



<GSM>

Band	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame Average Power (dBm)			Tune-up Limit (dBm)
	128	189	251		128	189	251	
GSM 850 Ant 0	128	189	251	Limit	128	189	251	Limit
TX Channel	324.2	335.4	345.8	(dBm)	324.2	335.4	345.8	(dBm)
Frequency (MHz)								
GSM 1 Tx slot	28.77	28.87	28.75	30.00	19.77	19.87	19.75	21.00
GPRS 1 Tx slot	28.83	28.87	28.82	30.00	19.83	19.87	19.82	21.00
GPRS 2 Tx slots	28.31	28.41	28.33	29.50	22.31	22.41	22.33	23.50
GPRS 3 Tx slots	26.80	26.89	26.84	28.00	22.54	22.63	22.58	23.74
GPRS 4 Tx slots	25.28	25.38	25.37	26.50	22.28	22.38	22.37	23.50

Band	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame Average Power (dBm)			Tune-up Limit (dBm)
	512	661	810		512	661	810	
GSM 1900 Ant 1	512	661	810	Limit	512	661	810	Limit
TX Channel	1850.2	1850	1909.8	(dBm)	1850.2	1850	1909.8	(dBm)
Frequency (MHz)								
GSM 1 Tx slot	29.21	29.22	29.10	27.50	17.21	17.22	17.10	18.50
GPRS 1 Tx slot	26.26	26.29	26.31	27.50	17.26	17.29	17.31	18.50
GPRS 2 Tx slots	25.25	25.34	25.31	26.50	19.25	19.34	19.31	20.50
GPRS 3 Tx slots	23.22	23.31	23.34	24.50	18.96	19.05	19.08	20.24
GPRS 4 Tx slots	22.21	22.28	22.26	23.50	19.21	19.28	19.26	20.50

<WCDMA>

Band	WCDMA V Ant 0			Tune-up Limit (dBm)	
	4132	4182	4233		
TX Channel	4367	4407	4458	Limit	
Rx Channel				(dBm)	
Frequency (MHz)	626.4	636.4	646.6		
3GPP Rel 99	AMR 12.2Kbps	23.21	23.30	23.24	24.50
3GPP Rel 99	RMC 12.2Kbps	23.24	23.34	23.28	24.50
3GPP Rel 6	HSDPA Subtest-1	22.20	22.42	22.31	23.50
3GPP Rel 6	HSDPA Subtest-2	22.24	22.38	22.32	23.50
3GPP Rel 6	HSDPA Subtest-3	21.77	21.76	21.88	23.00
3GPP Rel 6	HSDPA Subtest-4	21.80	21.76	21.73	23.00
3GPP Rel 6	HSUPA Subtest-1	22.22	22.34	22.19	23.50
3GPP Rel 6	HSUPA Subtest-2	20.27	20.38	20.27	21.50
3GPP Rel 6	HSUPA Subtest-3	21.17	21.44	21.20	22.50
3GPP Rel 6	HSUPA Subtest-4	20.28	20.27	20.30	21.50
3GPP Rel 6	HSUPA Subtest-5	22.31	22.33	22.19	23.50



Part27O n77 Ant0

BW (MHz)	Modulation	RB Size	RB Offset	Power			Tune-up limit (dBm)	MPR (dB)
				Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.		
Channel				650000	656000	662000		
Frequency (MHz)				3750	3840	3930		
100	PI2 BPSK	1	1	16.03	16.02	16.08		
100	PI2 BPSK	1	137	15.03	16.03	16.00	17.0	0.0
100	PI2 BPSK	1	271	15.99	16.03	16.08		
100	PI2 BPSK	135	0	16.02	16.13	16.06	17.0	0.0
100	PI2 BPSK	135	69	16.04	16.10	15.89	17.0	0.0
100	PI2 BPSK	135	138	15.83	16.02	15.82	17.0	0.0
100	PI2 BPSK	270	0	15.80	15.97	16.06		
100	QPSK	1	1	15.98	16.18	16.05		
100	QPSK	1	137	15.82	16.16	15.96	17.0	0.0
100	QPSK	1	271	15.97	16.09	15.85		
100	QPSK	135	0	16.00	16.01	15.89	17.0	0.0
100	QPSK	135	69	15.97	16.05	16.02	17.0	0.0
100	QPSK	135	138	15.96	16.03	16.03	17.0	0.0
100	QPSK	270	0	15.89	16.00	15.83		
100	16QAM	1	1	15.82	16.10	15.85	17.0	0.0
100	64QAM	1	1	15.98	16.07	15.89	17.0	0.0
100	256QAM	1	1	15.84	15.95	16.00	17.0	0.0
Channel				650000	656000	662000		
Frequency (MHz)				3750	3840	3930		
40	QPSK	1	1	15.77	15.86	15.82	17.0	0.0
Channel				647334	650000	652666		
Frequency (MHz)				3710.01	3750	3790.02		
20	QPSK	1	1	15.75	15.84	15.80	17.0	0.0

Part27Q n77 Ant0

BW (MHz)	Modulation	RB Size	RB Offset	Power			Tune-up limit (dBm)	MPR (dB)
				Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.		
Channel				633000	633332	633664		
Frequency (MHz)				3499.98				
100	PI2 BPSK	1	1	15.82				
100	PI2 BPSK	1	137	16.02			17.0	0.0
100	PI2 BPSK	1	271	15.89				
100	PI2 BPSK	135	0	15.84			17.0	0.0
100	PI2 BPSK	135	69	16.01			17.0	0.0
100	PI2 BPSK	135	138	16.07			17.0	0.0
100	PI2 BPSK	270	0	16.10				
100	QPSK	1	1	16.15				
100	QPSK	1	137	16.03			17.0	0.0
100	QPSK	1	271	16.08				
100	QPSK	135	0	16.08			17.0	0.0
100	QPSK	135	69	16.10			17.0	0.0
100	QPSK	135	138	16.05			17.0	0.0
100	QPSK	270	0	15.94				
100	16QAM	1	1	16.09			17.0	0.0
100	64QAM	1	1	15.97			17.0	0.0
100	256QAM	1	1	16.02			17.0	0.0
Channel				631334	633332	635332		
Frequency (MHz)				3470.01	3499.98	3529.98		
40	QPSK	1	1	16.04	15.84	16.10	17.0	0.0
Channel				630068	633332	636600		
Frequency (MHz)				3460.02	3499.98	3540		
20	QPSK	1	1	16.05	15.92	15.97	17.0	0.0

Part27O n78 Ant0

BW (MHz)	Modulation	RB Size	RB Offset	Power			Tune-up limit (dBm)	MPR (dB)
				Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.		
Channel				650000	656000	662000		
Frequency (MHz)				3750	3750	3750		
100	PI2 BPSK	1	1		16.03			
100	PI2 BPSK	1	137		15.94		17.0	0.0
100	PI2 BPSK	1	271		16.03			
100	PI2 BPSK	135	0		16.13		17.0	0.0
100	PI2 BPSK	135	69		15.88		17.0	0.0
100	PI2 BPSK	135	138		15.97		17.0	0.0
100	PI2 BPSK	270	0		16.12			
100	QPSK	1	1		16.16			
100	QPSK	1	137		16.06		17.0	0.0
100	QPSK	1	271		16.15			
100	QPSK	135	0		16.14		17.0	0.0
100	QPSK	135	69		16.07		17.0	0.0
100	QPSK	135	138		15.88		17.0	0.0
100	QPSK	270	0		16.01			
100	16QAM	1	1		16.02		17.0	0.0
100	64QAM	1	1		16.00		17.0	0.0
100	256QAM	1	1		16.00		17.0	0.0
Channel				646334	650000	653666		
Frequency (MHz)				3740.01	3750	3760.02		
80	QPSK	1	1	15.76	15.63	15.81	17.0	0.0
Channel				648000	650000	652000		
Frequency (MHz)				3720	3750	3780		
40	QPSK	1	1	15.91	15.91	15.78	17.0	0.0
Channel				647334	650000	652666		
Frequency (MHz)				3710.01	3750	3790.02		
20	QPSK	1	1	15.77	15.74	15.63	17.0	0.0



Part27Q n78 Ant0

BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)
				Low Ch. / Freq.	Middle Ch. / Freq. 633334	High Ch. / Freq.		
Channel					3000.01			
Frequency (MHz)					15.96			
100	PI2 BPSK	1	1	15.96			17.0	0.0
100	PI2 BPSK	1	137	15.90				
100	PI2 BPSK	1	271	16.08				
100	PI2 BPSK	135	0	15.94			17.0	0.0
100	PI2 BPSK	135	69	16.06			17.0	0.0
100	PI2 BPSK	135	138	15.93				
100	PI2 BPSK	270	0	15.99			17.0	0.0
100	QPSK	1	1	16.11				
100	QPSK	1	137	15.99			17.0	0.0
100	QPSK	1	271	15.95				
100	QPSK	135	0	15.94			17.0	0.0
100	QPSK	135	69	16.08			17.0	0.0
100	QPSK	135	138	15.94			17.0	0.0
100	QPSK	270	0	16.05				
100	16QAM	1	1	16.08			17.0	0.0
100	64QAM	1	1	15.98			17.0	0.0
100	256QAM	1	1	15.82			17.0	0.0
Channel				630668	633334	636000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3460.02	3000.01	3540		
80	QPSK	1	1	15.96	15.91	16.04	17.0	0.0
Channel				631334	633334	635334	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3470.01	3020.01	3520.01		
40	QPSK	1	1	16.03	16.01	16.01	17.0	0.0
Channel				630668	633334	636000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3460.02	3000.01	3540		
20	QPSK	1	1	15.90	15.88	16.08	17.0	0.0



2CA DL

CA List	PCC									SCC				Power		
	LTE	BW	BW	UL	UL	Mod.	UL#	UL	DL Antenna	LTE	BW	DL	DL	DL Antenna	With CA	Without CA
	Band	Ant	(MHz)	Freq. (MHz)	Channel		RB	RB Offset	Configuration	Band	(MHz)	Freq. (MHz)	Channel	Configuration	Tx. Power (dBm)	Tx. Power (dBm)
CA_41A-42A	Band 41	Ant 0	20M	2593	40620	QPSK	1	0	4xMIMO	Band 42	20M	3500	42590	4xMIMO	18.15	18.30
	Band 42	Ant 0	20M	3500	42590	QPSK	1	0	4xMIMO	Band 41	20M	2593	40620	4xMIMO	14.79	14.92

3CA DL

3CA List	PCC								SCC1				SCC2				Power				
	LTE	BW	BW	UL	UL	Mod.	UL#	UL	DL Antenna	LTE	BW	DL	DL	DL Antenna	LTE	BW	DL	DL	DL Antenna	With CA	Without CA
	Band	Ant	(MHz)	Freq.	Channel		RB	RB	Configuration	Band	(MHz)	Freq.	Channel	Configuration	Band	(MHz)	Freq.	Channel	Configuration	Tx. Power	Tx. Power
			(MHz)			Offset					(MHz)					(MHz)				(dBm)	(dBm)
CA_41A-42C	Band 41	Ant 0	20M	2593	40620	QPSK	1	0	4xMIMO	Band 42	20M	3500	42590	4xMIMO	Band 42	20M	3519.8	42788	4xMIMO	18.22	18.30
	Band 42	Ant 0	20M	3500	42590	QPSK	1	0	4xMIMO	Band 42	20M	3519.8	42788	4xMIMO	Band 41	20M	2593	40620	4xMIMO	14.88	14.92
CA_41C-42A	Band 41	Ant 0	20M	2593	40620	QPSK	1	0	4xMIMO	Band 41	20M	2612.8	40818	4xMIMO	Band 42	20M	3500	42590	4xMIMO	18.25	18.30
	Band 42	Ant 0	20M	3500	42590	QPSK	1	0	4xMIMO	Band 41	20M	2593	40620	4xMIMO	Band 41	20M	2612.8	40818	4xMIMO	14.89	14.92



<2.4GHz WLAN>

		Ant 6		Full Power		
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	11.49	13.00		
	6	2437	11.36	13.00		
	11	2462	11.43	13.00		100.00
802.11g 6Mbps	1	2412	11.40	13.00		
	6	2437	11.48	13.00		97.46
	11	2462	11.43	13.00		
802.11n-HT20 MCS0	1	2412	11.33	13.00		
	6	2437	11.29	13.00		97.28
	11	2462	11.24	13.00		
802.11n-HT40 MCS0	3	2422	11.41	13.00		
	6	2437	11.45	13.00		94.70
	9	2452	11.57	13.00		

<5.2GHz WLAN>

		Ant 8		Full Power		
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	36	5180	10.65	12.50		
	40	5200	10.68	12.50		
	44	5220	10.69	12.50		97.46
802.11n-HT20 MCS0	36	5180	10.44	12.50		
	40	5200	10.50	12.50		97.30
	44	5220	10.54	12.50		
802.11n-HT40 MCS0	36	5180	10.51	12.50		95.13
	40	5200	10.55	12.50		
	44	5220	10.60	12.50		97.31
802.11ac-VHT20 MCS0	36	5180	10.69	12.50		
	44	5220	10.56	12.50		95.15
	48	5240	10.74	12.50		
802.11ac-VHT40 MCS0	38	5190	10.69	12.50		
	46	5230	10.74	12.50		88.54
	42	5210	10.28	12.00		

<5.3GHz WLAN>

		Ant 8		Full Power		
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	10.69	12.50		
	56	5280	10.74	12.50		97.46
	60	5300	10.74	12.50		
	64	5320	10.66	12.50		
802.11n-HT20 MCS0	52	5260	10.67	12.50		
	56	5280	10.63	12.50		97.30
	60	5300	10.56	12.50		
	64	5320	10.48	12.50		
802.11n-HT40 MCS0	54	5270	10.73	12.50		95.13
	62	5310	10.71	12.50		
	52	5260	10.64	12.50		
	56	5280	10.63	12.50		97.31
802.11ac-VHT20 MCS0	60	5300	10.60	12.50		
	64	5320	10.50	12.50		
	54	5270	10.75	12.50		95.15
	62	5310	10.74	12.50		
802.11ac-VHT80 MCS0	58	5290	10.31	12.00		88.54

<5.8GHz WLAN>

		Ant 8		Full Power		
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	100	5550	10.59	12.50		
	116	5580	10.47	12.50		97.46
	124	5620	10.54	12.50		
	132	5660	10.66	12.50		
	140	5700	10.78	12.50		
	144	5720	10.75	12.50		
802.11n-HT20 MCS0	100	5550	10.49	12.50		
	116	5580	10.45	12.50		97.30
	124	5620	10.47	12.50		
	132	5660	10.55	12.50		
	140	5700	10.60	12.50		
	144	5720	10.54	12.50		
802.11n-HT40 MCS0	102	5510	10.63	12.50		
	110	5550	10.64	12.50		95.13
	126	5630	10.78	12.50		
	134	5670	10.84	12.50		
	142	5710	10.79	12.50		
	100	5550	10.55	12.50		97.31
802.11ac-VHT20 MCS0	116	5580	10.48	12.50		
	124	5620	10.54	12.50		
	132	5660	10.51	12.50		
	140	5700	10.69	12.50		
	144	5720	10.59	12.50		
	102	5510	10.65	12.50		95.15
802.11ac-VHT40 MCS0	110	5550	10.68	12.50		
	126	5630	10.60	12.50		
	134	5670	10.88	12.50		
	142	5710	10.80	12.50		
	106	5530	10.26	12.00		88.54
	122	5610	10.27	12.00		
802.11ac-VHT80 MCS0	138	5690	10.35	12.00		

<5.8GHz WLAN>

		Ant 6		Full Power		
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	149	5745	10.67	12.50		
	157	5785	10.66	12.50		97.46
	165	5825	10.63	12.50		
802.11n-HT20 MCS0	149	5745	10.58	12.50		
	157	5785	10.47	12.50		97.30
	165	5825	10.51	12.50		
802.11n-HT40 MCS0	151	5765	10.74	12.50		95.13
	159	5795	10.64	12.50		
	149	5745	10.63	12.50		97.31
802.11ac-VHT20 MCS0	157	5785	10.56	12.50		
	165	5825	10.54	12.50		
	151	5765	10.78	12.50		95.15
802.11ac-VHT40 MCS0	159	5795	10.66	12.50		
	155	5775	10.22	12.00		88.54

<Bluetooth>			Art 6		
Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	12.59	10.48	10.19
	CH 39	2442	12.28	10.14	9.88
	CH 78	2480	12.90	10.52	10.36
Tune-up Limit			14.00	12.00	11.50

BLE 1M			Art 6		
Mode	Channel	Frequency (MHz)	Average power (dBm)		
			GFSK		
LE	CH 00	2402	5.00		
	CH 29	2440	5.22		
	CH 39	2480	5.39		
Tune-up Limit			6.50		

BLE 2M			Art 6		
Mode	Channel	Frequency (MHz)	Average power (dBm)		
			2Mbps		
LE	CH 02	2404	4.95		
	CH 23	2440	5.18		
	CH 38	2478	5.40		
Tune-up Limit			6.50		