

Full Power Mode for NB-IOT

LTE Band 2 (1900MHz Band) Part 24E								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel Frequency (MHz)				1850.1	1860	1869.9	24	0
3.75	BPSK	1	0	22.18	22.22	22.09		
3.75	BPSK	1	47	22.20	22.14	22.06		
3.75	QPSK	1	0	22.30	22.34	22.24		
3.75	QPSK	1	47	22.26	22.13	22.07		
15	BPSK	1	0	22.20	22.20	22.22		
15	BPSK	1	11	22.10	22.20	22.23	24	0
15	QPSK	1	0	22.23	22.30	22.20		
15	QPSK	1	11	22.20	22.22	22.21		
15	QPSK	12	0	20.90	20.70	20.80	22.5	1.5

LTE Band 4								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel Frequency (MHz)				1695.1	1697.5	1699.9	24	0
3.75	BPSK	1	0	22.00	22.18	22.17		
3.75	BPSK	1	47	22.01	22.14	22.16		
3.75	QPSK	1	0	22.21	22.30	22.28		
3.75	QPSK	1	47	22.04	22.16	22.16		
15	BPSK	1	0	22.20	22.20	22.25		
15	BPSK	1	11	22.15	22.22	22.20	24	0
15	QPSK	1	0	22.20	22.28	22.23		
15	QPSK	1	11	22.13	22.21	22.20		
15	QPSK	12	0	21.03	21.06	21.05	22.5	1.5

LTE Band 5								
(Celluar Band) Part 22H(only on channel required)								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				2940.1	2955	2969.9	24	0
Frequency (MHz)				854.1	856.5	858.9		
3.75	BPSK	1	0	22.28	22.13	22.11		
3.75	BPSK	1	47	22.25	22.14	22.07		
3.75	QPSK	1	0	22.29	22.30	22.18		
3.75	QPSK	1	47	22.24	22.19	22.15		
15	BPSK	1	0	22.28	22.02	22.11		
15	BPSK	1	11	22.22	22.07	22.13		
15	QPSK	1	0	22.17	22.10	22.12		
15	QPSK	1	11	22.22	22.08	22.10		
15	QPSK	12	0	21.01	21.08	21.02	22.5	1.5

LTE Band 12								
(700MHz Low Band) Part 27F(only on channel required)								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				2931.1	2956	2979	24	0
Frequency (MHz)				698.1	707.5	715.9		
3.75	BPSK	1	0	22.20	22.18	22.04		
3.75	BPSK	1	47	22.12	22.15	22.02		
3.75	QPSK	1	0	22.26	22.29	22.10		
3.75	QPSK	1	47	22.23	22.14	22.03		
15	BPSK	1	0	22.18	22.21	22.04		
15	BPSK	1	11	22.15	22.19	22.08		
15	QPSK	1	0	22.18	22.15	22.04		
15	QPSK	1	11	22.20	22.24	22.02		
15	QPSK	12	0	21.51	21.57	21.55	22.5	1.5

LTE Band 13								
(700MHz Band) Part 27F								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				777.1	782	786.9		
Frequency (MHz)				22.14	22.27	22.16	24	0
3.75	BPSK	1	0	22.14	22.27	22.16		
3.75	BPSK	1	47	22.16	22.30	22.16		
3.75	QPSK	1	0	22.17	22.34	22.17		
3.75	QPSK	1	47	22.15	22.31	22.14		0
15	BPSK	1	0	22.10	22.18	22.13		
15	BPSK	1	11	22.05	22.14	22.11		
15	QPSK	1	0	22.08	22.23	22.15		
15	QPSK	1	11	22.06	22.22	22.12		
15	QPSK	12	0	21.22	21.27	21.23		
15	QPSK	12	0	21.22	21.27	21.23	22.5	1.5

Full Power Mode for CAT M1

LTE Band 2														
Ref (MHz)	Modulation	RB Size	RB Offset	Index			Power Low Ch. 1 Freq.	Power Mid Ch. 1 Freq.	Power High Ch. 1 Freq.	Tune-up limit (dB)	MPR (dB)			
Channel				L	M	H	18150	18600	19100					
Frequency (MHz)														
20	QPSK	1	0	0	0	15	22.53	22.56	22.88	24.00	0			
20	QPSK	1	5	0	0	15	22.77	22.78	22.89					
20	QPSK	3	0	0	0	15	22.69	22.72	22.85					
20	QPSK	3	5	0	0	15	22.89	22.92	23.05					
20	QPSK	6	0	0	0	15	22.68	22.72	22.95					
20	QPSK	6	5	0	0	15	22.79	22.82	23.00					
20	16QAM	1	5	0	0	15	22.77	22.78	22.88					
20	16QAM	3	0	0	0	15	22.72	22.72	22.88					
20	16QAM	3	5	0	0	15	22.88	22.88	23.00					
20	16QAM	5	0	0	0	15	22.73	22.78	22.88					
Channel				L	M	H	18150	18600	19100	Tune-up limit (dB)		MPR (dB)		
15	Frequency (MHz)	0	0	0	11	22.81	22.81	22.74	19.02	24.00	0			
15	QPSK	1	5	0	0	11	22.77	22.81	22.71					
15	QPSK	1	5	0	11	22.73	22.72	22.86	19.06					
15	QPSK	3	3	0	0	11	22.79	22.78	22.88					
15	QPSK	3	3	0	11	22.75	22.74	22.86	19.06					
15	16QAM	1	0	0	0	11	22.88	22.88	22.78					
15	16QAM	1	0	0	11	22.84	22.84	22.74	19.06					
15	16QAM	3	0	0	0	11	22.73	22.81	22.72					
15	16QAM	3	0	0	11	22.81	22.87	22.72	19.06					
15	16QAM	5	0	0	11	22.80	22.80	22.87	19.07					
Channel				L	M	H	18600	19000	19100	Tune-up limit (dB)		MPR (dB)		
10	Frequency (MHz)	0	0	0	7	22.82	22.83	22.72	19.05	24.00	0			
10	QPSK	1	5	0	0	7	22.72	22.72	22.86					
10	QPSK	3	0	0	0	7	22.65	22.68	22.81					
10	QPSK	3	0	0	7	22.61	22.64	22.83	19.03					
10	QPSK	6	0	0	0	7	22.60	22.65	22.80					
10	QPSK	6	0	0	7	22.59	22.60	22.80	19.00					
10	16QAM	1	5	0	0	7	22.68	22.71	22.80					
10	16QAM	1	5	0	7	22.68	22.70	22.80	19.00					
10	16QAM	3	0	0	0	7	22.61	22.65	22.81					
10	16QAM	3	0	0	7	22.64	22.64	22.86	19.00					
Channel				L	M	H	18600	19000	19100	Tune-up limit (dB)		MPR (dB)		
5	Frequency (MHz)	0	0	0	3	22.81	22.81	22.74	19.05	24.00	0			
5	QPSK	1	5	0	0	3	22.82	22.83	22.78					
5	QPSK	1	5	0	3	22.78	22.80	22.86	19.06					
5	QPSK	3	3	0	0	3	22.64	22.66	22.88					
5	QPSK	3	3	0	3	22.61	22.62	22.86	19.03					
5	16QAM	1	0	0	0	3	22.89	22.88	22.71					
5	16QAM	1	0	0	3	22.85	22.87	22.86	19.06					
5	16QAM	3	0	0	0	3	22.68	22.69	22.86					
5	16QAM	3	0	0	3	22.65	22.65	22.86	19.00					
Channel				L	M	H	18600	19000	19100	Tune-up limit (dB)		MPR (dB)		
3	Frequency (MHz)	0	0	0	1	22.83	22.83	22.74	19.00	24.00		0		
3	QPSK	1	5	0	0	1	22.80	22.81	22.80					
3	QPSK	1	5	0	1	22.84	22.82	22.81	19.00					
3	QPSK	3	3	0	0	1	22.64	22.62	22.86					
3	QPSK	3	3	0	1	22.60	22.60	22.86	19.00					
3	QPSK	6	0	0	0	1	22.61	22.60	22.81					
3	16QAM	1	5	0	0	1	22.65	22.67	22.86					
3	16QAM	1	5	0	1	22.61	22.63	22.81	19.00					
3	16QAM	3	0	0	0	1	22.60	22.60	22.86					
3	16QAM	3	0	0	1	22.59	22.59	22.82	19.00					
Channel				L	M	H	19000	19100	19100	Tune-up limit (dB)			MPR (dB)	
1.4	Frequency (MHz)	0	0	0	0	22.81	22.84	22.74	19.02	24.00	0			
1.4	QPSK	1	5	0	0	0	22.83	22.86	22.74					
1.4	QPSK	3	3	0	0	0	22.67	22.63	22.86					
1.4	QPSK	3	3	0	0	0	22.69	22.61	22.88					
1.4	QPSK	6	0	0	0	0	22.70	22.61	22.85					
1.4	16QAM	1	0	0	0	0	22.14	22.12	22.82					
1.4	16QAM	1	0	0	0	0	22.18	22.18	22.87					
1.4	16QAM	3	0	0	0	0	22.60	22.60	22.82					
1.4	16QAM	3	0	0	0	0	22.62	22.62	22.82					
1.4	16QAM	5	0	0	0	0	22.60	22.64	22.90					

LTE Band 4													
Ref (MHz)	Modulation	RB Size	RB Offset	Index			Power Low Ch. 1 Freq.	Power Mid Ch. 1 Freq.	Power High Ch. 1 Freq.	Tune-up limit (dB)	MPR (dB)		
Channel				L	M	H	20000	20475	20500				
Frequency (MHz)													
20	QPSK	1	0	0	0	15	22.78	22.94	22.44	24.00	0		
20	QPSK	1	5	0	0	15	22.60	22.84	22.50				
20	QPSK	3	0	0	0	15	22.68	22.73	22.29				
20	QPSK	3	5	0	0	15	22.84	22.71	22.29				
20	QPSK	6	0	0	0	15	22.67	22.73	22.94				
20	QPSK	6	5	0	0	15	22.80	22.66	22.91				
20	16QAM	1	5	0	0	15	22.79	22.82	22.31				
20	16QAM	1	5	0	15	22.76	22.72	22.30					
20	16QAM	3	0	0	0	15	22.61	22.76	22.82				
20	16QAM	3	0	15	22.71	22.77	22.51						
Channel				L	M	H	20000	20475	20500	Tune-up limit (dB)	MPR (dB)		
15	Frequency (MHz)	0	0	0	11	22.49	22.54	22.50	17.47	24.00	0		
15	QPSK	1	5	0	0	11	22.69	22.78	22.84				
15	QPSK	1	5	0	11	22.64	22.71	22.71	17.47				
15	QPSK	3	3	0	0	11	22.72	22.77	22.59				
15	QPSK	3	3	0	11	22.74	22.77	22.59	17.47				
15	16QAM	1	0	0	0	11	22.87	22.72	22.84				
15	16QAM	1	0	0	11	22.73	22.62	22.84	17.47				
15	16QAM	3	0	0	0	11	22.80	22.88	22.43				
15	16QAM	3	0	0	11	22.87	22.72	22.80	17.47				
15	16QAM	5	0	0	11	22.78	22.80	22.80	17.47				
Channel				L	M	H	20000	20475	20500	Tune-up limit (dB)		MPR (dB)	
10	Frequency (MHz)	0	0	0	7	22.78	22.82	22.43	17.86	24.00	0		
10	QPSK	1	5	0	0	7	22.69	22.81	22.57				
10	QPSK	3	0	0	0	7	22.77	22.83	22.41	17.86			
10	QPSK	3	0	0	7	22.79	22.83	22.44	17.86				
10	QPSK	6	0	0	0	7	22.62	22.63	21.87	23.00			
10	QPSK	6	0	0	7	22.80	22.80	21.86	23.00				
10	16QAM	1	5	0	0	7	22.78	22.82	22.62	19.00			
10	16QAM	1	5	0	7	22.71	22.80	22.39	19.00				
10	16QAM	3	0	0	0	7	22.69	22.76	22.39	19.00			
10	16QAM	3	0	7	22.78	22.82	22.39	19.00					
Channel				L	M	H	20000	20475	20500	Tune-up limit (dB)	MPR (dB)		
3	Frequency (MHz)	0	0	0	3	22.78	22.82	22.43	17.86	24.00	0		
3	QPSK	1	5	0	0	3	22.70	22.73	22.37				
3	QPSK	1	5	0	3	22.72	22.73	22.49	17.86				
3	QPSK	3	3	0	0	3	22.69	22.77	21.77	23.00			
3	QPSK	3	3	0	3	22.74	22.79	21.80	23.00				
3	16QAM	1	0	0	0	3	22.87	22.72	22.84	19.00			
3	16QAM	1	0	0	3	22.73	22.64	22.86	19.00				
3	16QAM	3	0	0	0	3	22.80	22.88	22.43	19.00			
3	16QAM	3	0	0	3	22.87	22.72	22.80	19.00				
Channel				L	M	H	19965 <th>20475</th> <th>20500</th> <th>Tune-up limit (dB)</th> <th>MPR (dB)</th> <th colspan="2"></th>	20475	20500	Tune-up limit (dB)	MPR (dB)		
3	Frequency (MHz)	0	0	0	3	22.78	22.82	22.43	17.86	24.00	0		
3	QPSK	1	5	0	0	3	22.70	22.80	22.39				
3	QPSK	1	5	0	3	22.72	22.73	22.49	17.86				
3	QPSK	3	3	0	0	3	22.69	22.77	21.85	23.00			
3	QPSK	3	3	0	3	22.74	22.79	21.86	23.00				
3	16QAM	1	0	0	0	3	22.88	22.73	21.81	19.00			
3	16QAM	1	0	0	3	22.74	22.65	21.86	19.00				
3	16QAM	3	0	0	0	3	22.80	22.88	22.43	19.00			
3	16QAM	3	0	0	3	22.87	22.72	22.80	19.00				
Channel				L	M	H	2104 <td>2110</td> <td>2079</td> <td>22.00</td> <td rowspan="2">2</td> <td colspan="2"></td>	2110	2079	22.00	2		
3	Frequency (MHz)	0	0	0	1	21.04	21.10	20.79	17.86				
1.4	Frequency (MHz)	0	0	0	1	21.04	21.10	20.79	17.86	24.00	0		
1.4	QPSK	1	5	0	0	1	20.96	21.05	20.64				
1.4	QPSK	1	5	0	1	20.98	21.05	20.64	17.86				
1.4	QPSK	3	3	0	0	1	20.93	20.95	21.84	23.00			
1.4	QPSK	3	3	0	1	20.95	20.95	21.84	23.00				
1.4	16QAM	1	0	0	0	1	21.01	21.05	20.82	19.00			
1.4	16QAM	1	0	0	1	20.99	20.98	21.86	19.00				
1.4	16QAM	3	0	0	0	1	21.05	21.05	20.84	19.00			
1.4	16QAM	3	0	0	1	21.03	21.10	20.86	22.00				

LTE Band 12											
Site [MHz]	Multicast	RB Size	RB Offset	Index			Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	Turn-up limit (dBm)	MFR (dB)
Channel				L	M	H	2300	2305	2310	24.00	0
Frequency (MHz)							784	787.5	791		
10	QPSK	1	0	0	0	7	23.27	23.28	23.29	23.00	1
10	QPSK	1	5	0	0	7	23.25	23.23	23.15		
10	QPSK	3	0	0	0	7	23.14	23.13	23.10		
10	QPSK	3	3	0	0	7	23.17	23.14	23.10		
10	QPSK	6	0	0	0	7	22.84	22.82	22.80	23.00	1
10	QPSK	6	0	0	0	7	22.81	22.79	22.70		
10	HQAM	1	5	0	0	7	23.18	23.18	23.11		
10	HQAM	1	5	0	0	7	23.18	23.18	23.11		
10	HQAM	3	0	0	0	7	23.16	23.13	23.10	24.00	0
10	HQAM	3	3	0	0	7	23.20	23.18	23.14		
10	HQAM	5	0	0	0	7	22.82	22.80	22.82		
10	HQAM	5	0	0	0	7	22.82	22.80	22.82		
Channel				L	M	H	2310	2315	2320	Turn-up limit (dBm)	MFR (dB)
Frequency (MHz)							791.5	795	798.5	23.00	0
5	QPSK	1	5	0	0	3	23.26	23.23	23.14	23.00	0
5	QPSK	1	5	0	0	3	23.22	23.20	23.21		
5	QPSK	3	0	0	0	3	22.41	22.39	22.30		
5	QPSK	3	3	0	0	3	22.52	22.49	22.47		
5	QPSK	6	0	0	0	3	22.51	22.50	22.48	23.00	1
5	QPSK	6	0	0	0	3	22.51	22.50	22.48		
5	HQAM	1	0	0	0	3	23.21	23.17	23.14		
5	HQAM	1	0	0	0	3	23.17	23.14	23.14		
5	HQAM	3	0	0	0	3	22.41	22.37	22.38	23.00	1
5	HQAM	3	0	0	0	3	22.54	22.51	22.49		
5	HQAM	3	3	0	0	3	21.49	21.46	21.45		
5	HQAM	5	0	0	0	3	21.49	21.46	21.45		
Channel				L	M	H	2320	2325	2330	Turn-up limit (dBm)	MFR (dB)
Frequency (MHz)							798.5	799.5	800.5	24.00	0
3	QPSK	1	0	0	0	1	23.22	23.24	23.26	23.00	1
3	QPSK	1	0	0	0	1	23.22	23.20	23.21		
3	QPSK	3	0	0	0	1	22.55	22.52	22.51		
3	QPSK	3	0	0	0	1	22.48	22.43	22.41		
3	QPSK	6	0	0	0	1	21.80	21.81	21.49	23.00	2
3	HQAM	1	0	0	0	1	22.49	22.44	22.45		
3	HQAM	1	5	0	0	1	22.54	22.54	22.52		
3	HQAM	3	0	0	0	1	21.41	21.40	21.42		
3	HQAM	3	3	0	0	1	21.53	21.50	21.48	22.00	2
3	HQAM	5	0	0	0	1	21.17	21.16	21.48		
Channel				L	M	H	800.5	801.5	802.5	Turn-up limit (dBm)	MFR (dB)
Frequency (MHz)							801.5	802.5	803.5	24.00	0
1.4	QPSK	1	5	0	0	0	23.22	23.21	23.19	23.00	1
1.4	QPSK	1	5	0	0	0	23.21	23.24	23.19		
1.4	QPSK	3	0	0	0	0	22.58	22.51	22.50		
1.4	QPSK	3	3	0	0	0	22.55	22.55	22.50		
1.4	QPSK	6	0	0	0	0	21.53	21.50	21.47	23.00	1
1.4	HQAM	1	0	0	0	0	22.48	22.48	22.47		
1.4	HQAM	1	5	0	0	0	22.44	22.41	22.41		
1.4	HQAM	3	0	0	0	0	21.48	21.44	21.40		
1.4	HQAM	3	3	0	0	0	21.49	21.46	21.45	22.00	2
1.4	HQAM	5	0	0	0	0	21.55	21.49	21.48		

LTE Band 13											
Site [MHz]	Multicast	RB Size	RB Offset	Index			Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	Turn-up limit (dBm)	MFR (dB)
Channel				L	M	H					
Frequency (MHz)							792	793	794		
10	QPSK	1	0	0	0	7	23.11			24.00	0
10	QPSK	1	5	0	0	7	23.05				
10	QPSK	3	0	0	0	7	23.08				
10	QPSK	3	0	0	0	7	23.00				
10	QPSK	6	0	0	0	7	22.92			23.00	1
10	HQAM	1	0	0	0	7	23.02				
10	HQAM	1	5	0	0	7	23.00				
10	HQAM	3	0	0	0	7	23.02				
10	HQAM	3	3	0	0	7	23.02			24.00	0
10	HQAM	5	0	0	0	7	22.94				
10	HQAM	5	0	0	0	7	22.94				
Channel				L	M	H	2350	2355	2360	Turn-up limit (dBm)	MFR (dB)
Frequency (MHz)							794	795	796		
5	QPSK	1	0	0	0	3	23.01	23.07	23.08	24.00	0
5	QPSK	1	0	0	0	3	23.10	23.10	23.10		
5	QPSK	3	0	0	0	3	22.91	22.92	22.91		
5	QPSK	3	3	0	0	3	22.92	22.95	22.94		
5	QPSK	6	0	0	0	3	22.10	22.14	22.10	23.00	1
5	HQAM	1	0	0	0	3	23.00	23.08	23.07		
5	HQAM	1	0	0	0	3	23.00	23.09	23.06		
5	HQAM	3	0	0	0	3	22.92	22.90	22.92		
5	HQAM	3	0	0	0	3	22.23	22.26	22.21	23.00	1
5	HQAM	5	0	0	0	3	21.98	21.10	21.09		

Reduced Power Mode for Sensor On for NB-IOT Power

LTE Band 2 (1900MHz Band) Part 24E								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				1850.1	1860	1869.9		
Frequency (MHz)							19	0
3.75	BPSK	1	0	17.18	17.27	17.22		
3.75	BPSK	1	47	17.18	17.23	17.17		
3.75	QPSK	1	0	17.36	17.41	17.38		
3.75	QPSK	1	47	17.19	17.19	17.13		0
15	BPSK	1	0	17.21	17.32	17.24		
15	BPSK	1	11	17.19	17.29	17.23		
15	QPSK	1	0	17.21	17.20	17.12		
15	QPSK	1	11	17.28	17.37	17.29		
15	QPSK	12	0	15.78	15.86	15.78	17.5	1.5

LTE Band 4								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				1950.1	2017.5	2069.9		
Frequency (MHz)				1710.1	1732.5	1754.9	19	0
3.75	BPSK	1	0	17.02	17.10	17.02		
3.75	BPSK	1	47	17.08	17.18	17.11		
3.75	QPSK	1	0	17.29	17.38	17.29		
3.75	QPSK	1	47	17.04	17.15	17.12		0
15	BPSK	1	0	17.22	17.32	17.28		
15	BPSK	1	11	17.18	17.28	17.23		
15	QPSK	1	0	17.06	17.16	17.13		
15	QPSK	1	11	17.25	17.35	17.28		
15	QPSK	12	0	15.83	15.93	15.86	17.5	1.5

LTE Band 5 (Celluar Band) Part 22H(only on channel required)								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel Frequency (MHz)				294.11	295.5	296.9	22	0
3.75	BPSK	1	0	20.18	20.26	20.21		
3.75	BPSK	1	47	20.17	20.23	20.16		
3.75	QPSK	1	0	20.59	20.66	20.63		
3.75	QPSK	1	47	20.10	20.20	20.12		
15	BPSK	1	0	20.51	20.55	20.53		0
15	BPSK	1	11	20.48	20.55	20.52		
15	QPSK	1	0	20.17	20.23	20.19		
15	QPSK	1	11	20.57	20.64	20.61		
15	QPSK	12	0	19.14	19.23	19.19	20.5	1.5

LTE Band 12 (700MHz Low Band) Part 27F(only on channel required)								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel Frequency (MHz)				230.11	230.56	231.75	22	0
3.75	BPSK	1	0	20.08	20.07	20.04		
3.75	BPSK	1	47	20.02	20.06	20.04		
3.75	QPSK	1	0	20.16	20.17	20.13		
3.75	QPSK	1	47	20.01	20.05	20.02		
15	BPSK	1	0	20.13	20.13	20.11		0
15	BPSK	1	11	20.11	20.10	20.04		
15	QPSK	1	0	20.02	20.06	20.02		
15	QPSK	1	11	20.12	20.16	20.11		
15	QPSK	12	0	18.77	18.78	18.77	20.5	1.5

LTE Band 13								
(700MHz Band) Part 27F								
Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				231.1	232.6	237.9		
Frequency (MHz)				777.1	782	786.9	22	0
3.75	BPSK	1	0	20.77	20.78	20.67		
3.75	BPSK	1	47	20.71	20.74	20.66		
3.75	QPSK	1	0	21.00	21.04	20.96		
3.75	QPSK	1	47	20.72	20.71	20.58		
15	BPSK	1	0	20.88	20.87	20.75		0
15	BPSK	1	11	20.84	20.86	20.74		
15	QPSK	1	0	20.72	20.78	20.65		
15	QPSK	1	11	20.99	21.03	20.91		
15	QPSK	12	0	19.67	19.58	19.50		
15	QPSK	12	0	19.67	19.58	19.50		1.5

LTE Band 2																			
Site [MHz]	Modulation	RB Size	RB Offset	Index			Power Low Ch. 1 Freq.	Power Middle Ch. 1 Freq.	Power High Ch. 1 Freq.	Tune-up limit (dBm)	MPR (dB)								
Channel																			
				L	M	H	18100	18600	19100	19.00	0								
Frequency (MHz)																			
20	QPSK	1	0	0	0	15	17.73	17.85	17.72										
20	QPSK	1	5	0	0	15	17.77	17.87	17.76										
20	QPSK	3	0	0	0	15	17.73	17.73	17.68										
20	QPSK	3	3	0	0	15	17.81	17.81	17.81										
20	QPSK	6	0	0	0	15	17.64	17.70	17.81										
20	WQAM	1	5	0	0	15	17.66	17.72	17.83										
20	WQAM	3	0	0	0	15	17.67	17.69	17.68										
20	WQAM	3	3	0	0	15	17.73	17.67	17.84										
20	WQAM	6	0	0	0	15	17.75	17.75	17.75										
Channel										L	M			H	18600	18900	19100	Tune-up limit (dBm)	MPR (dB)
15	QPSK	1	0	0	0	11	17.62	17.65	17.62										
15	QPSK	1	5	0	0	11	17.68	17.66	17.67										
15	QPSK	3	0	0	0	11	17.65	17.65	17.65										
15	QPSK	3	3	0	0	11	17.68	17.68	17.59										
15	QPSK	6	0	0	0	11	17.64	17.65	17.65										
15	WQAM	1	5	0	0	11	17.71	17.65	17.68										
15	WQAM	3	0	0	0	11	17.66	17.66	17.68										
15	WQAM	3	3	0	0	11	17.69	17.65	17.75										
15	WQAM	6	0	0	0	11	17.69	17.61	17.68										
15	WQAM	6	3	0	0	11	17.68	17.61	17.68										
Channel										L	M	H	18900	19000	19100	Tune-up limit (dBm)	MPR (dB)		
10	QPSK	1	0	0	0	7	17.75	17.75	17.64										
10	QPSK	1	5	0	0	7	17.87	17.81	17.69										
10	QPSK	3	0	0	0	7	17.68	17.65	17.58										
10	QPSK	3	3	0	0	7	17.69	17.65	17.59										
10	QPSK	6	0	0	0	7	17.67	17.68	17.59										
10	WQAM	1	5	0	0	7	17.67	17.65	17.61										
10	WQAM	3	0	0	0	7	17.66	17.68	17.61										
10	WQAM	3	3	0	0	7	17.67	17.65	17.61										
10	WQAM	6	0	0	0	7	17.65	17.65	17.65										
10	WQAM	6	3	0	0	7	17.67	17.65	17.65										
Channel										L	M	H	19000	19050	19100	Tune-up limit (dBm)	MPR (dB)		
5	QPSK	1	0	0	0	3	17.65	17.60	17.63										
5	QPSK	1	5	0	0	3	17.62	17.60	17.63										
5	QPSK	3	0	0	0	3	17.61	17.60	17.60										
5	QPSK	3	3	0	0	3	17.61	17.65	17.65										
5	QPSK	6	0	0	0	3	17.67	17.62	17.67										
5	WQAM	1	5	0	0	3	17.67	17.62	17.67										
5	WQAM	3	0	0	0	3	17.66	17.65	17.63										
5	WQAM	3	3	0	0	3	17.65	17.68	17.68										
5	WQAM	6	0	0	0	3	17.60	17.67	17.68										
5	WQAM	6	3	0	0	3	17.61	17.67	17.63										
Channel										L	M	H	19050	19100	19100	Tune-up limit (dBm)	MPR (dB)		
3	QPSK	1	0	0	0	1	17.69	17.67	17.59										
3	QPSK	1	5	0	0	1	17.64	17.68	17.68										
3	QPSK	3	0	0	0	1	17.67	17.68	17.68										
3	QPSK	3	3	0	0	1	17.65	17.68	17.68										
3	QPSK	6	0	0	0	1	17.63	17.67	17.67										
3	WQAM	1	5	0	0	1	17.63	17.67	17.67										
3	WQAM	3	0	0	0	1	17.65	17.67	17.65										
3	WQAM	3	3	0	0	1	17.67	17.64	17.68										
3	WQAM	6	0	0	0	1	17.67	17.64	17.68										
3	WQAM	6	3	0	0	1	17.67	17.64	17.68										
Channel										L	M	H	19100	19150	19100	Tune-up limit (dBm)	MPR (dB)		
1.4	QPSK	1	0	0	0	0	17.62	17.62	17.62										
1.4	QPSK	1	5	0	0	0	17.62	17.62	17.62										
1.4	QPSK	3	0	0	0	0	17.61	17.65	17.65										
1.4	QPSK	3	3	0	0	0	17.59	17.68	17.68										
1.4	QPSK	6	0	0	0	0	17.60	17.67	17.67										
1.4	WQAM	1	5	0	0	0	17.60	17.67	17.67										
1.4	WQAM	3	0	0	0	0	17.67	17.65	17.65										
1.4	WQAM	3	3	0	0	0	17.65	17.68	17.68										
1.4	WQAM	6	0	0	0	0	17.60	17.67	17.67										
1.4	WQAM	6	3	0	0	0	17.60	17.67	17.67										

LTE Band 4													
Site [MHz]	Modulation	RB Size	RB Offset	Index			Power Low Ch. 1 Freq.	Power Middle Ch. 1 Freq.	Power High Ch. 1 Freq.	Tune-up limit (dBm)	MPR (dB)		
Channel													
Frequency (MHz)				L	M	H	1720	1730.5	1740	19.00	0		
20	QPSK	1	0	0	0	15	17.64	17.68	17.62				
20	QPSK	1	5	0	0	15	17.65	17.65	17.63				
20	QPSK	3	0	0	0	15	17.61	17.63	17.60				
20	QPSK	3	3	0	0	15	17.60	17.61	17.61				
20	QPSK	6	0	0	0	15	17.58	17.58	17.52				
20	QPSK	6	3	0	0	15	17.58	17.58	17.52				
20	WQAM	1	5	0	0	15	17.61	17.65	17.60				
20	WQAM	3	0	0	0	15	17.50	17.57	17.46				
20	WQAM	3	3	0	0	15	17.50	17.50	17.46				
Channel				L	M	H	20000	20175	20300	Tune-up limit (dBm)	MPR (dB)		
15	QPSK	1	0	0	0	11	17.59	17.55	17.54				
15	QPSK	1	5	0	0	11	17.55	17.44	17.41				
15	QPSK	3	0	0	0	11	17.53	17.41	17.45				
15	QPSK	3	3	0	0	11	17.58	17.48	17.58				
15	QPSK	6	0	0	0	11	17.50	17.47	17.45				
15	WQAM	1	5	0	0	11	17.42	17.41	17.37				
15	WQAM	3	0	0	0	11	17.54	17.50	17.50				
15	WQAM	3	3	0	0	11	17.55	17.53	17.44				
15	WQAM	6	0	0	0	11	17.52	17.50	17.52				
15	WQAM	6	3	0	0	11	17.47	17.50	17.50				
Channel				L	M	H	20175	20225	20300	Tune-up limit (dBm)	MPR (dB)		
10	QPSK	1	0	0	0	7	17.61	17.51	17.58				
10	QPSK	1	5	0	0	7	17.47	17.48	17.63				
10	QPSK	3	0	0	0	7	17.61	17.61	17.49				
10	QPSK	3	3	0	0	7	17.62	17.58	17.55				
10	QPSK	6	0	0	0	7	17.67	17.60	17.65				
10	QPSK	6	3	0	0	7	17.64	17.61	17.60				
10	WQAM	1	5	0	0	7	17.48	17.58	17.58				
10	WQAM	3	0	0	0	7	17.64	17.61	17.60				
10	WQAM	3	3	0	0	7	17.48	17.58	17.58				
10	WQAM	6	0	0	0	7	17.60	17.60	17.52				
10	WQAM	6	3	0	0	7	17.60	17.60	17.58				
Channel				L	M	H	20300	20375	20500	Tune-up limit (dBm)	MPR (dB)		
5	QPSK	1	0	0	0	3	17.62	17.68	17.67				
5	QPSK	1	5	0	0	3	17.47	17.49	17.49				
5	QPSK	3	0	0	0	3	18.61	18.65	18.79				
5	QPSK	3	3	0	0	3	18.60	18.61	18.61				
5	QPSK	6	0	0	0	3	18.69	18.67	18.65				
5	QPSK	6	3	0	0	3	17.67	17.61	17.61				
5	WQAM	1	5	0	0	3	17.65	17.64	17.60				
5	WQAM	3	0	0	0	3	18.60	18.60	18.60				
5	WQAM	3	3	0	0	3	18.60	18.60	18.60				
5	WQAM	6	0	0	0	3	18.60	18.60	18.60				
Channel				L	M	H	19925	20125	20375	Tune-up limit (dBm)	MPR (dB)		
3	QPSK	1	0	0	0	1	17.63	17.64	17.62				
3	QPSK	1	5	0	0	1	17.37	17.21	17.40				
3	QPSK	3	0	0	0	1	18.62	18.63	18.61				
3	QPSK	3	3	0	0	1	18.64	18.62	18.63				
3	QPSK	6	0	0	0	1	18.69	18.68	18.69				
3	WQAM	1	5	0	0	1	18.61	18.60	18.61				
3	WQAM	3	0	0	0	1	18.74	18.60	18.78				
3	WQAM	3	3	0	0	1	18.74	18.61	18.78				
3	WQAM	6	0	0	0	1	18.71	18.72	18.70				
Channel				L	M	H	19	19.2	19.4	Tune-up limit (dBm)	MPR (dB)		
1.4	QPSK	1	0	0	0	1	19.83	19.23	19.53				
1.4	QPSK	1	5	0	0	1	19.83	19.23	19.54				
1.4	QPSK	3	0	0	0	1	19.83	19.23	19.54				
1.4	QPSK	3	3	0	0	1	19.83	19.23	19.54				
1.4	QPSK	6	0	0	0	1	19.79	19.72	19.70				
1.4	WQAM	1	5	0	0	1	19.79	19.72	19.70				
1.4	WQAM	3	0	0	0	1	19.79	19.78	19.79				
1.4	WQAM	3	3	0	0	1	19.79	19.78	19.79				
1.4	WQAM	6	0	0	0	1	19.79	19.78	19.79				
1.4	WQAM	6	3	0	0	1	19.79	19.78	19.79				

LTE Band 12												
Site [MHz]	Modulation	RB Size	RB Offset	Index			Power Low Ch. Freq. 23000	Power Middle Ch. Freq. 23000	Power High Ch. Freq. 23100	Tune-up limit (dBm)	MPR (dB)	
Channel				L	M	H						
Frequency (MHz)												
10	QPSK	1	0	0	0	7	20.74	20.74	20.74	22.00	0	
10	QPSK	1	0	0	0	7	20.73	20.75	20.68			
10	QPSK	3	0	0	0	7	20.70	20.72	20.72			
10	QPSK	3	0	0	0	7	20.65	20.71	20.60			
10	QPSK	6	0	0	0	7	20.59	20.70	20.65			
10	16QAM	1	0	0	0	7	20.64	20.71	20.67	21.00	1	
10	16QAM	1	0	0	0	7	20.63	20.70	20.67			
10	16QAM	1	0	0	0	7	20.66	20.72	20.62			
10	16QAM	3	0	0	0	7	20.67	20.70	20.65			
10	16QAM	6	0	0	0	7	20.85	20.00	20.85			
Channel				L	M	H	23000	23000	23100	Tune-up limit (dBm)	MPR (dB)	
5	QPSK	1	0	0	0	3	20.70	20.75	20.73	22.00	0	
5	QPSK	1	0	0	0	3	20.64	20.72	20.69			
5	QPSK	3	0	0	0	3	19.92	19.92	19.94			
5	QPSK	3	0	0	0	3	19.91	19.83	19.80			
5	QPSK	6	0	0	0	3	19.93	19.90	19.85			
5	16QAM	1	0	0	0	3	20.59	20.64	20.67	22.00	0	
5	16QAM	1	0	0	0	3	20.60	20.60	20.60			
5	16QAM	3	0	0	0	3	19.80	19.88	19.76			
5	16QAM	3	0	0	0	3	19.87	19.88	19.76			
5	16QAM	6	0	0	0	3	19.90	19.87	19.89			
Channel				L	M	H	23000	23000	23100	Tune-up limit (dBm)	MPR (dB)	
3	QPSK	1	0	0	0	1	20.63	20.68	20.64	22.00	0	
3	QPSK	1	0	0	0	1	20.62	20.66	20.58			
3	QPSK	3	0	0	0	1	19.90	19.87	19.76			
3	QPSK	3	0	0	0	1	19.89	19.85	19.74			
3	QPSK	6	0	0	0	1	19.90	19.96	19.77			
3	16QAM	1	0	0	0	1	19.82	19.90	19.80	21.00	1	
3	16QAM	1	0	0	0	1	19.82	19.90	19.80			
3	16QAM	3	0	0	0	1	18.86	19.87	19.75			
3	16QAM	3	0	0	0	1	18.83	19.91	19.79			
3	16QAM	6	0	0	0	1	18.93	19.95	19.78			
Channel				L	M	H	23000	23000	23100	Tune-up limit (dBm)	MPR (dB)	
1.4	QPSK	1	0	0	0	0	20.63	20.68	20.68	22.00	0	
1.4	QPSK	1	0	0	0	0	20.58	20.63	20.62			
1.4	QPSK	3	0	0	0	0	19.90	19.87	19.81			
1.4	QPSK	3	0	0	0	0	19.88	19.88	19.84			
1.4	QPSK	6	0	0	0	0	19.90	19.94	19.75			
1.4	16QAM	1	0	0	0	0	19.80	19.90	19.79	21.00	1	
1.4	16QAM	1	0	0	0	0	19.87	19.87	19.76			
1.4	16QAM	3	0	0	0	0	18.91	19.88	19.79			
1.4	16QAM	3	0	0	0	0	18.92	19.89	19.83			
1.4	16QAM	6	0	0	0	0	18.93	19.94	19.76			

LTE Band 13												
Site [MHz]	Modulation	RB Size	RB Offset	Index			Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel							23200	23200	23300	784		
Frequency (MHz)												
10	QPSK	1	0	0	0	7	21.08	21.08	21.08	22.00	0	
10	QPSK	1	0	0	0	7	21.08	21.08	21.08			
10	QPSK	3	0	0	0	7	21.07	21.07	21.07			
10	QPSK	3	0	0	0	7	21.07	21.07	21.07			
10	QPSK	6	0	0	0	7	20.99	21.00	21.00			
10	16QAM	1	0	0	0	7	21.00	21.00	21.00	21.00	1	
10	16QAM	1	0	0	0	7	21.00	21.00	21.00			
10	16QAM	1	0	0	0	7	21.00	21.00	21.00			
10	16QAM	3	0	0	0	7	21.00	21.00	21.00			
10	16QAM	6	0	0	0	7	21.00	21.00	21.00			
Channel							23200	23200	23300	784		
Frequency (MHz)												
5	QPSK	1	0	0	0	3	20.96	20.96	20.96	22.00	0	
5	QPSK	1	0	0	0	3	20.92	20.99	20.96			
5	QPSK	3	0	0	0	3	20.16	20.21	20.17			
5	QPSK	3	0	0	0	3	20.17	20.11	20.11			
5	QPSK	6	0	0	0	3	20.05	20.21	20.22			
5	16QAM	1	0	0	0	3	20.89	20.98	21.00	22.00	0	
5	16QAM	1	0	0	0	3	21.00	20.98	20.99			
5	16QAM	3	0	0	0	3	20.22	20.19	20.11			
5	16QAM	3	0	0	0	3	20.13	20.13	20.11			
5	16QAM	6	0	0	0	3	19.91	19.95	19.90			