



REPORT No.: SZ23020294S01

Annex E Conducted Power



Full Power

GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
TX Channel		128	189	251		128	189	251		
Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot		31.36	31.48	31.40	32.00	22.36	22.48	22.40	23.00	0.12
GPRS 1 Tx slot		31.36	31.47	31.41	32.00	22.36	22.47	22.41	23.00	
GPRS 2 Tx slots		29.52	29.56	29.48	30.00	23.52	23.56	23.48	24.00	0.08
GPRS 3 Tx slots		27.32	27.44	27.41	28.00	23.06	23.18	23.15	23.74	0.12
GPRS 4 Tx slots		26.18	26.24	26.21	27.00	23.18	23.24	23.21	24.00	0.06
EDGE 1 Tx slot		26.12	26.10	26.11	27.00	17.12	17.10	17.11	18.00	0.02
EDGE 2 Tx slots		25.47	25.55	25.49	26.00	19.47	19.55	19.49	20.00	0.08
EDGE 3 Tx slots		23.34	23.42	23.52	24.00	19.08	19.16	19.26	19.74	0.18
EDGE 4 Tx slots		20.61	20.59	20.64	21.00	17.61	17.59	17.64	18.00	0.05
Mode			Max.	31.48			Max.	23.56		
Attenuator		Cable Loss : 0.6								

GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
TX Channel		512	661	810		512	661	810		
Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8		
GSM 1 Tx slot		29.45	29.52	29.45	30.00	20.45	20.52	20.45	21.00	0.08
GPRS 1 Tx slot		29.46	29.53	29.47	30.00	20.46	20.53	20.47	21.00	
GPRS 2 Tx slots		26.45	26.36	26.33	27.00	20.45	20.36	20.33	21.00	0.12
GPRS 3 Tx slots		24.50	24.55	24.43	25.00	20.24	20.29	20.17	20.74	0.12
GPRS 4 Tx slots		23.16	23.17	23.12	24.00	20.16	20.17	20.12	21.00	0.05
EDGE 1 Tx slot		25.66	25.47	25.61	26.00	16.66	16.47	16.61	17.00	0.19
EDGE 2 Tx slots		24.62	24.52	24.56	25.00	18.62	18.52	18.56	19.00	0.10
EDGE 3 Tx slots		23.26	23.20	23.18	24.00	19.00	18.94	18.92	19.74	0.08
EDGE 4 Tx slots		22.55	22.46	22.41	23.00	19.55	19.46	19.41	20.00	0.14
Mode			Max.	29.53			Max.	20.53		
Attenuator		Cable Loss : 0.8								

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band IV (dBm)			Tune-up Limit (dBm)	WCDMA Band V (dBm)			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	22.39	22.47	22.41	23.00	23.11	23.18	23.14	24.00	22.56	22.61	22.51	23.00
3GPP Rel 6	HSDPA Subtest-1	19.44	19.61	19.47	20.50	19.76	19.91	19.99	20.50	20.26	20.25	20.34	21.50
3GPP Rel 6	HSDPA Subtest-2	18.48	18.62	18.53	19.50	18.79	18.94	19.02	20.50	19.31	19.25	19.41	20.50
3GPP Rel 6	HSDPA Subtest-3	17.67	17.85	17.71	18.50	17.96	18.13	18.20	19.50	18.50	18.46	18.57	20.50
3GPP Rel 6	HSDPA Subtest-4	17.58	17.73	17.63	18.80	17.87	18.03	18.09	19.50	18.36	18.35	18.47	20.50
3GPP Rel 8	DC-HSDPA Subtest-1	19.46	19.61	19.60	20.50	19.90	20.00	20.13	20.50	20.34	20.34	20.39	21.50
3GPP Rel 8	DC-HSDPA Subtest-2	18.30	18.45	18.41	19.50	18.70	18.88	18.92	19.50	19.18	19.16	19.24	20.50
3GPP Rel 8	DC-HSDPA Subtest-3	17.43	17.52	17.60	18.50	17.79	18.00	18.00	19.50	18.31	18.27	18.30	20.50
3GPP Rel 8	DC-HSDPA Subtest-4	17.52	17.67	17.62	18.50	17.91	18.09	18.14	19.50	18.38	18.36	18.38	20.50
3GPP Rel 6	HSUPA Subtest-1	18.50	18.57	18.50	19.50	18.75	18.96	19.07	19.50	19.31	19.30	19.39	20.50
3GPP Rel 6	HSUPA Subtest-2	18.48	18.56	18.48	19.50	18.75	18.94	19.05	19.50	19.28	19.26	19.35	20.50
3GPP Rel 6	HSUPA Subtest-3	18.20	18.31	18.20	19.50	18.45	18.66	18.63	19.50	19.00	19.00	19.06	20.50
3GPP Rel 6	HSUPA Subtest-4	19.44	19.56	19.43	20.50	19.73	19.91	19.95	20.50	20.23	20.27	20.32	21.50
3GPP Rel 6	HSUPA Subtest-5	18.45	18.51	18.38	19.50	18.66	18.86	18.86	19.50	19.20	19.18	19.29	20.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	17.71	17.72	17.67	18.50	18.13	18.27	18.23	19.50	18.51	18.47	18.51	19.50
Attenuator			Cable Loss	0.8			Cable Loss	0.8			Cable Loss	0.6	
Mode			Max.	22.47			Max.	23.18			Max.	22.61	



Band 2 (1900MHz Band)							
Part 24E							
BW (MHz)	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				18700	18900	19100	23.5
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.61	22.64	22.58	23.5
20	QPSK	1	49	22.59	22.53	22.46	
20	QPSK	1	99	22.53	22.49	22.47	
20	QPSK	50	0	21.44	21.53	21.46	22.5
20	QPSK	50	24	21.45	21.50	21.50	
20	QPSK	50	50	21.50	21.46	21.52	
20	QPSK	100	0	21.43	21.52	21.48	22.5
20	16QAM	1	0	21.49	21.49	21.51	
20	16QAM	1	49	21.33	21.63	21.59	
20	16QAM	1	99	21.46	21.31	21.71	22.5
20	16QAM	50	0	21.39	21.36	21.34	
20	16QAM	50	24	21.35	21.40	21.41	
20	16QAM	50	50	21.43	21.40	21.47	22.5
20	16QAM	100	0	21.46	21.47	21.34	
20	64QAM	1	0	21.41	21.60	21.34	22.5
20	64QAM	1	49	21.36	21.54	21.45	
20	64QAM	1	99	21.31	21.64	21.64	
20	64QAM	50	0	21.41	21.33	21.38	22.5
20	64QAM	50	24	21.44	21.38	21.43	
20	64QAM	50	50	21.43	21.44	21.38	
20	64QAM	100	0	21.31	21.28	21.29	23.5
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	23.5
15	QPSK	1	0	22.42	22.45	22.36	
15	QPSK	1	37	22.21	22.57	22.45	22.5
15	QPSK	1	74	22.58	22.50	22.58	
15	QPSK	36	0	21.18	21.27	21.26	
15	QPSK	36	20	21.17	21.36	21.33	22.5
15	QPSK	36	39	21.29	21.30	21.27	
15	QPSK	75	0	21.21	21.27	21.23	
15	16QAM	1	0	21.30	21.38	21.32	22.5
15	16QAM	1	37	21.43	21.46	21.32	
15	16QAM	1	74	21.38	21.50	21.50	
15	16QAM	36	0	21.17	21.22	21.25	22.5
15	16QAM	36	20	21.26	21.19	21.32	
15	16QAM	36	39	21.31	21.40	21.37	
15	16QAM	75	0	21.18	21.20	21.29	22.5
15	64QAM	1	0	21.38	21.14	21.20	
15	64QAM	1	37	21.37	21.18	21.60	
15	64QAM	1	74	21.26	21.30	21.45	22.5
15	64QAM	36	0	21.11	21.28	21.16	
15	64QAM	36	20	21.31	21.33	21.23	
15	64QAM	36	39	21.19	21.24	21.33	22.5
15	64QAM	75	0	21.18	21.25	21.24	
Channel				18650	18900	19150	23.5
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.39	22.38	22.48	23.5
10	QPSK	1	25	22.50	22.60	22.48	
10	QPSK	1	49	22.39	22.47	22.39	
10	QPSK	25	0	21.29	21.30	21.26	22.5
10	QPSK	25	12	21.25	21.37	21.30	
10	QPSK	25	25	21.16	21.29	21.25	
10	QPSK	50	0	21.22	21.31	21.29	22.5
10	16QAM	1	0	21.70	21.63	21.62	
10	16QAM	1	25	21.39	21.35	21.42	
10	16QAM	1	49	21.34	21.42	21.21	22.5
10	16QAM	25	0	21.24	21.23	21.20	
10	16QAM	25	12	21.40	21.20	21.20	
10	16QAM	25	25	21.20	21.40	21.50	22.5
10	16QAM	50	0	21.77	21.70	21.74	
10	64QAM	1	0	21.28	21.33	21.33	
10	64QAM	1	25	21.31	21.36	21.40	22.5
10	64QAM	1	49	20.98	21.11	21.08	
10	64QAM	25	0	21.28	21.32	21.33	
10	64QAM	25	12	21.31	21.29	21.30	22.5
10	64QAM	25	25	21.24	21.02	21.24	
10	64QAM	50	0	21.25	21.25	21.22	
Channel				18625	18900	19175	23.5
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.53	22.58	22.52	23.5
5	QPSK	1	12	22.52	22.47	22.50	
5	QPSK	1	24	22.48	22.56	22.57	
5	QPSK	12	0	21.28	21.19	21.26	22.5
5	QPSK	12	7	21.29	21.34	21.26	
5	QPSK	12	13	21.28	21.27	21.30	
5	QPSK	25	0	21.27	21.25	21.27	22.5
5	16QAM	1	0	21.40	21.30	21.68	
5	16QAM	1	12	21.38	21.31	21.68	
5	16QAM	1	24	21.41	21.28	21.67	22.5
5	16QAM	12	0	21.50	21.64	21.50	
5	16QAM	12	7	21.40	21.40	21.20	
5	16QAM	12	13	21.20	21.53	21.30	22.5
5	16QAM	25	0	21.30	21.76	21.74	
5	64QAM	1	0	21.50	21.22	21.27	
5	64QAM	1	12	21.66	21.32	21.43	22.5
5	64QAM	1	24	21.67	21.31	21.33	
5	64QAM	12	0	21.32	21.25	21.24	
5	64QAM	12	7	21.38	21.22	21.22	22.5
5	64QAM	12	13	21.35	21.31	21.29	
5	64QAM	25	0	21.42	21.22	21.29	
Channel				18615	18900	19185	23.5
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.47	22.54	22.46	23.5
3	QPSK	1	8	22.57	22.60	22.43	
3	QPSK	1	14	22.58	22.45	22.45	
3	QPSK	8	0	21.16	21.11	21.13	22.5
3	QPSK	8	4	21.22	21.16	21.17	
3	QPSK	8	7	21.22	21.16	21.12	
3	QPSK	15	0	21.14	21.22	21.15	23.5
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	

Band 4 (AWS Band)							
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	23.42	23.50	23.49	24.5
20	QPSK	1	49	23.28	23.36	23.35	
20	QPSK	1	99	23.20	23.33	23.45	
20	QPSK	50	0	22.49	22.62	22.59	23.5
20	QPSK	50	24	22.49	22.57	22.57	
20	QPSK	50	50	22.38	22.49	22.50	
20	QPSK	100	0	22.48	22.52	22.59	23.5
20	16QAM	1	0	22.35	22.65	22.52	
20	16QAM	1	49	22.50	22.27	22.41	
20	16QAM	1	99	22.29	22.51	22.35	23.5
20	16QAM	50	0	22.48	22.41	22.55	
20	16QAM	50	24	22.74	22.85	22.74	
20	16QAM	50	50	22.70	22.71	22.71	23.5
20	16QAM	100	0	22.72	22.80	22.81	
20	64QAM	1	0	22.46	22.57	22.79	
20	64QAM	1	49	22.50	22.43	22.31	23.5
20	64QAM	1	99	22.77	22.34	22.81	
20	64QAM	50	0	22.47	22.56	22.51	
20	64QAM	50	24	22.49	22.60	22.54	23.5
20	64QAM	50	50	22.53	22.48	22.50	
20	64QAM	100	0	22.56	22.54	22.63	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	23.29	23.33	23.43	24.5
15	QPSK	1	37	23.33	23.42	23.34	
15	QPSK	1	74	23.20	23.42	23.45	
15	QPSK	36	0	22.43	22.50	22.53	23.5
15	QPSK	36	20	22.47	22.60	22.56	
15	QPSK	36	39	22.52	22.51	22.60	
15	QPSK	75	0	22.47	22.49	22.50	23.5
15	16QAM	1	0	22.41	22.63	22.35	
15	16QAM	1	37	22.49	22.49	22.33	
15	16QAM	1	74	22.35	22.65	22.44	23.5
15	16QAM	36	0	22.36	22.38	22.57	
15	16QAM	36	20	22.31	22.38	22.44	
15	16QAM	36	39	22.27	22.36	22.42	23.5
15	16QAM	75	0	22.38	22.39	22.48	
15	64QAM	1	0	22.33	22.64	22.69	
15	64QAM	1	37	22.75	22.51	22.57	23.5
15	64QAM	1	74	22.79	22.50	22.54	
15	64QAM	36	0	22.44	22.51	22.55	
15	64QAM	36	20	22.50	22.52	22.54	23.5
15	64QAM	36	39	22.53	22.49	22.51	
15	64QAM	75	0	22.46	22.57	22.50	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	23.21	23.40	23.23	24.5
10	QPSK	1	25	23.19	23.32	23.33	
10	QPSK	1	49	23.27	23.10	23.33	
10	QPSK	25	0	22.26	22.48	22.50	23.5
10	QPSK	25	12	22.38	22.44	22.48	
10	QPSK	25	25	22.27	22.38	22.45	
10	QPSK	50	0	22.33	22.43	22.35	23.5
10	16QAM	1	0	22.32	22.47	22.23	
10	16QAM	1	25	22.59	22.33	22.65	
10	16QAM	1	49	22.66	22.56	22.55	23.5
10	16QAM	25	0	22.32	22.31	22.30	
10	16QAM	25	12	22.24	22.34	22.31	
10	16QAM	25	25	22.58	22.49	22.58	23.5
10	16QAM	50	0	22.52	22.56	22.68	
10	64QAM	1	0	22.38	22.46	22.36	
10	64QAM	1	25	22.45	22.74	22.83	23.5
10	64QAM	1	49	22.43	22.47	22.42	
10	64QAM	25	0	22.27	22.41	22.40	
10	64QAM	25	12	22.36	22.47	22.51	23.5
10	64QAM	25	25	22.24	22.36	22.38	
10	64QAM	50	0	22.30	22.37	22.36	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	23.11	23.33	23.38	24.5
5	QPSK	1	12	23.17	23.32	23.29	
5	QPSK	1	24	23.12	23.24	23.23	
5	QPSK	12	0	22.34	22.34	22.38	23.5
5	QPSK	12	7	22.34	22.45	22.42	
5	QPSK	12	13	22.29	22.46	22.38	
5	QPSK	25	0	22.32	22.36	22.42	23.5
5	16QAM	1	0	22.22	22.63	22.31	
5	16QAM	1	12	22.33	22.68	22.27	
5	16QAM	1	24	22.27	22.62	22.22	23.5
5	16QAM	12	0	22.26	22.20	22.23	
5	16QAM	12	7	22.29	22.33	22.31	
5	16QAM	12	13	22.56	22.63	22.67	23.5
5	16QAM	25	0	22.57	22.68	22.61	
5	64QAM	1	0	22.34	22.78	22.76	
5	64QAM	1	12	22.72	22.48	22.75	23.5
5	64QAM	1	24	22.68	22.38	22.45	
5	64QAM	12	0	22.35	22.42	22.44	
5	64QAM	12	7	22.34	22.43	22.49	23.5
5	64QAM	12	13	22.35	22.41	22.40	
5	64QAM	25	0	22.30	22.44	22.35	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	23.23	23.24	23.36	24.5
3	QPSK	1	8	23.32	23.46	23.40	
3	QPSK	1	14	23.12	23.31	23.31	
3	QPSK	8	0	22.32	22.38	22.39	23.5
3	QPSK	8	4	22.38	22.46	22.48	
3	QPSK	8	7	22.34	22.44	22.44	
3	QPSK	15	0	22.34	22.40	22.34	



3	16QAM	1	0	21.30	21.21	21.15	22.5
3	16QAM	1	8	21.34	21.28	21.24	
3	16QAM	1	14	21.27	21.24	21.12	
3	16QAM	8	0	21.50	21.63	21.55	22.5
3	16QAM	8	4	21.57	21.54	21.60	
3	16QAM	8	7	21.47	21.52	21.55	
3	16QAM	15	0	21.50	21.54	21.49	22.5
3	64QAM	1	0	21.23	21.16	21.19	
3	64QAM	1	8	21.65	21.64	21.24	
3	64QAM	1	14	21.26	21.62	21.26	22.5
3	64QAM	8	0	21.18	21.20	21.04	
3	64QAM	8	4	21.28	21.18	21.18	
3	64QAM	8	7	21.38	21.27	21.13	22.5
3	64QAM	15	0	21.23	21.23	21.21	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.53	22.56	22.51	23.5
1.4	QPSK	1	3	22.43	22.41	22.40	
1.4	QPSK	1	5	22.40	22.38	22.36	
1.4	QPSK	3	0	22.40	22.40	22.36	23.5
1.4	QPSK	3	1	22.44	22.41	22.39	
1.4	QPSK	3	3	22.46	22.50	22.39	
1.4	QPSK	6	0	21.32	21.30	21.29	22.5
1.4	16QAM	1	0	21.35	21.35	21.29	22.5
1.4	16QAM	1	3	21.31	21.51	21.49	
1.4	16QAM	1	5	21.19	21.39	21.07	
1.4	16QAM	3	0	21.21	21.26	21.23	22.5
1.4	16QAM	3	1	21.39	21.21	21.26	
1.4	16QAM	3	3	21.41	21.38	21.12	
1.4	16QAM	6	0	21.42	21.35	21.30	22.5
1.4	64QAM	1	0	21.30	21.22	21.25	22.5
1.4	64QAM	1	3	21.32	21.53	21.41	
1.4	64QAM	1	5	21.30	21.65	21.24	
1.4	64QAM	3	0	21.33	21.39	21.40	22.5
1.4	64QAM	3	1	21.42	21.39	21.60	
1.4	64QAM	3	3	21.34	21.48	21.25	
1.4	64QAM	6	0	21.39	21.42	21.31	22.5

3	16QAM	1	0	22.42	22.51	22.55	23.5
3	16QAM	1	8	22.64	22.64	22.38	
3	16QAM	1	14	22.55	22.33	22.41	
3	16QAM	8	0	22.34	22.35	22.44	23.5
3	16QAM	8	4	22.44	22.44	22.45	
3	16QAM	8	7	22.66	22.74	22.78	
3	16QAM	15	0	22.66	22.64	22.71	23.5
3	64QAM	1	0	22.33	22.42	22.40	
3	64QAM	1	8	22.52	22.40	22.56	
3	64QAM	1	14	22.33	22.40	22.23	23.5
3	64QAM	8	0	22.31	22.35	22.29	
3	64QAM	8	4	22.43	22.41	22.45	
3	64QAM	8	7	22.37	22.44	22.56	23.5
3	64QAM	15	0	22.33	22.41	22.32	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.98	23.19	23.20	24.5
1.4	QPSK	1	3	23.32	23.32	23.36	
1.4	QPSK	1	5	23.18	23.27	23.29	
1.4	QPSK	3	0	23.26	23.23	23.22	23.5
1.4	QPSK	3	1	23.22	23.32	23.37	
1.4	QPSK	3	3	23.21	23.28	23.27	
1.4	QPSK	6	0	22.37	22.39	22.35	23.5
1.4	16QAM	1	0	22.31	22.78	22.44	23.5
1.4	16QAM	1	3	22.44	22.52	22.56	
1.4	16QAM	1	5	22.50	22.66	22.46	
1.4	16QAM	3	0	22.53	22.57	22.48	23.5
1.4	16QAM	3	1	22.54	22.57	22.59	
1.4	16QAM	3	3	22.53	22.65	22.54	
1.4	16QAM	6	0	22.44	22.45	22.36	23.5
1.4	64QAM	1	0	22.22	22.16	22.30	23.5
1.4	64QAM	1	3	22.48	22.46	22.58	
1.4	64QAM	1	5	22.39	22.35	22.19	
1.4	64QAM	3	0	22.30	22.28	22.47	23.5
1.4	64QAM	3	1	22.21	22.36	22.33	
1.4	64QAM	3	3	22.27	22.44	22.32	
1.4	64QAM	6	0	22.26	22.27	22.34	23.5



Band 5 (Cellular Band)							
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	24
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	23.16	23.17	23.09	24
10	QPSK	1	25	23.02	23.05	22.85	
10	QPSK	1	49	22.94	23.06	22.74	
10	QPSK	25	0	22.47	22.49	22.30	
10	QPSK	25	12	22.23	22.25	22.30	23
10	QPSK	25	25	22.23	22.34	22.39	
10	QPSK	50	0	22.29	22.17	22.31	
10	16QAM	1	0	22.33	22.52	22.23	
10	16QAM	1	25	22.56	22.59	22.27	23
10	16QAM	1	49	22.39	22.45	22.52	
10	16QAM	25	0	22.48	22.49	22.31	
10	16QAM	25	12	22.42	22.50	22.28	
10	16QAM	25	25	22.45	22.38	22.41	23
10	16QAM	50	0	22.46	22.37	22.27	
10	64QAM	1	0	22.42	22.52	22.40	
10	64QAM	1	25	22.39	22.59	22.39	
10	64QAM	1	49	22.28	22.50	22.41	23
10	64QAM	25	0	22.39	22.50	22.17	
10	64QAM	25	12	22.38	22.55	22.26	
10	64QAM	25	25	22.50	22.39	22.09	
10	64QAM	50	0	22.46	22.42	22.28	23
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	24
5	QPSK	1	0	23.11	23.07	23.05	
5	QPSK	1	12	23.01	23.12	22.96	23
5	QPSK	1	24	23.01	22.96	22.96	
5	QPSK	12	0	22.38	22.43	22.29	
5	QPSK	12	7	22.45	22.46	22.38	
5	QPSK	12	13	22.50	22.34	22.29	23
5	QPSK	25	0	22.41	22.37	22.29	
5	16QAM	1	0	22.70	22.63	22.39	
5	16QAM	1	12	22.40	22.62	22.38	
5	16QAM	1	24	22.27	22.62	22.45	23
5	16QAM	12	0	22.36	22.45	22.44	
5	16QAM	12	7	22.43	22.46	22.28	
5	16QAM	12	13	22.43	22.34	22.39	
5	16QAM	25	0	22.44	22.49	22.44	23
5	64QAM	1	0	22.51	22.39	22.50	
5	64QAM	1	12	22.39	22.33	22.47	
5	64QAM	1	24	22.53	22.37	22.31	
5	64QAM	12	0	22.25	22.39	22.19	23
5	64QAM	12	7	22.29	22.45	22.23	
5	64QAM	12	13	22.47	22.42	21.99	
5	64QAM	25	0	22.35	22.42	22.03	
Channel				20415	20525	20635	24
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.80	23.11	22.96	23
3	QPSK	1	8	23.06	23.07	22.98	
3	QPSK	1	14	23.07	23.05	22.79	
3	QPSK	8	0	22.31	22.44	22.42	
3	QPSK	8	4	22.45	22.51	22.48	23
3	QPSK	8	7	22.40	22.42	22.29	
3	QPSK	15	0	22.38	22.44	22.43	
3	16QAM	1	0	22.40	22.51	22.58	
3	16QAM	1	8	22.33	22.59	22.43	23
3	16QAM	1	14	22.38	22.64	22.39	
3	16QAM	8	0	22.34	22.43	22.17	
3	16QAM	8	4	22.50	22.61	22.18	
3	16QAM	8	7	22.42	22.48	22.22	23
3	16QAM	15	0	22.36	22.38	21.93	
3	64QAM	1	0	22.31	22.19	22.40	
3	64QAM	1	8	22.19	22.43	22.19	
3	64QAM	1	14	22.21	22.39	22.20	23
3	64QAM	8	0	22.31	22.41	22.39	
3	64QAM	8	4	22.53	22.37	22.31	
3	64QAM	8	7	22.48	22.40	22.37	
3	64QAM	15	0	22.37	22.47	22.27	23
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	24
1.4	QPSK	1	0	23.01	23.08	23.12	
1.4	QPSK	1	3	23.14	23.07	23.14	23
1.4	QPSK	1	5	23.03	22.97	22.98	
1.4	QPSK	3	0	23.04	23.10	23.06	
1.4	QPSK	3	1	23.10	22.97	23.07	23
1.4	QPSK	3	3	23.11	23.03	23.03	
1.4	QPSK	6	0	22.36	22.35	22.34	
1.4	16QAM	1	0	22.49	22.30	22.47	
1.4	16QAM	1	3	22.29	22.53	22.42	23
1.4	16QAM	1	5	22.68	22.36	22.42	
1.4	16QAM	3	0	22.21	22.19	22.33	
1.4	16QAM	3	1	22.24	22.51	22.37	
1.4	16QAM	3	3	22.32	22.43	22.31	23
1.4	16QAM	6	0	22.51	22.38	22.42	
1.4	64QAM	1	0	22.04	22.21	22.23	
1.4	64QAM	1	3	22.35	22.36	22.31	
1.4	64QAM	1	5	22.30	22.29	22.17	23
1.4	64QAM	3	0	21.96	22.23	22.24	
1.4	64QAM	3	1	22.24	22.18	22.19	
1.4	64QAM	3	3	22.14	22.31	22.35	
1.4	64QAM	6	0	22.35	22.47	22.36	23

Band 12 (700MHz Low Band)							
Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.29	23.45	23.34	24
10	QPSK	1	25	23.15	23.28	23.31	
10	QPSK	1	49	23.25	23.26	23.25	
10	QPSK	25	0	22.54	22.64	22.55	
10	QPSK	25	12	22.51	22.45	22.24	23
10	QPSK	25	25	22.56	22.62	22.55	
10	QPSK	50	0	22.57	22.59	22.50	
10	16QAM	1	0	22.50	22.05	22.18	
10	16QAM	1	25	22.25	22.20	22.34	23
10	16QAM	1	49	22.34	22.39	22.28	
10	16QAM	25	0	22.23	22.25	22.19	
10	16QAM	25	12	22.27	22.31	22.20	
10	16QAM	25	25	22.32	22.33	22.27	23
10	16QAM	50	0	22.22	22.30	22.35	
10	64QAM	1	0	22.07	22.19	22.53	
10	64QAM	1	25	22.51	22.57	22.16	
10	64QAM	1	49	22.53	22.21	22.14	23
10	64QAM	25	0	22.04	21.98	21.95	
10	64QAM	25	12	22.09	22.12	22.04	
10	64QAM	25	25	22.14	22.11	22.11	
10	64QAM	50	0	22.06	21.99	22.10	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	Tune-up limit (dBm)
5	QPSK	1	0	23.04	23.37	23.15	24
5	QPSK	1	12	23.20	23.36	23.20	
5	QPSK	1	24	23.16	23.35	23.21	
5	QPSK	12	0	22.27	22.34	22.33	
5	QPSK	12	7	22.38	22.40	22.37	23
5	QPSK	12	13	22.33	22.36	22.33	
5	QPSK	25	0	22.29	22.41	22.37	
5	16QAM	1	0	22.30	22.32	22.34	
5	16QAM	1	12	22.47	22.42	22.43	23
5	16QAM	1	24	22.43	22.41	22.37	
5	16QAM	12	0	22.17	22.14	22.17	
5	16QAM	12	7	22.31	22.36	22.20	
5	16QAM	12	13	22.26	22.23	22.28	23
5	16QAM	25	0	22.27	22.23	22.25	
5	64QAM	1	0	22.05	22.06	22.11	
5	64QAM	1	12	22.50	22.20	22.13	
5	64QAM	1	24	22.48	22.17	22.22	23
5	64QAM	12	0	22.02	22.04	21.99	
5	64QAM	12	7	22.12	22.00	22.06	
5	64QAM	12	13	21.99	22.09	22.14	
5	64QAM	25	0	22.14	22.10	22.07	
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	Tune-up limit (dBm)
3	QPSK	1	0	23.12	23.39	23.06	24
3	QPSK	1	8	23.30	23.29	23.19	
3	QPSK	1	14	23.24	23.35	23.30	
3	QPSK	8	0	22.35	22.33	22.33	
3	QPSK	8	4	22.38	22.41	22.42	23
3	QPSK	8	7	22.33	22.41	22.35	
3	QPSK	15	0	22.32	22.40	22.26	
3	16QAM	1	0	22.33	22.69	22.28	
3	16QAM	1	8	22.53	22.51	22.46	23
3	16QAM	1	14	22.36	22.41	22.27	
3	16QAM	8	0	22.33	22.22	22.25	
3	16QAM	8	4	22.38	22.35	22.46	
3	16QAM	8	7	22.22	22.25	22.31	23
3	16QAM	15	0	22.20	22.13	22.12	
3	64QAM	1	0	22.06	22.40	22.39	
3	64QAM	1	8	22.35	22.25	22.26	
3	64QAM	1	14	22.28	22.13	22.24	23
3	64QAM	8	0	21.95	22.03	21.94	
3	64QAM	8	4	22.04	22.08	22.07	
3	64QAM	8	7	22.03	21.95	22.10	
3	64QAM	15	0	22.02	22.04	21.96	
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	Tune-up limit (dBm)
1.4	QPSK	1	0	23.15	23.32	23.12	24
1.4	QPSK	1	3	23.26	23.25	23.27	
1.4	QPSK	1	5	23.15	23.20	23.16	
1.4	QPSK	3	0	23.10	23.23	23.21	
1.4	QPSK	3	1	23.31	23.31	22.98	23
1.4	QPSK	3	3	23.26	23.28	23.24	
1.4	QPSK	6	0	22.32	22.29	22.27	
1.4	16QAM	1	0	22.36	22.30	22.15	
1.4	16QAM	1	3	22.17	22.60	22.27	23
1.4	16QAM	1	5	22.29	22.30	22.29	
1.4	16QAM	3	0	22.13	22.16	22.17	
1.4	16QAM	3	1	22.29	22.37	22.21	
1.4	16QAM	3	3	22.12	22.26	22.26	23
1.4	16QAM	6	0	22.05	22.25	22.15	
1.4	64QAM	1	0	21.90	22.05	21.89	
1.4	64QAM	1	3	22.02	21.95	22.00	
1.4	64QAM	1	5	22.18	22.21	22.17	23
1.4	64QAM	3	0	22.08	22.09	21.92	
1.4	64QAM	3	1	22.06	22.30	22.15	
1.4	64QAM	3	3	22.08	21.92	22.08	
1.4	64QAM	6	0	22.04	22.05	21.92	23



Band 25 (1900MHz Band) Part 24E								
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)	
Channel				26140	26365	26590	23.5	
Frequency (MHz)				1860	1882.5	1905		
20	QPSK	1	0	22.65	22.68	22.65		
20	QPSK	1	49	22.53	22.49	22.55		
20	QPSK	1	99	22.46	22.49	22.44	22.5	
20	QPSK	50	0	21.76	21.82	21.74		
20	QPSK	50	24	21.61	21.55	21.69		
20	QPSK	50	50	21.59	21.59	21.68		
20	QPSK	100	0	21.72	21.59	21.60	22.5	
20	16QAM	1	0	21.45	21.64	21.78		
20	16QAM	1	49	21.66	21.95	21.79		
20	16QAM	1	99	21.62	21.87	21.92		
20	16QAM	50	0	21.56	21.80	21.79	22.5	
20	16QAM	50	24	21.62	21.77	21.75		
20	16QAM	50	50	21.45	21.71	21.76		
20	16QAM	100	0	21.49	21.78	21.75		
20	64QAM	1	0	21.46	21.79	21.47	22.5	
20	64QAM	1	49	21.69	21.59	21.49		
20	64QAM	1	99	21.43	21.46	21.46		
20	64QAM	50	0	21.61	21.78	21.76		
20	64QAM	50	24	21.53	21.61	21.78	22.5	
20	64QAM	50	50	21.47	21.68	21.84		
20	64QAM	100	0	21.54	21.77	21.78		
Channel				26115	26365	26615		Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	23.5	
15	QPSK	1	0	22.59	22.55	22.51		
15	QPSK	1	37	22.58	22.54	22.53		
15	QPSK	1	74	22.50	22.56	22.55		
15	QPSK	36	0	21.66	21.84	22.00	22.5	
15	QPSK	36	20	21.78	21.87	21.95		
15	QPSK	36	39	21.61	21.89	21.95		
15	QPSK	75	0	21.64	21.81	21.94		
15	16QAM	1	0	22.12	22.17	21.89	22.5	
15	16QAM	1	37	22.29	21.85	22.22		
15	16QAM	1	74	22.13	22.18	22.34		
15	16QAM	36	0	21.57	21.60	21.81		
15	16QAM	36	20	21.57	21.64	21.76	22.5	
15	16QAM	36	39	21.48	21.73	21.76		
15	16QAM	75	0	21.58	21.70	21.74		
15	64QAM	1	0	21.38	21.39	21.39		
15	64QAM	1	37	21.42	21.39	21.47	22.5	
15	64QAM	1	74	21.47	21.47	21.39		
15	64QAM	36	0	21.53	21.58	21.82		
15	64QAM	36	20	21.66	21.74	21.68		
15	64QAM	36	39	21.51	21.69	21.71	22.5	
15	64QAM	75	0	21.48	21.67	21.83		
Channel				26090	26365	26640		Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910		23.5
10	QPSK	1	0	22.59	22.60	22.51		
10	QPSK	1	25	22.54	22.48	22.47		
10	QPSK	1	49	22.57	22.55	22.47		
10	QPSK	25	0	21.91	21.83	21.77	22.5	
10	QPSK	25	12	21.74	21.89	21.77		
10	QPSK	25	25	21.76	21.88	21.55		
10	QPSK	50	0	21.92	21.88	21.99		
10	16QAM	1	0	21.87	21.77	22.02	22.5	
10	16QAM	1	25	21.81	21.59	22.05		
10	16QAM	1	49	21.79	22.02	22.02		
10	16QAM	25	0	21.79	21.58	21.98		
10	16QAM	25	12	21.56	21.67	21.78	22.5	
10	16QAM	25	25	21.66	21.62	21.68		
10	16QAM	50	0	21.57	21.74	21.48		
10	64QAM	1	0	21.46	21.69	21.56		
10	64QAM	1	25	21.39	21.49	21.67	22.5	
10	64QAM	1	49	21.46	21.51	21.74		
10	64QAM	25	0	21.52	21.63	21.84		
10	64QAM	25	12	21.53	21.74	21.85		
10	64QAM	25	25	21.51	21.75	21.89	22.5	
10	64QAM	50	0	21.54	21.64	21.77		
Channel				26065	26365	26665		Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5		23.5
5	QPSK	1	0	22.53	22.58	22.55		
5	QPSK	1	12	22.51	22.51	22.50		
5	QPSK	1	24	22.57	22.55	22.53		
5	QPSK	12	0	21.96	21.70	21.96	22.5	
5	QPSK	12	7	22.09	21.95	22.06		
5	QPSK	12	13	21.66	22.05	21.98		
5	QPSK	25	0	22.03	21.82	21.99		
5	16QAM	1	0	22.03	21.73	21.92	22.5	
5	16QAM	1	12	21.75	21.59	22.03		
5	16QAM	1	24	21.66	21.68	22.02		
5	16QAM	12	0	21.53	21.51	21.87		
5	16QAM	12	7	21.56	21.68	21.64	22.5	
5	16QAM	12	13	21.53	21.64	21.79		
5	16QAM	25	0	21.44	21.61	21.71		
5	64QAM	1	0	21.41	21.65	21.68		
5	64QAM	1	12	21.46	21.49	21.48	22.5	
5	64QAM	1	24	21.49	21.39	21.47		
5	64QAM	12	0	21.48	21.60	21.75		
5	64QAM	12	7	21.49	21.77	21.84		
5	64QAM	12	13	21.42	21.67	21.76	22.5	
5	64QAM	25	0	21.48	21.65	21.80		
Channel				26055	26365	26675		Tune-up limit (dBm)
Frequency (MHz)				1851.5	1882.5	1913.5		23.5
3	QPSK	1	0	22.52	22.54	22.56		
3	QPSK	1	8	22.55	22.50	22.54		
3	QPSK	1	14	22.43	22.51	22.44		
3	QPSK	8	0	21.61	21.74	21.80	22.5	
3	QPSK	8	4	21.76	21.73	21.91		
3	QPSK	8	7	21.60	21.74	21.83		
3	QPSK	15	0	21.67	21.73	21.87		

Band 26 for FCC (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	22.60	22.64	22.61	23.5
15	QPSK	1	37	22.58	22.55	22.61	
15	QPSK	1	74	22.56	22.54	22.56	
15	QPSK	36	0	21.92	22.00	21.88	22.5
15	QPSK	36	20	21.81	21.75	21.60	
15	QPSK	36	39	21.83	21.62	21.68	
15	QPSK	75	0	21.89	21.92	21.70	22.5
15	16QAM	1	0	21.61	21.76	22.04	
15	16QAM	1	37	21.57	21.68	21.82	
15	16QAM	1	74	21.72	21.61	21.62	22.5
15	16QAM	36	0	21.72	21.58	21.61	
15	16QAM	36	20	21.67	21.47	21.62	
15	16QAM	36	39	21.74	21.54	21.62	22.5
15	16QAM	75	0	21.62	21.64	21.64	
15	64QAM	1	0	21.35	21.22	21.04	
15	64QAM	1	37	21.00	21.04	21.14	22.5
15	64QAM	1	74	21.04	21.00	21.32	
15	64QAM	36	0	21.40	21.21	21.20	
15	64QAM	36	20	21.49	21.21	21.12	22.5
15	64QAM	36	39	21.47	21.27	21.03	
15	64QAM	75	0	21.41	21.24	21.17	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	22.52	22.56	22.53	21.64
10	QPSK	1	25	22.55	22.54	22.47	
10	QPSK	1	49	22.41	22.54	22.46	
10	QPSK	25	0	21.94	21.75	21.61	20.64
10	QPSK	25	12	21.90	21.72	21.51	
10	QPSK	25	25	21.89	21.73	21.58	
10	QPSK	50	0	21.90	21.78	21.60	20.64
10	16QAM	1	0	21.62	21.94	21.71	
10	16QAM	1	25	21.71	21.80	21.85	
10	16QAM	1	49	21.65	21.64	21.62	22.5
10	16QAM	25	0	21.66	21.80	22.09	
10	16QAM	25	12	21.67	21.83	21.91	
10	16QAM	25	25	21.84	21.72	21.78	22.5
10	16QAM	50	0	22.01	21.88	21.90	
10	64QAM	1	0	21.30	21.30	21.12	
10	64QAM	1	25	21.40	21.12	21.14	22.5
10	64QAM	1	49	21.12	21.11	21.11	
10	64QAM	25	0	21.47	21.24	21.19	
10	64QAM	25	12	21.23	21.25	21.18	22.5
10	64QAM	25	25	21.13	21.26	21.01	
10	64QAM	50	0	21.43	21.22	21.15	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	22.51	22.56	22.52	21.9
5	QPSK	1	12	22.46	22.50	22.52	
5	QPSK	1	24	22.42	22.54	22.54	
5	QPSK	12	0	21.88	21.70	21.59	20.9
5	QPSK	12	7	21.98	21.69	21.69	
5	QPSK	12	13	21.87	21.64	21.58	
5	QPSK	25	0	21.91	21.72	21.77	20.9
5	16QAM	1	0	21.62	21.62	21.63	
5	16QAM	1	12	21.66	21.56	21.53	
5	16QAM	1	24	21.71	21.71	21.76	22.5
5	16QAM	12	0	21.99	21.81	21.79	
5	16QAM	12	7	21.84	21.86	21.55	
5	16QAM	12	13	21.96	21.81	21.60	22.5
5	16QAM	25	0	21.51	21.65	21.62	
5	64QAM	1	0	21.31	21.13	21.11	
5	64QAM	1	12	21.20	21.31	21.12	22.5
5	64QAM	1	24	21.14	21.11	21.11	
5	64QAM	12	0	21.41	21.19	21.02	
5	64QAM	12	7	21.00	21.32	21.03	22.5
5	64QAM	12	13	21.40	21.29	20.95	
5	64QAM	25	0	21.40	21.19	21.01	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	22.55	22.52	22.57	21.62
3	QPSK	1	8	22.46	22.54	22.46	
3	QPSK	1	14	22.51	22.47	22.53	
3	QPSK	8	0	21.78	21.62	21.81	20.62
3	QPSK	8	4	21.95	21.69	21.58	
3	QPSK	8	7	21.95	21.68	21.79	
3	QPSK	15	0	21.80	21.60	21.70	20.62
3	16QAM	1	0	21.91	21.85	21.86	
3	16QAM	1	8	21.90	21.79	21.82	
3	16QAM	1	14	21.88	21.73	21.73	22.5
3	16QAM	8	0	21.97	21.60	21.67	
3	16QAM	8	4	21.91	21.58	21.62	
3	16QAM	8	7	21.67	21.64	21.58	22.5
3	16QAM	15	0	21.74	21.61	21.71	
3	64QAM	1	0	21.00	21.44	21.23	
3	64QAM	1	8	21.30	21.40	21.14	22.5
3	64QAM	1	14	21.24	21.40	21.30	
3	64QAM	8	0	21.13	21.18	21.08	
3	64QAM	8	4	21.13	21.22	21.08	22.5
3	64QAM	8	7	21.40	21.28	21.07	
3	64QAM	15	0	21.40	21.26	21.05	
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	22.42	22.52	22.52	23.5
1.4	QPSK	1	3	22.41	22.52	22.44	
1.4	QPSK	1	5	22.41	22.43	22.43	
1.4	QPSK	3	0	22.55	22.43	22.45	22.5
1.4	QPSK	3	1	22.46	22.46	22.51	
1.4	QPSK	3	3	22.46	22.52	22.54	
1.4	QPSK	6	0	21.56	21.78	21.81	22.5



3	16QAM	1	0	21.73	21.81	21.97	22.5
3	16QAM	1	8	22.01	21.97	21.81	
3	16QAM	1	14	22.07	21.97	21.92	
3	16QAM	8	0	21.51	21.51	21.51	22.5
3	16QAM	8	4	21.51	21.67	21.86	
3	16QAM	8	7	21.62	21.81	21.87	
3	16QAM	15	0	21.66	21.56	21.77	22.5
3	64QAM	1	0	21.71	21.53	21.68	
3	64QAM	1	8	21.75	21.46	21.47	
3	64QAM	1	14	21.66	21.47	21.49	22.5
3	64QAM	8	0	21.54	21.64	21.80	
3	64QAM	8	4	21.49	21.69	21.76	
3	64QAM	8	7	21.47	21.53	21.87	22.5
3	64QAM	15	0	21.46	21.54	21.75	
Channel				26047	26365	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1882.5	1914.3	
1.4	QPSK	1	0	22.53	22.53	22.51	23.5
1.4	QPSK	1	3	22.50	22.51	22.45	
1.4	QPSK	1	5	22.45	22.51	22.42	
1.4	QPSK	3	0	22.40	22.44	22.53	
1.4	QPSK	3	1	22.43	22.47	22.50	
1.4	QPSK	3	3	22.48	22.41	22.45	22.5
1.4	QPSK	6	0	21.72	21.89	21.71	
1.4	16QAM	1	0	22.03	21.85	21.55	22.5
1.4	16QAM	1	3	21.81	21.55	21.80	
1.4	16QAM	1	5	21.55	21.81	21.92	
1.4	16QAM	3	0	21.78	21.80	21.82	
1.4	16QAM	3	1	21.82	21.97	22.03	
1.4	16QAM	3	3	21.59	21.83	22.07	22.5
1.4	16QAM	6	0	21.69	21.82	21.49	
1.4	64QAM	1	0	21.49	21.79	21.66	22.5
1.4	64QAM	1	3	21.47	21.82	21.49	
1.4	64QAM	1	5	21.48	21.89	21.68	
1.4	64QAM	3	0	21.55	21.67	21.49	
1.4	64QAM	3	1	21.46	21.49	21.47	
1.4	64QAM	3	3	21.71	21.47	21.79	22.5
1.4	64QAM	6	0	21.52	21.70	21.75	

1.4	16QAM	1	0	21.61	21.68	21.68	22.5
1.4	16QAM	1	3	21.68	21.62	21.62	
1.4	16QAM	1	5	21.77	21.91	21.72	
1.4	16QAM	3	0	21.78	21.54	21.79	
1.4	16QAM	3	1	21.78	21.57	21.70	
1.4	16QAM	3	3	21.78	21.55	21.51	22.5
1.4	16QAM	6	0	22.14	22.11	22.09	
1.4	64QAM	1	0	21.34	21.31	21.36	22.5
1.4	64QAM	1	3	21.40	21.40	21.40	
1.4	64QAM	1	5	21.30	21.33	21.44	
1.4	64QAM	3	0	21.39	21.40	21.40	
1.4	64QAM	3	1	21.44	21.32	21.36	
1.4	64QAM	3	3	21.36	21.40	21.31	22.5
1.4	64QAM	6	0	21.43	21.36	21.07	



Band 66							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				130722	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.59	23.65	23.63	24.5
20	QPSK	1	49	23.44	23.43	23.39	
20	QPSK	1	99	23.37	23.36	23.39	
20	QPSK	50	0	22.51	22.58	22.54	23.5
20	QPSK	50	24	22.32	22.34	22.47	
20	QPSK	50	50	22.36	22.44	22.32	
20	QPSK	100	0	22.34	22.34	22.26	23.5
20	16QAM	1	0	22.39	22.15	22.43	
20	16QAM	1	49	22.44	22.18	22.24	
20	16QAM	1	99	22.44	22.62	22.41	23.5
20	16QAM	50	0	22.56	22.53	22.50	
20	16QAM	50	24	22.45	22.45	22.46	
20	16QAM	50	50	22.42	22.34	22.30	23.5
20	16QAM	100	0	22.38	22.41	22.47	
20	64QAM	1	0	22.54	22.31	22.64	
20	64QAM	1	49	22.31	22.64	22.63	23.5
20	64QAM	1	99	22.54	22.66	22.74	
20	64QAM	50	0	22.50	22.40	22.53	
20	64QAM	50	24	22.44	22.38	22.50	23.5
20	64QAM	50	50	22.46	22.34	22.40	
20	64QAM	100	0	22.45	22.45	22.43	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.38	23.42	23.40	24.5
15	QPSK	1	37	23.52	23.38	23.36	
15	QPSK	1	74	23.36	23.32	23.30	
15	QPSK	36	0	22.33	22.30	22.34	23.5
15	QPSK	36	20	22.33	22.25	22.35	
15	QPSK	36	39	22.19	22.24	22.21	
15	QPSK	75	0	22.28	22.32	22.25	23.5
15	16QAM	1	0	22.27	22.14	22.44	
15	16QAM	1	37	22.14	22.44	22.37	
15	16QAM	1	74	22.24	22.14	22.14	23.5
15	16QAM	36	0	22.45	22.45	22.36	
15	16QAM	36	20	22.48	22.47	22.53	
15	16QAM	36	39	22.40	22.55	22.49	23.5
15	16QAM	75	0	22.50	22.48	22.44	
15	64QAM	1	0	22.64	22.54	22.64	
15	64QAM	1	37	22.66	22.44	22.54	23.5
15	64QAM	1	74	22.31	22.57	22.64	
15	64QAM	36	0	22.43	22.42	22.55	
15	64QAM	36	20	22.53	22.49	22.50	23.5
15	64QAM	36	39	22.42	22.36	22.40	
15	64QAM	75	0	22.44	22.46	22.43	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.36	23.36	23.37	24.5
10	QPSK	1	25	23.26	23.24	23.32	
10	QPSK	1	49	23.40	23.28	23.18	
10	QPSK	25	0	22.59	22.52	22.59	23.5
10	QPSK	25	12	22.56	22.75	22.53	
10	QPSK	25	25	22.57	22.53	22.45	
10	QPSK	50	0	22.65	22.50	22.69	23.5
10	16QAM	1	0	22.57	22.57	22.77	
10	16QAM	1	25	22.57	22.66	22.78	
10	16QAM	1	49	22.40	22.60	22.48	23.5
10	16QAM	25	0	22.41	22.58	22.46	
10	16QAM	25	12	22.40	22.60	22.51	
10	16QAM	25	25	22.31	22.36	22.36	23.5
10	16QAM	50	0	22.47	22.51	22.52	
10	64QAM	1	0	22.47	22.47	22.14	
10	64QAM	1	25	22.14	22.27	22.17	23.5
10	64QAM	1	49	22.14	22.14	22.14	
10	64QAM	25	0	22.47	22.45	22.47	
10	64QAM	25	12	22.46	22.50	22.54	23.5
10	64QAM	25	25	22.46	22.39	22.41	
10	64QAM	50	0	22.36	22.46	22.47	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.25	23.28	23.33	24.5
5	QPSK	1	12	23.28	23.28	23.27	
5	QPSK	1	24	23.36	23.26	23.32	
5	QPSK	12	0	22.28	22.30	22.26	23.5
5	QPSK	12	7	22.30	22.38	22.31	
5	QPSK	12	13	22.21	22.27	22.28	
5	QPSK	25	0	22.31	22.32	22.28	23.5
5	16QAM	1	0	22.80	22.49	22.50	
5	16QAM	1	12	22.43	22.72	22.67	
5	16QAM	1	24	22.55	22.44	22.79	23.5
5	16QAM	12	0	22.44	22.55	22.51	
5	16QAM	12	7	22.61	22.53	22.65	
5	16QAM	12	13	22.52	22.46	22.53	23.5
5	16QAM	25	0	22.53	22.55	22.47	
5	64QAM	1	0	22.14	22.54	22.34	
5	64QAM	1	12	22.44	22.44	22.44	23.5
5	64QAM	1	24	22.27	22.31	22.27	
5	64QAM	12	0	22.51	22.26	22.47	
5	64QAM	12	7	22.59	22.18	22.49	23.5
5	64QAM	12	13	22.42	22.54	22.49	
5	64QAM	25	0	22.49	22.57	22.44	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1776.5	
3	QPSK	1	0	23.32	23.23	23.22	24.5
3	QPSK	1	8	23.19	23.20	23.28	
3	QPSK	1	14	23.10	22.91	23.21	
3	QPSK	8	0	22.54	22.51	22.55	23.5
3	QPSK	8	4	22.54	22.46	22.56	
3	QPSK	8	7	22.40	22.45	22.42	
3	QPSK	15	0	22.49	22.53	22.46	

Band 71							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				133222	133322	133372	
Frequency (MHz)				673	683	688	
20	QPSK	1	0	22.49	22.56	22.53	23.5
20	QPSK	1	49	22.48	22.50	22.50	
20	QPSK	1	99	22.40	22.46	22.43	
20	QPSK	50	0	21.60	21.82	21.68	22.5
20	QPSK	50	24	21.53	21.60	21.56	
20	QPSK	50	50	21.57	21.62	21.56	
20	QPSK	100	0	21.45	21.56	21.59	22.5
20	16QAM	1	0	21.57	21.57	21.50	
20	16QAM	1	49	21.56	21.16	21.56	
20	16QAM	1	99	21.50	21.49	21.60	22.5
20	16QAM	50	0	21.35	21.49	21.10	
20	16QAM	50	24	21.46	21.28	21.19	
20	16QAM	50	50	21.45	21.09	21.13	22.5
20	16QAM	100	0	21.46	21.49	21.15	
20	64QAM	1	0	21.27	21.55	21.58	
20	64QAM	1	49	21.27	21.46	21.56	22.5
20	64QAM	1	99	21.29	21.56	21.60	
20	64QAM	50	0	21.28	21.27	21.16	
20	64QAM	50	24	21.30	21.26	21.25	22.5
20	64QAM	50	50	21.28	21.05	21.27	
20	64QAM	100	0	21.28	21.24	21.15	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	22.22	22.40	22.41	23.5
15	QPSK	1	37	22.20	22.33	22.44	
15	QPSK	1	74	22.22	22.44	22.41	
15	QPSK	36	0	21.31	21.56	21.60	22.5
15	QPSK	36	20	21.51	21.60	21.56	
15	QPSK	36	39	21.58	21.56	21.49	
15	QPSK	75	0	21.46	21.46	21.47	22.5
15	16QAM	1	0	21.54	21.56	21.46	
15	16QAM	1	37	21.56	21.60	21.28	
15	16QAM	1	74	21.57	21.47	21.27	22.5
15	16QAM	36	0	21.34	21.30	21.19	
15	16QAM	36	20	21.32	21.46	21.23	
15	16QAM	36	39	21.34	21.36	21.21	22.5
15	16QAM	75	0	21.30	21.25	21.19	
15	64QAM	1	0	21.41	21.30	21.46	
15	64QAM	1	37	21.29	21.30	21.28	22.5
15	64QAM	1	74	21.24	21.32	21.49	
15	64QAM	36	0	21.16	21.31	21.24	
15	64QAM	36	20	21.44	21.30	21.18	22.5
15	64QAM	36	39	21.28	21.28	21.29	
15	64QAM	75	0	21.46	21.22	21.32	
Channel				133172	133272	133422	Tune-up limit (dBm)
Frequency (MHz)				668	678	693	
10	QPSK	1	0	22.25	22.44	22.23	23.5
10	QPSK	1	25	22.36	22.23	22.43	
10	QPSK	1	49	22.37	22.39	22.12	
10	QPSK	25	0	21.30	21.16	21.16	22.5
10	QPSK	25	12	21.53	21.49	21.20	
10	QPSK	25	25	21.54	21.56	21.16	
10	QPSK	50	0	21.52	21.44	21.16	22.5
10	16QAM	1	0	21.38	21.15	21.46	
10	16QAM	1	25	21.26	21.16	21.56	



3	16QAM	1	0	22.18	22.59	22.35	23.5
3	16QAM	1	8	22.51	22.45	22.44	
3	16QAM	1	14	22.55	22.44	22.14	
3	16QAM	8	0	22.36	22.36	22.27	23.5
3	16QAM	8	4	22.39	22.38	22.44	
3	16QAM	8	7	22.31	22.46	22.40	
3	16QAM	15	0	22.41	22.39	22.35	23.5
3	64QAM	1	0	22.55	22.45	22.55	
3	64QAM	1	8	22.57	22.35	22.45	
3	64QAM	1	14	22.22	22.48	22.55	23.5
3	64QAM	8	0	22.34	22.33	22.46	
3	64QAM	8	4	22.44	22.40	22.41	
3	64QAM	8	7	22.33	22.27	22.31	23.5
3	64QAM	15	0	22.35	22.37	22.34	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.26	23.17	23.18	24.5
1.4	QPSK	1	3	23.32	23.34	23.34	
1.4	QPSK	1	5	23.24	23.12	23.28	
1.4	QPSK	3	0	23.23	23.16	23.23	23.5
1.4	QPSK	3	1	23.20	23.26	23.17	
1.4	QPSK	3	3	23.21	23.17	23.09	
1.4	QPSK	6	0	22.57	22.42	22.61	23.5
1.4	16QAM	1	0	22.49	22.49	22.69	
1.4	16QAM	1	3	22.49	22.58	22.70	
1.4	16QAM	1	5	22.32	22.52	22.40	23.5
1.4	16QAM	3	0	22.03	22.00	22.26	
1.4	16QAM	3	1	22.12	22.02	22.14	
1.4	16QAM	3	3	22.13	22.14	22.08	23.5
1.4	16QAM	6	0	22.02	21.93	21.94	
1.4	64QAM	1	0	22.36	22.21	22.37	
1.4	64QAM	1	3	22.09	22.18	22.18	23.5
1.4	64QAM	1	5	22.06	22.06	22.17	
1.4	64QAM	3	0	22.39	22.37	22.39	
1.4	64QAM	3	1	22.38	22.42	22.46	23.5
1.4	64QAM	3	3	22.38	22.31	22.33	
1.4	64QAM	6	0	22.28	22.38	22.39	



Band 41 (2496~2690MHz) Class2											
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	40600	41055	41460			
Frequency (MHz)				2506	2549.5	2593	2636.5	2680			
20	QPSK	1	0	25.33	25.43	25.45	25.38	25.39	26		
20	QPSK	1	49	25.29	25.38	25.38	25.39	25.39			
20	QPSK	1	99	25.23	25.39	25.34	25.44	25.19			
20	QPSK	50	0	24.29	24.54	24.55	24.53	24.48			
20	QPSK	50	24	24.29	24.39	24.32	24.29	24.29	25		
20	QPSK	50	50	24.32	24.53	24.33	24.32	24.39			
20	QPSK	100	0	24.29	24.32	24.33	24.33	24.29			
20	16QAM	1	0	24.33	24.49	24.32	24.39	24.29			
20	16QAM	1	49	24.32	24.37	24.32	24.27	24.29	25		
20	16QAM	1	99	24.39	24.29	24.39	24.37	24.39			
20	16QAM	50	0	24.30	24.39	24.32	24.62	24.29			
20	16QAM	50	24	24.28	24.60	24.29	24.39	24.29			
20	16QAM	50	50	24.34	24.66	24.75	24.36	24.39	25		
20	16QAM	100	0	24.28	24.59	24.74	24.43	24.32			
20	64QAM	1	0	24.43	24.34	24.54	24.37	24.33			
20	64QAM	1	49	24.36	24.46	24.36	24.65	24.33			
20	64QAM	1	99	24.46	24.41	24.32	24.41	24.29	25		
20	64QAM	50	0	24.42	24.38	24.35	24.30	24.39			
20	64QAM	50	24	24.27	24.54	24.42	24.39	24.32			
20	64QAM	50	50	24.37	24.53	24.56	24.45	24.38			
20	64QAM	100	0	24.35	24.63	24.59	24.27	24.39	Tune-up limit (dBm)		
Channel				39725	40173	40600	41068	41515			
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5			
15	QPSK	1	0	24.99	25.15	25.35	25.22	25.21	26		
15	QPSK	1	37	24.98	25.33	25.39	25.22	25.32			
15	QPSK	1	74	24.98	25.31	25.32	25.15	25.12			
15	QPSK	36	0	24.15	24.49	24.34	24.54	24.55			
15	QPSK	36	20	24.20	24.54	24.30	24.50	24.43	25		
15	QPSK	36	39	24.36	24.57	24.29	24.53	24.26			
15	QPSK	75	0	24.14	24.59	24.32	24.56	24.22			
15	16QAM	1	0	24.08	24.40	24.69	24.34	24.14			
15	16QAM	1	37	24.29	24.57	24.26	24.40	24.23	25		
15	16QAM	1	74	24.25	24.49	24.24	24.24	24.16			
15	16QAM	36	0	24.12	24.56	24.23	24.43	24.61			
15	16QAM	36	20	24.17	24.50	24.19	24.39	24.63			
15	16QAM	36	39	24.24	24.63	24.73	24.43	24.39	25		
15	16QAM	75	0	24.15	24.64	24.21	24.43	23.99			
15	64QAM	1	0	24.45	24.35	24.59	24.23	24.73			
15	64QAM	1	37	24.73	24.49	24.73	24.36	23.85			
15	64QAM	1	74	24.70	24.42	24.52	24.70	23.58	25		
15	64QAM	36	0	24.14	24.48	24.30	24.44	24.22			
15	64QAM	36	20	24.29	24.59	24.74	24.37	24.11			
15	64QAM	36	39	24.24	24.58	24.71	24.43	24.03			
15	64QAM	75	0	24.22	24.59	24.71	24.47	24.11	Tune-up limit (dBm)		
Channel				39700	40160	40600	41069	41540			
Frequency (MHz)				2501	2547	2593	2639	2685			
10	QPSK	1	0	25.03	25.24	25.32	25.20	25.19	26		
10	QPSK	1	25	25.23	25.29	25.19	25.15	25.14			
10	QPSK	1	49	25.00	25.16	25.39	25.16	25.15			
10	QPSK	25	0	24.11	24.54	24.42	24.38	24.39			
10	QPSK	25	12	24.19	24.53	24.31	24.38	24.39	25		
10	QPSK	25	25	24.23	24.62	24.26	24.42	24.75			
10	QPSK	50	0	24.28	24.66	24.34	24.40	23.99			
10	16QAM	1	0	24.14	24.01	24.16	24.41	24.19			
10	16QAM	1	25	24.32	24.10	24.31	24.24	24.23	25		
10	16QAM	1	49	24.18	24.06	24.23	24.37	24.38			
10	16QAM	25	0	24.18	24.09	24.37	24.55	24.04			
10	16QAM	25	12	24.31	24.06	24.23	24.40	23.80			
10	16QAM	25	25	24.28	24.13	24.35	24.62	24.31	25		
10	16QAM	50	0	24.26	24.09	24.33	24.51	24.07			
10	64QAM	1	0	24.08	24.44	24.04	24.38	24.44			
10	64QAM	1	25	24.11	24.56	24.21	24.43	24.39			
10	64QAM	1	49	24.09	24.45	24.06	24.34	24.20	25		
10	64QAM	25	0	24.16	24.59	24.29	24.47	24.36			
10	64QAM	25	12	24.19	24.56	24.18	24.47	24.11			
10	64QAM	25	25	24.28	24.60	24.27	24.44	24.34			
10	64QAM	50	0	24.24	24.57	24.32	24.53	24.40	Tune-up limit (dBm)		
Channel				39675	40148	40600	41063	41565			
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2697.5			
5	QPSK	1	0	25.00	25.09	25.32	25.29	25.10	26		
5	QPSK	1	12	24.99	25.24	25.19	25.32	25.14			
5	QPSK	1	24	25.12	25.15	25.29	25.02	25.15			
5	QPSK	12	0	24.13	24.47	24.51	24.60	24.11			
5	QPSK	12	7	24.21	24.60	24.36	24.66	24.33	25		
5	QPSK	12	13	24.15	24.60	24.68	24.72	24.39			
5	QPSK	25	0	24.18	24.61	24.59	24.74	24.32			
5	16QAM	1	0	24.62	24.44	24.60	24.29	24.23			
5	16QAM	1	12	24.23	24.61	24.77	24.45	24.13	25		
5	16QAM	1	24	24.09	24.47	24.58	24.30	24.39			
5	16QAM	12	0	24.07	24.02	24.24	24.42	24.19			
5	16QAM	12	7	24.19	23.97	24.34	24.53	24.32			
5	16QAM	12	13	24.25	24.10	24.24	24.46	24.11	25		
5	16QAM	25	0	24.17	23.98	24.32	24.53	24.09			
5	64QAM	1	0	24.44	24.29	24.56	24.31	24.14			
5	64QAM	1	12	24.64	24.50	24.69	24.40	24.10			
5	64QAM	1	24	24.49	24.35	24.62	24.26	24.43	25		
5	64QAM	12	0	24.44	24.53	24.62	24.34	24.30			
5	64QAM	12	7	24.45	24.01	24.30	24.52	24.38			
5	64QAM	12	13	24.43	24.00	24.09	24.40	24.29			
5	64QAM	25	0	24.17	24.00	24.15	24.49	24.11	Tune-up limit (dBm)		

Band 41 (2496~2690MHz) Class3										
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	40600	41055	41460		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	23.67	23.77	23.79	23.72	23.73	24.5	
20	QPSK	1	49	23.63	23.72	23.72	23.73	23.73		
20	QPSK	1	99	23.57	23.73	23.68	23.78	23.53		
20	QPSK	50	0	22.63	22.88	22.89	22.87	22.82		
20	QPSK	50	24	22.63	22.73	22.66	22.63	22.63	23.5	
20	QPSK	50	50	22.66	22.87	22.67	22.66	22.73		
20	QPSK	100	0	22.63	22.66	22.67	22.67	22.63		
20	16QAM	1	0	22.59	22.75	22.58	22.65	22.55		
20	16QAM	1	49	22.58	22.63	22.58	22.53	22.55	23.5	
20	16QAM	1	99	22.65	22.55	22.65	22.63	22.65		
20	16QAM	50	0	22.56	22.65	22.58	22.68	22.55		
20	16QAM	50	24	22.54	22.86	22.55	22.65	22.55		
20	16QAM	50	50	22.60	22.92	23.01	22.82	22.65	23.5	
20	16QAM	100	0	22.54	22.85	23.00	22.69	22.58		
20	64QAM	1	0	22.69	22.60	22.80	22.63	22.59		
20	64QAM	1	49	22.62	22.72	22.62	22.61	22.59	23.5	
20	64QAM	1	99	22.72	22.67	22.58	22.67	22.55		
20	64QAM	50	0	22.68	22.64	22.61	22.56	22.65		
20	64QAM	50	24	22.63	22.68	22.68	22.65	22.58		
20	64QAM	50	50	22.63	22.79	22.82	22.71	22.64	23.5	
20	64QAM	100	0	22.61	22.89	22.85	22.53	22.65		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	
Frequency (MHz)				2503.5	2548.3	2593	2637.4	2682.5		
15	QPSK	1	0	23.33	23.49	23.69	23.56	23.56	24.5	
15	QPSK	1	74	23.32	23.67	23.67	23.56	23.68		
15	QPSK	1	74	23.32	23.65	23.66	23.49	23.46		
15	QPSK	36	0	22.49	22.83	22.86	22.88	22.89		
15	QPSK	36	20	22.54	22.88	22.64	22.84	22.77	23.5	
15	QPSK	36	36	22.70	22.91	22.63	22.87	22.60		
15	QPSK	75	0	22.48	22.93	22.66	22.90	22.56		
15	16QAM	1	0	22.34	22.66	22.95	22.60	22.40		
15	16QAM	1	37	22.55	22.63	22.52	22.66	22.49	23.5	
15	16QAM	1	74	22.51	22.62	22.50	22.50	22.42		
15	16QAM	36	0	22.38	22.82	22.49	22.69	22.87		
15	16QAM	36	20	22.43	22.76	22.45	22.65	22.89		
15	16QAM	36	39	22.50	22.89	22.99	22.69	22.65	23.5	
15	16QAM	75	0	22.41	22.90	22.47	22.89	22.25		
15	64QAM	1	0	22.71	22.61	22.85	22.49	22.99		
15	64QAM	1	37	22.99	22.75	22.99	22.62	22.11		
15	64QAM	1	74	22.96	22.68	22.78	22.96	21.84	23.5	
15	64QAM	36	0	22.40	22.74	22.96	22.70	22.63		
15	64QAM	36	20	22.55	22.85	22.63	22.83	22.37		
15	64QAM	36	39	22.50	22.84	22.97	22.68	22.29		
15	64QAM	75	0	22.48	22.85	22.97	22.73	22.37		
Channel				39700	40160	40600	41080	41540	Tune-up limit (dBm)	
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	23.37	23.58	23.66	23.33	23.53	24.5	
10	QPSK	1	25	23.57	23.63	23.53	23.40	23.48		
10	QPSK	1	49	23.34	23.50	23.73	23.73	23.49		
10	QPSK	25	0	22.45	22.88	22.76	22.72	22.73		
10	QPSK	25	12	22.53	22.67	22.65	22.72	22.73	23.5	
10	QPSK	25	25	22.57	22.86	22.60	22.76	23.09		
10	QPSK	50	0	22.62	22.80	22.68	22.74	22.33		
10	16QAM	1	0	22.40	22.27	22.42	22.67	22.45		
10	16QAM	1	25	22.58	22.36	22.57	22.50	22.49	23.5	
10	16QAM	1	49	22.44	22.32	22.49	22.63	22.64		
10	16QAM	25	0	22.44	22.35	22.63	22.81	22.30		
10	16QAM	25	12	22.57	22.32	22.49	22.75	22.06		
10	16QAM	25	25	22.54	22.39	22.61	22.88	22.57	23.5	
10	16QAM	50	0	22.52	22.26	22.59	22.77	22.33		
10	64QAM	1	0	22.34	22.37	22.97	22.64	22.70		
10	64QAM	1	25	22.37	22.82	22.34	22.69	22.85		
10	64QAM	1	49	22.36	22.71	22.47	22.60	22.46	23.5	
10	64QAM	25	0	22.42	22.85	22.55	22.73	22.62		
10	64QAM	25	12	22.45	22.82	22.44	22.73	22.37		
10	64QAM	25	25	22.54	22.86	22.53	22.70	22.60		
10	64QAM	50	0	22.50	22.83	22.58	22.79	22.66		
Channel				39675	40148	40600	41093	41595	Tune-up limit (dBm)	
Frequency (MHz)				2498.5	2545.8	2592	2640.30	2687.5		
5	QPSK	1	0	23.34	23.43	23.66	23.63	23.44	24.5	
5	QPSK	1	25	23.33	23.58	23.63	23.66	23.48		
5	QPSK	1	24	23.40	23.49	23.63	23.38	23.49		
5	QPSK	12	0	22.47	22.81	22.85	22.94	22.45		
5	QPSK	12	7	22.55	22.94	22.70	23.00	22.67	23.5	
5	QPSK	12	13	22.49	22.94	22.92	23.06	22.73		
5	QPSK	25	0	22.52	22.95	22.93	23.08	22.66		
5	16QAM	1	0	22.68	22.70	22.86	22.52	22.45		
5	16QAM	1	12	22.49	22.87	22.41	22.71	22.38	23.5	
5	16QAM	1	24	22.35	22.73	22.84	22.56	22.69		
5	16QAM	12	0	22.33	22.28	22.50	22.68	22.48		
5	16QAM	12	7	22.45	22.23	22.60	22.79	22.55		
5	12	13	0	22.51	22.36	22.38	22.72	22.37	23.5	
5	16QAM	25	0	22.43	22.24	22.58	22.79	22.35		
5	64QAM	1	0	22.70	22.55	22.82	22.57	22.40		
5	64QAM	1	12	22.69	22.76	22.95	22.66	22.58		
5	64QAM	12	0	22.75	22.61	22.81	22.52	22.69	23.5	
5	64QAM	12	0	22.70	22.79	22.48	22.60	22.56		
5	64QAM	12	7	22.71	22.27	22.56	22.78	22.64		
5	64QAM	12	13	22.69	22.26	22.55	22.66	22.55		
5	64QAM	25	0	22.63	22.36	22.41	22.75	22.37		



CA_41C (Class2)										
Combination:20MHz+20MHz(100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level(dB)	Measured Power(dBm)	Tune-up limit(dBm)
			RB Size	RB Offset	RB Size	RB Offset				
39750	39948	QPSK	1	0	0	0	1	0	22.40	23
40185	39987	QPSK	1	0	0	0	1	0	22.34	23
40620	40422	QPSK	1	0	0	0	1	0	22.43	23
41055	40857	QPSK	1	0	0	0	1	0	22.20	23
41490	41292	QPSK	1	0	0	0	1	0	22.31	23
39750	39948	16QAM	1	0	0	0	1	0	21.58	22
40185	39987	16QAM	1	0	0	0	1	0	21.49	22
40620	40422	16QAM	1	0	0	0	1	0	21.59	22
41055	40857	16QAM	1	0	0	0	1	0	21.32	22
41490	41292	16QAM	1	0	0	0	1	0	21.46	22
39750	39948	64QAM	1	0	0	0	1	0	21.30	22
40185	39987	64QAM	1	0	0	0	1	0	21.24	22
40620	40422	64QAM	1	0	0	0	1	0	21.16	22
41055	40857	64QAM	1	0	0	0	1	0	21.32	22
41490	41292	64QAM	1	0	0	0	1	0	21.02	22
39750	39948	QPSK	50	0	0	0	1	0	21.27	22
40185	39987	QPSK	50	0	0	0	1	0	21.40	22
40620	40422	QPSK	50	0	0	0	1	0	21.45	22
41055	40857	QPSK	50	0	0	0	1	0	21.33	22
41490	41292	QPSK	50	0	0	0	1	0	21.02	22

CA_41C (Class3)										
Combination:20MHz+20MHz(100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level(dB)	Measured Power(dBm)	Tune-up limit(dBm)
			RB Size	RB Offset	RB Size	RB Offset				
39750	39948	QPSK	1	0	0	0	1	0	20.75	21.5
40185	39987	QPSK	1	0	0	0	1	0	20.82	21.5
40620	40422	QPSK	1	0	0	0	1	0	20.86	21.5
41055	40857	QPSK	1	0	0	0	1	0	20.78	21.5
41490	41292	QPSK	1	0	0	0	1	0	20.73	21.5
39750	39948	16QAM	1	0	0	0	1	0	19.92	20.5
40185	39987	16QAM	1	0	0	0	1	0	19.81	20.5
40620	40422	16QAM	1	0	0	0	1	0	19.75	20.5
41055	40857	16QAM	1	0	0	0	1	0	19.67	20.5
41490	41292	16QAM	1	0	0	0	1	0	19.72	20.5
39750	39948	64QAM	1	0	0	0	1	0	19.42	20.5
40185	39987	64QAM	1	0	0	0	1	0	19.44	20.5
40620	40422	64QAM	1	0	0	0	1	0	19.26	20.5
41055	40857	64QAM	1	0	0	0	1	0	19.38	20.5
41490	41292	64QAM	1	0	0	0	1	0	19.42	20.5
39750	39948	QPSK	50	0	0	0	1	0	19.87	20.5
40185	39987	QPSK	50	0	0	0	1	0	19.92	20.5
40620	40422	QPSK	50	0	0	0	1	0	19.94	20.5
41055	40857	QPSK	50	0	0	0	1	0	19.72	20.5
41490	41292	QPSK	50	0	0	0	1	0	19.55	20.5



Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation/ RB/Offset)	Band	BW (MHz)	DL Channel	DL Fre. (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
Intra-band	CA_2C	2	20	18801	1870.1	QPSK/1#0	2	20	18999	1889.9	21.65	22.64
	CA_2A-12A	2	20	18700	1860	QPSK/1#0	12	5	23035	701.5	21.46	22.64
	CA_2A-71A	2	20	18700	1860	QPSK/1#0	71	20	68786	637	21.54	22.64
	CA_2A-2A	2	20	18700	1860	QPSK/1#0	2	20	19100	1900	21.44	22.64
	CA_2A-4A	2	20	18700	1860	QPSK/1#0	4	20	20300	1745	21.43	22.64
	CA_2A-66A	2	20	18700	1860	QPSK/1#0	66	20	67236	2190	21.64	22.64
	CA_2A-5A	2	20	18700	1860	QPSK/1#0	5	10	20450	829	21.53	22.64
	CA_4A-12A	4	20	20050	1720	QPSK/1#0	12	5	23035	701.5	18.32	23.50
	CA_4A-71A	4	20	20050	1720	QPSK/1#0	71	20	68786	782	18.36	23.50
	CA_4A-5A	4	20	20050	1720	QPSK/1#0	5	10	20450	829	18.31	23.50
	CA_4A-4A	4	20	20050	1720	QPSK/1#0	4	20	20300	1745	18.21	23.50
	CA_5A-66A	5	10	20450	829	QPSK/1#0	66	20	67236	2190	21.68	23.17
	CA_5B	5	10	20501	834.1	QPSK/1#0	5	10	20600	844	22.33	23.17
	CA_5A-5A	5	10	20450	829	QPSK/1#0	5	10	20600	844	22.41	23.17
	CA_12A-66A	12	5	23035	701.5	QPSK/1#0	66	20	67236	2190	22.74	23.45
	CA_25A-25A	25	20	26140	1860	QPSK/1#0	25	20	26590	1905	21.64	22.68
	CA_26A-41A	26	15	26865	831.5	QPSK/1#0	41	20	41490	2680	22.31	22.64
	CA_41C	41	20	41292	2660.2	QPSK/1#0	41	20	41490	2680	22.62	25.45
	CA_41A-41A	41	20	39750	2506	QPSK/1#0	41	20	41490	2680	20.66	25.45
	CA_66A-71A	66	20	132072	1720	QPSK/1#0	71	20	68786	782	17.55	23.65
	CA_66A-66A	66	20	132072	1720	QPSK/1#0	66	20	132572	1770	18.23	23.65
	CA_66B	66	10	132523	1765.1	QPSK/1#0	66	10	132622	1775	17.15	23.65
	CA_66C	66	20	132572	1770	QPSK/1#0	66	20	67234	2189.8	18.77	23.65

**2.4GHz WLAN**

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN ANT 1	802.11b 1Mbps	CH 1	2412	12.52	13.00	14	98.79
		CH 7	2442	14.70	15.50	14	
		CH 13	2472	13.43	14.00	14	
	802.11g 6Mbps	CH 1	2412	9.75	10.50	12	98.31
		CH 7	2442	11.76	12.50	12	
		CH 13	2472	6.41	11.00	8	
	802.11n-HT20 MCS0	CH 1	2412	9.63	10.00	12	98.18
		CH 7	2442	11.66	12.50	12	
		CH 13	2472	5.64	11.00	7	
	802.11n-HT40 MCS0	CH 1	2412	10.81	11.50	12	94.87
		CH 7	2442	12.32	13.00	12	
		CH 13	2472	10.33	11.00	12	

5GHz WLAN

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 1	802.11a 6Mbps	CH 36	5180	10.20	11.00	12	98.31
		CH 44	5220	11.28	12.00	12	
		CH 48	5240	11.63	12.00	12	
	802.11n-HT20 MCS0	CH 36	5180	10.13	11.00	12	98.18
		CH 44	5220	11.17	12.00	12	
		CH 48	5240	11.57	12.00	12	
	802.11n-HT40 MCS0	CH 38	5190	11.27	12.00	12	96.37
		CH 46	5230	12.19	13.00	12	
		CH 36	5180	8.47	9.00	10	
	802.11ac-VHT20 MCS0	CH 44	5220	9.47	10.00	10	98.20
		CH 48	5240	9.84	10.00	10	
		CH 38	5190	9.55	10.00	10	
	802.11ac-VHT40 MCS0	CH 46	5230	10.48	11.00	10	96.41
		CH 38	5190	9.55	10.00	10	
		CH 42	5210	9.78	10.00	10	

5GHz WLAN

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN ANT 1	802.11a MCS0	CH 149	5745	12.63	13.00	12	98.31
		CH 157	5785	10.53	11.00	12	
		CH 165	5825	8.94	9.50	12	
	802.11n-HT20 MCS0	CH 149	5745	12.43	13.00	12	98.18
		CH 157	5785	10.43	11.00	12	
		CH 165	5825	8.85	9.50	12	
	802.11n-HT40 MCS0	CH 151	5755	12.97	13.50	12	96.37
		CH 159	5795	11.04	12.00	12	
		CH 149	5745	10.63	11.00	10	
	802.11ac-VHT20 MCS0	CH 157	5785	8.94	9.50	10	98.20
		CH 165	5825	6.25	7.00	10	
		CH 151	5755	11.14	12.00	10	
	802.11ac-VHT40 MCS0	CH 159	5795	9.19	10.00	10	96.41
		CH 155	5775	10.04	11.00	10	
		CH 155	5775	10.04	11.00	10	

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	8.81	5.67	6.64
	CH 39	2441	7.71	6.79	7.68
	CH 78	2480	7.79	5.01	5.07
Tune-up Limit			9.5	7	8
Duty Cycle %			77.2	77.6	77.6

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	2.22
	CH 19	2440	4.09
	CH 39	2480	0.86
Tune-up Limit			4.5
Duty Cycle %			66.03