



REPORT No.: SZ24060210S01

Annex E Conducted Power

Note:

Conducted power unit: dBm

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

Full Power

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	22.91	22.98	22.92	24.00	22.93	22.99	22.90	24.00	22.89	22.95	22.92	24.00
3GPP Rel 5	HSDPA Subtest-1	22.50	22.45	22.23	23.50	22.24	22.27	22.31	23.00	22.06	22.10	22.01	23.00
3GPP Rel 5	HSDPA Subtest-2	22.47	22.40	22.35	23.50	22.13	22.25	22.36	23.00	22.08	21.95	21.99	23.00
3GPP Rel 5	HSDPA Subtest-3	22.05	21.93	21.74	23.00	21.74	21.78	21.75	22.50	21.45	21.48	21.51	22.50
3GPP Rel 5	HSDPA Subtest-4	22.05	21.93	21.70	23.00	21.38	21.73	21.82	22.50	21.59	21.49	21.34	22.50
3GPP Rel 6	HSUPA Subtest-1	22.55	22.50	22.39	23.50	22.22	22.31	22.32	23.00	22.01	22.08	21.91	23.00
3GPP Rel 6	HSUPA Subtest-2	22.09	21.94	21.83	23.00	21.70	21.80	21.80	22.50	21.48	21.55	21.58	22.50
3GPP Rel 6	HSUPA Subtest-3	22.54	22.49	22.46	23.50	22.19	22.34	22.34	23.00	21.94	22.05	21.96	23.00
3GPP Rel 6	HSUPA Subtest-4	22.57	22.49	22.34	23.50	22.17	22.35	22.37	23.00	22.06	22.01	21.89	23.00
3GPP Rel 6	HSUPA Subtest-5	22.56	22.44	22.32	23.50	22.23	22.33	22.33	23.00	22.02	22.10	22.02	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	22.56	22.46	22.26	23.50	22.14	22.22	22.25	23.00	22.34	22.02	21.84	23.00
Attenuator		Cable Loss				Cable Loss				Cable Loss			
Mode		Max.				Max.				Max.			

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	22.58	22.62	22.55	24
20	QPSK	1	49	22.52	22.57	22.50	
20	QPSK	1	99	22.53	22.51	22.46	
20	QPSK	50	0	21.67	21.71	21.65	23
20	QPSK	50	24	21.56	21.63	21.58	
20	QPSK	50	50	21.51	21.60	21.49	
20	QPSK	100	0	21.55	21.57	21.52	23
20	16QAM	1	0	21.77	21.83	21.78	
20	16QAM	1	49	21.73	21.76	21.70	
20	16QAM	1	99	21.66	21.74	21.67	22
20	16QAM	50	0	20.63	20.72	20.68	
20	16QAM	50	24	20.56	20.66	20.60	
20	16QAM	50	50	20.49	20.63	20.56	22
20	16QAM	100	0	20.54	20.58	20.61	
20	64QAM	1	0	20.65	20.70	20.64	
20	64QAM	1	49	20.58	20.65	20.56	22
20	64QAM	1	99	20.52	20.54	20.51	
20	64QAM	50	0	19.58	19.66	19.60	
20	64QAM	50	24	19.49	19.51	19.63	21
20	64QAM	50	50	19.54	19.59	19.55	
20	64QAM	100	0	19.46	19.54	19.49	
20	256QAM	1	0	17.71	17.76	17.50	19
20	256QAM	1	49	17.49	17.69	17.67	
20	256QAM	1	99	17.67	17.54	17.52	
20	256QAM	50	0	16.53	16.66	16.55	18
20	256QAM	50	24	16.49	16.64	16.69	
20	256QAM	50	50	16.62	16.60	16.47	
20	256QAM	100	0	16.53	16.63	16.44	Tune-up limit (dBm)
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	24
15	QPSK	1	0	22.58	22.60	22.54	
15	QPSK	1	37	22.42	22.57	22.49	23
15	QPSK	1	74	22.56	22.54	22.48	
15	QPSK	36	0	21.58	21.64	21.72	
15	QPSK	36	20	21.53	21.56	21.51	23
15	QPSK	36	39	21.49	21.57	21.53	
15	QPSK	75	0	21.50	21.48	21.52	
15	16QAM	1	0	21.78	21.85	21.84	23
15	16QAM	1	37	21.80	21.76	21.68	
15	16QAM	1	74	21.62	21.61	21.65	
15	16QAM	36	0	20.51	20.77	20.74	22
15	16QAM	36	20	20.44	20.61	20.69	
15	16QAM	36	39	20.55	20.61	20.63	
15	16QAM	75	0	20.59	20.47	20.52	22
15	64QAM	1	0	20.61	20.72	20.68	
15	64QAM	1	37	20.44	20.67	20.52	
15	64QAM	1	74	20.52	20.45	20.44	21
15	64QAM	36	0	19.43	19.64	19.66	
15	64QAM	36	20	19.49	19.60	19.60	
15	64QAM	36	39	19.40	19.64	19.55	19
15	64QAM	75	0	19.45	19.60	19.39	
15	256QAM	1	0	17.71	17.75	17.53	
15	256QAM	1	37	17.46	17.67	17.75	18
15	256QAM	1	74	17.49	17.50	17.38	
15	256QAM	36	0	16.40	16.73	16.60	
15	256QAM	36	20	16.46	16.51	16.68	18
15	256QAM	36	39	16.48	16.44	16.49	
15	256QAM	75	0	16.42	16.58	16.43	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.55	22.58	22.50	24
10	QPSK	1	25	22.48	22.56	22.53	
10	QPSK	1	49	22.43	22.51	22.46	
10	QPSK	25	0	21.65	21.63	21.68	23
10	QPSK	25	12	21.47	21.60	21.63	
10	QPSK	25	25	21.60	21.50	21.45	
10	QPSK	50	0	21.46	21.66	21.56	23
10	16QAM	1	0	21.78	21.90	21.75	
10	16QAM	1	25	21.67	21.84	21.80	
10	16QAM	1	49	21.52	21.75	21.75	22
10	16QAM	25	0	20.56	20.66	20.64	
10	16QAM	25	12	20.51	20.68	20.67	
10	16QAM	25	25	20.46	20.69	20.44	22
10	16QAM	50	0	20.45	20.57	20.68	
10	64QAM	1	0	20.75	20.58	20.65	
10	64QAM	1	25	20.55	20.65	20.52	22
10	64QAM	1	49	20.48	20.55	20.57	
10	64QAM	25	0	19.49	19.64	19.48	
10	64QAM	25	12	19.51	19.56	19.52	21
10	64QAM	25	25	19.61	19.48	19.56	
10	64QAM	50	0	19.55	19.60	19.49	
10	256QAM	1	0	17.57	17.74	17.44	19
10	256QAM	1	25	17.50	17.71	17.71	
10	256QAM	1	49	17.60	17.45	17.47	
10	256QAM	25	0	16.56	16.63	16.59	18
10	256QAM	25	12	16.39	16.64	16.67	
10	256QAM	25	25	16.57	16.45	16.36	
10	256QAM	50	0	16.42	16.64	16.50	Tune-up limit (dBm)
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	24
5	QPSK	1	0	22.58	22.59	22.54	
5	QPSK	1	12	22.57	22.55	22.44	23
5	QPSK	1	24	22.51	22.55	22.47	
5	QPSK	12	0	21.62	21.75	21.73	
5	QPSK	12	7	21.58	21.67	21.57	23
5	QPSK	12	13	21.43	21.48	21.44	
5	QPSK	25	0	21.64	21.57	21.58	
5	16QAM	1	0	21.81	21.73	21.82	Tune-up limit (dBm)
Channel				18625	18900	19175	

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	22.67	22.74	22.61	24
20	QPSK	1	49	22.49	22.65	22.47	
20	QPSK	1	99	22.68	22.59	22.56	
20	QPSK	50	0	21.77	21.79	21.75	23
20	QPSK	50	24	21.54	21.71	21.60	
20	QPSK	50	50	21.63	21.78	21.62	
20	QPSK	100	0	21.54	21.70	21.68	23
20	16QAM	1	0	21.95	21.95	21.72	
20	16QAM	1	49	21.71	21.75	21.79	
20	16QAM	1	99	21.71	21.71	21.62	22
20	16QAM	50	0	20.77	20.72	20.76	
20	16QAM	50	24	20.64	20.76	20.54	
20	16QAM	50	50	20.49	20.58	20.67	22
20	16QAM	100	0	20.68	20.66	20.62	
20	64QAM	1	0	20.78	20.78	20.79	
20	64QAM	1	49	20.71	20.72	20.72	22
20	64QAM	1	99	20.46	20.64	20.54	
20	64QAM	50	0	19.69	19.65	19.66	
20	64QAM	50	24	19.43	19.56	19.74	21
20	64QAM	50	50	19.68	19.58	19.60	
20	64QAM	100	0	19.45	19.56	19.63	
20	256QAM	1	0	17.68	17.74	17.59	19
20	256QAM	1	49	17.64	17.81	17.84	
20	256QAM	1	99	17.67	17.63	17.55	
20	256QAM	50	0	16.51	16.73	16.74	18
20	256QAM	50	24	16.47	16.74	16.66	
20	256QAM	50	50	16.73	16.59	16.61	
20	256QAM	100	0	16.49	16.71	16.40	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.64	22.71	22.65	24
15	QPSK	1	37	22.47	22.61	22.63	
15	QPSK	1	74	22.65	22.56	22.51	
15	QPSK	36	0	21.62	21.67	21.77	23
15	QPSK	36	20	21.67	21.82	21.72	
15	QPSK	36	39	21.61	21.64	21.54	
15	QPSK	75	0	21.73	21.61	21.63	23
15	16QAM	1	0	21.89	21.99	21.72	
15	16QAM	1	37	21.82	21.78	21.80	
15	16QAM	1	74	21.65	21.78	21.64	22
15	16QAM	36	0	20.59	20.90	20.68	
15	16QAM	36	20	20.71	20.67	20.72	
15	16QAM	36	39	20.66	20.76	20.52	22
15	16QAM	75	0	20.61	20.72	20.55	
15	64QAM	1	0	20.68	20.88	20.83	
15	64QAM	1	37	20.59	20.59	20.65	22
15	64QAM	1	74	20.66	20.63	20.51	
15	64QAM	36	0	19.74	19.84	19.62	
15	64QAM	36	20	19.59	19.67	19.65	21
15	64QAM	36	39	19.60	19.67	19.62	
15	64QAM	75	0	19.51	19.61	19.47	
15	256QAM	1	0	17.73	17.75	17.52	19
15	256QAM	1	37	17.54	17.70	17.68	
15	256QAM	1	74	17.60	17.64	17.46	
15	256QAM	36	0	16.56	16.74	16.57	18
15	256QAM	36	20	16.61	16.77	16.54	
15	256QAM	36	39	16.58	16.65	16.45	
15	256QAM	75	0	16.57	16.76	16.51	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.64	22.69	22.66	24
10	QPSK	1	25	22.47	22.61	22.56	
10	QPSK	1	49	22.61	22.52	22.41	
10	QPSK	25	0	21.62	21.82	21.66	23
10	QPSK	25	12	21.54	21.74	21.61	
10	QPSK	25	25	21.62	21.78	21.66	
10	QPSK	50	0	21.51	21.76	21.62	23
10	16QAM	1	0	21.72	21.83	21.85	
10	16QAM	1	25	21.87	21.72	21.65	
10	16QAM	1	49	21.80	21.71	21.77	22
10	16QAM	25	0	20.58	20.81	20.65	
10	16QAM	25	12	20.67	20.66	20.67	
10	16QAM	25	25	20.67	20.76	20.75	22
10	16QAM	50	0	20.53	20.72	20.80	
10	64QAM	1	0	20.63	20.85	20.72	
10	64QAM	1	25	20.52	20.78	20.60	22
10	64QAM	1	49	20.62	20.63	20.65	
10	64QAM	25	0	19.69	19.72	19.74	
10	64QAM	25	12	19.47	19.62	19.79	21
10	64QAM	25	25	19.54	19.68	19.51	
10	64QAM	50	0	19.50	19.63	19.57	
10	256QAM	1	0	17.74	17.84	17.64	19
10	256QAM	1	25	17.58	17.70	17.69	
10	256QAM	1	49	17.68	17.58	17.66	
10	256QAM	25	0	16.58	16.77	16.65	18
10	256QAM	25	12	16.60	16.62	16.73	
10	256QAM	25	25	16.62	16.50	16.52	
10	256QAM	50	0	16.64	16.66	16.50	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.61	22.70	22.67	24
5	QPSK	1	12	22.61	22.57	22.56	
5	QPSK	1	24	22.53	22.57	22.61	
5	QPSK	12	0	21.64	21.81	21.64	23
5	QPSK	12	7	21.66	21.80	21.60	
5	QPSK	12	13	21.70	21.54	21.51	
5	QPSK	25	0	21.71	21.56	21.62	
5	16QAM	1	0	21.73	21.97	21.73	

5	16QAM	1	12	21.63	21.81	21.68	23
5	16QAM	1	24	21.60	21.74	21.62	
5	16QAM	12	0	20.51	20.74	20.78	
5	16QAM	12	7	20.63	20.55	20.89	
5	16QAM	12	13	20.49	20.53	20.47	
5	16QAM	25	0	20.42	20.64	20.54	
5	64QAM	1	0	20.59	20.70	20.51	
5	64QAM	1	12	20.61	20.60	20.66	
5	64QAM	1	24	20.50	20.63	20.37	
5	64QAM	12	0	19.44	19.59	19.56	
5	64QAM	12	7	19.56	19.47	19.55	
5	64QAM	12	13	19.62	19.54	19.43	
5	64QAM	25	0	19.41	19.42	19.40	
5	256QAM	1	0	17.62	17.79	17.53	
5	256QAM	1	12	17.52	17.67	17.66	
5	256QAM	1	24	17.52	17.47	17.43	
5	256QAM	12	0	16.51	16.66	16.62	
5	256QAM	12	7	16.56	16.70	16.62	
5	256QAM	12	13	16.61	16.49	16.39	
5	256QAM	25	0	16.52	16.67	16.40	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.52	22.55	22.51	24
3	QPSK	1	8	22.39	22.43	22.48	
3	QPSK	1	14	22.46	22.51	22.47	
3	QPSK	8	0	21.65	21.56	21.51	
3	QPSK	8	4	21.53	21.57	21.49	23
3	QPSK	8	7	21.51	21.66	21.42	
3	QPSK	15	0	21.58	21.44	21.42	
3	16QAM	1	0	21.62	21.81	21.75	
3	16QAM	1	8	21.61	21.78	21.73	23
3	16QAM	1	14	21.74	21.60	21.55	
3	16QAM	8	0	20.54	20.66	20.61	
3	16QAM	8	4	20.63	20.75	20.58	
3	16QAM	8	7	20.51	20.72	20.44	22
3	16QAM	15	0	20.40	20.46	20.54	
3	64QAM	1	0	20.56	20.65	20.63	
3	64QAM	1	8	20.49	20.74	20.64	
3	64QAM	1	14	20.57	20.61	20.41	21
3	64QAM	8	0	19.67	19.73	19.66	
3	64QAM	8	4	19.53	19.55	19.55	
3	64QAM	8	7	19.42	19.58	19.56	
3	64QAM	15	0	19.56	19.62	19.50	19
3	256QAM	1	0	17.75	17.74	17.44	
3	256QAM	1	8	17.55	17.56	17.77	
3	256QAM	1	14	17.57	17.48	17.58	
3	256QAM	8	0	16.61	16.77	16.50	19
3	256QAM	8	4	16.50	16.61	16.58	
3	256QAM	8	7	16.64	16.43	16.42	
3	256QAM	15	0	16.53	16.62	16.42	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.52	22.59	22.51	24
1.4	QPSK	1	3	22.38	22.45	22.50	
1.4	QPSK	1	5	22.56	22.50	22.50	
1.4	QPSK	3	0	21.71	21.75	21.50	
1.4	QPSK	3	1	21.65	21.70	21.50	23
1.4	QPSK	3	3	21.54	21.62	21.50	
1.4	QPSK	6	0	21.50	21.45	21.40	
1.4	16QAM	1	0	21.85	21.68	21.82	
1.4	16QAM	1	3	21.64	21.71	21.55	22
1.4	16QAM	1	5	21.70	21.61	21.59	
1.4	16QAM	3	0	20.54	20.74	20.63	
1.4	16QAM	3	1	20.60	20.53	20.60	
1.4	16QAM	3	3	20.54	20.49	20.47	22
1.4	16QAM	6	0	20.55	20.54	20.46	
1.4	64QAM	1	0	20.51	20.74	20.59	
1.4	64QAM	1	3	20.66	20.59	20.44	
1.4	64QAM	1	5	20.53	20.61	20.41	21
1.4	64QAM	3	0	19.55	19.54	19.54	
1.4	64QAM	3	1	19.52	19.61	19.70	
1.4	64QAM	3	3	19.51	19.60	19.63	
1.4	64QAM	6	0	19.55	19.52	19.51	19
1.4	256QAM	1	0	17.60	17.71	17.45	
1.4	256QAM	1	3	17.48	17.61	17.70	
1.4	256QAM	1	5	17.53	17.45	17.40	
1.4	256QAM	3	0	16.56	16.66	16.51	18
1.4	256QAM	3	1	16.56	16.66	16.77	
1.4	256QAM	3	3	16.52	16.53	16.39	
1.4	256QAM	6	0	16.54	16.57	16.43	

5	16QAM	1	12	21.89	21.89	21.69	23
5	16QAM	1	24	21.61	21.84	21.84	
5	16QAM	12	0	20.61	20.89	20.73	
5	16QAM	12	7	20.75	20.85	20.73	
5	16QAM	12	13	20.68	20.66	20.54	
5	16QAM	25	0	20.48	20.59	20.78	
5	64QAM	1	0	20.76	20.69	20.71	
5	64QAM	1	12	20.71	20.64	20.61	
5	64QAM	1	24	20.68	20.67	20.60	
5	64QAM	12	0	19.58	19.72	19.67	
5	64QAM	12	7	19.51	19.60	19.68	
5	64QAM	12	13	19.64	19.66	19.53	
5	64QAM	25	0	19.64	19.58	19.45	
5	256QAM	1	0	17.71	17.92	17.55	
5	256QAM	1	12	17.61	17.63	17.65	
5	256QAM	1	24	17.65	17.58	17.69	
5	256QAM	12	0	16.51	16.78	16.69	
5	256QAM	12	7	16.56	16.66	16.76	
5	256QAM	12	13	16.70	16.52	16.51	
5	256QAM	25	0	16.59	16.79	16.66	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.65	22.66	22.59	24
3	QPSK	1	8	22.64	22.62	22.61	
3	QPSK	1	14	22.57	22.48	22.42	
3	QPSK	8	0	21.81	21.74	21.73	
3	QPSK	8	4	21.51	21.59	21.72	23
3	QPSK	8	7	21.64	21.55	21.45	
3	QPSK	15	0	21.69	21.72	21.56	
3	16QAM	1	0	21.81	21.93	21.94	
3	16QAM	1	8	21.86	21.76	21.89	23
3	16QAM	1	14	21.83	21.79	21.86	
3	16QAM	8	0	20.78	20.80	20.77	
3	16QAM	8	4	20.61	20.67	20.79	
3	16QAM	8	7	20.64	20.68	20.52	22
3	16QAM	15	0	20.68	20.56	20.66	
3	64QAM	1	0	20.65	20.78	20.62	
3	64QAM	1	8	20.62	20.82	20.72	
3	64QAM	1	14	20.60	20.57	20.46	21
3	64QAM	8	0	19.60	19.70	19.74	
3	64QAM	8	4	19.53	19.65	19.72	
3	64QAM	8	7	19.63	19.58	19.57	
3	64QAM	15	0	19.42	19.67	19.52	19
3	256QAM	1	0	17.72	17.80	17.54	
3	256QAM	1	8	17.66	17.67	17.81	
3	256QAM	1	14	17.68	17.50	17.46	
3	256QAM	8	0	16.57	16.72	16.73	18
3	256QAM	8	4	16.63	16.63	16.71	
3	256QAM	8	7	16.56	16.53	16.50	
3	256QAM	15	0	16.57	16.78	16.54	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.64	22.67	22.62	24
1.4	QPSK	1	3	22.63	22.60	22.53	
1.4	QPSK	1	5	22.54	22.64	22.56	
1.4	QPSK	3	0	21.86	21.79	21.77	
1.4	QPSK	3	1	21.56	21.72	21.71	23
1.4	QPSK	3	3	21.61	21.61	21.65	
1.4	QPSK	6	0	21.71	21.71	21.52	
1.4	16QAM	1	0	21.84	21.79	21.72	
1.4	16QAM	1	3	21.76	21.81	21.75	22
1.4	16QAM	1	5	21.85	21.85	21.70	
1.4	16QAM	3	0	20.70	20.84	20.69	
1.4	16QAM	3	1	20.63	20.60	20.76	
1.4	16QAM	3	3	20.66	20.69	20.71	22
1.4	16QAM	6	0	20.60	20.69	20.80	
1.4	64QAM	1	0	20.72	20.75	20.74	
1.4	64QAM	1	3	20.73	20.82	20.67	
1.4	64QAM	1	5	20.61	20.66	20.61	21
1.4	64QAM	3	0	19.74	19.64	19.57	
1.4	64QAM	3	1	19.59	19.61	19.60	
1.4	64QAM	3	3	19.61	19.63	19.59	
1.4	64QAM	6	0	19.61	19.63	19.44	19
1.4	256QAM	1	0	17.82	17.78	17.56	
1.4	256QAM	1	3	17.50	17.67	17.76	
1.4	256QAM	1	5	17.63	17.58	17.54	
1.4	256QAM	3	0	16.62	16.73	16.62	18
1.4	256QAM	3	1	16.50	16.59	16.79	
1.4	256QAM	3	3	16.71	16.53	16.55	
1.4	256QAM	6	0	16.62	16.71	16.52	

Band 5 (Cellular Band) (dBm) Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	22.91	22.96	22.90	24
10	QPSK	1	25	22.92	22.89	22.82	
10	QPSK	1	49	22.88	22.93	22.80	
10	QPSK	25	0	21.91	21.97	21.87	23
10	QPSK	25	12	21.79	21.96	21.82	
10	QPSK	25	25	21.96	21.96	21.92	
10	QPSK	50	0	21.90	21.89	21.94	23
10	16QAM	1	0	22.09	22.12	22.00	
10	16QAM	1	25	21.98	22.08	22.15	
10	16QAM	1	49	21.92	21.94	22.11	22
10	16QAM	25	0	20.93	20.95	20.97	
10	16QAM	25	12	20.97	21.07	20.91	
10	16QAM	25	25	20.79	20.88	20.89	22
10	16QAM	50	0	20.96	20.90	20.84	
10	64QAM	1	0	21.06	21.02	20.97	
10	64QAM	1	25	20.97	20.85	20.80	22
10	64QAM	1	49	20.95	20.90	20.84	
10	64QAM	25	0	19.85	19.90	19.97	
10	64QAM	25	12	19.82	19.93	20.01	21
10	64QAM	25	25	19.90	19.96	19.80	
10	64QAM	50	0	19.75	19.96	19.94	
10	256QAM	1	0	17.80	17.71	17.59	19
10	256QAM	1	25	17.55	17.69	17.81	
10	256QAM	1	49	17.70	17.53	17.56	
10	256QAM	25	0	16.57	16.80	16.65	18
10	256QAM	25	12	16.49	16.58	16.73	
10	256QAM	25	25	16.68	16.56	16.49	
10	256QAM	50	0	16.59	16.68	16.44	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	Tune-up limit (dBm)
5	QPSK	1	0	22.90	22.94	22.88	24
5	QPSK	1	12	22.74	22.95	22.94	
5	QPSK	1	24	22.84	22.95	22.68	
5	QPSK	12	0	21.98	22.10	21.90	23
5	QPSK	12	7	21.84	22.06	22.02	
5	QPSK	12	13	21.82	21.81	21.91	
5	QPSK	25	0	21.76	21.99	21.82	23
5	16QAM	1	0	21.99	22.21	22.01	
5	16QAM	1	12	21.96	22.09	22.07	
5	16QAM	1	24	22.00	21.99	21.98	22
5	16QAM	12	0	20.94	20.93	20.90	
5	16QAM	12	7	20.85	21.10	20.99	
5	16QAM	12	13	20.82	21.03	20.91	22
5	16QAM	25	0	20.76	20.95	20.89	
5	64QAM	1	0	20.99	21.07	20.84	
5	64QAM	1	12	20.98	21.01	20.98	22
5	64QAM	1	24	20.85	20.74	20.94	
5	64QAM	12	0	19.89	20.03	19.93	
5	64QAM	12	7	19.93	19.81	19.86	21
5	64QAM	12	13	19.95	19.96	19.89	
5	64QAM	25	0	19.86	19.76	19.71	
5	256QAM	1	0	17.79	17.79	17.64	19
5	256QAM	1	12	17.64	17.72	17.69	
5	256QAM	1	24	17.57	17.60	17.52	
5	256QAM	12	0	16.56	16.73	16.67	18
5	256QAM	12	7	16.60	16.75	16.70	
5	256QAM	12	13	16.67	16.59	16.48	
5	256QAM	25	0	16.52	16.75	16.54	
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	Tune-up limit (dBm)
3	QPSK	1	0	22.83	22.91	22.78	24
3	QPSK	1	8	22.81	22.83	22.76	
3	QPSK	1	14	22.79	22.87	22.90	
3	QPSK	8	0	22.03	21.99	22.04	23
3	QPSK	8	4	21.85	22.05	21.82	
3	QPSK	8	7	21.93	22.04	21.78	
3	QPSK	15	0	21.92	21.78	21.80	23
3	16QAM	1	0	22.00	22.12	22.05	
3	16QAM	1	8	21.96	22.21	21.90	
3	16QAM	1	14	22.10	22.16	22.09	22
3	16QAM	8	0	20.95	20.98	20.89	
3	16QAM	8	4	20.92	21.08	21.04	
3	16QAM	8	7	20.73	20.95	20.94	22
3	16QAM	15	0	20.77	20.90	20.98	
3	64QAM	1	0	21.07	21.06	20.85	
3	64QAM	1	8	20.95	21.08	20.87	22
3	64QAM	1	14	20.86	20.93	20.78	
3	64QAM	8	0	19.94	20.01	19.81	
3	64QAM	8	4	19.80	19.88	19.95	21
3	64QAM	8	7	19.77	19.89	19.90	
3	64QAM	15	0	19.71	19.90	19.90	
3	256QAM	1	0	17.76	17.79	17.52	19
3	256QAM	1	8	17.51	17.74	17.83	
3	256QAM	1	14	17.59	17.51	17.47	
3	256QAM	8	0	16.46	16.69	16.66	18
3	256QAM	8	4	16.49	16.57	16.68	
3	256QAM	8	7	16.70	16.57	16.51	
3	256QAM	15	0	16.57	16.71	16.45	
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	Tune-up limit (dBm)
1.4	QPSK	1	0	22.86	22.88	22.85	24
1.4	QPSK	1	3	22.82	22.90	22.88	
1.4	QPSK	1	5	22.86	22.83	22.76	
1.4	QPSK	3	0	21.87	22.00	21.89	
1.4	QPSK	3	1	21.92	22.08	21.83	
1.4	QPSK	3	3	21.86	21.98	21.87	
1.4	QPSK	6	0	21.87	22.01	21.87	23
1.4	16QAM	1	0	22.12	22.10	21.98	

Band 7 (2600MHz Band) (dBm)							
Part 27							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.87	22.96	22.90	24
20	QPSK	1	49	22.76	22.88	22.73	
20	QPSK	1	99	22.82	22.76	22.70	
20	QPSK	50	0	21.95	22.10	22.01	23
20	QPSK	50	24	21.73	22.00	21.90	
20	QPSK	50	50	21.72	21.77	21.78	
20	QPSK	100	0	21.93	21.78	21.75	23
20	16QAM	1	0	21.94	22.03	22.16	
20	16QAM	1	49	21.91	22.05	22.03	
20	16QAM	1	99	21.85	21.96	21.98	22
20	16QAM	50	0	20.82	21.04	20.96	
20	16QAM	50	24	20.94	20.82	20.86	
20	16QAM	50	50	20.77	20.92	20.75	22
20	16QAM	100	0	20.71	20.94	20.90	
20	64QAM	1	0	20.99	20.95	20.96	
20	64QAM	1	49	20.91	20.80	20.92	22
20	64QAM	1	99	20.83	20.91	20.91	
20	64QAM	50	0	19.75	20.02	19.89	
20	64QAM	50	24	19.81	19.82	19.91	21
20	64QAM	50	50	19.94	19.97	19.74	
20	64QAM	100	0	19.67	19.84	19.84	
20	256QAM	1	0	17.69	17.88	17.49	19
20	256QAM	1	49	17.65	17.63	17.73	
20	256QAM	1	99	17.66	17.56	17.53	
20	256QAM	50	0	16.55	16.75	16.66	18
20	256QAM	50	24	16.45	16.82	16.69	
20	256QAM	50	50	16.60	16.57	16.58	
20	256QAM	100	0	16.49	16.63	16.53	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.89	22.93	22.83	24
15	QPSK	1	37	22.85	22.77	22.89	
15	QPSK	1	74	22.72	22.84	22.79	
15	QPSK	36	0	21.99	21.89	21.88	23
15	QPSK	36	20	21.73	21.85	21.78	
15	QPSK	36	39	21.91	21.96	21.64	
15	QPSK	75	0	21.77	21.91	21.72	23
15	16QAM	1	0	22.17	22.09	22.00	
15	16QAM	1	37	21.95	22.12	21.97	
15	16QAM	1	74	22.03	21.94	21.82	22
15	16QAM	36	0	20.95	20.94	21.06	
15	16QAM	36	20	20.72	20.99	20.81	
15	16QAM	36	39	20.86	20.99	20.91	22
15	16QAM	75	0	20.80	20.76	20.93	
15	64QAM	1	0	20.91	20.88	20.88	
15	64QAM	1	37	20.95	20.86	20.88	22
15	64QAM	1	74	20.70	20.74	20.70	
15	64QAM	36	0	19.75	19.96	19.98	
15	64QAM	36	20	19.67	19.86	19.84	21
15	64QAM	36	39	19.94	19.87	19.71	
15	64QAM	75	0	19.74	19.94	19.82	
15	256QAM	1	0	17.72	17.87	17.49	19
15	256QAM	1	37	17.48	17.64	17.56	
15	256QAM	1	74	17.60	17.54	17.50	
15	256QAM	36	0	16.53	16.68	16.63	18
15	256QAM	36	20	16.48	16.76	16.68	
15	256QAM	36	39	16.68	16.58	16.44	
15	256QAM	75	0	16.53	16.62	16.41	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.87	22.91	22.84	24
10	QPSK	1	25	22.87	22.78	22.86	
10	QPSK	1	49	22.74	22.87	22.76	
10	QPSK	25	0	21.89	21.89	22.00	23
10	QPSK	25	12	21.84	21.78	21.91	
10	QPSK	25	25	21.72	21.87	21.77	
10	QPSK	50	0	21.95	21.72	21.78	23
10	16QAM	1	0	22.03	22.13	21.98	
10	16QAM	1	25	21.91	22.10	21.96	
10	16QAM	1	49	22.01	22.03	21.84	22
10	16QAM	25	0	21.03	21.04	20.90	
10	16QAM	25	12	20.73	20.88	20.88	
10	16QAM	25	25	20.70	20.78	20.79	22
10	16QAM	50	0	20.85	20.73	20.92	
10	64QAM	1	0	20.98	20.95	20.91	
10	64QAM	1	25	20.94	20.88	20.76	22
10	64QAM	1	49	20.88	20.91	20.84	
10	64QAM	25	0	19.83	20.06	19.97	
10	64QAM	25	12	19.77	19.90	19.96	21
10	64QAM	25	25	19.93	19.91	19.80	
10	64QAM	50	0	19.66	19.74	19.73	
10	256QAM	1	0	17.68	17.89	17.56	19
10	256QAM	1	25	17.56	17.61	17.65	
10	256QAM	1	49	17.71	17.52	17.53	
10	256QAM	25	0	16.46	16.75	16.69	18
10	256QAM	25	12	16.56	16.73	16.88	
10	256QAM	25	25	16.54	16.63	16.52	
10	256QAM	50	0	16.51	16.65	16.37	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.86	22.88	22.76	24
5	QPSK	1	12	22.85	22.86	22.75	
5	QPSK	1	24	22.82	22.81	22.72	
5	QPSK	12	0	22.02	22.03	21.96	23
5	QPSK	12	7	21.87	21.86	21.91	
5	QPSK	12	13	21.78	21.97	21.69	
5	QPSK	25	0	21.77	21.89	21.74	
5	16QAM	1	0	22.10	22.03	22.09	



1.4	16QAM	1	3	22.11	22.14	22.05	23
1.4	16QAM	1	5	22.10	22.02	21.88	
1.4	16QAM	3	0	20.91	21.00	20.96	
1.4	16QAM	3	1	20.84	21.02	20.80	
1.4	16QAM	3	3	20.85	20.98	20.88	22
1.4	16QAM	6	0	20.76	20.97	20.93	
1.4	64QAM	1	0	21.08	21.07	20.96	
1.4	64QAM	1	3	20.87	20.89	21.00	
1.4	64QAM	1	5	20.74	20.75	20.81	22
1.4	64QAM	3	0	19.90	20.02	19.93	
1.4	64QAM	3	1	19.89	19.83	20.06	
1.4	64QAM	3	3	19.82	19.84	19.91	
1.4	64QAM	6	0	19.72	19.98	19.91	21
1.4	256QAM	1	0	17.71	17.90	17.58	19
1.4	256QAM	1	3	17.63	17.78	17.79	
1.4	256QAM	1	5	17.67	17.55	17.69	
1.4	256QAM	3	0	16.53	16.83	16.71	
1.4	256QAM	3	1	16.62	16.64	16.78	18
1.4	256QAM	3	3	16.61	16.62	16.69	
1.4	256QAM	6	0	16.50	16.62	16.41	
1.4	256QAM	6	0	16.50	16.62	16.41	

5	16QAM	1	12	22.01	21.97	22.03	23
5	16QAM	1	24	21.98	22.02	21.95	
5	16QAM	12	0	20.96	21.11	20.89	
5	16QAM	12	7	20.84	20.97	20.96	
5	16QAM	12	13	20.75	20.82	20.88	22
5	16QAM	25	0	20.81	20.98	20.91	
5	64QAM	1	0	21.03	21.03	20.94	
5	64QAM	1	12	20.91	20.88	20.77	
5	64QAM	1	24	20.75	20.89	20.67	22
5	64QAM	12	0	19.80	19.96	19.80	
5	64QAM	12	7	19.76	19.86	20.00	
5	64QAM	12	13	19.82	19.80	19.77	
5	64QAM	25	0	19.69	19.81	19.88	21
5	256QAM	1	0	17.71	17.78	17.64	
5	256QAM	1	12	17.64	17.70	17.74	
5	256QAM	1	24	17.67	17.58	17.56	
5	256QAM	12	0	16.60	16.76	16.69	19
5	256QAM	12	7	16.54	16.66	16.65	
5	256QAM	12	13	16.62	16.65	16.46	
5	256QAM	25	0	16.52	16.62	16.46	

Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	24
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	22.74	22.83	22.77	24
10	QPSK	1	25	22.62	22.76	22.58	
10	QPSK	1	49	22.71	22.62	22.59	
10	QPSK	25	0	21.77	21.84	21.75	23
10	QPSK	25	12	21.61	21.69	21.62	
10	QPSK	25	25	21.48	21.65	21.67	
10	QPSK	50	0	21.55	21.66	21.52	23
10	16QAM	1	0	21.90	21.83	21.83	
10	16QAM	1	25	21.89	21.90	21.88	
10	16QAM	1	49	21.76	21.71	21.73	22
10	16QAM	25	0	20.62	20.72	20.70	
10	16QAM	25	12	20.51	20.76	20.71	
10	16QAM	25	25	20.63	20.58	20.76	22
10	16QAM	50	0	20.54	20.70	20.60	
10	64QAM	1	0	20.71	20.68	20.82	
10	64QAM	1	25	20.61	20.77	20.55	22
10	64QAM	1	49	20.67	20.58	20.56	
10	64QAM	25	0	19.68	19.70	19.76	
10	64QAM	25	12	19.51	19.65	19.74	21
10	64QAM	25	25	19.50	19.57	19.51	
10	64QAM	50	0	19.45	19.58	19.50	
10	256QAM	1	0	17.66	17.80	17.61	19
10	256QAM	1	25	17.52	17.76	17.68	
10	256QAM	1	49	17.63	17.56	17.55	
10	256QAM	25	0	16.59	16.78	16.67	18
10	256QAM	25	12	16.59	16.73	16.78	
10	256QAM	25	25	16.55	16.67	16.50	
10	256QAM	50	0	16.42	16.73	16.40	18
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	Tune-up limit (dBm)
5	QPSK	1	0	22.70	22.80	22.70	24
5	QPSK	1	12	22.49	22.63	22.58	
5	QPSK	1	24	22.58	22.58	22.47	
5	QPSK	12	0	21.70	21.82	21.60	23
5	QPSK	12	7	21.58	21.68	21.73	
5	QPSK	12	13	21.71	21.64	21.62	
5	QPSK	25	0	21.54	21.65	21.60	23
5	16QAM	1	0	21.81	21.89	21.86	
5	16QAM	1	12	21.89	21.94	21.75	
5	16QAM	1	24	21.84	21.76	21.64	22
5	16QAM	12	0	20.79	20.74	20.79	
5	16QAM	12	7	20.54	20.81	20.56	
5	16QAM	12	13	20.49	20.59	20.60	22
5	16QAM	25	0	20.65	20.72	20.80	
5	64QAM	1	0	20.83	20.83	20.77	
5	64QAM	1	12	20.67	20.69	20.73	22
5	64QAM	1	24	20.49	20.67	20.47	
5	64QAM	12	0	19.77	19.65	19.77	
5	64QAM	12	7	19.57	19.70	19.63	21
5	64QAM	12	13	19.50	19.58	19.68	
5	64QAM	25	0	19.62	19.51	19.59	
5	256QAM	1	0	17.65	17.74	17.45	19
5	256QAM	1	12	17.46	17.71	17.70	
5	256QAM	1	24	17.63	17.48	17.49	
5	256QAM	12	0	16.57	16.78	16.60	18
5	256QAM	12	7	16.47	16.66	16.84	
5	256QAM	12	13	16.70	16.50	16.55	
5	256QAM	25	0	16.59	16.69	16.51	18
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	Tune-up limit (dBm)
3	QPSK	1	0	22.73	22.79	22.70	24
3	QPSK	1	8	22.62	22.53	22.67	
3	QPSK	1	14	22.51	22.63	22.51	
3	QPSK	8	0	21.65	21.67	21.60	23
3	QPSK	8	4	21.71	21.77	21.54	
3	QPSK	8	7	21.62	21.58	21.62	
3	QPSK	15	0	21.73	21.57	21.68	23
3	16QAM	1	0	21.94	21.95	21.94	
3	16QAM	1	8	21.74	21.93	21.71	
3	16QAM	1	14	21.70	21.83	21.84	22
3	16QAM	8	0	20.77	20.90	20.88	
3	16QAM	8	4	20.62	20.80	20.67	
3	16QAM	8	7	20.63	20.72	20.72	22
3	16QAM	15	0	20.62	20.54	20.75	
3	64QAM	1	0	20.63	20.81	20.81	
3	64QAM	1	8	20.65	20.85	20.65	22
3	64QAM	1	14	20.69	20.61	20.59	
3	64QAM	8	0	19.65	19.82	19.73	
3	64QAM	8	4	19.63	19.55	19.75	21
3	64QAM	8	7	19.67	19.62	19.64	
3	64QAM	15	0	19.46	19.67	19.50	
3	256QAM	1	0	17.70	17.86	17.61	19
3	256QAM	1	8	17.52	17.74	17.83	
3	256QAM	1	14	17.69	17.45	17.56	
3	256QAM	8	0	16.48	16.69	16.56	18
3	256QAM	8	4	16.52	16.68	16.81	
3	256QAM	8	7	16.63	16.64	16.48	
3	256QAM	15	0	16.47	16.68	16.44	24
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	Tune-up limit (dBm)
1.4	QPSK	1	0	22.69	22.77	22.65	24
1.4	QPSK	1	3	22.67	22.59	22.69	
1.4	QPSK	1	5	22.54	22.65	22.63	
1.4	QPSK	3	0	21.62	21.79	21.70	23
1.4	QPSK	3	1	21.51	21.63	21.63	
1.4	QPSK	3	3	21.70	21.65	21.66	
1.4	QPSK	6	0	21.54	21.74	21.64	23
1.4	16QAM	1	0	21.72	21.85	21.96	

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		22.98		24
10	QPSK	1	25		22.89		
10	QPSK	1	49		22.83		
10	QPSK	25	0		22.13		23
10	QPSK	25	12		21.89		
10	QPSK	25	25		22.00		
10	QPSK	50	0		21.84		23
10	16QAM	1	0		22.04		
10	16QAM	1	25		21.96		
10	16QAM	1	49		21.97		22
10	16QAM	25	0		21.04		
10	16QAM	25	12		20.97		
10	16QAM	25	25		21.02		22
10	16QAM	50	0		20.94		
10	64QAM	1	0		21.09		
10	64QAM	1	25		20.86		22
10	64QAM	1	49		20.82		
10	64QAM	25	0		20.02		
10	64QAM	25	12		19.78		21
10	64QAM	25	25		19.95		
10	64QAM	50	0		19.95		
10	256QAM	1	0		17.83		19
10	256QAM	1	25		17.77		
10	256QAM	1	49		17.61		
10	256QAM	25	0		16.71		18
10	256QAM	25	12		16.63		
10	256QAM	25	25		16.50		
10	256QAM	50	0		16.78		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	22.91	22.95	22.88	24
5	QPSK	1	12	22.73	22.79	22.87	
5	QPSK	1	24	22.89	22.87	22.91	
5	QPSK	12	0	22.02	22.06	21.97	23
5	QPSK	12	7	21.78	22.01	21.96	
5	QPSK	12	13	21.73	21.81	21.81	
5	QPSK	25	0	21.86	21.84	21.92	23
5	16QAM	1	0	22.11	22.27	22.12	
5	16QAM	1	12	22.10	21.97	21.93	
5	16QAM	1	24	22.10	21.97	22.12	22
5	16QAM	12	0	21.03	20.93	20.91	
5	16QAM	12	7	20.86	20.98	20.87	
5	16QAM	12	13	20.87	21.08	20.94	22
5	16QAM	25	0	20.94	20.96	20.87	
5	64QAM	1	0	20.90	21.10	20.98	
5	64QAM	1	12	20.81	21.07	20.87	22
5	64QAM	1	24	20.89	20.92	20.88	
5	64QAM	12	0	19.83	20.08	19.84	
5	64QAM	12	7	19.78	19.87	19.83	21
5	64QAM	12	13	19.91	19.98	19.87	
5	64QAM	25	0	19.82	19.94	19.76	
5	256QAM	1	0	17.74	17.75	17.48	19
5	256QAM	1	12	17.59	17.61	17.67	
5	256QAM	1	24	17.54	17.43	17.39	
5	256QAM	12	0	16.49	16.72	16.73	18
5	256QAM	12	7	16.45	16.56	16.75	
5	256QAM	12	13	16.70	16.68	16.39	
5	256QAM	25	0	16.50	16.74	16.46	



1.4	16QAM	1	3	21.83	21.91	21.87	23
1.4	16QAM	1	5	21.79	21.75	21.82	
1.4	16QAM	3	0	20.64	20.67	20.88	
1.4	16QAM	3	1	20.69	20.77	20.68	
1.4	16QAM	3	3	20.51	20.80	20.66	
1.4	16QAM	6	0	20.56	20.61	20.77	22
1.4	64QAM	1	0	20.60	20.79	20.79	22
1.4	64QAM	1	3	20.73	20.61	20.61	
1.4	64QAM	1	5	20.60	20.50	20.49	
1.4	64QAM	3	0	19.55	19.63	19.61	
1.4	64QAM	3	1	19.47	19.68	19.61	
1.4	64QAM	3	3	19.65	19.56	19.55	21
1.4	64QAM	6	0	19.46	19.65	19.59	
1.4	256QAM	1	0	17.80	17.86	17.53	19
1.4	256QAM	1	3	17.50	17.67	17.69	
1.4	256QAM	1	5	17.63	17.59	17.56	
1.4	256QAM	3	0	16.46	16.79	16.72	
1.4	256QAM	3	1	16.60	16.58	16.66	
1.4	256QAM	3	3	16.57	16.50	16.50	18
1.4	256QAM	6	0	16.49	16.81	16.49	

Band 17 (700MHz Band) (dBm) Part 27H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	22.67	22.74	22.65	24
10	QPSK	1	25	22.53	22.43	22.41	
10	QPSK	1	49	22.47	22.51	22.50	
10	QPSK	25	0	21.68	21.73	21.69	23
10	QPSK	25	12	21.57	21.45	21.59	
10	QPSK	25	25	21.47	21.55	21.47	
10	QPSK	50	0	21.49	21.40	21.48	23
10	16QAM	1	0	21.83	21.88	21.75	
10	16QAM	1	25	21.70	21.60	21.75	
10	16QAM	1	49	21.64	21.77	21.56	22
10	16QAM	25	0	20.54	20.74	20.73	
10	16QAM	25	12	20.50	20.57	20.44	
10	16QAM	25	25	20.47	20.66	20.45	22
10	16QAM	50	0	20.45	20.58	20.45	
10	64QAM	1	0	20.61	20.68	20.60	
10	64QAM	1	25	20.50	20.66	20.51	22
10	64QAM	1	49	20.44	20.52	20.42	
10	64QAM	25	0	19.54	19.69	19.50	
10	64QAM	25	12	19.38	19.41	19.50	21
10	64QAM	25	25	19.57	19.41	19.37	
10	64QAM	50	0	19.44	19.38	19.31	
10	256QAM	1	0	17.72	17.71	17.49	19
10	256QAM	1	25	17.63	17.73	17.63	
10	256QAM	1	49	17.58	17.60	17.45	
10	256QAM	25	0	16.54	16.69	16.72	18
10	256QAM	25	12	16.48	16.71	16.71	
10	256QAM	25	25	16.67	16.53	16.52	
10	256QAM	50	0	16.55	16.74	16.50	
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	Tune-up limit (dBm)
5	QPSK	1	0	22.63	22.70	22.57	24
5	QPSK	1	12	22.49	22.39	22.38	
5	QPSK	1	24	22.41	22.49	22.50	
5	QPSK	12	0	21.48	21.66	21.56	23
5	QPSK	12	7	21.38	21.58	21.43	
5	QPSK	12	13	21.44	21.54	21.48	
5	QPSK	25	0	21.40	21.45	21.42	23
5	16QAM	1	0	21.82	21.69	21.67	
5	16QAM	1	12	21.71	21.79	21.72	
5	16QAM	1	24	21.51	21.63	21.55	22
5	16QAM	12	0	20.68	20.69	20.65	
5	16QAM	12	7	20.40	20.61	20.59	
5	16QAM	12	13	20.55	20.46	20.43	22
5	16QAM	25	0	20.43	20.44	20.47	
5	64QAM	1	0	20.51	20.56	20.52	
5	64QAM	1	12	20.59	20.64	20.60	22
5	64QAM	1	24	20.41	20.39	20.45	
5	64QAM	12	0	19.62	19.63	19.55	
5	64QAM	12	7	19.31	19.45	19.52	21
5	64QAM	12	13	19.55	19.63	19.52	
5	64QAM	25	0	19.42	19.46	19.44	
5	256QAM	1	0	17.75	17.76	17.59	19
5	256QAM	1	12	17.46	17.67	17.77	
5	256QAM	1	24	17.54	17.44	17.41	
5	256QAM	12	0	16.57	16.72	16.56	18
5	256QAM	12	7	16.50	16.64	16.69	
5	256QAM	12	13	16.53	16.55	16.49	
5	256QAM	25	0	16.50	16.65	16.43	

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	22.74	22.85	22.77	24
20	QPSK	1	49	22.56	22.71	22.67	
20	QPSK	1	99	22.59	22.66	22.58	
20	QPSK	50	0	21.82	21.86	21.74	23
20	QPSK	50	24	21.67	21.79	21.80	
20	QPSK	50	50	21.68	21.75	21.50	
20	QPSK	100	0	21.70	21.78	21.72	23
20	16QAM	1	0	21.93	21.90	21.84	
20	16QAM	1	49	21.98	21.93	22.04	
20	16QAM	1	99	21.94	22.11	21.84	22
20	16QAM	50	0	20.82	20.92	20.90	
20	16QAM	50	24	20.74	20.86	20.70	
20	16QAM	50	50	20.81	20.78	20.71	22
20	16QAM	100	0	20.57	20.79	20.80	
20	64QAM	1	0	20.78	20.96	20.59	
20	64QAM	1	49	20.75	20.78	20.61	22
20	64QAM	1	99	20.97	20.73	20.70	
20	64QAM	50	0	19.78	19.92	19.67	
20	64QAM	50	24	19.70	19.70	19.86	21
20	64QAM	50	50	19.88	19.66	19.69	
20	64QAM	100	0	19.79	19.80	19.53	
20	256QAM	1	0	17.66	17.81	17.49	19
20	256QAM	1	49	17.61	17.67	17.65	
20	256QAM	1	99	17.54	17.57	17.54	
20	256QAM	50	0	16.60	16.85	16.61	18
20	256QAM	50	24	16.56	16.57	16.64	
20	256QAM	50	50	16.61	16.65	16.35	
20	256QAM	100	0	16.61	16.63	16.48	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.71	22.82	22.79	24
15	QPSK	1	37	22.59	22.64	22.48	
15	QPSK	1	74	22.66	22.62	22.65	
15	QPSK	36	0	21.78	21.90	21.68	23
15	QPSK	36	20	21.68	21.85	21.65	
15	QPSK	36	39	21.66	21.81	21.53	
15	QPSK	75	0	21.69	21.73	21.78	23
15	16QAM	1	0	21.98	21.99	21.98	
15	16QAM	1	37	21.99	21.91	22.03	
15	16QAM	1	74	21.80	21.95	21.80	22
15	16QAM	36	0	20.86	20.94	20.88	
15	16QAM	36	20	20.64	20.85	20.61	
15	16QAM	36	39	20.81	20.88	20.64	22
15	16QAM	75	0	20.64	20.75	20.80	
15	64QAM	1	0	20.72	20.95	20.76	
15	64QAM	1	37	20.69	20.84	20.61	22
15	64QAM	1	74	20.80	20.83	20.68	
15	64QAM	36	0	19.76	19.92	19.64	
15	64QAM	36	20	19.78	19.63	19.80	21
15	64QAM	36	39	19.82	19.76	19.61	
15	64QAM	75	0	19.73	19.89	19.56	
15	256QAM	1	0	17.68	17.81	17.49	19
15	256QAM	1	37	17.46	17.80	17.66	
15	256QAM	1	74	17.67	17.62	17.55	
15	256QAM	36	0	16.50	16.72	16.68	18
15	256QAM	36	20	16.55	16.76	16.72	
15	256QAM	36	39	16.56	16.55	16.46	
15	256QAM	75	0	16.49	16.65	16.52	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.74	22.80	22.64	24
10	QPSK	1	25	22.63	22.77	22.50	
10	QPSK	1	49	22.53	22.73	22.48	
10	QPSK	25	0	21.89	21.91	21.68	23
10	QPSK	25	12	21.77	21.98	21.74	
10	QPSK	25	25	21.70	21.82	21.66	
10	QPSK	50	0	21.65	21.71	21.67	23
10	16QAM	1	0	21.90	21.91	21.98	
10	16QAM	1	25	22.00	22.05	22.00	
10	16QAM	1	49	21.94	21.96	21.86	22
10	16QAM	25	0	20.89	20.91	20.89	
10	16QAM	25	12	20.68	20.94	20.74	
10	16QAM	25	25	20.81	20.78	20.68	22
10	16QAM	50	0	20.68	20.74	20.81	
10	64QAM	1	0	20.82	20.83	20.70	
10	64QAM	1	25	20.67	20.71	20.71	22
10	64QAM	1	49	20.96	20.71	20.72	
10	64QAM	25	0	19.67	19.97	19.62	
10	64QAM	25	12	19.90	19.74	19.85	21
10	64QAM	25	25	19.78	19.66	19.60	
10	64QAM	50	0	19.67	19.80	19.55	
10	256QAM	1	0	17.65	17.88	17.56	19
10	256QAM	1	25	17.55	17.81	17.65	
10	256QAM	1	49	17.72	17.44	17.46	
10	256QAM	25	0	16.58	16.79	16.62	18
10	256QAM	25	12	16.55	16.69	16.82	
10	256QAM	25	25	16.66	16.58	16.44	
10	256QAM	50	0	16.49	16.66	16.51	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.76	22.81	22.68	24
5	QPSK	1	12	22.62	22.75	22.61	
5	QPSK	1	24	22.51	22.65	22.50	
5	QPSK	12	0	21.90	21.85	21.83	23
5	QPSK	12	7	21.80	21.91	21.79	
5	QPSK	12	13	21.68	21.92	21.63	
5	QPSK	25	0	21.74	21.69	21.72	
5	16QAM	1	0	21.96	21.93	21.98	

5	16QAM	1	12	21.92	22.01	22.02	23
5	16QAM	1	24	21.85	22.01	21.80	
5	16QAM	12	0	20.92	21.03	20.91	
5	16QAM	12	7	20.73	20.89	20.89	22
5	16QAM	12	13	20.73	20.76	20.74	
5	16QAM	25	0	20.72	20.59	20.70	
5	64QAM	1	0	20.81	20.88	20.75	
5	64QAM	1	12	20.62	20.74	20.61	22
5	64QAM	1	24	20.86	20.66	20.62	
5	64QAM	12	0	19.61	19.82	19.66	
5	64QAM	12	7	19.71	19.64	19.72	21
5	64QAM	12	13	19.73	19.72	19.58	
5	64QAM	25	0	19.75	19.78	19.59	
5	256QAM	1	0	17.65	17.81	17.46	
5	256QAM	1	12	17.47	17.77	17.75	19
5	256QAM	1	24	17.55	17.60	17.48	
5	256QAM	12	0	16.61	16.69	16.72	
5	256QAM	12	7	16.59	16.57	16.67	18
5	256QAM	12	13	16.60	16.52	16.50	
5	256QAM	25	0	16.46	16.61	16.53	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.62	22.78	22.63	
3	QPSK	1	8	22.67	22.73	22.50	24
3	QPSK	1	14	22.68	22.59	22.62	
3	QPSK	8	0	21.85	21.88	21.76	
3	QPSK	8	4	21.62	21.89	21.85	23
3	QPSK	8	7	21.64	21.78	21.61	
3	QPSK	15	0	21.61	21.63	21.67	
3	16QAM	1	0	21.90	21.92	21.99	
3	16QAM	1	8	21.84	21.89	21.99	23
3	16QAM	1	14	21.95	22.01	21.73	
3	16QAM	8	0	20.98	20.87	20.94	
3	16QAM	8	4	20.77	20.84	20.77	22
3	16QAM	8	7	20.74	20.87	20.74	
3	16QAM	15	0	20.60	20.75	20.80	
3	64QAM	1	0	20.66	20.89	20.64	
3	64QAM	1	8	20.61	20.78	20.78	22
3	64QAM	1	14	20.92	20.68	20.74	
3	64QAM	8	0	19.66	19.91	19.65	
3	64QAM	8	4	19.82	19.65	19.76	21
3	64QAM	8	7	19.77	19.83	19.65	
3	64QAM	15	0	19.76	19.79	19.56	
3	256QAM	1	0	17.69	17.71	17.63	
3	256QAM	1	8	17.51	17.63	17.71	19
3	256QAM	1	14	17.62	17.56	17.47	
3	256QAM	8	0	16.56	16.79	16.63	
3	256QAM	8	4	16.61	16.60	16.71	18
3	256QAM	8	7	16.61	16.58	16.68	
3	256QAM	15	0	16.49	16.61	16.56	
Channel				131979	132322	132655	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.71	22.79	22.73	
1.4	QPSK	1	3	22.75	22.66	22.59	
1.4	QPSK	1	5	22.51	22.63	22.57	24
1.4	QPSK	3	0	21.78	21.91	21.84	
1.4	QPSK	3	1	21.73	21.83	21.69	
1.4	QPSK	3	3	21.73	21.79	21.57	
1.4	QPSK	6	0	21.69	21.66	21.81	23
1.4	16QAM	1	0	21.93	21.93	21.86	
1.4	16QAM	1	3	22.01	22.05	21.95	
1.4	16QAM	1	5	21.80	22.00	21.72	23
1.4	16QAM	3	0	20.85	20.90	20.78	
1.4	16QAM	3	1	20.61	20.82	20.81	
1.4	16QAM	3	3	20.70	20.91	20.75	
1.4	16QAM	6	0	20.67	20.65	20.63	22
1.4	64QAM	1	0	20.73	20.93	20.67	
1.4	64QAM	1	3	20.76	20.66	20.61	
1.4	64QAM	1	5	20.91	20.84	20.66	22
1.4	64QAM	3	0	19.62	19.80	19.60	
1.4	64QAM	3	1	19.79	19.75	19.83	
1.4	64QAM	3	3	19.75	19.66	19.71	
1.4	64QAM	6	0	19.85	19.87	19.69	21
1.4	256QAM	1	0	17.69	17.73	17.65	
1.4	256QAM	1	3	17.57	17.76	17.76	
1.4	256QAM	1	5	17.61	17.57	17.55	19
1.4	256QAM	3	0	16.57	16.74	16.73	
1.4	256QAM	3	1	16.55	16.69	16.83	
1.4	256QAM	3	3	16.52	16.50	16.47	
1.4	256QAM	6	0	16.56	16.74	16.60	18

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	Tune-up limit (dBm)	
Frequency (MHz)				3560	3609	3625	3641	3690		
20	QPSK	1	0	22.06	22.09	22.12	22.07	21.99	23	
20	QPSK	1	49	21.56	21.58	21.58	21.61	21.60		
20	QPSK	1	99	21.62	21.60	21.62	21.42	21.56		
20	QPSK	50	0	21.16	21.07	21.19	21.02	20.92	22	
20	QPSK	50	24	20.61	20.60	20.66	20.70	20.59		
20	QPSK	50	50	20.61	20.52	20.74	20.55	20.39		
20	QPSK	100	0	20.63	20.54	20.63	20.56	20.37	22	
20	16QAM	1	0	20.89	20.84	20.94	20.89	20.74		
20	16QAM	1	49	20.79	20.91	20.76	20.69	20.60		
20	16QAM	1	99	20.77	20.69	20.82	20.78	20.63	21	
20	16QAM	50	0	19.55	19.71	19.63	19.70	19.57		
20	16QAM	50	24	19.57	19.58	19.66	19.54	19.38		
20	16QAM	50	50	19.55	19.48	19.68	19.41	19.32	21	
20	16QAM	100	0	19.58	19.52	19.62	19.56	19.42		
20	64QAM	1	0	19.75	19.76	19.80	19.59	19.66		
20	64QAM	1	49	19.75	19.67	19.71	19.65	19.58	21	
20	64QAM	1	99	19.56	19.53	19.72	19.63	19.44		
20	64QAM	50	0	19.55	19.55	19.69	19.59	19.41		
20	64QAM	50	24	19.44	19.58	19.56	19.57	19.45	20	
20	64QAM	50	50	19.60	19.45	19.55	19.46	19.36		
20	64QAM	100	0	19.55	19.45	19.63	19.49	19.31		
20	256QAM	1	0	16.56	16.50	16.57	16.44	16.29	17	
20	256QAM	1	49	16.44	16.40	16.46	16.46	16.50		
20	256QAM	1	99	16.44	16.36	16.26	16.24	16.34		
20	256QAM	50	0	15.29	15.36	15.62	15.44	15.34	17	
20	256QAM	50	24	15.35	15.39	15.52	15.51	15.47		
20	256QAM	50	50	15.34	15.50	15.33	15.25	15.31		
20	256QAM	100	0	15.34	15.38	15.54	15.22	15.19		
Channel				55315	55820	55990	56160.15	56665.15	Tune-up limit (dBm)	
Frequency (MHz)				3557.5	3608	3625	3642.15	3692.65		
15	QPSK	1	0	21.60	21.66	21.68	21.67	21.62	23	
15	QPSK	1	37	21.54	21.57	21.57	21.61	21.60		
15	QPSK	1	74	21.56	21.62	21.62	21.62	21.52		
15	QPSK	36	0	20.66	20.77	20.72	20.76	20.66	22	
15	QPSK	36	20	20.68	20.65	20.70	20.78	20.72		
15	QPSK	36	39	20.69	20.70	20.72	20.60	20.58		
15	QPSK	75	0	20.59	20.55	20.67	20.61	20.71	22	
15	16QAM	1	0	20.95	20.77	20.91	20.91	20.93		
15	16QAM	1	37	20.89	20.72	20.76	20.82	20.78		
15	16QAM	1	74	20.77	20.67	20.80	20.93	20.66	21	
15	16QAM	36	0	19.53	19.70	19.70	19.80	19.61		
15	16QAM	36	20	19.50	19.65	19.61	19.78	19.55		
15	16QAM	36	39	19.47	19.49	19.57	19.65	19.57	21	
15	16QAM	75	0	19.49	19.43	19.53	19.78	19.61		
15	64QAM	1	0	19.70	19.74	19.72	19.75	19.82		
15	64QAM	1	37	19.71	19.72	19.64	19.65	19.68	21	
15	64QAM	1	74	19.67	19.62	19.54	19.70	19.60		
15	64QAM	36	0	19.47	19.53	19.56	19.69	19.66	20	
15	64QAM	36	20	19.53	19.58	19.41	19.62	19.52		
15	64QAM	36	39	19.47	19.43	19.63	19.70	19.55		
15	64QAM	75	0	19.44	19.49	19.44	19.52	19.40	17	
15	256QAM	1	0	16.56	16.52	16.52	16.37	16.26		
15	256QAM	1	37	16.29	16.25	16.43	16.44	16.62		
15	256QAM	1	74	16.53	16.45	16.34	16.26	16.28	17	
15	256QAM	36	0	15.31	15.24	15.59	15.43	15.38		
15	256QAM	36	20	15.44	15.28	15.54	15.48	15.50		
15	256QAM	36	39	15.35	15.52	15.34	15.29	15.24	17	
15	256QAM	75	0	15.35	15.35	15.46	15.15	15.27		
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)	
Frequency (MHz)				3555	3607.5	3625	3642.5	3695		
10	QPSK	1	0	21.58	21.65	21.67	21.56	21.51	23	
10	QPSK	1	25	21.62	21.53	21.68	21.58	21.34		
10	QPSK	1	49	21.53	21.63	21.65	21.50	21.49		
10	QPSK	25	0	20.75	20.72	20.84	20.73	20.54	22	
10	QPSK	25	12	20.71	20.66	20.64	20.55	20.61		
10	QPSK	25	25	20.59	20.62	20.62	20.55	20.55		
10	QPSK	50	0	20.60	20.62	20.76	20.57	20.51	22	
10	16QAM	1	0	20.93	20.93	20.83	20.79	20.68		
10	16QAM	1	25	20.73	20.77	20.75	20.79	20.67		
10	16QAM	1	49	20.83	20.65	20.78	20.81	20.65	21	
10	16QAM	25	0	19.54	19.56	19.66	19.65	19.61		
10	16QAM	25	12	19.55	19.62	19.74	19.55	19.36		
10	16QAM	25	25	19.47	19.45	19.52	19.60	19.41	21	
10	16QAM	50	0	19.48	19.52	19.67	19.62	19.50		
10	64QAM	1	0	19.74	19.73	19.72	19.75	19.63		
10	64QAM	1	25	19.63	19.64	19.81	19.53	19.47	21	
10	64QAM	1	49	19.52	19.65	19.71	19.63	19.45		
10	64QAM	25	0	19.64	19.54	19.70	19.47	19.54		
10	64QAM	25	12	19.45	19.43	19.53	19.55	19.49	20	
10	64QAM	25	25	19.53	19.45	19.52	19.40	19.38		
10	64QAM	50	0	19.40	19.36	19.61	19.46	19.30		
10	256QAM	1	0	16.53	16.52	16.50	16.37	16.33	16	
10	256QAM	1	25	16.27	16.30	16.48	16.58	16.52		
10	256QAM	1	49	16.51	16.49	16.24	16.20	16.26		
10	256QAM	25	0	15.38	15.42	15.63	15.34	15.47	16	
10	256QAM	25	12	15.42	15.41	15.53	15.60	15.52		
10	256QAM	25	25	15.52	15.34	15.41	15.29	15.23		
10	256QAM	50	0	15.30	15.30	15.60	15.26	15.27		
Channel				55265	55810	55990	56170	56175	Tune-up limit (dBm)	
Frequency (MHz)				3552.5	3607	3625	3643	3687.5		
5	QPSK	1	0	21.63	21.62	21.65	21.59	21.51	23	
5	QPSK	1	12	21.54	21.60	21.59	21.50	21.42		
5	QPSK	1	24	21.52	21.52	21.53	21.51	21.42		
5	QPSK	12	0	20.82	20.83	20.73	20.68	20.69	22	
5	QPSK	12	7	20.73	20.55	20.82	20.60	20.42		
5	QPSK	12	13	20.54	20.70	20.72	20.58	20.39		
5	QPSK	25	0	20.62	20.59	20.59	20.59	20.39	22	
5	16QAM	1	0	20.85	20.92	20.84	20.73	20.76		
5	16QAM	1	0	20.85	20.92	20.84	20.73	20.76		



5	16QAM	1	12	20.77	20.89	20.80	20.66	20.58	22
5	16QAM	1	24	20.81	20.71	20.83	20.78	20.53	
5	16QAM	12	0	19.64	19.52	19.68	19.62	19.59	21
5	16QAM	12	7	19.59	19.54	19.61	19.49	19.44	
5	16QAM	12	13	19.45	19.56	19.69	19.50	19.40	
5	16QAM	25	0	19.60	19.45	19.59	19.59	19.46	
5	64QAM	1	0	19.79	19.66	19.74	19.67	19.61	21
5	64QAM	1	12	19.65	19.63	19.69	19.61	19.46	
5	64QAM	1	24	19.60	19.56	19.67	19.63	19.53	20
5	64QAM	12	0	19.56	19.62	19.62	19.48	19.39	
5	64QAM	12	7	19.41	19.42	19.44	19.49	19.56	
5	64QAM	12	13	19.63	19.62	19.49	19.59	19.46	
5	64QAM	25	0	19.55	19.42	19.44	19.42	19.37	
5	256QAM	1	0	16.59	16.56	16.52	16.31	16.40	18
5	256QAM	1	12	16.36	16.29	16.43	16.47	16.59	
5	256QAM	1	24	16.47	16.50	16.40	16.34	16.20	
5	256QAM	12	0	15.41	15.41	15.54	15.38	15.50	17
5	256QAM	12	7	15.37	15.40	15.55	15.56	15.61	
5	256QAM	12	13	15.33	15.41	15.33	15.29	15.29	
5	256QAM	25	0	15.30	15.27	15.56	15.28	15.32	

n2 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				372000	376000	380000	(dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.89	22.70	22.27	23.50
20		1	53	22.85	22.50	22.57	
20		1	104	22.74	22.37	22.55	
20		50	1	22.64	22.57	22.80	23.50
20	DFT-s-OFDM QPSK	50	25	22.94	22.60	22.86	
20		50	50	22.74	22.59	22.60	
20		100	0	22.69	22.72	22.73	
20		1	1	23.30	23.35	23.26	24.50
20	DFT-s-OFDM 16QAM	1	53	23.20	23.17	23.14	
20		1	104	23.09	23.07	23.02	
20		50	1	22.90	22.95	22.84	23.50
20		50	25	22.79	22.59	22.74	
20	DFT-s-OFDM 64QAM	50	50	22.58	22.45	22.29	
20		100	0	22.50	22.59	22.46	
20	DFT-s-OFDM 256QAM	1	1	21.86	21.65	21.26	22.50
20	CP-OFDM QPSK	1	1	20.44	20.17	19.78	21.00
20	CP-OFDM 16QAM	1	1	18.21	18.00	17.59	18.50
20	CP-OFDM 64QAM	1	1	21.44	21.17	20.76	22.50
20	CP-OFDM 256QAM	1	1	20.86	20.63	20.21	21.50
20		1	1	19.26	18.93	18.59	20.00
20		1	1	16.22	15.96	15.59	17.00
Channel				371500	376000	380500	Tune-up limit
Frequency (MHz)				1857.5	1880	1902.5	(dBm)
15	DFT-s-OFDM QPSK	1	1	23.16	22.60	22.41	23.50
Channel				371000	376000	381000	Tune-up limit
Frequency (MHz)				1855	1880	1905	(dBm)
10	DFT-s-OFDM QPSK	1	1	22.71	22.68	21.99	23.50
Channel				370500	376000	381500	Tune-up limit
Frequency (MHz)				1852.5	1880	1907.5	(dBm)
5	DFT-s-OFDM QPSK	1	1	22.96	22.39	21.83	23.50

n5 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				166800	167300	167800	(dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.90	22.88	22.95	23.50
20		1	53	22.94	22.93	22.88	
20		1	104	22.80	22.76	22.75	
20		50	1	22.69	22.62	22.73	23.50
20	DFT-s-OFDM QPSK	50	25	23.00	23.01	23.02	
20		50	50	22.71	22.67	22.63	
20		100	0	22.73	22.72	22.72	
20		1	1	22.97	23.06	22.94	23.50
20	DFT-s-OFDM 16QAM	1	53	22.90	22.95	22.92	
20		1	104	22.82	22.80	22.72	
20		50	1	22.17	22.16	22.15	22.50
20		50	25	21.73	21.85	21.96	
20	DFT-s-OFDM 64QAM	50	50	21.85	21.77	21.73	
20		100	0	21.78	21.94	21.82	
20	DFT-s-OFDM 256QAM	1	1	22.12	22.16	22.17	22.50
20	CP-OFDM QPSK	1	1	20.52	20.63	20.63	21.20
20	CP-OFDM 16QAM	1	1	18.39	18.43	18.46	19.50
20	CP-OFDM 64QAM	1	1	21.62	21.71	21.63	22.50
20	CP-OFDM 256QAM	1	1	21.02	21.12	21.12	22.00
20		1	1	19.19	19.29	19.26	20.00
20		1	1	16.40	16.51	16.49	17.50
Channel				166300	167300	168300	Tune-up limit
Frequency (MHz)				831.5	836.5	841.5	(dBm)
15	DFT-s-OFDM QPSK	1	1	22.90	22.95	22.95	23.50
Channel				165800	167300	168800	Tune-up limit
Frequency (MHz)				829	836.5	844	(dBm)
10	DFT-s-OFDM QPSK	1	1	22.68	22.79	22.77	23.50
Channel				165300	167300	169300	Tune-up limit
Frequency (MHz)				826.5	836.5	846.5	(dBm)
5	DFT-s-OFDM QPSK	1	1	22.74	22.82	22.76	23.50

n48 (PC3)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High/Middle Channel	High Channel	Tune-up
Channel				638000	639834	641666	643500	645332	limit
Frequency (MHz)				3570	3597.51	3624.99	3652.5	3679.98	(dBm)
40	DFT-s-OFDM PI/2 BPSK	1	1	22.65	22.48	22.59	22.34	22.43	23.50
40		1	53	22.56	22.58	22.18	22.39	22.48	
40		1	104	22.61	22.40	22.55	22.58	22.77	
40		50	1	22.15	22.04	21.80	21.96	22.02	23.50
40		50	25	22.61	22.63	22.25	22.46	22.49	
40		50	50	22.03	22.04	21.78	21.88	22.08	
40		100	0	22.13	22.13	21.74	21.94	21.99	
40	DFT-s-OFDM QPSK	1	1	22.63	22.70	22.78	22.67	22.73	24.00
40		1	53	22.42	22.61	22.18	22.41	22.45	
40		1	104	22.63	22.38	22.55	22.63	22.51	
40		50	1	21.75	21.86	21.89	21.62	21.76	23.00
40		50	25	21.60	21.68	21.50	21.53	21.55	
40		50	50	21.43	21.53	21.27	21.37	21.57	
40		100	0	21.64	21.63	21.25	21.46	21.52	
40	DFT-s-OFDM 16QAM	1	1	21.56	21.41	21.45	21.31	21.37	22.50
40	DFT-s-OFDM 64QAM	1	1	20.25	20.03	20.05	19.86	19.97	21.00
40	DFT-s-OFDM 256QAM	1	1	17.94	17.80	17.79	17.64	17.74	18.50
40	CP-OFDM QPSK	1	1	21.21	21.01	21.02	20.88	20.96	22.00
40	CP-OFDM 16QAM	1	1	20.68	20.48	20.49	20.36	20.46	21.50
40	CP-OFDM 64QAM	1	1	18.76	18.60	18.62	18.45	18.58	19.50
40	CP-OFDM 256QAM	1	1	15.96	15.79	15.81	15.64	15.70	16.50
Channel				637668	639668	641666	643666	645666	Tune-up
Frequency (MHz)				3565.02	3595.02	3624.99	3654.99	3684.99	limit
30	DFT-s-OFDM QPSK	1	1	22.59	22.52	22.35	22.47	22.49	23.50
Channel				637334	639500	641666	643832	646000	Tune-up
Frequency (MHz)				3560.01	3592.5	3624.99	3657.48	3690	limit
20	DFT-s-OFDM QPSK	1	1	22.76	22.43	22.29	22.40	22.46	23.50
Channel				637000	639334	641666	644000	646332	Tune-up
Frequency (MHz)				3555	3590.01	3624.99	3660	3694.98	limit
10	DFT-s-OFDM QPSK	1	1	22.59	22.58	22.27	22.50	22.66	23.50

n66 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				345000	349000	353000	(dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM PI/2 BPSK	1	1	22.63	22.64	22.52	23.50
30		1	80	22.69	22.60	22.52	
30		1	158	22.51	22.40	22.46	
30		80	1	22.25	22.15	22.01	23.50
30		80	40	22.77	22.67	22.57	
30		80	80	22.25	22.12	22.08	
30		160	0	22.31	22.19	22.09	
30	DFT-s-OFDM QPSK	1	1	23.07	23.09	23.05	24.00
30		1	80	22.72	22.69	22.61	
30		1	158	22.57	22.50	22.60	
30		80	1	21.71	21.75	21.69	23.00
30		80	40	21.53	21.56	21.58	
30		80	80	21.70	21.65	21.63	
30		160	0	21.60	21.65	21.52	
30	DFT-s-OFDM 16QAM	1	1	21.58	21.63	21.50	22.50
30	DFT-s-OFDM 64QAM	1	1	20.12	20.12	19.96	21.00
30	DFT-s-OFDM 256QAM	1	1	17.93	17.92	17.79	18.50
30	CP-OFDM QPSK	1	1	21.11	21.19	21.10	22.00
30	CP-OFDM 16QAM	1	1	20.50	20.54	20.42	21.50
30	CP-OFDM 64QAM	1	1	18.81	18.81	18.65	19.50
30	CP-OFDM 256QAM	1	1	15.95	15.99	15.85	16.50
Channel				344000	349000	354000	Tune-up limit
Frequency (MHz)				1720	1745	1770	(dBm)
20	DFT-s-OFDM QPSK	1	1	22.92	22.88	22.91	23.50
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	(dBm)
15	DFT-s-OFDM QPSK	1	1	22.78	22.76	22.70	23.50
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	(dBm)
10	DFT-s-OFDM QPSK	1	1	22.90	22.97	22.56	23.50
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	(dBm)
5	DFT-s-OFDM QPSK	1	1	22.88	23.01	22.44	23.50

n77(3450-3550MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			
Frequency (MHz)						3500.01			
100	DFT-s-OFDM PI/2 BPSK	1	1			26.15			27.50
100		1	136			25.90			
100		1	271			25.83			
100		135	1			25.56			27.00
100	DFT-s-OFDM QPSK	135	67			26.06			
100		135	136			25.14			
100		270	0			25.51			
100		1	1			26.67			27.50
100	DFT-s-OFDM QPSK	1	136			25.97			
100		1	271			25.87			
100		135	1			25.06			27.00
100		135	67			26.03			
100		135	136			24.62			
100		270	0			25.01			
100	DFT-s-OFDM 16QAM	1	1			25.09			26.00
100	DFT-s-OFDM 64QAM	1	1			23.75			24.50
100	DFT-s-OFDM 256QAM	1	1			21.46			22.50
100	CP-OFDM QPSK	1	1			24.59			25.50
100	CP-OFDM 16QAM	1	1			24.11			25.00
100	CP-OFDM 64QAM	1	1			22.29			23.50
100	CP-OFDM 256QAM	1	1			19.53			20.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	26.10	26.09	25.98	25.94	25.97	27.50
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.25	26.14	26.18	26.09	26.07	27.50
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	26.61	26.55	26.59	26.46	26.32	27.50
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	26.61	26.48	26.39	26.35	26.00	27.50
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	26.39	26.38	26.33	26.17	25.90	27.50

n77(3450-3550MHz) (PC3)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High Channel	High Channel	Tune-up limit (dBm)
Channel						633334			
Frequency (MHz)						3500.01			
100	DFT-s-OFDM PI/2 BPSK	1	1			23.05			24.00
100		1	136			22.76			
100		1	271			22.23			
100		135	1			23.09			24.00
100		135	67			22.84			
100		135	136			22.21			
100		270	0			22.82			
100	DFT-s-OFDM QPSK	1	1			23.41			25.00
100		1	136			23.19			
100		1	271			23.22			
100		135	1			22.95			24.00
100		135	67			22.84			
100		135	136			22.19			
100		270	0			22.84			
100	DFT-s-OFDM 16QAM	1	1			23.17			24.00
100	DFT-s-OFDM 64QAM	1	1			23.29			24.00
100	DFT-s-OFDM 256QAM	1	1			21.61			22.50
100	CP-OFDM QPSK	1	1			23.32			24.50
100	CP-OFDM 16QAM	1	1			23.37			24.50
100	CP-OFDM 64QAM	1	1			22.43			23.50
100	CP-OFDM 256QAM	1	1			19.62			20.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	23.30	23.30	23.19	23.12	23.09	24.00
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	22.94	22.90	22.84	22.74	23.19	24.00
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	23.12	23.04	23.03	22.97	22.72	24.00
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	23.13	23.02	22.98	22.84	22.45	24.00
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	23.07	22.98	22.97	22.68	22.36	24.00

n77(3700-3980MHz) (PC2)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	25.26	25.51	25.28	25.50	25.85	26.50
100		1	136	25.47	25.42	25.53	25.64	25.39	
100		1	271	25.32	25.64	25.62	25.21	25.82	
100		135	1	25.17	24.92	24.84	24.88	25.20	26.50
100		135	67	25.51	25.48	25.61	25.67	25.55	
100		135	136	24.79	24.81	24.83	24.88	25.17	
100	DFT-s-OFDM QPSK	270	0	24.93	25.04	25.17	25.15	25.18	27.50
100		1	1	25.22	25.50	26.23	25.51	25.34	
100		1	136	25.50	25.38	25.63	25.88	25.42	
100		1	271	25.40	25.59	25.64	25.37	25.86	26.50
100		135	1	24.69	24.44	24.37	24.81	24.73	
100		135	67	25.51	25.44	25.64	26.00	25.52	
100	DFT-s-OFDM 16QAM	135	136	24.28	24.29	24.38	24.61	24.64	26.50
100		270	0	24.41	24.44	24.67	24.98	24.71	
100		1	1	24.08	24.41	24.23	24.80	24.83	
100		1	1	22.70	23.06	22.89	23.46	23.42	
100	DFT-s-OFDM 64QAM	1	1	20.47	20.75	20.66	21.16	21.15	21.50
100	DFT-s-OFDM 256QAM	1	1	23.71	24.06	23.84	24.44	24.35	25.00
100	CP-OFDM QPSK	1	1	23.27	23.53	23.37	23.97	23.88	24.50
100	CP-OFDM 16QAM	1	1	21.38	21.62	21.46	22.10	22.02	22.50
100	CP-OFDM 64QAM	1	1	18.53	18.80	18.67	19.24	19.14	19.50
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	25.27	25.64	25.45	25.51	25.47	26.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	25.45	25.66	25.47	25.65	25.34	26.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	25.50	25.67	25.55	25.73	25.42	26.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	25.20	25.42	25.43	25.71	25.28	26.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	25.30	25.58	25.58	25.70	25.47	26.50

n77(3700-3980MHz) (PC3)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	22.32	22.40	22.30	22.44	22.07	23.50
100		1	136	22.39	22.34	22.47	22.07	21.65	
100		1	271	22.30	22.43	22.01	21.69	22.49	
100		135	1	22.73	22.28	22.25	22.14	21.82	23.50
100		135	67	22.49	22.42	22.56	22.21	21.67	
100		135	136	22.17	22.21	22.05	21.77	22.03	
100	DFT-s-OFDM QPSK	270	0	22.44	22.44	22.51	22.26	21.82	24.00
100		1	1	22.90	22.94	22.98	22.80	22.97	
100		1	136	22.72	22.68	22.83	22.70	22.63	
100		1	271	22.56	22.50	22.59	22.56	22.56	23.00
100		135	1	22.39	22.43	22.46	22.41	22.37	
100		135	67	22.36	22.32	22.35	22.29	22.35	
100	DFT-s-OFDM 16QAM	135	136	22.17	22.21	22.05	22.26	22.04	23.00
100		270	0	22.35	22.34	22.25	22.30	22.38	
100		1	1	22.28	22.33	22.30	22.35	22.05	
100		1	1	22.31	22.33	22.38	22.45	22.06	
100	DFT-s-OFDM 64QAM	1	1	20.66	20.65	20.65	20.79	20.39	21.50
100	DFT-s-OFDM 256QAM	1	1	22.36	22.35	22.34	22.51	22.10	23.50
100	CP-OFDM QPSK	1	1	22.39	22.38	22.35	22.54	22.11	23.50
100	CP-OFDM 16QAM	1	1	21.50	21.48	21.48	21.58	21.23	22.50
100	CP-OFDM 64QAM	1	1	18.70	18.66	18.65	18.77	18.41	19.50
100	CP-OFDM 256QAM	1	1	649334	652668	656000	659332	662666	Tune-up
Channel				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	22.36	22.39	22.27	22.29	21.83	23.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	22.39	22.46	22.38	22.17	21.52	23.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	22.74	22.85	22.76	22.54	22.21	23.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	22.78	22.75	22.69	22.39	22.30	23.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	22.68	22.68	22.73	22.16	22.41	23.50

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			26.42			27.50
100		1	136			26.40			
100		1	271			25.87			
100		135	1			25.93			26.50
100		135	67			25.90			
100		135	136			25.41			
100	DFT-s-OFDM QPSK	270	0			25.85			28.00
100		1	1			27.05			
100		1	136			26.40			
100		1	271			25.83			27.50
100		135	1			25.36			
100		135	67			26.42			
100		135	136			24.88			
100		270	0			25.33			
100	DFT-s-OFDM 16QAM	1	1			25.34			26.50
100	DFT-s-OFDM 64QAM	1	1			23.93			25.00
100	DFT-s-OFDM 256QAM	1	1			21.67			22.50
100	CP-OFDM QPSK	1	1			24.87			25.50
100	CP-OFDM 16QAM	1	1			24.38			25.00
100	CP-OFDM 64QAM	1	1			22.54			23.50
100	CP-OFDM 256QAM	1	1			19.69			20.50
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	26.36	26.39	26.39	26.38	26.40	27.50
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	26.39	26.48	26.43	26.45	26.46	27.50
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	26.47	26.53	26.48	26.46	26.36	27.50
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	26.58	26.64	26.65	26.53	26.55	27.50
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	26.63	26.64	26.48	26.53	26.53	27.50
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	26.96	25.59	26.93	26.88	26.67	27.50
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	26.89	26.81	26.86	26.67	26.35	27.50

n78(3450-3550MHz) (PC3)									
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			23.26			24.00
100		1	136			22.80			
100		1	271			22.22			
100		135	1			23.05			24.00
100		135	67			22.83			
100		135	136			22.29			
100	DFT-s-OFDM QPSK	270	0			22.83			24.50
100		1	1			23.76			
100		1	136			22.82			
100		1	271			22.20			23.50
100		135	1			23.06			
100		135	67			22.84			
100	DFT-s-OFDM 16QAM	135	136			22.31			24.00
100		270	0			22.82			
100		1	1			23.18			
100	DFT-s-OFDM 64QAM	1	1			23.37			24.00
100	DFT-s-OFDM 256QAM	1	1			21.60			22.50
100	CP-OFDM QPSK	1	1			23.26			24.00
100	CP-OFDM 16QAM	1	1			23.30			24.00
100	CP-OFDM 64QAM	1	1			22.40			23.00
100	CP-OFDM 256QAM	1	1			19.58			20.50
Channel				633000	633166	633334	633500	633666	Tune-up limit
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	23.24	23.26	23.21	23.07	23.20	24.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	23.33	23.27	23.24	23.13	23.11	24.00
Channel				632334	632834	633334	633832	634332	Tune-up limit
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	23.36	23.33	23.19	23.13	23.04	24.00
Channel				632000	632666	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	23.43	23.38	23.29	23.15	23.12	24.00
Channel				631668	632500	633334	634166	635000	Tune-up limit
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	23.44	23.35	23.19	23.15	22.94	24.00
Channel				631334	636672	633334	634334	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	23.23	22.69	23.58	23.37	23.09	24.00
Channel				631000	632166	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	23.21	23.21	23.39	23.18	22.65	24.00
Channel				630668	632000	633334	634668	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	23.57	23.57	23.21	23.21	23.21	24.00

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			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			25.66			27.00
100		1	136			25.75			
100		1	271			25.61			
100		135	1			25.61			26.50
100		135	67			25.71			
100		135	136			24.98			
100		270	0			25.18			
100	DFT-s-OFDM QPSK	1	1			26.46			27.50
100		1	136			25.66			
100		1	271			25.62			
100		135	1			24.98			26.50
100		135	67			25.70			
100		135	136			24.47			
100		270	0			24.68			
100	DFT-s-OFDM 16QAM	1	1			24.58			25.50
100	DFT-s-OFDM 64QAM	1	1			23.21			24.50
100	DFT-s-OFDM 256QAM	1	1			20.93			21.50
100	CP-OFDM QPSK	1	1			24.10			25.00
100	CP-OFDM 16QAM	1	1			23.76			24.50
100	CP-OFDM 64QAM	1	1			21.79			22.50
100	CP-OFDM 256QAM	1	1			18.98			19.50
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	(dBm)
90	DFT-s-OFDM QPSK	1	1	25.64	25.65	25.66	25.68	25.80	27.00
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	(dBm)
80	DFT-s-OFDM QPSK	1	1	25.68	25.71	25.86	25.92	25.93	27.00
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	(dBm)
70	DFT-s-OFDM QPSK	1	1	25.76	25.93	25.97	26.05	26.05	27.00
Channel				649668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	(dBm)
60	DFT-s-OFDM QPSK	1	1	25.65	25.85	25.90	25.95	25.91	27.00
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	(dBm)
50	DFT-s-OFDM QPSK	1	1	25.80	26.06	26.13	26.01	25.88	27.00
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	(dBm)
40	DFT-s-OFDM QPSK	1	1	26.17	26.41	26.63	26.37	26.19	27.00
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	(dBm)
30	DFT-s-OFDM QPSK	1	1	26.03	26.40	26.34	26.20	26.08	27.00

n78(3700-3800MHz) (PC3)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Little Channel	Little/High Channel	High Channel	Tune-up limit (dBm)
Channel						650000			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			22.36			23.00
100		1	136			22.44			
100		1	271			22.42			
100		135	1			22.76			23.00
100		135	67			22.50			
100		135	136			22.26			
100		270	0			22.47			
100	DFT-s-OFDM QPSK	1	1			23.26			24.00
100		1	136			22.44			
100		1	271			22.40			
100		135	1			22.49			23.00
100		135	67			22.41			
100		135	136			22.27			
100		270	0			22.38			
100	DFT-s-OFDM 16QAM	1	1			22.29			23.00
100	DFT-s-OFDM 64QAM	1	1			22.45			23.00
100	DFT-s-OFDM 256QAM	1	1			20.63			21.50
100	CP-OFDM QPSK	1	1			22.39			23.00
100	CP-OFDM 16QAM	1	1			22.41			23.00
100	CP-OFDM 64QAM	1	1			21.53			22.50
100	CP-OFDM 256QAM	1	1			18.70			19.50
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	22.34	22.48	22.48	22.49	22.51	23.00
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	22.54	22.56	22.68	22.69	22.76	23.00
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	22.42	22.57	22.75	22.80	22.72	23.00
Channel				648668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	22.57	22.58	22.70	22.75	22.70	23.00
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	22.56	22.70	22.57	22.57	22.57	23.00
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	22.97	23.20	22.75	23.17	23.06	23.00
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	22.85	23.08	23.16	22.94	22.78	23.00
Channel				647334	648666	650000	651334	652666	Tune-up limit
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	22.70	23.00	22.92	22.77	22.65	23.00

CA_48C											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	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				
55340	55340	55538	QPSK	1	0	0	0	1	0	20.24	21.00
55990	55891	56089	QPSK	1	0	0	0	1	0	20.29	21.00
56640	56442	56640	QPSK	1	0	0	0	1	0	20.20	21.00
55340	55340	55538	16QAM	1	0	0	0	1	0	20.18	21.00
55990	55891	56089	16QAM	1	0	0	0	1	0	20.24	21.00
56640	56442	56640	16QAM	1	0	0	0	1	0	20.16	21.00
55340	55340	55538	64QAM	1	0	0	0	1	0	20.12	21.00
55990	55891	56089	64QAM	1	0	0	0	1	0	20.13	21.00
56640	56442	56640	64QAM	1	0	0	0	1	0	20.10	21.00
55340	55340	55538	256QAM	1	0	0	0	1	0	19.77	20.50
55990	55891	56089	256QAM	1	0	0	0	1	0	19.75	20.50
56640	56442	56640	256QAM	1	0	0	0	1	0	19.82	20.50
55340	55340	55538	QPSK	50	0	0	0	1	0	18.77	19.50
55990	55891	56089	QPSK	50	0	0	0	1	0	18.84	19.50
56640	56442	56640	QPSK	50	0	0	0	1	0	18.79	19.50

CA_66B											
Combination:10MHz+10MHz(50RB+50RB)											
PCC Channel	PCC Channel (3GPP)	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				
132072	132022	132121	QPSK	1	0	0	0	1	0	22.22	23.00
132322	132373	132472	QPSK	1	0	0	0	1	0	22.46	23.00
132572	132523	132622	QPSK	1	0	0	0	1	0	22.31	23.00
132072	132022	132121	16QAM	1	0	0	0	1	0	21.96	22.50
132322	132373	132472	16QAM	1	0	0	0	1	0	22.20	23.00
132572	132523	132622	16QAM	1	0	0	0	1	0	22.05	22.50
132072	132022	132121	64QAM	1	0	0	0	1	0	21.80	22.50
132322	132373	132472	64QAM	1	0	0	0	1	0	22.04	22.50
132572	132523	132622	64QAM	1	0	0	0	1	0	21.89	22.50
132072	132022	132121	256QAM	1	0	0	0	1	0	21.69	22.50
132322	132373	132472	256QAM	1	0	0	0	1	0	21.93	22.50
132572	132523	132622	256QAM	1	0	0	0	1	0	21.78	22.50
132072	132022	132121	QPSK	50	0	0	0	1	0	21.30	22.00
132322	132373	132472	QPSK	50	0	0	0	1	0	21.37	22.00
132572	132523	132622	QPSK	50	0	0	0	1	0	21.31	22.00

CA_66C											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	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				
132072	132072	132270	QPSK	1	0	0	0	1	0	22.10	23.00
132322	132323	132521	QPSK	1	0	0	0	1	0	22.14	23.00
132572	132374	132572	QPSK	1	0	0	0	1	0	22.19	23.00
132072	132072	132270	16QAM	1	0	0	0	1	0	21.98	23.00
132322	132323	132521	16QAM	1	0	0	0	1	0	22.01	23.00
132572	132374	132572	16QAM	1	0	0	0	1	0	22.08	23.00
132072	132072	132270	64QAM	1	0	0	0	1	0	21.89	23.00
132322	132323	132521	64QAM	1	0	0	0	1	0	21.92	23.00
132572	132374	132572	64QAM	1	0	0	0	1	0	21.99	23.00
132072	132072	132270	256QAM	1	0	0	0	1	0	21.81	23.00
132322	132323	132521	256QAM	1	0	0	0	1	0	21.84	23.00
132572	132374	132572	256QAM	1	0	0	0	1	0	21.91	23.00
132072	132072	132270	QPSK	50	0	0	0	1	0	21.06	22.00
132322	132323	132521	QPSK	50	0	0	0	1	0	21.10	22.00
132572	132374	132572	QPSK	50	0	0	0	1	0	21.18	22.00

2CC LTE Uplink												
Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation/RB/Offset)	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	1745	22.22	23.00
	CA_2A-5A	2	20	18700	1860	QPSK/1#0	5	10	20600	844	21.74	22.50
	CA_2A-13A	2	20	18700	1860	QPSK/1#0	13	10	23230	782	21.75	23.00
	CA_2A-66A	2	20	18700	1860	QPSK/1#0	66	20	132572	1770	22.16	23.00
	CA_4A-5A	4	20	20050	1720	QPSK/1#0	5	10	20600	844	21.56	22.50
	CA_4A-13A	4	20	20050	1720	QPSK/1#0	13	10	23230	782	21.55	22.50
	CA_5A-66A	5	10	20450	829	QPSK/1#0	66	20	132572	1770	23.02	24.00
	CA_13A-66A	13	10	23230	782	QPSK/1#0	66	20	132572	1770	21.83	22.50



2CC LTE Downlink												
Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Freq (MHz)	UL Mode (Modulation, RS/Offset)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
Intra-band&Inter-band	CA_13A-13A	4	10	20175	1732.5	QPSK1/80	13	20	23230	782	21.64	22.85
	CA_4A-48A	4	20	20050	1720	QPSK1/80	48	20	56640	3690	21.55	22.85
	CA_4A-5A	4	10	20175	1732.5	QPSK1/80	5	10	20450	829	21.5	22.85
	CA_66B	66	10	132373	1750.1	QPSK1/80	66	10	132472	1760	21.67	22.98
	CA_66C	66	20	132072	1720	QPSK1/80	66	20	132270	1736.8	21.70	22.98

3CC LTE Downlink														
Configure	CA Configuration	PCC					SCC1				SCC2			
		Band	BW (MHz)	UL Channel	UL Freq (MHz)	UL Mode (Modulation, RS/Offset)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	Band	BW (MHz)	UL Channel	UL Freq (MHz)
Intra-band&Inter-band	CA_13A-48A-66A	13	10	23230	782	QPSK1/80	48	20	56640	3690	66	20	67236	2190
	CA_13A-66A-66A	13	10	23230	782	QPSK1/80	66	20	66886	2155	66	20	67236	2190
	CA_13A-66B	13	10	23230	782	QPSK1/80	66	10	67187	2185.1	66	10	67286	2195
	CA_13A-66C	13	10	23230	782	QPSK1/80	66	20	67038	2170.2	66	20	67236	2190
	CA_2A-13A-48A	2	20	18700	1860	QPSK1/80	13	10	23230	782	48	20	56640	3690
	CA_2A-48A-66A	2	20	18700	1860	QPSK1/80	48	20	56089	3634.9	66	20	67236	2190
	CA_2A-4A-13A	2	20	18700	1860	QPSK1/80	4	20	20300	2145	13	10	23230	782
	CA_2A-4A-5A	2	20	18700	1860	QPSK1/80	4	20	20300	2145	5	10	20600	844
	CA_2A-5A-48A	2	20	18700	1860	QPSK1/80	5	10	20600	844	48	20	56089	3634.9
	CA_2A-66B	2	20	18700	1860	QPSK1/80	66	10	67187	2185.1	66	10	67286	2195
	CA_48A-66A-66A	48	20	55340	3560	QPSK1/80	66	20	66886	2155	66	20	67236	2190
	CA_48A-66B	48	20	55340	3560	QPSK1/80	66	10	67187	2185.1	66	10	67286	2195
	CA_48A-66C	48	20	55340	3560	QPSK1/80	66	20	67038	2170.2	66	20	67236	2190
	CA_4A-48C	4	20	20050	1720	QPSK1/80	48	20	56442	3670.2	48	20	56640	3690
	CA_4A-4A-13A	4	20	20050	1720	QPSK1/80	4	20	20000	1745	13	10	23230	782
	CA_4A-4A-5A	4	20	20050	1720	QPSK1/80	4	20	20000	1745	5	10	20600	844
	CA_5A-66A-66A	5	10	20450	829	QPSK1/80	66	20	66886	2155	66	20	67236	2190
	CA_5A-66B	5	10	20450	829	QPSK1/80	66	10	67187	2185.1	66	10	67286	2195
	CA_5A-66C	5	10	20450	829	QPSK1/80	66	20	67038	2170.2	66	20	67236	2190
	CA_66A-66A-66A	66	20	132072	1720	QPSK1/80	66	20	66886	2155	66	20	67236	2190
	CA_13A-48C	13	10	23230	782	QPSK1/80	48	20	56442	3670.2	48	20	56640	3690
	CA_2A-66C	2	20	18700	1860	QPSK1/80	66	20	67038	2170.2	66	20	67236	2190
	CA_5A-48A-66A	5	10	20450	829	QPSK1/80	48	20	56089	3634.9	66	20	67236	2190

4CC LTE Downlink																
Configure	CA Configuration	PCC					SCC1				SCC2				SCC3	
		Band	BW (MHz)	UL Channel	UL Freq (MHz)	UL Mode (Modulation, RS/Offset)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	Band	UL Channel
Intra-band&Inter-band	CA_13A-48A-66B	13	10	23230	782	QPSK1/80	48	10	56640	3690	66	10	67187	2185.1	66	10
	CA_13A-48A-66C	13	10	23230	782	QPSK1/80	48	10	56640	3690	66	20	67038	2170.2	66	10
	CA_13A-48C-66A	13	10	23230	782	QPSK1/80	48	20	56442	3670.2	48	20	56640	3690	66	20
	CA_2A-13A-48C	2	20	18700	1860	QPSK1/80	13	10	23230	782	48	20	56442	3670.2	48	20
	CA_2A-13A-66A	2	20	18700	1860	QPSK1/80	13	10	23230	782	66	20	66886	2155	66	20
	CA_2A-13A-66B	2	20	18700	1860	QPSK1/80	13	10	23230	782	66	10	67187	2185.1	66	10
	CA_2A-13A-66C	2	20	18700	1860	QPSK1/80	13	10	23230	782	66	20	67038	2170.2	66	20
	CA_2A-2A-4A-4A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	4	20	20300	1720	4	20
	CA_2A-2A-4A-5A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	4	20	20300	1745	5	10
	CA_2A-2A-66A-66A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	66	20	66886	2155	66	20
	CA_2A-2A-66B	2	20	18700	1860	QPSK1/80	2	20	19100	1900	66	10	67187	2185.1	66	10
	CA_2A-2A-66C	2	20	18700	1860	QPSK1/80	2	20	19100	1900	66	20	67038	2170.2	66	20
	CA_2A-48C-66A	2	20	18700	1860	QPSK1/80	48	20	55891	3615.1	48	20	56089	3634.9	66	20
	CA_2A-4A-4A-5A	2	20	18700	1860	QPSK1/80	4	20	20050	1720	4	20	20300	1745	5	10
	CA_2A-5A-48C	2	20	18700	1860	QPSK1/80	5	10	20600	844	48	20	55891	3615.1	48	20
	CA_2A-5A-66A-66A	2	20	18700	1860	QPSK1/80	5	10	20600	844	66	20	66886	2155	66	20
	CA_2A-5A-66B	2	20	18700	1860	QPSK1/80	5	10	20600	844	66	10	67187	2185.1	66	10
	CA_2A-5A-66C	2	20	18700	1860	QPSK1/80	5	10	20600	844	66	20	67038	2170.2	66	20
	CA_2A-66A-66A-66A	2	20	18700	1860	QPSK1/80	66	20	132072	1720	66	20	66886	2155	66	20
	CA_48C-66A-66A	48	20	55891	3615.1	QPSK1/80	48	20	56089	3634.9	66	20	66886	2155	66	20
	CA_48C-66B	48	20	55891	3615.1	QPSK1/80	48	20	56089	3634.9	66	10	67187	2185.1	66	10
	CA_48C-66C	48	20	55891	3615.1	QPSK1/80	48	20	56089	3634.9	66	20	67038	2170.2	66	20
	CA_48D-66A	48	20	56244	3650.4	QPSK1/80	48	20	56442	3670.2	48	20	56640	3690	66	20
	CA_4A-48D	4	20	20050	1720	QPSK1/80	48	20	56244	3650.4	48	20	56442	3670.2	48	20
	CA_5A-48C-66A	5	10	20450	829	QPSK1/80	48	20	55891	3615.1	48	20	56089	3634.9	66	20
	CA_2A-2A-5A-66A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	5	10	20600	844	66	20

5CC LTE Downlink																		
Configure	CA Configuration	PCC					SCC1				SCC2				SCC3			
		Band	BW (MHz)	UL Channel	UL Freq (MHz)	UL Mode (Modulation, RS/Offset)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	Band	BW (MHz)	UL Channel	UL Freq (MHz)	Band	BW (MHz)	UL Channel	UL Freq (MHz)
Intra-band&Inter-band	CA_13A-48D-66A	13	10	23230	782	QPSK1/80	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8
	CA_13A-48E	13	10	23230	782	QPSK1/80	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6
	CA_2A-13A-48D	2	20	18700	1860	QPSK1/80	13	10	23230	782	48	20	55792	3605.2	48	20	55990	3625
	CA_2A-2A-13A-66A-66A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	13	10	23230	782	66	20	66886	2155
	CA_2A-2A-13A-66A-66A	2	20	18700	1860	QPSK1/80	2	20	19100	1900	5	10	20600	844	66	20	66886	2155
	CA_2A-2A-5A-66B	2	20	18700	1860	QPSK1/80	2	20	19100	1900	5	10	20600	844	66	10	67187	2185.1
	CA_2A-2A-5A-66C	2	20	18700	1860	QPSK1/80	2	20	19100	1900	5	10	20600	844	66	20	67038	2170.2
	CA_2A-48D-66A	2	20	18700	1860	QPSK1/80	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8
	CA_2A-48E	2	20	18700	1860	QPSK1/80	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6
	CA_2A-5A-48D	2	20	18700	1860	QPSK1/80	5	10	20600	844	48	20	55792	3605.2	48	20	55990	3625
	CA_48E-66A	48	20	55340	3560	QPSK1/80	48	20	55538	3579.8	48	20	55736	3599.6	48	5	55853	3611.3
	CA_4A-48E	4	20	20050	1720	QPSK1/80	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6
	CA_5A-48D-66A	5	10	20450	829	QPSK1/80	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8

2CC LTE Downlink												
Configure	CA Configuration	PCC					SCC				Power	
		Band	BW (MHz)	UL Channel	UL Fre. (MHz)	UL Mode (Modulation /RB/Offset)	Band	BW (MHz)	UL Channel	UL Fre. (MHz)	CA TX (dBm)	Rel.8 TX (dBm)
Intra-band & Inter-band	CA_n2(2A)	n2A	20	388000	1940	QPSK/1#0	n2A	20	396000	1980	22.56	23.35
	CA_n2A-n5A	n2A	20	396000	1980	QPSK/1#0	n5A	20	176300	881.5	22.06	23.35
	CA_n2A-n41A	n2A	20	396000	1980	QPSK/1#0	n41A	100	518598	2592.99	22.25	23.35
	CA_n2A-n48A	n2A	20	396000	1980	QPSK/1#0	n48A	100	641666	3624.99	22.46	23.35
	CA_n2A-n66A	n2A	20	396000	1980	QPSK/1#0	n66A	30	431000	2515	22.59	23.35
	CA_n2A-n77A	n2A	20	396000	1980	QPSK/1#0	n77A	100	650000	3750	22.26	23.35
	CA_n5(2A)	n5A	20	175800	879	QPSK/1#0	n5A	20	176800	884	22.33	23.06
	CA_n5B	n5A	20	175800	879	QPSK/1#0	n5A	20	176800	884	22.46	23.06
	CA_n5A-n48A	n5A	20	176300	881.5	QPSK/1#0	n48A	100	641666	3624.99	22.35	23.06
	CA_n5A-n66A	n5A	20	176300	881.5	QPSK/1#0	n66A	30	431000	2515	21.93	23.06
	CA_n5A-n77A	n5A	20	176300	881.5	QPSK/1#0	n77A	100	650000	3750	22.08	23.06
	CA_n48(2A)	n48A	40	641666	3624.99	QPSK/1#0	n48A	40	641666	3624.99	21.43	22.78
	CA_n48 B	n48 B	40	637668	3565.02	QPSK/1#0	n48 B	40	645332	3864.99	21.66	22.78
	CA_n48 C	n48 C	40	637334	3560.01	QPSK/1#0	n48 C	40	645332	3679.98	21.77	22.78
	CA_n48A-n66A	n48A	40	641666	3624.99	QPSK/1#0	n66A	30	431000	2515	21.29	22.78
	CA_n66(2A)	n66A	20	424000	2120	QPSK/1#0	n66A	20	434000	2170	22.35	23.09
	CA_n66B	n66B	10	423000	2115	QPSK/1#0	n66B	15	435000	2175	22.2	23.09
	CA_n77(2A)	n77A	100	623334	3350.1	QPSK/1#0	n77A	100	676666	4149.99	22.23	23.41
	CA_n77C	n77A	100	623334	3350.1	QPSK/1#0	n77A	100	676666	4149.99	22.5	22.98

2.4GHz WLAN ANT 1 (WIFI 1)

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power (dBm)	Power Setting	Duty Cycle %
802.11a Mbps	CH 1	2412	18.71	17.50	18.50	98.90
	CH 7	2442	18.71	17.50	18.50	98.90
	CH 13	2472	18.62	16.50	16.50	98.88
802.11g Mbps	CH 1	2412	18.64	16.50	17.00	98.24
	CH 7	2442	18.62	16.50	17.00	98.24
	CH 13	2472	17.20	15.50	15.50	98.26
802.11n-HT20 MCS0	CH 1	2412	14.42	10.00	10.00	98.71
	CH 7	2442	14.21	10.00	10.00	98.71
	CH 13	2472	15.85	10.00	10.00	98.71
802.11n-HT40 MCS0	CH 1	2412	14.20	10.00	10.00	98.71
	CH 7	2442	13.70	10.00	10.00	98.71
	CH 11	2460	14.50	10.00	10.00	98.71
802.11n-VHT20 MCS0	CH 1	2412	12.43	10.00	10.00	98.74
	CH 7	2442	12.50	10.00	10.00	98.74
	CH 13	2472	12.80	10.00	10.00	98.74
802.11n-VHT40 MCS0	CH 1	2412	12.61	10.00	10.00	98.71
	CH 7	2442	12.54	10.00	10.00	98.74
	CH 11	2460	12.80	10.00	10.00	98.71
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.43	10.00	10.00	98.81
	CH 13	2472	12.48	10.00	10.00	98.57
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.50	10.00	10.00	98.87
	CH 7	2442	13.00	10.00	10.00	98.87
	CH 13	2472	12.82	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.88
	CH 7	2442	13.80	10.00	10.00	98.87
	CH 13	2472	12.80	10.00	10.00	98.57
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.58	10.00	10.00	98.87
	CH 11	2460	14.80	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.48	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.51	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.14	10.00	10.00	98.58
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.82	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.80	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81

2.4GHz WLAN ANT 2 (WIFI 2)

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power (dBm)	Power Setting	Duty Cycle %
802.11a Mbps	CH 1	2412	17.97	16.50	16.50	98.80
	CH 7	2442	18.00	16.50	16.50	98.80
	CH 13	2472	16.00	16.50	16.50	98.80
802.11g Mbps	CH 1	2412	16.00	16.50	17.00	98.24
	CH 7	2442	14.80	15.50	17.00	98.24
	CH 13	2472	14.80	15.50	17.00	98.24
802.11n-HT20 MCS0	CH 1	2412	14.80	10.00	10.00	98.71
	CH 7	2442	13.77	10.00	10.00	98.71
	CH 13	2472	13.64	10.00	10.00	98.71
802.11n-HT40 MCS0	CH 1	2412	12.70	10.00	10.00	98.71
	CH 7	2442	13.82	10.00	10.00	98.71
	CH 11	2460	13.81	10.00	10.00	98.71
802.11n-VHT20 MCS0	CH 1	2412	12.20	10.00	10.00	98.71
	CH 7	2442	12.10	10.00	10.00	98.71
	CH 13	2472	12.10	10.00	10.00	98.71
802.11n-VHT40 MCS0	CH 1	2412	12.12	10.00	10.00	98.74
	CH 7	2442	11.74	10.00	10.00	98.71
	CH 11	2460	12.44	10.00	10.00	98.71
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.50	10.00	10.00	98.81
	CH 7	2442	13.53	10.00	10.00	98.81
	CH 13	2472	10.40	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.80	10.00	10.00	98.87
	CH 13	2472	12.48	10.00	10.00	98.57
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.50	10.00	10.00	98.81
	CH 13	2472	12.80	10.00	10.00	98.57
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.47	10.00	10.00	98.81
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.80	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	13.80	10.00	10.00	98.87
	CH 7	2442	13.80	10.00	10.00	98.87
	CH 11	2460	14.87	10.00	10.00	98.81

2.4GHz WLAN ANT 1+2 (WIFI+2)

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power (dBm)	Power Setting	Duty Cycle %
802.11a Mbps	CH 1	2412	N/A	N/A	N/A	N/A
	CH 7	2442	N/A	N/A	N/A	N/A
	CH 13	2472	N/A	N/A	N/A	N/A
802.11g Mbps	CH 1	2412	N/A	N/A	N/A	N/A
	CH 7	2442	N/A	N/A	N/A	N/A
	CH 13	2472	N/A	N/A	N/A	N/A
802.11n-HT20 MCS0	CH 1	2412	17.37	16.50	16.50	98.71
	CH 7	2442	16.50	17.00	16.50	98.71
	CH 13	2472	15.76	16.50	16.50	98.71
802.11n-HT40 MCS0	CH 1	2412	17.37	16.50	16.50	98.71
	CH 7	2442	16.50	17.00	16.50	98.71
	CH 11	2460	16.35	17.00	16.50	98.71
802.11n-VHT20 MCS0	CH 1	2412	15.34	16.50	16.50	98.71
	CH 7	2442	15.34	16.50	16.50	98.74
	CH 13	2472	15.36	16.50	16.50	98.74
802.11n-VHT40 MCS0	CH 1	2412	15.36	16.50	16.50	98.74
	CH 7	2442	15.36	16.50	16.50	98.74
	CH 11	2460	15.36	16.50	16.50	98.74
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	14.36	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81
802.11n-HEW20 MCS0-RI/0.5	CH 1	2412	16.86	17.00	16.50	98.81
	CH 7	2442	16.86	17.00	16.50	98.81
	CH 13	2472	15.02	16.50	16.50	98.81

5GHz WLAN ANT 1 (WIFI 1)

Mode	Channel	Frequency (MHz)	Average power (dBm)	Transmit Power (dBm)	Power Setting	Duty Cycle (%)
802.11a Mbps	CH 36	5180	15.66	16.50	16.50	100.00
	CH 48	5200	15.76	16.50	16.50	100.00
	CH 60	5220	15.55	16.50	16.50	100.00
802.11n-HT20 MCS0	CH 36	5180	14.51	10.00	10.00	100.00
	CH 48	5200	14.32	10.00	10.00	100.00
	CH 60	5220	14.30	10.00	10.00	100.00
802.11n-HT40 MCS0	CH 36	5180	14.62	10.00	10.00	100.00
	CH 48	5200	14.50	10.00	10.00	100.00
	CH 60	5220	14.35	10.00	10.00	100.00
802.11n-VHT20 MCS0	CH 36	5180	12.16	10.00	10.00	100.00
	CH 48	5200	12.32	10.00	10.00	100.00
	CH 60	5220	12.30	10.00	10.00	100.00
802.11n-VHT40 MCS0	CH 36	5180	12.32	10.00	10.00	100.00
	CH 48	5200	12.50	10.00	10.00	100.00
	CH 60	5220	12.19	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 42	5210	12.32	10.00	10.00	100.00
	CH 44	5220	12.23	10.00	10.00	100.00
	CH 46	5230	12.30	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 42	5210	12.32	10.00	10.00	100.00
	CH 44	5220	12.23	10.00	10.00	100.00
	CH 46	5230	12.18	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00
802.11n-HEW20 MCS0-RI/0.5	CH 38	5190	12.10	10.00	10.00	100.00
	CH 40	5200	12.17	10.00	10.00	100.00
	CH 42	5210	12.32	10.00	10.00	100.00

Reduced Power Level 1

Band 48 (3.5G Band) (dBm) Ant 2									
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	20.06	20.09	20.12	20.07	19.99	21
20	QPSK	1	49	19.56	19.58	19.58	19.61	19.60	
20	QPSK	1	99	19.62	19.60	19.62	19.42	19.56	
20	QPSK	50	0	19.16	19.07	19.19	19.02	18.92	
20	QPSK	50	24	18.61	18.60	18.66	18.70	18.59	20
20	QPSK	50	50	18.61	18.52	18.74	18.55	18.39	
20	QPSK	100	0	18.63	18.54	18.63	18.56	18.37	
20	16QAM	1	0	18.89	18.84	18.94	18.89	18.74	
20	16QAM	1	49	18.79	18.91	18.76	18.69	18.60	20
20	16QAM	1	99	18.77	18.69	18.82	18.78	18.63	
20	16QAM	50	0	17.55	17.71	17.63	17.70	17.57	
20	16QAM	50	24	17.57	17.58	17.66	17.54	17.38	
20	16QAM	50	50	17.55	17.48	17.68	17.41	17.32	19
20	16QAM	100	0	17.58	17.52	17.62	17.56	17.42	
20	64QAM	1	0	17.75	17.76	17.80	17.59	17.66	
20	64QAM	1	49	17.75	17.67	17.71	17.65	17.58	
20	64QAM	1	99	17.56	17.53	17.72	17.63	17.44	19
20	64QAM	50	0	17.55	17.55	17.69	17.59	17.41	
20	64QAM	50	24	17.44	17.58	17.56	17.57	17.45	
20	64QAM	50	50	17.60	17.45	17.55	17.46	17.36	
20	64QAM	100	0	17.55	17.45	17.63	17.49	17.31	18
20	256QAM	1	0	14.56	14.50	14.57	14.44	14.29	
20	256QAM	1	49	14.44	14.40	14.46	14.46	14.50	
20	256QAM	1	99	14.44	14.36	14.26	14.24	14.34	
20	256QAM	50	0	13.29	13.36	13.62	13.44	13.34	15
20	256QAM	50	24	13.35	13.39	13.52	13.51	13.47	
20	256QAM	50	50	13.34	13.50	13.33	13.25	13.31	
20	256QAM	100	0	13.34	13.38	13.54	13.22	13.19	
Channel				55315	55820	55990	56160.15	56665.15	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642.15	3692.65	
15	QPSK	1	0	19.60	19.66	19.68	19.67	19.62	21
15	QPSK	1	37	19.54	19.57	19.57	19.61	19.60	
15	QPSK	1	74	19.56	19.62	19.62	19.62	19.52	
15	QPSK	36	0	18.66	18.77	18.72	18.76	18.66	
15	QPSK	36	20	18.68	18.65	18.70	18.78	18.72	20
15	QPSK	36	39	18.69	18.70	18.72	18.60	18.58	
15	QPSK	75	0	18.59	18.55	18.67	18.61	18.71	
15	16QAM	1	0	18.95	18.77	18.91	18.91	18.93	
15	16QAM	1	37	18.89	18.72	18.76	18.82	18.78	20
15	16QAM	1	74	18.77	18.67	18.80	18.93	18.66	
15	16QAM	36	0	17.53	17.70	17.70	17.80	17.61	
15	16QAM	36	20	17.50	17.65	17.61	17.78	17.55	
15	16QAM	36	39	17.47	17.49	17.57	17.65	17.57	19
15	16QAM	75	0	17.49	17.43	17.53	17.78	17.61	
15	64QAM	1	0	17.70	17.74	17.72	17.75	17.82	
15	64QAM	1	37	17.71	17.72	17.64	17.65	17.68	
15	64QAM	1	74	17.67	17.62	17.54	17.70	17.60	19
15	64QAM	36	0	17.47	17.53	17.56	17.69	17.66	
15	64QAM	36	20	17.53	17.58	17.41	17.62	17.52	
15	64QAM	36	39	17.47	17.43	17.63	17.70	17.55	
15	64QAM	75	0	17.44	17.49	17.44	17.52	17.40	18
15	256QAM	1	0	14.56	14.52	14.52	14.37	14.26	
15	256QAM	1	37	14.29	14.25	14.43	14.44	14.62	
15	256QAM	1	74	14.53	14.45	14.34	14.26	14.28	
15	256QAM	36	0	13.31	13.24	13.59	13.43	13.38	15
15	256QAM	36	20	13.44	13.28	13.54	13.48	13.50	
15	256QAM	36	39	13.35	13.52	13.34	13.29	13.24	
15	256QAM	75	0	13.35	13.35	13.46	13.15	13.27	
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	19.58	19.65	19.67	19.56	19.51	21
10	QPSK	1	25	19.62	19.53	19.68	19.58	19.34	
10	QPSK	1	49	19.53	19.63	19.65	19.50	19.49	
10	QPSK	25	0	18.75	18.72	18.84	18.73	18.54	
10	QPSK	25	12	18.71	18.66	18.64	18.55	18.61	20
10	QPSK	25	25	18.59	18.62	18.62	18.55	18.55	
10	QPSK	50	0	18.60	18.62	18.76	18.57	18.51	
10	16QAM	1	0	18.93	18.93	18.83	18.79	18.68	
10	16QAM	1	25	18.73	18.77	18.75	18.79	18.67	20
10	16QAM	1	49	18.83	18.65	18.78	18.81	18.65	
10	16QAM	25	0	17.54	17.56	17.66	17.65	17.61	
10	16QAM	25	12	17.55	17.62	17.74	17.55	17.36	
10	16QAM	25	25	17.47	17.45	17.52	17.60	17.41	19
10	16QAM	50	0	17.48	17.52	17.67	17.62	17.50	
10	64QAM	1	0	17.74	17.73	17.72	17.75	17.63	
10	64QAM	1	25	17.63	17.64	17.81	17.53	17.47	
10	64QAM	1	49	17.52	17.65	17.71	17.63	17.45	18
10	64QAM	25	0	17.64	17.54	17.70	17.47	17.54	
10	64QAM	25	12	17.45	17.43	17.53	17.55	17.49	
10	64QAM	25	25	17.53	17.45	17.52	17.40	17.38	
10	64QAM	50	0	17.40	17.36	17.61	17.48	17.30	14
10	256QAM	1	0	14.53	14.52	14.50	14.37	14.33	
10	256QAM	1	25	14.27	14.30	14.48	14.58	14.52	
10	256QAM	1	49	14.51	14.49	14.24	14.20	14.26	
10	256QAM	25	0	13.38	13.42	13.63	13.34	13.47	14
10	256QAM	25	12	13.42	13.41	13.53	13.60	13.52	
10	256QAM	25	25	13.52	13.34	13.41	13.29	13.23	
10	256QAM	50	0	13.30	13.30	13.60	13.26	13.27	
Channel				55265	55810	55990	56170	56175	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	19.63	19.62	19.65	19.59	19.51	21
5	QPSK	1	12	19.54	19.60	19.59	19.50	19.42	
5	QPSK	1	24	19.52	19.52	19.53	19.51	19.42	
5	QPSK	12	0	18.82	18.83	18.73	18.68	18.69	
5	QPSK	12	7	18.73	18.55	18.82	18.60	18.42	20
5	QPSK	12	13	18.54	18.70	18.72	18.58	18.39	
5	QPSK	25	0	18.62	18.59	18.59	18.59	18.39	



5	16QAM	1	0	18.85	18.92	18.84	18.73	18.76	20
5	16QAM	1	12	18.77	18.89	18.80	18.66	18.58	
5	16QAM	1	24	18.81	18.71	18.83	18.78	18.53	
5	16QAM	12	0	17.64	17.52	17.68	17.62	17.59	19
5	16QAM	12	7	17.59	17.54	17.61	17.49	17.44	
5	16QAM	12	13	17.45	17.56	17.69	17.50	17.40	
5	16QAM	25	0	17.60	17.45	17.59	17.59	17.46	19
5	64QAM	1	0	17.79	17.66	17.74	17.67	17.61	
5	64QAM	1	12	17.65	17.63	17.69	17.61	17.46	
5	64QAM	1	24	17.60	17.56	17.67	17.63	17.53	18
5	64QAM	12	0	17.56	17.62	17.62	17.48	17.39	
5	64QAM	12	7	17.41	17.42	17.44	17.49	17.56	
5	64QAM	12	13	17.63	17.62	17.49	17.59	17.46	18
5	64QAM	25	0	17.55	17.42	17.44	17.42	17.37	
5	256QAM	1	0	14.59	14.56	14.52	14.31	14.40	
5	256QAM	1	12	14.36	14.29	14.43	14.47	14.59	18
5	256QAM	1	24	14.47	14.50	14.40	14.34	14.20	
5	256QAM	12	0	13.41	13.41	13.54	13.38	13.50	
5	256QAM	12	7	13.37	13.40	13.55	13.56	13.61	15
5	256QAM	12	13	13.33	13.41	13.33	13.29	13.29	
5	256QAM	25	0	13.30	13.27	13.56	13.28	13.32	

n48 (PC3)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High/Middle Channel	High Channel	Tune-up
Channel				638000	639834	641666	643500	645332	limit
Frequency (MHz)				3570	3597.51	3624.99	3652.5	3679.98	(dBm)
40	DFT-s-OFDM PI/2 BPSK	1	1	18.05	17.88	17.99	17.74	17.83	19.00
40		1	53	17.96	17.98	17.58	17.79	17.88	
40		1	104	18.01	17.80	17.95	17.98	18.17	
40		50	1	17.55	17.44	17.20	17.36	17.42	19.00
40		50	25	18.01	18.03	17.65	17.86	17.89	
40		50	50	17.43	17.44	17.18	17.28	17.48	
40	DFT-s-OFDM QPSK	100	0	17.53	17.53	17.14	17.34	17.39	19.00
40		1	1	18.20	18.10	18.25	18.07	18.13	
40		1	53	18.20	18.01	17.58	17.81	17.85	
40		1	104	18.03	17.78	17.95	18.03	17.91	18.00
40		50	1	17.15	17.09	17.16	17.02	17.06	
40		50	25	17.00	17.08	16.90	16.93	16.95	
40	DFT-s-OFDM 16QAM	50	50	16.83	16.93	16.67	16.77	16.97	18.00
40		100	0	17.04	17.03	16.65	16.86	16.92	
40	DFT-s-OFDM 64QAM	1	1	16.96	16.81	16.85	16.71	16.77	18.00
40	DFT-s-OFDM 256QAM	1	1	15.65	15.43	15.45	15.26	15.37	16.00
40	CP-OFDM QPSK	1	1	13.34	13.20	13.19	13.04	13.14	14.00
40	CP-OFDM 16QAM	1	1	16.61	16.41	16.42	16.28	16.36	17.00
40	CP-OFDM 64QAM	1	1	16.08	15.88	15.89	15.76	15.86	16.50
40	CP-OFDM 256QAM	1	1	14.16	14.00	14.02	13.85	13.98	15.00
40	CP-OFDM 256QAM	1	1	11.36	11.19	11.21	11.04	11.10	12.00
Channel				637668	639668	641666	643666	645666	Tune-up
Frequency (MHz)				3565.02	3595.02	3624.99	3654.99	3684.99	limit
30	DFT-s-OFDM QPSK	1	1	17.97	17.90	17.73	17.85	17.87	19.00
Channel				637334	639500	641666	643832	646000	Tune-up
Frequency (MHz)				3560.01	3592.5	3624.99	3657.48	3690	limit
20	DFT-s-OFDM QPSK	1	1	18.14	17.81	17.67	17.78	17.84	19.00
Channel				637000	639334	641666	644000	646332	Tune-up
Frequency (MHz)				3555	3590.01	3624.99	3660	3694.98	limit
10	DFT-s-OFDM QPSK	1	1	17.97	17.96	17.65	17.88	18.04	19.00

n77(3450-3550MHz) (PC2)_Ant 2									
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			15.65			17.00
100		1	136			15.40			
100		1	271			15.33			
100		135	1			15.06			17.00
100		135	67			15.56			
100		135	136			14.64			
100		270	0			15.01			
100	DFT-s-OFDM QPSK	1	1			16.14			17.00
100		1	136			15.47			
100		1	271			15.37			
100		135	1			14.56			16.50
100		135	67			15.53			
100		135	136			14.12			
100		270	0			14.51			
100	DFT-s-OFDM 16QAM	1	1			14.59			15.50
100	DFT-s-OFDM 64QAM	1	1			13.25			14.00
100	DFT-s-OFDM 256QAM	1	1			10.96			12.00
100	CP-OFDM QPSK	1	1			14.09			15.00
100	CP-OFDM 16QAM	1	1			13.61			14.50
100	CP-OFDM 64QAM	1	1			11.79			12.50
100	CP-OFDM 256QAM	1	1			9.03			10.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	(dBm)
80	DFT-s-OFDM QPSK	1	1	15.60	15.59	15.48	15.44	15.47	17.00
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	(dBm)
60	DFT-s-OFDM QPSK	1	1	15.75	15.64	15.68	15.59	15.57	17.00
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	(dBm)
40	DFT-s-OFDM QPSK	1	1	16.11	16.05	16.09	15.96	15.82	17.00
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	(dBm)
30	DFT-s-OFDM QPSK	1	1	16.11	15.98	15.89	15.85	15.50	17.00
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	(dBm)
20	DFT-s-OFDM QPSK	1	1	15.89	15.88	15.83	15.67	15.40	17.00

n77(3450-3550MHz) (PC3)_Ant 2									
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			15.55			16.50
100		1	136			15.26			
100		1	271			14.73			
100		135	1			15.59			16.50
100		135	67			15.34			
100	DFT-s-OFDM QPSK	135	136			14.71			
100		270	0			15.32			
100		1	1			15.91			17.00
100		1	136			15.69			
100		1	271			15.72			
100		135	1			15.45			16.50
100		135	67			15.34			
100		135	136			14.69			
100		270	0			15.34			
100	DFT-s-OFDM 16QAM	1	1			15.67			16.50
100	DFT-s-OFDM 64QAM	1	1			15.79			16.50
100	DFT-s-OFDM 256QAM	1	1			14.11			15.00
100	CP-OFDM QPSK	1	1			15.82			16.50
100	CP-OFDM 16QAM	1	1			15.87			16.50
100	CP-OFDM 64QAM	1	1			14.93			16.00
100	CP-OFDM 256QAM	1	1			12.12			13.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	15.80	15.80	15.69	15.62	15.59	16.50
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	15.44	15.40	15.34	15.24	15.69	16.50
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	15.62	15.54	15.53	15.47	15.22	16.50
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	15.63	15.52	15.48	15.34	14.95	16.50
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	15.57	15.48	15.47	15.18	14.86	16.50

n77(3700-3980MHz) (PC2)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	16.36	16.61	16.38	16.60	16.95	17.50
100		1	136	16.57	16.52	16.63	16.74	16.49	
100		1	271	16.42	16.74	16.72	16.31	16.92	
100		135	1	16.27	16.02	15.94	15.98	16.30	17.50
100		135	67	16.61	16.58	16.71	16.77	16.65	
100		135	136	15.89	15.91	15.93	15.98	16.27	
100		270	0	16.03	16.14	16.27	16.25	16.28	
100	DFT-s-OFDM QPSK	1	1	17.32	17.38	17.46	17.39	17.42	18.50
100		1	136	16.60	16.48	16.73	16.98	16.52	
100		1	271	16.50	16.69	16.74	16.47	16.96	
100		135	1	15.79	15.54	15.47	15.91	15.83	17.50
100		135	67	16.51	16.54	16.57	16.52	16.48	
100		135	136	15.38	15.39	15.48	15.71	15.74	
100		270	0	15.51	15.54	15.77	16.08	15.81	
100	DFT-s-OFDM 16QAM	1	1	15.18	15.51	15.33	15.90	15.93	16.50
100	DFT-s-OFDM 64QAM	1	1	13.80	14.16	13.99	14.56	14.52	15.50
100	DFT-s-OFDM 256QAM	1	1	11.57	11.85	11.76	12.26	12.25	13.50
100	CP-OFDM QPSK	1	1	14.81	15.16	14.94	15.54	15.45	16.50
100	CP-OFDM 16QAM	1	1	14.37	14.63	14.47	15.07	14.98	16.00
100	CP-OFDM 64QAM	1	1	12.48	12.72	12.56	13.20	13.12	14.00
100	CP-OFDM 256QAM	1	1	9.63	9.90	9.77	10.34	10.24	11.00
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	16.37	16.74	16.55	16.61	16.57	17.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	16.55	16.76	16.57	16.75	16.44	17.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	16.60	16.77	16.65	16.83	16.52	17.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	16.30	16.52	16.53	16.81	16.38	17.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	16.40	16.68	16.68	16.80	16.57	17.50

n77(3700-3980MHz) (PC3)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	16.84	16.92	16.82	16.96	16.59	18.00
100		1	136	16.91	16.86	16.99	16.59	16.17	
100		1	271	16.82	16.95	16.53	16.21	17.01	
100		135	1	17.25	16.80	16.77	16.66	16.34	18.00
100		135	67	17.01	16.94	17.08	16.73	16.19	
100		135	136	16.69	16.73	16.57	16.29	16.55	
100		270	0	16.96	16.96	17.03	16.78	16.34	
100	DFT-s-OFDM QPSK	1	1	17.42	17.46	17.50	17.32	17.49	18.50
100		1	136	17.24	17.20	17.35	17.22	17.15	
100		1	271	17.08	17.02	17.11	17.08	17.08	
100		135	1	16.91	16.95	16.98	16.93	16.89	18.00
100		135	67	16.88	16.84	16.87	16.81	16.87	
100		135	136	16.69	16.73	16.57	16.78	16.56	
100		270	0	16.87	16.86	16.77	16.82	16.90	
100	DFT-s-OFDM 16QAM	1	1	16.80	16.85	16.82	16.87	16.57	17.50
100	DFT-s-OFDM 64QAM	1	1	16.83	16.85	16.90	16.97	16.58	17.50
100	DFT-s-OFDM 256QAM	1	1	15.18	15.17	15.17	15.31	14.91	16.00
100	CP-OFDM QPSK	1	1	16.88	16.87	16.86	17.03	16.62	18.00
100	CP-OFDM 16QAM	1	1	16.91	16.90	16.87	17.06	16.63	18.00
100	CP-OFDM 64QAM	1	1	16.02	16.00	16.00	16.10	15.75	17.00
100	CP-OFDM 256QAM	1	1	13.22	13.18	13.17	13.29	12.93	14.00
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	16.88	16.91	16.79	16.81	16.35	18.00
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	16.91	16.98	16.90	16.69	16.04	18.00
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	17.26	17.37	17.28	17.06	16.73	18.00
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	17.30	17.27	17.21	16.91	16.82	18.00
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	17.20	17.20	17.25	16.68	16.93	18.00

n78(3450-3550MHz) (PC2)_Ant 2									
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			17.42			18.50
100		1	136			17.40			
100		1	271			16.87			
100		135	1			16.93			18.50
100		135	67			16.90			
100		135	136			16.41			
100		270	0			16.85			
100	DFT-s-OFDM QPSK	1	1			18.05			19.00
100		1	136			17.40			
100		1	271			16.83			
100		135	1			16.36			18.50
100		135	67			17.42			
100		135	136			15.88			
100		270	0			16.33			
100	DFT-s-OFDM 16QAM	1	1			16.34			17.50
100	DFT-s-OFDM 64QAM	1	1			14.93			16.00
100	DFT-s-OFDM 256QAM	1	1			12.67			13.50
100	CP-OFDM QPSK	1	1			15.87			16.50
100	CP-OFDM 16QAM	1	1			15.38			16.00
100	CP-OFDM 64QAM	1	1			13.54			14.00
100	CP-OFDM 256QAM	1	1			10.69			11.50
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	17.36	17.39	17.39	17.38	17.40	18.50
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	17.39	17.48	17.43	17.45	17.46	18.50
Channel				632334	632834	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	17.47	17.53	17.48	17.46	17.36	18.50
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	17.58	17.64	17.65	17.53	17.55	18.50
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	17.63	17.64	17.48	17.53	17.53	18.50
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	17.96	16.59	17.93	17.88	17.67	18.50
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	17.89	17.81	17.86	17.67	17.35	18.50

n78(3450-3550MHz) (PC3)_Ant 2									
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			17.48			18.50
100		1	136			17.02			
100		1	271			16.44			
100		135	1			17.27			18.00
100		135	67			17.05			
100		135	136			16.51			
100		270	0			17.05			19.00
100	DFT-s-OFDM QPSK	1	1			17.92			
100		1	136			17.04			
100		1	271			16.42			
100		135	1			17.28			18.00
100		135	67			17.06			
100		135	136			16.53			
100		270	0			17.04			
100	DFT-s-OFDM 16QAM	1	1			17.40			18.50
100	DFT-s-OFDM 64QAM	1	1			17.59			18.50
100	DFT-s-OFDM 256QAM	1	1			15.82			16.50
100	CP-OFDM QPSK	1	1			17.48			18.50
100	CP-OFDM 16QAM	1	1			17.52			18.50
100	CP-OFDM 64QAM	1	1			16.62			17.50
100	CP-OFDM 256QAM	1	1			13.80			14.50
Channel				633000	633166	633334	633500	633666	Tune-up limit
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	17.46	17.48	17.43	17.29	17.42	18.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	17.55	17.49	17.46	17.35	17.33	18.50
Channel				632334	632634	633334	633832	634332	Tune-up limit
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	17.58	17.55	17.41	17.35	17.26	18.50
Channel				632000	632666	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	17.65	17.60	17.51	17.37	17.34	18.50
Channel				631668	632500	633334	634166	635000	Tune-up limit
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	17.66	17.57	17.41	17.37	17.16	18.50
Channel				631334	636672	633334	634334	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	17.45	16.91	17.80	17.59	17.31	18.50
Channel				631000	632166	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	17.43	17.43	17.61	17.40	16.87	18.50
Channel				630668	632000	633334	634668	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	17.79	17.79	17.43	17.43	17.43	18.50

n78(3700-3800MHz) (PC2)_Ant 2									
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			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			17.24			18.50
100		1	136			17.33			
100		1	271			17.19			
100		135	1			17.19			18.00
100		135	67			17.29			
100		135	136			16.56			
100		270	0			16.76			19.00
100	DFT-s-OFDM QPSK	1	1			18.07			
100		1	136			17.24			
100		1	271			17.20			
100		135	1			16.56			18.00
100		135	67			17.28			
100		135	136			16.05			
100		270	0			16.26			
100	DFT-s-OFDM 16QAM	1	1			16.16			17.00
100	DFT-s-OFDM 64QAM	1	1			14.79			15.50
100	DFT-s-OFDM 256QAM	1	1			12.51			13.50
100	CP-OFDM QPSK	1	1			15.68			16.50
100	CP-OFDM 16QAM	1	1			15.34			16.50
100	CP-OFDM 64QAM	1	1			13.37			14.50
100	CP-OFDM 256QAM	1	1			10.56			11.50
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	17.22	17.23	17.24	17.26	17.38	18.50
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	17.26	17.29	17.44	17.50	17.51	18.50
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	17.34	17.51	17.55	17.63	17.63	18.50
Channel				648668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	17.23	17.43	17.48	17.53	17.49	18.50
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	17.38	17.64	17.71	17.59	17.46	18.50
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	17.75	17.99	18.21	17.95	17.77	18.50
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	17.61	17.98	17.92	17.78	17.66	18.50

n78(3700-3800MHz) (PC3)_Ant 2									
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			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			16.11			17.00
100		1	136			16.19			
100		1	271			16.17			
100		135	1			16.51			17.00
100		135	67			16.25			
100		135	136			16.01			
100		270	0			16.22			
100	DFT-s-OFDM QPSK	1	1			17.18			18.00
100		1	136			16.19			
100		1	271			16.15			
100		135	1			16.24			17.00
100		135	67			16.16			
100		135	136			16.02			
100		270	0			16.13			
100	DFT-s-OFDM 16QAM	1	1			16.04			17.00
100	DFT-s-OFDM 64QAM	1	1			16.20			17.00
100	DFT-s-OFDM 256QAM	1	1			14.38			15.50
100	CP-OFDM QPSK	1	1			16.14			17.00
100	CP-OFDM 16QAM	1	1			16.16			17.00
100	CP-OFDM 64QAM	1	1			15.28			16.00
100	CP-OFDM 256QAM	1	1			12.45			13.50
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	16.09	16.23	16.23	16.24	16.26	17.00
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	16.29	16.31	16.43	16.44	16.51	17.00
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	16.17	16.32	16.50	16.55	16.47	17.00
Channel				648668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	16.32	16.33	16.45	16.50	16.45	17.00
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	16.31	16.45	16.32	16.32	16.32	17.00
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	16.72	16.95	16.50	16.92	16.81	17.00
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	16.60	16.83	16.91	16.69	16.53	17.00
Channel				647334	648666	650000	651334	652666	Tune-up limit
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	16.45	16.75	16.67	16.52	16.40	17.00

CA_48C_Ant 2											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	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				
55340	55340	55538	QPSK	1	0	0	0	1	0	18.24	19.00
55990	55891	56089	QPSK	1	0	0	0	1	0	18.29	19.00
56640	56442	56640	QPSK	1	0	0	0	1	0	18.20	19.00
55340	55340	55538	16QAM	1	0	0	0	1	0	18.18	19.00
55990	55891	56089	16QAM	1	0	0	0	1	0	18.24	19.00
56640	56442	56640	16QAM	1	0	0	0	1	0	18.16	19.00
55340	55340	55538	64QAM	1	0	0	0	1	0	18.12	19.00
55990	55891	56089	64QAM	1	0	0	0	1	0	18.13	19.00
56640	56442	56640	64QAM	1	0	0	0	1	0	18.10	19.00
55340	55340	55538	256QAM	1	0	0	0	1	0	17.77	18.50
55990	55891	56089	256QAM	1	0	0	0	1	0	17.75	18.50
56640	56442	56640	256QAM	1	0	0	0	1	0	17.82	18.50
55340	55340	55538	QPSK	50	0	0	0	1	0	16.77	17.50
55990	55891	56089	QPSK	50	0	0	0	1	0	16.84	17.50
56640	56442	56640	QPSK	50	0	0	0	1	0	16.79	17.50

Reduced Power level 2

Band		WCDMA Band V (dBm)			Tune-up Limit (dBm)
TX Channel		4132	4182	4233	
Rx Channel		4357	4407	4458	
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	21.31	21.37	21.34	22.00
3GPP Rel 5	HSDPA Subtest-1	20.06	20.10	20.01	21.00
3GPP Rel 5	HSDPA Subtest-2	20.08	19.95	19.99	21.00
3GPP Rel 5	HSDPA Subtest-3	19.45	19.48	19.51	20.50
3GPP Rel 5	HSDPA Subtest-4	19.59	19.49	19.34	20.50
3GPP Rel 6	HSUPA Subtest-1	20.01	20.08	19.91	21.00
3GPP Rel 6	HSUPA Subtest-2	19.48	19.55	19.58	20.50
3GPP Rel 6	HSUPA Subtest-3	19.94	20.05	19.96	21.00
3GPP Rel 6	HSUPA Subtest-4	20.06	20.01	19.89	21.00
3GPP Rel 6	HSUPA Subtest-5	20.02	20.10	20.02	21.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.34	20.02	19.84	21.00
Attenuator			Cable Loss	0.6	
Mode			Max.	21.37	

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	21.58	21.62	21.55	
20	QPSK	1	49	21.52	21.57	21.50	23
20	QPSK	1	99	21.53	21.51	21.46	
20	QPSK	50	0	20.67	20.71	20.65	
20	QPSK	50	24	20.56	20.63	20.58	22
20	QPSK	50	50	20.51	20.60	20.49	
20	QPSK	100	0	20.55	20.57	20.52	
20	16QAM	1	0	20.77	20.83	20.78	22
20	16QAM	1	49	20.73	20.76	20.70	
20	16QAM	1	99	20.66	20.74	20.67	
20	16QAM	50	0	19.63	19.72	19.68	21
20	16QAM	50	24	19.56	19.66	19.60	
20	16QAM	50	50	19.49	19.63	19.56	
20	16QAM	100	0	19.54	19.58	19.61	21
20	64QAM	1	0	19.65	19.70	19.64	
20	64QAM	1	49	19.58	19.65	19.56	
20	64QAM	1	99	19.52	19.54	19.51	20
20	64QAM	50	0	18.58	18.66	18.60	
20	64QAM	50	24	18.49	18.51	18.63	
20	64QAM	50	50	18.54	18.59	18.55	18
20	64QAM	100	0	18.46	18.54	18.49	
20	256QAM	1	0	16.71	16.76	16.50	
20	256QAM	1	49	16.49	16.69	16.67	17
20	256QAM	1	99	16.67	16.54	16.52	
20	256QAM	50	0	15.53	15.66	15.55	
20	256QAM	50	24	15.49	15.64	15.69	17
20	256QAM	50	50	15.62	15.60	15.47	
20	256QAM	100	0	15.53	15.63	15.44	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	23
15	QPSK	1	0	21.58	21.60	21.54	
15	QPSK	1	37	21.42	21.57	21.49	
15	QPSK	1	74	21.56	21.54	21.48	22
15	QPSK	36	0	20.58	20.64	20.72	
15	QPSK	36	20	20.53	20.56	20.51	
15	QPSK	36	39	20.49	20.57	20.53	22
15	QPSK	75	0	20.50	20.48	20.52	
15	16QAM	1	0	20.78	20.85	20.84	
15	16QAM	1	37	20.80	20.76	20.68	21
15	16QAM	1	74	20.62	20.61	20.65	
15	16QAM	36	0	19.51	19.77	19.74	
15	16QAM	36	20	19.44	19.61	19.69	21
15	16QAM	36	39	19.55	19.61	19.63	
15	16QAM	75	0	19.59	19.47	19.52	
15	64QAM	1	0	19.61	19.72	19.68	21
15	64QAM	1	37	19.44	19.67	19.52	
15	64QAM	1	74	19.52	19.45	19.44	
15	64QAM	36	0	18.43	18.64	18.66	20
15	64QAM	36	20	18.49	18.60	18.60	
15	64QAM	36	39	18.40	18.64	18.55	
15	64QAM	75	0	18.45	18.60	18.39	18
15	256QAM	1	0	16.71	16.75	16.53	
15	256QAM	1	37	16.46	16.67	16.75	
15	256QAM	1	74	16.49	16.50	16.38	17
15	256QAM	36	0	15.40	15.73	15.60	
15	256QAM	36	20	15.46	15.51	15.68	
15	256QAM	36	39	15.48	15.44	15.49	17
15	256QAM	75	0	15.42	15.58	15.43	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	22
10	QPSK	1	0	21.55	21.58	21.50	
10	QPSK	1	25	21.48	21.56	21.53	
10	QPSK	1	49	21.43	21.51	21.46	21
10	QPSK	25	0	20.65	20.63	20.68	
10	QPSK	25	12	20.47	20.60	20.63	
10	QPSK	25	25	20.60	20.50	20.45	21
10	QPSK	50	0	20.46	20.66	20.56	
10	16QAM	1	0	20.78	20.90	20.75	
10	16QAM	1	25	20.67	20.84	20.80	21
10	16QAM	1	49	20.52	20.75	20.75	
10	16QAM	25	0	19.56	19.66	19.64	
10	16QAM	25	12	19.51	19.68	19.67	20
10	16QAM	25	25	19.46	19.69	19.44	
10	16QAM	50	0	19.45	19.57	19.68	
10	64QAM	1	0	19.75	19.58	19.65	20
10	64QAM	1	25	19.55	19.65	19.52	
10	64QAM	1	49	19.48	19.55	19.57	
10	64QAM	25	0	18.49	18.64	18.48	20
10	64QAM	25	12	18.51	18.56	18.52	
10	64QAM	25	25	18.61	18.48	18.56	
10	64QAM	50	0	18.55	18.60	18.49	18
10	256QAM	1	0	16.57	16.74	16.44	
10	256QAM	1	25	16.50	16.71	16.71	
10	256QAM	1	49	16.60	16.45	16.47	17
10	256QAM	25	0	15.56	15.63	15.59	
10	256QAM	25	12	15.39	15.64	15.67	
10	256QAM	25	25	15.57	15.45	15.36	22
10	256QAM	50	0	15.42	15.64	15.50	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	23
5	QPSK	1	0	21.58	21.59	21.54	
5	QPSK	1	12	21.57	21.55	21.44	
5	QPSK	1	24	21.51	21.55	21.47	22
5	QPSK	12	0	20.62	20.75	20.73	
5	QPSK	12	7	20.58	20.67	20.57	
5	QPSK	12	13	20.43	20.48	20.44	22
5	QPSK	25	0	20.64	20.57	20.58	
5	16QAM	1	0	20.81	20.73	20.82	
5	16QAM	1	12	20.63	20.81	20.68	22

Band 4 (AWS Band) (dBm) ANT 0 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	23	
20	QPSK	1	0	21.67	21.74	21.61		
20	QPSK	1	49	21.49	21.65	21.47		
20	QPSK	1	99	21.68	21.59	21.56		
20	QPSK	50	0	20.77	20.79	20.75		
20	QPSK	50	24	20.54	20.71	20.60	22	
20	QPSK	50	50	20.63	20.78	20.62		
20	QPSK	100	0	20.54	20.70	20.68		
20	16QAM	1	0	20.95	20.95	20.72		
20	16QAM	1	49	20.71	20.75	20.79		
20	16QAM	1	99	20.71	20.71	20.62	22	
20	16QAM	50	0	19.77	19.72	19.76		
20	16QAM	50	24	19.64	19.76	19.54		
20	16QAM	50	50	19.49	19.58	19.67		
20	16QAM	100	0	19.68	19.66	19.62		
20	64QAM	1	0	19.78	19.78	19.79	21	
20	64QAM	1	49	19.71	19.72	19.72		
20	64QAM	1	99	19.46	19.64	19.54		
20	64QAM	50	0	18.69	18.65	18.66		
20	64QAM	50	24	18.43	18.56	18.74		
20	64QAM	50	50	18.68	18.58	18.60	20	
20	64QAM	100	0	18.45	18.56	18.63		
20	256QAM	1	0	16.68	16.74	16.59		
20	256QAM	1	49	16.64	16.81	16.84		
20	256QAM	1	99	16.67	16.63	16.55		
20	256QAM	50	0	15.51	15.73	15.74	18	
20	256QAM	50	24	15.47	15.74	15.66		
20	256QAM	50	50	15.73	15.59	15.61		
20	256QAM	100	0	15.49	15.71	15.40		
Channel				20025	20175	20325		Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	21.64	21.71	21.65	23	
15	QPSK	1	37	21.47	21.61	21.63		
15	QPSK	1	74	21.65	21.56	21.51		
15	QPSK	36	0	20.62	20.67	20.77		
15	QPSK	36	20	20.67	20.82	20.72		
15	QPSK	36	39	20.61	20.64	20.54	22	
15	QPSK	75	0	20.73	20.61	20.63		
15	16QAM	1	0	20.89	20.99	20.72		
15	16QAM	1	37	20.82	20.78	20.80		
15	16QAM	1	74	20.65	20.78	20.64		
15	16QAM	36	0	19.59	19.90	19.68	21	
15	16QAM	36	20	19.71	19.67	19.72		
15	16QAM	36	39	19.66	19.76	19.52		
15	16QAM	75	0	19.61	19.72	19.55		
15	64QAM	1	0	19.68	19.88	19.83		
15	64QAM	1	37	19.59	19.59	19.65	21	
15	64QAM	1	74	19.66	19.63	19.51		
15	64QAM	36	0	18.74	18.84	18.62		
15	64QAM	36	20	18.59	18.67	18.65		
15	64QAM	36	39	18.60	18.67	18.62		
15	64QAM	75	0	18.51	18.61	18.47	20	
15	256QAM	1	0	16.73	16.75	16.52		
15	256QAM	1	37	16.54	16.70	16.68		
15	256QAM	1	74	16.60	16.64	16.46		
15	256QAM	36	0	15.56	15.74	15.57		
15	256QAM	36	20	15.61	15.77	15.54	17	
15	256QAM	36	39	15.58	15.65	15.45		
15	256QAM	75	0	15.57	15.76	15.51		
Channel				20000	20175	20350		Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	21.64	21.69	21.66	23	
10	QPSK	1	25	21.47	21.61	21.56		
10	QPSK	1	49	21.61	21.52	21.41		
10	QPSK	25	0	20.62	20.82	20.66		
10	QPSK	25	12	20.54	20.74	20.61		
10	QPSK	25	25	20.62	20.78	20.66	22	
10	QPSK	50	0	20.51	20.76	20.62		
10	16QAM	1	0	20.72	20.83	20.85		
10	16QAM	1	25	20.87	20.72	20.65		
10	16QAM	1	49	20.80	20.71	20.77		
10	16QAM	25	0	19.58	19.81	19.65	22	
10	16QAM	25	12	19.67	19.66	19.67		
10	16QAM	25	25	19.67	19.76	19.75		
10	16QAM	50	0	19.53	19.72	19.80		
10	64QAM	1	0	19.63	19.85	19.72		
10	64QAM	1	25	19.52	19.78	19.60	21	
10	64QAM	1	49	19.62	19.63	19.65		
10	64QAM	25	0	18.69	18.72	18.74		
10	64QAM	25	12	18.47	18.62	18.79		
10	64QAM	25	25	18.54	18.68	18.51		
10	64QAM	50	0	18.50	18.63	18.57	18	
10	256QAM	1	0	16.74	16.84	16.64		
10	256QAM	1	25	16.58	16.70	16.69		
10	256QAM	1	49	16.68	16.58	16.66		
10	256QAM	25	0	15.58	15.77	15.65		
10	256QAM	25	12	15.60	15.62	15.73	17	
10	256QAM	25	25	15.62	15.50	15.52		
10	256QAM	50	0	15.64	15.66	15.50		
Channel				19975	20175	20375		Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	21.61	21.70	21.67	23	
5	QPSK	1	12	21.61	21.57	21.56		
5	QPSK	1	24	21.53	21.57	21.61		
5	QPSK	12	0	20.64	20.81	20.64		
5	QPSK	12	7	20.66	20.80	20.60		
5	QPSK	12	13	20.70	20.54	20.51	22	
5	QPSK	25	0	20.71	20.56	20.62		
5	16QAM	1	0	20.73	20.97	20.73		
5	16QAM	1	12	20.89	20.89	20.69		

5	16QAM	1	24	20.60	20.74	20.62	21
5	16QAM	12	0	19.51	19.74	19.78	
5	16QAM	12	7	19.63	19.55	19.69	
5	16QAM	12	13	19.49	19.53	19.47	
5	16QAM	25	0	19.42	19.64	19.54	21
5	64QAM	1	0	19.59	19.70	19.51	
5	64QAM	1	12	19.61	19.60	19.66	
5	64QAM	1	24	19.50	19.63	19.37	
5	64QAM	12	0	18.44	18.59	18.56	20
5	64QAM	12	7	18.56	18.47	18.55	
5	64QAM	12	13	18.62	18.54	18.43	
5	64QAM	25	0	18.41	18.42	18.40	
5	256QAM	1	0	16.62	16.79	16.53	18
5	256QAM	1	12	16.52	16.67	16.66	
5	256QAM	1	24	16.52	16.47	16.43	
5	256QAM	12	0	15.51	15.66	15.62	
5	256QAM	12	7	15.56	15.70	15.62	17
5	256QAM	12	13	15.61	15.49	15.39	
5	256QAM	25	0	15.52	15.67	15.40	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	21.52	21.55	21.51	23
3	QPSK	1	8	21.39	21.43	21.48	
3	QPSK	1	14	21.46	21.51	21.47	
3	QPSK	8	0	20.65	20.56	20.51	
3	QPSK	8	4	20.53	20.57	20.49	22
3	QPSK	8	7	20.51	20.66	20.42	
3	QPSK	15	0	20.58	20.44	20.42	
3	16QAM	1	0	20.62	20.81	20.75	
3	16QAM	1	8	20.61	20.78	20.73	22
3	16QAM	1	14	20.74	20.60	20.55	
3	16QAM	8	0	19.54	19.66	19.61	
3	16QAM	8	4	19.63	19.75	19.58	
3	16QAM	8	7	19.51	19.72	19.44	21
3	16QAM	15	0	19.40	19.46	19.54	
3	64QAM	1	0	19.56	19.65	19.63	
3	64QAM	1	8	19.49	19.74	19.64	
3	64QAM	1	14	19.57	19.61	19.41	20
3	64QAM	8	0	18.67	18.73	18.66	
3	64QAM	8	4	18.53	18.55	18.55	
3	64QAM	8	7	18.42	18.58	18.56	
3	64QAM	15	0	18.56	18.62	18.50	18
3	256QAM	1	0	16.75	16.74	16.44	
3	256QAM	1	8	16.55	16.56	16.77	
3	256QAM	1	14	16.57	16.48	16.58	
3	256QAM	8	0	15.61	15.77	15.50	17
3	256QAM	8	4	15.50	15.61	15.58	
3	256QAM	8	7	15.64	15.43	15.42	
3	256QAM	15	0	15.53	15.62	15.42	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	21.52	21.59	21.51	23
1.4	QPSK	1	3	21.38	21.45	21.50	
1.4	QPSK	1	5	21.56	21.50	21.50	
1.4	QPSK	3	0	20.71	20.75	20.50	
1.4	QPSK	3	1	20.65	20.70	20.50	22
1.4	QPSK	3	3	20.54	20.62	20.50	
1.4	QPSK	6	0	20.50	20.45	20.40	
1.4	16QAM	1	0	20.85	20.68	20.82	
1.4	16QAM	1	3	20.64	20.71	20.55	21
1.4	16QAM	1	5	20.70	20.61	20.59	
1.4	16QAM	3	0	19.54	19.74	19.63	
1.4	16QAM	3	1	19.60	19.53	19.60	
1.4	16QAM	3	3	19.54	19.49	19.47	20
1.4	16QAM	6	0	19.55	19.54	19.46	
1.4	64QAM	1	0	19.51	19.74	19.59	
1.4	64QAM	1	3	19.66	19.59	19.44	
1.4	64QAM	1	5	19.53	19.61	19.41	18
1.4	64QAM	3	0	18.55	18.54	18.54	
1.4	64QAM	3	1	18.52	18.61	18.70	
1.4	64QAM	3	3	18.51	18.60	18.63	
1.4	256QAM	1	0	16.60	16.71	16.45	17
1.4	256QAM	1	3	16.48	16.61	16.70	
1.4	256QAM	1	5	16.53	16.45	16.40	
1.4	256QAM	3	0	15.56	15.66	15.51	
1.4	256QAM	3	1	15.56	15.66	15.77	17
1.4	256QAM	3	3	15.52	15.53	15.39	
1.4	256QAM	6	0	15.54	15.57	15.43	

5	16QAM	1	24	20.61	20.84	20.84	21
5	16QAM	12	0	19.61	19.89	19.73	
5	16QAM	12	7	19.75	19.85	19.73	
5	16QAM	12	13	19.68	19.66	19.54	
5	16QAM	25	0	19.48	19.59	19.78	21
5	64QAM	1	0	19.76	19.69	19.71	
5	64QAM	1	12	19.71	19.64	19.61	
5	64QAM	1	24	19.68	19.67	19.60	
5	64QAM	12	0	18.58	18.72	18.67	20
5	64QAM	12	7	18.51	18.60	18.68	
5	64QAM	12	13	18.64	18.66	18.53	
5	64QAM	25	0	18.64	18.58	18.45	
5	256QAM	1	0	16.71	16.92	16.55	18
5	256QAM	1	12	16.61	16.63	16.65	
5	256QAM	1	24	16.65	16.58	16.69	
5	256QAM	12	0	15.51	15.78	15.69	
5	256QAM	12	7	15.56	15.66	15.76	17
5	256QAM	12	13	15.70	15.52	15.51	
5	256QAM	25	0	15.59	15.79	15.66	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	21.65	21.66	21.59	23
3	QPSK	1	8	21.64	21.62	21.61	
3	QPSK	1	14	21.57	21.48	21.42	
3	QPSK	8	0	20.81	20.74	20.73	
3	QPSK	8	4	20.51	20.59	20.72	22
3	QPSK	8	7	20.64	20.55	20.45	
3	QPSK	15	0	20.69	20.72	20.56	
3	16QAM	1	0	20.81	20.93	20.94	
3	16QAM	1	8	20.86	20.76	20.89	22
3	16QAM	1	14	20.83	20.79	20.86	
3	16QAM	8	0	19.78	19.80	19.77	
3	16QAM	8	4	19.61	19.67	19.79	
3	16QAM	8	7	19.64	19.68	19.52	21
3	16QAM	15	0	19.68	19.56	19.66	
3	64QAM	1	0	19.65	19.78	19.62	
3	64QAM	1	8	19.62	19.82	19.72	
3	64QAM	1	14	19.60	19.57	19.46	20
3	64QAM	8	0	18.60	18.70	18.74	
3	64QAM	8	4	18.53	18.65	18.72	
3	64QAM	8	7	18.63	18.58	18.57	
3	64QAM	15	0	18.42	18.67	18.52	18
3	256QAM	1	0	16.72	16.80	16.54	
3	256QAM	1	8	16.66	16.67	16.81	
3	256QAM	1	14	16.68	16.50	16.46	
3	256QAM	8	0	15.57	15.72	15.73	17
3	256QAM	8	4	15.63	15.63	15.71	
3	256QAM	8	7	15.56	15.53	15.50	
3	256QAM	15	0	15.57	15.78	15.54	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	22
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	21
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	20
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	18
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	256QAM	1	0	16.81	16.83	16.44	17
1.4	256QAM	1	3	16.82	16.78	16.56	
1.4	256QAM	1	5	16.63	16.58	16.54	
1.4	256QAM	3	0	15.62	15.73	15.62	
1.4	256QAM	3	1	15.50	15.59	15.79	17
1.4	256QAM	3	3	15.71	15.53	15.55	
1.4	256QAM	6	0	15.62	15.71	15.52	



Band 4 (dBm) Ant1							
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	21.67	21.74	21.61	23
20	QPSK	1	49	21.49	21.65	21.47	
20	QPSK	1	99	21.68	21.59	21.56	
20	QPSK	50	0	20.77	20.79	20.75	22
20	QPSK	50	24	20.54	20.71	20.60	
20	QPSK	50	50	20.63	20.78	20.62	
20	QPSK	100	0	20.54	20.70	20.68	22
20	16QAM	1	0	20.95	20.95	20.72	
20	16QAM	1	49	20.71	20.75	20.79	
20	16QAM	1	99	20.71	20.71	20.62	21
20	16QAM	50	0	19.77	19.72	19.76	
20	16QAM	50	24	19.64	19.76	19.54	
20	16QAM	50	50	19.49	19.58	19.67	21
20	16QAM	100	0	19.68	19.66	19.62	
20	64QAM	1	0	19.78	19.78	19.79	
20	64QAM	1	49	19.71	19.72	19.72	21
20	64QAM	1	99	19.46	19.64	19.54	
20	64QAM	50	0	18.69	18.65	18.66	
20	64QAM	50	24	18.43	18.56	18.74	20
20	64QAM	50	50	18.68	18.58	18.60	
20	64QAM	100	0	18.45	18.56	18.63	
20	256QAM	1	0	16.68	16.74	16.59	19
20	256QAM	1	49	16.64	16.81	16.84	
20	256QAM	1	99	16.67	16.63	16.55	
20	256QAM	50	0	15.51	15.73	15.74	17
20	256QAM	50	24	15.47	15.74	15.66	
20	256QAM	50	50	15.73	15.59	15.61	
20	256QAM	100	0	15.49	15.71	15.40	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	21.64	21.71	21.65	23
15	QPSK	1	37	21.47	21.61	21.63	
15	QPSK	1	74	21.65	21.56	21.51	
15	QPSK	36	0	20.62	20.67	20.77	22
15	QPSK	36	20	20.67	20.82	20.72	
15	QPSK	36	39	20.61	20.64	20.54	
15	QPSK	75	0	20.73	20.61	20.63	22
15	16QAM	1	0	20.89	20.99	20.72	
15	16QAM	1	37	20.82	20.78	20.80	
15	16QAM	1	74	20.65	20.78	20.64	21
15	16QAM	36	0	19.59	19.90	19.68	
15	16QAM	36	20	19.71	19.67	19.72	
15	16QAM	36	39	19.66	19.76	19.52	21
15	16QAM	75	0	19.61	19.72	19.55	
15	64QAM	1	0	19.68	19.88	19.83	
15	64QAM	1	37	19.59	19.59	19.65	20
15	64QAM	1	74	19.66	19.63	19.51	
15	64QAM	36	0	18.74	18.84	18.62	
15	64QAM	36	20	18.59	18.67	18.65	19
15	64QAM	36	39	18.60	18.67	18.62	
15	64QAM	75	0	18.51	18.61	18.47	
15	256QAM	1	0	16.73	16.75	16.52	17
15	256QAM	1	37	16.54	16.70	16.68	
15	256QAM	1	74	16.60	16.64	16.46	
15	256QAM	36	0	15.56	15.74	15.57	17
15	256QAM	36	20	15.61	15.77	15.54	
15	256QAM	36	39	15.58	15.65	15.45	
15	256QAM	75	0	15.57	15.76	15.51	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	21.64	21.69	21.66	23
10	QPSK	1	25	21.47	21.61	21.56	
10	QPSK	1	49	21.61	21.52	21.41	
10	QPSK	25	0	20.62	20.82	20.66	22
10	QPSK	25	12	20.54	20.74	20.61	
10	QPSK	25	25	20.62	20.78	20.66	
10	QPSK	50	0	20.51	20.76	20.62	22
10	16QAM	1	0	20.72	20.83	20.85	
10	16QAM	1	25	20.87	20.72	20.65	
10	16QAM	1	49	20.80	20.71	20.77	21
10	16QAM	25	0	19.58	19.81	19.65	
10	16QAM	25	12	19.67	19.66	19.67	
10	16QAM	25	25	19.67	19.76	19.75	21
10	16QAM	50	0	19.53	19.72	19.80	
10	64QAM	1	0	19.63	19.85	19.72	
10	64QAM	1	25	19.52	19.78	19.60	20
10	64QAM	1	49	19.62	19.63	19.65	
10	64QAM	25	0	18.69	18.72	18.74	
10	64QAM	25	12	18.47	18.62	18.79	19
10	64QAM	25	25	18.54	18.68	18.51	
10	64QAM	50	0	18.50	18.63	18.57	
10	256QAM	1	0	16.74	16.84	16.64	17
10	256QAM	1	25	16.58	16.70	16.69	
10	256QAM	1	49	16.68	16.58	16.66	
10	256QAM	25	0	15.58	15.77	15.65	17
10	256QAM	25	12	15.60	15.62	15.73	
10	256QAM	25	25	15.62	15.50	15.52	
10	256QAM	50	0	15.64	15.66	15.50	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	21.61	21.70	21.67	23
5	QPSK	1	12	21.61	21.57	21.56	
5	QPSK	1	24	21.53	21.57	21.61	
5	QPSK	12	0	20.64	20.81	20.64	22
5	QPSK	12	7	20.66	20.80	20.60	
5	QPSK	12	13	20.70	20.54	20.51	
5	QPSK	25	0	20.71	20.56	20.62	22
5	16QAM	1	0	20.73	20.97	20.73	
5	16QAM	1	12	20.89	20.89	20.69	

5	16QAM	1	24	20.61	20.84	20.84	21
5	16QAM	12	0	19.61	19.89	19.73	
5	16QAM	12	7	19.75	19.85	19.73	
5	16QAM	12	13	19.68	19.66	19.54	
5	16QAM	25	0	19.48	19.59	19.78	21
5	64QAM	1	0	19.76	19.69	19.71	
5	64QAM	1	12	19.71	19.64	19.61	
5	64QAM	1	24	19.68	19.67	19.60	
5	64QAM	12	0	18.58	18.72	18.67	20
5	64QAM	12	7	18.51	18.60	18.68	
5	64QAM	12	13	18.64	18.66	18.53	
5	64QAM	25	0	18.64	18.58	18.45	
5	256QAM	1	0	16.71	16.92	16.55	19
5	256QAM	1	12	16.61	16.63	16.65	
5	256QAM	1	24	16.65	16.58	16.69	
5	256QAM	12	0	15.51	15.78	15.69	
5	256QAM	12	7	15.56	15.66	15.76	17
5	256QAM	12	13	15.70	15.52	15.51	
5	256QAM	25	0	15.59	15.79	15.66	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	21.65	21.66	21.59	23
3	QPSK	1	8	21.64	21.62	21.61	
3	QPSK	1	14	21.57	21.48	21.42	
3	QPSK	8	0	20.81	20.74	20.73	
3	QPSK	8	4	20.51	20.59	20.72	22
3	QPSK	8	7	20.64	20.55	20.45	
3	QPSK	15	0	20.69	20.72	20.56	
3	16QAM	1	0	20.81	20.93	20.94	
3	16QAM	1	8	20.86	20.76	20.89	22
3	16QAM	1	14	20.83	20.79	20.86	
3	16QAM	8	0	19.78	19.80	19.77	
3	16QAM	8	4	19.61	19.67	19.79	
3	16QAM	8	7	19.64	19.68	19.52	21
3	16QAM	15	0	19.68	19.56	19.66	
3	64QAM	1	0	19.65	19.78	19.62	
3	64QAM	1	8	19.62	19.82	19.72	
3	64QAM	1	14	19.60	19.57	19.46	21
3	64QAM	8	0	18.60	18.70	18.74	
3	64QAM	8	4	18.53	18.65	18.72	
3	64QAM	8	7	18.63	18.58	18.57	
3	64QAM	15	0	18.42	18.67	18.52	20
3	256QAM	1	0	16.72	16.80	16.54	
3	256QAM	1	8	16.66	16.67	16.81	
3	256QAM	1	14	16.68	16.50	16.46	
3	256QAM	8	0	15.57	15.72	15.73	19
3	256QAM	8	4	15.63	15.63	15.71	
3	256QAM	8	7	15.56	15.53	15.50	
3	256QAM	15	0	15.57	15.78	15.54	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	22
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	21
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	20
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	64QAM	6	0	18.61	18.63	18.44	
1.4	256QAM	1	0	16.82	16.78	16.56	
1.4	256QAM	1	3	16.50	16.67	16.76	
1.4	256QAM	1	5	16.63	16.58	16.54	
1.4	256QAM	3	0	15.62	15.73	15.62	19
1.4	256QAM	3	1	15.50	15.59	15.79	
1.4	256QAM	3	3	15.71	15.53	15.55	
1.4	256QAM	6	0	15.62	15.71	15.52	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	22
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	21
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	20
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	64QAM	6	0	18.61	18.63	18.44	
1.4	256QAM	1	0	16.82	16.78	16.56	
1.4	256QAM	1	3	16.50	16.67	16.76	
1.4	256QAM	1	5	16.63	16.58	16.54	
1.4	256QAM	3	0	15.62	15.73	15.62	19
1.4	256QAM	3	1	15.50	15.59	15.79	
1.4	256QAM	3	3	15.71	15.53	15.55	
1.4	256QAM	6	0	15.62	15.71	15.52	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	22
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	21
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	20
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	64QAM	6	0	18.61	18.63	18.44	
1.4	256QAM	1	0	16.82	16.78	16.56	
1.4	256QAM	1	3	16.50	16.67	16.76	
1.4	256QAM	1	5	16.63	16.58	16.54	
1.4	256QAM	3	0	15.62	15.73	15.62	19
1.4	256QAM	3	1	15.50	15.59	15.79	
1.4	256QAM	3	3	15.71	15.53	15.55	
1.4	256QAM	6	0	15.62	15.71	15.52	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	22
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	21
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	20
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	64QAM	6	0	18.61	18.63	18.44	
1.4	256QAM	1	0	16.82	16.78	16.56	
1.4	256QAM	1	3	16.50	16.67	16.76	
1.4	256QAM	1	5	16.63	16.58	16.54	
1.4	256QAM	3	0	15.62	15.73	15.62	19
1.4	256QAM	3	1	15.50	15.59	15.79	
1.4	256QAM	3	3	15.71	15.53	15.55	
1.4	256QAM	6	0	15.62	15.71	15.52	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	21.64	21.67	21.62	23
1.4	QPSK	1	3	21.63	21.60	21.53	
1.4	QPSK	1	5	21.54	21.64	21.56	
1.4	QPSK	3	0	20.86	20.79	20.77	
1.4	QPSK	3	1	20.56	20.72	20.71	
1.4	QPSK	3	3	20.61	20.61	20.65	
1.4	QPSK	6	0	20.71	20.71	20.52	22
1.4	16QAM	1	0	20.84	20.79	20.72	
1.4	16QAM	1	3	20.76	20.81	20.75	
1.4	16QAM	1	5	20.85	20.85	20.70	
1.4	16QAM	3	0	19.70	19.84	19.69	
1.4	16QAM	3	1	19.63	19.60	19.76	
1.4	16QAM	3	3	19.66	19.69	19.71	21
1.4	16QAM	6	0	19.60	19.69	19.80	
1.4	64QAM	1	0	19.72	19.75	19.74	
1.4	64QAM	1	3	19.73	19.82	19.67	
1.4	64QAM	1	5	19.61	19.66	19.61	
1.4	64QAM	3	0	18.74	18.64	18.57	
1.4	64QAM	3	1	18.59	18.61	18.60	20
1.4	64QAM	3	3	18.61	18.63	18.59	
1.4	64QAM	6	0	18.61	18.63	18.44	
1.4	256QAM	1	0	16.82	16.78	16.56	
1.4	256QAM	1	3	16.50	16.6		

Band 5 (Celluar Band) (dBm) Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	19.88	19.96	19.87	21
10	QPSK	1	25	19.89	19.86	19.79	
10	QPSK	1	49	19.85	19.90	19.77	
10	QPSK	25	0	18.88	18.97	18.84	20
10	QPSK	25	12	18.76	18.93	18.79	
10	QPSK	25	25	18.93	18.93	18.89	
10	QPSK	50	0	18.87	18.86	18.91	20
10	16QAM	1	0	19.06	19.09	18.97	
10	16QAM	1	25	18.95	19.05	19.12	
10	16QAM	1	49	18.89	18.91	19.08	19
10	16QAM	25	0	17.90	17.92	17.94	
10	16QAM	25	12	17.94	18.04	17.88	
10	16QAM	25	25	17.76	17.85	17.86	19
10	16QAM	50	0	17.93	17.87	17.81	
10	64QAM	1	0	18.03	17.99	17.94	
10	64QAM	1	25	17.94	17.82	17.77	19
10	64QAM	1	49	17.92	17.87	17.81	
10	64QAM	25	0	16.82	16.87	16.94	
10	64QAM	25	12	16.79	16.90	16.98	18
10	64QAM	25	25	16.87	16.93	16.77	
10	64QAM	50	0	16.72	16.93	16.91	
10	256QAM	1	0	14.77	14.68	14.56	16
10	256QAM	1	25	14.52	14.66	14.78	
10	256QAM	1	49	14.67	14.50	14.53	
10	256QAM	25	0	13.54	13.77	13.62	15
10	256QAM	25	12	13.46	13.55	13.70	
10	256QAM	25	25	13.65	13.53	13.46	
10	256QAM	50	0	13.56	13.65	13.41	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	19.87	19.91	19.85	
5	QPSK	1	12	19.71	19.92	19.91	21
5	QPSK	1	24	19.81	19.92	19.65	
5	QPSK	12	0	18.95	19.07	18.87	
5	QPSK	12	7	18.81	19.03	18.99	20
5	QPSK	12	13	18.79	18.78	18.88	
5	QPSK	25	0	18.73	18.96	18.79	
5	16QAM	1	0	18.96	19.18	18.98	20
5	16QAM	1	12	18.93	19.06	19.04	
5	16QAM	1	24	18.97	18.96	18.95	
5	16QAM	12	0	17.91	17.90	17.87	19
5	16QAM	12	7	17.82	18.07	17.96	
5	16QAM	12	13	17.79	18.00	17.88	
5	16QAM	25	0	17.73	17.92	17.86	19
5	64QAM	1	0	17.96	18.04	17.81	
5	64QAM	1	12	17.95	17.98	17.95	
5	64QAM	1	24	17.82	17.71	17.91	18
5	64QAM	12	0	16.86	17.00	16.90	
5	64QAM	12	7	16.90	16.78	16.83	
5	64QAM	12	13	16.92	16.93	16.86	16
5	64QAM	25	0	16.83	16.73	16.68	
5	256QAM	1	0	14.76	14.76	14.61	
5	256QAM	1	12	14.61	14.69	14.66	15
5	256QAM	1	24	14.54	14.57	14.49	
5	256QAM	12	0	13.53	13.70	13.64	
5	256QAM	12	7	13.57	13.72	13.67	16
5	256QAM	12	13	13.64	13.56	13.45	
5	256QAM	25	0	13.49	13.72	13.51	
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	19.80	19.88	19.75	21
3	QPSK	1	8	19.78	19.80	19.73	
3	QPSK	1	14	19.76	19.84	19.87	
3	QPSK	8	0	19.00	18.96	19.01	20
3	QPSK	8	4	18.82	19.02	18.79	
3	QPSK	8	7	18.90	19.01	18.75	
3	QPSK	15	0	18.89	18.75	18.77	20
3	16QAM	1	0	18.97	19.09	19.02	
3	16QAM	1	8	18.93	19.18	18.87	
3	16QAM	1	14	19.07	19.13	19.06	19
3	16QAM	8	0	17.92	17.95	17.86	
3	16QAM	8	4	17.89	18.05	18.01	
3	16QAM	8	7	17.70	17.92	17.91	19
3	16QAM	15	0	17.74	17.87	17.95	
3	64QAM	1	0	18.04	18.03	17.82	
3	64QAM	1	8	17.92	18.05	17.84	18
3	64QAM	1	14	17.83	17.90	17.75	
3	64QAM	8	0	16.91	16.98	16.78	
3	64QAM	8	4	16.77	16.85	16.92	16
3	64QAM	8	7	16.74	16.86	16.87	
3	64QAM	15	0	16.68	16.87	16.87	
3	256QAM	1	0	14.73	14.76	14.49	15
3	256QAM	1	8	14.48	14.71	14.80	
3	256QAM	1	14	14.56	14.48	14.44	
3	256QAM	8	0	13.43	13.66	13.63	16
3	256QAM	8	4	13.46	13.54	13.65	
3	256QAM	8	7	13.67	13.54	13.48	
3	256QAM	15	0	13.54	13.68	13.42	
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	19.83	19.85	19.82	
1.4	QPSK	1	3	19.79	19.87	19.85	21
1.4	QPSK	1	5	19.83	19.80	19.73	
1.4	QPSK	3	0	18.84	18.97	18.86	
1.4	QPSK	3	1	18.89	19.05	18.80	20
1.4	QPSK	3	3	18.83	18.95	18.84	
1.4	QPSK	6	0	18.84	18.98	18.84	
1.4	16QAM	1	0	19.09	19.07	18.95	
1.4	16QAM	1	3	19.08	19.11	19.02	

Band 12 (700MHz Low Band) (dBm) Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	20.72	20.83	20.75	22
10	QPSK	1	25	20.60	20.74	20.56	
10	QPSK	1	49	20.69	20.60	20.57	
10	QPSK	25	0	19.75	19.84	19.73	21
10	QPSK	25	12	19.59	19.67	19.60	
10	QPSK	25	25	19.46	19.63	19.65	
10	QPSK	50	0	19.53	19.64	19.50	21
10	16QAM	1	0	19.88	19.81	19.81	
10	16QAM	1	25	19.87	19.88	19.86	
10	16QAM	1	49	19.74	19.69	19.71	20
10	16QAM	25	0	18.60	18.70	18.68	
10	16QAM	25	12	18.49	18.74	18.69	
10	16QAM	25	25	18.61	18.56	18.74	20
10	16QAM	50	0	18.52	18.68	18.58	
10	64QAM	1	0	18.69	18.66	18.80	
10	64QAM	1	25	18.59	18.75	18.53	20
10	64QAM	1	49	18.65	18.56	18.54	
10	64QAM	25	0	17.66	17.68	17.74	
10	64QAM	25	12	17.49	17.63	17.72	19
10	64QAM	25	25	17.48	17.55	17.49	
10	64QAM	50	0	17.43	17.56	17.48	
10	256QAM	1	0	15.64	15.78	15.59	17
10	256QAM	1	25	15.50	15.74	15.66	
10	256QAM	1	49	15.61	15.54	15.53	
10	256QAM	25	0	14.57	14.76	14.65	16
10	256QAM	25	12	14.57	14.71	14.76	
10	256QAM	25	25	14.53	14.65	14.48	
10	256QAM	50	0	14.40	14.71	14.38	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	20.68	20.78	20.68	22
5	QPSK	1	12	20.47	20.61	20.56	
5	QPSK	1	24	20.56	20.56	20.45	
5	QPSK	12	0	19.68	19.80	19.58	21
5	QPSK	12	7	19.56	19.66	19.71	
5	QPSK	12	13	19.69	19.62	19.60	
5	QPSK	25	0	19.52	19.63	19.58	21
5	16QAM	1	0	19.79	19.87	19.84	
5	16QAM	1	12	19.87	19.92	19.73	
5	16QAM	1	24	19.82	19.74	19.62	20
5	16QAM	12	0	18.77	18.72	18.77	
5	16QAM	12	7	18.52	18.79	18.54	
5	16QAM	12	13	18.47	18.57	18.58	20
5	16QAM	25	0	18.63	18.70	18.78	
5	64QAM	1	0	18.81	18.81	18.75	
5	64QAM	1	12	18.65	18.67	18.71	20
5	64QAM	1	24	18.47	18.65	18.45	
5	64QAM	12	0	17.75	17.63	17.75	
5	64QAM	12	7	17.55	17.68	17.61	19
5	64QAM	12	13	17.48	17.56	17.66	
5	64QAM	25	0	17.60	17.49	17.57	
5	256QAM	1	0	15.63	15.72	15.43	17
5	256QAM	1	12	15.44	15.69	15.68	
5	256QAM	1	24	15.61	15.46	15.47	
5	256QAM	12	0	14.55	14.76	14.58	16
5	256QAM	12	7	14.45	14.64	14.82	
5	256QAM	12	13	14.68	14.48	14.53	
5	256QAM	25	0	14.57	14.67	14.49	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	20.71	20.77	20.68	22
3	QPSK	1	8	20.60	20.51	20.65	
3	QPSK	1	14	20.49	20.61	20.49	
3	QPSK	8	0	19.63	19.65	19.58	21
3	QPSK	8	4	19.69	19.75	19.52	
3	QPSK	8	7	19.60	19.56	19.60	
3	QPSK	15	0	19.71	19.55	19.66	21
3	16QAM	1	0	19.92	19.93	19.92	
3	16QAM	1	8	19.72	19.91	19.69	
3	16QAM	1	14	19.68	19.81	19.82	20
3	16QAM	8	0	18.75	18.88	18.86	
3	16QAM	8	4	18.60	18.78	18.65	
3	16QAM	8	7	18.61	18.70	18.70	20
3	16QAM	15	0	18.60	18.52	18.73	
3	64QAM	1	0	18.61	18.79	18.79	
3	64QAM	1	8	18.63	18.83	18.63	20
3	64QAM	1	14	18.67	18.59	18.57	
3	64QAM	8	0	17.63	17.80	17.71	
3	64QAM	8	4	17.61	17.53	17.73	19
3	64QAM	8	7	17.65	17.60	17.62	
3	64QAM	15	0	17.44	17.65	17.48	
3	256QAM	1	0	15.68	15.84	15.59	17
3	256QAM	1	8	15.50	15.72	15.81	
3	256QAM	1	14	15.67	15.43	15.54	
3	256QAM	8	0	14.46	14.67	14.54	16
3	256QAM	8	4	14.50	14.66	14.79	
3	256QAM	8	7	14.61	14.62	14.46	
3	256QAM	15	0	14.45	14.66	14.42	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	20.67	20.75	20.63	22
1.4	QPSK	1	3	20.65	20.57	20.67	
1.4	QPSK	1	5	20.52	20.63	20.61	
1.4	QPSK	3	0	19.60	19.77	19.68	21
1.4	QPSK	3	1	19.49	19.61	19.61	
1.4	QPSK	3	3	19.68	19.63	19.64	
1.4	QPSK	6	0	19.52	19.72	19.62	
1.4	16QAM	1	0	19.70	19.83	19.94	21
1.4	16QAM	1	3	19.81	19.89	19.85	

1.4	16QAM	1	5	19.07	18.99	18.85	20
1.4	16QAM	3	0	17.88	17.97	17.93	
1.4	16QAM	3	1	17.81	17.99	17.77	
1.4	16QAM	3	3	17.82	17.95	17.85	
1.4	16QAM	6	0	17.73	17.94	17.90	19
1.4	64QAM	1	0	18.05	18.04	17.93	
1.4	64QAM	1	3	17.84	17.86	17.97	19
1.4	64QAM	1	5	17.71	17.72	17.78	
1.4	64QAM	3	0	16.87	16.99	16.90	
1.4	64QAM	3	1	16.86	16.80	17.03	
1.4	64QAM	3	3	16.79	16.81	16.88	
1.4	64QAM	6	0	16.69	16.95	16.88	
1.4	256QAM	1	0	14.68	14.87	14.55	18
1.4	256QAM	1	3	14.60	14.75	14.76	
1.4	256QAM	1	5	14.64	14.52	14.66	16
1.4	256QAM	3	0	13.50	13.80	13.68	
1.4	256QAM	3	1	13.59	13.61	13.75	
1.4	256QAM	3	3	13.58	13.59	13.66	
1.4	256QAM	6	0	13.47	13.59	13.38	
1.4	256QAM	6	0	13.47	13.59	13.38	15

1.4	16QAM	1	5	19.77	19.73	19.80	21
1.4	16QAM	3	0	18.62	18.65	18.86	
1.4	16QAM	3	1	18.67	18.75	18.66	
1.4	16QAM	3	3	18.49	18.78	18.64	
1.4	16QAM	6	0	18.54	18.59	18.75	20
1.4	64QAM	1	0	18.58	18.77	18.77	
1.4	64QAM	1	3	18.71	18.59	18.59	20
1.4	64QAM	1	5	18.58	18.48	18.47	
1.4	64QAM	3	0	17.53	17.61	17.59	
1.4	64QAM	3	1	17.45	17.66	17.59	
1.4	64QAM	3	3	17.63	17.54	17.53	
1.4	64QAM	6	0	17.44	17.63	17.57	
1.4	256QAM	1	0	15.78	15.84	15.51	19
1.4	256QAM	1	3	15.48	15.65	15.67	
1.4	256QAM	1	5	15.61	15.57	15.54	17
1.4	256QAM	3	0	14.44	14.77	14.70	
1.4	256QAM	3	1	14.58	14.56	14.64	
1.4	256QAM	3	3	14.55	14.48	14.48	
1.4	256QAM	6	0	14.47	14.79	14.47	
1.4	256QAM	6	0	14.47	14.79	14.47	16

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		20.98		22
10	QPSK	1	25		20.86		
10	QPSK	1	49		20.80		
10	QPSK	25	0		20.13		21
10	QPSK	25	12		19.86		
10	QPSK	25	25		19.97		
10	QPSK	50	0		19.81		21
10	16QAM	1	0		20.01		
10	16QAM	1	25		19.93		
10	16QAM	1	49		19.94		20
10	16QAM	25	0		19.01		
10	16QAM	25	12		18.94		
10	16QAM	25	25		18.99		20
10	16QAM	50	0		18.91		
10	64QAM	1	0		19.06		
10	64QAM	1	25		18.83		20
10	64QAM	1	49		18.79		
10	64QAM	25	0		17.99		
10	64QAM	25	12		17.75		19
10	64QAM	25	25		17.92		
10	64QAM	50	0		17.92		
10	256QAM	1	0		15.80		17
10	256QAM	1	25		15.74		
10	256QAM	1	49		15.58		
10	256QAM	25	0		14.68		16
10	256QAM	25	12		14.60		
10	256QAM	25	25		14.47		
10	256QAM	50	0		14.75		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	20.88	20.92	20.85	22
5	QPSK	1	12	20.70	20.76	20.84	
5	QPSK	1	24	20.86	20.84	20.88	
5	QPSK	12	0	19.99	20.03	19.94	21
5	QPSK	12	7	19.75	19.98	19.93	
5	QPSK	12	13	19.70	19.78	19.78	
5	QPSK	25	0	19.83	19.81	19.89	21
5	16QAM	1	0	20.08	20.24	20.09	
5	16QAM	1	12	20.07	19.94	19.90	
5	16QAM	1	24	20.07	19.94	20.09	20
5	16QAM	12	0	19.00	18.90	18.88	
5	16QAM	12	7	18.83	18.95	18.84	
5	16QAM	12	13	18.84	19.05	18.91	20
5	16QAM	25	0	18.91	18.93	18.84	
5	64QAM	1	0	18.87	19.07	18.95	
5	64QAM	1	12	18.78	19.04	18.84	20
5	64QAM	1	24	18.86	18.89	18.85	
5	64QAM	12	0	17.80	18.05	17.81	
5	64QAM	12	7	17.75	17.84	17.80	19
5	64QAM	12	13	17.88	17.95	17.84	
5	64QAM	25	0	17.79	17.91	17.73	
5	256QAM	1	0	15.71	15.72	15.45	17
5	256QAM	1	12	15.56	15.58	15.64	
5	256QAM	1	24	15.51	15.40	15.36	
5	256QAM	12	0	14.46	14.69	14.70	16
5	256QAM	12	7	14.42	14.53	14.72	
5	256QAM	12	13	14.67	14.65	14.36	
5	256QAM	25	0	14.47	14.71	14.43	

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	22
Frequency (MHz)				709	710	711	
10	QPSK	1	0	20.62	20.69	20.60	22
10	QPSK	1	25	20.48	20.38	20.36	
10	QPSK	1	49	20.42	20.46	20.45	
10	QPSK	25	0	19.63	19.68	19.64	21
10	QPSK	25	12	19.52	19.40	19.54	
10	QPSK	25	25	19.42	19.50	19.42	
10	QPSK	50	0	19.44	19.35	19.43	21
10	16QAM	1	0	19.78	19.83	19.70	
10	16QAM	1	25	19.65	19.55	19.70	
10	16QAM	1	49	19.59	19.72	19.51	20
10	16QAM	25	0	18.49	18.69	18.68	
10	16QAM	25	12	18.45	18.52	18.39	
10	16QAM	25	25	18.42	18.61	18.40	20
10	16QAM	50	0	18.40	18.53	18.40	
10	64QAM	1	0	18.56	18.63	18.55	
10	64QAM	1	25	18.45	18.61	18.46	20
10	64QAM	1	49	18.39	18.47	18.37	
10	64QAM	25	0	17.49	17.64	17.45	
10	64QAM	25	12	17.33	17.36	17.45	19
10	64QAM	25	25	17.52	17.36	17.32	
10	64QAM	50	0	17.39	17.33	17.26	
10	256QAM	1	0	15.67	15.66	15.44	17
10	256QAM	1	25	15.58	15.68	15.58	
10	256QAM	1	49	15.53	15.55	15.40	
10	256QAM	25	0	14.49	14.64	14.67	16
10	256QAM	25	12	14.43	14.66	14.66	
10	256QAM	25	25	14.62	14.48	14.47	
10	256QAM	50	0	14.50	14.69	14.45	16
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	Tune-up limit (dBm)
5	QPSK	1	0	20.58	20.65	20.52	22
5	QPSK	1	12	20.44	20.34	20.33	
5	QPSK	1	24	20.36	20.44	20.45	
5	QPSK	12	0	19.43	19.61	19.51	21
5	QPSK	12	7	19.33	19.53	19.38	
5	QPSK	12	13	19.39	19.49	19.43	
5	QPSK	25	0	19.35	19.40	19.37	21
5	16QAM	1	0	19.77	19.64	19.62	
5	16QAM	1	12	19.66	19.74	19.67	
5	16QAM	1	24	19.46	19.58	19.50	20
5	16QAM	12	0	18.63	18.64	18.60	
5	16QAM	12	7	18.35	18.56	18.54	
5	16QAM	12	13	18.50	18.41	18.38	20
5	16QAM	25	0	18.38	18.39	18.42	
5	64QAM	1	0	18.46	18.51	18.47	
5	64QAM	1	12	18.54	18.59	18.55	19
5	64QAM	1	24	18.36	18.34	18.40	
5	64QAM	12	0	17.57	17.58	17.50	
5	64QAM	12	7	17.26	17.40	17.47	19
5	64QAM	12	13	17.50	17.58	17.47	
5	64QAM	25	0	17.37	17.41	17.39	
5	256QAM	1	0	15.70	15.71	15.54	17
5	256QAM	1	12	15.41	15.62	15.72	
5	256QAM	1	24	15.49	15.39	15.36	
5	256QAM	12	0	14.52	14.67	14.51	16
5	256QAM	12	7	14.45	14.59	14.64	
5	256QAM	12	13	14.48	14.50	14.44	
5	256QAM	25	0	14.45	14.60	14.38	16



Band 66 (dBm) ANT 0							
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	21.71	21.85	21.74	23
20	QPSK	1	49	21.53	21.68	21.64	
20	QPSK	1	99	21.56	21.63	21.55	
20	QPSK	50	0	20.79	20.86	20.71	22
20	QPSK	50	24	20.64	20.76	20.77	
20	QPSK	50	50	20.65	20.72	20.47	
20	QPSK	100	0	20.67	20.75	20.69	22
20	16QAM	1	0	20.90	20.87	20.81	
20	16QAM	1	49	20.95	20.90	21.01	
20	16QAM	1	99	20.91	21.08	20.81	21
20	16QAM	50	0	19.79	19.89	19.87	
20	16QAM	50	24	19.71	19.83	19.67	
20	16QAM	50	50	19.78	19.75	19.68	21
20	16QAM	100	0	19.54	19.76	19.77	
20	64QAM	1	0	19.75	19.93	19.56	
20	64QAM	1	49	19.72	19.75	19.58	21
20	64QAM	1	99	19.94	19.70	19.67	
20	64QAM	50	0	18.75	18.89	18.64	
20	64QAM	50	24	18.67	18.67	18.83	20
20	64QAM	50	50	18.85	18.63	18.66	
20	64QAM	100	0	18.76	18.77	18.50	
20	256QAM	1	0	16.63	16.78	16.46	18
20	256QAM	1	49	16.58	16.64	16.62	
20	256QAM	1	99	16.51	16.54	16.51	
20	256QAM	50	0	15.57	15.82	15.58	17
20	256QAM	50	24	15.53	15.54	15.61	
20	256QAM	50	50	15.58	15.62	15.32	
20	256QAM	100	0	15.58	15.60	15.45	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	21.68	21.79	21.76	23
15	QPSK	1	37	21.56	21.61	21.45	
15	QPSK	1	74	21.63	21.59	21.62	
15	QPSK	36	0	20.75	20.87	20.65	22
15	QPSK	36	20	20.65	20.82	20.62	
15	QPSK	36	39	20.63	20.78	20.50	
15	QPSK	75	0	20.66	20.70	20.75	22
15	16QAM	1	0	20.95	20.96	20.95	
15	16QAM	1	37	20.96	20.88	21.00	
15	16QAM	1	74	20.77	20.92	20.77	21
15	16QAM	36	0	19.83	19.91	19.85	
15	16QAM	36	20	19.61	19.82	19.78	
15	16QAM	36	39	19.78	19.85	19.61	21
15	16QAM	75	0	19.61	19.72	19.77	
15	64QAM	1	0	19.69	19.92	19.73	
15	64QAM	1	37	19.66	19.81	19.58	20
15	64QAM	1	74	19.77	19.80	19.65	
15	64QAM	36	0	18.73	18.89	18.61	
15	64QAM	36	20	18.75	18.60	18.77	18
15	64QAM	36	39	18.79	18.73	18.58	
15	64QAM	75	0	18.70	18.86	18.53	
15	256QAM	1	0	16.65	16.78	16.46	17
15	256QAM	1	37	16.43	16.77	16.63	
15	256QAM	1	74	16.64	16.59	16.52	
15	256QAM	36	0	15.47	15.69	15.65	17
15	256QAM	36	20	15.52	15.73	15.69	
15	256QAM	36	39	15.53	15.52	15.43	
15	256QAM	75	0	15.46	15.62	15.49	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	21.71	21.77	21.61	23
10	QPSK	1	25	21.60	21.74	21.47	
10	QPSK	1	49	21.50	21.70	21.45	
10	QPSK	25	0	20.86	20.88	20.65	22
10	QPSK	25	12	20.74	20.95	20.71	
10	QPSK	25	25	20.67	20.79	20.63	
10	QPSK	50	0	20.62	20.68	20.64	22
10	16QAM	1	0	20.87	20.88	20.95	
10	16QAM	1	25	20.97	21.02	20.97	
10	16QAM	1	49	20.91	20.93	20.83	21
10	16QAM	25	0	19.86	19.88	19.86	
10	16QAM	25	12	19.65	19.91	19.71	
10	16QAM	25	25	19.78	19.75	19.65	21
10	16QAM	50	0	19.65	19.71	19.78	
10	64QAM	1	0	19.79	19.80	19.67	
10	64QAM	1	25	19.64	19.68	19.68	20
10	64QAM	1	49	19.93	19.68	19.69	
10	64QAM	25	0	18.64	18.94	18.59	
10	64QAM	25	12	18.87	18.71	18.82	18
10	64QAM	25	25	18.75	18.63	18.57	
10	64QAM	50	0	18.64	18.77	18.52	
10	256QAM	1	0	16.62	16.85	16.53	17
10	256QAM	1	25	16.52	16.78	16.62	
10	256QAM	1	49	16.69	16.41	16.43	
10	256QAM	25	0	15.55	15.76	15.59	17
10	256QAM	25	12	15.52	15.66	15.79	
10	256QAM	25	25	15.63	15.55	15.41	
10	256QAM	50	0	15.46	15.63	15.48	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	21.73	21.78	21.65	23
5	QPSK	1	12	21.59	21.72	21.58	
5	QPSK	1	24	21.48	21.62	21.47	
5	QPSK	12	0	20.87	20.82	20.80	22
5	QPSK	12	7	20.77	20.88	20.76	
5	QPSK	12	13	20.65	20.89	20.60	
5	QPSK	25	0	20.71	20.66	20.69	22
5	16QAM	1	0	20.93	20.90	20.96	
5	16QAM	1	12	20.89	20.98	20.99	

5	16QAM	1	24	20.82	20.98	20.77	21
5	16QAM	12	0	19.89	20.00	19.88	
5	16QAM	12	7	19.70	19.86	19.86	
5	16QAM	12	13	19.70	19.73	19.71	
5	16QAM	25	0	19.69	19.56	19.67	21
5	64QAM	1	0	19.78	19.85	19.72	
5	64QAM	1	12	19.59	19.71	19.58	
5	64QAM	1	24	19.83	19.63	19.59	
5	64QAM	12	0	18.58	18.79	18.63	20
5	64QAM	12	7	18.68	18.61	18.69	
5	64QAM	12	13	18.70	18.69	18.55	
5	64QAM	25	0	18.72	18.75	18.56	
5	256QAM	1	0	16.62	16.78	16.43	18
5	256QAM	1	12	16.44	16.74	16.72	
5	256QAM	1	24	16.52	16.57	16.45	
5	256QAM	12	0	15.58	15.66	15.69	
5	256QAM	12	7	15.56	15.54	15.64	17
5	256QAM	12	13	15.57	15.49	15.47	
5	256QAM	25	0	15.43	15.58	15.50	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	21.59	21.75	21.60	23
3	QPSK	1	8	21.64	21.70	21.47	
3	QPSK	1	14	21.65	21.56	21.59	
3	QPSK	8	0	20.82	20.85	20.73	
3	QPSK	8	4	20.59	20.86	20.82	22
3	QPSK	8	7	20.61	20.75	20.58	
3	QPSK	15	0	20.58	20.60	20.64	
3	16QAM	1	0	20.87	20.89	20.96	
3	16QAM	1	8	20.81	20.86	20.96	22
3	16QAM	1	14	20.92	20.98	20.70	
3	16QAM	8	0	19.95	19.84	19.91	
3	16QAM	8	4	19.74	19.81	19.74	
3	16QAM	8	7	19.71	19.84	19.71	21
3	16QAM	15	0	19.57	19.72	19.77	
3	64QAM	1	0	19.63	19.86	19.61	
3	64QAM	1	8	19.58	19.75	19.75	
3	64QAM	1	14	19.89	19.65	19.71	21
3	64QAM	8	0	18.63	18.88	18.62	
3	64QAM	8	4	18.79	18.62	18.73	
3	64QAM	8	7	18.74	18.80	18.62	
3	64QAM	15	0	18.73	18.76	18.53	20
3	256QAM	1	0	16.66	16.68	16.60	
3	256QAM	1	8	16.48	16.60	16.68	
3	256QAM	1	14	16.59	16.53	16.44	
3	256QAM	8	0	15.53	15.76	15.80	18
3	256QAM	8	4	15.58	15.57	15.68	
3	256QAM	8	7	15.58	15.55	15.65	
3	256QAM	15	0	15.46	15.58	15.53	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	21.68	21.76	21.70	23
1.4	QPSK	1	3	21.72	21.63	21.56	
1.4	QPSK	1	5	21.48	21.60	21.54	
1.4	QPSK	3	0	20.75	20.88	20.81	
1.4	QPSK	3	1	20.70	20.80	20.66	
1.4	QPSK	3	3	20.70	20.76	20.54	
1.4	QPSK	6	0	20.66	20.63	20.78	23
1.4	16QAM	1	0	20.90	20.90	20.83	
1.4	16QAM	1	3	20.98	21.02	20.92	
1.4	16QAM	1	5	20.77	20.97	20.69	
1.4	16QAM	3	0	19.82	19.87	19.75	
1.4	16QAM	3	1	19.58	19.79	19.78	
1.4	16QAM	3	3	19.67	19.88	19.72	22
1.4	16QAM	6	0	19.64	19.62	19.60	
1.4	64QAM	1	0	19.70	19.90	19.64	
1.4	64QAM	1	3	19.73	19.63	19.58	
1.4	64QAM	1	5	19.88	19.81	19.63	
1.4	64QAM	3	0	18.59	18.77	18.57	
1.4	64QAM	3	1	18.76	18.72	18.80	21
1.4	64QAM	3	3	18.72	18.63	18.68	
1.4	64QAM	6	0	18.82	18.84	18.66	
1.4	256QAM	1	0	16.66	16.70	16.62	
1.4	256QAM	1	3	16.54	16.73	16.73	
1.4	256QAM	1	5	16.58	16.54	16.52	
1.4	256QAM	3	0	15.54	15.71	15.70	18
1.4	256QAM	3	1	15.52	15.66	15.80	
1.4	256QAM	3	3	15.49	15.47	15.44	
1.4	256QAM	6	0	15.53	15.71	15.57	



Band 66 (dBm) Ant1							
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	21.74	21.85	21.77	23
20	QPSK	1	49	21.56	21.71	21.67	
20	QPSK	1	99	21.59	21.66	21.58	
20	QPSK	50	0	20.82	20.86	20.74	22
20	QPSK	50	24	20.67	20.79	20.80	
20	QPSK	50	50	20.68	20.75	20.50	
20	QPSK	100	0	20.70	20.78	20.72	22
20	16QAM	1	0	20.93	20.90	20.84	
20	16QAM	1	49	20.98	20.93	21.04	
20	16QAM	1	99	20.94	21.11	20.84	21
20	16QAM	50	0	19.82	19.92	19.90	
20	16QAM	50	24	19.74	19.86	19.70	
20	16QAM	50	50	19.81	19.78	19.71	21
20	16QAM	100	0	19.57	19.79	19.80	
20	64QAM	1	0	19.78	19.96	19.59	
20	64QAM	1	49	19.75	19.78	19.61	21
20	64QAM	1	99	19.97	19.73	19.70	
20	64QAM	50	0	18.78	18.92	18.67	
20	64QAM	50	24	18.70	18.70	18.86	20
20	64QAM	50	50	18.88	18.66	18.69	
20	64QAM	100	0	18.79	18.80	18.53	
20	256QAM	1	0	16.66	16.81	16.49	19
20	256QAM	1	49	16.61	16.67	16.65	
20	256QAM	1	99	16.54	16.57	16.54	
20	256QAM	50	0	15.60	15.85	15.61	18
20	256QAM	50	24	15.56	15.57	15.64	
20	256QAM	50	50	15.61	15.65	15.35	
20	256QAM	100	0	15.61	15.63	15.48	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	21.71	21.82	21.79	23
15	QPSK	1	37	21.59	21.64	21.48	
15	QPSK	1	74	21.66	21.62	21.65	
15	QPSK	36	0	20.78	20.90	20.68	22
15	QPSK	36	20	20.68	20.85	20.65	
15	QPSK	36	39	20.66	20.81	20.53	
15	QPSK	75	0	20.69	20.73	20.78	22
15	16QAM	1	0	20.98	20.99	20.98	
15	16QAM	1	37	20.99	20.91	21.03	
15	16QAM	1	74	20.80	20.95	20.80	21
15	16QAM	36	0	19.86	19.94	19.88	
15	16QAM	36	20	19.64	19.85	19.81	
15	16QAM	36	39	19.81	19.88	19.64	21
15	16QAM	75	0	19.64	19.75	19.80	
15	64QAM	1	0	19.72	19.95	19.76	
15	64QAM	1	37	19.69	19.84	19.61	21
15	64QAM	1	74	19.80	19.83	19.68	
15	64QAM	36	0	18.76	18.92	18.64	
15	64QAM	36	20	18.78	18.63	18.80	20
15	64QAM	36	39	18.82	18.76	18.61	
15	64QAM	75	0	18.73	18.89	18.56	
15	256QAM	1	0	16.68	16.81	16.49	19
15	256QAM	1	37	16.46	16.80	16.66	
15	256QAM	1	74	16.67	16.62	16.55	
15	256QAM	36	0	15.50	15.72	15.68	18
15	256QAM	36	20	15.55	15.76	15.72	
15	256QAM	36	39	15.56	15.55	15.46	
15	256QAM	75	0	15.49	15.65	15.52	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	21.74	21.80	21.64	23
10	QPSK	1	25	21.63	21.77	21.50	
10	QPSK	1	49	21.53	21.73	21.48	
10	QPSK	25	0	20.89	20.91	20.68	22
10	QPSK	25	12	20.77	20.98	20.74	
10	QPSK	25	25	20.70	20.82	20.66	
10	QPSK	50	0	20.65	20.71	20.67	22
10	16QAM	1	0	20.90	20.91	20.98	
10	16QAM	1	25	21.00	21.05	21.00	
10	16QAM	1	49	20.94	20.96	20.86	21
10	16QAM	25	0	19.89	19.91	19.89	
10	16QAM	25	12	19.68	19.94	19.74	
10	16QAM	25	25	19.81	19.78	19.68	21
10	16QAM	50	0	19.68	19.74	19.81	
10	64QAM	1	0	19.82	19.83	19.70	
10	64QAM	1	25	19.67	19.71	19.71	21
10	64QAM	1	49	19.96	19.71	19.72	
10	64QAM	25	0	18.67	18.97	18.62	
10	64QAM	25	12	18.90	18.74	18.85	20
10	64QAM	25	25	18.78	18.66	18.60	
10	64QAM	50	0	18.67	18.80	18.55	
10	256QAM	1	0	16.65	16.88	16.56	19
10	256QAM	1	25	16.55	16.81	16.65	
10	256QAM	1	49	16.72	16.44	16.46	
10	256QAM	25	0	15.58	15.79	15.62	18
10	256QAM	25	12	15.55	15.69	15.82	
10	256QAM	25	25	15.66	15.58	15.44	
10	256QAM	50	0	15.49	15.66	15.51	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	21.76	21.81	21.68	23
5	QPSK	1	12	21.62	21.75	21.61	
5	QPSK	1	24	21.51	21.65	21.50	
5	QPSK	12	0	20.90	20.85	20.83	22
5	QPSK	12	7	20.80	20.91	20.79	
5	QPSK	12	13	20.68	20.92	20.63	
5	QPSK	25	0	20.74	20.69	20.72	22
5	16QAM	1	0	20.96	20.93	20.99	
5	16QAM	1	12	20.92	21.01	21.02	



5	16QAM	1	24	20.85	21.01	20.80	21
5	16QAM	12	0	19.92	20.03	19.91	
5	16QAM	12	7	19.73	19.89	19.89	
5	16QAM	12	13	19.73	19.78	19.74	
5	16QAM	25	0	19.72	19.59	19.70	21
5	64QAM	1	0	19.81	19.88	19.75	
5	64QAM	1	12	19.62	19.74	19.61	
5	64QAM	1	24	19.86	19.66	19.62	
5	64QAM	12	0	18.61	18.82	18.66	20
5	64QAM	12	7	18.71	18.64	18.72	
5	64QAM	12	13	18.73	18.72	18.58	
5	64QAM	25	0	18.75	18.78	18.59	
5	256QAM	1	0	16.65	16.81	16.46	19
5	256QAM	1	12	16.47	16.77	16.75	
5	256QAM	1	24	16.55	16.60	16.48	
5	256QAM	12	0	15.61	15.69	15.72	
5	256QAM	12	7	15.59	15.57	15.67	17
5	256QAM	12	13	15.60	15.52	15.50	
5	256QAM	25	0	15.46	15.61	15.53	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	21.62	21.78	21.63	23
3	QPSK	1	8	21.67	21.73	21.50	
3	QPSK	1	14	21.68	21.59	21.62	
3	QPSK	8	0	20.85	20.88	20.76	
3	QPSK	8	4	20.62	20.89	20.85	22
3	QPSK	8	7	20.64	20.78	20.61	
3	QPSK	15	0	20.61	20.63	20.67	
3	16QAM	1	0	20.90	20.92	20.99	
3	16QAM	1	8	20.84	20.89	20.99	22
3	16QAM	1	14	20.95	21.01	20.73	
3	16QAM	8	0	19.98	19.87	19.94	
3	16QAM	8	4	19.77	19.84	19.77	
3	16QAM	8	7	19.74	19.87	19.74	21
3	16QAM	15	0	19.60	19.75	19.80	
3	64QAM	1	0	19.66	19.89	19.64	
3	64QAM	1	8	19.61	19.78	19.78	
3	64QAM	1	14	19.92	19.68	19.74	21
3	64QAM	8	0	18.66	18.91	18.65	
3	64QAM	8	4	18.62	18.65	18.76	
3	64QAM	8	7	18.77	18.83	18.65	
3	64QAM	15	0	18.76	18.79	18.56	20
3	256QAM	1	0	16.69	16.71	16.63	
3	256QAM	1	8	16.51	16.63	16.71	
3	256QAM	1	14	16.62	16.56	16.47	
3	256QAM	8	0	15.56	15.79	15.63	19
3	256QAM	8	4	15.61	15.60	15.71	
3	256QAM	8	7	15.61	15.58	15.68	
3	256QAM	15	0	15.49	15.61	15.56	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	21.71	21.79	21.73	23
1.4	QPSK	1	3	21.75	21.66	21.59	
1.4	QPSK	1	5	21.51	21.63	21.57	
1.4	QPSK	3	0	20.78	20.91	20.84	
1.4	QPSK	3	1	20.73	20.83	20.69	23
1.4	QPSK	3	3	20.73	20.79	20.57	
1.4	QPSK	6	0	20.69	20.66	20.81	
1.4	16QAM	1	0	20.93	20.93	20.86	
1.4	16QAM	1	3	21.01	21.05	20.95	23
1.4	16QAM	1	5	20.80	21.00	20.72	
1.4	16QAM	3	0	19.85	19.90	19.78	
1.4	16QAM	3	1	19.61	19.82	19.81	
1.4	16QAM	3	3	19.70	19.91	19.75	22
1.4	16QAM	6	0	19.67	19.65	19.63	
1.4	64QAM	1	0	19.73	19.93	19.67	
1.4	64QAM	1	3	19.76	19.66	19.61	
1.4	64QAM	1	5	19.91	19.84	19.66	22
1.4	64QAM	3	0	18.62	18.80	18.60	
1.4	64QAM	3	1	18.79	18.75	18.83	
1.4	64QAM	3	3	18.75	18.66	18.71	
1.4	64QAM	6	0	18.85	18.87	18.69	21
1.4	256QAM	1	0	16.69	16.73	16.65	
1.4	256QAM	1	3	16.57	16.76	16.76	
1.4	256QAM	1	5	16.61	16.57	16.55	
1.4	256QAM	3	0	15.57	15.74	15.73	19
1.4	256QAM	3	1	15.55	15.69	15.83	
1.4	256QAM	3	3	15.52	15.50	15.47	
1.4	256QAM	6	0	15.56	15.74	15.60	
1.4	256QAM	6	0	15.56	15.74	15.60	18

Band 48 (3.5G Band) (dBm) ANT 2											
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	Tune-up limit (dBm)		
Frequency (MHz)				3560	3609	3625	3641	3690			
20	QPSK	1	0	17.03	17.06	17.12	17.04	16.96	18		
20	QPSK	1	49	16.53	16.55	16.55	16.58	16.57			
20	QPSK	1	99	16.59	16.57	16.59	16.39	16.53			
20	QPSK	50	0	16.13	16.04	16.19	15.99	15.89	17		
20	QPSK	50	24	15.58	15.57	15.63	15.67	15.56			
20	QPSK	50	50	15.58	15.49	15.71	15.52	15.36			
20	QPSK	100	0	15.60	15.51	15.60	15.53	15.34	17		
20	16QAM	1	0	15.86	15.81	15.91	15.86	15.71			
20	16QAM	1	49	15.76	15.88	15.73	15.66	15.57			
20	16QAM	1	99	15.74	15.66	15.79	15.75	15.60	16		
20	16QAM	50	0	14.52	14.68	14.60	14.67	14.54			
20	16QAM	50	24	14.54	14.55	14.63	14.51	14.35			
20	16QAM	50	50	14.52	14.45	14.65	14.38	14.29	16		
20	16QAM	100	0	14.55	14.49	14.59	14.53	14.39			
20	64QAM	1	0	14.72	14.73	14.77	14.56	14.63			
20	64QAM	1	49	14.72	14.64	14.68	14.62	14.55	16		
20	64QAM	1	99	14.53	14.50	14.69	14.60	14.41			
20	64QAM	50	0	14.52	14.52	14.66	14.56	14.38			
20	64QAM	50	24	14.41	14.55	14.53	14.54	14.42	15		
20	64QAM	50	50	14.57	14.42	14.52	14.43	14.33			
20	64QAM	100	0	14.52	14.42	14.60	14.46	14.28			
20	256QAM	1	0	11.53	11.47	11.54	11.41	11.26	12		
20	256QAM	1	49	11.41	11.37	11.43	11.43	11.47			
20	256QAM	1	99	11.41	11.33	11.23	11.21	11.31			
20	256QAM	50	0	10.26	10.33	10.59	10.41	10.31	12		
20	256QAM	50	24	10.32	10.36	10.49	10.48	10.44			
20	256QAM	50	50	10.31	10.47	10.30	10.22	10.28			
20	256QAM	100	0	10.31	10.35	10.51	10.19	10.16			
Channel				55315	55820	55990	56160.15	56665.15	Tune-up limit (dBm)		
Frequency (MHz)				3557.5	3608	3625	3642.15	3692.65			
15	QPSK	1	0	16.57	16.63	16.65	16.64	16.59	18		
15	QPSK	1	37	16.51	16.54	16.54	16.58	16.57			
15	QPSK	1	74	16.53	16.59	16.59	16.59	16.49			
15	QPSK	36	0	15.63	15.74	15.69	15.73	15.63	17		
15	QPSK	36	20	15.65	15.62	15.67	15.75	15.69			
15	QPSK	36	39	15.66	15.67	15.69	15.57	15.55			
15	QPSK	75	0	15.56	15.52	15.64	15.58	15.68	17		
15	16QAM	1	0	15.92	15.74	15.88	15.88	15.90			
15	16QAM	1	37	15.86	15.69	15.73	15.79	15.75			
15	16QAM	1	74	15.74	15.64	15.77	15.90	15.63	16		
15	16QAM	36	0	14.50	14.67	14.67	14.77	14.58			
15	16QAM	36	20	14.47	14.62	14.58	14.75	14.52			
15	16QAM	36	39	14.44	14.46	14.54	14.62	14.54	16		
15	16QAM	75	0	14.46	14.40	14.50	14.75	14.58			
15	64QAM	1	0	14.67	14.71	14.69	14.72	14.79			
15	64QAM	1	37	14.68	14.69	14.61	14.62	14.65	16		
15	64QAM	1	74	14.64	14.59	14.51	14.67	14.57			
15	64QAM	36	0	14.44	14.50	14.53	14.66	14.63			
15	64QAM	36	20	14.50	14.55	14.38	14.59	14.49	15		
15	64QAM	36	39	14.44	14.40	14.60	14.67	14.52			
15	64QAM	75	0	14.41	14.46	14.41	14.49	14.37			
15	256QAM	1	0	11.53	11.49	11.49	11.34	11.23	12		
15	256QAM	1	37	11.26	11.22	11.40	11.41	11.59			
15	256QAM	1	74	11.50	11.42	11.31	11.23	11.25			
15	256QAM	36	0	10.28	10.21	10.56	10.40	10.35	12		
15	256QAM	36	20	10.41	10.25	10.51	10.45	10.47			
15	256QAM	36	39	10.32	10.49	10.31	10.26	10.21			
15	256QAM	75	0	10.32	10.32	10.43	10.12	10.24			
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)		
Frequency (MHz)				3555	3607.5	3625	3642.5	3695			
10	QPSK	1	0	16.55	16.62	16.64	16.53	16.48	18		
10	QPSK	1	25	16.59	16.50	16.65	16.55	16.31			
10	QPSK	1	49	16.50	16.60	16.62	16.47	16.46			
10	QPSK	25	0	15.72	15.69	15.81	15.70	15.51	17		
10	QPSK	25	12	15.68	15.63	15.61	15.52	15.58			
10	QPSK	25	25	15.56	15.59	15.59	15.52	15.52			
10	QPSK	50	0	15.57	15.59	15.73	15.54	15.48	17		
10	16QAM	1	0	15.90	15.90	15.80	15.76	15.65			
10	16QAM	1	25	15.70	15.74	15.72	15.76	15.64			
10	16QAM	1	49	15.80	15.62	15.75	15.78	15.62	16		
10	16QAM	25	0	14.51	14.53	14.63	14.62	14.58			
10	16QAM	25	12	14.52	14.59	14.71	14.52	14.33			
10	16QAM	25	25	14.44	14.42	14.49	14.57	14.38	16		
10	16QAM	50	0	14.45	14.49	14.64	14.59	14.47			
10	64QAM	1	0	14.71	14.70	14.69	14.72	14.80			
10	64QAM	1	25	14.60	14.61	14.78	14.50	14.44	16		
10	64QAM	1	49	14.49	14.62	14.68	14.60	14.42			
10	64QAM	25	0	14.61	14.51	14.67	14.44	14.51			
10	64QAM	25	12	14.42	14.40	14.50	14.52	14.46	15		
10	64QAM	25	25	14.50	14.42	14.49	14.37	14.35			
10	64QAM	50	0	14.37	14.33	14.58	14.43	14.27			
10	256QAM	1	0	11.50	11.49	11.47	11.34	11.30	11		
10	256QAM	1	25	11.24	11.27	11.45	11.55	11.49			
10	256QAM	1	49	11.48	11.46	11.21	11.17	11.23			
10	256QAM	25	0	10.35	10.39	10.60	10.31	10.44	11		
10	256QAM	25	12	10.39	10.38	10.50	10.57	10.49			
10	256QAM	25	25	10.49	10.31	10.38	10.26	10.20			
10	256QAM	50	0	10.27	10.27	10.57	10.23	10.24			
Channel				55265	55810	55990	56170	56175	Tune-up limit (dBm)		
Frequency (MHz)				3552.5	3607	3625	3643	3697.5			
5	QPSK	1	0	16.60	16.59	16.62	16.56	16.48	18		
5	QPSK	1	12	16.51	16.57	16.56	16.47	16.39			
5	QPSK	1	24	16.49	16.49	16.50	16.48	16.39			
5	QPSK	12	0	15.79	15.80	15.70	15.65	15.66	17		
5	QPSK	12	7	15.70	15.52	15.79	15.57	15.39			
5	QPSK	12	13	15.51	15.67	15.69	15.55	15.36			
5	QPSK	25	0	15.59	15.56	15.56	15.56	15.36	17		
5	16QAM	1	0	15.82	15.89	15.81	15.70	15.73			



5	16QAM	1	12	15.74	15.86	15.77	15.63	15.55	17
5	16QAM	1	24	15.78	15.68	15.80	15.75	15.50	
5	16QAM	12	0	14.61	14.49	14.65	14.59	14.56	16
5	16QAM	12	7	14.56	14.51	14.58	14.46	14.41	
5	16QAM	12	13	14.42	14.53	14.66	14.47	14.37	
5	16QAM	25	0	14.57	14.42	14.56	14.56	14.43	
5	64QAM	1	0	14.76	14.63	14.71	14.64	14.58	16
5	64QAM	1	12	14.62	14.60	14.66	14.58	14.43	
5	64QAM	1	24	14.57	14.53	14.64	14.60	14.50	15
5	64QAM	12	0	14.53	14.59	14.59	14.45	14.36	
5	64QAM	12	7	14.38	14.39	14.41	14.46	14.53	
5	64QAM	12	13	14.60	14.59	14.46	14.56	14.43	
5	64QAM	25	0	14.52	14.39	14.41	14.39	14.34	18
5	256QAM	1	0	11.56	11.53	11.49	11.28	11.37	
5	256QAM	1	12	11.33	11.26	11.40	11.44	11.56	
5	256QAM	1	24	11.44	11.47	11.37	11.31	11.17	
5	256QAM	12	0	10.38	10.38	10.51	10.35	10.47	12
5	256QAM	12	7	10.34	10.37	10.52	10.53	10.58	
5	256QAM	12	13	10.30	10.38	10.30	10.26	10.26	
5	256QAM	25	0	10.27	10.24	10.53	10.25	10.29	

Band 48 (3.5G Band) (dBm) Ant3										
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	Tune-up limit (dBm)	
Frequency (MHz)				3560	3609	3625	3641	3690	Tune-up limit (dBm)	
20	QPSK	1	0	20.06	20.09	20.12	20.07	19.99	21	
20	QPSK	1	49	19.56	19.58	19.58	19.61	19.60		
20	QPSK	1	99	19.62	19.60	19.62	19.42	19.56		
20	QPSK	50	0	19.16	19.07	19.19	19.02	18.92	20	
20	QPSK	50	24	18.61	18.60	18.66	18.70	18.59		
20	QPSK	50	50	18.61	18.52	18.74	18.55	18.39		
20	QPSK	100	0	18.63	18.54	18.63	18.56	18.37	20	
20	16QAM	1	0	18.89	18.84	18.94	18.89	18.74		
20	16QAM	1	49	18.79	18.91	18.76	18.69	18.60		
20	16QAM	1	99	18.77	18.69	18.82	18.78	18.63	20	
20	16QAM	50	0	17.55	17.71	17.63	17.70	17.57		
20	16QAM	50	24	17.57	17.58	17.66	17.54	17.38		
20	16QAM	50	50	17.55	17.48	17.68	17.41	17.32	19	
20	16QAM	100	0	17.58	17.52	17.62	17.56	17.42		
20	64QAM	1	0	17.75	17.76	17.80	17.59	17.66		
20	64QAM	1	49	17.75	17.67	17.71	17.65	17.58	19	
20	64QAM	1	99	17.56	17.53	17.72	17.63	17.44		
20	64QAM	50	0	17.55	17.55	17.69	17.59	17.41		
20	64QAM	50	24	17.44	17.58	17.56	17.57	17.45	18	
20	64QAM	50	50	17.60	17.45	17.55	17.46	17.36		
20	64QAM	100	0	17.55	17.45	17.63	17.49	17.31		
20	256QAM	1	0	14.56	14.50	14.57	14.44	14.29	15	
20	256QAM	1	49	14.44	14.40	14.46	14.46	14.50		
20	256QAM	1	99	14.44	14.36	14.26	14.24	14.34		
20	256QAM	50	0	13.29	13.36	13.62	13.44	13.34	15	
20	256QAM	50	24	13.35	13.39	13.52	13.51	13.47		
20	256QAM	50	50	13.34	13.50	13.33	13.25	13.31		
20	256QAM	100	0	13.34	13.38	13.54	13.22	13.19		
Channel				55315	55820	55990	56160.15	56665.15	Tune-up limit (dBm)	
Frequency (MHz)				3557.5	3608	3625	3642.15	3692.65	Tune-up limit (dBm)	
15	QPSK	1	0	19.60	19.66	19.68	19.67	19.62	21	
15	QPSK	1	37	19.54	19.57	19.57	19.61	19.60		
15	QPSK	1	74	19.56	19.62	19.62	19.62	19.52		
15	QPSK	36	0	18.66	18.77	18.72	18.76	18.66	20	
15	QPSK	36	20	18.68	18.65	18.70	18.78	18.72		
15	QPSK	36	39	18.69	18.70	18.72	18.60	18.58		
15	QPSK	75	0	18.59	18.55	18.67	18.61	18.71	20	
15	16QAM	1	0	18.95	18.77	18.91	18.91	18.93		
15	16QAM	1	37	18.89	18.72	18.76	18.82	18.78		
15	16QAM	1	74	18.77	18.67	18.80	18.93	18.66	19	
15	16QAM	36	0	17.53	17.70	17.70	17.80	17.61		
15	16QAM	36	20	17.50	17.65	17.61	17.78	17.55		
15	16QAM	36	39	17.47	17.49	17.57	17.65	17.57	19	
15	16QAM	75	0	17.49	17.43	17.53	17.78	17.61		
15	64QAM	1	0	17.70	17.74	17.72	17.75	17.82		
15	64QAM	1	37	17.71	17.72	17.64	17.65	17.68	19	
15	64QAM	1	74	17.67	17.62	17.54	17.70	17.60		
15	64QAM	36	0	17.47	17.53	17.56	17.69	17.66		
15	64QAM	36	20	17.53	17.58	17.41	17.62	17.52	18	
15	64QAM	36	39	17.47	17.43	17.63	17.70	17.55		
15	64QAM	75	0	17.44	17.49	17.44	17.52	17.40		
15	256QAM	1	0	14.56	14.52	14.52	14.37	14.26	15	
15	256QAM	1	37	14.29	14.25	14.43	14.44	14.62		
15	256QAM	1	74	14.53	14.45	14.34	14.26	14.28		
15	256QAM	36	0	13.31	13.24	13.59	13.43	13.38	15	
15	256QAM	36	20	13.44	13.28	13.54	13.48	13.50		
15	256QAM	36	39	13.35	13.52	13.34	13.29	13.24		
15	256QAM	75	0	13.35	13.35	13.46	13.15	13.27		
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)	
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	Tune-up limit (dBm)	
10	QPSK	1	0	19.58	19.65	19.67	19.56	19.51	21	
10	QPSK	1	25	19.62	19.53	19.68	19.58	19.34		
10	QPSK	1	49	19.53	19.63	19.65	19.50	19.49		
10	QPSK	25	0	18.75	18.72	18.84	18.73	18.54	20	
10	QPSK	25	12	18.71	18.66	18.64	18.55	18.61		
10	QPSK	25	25	18.59	18.62	18.62	18.55	18.55		
10	QPSK	50	0	18.60	18.62	18.76	18.57	18.51	20	
10	16QAM	1	0	18.93	18.93	18.83	18.79	18.68		
10	16QAM	1	25	18.73	18.77	18.75	18.79	18.67		
10	16QAM	1	49	18.83	18.65	18.78	18.81	18.65	19	
10	16QAM	25	0	17.54	17.56	17.66	17.65	17.61		
10	16QAM	25	12	17.55	17.62	17.74	17.55	17.36		
10	16QAM	25	25	17.47	17.45	17.52	17.60	17.41	19	
10	16QAM	50	0	17.48	17.52	17.67	17.62	17.50		
10	64QAM	1	0	17.74	17.73	17.72	17.75	17.63		
10	64QAM	1	25	17.63	17.64	17.81	17.53	17.47	19	
10	64QAM	1	49	17.52	17.65	17.71	17.63	17.45		
10	64QAM	25	0	17.64	17.54	17.70	17.47	17.54		
10	64QAM	25	12	17.45	17.43	17.53	17.55	17.49	18	
10	64QAM	25	25	17.53	17.45	17.52	17.40	17.38		
10	64QAM	50	0	17.40	17.36	17.61	17.46	17.30		
10	256QAM	1	0	14.53	14.52	14.50	14.37	14.33	14	
10	256QAM	1	25	14.27	14.30	14.48	14.58	14.52		
10	256QAM	1	49	14.51	14.49	14.24	14.20	14.26		
10	256QAM	25	0	13.38	13.42	13.63	13.34	13.47	14	
10	256QAM	25	12	13.42	13.41	13.53	13.60	13.52		
10	256QAM	25	25	13.52	13.34	13.41	13.29	13.23		
10	256QAM	50	0	13.30	13.30	13.60	13.26	13.27		
Channel				55265	55810	55990	56170	56175	Tune-up limit (dBm)	
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	Tune-up limit (dBm)	
5	QPSK	1	0	19.63	19.62	19.65	19.59	19.51	21	
5	QPSK	1	12	19.54	19.60	19.59	19.50	19.42		
5	QPSK	1	24	19.52	19.52	19.53	19.51	19.42		
5	QPSK	12	0	18.82	18.83	18.73	18.68	18.69	20	
5	QPSK	12	7	18.73	18.55	18.82	18.60	18.42		
5	QPSK	12	13	18.54	18.70	18.72	18.58	18.39		
5	QPSK	25	0	18.62	18.59	18.59	18.59	18.39	20	
5	16QAM	1	0	18.85	18.92	18.84	18.73	18.76		
5	16QAM	1	0	18.85	18.92	18.84	18.73	18.76		



5	16QAM	1	12	18.77	18.89	18.80	18.66	18.58	20
5	16QAM	1	24	18.81	18.71	18.83	18.78	18.53	
5	16QAM	12	0	17.64	17.52	17.68	17.62	17.59	
5	16QAM	12	7	17.59	17.54	17.61	17.49	17.44	19
5	16QAM	12	13	17.45	17.56	17.69	17.50	17.40	
5	16QAM	25	0	17.60	17.45	17.59	17.59	17.46	
5	64QAM	1	0	17.79	17.66	17.74	17.67	17.61	
5	64QAM	1	12	17.65	17.63	17.69	17.61	17.46	19
5	64QAM	1	24	17.60	17.56	17.67	17.63	17.53	
5	64QAM	12	0	17.56	17.62	17.62	17.48	17.39	
5	64QAM	12	7	17.41	17.42	17.44	17.49	17.56	18
5	64QAM	12	13	17.63	17.62	17.49	17.59	17.46	
5	64QAM	25	0	17.55	17.42	17.44	17.42	17.37	
5	256QAM	1	0	14.59	14.56	14.52	14.31	14.40	
5	256QAM	1	12	14.36	14.29	14.43	14.47	14.59	18
5	256QAM	1	24	14.47	14.50	14.40	14.34	14.20	
5	256QAM	12	0	13.41	13.41	13.54	13.38	13.50	
5	256QAM	12	7	13.37	13.40	13.55	13.56	13.61	15
5	256QAM	12	13	13.33	13.41	13.33	13.29	13.29	
5	256QAM	25	0	13.30	13.27	13.56	13.28	13.32	

n2 (PC3)_Ant 0							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				372000	376000	380000	(dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	21.89	21.70	21.27	22.50
20		1	53	21.85	21.50	21.57	
20		1	104	21.74	21.37	21.55	
20		50	1	21.64	21.57	21.80	22.50
20		50	25	21.94	21.60	21.86	
20		50	50	21.74	21.59	21.60	
20		100	0	21.69	21.72	21.73	
20	DFT-s-OFDM QPSK	1	1	22.30	22.35	22.26	23.50
20		1	53	22.20	22.17	22.14	
20		1	104	22.09	22.07	22.02	
20		50	1	21.90	21.95	21.84	22.50
20		50	25	21.79	21.59	21.74	
20		50	50	21.58	21.45	21.29	
20		100	0	21.50	21.59	21.46	
20	DFT-s-OFDM 16QAM	1	1	20.86	20.65	20.26	21.00
20	DFT-s-OFDM 64QAM	1	1	19.44	19.17	18.78	20.00
20	DFT-s-OFDM 256QAM	1	1	17.21	17.00	16.59	17.50
20	CP-OFDM QPSK	1	1	20.44	20.17	19.76	20.00
20	CP-OFDM 16QAM	1	1	19.86	19.63	19.21	21.50
20	CP-OFDM 64QAM	1	1	18.26	17.93	17.59	19.00
20	CP-OFDM 256QAM	1	1	15.22	14.96	14.59	15.50
Channel				371500	376000	380500	Tune-up limit
Frequency (MHz)				1857.5	1880	1902.5	(dBm)
15	DFT-s-OFDM QPSK	1	1	22.16	21.60	21.41	22.50
Channel				371000	376000	381000	Tune-up limit
Frequency (MHz)				1855	1880	1905	(dBm)
10	DFT-s-OFDM QPSK	1	1	21.71	21.68	20.99	22.50
Channel				370500	376000	381500	Tune-up limit
Frequency (MHz)				1852.5	1880	1907.5	(dBm)
5	DFT-s-OFDM QPSK	1	1	21.96	21.39	20.83	22.50

n5 (PC3)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				166800	167300	167800	(dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	19.40	19.38	19.45	20.50
20		1	53	19.44	19.43	19.38	
20		1	104	19.30	19.26	19.25	
20		50	1	19.19	19.12	19.23	19.50
20	DFT-s-OFDM QPSK	50	25	19.50	19.51	19.52	
20		50	50	19.21	19.17	19.13	
20		100	0	19.23	19.22	19.22	
20	DFT-s-OFDM 16QAM	1	1	19.47	19.59	19.44	20.50
20		1	53	19.40	19.45	19.42	
20		1	104	19.32	19.30	19.22	
20		50	1	18.67	18.66	18.65	19.50
20	DFT-s-OFDM 64QAM	50	25	18.23	18.35	18.46	
20		50	50	18.35	18.27	18.23	
20		100	0	18.28	18.44	18.32	
20	DFT-s-OFDM 256QAM	1	1	18.62	18.66	18.67	19.50
20	CP-OFDM QPSK	1	1	17.02	17.13	17.13	17.50
20	CP-OFDM 16QAM	1	1	14.89	14.93	14.96	15.50
20	CP-OFDM 64QAM	1	1	18.12	18.21	18.13	18.50
20	CP-OFDM 256QAM	1	1	17.52	17.62	17.62	18.00
20		1	1	15.69	15.79	15.76	16.50
20		1	1	12.90	13.01	12.99	14.00
Channel				166300	167300	168300	Tune-up limit
Frequency (MHz)				831.5	836.5	841.5	(dBm)
15	DFT-s-OFDM QPSK	1	1	19.40	19.45	19.45	20.50
Channel				165800	167300	168800	Tune-up limit
Frequency (MHz)				829	836.5	844	(dBm)
10	DFT-s-OFDM QPSK	1	1	19.18	19.29	19.27	20.50
Channel				165300	167300	169300	Tune-up limit
Frequency (MHz)				826.5	836.5	846.5	(dBm)
5	DFT-s-OFDM QPSK	1	1	19.24	19.32	19.26	20.50

n48 (PC3)									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				638000	639834	641666	643500	645332	limit
Frequency (MHz)				3570	3597.51	3624.99	3652.5	3679.98	(dBm)
40	DFT-s-OFDM PI/2 BPSK	1	1	13.15	12.98	13.09	12.84	12.93	14.00
40		1	53	13.06	13.08	12.68	12.89	12.98	
40		1	104	13.11	12.90	13.05	13.08	13.27	
40		50	1	12.65	12.54	12.30	12.46	12.52	14.00
40		50	25	13.11	13.13	12.75	12.96	12.99	
40		50	50	12.53	12.54	12.28	12.38	12.58	
40	DFT-s-OFDM QPSK	100	0	12.63	12.63	12.24	12.44	12.49	14.00
40		1	1	13.13	13.20	13.28	13.17	13.23	
40		1	53	12.92	13.11	12.68	12.91	12.95	
40		1	104	13.13	12.88	13.05	13.13	13.01	13.00
40		50	1	12.25	12.36	12.39	12.12	12.26	
40		50	25	12.10	12.18	12.00	12.03	12.05	
40	DFT-s-OFDM 16QAM	50	50	11.93	12.03	11.77	11.87	12.07	13.00
40		100	0	12.14	12.13	11.75	11.96	12.02	
40	DFT-s-OFDM 64QAM	1	1	12.06	11.91	11.95	11.81	11.87	13.00
40	DFT-s-OFDM 256QAM	1	1	10.75	10.53	10.55	10.36	10.47	11.50
40	CP-OFDM QPSK	1	1	8.44	8.30	8.29	8.14	8.24	9.00
40	CP-OFDM 16QAM	1	1	11.71	11.51	11.52	11.38	11.46	12.50
40	CP-OFDM 64QAM	1	1	11.18	10.98	10.99	10.86	10.96	12.00
40	CP-OFDM 256QAM	1	1	9.26	9.10	9.12	8.95	9.08	10.00
40	CP-OFDM 256QAM	1	1	6.46	6.29	6.31	6.14	6.20	7.00
Channel				637668	639668	641666	643666	645666	Tune-up
Frequency (MHz)				3565.02	3595.02	3624.99	3654.99	3684.99	limit
30	DFT-s-OFDM QPSK	1	1	13.09	13.02	12.85	12.97	12.99	14.00
Channel				637334	639500	641666	643832	646000	Tune-up
Frequency (MHz)				3560.01	3592.5	3624.99	3657.48	3690	limit
20	DFT-s-OFDM QPSK	1	1	13.26	12.93	12.79	12.90	12.96	14.00
Channel				637000	639334	641666	644000	646332	Tune-up
Frequency (MHz)				3555	3590.01	3624.99	3660	3694.98	limit
10	DFT-s-OFDM QPSK	1	1	13.09	13.08	12.77	13.00	13.16	14.00

n66 (PC3)_Ant 0							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				345000	349000	353000	(dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM PI/2 BPSK	1	1	21.63	21.64	21.52	22.50
30		1	80	21.69	21.60	21.52	
30		1	158	21.51	21.40	21.46	
30		80	1	21.25	21.15	21.01	22.50
30		80	40	21.77	21.67	21.57	
30		80	80	21.25	21.12	21.08	
30		160	0	21.31	21.19	21.09	
30	DFT-s-OFDM QPSK	1	1	22.07	22.09	22.05	23.00
30		1	80	21.72	21.69	21.61	
30		1	158	21.57	21.50	21.60	
30		80	1	20.71	20.75	20.69	22.00
30		80	40	20.53	20.56	20.58	
30		80	80	20.70	20.65	20.63	
30		160	0	20.60	20.65	20.52	
30	DFT-s-OFDM 16QAM	1	1	20.58	20.63	20.50	21.50
30	DFT-s-OFDM 64QAM	1	1	19.12	19.12	18.96	20.00
30	DFT-s-OFDM 256QAM	1	1	16.93	16.92	16.79	17.50
30	CP-OFDM QPSK	1	1	20.11	20.19	20.10	21.00
30	CP-OFDM 16QAM	1	1	19.50	19.54	19.42	20.50
30	CP-OFDM 64QAM	1	1	17.81	17.81	17.65	18.50
30	CP-OFDM 256QAM	1	1	14.95	14.99	14.85	15.50
Channel				344000	349000	354000	Tune-up limit
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	21.92	21.88	21.91	22.50
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	21.78	21.76	21.70	22.50
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	21.90	21.97	21.56	22.50
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	21.88	22.01	21.44	22.50

n66 (PC3)_Ant 1							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit
Channel				345000	349000	353000	(dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM PI/2 BPSK	1	1	21.13	21.14	21.02	22.00
30		1	80	21.19	21.10	21.02	
30		1	158	21.01	20.90	20.96	
30		80	1	20.75	20.65	20.51	22.00
30		80	40	21.27	21.17	21.07	
30		80	80	20.75	20.62	20.58	
30		160	0	20.81	20.69	20.59	
30	DFT-s-OFDM QPSK	1	1	21.57	21.59	21.55	22.50
30		1	80	21.22	21.19	21.11	
30		1	158	21.07	21.00	21.10	
30		80	1	20.21	20.25	20.19	21.00
30		80	40	20.03	20.06	20.08	
30		80	80	20.20	20.15	20.13	
30		160	0	20.10	20.15	20.02	
30	DFT-s-OFDM 16QAM	1	1	20.08	20.13	20.00	19.50
30	DFT-s-OFDM 64QAM	1	1	18.62	18.62	18.46	19.50
30	DFT-s-OFDM 256QAM	1	1	16.43	16.42	16.29	17.00
30	CP-OFDM QPSK	1	1	19.61	19.69	19.60	20.50
30	CP-OFDM 16QAM	1	1	19.00	19.04	18.92	20.00
30	CP-OFDM 64QAM	1	1	17.31	17.31	17.15	18.00
30	CP-OFDM 256QAM	1	1	14.45	14.49	14.35	15.00
Channel				344000	349000	354000	Tune-up limit
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	21.42	21.38	21.41	22.00
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	21.28	21.26	21.20	22.00
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	21.40	21.47	21.06	22.00
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	21.38	21.51	20.94	22.00

n77(3450-3550MHz) (PC2)_Ant 2									
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			12.25			13.00
100		1	136			12.00			
100		1	271			11.93			
100		135	1			11.66			12.50
100		135	67			12.16			
100		135	136			11.24			
100		270	0			11.61			13.50
100	DFT-s-OFDM QPSK	1	1			12.77			
100		1	136			12.07			
100		1	271			11.97			
100		135	1			12.13			12.50
100		135	67			11.16			
100		135	136			10.72			
100		270	0			11.11			
100	DFT-s-OFDM 16QAM	1	1			11.19			12.00
100	DFT-s-OFDM 64QAM	1	1			9.85			10.50
100	DFT-s-OFDM 256QAM	1	1			7.56			8.50
100	CP-OFDM QPSK	1	1			10.69			11.50
100	CP-OFDM 16QAM	1	1			10.21			11.00
100	CP-OFDM 64QAM	1	1			8.39			9.00
100	CP-OFDM 256QAM	1	1			5.63			6.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	12.20	12.25	12.25	12.17	12.13	13.00
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	12.36	12.36	12.32	12.20	12.19	13.00
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	12.09	12.62	12.52	12.46	12.13	13.00
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.62	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	12.63	12.55	12.44	12.27	11.89	13.00
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	12.51	12.43	12.34	12.04	11.69	13.00

n77(3450-3550MHz) (PC3)_Ant 2									
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			12.05			13.00
100		1	136			11.76			
100		1	271			11.23			
100		135	1			12.09			13.00
100		135	67			11.84			
100		135	136			11.21			
100		270	0			11.82			
100	DFT-s-OFDM QPSK	1	1			12.41			13.50
100		1	136			11.83			
100		1	271			11.71			
100		135	1			11.95			12.50
100		135	67			11.84			
100		135	136			11.19			
100		270	0			11.84			
100	DFT-s-OFDM 16QAM	1	1			12.17			13.00
100	DFT-s-OFDM 64QAM	1	1			12.29			13.00
100	DFT-s-OFDM 256QAM	1	1			10.61			11.50
100	CP-OFDM QPSK	1	1			12.32			13.50
100	CP-OFDM 16QAM	1	1			12.37			13.50
100	CP-OFDM 64QAM	1	1			11.43			12.50
100	CP-OFDM 256QAM	1	1			8.62			9.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	12.30	12.30	12.19	12.12	12.09	13.00
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	11.94	11.90	11.84	11.74	12.19	13.00
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	12.12	12.04	12.03	11.97	11.72	13.00
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	12.13	12.02	11.98	11.84	11.45	13.00
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	12.07	11.98	11.97	11.68	11.36	13.00

n77(3700-3980MHz) (PC2)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	10.26	10.51	10.28	10.50	10.85	11.50
100		1	136	10.47	10.42	10.53	10.64	10.39	
100		1	271	10.32	10.64	10.62	10.21	10.82	
100		135	1	10.17	9.92	9.84	9.88	10.20	11.00
100		135	67	10.51	10.48	10.61	10.67	10.55	
100		135	136	9.79	9.81	9.83	9.88	10.17	
100		270	0	9.93	10.04	10.17	10.15	10.18	
100	DFT-s-OFDM QPSK	1	1	10.22	10.50	11.23	10.51	10.34	12.00
100		1	136	10.50	10.38	10.63	10.88	10.42	
100		1	271	10.40	10.59	9.37	10.37	10.86	
100		135	1	9.69	9.44	10.64	9.81	9.73	12.00
100		135	67	10.51	10.44	11.00	10.64	10.52	
100		135	136	9.28	9.29	9.38	9.61	9.64	
100		270	0	9.41	9.44	9.67	9.98	9.71	
100	DFT-s-OFDM 16QAM	1	1	9.08	9.41	9.23	9.80	9.83	11.00
100	DFT-s-OFDM 64QAM	1	1	7.70	8.06	7.89	8.46	8.42	9.50
100	DFT-s-OFDM 256QAM	1	1	5.47	5.75	5.66	6.16	6.15	7.00
100	CP-OFDM QPSK	1	1	8.71	9.06	8.84	9.44	9.35	10.50
100	CP-OFDM 16QAM	1	1	8.27	8.53	8.37	8.97	8.88	10.00
100	CP-OFDM 64QAM	1	1	6.38	6.62	6.46	7.10	7.02	8.00
100	CP-OFDM 256QAM	1	1	3.53	3.80	3.67	4.24	4.14	5.00
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	10.27	10.64	10.45	10.51	10.47	11.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	10.45	10.66	10.47	10.65	10.34	11.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	10.50	10.67	10.55	10.73	10.42	11.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	10.20	10.42	10.43	10.71	10.28	11.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	10.30	10.58	10.58	10.70	10.47	11.50

n77(3700-3980MHz) (PC3)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	10.82	10.90	10.80	10.94	10.57	12.00
100		1	136	10.89	10.84	10.97	10.57	10.15	
100		1	271	10.80	10.93	10.51	10.19	10.99	
100		135	1	11.23	10.78	10.75	10.64	10.32	12.00
100		135	67	10.99	10.92	11.06	10.71	10.17	
100		135	136	10.67	10.71	10.55	10.27	10.53	
100		270	0	10.94	10.94	11.01	10.76	10.32	
100	DFT-s-OFDM QPSK	1	1	11.40	11.44	11.48	11.30	11.47	12.50
100		1	136	11.22	11.18	10.94	11.20	11.13	
100		1	271	11.06	11.00	10.82	11.06	11.06	
100		135	1	10.89	10.93	10.96	10.91	10.87	11.50
100		135	67	10.86	10.82	10.85	10.79	10.85	
100		135	136	10.67	10.71	10.55	10.76	10.54	
100		270	0	10.85	10.84	10.75	10.80	10.88	
100	DFT-s-OFDM 16QAM	1	1	10.78	10.83	10.80	10.85	10.55	11.50
100	DFT-s-OFDM 64QAM	1	1	10.81	10.83	10.88	10.95	10.56	11.50
100	DFT-s-OFDM 256QAM	1	1	9.16	9.15	9.15	9.29	8.89	10.00
100	CP-OFDM QPSK	1	1	10.86	10.85	10.84	11.01	10.60	12.00
100	CP-OFDM 16QAM	1	1	10.89	10.88	10.85	11.04	10.61	12.00
100	CP-OFDM 64QAM	1	1	10.00	9.98	9.98	10.08	9.73	11.00
100	CP-OFDM 256QAM	1	1	7.20	7.16	7.15	7.27	6.91	8.00
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	10.86	10.89	10.77	10.79	10.33	12.00
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	10.89	10.96	10.88	10.67	10.02	12.00
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	11.24	11.35	11.26	11.04	10.71	12.00
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	11.28	11.25	11.19	10.89	10.80	12.00
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	11.18	11.18	11.23	10.66	10.91	12.00

n77(3450-3550MHz) (PC2)_Ant 3									
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			17.62			18.50
100		1	136			17.37			
100		1	271			17.30			
100		135	1			17.03			18.50
100		135	67			17.53			
100		135	136			16.61			
100		270	0			16.98			
100	DFT-s-OFDM QPSK	1	1			18.14			19.00
100		1	136			17.44			
100		1	271			17.34			
100		135	1			17.50			18.50
100		135	67			16.53			
100		135	136			16.09			
100		270	0			16.48			
100	DFT-s-OFDM 16QAM	1	1			16.56			17.50
100	DFT-s-OFDM 64QAM	1	1			15.22			17.00
100	DFT-s-OFDM 256QAM	1	1			12.93			14.00
100	CP-OFDM QPSK	1	1			16.06			17.00
100	CP-OFDM 16QAM	1	1			15.58			16.50
100	CP-OFDM 64QAM	1	1			13.76			14.50
100	CP-OFDM 256QAM	1	1			11.00			12.00
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	17.67	17.72	17.72	17.64	17.60	18.50
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	17.83	17.83	17.79	17.67	17.66	18.50
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	17.06	17.59	17.49	17.43	17.10	18.50
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	17.60	17.52	17.41	17.24	16.86	18.50
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	17.48	17.40	17.31	17.01	16.66	18.50

n77(3450-3550MHz) (PC3)_Ant 3									
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			17.82			18.50
100		1	136			17.53			
100		1	271			17.00			
100		135	1			17.86			18.50
100		135	67			17.61			
100		135	136			16.98			
100		270	0			17.59			
100	DFT-s-OFDM QPSK	1	1			18.18			19.00
100		1	136			17.96			
100		1	271			17.99			
100		135	1			17.72			18.50
100		135	67			17.61			
100		135	136			16.96			
100		270	0			17.61			
100	DFT-s-OFDM 16QAM	1	1			17.94			18.50
100	DFT-s-OFDM 64QAM	1	1			18.06			18.50
100	DFT-s-OFDM 256QAM	1	1			16.38			18.00
100	CP-OFDM QPSK	1	1			18.09			19.00
100	CP-OFDM 16QAM	1	1			18.14			19.00
100	CP-OFDM 64QAM	1	1			17.20			18.00
100	CP-OFDM 256QAM	1	1			14.39			15.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3495	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	18.30	18.30	18.19	18.12	18.09	18.50
Channel				632000	632668	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3490.02	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	17.94	17.90	17.84	17.74	18.19	18.50
Channel				631334	632334	633334	634332	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3514.98	3529.98	
40	DFT-s-OFDM QPSK	1	1	18.12	18.04	18.03	17.97	17.72	18.50
Channel				631000	632168	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.52	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	18.13	18.02	17.98	17.84	17.45	18.50
Channel				630668	632000	633334	634666	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3519.99	3540	
20	DFT-s-OFDM QPSK	1	1	18.07	17.98	17.97	17.68	17.36	18.50

n77(3700-3980MHz) (PC2)_Ant 3									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	15.23	15.48	15.25	15.47	15.82	16.50
100		1	136	15.44	15.39	15.50	15.61	15.36	
100		1	271	15.29	15.61	15.59	15.18	15.79	
100		135	1	15.14	14.89	14.81	14.85	15.17	16.50
100		135	67	15.48	15.45	15.58	15.64	15.52	
100		135	136	14.76	14.78	14.80	14.85	15.14	
100	DFT-s-OFDM QPSK	270	0	14.90	15.01	15.14	15.12	15.15	17.00
100		1	1	16.17	16.10	16.20	16.15	16.17	
100		1	136	16.03	15.35	14.57	15.85	15.39	
100		1	271	15.37	15.56	14.41	15.34	15.83	16.50
100		135	1	15.48	15.41	15.67	15.97	15.49	
100		135	67	14.49	14.58	14.68	14.67	14.79	
100	DFT-s-OFDM 16QAM	135	136	14.25	14.26	14.35	14.58	14.61	16.50
100		270	0	14.38	14.41	14.42	14.95	14.68	
100		1	1	14.05	14.38	14.20	14.77	14.80	
100		1	1	12.67	13.03	12.86	13.43	13.39	
100	DFT-s-OFDM 64QAM	1	1	10.44	10.72	10.63	11.13	11.12	12.00
100	DFT-s-OFDM 256QAM	1	1	13.68	14.03	13.81	14.41	14.32	15.50
100	CP-OFDM QPSK	1	1	13.24	13.50	13.34	13.94	13.85	15.00
100	CP-OFDM 16QAM	1	1	11.35	11.59	11.43	12.07	11.99	13.00
100	CP-OFDM 64QAM	1	1	8.50	8.77	8.64	9.21	9.11	10.00
100	CP-OFDM 256QAM	1	1	8.50	8.77	8.64	9.21	9.11	10.00
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	15.24	15.61	15.42	15.48	15.44	16.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	15.42	15.63	15.44	15.62	15.31	16.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	15.47	15.64	15.52	15.70	15.39	16.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	15.17	15.39	15.40	15.68	15.25	16.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	15.27	15.55	15.55	15.67	15.44	16.50

n77(3700-3980MHz) (PC3)_Ant 3									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	Middle Channel	Middle/High Channel	High Channel	Tune-up
Channel				650000	653000	656000	659000	662000	limit
Frequency (MHz)				3750	3795	3840	3885	3930	(dBm)
100	DFT-s-OFDM PI/2 BPSK	1	1	15.29	15.37	15.27	15.41	15.04	16.50
100		1	136	15.36	15.31	15.44	15.04	14.62	
100		1	271	15.27	15.40	14.98	14.66	15.46	
100		135	1	15.70	15.25	15.22	15.11	14.79	16.50
100		135	67	15.46	15.39	15.53	15.18	14.64	
100		135	136	15.14	15.18	15.02	14.74	15.00	
100		270	0	15.41	15.41	15.48	15.23	14.79	
100	DFT-s-OFDM QPSK	1	1	15.87	15.91	15.95	15.77	15.94	17.00
100		1	136	15.69	15.65	15.27	15.67	15.60	
100		1	271	15.53	15.47	15.26	15.53	15.53	
100		135	1	15.36	15.40	15.43	15.38	15.34	16.50
100		135	67	15.33	15.29	15.32	15.26	15.32	
100		135	136	15.14	15.18	15.02	15.23	15.01	
100		270	0	15.32	15.31	15.22	15.27	15.35	
100	DFT-s-OFDM 16QAM	1	1	15.25	15.30	15.27	15.32	15.02	16.50
100	DFT-s-OFDM 64QAM	1	1	15.28	15.30	15.35	15.42	15.03	16.50
100	DFT-s-OFDM 256QAM	1	1	13.63	13.62	13.62	13.76	13.36	14.50
100	CP-OFDM QPSK	1	1	15.33	15.32	15.31	15.48	15.07	16.50
100	CP-OFDM 16QAM	1	1	15.36	15.35	15.32	15.51	15.08	16.50
100	CP-OFDM 64QAM	1	1	14.47	14.45	14.45	14.55	14.20	15.50
100	CP-OFDM 256QAM	1	1	11.67	11.63	11.62	11.74	11.38	12.50
Channel				649334	652668	656000	659332	662666	Tune-up
Frequency (MHz)				3740.01	3790.02	3840	3889.98	3939.99	limit
80	DFT-s-OFDM QPSK	1	1	15.33	15.36	15.24	15.26	14.80	16.50
Channel				648668	652334	656000	659666	663332	Tune-up
Frequency (MHz)				3730.02	3785.01	3840	3894.99	3949.98	limit
60	DFT-s-OFDM QPSK	1	1	15.36	15.43	15.35	15.14	14.49	16.50
Channel				648000	652000	656000	660000	664000	Tune-up
Frequency (MHz)				3720	3780	3840	3900	3960	limit
40	DFT-s-OFDM QPSK	1	1	15.71	15.82	15.73	15.51	15.18	16.50
Channel				647668	651834	656000	660166	664332	Tune-up
Frequency (MHz)				3715.02	3777.51	3840	3902.49	3964.98	limit
30	DFT-s-OFDM QPSK	1	1	15.75	15.72	15.66	15.36	15.27	16.50
Channel				647334	651668	656000	660332	664666	Tune-up
Frequency (MHz)				3710.01	3775.02	3840	3904.98	3969.99	limit
20	DFT-s-OFDM QPSK	1	1	15.65	15.65	15.70	15.13	15.38	16.50

n78(3450-3550MHz) (PC2)_Ant 2									
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			11.80			12.50
100		1	136			11.81			
100		1	271			11.37			
100		135	1			11.43			12.50
100		135	67			11.50			
100	DFT-s-OFDM QPSK	135	136			10.91			
100		270	0			11.35			
100		1	1			12.14			13.00
100		1	136			11.36			
100		1	271			11.33			
100		135	1			11.90			13.00
100		135	67			10.92			
100		135	136			10.38			
100		270	0			10.83			
100	DFT-s-OFDM 16QAM	1	1			10.60			11.50
100	DFT-s-OFDM 64QAM	1	1			9.13			10.00
100	DFT-s-OFDM 256QAM	1	1			6.73			7.50
100	CP-OFDM QPSK	1	1			10.10			11.00
100	CP-OFDM 16QAM	1	1			9.68			10.50
100	CP-OFDM 64QAM	1	1			7.63			8.50
100	CP-OFDM 256QAM	1	1			4.70			5.50
Channel				633000	633166	633334	633500	633666	Tune-up limit
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	11.59	11.58	11.55	11.56	11.55	12.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	11.64	11.64	11.60	11.60	11.58	12.50
Channel				632334	632634	633334	633832	634332	Tune-up limit
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	11.68	11.66	11.65	11.56	11.52	12.50
Channel				632000	632666	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	11.79	11.81	11.70	11.61	11.64	12.50
Channel				631668	632500	633334	634166	635000	Tune-up limit
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	11.80	10.92	11.68	11.62	11.51	12.50
Channel				631334	636672	633334	634334	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	11.51	11.02	11.95	11.86	11.59	12.50
Channel				631000	632166	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	12.04	11.96	11.83	10.97	11.29	12.50
Channel				630668	632000	633334	634668	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	12.07	11.98	11.83	11.64	10.58	12.50

n78(3450-3550MHz) (PC3)_Ant 2									
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			11.76			12.50
100		1	136			11.30			
100		1	271			10.72			
100		135	1			11.55			12.50
100		135	67			11.33			
100		135	136			10.79			
100	DFT-s-OFDM QPSK	270	0			11.33			13.00
100		1	1			12.26			
100		1	136			11.32			
100		1	271			10.70			12.50
100		135	1			11.56			
100		135	67			11.34			
100	DFT-s-OFDM 16QAM	135	136			10.81			12.50
100		270	0			11.32			
100		1	1			11.68			12.50
100	DFT-s-OFDM 64QAM	1	1			11.87			12.50
100	DFT-s-OFDM 256QAM	1	1			10.10			11.00
100	CP-OFDM QPSK	1	1			11.76			12.50
100	CP-OFDM 16QAM	1	1			11.80			12.50
100	CP-OFDM 64QAM	1	1			10.90			11.50
100	CP-OFDM 256QAM	1	1			8.08			9.00
Channel				633000	633166	633334	633500	633666	Tune-up limit
Frequency (MHz)				3495	3497.49	3500.01	3502.5	3504.99	
90	DFT-s-OFDM QPSK	1	1	11.74	11.76	11.71	11.57	11.70	12.50
Channel				632668	633000	633334	633666	634000	Tune-up limit
Frequency (MHz)				3490.02	3450	3500.01	3504.99	3510	
80	DFT-s-OFDM QPSK	1	1	11.83	11.77	11.74	11.63	11.61	12.50
Channel				632334	632634	633334	633832	634332	Tune-up limit
Frequency (MHz)				3485.01	3492.51	3500.01	3507.48	3514.98	
70	DFT-s-OFDM QPSK	1	1	11.86	11.83	11.69	11.63	11.54	12.50
Channel				632000	632666	633334	634000	634666	Tune-up limit
Frequency (MHz)				3480	3489.99	3500.01	3510	3519.99	
60	DFT-s-OFDM QPSK	1	1	11.93	11.88	11.79	11.65	11.62	12.50
Channel				631668	632500	633334	634166	635000	Tune-up limit
Frequency (MHz)				3475.02	3487.5	3500.01	3512.49	3525	
50	DFT-s-OFDM QPSK	1	1	11.94	11.85	11.69	11.65	11.44	12.50
Channel				631334	636672	633334	634334	635332	Tune-up limit
Frequency (MHz)				3470.01	3485.01	3500.01	3515.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	11.73	11.19	12.08	11.87	11.59	12.50
Channel				631000	632166	633334	634500	635666	Tune-up limit
Frequency (MHz)				3465	3482.49	3500.01	3517.5	3534.99	
30	DFT-s-OFDM QPSK	1	1	11.71	11.71	11.89	11.68	11.15	12.50
Channel				630668	632000	633334	634668	636000	Tune-up limit
Frequency (MHz)				3460.02	3480	3500.01	3520.02	3540	
20	DFT-s-OFDM QPSK	1	1	12.07	12.07	11.71	11.71	11.71	12.50

n78(3700-3800MHz) (PC2)_Ant 2									
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			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			10.74			11.50
100		1	136			10.83			
100		1	271			10.69			
100		135	1			10.69			11.50
100		135	67			10.79			
100		135	136			10.06			
100		270	0			10.26			
100	DFT-s-OFDM QPSK	1	1			11.54			12.50
100		1	136			10.74			
100		1	271			10.70			
100		135	1			10.06			11.50
100		135	67			10.78			
100		135	136			9.55			
100		270	0			9.76			
100	DFT-s-OFDM 16QAM	1	1			9.66			10.50
100	DFT-s-OFDM 64QAM	1	1			8.29			9.00
100	DFT-s-OFDM 256QAM	1	1			6.01			7.00
100	CP-OFDM QPSK	1	1			9.18			10.00
100	CP-OFDM 16QAM	1	1			8.84			9.50
100	CP-OFDM 64QAM	1	1			6.87			8.00
100	CP-OFDM 256QAM	1	1			4.06			5.00
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	10.72	10.73	10.74	10.76	10.88	11.50
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	10.76	10.79	10.94	11.00	11.01	11.50
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	10.84	11.01	11.05	10.68	11.13	11.50
Channel				648668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	10.73	10.93	10.98	11.03	10.99	11.50
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	10.88	11.14	11.21	11.09	10.96	11.50
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	10.88	10.91	11.05	10.87	10.75	11.50
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	10.80	11.01	10.98	10.64	10.49	11.50
Channel				647334	648666	650000	651334	652666	Tune-up limit
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	11.11	11.43	11.42	11.28	11.16	11.50

n78(3700-3800MHz) (PC3)_Ant 2									
BW [MHz]	Modulation	RB num	RB start	Low Channel	Low/Middle Channel	High Channel	High/Middle Channel	High Channel	Tune-up limit (dBm)
Channel						650000			
Frequency (MHz)						3750			
100	DFT-s-OFDM PI/2 BPSK	1	1			10.86			11.50
100		1	136			10.94			
100		1	271			10.92			
100		135	1			11.26			11.50
100		135	67			11.00			
100		135	136			10.76			
100		270	0			10.97			
100	DFT-s-OFDM QPSK	1	1			11.76			12.50
100		1	136			10.94			
100		1	271			10.90			
100		135	1			10.99			11.50
100		135	67			10.91			
100		135	136			10.77			
100		270	0			10.88			
100	DFT-s-OFDM 16QAM	1	1			10.79			11.50
100	DFT-s-OFDM 64QAM	1	1			10.95			11.50
100	DFT-s-OFDM 256QAM	1	1			9.13			10.00
100	CP-OFDM QPSK	1	1			10.89			11.50
100	CP-OFDM 16QAM	1	1			10.91			11.50
100	CP-OFDM 64QAM	1	1			10.03			11.00
100	CP-OFDM 256QAM	1	1			7.20			8.00
Channel				649668	649834	650000	650166	650332	Tune-up limit
Frequency (MHz)				3745.02	3747.51	3750	3752.49	3754.98	
90	DFT-s-OFDM QPSK	1	1	10.84	10.98	10.98	10.99	11.01	11.50
Channel				649334	649666	650000	650334	650666	Tune-up limit
Frequency (MHz)				3740.01	3744.99	3750	3755.01	3759.99	
80	DFT-s-OFDM QPSK	1	1	11.04	11.06	11.18	11.19	11.26	11.50
Channel				649000	649500	650000	650500	651000	Tune-up limit
Frequency (MHz)				3735	3742.5	3750	3757.5	3765	
70	DFT-s-OFDM QPSK	1	1	10.92	11.07	11.25	11.30	11.22	11.50
Channel				648668	649334	650000	650666	651332	Tune-up limit
Frequency (MHz)				3730.02	3740.01	3750	3759.99	3769.98	
60	DFT-s-OFDM QPSK	1	1	11.07	11.08	11.20	11.25	11.20	11.50
Channel				648334	649166	650000	650834	651666	Tune-up limit
Frequency (MHz)				3725.01	3737.49	3750	3762.51	3774.99	
50	DFT-s-OFDM QPSK	1	1	11.06	11.20	11.07	11.07	11.07	11.50
Channel				648000	649000	650000	651000	652000	Tune-up limit
Frequency (MHz)				3720	3735	3750	3765	3780	
40	DFT-s-OFDM QPSK	1	1	11.47	11.70	11.25	11.67	11.56	11.50
Channel				647668	648834	650000	651166	652332	Tune-up limit
Frequency (MHz)				3715.02	3732.51	3750	3767.49	3784.98	
30	DFT-s-OFDM QPSK	1	1	22.85	23.08	23.16	22.94	22.78	11.50
Channel				647334	648666	650000	651334	652666	Tune-up limit
Frequency (MHz)				3710.01	3729.99	3750	3770.01	3789.99	
20	DFT-s-OFDM QPSK	1	1	11.20	11.50	11.42	11.27	11.15	11.50

CA_48C_Ant 2											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	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				
55340	55340	55538	QPSK	1	0	0	0	1	0	15.21	16.00
55990	55891	56089	QPSK	1	0	0	0	1	0	15.26	16.00
56640	56442	56640	QPSK	1	0	0	0	1	0	15.17	16.00
55340	55340	55538	16QAM	1	0	0	0	1	0	15.15	16.00
55990	55891	56089	16QAM	1	0	0	0	1	0	15.21	16.00
56640	56442	56640	16QAM	1	0	0	0	1	0	15.13	16.00
55340	55340	55538	64QAM	1	0	0	0	1	0	15.09	16.00
55990	55891	56089	64QAM	1	0	0	0	1	0	15.10	16.00
56640	56442	56640	64QAM	1	0	0	0	1	0	15.07	16.00
55340	55340	55538	256QAM	1	0	0	0	1	0	14.74	15.50
55990	55891	56089	256QAM	1	0	0	0	1	0	14.72	15.50
56640	56442	56640	256QAM	1	0	0	0	1	0	14.79	15.50
55340	55340	55538	QPSK	50	0	0	0	1	0	13.74	14.50
55990	55891	56089	QPSK	50	0	0	0	1	0	13.81	14.50
56640	56442	56640	QPSK	50	0	0	0	1	0	13.76	14.50

CA_66B_Ant 0											
Combination:10MHz+10MHz(50RB+50RB)											
PCC Channel	PCC Channel (3GPP)	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				
132072	132022	132121	QPSK	1	0	0	0	1	0	21.19	22.00
132322	132373	132472	QPSK	1	0	0	0	1	0	21.43	22.00
132572	132523	132622	QPSK	1	0	0	0	1	0	21.28	22.00
132072	132022	132121	16QAM	1	0	0	0	1	0	20.93	21.50
132322	132373	132472	16QAM	1	0	0	0	1	0	21.17	22.00
132572	132523	132622	16QAM	1	0	0	0	1	0	21.02	21.50
132072	132022	132121	64QAM	1	0	0	0	1	0	20.77	21.50
132322	132373	132472	64QAM	1	0	0	0	1	0	21.01	21.50
132572	132523	132622	64QAM	1	0	0	0	1	0	20.86	21.50
132072	132022	132121	256QAM	1	0	0	0	1	0	20.66	21.50
132322	132373	132472	256QAM	1	0	0	0	1	0	20.90	21.50
132572	132523	132622	256QAM	1	0	0	0	1	0	20.75	21.50
132072	132022	132121	QPSK	50	0	0	0	1	0	20.27	21.00
132322	132373	132472	QPSK	50	0	0	0	1	0	20.34	21.00
132572	132523	132622	QPSK	50	0	0	0	1	0	20.28	21.00

CA_66C_Ant 0											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Channel	PCC Channel (3GPP)	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				
132072	132072	132270	QPSK	1	0	0	0	1	0	21.05	22.00
132322	132323	132521	QPSK	1	0	0	0	1	0	21.09	22.00
132572	132374	132572	QPSK	1	0	0	0	1	0	21.14	22.00
132072	132072	132270	16QAM	1	0	0	0	1	0	20.93	22.00
132322	132323	132521	16QAM	1	0	0	0	1	0	20.96	22.00
132572	132374	132572	16QAM	1	0	0	0	1	0	21.03	22.00
132072	132072	132270	64QAM	1	0	0	0	1	0	20.84	22.00
132322	132323	132521	64QAM	1	0	0	0	1	0	20.87	22.00
132572	132374	132572	64QAM	1	0	0	0	1	0	20.94	22.00
132072	132072	132270	256QAM	1	0	0	0	1	0	20.76	22.00
132322	132323	132521	256QAM	1	0	0	0	1	0	20.79	22.00
132572	132374	132572	256QAM	1	0	0	0	1	0	20.86	22.00
132072	132072	132270	QPSK	50	0	0	0	1	0	20.01	21.00
132322	132323	132521	QPSK	50	0	0	0	1	0	20.05	21.00
132572	132374	132572	QPSK	50	0	0	0	1	0	20.13	21.00