	17.71	17.60	
5	QPSK	12	0	16.69	16.76	16.74	17.8
5	QPSK	12	7	16.66	16.71	16.55	
5	QPSK	12	13	16.65	16.69	16.51	
5	QPSK	25	0	16.60	16.65	16.63	17.8
5	16QAM	1	0	16.72	16.86	16.84	
5	16QAM	1	12	16.70	16.83	16.76	
5	16QAM	1	24	16.66	16.71	16.60	16.8
5	16QAM	12	0	15.72	15.70	15.65	
5	16QAM	12	7	15.65	15.69	15.63	
5	16QAM	12	13	15.59	15.60	15.59	16.8
5	16QAM	25	0	15.76	15.57	15.65	
5	64QAM	1	0	15.72	15.84	15.70	
5	64QAM	1	12	15.75	15.74	15.75	15.8
5	64QAM	1	24	15.73	15.70	15.74	
5	64QAM	12	0	14.68	14.75	14.62	
5	64QAM	12	7	14.74	14.43	14.48	15.8
5	64QAM	12	13	14.59	14.46	14.57	
5	64QAM	25	0	14.56	14.45	14.59	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	17.67	17.78	17.72	18.8
3	QPSK	1	8	17.72	17.77	17.68	
3	QPSK	1	14	17.59	17.72	17.61	
3	QPSK	8	0	16.66	16.83	16.68	17.8
3	QPSK	8	4	16.65	16.58	16.71	
3	QPSK	8	7	16.68	16.48	16.51	



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3	QPSK	15	0	18.72	18.64	18.59	19.8
3	16QAM	1	0	18.96	18.85	18.82	
3	16QAM	1	8	18.81	18.80	18.73	
3	16QAM	1	14	18.77	18.76	18.74	18.8
3	16QAM	8	0	17.88	17.70	17.58	
3	16QAM	8	4	17.85	17.59	17.58	
3	16QAM	8	7	17.66	17.63	17.62	18.8
3	16QAM	15	0	17.76	17.58	17.53	
3	64QAM	1	0	17.85	17.76	17.64	
3	64QAM	1	8	17.75	17.61	17.63	17.8
3	64QAM	1	14	17.80	17.67	17.76	
3	64QAM	8	0	16.85	16.65	16.57	
3	64QAM	8	4	16.77	16.57	16.66	17.8
3	64QAM	8	7	16.58	16.59	16.55	
3	64QAM	15	0	16.68	16.51	16.61	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	19.79	19.76	19.71	20.8
1.4	QPSK	1	3	19.76	19.71	19.62	
1.4	QPSK	1	5	19.68	19.50	19.58	
1.4	QPSK	3	0	18.89	18.73	18.76	
1.4	QPSK	3	1	18.88	18.57	18.60	
1.4	QPSK	3	3	18.78	18.55	18.56	
1.4	QPSK	6	0	18.74	18.65	18.66	19.8
1.4	16QAM	1	0	18.97	18.96	18.88	19.8
1.4	16QAM	1	3	18.90	18.90	18.80	
1.4	16QAM	1	5	18.84	18.95	18.85	
1.4	16QAM	3	0	17.78	17.67	17.63	
1.4	16QAM	3	1	17.72	17.58	17.65	
1.4	16QAM	3	3	17.73	17.64	17.52	
1.4	16QAM	6	0	17.64	17.52	17.46	18.8
1.4	64QAM	1	0	17.85	17.72	17.70	18.8
1.4	64QAM	1	3	17.84	17.72	17.74	
1.4	64QAM	1	5	17.72	17.46	17.61	
1.4	64QAM	3	0	16.89	16.66	16.67	
1.4	64QAM	3	1	16.68	16.57	16.55	
1.4	64QAM	3	3	16.58	16.50	16.52	
1.4	64QAM	6	0	16.56	16.51	16.52	17.8

3	QPSK	15	0	16.61	16.60	16.48	17.8
3	16QAM	1	0	16.83	16.86	16.81	
3	16QAM	1	8	16.71	16.80	16.79	
3	16QAM	1	14	16.60	16.72	16.69	16.8
3	16QAM	8	0	15.73	15.63	15.74	
3	16QAM	8	4	15.68	15.62	15.50	
3	16QAM	8	7	15.64	15.54	15.50	16.8
3	16QAM	15	0	15.57	15.60	15.50	
3	64QAM	1	0	15.66	15.79	15.78	
3	64QAM	1	8	15.62	15.60	15.71	15.8
3	64QAM	1	14	15.65	15.62	15.67	
3	64QAM	8	0	14.77	14.80	14.56	
3	64QAM	8	4	14.74	14.49	14.52	15.8
3	64QAM	8	7	14.72	14.55	14.48	
3	64QAM	15	0	14.58	14.48	14.55	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	17.65	17.76	17.74	18.8
1.4	QPSK	1	3	17.65	17.62	17.57	
1.4	QPSK	1	5	17.63	17.63	17.47	
1.4	QPSK	3	0	16.72	16.74	16.70	
1.4	QPSK	3	1	16.68	16.63	16.56	
1.4	QPSK	3	3	16.65	16.69	16.61	
1.4	QPSK	6	0	16.74	16.66	16.61	17.8
1.4	16QAM	1	0	16.87	16.89	16.80	17.8
1.4	16QAM	1	3	16.66	16.85	16.83	
1.4	16QAM	1	5	16.59	16.73	16.69	
1.4	16QAM	3	0	15.72	15.79	15.75	
1.4	16QAM	3	1	15.70	15.53	15.64	
1.4	16QAM	3	3	15.74	15.55	15.41	
1.4	16QAM	6	0	15.76	15.82	15.57	16.8
1.4	64QAM	1	0	15.80	15.70	15.77	16.8
1.4	64QAM	1	3	15.72	15.54	15.63	
1.4	64QAM	1	5	15.75	15.55	15.53	
1.4	64QAM	3	0	14.78	14.82	14.72	
1.4	64QAM	3	1	14.71	14.63	14.69	
1.4	64QAM	3	3	14.61	14.45	14.55	
1.4	64QAM	6	0	14.56	14.31	14.54	15.8



Band 5 (Cellular Band) (dBm)_ANT 1 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	22.95	22.97	22.86	23.8
10	QPSK	1	25	22.83	22.86	22.65	
10	QPSK	1	49	22.80	22.77	22.76	
10	QPSK	25	0	21.85	21.88	21.75	22.8
10	QPSK	25	12	21.82	21.66	21.69	
10	QPSK	25	25	21.66	21.56	21.67	
10	QPSK	50	0	21.71	21.74	21.72	22.8
10	16QAM	1	0	22.01	22.04	22.05	
10	16QAM	1	25	21.89	21.99	21.99	
10	16QAM	1	49	21.95	22.02	21.98	21.8
10	16QAM	25	0	20.83	20.88	20.81	
10	16QAM	25	12	20.81	20.71	20.67	
10	16QAM	25	25	20.74	20.69	20.55	21.8
10	16QAM	50	0	20.83	20.80	20.65	
10	64QAM	1	0	20.90	20.93	20.84	
10	64QAM	1	25	20.86	20.76	20.82	21.8
10	64QAM	1	49	20.86	20.79	20.77	
10	64QAM	25	0	19.67	19.72	19.81	
10	64QAM	25	12	19.78	19.56	19.71	20.8
10	64QAM	25	25	19.69	19.47	19.73	
10	64QAM	50	0	19.60	19.57	19.55	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	22.88	22.94	22.83	23.8
5	QPSK	1	12	22.81	22.75	22.72	
5	QPSK	1	24	22.73	22.79	22.73	
5	QPSK	12	0	21.85	21.90	21.89	22.8
5	QPSK	12	7	21.86	21.87	21.85	
5	QPSK	12	13	21.69	21.78	21.71	
5	QPSK	25	0	21.88	21.79	21.72	22.8
5	16QAM	1	0	21.90	21.95	21.89	
5	16QAM	1	12	21.77	21.92	21.89	
5	16QAM	1	24	21.82	21.84	21.81	21.8
5	16QAM	12	0	20.83	20.84	20.68	
5	16QAM	12	7	20.80	20.67	20.60	
5	16QAM	12	13	20.69	20.72	20.65	21.8
5	16QAM	25	0	20.73	20.73	20.62	
5	64QAM	1	0	20.86	20.90	20.81	
5	64QAM	1	12	20.87	20.83	20.80	21.8
5	64QAM	1	24	20.86	20.57	20.81	
5	64QAM	12	0	19.82	19.80	19.75	
5	64QAM	12	7	19.76	19.67	19.61	20.8
5	64QAM	12	13	19.75	19.48	19.74	
5	64QAM	25	0	19.52	19.61	19.57	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.86	22.89	22.85	23.8
3	QPSK	1	8	22.83	22.80	22.60	
3	QPSK	1	14	22.66	22.59	22.59	
3	QPSK	8	0	21.80	21.85	21.81	22.8
3	QPSK	8	4	21.84	21.79	21.76	
3	QPSK	8	7	21.79	21.68	21.57	
3	QPSK	15	0	21.69	21.68	21.61	22.8
3	16QAM	1	0	22.06	22.10	22.06	
3	16QAM	1	8	22.00	22.05	21.98	
3	16QAM	1	14	21.98	21.83	21.83	21.8
3	16QAM	8	0	20.83	20.90	20.76	
3	16QAM	8	4	20.70	20.78	20.59	
3	16QAM	8	7	20.78	20.71	20.57	21.8
3	16QAM	15	0	20.76	20.77	20.77	
3	64QAM	1	0	20.76	20.75	20.88	
3	64QAM	1	8	20.74	20.66	20.79	21.8
3	64QAM	1	14	20.80	20.79	20.74	
3	64QAM	8	0	19.66	19.74	19.77	
3	64QAM	8	4	19.73	19.64	19.81	20.8
3	64QAM	8	7	19.76	19.62	19.61	
3	64QAM	15	0	19.73	19.64	19.76	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	22.82	22.88	22.77	23.8
1.4	QPSK	1	3	22.74	22.79	22.60	
1.4	QPSK	1	5	22.80	22.73	22.55	
1.4	QPSK	3	0	21.82	21.85	21.81	22.8
1.4	QPSK	3	1	21.83	21.70	21.68	
1.4	QPSK	3	3	21.68	21.67	21.58	
1.4	QPSK	6	0	21.74	21.80	21.62	22.8
1.4	16QAM	1	0	22.00	22.08	21.97	
1.4	16QAM	1	3	22.04	21.92	21.98	
1.4	16QAM	1	5	22.02	21.85	21.82	22.8
1.4	16QAM	3	0	20.82	20.83	20.83	
1.4	16QAM	3	1	20.68	20.72	20.83	
1.4	16QAM	3	3	20.78	20.72	20.50	21.8
1.4	16QAM	6	0	20.85	20.58	20.67	
1.4	64QAM	1	0	20.91	20.70	20.71	
1.4	64QAM	1	3	20.79	20.75	20.75	21.8
1.4	64QAM	1	5	20.76	20.75	20.76	
1.4	64QAM	3	0	19.80	19.78	19.68	
1.4	64QAM	3	1	19.59	19.59	19.57	20.8
1.4	64QAM	3	3	19.57	19.63	19.72	
1.4	64QAM	6	0	19.73	19.47	19.59	

Band 7 (2600MHz Band) (dBm)_ANT 5							
Part 27							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	20.22	20.35	20.30	21.3
20	QPSK	1	49	20.21	20.29	20.21	
20	QPSK	1	99	20.01	20.21	20.13	
20	QPSK	50	0	19.21	19.29	19.24	
20	QPSK	50	24	19.15	19.20	19.24	
20	QPSK	50	50	19.16	19.06	19.13	
20	QPSK	100	0	19.22	19.24	19.19	
20	16QAM	1	0	19.21	19.40	19.35	
20	16QAM	1	49	19.24	19.32	19.30	
20	16QAM	1	99	19.23	19.27	19.26	20.3
20	16QAM	50	0	18.29	18.35	18.23	
20	16QAM	50	24	18.19	18.11	18.09	
20	16QAM	50	50	18.13	17.98	18.05	19.3
20	16QAM	100	0	18.26	18.31	18.06	
20	64QAM	1	0	18.20	18.15	18.12	
20	64QAM	1	49	18.16	18.22	18.19	19.3
20	64QAM	1	99	18.06	18.06	18.10	
20	64QAM	50	0	17.05	17.11	17.27	
20	64QAM	50	24	17.19	17.02	17.05	
20	64QAM	50	50	17.16	16.99	17.03	
20	64QAM	100	0	17.04	17.05	17.16	18.3
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	Tune-up limit (dBm)
15	QPSK	1	0	20.26	20.32	20.27	21.3
15	QPSK	1	37	20.24	20.09	20.01	
15	QPSK	1	74	20.01	20.18	20.11	
15	QPSK	36	0	19.22	19.34	19.15	20.3
15	QPSK	36	20	19.20	19.12	19.21	
15	QPSK	36	39	19.16	19.02	19.02	
15	QPSK	75	0	19.14	19.18	19.15	20.3
15	16QAM	1	0	19.42	19.45	19.44	
15	16QAM	1	37	19.39	19.29	19.30	
15	16QAM	1	74	19.43	19.20	19.25	19.3
15	16QAM	36	0	18.16	18.22	18.20	
15	16QAM	36	20	18.13	18.11	18.14	
15	16QAM	36	39	18.17	18.08	18.03	19.3
15	16QAM	75	0	18.07	18.04	18.08	
15	64QAM	1	0	18.16	18.37	18.20	
15	64QAM	1	37	18.14	18.25	18.30	19.3
15	64QAM	1	74	18.10	18.15	18.25	
15	64QAM	36	0	17.17	17.28	17.27	18.3
15	64QAM	36	20	17.05	17.09	17.16	
15	64QAM	36	39	17.15	17.07	17.06	
15	64QAM	75	0	17.06	17.04	17.10	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	20.24	20.30	20.25	21.3
10	QPSK	1	25	20.21	20.22	20.20	
10	QPSK	1	49	20.12	20.11	20.02	
10	QPSK	25	0	19.20	19.27	19.12	20.3
10	QPSK	25	12	19.15	19.19	19.11	
10	QPSK	25	25	19.15	19.14	19.12	
10	QPSK	50	0	19.12	19.19	19.04	20.3
10	16QAM	1	0	19.32	19.43	19.35	
10	16QAM	1	25	19.42	19.40	19.35	
10	16QAM	1	49	19.34	19.22	19.30	19.3
10	16QAM	25	0	18.27	18.33	18.28	
10	16QAM	25	12	18.23	18.20	18.13	
10	16QAM	25	25	18.14	18.03	18.01	19.3
10	16QAM	50	0	18.08	18.13	18.05	
10	64QAM	1	0	18.25	18.26	18.16	
10	64QAM	1	25	18.21	18.16	18.14	19.3
10	64QAM	1	49	18.15	18.03	18.15	
10	64QAM	25	0	17.15	17.23	17.19	18.3
10	64QAM	25	12	17.22	17.08	17.06	
10	64QAM	25	25	17.10	16.99	17.04	
10	64QAM	50	0	17.14	17.10	17.09	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	20.21	20.29	20.23	21.3
5	QPSK	1	12	20.12	20.22	20.18	
5	QPSK	1	24	20.17	20.13	20.05	
5	QPSK	12	0	19.19	19.24	19.15	20.3
5	QPSK	12	7	19.14	19.09	19.16	
5	QPSK	12	13	19.22	19.20	19.12	
5	QPSK	25	0	19.09	19.12	19.15	20.3
5	16QAM	1	0	19.36	19.42	19.37	
5	16QAM	1	12	19.34	19.31	19.28	
5	16QAM	1	24	19.31	19.34	19.32	19.3
5	16QAM	12	0	18.18	18.23	18.17	
5	16QAM	12	7	18.20	18.10	18.14	
5	16QAM	12	13	18.04	18.08	18.06	19.3
5	16QAM	25	0	18.09	18.07	18.02	
5	64QAM	1	0	18.18	18.27	18.12	
5	64QAM	1	12	18.20	18.19	18.19	19.3
5	64QAM	1	24	18.23	18.05	18.18	
5	64QAM	12	0	17.10	17.20	17.09	18.3
5	64QAM	12	7	17.02	17.03	17.06	
5	64QAM	12	13	17.03	17.00	17.04	
5	64QAM	25	0	17.01	17.07	17.06	



Band 12 (700MHz Low Band) (dBm)_ANT 1 Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23090	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	22.82	22.90	22.83	23.8
10	QPSK	1	25	22.64	22.77	22.70	
10	QPSK	1	49	22.66	22.76	22.72	
10	QPSK	25	0	21.75	21.88	21.80	22.8
10	QPSK	25	12	21.80	21.83	21.85	
10	QPSK	25	25	21.66	21.73	21.76	
10	QPSK	50	0	21.63	21.83	21.74	22.8
10	16QAM	1	0	21.87	21.95	21.90	
10	16QAM	1	25	21.81	21.93	21.87	
10	16QAM	1	49	21.84	21.83	21.93	21.8
10	16QAM	25	0	20.63	20.88	20.67	
10	16QAM	25	12	20.65	20.70	20.60	
10	16QAM	25	25	20.60	20.58	20.59	21.8
10	16QAM	50	0	20.65	20.62	20.74	
10	64QAM	1	0	20.87	20.89	20.85	
10	64QAM	1	25	20.75	20.64	20.77	21.8
10	64QAM	1	49	20.67	20.70	20.77	
10	64QAM	25	0	19.73	19.86	19.84	
10	64QAM	25	12	19.51	19.62	19.72	20.8
10	64QAM	25	25	19.55	19.52	19.56	
10	64QAM	50	0	19.66	19.63	19.64	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.84	22.86	22.79	23.8
5	QPSK	1	12	22.83	22.81	22.64	
5	QPSK	1	24	22.75	22.61	22.62	
5	QPSK	12	0	21.79	21.85	21.84	22.8
5	QPSK	12	7	21.69	21.76	21.75	
5	QPSK	12	13	21.59	21.78	21.69	
5	QPSK	25	0	21.68	21.72	21.66	22.8
5	16QAM	1	0	21.92	21.99	21.94	
5	16QAM	1	12	21.88	21.95	21.90	
5	16QAM	1	24	21.93	21.80	21.95	21.8
5	16QAM	12	0	20.75	20.86	20.75	
5	16QAM	12	7	20.81	20.63	20.59	
5	16QAM	12	13	20.54	20.50	20.52	21.8
5	16QAM	25	0	20.75	20.69	20.63	
5	64QAM	1	0	20.85	20.87	20.76	
5	64QAM	1	12	20.65	20.82	20.69	21.8
5	64QAM	1	24	20.62	20.65	20.71	
5	64QAM	12	0	19.78	19.79	19.67	
5	64QAM	12	7	19.66	19.65	19.70	20.8
5	64QAM	12	13	19.55	19.52	19.56	
5	64QAM	25	0	19.56	19.65	19.60	
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.81	22.87	22.80	23.8
3	QPSK	1	8	22.65	22.66	22.77	
3	QPSK	1	14	22.63	22.67	22.64	
3	QPSK	8	0	21.77	21.91	21.70	22.8
3	QPSK	8	4	21.85	21.68	21.81	
3	QPSK	8	7	21.62	21.58	21.57	
3	QPSK	15	0	21.73	21.68	21.69	22.8
3	16QAM	1	0	21.88	21.96	21.93	
3	16QAM	1	8	21.91	21.89	21.86	
3	16QAM	1	14	21.86	21.90	21.85	21.8
3	16QAM	8	0	20.68	20.85	20.70	
3	16QAM	8	4	20.83	20.76	20.77	
3	16QAM	8	7	20.73	20.51	20.63	21.8
3	16QAM	15	0	20.58	20.71	20.56	
3	64QAM	1	0	20.87	20.91	20.79	
3	64QAM	1	8	20.81	20.82	20.89	21.8
3	64QAM	1	14	20.73	20.79	20.68	
3	64QAM	8	0	19.79	19.85	19.70	
3	64QAM	8	4	19.68	19.70	19.63	20.8
3	64QAM	8	7	19.57	19.59	19.68	
3	64QAM	15	0	19.53	19.66	19.70	
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	22.72	22.85	22.80	23.8
1.4	QPSK	1	3	22.69	22.68	22.79	
1.4	QPSK	1	5	22.61	22.63	22.61	
1.4	QPSK	3	0	21.80	21.83	21.79	22.8
1.4	QPSK	3	1	21.65	21.79	21.64	
1.4	QPSK	3	3	21.63	21.61	21.73	
1.4	QPSK	6	0	21.62	21.79	21.62	22.8
1.4	16QAM	1	0	21.96	21.98	21.88	
1.4	16QAM	1	3	21.92	21.90	21.90	
1.4	16QAM	1	5	21.93	21.86	21.79	22.8
1.4	16QAM	3	0	20.85	20.92	20.66	
1.4	16QAM	3	1	20.58	20.79	20.69	
1.4	16QAM	3	3	20.63	20.68	20.58	21.8
1.4	16QAM	6	0	20.78	20.69	20.57	
1.4	64QAM	1	0	20.87	20.90	20.72	
1.4	64QAM	1	3	20.86	20.65	20.79	21.8
1.4	64QAM	1	5	20.72	20.62	20.88	
1.4	64QAM	3	0	19.56	19.59	19.73	
1.4	64QAM	3	1	19.59	19.64	19.63	20.8
1.4	64QAM	3	3	19.54	19.51	19.73	
1.4	64QAM	6	0	20.64	20.67	20.67	

Band 13(700MHz Band) (dBm)_ANT 1 Part 27F							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		23.19		24.3
10	QPSK	1	25		23.14		
10	QPSK	1	49		23.09		
10	QPSK	25	0		22.28		23.3
10	QPSK	25	12		22.24		
10	QPSK	25	25		22.19		
10	QPSK	50	0		22.20		23.3
10	16QAM	1	0		22.36		
10	16QAM	1	25		22.29		
10	16QAM	1	49		22.31		22.3
10	16QAM	25	0		21.35		
10	16QAM	25	12		21.32		
10	16QAM	25	25		21.18		22.3
10	16QAM	50	0		21.17		
10	64QAM	1	0		21.39		
10	64QAM	1	25		21.31		22.3
10	64QAM	1	49		21.27		
10	64QAM	25	0		20.22		
10	64QAM	25	12		20.15		21.3
10	64QAM	25	25		20.05		
10	64QAM	50	0		20.16		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	23.12	23.16	23.09	24.3
5	QPSK	1	12	23.11	23.14	23.10	
5	QPSK	1	24	23.07	23.00	23.02	
5	QPSK	12	0	22.28	22.31	22.23	23.3
5	QPSK	12	7	22.16	22.26	22.12	
5	QPSK	12	13	22.02	22.10	22.10	
5	QPSK	25	0	22.21	22.21	22.09	23.3
5	16QAM	1	0	22.28	22.34	22.33	
5	16QAM	1	12	22.22	22.32	22.22	
5	16QAM	1	24	22.21	22.28	22.23	23.3
5	16QAM	12	0	21.18	21.25	21.16	
5	16QAM	12	7	21.08	21.14	21.19	
5	16QAM	12	13	21.03	21.13	21.08	22.3
5	16QAM	25	0	21.15	21.16	21.12	
5	64QAM	1	0	21.26	21.32	21.18	
5	64QAM	1	12	21.17	21.19	21.22	22.3
5	64QAM	1	24	21.20	21.04	21.07	
5	64QAM	12	0	20.22	20.25	20.09	
5	64QAM	12	7	20.01	20.12	20.06	21.3
5	64QAM	12	13	20.00	19.99	20.03	
5	64QAM	25	0	20.09	20.04	20.15	



Band 14 (700MHz Band) (dBm)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23330			Tune-up limit (dBm)
Frequency (MHz)				793			
10	QPSK	1	0		22.11		23
10	QPSK	1	25		22.09		
10	QPSK	1	49		22.05		
10	QPSK	25	0		21.24		22
10	QPSK	25	12		21.20		
10	QPSK	25	25		21.11		
10	QPSK	50	0		21.06		22
10	16QAM	1	0		21.03		
10	16QAM	1	25		21.30		
10	16QAM	1	49		21.10		21
10	16QAM	25	0		19.99		
10	16QAM	25	12		19.96		
10	16QAM	25	25		20.04		21
10	16QAM	50	0		19.98		
10	64QAM	1	0		20.21		
10	64QAM	1	25		19.99		21
10	64QAM	1	49		19.96		
10	64QAM	25	0		20.04		
10	64QAM	25	12		19.99		21
10	64QAM	25	25		20.04		
10	64QAM	50	0		20.01		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	21.82	21.83	21.75	23
5	QPSK	1	12	21.78	21.78	21.71	
5	QPSK	1	24	21.68	21.75	21.49	
5	QPSK	12	0	20.90	20.96	20.72	22
5	QPSK	12	7	20.94	20.92	20.87	
5	QPSK	12	13	20.80	20.82	20.79	
5	QPSK	25	0	20.84	20.82	20.87	22
5	16QAM	1	0	20.98	20.89	20.84	
5	16QAM	1	12	20.97	21.17	21.03	
5	16QAM	1	24	20.96	20.93	20.89	21
5	16QAM	12	0	19.89	19.85	19.76	
5	16QAM	12	7	19.83	19.82	19.74	
5	16QAM	12	13	19.88	19.87	19.81	21
5	16QAM	25	0	19.97	19.78	19.75	
5	64QAM	1	0	19.83	19.90	19.83	
5	64QAM	1	12	19.66	19.73	19.75	21
5	64QAM	1	24	19.86	19.62	19.78	
5	64QAM	12	0	19.79	19.75	19.68	
5	64QAM	12	7	19.90	19.69	19.73	21
5	64QAM	12	13	19.70	19.70	19.64	
5	64QAM	25	0	19.88	19.86	19.89	

Band 17 (700MHz Band) (dBm) Part 27H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	Tune-up limit (dBm)
Frequency (MHz)				709	710	711	
10	QPSK	1	0	22.75	22.77	22.62	23.8
10	QPSK	1	25	22.74	22.76	22.72	
10	QPSK	1	49	22.65	22.73	22.75	
10	QPSK	25	0	21.85	21.86	21.84	22.8
10	QPSK	25	12	21.82	21.81	21.81	
10	QPSK	25	25	21.83	21.77	21.78	
10	QPSK	50	0	21.84	21.82	21.82	22.8
10	16QAM	1	0	21.96	22.12	21.79	
10	16QAM	1	25	21.78	21.84	21.89	
10	16QAM	1	49	21.92	21.98	22.00	21.8
10	16QAM	25	0	20.85	20.89	20.77	
10	16QAM	25	12	20.91	20.93	20.92	
10	16QAM	25	25	20.93	20.87	20.86	21.8
10	16QAM	50	0	20.78	20.82	20.83	
10	64QAM	1	0	20.83	21.02	20.91	
10	64QAM	1	25	21.06	21.10	20.97	21.8
10	64QAM	1	49	20.91	20.90	20.88	
10	64QAM	25	0	20.79	20.91	20.80	
10	64QAM	25	12	20.78	20.85	20.82	21.8
10	64QAM	25	25	20.86	20.89	20.85	
10	64QAM	50	0	20.82	20.78	20.83	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	22.74	22.75	22.61	23.8
5	QPSK	1	12	22.67	22.70	22.71	
5	QPSK	1	24	22.62	22.66	22.69	
5	QPSK	12	0	21.78	21.81	21.81	22.8
5	QPSK	12	7	21.73	21.71	21.73	
5	QPSK	12	13	21.73	21.70	21.76	
5	QPSK	25	0	21.79	21.75	21.77	22.8
5	16QAM	1	0	21.93	22.02	21.72	
5	16QAM	1	12	21.77	21.77	21.79	
5	16QAM	1	24	21.83	21.91	21.90	21.8
5	16QAM	12	0	20.82	20.85	20.70	
5	16QAM	12	7	20.83	20.84	20.88	
5	16QAM	12	13	20.92	20.83	20.78	21.8
5	16QAM	25	0	20.74	20.81	20.74	
5	64QAM	1	0	20.80	21.01	20.87	
5	64QAM	1	12	21.05	21.05	20.89	21.8
5	64QAM	1	24	20.83	20.89	20.84	
5	64QAM	12	0	20.69	20.84	20.70	
5	64QAM	12	7	20.69	20.80	20.79	21.8
5	64QAM	12	13	20.83	20.85	20.76	
5	64QAM	25	0	20.73	20.77	20.81	



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	19.95	19.97	19.90	21
20	QPSK	1	49	19.94	19.96	19.89	
20	QPSK	1	99	19.86	19.93	19.90	
20	QPSK	50	0	19.00	19.12	19.01	20
20	QPSK	50	24	19.04	18.98	18.96	
20	QPSK	50	50	19.01	19.04	18.97	
20	QPSK	100	0	19.04	19.05	18.94	20
20	16QAM	1	0	19.31	19.22	19.05	
20	16QAM	1	49	19.19	19.28	19.23	
20	16QAM	1	99	19.29	19.06	19.33	19
20	16QAM	50	0	18.12	18.07	18.11	
20	16QAM	50	24	18.21	18.06	18.05	
20	16QAM	50	50	18.08	18.11	18.13	19
20	16QAM	100	0	18.06	18.08	18.04	
20	64QAM	1	0	18.16	18.30	18.25	
20	64QAM	1	49	18.19	18.23	18.13	19
20	64QAM	1	99	18.29	18.17	17.99	
20	64QAM	50	0	18.14	18.03	18.03	
20	64QAM	50	24	17.97	17.98	18.05	19
20	64QAM	50	50	18.10	18.03	18.08	
20	64QAM	100	0	18.02	18.05	18.04	
Channel				26115	26365	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	QPSK	1	0	19.87	19.92	19.83	21
15	QPSK	1	37	19.91	19.92	19.86	
15	QPSK	1	74	19.77	19.92	19.89	
15	QPSK	36	0	18.96	19.02	18.91	20
15	QPSK	36	20	19.10	18.91	18.92	
15	QPSK	36	39	19.00	18.97	18.88	
15	QPSK	75	0	18.99	18.97	18.84	20
15	16QAM	1	0	19.27	19.16	18.99	
15	16QAM	1	37	19.26	19.38	19.18	
15	16QAM	1	74	19.31	19.46	19.32	19
15	16QAM	36	0	18.11	17.98	18.05	
15	16QAM	36	20	18.17	17.97	17.97	
15	16QAM	36	39	18.04	18.09	18.11	19
15	16QAM	75	0	17.96	18.04	18.03	
15	64QAM	1	0	18.13	18.29	18.20	
15	64QAM	1	37	18.13	18.13	18.08	19
15	64QAM	1	74	18.27	18.12	17.93	
15	64QAM	36	0	18.11	17.93	17.96	
15	64QAM	36	20	17.88	17.95	17.98	19
15	64QAM	36	39	18.06	18.01	18.00	
15	64QAM	75	0	17.96	18.02	18.03	
Channel				26090	26365	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	QPSK	1	0	19.94	19.95	19.88	21
10	QPSK	1	25	19.87	19.91	19.83	
10	QPSK	1	49	19.78	19.92	19.82	
10	QPSK	25	0	18.94	19.11	18.96	20
10	QPSK	25	12	19.02	18.89	18.95	
10	QPSK	25	25	18.92	19.02	18.90	
10	QPSK	50	0	18.95	19.01	18.88	20
10	16QAM	1	0	19.25	19.17	18.98	
10	16QAM	1	25	19.25	19.42	19.22	
10	16QAM	1	49	19.27	19.47	19.28	19
10	16QAM	25	0	18.04	18.03	18.06	
10	16QAM	25	12	18.13	17.99	18.01	
10	16QAM	25	25	18.07	18.02	18.09	19
10	16QAM	50	0	18.05	18.02	17.95	
10	64QAM	1	0	18.06	18.21	18.23	
10	64QAM	1	25	18.17	18.22	18.11	19
10	64QAM	1	49	18.24	18.10	17.89	
10	64QAM	25	0	18.13	17.93	17.94	
10	64QAM	25	12	17.89	17.95	17.99	19
10	64QAM	25	25	18.06	18.01	18.02	
10	64QAM	50	0	17.95	17.96	18.02	
Channel				26065	26365	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	QPSK	1	0	19.93	19.93	19.84	21
5	QPSK	1	12	19.84	19.86	19.88	
5	QPSK	1	24	19.85	19.91	19.81	
5	QPSK	12	0	18.91	19.07	18.95	20
5	QPSK	12	7	19.05	18.93	18.87	
5	QPSK	12	13	18.98	18.98	18.87	
5	QPSK	25	0	19.02	19.01	18.86	20
5	16QAM	1	0	19.21	19.20	19.01	
5	16QAM	1	12	19.24	19.40	19.21	
5	16QAM	1	24	19.29	19.40	19.25	19
5	16QAM	12	0	18.10	18.00	18.07	
5	16QAM	12	7	18.11	18.01	17.97	
5	16QAM	12	13	18.03	18.03	18.09	19
5	16QAM	25	0	17.97	17.99	17.95	
5	64QAM	1	0	18.07	18.27	18.19	
5	64QAM	1	12	18.10	18.18	18.08	19
5	64QAM	1	24	18.26	18.14	17.95	
5	64QAM	12	0	18.12	18.02	18.00	
5	64QAM	12	7	17.94	17.91	17.99	19
5	64QAM	12	13	18.06	17.94	18.07	
5	64QAM	25	0	18.01	18.02	17.95	
Channel				26055	26365	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1882.5	1913.5	
3	QPSK	1	0	19.84	19.94	19.80	21
3	QPSK	1	8	19.88	19.93	19.84	
3	QPSK	1	14	19.80	19.83	19.81	
3	QPSK	8	0	18.93	19.05	18.97	20
3	QPSK	8	4	19.01	18.95	18.94	
3	QPSK	8	7	18.97	18.96	18.94	

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	21.09	21.10	21.05	22
15	QPSK	1	37	21.07	21.01	21.08	
15	QPSK	1	74	21.06	21.08	20.75	
15	QPSK	36	0	20.18	20.21	20.12	21
15	QPSK	36	20	20.14	20.18	20.04	
15	QPSK	36	39	20.19	20.20	20.14	
15	QPSK	75	0	20.16	20.10	20.07	21
15	16QAM	1	0	20.18	20.02	20.16	
15	16QAM	1	37	20.02	20.05	20.03	
15	16QAM	1	74	19.89	19.99	19.94	20
15	16QAM	36	0	19.15	19.16	19.09	
15	16QAM	36	20	18.88	19.09	19.08	
15	16QAM	36	39	19.14	19.17	19.15	20
15	16QAM	75	0	19.20	19.19	19.13	
15	64QAM	1	0	19.05	19.17	19.18	
15	64QAM	1	37	19.21	19.17	19.14	20
15	64QAM	1	74	19.04	19.02	18.90	
15	64QAM	36	0	19.18	19.08	19.12	
15	64QAM	36	20	19.09	19.11	19.00	20
15	64QAM	36	39	19.13	19.15	19.11	
15	64QAM	75	0	19.09	19.19	19.04	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	20.99	21.07	21.02	22
10	QPSK	1	25	21.01	20.95	20.98	
10	QPSK	1	49	21.02	21.04	20.69	
10	QPSK	25	0	20.12	20.16	20.03	21
10	QPSK	25	12	20.10	20.16	19.96	
10	QPSK	25	25	20.18	20.15	20.06	
10	QPSK	50	0	20.14	20.03	20.40	21
10	16QAM	1	0	20.13	20.01	20.06	
10	16QAM	1	25	19.94	20.03	19.96	
10	16QAM	1	49	19.79	19.90	19.92	20
10	16QAM	25	0	19.05	19.15	18.99	
10	16QAM	25	12	18.87	19.07	19.05	
10	16QAM	25	25	19.06	19.07	19.08	20
10	16QAM	50	0	19.12	19.13	19.08	
10	64QAM	1	0	18.99	19.11	19.16	
10	64QAM	1	25	19.19	19.14	19.05	20
10	64QAM	1	49	19.01	19.01	18.86	
10	64QAM	25	0	19.11	19.02	19.05	
10	64QAM	25	12	19.06	19.10	18.99	20
10	64QAM	25	25	19.04	19.14	19.04	
10	64QAM	50	0	19.02	19.12	18.95	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	21.05	21.08	21.02	22
5	QPSK	1	12	21.02	20.95	21.04	
5	QPSK	1	24	20.98	20.99	20.70	
5	QPSK	12	0	20.08	20.19	20.03	21
5	QPSK	12	7	20.07	20.09	19.96	
5	QPSK	12	13	20.14	20.15	20.09	
5	QPSK	25	0	20.13	20.04	20.38	21
5	16QAM	1	0	20.13	19.98	20.13	
5	16QAM	1	12	19.96	20.03	19.98	
5	16QAM	1	24	19.84	19.92	19.84	20
5	16QAM	12	0	19.14	19.08	19.07	



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3	QPSK	15	0	18.94	18.96	18.88	20
3	16QAM	1	0	19.21	19.21	18.98	
3	16QAM	1	8	19.25	19.39	19.21	
3	16QAM	1	14	19.31	19.42	19.30	19
3	16QAM	8	0	18.05	17.98	18.04	
3	16QAM	8	4	18.18	17.98	17.99	
3	16QAM	8	7	17.98	18.04	18.10	19
3	16QAM	15	0	17.97	18.00	18.01	
3	64QAM	1	0	18.15	18.23	18.23	
3	64QAM	1	8	18.15	18.17	18.04	19
3	64QAM	1	14	18.27	18.12	17.89	
3	64QAM	8	0	18.08	17.93	17.93	
3	64QAM	8	4	17.92	17.91	17.95	19
3	64QAM	8	7	18.01	17.95	18.04	
3	64QAM	15	0	17.95	17.97	18.01	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	19.84	19.92	19.81	21
1.4	QPSK	1	3	19.84	19.87	19.80	
1.4	QPSK	1	5	19.80	19.91	19.85	
1.4	QPSK	3	0	19.94	19.89	19.94	
1.4	QPSK	3	1	19.93	19.93	19.91	
1.4	QPSK	3	3	19.91	19.95	19.95	20
1.4	QPSK	6	0	18.95	18.95	18.84	
1.4	16QAM	1	0	19.22	19.19	18.96	
1.4	16QAM	1	3	19.31	19.39	19.22	19
1.4	16QAM	1	5	19.26	19.42	19.32	
1.4	16QAM	3	0	19.04	19.04	19.07	
1.4	16QAM	3	1	19.19	18.98	18.95	
1.4	16QAM	3	3	19.01	19.08	19.03	
1.4	16QAM	6	0	17.99	17.98	17.95	22.8
1.4	64QAM	1	0	18.06	18.21	18.24	19
1.4	64QAM	1	3	18.16	18.18	18.10	
1.4	64QAM	1	5	18.22	18.16	17.94	
1.4	64QAM	3	0	18.06	17.99	18.02	
1.4	64QAM	3	1	17.93	17.97	18.03	
1.4	64QAM	3	3	18.03	17.96	18.03	19
1.4	64QAM	6	0	17.93	17.95	17.96	

1.4	QPSK	6	0	20.10	20.04	20.04	21
1.4	16QAM	1	0	20.17	19.92	20.14	21
1.4	16QAM	1	3	19.94	19.97	19.98	
1.4	16QAM	1	5	19.85	19.98	19.84	
1.4	16QAM	3	0	20.13	20.06	19.99	
1.4	16QAM	3	1	19.94	19.99	20.02	
1.4	16QAM	3	3	20.12	20.08	20.12	
1.4	16QAM	6	0	19.16	19.09	19.11	20
1.4	64QAM	1	0	19.00	19.16	19.09	20
1.4	64QAM	1	3	19.20	19.11	19.12	
1.4	64QAM	1	5	19.03	18.97	18.83	
1.4	64QAM	3	0	19.06	19.02	19.06	
1.4	64QAM	3	1	19.06	19.08	18.99	
1.4	64QAM	3	3	19.05	19.10	19.04	
1.4	64QAM	6	0	19.00	19.12	19.02	20



Band 66 (dBm)_ANT 4							
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	17.79	17.89	17.86	18.8
20	QPSK	1	49	17.73	17.73	17.70	
20	QPSK	1	99	17.67	17.74	17.66	
20	QPSK	50	0	16.69	16.85	16.82	17.8
20	QPSK	50	24	16.82	16.83	16.80	
20	QPSK	50	50	16.78	16.83	16.70	
20	QPSK	100	0	16.79	16.83	16.57	17.8
20	16QAM	1	0	17.01	17.05	16.99	
20	16QAM	1	49	16.98	17.02	16.95	
20	16QAM	1	99	17.02	16.94	17.01	16.8
20	16QAM	50	0	15.80	15.86	15.81	
20	16QAM	50	24	15.71	15.61	15.84	
20	16QAM	50	50	15.68	15.56	15.68	16.8
20	16QAM	100	0	15.78	15.56	15.69	
20	64QAM	1	0	15.83	15.77	15.72	
20	64QAM	1	49	15.71	15.86	15.80	16.8
20	64QAM	1	99	15.68	15.81	15.82	
20	64QAM	50	0	14.67	14.90	14.84	
20	64QAM	50	24	14.80	14.69	14.70	15.8
20	64QAM	50	50	14.76	14.64	14.71	
20	64QAM	100	0	14.76	14.70	14.55	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	17.84	17.86	17.82	18.8
15	QPSK	1	37	17.77	17.68	17.78	
15	QPSK	1	74	17.75	17.74	17.54	
15	QPSK	36	0	16.80	16.89	16.71	17.8
15	QPSK	36	20	16.78	16.64	16.71	
15	QPSK	36	39	16.87	16.76	16.63	
15	QPSK	75	0	16.76	16.64	16.59	17.8
15	16QAM	1	0	17.13	17.16	17.03	
15	16QAM	1	37	17.00	17.01	16.96	
15	16QAM	1	74	16.93	16.83	16.92	16.8
15	16QAM	36	0	15.91	15.62	15.88	
15	16QAM	36	20	15.89	15.83	15.65	
15	16QAM	36	39	15.85	15.62	15.72	16.8
15	16QAM	75	0	15.77	15.61	15.57	
15	64QAM	1	0	15.84	15.80	15.89	
15	64QAM	1	37	15.75	15.74	15.83	16.8
15	64QAM	1	74	15.73	15.66	15.81	
15	64QAM	36	0	14.71	14.59	14.81	
15	64QAM	36	20	14.81	14.60	14.68	15.8
15	64QAM	36	39	14.59	14.47	14.59	
15	64QAM	75	0	14.55	14.50	14.61	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	17.83	17.85	17.83	18.8
10	QPSK	1	25	17.78	17.78	17.71	
10	QPSK	1	49	17.70	17.79	17.74	
10	QPSK	25	0	16.89	16.93	16.82	17.8
10	QPSK	25	12	16.75	16.78	16.86	
10	QPSK	25	25	16.84	16.67	16.76	
10	QPSK	50	0	16.87	16.60	16.63	17.8
10	16QAM	1	0	17.03	17.06	17.01	
10	16QAM	1	25	17.01	17.05	16.95	
10	16QAM	1	49	16.96	16.82	16.86	16.8
10	16QAM	25	0	15.84	15.85	15.81	
10	16QAM	25	12	15.70	15.60	15.71	
10	16QAM	25	25	15.63	15.68	15.54	16.8
10	16QAM	50	0	15.79	15.68	15.71	
10	64QAM	1	0	15.89	15.75	15.82	
10	64QAM	1	25	15.75	15.82	15.73	16.8
10	64QAM	1	49	15.70	15.73	15.65	
10	64QAM	25	0	14.74	14.77	14.63	
10	64QAM	25	12	14.75	14.55	14.64	15.8
10	64QAM	25	25	14.70	14.46	14.73	
10	64QAM	50	0	14.73	14.52	14.65	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	17.82	17.83	17.77	18.8
5	QPSK	1	12	17.70	17.78	17.72	
5	QPSK	1	24	17.74	17.67	17.54	
5	QPSK	12	0	16.81	16.85	16.81	17.8
5	QPSK	12	7	16.79	16.79	16.68	
5	QPSK	12	13	16.67	16.64	16.58	
5	QPSK	25	0	16.70	16.81	16.77	17.8
5	16QAM	1	0	17.02	17.04	16.92	
5	16QAM	1	12	17.00	16.92	16.97	
5	16QAM	1	24	16.90	16.89	16.99	16.8
5	16QAM	12	0	15.86	15.87	15.80	
5	16QAM	12	7	15.76	15.70	15.80	
5	16QAM	12	13	15.80	15.70	15.59	16.8
5	16QAM	25	0	15.63	15.64	15.78	
5	64QAM	1	0	15.77	15.81	15.88	
5	64QAM	1	12	15.83	15.80	15.69	16.8
5	64QAM	1	24	15.66	15.78	15.78	
5	64QAM	12	0	14.68	14.74	14.86	
5	64QAM	12	7	14.77	14.60	14.80	15.8
5	64QAM	12	13	14.59	14.63	14.56	
5	64QAM	25	0	14.60	14.42	14.62	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	17.81	17.85	17.77	18.8
3	QPSK	1	8	17.71	17.82	17.82	
3	QPSK	1	14	17.74	17.82	17.72	
3	QPSK	8	0	16.86	16.93	16.83	17.8
3	QPSK	8	4	16.80	16.75	16.75	
3	QPSK	8	7	16.69	16.62	16.61	



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3	QPSK	15	0	16.83	16.65	16.63	17.8
3	16QAM	1	0	16.99	17.03	17.16	
3	16QAM	1	8	17.01	16.89	16.89	
3	16QAM	1	14	16.95	16.94	16.93	16.8
3	16QAM	8	0	15.81	15.96	15.94	
3	16QAM	8	4	15.92	15.74	15.77	
3	16QAM	8	7	15.75	15.71	15.65	16.8
3	16QAM	15	0	15.76	15.75	15.54	
3	64QAM	1	0	15.88	15.82	15.73	
3	64QAM	1	8	15.82	15.72	15.76	15.8
3	64QAM	1	14	15.77	15.63	15.67	
3	64QAM	8	0	14.81	14.78	14.67	
3	64QAM	8	4	14.79	14.70	14.69	15.8
3	64QAM	8	7	14.54	14.51	14.53	
3	64QAM	15	0	14.69	14.61	14.70	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	17.78	17.84	17.69	18.8
1.4	QPSK	1	3	17.75	17.66	17.64	
1.4	QPSK	1	5	17.77	17.65	17.70	
1.4	QPSK	3	0	16.86	16.89	16.85	
1.4	QPSK	3	1	16.87	16.67	16.84	
1.4	QPSK	3	3	16.76	16.80	16.58	
1.4	QPSK	6	0	16.72	16.76	16.67	17.8
1.4	16QAM	1	0	16.93	17.09	17.03	17.8
1.4	16QAM	1	3	17.02	16.91	16.88	
1.4	16QAM	1	5	16.91	17.00	17.00	
1.4	16QAM	3	0	15.72	15.85	15.80	
1.4	16QAM	3	1	15.73	15.62	15.75	
1.4	16QAM	3	3	15.62	15.50	15.65	
1.4	16QAM	6	0	15.78	15.68	15.68	16.8
1.4	64QAM	1	0	15.79	15.86	15.80	16.8
1.4	64QAM	1	3	15.76	15.83	15.73	
1.4	64QAM	1	5	15.66	15.74	15.84	
1.4	64QAM	3	0	14.72	14.68	14.74	
1.4	64QAM	3	1	14.84	14.55	14.62	
1.4	64QAM	3	3	14.58	14.54	14.66	
1.4	64QAM	6	0	14.54	14.58	14.54	15.8



Band 48 (3.5G Band) (dBm)_ANT 6									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Middle-Low Channel	Middle-Low Channel	Middle-High Channel	High Channel	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	21.43	21.41	21.48	21.38	21.45	22.3
20	QPSK	1	49	21.37	21.26	21.37	21.34	21.35	
20	QPSK	1	99	21.39	21.33	21.25	21.21	21.32	
20	QPSK	50	0	20.36	20.30	20.39	20.32	20.38	21.3
20	QPSK	50	24	20.32	20.23	20.30	20.26	20.34	
20	QPSK	50	50	20.29	20.15	20.19	20.14	20.23	
20	QPSK	100	0	20.23	20.23	20.23	20.20	20.30	21.3
20	16QAM	1	0	20.72	20.68	20.70	20.63	20.66	
20	16QAM	1	49	20.70	20.50	20.56	20.65	20.59	
20	16QAM	1	99	20.48	20.49	20.61	20.51	20.53	20.3
20	16QAM	50	0	19.29	19.33	19.35	19.30	19.25	
20	16QAM	50	24	19.22	19.28	19.21	19.24	19.28	
20	16QAM	50	50	19.15	19.15	19.20	19.19	19.19	20.3
20	16QAM	100	0	19.39	19.15	19.08	19.37	19.31	
20	64QAM	1	0	19.30	19.21	19.43	19.36	19.34	
20	64QAM	1	49	19.36	19.32	19.36	19.41	19.30	19.3
20	64QAM	1	99	19.38	19.17	19.24	19.38	19.31	
20	64QAM	50	0	18.35	18.24	18.39	18.33	18.22	
20	64QAM	50	24	18.32	18.24	18.29	18.17	18.20	19.3
20	64QAM	50	50	18.24	18.15	18.19	18.36	18.15	
20	64QAM	100	0	18.26	18.18	18.32	18.21	18.22	
Channel				55315	55820	55990	56160	56665	
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	21.34	21.40	21.45	21.32	21.36	22.3
15	QPSK	1	37	21.31	21.24	21.21	21.23	21.31	
15	QPSK	1	74	21.30	21.18	21.22	21.18	21.34	
15	QPSK	36	0	20.30	20.33	20.36	20.34	20.30	21.3
15	QPSK	36	20	20.33	20.31	20.35	20.28	20.34	
15	QPSK	36	39	20.24	20.19	20.26	20.26	20.20	
15	QPSK	75	0	20.19	20.35	20.21	20.20	20.26	21.3
15	16QAM	1	0	20.53	20.59	20.60	20.58	20.48	
15	16QAM	1	37	20.56	20.56	20.50	20.44	20.52	
15	16QAM	1	74	20.45	20.41	20.45	20.57	20.51	20.3
15	16QAM	36	0	19.46	19.22	19.42	19.31	19.34	
15	16QAM	36	20	19.43	19.26	19.34	19.30	19.34	
15	16QAM	36	39	19.21	19.20	19.25	19.39	19.22	20.3
15	16QAM	75	0	19.29	19.19	19.26	19.19	19.13	
15	64QAM	1	0	19.43	19.31	19.39	19.38	19.43	
15	64QAM	1	37	19.41	19.31	19.37	19.35	19.18	19.3
15	64QAM	1	74	19.44	19.14	19.19	19.31	19.34	
15	64QAM	36	0	18.33	18.28	18.26	18.34	18.26	
15	64QAM	36	20	18.25	18.19	18.34	18.20	18.14	19.3
15	64QAM	36	39	18.23	18.07	18.27	18.21	18.08	
15	64QAM	75	0	18.12	18.08	18.23	18.21	18.16	
Channel				55290	55815	55990	56165	56690	
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	21.39	21.29	21.43	21.32	21.33	22.3
10	QPSK	1	25	21.31	21.26	21.34	21.23	21.32	
10	QPSK	1	49	21.23	21.28	21.21	21.25	21.16	
10	QPSK	25	0	20.44	20.42	20.45	20.32	20.30	21.3
10	QPSK	25	12	20.30	20.32	20.34	20.32	20.37	
10	QPSK	25	25	20.26	20.33	20.20	20.20	20.25	
10	QPSK	50	0	20.36	20.37	20.27	20.18	20.23	21.3
10	16QAM	1	0	20.58	20.57	20.65	20.56	20.51	
10	16QAM	1	25	20.53	20.54	20.54	20.57	20.59	
10	16QAM	1	49	20.50	20.37	20.51	20.51	20.50	20.3
10	16QAM	25	0	19.27	19.33	19.34	19.44	19.22	
10	16QAM	25	12	19.35	19.34	19.25	19.39	19.28	
10	16QAM	25	25	19.26	19.22	19.22	19.34	19.19	20.3
10	16QAM	50	0	19.19	19.18	19.31	19.36	19.25	
10	64QAM	1	0	19.55	19.25	19.32	19.36	19.40	
10	64QAM	1	25	19.27	19.36	19.29	19.34	19.27	19.3
10	64QAM	1	49	19.33	19.19	19.27	19.24	19.30	
10	64QAM	25	0	18.34	18.16	18.39	18.40	18.17	
10	64QAM	25	12	18.17	18.27	18.30	18.13	18.24	19.3
10	64QAM	25	25	18.19	18.22	18.12	18.34	18.12	
10	64QAM	50	0	18.13	18.21	18.20	18.28	18.20	
Channel				55265	55810	55990	56170	56175	
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	21.34	21.32	21.40	21.33	21.34	22.3
5	QPSK	1	12	21.31	21.38	21.35	21.34	21.35	
5	QPSK	1	24	21.38	21.37	21.23	21.26	21.21	
5	QPSK	12	0	20.36	20.32	20.39	20.35	20.26	21.3
5	QPSK	12	7	21.32	20.38	20.27	20.27	20.37	
5	QPSK	12	13	20.38	20.35	20.29	20.14	20.23	
5	QPSK	25	0	20.33	20.30	20.18	20.42	20.36	21.3
5	16QAM	1	0	20.52	20.56	20.58	20.53	20.53	
5	16QAM	1	12	20.56	20.54	20.41	20.56	20.52	
5	16QAM	1	24	20.51	20.54	20.38	20.53	20.54	20.3
5	16QAM	12	0	19.30	19.23	19.45	19.44	19.32	
5	16QAM	12	7	19.29	19.26	19.26	19.45	19.31	
5	16QAM	12	13	19.17	19.20	19.19	19.29	19.24	20.3
5	16QAM	25	0	19.41	19.32	19.22	19.34	19.29	
5	64QAM	1	0	19.40	19.45	19.37	19.48	19.34	
5	64QAM	1	12	19.31	19.37	19.26	19.37	19.26	19.3
5	64QAM	1	24	19.39	19.34	19.40	19.32	19.32	
5	64QAM	12	0	18.37	18.22	18.42	18.40	18.23	
5	64QAM	12	7	18.19	18.20	18.20	18.30	18.11	19.3
5	64QAM	12	13	18.18	18.22	18.23	18.21	18.17	
5	64QAM	25	0	18.10	18.16	18.19	18.15	18.00	

n2 (PC3)_ANT 4							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	19.00
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	17.87	17.83	17.53	19.00
20		1	53	17.93	17.62	17.57	
20		1	104	17.66	17.54	17.51	
20		50	1	18.08	17.80	17.64	19.00
20		50	25	18.02	17.80	17.63	
20		50	50	17.98	17.77	17.67	
20		100	0	17.98	17.80	17.61	19.00
20		1	1	18.07	18.13	18.02	
20	DFT-s-OFDM QPSK	1	53	17.92	17.72	17.95	19.00
20		1	104	17.76	17.67	17.63	
20		50	1	18.05	18.08	18.07	19.00
20		50	25	18.03	17.69	17.68	
20		50	50	17.95	17.69	17.74	
20		100	0	18.01	17.79	17.63	19.00
20		1	1	18.11	17.97	17.71	
20		1	1	16.58	16.50	16.22	
20	DFT-s-OFDM 16QAM	1	1	14.20	14.16	13.90	15.00
20	DFT-s-OFDM 64QAM	1	1	17.48	17.39	17.15	18.50
20	CP-OFDM QPSK	1	1	16.98	16.95	16.68	18.00
20	CP-OFDM 16QAM	1	1	15.64	15.56	15.25	16.50
20	CP-OFDM 64QAM	1	1	12.31	12.23	11.90	13.00
20	CP-OFDM 256QAM	1	1	371500	376000	380500	19.00
Channel				1857.5	1880	1902.5	
Frequency (MHz)				1855	1880	1905	19.00
15	DFT-s-OFDM QPSK	1	1	18.09	17.83	17.59	
Channel				371000	376000	381000	19.00
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	18.08	17.81	17.70	19.00
Channel				370500	376000	381500	19.00
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	18.06	17.63	17.59	19.00

n5 (PC3)_ANT 1

BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	20.11	20.17	20.17	21.00
20		1	53	20.03	20.01	20.05	
20		1	104	19.77	19.71	19.79	
20		50	1	20.22	20.21	20.22	21.00
20	DFT-s-OFDM QPSK	50	25	20.12	20.16	20.09	
20		50	50	20.12	20.01	19.99	
20		100	0	20.20	20.12	20.04	
20		1	1	20.27	20.32	20.31	21.00
20	DFT-s-OFDM 16QAM	1	53	20.10	20.10	20.18	
20		1	104	19.85	19.74	19.82	
20		50	1	20.21	20.23	20.14	21.00
20		50	25	20.15	20.15	20.06	
20	DFT-s-OFDM 64QAM	50	50	20.00	20.04	19.81	
20		100	0	20.19	20.17	20.01	
20	DFT-s-OFDM 256QAM	1	1	19.75	19.79	19.78	20.00
20	CP-OFDM QPSK	1	1	18.64	18.83	18.86	19.00
20	CP-OFDM 16QAM	1	1	16.48	16.57	16.50	16.00
20	CP-OFDM 64QAM	1	1	19.71	19.81	19.61	21.50
20	CP-OFDM 256QAM	1	1	19.30	19.32	19.27	20.50
20		1	1	17.77	17.92	17.82	19.50
20		1	1	14.51	14.61	14.60	15.50
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	23.75	23.79	23.57	21.00
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	23.53	23.35	23.48	21.00
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	23.59	23.52	23.28	21.00

n25 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up
Channel				372000	376500	381000	limit
Frequency (MHz)				1860	1882.5	1905	(dBm)
20	DFT-s-OFDM PI/2 BPSK	1	1	18.64	18.63	18.51	19.8
20		1	53	18.73	18.63	18.49	
20		1	104	18.75	18.56	18.63	
20		50	1	18.81	18.62	18.48	19.8
20		50	25	18.85	18.66	18.60	
20		50	50	18.74	18.60	18.68	
20	DFT-s-OFDM QPSK	100	0	18.87	18.66	18.56	19.8
20		1	1	18.88	18.89	18.86	
20		1	53	18.81	18.49	18.52	
20		1	104	18.72	18.54	18.64	19.8
20		50	1	18.71	18.74	18.65	
20		50	25	18.56	18.66	18.60	
20	DFT-s-OFDM 16QAM	50	50	18.77	18.53	18.49	19.8
20		100	0	18.55	18.68	18.48	
20		1	1	18.74	18.58	18.48	
20	DFT-s-OFDM 64QAM	1	1	17.16	17.08	16.89	18.8
20	DFT-s-OFDM 256QAM	1	1	14.88	14.70	14.54	15.8
20	CP-OFDM QPSK	1	1	17.69	17.64	17.68	19.8
20	CP-OFDM 16QAM	1	1	17.62	17.50	17.37	19.8
20	CP-OFDM 64QAM	1	1	15.88	15.76	15.51	16.8
20	CP-OFDM 256QAM	1	1	12.92	12.77	12.59	13.8
Channel				371500	376500	381500	Tune-up
Frequency (MHz)				1857.5	1882.5	1907.5	limit
15	DFT-s-OFDM QPSK	1	1	18.82	18.64	18.48	19.8
Channel				371000	376500	382000	Tune-up
Frequency (MHz)				1855	1882.5	1910	limit
10	DFT-s-OFDM QPSK	1	1	18.73	18.54	18.46	19.8
Channel				370500	376500	382500	Tune-up
Frequency (MHz)				1852.5	1882.5	1912.5	limit
5	DFT-s-OFDM QPSK	1	1	18.74	18.59	18.55	19.8

n26(814-824MHz) (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel					163800		
Frequency (MHz)					819		
10	DFT-s-OFDM PI/2 BPSK	1	1		19.23		21
10		1	26		19.35		
10		1	50		19.45		
10		25	1		19.35		21
10	DFT-s-OFDM QPSK	25	12		19.38		
10		25	25		19.46		
10		50	0		19.41		
10		1	1		19.95		21
10	DFT-s-OFDM QPSK	1	26		19.36		
10		1	50		19.44		
10		25	1		19.84		21
10		25	12		19.39		
10	DFT-s-OFDM 16QAM	25	25		19.45		
10		50	0		19.79		
10	DFT-s-OFDM 16QAM	1	1		19.19		20
10	DFT-s-OFDM 64QAM	1	1		17.73		18.5
10	DFT-s-OFDM 256QAM	1	1		15.50		18
10	CP-OFDM QPSK	1	1		18.63		21
10	CP-OFDM 16QAM	1	1		18.13		20
10	CP-OFDM 64QAM	1	1		16.46		19
10	CP-OFDM 256QAM	1	1		13.62		16
Channel				163300	163800	164300	Tune-up
Frequency (MHz)				816.5	819	821.5	limit
5	DFT-s-OFDM QPSK	1	1	19.21	19.25	19.33	21

n26(824-849MHz) (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	iddle Channel	High Channel	Tune-up
Channel				166800	167300	167800	limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	19.41	19.44	19.41	21
20		1	53	19.42	19.31	19.25	
20		1	104	19.28	19.22	19.51	
20		50	1	19.47	19.49	19.49	21
20		50	25	19.51	19.43	19.37	
20		50	50	19.37	19.26	19.38	
20	DFT-s-OFDM QPSK	100	0	19.50	19.42	19.43	21
20		1	1	19.92	19.97	19.89	
20		1	53	19.46	19.30	19.26	
20		1	104	19.33	19.20	19.48	21
20		50	1	19.50	19.52	19.48	
20		50	25	19.50	19.42	19.42	
20	DFT-s-OFDM 16QAM	50	50	19.37	19.32	19.33	21
20		100	0	19.50	19.42	19.47	
20		1	1	19.35	19.36	19.36	20
20	DFT-s-OFDM 64QAM	1	1	17.87	17.87	17.85	19
20	DFT-s-OFDM 256QAM	1	1	15.72	15.79	15.79	16.5
20	CP-OFDM QPSK	1	1	18.86	18.88	18.87	19.5
20	CP-OFDM 16QAM	1	1	18.34	18.34	18.34	19
20	CP-OFDM 64QAM	1	1	16.63	16.67	16.65	18
20	CP-OFDM 256QAM	1	1	13.93	13.93	13.84	15
Channel				166300	167300	168300	Tune-up
Frequency (MHz)				831.5	836.5	841.5	limit
15	DFT-s-OFDM QPSK	1	1	19.44	19.37	19.37	21
Channel				165800	167300	168800	Tune-up
Frequency (MHz)				829	836.5	844	limit
10	DFT-s-OFDM QPSK	1	1	19.49	19.31	19.30	21
Channel				165300	167300	169300	Tune-up
Frequency (MHz)				826.5	836.5	846.5	limit
5	DFT-s-OFDM QPSK	1	1	19.47	19.32	19.19	21



n41 (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High/Middle Channel	High Channel	Tune-up
Channel				509202	513900	518598	523296	528000	limit
Frequency (MHz)				2546.01	2569.5	2592.99	2616.48	2640	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	20.05	20.10	20.15	20.22	20.13	21
100		1	136	20.15	20.23	20.21	20.07	19.95	
100		1	271	20.25	20.18	20.06	19.63	19.39	
100		135	1	19.69	19.61	19.66	19.69	19.60	21
100		135	67	20.25	20.22	20.22	20.17	20.03	
100		135	136	19.69	19.76	19.58	19.49	19.12	
100		270	0	19.65	19.72	19.75	19.70	19.53	
100	DFT-s-OFDM QPSK	1	1	20.47	20.46	20.58	20.55	20.56	21
100		1	136	20.16	20.24	20.12	20.06	19.97	
100		1	271	20.46	20.09	20.00	19.59	19.39	
100		135	1	19.16	19.22	19.17	19.19	19.12	21
100		135	67	20.20	20.17	20.22	20.13	20.05	
100		135	136	19.98	20.05	19.93	19.78	19.42	
100		270	0	19.94	20.02	20.03	20.00	19.86	
100	DFT-s-OFDM 16QAM	1	1	19.00	18.99	19.12	19.04	19.00	20
100	DFT-s-OFDM 64QAM	1	1	17.58	17.59	17.70	17.61	17.63	18
100	DFT-s-OFDM 256QAM	1	1	15.39	15.37	15.43	15.48	15.39	16
100	CP-OFDM QPSK	1	1	18.59	18.60	18.67	18.61	18.63	19
100	CP-OFDM 16QAM	1	1	18.10	18.16	18.21	18.13	18.13	19
100	CP-OFDM 64QAM	1	1	16.18	16.20	16.23	16.23	16.25	17
100	CP-OFDM 256QAM	1	1	13.48	13.42	13.42	13.50	13.46	14
Channel				508200	513402	518598	523800	528996	Tune-up
Frequency (MHz)				2541	2567.01	2592.99	2619	2644.98	limit
90	DFT-s-OFDM QPSK	1	1	20.09	20.02	20.09	20.19	20.11	21
Channel				507204	512904	518598	524298	529998	Tune-up
Frequency (MHz)				2536.02	2564.52	2592.99	2621.49	2649.99	limit
80	DFT-s-OFDM QPSK	1	1	20.13	20.14	20.19	20.21	20.13	21
Channel				506202	512400	518598	524796	531000	Tune-up
Frequency (MHz)				2531.01	2562	2592.99	2623.98	2655	limit
70	DFT-s-OFDM QPSK	1	1	20.15	20.19	20.25	20.26	20.19	21
Channel				505200	511902	518598	525798	531996	Tune-up
Frequency (MHz)				2526	2559.51	2592.99	2626.5	2659.98	limit
60	DFT-s-OFDM QPSK	1	1	20.20	20.27	20.22	20.22	20.15	21
Channel				504204	511404	518598	525798	532998	Tune-up
Frequency (MHz)				2521.02	2557.02	2592.99	2626.5	2664.99	limit
50	DFT-s-OFDM QPSK	1	1	20.27	20.36	20.34	20.31	20.16	21
Channel				503202	510900	518598	526296	534000	Tune-up
Frequency (MHz)				2516.01	2554.5	2592.99	2631.48	2670	limit
40	DFT-s-OFDM QPSK	1	1	20.40	20.43	20.26	20.38	20.11	21
Channel				502200	510402	518598	526800	534996	Tune-up
Frequency (MHz)				2511	2552.01	2592.99	2634	2674.98	limit
30	DFT-s-OFDM QPSK	1	1	20.34	20.32	20.39	20.26	19.87	21
Channel				501204	509904	518598	527298	535998	Tune-up
Frequency (MHz)				2506.02	2549.52	2592.99	2636.49	2679.99	limit
20	DFT-s-OFDM QPSK	1	1	20.32	20.38	20.45	20.24	19.81	21



n48 (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				638000	639834	641666	643500	645332	
Frequency (MHz)				3570	3597.51	3624.99	3652.5	3679.98	
40	DFT-s-OFDM PI/2 BPSK	1	1	16.42	16.13	15.31	15.12	16.98	19
40		1	53	17.19	15.69	14.32	16.51	17.70	
40		1	104	16.08	16.85	15.91	17.51	17.75	
40		50	1	15.91	15.51	14.31	15.33	16.86	19
40		50	25	16.33	15.81	14.74	16.45	17.68	
40		50	50	15.64	14.81	14.48	16.31	16.93	
40		100	0	15.75	15.28	14.33	15.91	17.19	
40	DFT-s-OFDM QPSK	1	1	18.05	18.11	18.23	18.13	17.97	19
40		1	53	16.33	15.68	14.33	16.54	17.72	
40		1	104	17.08	14.83	15.91	17.54	18.20	
40		50	1	17.22	17.16	17.33	17.03	17.17	18
40		50	25	16.37	15.80	16.61	16.42	17.08	
40		50	50	16.06	16.76	16.95	16.88	17.00	
40		100	0	17.05	16.80	16.85	16.28	16.69	
40	DFT-s-OFDM 16QAM	1	1	15.31	14.99	15.16	15.03	15.86	17
40	DFT-s-OFDM 64QAM	1	1	13.90	13.56	13.76	13.60	13.83	17
40	DFT-s-OFDM 256QAM	1	1	11.75	11.48	10.64	10.43	12.26	13
40	CP-OFDM QPSK	1	1	14.94	14.63	13.80	13.65	15.47	16.5
40	CP-OFDM 16QAM	1	1	14.39	14.10	13.36	13.19	15.04	16
40	CP-OFDM 64QAM	1	1	12.52	12.19	11.38	11.19	13.07	14.5
40	CP-OFDM 256QAM	1	1	9.75	9.49	8.55	8.44	10.25	11
Channel				637334	639500	641666	643832	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3592.5	3624.99	3657.48	3690	
20	DFT-s-OFDM QPSK	1	1	16.25	15.89	14.64	16.17	17.79	19

n66 (PC3)_ANT 4							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				344000	349000	354000	18
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM PI/2 BPSK	1	1	17.31	17.15	17.07	18
20		1	53	17.23	17.10	17.01	
20		1	104	17.13	17.16	17.03	
20		50	1	17.38	17.21	17.16	18
20	DFT-s-OFDM PI/2 BPSK	50	25	17.37	17.16	17.11	
20		50	50	17.29	17.17	17.10	
20		100	0	17.33	17.18	17.15	
20	DFT-s-OFDM QPSK	1	1	17.38	17.40	17.36	18
20		1	53	17.31	17.09	16.99	
20		1	104	17.16	17.14	17.02	
20		50	1	17.30	17.34	17.29	18
20	DFT-s-OFDM QPSK	50	25	17.28	17.24	17.09	
20		50	50	17.26	17.18	17.06	
20		100	0	17.32	17.24	17.06	
20	DFT-s-OFDM 16QAM	1	1	17.31	17.26	17.16	18
20	DFT-s-OFDM 64QAM	1	1	15.96	15.74	15.67	16
20	DFT-s-OFDM 256QAM	1	1	13.59	13.40	13.31	14
20	CP-OFDM QPSK	1	1	16.97	16.79	16.69	17.5
20	CP-OFDM 16QAM	1	1	16.51	16.20	16.17	17.5
20	CP-OFDM 64QAM	1	1	15.06	14.85	14.78	15.5
20	CP-OFDM 256QAM	1	1	11.59	11.42	11.29	12.5
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	17.46	17.34	17.26	18
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	17.28	17.15	17.07	18
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	17.33	17.19	17.23	18

n71 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	iddle Channel	High Channel	Tune-up
Channel				134600	136100	137600	limit (dBm)
Frequency (MHz)				673	680.5	688	
20	DFT-s-OFDM PI/2 BPSK	1	1	19.51	19.54	19.61	21
20		1	53	19.51	19.73	19.72	
20		1	104	19.62	19.63	19.47	
20		50	1	19.54	19.58	19.72	21
20		50	25	19.55	19.64	19.64	
20		50	50	19.62	19.65	19.57	
20	DFT-s-OFDM QPSK	100	0	19.50	19.57	19.58	21
20		1	1	19.91	19.96	19.94	
20		1	53	19.51	19.66	19.63	
20		1	104	19.62	19.65	19.40	21
20		50	1	19.59	19.69	19.61	
20		50	25	19.56	19.63	19.60	
20	DFT-s-OFDM 16QAM	50	50	19.63	19.64	19.56	21
20		100	0	19.54	19.61	19.62	
20	DFT-s-OFDM 64QAM	1	1	19.49	19.52	19.62	21
20	DFT-s-OFDM 256QAM	1	1	18.83	18.80	18.86	19
20	CP-OFDM QPSK	1	1	16.30	16.36	16.34	17
20	CP-OFDM 16QAM	1	1	19.74	19.73	19.82	20
20	CP-OFDM 64QAM	1	1	19.21	19.24	19.34	20
20	CP-OFDM 256QAM	1	1	17.54	17.57	17.57	18
20	CP-OFDM 256QAM	1	1	14.36	14.44	14.41	15
Channel				134100	136100	138100	Tune-up
Frequency (MHz)				670.5	680.5	690.5	limit
15	DFT-s-OFDM QPSK	1	1	19.51	19.51	19.64	21
Channel				133600	136100	138600	Tune-up
Frequency (MHz)				668	680.5	693	limit
10	DFT-s-OFDM QPSK	1	1	19.48	19.55	19.60	21
Channel				133100	136100	139100	Tune-up
Frequency (MHz)				665.5	680.5	695.5	limit
5	DFT-s-OFDM QPSK	1	1	19.49	19.48	19.48	21

n77(3450-3550MHz) (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			19
Frequency (MHz)						3500.01			
100	DFT-s-OFDM PI/2 BPSK	1	1			18.32			19
100		1	136			17.67			
100		1	271			17.45			
100		135	1			17.72			
100		135	67			18.01			
100	DFT-s-OFDM QPSK	135	136			16.99			19
100		270	0			17.45			
100		1	1			18.43			
100		1	136			17.95			
100		1	271			17.39			
100	DFT-s-OFDM QPSK	135	1			18.01			18.5
100		135	67			17.99			
100		135	136			17.46			
100		270	0			17.92			
100		1	1			17.33			
100	DFT-s-OFDM 16QAM	1	1			15.97			17
100	DFT-s-OFDM 64QAM	1	1			13.78			14
100	CP-OFDM QPSK	1	1			16.92			18
100	CP-OFDM 16QAM	1	1			16.41			17
100	CP-OFDM 64QAM	1	1			14.53			15.5
100	CP-OFDM 256QAM	1	1			11.79			12.5
Channel				632668	633000	633334	633666	634000	19
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	18.33	18.34	18.32	18.18	18.09	19
Channel				632000	632668	633334	634000	634666	19
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	17.53	18.35	18.12	17.98	18.04	19
Channel				631334	632334	633334	634332	635332	19
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	18.39	18.33	18.36	18.32	18.19	19
Channel				631000	632168	633334	634500	635666	19
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	18.34	18.35	18.30	18.31	17.95	19
Channel				630668	632000	633334	634666	636000	19
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	18.31	18.34	18.25	18.09	17.69	19



n77(3700-3980MHz) (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				650000	653000	656000	659000	662000	
Frequency (MHz)				3750	3795	3840	3885	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	13.58	15.18	15.30	15.19	14.25	17.00
100		1	136	15.27	15.41	15.18	14.21	15.15	
100		1	271	15.07	15.09	14.18	14.06	13.95	
100		135	1	14.52	15.05	14.80	14.04	14.26	16.00
100		135	67	15.37	15.42	15.20	14.23	14.01	
100		135	136	14.52	14.76	13.88	13.80	13.39	
100		270	0	14.51	14.99	14.67	14.56	14.98	
100	DFT-s-OFDM QPSK	1	1	16.02	16.15	16.17	16.07	16.12	17.00
100		1	136	15.63	15.39	15.21	15.02	14.62	
100		1	271	15.08	15.05	14.20	13.84	14.51	
100		135	1	15.04	15.13	15.37	15.25	15.29	16.00
100		135	67	14.75	14.98	15.16	15.05	13.99	
100		135	136	14.84	15.05	14.18	14.13	14.32	
100		270	0	14.94	14.51	14.99	14.06	13.64	
100	DFT-s-OFDM 16QAM	1	1	14.43	15.06	13.93	14.08	13.16	16.00
100	DFT-s-OFDM 64QAM	1	1	14.30	13.81	12.84	12.90	11.85	15.00
100	DFT-s-OFDM 256QAM	1	1	8.87	11.44	10.65	10.51	9.55	11.00
100	CP-OFDM QPSK	1	1	12.07	14.65	13.82	13.71	12.75	12.50
100	CP-OFDM 16QAM	1	1	11.57	11.72	13.39	13.24	12.27	11.50
100	CP-OFDM 64QAM	1	1	9.67	12.34	11.39	11.35	10.35	10.50
100	CP-OFDM 256QAM	1	1	7.89	9.50	8.56	8.54	7.58	9.50
Channel				649334	652668	656000	659332	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	
80	DFT-s-OFDM QPSK	1	1	13.55	16.02	15.41	14.84	13.72	17.00
Channel				648668	652334	656000	659666	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	
60	DFT-s-OFDM QPSK	1	1	13.59	15.84	15.36	14.35	13.07	17.00
Channel				648000	652000	656000	660000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3780	3840	3900	3960	
40	DFT-s-OFDM QPSK	1	1	14.00	16.00	15.57	14.63	12.44	17.00
Channel				647668	651834	656000	660166	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	
30	DFT-s-OFDM QPSK	1	1	13.92	15.79	15.45	14.29	12.48	17.00
Channel				647334	651668	656000	660332	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	
20	DFT-s-OFDM QPSK	1	1	13.84	15.75	15.49	14.14	12.86	17.00



n78(3450-3550MHz) (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	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			18.99			20.00
100		1	136			17.84			
100		1	271			17.15			
100		135	1			17.85			19.00
100		135	67			18.05			
100		135	136			16.74			
100	DFT-s-OFDM QPSK	270	0			17.45			20.00
100		1	1			19.02			
100		1	136			17.89			
100		1	271			17.12			19.00
100		135	1			18.03			
100		135	67			17.88			
100	DFT-s-OFDM 16QAM	135	136			17.08			19.00
100		270	0			17.73			
100		1	1			17.82			
100	DFT-s-OFDM 64QAM	1	1			16.50			17.50
100	DFT-s-OFDM 256QAM	1	1			14.37			15.50
100	CP-OFDM QPSK	1	1			17.29			18.50
100	CP-OFDM 16QAM	1	1			16.83			17.50
100	CP-OFDM 64QAM	1	1			15.19			16.00
100	CP-OFDM 256QAM	1	1			12.30			13.00
Channel				633000	633166	633334	633500	633666	Tune-up limit
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	(dBm)
90	DFT-s-OFDM QPSK	1	1	18.98	18.94	18.81	18.70	18.66	20.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	(dBm)
80	DFT-s-OFDM QPSK	1	1	18.98	18.90	18.75	18.62	18.38	20.00
Channel				632334	632634	633334	633832	634332	Tune-up limit
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	(dBm)
70	DFT-s-OFDM QPSK	1	1	18.99	18.85	18.63	18.37	18.15	20.00
Channel				632000	632666	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	(dBm)
60	DFT-s-OFDM QPSK	1	1	18.94	18.73	18.48	18.16	18.12	20.00
Channel				631668	632500	633334	634166	635000	Tune-up limit
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	(dBm)
50	DFT-s-OFDM QPSK	1	1	18.93	18.64	18.26	18.08	17.99	20.00
Channel				631334	636672	633334	634334	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	(dBm)
40	DFT-s-OFDM QPSK	1	1	18.99	18.10	18.43	18.30	18.04	20.00
Channel				631000	632166	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	(dBm)
30	DFT-s-OFDM QPSK	1	1	18.96	18.68	18.32	18.09	17.63	20.00
Channel				630668	632000	633334	634668	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	(dBm)
20	DFT-s-OFDM QPSK	1	1	18.90	18.59	18.30	17.89	17.40	20.00



n78(3700-3800MHz) (PC2)_ANT 6

BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						650000			20.00
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			18.01			20.00
100		1	136			19.21			
100		1	271			19.10			
100		135	1			18.60			20.00
100		135	67			19.18			
100		135	136			18.38			
100		270	0			18.50			
100	DFT-s-OFDM QPSK	1	1			19.23			20.00
100		1	136			18.39			
100		1	271			18.59			
100		135	1			19.11			20.00
100		135	67			18.09			
100		135	136			18.67			
100		270	0			18.71			
100	DFT-s-OFDM 16QAM	1	1			16.88			18.00
100	DFT-s-OFDM 64QAM	1	1			15.57			16.50
100	DFT-s-OFDM 256QAM	1	1			13.28			14.00
100	CP-OFDM QPSK	1	1			16.48			17.50
100	CP-OFDM 16QAM	1	1			16.12			17.00
100	CP-OFDM 64QAM	1	1			14.19			15.00
100	CP-OFDM 256QAM	1	1			11.31			12.00
Channel				649668	649834	650000	650166	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	17.97	18.01	18.15	18.23	18.42	20.00
Channel				649334	649666	650000	650334	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	18.02	18.24	18.45	18.64	18.93	20.00
Channel				649000	649500	650000	650500	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	18.03	18.36	18.68	19.05	19.18	20.00
Channel				648668	649334	650000	650666	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	17.92	18.39	18.93	19.12	19.08	20.00
Channel				648334	649166	650000	650834	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	18.09	18.65	19.17	19.16	19.18	20.00
Channel				648000	649000	650000	651000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	18.30	19.07	19.13	19.13	19.39	20.00
Channel				647668	648834	650000	651166	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	18.18	19.06	19.17	19.09	19.01	20.00
Channel				647334	648666	650000	651334	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	18.16	19.10	19.16	19.16	19.04	20.00

2.4GHz WLAN ANT 8

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN ANT 8	802.11b 1Mbps	CH 1	2412	16.75	16.00	98.77
		CH 6	2437	16.15		
		CH 11	2462	16.81		
	802.11g 6Mbps	CH 1	2412	15.01	15.00	98.26
		CH 6	2437	14.80		
		CH 11	2462	15.05		
	802.11n-HT20 MCS0	CH 1	2412	14.92	15.00	98.13
		CH 6	2437	14.58		
		CH 11	2462	14.98		
	802.11n-HT40 MCS0	CH 3	2422	15.33	15.00	94.90
		CH 6	2437	15.29		
		CH 9	2452	15.75		

5GHz WLAN ANT 8

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 8	802.11a 6Mbps	CH 36	5180	17.11	17.50	98.26
		CH 44	5220	17.14		
		CH 48	5240	16.94		
	802.11n-HT20 MCS0	CH 36	5180	16.44	18.00	98.13
		CH 44	5220	16.54		
		CH 48	5240	16.26		
	802.11n-HT40 MCS0	CH 38	5190	17.06	18.00	96.47
		CH 46	5230	16.94		
	802.11ac-VHT20 MCS0	CH 36	5180	16.40	18.00	98.13
		CH 44	5220	16.56		
		CH 48	5240	16.28		
	802.11ac-VHT40 MCS0	CH 38	5190	17.07	17.00	96.30
		CH 46	5230	16.94		
	802.11ac-VHT80 MCS0	CH 42	5210	17.36	17.00	93.09

5GHz WLAN ANT 8

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN ANT 8	802.11a 6Mbps	CH 149	5745	15.16	14.50	98.26
		CH 157	5785	15.09		
		CH 165	5825	15.22		
	802.11n-HT20 MCS0	CH 149	5745	14.46	14.00	98.13
		CH 157	5785	14.44		
		CH 165	5825	14.53		
	802.11n-HT40 MCS0	CH 151	5755	15.30	14.00	96.47
		CH 159	5795	15.03		
	802.11ac-VHT20 MCS0	CH 149	5745	14.50	14.00	98.13
		CH 157	5785	14.42		
		CH 165	5825	14.54		
	802.11ac-VHT40 MCS0	CH 151	5755	15.31	14.00	96.30
		CH 159	5795	15.03		
	802.11ac-VHT80 MCS0	CH 155	5775	15.06	14.00	92.68



Reduced Power Level 2 for ANT 1 & ANT 4 & ANT 5 & ANT 6 & ANT 8

Band 2 (1900MHz Band) (dBm)_ANT 4							
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	1890	1900	
20	QPSK	1	0	16.84	16.85	16.75	
20	QPSK	1	49	16.74	16.57	16.65	17.8
20	QPSK	1	99	16.73	16.67	16.52	
20	QPSK	50	0	15.80	15.82	15.71	
20	QPSK	50	24	15.75	15.74	15.69	16.8
20	QPSK	50	50	15.71	15.59	15.54	
20	QPSK	100	0	15.73	15.78	15.64	
20	16QAM	1	0	15.95	15.87	15.81	16.8
20	16QAM	1	49	15.90	15.86	15.87	
20	16QAM	1	99	15.82	15.82	15.86	
20	16QAM	50	0	14.86	14.66	14.70	15.8
20	16QAM	50	24	14.84	14.62	14.67	
20	16QAM	50	50	14.84	14.53	14.56	
20	16QAM	100	0	14.75	14.66	14.66	15.8
20	64QAM	1	0	14.91	14.71	14.82	
20	64QAM	1	49	14.83	14.75	14.71	
20	64QAM	1	99	14.80	14.71	14.66	14.8
20	64QAM	50	0	13.78	13.69	13.71	
20	64QAM	50	24	13.63	13.58	13.57	
20	64QAM	50	50	13.53	13.55	13.58	14.8
20	64QAM	100	0	13.51	13.46	13.55	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	16.80	16.74	16.63	
15	QPSK	1	37	16.60	16.71	16.51	17.8
15	QPSK	1	74	16.59	16.52	16.57	
15	QPSK	36	0	15.88	15.75	15.72	
15	QPSK	36	20	15.87	15.60	15.64	16.8
15	QPSK	36	39	15.77	15.56	15.61	
15	QPSK	75	0	15.65	15.67	15.59	
15	16QAM	1	0	15.89	15.80	15.72	16.8
15	16QAM	1	37	15.84	15.73	15.75	
15	16QAM	1	74	15.80	15.77	15.73	
15	16QAM	36	0	14.74	14.61	14.56	15.8
15	16QAM	36	20	14.76	14.55	14.56	
15	16QAM	36	39	14.72	14.52	14.58	
15	16QAM	75	0	14.79	14.54	14.53	15.8
15	64QAM	1	0	14.84	14.67	14.66	
15	64QAM	1	37	14.83	14.66	14.74	
15	64QAM	1	74	14.69	14.60	14.77	14.8
15	64QAM	36	0	13.82	13.56	13.63	
15	64QAM	36	20	13.73	13.62	13.56	
15	64QAM	36	39	13.62	13.51	13.60	14.8
15	64QAM	75	0	13.69	13.56	13.50	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	16.81	16.74	16.70	
10	QPSK	1	25	16.80	16.65	16.68	17.8
10	QPSK	1	49	16.75	16.63	16.61	
10	QPSK	25	0	15.85	15.82	15.61	
10	QPSK	25	12	15.80	15.66	15.70	16.8
10	QPSK	25	25	15.74	15.58	15.65	
10	QPSK	50	0	15.67	15.60	15.51	
10	16QAM	1	0	15.95	15.86	15.85	16.8
10	16QAM	1	25	15.87	15.69	15.89	
10	16QAM	1	49	15.69	15.83	15.83	
10	16QAM	25	0	14.86	14.61	14.71	15.8
10	16QAM	25	12	14.70	14.52	14.54	
10	16QAM	25	25	14.65	14.63	14.60	
10	16QAM	50	0	14.66	14.60	14.67	15.8
10	64QAM	1	0	14.90	14.61	14.81	
10	64QAM	1	25	14.83	14.53	14.70	
10	64QAM	1	49	14.80	14.55	14.56	14.8
10	64QAM	25	0	13.84	13.63	13.69	
10	64QAM	25	12	13.64	13.52	13.64	
10	64QAM	25	25	13.54	13.60	13.55	14.8
10	64QAM	50	0	13.68	13.56	13.59	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	16.82	16.77	16.68	
5	QPSK	1	12	16.73	16.76	16.68	17.8
5	QPSK	1	24	16.76	16.66	16.53	
5	QPSK	12	0	15.80	15.78	15.83	
5	QPSK	12	7	15.79	15.76	15.67	16.8
5	QPSK	12	13	15.71	15.58	15.52	
5	QPSK	25	0	15.79	15.70	15.58	
5	16QAM	1	0	15.95	15.86	15.80	16.8
5	16QAM	1	12	15.81	15.73	15.68	
5	16QAM	1	24	15.88	15.75	15.71	
5	16QAM	12	0	14.93	14.67	14.81	15.8
5	16QAM	12	7	14.85	14.56	14.56	
5	16QAM	12	13	14.84	14.59	14.61	
5	16QAM	25	0	14.87	14.56	14.50	15.8
5	64QAM	1	0	14.88	14.66	14.75	
5	64QAM	1	12	14.82	14.59	14.77	
5	64QAM	1	24	14.80	14.70	14.53	14.8
5	64QAM	12	0	13.80	13.60	13.61	
5	64QAM	12	7	13.71	13.63	13.64	
5	64QAM	12	13	13.52	13.50	13.62	14.8
5	64QAM	25	0	13.56	13.58	13.51	
Channel				18615	18900	19165	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	16.78	16.75	16.66	
3	QPSK	1	8	16.60	16.74	16.70	17.8
3	QPSK	1	14	16.70	16.64	16.51	
3	QPSK	8	0	15.85	15.78	15.65	
3	QPSK	8	4	15.70	15.75	15.58	14.8

Band 4 (AWS Band) (dBm)_ANT 4							
Part 27L (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel			20050	20175	20300		
Frequency (MHz)			1720	1732.5	1745		
20	QPSK	1	0	14.71	14.83	14.80	15.8
20	QPSK	1	49	14.66	14.71	14.52	
20	QPSK	1	99	14.59	14.58	14.50	
20	QPSK	50	0	13.75	13.81	13.60	14.8
20	QPSK	50	24	13.73	13.70	13.72	
20	QPSK	50	50	13.70	13.60	13.45	
20	QPSK	100	0	13.65	13.67	13.61	14.8
20	16QAM	1	0	13.96	14.03	14.00	
20	16QAM	1	49	13.83	13.80	13.91	
20	16QAM	1	99	13.77	13.77	13.71	13.8
20	16QAM	50	0	12.81	12.85	12.71	
20	16QAM	50	24	12.75	12.71	12.55	
20	16QAM	50	50	12.67	12.54	12.52	13.8
20	16QAM	100	0	12.69	12.64	12.75	
20	64QAM	1	0	12.83	12.90	12.84	
20	64QAM	1	49	12.82	12.65	12.79	13.8
20	64QAM	1	99	12.76	12.63	12.75	
20	64QAM	50	0	11.65	11.74	11.64	
20	64QAM	50	24	11.69	11.43	11.59	12.8
20	64QAM	50	50	11.70	11.42	11.65	
20	64QAM	100	0	11.67	11.48	11.49	
Channel			20025	20175	20325	Tune-up limit (dBm)	
Frequency (MHz)			1717.5	1732.5	1747.5		
15	QPSK	1	0	14.69	14.76		14.70
15	QPSK	1	37	14.60	14.66	14.63	15.8
15	QPSK	1	74	14.65	14.72	14.49	
15	QPSK	36	0	13.80	13.82	13.63	
15	QPSK	36	20	13.73	13.58	13.64	14.8
15	QPSK	36	39	13.74	13.70	13.44	
15	QPSK	75	0	13.72	13.70	13.69	
15	16QAM	1	0	13.96	14.01	13.91	14.8
15	16QAM	1	37	13.85	13.85	13.82	
15	16QAM	1	74	13.82	13.84	13.89	
15	16QAM	36	0	12.81	12.84	12.74	13.8
15	16QAM	36	20	12.78	12.69	12.73	
15	16QAM	36	39	12.82	12.48	12.52	
15	16QAM	75	0	12.67	12.54	12.51	13.8
15	64QAM	1	0	12.86	12.89	12.67	
15	64QAM	1	37	12.85	12.72	12.63	
15	64QAM	1	74	12.71	12.62	12.73	12.8
15	64QAM	36	0	11.74	11.76	11.57	
15	64QAM	36	20	11.70	11.57	11.64	
15	64QAM	36	39	11.76	11.43	11.62	12.8
15	64QAM	75	0	11.55	11.55	11.61	
Channel			20000	20175	20350	Tune-up limit (dBm)	
Frequency (MHz)			1715	1732.5	1750		
10	QPSK	1	0	14.75	14.80		14.65
10	QPSK	1	25	14.70	14.65	14.57	15.8
10	QPSK	1	49	14.63	14.51	14.52	
10	QPSK	25	0	13.71	13.72	13.69	
10	QPSK	25	12	13.64	13.62	13.64	14.8
10	QPSK	25	25	13.65	13.47	13.50	
10	QPSK	50	0	13.55	13.59	13.57	
10	16QAM	1	0	13.86	13.87	13.77	14.8
10	16QAM	1	25	13.80	13.64	13.73	
10	16QAM	1	49	13.74	13.72	13.70	
10	16QAM	25	0	12.80	12.83	12.78	13.8
10	16QAM	25	12	12.75	12.60	12.67	
10	16QAM	25	25	12.62	12.62	12.43	
10	16QAM	50	0	12.63	12.83	12.62	13.8
10	64QAM	1	0	12.80	12.77	12.72	
10	64QAM	1	25	12.72	12.60	12.66	
10	64QAM	1	49	12.65	12.65	12.69	12.8
10	64QAM	25	0	11.81	11.82	11.71	
10	64QAM	25	12	11.70	11.48	11.58	
10	64QAM	25	25	11.59	11.49	11.43	13.8
10	64QAM	50	0	11.62	11.42	11.56	
Channel			19975	20175	20375		
Frequency (MHz)			1712.5	1732.5	1752.5	Tune-up limit (dBm)	
5	QPSK	1	0	14.73	14.77	14.75	15.8
5	QPSK	1	12	14.70	14.69	14.57	
5	QPSK	1	24	14.55	14.71	14.60	
5	QPSK	12	0	13.69	13.76	13.74	14.8
5	QPSK	12	7	13.66	13.71	13.55	
5	QPSK	12	13	13.65	13.69	13.51	
5	QPSK	25	0	13.60	13.65	13.63	14.8
5	16QAM	1	0	13.72	13.86	13.84	
5	16QAM	1	12	13.70	13.83	13.76	
5	16QAM	1	24	13.66	13.71	13.60	13.8
5	16QAM	12	0	12.72	12.70	12.65	
5	16QAM	12	7	12.65	12.69	12.63	
5	16QAM	12	13	12.59	12.60	12.59	13.8
5	16QAM	25	0	12.76	12.57	12.65	
5	64QAM	1	0	12.72	12.84	12.70	
5	64QAM	1	12	12.75	12.74	12.75	12.8
5	64QAM	1	24	12.73	12.70	12.74	
5	64QAM	12	0	11.68	11.75	11.62	
5	64QAM	12	7	11.74	11.43	11.48	12.8
5	64QAM	12	13	11.59	11.46	11.57	
5	64QAM	25	0	11.56	11.45	11.59	
Channel			19965	20175	20385	Tune-up limit (dBm)	
Frequency (MHz)			1711.5	1732.5	1753.5		
3	QPSK	1	0	14.67	14.78		14.72
3	QPSK	1	8	14.72	14.77	14.68	15.8
3	QPSK	1	14	14.59	14.72	14.61	
3	QPSK	8	0	13.66	13.83	13.68	
3	QPSK	8	4	13.65	13.58	13.71	



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3	QPSK	8	7	15.75	15.57	15.53	15.8
3	QPSK	15	0	15.72	15.64	15.59	
3	16QAM	1	0	15.96	15.85	15.82	
3	16QAM	1	8	15.81	15.80	15.73	16.8
3	16QAM	1	14	15.77	15.76	15.74	
3	16QAM	8	0	14.88	14.70	14.58	
3	16QAM	8	4	14.85	14.59	14.58	15.8
3	16QAM	8	7	14.66	14.63	14.62	
3	16QAM	15	0	14.76	14.58	14.53	
3	64QAM	1	0	14.85	14.76	14.64	15.8
3	64QAM	1	8	14.75	14.61	14.63	
3	64QAM	1	14	14.80	14.67	14.76	
3	64QAM	8	0	13.85	13.65	13.57	14.8
3	64QAM	8	4	13.77	13.57	13.66	
3	64QAM	8	7	13.58	13.59	13.55	
3	64QAM	15	0	13.68	13.51	13.61	14.8
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	16.79	16.76	16.71	17.8
1.4	QPSK	1	3	16.76	16.71	16.62	
1.4	QPSK	1	5	16.68	16.50	16.58	
1.4	QPSK	3	0	15.89	15.73	15.76	16.8
1.4	QPSK	3	1	15.88	15.57	15.60	
1.4	QPSK	3	3	15.78	15.55	15.56	
1.4	QPSK	6	0	15.74	15.65	15.66	16.8
1.4	16QAM	1	0	15.97	15.96	15.88	
1.4	16QAM	1	3	15.90	15.90	15.80	
1.4	16QAM	1	5	15.84	15.95	15.85	16.8
1.4	16QAM	3	0	14.78	14.67	14.63	
1.4	16QAM	3	1	14.72	14.58	14.65	
1.4	16QAM	3	3	14.73	14.64	14.52	15.8
1.4	16QAM	6	0	14.64	14.52	14.46	
1.4	64QAM	1	0	14.85	14.72	14.70	
1.4	64QAM	1	3	14.84	14.72	14.74	15.8
1.4	64QAM	1	5	14.72	14.46	14.61	
1.4	64QAM	3	0	13.89	13.66	13.67	
1.4	64QAM	3	1	13.68	13.57	13.55	14.8
1.4	64QAM	3	3	13.58	13.50	13.52	
1.4	64QAM	6	0	13.56	13.51	13.52	

3	QPSK	8	7	13.68	13.48	13.51	14.8
3	QPSK	15	0	13.61	13.60	13.48	
3	16QAM	1	0	13.63	13.66	13.61	
3	16QAM	1	8	13.71	13.80	13.79	13.8
3	16QAM	1	14	13.60	13.72	13.69	
3	16QAM	8	0	12.73	12.63	12.74	
3	16QAM	8	4	12.68	12.62	12.50	13.8
3	16QAM	8	7	12.64	12.54	12.50	
3	16QAM	15	0	12.57	12.60	12.50	
3	64QAM	1	0	12.66	12.79	12.78	13.8
3	64QAM	1	8	12.62	12.60	12.71	
3	64QAM	1	14	12.65	12.62	12.67	
3	64QAM	8	0	11.77	11.80	11.56	12.8
3	64QAM	8	4	11.74	11.49	11.52	
3	64QAM	8	7	11.72	11.55	11.48	
3	64QAM	15	0	11.58	11.48	11.55	12.8
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	14.65	14.76	14.74	15.8
1.4	QPSK	1	3	14.65	14.62	14.57	
1.4	QPSK	1	5	14.63	14.63	14.47	
1.4	QPSK	3	0	13.72	13.74	13.70	14.8
1.4	QPSK	3	1	13.68	13.63	13.56	
1.4	QPSK	3	3	13.65	13.69	13.61	
1.4	QPSK	6	0	13.74	13.66	13.61	14.8
1.4	16QAM	1	0	13.87	13.89	13.80	
1.4	16QAM	1	3	13.66	13.85	13.63	
1.4	16QAM	1	5	13.59	13.73	13.69	14.8
1.4	16QAM	3	0	12.72	12.79	12.75	
1.4	16QAM	3	1	12.70	12.53	12.64	
1.4	16QAM	3	3	12.74	12.55	12.41	13.8
1.4	16QAM	6	0	12.76	12.82	12.57	
1.4	64QAM	1	0	12.80	12.70	12.77	
1.4	64QAM	1	3	12.72	12.54	12.63	13.8
1.4	64QAM	1	5	12.75	12.55	12.53	
1.4	64QAM	3	0	11.78	11.82	11.72	
1.4	64QAM	3	1	11.71	11.63	11.69	12.8
1.4	64QAM	3	3	11.61	11.45	11.55	
1.4	64QAM	6	0	11.56	11.31	11.54	



Band 5 (Celluar Band) (dBm)_ANT 1 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	19.95	19.97	19.86	20.8
10	QPSK	1	25	19.83	19.86	19.65	
10	QPSK	1	49	19.80	19.77	19.76	
10	QPSK	25	0	18.85	18.88	18.75	19.8
10	QPSK	25	12	18.82	18.66	18.69	
10	QPSK	25	25	18.66	18.56	18.67	
10	QPSK	50	0	18.71	18.74	18.72	19.8
10	16QAM	1	0	19.01	19.04	19.05	
10	16QAM	1	25	18.89	18.99	18.99	
10	16QAM	1	49	18.95	19.02	18.98	18.8
10	16QAM	25	0	17.83	17.88	17.81	
10	16QAM	25	12	17.81	17.71	17.67	
10	16QAM	25	25	17.74	17.69	17.55	18.8
10	16QAM	50	0	17.83	17.80	17.65	
10	64QAM	1	0	17.90	17.93	17.84	
10	64QAM	1	25	17.86	17.76	17.82	18.8
10	64QAM	1	49	17.86	17.79	17.77	
10	64QAM	25	0	16.67	16.72	16.81	
10	64QAM	25	12	16.78	16.56	16.71	17.8
10	64QAM	25	25	16.69	16.47	16.73	
10	64QAM	50	0	16.60	16.57	16.55	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				820.5	830.5	840.5	
5	QPSK	1	0	19.88	19.94	19.83	20.8
5	QPSK	1	12	19.81	19.75	19.72	
5	QPSK	1	24	19.73	19.79	19.73	
5	QPSK	12	0	18.85	18.90	18.89	19.8
5	QPSK	12	7	18.86	18.87	18.85	
5	QPSK	12	13	18.69	18.78	18.71	
5	QPSK	25	0	18.88	18.79	18.72	19.8
5	16QAM	1	0	18.90	18.95	18.89	
5	16QAM	1	12	18.77	18.92	18.89	
5	16QAM	1	24	18.82	18.84	18.81	18.8
5	16QAM	12	0	17.83	17.84	17.68	
5	16QAM	12	7	17.80	17.67	17.60	
5	16QAM	12	13	17.69	17.72	17.65	18.8
5	16QAM	25	0	17.73	17.73	17.62	
5	64QAM	1	0	17.86	17.90	17.81	
5	64QAM	1	12	17.87	17.83	17.80	18.8
5	64QAM	1	24	17.86	17.57	17.81	
5	64QAM	12	0	16.82	16.80	16.75	
5	64QAM	12	7	16.76	16.67	16.61	17.8
5	64QAM	12	13	16.75	16.48	16.74	
5	64QAM	25	0	16.52	16.61	16.57	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	19.86	19.89	19.85	20.8
3	QPSK	1	8	19.83	19.80	19.60	
3	QPSK	1	14	19.66	19.59	19.59	
3	QPSK	8	0	18.80	18.85	18.81	19.8
3	QPSK	8	4	18.84	18.79	18.76	
3	QPSK	8	7	18.79	18.68	18.57	
3	QPSK	15	0	18.69	18.68	18.61	19.8
3	16QAM	1	0	19.06	19.10	19.06	
3	16QAM	1	8	19.00	19.05	18.98	
3	16QAM	1	14	18.98	18.83	18.83	18.8
3	16QAM	8	0	17.83	17.90	17.76	
3	16QAM	8	4	17.70	17.78	17.59	
3	16QAM	8	7	17.78	17.71	17.57	18.8
3	16QAM	15	0	17.76	17.77	17.77	
3	64QAM	1	0	17.76	17.75	17.88	
3	64QAM	1	8	17.74	17.66	17.79	18.8
3	64QAM	1	14	17.80	17.79	17.74	
3	64QAM	8	0	16.66	16.74	16.77	
3	64QAM	8	4	16.73	16.64	16.81	17.8
3	64QAM	8	7	16.76	16.62	16.61	
3	64QAM	15	0	16.73	16.64	16.76	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	19.82	19.88	19.77	20.8
1.4	QPSK	1	3	19.74	19.79	19.60	
1.4	QPSK	1	5	19.80	19.73	19.55	
1.4	QPSK	3	0	18.82	18.85	18.81	19.8
1.4	QPSK	3	1	18.83	18.70	18.68	
1.4	QPSK	3	3	18.68	18.67	18.58	
1.4	QPSK	6	0	18.74	18.80	18.62	19.8
1.4	16QAM	1	0	19.00	19.08	18.97	
1.4	16QAM	1	3	19.04	18.92	18.98	
1.4	16QAM	1	5	19.02	18.85	18.82	19.8
1.4	16QAM	3	0	17.82	17.83	17.83	
1.4	16QAM	3	1	17.68	17.72	17.83	
1.4	16QAM	3	3	17.78	17.72	17.50	18.8
1.4	16QAM	6	0	17.85	17.58	17.67	
1.4	64QAM	1	0	17.91	17.70	17.71	
1.4	64QAM	1	3	17.79	17.75	17.75	18.8
1.4	64QAM	1	5	17.76	17.75	17.76	
1.4	64QAM	3	0	16.80	16.78	16.68	
1.4	64QAM	3	1	16.59	16.59	16.57	17.8
1.4	64QAM	3	3	16.57	16.63	16.72	
1.4	64QAM	6	0	16.73	16.47	16.59	

Band 13(700MHz Band) (dBm)_ANT 1 Part 27F							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		20.19		21.3
10	QPSK	1	25		20.14		
10	QPSK	1	49		20.09		
10	QPSK	25	0		19.28		20.3
10	QPSK	25	12		19.24		
10	QPSK	25	25		19.19		
10	QPSK	50	0		19.20		20.3
10	16QAM	1	0		19.36		
10	16QAM	1	25		19.29		
10	16QAM	1	49		19.31		19.3
10	16QAM	25	0		18.35		
10	16QAM	25	12		18.32		
10	16QAM	25	25		18.18		19.3
10	16QAM	50	0		18.17		
10	64QAM	1	0		18.39		
10	64QAM	1	25		18.31		19.3
10	64QAM	1	49		18.27		
10	64QAM	25	0		17.22		
10	64QAM	25	12		17.15		18.3
10	64QAM	25	25		17.05		
10	64QAM	50	0		17.16		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	20.12	20.16	20.09	21.3
5	QPSK	1	12	20.11	20.14	20.10	
5	QPSK	1	24	20.07	20.00	20.02	
5	QPSK	12	0	19.28	19.31	19.23	20.3
5	QPSK	12	7	19.16	19.26	19.12	
5	QPSK	12	13	19.02	19.10	19.10	
5	QPSK	25	0	19.21	19.21	19.09	20.3
5	16QAM	1	0	19.28	19.34	19.33	
5	16QAM	1	12	19.22	19.32	19.22	
5	16QAM	1	24	19.21	19.28	19.23	19.3
5	16QAM	12	0	18.18	18.25	18.16	
5	16QAM	12	7	18.08	18.14	18.19	
5	16QAM	12	13	18.03	18.13	18.08	19.3
5	16QAM	25	0	18.15	18.16	18.12	
5	64QAM	1	0	18.26	18.32	18.18	
5	64QAM	1	12	18.17	18.19	18.22	19.3
5	64QAM	1	24	18.20	18.04	18.07	
5	64QAM	12	0	17.22	17.25	17.09	
5	64QAM	12	7	17.01	17.12	17.06	18.3
5	64QAM	12	13	17.00	16.99	17.03	
5	64QAM	25	0	17.09	17.04	17.15	



Band 66 (dBm)_ANT 4							
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	14.79	14.89	14.86	
20	QPSK	1	49	14.73	14.73	14.70	15.8
20	QPSK	1	99	14.67	14.74	14.66	
20	QPSK	50	0	13.69	13.85	13.82	
20	QPSK	50	24	13.82	13.83	13.80	14.8
20	QPSK	50	50	13.78	13.63	13.70	
20	QPSK	100	0	13.79	13.63	13.57	
20	16QAM	1	0	14.01	14.05	13.99	14.8
20	16QAM	1	49	13.98	14.02	13.95	
20	16QAM	1	99	14.02	13.94	14.01	
20	16QAM	50	0	12.80	12.86	12.81	13.8
20	16QAM	50	24	12.71	12.61	12.84	
20	16QAM	50	50	12.68	12.56	12.68	
20	16QAM	100	0	12.78	12.56	12.69	13.8
20	64QAM	1	0	12.83	12.77	12.72	
20	64QAM	1	49	12.71	12.86	12.80	
20	64QAM	1	99	12.68	12.81	12.82	12.8
20	64QAM	50	0	11.67	11.90	11.84	
20	64QAM	50	24	11.80	11.69	11.70	
20	64QAM	50	50	11.76	11.64	11.71	
20	64QAM	100	0	11.76	11.70	11.55	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	14.84	14.86	14.82	15.8
15	QPSK	1	37	14.77	14.68	14.78	
15	QPSK	1	74	14.75	14.74	14.54	
15	QPSK	36	0	13.80	13.89	13.71	14.8
15	QPSK	36	20	13.78	13.64	13.71	
15	QPSK	36	39	13.67	13.76	13.63	
15	QPSK	75	0	13.76	13.64	13.59	14.8
15	16QAM	1	0	14.13	14.16	14.03	
15	16QAM	1	37	14.00	14.01	13.96	
15	16QAM	1	74	13.93	13.83	13.92	13.8
15	16QAM	36	0	12.91	12.62	12.88	
15	16QAM	36	20	12.89	12.83	12.65	
15	16QAM	36	39	12.85	12.62	12.72	13.8
15	16QAM	75	0	12.77	12.61	12.57	
15	64QAM	1	0	12.84	12.80	12.89	
15	64QAM	1	37	12.75	12.74	12.83	12.8
15	64QAM	1	74	12.73	12.66	12.81	
15	64QAM	36	0	11.71	11.59	11.81	
15	64QAM	36	20	11.81	11.60	11.68	
15	64QAM	36	39	11.59	11.47	11.59	
15	64QAM	75	0	11.55	11.50	11.61	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	14.83	14.85	14.83	15.8
10	QPSK	1	25	14.78	14.78	14.71	
10	QPSK	1	49	14.70	14.79	14.74	
10	QPSK	25	0	13.89	13.93	13.82	14.8
10	QPSK	25	12	13.75	13.78	13.86	
10	QPSK	25	25	13.84	13.67	13.76	
10	QPSK	50	0	13.87	13.60	13.63	14.8
10	16QAM	1	0	14.03	14.06	14.01	
10	16QAM	1	25	14.01	14.05	13.95	
10	16QAM	1	49	13.96	13.82	13.86	13.8
10	16QAM	25	0	12.84	12.85	12.81	
10	16QAM	25	12	12.70	12.60	12.71	
10	16QAM	25	25	12.63	12.68	12.54	13.8
10	16QAM	50	0	12.79	12.68	12.71	
10	64QAM	1	0	12.89	12.75	12.82	
10	64QAM	1	25	12.75	12.82	12.73	12.8
10	64QAM	1	49	12.70	12.73	12.65	
10	64QAM	25	0	11.74	11.77	11.63	
10	64QAM	25	12	11.75	11.55	11.64	
10	64QAM	25	25	11.70	11.46	11.73	
10	64QAM	50	0	11.73	11.52	11.65	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	14.82	14.83	14.77	15.8
5	QPSK	1	12	14.70	14.78	14.72	
5	QPSK	1	24	14.74	14.67	14.54	
5	QPSK	12	0	13.81	13.85	13.81	14.8
5	QPSK	12	7	13.79	13.79	13.68	
5	QPSK	12	13	13.67	13.64	13.58	
5	QPSK	25	0	13.70	13.81	13.77	14.8
5	16QAM	1	0	14.02	14.04	13.92	
5	16QAM	1	12	14.00	13.92	13.97	
5	16QAM	1	24	13.90	13.89	13.99	13.8
5	16QAM	12	0	12.86	12.87	12.80	
5	16QAM	12	7	12.76	12.70	12.80	
5	16QAM	12	13	12.80	12.70	12.59	13.8
5	16QAM	25	0	12.63	12.64	12.78	
5	64QAM	1	0	12.77	12.81	12.88	
5	64QAM	1	12	12.83	12.80	12.69	12.8
5	64QAM	1	24	12.66	12.78	12.78	
5	64QAM	12	0	11.68	11.74	11.86	
5	64QAM	12	7	11.77	11.60	11.80	
5	64QAM	12	13	11.59	11.63	11.56	
5	64QAM	25	0	11.60	11.42	11.62	
Channel				131987	132322	132057	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	14.81	14.85	14.77	15.8
3	QPSK	1	8	14.71	14.82	14.82	
3	QPSK	1	14	14.74	14.82	14.72	
3	QPSK	8	0	13.86	13.93	13.83	
3	QPSK	8	4	13.80	13.75	13.75	

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3	QPSK	8	7	13.69	13.62	13.61	14.0
3	QPSK	15	0	13.83	13.65	13.63	
3	16QAM	1	0	13.99	14.03	14.16	
3	16QAM	1	8	14.01	13.89	13.89	14.8
3	16QAM	1	14	13.95	13.94	13.93	
3	16QAM	8	0	12.81	12.96	12.94	
3	16QAM	8	4	12.92	12.74	12.77	13.8
3	16QAM	8	7	12.75	12.71	12.65	
3	16QAM	15	0	12.76	12.75	12.54	
3	64QAM	1	0	12.88	12.82	12.73	13.8
3	64QAM	1	8	12.82	12.72	12.76	
3	64QAM	1	14	12.77	12.63	12.67	
3	64QAM	8	0	11.81	11.78	11.67	12.8
3	64QAM	8	4	11.79	11.70	11.69	
3	64QAM	8	7	11.54	11.51	11.53	
3	64QAM	15	0	11.69	11.61	11.70	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	14.78	14.84	14.69	15.8
1.4	QPSK	1	3	14.75	14.66	14.64	
1.4	QPSK	1	5	14.77	14.65	14.70	
1.4	QPSK	3	0	13.86	13.89	13.85	
1.4	QPSK	3	1	13.87	13.67	13.84	
1.4	QPSK	3	3	13.76	13.80	13.58	14.8
1.4	QPSK	6	0	13.72	13.76	13.67	
1.4	16QAM	1	0	13.93	14.09	14.03	14.8
1.4	16QAM	1	3	14.02	13.91	13.88	
1.4	16QAM	1	5	13.91	14.00	14.00	
1.4	16QAM	3	0	12.72	12.85	12.80	
1.4	16QAM	3	1	12.73	12.62	12.75	
1.4	16QAM	3	3	12.62	12.50	12.65	13.8
1.4	16QAM	6	0	12.78	12.68	12.68	
1.4	64QAM	1	0	12.79	12.86	12.80	13.8
1.4	64QAM	1	3	12.76	12.83	12.73	
1.4	64QAM	1	5	12.66	12.74	12.84	
1.4	64QAM	3	0	11.72	11.68	11.74	
1.4	64QAM	3	1	11.84	11.55	11.62	
1.4	64QAM	3	3	11.58	11.54	11.66	12.8
1.4	64QAM	6	0	11.54	11.58	11.54	



Band 48 (3.5G Band) (dBm)_ANT 6									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Middle-Low Channel	Middle-Low Channel	Middle-High Channel	High Channel	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	18.43	18.41	18.48	18.38	18.45	19.3
20	QPSK	1	49	18.37	18.26	18.37	18.34	18.35	
20	QPSK	1	99	18.39	18.33	18.25	18.21	18.32	
20	QPSK	50	0	17.36	17.30	17.39	17.32	17.38	18.3
20	QPSK	50	24	17.32	17.23	17.30	17.26	17.34	
20	QPSK	50	50	17.29	17.15	17.19	17.14	17.23	
20	QPSK	100	0	17.23	17.23	17.23	17.20	17.30	18.3
20	16QAM	1	0	17.72	17.68	17.70	17.63	17.66	
20	16QAM	1	49	17.70	17.50	17.56	17.65	17.59	
20	16QAM	1	99	17.48	17.49	17.61	17.51	17.53	17.3
20	16QAM	50	0	16.29	16.33	16.35	16.30	16.25	
20	16QAM	50	24	16.22	16.28	16.21	16.24	16.28	
20	16QAM	50	50	16.15	16.15	16.20	16.19	16.19	17.3
20	16QAM	100	0	16.39	16.15	16.08	16.37	16.31	
20	64QAM	1	0	16.30	16.21	16.43	16.36	16.34	
20	64QAM	1	49	16.36	16.32	16.36	16.41	16.30	16.3
20	64QAM	1	99	16.38	16.17	16.24	16.38	16.31	
20	64QAM	50	0	15.35	15.24	15.39	15.33	15.22	
20	64QAM	50	24	15.32	15.24	15.29	15.17	15.20	16.3
20	64QAM	50	50	15.24	15.15	15.19	15.36	15.15	
20	64QAM	100	0	15.26	15.18	15.32	15.21	15.22	
Channel				55315	55820	55990	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	18.34	18.40	18.45	18.32	18.36	19.3
15	QPSK	1	37	18.31	18.24	18.21	18.23	18.31	
15	QPSK	1	74	18.30	18.18	18.22	18.18	18.34	
15	QPSK	36	0	17.30	17.33	17.36	17.34	17.30	18.3
15	QPSK	36	20	17.33	17.31	17.35	17.28	17.34	
15	QPSK	36	39	17.24	17.19	17.26	17.26	17.20	
15	QPSK	75	0	17.19	17.35	17.21	17.20	17.26	18.3
15	16QAM	1	0	17.53	17.59	17.60	17.58	17.48	
15	16QAM	1	37	17.56	17.56	17.50	17.44	17.52	
15	16QAM	1	74	17.45	17.41	17.45	17.57	17.51	17.3
15	16QAM	36	0	16.46	16.22	16.42	16.31	16.34	
15	16QAM	36	20	16.43	16.26	16.34	16.30	16.34	
15	16QAM	36	39	16.21	16.20	16.25	16.39	16.22	17.3
15	16QAM	75	0	16.29	16.19	16.26	16.19	16.13	
15	64QAM	1	0	16.43	16.31	16.39	16.38	16.43	
15	64QAM	1	37	16.41	16.31	16.37	16.35	16.18	16.3
15	64QAM	1	74	16.44	16.14	16.19	16.31	16.34	
15	64QAM	36	0	15.33	15.28	15.26	15.34	15.26	
15	64QAM	36	20	15.25	15.19	15.34	15.20	15.14	16.3
15	64QAM	36	39	15.23	15.07	15.27	15.21	15.08	
15	64QAM	75	0	15.12	15.08	15.23	15.21	15.16	
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	18.39	18.29	18.43	18.32	18.33	19.3
10	QPSK	1	25	18.31	18.26	18.34	18.23	18.32	
10	QPSK	1	49	18.23	18.28	18.21	18.25	18.16	
10	QPSK	25	0	17.44	17.42	17.45	17.32	17.30	18.3
10	QPSK	25	12	17.30	17.32	17.34	17.32	17.37	
10	QPSK	25	25	17.26	17.33	17.20	17.20	17.25	
10	QPSK	50	0	17.36	17.37	17.27	17.18	17.23	18.3
10	16QAM	1	0	17.58	17.57	17.65	17.56	17.51	
10	16QAM	1	25	17.53	17.54	17.54	17.57	17.59	
10	16QAM	1	49	17.50	17.37	17.51	17.51	17.50	17.3
10	16QAM	25	0	16.27	16.33	16.34	16.44	16.22	
10	16QAM	25	12	16.35	16.34	16.25	16.39	16.28	
10	16QAM	25	25	16.26	16.22	16.22	16.34	16.19	17.3
10	16QAM	50	0	16.19	16.18	16.31	16.36	16.25	
10	64QAM	1	0	16.55	16.25	16.32	16.36	16.40	
10	64QAM	1	25	16.27	16.36	16.29	16.34	16.27	16.3
10	64QAM	1	49	16.33	16.19	16.27	16.24	16.30	
10	64QAM	25	0	15.34	15.16	15.39	15.40	15.17	
10	64QAM	25	12	15.17	15.27	15.30	15.13	15.24	16.3
10	64QAM	25	25	15.19	15.22	15.12	15.34	15.12	
10	64QAM	50	0	15.13	15.21	15.20	15.28	15.20	
Channel				55265	55810	55990	56170	56175	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	18.34	18.32	18.40	18.33	18.34	19.3
5	QPSK	1	12	18.31	18.38	18.35	18.34	18.35	
5	QPSK	1	24	18.38	18.37	18.23	18.26	18.21	
5	QPSK	12	0	17.36	17.32	17.39	17.35	17.26	18.3
5	QPSK	12	7	18.32	17.38	17.27	17.27	17.37	
5	QPSK	12	13	17.38	17.35	17.29	17.14	17.23	
5	QPSK	25	0	17.33	17.30	17.18	17.42	17.36	18.3
5	16QAM	1	0	17.52	17.56	17.58	17.53	17.53	
5	16QAM	1	12	17.56	17.54	17.41	17.56	17.52	
5	16QAM	1	24	17.51	17.54	17.38	17.53	17.54	17.3
5	16QAM	12	0	16.30	16.23	16.45	16.44	16.32	
5	16QAM	12	7	16.29	16.26	16.26	16.45	16.31	
5	16QAM	12	13	16.17	16.20	16.19	16.29	16.24	16.3
5	16QAM	25	0	16.41	16.32	16.22	16.34	16.29	
5	64QAM	1	0	16.40	16.45	16.37	16.48	16.34	
5	64QAM	1	12	16.31	16.37	16.26	16.37	16.26	16.3
5	64QAM	1	24	16.39	16.34	16.40	16.32	16.32	
5	64QAM	12	0	15.37	15.22	15.42	15.40	15.23	
5	64QAM	12	7	15.19	15.20	15.20	15.30	15.11	16.3
5	64QAM	12	13	15.18	15.22	15.23	15.21	15.17	
5	64QAM	25	0	15.10	15.16	15.19	15.15	15.00	

n2 (PC3)_ANT 4							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	16.00
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	14.87	14.83	14.53	16.00
20		1	53	14.93	14.62	14.57	
20		1	104	14.66	14.54	14.51	
20		50	1	15.08	14.80	14.64	16.00
20		50	25	15.02	14.80	14.63	
20		50	50	14.98	14.77	14.67	
20		100	0	14.98	14.80	14.61	16.00
20		1	1	15.07	15.13	15.02	
20	DFT-s-OFDM QPSK	1	53	14.92	14.72	14.95	
20		1	104	14.76	14.67	14.63	16.00
20		50	1	15.05	15.08	15.07	
20		50	25	15.03	14.69	14.68	16.00
20		50	50	14.95	14.69	14.74	
20		100	0	15.01	14.79	14.63	
20	DFT-s-OFDM 16QAM	1	1	15.11	14.97	14.71	16.00
20	DFT-s-OFDM 64QAM	1	1	13.58	13.50	13.22	14.50
20	DFT-s-OFDM 256QAM	1	1	11.20	11.16	10.90	12.00
20	CP-OFDM QPSK	1	1	14.48	14.39	14.15	15.50
20	CP-OFDM 16QAM	1	1	13.98	13.95	13.68	15.00
20	CP-OFDM 64QAM	1	1	12.64	12.56	12.25	13.50
20	CP-OFDM 256QAM	1	1	9.31	9.23	8.90	10.00
Channel				371500	376000	380500	16.00
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	15.09	14.83	14.59	16.00
Channel				371000	376000	381000	16.00
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	15.08	14.81	14.70	16.00
Channel				370500	376000	381500	16.00
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	15.06	14.63	14.59	16.00

n5 (PC3)_ANT 1

BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	19.00
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	18.11	18.17	18.17	19.00
20		1	53	18.03	18.01	18.05	
20		1	104	17.77	17.71	17.79	
20		50	1	18.22	18.21	18.22	19.00
20	DFT-s-OFDM QPSK	50	25	18.12	18.16	18.09	
20		50	50	18.12	18.01	17.99	
20		100	0	18.20	18.12	18.04	
20		1	1	18.27	18.32	18.31	19.00
20	DFT-s-OFDM 16QAM	1	53	18.10	18.10	18.18	
20		1	104	17.85	17.74	17.82	
20		50	1	18.21	18.23	18.14	19.00
20		50	25	18.15	18.15	18.06	
20	DFT-s-OFDM 64QAM	50	50	18.00	18.04	17.81	
20		100	0	18.19	18.17	18.01	18.00
20	DFT-s-OFDM 256QAM	1	1	17.75	17.79	17.78	
20	CP-OFDM QPSK	1	1	16.64	16.83	16.86	17.00
20	CP-OFDM 16QAM	1	1	14.48	14.57	14.50	14.00
20	CP-OFDM 64QAM	1	1	17.71	17.81	17.61	19.50
20	CP-OFDM 256QAM	1	1	17.30	17.32	17.27	18.50
20		1	1	15.77	15.92	15.82	17.50
20		1	1	12.51	12.61	12.60	13.50
Channel				166300	167300	168300	19.00
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	21.75	21.79	21.57	19.00
Channel				165800	167300	168800	19.00
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	21.53	21.35	21.48	19.00
Channel				165300	167300	169300	19.00
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	21.59	21.52	21.28	19.00

n66 (PC3)_ANT 4							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM PI/2 BPSK	1	1	13.81	13.65	13.57	14.5
20		1	53	13.73	13.60	13.51	
20		1	104	13.63	13.66	13.53	
20		50	1	13.88	13.71	13.66	14.5
20	DFT-s-OFDM QPSK	50	25	13.87	13.66	13.61	
20		50	50	13.79	13.67	13.60	
20		100	0	13.83	13.68	13.65	
20		1	1	13.88	13.90	13.86	14.5
20	DFT-s-OFDM 16QAM	1	53	13.81	13.59	13.49	
20		1	104	13.66	13.64	13.52	
20		50	1	13.80	13.84	13.79	14.5
20		50	25	13.78	13.74	13.59	
20	DFT-s-OFDM 64QAM	50	50	13.76	13.68	13.56	
20		100	0	13.82	13.74	13.56	
20	DFT-s-OFDM 256QAM	1	1	13.81	13.76	13.66	14.5
20	CP-OFDM QPSK	1	1	12.46	12.24	12.17	12.5
20	CP-OFDM 16QAM	1	1	10.09	9.90	9.81	10.5
20	CP-OFDM 64QAM	1	1	13.47	13.29	13.19	14
20	CP-OFDM 256QAM	1	1	13.01	12.70	12.67	14
20		1	1	11.56	11.35	11.28	12
20		1	1	8.09	7.92	7.79	9
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	13.96	13.84	13.76	14.5
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	13.78	13.65	13.57	14.5
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	13.83	13.69	13.73	14.5

n77(3450-3550MHz) (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			16
Frequency (MHz)						3500.01			
100	DFT-s-OFDM PI/2 BPSK	1	1			15.32			16
100		1	136			14.67			
100		1	271			14.45			
100		135	1			14.72			
100		135	67			15.01			
100	DFT-s-OFDM QPSK	135	136			13.99			16
100		270	0			14.45			
100		1	1			15.43			
100		1	136			14.95			
100		1	271			14.39			
100	DFT-s-OFDM 16QAM	135	1			15.01			15.5
100		135	67			14.99			
100		135	136			14.46			
100		270	0			14.92			
100		1	1			14.33			
100	DFT-s-OFDM 64QAM	1	1			12.97			14
100	DFT-s-OFDM 256QAM	1	1			10.78			11
100	CP-OFDM QPSK	1	1			13.92			15
100	CP-OFDM 16QAM	1	1			13.41			14
100	CP-OFDM 64QAM	1	1			11.53			12.5
100	CP-OFDM 256QAM	1	1			8.79			9.5
Channel				632668	633000	633334	633666	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	15.33	15.34	15.32	15.18	15.09	16
Channel				632000	632668	633334	634000	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	14.53	15.35	15.12	14.98	15.04	16
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 QPSK	1	1	15.39	15.33	15.36	15.32	15.19	16
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 QPSK	1	1	15.34	15.35	15.30	15.31	14.95	16
Channel				630668	632000	633334	634666	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	15.31	15.34	15.25	15.09	14.69	16



n77(3700-3980MHz) (PC2)_ANT 6									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel				650000	653000	656000	659000	662000	
Frequency (MHz)				3750	3795	3840	3885	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	11.08	12.68	12.80	12.69	11.75	14.50
100		1	136	12.77	12.91	12.68	11.71	12.65	
100		1	271	12.57	12.59	11.68	11.56	11.45	
100		135	1	12.02	12.55	12.30	11.54	11.76	13.50
100		135	67	12.87	12.92	12.70	11.73	11.51	
100		135	136	12.02	12.26	11.38	11.30	10.89	
100		270	0	12.01	12.49	12.17	12.06	12.48	
100	DFT-s-OFDM QPSK	1	1	13.52	13.65	13.67	13.57	13.62	14.50
100		1	136	13.13	12.89	12.71	12.52	12.12	
100		1	271	12.58	12.55	11.70	11.34	12.01	
100		135	1	12.54	12.63	12.87	12.75	12.79	13.50
100		135	67	12.25	12.48	12.66	12.55	11.49	
100		135	136	12.34	12.55	11.68	11.63	11.82	
100		270	0	12.44	12.01	12.49	11.56	11.14	
100	DFT-s-OFDM 16QAM	1	1	11.93	12.56	11.43	11.58	10.66	13.50
100	DFT-s-OFDM 64QAM	1	1	11.80	11.31	10.34	10.40	9.35	12.50
100	DFT-s-OFDM 256QAM	1	1	6.37	8.94	8.15	8.01	7.05	8.50
100	CP-OFDM QPSK	1	1	9.57	12.15	11.32	11.21	10.25	10.00
100	CP-OFDM 16QAM	1	1	9.07	9.22	10.89	10.74	9.77	9.00
100	CP-OFDM 64QAM	1	1	7.17	9.84	8.89	8.85	7.85	8.00
100	CP-OFDM 256QAM	1	1	5.39	7.00	6.06	6.04	5.08	7.00
Channel				649334	652668	656000	659332	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	
80	DFT-s-OFDM QPSK	1	1	11.05	13.52	12.91	12.34	11.22	14.50
Channel				648668	652334	656000	659666	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	
60	DFT-s-OFDM QPSK	1	1	11.09	13.34	12.86	11.85	10.57	14.50
Channel				648000	652000	656000	660000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3780	3840	3900	3960	
40	DFT-s-OFDM QPSK	1	1	11.50	13.50	13.07	12.13	9.94	14.50
Channel				647668	651834	656000	660166	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	
30	DFT-s-OFDM QPSK	1	1	11.42	13.29	12.95	11.79	9.98	14.50
Channel				647334	651668	656000	660332	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	
20	DFT-s-OFDM QPSK	1	1	11.34	13.25	12.99	11.64	10.36	14.50



n78(3450-3550MHz) (PC2)_ANT 6

BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			17.00
Frequency (MHz)						3500.01			
100	DFT-s-OFDM PI/2 BPSK	1	1			15.99			17.00
100		1	136			14.84			
100		1	271			14.15			
100		135	1			14.85			
100		135	67			15.05			
100		135	136			13.74			
100		270	0			14.45			
100	DFT-s-OFDM QPSK	1	1			16.21			17.00
100		1	136			15.89			
100		1	271			15.12			
100		135	1			16.09			
100		135	67			15.88			
100		135	136			15.08			
100		270	0			14.73			
100	DFT-s-OFDM 16QAM	1	1			14.82			15.50
100	DFT-s-OFDM 64QAM	1	1			13.50			14.50
100	DFT-s-OFDM 256QAM	1	1			11.37			12.50
100	CP-OFDM QPSK	1	1			14.29			15.50
100	CP-OFDM 16QAM	1	1			13.83			14.50
100	CP-OFDM 64QAM	1	1			12.19			13.00
100	CP-OFDM 256QAM	1	1			9.30			10.00
Channel				633000	633166	633334	633500	633666	17.00
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	15.98	15.94	15.99	15.92	15.88	17.00
Channel				632668	633000	633334	633666	634000	17.00
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	15.98	15.90	16.00	15.84	15.73	17.00
Channel				632334	632834	633334	633832	634332	17.00
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	15.99	15.85	16.00	15.69	15.81	17.00
Channel				632000	632666	633334	634000	634666	17.00
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	15.94	15.73	16.01	15.78	15.78	17.00
Channel				631668	632500	633334	634166	635000	17.00
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	15.93	15.64	16.00	15.90	15.83	17.00
Channel				631334	636672	633334	634334	635332	17.00
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	15.99	15.86	16.00	15.81	15.75	17.00
Channel				631000	632166	633334	634500	635666	17.00
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	15.96	15.74	15.98	15.85	15.72	17.00
Channel				630668	632000	633334	634668	636000	17.00
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	15.90	15.59	15.92	15.67	15.78	17.00



n78(3700-3800MHz) (PC2)_ANT 6

BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up limit (dBm)
Channel						650000			18.00
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			15.91			18.00
100		1	136			17.11			
100		1	271			17.00			
100		135	1			16.50			
100		135	67			17.08			
100		135	136			16.28			
100		270	0			16.40			
100	DFT-s-OFDM QPSK	1	1			17.17			18.00
100		1	136			16.29			
100		1	271			16.49			
100		135	1			17.13			
100		135	67			16.89			
100		135	136			16.77			
100		270	0			16.81			
100	DFT-s-OFDM 16QAM	1	1			14.88			16.00
100	DFT-s-OFDM 64QAM	1	1			13.57			14.50
100	DFT-s-OFDM 256QAM	1	1			11.28			12.00
100	CP-OFDM QPSK	1	1			14.48			15.00
100	CP-OFDM 16QAM	1	1			14.12			15.00
100	CP-OFDM 64QAM	1	1			12.19			13.00
100	CP-OFDM 256QAM	1	1			9.31			10.00
Channel				649668	649834	650000	650166	650332	18.00
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	16.97	17.01	17.11	17.00	17.00	18.00
Channel				649334	649666	650000	650334	650666	18.00
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	17.02	17.01	17.11	17.00	17.00	18.00
Channel				649000	649500	650000	650500	651000	18.00
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	17.02	17.01	17.11	17.03	17.02	18.00
Channel				648668	649334	650000	650666	651332	18.00
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	17.09	17.00	17.10	17.04	16.98	18.00
Channel				648334	649166	650000	650834	651666	18.00
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	17.09	17.00	17.10	17.04	17.03	18.00
Channel				648000	649000	650000	651000	652000	18.00
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	17.09	17.00	17.10	17.04	17.00	18.00
Channel				647668	648834	650000	651166	652332	18.00
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	17.00	17.06	17.09	17.04	17.00	18.00
Channel				647334	648666	650000	651334	652666	18.00
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	17.02	17.06	17.09	17.04	17.03	18.00

2.4GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN ANT 8	802.11b 1Mbps	CH 1	2412	13.25	14.00	12.50	98.77
		CH 6	2437	12.65	13.50		
		CH 11	2462	13.31	14.00		
	802.11g 6Mbps	CH 1	2412	11.51	12.50	11.50	98.26
		CH 6	2437	11.30	12.50		
		CH 11	2462	11.55	12.50		
	802.11n-HT20 MCS0	CH 1	2412	11.42	12.50	11.50	98.13
		CH 6	2437	11.08	12.00		
		CH 11	2462	11.48	12.50		
	802.11n-HT40 MCS0	CH 3	2422	11.83	12.50	11.50	94.90
		CH 6	2437	11.79	12.50		
		CH 9	2452	12.25	13.00		

5GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 8	802.11a 6Mbps	CH 36	5180	13.11	14.00	13.50	98.26
		CH 44	5220	13.14	14.00		
		CH 48	5240	12.94	14.00		
	802.11n-HT20 MCS0	CH 36	5180	12.44	13.50	14.00	98.13
		CH 44	5220	12.54	13.50		
		CH 48	5240	12.26	13.00		
	802.11n-HT40 MCS0	CH 38	5190	13.06	14.00	14.00	96.47
		CH 46	5230	12.94	14.00		
	802.11ac-VHT20 MCS0	CH 36	5180	12.40	13.50	14.00	98.13
		CH 44	5220	12.56	13.50		
		CH 48	5240	12.28	13.00		
	802.11ac-VHT40 MCS0	CH 38	5190	13.07	14.00	13.00	96.30
		CH 46	5230	12.94	14.00		
	802.11ac-VHT80 MCS0	CH 42	5210	13.36	14.00	13.00	93.09

5GHz WLAN ANT 8

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN ANT 8	802.11a 6Mbps	CH 149	5745	13.16	14.00	12.50	98.26
		CH 157	5785	13.09	14.00		
		CH 165	5825	13.22	14.00		
	802.11n-HT20 MCS0	CH 149	5745	12.46	13.50	12.00	98.13
		CH 157	5785	12.44	13.50		
		CH 165	5825	12.53	13.50		
	802.11n-HT40 MCS0	CH 151	5755	13.30	14.00	12.00	96.47
		CH 159	5795	13.03	14.00		
	802.11ac-VHT20 MCS0	CH 149	5745	12.50	13.50	12.00	98.13
		CH 157	5785	12.42	13.50		
		CH 165	5825	12.54	13.50		
	802.11ac-VHT40 MCS0	CH 151	5755	13.31	14.00	12.00	96.30
		CH 159	5795	13.03	14.00		
	802.11ac-VHT80 MCS0	CH 155	5775	13.06	14.00	12.00	92.68