

not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

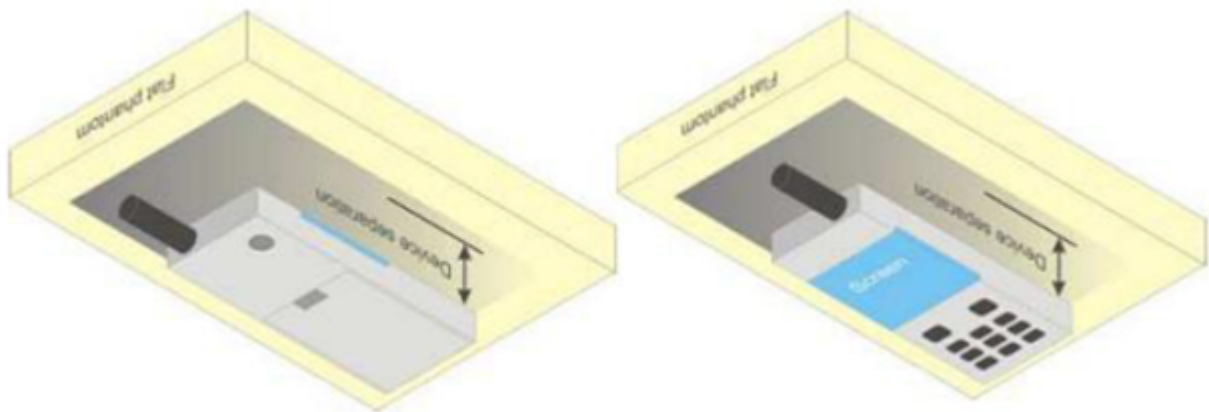


Figure 7.4.1 – Test positions for body-worn devices

7.5. Wireless Router Devices

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WLAN simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WLAN transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WLAN transmitter according to FCC KDB Publication 447498 D01 publication procedures. The —Portable Hotspot|| feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

8. RF Output Power

8.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	128	189	251		Tune-up	128	189	251
Frequency (MHz)		824.2	836.4	848.8			824.2	836.4	848.8
GSM (GMSK)	34.0	33.25	33.31	33.21	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	34.0	33.55	33.52	33.39	-9.03	24.97	24.52	24.49	24.36
GPRS(GMSK,2 Tx slot)	30.5	30.48	30.47	30.36	-6.02	24.48	24.46	24.45	24.34
GPRS(GMSK,3 Tx slot)	29.0	28.65	28.78	28.68	-4.26	24.74	24.39	24.52	24.42
GPRS(GMSK,4 Tx slot)	27.0	26.63	26.64	26.58	-3.01	23.99	23.62	23.63	23.57

Band GSM1900	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	512	661	810		Tune-up	512	661	810
Frequency (MHz)		1850.2	1880	1909.8			1850.2	1880	1909.8
GSM (GMSK)	29.5	28.94	29.42	29.49	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	29.5	28.93	29.40	29.47	-9.03	20.47	19.90	20.37	20.44
GPRS(GMSK,2 Tx slot)	27.0	26.05	26.57	26.86	-6.02	20.98	20.03	20.55	20.84
GPRS(GMSK,3 Tx slot)	25.0	24.11	24.69	24.99	-4.26	20.74	19.85	20.43	20.73
GPRS(GMSK,4 Tx slot)	23.0	21.75	22.36	22.75	-3.01	19.99	18.74	19.35	19.74

Note:

Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme.

Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link

Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link

Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link

SAR testing was performed on the maximum frame-averaged power mode.

The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum

Burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB

Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB

Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB

Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB

8.2. WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

1. Release99 Setup Configuration

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm1
	β_c/β_d	8/15

2. HSDPA Setup Configuration

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm 2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	$A_{hs} = \beta_{hs}/\beta_c$	30/15			

3. HSUPA Setup Configuration

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm1				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	15/15
	β_{ec}	209/225	12/15	30/15	2/15	24/15
	β_c/β_d	11/15	6/15	15/9	2/15	15/15
	β_{hs}	22/15	12/15	30/15	4/15	30/15
	β_{ed}	1309/225	94/75	47/15 47/15	56/75	134/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
HSDPA Specific Settings	D_{ACK}	8				
	D_{NAK}	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				

HSUPA Specific Settings	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = β_{hs}/β_c	30/15				
	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
Associated Max UL Data Rate kbps		242.1	174.9	482.8	205.8	308.9

4. WCDMA Conducted Power Results

Choose the highest output power mode RMC 12.2Kbps for Band VIII/I at middle channel to test SAR and determine the worst configuration for further high/low channel test.

WCDMA Band II	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
RMC12.2K	23.0	22.50	22.74	22.77
HSDPA Sub 1	23.0	22.64	22.99	22.86
HSDPA Sub 2	23.0	22.27	22.62	22.42
HSDPA Sub 3	22.5	22.06	22.34	22.11
HSDPA Sub 4	22.5	22.09	22.47	22.26
HSUPA Sub 1	20.0	19.46	20.00	19.82
HSUPA Sub 2	20.5	20.14	20.37	20.14
HSUPA Sub 3	20.5	19.93	20.18	19.95
HSUPA Sub 4	20.5	20.17	20.49	20.26
HSUPA Sub 5	23.0	22.31	22.67	22.43

WCDMA Band IV	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	1312	1413	1513
Frequency (MHz)		1712.4	1732.6	1752.6
RMC12.2K	23.0	22.66	22.60	22.52
HSDPA Sub 1	23.0	22.52	22.82	22.68
HSDPA Sub 2	23.0	22.69	22.93	22.74
HSDPA Sub 3	23.0	22.64	22.87	22.69
HSDPA Sub 4	23.0	22.61	22.86	22.71
HSUPA Sub 1	22.5	21.43	22.09	21.80
HSUPA Sub 2	22.5	21.82	22.18	21.90
HSUPA Sub 3	22.0	21.56	21.96	21.68
HSUPA Sub 4	22.5	21.85	22.22	22.00
HSUPA Sub 5	23.0	22.50	22.71	22.60

WCDMA Band V	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	4132	4182	4233
Frequency (MHz)		826.4	836.4	846.6
RMC12.2K	23.0	22.85	22.88	22.81
HSDPA Sub 1	23.0	22.82	22.89	22.82
HSDPA Sub 2	22.5	22.60	22.36	22.21
HSDPA Sub 3	22.0	22.34	22.33	22.13
HSDPA Sub 4	22.0	21.63	21.81	21.57
HSUPA Sub 1	21.0	21.67	21.84	21.59
HSUPA Sub 2	21.0	20.55	20.61	20.46
HSUPA Sub 3	21.0	20.64	20.76	20.59
HSUPA Sub 4	20.5	20.42	20.50	20.37
HSUPA Sub 5	23.0	20.14	20.28	20.18

8.3. LTE Conducted Power

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 36.521-1 specification. A summary of these configurations are illustrated below:

Test Parameters for Channel Bandwidths				
Ch BW	Downlink Configuration	Mod'n	Uplink Configuration	
	N/A for Max UE output power testing		RB allocation	
			FDD	TDD
1.4MHz		QPSK	1	1
1.4MHz		QPSK	5	5
3MHz		QPSK	1	1
3MHz		QPSK	4	4
5MHz		QPSK	1	1
5MHz		QPSK	8	8
10MHz		QPSK	1	1
10MHz		QPSK	12	12
15MHz		QPSK	1	1
15MHz		QPSK	16	16
20MHz		QPSK	1	1
20MHz		QPSK	18	18

Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, the applicable channel bandwidths are specified in Table 5.4.2.1-1.

Note 2: For E-UTRA bands not applied with Note 2 in Table 6.2.2.3-1:

- The 1 RB allocation shall be tested at RB#0 for low and mid range, RB #max for high range test frequency.
- The RBstart of non-1RB allocation shall be RB #0 for low and mid range, RB# (max +1 - RB allocation) for high range test frequency.

Note 3: For E-UTRA bands applied with Note 2 in Table 6.2.2.3-1:

- If the test channel bandwidth is larger than 4MHz, then the 1 RB allocation shall be tested at both RB #0 and RB #max.
- If the test channel bandwidth is smaller or equal to 4MHz, then the 1 RB allocation shall be tested at RB #0.
- If the test channel bandwidth = (FUL_high - FUL_low) specified by the operating band, then only one frequency range shall be tested and the 1 RB allocation shall be tested at RB #0, RB # $\left\lceil N_{RB}^{UL} / 2 \right\rceil$ and RB #max.
- For non-1RB allocation, test frequency is middle range, and the RBstart shall be RB #0.

LTE Conducted Power Results

LTE output list

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	24.0	23.39	23.83	23.79
			1	2	24.0	23.35	23.87	23.76
			1	5	24.0	23.35	23.70	23.71
			3	0	23.5	22.87	23.12	23.03
			3	1	23.5	22.86	23.13	23.02
			3	2	23.5	22.71	23.12	23.01
			6	0	22.5	21.80	22.02	22.07
		16QAM	1	0	23.5	22.61	23.09	22.67
			1	2	23.5	22.56	23.05	22.10
			1	5	23.5	22.60	23.07	22.17
			3	0	22.0	21.35	21.78	21.91
			3	1	22.0	21.43	21.75	21.91
			3	2	22.0	21.68	21.80	21.90
			6	0	21.0	21.19	21.34	21.19
		64QAM	1	0	23.0	22.08	22.82	22.19
			1	2	23.0	22.04	21.88	21.56
			1	5	23.0	22.06	22.17	21.53
			3	0	22.5	21.81	21.72	22.17
			3	1	22.5	21.82	21.74	22.17
			3	2	22.5	21.92	21.96	22.20
			6	0	21.0	20.90	20.92	20.77
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	24.0	23.46	23.50	23.68
			1	7	24.0	23.44	23.59	23.73
			1	14	24.0	23.48	23.64	23.61
			8	0	22.5	21.72	21.97	21.92
			8	4	22.5	21.70	21.88	21.98
			8	7	22.5	21.73	22.04	22.01
			15	0	22.5	21.78	22.03	22.03
		16QAM	1	0	23.0	22.34	22.50	22.58
			1	7	23.0	22.34	22.63	22.59
			1	14	23.0	21.79	22.62	22.50
			8	0	22.0	21.34	21.09	21.11
			8	4	22.0	21.35	21.11	21.13
			8	7	22.0	21.38	21.51	21.23
			15	0	21.5	21.05	21.08	20.97
		64QAM	1	0	22.5	22.14	21.97	22.06
			1	7	22.5	22.22	22.35	22.09
			1	14	22.5	21.54	22.46	22.09
			8	0	21.0	20.70	20.83	20.55
			8	4	21.0	20.68	20.84	20.43
			8	7	21.0	20.72	20.87	20.56
			15	0	21.5	20.87	21.13	20.68

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band 2	5MHz	QPSK	1	0	24.0	23.46	23.71	23.64
			1	12	24.0	23.49	23.82	23.64
			1	24	24.0	23.53	23.81	23.58
			12	0	22.5	21.88	21.90	21.93
			12	6	22.5	21.68	21.92	21.99
			12	11	22.5	21.69	21.93	22.08
			25	0	22.0	21.79	21.84	21.94
		16QAM	1	0	23.0	22.24	22.07	22.80
			1	12	23.0	22.20	22.09	22.89
			1	24	23.0	22.36	22.07	22.88
			12	0	21.5	21.17	20.97	21.08
			12	6	21.5	21.31	20.94	21.17
			12	11	21.5	21.29	20.95	21.09
			25	0	21.5	21.22	21.04	20.99
		64QAM	1	0	22.5	21.44	21.63	21.62
			1	12	22.5	21.48	22.01	21.66
			1	24	22.5	21.20	21.73	21.70
			12	0	21.5	20.79	21.05	20.63
			12	6	21.5	20.82	21.06	20.63
			12	11	21.5	20.82	21.02	20.55
			25	0	21.5	20.98	21.22	20.56
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.0	23.48	23.58	23.71
			1	24	24.0	23.53	23.61	23.70
			1	49	24.0	23.44	23.70	23.70
			25	0	22.5	21.79	21.93	22.12
			25	12	22.5	21.83	21.96	22.07
			25	24	22.5	21.84	21.96	22.04
			50	0	22.0	21.78	22.00	21.99
		16QAM	1	0	23.0	21.71	22.44	22.04
			1	24	23.0	22.35	22.45	22.56
			1	49	23.0	22.35	22.54	22.02
			25	0	21.5	21.29	21.00	21.17
			25	12	21.5	21.31	21.01	21.14
			25	24	21.5	21.31	21.02	21.19
			50	0	21.5	20.86	21.07	21.08
		64QAM	1	0	22.5	21.62	21.99	21.62
			1	24	22.5	21.90	21.94	22.06
			1	49	22.5	22.34	22.04	21.53
			25	0	21.5	20.93	20.83	21.09
			25	12	21.5	20.93	20.79	21.08
			25	24	21.5	20.89	20.82	21.11
			50	0	21.5	20.97	21.17	21.20

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.0	23.54	23.65	23.88
			1	37	24.0	23.60	23.70	23.81
			1	74	24.0	23.63	23.70	23.84
			36	0	22.5	21.79	22.00	21.99
			36	18	22.5	21.72	21.90	22.16
			36	37	22.5	21.82	21.92	22.06
			75	0	22.5	21.72	21.99	22.04
		16QAM	1	0	23.0	22.40	22.35	22.80
			1	37	23.0	22.50	22.43	22.76
			1	74	23.0	22.54	22.50	22.76
			36	0	21.5	20.94	21.10	21.20
			36	18	21.5	20.95	21.12	21.23
			36	37	21.5	20.94	21.05	21.18
			75	0	21.5	20.89	21.08	21.05
		64QAM	1	0	22.5	22.07	21.89	22.12
			1	37	22.5	21.81	22.12	21.99
			1	74	22.5	21.89	22.02	22.07
			36	0	21.5	20.90	20.81	20.82
			36	18	21.5	20.98	20.84	20.88
			36	37	21.5	20.99	20.83	20.96
			75	0	21.5	20.91	21.10	21.20
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	24.5	23.54	23.63	23.97
			1	49	24.5	23.62	23.74	23.90
			1	99	24.5	23.64	23.89	23.91
			50	0	22.5	21.81	22.06	22.12
			50	24	22.5	21.73	22.18	22.18
			50	49	22.5	21.73	22.09	22.20
			100	0	22.5	21.87	22.13	22.15
		16QAM	1	0	23.5	22.92	22.76	23.29
			1	49	23.5	23.03	22.77	23.32
			1	99	23.5	23.02	22.98	23.27
			50	0	21.5	20.90	21.21	21.23
			50	24	21.5	20.90	21.29	21.18
			50	49	21.5	20.92	21.16	21.27
			100	0	21.5	21.25	21.10	21.24
		64QAM	1	0	23.0	22.71	21.93	22.77
			1	49	23.0	22.79	21.93	22.73
			1	99	23.0	22.46	22.21	22.72
			50	0	21.5	20.94	21.02	20.87
			50	24	21.5	20.94	20.79	20.81
			50	49	21.5	20.94	20.87	21.01
			100	0	21.5	20.96	21.09	20.92

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	23.5	22.82	22.94	22.57
			1	2	23.5	22.88	23.06	22.56
			1	5	23.5	22.78	23.06	22.55
			3	0	23.0	22.71	22.81	22.54
			3	1	23.0	22.84	22.79	22.52
			3	2	23.0	22.83	22.78	22.60
			6	0	22.0	21.82	21.84	21.58
		16QAM	1	0	23.5	22.61	22.96	22.27
			1	2	23.5	23.02	22.36	22.23
			1	5	23.5	23.01	22.37	22.22
			3	0	22.0	21.41	21.70	21.06
			3	1	22.0	21.49	21.64	21.07
			3	2	22.0	21.49	21.63	21.28
			6	0	21.5	21.04	20.88	20.64
		64QAM	1	0	22.5	22.30	21.82	20.63
			1	2	22.5	22.43	21.18	20.65
			1	5	22.5	22.37	21.22	20.56
			3	0	22.0	21.52	21.49	21.34
			3	1	22.0	21.45	21.51	21.33
			3	2	22.0	21.53	21.55	21.71
			6	0	21.0	20.54	20.51	20.53
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	23.5	22.94	22.94	22.64
			1	7	23.5	22.89	23.08	22.70
			1	14	23.5	22.88	23.10	22.68
			8	0	22.0	21.72	21.67	21.58
			8	4	22.0	21.75	21.59	21.45
			8	7	22.0	21.72	21.71	21.64
			15	0	22.0	21.82	21.71	21.63
		16QAM	1	0	23.0	22.35	23.00	22.01
			1	7	23.0	22.22	22.30	22.12
			1	14	23.0	22.25	22.41	22.04
			8	0	21.0	21.00	20.89	20.77
			8	4	21.0	20.91	20.75	20.79
			8	7	21.0	20.99	20.88	20.75
			15	0	21.0	20.70	20.72	20.51
		64QAM	1	0	22.5	22.01	21.77	21.87
			1	7	22.5	21.94	21.20	21.88
			1	14	22.5	21.81	21.23	21.90
			8	0	21.0	20.65	20.75	20.60
			8	4	21.0	20.62	20.67	20.61
			8	7	21.0	20.74	20.73	20.59
			15	0	21.0	20.77	20.69	20.72

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	23.5	23.07	23.01	22.97
			1	12	23.5	22.88	22.85	22.97
			1	24	23.5	22.94	22.91	22.96
			12	0	22.0	21.69	21.72	21.61
			12	6	22.0	21.70	21.76	21.64
			12	11	22.0	21.85	21.61	21.65
			25	0	22.0	21.77	21.80	21.62
		16QAM	1	0	23.5	22.19	22.14	21.67
			1	12	23.5	22.52	22.04	21.62
			1	24	23.5	22.52	22.02	21.64
			12	0	21.0	20.91	20.61	20.64
			12	6	21.0	20.92	20.63	20.64
			12	11	21.0	20.91	20.64	20.64
			25	0	21.0	20.75	20.80	20.70
		64QAM	1	0	22.5	21.11	22.04	21.26
			1	12	22.5	21.37	21.74	21.26
			1	24	22.5	21.43	21.73	21.28
			12	0	21.0	20.64	20.90	20.71
			12	6	21.0	20.64	20.91	20.72
			12	11	21.0	20.64	20.90	20.73
			25	0	21.0	20.92	20.98	20.96
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	23.5	23.02	22.97	22.87
			1	24	23.5	22.87	23.01	22.87
			1	49	23.5	22.89	23.10	22.79
			25	0	22.0	21.76	21.65	21.69
			25	12	22.0	21.59	21.67	21.71
			25	24	22.0	21.65	21.66	21.72
			50	0	22.0	21.60	21.83	21.58
		16QAM	1	0	22.5	21.74	22.23	22.13
			1	24	22.5	21.71	22.34	22.02
			1	49	22.5	21.72	22.32	21.90
			25	0	21.0	20.88	20.88	20.58
			25	12	21.0	20.87	20.95	20.59
			25	24	21.0	20.82	20.70	20.59
			50	0	21.0	20.79	20.82	20.64
		64QAM	1	0	22.0	21.27	21.14	21.52
			1	24	22.0	21.25	21.24	21.49
			1	49	22.0	21.16	21.30	21.44
			25	0	21.0	20.87	20.78	20.83
			25	12	21.0	20.86	20.79	20.81
			25	24	21.0	20.86	20.82	20.86
			50	0	21.0	20.91	20.84	20.81

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	23.5	23.02	22.94	22.90
			1	37	23.5	22.85	23.02	22.79
			1	74	23.5	22.43	23.12	22.81
			36	0	22.0	21.77	21.67	21.71
			36	16	22.0	21.78	21.69	21.62
			36	35	22.0	21.68	21.54	21.62
			75	0	22.0	21.73	21.76	21.65
		16QAM	1	0	22.5	22.47	22.18	22.11
			1	37	22.5	22.12	22.36	22.07
			1	74	22.5	22.41	22.44	22.28
			36	0	21.0	20.85	20.75	20.78
			36	16	21.0	20.86	20.75	20.82
			36	35	21.0	20.88	20.72	20.81
			75	0	21.5	21.19	20.88	20.67
		64QAM	1	0	22.5	21.82	21.09	21.57
			1	37	22.5	22.06	21.25	21.90
			1	74	22.5	21.80	21.35	21.76
			36	0	21.0	20.83	20.55	20.86
			36	16	21.0	20.84	20.58	20.88
			36	35	21.0	20.85	20.54	20.88
			75	0	21.0	20.81	20.92	20.83
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	23.5	23.08	22.65	22.96
			1	49	23.5	22.78	22.81	22.99
			1	99	23.5	22.86	22.95	23.04
			50	0	22.0	21.64	21.73	21.63
			50	24	22.0	21.67	21.74	21.76
			50	49	22.0	21.57	21.75	21.76
			100	0	22.0	21.54	21.79	21.76
		16QAM	1	0	23.5	23.02	22.26	21.59
			1	49	23.5	22.66	22.39	21.85
			1	99	23.5	22.83	22.13	21.72
			50	0	21.0	20.69	20.82	20.80
			50	24	21.0	20.71	20.85	20.80
			50	49	21.0	20.72	20.85	20.81
			100	0	21.0	20.84	20.67	20.66
		64QAM	1	0	23.0	22.45	22.03	21.82
			1	49	23.0	22.61	21.69	22.14
			1	99	23.0	22.76	21.86	21.98
			50	0	21.0	20.93	20.39	20.97
			50	24	21.0	20.94	20.40	20.97
			50	49	21.0	20.77	20.41	20.98
			100	0	21.0	20.49	20.88	20.82

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	23.5	23.18	23.32	23.31
			1	2	23.5	23.19	23.44	23.33
			1	5	23.5	23.08	23.40	23.44
			3	0	23.5	23.14	23.16	23.19
			3	1	23.5	23.13	23.18	23.23
			3	2	23.5	23.11	23.17	23.22
			6	0	22.5	22.10	22.15	22.11
		16QAM	1	0	23.5	22.93	22.64	23.31
			1	2	23.5	22.79	22.70	23.31
			1	5	23.5	22.88	22.70	23.27
			3	0	22.5	21.56	22.00	21.79
			3	1	22.5	21.55	22.05	21.94
			3	2	22.5	21.61	22.02	21.79
			6	0	21.5	21.22	21.32	21.18
		64QAM	1	0	23.0	21.88	21.47	22.54
			1	2	23.0	21.85	21.57	22.38
			1	5	23.0	21.93	21.55	22.30
			3	0	22.5	21.56	21.97	21.84
			3	1	22.5	21.54	21.97	22.21
			3	2	22.5	21.53	22.20	22.21
			6	0	21.5	21.13	20.76	20.92
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	23.5	23.29	23.20	23.26
			1	7	23.5	23.30	23.41	23.24
			1	14	23.5	23.33	23.39	23.34
			8	0	22.5	22.17	22.08	22.17
			8	4	22.5	22.05	22.10	22.12
			8	7	22.5	22.10	22.04	22.04
			15	0	22.5	22.22	22.17	22.10
		16QAM	1	0	23.0	22.57	22.52	22.87
			1	7	23.0	22.61	22.69	22.78
			1	14	23.0	22.53	22.67	22.69
			8	0	21.5	21.32	21.11	21.37
			8	4	21.5	21.34	21.06	21.35
			8	7	21.5	21.28	21.19	21.27
			15	0	21.5	21.08	21.14	21.16
		64QAM	1	0	22.5	22.16	21.53	22.36
			1	7	22.5	22.18	21.55	22.26
			1	14	22.5	22.10	21.57	22.25
			8	0	21.5	21.10	20.67	20.73
			8	4	21.5	21.13	20.67	20.75
			8	7	21.5	20.73	20.76	20.91
			15	0	21.5	21.13	20.80	20.99

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	24.0	23.41	23.41	23.51
			1	12	24.0	23.33	23.21	23.45
			1	24	24.0	23.45	23.24	23.47
			12	0	22.5	22.26	22.09	22.14
			12	6	22.5	22.13	22.01	22.23
			12	11	22.5	22.14	22.01	22.15
			25	0	22.5	22.14	22.09	22.17
		16QAM	1	0	23.0	22.49	22.47	22.18
			1	12	23.0	22.50	22.42	22.18
			1	24	23.0	22.62	22.30	22.21
			12	0	21.5	21.12	21.01	21.12
			12	6	21.5	21.14	21.03	21.12
			12	11	21.5	21.14	21.03	21.12
			25	0	21.5	21.03	21.26	21.32
		64QAM	1	0	22.5	21.33	22.35	21.91
			1	12	22.5	21.40	22.14	21.82
			1	24	22.5	21.41	22.34	21.83
			12	0	21.5	21.03	20.83	20.79
			12	6	21.5	21.13	20.84	20.79
			12	11	21.5	21.13	20.84	20.82
			15	0	21.5	20.65	21.01	21.16
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	24.0	23.26	23.42	23.25
			1	24	24.0	23.30	23.44	23.18
			1	49	24.0	23.24	23.50	23.30
			25	0	22.5	22.07	21.96	22.15
			25	12	22.5	22.14	22.10	22.17
			25	24	22.5	22.21	22.11	22.18
			50	0	22.5	22.05	22.14	22.09
		16QAM	1	0	23.0	21.99	22.69	22.39
			1	24	23.0	22.10	22.68	22.34
			1	49	23.0	22.09	22.71	22.54
			25	0	21.5	21.19	21.14	21.04
			25	12	21.5	21.24	21.15	21.07
			25	24	21.5	21.19	21.10	20.99
			50	0	21.5	20.97	21.25	21.01
			1	0	22.5	21.54	21.51	22.33
			1	24	22.5	21.50	21.49	21.79
			1	49	22.5	21.53	21.59	22.04
			25	0	21.0	20.92	20.61	20.85
			25	12	21.0	20.82	20.64	20.93
			25	24	21.0	20.82	20.65	20.85
			50	0	21.5	20.74	20.82	21.15

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	22.5	22.12	21.82	21.85
			1	12	22.5	22.16	22.04	22.01
			1	24	22.5	22.18	21.99	22.03
			12	0	21.5	21.08	20.96	20.82
			12	6	21.5	21.13	20.91	20.78
			12	11	21.5	21.13	20.95	20.79
			25	0	21.5	21.03	20.87	20.81
		16QAM	1	0	21.5	21.28	21.17	21.07
			1	12	21.5	21.30	21.16	21.15
			1	24	21.5	21.28	21.15	21.14
			12	0	20.5	20.26	20.04	20.06
			12	6	20.5	20.26	20.05	19.93
			12	11	20.5	20.26	20.02	19.93
			25	0	20.5	20.30	19.84	19.97
		64QAM	1	0	21.5	20.28	20.07	20.95
			1	12	21.5	20.22	20.12	20.99
			1	24	21.5	20.20	20.15	21.02
			12	0	19.5	19.16	18.84	19.09
			12	6	19.5	19.17	18.84	19.10
			12	11	19.5	19.15	18.84	19.09
			25	0	19.5	19.29	18.83	18.90
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20800/2505	21100/2535	21400/2565
LTE Band 7	10MHz	QPSK	1	0	22.5	22.11	21.88	21.74
			1	24	22.5	22.10	21.79	21.81
			1	49	22.5	22.08	21.86	21.64
			25	0	21.5	21.16	20.77	20.82
			25	12	21.5	21.08	20.93	20.84
			25	24	21.5	21.18	20.93	20.73
			50	0	21.5	21.17	20.86	20.75
		16QAM	1	0	22.0	20.94	21.96	21.52
			1	24	22.0	21.00	21.96	21.03
			1	49	22.0	20.91	21.93	20.97
			25	0	20.5	20.28	19.98	19.90
			25	12	20.5	20.25	20.05	19.82
			25	24	20.5	20.25	19.98	19.86
			50	0	20.5	20.19	20.00	19.99
		64QAM	1	0	21.0	20.37	20.89	20.56
			1	24	21.0	20.47	20.89	20.56
			1	49	21.0	20.47	20.96	20.61
			25	0	19.5	19.24	18.88	19.02
			25	12	19.5	19.25	18.90	18.98
			25	24	19.5	19.25	18.92	18.97
			50	0	19.5	19.19	19.11	18.89

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	22.0	21.72	21.75	21.80
			1	37	22.0	21.67	21.81	21.80
			1	74	22.0	21.59	21.87	21.75
			36	0	21.5	21.17	20.84	20.86
			36	16	21.5	21.18	20.88	20.82
			36	35	21.5	21.18	20.88	20.84
			75	0	21.0	20.99	20.87	20.98
		16QAM	1	0	22.0	21.52	21.96	21.47
			1	37	22.0	21.44	21.89	21.53
			1	74	22.0	21.42	21.99	21.45
			36	0	20.5	20.33	19.94	19.95
			36	16	20.5	20.33	19.92	20.01
			36	35	20.5	20.33	19.92	19.98
			75	0	21.0	20.23	19.91	19.97
		64QAM	1	0	21.0	20.95	20.89	20.98
			1	37	21.0	20.98	20.82	20.96
			1	74	21.0	20.89	20.85	20.91
			36	0	19.5	19.15	18.92	19.04
			36	16	19.5	19.16	18.94	18.90
			36	35	19.5	19.16	18.94	19.01
			75	0	19.5	19.15	18.91	18.97
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20850/2510	21100/2535	21350/2560
LTE Band 7	20MHz	QPSK	1	0	22.5	22.08	21.95	21.99
			1	49	22.5	22.05	21.92	21.88
			1	99	22.5	22.11	22.06	21.86
			50	0	21.5	21.00	20.95	20.87
			50	24	21.5	21.14	20.98	20.89
			50	49	21.5	21.13	20.98	20.83
			100	0	21.5	21.07	20.80	20.89
		16QAM	1	0	22.5	21.99	21.26	21.16
			1	49	22.5	21.97	21.27	21.16
			1	99	22.5	22.11	21.33	20.76
			50	0	20.5	20.18	20.14	20.15
			50	24	20.5	20.22	20.15	20.07
			50	49	20.5	20.21	20.07	20.09
			100	0	20.5	20.23	19.95	19.95
		64QAM	1	0	22.0	21.75	21.12	20.89
			1	49	22.0	21.79	21.08	20.91
			1	99	22.0	21.62	21.08	20.78
			50	0	19.5	19.23	18.96	18.97
			50	24	19.5	19.12	18.71	19.01
			50	49	19.5	19.22	18.69	19.02
			100	0	19.5	19.02	18.94	18.96

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23017/699.7	23095/707.5	23173/715.3
LTE Band 12	1.4MHz	QPSK	1	0	24.0	23.79	23.87	23.95
			1	2	24.0	23.76	23.79	23.88
			1	5	24.0	23.73	23.84	23.85
			3	0	23.5	23.16	23.12	23.22
			3	1	23.5	23.17	23.11	23.23
			3	2	23.5	23.17	23.11	23.21
			6	0	22.5	21.97	22.17	22.26
		16QAM	1	0	22.5	22.90	22.65	23.06
			1	2	23.5	22.93	22.66	23.06
			1	5	23.5	22.82	22.62	23.09
			3	0	23.5	21.57	22.13	22.08
			3	1	22.5	21.57	22.15	21.75
			3	2	22.5	21.52	22.15	21.71
			6	0	22.0	21.51	21.00	21.43
		64QAM	1	0	22.5	22.15	22.11	21.46
			1	2	22.5	22.23	22.09	21.59
			1	5	22.5	22.26	22.05	21.57
			3	0	22.5	21.85	21.93	21.80
			3	1	22.5	21.80	21.89	22.24
			3	2	22.5	21.73	21.92	21.82
			6	0	21.5	21.17	20.59	20.79
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	24.0	23.88	23.84	23.86
			1	7	24.0	23.87	23.83	23.90
			1	14	24.0	23.93	23.88	23.81
			8	0	22.5	22.01	22.06	22.15
			8	4	22.5	22.04	22.23	22.10
			8	7	22.5	22.18	22.16	22.31
			15	0	22.5	22.05	21.91	22.09
		16QAM	1	0	23.5	22.41	23.30	22.74
			1	7	23.5	22.28	22.59	22.84
			1	14	23.5	22.55	22.67	22.57
			8	0	22.0	21.68	21.06	21.13
			8	4	22.0	21.63	21.10	21.11
			8	7	22.0	21.32	21.03	21.34
			15	0	21.5	21.36	21.17	21.15
		64QAM	1	0	23.0	22.54	22.26	22.03
			1	7	23.0	22.48	21.41	22.21
			1	14	23.0	22.19	21.48	22.05
			8	0	21.5	21.04	20.70	21.00
			8	4	21.5	21.16	20.69	21.01
			8	7	21.5	20.71	20.54	20.79
			15	0	21.5	21.07	20.60	21.17

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	24.5	23.96	23.92	24.09
			1	12	24.5	23.97	23.76	23.98
			1	24	24.5	23.90	24.00	23.92
			12	0	22.5	21.96	22.05	22.15
			12	6	22.5	22.02	21.90	22.16
			12	11	22.5	22.02	21.89	22.16
			25	0	22.5	22.20	22.09	22.01
		16QAM	1	0	23.0	22.01	22.33	22.59
			1	12	23.0	22.12	22.27	22.45
			1	24	23.0	22.03	22.21	22.55
			12	0	21.5	21.39	20.91	21.12
			12	6	21.5	21.49	20.88	21.07
			12	11	21.5	21.49	21.02	21.07
			25	0	21.5	21.20	21.05	20.95
		64QAM	1	0	22.5	21.83	21.35	22.28
			1	12	22.5	21.66	21.45	22.07
			1	24	22.5	21.48	21.34	22.35
			12	0	21.5	21.06	20.59	20.95
			12	6	21.5	21.07	20.55	20.89
			12	11	21.5	21.06	20.60	20.97
			25	0	21.5	20.89	20.74	21.22
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23060/704	23095/707.5	23130/711
LTE Band 12	10MHz	QPSK	1	0	24.5	23.75	23.79	23.73
			1	24	24.5	23.68	23.82	23.79
			1	49	24.5	23.81	24.00	23.72
			25	0	22.5	22.13	22.06	22.02
			25	12	22.5	22.14	22.00	22.09
			25	24	22.5	22.15	22.01	22.11
			50	0	22.5	22.05	21.94	21.90
		16QAM	1	0	23.0	22.38	22.51	22.25
			1	24	23.0	22.46	22.50	22.28
			1	49	23.0	22.54	22.81	22.45
			25	0	21.5	21.25	21.13	21.04
			25	12	21.5	21.35	21.20	21.11
			25	24	21.5	21.20	21.20	20.93
			50	0	21.5	21.04	21.01	20.87
		64QAM	1	0	23.0	22.41	21.35	21.90
			1	24	23.0	21.90	21.32	21.66
			1	49	23.0	22.09	22.30	22.62
			25	0	21.0	20.85	20.78	20.62
			25	12	21.0	20.82	20.82	20.77
			25	24	21.0	20.82	20.78	20.63
			50	0	21.5	21.26	20.80	21.15

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23755/706.5	23790/710	23825/713.5
LTE Band 17	5MHz	QPSK	1	0	24.5	23.60	23.86	24.04
			1	12	24.5	23.86	23.96	23.93
			1	24	24.5	23.71	24.11	23.76
			12	0	22.5	21.96	22.03	22.22
			12	6	22.5	21.97	21.91	22.18
			12	11	22.5	22.14	22.07	22.17
			25	0	22.5	22.16	22.00	22.13
		16QAM	1	0	23.0	22.13	22.04	22.97
			1	12	23.0	22.21	21.91	22.88
			1	24	23.0	22.12	22.23	22.91
			12	0	21.5	21.02	20.85	21.20
			12	6	21.5	21.02	20.86	21.24
			12	11	21.5	21.02	20.87	21.11
			25	0	21.5	21.07	20.90	21.00
		64QAM	1	0	22.5	21.83	21.42	21.65
			1	12	22.5	22.01	21.52	21.69
			1	24	22.5	21.93	21.67	21.78
			12	0	21.0	20.95	20.58	20.76
			12	6	21.0	20.92	20.59	20.77
			12	11	21.0	20.96	20.59	20.78
			25	0	21.5	20.71	21.34	21.21
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	24.5	23.78	23.84	23.65
			1	24	24.5	23.77	23.95	23.84
			1	49	24.5	23.94	24.07	23.73
			25	0	22.5	21.99	21.88	22.20
			25	12	22.5	22.14	21.97	22.00
			25	24	22.5	22.15	21.93	21.84
			50	0	22.0	22.00	21.98	21.96
		16QAM	1	0	23.0	22.03	22.58	22.24
			1	24	23.0	22.10	22.57	22.68
			1	49	23.0	22.19	22.67	22.90
			25	0	21.5	21.13	21.11	21.09
			25	12	21.5	21.09	21.09	21.10
			25	24	21.5	21.12	21.11	20.99
			50	0	21.5	21.05	20.88	20.89
		64QAM	1	0	23.0	21.35	21.43	21.82
			1	24	23.0	21.42	21.37	22.28
			1	49	23.0	21.52	21.51	22.69
			25	0	21.0	20.77	20.40	20.68
			25	12	21.0	20.78	20.65	20.77
			25	24	21.0	20.75	20.60	20.76
			50	0	21.5	20.72	21.20	21.18

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26697/814.7	26865/831.5	27033/848.3
LTE Band 26	1.4MHz	QPSK	1	0	24.0	23.52	23.45	23.38
			1	2	24.0	23.45	23.42	23.41
			1	5	24.0	23.39	23.44	23.51
			3	0	23.5	23.39	23.19	23.13
			3	1	23.5	23.33	23.22	23.14
			3	2	23.5	23.32	23.28	23.25
		16QAM	6	0	22.5	22.21	22.23	22.30
			1	0	23.5	22.64	22.96	23.12
			1	2	23.5	22.31	22.61	23.15
			1	5	23.5	22.68	22.96	23.09
			3	0	23.0	22.22	22.71	21.84
			3	1	23.0	22.17	22.53	21.71
			3	2	23.0	22.19	22.11	21.88
			6	0	21.5	21.27	21.08	21.01
		64QAM	1	0	22.5	22.30	22.13	21.29
			1	2	22.5	21.70	21.52	21.37
			1	5	22.5	22.19	21.52	21.40
			3	0	22.5	22.00	21.79	21.64
			3	1	22.5	22.00	22.03	22.08
			3	2	22.5	21.99	21.77	21.68
			6	0	21.5	21.24	20.83	20.70
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26705/845.5	26865/831.5	27025/847.5
LTE Band 26	3MHz	QPSK	1	0	23.5	23.40	23.39	23.38
			1	7	23.5	23.40	23.42	23.45
			1	14	23.5	23.33	23.41	23.44
			8	0	22.5	22.14	22.07	22.05
			8	4	22.5	22.27	22.13	22.08
			8	7	22.5	22.29	22.23	22.09
		16QAM	15	0	22.5	22.16	22.13	22.10
			1	0	23.5	22.70	22.78	23.36
			1	7	23.5	22.56	22.74	22.88
			1	14	23.5	22.60	22.71	23.07
			8	0	21.5	21.35	21.13	21.05
			8	4	21.5	21.24	21.15	21.07
			8	7	21.5	21.44	21.32	21.19
			15	0	21.0	20.93	20.95	20.98
		64QAM	1	0	22.5	22.25	22.17	21.36
			1	7	22.5	22.22	22.10	21.33
			1	14	22.5	22.32	21.69	21.58
			8	0	21.5	21.26	21.22	21.20
			8	4	21.5	21.27	21.19	21.12
			8	7	21.5	20.81	20.77	20.75
			15	0	21.5	21.21	21.16	21.08

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26715/816.5	26865/831.5	27015/846.6
LTE Band 26	5MHz	QPSK	1	0	24.0	23.41	23.42	23.52
			1	12	24.0	23.41	23.41	23.42
			1	24	24.0	23.42	23.39	23.38
			12	0	22.5	22.02	22.18	22.38
			12	6	22.5	22.04	22.16	22.30
			12	11	22.5	22.05	22.11	22.17
			25	0	22.5	22.35	22.23	22.11
		16QAM	1	0	23.5	22.49	22.56	22.72
			1	12	23.5	22.57	22.69	23.04
			1	24	23.5	22.58	22.74	22.85
			12	0	21.5	21.15	21.32	21.48
			12	6	21.5	21.14	21.28	21.36
			12	11	21.5	21.14	21.11	21.08
			25	0	21.5	21.30	21.27	21.12
		64QAM	1	0	22.5	21.44	21.55	21.61
			1	12	22.5	21.59	21.60	21.62
			1	24	22.5	22.12	21.95	21.88
			12	0	21.5	21.16	20.96	20.81
			12	6	21.5	21.17	20.99	20.82
			12	11	21.5	21.18	21.17	21.17
			25	0	21.5	21.05	21.26	21.43
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26740/819	26865/831.5	26990/844
LTE Band 26	10MHz	QPSK	1	0	23.5	23.41	23.32	23.28
			1	24	23.5	23.39	23.32	23.27
			1	49	23.5	23.43	23.41	23.39
			25	0	22.5	22.26	22.23	22.22
			25	12	22.5	22.39	22.36	22.20
			25	24	22.5	22.28	22.16	22.09
			50	0	22.5	22.26	22.25	22.21
		16QAM	1	0	23.0	22.18	22.19	22.49
			1	24	23.0	22.19	22.23	22.65
			1	49	23.0	22.26	22.52	22.63
			25	0	21.5	21.43	21.34	21.04
			25	12	21.5	21.44	21.36	21.07
			25	24	21.5	21.45	21.33	21.06
			50	0	21.5	21.23	21.20	21.17
		64QAM	1	0	22.5	21.62	22.01	22.04
			1	24	22.5	21.60	21.74	22.12
			1	49	22.5	21.70	21.88	22.15
			25	0	21.5	20.93	20.93	20.93
			25	12	21.5	20.97	20.95	20.94
			25	24	21.5	21.01	21.30	21.35
			50	0	21.5	21.04	21.44	20.91

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26765/821.5	26865/831.5	26965/841.5
LTE Band 26	15MHz	QPSK	1	0	24.0	23.33	23.42	23.32
			1	37	24.0	23.42	23.45	23.31
			1	74	24.0	23.41	23.54	23.37
			36	0	22.5	22.12	22.11	22.13
			36	16	22.5	22.19	22.28	22.07
			36	35	22.5	22.27	22.26	22.29
			75	0	22.5	22.18	22.26	22.16
		16QAM	1	0	23.0	22.66	22.87	22.58
			1	37	23.0	22.91	22.93	22.54
			1	74	23.0	22.69	22.94	22.64
			36	0	22.5	22.10	22.06	22.11
			36	16	22.5	22.17	22.22	22.12
			36	35	22.5	22.20	22.24	22.15
			75	0	21.5	21.15	21.18	21.09
		64QAM	1	0	22.5	22.05	22.05	22.06
			1	37	22.5	22.11	22.24	22.06
			1	74	22.5	22.21	22.21	22.21
			36	0	22.5	22.13	22.11	22.21
			36	16	22.5	22.18	22.25	22.13
			36	35	22.5	22.19	22.23	22.17
			75	0	21.5	20.89	20.89	20.98

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		40065/2537.5	40355/2566.5	40640/2595	40750/2624.0	41215/2652.5
LTE Band 41	5MHz	QPSK	1	0	22.5	21.82	21.76	21.93	21.82	21.70
			1	12	22.5	21.83	21.85	22.03	21.91	21.87
			1	24	22.5	21.86	21.85	21.99	21.89	21.83
			12	0	21.5	20.86	20.93	21.12	20.99	20.99
			12	6	21.5	20.88	20.96	21.09	21.00	21.03
			12	11	21.5	21.00	21.02	21.09	21.04	21.03
			25	0	21.5	20.94	21.02	21.05	21.03	21.10
		16QAM	1	0	22.5	21.86	21.88	22.09	21.95	21.90
			1	12	22.5	21.91	21.95	21.75	21.88	21.98
			1	24	22.5	21.94	21.93	21.83	21.90	21.92
			12	0	20.5	19.77	19.92	20.13	19.99	20.06
			12	6	20.5	19.78	19.93	20.14	20.00	20.07
			12	11	20.5	19.77	19.93	20.14	20.00	20.08
			25	0	20.5	20.14	20.15	20.25	20.18	20.15
		64QAM	1	0	21.0	20.76	20.50	20.45	20.48	20.24
			1	12	21.0	20.82	20.52	20.61	20.55	20.21
			1	24	21.0	20.82	20.53	20.68	20.58	20.24
			12	0	19.5	18.77	18.96	19.29	19.07	19.15
			12	6	19.5	18.78	18.97	19.29	19.08	19.16
			12	11	19.5	18.78	18.98	19.30	19.08	19.17
			25	0	19.5	19.02	19.08	19.26	19.14	19.14
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		40090/2540	40365/2567.5	40640/2595	40915/2622.5	41190/2650
LTE Band 41	10MHz	QPSK	1	0	22.5	21.82	21.95	21.72	21.87	22.07
			1	24	22.5	21.92	22.00	21.67	21.89	22.08
			1	49	22.5	21.89	22.03	21.78	21.95	22.17
			25	0	21.5	20.96	21.15	21.02	21.11	21.34
			25	12	21.5	20.97	21.10	21.03	21.07	21.22
			25	24	21.5	20.97	21.10	21.03	21.08	21.23
			50	0	21.5	20.98	21.16	20.90	21.07	21.34
		16QAM	1	0	22.0	21.85	21.66	21.50	21.60	21.46
			1	24	22.0	21.91	21.69	21.52	21.63	21.47
			1	49	22.0	21.92	21.69	21.54	21.64	21.45
			25	0	21.0	20.08	20.34	20.25	20.31	20.60
			25	12	21.0	20.08	20.35	20.14	20.28	20.62
			25	24	21.0	20.08	20.35	20.15	20.28	20.62
			50	0	20.5	20.15	20.25	20.10	20.20	20.35
		64QAM	1	0	22.5	20.51	20.39	22.06	20.95	20.27
			1	24	22.5	20.72	20.54	21.89	20.99	20.35
			1	49	22.5	20.68	20.56	21.97	21.03	20.43
			25	0	20.0	18.94	19.23	19.11	19.19	19.52
			25	12	20.0	18.94	19.24	19.12	19.20	19.53
			25	24	20.0	19.00	19.27	19.12	19.22	19.53
			50	0	19.5	19.02	19.20	19.31	19.23	19.37

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		40115/2542.5	40375/2568.5	40640/2595	40900/2673.5	41165/2647.5
LTE Band 41	15MHz	QPSK	1	0	22.5	21.76	21.92	21.98	21.94	22.08
			1	37	22.5	21.86	21.99	21.94	21.97	22.12
			1	74	22.5	21.84	22.01	22.10	22.04	22.18
			36	0	21.5	20.85	21.09	21.08	21.08	21.32
			36	16	21.5	20.88	21.03	21.12	21.06	21.18
			36	35	21.5	20.88	21.03	21.06	21.04	21.18
			75	0	21.5	20.82	21.07	20.96	21.03	21.32
		16QAM	1	0	22.0	20.51	20.78	21.78	21.11	21.05
			1	37	22.0	20.47	20.68	21.73	21.03	20.89
			1	74	22.0	20.66	20.91	21.76	21.19	21.15
			36	0	21.0	20.02	20.27	20.15	20.23	20.51
			36	16	21.0	20.02	20.27	20.17	20.24	20.52
			36	35	21.0	20.01	20.27	20.18	20.24	20.53
			75	0	20.5	20.06	20.25	20.13	20.21	20.43
		64QAM	1	0	21.0	19.99	20.41	20.59	20.47	20.82
			1	37	21.0	20.09	20.51	20.64	20.55	20.92
			1	74	21.0	20.08	20.50	20.75	20.58	20.91
			36	0	19.5	19.06	19.27	19.08	19.21	19.48
			36	16	19.5	19.06	19.27	19.09	19.21	19.48
			36	35	19.5	19.05	19.27	19.09	19.21	19.49
			75	0	19.5	18.91	19.14	19.21	19.16	19.36
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		40140/2545	40390/2570	40640/2595	40890/2620	41140/2645
LTE Band 41	20MHz	QPSK	1	0	22.5	21.74	21.90	21.77	21.85	22.05
			1	49	22.5	21.83	21.99	21.90	21.96	22.14
			1	99	22.5	21.78	22.00	21.86	21.95	22.21
			50	0	21.5	20.94	21.12	21.04	21.09	21.29
			50	24	21.5	20.94	21.08	20.93	21.03	21.21
			50	49	21.5	20.93	21.07	20.94	21.03	21.21
			100	0	21.5	20.92	21.09	21.03	21.07	21.26
		16QAM	1	0	22.5	21.15	21.53	21.89	21.65	21.91
			1	49	22.5	21.06	21.51	21.89	21.64	21.96
			1	99	22.5	21.04	21.55	21.90	21.67	22.06
			50	0	20.5	20.05	20.19	20.28	20.22	20.33
			50	24	20.5	20.05	20.21	20.23	20.21	20.36
			50	49	20.5	20.05	20.20	20.14	20.18	20.35
			100	0	20.5	19.97	20.21	20.15	20.19	20.45
		64QAM	1	0	21.5	20.64	21.01	20.83	20.95	21.37
			1	49	21.5	20.46	20.90	20.81	20.87	21.34
			1	99	21.5	20.24	20.87	20.85	20.86	21.49
			50	0	20.0	18.98	19.27	19.03	19.19	19.55
			50	24	20.0	18.98	19.27	19.04	19.19	19.56
			50	49	20.0	18.97	19.26	19.04	19.19	19.55
			100	0	19.5	18.97	19.17	19.09	19.14	19.36

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131979/1710.7	132322/1745	132665/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	24.0	23.40	23.57	23.38
			1	2	24.0	23.40	23.52	23.30
			1	5	24.0	23.41	23.45	23.31
			3	0	23.0	22.73	22.67	22.71
			3	1	23.0	22.68	22.66	22.69
			3	2	23.0	22.65	22.75	22.67
			6	0	22.0	21.68	21.65	21.58
		16QAM	1	0	23.0	21.96	22.16	22.51
			1	2	23.0	21.97	22.14	22.68
			1	5	23.0	21.97	22.19	22.53
			3	0	21.5	21.34	21.05	21.26
			3	1	21.5	21.31	21.04	21.19
			3	2	21.5	21.29	21.02	21.19
			6	0	22.5	21.01	20.76	20.69
		64QAM	1	0	22.5	21.66	22.08	21.65
			1	2	22.5	21.64	22.11	21.63
			1	5	22.5	21.67	22.16	21.65
			3	0	22.5	22.14	21.65	21.18
			3	1	22.5	22.14	21.72	21.26
			3	2	22.5	22.18	21.51	21.25
			6	0	21.0	20.77	20.87	20.81
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131987/1711.5	132322/1745	132657/1778.5
LTE Band 66	3MHz	QPSK	1	0	23.5	23.34	23.37	23.31
			1	7	23.5	23.36	23.36	23.30
			1	14	23.5	23.32	23.35	23.38
			8	0	22.0	21.67	21.69	21.72
			8	4	22.0	21.65	21.72	21.65
			8	7	22.0	21.73	21.57	21.73
			15	0	22.0	21.53	21.71	21.75
		16QAM	1	0	23.0	21.98	22.83	22.28
			1	7	23.0	22.04	22.72	22.32
			1	14	23.0	21.93	22.71	22.39
			8	0	21.5	21.25	20.88	21.28
			8	4	21.5	21.24	20.89	21.35
			8	7	21.5	21.29	20.81	20.88
			15	0	21.0	20.96	20.83	20.82
		64QAM	1	0	22.5	21.61	21.50	22.05
			1	7	22.5	21.62	21.55	21.90
			1	14	22.5	21.63	21.80	21.82
			8	0	21.0	20.74	20.85	20.63
			8	4	21.0	20.69	20.87	20.64
			8	7	21.0	20.67	20.81	20.62
			15	0	21.0	20.75	20.77	20.91

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1712.5	132322/1745	132647/1777.5
LTE Band 66	5MHz	QPSK	1	0	24.0	23.47	23.55	23.34
			1	12	24.0	23.37	23.55	23.34
			1	24	24.0	23.38	23.57	23.32
			12	0	22.0	21.74	21.74	21.67
			12	6	22.0	21.65	21.78	21.72
			12	11	22.0	21.74	21.78	21.69
			25	0	22.0	21.57	21.70	21.76
		16QAM	1	0	22.5	22.26	22.40	21.63
			1	12	22.5	22.34	22.39	21.68
			1	24	22.5	22.38	22.35	21.78
			12	0	21.5	21.09	20.83	21.12
			12	6	21.5	21.10	20.85	21.10
			12	11	21.5	21.09	20.84	21.03
			25	0	21.5	21.00	20.77	21.24
		64QAM	1	0	23.0	21.52	22.34	21.12
			1	12	23.0	21.65	22.27	21.20
			1	24	23.0	21.61	22.61	20.80
			12	0	21.5	20.72	21.04	20.74
			12	6	21.5	20.72	21.05	20.76
			12	11	21.5	20.72	21.04	20.71
			25	0	21.0	20.72	20.88	20.96
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132022/1715	132322/1745	132622/1775
LTE Band 66	10MHz	QPSK	1	0	24.0	23.32	23.48	23.14
			1	24	24.0	23.32	23.50	23.27
			1	49	24.0	23.30	23.46	23.33
			25	0	22.0	21.60	21.81	21.53
			25	12	22.0	21.76	21.71	21.68
			25	24	22.0	21.60	21.60	21.69
			50	0	22.0	21.72	21.58	21.75
		16QAM	1	0	23.0	21.97	22.62	22.03
			1	24	23.0	21.90	22.52	22.18
			1	49	23.0	21.90	22.50	22.21
			25	0	21.5	21.17	20.85	20.58
			25	12	21.5	21.18	20.86	20.60
			25	24	21.5	21.18	20.86	20.61
			50	0	21.5	21.09	20.78	21.07
		64QAM	1	0	22.5	21.68	21.20	22.05
			1	24	22.5	21.66	21.17	22.21
			1	49	22.5	21.69	21.16	21.90
			25	0	21.0	20.77	20.86	20.84
			25	12	21.0	20.78	20.86	20.86
			25	24	21.0	20.77	20.86	20.87
			50	0	21.0	20.81	20.91	20.80

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132047/1717.5	132322/1745	132597/1772.5
LTE Band 66	15MHz	QPSK	1	0	24.0	23.27	23.52	23.08
			1	37	24.0	23.26	23.48	23.29
			1	74	24.0	23.21	23.43	23.35
			36	0	22.0	21.59	21.69	21.63
			36	16	22.0	21.61	21.71	21.52
			36	35	22.0	21.59	21.72	21.53
			75	0	22.0	21.54	21.69	21.55
		16QAM	1	0	23.0	22.51	22.60	21.98
			1	37	23.0	22.53	22.54	22.12
			1	74	23.0	22.46	22.51	22.20
			36	0	21.5	21.11	20.75	20.64
			36	16	21.5	21.13	20.82	20.67
			36	35	21.5	21.14	20.70	20.67
			75	0	21.0	20.76	20.64	20.77
		64QAM	1	0	22.5	21.99	21.55	22.10
			1	37	22.5	21.63	21.19	21.90
			1	74	22.5	21.92	21.48	22.00
			36	0	21.0	20.80	20.93	20.43
			36	16	21.0	20.82	20.94	20.47
			36	35	21.0	20.82	20.87	20.47
			75	0	21.0	20.49	20.80	20.84
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132072/1720	132322/1745	132572/1770
LTE Band 66	20MHz	QPSK	1	0	24.0	23.59	23.31	23.25
			1	49	24.0	23.43	23.37	23.38
			1	99	24.0	23.58	23.23	23.57
			50	0	22.0	21.53	21.64	21.40
			50	24	22.0	21.68	21.73	21.46
			50	49	22.0	21.68	21.73	21.48
			100	0	22.0	21.53	21.72	21.56
		16QAM	1	0	23.0	22.78	22.50	21.92
			1	49	23.0	22.63	22.54	22.00
			1	99	23.0	22.72	22.35	22.16
			50	0	21.5	21.07	20.93	21.02
			50	24	21.5	21.00	20.91	21.05
			50	49	21.5	21.02	20.86	20.93
			100	0	21.5	21.14	20.64	20.57
		64QAM	1	0	23.0	22.74	21.57	21.83
			1	49	23.0	22.55	21.55	21.71
			1	99	23.0	22.74	21.42	21.78
			50	0	21.0	20.76	20.81	20.54
			50	24	21.0	20.77	20.82	20.57
			50	49	21.0	20.77	20.81	20.57
			100	0	21.0	20.77	20.81	20.36

8.4. Wi-Fi & BT Output Power

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	18.0	17.80
	6	2437	18.0	16.90
	11	2462	18.0	17.88
802.11g	1	2412	13.5	13.40
	6	2437	13.5	12.63
	11	2462	13.5	13.27
802.11n (HT20)	1	2412	12.5	12.23
	6	2437	12.5	11.69
	11	2462	12.5	11.80

Mode	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11A	5180	16.0	15.54
	5200	16.0	15.57
	5240	16.0	15.88
802.11N20SISO	5180	14.0	13.43
	5200	14.0	13.52
	5240	14.0	13.89
802.11N40SISO	5190	14.5	13.47
	5230	14.5	14.05
802.11AC20SISO	5180	14.0	13.43
	5200	14.0	13.50
	5240	14.0	13.92
802.11AC40SISO	5190	13.0	12.44
	5230	13.0	12.94
802.11AC80SISO	5210	14.5	14.32

Mode	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11A	5260	16.0	15.24
	5280	16.0	15.45
	5320	16.0	15.57
802.11N20SISO	5260	14.0	13.39
	5280	14.0	13.68
	5320	14.0	13.84
802.11N40SISO	5270	14.5	13.68
	5310	14.5	14.42
802.11AC20SISO	5260	14.0	13.39
	5280	14.0	13.71
	5320	14.0	13.82
802.11AC40SISO	5270	14.0	12.79
	5310	14.0	13.53
802.11AC80SISO	5290	14.5	14.35

Mode	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11A	5500	18.5	15.25
	5600	18.5	14.39
	5700	18.5	14.56
802.11N20SISO	5500	13.5	13.00
	5600	13.5	12.10
	5700	13.5	12.16
802.11N40SISO	5510	13.5	13.32
	5590	13.5	12.31
	5670	13.5	12.97
802.11AC20SISO	5500	13.0	12.42
	5600	13.0	11.46
	5700	13.0	12.10
802.11AC40SISO	5510	12.5	12.42
	5590	12.5	11.46
	5670	12.5	12.10
802.11AC80SISO	5530	12.0	13.13
	5610	12.0	11.90

Mode	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11A	5745	15.5	15.11
	5785	15.5	14.18
	5825	15.5	13.90
802.11N20SISO	5745	13.5	13.44
	5785	13.5	12.56
	5825	13.5	12.29
802.11N40SISO	5755	14.0	13.75
	5795	14.0	13.48
802.11AC20SISO	5745	13.5	13.37
	5785	13.5	12.59
	5825	13.5	12.30
802.11AC40SISO	5755	13.0	12.86
	5795	13.0	12.58
802.11AC80SISO	5775	14.0	13.97

BR+EDR	Output Power (dBm)				
	Channel	Tune-up (dBm)	Data Rates		
			1M	2M	3M
	0CH	5.5	4.92	4.12	4.39
	39CH	5.5	5.05	4.60	4.86
	78CH	5.5	5.05	4.34	4.52

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE1M	CH00	-0.5	-2.24
	CH19	-0.5	-1.27
	CH39	-0.5	-0.94

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE2M	CH00	-0.5	-2.45
	CH19	-0.5	-1.46
	CH39	-0.5	-0.94

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE S=2	CH00	-0.5	-2.48
	CH19	-0.5	-1.50
	CH39	-0.5	-1.02

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE S=8	CH00	-0.5	-2.49
	CH19	-0.5	-1.60
	CH39	-0.5	-1.05