

Appendix D. Output Power Measurement

1. UMTS/LTE Output Power (Unit: dBm)

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - iii. Set RMC 12.2Kbps + HSDPA mode.
 - iv. Set Cell Power = -86 dBm
 - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - vi. Select HSDPA Uplink Parameters
 - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - viii. Set Ack-Nack Repetition Factor to 3
 - ix. Set CQI Feedback Cycle (k) to 4 ms
 - x. Set CQI Repetition Factor to 2
 - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{HS} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPCCH, DPCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
 - iii. Set Cell Power = -86 dBm
 - iv. Set Channel Type = 12.2k + HSPA
 - v. Set UE Target Power
 - vi. Power Ctrl Mode= Alternating bits
 - vii. Set and observe the E-TFCI
 - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

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:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{inf})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

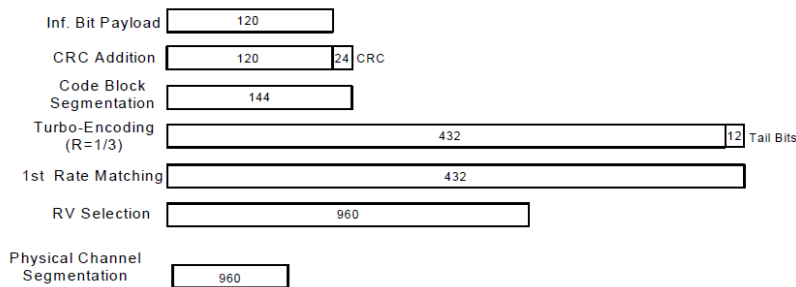


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration



<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

<WCDMA>

Band		WCDMA II_Ant 1_DSI 1			Tune-up Limit (dBm)	WCDMA IV_Ant 1_DSI 1			Tune-up Limit (dBm)	WCDMA V_Ant 1_DSI 0/1/3			Tune-up Limit (dBm)
TX Channel		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	24.76	24.94	25.00	24.30	24.48	24.59	25.00	24.62	24.57	24.33	25.00
3GPP Rel 6	HSDPA Subtest-1	23.51	23.75	23.93	24.00	23.37	23.51	23.59	24.00	23.61	23.59	23.33	24.00
3GPP Rel 6	HSDPA Subtest-2	23.52	23.78	23.93	24.00	23.39	23.43	23.59	24.00	23.65	23.55	23.34	24.00
3GPP Rel 6	HSDPA Subtest-3	23.03	23.28	23.45	23.50	22.93	22.92	23.08	23.50	23.13	23.04	22.84	23.50
3GPP Rel 6	HSDPA Subtest-4	23.07	23.26	23.46	23.50	22.85	22.95	23.12	23.50	23.09	23.07	22.82	23.50
3GPP Rel 8	DC-HSDPA Subtest-1	23.31	23.71	23.92	24.00	23.20	23.43	23.42	24.00	23.56	23.53	23.30	24.00
3GPP Rel 8	DC-HSDPA Subtest-2	23.39	23.65	23.77	24.00	23.29	23.38	23.48	24.00	23.51	23.41	23.24	24.00
3GPP Rel 8	DC-HSDPA Subtest-3	22.91	23.21	23.39	23.50	22.89	22.85	22.94	23.50	22.96	22.88	22.75	23.50
3GPP Rel 8	DC-HSDPA Subtest-4	23.00	23.25	23.44	23.50	22.71	22.78	22.95	23.50	23.04	22.91	22.77	23.50
3GPP Rel 6	HSUPA Subtest-1	23.50	23.83	23.95	24.00	23.34	23.46	23.57	24.00	23.61	23.54	23.30	24.00
3GPP Rel 6	HSUPA Subtest-2	21.57	21.85	21.98	22.00	21.34	21.48	21.61	22.00	21.60	21.52	21.29	22.00
3GPP Rel 6	HSUPA Subtest-3	22.51	22.81	22.92	23.00	22.32	22.46	22.62	23.00	22.60	22.56	22.32	23.00
3GPP Rel 6	HSUPA Subtest-4	21.56	21.79	21.32	22.00	21.34	21.43	21.62	22.00	21.60	21.50	21.35	22.00
3GPP Rel 6	HSUPA Subtest-5	23.50	23.80	24.00	24.00	23.30	23.50	23.60	24.00	23.60	23.50	23.30	24.00

<WCDMA>

Band		WCDMA II_Ant 1_DSI 3			Tune-up Limit (dBm)	WCDMA IV_Ant 1_DSI 3			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513	
Rx Channel		9662	9800	9938		1537	1638	1738	
Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6		
3GPP Rel 99	RMC 12.2Kbps	23.19	23.25	23.56	24.00	23.03	23.08	23.57	24.00
3GPP Rel 6	HSDPA Subtest-1	22.16	22.14	22.38	22.50	22.05	22.01	22.06	22.50
3GPP Rel 6	HSDPA Subtest-2	22.23	22.19	22.42	22.50	22.11	21.95	22.06	22.50
3GPP Rel 6	HSDPA Subtest-3	21.65	21.67	21.87	22.00	21.58	21.48	21.64	22.00
3GPP Rel 6	HSDPA Subtest-4	21.78	21.75	21.94	22.00	21.55	21.54	21.59	22.00
3GPP Rel 8	DC-HSDPA Subtest-1	21.98	22.20	22.44	22.50	21.88	21.98	21.92	22.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.04	22.05	22.25	22.50	21.95	21.93	21.96	22.50
3GPP Rel 8	DC-HSDPA Subtest-3	21.55	21.65	21.87	22.00	21.57	21.38	21.43	22.00
3GPP Rel 8	DC-HSDPA Subtest-4	21.68	21.64	21.94	22.00	21.42	21.32	21.42	22.00
3GPP Rel 6	HSUPA Subtest-1	22.13	22.26	22.40	22.50	22.05	22.03	22.05	22.50
3GPP Rel 6	HSUPA Subtest-2	20.27	20.31	20.44	20.50	20.02	20.02	20.12	20.50
3GPP Rel 6	HSUPA Subtest-3	21.20	21.22	21.38	21.50	20.99	20.96	21.14	21.50
3GPP Rel 6	HSUPA Subtest-4	20.26	20.28	19.76	20.50	19.99	19.93	20.13	20.50
3GPP Rel 6	HSUPA Subtest-5	22.19	22.20	22.43	22.50	21.95	22.10	22.17	22.50

**<LTE Conducted Power>****General Note:**

1. A Base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 4/5/17/38 SAR test was covered by Band 66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band



<LTE Band 2_Ant 1_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	24.26	24.34	24.53	25
20	QPSK	1	49	24.25	24.32	24.48	
20	QPSK	1	99	24.16	24.31	24.38	
20	QPSK	50	0	22.36	22.34	22.75	24
20	QPSK	50	24	22.37	22.43	22.60	
20	QPSK	50	50	22.32	22.44	22.72	
20	QPSK	100	0	22.35	22.41	22.66	
20	16QAM	1	0	23.49	23.72	23.70	24
20	16QAM	1	49	23.65	23.66	23.88	
20	16QAM	1	99	23.51	23.65	23.91	
20	16QAM	50	0	21.39	21.33	21.54	23
20	16QAM	50	24	21.35	21.40	21.59	
20	16QAM	50	50	21.32	21.40	21.66	
20	16QAM	100	0	21.36	21.39	21.65	
20	64QAM	1	0	22.53	22.55	22.76	23
20	64QAM	1	49	22.55	22.55	22.82	
20	64QAM	1	99	22.45	22.68	22.92	
20	64QAM	50	0	21.34	21.30	21.57	22
20	64QAM	50	24	21.34	21.39	21.59	
20	64QAM	50	50	21.29	21.36	21.67	
20	64QAM	100	0	21.33	21.37	21.66	
20	256QAM	1	0	19.34	19.29	19.55	20
20	256QAM	1	49	19.21	19.23	19.55	
20	256QAM	1	99	19.22	19.30	19.56	
20	256QAM	50	0	19.22	19.10	19.50	20
20	256QAM	50	24	19.25	19.30	19.47	
20	256QAM	50	50	19.21	19.27	19.60	
20	256QAM	100	0	19.24	19.27	19.59	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	24.20	24.30	24.49	25
15	QPSK	1	37	24.17	24.22	24.47	
15	QPSK	1	74	24.15	24.21	24.28	
15	QPSK	36	0	22.33	22.34	22.70	24
15	QPSK	36	20	22.31	22.34	22.53	
15	QPSK	36	39	22.26	22.37	22.70	
15	QPSK	75	0	22.26	22.34	22.56	
15	16QAM	1	0	23.49	23.69	23.67	24
15	16QAM	1	37	23.57	23.59	23.78	
15	16QAM	1	74	23.51	23.55	23.86	
15	16QAM	36	0	21.30	21.31	21.49	23
15	16QAM	36	20	21.30	21.36	21.53	
15	16QAM	36	39	21.31	21.30	21.60	
15	16QAM	75	0	21.30	21.34	21.57	
15	64QAM	1	0	22.53	22.55	22.69	23
15	64QAM	1	37	22.52	22.53	22.82	
15	64QAM	1	74	22.45	22.68	22.91	
15	64QAM	36	0	21.28	21.29	21.47	22
15	64QAM	36	20	21.24	21.32	21.59	
15	64QAM	36	39	21.27	21.30	21.60	
15	64QAM	75	0	21.28	21.35	21.61	
15	256QAM	1	0	19.28	19.20	19.55	20
15	256QAM	1	37	19.16	19.22	19.53	
15	256QAM	1	74	19.13	19.20	19.50	
15	256QAM	36	0	19.22	19.10	19.44	20
15	256QAM	36	20	19.20	19.20	19.43	



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Report No. :FA3N2803B

15	256QAM	36	39	19.19	19.18	19.58	
15	256QAM	75	0	19.20	19.20	19.54	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	24.10	24.28	24.43	25
10	QPSK	1	25	24.15	24.13	24.41	
10	QPSK	1	49	24.15	24.16	24.23	
10	QPSK	25	0	22.23	22.34	22.66	24
10	QPSK	25	12	22.24	22.27	22.46	
10	QPSK	25	25	22.17	22.32	22.64	
10	QPSK	50	0	22.19	22.32	22.52	
10	16QAM	1	0	23.41	23.68	23.57	24
10	16QAM	1	25	23.56	23.58	23.74	
10	16QAM	1	49	23.49	23.46	23.85	
10	16QAM	25	0	21.23	21.27	21.42	23
10	16QAM	25	12	21.21	21.27	21.48	
10	16QAM	25	25	21.30	21.28	21.53	
10	16QAM	50	0	21.30	21.26	21.57	
10	64QAM	1	0	22.43	22.55	22.69	23
10	64QAM	1	25	22.42	22.46	22.76	
10	64QAM	1	49	22.44	22.67	22.84	
10	64QAM	25	0	21.20	21.24	21.38	22
10	64QAM	25	12	21.23	21.28	21.53	
10	64QAM	25	25	21.21	21.28	21.56	
10	64QAM	50	0	21.22	21.29	21.54	
10	256QAM	1	0	19.27	19.13	19.47	20
10	256QAM	1	25	19.11	19.17	19.52	
10	256QAM	1	49	19.03	19.11	19.43	
10	256QAM	25	0	19.16	19.03	19.36	20
10	256QAM	25	12	19.20	19.19	19.33	
10	256QAM	25	25	19.13	19.09	19.49	
10	256QAM	50	0	19.13	19.16	19.53	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	24.10	24.30	24.46	25
5	QPSK	1	12	24.17	24.17	24.38	
5	QPSK	1	24	24.09	24.16	24.18	
5	QPSK	12	0	22.28	22.29	22.62	24
5	QPSK	12	7	22.23	22.32	22.49	
5	QPSK	12	13	22.26	22.34	22.66	
5	QPSK	25	0	22.16	22.25	22.46	
5	16QAM	1	0	23.41	23.67	23.65	24
5	16QAM	1	12	23.48	23.58	23.78	
5	16QAM	1	24	23.45	23.45	23.83	
5	16QAM	12	0	21.29	21.27	21.42	23
5	16QAM	12	7	21.25	21.26	21.50	
5	16QAM	12	13	21.24	21.21	21.50	
5	16QAM	25	0	21.21	21.30	21.56	
5	64QAM	1	0	22.50	22.45	22.65	23
5	64QAM	1	12	22.51	22.45	22.76	
5	64QAM	1	24	22.35	22.61	22.88	
5	64QAM	12	0	21.27	21.20	21.47	22
5	64QAM	12	7	21.23	21.32	21.56	
5	64QAM	12	13	21.24	21.30	21.56	
5	64QAM	25	0	21.22	21.30	21.55	
5	256QAM	1	0	19.23	19.15	19.47	20
5	256QAM	1	12	19.16	19.16	19.45	
5	256QAM	1	24	19.07	19.18	19.40	
5	256QAM	12	0	19.17	19.08	19.44	20
5	256QAM	12	7	19.15	19.16	19.33	
5	256QAM	12	13	19.15	19.17	19.52	
5	256QAM	25	0	19.12	19.17	19.47	
Channel				18615	18900	19185	Tune-up limit



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Frequency (MHz)				1851.5	1880	1908.5	(dBm)
3	QPSK	1	0	24.17	24.27	24.45	25
3	QPSK	1	8	24.09	24.13	24.40	
3	QPSK	1	14	24.10	24.17	24.25	
3	QPSK	8	0	22.28	22.28	22.61	24
3	QPSK	8	4	22.29	22.33	22.46	
3	QPSK	8	7	22.19	22.27	22.64	
3	QPSK	15	0	22.24	22.28	22.55	24
3	16QAM	1	0	23.49	23.67	23.60	
3	16QAM	1	8	23.56	23.57	23.68	
3	16QAM	1	14	23.46	23.55	23.78	23
3	16QAM	8	0	21.20	21.29	21.46	
3	16QAM	8	4	21.29	21.27	21.51	
3	16QAM	8	7	21.21	21.29	21.55	23
3	16QAM	15	0	21.24	21.25	21.57	
3	64QAM	1	0	22.47	22.48	22.69	
3	64QAM	1	8	22.48	22.46	22.79	23
3	64QAM	1	14	22.39	22.60	22.83	
3	64QAM	8	0	21.25	21.28	21.47	
3	64QAM	8	4	21.20	21.29	21.57	22
3	64QAM	8	7	21.20	21.25	21.50	
3	64QAM	15	0	21.28	21.27	21.54	
3	256QAM	1	0	19.23	19.19	19.51	20
3	256QAM	1	8	19.09	19.16	19.47	
3	256QAM	1	14	19.04	19.17	19.50	
3	256QAM	8	0	19.22	19.00	19.37	20
3	256QAM	8	4	19.19	19.13	19.34	
3	256QAM	8	7	19.11	19.09	19.58	
3	256QAM	15	0	19.12	19.18	19.46	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	24.13	24.20	24.48	25
1.4	QPSK	1	3	24.13	24.16	24.41	
1.4	QPSK	1	5	24.08	24.20	24.25	
1.4	QPSK	3	0	24.20	24.27	24.49	24
1.4	QPSK	3	1	24.09	24.13	24.42	
1.4	QPSK	3	3	24.05	24.21	24.26	
1.4	QPSK	6	0	22.24	22.34	22.52	24
1.4	16QAM	1	0	23.48	23.69	23.64	
1.4	16QAM	1	3	23.53	23.50	23.73	
1.4	16QAM	1	5	23.41	23.45	23.81	24
1.4	16QAM	3	0	23.48	23.67	23.60	
1.4	16QAM	3	1	23.51	23.54	23.74	
1.4	16QAM	3	3	23.43	23.47	23.79	23
1.4	16QAM	6	0	21.25	21.31	21.50	
1.4	64QAM	1	0	22.52	22.45	22.64	
1.4	64QAM	1	3	22.45	22.47	22.76	23
1.4	64QAM	1	5	22.35	22.66	22.82	
1.4	64QAM	3	0	22.50	22.52	22.66	
1.4	64QAM	3	1	22.48	22.44	22.79	22
1.4	64QAM	3	3	22.43	22.60	22.82	
1.4	64QAM	6	0	21.28	21.29	21.55	
1.4	256QAM	1	0	19.19	19.13	19.50	20
1.4	256QAM	1	3	19.14	19.21	19.49	
1.4	256QAM	1	5	19.07	19.10	19.41	
1.4	256QAM	3	0	19.25	19.17	19.49	20
1.4	256QAM	3	1	19.06	19.19	19.50	
1.4	256QAM	3	3	19.12	19.11	19.40	
1.4	256QAM	6	0	19.15	19.10	19.51	20



<LTE Band 2_Ant 1_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	23.33	23.40	23.59	24
20	QPSK	1	49	23.25	23.30	23.38	
20	QPSK	1	99	23.20	23.30	23.27	
20	QPSK	50	0	21.34	21.39	21.66	23
20	QPSK	50	24	21.44	21.49	21.46	
20	QPSK	50	50	21.32	21.40	21.61	
20	QPSK	100	0	21.42	21.38	21.54	
20	16QAM	1	0	22.47	22.72	22.61	23
20	16QAM	1	49	22.68	22.71	22.74	
20	16QAM	1	99	22.50	22.63	22.78	
20	16QAM	50	0	20.41	20.38	20.44	22
20	16QAM	50	24	20.41	20.40	20.52	
20	16QAM	50	50	20.34	20.41	20.51	
20	16QAM	100	0	20.34	20.39	20.54	
20	64QAM	1	0	21.50	21.60	21.60	22
20	64QAM	1	49	21.62	21.56	21.66	
20	64QAM	1	99	21.50	21.65	21.81	
20	64QAM	50	0	20.37	20.36	20.50	21
20	64QAM	50	24	20.36	20.38	20.47	
20	64QAM	50	50	20.30	20.37	20.56	
20	64QAM	100	0	20.38	20.40	20.58	
20	256QAM	1	0	18.37	18.27	18.47	19
20	256QAM	1	49	18.18	18.28	18.43	
20	256QAM	1	99	18.22	18.33	18.44	
20	256QAM	50	0	18.19	18.09	18.34	19
20	256QAM	50	24	18.23	18.34	18.38	
20	256QAM	50	50	18.21	18.32	18.48	
20	256QAM	100	0	18.30	18.23	18.45	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	23.25	23.34	23.43	24
15	QPSK	1	37	23.22	23.22	23.32	
15	QPSK	1	74	23.15	23.20	23.23	
15	QPSK	36	0	21.32	21.31	21.59	23
15	QPSK	36	20	21.44	21.46	21.44	
15	QPSK	36	39	21.27	21.30	21.58	
15	QPSK	75	0	21.39	21.33	21.47	
15	16QAM	1	0	22.47	22.67	22.60	23
15	16QAM	1	37	22.61	22.68	22.70	
15	16QAM	1	74	22.48	22.60	22.72	
15	16QAM	36	0	20.40	20.28	20.39	22
15	16QAM	36	20	20.33	20.32	20.45	
15	16QAM	36	39	20.27	20.38	20.50	
15	16QAM	75	0	20.33	20.33	20.47	
15	64QAM	1	0	21.43	21.60	21.52	22
15	64QAM	1	37	21.56	21.50	21.56	
15	64QAM	1	74	21.50	21.60	21.73	
15	64QAM	36	0	20.32	20.30	20.49	21
15	64QAM	36	20	20.35	20.32	20.41	
15	64QAM	36	39	20.27	20.29	20.48	
15	64QAM	75	0	20.36	20.33	20.48	
15	256QAM	1	0	18.29	18.22	18.44	19
15	256QAM	1	37	18.17	18.25	18.43	
15	256QAM	1	74	18.14	18.31	18.37	
15	256QAM	36	0	18.12	18.03	18.24	19
15	256QAM	36	20	18.14	18.33	18.31	



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15	256QAM	36	39	18.15	18.25	18.45	
15	256QAM	75	0	18.23	18.19	18.44	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	23.28	23.36	23.38	24
10	QPSK	1	25	23.20	23.27	23.36	
10	QPSK	1	49	23.13	23.28	23.20	
10	QPSK	25	0	21.24	21.34	21.56	23
10	QPSK	25	12	21.36	21.39	21.45	
10	QPSK	25	25	21.31	21.36	21.51	
10	QPSK	50	0	21.35	21.33	21.51	
10	16QAM	1	0	22.40	22.66	22.53	23
10	16QAM	1	25	22.62	22.66	22.73	
10	16QAM	1	49	22.47	22.63	22.75	22
10	16QAM	25	0	20.38	20.33	20.39	
10	16QAM	25	12	20.37	20.32	20.48	
10	16QAM	25	25	20.25	20.34	20.51	
10	16QAM	50	0	20.25	20.37	20.51	
10	64QAM	1	0	21.49	21.50	21.59	22
10	64QAM	1	25	21.59	21.50	21.56	
10	64QAM	1	49	21.45	21.58	21.78	
10	64QAM	25	0	20.36	20.31	20.40	21
10	64QAM	25	12	20.36	20.34	20.40	
10	64QAM	25	25	20.24	20.36	20.47	
10	64QAM	50	0	20.36	20.37	20.49	
10	256QAM	1	0	18.34	18.27	18.39	
10	256QAM	1	25	18.15	18.23	18.36	19
10	256QAM	1	49	18.21	18.31	18.40	
10	256QAM	25	0	18.17	18.04	18.34	
10	256QAM	25	12	18.19	18.33	18.32	19
10	256QAM	25	25	18.18	18.28	18.45	
10	256QAM	25	0	18.20	18.14	18.44	
Channel				18625	18900	19175	
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	23.30	23.36	23.41	24
5	QPSK	1	12	23.21	23.22	23.32	
5	QPSK	1	24	23.12	23.21	23.26	
5	QPSK	12	0	21.26	21.38	21.59	23
5	QPSK	12	7	21.38	21.43	21.42	
5	QPSK	12	13	21.23	21.40	21.51	
5	QPSK	25	0	21.38	21.37	21.50	
5	16QAM	1	0	22.37	22.72	22.57	23
5	16QAM	1	12	22.60	22.70	22.65	
5	16QAM	1	24	22.50	22.62	22.70	
5	16QAM	12	0	20.31	20.33	20.42	22
5	16QAM	12	7	20.40	20.32	20.48	
5	16QAM	12	13	20.33	20.35	20.44	
5	16QAM	25	0	20.30	20.39	20.47	
5	64QAM	1	0	21.43	21.54	21.51	
5	64QAM	1	12	21.58	21.56	21.66	22
5	64QAM	1	24	21.44	21.59	21.75	
5	64QAM	12	0	20.35	20.32	20.48	
5	64QAM	12	7	20.35	20.29	20.47	21
5	64QAM	12	13	20.27	20.30	20.54	
5	64QAM	25	0	20.34	20.33	20.56	
5	256QAM	1	0	18.29	18.24	18.39	
5	256QAM	1	12	18.09	18.18	18.39	19
5	256QAM	1	24	18.12	18.27	18.43	
5	256QAM	12	0	18.16	18.08	18.25	19
5	256QAM	12	7	18.19	18.25	18.37	
5	256QAM	12	13	18.18	18.30	18.40	
5	256QAM	25	0	18.27	18.13	18.41	
Channel				18615	18900	19185	Tune-up limit



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Frequency (MHz)				1851.5	1880	1908.5	(dBm)
3	QPSK	1	0	23.30	23.37	23.38	24
3	QPSK	1	8	23.24	23.25	23.37	
3	QPSK	1	14	23.19	23.28	23.17	
3	QPSK	8	0	21.34	21.37	21.56	23
3	QPSK	8	4	21.36	21.46	21.38	
3	QPSK	8	7	21.29	21.39	21.56	
3	QPSK	15	0	21.38	21.33	21.45	23
3	16QAM	1	0	22.46	22.70	22.54	
3	16QAM	1	8	22.60	22.67	22.74	
3	16QAM	1	14	22.41	22.61	22.70	22
3	16QAM	8	0	20.37	20.35	20.38	
3	16QAM	8	4	20.39	20.40	20.45	
3	16QAM	8	7	20.33	20.41	20.46	22
3	16QAM	15	0	20.33	20.36	20.47	
3	64QAM	1	0	21.44	21.60	21.51	
3	64QAM	1	8	21.52	21.49	21.58	22
3	64QAM	1	14	21.50	21.59	21.73	
3	64QAM	8	0	20.34	20.32	20.47	
3	64QAM	8	4	20.27	20.38	20.39	21
3	64QAM	8	7	20.20	20.35	20.46	
3	64QAM	15	0	20.35	20.40	20.55	
3	256QAM	1	0	18.28	18.26	18.43	19
3	256QAM	1	8	18.11	18.21	18.41	
3	256QAM	1	14	18.20	18.27	18.39	
3	256QAM	8	0	18.10	18.04	18.27	19
3	256QAM	8	4	18.22	18.30	18.29	
3	256QAM	8	7	18.14	18.29	18.39	
3	256QAM	15	0	18.25	18.18	18.42	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	23.28	23.31	23.43	24
1.4	QPSK	1	3	23.20	23.20	23.29	
1.4	QPSK	1	5	23.13	23.24	23.23	
1.4	QPSK	3	0	22.30	22.31	22.63	23
1.4	QPSK	3	1	22.41	22.49	22.40	
1.4	QPSK	3	3	22.32	22.35	22.55	
1.4	QPSK	6	0	21.32	21.36	21.51	
1.4	16QAM	1	0	22.41	22.66	22.59	23
1.4	16QAM	1	3	22.64	22.69	22.69	
1.4	16QAM	1	5	22.41	22.54	22.76	
1.4	16QAM	3	0	21.33	21.33	21.37	22
1.4	16QAM	3	1	21.39	21.32	21.42	
1.4	16QAM	3	3	21.26	21.36	21.48	
1.4	16QAM	6	0	20.33	20.39	20.49	
1.4	64QAM	1	0	21.45	21.50	21.57	22
1.4	64QAM	1	3	21.60	21.52	21.66	
1.4	64QAM	1	5	21.43	21.63	21.80	
1.4	64QAM	3	0	20.34	20.33	20.49	21
1.4	64QAM	3	1	20.29	20.37	20.38	
1.4	64QAM	3	3	20.21	20.34	20.54	
1.4	64QAM	6	0	20.28	20.31	20.56	
1.4	256QAM	1	0	18.34	18.22	18.39	19
1.4	256QAM	1	3	18.18	18.23	18.36	
1.4	256QAM	1	5	18.16	18.31	18.34	
1.4	256QAM	3	0	18.15	18.03	18.31	19
1.4	256QAM	3	1	18.14	18.31	18.37	
1.4	256QAM	3	3	18.14	18.32	18.45	
1.4	256QAM	6	0	18.29	18.22	18.36	



<LTE Band 4_Ant 1_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	23.91	24.06	24.22	25
20	QPSK	1	49	23.87	24.00	24.12	
20	QPSK	1	99	23.83	23.99	24.10	
20	QPSK	50	0	22.89	23.03	23.26	24
20	QPSK	50	24	22.94	23.10	23.18	
20	QPSK	50	50	22.93	23.09	23.23	
20	QPSK	100	0	22.94	23.07	23.23	
20	16QAM	1	0	23.15	23.34	23.42	24
20	16QAM	1	49	23.09	23.34	23.54	
20	16QAM	1	99	23.27	23.44	23.53	
20	16QAM	50	0	21.86	22.05	22.19	23
20	16QAM	50	24	21.96	22.12	22.18	
20	16QAM	50	50	21.91	22.07	22.20	
20	16QAM	100	0	21.92	22.07	22.24	
20	64QAM	1	0	22.05	22.27	22.35	23
20	64QAM	1	49	22.24	22.25	22.39	
20	64QAM	1	99	22.22	22.24	22.37	
20	64QAM	50	0	20.87	21.02	21.15	22
20	64QAM	50	24	20.92	21.12	21.16	
20	64QAM	50	50	20.90	21.07	21.21	
20	64QAM	100	0	20.92	21.10	21.22	
20	256QAM	1	0	18.79	18.88	19.10	20
20	256QAM	1	49	18.81	18.92	19.10	
20	256QAM	1	99	18.87	18.92	19.06	
20	256QAM	50	0	18.75	18.94	18.96	20
20	256QAM	50	24	18.78	18.95	19.06	
20	256QAM	50	50	18.76	18.87	19.14	
20	256QAM	100	0	18.86	19.08	19.16	
Channel				20025	20175	20325	
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	23.91	23.99	24.15	25
15	QPSK	1	37	23.87	23.92	24.10	
15	QPSK	1	74	23.73	23.91	24.00	
15	QPSK	36	0	22.82	22.95	23.19	24
15	QPSK	36	20	22.94	23.03	23.13	
15	QPSK	36	39	22.84	23.01	23.14	
15	QPSK	75	0	22.85	23.00	23.13	
15	16QAM	1	0	23.06	23.24	23.34	24
15	16QAM	1	37	22.99	23.24	23.49	
15	16QAM	1	74	23.22	23.44	23.46	
15	16QAM	36	0	21.84	21.98	22.16	
15	16QAM	36	20	21.94	22.04	22.08	23
15	16QAM	36	39	21.88	22.07	22.15	
15	16QAM	75	0	21.86	22.02	22.24	
15	64QAM	1	0	21.97	22.18	22.26	
15	64QAM	1	37	22.23	22.24	22.38	23
15	64QAM	1	74	22.17	22.16	22.33	
15	64QAM	36	0	20.83	20.97	21.10	
15	64QAM	36	20	20.83	21.08	21.13	
15	64QAM	36	39	20.81	21.02	21.20	22
15	64QAM	75	0	20.87	21.04	21.17	
15	256QAM	1	0	18.77	18.81	19.04	
15	256QAM	1	37	18.79	18.83	19.04	
15	256QAM	1	74	18.85	18.92	19.03	20
15	256QAM	36	0	18.67	18.89	18.96	
15	256QAM	36	20	18.75	18.94	19.06	



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15	256QAM	36	39	18.72	18.82	19.08	
15	256QAM	75	0	18.86	18.98	19.11	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	23.88	23.99	24.15	25
10	QPSK	1	25	23.82	23.87	24.10	
10	QPSK	1	49	23.72	23.91	23.92	
10	QPSK	25	0	22.78	22.88	23.15	24
10	QPSK	25	12	22.90	22.99	23.10	
10	QPSK	25	25	22.74	22.92	23.11	
10	QPSK	50	0	22.78	22.94	23.11	
10	16QAM	1	0	22.98	23.15	23.29	24
10	16QAM	1	25	22.90	23.24	23.49	
10	16QAM	1	49	23.14	23.36	23.45	
10	16QAM	25	0	21.74	21.91	22.14	23
10	16QAM	25	12	21.84	22.03	22.07	
10	16QAM	25	25	21.87	22.00	22.07	
10	16QAM	50	0	21.83	21.99	22.20	
10	64QAM	1	0	21.97	22.10	22.19	23
10	64QAM	1	25	22.19	22.22	22.35	
10	64QAM	1	49	22.10	22.09	22.32	
10	64QAM	25	0	20.80	20.88	21.02	22
10	64QAM	25	12	20.74	21.06	21.07	
10	64QAM	25	25	20.78	20.94	21.15	
10	64QAM	50	0	20.82	20.96	21.07	
10	256QAM	1	0	18.77	18.80	19.03	20
10	256QAM	1	25	18.76	18.79	19.03	
10	256QAM	1	49	18.82	18.84	19.01	
10	256QAM	25	0	18.59	18.89	18.92	20
10	256QAM	25	12	18.65	18.89	19.01	
10	256QAM	25	25	18.64	18.79	19.08	
10	256QAM	50	0	18.86	18.95	19.04	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	23.86	23.92	24.13	25
5	QPSK	1	12	23.77	23.86	24.04	
5	QPSK	1	24	23.72	23.89	23.93	
5	QPSK	12	0	22.74	22.92	23.13	24
5	QPSK	12	7	22.94	23.02	23.08	
5	QPSK	12	13	22.81	22.93	23.09	
5	QPSK	25	0	22.78	22.91	23.10	
5	16QAM	1	0	23.04	23.21	23.29	24
5	16QAM	1	12	22.99	23.22	23.43	
5	16QAM	1	24	23.14	23.41	23.43	
5	16QAM	12	0	21.80	21.89	22.06	23
5	16QAM	12	7	21.88	21.94	22.06	
5	16QAM	12	13	21.83	21.99	22.10	
5	16QAM	25	0	21.86	21.97	22.20	
5	64QAM	1	0	21.91	22.12	22.21	23
5	64QAM	1	12	22.19	22.15	22.31	
5	64QAM	1	24	22.07	22.11	22.23	
5	64QAM	12	0	20.82	20.93	21.02	22
5	64QAM	12	7	20.81	21.02	21.11	
5	64QAM	12	13	20.72	20.97	21.14	
5	64QAM	25	0	20.80	20.96	21.16	
5	256QAM	1	0	18.75	18.80	18.96	20
5	256QAM	1	12	18.77	18.79	19.02	
5	256QAM	1	24	18.77	18.88	18.95	
5	256QAM	12	0	18.60	18.80	18.91	20
5	256QAM	12	7	18.72	18.92	19.05	
5	256QAM	12	13	18.62	18.82	19.02	
5	256QAM	25	0	18.79	18.95	19.10	
Channel				19965	20175	20385	Tune-up limit



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Frequency (MHz)				1711.5	1732.5	1753.5	(dBm)
3	QPSK	1	0	23.85	23.89	24.15	25
3	QPSK	1	8	23.83	23.91	24.05	
3	QPSK	1	14	23.68	23.85	23.95	
3	QPSK	8	0	22.80	22.90	23.15	24
3	QPSK	8	4	22.89	22.96	23.08	
3	QPSK	8	7	22.78	22.93	23.12	
3	QPSK	15	0	22.85	22.90	23.06	24
3	16QAM	1	0	23.05	23.24	23.33	
3	16QAM	1	8	22.98	23.17	23.46	
3	16QAM	1	14	23.13	23.43	23.40	23
3	16QAM	8	0	21.79	21.90	22.11	
3	16QAM	8	4	21.93	21.95	22.02	
3	16QAM	8	7	21.82	22.07	22.09	23
3	16QAM	15	0	21.79	21.97	22.19	
3	64QAM	1	0	21.89	22.10	22.16	
3	64QAM	1	8	22.14	22.17	22.29	23
3	64QAM	1	14	22.09	22.11	22.26	
3	64QAM	8	0	20.82	20.88	21.05	
3	64QAM	8	4	20.81	21.03	21.05	22
3	64QAM	8	7	20.78	20.99	21.13	
3	64QAM	15	0	20.79	21.00	21.09	
3	256QAM	1	0	18.76	18.71	18.96	20
3	256QAM	1	8	18.75	18.79	19.04	
3	256QAM	1	14	18.75	18.92	18.95	
3	256QAM	8	0	18.57	18.84	18.89	20
3	256QAM	8	4	18.75	18.90	19.06	
3	256QAM	8	7	18.66	18.79	19.06	
3	256QAM	15	0	18.81	18.91	19.06	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	23.89	23.95	24.14	25
1.4	QPSK	1	3	23.87	23.88	24.05	
1.4	QPSK	1	5	23.72	23.89	23.99	
1.4	QPSK	3	0	23.87	23.91	24.05	24
1.4	QPSK	3	1	23.80	23.89	24.04	
1.4	QPSK	3	3	23.72	23.88	23.97	
1.4	QPSK	6	0	22.81	22.93	23.03	24
1.4	16QAM	1	0	23.00	23.21	23.26	
1.4	16QAM	1	3	22.95	23.20	23.46	
1.4	16QAM	1	5	23.12	23.39	23.37	24
1.4	16QAM	3	0	22.98	23.14	23.27	
1.4	16QAM	3	1	22.95	23.16	23.46	
1.4	16QAM	3	3	23.19	23.40	23.45	23
1.4	16QAM	6	0	21.80	22.02	22.16	
1.4	64QAM	1	0	21.97	22.11	22.25	
1.4	64QAM	1	3	22.23	22.23	22.34	23
1.4	64QAM	1	5	22.13	22.09	22.24	
1.4	64QAM	3	0	21.95	22.14	22.20	
1.4	64QAM	3	1	22.17	22.22	22.32	22
1.4	64QAM	3	3	22.09	22.11	22.28	
1.4	64QAM	6	0	20.84	20.95	21.11	
1.4	256QAM	1	0	18.72	18.73	18.94	20
1.4	256QAM	1	3	18.74	18.74	18.98	
1.4	256QAM	1	5	18.79	18.92	18.95	
1.4	256QAM	3	0	18.77	18.74	18.94	20
1.4	256QAM	3	1	18.78	18.76	18.96	
1.4	256QAM	3	3	18.82	18.85	19.01	
1.4	256QAM	6	0	18.86	18.93	19.03	20



<LTE Band 4_Ant 1_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	23.04	23.10	23.23	23.5
20	QPSK	1	49	22.94	22.98	23.13	
20	QPSK	1	99	22.91	23.00	22.98	
20	QPSK	50	0	21.91	22.12	22.33	22.5
20	QPSK	50	24	22.07	22.01	22.21	
20	QPSK	50	50	22.06	22.05	22.23	
20	QPSK	100	0	21.97	22.09	22.16	
20	16QAM	1	0	22.32	22.30	22.39	22.5
20	16QAM	1	49	22.27	22.32	22.36	
20	16QAM	1	99	22.37	22.26	22.32	
20	16QAM	50	0	20.96	21.05	21.23	21.5
20	16QAM	50	24	21.08	21.03	21.22	
20	16QAM	50	50	21.06	21.06	21.22	
20	16QAM	100	0	21.03	21.06	21.16	
20	64QAM	1	0	21.38	21.20	21.39	21.5
20	64QAM	1	49	21.21	21.27	21.37	
20	64QAM	1	99	21.33	21.18	21.32	
20	64QAM	50	0	19.99	20.09	20.24	20.5
20	64QAM	50	24	20.04	20.04	20.23	
20	64QAM	50	50	19.99	20.06	20.19	
20	64QAM	100	0	20.03	20.13	20.13	
20	256QAM	1	0	17.89	17.90	18.06	18.5
20	256QAM	1	49	17.87	17.98	18.18	
20	256QAM	1	99	17.90	18.02	18.07	
20	256QAM	50	0	17.78	17.95	17.97	18.5
20	256QAM	50	24	17.77	17.93	18.06	
20	256QAM	50	50	17.88	17.88	18.11	
20	256QAM	100	0	17.94	17.95	18.10	
Channel				20025	20175	20325	
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.91	22.92	23.08	23.5
15	QPSK	1	37	22.80	22.82	22.97	
15	QPSK	1	74	22.71	22.89	22.84	
15	QPSK	36	0	21.77	21.94	22.23	22.5
15	QPSK	36	20	21.87	21.84	22.09	
15	QPSK	36	39	21.93	21.94	22.09	
15	QPSK	75	0	21.86	21.91	22.04	
15	16QAM	1	0	22.16	22.14	22.19	22.5
15	16QAM	1	37	22.13	22.19	22.26	
15	16QAM	1	74	22.20	22.12	22.17	
15	16QAM	36	0	20.83	20.90	21.13	21.5
15	16QAM	36	20	20.88	20.88	21.04	
15	16QAM	36	39	20.95	20.89	21.10	
15	16QAM	75	0	20.85	20.87	20.96	
15	64QAM	1	0	21.22	21.02	21.26	21.5
15	64QAM	1	37	21.02	21.10	21.25	
15	64QAM	1	74	21.22	20.99	21.18	
15	64QAM	36	0	19.84	19.97	20.11	20.5
15	64QAM	36	20	19.88	19.91	20.10	
15	64QAM	36	39	19.83	19.89	20.02	
15	64QAM	75	0	19.93	20.01	19.93	
15	256QAM	1	0	17.79	17.77	17.87	18.5
15	256QAM	1	37	17.70	17.86	18.06	
15	256QAM	1	74	17.74	17.82	17.93	
15	256QAM	36	0	17.66	17.76	17.87	18.5
15	256QAM	36	20	17.58	17.81	17.86	



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15	256QAM	36	39	17.69	17.72	18.00	
15	256QAM	75	0	17.79	17.83	18.00	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.94	22.94	23.06	23.5
10	QPSK	1	25	22.77	22.80	23.01	
10	QPSK	1	49	22.80	22.89	22.78	
10	QPSK	25	0	21.78	22.01	22.19	22.5
10	QPSK	25	12	21.87	21.90	22.05	
10	QPSK	25	25	21.95	21.95	22.13	
10	QPSK	50	0	21.84	21.95	22.06	
10	16QAM	1	0	22.13	22.12	22.28	22.5
10	16QAM	1	25	22.17	22.12	22.26	
10	16QAM	1	49	22.17	22.09	22.12	
10	16QAM	25	0	20.76	20.92	21.05	21.5
10	16QAM	25	12	20.91	20.91	21.06	
10	16QAM	25	25	20.87	20.94	21.06	
10	16QAM	50	0	20.90	20.91	21.02	
10	64QAM	1	0	21.20	21.01	21.21	21.5
10	64QAM	1	25	21.08	21.10	21.20	
10	64QAM	1	49	21.17	21.03	21.16	
10	64QAM	25	0	19.83	19.94	20.09	20.5
10	64QAM	25	12	19.86	19.88	20.11	
10	64QAM	25	25	19.87	19.88	20.09	
10	64QAM	50	0	19.88	19.95	20.00	
10	256QAM	1	0	17.77	17.80	17.86	18.5
10	256QAM	1	25	17.71	17.83	18.01	
10	256QAM	1	49	17.79	17.89	17.92	
10	256QAM	25	0	17.66	17.83	17.82	18.5
10	256QAM	25	12	17.64	17.82	17.87	
10	256QAM	25	25	17.76	17.69	17.95	
10	256QAM	50	0	17.83	17.79	17.99	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.87	22.91	23.10	23.5
5	QPSK	1	12	22.82	22.84	23.01	
5	QPSK	1	24	22.71	22.85	22.85	
5	QPSK	12	0	21.77	22.02	22.15	22.5
5	QPSK	12	7	21.96	21.81	22.09	
5	QPSK	12	13	21.93	21.87	22.04	
5	QPSK	25	0	21.84	21.92	21.99	
5	16QAM	1	0	22.22	22.10	22.29	22.5
5	16QAM	1	12	22.12	22.13	22.17	
5	16QAM	1	24	22.20	22.06	22.19	
5	16QAM	12	0	20.85	20.93	21.12	21.5
5	16QAM	12	7	20.91	20.86	21.03	
5	16QAM	12	13	20.93	20.91	21.06	
5	16QAM	25	0	20.93	20.94	21.04	
5	64QAM	1	0	21.21	21.04	21.24	21.5
5	64QAM	1	12	21.01	21.12	21.24	
5	64QAM	1	24	21.20	21.06	21.12	
5	64QAM	12	0	19.85	19.89	20.06	20.5
5	64QAM	12	7	19.92	19.87	20.12	
5	64QAM	12	13	19.82	19.95	20.06	
5	64QAM	25	0	19.89	19.95	20.02	
5	256QAM	1	0	17.77	17.74	17.92	18.5
5	256QAM	1	12	17.76	17.78	18.07	
5	256QAM	1	24	17.80	17.91	17.88	
5	256QAM	12	0	17.61	17.81	17.87	18.5
5	256QAM	12	7	17.66	17.77	17.94	
5	256QAM	12	13	17.71	17.77	17.99	
5	256QAM	25	0	17.75	17.75	17.94	
Channel				19965	20175	20385	Tune-up limit



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Frequency (MHz)				1711.5	1732.5	1753.5	(dBm)
3	QPSK	1	0	22.86	22.97	23.08	23.5
3	QPSK	1	8	22.83	22.87	22.95	
3	QPSK	1	14	22.75	22.88	22.83	
3	QPSK	8	0	21.78	21.97	22.17	22.5
3	QPSK	8	4	21.93	21.83	22.04	
3	QPSK	8	7	21.88	21.95	22.04	
3	QPSK	15	0	21.86	21.93	22.00	
3	16QAM	1	0	22.13	22.18	22.29	
3	16QAM	1	8	22.17	22.12	22.20	22.5
3	16QAM	1	14	22.18	22.16	22.18	
3	16QAM	8	0	20.85	20.93	21.05	
3	16QAM	8	4	20.91	20.84	21.09	21.5
3	16QAM	8	7	20.90	20.94	21.07	
3	16QAM	15	0	20.84	20.95	21.01	
3	64QAM	1	0	21.27	21.01	21.27	
3	64QAM	1	8	21.09	21.09	21.17	21.5
3	64QAM	1	14	21.14	20.98	21.19	
3	64QAM	8	0	19.82	19.90	20.04	
3	64QAM	8	4	19.92	19.94	20.10	20.5
3	64QAM	8	7	19.83	19.86	20.07	
3	64QAM	15	0	19.89	19.97	20.00	
3	256QAM	1	0	17.75	17.75	17.90	
3	256QAM	1	8	17.70	17.80	17.98	18.5
3	256QAM	1	14	17.75	17.90	17.89	
3	256QAM	8	0	17.64	17.82	17.84	
3	256QAM	8	4	17.57	17.76	17.87	18.5
3	256QAM	8	7	17.74	17.70	17.98	
3	256QAM	15	0	17.76	17.79	17.93	
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.88	22.93	23.04	23.5
1.4	QPSK	1	3	22.75	22.83	22.97	
1.4	QPSK	1	5	22.75	22.85	22.79	
1.4	QPSK	3	0	21.77	21.95	22.18	
1.4	QPSK	3	1	21.93	21.84	22.11	
1.4	QPSK	3	3	21.91	21.85	22.13	
1.4	QPSK	6	0	21.82	21.98	21.99	22.5
1.4	16QAM	1	0	22.15	22.16	22.28	22.5
1.4	16QAM	1	3	22.14	22.17	22.26	
1.4	16QAM	1	5	22.21	22.12	22.13	
1.4	16QAM	3	0	20.85	20.94	21.05	
1.4	16QAM	3	1	20.95	20.86	21.08	
1.4	16QAM	3	3	20.88	20.87	21.10	
1.4	16QAM	6	0	20.93	20.89	20.98	21.5
1.4	64QAM	1	0	21.18	21.09	21.28	21.5
1.4	64QAM	1	3	21.03	21.14	21.19	
1.4	64QAM	1	5	21.19	21.02	21.19	
1.4	64QAM	3	0	19.81	19.90	20.13	
1.4	64QAM	3	1	19.90	19.89	20.13	
1.4	64QAM	3	3	19.80	19.92	20.07	
1.4	64QAM	6	0	19.90	20.02	19.99	20.5
1.4	256QAM	1	0	17.77	17.70	17.92	18.5
1.4	256QAM	1	3	17.77	17.83	17.98	
1.4	256QAM	1	5	17.74	17.87	17.90	
1.4	256QAM	3	0	17.66	17.75	17.80	
1.4	256QAM	3	1	17.57	17.81	17.92	
1.4	256QAM	3	3	17.74	17.72	17.96	
1.4	256QAM	6	0	17.84	17.83	18.00	18.5



<LTE Band 5_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	24.25	23.49	24.03	24.5
10	QPSK	1	25	23.90	23.49	24.01	
10	QPSK	1	49	23.33	24.15	23.13	
10	QPSK	25	0	23.26	22.51	23.21	23.5
10	QPSK	25	12	23.06	22.66	23.19	
10	QPSK	25	25	22.79	23.05	22.57	
10	QPSK	50	0	23.06	22.82	23.04	23.5
10	16QAM	1	0	23.47	22.78	23.37	
10	16QAM	1	25	23.21	22.80	23.30	
10	16QAM	1	49	22.67	23.44	22.41	22.5
10	16QAM	25	0	22.24	21.58	22.20	
10	16QAM	25	12	22.15	21.72	22.17	
10	16QAM	25	25	21.89	22.11	21.66	22.5
10	16QAM	50	0	22.17	21.89	22.11	
10	64QAM	1	0	22.47	21.81	22.34	
10	64QAM	1	25	22.32	21.86	22.34	22.5
10	64QAM	1	49	21.71	22.38	21.39	
10	64QAM	25	0	21.28	20.64	21.19	
10	64QAM	25	12	21.22	20.77	21.16	21.5
10	64QAM	25	25	20.96	21.17	20.75	
10	64QAM	50	0	21.24	20.95	21.13	
10	256QAM	1	0	19.11	18.57	19.07	19.5
10	256QAM	1	25	19.12	18.71	19.05	
10	256QAM	1	49	18.84	19.05	18.62	
10	256QAM	25	0	19.16	18.57	19.01	19.5
10	256QAM	25	12	19.20	18.74	19.00	
10	256QAM	25	25	18.95	19.16	18.70	
10	256QAM	50	0	19.22	18.93	19.01	
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	24.22	23.43	24.02	24.5
5	QPSK	1	12	23.85	23.41	23.95	
5	QPSK	1	24	23.29	24.11	23.08	
5	QPSK	12	0	23.16	22.45	23.17	23.5
5	QPSK	12	7	23.03	22.59	23.12	
5	QPSK	12	13	22.70	23.00	22.52	
5	QPSK	25	0	22.98	22.77	23.03	23.5
5	16QAM	1	0	23.37	22.75	23.37	
5	16QAM	1	12	23.18	22.72	23.30	
5	16QAM	1	24	22.64	23.44	22.36	22.5
5	16QAM	12	0	22.24	21.55	22.12	
5	16QAM	12	7	22.06	21.67	22.09	
5	16QAM	12	13	21.89	22.04	21.57	22.5
5	16QAM	25	0	22.13	21.81	22.05	
5	64QAM	1	0	22.37	21.75	22.31	
5	64QAM	1	12	22.22	21.78	22.34	22.5
5	64QAM	1	24	21.69	22.29	21.39	
5	64QAM	12	0	21.26	20.64	21.14	
5	64QAM	12	7	21.21	20.68	21.07	21.5
5	64QAM	12	13	20.86	21.07	20.65	
5	64QAM	25	0	21.20	20.94	21.09	
5	256QAM	1	0	19.03	18.51	19.02	19.5
5	256QAM	1	12	19.02	18.67	19.00	
5	256QAM	1	24	18.78	19.02	18.59	
5	256QAM	12	0	19.16	18.54	18.98	19.5
5	256QAM	12	7	19.19	18.67	19.00	



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5	256QAM	12	13	18.86	19.13	18.65	
5	256QAM	25	0	19.12	18.92	19.00	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	24.13	23.42	23.97	24.5
3	QPSK	1	8	23.84	23.33	23.93	
3	QPSK	1	14	23.28	24.07	22.98	
3	QPSK	8	0	23.06	22.42	23.10	23.5
3	QPSK	8	4	23.01	22.57	23.10	
3	QPSK	8	7	22.69	22.97	22.43	
3	QPSK	15	0	22.92	22.76	22.97	
3	16QAM	1	0	23.36	22.68	23.35	23.5
3	16QAM	1	8	23.08	22.72	23.25	
3	16QAM	1	14	22.61	23.36	22.35	
3	16QAM	8	0	22.23	21.53	22.08	22.5
3	16QAM	8	4	21.99	21.66	22.00	
3	16QAM	8	7	21.84	22.01	21.51	
3	16QAM	15	0	22.13	21.72	21.99	
3	64QAM	1	0	22.33	21.72	22.26	22.5
3	64QAM	1	8	22.20	21.78	22.25	
3	64QAM	1	14	21.60	22.29	21.31	
3	64QAM	8	0	21.21	20.63	21.07	21.5
3	64QAM	8	4	21.17	20.58	21.01	
3	64QAM	8	7	20.76	21.02	20.59	
3	64QAM	15	0	21.12	20.89	21.01	
3	256QAM	1	0	18.96	18.44	18.99	19.5
3	256QAM	1	8	18.97	18.66	18.91	
3	256QAM	1	14	18.75	18.95	18.50	
3	256QAM	8	0	19.06	18.53	18.94	19.5
3	256QAM	8	4	19.19	18.65	18.94	
3	256QAM	8	7	18.85	19.09	18.56	
3	256QAM	15	0	19.12	18.89	18.95	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	24.15	23.35	23.92	24.5
1.4	QPSK	1	3	23.80	23.36	23.92	
1.4	QPSK	1	5	23.18	24.02	23.02	
1.4	QPSK	3	0	24.19	23.33	23.90	
1.4	QPSK	3	1	23.81	23.37	23.85	
1.4	QPSK	3	3	23.20	23.97	23.03	23.5
1.4	QPSK	6	0	22.89	22.58	22.91	
1.4	16QAM	1	0	23.31	22.67	23.26	23.5
1.4	16QAM	1	3	23.08	22.55	23.22	
1.4	16QAM	1	5	22.53	23.32	22.24	
1.4	16QAM	3	0	23.29	22.71	23.19	
1.4	16QAM	3	1	23.05	22.64	23.25	
1.4	16QAM	3	3	22.49	23.32	22.19	
1.4	16QAM	6	0	21.99	21.67	21.94	22.5
1.4	64QAM	1	0	22.25	21.74	22.12	
1.4	64QAM	1	3	22.18	21.67	22.25	22.5
1.4	64QAM	1	5	21.63	22.25	21.27	
1.4	64QAM	3	0	22.22	21.64	22.11	
1.4	64QAM	3	1	22.21	21.69	22.22	
1.4	64QAM	3	3	21.59	22.18	21.23	
1.4	64QAM	6	0	21.10	20.89	20.93	21.5
1.4	256QAM	1	0	18.88	18.37	18.98	
1.4	256QAM	1	3	18.92	18.55	18.88	19.5
1.4	256QAM	1	5	18.65	18.83	18.51	
1.4	256QAM	3	0	18.94	18.33	18.98	
1.4	256QAM	3	1	18.88	18.55	18.87	
1.4	256QAM	3	3	18.58	18.84	18.57	
1.4	256QAM	6	0	18.96	18.87	18.95	19.5



<LTE Band 7_Ant 5_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	23.95	24.04	23.81	25
20	QPSK	1	49	23.89	24.03	23.80	
20	QPSK	1	99	23.76	23.94	23.73	
20	QPSK	50	0	22.88	23.11	22.85	24
20	QPSK	50	24	22.99	23.09	22.91	
20	QPSK	50	50	23.02	23.08	22.84	
20	QPSK	100	0	23.00	23.09	22.86	24
20	16QAM	1	0	23.11	23.27	23.16	
20	16QAM	1	49	23.33	23.37	23.14	
20	16QAM	1	99	23.26	23.33	23.07	23
20	16QAM	50	0	21.88	22.07	21.85	
20	16QAM	50	24	22.01	22.08	21.93	
20	16QAM	50	50	22.03	22.09	21.82	23
20	16QAM	100	0	21.98	22.07	21.88	
20	64QAM	1	0	22.09	22.10	21.99	
20	64QAM	1	49	22.07	22.22	22.04	23
20	64QAM	1	99	22.08	22.26	22.01	
20	64QAM	50	0	20.86	21.06	20.87	
20	64QAM	50	24	21.04	21.11	20.92	22
20	64QAM	50	50	21.03	21.05	20.82	
20	64QAM	100	0	21.01	21.05	20.88	
20	256QAM	1	0	18.71	18.92	18.82	20
20	256QAM	1	49	18.88	19.06	18.73	
20	256QAM	1	99	18.86	18.98	18.69	
20	256QAM	50	0	18.73	19.00	18.87	20
20	256QAM	50	24	18.89	18.95	18.89	
20	256QAM	50	50	18.85	18.99	18.71	
20	256QAM	100	0	19.01	18.94	18.87	
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	Tune-up limit (dBm)
15	QPSK	1	0	23.90	23.96	23.75	25
15	QPSK	1	37	23.86	24.00	23.70	
15	QPSK	1	74	23.68	23.86	23.72	
15	QPSK	36	0	22.87	23.08	22.77	24
15	QPSK	36	20	22.92	23.00	22.90	
15	QPSK	36	39	23.02	22.99	22.74	
15	QPSK	75	0	22.97	23.00	22.85	24
15	16QAM	1	0	23.05	23.25	23.12	
15	16QAM	1	37	23.26	23.34	23.08	
15	16QAM	1	74	23.17	23.28	23.03	23
15	16QAM	36	0	21.87	22.02	21.79	
15	16QAM	36	20	21.99	22.06	21.87	
15	16QAM	36	39	22.03	22.03	21.81	23
15	16QAM	75	0	21.96	22.05	21.87	
15	64QAM	1	0	22.08	22.09	21.98	
15	64QAM	1	37	21.99	22.13	22.04	23
15	64QAM	1	74	22.01	22.26	21.92	
15	64QAM	36	0	20.80	21.04	20.87	
15	64QAM	36	20	21.03	21.06	20.90	22
15	64QAM	36	39	21.00	21.04	20.75	
15	64QAM	75	0	20.96	21.03	20.88	
15	256QAM	1	0	18.68	18.91	18.75	20
15	256QAM	1	37	18.81	19.01	18.73	
15	256QAM	1	74	18.82	18.97	18.64	
15	256QAM	36	0	18.73	18.90	18.77	20
15	256QAM	36	20	18.80	18.88	18.89	



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15	256QAM	36	39	18.75	18.94	18.63	
15	256QAM	75	0	18.95	18.94	18.83	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	23.81	23.94	23.68	25
10	QPSK	1	25	23.85	23.99	23.69	
10	QPSK	1	49	23.66	23.83	23.70	
10	QPSK	25	0	22.84	22.99	22.72	24
10	QPSK	25	12	22.88	22.90	22.81	
10	QPSK	25	25	22.92	22.89	22.68	
10	QPSK	50	0	22.93	22.91	22.77	
10	16QAM	1	0	23.05	23.23	23.02	24
10	16QAM	1	25	23.21	23.31	23.04	
10	16QAM	1	49	23.07	23.27	23.00	
10	16QAM	25	0	21.81	21.94	21.70	23
10	16QAM	25	12	21.94	22.06	21.79	
10	16QAM	25	25	21.93	22.00	21.77	
10	16QAM	50	0	21.90	21.98	21.79	
10	64QAM	1	0	22.05	22.01	21.98	
10	64QAM	1	25	21.97	22.06	21.97	23
10	64QAM	1	49	21.98	22.25	21.90	
10	64QAM	25	0	20.70	21.03	20.82	
10	64QAM	25	12	21.00	21.05	20.86	22
10	64QAM	25	25	20.90	20.95	20.67	
10	64QAM	50	0	20.89	20.96	20.88	
10	256QAM	1	0	18.60	18.86	18.74	
10	256QAM	1	25	18.73	18.95	18.70	20
10	256QAM	1	49	18.81	18.93	18.59	
10	256QAM	25	0	18.63	18.80	18.74	
10	256QAM	25	12	18.75	18.84	18.85	20
10	256QAM	25	25	18.73	18.86	18.54	
10	256QAM	50	0	18.88	18.89	18.74	
Channel				20775	21100	21425	
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	23.84	23.91	23.67	25
5	QPSK	1	12	23.84	23.91	23.66	
5	QPSK	1	24	23.68	23.76	23.62	
5	QPSK	12	0	22.81	23.08	22.70	24
5	QPSK	12	7	22.82	22.91	22.89	
5	QPSK	12	13	22.99	22.92	22.70	
5	QPSK	25	0	22.94	23.00	22.81	
5	16QAM	1	0	23.05	23.19	23.03	24
5	16QAM	1	12	23.16	23.25	22.98	
5	16QAM	1	24	23.12	23.27	22.93	
5	16QAM	12	0	21.83	21.97	21.70	
5	16QAM	12	7	21.90	21.99	21.77	23
5	16QAM	12	13	22.00	21.97	21.74	
5	16QAM	25	0	21.86	21.95	21.84	
5	64QAM	1	0	22.00	22.04	21.93	
5	64QAM	1	12	21.89	22.09	21.99	23
5	64QAM	1	24	21.95	22.24	21.88	
5	64QAM	12	0	20.77	21.00	20.78	
5	64QAM	12	7	20.97	21.03	20.84	22
5	64QAM	12	13	20.97	21.02	20.74	
5	64QAM	25	0	20.93	20.98	20.83	
5	256QAM	1	0	18.61	18.89	18.73	
5	256QAM	1	12	18.74	18.98	18.70	20
5	256QAM	1	24	18.74	18.95	18.64	
5	256QAM	12	0	18.70	18.86	18.73	
5	256QAM	12	7	18.79	18.79	18.81	20
5	256QAM	12	13	18.69	18.92	18.63	
5	256QAM	25	0	18.89	18.86	18.77	



<LTE Band 7_Ant 5_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.16	22.23	22.74	23
20	QPSK	1	49	22.10	22.16	22.11	
20	QPSK	1	99	21.97	22.11	22.10	
20	QPSK	50	0	21.05	21.26	21.27	22
20	QPSK	50	24	21.11	21.25	21.19	
20	QPSK	50	50	21.13	21.22	21.16	
20	QPSK	100	0	21.12	21.23	21.25	
20	16QAM	1	0	21.29	21.45	21.46	22
20	16QAM	1	49	21.46	21.41	21.44	
20	16QAM	1	99	21.45	21.45	21.40	
20	16QAM	50	0	20.02	20.21	20.18	21
20	16QAM	50	24	20.18	20.19	20.29	
20	16QAM	50	50	20.22	20.20	20.20	
20	16QAM	100	0	20.10	20.17	20.23	
20	64QAM	1	0	20.27	20.27	20.38	21
20	64QAM	1	49	20.23	20.35	20.36	
20	64QAM	1	99	20.25	20.42	20.41	
20	64QAM	50	0	19.05	19.23	19.18	20
20	64QAM	50	24	19.22	19.30	19.30	
20	64QAM	50	50	19.16	19.18	19.13	
20	64QAM	100	0	19.21	19.16	19.28	
20	256QAM	1	0	16.84	17.01	17.19	18
20	256QAM	1	49	17.00	17.25	17.13	
20	256QAM	1	99	16.99	17.09	17.01	
20	256QAM	50	0	16.89	17.13	17.19	18
20	256QAM	50	24	17.02	17.13	17.25	
20	256QAM	50	50	17.01	17.09	17.03	
20	256QAM	100	0	17.21	17.03	17.21	
Channel				20825	21100	21375	
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.14	22.23	22.19	23
15	QPSK	1	37	22.07	22.07	22.05	
15	QPSK	1	74	21.94	22.06	22.06	
15	QPSK	36	0	20.97	21.22	21.08	22
15	QPSK	36	20	21.02	21.20	21.27	
15	QPSK	36	39	21.10	21.13	21.08	
15	QPSK	75	0	21.05	21.16	21.15	
15	16QAM	1	0	21.25	21.44	21.36	22
15	16QAM	1	37	21.43	21.36	21.43	
15	16QAM	1	74	21.42	21.39	21.38	
15	16QAM	36	0	20.02	20.21	20.11	21
15	16QAM	36	20	20.14	20.11	20.25	
15	16QAM	36	39	20.14	20.17	20.12	
15	16QAM	75	0	20.09	20.07	20.20	
15	64QAM	1	0	20.25	20.24	20.37	21
15	64QAM	1	37	20.15	20.25	20.26	
15	64QAM	1	74	20.16	20.33	20.38	
15	64QAM	36	0	19.04	19.20	19.08	20
15	64QAM	36	20	19.21	19.27	19.22	
15	64QAM	36	39	19.07	19.10	19.08	
15	64QAM	75	0	19.14	19.15	19.28	
15	256QAM	1	0	16.76	16.96	17.09	18
15	256QAM	1	37	16.94	17.21	17.07	
15	256QAM	1	74	16.98	17.03	16.98	
15	256QAM	36	0	16.88	17.09	17.12	18
15	256QAM	36	20	16.99	17.11	17.21	



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15	256QAM	36	39	17.01	17.00	17.03	
15	256QAM	75	0	17.13	16.99	17.13	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.14	22.19	22.21	23
10	QPSK	1	25	22.06	22.13	22.01	
10	QPSK	1	49	21.93	22.09	22.10	
10	QPSK	25	0	21.02	21.19	21.13	22
10	QPSK	25	12	21.03	21.26	21.26	
10	QPSK	25	25	21.07	21.19	21.06	
10	QPSK	50	0	21.12	21.20	21.14	
10	16QAM	1	0	21.26	21.41	21.37	22
10	16QAM	1	25	21.45	21.34	21.38	
10	16QAM	1	49	21.37	21.40	21.30	
10	16QAM	25	0	20.01	20.13	20.08	21
10	16QAM	25	12	20.09	20.18	20.19	
10	16QAM	25	25	20.13	20.19	20.18	
10	16QAM	50	0	20.07	20.09	20.21	
10	64QAM	1	0	20.25	20.24	20.34	21
10	64QAM	1	25	20.20	20.27	20.27	
10	64QAM	1	49	20.25	20.39	20.31	
10	64QAM	25	0	19.05	19.17	19.08	20
10	64QAM	25	12	19.15	19.21	19.24	
10	64QAM	25	25	19.09	19.14	19.10	
10	64QAM	50	0	19.17	19.11	19.20	
10	256QAM	1	0	16.79	16.95	17.16	18
10	256QAM	1	25	17.00	17.16	17.03	
10	256QAM	1	49	16.90	17.08	16.97	
10	256QAM	25	0	16.85	17.13	17.14	18
10	256QAM	25	12	16.99	17.07	17.24	
10	256QAM	25	25	17.01	17.02	17.02	
10	256QAM	50	0	17.18	16.97	17.21	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.07	22.15	22.14	23
5	QPSK	1	12	22.06	22.11	22.03	
5	QPSK	1	24	21.97	22.04	22.05	
5	QPSK	12	0	20.98	21.23	21.13	22
5	QPSK	12	7	21.03	21.18	21.17	
5	QPSK	12	13	21.13	21.22	21.15	
5	QPSK	25	0	21.02	21.17	21.11	
5	16QAM	1	0	21.28	21.45	21.46	22
5	16QAM	1	12	21.42	21.33	21.39	
5	16QAM	1	24	21.40	21.36	21.39	
5	16QAM	12	0	19.94	20.13	20.12	21
5	16QAM	12	7	20.13	20.14	20.21	
5	16QAM	12	13	20.14	20.17	20.20	
5	16QAM	25	0	20.01	20.07	20.15	
5	64QAM	1	0	20.22	20.27	20.32	21
5	64QAM	1	12	20.21	20.33	20.30	
5	64QAM	1	24	20.20	20.40	20.32	
5	64QAM	12	0	19.03	19.17	19.09	20
5	64QAM	12	7	19.20	19.22	19.25	
5	64QAM	12	13	19.09	19.15	19.09	
5	64QAM	25	0	19.19	19.08	19.19	
5	256QAM	1	0	16.82	16.93	17.14	18
5	256QAM	1	12	16.97	17.18	17.09	
5	256QAM	1	24	16.91	17.09	16.95	
5	256QAM	12	0	16.80	17.08	17.15	18
5	256QAM	12	7	16.92	17.04	17.23	
5	256QAM	12	13	16.96	17.02	16.97	
5	256QAM	25	0	17.11	17.01	17.18	



<LTE Band 12_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	24.29	24.35	24.25	25
10	QPSK	1	25	24.27	24.29	24.18	
10	QPSK	1	49	24.23	24.19	24.17	
10	QPSK	25	0	23.24	23.41	23.21	24
10	QPSK	25	12	23.37	23.31	23.32	
10	QPSK	25	25	23.38	23.34	23.28	
10	QPSK	50	0	23.35	23.31	23.21	
10	16QAM	1	0	23.53	23.47	23.50	24
10	16QAM	1	25	23.52	23.66	23.57	
10	16QAM	1	49	23.58	23.59	23.36	
10	16QAM	25	0	22.25	22.27	22.23	23
10	16QAM	25	12	22.36	22.36	22.33	
10	16QAM	25	25	22.37	22.40	22.30	
10	16QAM	50	0	22.35	22.32	22.25	
10	64QAM	1	0	22.42	22.48	22.44	23
10	64QAM	1	25	22.49	22.61	22.47	
10	64QAM	1	49	22.43	22.49	22.41	
10	64QAM	25	0	21.24	21.29	21.21	22
10	64QAM	25	12	21.37	21.34	21.32	
10	64QAM	25	25	21.37	21.41	21.27	
10	64QAM	50	0	21.36	21.31	21.23	
10	256QAM	1	0	19.10	19.28	19.10	20
10	256QAM	1	25	19.37	19.28	19.16	
10	256QAM	1	49	19.37	19.37	19.20	
10	256QAM	25	0	19.17	19.23	19.03	20
10	256QAM	25	12	19.23	19.25	19.28	
10	256QAM	25	25	19.20	19.22	19.21	
10	256QAM	50	0	19.22	19.30	19.21	
Channel				23035	23095	23155	
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	24.20	24.30	24.22	25
5	QPSK	1	12	24.22	24.21	24.12	
5	QPSK	1	24	24.16	24.12	24.12	
5	QPSK	12	0	23.16	23.32	23.15	24
5	QPSK	12	7	23.31	23.21	23.32	
5	QPSK	12	13	23.30	23.34	23.27	
5	QPSK	25	0	23.32	23.21	23.16	
5	16QAM	1	0	23.48	23.43	23.41	24
5	16QAM	1	12	23.42	23.59	23.56	
5	16QAM	1	24	23.51	23.56	23.32	
5	16QAM	12	0	22.25	22.25	22.13	23
5	16QAM	12	7	22.30	22.26	22.32	
5	16QAM	12	13	22.33	22.40	22.29	
5	16QAM	25	0	22.30	22.29	22.15	
5	64QAM	1	0	22.39	22.39	22.43	23
5	64QAM	1	12	22.45	22.52	22.44	
5	64QAM	1	24	22.37	22.41	22.39	
5	64QAM	12	0	21.23	21.19	21.11	22
5	64QAM	12	7	21.37	21.34	21.27	
5	64QAM	12	13	21.37	21.41	21.24	
5	64QAM	25	0	21.31	21.30	21.21	
5	256QAM	1	0	19.10	19.20	19.03	20
5	256QAM	1	12	19.34	19.22	19.07	
5	256QAM	1	24	19.30	19.28	19.10	
5	256QAM	12	0	19.10	19.16	18.99	20
5	256QAM	12	7	19.21	19.19	19.24	



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5	256QAM	12	13	19.12	19.12	19.18	
5	256QAM	25	0	19.14	19.23	19.18	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	24.15	24.30	24.16	25
3	QPSK	1	8	24.14	24.12	24.10	
3	QPSK	1	14	24.08	24.12	24.03	
3	QPSK	8	0	23.07	23.22	23.14	24
3	QPSK	8	4	23.27	23.16	23.24	
3	QPSK	8	7	23.26	23.33	23.25	
3	QPSK	15	0	23.28	23.12	23.09	
3	16QAM	1	0	23.46	23.35	23.36	24
3	16QAM	1	8	23.42	23.57	23.52	
3	16QAM	1	14	23.41	23.49	23.27	
3	16QAM	8	0	22.21	22.19	22.13	23
3	16QAM	8	4	22.20	22.16	22.31	
3	16QAM	8	7	22.27	22.31	22.23	
3	16QAM	15	0	22.24	22.20	22.15	
3	64QAM	1	0	22.37	22.30	22.34	23
3	64QAM	1	8	22.43	22.52	22.34	
3	64QAM	1	14	22.29	22.35	22.34	
3	64QAM	8	0	21.18	21.12	21.10	22
3	64QAM	8	4	21.27	21.26	21.19	
3	64QAM	8	7	21.28	21.32	21.17	
3	64QAM	15	0	21.25	21.24	21.13	
3	256QAM	1	0	19.02	19.15	18.96	20
3	256QAM	1	8	19.30	19.19	19.00	
3	256QAM	1	14	19.24	19.25	19.06	
3	256QAM	8	0	19.07	19.13	18.93	20
3	256QAM	8	4	19.16	19.14	19.15	
3	256QAM	8	7	19.09	19.12	19.11	
3	256QAM	15	0	19.13	19.20	19.08	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	24.15	24.27	24.10	25
1.4	QPSK	1	3	24.10	24.06	24.04	
1.4	QPSK	1	5	24.04	24.06	24.01	
1.4	QPSK	3	0	24.10	24.28	24.07	
1.4	QPSK	3	1	24.13	24.02	24.01	
1.4	QPSK	3	3	24.03	24.08	23.96	24
1.4	QPSK	6	0	23.20	23.03	23.01	
1.4	16QAM	1	0	23.40	23.34	23.32	24
1.4	16QAM	1	3	23.37	23.51	23.52	
1.4	16QAM	1	5	23.33	23.45	23.19	
1.4	16QAM	3	0	23.41	23.34	23.28	
1.4	16QAM	3	1	23.35	23.51	23.44	
1.4	16QAM	3	3	23.40	23.45	23.21	
1.4	16QAM	6	0	22.23	22.18	22.10	23
1.4	64QAM	1	0	22.34	22.22	22.26	23
1.4	64QAM	1	3	22.39	22.49	22.25	
1.4	64QAM	1	5	22.22	22.30	22.29	
1.4	64QAM	3	0	22.30	22.22	22.28	
1.4	64QAM	3	1	22.36	22.43	22.28	
1.4	64QAM	3	3	22.28	22.28	22.31	22
1.4	64QAM	6	0	21.22	21.15	21.13	
1.4	256QAM	1	0	19.00	19.05	18.87	20
1.4	256QAM	1	3	19.27	19.15	18.94	
1.4	256QAM	1	5	19.19	19.15	18.97	
1.4	256QAM	3	0	18.93	19.11	18.91	
1.4	256QAM	3	1	19.26	19.11	18.94	
1.4	256QAM	3	3	19.15	19.20	19.06	
1.4	256QAM	6	0	19.10	19.16	18.98	20



<LTE Band 17_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	24.26	24.24	24.23	25
10	QPSK	1	25	24.15	24.13	24.20	
10	QPSK	1	49	24.12	24.04	24.14	
10	QPSK	25	0	23.27	23.17	23.19	24
10	QPSK	25	12	23.20	23.24	23.22	
10	QPSK	25	25	23.16	23.17	23.17	
10	QPSK	50	0	23.18	23.20	23.19	24
10	16QAM	1	0	23.41	23.36	23.50	
10	16QAM	1	25	23.56	23.60	23.63	
10	16QAM	1	49	23.50	23.36	23.39	23
10	16QAM	25	0	22.18	22.19	22.19	
10	16QAM	25	12	22.25	22.20	22.21	
10	16QAM	25	25	22.28	22.21	22.21	23
10	16QAM	50	0	22.19	22.21	22.24	
10	64QAM	1	0	22.33	22.31	22.41	
10	64QAM	1	25	22.40	22.50	22.49	23
10	64QAM	1	49	22.37	22.35	22.41	
10	64QAM	25	0	21.21	21.18	21.19	
10	64QAM	25	12	21.22	21.26	21.24	22
10	64QAM	25	25	21.30	21.21	21.19	
10	64QAM	50	0	21.20	21.21	21.22	
10	256QAM	1	0	19.06	19.15	19.10	20
10	256QAM	1	25	19.22	19.08	19.09	
10	256QAM	1	49	19.15	19.09	19.04	
10	256QAM	25	0	19.12	19.02	19.09	20
10	256QAM	25	12	19.20	19.13	19.15	
10	256QAM	25	25	19.25	19.03	19.08	
10	256QAM	50	0	19.17	19.09	19.07	
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	24.18	24.16	24.19	25
5	QPSK	1	12	24.12	24.11	24.16	
5	QPSK	1	24	24.04	23.96	24.04	
5	QPSK	12	0	23.22	23.08	23.12	24
5	QPSK	12	7	23.10	23.23	23.17	
5	QPSK	12	13	23.08	23.17	23.17	
5	QPSK	25	0	23.13	23.10	23.17	24
5	16QAM	1	0	23.39	23.28	23.43	
5	16QAM	1	12	23.48	23.54	23.61	
5	16QAM	1	24	23.42	23.28	23.31	23
5	16QAM	12	0	22.11	22.12	22.12	
5	16QAM	12	7	22.20	22.19	22.15	
5	16QAM	12	13	22.21	22.11	22.16	23
5	16QAM	25	0	22.19	22.12	22.16	
5	64QAM	1	0	22.31	22.27	22.37	
5	64QAM	1	12	22.33	22.40	22.41	23
5	64QAM	1	24	22.28	22.28	22.31	
5	64QAM	12	0	21.11	21.16	21.12	
5	64QAM	12	7	21.12	21.25	21.14	22
5	64QAM	12	13	21.30	21.15	21.12	
5	64QAM	25	0	21.12	21.21	21.13	
5	256QAM	1	0	19.01	19.11	19.05	20
5	256QAM	1	12	19.16	19.03	19.07	
5	256QAM	1	24	19.06	19.08	18.94	
5	256QAM	12	0	19.02	19.00	19.02	20
5	256QAM	12	7	19.15	19.11	19.13	



5	256QAM	12	13	19.18	19.00	19.01	
5	256QAM	25	0	19.16	19.05	19.04	

<LTE Band 26_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	23.79	23.75	23.67	24.5
15	QPSK	1	37	23.18	23.44	23.66	
15	QPSK	1	74	23.42	23.26	22.97	
15	QPSK	36	0	23.18	22.90	22.71	23.5
15	QPSK	36	20	22.38	22.63	22.73	
15	QPSK	36	39	22.90	22.38	22.42	
15	QPSK	75	0	22.65	22.65	22.73	23.5
15	16QAM	1	0	22.74	23.09	22.95	
15	16QAM	1	37	22.53	22.79	22.98	
15	16QAM	1	74	23.06	22.63	22.29	22.5
15	16QAM	36	0	21.43	21.89	21.72	
15	16QAM	36	20	21.47	21.73	21.73	
15	16QAM	36	39	21.90	21.45	21.53	22.5
15	16QAM	75	0	21.75	21.73	21.70	
15	64QAM	1	0	21.85	22.10	21.96	
15	64QAM	1	37	21.51	21.79	21.89	22.5
15	64QAM	1	74	22.12	21.57	21.33	
15	64QAM	36	0	20.48	20.89	20.69	
15	64QAM	36	20	20.51	20.77	20.74	21.5
15	64QAM	36	39	20.91	20.49	20.60	
15	64QAM	75	0	20.82	20.79	20.73	
15	256QAM	1	0	18.37	18.73	18.49	19.5
15	256QAM	1	37	18.31	18.69	18.69	
15	256QAM	1	74	18.90	18.44	18.58	
15	256QAM	36	0	18.29	18.78	18.52	19.5
15	256QAM	36	20	18.37	18.76	18.72	
15	256QAM	36	39	18.76	18.42	18.59	
15	256QAM	75	0	18.64	18.73	18.68	
Channel				26740	26865	26990	
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	23.73	23.68	23.63	24.5
10	QPSK	1	25	23.15	23.38	23.60	
10	QPSK	1	49	23.32	23.24	22.89	
10	QPSK	25	0	23.12	22.82	22.63	23.5
10	QPSK	25	12	22.36	22.60	22.73	
10	QPSK	25	25	22.82	22.35	22.41	
10	QPSK	50	0	22.55	22.60	22.63	23.5
10	16QAM	1	0	22.66	23.08	22.86	
10	16QAM	1	25	22.50	22.77	22.89	
10	16QAM	1	49	23.06	22.55	22.19	22.5
10	16QAM	25	0	21.40	21.80	21.67	
10	16QAM	25	12	21.47	21.64	21.66	
10	16QAM	25	25	21.85	21.43	21.51	22.5
10	16QAM	50	0	21.68	21.70	21.67	
10	64QAM	1	0	21.76	22.07	21.93	
10	64QAM	1	25	21.44	21.72	21.85	22.5
10	64QAM	1	49	22.09	21.57	21.27	
10	64QAM	25	0	20.45	20.81	20.66	
10	64QAM	25	12	20.48	20.75	20.74	21.5
10	64QAM	25	25	20.88	20.42	20.60	
10	64QAM	50	0	20.81	20.70	20.69	
10	256QAM	1	0	18.28	18.65	18.40	19.5



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10	256QAM	1	25	18.22	18.61	18.65	19.5
10	256QAM	1	49	18.90	18.38	18.50	
10	256QAM	25	0	18.27	18.74	18.52	
10	256QAM	25	12	18.31	18.74	18.66	
10	256QAM	25	25	18.66	18.33	18.55	
10	256QAM	50	0	18.61	18.73	18.68	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	23.63	23.61	23.55	24.5
5	QPSK	1	12	23.13	23.28	23.50	
5	QPSK	1	24	23.22	23.22	22.85	
5	QPSK	12	0	23.03	22.81	22.54	23.5
5	QPSK	12	7	22.35	22.56	22.64	
5	QPSK	12	13	22.73	22.32	22.31	
5	QPSK	25	0	22.53	22.59	22.57	
5	16QAM	1	0	22.56	22.98	22.85	23.5
5	16QAM	1	12	22.49	22.72	22.81	
5	16QAM	1	24	23.00	22.47	22.18	
5	16QAM	12	0	21.33	21.72	21.63	22.5
5	16QAM	12	7	21.37	21.57	21.64	
5	16QAM	12	13	21.76	21.33	21.47	
5	16QAM	25	0	21.63	21.60	21.58	
5	64QAM	1	0	21.75	22.04	21.89	22.5
5	64QAM	1	12	21.41	21.67	21.82	
5	64QAM	1	24	22.06	21.48	21.18	
5	64QAM	12	0	20.40	20.79	20.60	21.5
5	64QAM	12	7	20.47	20.70	20.68	
5	64QAM	12	13	20.85	20.40	20.57	
5	64QAM	25	0	20.72	20.66	20.61	
5	256QAM	1	0	18.22	18.55	18.37	19.5
5	256QAM	1	12	18.22	18.51	18.57	
5	256QAM	1	24	18.82	18.30	18.47	
5	256QAM	12	0	18.24	18.71	18.44	19.5
5	256QAM	12	7	18.31	18.73	18.58	
5	256QAM	12	13	18.66	18.32	18.46	
5	256QAM	25	0	18.60	18.70	18.63	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	23.62	23.61	23.50	24.5
3	QPSK	1	8	23.09	23.22	23.41	
3	QPSK	1	14	23.20	23.14	22.78	
3	QPSK	8	0	22.94	22.73	22.50	23.5
3	QPSK	8	4	22.34	22.49	22.58	
3	QPSK	8	7	22.65	22.26	22.30	
3	QPSK	15	0	22.44	22.52	22.51	
3	16QAM	1	0	22.50	22.92	22.83	23.5
3	16QAM	1	8	22.44	22.72	22.72	
3	16QAM	1	14	22.91	22.39	22.12	
3	16QAM	8	0	21.33	21.68	21.60	22.5
3	16QAM	8	4	21.30	21.51	21.54	
3	16QAM	8	7	21.69	21.32	21.37	
3	16QAM	15	0	21.60	21.57	21.50	
3	64QAM	1	0	21.69	21.98	21.83	22.5
3	64QAM	1	8	21.33	21.57	21.74	
3	64QAM	1	14	22.06	21.39	21.13	
3	64QAM	8	0	20.37	20.70	20.55	21.5
3	64QAM	8	4	20.46	20.70	20.59	
3	64QAM	8	7	20.76	20.32	20.47	
3	64QAM	15	0	20.72	20.66	20.59	
3	256QAM	1	0	18.14	18.50	18.33	19.5
3	256QAM	1	8	18.18	18.42	18.52	
3	256QAM	1	14	18.72	18.22	18.44	
3	256QAM	8	0	18.20	18.69	18.39	19.5



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3	256QAM	8	4	18.26	18.73	18.53	
3	256QAM	8	7	18.66	18.25	18.38	
3	256QAM	15	0	18.60	18.69	18.56	
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.62	23.61	23.53	24.5
1.4	QPSK	1	3	23.13	23.27	23.45	
1.4	QPSK	1	5	23.17	23.20	22.83	
1.4	QPSK	3	0	23.60	23.52	23.53	
1.4	QPSK	3	1	23.03	23.20	23.45	
1.4	QPSK	3	3	23.15	23.17	22.81	
1.4	QPSK	6	0	22.46	22.52	22.56	23.5
1.4	16QAM	1	0	22.46	22.92	22.75	23.5
1.4	16QAM	1	3	22.39	22.68	22.77	
1.4	16QAM	1	5	22.96	22.41	22.08	
1.4	16QAM	3	0	22.47	22.89	22.78	
1.4	16QAM	3	1	22.47	22.70	22.76	
1.4	16QAM	3	3	22.93	22.39	22.18	
1.4	16QAM	6	0	21.58	21.50	21.55	22.5
1.4	64QAM	1	0	21.72	21.94	21.83	22.5
1.4	64QAM	1	3	21.31	21.60	21.82	
1.4	64QAM	1	5	22.06	21.45	21.14	
1.4	64QAM	3	0	21.70	21.98	21.85	
1.4	64QAM	3	1	21.39	21.65	21.77	
1.4	64QAM	3	3	21.99	21.43	21.12	
1.4	64QAM	6	0	20.66	20.61	20.57	21.5
1.4	256QAM	1	0	18.21	18.52	18.35	19.5
1.4	256QAM	1	3	18.12	18.41	18.56	
1.4	256QAM	1	5	18.76	18.21	18.42	
1.4	256QAM	3	0	18.16	18.53	18.31	
1.4	256QAM	3	1	18.12	18.41	18.48	
1.4	256QAM	3	3	18.73	18.29	18.41	
1.4	256QAM	6	0	18.54	18.60	18.62	19.5

<LTE Band 66_Ant 1_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.84	24.07	24.18	25
20	QPSK	1	49	23.82	24.05	24.12	
20	QPSK	1	99	23.77	24.03	23.96	
20	QPSK	50	0	22.79	23.09	23.28	24
20	QPSK	50	24	22.88	23.08	23.25	
20	QPSK	50	50	22.88	23.12	23.21	
20	QPSK	100	0	22.86	23.07	23.14	24
20	16QAM	1	0	23.21	23.33	23.48	
20	16QAM	1	49	23.10	23.35	23.40	
20	16QAM	1	99	23.20	23.27	23.33	23
20	16QAM	50	0	21.82	22.10	22.19	
20	16QAM	50	24	21.90	22.07	22.24	
20	16QAM	50	50	21.88	22.12	22.17	23
20	16QAM	100	0	21.85	22.06	22.12	
20	64QAM	1	0	22.19	22.20	22.52	
20	64QAM	1	49	22.06	22.33	22.47	23
20	64QAM	1	99	22.15	22.24	22.29	
20	64QAM	50	0	20.80	21.07	21.20	
20	64QAM	50	24	20.84	21.06	21.27	22
20	64QAM	50	50	20.84	21.11	21.20	
20	64QAM	100	0	20.85	21.10	21.17	



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20	256QAM	1	0	18.75	18.97	19.11	20
20	256QAM	1	49	18.71	19.04	19.17	
20	256QAM	1	99	18.78	19.05	19.10	
20	256QAM	50	0	18.64	18.95	19.00	20
20	256QAM	50	24	18.64	18.99	19.11	
20	256QAM	50	50	18.73	18.91	19.08	
20	256QAM	100	0	18.76	19.00	19.13	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.82	24.02	24.13	25
15	QPSK	1	37	23.82	24.02	24.05	
15	QPSK	1	74	23.76	23.98	23.90	
15	QPSK	36	0	22.72	23.00	23.18	24
15	QPSK	36	20	22.85	23.01	23.23	
15	QPSK	36	39	22.87	23.12	23.14	
15	QPSK	75	0	22.83	23.00	23.14	24
15	16QAM	1	0	23.13	23.32	23.44	
15	16QAM	1	37	23.10	23.33	23.38	
15	16QAM	1	74	23.18	23.27	23.24	23
15	16QAM	36	0	21.74	22.08	22.13	
15	16QAM	36	20	21.82	22.03	22.18	
15	16QAM	36	39	21.79	22.05	22.17	23
15	16QAM	75	0	21.85	21.96	22.05	
15	64QAM	1	0	22.14	22.15	22.50	
15	64QAM	1	37	21.98	22.23	22.42	22
15	64QAM	1	74	22.10	22.19	22.28	
15	64QAM	36	0	20.79	21.05	21.15	
15	64QAM	36	20	20.82	20.99	21.27	20
15	64QAM	36	39	20.79	21.09	21.15	
15	64QAM	75	0	20.78	21.09	21.07	
15	256QAM	1	0	18.68	18.95	19.11	20
15	256QAM	1	37	18.61	19.01	19.12	
15	256QAM	1	74	18.74	18.99	19.08	
15	256QAM	36	0	18.57	18.89	18.98	20
15	256QAM	36	20	18.61	18.93	19.10	
15	256QAM	36	39	18.71	18.83	18.98	
15	256QAM	75	0	18.69	18.93	19.06	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.81	24.02	24.12	25
10	QPSK	1	25	23.78	23.99	24.05	
10	QPSK	1	49	23.66	23.89	23.89	
10	QPSK	25	0	22.66	22.99	23.14	24
10	QPSK	25	12	22.82	22.94	23.23	
10	QPSK	25	25	22.77	23.10	23.14	
10	QPSK	50	0	22.73	22.98	23.14	24
10	16QAM	1	0	23.07	23.29	23.40	
10	16QAM	1	25	23.00	23.30	23.32	
10	16QAM	1	49	23.12	23.25	23.16	23
10	16QAM	25	0	21.64	22.06	22.04	
10	16QAM	25	12	21.73	21.97	22.14	
10	16QAM	25	25	21.74	22.02	22.17	23
10	16QAM	50	0	21.79	21.90	22.00	
10	64QAM	1	0	22.13	22.11	22.43	
10	64QAM	1	25	21.90	22.21	22.34	22
10	64QAM	1	49	22.00	22.15	22.18	
10	64QAM	25	0	20.77	20.98	21.07	
10	64QAM	25	12	20.74	20.98	21.24	20
10	64QAM	25	25	20.75	21.08	21.11	
10	64QAM	50	0	20.71	21.08	20.97	
10	256QAM	1	0	18.63	18.90	19.09	20
10	256QAM	1	25	18.61	18.98	19.09	
10	256QAM	1	49	18.66	18.91	19.05	



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10	256QAM	25	0	18.47	18.80	18.94	20	
10	256QAM	25	12	18.55	18.87	19.00		
10	256QAM	25	25	18.62	18.73	18.94		
10	256QAM	50	0	18.69	18.89	19.02		
Channel				131997	132322	132647	Tune-up limit (dBm)	
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.79	24.02	24.11	25	
5	QPSK	1	12	23.69	23.96	24.02		
5	QPSK	1	24	23.56	23.87	23.83		
5	QPSK	12	0	22.58	22.89	23.12	24	
5	QPSK	12	7	22.79	22.86	23.23		
5	QPSK	12	13	22.71	23.02	23.13		
5	QPSK	25	0	22.64	22.95	23.13	24	
5	16QAM	1	0	23.01	23.23	23.30		
5	16QAM	1	12	22.96	23.25	23.25		
5	16QAM	1	24	23.12	23.16	23.14	23	
5	16QAM	12	0	21.58	21.98	22.03		
5	16QAM	12	7	21.63	21.88	22.09		
5	16QAM	12	13	21.67	21.96	22.10	23	
5	16QAM	25	0	21.72	21.82	21.95		
5	64QAM	1	0	22.12	22.02	22.38		
5	64QAM	1	12	21.89	22.14	22.33	23	
5	64QAM	1	24	21.96	22.12	22.16		
5	64QAM	12	0	20.75	20.95	20.99		
5	64QAM	12	7	20.71	20.95	21.18	22	
5	64QAM	12	13	20.66	21.02	21.05		
5	64QAM	25	0	20.68	21.06	20.93		
5	256QAM	1	0	18.57	18.84	19.03	20	
5	256QAM	1	12	18.53	18.93	19.07		
5	256QAM	1	24	18.57	18.84	19.04		
5	256QAM	12	0	18.39	18.72	18.87	20	
5	256QAM	12	7	18.45	18.79	18.95		
5	256QAM	12	13	18.61	18.64	18.90		
5	256QAM	25	0	18.60	18.80	18.96	20	
Channel				131987	132322	132657		Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.70	23.99	24.03	25	
3	QPSK	1	8	23.61	23.90	23.96		
3	QPSK	1	14	23.53	23.80	23.82		
3	QPSK	8	0	22.58	22.81	23.04	24	
3	QPSK	8	4	22.76	22.86	23.18		
3	QPSK	8	7	22.67	23.00	23.10		
3	QPSK	15	0	22.62	22.85	23.07	24	
3	16QAM	1	0	22.94	23.15	23.24		
3	16QAM	1	8	22.95	23.20	23.17		
3	16QAM	1	14	23.07	23.16	23.12	23	
3	16QAM	8	0	21.58	21.93	21.94		
3	16QAM	8	4	21.59	21.78	22.03		
3	16QAM	8	7	21.57	21.90	22.04	23	
3	16QAM	15	0	21.67	21.76	21.94		
3	64QAM	1	0	22.08	21.92	22.35		
3	64QAM	1	8	21.83	22.12	22.25	23	
3	64QAM	1	14	21.95	22.11	22.14		
3	64QAM	8	0	20.72	20.95	20.91		
3	64QAM	8	4	20.71	20.91	21.09	22	
3	64QAM	8	7	20.64	20.98	21.05		
3	64QAM	15	0	20.64	21.06	20.90		
3	256QAM	1	0	18.54	18.76	18.94	20	
3	256QAM	1	8	18.48	18.86	18.98		
3	256QAM	1	14	18.56	18.84	19.01		
3	256QAM	8	0	18.36	18.72	18.82	20	
3	256QAM	8	4	18.42	18.75	18.91		
3	256QAM	8	7	18.59	18.61	18.82		



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3	256QAM	15	0	18.52	18.72	18.92	Tune-up limit (dBm)
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.73	23.95	24.10	25
1.4	QPSK	1	3	23.66	23.86	23.94	
1.4	QPSK	1	5	23.56	23.82	23.83	
1.4	QPSK	3	0	23.69	23.97	24.08	
1.4	QPSK	3	1	23.65	23.93	23.98	
1.4	QPSK	3	3	23.55	23.80	23.82	
1.4	QPSK	6	0	22.54	22.87	23.07	24
1.4	16QAM	1	0	22.95	23.21	23.26	24
1.4	16QAM	1	3	22.90	23.22	23.20	
1.4	16QAM	1	5	23.03	23.14	23.04	
1.4	16QAM	3	0	22.91	23.23	23.24	
1.4	16QAM	3	1	22.94	23.25	23.18	
1.4	16QAM	3	3	23.05	23.11	23.08	
1.4	16QAM	6	0	21.64	21.74	21.87	23
1.4	64QAM	1	0	22.03	21.95	22.37	23
1.4	64QAM	1	3	21.83	22.05	22.26	
1.4	64QAM	1	5	21.91	22.08	22.06	
1.4	64QAM	3	0	22.06	21.96	22.29	
1.4	64QAM	3	1	21.79	22.05	22.33	
1.4	64QAM	3	3	21.89	22.10	22.15	
1.4	64QAM	6	0	20.59	20.96	20.90	22
1.4	256QAM	1	0	18.56	18.77	19.01	20
1.4	256QAM	1	3	18.50	18.91	19.02	
1.4	256QAM	1	5	18.56	18.83	19.02	
1.4	256QAM	3	0	18.52	18.75	18.93	
1.4	256QAM	3	1	18.51	18.88	19.04	
1.4	256QAM	3	3	18.48	18.83	19.00	
1.4	256QAM	6	0	18.50	18.73	18.95	20

<LTE Band 66_Ant 1_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.06	23.13	23.27	23.5
20	QPSK	1	49	22.96	23.01	23.17	
20	QPSK	1	99	22.93	23.03	23.02	
20	QPSK	50	0	21.93	22.15	22.37	22.5
20	QPSK	50	24	22.09	22.04	22.25	
20	QPSK	50	50	22.08	22.08	22.27	
20	QPSK	100	0	21.99	22.12	22.20	22.5
20	16QAM	1	0	22.34	22.33	22.43	
20	16QAM	1	49	22.29	22.35	22.40	
20	16QAM	1	99	22.39	22.29	22.36	21.5
20	16QAM	50	0	20.98	21.08	21.27	
20	16QAM	50	24	21.10	21.06	21.26	
20	16QAM	50	50	21.08	21.09	21.26	21.5
20	16QAM	100	0	21.05	21.09	21.20	
20	64QAM	1	0	21.40	21.23	21.43	
20	64QAM	1	49	21.23	21.30	21.41	21.5
20	64QAM	1	99	21.35	21.21	21.36	
20	64QAM	50	0	20.01	20.12	20.28	
20	64QAM	50	24	20.06	20.07	20.27	20.5
20	64QAM	50	50	20.01	20.09	20.23	
20	64QAM	100	0	20.05	20.16	20.17	
20	256QAM	1	0	17.91	17.93	18.10	18.5
20	256QAM	1	49	17.89	18.01	18.22	



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20	256QAM	1	99	17.92	18.05	18.11	18.5
20	256QAM	50	0	17.80	17.98	18.01	
20	256QAM	50	24	17.79	17.96	18.10	
20	256QAM	50	50	17.90	17.91	18.15	
20	256QAM	100	0	17.96	17.98	18.14	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.97	23.10	23.23	23.5
15	QPSK	1	37	22.90	23.01	23.13	
15	QPSK	1	74	22.87	23.03	23.00	
15	QPSK	36	0	21.89	22.15	22.31	22.5
15	QPSK	36	20	22.07	21.96	22.16	
15	QPSK	36	39	22.07	22.00	22.22	
15	QPSK	75	0	21.92	22.03	22.10	
15	16QAM	1	0	22.33	22.23	22.35	22.5
15	16QAM	1	37	22.27	22.30	22.35	
15	16QAM	1	74	22.32	22.29	22.35	
15	16QAM	36	0	20.95	21.02	21.26	21.5
15	16QAM	36	20	21.03	21.02	21.23	
15	16QAM	36	39	21.07	21.07	21.18	
15	16QAM	75	0	20.95	21.02	21.14	
15	64QAM	1	0	21.39	21.23	21.37	21.5
15	64QAM	1	37	21.16	21.22	21.32	
15	64QAM	1	74	21.28	21.12	21.26	
15	64QAM	36	0	19.95	20.12	20.26	20.5
15	64QAM	36	20	19.96	20.03	20.24	
15	64QAM	36	39	20.01	20.07	20.14	
15	64QAM	75	0	20.01	20.08	20.10	
15	256QAM	1	0	17.87	17.86	18.01	18.5
15	256QAM	1	37	17.89	17.95	18.15	
15	256QAM	1	74	17.83	17.98	18.04	
15	256QAM	36	0	17.76	17.88	18.01	18.5
15	256QAM	36	20	17.71	17.91	18.09	
15	256QAM	36	39	17.83	17.81	18.14	
15	256QAM	75	0	17.93	17.96	18.13	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.97	23.05	23.26	23.5
10	QPSK	1	25	22.93	23.00	23.07	
10	QPSK	1	49	22.90	22.96	22.93	
10	QPSK	25	0	21.93	22.13	22.29	22.5
10	QPSK	25	12	22.03	22.01	22.20	
10	QPSK	25	25	22.00	22.06	22.19	
10	QPSK	50	0	21.91	22.07	22.10	
10	16QAM	1	0	22.31	22.30	22.40	22.5
10	16QAM	1	25	22.28	22.35	22.32	
10	16QAM	1	49	22.33	22.27	22.32	
10	16QAM	25	0	20.96	21.01	21.24	21.5
10	16QAM	25	12	21.08	21.05	21.21	
10	16QAM	25	25	21.07	21.07	21.21	
10	16QAM	50	0	21.01	21.02	21.18	
10	64QAM	1	0	21.39	21.19	21.36	21.5
10	64QAM	1	25	21.14	21.21	21.34	
10	64QAM	1	49	21.34	21.16	21.30	
10	64QAM	25	0	19.93	20.03	20.27	20.5
10	64QAM	25	12	20.01	19.99	20.24	
10	64QAM	25	25	19.95	20.02	20.18	
10	64QAM	50	0	19.97	20.12	20.09	
10	256QAM	1	0	17.83	17.93	18.04	18.5
10	256QAM	1	25	17.81	18.00	18.14	
10	256QAM	1	49	17.90	18.00	18.01	
10	256QAM	25	0	17.79	17.96	17.91	18.5
10	256QAM	25	12	17.76	17.91	18.10	



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10	256QAM	25	25	17.85	17.83	18.06	
10	256QAM	50	0	17.92	17.96	18.08	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.99	23.10	23.20	23.5
5	QPSK	1	12	22.94	22.96	23.11	
5	QPSK	1	24	22.92	22.95	23.02	
5	QPSK	12	0	21.92	22.06	22.28	22.5
5	QPSK	12	7	22.03	22.03	22.17	
5	QPSK	12	13	22.07	22.06	22.27	
5	QPSK	25	0	21.89	22.02	22.17	22.5
5	16QAM	1	0	22.24	22.32	22.41	
5	16QAM	1	12	22.25	22.27	22.34	
5	16QAM	1	24	22.36	22.24	22.33	21.5
5	16QAM	12	0	20.96	21.05	21.26	
5	16QAM	12	7	21.04	20.99	21.18	
5	16QAM	12	13	21.06	21.08	21.25	21.5
5	16QAM	25	0	20.98	21.05	21.13	
5	64QAM	1	0	21.33	21.16	21.42	
5	64QAM	1	12	21.14	21.23	21.37	21.5
5	64QAM	1	24	21.28	21.13	21.30	
5	64QAM	12	0	20.00	20.04	20.19	
5	64QAM	12	7	20.04	20.02	20.18	20.5
5	64QAM	12	13	19.98	20.00	20.20	
5	64QAM	25	0	20.00	20.06	20.14	
5	256QAM	1	0	17.85	17.90	18.06	18.5
5	256QAM	1	12	17.87	17.97	18.12	
5	256QAM	1	24	17.84	18.03	18.10	
5	256QAM	12	0	17.76	17.93	17.97	18.5
5	256QAM	12	7	17.78	17.91	18.04	
5	256QAM	12	13	17.87	17.84	18.15	
5	256QAM	25	0	17.92	17.95	18.07	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.06	23.05	23.21	23.5
3	QPSK	1	8	22.94	23.00	23.15	
3	QPSK	1	14	22.90	22.95	23.01	
3	QPSK	8	0	21.83	22.12	22.30	22.5
3	QPSK	8	4	22.05	22.04	22.16	
3	QPSK	8	7	22.04	22.07	22.24	
3	QPSK	15	0	21.99	22.06	22.18	22.5
3	16QAM	1	0	22.30	22.25	22.35	
3	16QAM	1	8	22.22	22.33	22.38	
3	16QAM	1	14	22.37	22.22	22.36	21.5
3	16QAM	8	0	20.96	21.06	21.17	
3	16QAM	8	4	21.03	20.99	21.20	
3	16QAM	8	7	21.03	21.08	21.20	21.5
3	16QAM	15	0	21.05	21.03	21.18	
3	64QAM	1	0	21.30	21.20	21.34	
3	64QAM	1	8	21.13	21.25	21.37	20.5
3	64QAM	1	14	21.33	21.11	21.35	
3	64QAM	8	0	19.98	20.03	20.25	
3	64QAM	8	4	20.04	20.06	20.22	20.5
3	64QAM	8	7	19.99	20.04	20.16	
3	64QAM	15	0	20.00	20.07	20.07	
3	256QAM	1	0	17.81	17.92	18.00	18.5
3	256QAM	1	8	17.87	17.95	18.15	
3	256QAM	1	14	17.86	17.97	18.04	
3	256QAM	8	0	17.79	17.97	17.99	18.5
3	256QAM	8	4	17.75	17.86	18.06	
3	256QAM	8	7	17.85	17.84	18.10	
3	256QAM	15	0	17.87	17.95	18.04	
Channel				131979	132322	132665	Tune-up limit



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Frequency (MHz)				1710.7	1745	1779.3	(dBm)
1.4	QPSK	1	0	22.96	23.11	23.22	23.5
1.4	QPSK	1	3	22.90	22.91	23.14	
1.4	QPSK	1	5	22.86	22.99	22.97	
1.4	QPSK	3	0	21.85	22.05	22.29	
1.4	QPSK	3	1	22.03	22.02	22.15	
1.4	QPSK	3	3	22.00	21.99	22.19	
1.4	QPSK	6	0	21.94	22.09	22.11	22.5
1.4	16QAM	1	0	22.30	22.31	22.41	22.5
1.4	16QAM	1	3	22.26	22.32	22.37	
1.4	16QAM	1	5	22.36	22.26	22.36	
1.4	16QAM	3	0	20.92	21.07	21.21	
1.4	16QAM	3	1	21.05	20.96	21.17	
1.4	16QAM	3	3	21.03	21.06	21.24	
1.4	16QAM	6	0	21.01	21.02	21.16	21.5
1.4	64QAM	1	0	21.33	21.22	21.39	21.5
1.4	64QAM	1	3	21.15	21.20	21.37	
1.4	64QAM	1	5	21.28	21.17	21.33	
1.4	64QAM	3	0	19.92	20.12	20.26	
1.4	64QAM	3	1	20.00	19.98	20.17	
1.4	64QAM	3	3	19.94	20.04	20.23	
1.4	64QAM	6	0	19.98	20.14	20.13	20.5
1.4	256QAM	1	0	17.82	17.92	18.07	18.5
1.4	256QAM	1	3	17.86	17.95	18.14	
1.4	256QAM	1	5	17.90	17.96	18.11	
1.4	256QAM	3	0	17.70	17.88	17.93	
1.4	256QAM	3	1	17.69	17.95	18.01	
1.4	256QAM	3	3	17.89	17.89	18.07	
1.4	256QAM	6	0	17.93	17.95	18.06	18.5

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	25
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	24.00	24.05	24.02	
20	QPSK	1	49	23.94	24.04	24.01	24
20	QPSK	1	99	23.90	23.92	23.96	
20	QPSK	50	0	23.00	23.19	23.01	
20	QPSK	50	24	23.08	23.04	23.08	24
20	QPSK	50	50	23.09	23.16	23.14	
20	QPSK	100	0	23.09	23.05	23.06	
20	16QAM	1	0	23.31	23.36	23.30	24
20	16QAM	1	49	23.28	23.27	23.34	
20	16QAM	1	99	23.40	23.40	23.41	
20	16QAM	50	0	21.98	21.99	22.03	23
20	16QAM	50	24	22.08	22.05	22.08	
20	16QAM	50	50	22.08	22.14	22.13	
20	16QAM	100	0	22.09	22.03	22.08	23
20	64QAM	1	0	22.19	22.03	22.10	
20	64QAM	1	49	22.20	22.27	22.28	
20	64QAM	1	99	22.18	22.39	22.35	22
20	64QAM	50	0	21.02	21.02	21.03	
20	64QAM	50	24	21.09	21.05	21.12	
20	64QAM	50	50	21.11	21.16	21.11	20
20	64QAM	100	0	21.10	21.05	21.08	
20	256QAM	1	0	18.98	18.91	18.95	
20	256QAM	1	49	18.92	18.89	19.00	20
20	256QAM	1	99	19.07	19.12	18.95	
20	256QAM	50	0	18.93	18.86	19.03	



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20	256QAM	50	24	19.07	19.04	19.11	
20	256QAM	50	50	18.94	18.99	18.99	
20	256QAM	100	0	19.10	18.99	18.93	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	23.99	23.99	23.92	25
15	QPSK	1	37	23.93	24.03	23.95	
15	QPSK	1	74	23.82	23.83	23.91	
15	QPSK	36	0	22.97	23.16	22.91	24
15	QPSK	36	20	23.07	23.03	22.98	
15	QPSK	36	39	23.05	23.10	23.04	
15	QPSK	75	0	23.00	23.01	22.99	24
15	16QAM	1	0	23.27	23.33	23.24	
15	16QAM	1	37	23.21	23.21	23.31	
15	16QAM	1	74	23.31	23.34	23.34	23
15	16QAM	36	0	21.97	21.97	22.01	
15	16QAM	36	20	22.01	22.01	22.03	
15	16QAM	36	39	22.06	22.05	22.06	23
15	16QAM	75	0	21.99	22.01	22.06	
15	64QAM	1	0	22.18	22.02	22.01	
15	64QAM	1	37	22.19	22.20	22.25	23
15	64QAM	1	74	22.18	22.39	22.30	
15	64QAM	36	0	20.95	20.96	21.02	
15	64QAM	36	20	21.07	20.96	21.10	22
15	64QAM	36	39	21.05	21.06	21.01	
15	64QAM	75	0	21.10	20.95	21.04	
15	256QAM	1	0	18.88	18.87	18.95	20
15	256QAM	1	37	18.89	18.81	18.90	
15	256QAM	1	74	18.99	19.06	18.92	
15	256QAM	36	0	18.88	18.76	19.02	20
15	256QAM	36	20	18.99	18.95	19.05	
15	256QAM	36	39	18.88	18.98	18.96	
15	256QAM	75	0	19.10	18.94	18.89	
Channel				133172	133297	133422	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	QPSK	1	0	23.89	23.99	23.82	25
10	QPSK	1	25	23.89	23.97	23.94	
10	QPSK	1	49	23.82	23.76	23.83	
10	QPSK	25	0	22.97	23.12	22.86	24
10	QPSK	25	12	23.01	23.01	22.93	
10	QPSK	25	25	22.97	23.03	22.94	
10	QPSK	50	0	22.91	22.94	22.89	24
10	16QAM	1	0	23.25	23.30	23.20	
10	16QAM	1	25	23.16	23.15	23.29	
10	16QAM	1	49	23.25	23.26	23.30	23
10	16QAM	25	0	21.95	21.95	21.96	
10	16QAM	25	12	22.00	22.01	22.01	
10	16QAM	25	25	22.04	22.02	22.05	23
10	16QAM	50	0	21.99	21.91	22.01	
10	64QAM	1	0	22.12	21.95	21.96	
10	64QAM	1	25	22.12	22.14	22.19	23
10	64QAM	1	49	22.08	22.35	22.21	
10	64QAM	25	0	20.89	20.92	20.93	
10	64QAM	25	12	20.98	20.88	21.00	22
10	64QAM	25	25	21.00	21.04	20.96	
10	64QAM	50	0	21.08	20.88	20.98	
10	256QAM	1	0	18.82	18.82	18.91	20
10	256QAM	1	25	18.86	18.73	18.87	
10	256QAM	1	49	18.93	19.03	18.85	
10	256QAM	25	0	18.88	18.76	19.02	20
10	256QAM	25	12	18.94	18.94	18.99	
10	256QAM	25	25	18.80	18.90	18.95	
10	256QAM	50	0	19.05	18.85	18.88	



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Channel				133147	133297	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	QPSK	1	0	23.86	23.97	23.81	25
5	QPSK	1	12	23.80	23.88	23.92	
5	QPSK	1	24	23.73	23.73	23.83	
5	QPSK	12	0	22.97	23.02	22.80	24
5	QPSK	12	7	22.92	23.01	22.93	
5	QPSK	12	13	22.94	22.99	22.90	
5	QPSK	25	0	22.85	22.93	22.79	24
5	16QAM	1	0	23.23	23.25	23.14	
5	16QAM	1	12	23.09	23.13	23.27	
5	16QAM	1	24	23.25	23.18	23.21	23
5	16QAM	12	0	21.92	21.94	21.95	
5	16QAM	12	7	21.94	21.92	21.97	
5	16QAM	12	13	21.97	21.92	22.03	23
5	16QAM	25	0	21.90	21.91	21.97	
5	64QAM	1	0	22.02	21.88	21.88	
5	64QAM	1	12	22.06	22.11	22.18	23
5	64QAM	1	24	22.04	22.30	22.11	
5	64QAM	12	0	20.81	20.89	20.92	
5	64QAM	12	7	20.91	20.81	20.99	22
5	64QAM	12	13	20.93	20.96	20.88	
5	64QAM	25	0	21.01	20.88	20.89	
5	256QAM	1	0	18.82	18.75	18.91	20
5	256QAM	1	12	18.78	18.66	18.81	
5	256QAM	1	24	18.84	19.02	18.75	
5	256QAM	12	0	18.79	18.73	19.00	20
5	256QAM	12	7	18.86	18.88	18.91	
5	256QAM	12	13	18.77	18.81	18.93	
5	256QAM	25	0	19.05	18.85	18.80	

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Base station simulator was used for LTE output power measurements and SAR testing.

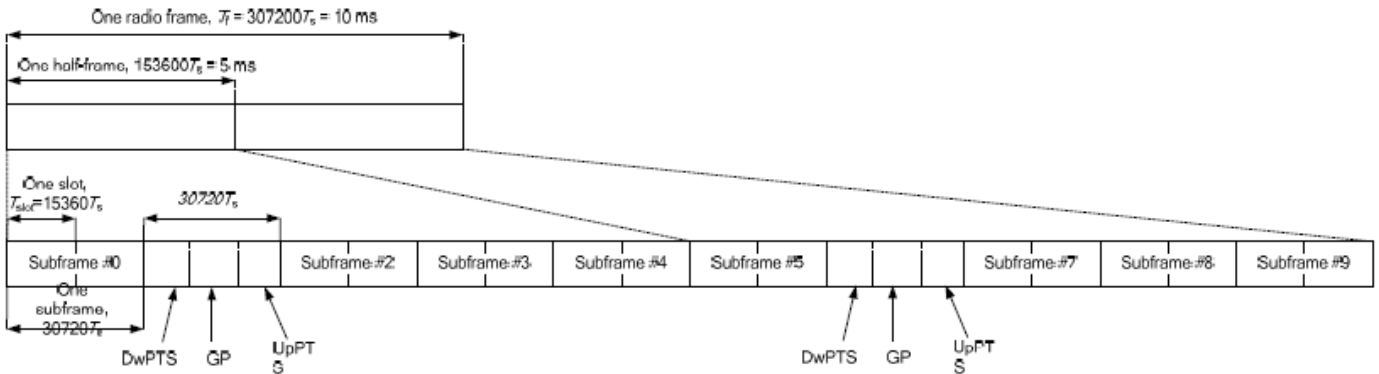


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	6592 · Ts	2192 · Ts	2560 · Ts	7680 · Ts	2192 · Ts	2560 · Ts
1	19760 · Ts			20480 · Ts		
2	21952 · Ts			23040 · Ts		
3	24144 · Ts			25600 · Ts		
4	26336 · Ts			7680 · Ts		
5	6592 · Ts	4384 · Ts	5120 · Ts	20480 · Ts	4384 · Ts	5120 · Ts
6	19760 · Ts			23040 · Ts		
7	21952 · Ts			12800 · Ts		
8	24144 · Ts			-		
9	13168 · Ts			-		-



Special subframe (30720·T _s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T _s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE TDD.
- vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	24.56	24.67	24.55	25
20	QPSK	1	49	24.59	24.57	24.63	
20	QPSK	1	99	24.58	24.63	24.60	
20	QPSK	50	0	22.67	22.57	22.64	24
20	QPSK	50	24	22.73	22.68	22.70	
20	QPSK	50	50	22.76	22.72	22.80	
20	QPSK	100	0	22.69	22.70	22.65	24
20	16QAM	1	0	23.49	23.56	23.56	
20	16QAM	1	49	23.59	23.69	23.70	
20	16QAM	1	99	23.66	23.65	23.63	24
20	16QAM	50	0	21.68	21.58	21.64	
20	16QAM	50	24	21.74	21.71	21.69	
20	16QAM	50	50	21.72	21.73	21.79	23
20	16QAM	100	0	21.69	21.71	21.66	
20	64QAM	1	0	22.59	22.46	22.55	
20	64QAM	1	49	22.55	22.52	22.60	23
20	64QAM	1	99	22.56	22.55	22.67	
20	64QAM	50	0	21.67	21.58	21.63	
20	64QAM	50	24	21.72	21.72	21.68	22
20	64QAM	50	50	21.73	21.72	21.81	
20	64QAM	100	0	21.72	21.69	21.67	
20	256QAM	1	0	19.56	19.52	19.49	20
20	256QAM	1	49	19.58	19.71	19.57	
20	256QAM	1	99	19.62	19.61	19.63	
20	256QAM	50	0	19.55	19.50	19.55	20
20	256QAM	50	24	19.56	19.65	19.63	
20	256QAM	50	50	19.64	19.53	19.80	
20	256QAM	100	0	19.56	19.57	19.57	
Channel				37825	38000	38175	
Frequency (MHz)				2577.5	2595	2612.5	Tune-up limit (dBm)
15	QPSK	1	0	24.55	24.66	24.47	25
15	QPSK	1	37	24.54	24.51	24.58	
15	QPSK	1	74	24.53	24.57	24.51	
15	QPSK	36	0	22.65	22.47	22.54	24
15	QPSK	36	20	22.69	22.63	22.70	
15	QPSK	36	39	22.67	22.64	22.80	
15	QPSK	75	0	22.64	22.65	22.55	24
15	16QAM	1	0	23.45	23.56	23.48	
15	16QAM	1	37	23.50	23.61	23.68	
15	16QAM	1	74	23.62	23.63	23.54	23
15	16QAM	36	0	21.61	21.51	21.58	
15	16QAM	36	20	21.70	21.63	21.60	
15	16QAM	36	39	21.71	21.72	21.79	23
15	16QAM	75	0	21.65	21.63	21.56	
15	64QAM	1	0	22.53	22.46	22.48	
15	64QAM	1	37	22.52	22.49	22.58	23
15	64QAM	1	74	22.49	22.47	22.62	
15	64QAM	36	0	21.67	21.50	21.58	
15	64QAM	36	20	21.68	21.68	21.61	22
15	64QAM	36	39	21.72	21.66	21.79	
15	64QAM	75	0	21.68	21.68	21.65	
15	256QAM	1	0	19.55	19.51	19.46	20
15	256QAM	1	37	19.49	19.67	19.47	
15	256QAM	1	74	19.57	19.54	19.56	
15	256QAM	36	0	19.50	19.41	19.52	20
15	256QAM	36	20	19.48	19.59	19.59	



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15	256QAM	36	39	19.56	19.53	19.75	
15	256QAM	75	0	19.50	19.51	19.52	
Channel				37800	38000	38200	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	24.47	24.63	24.43	25
10	QPSK	1	25	24.44	24.46	24.54	
10	QPSK	1	49	24.46	24.48	24.48	
10	QPSK	25	0	22.55	22.38	22.49	24
10	QPSK	25	12	22.59	22.63	22.65	
10	QPSK	25	25	22.59	22.60	22.70	
10	QPSK	50	0	22.61	22.55	22.45	
10	16QAM	1	0	23.38	23.53	23.43	24
10	16QAM	1	25	23.47	23.52	23.61	
10	16QAM	1	49	23.56	23.54	23.48	
10	16QAM	25	0	21.58	21.48	21.48	23
10	16QAM	25	12	21.65	21.59	21.57	
10	16QAM	25	25	21.66	21.67	21.70	
10	16QAM	50	0	21.63	21.58	21.53	
10	64QAM	1	0	22.52	22.37	22.45	
10	64QAM	1	25	22.46	22.41	22.52	23
10	64QAM	1	49	22.41	22.46	22.59	
10	64QAM	25	0	21.63	21.49	21.54	
10	64QAM	25	12	21.60	21.64	21.52	22
10	64QAM	25	25	21.71	21.65	21.74	
10	64QAM	50	0	21.62	21.60	21.57	
10	256QAM	1	0	19.50	19.46	19.36	
10	256QAM	1	25	19.49	19.62	19.42	20
10	256QAM	1	49	19.56	19.51	19.55	
10	256QAM	25	0	19.47	19.41	19.45	
10	256QAM	25	12	19.38	19.59	19.58	20
10	256QAM	25	25	19.52	19.50	19.68	
10	256QAM	50	0	19.44	19.45	19.45	
Channel				37775	38000	38225	
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	24.46	24.53	24.35	25
5	QPSK	1	12	24.41	24.45	24.54	
5	QPSK	1	24	24.40	24.47	24.46	
5	QPSK	12	0	22.49	22.34	22.41	24
5	QPSK	12	7	22.51	22.53	22.61	
5	QPSK	12	13	22.56	22.54	22.66	
5	QPSK	25	0	22.53	22.46	22.44	
5	16QAM	1	0	23.35	23.45	23.34	24
5	16QAM	1	12	23.38	23.42	23.54	
5	16QAM	1	24	23.50	23.50	23.44	
5	16QAM	12	0	21.50	21.41	21.45	
5	16QAM	12	7	21.57	21.50	21.49	23
5	16QAM	12	13	21.63	21.59	21.69	
5	16QAM	25	0	21.62	21.55	21.53	
5	64QAM	1	0	22.48	22.37	22.40	
5	64QAM	1	12	22.36	22.36	22.44	23
5	64QAM	1	24	22.32	22.45	22.57	
5	64QAM	12	0	21.59	21.40	21.53	
5	64QAM	12	7	21.60	21.55	21.52	22
5	64QAM	12	13	21.67	21.64	21.71	
5	64QAM	25	0	21.61	21.52	21.50	
5	256QAM	1	0	19.47	19.40	19.34	
5	256QAM	1	12	19.45	19.60	19.42	20
5	256QAM	1	24	19.53	19.48	19.53	
5	256QAM	12	0	19.42	19.32	19.37	
5	256QAM	12	7	19.34	19.54	19.56	20
5	256QAM	12	13	19.48	19.46	19.58	
5	256QAM	25	0	19.43	19.41	19.37	



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Channel	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)			
Channel	39750	40185	40620	41055	41490				
Frequency (MHz)	2506	2549.5	2593	2636.5	2680				
20	QPSK	1	0	24.14	23.89	23.95	24.11	24.31	25
20	QPSK	1	49	24.11	23.86	23.81	23.90	24.25	
20	QPSK	1	99	24.05	23.80	23.80	23.89	24.22	
20	QPSK	50	0	23.24	22.97	22.84	22.89	23.29	24
20	QPSK	50	24	23.18	22.98	22.89	23.02	23.28	
20	QPSK	50	50	23.09	22.90	22.97	23.08	23.28	
20	QPSK	100	0	23.19	22.99	22.87	22.99	23.30	24
20	16QAM	1	0	23.14	22.85	22.80	22.96	23.23	
20	16QAM	1	49	23.13	22.90	22.89	22.99	23.29	
20	16QAM	1	99	23.08	22.83	22.98	23.14	23.35	24
20	16QAM	50	0	22.20	21.96	21.82	21.89	22.29	
20	16QAM	50	24	22.22	21.99	21.86	22.02	22.32	
20	16QAM	50	50	22.08	21.88	21.96	22.08	22.25	23
20	16QAM	100	0	22.20	21.98	21.86	22.00	22.32	
20	64QAM	1	0	22.10	21.85	21.74	21.95	22.20	
20	64QAM	1	49	22.07	21.85	21.78	21.89	22.20	23
20	64QAM	1	99	22.07	21.85	21.94	22.08	22.29	
20	64QAM	50	0	21.21	20.96	20.83	20.88	21.28	
20	64QAM	50	24	21.22	21.01	20.91	21.02	21.33	22
20	64QAM	50	50	21.11	20.91	20.98	21.08	21.26	
20	64QAM	100	0	21.21	21.00	20.86	21.02	21.31	
20	256QAM	1	0	19.17	18.79	18.73	18.77	19.08	20
20	256QAM	1	49	19.12	18.82	18.82	19.00	19.22	
20	256QAM	1	99	18.99	18.90	18.89	18.99	19.20	
20	256QAM	50	0	19.03	18.86	18.68	18.76	19.24	20
20	256QAM	50	24	19.13	18.83	18.84	18.87	19.15	
20	256QAM	50	50	19.07	18.85	18.91	19.07	19.09	
20	256QAM	100	0	19.09	18.94	18.68	19.01	19.26	20
Channel	39725	40173	40620	41068	41515	Tune-up limit (dBm)			
Frequency (MHz)	2503.5	2548.3	2593	2637.8	2682.5				
15	QPSK	1	0	24.10	23.88	23.91	24.03	24.27	25
15	QPSK	1	37	24.01	23.82	23.73	23.87	24.17	
15	QPSK	1	74	23.95	23.71	23.79	23.87	24.14	
15	QPSK	36	0	23.24	22.90	22.84	22.85	23.29	24
15	QPSK	36	20	23.15	22.94	22.86	22.99	23.30	
15	QPSK	36	39	23.06	22.85	22.87	23.00	23.21	
15	QPSK	75	0	23.18	22.98	22.86	22.89	23.27	24
15	16QAM	1	0	23.12	22.81	22.74	22.88	23.19	
15	16QAM	1	37	23.04	22.90	22.88	22.89	23.28	
15	16QAM	1	74	23.04	22.81	22.94	23.04	23.27	23
15	16QAM	36	0	22.11	21.91	21.77	21.87	22.22	
15	16QAM	36	20	22.19	21.97	21.81	21.98	22.24	
15	16QAM	36	39	21.99	21.82	21.95	21.99	22.18	23
15	16QAM	75	0	22.14	21.92	21.82	21.97	22.31	
15	64QAM	1	0	22.08	21.79	21.65	21.86	22.12	
15	64QAM	1	37	22.06	21.84	21.71	21.79	22.16	23
15	64QAM	1	74	22.03	21.81	21.84	22.03	22.19	
15	64QAM	36	0	21.11	20.86	20.75	20.79	21.27	
15	64QAM	36	20	21.17	20.93	20.91	20.94	21.25	22
15	64QAM	36	39	21.03	20.84	20.88	21.08	21.24	
15	64QAM	75	0	21.19	20.94	20.78	21.01	21.29	
15	256QAM	1	0	19.10	18.73	18.67	18.75	19.00	20
15	256QAM	1	37	19.06	18.73	18.78	18.96	19.15	
15	256QAM	1	74	18.89	18.82	18.88	18.91	19.16	
15	256QAM	36	0	18.96	18.81	18.59	18.75	19.22	20
15	256QAM	36	20	19.07	18.80	18.74	18.77	19.12	



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15	256QAM	36	39	19.06	18.83	18.90	19.03	19.00	Tune-up limit (dBm)
15	256QAM	75	0	19.09	18.94	18.63	18.98	19.24	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	24.09	23.79	23.85	23.98	24.20	25
10	QPSK	1	25	23.99	23.79	23.66	23.79	24.09	
10	QPSK	1	49	23.93	23.70	23.74	23.79	24.05	
10	QPSK	25	0	23.15	22.87	22.83	22.75	23.19	24
10	QPSK	25	12	23.12	22.89	22.81	22.98	23.22	
10	QPSK	25	25	23.02	22.85	22.84	22.94	23.20	
10	QPSK	50	0	23.11	22.94	22.77	22.83	23.17	
10	16QAM	1	0	23.05	22.79	22.69	22.86	23.12	24
10	16QAM	1	25	23.01	22.87	22.83	22.84	23.27	
10	16QAM	1	49	22.97	22.81	22.86	22.95	23.19	
10	16QAM	25	0	22.06	21.85	21.74	21.86	22.16	23
10	16QAM	25	12	22.16	21.87	21.80	21.97	22.20	
10	16QAM	25	25	21.96	21.74	21.89	21.94	22.08	
10	16QAM	50	0	22.04	21.83	21.77	21.91	22.22	
10	64QAM	1	0	22.07	21.75	21.56	21.80	22.12	23
10	64QAM	1	25	22.02	21.74	21.65	21.73	22.15	
10	64QAM	1	49	21.96	21.72	21.82	21.94	22.17	
10	64QAM	25	0	21.08	20.82	20.66	20.71	21.27	22
10	64QAM	25	12	21.14	20.92	20.84	20.94	21.19	
10	64QAM	25	25	20.98	20.77	20.86	21.05	21.15	
10	64QAM	50	0	21.11	20.93	20.74	20.99	21.26	
10	256QAM	1	0	19.00	18.67	18.59	18.75	18.97	20
10	256QAM	1	25	18.99	18.69	18.69	18.94	19.06	
10	256QAM	1	49	18.84	18.81	18.87	18.86	19.10	
10	256QAM	25	0	18.89	18.75	18.56	18.67	19.13	20
10	256QAM	25	12	18.99	18.77	18.64	18.68	19.08	
10	256QAM	25	25	19.00	18.82	18.81	19.00	18.95	
10	256QAM	50	0	19.05	18.93	18.57	18.90	19.19	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	24.00	23.79	23.75	23.92	24.17	25
5	QPSK	1	12	23.89	23.79	23.65	23.74	24.01	
5	QPSK	1	24	23.83	23.66	23.65	23.79	24.04	
5	QPSK	12	0	23.13	22.86	22.81	22.67	23.09	24
5	QPSK	12	7	23.03	22.82	22.76	22.96	23.18	
5	QPSK	12	13	22.95	22.78	22.78	22.94	23.13	
5	QPSK	25	0	23.01	22.94	22.74	22.78	23.08	
5	16QAM	1	0	22.99	22.73	22.59	22.76	23.10	24
5	16QAM	1	12	22.95	22.80	22.80	22.83	23.20	
5	16QAM	1	24	22.90	22.78	22.84	22.88	23.10	
5	16QAM	12	0	22.05	21.84	21.66	21.85	22.13	23
5	16QAM	12	7	22.12	21.87	21.79	21.88	22.15	
5	16QAM	12	13	21.88	21.70	21.81	21.86	21.99	
5	16QAM	25	0	21.97	21.73	21.68	21.82	22.15	
5	64QAM	1	0	22.03	21.71	21.46	21.80	22.04	23
5	64QAM	1	12	21.94	21.69	21.57	21.72	22.15	
5	64QAM	1	24	21.87	21.67	21.80	21.88	22.15	
5	64QAM	12	0	21.05	20.76	20.63	20.63	21.18	22
5	64QAM	12	7	21.12	20.92	20.80	20.90	21.14	
5	64QAM	12	13	20.89	20.72	20.77	21.03	21.07	
5	64QAM	25	0	21.09	20.93	20.65	20.98	21.25	
5	256QAM	1	0	18.99	18.66	18.59	18.65	18.90	20
5	256QAM	1	12	18.95	18.60	18.68	18.88	19.05	
5	256QAM	1	24	18.79	18.80	18.78	18.76	19.10	
5	256QAM	12	0	18.83	18.70	18.54	18.61	19.11	20
5	256QAM	12	7	18.98	18.67	18.62	18.67	18.98	
5	256QAM	12	13	18.98	18.72	18.72	18.98	18.91	
5	256QAM	25	0	18.97	18.88	18.48	18.84	19.09	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	27.00	26.78	26.82	26.14	25.96	27
20	QPSK	1	49	26.96	26.74	26.70	25.68	25.92	
20	QPSK	1	99	26.94	26.73	26.63	25.59	25.84	
20	QPSK	50	0	25.94	25.69	25.54	24.83	24.91	26
20	QPSK	50	24	25.95	25.71	25.58	24.85	24.88	
20	QPSK	50	50	25.86	25.61	25.69	25.00	24.93	
20	QPSK	100	0	25.90	25.66	25.58	24.93	24.93	26
20	16QAM	1	0	25.84	25.89	25.74	25.19	25.25	
20	16QAM	1	49	25.93	25.78	25.82	25.02	25.04	
20	16QAM	1	99	25.91	25.73	25.99	25.49	25.26	26
20	16QAM	50	0	24.74	24.67	24.50	23.94	24.01	
20	16QAM	50	24	24.74	24.69	24.55	23.94	23.97	
20	16QAM	50	50	24.66	24.59	24.67	24.11	24.05	25
20	16QAM	100	0	24.70	24.65	24.53	24.04	24.04	
20	64QAM	1	0	25.00	24.77	24.82	24.25	24.36	
20	64QAM	1	49	24.99	24.93	24.79	24.05	24.06	25
20	64QAM	1	99	24.70	24.69	24.89	24.64	24.30	
20	64QAM	50	0	23.89	23.70	23.54	23.01	23.07	
20	64QAM	50	24	23.91	23.68	23.57	23.01	23.05	24
20	64QAM	50	50	23.80	23.61	23.66	23.20	23.13	
20	64QAM	100	0	23.88	23.68	23.53	23.11	23.12	
20	256QAM	1	0	21.85	21.64	21.44	20.89	21.01	22
20	256QAM	1	49	21.85	21.60	21.43	20.86	20.90	
20	256QAM	1	99	21.69	21.53	21.58	21.03	21.09	
20	256QAM	50	0	21.85	21.55	21.54	20.84	21.01	22
20	256QAM	50	24	21.89	21.52	21.41	20.91	20.85	
20	256QAM	50	50	21.62	21.60	21.64	21.16	20.93	
20	256QAM	100	0	21.85	21.56	21.53	21.03	21.04	
Channel				39725	40173	40620	41068	41515	
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	Tune-up limit (dBm)
15	QPSK	1	0	26.97	26.77	26.78	26.07	25.88	27
15	QPSK	1	37	26.93	26.73	26.65	25.66	25.89	
15	QPSK	1	74	26.92	26.72	26.61	25.49	25.76	
15	QPSK	36	0	25.90	25.65	25.44	24.75	24.88	26
15	QPSK	36	20	25.88	25.69	25.58	24.79	24.82	
15	QPSK	36	39	25.79	25.56	25.61	24.97	24.83	
15	QPSK	75	0	25.86	25.65	25.56	24.85	24.85	26
15	16QAM	1	0	25.80	25.87	25.65	25.18	25.20	
15	16QAM	1	37	25.85	25.70	25.75	24.94	24.94	
15	16QAM	1	74	25.89	25.67	25.92	25.47	25.23	26
15	16QAM	36	0	24.73	24.67	24.45	23.89	23.92	
15	16QAM	36	20	24.65	24.60	24.47	23.87	23.91	
15	16QAM	36	39	24.57	24.54	24.67	24.05	23.99	25
15	16QAM	75	0	24.68	24.63	24.47	24.01	23.98	
15	64QAM	1	0	25.00	24.74	24.80	24.18	24.34	
15	64QAM	1	37	24.91	24.92	24.71	24.04	24.03	25
15	64QAM	1	74	24.62	24.63	24.81	24.56	24.24	
15	64QAM	36	0	23.79	23.68	23.45	22.98	23.04	
15	64QAM	36	20	23.91	23.62	23.49	22.95	23.05	24
15	64QAM	36	39	23.72	23.54	23.60	23.10	23.09	
15	64QAM	75	0	23.88	23.58	23.49	23.07	23.05	
15	256QAM	1	0	21.75	21.54	21.41	20.86	21.01	22
15	256QAM	1	37	21.76	21.52	21.35	20.83	20.85	
15	256QAM	1	74	21.67	21.49	21.49	20.95	21.08	
15	256QAM	36	0	21.80	21.52	21.51	20.84	20.96	22
15	256QAM	36	20	21.87	21.42	21.41	20.91	20.85	



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15	256QAM	36	39	21.60	21.56	21.57	21.14	20.84	
15	256QAM	75	0	21.82	21.47	21.53	21.01	20.96	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	26.89	26.71	26.71	25.97	25.79	27
10	QPSK	1	25	26.90	26.64	26.55	25.64	25.79	
10	QPSK	1	49	26.85	26.69	26.56	25.45	25.67	
10	QPSK	25	0	25.85	25.63	25.38	24.75	24.86	26
10	QPSK	25	12	25.86	25.59	25.56	24.70	24.80	
10	QPSK	25	25	25.78	25.48	25.51	24.91	24.73	
10	QPSK	50	0	25.82	25.57	25.50	24.82	24.81	
10	16QAM	1	0	25.75	25.77	25.59	25.10	25.11	26
10	16QAM	1	25	25.78	25.61	25.74	24.88	24.86	
10	16QAM	1	49	25.82	25.57	25.83	25.38	25.13	
10	16QAM	25	0	24.70	24.67	24.45	23.88	23.88	25
10	16QAM	25	12	24.63	24.57	24.47	23.86	23.83	
10	16QAM	25	25	24.55	24.51	24.62	23.95	23.99	
10	16QAM	50	0	24.63	24.58	24.47	23.94	23.96	
10	64QAM	1	0	24.91	24.69	24.77	24.17	24.28	25
10	64QAM	1	25	24.81	24.85	24.62	24.00	24.00	
10	64QAM	1	49	24.59	24.60	24.78	24.52	24.24	
10	64QAM	25	0	23.73	23.67	23.35	22.92	22.95	24
10	64QAM	25	12	23.90	23.60	23.48	22.85	23.03	
10	64QAM	25	25	23.64	23.53	23.60	23.08	23.09	
10	64QAM	50	0	23.84	23.58	23.47	23.05	22.98	
10	256QAM	1	0	21.72	21.44	21.32	20.82	20.98	22
10	256QAM	1	25	21.66	21.48	21.28	20.79	20.77	
10	256QAM	1	49	21.60	21.48	21.40	20.91	21.01	
10	256QAM	25	0	21.75	21.50	21.50	20.83	20.91	22
10	256QAM	25	12	21.78	21.39	21.41	20.89	20.80	
10	256QAM	25	25	21.54	21.48	21.52	21.10	20.75	
10	256QAM	50	0	21.82	21.40	21.44	20.97	20.92	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	26.85	26.67	26.72	25.94	25.82	27
5	QPSK	1	12	26.87	26.63	26.59	25.51	25.74	
5	QPSK	1	24	26.84	26.70	26.57	25.31	25.61	
5	QPSK	12	0	25.77	25.56	25.34	24.62	24.81	26
5	QPSK	12	7	25.74	25.59	25.50	24.59	24.73	
5	QPSK	12	13	25.68	25.50	25.55	24.88	24.68	
5	QPSK	25	0	25.85	25.45	25.41	24.80	24.68	
5	16QAM	1	0	25.71	25.69	25.57	25.10	25.16	26
5	16QAM	1	12	25.69	25.52	25.74	24.83	24.86	
5	16QAM	1	24	25.74	25.52	25.88	25.37	25.12	
5	16QAM	12	0	24.62	24.58	24.34	23.72	23.75	25
5	16QAM	12	7	24.58	24.46	24.37	23.75	23.78	
5	16QAM	12	13	24.47	24.45	24.52	23.93	23.81	
5	16QAM	25	0	24.58	24.51	24.40	23.94	23.83	
5	64QAM	1	0	24.87	24.67	24.72	24.00	24.28	25
5	64QAM	1	12	24.77	24.81	24.68	23.97	23.89	
5	64QAM	1	24	24.49	24.54	24.75	24.48	24.10	
5	64QAM	12	0	23.64	23.57	23.40	22.92	22.94	24
5	64QAM	12	7	23.80	23.51	23.39	22.85	22.92	
5	64QAM	12	13	23.63	23.46	23.53	23.00	22.98	
5	64QAM	25	0	23.80	23.44	23.36	23.05	22.98	
5	256QAM	1	0	21.62	21.44	21.38	20.75	20.95	22
5	256QAM	1	12	21.62	21.48	21.32	20.71	20.82	
5	256QAM	1	24	21.61	21.37	21.43	20.86	21.04	
5	256QAM	12	0	21.76	21.45	21.46	20.71	20.84	22
5	256QAM	12	7	21.71	21.33	21.31	20.77	20.81	
5	256QAM	12	13	21.53	21.53	21.47	21.07	20.64	
5	256QAM	25	0	21.72	21.37	21.43	20.92	20.78	



<LTE Band 42_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	23.46	23.55	23.35	25
20	QPSK	1	49	23.22	23.32	23.27	
20	QPSK	1	99	23.13	23.15	23.10	
20	QPSK	50	0	22.34	22.39	22.34	24
20	QPSK	50	24	22.38	22.37	22.33	
20	QPSK	50	50	22.33	22.35	22.31	
20	QPSK	100	0	22.32	22.33	22.26	
20	16QAM	1	0	22.42	22.52	22.48	24
20	16QAM	1	49	22.37	22.40	22.34	
20	16QAM	1	99	22.23	22.23	22.17	
20	16QAM	50	0	21.28	21.35	21.28	23
20	16QAM	50	24	21.27	21.37	21.33	
20	16QAM	50	50	21.26	21.31	21.26	
20	16QAM	100	0	21.30	21.34	21.34	
20	64QAM	1	0	21.16	21.23	21.19	23
20	64QAM	1	49	21.05	21.15	21.11	
20	64QAM	1	99	21.15	21.17	21.15	
20	64QAM	50	0	20.21	20.31	20.26	22
20	64QAM	50	24	20.27	20.29	20.23	
20	64QAM	50	50	20.17	20.22	20.17	
20	64QAM	100	0	20.22	20.25	20.19	
20	256QAM	1	0	19.06	19.07	19.02	20
20	256QAM	1	49	19.06	19.13	19.09	
20	256QAM	1	99	19.09	19.15	19.08	
20	256QAM	50	0	19.15	19.18	19.12	20
20	256QAM	50	24	19.00	19.07	19.07	
20	256QAM	50	50	18.95	19.05	19.01	
20	256QAM	100	0	19.14	19.23	19.20	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	23.40	23.45	23.35	25
15	QPSK	1	37	23.16	23.30	23.20	
15	QPSK	1	74	23.08	23.14	23.10	
15	QPSK	36	0	22.33	22.30	22.29	24
15	QPSK	36	20	22.31	22.36	22.27	
15	QPSK	36	39	22.31	22.29	22.33	
15	QPSK	75	0	22.28	22.30	22.20	
15	16QAM	1	0	22.33	22.49	22.40	24
15	16QAM	1	37	22.31	22.35	22.30	
15	16QAM	1	74	22.23	22.18	22.15	
15	16QAM	36	0	21.26	21.30	21.18	23
15	16QAM	36	20	21.18	21.37	21.26	
15	16QAM	36	39	21.21	21.21	21.24	
15	16QAM	75	0	21.21	21.24	21.28	
15	64QAM	1	0	21.12	21.14	21.10	23
15	64QAM	1	37	21.11	21.14	21.11	
15	64QAM	1	74	21.08	21.14	21.10	
15	64QAM	36	0	20.17	20.23	20.20	22
15	64QAM	36	20	20.25	20.23	20.14	
15	64QAM	36	39	20.17	20.17	20.14	
15	64QAM	75	0	20.18	20.24	20.14	
15	256QAM	1	0	19.06	19.06	18.92	20
15	256QAM	1	37	19.02	19.07	19.04	
15	256QAM	1	74	19.09	19.08	19.08	
15	256QAM	36	0	19.13	19.13	19.05	20
15	256QAM	36	20	18.94	19.04	19.04	



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15	256QAM	36	39	18.95	19.05	19.00	
15	256QAM	75	0	19.13	19.21	19.13	
Channel				42140	42590	43040	Tune-up limit (dBm)
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	23.38	23.40	23.30	25
10	QPSK	1	25	23.11	23.23	23.16	
10	QPSK	1	49	23.06	23.07	23.03	
10	QPSK	25	0	22.25	22.29	22.28	24
10	QPSK	25	12	22.21	22.32	22.20	
10	QPSK	25	25	22.24	22.19	22.24	
10	QPSK	50	0	22.27	22.20	22.14	
10	16QAM	1	0	22.30	22.49	22.33	24
10	16QAM	1	25	22.28	22.28	22.23	
10	16QAM	1	49	22.20	22.15	22.07	23
10	16QAM	25	0	21.22	21.22	21.12	
10	16QAM	25	12	21.10	21.34	21.20	
10	16QAM	25	25	21.12	21.20	21.15	
10	16QAM	50	0	21.17	21.21	21.19	
10	64QAM	1	0	21.11	21.10	21.03	23
10	64QAM	1	25	21.20	21.06	21.06	
10	64QAM	1	49	21.23	21.08	21.08	
10	64QAM	25	0	20.13	20.17	20.16	22
10	64QAM	25	12	20.21	20.17	20.11	
10	64QAM	25	25	20.16	20.12	20.12	
10	64QAM	50	0	20.11	20.20	20.07	
10	256QAM	1	0	19.03	19.05	18.92	20
10	256QAM	1	25	18.94	19.02	19.02	
10	256QAM	1	49	19.04	19.06	18.98	
10	256QAM	25	0	19.10	19.09	19.05	
10	256QAM	25	12	18.92	18.98	18.99	20
10	256QAM	25	25	18.94	18.95	18.98	
10	256QAM	50	0	19.07	19.16	19.07	
Channel				42115	42590	43065	Tune-up limit (dBm)
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	23.36	23.38	23.29	25
5	QPSK	1	12	23.16	23.24	23.16	
5	QPSK	1	24	23.06	23.13	23.05	
5	QPSK	12	0	22.33	22.25	22.28	24
5	QPSK	12	7	22.28	22.31	22.27	
5	QPSK	12	13	22.26	22.21	22.31	
5	QPSK	25	0	22.26	22.29	22.18	
5	16QAM	1	0	22.30	22.48	22.38	24
5	16QAM	1	12	22.30	22.28	22.21	
5	16QAM	1	24	22.16	22.18	22.10	
5	16QAM	12	0	21.16	21.28	21.16	23
5	16QAM	12	7	21.08	21.32	21.25	
5	16QAM	12	13	21.17	21.17	21.24	
5	16QAM	25	0	21.15	21.16	21.25	
5	64QAM	1	0	21.03	21.11	21.01	23
5	64QAM	1	12	21.14	21.11	21.06	
5	64QAM	1	24	21.00	21.11	21.03	
5	64QAM	12	0	20.14	20.13	20.19	22
5	64QAM	12	7	20.21	20.21	20.10	
5	64QAM	12	13	20.13	20.15	20.06	
5	64QAM	25	0	20.11	20.19	20.10	
5	256QAM	1	0	18.97	19.02	18.83	20
5	256QAM	1	12	19.01	19.07	18.98	
5	256QAM	1	24	19.09	19.07	19.05	
5	256QAM	12	0	19.08	19.04	18.98	20
5	256QAM	12	7	18.90	18.95	19.03	
5	256QAM	12	13	18.92	18.96	18.97	
5	256QAM	25	0	19.09	19.14	19.11	



<LTE Band 42_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	22.06	21.56	21.45	22.5
20	QPSK	1	49	21.23	21.32	21.34	
20	QPSK	1	99	21.15	21.07	21.17	
20	QPSK	50	0	20.45	20.40	20.43	21.5
20	QPSK	50	24	20.41	20.39	20.33	
20	QPSK	50	50	20.31	20.37	20.36	
20	QPSK	100	0	20.33	20.32	20.28	21.5
20	16QAM	1	0	20.45	20.46	20.50	
20	16QAM	1	49	20.41	20.34	20.41	
20	16QAM	1	99	20.19	20.19	20.23	20.5
20	16QAM	50	0	19.26	19.34	19.37	
20	16QAM	50	24	19.25	19.33	19.40	
20	16QAM	50	50	19.21	19.28	19.28	20.5
20	16QAM	100	0	19.29	19.27	19.35	
20	64QAM	1	0	19.20	19.17	19.26	
20	64QAM	1	49	19.06	19.12	19.16	20.5
20	64QAM	1	99	19.16	19.10	19.23	
20	64QAM	50	0	18.21	18.23	18.30	
20	64QAM	50	24	18.27	18.22	18.25	19.5
20	64QAM	50	50	18.12	18.14	18.27	
20	64QAM	100	0	18.17	18.23	18.21	
20	256QAM	1	0	17.04	17.01	17.09	18
20	256QAM	1	49	17.04	17.05	17.09	
20	256QAM	1	99	17.12	17.09	17.08	
20	256QAM	50	0	17.11	17.17	17.17	18
20	256QAM	50	24	16.99	17.00	17.07	
20	256QAM	50	50	16.94	17.05	17.08	
20	256QAM	100	0	17.12	17.17	17.20	
Channel				42165	42590	43015	
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	21.53	21.54	21.38	22.5
15	QPSK	1	37	21.13	21.22	21.31	
15	QPSK	1	74	21.12	21.00	21.13	
15	QPSK	36	0	20.30	20.22	20.40	21.5
15	QPSK	36	20	20.42	20.47	20.24	
15	QPSK	36	39	20.30	20.34	20.40	
15	QPSK	75	0	20.27	20.29	20.26	21.5
15	16QAM	1	0	20.35	20.46	20.50	
15	16QAM	1	37	20.38	20.26	20.40	
15	16QAM	1	74	20.12	20.12	20.15	20.5
15	16QAM	36	0	19.16	19.28	19.28	
15	16QAM	36	20	19.18	19.27	19.35	
15	16QAM	36	39	19.19	19.28	19.27	20.5
15	16QAM	75	0	19.29	19.20	19.32	
15	64QAM	1	0	19.14	19.15	19.24	
15	64QAM	1	37	19.02	19.10	19.15	20.5
15	64QAM	1	74	19.15	19.09	19.22	
15	64QAM	36	0	18.13	18.16	18.24	
15	64QAM	36	20	18.22	18.15	18.19	19.5
15	64QAM	36	39	18.09	18.11	18.20	
15	64QAM	75	0	18.16	18.16	18.11	
15	256QAM	1	0	16.96	16.92	17.06	18
15	256QAM	1	37	16.97	17.03	17.07	
15	256QAM	1	74	17.02	17.05	17.04	
15	256QAM	36	0	17.09	17.13	17.12	18
15	256QAM	36	20	16.99	17.00	16.97	



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15	256QAM	36	39	16.88	16.96	17.07	
15	256QAM	75	0	17.12	17.11	17.20	
Channel				42140	42590	43040	Tune-up limit (dBm)
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	21.47	21.54	21.41	22.5
10	QPSK	1	25	21.15	21.23	21.31	
10	QPSK	1	49	21.06	20.97	21.12	
10	QPSK	25	0	20.26	20.27	20.34	21.5
10	QPSK	25	12	20.49	20.46	20.25	
10	QPSK	25	25	20.24	20.30	20.38	
10	QPSK	50	0	20.27	20.27	20.20	
10	16QAM	1	0	20.44	20.46	20.44	21.5
10	16QAM	1	25	20.36	20.34	20.35	
10	16QAM	1	49	20.10	20.14	20.22	
10	16QAM	25	0	19.16	19.33	19.28	
10	16QAM	25	12	19.21	19.24	19.36	20.5
10	16QAM	25	25	19.21	19.23	19.19	
10	16QAM	50	0	19.29	19.27	19.27	
10	64QAM	1	0	19.13	19.12	19.21	
10	64QAM	1	25	19.05	19.02	19.11	20.5
10	64QAM	1	49	19.07	19.07	19.21	
10	64QAM	25	0	18.20	18.17	18.23	
10	64QAM	25	12	18.20	18.16	18.22	19.5
10	64QAM	25	25	18.02	18.13	18.17	
10	64QAM	50	0	18.08	18.20	18.11	
10	256QAM	1	0	16.94	16.99	16.99	
10	256QAM	1	25	17.02	16.99	17.05	18
10	256QAM	1	49	17.10	17.09	17.04	
10	256QAM	25	0	17.01	17.10	17.10	
10	256QAM	25	12	16.93	16.95	16.97	18
10	256QAM	25	25	16.90	16.99	17.02	
10	256QAM	50	0	17.12	17.14	17.10	
Channel				42115	42590	43065	
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	21.42	21.47	21.35	22.5
5	QPSK	1	12	21.22	21.25	21.29	
5	QPSK	1	24	21.12	21.02	21.14	
5	QPSK	12	0	20.31	20.25	20.42	21.5
5	QPSK	12	7	20.41	20.41	20.30	
5	QPSK	12	13	20.31	20.33	20.42	
5	QPSK	25	0	20.31	20.25	20.19	
5	16QAM	1	0	20.38	20.41	20.47	21.5
5	16QAM	1	12	20.39	20.31	20.41	
5	16QAM	1	24	20.11	20.16	20.22	
5	16QAM	12	0	19.24	19.32	19.33	
5	16QAM	12	7	19.23	19.26	19.40	20.5
5	16QAM	12	13	19.18	19.24	19.26	
5	16QAM	25	0	19.24	19.22	19.33	
5	64QAM	1	0	19.16	19.17	19.21	
5	64QAM	1	12	19.06	19.09	19.07	20.5
5	64QAM	1	24	19.09	19.02	19.20	
5	64QAM	12	0	18.17	18.22	18.24	
5	64QAM	12	7	18.19	18.18	18.21	19.5
5	64QAM	12	13	18.08	18.05	18.17	
5	64QAM	25	0	18.17	18.13	18.14	
5	256QAM	1	0	17.00	16.99	17.09	
5	256QAM	1	12	16.96	17.03	17.02	18
5	256QAM	1	24	17.10	17.06	17.02	
5	256QAM	12	0	17.02	17.11	17.16	
5	256QAM	12	7	16.99	16.95	17.05	18
5	256QAM	12	13	16.90	17.05	17.05	
5	256QAM	25	0	17.11	17.15	17.13	



<LTE Band 42_Ant 8_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	22.01	22.02	22.05	22.5
20	QPSK	1	49	21.23	21.32	21.34	
20	QPSK	1	99	21.15	21.07	21.17	
20	QPSK	50	0	20.32	20.30	20.43	21.5
20	QPSK	50	24	20.28	20.29	20.33	
20	QPSK	50	50	20.31	20.39	20.26	
20	QPSK	100	0	20.33	20.32	20.35	21.5
20	16QAM	1	0	20.45	20.46	20.50	
20	16QAM	1	49	20.41	20.34	20.41	
20	16QAM	1	99	20.19	20.19	20.23	20.5
20	16QAM	50	0	19.26	19.34	19.37	
20	16QAM	50	24	19.25	19.33	19.40	
20	16QAM	50	50	19.21	19.28	19.28	20.5
20	16QAM	100	0	19.29	19.27	19.35	
20	64QAM	1	0	19.20	19.17	19.26	
20	64QAM	1	49	19.06	19.12	19.16	20.5
20	64QAM	1	99	19.16	19.10	19.23	
20	64QAM	50	0	18.21	18.23	18.30	
20	64QAM	50	24	18.27	18.22	18.25	19.5
20	64QAM	50	50	18.12	18.14	18.27	
20	64QAM	100	0	18.17	18.23	18.21	
20	256QAM	1	0	17.04	17.01	17.09	18
20	256QAM	1	49	17.04	17.05	17.09	
20	256QAM	1	99	17.12	17.09	17.08	
20	256QAM	50	0	17.11	17.17	17.17	18
20	256QAM	50	24	16.99	17.00	17.07	
20	256QAM	50	50	16.94	17.05	17.08	
20	256QAM	100	0	17.12	17.17	17.20	
Channel				42165	42590	43015	
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	21.53	21.54	21.38	22.5
15	QPSK	1	37	21.13	21.22	21.31	
15	QPSK	1	74	21.12	21.00	21.13	
15	QPSK	36	0	20.30	20.22	20.40	21.5
15	QPSK	36	20	20.42	20.47	20.24	
15	QPSK	36	39	20.30	20.34	20.40	
15	QPSK	75	0	20.27	20.29	20.26	21.5
15	16QAM	1	0	20.35	20.46	20.50	
15	16QAM	1	37	20.38	20.26	20.40	
15	16QAM	1	74	20.12	20.12	20.15	20.5
15	16QAM	36	0	19.16	19.28	19.28	
15	16QAM	36	20	19.18	19.27	19.35	
15	16QAM	36	39	19.19	19.28	19.27	20.5
15	16QAM	75	0	19.29	19.20	19.32	
15	64QAM	1	0	19.14	19.15	19.24	
15	64QAM	1	37	19.02	19.10	19.15	20.5
15	64QAM	1	74	19.15	19.09	19.22	
15	64QAM	36	0	18.13	18.16	18.24	
15	64QAM	36	20	18.22	18.15	18.19	19.5
15	64QAM	36	39	18.09	18.11	18.20	
15	64QAM	75	0	18.16	18.16	18.11	
15	256QAM	1	0	16.96	16.92	17.06	18
15	256QAM	1	37	16.97	17.03	17.07	
15	256QAM	1	74	17.02	17.05	17.04	
15	256QAM	36	0	17.09	17.13	17.12	18
15	256QAM	36	20	16.99	17.00	16.97	



FCC SAR TEST REPORT

Report No. :FA3N2803B

15	256QAM	36	39	16.88	16.96	17.07	
15	256QAM	75	0	17.12	17.11	17.20	
Channel				42140	42590	43040	Tune-up limit (dBm)
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	21.47	21.54	21.41	22.5
10	QPSK	1	25	21.15	21.23	21.31	
10	QPSK	1	49	21.06	20.97	21.12	
10	QPSK	25	0	20.26	20.27	20.34	21.5
10	QPSK	25	12	20.49	20.46	20.25	
10	QPSK	25	25	20.24	20.30	20.38	
10	QPSK	50	0	20.27	20.27	20.20	
10	16QAM	1	0	20.44	20.46	20.44	21.5
10	16QAM	1	25	20.36	20.34	20.35	
10	16QAM	1	49	20.10	20.14	20.22	
10	16QAM	25	0	19.16	19.33	19.28	20.5
10	16QAM	25	12	19.21	19.24	19.36	
10	16QAM	25	25	19.21	19.23	19.19	
10	16QAM	50	0	19.29	19.27	19.27	
10	64QAM	1	0	19.13	19.12	19.21	20.5
10	64QAM	1	25	19.05	19.02	19.11	
10	64QAM	1	49	19.07	19.07	19.21	
10	64QAM	25	0	18.20	18.17	18.23	19.5
10	64QAM	25	12	18.20	18.16	18.22	
10	64QAM	25	25	18.02	18.13	18.17	
10	64QAM	50	0	18.08	18.20	18.11	
10	256QAM	1	0	16.94	16.99	16.99	18
10	256QAM	1	25	17.02	16.99	17.05	
10	256QAM	1	49	17.10	17.09	17.04	
10	256QAM	25	0	17.01	17.10	17.10	18
10	256QAM	25	12	16.93	16.95	16.97	
10	256QAM	25	25	16.90	16.99	17.02	
10	256QAM	50	0	17.12	17.14	17.10	
Channel				42115	42590	43065	Tune-up limit (dBm)
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	21.42	21.47	21.35	22.5
5	QPSK	1	12	21.22	21.25	21.29	
5	QPSK	1	24	21.12	21.02	21.14	
5	QPSK	12	0	20.31	20.25	20.42	21.5
5	QPSK	12	7	20.41	20.41	20.30	
5	QPSK	12	13	20.31	20.33	20.42	
5	QPSK	25	0	20.31	20.25	20.19	
5	16QAM	1	0	20.38	20.41	20.47	21.5
5	16QAM	1	12	20.39	20.31	20.41	
5	16QAM	1	24	20.11	20.16	20.22	
5	16QAM	12	0	19.24	19.32	19.33	20.5
5	16QAM	12	7	19.23	19.26	19.40	
5	16QAM	12	13	19.18	19.24	19.26	
5	16QAM	25	0	19.24	19.22	19.33	
5	64QAM	1	0	19.16	19.17	19.21	20.5
5	64QAM	1	12	19.06	19.09	19.07	
5	64QAM	1	24	19.09	19.02	19.20	
5	64QAM	12	0	18.17	18.22	18.24	19.5
5	64QAM	12	7	18.19	18.18	18.21	
5	64QAM	12	13	18.08	18.05	18.17	
5	64QAM	25	0	18.17	18.13	18.14	
5	256QAM	1	0	17.00	16.99	17.09	18
5	256QAM	1	12	16.96	17.03	17.02	
5	256QAM	1	24	17.10	17.06	17.02	
5	256QAM	12	0	17.02	17.11	17.16	18
5	256QAM	12	7	16.99	16.95	17.05	
5	256QAM	12	13	16.90	17.05	17.05	
5	256QAM	25	0	17.11	17.15	17.13	



2. LTE DL/UL Carrier Aggregation Output Power

<LTE DL Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by	Number	Combination	Covered by	Number	Combination	Covered by
		Measurement Superset			Measurement Superset			Measurement Superset
1	CA_2C	164	41	CA_41D	111	109	CA_41E	111
2	CA_5B	166	42	CA_66D	166	110	CA_41A-41A-41C	111
3	CA_7B	166	43	CA_41A-41A-41A	111	111	CA_41A-41D	
4	CA_7C	166	44	CA_41A-41C	111	112	CA_2A-2A-4A-4A	152
5	CA_12B	162	45	CA_66A-66A-66A	166	113	CA_2A-2A-5B	156
6	CA_38C	33	46	CA_66A-66B	166	114	CA_2A-2A-12A-12A	162
7	CA_41C	111	47	CA_66A-66C	166	115	CA_2A-2A-12B	162
8	CA_42C		48	CA_2A-2A-4A	152	116	CA_2A-2A-66A-66A	164
9	CA_66B	166	49	CA_2A-2A-5A	156	117	CA_2A-2A-66B	164
10	CA_66C	166	50	CA_2A-2A-7A	159	118	CA_2A-2A-66C	164
11	CA_2A-2A	164	51	CA_2A-2A-12A	162	119	CA_2A-66A-66A-66A	164
12	CA_4A-4A	152	52	CA_2A-2A-13A	102	120	CA_2A-66A-66B	164
13	CA_5A-5A	166	53	CA_2A-2A-14A		121	CA_2A-66A-66C	164
14	CA_7A-7A	166	54	CA_2A-2A-66A	164	122	CA_2C-66A-66A	164
15	CA_12A-12A	162	55	CA_2A-2A-71A	164	123	CA_2A-66D	164
16	CA_41A-41A	111	56	CA_2A-4A-4A	152	124	CA_4A-4A-5B	149
17	CA_66A-66A	166	57	CA_2A-5B	156	125	CA_4A-4A-12A-12A	152
18	CA_2A-4A	152	58	CA_2C-5A	156	126	CA_4A-4A-12B	152
19	CA_2A-5A	156	59	CA_2A-7A-7A	159	127	CA_5A-5A-66A-66A	166
20	CA_2A-7A	159	60	CA_2A-7C	159	128	CA_5A-5A-66B	166
21	CA_2A-12A	162	61	CA_2A-12A-12A	162	129	CA_5A-5A-66C	166
22	CA_2A-13A	102	62	CA_2A-12B	162	130	CA_5A-66A-66B	166
23	CA_2A-14A	53	63	CA_2C-12A	162	131	CA_5A-66A-66C	166
24	CA_2A-17A		64	CA_2A-66A-66A	164	132	CA_5B-66A-66A	166
25	CA_2A-66A	164	65	CA_2A-66B	164	133	CA_5A-66D	166
26	CA_2A-71A	164	66	CA_2A-66C	164	134	CA_5B-66B	166
27	CA_4A-5A	149	67	CA_2C-66A	164	135	CA_5B-66C	166
28	CA_4A-7A	151	68	CA_4A-4A-5A	149	136	CA_7A-7A-66A-66A	166
29	CA_4A-12A	152	69	CA_4A-4A-7A	151	137	CA_7C-66A-66A	166
30	CA_4A-17A		70	CA_4A-4A-12A	152	138	CA_12B-66A-66A	162
31	CA_4A-71A	141	71	CA_4A-4A-71A	141	139	CA_2A-2A-4A-5A	149
32	CA_5A-7A	166	72	CA_4A-5B	149	140	CA_2A-2A-4A-12A	152
33	CA_5A-38A		73	CA_4A-7A-7A	151	141	CA_2A-2A-4A-71A	
34	CA_5A-41A		74	CA_4A-7C	151	142	CA_2A-2A-5A-66A	156
35	CA_5A-66A	166	75	CA_4A-12A-12A	152	143	CA_2A-2A-7A-12A	
36	CA_7A-12A	143	76	CA_4A-12B	152	144	CA_2A-2A-7A-66A	159
37	CA_7A-26A	84	77	CA_5A-5A-66A	166	145	CA_2A-2A-12A-66A	162
38	CA_7A-66A	166	78	CA_5A-7A-7A	166	146	CA_2A-2A-66A-71A	164
39	CA_12A-66A	162	79	CA_5A-7C	166	147	CA_2A-4A-4A-5A	149
40	CA_66A-71A	164	80	CA_5A-66A-66A	166	148	CA_2A-4A-4A-12A	152
			81	CA_5A-66B	166	149	CA_2A-4A-5B	
			82	CA_5A-66C	166	150	CA_2A-4A-7A-7A	151
			83	CA_5B-66A	166	151	CA_2A-4A-7C	
			84	CA_7A-7A-26A		152	CA_2A-4A-12B	



			85	CA_7A-7A-66A	166	153	CA_2A-5A-66A-66A	156
			86	CA_7A-12B	143	154	CA_2A-5A-66B	156
			87	CA_7C-13A	102	155	CA_2A-5A-66C	156
			88	CA_7A-66A-66A	166	156	CA_2A-5B-66A	
			89	CA_7C-66A	166	157	CA_2A-7A-7A-66A	159
			90	CA_12A-66A-66A	162	158	CA_2A-7A-66A-66A	159
			91	CA_12A-66C	162	159	CA_2A-7C-66A	
			92	CA_12B-66A	162	160	CA_2A-12A-66A-66A	162
			93	CA_66A-66A-71A	164	161	CA_2A-12A-66C	162
			94	CA_66C-71A	164	162	CA_2A-12B-66A	
			95	CA_2A-4A-5A	149	163	CA_2A-66A-66A-71A	164
			96	CA_2A-4A-7A	151	164	CA_2A-66C-71A	
			97	CA_2A-4A-12A	152	165	CA_5A-7A-66A-66A	166
			98	CA_2A-4A-71A	141	166	CA_5A-7C-66A	
			99	CA_2A-5A-7A				
			100	CA_2A-5A-66A	156			
			101	CA_2A-7A-12A	143			
			102	CA_2A-7A-13A				
			103	CA_2A-7A-66A	159			
			104	CA_2A-12A-66A	162			
			105	CA_2A-66A-71A	164			
			106	CA_4A-7A-12A				
			107	CA_5A-7A-66A	166			
			108	CA_7A-12A-66A				

<Power verification when LTE Carrier Aggregation Active>

General Note:

- i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.
- ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.
- iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- v. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vi. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lceil \frac{BW_{\text{Channel}(1)} + BW_{\text{Channel}(2)} - 0.1 |BW_{\text{Channel}(1)} - BW_{\text{Channel}(2)}|}{0.6} \right\rceil 0.3 \text{ [MHz]}$$

<Two Carrier power verification>

Configure	PCC							SCC				Power		
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)	
Inter-Band	2	20	1900	19100	QPSK	1	0	17	10	740	5790	24.47	24.53	
	4	20	1745	20300	QPSK	1	0	17	10	740	5790	24.13	24.22	
	5	10	829	20450	QPSK	1	0	38	20	2595	38000	24.03	24.25	
	5	10	829	20450	QPSK	1	0	41	20	2593	40620	24.11	24.25	
	12	10	707.5	23095	QPSK	1	0	25	20	1960	8340	24.20	24.25	
Intra-Band	Contiguous	42	20	3500	42590	QPSK	1	0	42	5	3545.5	42115	23.47	23.55

<Three Carrier power verification>

Configure	PCC							SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1900	19100	QPSK	1	0	2	20	1960	900	14	10	763	5330	24.39	24.53
	7	20	2535	21100	QPSK	1	0	7	20	2655	3100	26	15	876.5	8865	23.97	24.04
	2	20	1900	19100	QPSK	1	0	5	10	881.5	2525	7	20	2655	3100	24.33	24.53
	2	20	1900	19100	QPSK	1	0	7	20	2655	3100	13	10	751	5230	24.39	24.53
	4	20	1745	20300	QPSK	1	0	7	20	2655	3100	12	10	737.5	5095	24.10	24.22
	7	20	2535	21100	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	24.00	24.04



<Four Carrier power verification>

Configure	PCC							SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	71	20	680.5	133297	QPSK	1	0	2	20	1960	900	2	20	1940.2	702	4	20	2132.5	2175	24.02	24.05
	2	20	1900	19100	QPSK	1	0	2	20	1960	900	7	20	2655	3100	12	10	737.5	5095	24.27	24.53
	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	5	10	871.6	2426	24.29	24.53
	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	20	2635.2	2902	24.38	24.53
	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	12	10	737.5	5095	12	10	727.6	4996	24.33	24.53
	2	20	1900	19100	QPSK	1	0	5	10	881.5	2525	5	10	871.6	2426	66	20	2155	66886	24.49	24.53
	2	20	1900	19100	QPSK	1	0	7	20	2655	3100	7	20	2635.2	2902	66	20	2155	66886	24.41	24.53
	2	20	1900	19100	QPSK	1	0	12	10	737.5	5095	12	10	727.6	4996	66	20	2155	66886	24.28	24.53
	71	20	680.5	133297	QPSK	1	0	2	20	1960	900	66	20	2155	66886	66	20	2135.2	66688	24.35	24.53
	5	10	829	20450	QPSK	1	0	7	20	2655	3100	7	20	2635.2	2902	66	20	2155	66886	24.12	24.25
	41	20	2680	41490	QPSK	1	0	41	20	2593	40620	41	20	2593	40620	41	20	2593	40620	24.19	24.31



<LTE Uplink carrier aggregation>

Number	Combination
1	2C
2	5B
3	7C
4	38C
5	41C
6	41D
7	66B
8	66C

<Intra-band>

General Note:

- i. The device supports intra-band uplink carrier aggregation with a maximum of three 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- ii. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.
- iii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
- iv. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
- v. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

CA_2C_Ant 1_DSI 0/1										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
18700	18898	QPSK	1	0	0	0	1	0	23.08	25
18900	18702	QPSK	1	0	0	0	1	0	23.39	25
19100	18902	QPSK	1	0	0	0	1	0	24.3	25

CA_5B_Ant 1_DSI 0/1/3										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	24.4	24.5
20475	20574	QPSK	1	49	1	0	2	0	23.96	24.5
20600	20501	QPSK	1	0	1	49	2	0	24.35	24.5



CA_7C_Ant 5_DSI 0/1										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	24.53	25
21100	20902	QPSK	1	0	1	99	2	0	24.37	25
21350	21152	QPSK	1	0	1	99	2	0	24.28	25

CA_66B_Ant 1_DSI 0/1										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	24.56	25
132322	132229	QPSK	1	0	1	24	2	0	24.35	25
132597	132504	QPSK	1	0	1	24	2	0	24.03	25

CA_66C_Ant 1_DSI 0/1										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	24.63	25
132322	132124	QPSK	1	0	1	99	2	0	23.95	25
132572	132374	QPSK	1	0	1	99	2	0	24.23	25

CA_38C_Ant 5_DSI 0/1/3										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	24.38	25
37901	38099	QPSK	1	0	0	0	1	0	24.66	25
38150	37952	QPSK	1	0	1	99	2	0	24.12	25

CA_41C_Ant 5_DSI 0/1/3										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	24.65	25
40185	39987	QPSK	1	0	1	99	2	0	24.4	25
40620	40422	QPSK	1	0	1	99	2	0	24.11	25
41055	40857	QPSK	1	0	1	99	2	0	24.23	25
41490	41292	QPSK	1	0	1	99	2	0	23.95	25

CA_41D_Ant 5_DSI 0/1/3													
Combination 20MHz+20MHz+20MHz (100RB+100RB+100RB)													
PCC Channel	SCC Channel	SCC Channel	Modulation	PCC		SCC2		SCC3		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
				RB Size	RB offset	RB Size	RB offset	RB Size	RB offset				
39750	39948	40146	QPSK	1	0	0	0	0	0	1	0	23.97	25
40185	39987	39789	QPSK	1	0	1	99	1	99	3	0	24.12	25
40620	40422	40224	QPSK	1	0	1	99	1	99	3	0	24.23	25
41055	40857	40659	QPSK	1	0	1	99	1	99	3	0	24.65	25
41490	41292	41094	QPSK	1	0	1	99	1	99	3	0	24.11	25



CA_2C_Ant 1_DSI 3										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
18700	18898	QPSK	1	0	0	0	1	0	22.57	24
18900	18702	QPSK	1	0	0	0	1	0	22.91	24
19100	18902	QPSK	1	0	0	0	1	0	23.3	24

CA_7C_Ant 5_DSI 3										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.61	23
21100	20902	QPSK	1	0	1	99	2	0	22.31	23
21350	21152	QPSK	1	0	1	99	2	0	22.17	23

CA_66B_Ant 1_DSI 3										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	22.56	23.5
132322	132229	QPSK	1	0	1	24	2	0	22.38	23.5
132597	132504	QPSK	1	0	1	24	2	0	22.1	23.5

CA_66C_Ant 1_DSI 3										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	22.19	23.5
132322	132124	QPSK	1	0	1	99	2	0	23.12	23.5
132572	132374	QPSK	1	0	1	99	2	0	23.23	23.5

3. 5G NR Output Power (Unit: dBm)

General Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission.

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Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5 ¹	≤ 1.2 ¹	≤ 0.2 ¹
		≤ 0.5 ²	≤ 0.5 ²	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
CP-OFDM	256 QAM	≤ 4.5		
	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		
NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability <i>powerBoosting-pi2BPSK</i> and if the IE <i>powerBoostPi2BPSK</i> is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.				
NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE <i>powerBoostPi2BPSK</i> is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.				

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5	≤ 2.5	
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		



<FR1 n2_Ant 1_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	24.35	24.44	24.57	
20	PI/2 BPSK	1	53	24.38	24.38	24.34	25.0
20	PI/2 BPSK	1	104	24.30	24.33	24.33	
20	PI/2 BPSK	50	0	22.66	22.75	22.74	24.5
20	PI/2 BPSK	50	28	24.25	24.32	24.33	25.0
20	PI/2 BPSK	50	56	22.83	22.90	22.83	24.5
20	PI/2 BPSK	100	0	22.76	22.85	22.79	
20	QPSK	1	1	24.32	24.33	24.30	25.0
20	QPSK	1	53	24.24	24.34	24.30	
20	QPSK	1	104	24.38	24.39	24.30	
20	QPSK	50	0	22.34	22.34	22.24	24.0
20	QPSK	50	28	24.20	24.27	24.27	25.0
20	QPSK	50	56	22.29	22.36	22.36	24.0
20	QPSK	100	0	22.27	22.28	22.24	
20	16QAM	1	1	23.42	23.46	23.41	24.0
20	64QAM	1	1	21.97	22.03	21.95	22.5
20	256QAM	1	1	20.01	20.04	19.97	20.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	24.25	24.34	24.51	25.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	24.35	24.43	24.44	25.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	24.34	24.43	24.49	25.0



<FR1 n2_Ant 1_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.39	22.46	23.11	
20	PI/2 BPSK	1	53	22.39	22.33	22.37	23.5
20	PI/2 BPSK	1	104	22.27	22.30	22.30	
20	PI/2 BPSK	50	0	20.68	20.69	20.72	22.5
20	PI/2 BPSK	50	28	22.25	22.32	22.35	23.5
20	PI/2 BPSK	50	56	20.78	20.89	20.79	22.5
20	PI/2 BPSK	100	0	20.76	20.78	20.80	
20	QPSK	1	1	22.34	22.28	22.31	23.5
20	QPSK	1	53	22.19	22.36	22.29	
20	QPSK	1	104	22.37	22.39	22.34	
20	QPSK	50	0	20.32	20.32	20.20	22.0
20	QPSK	50	28	22.16	22.27	22.31	23.5
20	QPSK	50	56	20.28	20.28	20.32	22.0
20	QPSK	100	0	20.25	20.22	20.24	
20	16QAM	1	1	21.38	21.44	21.37	22.5
20	64QAM	1	1	20.01	19.98	19.97	21.0
20	256QAM	1	1	17.98	18.00	17.98	19.0
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.37	22.44	22.59	23.5
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.33	22.43	22.56	23.5
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	22.37	22.42	22.54	23.5



<FR1 n5_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	24.32	24.27	24.21	24.5
20	PI/2 BPSK	1	53	24.20	24.13	24.17	
20	PI/2 BPSK	1	104	24.01	23.96	23.91	
20	PI/2 BPSK	50	0	23.63	23.62	23.63	24.0
20	PI/2 BPSK	50	28	24.17	24.13	24.11	24.5
20	PI/2 BPSK	50	56	23.62	23.54	23.62	24.0
20	PI/2 BPSK	100	0	23.65	23.55	23.55	
20	QPSK	1	1	24.27	24.23	24.18	24.5
20	QPSK	1	53	24.18	24.17	24.16	
20	QPSK	1	104	24.00	23.99	23.98	
20	QPSK	50	0	23.15	23.12	23.07	23.5
20	QPSK	50	28	24.12	24.02	24.09	24.5
20	QPSK	50	56	23.08	23.01	23.01	23.5
20	QPSK	100	0	23.11	23.08	23.02	
20	16QAM	1	1	23.32	23.23	23.28	23.5
20	64QAM	1	1	21.94	21.85	21.88	22.0
20	256QAM	1	1	19.91	19.90	19.88	20.0
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	24.28	24.18	24.11	24.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	24.26	24.26	24.16	24.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	24.30	24.26	24.18	24.5



<FR1 n7_Ant 5_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				504000	507000	510000	
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	24.50	24.55	24.50	25.0
40	PI/2 BPSK	1	108	24.50	24.52	24.48	
40	PI/2 BPSK	1	214	24.23	24.25	24.21	
40	PI/2 BPSK	108	0	23.93	23.94	23.87	24.5
40	PI/2 BPSK	108	54	24.32	24.38	24.36	25.0
40	PI/2 BPSK	108	108	23.74	23.82	23.72	24.5
40	PI/2 BPSK	216	0	23.83	23.85	23.85	
40	QPSK	1	1	24.52	24.52	24.42	
40	QPSK	1	108	24.52	24.52	24.45	25.0
40	QPSK	1	214	24.24	24.30	24.23	
40	QPSK	108	0	23.37	23.42	23.32	
40	QPSK	108	54	24.23	24.33	24.33	25.0
40	QPSK	108	108	23.35	23.38	23.29	24.0
40	QPSK	216	0	23.32	23.33	23.30	
40	16QAM	1	1	23.54	23.60	23.54	
40	64QAM	1	1	22.08	22.13	22.06	22.5
40	256QAM	1	1	20.00	20.00	19.97	20.5
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	24.47	24.51	24.40	25.0
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	24.42	24.45	24.49	25.0
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	24.48	24.45	24.45	25.0
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	24.41	24.49	24.45	25.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	24.40	24.45	24.46	25.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	24.40	24.46	24.44	25.0



<FR1 n7_Ant 5_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				504000	507000	510000	
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	23.48	23.62	23.51	24.0
40	PI/2 BPSK	1	108	23.47	23.52	23.45	
40	PI/2 BPSK	1	214	23.13	23.28	23.19	
40	PI/2 BPSK	108	0	22.89	22.90	22.81	23.5
40	PI/2 BPSK	108	54	23.27	23.38	23.34	24.0
40	PI/2 BPSK	108	108	22.62	22.87	22.68	23.5
40	PI/2 BPSK	216	0	22.76	22.90	22.81	
40	QPSK	1	1	23.44	23.57	23.33	24.0
40	QPSK	1	108	23.43	23.49	23.38	
40	QPSK	1	214	23.19	23.27	23.21	
40	QPSK	108	0	22.35	22.46	22.32	23.0
40	QPSK	108	54	23.16	23.35	23.30	24.0
40	QPSK	108	108	22.28	22.39	22.27	23.0
40	QPSK	216	0	22.25	22.37	22.21	
40	16QAM	1	1	22.42	22.65	22.51	23.0
40	64QAM	1	1	21.01	21.12	20.97	21.5
40	256QAM	1	1	18.92	19.01	18.91	19.5
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	23.43	23.52	23.45	24.0
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	23.42	23.61	23.45	24.0
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	23.48	23.56	23.43	24.0
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	23.48	23.60	23.42	24.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	23.48	23.56	23.50	24.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	23.44	23.54	23.42	24.0



<FR1 n12_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	24.15	24.20	24.13	25.0
15	PI/2 BPSK	1	40	23.87	23.95	23.91	
15	PI/2 BPSK	1	77	23.80	23.85	23.80	
15	PI/2 BPSK	36	0	23.48	23.48	23.42	24.5
15	PI/2 BPSK	36	22	23.89	23.90	23.88	25.0
15	PI/2 BPSK	36	43	23.01	23.11	23.09	24.5
15	PI/2 BPSK	75	0	23.33	23.34	23.30	
15	QPSK	1	1	24.06	24.13	24.13	25.0
15	QPSK	1	40	23.82	23.90	23.82	
15	QPSK	1	77	23.86	23.89	23.85	
15	QPSK	36	0	22.92	22.97	22.93	24.0
15	QPSK	36	22	23.93	23.96	23.95	25.0
15	QPSK	36	43	23.52	23.54	23.44	24.0
15	QPSK	75	0	22.89	22.90	22.90	
15	16QAM	1	1	23.25	23.33	23.27	24.0
15	64QAM	1	1	21.73	21.80	21.80	22.5
	256QAM	1	1	19.84	19.91	19.87	20.5
Channel				140800	141500	142200	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	PI/2 BPSK	1	1	24.10	24.13	24.08	25.0
Channel				140300	141500	142700	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	PI/2 BPSK	1	1	24.11	24.11	24.05	25.0



<FR1 n26_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	23.95	24.00	23.90	24.5
20	PI/2 BPSK	1	53	23.91	23.96	23.88	
20	PI/2 BPSK	1	104	23.66	23.76	23.69	
20	PI/2 BPSK	50	0	23.39	23.42	23.33	24.0
20	PI/2 BPSK	50	28	23.78	23.87	23.85	24.5
20	PI/2 BPSK	50	56	23.18	23.27	23.27	24.0
20	PI/2 BPSK	100	0	23.40	23.41	23.39	
20	QPSK	1	1	23.86	23.86	23.78	24.5
20	QPSK	1	53	23.87	23.92	23.89	
20	QPSK	1	104	23.70	23.78	23.75	
20	QPSK	50	0	22.88	22.89	22.81	23.5
20	QPSK	50	28	23.73	23.82	23.78	24.5
20	QPSK	50	56	22.76	22.76	22.69	23.5
20	QPSK	100	0	22.78	22.86	22.81	
20	16QAM	1	1	22.90	22.97	22.96	23.5
20	64QAM	1	1	21.48	21.58	21.49	22.0
20	256QAM	1	1	19.51	19.56	19.51	20.0
Channel				164300	166300	168300	Tune-up limit (dBm)
Frequency (MHz)				821.5	831.5	841.5	
15	PI/2 BPSK	1	1	23.88	23.94	23.87	24.5
Channel				163800	166300	168800	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	PI/2 BPSK	1	1	23.93	23.95	23.88	24.5
Channel				163300	166300	169300	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	PI/2 BPSK	1	1	23.86	23.98	23.89	24.5



<FR1 n66_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	24.10	24.31	24.25	25.0
40	PI/2 BPSK	1	108	24.11	24.13	24.09	
40	PI/2 BPSK	1	214	24.00	24.07	24.07	
40	PI/2 BPSK	108	0	23.48	23.53	23.44	24.5
40	PI/2 BPSK	108	54	23.92	24.04	24.02	25.0
40	PI/2 BPSK	108	108	23.61	23.63	23.54	24.5
40	PI/2 BPSK	216	0	23.53	23.60	23.53	
40	QPSK	1	1	24.15	24.25	24.20	
40	QPSK	1	108	24.03	24.08	23.98	25.0
40	QPSK	1	214	24.01	24.03	23.99	
40	QPSK	108	0	22.92	22.97	22.94	
40	QPSK	108	54	23.89	23.95	23.93	25.0
40	QPSK	108	108	23.03	23.10	23.03	24.0
40	QPSK	216	0	23.00	23.08	23.00	
40	16QAM	1	1	23.03	23.11	23.03	
40	64QAM	1	1	21.70	21.70	21.62	22.5
40	256QAM	1	1	19.84	19.86	19.78	20.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	24.08	24.28	24.23	25.0
Channel				344500	349000	353500	Tune-up limit (dBm)
Frequency (MHz)				1722.5	1745	1767.5	
25	PI/2 BPSK	1	1	24.10	24.29	24.20	25.0
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	24.10	24.23	24.21	25.0
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	24.08	24.21	24.23	25.0
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	24.07	24.24	24.25	25.0
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	24.10	24.29	24.15	25.0



<FR1 n71_Ant 1_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	23.96	24.06	23.89	25.0
20	PI/2 BPSK	1	53	23.97	23.98	23.92	
20	PI/2 BPSK	1	104	23.20	23.25	23.22	
20	PI/2 BPSK	50	0	23.28	23.30	23.27	24.5
20	PI/2 BPSK	50	28	23.94	24.00	23.90	25.0
20	PI/2 BPSK	50	56	23.36	23.36	23.30	24.5
20	PI/2 BPSK	100	0	23.29	23.29	23.19	
20	QPSK	1	1	23.92	24.02	23.99	25.0
20	QPSK	1	53	23.88	23.91	23.81	
20	QPSK	1	104	23.16	23.20	23.10	
20	QPSK	50	0	22.84	22.85	22.76	24.0
20	QPSK	50	28	23.83	23.88	23.84	25.0
20	QPSK	50	56	22.79	22.87	22.78	24.0
20	QPSK	100	0	22.69	22.79	22.74	
20	16QAM	1	1	22.42	22.45	22.40	24.0
20	64QAM	1	1	21.55	21.59	21.57	22.5
20	256QAM	1	1	19.24	19.29	19.27	20.5
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	23.87	24.03	23.85	25.0
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	23.94	24.01	23.86	25.0
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	23.89	24.00	23.81	25.0



<FR1 n38_Ant 5_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	24.22	24.30	24.16	25.0
40	PI/2 BPSK	1	53	24.17	24.22	24.15	
40	PI/2 BPSK	1	104	24.00	24.10	24.05	
40	PI/2 BPSK	50	0	22.52	22.55	22.57	24.5
40	PI/2 BPSK	50	28	24.06	24.10	24.07	25.0
40	PI/2 BPSK	50	56	22.50	22.54	22.50	24.5
40	PI/2 BPSK	100	0	22.59	22.53	22.53	
40	QPSK	1	1	24.22	24.26	24.25	25.0
40	QPSK	1	53	24.09	24.13	24.09	
40	QPSK	1	104	24.06	24.09	24.01	
40	QPSK	50	0	22.06	22.01	22.07	24.0
40	QPSK	50	28	24.01	24.01	24.03	25.0
40	QPSK	50	56	22.03	22.05	22.08	24.0
40	QPSK	100	0	22.05	22.00	22.06	24.0
40	16QAM	1	1	23.07	23.17	23.15	24.0
40	64QAM	1	1	21.53	21.62	21.56	22.5
40	256QAM	1	1	19.49	19.57	19.57	20.5
Channel				517000	519000	521000	Tune-up limit (dBm)
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	24.14	24.28	24.06	25.0
Channel				516000	519000	522000	Tune-up limit (dBm)
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	24.14	24.22	24.08	25.0
Channel				515500	519000	522500	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	24.22	24.22	24.09	25.0
Channel				515000	519000	523000	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	24.14	24.23	24.08	25.0



<FR1 n41_Ant 5_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	24.69	24.35	24.11	25.0
100	PI/2 BPSK	1	137	24.28	24.28	24.25	
100	PI/2 BPSK	1	271	24.61	24.28	24.62	
100	PI/2 BPSK	135	0	23.52	23.62	23.61	24.5
100	PI/2 BPSK	135	69	24.20	24.16	24.06	25.0
100	PI/2 BPSK	135	138	23.76	23.82	23.80	24.5
100	PI/2 BPSK	270	0	23.55	23.60	23.60	
100	QPSK	1	1	24.11	24.21	24.12	25.0
100	QPSK	1	137	24.29	24.38	24.31	
100	QPSK	1	271	24.68	24.62	24.68	
100	QPSK	135	0	23.02	23.03	23.05	25.0
100	QPSK	135	69	24.12	24.15	24.09	
100	QPSK	135	138	23.23	23.32	23.22	
100	QPSK	270	0	23.11	23.15	23.12	24.0
100	16QAM	1	1	23.24	23.26	23.17	24.0
100	64QAM	1	1	21.65	21.71	21.68	22.5
100	256QAM	1	1	19.55	19.65	19.56	20.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	24.67	24.33	24.04	25.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	24.68	24.32	24.01	25.0
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	24.66	24.27	24.07	25.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	24.66	24.32	24.07	25.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	24.67	24.32	24.07	25.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	24.66	24.35	24.03	25.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	24.61	24.25	24.10	25.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	24.67	24.31	24.02	25.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	24.65	24.32	24.05	25.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	24.60	24.28	24.10	25.0



<FR1 n41_Ant 2_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	21.55	21.67	21.49	22.0
100	PI/2 BPSK	1	137	20.13	20.12	20.11	
100	PI/2 BPSK	1	271	21.34	21.39	21.27	
100	PI/2 BPSK	135	0	20.73	20.74	20.73	21.5
100	PI/2 BPSK	135	69	20.81	20.85	20.79	22.0
100	PI/2 BPSK	135	138	20.71	20.80	20.77	21.5
100	PI/2 BPSK	270	0	20.21	20.35	20.26	
100	QPSK	1	1	20.92	20.92	20.90	22.0
100	QPSK	1	137	20.40	20.53	20.44	
100	QPSK	1	271	21.13	21.16	21.14	
100	QPSK	135	0	20.07	20.19	20.14	22.0
100	QPSK	135	69	20.25	20.27	20.17	
100	QPSK	135	138	20.30	20.38	20.29	
100	QPSK	270	0	20.03	20.00	19.99	21.0
100	16QAM	1	1	20.10	20.11	20.10	21.0
100	64QAM	1	1	18.69	18.76	18.68	19.5
100	256QAM	1	1	16.92	17.01	16.85	17.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	21.45	21.58	21.48	22.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	21.54	21.59	21.47	22.0
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	21.52	21.50	21.41	22.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	21.45	21.58	21.47	22.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	21.45	21.54	21.44	22.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	21.48	21.57	21.44	22.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	21.44	21.48	21.37	22.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	21.39	21.47	21.36	22.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	21.39	21.49	21.37	22.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	21.48	21.47	21.38	22.0



<FR1 n41_Ant 4_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	22.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	21.45	21.12	21.00	
100	PI/2 BPSK	1	137	20.52	20.02	20.13	22.0
100	PI/2 BPSK	1	271	21.45	21.03	21.13	
100	PI/2 BPSK	135	0	20.33	20.37	20.40	
100	PI/2 BPSK	135	69	20.67	20.41	20.43	22.0
100	PI/2 BPSK	135	138	20.11	20.03	20.05	22.0
100	PI/2 BPSK	270	0	20.06	20.02	20.03	
100	QPSK	1	1	21.32	21.24	21.31	
100	QPSK	1	137	20.53	20.10	20.13	22.0
100	QPSK	1	271	21.34	21.27	21.34	
100	QPSK	135	0	20.13	20.11	20.07	
100	QPSK	135	69	20.56	20.03	20.33	22.0
100	QPSK	135	138	20.36	20.01	20.20	
100	QPSK	270	0	20.20	20.02	20.19	
100	16QAM	1	1	20.84	20.84	20.81	22.0
100	64QAM	1	1	19.27	19.21	19.20	20.5
100	256QAM	1	1	17.35	17.25	17.32	18.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	21.40	20.07	20.98	22.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	21.42	20.05	20.99	22.0
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	21.40	20.01	20.90	22.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	21.32	20.05	20.91	22.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	21.42	20.05	20.89	22.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	21.39	20.03	20.90	22.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	21.41	20.00	20.99	22.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	21.40	20.00	20.91	22.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	21.39	20.01	20.91	22.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	21.37	20.10	20.99	22.0



<FR1 n41_Ant 3_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	22.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.00	21.01	21.09	22.0
100	PI/2 BPSK	1	137	20.02	20.00	20.12	
100	PI/2 BPSK	1	271	21.64	21.01	21.03	
100	PI/2 BPSK	135	0	20.35	20.30	20.33	22.0
100	PI/2 BPSK	135	69	20.65	20.56	20.49	22.0
100	PI/2 BPSK	135	138	20.33	20.03	20.05	22.0
100	PI/2 BPSK	270	0	20.51	20.00	20.00	
100	QPSK	1	1	21.92	21.18	21.25	22.0
100	QPSK	1	137	20.01	20.07	20.06	
100	QPSK	1	271	21.64	21.23	21.34	
100	QPSK	135	0	20.00	20.05	20.00	22.0
100	QPSK	135	69	20.31	20.00	20.24	
100	QPSK	135	138	20.21	20.02	20.20	
100	QPSK	270	0	20.09	20.02	20.03	22.0
100	16QAM	1	1	20.99	20.06	20.05	22.0
100	64QAM	1	1	19.45	18.52	18.53	20.5
100	256QAM	1	1	17.43	16.53	16.52	18.5
Channel				508200	518598	528996	22.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	21.90	20.92	20.90	22.0
Channel				507204	518598	529998	22.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	21.91	20.95	20.91	22.0
Channel				506202	518598	531000	22.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	21.88	20.92	20.89	22.0
Channel				505200	518598	531996	22.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	21.89	20.91	20.87	22.0
Channel				504204	518598	532998	22.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	21.86	20.93	20.90	22.0
Channel				503202	518598	534000	22.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	21.81	20.85	20.87	22.0
Channel				502200	518598	534996	22.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	21.91	20.93	20.90	22.0
Channel				501204	518598	535998	22.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	21.82	20.89	20.90	22.0
Channel				500700	518598	536496	22.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	21.86	20.85	20.87	22.0
Channel				500202	518598	537000	22.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	21.87	20.86	20.91	22.0



<FR1 n41_HPUE_Ant 5_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	27.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	26.59	26.14	26.03	27.0
100	PI/2 BPSK	1	137	26.18	26.11	26.20	
100	PI/2 BPSK	1	271	26.52	26.10	26.53	
100	PI/2 BPSK	135	0	25.48	25.58	25.52	26.5
100	PI/2 BPSK	135	69	26.10	26.15	26.14	27.0
100	PI/2 BPSK	135	138	25.77	25.78	25.69	26.5
100	PI/2 BPSK	270	0	25.53	25.58	25.48	
100	QPSK	1	1	26.09	26.14	26.06	27.0
100	QPSK	1	137	26.23	26.31	26.26	
100	QPSK	1	271	26.49	26.57	26.49	
100	QPSK	135	0	25.04	25.02	25.09	27.0
100	QPSK	135	69	26.06	26.11	26.03	
100	QPSK	135	138	25.16	25.26	25.19	
100	QPSK	270	0	24.98	25.02	24.97	26.0
100	16QAM	1	1	25.24	25.28	25.18	26.0
100	64QAM	1	1	23.64	23.70	23.64	24.5
100	256QAM	1	1	21.56	21.63	21.55	22.5
Channel				508200	518598	528996	27.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	26.52	26.09	25.97	27.0
Channel				507204	518598	529998	27.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	26.55	26.04	26.02	27.0
Channel				506202	518598	531000	27.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	26.57	26.10	25.94	27.0
Channel				505200	518598	531996	27.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	26.56	26.04	26.03	27.0
Channel				504204	518598	532998	27.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	26.52	26.11	25.94	27.0
Channel				503202	518598	534000	27.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	26.52	26.13	26.02	27.0
Channel				502200	518598	534996	27.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	26.55	26.14	25.95	27.0
Channel				501204	518598	535998	27.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	26.56	26.07	25.96	27.0
Channel				500700	518598	536496	27.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	26.50	26.07	25.96	27.0
Channel				500202	518598	537000	27.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	26.57	26.13	25.93	27.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.75	23.63	23.62	25.0
100	PI/2 BPSK	1	137	23.73	23.67	23.65	
100	PI/2 BPSK	1	271	23.45	23.44	23.44	
100	PI/2 BPSK	135	0	23.10	23.08	23.10	24.5
100	PI/2 BPSK	135	69	23.55	23.55	23.47	25.0
100	PI/2 BPSK	135	138	22.94	22.90	22.87	24.5
100	PI/2 BPSK	270	0	22.95	22.94	22.91	
100	QPSK	1	1	23.70	23.63	23.70	
100	QPSK	1	137	23.71	23.67	23.64	25.0
100	QPSK	1	271	23.50	23.47	23.46	
100	QPSK	135	0	22.41	22.39	22.36	
100	QPSK	135	69	23.52	23.51	23.48	25.0
100	QPSK	135	138	22.38	22.30	22.32	24.0
100	QPSK	270	0	22.38	22.37	22.35	24.0
100	16QAM	1	1	22.87	22.83	22.82	24.0
100	64QAM	1	1	21.38	21.32	21.31	22.5
100	256QAM	1	1	19.30	19.26	19.29	20.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.66	23.60	23.53	25.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.67	23.54	23.52	25.0
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.67	23.54	23.52	25.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.65	23.57	23.57	25.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.66	23.58	23.61	25.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.70	23.55	23.54	25.0
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.68	23.54	23.61	25.0
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.65	23.58	23.56	25.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.67	23.63	23.58	25.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.73	23.62	23.61	25.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.65	23.61	23.59	25.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	25.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.33	23.30	23.45	25.0
100	PI/2 BPSK	1	137	23.34	23.29	23.42	
100	PI/2 BPSK	1	271	23.13	23.15	23.19	
100	PI/2 BPSK	135	0	22.86	22.87	22.88	24.5
100	PI/2 BPSK	135	69	23.23	23.19	23.28	25.0
100	PI/2 BPSK	135	138	22.61	22.62	22.67	24.5
100	PI/2 BPSK	270	0	22.67	22.68	22.74	
100	QPSK	1	1	23.40	23.31	23.40	25.0
100	QPSK	1	137	23.38	23.33	23.41	
100	QPSK	1	271	23.23	23.24	23.26	
100	QPSK	135	0	22.23	22.27	22.30	24.0
100	QPSK	135	69	23.16	23.23	23.24	25.0
100	QPSK	135	138	22.05	22.03	22.12	24.0
100	QPSK	270	0	22.14	22.14	22.15	24.0
100	16QAM	1	1	22.54	22.52	22.58	24.0
100	64QAM	1	1	20.98	21.02	21.05	22.5
100	256QAM	1	1	18.98	19.01	19.07	20.5
Channel				649668	656000	662332	25.0
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.30	23.29	23.38	25.0
Channel				649334	656000	662666	25.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.33	23.26	23.33	25.0
Channel				649000	656000	663000	25.0
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.32	23.27	23.35	25.0
Channel				648668	656000	663332	25.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.24	23.26	23.39	25.0
Channel				648334	656000	663666	25.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.24	23.22	23.34	25.0
Channel				648000	656000	664000	25.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.24	23.26	23.32	25.0
Channel				647668	656000	664332	25.0
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.31	23.30	23.31	25.0
Channel				647500	656000	664500	25.0
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.24	23.27	23.33	25.0
Channel				647334	656000	664666	25.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.16	23.23	23.31	25.0
Channel				647168	656000	664832	25.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.24	23.22	23.28	25.0
Channel				647000	656000	665000	25.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.21	23.26	23.24	25.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	20.93	20.85	21.16	22.0
100	PI/2 BPSK	1	137	20.89	20.58	20.95	
100	PI/2 BPSK	1	271	20.71	20.67	20.75	
100	PI/2 BPSK	135	0	20.58	20.53	20.66	22.0
100	PI/2 BPSK	135	69	20.85	20.62	20.75	22.0
100	PI/2 BPSK	135	138	20.70	20.48	20.70	22.0
100	PI/2 BPSK	270	0	20.76	20.47	20.61	
100	QPSK	1	1	20.93	20.63	20.00	22.0
100	QPSK	1	137	20.92	20.45	20.72	
100	QPSK	1	271	20.77	20.57	20.66	
100	QPSK	135	0	20.87	20.43	20.68	22.0
100	QPSK	135	69	20.82	20.45	20.46	
100	QPSK	135	138	20.74	20.24	20.50	
100	QPSK	270	0	20.79	20.17	20.41	22.0
100	16QAM	1	1	20.93	20.96	21.00	22.0
100	64QAM	1	1	21.00	21.10	21.12	22.0
100	256QAM	1	1	19.13	19.11	19.27	20.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	20.93	20.75	21.11	22.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	20.88	20.81	21.08	22.0
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	20.90	20.84	21.13	22.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	20.89	20.80	21.13	22.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	20.80	20.79	21.08	22.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	20.86	20.75	21.12	22.0
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	20.84	20.70	21.05	22.0
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	20.81	20.77	21.06	22.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	20.89	20.75	21.09	22.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	20.79	20.70	21.07	22.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	20.80	20.76	21.09	22.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	20.67	20.58	20.49	22.0
100	PI/2 BPSK	1	137	20.58	20.49	20.38	
100	PI/2 BPSK	1	271	20.53	20.32	20.37	
100	PI/2 BPSK	135	0	20.49	20.36	20.46	22.0
100	PI/2 BPSK	135	69	20.63	20.48	20.47	22.0
100	PI/2 BPSK	135	138	20.47	20.38	20.31	22.0
100	PI/2 BPSK	270	0	20.50	20.52	20.38	
100	QPSK	1	1	20.61	20.64	20.50	22.0
100	QPSK	1	137	20.52	20.42	20.54	
100	QPSK	1	271	20.54	20.46	20.41	
100	QPSK	135	0	20.51	20.49	20.45	22.0
100	QPSK	135	69	20.55	20.47	20.48	
100	QPSK	135	138	20.41	20.38	20.27	
100	QPSK	270	0	20.43	20.29	20.42	22.0
100	16QAM	1	1	20.65	20.10	20.10	22.0
100	64QAM	1	1	20.60	20.95	21.01	22.0
100	256QAM	1	1	19.18	18.98	18.90	20.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	20.62	20.52	20.43	22.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	20.63	20.54	20.40	22.0
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	20.58	20.51	20.41	22.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	20.56	20.52	20.43	22.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	20.60	20.52	20.49	22.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	20.64	20.58	20.42	22.0
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	20.55	20.52	20.39	22.0
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	20.56	20.54	20.42	22.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	20.63	20.54	20.41	22.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	20.64	20.51	20.42	22.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	20.58	20.53	20.46	22.0



<FR1 n77_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	18.59	19.12	18.69	19.5
100	PI/2 BPSK	1	137	18.36	18.36	18.50	
100	PI/2 BPSK	1	271	18.27	18.25	18.26	
100	PI/2 BPSK	135	0	17.81	17.88	17.92	19.0
100	PI/2 BPSK	135	69	18.26	18.29	18.32	19.5
100	PI/2 BPSK	135	138	17.64	17.71	17.80	19.0
100	PI/2 BPSK	270	0	17.70	17.65	17.77	
100	QPSK	1	1	18.33	18.32	18.41	19.5
100	QPSK	1	137	18.15	18.09	18.28	
100	QPSK	1	271	18.07	18.13	18.15	
100	QPSK	135	0	17.44	17.23	17.73	18.5
100	QPSK	135	69	18.18	18.42	18.50	19.5
100	QPSK	135	138	17.26	17.35	17.51	18.5
100	QPSK	270	0	17.13	17.15	17.24	18.5
100	16QAM	1	1	17.70	17.72	17.84	18.5
100	64QAM	1	1	16.31	16.32	16.42	17.0
100	256QAM	1	1	14.12	14.13	14.23	15.0
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	18.45	18.47	18.63	19.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	18.53	18.46	18.61	19.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	18.56	18.46	18.63	19.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	18.58	18.46	18.64	19.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	18.49	18.41	18.68	19.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	18.54	18.51	18.65	19.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	18.49	18.41	18.59	19.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	18.54	18.43	18.63	19.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	18.53	18.45	18.68	19.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	18.49	18.38	18.58	19.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	18.54	18.46	18.51	19.5



<FR1 n77_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	19.20	19.05	19.13	19.5
100	PI/2 BPSK	1	137	18.93	18.85	18.92	
100	PI/2 BPSK	1	271	18.84	18.87	18.77	
100	PI/2 BPSK	135	0	18.44	18.34	18.36	19.0
100	PI/2 BPSK	135	69	18.86	18.70	18.80	19.5
100	PI/2 BPSK	135	138	18.24	18.21	18.24	19.0
100	PI/2 BPSK	270	0	18.28	18.13	18.18	
100	QPSK	1	1	18.97	18.94	18.92	19.5
100	QPSK	1	137	18.76	18.82	18.69	
100	QPSK	1	271	18.70	18.74	18.60	
100	QPSK	135	0	18.01	17.76	18.21	18.5
100	QPSK	135	69	18.79	18.68	18.96	19.5
100	QPSK	135	138	17.81	18.14	18.00	18.5
100	QPSK	270	0	17.72	18.23	17.73	18.5
100	16QAM	1	1	18.27	18.07	18.25	18.5
100	64QAM	1	1	16.85	16.57	16.88	17.0
100	256QAM	1	1	14.63	14.53	14.71	15.0
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	19.10	18.97	19.03	19.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	19.18	18.99	19.10	19.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	19.15	19.01	19.11	19.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	19.14	18.98	19.05	19.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	19.12	18.97	19.11	19.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	19.14	19.03	19.11	19.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	19.11	19.02	19.07	19.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	19.12	19.01	19.07	19.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	19.12	19.00	19.13	19.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	19.09	18.94	19.06	19.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	19.14	19.04	19.12	19.5



<FR1 n77_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.70	22.54	22.65	23.0
100	PI/2 BPSK	1	137	22.15	22.15	22.11	
100	PI/2 BPSK	1	271	21.87	21.94	21.88	
100	PI/2 BPSK	135	0	21.56	21.51	21.54	23.0
100	PI/2 BPSK	135	69	22.01	22.05	21.89	23.0
100	PI/2 BPSK	135	138	21.40	21.30	21.27	23.0
100	PI/2 BPSK	270	0	21.39	21.34	21.32	
100	QPSK	1	1	22.15	22.09	22.20	
100	QPSK	1	137	22.12	22.10	22.10	23.0
100	QPSK	1	271	22.06	22.07	22.00	
100	QPSK	135	0	22.34	22.32	22.29	
100	QPSK	135	69	22.45	22.47	22.39	23.0
100	QPSK	135	138	22.38	22.29	22.32	23.0
100	QPSK	270	0	22.37	22.35	22.34	23.0
100	16QAM	1	1	22.28	22.30	22.21	23.0
100	64QAM	1	1	21.29	21.29	21.26	22.5
100	256QAM	1	1	19.30	19.23	19.19	20.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	22.69	22.55	22.65	23.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.63	22.54	22.58	23.0
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	22.68	22.49	22.60	23.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.65	22.48	22.64	23.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.60	22.52	22.61	23.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.64	22.53	22.62	23.0
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	22.66	22.51	22.57	23.0
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	22.62	22.52	22.63	23.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.64	22.48	22.58	23.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.61	22.48	22.58	23.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.68	22.54	22.61	23.0



<FR1 n77_Ant 8_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	19.15	19.06	19.21	19.5
100	PI/2 BPSK	1	137	18.89	18.90	18.94	
100	PI/2 BPSK	1	271	18.77	18.88	18.84	
100	PI/2 BPSK	135	0	18.41	18.31	18.46	19.0
100	PI/2 BPSK	135	69	18.81	18.77	18.83	19.5
100	PI/2 BPSK	135	138	18.21	18.23	18.30	19.0
100	PI/2 BPSK	270	0	18.20	18.14	18.28	
100	QPSK	1	1	18.92	18.91	19.01	19.5
100	QPSK	1	137	18.65	18.74	18.77	
100	QPSK	1	271	18.61	18.82	18.67	
100	QPSK	135	0	18.03	17.77	18.26	18.5
100	QPSK	135	69	18.78	18.65	19.09	19.5
100	QPSK	135	138	17.73	18.09	18.07	18.5
100	QPSK	270	0	17.66	18.18	17.85	18.5
100	16QAM	1	1	18.26	18.08	18.33	18.5
100	64QAM	1	1	16.85	16.63	16.95	17.0
100	256QAM	1	1	14.64	14.50	14.72	15.0
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	19.06	19.01	19.20	19.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	19.07	19.05	19.17	19.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	19.07	19.03	19.15	19.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	19.14	18.97	19.20	19.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	19.13	18.99	19.16	19.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	19.09	19.01	19.16	19.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	19.13	18.99	19.19	19.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	19.07	19.06	19.15	19.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	19.07	18.96	19.16	19.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	19.11	19.03	19.18	19.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	19.13	19.01	19.16	19.5



<FR1 n77_Ant 9_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	20.72	20.61	20.69	21.0
100	PI/2 BPSK	1	137	20.47	20.43	20.50	
100	PI/2 BPSK	1	271	20.34	20.46	20.32	
100	PI/2 BPSK	135	0	19.90	19.88	19.87	20.5
100	PI/2 BPSK	135	69	20.33	20.26	20.29	21.0
100	PI/2 BPSK	135	138	19.75	19.69	19.81	20.5
100	PI/2 BPSK	270	0	19.84	19.67	19.82	
100	QPSK	1	1	20.48	20.50	20.46	21.0
100	QPSK	1	137	20.32	20.38	20.25	
100	QPSK	1	271	20.20	20.32	20.14	
100	QPSK	135	0	19.53	19.36	19.76	20.0
100	QPSK	135	69	20.28	20.29	20.58	21.0
100	QPSK	135	138	19.35	19.64	19.51	20.0
100	QPSK	270	0	19.31	19.75	19.28	20.0
100	16QAM	1	1	19.84	19.61	19.79	20.0
100	64QAM	1	1	18.41	18.20	18.41	18.5
100	256QAM	1	1	16.19	16.03	16.21	16.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	20.61	20.51	20.69	21.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	20.70	20.58	20.64	21.0
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	20.64	20.58	20.61	21.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	20.64	20.55	20.69	21.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	20.67	20.53	20.61	21.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	20.65	20.58	20.60	21.0
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	20.70	20.53	20.64	21.0
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	20.66	20.60	20.62	21.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	20.65	20.54	20.60	21.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	20.64	20.53	20.62	21.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	20.65	20.60	20.65	21.0



<FR1 n77_HPUE_Ant 9_DSI 1>

Channel	BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000	656000	662000	
Frequency (MHz)					3750	3840	3930	
100	PI/2 BPSK	1	1		25.34	25.33	25.42	27.0
100	PI/2 BPSK	1	137		25.34	25.31	25.38	
100	PI/2 BPSK	1	271		25.11	25.07	25.19	
100	PI/2 BPSK	135	0		24.76	24.85	24.86	26.5
100	PI/2 BPSK	135	69		25.22	25.17	25.18	27.0
100	PI/2 BPSK	135	138		24.58	24.55	24.57	26.5
100	PI/2 BPSK	270	0		24.60	24.66	24.65	
100	QPSK	1	1		25.38	25.29	25.39	27.0
100	QPSK	1	137		25.34	25.33	25.41	
100	QPSK	1	271		25.18	25.15	25.26	
100	QPSK	135	0		24.22	24.21	24.22	26.0
100	QPSK	135	69		25.06	25.23	25.16	27.0
100	QPSK	135	138		24.03	24.07	24.02	26.0
100	QPSK	270	0		24.13	24.07	24.10	26.0
100	16QAM	1	1		24.44	24.46	24.50	26.0
100	64QAM	1	1		22.90	22.99	22.98	24.5
100	256QAM	1	1		20.93	20.96	20.97	22.5
Channel					649668	656000	662332	
Frequency (MHz)					3745.02	3840	3934.98	
90	PI/2 BPSK	1	1		25.30	25.30	25.39	27.0
Channel					649334	656000	662666	
Frequency (MHz)					3740.01	3840	3939.99	
80	PI/2 BPSK	1	1		25.24	25.25	25.33	27.0
Channel					649000	656000	663000	
Frequency (MHz)					3735	3840	3945	
70	PI/2 BPSK	1	1		25.20	25.30	25.39	27.0
Channel					648668	656000	663332	
Frequency (MHz)					3730.02	3840	3949.98	
60	PI/2 BPSK	1	1		25.30	25.28	25.33	27.0
Channel					648334	656000	663666	
Frequency (MHz)					3725.01	3840	3954.99	
50	PI/2 BPSK	1	1		25.20	25.27	25.39	27.0
Channel					648000	656000	664000	
Frequency (MHz)					3720	3840	3960	
40	PI/2 BPSK	1	1		25.29	25.28	25.38	27.0
Channel					647668	656000	664332	
Frequency (MHz)					3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1		25.21	25.23	25.29	27.0
Channel					647500	656000	664500	
Frequency (MHz)					3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1		25.20	25.21	25.32	27.0
Channel					647334	656000	664666	
Frequency (MHz)					3710.01	3840	3969.99	
20	PI/2 BPSK	1	1		25.28	25.22	25.35	27.0
Channel					647168	656000	664832	
Frequency (MHz)					3707.52	3840	3972.48	
15	PI/2 BPSK	1	1		25.28	25.25	25.29	27.0
Channel					647000	656000	665000	
Frequency (MHz)					3705	3840	3975	
10	PI/2 BPSK	1	1		25.25	25.27	25.35	27.0



<FR1 n77_HPUE_Ant 8_DSI 3>

Channel	BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000	656000	662000	
Frequency (MHz)					3750	3840	3930	
100	PI/2 BPSK	1	1		21.56	22.15	21.73	22.5
100	PI/2 BPSK	1	137		21.39	21.32	21.55	
100	PI/2 BPSK	1	271		21.26	21.23	21.27	
100	PI/2 BPSK	135	0		20.80	20.84	20.96	22.0
100	PI/2 BPSK	135	69		21.30	21.29	21.31	22.5
100	PI/2 BPSK	135	138		20.61	20.75	20.85	22.0
100	PI/2 BPSK	270	0		20.75	20.63	20.80	
100	QPSK	1	1		21.32	21.30	21.44	22.5
100	QPSK	1	137		21.13	21.04	21.23	
100	QPSK	1	271		21.09	21.08	21.13	
100	QPSK	135	0		20.40	20.25	20.77	21.5
100	QPSK	135	69		21.19	21.40	21.54	22.5
100	QPSK	135	138		20.23	20.37	20.56	21.5
100	QPSK	270	0		20.17	20.17	20.27	21.5
100	16QAM	1	1		20.75	20.73	20.89	21.5
100	64QAM	1	1		19.34	19.34	19.40	20.0
100	256QAM	1	1		17.09	17.08	17.21	18.0
Channel					649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)					3745.02	3840	3934.98	
90	PI/2 BPSK	1	1		21.47	21.44	21.62	22.5
Channel					649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)					3740.01	3840	3939.99	
80	PI/2 BPSK	1	1		21.53	21.44	21.61	22.5
Channel					649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)					3735	3840	3945	
70	PI/2 BPSK	1	1		21.60	21.48	21.65	22.5
Channel					648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)					3730.02	3840	3949.98	
60	PI/2 BPSK	1	1		21.54	21.41	21.62	22.5
Channel					648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)					3725.01	3840	3954.99	
50	PI/2 BPSK	1	1		21.48	21.46	21.66	22.5
Channel					648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)					3720	3840	3960	
40	PI/2 BPSK	1	1		21.54	21.55	21.70	22.5
Channel					647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)					3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1		21.53	21.38	21.62	22.5
Channel					647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)					3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1		21.52	21.39	21.60	22.5
Channel					647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)					3710.01	3840	3969.99	
20	PI/2 BPSK	1	1		21.49	21.42	21.69	22.5
Channel					647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)					3707.52	3840	3972.48	
15	PI/2 BPSK	1	1		21.48	21.33	21.56	22.5
Channel					647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)					3705	3840	3975	
10	PI/2 BPSK	1	1		21.52	21.44	21.53	22.5



<FR1 n77_HPUE_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	22.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.17	22.06	22.15	
100	PI/2 BPSK	1	137	21.88	21.86	21.95	22.0
100	PI/2 BPSK	1	271	21.81	21.91	21.77	
100	PI/2 BPSK	135	0	21.41	21.39	21.39	
100	PI/2 BPSK	135	69	21.91	21.70	21.85	22.0
100	PI/2 BPSK	135	138	21.29	21.22	21.20	
100	PI/2 BPSK	270	0	21.29	21.17	21.18	
100	QPSK	1	1	22.01	21.96	21.92	22.5
100	QPSK	1	137	21.75	21.85	21.64	
100	QPSK	1	271	21.70	21.76	21.56	
100	QPSK	135	0	21.03	20.77	21.17	21.5
100	QPSK	135	69	21.78	21.66	21.96	22.5
100	QPSK	135	138	20.79	21.13	20.98	21.5
100	QPSK	270	0	20.75	21.22	20.72	21.5
100	16QAM	1	1	21.25	21.03	21.28	21.5
100	64QAM	1	1	19.84	19.62	19.85	20.0
100	256QAM	1	1	17.65	17.51	17.73	18.0
Channel				649668	656000	662332	22.5
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	22.05	21.93	22.03	
Channel				649334	656000	662666	22.5
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.08	21.99	22.15	
Channel				649000	656000	663000	22.5
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	22.11	21.99	22.13	
Channel				648668	656000	663332	22.5
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.12	21.96	22.03	
Channel				648334	656000	663666	22.5
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.13	21.94	22.12	
Channel				648000	656000	664000	22.5
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.17	22.06	22.13	
Channel				647668	656000	664332	22.5
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	22.16	22.01	22.02	
Channel				647500	656000	664500	22.5
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	22.09	21.97	22.08	
Channel				647334	656000	664666	22.5
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.11	21.96	22.12	
Channel				647168	656000	664832	22.5
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.05	21.93	22.01	
Channel				647000	656000	665000	22.5
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.13	22.06	22.07	



<FR1 n77_HPUE_Ant 8_DSI 1>

Channel	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel	650000	656000	662000	26.0
Frequency (MHz)	3750	3840	3930	
100	PI/2 BPSK	1	1	25.68
100	PI/2 BPSK	1	137	25.19
100	PI/2 BPSK	1	271	24.91
100	PI/2 BPSK	135	0	24.53
100	PI/2 BPSK	135	69	24.96
100	PI/2 BPSK	135	138	24.43
100	PI/2 BPSK	270	0	24.43
100	QPSK	1	1	25.20
100	QPSK	1	137	25.09
100	QPSK	1	271	25.07
100	QPSK	135	0	25.31
100	QPSK	135	69	25.46
100	QPSK	135	138	25.40
100	QPSK	270	0	25.37
100	16QAM	1	1	25.33
100	64QAM	1	1	24.32
100	256QAM	1	1	22.34
Channel	649668	656000	662332	26.0
Frequency (MHz)	3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.61
Channel	649334	656000	662666	26.0
Frequency (MHz)	3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.66
Channel	649000	656000	663000	26.0
Frequency (MHz)	3735	3840	3945	
70	PI/2 BPSK	1	1	25.68
Channel	648668	656000	663332	26.0
Frequency (MHz)	3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.67
Channel	648334	656000	663666	26.0
Frequency (MHz)	3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.61
Channel	648000	656000	664000	26.0
Frequency (MHz)	3720	3840	3960	
40	PI/2 BPSK	1	1	25.61
Channel	647668	656000	664332	26.0
Frequency (MHz)	3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.67
Channel	647500	656000	664500	26.0
Frequency (MHz)	3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	25.59
Channel	647334	656000	664666	26.0
Frequency (MHz)	3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.62
Channel	647168	656000	664832	26.0
Frequency (MHz)	3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.64
Channel	647000	656000	665000	26.0
Frequency (MHz)	3705	3840	3975	
10	PI/2 BPSK	1	1	25.62



<FR1 n77_Ant 8_DSI 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.49		25.0
100	PI/2 BPSK	1	137		23.39		
100	PI/2 BPSK	1	271		23.29		
100	PI/2 BPSK	135	0		23.30		24.5
100	PI/2 BPSK	135	69		23.33		25.0
100	PI/2 BPSK	135	138		23.19		24.5
100	PI/2 BPSK	270	0		23.17		
100	QPSK	1	1		23.43		25.0
100	QPSK	1	137		23.30		
100	QPSK	1	271		23.26		
100	QPSK	135	0		23.31		25.0
100	QPSK	135	69		23.20		
100	QPSK	135	138		23.18		
100	QPSK	270	0		23.22		24.0
100	16QAM	1	1		22.60		24.0
100	64QAM	1	1		21.13		22.5
100	256QAM	1	1		19.10		20.5
Channel				633000	633332	633666	25.0
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.34	23.35	23.36	25.0
Channel				632668	633332	634000	25.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.25	23.31	23.23	25.0
Channel				632334	633332	634332	25.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.30	23.37	23.19	25.0
Channel				632000	633332	634666	25.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.23	23.31	23.15	25.0
Channel				631668	633332	635000	25.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.20	23.39	23.20	25.0
Channel				631334	633332	635332	25.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.23	23.30	23.15	25.0
Channel				631000	633332	635666	25.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.25	23.39	23.17	25.0
Channel				630834	633332	635832	25.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.21	23.31	23.22	25.0
Channel				630668	633332	636000	25.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.23	23.33	23.13	25.0
Channel				630500	633332	636166	25.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.21	23.34	23.17	25.0
Channel				630334	633332	636332	25.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.20	23.31	23.21	25.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.20		25.0
100	PI/2 BPSK	1	137		23.19		
100	PI/2 BPSK	1	271		23.14		
100	PI/2 BPSK	135	0		22.70		24.5
100	PI/2 BPSK	135	69		23.15		25.0
100	PI/2 BPSK	135	138		22.55		24.5
100	PI/2 BPSK	270	0		22.63		
100	QPSK	1	1		23.15		25.0
100	QPSK	1	137		23.19		
100	QPSK	1	271		23.13		
100	QPSK	135	0		22.19		24.0
100	QPSK	135	69		23.09		25.0
100	QPSK	135	138		22.02		24.0
100	QPSK	270	0		22.05		24.0
100	16QAM	1	1		22.12		24.0
100	64QAM	1	1		20.55		22.5
100	256QAM	1	1		18.60		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.10	23.18	23.07	25.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.08	23.14	23.01	25.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.08	23.16	23.06	25.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.14	23.10	23.08	25.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.10	23.12	23.06	25.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.16	23.15	23.01	25.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.18	23.17	23.08	25.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.18	23.17	23.10	25.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.11	23.12	23.09	25.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.12	23.09	23.04	25.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.16	23.13	23.04	25.0



<FR1 n77_Ant 4_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.44		22.0
100	PI/2 BPSK	1	137		20.19		
100	PI/2 BPSK	1	271		20.11		
100	PI/2 BPSK	135	0		20.19		22.0
100	PI/2 BPSK	135	69		20.30		22.0
100	PI/2 BPSK	135	138		20.27		22.0
100	PI/2 BPSK	270	0		20.34		
100	QPSK	1	1		20.12		22.0
100	QPSK	1	137		20.13		
100	QPSK	1	271		20.26		
100	QPSK	135	0		20.20		22.0
100	QPSK	135	69		20.27		
100	QPSK	135	138		20.31		
100	QPSK	270	0		20.25		22.0
100	16QAM	1	1		20.42		22.0
100	64QAM	1	1		20.40		22.0
100	256QAM	1	1		19.15		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.32	20.35	20.29	22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.36	20.34	20.35	22.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.40	20.35	20.34	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.32	20.32	20.31	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.36	20.38	20.27	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.31	20.30	20.33	22.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.37	20.30	20.27	22.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.30	20.37	20.35	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.40	20.33	20.33	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.31	20.37	20.28	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.38	20.32	20.34	22.0



<FR1 n77_Ant 3_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		22.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.14		22.0
100	PI/2 BPSK	1	137		20.12		
100	PI/2 BPSK	1	271		20.10		22.0
100	PI/2 BPSK	135	0		20.07		
100	PI/2 BPSK	135	69		20.13		22.0
100	PI/2 BPSK	135	138		20.09		
100	PI/2 BPSK	270	0		20.04		22.0
100	QPSK	1	1		20.10		
100	QPSK	1	137		20.08		22.0
100	QPSK	1	271		20.13		
100	QPSK	135	0		20.12		22.0
100	QPSK	135	69		20.08		
100	QPSK	135	138		20.00		22.0
100	QPSK	270	0		20.10		
100	16QAM	1	1		20.11		22.0
100	64QAM	1	1		20.08		
100	256QAM	1	1		18.62		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.03	20.11	20.03	22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.08	20.08	20.09	22.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.12	20.07	20.04	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.04	20.06	20.13	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.11	20.10	20.11	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.12	20.06	20.10	22.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.10	20.06	20.03	22.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.10	20.07	20.13	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.04	20.08	20.05	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.08	20.10	20.06	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.13	20.11	20.04	22.0



<FR1 n77_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.19		19.5
100	PI/2 BPSK	1	137		19.00		
100	PI/2 BPSK	1	271		19.01		
100	PI/2 BPSK	135	0		18.54		19.0
100	PI/2 BPSK	135	69		18.88		19.5
100	PI/2 BPSK	135	138		18.35		19.0
100	PI/2 BPSK	270	0		18.29		
100	QPSK	1	1		19.03		19.5
100	QPSK	1	137		18.96		
100	QPSK	1	271		18.89		
100	QPSK	135	0		17.91		19.5
100	QPSK	135	69		18.79		
100	QPSK	135	138		18.28		
100	QPSK	270	0		18.36		18.5
100	16QAM	1	1		18.22		18.5
100	64QAM	1	1		16.79		17.0
100	256QAM	1	1		14.69		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	18.97	19.09	19.02	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	18.96	19.15	18.93	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.00	19.12	19.01	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	18.98	19.11	18.97	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	18.97	19.16	19.03	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	18.93	19.13	18.98	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	18.94	19.12	18.93	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	18.95	19.12	18.97	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	18.97	19.16	19.03	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	18.89	19.09	18.98	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.00	19.16	19.01	19.5



<FR1 n77_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.33		19.5
100	PI/2 BPSK	1	137		19.14		
100	PI/2 BPSK	1	271		19.22		
100	PI/2 BPSK	135	0		18.64		19.0
100	PI/2 BPSK	135	69		19.03		19.5
100	PI/2 BPSK	135	138		18.45		19.0
100	PI/2 BPSK	270	0		18.44		
100	QPSK	1	1		19.21		19.5
100	QPSK	1	137		19.05		
100	QPSK	1	271		19.05		
100	QPSK	135	0		18.08		18.5
100	QPSK	135	69		18.98		19.5
100	QPSK	135	138		18.40		18.5
100	QPSK	270	0		18.49		18.5
100	16QAM	1	1		18.32		18.5
100	64QAM	1	1		16.85		17.0
100	256QAM	1	1		14.79		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	19.22	19.22	19.21	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.18	19.25	19.19	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.17	19.28	19.21	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.13	19.24	19.22	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.15	19.27	19.24	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.19	19.22	19.20	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	19.18	19.23	19.18	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.20	19.29	19.20	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.20	19.21	19.19	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.17	19.12	19.14	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.22	19.30	19.19	19.5



<FR1 n77_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.55		23.0
100	PI/2 BPSK	1	137		22.44		
100	PI/2 BPSK	1	271		22.47		
100	PI/2 BPSK	135	0		21.70		23.0
100	PI/2 BPSK	135	69		21.73		23.0
100	PI/2 BPSK	135	138		21.68		23.0
100	PI/2 BPSK	270	0		21.60		
100	QPSK	1	1		21.90		23.0
100	QPSK	1	137		21.79		
100	QPSK	1	271		21.74		
100	QPSK	135	0		21.76		23.0
100	QPSK	135	69		21.68		
100	QPSK	135	138		21.66		
100	QPSK	270	0		21.68		23.0
100	16QAM	1	1		21.07		23.0
100	64QAM	1	1		21.11		22.5
100	256QAM	1	1		19.07		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.37	22.39	22.35	23.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.43	22.44	22.44	23.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.37	22.41	22.41	23.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.44	22.40	22.37	23.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.36	22.44	22.38	23.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.35	22.41	22.39	23.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.40	22.39	22.37	23.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.42	22.42	22.36	23.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.44	22.34	22.38	23.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.39	22.39	22.36	23.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.37	22.40	22.40	23.0



<FR1 n77_Ant 8_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.22		19.5
100	PI/2 BPSK	1	137		18.97		
100	PI/2 BPSK	1	271		18.77		
100	PI/2 BPSK	135	0		18.45		19.0
100	PI/2 BPSK	135	69		18.82		19.5
100	PI/2 BPSK	135	138		18.33		19.0
100	PI/2 BPSK	270	0		18.30		
100	QPSK	1	1		18.94		19.5
100	QPSK	1	137		18.82		
100	QPSK	1	271		18.66		
100	QPSK	135	0		18.19		19.5
100	QPSK	135	69		19.12		
100	QPSK	135	138		18.08		
100	QPSK	270	0		17.75		18.5
100	16QAM	1	1		18.35		18.5
100	64QAM	1	1		16.97		17.0
100	256QAM	1	1		14.77		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	19.07	19.19	19.14	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.07	19.14	19.08	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.07	19.17	19.12	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.03	19.12	19.14	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.07	19.15	19.11	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.10	19.17	19.16	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	19.07	19.14	19.12	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.11	19.15	19.10	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.05	19.14	19.16	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.03	19.20	19.16	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.11	19.17	19.13	19.5



<FR1 n77_Ant 9_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.81		21.0
100	PI/2 BPSK	1	137		20.45		
100	PI/2 BPSK	1	271		20.33		
100	PI/2 BPSK	135	0		19.88		20.5
100	PI/2 BPSK	135	69		20.38		21.0
100	PI/2 BPSK	135	138		19.80		20.5
100	PI/2 BPSK	270	0		19.82		
100	QPSK	1	1		20.55		21.0
100	QPSK	1	137		20.31		
100	QPSK	1	271		20.22		
100	QPSK	135	0		19.59		20.0
100	QPSK	135	69		20.29		21.0
100	QPSK	135	138		19.31		20.0
100	QPSK	270	0		19.28		20.0
100	16QAM	1	1		19.87		20.0
100	64QAM	1	1		18.45		18.5
100	256QAM	1	1		16.15		16.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.54	20.78	20.60	21.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.61	20.70	20.57	21.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.57	20.70	20.64	21.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.55	20.76	20.60	21.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.53	20.76	20.63	21.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.57	20.73	20.64	21.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.52	20.73	20.60	21.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.54	20.75	20.64	21.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.52	20.80	20.67	21.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.56	20.76	20.59	21.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.57	20.74	20.58	21.0



<FR1 n77_HPUE_Ant 9_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		27.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.18		27.0
100	PI/2 BPSK	1	137		25.10		
100	PI/2 BPSK	1	271		25.12		
100	PI/2 BPSK	135	0		24.70		26.5
100	PI/2 BPSK	135	69		25.10		27.0
100	PI/2 BPSK	135	138		25.00		26.5
100	PI/2 BPSK	270	0		24.55		
100	QPSK	1	1		25.07		27.0
100	QPSK	1	137		25.17		
100	QPSK	1	271		25.03		
100	QPSK	135	0		24.12		26.0
100	QPSK	135	69		25.06		27.0
100	QPSK	135	138		24.02		26.0
100	QPSK	270	0		24.00		26.0
100	16QAM	1	1		24.05		26.0
100	64QAM	1	1		22.55		24.5
100	256QAM	1	1		20.58		22.5
Channel				633000	633332	633666	27.0
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.13	25.16	25.08	27.0
Channel				632668	633332	634000	27.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.13	25.06	25.08	27.0
Channel				632334	633332	634332	27.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.09	25.13	25.07	27.0
Channel				632000	633332	634666	27.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.10	25.06	25.11	27.0
Channel				631668	633332	635000	27.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.08	25.12	25.10	27.0
Channel				631334	633332	635332	27.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.08	25.12	25.08	27.0
Channel				631000	633332	635666	27.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.13	25.07	25.09	27.0
Channel				630834	633332	635832	27.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.09	25.14	25.14	27.0
Channel				630668	633332	636000	27.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.08	25.16	25.12	27.0
Channel				630500	633332	636166	27.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.17	25.10	25.05	27.0
Channel				630334	633332	636332	27.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.14	25.08	25.07	27.0



<FR1 n77_HPUE_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.14		22.5
100	PI/2 BPSK	1	137		22.01		
100	PI/2 BPSK	1	271		21.99		
100	PI/2 BPSK	135	0		21.49		22.0
100	PI/2 BPSK	135	69		21.90		22.5
100	PI/2 BPSK	135	138		21.39		22.0
100	PI/2 BPSK	270	0		21.26		
100	QPSK	1	1		22.07		22.5
100	QPSK	1	137		21.93		
100	QPSK	1	271		21.84		
100	QPSK	135	0		20.93		21.5
100	QPSK	135	69		21.81		
100	QPSK	135	138		21.23		
100	QPSK	270	0		21.32		21.5
100	16QAM	1	1		21.22		21.5
100	64QAM	1	1		19.75		20.0
100	256QAM	1	1		17.64		18.0
Channel				633000	633332		Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	-6000	
90	PI/2 BPSK	1	1	21.99	22.07	22.04	22.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	21.96	22.17	21.94	22.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.04	22.08	22.02	22.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	21.99	22.15	22.00	22.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	21.93	22.17	22.08	22.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	21.88	22.17	21.96	22.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	21.99	22.16	21.96	22.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	21.94	22.09	21.99	22.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	21.98	22.14	22.02	22.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	21.88	22.04	21.95	22.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	21.98	22.11	22.01	22.5



<FR1 n77_HPUE_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		22.5
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.38		22.5
100	PI/2 BPSK	1	137		22.14		
100	PI/2 BPSK	1	271		22.23		
100	PI/2 BPSK	135	0		21.61		22.0
100	PI/2 BPSK	135	69		22.05		22.5
100	PI/2 BPSK	135	138		21.42		22.0
100	PI/2 BPSK	270	0		21.43		
100	QPSK	1	1		22.22		22.5
100	QPSK	1	137		22.00		
100	QPSK	1	271		22.08		
100	QPSK	135	0		21.04		21.5
100	QPSK	135	69		22.03		22.5
100	QPSK	135	138		21.42		21.5
100	QPSK	270	0		21.49		21.5
100	16QAM	1	1		21.37		21.5
100	64QAM	1	1		19.81		20.0
100	256QAM	1	1		17.80		18.0
Channel				633000	633332	633666	22.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.20	22.24	22.19	22.5
Channel				632668	633332	634000	22.5
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.23	22.24	22.19	22.5
Channel				632334	633332	634332	22.5
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.20	22.33	22.25	22.5
Channel				632000	633332	634666	22.5
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.08	22.28	22.26	22.5
Channel				631668	633332	635000	22.5
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.19	22.31	22.25	22.5
Channel				631334	633332	635332	22.5
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.21	22.18	22.12	22.5
Channel				631000	633332	635666	22.5
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.22	22.26	22.25	22.5
Channel				630834	633332	635832	22.5
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.19	22.26	22.21	22.5
Channel				630668	633332	636000	22.5
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.18	22.16	22.14	22.5
Channel				630500	633332	636166	22.5
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.15	22.14	22.16	22.5
Channel				630334	633332	636332	22.5
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.23	22.28	22.21	22.5



<FR1 n77_HPUE_Ant 8_DSI 1>

Channel	BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel						633332		26.0
Frequency (MHz)						3499.98		
100		PI/2 BPSK	1	1		25.55		
100		PI/2 BPSK	1	137		25.40		
100		PI/2 BPSK	1	271		25.48		
100		PI/2 BPSK	135	0		24.69		26.0
100		PI/2 BPSK	135	69		24.72		26.0
100		PI/2 BPSK	135	138		24.68		26.0
100		PI/2 BPSK	270	0		24.59		
100		QPSK	1	1		24.95		26.0
100		QPSK	1	137		24.75		
100		QPSK	1	271		24.76		
100		QPSK	135	0		24.75		26.0
100		QPSK	135	69		24.64		26.0
100		QPSK	135	138		24.65		26.0
100		QPSK	270	0		24.65		26.0
100		16QAM	1	1		24.08		26.0
100		64QAM	1	1		24.11		25.5
100		256QAM	1	1		22.04		23.5
Channel					633000	633332	633666	26.0
Frequency (MHz)					3495	3499.98	3504.99	
90		PI/2 BPSK	1	1	25.32	25.36	25.31	26.0
Channel					632668	633332	634000	26.0
Frequency (MHz)					3490.02	3499.98	3510	
80		PI/2 BPSK	1	1	25.40	25.46	25.47	26.0
Channel					632334	633332	634332	26.0
Frequency (MHz)					3485.01	3499.98	3514.98	
70		PI/2 BPSK	1	1	25.36	25.40	25.41	26.0
Channel					632000	633332	634666	26.0
Frequency (MHz)					3480	3499.98	3519.99	
60		PI/2 BPSK	1	1	25.46	25.44	25.38	26.0
Channel					631668	633332	635000	26.0
Frequency (MHz)					3475.02	3499.98	3525	
50		PI/2 BPSK	1	1	25.39	25.42	25.33	26.0
Channel					631334	633332	635332	26.0
Frequency (MHz)					3470.01	3499.98	3529.98	
40		PI/2 BPSK	1	1	25.40	25.36	25.37	26.0
Channel					631000	633332	635666	26.0
Frequency (MHz)					3465	3499.98	3534.99	
30		PI/2 BPSK	1	1	25.41	25.42	25.35	26.0
Channel					630834	633332	635832	26.0
Frequency (MHz)					3462.51	3499.98	3537.48	
25		PI/2 BPSK	1	1	25.37	25.44	25.38	26.0
Channel					630668	633332	636000	26.0
Frequency (MHz)					3460.02	3499.98	3540	
20		PI/2 BPSK	1	1	25.42	25.34	25.46	26.0
Channel					630500	633332	636166	26.0
Frequency (MHz)					3457.5	3499.98	3542.49	
15		PI/2 BPSK	1	1	25.37	25.35	25.32	26.0
Channel					630334	633332	636332	26.0
Frequency (MHz)					3455.01	3499.98	3544.98	
10		PI/2 BPSK	1	1	25.38	25.42	25.45	26.0



<FR1 n78_Ant 9_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		23.52		25.0
100	PI/2 BPSK	1	137		23.45		
100	PI/2 BPSK	1	271		23.44		
100	PI/2 BPSK	135	0		22.81		24.5
100	PI/2 BPSK	135	69		23.35		25.0
100	PI/2 BPSK	135	138		22.74		24.5
100	PI/2 BPSK	270	0		22.81		
100	QPSK	1	1		23.51		25.0
100	QPSK	1	137		23.48		
100	QPSK	1	271		23.40		
100	QPSK	135	0		22.27		24.0
100	QPSK	135	69		23.26		25.0
100	QPSK	135	138		22.21		24.0
100	QPSK	270	0		22.22		24.0
100	16QAM	1	1		22.58		24.0
100	64QAM	1	1		21.00		22.5
100	256QAM	1	1		19.00		20.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	23.43	23.45	23.34	25.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	23.36	23.49	23.29	25.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	23.36	23.48	23.28	25.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	23.35	23.44	23.27	25.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	23.41	23.40	23.33	25.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	23.44	23.40	23.35	25.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	23.35	23.45	23.34	25.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	23.40	23.43	23.35	25.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	23.41	23.50	23.28	25.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	23.39	23.42	23.30	25.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	23.39	23.46	23.37	25.0



<FR1 n78_Ant 4_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		21.13		22.0
100	PI/2 BPSK	1	137		21.09		
100	PI/2 BPSK	1	271		20.89		
100	PI/2 BPSK	135	0		20.84		22.0
100	PI/2 BPSK	135	69		20.97		22.0
100	PI/2 BPSK	135	138		20.75		22.0
100	PI/2 BPSK	270	0		20.88		
100	QPSK	1	1		21.10		22.0
100	QPSK	1	137		21.10		
100	QPSK	1	271		20.86		
100	QPSK	135	0		20.87		22.0
100	QPSK	135	69		20.86		
100	QPSK	135	138		20.85		
100	QPSK	270	0		20.77		22.0
100	16QAM	1	1		21.08		22.0
100	64QAM	1	1		21.00		22.0
100	256QAM	1	1		19.35		20.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	21.08	20.93	20.95	22.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	21.06	20.94	20.99	22.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	21.08	20.99	20.98	22.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	21.10	20.91	20.98	22.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	21.01	20.96	21.00	22.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	21.03	20.90	21.00	22.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	21.03	20.99	21.02	22.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	21.09	21.00	21.01	22.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	21.06	20.92	20.96	22.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	21.10	21.00	21.02	22.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	21.05	20.93	21.01	22.0



<FR1 n78_Ant 3_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		20.78		22.0
100	PI/2 BPSK	1	137		20.65		
100	PI/2 BPSK	1	271		20.52		
100	PI/2 BPSK	135	0		20.57		22.0
100	PI/2 BPSK	135	69		20.63		22.0
100	PI/2 BPSK	135	138		20.44		22.0
100	PI/2 BPSK	270	0		20.46		
100	QPSK	1	1		20.57		22.0
100	QPSK	1	137		20.54		
100	QPSK	1	271		20.58		
100	QPSK	135	0		20.56		22.0
100	QPSK	135	69		20.43		
100	QPSK	135	138		20.44		
100	QPSK	270	0		20.34		22.0
100	16QAM	1	1		20.52		22.0
100	64QAM	1	1		20.65		22.0
100	256QAM	1	1		19.16		20.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	20.69	20.65	20.72	22.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	20.77	20.70	20.66	22.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	20.68	20.68	20.67	22.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	20.67	20.65	20.71	22.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	20.72	20.68	20.72	22.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	20.75	20.71	20.68	22.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	20.75	20.66	20.64	22.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	20.70	20.67	20.71	22.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	20.69	20.67	20.66	22.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	20.76	20.73	20.72	22.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	20.73	20.68	20.73	22.0



<FR1 n78_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		19.07		19.5
100	PI/2 BPSK	1	137		18.85		
100	PI/2 BPSK	1	271		18.91		
100	PI/2 BPSK	135	0		18.37		19.0
100	PI/2 BPSK	135	69		18.75		19.5
100	PI/2 BPSK	135	138		18.21		19.0
100	PI/2 BPSK	270	0		18.16		
100	QPSK	1	1		18.98		19.5
100	QPSK	1	137		18.76		
100	QPSK	1	271		18.76		
100	QPSK	135	0		18.01		19.5
100	QPSK	135	69		18.70		
100	QPSK	135	138		18.13		
100	QPSK	270	0		18.24		18.5
100	16QAM	1	1		18.16		18.5
100	64QAM	1	1		16.67		17.0
100	256QAM	1	1		14.57		15.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	19.00	19.02	18.95	19.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	18.92	19.02	19.02	19.5
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	18.91	19.02	19.03	19.5
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	18.98	18.99	18.98	19.5
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	18.91	19.01	18.93	19.5
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	18.90	19.03	19.02	19.5
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	18.92	19.00	19.03	19.5
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	18.94	19.04	18.97	19.5
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	18.93	19.03	18.97	19.5
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	18.90	18.95	18.97	19.5
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	18.97	18.97	18.93	19.5



<FR1 n78_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		19.17		19.5
100	PI/2 BPSK	1	137		18.95		
100	PI/2 BPSK	1	271		18.72		
100	PI/2 BPSK	135	0		18.39		19.0
100	PI/2 BPSK	135	69		18.75		19.5
100	PI/2 BPSK	135	138		18.19		19.0
100	PI/2 BPSK	270	0		18.20		
100	QPSK	1	1		18.93		19.5
100	QPSK	1	137		18.67		
100	QPSK	1	271		18.58		
100	QPSK	135	0		18.16		18.5
100	QPSK	135	69		19.01		19.5
100	QPSK	135	138		17.97		18.5
100	QPSK	270	0		17.77		18.5
100	16QAM	1	1		18.23		18.5
100	64QAM	1	1		16.90		17.0
100	256QAM	1	1		14.64		15.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	18.99	19.14	19.08	19.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	19.06	19.13	19.08	19.5
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	19.01	19.16	19.07	19.5
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	19.00	19.08	19.09	19.5
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	19.05	19.08	19.07	19.5
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	18.97	19.12	19.02	19.5
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	19.02	19.15	19.07	19.5
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	19.00	19.11	19.03	19.5
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	19.00	19.15	19.08	19.5
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	18.93	19.15	18.99	19.5
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	18.98	19.08	19.06	19.5



<FR1 n78_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.61		23.0
100	PI/2 BPSK	1	137		22.36		
100	PI/2 BPSK	1	271		22.28		
100	PI/2 BPSK	135	0		22.27		23.0
100	PI/2 BPSK	135	69		22.34		23.0
100	PI/2 BPSK	135	138		22.25		23.0
100	PI/2 BPSK	270	0		22.24		
100	QPSK	1	1		22.51		23.0
100	QPSK	1	137		22.37		
100	QPSK	1	271		22.22		
100	QPSK	135	0		22.43		23.0
100	QPSK	135	69		22.35		
100	QPSK	135	138		22.15		
100	QPSK	270	0		22.16		23.0
100	16QAM	1	1		21.58		23.0
100	64QAM	1	1		21.10		22.5
100	256QAM	1	1		18.70		20.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	22.28	22.50	22.38	23.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.33	22.57	22.39	23.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	22.30	22.50	22.37	23.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.33	22.53	22.43	23.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.30	22.49	22.43	23.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.31	22.48	22.38	23.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	22.27	22.48	22.34	23.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	22.30	22.51	22.37	23.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.26	22.49	22.39	23.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.33	22.56	22.35	23.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.28	22.56	22.42	23.0



<FR1 n78_Ant 8_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		19.14		19.5
100	PI/2 BPSK	1	137		18.92		
100	PI/2 BPSK	1	271		18.79		
100	PI/2 BPSK	135	0		18.39		19.0
100	PI/2 BPSK	135	69		18.77		19.5
100	PI/2 BPSK	135	138		18.25		19.0
100	PI/2 BPSK	270	0		18.22		
100	QPSK	1	1		18.92		19.5
100	QPSK	1	137		18.71		
100	QPSK	1	271		18.61		
100	QPSK	135	0		17.95		19.5
100	QPSK	135	69		18.71		
100	QPSK	135	138		17.77		
100	QPSK	270	0		17.67		18.5
100	16QAM	1	1		18.22		18.5
100	64QAM	1	1		16.84		17.0
100	256QAM	1	1		14.64		15.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	18.95	19.10	19.06	19.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	18.91	19.09	18.99	19.5
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	18.91	19.12	18.99	19.5
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	19.00	19.08	18.99	19.5
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	18.94	19.05	19.06	19.5
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	18.96	19.05	18.96	19.5
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	18.99	19.08	18.97	19.5
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	18.96	19.04	19.03	19.5
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	18.97	19.03	19.06	19.5
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	18.99	19.04	18.97	19.5
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	18.92	19.12	19.05	19.5



<FR1 n78_Ant 9_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		20.70		21.0
100	PI/2 BPSK	1	137		20.53		
100	PI/2 BPSK	1	271		20.31		
100	PI/2 BPSK	135	0		19.97		20.5
100	PI/2 BPSK	135	69		20.40		21.0
100	PI/2 BPSK	135	138		19.80		20.5
100	PI/2 BPSK	270	0		19.83		
100	QPSK	1	1		20.52		21.0
100	QPSK	1	137		20.22		
100	QPSK	1	271		20.25		
100	QPSK	135	0		19.51		20.0
100	QPSK	135	69		20.36		21.0
100	QPSK	135	138		19.35		20.0
100	QPSK	270	0		19.28		20.0
100	16QAM	1	1		19.83		20.0
100	64QAM	1	1		18.40		18.5
100	256QAM	1	1		16.24		16.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	20.52	20.67	20.51	21.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	20.49	20.68	20.58	21.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	20.47	20.64	20.54	21.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	20.46	20.61	20.54	21.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	20.53	20.59	20.57	21.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	20.49	20.69	20.53	21.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	20.52	20.69	20.57	21.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	20.44	20.68	20.54	21.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	20.52	20.61	20.52	21.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	20.50	20.68	20.55	21.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	20.50	20.66	20.57	21.0



<FR1 n78_HPUE_Ant 9_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.52		27.0
100	PI/2 BPSK	1	137		25.30		
100	PI/2 BPSK	1	271		25.50		
100	PI/2 BPSK	135	0		24.98		26.5
100	PI/2 BPSK	135	69		25.37		27.0
100	PI/2 BPSK	135	138		24.89		26.5
100	PI/2 BPSK	270	0		24.86		
100	QPSK	1	1		25.51		27.0
100	QPSK	1	137		25.04		
100	QPSK	1	271		25.42		
100	QPSK	135	0		24.33		26.0
100	QPSK	135	69		25.28		27.0
100	QPSK	135	138		24.25		26.0
100	QPSK	270	0		24.31		26.0
100	16QAM	1	1		24.77		26.0
100	64QAM	1	1		23.26		24.5
100	256QAM	1	1		21.07		22.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.40	25.45	25.42	27.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.36	25.48	25.41	27.0
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.36	25.47	25.38	27.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.36	25.45	25.38	27.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.34	25.41	25.36	27.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.41	25.48	25.44	27.0
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.43	25.47	25.41	27.0
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.40	25.40	25.42	27.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.34	25.47	25.46	27.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.41	25.40	25.42	27.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.39	25.46	25.36	27.0



<FR1 n78_HPUE_Ant 8_DSI 3>

Channel	BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel						650000		
Frequency (MHz)						3750		
100	PI/2 BPSK	1	1			22.03		22.5
100	PI/2 BPSK	1	137			21.88		
100	PI/2 BPSK	1	271			21.96		
100	PI/2 BPSK	135	0			21.33		22.0
100	PI/2 BPSK	135	69			21.78		22.5
100	PI/2 BPSK	135	138			21.25		22.0
100	PI/2 BPSK	270	0			21.18		
100	QPSK	1	1			21.98		22.5
100	QPSK	1	137			21.71		
100	QPSK	1	271			21.77		
100	QPSK	135	0			20.96		22.5
100	QPSK	135	69			21.71		
100	QPSK	135	138			21.12		
100	QPSK	270	0			21.28		21.5
100	16QAM	1	1			21.15		21.5
100	64QAM	1	1			19.63		20.0
100	256QAM	1	1			17.56		18.0
Channel					649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)					3745.02	3750	3754.98	
90	PI/2 BPSK	1	1		22.01	21.98	21.96	22.5
Channel					649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)					3740.01	3750	3759.99	
80	PI/2 BPSK	1	1		21.96	21.97	21.97	22.5
Channel					649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)					3735	3750	3765	
70	PI/2 BPSK	1	1		21.93	21.96	21.99	22.5
Channel					648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)					3730.02	3750	3769.98	
60	PI/2 BPSK	1	1		21.95	21.94	21.99	22.5
Channel					648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)					3725.01	3750	3774.99	
50	PI/2 BPSK	1	1		21.93	22.02	21.95	22.5
Channel					648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)					3720	3750	3780	
40	PI/2 BPSK	1	1		21.92	22.01	21.98	22.5
Channel					647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)					3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1		21.95	21.94	22.00	22.5
Channel					647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)					3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1		21.99	21.94	21.93	22.5
Channel					647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)					3710.01	3750	3789.99	
20	PI/2 BPSK	1	1		21.96	22.02	21.98	22.5
Channel					647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)					3707.52	3750	3792.48	
15	PI/2 BPSK	1	1		21.91	21.99	21.98	22.5
Channel					647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)					3705	3750	3795	
10	PI/2 BPSK	1	1		21.95	21.98	21.94	22.5



<FR1 n78_HPUE_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.19		22.5
100	PI/2 BPSK	1	137		21.95		
100	PI/2 BPSK	1	271		21.77		
100	PI/2 BPSK	135	0		21.34		22.0
100	PI/2 BPSK	135	69		21.73		22.5
100	PI/2 BPSK	135	138		21.23		22.0
100	PI/2 BPSK	270	0		21.17		
100	QPSK	1	1		21.98		22.5
100	QPSK	1	137		21.62		
100	QPSK	1	271		21.62		
100	QPSK	135	0		21.15		21.5
100	QPSK	135	69		21.97		22.5
100	QPSK	135	138		20.98		21.5
100	QPSK	270	0		20.82		21.5
100	16QAM	1	1		21.20		21.5
100	64QAM	1	1		19.92		20.0
100	256QAM	1	1		17.69		18.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	21.98	22.13	22.04	22.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.03	22.17	22.06	22.5
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	22.01	22.18	22.07	22.5
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.03	22.08	22.09	22.5
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.04	22.10	22.09	22.5
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	21.98	22.17	22.01	22.5
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	22.01	22.19	22.06	22.5
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	22.02	22.08	22.06	22.5
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.06	22.14	22.12	22.5
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	21.95	22.09	22.03	22.5
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	21.99	22.06	22.03	22.5



<FR1 n78_HPUE_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		26.0
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.59		26.0
100	PI/2 BPSK	1	137		25.37		
100	PI/2 BPSK	1	271		25.27		
100	PI/2 BPSK	135	0		25.30		26.0
100	PI/2 BPSK	135	69		25.33		26.0
100	PI/2 BPSK	135	138		25.26		26.0
100	PI/2 BPSK	270	0		25.20		
100	QPSK	1	1		25.54		26.0
100	QPSK	1	137		25.39		
100	QPSK	1	271		25.20		
100	QPSK	135	0		25.43		26.0
100	QPSK	135	69		25.31		
100	QPSK	135	138		25.14		
100	QPSK	270	0		25.15		26.0
100	16QAM	1	1		24.55		26.0
100	64QAM	1	1		24.07		25.5
100	256QAM	1	1		21.73		23.5
Channel				649668	650000	650332	26.0
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.30	25.47	25.40	26.0
Channel				649334	650000	650666	26.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.32	25.56	25.41	26.0
Channel				649000	650000	651000	26.0
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.27	25.48	25.37	26.0
Channel				648668	650000	651332	26.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.35	25.51	25.45	26.0
Channel				648334	650000	651666	26.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.31	25.45	25.44	26.0
Channel				648000	650000	652000	26.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.26	25.43	25.40	26.0
Channel				647668	650000	652332	26.0
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.24	25.53	25.32	26.0
Channel				647500	650000	652500	26.0
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.27	25.49	25.37	26.0
Channel				647334	650000	652666	26.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.31	25.53	25.41	26.0
Channel				647168	650000	652832	26.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.28	25.55	25.31	26.0
Channel				647000	650000	653000	26.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.25	25.55	25.46	26.0



<FR1 n78_Ant 9_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.36		25.0
100	PI/2 BPSK	1	137		23.34		
100	PI/2 BPSK	1	271		23.24		
100	PI/2 BPSK	135	0		22.75		24.5
100	PI/2 BPSK	135	69		23.29		25.0
100	PI/2 BPSK	135	138		22.73		24.5
100	PI/2 BPSK	270	0		22.64		
100	QPSK	1	1		23.32		25.0
100	QPSK	1	137		23.30		
100	QPSK	1	271		23.23		
100	QPSK	135	0		22.15		24.0
100	QPSK	135	69		23.26		25.0
100	QPSK	135	138		22.08		24.0
100	QPSK	270	0		22.14		24.0
100	16QAM	1	1		22.51		24.0
100	64QAM	1	1		20.92		22.5
100	256QAM	1	1		18.85		20.5
Channel				633000	633332	633666	25.0
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.28	23.34	23.21	25.0
Channel				632668	633332	634000	25.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.22	23.27	23.15	25.0
Channel				632334	633332	634332	25.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.20	23.32	23.19	25.0
Channel				632000	633332	634666	25.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.20	23.27	23.15	25.0
Channel				631668	633332	635000	25.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.23	23.34	23.25	25.0
Channel				631334	633332	635332	25.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.26	23.32	23.18	25.0
Channel				631000	633332	635666	25.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.22	23.26	23.17	25.0
Channel				630834	633332	635832	25.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.17	23.17	23.15	25.0
Channel				630668	633332	636000	25.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.22	23.24	23.09	25.0
Channel				630500	633332	636166	25.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.16	23.25	23.07	25.0
Channel				630334	633332	636332	25.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.18	23.23	23.11	25.0



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.34		22.0
100	PI/2 BPSK	1	137		20.19		
100	PI/2 BPSK	1	271		20.07		
100	PI/2 BPSK	135	0		20.07		22.0
100	PI/2 BPSK	135	69		20.11		22.0
100	PI/2 BPSK	135	138		20.08		22.0
100	PI/2 BPSK	270	0		20.06		
100	QPSK	1	1		20.13		22.0
100	QPSK	1	137		20.06		
100	QPSK	1	271		20.00		
100	QPSK	135	0		20.00		22.0
100	QPSK	135	69		20.11		
100	QPSK	135	138		20.05		
100	QPSK	270	0		20.04		22.0
100	16QAM	1	1		20.30		22.0
100	64QAM	1	1		20.32		22.0
100	256QAM	1	1		19.06		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.26	20.25	20.19	22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.25	20.29	20.20	22.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.21	20.23	20.23	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.27	20.24	20.20	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.26	20.29	20.19	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.30	20.23	20.28	22.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.27	20.29	20.28	22.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.24	20.26	20.19	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.28	20.30	20.25	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.29	20.27	20.21	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.22	20.23	20.18	22.0



<FR1 n78_Ant 3_DSI 1/3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.11		22.0
100	PI/2 BPSK	1	137		20.11		
100	PI/2 BPSK	1	271		20.02		
100	PI/2 BPSK	135	0		20.00		22.0
100	PI/2 BPSK	135	69		20.10		22.0
100	PI/2 BPSK	135	138		20.08		22.0
100	PI/2 BPSK	270	0		20.02		
100	QPSK	1	1		20.02		22.0
100	QPSK	1	137		20.06		
100	QPSK	1	271		20.00		
100	QPSK	135	0		20.05		22.0
100	QPSK	135	69		20.04		
100	QPSK	135	138		20.07		
100	QPSK	270	0		20.02		22.0
100	16QAM	1	1		20.07		22.0
100	64QAM	1	1		20.08		22.0
100	256QAM	1	1		18.68		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.04	20.07	20.09	22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.05	20.08	20.02	22.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.01	20.06	20.07	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.04	20.02	20.08	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.05	20.06	20.08	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.03	20.03	20.07	22.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.08	20.01	20.01	22.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.09	20.03	20.06	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.06	20.09	20.06	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.02	20.09	20.03	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.00	20.04	20.00	22.0



<FR1 n78_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.17		19.5
100	PI/2 BPSK	1	137		19.02		
100	PI/2 BPSK	1	271		19.03		
100	PI/2 BPSK	135	0		18.42		19.0
100	PI/2 BPSK	135	69		18.81		19.5
100	PI/2 BPSK	135	138		18.24		19.0
100	PI/2 BPSK	270	0		18.23		
100	QPSK	1	1		19.02		19.5
100	QPSK	1	137		18.91		
100	QPSK	1	271		18.85		
100	QPSK	135	0		17.95		19.5
100	QPSK	135	69		18.83		
100	QPSK	135	138		18.21		
100	QPSK	270	0		18.26		18.5
100	16QAM	1	1		18.17		18.5
100	64QAM	1	1		16.71		17.0
100	256QAM	1	1		14.61		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	18.99	19.11	19.01	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	18.95	19.16	18.95	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	18.93	19.16	18.98	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.00	19.09	19.01	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	18.92	19.13	19.03	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	18.97	19.14	19.03	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	18.93	19.12	18.96	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	18.95	19.15	18.97	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.00	19.10	18.96	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	18.92	19.01	18.86	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	18.99	19.08	18.99	19.5



<FR1 n78_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.29		19.5
100	PI/2 BPSK	1	137		19.19		
100	PI/2 BPSK	1	271		19.22		
100	PI/2 BPSK	135	0		18.59		19.0
100	PI/2 BPSK	135	69		19.04		19.5
100	PI/2 BPSK	135	138		18.44		19.0
100	PI/2 BPSK	270	0		18.49		
100	QPSK	1	1		19.26		19.5
100	QPSK	1	137		19.05		
100	QPSK	1	271		19.00		
100	QPSK	135	0		18.03		18.5
100	QPSK	135	69		18.93		19.5
100	QPSK	135	138		18.42		18.5
100	QPSK	270	0		18.50		18.5
100	16QAM	1	1		18.39		18.5
100	64QAM	1	1		16.92		17.0
100	256QAM	1	1		14.77		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	19.09	19.27	19.17	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.12	19.25	19.14	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.03	19.21	19.18	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.12	19.27	19.15	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.03	19.22	19.10	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.03	19.26	19.13	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	19.03	19.18	19.18	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.08	19.21	19.17	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.13	19.25	19.15	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.12	19.22	19.05	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.10	19.19	19.10	19.5



<FR1 n78_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.59		23.0
100	PI/2 BPSK	1	137		22.30		
100	PI/2 BPSK	1	271		22.27		
100	PI/2 BPSK	135	0		21.44		23.0
100	PI/2 BPSK	135	69		21.91		23.0
100	PI/2 BPSK	135	138		21.54		23.0
100	PI/2 BPSK	270	0		21.41		
100	QPSK	1	1		21.96		23.0
100	QPSK	1	137		21.89		
100	QPSK	1	271		21.89		
100	QPSK	135	0		21.10		23.0
100	QPSK	135	69		21.82		23.0
100	QPSK	135	138		21.13		23.0
100	QPSK	270	0		21.27		23.0
100	16QAM	1	1		21.11		23.0
100	64QAM	1	1		21.09		22.5
100	256QAM	1	1		19.00		20.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.30	22.57	22.41	23.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.35	22.53	22.41	23.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.33	22.50	22.35	23.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.40	22.52	22.42	23.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.33	22.54	22.41	23.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.34	22.57	22.43	23.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.34	22.51	22.39	23.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.27	22.53	22.44	23.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.28	22.55	22.41	23.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.32	22.53	22.42	23.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.31	22.48	22.37	23.0



<FR1 n78_Ant 8_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.20		19.5
100	PI/2 BPSK	1	137		18.96		
100	PI/2 BPSK	1	271		18.81		
100	PI/2 BPSK	135	0		18.48		19.0
100	PI/2 BPSK	135	69		18.89		19.5
100	PI/2 BPSK	135	138		18.31		19.0
100	PI/2 BPSK	270	0		18.31		
100	QPSK	1	1		18.96		19.5
100	QPSK	1	137		18.80		
100	QPSK	1	271		18.64		
100	QPSK	135	0		18.29		19.5
100	QPSK	135	69		19.05		
100	QPSK	135	138		18.05		
100	QPSK	270	0		17.83		18.5
100	16QAM	1	1		18.34		18.5
100	64QAM	1	1		16.98		17.0
100	256QAM	1	1		14.81		15.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	18.97	19.10	18.98	19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	18.95	19.13	19.02	19.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	18.97	19.19	18.97	19.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	18.93	19.09	19.00	19.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	18.91	19.12	19.02	19.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	18.95	19.13	18.99	19.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	18.94	19.11	19.06	19.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.00	19.11	18.96	19.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	18.98	19.09	19.05	19.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	18.96	19.18	18.99	19.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	18.98	19.13	19.05	19.5



<FR1 n78_Ant 9_DSI 1_WIFI ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		21.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		20.83		21.0
100	PI/2 BPSK	1	137		20.62		
100	PI/2 BPSK	1	271		20.65		
100	PI/2 BPSK	135	0		20.11		20.5
100	PI/2 BPSK	135	69		20.50		21.0
100	PI/2 BPSK	135	138		19.91		20.5
100	PI/2 BPSK	270	0		19.92		
100	QPSK	1	1		20.73		21.0
100	QPSK	1	137		20.60		
100	QPSK	1	271		20.53		
100	QPSK	135	0		19.56		20.0
100	QPSK	135	69		20.49		21.0
100	QPSK	135	138		19.94		20.0
100	QPSK	270	0		19.92		20.0
100	16QAM	1	1		19.92		20.0
100	64QAM	1	1		18.36		18.5
100	256QAM	1	1		16.25		16.5
Channel				633000	633332	633666	21.0
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	20.54	20.74	20.58	21.0
Channel				632668	633332	634000	21.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	20.53	20.72	20.61	21.0
Channel				632334	633332	634332	21.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	20.58	20.75	20.63	21.0
Channel				632000	633332	634666	21.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.51	20.72	20.62	21.0
Channel				631668	633332	635000	21.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.51	20.76	20.64	21.0
Channel				631334	633332	635332	21.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	20.57	20.77	20.59	21.0
Channel				631000	633332	635666	21.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	20.57	20.79	20.60	21.0
Channel				630834	633332	635832	21.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	20.55	20.77	20.57	21.0
Channel				630668	633332	636000	21.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.56	20.72	20.58	21.0
Channel				630500	633332	636166	21.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.57	20.71	20.65	21.0
Channel				630334	633332	636332	21.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	20.50	20.71	20.60	21.0



<FR1 n78_HPUE_Ant 9_DSI 1>

Channel	BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel						633332		27.0
Frequency (MHz)						3499.98		
100		PI/2 BPSK	1	1		25.46		
100		PI/2 BPSK	1	137		25.36		
100		PI/2 BPSK	1	271		25.27		
100		PI/2 BPSK	135	0		25.12		26.5
100		PI/2 BPSK	135	69		25.44		27.0
100		PI/2 BPSK	135	138		25.08		26.5
100		PI/2 BPSK	270	0		25.01		
100		QPSK	1	1		25.15		27.0
100		QPSK	1	137		25.16		
100		QPSK	1	271		25.12		
100		QPSK	135	0		24.45		26.0
100		QPSK	135	69		25.33		27.0
100		QPSK	135	138		24.29		26.0
100		QPSK	270	0		24.40		26.0
100		16QAM	1	1		24.93		26.0
100		64QAM	1	1		23.39		24.5
100		256QAM	1	1		21.26		22.5
Channel					633000	633332	633666	27.0
Frequency (MHz)					3495	3499.98	3504.99	
90		PI/2 BPSK	1	1	25.35	25.36	25.21	27.0
Channel					632668	633332	634000	27.0
Frequency (MHz)					3490.02	3499.98	3510	
80		PI/2 BPSK	1	1	25.25	25.40	25.28	27.0
Channel					632334	633332	634332	27.0
Frequency (MHz)					3485.01	3499.98	3514.98	
70		PI/2 BPSK	1	1	25.35	25.35	25.22	27.0
Channel					632000	633332	634666	27.0
Frequency (MHz)					3480	3499.98	3519.99	
60		PI/2 BPSK	1	1	25.33	25.41	25.28	27.0
Channel					631668	633332	635000	27.0
Frequency (MHz)					3475.02	3499.98	3525	
50		PI/2 BPSK	1	1	25.30	25.44	25.29	27.0
Channel					631334	633332	635332	27.0
Frequency (MHz)					3470.01	3499.98	3529.98	
40		PI/2 BPSK	1	1	25.35	25.45	25.26	27.0
Channel					631000	633332	635666	27.0
Frequency (MHz)					3465	3499.98	3534.99	
30		PI/2 BPSK	1	1	25.29	25.40	25.22	27.0
Channel					630834	633332	635832	27.0
Frequency (MHz)					3462.51	3499.98	3537.48	
25		PI/2 BPSK	1	1	25.31	25.35	25.26	27.0
Channel					630668	633332	636000	27.0
Frequency (MHz)					3460.02	3499.98	3540	
20		PI/2 BPSK	1	1	25.29	25.45	25.30	27.0
Channel					630500	633332	636166	27.0
Frequency (MHz)					3457.5	3499.98	3542.49	
15		PI/2 BPSK	1	1	25.31	25.36	25.28	27.0
Channel					630334	633332	636332	27.0
Frequency (MHz)					3455.01	3499.98	3544.98	
10		PI/2 BPSK	1	1	25.32	25.42	25.28	27.0



<FR1 n78_HPUE_Ant 8_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.16		22.5
100	PI/2 BPSK	1	137		22.07		
100	PI/2 BPSK	1	271		22.03		
100	PI/2 BPSK	135	0		21.37		22.0
100	PI/2 BPSK	135	69		21.85		22.5
100	PI/2 BPSK	135	138		21.25		22.0
100	PI/2 BPSK	270	0		21.27		
100	QPSK	1	1		22.07		22.5
100	QPSK	1	137		21.94		
100	QPSK	1	271		21.86		
100	QPSK	135	0		20.94		21.5
100	QPSK	135	69		21.79		
100	QPSK	135	138		21.24		
100	QPSK	270	0		21.31		21.5
100	16QAM	1	1		21.17		21.5
100	64QAM	1	1		19.66		20.0
100	256QAM	1	1		17.62		18.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	21.97	22.09	21.98	22.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	21.93	22.13	21.99	22.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	21.88	22.07	21.98	22.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	21.96	22.09	22.06	22.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	21.93	22.14	22.07	22.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	21.92	22.09	22.08	22.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	21.93	22.11	21.96	22.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	21.95	22.13	21.98	22.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	21.97	22.14	21.91	22.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	21.89	21.99	21.81	22.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.02	22.13	22.01	22.5



<FR1 n78_HPUE_Ant 9_DSI 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		22.5
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.24		22.5
100	PI/2 BPSK	1	137		22.15		
100	PI/2 BPSK	1	271		22.17		
100	PI/2 BPSK	135	0		21.54		22.0
100	PI/2 BPSK	135	69		22.06		22.5
100	PI/2 BPSK	135	138		21.43		22.0
100	PI/2 BPSK	270	0		21.47		
100	QPSK	1	1		22.24		22.5
100	QPSK	1	137		22.02		
100	QPSK	1	271		22.02		
100	QPSK	135	0		21.02		21.5
100	QPSK	135	69		21.92		22.5
100	QPSK	135	138		21.40		21.5
100	QPSK	270	0		21.47		21.5
100	16QAM	1	1		21.41		21.5
100	64QAM	1	1		19.96		20.0
100	256QAM	1	1		17.74		18.0
Channel				633000	633332	633666	22.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.10	22.23	22.13	22.5
Channel				632668	633332	634000	22.5
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.09	22.17	22.12	22.5
Channel				632334	633332	634332	22.5
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	21.98	22.22	22.21	22.5
Channel				632000	633332	634666	22.5
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.13	22.23	22.15	22.5
Channel				631668	633332	635000	22.5
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.05	22.15	22.11	22.5
Channel				631334	633332	635332	22.5
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.08	22.22	22.15	22.5
Channel				631000	633332	635666	22.5
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.02	22.18	22.21	22.5
Channel				630834	633332	635832	22.5
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.10	22.19	22.20	22.5
Channel				630668	633332	636000	22.5
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.08	22.22	22.10	22.5
Channel				630500	633332	636166	22.5
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.13	22.20	22.06	22.5
Channel				630334	633332	636332	22.5
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.14	22.19	22.10	22.5



<FR1 n78_HPUE_Ant 8_DSI 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		26.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.58		26.0
100	PI/2 BPSK	1	137		25.34		
100	PI/2 BPSK	1	271		25.28		
100	PI/2 BPSK	135	0		24.46		26.0
100	PI/2 BPSK	135	69		24.89		26.0
100	PI/2 BPSK	135	138		24.51		26.0
100	PI/2 BPSK	270	0		24.46		
100	QPSK	1	1		24.95		26.0
100	QPSK	1	137		24.89		
100	QPSK	1	271		24.89		
100	QPSK	135	0		24.06		26.0
100	QPSK	135	69		24.83		26.0
100	QPSK	135	138		24.17		26.0
100	QPSK	270	0		24.26		26.0
100	16QAM	1	1		24.16		26.0
100	64QAM	1	1		24.13		25.5
100	256QAM	1	1		21.98		23.5
Channel				633000	633332	633666	26.0
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.26	25.55	25.37	26.0
Channel				632668	633332	634000	26.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.30	25.54	25.46	26.0
Channel				632334	633332	634332	26.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.28	25.46	25.36	26.0
Channel				632000	633332	634666	26.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.41	25.50	25.44	26.0
Channel				631668	633332	635000	26.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.29	25.50	25.39	26.0
Channel				631334	633332	635332	26.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.35	25.58	25.46	26.0
Channel				631000	633332	635666	26.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.31	25.46	25.40	26.0
Channel				630834	633332	635832	26.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.25	25.51	25.41	26.0
Channel				630668	633332	636000	26.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.30	25.52	25.39	26.0
Channel				630500	633332	636166	26.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.36	25.51	25.33	26.0
Channel				630334	633332	636332	26.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.32	25.44	25.35	26.0



4. WiFi/Bluetooth Output Power (Unit: dBm)

General Note:

1. For each antenna, transmit power in SISO operation is equal to the power in MIMO operation, therefore, for RF exposure evaluation was performed by MIMO operation.
2. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, additional output power measurements were not necessary.
3. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
4. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
5. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
6. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
7. Per 201904 TCBC workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
8. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
9. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
10. When SAR testing for 802.11ax is required
 - a. If the maximum output power is highest for OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
 - b. Otherwise, consider the fully allocated channel for SAR testing
 - c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel



<WWAN off, on / DBS, non DBS>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7															
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %													
2.4GHz WLAN	802.11b 1Mbps	1	2412	20.70	21.50	86.11	20.90	21.50	86.11	21.40	21.50	21.00	21.50	24.21	24.50	86.11													
		6	2437	20.90	21.50		21.00	21.50		21.30	21.50	21.40	21.50	24.36	24.50														
		11	2462	20.00	20.50		20.00	20.50		19.60	20.50	20.10	20.50	22.87	23.50														
	802.11g 6Mbps	1	2412	Not required	19.00	Not required	Not required	19.00	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required												
		6	2437		20.00			20.00										20.00	20.00	22.00	23.00								
		11	2462		17.50			17.50										17.50	17.50	20.50	20.50								
	802.11n-HT20 MCS0	1	2412		16.50			16.50										16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	19.50	19.50	19.50	22.50
		6	2437		19.50			19.50										19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	20.50	20.50	20.50	22.50
		11	2462		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.00	20.00	20.00	20.00
	802.11n-HT40 MCS0	3	2422		17.00			17.00										17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	20.00
		6	2437		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.50
		9	2452		13.00			13.00										13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00
	802.11ac-VHT20 MCS0	1	2412		16.50			16.50										16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	19.50
		6	2437		19.50			19.50										19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	22.50
		11	2462		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.50
	802.11ac-VHT40 MCS0	3	2422		17.00			17.00										17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	20.00
		6	2437		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.50
		9	2452		13.00			13.00										13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00
	802.11ax-HE20 MCS0	1	2412		16.50			16.50										16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	19.50
		6	2437		19.50			19.50										19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	19.50	22.50
		11	2462		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.50
	802.11ax-HE40 MCS0	3	2422		17.00			17.00										17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	20.00
		6	2437		17.50			17.50										17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	20.50
		9	2452		13.00			13.00										13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7								
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %						
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	18.00	Not required	Not required	Not required	18.00	17.80	18.00	17.10	18.00	20.47	21.00	85.66						
		40	5200		19.50												18.70	19.50	18.70	19.50	21.71	22.50
		44	5220		19.50												19.30	19.50	18.50	19.50	21.93	22.50
		48	5240		19.00												18.60	19.00	17.50	19.00	21.10	22.00
	802.11n-HT20 MCS0	36	5180		18.00											18.00	18.00	18.00	21.00			
		40	5200		19.50											19.50	19.50	22.50				
		44	5220		19.50											19.50	19.50	22.50				
		48	5240		19.00											19.00	19.00	22.00				
	802.11n-HT40 MCS0	38	5190		15.00											15.00	15.00	18.00				
		46	5230		18.50											18.50	18.50	21.50				
	802.11ac-VHT20 MCS0	36	5180		18.00											18.00	18.00	21.00				
		40	5200		19.50											19.50	19.50	22.50				
		44	5220		19.50											19.50	19.50	22.50				
	802.11ac-VHT40 MCS0	38	5190		15.00											15.00	15.00	18.00				
		46	5230		18.50											18.50	18.50	21.50				
	802.11ac-VHT80 MCS0	42	5210		15.00											15.00	15.00	18.00				
		36	5180		18.00											18.00	18.00	21.00				
	802.11ax-HE20 MCS0	40	5200		19.50											19.50	19.50	22.50				
		44	5220		19.50											19.50	19.50	22.50				
		48	5240		19.00											19.00	19.00	22.00				
802.11ax-HE40 MCS0	38	5190	15.00	15.00	15.00	18.00																
	46	5230	18.50	18.50	18.50	21.50																
802.11ax-HE80 MCS0	42	5210	15.00	15.00	15.00	18.00																



Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7																																								
			Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %																																						
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not required	19.00	Not required	Not required	19.00	Not required	Not required	19.00	Not required	19.00	Not required	22.00	Not required																																					
		56	5280		18.50						18.50		22.00																																								
		60	5300		19.00						19.00		22.00																																								
		64	5320		18.00						18.00		21.00																																								
	802.11n-HT20 MCS0	52	5260		19.00					19.00	18.70	19.00	18.00	19.00	21.37	22.00	85.90																																				
		56	5280		19.50					19.50	18.90	19.50	18.40	19.50	21.67	22.50																																					
		60	5300		19.50					19.50	19.20	19.50	18.50	19.50	21.87	22.50																																					
		64	5320		18.00					18.00	16.70	18.00	16.30	18.00	19.51	21.00																																					
	802.11n-HT40 MCS0	54	5270		17.50					17.50	Not required	18.00	18.00	18.00	Not required	18.00	21.00																																				
		62	5310		15.00					15.00								18.00	18.00	18.00	18.00	18.00	18.00	18.00																													
	802.11ac-VHT20 MCS0	52	5260		19.00					19.00								Not required	19.00	19.00	19.00	Not required	19.00	22.00																													
		56	5280		19.50					19.50															19.50	19.50	19.50	19.50	19.50	19.50	22.50																						
		60	5300		19.50					19.50															19.50	19.50	19.50	19.50	19.50	19.50	22.50																						
	802.11ac-VHT40 MCS0	54	5270		17.00					17.00															Not required	17.00	17.00	17.00	Not required	17.00	20.00																						
		62	5310		15.00					15.00																						18.00	18.00	18.00	18.00	18.00	18.00	18.00															
	802.11ac-VHT80 MCS0	58	5290		15.00					15.00																						Not required	15.00	15.00	15.00	Not required	15.00	18.00															
802.11ac-VHT160 MCS0		50	5250	13.50	13.50	13.50	13.50	13.50	13.50	13.50																													16.50	16.50	16.50												
802.11ax-HE20 MCS0	52	5260	19.00	19.00	Not required	19.00	19.00	19.00	Not required	19.00																													22.00														
	56	5280	19.50	19.50																																				19.50	19.50	19.50	19.50	19.50	19.50	22.50							
	60	5300	19.50	19.50																																				19.50	19.50	19.50	19.50	19.50	19.50	22.50							
	64	5320	18.00	18.00																																				18.00	18.00	18.00	18.00	18.00	18.00	21.00							
802.11ax-HE40 MCS0	54	5270	17.50	17.50																																				Not required	18.00	18.00	18.00	Not required	18.00	21.00							
	62	5310	15.00	15.00																																											15.00	15.00	15.00	15.00	15.00	15.00	18.00
802.11ax-HE80 MCS0	58	5290	15.00	15.00																																											Not required	15.00	15.00	15.00	Not required	15.00	18.00
802.11ax-HE160 MCS0	50	5250	13.50	13.50							13.50	13.50	13.50	13.50	13.50	16.50	16.50																																				



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7		
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not required	18.50	Not required	Not required	18.50	Not required	18.50	18.50	17.40	18.50	21.00	21.50	85.66
		116	5580		19.00			19.00		18.90	19.00	18.00	19.00	21.48	22.00	
		124	5620		19.00			19.00		18.60	19.00	18.20	19.00	21.47	22.00	
		132	5660		19.00			19.00		18.70	19.00	18.30	19.00	21.51	22.00	
		144	5720		19.00			19.00		18.80	19.00	18.30	19.00	21.57	22.00	
	802.11n-HT20 MCS0	100	5500		17.50			17.50		17.50	17.50	20.50				
		116	5580		19.00			19.00		19.00	19.00	22.00				
		124	5620		19.00			19.00		19.00	19.00	22.00				
		132	5660		19.00			19.00		19.00	19.00	22.00				
		144	5720		19.00			19.00		19.00	19.00	22.00				
	802.11n-HT40 MCS0	102	5510		16.50			16.50		16.50	16.50	19.50				
		110	5550		18.50			18.50		18.50	18.50	21.50				
		126	5630		19.00			19.00		19.00	19.00	22.00				
		134	5670		18.00			18.00		18.00	18.00	21.00				
	802.11ac-VHT20 MCS0	100	5500		17.50			17.50		17.50	17.50	20.50				
		116	5580		19.00			19.00		19.00	19.00	22.00				
		124	5620		19.00			19.00		19.00	19.00	22.00				
		132	5660		19.00			19.00		19.00	19.00	22.00				
	802.11ac-VHT40 MCS0	102	5510		16.50			16.50		16.50	16.50	19.50				
		110	5550		18.50			18.50		18.50	18.50	21.50				
		126	5630		19.00			19.00		19.00	19.00	22.00				
		134	5670		18.00			18.00		18.00	18.00	21.00				
	802.11ac-VHT80 MCS0	106	5530		16.50			16.50		16.50	16.50	19.50				
		122	5610		17.50			17.50		17.50	17.50	20.50				
		138	5690		18.00			18.00		18.00	18.00	21.00				
		802.11ac-VHT160 MCS0	114		5570			13.50		13.50	13.50	13.50	16.50			
	802.11ax-HE20 MCS0	100	5500		17.50			17.50		17.50	17.50	20.50				
		116	5580		19.00			19.00		19.00	19.00	22.00				
		124	5620		19.00			19.00		19.00	19.00	22.00				
		132	5660		19.00			19.00		19.00	19.00	22.00				
	802.11ax-HE40 MCS0	102	5510		16.50			16.50		16.50	16.50	19.50				
		110	5550		18.50			18.50		18.50	18.50	21.50				
		126	5630		19.00			19.00		19.00	19.00	22.00				
		134	5670		18.00			18.00		18.00	18.00	21.00				
	802.11ax-HE80 MCS0	106	5530		16.50			16.50		16.50	16.50	19.50				
		122	5610		17.50			17.50		17.50	17.50	20.50				
		138	5690		18.00			18.00		18.00	18.00	21.00				
	802.11ax-HE160 MCS0	114	5570		13.50			13.50		13.50	13.50	16.50				



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7		
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	20.50	Not required	Not required	20.50	Not required	19.20	20.50	20.20	20.50	22.74	23.50	85.66
		157	5785		20.50			20.50		19.90	20.50	22.67	23.50			
		165	5825		20.50			20.50		19.40	20.50	20.20	20.50	22.83	23.50	
	802.11n-HT20 MCS0	149	5745		19.50			19.50		17.90	18.50	18.40	18.50	21.17	21.50	85.90
		157	5785		19.50			19.50		18.00	18.50	18.40	18.50	21.21	21.50	
		165	5825		20.00			20.00		18.20	18.50	18.30	18.50	21.26	21.50	
	802.11n-HT40 MCS0	151	5755		20.00			20.00		18.30	18.50	18.40	18.50	21.36	21.50	85.94
		159	5795		20.00			20.00		18.10	18.50	18.40	18.50	21.26	21.50	
	802.11ac-VHT20 MCS0	149	5745		19.50			19.50		17.90	18.50	18.40	18.50	21.17	21.50	85.90
		157	5785		19.50			19.50		18.00	18.50	18.40	18.50	21.21	21.50	
		165	5825		20.00			20.00		18.20	18.50	18.30	18.50	21.26	21.50	
	802.11ac-VHT40 MCS0	151	5755		20.00			20.00		18.40	18.50	18.40	18.50	21.41	21.50	85.99
		159	5795		20.00			20.00		18.40	18.50	18.40	18.50	21.41	21.50	
	802.11ac-VHT80 MCS0	155	5775		19.50			19.50		18.10	18.50	18.30	18.50	21.21	21.50	86.09
	802.11ax-HE20 MCS0	149	5745		20.50			20.50		18.00	18.50	18.50	18.50	21.27	21.50	85.99
		157	5785		20.50			20.50		18.10	18.50	18.50	18.50	21.31	21.50	
		165	5825		20.50			20.50		18.30	18.50	18.40	18.50	21.36	21.50	
	802.11ax-HE40 MCS0	151	5755		20.00			20.00		18.40	18.50	18.50	18.50	21.46	21.50	85.99
		159	5795		20.00			20.00		18.20	18.50	18.50	18.50	21.36	21.50	
	802.11ax-HE80 MCS0	155	5775		19.50			19.50		18.20	18.50	18.40	18.50	21.31	21.50	86.17



<WWAN OFF / Non DBS>

Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7			
			Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	18.00	Not required	Not required	18.00	Not required	Not required	18.00	Not required	18.00	Not required	21.0	85.66
		157	5785								18.00		18.00		21.0	
		165	5825								18.00		18.00		21.0	
	802.11n-HT20 MCS0	149	5745							18.00	18.00	21.0	85.90			
		157	5785							18.00	18.00	21.0				
		165	5825							18.00	18.00	21.0				
	802.11n-HT40 MCS0	151	5755							18.00	18.00	21.0	85.94			
		159	5795							18.00	18.00	21.0				
	802.11ac-VHT20 MCS0	149	5745							18.00	18.00	21.0	85.90			
		157	5785							18.00	18.00	21.0				
		165	5825							18.00	18.00	21.0				
	802.11ac-VHT40 MCS0	151	5755							18.00	18.00	21.0	85.99			
		159	5795							18.00	18.00	21.0				
	802.11ac-VHT80 MCS0	155	5775							18.00	18.00	21.0	86.09			
	802.11ax-HE20 MCS0	149	5745							18.00	18.00	21.0	85.99			
		157	5785							18.00	18.00	21.0				
		165	5825							18.00	18.00	21.0				
	802.11ax-HE40 MCS0	151	5755							18.00	18.00	21.0	85.99			
		159	5795							18.00	18.00	21.0				
	802.11ax-HE80 MCS0	155	5775							18.00	18.00	21.0	86.17			



<WWAN OFF / DBS>

5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7									
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %							
	802.11a 6Mbps	149	5745	Not required	17.50	Not required	Not required	17.50	Not required	Not required	17.50	Not required	17.50	Not required	20.5	85.66							
		157	5785								17.50		17.50		20.5								
		165	5825								17.50		17.50		20.5								
	802.11n-HT20 MCS0	149	5745								17.50		17.50		17.50	17.50	20.5	85.90					
		157	5785								17.50		17.50		17.50	17.50	20.5						
		165	5825								17.50		17.50		17.50	17.50	20.5						
	802.11n-HT40 MCS0	151	5755								17.50		17.50		17.00	17.50	17.50	20.27	20.5	85.94			
		159	5795								17.50		17.50		16.90	17.50	17.40	17.50	20.17		20.5		
	802.11ac-VHT20 MCS0	149	5745								17.50		17.50		Not required	17.50	Not required	Not required	17.50	Not required	17.50	Not required	17.50
		157	5785							17.50	17.50	17.50	17.50	20.5									
		165	5825							17.50	17.50	17.50	17.50	20.5									
	802.11ac-VHT40 MCS0	151	5755							17.50	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	20.5	85.99	
		159	5795							17.50	17.50								17.50		17.50		20.5
	802.11ac-VHT80 MCS0	155	5775							17.50	17.50	Not required	17.50	Not required	17.00	17.50	17.04	17.50	20.21	20.5	86.09		
	802.11ax-HE20 MCS0	149	5745							17.50	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	20.5	85.99	
		157	5785							17.50	17.50								17.50		17.50		20.5
		165	5825							17.50	17.50								17.50		17.50		20.5
	802.11ax-HE40 MCS0	151	5755							17.50	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	20.5	85.99	
		159	5795							17.50	17.50								17.50		17.50		20.5
	802.11ax-HE80 MCS0	155	5775							17.50	17.50	Not required	17.50	Not required	17.50	17.50	17.50	17.50	20.5	86.17			



<WWAN ON / DSI 3 / Non DBS>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7								
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %						
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	18.00	Not required	Not required	18.00	Not required	17.10	18.00	17.30	18.00	20.21	21.0	85.66						
		40	5200							17.50	18.00	17.50	18.00	20.51	21.0							
		44	5220							18.00	18.00	17.60	18.00	20.61	21.0							
		48	5240							18.00	18.00	17.50	18.00	20.46	21.0							
	802.11n-HT20 MCS0	36	5180							18.00	18.00	Not required	18.00	Not required	18.00	18.00	18.00	18.00	18.00	Not required	21.0	85.90
		40	5200							18.00	18.00											
		44	5220							18.00	18.00											
		48	5240							18.00	18.00											
	802.11n-HT40 MCS0	38	5190							15.00	15.00	14.70	15.00	14.10	15.00	17.42	18.0	85.94				
		46	5230							18.00	18.00	17.10	18.00	17.10	18.00	20.11	21.0					
	802.11ac-VHT20 MCS0	36	5180							18.00	18.00	Not required	18.00	Not required	18.00	18.00	18.00	18.00	18.00	18.00	21.0	85.90
		40	5200							18.00	18.00											
		44	5220							18.00	18.00											
		48	5240							18.00	18.00											
	802.11ac-VHT40 MCS0	38	5190							15.00	15.00	15.00	15.00	15.00	15.00	18.0	85.99					
		46	5230							18.00	18.00	18.00	18.00	18.00	18.00	21.0						
	802.11ac-VHT80 MCS0	42	5210							15.00	15.00	15.00	15.00	15.00	15.00	18.0	86.09					
	802.11ax-HE20 MCS0	36	5180							18.00	18.00	Not required	18.00	Not required	18.00	18.00	18.00	18.00	18.00	18.00	21.0	85.99
		40	5200							18.00	18.00											
		44	5220							18.00	18.00											
48		5240	18.00	18.00																		
802.11ax-HE40 MCS0	38	5190	15.00	15.00	15.00	15.00	15.00	15.00	18.0	85.99												
	46	5230	18.00	18.00	18.00	18.00	18.00	18.00	21.0													
802.11ax-HE80 MCS0	42	5210	15.00	15.00	15.00	15.00	15.00	15.00	18.0	86.17												



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7						
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %				
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	17.00	Not required	Not required	17.00	Not required	Not required	17.00	Not required	Not required	Not required	20.0	85.66				
		157	5785		17.00			17.00			17.00				20.0					
		165	5825		17.00			17.00			17.00				20.0					
	802.11n-HT20 MCS0	149	5745		17.00			17.00			17.00				20.0		85.90			
		157	5785		17.00			17.00			17.00				20.0					
		165	5825		17.00			17.00			17.00				20.0					
	802.11n-HT40 MCS0	151	5755		17.00			17.00			16.50				17.00		17.00	19.77	20.0	85.94
		159	5795		17.00			17.00			16.80				17.00		17.00	19.91	20.0	
	802.11ac-VHT20 MCS0	149	5745		17.00			17.00			Not required				17.00		Not required	Not required	Not required	Not required
		157	5785		17.00			17.00		17.00		20.0								
		165	5825		17.00			17.00		17.00		20.0								
	802.11ac-VHT40 MCS0	151	5755		17.00			17.00		Not required	17.00	Not required	Not required	Not required	Not required	Not required	Not required	Not required	20.0	85.99
		159	5795		17.00			17.00			17.00								20.0	
	802.11ac-VHT80 MCS0	155	5775		17.00			17.00		16.10	17.00	16.50	17.00	19.31	20.0	86.09				
	802.11ax-HE20 MCS0	149	5745		17.00			17.00		Not required	17.00	Not required	Not required	Not required	Not required	Not required	Not required	Not required	20.0	85.99
		157	5785		17.00			17.00			17.00								20.0	
		165	5825		17.00			17.00			17.00								20.0	
	802.11ax-HE40 MCS0	151	5755		17.00			17.00		Not required	17.00	Not required	Not required	Not required	Not required	Not required	Not required	Not required	20.0	85.99
		159	5795		17.00			17.00			17.00								20.0	
	802.11ax-HE80 MCS0	155	5775		17.00			17.00		17.00	17.00	17.00	17.00	20.0	86.17					



<WWAN ON / DSI 3 / DBS>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7								
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %						
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	15.00	Not required	Not required	15.00	Not required	Not required	15.00	15.00	Not required	15.00	Not required	18.0	85.66					
		40	5200															15.00	15.00	15.00	15.00	18.0
		44	5220															15.00	15.00	15.00	15.00	18.0
		48	5240															15.00	15.00	15.00	15.00	18.0
	802.11n-HT20 MCS0	36	5180														15.00	15.00	15.00	15.00	18.0	
		40	5200														15.00	15.00	15.00	15.00	18.0	
		44	5220														15.00	15.00	15.00	15.00	18.0	
	802.11n-HT40 MCS0	38	5190														15.00	15.00	15.00	15.00	18.0	
		46	5230														15.00	15.00	15.00	15.00	18.0	
	802.11ac-VHT20 MCS0	36	5180														15.00	15.00	15.00	15.00	18.0	
		40	5200														15.00	15.00	15.00	15.00	18.0	
		44	5220														15.00	15.00	15.00	15.00	18.0	
	802.11ac-VHT40 MCS0	38	5190														15.00	15.00	15.00	15.00	18.0	
		46	5230														15.00	15.00	15.00	15.00	18.0	
	802.11ac-VHT80 MCS0	42	5210														15.00	15.00	15.00	15.00	18.0	
	802.11ax-HE20 MCS0	36	5180														15.00	15.00	15.00	15.00	18.0	
		40	5200														15.00	15.00	15.00	15.00	18.0	
		44	5220														15.00	15.00	15.00	15.00	18.0	
		48	5240														15.00	15.00	15.00	15.00	18.0	
	802.11ax-HE40 MCS0	38	5190														15.00	15.00	15.00	15.00	18.0	
46		5230	15.00	15.00	15.00	15.00	18.0															
802.11ax-HE80 MCS0	42	5210	15.00	15.00	15.00	15.00	18.0															
										14.50	15.00	14.00	15.00	17.27	18.0	86.09						
										Not required	15.00	Not required	15.00	Not required	18.0	85.99						
										15.00	15.00	15.00	15.00	18.0								
										15.00	15.00	15.00	15.00	18.0								
										15.00	15.00	15.00	15.00	18.0								
										15.00	15.00	15.00	15.00	18.0	85.99							
										15.00	15.00	15.00	15.00	18.0	86.17							



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7										
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %								
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	15.00	Not required	Not required	Not required	15.00	Not required	15.00	Not required	15.00	Not required	18.0	85.66								
		157	5785		15.00												15.00	18.0						
		165	5825		15.00												15.00	18.0						
	802.11n-HT20 MCS0	149	5745		15.00											15.00	18.0							
		157	5785		15.00											15.00	18.0							
		165	5825		15.00											15.00	18.0							
	802.11n-HT40 MCS0	151	5755		15.00											15.00	18.0							
		159	5795		15.00											15.00	18.0							
	802.11ac-VHT20 MCS0	149	5745		15.00											15.00	18.0							
		157	5785		15.00											15.00	18.0							
		165	5825		15.00											15.00	18.0							
	802.11ac-VHT40 MCS0	151	5755		15.00											15.00	18.0							
		159	5795		15.00											15.00	18.0							
	802.11ac-VHT80 MCS0	155	5775		15.00											15.00	18.0	14.00	15.00	14.30	15.00	17.16	18.0	86.09
	802.11ax-HE20 MCS0	149	5745		15.00											15.00	18.0							
		157	5785		15.00											15.00	18.0							
		165	5825		15.00											15.00	18.0							
	802.11ax-HE40 MCS0	151	5755		15.00											15.00	18.0							
		159	5795		15.00											15.00	18.0							
	802.11ax-HE80 MCS0	155	5775		15.00											15.00	18.0	15.00	15.00	15.00	15.00	18.0	86.17	



<WWAN ON / DSI 1 / Non DBS>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7								
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %						
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	18.00	Not required	18.00	18.50	Not required	17.10	18.00	17.30	18.00	20.21	21.0	85.66						
		40	5200							18.00	18.50	18.00	18.50	21.01	21.5							
		44	5220							18.10	18.50	18.10	18.50	21.11	21.5							
		48	5240							18.00	18.50	17.90	18.50	20.96	21.5							
	802.11n-HT20 MCS0	36	5180							18.00	18.00	Not required	18.50	18.50	Not required	18.00	18.00	18.00	18.00	Not required	21.0	85.90
		40	5200							18.50	18.50					18.50	18.50	Not required	21.5			
		44	5220							18.50	18.50					18.50	18.50	Not required	21.5			
		48	5240							18.50	18.50					18.50	18.50	Not required	21.5			
	802.11n-HT40 MCS0	38	5190							15.00	15.00	Not required	18.50	18.50	Not required	14.70	15.00	14.10	15.00	17.42	18.0	85.94
		46	5230							18.50	18.50					17.60	18.50	17.60	18.50	20.61	21.5	
	802.11ac-VHT20 MCS0	36	5180							18.00	18.00	Not required	18.50	18.50	Not required	18.00	18.00	Not required	18.00	Not required	21.0	85.90
		40	5200							18.50	18.50						18.50		18.50		21.5	
		44	5220							18.50	18.50						18.50		18.50		21.5	
		48	5240							18.50	18.50						18.50		18.50		21.5	
	802.11ac-VHT40 MCS0	38	5190							15.00	15.00	Not required	18.50	18.50	Not required	15.00	15.00	15.00	15.00	18.0	85.99	
		46	5230							18.50	18.50					18.50	18.50	21.5				
	802.11ac-VHT80 MCS0	42	5210							15.00	15.00	Not required	18.00	18.00	Not required	15.00	15.00	15.00	15.00	18.0	86.09	
	802.11ax-HE20 MCS0	36	5180							18.00	18.00					Not required	18.50	18.50	Not required	18.00	Not required	18.00
		40	5200							18.50	18.50	18.50	18.50	21.5								
		44	5220							18.50	18.50	18.50	18.50	21.5								
48		5240	18.50	18.50	18.50	18.50	21.5															
802.11ax-HE40 MCS0	38	5190	15.00	15.00	Not required	18.50	18.50	Not required	15.00	15.00	15.00	15.00	18.0	85.99								
	46	5230	18.50	18.50					18.50	18.50	21.5											
802.11ax-HE80 MCS0	42	5210	15.00	15.00	Not required	18.00	18.00	Not required	15.00	15.00	15.00	15.00	18.0	86.17								



5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7							
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %					
	802.11a 6Mbps	52	5260	Not required	18.50	Not required	Not required	18.50	Not required	17.90	18.50	17.80	18.50	20.86	21.5	85.66					
		56	5280		18.50			18.50		17.90	18.50	17.90	18.50	20.91	21.5						
		60	5300		18.50			18.50		17.90	18.50	18.00	18.50	20.96	21.5						
		64	5320		18.00			18.00		17.30	18.00	17.50	18.00	20.41	21.0						
	802.11n-HT20 MCS0	52	5260		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.86	21.5	85.90	
		56	5280		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.91	21.5		
		60	5300		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.96	21.5		
		64	5320		18.00			18.00		18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	20.41	21.0		
	802.11n-HT40 MCS0	54	5270		18.00			18.00		18.00	18.00	18.00	18.00	18.00	18.00	17.40	18.00	20.31	21.0	85.94	
		62	5310		15.00			15.00		15.00	15.00	15.00	14.30	15.00	14.10	15.00	17.21	18.0			
	802.11ac-VHT20 MCS0	52	5260		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.86	21.5	85.90
		56	5280		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.91	21.5	
		60	5300		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.96	21.5	
		64	5320		17.00			17.00		17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	20.41	21.0	
	802.11ac-VHT40 MCS0	54	5270		18.00			18.00		18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	20.86	21.5	85.99
		62	5310		15.00			15.00		15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	20.91	21.5	
	802.11ac-VHT80 MCS0	58	5290		15.00			15.00		15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	18.0	86.09	
	802.11ac-VHT160 MCS0	50	5250		13.50			13.50		13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	16.5	86.33	
	802.11ax-HE20 MCS0	52	5260		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.86	21.5	85.99
		56	5280		18.50			18.50		18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.91	21.5	
60		5300	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	20.96	21.5						
64		5320	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	20.41	21.0						
802.11ax-HE40 MCS0	54	5270	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	20.86	21.5	85.99					
	62	5310	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	20.91	21.5						
802.11ax-HE80 MCS0	58	5290	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	18.0	86.17						
802.11ax-HE160 MCS0	50	5250	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	16.5	86.33						



Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7			
			Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not required	18.00	Not required	Not required	18.00	Not required	Not required	18.00	Not required	18.00	Not required	21.0	85.66
		116	5580		18.00			18.00			18.00		21.0			
		124	5620		18.00			18.00			18.00		21.0			
		132	5660		18.00			18.00			18.00		21.0			
		144	5720		18.00			18.00			18.00		21.0			
	802.11n-HT20 MCS0	100	5500		17.50			17.50			17.50		20.5		85.90	
		116	5580		18.00			18.00			18.00		21.0			
		124	5620		18.00			18.00			18.00		21.0			
		132	5660		18.00			18.00			18.00		21.0			
		144	5720		18.00			18.00			18.00		21.0			
802.11n-HT40 MCS0	102	5510	16.50	16.50	16.20	16.50	16.00	16.50	19.11	19.5	85.94					
	110	5550	18.00	18.00	17.70	18.00	17.80	18.00	20.76	21.0						
	126	5630	18.00	18.00	16.90	18.00	17.90	18.00	20.44	21.0						
	134	5670	18.00	18.00	17.40	18.00	17.70	18.00	20.56	21.0						
	142	5710	18.00	18.00	17.30	18.00	17.60	18.00	20.46	21.0						
802.11ac-VHT20 MCS0	100	5500	17.50	17.50	Not required	17.50	Not required	17.50	Not required	17.50	Not required	20.5	85.90			
	116	5580	18.00	18.00		18.00		21.0								
	124	5620	18.00	18.00		18.00		21.0								
	132	5660	18.00	18.00		18.00		21.0								
	144	5720	18.00	18.00		18.00		21.0								
802.11ac-VHT40 MCS0	102	5510	16.50	16.50	Not required	16.50	Not required	16.50	Not required	16.50	Not required	19.5	85.99			
	110	5550	18.00	18.00		18.00		21.0								
	126	5630	18.00	18.00		18.00		21.0								
	134	5670	18.00	18.00		18.00		21.0								
	142	5710	18.00	18.00		18.00		21.0								
802.11ac-VHT80 MCS0	106	5530	16.50	16.50	16.10	16.50	16.10	16.50	19.11	19.5	86.09					
	122	5610	17.50	17.50	17.30	17.50	17.20	17.50	20.26	20.5						
	138	5690	18.00	18.00	17.70	18.00	17.80	18.00	20.76	21.0						
802.11ac-VHT160 MCS0	114	5570	13.50	13.50		13.50		13.50		16.5	86.33					
802.11ax-HE20 MCS0	100	5500	17.50	17.50		17.50		17.50		20.5	85.99					
	116	5580	18.00	18.00		18.00		18.00		21.0						
	124	5620	18.00	18.00		18.00		18.00		21.0						
	132	5660	18.00	18.00		18.00		18.00		21.0						
	144	5720	18.00	18.00		18.00		18.00		21.0						
802.11ax-HE40 MCS0	102	5510	16.50	16.50		16.50		16.50		19.5	85.99					
	110	5550	18.00	18.00		18.00		18.00		21.0						
	126	5630	18.00	18.00		18.00		18.00		21.0						
	134	5670	18.00	18.00		18.00		18.00		21.0						
	142	5710	18.00	18.00		18.00		18.00		21.0						
802.11ax-HE80 MCS0	106	5530	16.50	16.50		16.50		16.50		19.5	86.17					
	122	5610	17.50	17.50		17.50		17.50		20.5						
	138	5690	18.00	18.00		18.00		18.00		21.0						
802.11ax-HE160 MCS0	114	5570	13.50	13.50		13.50		13.50		16.5	86.33					



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7			
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	17.00	Not required	Not required	Not required	17.00	Not required	Not required	17.00	Not required	Not required	20.0	85.66	
		157	5785		17.00							17.00			17.00		20.0
		165	5825		17.00							17.00			17.00		20.0
	802.11n-HT20 MCS0	149	5745		17.00						17.00	17.00	20.0	85.90			
		157	5785		17.00						17.00	17.00	20.0				
		165	5825		17.00						17.00	17.00	20.0				
	802.11n-HT40 MCS0	151	5755		17.00						17.00	17.00	20.0	85.94			
		159	5795		17.00						17.00	17.00	20.0				
	802.11ac-VHT20 MCS0	149	5745		17.00						17.00	17.00	20.0	85.90			
		157	5785		17.00						17.00	17.00	20.0				
		165	5825		17.00						17.00	17.00	20.0				
	802.11ac-VHT40 MCS0	151	5755		17.00						17.00	17.00	20.0	85.99			
		159	5795		17.00						17.00	17.00	20.0				
	802.11ac-VHT80 MCS0	155	5775		17.00						17.00	17.00	20.0	86.09			
	802.11ax-HE20 MCS0	149	5745		17.00						17.00	17.00	20.0	85.99			
		157	5785		17.00						17.00	17.00	20.0				
		165	5825		17.00						17.00	17.00	20.0				
	802.11ax-HE40 MCS0	151	5755		17.00						17.00	17.00	20.0	85.99			
159		5795	17.00	17.00	17.00	20.0											
802.11ax-HE80 MCS0	155	5775	17.00	17.00	17.00	20.0	86.17										



<WWAN ON / DSI 1 / DBS>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7														
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %												
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	17.00	Not required	Not required	17.00	Not required	Not required	17.00	Not required	17.00	Not required	20.0	85.66												
		40	5200								17.00		17.00															
		44	5220								17.00		17.00															
		48	5240								17.00		17.00															
	802.11n-HT20 MCS0	36	5180								17.00		17.00															
		40	5200								17.00		17.00															
		44	5220								17.00		17.00															
		48	5240								17.00		17.00															
	802.11n-HT40 MCS0	38	5190								15.00		15.00				14.70	15.00	14.10	15.00	17.42	18.0	85.94					
		46	5230								17.00		17.00				16.60	17.00	16.60	17.00	19.61	20.0						
	802.11ac-VHT20 MCS0	36	5180								17.00		17.00				Not required	17.00	Not required	17.00	Not required	Not required	17.00	Not required	17.00	Not required	20.0	85.90
		40	5200								17.00		17.00															
		44	5220							17.00	17.00																	
		48	5240							17.00	17.00																	
	802.11ac-VHT40 MCS0	38	5190							15.00	15.00	Not required	17.00	Not required	17.00	Not required	Not required	15.00	Not required	15.00	18.0	85.99						
		46	5230							17.00	17.00							17.00		17.00								
	802.11ac-VHT80 MCS0	42	5210							15.00	15.00	14.50	15.00	14.00	15.00	17.27	18.0	86.09										
	802.11ax-HE20 MCS0	36	5180							17.00	17.00	Not required	17.00	Not required	17.00	Not required	Not required	17.00	Not required	17.00	Not required	20.0	85.99					
		40	5200							17.00	17.00																	
		44	5220							17.00	17.00																	
48		5240	17.00	17.00																								
802.11ax-HE40 MCS0	38	5190	15.00	15.00	Not required	17.00	Not required	17.00	Not required	Not required	15.00	Not required	15.00	18.0	85.99													
	46	5230	17.00	17.00							17.00		17.00															
802.11ax-HE80 MCS0	42	5210	15.00	15.00	15.00	15.00	15.00	15.00	18.0	86.17																		



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7		
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not required	17.00	Not required	Not required	17.00	Not required	Not required	17.00	Not required	Not required	20.0	85.66	
		56	5280		17.00			17.00			20.0					
		60	5300		17.00			17.00			20.0					
		64	5320		17.00			17.00			20.0					
	802.11n-HT20 MCS0	52	5260		17.00			17.00			20.0					
		56	5280		17.00			17.00			20.0					
		60	5300		17.00			17.00			20.0					
		64	5320		17.00			17.00			20.0					
	802.11n-HT40 MCS0	54	5270		17.00			17.00			20.0					
		62	5310		15.00			15.00			18.0					
	802.11ac-VHT20 MCS0	52	5260		17.00			17.00			20.0					
		56	5280		17.00			17.00			20.0					
		60	5300		17.00			17.00		20.0						
		64	5320		17.00			17.00		20.0						
	802.11ac-VHT40 MCS0	54	5270		17.00			17.00		20.0						
		62	5310		15.00			15.00		18.0						
	802.11ac-VHT80 MCS0	58	5290		15.00			15.00		18.0						
		58	5290		15.00			15.00		18.0						
	802.11ac-VHT160 MCS0	50	5250		13.50			13.50		16.5						
	802.11ax-HE20 MCS0	52	5260		17.00			17.00		20.0						
56		5280	17.00	17.00	20.0											
60		5300	17.00	17.00	20.0											
64		5320	17.00	17.00	20.0											
802.11ax-HE40 MCS0	54	5270	17.00	17.00	20.0											
	62	5310	15.00	15.00	18.0											
802.11ax-HE80 MCS0	58	5290	15.00	15.00	18.0											
802.11ax-HE160 MCS0	50	5250	13.50	13.50	16.5											



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7								
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %						
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not required	16.00	Not required	Not required	16.00	Not required	Not required	16.00	Not required	16.00	Not required	19.0	85.66						
		116	5580		16.00			16.00			16.00		19.0									
		124	5620		16.00			16.00			16.00		19.0									
		132	5660		16.00			16.00			16.00		19.0									
		144	5720		16.00			16.00			16.00		19.0									
	802.11n-HT20 MCS0	100	5500		16.00			16.00			16.00		19.0		85.90							
		116	5580		16.00			16.00			16.00		19.0									
		124	5620		16.00			16.00			16.00		19.0									
		132	5660		16.00			16.00			16.00		19.0									
		144	5720		16.00			16.00			16.00		19.0									
	802.11n-HT40 MCS0	102	5510		16.00			16.00			Not required		16.00		Not required	16.00	Not required	16.00	Not required	19.0	85.94	
		110	5550		16.00			16.00					16.00			19.0						
		126	5630		16.00			16.00					16.00			19.0						
		134	5670		16.00			16.00					16.00			19.0						
		142	5710		16.00			16.00					16.00			19.0						
	802.11ac-VHT20 MCS0	100	5500		16.00			16.00			Not required		16.00		Not required	16.00	Not required	16.00	Not required	19.0	85.90	
		116	5580		16.00			16.00					16.00			19.0						
		124	5620		16.00			16.00					16.00			19.0						
		132	5660		16.00			16.00					16.00			19.0						
		144	5720		16.00			16.00					16.00			19.0						
	802.11ac-VHT40 MCS0	102	5510		16.00			16.00			Not required		16.00		Not required	16.00	Not required	16.00	Not required	19.0	85.99	
		110	5550		16.00			16.00					16.00			19.0						
		126	5630		16.00			16.00					16.00			19.0						
		134	5670		16.00			16.00					16.00			19.0						
		142	5710		16.00			16.00					16.00			19.0						
	802.11ac-VHT80 MCS0	106	5530		16.00			16.00			Not required		16.00		Not required	15.70	16.00	15.90	16.00	18.81	19.0	86.09
		122	5610		16.00			16.00					15.50			16.00	15.70	16.00	18.61	19.0		
		138	5690		16.00			16.00					14.90			16.00	15.90	16.00	18.44	19.0		
	802.11ac-VHT160 MCS0	114	5570		13.50			13.50			Not required		13.50		Not required	13.50	Not required	13.50	Not required	16.5	86.33	
	802.11ax-HE20 MCS0	100	5500		16.00			16.00					16.00			19.0						
		116	5580		16.00			16.00					16.00			19.0						
		124	5620		16.00			16.00					16.00			19.0						
		132	5660		16.00			16.00					16.00			19.0						
		144	5720		16.00			16.00					16.00			19.0						
	802.11ax-HE40 MCS0	102	5510		16.00			16.00					16.00			19.0						
		110	5550		16.00			16.00					16.00			19.0						
		126	5630		16.00			16.00					16.00			19.0						
		134	5670		16.00			16.00					16.00			19.0						
		142	5710		16.00			16.00					16.00			19.0						
	802.11ax-HE80 MCS0	106	5530		16.00			16.00					16.00			19.0						
122		5610	16.00	16.00	16.00	19.0																
138		5690	16.00	16.00	16.00	19.0																
802.11ax-HE160 MCS0	114	5570	13.50	13.50	13.50	16.5	86.33															



	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7					
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %			
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not required	16.00	Not required	Not required	Not required	16.00	Not required	16.00	Not required	16.00	Not required	19.0	85.66			
		157	5785		16.00												16.00	16.00	19.0
		165	5825		16.00												16.00	16.00	19.0
	802.11n-HT20 MCS0	149	5745		16.00											16.00	16.00	19.0	
		157	5785		16.00											16.00	16.00	19.0	
		165	5825		16.00											16.00	16.00	19.0	
	802.11n-HT40 MCS0	151	5755		16.00											16.00	16.00	19.0	
		159	5795		16.00											16.00	16.00	19.0	
	802.11ac-VHT20 MCS0	149	5745		16.00											16.00	16.00	19.0	
		157	5785		16.00											16.00	16.00	19.0	
	802.11ac-VHT40 MCS0	151	5755		16.00											16.00	16.00	19.0	
		159	5795		16.00											16.00	16.00	19.0	
	802.11ac-VHT80 MCS0	155	5775		16.00											16.00	16.00	19.0	
	802.11ax-HE20 MCS0	149	5745		16.00											16.00	16.00	19.0	
		157	5785		16.00											16.00	16.00	19.0	
		165	5825		16.00											16.00	16.00	19.0	
	802.11ax-HE40 MCS0	151	5755		16.00											16.00	16.00	19.0	
		159	5795		16.00											16.00	16.00	19.0	
802.11ax-HE80 MCS0	155	5775	16.00	16.00	16.00	19.0													

<WWAN on/off, non-DBS, DBS, Standard>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7				
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %		
WiFi 6E	802.11a 6Mbps	1	5955	Not required	15.00	Not required	Not required	15.00	Not required	15.00	Not required	15.00	Not required	18.0	85.66			
		57	6235		15.00											15.00	15.00	18.0
		173	6815		13.50											13.50	13.50	16.5
	802.11ax-HE20 MCS0	1	5955		15.00										15.00	15.00	18.0	
		57	6235		15.00										15.00	15.00	18.0	
		173	6815		13.50										13.50	13.50	16.5	
	802.11ax-HE40 MCS0	3	5965		15.00										15.00	15.00	18.0	
		59	6245		15.00										15.00	15.00	18.0	
		171	6805		13.50										13.50	13.50	16.5	
	802.11ax-HE80 MCS0	7	5985		15.00										15.00	15.00	18.0	
		71	6305		15.00										15.00	15.00	18.0	
		119	6545		10.50										10.50	10.50	13.5	
		167	6785		13.50										13.50	13.50	16.5	
		215	7025		10.00										10.00	10.00	13.0	
	802.11ax-HE160 MCS0	15	6025		15.00										15.00	15.00	18.0	
		47	6185		15.00										15.00	15.00	18.0	
		143	6665		13.50										13.50	13.50	16.5	



<WWAN on/off, non-DBS, DBS, Indoor>

	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7			ANT 6+7(6)		ANT 6+7(7)		Ant 6+7				
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %		
WIFI 6E	802.11a 6Mbps	1	5955	Not required	2.50	Not required	Not required	2.50	Not required	Not required	2.50	Not required	2.50	Not required	Not required	Not required	5.5	85.66
		57	6235		2.50			2.50			2.50		2.50				5.5	
		113	6515		2.50			2.50			2.50		2.50				5.5	
		173	6815		2.50			2.50			2.50		2.50				5.5	
		233	7115		2.50			2.50			2.50		2.50				5.5	
	802.11ax-HE20 MCS0	1	5955		5.50			5.50			5.50		5.50				8.5	87.10
		57	6235		6.00			6.00			6.00		6.00				9.0	
		113	6515		5.00			5.00			5.00		5.00				8.0	
		173	6815		6.00			6.00			6.00		6.00				9.0	
		233	7115		6.00			6.00			6.00		6.00				9.0	
	802.11ax-HE40 MCS0	3	5965		7.50			7.50			7.50		7.50				10.5	87.10
		59	6245		8.00			8.00			8.00		8.00				11.0	
		107	6485		8.00			8.00			8.00		8.00				11.0	
		171	6805		8.00			8.00			8.00		8.00				11.0	
		227	7085		7.50			7.50			7.50		7.50				10.5	
	802.11ax-HE80 MCS0	7	5985		10.00			10.00			10.00		10.00				13.0	87.17
		71	6305		10.50			10.50			10.50		10.50				13.5	
		119	6545		10.50			10.50			10.50		10.50				13.5	
		167	6785		10.50			10.50			10.50		10.50				13.5	
		215	7025		10.00			10.00			10.00		10.00				13.0	
802.11ax-HE160 MCS0	15	6025	13.00	13.00	13.00	13.00	16.0	86.67										
	47	6185	13.50	13.50	13.50	13.50	16.5											
	111	6505	13.00	13.00	13.00	13.00	16.0											
	143	6665	13.00	13.00	13.00	13.00	16.0											
	207	6985	13.50	13.50	13.50	13.50	16.5											



Bluetooth	Mode	Channel	Frequency (MHz)	Ant 6			Ant 7		
				Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %
Bluetooth	BR / EDR 1Mbps	0	2402	3.14	3.50	76.80	1.88	2.00	76.86
		39	2441	2.40	2.50		1.51	2.00	
		78	2480	3.19	3.50		1.77	2.00	
	BR / EDR 2Mbps	0	2402	3.27	3.50	76.97	2.40	2.50	76.80
		39	2441	3.08	3.50		1.94	2.50	
		78	2480	3.30	3.50		2.18	2.50	
	BR / EDR 3Mbps	0	2402	3.31	3.50	77.03	2.39	2.50	76.86
		39	2441	2.96	3.00		1.89	2.50	
		78	2480	3.52	4.00		2.12	2.50	
LE 1Mbps	0	2402	2.00	2.50	62.10	1.30	1.50	62.10	
	19	2440	1.10	1.50		0.10	0.50		
	39	2480	2.30	2.50		0.90	1.00		
LE 2Mbps	0	2402	2.10	2.50	32.70	1.20	1.50	32.70	
	19	2440	1.10	1.50		0.00	0.50		
	39	2480	2.20	2.50		0.80	1.00		

General Note:

- For 2.4GHz Bluetooth SAR testing was selected BR/EDR 3Mbps due to its highest average power and duty cycle is 76.8% and 76.86% considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation.

