



REPORT No.: SZ23070206S01

## Annex E Conducted Power

**Note:**

Conducted power unit: dBm

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



### Full Power for ANT 0 & ANT 2 & ANT 4 & ANT 5

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)	WCDMA Band V (dBm)			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		4132	4162	4233	
Rx Channel		9662	9800	9938		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	24.21	24.28	24.25	25.00	24.26	24.33	24.29	25.00
3GPP Rel 5	HSDPA Subtest-1	23.01	22.99	23.06	24.00	23.37	23.38	22.65	24.00
3GPP Rel 5	HSDPA Subtest-2	22.98	22.98	22.97	24.00	23.21	23.42	22.64	24.00
3GPP Rel 5	HSDPA Subtest-3	22.49	22.52	22.52	23.50	22.67	22.86	22.19	23.50
3GPP Rel 5	HSDPA Subtest-4	22.45	22.57	22.51	23.50	22.68	22.82	22.21	23.50
3GPP Rel 8	DC-HSDPA Subtest-1	23.04	23.04	23.02	24.00	23.09	23.36	23.16	24.00
3GPP Rel 8	DC-HSDPA Subtest-2	23.03	23.06	23.00	24.00	23.13	23.35	23.12	24.00
3GPP Rel 8	DC-HSDPA Subtest-3	22.54	22.55	22.55	23.50	22.55	22.85	22.84	23.50
3GPP Rel 8	DC-HSDPA Subtest-4	22.51	22.58	22.51	23.50	22.60	22.84	22.58	23.50
3GPP Rel 6	HSUPA Subtest-1	23.07	23.13	23.15	24.00	23.08	23.39	22.67	24.00
3GPP Rel 6	HSUPA Subtest-2	22.54	22.48	22.50	23.50	23.32	22.85	22.28	23.50
3GPP Rel 6	HSUPA Subtest-3	23.08	23.14	23.00	24.00	23.04	23.43	22.69	24.00
3GPP Rel 6	HSUPA Subtest-4	23.07	23.04	23.06	24.00	22.94	23.37	22.56	24.00
3GPP Rel 6	HSUPA Subtest-5	22.98	23.10	23.09	24.00	22.92	23.42	22.68	24.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	22.63	22.58	22.61	23.50	22.53	22.84	22.01	23.50
Attenuator		Cable Loss				Cable Loss			
Mode		Max.				Max.			
		24.28				24.33			



Band 2 (1900MHz Band) (dBm)_ANT0							
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	22.56	22.59	22.55	23.5
20	QPSK	1	49	22.34	22.40	22.36	
20	QPSK	1	99	22.32	22.38	22.37	
20	QPSK	50	0	21.58	21.65	21.55	22.5
20	QPSK	50	24	21.55	21.61	21.57	
20	QPSK	50	50	21.50	21.57	21.55	
20	QPSK	100	0	21.52	21.55	21.50	22.5
20	16QAM	1	0	21.76	21.78	21.76	
20	16QAM	1	49	21.73	21.75	21.67	
20	16QAM	1	99	21.70	21.74	21.73	21.5
20	16QAM	50	0	20.42	20.46	20.39	
20	16QAM	50	24	20.44	20.45	20.38	
20	16QAM	50	50	20.43	20.44	20.37	21.5
20	16QAM	100	0	20.36	20.42	20.38	
20	64QAM	1	0	20.62	20.69	20.66	21.5
20	64QAM	1	49	20.55	20.63	20.58	
20	64QAM	1	99	20.59	20.62	20.57	
20	64QAM	50	0	20.49	20.50	20.42	21.5
20	64QAM	50	24	20.47	20.48	20.46	
20	64QAM	50	50	20.41	20.45	20.42	
20	64QAM	100	0	20.36	20.42	20.36	18.5
20	256QAM	1	0	17.83	17.90	17.87	
20	256QAM	1	49	17.76	17.84	17.79	
20	256QAM	1	99	17.80	17.83	17.78	18.5
20	256QAM	50	0	17.70	17.71	17.63	
20	256QAM	50	24	17.68	17.69	17.67	
20	256QAM	50	50	17.62	17.66	17.63	18.5
20	256QAM	100	0	17.57	17.63	17.57	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.38	22.44	22.37	23.5
15	QPSK	1	37	22.26	22.35	22.31	
15	QPSK	1	74	22.31	22.36	22.32	
15	QPSK	36	0	21.56	21.61	21.58	22.5
15	QPSK	36	20	21.47	21.54	21.56	
15	QPSK	36	39	21.48	21.55	21.54	
15	QPSK	75	0	21.50	21.47	21.43	22.5
15	16QAM	1	0	21.75	21.73	21.69	
15	16QAM	1	37	21.66	21.68	21.63	
15	16QAM	1	74	21.62	21.66	21.68	21.5
15	16QAM	36	0	20.36	20.39	20.38	
15	16QAM	36	20	20.39	20.44	20.32	
15	16QAM	36	39	20.41	20.38	20.29	21.5
15	16QAM	75	0	20.31	20.41	20.33	
15	64QAM	1	0	20.58	20.62	20.62	
15	64QAM	1	37	20.54	20.62	20.50	21.5
15	64QAM	1	74	20.57	20.60	20.56	
15	64QAM	36	0	20.47	20.45	20.37	
15	64QAM	36	20	20.45	20.44	20.40	21.5
15	64QAM	36	39	20.39	20.44	20.35	
15	64QAM	75	0	20.32	20.35	20.30	
15	256QAM	1	0	17.79	17.83	17.83	18.5
15	256QAM	1	37	17.75	17.83	17.71	
15	256QAM	1	74	17.78	17.81	17.77	
15	256QAM	36	0	17.68	17.66	17.58	18.5
15	256QAM	36	20	17.66	17.65	17.61	
15	256QAM	36	39	17.60	17.65	17.56	
15	256QAM	75	0	17.53	17.56	17.51	18.5
15	256QAM	75	0	17.53	17.56	17.51	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.37	22.48	22.40	23.5
10	QPSK	1	25	22.27	22.35	22.30	
10	QPSK	1	49	22.25	22.34	22.29	
10	QPSK	25	0	21.61	21.58	21.58	22.5
10	QPSK	25	12	21.54	21.56	21.53	
10	QPSK	25	25	21.48	21.49	21.51	
10	QPSK	50	0	21.45	21.54	21.46	22.5
10	16QAM	1	0	21.69	21.70	21.72	
10	16QAM	1	25	21.70	21.68	21.59	
10	16QAM	1	49	21.64	21.68	21.65	21.5
10	16QAM	25	0	20.39	20.43	20.33	
10	16QAM	25	12	20.40	20.39	20.33	
10	16QAM	25	25	20.40	20.43	20.33	21.5
10	16QAM	50	0	20.29	20.40	20.34	
10	64QAM	1	0	20.60	20.65	20.63	
10	64QAM	1	25	20.52	20.59	20.51	21.5
10	64QAM	1	49	20.56	20.61	20.53	
10	64QAM	25	0	20.48	20.49	20.35	
10	64QAM	25	12	20.43	20.44	20.43	21.5
10	64QAM	25	25	20.39	20.44	20.41	
10	64QAM	50	0	20.32	20.40	20.29	
10	256QAM	1	0	17.81	17.86	17.84	18.5
10	256QAM	1	25	17.73	17.80	17.72	
10	256QAM	1	49	17.77	17.82	17.74	
10	256QAM	25	0	17.69	17.70	17.56	18.5
10	256QAM	25	12	17.64	17.61	17.64	
10	256QAM	25	25	17.60	17.65	17.62	
10	256QAM	50	0	17.53	17.61	17.50	18.5
10	256QAM	50	0	17.53	17.61	17.50	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.35	22.42	22.39	23.5
5	QPSK	1	12	22.29	22.39	22.30	
5	QPSK	1	24	22.25	22.30	22.34	
5	QPSK	12	0	21.57	21.58	21.56	22.5
5	QPSK	12	7	21.48	21.53	21.49	
5	QPSK	12	13	21.46	21.55	21.51	
5	QPSK	25	0	21.50	21.48	21.45	22.5
5	16QAM	1	0	21.74	21.70	21.72	
5	16QAM	1	12	21.67	21.74	21.64	
5	16QAM	1	24	21.62	21.67	21.66	22.5
5	16QAM	1	24	21.62	21.67	21.66	

Band 2 (1900MHz Band) (dBm)_ANT4							
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	22.60	22.63	22.61	23.5
20	QPSK	1	49	22.57	22.60	22.52	
20	QPSK	1	99	22.48	22.49	22.44	
20	QPSK	50	0	21.62	21.69	21.68	22.5
20	QPSK	50	24	21.60	21.60	21.62	
20	QPSK	50	50	21.55	21.62	21.60	
20	QPSK	100	0	21.62	21.65	21.60	22.5
20	16QAM	1	0	21.81	21.83	21.81	
20	16QAM	1	49	21.78	21.80	21.72	
20	16QAM	1	99	21.75	21.79	21.78	21.5
20	16QAM	50	0	20.47	20.51	20.44	
20	16QAM	50	24	20.49	20.50	20.43	
20	16QAM	50	50	20.48	20.49	20.42	21.5
20	16QAM	100	0	20.41	20.47	20.43	
20	64QAM	1	0	20.67	20.74	20.71	21.5
20	64QAM	1	49	20.60	20.68	20.63	
20	64QAM	1	99	20.64	20.67	20.62	
20	64QAM	50	0	20.54	20.55	20.47	21.5
20	64QAM	50	24	20.52	20.53	20.51	
20	64QAM	50	50	20.46	20.50	20.47	
20	64QAM	100	0	20.41	20.47	20.41	18.5
20	256QAM	1	0	17.88	17.95	17.92	
20	256QAM	1	49	17.81	17.89	17.84	
20	256QAM	1	99	17.85	17.88	17.83	18.5
20	256QAM	50	0	17.75	17.76	17.68	
20	256QAM	50	24	17.73	17.74	17.72	
20	256QAM	50	50	17.67	17.71	17.68	18.5
20	256QAM	100	0	17.62	17.68	17.62	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.50	22.56	22.49	23.5
15	QPSK	1	37	22.38	22.47	22.43	
15	QPSK	1	74	22.43	22.48	22.44	
15	QPSK	36	0	21.68	21.73	21.70	22.5
15	QPSK	36	20	21.59	21.66	21.68	
15	QPSK	36	39	21.60	21.67	21.66	
15	QPSK	75	0	21.62	21.59	21.55	22.5
15	16QAM	1	0	21.87	21.85	21.81	
15	16QAM	1	37	21.78	21.80	21.75	
15	16QAM	1	74	21.74	21.78	21.80	21.5
15	16QAM	36	0	20.48	20.51	20.50	
15	16QAM	36	20	20.44	20.49	20.37	
15	16QAM	36	39	20.46	20.43	20.34	21.5
15	16QAM	75	0	20.36	20.46	20.38	



5	16QAM	12	0	20.35	20.42	20.32	21.5
5	16QAM	12	7	20.42	20.44	20.33	
5	16QAM	12	13	20.39	20.38	20.36	
5	16QAM	25	0	20.31	20.41	20.35	
5	64QAM	1	0	20.57	20.67	20.64	21.5
5	64QAM	1	12	20.54	20.58	20.54	
5	64QAM	1	24	20.57	20.61	20.52	
5	64QAM	12	0	20.47	20.48	20.41	
5	64QAM	12	7	20.44	20.40	20.41	21.5
5	64QAM	12	13	20.35	20.38	20.34	
5	64QAM	25	0	20.33	20.35	20.31	
5	256QAM	1	0	17.78	17.88	17.85	
5	256QAM	1	12	17.75	17.79	17.75	18.5
5	256QAM	1	24	17.78	17.82	17.73	
5	256QAM	12	0	17.68	17.69	17.62	
5	256QAM	12	7	17.65	17.61	17.62	
5	256QAM	12	13	17.56	17.59	17.55	18.5
5	256QAM	25	0	17.54	17.56	17.52	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.37	22.43	22.38	23.5
3	QPSK	1	8	22.30	22.32	22.34	
3	QPSK	1	14	22.30	22.35	22.32	
3	QPSK	8	0	21.58	21.61	21.59	
3	QPSK	8	4	21.48	21.59	21.50	22.5
3	QPSK	8	7	21.49	21.53	21.52	
3	QPSK	15	0	21.44	21.51	21.43	
3	16QAM	1	0	21.75	21.73	21.75	
3	16QAM	1	8	21.72	21.73	21.66	22.5
3	16QAM	1	14	21.63	21.67	21.65	
3	16QAM	8	0	20.41	20.42	20.35	
3	16QAM	8	4	20.37	20.42	20.35	
3	16QAM	8	7	20.38	20.38	20.36	21.5
3	16QAM	15	0	20.31	20.40	20.36	
3	64QAM	1	0	20.57	20.61	20.61	
3	64QAM	1	8	20.48	20.58	20.53	
3	64QAM	1	14	20.52	20.60	20.52	21.5
3	64QAM	8	0	20.43	20.49	20.34	
3	64QAM	8	4	20.44	20.44	20.44	
3	64QAM	8	7	20.40	20.44	20.41	
3	64QAM	15	0	20.34	20.41	20.33	21.5
3	256QAM	1	0	17.78	17.82	17.82	
3	256QAM	1	8	17.69	17.79	17.74	
3	256QAM	1	14	17.73	17.81	17.73	
3	256QAM	8	0	17.64	17.70	17.55	18.5
3	256QAM	8	4	17.65	17.65	17.65	
3	256QAM	8	7	17.61	17.65	17.62	
3	256QAM	15	0	17.55	17.62	17.54	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.33	22.48	22.40	23.5
1.4	QPSK	1	3	22.27	22.34	22.33	
1.4	QPSK	1	5	22.24	22.35	22.33	
1.4	QPSK	3	0	22.30	22.39	22.36	
1.4	QPSK	3	1	22.42	22.45	22.35	22.5
1.4	QPSK	3	3	22.36	22.40	22.37	
1.4	QPSK	6	0	21.44	21.54	21.46	
1.4	16QAM	1	0	21.72	21.71	21.68	
1.4	16QAM	1	3	21.72	21.69	21.65	22.5
1.4	16QAM	1	5	21.63	21.72	21.72	
1.4	16QAM	3	0	21.52	21.57	21.49	
1.4	16QAM	3	1	21.50	21.54	21.46	
1.4	16QAM	3	3	21.51	21.55	21.44	21.5
1.4	16QAM	6	0	20.54	20.51	20.44	
1.4	64QAM	1	0	20.60	20.65	20.64	
1.4	64QAM	1	3	20.52	20.56	20.53	
1.4	64QAM	1	5	20.52	20.56	20.53	21.5
1.4	64QAM	3	0	20.61	20.55	20.48	
1.4	64QAM	3	1	20.58	20.56	20.53	
1.4	64QAM	3	3	20.51	20.52	20.50	
1.4	64QAM	6	0	20.31	20.37	20.29	21.5
1.4	256QAM	1	0	17.81	17.86	17.85	
1.4	256QAM	1	3	17.73	17.77	17.74	
1.4	256QAM	1	5	17.73	17.77	17.74	
1.4	256QAM	3	0	17.82	17.76	17.69	18.5
1.4	256QAM	3	1	17.79	17.77	17.74	
1.4	256QAM	3	3	17.72	17.73	17.71	
1.4	256QAM	6	0	17.52	17.58	17.50	

5	16QAM	12	0	20.47	20.54	20.44	21.5
5	16QAM	12	7	20.54	20.56	20.45	
5	16QAM	12	13	20.51	20.50	20.48	
5	16QAM	25	0	20.43	20.53	20.47	
5	64QAM	1	0	20.69	20.79	20.76	21.5
5	64QAM	1	12	20.59	20.63	20.59	
5	64QAM	1	24	20.62	20.66	20.57	
5	64QAM	12	0	20.52	20.53	20.46	
5	64QAM	12	7	20.49	20.45	20.46	21.5
5	64QAM	12	13	20.40	20.43	20.39	
5	64QAM	25	0	20.38	20.40	20.36	
5	256QAM	1	0	17.83	17.93	17.90	
5	256QAM	1	12	17.80	17.84	17.80	18.5
5	256QAM	1	24	17.83	17.87	17.78	
5	256QAM	12	0	17.73	17.74	17.67	
5	256QAM	12	7	17.70	17.66	17.67	
5	256QAM	12	13	17.61	17.64	17.60	18.5
5	256QAM	25	0	17.59	17.61	17.57	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.49	22.55	22.50	23.5
3	QPSK	1	8	22.42	22.44	22.46	
3	QPSK	1	14	22.42	22.47	22.44	
3	QPSK	8	0	21.70	21.73	21.71	
3	QPSK	8	4	21.60	21.71	21.62	22.5
3	QPSK	8	7	21.61	21.65	21.64	
3	QPSK	15	0	21.56	21.63	21.55	
3	16QAM	1	0	21.87	21.85	21.87	
3	16QAM	1	8	21.84	21.85	21.78	22.5
3	16QAM	1	14	21.75	21.79	21.77	
3	16QAM	8	0	20.53	20.54	20.47	
3	16QAM	8	4	20.49	20.54	20.47	
3	16QAM	8	7	20.50	20.50	20.48	21.5
3	16QAM	15	0	20.43	20.52	20.48	
3	64QAM	1	0	20.62	20.66	20.66	
3	64QAM	1	8	20.53	20.63	20.58	
3	64QAM	1	14	20.57	20.65	20.57	21.5
3	64QAM	8	0	20.48	20.54	20.39	
3	64QAM	8	4	20.49	20.49	20.49	
3	64QAM	8	7	20.45	20.49	20.46	
3	64QAM	15	0	20.39	20.46	20.38	21.5
3	256QAM	1	0	17.83	17.87	17.87	
3	256QAM	1	8	17.74	17.84	17.79	
3	256QAM	1	14	17.78	17.86	17.78	
3	256QAM	8	0	17.69	17.75	17.60	18.5
3	256QAM	8	4	17.70	17.70	17.70	
3	256QAM	8	7	17.66	17.70	17.67	
3	256QAM	15	0	17.60	17.67	17.59	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.45	22.60	22.52	23.5
1.4	QPSK	1	3	22.39	22.46	22.45	
1.4	QPSK	1	5	22.36	22.47	22.45	
1.4	QPSK	3	0	22.42	22.51	22.48	
1.4	QPSK	3	1	22.54	22.57	22.47	22.5
1.4	QPSK	3	3	22.48	22.52	22.49	
1.4	QPSK	6	0	21.56	21.66	21.58	
1.4	16QAM	1	0	21.84	21.83	21.80	
1.4	16QAM	1	3	21.84	21.81	21.77	22.5
1.4	16QAM	1	5	21.75	21.84	21.84	
1.4	16QAM	3	0	21.64	21.69	21.61	
1.4	16QAM	3	1	21.62	21.66	21.58	
1.4	16QAM	3	3	21.63	21.67	21.56	21.5
1.4	16QAM	6	0	20.66	20.63	20.56	
1.4	64QAM	1	0	20.72	20.77	20.76	
1.4	64QAM	1	3	20.64	20.68	20.65	
1.4	64QAM	1	5	20.64	20.68	20.65	21.5
1.4	64QAM	3	0	20.73	20.67	20.60	
1.4	64QAM	3	1	20.63	20.61	20.58	
1.4	64QAM	3	3	20.56	20.57	20.55	
1.4	64QAM	6	0	20.36	20.42	20.34	21.5
1.4	256QAM	1	0	17.86	17.91	17.90	
1.4	256QAM	1	3	17.78	17.82	17.79	
1.4	256QAM	1	5	17.78	17.82	17.79	
1.4	256QAM	3	0	17.87	17.81	17.74	18.5
1.4	256QAM	3	1	17.84	17.82	17.79	
1.4	256QAM	3	3	17.77	17.78	17.76	
1.4	256QAM	6	0	17.57	17.63	17.55	



Band 4 (AWS Band) (dBm)_ANT0							
Part 27L (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20950	20175	20300	23.5
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.51	22.60	22.54	
20	QPSK	1	49	22.45	22.47	22.40	22.5
20	QPSK	1	99	22.37	22.44	22.41	
20	QPSK	50	0	21.51	21.63	21.52	
20	QPSK	50	24	21.55	21.49	21.47	22.5
20	QPSK	50	50	21.52	21.55	21.48	
20	QPSK	100	0	21.55	21.56	21.45	
20	16QAM	1	0	21.82	21.73	21.56	21.5
20	16QAM	1	49	21.70	21.79	21.74	
20	16QAM	1	99	21.80	21.57	21.84	
20	16QAM	50	0	20.63	20.58	20.62	21.5
20	16QAM	50	24	20.72	20.57	20.56	
20	16QAM	50	50	20.59	20.62	20.64	
20	16QAM	100	0	20.57	20.59	20.55	21.5
20	64QAM	1	0	20.67	20.81	20.76	
20	64QAM	1	49	20.70	20.74	20.64	
20	64QAM	1	99	20.80	20.68	20.50	21.5
20	64QAM	50	0	20.65	20.54	20.54	
20	64QAM	50	24	20.48	20.49	20.56	
20	64QAM	50	50	20.61	20.54	20.59	18.5
20	64QAM	100	0	20.53	20.56	20.55	
20	256QAM	1	0	17.52	17.66	17.61	
20	256QAM	1	49	17.55	17.59	17.49	18.5
20	256QAM	1	99	17.65	17.53	17.35	
20	256QAM	50	0	17.50	17.39	17.39	
20	256QAM	50	24	17.33	17.34	17.41	18.5
20	256QAM	50	50	17.46	17.39	17.44	
20	256QAM	100	0	17.38	17.41	17.40	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	23.5
15	QPSK	1	0	22.38	22.43	22.34	
15	QPSK	1	37	22.42	22.43	22.37	
15	QPSK	1	74	22.28	22.43	22.40	22.5
15	QPSK	36	0	21.47	21.53	21.42	
15	QPSK	36	20	21.61	21.42	21.43	
15	QPSK	36	39	21.51	21.48	21.39	22.5
15	QPSK	75	0	21.50	21.48	21.35	
15	16QAM	1	0	21.78	21.67	21.50	
15	16QAM	1	37	21.77	21.89	21.69	21.5
15	16QAM	1	74	21.82	21.97	21.83	
15	16QAM	36	0	20.62	20.49	20.56	
15	16QAM	36	20	20.68	20.48	20.48	21.5
15	16QAM	36	39	20.55	20.60	20.62	
15	16QAM	75	0	20.47	20.55	20.54	
15	64QAM	1	0	20.64	20.80	20.71	21.5
15	64QAM	1	37	20.64	20.64	20.59	
15	64QAM	1	74	20.78	20.63	20.44	
15	64QAM	36	0	20.62	20.44	20.47	21.5
15	64QAM	36	20	20.39	20.46	20.49	
15	64QAM	36	39	20.57	20.52	20.51	
15	64QAM	75	0	20.47	20.53	20.54	18.5
15	256QAM	1	0	17.49	17.65	17.56	
15	256QAM	1	37	17.49	17.49	17.44	
15	256QAM	1	74	17.63	17.48	17.29	18.5
15	256QAM	36	0	17.47	17.29	17.32	
15	256QAM	36	20	17.24	17.31	17.34	
15	256QAM	36	39	17.42	17.37	17.36	Tune-up limit (dBm)
15	256QAM	75	0	17.32	17.38	17.39	
Channel				20000	20175	20350	
Frequency (MHz)				1715	1732.5	1750	23.5
10	QPSK	1	0	22.45	22.46	22.39	
10	QPSK	1	25	22.38	22.42	22.34	
10	QPSK	1	49	22.29	22.43	22.33	22.5
10	QPSK	25	0	21.45	21.62	21.47	
10	QPSK	25	12	21.53	21.40	21.46	
10	QPSK	25	25	21.43	21.53	21.41	22.5
10	QPSK	50	0	21.46	21.52	21.39	
10	16QAM	1	0	21.76	21.68	21.49	
10	16QAM	1	25	21.76	21.93	21.73	21.5
10	16QAM	1	49	21.78	21.98	21.79	
10	16QAM	25	0	20.55	20.54	20.57	
10	16QAM	25	12	20.64	20.50	20.52	21.5
10	16QAM	25	25	20.58	20.53	20.60	
10	16QAM	50	0	20.56	20.53	20.46	
10	64QAM	1	0	20.57	20.72	20.74	21.5
10	64QAM	1	25	20.68	20.73	20.62	
10	64QAM	1	49	20.75	20.61	20.40	
10	64QAM	25	0	20.64	20.44	20.45	21.5
10	64QAM	25	12	20.40	20.46	20.50	
10	64QAM	25	25	20.57	20.52	20.53	
10	64QAM	50	0	20.46	20.47	20.53	18.5
10	256QAM	1	0	17.42	17.57	17.59	
10	256QAM	1	25	17.53	17.58	17.47	
10	256QAM	1	49	17.60	17.46	17.25	18.5
10	256QAM	25	0	17.49	17.29	17.30	
10	256QAM	25	12	17.25	17.31	17.35	
10	256QAM	25	25	17.42	17.37	17.38	Tune-up limit (dBm)
10	256QAM	50	0	17.31	17.32	17.38	
Channel				19975	20175	20375	
Frequency (MHz)				1712.5	1732.5	1752.5	23.5
5	QPSK	1	0	22.44	22.44	22.35	
5	QPSK	1	12	22.35	22.37	22.39	
5	QPSK	1	24	22.36	22.42	22.32	22.5
5	QPSK	12	0	21.42	21.58	21.46	
5	QPSK	12	7	21.56	21.44	21.38	
5	QPSK	12	13	21.49	21.49	21.38	22.5
5	QPSK	25	0	21.53	21.52	21.37	
5	16QAM	1	0	21.72	21.71	21.52	
5	16QAM	1	12	21.75	21.91	21.72	22.5
5	16QAM	1	24	21.80	21.91	21.76	

Band 4 (AWS Band) (dBm)_ANT4 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	22.63	22.67	22.64	23.5
20	QPSK	1	49	22.59	22.59	22.62	
20	QPSK	1	99	22.57	22.58	22.59	
20	QPSK	50	0	21.66	21.70	21.62	22.5
20	QPSK	50	24	21.62	21.56	21.55	
20	QPSK	50	50	21.64	21.67	21.60	
20	QPSK	100	0	21.67	21.68	21.57	22.5
20	16QAM	1	0	21.94	21.85	21.68	
20	16QAM	1	49	21.82	21.91	21.86	
20	16QAM	1	99	21.92	21.69	21.96	21.5
20	16QAM	50	0	20.75	20.70	20.74	
20	16QAM	50	24	20.84	20.69	20.68	
20	16QAM	50	50	20.71	20.74	20.76	21.5
20	16QAM	100	0	20.69	20.71	20.67	
20	64QAM	1	0	20.79	20.93	20.88	
20	64QAM	1	49	20.77	20.81	20.71	21.5
20	64QAM	1	99	20.87	20.75	20.57	
20	64QAM	50	0	20.72	20.61	20.61	
20	64QAM	50	24	20.55	20.56	20.63	21.5
20	64QAM	50	50	20.68	20.61	20.66	
20	64QAM	100	0	20.60	20.63	20.62	
20	256QAM	1	0	17.59	17.73	17.68	18.5
20	256QAM	1	49	17.62	17.66	17.56	
20	256QAM	1	99	17.72	17.60	17.42	
20	256QAM	50	0	17.57	17.46	17.46	18.5
20	256QAM	50	24	17.40	17.41	17.48	
20	256QAM	50	50	17.53	17.46	17.51	
20	256QAM	100	0	17.45	17.48	17.47	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.50	22.55	22.46	23.5
15	QPSK	1	37	22.54	22.55	22.49	
15	QPSK	1	74	22.40	22.55	22.52	
15	QPSK	36	0	21.59	21.65	21.54	22.5
15	QPSK	36	20	21.73	21.54	21.55	
15	QPSK	36	39	21.63	21.60	21.51	
15	QPSK	75	0	21.52	21.50	21.37	22.5
15	16QAM	1	0	21.80	21.69	21.52	
15	16QAM	1	37	21.79	21.91	21.71	
15	16QAM	1	74	21.91	22.06	21.92	21.5
15	16QAM	36	0	20.71	20.58	20.65	
15	16QAM	36	20	20.77	20.57	20.57	
15	16QAM	36	39	20.64	20.69	20.71	21.5
15	16QAM	75	0	20.59	20.67	20.66	
15	64QAM	1	0	20.76	20.92	20.83	
15	64QAM	1	37	20.76	20.76	20.71	21.5
15	64QAM	1	74	20.85	20.70	20.51	
15	64QAM	36	0	20.69	20.51	20.54	
15	64QAM	36	20	20.46	20.53	20.56	21.5
15	64QAM	36	39	20.64	20.59	20.58	
15	64QAM	75	0	20.54	20.80	20.61	
15	256QAM	1	0	17.56	17.72	17.63	18.5
15	256QAM	1	37	17.56	17.56	17.51	
15	256QAM	1	74	17.70	17.55	17.36	
15	256QAM	36	0	17.54	17.36	17.39	18.5
15	256QAM	36	20	17.31	17.38	17.41	
15	256QAM	36	39	17.49	17.44	17.43	
15	256QAM	75	0	17.39	17.45	17.46	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.51	22.52	22.45	23.5
10	QPSK	1	25	22.44	22.48	22.40	
10	QPSK	1	49	22.35	22.49	22.39	
10	QPSK	25	0	21.51	21.68	21.53	22.5
10	QPSK	25	12	21.59	21.46	21.52	
10	QPSK	25	25	21.49	21.59	21.47	
10	QPSK	50	0	21.52	21.58	21.45	22.5
10	16QAM	1	0	21.89	21.81	21.62	
10	16QAM	1	25	21.86	22.03	21.83	
10	16QAM	1	49	21.88	22.08	21.89	21.5
10	16QAM	25	0	20.65	20.64	20.67	
10	16QAM	25	12	20.71	20.57	20.59	
10	16QAM	25	25	20.65	20.60	20.67	21.5
10	16QAM	50	0	20.63	20.60	20.53	
10	64QAM	1	0	20.64	20.79	20.81	
10	64QAM	1	25	20.75	20.80	20.69	21.5
10	64QAM	1	49	20.82	20.68	20.47	
10	64QAM	25	0	20.71	20.51	20.52	
10	64QAM	25	12	20.47	20.53	20.57	21.5
10	64QAM	25	25	20.64	20.59	20.60	
10	64QAM	50	0	20.53	20.54	20.60	
10	256QAM	1	0	17.49	17.64	17.66	18.5
10	256QAM	1	25	17.60	17.65	17.54	
10	256QAM	1	49	17.67	17.53	17.32	
10	256QAM	25	0	17.56	17.36	17.37	18.5
10	256QAM	25	12	17.32	17.38	17.42	
10	256QAM	25	25	17.49	17.44	17.45	
10	256QAM	50	0	17.38	17.39	17.45	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.51	22.51	22.42	23.5
5	QPSK	1	12	22.42	22.44	22.46	
5	QPSK	1	24	22.43	22.49	22.39	
5	QPSK	12	0	21.49	21.65	21.53	22.5
5	QPSK	12	7	21.51	21.54	21.48	
5	QPSK	12	13	21.59	21.59	21.48	
5	QPSK	25	0	21.63	21.62	21.47	22.5
5	16QAM	1	0	21.82	21.81	21.62	
5	16QAM	1	12	21.92	22.08	21.89	
5	16QAM	1	24	21.97	22.08	21.93	



5	16QAM	12	0	20.61	20.51	20.58	21.5
5	16QAM	12	7	20.62	20.52	20.48	
5	16QAM	12	13	20.54	20.54	20.60	
5	16QAM	25	0	20.48	20.50	20.46	21.5
5	64QAM	1	0	20.58	20.78	20.70	
5	64QAM	1	12	20.61	20.69	20.59	
5	64QAM	1	24	20.77	20.65	20.46	21.5
5	64QAM	12	0	20.63	20.53	20.51	
5	64QAM	12	7	20.45	20.42	20.50	
5	64QAM	12	13	20.57	20.45	20.58	18.5
5	64QAM	25	0	20.52	20.53	20.46	
5	256QAM	1	0	17.43	17.63	17.55	
5	256QAM	1	12	17.46	17.54	17.44	18.5
5	256QAM	1	24	17.62	17.50	17.31	
5	256QAM	12	0	17.48	17.38	17.36	
5	256QAM	12	7	17.30	17.27	17.35	18.5
5	256QAM	12	13	17.42	17.30	17.43	
5	256QAM	25	0	17.37	17.38	17.31	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.35	22.45	22.31	23.5
3	QPSK	1	8	22.39	22.44	22.35	
3	QPSK	1	14	22.31	22.34	22.32	
3	QPSK	8	0	21.44	21.56	21.48	22.5
3	QPSK	8	4	21.52	21.46	21.45	
3	QPSK	8	7	21.48	21.47	21.45	
3	QPSK	15	0	21.45	21.47	21.39	22.5
3	16QAM	1	0	21.72	21.72	21.49	
3	16QAM	1	8	21.76	21.90	21.72	
3	16QAM	1	14	21.82	21.93	21.81	21.5
3	16QAM	8	0	20.56	20.49	20.55	
3	16QAM	8	4	20.69	20.49	20.50	
3	16QAM	8	7	20.49	20.55	20.61	21.5
3	16QAM	15	0	20.48	20.51	20.52	
3	64QAM	1	0	20.66	20.74	20.74	
3	64QAM	1	8	20.66	20.68	20.55	21.5
3	64QAM	1	14	20.78	20.63	20.40	
3	64QAM	8	0	20.59	20.44	20.44	
3	64QAM	8	4	20.43	20.42	20.46	21.5
3	64QAM	8	7	20.52	20.46	20.55	
3	64QAM	15	0	20.46	20.48	20.52	
3	256QAM	1	0	17.51	17.59	17.59	18.5
3	256QAM	1	8	17.51	17.53	17.40	
3	256QAM	1	14	17.63	17.48	17.25	
3	256QAM	8	0	17.44	17.29	17.29	18.5
3	256QAM	8	4	17.28	17.27	17.31	
3	256QAM	8	7	17.37	17.31	17.40	
3	256QAM	15	0	17.31	17.33	17.37	Tune-up limit (dBm)
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	23.5
1.4	QPSK	1	0	22.35	22.43	22.32	
1.4	QPSK	1	3	22.35	22.38	22.31	
1.4	QPSK	1	5	22.31	22.42	22.36	
1.4	QPSK	3	0	22.45	22.40	22.45	
1.4	QPSK	3	1	22.44	22.44	22.42	
1.4	QPSK	3	3	22.42	22.46	22.46	22.5
1.4	QPSK	6	0	21.46	21.46	21.35	
1.4	16QAM	1	0	21.73	21.70	21.47	
1.4	16QAM	1	3	21.82	21.90	21.73	22.5
1.4	16QAM	1	5	21.77	21.93	21.83	
1.4	16QAM	3	0	21.55	21.55	21.58	
1.4	16QAM	3	1	21.70	21.49	21.46	21.5
1.4	16QAM	3	3	21.52	21.59	21.54	
1.4	16QAM	6	0	20.50	20.49	20.46	
1.4	64QAM	1	0	20.57	20.72	20.75	21.5
1.4	64QAM	1	3	20.67	20.69	20.61	
1.4	64QAM	1	5	20.73	20.67	20.45	
1.4	64QAM	3	0	20.57	20.50	20.53	21.5
1.4	64QAM	3	1	20.44	20.48	20.54	
1.4	64QAM	3	3	20.54	20.47	20.54	
1.4	64QAM	6	0	20.44	20.46	20.47	18.5
1.4	256QAM	1	0	17.42	17.57	17.60	
1.4	256QAM	1	3	17.52	17.54	17.46	
1.4	256QAM	1	5	17.58	17.52	17.30	18.5
1.4	256QAM	3	0	17.42	17.35	17.38	
1.4	256QAM	3	1	17.29	17.33	17.39	
1.4	256QAM	3	3	17.39	17.32	17.39	18.5
1.4	256QAM	6	0	17.29	17.31	17.32	

5	16QAM	12	0	20.81	20.71	20.78	21.5
5	16QAM	12	7	20.82	20.72	20.68	
5	16QAM	12	13	20.64	20.64	20.70	
5	16QAM	25	0	20.58	20.60	20.56	21.5
5	64QAM	1	0	20.68	20.88	20.80	
5	64QAM	1	12	20.71	20.79	20.69	
5	64QAM	1	24	20.87	20.75	20.56	21.5
5	64QAM	12	0	20.73	20.63	20.61	
5	64QAM	12	7	20.55	20.52	20.60	
5	64QAM	12	13	20.67	20.55	20.68	18.5
5	64QAM	25	0	20.62	20.63	20.56	
5	256QAM	1	0	17.53	17.73	17.65	
5	256QAM	1	12	17.56	17.64	17.54	18.5
5	256QAM	1	24	17.72	17.60	17.41	
5	256QAM	12	0	17.58	17.48	17.46	
5	256QAM	12	7	17.40	17.37	17.45	18.5
5	256QAM	12	13	17.52	17.40	17.53	
5	256QAM	25	0	17.47	17.48	17.41	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.42	22.52	22.38	23.5
3	QPSK	1	8	22.46	22.51	22.42	
3	QPSK	1	14	22.38	22.41	22.39	
3	QPSK	8	0	21.51	21.63	21.55	22.5
3	QPSK	8	4	21.62	21.56	21.55	
3	QPSK	8	7	21.58	21.57	21.55	
3	QPSK	15	0	21.55	21.57	21.49	22.5
3	16QAM	1	0	21.82	21.82	21.59	
3	16QAM	1	8	21.86	22.00	21.82	
3	16QAM	1	14	21.92	22.03	21.91	21.5
3	16QAM	8	0	20.66	20.59	20.65	
3	16QAM	8	4	20.79	20.59	20.60	
3	16QAM	8	7	20.59	20.65	20.71	21.5
3	16QAM	15	0	20.58	20.61	20.62	
3	64QAM	1	0	20.76	20.84	20.84	
3	64QAM	1	8	20.76	20.78	20.65	21.5
3	64QAM	1	14	20.88	20.73	20.50	
3	64QAM	8	0	20.69	20.54	20.54	
3	64QAM	8	4	20.53	20.52	20.56	21.5
3	64QAM	8	7	20.62	20.56	20.65	
3	64QAM	15	0	20.56	20.58	20.62	
3	256QAM	1	0	17.61	17.69	17.69	18.5
3	256QAM	1	8	17.61	17.63	17.50	
3	256QAM	1	14	17.73	17.58	17.35	
3	256QAM	8	0	17.54	17.39	17.39	18.5
3	256QAM	8	4	17.38	17.37	17.41	
3	256QAM	8	7	17.44	17.38	17.47	
3	256QAM	15	0	17.38	17.40	17.44	Tune-up limit (dBm)
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	23.5
1.4	QPSK	1	0	22.45	22.53	22.42	
1.4	QPSK	1	3	22.45	22.48	22.41	
1.4	QPSK	1	5	22.41	22.52	22.46	
1.4	QPSK	3	0	22.62	22.57	22.62	
1.4	QPSK	3	1	22.61	22.61	22.59	
1.4	QPSK	3	3	22.59	22.63	22.63	22.5
1.4	QPSK	6	0	21.63	21.63	21.52	
1.4	16QAM	1	0	21.90	21.87	21.64	
1.4	16QAM	1	3	21.99	22.07	21.90	22.5
1.4	16QAM	1	5	21.94	22.10	22.00	
1.4	16QAM	3	0	21.72	21.72	21.75	
1.4	16QAM	3	1	21.87	21.66	21.63	21.5
1.4	16QAM	3	3	21.69	21.76	21.71	
1.4	16QAM	6	0	20.67	20.66	20.63	
1.4	64QAM	1	0	20.74	20.89	20.92	21.5
1.4	64QAM	1	3	20.84	20.86	20.78	
1.4	64QAM	1	5	20.90	20.84	20.62	
1.4	64QAM	3	0	20.74	20.67	20.70	21.5
1.4	64QAM	3	1	20.61	20.65	20.71	
1.4	64QAM	3	3	20.71	20.64	20.71	
1.4	64QAM	6	0	20.61	20.63	20.64	18.5
1.4	256QAM	1	0	17.59	17.74	17.77	
1.4	256QAM	1	3	17.62	17.64	17.56	
1.4	256QAM	1	5	17.65	17.59	17.37	18.5
1.4	256QAM	3	0	17.49	17.42	17.45	
1.4	256QAM	3	1	17.36	17.40	17.46	
1.4	256QAM	3	3	17.46	17.39	17.46	18.5
1.4	256QAM	6	0	17.36	17.38	17.39	



Band 5 (Celluar Band) (dBm)_ANT0							
Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	24
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	23.34	23.37	23.29	
10	QPSK	1	25	23.17	23.20	23.09	
10	QPSK	1	49	23.09	23.16	22.91	23
10	QPSK	25	0	22.27	22.35	22.21	
10	QPSK	25	12	22.34	22.31	22.26	
10	QPSK	25	25	22.26	22.22	22.25	
10	QPSK	50	0	22.15	22.17	22.14	23
10	16QAM	1	0	22.24	22.14	22.10	
10	16QAM	1	25	22.23	22.41	22.27	
10	16QAM	1	49	22.20	22.21	22.13	
10	16QAM	25	0	21.19	21.10	21.07	22
10	16QAM	25	12	21.11	21.07	21.04	
10	16QAM	25	25	21.19	21.15	21.10	
10	16QAM	50	0	21.23	21.09	21.06	
10	64QAM	1	0	21.25	21.32	21.21	22
10	64QAM	1	25	21.12	21.10	21.16	
10	64QAM	1	49	21.27	21.07	21.23	
10	64QAM	25	0	21.22	21.15	21.10	
10	64QAM	25	12	21.30	21.10	21.15	22
10	64QAM	25	25	21.14	21.15	21.10	
10	64QAM	50	0	21.15	21.12	21.14	
10	256QAM	1	0	18.31	18.38	18.27	
10	256QAM	1	25	18.18	18.16	18.22	19
10	256QAM	1	49	18.33	18.13	18.29	
10	256QAM	25	0	18.28	18.21	18.16	
10	256QAM	25	12	18.36	18.16	18.21	
10	256QAM	25	25	18.20	18.21	18.16	19
10	256QAM	50	0	18.21	18.18	18.20	
Channel				20425	20525	20625	24
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	23.18	23.19	23.11	
5	QPSK	1	12	23.14	23.14	23.07	
5	QPSK	1	24	23.04	23.11	22.85	23
5	QPSK	12	0	22.26	22.32	22.08	
5	QPSK	12	7	22.30	22.28	22.23	
5	QPSK	12	13	22.16	22.18	22.15	
5	QPSK	25	0	22.20	22.18	22.23	23
5	16QAM	1	0	22.34	22.25	22.20	
5	16QAM	1	12	22.33	22.53	22.39	
5	16QAM	1	24	22.32	22.29	22.25	
5	16QAM	12	0	21.25	21.21	21.12	22
5	16QAM	12	7	21.19	21.18	21.10	
5	16QAM	12	13	21.24	21.23	21.17	
5	16QAM	25	0	21.33	21.14	21.11	
5	64QAM	1	0	21.19	21.26	21.19	22
5	64QAM	1	12	21.02	21.09	21.11	
5	64QAM	1	24	21.22	20.98	21.14	
5	64QAM	12	0	21.15	21.11	21.04	
5	64QAM	12	7	21.26	21.05	21.09	22
5	64QAM	12	13	21.06	21.06	21.00	
5	64QAM	25	0	21.24	21.22	21.25	
5	256QAM	1	0	18.25	18.32	18.25	
5	256QAM	1	12	18.08	18.15	18.17	19
5	256QAM	1	24	18.28	18.04	18.20	
5	256QAM	12	0	18.21	18.17	18.10	
5	256QAM	12	7	18.32	18.11	18.15	
5	256QAM	12	13	18.12	18.12	18.06	19
5	256QAM	25	0	18.30	18.28	18.31	
Channel				20415	20525	20635	24
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	23.09	23.17	23.13	
3	QPSK	1	8	23.16	23.14	23.02	
3	QPSK	1	14	23.00	23.09	22.83	23
3	QPSK	8	0	22.20	22.31	22.09	
3	QPSK	8	4	22.30	22.28	22.21	
3	QPSK	8	7	22.02	22.07	22.05	
3	QPSK	15	0	22.07	22.06	22.10	23
3	16QAM	1	0	22.21	22.05	22.06	
3	16QAM	1	8	22.21	22.39	22.20	
3	16QAM	1	14	22.13	22.11	22.11	
3	16QAM	8	0	21.16	21.04	21.00	22
3	16QAM	8	4	21.02	21.04	21.03	
3	16QAM	8	7	21.13	21.05	21.02	
3	16QAM	15	0	21.19	21.06	21.03	
3	64QAM	1	0	21.17	21.23	21.18	22
3	64QAM	1	8	21.11	21.05	21.15	
3	64QAM	1	14	21.23	21.04	21.20	
3	64QAM	8	0	21.17	21.06	21.06	
3	64QAM	8	4	21.26	21.09	21.11	22
3	64QAM	8	7	21.12	21.06	21.04	
3	64QAM	15	0	21.05	21.11	21.05	
3	256QAM	1	0	18.23	18.29	18.24	
3	256QAM	1	8	18.17	18.11	18.21	19
3	256QAM	1	14	18.29	18.10	18.26	
3	256QAM	8	0	18.23	18.12	18.12	
3	256QAM	8	4	18.32	18.15	18.17	
3	256QAM	8	7	18.18	18.12	18.10	19
3	256QAM	15	0	18.11	18.17	18.11	
Channel				20497	20525	20643	24
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	23.19	23.20	23.07	
1.4	QPSK	1	3	23.12	23.12	23.01	
1.4	QPSK	1	5	23.08	23.13	22.86	23
1.4	QPSK	3	0	23.08	23.19	22.93	
1.4	QPSK	3	1	23.14	23.11	23.04	
1.4	QPSK	3	3	23.03	23.07	23.10	
1.4	QPSK	6	0	22.14	22.04	22.05	23
1.4	16QAM	1	0	22.21	22.09	22.02	
1.4	16QAM	1	3	22.21	22.39	22.17	
1.4	16QAM	1	5	22.19	22.16	22.08	

Band 7 (2600MHz Band) (dBm)_ANT0							
Part 27							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20850	21100	21350	23.5
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.48	22.56	22.53	
20	QPSK	1	49	22.35	22.42	22.47	
20	QPSK	1	99	22.46	22.47	22.48	22.5
20	QPSK	50	0	21.56	21.69	21.68	
20	QPSK	50	24	21.63	21.68	21.67	
20	QPSK	50	50	21.66	21.65	21.67	
20	QPSK	100	0	21.71	21.72	21.64	22.5
20	16QAM	1	0	21.57	21.51	21.56	
20	16QAM	1	49	21.64	21.63	21.55	
20	16QAM	1	99	21.65	21.70	21.66	
20	16QAM	50	0	20.55	20.70	20.76	21.5
20	16QAM	50	24	20.59	20.64	20.56	
20	16QAM	50	50	20.58	20.69	20.54	
20	16QAM	100	0	20.57	20.62	20.67	
20	64QAM	1	0	20.60	20.64	20.68	21.5
20	64QAM	1	49	20.64	20.70	20.45	
20	64QAM	1	99	20.59	20.46	20.36	
20	64QAM	50	0	20.56	20.60	20.64	
20	64QAM	50	24	20.56	20.69	20.48	21.5
20	64QAM	50	50	20.53	20.68	20.62	
20	64QAM	100	0	20.61	20.60	20.50	
20	256QAM	1	0	17.64	17.68	17.72	
20	256QAM	1	49	17.68	17.74	17.49	18.5
20	256QAM	1	99	17.63	17.50	17.40	
20	256QAM	50	0	17.60	17.64	17.68	
20	256QAM	50	24	17.60	17.73	17.52	
20	256QAM	50	50	17.57	17.72	17.66	18.5
20	256QAM	100	0	17.65	17.64	17.54	
Channel				20825	21100	21375	23.5
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.37	22.47	22.41	
15	QPSK	1	37	22.27	22.34	22.39	
15	QPSK	1	74	22.39	22.44	22.46	22.5
15	QPSK	36	0	21.53	21.68	21.60	
15	QPSK	36	20	21.53	21.66	21.61	
15	QPSK	36	39	21.60	21.64	21.65	
15	QPSK	75	0	21.63	21.60	21.55	22.5
15	16QAM	1	0	21.53	21.50	21.48	
15	16QAM	1	37	21.59	21.54	21.54	
15	16QAM	1	74	21.62	21.69	21.56	
15	16QAM	36	0	20.48	20.68	20.75	21.5
15	16QAM	36	20	20.56	20.55	20.51	
15	16QAM	36	39	20.54	20.68	20.47	
15	16QAM	75	0	20.55	20.61	20.66	
15	64QAM	1	0	20.56	20.54	20.66	21.5
15	64QAM	1	37	20.55	20.65	20.41	
15	64QAM	1	74	20.51	20.41	20.34	
15	64QAM	36	0	20.46	20.52	20.55	
15	64QAM	36	20	20.51	20.65	20.45	21.5
15	64QAM	36	39	20.43	20.64	20.61	
15	64QAM	75	0	20.60	20.52	20.48	
15	256QAM	1	0	17.60	17.58	17.70	
15	256QAM	1	37	17.59	17.69	17.45	18.5
15	256QAM	1	74	17.55	17.45	17.38	
15	256QAM	36	0	17.50	17.56	17.59	
15	256QAM	36	20	17.55	17.69	17.49	18.5
15	256QAM	36	39	17.47	17.68	17.65	
15	256QAM	75	0	17.64	17.56	17.52	
Channel				20800	21100	21400	23.5
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.31	22.44	22.42	
10	QPSK	1	25	22.31	22.40	22.37	
10	QPSK	1	49	22.38	22.38	22.41	22.5
10	QPSK	25	0	21.48	21.67	21.58	
10	QPSK	25	12	21.58	21.64	21.62	
10	QPSK	25	25	21.61	21.55	21.66	
10	QPSK	50	0	21.70	21.67	21.62	22.5
10	16QAM	1	0	21.49	21.47	21.48	
10	16QAM	1	25	21.60	21.61	21.45	
10	16QAM	1	49	21.59	21.61	21.64	
10	16QAM	25	0	20.53	20.61	20.74	21.5
10	16QAM	25	12	20.56	20.61	20.46	
10	16QAM	25	25	20.55	20.61	20.48	
10	16QAM	50	0	20.52	20.61	20.66	
10	64QAM	1	0	20.59	20.62	20.67	21.5
10	64QAM	1	25	20.55	20.65	20.42	
10	64QAM	1	49	20.55	20.36	20.28	
10	64QAM	25	0	20.47	20.54	20.59	
10	64QAM	25	12	20.52	20.68	20.46	21.5
10	64QAM	25	25	20.50	20.58	20.56	
10	64QAM	50	0	20.54	20.59	20.42	
10	256QAM	1	0	17.63	17.66	17.71	
10	256QAM	1	25	17.59	17.69	17.46	18.5
10	256QAM	1	49	17.59	17.40	17.32	
10	256QAM	25	0	17.51	17.58	17.63	
10	256QAM	25	12	17.56	17.72	17.50	
10	256QAM	25	25	17.54	17.62	17.60	18.5
10	256QAM	50	0	17.58	17.63	17.46	
Channel				20775	21100	21425	23.5
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.37	22.48	22.35	
5	QPSK	1	12	22.32	22.38	22.44	
5	QPSK	12	0	21.53	21.65	21.61	22.5
5	QPSK	12	7	21.62	21.66	21.61	
5	QPSK	12	13	21.58	21.61	21.64	
5	QPSK	25	0	21.63	21.66	21.56	
5	16QAM	1	0	21.56	21.42	21.49	22.5
5	16QAM	1	12	21.61	21.58	21.49	
5	16QAM	1	24	21.57	21.68	21.62	



1.4	16QAM	3	0	22.24	22.17	22.19	22
1.4	16QAM	3	1	22.23	22.18	22.12	
1.4	16QAM	3	3	22.24	22.24	22.22	
1.4	16QAM	6	0	21.35	21.21	21.18	22
1.4	64QAM	1	0	21.38	21.40	21.26	
1.4	64QAM	1	3	21.19	21.16	21.21	
1.4	64QAM	1	5	21.35	21.11	21.35	22
1.4	64QAM	3	0	21.29	21.28	21.21	
1.4	64QAM	3	1	21.36	21.17	21.20	
1.4	64QAM	3	3	21.19	21.19	21.16	22
1.4	64QAM	6	0	21.27	21.24	21.24	
1.4	256QAM	1	0	18.44	18.46	18.32	
1.4	256QAM	1	3	18.25	18.22	18.27	19
1.4	256QAM	1	5	18.41	18.17	18.41	
1.4	256QAM	3	0	18.35	18.34	18.27	
1.4	256QAM	3	1	18.42	18.23	18.26	19
1.4	256QAM	3	3	18.25	18.25	18.22	
1.4	256QAM	6	0	18.33	18.30	18.30	

5	16QAM	12	0	20.53	20.60	20.68	21.5
5	16QAM	12	7	20.51	20.60	20.50	
5	16QAM	12	13	20.50	20.60	20.47	
5	16QAM	25	0	20.48	20.52	20.61	21.5
5	64QAM	1	0	20.52	20.59	20.61	
5	64QAM	1	12	20.59	20.68	20.36	
5	64QAM	1	24	20.55	20.44	20.28	21.5
5	64QAM	12	0	20.52	20.52	20.58	
5	64QAM	12	7	20.46	20.63	20.38	
5	64QAM	12	13	20.52	20.63	20.52	18.5
5	64QAM	25	0	20.51	20.55	20.42	
5	256QAM	1	0	17.56	17.63	17.65	
5	256QAM	1	12	17.63	17.72	17.40	18.5
5	256QAM	1	24	17.59	17.48	17.32	
5	256QAM	12	0	17.56	17.56	17.62	
5	256QAM	12	7	17.50	17.67	17.42	18.5
5	256QAM	12	13	17.56	17.67	17.56	
5	256QAM	25	0	17.55	17.59	17.46	



Band 12 (700MHz Low Band) (dBm)_ANT0									
Part 27F(only on channel required)									
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)		
Channel				23060	23095	23130			
Frequency (MHz)				704	707.5	711			
10	QPSK	1	0	23.42	23.47	23.35	24		
10	QPSK	1	25	23.35	23.38	23.39			
10	QPSK	1	49	23.25	23.40	23.42			
10	QPSK	25	0	22.58	22.63	22.62	23		
10	QPSK	25	12	22.60	22.51	22.58			
10	QPSK	25	25	22.60	22.55	22.52			
10	QPSK	50	0	22.54	22.63	22.59	23		
10	16QAM	1	0	22.78	22.75	22.62			
10	16QAM	1	25	22.53	22.60	22.60			
10	16QAM	1	49	22.58	22.53	22.64	22		
10	16QAM	25	0	21.56	21.58	21.69			
10	16QAM	25	12	21.54	21.59	21.56			
10	16QAM	25	25	21.66	21.63	21.65	22		
10	16QAM	50	0	21.70	21.64	21.61			
10	64QAM	1	0	21.70	21.65	21.55			
10	64QAM	1	25	21.76	21.71	21.69	22		
10	64QAM	1	49	21.82	21.84	21.78			
10	64QAM	25	0	21.54	21.74	21.58			
10	64QAM	25	12	21.61	21.67	21.69	22		
10	64QAM	25	25	21.56	21.63	21.57			
10	64QAM	50	0	21.60	21.58	21.61			
10	256QAM	1	0	18.32	18.27	18.17	19		
10	256QAM	1	25	18.38	18.33	18.31			
10	256QAM	1	49	18.44	18.46	18.40			
10	256QAM	25	0	18.16	18.36	18.20	19		
10	256QAM	25	12	18.23	18.29	18.31			
10	256QAM	25	25	18.18	18.25	18.19			
10	256QAM	50	0	18.22	18.20	18.23			
Channel				23035	23095	23155	Tune-up limit (dBm)		
Frequency (MHz)				701.5	707.5	713.5			
5	QPSK	1	0	23.22	23.37	23.25	24		
5	QPSK	1	12	23.30	23.37	23.30			
5	QPSK	1	24	23.24	23.35	23.36			
5	QPSK	12	0	22.55	22.56	22.58	23		
5	QPSK	12	7	22.51	22.46	22.55			
5	QPSK	12	13	22.52	22.47	22.51			
5	QPSK	25	0	22.53	22.50	22.55	23		
5	16QAM	1	0	22.74	22.70	22.52			
5	16QAM	1	12	22.43	22.58	22.58			
5	16QAM	1	24	22.53	22.52	22.57	22		
5	16QAM	12	0	21.47	21.56	21.61			
5	16QAM	12	7	21.53	21.51	21.48			
5	16QAM	12	13	21.58	21.55	21.59	22		
5	16QAM	25	0	21.68	21.54	21.59			
5	64QAM	1	0	21.68	21.57	21.51			
5	64QAM	1	12	21.68	21.64	21.67	22		
5	64QAM	1	24	21.78	21.80	21.68			
5	64QAM	12	0	21.50	21.69	21.55			
5	64QAM	12	7	21.54	21.64	21.62	22		
5	64QAM	12	13	21.52	21.58	21.48			
5	64QAM	25	0	21.59	21.55	21.60			
5	256QAM	1	0	18.30	18.19	18.13	19		
5	256QAM	1	12	18.30	18.26	18.29			
5	256QAM	1	24	18.40	18.42	18.30			
5	256QAM	12	0	18.12	18.31	18.17	19		
5	256QAM	12	7	18.16	18.26	18.24			
5	256QAM	12	13	18.14	18.20	18.10			
5	256QAM	25	0	18.21	18.17	18.22			
Channel				23025	23095	23165	Tune-up limit (dBm)		
Frequency (MHz)				700.5	707.5	714.5			
3	QPSK	1	0	23.27	23.45	23.33	24		
3	QPSK	1	8	23.33	23.33	23.38			
3	QPSK	1	14	23.23	23.39	23.32			
3	QPSK	8	0	22.57	22.57	22.57	23		
3	QPSK	8	4	22.55	22.41	22.54			
3	QPSK	8	7	22.51	22.50	22.45			
3	QPSK	15	0	22.48	22.50	22.54	23		
3	16QAM	1	0	22.71	22.70	22.52			
3	16QAM	1	8	22.48	22.53	22.58			
3	16QAM	1	14	22.48	22.48	22.62	23		
3	16QAM	8	0	21.54	21.52	21.67			
3	16QAM	8	4	21.45	21.49	21.48			
3	16QAM	8	7	21.63	21.59	21.60	22		
3	16QAM	15	0	21.69	21.59	21.51			
3	64QAM	1	0	21.66	21.60	21.51			
3	64QAM	1	8	21.73	21.70	21.61	22		
3	64QAM	1	14	21.75	21.77	21.71			
3	64QAM	8	0	21.52	21.73	21.48			
3	64QAM	8	4	21.52	21.59	21.65	22		
3	64QAM	8	7	21.55	21.56	21.51			
3	64QAM	15	0	21.54	21.52	21.53			
3	256QAM	1	0	18.28	18.22	18.13	19		
3	256QAM	1	8	18.35	18.32	18.23			
3	256QAM	1	14	18.37	18.39	18.33			
3	256QAM	8	0	18.14	18.35	18.10	19		
3	256QAM	8	4	18.14	18.21	18.27			
3	256QAM	8	7	18.17	18.18	18.13			
3	256QAM	15	0	18.16	18.14	18.15			
Channel				23017	23095	23173	Tune-up limit (dBm)		
Frequency (MHz)				699.7	707.5	715.3			
1.4	QPSK	1	0	23.26	23.46	23.27	24		
1.4	QPSK	1	3	23.33	23.32	23.36			
1.4	QPSK	1	5	23.24	23.30	23.35			
1.4	QPSK	3	0	23.37	23.41	23.41	23		
1.4	QPSK	3	1	23.42	23.30	23.39			
1.4	QPSK	3	3	23.34	23.30	23.28			
1.4	QPSK	6	0	22.49	22.49	22.51	23		
1.4	16QAM	1	0	22.73	22.68	22.60			
1.4	16QAM	1	3	22.46	22.51	22.53			
1.4	16QAM	1	5	22.57	22.43	22.61			

Band 13(700MHz Band) (dBm)_ANT0							
Part 27F							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		23.41		24
10	QPSK	1	25		23.40		
10	QPSK	1	49		23.37		
10	QPSK	25	0		22.50		23
10	QPSK	25	12		22.45		
10	QPSK	25	25		22.41		
10	QPSK	50	0		22.46		23
10	16QAM	1	0		22.76		
10	16QAM	1	25		22.48		
10	16QAM	1	49		22.62		22
10	16QAM	25	0		21.53		
10	16QAM	25	12		21.57		
10	16QAM	25	25		21.51		22
10	16QAM	50	0		21.46		
10	64QAM	1	0		21.66		
10	64QAM	1	25		21.74		22
10	64QAM	1	49		21.54		
10	64QAM	25	0		21.55		
10	64QAM	25	12		21.49		22
10	64QAM	25	25		21.53		
10	64QAM	50	0		21.42		
10	256QAM	1	0		18.43		19
10	256QAM	1	25		18.51		
10	256QAM	1	49		18.31		
10	256QAM	25	0		18.32		19
10	256QAM	25	12		18.26		
10	256QAM	25	25		18.30		
10	256QAM	50	0		18.19		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	23.38	23.39	23.25	24
5	QPSK	1	12	23.31	23.34	23.35	
5	QPSK	1	24	23.26	23.30	23.33	
5	QPSK	12	0	22.42	22.45	22.45	23
5	QPSK	12	7	22.37	22.35	22.37	
5	QPSK	12	13	22.37	22.34	22.40	
5	QPSK	25	0	22.43	22.39	22.41	23
5	16QAM	1	0	22.57	22.66	22.36	
5	16QAM	1	12	22.41	22.41	22.43	
5	16QAM	1	24	22.47	22.55	22.54	22
5	16QAM	12	0	21.46	21.49	21.34	
5	16QAM	12	7	21.47	21.48	21.52	
5	16QAM	12	13	21.56	21.47	21.42	22
5	16QAM	25	0	21.38	21.45	21.38	
5	64QAM	1	0	21.44	21.65	21.51	
5	64QAM	1	12	21.69	21.69	21.53	22
5	64QAM	1	24	21.47	21.53	21.48	
5	64QAM	12	0	21.33	21.48	21.34	
5	64QAM	12	7	21.33	21.44	21.43	22
5	64QAM	12	13	21.47	21.49	21.40	
5	64QAM	25	0	21.37	21.41	21.45	
5	256QAM	1	0	18.21	18.42	18.28	19
5	256QAM	1	12	18.46	18.46	18.30	
5	256QAM	1	24	18.24	18.30	18.25	
5	256QAM	12	0	18.10	18.25	18.11	19
5	256QAM	12	7	18.10	18.21	18.20	
5	256QAM	12	13	18.24	18.26	18.17	
5	256QAM	25	0	18.14	18.18	18.22	



1.4	16QAM	3	0	22.47	22.57	22.61	22
1.4	16QAM	3	1	22.48	22.50	22.47	
1.4	16QAM	3	3	22.63	22.58	22.61	
1.4	16QAM	6	0	21.64	21.55	21.57	22
1.4	64QAM	1	0	21.68	21.57	21.47	
1.4	64QAM	1	3	21.68	21.63	21.65	
1.4	64QAM	1	5	21.81	21.79	21.72	22
1.4	64QAM	3	0	21.52	21.67	21.57	
1.4	64QAM	3	1	21.52	21.60	21.68	
1.4	64QAM	3	3	21.51	21.59	21.47	22
1.4	64QAM	6	0	21.58	21.48	21.60	
1.4	256QAM	1	0	18.30	18.19	18.09	
1.4	256QAM	1	3	18.30	18.25	18.27	19
1.4	256QAM	1	5	18.43	18.41	18.34	
1.4	256QAM	3	0	18.14	18.29	18.19	
1.4	256QAM	3	1	18.14	18.22	18.30	19
1.4	256QAM	3	3	18.13	18.21	18.09	
1.4	256QAM	6	0	18.20	18.10	18.22	



Band 66 (dBm)_ANT0									
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	22.60	22.62	22.55	23.5		
20	QPSK	1	49	22.31	22.43	22.28			
20	QPSK	1	99	22.39	22.39	22.36			
20	QPSK	50	0	21.51	21.56	21.54	22.5		
20	QPSK	50	24	21.44	21.52	21.51			
20	QPSK	50	50	21.55	21.50	21.52			
20	QPSK	100	0	21.51	21.56	21.53	22.5		
20	16QAM	1	0	21.81	21.76	21.78			
20	16QAM	1	49	21.68	21.77	21.54			
20	16QAM	1	99	21.62	21.69	21.77	21.5		
20	16QAM	50	0	20.62	20.55	20.54			
20	16QAM	50	24	20.74	20.69	20.57			
20	16QAM	50	50	20.67	20.66	20.63	21.5		
20	16QAM	100	0	20.68	20.65	20.55			
20	64QAM	1	0	20.91	20.88	20.89			
20	64QAM	1	49	20.79	20.89	20.63	21.5		
20	64QAM	1	99	20.70	20.83	20.84			
20	64QAM	50	0	20.59	20.54	20.54			
20	64QAM	50	24	20.66	20.64	20.56	21.5		
20	64QAM	50	50	20.59	20.60	20.60			
20	64QAM	100	0	20.70	20.59	20.48			
20	256QAM	1	0	17.90	17.87	17.88	18.5		
20	256QAM	1	49	17.78	17.88	17.62			
20	256QAM	1	99	17.69	17.82	17.83			
20	256QAM	50	0	17.58	17.53	17.53	18.5		
20	256QAM	50	24	17.65	17.63	17.55			
20	256QAM	50	50	17.58	17.59	17.59			
20	256QAM	100	0	17.69	17.58	17.47			
Channel				132047	132322	132597	Tune-up limit (dBm)		
Frequency (MHz)				1717.5	1745	1772.5			
15	QPSK	1	0	22.21	22.41	22.37	23.5		
15	QPSK	1	37	22.29	22.36	22.18			
15	QPSK	1	74	22.33	22.38	22.32			
15	QPSK	36	0	21.29	21.33	21.32	22.5		
15	QPSK	36	20	21.35	21.48	21.50			
15	QPSK	36	39	21.46	21.46	21.47			
15	QPSK	75	0	21.31	21.35	21.47	22.5		
15	16QAM	1	0	21.79	21.69	21.76			
15	16QAM	1	37	21.63	21.73	21.50			
15	16QAM	1	74	21.57	21.60	21.70	21.5		
15	16QAM	36	0	20.60	20.50	20.52			
15	16QAM	36	20	20.63	20.67	20.56			
15	16QAM	36	39	20.61	20.57	20.55	21.5		
15	16QAM	75	0	20.61	20.57	20.45			
15	64QAM	1	0	20.86	20.84	20.82			
15	64QAM	1	37	20.70	20.79	20.59	21.5		
15	64QAM	1	74	20.59	20.78	20.82			
15	64QAM	36	0	20.47	20.53	20.46			
15	64QAM	36	20	20.56	20.54	20.55	21.5		
15	64QAM	36	39	20.50	20.58	20.50			
15	64QAM	75	0	20.68	20.57	20.41			
15	256QAM	1	0	17.85	17.83	17.81	18.5		
15	256QAM	1	37	17.69	17.78	17.58			
15	256QAM	1	74	17.58	17.77	17.81			
15	256QAM	36	0	17.46	17.52	17.45	18.5		
15	256QAM	36	20	17.55	17.53	17.54			
15	256QAM	36	39	17.49	17.57	17.49			
15	256QAM	75	0	17.67	17.56	17.40			
Channel				132022	132322	132622	Tune-up limit (dBm)		
Frequency (MHz)				1715	1745	1775			
10	QPSK	1	0	22.26	22.36	22.34	23.5		
10	QPSK	1	25	22.14	22.35	22.15			
10	QPSK	1	49	22.24	22.28	22.22			
10	QPSK	25	0	21.24	21.32	21.33	22.5		
10	QPSK	25	12	21.32	21.40	21.38			
10	QPSK	25	25	21.41	21.40	21.41			
10	QPSK	50	0	21.32	21.21	21.47	22.5		
10	16QAM	1	0	21.75	21.65	21.69			
10	16QAM	1	25	21.56	21.68	21.41			
10	16QAM	1	49	21.53	21.59	21.64	21.5		
10	16QAM	25	0	20.45	20.47	20.41			
10	16QAM	25	12	20.66	20.58	20.47			
10	16QAM	25	25	20.51	20.58	20.51	21.5		
10	16QAM	50	0	20.58	20.51	20.46			
10	64QAM	1	0	20.74	20.81	20.74			
10	64QAM	1	25	20.72	20.78	20.52	21.5		
10	64QAM	1	49	20.54	20.75	20.73			
10	64QAM	25	0	20.52	20.48	20.40			
10	64QAM	25	12	20.57	20.56	20.41	21.5		
10	64QAM	25	25	20.43	20.53	20.46			
10	64QAM	50	0	20.57	20.44	20.42			
10	256QAM	1	0	17.73	17.80	17.73	18.5		
10	256QAM	1	25	17.71	17.77	17.51			
10	256QAM	1	49	17.53	17.74	17.72			
10	256QAM	25	0	17.51	17.47	17.39	18.5		
10	256QAM	25	12	17.56	17.55	17.40			
10	256QAM	25	25	17.42	17.52	17.45			
10	256QAM	50	0	17.56	17.43	17.41	18.5		
Channel				131997	132322	132647	Tune-up limit (dBm)		
Frequency (MHz)				1712.5	1745	1777.5			
5	QPSK	1	0	22.22	22.39	22.33	23.5		
5	QPSK	1	12	22.23	22.30	22.17			
5	QPSK	1	24	22.29	22.26	22.26			
5	QPSK	12	0	21.32	21.35	21.33	22.5		
5	QPSK	12	7	21.33	21.43	21.37			
5	QPSK	12	13	21.44	21.41	21.40			
5	QPSK	25	0	21.28	21.27	21.47	22.5		
5	16QAM	1	0	21.70	21.67	21.70			
5	16QAM	1	12	21.51	21.68	21.43			
5	16QAM	1	24	21.50	21.61	21.62	22.5		

Band 66 (dBm)_ANT4							
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	22.69	22.75	22.70	23.5
20	QPSK	1	49	22.61	22.59	22.66	
20	QPSK	1	99	22.58	22.63	22.65	
20	QPSK	50	0	21.65	21.69	21.63	22.5
20	QPSK	50	24	21.57	21.65	21.64	
20	QPSK	50	50	21.68	21.63	21.65	
20	QPSK	100	0	21.64	21.68	21.66	22.5
20	16QAM	1	0	21.94	21.89	21.91	
20	16QAM	1	49	21.81	21.90	21.67	
20	16QAM	1	99	21.75	21.82	21.90	21.5
20	16QAM	50	0	20.75	20.68	20.67	
20	16QAM	50	24	20.87	20.82	20.70	
20	16QAM	50	50	20.80	20.79	20.76	21.5
20	16QAM	100	0	20.81	20.78	20.68	
20	64QAM	1	0	21.04	21.01	21.02	
20	64QAM	1	49	20.92	21.02	20.76	21.5
20	64QAM	1	99	20.83	20.96	20.97	
20	64QAM	50	0	20.72	20.67	20.67	
20	64QAM	50	24	20.79	20.77	20.69	21.5
20	64QAM	50	50	20.72	20.73	20.73	
20	64QAM	100	0	20.83	20.72	20.61	
20	256QAM	1	0	18.03	18.00	18.01	18.5
20	256QAM	1	49	17.91	18.01	17.75	
20	256QAM	1	99	17.82	17.95	17.96	
20	256QAM	50	0	17.71	17.66	17.66	18.5
20	256QAM	50	24	17.78	17.76	17.68	
20	256QAM	50	50	17.71	17.72	17.72	
20	256QAM	100	0	17.82	17.71	17.60	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.34	22.54	22.50	23.5
15	QPSK	1	37	22.42	22.49	22.31	
15	QPSK	1	74	22.46	22.51	22.45	
15	QPSK	36	0	21.42	21.46	21.45	22.5
15	QPSK	36	20	21.48	21.61	21.63	
15	QPSK	36	39	21.59	21.59	21.60	
15	QPSK	75	0	21.44	21.48	21.60	22.5
15	16QAM	1	0	21.92	21.82	21.89	
15	16QAM	1	37	21.76	21.86	21.63	
15	16QAM	1	74	21.70	21.73	21.83	21.5
15	16QAM	36	0	20.73	20.63	20.65	
15	16QAM	36	20	20.76	20.80	20.69	
15	16QAM	36	39	20.74	20.70	20.68	21.5
15	16QAM	75	0	20.74	20.70	20.58	
15	64QAM	1	0	20.99	20.97	20.95	
15	64QAM	1	37	20.83	20.92	20.72	21.5
15	64QAM	1	74	20.72	20.91	20.95	
15	64QAM	36	0	20.60	20.66	20.59	
15	64QAM	36	20	20.69	20.67	20.68	21.5
15	64QAM	36	39	20.63	20.71	20.63	
15	64QAM	75	0	20.81	20.70	20.54	
15	256QAM	1	0	17.98	17.96	17.94	18.5
15	256QAM	1	37	17.82	17.91	17.71	
15	256QAM	1	74	17.71	17.90	17.94	
15	256QAM	36	0	17.59	17.65	17.58	18.5
15	256QAM	36	20	17.68	17.66	17.67	
15	256QAM	36	39	17.62	17.70	17.62	
15	256QAM	75	0	17.80	17.69	17.53	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.39	22.49	22.47	23.5
10	QPSK	1	25	22.27	22.48	22.28	
10	QPSK	1	49	22.37	22.41	22.35	
10	QPSK	25	0	21.37	21.45	21.46	22.5
10	QPSK	25	12	21.45	21.53	21.51	
10	QPSK	25	25	21.54	21.53	21.54	
10	QPSK	50	0	21.45	21.34	21.60	22.5
10	16QAM	1	0	21.88	21.78	21.82	
10	16QAM	1	25	21.69	21.81	21.54	
10	16QAM	1	49	21.66	21.72	21.77	21.5
10	16QAM	25	0	20.58	20.60	20.54	
10	16QAM	25	12	20.79	20.71	20.60	
10	16QAM	25	25	20.64	20.71	20.64	21.5
10	16QAM	50	0	20.71	20.64	20.59	
10	64QAM	1	0	20.87	20.94	20.87	
10	64QAM	1	25	20.85	20.91	20.65	21.5
10	64QAM	1	49	20.67	20.88	20.86	
10	64QAM	25	0	20.65	20.61	20.53	
10	64QAM	25	12	20.70	20.69	20.54	21.5
10	64QAM	25	25	20.56	20.66	20.59	
10	64QAM	50	0	20.70	20.57	20.55	
10	256QAM	1	0	17.86	17.93	17.86	18.5
10	256QAM	1	25	17.84	17.90	17.64	
10	256QAM	1	49	17.66	17.87	17.85	
10	256QAM	25	0	17.64	17.60	17.52	18.5
10	256QAM	25	12	17.69	17.68	17.53	
10	256QAM	25	25	17.55	17.65	17.58	
10	256QAM	50	0	17.69	17.56	17.54	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.35	22.52	22.46	23.5
5	QPSK	1	12	22.36	22.43	22.30	
5	QPSK	1	24	22.42	22.39	22.39	
5	QPSK	12	0	21.45	21.48	21.46	22.5
5	QPSK	12	7	21.46	21.56	21.50	
5	QPSK	12	13	21.57	21.54	21.53	
5	QPSK	25	0	21.41	21.40	21.60	22.5
5	16QAM	1	0	21.83	21.80	21.83	
5	16QAM	1	12	21.64	21.81	21.56	
5	16QAM	1	24	21.63	21.74	21.75	



5	16QAM	12	0	20.52	20.40	20.43	21.5
5	16QAM	12	7	20.63	20.57	20.42	
5	16QAM	12	13	20.50	20.59	20.54	
5	16QAM	25	0	20.62	20.57	20.45	21.5
5	64QAM	1	0	20.76	20.75	20.81	
5	64QAM	1	12	20.62	20.81	20.55	
5	64QAM	1	24	20.56	20.70	20.77	21.5
5	64QAM	12	0	20.51	20.40	20.43	
5	64QAM	12	7	20.59	20.56	20.43	
5	64QAM	12	13	20.52	20.54	20.51	18.5
5	64QAM	25	0	20.53	20.53	20.38	
5	256QAM	1	0	17.75	17.74	17.80	
5	256QAM	1	12	17.61	17.80	17.54	18.5
5	256QAM	1	24	17.55	17.69	17.76	
5	256QAM	12	0	17.50	17.39	17.42	
5	256QAM	12	7	17.58	17.55	17.42	18.5
5	256QAM	12	13	17.51	17.53	17.50	
5	256QAM	25	0	17.52	17.52	17.37	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.22	22.32	22.29	23.5
3	QPSK	1	8	22.14	22.32	22.19	
3	QPSK	1	14	22.24	22.25	22.30	
3	QPSK	8	0	21.31	21.29	21.32	22.5
3	QPSK	8	4	21.35	21.38	21.38	
3	QPSK	8	7	21.41	21.41	21.38	
3	QPSK	15	0	21.30	21.21	21.38	22.5
3	16QAM	1	0	21.71	21.68	21.63	
3	16QAM	1	8	21.59	21.64	21.47	
3	16QAM	1	14	21.45	21.61	21.71	21.5
3	16QAM	8	0	20.47	20.47	20.42	
3	16QAM	8	4	20.60	20.57	20.50	
3	16QAM	8	7	20.54	20.53	20.57	21.5
3	16QAM	15	0	20.53	20.51	20.45	
3	64QAM	1	0	20.85	20.76	20.83	
3	64QAM	1	8	20.72	20.79	20.56	21.5
3	64QAM	1	14	20.60	20.72	20.69	
3	64QAM	8	0	20.45	20.47	20.39	
3	64QAM	8	4	20.60	20.49	20.50	21.5
3	64QAM	8	7	20.50	20.45	20.49	
3	64QAM	15	0	20.61	20.48	20.37	
3	256QAM	1	0	17.84	17.75	17.82	18.5
3	256QAM	1	8	17.71	17.78	17.55	
3	256QAM	1	14	17.59	17.71	17.68	
3	256QAM	8	0	17.44	17.46	17.38	18.5
3	256QAM	8	4	17.59	17.48	17.49	
3	256QAM	8	7	17.49	17.44	17.48	
3	256QAM	15	0	17.60	17.47	17.36	Tune-up limit (dBm)
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	23.5
1.4	QPSK	1	0	22.21	22.37	22.33	
1.4	QPSK	1	3	22.24	22.32	22.21	
1.4	QPSK	1	5	22.25	22.33	22.21	
1.4	QPSK	3	0	22.35	22.33	22.47	
1.4	QPSK	3	1	22.38	22.40	22.36	
1.4	QPSK	3	3	22.43	22.40	22.37	22.5
1.4	QPSK	6	0	21.34	21.21	21.45	
1.4	16QAM	1	0	21.68	21.64	21.63	
1.4	16QAM	1	3	21.55	21.67	21.40	22.5
1.4	16QAM	1	5	21.55	21.62	21.66	
1.4	16QAM	3	0	21.32	21.54	21.33	
1.4	16QAM	3	1	21.52	21.49	21.35	21.5
1.4	16QAM	3	3	21.39	21.42	21.41	
1.4	16QAM	6	0	20.56	20.52	20.53	
1.4	64QAM	1	0	20.82	20.75	20.74	21.5
1.4	64QAM	1	3	20.66	20.82	20.55	
1.4	64QAM	1	5	20.63	20.70	20.73	
1.4	64QAM	3	0	20.56	20.51	20.47	21.5
1.4	64QAM	3	1	20.50	20.55	20.49	
1.4	64QAM	3	3	20.50	20.51	20.54	
1.4	64QAM	6	0	20.62	20.49	20.41	18.5
1.4	256QAM	1	0	17.81	17.74	17.73	
1.4	256QAM	1	3	17.65	17.81	17.54	
1.4	256QAM	1	5	17.62	17.69	17.72	18.5
1.4	256QAM	3	0	17.55	17.50	17.46	
1.4	256QAM	3	1	17.49	17.54	17.48	
1.4	256QAM	3	3	17.49	17.50	17.53	18.5
1.4	256QAM	6	0	17.61	17.48	17.40	

5	16QAM	12	0	20.65	20.53	20.56	21.5
5	16QAM	12	7	20.76	20.70	20.55	
5	16QAM	12	13	20.63	20.72	20.67	
5	16QAM	25	0	20.75	20.70	20.58	21.5
5	64QAM	1	0	20.89	20.88	20.94	
5	64QAM	1	12	20.75	20.94	20.68	
5	64QAM	1	24	20.69	20.83	20.90	21.5
5	64QAM	12	0	20.64	20.53	20.56	
5	64QAM	12	7	20.72	20.69	20.56	
5	64QAM	12	13	20.65	20.67	20.64	18.5
5	64QAM	25	0	20.66	20.66	20.51	
5	256QAM	1	0	17.88	17.87	17.93	
5	256QAM	1	12	17.74	17.93	17.67	18.5
5	256QAM	1	24	17.68	17.82	17.88	
5	256QAM	12	0	17.63	17.52	17.55	
5	256QAM	12	7	17.71	17.68	17.55	18.5
5	256QAM	12	13	17.64	17.66	17.63	
5	256QAM	25	0	17.65	17.65	17.50	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.35	22.45	22.42	23.5
3	QPSK	1	8	22.27	22.45	22.32	
3	QPSK	1	14	22.37	22.38	22.43	
3	QPSK	8	0	21.44	21.42	21.45	22.5
3	QPSK	8	4	21.48	21.51	21.51	
3	QPSK	8	7	21.54	21.54	21.51	
3	QPSK	15	0	21.43	21.34	21.51	22.5
3	16QAM	1	0	21.84	21.81	21.76	
3	16QAM	1	8	21.72	21.77	21.60	
3	16QAM	1	14	21.58	21.74	21.84	21.5
3	16QAM	8	0	20.60	20.60	20.55	
3	16QAM	8	4	20.73	20.70	20.63	
3	16QAM	8	7	20.67	20.66	20.70	21.5
3	16QAM	15	0	20.66	20.64	20.58	
3	64QAM	1	0	20.98	20.89	20.96	
3	64QAM	1	8	20.85	20.92	20.69	21.5
3	64QAM	1	14	20.73	20.85	20.82	
3	64QAM	8	0	20.58	20.60	20.52	
3	64QAM	8	4	20.73	20.62	20.63	21.5
3	64QAM	8	7	20.63	20.58	20.62	
3	64QAM	15	0	20.74	20.61	20.50	
3	256QAM	1	0	17.97	17.88	17.95	18.5
3	256QAM	1	8	17.84	17.91	17.68	
3	256QAM	1	14	17.72	17.84	17.81	
3	256QAM	8	0	17.57	17.59	17.51	18.5
3	256QAM	8	4	17.72	17.61	17.62	
3	256QAM	8	7	17.62	17.57	17.61	
3	256QAM	15	0	17.73	17.60	17.49	Tune-up limit (dBm)
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	23.5
1.4	QPSK	1	0	22.34	22.50	22.46	
1.4	QPSK	1	3	22.37	22.45	22.34	
1.4	QPSK	1	5	22.38	22.46	22.34	
1.4	QPSK	3	0	22.48	22.46	22.60	
1.4	QPSK	3	1	22.51	22.53	22.49	
1.4	QPSK	3	3	22.56	22.53	22.50	22.5
1.4	QPSK	6	0	21.47	21.34	21.58	
1.4	16QAM	1	0	21.81	21.77	21.76	
1.4	16QAM	1	3	21.68	21.80	21.53	22.5
1.4	16QAM	1	5	21.68	21.75	21.79	
1.4	16QAM	3	0	21.45	21.67	21.46	
1.4	16QAM	3	1	21.65	21.62	21.48	21.5
1.4	16QAM	3	3	21.52	21.55	21.54	
1.4	16QAM	6	0	20.69	20.65	20.66	
1.4	64QAM	1	0	20.95	20.88	20.87	21.5
1.4	64QAM	1	3	20.79	20.95	20.68	
1.4	64QAM	1	5	20.76	20.83	20.86	
1.4	64QAM	3	0	20.69	20.64	20.60	21.5
1.4	64QAM	3	1	20.63	20.68	20.62	
1.4	64QAM	3	3	20.63	20.64	20.67	
1.4	64QAM	6	0	20.75	20.62	20.54	18.5
1.4	256QAM	1	0	17.94	17.87	17.86	
1.4	256QAM	1	3	17.78	17.94	17.67	
1.4	256QAM	1	5	17.75	17.82	17.85	18.5
1.4	256QAM	3	0	17.68	17.63	17.59	
1.4	256QAM	3	1	17.62	17.67	17.61	
1.4	256QAM	3	3	17.62	17.63	17.66	18.5
1.4	256QAM	6	0	17.74	17.61	17.53	



Band 48 (3.5G Band) (dBm)_ANT2									
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	55630	55960	56150	56640	3697.5
Frequency (MHz)				55340	55630	55960	56150	56640	
20	QPSK	1	0	22.09	22.09	22.15	21.99	21.98	23
20	QPSK	1	49	22.00	22.07	21.90	21.92	21.88	
20	QPSK	1	99	22.09	21.94	22.05	21.95	21.87	
20	QPSK	50	0	21.08	21.09	21.17	21.12	21.16	
20	QPSK	50	24	21.14	21.11	21.05	20.90	20.87	22
20	QPSK	50	50	21.16	21.05	21.01	20.84	20.74	
20	QPSK	100	0	21.15	21.11	21.17	20.96	21.04	
20	QPSK	1	0	21.23	21.25	21.19	21.13	21.14	
20	16QAM	1	49	21.16	21.03	21.13	21.06	21.02	22
20	16QAM	1	99	21.09	20.95	21.16	21.04	21.06	
20	16QAM	50	0	20.24	20.20	20.06	20.00	19.91	
20	16QAM	50	24	20.18	20.03	20.09	19.97	19.94	
20	16QAM	50	50	20.15	19.91	19.94	19.86	19.90	21
20	16QAM	100	0	20.06	20.03	20.09	20.03	20.04	
20	64QAM	1	0	20.14	20.21	20.12	20.02	20.06	
20	64QAM	1	49	20.13	19.85	20.03	19.94	19.96	
20	64QAM	1	99	20.07	19.98	20.07	19.96	20.01	21
20	64QAM	50	0	20.19	20.13	20.00	19.93	19.77	
20	64QAM	50	24	20.09	20.04	20.03	19.91	19.95	
20	64QAM	50	50	19.96	19.97	19.98	19.87	19.89	
20	64QAM	100	0	20.22	20.17	20.21	20.12	20.11	18
20	256QAM	1	0	17.19	17.26	17.17	17.07	17.11	
20	256QAM	1	49	17.18	16.90	17.08	16.99	17.01	
20	256QAM	1	99	17.12	17.03	17.12	17.03	17.06	
20	256QAM	50	0	17.24	17.18	17.05	16.96	16.82	18
20	256QAM	50	24	17.14	17.09	17.08	16.96	17.00	
20	256QAM	50	50	17.01	17.02	17.03	16.92	16.94	
20	256QAM	100	0	17.20	17.15	17.19	17.10	17.09	
Channel				55315	55620	55960	56160	56655	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	22.01	21.86	22.11	21.90	21.86	23
15	QPSK	1	37	21.96	21.94	21.85	21.84	21.86	
15	QPSK	1	74	21.97	21.85	21.82	21.87	21.83	
15	QPSK	36	0	21.16	21.16	21.26	21.08	21.02	
15	QPSK	36	24	21.14	21.14	21.12	20.92	20.85	22
15	QPSK	36	39	21.26	21.15	21.09	20.86	20.83	
15	QPSK	75	0	21.17	21.16	21.09	20.97	20.88	
15	16QAM	1	0	21.30	21.24	21.19	21.12	21.19	
15	16QAM	1	37	21.18	21.07	21.22	21.07	21.10	22
15	16QAM	1	74	21.16	20.94	21.19	21.12	21.05	
15	16QAM	36	0	20.28	20.23	20.09	20.01	19.97	
15	16QAM	36	20	20.28	20.05	20.14	19.99	20.02	
15	16QAM	36	39	20.15	19.96	19.96	19.90	20.00	21
15	16QAM	75	0	20.13	20.08	20.19	20.12	20.12	
15	64QAM	1	0	20.14	20.21	20.17	20.03	20.07	
15	64QAM	1	37	20.21	19.88	20.10	19.93	19.98	
15	64QAM	1	74	20.15	20.06	20.07	19.98	20.08	21
15	64QAM	36	0	20.18	20.23	20.01	20.01	19.83	
15	64QAM	36	20	20.09	20.03	20.04	19.93	20.02	
15	64QAM	36	39	19.98	20.00	19.97	19.93	19.92	
15	64QAM	75	0	20.15	20.08	20.05	20.05	20.09	18
15	256QAM	1	0	17.09	17.15	17.11	16.97	17.01	
15	256QAM	1	37	17.15	16.82	17.04	16.87	16.92	
15	256QAM	1	74	17.09	17.00	17.01	16.92	17.02	
15	256QAM	36	0	17.12	17.17	16.95	16.95	16.77	18
15	256QAM	36	20	17.03	16.97	16.98	16.87	16.96	
15	256QAM	36	39	16.96	16.98	16.95	16.91	16.90	
15	256QAM	75	0	17.13	17.06	17.07	17.03	17.07	
Channel				55290	55815	55960	56165	56660	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	21.97	21.92	22.07	21.90	21.86	23
10	QPSK	1	25	21.89	21.94	21.83	21.89	21.85	
10	QPSK	1	49	22.02	21.96	21.82	21.90	21.87	
10	QPSK	25	0	21.25	21.17	21.22	21.10	20.96	
10	QPSK	25	12	21.24	21.13	21.15	20.99	20.88	22
10	QPSK	25	25	21.26	21.07	21.10	20.92	20.83	
10	QPSK	50	0	21.22	21.14	21.16	20.98	20.90	
10	16QAM	1	0	21.30	21.25	21.21	21.12	21.18	
10	16QAM	1	25	21.21	21.11	21.14	21.13	21.11	22
10	16QAM	1	49	21.17	21.00	21.28	21.11	21.11	
10	16QAM	25	0	20.24	20.27	20.09	20.06	19.93	
10	16QAM	25	12	20.26	20.10	20.15	20.04	19.94	
10	16QAM	25	25	20.19	19.95	19.98	19.96	19.91	21
10	16QAM	50	0	20.07	20.08	20.16	20.11	20.13	
10	64QAM	1	0	20.20	20.25	20.13	20.06	20.11	
10	64QAM	1	25	20.21	19.86	20.06	20.00	19.98	
10	64QAM	1	49	20.06	20.01	20.10	20.08	20.02	21
10	64QAM	25	0	20.19	20.21	20.01	19.97	19.87	
10	64QAM	25	12	20.16	20.08	20.04	20.00	20.04	
10	64QAM	25	25	20.06	19.97	20.06	19.95	19.93	
10	64QAM	50	0	20.21	20.15	20.17	20.02	20.07	18
10	256QAM	1	0	17.14	17.19	17.07	17.00	17.05	
10	256QAM	1	25	17.15	16.80	17.00	16.94	16.92	
10	256QAM	1	49	17.00	16.95	17.04	17.02	16.96	
10	256QAM	25	0	17.13	17.15	16.95	16.91	16.81	18
10	256QAM	25	12	17.10	17.02	16.98	16.94	16.98	
10	256QAM	25	25	17.00	16.91	17.00	16.89	16.87	
10	256QAM	50	0	17.19	17.13	17.15	17.00	17.05	
Channel				55016	55595	55710	56113	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	21.95	21.86	22.09	21.88	21.94	23
5	QPSK	1	12	21.95	21.94	21.87	21.86	21.90	
5	QPSK	1	24	22.01	21.84	21.90	21.88	21.89	
5	QPSK	12	0	21.25	21.18	21.23	21.09	20.97	
5	QPSK	12	7	21.17	21.21	21.08	20.94	20.94	22
5	QPSK	12	13	21.15	21.07	21.05	20.92	20.84	
5	QPSK	25	0	21.15	21.20	21.10	20.97	20.84	
5	16QAM	1	24	21.24	21.28	21.34	21.23	21.23	
5	16QAM	1	12	21.17	21.05	21.13	21.08	21.13	22
5	16QAM	1	24	21.09	21.03	21.17	21.14	21.07	
5	16QAM	12	0	20.24	20.20	20.13	19.99	19.91	
5	16QAM	12	13	20.18	19.94	19.98	19.87	19.93	
5	16QAM	25	0	20.12	20.12	20.15	20.12	20.09	21
5	64QAM	1	0	20.19	20.22	20.15	20.05	20.08	
5	64QAM	1	12	20.13	19.86	20.07	19.93	20.03	
5	64QAM	1	24	20.08	19.99	20.16	20.05	20.10	
5	64QAM	12	0	20.19	20.14	20.04	19.88	19.82	21
5	64QAM	12	13	20.06	19.96	19.98	19.90	19.92	
5	64QAM	12	25	19.94	19.94	19.94	19.90	19.87	
5	64QAM	25	0	20.14	20.09	20.16	20.01	20.08	
5	256QAM	1	0	17.13	17.16	17.09	16.99	17.02	18
5	256QAM	1	12	17.07	16.90	16.97	16.97	16.97	
5	256QAM	1	24	17.02	16.93	17.10	16.99	17.04	
5	256QAM	12	0	17.17	17.12	17.02	16.86	16.90	
5	256QAM	12	7	17.02	17.04	16.88	16.88	16.80	18
5	256QAM	12	13	16.92	16.92	16.92	16.87	16.85	
5	256QAM	25	0	17.12	17.07	17.14	16.99	17.06	
5	256QAM	25	0	17.12	17.07	17.02	16.84	17.01	

Band 48 (3.5G Band) (dBm)_ANT5									
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	55630	55960	56150	56640	
Frequency (MHz)				3650	3609	3625	3641	3690	
20	QPSK	1	0	21.97	21.88	22.03	21.87	21.86	23
20	QPSK	1	49	21.88	21.95	21.78	21.80	21.76	
20	QPSK	1	99	21.97	21.82	21.93	21.83	21.75	
20	QPSK	50	0	21.20	21.15	21.21	21.06	21.04	
20	QPSK	50	24	21.16	21.13	21.07	20.92	20.89	22
20	QPSK	50	50	21.18	21.07	21.03	20.86	20.76	
20	QPSK	100	0	21.17	21.13	21.19	20.98	21.06	
20	16QAM	1	0	21.25	21.27	21.21	21.15	21.16	
20	16QAM	1	49	21.18	21.05	21.15	21.08	21.11	21
20	16QAM	1	99	21.11	20.97	21.20	21.06	21.08	
20	16QAM	50	0	20.26	20.22	20.08	20.02	19.98	
20	16QAM	50	24	20.20	20.20	20.05	19.99	19.96	
20	16QAM	50	50	20.17	19.93	19.96	19.88	19.92	20
20	16QAM	100	0	20.08	20.05	20.11	20.05	20.06	
20	64QAM	1	0	20.16	20.23	20.14	20.04	20.08	
20	64QAM	1	49	20.15	19.87	20.05	19.96	19.98	
20	64QAM	1	99	20.09	20.00	20.09	20.00	20.03	19
20	64QAM	50	0	20.21	20.15	20.02	19.95	19.79	
20	64QAM	50	24	20.11	20.06	20.05	19.93	19.97	
20	64QAM	50	50	19.98	19.96	19.99	19.89	19.91	
20	64QAM	100	0	20.17	20.12	20.16	20.07	20.06	18
20	256QAM	1	0	17.14	17.21	17.12	17.02	17.06	
20	256QAM	1	49	17.13	16.85	17.03	16.94	16.96	
20	256QAM	1	99	17.07	16.98	17.07	16.96	17.01	
20	256QAM	50	0	17.19	17.13	17.00	16.93	16.77	17
20	256QAM	50	24	17.09	17.04	17.03	16.91	16.95	
20	256QAM	50	50	16.96	16.97	16.98	16.87	16.89	
20	256QAM	100	0	17.15	17.10	17.16	17.05	17.04	
Channel				55315	55502	55990	56160	56650	Tune-up limit (dBm)
Frequency (MHz)				3657.5	3608	3625	3642	3692.5	
15	QPSK	1	0	21.92	21.77	22.02	21.81	21.77	23
15	QPSK	1	37	21.87	21.85	21.76	21.75	21.77	
15	QPSK	1	74	21.88	21.76	21.83	21.78	21.74	
15	QPSK	36	0	21.09	21.07	21.17	20.99	20.93	
15	QPSK	36	20	21.05	21.05	21.03	20.83	20.83	22
15	QPSK	36	39	21.17	21.06	21.00	20.77	20.74	
15	QPSK	75	0	21.08	21.07	21.03	20.86	20.79	
15	16QAM	1	0	21.21	21.15	21.03	21.10	21.10	
15	16QAM	1	37	21.09	20.98	21.13	20.98	21.01	21
15	16QAM	1	74	21.07	20.85	21.10	21.03	20.96	
15	16QAM	36	0	20.19	20.14	20.00	19.92	19.88	
15	16QAM	36	20	20.19	19.96	20.05	19.90	19.93	
15	16QAM	36	39	20.06	19.81	19.87	19.81	19.91	20
15	16QAM	75	0	20.04	19.99	20.10	19.96	20.03	
15	64QAM	1	0	20.05	20.12	20.08	19.94	19.98	
15	64QAM	1	37	20.12	19.95	20.09	19.84	19.89	
15	64QAM	1	74	20.06	19.97	19.98	19.89	19.96	19
15	64QAM	36	0	20.09	20.14	19.92	19.82	19.74	
15	64QAM	36	20	20.00	19.84	19.95	19.84	19.93	
15	64QAM	36	39	19.93	19.95	19.92	19.88	19.87	
15	64QAM	75	0	20.10	20.03	20.04	20.00	20.04	18
15	256QAM	1	0	17.03	17.10	17.06	16.92	16.96	
15	256QAM	1	37	17.10	16.77	16.99	16.82	16.87	
15	256QAM	1	74	17.04	16.95	16.97	16.87	16.97	
15	256QAM	36	0	17.07	17.12	16.90	16.90	16.72	17
15	256QAM	36	20	16.98	16.92	16.93	16.82	16.91	
15	256QAM	36	39	16.91	16.93	16.90	16.86	16.85	
15	256QAM	75	0	17.08	17.01	17.02	16.98	17.02	
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				36550	3607.5	3625	3642.5	3695	
10	QPSK	1	0	21.88	21.83	21.98	21.81	21.77	23
10	QPSK	1	25	21.80	21.85	21.74	21.80	21.76	
10	QPSK	1	49	21.93	21.77	21.83	21.81	21.78	
10	QPSK	25	0	21.16	21.08	21.13	21.01	20.87	
10	QPSK	25	12	21.15	21.04	21.06	20.90	20.79	22
10	QPSK	25	24	21.17	20.98	21.01	20.82	20.74	
10	QPSK	50	0	21.13	21.05	21.07	20.89	20.81	
10	16QAM	1	0	21.21	21.16	21.12	21.03	21.09	
10	16QAM	1	25	21.12	21.02	21.05	21.04	21.02	21
10	16QAM	1	49	21.08	20.91	21.19	21.02	21.02	
10	16QAM	25	0	20.15	20.18	20.00	19.97	19.84	
10	16QAM	25	12	20.17	20.01	20.06	19.95	19.85	
10	16QAM	25	24	20.10	19.86	19.89	19.87	19.82	20
10	16QAM	50	0	19.98	19.85	19.91	20.02	20.04	
10	64QAM	1	0	20.11	20.16	20.04	19.97	20.02	
10	64QAM	1	25	20.12	19.77	19.97	19.91	19.89	
10	64QAM	1	49	19.87	19.92	20.01	19.99	19.93	19
10	64QAM	25	0	20.10	20.12	19.92	19.88	19.78	
10	64QAM	25	12	20.07	19.99	19.95	19.91	19.95	
10	64QAM	25	24	19.97	19.88	19.97	19.86	19.84	
10	64QAM	50	0	20.16	20.10	20.12	19.97	20.02	18
10	256QAM	1	0	17.09	17.14	17.02	16.95	17.00	
10	256QAM	1	25	17.10	16.75	16.95	16.81	16.87	
10	256QAM	1	49	16.95	16.80	16.99	16.97	16.91	
10	256QAM	25	0	17.08	17.10	16.90	16.86	16.78	17
10	256QAM	25	12	17.05	16.97	16.93	16.89	16.93	
10	256QAM	25	24	16.95	16.86	16.95	16.84	16.82	
10	256QAM	50	0	17.14	17.08	17.10	16.95	17.00	
Channel				55265	55810	55990	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3652.5	3607	3625	3643	3697.5	
5	QPSK	1	0	21.85	21.77	21.90	21.78	21.85	23
5	QPSK	1	12	21.86	21.85	21.79	21.77	21.81	
5	QPSK	1	24	21.92	21.75	21.81	21.79	21.80	
5	QPSK	12	0	21.16	21.09	21.14	21.00	20.88	
5	QPSK	12	7	21.08	21.12	20.99	20.85	20.85	22
5	QPSK	12	13	21.06	20.98	20.96	20.83	20.75	
5	QPSK	25	0	21.06	21.11	21.01	20.88	20.75	
5	16QAM	1	0	21.15	21.19	21.15	21.14	21.14	
5	16QAM	1	12	21.08	20.98	20.99	21.04	21.04	21
5	16QAM	1	24	21.00	20.94	21.08	21.05	20.98	
5	16QAM	12	0	20.15	20.11	20.04	19.90	19.82	
5	16QAM	12	13	20.09	19.99	20.04	19.98	19.87	
5	16QAM	25	0	20.09	19.85	19.78	19.78	19.84	20
5	16QAM	25	13	20.03	20.03	20.08	20.03	20.00	
5	64QAM	1	0	20.10	20.13	20.06	19.96	19.99	
5	64QAM	1	12	20.04	19.77	19.99	19.84	19.84	
5	64QAM	1	24	19.95	19.90	20.07	19.96	20.01	19
5	64QAM	12	0	20.14	20.09	19.99	19.83	19.77	
5	64QAM	12	7	19.99	20.01	19.93	19.85	19.87	
5	64QAM	12	13	19.99	19.99	19.95	19.85	19.82	
5	64QAM	25	0	20.09	20.04	20.11	19.96	20.03	18
5	256QAM	1	0	17.08	17.11	17.04	16.94	16.97	
5	256QAM	1	12	17.02	16.75	16.96	16.82	16.92	
5	256QAM	1	24	16.97	16.88	16.94	16.89	16.89	
5	256QAM	12	0	17.12	17.07	16.97	16.81	16.75	17
5	256QAM	12	7	16.97	16.99	16.91	16.83	16.85	
5	256QAM	12	13	16.87	16.87	16.87	16.83	16.80	
5	256QAM	25	0	17.00	17.02	17.09	16.94	17.01	



CA_5B_ANT0											
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				
20450	20450	20549	QPSK	1	0	0	0	1	0	23.07	24.00
20525	20476	20575	QPSK	1	0	0	0	1	0	23.11	24.00
20600	20501	20600	QPSK	1	0	0	0	1	0	23.09	24.00
20450	20450	20549	16QAM	1	0	0	0	1	0	22.21	23.00
20525	20476	20575	16QAM	1	0	0	0	1	0	22.29	23.00
20600	20501	20600	16QAM	1	0	0	0	1	0	22.18	23.00
20450	20450	20549	64QAM	1	0	0	0	1	0	21.36	22.00
20525	20476	20575	64QAM	1	0	0	0	1	0	21.55	22.00
20600	20501	20600	64QAM	1	0	0	0	1	0	21.58	22.00
20450	20450	20549	256QAM	1	0	0	0	1	0	18.34	19.00
20525	20476	20575	256QAM	1	0	0	0	1	0	18.35	19.00
20600	20501	20600	256QAM	1	0	0	0	1	0	18.22	19.00
20450	20450	20549	QPSK	25	0	0	0	1	0	22.10	23.00
20525	20476	20575	QPSK	25	0	0	0	1	0	22.18	23.00
20600	20501	20600	QPSK	25	0	0	0	1	0	22.14	23.00

CA_48C_ANT5											
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	21.97	23.00
55990	55891	56089	QPSK	1	0	0	0	1	0	22.12	23.00
56640	56442	56640	QPSK	1	0	0	0	1	0	21.93	23.00
55340	55340	55538	16QAM	1	0	0	0	1	0	21.15	22.00
55990	55891	56089	16QAM	1	0	0	0	1	0	21.22	22.00
56640	56442	56640	16QAM	1	0	0	0	1	0	21.12	22.00
55340	55340	55538	64QAM	1	0	0	0	1	0	20.19	21.00
55990	55891	56089	64QAM	1	0	0	0	1	0	20.31	21.00
56640	56442	56640	64QAM	1	0	0	0	1	0	20.22	21.00
55340	55340	55538	256QAM	1	0	0	0	1	0	17.14	18.00
55990	55891	56089	256QAM	1	0	0	0	1	0	17.15	18.00
56640	56442	56640	256QAM	1	0	0	0	1	0	17.16	18.00
55340	55340	55538	QPSK	50	0	0	0	1	0	21.08	22.00
55990	55891	56089	QPSK	50	0	0	0	1	0	21.16	22.00
56640	56442	56640	QPSK	50	0	0	0	1	0	21.13	22.00

CA_66B_ANT0											
Combination:15MHz+10MHz(75RB+25RB)											
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				
132070	132047	132140	QPSK	1	0	0	0	1	0	22.65	23.50
132322	132398	132491	QPSK	1	0	0	0	1	0	22.75	23.50
132572	132549	132642	QPSK	1	0	0	0	1	0	22.69	23.50
132070	132047	132140	16QAM	1	0	0	0	1	0	21.72	22.50
132322	132398	132491	16QAM	1	0	0	0	1	0	21.73	22.50
132572	132549	132642	16QAM	1	0	0	0	1	0	21.66	22.50
132070	132047	132140	64QAM	1	0	0	0	1	0	20.55	21.50
132322	132398	132491	64QAM	1	0	0	0	1	0	20.67	21.50
132572	132549	132642	64QAM	1	0	0	0	1	0	20.59	21.50
132070	132047	132140	256QAM	1	0	0	0	1	0	17.77	18.50
132322	132398	132491	256QAM	1	0	0	0	1	0	17.81	18.50
132572	132549	132642	256QAM	1	0	0	0	1	0	17.68	18.50
132070	132047	132140	QPSK	36	0	0	0	1	0	21.58	22.50
132322	132398	132491	QPSK	36	0	0	0	1	0	21.69	22.50
132572	132549	132642	QPSK	36	0	0	0	1	0	21.66	22.50

CA_66C_ANT0											
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				
132070	132072	132270	QPSK	1	0	0	0	1	0	22.63	23.50
132322	132323	132521	QPSK	1	0	0	0	1	0	22.78	23.50
132572	132374	132572	QPSK	1	0	0	0	1	0	22.67	23.50
132070	132072	132270	16QAM	1	0	0	0	1	0	21.66	22.50
132322	132323	132521	16QAM	1	0	0	0	1	0	21.75	22.50
132572	132374	132572	16QAM	1	0	0	0	1	0	21.68	22.50
132070	132072	132270	64QAM	1	0	0	0	1	0	20.69	21.50
132322	132323	132521	64QAM	1	0	0	0	1	0	20.75	21.50
132572	132374	132572	64QAM	1	0	0	0	1	0	20.66	21.50
132070	132072	132270	256QAM	1	0	0	0	1	0	17.52	18.50
132322	132323	132521	256QAM	1	0	0	0	1	0	17.72	18.50
132572	132374	132572	256QAM	1	0	0	0	1	0	17.64	18.50
132070	132072	132270	QPSK	50	0	0	0	1	0	21.75	22.50
132322	132323	132521	QPSK	50	0	0	0	1	0	21.85	22.50
132572	132374	132572	QPSK	50	0	0	0	1	0	21.77	22.50





2CC LTE Uplink													
Configure	CA Configuration	Ant	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	2A-4A	ANT0 ANT4	2	20	18700	1860	QPSK/1#0	4	20	20300	1745	22.58	23.50
	2A-5A	ANT4 ANT0	2	20	18700	1860	QPSK/1#0	5	10	20450	829	22.64	23.50
	2A-13A	ANT4 ANT0	2	20	18700	1860	QPSK/1#0	13	10	23230	782	22.61	23.50
	2A-66A	ANT0 ANT4	2	20	18700	1860	QPSK/1#0	66	20	132572	1770	22.75	23.50
	4A-5A	ANT4 ANT0	4	20	20050	1720	QPSK/1#0	5	10	20450	829	22.56	23.50
	4A-13A	ANT4 ANT0	4	20	20050	1720	QPSK/1#0	13	10	23230	782	22.53	23.50
	5A-66A	ANT0 ANT4	5	10	20450	829	QPSK/1#0	66	20	132572	1770	23.17	24.00
	13A-66A	ANT0 ANT4	13	10	23230	782	QPSK/1#0	66	20	132572	1770	23.15	24.00



ZC12E Overview												
Configure	CA Configuration	PCC				SCC				Psewer		
		Band	BW (MHz)	UL FR. (MHz)	UL FR. Modulation (RB/20MHz)	Band	BW (MHz)	DL Channel	DL FR. (MHz)	CA TX (dBm)	Rel 8 TX (dBm)	
Intra-Band Inter-band	CA_13A-13A	13	20	21250	782	QPSK/16QAM	68	20	60960	826	23.48	20.41
	CA_13A-8A-8A	13	10	21250	782	QPSK/16QAM	68	20	13242	1765	22.85	23.41
	CA_2A-13A	2	10	18600	1880	QPSK/16QAM	13	20	21240	762	22.81	22.59
	CA_2A-2A	2	20	18700	1880	QPSK/16QAM	2	20	19100	1900	22.12	22.59
	CA_2A-8A	2	20	18700	1880	QPSK/16QAM	48	20	60960	826	22.13	22.59
	CA_2A-4A	2	10	18600	1880	QPSK/16QAM	4	10	20175	17324	22.22	22.59
	CA_2A-5A	2	10	18600	1880	QPSK/16QAM	5	10	20480	820	22.13	22.59
	CA_2A-6A	2	10	18600	1880	QPSK/16QAM	66	20	13242	1765	22.14	22.59
	CA_48A-8A	48	20	65340	3560	QPSK/16QAM	66	20	13242	1765	22.16	22.53
	CA_48C	48	20	65340	3560	QPSK/16QAM	48	20	60960	826	22.16	22.53
	CA_4A-15A	4	20	17175	17325	QPSK/16QAM	13	20	20580	826	22.38	22.84
	CA_4A-48A	4	20	20550	1720	QPSK/16QAM	48	20	60960	826	22.35	22.80
	CA_4A-4A	4	20	20550	1720	QPSK/16QAM	4	20	20360	1745	22.49	22.80
	CA_4A-5A	4	20	17175	17325	QPSK/16QAM	5	10	20480	820	22.51	22.80
	CA_5A-5A	5	20	20450	820	QPSK/16QAM	5	20	20580	826	22.37	22.37
	CA_5A-6A	5	20	20450	836.5	QPSK/16QAM	66	20	13242	1765	22.12	22.37
CA_SB	5	20	20476	831.6	QPSK/16QAM	5	10	20375	841.5	22.11	22.37	
CA_88A-88A	66	20	132072	1720	QPSK/16QAM	66	20	17424	1760	22.51	22.62	
CA_88B	66	20	132323	1707.1	QPSK/16QAM	66	10	132472	1760	22.54	22.62	
CA_88C	66	20	132323	1745.1	QPSK/16QAM	66	20	132521	1764.9	22.51	22.62	

3CC1TE Download																		
Configure	CA Configuration	PCC				SCC1				SCC2				PSSW				
		Band	BW (MHz)	UL Fx (MHz)	UL Modulation (BPSK)	Band	BW (MHz)	DL Fx (MHz)	Band	BW (MHz)	DL Fx (MHz)	CA TX (MHz)	Rel Tx (MHz)					
Intra-BandInter-Band	CA_13A-48A-6A	13	10	23250	782	OPUS/VRC	48	20	55360	3620	20	56640	3660	21	13422	1758	23.22	23.41
	CA_13A-48C	13	10	23250	782	OPUS/VRC	48	20	55640	3670.2	20	56640	3660	21	13422	1758	23.24	23.41
	CA_13A-6A-6A-6A	13	10	23250	782	OPUS/VRC	66	20	55360	3620	20	56640	3660	21	13422	1758	23.22	23.41
	CA_13A-6A	13	10	23250	782	OPUS/VRC	66	20	55360	3620	20	56640	3660	21	13422	1758	23.22	23.41
	CA_13A-6C	13	10	23250	782	OPUS/VRC	66	20	67038	2170.2	20	67296	2160	21	13422	1758	23.25	23.41
	CA_2A-13A-4A	2	20	18700	1860	OPUS/VRC	13	10	23250	782	48	20	55660	3625	22.42	22.59	22.59	22.59
	CA_2A-13A-6A	2	20	18700	1860	OPUS/VRC	13	10	23250	782	48	20	55640	3625	22.42	22.59	22.59	22.59
	CA_2A-2A-13A	2	20	18700	1860	OPUS/VRC	2	20	19100	1600	4	20	20300	1745	22.26	22.26	22.26	22.26
	CA_2A-2A-4A	2	20	18700	1860	OPUS/VRC	2	20	19100	1600	4	20	20300	1745	22.26	22.26	22.26	22.26
	CA_2A-2A-6A	2	20	18700	1860	OPUS/VRC	2	20	19100	1600	5	10	20450	825	22.55	22.59	22.59	22.59
	CA_2A-2A-6A-2A	2	20	18700	1860	OPUS/VRC	2	20	19100	1600	5	10	20450	825	22.55	22.59	22.59	22.59
	CA_2A-4A-6A-6A	2	20	18700	1860	OPUS/VRC	48	20	55360	3620	20	56640	3660	21	13422	1758	23.22	23.41
	CA_2A-4A-6A	2	20	18700	1860	OPUS/VRC	48	20	55360	3620	20	56640	3660	21	13422	1758	23.22	23.41
	CA_2A-6C	2	20	18700	1860	OPUS/VRC	48	20	56440	3670.2	20	56640	3660	21	13422	1758	23.24	23.41
	CA_2A-6A-13A	2	20	18700	1860	OPUS/VRC	4	20	20300	1745	13	10	23250	782	22.63	22.69	22.69	22.69
	CA_2A-4A-4A	2	20	18700	1860	OPUS/VRC	4	20	20300	1745	13	10	23250	782	22.63	22.69	22.69	22.69
	CA_2A-4A-5A	2	20	18700	1860	OPUS/VRC	4	20	20300	1745	5	10	20450	825	22.55	22.59	22.59	22.59
	CA_2A-5A-6A	2	20	18700	1860	OPUS/VRC	4	20	20450	825	48	20	55660	3625	22.42	22.59	22.59	22.59
	CA_2A-5A-6A-2A	2	20	18700	1860	OPUS/VRC	5	10	20450	825	48	20	55660	3625	22.42	22.59	22.59	22.59
	CA_2A-5A-6A-2A-2A	2	20	18700	1860	OPUS/VRC	5	10	20450	825	48	20	55660	3625	22.42	22.59	22.59	22.59
	CA_2A-5A-6A-2A-2A-2A	2	20	18700	1860	OPUS/VRC	5	10	20450	825	48	20	55660	3625	22.42	22.59	22.59	22.59
	CA_2A-6A-6A-6A	2	20	18700	1860	OPUS/VRC	66	20	67038	2170.2	20	67296	2160	21	13422	1758	23.25	23.41
	CA_2A-6A	2	20	18700	1860	OPUS/VRC	66	20	67187	2165.1	20	67296	2160	21	13422	1758	23.24	23.41
	CA_2A-6C	2	20	18700	1860	OPUS/VRC	66	20	67038	2170.2	20	67296	2160	21	13422	1758	23.25	23.41
CA_48A-6A-6A-6A	48	20	55360	3660	OPUS/VRC	48	20	55360	3660	20	56640	3660	21	13422	1758	23.22	23.41	
CA_48A-6A-6A-6A	48	20	55360	3660	OPUS/VRC	66	20	67038	2165.1	20	67296	2160	21	13422	1758	23.24	23.41	
CA_48A-6A-6A	48	20	55360	3660	OPUS/VRC	66	20	67187	2165.1	20	67296	2160	21	13422	1758	23.25	23.41	
CA_48A-6A-6A	48	20	55360	3660	OPUS/VRC	66	20	67038	2170.2	20	67296	2160	21	13422	1758	23.26	23.41	
CA_48A-6C	48	20	55911	3691	OPUS/VRC	48	20	56889	3634.6	20	57240	3624	21	13422	1758	23.32	23.41	
CA_48C	48	20	55911	3691	OPUS/VRC	48	20	56889	3634.6	20	57240	3624	21	13422	1758	23.32	23.41	
CA_48-4C	4	20	20505	1720	OPUS/VRC	4	20	20300	1745	5	10	20450	825	22.55	22.59	22.59	22.59	
CA_4A-4A-13A	4	20	20505	1720	OPUS/VRC	4	20	20300	1745	13	10	23250	782	22.63	22.69	22.69	22.69	
CA_4A-4A-5A	4	20	20505	1720	OPUS/VRC	4	20	20300	1745	5	10	20450	825	22.55	22.59	22.59	22.59	
CA_4A-5A	4	20	20505	1720	OPUS/VRC	4	20	20300	1745	13	10	23250	782	22.63	22.69	22.69	22.69	
CA_5A-6A-6A-6A	5	10	20450	825	OPUS/VRC	48	20	55360	3660	20	56640	3660	21	13422	1758	23.22	23.41	
CA_5A-6A	5	10	20450	825	OPUS/VRC	48	20	55360	3660	20	56640	3660	21	13422	1758	23.22	23.41	
CA_5A-6A-6A	5	10	20450	825	OPUS/VRC	48	20	55360	3660	20	56640	3660	21	13422	1758	23.22	23.41	
CA_5A-6C	5	10	20450	825	OPUS/VRC	48	20	56889	3634.6	20	57240	3624	21	13422	1758	23.32	23.41	
CA_5A-6A	5	10	20450	825	OPUS/VRC	66	20	67187	2165.1	20	67296	2160	21	13422	1758	23.25	23.41	
CA_5A-6A	5	10	20450	825	OPUS/VRC	66	20	67038	2170.2	20	67296	2160	21	13422	1758	23.26	23.41	
CA_5B-6A	5	10	20450	825	OPUS/VRC	5	10	20575	815	6	10	13422	1758	23.11	23.12	23.12	23.12	
CA_5B-6A-6A	5	10	20450	825	OPUS/VRC	6	10	20575	815	6	10	13422	1758	23.11	23.12	23.12	23.12	
CA_5B-6A	5	10	20450	825	OPUS/VRC	6	10	20575	815	6	10	13422	1758	23.11	23.12	23.12	23.12	
CA_5B-6C	5	10	20450	825	OPUS/VRC	6	10	20575	815	6	10	13422	1758	23.11	23.12	23.12	23.12	

4CC LTE Downlink																				
Configure	CA Configuration	PCC				SCC1				SCC2				SCC3				Power		
		Band	BW (MHz)	DL Freq (MHz)	UL Freq (MHz)	Band	BW (MHz)	DL Freq (MHz)	UL Freq (MHz)	Band	BW (MHz)	DL Freq (MHz)	UL Freq (MHz)	Band	BW (MHz)	DL Freq (MHz)	UL Freq (MHz)			
4CC 1x4x4x4	CA, 1A-4A-4B-4C	13	10	23250	762	OPK1948	4	10	25900	3625	48	10	26842	3670.2	48	10	26840	3670	23.48	23.41
	CA, 1A-4A-4B-4D	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B-4E	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B-4F	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
	CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230	762	OPK1948	4	10	25900	3625	48	10	26787	2102.1	66	10	26728	2105	22.82	23.41	
CA, 1A-4A-4B	13	10	23230																	

5G NR E-UTRA Downlink																											
Configure	CA Configuration	PDC					B0C1					B0C2					B0C3					B0C4					Power
		Band	BW (MHz)	UL Freq (MHz)	UL Chann (MHz)	UL Mod (Modulation)	Band	BW (MHz)	UL Freq (MHz)	UL Chann (MHz)	Band	BW (MHz)	UL Freq (MHz)	UL Chann (MHz)	Band	BW (MHz)	UL Freq (MHz)	UL Chann (MHz)	Band	BW (MHz)	UL Freq (MHz)	UL Chann (MHz)					
Intra-Band Inter-Band	CA 1A-4A	13	10	23230	782	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.28	21.41			
	CA 1A-4B-4C	13	10	23230	782	QPSK16Q	48	20	56442	3670.2	48	20	56400	3650	48	20	56442	3670.2	48	20	56640	3660	22.28	21.41			
	CA 1A-4B-6A	13	10	23230	782	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.28	21.41			
	CA 1A-4E	13	10	23230	782	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.28	21.41			
	CA 1A-1A-4A	2	20	18700	1860	QPSK16Q	13	10	23230	782	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.44	22.59			
	CA 1A-2A-4A-6A	2	20	18700	1860	QPSK16Q	13	10	23230	782	66	20	55702	3605.2	66	20	55900	3605	66	20	56188	3644.8	22.44	22.59			
	CA 1A-2A-4A-6A-8A	2	20	18700	1860	QPSK16Q	13	10	23230	782	66	20	55702	3605.2	66	20	55900	3605	66	20	56188	3644.8	22.44	22.59			
	CA 1A-2A-4A-6A-8A-10A	2	20	18700	1860	QPSK16Q	13	10	23230	782	66	20	55702	3605.2	66	20	55900	3605	66	20	56188	3644.8	22.44	22.59			
	CA 2A-2A-4A-6A-8A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A-12A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A-12A-14A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A-12A-14A-16A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A-12A-14A-16A-18A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-2A-4A-6A-8A-10A-12A-14A-16A-18A-20A	2	20	18700	1860	QPSK16Q	2	20	19100	1900	13	10	23230	782	66	20	55702	3605.2	66	20	56188	3644.8	22.25	22.59			
	CA 2A-4C	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59			
	CA 2A-4D	48	20	55340	3560	QPSK16Q	48	20	56442	3670.2	48	20	56400	3650	48	20	56442	3670.2	48	20	56640	3660	22.25	22.59			
	CA 2A-4E	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59			
	CA 2A-4F	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59			
	CA 2A-4G	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59			
CA 2A-4H	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4I	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4J	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4K	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4L	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4M	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4N	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4O	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4P	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4Q	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4R	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4S	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4T	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4U	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4V	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4W	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4X	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4Y	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-4Z	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5A	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5B	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5C	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5D	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5E	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5F	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5G	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5H	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5I	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5J	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5K	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5L	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5M	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5N	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5O	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5P	48	20	55340	3560	QPSK16Q	48	20	55900	3625	48	20	55702	3605.2	48	20	55900	3605	48	20	56188	3644.8	22.25	22.59				
CA 2A-5Q	48	20	55340																								



5A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.83	22.79	22.58	23.5
20		1	53	22.86	22.68	22.55	
20		1	104	22.84	22.62	22.62	
20		50	1	22.78	22.69	22.57	23.5
20	DFT-s-OFDM QPSK	50	25	22.86	22.67	22.60	
20		50	50	22.72	22.64	22.62	
20		100	0	22.76	22.71	22.62	
20		1	1	22.79	22.89	22.84	23.5
20	DFT-s-OFDM 16QAM	1	53	22.72	22.68	22.58	
20		1	104	22.71	22.55	22.58	
20		50	1	22.38	22.40	22.26	23.5
20		50	25	22.25	22.33	22.25	
20	DFT-s-OFDM 64QAM	50	50	22.34	22.30	22.21	
20		100	0	22.21	22.44	22.26	
20	DFT-s-OFDM 256QAM	1	1	22.85	22.78	22.63	23.5
20	DFT-s-OFDM 64QAM	1	1	21.18	21.15	21.34	22.5
20	DFT-s-OFDM 256QAM	1	1	19.47	19.44	19.09	20.5
20	CP-OFDM QPSK	1	1	21.65	21.61	21.53	22.5
20	CP-OFDM 16QAM	1	1	21.05	20.98	20.97	21.5
20	CP-OFDM 64QAM	1	1	19.82	19.73	19.59	20.5
20	CP-OFDM 256QAM	1	1	17.52	17.48	17.14	18.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	22.79	22.82	22.59	23.5
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	22.57	22.67	22.46	23.5
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	22.65	22.70	22.46	23.5



13A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.70	22.65	22.57	23.5
20		1	53	22.72	22.64	22.58	
20		1	104	22.73	22.56	22.59	
20	DFT-s-OFDM PI/2 BPSK	50	1	22.72	22.64	22.57	23.5
20		50	25	22.76	22.65	22.60	
20		50	50	22.70	22.64	22.61	
20		100	0	22.74	22.67	22.63	
20	DFT-s-OFDM QPSK	1	1	22.68	22.78	22.74	23.5
20		1	53	22.74	22.67	22.59	
20		1	104	22.67	22.55	22.60	
20		50	1	22.40	22.45	22.26	23.5
20		50	25	22.37	22.29	22.26	
20		50	50	22.42	22.30	22.23	
20		100	0	22.34	22.44	22.24	
20	DFT-s-OFDM 16QAM	1	1	22.75	22.75	22.66	23.5
20	DFT-s-OFDM 64QAM	1	1	21.16	21.15	21.01	22.5
20	DFT-s-OFDM 256QAM	1	1	19.45	19.40	19.32	20.5
20	CP-OFDM QPSK	1	1	21.63	21.53	21.48	22.5
20	CP-OFDM 16QAM	1	1	20.96	20.93	20.87	21.5
20	CP-OFDM 64QAM	1	1	19.75	19.69	19.58	20.5
20	CP-OFDM 256QAM	1	1	17.48	17.40	17.30	18.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	22.68	22.74	22.53	23.5
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	22.60	22.67	22.48	23.5
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	22.61	22.65	22.53	23.5



66A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.73	22.68	22.59	23.5
20		1	53	22.77	22.67	22.58	
20		1	104	22.74	22.62	22.65	
20		50	1	22.69	22.69	22.62	23.5
20	DFT-s-OFDM QPSK	50	25	22.75	22.69	22.63	
20		50	50	22.76	22.64	22.61	
20		100	0	22.75	22.67	22.61	
20		1	1	22.75	22.79	22.73	23.5
20	DFT-s-OFDM QPSK	1	53	22.77	22.65	22.62	
20		1	104	22.74	22.57	22.63	
20		50	1	22.46	22.52	22.35	23.5
20		50	25	22.45	22.43	22.37	
20	DFT-s-OFDM 16QAM	50	50	22.47	22.37	22.34	
20		100	0	22.40	22.48	22.34	
20	DFT-s-OFDM 16QAM	1	1	22.63	22.72	22.62	23.5
20	DFT-s-OFDM 64QAM	1	1	21.22	21.12	21.08	22.5
20	DFT-s-OFDM 256QAM	1	1	19.48	19.42	19.36	20.5
20	CP-OFDM QPSK	1	1	21.63	21.61	21.51	22.5
20	CP-OFDM 16QAM	1	1	20.69	20.66	20.59	21.5
20	CP-OFDM 64QAM	1	1	19.45	19.52	19.60	20.5
20	CP-OFDM 256QAM	1	1	17.52	17.47	17.33	18.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	22.66	22.72	22.56	23.5
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	22.51	22.69	22.46	23.5
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	22.53	22.66	22.65	23.5



2A_n5							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.75	22.77	22.84	23.5
20		1	53	22.83	22.90	22.87	
20		1	104	22.85	22.87	22.77	
20		50	1	22.93	22.94	22.90	23.5
20		50	25	22.87	22.92	22.97	
20		50	50	22.97	22.95	22.90	
20		100	0	22.89	22.92	22.94	
20	DFT-s-OFDM QPSK	1	1	22.87	22.99	22.82	23.5
20		1	53	22.84	22.92	22.85	
20		1	104	22.91	22.87	22.73	
20		50	1	22.60	22.68	22.62	23.5
20		50	25	22.65	22.66	22.54	
20		50	50	22.52	22.57	22.59	
20		100	0	22.66	22.72	22.56	
20	DFT-s-OFDM 16QAM	1	1	22.91	22.83	22.93	23.5
20	DFT-s-OFDM 64QAM	1	1	21.38	21.23	21.33	22.5
20	DFT-s-OFDM 256QAM	1	1	19.35	19.47	19.57	20.5
20	CP-OFDM QPSK	1	1	21.64	21.65	21.74	22.5
20	CP-OFDM 16QAM	1	1	20.55	20.68	20.72	21.5
20	CP-OFDM 64QAM	1	1	19.71	19.78	19.86	20.5
20	CP-OFDM 256QAM	1	1	17.37	17.49	17.64	18.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	22.76	22.96	22.85	23.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	22.67	22.81	22.72	23.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	22.69	22.87	22.71	23.5



B48_n5							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.20	22.19	22.18	23.5
20		1	53	22.20	22.17	22.14	
20		1	104	22.16	22.14	22.12	
20		50	1	22.27	22.26	22.34	23.5
20		50	25	22.22	22.27	22.28	
20		50	50	22.26	22.24	22.23	
20		100	0	22.20	22.29	22.27	
20	DFT-s-OFDM QPSK	1	1	22.25	22.37	22.33	23.5
20		1	53	22.25	22.13	22.13	
20		1	104	22.20	22.08	22.06	
20		50	1	22.17	22.23	22.18	23.5
20		50	25	22.11	22.15	22.15	
20		50	50	22.16	22.10	22.17	
20		100	0	22.11	22.19	22.16	
20	DFT-s-OFDM 16QAM	1	1	22.32	22.28	22.27	23.5
20	DFT-s-OFDM 64QAM	1	1	20.78	20.65	20.61	21.5
20	DFT-s-OFDM 256QAM	1	1	18.78	18.98	18.96	19.5
20	CP-OFDM QPSK	1	1	21.31	21.44	21.20	22.5
20	CP-OFDM 16QAM	1	1	20.31	20.20	20.21	21.5
20	CP-OFDM 64QAM	1	1	19.35	19.20	19.22	20.5
20	CP-OFDM 256QAM	1	1	17.20	17.02	17.11	18.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	22.29	22.23	22.27	23.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	22.10	22.10	22.08	23.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	22.19	22.20	22.16	23.5



66A_n5							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	DFT-s-OFDM PI/2 BPSK	1	1	22.51	22.52	22.60	23.5
20		1	53	22.62	22.67	22.63	
20		1	104	22.54	22.65	22.59	
20		50	1	22.65	22.70	22.63	23.5
20		50	25	22.67	22.76	22.71	
20		50	50	22.70	22.69	22.65	
20		100	0	22.62	22.73	22.69	
20	DFT-s-OFDM QPSK	1	1	22.82	22.85	22.83	23.5
20		1	53	22.61	22.65	22.58	
20		1	104	22.50	22.56	22.56	
20		50	1	22.45	22.49	22.40	23.5
20		50	25	22.42	22.43	22.42	
20		50	50	22.41	22.47	22.41	
20		100	0	22.37	22.50	22.48	
20	DFT-s-OFDM 16QAM	1	1	22.71	22.68	22.82	23.5
20	DFT-s-OFDM 64QAM	1	1	21.04	21.12	21.19	22.5
20	DFT-s-OFDM 256QAM	1	1	18.61	18.45	18.51	19.5
20	CP-OFDM QPSK	1	1	21.53	21.50	21.62	22.5
20	CP-OFDM 16QAM	1	1	20.55	20.42	20.36	21.5
20	CP-OFDM 64QAM	1	1	19.52	19.61	19.22	20.5
20	CP-OFDM 256QAM	1	1	17.40	17.37	17.48	18.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	DFT-s-OFDM QPSK	1	1	22.61	22.72	22.81	23.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	DFT-s-OFDM QPSK	1	1	22.57	22.51	22.66	23.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	DFT-s-OFDM QPSK	1	1	22.59	22.68	22.57	23.5



2A_n66							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	23.5
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	22.68	22.72	22.75	23.5
40		1	108	22.68	22.75	22.60	
40		1	214	22.74	22.63	22.59	
40		108	1	22.61	22.62	22.63	
40		108	54	22.74	22.67	22.66	
40		108	108	22.77	22.65	22.77	
40		216	0	22.76	22.69	22.76	
40	DFT-s-OFDM QPSK	1	1	22.75	22.82	22.75	23.5
40		1	108	22.69	22.74	22.58	
40		1	214	22.60	22.48	22.61	
40		108	1	22.54	22.55	22.52	
40		108	54	22.52	22.48	22.38	
40		108	108	22.37	22.42	22.39	
40		216	0	22.53	22.54	22.52	
40	DFT-s-OFDM 16QAM	1	1	22.73	22.80	22.78	23.5
40	DFT-s-OFDM 64QAM	1	1	21.14	21.14	21.26	22.5
40	DFT-s-OFDM 256QAM	1	1	19.41	19.49	19.21	20.5
40	CP-OFDM QPSK	1	1	21.43	21.50	21.46	22.5
40	CP-OFDM 16QAM	1	1	20.62	20.55	20.68	21.5
40	CP-OFDM 64QAM	1	1	19.61	19.68	19.55	20.5
40	CP-OFDM 256QAM	1	1	17.42	17.48	17.42	18.5
Channel				345000	349000	353000	23.5
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	22.60	22.67	22.64	23.5
Channel				344000	349000	354000	23.5
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	22.77	22.74	22.62	23.5
Channel				343500	349000	354500	23.5
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	22.75	22.72	22.58	23.5
Channel				343000	349000	355000	23.5
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	22.18	22.58	22.46	23.5
Channel				342500	349000	355500	23.5
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	22.69	22.68	22.50	23.5



5A_n66							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	22.64	22.76	22.77	23.5
40		1	108	22.64	22.73	22.60	
40		1	214	22.74	22.59	22.60	
40		108	1	22.79	22.72	22.74	23.5
40		108	54	22.76	22.71	22.64	
40		108	108	22.76	22.79	22.76	
40	DFT-s-OFDM QPSK	216	0	22.69	22.71	22.68	23.5
40		1	1	22.74	22.81	22.72	
40		1	108	22.69	22.70	22.58	
40		1	214	22.70	22.62	22.61	23.5
40		108	1	22.46	22.48	22.43	
40		108	54	22.44	22.44	22.35	
40	DFT-s-OFDM 16QAM	108	108	22.43	22.40	22.39	23.5
40		216	0	22.44	22.46	22.42	
40		1	1	22.66	22.78	22.68	23.5
40	DFT-s-OFDM 64QAM	1	1	21.10	21.17	21.16	22.5
40	DFT-s-OFDM 256QAM	1	1	19.42	19.43	19.38	20.5
40	CP-OFDM QPSK	1	1	21.20	21.27	21.17	22.5
40	CP-OFDM 16QAM	1	1	20.58	20.64	20.56	21.5
40	CP-OFDM 64QAM	1	1	19.33	19.42	19.32	20.5
40	CP-OFDM 256QAM	1	1	17.42	17.48	17.40	18.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	22.69	22.61	22.67	23.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	22.73	22.21	22.06	23.5
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	22.70	22.41	22.25	23.5
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	22.68	22.54	22.56	23.5
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	22.70	22.66	22.57	23.5



13A_n66							
BW (MHz)	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	22.67	22.71	22.77	23.5
40		1	108	22.67	22.75	22.60	
40		1	214	22.63	22.61	22.59	
40		108	1	22.79	22.73	22.75	23.5
40		108	54	22.76	22.82	22.71	
40		108	108	22.81	22.77	22.64	
40	DFT-s-OFDM QPSK	216	0	22.77	22.76	22.63	23.5
40		1	1	22.81	22.83	22.74	
40		1	108	22.70	22.72	22.62	
40		1	214	22.63	22.58	22.57	23.5
40		108	1	22.50	22.52	22.33	
40		108	54	22.46	22.48	22.23	
40	DFT-s-OFDM 16QAM	108	108	22.47	22.42	22.37	23.5
40		216	0	22.51	22.52	22.32	
40		1	1	22.69	22.74	22.65	23.5
40	DFT-s-OFDM 64QAM	1	1	21.11	21.19	21.11	22.5
40	DFT-s-OFDM 256QAM	1	1	19.40	19.45	19.35	20.5
40	CP-OFDM QPSK	1	1	21.35	21.39	21.31	22.5
40	CP-OFDM 16QAM	1	1	20.70	20.75	20.64	21.5
40	CP-OFDM 64QAM	1	1	19.46	19.53	19.41	20.5
40	CP-OFDM 256QAM	1	1	17.41	17.50	17.38	18.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	22.68	22.72	22.64	23.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	22.22	22.75	22.58	23.5
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	22.41	22.71	22.59	23.5
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	22.67	22.57	22.56	23.5
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	22.68	22.57	22.50	23.5



2A_n77(3450-3550MHz)							
BW (MHz)	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel					633334		Tune-up limit (dBm)
Frequency (MHz)					3500.01		
100	DFT-s-OFDM Pi/2 BPSK	1	1		25.89		27
100		1	136		25.92		
100		1	271		26.02		
100		135	1		25.69		27
100		135	67		26.01		
100		135	136		25.34		
100	DFT-s-OFDM QPSK	270	0		25.59		27
100		1	1		26.29		
100		1	136		25.90		
100		1	271		25.99		27
100		135	1		26.08		
100		135	67		25.69		
100	DFT-s-OFDM 16QAM	135	136		25.85		27
100		270	0		25.90		
100		1	1		25.68		
100	DFT-s-OFDM 64QAM	1	1		24.10		25.5
100	DFT-s-OFDM 256QAM	1	1		21.76		22.5
100	CP-OFDM QPSK	1	1		23.54		24.5
100	CP-OFDM 16QAM	1	1		22.61		23.5
100	CP-OFDM 64QAM	1	1		21.97		22.5
100	CP-OFDM 256QAM	1	1		19.54		20.5
Channel				633000	633334	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3500.01	3504.99	
90	DFT-s-OFDM QPSK	1	1	26.09	26.19	26.14	27
Channel				632668	633334	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3500.01	3510	
80	DFT-s-OFDM QPSK	1	1	26.11	26.19	26.06	27
Channel				632334	633334	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3500.01	3514.98	
70	DFT-s-OFDM QPSK	1	1	26.13	26.16	26.01	27
Channel				632000	633334	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3500.01	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.00	26.20	26.11	27
Channel				631668	633334	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3500.01	3525	
50	DFT-s-OFDM QPSK	1	1	26.04	26.21	26.12	27
Channel				631334	633334	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3500.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	25.79	26.08	26.16	27
Channel				631000	633334	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3500.01	3534.99	
30	DFT-s-OFDM QPSK	1	1	25.89	26.15	25.97	27
Channel				630668	633334	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3500.01	3540	
20	DFT-s-OFDM QPSK	1	1	25.97	26.23	25.95	27
Channel				630500	633334	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500.01	3542.49	
15	DFT-s-OFDM QPSK	1	1	25.98	26.11	25.99	27
Channel				630334	633334	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3500.01	3544.98	
10	DFT-s-OFDM QPSK	1	1	25.55	26.11	25.89	27



5A_n77(3450-3550MHz)							
BW (MHz)	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel					633334		Tune-up limit (dBm)
Frequency (MHz)					3500.01		
100	DFT-s-OFDM Pi/2 BPSK	1	1		26.27		27
100		1	136		25.98		
100		1	271		26.02		
100		135	1		25.63		27
100		135	67		25.97		
100		135	136		25.29		
100	DFT-s-OFDM QPSK	270	0		25.93		27
100		1	1		26.33		
100		1	136		25.96		
100		1	271		25.37		27
100		135	1		25.95		
100		135	67		25.76		
100	DFT-s-OFDM 16QAM	135	136		25.20		27
100		270	0		25.94		
100		1	1		25.43		
100	DFT-s-OFDM 64QAM	1	1		23.56		24.5
100	DFT-s-OFDM 256QAM	1	1		21.81		22.5
100	CP-OFDM QPSK	1	1		24.03		25.5
100	CP-OFDM 16QAM	1	1		23.65		24.5
100	CP-OFDM 64QAM	1	1		22.13		23.5
100	CP-OFDM 256QAM	1	1		18.73		19.5
Channel				633000	633334	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3500.01	3504.99	
90	DFT-s-OFDM QPSK	1	1	25.85	25.83	25.76	27
Channel				632668	633334	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3500.01	3510	
80	DFT-s-OFDM QPSK	1	1	25.92	25.82	25.71	27
Channel				632334	633334	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3500.01	3514.98	
70	DFT-s-OFDM QPSK	1	1	25.95	25.78	25.63	27
Channel				632000	633334	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3500.01	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.02	25.81	25.77	27
Channel				631668	633334	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3500.01	3525	
50	DFT-s-OFDM QPSK	1	1	26.10	25.82	25.86	27
Channel				631334	633334	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3500.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	26.11	26.20	25.81	27
Channel				631000	633334	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3500.01	3534.99	
30	DFT-s-OFDM QPSK	1	1	26.12	26.14	25.59	27
Channel				630668	633334	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3500.01	3540	
20	DFT-s-OFDM QPSK	1	1	26.12	26.15	25.56	27
Channel				630500	633334	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500.01	3542.49	
15	DFT-s-OFDM QPSK	1	1	26.09	26.13	25.61	27
Channel				630334	633334	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3500.01	3544.98	
10	DFT-s-OFDM QPSK	1	1	26.10	26.06	26.02	27



13A_n77(3450-3550MHz)							
BW (MHz)	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel					633334		Tune-up limit (dBm)
Frequency (MHz)					3500.01		
100	DFT-s-OFDM P1/2 BPSK	1	1		26.08		27
100		1	136		25.82		
100		1	271		25.85		
100		135	1		25.74		27
100		135	67		25.78		
100		135	136		25.66		
100	DFT-s-OFDM QPSK	270	0		25.64		27
100		1	1		26.31		
100		1	136		25.80		
100		1	271		25.75		27
100		135	1		25.85		
100		135	67		25.55		
100	DFT-s-OFDM 16QAM	135	136		25.61		27
100		270	0		25.87		
100		1	1		25.21		
100	DFT-s-OFDM 64QAM	1	1		23.88		24.5
100	DFT-s-OFDM 256QAM	1	1		21.55		22.5
100	CP-OFDM QPSK	1	1		24.67		25.5
100	CP-OFDM 16QAM	1	1		23.44		24.5
100	CP-OFDM 64QAM	1	1		22.80		23.5
100	CP-OFDM 256QAM	1	1		19.55		20.5
Channel				633000	633334	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3500.01	3504.99	
90	DFT-s-OFDM QPSK	1	1	25.86	26.11	25.70	27
Channel				632668	633334	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3500.01	3510	
80	DFT-s-OFDM QPSK	1	1	25.89	26.09	25.67	27
Channel				632334	633334	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3500.01	3514.98	
70	DFT-s-OFDM QPSK	1	1	25.91	26.10	25.58	27
Channel				632000	633334	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3500.01	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.03	25.80	25.71	27
Channel				631668	633334	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3500.01	3525	
50	DFT-s-OFDM QPSK	1	1	26.09	25.82	25.85	27
Channel				631334	633334	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3500.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	26.11	26.00	25.79	27
Channel				631000	633334	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3500.01	3534.99	
30	DFT-s-OFDM QPSK	1	1	26.12	25.93	25.68	27
Channel				630668	633334	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3500.01	3540	
20	DFT-s-OFDM QPSK	1	1	26.10	25.89	25.55	27
Channel				630500	633334	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500.01	3542.49	
15	DFT-s-OFDM QPSK	1	1	26.08	25.88	25.59	27
Channel				630334	633334	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3500.01	3544.98	
10	DFT-s-OFDM QPSK	1	1	26.03	25.69	25.48	27



66A_n77(3450-3550MHz)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel					633334		Tune-up limit (dBm)
Frequency (MHz)					3500.01		
100	DFT-s-OFDM Pi/2 BPSK	1	1		25.96		27
100		1	136		25.95		
100		1	271		24.80		
100		135	1		25.67		27
100		135	67		26.02		
100		135	136		24.48		
100	DFT-s-OFDM QPSK	270	0		25.63		27
100		1	1		26.22		
100		1	136		25.93		
100		1	271		25.98		27
100		135	1		26.05		
100		135	67		25.96		
100	DFT-s-OFDM 16QAM	135	136		25.30		27
100		270	0		25.87		
100		1	1		24.46		25.5
100	DFT-s-OFDM 64QAM	1	1		23.55		24.5
100	DFT-s-OFDM 256QAM	1	1		21.22		22.5
100	CP-OFDM QPSK	1	1		24.56		25.5
100	CP-OFDM 16QAM	1	1		23.12		24.5
100	CP-OFDM 64QAM	1	1		22.16		23.5
100	CP-OFDM 256QAM	1	1		19.20		20.5
Channel				633000	633334	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3500.01	3504.99	
90	DFT-s-OFDM QPSK	1	1	25.93	25.86	25.81	27
Channel				632668	633334	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3500.01	3510	
80	DFT-s-OFDM QPSK	1	1	25.96	25.85	25.74	27
Channel				632334	633334	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3500.01	3514.98	
70	DFT-s-OFDM QPSK	1	1	25.98	25.82	25.67	27
Channel				632000	633334	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3500.01	3519.99	
60	DFT-s-OFDM QPSK	1	1	26.10	25.90	25.79	27
Channel				631668	633334	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3500.01	3525	
50	DFT-s-OFDM QPSK	1	1	26.13	25.90	25.79	27
Channel				631334	633334	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3500.01	3529.98	
40	DFT-s-OFDM QPSK	1	1	26.10	26.13	25.30	27
Channel				631000	633334	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3500.01	3534.99	
30	DFT-s-OFDM QPSK	1	1	26.15	25.97	25.63	27
Channel				630668	633334	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3500.01	3540	
20	DFT-s-OFDM QPSK	1	1	26.12	25.92	25.60	27
Channel				630500	633334	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500.01	3542.49	
15	DFT-s-OFDM QPSK	1	1	26.08	25.94	25.64	27
Channel				630334	633334	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3500.01	3544.98	
10	DFT-s-OFDM QPSK	1	1	25.98	26.07	25.55	27



2A_n77(3700-3980MHz)							
BW (MHz)	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	DFT-s-OFDM Pi/2 BPSK	1	1	25.83	25.96	26.20	27
100		1	136	26.02	26.10	26.04	
100		1	271	25.94	25.79	26.01	
100		135	1	24.63	25.60	25.80	27
100		135	67	26.03	25.60	26.04	
100		135	136	25.47	25.66	25.82	
100		270	0	25.56	25.80	25.25	
100	DFT-s-OFDM QPSK	1	1	26.15	26.21	26.20	27
100		1	136	26.03	25.88	26.01	
100		1	271	25.92	25.46	26.12	
100		135	1	25.73	25.89	25.68	27
100		135	67	25.25	25.55	25.22	
100		135	136	24.94	25.16	24.99	
100		270	0	25.33	25.32	25.22	
100	DFT-s-OFDM 16QAM	1	1	24.57	24.64	24.89	25.5
100	DFT-s-OFDM 64QAM	1	1	23.23	23.22	23.15	24.5
100	DFT-s-OFDM 256QAM	1	1	21.20	21.20	21.30	22.5
100	CP-OFDM QPSK	1	1	24.08	24.15	24.46	25.5
100	CP-OFDM 16QAM	1	1	23.51	23.60	23.50	24.5
100	CP-OFDM 64QAM	1	1	22.18	22.29	22.61	23.5
100	CP-OFDM 256QAM	1	1	19.20	19.05	19.35	20.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3744.99	3840	3934.98	
90	DFT-s-OFDM QPSK	1	1	25.48	25.61	25.88	27
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	DFT-s-OFDM QPSK	1	1	25.52	25.64	25.85	27
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	DFT-s-OFDM QPSK	1	1	25.57	25.62	25.77	27
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	DFT-s-OFDM QPSK	1	1	25.64	25.66	25.74	27
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	DFT-s-OFDM QPSK	1	1	25.71	25.77	25.99	27
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	DFT-s-OFDM QPSK	1	1	25.54	25.99	26.13	27
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	DFT-s-OFDM QPSK	1	1	25.47	25.99	26.09	27
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	DFT-s-OFDM QPSK	1	1	25.84	26.07	26.03	27
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	DFT-s-OFDM QPSK	1	1	25.83	26.13	26.04	27
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	DFT-s-OFDM QPSK	1	1	25.61	25.88	26.10	27



5A_n77(3700-3980MHz)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	25.81	25.90	26.20	27
100		1	136	25.99	26.20	26.00	
100		1	271	25.55	25.56	25.99	
100		135	1	25.76	25.57	25.78	27
100		135	67	26.01	25.80	26.03	
100		135	136	25.64	25.51	25.76	
100	DFT-s-OFDM QPSK	270	0	25.54	25.80	25.22	27
100		1	1	26.20	26.24	26.18	
100		1	136	26.00	26.20	25.99	
100		1	271	25.92	25.89	25.90	27
100		135	1	25.89	25.98	25.83	
100		135	67	25.69	25.88	25.64	
100	DFT-s-OFDM 16QAM	135	136	25.59	25.69	25.75	27
100		270	0	25.64	25.68	25.61	
100		1	1	24.49	24.55	24.62	25.5
100	DFT-s-OFDM 64QAM	1	1	23.21	23.32	23.10	24.5
100	DFT-s-OFDM 256QAM	1	1	21.36	21.00	21.30	22.5
100	CP-OFDM QPSK	1	1	24.03	24.12	24.44	25.5
100	CP-OFDM 16QAM	1	1	23.61	23.74	24.08	24.5
100	CP-OFDM 64QAM	1	1	22.17	22.23	22.58	23.5
100	CP-OFDM 256QAM	1	1	19.21	19.01	19.31	20.5
Channel				649666	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3744.99	3840	3934.98	
90	DFT-s-OFDM QPSK	1	1	25.46	26.01	25.86	27
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	DFT-s-OFDM QPSK	1	1	25.50	26.08	25.83	27
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	DFT-s-OFDM QPSK	1	1	25.52	26.05	25.82	27
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	DFT-s-OFDM QPSK	1	1	25.62	26.03	25.76	27
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	DFT-s-OFDM QPSK	1	1	25.69	25.76	26.11	27
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	DFT-s-OFDM QPSK	1	1	25.96	25.95	26.10	27
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	DFT-s-OFDM QPSK	1	1	25.80	25.96	26.02	27
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	DFT-s-OFDM QPSK	1	1	25.82	26.07	26.11	27
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	DFT-s-OFDM QPSK	1	1	25.83	26.09	26.03	27
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	DFT-s-OFDM QPSK	1	1	25.99	25.88	26.10	27



13A_n77(3700-3980MHz)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	25.44	25.57	25.82	27
100		1	136	25.63	25.82	25.65	
100		1	271	25.61	25.98	25.65	
100		135	1	25.39	25.21	25.49	27
100		135	67	25.63	25.87	25.73	
100		135	136	25.55	25.28	25.43	
100		270	0	25.16	24.64	24.90	
100	DFT-s-OFDM QPSK	1	1	26.15	26.20	26.19	27
100		1	136	25.87	25.83	25.65	
100		1	271	25.55	25.13	25.76	
100		135	1	25.88	25.89	25.76	27
100		135	67	25.62	25.72	25.65	
100		135	136	25.25	25.52	25.61	
100		270	0	25.76	25.88	25.87	
100	DFT-s-OFDM 16QAM	1	1	24.46	24.55	24.88	25.5
100	DFT-s-OFDM 64QAM	1	1	23.18	23.24	23.53	24.5
100	DFT-s-OFDM 256QAM	1	1	21.22	21.19	21.33	22.5
100	CP-OFDM QPSK	1	1	24.00	24.12	24.44	25.5
100	CP-OFDM 16QAM	1	1	23.64	23.81	24.02	24.5
100	CP-OFDM 64QAM	1	1	22.16	22.21	22.57	23.5
100	CP-OFDM 256QAM	1	1	19.10	19.04	19.35	20.5
Channel				649666	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3744.99	3840	3934.98	
90	DFT-s-OFDM QPSK	1	1	25.82	26.02	25.84	27
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	DFT-s-OFDM QPSK	1	1	25.79	26.05	25.79	27
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	DFT-s-OFDM QPSK	1	1	25.88	26.01	25.81	27
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	DFT-s-OFDM QPSK	1	1	25.58	26.03	25.88	27
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	DFT-s-OFDM QPSK	1	1	25.65	26.01	26.04	27
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	DFT-s-OFDM QPSK	1	1	25.92	26.03	26.08	27
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	DFT-s-OFDM QPSK	1	1	25.73	25.92	26.11	27
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	DFT-s-OFDM QPSK	1	1	25.79	26.01	26.13	27
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	DFT-s-OFDM QPSK	1	1	25.81	26.05	26.07	27
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	DFT-s-OFDM QPSK	1	1	25.54	25.85	26.11	27



66A_n77(3700-3980MHz)							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	DFT-s-OFDM PI/2 BPSK	1	1	25.50	25.61	25.89	27
100		1	136	25.69	25.88	25.71	
100		1	271	25.59	25.94	25.65	
100		135	1	25.45	25.25	25.50	27
100		135	67	25.69	25.88	25.75	
100		135	136	25.61	25.66	25.28	
100	DFT-s-OFDM QPSK	270	0	25.23	25.50	25.32	27
100		1	1	26.17	26.20	26.18	
100		1	136	25.66	25.85	25.69	
100		1	271	25.58	25.92	25.79	27
100		135	1	25.76	25.88	25.71	
100		135	67	25.66	25.75	25.73	
100	DFT-s-OFDM 16QAM	135	136	25.59	25.57	25.68	27
100		270	0	25.73	25.95	25.78	
100		1	1	24.48	24.64	24.89	25.5
100	DFT-s-OFDM 64QAM	1	1	23.37	23.31	23.58	24.5
100	DFT-s-OFDM 256QAM	1	1	21.33	21.48	21.34	22.5
100	CP-OFDM QPSK	1	1	24.07	24.16	24.46	25.5
100	CP-OFDM 16QAM	1	1	23.70	23.82	24.09	24.5
100	CP-OFDM 64QAM	1	1	22.19	22.31	22.62	23.5
100	CP-OFDM 256QAM	1	1	19.12	19.05	19.35	20.5
Channel				649666	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3744.99	3840	3934.98	
90	DFT-s-OFDM QPSK	1	1	25.47	25.60	25.89	27
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	DFT-s-OFDM QPSK	1	1	25.51	25.66	25.85	27
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	DFT-s-OFDM QPSK	1	1	25.57	25.67	25.76	27
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	DFT-s-OFDM QPSK	1	1	25.63	26.03	25.74	27
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	DFT-s-OFDM QPSK	1	1	25.69	26.12	25.88	27
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	DFT-s-OFDM QPSK	1	1	25.90	26.09	26.12	27
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	DFT-s-OFDM QPSK	1	1	25.81	26.10	26.03	27
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	DFT-s-OFDM QPSK	1	1	25.85	26.07	26.15	27
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	DFT-s-OFDM QPSK	1	1	25.85	26.13	26.20	27
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	DFT-s-OFDM QPSK	1	1	25.61	25.91	26.10	27



2.4GHz WLAN ANT 1 (W0)

Category	Sub-category	Performance Metrics (Q1-Q4)						Overall Score
		Q1 Score	Q2 Score	Q3 Score	Q4 Score	Avg Score	Max Score	
Category A	Sub-category A1	120	130	140	150	135	160	90%
		110	120	130	140	125	150	85%
	Sub-category A2	130	140	150	160	145	170	92%
		120	130	140	150	135	160	88%
	Sub-category A3	140	150	160	170	155	180	95%
		130	140	150	160	145	170	90%
	Sub-category A4	150	160	170	180	165	190	97%
		140	150	160	170	155	180	93%
	Sub-category A5	160	170	180	190	175	200	99%
		150	160	170	180	165	190	95%
Category B	Sub-category B1	110	120	130	140	125	150	85%
		100	110	120	130	115	140	80%
	Sub-category B2	120	130	140	150	135	160	88%
		110	120	130	140	125	150	83%
	Sub-category B3	130	140	150	160	145	170	90%
		120	130	140	150	135	160	85%
	Sub-category B4	140	150	160	170	155	180	92%
		130	140	150	160	145	170	87%
	Sub-category B5	150	160	170	180	165	190	94%
		140	150	160	170	155	180	89%

5GHz WLAN ANT 1 (W0)

	State	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500
MSA of ALBUQUERQUE, NM	2016	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000</																																																																

5GHz WLAN ANT 1 (W0)

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5GHzWLAN ANT 1 (W0)

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5GHz WLAN ANT 1 (W0)

	Model	Training Epochs	Training Samples	Validation Samples	Training Loss	Validation Loss	Final F1 Score
CANDIDATE SET 1	BES T1 (NO REFIN.)	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
CANDIDATE SET 2	BES T1 (NO REFIN.)	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
CANDIDATE SET 3	BES T1 (NO REFIN.)	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00
	BES T1 (NO REFIN.) REFIN.	100-1000	10000	10000	0.000	0.000	0.00
		200-1000	10000	10000	0.000	0.000	0.00
		300-1000	10000	10000	0.000	0.000	0.00

2.4GHz WLAN ANT 2 (W1)

	Model	Frequency (Hz)	Amplitude (mm)	Phase (deg)	Time (sec)	Power (W)	Max. Acc. (g)
VIBRATION TEST 1	ISO 10818-1 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-2 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-3 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-4 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-5 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
VIBRATION TEST 2	ISO 10818-1 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-2 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-3 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-4 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-5 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
VIBRATION TEST 3	ISO 10818-1 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-2 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-3 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-4 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005
	ISO 10818-5 (Shake)	0.01	0.010	0.00	10.00	10	0.001
		0.05	0.020	0.00	10.00	10	0.005

5.2GHz	WLAN ANT 2 (W1)	
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5.3GHz WLAN ANT 2 (W1)

	Model	Processor	Memory	Configuration	Number of nodes	Number of GPUs	Cost (USD)
Large model (100M)	BERT Transformer	Intel Xeon	32GB	100M	100	100	10000
		AMD Ryzen	32GB	100M	100	100	10000
		ARM Cortex	32GB	100M	100	100	10000
	BERT Transformer Model	Intel Xeon	32GB	100M	100	100	10000
		AMD Ryzen	32GB	100M	100	100	10000
		ARM Cortex	32GB	100M	100	100	10000
	BERT Transformer Model	Intel Xeon	32GB	100M	100	100	10000
		AMD Ryzen	32GB	100M	100	100	10000
		ARM Cortex	32GB	100M	100	100	10000
	BERT Transformer Model	Intel Xeon	32GB	100M	100	100	10000
		AMD Ryzen	32GB	100M	100	100	10000
		ARM Cortex	32GB	100M	100	100	10000
BERT Transformer Model	Intel Xeon	32GB	100M	100	100	10000	
	AMD Ryzen	32GB	100M	100	100	10000	
	ARM Cortex	32GB	100M	100	100	10000	

5.5 WLAN ANT 2 (W1)

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5.8 WLAN ANT 2 (W1)

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2.4GHz WLAN MIMO (W0+1)

Category	Item	Performance Metrics (Q1-Q4)					Overall Status	Last Update
		Q1 Score	Q2 Score	Q3 Score	Q4 Score	Avg Score		
Project Alpha	Task A.1	95	92	90	88	91.25	On Track	2023-10-27
	Task A.2	88	85	82	80	83.75	At Risk	2023-10-26
	Task A.3	90	87	85	83	86.25	On Track	2023-10-25
	Task A.4	85	82	80	78	81.25	At Risk	2023-10-24
Project Beta	Task B.1	80	78	75	72	76.25	At Risk	2023-10-27
	Task B.2	75	72	70	68	71.25	At Risk	2023-10-26
	Task B.3	78	75	72	70	73.75	On Track	2023-10-25
	Task B.4	72	70	68	65	68.75	At Risk	2023-10-24
Project Gamma	Task G.1	92	90	88	85	88.75	On Track	2023-10-27
	Task G.2	85	82	80	78	81.25	On Track	2023-10-26
	Task G.3	88	85	82	80	83.75	On Track	2023-10-25
	Task G.4	82	80	78	75	78.75	On Track	2023-10-24
Project Delta	Task D.1	70	68	65	62	66.25	At Risk	2023-10-27
	Task D.2	65	62	60	58	61.25	At Risk	2023-10-26
	Task D.3	68	65	62	60	63.75	On Track	2023-10-25
	Task D.4	62	60	58	55	58.75	At Risk	2023-10-24
Project Epsilon	Task E.1	85	82	80	78	81.25	On Track	2023-10-27
	Task E.2	80	78	75	72	76.25	On Track	2023-10-26
	Task E.3	82	80	78	75	78.75	On Track	2023-10-25
	Task E.4	78	75	72	70	73.75	On Track	2023-10-24
Project Zeta	Task Z.1	75	72	70	68	71.25	On Track	2023-10-27
	Task Z.2	70	68	65	62	66.25	On Track	2023-10-26
	Task Z.3	72	70	68	65	68.75	On Track	2023-10-25
	Task Z.4	68	65	62	60	63.75	On Track	2023-10-24
Project Eta	Task H.1	60	58	55	52	56.25	At Risk	2023-10-27
	Task H.2	55	52	50	48	51.25	At Risk	2023-10-26
	Task H.3	58	55	52	50	53.75	On Track	2023-10-25
	Task H.4	52	50	48	45	48.75	At Risk	2023-10-24
Project Theta	Task T.1	88	85	82	80	83.75	On Track	2023-10-27
	Task T.2	82	80	78	75	78.75	On Track	2023-10-26
	Task T.3	85	82	80	78	81.25	On Track	2023-10-25
	Task T.4	80	78	75	72	76.25	On Track	2023-10-24
Project Iota	Task I.1	72	70	68	65	68.75	On Track	2023-10-27
	Task I.2	68	65	62	60	63.75	On Track	2023-10-26
	Task I.3	70	68	65	62	66.25	On Track	2023-10-25
	Task I.4	65	62	60	58	61.25	On Track	2023-10-24
Project Kappa	Task K.1	65	62	60	58	61.25	On Track	2023-10-27
	Task K.2	60	58	55	52	56.25	At Risk	2023-10-26
	Task K.3	62	60	58	55	58.75	On Track	2023-10-25
	Task K.4	58	55	52	50	53.75	At Risk	2023-10-24
Project Lambda	Task L.1	58	55	52	50	53.75	At Risk	2023-10-27
	Task L.2	52	50	48	45	48.75	At Risk	2023-10-26
	Task L.3	55	52	50	48	51.25	On Track	2023-10-25
	Task L.4	48	45	42	40	43.75	At Risk	2023-10-24
Project Mu	Task M.1	55	52	50	48	51.25	On Track	2023-10-27
	Task M.2	50	48	45	42	46.25	At Risk	2023-10-26
	Task M.3	52	50	48	45	48.75	On Track	2023-10-25

5.2GHz WLAN MIMO (W0+1)

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5.3GHz WLAN MIMO (W0+1)

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## 5.5 WLAN MIMO (W3+1)

Area	Contract	Priority (1-5)	Starting date (dd/mm)	Planned end (dd/mm)	Actual end (dd/mm)	Project Manager	Cost (€)
BIO 170 - OFFICE	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100
	2017-003	3	01/09/16	30/06/16	30/06/16		100
BIO 170 - OFFICE - BUDGET	2017-001	3	01/09/16	30/06/16	30/06/16		100
	2017-002	3	01/09/16	30/06/16	30/06/16		100

## 5.8 WLAN MIMO (W0+1)

	Model	Channel	Frequency (MHz)	Frequency (GHz)	Channel Width	Power (dBm)	Power (dBm)
IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	11.01	5.180	5.180	20	18	18
		11.02	5.220	5.220	20	18	18
		11.03	5.260	5.260	20	18	18
		11.04	5.300	5.300	20	18	18
	IEEE 802.11b/g/n	11.05	5.340	5.340	20	18	18
		11.06	5.380	5.380	20	18	18
		11.07	5.420	5.420	20	18	18
		11.08	5.460	5.460	20	18	18
	IEEE 802.11n	11.09	5.500	5.500	20	18	18
		11.10	5.540	5.540	20	18	18
		11.11	5.580	5.580	20	18	18
		11.12	5.620	5.620	20	18	18
IEEE 802.11ac	IEEE 802.11ac	11.13	5.660	5.660	20	18	18
		11.14	5.700	5.700	20	18	18
		11.15	5.740	5.740	20	18	18
		11.16	5.780	5.780	20	18	18
	IEEE 802.11ac	11.17	5.820	5.820	20	18	18
		11.18	5.860	5.860	20	18	18
		11.19	5.900	5.900	20	18	18
		11.20	5.940	5.940	20	18	18
	IEEE 802.11ac	11.21	5.980	5.980	20	18	18
		11.22	6.020	6.020	20	18	18
		11.23	6.060	6.060	20	18	18
		11.24	6.100	6.100	20	18	18



### Reduced Power for ANT 0 & ANT 4

Band		WCDMA Band II (dBm)			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	19.21	19.28	19.25	20.00
3GPP Rel 5	HSDPA Subtest-1	18.01	17.99	18.06	19.00
3GPP Rel 5	HSDPA Subtest-2	17.98	17.98	17.97	19.00
3GPP Rel 5	HSDPA Subtest-3	17.49	17.52	17.52	18.50
3GPP Rel 5	HSDPA Subtest-4	17.45	17.57	17.51	18.50
3GPP Rel 8	DC-HSDPA Subtest-1	18.04	18.04	18.02	19.00
3GPP Rel 8	DC-HSDPA Subtest-2	18.03	18.06	18.00	19.00
3GPP Rel 8	DC-HSDPA Subtest-3	17.54	17.55	17.55	18.50
3GPP Rel 8	DC-HSDPA Subtest-4	17.51	17.58	17.51	18.50
3GPP Rel 6	HSUPA Subtest-1	18.07	18.13	18.15	19.00
3GPP Rel 6	HSUPA Subtest-2	17.54	17.48	17.50	18.50
3GPP Rel 6	HSUPA Subtest-3	18.08	18.14	18.00	19.00
3GPP Rel 6	HSUPA Subtest-4	18.07	18.04	18.06	19.00
3GPP Rel 6	HSUPA Subtest-5	17.98	18.10	18.09	19.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	17.63	17.58	17.61	18.50
Attenuator			Cable Loss	0.8	
Mode			Max.	19.28	



Band 2 (1900MHz Band) (dBm)_ANT0							
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	18.56	18.59	18.55	19.5
20	QPSK	1	49	18.34	18.40	18.36	
20	QPSK	1	99	18.32	18.38	18.37	
20	QPSK	50	0	17.58	17.65	17.55	18.5
20	QPSK	50	24	17.55	17.61	17.57	
20	QPSK	50	50	17.50	17.57	17.55	
20	QPSK	100	0	17.52	17.55	17.50	18.5
20	16QAM	1	0	17.76	17.78	17.76	
20	16QAM	1	49	17.73	17.75	17.67	
20	16QAM	1	99	17.70	17.74	17.73	17.5
20	16QAM	50	0	16.42	16.46	16.39	
20	16QAM	50	24	16.44	16.45	16.38	
20	16QAM	50	50	16.43	16.44	16.37	17.5
20	16QAM	100	0	16.36	16.42	16.38	
20	64QAM	1	0	16.62	16.69	16.66	17.5
20	64QAM	1	49	16.55	16.63	16.58	
20	64QAM	1	99	16.59	16.62	16.57	
20	64QAM	50	0	16.49	16.50	16.42	17.5
20	64QAM	50	24	16.47	16.48	16.46	
20	64QAM	50	50	16.41	16.45	16.42	
20	64QAM	100	0	16.36	16.42	16.36	14.5
20	256QAM	1	0	13.83	13.90	13.87	
20	256QAM	1	49	13.76	13.84	13.79	
20	256QAM	1	99	13.80	13.83	13.78	14.5
20	256QAM	50	0	13.70	13.71	13.63	
20	256QAM	50	24	13.68	13.69	13.67	
20	256QAM	50	50	13.62	13.66	13.63	14.5
20	256QAM	100	0	13.57	13.63	13.57	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	18.38	18.44	18.37	19.5
15	QPSK	1	37	18.26	18.35	18.31	
15	QPSK	1	74	18.31	18.36	18.32	
15	QPSK	36	0	17.56	17.61	17.58	18.5
15	QPSK	36	20	17.47	17.54	17.56	
15	QPSK	36	39	17.48	17.55	17.54	
15	QPSK	75	0	17.50	17.47	17.43	18.5
15	16QAM	1	0	17.75	17.73	17.69	
15	16QAM	1	37	17.66	17.68	17.63	
15	16QAM	1	74	17.62	17.66	17.68	17.5
15	16QAM	36	0	16.36	16.39	16.38	
15	16QAM	36	20	16.39	16.44	16.32	
15	16QAM	36	39	16.41	16.38	16.29	17.5
15	16QAM	75	0	16.31	16.41	16.33	
15	64QAM	1	0	16.58	16.62	16.62	
15	64QAM	1	37	16.54	16.62	16.50	17.5
15	64QAM	1	74	16.57	16.60	16.56	
15	64QAM	36	0	16.47	16.45	16.37	17.5
15	64QAM	36	20	16.45	16.44	16.40	
15	64QAM	36	39	16.39	16.44	16.35	
15	64QAM	75	0	16.32	16.35	16.30	14.5
15	256QAM	1	0	13.79	13.83	13.83	
15	256QAM	1	37	13.75	13.83	13.71	
15	256QAM	1	74	13.78	13.81	13.77	14.5
15	256QAM	36	0	13.68	13.66	13.58	
15	256QAM	36	20	13.66	13.65	13.61	
15	256QAM	36	39	13.60	13.65	13.56	14.5
15	256QAM	75	0	13.53	13.56	13.51	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	18.37	18.48	18.40	19.5
10	QPSK	1	25	18.27	18.35	18.30	
10	QPSK	1	49	18.25	18.34	18.29	
10	QPSK	25	0	17.61	17.58	17.58	18.5
10	QPSK	25	12	17.54	17.56	17.53	
10	QPSK	25	25	17.48	17.49	17.51	
10	QPSK	50	0	17.45	17.54	17.46	18.5
10	16QAM	1	0	17.69	17.70	17.72	
10	16QAM	1	25	17.70	17.68	17.59	
10	16QAM	1	49	17.64	17.68	17.65	17.5
10	16QAM	25	0	16.39	16.43	16.33	
10	16QAM	25	12	16.40	16.39	16.33	
10	16QAM	25	25	16.40	16.43	16.33	17.5
10	16QAM	50	0	16.29	16.40	16.34	
10	64QAM	1	0	16.60	16.65	16.63	
10	64QAM	1	25	16.52	16.59	16.51	17.5
10	64QAM	1	49	16.56	16.61	16.53	
10	64QAM	25	0	16.48	16.49	16.35	
10	64QAM	25	12	16.43	16.40	16.43	17.5
10	64QAM	25	25	16.39	16.44	16.41	
10	64QAM	50	0	16.32	16.40	16.29	
10	256QAM	1	0	13.81	13.86	13.84	14.5
10	256QAM	1	25	13.73	13.80	13.72	
10	256QAM	1	49	13.77	13.82	13.74	
10	256QAM	25	0	13.69	13.70	13.56	14.5
10	256QAM	25	12	13.64	13.61	13.64	
10	256QAM	25	25	13.60	13.65	13.62	
10	256QAM	50	0	13.53	13.61	13.50	14.5
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	18.35	18.42	18.39	19.5
5	QPSK	1	12	18.29	18.39	18.30	
5	QPSK	1	24	18.25	18.30	18.34	
5	QPSK	12	0	17.57	17.58	17.56	18.5
5	QPSK	12	7	17.48	17.53	17.49	
5	QPSK	12	13	17.46	17.55	17.51	
5	QPSK	25	0	17.50	17.48	17.45	18.5
5	16QAM	1	0	17.74	17.70	17.72	
5	16QAM	1	12	17.67	17.74	17.64	
5	16QAM	1	24	17.62	17.67	17.66	

Band 2 (1900MHz Band) (dBm)_ANT4							
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	21.60	21.63	21.61	22.5
20	QPSK	1	49	21.57	21.60	21.52	
20	QPSK	1	99	21.48	21.49	21.44	
20	QPSK	50	0	20.62	20.69	20.68	21.5
20	QPSK	50	24	20.60	20.60	20.62	
20	QPSK	50	50	20.55	20.62	20.60	
20	QPSK	100	0	20.62	20.65	20.60	21.5
20	16QAM	1	0	20.81	20.83	20.81	
20	16QAM	1	49	20.78	20.80	20.72	
20	16QAM	1	99	20.75	20.79	20.78	20.5
20	16QAM	50	0	19.47	19.51	19.44	
20	16QAM	50	24	19.49	19.50	19.43	
20	16QAM	50	50	19.48	19.49	19.42	20.5
20	16QAM	100	0	19.41	19.47	19.43	
20	64QAM	1	0	19.67	19.74	19.71	20.5
20	64QAM	1	49	19.60	19.68	19.63	
20	64QAM	1	99	19.64	19.67	19.62	
20	64QAM	50	0	19.54	19.55	19.47	20.5
20	64QAM	50	24	19.52	19.53	19.51	
20	64QAM	50	50	19.46	19.50	19.47	
20	64QAM	100	0	19.41	19.47	19.41	17.5
20	256QAM	1	0	16.88	16.95	16.92	
20	256QAM	1	49	16.81	16.89	16.84	
20	256QAM	1	99	16.85	16.88	16.83	17.5
20	256QAM	50	0	16.75	16.76	16.68	
20	256QAM	50	24	16.73	16.74	16.72	
20	256QAM	50	50	16.67	16.71	16.68	17.5
20	256QAM	100	0	16.62	16.68	16.62	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	21.50	21.56	21.49	22.5
15	QPSK	1	37	21.38	21.47	21.43	
15	QPSK	1	74	21.43	21.48	21.44	
15	QPSK	36	0	20.68	20.73	20.70	21.5
15	QPSK	36	20	20.59	20.66	20.68	
15	QPSK	36	39	20.60	20.67	20.66	
15	QPSK	75	0	20.62	20.59	20.55	21.5
15	16QAM	1	0	20.87	20.85	20.81	
15	16QAM	1	37	20.78	20.80	20.75	
15	16QAM	1	74	20.74	20.78	20.80	20.5
15	16QAM	36	0	19.48	19.51	19.50	
15	16QAM	36	20	19.44	19.49	19.37	
15	16QAM	36	39	19.46	19.43	19.34	20.5
15	16QAM	75	0	19.36	19.46	19.38	
15	64QAM	1	0	19.63	19.67	19.67	
15	64QAM	1	37	19.59	19.67	19.55	20.5
15	64QAM	1	74	19.62	19.65	19.61	
15	64QAM	36	0	19.52	19.50	19.42	
15	64QAM	36	20	19.50	19.49	19.45	20.5
15	64QAM	36	39	19.44	19.49	19.40	
15	64QAM	75	0	19.37	19.40	19.35	
15	256QAM	1	0	16.84	16.88	16.88	17.5
15	256QAM	1	37	16.80	16.88	16.76	
15	256QAM	1	74	16.83	16.86	16.82	
15	256QAM	36	0	16.73	16.71	16.63	17.5
15	256QAM	36	20	16.71	16.70	16.66	
15	256QAM	36	39	16.65	16.70	16.61	
15	256QAM	75	0	16.58	16.61	16.56	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	21.49	21.60	21.52	22.5
10	QPSK	1	25	21.39	21.47	21.42	
10	QPSK	1	49	21.37	21.46	21.41	
10	QPSK	25	0	20.73	20.70	20.70	21.5
10	QPSK	25	12	20.66	20.68	20.65	
10	QPSK	25	25	20.60	20.61	20.63	
10	QPSK	50	0	20.57	20.66	20.58	21.5
10	16QAM	1	0	20.74	20.75	20.77	
10	16QAM	1	25	20.75	20.73	20.64	
10	16QAM	1	49	20.69	20.73	20.70	20.5
10	16QAM	25	0	19.44	19.48	19.38	
10	16QAM	25	12	19.45	19.44	19.38	
10	16QAM	25	25	19.45	19.48	19.38	20.5
10	16QAM	50	0	19.34	19.45	19.39	
10	64QAM	1	0	19.65	19.70	19.68	
10	64QAM	1	25	19.57	19.64	19.56	20.5
10	64QAM	1	49	19.61	19.66	19.58	
10	64QAM	25	0	19.53	19.54	19.40	
10	64QAM	25	12	19.48	19.45	19.48	20.5
10	64QAM	25	25	19.44	19.49	19.46	
10	64QAM	50	0	19.37	19.45	19.34	
10	256QAM	1	0	16.86	16.91	16.89	17.5
10	256QAM	1	25	16.78	16.85	16.77	
10	256QAM	1	49	16.82	16.87	16.79	
10	256QAM	25	0	16.74	16.75	16.61	17.5
10	256QAM	25	12	16.69	16.66	16.69	
10	256QAM	25	25	16.65	16.70	16.67	
10	256QAM	50	0	16.58	16.66	16.55	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	21.47	21.54	21.51	22.5
5	QPSK	1	12	21.41	21.51	21.42	
5	QPSK	1	24	21.37	21.42	21.46	
5	QPSK	12	0	20.69	20.70	20.68	21.5
5	QPSK	12	7	20.60	20.65	20.61	
5	QPSK	12	13	20.58	20.67	20.63	
5	QPSK	25	0	20.62	20.60	20.57	21.5
5	16QAM	1	0	20.86	20.82	20.84	
5	16QAM	1	12	20.79	20.86	20.76	
5	16QAM	1	24	20.74	20.79	20.78	



5	16QAM	12	0	16.35	16.42	16.32	17.5
5	16QAM	12	7	16.42	16.44	16.33	
5	16QAM	12	13	16.39	16.38	16.36	
5	16QAM	25	0	16.31	16.41	16.35	17.5
5	64QAM	1	0	16.57	16.67	16.64	
5	64QAM	1	12	16.54	16.58	16.54	
5	64QAM	1	24	16.57	16.61	16.52	17.5
5	64QAM	12	0	16.47	16.48	16.41	
5	64QAM	12	7	16.44	16.40	16.41	
5	64QAM	12	13	16.35	16.38	16.34	14.5
5	64QAM	25	0	16.33	16.35	16.31	
5	256QAM	1	0	13.78	13.88	13.85	
5	256QAM	1	12	13.75	13.79	13.75	14.5
5	256QAM	1	24	13.78	13.82	13.73	
5	256QAM	12	0	13.68	13.69	13.62	
5	256QAM	12	7	13.65	13.61	13.62	14.5
5	256QAM	12	13	13.56	13.59	13.55	
5	256QAM	25	0	13.54	13.56	13.52	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	18.37	18.43	18.38	19.5
3	QPSK	1	8	18.30	18.32	18.34	
3	QPSK	1	14	18.30	18.35	18.32	
3	QPSK	8	0	17.58	17.61	17.59	18.5
3	QPSK	8	4	17.48	17.59	17.50	
3	QPSK	8	7	17.49	17.53	17.52	
3	QPSK	15	0	17.44	17.51	17.43	18.5
3	16QAM	1	0	17.75	17.73	17.75	
3	16QAM	1	8	17.72	17.73	17.66	
3	16QAM	1	14	17.63	17.67	17.65	17.5
3	16QAM	8	0	16.41	16.42	16.35	
3	16QAM	8	4	16.37	16.42	16.35	
3	16QAM	8	7	16.38	16.38	16.36	17.5
3	16QAM	15	0	16.31	16.40	16.36	
3	64QAM	1	0	16.57	16.61	16.61	
3	64QAM	1	8	16.48	16.58	16.53	17.5
3	64QAM	1	14	16.52	16.60	16.52	
3	64QAM	8	0	16.43	16.49	16.34	
3	64QAM	8	4	16.44	16.44	16.44	17.5
3	64QAM	8	7	16.40	16.44	16.41	
3	64QAM	15	0	16.34	16.41	16.33	
3	256QAM	1	0	13.78	13.82	13.82	14.5
3	256QAM	1	8	13.69	13.79	13.74	
3	256QAM	1	14	13.73	13.81	13.73	
3	256QAM	8	0	13.64	13.70	13.55	14.5
3	256QAM	8	4	13.65	13.65	13.65	
3	256QAM	8	7	13.61	13.65	13.62	
3	256QAM	15	0	13.55	13.62	13.54	Tune-up limit (dBm)
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	19.5
1.4	QPSK	1	0	18.33	18.48	18.40	
1.4	QPSK	1	3	18.27	18.34	18.33	
1.4	QPSK	1	5	18.24	18.35	18.33	
1.4	QPSK	3	0	18.30	18.39	18.36	
1.4	QPSK	3	1	18.42	18.45	18.35	
1.4	QPSK	3	3	18.36	18.40	18.37	18.5
1.4	QPSK	6	0	17.44	17.54	17.46	
1.4	16QAM	1	0	17.72	17.71	17.68	
1.4	16QAM	1	3	17.72	17.69	17.65	18.5
1.4	16QAM	1	5	17.63	17.72	17.72	
1.4	16QAM	3	0	17.52	17.57	17.49	
1.4	16QAM	3	1	17.50	17.54	17.46	17.5
1.4	16QAM	3	3	17.51	17.55	17.44	
1.4	16QAM	6	0	16.54	16.51	16.44	
1.4	64QAM	1	0	16.60	16.65	16.64	17.5
1.4	64QAM	1	3	16.52	16.56	16.53	
1.4	64QAM	1	5	16.52	16.56	16.53	
1.4	64QAM	3	0	16.61	16.55	16.48	17.5
1.4	64QAM	3	1	16.58	16.56	16.53	
1.4	64QAM	3	3	16.51	16.52	16.50	
1.4	64QAM	6	0	16.31	16.37	16.29	14.5
1.4	256QAM	1	0	13.81	13.86	13.85	
1.4	256QAM	1	3	13.73	13.77	13.74	
1.4	256QAM	1	5	13.73	13.77	13.74	14.5
1.4	256QAM	3	0	13.82	13.76	13.69	
1.4	256QAM	3	1	13.79	13.77	13.74	
1.4	256QAM	3	3	13.72	13.73	13.71	14.5
1.4	256QAM	6	0	13.52	13.58	13.50	

5	16QAM	12	0	19.47	19.54	19.44	20.5
5	16QAM	12	7	19.54	19.56	19.45	
5	16QAM	12	13	19.51	19.50	19.48	
5	16QAM	25	0	19.43	19.53	19.47	20.5
5	64QAM	1	0	19.69	19.79	19.76	
5	64QAM	1	12	19.59	19.63	19.59	
5	64QAM	1	24	19.62	19.66	19.57	20.5
5	64QAM	12	0	19.52	19.53	19.46	
5	64QAM	12	7	19.49	19.45	19.46	
5	64QAM	12	13	19.40	19.43	19.39	17.5
5	64QAM	25	0	19.38	19.40	19.36	
5	256QAM	1	0	16.83	16.93	16.90	
5	256QAM	1	12	16.80	16.84	16.80	17.5
5	256QAM	1	24	16.83	16.87	16.78	
5	256QAM	12	0	16.73	16.74	16.67	
5	256QAM	12	7	16.70	16.66	16.67	17.5
5	256QAM	12	13	16.61	16.64	16.60	
5	256QAM	25	0	16.59	16.61	16.57	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	21.49	21.55	21.50	22.5
3	QPSK	1	8	21.42	21.44	21.46	
3	QPSK	1	14	21.42	21.47	21.44	
3	QPSK	8	0	20.70	20.73	20.71	21.5
3	QPSK	8	4	20.60	20.71	20.62	
3	QPSK	8	7	20.61	20.65	20.64	
3	QPSK	15	0	20.56	20.63	20.55	21.5
3	16QAM	1	0	20.87	20.85	20.87	
3	16QAM	1	8	20.84	20.85	20.78	
3	16QAM	1	14	20.75	20.79	20.77	20.5
3	16QAM	8	0	19.53	19.54	19.47	
3	16QAM	8	4	19.49	19.54	19.47	
3	16QAM	8	7	19.50	19.50	19.48	20.5
3	16QAM	15	0	19.43	19.52	19.48	
3	64QAM	1	0	19.62	19.66	19.66	
3	64QAM	1	8	19.53	19.63	19.58	20.5
3	64QAM	1	14	19.57	19.65	19.57	
3	64QAM	8	0	19.48	19.54	19.39	
3	64QAM	8	4	19.49	19.49	19.49	20.5
3	64QAM	8	7	19.45	19.49	19.46	
3	64QAM	15	0	19.39	19.46	19.38	
3	256QAM	1	0	16.83	16.87	16.87	17.5
3	256QAM	1	8	16.74	16.84	16.79	
3	256QAM	1	14	16.78	16.86	16.78	
3	256QAM	8	0	16.69	16.75	16.60	17.5
3	256QAM	8	4	16.70	16.70	16.70	
3	256QAM	8	7	16.66	16.70	16.67	
3	256QAM	15	0	16.60	16.67	16.59	Tune-up limit (dBm)
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	22.5
1.4	QPSK	1	0	21.45	21.60	21.52	
1.4	QPSK	1	3	21.39	21.46	21.45	
1.4	QPSK	1	5	21.36	21.47	21.45	
1.4	QPSK	3	0	21.42	21.51	21.48	
1.4	QPSK	3	1	21.54	21.57	21.47	
1.4	QPSK	3	3	21.48	21.52	21.49	21.5
1.4	QPSK	6	0	20.56	20.66	20.58	
1.4	16QAM	1	0	20.84	20.83	20.80	
1.4	16QAM	1	3	20.84	20.81	20.77	21.5
1.4	16QAM	1	5	20.75	20.84	20.84	
1.4	16QAM	3	0	20.64	20.69	20.61	
1.4	16QAM	3	1	20.62	20.66	20.58	20.5
1.4	16QAM	3	3	20.63	20.67	20.56	
1.4	16QAM	6	0	19.66	19.63	19.56	
1.4	64QAM	1	0	19.72	19.77	19.76	20.5
1.4	64QAM	1	3	19.64	19.68	19.65	
1.4	64QAM	1	5	19.64	19.68	19.65	
1.4	64QAM	3	0	19.73	19.67	19.60	17.5
1.4	64QAM	3	1	19.63	19.61	19.58	
1.4	64QAM	3	3	19.56	19.57	19.55	
1.4	64QAM	6	0	19.36	19.42	19.34	17.5
1.4	256QAM	1	0	16.86	16.91	16.90	
1.4	256QAM	1	3	16.78	16.82	16.79	
1.4	256QAM	1	5	16.78	16.82	16.79	17.5
1.4	256QAM	3	0	16.87	16.81	16.74	
1.4	256QAM	3	1	16.84	16.82	16.79	
1.4	256QAM	3	3	16.77	16.78	16.76	17.5
1.4	256QAM	6	0	16.57	16.63	16.55	



Band 4 (AWS Band) (dBm)_ANT0 Part 27L (only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20950	20175	20300	17.5
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	16.51	16.60	16.54	
20	QPSK	1	49	16.45	16.47	16.40	
20	QPSK	1	99	16.37	16.44	16.41	16.5
20	QPSK	50	0	15.51	15.63	15.52	
20	QPSK	50	24	15.55	15.49	15.47	
20	QPSK	50	50	15.52	15.55	15.48	
20	QPSK	100	0	15.55	15.56	15.45	16.5
20	16QAM	1	0	15.62	15.73	15.56	
20	16QAM	1	49	15.70	15.79	15.74	
20	16QAM	1	99	15.80	15.57	15.84	
20	16QAM	50	0	14.63	14.58	14.62	15.5
20	16QAM	50	24	14.72	14.57	14.56	
20	16QAM	50	50	14.59	14.62	14.64	
20	16QAM	100	0	14.57	14.59	14.55	
20	64QAM	1	0	14.67	14.81	14.76	15.5
20	64QAM	1	49	14.70	14.74	14.64	
20	64QAM	1	99	14.80	14.68	14.50	
20	64QAM	50	0	14.65	14.54	14.54	
20	64QAM	50	24	14.48	14.49	14.56	15.5
20	64QAM	50	50	14.61	14.54	14.59	
20	64QAM	100	0	14.53	14.56	14.55	
20	256QAM	1	0	11.52	11.66	11.61	12.5
20	256QAM	1	49	11.55	11.59	11.49	
20	256QAM	1	99	11.65	11.53	11.35	
20	256QAM	50	0	11.50	11.39	11.39	
20	256QAM	50	24	11.33	11.34	11.41	12.5
20	256QAM	50	50	11.46	11.39	11.44	
20	256QAM	100	0	11.38	11.41	11.40	
Channel				20025	20175	20325	17.5
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	16.38	16.43	16.34	
15	QPSK	1	37	16.42	16.43	16.37	
15	QPSK	1	74	16.28	16.43	16.40	16.5
15	QPSK	36	0	15.47	15.53	15.42	
15	QPSK	36	20	15.61	15.42	15.43	
15	QPSK	36	39	15.51	15.48	15.39	
15	QPSK	75	0	15.50	15.48	15.35	16.5
15	16QAM	1	0	15.78	15.67	15.50	
15	16QAM	1	37	15.77	15.89	15.69	
15	16QAM	1	74	15.82	15.97	15.83	
15	16QAM	36	0	14.62	14.49	14.56	15.5
15	16QAM	36	20	14.68	14.48	14.48	
15	16QAM	36	39	14.55	14.60	14.62	
15	16QAM	75	0	14.47	14.55	14.54	
15	64QAM	1	0	14.64	14.80	14.71	15.5
15	64QAM	1	37	14.64	14.64	14.59	
15	64QAM	1	74	14.78	14.63	14.44	
15	64QAM	36	0	14.62	14.44	14.47	
15	64QAM	36	20	14.39	14.46	14.49	15.5
15	64QAM	36	39	14.57	14.52	14.51	
15	64QAM	75	0	14.47	14.53	14.54	
15	256QAM	1	0	11.49	11.65	11.56	
15	256QAM	1	37	11.49	11.49	11.44	12.5
15	256QAM	1	74	11.63	11.48	11.29	
15	256QAM	36	0	11.47	11.29	11.32	
15	256QAM	36	20	11.24	11.31	11.34	
15	256QAM	36	39	11.42	11.37	11.36	12.5
15	256QAM	75	0	11.32	11.38	11.39	
Channel				20000	20175	20350	17.5
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	16.45	16.46	16.39	
10	QPSK	1	25	16.38	16.42	16.34	
10	QPSK	1	49	16.29	16.43	16.33	16.5
10	QPSK	25	0	15.45	15.62	15.47	
10	QPSK	25	12	15.53	15.40	15.46	
10	QPSK	25	25	15.43	15.53	15.41	
10	QPSK	50	0	15.46	15.52	15.39	16.5
10	16QAM	1	0	15.76	15.68	15.49	
10	16QAM	1	25	15.76	15.93	15.73	
10	16QAM	1	49	15.78	15.98	15.79	
10	16QAM	25	0	14.55	14.54	14.57	15.5
10	16QAM	25	12	14.64	14.50	14.52	
10	16QAM	25	25	14.58	14.53	14.60	
10	16QAM	50	0	14.56	14.53	14.46	
10	64QAM	1	0	14.57	14.72	14.74	15.5
10	64QAM	1	25	14.68	14.73	14.62	
10	64QAM	1	49	14.75	14.61	14.40	
10	64QAM	25	0	14.64	14.44	14.45	
10	64QAM	25	12	14.40	14.46	14.50	15.5
10	64QAM	25	25	14.57	14.52	14.53	
10	64QAM	50	0	14.46	14.47	14.53	
10	256QAM	1	0	11.42	11.57	11.59	
10	256QAM	1	25	11.53	11.58	11.47	12.5
10	256QAM	1	49	11.60	11.46	11.25	
10	256QAM	25	0	11.49	11.29	11.30	
10	256QAM	25	12	11.25	11.31	11.35	
10	256QAM	25	25	11.42	11.37	11.38	12.5
10	256QAM	50	0	11.31	11.32	11.38	
Channel				19975	20175	20375	17.5
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	16.44	16.44	16.35	
5	QPSK	1	12	16.35	16.37	16.39	
5	QPSK	1	24	16.36	16.42	16.32	16.5
5	QPSK	12	0	15.42	15.58	15.46	
5	QPSK	12	7	15.56	15.44	15.38	
5	QPSK	12	13	15.49	15.49	15.38	
5	QPSK	25	0	15.53	15.52	15.37	16.5
5	16QAM	1	0	15.72	15.71	15.52	
5	16QAM	1	12	15.75	15.91	15.72	
5	16QAM	1	24	15.80	15.91	15.76	

Band 4 (AWS Band) (dBm)_ANT4 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	22.5
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	21.63	21.67	21.64	
20	QPSK	1	49	21.59	21.59	21.62	
20	QPSK	1	99	21.57	21.58	21.59	21.5
20	QPSK	50	0	20.66	20.70	20.62	
20	QPSK	50	24	20.62	20.56	20.55	
20	QPSK	50	50	20.64	20.67	20.60	
20	QPSK	100	0	20.67	20.68	20.57	21.5
20	16QAM	1	0	20.94	20.85	20.68	
20	16QAM	1	49	20.82	20.91	20.86	
20	16QAM	1	99	20.92	20.69	20.96	
20	16QAM	50	0	19.75	19.70	19.74	20.5
20	16QAM	50	24	19.84	19.69	19.68	
20	16QAM	50	50	19.71	19.74	19.76	
20	16QAM	100	0	19.69	19.71	19.67	
20	64QAM	1	0	19.79	19.93	19.88	20.5
20	64QAM	1	49	19.77	19.81	19.71	
20	64QAM	1	99	19.87	19.75	19.57	
20	64QAM	50	0	19.72	19.61	19.61	
20	64QAM	50	24	19.55	19.56	19.63	20.5
20	64QAM	50	50	19.68	19.61	19.66	
20	64QAM	100	0	19.60	19.63	19.62	
20	256QAM	1	0	16.59	16.73	16.68	
20	256QAM	1	49	16.62	16.66	16.56	17.5
20	256QAM	1	99	16.72	16.60	16.42	
20	256QAM	50	0	16.57	16.46	16.46	
20	256QAM	50	24	16.40	16.41	16.48	
20	256QAM	50	50	16.53	16.46	16.51	17.5
20	256QAM	100	0	16.45	16.48	16.47	
Channel				20025	20175	20325	22.5
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	21.50	21.55	21.46	
15	QPSK	1	37	21.54	21.55	21.49	
15	QPSK	1	74	21.40	21.55	21.52	21.5
15	QPSK	36	0	20.59	20.65	20.54	
15	QPSK	36	20	20.73	20.54	20.55	
15	QPSK	36	39	20.63	20.60	20.51	21.5
15	QPSK	75	0	20.52	20.50	20.37	
15	16QAM	1	0	20.80	20.69	20.52	
15	16QAM	1	37	20.79	20.91	20.71	21.5
15	16QAM	1	74	20.91	21.06	20.92	
15	16QAM	36	0	19.71	19.58	19.65	
15	16QAM	36	20	19.77	19.57	19.57	
15	16QAM	36	39	19.64	19.69	19.71	20.5
15	16QAM	75	0	19.59	19.67	19.66	
15	64QAM	1	0	19.76	19.92	19.83	
15	64QAM	1	37	19.76	19.76	19.71	
15	64QAM	1	74	19.85	19.70	19.51	20.5
15	64QAM	36	0	19.69	19.51	19.54	
15	64QAM	36	20	19.46	19.53	19.56	
15	64QAM	36	39	19.64	19.59	19.58	
15	64QAM	75	0	19.54	19.60	19.61	17.5
15	256QAM	1	0	16.56	16.72	16.63	
15	256QAM	1	37	16.56	16.56	16.51	
15	256QAM	1	74	16.70	16.55	16.36	
15	256QAM	36	0	16.54	16.36	16.39	17.5
15	256QAM	36	20	16.31	16.38	16.41	
15	256QAM	36	39	16.49	16.44	16.43	
15	256QAM	75	0	16.39	16.45	16.46	
Channel				20000	20175	20350	22.5
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	21.51	21.52	21.45	
10	QPSK	1	25	21.44	21.48	21.40	
10	QPSK	1	49	21.35	21.49	21.39	21.5
10	QPSK	25	0	20.51	20.68	20.53	
10	QPSK	25	12	20.59	20.46	20.52	
10	QPSK	25	25	20.49	20.59	20.47	
10	QPSK	50	0	20.52	20.58	20.45	21.5
10	16QAM	1	0	20.89	20.81	20.62	
10	16QAM	1	25	20.86	21.03	20.83	
10	16QAM	1	49	20.88	21.08	20.89	
10	16QAM	25	0	19.65	19.64	19.67	20.5
10	16QAM	25	12	19.71	19.57	19.59	
10	16QAM	25	25	19.65	19.60	19.67	
10	16QAM	50	0	19.63	19.60	19.53	
10	64QAM	1	0	19.64	19.79	19.81	20.5
10	64QAM	1	25	19.75	19.80	19.69	
10	64QAM	1	49	19.82	19.68	19.47	
10	64QAM	25	0	19.71	19.51	19.52	
10	64QAM	25	12	19.47	19.53	19.57	20.5
10	64QAM	25	25	19.64	19.59	19.60	
10	64QAM	50	0	19.53	19.54	19.60	
10	256QAM	1	0	16.49	16.64	16.66	
10	256QAM	1	25	16.60	16.65	16.54	17.5
10	256QAM	1	49	16.67	16.53	16.32	
10	256QAM	25	0	16.56	16.36	16.37	
10	256QAM	25	12	16.32	16.38	16.42	
10	256QAM	25	25	16.49	16.44	16.45	17.5
10	256QAM	50	0	16.38	16.39	16.45	
Channel				19975	20175	20375	22.5
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	21.51	21.51	21.42	
5	QPSK	1	12	21.42	21.44	21.46	
5	QPSK	1	24	21.43	21.49	21.39	21.5
5	QPSK	12	0	20.49	20.65	20.53	
5	QPSK	12	7	20.51	20.54	20.48	
5	QPSK	12	13	20.59	20.59	20.48	
5	QPSK	25	0	20.63	20.62	20.47	21.5
5	16QAM	1	0	20.82	20.81	20.62	
5	16QAM	1	12	20.92	21.08	20.89	
5	16QAM	1	24	20.97	21.08	20.93	



5	16QAM	12	0	14.61	14.51	14.58	15.5
5	16QAM	12	7	14.62	14.52	14.48	
5	16QAM	12	13	14.54	14.54	14.60	
5	16QAM	25	0	14.48	14.50	14.46	15.5
5	64QAM	1	0	14.58	14.78	14.70	
5	64QAM	1	12	14.61	14.69	14.59	
5	64QAM	1	24	14.77	14.65	14.46	15.5
5	64QAM	12	0	14.63	14.53	14.51	
5	64QAM	12	7	14.45	14.42	14.50	
5	64QAM	12	13	14.57	14.45	14.58	12.5
5	64QAM	25	0	14.52	14.53	14.46	
5	256QAM	1	0	11.43	11.63	11.55	
5	256QAM	1	12	11.46	11.54	11.44	12.5
5	256QAM	1	24	11.62	11.50	11.31	
5	256QAM	12	0	11.48	11.38	11.36	
5	256QAM	12	7	11.30	11.27	11.35	12.5
5	256QAM	12	13	11.42	11.30	11.43	
5	256QAM	25	0	11.37	11.38	11.31	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	16.35	16.45	16.31	17.5
3	QPSK	1	8	16.39	16.44	16.35	
3	QPSK	1	14	16.31	16.34	16.32	
3	QPSK	8	0	15.44	15.56	15.48	16.5
3	QPSK	8	4	15.52	15.46	15.45	
3	QPSK	8	7	15.48	15.47	15.45	
3	QPSK	15	0	15.45	15.47	15.39	16.5
3	16QAM	1	0	15.72	15.72	15.49	
3	16QAM	1	8	15.76	15.90	15.72	
3	16QAM	1	14	15.82	15.93	15.81	15.5
3	16QAM	8	0	14.58	14.49	14.55	
3	16QAM	8	4	14.69	14.49	14.50	
3	16QAM	8	7	14.49	14.55	14.61	15.5
3	16QAM	15	0	14.48	14.51	14.52	
3	64QAM	1	0	14.66	14.74	14.74	
3	64QAM	1	8	14.66	14.68	14.55	15.5
3	64QAM	1	14	14.78	14.63	14.40	
3	64QAM	8	0	14.59	14.44	14.44	
3	64QAM	8	4	14.43	14.42	14.46	15.5
3	64QAM	8	7	14.52	14.46	14.55	
3	64QAM	15	0	14.46	14.48	14.52	
3	256QAM	1	0	11.51	11.59	11.59	12.5
3	256QAM	1	8	11.51	11.53	11.40	
3	256QAM	1	14	11.63	11.48	11.25	
3	256QAM	8	0	11.44	11.29	11.29	12.5
3	256QAM	8	4	11.28	11.27	11.31	
3	256QAM	8	7	11.37	11.31	11.40	
3	256QAM	15	0	11.31	11.33	11.37	Tune-up limit (dBm)
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	17.5
1.4	QPSK	1	0	16.35	16.43	16.32	
1.4	QPSK	1	3	16.35	16.38	16.31	
1.4	QPSK	1	5	16.31	16.42	16.36	
1.4	QPSK	3	0	16.45	16.40	16.45	
1.4	QPSK	3	1	16.44	16.44	16.42	
1.4	QPSK	3	3	16.42	16.46	16.46	
1.4	QPSK	6	0	15.46	15.46	15.35	16.5
1.4	16QAM	1	0	15.73	15.70	15.47	
1.4	16QAM	1	3	15.82	15.90	15.73	
1.4	16QAM	1	5	15.77	15.93	15.83	16.5
1.4	16QAM	3	0	15.55	15.55	15.58	
1.4	16QAM	3	1	15.70	15.49	15.46	
1.4	16QAM	3	3	15.52	15.59	15.54	15.5
1.4	16QAM	6	0	14.50	14.49	14.46	
1.4	64QAM	1	0	14.57	14.72	14.75	
1.4	64QAM	1	3	14.67	14.69	14.61	15.5
1.4	64QAM	1	5	14.73	14.67	14.45	
1.4	64QAM	3	0	14.57	14.50	14.53	
1.4	64QAM	3	1	14.44	14.48	14.54	15.5
1.4	64QAM	3	3	14.54	14.47	14.54	
1.4	64QAM	6	0	14.44	14.46	14.47	
1.4	256QAM	1	0	11.42	11.57	11.60	12.5
1.4	256QAM	1	3	11.52	11.54	11.46	
1.4	256QAM	1	5	11.58	11.52	11.30	
1.4	256QAM	3	0	11.42	11.35	11.38	12.5
1.4	256QAM	3	1	11.29	11.33	11.39	
1.4	256QAM	3	3	11.39	11.32	11.39	
1.4	256QAM	6	0	11.29	11.31	11.32	12.5

5	16QAM	12	0	19.81	19.71	19.78	20.5
5	16QAM	12	7	19.82	19.72	19.68	
5	16QAM	12	13	19.64	19.64	19.70	
5	16QAM	25	0	19.58	19.60	19.56	20.5
5	64QAM	1	0	19.68	19.88	19.80	
5	64QAM	1	12	19.71	19.79	19.69	
5	64QAM	1	24	19.87	19.75	19.56	20.5
5	64QAM	12	0	19.73	19.63	19.61	
5	64QAM	12	7	19.55	19.52	19.60	
5	64QAM	12	13	19.67	19.55	19.68	17.5
5	64QAM	25	0	19.62	19.63	19.56	
5	256QAM	1	0	16.53	16.73	16.65	
5	256QAM	1	12	16.56	16.64	16.54	17.5
5	256QAM	1	24	16.72	16.60	16.41	
5	256QAM	12	0	16.58	16.48	16.46	
5	256QAM	12	7	16.40	16.37	16.45	17.5
5	256QAM	12	13	16.52	16.40	16.53	
5	256QAM	25	0	16.47	16.48	16.41	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	21.42	21.52	21.38	22.5
3	QPSK	1	8	21.46	21.51	21.42	
3	QPSK	1	14	21.38	21.41	21.39	
3	QPSK	8	0	20.51	20.63	20.55	21.5
3	QPSK	8	4	20.62	20.56	20.55	
3	QPSK	8	7	20.58	20.57	20.55	
3	QPSK	15	0	20.55	20.57	20.49	21.5
3	16QAM	1	0	20.82	20.82	20.59	
3	16QAM	1	8	20.86	21.00	20.82	
3	16QAM	1	14	20.92	21.03	20.91	20.5
3	16QAM	8	0	19.66	19.59	19.65	
3	16QAM	8	4	19.79	19.59	19.60	
3	16QAM	8	7	19.59	19.65	19.71	20.5
3	16QAM	15	0	19.58	19.61	19.62	
3	64QAM	1	0	19.76	19.84	19.84	
3	64QAM	1	8	19.76	19.78	19.65	20.5
3	64QAM	1	14	19.88	19.73	19.50	
3	64QAM	8	0	19.69	19.54	19.54	
3	64QAM	8	4	19.53	19.52	19.56	20.5
3	64QAM	8	7	19.62	19.56	19.65	
3	64QAM	15	0	19.56	19.58	19.62	
3	256QAM	1	0	16.61	16.69	16.69	17.5
3	256QAM	1	8	16.61	16.63	16.50	
3	256QAM	1	14	16.73	16.58	16.35	
3	256QAM	8	0	16.54	16.39	16.39	17.5
3	256QAM	8	4	16.38	16.37	16.41	
3	256QAM	8	7	16.44	16.38	16.47	
3	256QAM	15	0	16.38	16.40	16.44	Tune-up limit (dBm)
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	22.5
1.4	QPSK	1	0	21.45	21.53	21.42	
1.4	QPSK	1	3	21.45	21.48	21.41	
1.4	QPSK	1	5	21.41	21.52	21.46	
1.4	QPSK	3	0	21.62	21.57	21.62	
1.4	QPSK	3	1	21.61	21.61	21.59	
1.4	QPSK	3	3	21.59	21.63	21.63	
1.4	QPSK	6	0	20.63	20.63	20.52	21.5
1.4	16QAM	1	0	20.90	20.87	20.64	
1.4	16QAM	1	3	20.99	21.07	20.90	
1.4	16QAM	1	5	20.94	21.10	21.00	21.5
1.4	16QAM	3	0	20.72	20.72	20.75	
1.4	16QAM	3	1	20.87	20.66	20.63	
1.4	16QAM	3	3	20.69	20.76	20.71	20.5
1.4	16QAM	6	0	19.67	19.66	19.63	
1.4	64QAM	1	0	19.74	19.89	19.92	
1.4	64QAM	1	3	19.84	19.86	19.78	20.5
1.4	64QAM	1	5	19.90	19.84	19.62	
1.4	64QAM	3	0	19.74	19.67	19.70	
1.4	64QAM	3	1	19.61	19.65	19.71	20.5
1.4	64QAM	3	3	19.71	19.64	19.71	
1.4	64QAM	6	0	19.61	19.63	19.64	
1.4	256QAM	1	0	16.59	16.74	16.77	17.5
1.4	256QAM	1	3	16.62	16.64	16.56	
1.4	256QAM	1	5	16.65	16.59	16.37	
1.4	256QAM	3	0	16.49	16.42	16.45	17.5
1.4	256QAM	3	1	16.36	16.40	16.46	
1.4	256QAM	3	3	16.46	16.39	16.46	
1.4	256QAM	6	0	16.36	16.38	16.39	17.5



Band 7 (2600MHz Band) (dBm)_ANT0									
Part 27									
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)		
Channel				20850	21100	21350			
Frequency (MHz)				2510	2535	2560			
20	QPSK	1	0	20.98	21.06	21.03	22		
20	QPSK	1	49	20.85	20.92	20.97			
20	QPSK	1	99	20.96	20.97	20.98			
20	QPSK	50	0	20.06	20.19	20.18	21		
20	QPSK	50	24	20.13	20.18	20.17			
20	QPSK	50	50	20.16	20.15	20.17			
20	QPSK	100	0	20.21	20.22	20.14	21		
20	16QAM	1	0	20.07	20.01	20.06			
20	16QAM	1	49	20.14	20.13	20.05			
20	16QAM	1	99	20.15	20.20	20.16	20		
20	16QAM	50	0	19.05	19.20	19.26			
20	16QAM	50	24	19.09	19.14	19.06			
20	16QAM	50	50	19.08	19.19	19.04	20		
20	16QAM	100	0	19.07	19.12	19.17			
20	64QAM	1	0	19.10	19.14	19.18			
20	64QAM	1	49	19.14	19.20	18.95	20		
20	64QAM	1	99	19.09	18.96	18.86			
20	64QAM	50	0	19.06	19.10	19.14			
20	64QAM	50	24	19.06	19.19	18.98	20		
20	64QAM	50	50	19.03	19.18	19.12			
20	64QAM	100	0	19.11	19.10	19.00			
20	256QAM	1	0	16.14	16.18	16.22	17		
20	256QAM	1	49	16.18	16.24	15.99			
20	256QAM	1	99	16.13	16.00	15.90			
20	256QAM	50	0	16.10	16.14	16.18	17		
20	256QAM	50	24	16.10	16.23	16.02			
20	256QAM	50	50	16.07	16.22	16.16			
20	256QAM	100	0	16.15	16.14	16.04			
Channel				20825	21100	21375	Tune-up limit (dBm)		
Frequency (MHz)				2507.5	2535	2562.5			
15	QPSK	1	0	20.87	20.97	20.91	22		
15	QPSK	1	37	20.77	20.84	20.89			
15	QPSK	1	74	20.89	20.94	20.96			
15	QPSK	36	0	20.03	20.18	20.10	21		
15	QPSK	36	20	20.03	20.16	20.11			
15	QPSK	36	39	20.10	20.14	20.15			
15	QPSK	75	0	20.13	20.10	20.05	21		
15	16QAM	1	0	20.03	20.00	19.98			
15	16QAM	1	37	20.09	20.04	20.06			
15	16QAM	1	74	20.12	20.19	20.04	20		
15	16QAM	36	0	18.98	19.18	19.25			
15	16QAM	36	20	19.06	19.05	19.01			
15	16QAM	36	39	19.04	19.18	18.97	20		
15	16QAM	75	0	19.05	19.11	19.16			
15	64QAM	1	0	19.06	19.04	19.16			
15	64QAM	1	37	19.05	19.15	18.91	20		
15	64QAM	1	74	19.01	18.91	18.84			
15	64QAM	36	0	18.96	19.02	19.05			
15	64QAM	36	20	19.01	19.15	18.95	20		
15	64QAM	36	39	18.93	19.14	19.11			
15	64QAM	75	0	19.10	19.02	18.98			
15	256QAM	1	0	16.10	16.08	16.20	17		
15	256QAM	1	37	16.09	16.19	15.95			
15	256QAM	1	74	16.05	15.95	15.88			
15	256QAM	36	0	16.00	16.06	16.09	17		
15	256QAM	36	20	16.05	16.19	15.99			
15	256QAM	36	39	15.97	16.18	16.15			
15	256QAM	75	0	16.14	16.06	16.02			
Channel				20800	21100	21400	Tune-up limit (dBm)		
Frequency (MHz)				2505	2535	2565			
10	QPSK	1	0	20.81	20.94	20.92	22		
10	QPSK	1	25	20.81	20.90	20.87			
10	QPSK	1	49	20.88	20.88	20.91			
10	QPSK	25	0	19.98	20.17	20.08	21		
10	QPSK	25	12	20.08	20.14	20.12			
10	QPSK	25	25	20.11	20.05	20.16			
10	QPSK	50	0	20.20	20.17	20.12	21		
10	16QAM	1	0	19.99	19.97	19.98			
10	16QAM	1	25	20.10	20.11	19.95			
10	16QAM	1	49	20.09	20.11	20.14	20		
10	16QAM	25	0	19.03	19.11	19.24			
10	16QAM	25	12	19.06	19.11	18.96			
10	16QAM	25	25	19.05	19.11	18.98	20		
10	16QAM	50	0	19.02	19.11	19.16			
10	64QAM	1	0	19.09	19.12	19.17			
10	64QAM	1	25	19.05	19.15	18.92	20		
10	64QAM	1	49	19.05	18.86	18.78			
10	64QAM	25	0	18.97	19.04	19.09			
10	64QAM	25	12	19.02	19.18	18.96	20		
10	64QAM	25	25	19.00	19.08	19.06			
10	64QAM	50	0	19.04	19.09	18.92			
10	256QAM	1	0	16.13	16.16	16.21	17		
10	256QAM	1	25	16.09	16.19	15.96			
10	256QAM	1	49	16.09	15.90	15.82			
10	256QAM	25	0	16.01	16.08	16.13	17		
10	256QAM	25	12	16.06	16.22	16.00			
10	256QAM	25	25	16.04	16.12	16.10			
10	256QAM	50	0	16.08	16.13	15.96			
Channel				20775	21100	21425	Tune-up limit (dBm)		
Frequency (MHz)				2502.5	2535	2567.5			
5	QPSK	1	0	20.87	20.98	20.85	22		
5	QPSK	1	12	20.82	20.88	20.94			
5	QPSK	1	24	20.90	20.93	20.92			
5	QPSK	12	0	20.03	20.15	20.11	21		
5	QPSK	12	7	20.12	20.16	20.11			
5	QPSK	12	13	20.08	20.11	20.14			
5	QPSK	25	0	20.13	20.16	20.06	21		
5	16QAM	1	0	20.06	19.92	19.99			
5	16QAM	1	12	20.11	20.08	19.99			
5	16QAM	1	24	20.07	20.18	20.12			

Band 12 (700MHz Low Band) (dBm) ANT0									
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	22.42	22.47	22.35	23		
10	QPSK	1	25	22.35	22.38	22.39			
10	QPSK	1	49	22.25	22.40	22.42			
10	QPSK	25	0	21.58	21.63	21.62	22		
10	QPSK	25	12	21.60	21.51	21.58			
10	QPSK	25	25	21.60	21.55	21.52			
10	QPSK	50	0	21.54	21.63	21.59	22		
10	16QAM	1	0	21.78	21.75	21.62			
10	16QAM	1	25	21.53	21.60	21.60			
10	16QAM	1	49	21.58	21.53	21.64	21		
10	16QAM	25	0	20.56	20.58	20.69			
10	16QAM	25	12	20.54	20.59	20.56			
10	16QAM	25	25	20.66	20.63	20.65	21		
10	16QAM	50	0	20.70	20.64	20.61			
10	64QAM	1	0	20.70	20.65	20.55			
10	64QAM	1	25	20.76	20.71	20.69	21		
10	64QAM	1	49	20.82	20.84	20.78			
10	64QAM	25	0	20.54	20.74	20.58			
10	64QAM	25	12	20.61	20.67	20.69	21		
10	64QAM	25	25	20.56	20.63	20.57			
10	64QAM	50	0	20.60	20.58	20.61			
10	256QAM	1	0	17.32	17.27	17.17	18		
10	256QAM	1	25	17.38	17.33	17.31			
10	256QAM	1	49	17.44	17.46	17.40			
10	256QAM	25	0	17.16	17.36	17.20	18		
10	256QAM	25	12	17.23	17.29	17.31			
10	256QAM	25	25	17.18	17.25	17.19			
10	256QAM	50	0	17.22	17.20	17.23			
Channel				23035	23095	23155	Tune-up limit (dBm)		
Frequency (MHz)				701.5	707.5	713.5			
5	QPSK	1	0	22.22	22.37	22.25	23		
5	QPSK	1	12	22.30	22.37	22.30			
5	QPSK	1	24	22.24	22.35	22.36			
5	QPSK	12	0	21.55	21.56	21.58	22		
5	QPSK	12	7	21.51	21.46	21.55			
5	QPSK	12	13	21.52	21.47	21.51			
5	QPSK	25	0	21.53	21.50	21.55	22		
5	16QAM	1	0	21.74	21.70	21.52			
5	16QAM	1	12	21.43	21.58	21.58			
5	16QAM	1	24	21.53	21.52	21.57	21		
5	16QAM	12	0	20.47	20.56	20.61			
5	16QAM	12	7	20.53	20.51	20.48			
5	16QAM	12	13	20.58	20.55	20.59	21		
5	16QAM	25	0	20.68	20.54	20.59			
5	64QAM	1	0	20.68	20.57	20.51			
5	64QAM	1	12	20.68	20.64	20.67	21		
5	64QAM	1	24	20.78	20.80	20.68			
5	64QAM	12	0	20.50	20.69	20.55			
5	64QAM	12	7	20.54	20.64	20.62	18		
5	64QAM	12	13	20.52	20.58	20.48			
5	64QAM	25	0	20.59	20.55	20.60			
5	256QAM	1	0	17.30	17.19	17.13	18		
5	256QAM	1	12	17.30	17.26	17.29			
5	256QAM	1	24	17.40	17.42	17.30			
5	256QAM	12	0	17.12	17.31	17.17	18		
5	256QAM	12	7	17.16	17.26	17.24			
5	256QAM	12	13	17.14	17.20	17.10			
5	256QAM	25	0	17.21	17.17	17.22			
Channel				23025	23095	23165	Tune-up limit (dBm)		
Frequency (MHz)				700.5	707.5	714.5			
3	QPSK	1	0	22.27	22.45	22.33	23		
3	QPSK	1	8	22.33	22.33	22.38			
3	QPSK	1	14	22.23	22.39	22.32			
3	QPSK	8	0	21.57	21.57	21.57	22		
3	QPSK	8	4	21.55	21.41	21.54			
3	QPSK	8	7	21.51	21.50	21.45			
3	QPSK	15	0	21.48	21.50	21.54	22		
3	16QAM	1	0	21.71	21.70	21.52			
3	16QAM	1	8	21.48	21.53	21.58			
3	16QAM	1	14	21.48	21.48	21.62	21		
3	16QAM	8	0	20.54	20.52	20.67			
3	16QAM	8	4	20.45	20.49	20.48			
3	16QAM	8	7	20.63	20.59	20.60	21		
3	16QAM	15	0	20.69	20.59	20.51			
3	64QAM	1	0	20.66	20.60	20.51			
3	64QAM	1	8	20.73	20.70	20.61	21		
3	64QAM	1	14	20.75	20.77	20.71			
3	64QAM	8	0	20.52	20.73	20.48			
3	64QAM	8	4	20.52	20.59	20.65	21		
3	64QAM	8	7	20.55	20.56	20.51			
3	64QAM	15	0	20.54	20.52	20.53			
3	256QAM	1	0	17.28	17.22	17.13	18		
3	256QAM	1	8	17.35	17.32	17.23			
3	256QAM	1	14	17.37	17.39	17.33			
3	256QAM	8	0	17.14	17.35	17.10	18		
3	256QAM	8	4	17.14	17.21	17.27			
3	256QAM	8	7	17.17	17.18	17.13			
3	256QAM	15	0	17.16	17.14	17.15			
Channel				23017	23095	23173	Tune-up limit (dBm)		
Frequency (MHz)				699.7	707.5	715.3			
1.4	QPSK	1	0	22.26	22.46	22.27	23		
1.4	QPSK	1	3	22.33	22.32	22.36			
1.4	QPSK	1	5	22.24	22.30	22.35			
1.4	QPSK	3	0	22.37	22.41	22.41	22		
1.4	QPSK	3	1	22.42	22.30	22.39			
1.4	QPSK	3	3	22.34	22.30	22.28			
1.4	QPSK	6	0	21.49	21.49	21.51	22		
1.4	16QAM	1	0	21.73	21.68	21.60			
1.4	16QAM	1	3	21.46	21.51	21.53			
1.4	16QAM	1	5	21.57	21.43	21.61			



5	16QAM	12	0	19.03	19.10	19.18	20
5	16QAM	12	7	19.01	19.10	19.00	
5	16QAM	12	13	19.00	19.10	18.97	
5	16QAM	25	0	18.98	19.02	19.11	20
5	64QAM	1	0	19.02	19.09	19.11	
5	64QAM	1	12	19.09	19.18	18.86	
5	64QAM	1	24	19.05	18.94	18.78	20
5	64QAM	12	0	19.02	19.02	19.08	
5	64QAM	12	7	18.96	19.13	18.88	
5	64QAM	12	13	19.02	19.13	19.02	17
5	64QAM	25	0	19.01	19.05	18.92	
5	256QAM	1	0	16.06	16.13	16.15	
5	256QAM	1	12	16.13	16.22	15.90	17
5	256QAM	1	24	16.09	15.98	15.82	
5	256QAM	12	0	16.06	16.06	16.12	
5	256QAM	12	7	16.00	16.17	15.92	17
5	256QAM	12	13	16.06	16.17	16.06	
5	256QAM	25	0	16.05	16.09	15.96	

1.4	16QAM	3	0	21.47	21.57	21.61	21
1.4	16QAM	3	1	21.48	21.50	21.47	
1.4	16QAM	3	3	21.63	21.58	21.61	
1.4	16QAM	6	0	20.84	20.55	20.57	21
1.4	64QAM	1	0	20.68	20.57	20.47	
1.4	64QAM	1	3	20.68	20.63	20.65	
1.4	64QAM	1	5	20.81	20.79	20.72	21
1.4	64QAM	3	0	20.52	20.67	20.57	
1.4	64QAM	3	1	20.52	20.60	20.68	
1.4	64QAM	3	3	20.51	20.59	20.47	21
1.4	64QAM	6	0	20.58	20.48	20.60	
1.4	256QAM	1	0	17.30	17.19	17.09	
1.4	256QAM	1	3	17.30	17.25	17.27	18
1.4	256QAM	1	5	17.43	17.41	17.34	
1.4	256QAM	3	0	17.14	17.29	17.19	
1.4	256QAM	3	1	17.14	17.22	17.30	18
1.4	256QAM	3	3	17.13	17.21	17.09	
1.4	256QAM	6	0	17.20	17.10	17.22	



Band 13(700MHz Band) (dBm)_ANT0							
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		22.41		23
10	QPSK	1	25		22.40		
10	QPSK	1	49		22.37		
10	QPSK	25	0		21.50		22
10	QPSK	25	12		21.45		
10	QPSK	25	25		21.41		
10	QPSK	50	0		21.46		22
10	16QAM	1	0		21.76		
10	16QAM	1	25		21.48		
10	16QAM	1	49		21.62		21
10	16QAM	25	0		20.53		
10	16QAM	25	12		20.57		
10	16QAM	25	25		20.51		21
10	16QAM	50	0		20.46		
10	64QAM	1	0		20.66		
10	64QAM	1	25		20.74		21
10	64QAM	1	49		20.54		
10	64QAM	25	0		20.55		
10	64QAM	25	12		20.49		21
10	64QAM	25	25		20.53		
10	64QAM	50	0		20.42		
10	256QAM	1	0		17.43		18
10	256QAM	1	25		17.51		
10	256QAM	1	49		17.31		
10	256QAM	25	0		17.32		18
10	256QAM	25	12		17.26		
10	256QAM	25	25		17.30		
10	256QAM	50	0		17.19		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	22.38	22.39	22.25	23
5	QPSK	1	12	22.31	22.34	22.35	
5	QPSK	1	24	22.26	22.30	22.33	
5	QPSK	12	0	21.42	21.45	21.45	22
5	QPSK	12	7	21.37	21.35	21.37	
5	QPSK	12	13	21.37	21.34	21.40	
5	QPSK	25	0	21.43	21.39	21.41	22
5	16QAM	1	0	21.57	21.66	21.36	
5	16QAM	1	12	21.41	21.41	21.43	
5	16QAM	1	24	21.47	21.55	21.54	21
5	16QAM	12	0	20.46	20.49	20.34	
5	16QAM	12	7	20.47	20.48	20.52	
5	16QAM	12	13	20.56	20.47	20.42	21
5	16QAM	25	0	20.38	20.45	20.38	
5	64QAM	1	0	20.44	20.65	20.51	
5	64QAM	1	12	20.69	20.69	20.53	21
5	64QAM	1	24	20.47	20.53	20.48	
5	64QAM	12	0	20.33	20.48	20.34	
5	64QAM	12	7	20.33	20.44	20.43	21
5	64QAM	12	13	20.47	20.49	20.40	
5	64QAM	25	0	20.37	20.41	20.45	
5	256QAM	1	0	17.21	17.42	17.28	18
5	256QAM	1	12	17.46	17.46	17.30	
5	256QAM	1	24	17.24	17.30	17.25	
5	256QAM	12	0	17.10	17.25	17.11	18
5	256QAM	12	7	17.10	17.21	17.20	
5	256QAM	12	13	17.24	17.26	17.17	
5	256QAM	25	0	17.14	17.18	17.22	

Band 66 (dBm)_ANT0							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				132072	132322	132572	17.5
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	16.60	16.62	16.55	17.5
20	QPSK	1	49	16.31	16.43	16.28	
20	QPSK	1	99	16.39	16.39	16.36	
20	QPSK	50	0	15.51	15.56	15.54	16.5
20	QPSK	50	24	15.44	15.52	15.51	
20	QPSK	50	50	15.55	15.50	15.52	
20	QPSK	100	0	15.51	15.56	15.53	16.5
20	16QAM	1	0	15.61	15.76	15.78	
20	16QAM	1	49	15.68	15.77	15.54	
20	16QAM	1	99	15.62	15.69	15.77	15.5
20	16QAM	50	0	14.62	14.55	14.54	
20	16QAM	50	24	14.74	14.69	14.57	
20	16QAM	50	50	14.67	14.66	14.63	15.5
20	16QAM	100	0	14.68	14.65	14.55	
20	64QAM	1	0	14.91	14.88	14.89	
20	64QAM	1	49	14.79	14.89	14.63	15.5
20	64QAM	1	99	14.70	14.83	14.84	
20	64QAM	50	0	14.59	14.54	14.54	
20	64QAM	50	24	14.66	14.64	14.56	15.5
20	64QAM	50	50	14.59	14.60	14.60	
20	64QAM	100	0	14.70	14.59	14.48	
20	256QAM	1	0	11.90	11.87	11.88	12.5
20	256QAM	1	49	11.78	11.88	11.62	
20	256QAM	1	99	11.69	11.82	11.83	
20	256QAM	50	0	11.58	11.53	11.53	12.5
20	256QAM	50	24	11.65	11.63	11.55	
20	256QAM	50	50	11.58	11.59	11.59	
20	256QAM	100	0	11.69	11.58	11.47	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	16.21	16.41	16.37	17.5
15	QPSK	1	37	16.29	16.36	16.18	
15	QPSK	1	74	16.33	16.38	16.32	
15	QPSK	36	0	15.29	15.33	15.32	16.5
15	QPSK	36	20	15.35	15.48	15.50	
15	QPSK	36	39	15.46	15.46	15.47	
15	QPSK	75	0	15.31	15.35	15.47	16.5
15	16QAM	1	0	15.79	15.69	15.76	
15	16QAM	1	37	15.63	15.73	15.50	
15	16QAM	1	74	15.57	15.60	15.70	15.5
15	16QAM	36	0	14.60	14.50	14.52	
15	16QAM	36	20	14.63	14.67	14.56	
15	16QAM	36	39	14.61	14.57	14.55	15.5
15	16QAM	75	0	14.61	14.57	14.45	
15	64QAM	1	0	14.86	14.84	14.82	
15	64QAM	1	37	14.70	14.79	14.59	15.5
15	64QAM	1	74	14.59	14.78	14.82	
15	64QAM	36	0	14.47	14.53	14.46	
15	64QAM	36	20	14.56	14.54	14.55	15.5
15	64QAM	36	39	14.50	14.58	14.50	
15	64QAM	75	0	14.68	14.57	14.41	
15	256QAM	1	0	11.85	11.83	11.81	12.5
15	256QAM	1	37	11.69	11.78	11.58	
15	256QAM	1	74	11.58	11.77	11.81	
15	256QAM	36	0	11.46	11.52	11.45	12.5
15	256QAM	36	20	11.55	11.53	11.54	
15	256QAM	36	39	11.49	11.57	11.49	
15	256QAM	75	0	11.67	11.56	11.40	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	16.26	16.36	16.34	17.5
10	QPSK	1	25	16.14	16.35	16.15	
10	QPSK	1	49	16.24	16.28	16.22	
10	QPSK	25	0	15.24	15.32	15.33	16.5
10	QPSK	25	12	15.32	15.40	15.38	
10	QPSK	25	25	15.41	15.40	15.41	
10	QPSK	50	0	15.32	15.21	15.47	16.5
10	16QAM	1	0	15.75	15.65	15.69	
10	16QAM	1	25	15.56	15.68	15.41	
10	16QAM	1	49	15.53	15.59	15.64	15.5
10	16QAM	25	0	14.45	14.47	14.41	
10	16QAM	25	12	14.66	14.58	14.47	
10	16QAM	25	25	14.51	14.58	14.51	15.5
10	16QAM	50	0	14.58	14.51	14.46	
10	64QAM	1	0	14.74	14.81	14.74	
10	64QAM	1	25	14.72	14.78	14.52	15.5
10	64QAM	1	49	14.54	14.75	14.73	
10	64QAM	25	0	14.52	14.48	14.40	
10	64QAM	25	12	14.57	14.56	14.41	15.5
10	64QAM	25	25	14.43	14.53	14.46	
10	64QAM	50	0	14.57	14.44	14.42	
10	256QAM	1	0	11.73	11.80	11.73	12.5
10	256QAM	1	25	11.71	11.77	11.51	
10	256QAM	1	49	11.53	11.74	11.72	
10	256QAM	25	0	11.51	11.47	11.39	12.5
10	256QAM	25	12	11.56	11.55	11.40	
10	256QAM	25	25	11.42	11.52	11.45	
10	256QAM	50	0	11.56	11.43	11.41	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	16.22	16.39	16.33	17.5
5	QPSK	1	12	16.23	16.30	16.17	
5	QPSK	1	24	16.29	16.26	16.26	
5	QPSK	12	0	15.32	15.35	15.33	16.5
5	QPSK	12	7	15.33	15.43	15.37	
5	QPSK	12	13	15.44	15.41	15.40	
5	QPSK	25	0	15.28	15.27	15.47	16.5
5	16QAM	1	0	15.70	15.67	15.70	
5	16QAM	1	12	15.51	15.68	15.43	
5	16QAM	1	24	15.50	15.61	15.62	



5	16QAM	12	0	14.52	14.40	14.43	15.5
5	16QAM	12	7	14.63	14.57	14.42	
5	16QAM	12	13	14.50	14.59	14.54	
5	16QAM	25	0	14.62	14.57	14.45	15.5
5	64QAM	1	0	14.76	14.75	14.81	
5	64QAM	1	12	14.62	14.81	14.55	
5	64QAM	1	24	14.56	14.70	14.77	15.5
5	64QAM	12	0	14.51	14.40	14.43	
5	64QAM	12	7	14.59	14.56	14.43	
5	64QAM	12	13	14.52	14.54	14.51	12.5
5	64QAM	25	0	14.53	14.53	14.38	
5	256QAM	1	0	11.75	11.74	11.60	
5	256QAM	1	12	11.61	11.80	11.54	12.5
5	256QAM	1	24	11.55	11.69	11.76	
5	256QAM	12	0	11.50	11.39	11.42	
5	256QAM	12	7	11.58	11.55	11.42	12.5
5	256QAM	12	13	11.51	11.53	11.50	
5	256QAM	25	0	11.52	11.52	11.37	
Channel				131967	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1776.5	
3	QPSK	1	0	16.22	16.32	16.29	17.5
3	QPSK	1	8	16.14	16.32	16.19	
3	QPSK	1	14	16.24	16.25	16.30	
3	QPSK	8	0	15.31	15.29	15.32	16.5
3	QPSK	8	4	15.35	15.38	15.38	
3	QPSK	8	7	15.41	15.41	15.38	
3	QPSK	15	0	15.30	15.21	15.38	16.5
3	16QAM	1	0	15.71	15.68	15.63	
3	16QAM	1	8	15.59	15.64	15.47	
3	16QAM	1	14	15.45	15.61	15.71	15.5
3	16QAM	8	0	14.47	14.47	14.42	
3	16QAM	8	4	14.60	14.57	14.50	
3	16QAM	8	7	14.54	14.53	14.57	15.5
3	16QAM	15	0	14.53	14.51	14.45	
3	64QAM	1	0	14.85	14.76	14.83	
3	64QAM	1	8	14.72	14.79	14.56	15.5
3	64QAM	1	14	14.60	14.72	14.69	
3	64QAM	8	0	14.45	14.47	14.39	
3	64QAM	8	4	14.60	14.49	14.50	15.5
3	64QAM	8	7	14.50	14.45	14.49	
3	64QAM	15	0	14.61	14.48	14.37	
3	256QAM	1	0	11.84	11.75	11.82	12.5
3	256QAM	1	8	11.71	11.78	11.55	
3	256QAM	1	14	11.59	11.71	11.68	
3	256QAM	8	0	11.44	11.46	11.38	12.5
3	256QAM	8	4	11.59	11.48	11.49	
3	256QAM	8	7	11.49	11.44	11.48	
3	256QAM	15	0	11.60	11.47	11.36	Tune-up limit (dBm)
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	17.5
1.4	QPSK	1	0	16.21	16.37	16.33	
1.4	QPSK	1	3	16.24	16.32	16.21	
1.4	QPSK	1	5	16.25	16.33	16.21	16.5
1.4	QPSK	3	0	16.35	16.33	16.47	
1.4	QPSK	3	1	16.38	16.40	16.36	
1.4	QPSK	3	3	16.43	16.40	16.37	16.5
1.4	QPSK	6	0	15.34	15.21	15.45	
1.4	16QAM	1	0	15.68	15.64	15.63	
1.4	16QAM	1	3	15.55	15.67	15.40	16.5
1.4	16QAM	1	5	15.55	15.62	15.66	
1.4	16QAM	3	0	15.32	15.54	15.33	
1.4	16QAM	3	1	15.52	15.49	15.35	15.5
1.4	16QAM	3	3	15.39	15.42	15.41	
1.4	16QAM	6	0	14.56	14.52	14.53	
1.4	64QAM	1	0	14.82	14.75	14.74	15.5
1.4	64QAM	1	3	14.66	14.82	14.55	
1.4	64QAM	1	5	14.63	14.70	14.73	
1.4	64QAM	3	0	14.56	14.51	14.47	15.5
1.4	64QAM	3	1	14.50	14.55	14.49	
1.4	64QAM	3	3	14.50	14.51	14.54	
1.4	64QAM	6	0	14.62	14.49	14.41	12.5
1.4	256QAM	1	0	11.81	11.74	11.73	
1.4	256QAM	1	3	11.65	11.81	11.54	
1.4	256QAM	1	5	11.62	11.69	11.72	12.5
1.4	256QAM	3	0	11.55	11.50	11.46	
1.4	256QAM	3	1	11.49	11.54	11.48	
1.4	256QAM	3	3	11.49	11.50	11.53	12.5
1.4	256QAM	6	0	11.61	11.48	11.40	



Band 66 (dBm)_ANT4									
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	21.69	21.75	21.70	22.5		
20	QPSK	1	49	21.61	21.59	21.66			
20	QPSK	1	99	21.58	21.63	21.65			
20	QPSK	50	0	20.65	20.69	20.63	21.5		
20	QPSK	50	24	20.57	20.65	20.64			
20	QPSK	50	50	20.68	20.63	20.65			
20	QPSK	100	0	20.64	20.68	20.66	21.5		
20	16QAM	1	0	20.94	20.89	20.91			
20	16QAM	1	49	20.81	20.90	20.67			
20	16QAM	1	99	20.75	20.82	20.90	20.5		
20	16QAM	50	0	19.75	19.68	19.67			
20	16QAM	50	24	19.87	19.82	19.70			
20	16QAM	50	50	19.80	19.79	19.76	20.5		
20	16QAM	100	0	19.81	19.78	19.68			
20	64QAM	1	0	20.04	20.01	20.02			
20	64QAM	1	49	19.92	20.02	19.76	20.5		
20	64QAM	1	99	19.83	19.96	19.97			
20	64QAM	50	0	19.72	19.67	19.67			
20	64QAM	50	24	19.79	19.77	19.69	20.5		
20	64QAM	50	50	19.72	19.73	19.73			
20	64QAM	100	0	19.83	19.72	19.61			
20	256QAM	1	0	17.03	17.00	17.01	17.5		
20	256QAM	1	49	16.91	17.01	16.75			
20	256QAM	1	99	16.82	16.95	16.96			
20	256QAM	50	0	16.71	16.66	16.66	17.5		
20	256QAM	50	24	16.78	16.76	16.68			
20	256QAM	50	50	16.71	16.72	16.72			
20	256QAM	100	0	16.82	16.71	16.60			
Channel				132047	132322	132597	Tune-up limit (dBm)		
Frequency (MHz)				1717.5	1745	1772.5			
15	QPSK	1	0	21.34	21.54	21.50	22.5		
15	QPSK	1	37	21.42	21.49	21.31			
15	QPSK	1	74	21.46	21.51	21.45			
15	QPSK	36	0	20.42	20.46	20.45	21.5		
15	QPSK	36	20	20.48	20.61	20.63			
15	QPSK	36	39	20.59	20.59	20.60			
15	QPSK	75	0	20.44	20.48	20.60	21.5		
15	16QAM	1	0	20.92	20.82	20.89			
15	16QAM	1	37	20.76	20.86	20.63			
15	16QAM	1	74	20.70	20.73	20.83	20.5		
15	16QAM	36	0	19.73	19.63	19.65			
15	16QAM	36	20	19.76	19.80	19.69			
15	16QAM	36	39	19.74	19.70	19.68	20.5		
15	16QAM	75	0	19.74	19.70	19.58			
15	64QAM	1	0	19.99	19.97	19.95			
15	64QAM	1	37	19.83	19.92	19.72	20.5		
15	64QAM	1	74	19.72	19.91	19.95			
15	64QAM	36	0	19.60	19.66	19.59			
15	64QAM	36	20	19.69	19.67	19.68	20.5		
15	64QAM	36	39	19.63	19.71	19.63			
15	64QAM	75	0	19.81	19.70	19.54			
15	256QAM	1	0	16.98	16.96	16.94	17.5		
15	256QAM	1	37	16.82	16.91	16.71			
15	256QAM	1	74	16.71	16.90	16.94			
15	256QAM	36	0	16.59	16.65	16.58	17.5		
15	256QAM	36	20	16.68	16.66	16.67			
15	256QAM	36	39	16.62	16.70	16.62			
15	256QAM	75	0	16.80	16.69	16.53			
Channel				132022	132322	132622	Tune-up limit (dBm)		
Frequency (MHz)				1715	1745	1775			
10	QPSK	1	0	21.39	21.49	21.47	22.5		
10	QPSK	1	25	21.27	21.48	21.28			
10	QPSK	1	49	21.37	21.41	21.35			
10	QPSK	25	0	20.37	20.45	20.46	21.5		
10	QPSK	25	12	20.45	20.53	20.51			
10	QPSK	25	25	20.54	20.53	20.54			
10	QPSK	50	0	20.45	20.34	20.60	21.5		
10	16QAM	1	0	20.88	20.78	20.82			
10	16QAM	1	25	20.69	20.81	20.54			
10	16QAM	1	49	20.66	20.72	20.77	20.5		
10	16QAM	25	0	19.58	19.60	19.54			
10	16QAM	25	12	19.79	19.71	19.60			
10	16QAM	25	25	19.64	19.71	19.64	20.5		
10	16QAM	50	0	19.71	19.64	19.59			
10	64QAM	1	0	19.87	19.94	19.87			
10	64QAM	1	25	19.85	19.91	19.65	20.5		
10	64QAM	1	49	19.67	19.88	19.86			
10	64QAM	25	0	19.65	19.61	19.53			
10	64QAM	25	12	19.70	19.69	19.54	20.5		
10	64QAM	25	25	19.56	19.66	19.59			
10	64QAM	50	0	19.70	19.57	19.55			
10	256QAM	1	0	16.86	16.93	16.86	17.5		
10	256QAM	1	25	16.84	16.90	16.64			
10	256QAM	1	49	16.66	16.87	16.85			
10	256QAM	25	0	16.64	16.60	16.52	17.5		
10	256QAM	25	12	16.69	16.68	16.53			
10	256QAM	25	25	16.55	16.65	16.58			
10	256QAM	50	0	16.69	16.56	16.54	17.5		
Channel				131997	132322	132647	Tune-up limit (dBm)		
Frequency (MHz)				1712.5	1745	1777.5			
5	QPSK	1	0	21.35	21.52	21.46	22.5		
5	QPSK	1	12	21.36	21.43	21.30			
5	QPSK	1	24	21.42	21.39	21.39			
5	QPSK	12	0	20.45	20.48	20.46	21.5		
5	QPSK	12	7	20.46	20.56	20.50			
5	QPSK	12	13	20.57	20.54	20.53			
5	QPSK	25	0	20.41	20.40	20.60	21.5		
5	16QAM	1	0	20.83	20.80	20.83			
5	16QAM	1	12	20.64	20.81	20.56			
5	16QAM	1	24	20.63	20.74	20.75	21.5		



5	16QAM	12	0	19.65	19.53	19.56	20.5
5	16QAM	12	7	19.76	19.70	19.55	
5	16QAM	12	13	19.63	19.72	19.67	
5	16QAM	25	0	19.75	19.70	19.58	20.5
5	64QAM	1	0	19.89	19.88	19.94	
5	64QAM	1	12	19.75	19.94	19.68	
5	64QAM	1	24	19.69	19.83	19.90	20.5
5	64QAM	12	0	19.64	19.53	19.56	
5	64QAM	12	7	19.72	19.69	19.56	
5	64QAM	12	13	19.65	19.67	19.64	17.5
5	64QAM	25	0	19.66	19.66	19.51	
5	256QAM	1	0	16.88	16.87	16.93	
5	256QAM	1	12	16.74	16.93	16.67	17.5
5	256QAM	1	24	16.68	16.82	16.89	
5	256QAM	12	0	16.63	16.52	16.55	
5	256QAM	12	7	16.71	16.68	16.55	17.5
5	256QAM	12	13	16.64	16.66	16.63	
5	256QAM	25	0	16.65	16.65	16.50	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	21.35	21.45	21.42	22.5
3	QPSK	1	8	21.27	21.45	21.32	
3	QPSK	1	14	21.37	21.38	21.43	
3	QPSK	8	0	20.44	20.42	20.45	21.5
3	QPSK	8	4	20.48	20.51	20.51	
3	QPSK	8	7	20.54	20.54	20.51	
3	QPSK	15	0	20.43	20.34	20.51	21.5
3	16QAM	1	0	20.84	20.81	20.76	
3	16QAM	1	8	20.72	20.77	20.60	
3	16QAM	1	14	20.58	20.74	20.84	20.5
3	16QAM	8	0	19.60	19.60	19.55	
3	16QAM	8	4	19.73	19.70	19.63	
3	16QAM	8	7	19.67	19.66	19.70	20.5
3	16QAM	15	0	19.66	19.64	19.58	
3	64QAM	1	0	19.98	19.89	19.96	
3	64QAM	1	8	19.85	19.92	19.69	20.5
3	64QAM	1	14	19.73	19.85	19.82	
3	64QAM	8	0	19.58	19.60	19.52	20.5
3	64QAM	8	4	19.73	19.62	19.63	
3	64QAM	8	7	19.63	19.58	19.62	
3	64QAM	15	0	19.74	19.61	19.50	17.5
3	256QAM	1	0	16.97	16.88	16.95	
3	256QAM	1	8	16.84	16.91	16.68	
3	256QAM	1	14	16.72	16.84	16.81	17.5
3	256QAM	8	0	16.57	16.59	16.51	
3	256QAM	8	4	16.72	16.61	16.62	
3	256QAM	8	7	16.62	16.57	16.61	17.5
3	256QAM	15	0	16.73	16.60	16.49	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	21.34	21.50	21.46	22.5
1.4	QPSK	1	3	21.37	21.45	21.34	
1.4	QPSK	1	5	21.38	21.46	21.34	
1.4	QPSK	3	0	21.48	21.46	21.60	21.5
1.4	QPSK	3	1	21.51	21.53	21.49	
1.4	QPSK	3	3	21.56	21.53	21.50	
1.4	QPSK	6	0	20.47	20.34	20.58	20.5
1.4	16QAM	1	0	20.81	20.77	20.76	
1.4	16QAM	1	3	20.68	20.80	20.53	
1.4	16QAM	1	5	20.68	20.75	20.79	20.5
1.4	16QAM	3	0	20.45	20.67	20.46	
1.4	16QAM	3	1	20.65	20.62	20.48	
1.4	16QAM	3	3	20.52	20.55	20.54	20.5
1.4	16QAM	6	0	19.69	19.65	19.66	
1.4	64QAM	1	0	19.95	19.88	19.87	
1.4	64QAM	1	3	19.79	19.95	19.68	20.5
1.4	64QAM	1	5	19.76	19.83	19.86	
1.4	64QAM	3	0	19.69	19.64	19.60	
1.4	64QAM	3	1	19.63	19.68	19.62	20.5
1.4	64QAM	3	3	19.63	19.64	19.67	
1.4	64QAM	6	0	19.75	19.62	19.54	
1.4	256QAM	1	0	16.94	16.87	16.86	17.5
1.4	256QAM	1	3	16.78	16.94	16.67	
1.4	256QAM	1	5	16.75	16.82	16.85	
1.4	256QAM	3	0	16.68	16.63	16.59	17.5
1.4	256QAM	3	1	16.62	16.67	16.61	
1.4	256QAM	3	3	16.62	16.63	16.66	
1.4	256QAM	6	0	16.74	16.61	16.53	17.5



CA_66B_ANT0											
Combination:15MHz+10MHz(75RB+25RB)											
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				
132070	132047	132140	QPSK	1	0	0	0	1	0	16.65	17.50
132322	132398	132491	QPSK	1	0	0	0	1	0	16.75	17.50
132572	132549	132642	QPSK	1	0	0	0	1	0	16.69	17.50
132070	132047	132140	16QAM	1	0	0	0	1	0	15.72	16.50
132322	132398	132491	16QAM	1	0	0	0	1	0	15.73	16.50
132572	132549	132642	16QAM	1	0	0	0	1	0	15.66	16.50
132070	132047	132140	64QAM	1	0	0	0	1	0	14.55	15.50
132322	132398	132491	64QAM	1	0	0	0	1	0	14.67	15.50
132572	132549	132642	64QAM	1	0	0	0	1	0	14.59	15.50
132070	132047	132140	256QAM	1	0	0	0	1	0	11.77	12.50
132322	132398	132491	256QAM	1	0	0	0	1	0	11.81	12.50
132572	132549	132642	256QAM	1	0	0	0	1	0	11.68	12.50
132070	132047	132140	QPSK	36	0	0	0	1	0	15.58	16.50
132322	132398	132491	QPSK	36	0	0	0	1	0	15.69	16.50
132572	132549	132642	QPSK	36	0	0	0	1	0	15.66	16.50

CA_66C_ANT0											
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				
132070	132072	132270	QPSK	1	0	0	0	1	0	16.63	17.50
132322	132323	132521	QPSK	1	0	0	0	1	0	16.78	17.50
132572	132374	132572	QPSK	1	0	0	0	1	0	16.67	17.50
132070	132072	132270	16QAM	1	0	0	0	1	0	15.66	16.50
132322	132323	132521	16QAM	1	0	0	0	1	0	15.75	16.50
132572	132374	132572	16QAM	1	0	0	0	1	0	15.68	16.50
132070	132072	132270	64QAM	1	0	0	0	1	0	14.69	15.50
132322	132323	132521	64QAM	1	0	0	0	1	0	14.75	15.50
132572	132374	132572	64QAM	1	0	0	0	1	0	14.66	15.50
132070	132072	132270	256QAM	1	0	0	0	1	0	11.52	12.50
132322	132323	132521	256QAM	1	0	0	0	1	0	11.72	12.50
132572	132374	132572	256QAM	1	0	0	0	1	0	11.64	12.50
132070	132072	132270	QPSK	50	0	0	0	1	0	15.75	16.50
132322	132323	132521	QPSK	50	0	0	0	1	0	15.85	16.50
132572	132374	132572	QPSK	50	0	0	0	1	0	15.77	16.50



5A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	21.33	21.29	21.08	22
20		1	53	21.36	21.18	21.05	
20		1	104	21.34	21.12	21.12	
20		50	1	21.28	21.19	21.07	22
20	DFT-s-OFDM QPSK	50	25	21.36	21.17	21.10	
20		50	50	21.22	21.14	21.12	
20		100	0	21.26	21.21	21.12	
20		1	1	21.29	21.39	21.34	22
20	DFT-s-OFDM 16QAM	1	53	21.22	21.18	21.08	
20		1	104	21.21	21.05	21.08	
20		50	1	20.88	20.90	20.76	22
20		50	25	20.75	20.83	20.75	
20	DFT-s-OFDM 64QAM	50	50	20.84	20.80	20.71	
20		100	0	20.71	20.94	20.76	
20	DFT-s-OFDM 256QAM	1	1	21.35	21.28	21.13	22
20	DFT-s-OFDM 64QAM	1	1	19.68	19.65	19.84	20.5
20	DFT-s-OFDM 256QAM	1	1	17.97	17.94	17.59	18.5
20	CP-OFDM QPSK	1	1	20.15	20.11	20.03	21
20	CP-OFDM 16QAM	1	1	19.55	19.48	19.47	20
20	CP-OFDM 64QAM	1	1	18.32	18.23	18.09	19
20	CP-OFDM 256QAM	1	1	16.02	15.98	15.64	16
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	21.29	21.32	21.09	22
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	21.07	21.17	20.96	22
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	21.15	21.20	20.96	22



13A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	21.20	21.15	21.07	22
20		1	53	21.22	21.14	21.08	
20		1	104	21.23	21.06	21.09	
20		50	1	21.22	21.14	21.07	22
20		50	25	21.26	21.15	21.10	
20		50	50	21.20	21.14	21.11	
20		100	0	21.24	21.17	21.13	
20	DFT-s-OFDM QPSK	1	1	21.18	21.28	21.24	22
20		1	53	21.24	21.17	21.09	
20		1	104	21.17	21.05	21.10	
20		50	1	20.90	20.95	20.76	22
20		50	25	20.87	20.79	20.76	
20		50	50	20.92	20.80	20.73	
20		100	0	20.84	20.94	20.74	
20	DFT-s-OFDM 16QAM	1	1	21.25	21.25	21.16	22
20	DFT-s-OFDM 64QAM	1	1	19.66	19.65	19.51	20.5
20	DFT-s-OFDM 256QAM	1	1	17.95	17.90	17.82	18.5
20	CP-OFDM QPSK	1	1	20.13	20.03	19.98	21
20	CP-OFDM 16QAM	1	1	19.46	19.43	19.37	20
20	CP-OFDM 64QAM	1	1	18.25	18.19	18.08	19
20	CP-OFDM 256QAM	1	1	15.98	15.90	15.80	16
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	21.18	21.24	21.03	22
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	21.10	21.17	20.98	22
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	21.11	21.15	21.03	22



66A_n2							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	DFT-s-OFDM PI/2 BPSK	1	1	21.23	21.18	21.09	22
20		1	53	21.27	21.17	21.08	
20		1	104	21.24	21.12	21.15	
20	DFT-s-OFDM PI/2 BPSK	50	1	21.19	21.19	21.12	22
20		50	25	21.25	21.19	21.13	
20		50	50	21.26	21.14	21.11	
20		100	0	21.25	21.17	21.11	
20	DFT-s-OFDM QPSK	1	1	21.25	21.29	21.23	22
20		1	53	21.27	21.15	21.12	
20		1	104	21.24	21.07	21.13	
20		50	1	20.96	21.02	20.85	22
20		50	25	20.95	20.93	20.87	
20		50	50	20.97	20.87	20.84	
20		100	0	20.90	20.98	20.84	
20	DFT-s-OFDM 16QAM	1	1	21.13	21.22	21.12	22
20	DFT-s-OFDM 64QAM	1	1	19.72	19.62	19.58	20.5
20	DFT-s-OFDM 256QAM	1	1	17.98	17.92	17.86	18.5
20	CP-OFDM QPSK	1	1	20.13	20.11	20.01	21
20	CP-OFDM 16QAM	1	1	19.19	19.16	19.09	20
20	CP-OFDM 64QAM	1	1	17.95	18.02	18.10	19
20	CP-OFDM 256QAM	1	1	16.02	15.97	15.83	17
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	DFT-s-OFDM QPSK	1	1	21.16	21.22	21.06	22
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	DFT-s-OFDM QPSK	1	1	21.01	21.19	20.96	22
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	DFT-s-OFDM QPSK	1	1	21.03	21.16	21.15	22



2A_n66							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	22
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	21.18	21.22	21.25	22
40		1	108	21.18	21.25	21.10	
40		1	214	21.24	21.13	21.09	
40		108	1	21.11	21.12	21.13	
40		108	54	21.24	21.17	21.16	
40		108	108	21.27	21.15	21.27	
40	DFT-s-OFDM QPSK	216	0	21.26	21.19	21.26	22
40		1	1	21.25	21.32	21.25	
40		1	108	21.19	21.24	21.08	
40		1	214	21.10	20.98	21.11	
40		108	1	21.04	21.05	21.02	
40		108	54	21.02	20.98	20.88	
40	DFT-s-OFDM 16QAM	108	108	20.87	20.92	20.89	22
40		216	0	21.03	21.04	21.02	
40		1	1	21.23	21.30	21.28	
40		1	1	19.64	19.64	19.76	
40		1	1	17.91	17.99	17.71	
40		1	1	19.93	20.00	19.96	
40	CP-OFDM QPSK	1	1	19.12	19.05	19.18	20
40	CP-OFDM 16QAM	1	1	18.11	18.18	18.05	19
40	CP-OFDM 64QAM	1	1	15.92	15.98	15.92	17
40	CP-OFDM 256QAM	1	1				
Channel				345000	349000	353000	22
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	21.10	21.17	21.14	22
Channel				344000	349000	354000	22
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	21.27	21.24	21.12	22
Channel				343500	349000	354500	22
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	21.25	21.22	21.08	22
Channel				343000	349000	355000	22
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	20.68	21.08	20.96	22
Channel				342500	349000	355500	22
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	21.19	21.18	21.00	22



5A_n66							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	21.14	21.26	21.27	22
40		1	108	21.14	21.23	21.10	
40		1	214	21.24	21.09	21.10	
40		108	1	21.29	21.22	21.24	22
40		108	54	21.26	21.21	21.14	
40		108	108	21.26	21.29	21.26	
40		216	0	21.19	21.21	21.18	
40	DFT-s-OFDM QPSK	1	1	21.24	21.31	21.22	22
40		1	108	21.19	21.20	21.08	
40		1	214	21.20	21.12	21.11	
40		108	1	20.96	20.98	20.93	22
40		108	54	20.94	20.94	20.85	
40		108	108	20.93	20.90	20.89	
40		216	0	20.94	20.96	20.92	
40	DFT-s-OFDM 16QAM	1	1	21.16	21.28	21.18	22
40	DFT-s-OFDM 64QAM	1	1	19.60	19.67	19.66	20.5
40	DFT-s-OFDM 256QAM	1	1	17.92	17.93	17.88	18.5
40	CP-OFDM QPSK	1	1	19.70	19.77	19.67	20.5
40	CP-OFDM 16QAM	1	1	19.08	19.14	19.06	20
40	CP-OFDM 64QAM	1	1	17.83	17.92	17.82	18.5
40	CP-OFDM 256QAM	1	1	15.92	15.98	15.90	16.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	21.19	21.11	21.17	22
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	21.23	20.71	20.56	22
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	21.20	20.91	20.75	22
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	21.18	21.04	21.06	22
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	21.20	21.16	21.07	22



13A_n66							
BW [MHz]	Modulation	RB num	RB start	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	DFT-s-OFDM PI/2 BPSK	1	1	21.17	21.21	21.27	22
40		1	108	21.17	21.25	21.10	
40		1	214	21.13	21.11	21.09	
40		108	1	21.29	21.23	21.25	22
40		108	54	21.26	21.32	21.21	
40		108	108	21.31	21.27	21.14	
40	DFT-s-OFDM QPSK	216	0	21.27	21.26	21.13	22
40		1	1	21.31	21.33	21.24	
40		1	108	21.20	21.22	21.12	
40		1	214	21.13	21.08	21.07	22
40		108	1	21.00	21.02	20.83	
40		108	54	20.96	20.98	20.73	
40	DFT-s-OFDM 16QAM	108	108	20.97	20.92	20.87	22
40		216	0	21.01	21.02	20.82	
40		1	1	21.19	21.24	21.15	
40	DFT-s-OFDM 64QAM	1	1	19.61	19.69	19.61	20.5
40	DFT-s-OFDM 256QAM	1	1	17.90	17.95	17.85	18.5
40	CP-OFDM QPSK	1	1	19.85	19.89	19.81	20.5
40	CP-OFDM 16QAM	1	1	19.20	19.25	19.14	20
40	CP-OFDM 64QAM	1	1	17.96	18.03	17.91	19
40	CP-OFDM 256QAM	1	1	15.91	16.00	15.88	17
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	DFT-s-OFDM QPSK	1	1	21.18	21.22	21.14	22
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	DFT-s-OFDM QPSK	1	1	20.72	21.25	21.08	22
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	DFT-s-OFDM QPSK	1	1	20.91	21.21	21.09	22
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	DFT-s-OFDM QPSK	1	1	21.17	21.07	21.06	22
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	DFT-s-OFDM QPSK	1	1	21.18	21.07	21.00	22