



REPORT No.: SZ21090279S01

## Annex E Conducted Power

**Conducted Power**

GSM850 TX Channel	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
	128	189	251		128	189	251		
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8		
GSM 1 Tx slot	32.95	32.91	32.85	33.50	23.95	23.91	23.85	24.50	0.13
GPRS 1 Tx slot	32.96	32.90	32.83	33.50	23.96	23.90	23.83	24.50	
GPRS 2 Tx slots	32.16	32.11	32.03	32.50	26.16	26.11	26.03	26.50	
GPRS 3 Tx slots	30.41	30.33	30.25	31.00	26.15	26.07	25.99	26.74	
GPRS 4 Tx slots	29.24	29.20	29.15	30.00	26.24	26.20	26.15	27.00	0.09
EDGE 1 Tx slot	27.76	27.74	27.64	28.50	18.76	18.74	18.64	19.50	0.12
EDGE 2 Tx slots	26.19	26.28	26.32	27.00	20.19	20.28	20.32	21.00	0.13
EDGE 3 Tx slots	24.31	24.27	24.35	25.00	20.05	20.01	20.09	20.74	0.06
EDGE 4 Tx slots	22.74	22.52	22.49	23.00	19.74	19.52	19.49	20.00	0.25
Mode		Max.	32.96		Max.	26.24			
Attenuator	Cable Loss : 0.6								

GSM1900 TX Channel	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)	Ch Delta > 0.5
	512	661	810		512	661	810		
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8		
GSM 1 Tx slot	30.04	29.96	29.94	30.50	21.04	20.96	20.94	21.50	0.13
GPRS 1 Tx slot	30.07	29.97	29.96	30.50	21.07	20.97	20.96	21.50	
GPRS 2 Tx slots	29.30	29.23	29.21	30.00	23.30	23.23	23.21	24.00	
GPRS 3 Tx slots	27.56	27.48	27.50	28.00	23.30	23.22	23.24	23.74	
GPRS 4 Tx slots	26.48	26.40	26.41	27.00	23.48	23.40	23.41	24.00	0.08
EDGE 1 Tx slot	28.15	28.14	28.07	28.50	19.15	19.14	19.07	19.50	0.08
EDGE 2 Tx slots	26.96	26.86	26.85	27.50	20.96	20.86	20.85	21.50	0.11
EDGE 3 Tx slots	25.11	25.03	25.06	25.50	20.85	20.77	20.80	21.24	0.08
EDGE 4 Tx slots	24.01	24.08	24.06	24.50	21.01	21.08	21.06	21.50	0.07
Mode		Max.	30.07		Max.	23.48			
Attenuator	Cable Loss :0.8								

Band	WCDMA Band II			Tune-up Limit (dBm)	WCDMA Band IV			Tune-up Limit (dBm)	WCDMA Band V			Tune-up Limit (dBm)
	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99 RMC 12.2Kbps	24.48	24.50	24.53	25.00	24.02	24.04	24.12	24.50	22.87	22.90	22.98	23.50
3GPP Rel 6 HSDPA Subtest-1	23.51	23.38	23.37	24.00	23.96	23.96	23.97	24.00	22.84	22.89	22.86	23.00
3GPP Rel 6 HSDPA Subtest-2	23.46	23.46	23.26	24.00	23.98	23.96	23.90	24.00	22.85	22.84	22.85	23.00
3GPP Rel 6 HSDPA Subtest-3	23.03	22.94	22.83	24.00	23.52	23.49	23.43	24.00	22.35	22.38	22.39	23.00
3GPP Rel 6 HSDPA Subtest-4	23.05	22.99	22.77	24.00	23.45	23.52	23.42	24.00	22.39	22.38	22.32	23.00
3GPP Rel 8 DC-HSDPA Subtest-1	22.89	22.83	22.75	24.00	23.37	23.47	23.39	24.00	22.29	22.40	22.83	23.00
3GPP Rel 8 DC-HSDPA Subtest-2	23.40	23.36	23.27	24.00	23.85	23.89	23.90	24.00	22.80	22.87	22.82	23.00
3GPP Rel 8 DC-HSDPA Subtest-3	22.58	22.37	22.27	24.00	23.89	22.95	23.03	24.00	22.78	22.84	22.84	23.00
3GPP Rel 8 DC-HSDPA Subtest-4	23.40	23.37	23.26	24.00	23.85	23.89	23.87	24.00	22.85	22.83	22.80	23.00
3GPP Rel 6 HSUPA Subtest-1	22.51	22.26	22.21	24.00	22.93	22.93	22.92	24.00	21.80	21.86	22.84	23.00
3GPP Rel 6 HSUPA Subtest-2	23.38	23.31	23.22	24.00	23.91	23.84	23.92	24.00	22.76	22.85	22.88	23.00
3GPP Rel 6 HSUPA Subtest-3	23.42	23.32	23.23	24.00	23.80	23.87	23.93	24.00	22.74	22.88	22.87	23.00
3GPP Rel 6 HSUPA Subtest-4	22.82	22.73	22.72	24.00	23.34	23.34	23.40	24.00	22.23	22.35	22.33	23.00
3GPP Rel 6 HSUPA Subtest-5	22.80	22.71	22.67	24.00	23.39	23.33	23.42	24.00	22.20	22.37	22.35	23.00
3GPP Rel 7 HSPA+ (16QAM) Subtest-1	22.51	22.42	22.21	24.00	22.88	22.95	22.91	24.00	22.01	22.03	22.00	23.00
Attenuator		Cable Loss	0.8		Cable Loss	0.8			Cable Loss	0.6		
Mode		Max.	24.53		Max.	24.12			Max.	22.98		

Band	CDMA2000 BC0			Tune-up Limit (dBm)	BC0 Ch Delta > 0.5
	1013	884	777		
Frequency (MHz)	824.7	836.52	848.31		0.46
RC1 SO55	22.95	22.96	22.88	23.50	
RC3 SO55	22.96	22.94	22.87	23.50	
RC3 SO32 (F+SCH)	22.64	22.61	22.59	23.00	
RC3 SO32 (+SCH)	22.59	22.55	22.56	23.00	
RTAP 153.6Kbps	23.01	22.99	22.88	23.50	
RETAP 4096Bits	22.91	22.97	22.85	23.50	
Rev.0	21.68	21.59	21.82	23.00	
Rev.A	21.32	21.14	21.73	23.00	
Attenuator		Cable Loss	0.6		
Mode		Max.	23.01		

Band 2 (1900MHz Band) Part 24E									
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)		
Channel				18700	18900	19100	25		
Frequency (MHz)				1860	1880	1900			
20	QPSK	1	0	24.16	24.20	24.15			
20	QPSK	1	49	23.93	24.05	24.12	24		
20	QPSK	1	99	23.92	23.88	23.93			
20	QPSK	50	0	23.24	23.44	23.32			
20	QPSK	50	24	23.15	21.12	23.09	24		
20	QPSK	50	50	23.00	22.94	23.19			
20	QPSK	100	0	23.21	23.31	23.18			
20	16QAM	1	0	23.45	23.52	23.49	24		
20	16QAM	1	49	23.32	23.22	23.38			
20	16QAM	1	99	23.21	23.26	23.41			
20	16QAM	50	0	21.93	21.88	21.97	23		
20	16QAM	50	24	21.95	22.04	22.10			
20	16QAM	50	50	21.95	22.01	22.07			
20	16QAM	100	0	21.98	22.06	22.00	25		
Channel				18675	18900	19125			
Frequency (MHz)				1857.5	1880	1902.5			
15	QPSK	1	0	21.05	24.09	24.04	25		
15	QPSK	1	37	23.82	23.94	24.01			
15	QPSK	1	74	23.81	23.77	23.82			
15	QPSK	36	0	23.13	23.33	23.21	24		
15	QPSK	36	20	23.04	21.01	22.98			
15	QPSK	36	39	22.89	22.83	23.08			
15	QPSK	75	0	23.10	23.20	23.07	24		
15	16QAM	1	0	23.34	23.41	23.38			
15	16QAM	1	37	23.21	23.11	23.27			
15	16QAM	1	74	23.10	23.15	23.30	23		
15	16QAM	36	0	21.82	21.77	21.86			
15	16QAM	36	20	21.84	21.93	21.99			
15	16QAM	36	39	21.84	21.90	21.96	23		
15	16QAM	75	0	21.87	21.95	21.89			
Channel				18650	18900	19150			
Frequency (MHz)				1855	1880	1905			
10	QPSK	1	0	20.93	23.97	23.92	25		
10	QPSK	1	25	23.70	23.82	23.89			
10	QPSK	1	49	23.69	23.65	23.70			
10	QPSK	25	0	23.01	23.21	23.09	24		
10	QPSK	25	12	22.92	20.89	22.86			
10	QPSK	25	25	22.77	22.71	22.96			
10	QPSK	50	0	22.98	23.08	22.95	24		
10	16QAM	1	0	23.22	23.29	23.26			
10	16QAM	1	25	23.09	22.99	23.15			
10	16QAM	1	49	22.98	23.03	23.18	23		
10	16QAM	25	0	21.70	21.65	21.74			
10	16QAM	25	12	21.72	21.81	21.87			
10	16QAM	25	25	21.72	21.78	21.84	23		
10	16QAM	50	0	21.75	21.83	21.77			
Channel				18625	18900	19175			
Frequency (MHz)				1852.5	1880	1907.5			
5	QPSK	1	0	20.82	23.86	23.81	25		
5	QPSK	1	12	23.59	23.71	23.78			
5	QPSK	1	24	23.58	23.54	23.59			
5	QPSK	12	0	22.90	23.10	22.98	24		
5	QPSK	12	7	22.81	20.78	22.75			
5	QPSK	12	13	22.66	22.60	22.85			
5	QPSK	25	0	22.87	22.97	22.84	24		
5	16QAM	1	0	23.11	23.18	23.15			
5	16QAM	1	12	22.98	22.88	23.04			
5	16QAM	1	24	22.87	22.92	23.07	23		
5	16QAM	12	0	21.59	21.54	21.63			
5	16QAM	12	7	21.61	21.70	21.76			
5	16QAM	12	13	21.61	21.67	21.73	23		
5	16QAM	25	0	21.64	21.72	21.66			
Channel				18615	18900	19185			
Frequency (MHz)				1851.5	1880	1908.5			
3	QPSK	1	0	20.72	23.76	23.71	25		
3	QPSK	1	8	23.49	23.61	23.68			
3	QPSK	1	14	23.48	23.44	23.49			
3	QPSK	8	0	22.80	23.00	22.88	24		
3	QPSK	8	4	22.71	20.68	22.65			
3	QPSK	8	7	22.56	22.50	22.75			
3	QPSK	15	0	22.77	22.87	22.74	24		
3	16QAM	1	0	23.01	23.08	23.05			
3	16QAM	1	8	22.88	22.78	22.94			
3	16QAM	1	14	22.77	22.82	22.97	23		
3	16QAM	8	0	21.49	21.44	21.53			
3	16QAM	8	4	21.51	21.60	21.66			
3	16QAM	8	7	21.51	21.57	21.63	23		
3	16QAM	15	0	21.54	21.62	21.56			
Channel				18607	18900	19193			
Frequency (MHz)				1850.7	1880	1909.3			
1.4	QPSK	1	0	20.62	23.66	23.61	25		
1.4	QPSK	1	3	23.39	23.51	23.58			
1.4	QPSK	1	5	23.38	23.34	23.39			
1.4	QPSK	3	0	22.70	22.90	22.78	24		
1.4	QPSK	3	1	22.61	20.58	22.55			
1.4	QPSK	3	3	22.46	22.40	22.65			
1.4	QPSK	6	0	22.67	22.77	22.64	24		
1.4	16QAM	1	0	22.91	22.98	22.95			
1.4	16QAM	1	3	22.78	22.68	22.84			
1.4	16QAM	1	5	22.67	22.72	22.87	24		
1.4	16QAM	3	0	21.39	21.34	21.43			
1.4	16QAM	3	1	21.41	21.50	21.56			
1.4	16QAM	3	3	21.41	21.47	21.53	23		
1.4	16QAM	6	0	21.44	21.52	21.46			

Band 4 (AWS Band) Part 27L (only on channel required)									
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)		
Channel				20050	20175	20300	25		
Frequency (MHz)				1720	1732.5	1745			
20	QPSK	1	0	24.31	24.41	24.34			
20	QPSK	1	49	24.21	24.31	24.29	24		
20	QPSK	1	99	24.27	24.23	24.25			
20	QPSK	50	0	23.37	23.42	23.32			
20	QPSK	50	24	23.26	23.29	23.24	24		
20	QPSK	50	50	23.21	23.12	23.27			
20	QPSK	100	0	23.28	23.35	23.24			
20	16QAM	1	0	23.59	23.70	23.49	24		
20	16QAM	1	49	23.58	23.59	23.46			
20	16QAM	1	99	23.44	23.48	23.44			
20	16QAM	50	0	22.11	22.23	22.21	23		
20	16QAM	50	24	22.32	22.28	22.33			
20	16QAM	50	50	22.21	22.17	22.24			
20	16QAM	100	0	22.32	22.15	22.16	25		
Channel				20025	20175	20325			
Frequency (MHz)				1717.5	1732.5	1747.5			
15	QPSK	1	0	24.20	24.30	24.23	25		
15	QPSK	1	37	24.10	24.20	24.18			
15	QPSK	1	74	24.16	24.12	24.14			
15	QPSK	36	0	23.26	23.31	23.21	24		
15	QPSK	36	20	23.15	23.18	23.13			
15	QPSK	36	39	23.10	23.01	23.16			
15	QPSK	75	0	23.17	23.24	23.13	24		
15	16QAM	1	0	23.48	23.59	23.38			
15	16QAM	1	37	23.47	23.48	23.35			
15	16QAM	1	74	23.33	23.37	23.33	23		
15	16QAM	36	0	22.00	22.12	22.10			
15	16QAM	36	20	22.21	22.17	22.22			
15	16QAM	36	39	22.10	22.06	22.13	23		
15	16QAM	75	0	22.21	22.04	22.05			
Channel				20000	20175	20350			
Frequency (MHz)				1715	1732.5	1750			
10	QPSK	1	0	24.10	24.20	24.13	25		
10	QPSK	1	25	24.00	24.10	24.08			
10	QPSK	1	49	24.06	24.02	24.04			
10	QPSK	25	0	23.16	23.21	23.11	24		
10	QPSK	25	12	23.05	23.08	23.03			
10	QPSK	25	25	23.00	22.91	23.06			
10	QPSK	50	0	23.07	23.14	23.03	24		
10	16QAM	1	0	23.38	23.49	23.28			
10	16QAM	1	25	23.37	23.38	23.25			
10	16QAM	1	49	23.23	23.27	23.23	23		
10	16QAM	25	0	21.90	22.02	22.00			
10	16QAM	25	12	22.11	22.07	22.12			
10	16QAM	25	25	22.00	21.96	22.03	23		
10	16QAM	50	0	22.11	21.94	21.95			
Channel				19975	20175	20375			
Frequency (MHz)				1712.5	1732.5	1752.5			
5	QPSK	1	0	23.98	24.08	24.01	25		
5	QPSK	1	12	23.88	23.98	23.96			
5	QPSK	1	24	23.94	23.90				

Band 5 (Cellular Band) Part 22H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	24.16	24.27	24.14	25
10	QPSK	1	25	23.92	24.22	24.10	
10	QPSK	1	49	24.00	24.03	23.90	
10	QPSK	25	0	23.15	23.20	23.17	24
10	QPSK	25	12	23.15	23.06	23.03	
10	QPSK	25	25	23.17	23.11	23.18	
10	QPSK	50	0	23.07	23.17	23.08	24
10	16QAM	1	0	23.62	23.63	23.52	
10	16QAM	1	25	23.62	23.34	23.31	
10	16QAM	1	49	23.34	23.40	23.45	23
10	16QAM	25	0	22.15	22.08	22.05	
10	16QAM	25	12	22.23	22.13	22.17	
10	16QAM	25	25	22.12	22.12	22.12	23
10	16QAM	50	0	22.24	22.11	22.11	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	Tune-up limit (dBm)
5	QPSK	1	0	24.05	24.16	24.03	25
5	QPSK	1	12	23.81	24.11	23.99	
5	QPSK	1	24	23.89	23.92	23.79	
5	QPSK	12	0	23.04	23.09	23.06	24
5	QPSK	12	7	23.04	22.95	22.92	
5	QPSK	12	13	23.06	23.00	23.07	
5	QPSK	25	0	22.96	23.06	22.97	24
5	16QAM	1	0	23.51	23.52	23.41	
5	16QAM	1	12	23.51	23.23	23.20	
5	16QAM	1	24	23.23	23.29	23.34	23
5	16QAM	12	0	22.04	21.97	21.94	
5	16QAM	12	7	22.12	22.02	22.06	
5	16QAM	12	13	22.01	22.01	22.01	23
5	16QAM	25	0	22.13	22.00	22.00	
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	Tune-up limit (dBm)
3	QPSK	1	0	23.93	24.04	23.91	25
3	QPSK	1	8	23.69	23.99	23.87	
3	QPSK	1	14	23.77	23.80	23.67	
3	QPSK	8	0	22.92	22.97	22.94	24
3	QPSK	8	4	22.92	22.83	22.80	
3	QPSK	8	7	22.94	22.88	22.95	
3	QPSK	15	0	22.84	22.94	22.85	24
3	16QAM	1	0	23.39	23.40	23.29	
3	16QAM	1	8	23.39	23.11	23.08	
3	16QAM	1	14	23.11	23.17	23.22	23
3	16QAM	8	0	21.92	21.85	21.82	
3	16QAM	8	4	22.00	21.90	21.94	
3	16QAM	8	7	21.89	21.89	21.89	23
3	16QAM	15	0	22.01	21.88	21.88	
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	Tune-up limit (dBm)
1.4	QPSK	1	0	23.82	23.93	23.80	25
1.4	QPSK	1	3	23.58	23.88	23.76	
1.4	QPSK	1	5	23.66	23.69	23.56	
1.4	QPSK	3	0	22.81	22.86	22.83	24
1.4	QPSK	3	1	22.81	22.72	22.69	
1.4	QPSK	3	3	22.83	22.77	22.84	
1.4	QPSK	6	0	22.73	22.83	22.74	24
1.4	16QAM	1	0	23.28	23.29	23.18	
1.4	16QAM	1	3	23.28	23.00	22.97	
1.4	16QAM	1	5	23.00	23.06	23.11	24
1.4	16QAM	3	0	21.81	21.74	21.71	
1.4	16QAM	3	1	21.89	21.79	21.83	
1.4	16QAM	3	3	21.78	21.78	21.78	23
1.4	16QAM	6	0	21.90	21.77	21.77	

Band 7 (2600MHz Band) 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	21.41	21.55	21.39	22
20	QPSK	1	49	21.40	21.47	21.37	
20	QPSK	1	99	21.34	21.35	21.37	
20	QPSK	50	0	20.36	20.42	20.34	21
20	QPSK	50	24	20.36	20.30	20.20	
20	QPSK	50	50	20.29	20.35	20.28	
20	QPSK	100	0	20.32	20.38	20.27	21
20	16QAM	1	0	20.53	20.63	20.76	
20	16QAM	1	49	20.50	20.61	20.62	
20	16QAM	1	99	20.43	20.69	20.52	20
20	16QAM	50	0	19.31	19.24	19.31	
20	16QAM	50	24	19.32	19.33	19.14	
20	16QAM	50	50	19.39	19.32	19.33	20
20	16QAM	100	0	19.27	19.29	19.27	
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	Tune-up limit (dBm)
15	QPSK	1	0	21.30	21.44	21.28	22
15	QPSK	1	37	21.29	21.36	21.26	
15	QPSK	1	74	21.23	21.24	21.26	
15	QPSK	36	0	20.25	20.31	20.23	21
15	QPSK	36	20	20.25	20.19	20.09	
15	QPSK	36	39	20.18	20.24	20.17	
15	QPSK	75	0	20.21	20.27	20.16	21
15	16QAM	1	0	20.42	20.52	20.65	
15	16QAM	1	37	20.39	20.50	20.51	
15	16QAM	1	74	20.32	20.58	20.41	20
15	16QAM	36	0	19.20	19.13	19.20	
15	16QAM	36	20	19.21	19.22	19.03	
15	16QAM	36	39	19.28	19.21	19.22	20
15	16QAM	75	0	19.16	19.18	19.16	
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	Tune-up limit (dBm)
10	QPSK	1	0	21.18	21.32	21.16	22
10	QPSK	1	25	21.17	21.24	21.14	
10	QPSK	1	49	21.11	21.12	21.14	
10	QPSK	25	0	20.13	20.19	20.11	21
10	QPSK	25	12	20.13	20.07	19.97	
10	QPSK	25	25	20.06	20.12	20.05	
10	QPSK	50	0	20.09	20.15	20.04	21
10	16QAM	1	0	20.30	20.40	20.53	
10	16QAM	1	25	20.27	20.38	20.39	
10	16QAM	1	49	20.20	20.46	20.29	20
10	16QAM	25	0	19.08	19.01	19.08	
10	16QAM	25	12	19.09	19.10	18.91	
10	16QAM	25	25	19.16	19.09	19.10	20
10	16QAM	50	0	19.04	19.06	19.04	
Channel				20775	21100	21425	
Frequency (MHz)				2502.5	2535	2567.5	Tune-up limit (dBm)
5	QPSK	1	0	21.07	21.21	21.05	22
5	QPSK	1	12	21.06	21.13	21.03	
5	QPSK	1	24	21.00	21.01	21.03	
5	QPSK	12	0	20.02	20.08	20.00	21
5	QPSK	12	7	20.02	19.96	19.86	
5	QPSK	12	13	19.95	20.01	19.94	
5	QPSK	25	0	19.98	20.04	19.93	21
5	16QAM	1	0	20.19	20.29	20.42	
5	16QAM	1	12	20.16	20.27	20.28	
5	16QAM	1	24	20.09	20.35	20.18	20
5	16QAM	12	0	18.97	18.90	18.97	
5	16QAM	12	7	18.98	18.99	18.80	
5	16QAM	12	13	19.05	18.98	18.99	20
5	16QAM	25	0	18.93	18.95	18.93	

Band 12 (700MHz Low Band) Part 27F(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23060	23095	23130	25
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	24.12	24.28	24.22	25
10	QPSK	1	25	23.92	24.22	24.10	
10	QPSK	1	49	24.00	24.03	23.90	
10	QPSK	25	0	23.10	23.22	23.13	24
10	QPSK	25	12	23.15	23.08	23.03	
10	QPSK	25	25	23.17	23.11	23.11	
10	QPSK	50	0	23.07	23.15	23.00	24
10	16QAM	1	0	23.62	23.53	23.52	
10	16QAM	1	25	23.62	23.34	23.31	
10	16QAM	1	49	23.34	23.40	23.45	23
10	16QAM	25	0	22.15	22.08	22.05	
10	16QAM	25	12	22.23	22.13	22.17	
10	16QAM	25	25	22.12	22.12	22.12	23
10	16QAM	50	0	22.24	22.11	22.11	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	25
5	QPSK	1	0	24.01	24.17	24.11	
5	QPSK	1	12	23.81	24.11	23.99	24
5	QPSK	1	24	23.89	23.92	23.79	
5	QPSK	12	0	22.99	23.11	23.02	
5	QPSK	12	7	23.04	22.95	22.92	24
5	QPSK	12	13	23.06	23.00	23.00	
5	QPSK	25	0	22.96	23.04	22.89	
5	16QAM	1	0	23.51	23.42	23.41	24
5	16QAM	1	12	23.51	23.23	23.20	
5	16QAM	1	24	23.23	23.29	23.34	
5	16QAM	12	0	22.04	21.97	21.94	23
5	16QAM	12	7	22.12	22.02	22.06	
5	16QAM	12	13	22.01	22.01	22.01	
5	16QAM	25	0	22.13	22.00	22.00	23
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	25
3	QPSK	1	0	23.89	24.05	23.99	
3	QPSK	1	8	23.69	23.99	23.87	24
3	QPSK	1	14	23.77	23.80	23.67	
3	QPSK	8	0	22.87	22.99	22.90	
3	QPSK	8	4	22.92	22.83	22.80	24
3	QPSK	8	7	22.94	22.88	22.88	
3	QPSK	15	0	22.84	22.92	22.77	
3	16QAM	1	0	23.39	23.30	23.29	24
3	16QAM	1	8	23.39	23.11	23.08	
3	16QAM	1	14	23.11	23.17	23.22	
3	16QAM	8	0	21.92	21.85	21.82	23
3	16QAM	8	4	22.00	21.90	21.94	
3	16QAM	8	7	21.89	21.89	21.89	
3	16QAM	15	0	22.01	21.88	21.88	23
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	25
1.4	QPSK	1	0	23.79	23.95	23.89	
1.4	QPSK	1	3	23.59	23.89	23.77	25
1.4	QPSK	1	5	23.67	23.70	23.57	
1.4	QPSK	3	0	22.77	22.89	22.80	
1.4	QPSK	3	1	22.82	22.73	22.70	24
1.4	QPSK	3	3	22.84	22.78	22.78	
1.4	QPSK	6	0	22.74	22.82	22.67	
1.4	16QAM	1	0	23.29	23.20	23.19	24
1.4	16QAM	1	3	23.29	23.01	22.98	
1.4	16QAM	1	5	23.01	23.07	23.12	
1.4	16QAM	3	0	21.82	21.75	21.72	24
1.4	16QAM	3	1	21.90	21.80	21.84	
1.4	16QAM	3	3	21.79	21.79	21.79	
1.4	16QAM	6	0	21.91	21.78	21.78	23

Band 17 (700MHz Band) Part 27H(only on channel required)							
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				23780	23790	23800	25
Frequency (MHz)				709	710	711	
10	QPSK	1	0	24.03	24.11	24.07	25
10	QPSK	1	25	23.87	23.88	23.79	
10	QPSK	1	49	23.81	23.92	23.88	
10	QPSK	25	0	22.96	23.07	23.07	24
10	QPSK	25	12	22.95	22.94	22.98	
10	QPSK	25	25	22.92	22.85	22.91	
10	QPSK	50	0	22.94	23.01	22.97	24
10	16QAM	1	0	23.33	23.37	23.32	
10	16QAM	1	25	23.30	23.31	23.22	
10	16QAM	1	49	23.25	23.30	23.27	23
10	16QAM	25	0	22.18	22.35	22.32	
10	16QAM	25	12	22.15	22.26	22.23	
10	16QAM	25	25	22.06	22.18	22.11	23
10	16QAM	50	0	22.08	22.11	22.06	
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	25
5	QPSK	1	0	23.92	23.99	23.96	
5	QPSK	1	12	23.76	23.77	23.68	24
5	QPSK	1	24	23.70	23.81	23.77	
5	QPSK	12	0	22.85	22.96	22.96	
5	QPSK	12	7	22.84	22.83	22.87	24
5	QPSK	12	13	22.81	22.74	22.80	
5	QPSK	25	0	22.83	22.90	22.86	
5	16QAM	1	0	23.22	23.26	23.21	24
5	16QAM	1	12	23.19	23.20	23.11	
5	16QAM	1	24	23.14	23.19	23.16	
5	16QAM	12	0	22.07	22.24	22.21	23
5	16QAM	12	7	22.04	22.15	22.12	
5	16QAM	12	13	21.95	22.07	22.00	
5	16QAM	25	0	21.97	22.00	21.95	23

### Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	23.89	24.01	23.91	24.5
20	QPSK	1	49	23.77	23.87	23.71	
20	QPSK	1	99	23.69	23.71	23.66	
20	QPSK	50	0	23.09	23.16	23.11	23.5
20	QPSK	50	24	23.06	22.99	23.12	
20	QPSK	50	50	23.02	23.13	23.00	
20	QPSK	100	0	23.01	23.21	23.09	23.5
20	16QAM	1	0	22.61	22.68	22.70	
20	16QAM	1	49	22.54	22.77	22.72	
20	16QAM	1	99	22.44	22.59	22.43	22.5
20	16QAM	50	0	21.49	21.57	21.53	
20	16QAM	50	24	21.41	21.65	21.45	
20	16QAM	50	50	21.45	21.63	21.41	22.5
20	16QAM	100	0	21.49	21.46	21.48	
Channel				37825	38000	38175	
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	23.79	23.91	23.81	24.5
15	QPSK	1	37	23.67	23.77	23.61	
15	QPSK	1	74	23.59	23.61	23.56	
15	QPSK	36	0	23.17	23.21	23.11	23.5
15	QPSK	36	20	22.96	22.89	23.02	
15	QPSK	36	39	22.92	23.03	22.90	
15	QPSK	75	0	22.91	23.11	22.99	23.5
15	16QAM	1	0	22.51	22.58	22.60	
15	16QAM	1	37	22.44	22.67	22.62	
15	16QAM	1	74	22.34	22.49	22.33	22.5
15	16QAM	36	0	21.39	21.47	21.43	
15	16QAM	36	20	21.31	21.55	21.35	
15	16QAM	36	39	21.35	21.53	21.31	22.5
15	16QAM	75	0	21.39	21.36	21.38	
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	23.68	23.80	23.70	24.5
10	QPSK	1	25	23.56	23.66	23.50	
10	QPSK	1	49	23.48	23.50	23.45	
10	QPSK	25	0	23.06	23.10	23.00	23.5
10	QPSK	25	12	22.85	22.78	22.91	
10	QPSK	25	25	22.81	22.92	22.79	
10	QPSK	50	0	22.80	23.00	22.88	23.5
10	16QAM	1	0	22.40	22.47	22.49	
10	16QAM	1	25	22.33	22.56	22.51	
10	16QAM	1	49	22.23	22.38	22.22	22.5
10	16QAM	25	0	21.28	21.36	21.32	
10	16QAM	25	12	21.20	21.44	21.24	
10	16QAM	25	25	21.24	21.42	21.20	22.5
10	16QAM	50	0	21.28	21.25	21.27	
Channel				37775	38000	38225	
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	23.57	23.69	23.59	24.5
5	QPSK	1	12	23.45	23.55	23.39	
5	QPSK	1	24	23.37	23.39	23.34	
5	QPSK	12	0	22.95	22.99	22.89	23.5
5	QPSK	12	7	22.74	22.67	22.80	
5	QPSK	12	13	22.70	22.81	22.68	
5	QPSK	25	0	22.69	22.89	22.77	23.5
5	16QAM	1	0	22.29	22.36	22.38	
5	16QAM	1	12	22.22	22.45	22.40	
5	16QAM	1	24	22.12	22.27	22.11	22.5
5	16QAM	12	0	21.17	21.25	21.21	
5	16QAM	12	7	21.09	21.33	21.13	
5	16QAM	12	13	21.13	21.31	21.09	22.5
5	16QAM	25	0	21.17	21.14	21.16	

### Band 40 (2.3G Band-1) Part 27D-1 2305MHz ~ 2315MHz

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				38750			
Frequency (MHz)				2310			
10	QPSK	1	0	21.77			22.5
10	QPSK	1	25	21.57			
10	QPSK	1	49	21.34			
10	QPSK	25	0	20.60			21
10	QPSK	25	12	20.57			
10	QPSK	25	25	20.58			
10	QPSK	50	0	20.54			21
10	16QAM	1	0	20.71			
10	16QAM	1	25	20.76			
10	16QAM	1	49	20.83			20.5
10	16QAM	25	0	19.64			
10	16QAM	25	12	19.66			
10	16QAM	25	25	19.56			20.5
10	16QAM	50	0	19.54			
Channel				38725	38750	38775	
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	21.29	21.75	21.74	22.5
5	QPSK	1	12	21.21	21.68	21.65	
5	QPSK	1	24	21.27	21.58	21.76	
5	QPSK	12	0	20.47	20.82	20.88	21
5	QPSK	12	7	20.50	20.94	20.86	
5	QPSK	12	13	20.51	20.88	20.90	
5	QPSK	25	0	20.47	20.88	20.92	21
5	16QAM	1	0	20.70	21.07	21.08	
5	16QAM	1	12	20.64	20.93	21.04	
5	16QAM	1	24	20.65	21.10	21.12	20.5
5	16QAM	12	0	19.57	19.81	19.95	
5	16QAM	12	7	19.59	19.91	20.08	
5	16QAM	12	13	19.49	20.02	20.02	20.5
5	16QAM	25	0	19.47	20.06	19.95	

**Band 40 (2.3G Band-2)  
Part 27D-2 2350MHz ~ 2360MHz**

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel	Tune-up limit (dBm)
Channel				39200			
Frequency (MHz)				2355			
10	QPSK	1	0	21.51			22.5
10	QPSK	1	25	21.78			
10	QPSK	1	49	21.62			
10	QPSK	25	0	20.75			21
10	QPSK	25	12	20.62			
10	QPSK	25	25	20.63			
10	QPSK	50	0	21.48			
10	16QAM	1	0	20.81			21
10	16QAM	1	25	20.66			
10	16QAM	1	49	20.75			
10	16QAM	25	0	19.64			20.5
10	16QAM	25	12	19.66			
10	16QAM	25	25	19.56			
10	16QAM	50	0	19.54			
Channel				39175	39200	39225	
Frequency (MHz)				2352.5	2355	2357.5	
5	QPSK	1	0	21.34	21.75	21.65	22.5
5	QPSK	1	12	21.28	21.67	21.60	
5	QPSK	1	24	21.16	21.61	21.70	
5	QPSK	12	0	20.27	20.72	20.72	21
5	QPSK	12	7	20.33	20.70	20.69	
5	QPSK	12	13	20.32	20.66	20.76	
5	QPSK	25	0	20.23	20.70	20.68	
5	16QAM	1	0	20.45	20.79	20.77	21
5	16QAM	1	12	20.28	20.80	20.73	
5	16QAM	1	24	20.52	20.90	20.93	
5	16QAM	12	0	19.31	19.72	19.72	20.5
5	16QAM	12	7	19.48	19.77	19.79	
5	16QAM	12	13	19.40	19.79	19.72	
5	16QAM	25	0	19.29	19.65	19.70	

## Band 41 (2496~2690MHz)

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Low Channel	Middle Channel	Middle High Channel	High Channel	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.40	22.37	22.57	22.39	22.22	23
20	QPSK	1	49	22.31	22.30	22.39	22.17	22.11	
20	QPSK	1	99	22.22	22.22	22.29	22.20	22.14	
20	QPSK	50	0	21.27	21.34	21.48	21.29	21.19	22
20	QPSK	50	24	21.36	21.49	21.28	21.31	21.20	
20	QPSK	50	50	21.28	21.47	21.37	21.17	21.18	
20	QPSK	100	0	21.32	21.40	21.46	21.27	21.17	22
20	16QAM	1	0	21.60	21.64	21.58	21.52	21.65	
20	16QAM	1	49	21.44	21.55	21.89	21.58	21.78	
20	16QAM	1	99	21.47	21.67	21.43	21.42	21.70	21
20	16QAM	50	0	20.37	20.44	20.27	20.28	20.27	
20	16QAM	50	24	20.40	20.40	20.27	20.28	20.18	
20	16QAM	50	50	20.33	20.41	20.44	20.22	20.12	21
20	16QAM	100	0	20.33	20.55	20.31	20.17	20.07	
Channel				39725	40173	40620	41068	41515	
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	22.31	22.28	22.48	22.30	22.13	23
15	QPSK	1	37	22.22	22.21	22.30	22.08	22.02	
15	QPSK	1	74	22.13	22.13	22.20	22.11	22.05	
15	QPSK	36	0	21.18	21.25	21.39	21.20	21.10	22
15	QPSK	36	20	21.27	21.40	21.19	21.22	21.11	
15	QPSK	36	39	21.19	21.38	21.28	21.08	21.09	
15	QPSK	75	0	21.23	21.31	21.37	21.18	21.08	22
15	16QAM	1	0	21.51	21.55	21.49	21.43	21.56	
15	16QAM	1	37	21.35	21.46	21.80	21.49	21.69	
15	16QAM	1	74	21.38	21.58	21.34	21.33	21.61	21
15	16QAM	36	0	20.28	20.35	20.18	20.19	20.18	
15	16QAM	36	20	20.31	20.31	20.18	20.19	20.09	
15	16QAM	36	39	20.24	20.32	20.35	20.13	20.03	21
15	16QAM	75	0	20.24	20.46	20.22	20.08	19.98	
Channel				39700	40160	40620	41080	41540	
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	22.24	22.21	22.41	22.23	22.06	23
10	QPSK	1	25	22.15	22.14	22.23	22.01	21.95	
10	QPSK	1	49	22.06	22.06	22.13	22.04	21.98	
10	QPSK	25	0	21.11	21.18	21.32	21.13	21.03	22
10	QPSK	25	12	21.20	21.33	21.12	21.15	21.04	
10	QPSK	25	25	21.12	21.31	21.21	21.01	21.02	
10	QPSK	50	0	21.16	21.24	21.30	21.11	21.01	22
10	16QAM	1	0	21.44	21.48	21.42	21.36	21.49	
10	16QAM	1	25	21.28	21.39	21.73	21.42	21.62	
10	16QAM	1	49	21.31	21.51	21.27	21.26	21.54	21
10	16QAM	25	0	20.21	20.28	20.11	20.12	20.11	
10	16QAM	25	12	20.24	20.24	20.11	20.12	20.02	
10	16QAM	25	25	20.17	20.25	20.28	20.06	19.96	21
10	16QAM	50	0	20.17	20.39	20.15	20.01	19.91	
Channel				39675	40148	40620	41093	41565	
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	22.17	22.14	22.34	22.16	21.99	23
5	QPSK	1	12	22.08	22.07	22.16	21.94	21.88	
5	QPSK	1	24	21.99	21.99	22.06	21.97	21.91	
5	QPSK	12	0	21.04	21.11	21.25	21.06	20.96	22
5	QPSK	12	7	21.13	21.26	21.05	21.08	20.97	
5	QPSK	12	13	21.05	21.24	21.14	20.94	20.95	
5	QPSK	25	0	21.09	21.17	21.23	21.04	20.94	22
5	16QAM	1	0	21.37	21.41	21.35	21.29	21.42	
5	16QAM	1	12	21.21	21.32	21.66	21.35	21.55	
5	16QAM	1	24	21.24	21.44	21.20	21.19	21.47	21
5	16QAM	12	0	20.14	20.21	20.04	20.05	20.04	
5	16QAM	12	7	20.17	20.17	20.04	20.05	19.95	
5	16QAM	12	13	20.10	20.18	20.21	19.99	19.89	21
5	16QAM	25	0	20.10	20.32	20.08	19.94	19.84	



**2.4GHz WLAN**

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	CH 1	2412	12.55	13.00	15.00
		CH 6	2437	11.82	12.50	15.00
		CH 11	2462	13.69	14.00	15.00
	802.11g 6Mbps	CH 1	2412	10.29	10.50	13.00
		CH 6	2437	9.83	10.50	13.00
		CH 11	2462	11.51	12.00	13.00
802.11n-HT20 MCS0	CH 1	2412	10.09	10.50	13.00	
	CH 6	2437	9.27	9.50	13.00	
	CH 11	2462	12.78	13.00	13.00	

**5.2GHz WLAN**

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.2GHz WLAN ANT 1	802.11a 6Mbps	CH 36	5180	8.52	9.00	13.00
		CH 44	5220	7.20	7.50	13.00
		CH 48	5240	7.21	7.50	13.00
	802.11n-HT20 MCS0	CH 36	5180	10.35	11.00	15.00
		CH 44	5220	9.51	10.00	15.00
		CH 48	5240	8.75	9.00	15.00
	802.11n-HT40 MCS0	CH 38	5190	8.47	9.00	13.00
		CH 46	5230	7.49	8.00	13.00
	802.11ac-VHT20 MCS0	CH 36	5180	10.40	11.00	15.00
		CH 44	5220	9.82	10.50	15.00
		CH 48	5240	9.08	9.50	15.00
	802.11ac-VHT40 MCS0	CH 38	5190	8.81	9.00	13.00
		CH 46	5230	7.65	8.00	13.00
	802.11ac-VHT80 MCS0	CH 42	5210	7.98	8.50	13.00

**5.3GHz WLAN**

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	CH 52	5280	7.28	7.50	13.00
		CH 60	5300	6.86	7.00	13.00
		CH 64	5320	6.71	7.00	13.00
	802.11n-HT20 MCS0	CH 52	5280	8.45	8.50	15.00
		CH 60	5300	8.31	9.00	15.00
		CH 64	5320	8.30	9.00	15.00
	802.11n-HT40 MCS0	CH 54	5270	6.54	7.00	13.00
		CH 62	5310	6.40	7.00	13.00
	802.11ac-VHT20 MCS0	CH 52	5280	8.24	8.50	15.00
		CH 60	5300	8.42	9.00	15.00
		CH 64	5320	8.33	9.00	15.00
	802.11ac-VHT40 MCS0	CH 54	5270	6.74	7.00	13.00
		CH 62	5310	6.54	7.00	13.00
	802.11ac-VHT80 MCS0	CH 58	5290	6.32	7.00	13.00

**5.5GHz WLAN**

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	CH 100	5600	6.96	7.50	13.50
		CH 120	5600	8.66	9.00	13.50
		CH 144	5720	11.71	12.00	13.50
	802.11n-HT20 MCS0	CH 100	5600	9.01	9.50	13.50
		CH 120	5600	10.63	11.00	13.50
		CH 144	5720	13.88	14.00	13.50
	802.11n-HT40 MCS0	CH 102	5510	6.73	7.00	13.50
		CH 126	5630	9.00	9.50	13.50
		CH 142	5710	11.22	11.50	13.50
	802.11ac-VHT20 MCS0	CH 100	5500	8.51	9.00	15.50
		CH 120	5600	10.21	10.50	15.50
		CH 144	5720	12.34	12.50	15.50
	802.11ac-VHT40 MCS0	CH 102	5510	6.82	7.50	13.50
		CH 126	5630	9.02	9.50	13.50
		CH 142	5710	11.35	12.00	13.50
	802.11ac-VHT80 MCS0	CH 106	5530	6.75	7.00	13.50
		CH 122	5610	8.52	9.00	13.50
		CH 138	5690	10.34	10.50	13.50

**5.8GHz WLAN**

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting	Duty Cycle %
5.8GHz WLAN	802.11a MCS0	CH 148	5745	11.74	12.50	13.00
		CH 157	5785	10.67	11.50	13.00
		CH 165	5825	9.55	10.00	13.00
	802.11n-HT20 MCS0	CH 149	5745	13.52	14.00	15.00
		CH 157	5785	12.36	13.00	15.00
		CH 165	5825	10.82	11.50	15.00
	802.11n-HT40 MCS0	CH 151	5755	11.08	11.50	13.00
		CH 159	5795	9.69	10.00	13.00
		CH 149	5745	13.17	14.00	15.00
	802.11ac-VHT20 MCS0	CH 157	5785	12.07	12.50	15.00
		CH 165	5825	10.52	11.00	15.00
		CH 151	5755	11.17	12.00	13.50
	802.11ac-VHT40 MCS0	CH 159	5795	9.84	10.50	13.50
		CH 155	5775	10.11	10.50	13.50

**Bluetooth**

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	9.12	5.63	5.62
	CH 39	2441	7.90	4.42	4.54
	CH 78	2480	4.54	0.96	0.91
Tune-up Limit			9.50	6.00	6.00
Duty Cycle %			76.80	76.80	76.80

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	-6.61	-9.39
	CH 19	2440	-6.32	-8.99
	CH 39	2480	-7.04	-9.78
Tune-up Limit			-6.00	-9.00
Duty Cycle %			60.32	32.26

Mode	Frequency (MHz)	Average power (dBm)	
		1Mbps	2Mbps
RFID	902.75	26.84	
	914.75	27.17	
	927.25	27.23	
Tune-up Limit		28.0	