4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	15972	16183
Channel Y	15900	16376
Channel Z	16167	15841

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	1.19	0.18	2.38	0.46
Channel Y	0.15	-1.39	1.24	0.47
Channel Z	0.36	-1.22	1.42	0.42

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
www.speag.swiss, info@speag.swiss

1226

Tejet (Sporton) SZ

IMPORTANT NOTICE

USAGE OF THE DAE4

The DAE unit is a delicate, high precision instrument and requires careful treatment by the user. There are no serviceable parts inside the DAE. Special attention shall be given to the following points:

Battery Exchange: The battery cover of the DAE4 unit is fixed using a screw, over tightening the screw may cause the threads inside the DAE to wear out.

Shipping of the DAE: Before shipping the DAE to SPEAG for calibration, remove the batteries and pack the DAE in an antistatic bag. This antistatic bag shall then be packed into a larger box or container which protects the DAE from impacts during transportation. The package shall be marked to indicate that a fragile instrument is inside.

E-Stop Failures: Touch detection may be malfunctioning due to broken magnets in the E-stop. Rough handling of the E-stop may lead to damage of these magnets. Touch and collision errors are often caused by dust and dirt accumulated in the E-stop. To prevent E-stop failure, the customer shall always mount the probe to the DAE carefully and keep the DAE unit in a non-dusty environment if not used for measurements.

Repair: Minor repairs are performed at no extra cost during the annual calibration. However, SPEAG reserves the right to charge for any repair especially if rough unprofessional handling caused the defect.

DASY Configuration Files: Since the exact values of the DAE input resistances, as measured during the calibration procedure of a DAE unit, are not used by the DASY software, a nominal value of 200 MOhm is given in the corresponding configuration file.

Important Note:
Warranty and calibration is void if the DAE unit is disassembled partly or fully by the Customer.

Important Note:
Never attempt to grease or oil the E-stop assembly. Cleaning and readjusting of the E-stop assembly is allowed by certified SPEAG personnel only and is part of the annual calibration procedure.

Important Note:
To prevent damage of the DAE probe connector pins, use great care when installing the probe to the DAE. Carefully connect the probe with the connector notch oriented in the mating position. Avoid any rotational movement of the probe body versus the DAE while turning the locking nut of the connector. The same care shall be used when disconnecting the probe from the DAE.

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Accreditation No.: SCS 0108

Client Tejet (Auden)

Certificate No: DAE4-1226_May20

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BM - SN: 1226
Calibration procedure(s)	QA CAL-06.v30 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	May 15, 2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	03-Sep-19 (No:25949)	Sep-20
Secondary Standards	**ID #**	**Check Date (in house)**	**Scheduled Check**
Auto DAE Calibration Unit	SE UWS 053 AA 1001	09-Jan-20 (in house check)	In house check: Jan-21
Calibrator Box V2.1	SE UMS 006 AA 1002	09-Jan-20 (in house check)	In house check: Jan-21

	Name	Function	Signature
Calibrated by:	Eric Hainfeld	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: May 15, 2020

Glossary

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.
  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.
  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage
  - *Input Offset Measurement*: Output voltage and statistical results over a large number of zero voltage measurements.
  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.
  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1μV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.644 ± 0.02% (k=2)	404.410 ± 0.02% (k=2)	404.128 ± 0.02% (k=2)
Low Range	3.98010 ± 1.50% (k=2)	4.00441 ± 1.50% (k=2)	3.98517 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	283.5 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	200036.25	2.48	0.00
Channel X	+ Input	20007.54	2.38	0.01
Channel X	- Input	-20005.86	0.51	-0.00
Channel Y	+ Input	200033.61	-0.21	-0.00
Channel Y	+ Input	20003.31	-1.72	-0.01
Channel Y	- Input	-20007.95	-1.52	0.01
Channel Z	+ Input	200035.07	1.43	0.00
Channel Z	+ Input	20004.81	-0.10	-0.00
Channel Z	- Input	-20007.44	-1.01	0.01

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2000.93	0.16	0.01
Channel X	+ Input	200.14	-0.66	-0.33
Channel X	- Input	-199.83	-0.71	0.36
Channel Y	+ Input	2000.72	0.15	0.01
Channel Y	+ Input	199.44	-1.19	-0.59
Channel Y	- Input	-200.55	-1.29	0.65
Channel Z	+ Input	2000.71	0.18	0.01
Channel Z	+ Input	200.02	-0.61	-0.31
Channel Z	- Input	-199.97	-0.66	0.33

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	5.07	2.90
	- 200	-2.74	-4.97
Channel Y	200	-8.89	-9.14
	- 200	7.09	6.94
Channel Z	200	-7.29	-7.53
	- 200	5.53	5.89

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	2.16	-3.66
Channel Y	200	8.16	-	3.69
Channel Z	200	9.32	5.65	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16032	12468
Channel Y	15897	17438
Channel Z	16001	15611

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	-0.38	-1.14	0.42	0.38
Channel Y	-0.09	-1.14	0.85	0.39
Channel Z	-0.31	-1.86	1.00	0.41

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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Accreditation No.: SCS 0108

Client **Sporton**

Certificate No: EX3-3819_Apr20

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3819

Calibration procedure(s) QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: April 30, 2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: CC2552 (20x)	31-Mar-20 (No. 217-03106)	Apr-21
DAE4	SN: 660	27-Dec-19 (No. DAE4-660_Dec19)	Dec-20
Reference Probe ES3DV2	SN: 3013	31-Dec-19 (No. ES3-3013_Dec19)	Dec-20
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 30, 2020

Calibration Laboratory of
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Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accreditation No.: **SCS 0108**

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z*: Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z*: *A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3819

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.46	0.41	0.46	± 10.1 %
DCP (mV)[B]	104.6	101.5	102.0	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	156.7	± 3.5 %	± 4.7 %
		Y	0.0	0.0	1.0		148.5		
		Z	0.0	0.0	1.0		139.2		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 5).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3819

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	113.9
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3819

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	41.9	0.89	9.64	9.64	9.64	0.52	0.80	± 12.0 %
835	41.5	0.90	9.39	9.39	9.39	0.50	0.80	± 12.0 %
900	41.5	0.97	9.26	9.26	9.26	0.39	0.96	± 12.0 %
1750	40.1	1.37	8.43	8.43	8.43	0.34	0.80	± 12.0 %
1900	40.0	1.40	8.10	8.10	8.10	0.37	0.80	± 12.0 %
2000	40.0	1.40	7.95	7.95	7.95	0.30	0.88	± 12.0 %
2300	39.5	1.67	7.66	7.66	7.66	0.32	0.90	± 12.0 %
2450	39.2	1.80	7.42	7.42	7.42	0.38	0.90	± 12.0 %
2600	39.0	1.96	7.22	7.22	7.22	0.38	0.90	± 12.0 %
3300	38.2	2.71	6.91	6.91	6.91	0.20	1.20	± 14.0 %
3500	37.9	2.91	6.84	6.84	6.84	0.25	1.20	± 14.0 %
3700	37.7	3.12	6.75	6.75	6.75	0.25	1.25	± 14.0 %
3900	37.5	3.32	6.40	6.40	6.40	0.30	1.60	± 14.0 %
4100	37.2	3.53	6.39	6.39	6.39	0.30	1.60	± 14.0 %
4400	36.9	3.84	6.07	6.07	6.07	0.30	1.60	± 14.0 %
4600	36.7	4.04	5.98	5.98	5.98	0.30	1.70	± 14.0 %
4800	36.4	4.25	5.88	5.88	5.88	0.45	1.80	± 14.0 %
4950	36.3	4.40	5.72	5.72	5.72	0.45	1.80	± 14.0 %
5250	35.9	4.71	5.02	5.02	5.02	0.40	1.80	± 14.0 %
5600	35.5	5.07	4.56	4.56	4.56	0.40	1.80	± 14.0 %
5750	35.4	5.22	4.63	4.63	4.63	0.40	1.80	± 14.0 %

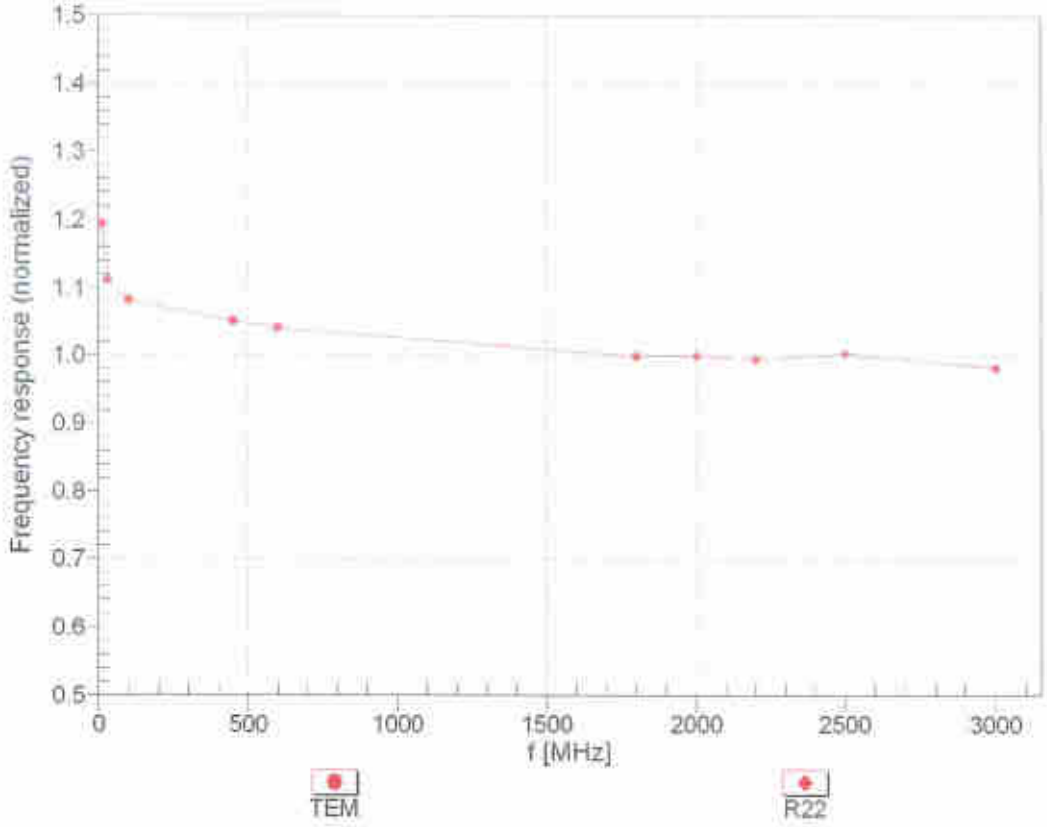
[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies up to 6 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)

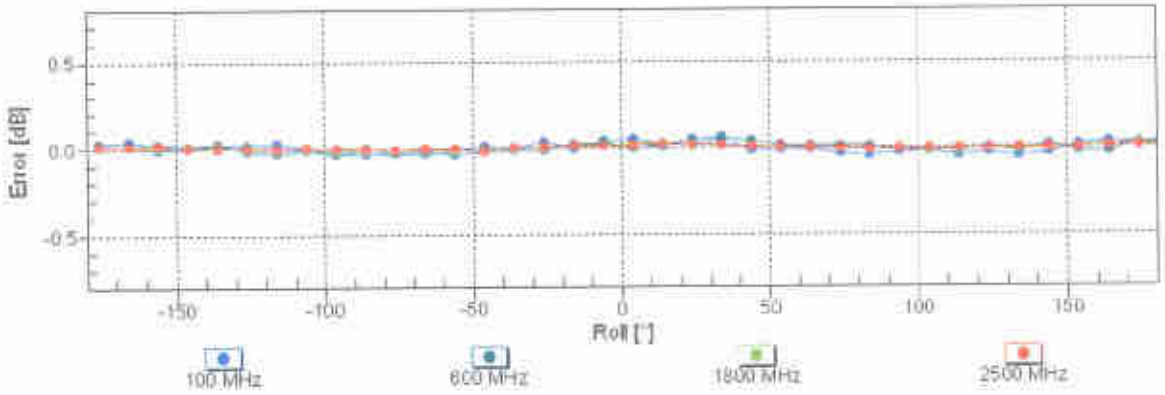


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°

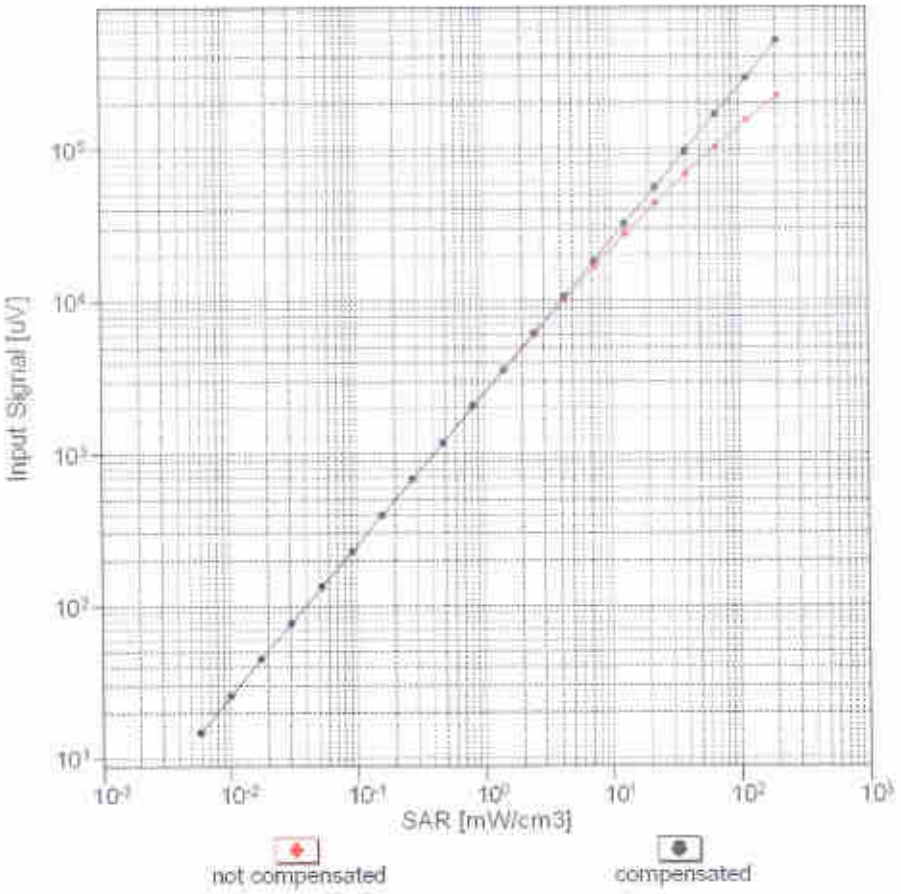
f=600 MHz,TEM

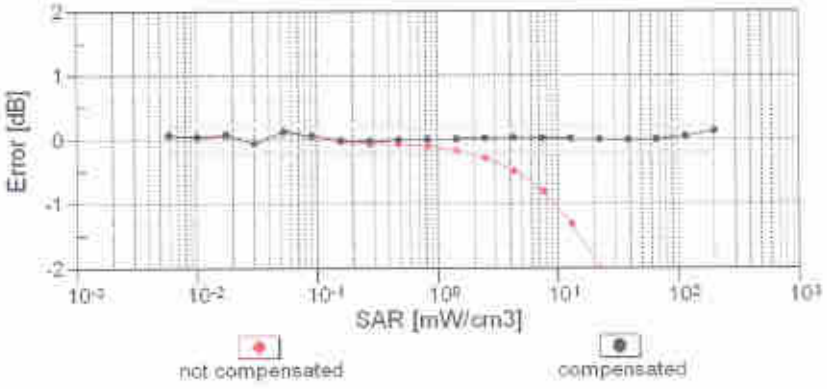
f=1800 MHz,R22



Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR$_{head}$)
(TEM cell , f_{eval}= 1900 MHz)

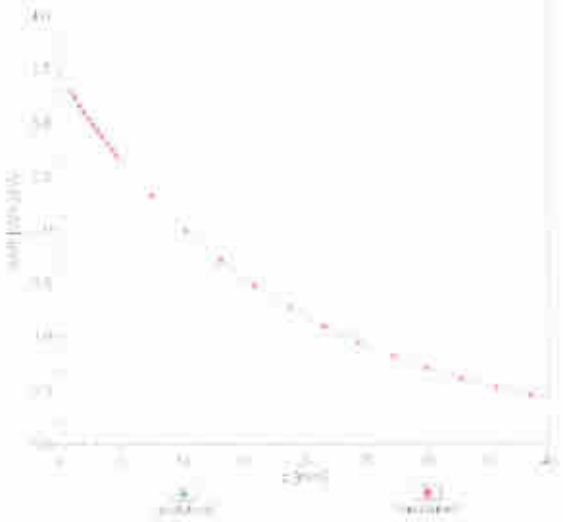




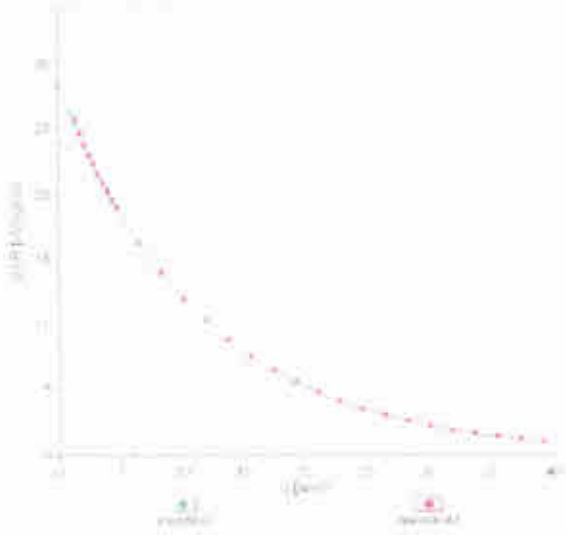
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

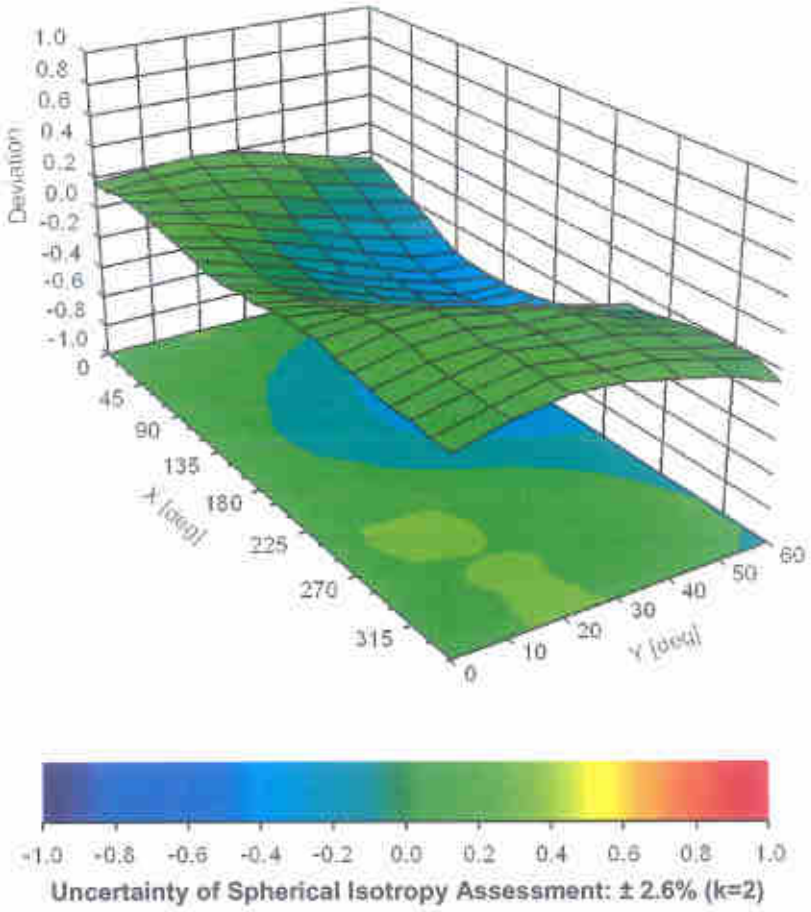


f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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Schmid & Partner
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Accreditation No.: SCS 0108

Client Sporton

Certificate No: EX3-7576_Jan20

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:7576

Calibration procedure(s): QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: January 22, 2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
DAE4	SN: 660	27-Dec-19 (No. DAE4-660_Dec19)	Dec-20
Reference Probe ES3DV2	SN: 3013	31-Dec-19 (No. ES3-3013_Dec19)	Dec-20
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 25, 2020

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z*: Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z*: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR*: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z*: *A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters*: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7576

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.48	0.63	0.63	± 10.1 %
DCP (mV)[B]	103.8	99.8	103.6	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	164.4	± 2.7 %	± 4.7 %
		Y	0.0	0.0	1.0		161.8		
		Z	0.0	0.0	1.0		164.7		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 5).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7576

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	112.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7576

Calibration Parameter Determined in Head Tissue Simulating Media

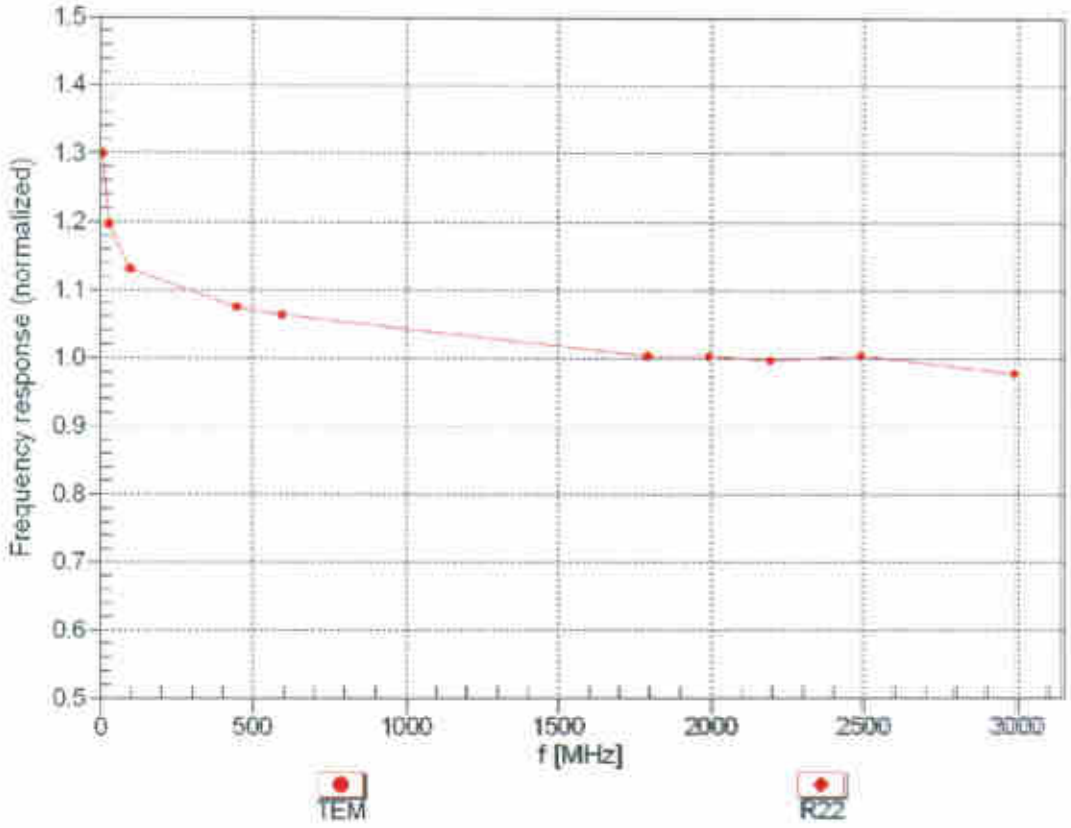
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	41.9	0.89	10.71	10.71	10.71	0.62	0.80	± 12.0 %
835	41.5	0.90	10.45	10.45	10.45	0.46	0.94	± 12.0 %
900	41.5	0.97	10.16	10.16	10.16	0.33	1.09	± 12.0 %
1750	40.1	1.37	8.88	8.88	8.88	0.42	0.86	± 12.0 %
1900	40.0	1.40	8.58	8.58	8.58	0.38	0.86	± 12.0 %
2000	40.0	1.40	8.48	8.48	8.48	0.39	0.86	± 12.0 %
2300	39.5	1.67	8.03	8.03	8.03	0.41	0.90	± 12.0 %
2450	39.2	1.80	7.76	7.76	7.76	0.44	0.90	± 12.0 %
2600	39.0	1.96	7.47	7.47	7.47	0.41	0.96	± 12.0 %
3300	38.2	2.71	7.08	7.08	7.08	0.30	1.35	± 14.0 %
3500	37.9	2.91	6.77	6.77	6.77	0.30	1.35	± 14.0 %
3700	37.7	3.12	6.74	6.74	6.74	0.30	1.35	± 14.0 %
3900	37.5	3.32	6.56	6.56	6.56	0.40	1.40	± 14.0 %
4100	37.2	3.53	6.26	6.26	6.26	0.40	1.40	± 14.0 %
4400	36.9	3.84	6.19	6.19	6.19	0.40	1.60	± 14.0 %
4600	36.7	4.04	6.06	6.06	6.06	0.40	1.60	± 14.0 %
4800	36.4	4.25	5.89	5.89	5.89	0.40	1.80	± 14.0 %
4950	36.3	4.40	5.59	5.59	5.59	0.40	1.80	± 14.0 %
5250	35.9	4.71	5.20	5.20	5.20	0.40	1.80	± 14.0 %
5600	35.5	5.07	4.62	4.62	4.62	0.40	1.80	± 14.0 %
5750	35.4	5.22	4.83	4.83	4.83	0.40	1.80	± 14.0 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies up to 6 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

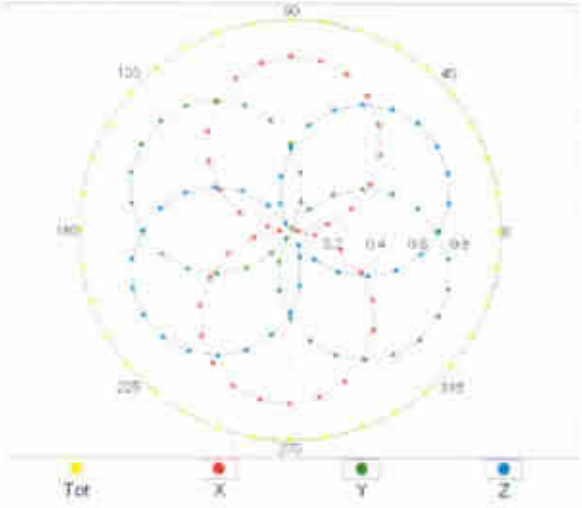
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



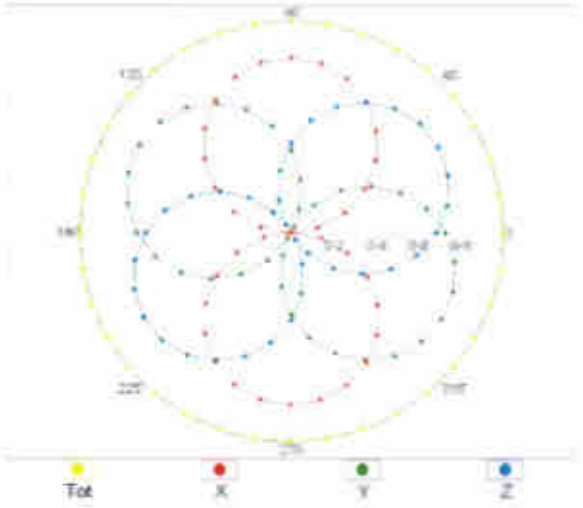
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

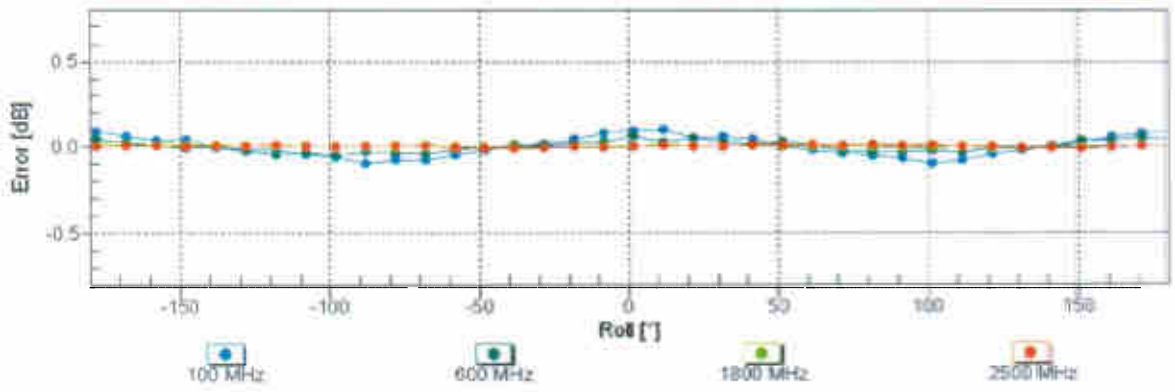
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



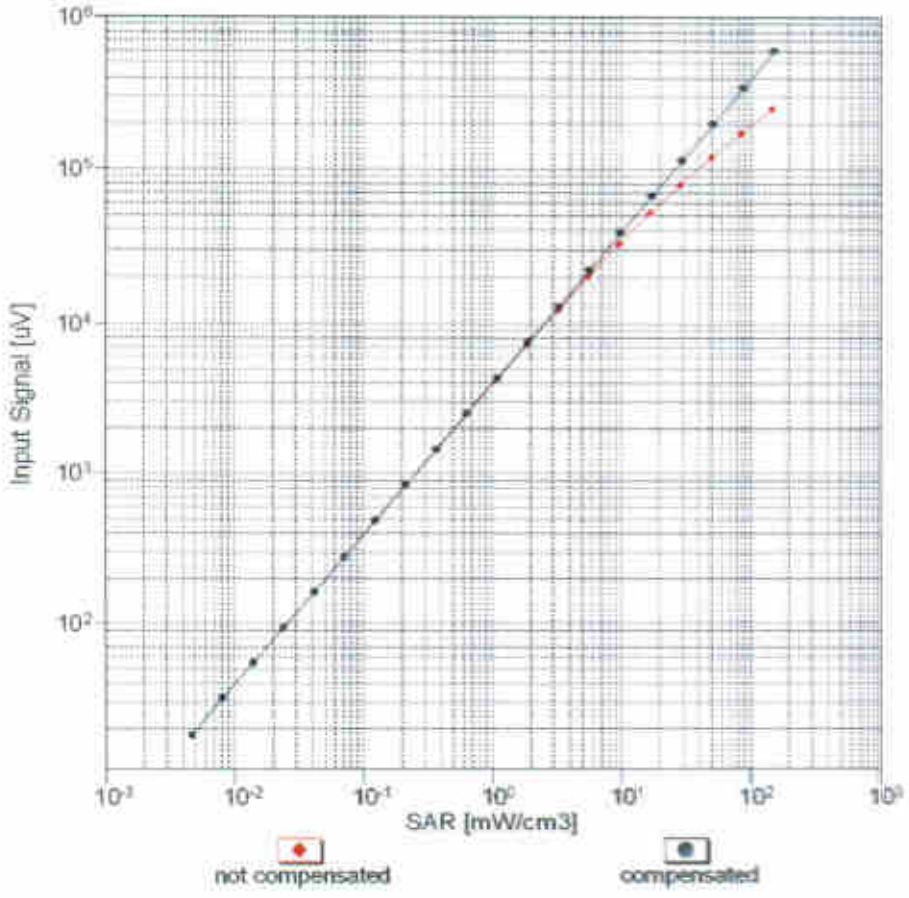
f=1800 MHz,R22

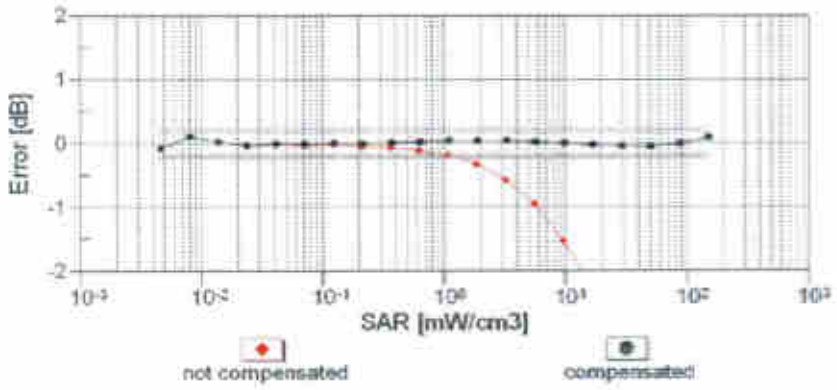




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR$_{head}$)
(TEM cell , f_{eval}= 1900 MHz)

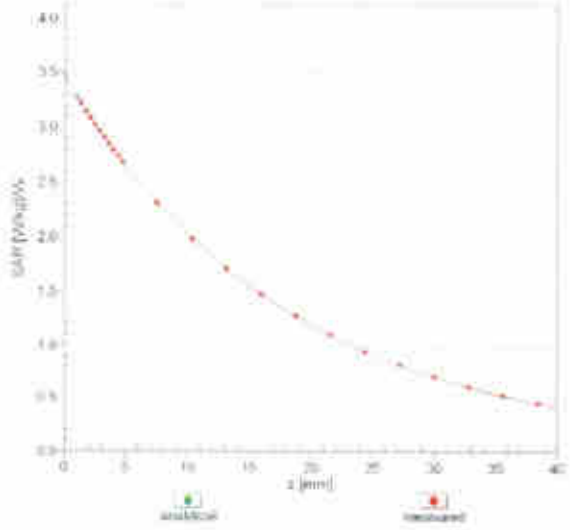




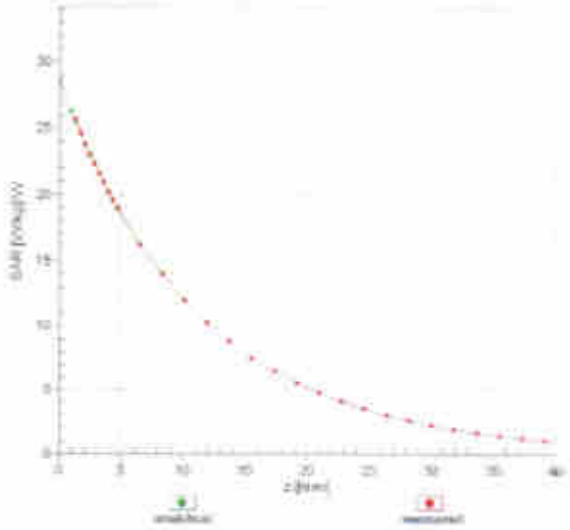
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

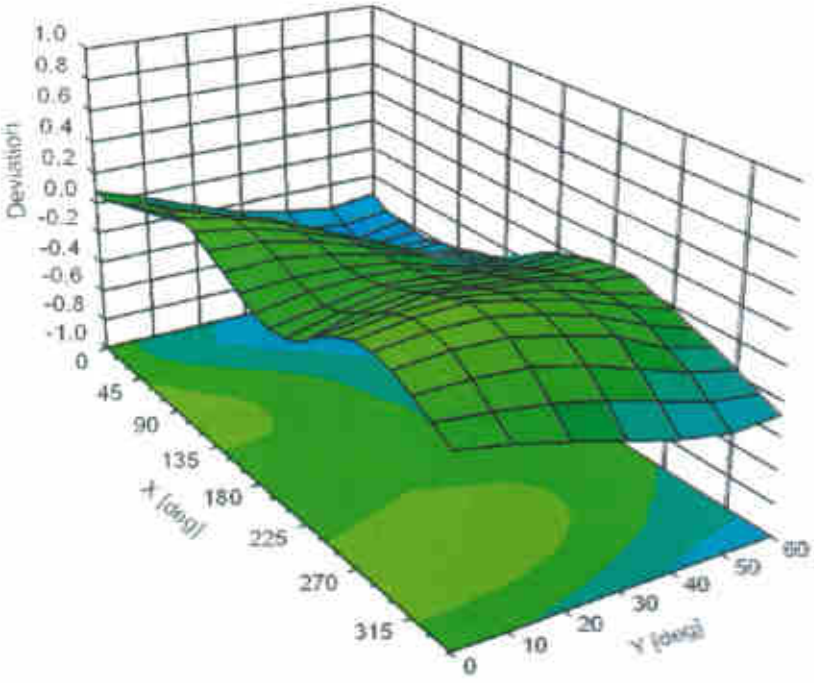


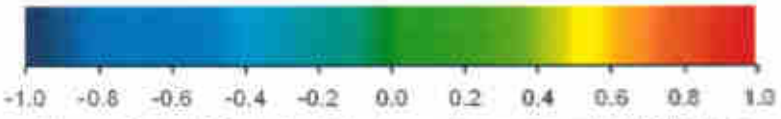
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2

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CALIBRATION LABORATORY

Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

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CALIBRATION
CNAS L0570

Client **Auden** **Certificate No: Z20-60166**

CALIBRATION CERTIFICAT

Object EX3DV4 - SN : 3826

Calibration Procedure(s) FF-Z11-004-01
Calibration Procedures for Dosimetric E-field Probes

Calibration date: May 20, 2020

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Power sensor NRP-Z91	101547	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Power sensor NRP-Z91	101548	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 3617	30-Jan-20(SPEAG, No.EX3-3617_Jan20/2)	Jan-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	18-Jun-19(CTTL, No.J19X05127)	Jun-20
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: May 22, 2020

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CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z; VRx,y,z:* A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

DASY/EASY – Parameters of Probe: EX3DV4 – SN:3826

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.48	0.41	0.36	±10.0%
DCP(mV)[B]	100.2	99.8	103.2	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	160.2	±2.7%
		Y	0.0	0.0	1.0		141.6	
		Z	0.0	0.0	1.0		130.8	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor *k*=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X, Y, Z do not affect the E^2-field uncertainty inside TSL (see Page 4).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

DASY/EASY – Parameters of Probe: EX3DV4 – SN:3826

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
750	41.9	0.89	9.37	9.37	9.37	0.40	0.80	±12.1%
835	41.5	0.90	9.12	9.12	9.12	0.17	1.26	±12.1%
900	41.5	0.97	9.10	9.10	9.10	0.18	1.30	±12.1%
1750	40.1	1.37	7.98	7.98	7.98	0.19	1.14	±12.1%
1900	40.0	1.40	7.67	7.67	7.67	0.22	1.14	±12.1%
2000	40.0	1.40	7.77	7.77	7.77	0.24	1.10	±12.1%
2300	39.5	1.67	7.35	7.35	7.35	0.51	0.73	±12.1%
2450	39.2	1.80	7.12	7.12	7.12	0.53	0.72	±12.1%
2600	39.0	1.96	6.94	6.94	6.94	0.45	0.85	±12.1%
3500	37.9	2.91	6.62	6.62	6.62	0.39	0.98	±13.3%
5250	35.9	4.71	5.09	5.09	5.09	0.45	1.30	±13.3%
5600	35.5	5.07	4.66	4.66	4.66	0.45	1.40	±13.3%
5750	35.4	5.22	4.68	4.68	4.68	0.45	1.40	±13.3%

[C] Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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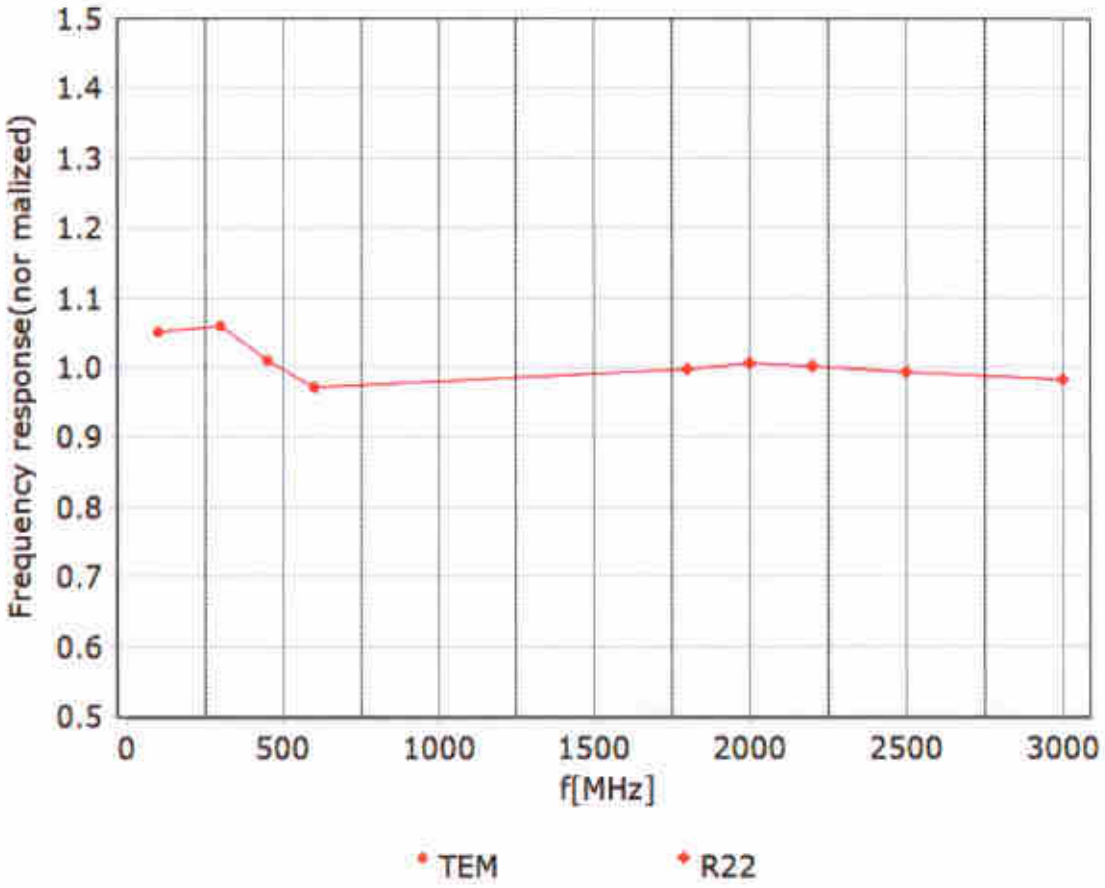
CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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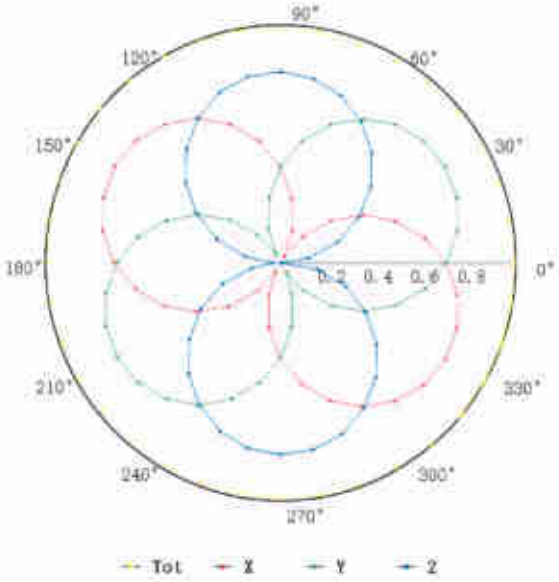
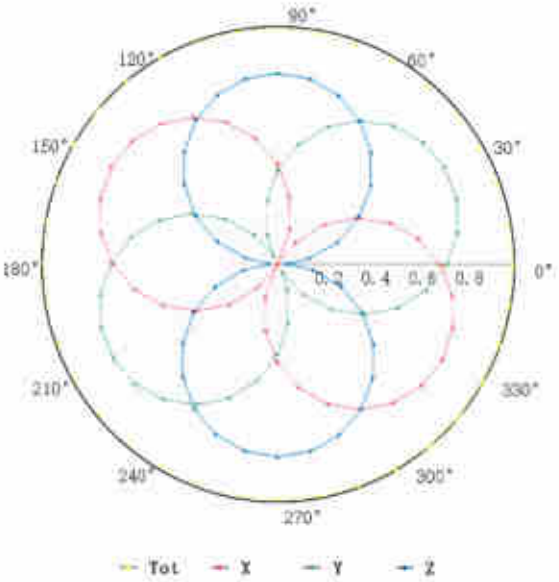
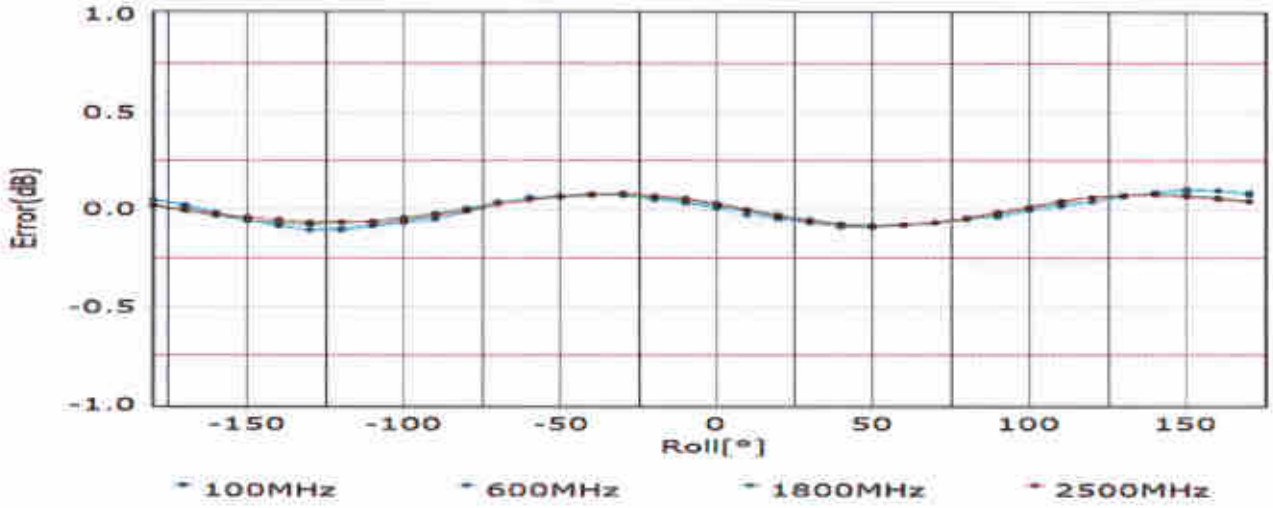
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±1.2% (*k*=2)

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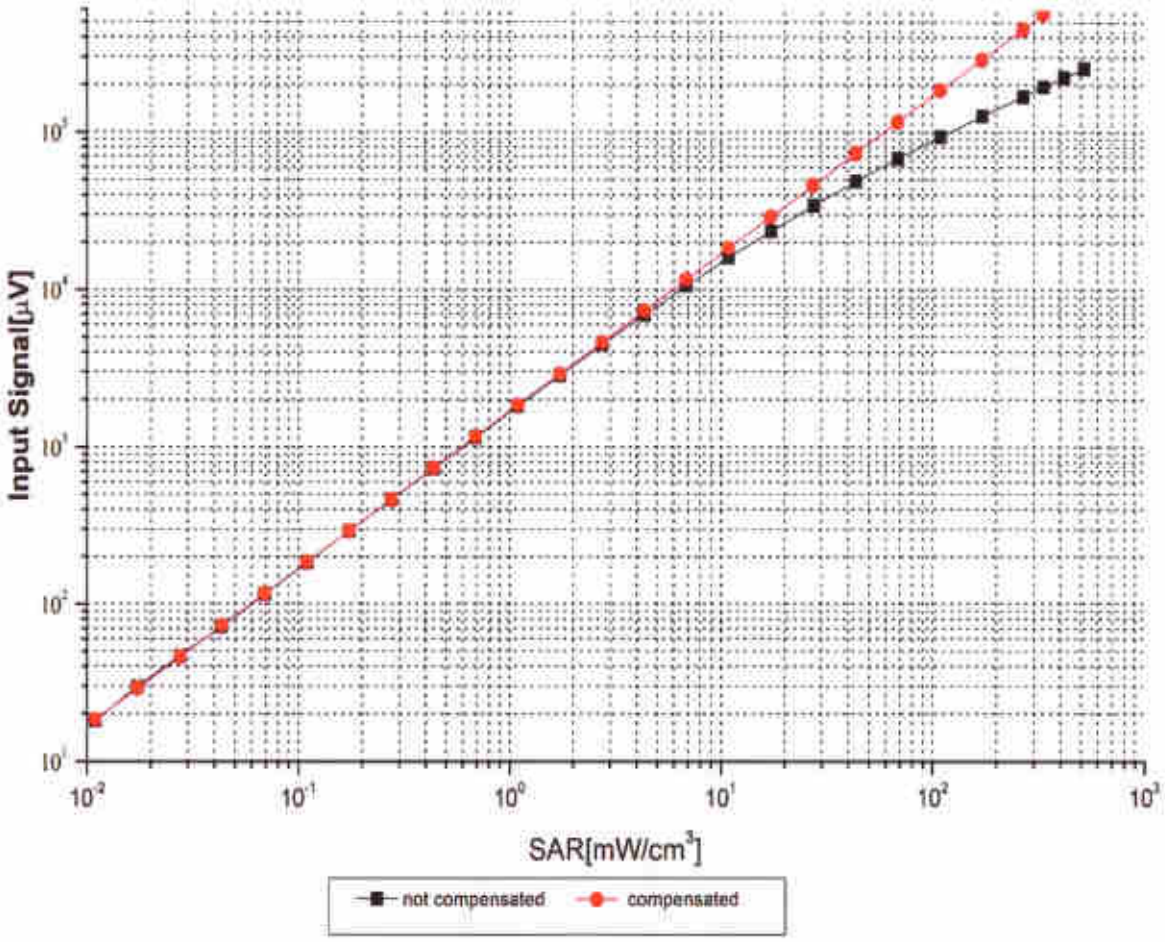
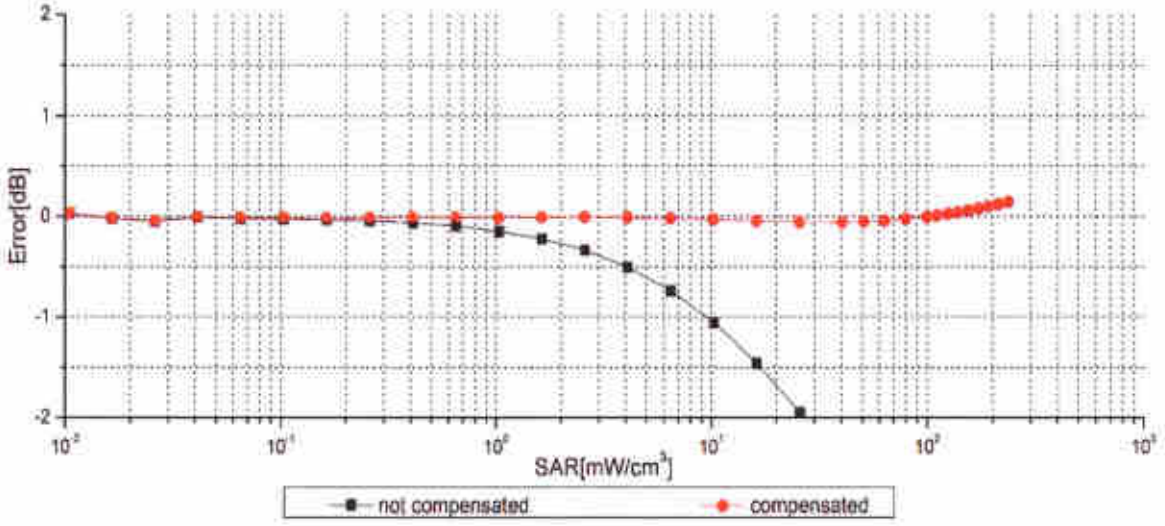
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)





Uncertainty of Linearity Assessment: ±0.9% (*k*=2)

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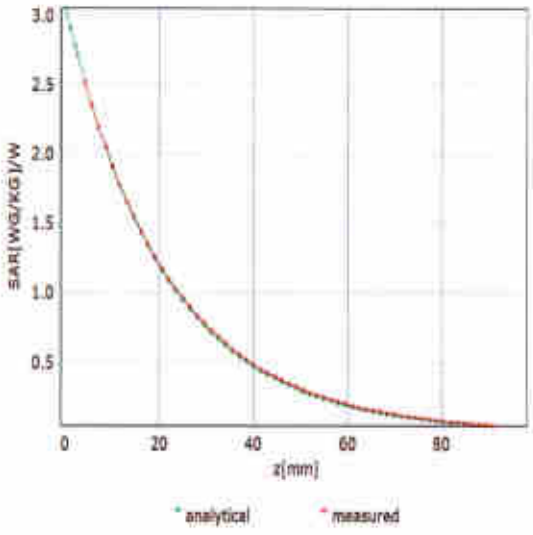
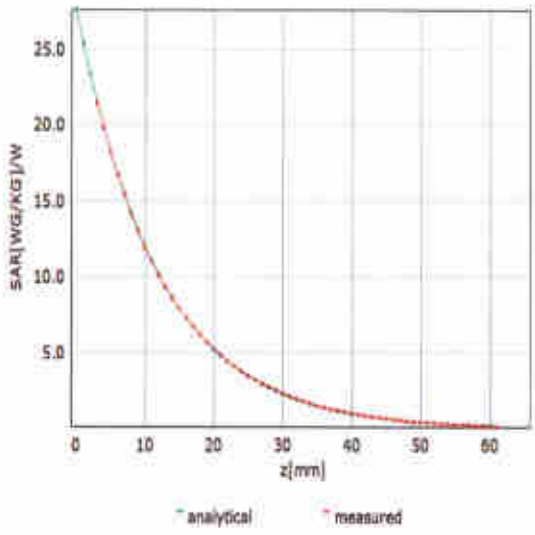
Conversion Factor Assessment

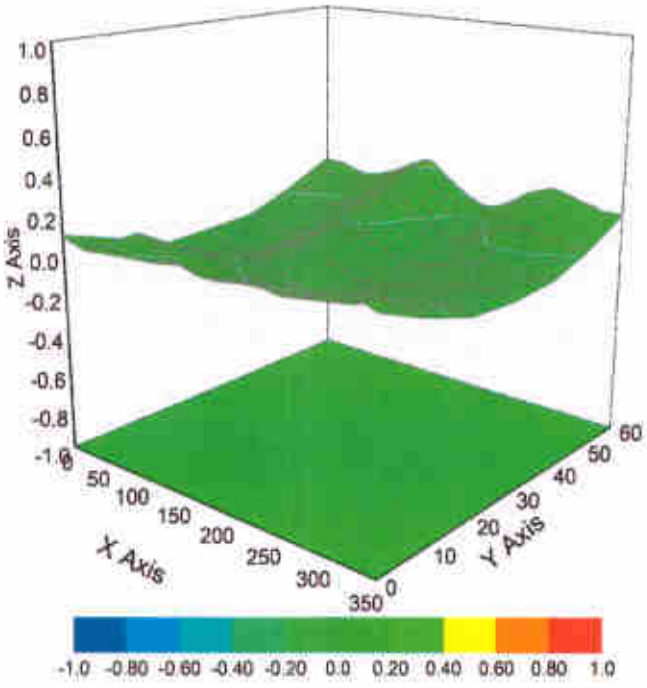
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±3.2% (*k*=2)

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3826

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	51.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	10mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

Appendix E. Conducted RF Output Power Table

The detailed power table are shown as follows.

Full Power

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot	32.16	32.29	32.32	33.50	23.16	23.29	23.32	24.50
GPRS 1 Tx slot	32.15	32.27	32.31	33.50	23.15	23.27	23.31	24.50
GPRS 2 Tx slots	30.32	30.40	30.02	31.50	24.32	24.40	24.02	25.50
GPRS 3 Tx slots	27.98	28.03	27.81	29.00	23.70	23.77	23.55	24.74
GPRS 4 Tx slots	25.72	25.73	25.55	26.50	22.72	22.73	22.55	23.50
EDGE 1 Tx slot	26.51	26.34	26.24	27.50	17.51	17.34	17.24	18.50
EDGE 2 Tx slots	24.36	24.31	24.22	25.50	18.36	18.31	18.22	19.50
EDGE 3 Tx slots	22.14	22.13	22.07	23.00	17.88	17.87	17.81	18.74
EDGE 4 Tx slots	20.03	20.09	19.94	21.00	17.03	17.09	16.94	18.00

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	29.76	29.77	29.53	30.50	20.76	20.77	20.53	21.50
GPRS 1 Tx slot	29.74	29.72	29.47	30.50	20.74	20.72	20.47	21.50
GPRS 2 Tx slots	27.75	27.82	27.71	29.00	21.75	21.82	21.71	23.00
GPRS 3 Tx slots	25.44	25.41	25.53	26.50	21.18	21.15	21.27	22.24
GPRS 4 Tx slots	23.44	23.47	23.42	24.50	20.44	20.47	20.42	21.50
EDGE 1 Tx slot	25.46	25.58	25.32	26.50	16.46	16.58	16.32	17.50
EDGE 2 Tx slots	23.29	23.52	23.38	24.50	17.29	17.52	17.38	18.50
EDGE 3 Tx slots	21.24	21.18	21.13	22.00	16.98	16.92	16.87	17.74
EDGE 4 Tx slots	19.81	19.71	19.68	21.00	16.81	16.71	16.68	18.00

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			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	AMR 12.2Kbps	23.00	23.04	22.96	24.00	22.64	22.56	22.73	24.00	23.01	23.00	23.22	24.00
3GPP Rel 99	RMC 12.2Kbps	23.01	23.05	22.99	24.00	22.75	22.58	22.79	24.00	23.02	23.03	23.29	24.00
3GPP Rel 6	HSDPA Subtest-1	22.08	22.04	21.97	23.00	22.02	21.99	22.16	23.00	22.09	22.07	22.26	23.00
3GPP Rel 6	HSDPA Subtest-2	22.06	22.06	22.02	23.00	22.05	22.06	22.18	23.00	22.08	22.12	22.29	23.00
3GPP Rel 6	HSDPA Subtest-3	21.21	21.55	21.47	22.50	21.57	21.52	21.78	22.50	21.60	21.58	21.82	22.50
3GPP Rel 6	HSDPA Subtest-4	21.54	21.57	21.52	22.50	21.46	21.56	21.21	22.50	21.56	21.61	21.39	22.50
3GPP Rel 8	DC-HSDPA Subtest-1	21.92	21.97	21.80	23.00	21.94	21.99	22.09	23.00	22.02	21.87	22.13	23.00
3GPP Rel 8	DC-HSDPA Subtest-2	21.99	21.87	21.99	23.00	21.99	22.03	22.08	23.00	21.99	21.93	22.26	23.00
3GPP Rel 8	DC-HSDPA Subtest-3	21.09	21.47	21.43	22.50	21.57	21.40	21.74	22.50	21.57	21.42	21.76	22.50
3GPP Rel 8	DC-HSDPA Subtest-4	21.53	21.53	21.42	22.50	21.26	21.51	21.20	22.50	21.36	21.47	21.20	22.50
3GPP Rel 6	HSUPA Subtest-1	22.06	22.07	22.02	23.00	21.99	22.06	21.84	23.00	22.03	22.03	22.17	23.00
3GPP Rel 6	HSUPA Subtest-2	20.05	20.06	20.05	21.00	19.87	19.86	19.89	21.00	19.97	20.02	20.13	21.00
3GPP Rel 6	HSUPA Subtest-3	21.07	21.04	20.99	22.00	20.96	20.99	20.99	22.00	21.01	21.01	21.20	22.00
3GPP Rel 6	HSUPA Subtest-4	20.08	20.03	19.98	21.00	19.98	20.00	19.89	21.00	19.99	20.00	20.18	21.00
3GPP Rel 6	HSUPA Subtest-5	22.10	22.10	22.00	23.00	22.00	22.00	22.10	23.00	22.00	22.00	22.20	23.00

Band	CDMA BC0			Tune-up Limit (dBm)	CDMA BC1			Tune-up Limit (dBm)	CDMA BC10			Tune-up Limit (dBm)
TX Channel	1013	384	777		25	600	1175		476	580	684	
Frequency (MHz)	824.7	836.52	848.31		1851.25	1880	1908.75		817.9	820.5	823.1	
RC1 SO55	24.13	24.23	24.54	25.00	24.32	24.55	24.36	25.00	23.90	24.28	24.22	25.00
RC3 SO55	24.10	24.19	24.50	25.00	24.23	24.44	24.26	25.00	23.65	24.11	24.02	25.00
RC3 SO32 (F+SCH)	24.14	24.24	24.53	25.00	24.44	24.52	24.35	25.00	24.25	24.27	24.18	25.00
RC3 SO32 (+SCH)	24.08	24.15	24.47	25.00	24.42	24.39	24.22	25.00	24.01	24.24	24.11	25.00
RTAP 153.6Kbps	23.85	23.94	24.25	25.00	23.72	23.81	23.69	25.00	24.12	24.14	24.08	25.00
RETAP 4096Bits	23.79	23.86	24.11	25.00	23.74	23.74	23.62	25.00	24.01	24.11	24.07	25.00

Band 2 (1900MHz Band)
Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.94	22.91	22.84		
20	QPSK	1	49	22.57	22.59	22.64	24	0
20	QPSK	1	99	22.47	22.55	22.48		
20	QPSK	50	0	21.96	21.93	21.90		
20	QPSK	50	24	21.80	21.84	21.86	23	1
20	QPSK	50	50	21.64	21.77	21.73		
20	QPSK	100	0	21.84	21.81	21.82		
20	16QAM	1	0	22.12	22.11	22.12		
20	16QAM	1	49	22.03	22.11	22.08	23	1
20	16QAM	1	99	21.78	21.88	21.79		
20	16QAM	50	0	20.94	20.96	20.88		
20	16QAM	50	24	20.83	20.85	20.87	22	2
20	16QAM	50	50	20.60	20.76	20.74		
20	16QAM	100	0	20.75	20.79	20.80		
20	64QAM	1	0	21.10	20.99	20.94		
20	64QAM	1	49	20.98	20.94	20.85	22	2
20	64QAM	1	99	20.74	20.75	20.69		
20	64QAM	50	0	19.92	19.94	19.86		
20	64QAM	50	24	19.79	19.85	19.85	21	3
20	64QAM	50	50	19.59	19.74	19.70		
20	64QAM	100	0	19.74	19.79	19.80		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.84	22.88	22.84		
15	QPSK	1	37	22.51	22.57	22.44	24	0
15	QPSK	1	74	22.39	22.47	22.48		
15	QPSK	36	0	21.92	21.80	21.90		
15	QPSK	36	20	21.75	21.64	21.83	23	1
15	QPSK	36	39	21.64	21.66	21.71		
15	QPSK	75	0	21.71	21.69	21.68		
15	16QAM	1	0	22.01	22.01	22.02		
15	16QAM	1	37	21.93	22.02	21.96	23	1
15	16QAM	1	74	21.70	21.77	21.77		
15	16QAM	36	0	20.85	20.92	20.70		
15	16QAM	36	20	20.70	20.73	20.87	22	2
15	16QAM	36	39	20.51	20.70	20.69		
15	16QAM	75	0	20.55	20.60	20.79		
15	64QAM	1	0	20.98	20.82	20.76		
15	64QAM	1	37	20.94	20.79	20.84	22	2
15	64QAM	1	74	20.66	20.72	20.57		
15	64QAM	36	0	19.81	19.89	19.85		
15	64QAM	36	20	19.75	19.65	19.76	21	3
15	64QAM	36	39	19.47	19.60	19.52		
15	64QAM	75	0	19.59	19.72	19.64		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.81	22.76	22.69		
10	QPSK	1	25	22.38	22.47	22.57	24	0
10	QPSK	1	49	22.40	22.52	22.39		
10	QPSK	25	0	21.79	21.96	21.86		
10	QPSK	25	12	21.63	21.71	21.69	23	1
10	QPSK	25	25	21.57	21.74	21.53		
10	QPSK	50	0	21.76	21.63	21.73		
10	16QAM	1	0	21.96	22.05	22.01		
10	16QAM	1	25	21.97	22.08	21.92	23	1
10	16QAM	1	49	21.70	21.75	21.72		
10	16QAM	25	0	20.91	20.94	20.78		
10	16QAM	25	12	20.81	20.73	20.79	22	2
10	16QAM	25	25	20.42	20.67	20.65		
10	16QAM	50	0	20.62	20.66	20.71		
10	64QAM	1	0	20.95	20.98	20.90		
10	64QAM	1	25	20.79	20.88	20.67	22	2
10	64QAM	1	49	20.73	20.67	20.59		
10	64QAM	25	0	19.92	19.91	19.78		
10	64QAM	25	12	19.62	19.77	19.81	21	3
10	64QAM	25	25	19.49	19.68	19.66		
10	64QAM	50	0	19.60	19.61	19.80		
Channel				18825	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.78	22.83	22.74		
5	QPSK	1	12	22.37	22.41	22.59	24	0
5	QPSK	1	24	22.46	22.35	22.33		
5	QPSK	12	0	21.76	21.80	21.84		
5	QPSK	12	7	21.80	21.64	21.75	23	1
5	QPSK	12	13	21.58	21.72	21.73		
5	QPSK	25	0	21.73	21.81	21.65		
5	16QAM	1	0	22.03	21.97	22.12		
5	16QAM	1	12	22.03	22.11	22.04	23	1
5	16QAM	1	24	21.71	21.86	21.79		
5	16QAM	12	0	20.92	20.95	20.73		
5	16QAM	12	7	20.63	20.79	20.80	22	2
5	16QAM	12	13	20.40	20.62	20.60		
5	16QAM	25	0	20.65	20.69	20.65		
5	64QAM	1	0	21.02	20.94	20.87		
5	64QAM	1	12	20.87	20.75	20.83	22	2
5	64QAM	1	24	20.61	20.61	20.53		
5	64QAM	12	0	19.90	19.88	19.68		
5	64QAM	12	7	19.76	19.85	19.85	21	3
5	64QAM	12	13	19.57	19.55	19.56		
5	64QAM	25	0	19.66	19.73	19.70		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	22.91	22.91	22.81		
3	QPSK	1	8	22.49	22.47	22.64	24	0
3	QPSK	1	14	22.37	22.45	22.44		
3	QPSK	8	0	21.92	21.87	21.84		
3	QPSK	8	4	21.64	21.68	21.67	23	1
3	QPSK	8	7	21.45	21.70	21.73		
3	QPSK	15	0	21.71	21.81	21.69		
3	16QAM	1	0	22.06	21.91	22.00		
3	16QAM	1	8	21.93	22.08	22.07	23	1
3	16QAM	1	14	21.75	21.77	21.62		
3	16QAM	8	0	20.80	20.81	20.85		
3	16QAM	8	4	20.82	20.78	20.78	22	2
3	16QAM	8	7	20.46	20.74	20.55		
3	16QAM	15	0	20.65	20.70	20.77		
3	64QAM	1	0	21.02	20.91	20.85		
3	64QAM	1	8	20.96	20.87	20.65	22	2
3	64QAM	1	14	20.59	20.59	20.58		
3	64QAM	8	0	19.80	19.78	19.80		
3	64QAM	8	4	19.71	19.76	19.77	21	3
3	64QAM	8	7	19.58	19.63	19.60		
3	64QAM	15	0	19.60	19.79	19.74		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	22.90	22.72	22.67		
1.4	QPSK	1	3	22.54	22.40	22.56		
1.4	QPSK	1	5	22.41	22.44	22.28	24	0
1.4	QPSK	3	0	22.77	22.84	22.74		
1.4	QPSK	3	1	22.51	22.54	22.73		
1.4	QPSK	3	3	22.49	22.65	22.45		
1.4	QPSK	6	0	21.80	21.68	21.62	23	1
1.4	16QAM	1	0	21.98	22.02	21.99		
1.4	16QAM	1	3	21.93	21.92	22.00		
1.4	16QAM	1	5	21.64	21.69	21.67	23	1
1.4	16QAM	3	0	21.80	21.67	21.61		
1.4	16QAM	3	1	21.52	21.71	21.57		
1.4	16QAM	3	3	21.47	21.60	21.58		
1.4	16QAM	6	0	20.74	20.70	20.78	22	2
1.4	64QAM	1	0	21.09	20.90	20.88		
1.4	64QAM	1	3	20.79	20.83	20.72		
1.4	64QAM	1	5	20.63	20.64	20.61	22	2
1.4	64QAM	3	0	20.72	20.74	20.72		
1.4	64QAM	3	1	20.65	20.54	20.64		
1.4	64QAM	3	3	20.33	20.50	20.51		
1.4	64QAM	6	0	19.70	19.61	19.80	21	3

Band 4 (AWS Band)
Part 27L (only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	22.99	22.95	22.98		
20	QPSK	1	49	23.07	22.97	23.26	24	0
20	QPSK	1	99	22.97	22.98	23.33		
20	QPSK	50	0	22.11	21.95	22.05		
20	QPSK	50	24	22.06	21.98	22.03	23	1
20	QPSK	50	50	22.01	21.96	22.29		
20	QPSK	100	0	22.16	22.03	22.09		
20	16QAM	1	0	22.37	22.28	22.35		
20	16QAM	1	49	22.52	22.34	22.39	23	1
20	16QAM	1	99	22.29	22.31	22.70		
20	16QAM	50	0	21.03	20.86	21.11		
20	16QAM	50	24	21.11	20.90	21.13	22	2
20	16QAM	50	50	20.90	20.84	21.32		
20	16QAM	100	0	21.00	20.74	21.16		
20	64QAM	1	0	21.21	21.08	21.09		
20	64QAM	1	49	21.12	21.03	21.21	22	2
20	64QAM	1	99	21.09	21.18	21.51		
20	64QAM	50	0	20.12	19.83	19.91		
20	64QAM	50	24	19.99	19.78	20.21	21	3
20	64QAM	50	50	20.02	19.88	20.16		
20	64QAM	100	0	20.04	19.91	20.10		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	22.94	22.71	22.72		
15	QPSK	1	37	22.79	22.71	23.09	24	0
15	QPSK	1	74	22.74	22.65	23.24		
15	QPSK	36	0	22.05	21.72	22.02		
15	QPSK	36	20	21.98	21.71	22.18	23	1
15	QPSK	36	39	21.89	21.68	22.17		
15	QPSK	75	0	21.93	21.73	22.07		
15	16QAM	1	0	22.42	22.09	22.06		
15	16QAM	1	37	22.24	21.99	22.38	23	1
15	16QAM	1	74	22.12	21.96	22.61		
15	16QAM	36	0	21.04	20.76	21.00		
15	16QAM	36	20	20.98	20.73	21.16	22	2
15	16QAM	36	39	20.87	20.71	21.14		
15	16QAM	75	0	20.95	20.75	21.07		
15	64QAM	1	0	21.30	20.90	21.02		
15	64QAM	1	37	21.02	20.89	21.16	22	2
15	64QAM	1	74	20.93	20.91	21.46		
15	64QAM	36	0	20.04	19.77	19.99		
15	64QAM	36	20	19.97	19.75	20.16	21	3
15	64QAM	36	39	19.90	19.70	20.17		
15	64QAM	75	0	19.95	19.73	20.06		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	22.80	22.65	22.75		
10	QPSK	1	25	23.05	22.77	23.17	24	0
10	QPSK	1	49	23.24	23.25	23.29		
10	QPSK	25	0	22.12	22.04	22.23		
10	QPSK	25	12	22.07	22.14	22.30	23	1
10	QPSK	25	25	22.19	22.22	22.45		
10	QPSK	50	0	22.15	22.14	22.33		
10	16QAM	1	0	22.65	22.65	22.60		
10	16QAM	1	25	22.26	22.32	22.51	23	1
10	16QAM	1	49	22.68	22.77	22.40		
10	16QAM	25	0	21.13	21.09	21.23		
10	16QAM	25	12	21.09	21.17	21.29	22	2
10	16QAM	25	25	21.17	21.24	21.43		
10	16QAM	50	0	21.18	21.16	21.31		
10	64QAM	1	0	21.48	21.54	21.49		
10	64QAM	1	25	21.12	21.11	21.35	22	2
10	64QAM	1	49	21.48	21.72	21.67		
10	64QAM	25	0	20.13	20.07	20.20		
10	64QAM	25	12	20.06	20.16	20.29	21	3
10	64QAM	25	25	20.18	20.23	20.43		
10	64QAM	50	0	20.16	20.13	20.32		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	22.78	22.72	22.67		
5	QPSK	1	12	23.12	23.02	23.27	24	0
5	QPSK	1	24	23.05	23.11	23.22		
5	QPSK	12	0	22.13	22.14	22.37		
5	QPSK	12	7	22.11	22.06	22.32	23	1
5	QPSK	12	13	22.04	22.07	22.39		
5	QPSK	25	0	22.14	22.09	22.36		
5	16QAM	1	0	22.64	22.46	22.66		
5	16QAM	1	12	22.30	22.31	22.52	23	1
5	16QAM	1	24	22.33	22.39	22.66		
5	16QAM	12	0	21.19	21.22	21.41		
5	16QAM	12	7	21.18	21.14	21.33	22	2
5	16QAM	12	13	21.07	21.12	21.42		
5	16QAM	25	0	21.14	21.10	21.36		
5	64QAM	1	0	21.45	21.32	21.54		
5	64QAM	1	12	21.25	21.22	21.42	22	2
5	64QAM	1	24	21.22	21.27	21.50		
5	64QAM	12	0	20.17	20.22	20.40		
5	64QAM	12	7	20.17	20.12	20.36	21	3
5	64QAM	12	13	20.09	20.11	20.41		
5	64QAM	25	0	20.13	20.09	20.34		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	22.94	22.77	22.67		
3	QPSK	1	8	23.11	23.09	23.24	24	0
3	QPSK	1	14	22.97	23.04	23.28		
3	QPSK	8	0	22.17	22.10	22.32		
3	QPSK	8	4	22.03	22.08	22.43	23	1
3	QPSK	8	7	22.06	22.12	22.37		
3	QPSK	15	0	22.10	22.04	22.38		
3	16QAM	1	0	22.45	22.42	22.67		
3	16QAM	1	8	22.47	22.43	22.72	23	1
3	16QAM	1	14	22.27	22.43	22.64		
3	16QAM	8	0	21.18	21.17	21.34		
3	16QAM	8	4	21.10	21.13	21.46	22	2
3	16QAM	8	7	21.10	21.16	21.42		
3	16QAM	15	0	21.14	21.11	21.42		
3	64QAM	1	0	21.35	21.30	21.51		
3	64QAM	1	8	21.32	21.22	21.56	22	2
3	64QAM	1	14	21.14	21.23	21.49		
3	64QAM	8	0	20.19	20.18	20.33		
3	64QAM	8	4	20.07	20.15	20.45	21	3
3	64QAM	8	7	20.10	20.16	20.39		
3	64QAM	15	0	20.11	20.06	20.38		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	22.84	22.66	22.67		
1.4	QPSK	1	3	23.00	23.05	23.32		
1.4	QPSK	1	5	22.93	22.99	23.20	24	0
1.4	QPSK	3	0	22.86	23.10	23.29		
1.4	QPSK	3	1	23.09	23.03	23.19		
1.4	QPSK	3	3	23.05	22.94	23.25		
1.4	QPSK	6	0	21.96	21.85	22.16	23	1
1.4	16QAM	1	0	22.39	22.24	22.57		
1.4	16QAM	1	3	22.29	22.36	22.63		
1.4	16QAM	1	5	22.10	22.38	22.62	23	1
1.4	16QAM	3	0	22.01	22.06	22.36		
1.4	16QAM	3	1	22.12	21.96	22.27		
1.4	16QAM	3	3	21.89	22.01	22.34		
1.4	16QAM	6	0	21.08	20.93	21.41	22	2
1.4	64QAM	1	0	21.11	21.23	21.40		
1.4	64QAM	1	3	21.15	20.99	21.47		
1.4	64QAM	1	5	20.97	21.01	21.35	22	2
1.4	64QAM	3	0	21.03	21.17	21.43		
1.4	64QAM	3	1	21.18	21.24	21.36		
1.4	64QAM	3	3	21.13	21.01	21.43		
1.4	64QAM	6	0	19.98	19.90	20.29	21	3

Band 5 (Celluar Band)
Part 22H(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.83	22.92	22.97		
10	QPSK	1	25	22.65	22.70	22.35	24	0
10	QPSK	1	49	23.07	23.11	23.12		
10	QPSK	25	0	21.66	21.69	21.84		
10	QPSK	25	12	21.58	21.82	21.88	23	1
10	QPSK	25	25	21.65	21.90	22.03		
10	QPSK	50	0	21.49	21.88	21.92		
10	16QAM	1	0	22.02	22.12	22.27		
10	16QAM	1	25	21.93	22.03	22.18	23	1
10	16QAM	1	49	22.36	22.35	22.32		
10	16QAM	25	0	20.62	20.71	20.83		
10	16QAM	25	12	20.67	20.84	20.91	22	2
10	16QAM	25	25	20.69	20.87	20.96		
10	16QAM	50	0	20.66	20.84	20.87		
10	64QAM	1	0	20.84	20.96	20.91		
10	64QAM	1	25	20.82	20.94	20.92	22	2
10	64QAM	1	49	20.98	20.95	20.92		
10	64QAM	25	0	19.61	19.70	19.81		
10	64QAM	25	12	19.65	19.81	19.86	21	3
10	64QAM	25	25	19.79	19.86	19.91		
10	64QAM	50	0	19.65	19.83	19.88		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.68	22.86	22.81		
5	QPSK	1	12	22.68	22.81	22.81	24	0
5	QPSK	1	24	22.72	22.84	22.86		
5	QPSK	12	0	21.72	21.87	21.88		
5	QPSK	12	7	21.74	21.90	21.92	23	1
5	QPSK	12	13	21.70	21.80	21.89		
5	QPSK	25	0	21.74	21.88	21.98		
5	16QAM	1	0	21.99	22.11	22.26		
5	16QAM	1	12	21.94	22.14	22.10	23	1
5	16QAM	1	24	22.06	22.15	22.17		
5	16QAM	12	0	20.77	20.88	20.92		
5	16QAM	12	7	20.75	20.91	20.95	22	2
5	16QAM	12	13	20.71	20.82	20.90		
5	16QAM	25	0	20.72	20.88	20.95		
5	64QAM	1	0	20.91	20.96	21.16		
5	64QAM	1	12	20.79	21.00	20.93	22	2
5	64QAM	1	24	20.91	20.98	21.03		
5	64QAM	12	0	19.74	19.85	19.90		
5	64QAM	12	7	19.75	19.87	19.95	21	3
5	64QAM	12	13	19.71	19.78	19.90		
5	64QAM	25	0	19.71	19.89	19.95		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	22.74	22.74	22.88		
3	QPSK	1	8	22.71	22.82	22.86	24	0
3	QPSK	1	14	22.68	22.85	22.79		
3	QPSK	8	0	21.71	21.78	21.83		
3	QPSK	8	4	21.74	21.88	21.84	23	1
3	QPSK	8	7	21.73	21.83	21.91		
3	QPSK	15	0	21.69	21.85	21.88		
3	16QAM	1	0	21.99	22.15	22.23		
3	16QAM	1	8	22.07	22.14	22.22	23	1
3	16QAM	1	14	21.98	22.12	22.20		
3	16QAM	8	0	20.74	20.84	20.89		
3	16QAM	8	4	20.77	20.92	20.89	22	2
3	16QAM	8	7	20.75	20.86	20.91		
3	16QAM	15	0	20.71	20.90	20.86		
3	64QAM	1	0	20.83	20.99	21.08		
3	64QAM	1	8	20.92	21.08	21.13	22	2
3	64QAM	1	14	20.87	21.00	21.01		
3	64QAM	8	0	19.69	19.78	19.82		
3	64QAM	8	4	19.76	19.85	19.84	21	3
3	64QAM	8	7	19.72	19.81	19.86		
3	64QAM	15	0	19.70	19.85	19.83		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	22.78	22.77	22.77		
1.4	QPSK	1	3	22.67	22.86	22.85		
1.4	QPSK	1	5	22.56	22.77	22.80	24	0
1.4	QPSK	3	0	22.65	22.85	22.82		
1.4	QPSK	3	1	22.69	22.88	22.83		
1.4	QPSK	3	3	22.68	22.81	22.83		
1.4	QPSK	6	0	21.66	21.79	21.82	23	1
1.4	16QAM	1	0	21.93	22.15	22.23		
1.4	16QAM	1	3	22.03	22.15	22.21		
1.4	16QAM	1	5	22.01	22.07	22.12	23	1
1.4	16QAM	3	0	21.66	21.85	21.86		
1.4	16QAM	3	1	21.74	21.89	21.92		
1.4	16QAM	3	3	21.67	21.82	21.81		
1.4	16QAM	6	0	20.70	20.81	20.83	22	2
1.4	64QAM	1	0	20.80	20.99	21.06		
1.4	64QAM	1	3	20.84	20.98	20.97		
1.4	64QAM	1	5	20.77	20.90	20.95	22	2
1.4	64QAM	3	0	20.70	20.92	20.92		
1.4	64QAM	3	1	20.80	20.97	20.99		
1.4	64QAM	3	3	20.72	20.86	20.91		
1.4	64QAM	6	0	19.65	19.79	19.80	21	3

Band 7 (2600MHz Band)
Part 27

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	22.97	23.21	23.25	24	0
20	QPSK	1	49	22.89	23.24	23.30		
20	QPSK	1	99	23.06	23.25	23.46		
20	QPSK	50	0	21.91	22.21	22.34	23	1
20	QPSK	50	24	21.91	22.31	22.30		
20	QPSK	50	50	22.04	22.39	22.42		
20	QPSK	100	0	22.01	22.22	22.32		
20	16QAM	1	0	22.40	22.58	22.18	23	1
20	16QAM	1	49	22.31	22.62	22.59		
20	16QAM	1	99	22.39	22.39	22.75		
20	16QAM	50	0	20.91	21.31	21.24	22	2
20	16QAM	50	24	20.92	21.26	21.37		
20	16QAM	50	50	20.94	21.26	21.44		
20	16QAM	100	0	20.99	21.29	21.32		
20	64QAM	1	0	21.31	21.67	21.58	22	2
20	64QAM	1	49	21.12	21.40	21.55		
20	64QAM	1	99	21.18	21.72	21.65		
20	64QAM	50	0	19.91	20.21	20.29	21	3
20	64QAM	50	24	19.95	20.38	20.38		
20	64QAM	50	50	19.96	20.33	20.27		
20	64QAM	100	0	20.00	20.24	20.34		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	22.71	22.85	22.87	24	0
15	QPSK	1	37	22.72	22.93	22.88		
15	QPSK	1	74	23.05	23.40	23.43		
15	QPSK	36	0	22.06	22.44	22.36	23	1
15	QPSK	36	20	22.10	22.43	22.43		
15	QPSK	36	39	22.03	22.37	22.42		
15	QPSK	75	0	22.07	22.42	22.43		
15	16QAM	1	0	22.38	22.79	22.89	23	1
15	16QAM	1	37	22.37	22.79	22.80		
15	16QAM	1	74	22.38	22.81	22.85		
15	16QAM	36	0	21.09	21.51	21.42	22	2
15	16QAM	36	20	21.12	21.47	21.41		
15	16QAM	36	39	21.02	21.37	21.47		
15	16QAM	75	0	21.06	21.42	21.43		
15	64QAM	1	0	21.30	21.60	21.76	22	2
15	64QAM	1	37	21.18	21.61	21.49		
15	64QAM	1	74	21.33	21.57	21.68		
15	64QAM	36	0	20.08	20.47	20.41	21	3
15	64QAM	36	20	20.14	20.45	20.43		
15	64QAM	36	39	20.01	20.37	20.47		
15	64QAM	75	0	20.02	20.44	20.41		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	22.86	22.97	22.84	24	0
10	QPSK	1	25	23.06	23.16	22.99		
10	QPSK	1	49	23.16	23.23	23.28		
10	QPSK	25	0	21.99	22.45	22.51	23	1
10	QPSK	25	12	22.00	22.45	22.50		
10	QPSK	25	25	22.02	22.44	22.49		
10	QPSK	50	0	22.04	22.47	22.55		
10	16QAM	1	0	22.56	22.88	22.99	23	1
10	16QAM	1	25	22.31	22.73	22.87		
10	16QAM	1	49	22.52	22.85	22.92		
10	16QAM	25	0	21.02	21.46	21.50	22	2
10	16QAM	25	12	21.03	21.47	21.49		
10	16QAM	25	25	21.02	21.46	21.44		
10	16QAM	50	0	21.08	21.49	21.49		
10	64QAM	1	0	21.51	21.75	21.88	22	2
10	64QAM	1	25	21.15	21.63	21.59		
10	64QAM	1	49	21.37	21.81	21.82		
10	64QAM	25	0	19.99	20.46	20.43	21	3
10	64QAM	25	12	19.99	20.44	20.46		
10	64QAM	25	25	20.06	20.46	20.52		
10	64QAM	50	0	20.06	20.48	20.52		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	22.90	22.86	22.86	24	0
5	QPSK	1	12	22.87	22.97	23.15		
5	QPSK	1	24	22.94	23.36	23.39		
5	QPSK	12	0	21.96	22.47	22.53	23	1
5	QPSK	12	7	22.00	22.48	22.48		
5	QPSK	12	13	21.93	22.37	22.46		
5	QPSK	25	0	21.91	22.44	22.51		
5	16QAM	1	0	22.34	22.74	22.87	23	1
5	16QAM	1	12	22.22	22.71	22.73		
5	16QAM	1	24	22.20	22.76	22.71		
5	16QAM	12	0	21.01	21.49	21.53	22	2
5	16QAM	12	7	21.05	21.50	21.52		
5	16QAM	12	13	20.95	21.46	21.49		
5	16QAM	25	0	20.94	21.51	21.49		
5	64QAM	1	0	21.22	21.65	21.67	22	2
5	64QAM	1	12	21.20	21.58	21.68		
5	64QAM	1	24	21.15	21.64	21.61		
5	64QAM	12	0	20.00	20.49	20.51	21	3
5	64QAM	12	7	20.09	20.51	20.50		
5	64QAM	12	13	19.95	20.43	20.47		
5	64QAM	25	0	19.90	20.49	20.49		

Band 12 (700MHz Low Band)
Part 27F(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130		
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	22.87	22.90	22.93	24	0
10	QPSK	1	25	22.56	22.59	22.46		
10	QPSK	1	49	22.86	22.82	22.89		
10	QPSK	25	0	21.77	21.68	21.60	23	1
10	QPSK	25	12	21.75	21.67	21.56		
10	QPSK	25	25	21.58	21.61	21.66		
10	QPSK	50	0	21.78	21.51	21.72		
10	16QAM	1	0	22.12	22.10	22.03	23	1
10	16QAM	1	25	21.83	21.78	21.81		
10	16QAM	1	49	22.02	22.06	22.04		
10	16QAM	25	0	20.79	20.54	20.59	22	2
10	16QAM	25	12	20.70	20.64	20.59		
10	16QAM	25	25	20.58	20.64	20.66		
10	16QAM	50	0	20.78	20.55	20.73		
10	64QAM	1	0	20.94	20.94	20.97	22	2
10	64QAM	1	25	20.69	20.69	20.79		
10	64QAM	1	49	20.96	20.99	20.99		
10	64QAM	25	0	19.77	19.55	19.56	21	3
10	64QAM	25	12	19.71	19.62	19.56		
10	64QAM	25	25	19.60	19.58	19.65		
10	64QAM	50	0	19.73	19.54	19.64		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	22.70	22.72	22.91	24	0
5	QPSK	1	12	22.44	22.51	22.37		
5	QPSK	1	24	22.71	22.75	22.77		
5	QPSK	12	0	21.62	21.47	21.48	23	1
5	QPSK	12	7	21.58	21.58	21.37		
5	QPSK	12	13	21.55	21.51	21.48		
5	QPSK	25	0	21.70	21.36	21.55		
5	16QAM	1	0	22.06	22.05	22.03	23	1
5	16QAM	1	12	21.65	21.66	21.62		
5	16QAM	1	24	21.95	21.93	21.87		
5	16QAM	12	0	20.64	20.39	20.46	22	2
5	16QAM	12	7	20.66	20.53	20.50		
5	16QAM	12	13	20.48	20.51	20.47		
5	16QAM	25	0	20.71	20.37	20.56		
5	64QAM	1	0	20.84	20.94	20.89	22	2
5	64QAM	1	12	20.57	20.53	20.77		
5	64QAM	1	24	20.78	20.84	20.89		
5	64QAM	12	0	19.60	19.43	19.53	21	3
5	64QAM	12	7	19.57	19.52	19.43		
5	64QAM	12	13	19.41	19.40	19.45		
5	64QAM	25	0	19.56	19.46	19.51		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	22.86	22.74	22.89	24	0
3	QPSK	1	8	22.44	22.41	22.45		
3	QPSK	1	14	22.72	22.67	22.88		
3	QPSK	8	0	21.57	21.40	21.42	23	1
3	QPSK	8	4	21.61	21.47	21.47		
3	QPSK	8	7	21.41	21.54	21.53		
3	QPSK	15	0	21.64	21.44	21.72		
3	16QAM	1	0	22.11	22.07	21.95	23	1
3	16QAM	1	8	21.71	21.61	21.61		
3	16QAM	1	14	21.94	21.86	22.02		
3	16QAM	8	0	20.69	20.53	20.54	22	2
3	16QAM	8	4	20.62	20.59	20.39		
3	16QAM	8	7	20.42	20.45	20.58		
3	16QAM	15	0	20.60	20.42	20.72		
3	64QAM	1	0	20.85	20.84	20.77	22	2
3	64QAM	1	8	20.54	20.61	20.75		
3	64QAM	1	14	20.76	20.79	20.83		
3	64QAM	8	0	19.74	19.54	19.49	21	3
3	64QAM	8	4	19.63	19.58	19.36		
3	64QAM	8	7	19.53	19.44	19.50		
3	64QAM	15	0	19.71	19.44	19.52		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	22.76	22.88	22.82	24	0
1.4	QPSK	1	3	22.38	22.58	22.34		
1.4	QPSK	1	5	22.73	22.81	22.81		
1.4	QPSK	3	0	22.48	22.20	22.38		
1.4	QPSK	3	1	22.49	22.47	22.26		
1.4	QPSK	3	3	22.37	22.21	22.38		
1.4	QPSK	6	0	21.69	21.34	21.58	23	1
1.4	16QAM	1	0	22.02	21.91	21.94	23	1
1.4	16QAM	1	3	21.71	21.58	21.78		
1.4	16QAM	1	5	22.01	21.99	22.00		
1.4	16QAM	3	0	21.40	21.34	21.28		
1.4	16QAM	3	1	21.38	21.42	21.29		
1.4	16QAM	3	3	21.35	21.38	21.40		
1.4	16QAM	6	0	20.61	20.55	20.54	22	2
1.4	64QAM	1	0	20.81	20.86	20.81	22	2
1.4	64QAM	1	3	20.52	20.69	20.69		
1.4	64QAM	1	5	20.80	20.87	20.85		
1.4	64QAM	3	0	20.65	20.35	20.36		
1.4	64QAM	3	1	20.59	20.42	20.40		
1.4	64QAM	3	3	20.56	20.46	20.62		
1.4	64QAM	6	0	19.54	19.46	19.55	21	3

Band 13(700MHz Band)
Part 27F

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23230			
Frequency (MHz)					782			
10	QPSK	1	0		22.63		24	0
10	QPSK	1	25		22.29			
10	QPSK	1	49		22.44			
10	QPSK	25	0		21.37		23	1
10	QPSK	25	12		21.48			
10	QPSK	25	25		21.41			
10	QPSK	50	0		21.44			
10	16QAM	1	0		21.81		23	1
10	16QAM	1	25		21.54			
10	16QAM	1	49		21.79			
10	16QAM	25	0		20.38		22	2
10	16QAM	25	12		20.45			
10	16QAM	25	25		20.41			
10	16QAM	50	0		20.46			
10	64QAM	1	0		20.65		22	2
10	64QAM	1	25		20.48			
10	64QAM	1	49		20.69			
10	64QAM	25	0		19.40		21	3
10	64QAM	25	12		19.43			
10	64QAM	25	25		19.33			
10	64QAM	50	0		19.42			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.22	22.28	22.27	24	0
5	QPSK	1	12	22.39	22.27	22.26		
5	QPSK	1	24	22.39	22.34	22.22		
5	QPSK	12	0	21.35	21.40	21.28	23	1
5	QPSK	12	7	21.30	21.32	21.37		
5	QPSK	12	13	21.41	21.28	21.33		
5	QPSK	25	0	21.41	21.37	21.31		
5	16QAM	1	0	21.57	21.72	21.63	23	1
5	16QAM	1	12	21.58	21.52	21.62		
5	16QAM	1	24	21.73	21.69	21.59		
5	16QAM	12	0	20.33	20.45	20.32	22	2
5	16QAM	12	7	20.34	20.37	20.38		
5	16QAM	12	13	20.39	20.33	20.36		
5	16QAM	25	0	20.36	20.32	20.32		
5	64QAM	1	0	20.44	20.63	20.51	22	2
5	64QAM	1	12	20.50	20.46	20.46		
5	64QAM	1	24	20.51	20.57	20.48		
5	64QAM	12	0	19.37	19.48	19.31	21	3
5	64QAM	12	7	19.35	19.42	19.43		
5	64QAM	12	13	19.39	19.33	19.36		
5	64QAM	25	0	19.39	19.35	19.32		

Band 14 (700MHz Band)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23330			
Frequency (MHz)					793			
10	QPSK	1	0		22.65		24	0
10	QPSK	1	25		22.57			
10	QPSK	1	49		22.72			
10	QPSK	25	0		21.46		23	1
10	QPSK	25	12		21.47			
10	QPSK	25	25		21.42			
10	QPSK	50	0		21.54			
10	16QAM	1	0		21.86		23	1
10	16QAM	1	25		21.76			
10	16QAM	1	49		21.90			
10	16QAM	25	0		20.47		22	2
10	16QAM	25	12		20.52			
10	16QAM	25	25		20.41			
10	16QAM	50	0		20.55			
10	64QAM	1	0		20.70		22	2
10	64QAM	1	25		20.71			
10	64QAM	1	49		20.87			
10	64QAM	25	0		19.46		21	3
10	64QAM	25	12		19.50			
10	64QAM	25	25		19.46			
10	64QAM	50	0		19.46			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	22.26	22.14	22.22	24	0
5	QPSK	1	12	22.15	22.16	22.07		
5	QPSK	1	24	22.40	22.37	22.44		
5	QPSK	12	0	21.41	21.41	21.46	23	1
5	QPSK	12	7	21.33	21.45	21.38		
5	QPSK	12	13	21.44	21.43	21.42		
5	QPSK	25	0	21.44	21.44	21.52		
5	16QAM	1	0	21.68	21.72	21.70	23	1
5	16QAM	1	12	21.65	21.73	21.67		
5	16QAM	1	24	21.77	21.73	21.74		
5	16QAM	12	0	20.44	20.44	20.50	22	2
5	16QAM	12	7	20.35	20.52	20.43		
5	16QAM	12	13	20.46	20.46	20.48		
5	16QAM	25	0	20.46	20.49	20.49		
5	64QAM	1	0	20.49	20.55	20.60	22	2
5	64QAM	1	12	20.43	20.55	20.59		
5	64QAM	1	24	20.59	20.59	20.61		
5	64QAM	12	0	19.43	19.45	19.50	21	3
5	64QAM	12	7	19.35	19.48	19.39		
5	64QAM	12	13	19.44	19.46	19.45		
5	64QAM	25	0	19.42	19.43	19.47		

Band 17 (700MHz Band) Part 27H(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	22.85	22.93	22.88	24	0
10	QPSK	1	25	22.84	22.77	22.74		
10	QPSK	1	49	22.81	22.76	22.79		
10	QPSK	25	0	21.70	21.74	21.66	23	1
10	QPSK	25	12	21.57	21.63	21.59		
10	QPSK	25	25	21.64	21.54	21.64		
10	QPSK	50	0	21.65	21.66	21.65		
10	16QAM	1	0	22.13	22.07	22.06	23	1
10	16QAM	1	25	21.80	21.84	21.87		
10	16QAM	1	49	22.05	22.08	22.05		
10	16QAM	25	0	20.66	20.63	20.63	22	2
10	16QAM	25	12	20.59	20.65	20.58		
10	16QAM	25	25	20.62	20.57	20.62		
10	16QAM	50	0	20.61	20.60	20.59		
10	64QAM	1	0	20.98	20.97	20.96	22	2
10	64QAM	1	25	20.71	20.70	20.82		
10	64QAM	1	49	20.99	20.91	20.88		
10	64QAM	25	0	19.66	19.63	19.63	21	3
10	64QAM	25	12	19.59	19.66	19.61		
10	64QAM	25	25	19.64	19.57	19.49		
10	64QAM	50	0	19.62	19.57	19.56		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	22.75	22.82	22.78	24	0
5	QPSK	1	12	22.55	22.47	22.42		
5	QPSK	1	24	22.57	22.46	22.48		
5	QPSK	12	0	21.53	21.54	21.53	23	1
5	QPSK	12	7	21.65	21.53	21.51		
5	QPSK	12	13	21.58	21.58	21.53		
5	QPSK	25	0	21.65	21.62	21.51		
5	16QAM	1	0	21.88	21.83	21.87	23	1
5	16QAM	1	12	21.85	21.77	21.80		
5	16QAM	1	24	21.92	21.84	21.77		
5	16QAM	12	0	20.55	20.58	20.54	22	2
5	16QAM	12	7	20.63	20.52	20.49		
5	16QAM	12	13	20.58	20.57	20.55		
5	16QAM	25	0	20.64	20.59	20.50		
5	64QAM	1	0	20.75	20.69	20.71	22	2
5	64QAM	1	12	20.69	20.59	20.66		
5	64QAM	1	24	20.69	20.71	20.63		
5	64QAM	12	0	19.57	19.56	19.48	21	3
5	64QAM	12	7	19.62	19.55	19.51		
5	64QAM	12	13	19.62	19.58	19.53		
5	64QAM	25	0	19.63	19.59	19.46		

Band 25 (1900MHz Band) Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	22.80	22.76	22.93	24	0
20	QPSK	1	49	22.60	22.74	22.70		
20	QPSK	1	99	22.51	22.61	22.65		
20	QPSK	50	0	21.83	21.77	21.86	23	1
20	QPSK	50	24	21.80	21.75	21.79		
20	QPSK	50	50	21.74	21.69	21.69		
20	QPSK	100	0	21.79	21.79	21.88		
20	16QAM	1	0	22.10	22.03	22.05	23	1
20	16QAM	1	49	21.95	22.06	21.98		
20	16QAM	1	99	21.52	21.77	21.48		
20	16QAM	50	0	20.82	20.74	20.76	22	2
20	16QAM	50	24	20.77	20.75	20.81		
20	16QAM	50	50	20.74	20.69	20.73		
20	16QAM	100	0	20.77	20.70	20.76		
20	64QAM	1	0	20.98	20.94	21.05	22	2
20	64QAM	1	49	20.89	20.93	20.90		
20	64QAM	1	99	20.57	20.67	20.54		
20	64QAM	50	0	19.90	19.87	19.89	21	3
20	64QAM	50	24	19.89	19.83	19.85		
20	64QAM	50	50	19.84	19.76	19.83		
20	64QAM	100	0	19.87	19.82	19.87		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	22.76	22.74	22.63	24	0
15	QPSK	1	37	22.55	22.65	22.67		
15	QPSK	1	74	22.44	22.42	22.49		
15	QPSK	36	0	21.71	21.71	21.67	23	1
15	QPSK	36	20	21.69	21.58	21.61		
15	QPSK	36	39	21.73	21.66	21.60		
15	QPSK	75	0	21.61	21.66	21.71		
15	16QAM	1	0	21.95	22.00	21.96	23	1
15	16QAM	1	37	21.93	21.87	21.90		
15	16QAM	1	74	21.35	21.58	21.42		
15	16QAM	36	0	20.80	20.63	20.76	22	2
15	16QAM	36	20	20.66	20.56	20.74		
15	16QAM	36	39	20.71	20.50	20.73		
15	16QAM	75	0	20.62	20.66	20.65		
15	64QAM	1	0	20.92	20.76	21.00	22	2
15	64QAM	1	37	20.79	20.78	20.72		
15	64QAM	1	74	20.55	20.62	20.47		
15	64QAM	36	0	19.73	19.74	19.73	21	3
15	64QAM	36	20	19.88	19.64	19.69		
15	64QAM	36	39	19.75	19.74	19.82		
15	64QAM	75	0	19.84	19.75	19.82		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	22.66	22.58	22.68	24	0
10	QPSK	1	25	22.45	22.71	22.58		
10	QPSK	1	49	22.46	22.45	22.58		
10	QPSK	25	0	21.65	21.63	21.69	23	1
10	QPSK	25	12	21.70	21.56	21.60		
10	QPSK	25	25	21.61	21.63	21.57		
10	QPSK	50	0	21.62	21.78	21.70		
10	16QAM	1	0	21.98	22.02	21.94	23	1
10	16QAM	1	25	21.75	22.03	21.90		
10	16QAM	1	49	21.46	21.61	21.40		
10	16QAM	25	0	20.68	20.61	20.63	22	2
10	16QAM	25	12	20.63	20.69	20.78		
10	16QAM	25	25	20.61	20.53	20.61		
10	16QAM	50	0	20.59	20.54	20.61		
10	64QAM	1	0	20.94	20.86	21.03	22	2
10	64QAM	1	25	20.76	20.90	20.73		
10	64QAM	1	49	20.55	20.58	20.42		
10	64QAM	25	0	19.71	19.87	19.87	21	3
10	64QAM	25	12	19.81	19.82	19.82		
10	64QAM	25	25	19.67	19.68	19.81		
10	64QAM	50	0	19.87	19.73	19.73		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.75	22.66	22.80	24	0
5	QPSK	1	12	22.54	22.58	22.62		
5	QPSK	1	24	22.31	22.49	22.48		
5	QPSK	12	0	21.71	21.67	21.69	23	1
5	QPSK	12	7	21.66	21.64	21.67		
5	QPSK	12	13	21.74	21.65	21.63		
5	QPSK	25	0	21.61	21.78	21.87		
5	16QAM	1	0	21.96	21.88	21.98	23	1
5	16QAM	1	12	21.95	22.04	21.93		
5	16QAM	1	24	21.41	21.65	21.32		
5	16QAM	12	0	20.65	20.63	20.68	22	2
5	16QAM	12	7	20.77	20.75	20.77		
5	16QAM	12	13	20.74	20.57	20.70		
5	16QAM	25	0	20.77	20.61	20.74		
5	64QAM	1	0	20.97	20.76	20.88	22	2
5	64QAM	1	12	20.81	20.83	20.75		
5	64QAM	1	24	20.45	20.48	20.48		
5	64QAM	12	0	19.89	19.83	19.77	21	3
5	64QAM	12	7	19.77	19.65	19.71		
5	64QAM	12	13	19.78	19.72	19.64		
5	64QAM	25	0	19.77	19.64	19.69		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	22.61	22.65	22.82	24	0
3	QPSK	1	8	22.40	22.65	22.59		
3	QPSK	1	14	22.45	22.59	22.48		
3	QPSK	8	0	21.82	21.62	21.61	23	1
3	QPSK	8	4	21.71	21.55	21.59		
3	QPSK	8	7	21.55	21.69	21.49		
3	QPSK	15	0	21.76	21.64	21.73		
3	16QAM	1	0	21.96	21.99	21.93	23	1
3	16QAM	1	8	21.85	21.98	21.83		
3	16QAM	1	14	21.39	21.77	21.29		
3	16QAM	8	0	20.74	20.66	20.62	22	2
3	16QAM	8	4	20.57	20.69	20.66		
3	16QAM	8	7	20.54	20.64	20.64		
3	16QAM	15	0	20.60	20.68	20.67		
3	64QAM	1	0	20.97	20.89	20.98	22	2
3	64QAM	1	8	20.83	20.93	20.88		
3	64QAM	1	14	20.52	20.63	20.51		
3	64QAM	8	0	19.71	19.82	19.71	21	3
3	64QAM	8	4	19.80	19.73	19.68		
3	64QAM	8	7	19.64	19.65	19.67		
3	64QAM	15	0	19.77	19.74	19.84		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	22.74	22.67	22.73	24	0
1.4	QPSK	1	3	22.42	22.67	22.58		
1.4	QPSK	1	5	22.31	22.47	22.62		
1.4	QPSK	3	0	22.52	22.65	22.51		
1.4	QPSK	3	1	22.52	22.49	22.53		
1.4	QPSK	3	3	22.56	22.46	22.45		
1.4	QPSK	6	0	21.66	21.61	21.86	23	1
1.4	16QAM	1	0	22.07	21.83	22.02	23	1
1.4	16QAM	1	3	21.91	22.01	21.84		
1.4	16QAM	1	5	21.41	21.77	21.41		
1.4	16QAM	3	0	21.60	21.62	21.55		
1.4	16QAM	3	1	21.56	21.52	21.55		
1.4	16QAM	3	3	21.46	21.38	21.56		
1.4	16QAM	6	0	20.64	20.57	20.58	22	2
1.4	64QAM	1	0	20.80	20.75	20.85	22	2
1.4	64QAM	1	3	20.89	20.76	20.78		
1.4	64QAM	1	5	20.44	20.58	20.36		
1.4	64QAM	3	0	20.76	20.58	20.73		
1.4	64QAM	3	1	20.59	20.71	20.74		
1.4	64QAM	3	3	20.65	20.66	20.67		
1.4	64QAM	6	0	19.69	19.62	19.78	21	3

Band 26 for FCC
(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	22.64	22.74	22.95	24	0
15	QPSK	1	37	22.47	22.43	22.75		
15	QPSK	1	74	23.05	23.08	23.07		
15	QPSK	36	0	21.72	21.75	21.71	23	1
15	QPSK	36	20	21.57	21.54	21.66		
15	QPSK	36	39	21.46	21.44	21.60		
15	QPSK	75	0	21.63	21.68	21.67		
15	16QAM	1	0	21.95	21.98	22.26	23	1
15	16QAM	1	37	21.68	21.74	21.92		
15	16QAM	1	74	22.40	22.26	22.38		
15	16QAM	36	0	20.67	20.67	20.93	22	2
15	16QAM	36	20	20.54	20.53	20.65		
15	16QAM	36	39	20.43	20.40	20.56		
15	16QAM	75	0	20.61	20.59	20.74		
15	64QAM	1	0	20.89	20.96	21.09	22	2
15	64QAM	1	37	20.47	20.60	20.71		
15	64QAM	1	74	21.11	21.13	21.10		
15	64QAM	36	0	19.73	19.69	19.91	21	3
15	64QAM	36	20	19.58	19.55	19.67		
15	64QAM	36	39	19.47	19.44	19.62		
15	64QAM	75	0	19.58	19.60	19.73		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	22.46	22.60	22.95	24	0
10	QPSK	1	25	22.47	22.37	22.67		
10	QPSK	1	49	22.86	22.96	23.00		
10	QPSK	25	0	21.53	21.60	21.85	23	1
10	QPSK	25	12	21.44	21.50	21.62		
10	QPSK	25	25	21.27	21.25	21.57		
10	QPSK	50	0	21.52	21.49	21.61		
10	16QAM	1	0	21.85	21.91	22.17	23	1
10	16QAM	1	25	21.59	21.67	21.86		
10	16QAM	1	49	22.29	22.10	22.30		
10	16QAM	25	0	20.52	20.65	20.82	22	2
10	16QAM	25	12	20.43	20.46	20.46		
10	16QAM	25	25	20.26	20.40	20.39		
10	16QAM	50	0	20.48	20.57	20.63		
10	64QAM	1	0	20.70	20.81	20.89	22	2
10	64QAM	1	25	20.41	20.60	20.66		
10	64QAM	1	49	20.91	21.09	21.02		
10	64QAM	25	0	19.66	19.66	19.79	21	3
10	64QAM	25	12	19.52	19.47	19.48		
10	64QAM	25	25	19.37	19.26	19.52		
10	64QAM	50	0	19.40	19.54	19.57		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	22.60	22.66	22.94	24	0
5	QPSK	1	12	22.43	22.42	22.56		
5	QPSK	1	24	22.95	23.06	23.03		
5	QPSK	12	0	21.61	21.53	21.76	23	1
5	QPSK	12	7	21.43	21.41	21.65		
5	QPSK	12	13	21.32	21.24	21.46		
5	QPSK	25	0	21.56	21.58	21.68		
5	16QAM	1	0	21.88	21.91	22.07	23	1
5	16QAM	1	12	21.56	21.60	21.76		
5	16QAM	1	24	22.23	22.25	22.26		
5	16QAM	12	0	20.66	20.58	20.74	22	2
5	16QAM	12	7	20.39	20.48	20.55		
5	16QAM	12	13	20.25	20.33	20.47		
5	16QAM	25	0	20.44	20.59	20.56		
5	64QAM	1	0	20.82	20.88	21.05	22	2
5	64QAM	1	12	20.40	20.60	20.61		
5	64QAM	1	24	20.94	21.03	21.03		
5	64QAM	12	0	19.66	19.56	19.80	21	3
5	64QAM	12	7	19.44	19.48	19.50		
5	64QAM	12	13	19.41	19.31	19.50		
5	64QAM	25	0	19.47	19.50	19.57		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	22.46	22.62	22.83	24	0
3	QPSK	1	8	22.45	22.32	22.74		
3	QPSK	1	14	22.95	22.92	22.94		
3	QPSK	8	0	21.56	21.65	21.75	23	1
3	QPSK	8	4	21.44	21.42	21.50		
3	QPSK	8	7	21.39	21.43	21.40		
3	QPSK	15	0	21.53	21.50	21.60		
3	16QAM	1	0	21.86	21.90	22.11	23	1
3	16QAM	1	8	21.66	21.58	21.91		
3	16QAM	1	14	22.33	22.26	22.28		
3	16QAM	8	0	20.53	20.52	20.84	22	2
3	16QAM	8	4	20.46	20.39	20.48		
3	16QAM	8	7	20.32	20.30	20.52		
3	16QAM	15	0	20.61	20.40	20.69		
3	64QAM	1	0	20.81	20.81	21.00	22	2
3	64QAM	1	8	20.45	20.59	20.59		
3	64QAM	1	14	21.04	21.07	20.98		
3	64QAM	8	0	19.67	19.53	19.76	21	3
3	64QAM	8	4	19.52	19.37	19.54		
3	64QAM	8	7	19.36	19.44	19.42		
3	64QAM	15	0	19.39	19.54	19.71		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	22.49	22.61	22.80	24	0
1.4	QPSK	1	3	22.32	22.32	22.75		
1.4	QPSK	1	5	23.05	23.07	22.88		
1.4	QPSK	3	0	22.42	22.53	22.74		
1.4	QPSK	3	1	22.29	22.34	22.47		
1.4	QPSK	3	3	22.35	22.26	22.49		
1.4	QPSK	6	0	21.63	21.42	21.67	23	1
1.4	16QAM	1	0	21.82	21.81	22.22	23	1
1.4	16QAM	1	3	21.60	21.60	21.92		
1.4	16QAM	1	5	22.35	22.11	22.22		
1.4	16QAM	3	0	21.53	21.36	21.70		
1.4	16QAM	3	1	21.24	21.39	21.38		
1.4	16QAM	3	3	21.13	21.23	21.36		
1.4	16QAM	6	0	20.50	20.45	20.62	22	2
1.4	64QAM	1	0	20.69	20.94	20.97	22	2
1.4	64QAM	1	3	20.36	20.54	20.62		
1.4	64QAM	1	5	20.94	21.10	20.95		
1.4	64QAM	3	0	20.49	20.47	20.66		
1.4	64QAM	3	1	20.42	20.34	20.37		
1.4	64QAM	3	3	20.27	20.29	20.34		
1.4	64QAM	6	0	19.45	19.55	19.69	21	3

Band 30

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		22.92		24	0
10	QPSK	1	25		22.61			
10	QPSK	1	49		22.86			
10	QPSK	25	0		21.75		23	1
10	QPSK	25	12		21.66			
10	QPSK	25	25		21.79			
10	QPSK	50	0		21.72			
10	16QAM	1	0		22.23		23	1
10	16QAM	1	25		22.01			
10	16QAM	1	49		22.31			
10	16QAM	25	0		20.76		22	2
10	16QAM	25	12		20.63			
10	16QAM	25	25		20.74			
10	16QAM	50	0		20.69			
10	64QAM	1	0		21.14		22	2
10	64QAM	1	25		20.78			
10	64QAM	1	49		21.21			
10	64QAM	25	0		19.67		21	3
10	64QAM	25	12		19.61			
10	64QAM	25	25		19.73			
10	64QAM	50	0		19.69			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	22.86	22.83	22.82	24	0
5	QPSK	1	12	22.66	22.78	22.80		
5	QPSK	1	24	22.49	22.63	22.71		
5	QPSK	12	0	21.76	21.73	21.74	23	1
5	QPSK	12	7	21.69	21.76	21.74		
5	QPSK	12	13	21.66	21.69	21.78		
5	QPSK	25	0	21.72	21.63	21.75		
5	16QAM	1	0	22.23	22.09	22.14	23	1
5	16QAM	1	12	21.93	21.97	22.03		
5	16QAM	1	24	21.95	22.03	22.14		
5	16QAM	12	0	20.76	20.74	20.75	22	2
5	16QAM	12	7	20.72	20.79	20.75		
5	16QAM	12	13	20.62	20.69	20.81		
5	16QAM	25	0	20.73	20.68	20.76		
5	64QAM	1	0	21.08	21.02	21.01	22	2
5	64QAM	1	12	20.91	20.92	20.85		
5	64QAM	1	24	20.89	20.84	20.85		
5	64QAM	12	0	19.78	19.71	19.71	21	3
5	64QAM	12	7	19.68	19.74	19.71		
5	64QAM	12	13	19.63	19.65	19.76		
5	64QAM	25	0	19.66	19.62	19.69		

Band 66

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	22.61	22.67	22.89	24	0
20	QPSK	1	49	22.58	22.65	22.88		
20	QPSK	1	99	22.73	23.08	23.36		
20	QPSK	50	0	21.57	21.64	21.70	23	1
20	QPSK	50	24	21.61	21.70	21.74		
20	QPSK	50	50	21.58	21.90	22.08		
20	QPSK	100	0	21.67	21.79	21.97		
20	16QAM	1	0	21.90	21.84	21.71	23	1
20	16QAM	1	49	21.97	22.12	22.03		
20	16QAM	1	99	22.07	22.08	22.10		
20	16QAM	50	0	20.56	20.81	20.61	22	2
20	16QAM	50	24	20.61	21.00	20.78		
20	16QAM	50	50	20.58	21.11	20.90		
20	16QAM	100	0	20.60	20.97	20.73		
20	64QAM	1	0	20.78	20.78	20.61	22	2
20	64QAM	1	49	20.66	20.99	20.87		
20	64QAM	1	99	20.95	21.08	21.10		
20	64QAM	50	0	19.56	19.79	19.62	21	3
20	64QAM	50	24	19.60	19.97	19.76		
20	64QAM	50	50	19.56	20.12	19.88		
20	64QAM	100	0	19.58	19.93	19.74		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	22.54	22.99	22.88	24	0
15	QPSK	1	37	22.36	22.93	22.77		
15	QPSK	1	74	22.64	22.91	23.14		
15	QPSK	36	0	21.70	21.93	21.86	23	1
15	QPSK	36	20	21.55	21.95	21.90		
15	QPSK	36	39	21.54	22.02	21.93		
15	QPSK	75	0	21.59	21.91	21.87		
15	16QAM	1	0	22.25	22.22	22.24	23	1
15	16QAM	1	37	21.89	22.13	22.22		
15	16QAM	1	74	21.89	22.23	22.44		
15	16QAM	36	0	20.64	20.91	20.83	22	2
15	16QAM	36	20	20.52	20.95	20.87		
15	16QAM	36	39	20.52	21.02	20.91		
15	16QAM	75	0	20.61	20.97	20.88		
15	64QAM	1	0	21.09	21.19	21.04	22	2
15	64QAM	1	37	20.58	20.91	20.91		
15	64QAM	1	74	20.83	21.21	21.22		
15	64QAM	36	0	19.69	19.92	19.86	21	3
15	64QAM	36	20	19.55	19.93	19.89		
15	64QAM	36	39	19.55	20.05	19.95		
15	64QAM	75	0	19.56	19.95	19.88		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	22.62	22.94	23.06	24	0
10	QPSK	1	25	22.67	23.10	22.96		
10	QPSK	1	49	23.02	23.02	23.17		
10	QPSK	25	0	21.75	22.00	21.97	23	1
10	QPSK	25	12	21.78	22.10	22.08		
10	QPSK	25	25	21.77	22.30	22.20		
10	QPSK	50	0	21.77	22.10	22.04		
10	16QAM	1	0	21.69	21.62	21.61	23	1
10	16QAM	1	25	21.98	22.31	22.33		
10	16QAM	1	49	22.31	22.19	22.31		
10	16QAM	25	0	20.76	21.06	20.97	22	2
10	16QAM	25	12	20.75	21.17	21.07		
10	16QAM	25	25	20.72	21.32	21.14		
10	16QAM	50	0	20.76	21.15	21.01		
10	64QAM	1	0	20.33	20.58	20.49	22	2
10	64QAM	1	25	20.75	21.19	21.12		
10	64QAM	1	49	21.21	21.11	21.05		
10	64QAM	25	0	19.75	20.05	19.98	21	3
10	64QAM	25	12	19.78	20.16	20.07		
10	64QAM	25	25	19.75	20.34	20.22		
10	64QAM	50	0	19.74	20.13	20.01		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	22.66	23.08	23.07	24	0
5	QPSK	1	12	22.77	23.10	23.04		
5	QPSK	1	24	22.67	23.16	23.01		
5	QPSK	12	0	21.83	22.09	22.16	23	1
5	QPSK	12	7	21.79	22.05	22.11		
5	QPSK	12	13	21.69	22.05	22.09		
5	QPSK	25	0	21.82	22.10	22.10		
5	16QAM	1	0	22.31	22.45	22.40	23	1
5	16QAM	1	12	22.02	22.27	22.36		
5	16QAM	1	24	22.05	22.47	22.37		
5	16QAM	12	0	20.85	21.18	21.17	22	2
5	16QAM	12	7	20.81	21.13	21.12		
5	16QAM	12	13	20.69	21.14	21.10		
5	16QAM	25	0	20.82	21.13	21.12		
5	64QAM	1	0	21.12	21.35	21.29	22	2
5	64QAM	1	12	20.90	21.24	21.18		
5	64QAM	1	24	20.84	21.32	21.28		
5	64QAM	12	0	19.87	20.20	20.19	21	3
5	64QAM	12	7	19.85	20.16	20.12		
5	64QAM	12	13	19.72	20.12	20.08		
5	64QAM	25	0	19.83	20.14	20.11		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	22.75	23.12	23.11	24	0
3	QPSK	1	8	22.76	23.10	23.06		
3	QPSK	1	14	22.70	23.07	23.04		
3	QPSK	8	0	21.82	22.10	22.11	23	1
3	QPSK	8	4	21.81	22.11	22.12		
3	QPSK	8	7	21.76	22.07	22.09		
3	QPSK	15	0	21.77	22.05	22.06		
3	16QAM	1	0	22.16	22.42	22.45	23	1
3	16QAM	1	8	22.16	22.40	22.43		
3	16QAM	1	14	22.11	22.38	22.43		
3	16QAM	8	0	20.83	21.13	21.14	22	2
3	16QAM	8	4	20.87	21.16	21.17		
3	16QAM	8	7	20.81	21.10	21.13		
3	16QAM	15	0	20.80	21.12	21.11		
3	64QAM	1	0	20.95	21.29	21.31	22	2
3	64QAM	1	8	20.95	21.24	21.26		
3	64QAM	1	14	20.89	21.25	21.20		
3	64QAM	8	0	19.86	20.17	20.13	21	3
3	64QAM	8	4	19.85	20.16	20.18		
3	64QAM	8	7	19.80	20.14	20.13		
3	64QAM	15	0	19.79	20.11	20.10		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	22.68	23.05	23.04	24	0
1.4	QPSK	1	3	22.74	23.09	23.11		
1.4	QPSK	1	5	22.75	23.05	23.04		
1.4	QPSK	3	0	22.79	23.09	23.07		
1.4	QPSK	3	1	22.79	23.12	23.17		
1.4	QPSK	3	3	22.74	23.11	23.12		
1.4	QPSK	6	0	21.69	21.97	22.02	23	1
1.4	16QAM	1	0	22.08	22.35	22.38	23	1
1.4	16QAM	1	3	22.14	22.37	22.45		
1.4	16QAM	1	5	22.05	22.33	22.39		
1.4	16QAM	3	0	21.75	22.02	22.11		
1.4	16QAM	3	1	21.82	22.04	22.17		
1.4	16QAM	3	3	21.75	22.01	22.08		
1.4	16QAM	6	0	20.79	21.21	21.12	22	2
1.4	64QAM	1	0	20.89	21.21	21.24	22	2
1.4	64QAM	1	3	20.89	21.20	21.23		
1.4	64QAM	1	5	20.87	21.22	21.23		
1.4	64QAM	3	0	20.84	21.19	21.18		
1.4	64QAM	3	1	20.92	21.22	21.25		
1.4	64QAM	3	3	20.83	21.18	21.16		
1.4	64QAM	6	0	19.74	20.05	20.09	21	3

Band 71

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				133222	133322	133372		
Frequency (MHz)				673	683	688		
20	QPSK	1	0	22.01	22.20	22.11	24	0
20	QPSK	1	49	22.43	22.50	22.56		
20	QPSK	1	99	22.56	22.70	22.65		
20	QPSK	50	0	21.49	21.40	21.34	23	1
20	QPSK	50	24	21.64	21.65	21.63		
20	QPSK	50	50	21.63	21.52	21.62		
20	QPSK	100	0	21.63	21.64	21.51		
20	16QAM	1	0	21.13	21.08	21.26	23	1
20	16QAM	1	49	21.84	21.88	22.05		
20	16QAM	1	99	21.76	21.71	22.00		
20	16QAM	50	0	20.36	20.24	20.32	22	2
20	16QAM	50	24	20.68	20.66	20.53		
20	16QAM	50	50	20.41	20.54	20.56		
20	16QAM	100	0	20.52	20.55	20.44		
20	64QAM	1	0	20.72	20.66	20.50	22	2
20	64QAM	1	49	20.78	20.36	20.48		
20	64QAM	1	99	20.54	20.49	20.65		
20	64QAM	50	0	19.45	19.33	19.29	21	3
20	64QAM	50	24	19.77	19.64	19.65		
20	64QAM	50	50	19.42	19.63	19.67		
20	64QAM	100	0	19.62	19.53	19.45		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	22.04	22.06	22.01	24	0
15	QPSK	1	37	22.42	22.42	22.54		
15	QPSK	1	74	22.42	22.62	22.34		
15	QPSK	36	0	21.41	21.31	21.22	23	1
15	QPSK	36	20	21.66	21.46	21.56		
15	QPSK	36	39	21.54	21.48	21.53		
15	QPSK	75	0	21.62	21.32	21.43		
15	16QAM	1	0	21.03	21.03	21.13	23	1
15	16QAM	1	37	21.81	21.86	21.89		
15	16QAM	1	74	21.66	21.61	21.87		
15	16QAM	36	0	20.28	20.07	20.18	22	2
15	16QAM	36	20	20.56	20.56	20.51		
15	16QAM	36	39	20.37	20.38	20.55		
15	16QAM	75	0	20.33	20.41	20.30		
15	64QAM	1	0	20.57	20.57	20.44	22	2
15	64QAM	1	37	20.60	20.33	20.36		
15	64QAM	1	74	20.35	20.49	20.50		
15	64QAM	36	0	19.44	19.32	19.22	21	3
15	64QAM	36	20	19.75	19.50	19.48		
15	64QAM	36	39	19.23	19.60	19.49		
15	64QAM	75	0	19.43	19.43	19.42		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	22.01	22.12	22.09	24	0
10	QPSK	1	25	22.40	22.48	22.66		
10	QPSK	1	49	22.42	22.51	22.33		
10	QPSK	25	0	21.47	21.27	21.24	23	1
10	QPSK	25	12	21.73	21.48	21.66		
10	QPSK	25	25	21.44	21.50	21.62		
10	QPSK	50	0	21.60	21.36	21.38		
10	16QAM	1	0	21.09	21.02	21.18	23	1
10	16QAM	1	25	21.80	21.81	21.86		
10	16QAM	1	49	21.57	21.57	21.89		
10	16QAM	25	0	20.26	20.17	20.24	22	2
10	16QAM	25	12	20.60	20.60	20.53		
10	16QAM	25	25	20.26	20.50	20.42		
10	16QAM	50	0	20.41	20.45	20.41		
10	64QAM	1	0	20.56	20.47	20.39	22	2
10	64QAM	1	25	20.77	20.25	20.33		
10	64QAM	1	49	20.34	20.44	20.65		
10	64QAM	25	0	19.29	19.29	19.15	21	3
10	64QAM	25	12	19.72	19.47	19.60		
10	64QAM	25	25	19.30	19.45	19.57		
10	64QAM	50	0	19.46	19.34	19.31		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	22.02	22.11	22.07	24	0
5	QPSK	1	12	22.25	22.49	22.57		
5	QPSK	1	24	22.51	22.65	22.44		
5	QPSK	12	0	21.43	21.34	21.16	23	1
5	QPSK	12	7	21.75	21.42	21.54		
5	QPSK	12	13	21.46	21.40	21.46		
5	QPSK	25	0	21.54	21.37	21.38		
5	16QAM	1	0	21.03	21.06	21.10	23	1
5	16QAM	1	12	21.66	21.79	21.92		
5	16QAM	1	24	21.67	21.63	21.89		
5	16QAM	12	0	20.23	20.19	20.25	22	2
5	16QAM	12	7	20.68	20.49	20.36		
5	16QAM	12	13	20.37	20.51	20.39		
5	16QAM	25	0	20.47	20.48	20.35		
5	64QAM	1	0	20.60	20.58	20.37	22	2
5	64QAM	1	12	20.68	20.33	20.44		
5	64QAM	1	24	20.52	20.29	20.59		
5	64QAM	12	0	19.28	19.16	19.14	21	3
5	64QAM	12	7	19.60	19.48	19.61		
5	64QAM	12	13	19.37	19.44	19.60		
5	64QAM	25	0	19.49	19.38	19.41		

Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	22.92	22.76	22.85	24	0
20	QPSK	1	49	22.94	22.88	22.81		
20	QPSK	1	99	23.29	22.89	23.02		
20	QPSK	50	0	22.12	22.04	21.82	23	1
20	QPSK	50	24	22.26	22.10	22.11		
20	QPSK	50	50	22.25	21.87	22.07		
20	QPSK	100	0	21.97	21.81	22.11		
20	16QAM	1	0	21.95	21.69	21.76	23	1
20	16QAM	1	49	22.07	21.90	21.91		
20	16QAM	1	99	22.01	21.86	21.96		
20	16QAM	50	0	21.16	21.10	21.11	22	2
20	16QAM	50	24	21.30	20.91	20.83		
20	16QAM	50	50	21.12	20.92	20.99		
20	16QAM	100	0	20.93	20.98	21.09		
20	64QAM	1	0	20.70	20.50	20.55	22	2
20	64QAM	1	49	20.59	20.47	20.49		
20	64QAM	1	99	20.83	20.55	20.52		
20	64QAM	50	0	19.81	19.72	19.71	21	3
20	64QAM	50	24	20.06	19.74	19.97		
20	64QAM	50	50	20.26	20.03	19.90		
20	64QAM	100	0	20.15	20.02	20.05		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	22.90	22.61	22.79	24	0
15	QPSK	1	37	22.79	22.42	22.74		
15	QPSK	1	74	23.17	22.96	23.07		
15	QPSK	36	0	22.05	21.92	22.03	23	1
15	QPSK	36	20	22.22	22.02	22.09		
15	QPSK	36	39	22.19	22.02	22.06		
15	QPSK	75	0	22.17	21.96	22.05		
15	16QAM	1	0	21.96	21.86	21.88	23	1
15	16QAM	1	37	21.91	21.67	21.70		
15	16QAM	1	74	22.17	21.95	22.01		
15	16QAM	36	0	21.05	20.92	20.99	22	2
15	16QAM	36	20	21.22	20.99	21.05		
15	16QAM	36	39	21.16	21.00	21.08		
15	16QAM	75	0	21.16	20.99	21.05		
15	64QAM	1	0	20.69	20.56	20.69	22	2
15	64QAM	1	37	20.70	20.40	20.51		
15	64QAM	1	74	20.86	20.64	20.71		
15	64QAM	36	0	20.17	20.06	20.12	21	3
15	64QAM	36	20	20.34	20.13	20.18		
15	64QAM	36	39	20.34	20.13	20.20		
15	64QAM	75	0	20.25	20.07	20.18		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	23.19	22.98	23.13	24	0
10	QPSK	1	25	22.94	23.03	23.25		
10	QPSK	1	49	23.28	23.07	23.22		
10	QPSK	25	0	22.38	22.05	22.24	23	1
10	QPSK	25	12	22.31	22.01	22.01		
10	QPSK	25	25	22.47	22.18	22.26		
10	QPSK	50	0	21.97	21.88	21.96		
10	16QAM	1	0	22.40	22.22	22.26	23	1
10	16QAM	1	25	22.35	22.07	22.05		
10	16QAM	1	49	22.48	22.16	22.19		
10	16QAM	25	0	21.32	20.90	20.97	22	2
10	16QAM	25	12	21.03	20.98	21.25		
10	16QAM	25	25	21.20	21.02	21.09		
10	16QAM	50	0	21.12	20.83	21.25		
10	64QAM	1	0	21.08	21.03	20.85	22	2
10	64QAM	1	25	21.24	20.95	21.21		
10	64QAM	1	49	20.93	20.88	20.91		
10	64QAM	25	0	20.34	19.92	20.23	21	3
10	64QAM	25	12	20.07	20.02	20.16		
10	64QAM	25	25	20.43	20.17	20.27		
10	64QAM	50	0	20.12	19.86	20.03		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	23.14	23.05	23.03	24	0
5	QPSK	1	12	23.03	22.95	22.86		
5	QPSK	1	24	23.14	22.68	23.06		
5	QPSK	12	0	22.39	22.02	22.15	23	1
5	QPSK	12	7	22.32	22.07	22.17		
5	QPSK	12	13	21.99	22.00	21.99		
5	QPSK	25	0	22.04	21.90	22.24		
5	16QAM	1	0	22.29	22.11	22.25	23	1
5	16QAM	1	12	22.10	21.85	22.20		
5	16QAM	1	24	22.06	22.06	22.05		
5	16QAM	12	0	21.07	21.16	21.14	22	2
5	16QAM	12	7	21.09	21.08	21.10		
5	16QAM	12	13	21.28	20.99	21.02		
5	16QAM	25	0	21.38	21.06	21.16		
5	64QAM	1	0	21.02	20.64	20.88	22	2
5	64QAM	1	12	20.97	20.76	20.78		
5	64QAM	1	24	21.05	20.90	21.27		
5	64QAM	12	0	20.44	20.02	20.13	21	3
5	64QAM	12	7	20.15	20.06	20.04		
5	64QAM	12	13	20.15	20.06	20.09		
5	64QAM	25	0	20.40	20.02	20.14		

Band 41 (2.6G Band)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	23.57	23.93	23.24	23.39	23.82	25	0
20	QPSK	1	49	23.81	23.92	23.66	23.82	24.02		
20	QPSK	1	99	23.27	23.53	23.27	23.27	23.80		
20	QPSK	50	0	22.85	22.85	22.68	22.76	23.02	24	1
20	QPSK	50	24	22.90	23.02	22.86	22.90	23.06		
20	QPSK	50	50	22.75	22.93	22.77	22.80	22.95		
20	QPSK	100	0	22.76	23.01	22.77	22.80	23.02		
20	16QAM	1	0	22.72	22.81	22.29	22.36	22.89	24	1
20	16QAM	1	49	22.91	22.87	22.74	22.76	23.06		
20	16QAM	1	99	22.34	22.22	22.14	22.17	22.81		
20	16QAM	50	0	21.87	22.06	21.70	21.80	22.06	23	2
20	16QAM	50	24	21.93	22.10	21.90	21.94	22.10		
20	16QAM	50	50	21.81	21.96	21.80	21.83	21.98		
20	16QAM	100	0	21.73	21.92	21.71	21.77	22.02		
20	64QAM	1	0	21.26	21.49	21.07	21.11	21.54	23	2
20	64QAM	1	49	21.46	21.62	21.39	21.44	21.62		
20	64QAM	1	99	21.23	21.07	21.15	21.21	21.41		
20	64QAM	50	0	20.80	21.02	20.65	20.75	21.02	22	3
20	64QAM	50	24	20.87	21.03	20.85	20.86	21.06		
20	64QAM	50	50	20.74	20.85	20.76	20.74	20.94		
20	64QAM	100	0	20.75	20.96	20.72	20.72	21.03		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	23.62	23.84	23.17	23.25	23.97	25	0
15	QPSK	1	37	23.30	23.40	23.26	23.34	23.68		
15	QPSK	1	74	23.30	23.54	23.33	23.35	23.95		
15	QPSK	36	0	22.86	23.19	22.71	22.72	22.97	24	1
15	QPSK	36	20	22.89	23.18	22.90	22.90	22.99		
15	QPSK	36	39	22.98	23.18	22.95	22.97	22.96		
15	QPSK	75	0	22.83	23.12	22.79	22.77	22.88		
15	16QAM	1	0	22.48	22.48	22.18	22.02	22.94	24	1
15	16QAM	1	37	22.48	22.39	22.23	22.32	22.65		
15	16QAM	1	74	22.17	22.18	22.05	22.09	22.88		
15	16QAM	36	0	21.80	22.12	21.69	21.68	21.99	23	2
15	16QAM	36	20	21.83	22.12	21.88	21.90	22.01		
15	16QAM	36	39	21.91	22.14	21.89	21.94	21.99		
15	16QAM	75	0	21.82	22.12	21.82	21.77	22.00		
15	64QAM	1	0	21.09	21.28	21.23	21.05	21.55	23	2
15	64QAM	1	37	21.34	21.24	21.29	21.07	21.22		
15	64QAM	1	74	21.18	21.25	21.16	21.19	21.53		
15	64QAM	36	0	20.70	21.02	20.62	20.61	20.96	22	3
15	64QAM	36	20	20.82	21.06	20.84	20.85	20.95		
15	64QAM	36	39	20.85	21.02	20.87	20.84	20.94		
15	64QAM	75	0	20.75	21.04	20.76	20.79	20.90		
Channel				39700	40140	40580	41020	41460	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	23.74	23.91	23.59	23.76	23.97	25	0
10	QPSK	1	25	23.76	23.94	23.76	23.80	23.96		
10	QPSK	1	49	23.76	23.96	23.76	23.79	24.00		
10	QPSK	25	0	22.78	23.18	22.89	22.95	22.98	24	1
10	QPSK	25	12	22.92	23.19	22.99	22.95	23.05		
10	QPSK	25	25	22.90	23.16	22.95	22.94	23.02		
10	QPSK	50	0	22.83	23.21	22.87	22.92	22.98		
10	16QAM	1	0	22.91	23.06	22.72	22.86	23.08	24	1
10	16QAM	1	25	22.90	23.07	22.95	22.93	23.04		
10	16QAM	1	49	22.88	23.03	22.88	22.89	23.03		
10	16QAM	25	0	21.80	22.23	21.95	21.97	22.03	23	2
10	16QAM	25	12	21.92	22.20	22.01	22.00	22.07		
10	16QAM	25	25	21.90	22.14	21.97	21.96	22.05		
10	16QAM	50	0	21.83	22.14	21.95	21.97	22.02		
10	64QAM	1	0	21.46	21.65	21.31	21.42	21.70	23	2
10	64QAM	1	25	21.35	21.63	21.45	21.47	21.60		
10	64QAM	1	49	21.43	21.60	21.45	21.46	21.63		
10	64QAM	25	0	20.80	21.25	20.97	20.94	21.01	22	3
10	64QAM	25	12	20.90	21.19	21.00	21.07	21.07		
10	64QAM	25	25	20.89	21.16	20.99	21.02	21.07		
10	64QAM	50	0	20.78	21.12	20.99	20.91	21.01		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	23.87	24.01	23.78	23.85	23.96	25	0
5	QPSK	1	12	23.59	23.90	23.32	23.87	23.34		
5	QPSK	1	24	23.63	23.88	23.60	23.91	23.85		
5	QPSK	12	0	22.67	23.00	22.74	22.73	22.88	24	1
5	QPSK	12	7	23.04	22.92	22.75	22.78	22.90		
5	QPSK	12	13	22.97	22.90	22.77	22.68	22.80		
5	QPSK	25	0	22.89	23.30	23.05	22.82	22.86		
5	16QAM	1	0	23.01	23.24	22.93	22.93	22.99	24	1
5	16QAM	1	12	22.83	23.18	22.96	22.98	22.94		
5	16QAM	1	24	22.99	23.01	22.85	22.85	22.97		
5	16QAM	12	0	21.78	22.11	21.87	21.85	21.97	23	2
5	16QAM	12	7	21.80	21.92	21.68	21.67	21.81		
5	16QAM	12	13	21.75	22.03	21.81	21.80	21.92		
5	16QAM	25	0	21.77	22.00	21.79	21.76	21.90		
5	64QAM	1	0	21.59	21.90	21.64	21.70	21.79	23	2
5	64QAM	1	12	21.66	21.78	21.43	21.40	21.48		
5	64QAM	1	24	21.48	21.85	21.85	21.62	21.76		
5	64QAM	12	0	21.04	21.46	21.17	21.15	21.27	22	3
5	64QAM	12	7	21.01	21.29	21.09	21.08	21.19		
5	64QAM	12	13	20.82	21.30	21.12	21.11	21.21		
5	64QAM	25	0	20.65	21.28	21.07	21.06	21.06		

Band 41 (2.6G Band) HPUE (Limit 27)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	25.42	25.48	25.04	25.26	25.52	27	0
20	QPSK	1	49	25.47	25.51	25.43	25.49	25.61		
20	QPSK	1	99	25.02	25.25	25.01	25.00	25.51		
20	QPSK	50	0	24.48	24.56	24.29	24.41	24.61	26	1
20	QPSK	50	24	24.54	24.59	24.47	24.54	24.64		
20	QPSK	50	50	24.42	24.52	24.39	24.45	24.63		
20	QPSK	100	0	24.40	24.61	24.38	24.43	24.62		
20	16QAM	1	0	24.60	24.77	24.28	24.39	24.73	26	1
20	16QAM	1	49	24.79	24.90	24.69	24.80	24.90		
20	16QAM	1	99	24.21	24.27	24.12	24.24	24.71		
20	16QAM	50	0	23.53	23.74	23.33	23.47	23.73	25	2
20	16QAM	50	24	23.60	23.78	23.56	23.57	23.76		
20	16QAM	50	50	23.46	23.57	23.46	23.50	23.66		
20	16QAM	100	0	23.42	23.61	23.42	23.45	23.70		
20	64QAM	1	0	23.46	23.77	23.26	23.17	23.59	25	2
20	64QAM	1	49	23.52	23.69	23.47	23.57	23.90		
20	64QAM	1	99	23.35	23.17	23.04	23.05	23.58		
20	64QAM	50	0	22.50	22.69	22.32	22.47	22.68	24	3
20	64QAM	50	24	22.53	22.71	22.52	22.55	22.74		
20	64QAM	50	50	22.41	22.54	22.38	22.46	22.61		
20	64QAM	100	0	22.37	22.61	22.35	22.41	22.65		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	25.18	25.34	25.32	25.33	25.57	27	0
15	QPSK	1	37	25.07	25.56	25.00	25.31	25.45		
15	QPSK	1	74	25.16	25.31	25.19	25.26	25.54		
15	QPSK	36	0	24.54	24.79	24.33	24.36	24.56	26	1
15	QPSK	36	20	24.48	24.78	24.48	24.54	24.63		
15	QPSK	36	39	24.55	24.83	24.53	24.63	24.53		
15	QPSK	75	0	24.58	24.73	24.42	24.37	24.64		
15	16QAM	1	0	24.39	24.61	24.22	24.05	24.79	26	1
15	16QAM	1	37	24.22	24.28	24.15	24.07	24.45		
15	16QAM	1	74	24.13	24.33	24.12	24.17	24.82		
15	16QAM	36	0	23.52	23.86	23.36	23.29	23.51	25	2
15	16QAM	36	20	23.46	23.84	23.47	23.54	23.68		
15	16QAM	36	39	23.58	23.83	23.57	23.59	23.54		
15	16QAM	75	0	23.58	23.83	23.41	23.43	23.65		
15	64QAM	1	0	23.46	23.59	23.12	23.14	23.63	25	2
15	64QAM	1	37	23.63	23.50	23.17	23.57	23.59		
15	64QAM	1	74	23.22	23.27	23.01	23.08	23.60		
15	64QAM	36	0	22.53	22.72	22.30	22.33	22.55	24	3
15	64QAM	36	20	22.45	22.75	22.51	22.51	22.63		
15	64QAM	36	39	22.48	22.72	22.58	22.55	22.56		
15	64QAM	75	0	22.57	22.75	22.41	22.47	22.60		
Channel				39700	40140	40580	41020	41460	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	25.42	25.56	25.30	25.36	25.57	27	0
10	QPSK	1	25	25.36	25.55	25.31	25.38	25.46		
10	QPSK	1	49	25.39	25.32	25.41	25.50	25.53		
10	QPSK	25	0	24.45	24.78	24.60	24.54	24.67	26	1
10	QPSK	25	12	24.59	24.69	24.63	24.62	24.65		
10	QPSK	25	25	24.48	24.75	24.60	24.64	24.58		
10	QPSK	50	0	24.51	24.71	24.58	24.58	24.68		
10	16QAM	1	0	24.81	25.03	24.66	24.77	24.91	26	1
10	16QAM	1	25	24.76	25.02	24.85	24.88	24.77		
10	16QAM	1	49	24.72	24.98	24.79	24.86	24.96		
10	16QAM	25	0	23.52	23.81	23.60	23.64	23.65	25	2
10	16QAM	25	12	23.64	23.80	23.66	23.65	23.71		
10	16QAM	25	25	23.52	23.84	23.62	23.61	23.52		
10	16QAM	50	0	23.55	23.74	23.59	23.57	23.62		
10	64QAM	1	0	23.69	23.99	23.55	23.74	23.80	25	2
10	64QAM	1	25	23.57	23.67	23.53	23.61	23.52		
10	64QAM	1	49	23.55	23.91	23.73	23.69	23.73		
10	64QAM	25	0	22.51	22.81	22.64	22.63	22.68	24	3
10	64QAM	25	12	22.66	22.84	22.73	22.72	22.77		
10	64QAM	25	25	22.54	22.80	22.74	22.71	22.64		
10	64QAM	50	0	22.53	22.72	22.57	22.58	22.53		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	25.45	25.51	25.52	25.60	25.52	27	0
5	QPSK	1	12	25.20	25.30	25.27	25.36	25.30		
5	QPSK	1	24	25.45	25.51	25.39	25.40	25.35		
5	QPSK	12	0	24.49	24.77	24.60	24.59	24.58	26	1
5	QPSK	12	7	24.54	24.74	24.60	24.60	24.54		
5	QPSK	12	13	24.48	24.72	24.59	24.63	24.57		
5	QPSK	25	0	24.42	24.72	24.55	24.63	24.55		
5	16QAM	1	0	24.79	25.06	24.90	24.89	24.91	26	1
5	16QAM	1	12	24.69	24.89	24.74	24.95	24.90		
5	16QAM	1	24	24.75	25.04	24.80	24.86	24.80		
5	16QAM	12	0	23.55	23.89	23.76	23.74	23.59	25	2
5	16QAM	12	7	23.62	23.81	23.68	23.67	23.60		
5	16QAM	12	13	23.60	23.80	23.66	23.66	23.52		
5	16QAM	25	0	23.49	23.77	23.63	23.61	23.56		
5	64QAM	1	0	23.70	24.04	23.78	23.88	23.78	25	2
5	64QAM	1	12	23.75	23.98	23.81	23.81	23.62		
5	64QAM	1	24	23.65	23.97	23.75	23.72	23.62		
5	64QAM	12	0	22.56	22.86	22.72	22.75	22.72	24	3
5	64QAM	12	7	22.60	22.80	22.68	22.69	22.62		
5	64QAM	12	13	22.57	22.78	22.69	22.65	22.62		
5	64QAM	25	0	22.49	22.82	22.66	22.76	22.51		

Reduced Power Mode for P-Sensor On

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	22.99	23.00	22.76	24.00	13.99	14.00	13.76	15.00
GPRS 1 Tx slot	22.97	22.95	22.70	24.00	13.97	13.95	13.70	15.00
GPRS 2 Tx slots	20.98	21.05	20.94	22.50	14.98	15.05	14.94	16.50
GPRS 3 Tx slots	18.67	18.64	18.76	20.00	14.41	14.38	14.50	15.74
GPRS 4 Tx slots	16.67	16.70	16.65	18.00	13.67	13.70	13.65	15.00
EDGE 1 Tx slot	18.69	18.81	18.55	20.00	9.69	9.81	9.55	11.00
EDGE 2 Tx slots	16.52	16.75	16.61	18.00	10.52	10.75	10.61	12.00
EDGE 3 Tx slots	14.47	14.41	14.36	15.50	10.21	10.15	10.10	11.24
EDGE 4 Tx slots	13.54	13.44	13.41	14.50	10.54	10.44	10.41	11.50

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			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	AMR 12.2Kbps	14.30	14.34	14.26	15.50	13.44	13.36	13.53	15.50	21.87	21.86	22.08	23.00
3GPP Rel 99	RMC 12.2Kbps	14.31	14.45	14.42	15.50	14.05	13.88	14.09	15.50	21.88	21.89	22.15	23.00
3GPP Rel 6	HSDPA Subtest-1	13.18	13.14	13.07	14.50	12.82	12.79	12.96	14.50	20.95	20.93	21.12	22.00
3GPP Rel 6	HSDPA Subtest-2	13.16	13.16	13.12	14.50	12.85	12.86	12.98	14.50	20.94	20.98	21.15	22.00
3GPP Rel 6	HSDPA Subtest-3	12.31	12.65	12.57	14.00	12.37	12.32	12.58	14.00	20.46	20.44	20.68	21.50
3GPP Rel 6	HSDPA Subtest-4	12.64	12.67	12.62	14.00	12.26	12.36	12.01	14.00	20.42	20.47	20.25	21.50
3GPP Rel 8	DC-HSDPA Subtest-1	13.02	13.07	12.90	14.50	12.74	12.79	12.89	14.50	20.88	20.73	20.99	22.00
3GPP Rel 8	DC-HSDPA Subtest-2	13.09	12.97	13.09	14.50	12.79	12.83	12.88	14.50	20.85	20.79	21.12	22.00
3GPP Rel 8	DC-HSDPA Subtest-3	12.19	12.57	12.53	14.00	12.37	12.20	12.54	14.00	20.43	20.28	20.62	21.50
3GPP Rel 8	DC-HSDPA Subtest-4	12.63	12.63	12.52	14.00	12.06	12.31	12.00	14.00	20.22	20.33	20.06	21.50
3GPP Rel 6	HSUPA Subtest-1	13.16	13.17	13.12	14.50	12.79	12.86	12.64	14.50	20.89	20.89	21.03	22.00
3GPP Rel 6	HSUPA Subtest-2	11.15	11.16	11.15	12.50	10.67	10.66	10.69	12.50	18.83	18.88	18.99	20.00
3GPP Rel 6	HSUPA Subtest-3	12.17	12.14	12.09	13.50	11.76	11.79	11.79	13.50	19.87	19.87	20.06	21.00
3GPP Rel 6	HSUPA Subtest-4	11.18	11.13	11.08	12.50	10.78	10.80	10.69	12.50	18.85	18.86	19.04	20.00
3GPP Rel 6	HSUPA Subtest-5	13.20	13.20	13.10	14.50	12.80	12.80	12.90	14.50	20.86	20.86	21.06	22.00

Band	CDMA BC1			Tune-up Limit (dBm)
TX Channel	25	600	1175	
Frequency (MHz)	1851.25	1880	1908.75	
RC1 SO55	16.39	16.42	16.33	17.00
RC3 SO55	16.21	16.31	16.17	17.00
RC3 SO32 (F+SCH)	16.31	16.39	16.22	17.00
RC3 SO32 (+SCH)	16.29	16.26	16.19	17.00
RTAP 153.6Kbps	15.59	15.68	15.56	17.00
RETAP 4096Bits	15.61	15.61	15.58	17.00

Band 2 (1900MHz Band)
Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	14.97	14.85	14.89		
20	QPSK	1	49	14.66	14.70	14.59	16	0
20	QPSK	1	99	14.43	14.53	14.41		
20	QPSK	50	0	14.98	14.93	14.90		
20	QPSK	50	24	14.84	14.84	14.91	16	0
20	QPSK	50	50	14.63	14.75	14.74		
20	QPSK	100	0	14.77	14.77	14.82		
20	16QAM	1	0	15.54	15.36	15.36		
20	16QAM	1	49	15.27	15.22	15.15	16	0
20	16QAM	1	99	14.90	14.97	14.92		
20	16QAM	50	0	14.99	14.91	14.92		
20	16QAM	50	24	14.86	14.85	14.91	16	0
20	16QAM	50	50	14.63	14.72	14.75		
20	16QAM	100	0	14.79	14.77	14.85		
20	64QAM	1	0	15.18	15.11	14.99		
20	64QAM	1	49	15.00	14.93	14.91	16	0
20	64QAM	1	99	14.70	14.74	14.68		
20	64QAM	50	0	14.94	14.93	14.89		
20	64QAM	50	24	14.83	14.83	14.89	16	0
20	64QAM	50	50	14.62	14.75	14.72		
20	64QAM	100	0	14.82	14.78	14.80		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	15.04	15.10	15.03		
15	QPSK	1	37	14.42	14.51	14.49	16	0
15	QPSK	1	74	14.95	14.97	15.02		
15	QPSK	36	0	14.90	14.87	14.87		
15	QPSK	36	20	14.81	14.84	14.88	16	0
15	QPSK	36	39	14.78	14.83	14.87		
15	QPSK	75	0	14.81	14.76	14.87		
15	16QAM	1	0	15.54	15.51	15.55		
15	16QAM	1	37	15.40	15.34	15.32	16	0
15	16QAM	1	74	15.37	15.40	15.33		
15	16QAM	36	0	14.91	14.89	14.86		
15	16QAM	36	20	14.86	14.81	14.88	16	0
15	16QAM	36	39	14.77	14.82	14.84		
15	16QAM	75	0	14.80	14.79	14.87		
15	64QAM	1	0	15.28	15.26	15.29		
15	64QAM	1	37	14.98	14.96	14.89	16	0
15	64QAM	1	74	15.05	15.27	15.05		
15	64QAM	36	0	14.92	14.87	14.89		
15	64QAM	36	20	14.84	14.80	14.87	16	0
15	64QAM	36	39	14.79	14.81	14.80		
15	64QAM	75	0	14.79	14.79	14.89		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	15.17	15.07	15.02		
10	QPSK	1	25	14.89	14.86	14.93	16	0
10	QPSK	1	49	14.97	14.86	15.02		
10	QPSK	25	0	15.11	14.94	15.02		
10	QPSK	25	12	15.07	14.96	15.03	16	0
10	QPSK	25	25	15.04	14.91	15.05		
10	QPSK	50	0	15.06	14.96	15.03		
10	16QAM	1	0	15.52	15.50	15.45		
10	16QAM	1	25	15.35	15.38	15.39	16	0
10	16QAM	1	49	15.43	15.37	15.41		
10	16QAM	25	0	15.02	14.93	15.02		
10	16QAM	25	12	15.07	14.95	15.05	16	0
10	16QAM	25	25	15.03	14.88	15.01		
10	16QAM	50	0	15.07	14.93	14.98		
10	64QAM	1	0	15.29	15.34	15.20		
10	64QAM	1	25	15.20	15.21	15.12	16	0
10	64QAM	1	49	15.29	15.26	15.21		
10	64QAM	25	0	15.08	14.91	15.03		
10	64QAM	25	12	15.09	14.95	15.02	16	0
10	64QAM	25	25	15.01	14.92	15.07		
10	64QAM	50	0	15.07	14.95	14.96		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	15.15	15.06	15.14		
5	QPSK	1	12	14.97	14.89	14.94	16	0
5	QPSK	1	24	14.97	14.89	14.95		
5	QPSK	12	0	15.07	15.05	15.06		
5	QPSK	12	7	15.11	15.02	15.05	16	0
5	QPSK	12	13	15.07	14.93	15.03		
5	QPSK	25	0	15.06	15.00	15.08		
5	16QAM	1	0	15.45	15.42	15.41		
5	16QAM	1	12	15.35	15.38	15.40	16	0
5	16QAM	1	24	15.33	15.22	15.31		
5	16QAM	12	0	15.08	15.10	15.09		
5	16QAM	12	7	15.16	14.99	15.07	16	0
5	16QAM	12	13	15.06	14.99	15.02		
5	16QAM	25	0	15.07	14.98	15.01		
5	64QAM	1	0	15.33	15.26	15.32		
5	64QAM	1	12	15.20	15.11	15.15	16	0
5	64QAM	1	24	15.27	15.15	15.13		
5	64QAM	12	0	15.09	15.03	15.08		
5	64QAM	12	7	15.10	14.99	15.05	16	0
5	64QAM	12	13	15.05	14.96	15.04		
5	64QAM	25	0	15.06	14.96	15.07		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	15.02	14.96	15.04		
3	QPSK	1	8	14.90	14.92	14.96	16	0
3	QPSK	1	14	14.86	14.83	14.89		
3	QPSK	8	0	14.97	14.94	15.00		
3	QPSK	8	4	15.03	14.96	15.00	16	0
3	QPSK	8	7	14.93	14.89	14.94		
3	QPSK	15	0	14.97	14.94	14.97		
3	16QAM	1	0	15.26	15.25	15.40		
3	16QAM	1	8	15.30	15.21	15.26	16	0
3	16QAM	1	14	15.06	15.15	15.18		
3	16QAM	8	0	15.05	15.04	15.07		
3	16QAM	8	4	15.09	15.04	15.06	16	0
3	16QAM	8	7	15.01	15.01	15.02		
3	16QAM	15	0	15.01	14.95	14.99		
3	64QAM	1	0	15.07	15.18	15.23		
3	64QAM	1	8	15.15	15.14	15.11	16	0
3	64QAM	1	14	15.01	14.97	15.11		
3	64QAM	8	0	15.01	15.00	15.00		
3	64QAM	8	4	15.05	14.98	15.02	16	0
3	64QAM	8	7	14.99	14.88	14.98		
3	64QAM	15	0	14.96	14.90	15.00		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	14.94	14.92	14.95		
1.4	QPSK	1	3	14.99	14.97	15.02		
1.4	QPSK	1	5	14.95	14.85	14.93	16	0
1.4	QPSK	3	0	14.95	14.89	14.92		
1.4	QPSK	3	1	15.00	15.01	15.00		
1.4	QPSK	3	3	14.93	14.87	14.93		
1.4	QPSK	6	0	14.90	14.89	14.95	16	0
1.4	16QAM	1	0	15.37	15.29	15.22		
1.4	16QAM	1	3	15.23	15.24	15.26		
1.4	16QAM	1	5	15.22	15.21	15.23	16	0
1.4	16QAM	3	0	14.98	14.98	15.01		
1.4	16QAM	3	1	15.04	15.04	15.05		
1.4	16QAM	3	3	15.00	14.90	14.96		
1.4	16QAM	6	0	14.94	14.89	15.00	16	0
1.4	64QAM	1	0	15.03	15.09	15.17		
1.4	64QAM	1	3	15.02	15.05	15.27		
1.4	64QAM	1	5	15.06	15.10	15.09	16	0
1.4	64QAM	3	0	15.01	15.05	15.08		
1.4	64QAM	3	1	15.08	15.12	15.11		
1.4	64QAM	3	3	15.05	15.00	15.02		
1.4	64QAM	6	0	14.96	14.97	14.96	16	0

Band 4 (AWS Band)
Part 27L (only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	15.30	15.37	15.41		
20	QPSK	1	49	15.20	15.35	15.56	16.5	0
20	QPSK	1	99	15.14	15.55	15.94		
20	QPSK	50	0	15.36	15.30	15.23		
20	QPSK	50	24	15.34	15.40	15.60	16.5	0
20	QPSK	50	50	15.19	15.47	15.71		
20	QPSK	100	0	15.01	15.45	15.54		
20	16QAM	1	0	15.39	15.32	15.44		
20	16QAM	1	49	15.31	15.60	15.68	16.5	0
20	16QAM	1	99	15.24	15.53	15.88		
20	16QAM	50	0	14.96	15.07	15.21		
20	16QAM	50	24	14.96	15.08	15.32	16.5	0
20	16QAM	50	50	14.80	15.03	15.39		
20	16QAM	100	0	14.96	15.06	15.29		
20	64QAM	1	0	15.13	15.12	15.29		
20	64QAM	1	49	15.02	15.30	15.42	16.5	0
20	64QAM	1	99	14.97	15.25	15.66		
20	64QAM	50	0	14.95	15.05	15.19		
20	64QAM	50	24	14.96	15.06	15.29	16.5	0
20	64QAM	50	50	14.79	15.03	15.40		
20	64QAM	100	0	14.96	15.07	15.30		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	15.00	15.21	15.11		
15	QPSK	1	37	15.11	15.20	15.14	16.5	0
15	QPSK	1	74	15.27	15.14	15.50		
15	QPSK	36	0	15.06	15.13	15.34		
15	QPSK	36	20	15.00	15.09	15.45	16.5	0
15	QPSK	36	39	15.33	15.06	15.41		
15	QPSK	75	0	15.36	15.16	15.34		
15	16QAM	1	0	15.35	15.59	15.68		
15	16QAM	1	37	15.42	15.72	15.86	16.5	0
15	16QAM	1	74	15.23	15.60	15.90		
15	16QAM	36	0	15.42	15.13	15.33		
15	16QAM	36	20	15.39	15.12	15.47	16.5	0
15	16QAM	36	39	15.31	15.08	15.41		
15	16QAM	75	0	15.38	15.14	15.38		
15	64QAM	1	0	15.34	15.29	15.43		
15	64QAM	1	37	15.09	15.23	15.59	16.5	0
15	64QAM	1	74	15.36	15.30	15.69		
15	64QAM	36	0	15.45	15.15	15.33		
15	64QAM	36	20	15.38	15.13	15.46	16.5	0
15	64QAM	36	39	15.33	15.07	15.43		
15	64QAM	75	0	15.36	15.11	15.36		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	15.48	15.01	15.40		
10	QPSK	1	25	15.44	15.04	15.45	16.5	0
10	QPSK	1	49	15.35	15.59	15.90		
10	QPSK	25	0	15.15	15.23	15.53		
10	QPSK	25	12	15.10	15.31	15.58	16.5	0
10	QPSK	25	25	15.22	15.39	15.72		
10	QPSK	50	0	15.19	15.29	15.61		
10	16QAM	1	0	15.34	15.50	15.64		
10	16QAM	1	25	14.98	15.19	15.45	16.5	0
10	16QAM	1	49	15.36	15.68	15.68		
10	16QAM	25	0	15.12	15.22	15.54		
10	16QAM	25	12	15.09	15.30	15.57	16.5	0
10	16QAM	25	25	15.16	15.34	15.67		
10	16QAM	50	0	15.19	15.30	15.60		
10	64QAM	1	0	15.46	15.69	15.85		
10	64QAM	1	25	15.52	15.26	15.60	16.5	0
10	64QAM	1	49	15.25	15.82	15.89		
10	64QAM	25	0	15.14	15.20	15.50		
10	64QAM	25	12	15.10	15.32	15.59	16.5	0
10	64QAM	25	25	15.22	15.40	15.68		
10	64QAM	50	0	15.16	15.27	15.60		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	15.41	15.05	15.30		
5	QPSK	1	12	15.46	15.02	15.39	16.5	0
5	QPSK	1	24	15.12	15.18	15.53		
5	QPSK	12	0	15.10	15.29	15.61		
5	QPSK	12	7	15.11	15.20	15.56	16.5	0
5	QPSK	12	13	15.03	15.19	15.63		
5	QPSK	25	0	15.11	15.21	15.56		
5	16QAM	1	0	15.10	15.62	15.91		
5	16QAM	1	12	15.33	15.51	15.78	16.5	0
5	16QAM	1	24	15.30	15.51	15.84		
5	16QAM	12	0	15.13	15.33	15.65		
5	16QAM	12	7	15.13	15.24	15.59	16.5	0
5	16QAM	12	13	15.07	15.24	15.65		
5	16QAM	25	0	15.09	15.22	15.55		
5	64QAM	1	0	15.09	15.48	15.80		
5	64QAM	1	12	14.88	15.26	15.69	16.5	0
5	64QAM	1	24	14.87	15.41	15.76		
5	64QAM	12	0	15.13	15.30	15.63		
5	64QAM	12	7	15.12	15.21	15.59	16.5	0
5	64QAM	12	13	15.05	15.20	15.62		
5	64QAM	25	0	15.11	15.21	15.57		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	15.49	15.12	15.43		
3	QPSK	1	8	15.48	15.13	15.46	16.5	0
3	QPSK	1	14	15.41	15.08	15.48		
3	QPSK	8	0	15.11	15.22	15.51		
3	QPSK	8	4	15.03	15.23	15.61	16.5	0
3	QPSK	8	7	15.03	15.22	15.55		
3	QPSK	15	0	15.04	15.18	15.59		
3	16QAM	1	0	15.37	15.48	15.80		
3	16QAM	1	8	15.41	15.45	15.88	16.5	0
3	16QAM	1	14	15.25	15.38	15.77		
3	16QAM	8	0	15.19	15.31	15.58		
3	16QAM	8	4	15.07	15.29	15.69	16.5	0
3	16QAM	8	7	15.09	15.29	15.64		
3	16QAM	15	0	15.10	15.19	15.62		
3	64QAM	1	0	15.30	15.42	15.73		
3	64QAM	1	8	15.31	15.37	15.74	16.5	0
3	64QAM	1	14	15.11	15.38	15.74		
3	64QAM	8	0	15.14	15.24	15.57		
3	64QAM	8	4	15.05	15.27	15.66	16.5	0
3	64QAM	8	7	15.07	15.26	15.63		
3	64QAM	15	0	15.05	15.17	15.60		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	15.54	15.19	15.50		
1.4	QPSK	1	3	15.55	15.09	15.49		
1.4	QPSK	1	5	15.43	15.17	15.52	16.5	0
1.4	QPSK	3	0	15.47	15.21	15.56		
1.4	QPSK	3	1	15.08	15.31	15.63		
1.4	QPSK	3	3	15.04	15.15	15.53		
1.4	QPSK	6	0	14.99	15.10	15.51	16.5	0
1.4	16QAM	1	0	15.35	15.40	15.85		
1.4	16QAM	1	3	15.36	15.42	15.84		
1.4	16QAM	1	5	15.21	15.36	15.71	16.5	0
1.4	16QAM	3	0	15.06	15.27	15.63		
1.4	16QAM	3	1	15.16	15.37	15.68		
1.4	16QAM	3	3	15.12	15.20	15.60		
1.4	16QAM	6	0	15.03	15.13	15.56	16.5	0
1.4	64QAM	1	0	15.24	15.31	15.71		
1.4	64QAM	1	3	15.20	15.23	15.68		
1.4	64QAM	1	5	15.13	15.32	15.62	16.5	0
1.4	64QAM	3	0	15.08	15.34	15.68		
1.4	64QAM	3	1	15.21	15.38	15.71		
1.4	64QAM	3	3	15.12	15.25	15.65		
1.4	64QAM	6	0	15.06	15.18	15.55	16.5	0

Band 7 (2600MHz Band)
Part 27

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	18.91	18.93	18.99		
20	QPSK	1	49	18.90	18.99	18.92	19.5	0
20	QPSK	1	99	18.93	18.97	19.22		
20	QPSK	50	0	18.93	19.09	19.01		
20	QPSK	50	24	18.96	19.09	19.05	19.5	0
20	QPSK	50	50	19.02	19.07	19.15		
20	QPSK	100	0	19.04	19.07	19.09		
20	16QAM	1	0	18.92	19.04	18.94		
20	16QAM	1	49	18.86	19.07	18.95	19.5	0
20	16QAM	1	99	18.89	18.96	18.92		
20	16QAM	50	0	18.96	19.06	19.03		
20	16QAM	50	24	18.96	19.08	19.03	19.5	0
20	16QAM	50	50	19.03	19.08	19.06		
20	16QAM	100	0	19.03	19.09	19.04		
20	64QAM	1	0	19.12	19.14	19.15		
20	64QAM	1	49	19.03	19.16	19.20	19.5	0
20	64QAM	1	99	19.07	19.19	19.12		
20	64QAM	50	0	18.93	19.04	19.01		
20	64QAM	50	24	18.94	19.04	19.01	19.5	0
20	64QAM	50	50	19.02	19.05	19.07		
20	64QAM	100	0	19.03	19.07	19.03		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	19.01	19.05	19.10		
15	QPSK	1	37	19.00	19.02	19.03	19.5	0
15	QPSK	1	74	18.87	19.03	18.96		
15	QPSK	36	0	19.05	19.12	19.03		
15	QPSK	36	20	19.08	19.10	19.05	19.5	0
15	QPSK	36	39	18.93	19.08	19.02		
15	QPSK	75	0	18.99	19.09	19.05		
15	16QAM	1	0	18.91	19.02	18.93		
15	16QAM	1	37	18.91	19.03	19.02	19.5	0
15	16QAM	1	74	18.87	18.98	18.91		
15	16QAM	36	0	19.03	19.07	19.04		
15	16QAM	36	20	19.07	19.12	19.06	19.5	0
15	16QAM	36	39	18.90	19.06	19.05		
15	16QAM	75	0	18.95	19.05	19.03		
15	64QAM	1	0	19.12	19.19	19.09		
15	64QAM	1	37	19.00	19.19	19.03	19.5	0
15	64QAM	1	74	19.17	19.17	19.04		
15	64QAM	36	0	19.02	19.10	19.07		
15	64QAM	36	20	19.07	19.12	19.09	19.5	0
15	64QAM	36	39	18.93	19.05	19.04		
15	64QAM	75	0	18.93	19.02	19.04		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	19.01	19.15	19.17		
10	QPSK	1	25	19.11	19.13	19.12	19.5	0
10	QPSK	1	49	19.18	19.21	19.17		
10	QPSK	25	0	19.03	19.13	19.13		
10	QPSK	25	12	19.08	19.11	19.11	19.5	0
10	QPSK	25	25	19.04	19.17	19.13		
10	QPSK	50	0	19.10	19.14	19.17		
10	16QAM	1	0	19.14	19.18	19.15		
10	16QAM	1	25	18.87	19.02	19.08	19.5	0
10	16QAM	1	49	19.00	19.20	19.21		
10	16QAM	25	0	19.06	19.21	19.15		
10	16QAM	25	12	19.07	19.10	19.15	19.5	0
10	16QAM	25	25	19.03	19.18	19.13		
10	16QAM	50	0	19.11	19.17	19.19		
10	64QAM	1	0	19.20	19.18	19.17		
10	64QAM	1	25	18.97	19.01	18.98	19.5	0
10	64QAM	1	49	19.02	19.09	19.08		
10	64QAM	25	0	19.02	19.21	19.10		
10	64QAM	25	12	19.06	19.11	19.13	19.5	0
10	64QAM	25	25	19.04	19.16	19.09		
10	64QAM	50	0	19.12	19.15	19.14		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	19.11	19.14	19.08		
5	QPSK	1	12	19.04	19.07	19.06	19.5	0
5	QPSK	1	24	19.03	19.16	19.04		
5	QPSK	12	0	19.02	19.12	19.16		
5	QPSK	12	7	19.09	19.11	19.13	19.5	0
5	QPSK	12	13	19.02	19.12	19.12		
5	QPSK	25	0	19.01	19.15	19.17		
5	16QAM	1	0	19.05	19.14	19.13		
5	16QAM	1	12	18.91	18.94	19.03	19.5	0
5	16QAM	1	24	18.91	19.08	19.07		
5	16QAM	12	0	19.07	19.17	19.15		
5	16QAM	12	7	19.14	19.19	19.15	19.5	0
5	16QAM	12	13	19.04	19.18	19.11		
5	16QAM	25	0	19.00	19.15	19.13		
5	64QAM	1	0	19.18	19.13	19.14		
5	64QAM	1	12	19.19	19.16	19.16	19.5	0
5	64QAM	1	24	19.16	19.13	19.20		
5	64QAM	12	0	19.10	19.19	19.15		
5	64QAM	12	7	19.16	19.16	19.15	19.5	0
5	64QAM	12	13	19.07	19.19	19.10		
5	64QAM	25	0	18.99	19.12	19.12		

Band 25 (1900MHz Band)
Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	14.37	14.36	14.83	16	0
20	QPSK	1	49	14.36	14.33	14.35		
20	QPSK	1	99	14.35	14.42	14.33		
20	QPSK	50	0	14.47	14.34	14.51	16	0
20	QPSK	50	24	14.49	14.37	14.45		
20	QPSK	50	50	14.41	14.30	14.39		
20	QPSK	100	0	14.40	14.33	14.51		
20	16QAM	1	0	14.81	14.69	14.81	16	0
20	16QAM	1	49	14.81	14.70	14.79		
20	16QAM	1	99	14.28	14.41	14.24		
20	16QAM	50	0	14.47	14.35	14.47	16	0
20	16QAM	50	24	14.46	14.38	14.48		
20	16QAM	50	50	14.42	14.31	14.43		
20	16QAM	100	0	14.41	14.31	14.50		
20	64QAM	1	0	14.71	14.53	14.60	16	0
20	64QAM	1	49	14.54	14.38	14.50		
20	64QAM	1	99	14.22	14.15	14.38		
20	64QAM	50	0	14.50	14.37	14.48	16	0
20	64QAM	50	24	14.48	14.38	14.46		
20	64QAM	50	50	14.37	14.29	14.42		
20	64QAM	100	0	14.41	14.32	14.44		
Channel				26115	26340	26915	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	14.30	14.28	14.27	16	0
15	QPSK	1	37	14.27	14.23	14.23		
15	QPSK	1	74	14.43	14.41	14.28		
15	QPSK	36	0	14.52	14.44	14.53	16	0
15	QPSK	36	20	14.54	14.44	14.52		
15	QPSK	36	39	14.58	14.50	14.58		
15	QPSK	75	0	14.55	14.44	14.59		
15	16QAM	1	0	14.77	14.73	14.73	16	0
15	16QAM	1	37	14.79	14.76	14.75		
15	16QAM	1	74	14.75	14.76	14.25		
15	16QAM	36	0	14.55	14.41	14.50	16	0
15	16QAM	36	20	14.56	14.43	14.52		
15	16QAM	36	39	14.56	14.50	14.59		
15	16QAM	75	0	14.51	14.43	14.56		
15	64QAM	1	0	14.70	14.62	14.69	16	0
15	64QAM	1	37	14.68	14.46	14.56		
15	64QAM	1	74	14.60	14.53	14.35		
15	64QAM	36	0	14.53	14.43	14.57	16	0
15	64QAM	36	20	14.54	14.41	14.53		
15	64QAM	36	39	14.56	14.49	14.65		
15	64QAM	75	0	14.50	14.43	14.61		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	14.40	14.41	14.46	16	0
10	QPSK	1	25	14.34	14.42	14.47		
10	QPSK	1	49	14.57	14.59	14.44		
10	QPSK	25	0	14.46	14.56	14.55	16	0
10	QPSK	25	12	14.50	14.57	14.53		
10	QPSK	25	25	14.47	14.54	14.60		
10	QPSK	50	0	14.49	14.58	14.59		
10	16QAM	1	0	14.74	14.83	14.81	16	0
10	16QAM	1	25	14.53	14.65	14.62		
10	16QAM	1	49	14.75	14.83	14.53		
10	16QAM	25	0	14.47	14.56	14.53	16	0
10	16QAM	25	12	14.47	14.55	14.53		
10	16QAM	25	25	14.45	14.56	14.59		
10	16QAM	50	0	14.48	14.58	14.59		
10	64QAM	1	0	14.59	14.62	14.66	16	0
10	64QAM	1	25	14.35	14.37	14.42		
10	64QAM	1	49	14.61	14.65	14.25		
10	64QAM	25	0	14.45	14.57	14.53	16	0
10	64QAM	25	12	14.47	14.60	14.56		
10	64QAM	25	25	14.47	14.58	14.64		
10	64QAM	50	0	14.46	14.56	14.59		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	14.30	14.41	14.49	16	0
5	QPSK	1	12	14.35	14.49	14.52		
5	QPSK	1	24	14.36	14.45	14.44		
5	QPSK	12	0	14.48	14.57	14.57	16	0
5	QPSK	12	7	14.45	14.56	14.56		
5	QPSK	12	13	14.43	14.51	14.51		
5	QPSK	25	0	14.48	14.55	14.54		
5	16QAM	1	0	14.63	14.75	14.77	16	0
5	16QAM	1	12	14.47	14.57	14.56		
5	16QAM	1	24	14.54	14.60	14.47		
5	16QAM	12	0	14.52	14.61	14.59	16	0
5	16QAM	12	7	14.46	14.53	14.57		
5	16QAM	12	13	14.44	14.54	14.54		
5	16QAM	25	0	14.47	14.54	14.57		
5	64QAM	1	0	14.65	14.79	14.78	16	0
5	64QAM	1	12	14.53	14.57	14.65		
5	64QAM	1	24	14.55	14.63	14.57		
5	64QAM	12	0	14.51	14.60	14.63	16	0
5	64QAM	12	7	14.47	14.56	14.60		
5	64QAM	12	13	14.45	14.57	14.56		
5	64QAM	25	0	14.47	14.55	14.57		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	14.40	14.46	14.47	16	0
3	QPSK	1	8	14.39	14.49	14.48		
3	QPSK	1	14	14.34	14.44	14.46		
3	QPSK	8	0	14.44	14.52	14.53	16	0
3	QPSK	8	4	14.44	14.55	14.57		
3	QPSK	8	7	14.40	14.51	14.54		
3	QPSK	15	0	14.40	14.52	14.53		
3	16QAM	1	0	14.42	14.70	14.68	16	0
3	16QAM	1	8	14.55	14.69	14.64		
3	16QAM	1	14	14.53	14.58	14.62		
3	16QAM	8	0	14.47	14.56	14.55	16	0
3	16QAM	8	4	14.46	14.59	14.59		
3	16QAM	8	7	14.44	14.54	14.54		
3	16QAM	15	0	14.43	14.54	14.57		
3	64QAM	1	0	14.62	14.59	14.71	16	0
3	64QAM	1	8	14.58	14.65	14.68		
3	64QAM	1	14	14.57	14.59	14.62		
3	64QAM	8	0	14.46	14.58	14.56	16	0
3	64QAM	8	4	14.46	14.57	14.57		
3	64QAM	8	7	14.40	14.51	14.56		
3	64QAM	15	0	14.44	14.54	14.53		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	14.35	14.50	14.45	16	0
1.4	QPSK	1	3	14.38	14.52	14.48		
1.4	QPSK	1	5	14.37	14.44	14.44		
1.4	QPSK	3	0	14.37	14.46	14.47		
1.4	QPSK	3	1	14.42	14.53	14.50		
1.4	QPSK	3	3	14.36	14.49	14.45		
1.4	QPSK	6	0	14.38	14.42	14.45	16	0
1.4	16QAM	1	0	14.68	14.72	14.77	16	0
1.4	16QAM	1	3	14.49	14.52	14.65		
1.4	16QAM	1	5	14.39	14.49	14.61		
1.4	16QAM	3	0	14.40	14.54	14.49		
1.4	16QAM	3	1	14.43	14.59	14.51		
1.4	16QAM	3	3	14.41	14.51	14.45		
1.4	16QAM	6	0	14.40	14.53	14.55	16	0
1.4	64QAM	1	0	14.56	14.71	14.65	16	0
1.4	64QAM	1	3	14.56	14.75	14.65		
1.4	64QAM	1	5	14.50	14.66	14.60		
1.4	64QAM	3	0	14.50	14.60	14.66		
1.4	64QAM	3	1	14.58	14.66	14.68		
1.4	64QAM	3	3	14.48	14.57	14.62		
1.4	64QAM	6	0	14.37	14.50	14.46	16	0

Band 26 for FCC
(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	21.53	21.66	21.64	23	0
15	QPSK	1	37	21.52	21.65	21.67		
15	QPSK	1	74	21.96	22.09	22.06		
15	QPSK	36	0	21.56	21.84	21.67	23	0
15	QPSK	36	20	21.37	21.49	21.58		
15	QPSK	36	39	21.38	21.37	21.52		
15	QPSK	75	0	21.47	21.68	21.57		
15	16QAM	1	0	21.77	21.93	22.01	23	0
15	16QAM	1	37	21.65	21.62	21.89		
15	16QAM	1	74	22.04	22.01	22.05		
15	16QAM	36	0	20.59	20.63	20.83	22	1
15	16QAM	36	20	20.41	20.51	20.54		
15	16QAM	36	39	20.33	20.37	20.49		
15	16QAM	75	0	20.42	20.55	20.63		
15	64QAM	1	0	20.89	20.96	21.09	22	1
15	64QAM	1	37	20.47	20.60	20.71		
15	64QAM	1	74	21.11	21.13	21.10		
15	64QAM	36	0	19.73	19.69	19.91	21	2
15	64QAM	36	20	19.58	19.55	19.67		
15	64QAM	36	39	19.47	19.44	19.62		
15	64QAM	75	0	19.58	19.60	19.73		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	21.40	21.58	21.51	23	0
10	QPSK	1	25	21.42	21.65	21.57		
10	QPSK	1	49	21.81	21.90	21.77		
10	QPSK	25	0	21.45	21.61	21.76	23	0
10	QPSK	25	12	21.47	21.67	21.66		
10	QPSK	25	25	21.60	21.72	21.69		
10	QPSK	50	0	21.57	21.67	21.68		
10	16QAM	1	0	21.87	22.05	22.02	23	0
10	16QAM	1	25	21.67	21.86	21.81		
10	16QAM	1	49	22.01	22.03	21.88		
10	16QAM	25	0	20.47	20.63	20.73	22	1
10	16QAM	25	12	20.46	20.66	20.62		
10	16QAM	25	25	20.57	20.73	20.64		
10	16QAM	50	0	20.57	20.69	20.67		
10	64QAM	1	0	20.92	21.16	21.24	22	1
10	64QAM	1	25	20.73	20.91	20.96		
10	64QAM	1	49	21.17	21.23	21.10		
10	64QAM	25	0	19.65	19.82	19.93	21	2
10	64QAM	25	12	19.65	19.86	19.80		
10	64QAM	25	25	19.78	19.90	19.88		
10	64QAM	50	0	19.74	19.87	19.84		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	21.30	21.55	21.46	23	0
5	QPSK	1	12	21.33	21.54	21.48		
5	QPSK	1	24	21.32	21.57	21.46		
5	QPSK	12	0	21.44	21.61	21.60	23	0
5	QPSK	12	7	21.38	21.58	21.57		
5	QPSK	12	13	21.40	21.54	21.57		
5	QPSK	25	0	21.41	21.60	21.58		
5	16QAM	1	0	21.66	21.83	22.00	23	0
5	16QAM	1	12	21.60	21.74	21.73		
5	16QAM	1	24	21.70	21.84	21.75		
5	16QAM	12	0	20.48	20.68	20.61	22	1
5	16QAM	12	7	20.45	20.60	20.59		
5	16QAM	12	13	20.47	20.55	20.60		
5	16QAM	25	0	20.42	20.57	20.59		
5	64QAM	1	0	20.76	20.96	21.06	22	1
5	64QAM	1	12	20.65	20.76	20.86		
5	64QAM	1	24	20.69	20.95	20.74		
5	64QAM	12	0	19.65	19.82	19.79	21	2
5	64QAM	12	7	19.60	19.78	19.76		
5	64QAM	12	13	19.63	19.75	19.76		
5	64QAM	25	0	19.56	19.78	19.77		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	21.40	21.51	21.48	23	0
3	QPSK	1	8	21.33	21.53	21.53		
3	QPSK	1	14	21.28	21.49	21.46		
3	QPSK	8	0	21.43	21.58	21.57	23	0
3	QPSK	8	4	21.36	21.59	21.57		
3	QPSK	8	7	21.38	21.56	21.54		
3	QPSK	15	0	21.31	21.59	21.57		
3	16QAM	1	0	21.63	21.93	21.87	23	0
3	16QAM	1	8	21.67	21.88	21.89		
3	16QAM	1	14	21.60	21.82	21.80		
3	16QAM	8	0	20.41	20.60	20.57	22	1
3	16QAM	8	4	20.40	20.61	20.59		
3	16QAM	8	7	20.39	20.58	20.55		
3	16QAM	15	0	20.31	20.57	20.57		
3	64QAM	1	0	20.69	20.92	20.93	22	1
3	64QAM	1	8	20.64	20.95	20.90		
3	64QAM	1	14	20.77	20.90	20.88		
3	64QAM	8	0	19.65	19.81	19.75	21	2
3	64QAM	8	4	19.55	19.81	19.76		
3	64QAM	8	7	19.56	19.78	19.78		
3	64QAM	15	0	19.56	19.79	19.76		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	21.25	21.55	21.49	23	0
1.4	QPSK	1	3	21.34	21.56	21.51		
1.4	QPSK	1	5	21.38	21.52	21.45		
1.4	QPSK	3	0	21.37	21.56	21.50		
1.4	QPSK	3	1	21.34	21.58	21.53		
1.4	QPSK	3	3	21.38	21.57	21.49		
1.4	QPSK	6	0	21.34	21.55	21.49	23	0
1.4	16QAM	1	0	21.72	21.92	21.72	23	0
1.4	16QAM	1	3	21.81	21.91	21.84		
1.4	16QAM	1	5	21.75	21.83	21.90		
1.4	16QAM	3	0	21.33	21.52	21.53		
1.4	16QAM	3	1	21.39	21.56	21.53		
1.4	16QAM	3	3	21.36	21.55	21.50		
1.4	16QAM	6	0	20.50	20.68	20.56	23	0
1.4	64QAM	1	0	20.41	20.73	20.70	23	0
1.4	64QAM	1	3	20.56	20.72	20.65		
1.4	64QAM	1	5	20.52	20.67	20.62		
1.4	64QAM	3	0	20.45	20.61	20.57		
1.4	64QAM	3	1	20.45	20.67	20.65		
1.4	64QAM	3	3	20.48	20.59	20.57		
1.4	64QAM	6	0	19.31	19.53	19.49	23	0

Band 30

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		20.26		21	0
10	QPSK	1	25		19.83			
10	QPSK	1	49		20.17			
10	QPSK	25	0		19.92		21	0
10	QPSK	25	12		19.96			
10	QPSK	25	25		20.10			
10	QPSK	50	0		20.01			
10	16QAM	1	0		20.13		21	0
10	16QAM	1	25		20.19			
10	16QAM	1	49		20.13			
10	16QAM	25	0		19.93		21	0
10	16QAM	25	12		19.95			
10	16QAM	25	25		20.04			
10	16QAM	50	0		19.90			
10	64QAM	1	0		20.19		21	0
10	64QAM	1	25		20.07			
10	64QAM	1	49		20.17			
10	64QAM	25	0		19.92		21	0
10	64QAM	25	12		19.91			
10	64QAM	25	25		20.05			
10	64QAM	50	0		19.92			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	20.07	19.95	19.89	21	0
5	QPSK	1	12	19.84	19.80	19.93		
5	QPSK	1	24	19.85	19.95	19.96		
5	QPSK	12	0	20.02	19.92	19.95	21	0
5	QPSK	12	7	19.89	19.93	20.03		
5	QPSK	12	13	19.90	19.89	20.00		
5	QPSK	25	0	19.87	19.95	20.03		
5	16QAM	1	0	20.16	20.25	20.19	21	0
5	16QAM	1	12	20.14	20.20	20.20		
5	16QAM	1	24	20.11	20.20	20.18		
5	16QAM	12	0	20.07	19.96	19.94	21	0
5	16QAM	12	7	19.94	19.93	20.06		
5	16QAM	12	13	19.89	19.90	20.03		
5	16QAM	25	0	19.91	19.93	20.05		
5	64QAM	1	0	20.20	20.12	20.17	21	0
5	64QAM	1	12	19.97	20.07	20.18		
5	64QAM	1	24	20.05	20.17	20.16		
5	64QAM	12	0	20.07	19.95	19.94	21	0
5	64QAM	12	7	19.93	19.92	20.03		
5	64QAM	12	13	19.92	19.89	20.02		
5	64QAM	25	0	19.88	19.92	20.03		

Band 66

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	15.26	15.68	15.70	16.5	0
20	QPSK	1	49	15.31	15.60	15.71		
20	QPSK	1	99	15.32	15.73	15.96		
20	QPSK	50	0	15.13	15.07	15.63	16.5	0
20	QPSK	50	24	15.19	15.19	15.76		
20	QPSK	50	50	15.28	15.65	15.81		
20	QPSK	100	0	15.24	15.68	15.77		
20	16QAM	1	0	15.21	15.31	15.78	16.5	0
20	16QAM	1	49	15.23	15.47	15.85		
20	16QAM	1	99	15.51	15.59	15.91		
20	16QAM	50	0	15.85	15.05	15.60	16.5	0
20	16QAM	50	24	15.88	15.18	15.77		
20	16QAM	50	50	15.88	15.26	15.83		
20	16QAM	100	0	15.85	15.14	15.69		
20	64QAM	1	0	15.03	15.14	15.65	16.5	0
20	64QAM	1	49	15.17	15.24	15.85		
20	64QAM	1	99	15.41	15.93	15.77		
20	64QAM	50	0	15.79	15.01	15.60	16.5	0
20	64QAM	50	24	15.84	15.16	15.72		
20	64QAM	50	50	15.85	15.25	15.80		
20	64QAM	100	0	15.88	15.14	15.70		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	15.20	15.47	15.50	16.5	0
15	QPSK	1	37	15.17	15.91	15.66		
15	QPSK	1	74	15.19	15.50	15.90		
15	QPSK	36	0	15.16	15.18	15.84	16.5	0
15	QPSK	36	20	15.84	15.19	15.84		
15	QPSK	36	39	15.87	15.22	15.86		
15	QPSK	75	0	15.85	15.18	15.83		
15	16QAM	1	0	15.61	15.67	15.89	16.5	0
15	16QAM	1	37	15.21	15.50	15.88		
15	16QAM	1	74	15.40	15.89	15.87		
15	16QAM	36	0	15.94	15.18	15.82	16.5	0
15	16QAM	36	20	15.85	15.19	15.85		
15	16QAM	36	39	15.85	15.20	15.85		
15	16QAM	75	0	15.87	15.18	15.83		
15	64QAM	1	0	15.42	15.52	15.85	16.5	0
15	64QAM	1	37	15.17	15.22	15.95		
15	64QAM	1	74	15.20	15.67	15.90		
15	64QAM	36	0	15.16	15.20	15.84	16.5	0
15	64QAM	36	20	15.22	15.20	15.83		
15	64QAM	36	39	15.26	15.23	15.85		
15	64QAM	75	0	15.28	15.16	15.84		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	15.20	15.30	15.70	16.5	0
10	QPSK	1	25	15.23	15.27	15.90		
10	QPSK	1	49	15.36	15.84	15.72		
10	QPSK	25	0	15.05	15.31	15.71	16.5	0
10	QPSK	25	12	15.08	15.38	15.80		
10	QPSK	25	25	15.10	15.54	15.65		
10	QPSK	50	0	15.05	15.37	15.88		
10	16QAM	1	0	15.24	15.53	15.61	16.5	0
10	16QAM	1	25	15.32	15.61	15.73		
10	16QAM	1	49	15.21	15.79	15.66		
10	16QAM	25	0	15.06	15.31	15.64	16.5	0
10	16QAM	25	12	15.09	15.39	15.70		
10	16QAM	25	25	15.05	15.53	15.78		
10	16QAM	50	0	15.08	15.38	15.68		
10	64QAM	1	0	15.42	15.52	15.85	16.5	0
10	64QAM	1	25	15.27	15.30	15.65		
10	64QAM	1	49	15.20	15.42	15.90		
10	64QAM	25	0	15.26	15.20	15.84	16.5	0
10	64QAM	25	12	15.22	15.20	15.83		
10	64QAM	25	25	15.26	15.21	15.85		
10	64QAM	50	0	15.30	15.16	15.84		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	15.10	15.32	15.86	16.5	0
5	QPSK	1	12	15.19	15.25	15.80		
5	QPSK	1	24	15.25	15.37	15.89		
5	QPSK	12	0	15.11	15.39	15.77	16.5	0
5	QPSK	12	7	15.07	15.33	15.73		
5	QPSK	12	13	15.07	15.31	15.71		
5	QPSK	25	0	15.10	15.37	15.74		
5	16QAM	1	0	15.49	15.72	15.83	16.5	0
5	16QAM	1	12	15.29	15.54	15.65		
5	16QAM	1	24	15.27	15.68	15.65		
5	16QAM	12	0	15.15	15.40	15.81	16.5	0
5	16QAM	12	7	15.11	15.34	15.72		
5	16QAM	12	13	15.22	15.33	15.72		
5	16QAM	25	0	15.13	15.35	15.74		
5	64QAM	1	0	15.37	15.62	15.65	16.5	0
5	64QAM	1	12	15.21	15.47	15.81		
5	64QAM	1	24	15.17	15.61	15.86		
5	64QAM	12	0	15.16	15.40	15.82	16.5	0
5	64QAM	12	7	15.10	15.35	15.75		
5	64QAM	12	13	15.38	15.33	15.72		
5	64QAM	25	0	15.10	15.35	15.73		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	15.14	15.21	15.82	16.5	0
3	QPSK	1	8	15.28	15.26	15.95		
3	QPSK	1	14	15.19	15.23	15.93		
3	QPSK	8	0	15.64	15.34	15.92	16.5	0
3	QPSK	8	4	15.60	15.34	15.93		
3	QPSK	8	7	15.55	15.30	15.88		
3	QPSK	15	0	15.54	15.30	15.89		
3	16QAM	1	0	15.34	15.68	15.84	16.5	0
3	16QAM	1	8	15.39	15.63	15.90		
3	16QAM	1	14	15.34	15.59	15.90		
3	16QAM	8	0	15.11	15.38	15.87	16.5	0
3	16QAM	8	4	15.13	15.38	15.81		
3	16QAM	8	7	15.08	15.38	15.85		
3	16QAM	15	0	15.07	15.32	15.91		
3	64QAM	1	0	15.28	15.55	15.92	16.5	0
3	64QAM	1	8	15.19	15.47	15.87		
3	64QAM	1	14	15.23	15.45	15.82		
3	64QAM	8	0	15.12	15.38	15.76	16.5	0
3	64QAM	8	4	15.10	15.36	15.87		
3	64QAM	8	7	15.07	15.37	15.91		
3	64QAM	15	0	15.05	15.31	15.92		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	15.08	15.20	15.90	16.5	0
1.4	QPSK	1	3	15.04	15.29	15.91		
1.4	QPSK	1	5	15.26	15.25	15.94		
1.4	QPSK	3	0	15.19	15.29	15.89		
1.4	QPSK	3	1	15.18	15.33	15.94		
1.4	QPSK	3	3	15.18	15.28	15.87		
1.4	QPSK	6	0	15.28	15.26	15.86	16.5	0
1.4	16QAM	1	0	15.29	15.62	15.92	16.5	0
1.4	16QAM	1	3	15.40	15.64	15.89		
1.4	16QAM	1	5	15.30	15.51	15.92		
1.4	16QAM	3	0	15.09	15.33	15.95		
1.4	16QAM	3	1	15.16	15.37	15.87		
1.4	16QAM	3	3	15.17	15.32	15.89		
1.4	16QAM	6	0	15.04	15.35	15.80	16.5	0
1.4	64QAM	1	0	15.18	15.47	15.84	16.5	0
1.4	64QAM	1	3	15.16	15.50	15.86		
1.4	64QAM	1	5	15.20	15.43	15.78		
1.4	64QAM	3	0	15.14	15.39	15.77		
1.4	64QAM	3	1	15.21	15.45	15.89		
1.4	64QAM	3	3	15.15	15.36	15.81		
1.4	64QAM	6	0	15.06	15.28	15.88	16.5	0

Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	19.03	18.79	18.83	20	0
20	QPSK	1	49	19.26	19.06	19.09		
20	QPSK	1	99	19.09	19.08	19.20		
20	QPSK	50	0	19.09	18.93	19.01	20	0
20	QPSK	50	24	19.29	19.04	19.04		
20	QPSK	50	50	19.29	19.06	19.18		
20	QPSK	100	0	19.04	19.03	19.12		
20	16QAM	1	0	18.92	18.90	19.06	20	0
20	16QAM	1	49	19.11	19.18	19.01		
20	16QAM	1	99	19.22	19.10	18.92		
20	16QAM	50	0	18.98	18.99	18.96	20	0
20	16QAM	50	24	19.07	19.05	18.96		
20	16QAM	50	50	19.10	19.00	19.26		
20	16QAM	100	0	19.22	19.05	19.16		
20	64QAM	1	0	18.63	18.39	18.67	20	0
20	64QAM	1	49	18.79	18.58	18.62		
20	64QAM	1	99	18.74	18.53	18.58		
20	64QAM	50	0	19.03	18.80	19.11	20	0
20	64QAM	50	24	19.26	18.94	19.14		
20	64QAM	50	50	19.24	18.93	18.93		
20	64QAM	100	0	19.20	18.86	18.89		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	18.91	18.87	18.92	20	0
15	QPSK	1	37	18.87	18.72	18.74		
15	QPSK	1	74	19.22	18.97	19.15		
15	QPSK	36	0	18.98	19.02	19.02	20	0
15	QPSK	36	20	19.28	19.09	19.11		
15	QPSK	36	39	19.15	19.09	19.20		
15	QPSK	75	0	19.27	19.01	19.14		
15	16QAM	1	0	19.07	18.93	18.96	20	0
15	16QAM	1	37	19.18	19.01	18.95		
15	16QAM	1	74	19.10	18.98	18.93		
15	16QAM	36	0	18.92	18.78	18.88	20	0
15	16QAM	36	20	19.08	18.86	18.97		
15	16QAM	36	39	19.40	18.85	19.18		
15	16QAM	75	0	19.28	19.05	19.16		
15	64QAM	1	0	18.70	18.54	18.51	20	0
15	64QAM	1	37	19.03	18.84	19.00		
15	64QAM	1	74	18.96	18.63	18.93		
15	64QAM	36	0	18.97	18.78	19.01	20	0
15	64QAM	36	20	19.14	18.87	19.11		
15	64QAM	36	39	19.10	18.85	19.11		
15	64QAM	75	0	19.27	19.02	19.17		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	19.23	19.03	19.26	20	0
10	QPSK	1	25	19.19	18.99	18.97		
10	QPSK	1	49	19.40	19.12	19.20		
10	QPSK	25	0	19.15	19.16	19.11	20	0
10	QPSK	25	12	19.30	19.02	19.09		
10	QPSK	25	25	19.41	19.17	19.32		
10	QPSK	50	0	19.18	19.09	19.27		
10	16QAM	1	0	19.31	19.16	19.32	20	0
10	16QAM	1	25	19.29	19.01	19.08		
10	16QAM	1	49	19.36	19.23	19.26		
10	16QAM	25	0	19.27	19.19	19.06	20	0
10	16QAM	25	12	19.12	18.94	19.22		
10	16QAM	25	25	19.36	19.09	19.26		
10	16QAM	50	0	19.30	18.94	19.20		
10	64QAM	1	0	19.07	18.58	18.95	20	0
10	64QAM	1	25	18.71	18.94	18.71		
10	64QAM	1	49	18.98	18.76	18.79		
10	64QAM	25	0	19.09	18.91	19.31	20	0
10	64QAM	25	12	19.24	19.18	19.04		
10	64QAM	25	25	19.49	19.03	19.21		
10	64QAM	50	0	19.07	18.91	19.08		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	19.18	18.94	19.25	20	0
5	QPSK	1	12	19.05	18.76	19.05		
5	QPSK	1	24	19.08	19.02	18.99		
5	QPSK	12	0	19.31	19.16	19.09	20	0
5	QPSK	12	7	19.21	19.11	19.22		
5	QPSK	12	13	19.29	19.04	19.13		
5	QPSK	25	0	19.35	19.06	19.14		
5	16QAM	1	0	19.23	19.14	19.24	20	0
5	16QAM	1	12	19.14	18.97	19.17		
5	16QAM	1	24	19.21	18.96	19.14		
5	16QAM	12	0	19.20	19.08	19.19	20	0
5	16QAM	12	7	19.28	18.90	19.21		
5	16QAM	12	13	19.30	18.93	19.23		
5	16QAM	25	0	19.19	19.10	19.09		
5	64QAM	1	0	19.11	18.56	18.68	20	0
5	64QAM	1	12	18.85	18.90	18.79		
5	64QAM	1	24	18.96	18.71	18.89		
5	64QAM	12	0	19.32	19.21	19.12	20	0
5	64QAM	12	7	19.34	19.05	19.26		
5	64QAM	12	13	19.12	19.07	19.16		
5	64QAM	25	0	19.41	18.89	19.31		

Band 41 (2.6G Band)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	19.39	19.68	19.31	19.25	19.52	21	0
20	QPSK	1	49	19.58	19.73	19.50	19.59	19.93		
20	QPSK	1	99	19.31	19.46	19.25	19.22	19.51		
20	QPSK	50	0	19.42	19.68	19.26	19.40	19.63	21	0
20	QPSK	50	24	19.58	19.80	19.55	19.60	19.85		
20	QPSK	50	50	19.37	19.53	19.34	19.39	19.56		
20	QPSK	100	0	19.36	19.54	19.33	19.40	19.90		
20	16QAM	1	0	19.16	19.39	19.06	19.02	19.45	21	0
20	16QAM	1	49	19.32	19.33	19.36	19.34	19.65		
20	16QAM	1	99	19.01	19.13	19.23	19.03	19.42		
20	16QAM	50	0	19.47	19.74	19.25	19.50	19.64	21	0
20	16QAM	50	24	19.49	19.74	19.41	19.57	19.71		
20	16QAM	50	50	19.35	19.60	19.37	19.46	19.60		
20	16QAM	100	0	19.29	19.55	19.30	19.32	19.61		
20	64QAM	1	0	19.43	19.15	19.59	19.68	19.16	21	0
20	64QAM	1	49	19.16	19.33	19.04	19.09	19.36		
20	64QAM	1	99	19.35	19.32	19.15	19.40	19.29		
20	64QAM	50	0	19.40	19.67	19.20	19.33	19.62	21	0
20	64QAM	50	24	19.47	19.67	19.36	19.37	19.64		
20	64QAM	50	50	19.28	19.46	19.30	19.35	19.56		
20	64QAM	100	0	19.33	19.59	19.37	19.37	19.62		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	19.20	19.39	19.20	19.30	19.58	21	0
15	QPSK	1	37	19.35	19.14	19.50	19.02	19.38		
15	QPSK	1	74	19.28	19.07	19.54	19.38	19.59		
15	QPSK	36	0	19.48	19.70	19.32	19.32	19.63	21	0
15	QPSK	36	20	19.54	19.75	19.48	19.53	19.60		
15	QPSK	36	39	19.57	19.80	19.55	19.60	19.59		
15	QPSK	75	0	19.45	19.72	19.36	19.35	19.53		
15	16QAM	1	0	19.08	19.15	19.58	19.14	19.61	21	0
15	16QAM	1	37	19.04	19.26	19.47	19.07	19.44		
15	16QAM	1	74	19.30	19.39	19.18	19.25	19.50		
15	16QAM	36	0	19.44	19.69	19.20	19.28	19.55	21	0
15	16QAM	36	20	19.53	19.69	19.39	19.48	19.54		
15	16QAM	36	39	19.57	19.68	19.48	19.55	19.52		
15	16QAM	75	0	19.45	19.74	19.40	19.44	19.54		
15	64QAM	1	0	19.36	19.19	19.53	19.28	19.26	21	0
15	64QAM	1	37	19.42	19.36	19.12	19.33	19.01		
15	64QAM	1	74	19.04	19.20	19.08	19.07	19.21		
15	64QAM	36	0	19.31	19.62	19.19	19.20	19.56	21	0
15	64QAM	36	20	19.41	19.67	19.39	19.44	19.50		
15	64QAM	36	39	19.45	19.61	19.37	19.49	19.52		
15	64QAM	75	0	19.39	19.68	19.33	19.37	19.55		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.48	19.77	19.41	19.55	19.63	21	0
10	QPSK	1	25	19.50	19.15	19.52	19.56	19.55		
10	QPSK	1	49	19.40	19.72	19.49	19.45	19.39		
10	QPSK	25	0	19.36	19.77	19.50	19.54	19.39	21	0
10	QPSK	25	12	19.55	19.82	19.63	19.63	19.52		
10	QPSK	25	25	19.48	19.76	19.53	19.54	19.47		
10	QPSK	50	0	19.46	19.77	19.49	19.54	19.37		
10	16QAM	1	0	19.38	19.78	19.26	19.38	19.46	21	0
10	16QAM	1	25	19.36	19.70	19.45	19.50	19.43		
10	16QAM	1	49	19.43	19.67	19.40	19.47	19.48		
10	16QAM	25	0	19.40	19.82	19.56	19.54	19.44	21	0
10	16QAM	25	12	19.55	19.81	19.67	19.68	19.43		
10	16QAM	25	25	19.50	19.83	19.61	19.57	19.46		
10	16QAM	50	0	19.43	19.78	19.48	19.56	19.45		
10	64QAM	1	0	19.02	19.32	19.01	19.13	19.15	21	0
10	64QAM	1	25	19.07	19.31	19.08	19.14	19.01		
10	64QAM	1	49	19.08	19.30	19.04	19.06	19.14		
10	64QAM	25	0	19.34	19.83	19.54	19.55	19.45	21	0
10	64QAM	25	12	19.51	19.89	19.60	19.64	19.47		
10	64QAM	25	25	19.49	19.79	19.51	19.56	19.51		
10	64QAM	50	0	19.39	19.78	19.51	19.44	19.35		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	19.60	19.44	19.66	19.86	19.61	21	0
5	QPSK	1	12	19.27	19.57	19.35	19.55	19.30		
5	QPSK	1	24	19.30	19.64	19.40	19.36	19.21		
5	QPSK	12	0	19.45	19.85	19.57	19.52	19.41	21	0
5	QPSK	12	7	19.50	19.84	19.56	19.55	19.44		
5	QPSK	12	13	19.41	19.82	19.53	19.60	19.39		
5	QPSK	25	0	19.39	19.80	19.59	19.57	19.41		
5	16QAM	1	0	19.48	19.82	19.53	19.54	19.44	21	0
5	16QAM	1	12	19.53	19.82	19.64	19.64	19.44		
5	16QAM	1	24	19.44	19.77	19.50	19.48	19.37		
5	16QAM	12	0	19.42	19.74	19.52	19.54	19.41	21	0
5	16QAM	12	7	19.42	19.71	19.48	19.51	19.37		
5	16QAM	12	13	19.36	19.69	19.48	19.49	19.38		
5	16QAM	25	0	19.42	19.81	19.56	19.56	19.44		
5	64QAM	1	0	19.22	19.72	19.16	19.16	19.10	21	0
5	64QAM	1	12	19.17	19.28	19.21	19.20	19.09		
5	64QAM	1	24	19.06	19.38	19.11	19.14	19.07		
5	64QAM	12	0	19.51	19.89	19.61	19.60	19.44	21	0
5	64QAM	12	7	19.49	19.80	19.60	19.62	19.42		
5	64QAM	12	13	19.45	19.78	19.58	19.62	19.38		
5	64QAM	25	0	19.46	19.80	19.57	19.58	19.43		

Band 41 (2.6G Band) HPUE (Limit 27)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	19.25	19.55	19.37	19.12	19.91	21	0
20	QPSK	1	49	19.34	19.58	19.70	19.26	19.95		
20	QPSK	1	99	19.46	19.61	19.39	19.44	19.92		
20	QPSK	50	0	19.41	19.60	19.22	19.33	19.52	21	0
20	QPSK	50	24	19.45	19.64	19.35	19.43	19.71		
20	QPSK	50	50	19.34	19.45	19.27	19.36	19.52		
20	QPSK	100	0	19.32	19.57	19.26	19.27	19.54		
20	16QAM	1	0	19.46	19.66	19.09	19.30	19.65	21	0
20	16QAM	1	49	19.68	19.72	19.45	19.63	19.79		
20	16QAM	1	99	19.10	19.28	19.06	19.11	19.56		
20	16QAM	50	0	19.40	19.64	19.20	19.34	19.55	21	0
20	16QAM	50	24	19.49	19.62	19.40	19.45	19.60		
20	16QAM	50	50	19.33	19.47	19.31	19.35	19.49		
20	16QAM	100	0	19.28	19.50	19.26	19.26	19.56		
20	64QAM	1	0	19.30	19.60	19.14	19.29	19.44	21	0
20	64QAM	1	49	19.54	19.70	19.45	19.52	19.63		
20	64QAM	1	99	19.04	19.22	18.93	18.99	19.46		
20	64QAM	50	0	19.35	19.59	19.14	19.29	19.51	21	0
20	64QAM	50	24	19.41	19.61	19.38	19.38	19.56		
20	64QAM	50	50	19.25	19.44	19.20	19.27	19.50		
20	64QAM	100	0	19.25	19.46	19.23	19.26	19.52		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	19.48	19.35	19.54	19.73	19.44	21	0
15	QPSK	1	37	19.72	19.65	19.93	19.69	19.57		
15	QPSK	1	74	19.64	19.48	19.86	19.84	19.47		
15	QPSK	36	0	19.40	19.66	19.21	19.23	19.51	21	0
15	QPSK	36	20	19.40	19.70	19.37	19.46	19.54		
15	QPSK	36	39	19.54	19.73	19.50	19.47	19.53		
15	QPSK	75	0	19.37	19.68	19.28	19.35	19.45		
15	16QAM	1	0	19.25	19.42	19.39	19.34	19.68	21	0
15	16QAM	1	37	19.12	19.35	19.13	19.15	19.50		
15	16QAM	1	74	19.38	19.14	19.49	19.52	19.70		
15	16QAM	36	0	19.39	19.69	19.22	19.22	19.48	21	0
15	16QAM	36	20	19.39	19.66	19.37	19.40	19.49		
15	16QAM	36	39	19.43	19.66	19.42	19.47	19.54		
15	16QAM	75	0	19.38	19.66	19.33	19.36	19.49		
15	64QAM	1	0	19.12	19.46	19.54	19.24	19.54	21	0
15	64QAM	1	37	19.64	19.79	19.26	19.70	19.67		
15	64QAM	1	74	19.54	19.09	19.42	19.53	19.54		
15	64QAM	36	0	19.27	19.59	19.13	19.14	19.49	21	0
15	64QAM	36	20	19.37	19.62	19.34	19.34	19.44		
15	64QAM	36	39	19.39	19.56	19.33	19.37	19.43		
15	64QAM	75	0	19.31	19.57	19.22	19.27	19.41		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.53	19.79	19.44	19.40	19.36	21	0
10	QPSK	1	25	19.29	19.45	19.18	19.25	19.13		
10	QPSK	1	49	19.30	19.62	19.35	19.41	19.15		
10	QPSK	25	0	19.30	19.72	19.48	19.43	19.25	21	0
10	QPSK	25	12	19.44	19.74	19.49	19.50	19.25		
10	QPSK	25	25	19.40	19.63	19.48	19.47	19.24		
10	QPSK	50	0	19.39	19.69	19.42	19.49	19.22		
10	16QAM	1	0	19.70	19.87	19.57	19.70	19.58	21	0
10	16QAM	1	25	19.68	19.72	19.73	19.71	19.54		
10	16QAM	1	49	19.72	19.86	19.61	19.72	19.49		
10	16QAM	25	0	19.34	19.73	19.48	19.48	19.27	21	0
10	16QAM	25	12	19.39	19.74	19.50	19.50	19.27		
10	16QAM	25	25	19.43	19.72	19.45	19.51	19.28		
10	16QAM	50	0	19.41	19.70	19.48	19.46	19.27		
10	64QAM	1	0	19.50	19.75	19.48	19.49	19.33	21	0
10	64QAM	1	25	19.32	19.72	19.46	19.45	19.25		
10	64QAM	1	49	19.42	19.73	19.49	19.50	19.29		
10	64QAM	25	0	19.31	19.69	19.42	19.42	19.29	21	0
10	64QAM	25	12	19.42	19.69	19.47	19.52	19.34		
10	64QAM	25	25	19.46	19.68	19.51	19.50	19.31		
10	64QAM	50	0	19.34	19.69	19.41	19.46	19.26		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	19.55	19.81	19.55	19.58	19.48	21	0
5	QPSK	1	12	19.41	19.23	19.37	19.05	19.02		
5	QPSK	1	24	19.36	19.58	19.38	19.37	19.13		
5	QPSK	12	0	19.38	19.72	19.48	19.48	19.24	21	0
5	QPSK	12	7	19.40	19.68	19.51	19.46	19.24		
5	QPSK	12	13	19.32	19.69	19.47	19.44	19.22		
5	QPSK	25	0	19.30	19.72	19.48	19.49	19.24		
5	16QAM	1	0	19.67	19.81	19.84	19.78	19.62	21	0
5	16QAM	1	12	19.70	19.89	19.69	19.78	19.48		
5	16QAM	1	24	19.54	19.85	19.62	19.74	19.44		
5	16QAM	12	0	19.45	19.81	19.60	19.53	19.34	21	0
5	16QAM	12	7	19.48	19.78	19.52	19.53	19.30		
5	16QAM	12	13	19.38	19.77	19.50	19.57	19.33		
5	16QAM	25	0	19.36	19.71	19.51	19.49	19.26		
5	64QAM	1	0	19.61	19.90	19.65	19.66	19.38	21	0
5	64QAM	1	12	19.55	19.91	19.65	19.65	19.36		
5	64QAM	1	24	19.51	19.61	19.69	19.62	19.29		
5	64QAM	12	0	19.42	19.81	19.55	19.53	19.33	21	0
5	64QAM	12	7	19.47	19.76	19.54	19.52	19.28		
5	64QAM	12	13	19.38	19.71	19.47	19.50	19.27		
5	64QAM	25	0	19.33	19.75	19.55	19.51	19.28		

Reduced Power Mode for Hotspot On

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	21.42	21.43	21.19	22.50	12.42	12.43	12.19	13.50
GPRS 1 Tx slot	21.40	21.38	21.13	22.50	12.40	12.38	12.13	13.50
GPRS 2 Tx slots	19.71	20.15	19.77	21.00	13.71	14.15	13.77	15.00
GPRS 3 Tx slots	17.40	17.31	17.49	18.50	13.14	13.05	13.23	14.24
GPRS 4 Tx slots	15.45	15.43	15.38	16.50	12.45	12.43	12.38	13.50
EDGE 1 Tx slot	17.12	17.24	16.98	18.50	8.12	8.24	7.98	9.50
EDGE 2 Tx slots	15.25	15.48	15.34	16.50	9.25	9.48	9.34	10.50
EDGE 3 Tx slots	13.20	13.11	13.09	14.00	8.94	8.85	8.83	9.74
EDGE 4 Tx slots	11.87	11.77	11.74	13.00	8.87	8.77	8.74	10.00

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			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	AMR 12.2Kbps	12.65	12.69	12.61	14.00	12.48	12.40	12.57	14.00	21.87	21.86	22.08	23.00
3GPP Rel 99	RMC 12.2Kbps	12.66	12.70	12.64	14.00	12.59	12.42	12.63	14.00	21.88	21.89	22.15	23.00
3GPP Rel 6	HSDPA Subtest-1	11.73	11.69	11.62	13.00	11.86	11.83	12.00	13.00	20.95	20.93	21.12	22.00
3GPP Rel 6	HSDPA Subtest-2	11.71	11.71	11.67	13.00	11.89	11.90	12.02	13.00	20.94	20.98	21.15	22.00
3GPP Rel 6	HSDPA Subtest-3	10.86	11.20	11.12	12.50	11.41	11.36	11.62	12.50	20.46	20.44	20.68	21.50
3GPP Rel 6	HSDPA Subtest-4	11.19	11.22	11.17	12.50	11.30	11.40	11.05	12.50	20.42	20.47	20.25	21.50
3GPP Rel 8	DC-HSDPA Subtest-1	11.57	11.62	11.45	13.00	11.78	11.83	11.93	13.00	20.88	20.73	20.99	22.00
3GPP Rel 8	DC-HSDPA Subtest-2	11.64	11.52	11.64	13.00	11.83	11.87	11.92	13.00	20.85	20.79	21.12	22.00
3GPP Rel 8	DC-HSDPA Subtest-3	10.74	11.12	11.08	12.50	11.41	11.24	11.58	12.50	20.43	20.28	20.62	21.50
3GPP Rel 8	DC-HSDPA Subtest-4	11.18	11.18	11.07	12.50	11.10	11.35	11.04	12.50	20.22	20.33	20.06	21.50
3GPP Rel 6	HSUPA Subtest-1	11.71	11.72	11.67	13.00	11.83	11.90	11.68	13.00	20.89	20.89	21.03	22.00
3GPP Rel 6	HSUPA Subtest-2	9.70	9.71	9.70	11.00	9.71	9.70	9.73	11.00	18.83	18.88	18.99	20.00
3GPP Rel 6	HSUPA Subtest-3	10.72	10.69	10.64	12.00	10.80	10.83	10.83	12.00	19.87	19.87	20.06	21.00
3GPP Rel 6	HSUPA Subtest-4	9.73	9.68	9.63	11.00	9.82	9.84	9.73	11.00	18.85	18.86	19.04	20.00
3GPP Rel 6	HSUPA Subtest-5	11.75	11.75	11.65	13.00	11.84	11.84	11.94	13.00	20.86	20.86	21.06	22.00

Band	CDMA BC1			Tune-up Limit (dBm)
TX Channel	25	600	1175	
Frequency (MHz)	1851.25	1880	1908.75	
RC1 SO55	14.55	14.78	14.59	15.50
RC3 SO55	14.46	14.67	14.49	15.50
RC3 SO32 (F+SCH)	14.67	14.75	14.58	15.50
RC3 SO32 (+SCH)	14.65	14.62	14.45	15.50
RTAP 153.6Kbps	13.95	14.04	13.92	15.50
RETAP 4096Bits	13.97	13.97	13.85	15.50

Band 2 (1900MHz Band) Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	12.67	12.45	12.41	13.5	0
20	QPSK	1	49	12.44	12.38	12.31		
20	QPSK	1	99	12.33	12.25	12.11		
20	QPSK	50	0	12.52	12.47	12.43	13.5	0
20	QPSK	50	24	12.42	12.37	12.41		
20	QPSK	50	50	12.16	12.26	12.24		
20	QPSK	100	0	12.31	12.31	12.38		
20	16QAM	1	0	12.59	12.58	12.57	13.5	0
20	16QAM	1	49	12.48	12.43	12.45		
20	16QAM	1	99	12.41	12.63	12.54		
20	16QAM	50	0	12.52	12.44	12.43	13.5	0
20	16QAM	50	24	12.39	12.39	12.47		
20	16QAM	50	50	12.16	12.27	12.25		
20	16QAM	100	0	12.32	12.30	12.35		
20	64QAM	1	0	12.59	12.65	12.57	13.5	0
20	64QAM	1	49	12.49	12.48	12.36		
20	64QAM	1	99	12.34	12.23	12.21		
20	64QAM	50	0	12.52	12.46	12.41	13.5	0
20	64QAM	50	24	12.38	12.36	12.38		
20	64QAM	50	50	12.17	12.25	12.25		
20	64QAM	100	0	12.31	12.32	12.35		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	12.46	12.41	12.49	13.5	0
15	QPSK	1	37	12.18	11.99	12.31		
15	QPSK	1	74	12.47	12.32	12.32		
15	QPSK	36	0	12.45	12.39	12.39	13.5	0
15	QPSK	36	20	12.32	12.36	12.42		
15	QPSK	36	39	12.34	12.35	12.39		
15	QPSK	75	0	12.32	12.32	12.38		
15	16QAM	1	0	12.43	12.45	12.44	13.5	0
15	16QAM	1	37	12.41	12.47	12.36		
15	16QAM	1	74	12.37	12.32	12.36		
15	16QAM	36	0	12.42	12.38	12.41	13.5	0
15	16QAM	36	20	12.39	12.36	12.41		
15	16QAM	36	39	12.32	12.36	12.32		
15	16QAM	75	0	12.34	12.32	12.38		
15	64QAM	1	0	12.49	12.38	12.47	13.5	0
15	64QAM	1	37	12.43	12.44	12.48		
15	64QAM	1	74	12.48	12.42	12.36		
15	64QAM	36	0	12.41	12.38	12.41	13.5	0
15	64QAM	36	20	12.37	12.38	12.41		
15	64QAM	36	39	12.33	12.37	12.32		
15	64QAM	75	0	12.29	12.30	12.37		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	12.33	12.31	12.35	13.5	0
10	QPSK	1	25	12.41	12.32	12.43		
10	QPSK	1	49	12.50	12.38	12.34		
10	QPSK	25	0	12.34	12.46	12.36	13.5	0
10	QPSK	25	12	12.33	12.48	12.34		
10	QPSK	25	25	12.37	12.45	12.36		
10	QPSK	50	0	12.31	12.53	12.41		
10	16QAM	1	0	12.36	12.33	12.40	13.5	0
10	16QAM	1	25	12.36	12.30	12.28		
10	16QAM	1	49	12.40	12.39	12.38		
10	16QAM	25	0	12.62	12.47	12.56	13.5	0
10	16QAM	25	12	12.61	12.48	12.55		
10	16QAM	25	25	12.55	12.40	12.49		
10	16QAM	50	0	12.59	12.47	12.49		
10	64QAM	1	0	12.66	12.60	12.56	13.5	0
10	64QAM	1	25	12.65	12.62	12.52		
10	64QAM	1	49	12.63	12.58	12.62		
10	64QAM	25	0	12.58	12.46	12.55	13.5	0
10	64QAM	25	12	12.62	12.46	12.52		
10	64QAM	25	25	12.55	12.42	12.56		
10	64QAM	50	0	12.57	12.51	12.50		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	12.61	12.56	12.65	13.5	0
5	QPSK	1	12	12.42	12.36	12.40		
5	QPSK	1	24	12.53	12.42	12.47		
5	QPSK	12	0	12.59	12.58	12.58	13.5	0
5	QPSK	12	7	12.64	12.55	12.60		
5	QPSK	12	13	12.60	12.49	12.58		
5	QPSK	25	0	12.65	12.53	12.62		
5	16QAM	1	0	12.50	12.49	12.49	13.5	0
5	16QAM	1	12	12.38	12.34	12.35		
5	16QAM	1	24	12.36	12.23	12.28		
5	16QAM	12	0	12.64	12.60	12.63	13.5	0
5	16QAM	12	7	12.62	12.56	12.58		
5	16QAM	12	13	12.63	12.48	12.56		
5	16QAM	25	0	12.59	12.53	12.59		
5	64QAM	1	0	12.57	12.66	12.64	13.5	0
5	64QAM	1	12	12.61	12.58	12.61		
5	64QAM	1	24	12.63	12.65	12.61		
5	64QAM	12	0	12.59	12.60	12.62	13.5	0
5	64QAM	12	7	12.61	12.51	12.58		
5	64QAM	12	13	12.58	12.49	12.55		
5	64QAM	25	0	12.57	12.47	12.59		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	12.56	12.43	12.58	13.5	0
3	QPSK	1	8	12.50	12.37	12.48		
3	QPSK	1	14	12.38	12.41	12.46		
3	QPSK	8	0	12.53	12.52	12.53	13.5	0
3	QPSK	8	4	12.53	12.53	12.55		
3	QPSK	8	7	12.51	12.42	12.49		
3	QPSK	15	0	12.51	12.46	12.45		
3	16QAM	1	0	12.49	12.46	12.43	13.5	0
3	16QAM	1	8	12.37	12.49	12.47		
3	16QAM	1	14	12.42	12.43	12.39		
3	16QAM	8	0	12.32	12.31	12.28	13.5	0
3	16QAM	8	4	12.31	12.26	12.33		
3	16QAM	8	7	12.27	12.23	12.25		
3	16QAM	15	0	12.24	12.22	12.25		
3	64QAM	1	0	12.42	12.36	12.47	13.5	0
3	64QAM	1	8	12.39	12.25	12.46		
3	64QAM	1	14	12.48	12.45	12.41		
3	64QAM	8	0	12.22	12.33	12.38	13.5	0
3	64QAM	8	4	12.34	12.27	12.23		
3	64QAM	8	7	12.27	12.15	12.22		
3	64QAM	15	0	12.21	12.14	12.24		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	12.25	12.31	12.38	13.5	0
1.4	QPSK	1	3	12.42	12.47	12.24		
1.4	QPSK	1	5	12.41	12.41	12.21		
1.4	QPSK	3	0	12.49	12.46	12.47		
1.4	QPSK	3	1	12.24	12.22	12.25		
1.4	QPSK	3	3	12.43	12.38	12.47		
1.4	QPSK	6	0	12.49	12.45	12.47	13.5	0
1.4	16QAM	1	0	12.38	12.44	12.45	13.5	0
1.4	16QAM	1	3	12.45	12.41	12.43		
1.4	16QAM	1	5	12.48	12.33	12.38		
1.4	16QAM	3	0	12.27	12.22	12.19		
1.4	16QAM	3	1	12.26	12.29	12.27		
1.4	16QAM	3	3	12.17	12.21	12.25		
1.4	16QAM	6	0	12.46	12.42	12.50	13.5	0
1.4	64QAM	1	0	12.35	12.29	12.33	13.5	0
1.4	64QAM	1	3	12.30	12.33	12.47		
1.4	64QAM	1	5	12.29	12.24	12.32		
1.4	64QAM	3	0	12.29	12.28	12.32		
1.4	64QAM	3	1	12.33	12.34	12.38		
1.4	64QAM	3	3	12.26	12.24	12.28		
1.4	64QAM	6	0	12.17	12.16	12.22	13.5	0

Band 4 (AWS Band) Part 27L (only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	13.16	13.24	13.61	14.5	0
20	QPSK	1	49	13.17	13.28	13.60		
20	QPSK	1	99	13.18	13.32	13.98		
20	QPSK	50	0	13.17	13.33	13.54	14.5	0
20	QPSK	50	24	13.20	13.37	13.68		
20	QPSK	50	50	13.12	13.35	13.81		
20	QPSK	100	0	13.29	13.27	13.70		
20	16QAM	1	0	13.51	13.46	13.64	14.5	0
20	16QAM	1	49	13.50	13.79	13.91		
20	16QAM	1	99	13.50	13.66	13.96		
20	16QAM	50	0	13.00	13.11	13.31	14.5	0
20	16QAM	50	24	13.02	13.11	13.46		
20	16QAM	50	50	12.93	13.15	13.61		
20	16QAM	100	0	12.99	13.11	13.45		
20	64QAM	1	0	13.30	13.21	13.48	14.5	0
20	64QAM	1	49	13.19	13.47	13.65		
20	64QAM	1	99	13.34	13.47	13.98		
20	64QAM	50	0	12.94	13.08	13.31	14.5	0
20	64QAM	50	24	12.99	13.09	13.45		
20	64QAM	50	50	12.87	13.09	13.61		
20	64QAM	100	0	13.01	13.09	13.47		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	12.59	12.60	13.07	14.5	0
15	QPSK	1	37	12.55	12.63	13.18		
15	QPSK	1	74	12.93	13.19	13.28		
15	QPSK	36	0	13.06	13.17	13.45	14.5	0
15	QPSK	36	20	13.00	13.18	13.63		
15	QPSK	36	39	12.99	13.17	13.63		
15	QPSK	75	0	13.01	13.24	13.55		
15	16QAM	1	0	13.63	13.61	13.81	14.5	0
15	16QAM	1	37	13.38	13.77	13.91		
15	16QAM	1	74	13.40	13.76	13.81		
15	16QAM	36	0	13.06	13.20	13.47	14.5	0
15	16QAM	36	20	13.01	13.19	13.65		
15	16QAM	36	39	12.95	13.14	13.61		
15	16QAM	75	0	13.02	13.21	13.55		
15	64QAM	1	0	13.43	13.47	13.66	14.5	0
15	64QAM	1	37	13.17	13.49	13.89		
15	64QAM	1	74	13.18	13.55	13.95		
15	64QAM	36	0	13.06	13.20	13.45	14.5	0
15	64QAM	36	20	13.01	13.19	13.64		
15	64QAM	36	39	12.95	13.14	13.61		
15	64QAM	75	0	13.01	13.21	13.55		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	12.93	13.01	13.48	14.5	0
10	QPSK	1	25	12.94	13.08	13.61		
10	QPSK	1	49	13.37	13.63	13.70		
10	QPSK	25	0	13.15	13.25	13.70	14.5	0
10	QPSK	25	12	13.13	13.37	13.77		
10	QPSK	25	25	13.25	13.45	13.92		
10	QPSK	50	0	13.18	13.37	13.78		
10	16QAM	1	0	13.71	13.97	13.82	14.5	0
10	16QAM	1	25	13.40	13.70	13.85		
10	16QAM	1	49	13.82	13.88	13.88		
10	16QAM	25	0	13.13	13.25	13.70	14.5	0
10	16QAM	25	12	13.09	13.36	13.75		
10	16QAM	25	25	13.20	13.41	13.87		
10	16QAM	50	0	13.18	13.34	13.79		
10	64QAM	1	0	13.62	13.78	13.78	14.5	0
10	64QAM	1	25	13.29	13.53	13.95		
10	64QAM	1	49	13.74	13.92	13.95		
10	64QAM	25	0	13.12	13.26	13.67	14.5	0
10	64QAM	25	12	13.06	13.33	13.73		
10	64QAM	25	25	13.16	13.40	13.86		
10	64QAM	50	0	13.16	13.31	13.77		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	12.81	13.00	13.54	14.5	0
5	QPSK	1	12	12.87	13.05	13.59		
5	QPSK	1	24	13.01	13.24	13.77		
5	QPSK	12	0	13.10	13.36	13.82	14.5	0
5	QPSK	12	7	13.11	13.28	13.78		
5	QPSK	12	13	13.06	13.28	13.83		
5	QPSK	25	0	13.14	13.30	13.80		
5	16QAM	1	0	13.55	13.69	13.91	14.5	0
5	16QAM	1	12	13.30	13.58	13.97		
5	16QAM	1	24	13.36	13.61	13.96		
5	16QAM	12	0	13.11	13.40	13.84	14.5	0
5	16QAM	12	7	13.15	13.31	13.80		
5	16QAM	12	13	13.04	13.32	13.88		
5	16QAM	25	0	13.10	13.30	13.78		
5	64QAM	1	0	13.43	13.51	13.87	14.5	0
5	64QAM	1	12	13.29	13.47	13.94		
5	64QAM	1	24	13.25	13.51	13.90		
5	64QAM	12	0	13.08	13.35	13.80	14.5	0
5	64QAM	12	7	13.10	13.24	13.76		
5	64QAM	12	13	13.01	13.27	13.81		
5	64QAM	25	0	13.09	13.28	13.77		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	12.93	13.05	13.69	14.5	0
3	QPSK	1	8	12.91	13.08	13.71		
3	QPSK	1	14	12.92	13.20	13.72		
3	QPSK	8	0	13.10	13.28	13.75	14.5	0
3	QPSK	8	4	13.02	13.30	13.87		
3	QPSK	8	7	13.04	13.29	13.81		
3	QPSK	15	0	13.06	13.24	13.82		
3	16QAM	1	0	13.36	13.57	13.93	14.5	0
3	16QAM	1	8	13.37	13.45	13.95		
3	16QAM	1	14	13.22	13.38	13.90		
3	16QAM	8	0	13.21	13.39	13.81	14.5	0
3	16QAM	8	4	13.07	13.34	13.91		
3	16QAM	8	7	13.11	13.39	13.87		
3	16QAM	15	0	13.07	13.27	13.86		
3	64QAM	1	0	13.33	13.48	13.92	14.5	0
3	64QAM	1	8	13.27	13.41	13.91		
3	64QAM	1	14	13.14	13.48	13.92		
3	64QAM	8	0	13.13	13.32	13.77	14.5	0
3	64QAM	8	4	13.06	13.30	13.88		
3	64QAM	8	7	13.03	13.33	13.83		
3	64QAM	15	0	13.06	13.24	13.60		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	13.01	13.12	13.71	14.5	0
1.4	QPSK	1	3	13.04	13.13	13.73		
1.4	QPSK	1	5	12.98	13.22	13.73		
1.4	QPSK	3	0	12.99	13.28	13.79		
1.4	QPSK	3	1	13.09	13.38	13.83		
1.4	QPSK	3	3	13.05	13.18	13.77		
1.4	QPSK	6	0	13.01	13.20	13.78	14.5	0
1.4	16QAM	1	0	13.36	13.47	13.85	14.5	0
1.4	16QAM	1	3	13.44	13.51	13.89		
1.4	16QAM	1	5	13.27	13.50	13.91		
1.4	16QAM	3	0	13.07	13.35	13.85		
1.4	16QAM	3	1	13.14	13.48	13.89		
1.4	16QAM	3	3	13.14	13.31	13.81		
1.4	16QAM	6	0	13.01	13.17	13.78	14.5	0
1.4	64QAM	1	0	13.23	13.46	13.97	14.5	0
1.4	64QAM	1	3	13.13	13.38	13.97		
1.4	64QAM	1	5	13.08	13.40	13.95		
1.4	64QAM	3	0	13.12	13.40	13.88		
1.4	64QAM	3	1	13.25	13.54	13.97		
1.4	64QAM	3	3	13.14	13.34	13.86		
1.4	64QAM	6	0	13.03	13.29	13.82	14.5	0

Band 7 (2600MHz Band) Part 27

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	18.91	18.93	18.99	19.5	0
20	QPSK	1	49	18.90	18.99	18.92		
20	QPSK	1	99	18.93	18.97	19.22		
20	QPSK	50	0	18.93	19.09	19.01	19.5	0
20	QPSK	50	24	18.96	19.09	19.05		
20	QPSK	50	50	19.02	19.07	19.15		
20	QPSK	100	0	19.04	19.07	19.09		
20	16QAM	1	0	18.92	19.04	18.94	19.5	0
20	16QAM	1	49	18.86	19.07	18.95		
20	16QAM	1	99	18.89	18.96	18.92		
20	16QAM	50	0	18.96	19.06	19.03	19.5	0
20	16QAM	50	24	18.96	19.08	19.03		
20	16QAM	50	50	19.03	19.08	19.06		
20	16QAM	100	0	19.03	19.09	19.04		
20	64QAM	1	0	19.12	19.14	19.15	19.5	0
20	64QAM	1	49	19.03	19.16	19.20		
20	64QAM	1	99	19.07	19.19	19.12		
20	64QAM	50	0	18.93	19.04	19.01	19.5	0
20	64QAM	50	24	18.94	19.04	19.01		
20	64QAM	50	50	19.02	19.05	19.07		
20	64QAM	100	0	19.03	19.07	19.03		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	19.01	19.05	19.10	19.5	0
15	QPSK	1	37	19.00	19.02	19.03		
15	QPSK	1	74	18.87	19.03	18.96		
15	QPSK	36	0	19.05	19.12	19.03	19.5	0
15	QPSK	36	20	19.08	19.10	19.05		
15	QPSK	36	39	18.93	19.08	19.02		
15	QPSK	75	0	18.99	19.09	19.05		
15	16QAM	1	0	18.91	19.02	18.93	19.5	0
15	16QAM	1	37	18.91	19.03	19.02		
15	16QAM	1	74	18.87	18.98	18.91		
15	16QAM	36	0	19.03	19.07	19.04	19.5	0
15	16QAM	36	20	19.07	19.12	19.06		
15	16QAM	36	39	18.90	19.06	19.05		
15	16QAM	75	0	18.95	19.05	19.03		
15	64QAM	1	0	19.12	19.19	19.09	19.5	0
15	64QAM	1	37	19.00	19.19	19.03		
15	64QAM	1	74	19.17	19.17	19.04		
15	64QAM	36	0	19.02	19.10	19.07	19.5	0
15	64QAM	36	20	19.07	19.12	19.09		
15	64QAM	36	39	18.93	19.05	19.04		
15	64QAM	75	0	18.93	19.02	19.04		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	19.01	19.15	19.17	19.5	0
10	QPSK	1	25	19.11	19.13	19.12		
10	QPSK	1	49	19.18	19.21	19.17		
10	QPSK	25	0	19.03	19.13	19.13	19.5	0
10	QPSK	25	12	19.08	19.11	19.11		
10	QPSK	25	25	19.04	19.17	19.13		
10	QPSK	50	0	19.10	19.14	19.17		
10	16QAM	1	0	19.14	19.18	19.15	19.5	0
10	16QAM	1	25	18.87	19.02	19.08		
10	16QAM	1	49	19.00	19.20	19.21		
10	16QAM	25	0	19.06	19.21	19.15	19.5	0
10	16QAM	25	12	19.07	19.10	19.15		
10	16QAM	25	25	19.03	19.18	19.13		
10	16QAM	50	0	19.11	19.17	19.19		
10	64QAM	1	0	19.20	19.18	19.17	19.5	0
10	64QAM	1	25	18.97	18.91	18.98		
10	64QAM	1	49	19.02	19.09	19.08		
10	64QAM	25	0	19.02	19.21	19.10	19.5	0
10	64QAM	25	12	19.06	19.11	19.13		
10	64QAM	25	25	19.04	19.16	19.09		
10	64QAM	50	0	19.12	19.15	19.14		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	19.11	19.14	19.08	19.5	0
5	QPSK	1	12	19.04	19.07	19.06		
5	QPSK	1	24	19.03	19.16	19.04		
5	QPSK	12	0	19.02	19.12	19.16	19.5	0
5	QPSK	12	7	19.09	19.11	19.13		
5	QPSK	12	13	19.02	19.12	19.12		
5	QPSK	25	0	19.01	19.15	19.17		
5	16QAM	1	0	19.05	19.14	19.13	19.5	0
5	16QAM	1	12	18.91	18.94	19.03		
5	16QAM	1	24	18.91	19.08	19.07		
5	16QAM	12	0	19.07	19.17	19.15	19.5	0
5	16QAM	12	7	19.14	19.19	19.15		
5	16QAM	12	13	19.04	19.18	19.11		
5	16QAM	25	0	19.00	19.15	19.13		
5	64QAM	1	0	19.18	19.13	19.14	19.5	0
5	64QAM	1	12	19.19	19.16	19.16		
5	64QAM	1	24	19.16	19.13	19.20		
5	64QAM	12	0	19.10	19.19	19.15	19.5	0
5	64QAM	12	7	19.16	19.16	19.15		
5	64QAM	12	13	19.07	19.19	19.10		
5	64QAM	25	0	18.99	19.12	19.12		

Band 25 (1900MHz Band)
Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	12.45	12.32	12.70		
20	QPSK	1	49	12.43	12.32	12.53	13.5	0
20	QPSK	1	99	12.36	12.30	12.40		
20	QPSK	50	0	12.49	12.33	12.54		
20	QPSK	50	24	12.46	12.36	12.44	13.5	0
20	QPSK	50	50	12.37	12.30	12.41		
20	QPSK	100	0	12.38	12.31	12.47		
20	16QAM	1	0	12.39	12.37	12.44		
20	16QAM	1	49	12.32	12.36	12.48	13.5	0
20	16QAM	1	99	12.33	12.43	12.36		
20	16QAM	50	0	12.48	12.35	12.44		
20	16QAM	50	24	12.44	12.36	12.45	13.5	0
20	16QAM	50	50	12.38	12.26	12.35		
20	16QAM	100	0	12.39	12.29	12.43		
20	64QAM	1	0	12.36	12.33	12.42		
20	64QAM	1	49	12.31	12.43	12.47	13.5	0
20	64QAM	1	99	12.11	12.17	12.13		
20	64QAM	50	0	12.46	12.33	12.42		
20	64QAM	50	24	12.46	12.36	12.44	13.5	0
20	64QAM	50	50	12.34	12.25	12.39		
20	64QAM	100	0	12.38	12.30	12.44		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	12.43	12.41	12.49		
15	QPSK	1	37	11.94	11.94	11.86	13.5	0
15	QPSK	1	74	11.98	11.92	11.95		
15	QPSK	36	0	12.08	11.99	12.01		
15	QPSK	36	20	12.08	12.00	12.03	13.5	0
15	QPSK	36	39	12.08	12.05	12.07		
15	QPSK	75	0	12.10	12.02	12.03		
15	16QAM	1	0	12.44	12.32	12.36		
15	16QAM	1	37	12.38	12.35	12.23	13.5	0
15	16QAM	1	74	12.37	12.40	12.25		
15	16QAM	36	0	12.08	11.98	12.03		
15	16QAM	36	20	12.08	12.00	12.01	13.5	0
15	16QAM	36	39	12.09	12.04	12.05		
15	16QAM	75	0	12.06	12.03	12.07		
15	64QAM	1	0	12.26	12.18	12.20		
15	64QAM	1	37	12.18	12.18	12.05	13.5	0
15	64QAM	1	74	12.16	12.15	12.01		
15	64QAM	36	0	12.08	12.01	12.03		
15	64QAM	36	20	12.08	12.01	12.01	13.5	0
15	64QAM	36	39	12.11	12.08	12.06		
15	64QAM	75	0	12.05	12.01	12.06		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	12.48	12.46	12.45		
10	QPSK	1	25	11.87	11.99	11.92	13.5	0
10	QPSK	1	49	12.12	12.19	12.14		
10	QPSK	25	0	12.01	12.12	11.99		
10	QPSK	25	12	12.00	12.13	12.04	13.5	0
10	QPSK	25	25	12.03	12.15	12.07		
10	QPSK	50	0	12.02	12.13	12.05		
10	16QAM	1	0	12.31	12.40	12.49		
10	16QAM	1	25	12.32	12.42	12.30	13.5	0
10	16QAM	1	49	12.34	12.33	12.33		
10	16QAM	25	0	12.02	12.13	12.01		
10	16QAM	25	12	12.01	12.13	11.99	13.5	0
10	16QAM	25	25	11.98	12.13	12.03		
10	16QAM	50	0	12.03	12.13	12.03		
10	64QAM	1	0	12.35	12.41	12.43		
10	64QAM	1	25	12.12	12.23	12.11	13.5	0
10	64QAM	1	49	12.37	12.44	12.19		
10	64QAM	25	0	11.99	12.10	12.02		
10	64QAM	25	12	12.03	12.14	12.03	13.5	0
10	64QAM	25	25	12.02	12.14	12.06		
10	64QAM	50	0	12.00	12.14	12.05		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	12.49	12.46	12.45		
5	QPSK	1	12	11.89	11.96	11.86	13.5	0
5	QPSK	1	24	11.95	12.02	11.92		
5	QPSK	12	0	12.02	12.13	12.03		
5	QPSK	12	7	12.01	12.11	11.98	13.5	0
5	QPSK	12	13	11.98	12.07	11.98		
5	QPSK	25	0	12.01	12.12	12.02		
5	16QAM	1	0	12.38	12.41	12.38		
5	16QAM	1	12	12.27	12.34	12.22	13.5	0
5	16QAM	1	24	12.20	12.40	12.29		
5	16QAM	12	0	12.06	12.17	12.05		
5	16QAM	12	7	12.02	12.11	12.01	13.5	0
5	16QAM	12	13	11.98	12.12	11.97		
5	16QAM	25	0	12.00	12.12	12.01		
5	64QAM	1	0	12.26	12.40	12.28		
5	64QAM	1	12	12.15	12.20	12.08	13.5	0
5	64QAM	1	24	12.12	12.23	12.10		
5	64QAM	12	0	12.05	12.18	12.05		
5	64QAM	12	7	12.01	12.11	12.01	13.5	0
5	64QAM	12	13	11.98	12.08	12.00		
5	64QAM	25	0	11.99	12.11	12.04		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	12.44	12.42	12.46		
3	QPSK	1	8	11.95	12.05	11.90	13.5	0
3	QPSK	1	14	11.87	12.00	11.90		
3	QPSK	8	0	11.98	12.11	11.96		
3	QPSK	8	4	11.98	12.11	11.98	13.5	0
3	QPSK	8	7	11.93	12.05	11.95		
3	QPSK	15	0	11.97	12.06	11.97		
3	16QAM	1	0	12.30	12.37	12.33		
3	16QAM	1	8	12.29	12.34	12.36	13.5	0
3	16QAM	1	14	12.14	12.30	12.27		
3	16QAM	8	0	12.07	12.17	12.01		
3	16QAM	8	4	12.04	12.16	12.05	13.5	0
3	16QAM	8	7	12.02	12.13	12.00		
3	16QAM	15	0	11.99	12.09	12.00		
3	64QAM	1	0	12.12	12.26	12.12		
3	64QAM	1	8	12.16	12.25	12.12	13.5	0
3	64QAM	1	14	12.09	12.22	12.09		
3	64QAM	8	0	12.03	12.14	12.00		
3	64QAM	8	4	12.04	12.15	12.01	13.5	0
3	64QAM	8	7	11.97	12.09	11.97		
3	64QAM	15	0	11.96	12.10	11.95		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	12.44	12.46	12.47		
1.4	QPSK	1	3	11.96	12.01	11.86		
1.4	QPSK	1	5	11.87	11.97	11.86	13.5	0
1.4	QPSK	3	0	11.89	12.00	11.89		
1.4	QPSK	3	1	11.97	12.05	11.91		
1.4	QPSK	3	3	11.89	12.00	11.87		
1.4	QPSK	6	0	11.89	12.01	11.86	13.5	0
1.4	16QAM	1	0	12.14	12.23	12.17		
1.4	16QAM	1	3	12.22	12.33	12.22		
1.4	16QAM	1	5	12.14	12.22	12.17	13.5	0
1.4	16QAM	3	0	11.96	12.06	11.93		
1.4	16QAM	3	1	12.02	12.12	11.97		
1.4	16QAM	3	3	11.96	12.08	11.92		
1.4	16QAM	6	0	11.95	12.01	11.94	13.5	0
1.4	64QAM	1	0	12.12	12.20	12.07		
1.4	64QAM	1	3	12.11	12.18	12.06		
1.4	64QAM	1	5	12.07	12.14	12.07	13.5	0
1.4	64QAM	3	0	11.98	12.14	12.03		
1.4	64QAM	3	1	12.09	12.19	12.05		
1.4	64QAM	3	3	12.01	12.11	12.01		
1.4	64QAM	6	0	11.92	12.04	11.89	13.5	0

Band 26 for FCC
(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	21.53	21.66	21.64		
15	QPSK	1	37	21.52	21.65	21.67	23	0
15	QPSK	1	74	21.96	22.09	22.06		
15	QPSK	36	0	21.56	21.84	21.67		
15	QPSK	36	20	21.37	21.49	21.58	23	0
15	QPSK	36	39	21.38	21.37	21.52		
15	QPSK	75	0	21.47	21.68	21.57		
15	16QAM	1	0	21.77	21.93	22.01		
15	16QAM	1	37	21.65	21.62	21.89	23	0
15	16QAM	1	74	22.04	22.01	22.05		
15	16QAM	36	0	20.59	20.63	20.83		
15	16QAM	36	20	20.41	20.51	20.54	22	1
15	16QAM	36	39	20.33	20.37	20.49		
15	16QAM	75	0	20.42	20.55	20.63		
15	64QAM	1	0	20.89	20.96	21.09		
15	64QAM	1	37	20.47	20.60	20.71	22	1
15	64QAM	1	74	21.11	21.13	21.10		
15	64QAM	36	0	19.73	19.69	19.91		
15	64QAM	36	20	19.58	19.55	19.67	21	2
15	64QAM	36	39	19.47	19.44	19.62		
15	64QAM	75	0	19.58	19.60	19.73		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	21.40	21.58	21.51		
10	QPSK	1	25	21.42	21.65	21.57	23	0
10	QPSK	1	49	21.81	21.90	21.77		
10	QPSK	25	0	21.45	21.61	21.76		
10	QPSK	25	12	21.47	21.67	21.66	23	0
10	QPSK	25	25	21.60	21.72	21.69		
10	QPSK	50	0	21.57	21.67	21.68		
10	16QAM	1	0	21.87	22.05	22.02		
10	16QAM	1	25	21.67	21.86	21.81	23	0
10	16QAM	1	49	22.01	22.03	21.88		
10	16QAM	25	0	20.47	20.63	20.73		
10	16QAM	25	12	20.46	20.66	20.62	22	1
10	16QAM	25	25	20.57	20.73	20.64		
10	16QAM	50	0	20.57	20.69	20.67		
10	64QAM	1	0	20.92	21.16	21.24		
10	64QAM	1	25	20.73	20.91	20.96	22	1
10	64QAM	1	49	21.17	21.23	21.10		
10	64QAM	25	0	19.65	19.82	19.93		
10	64QAM	25	12	19.65	19.86	19.80	21	2
10	64QAM	25	25	19.78	19.90	19.88		
10	64QAM	50	0	19.74	19.87	19.84		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	21.30	21.55	21.46		
5	QPSK	1	12	21.33	21.54	21.48	23	0
5	QPSK	1	24	21.32	21.57	21.46		
5	QPSK	12	0	21.44	21.61	21.60		
5	QPSK	12	7	21.38	21.58	21.57	23	0
5	QPSK	12	13	21.40	21.54	21.57		
5	QPSK	25	0	21.41	21.60	21.58		
5	16QAM	1	0	21.66	21.83	22.00		
5	16QAM	1	12	21.60	21.74	21.73	23	0
5	16QAM	1	24	21.70	21.84	21.75		
5	16QAM	12	0	20.48	20.68	20.61		
5	16QAM	12	7	20.45	20.60	20.59	22	1
5	16QAM	12	13	20.47	20.55	20.60		
5	16QAM	25	0	20.42	20.57	20.59		
5	64QAM	1	0	20.76	20.96	21.06		
5	64QAM	1	12	20.65	20.76	20.86	22	1
5	64QAM	1	24	20.69	20.95	20.74		
5	64QAM	12	0	19.65	19.82	19.79		
5	64QAM	12	7	19.60	19.78	19.76	21	2
5	64QAM	12	13	19.63	19.75	19.76		
5	64QAM	25	0	19.56	19.78	19.77		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	21.40	21.51	21.48		
3	QPSK	1	8	21.33	21.53	21.53	23	0
3	QPSK	1	14	21.28	21.49	21.46		
3	QPSK	8	0	21.43	21.58	21.57		
3	QPSK	8	4	21.36	21.59	21.57	23	0
3	QPSK	8	7	21.38	21.56	21.54		
3	QPSK	15	0	21.31	21.59	21.57		
3	16QAM	1	0	21.63	21.93	21.87		
3	16QAM	1	8	21.67	21.88	21.89	23	0
3	16QAM	1	14	21.60	21.82	21.80		
3	16QAM	8	0	20.41	20.60	20.57		
3	16QAM	8	4	20.40	20.61	20.59	22	1
3	16QAM	8	7	20.39	20.58	20.55		
3	16QAM	15	0	20.31	20.57	20.57		
3	64QAM	1	0	20.69	20.92	20.93		
3	64QAM	1	8	20.64	20.95	20.90	22	1
3	64QAM	1	14	20.77	20.90	20.88		
3	64QAM	8	0	19.65	19.81	19.75		
3	64QAM	8	4	19.55	19.81	19.76	21	2
3	64QAM	8	7	19.56	19.78	19.78		
3	64QAM	15	0	19.56	19.79	19.76		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	21.25	21.55	21.49		
1.4	QPSK	1	3	21.34	21.56	21.51		
1.4	QPSK	1	5	21.38	21.52	21.45	23	0
1.4	QPSK	3	0	21.37	21.56	21.50		
1.4	QPSK	3	1	21.34	21.58	21.53		
1.4	QPSK	3	3	21.38	21.57	21.49		
1.4	QPSK	6	0	21.34	21.55	21.49	23	0
1.4	16QAM	1	0	21.72	21.92	21.72		
1.4	16QAM	1	3	21.81	21.91	21.84		
1.4	16QAM	1	5	21.75	21.83	21.90	23	0
1.4	16QAM	3	0	21.33	21.52	21.53		
1.4	16QAM	3	1	21.39	21.56	21.53		
1.4	16QAM	3	3	21.36	21.55	21.50		
1.4	16QAM	6	0	20.50	20.68	20.56	23	0
1.4	64QAM	1	0	20.41	20.73	20.70		
1.4	64QAM	1	3	20.56	20.72	20.65		
1.4	64QAM	1	5	20.52	20.67	20.62	23	0
1.4	64QAM	3	0	20.45	20.61	20.57		
1.4	64QAM	3	1	20.45	20.67	20.65		
1.4	64QAM	3	3	20.48	20.59	20.57		
1.4	64QAM	6	0	19.31	19.53	19.49	23	0

Band 30

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		20.26		21	0
10	QPSK	1	25		19.83			
10	QPSK	1	49		20.17			
10	QPSK	25	0		19.92		21	0
10	QPSK	25	12		19.96			
10	QPSK	25	25		20.10			
10	QPSK	50	0		20.01			
10	16QAM	1	0		20.13		21	0
10	16QAM	1	25		20.19			
10	16QAM	1	49		20.13			
10	16QAM	25	0		19.93		21	0
10	16QAM	25	12		19.95			
10	16QAM	25	25		20.04			
10	16QAM	50	0		19.90			
10	64QAM	1	0		20.19		21	0
10	64QAM	1	25		20.07			
10	64QAM	1	49		20.17			
10	64QAM	25	0		19.92		21	0
10	64QAM	25	12		19.91			
10	64QAM	25	25		20.05			
10	64QAM	50	0		19.92			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	19.87	19.85	19.83	21	0
5	QPSK	1	12	19.84	19.80	19.93		
5	QPSK	1	24	19.85	19.95	19.96		
5	QPSK	12	0	20.02	19.92	19.95	21	0
5	QPSK	12	7	19.89	19.93	20.03		
5	QPSK	12	13	19.90	19.89	20.00		
5	QPSK	25	0	19.87	19.95	20.03		
5	16QAM	1	0	20.16	20.25	20.19	21	0
5	16QAM	1	12	20.14	20.20	20.20		
5	16QAM	1	24	20.11	20.20	20.18		
5	16QAM	12	0	20.07	19.96	19.94	21	0
5	16QAM	12	7	19.94	19.93	20.06		
5	16QAM	12	13	19.89	19.90	20.03		
5	16QAM	25	0	19.91	19.93	20.05		
5	64QAM	1	0	20.20	20.12	20.17	21	0
5	64QAM	1	12	19.97	20.07	20.18		
5	64QAM	1	24	20.05	20.17	20.16		
5	64QAM	12	0	20.07	19.95	19.94	21	0
5	64QAM	12	7	19.93	19.92	20.03		
5	64QAM	12	13	19.92	19.89	20.02		
5	64QAM	25	0	19.88	19.92	20.03		

Band 66

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	13.16	13.26	13.54	14.5	0
20	QPSK	1	49	13.24	13.31	13.56		
20	QPSK	1	99	13.61	14.06	14.09		
20	QPSK	50	0	12.79	12.83	13.52	14.5	0
20	QPSK	50	24	12.87	12.98	13.64		
20	QPSK	50	50	12.98	13.55	13.68		
20	QPSK	100	0	12.97	13.55	13.82		
20	16QAM	1	0	13.16	13.13	13.73	14.5	0
20	16QAM	1	49	13.25	13.34	13.92		
20	16QAM	1	99	13.62	13.85	13.97		
20	16QAM	50	0	12.77	12.83	13.52	14.5	0
20	16QAM	50	24	12.87	13.02	13.66		
20	16QAM	50	50	12.90	13.13	13.68		
20	16QAM	100	0	12.85	12.98	13.59		
20	64QAM	1	0	13.05	13.11	13.57	14.5	0
20	64QAM	1	49	13.09	13.11	13.80		
20	64QAM	1	99	13.47	13.80	13.92		
20	64QAM	50	0	12.79	12.82	13.49	14.5	0
20	64QAM	50	24	12.84	12.99	13.62		
20	64QAM	50	50	12.88	13.15	13.67		
20	64QAM	100	0	12.86	12.96	13.60		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	12.71	12.75	13.41	14.5	0
15	QPSK	1	37	12.61	12.81	13.48		
15	QPSK	1	74	12.97	13.34	13.81		
15	QPSK	36	0	12.89	12.96	13.67	14.5	0
15	QPSK	36	20	12.78	13.00	13.67		
15	QPSK	36	39	12.82	13.05	13.66		
15	QPSK	75	0	12.85	12.98	13.68		
15	16QAM	1	0	13.55	13.44	13.95	14.5	0
15	16QAM	1	37	13.14	13.32	13.91		
15	16QAM	1	74	13.36	13.76	13.98		
15	16QAM	36	0	12.87	12.93	13.70	14.5	0
15	16QAM	36	20	12.79	12.97	13.68		
15	16QAM	36	39	12.80	13.04	13.63		
15	16QAM	75	0	12.84	13.01	13.67		
15	64QAM	1	0	13.35	13.21	13.94	14.5	0
15	64QAM	1	37	13.02	13.08	13.84		
15	64QAM	1	74	13.16	13.54	13.93		
15	64QAM	36	0	12.88	12.95	13.71	14.5	0
15	64QAM	36	20	12.78	13.00	13.70		
15	64QAM	36	39	12.81	13.05	13.70		
15	64QAM	75	0	12.81	12.98	13.68		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	13.11	13.01	13.61	14.5	0
10	QPSK	1	25	13.16	13.07	13.70		
10	QPSK	1	49	13.30	13.66	13.98		
10	QPSK	25	0	12.95	13.08	13.78	14.5	0
10	QPSK	25	12	13.00	13.17	13.88		
10	QPSK	25	25	13.01	13.38	13.94		
10	QPSK	50	0	12.99	13.18	13.82		
10	16QAM	1	0	13.18	13.23	13.56	14.5	0
10	16QAM	1	25	13.24	13.47	13.97		
10	16QAM	1	49	13.64	13.86	13.95		
10	16QAM	25	0	12.98	13.08	13.79	14.5	0
10	16QAM	25	12	12.99	13.20	13.85		
10	16QAM	25	25	13.00	13.36	13.92		
10	16QAM	50	0	12.98	13.17	13.80		
10	64QAM	1	0	13.05	13.04	13.32	14.5	0
10	64QAM	1	25	13.12	13.29	13.87		
10	64QAM	1	49	13.50	13.90	13.97		
10	64QAM	25	0	12.96	13.06	13.79	14.5	0
10	64QAM	25	12	13.02	13.20	13.87		
10	64QAM	25	25	13.02	13.37	13.95		
10	64QAM	50	0	12.93	13.16	13.79		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	12.91	13.01	13.64	14.5	0
5	QPSK	1	12	12.90	13.09	13.74		
5	QPSK	1	24	12.90	13.20	13.76		
5	QPSK	12	0	13.05	13.19	13.91	14.5	0
5	QPSK	12	7	13.03	13.16	13.84		
5	QPSK	12	13	13.10	13.14	13.80		
5	QPSK	25	0	13.05	13.19	13.86		
5	16QAM	1	0	13.41	13.54	13.80	14.5	0
5	16QAM	1	12	13.24	13.39	13.86		
5	16QAM	1	24	13.22	13.52	13.91		
5	16QAM	12	0	13.06	13.19	13.94	14.5	0
5	16QAM	12	7	13.05	13.18	13.85		
5	16QAM	12	13	13.13	13.16	13.83		
5	16QAM	25	0	13.04	13.17	13.84		
5	64QAM	1	0	13.34	13.43	13.98	14.5	0
5	64QAM	1	12	13.10	13.23	13.94		
5	64QAM	1	24	13.14	13.39	13.98		
5	64QAM	12	0	13.06	13.21	13.75	14.5	0
5	64QAM	12	7	13.06	13.18	13.86		
5	64QAM	12	13	13.12	13.16	13.82		
5	64QAM	25	0	13.01	13.16	13.85		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	12.95	12.97	13.75	14.5	0
3	QPSK	1	8	12.95	13.07	13.74		
3	QPSK	1	14	12.90	13.07	13.73		
3	QPSK	8	0	12.99	13.15	13.83	14.5	0
3	QPSK	8	4	12.99	13.16	13.81		
3	QPSK	8	7	12.97	13.13	13.80		
3	QPSK	15	0	12.96	13.12	13.79		
3	16QAM	1	0	13.26	13.43	13.98	14.5	0
3	16QAM	1	8	13.30	13.46	13.95		
3	16QAM	1	14	13.24	13.38	13.96		
3	16QAM	8	0	13.05	13.18	13.90	14.5	0
3	16QAM	8	4	13.06	13.21	13.88		
3	16QAM	8	7	13.03	13.17	13.87		
3	16QAM	15	0	13.01	13.14	13.82		
3	64QAM	1	0	13.15	13.32	13.96	14.5	0
3	64QAM	1	8	13.15	13.31	13.98		
3	64QAM	1	14	13.08	13.28	13.94		
3	64QAM	8	0	12.99	13.18	13.84	14.5	0
3	64QAM	8	4	13.04	13.17	13.88		
3	64QAM	8	7	12.98	13.14	13.83		
3	64QAM	15	0	12.98	13.14	13.81		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	12.91	13.07	13.74	14.5	0
1.4	QPSK	1	3	12.93	13.13	13.81		
1.4	QPSK	1	5	12.87	13.09	13.73		
1.4	QPSK	3	0	12.92	13.03	13.77		
1.4	QPSK	3	1	12.95	13.41	13.84		
1.4	QPSK	3	3	12.88	13.44	13.76		
1.4	QPSK	6	0	12.88	13.37	13.74	14.5	0
1.4	16QAM	1	0	13.12	13.12	13.95	14.5	0
1.4	16QAM	1	3	13.19	13.15	13.95		
1.4	16QAM	1	5	13.13	13.12	13.97		
1.4	16QAM	3	0	12.97	13.13	13.83		
1.4	16QAM	3	1	13.06	13.28	13.88		
1.4	16QAM	3	3	12.97	13.28	13.82		
1.4	16QAM	6	0	12.94	13.20	13.80	14.5	0
1.4	64QAM	1	0	13.16	13.18	13.90	14.5	0
1.4	64QAM	1	3	13.11	13.25	13.98		
1.4	64QAM	1	5	13.03	13.16	13.93		
1.4	64QAM	3	0	13.03	13.09	13.88		
1.4	64QAM	3	1	13.12	13.13	13.94		
1.4	64QAM	3	3	13.01	13.28	13.88		
1.4	64QAM	6	0	12.94	13.10	13.78	14.5	0

Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	19.03	18.79	18.83	20	0
20	QPSK	1	49	19.26	19.06	19.09		
20	QPSK	1	99	19.09	19.08	19.20		
20	QPSK	50	0	19.09	18.93	19.01	20	0
20	QPSK	50	24	19.29	19.04	19.04		
20	QPSK	50	50	19.29	19.06	19.18		
20	QPSK	100	0	19.04	19.03	19.12		
20	16QAM	1	0	18.92	18.90	19.06	20	0
20	16QAM	1	49	19.11	19.18	19.01		
20	16QAM	1	99	19.22	19.10	18.92		
20	16QAM	50	0	18.98	18.99	18.96	20	0
20	16QAM	50	24	19.07	19.05	18.96		
20	16QAM	50	50	19.10	19.00	19.26		
20	16QAM	100	0	19.22	19.05	19.16		
20	64QAM	1	0	18.63	18.39	18.67	20	0
20	64QAM	1	49	18.79	18.58	18.62		
20	64QAM	1	99	18.74	18.53	18.58		
20	64QAM	50	0	19.03	18.80	19.11	20	0
20	64QAM	50	24	19.26	18.94	19.14		
20	64QAM	50	50	19.24	18.93	18.93		
20	64QAM	100	0	19.20	18.86	18.89		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	18.91	18.87	18.92	20	0
15	QPSK	1	37	18.87	18.72	18.74		
15	QPSK	1	74	19.22	18.97	19.15		
15	QPSK	36	0	18.98	19.02	19.02	20	0
15	QPSK	36	20	19.28	19.09	19.11		
15	QPSK	36	39	19.15	19.09	19.20		
15	QPSK	75	0	19.27	19.01	19.14		
15	16QAM	1	0	19.07	18.93	18.96	20	0
15	16QAM	1	37	19.18	19.01	18.95		
15	16QAM	1	74	19.10	18.98	18.93		
15	16QAM	36	0	18.92	18.78	18.88	20	0
15	16QAM	36	20	19.08	18.86	18.97		
15	16QAM	36	39	19.40	18.85	19.18		
15	16QAM	75	0	19.28	19.05	19.16		
15	64QAM	1	0	18.70	18.54	18.51	20	0
15	64QAM	1	37	19.03	18.84	19.00		
15	64QAM	1	74	18.96	18.63	18.93		
15	64QAM	36	0	18.97	18.78	19.01	20	0
15	64QAM	36	20	19.14	18.87	19.11		
15	64QAM	36	39	19.10	18.85	19.11		
15	64QAM	75	0	19.27	19.02	19.17		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	19.23	19.03	19.26	20	0
10	QPSK	1	25	19.19	18.99	18.97		
10	QPSK	1	49	19.40	19.12	19.20		
10	QPSK	25	0	19.15	19.16	19.11	20	0
10	QPSK	25	12	19.30	19.02	19.09		
10	QPSK	25	25	19.41	19.17	19.32		
10	QPSK	50	0	19.18	19.09	19.27		
10	16QAM	1	0	19.31	19.16	19.32	20	0
10	16QAM	1	25	19.29	19.01	19.08		
10	16QAM	1	49	19.36	19.23	19.26		
10	16QAM	25	0	19.27	19.19	19.06	20	0
10	16QAM	25	12	19.12	18.94	19.22		
10	16QAM	25	25	19.36	19.09	19.26		
10	16QAM	50	0	19.30	18.94	19.20		
10	64QAM	1	0	19.07	18.58	18.95	20	0
10	64QAM	1	25	18.71	18.94	18.71		
10	64QAM	1	49	18.98	18.76	18.79		
10	64QAM	25	0	19.09	18.91	19.31	20	0
10	64QAM	25	12	19.24	19.18	19.04		
10	64QAM	25	25	19.49	19.03	19.21		
10	64QAM	50	0	19.07	18.91	19.08		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	19.18	18.94	19.25	20	0
5	QPSK	1	12	19.05	18.76	19.05		
5	QPSK	1	24	19.08	19.02	18.99		
5	QPSK	12	0	19.31	19.16	19.09	20	0
5	QPSK	12	7	19.21	19.11	19.22		
5	QPSK	12	13	19.29	19.04	19.13		
5	QPSK	25	0	19.35	19.06	19.14		
5	16QAM	1	0	19.23	19.14	19.24	20	0
5	16QAM	1	12	19.14	18.97	19.17		
5	16QAM	1	24	19.21	18.96	19.14		
5	16QAM	12	0	19.20	19.08	19.19	20	0
5	16QAM	12	7	19.28	18.90	19.21		
5	16QAM	12	13	19.30	18.93	19.23		
5	16QAM	25	0	19.19	19.10	19.09		
5	64QAM	1	0	19.11	18.56	18.68	20	0
5	64QAM	1	12	18.85	18.90	18.79		
5	64QAM	1	24	18.96	18.71	18.89		
5	64QAM	12	0	19.32	19.21	19.12	20	0
5	64QAM	12	7	19.34	19.05	19.26		
5	64QAM	12	13	19.12	19.07	19.16		
5	64QAM	25	0	19.41	18.89	19.31		

Band 41 (2.6G Band)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	19.39	19.68	19.31	19.25	19.52	21	0
20	QPSK	1	49	19.58	19.73	19.50	19.59	19.93		
20	QPSK	1	99	19.31	19.46	19.25	19.22	19.51		
20	QPSK	50	0	19.42	19.68	19.26	19.40	19.63	21	0
20	QPSK	50	24	19.58	19.80	19.55	19.60	19.85		
20	QPSK	50	50	19.37	19.53	19.34	19.39	19.56		
20	QPSK	100	0	19.36	19.54	19.33	19.40	19.90		
20	16QAM	1	0	19.16	19.39	19.06	19.02	19.45	21	0
20	16QAM	1	49	19.32	19.33	19.36	19.34	19.65		
20	16QAM	1	99	19.01	19.13	19.23	19.03	19.42		
20	16QAM	50	0	19.47	19.74	19.25	19.50	19.64	21	0
20	16QAM	50	24	19.49	19.74	19.41	19.57	19.71		
20	16QAM	50	50	19.35	19.60	19.37	19.46	19.60		
20	16QAM	100	0	19.29	19.55	19.30	19.32	19.61		
20	64QAM	1	0	19.43	19.15	19.59	19.68	19.16	21	0
20	64QAM	1	49	19.16	19.33	19.04	19.09	19.36		
20	64QAM	1	99	19.35	19.32	19.15	19.40	19.29		
20	64QAM	50	0	19.40	19.67	19.20	19.33	19.62	21	0
20	64QAM	50	24	19.47	19.67	19.36	19.37	19.64		
20	64QAM	50	50	19.28	19.46	19.30	19.35	19.56		
20	64QAM	100	0	19.33	19.59	19.37	19.37	19.62		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	19.20	19.39	19.20	19.30	19.58	21	0
15	QPSK	1	37	19.35	19.14	19.50	19.02	19.38		
15	QPSK	1	74	19.28	19.07	19.54	19.38	19.59		
15	QPSK	36	0	19.48	19.70	19.32	19.32	19.63	21	0
15	QPSK	36	20	19.54	19.75	19.48	19.53	19.60		
15	QPSK	36	39	19.57	19.80	19.55	19.60	19.59		
15	QPSK	75	0	19.45	19.72	19.36	19.35	19.53		
15	16QAM	1	0	19.08	19.15	19.58	19.14	19.61	21	0
15	16QAM	1	37	19.04	19.26	19.47	19.07	19.44		
15	16QAM	1	74	19.30	19.39	19.18	19.25	19.50		
15	16QAM	36	0	19.44	19.69	19.20	19.28	19.55	21	0
15	16QAM	36	20	19.53	19.69	19.39	19.48	19.54		
15	16QAM	36	39	19.57	19.68	19.48	19.55	19.52		
15	16QAM	75	0	19.45	19.74	19.40	19.44	19.54		
15	64QAM	1	0	19.36	19.19	19.53	19.28	19.26	21	0
15	64QAM	1	37	19.42	19.36	19.12	19.33	19.01		
15	64QAM	1	74	19.04	19.20	19.08	19.07	19.21		
15	64QAM	36	0	19.31	19.62	19.19	19.20	19.56	21	0
15	64QAM	36	20	19.41	19.67	19.39	19.44	19.50		
15	64QAM	36	39	19.45	19.61	19.37	19.49	19.52		
15	64QAM	75	0	19.39	19.68	19.33	19.37	19.55		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.48	19.77	19.41	19.55	19.63	21	0
10	QPSK	1	25	19.50	19.15	19.52	19.56	19.55		
10	QPSK	1	49	19.40	19.72	19.49	19.45	19.39		
10	QPSK	25	0	19.36	19.77	19.50	19.54	19.39	21	0
10	QPSK	25	12	19.55	19.82	19.63	19.63	19.52		
10	QPSK	25	25	19.48	19.76	19.53	19.54	19.47		
10	QPSK	50	0	19.46	19.77	19.49	19.54	19.37		
10	16QAM	1	0	19.38	19.78	19.26	19.38	19.46	21	0
10	16QAM	1	25	19.36	19.70	19.45	19.50	19.43		
10	16QAM	1	49	19.43	19.67	19.40	19.47	19.48		
10	16QAM	25	0	19.40	19.82	19.56	19.54	19.44	21	0
10	16QAM	25	12	19.55	19.81	19.67	19.68	19.43		
10	16QAM	25	25	19.50	19.83	19.61	19.57	19.46		
10	16QAM	50	0	19.43	19.78	19.48	19.56	19.45		
10	64QAM	1	0	19.02	19.32	19.01	19.13	19.15	21	0
10	64QAM	1	25	19.07	19.31	19.08	19.14	19.01		
10	64QAM	1	49	19.08	19.30	19.04	19.06	19.14		
10	64QAM	25	0	19.34	19.83	19.54	19.55	19.45	21	0
10	64QAM	25	12	19.51	19.89	19.60	19.64	19.47		
10	64QAM	25	25	19.49	19.79	19.51	19.56	19.51		
10	64QAM	50	0	19.39	19.78	19.51	19.44	19.35		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	19.60	19.44	19.66	19.86	19.61	21	0
5	QPSK	1	12	19.27	19.57	19.35	19.55	19.30		
5	QPSK	1	24	19.30	19.64	19.40	19.36	19.21		
5	QPSK	12	0	19.45	19.85	19.57	19.52	19.41	21	0
5	QPSK	12	7	19.50	19.84	19.56	19.55	19.44		
5	QPSK	12	13	19.41	19.82	19.53	19.60	19.39		
5	QPSK	25	0	19.39	19.80	19.59	19.57	19.41		
5	16QAM	1	0	19.48	19.82	19.53	19.54	19.44	21	0
5	16QAM	1	12	19.53	19.82	19.64	19.64	19.44		
5	16QAM	1	24	19.44	19.77	19.50	19.48	19.37		
5	16QAM	12	0	19.42	19.74	19.52	19.54	19.41	21	0
5	16QAM	12	7	19.42	19.71	19.48	19.51	19.37		
5	16QAM	12	13	19.36	19.69	19.48	19.49	19.38		
5	16QAM	25	0	19.42	19.81	19.56	19.56	19.44		
5	64QAM	1	0	19.22	19.72	19.16	19.16	19.10	21	0
5	64QAM	1	12	19.17	19.28	19.21	19.20	19.09		
5	64QAM	1	24	19.06	19.38	19.11	19.14	19.07		
5	64QAM	12	0	19.51	19.89	19.61	19.60	19.44	21	0
5	64QAM	12	7	19.49	19.80	19.60	19.62	19.42		
5	64QAM	12	13	19.45	19.78	19.58	19.62	19.38		
5	64QAM	25	0	19.46	19.80	19.57	19.58	19.43		

Band 41 (2.6G Band) HPUE (Limit 27)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	19.25	19.55	19.37	19.12	19.91	21	0
20	QPSK	1	49	19.34	19.58	19.70	19.26	19.95		
20	QPSK	1	99	19.46	19.61	19.39	19.44	19.92		
20	QPSK	50	0	19.41	19.60	19.22	19.33	19.52	21	0
20	QPSK	50	24	19.45	19.64	19.35	19.43	19.71		
20	QPSK	50	50	19.34	19.45	19.27	19.36	19.52		
20	QPSK	100	0	19.32	19.57	19.26	19.27	19.54		
20	16QAM	1	0	19.46	19.66	19.09	19.30	19.65	21	0
20	16QAM	1	49	19.68	19.72	19.45	19.63	19.79		
20	16QAM	1	99	19.10	19.28	19.06	19.11	19.56		
20	16QAM	50	0	19.40	19.64	19.20	19.34	19.55	21	0
20	16QAM	50	24	19.49	19.62	19.40	19.45	19.60		
20	16QAM	50	50	19.33	19.47	19.31	19.35	19.49		
20	16QAM	100	0	19.28	19.50	19.26	19.26	19.56		
20	64QAM	1	0	19.30	19.60	19.14	19.29	19.44	21	0
20	64QAM	1	49	19.54	19.70	19.45	19.52	19.63		
20	64QAM	1	99	19.04	19.22	18.93	18.99	19.46		
20	64QAM	50	0	19.35	19.59	19.14	19.29	19.51	21	0
20	64QAM	50	24	19.41	19.61	19.38	19.38	19.56		
20	64QAM	50	50	19.25	19.44	19.20	19.27	19.50		
20	64QAM	100	0	19.25	19.46	19.23	19.26	19.52		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	19.48	19.35	19.54	19.73	19.44	21	0
15	QPSK	1	37	19.72	19.65	19.93	19.69	19.57		
15	QPSK	1	74	19.64	19.48	19.86	19.84	19.47		
15	QPSK	36	0	19.40	19.66	19.21	19.23	19.51	21	0
15	QPSK	36	20	19.40	19.70	19.37	19.46	19.54		
15	QPSK	36	39	19.54	19.73	19.50	19.47	19.53		
15	QPSK	75	0	19.37	19.68	19.28	19.35	19.45		
15	16QAM	1	0	19.25	19.42	19.39	19.34	19.68	21	0
15	16QAM	1	37	19.12	19.35	19.13	19.15	19.50		
15	16QAM	1	74	19.38	19.14	19.49	19.52	19.70		
15	16QAM	36	0	19.39	19.69	19.22	19.22	19.48	21	0
15	16QAM	36	20	19.39	19.66	19.37	19.40	19.49		
15	16QAM	36	39	19.43	19.66	19.42	19.47	19.54		
15	16QAM	75	0	19.38	19.66	19.33	19.36	19.49		
15	64QAM	1	0	19.12	19.46	19.54	19.24	19.54	21	0
15	64QAM	1	37	19.64	19.79	19.26	19.70	19.67		
15	64QAM	1	74	19.54	19.09	19.42	19.53	19.54		
15	64QAM	36	0	19.27	19.59	19.13	19.14	19.49	21	0
15	64QAM	36	20	19.37	19.62	19.34	19.34	19.44		
15	64QAM	36	39	19.39	19.56	19.33	19.37	19.43		
15	64QAM	75	0	19.31	19.57	19.22	19.27	19.41		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.53	19.79	19.44	19.40	19.36	21	0
10	QPSK	1	25	19.29	19.45	19.18	19.25	19.13		
10	QPSK	1	49	19.30	19.62	19.35	19.41	19.15		
10	QPSK	25	0	19.30	19.72	19.48	19.43	19.25	21	0
10	QPSK	25	12	19.44	19.74	19.49	19.50	19.25		
10	QPSK	25	25	19.40	19.63	19.48	19.47	19.24		
10	QPSK	50	0	19.39	19.69	19.42	19.49	19.22		
10	16QAM	1	0	19.70	19.87	19.57	19.70	19.58	21	0
10	16QAM	1	25	19.68	19.72	19.73	19.71	19.54		
10	16QAM	1	49	19.72	19.86	19.61	19.72	19.49		
10	16QAM	25	0	19.34	19.73	19.48	19.48	19.27	21	0
10	16QAM	25	12	19.39	19.74	19.50	19.50	19.27		
10	16QAM	25	25	19.43	19.72	19.45	19.51	19.28		
10	16QAM	50	0	19.41	19.70	19.48	19.46	19.27		
10	64QAM	1	0	19.50	19.75	19.48	19.49	19.33	21	0
10	64QAM	1	25	19.32	19.72	19.46	19.45	19.25		
10	64QAM	1	49	19.42	19.73	19.49	19.50	19.29		
10	64QAM	25	0	19.31	19.69	19.42	19.42	19.29	21	0
10	64QAM	25	12	19.42	19.69	19.47	19.52	19.34		
10	64QAM	25	25	19.46	19.68	19.51	19.50	19.31		
10	64QAM	50	0	19.34	19.69	19.41	19.46	19.26		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	19.55	19.81	19.55	19.58	19.48	21	0
5	QPSK	1	12	19.41	19.23	19.37	19.05	19.02		
5	QPSK	1	24	19.36	19.58	19.38	19.37	19.13		
5	QPSK	12	0	19.38	19.72	19.48	19.48	19.24	21	0
5	QPSK	12	7	19.40	19.68	19.51	19.46	19.24		
5	QPSK	12	13	19.32	19.69	19.47	19.44	19.22		
5	QPSK	25	0	19.30	19.72	19.48	19.49	19.24		
5	16QAM	1	0	19.67	19.81	19.84	19.78	19.62	21	0
5	16QAM	1	12	19.70	19.89	19.69	19.78	19.48		
5	16QAM	1	24	19.54	19.85	19.62	19.74	19.44		
5	16QAM	12	0	19.45	19.81	19.60	19.53	19.34	21	0
5	16QAM	12	7	19.48	19.78	19.52	19.53	19.30		
5	16QAM	12	13	19.38	19.77	19.50	19.57	19.33		
5	16QAM	25	0	19.36	19.71	19.51	19.49	19.26		
5	64QAM	1	0	19.61	19.90	19.65	19.66	19.38	21	0
5	64QAM	1	12	19.55	19.91	19.65	19.65	19.36		
5	64QAM	1	24	19.51	19.61	19.69	19.62	19.29		
5	64QAM	12	0	19.42	19.81	19.55	19.53	19.33	21	0
5	64QAM	12	7	19.47	19.76	19.54	19.52	19.28		
5	64QAM	12	13	19.38	19.71	19.47	19.50	19.27		
5	64QAM	25	0	19.33	19.75	19.55	19.51	19.28		

Reduced Power Mode for Handheld On

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	26.39	26.35	26.23	**27.50**	17.39	17.35	17.23	18.50
GPRS 1 Tx slot	26.33	26.28	26.71	**27.50**	17.33	17.28	17.71	18.50
GPRS 2 Tx slots	24.33	24.41	24.39	**26.00**	18.33	18.41	18.39	20.00
GPRS 3 Tx slots	22.11	22.04	22.01	**23.50**	17.85	17.78	17.75	19.24
GPRS 4 Tx slots	19.96	19.87	19.79	**21.50**	16.96	16.87	16.79	18.50
EDGE 1 Tx slot	22.02	22.10	22.03	**23.50**	13.02	13.10	13.03	14.50
EDGE 2 Tx slots	19.85	19.92	19.89	**21.50**	13.85	13.92	13.89	15.50
EDGE 3 Tx slots	17.57	17.64	17.61	**19.00**	13.31	13.38	13.35	14.74
EDGE 4 Tx slots	16.01	16.11	16.05	**18.00**	13.01	13.11	13.05	15.00

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			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	AMR 12.2Kbps	17.44	17.45	17.46	18.50	16.08	15.98	16.01	17.50
3GPP Rel 99	RMC 12.2Kbps	17.46	17.47	17.51	18.50	16.12	16.01	16.15	17.50
3GPP Rel 6	HSDPA Subtest-1	16.60	16.56	16.49	17.50	15.30	15.27	15.44	16.50
3GPP Rel 6	HSDPA Subtest-2	16.58	16.58	16.54	17.50	15.33	15.34	15.46	16.50
3GPP Rel 6	HSDPA Subtest-3	15.73	16.07	15.99	17.00	14.85	14.80	15.06	16.00
3GPP Rel 6	HSDPA Subtest-4	16.06	16.09	16.04	17.00	14.74	14.84	14.49	16.00
3GPP Rel 8	DC-HSDPA Subtest-1	16.44	16.49	16.32	17.50	15.22	15.27	15.37	16.50
3GPP Rel 8	DC-HSDPA Subtest-2	16.51	16.39	16.51	17.50	15.27	15.31	15.36	16.50
3GPP Rel 8	DC-HSDPA Subtest-3	15.61	15.99	15.95	17.00	14.85	14.68	15.02	16.00
3GPP Rel 8	DC-HSDPA Subtest-4	16.05	16.05	15.94	17.00	14.54	14.79	14.48	16.00
3GPP Rel 6	HSUPA Subtest-1	16.58	16.59	16.54	17.50	15.27	15.34	15.12	16.50
3GPP Rel 6	HSUPA Subtest-2	14.57	14.58	14.57	15.50	13.15	13.14	13.17	14.50
3GPP Rel 6	HSUPA Subtest-3	15.59	15.56	15.51	16.50	14.24	14.27	14.27	15.50
3GPP Rel 6	HSUPA Subtest-4	14.60	14.55	14.50	15.50	13.26	13.28	13.17	14.50
3GPP Rel 6	HSUPA Subtest-5	16.62	16.62	16.52	17.50	15.28	15.28	15.38	16.50

Band	CDMA BC1			Tune-up Limit (dBm)
TX Channel	25	600	1175	
Frequency (MHz)	1851.25	1880	1908.75	
RC1 SO55	19.13	19.36	19.17	20.00
RC3 SO55	19.04	19.25	19.07	20.00
RC3 SO32 (F+SCH)	19.25	19.33	19.16	20.00
RC3 SO32 (+SCH)	19.23	19.20	19.03	20.00
RTAP 153.6Kbps	19.04	19.07	18.97	20.00
RETAP 4096Bits	18.75	18.75	18.63	20.00

Band 2 (1900MHz Band)
Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	19.61	19.37	19.33		
20	QPSK	1	49	19.41	19.39	19.33	20.5	0
20	QPSK	1	99	19.12	19.15	19.16		
20	QPSK	50	0	19.47	19.41	19.40		
20	QPSK	50	24	19.32	19.32	19.37	20.5	0
20	QPSK	50	50	19.14	19.26	19.18		
20	QPSK	100	0	19.29	19.27	19.33		
20	16QAM	1	0	19.30	19.30	19.31		
20	16QAM	1	49	19.12	19.24	19.17	20.5	0
20	16QAM	1	99	19.27	19.39	19.31		
20	16QAM	50	0	19.44	19.43	19.37		
20	16QAM	50	24	19.29	19.31	19.36	20.5	0
20	16QAM	50	50	19.11	19.23	19.22		
20	16QAM	100	0	19.25	19.26	19.30		
20	64QAM	1	0	19.22	19.13	19.21		
20	64QAM	1	49	19.39	19.46	19.48	20.5	0
20	64QAM	1	99	19.14	19.15	19.17		
20	64QAM	50	0	19.44	19.42	19.37		
20	64QAM	50	24	19.33	19.30	19.35	20.5	0
20	64QAM	50	50	19.12	19.18	19.20		
20	64QAM	100	0	19.28	19.23	19.31		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	19.60	19.55	19.53		
15	QPSK	1	37	19.23	19.06	19.14	20.5	0
15	QPSK	1	74	19.34	19.46	19.40		
15	QPSK	36	0	19.42	19.37	19.36		
15	QPSK	36	20	19.29	19.30	19.38	20.5	0
15	QPSK	36	39	19.30	19.30	19.32		
15	QPSK	75	0	19.29	19.24	19.32		
15	16QAM	1	0	19.41	19.52	19.41		
15	16QAM	1	37	19.30	19.26	19.20	20.5	0
15	16QAM	1	74	19.28	19.55	19.33		
15	16QAM	36	0	19.39	19.37	19.33		
15	16QAM	36	20	19.32	19.29	19.34	20.5	0
15	16QAM	36	39	19.28	19.30	19.30		
15	16QAM	75	0	19.25	19.29	19.38		
15	64QAM	1	0	19.40	19.35	19.28		
15	64QAM	1	37	19.44	19.40	19.38	20.5	0
15	64QAM	1	74	19.14	19.23	19.13		
15	64QAM	36	0	19.41	19.39	19.36		
15	64QAM	36	20	19.29	19.31	19.35	20.5	0
15	64QAM	36	39	19.29	19.29	19.28		
15	64QAM	75	0	19.23	19.28	19.34		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	19.59	19.60	19.55		
10	QPSK	1	25	19.42	19.40	19.42	20.5	0
10	QPSK	1	49	19.45	19.45	19.51		
10	QPSK	25	0	19.56	19.43	19.49		
10	QPSK	25	12	19.51	19.42	19.50	20.5	0
10	QPSK	25	25	19.48	19.41	19.50		
10	QPSK	50	0	19.52	19.41	19.47		
10	16QAM	1	0	19.46	19.47	19.49		
10	16QAM	1	25	19.41	19.31	19.41	20.5	0
10	16QAM	1	49	19.44	19.36	19.41		
10	16QAM	25	0	19.54	19.40	19.49		
10	16QAM	25	12	19.56	19.41	19.48	20.5	0
10	16QAM	25	25	19.48	19.35	19.48		
10	16QAM	50	0	19.50	19.44	19.43		
10	64QAM	1	0	19.30	19.40	19.25		
10	64QAM	1	25	19.19	19.18	19.16	20.5	0
10	64QAM	1	49	19.24	19.27	19.29		
10	64QAM	25	0	19.56	19.37	19.47		
10	64QAM	25	12	19.55	19.43	19.51	20.5	0
10	64QAM	25	25	19.52	19.39	19.51		
10	64QAM	50	0	19.51	19.45	19.46		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	19.59	19.53	19.58		
5	QPSK	1	12	19.47	19.38	19.45	20.5	0
5	QPSK	1	24	19.46	19.37	19.42		
5	QPSK	12	0	19.52	19.52	19.56		
5	QPSK	12	7	19.56	19.42	19.52	20.5	0
5	QPSK	12	13	19.53	19.43	19.48		
5	QPSK	25	0	19.53	19.47	19.52		
5	16QAM	1	0	19.49	19.42	19.46		
5	16QAM	1	12	19.35	19.26	19.40	20.5	0
5	16QAM	1	24	19.37	19.37	19.36		
5	16QAM	12	0	19.16	19.16	19.18		
5	16QAM	12	7	19.60	19.49	19.53	20.5	0
5	16QAM	12	13	19.55	19.42	19.48		
5	16QAM	25	0	19.55	19.46	19.53		
5	64QAM	1	0	19.39	19.28	19.36		
5	64QAM	1	12	19.27	19.17	19.20	20.5	0
5	64QAM	1	24	19.25	19.09	19.20		
5	64QAM	12	0	19.19	19.16	19.22		
5	64QAM	12	7	19.59	19.50	19.54	20.5	0
5	64QAM	12	13	19.56	19.41	19.51		
5	64QAM	25	0	19.56	19.47	19.55		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	19.45	19.47	19.52		
3	QPSK	1	8	19.47	19.42	19.49	20.5	0
3	QPSK	1	14	19.37	19.35	19.44		
3	QPSK	8	0	19.52	19.51	19.51		
3	QPSK	8	4	19.51	19.49	19.51	20.5	0
3	QPSK	8	7	19.48	19.43	19.50		
3	QPSK	15	0	19.45	19.43	19.52		
3	16QAM	1	0	19.47	19.41	19.50		
3	16QAM	1	8	19.36	19.34	19.37	20.5	0
3	16QAM	1	14	19.29	19.24	19.38		
3	16QAM	8	0	19.53	19.52	19.54		
3	16QAM	8	4	19.56	19.53	19.57	20.5	0
3	16QAM	8	7	19.52	19.49	19.51		
3	16QAM	15	0	19.48	19.52	19.53		
3	64QAM	1	0	19.27	19.27	19.25		
3	64QAM	1	8	19.25	19.21	19.25	20.5	0
3	64QAM	1	14	19.19	19.17	19.23		
3	64QAM	8	0	19.55	19.53	19.56		
3	64QAM	8	4	19.56	19.55	19.56	20.5	0
3	64QAM	8	7	19.53	19.45	19.53		
3	64QAM	15	0	19.47	19.50	19.50		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	19.44	19.38	19.45		
1.4	QPSK	1	3	19.45	19.45	19.47		
1.4	QPSK	1	5	19.39	19.38	19.42	20.5	0
1.4	QPSK	3	0	19.43	19.43	19.44		
1.4	QPSK	3	1	19.50	19.49	19.45		
1.4	QPSK	3	3	19.45	19.40	19.41		
1.4	QPSK	6	0	19.41	19.40	19.44	20.5	0
1.4	16QAM	1	0	19.35	19.31	19.34		
1.4	16QAM	1	3	19.32	19.43	19.41		
1.4	16QAM	1	5	19.39	19.29	19.27	20.5	0
1.4	16QAM	3	0	19.49	19.45	19.47		
1.4	16QAM	3	1	19.54	19.49	19.54		
1.4	16QAM	3	3	19.48	19.37	19.42		
1.4	16QAM	6	0	19.53	19.46	19.53	20.5	0
1.4	64QAM	1	0	19.25	19.26	19.21		
1.4	64QAM	1	3	19.12	19.14	19.22		
1.4	64QAM	1	5	19.18	19.16	19.18	20.5	0
1.4	64QAM	3	0	19.53	19.50	19.54		
1.4	64QAM	3	1	19.59	19.57	19.59		
1.4	64QAM	3	3	19.56	19.49	19.54		
1.4	64QAM	6	0	19.43	19.44	19.42	20.5	0

Band 4 (AWS Band)
Part 27L (only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	17.84	17.90	17.96		
20	QPSK	1	49	17.90	17.97	17.98	19.5	0
20	QPSK	1	99	17.95	18.30	18.60		
20	QPSK	50	0	17.71	17.67	17.89		
20	QPSK	50	24	17.54	17.70	18.01	19.5	0
20	QPSK	50	50	17.75	17.68	18.16		
20	QPSK	100	0	17.63	17.64	18.03		
20	16QAM	1	0	17.84	17.87	17.97		
20	16QAM	1	49	17.87	18.15	18.38	19.5	0
20	16QAM	1	99	17.81	18.10	18.58		
20	16QAM	50	0	17.52	17.65	17.88		
20	16QAM	50	24	17.58	17.67	18.00	19.5	0
20	16QAM	50	50	17.63	17.65	18.16		
20	16QAM	100	0	17.56	17.66	17.99		
20	64QAM	1	0	17.67	17.62	17.81		
20	64QAM	1	49	17.66	17.76	18.27	19.5	0
20	64QAM	1	99	17.64	17.81	18.44		
20	64QAM	50	0	17.54	17.65	17.88		
20	64QAM	50	24	17.53	17.68	17.99	19.5	0
20	64QAM	50	50	17.43	17.65	18.15		
20	64QAM	100	0	17.56	17.69	17.96		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	17.64	17.70	17.86		
15	QPSK	1	37	17.65	17.75	17.93	19.5	0
15	QPSK	1	74	17.74	17.72	18.28		
15	QPSK	36	0	17.62	17.69	18.00		
15	QPSK	36	20	17.56	17.70	18.17	19.5	0
15	QPSK	36	39	17.51	17.69	18.15		
15	QPSK	75	0	17.50	17.73	18.05		
15	16QAM	1	0	18.03	18.10	18.22		
15	16QAM	1	37	17.94	18.18	18.44	19.5	0
15	16QAM	1	74	17.82	18.09	18.55		
15	16QAM	36	0	17.59	17.73	18.02		
15	16QAM	36	20	17.55	17.73	18.17	19.5	0
15	16QAM	36	39	17.52	17.68	18.15		
15	16QAM	75	0	17.54	17.72	18.09		
15	64QAM	1	0	17.88	17.89	18.07		
15	64QAM	1	37	17.63	17.85	18.20	19.5	0
15	64QAM	1	74	17.57	17.93	18.51		
15	64QAM	36	0	17.62	17.72	18.01		
15	64QAM	36	20	17.56	17.69	18.18	19.5	0
15	64QAM	36	39	17.52	17.71	18.16		
15	64QAM	75	0	17.55	17.60	18.08		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	17.60	17.64	18.09		
10	QPSK	1	25	17.55	17.69	18.18	19.5	0
10	QPSK	1	49	17.96	18.26	18.57		
10	QPSK	25	0	17.68	17.80	18.22		
10	QPSK	25	12	17.64	17.88	18.28	19.5	0
10	QPSK	25	25	17.79	17.99	18.45		
10	QPSK	50	0	17.73	17.89	18.34		
10	16QAM	1	0	18.21	18.45	18.51		
10	16QAM	1	25	17.89	18.13	18.55	19.5	0
10	16QAM	1	49	18.30	18.59	18.52		
10	16QAM	25	0	17.69	17.80	18.24		
10	16QAM	25	12	17.63	17.91	18.28	19.5	0
10	16QAM	25	25	17.77	17.97	18.40		
10	16QAM	50	0	17.73	17.87	18.33		
10	64QAM	1	0	18.00	18.22	18.50		
10	64QAM	1	25	17.71	17.79	18.37	19.5	0
10	64QAM	1	49	18.09	18.38	18.54		
10	64QAM	25	0	17.68	17.78	18.23		
10	64QAM	25	12	17.65	17.89	18.28	19.5	0
10	64QAM	25	25	17.78	17.98	18.45		
10	64QAM	50	0	17.74	17.87	18.32		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	17.51	17.61	17.97		
5	QPSK	1	12	17.53	17.60	18.14	19.5	0
5	QPSK	1	24	17.54	17.79	18.31		
5	QPSK	12	0	17.64	17.90	18.34		
5	QPSK	12	7	17.66	17.82	18.32	19.5	0
5	QPSK	12	13	17.58	17.81	18.34		
5	QPSK	25	0	17.66	17.84	18.31		
5	16QAM	1	0	18.13	18.16	18.57		
5	16QAM	1	12	17.88	18.03	18.56	19.5	0
5	16QAM	1	24	17.95	18.17	18.54		
5	16QAM	12	0	17.69	17.92	18.37		
5	16QAM	12	7	17.70	17.82	18.31	19.5	0
5	16QAM	12	13	17.59	17.81	18.38		
5	16QAM	25	0	17.65	17.79	18.29		
5	64QAM	1	0	17.96	18.03	18.52		
5	64QAM	1	12	17.77	17.95	18.37	19.5	0
5	64QAM	1	24	17.74	18.00	18.50		
5	64QAM	12	0	17.69	17.90	18.38		
5	64QAM	12	7	17.68	17.82	18.32	19.5	0
5	64QAM	12	13	17.61	17.81	18.36		
5	64QAM	25	0	17.65	17.78	18.30		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	17.73	17.63	18.08		
3	QPSK	1	8	17.81	17.73	18.18	19.5	0
3	QPSK	1	14	17.79	17.72	18.27		
3	QPSK	8	0	17.66	17.81	18.28		
3	QPSK	8	4	17.58	17.82	18.37	19.5	0
3	QPSK	8	7	17.59	17.82	18.34		
3	QPSK	15	0	17.60	17.76	18.33		
3	16QAM	1	0	17.95	18.14	18.57		
3	16QAM	1	8	17.92	18.12	18.58	19.5	0
3	16QAM	1	14	17.80	18.06	18.59		
3	16QAM	8	0	17.70	17.87	18.33		
3	16QAM	8	4	17.58	17.86	18.43	19.5	0
3	16QAM	8	7	17.60	17.89	18.38		
3	16QAM	15	0	17.62	17.80	18.40		
3	64QAM	1	0	17.83	18.06	18.42		
3	64QAM	1	8	17.78	17.97	18.50	19.5	0
3	64QAM	1	14	17.69	17.93	18.47		
3	64QAM	8	0	17.70	17.88	18.30		
3	64QAM	8	4	17.59	17.86	18.41	19.5	0
3	64QAM	8	7	17.60	17.86	18.38		
3	64QAM	15	0	17.61	17.78	18.34		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	17.53	17.71	18.09		
1.4	QPSK	1	3	17.59	17.72	18.26		
1.4	QPSK	1	5	17.69	17.76	18.25	19.5	0
1.4	QPSK	3	0	17.55	17.80	18.30		
1.4	QPSK	3	1	17.64	17.89	18.37		
1.4	QPSK	3	3	17.60	17.75	18.30		
1.4	QPSK	6	0	17.56	17.73	18.27	19.5	0
1.4	16QAM	1	0	17.89	18.09	18.51		
1.4	16QAM	1	3	17.90	18.07	18.54		
1.4	16QAM	1	5	17.77	18.04	18.54	19.5	0
1.4	16QAM	3	0	17.60	17.85	18.38		
1.4	16QAM	3	1	17.69	17.94	18.42		
1.4	16QAM	3	3	17.64	17.79	18.36		
1.4	16QAM	6	0	17.61	17.75	18.36	19.5	0
1.4	64QAM	1	0	17.74	17.99	18.47		
1.4	64QAM	1	3	17.70	17.88	18.47		
1.4	64QAM	1	5	17.67	17.95	18.46	19.5	0
1.4	64QAM	3	0	17.67	17.96	18.40		
1.4	64QAM	3	1	17.75	18.01	18.46		
1.4	64QAM	3	3	17.71	17.90	18.39		
1.4	64QAM	6	0	17.60	17.75	18.30	19.5	0

Band 7 (2600MHz Band)
Part 27

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	19.14	19.40	19.45		
20	QPSK	1	49	19.16	19.41	19.42	20	0
20	QPSK	1	99	19.27	19.42	19.52		
20	QPSK	50	0	18.86	19.10	19.07		
20	QPSK	50	24	18.82	19.12	19.14	20	0
20	QPSK	50	50	19.15	19.10	19.17		
20	QPSK	100	0	18.97	19.12	19.15		
20	16QAM	1	0	19.17	19.44	19.41		
20	16QAM	1	49	19.12	19.49	19.50	20	0
20	16QAM	1	99	19.24	19.42	19.51		
20	16QAM	50	0	18.84	19.09	19.08		
20	16QAM	50	24	18.83	19.10	19.12	20	0
20	16QAM	50	50	18.91	19.08	19.14		
20	16QAM	100	0	18.90	19.07	19.11		
20	64QAM	1	0	19.06	19.27	19.31		
20	64QAM	1	49	18.97	19.24	19.30	20	0
20	64QAM	1	99	19.10	19.24	19.30		
20	64QAM	50	0	18.34	18.57	18.56		
20	64QAM	50	24	18.32	18.58	18.61	20	0
20	64QAM	50	50	18.39	18.56	18.66		
20	64QAM	100	0	18.41	18.55	18.61		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	18.74	18.91	18.88		
15	QPSK	1	37	18.75	18.95	18.94	20	0
15	QPSK	1	74	18.76	19.09	19.03		
15	QPSK	36	0	18.89	19.12	19.12		
15	QPSK	36	20	18.94	19.09	19.14	20	0
15	QPSK	36	39	18.81	19.10	19.11		
15	QPSK	75	0	18.83	19.09	19.11		
15	16QAM	1	0	19.16	19.43	19.39		
15	16QAM	1	37	19.22	19.48	19.49	20	0
15	16QAM	1	74	19.13	19.45	19.45		
15	16QAM	36	0	18.88	19.11	19.13		
15	16QAM	36	20	18.93	19.13	19.14	20	0
15	16QAM	36	39	18.78	19.12	19.13		
15	16QAM	75	0	18.85	19.11	19.12		
15	64QAM	1	0	19.04	19.33	19.30		
15	64QAM	1	37	18.88	19.18	19.14	20	0
15	64QAM	1	74	18.94	19.28	19.23		
15	64QAM	36	0	18.38	18.61	18.61		
15	64QAM	36	20	18.46	18.62	18.65	20	0
15	64QAM	36	39	18.29	18.61	18.65		
15	64QAM	75	0	18.31	18.58	18.60		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	18.89	19.05	19.10		
10	QPSK	1	25	18.88	19.10	19.17	20	0
10	QPSK	1	49	19.02	19.29	19.29		
10	QPSK	25	0	18.87	19.26	19.22		
10	QPSK	25	12	18.86	19.14	19.23	20	0
10	QPSK	25	25	18.88	19.22	19.22		
10	QPSK	50	0	18.93	19.16	19.28		
10	16QAM	1	0	19.44	19.37	19.45		
10	16QAM	1	25	19.22	19.50	19.41	20	0
10	16QAM	1	49	19.29	19.48	19.48		
10	16QAM	25	0	18.88	19.23	19.21		
10	16QAM	25	12	18.89	19.12	19.23	20	0
10	16QAM	25	25	18.86	19.22	19.18		
10	16QAM	50	0	18.93	19.17	19.24		
10	64QAM	1	0	19.33	19.43	19.48		
10	64QAM	1	25	19.07	19.26	19.43	20	0
10	64QAM	1	49	19.23	19.42	19.46		
10	64QAM	25	0	18.33	18.72	18.72		
10	64QAM	25	12	18.39	18.64	18.73	20	0
10	64QAM	25	25	18.39	18.68	18.71		
10	64QAM	50	0	18.43	18.67	18.77		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	18.79	18.95	19.00		
5	QPSK	1	12	18.78	19.00	19.07	20	0
5	QPSK	1	24	18.92	19.19	19.19		
5	QPSK	12	0	18.77	19.16	19.12		
5	QPSK	12	7	18.76	19.04	19.13	20	0
5	QPSK	12	13	18.78	19.12	19.12		
5	QPSK	25	0	18.83	19.06	19.18		
5	16QAM	1	0	19.34	19.47	19.45		
5	16QAM	1	12	19.12	19.40	19.51	20	0
5	16QAM	1	24	19.19	19.48	19.48		
5	16QAM	12	0	18.78	19.13	19.11		
5	16QAM	12	7	18.79	19.02	19.13	20	0
5	16QAM	12	13	18.76	19.12	19.08		
5	16QAM	25	0	18.83	19.07	19.14		
5	64QAM	1	0	19.23	19.43	19.48		
5	64QAM	1	12	18.97	19.16	19.33	20	0
5	64QAM	1	24	19.13	19.32	19.36		
5	64QAM	12	0	18.23	18.62	18.62		
5	64QAM	12	7	18.29	18.54	18.63	20	0
5	64QAM	12	13	18.29	18.58	18.61		
5	64QAM	25	0	18.33	18.57	18.67		

Band 25 (1900MHz Band) Part 24E

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	18.10	18.06	18.12		
20	QPSK	1	49	18.08	17.94	18.07	19	0
20	QPSK	1	99	17.62	17.67	17.70		
20	QPSK	50	0	17.76	17.66	17.85		
20	QPSK	50	24	17.74	17.67	17.70	19	0
20	QPSK	50	50	17.68	17.59	17.64		
20	QPSK	100	0	17.71	17.67	17.81		
20	16QAM	1	0	17.97	17.91	17.95		
20	16QAM	1	49	17.91	17.87	17.85	19	0
20	16QAM	1	99	17.51	17.65	17.49		
20	16QAM	50	0	17.76	17.65	17.72		
20	16QAM	50	24	17.73	17.69	17.74	19	0
20	16QAM	50	50	17.68	17.61	17.67		
20	16QAM	100	0	17.70	17.63	17.71		
20	64QAM	1	0	17.95	17.86	17.91		
20	64QAM	1	49	17.88	17.84	17.86	19	0
20	64QAM	1	99	17.43	17.54	17.32		
20	64QAM	50	0	17.73	17.66	17.69		
20	64QAM	50	24	17.73	17.68	17.71	19	0
20	64QAM	50	50	17.66	17.56	17.65		
20	64QAM	100	0	17.69	17.64	17.66		
Channel				26115	26340	26565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	17.81	17.58	17.56		
15	QPSK	1	37	17.75	17.49	17.47	19	0
15	QPSK	1	74	17.74	17.67	17.54		
15	QPSK	36	0	17.81	17.73	17.77		
15	QPSK	36	20	17.82	17.76	17.75	19	0
15	QPSK	36	39	17.85	17.78	17.82		
15	QPSK	75	0	17.80	17.73	17.76		
15	16QAM	1	0	17.93	17.94	17.96		
15	16QAM	1	37	17.89	17.91	17.85	19	0
15	16QAM	1	74	17.91	18.01	17.74		
15	16QAM	36	0	17.78	17.73	17.72		
15	16QAM	36	20	17.80	17.74	17.71	19	0
15	16QAM	36	39	17.81	17.77	17.78		
15	16QAM	75	0	17.80	17.77	17.83		
15	64QAM	1	0	17.93	17.85	17.89		
15	64QAM	1	37	17.83	17.71	17.72	19	0
15	64QAM	1	74	17.92	17.80	17.58		
15	64QAM	36	0	17.82	17.75	17.73		
15	64QAM	36	20	17.79	17.76	17.74	19	0
15	64QAM	36	39	17.85	17.78	17.81		
15	64QAM	75	0	17.81	17.75	17.81		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	17.82	17.85	17.83		
10	QPSK	1	25	17.72	17.78	17.73	19	0
10	QPSK	1	49	17.91	18.01	17.76		
10	QPSK	25	0	17.74	17.85	17.74		
10	QPSK	25	12	17.73	17.85	17.75	19	0
10	QPSK	25	25	17.75	17.88	17.81		
10	QPSK	50	0	17.73	17.87	17.77		
10	16QAM	1	0	17.84	17.91	17.87		
10	16QAM	1	25	17.64	17.76	17.63	19	0
10	16QAM	1	49	17.86	17.98	17.70		
10	16QAM	25	0	17.76	17.86	17.75		
10	16QAM	25	12	17.75	17.85	17.76	19	0
10	16QAM	25	25	17.75	17.84	17.78		
10	16QAM	50	0	17.78	17.88	17.77		
10	64QAM	1	0	17.70	17.83	17.71		
10	64QAM	1	25	17.80	17.94	17.79	19	0
10	64QAM	1	49	17.74	17.85	17.47		
10	64QAM	25	0	17.74	17.84	17.72		
10	64QAM	25	12	17.72	17.86	17.75	19	0
10	64QAM	25	25	17.77	17.88	17.80		
10	64QAM	50	0	17.74	17.87	17.78		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	17.68	17.75	17.61		
5	QPSK	1	12	17.69	17.78	17.65	19	0
5	QPSK	1	24	17.62	17.75	17.68		
5	QPSK	12	0	17.71	17.85	17.77		
5	QPSK	12	7	17.70	17.80	17.69	19	0
5	QPSK	12	13	17.66	17.77	17.69		
5	QPSK	25	0	17.71	17.83	17.71		
5	16QAM	1	0	17.72	17.88	17.76		
5	16QAM	1	12	17.60	17.79	17.64	19	0
5	16QAM	1	24	17.65	17.76	17.63		
5	16QAM	12	0	17.76	17.91	17.77		
5	16QAM	12	7	17.73	17.85	17.73	19	0
5	16QAM	12	13	17.69	17.79	17.73		
5	16QAM	25	0	17.73	17.84	17.72		
5	64QAM	1	0	17.67	17.76	17.63		
5	64QAM	1	12	17.77	17.91	17.83	19	0
5	64QAM	1	24	17.80	17.93	17.80		
5	64QAM	12	0	17.82	17.91	17.79		
5	64QAM	12	7	17.77	17.86	17.76	19	0
5	64QAM	12	13	17.73	17.83	17.73		
5	64QAM	25	0	17.73	17.83	17.75		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	17.75	17.83	17.72		
3	QPSK	1	8	17.67	17.77	17.65	19	0
3	QPSK	1	14	17.62	17.68	17.62		
3	QPSK	8	0	17.67	17.78	17.66		
3	QPSK	8	4	17.67	17.79	17.68	19	0
3	QPSK	8	7	17.64	17.75	17.65		
3	QPSK	15	0	17.63	17.76	17.68		
3	16QAM	1	0	17.66	17.78	17.71		
3	16QAM	1	8	17.71	17.82	17.71	19	0
3	16QAM	1	14	17.57	17.76	17.66		
3	16QAM	8	0	17.68	17.80	17.70		
3	16QAM	8	4	17.68	17.81	17.71	19	0
3	16QAM	8	7	17.65	17.76	17.67		
3	16QAM	15	0	17.67	17.80	17.68		
3	64QAM	1	0	17.82	17.98	17.88		
3	64QAM	1	8	17.82	17.94	17.82	19	0
3	64QAM	1	14	17.77	17.84	17.77		
3	64QAM	8	0	17.74	17.85	17.75		
3	64QAM	8	4	17.71	17.84	17.73	19	0
3	64QAM	8	7	17.67	17.82	17.68		
3	64QAM	15	0	17.65	17.77	17.67		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	17.64	17.72	17.61		
1.4	QPSK	1	3	17.60	17.71	17.64		
1.4	QPSK	1	5	17.55	17.67	17.57	19	0
1.4	QPSK	3	0	17.62	17.71	17.60		
1.4	QPSK	3	1	17.69	17.77	17.62		
1.4	QPSK	3	3	17.64	17.74	17.61		
1.4	QPSK	6	0	17.58	17.71	17.57	19	0
1.4	16QAM	1	0	17.64	17.75	17.63		
1.4	16QAM	1	3	17.65	17.78	17.67		
1.4	16QAM	1	5	17.63	17.71	17.57	19	0
1.4	16QAM	3	0	17.63	17.75	17.60		
1.4	16QAM	3	1	17.63	17.75	17.65		
1.4	16QAM	3	3	17.60	17.70	17.62		
1.4	16QAM	6	0	17.74	17.82	17.72	19	0
1.4	64QAM	1	0	17.80	17.85	17.77		
1.4	64QAM	1	3	17.82	17.92	17.79		
1.4	64QAM	1	5	17.75	17.90	17.77	19	0
1.4	64QAM	3	0	17.73	17.87	17.73		
1.4	64QAM	3	1	17.74	17.87	17.76		
1.4	64QAM	3	3	17.74	17.81	17.74		
1.4	64QAM	6	0	17.60	17.71	17.57	20.5	0

Band 30

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		19.57			
10	QPSK	1	25		19.32		20.5	0
10	QPSK	1	49		19.40			
10	QPSK	25	0		19.11			
10	QPSK	25	12		19.17		20.5	0
10	QPSK	25	25		19.35			
10	QPSK	50	0		19.32			
10	16QAM	1	0		19.42			
10	16QAM	1	25		19.21		20.5	0
10	16QAM	1	49		19.48			
10	16QAM	25	0		19.10			
10	16QAM	25	12		19.14		20.5	0
10	16QAM	25	25		19.22			
10	16QAM	50	0		19.09			
10	64QAM	1	0		19.47			
10	64QAM	1	25		19.29		20.5	0
10	64QAM	1	49		19.40			
10	64QAM	25	0		18.89			
10	64QAM	25	12		18.90		20.5	0
10	64QAM	25	25		19.01			
10	64QAM	50	0		18.90			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	18.72	18.80	18.81		
5	QPSK	1	12	18.78	18.79	18.85	20.5	0
5	QPSK	1	24	19.02	19.11	19.09		
5	QPSK	12	0	19.19	19.16	19.18		
5	QPSK	12	7	19.10	19.14	19.23	20.5	0
5	QPSK	12	13	19.12	19.10	19.19		
5	QPSK	25	0	19.11	19.16	19.23		
5	16QAM	1	0	19.55	19.48	19.49		
5	16QAM	1	12	19.43	19.49	19.51	20.5	0
5	16QAM	1	24	19.47	19.50	19.45		
5	16QAM	12	0	19.22	19.19	19.17		
5	16QAM	12	7	19.10	19.15	19.20	20.5	0
5	16QAM	12	13	19.12	19.11	19.18		
5	16QAM	25	0	19.10	19.11	19.21		
5	64QAM	1	0	19.38	19.40	19.45		
5	64QAM	1	12	19.31	19.31	19.37	20.5	0
5	64QAM	1	24	19.28	19.34	19.36		
5	64QAM	12	0	19.06	18.93	18.91		
5	64QAM	12	7	18.88	18.89	19.03	20.5	0
5	64QAM	12	13	18.87	18.87	19.01		
5	64QAM	25	0	18.87	18.90	19.02		

Band 66

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	17.20	17.26	17.31		
20	QPSK	1	49	17.10	17.15	17.45	18.5	0
20	QPSK	1	99	17.35	17.51	17.96		
20	QPSK	50	0	16.90	16.76	17.43		
20	QPSK	50	24	16.91	16.95	17.50	18.5	0
20	QPSK	50	50	16.95	17.08	17.55		
20	QPSK	100	0	16.88	16.96	17.52		
20	16QAM	1	0	17.09	16.98	17.62		
20	16QAM	1	49	17.13	17.15	17.87	18.5	0
20	16QAM	1	99	17.45	17.84	17.88		
20	16QAM	50	0	16.76	16.77	17.43		
20	16QAM	50	24	16.82	16.94	17.54	18.5	0
20	16QAM	50	50	16.85	17.10	17.55		
20	16QAM	100	0	16.81	16.91	17.48		
20	64QAM	1	0	16.92	16.86	17.49		
20	64QAM	1	49	16.91	17.03	17.70	18.5	0
20	64QAM	1	99	17.21	17.78	17.82		
20	64QAM	50	0	16.73	16.74	17.40		
20	64QAM	50	24	16.78	16.93	17.53	18.5	0
20	64QAM	50	50	16.81	17.07	17.55		
20	64QAM	100	0	16.82	16.91	17.47		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	16.50	16.90	17.23		
15	QPSK	1	37	16.52	16.88	17.33	18.5	0
15	QPSK	1	74	16.88	17.30	17.64		
15	QPSK	36	0	16.83	16.88	17.58		
15	QPSK	36	20	16.73	16.95	17.54	18.5	0
15	QPSK	36	39	16.76	17.01	17.55		
15	QPSK	75	0	16.77	16.91	17.54		
15	16QAM	1	0	17.09	17.28	17.90		
15	16QAM	1	37	17.06	17.17	17.90	18.5	0
15	16QAM	1	74	16.92	17.70	17.91		
15	16QAM	36	0	16.82	16.85	17.59		
15	16QAM	36	20	16.74	16.94	17.59	18.5	0
15	16QAM	36	39	16.75	16.99	17.52		
15	16QAM	75	0	16.77	16.94	17.58		
15	64QAM	1	0	17.32	17.19	17.88		
15	64QAM	1	37	17.08	17.02	17.75	18.5	0
15	64QAM	1	74	17.07	17.53	17.86		
15	64QAM	36	0	16.78	16.84	17.54		
15	64QAM	36	20	16.73	16.90	17.56	18.5	0
15	64QAM	36	39	16.74	16.96	17.53		
15	64QAM	75	0	16.75	16.93	17.55		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	17.15	17.00	17.40		
10	QPSK	1	25	17.12	17.07	17.55	18.5	0
10	QPSK	1	49	17.18	17.59	17.93		
10	QPSK	25	0	16.90	17.02	17.64		
10	QPSK	25	12	16.95	17.11	17.73	18.5	0
10	QPSK	25	25	16.98	17.30	17.83		
10	QPSK	50	0	16.93	17.12	17.68		
10	16QAM	1	0	16.68	16.69	17.37		
10	16QAM	1	25	17.20	17.33	17.95	18.5	0
10	16QAM	1	49	17.63	17.93	17.90		
10	16QAM	25	0	16.92	17.03	17.65		
10	16QAM	25	12	16.94	17.13	17.71	18.5	0
10	16QAM	25	25	16.94	17.28	17.78		
10	16QAM	50	0	16.95	17.11	17.67		
10	64QAM	1	0	16.83	16.86	17.25		
10	64QAM	1	25	17.10	17.24	17.81	18.5	0
10	64QAM	1	49	17.42	17.79	17.78		
10	64QAM	25	0	16.90	17.00	17.62		
10	64QAM	25	12	16.95	17.13	17.66	18.5	0
10	64QAM	25	25	16.93	17.27	17.77		
10	64QAM	50	0	16.92	17.09	17.62		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	17.10	16.87	17.41		
5	QPSK	1	12	16.91	17.04	17.58	18.5	0
5	QPSK	1	24	16.84	17.13	17.64		
5	QPSK	12	0	16.97	17.12	17.77		
5	QPSK	12	7	16.94	17.07	17.68	18.5	0
5	QPSK	12	13	16.82	17.06	17.66		
5	QPSK	25	0	16.98	17.11	17.72		
5	16QAM	1	0	17.38	17.48	17.84		
5	16QAM	1	12	17.18	17.32	17.93	18.5	0
5	16QAM	1	24	17.20	17.53	17.89		
5	16QAM	12	0	17.02	17.12	17.78		
5	16QAM	12	7	16.98	17.10	17.71	18.5	0
5	16QAM	12	13	16.85	17.07	17.68		
5	16QAM	25	0	16.97	17.10	17.70		
5	64QAM	1	0	17.23	17.35	17.90		
5	64QAM	1	12	17.07	17.16	17.77	18.5	0
5	64QAM	1	24	17.04	17.34	17.79		
5	64QAM	12	0	16.98	17.11	17.76		
5	64QAM	12	7	16.96	17.09	17.68	18.5	0
5	64QAM	12	13	16.84	17.06	17.66		
5	64QAM	25	0	16.96	17.10	17.70		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	16.90	16.85	17.43		
3	QPSK	1	8	16.88	17.02	17.60	18.5	0
3	QPSK	1	14	16.84	16.97	17.56		
3	QPSK	8	0	16.95	17.10	17.69		
3	QPSK	8	4	16.95	17.10	17.69	18.5	0
3	QPSK	8	7	16.91	17.06	17.64		
3	QPSK	15	0	16.92	17.05	17.63		
3	16QAM	1	0	17.27	17.37	17.95		
3	16QAM	1	8	17.25	17.40	17.93	18.5	0
3	16QAM	1	14	17.19	17.31	17.85		
3	16QAM	8	0	17.01	17.13	17.75		
3	16QAM	8	4	16.98	17.11	17.76	18.5	0
3	16QAM	8	7	16.95	17.07	17.69		
3	16QAM	15	0	16.95	17.07	17.67		
3	64QAM	1	0	17.11	17.19	17.88		
3	64QAM	1	8	17.09	17.21	17.83	18.5	0
3	64QAM	1	14	17.03	17.23	17.79		
3	64QAM	8	0	16.99	17.14	17.71		
3	64QAM	8	4	16.98	17.13	17.73	18.5	0
3	64QAM	8	7	16.93	17.08	17.64		
3	64QAM	15	0	16.91	17.07	17.68		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	16.93	17.08	17.60		
1.4	QPSK	1	3	16.90	17.02	17.61		
1.4	QPSK	1	5	16.84	16.97	17.59	18.5	0
1.4	QPSK	3	0	16.84	17.02	17.61		
1.4	QPSK	3	1	16.94	17.05	17.68		
1.4	QPSK	3	3	16.86	17.01	17.60		
1.4	QPSK	6	0	16.81	16.97	17.59	18.5	0
1.4	16QAM	1	0	17.12	17.35	17.88		
1.4	16QAM	1	3	17.19	17.43	17.91		
1.4	16QAM	1	5	17.10	17.35	17.88	18.5	0
1.4	16QAM	3	0	16.90	17.03	17.73		
1.4	16QAM	3	1	16.98	17.09	17.76		
1.4	16QAM	3	3	16.89	17.01	17.65		
1.4	16QAM	6	0	16.89	17.12	17.66	18.5	0
1.4	64QAM	1	0	17.05	17.16	17.80		
1.4	64QAM	1	3	16.99	17.19	17.81		
1.4	64QAM	1	5	17.02	17.14	17.79	18.5	0
1.4	64QAM	3	0	16.95	17.15	17.73		
1.4	64QAM	3	1	17.05	17.18	17.81		
1.4	64QAM	3	3	16.96	17.14	17.70		
1.4	64QAM	6	0	16.88	17.01	17.67	18.5	0

Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	20.17	19.91	19.93	21	0
20	QPSK	1	49	20.70	20.41	20.57		
20	QPSK	1	99	20.56	20.27	20.37		
20	QPSK	50	0	20.43	20.43	20.42	21	0
20	QPSK	50	24	20.67	20.23	20.25		
20	QPSK	50	50	20.39	20.45	20.54		
20	QPSK	100	0	20.57	20.17	20.18		
20	16QAM	1	0	20.20	19.95	20.23	21	0
20	16QAM	1	49	20.36	20.26	20.30		
20	16QAM	1	99	20.37	20.13	20.20		
20	16QAM	50	0	19.33	19.48	19.47	21	0
20	16QAM	50	24	19.67	19.18	19.18		
20	16QAM	50	50	19.32	19.51	19.59		
20	16QAM	100	0	19.39	19.11	19.22		
20	64QAM	1	0	19.50	19.57	19.62	21	0
20	64QAM	1	49	19.73	19.43	19.46		
20	64QAM	1	99	19.63	19.40	19.48		
20	64QAM	50	0	19.46	19.40	19.39	21	0
20	64QAM	50	24	19.36	19.21	19.12		
20	64QAM	50	50	19.68	19.44	19.49		
20	64QAM	100	0	19.33	19.16	19.18		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	20.54	20.33	20.40	21	0
15	QPSK	1	37	20.32	20.10	20.12		
15	QPSK	1	74	20.59	20.33	20.36		
15	QPSK	36	0	20.29	20.16	20.21	21	0
15	QPSK	36	20	20.38	20.24	20.52		
15	QPSK	36	39	20.42	20.45	20.54		
15	QPSK	75	0	20.44	20.15	20.41		
15	16QAM	1	0	20.31	20.26	20.26	21	0
15	16QAM	1	37	20.33	19.93	20.20		
15	16QAM	1	74	20.41	20.26	20.29		
15	16QAM	36	0	19.66	19.24	19.51	21	0
15	16QAM	36	20	19.53	19.33	19.38		
15	16QAM	36	39	19.58	19.20	19.43		
15	16QAM	75	0	19.58	19.42	19.47		
15	64QAM	1	0	19.49	19.22	19.54	21	0
15	64QAM	1	37	19.30	19.52	19.07		
15	64QAM	1	74	19.58	19.32	19.59		
15	64QAM	36	0	19.43	19.31	19.37	21	0
15	64QAM	36	20	19.61	19.30	19.51		
15	64QAM	36	39	19.46	19.22	19.31		
15	64QAM	75	0	19.32	19.25	19.44		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	20.69	20.29	20.33	21	0
10	QPSK	1	25	20.38	20.34	20.56		
10	QPSK	1	49	20.64	20.27	20.39		
10	QPSK	25	0	20.65	20.41	20.49	21	0
10	QPSK	25	12	20.60	20.13	20.58		
10	QPSK	25	25	20.44	20.28	20.62		
10	QPSK	50	0	20.63	20.22	20.64		
10	16QAM	1	0	20.66	20.57	20.54	21	0
10	16QAM	1	25	20.51	20.21	20.59		
10	16QAM	1	49	20.51	20.51	20.65		
10	16QAM	25	0	19.74	19.35	19.52	21	0
10	16QAM	25	12	19.36	19.51	19.61		
10	16QAM	25	25	19.40	19.45	19.44		
10	16QAM	50	0	19.48	19.50	19.38		
10	64QAM	1	0	19.84	19.38	19.71	21	0
10	64QAM	1	25	19.76	19.56	19.70		
10	64QAM	1	49	19.77	19.60	19.74		
10	64QAM	25	0	19.41	19.42	19.50	21	0
10	64QAM	25	12	19.59	19.15	19.59		
10	64QAM	25	25	19.75	19.44	19.55		
10	64QAM	50	0	19.41	19.24	19.53		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	20.48	20.39	20.55	21	0
5	QPSK	1	12	20.23	20.29	20.31		
5	QPSK	1	24	20.33	20.13	20.41		
5	QPSK	12	0	20.66	20.18	20.56	21	0
5	QPSK	12	7	20.33	20.33	20.50		
5	QPSK	12	13	20.69	20.24	20.32		
5	QPSK	25	0	20.53	20.16	20.34		
5	16QAM	1	0	20.64	20.42	20.59	21	0
5	16QAM	1	12	20.56	20.54	20.59		
5	16QAM	1	24	20.52	20.34	20.53		
5	16QAM	12	0	19.65	19.21	19.38	21	0
5	16QAM	12	7	19.66	19.26	19.51		
5	16QAM	12	13	19.67	19.16	19.53		
5	16QAM	25	0	19.78	19.21	19.60		
5	64QAM	1	0	19.79	19.36	19.65	21	0
5	64QAM	1	12	19.72	19.89	19.78		
5	64QAM	1	24	19.80	19.53	19.37		
5	64QAM	12	0	19.54	19.31	19.48	21	0
5	64QAM	12	7	19.54	19.26	19.62		
5	64QAM	12	13	19.67	19.29	19.55		
5	64QAM	25	0	19.53	19.54	19.62		

Band 41 (2.6G Band)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	20.75	20.90	20.51	20.55	20.78	22	0
20	QPSK	1	49	20.63	20.68	20.75	20.91	21.08		
20	QPSK	1	99	20.30	20.24	20.25	20.47	20.48		
20	QPSK	50	0	20.27	20.39	20.18	20.42	20.51	22	0
20	QPSK	50	24	20.59	20.40	20.60	20.81	20.91		
20	QPSK	50	50	20.10	20.21	20.09	20.29	20.41		
20	QPSK	100	0	20.35	20.49	20.20	20.57	20.85		
20	16QAM	1	0	20.81	20.63	20.74	20.77	20.55	22	0
20	16QAM	1	49	20.14	20.13	20.24	20.76	20.73		
20	16QAM	1	99	20.71	20.61	20.66	20.72	21.03		
20	16QAM	50	0	20.50	20.71	20.29	20.44	20.67	22	0
20	16QAM	50	24	20.54	20.75	20.51	20.51	20.76		
20	16QAM	50	50	20.39	20.62	20.37	20.43	20.61		
20	16QAM	100	0	20.84	20.54	20.76	20.75	20.69		
20	64QAM	1	0	20.73	20.86	20.52	20.61	20.76	22	0
20	64QAM	1	49	20.95	20.99	20.90	20.95	21.05		
20	64QAM	1	99	20.40	20.55	20.61	20.52	20.65		
20	64QAM	50	0	20.83	20.90	20.52	20.58	20.74	22	0
20	64QAM	50	24	20.91	20.95	20.53	20.87	20.98		
20	64QAM	50	50	20.77	20.76	20.82	20.81	20.84		
20	64QAM	100	0	20.78	20.74	20.86	20.83	20.91		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	20.61	20.63	20.16	20.35	20.86	22	0
15	QPSK	1	37	20.50	20.65	20.49	20.25	20.67		
15	QPSK	1	74	20.39	20.43	20.40	20.48	20.67		
15	QPSK	36	0	20.92	20.97	20.69	20.37	20.68	22	0
15	QPSK	36	20	20.97	21.04	20.92	20.59	20.67		
15	QPSK	36	39	21.01	21.06	21.00	20.63	20.59		
15	QPSK	75	0	20.84	20.99	20.80	20.45	20.59		
15	16QAM	1	0	20.50	20.37	20.24	20.37	20.48	22	0
15	16QAM	1	37	20.58	20.77	20.63	20.64	20.71		
15	16QAM	1	74	20.21	20.44	20.50	20.44	20.46		
15	16QAM	36	0	20.82	20.95	20.68	20.30	20.61	22	0
15	16QAM	36	20	20.90	20.94	20.83	20.57	20.59		
15	16QAM	36	39	20.98	20.94	20.95	20.63	20.58		
15	16QAM	75	0	20.89	20.94	20.82	20.46	20.60		
15	64QAM	1	0	20.19	20.03	20.20	20.22	20.22	22	0
15	64QAM	1	37	21.07	20.29	20.21	20.54	20.47		
15	64QAM	1	74	20.44	20.36	20.41	20.40	20.94		
15	64QAM	36	0	20.86	20.92	20.55	21.04	20.96	22	0
15	64QAM	36	20	20.81	20.89	20.61	21.05	21.01		
15	64QAM	36	39	20.78	20.86	20.68	20.99	20.92		
15	64QAM	75	0	20.90	20.87	20.85	20.92	20.86		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	20.94	20.59	20.83	20.91	20.96	22	0
10	QPSK	1	25	21.05	20.67	20.88	20.96	20.87		
10	QPSK	1	49	20.82	20.69	20.76	20.84	20.65		
10	QPSK	25	0	20.42	20.83	20.51	20.54	20.67	22	0
10	QPSK	25	12	20.57	20.85	20.64	20.63	20.71		
10	QPSK	25	25	20.55	20.79	20.58	20.61	20.71		
10	QPSK	50	0	20.42	20.78	20.55	20.60	20.68		
10	16QAM	1	0	20.48	20.64	20.37	20.45	20.75	22	0
10	16QAM	1	25	20.51	20.75	20.58	20.58	20.68		
10	16QAM	1	49	20.48	20.67	20.50	20.55	20.70		
10	16QAM	25	0	20.42	20.84	20.58	20.59	20.73	22	0
10	16QAM	25	12	20.52	20.89	20.63	20.64	20.74		
10	16QAM	25	25	20.51	20.77	20.55	20.64	20.66		
10	16QAM	50	0	20.48	20.79	20.55	20.60	20.67		
10	64QAM	1	0	20.95	20.96	20.80	20.86	21.08	22	0
10	64QAM	1	25	20.81	20.85	20.75	20.90	20.96		
10	64QAM	1	49	20.98	20.94	20.78	20.85	21.01		
10	64QAM	25	0	20.91	20.89	20.81	20.94	21.00	22	0
10	64QAM	25	12	20.95	21.05	20.95	21.01	21.03		
10	64QAM	25	25	20.93	20.98	21.00	20.82	20.98		
10	64QAM	50	0	20.88	20.96	20.91	20.90	20.89		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	20.62	20.76	20.67	20.65	20.70	22	0
5	QPSK	1	12	20.93	21.04	20.94	20.92	20.70		
5	QPSK	1	24	20.97	21.01	21.00	20.95	20.94		
5	QPSK	12	0	20.51	20.75	20.64	20.63	20.66	22	0
5	QPSK	12	7	20.51	20.84	20.56	20.62	20.66		
5	QPSK	12	13	20.42	20.73	20.62	20.58	20.67		
5	QPSK	25	0	20.46	20.83	20.59	20.61	20.72		
5	16QAM	1	0	20.56	20.81	20.60	20.63	20.73	22	0
5	16QAM	1	12	20.61	20.70	20.73	20.77	20.70		
5	16QAM	1	24	20.46	20.72	20.55	20.61	20.65		
5	16QAM	12	0	20.46	20.72	20.60	20.59	20.66	22	0
5	16QAM	12	7	20.45	20.71	20.50	20.58	20.62		
5	16QAM	12	13	20.48	20.75	20.56	20.57	20.62		
5	16QAM	25	0	20.43	20.58	20.60	20.60	20.72		
5	64QAM	1	0	20.61	20.70	20.78	20.75	20.80	22	0
5	64QAM	1	12	20.81	20.77	20.88	20.79	20.85		
5	64QAM	1	24	20.89	20.92	21.03	20.95	21.01		
5	64QAM	12	0	20.91	20.96	20.99	21.00	21.03	22	0
5	64QAM	12	7	20.94	21.04	21.01	20.81	21.05		
5	64QAM	12	13	20.86	20.91	20.93	20.96	21.01		
5	64QAM	25	0	20.88	20.96	20.98	20.95	21.00		

Band 41 (2.6G Band) HPUE (Limit 27)

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	20.74	20.81	20.50	20.55	20.77	22	0
20	QPSK	1	49	20.76	20.94	21.04	20.73	21.23		
20	QPSK	1	99	20.83	20.81	20.75	20.68	20.64		
20	QPSK	50	0	20.75	20.80	20.53	20.68	20.82	22	0
20	QPSK	50	24	20.80	20.64	20.91	21.02	20.98		
20	QPSK	50	50	20.91	20.82	20.58	20.90	20.89		
20	QPSK	100	0	20.78	20.98	20.63	20.54	20.79		
20	16QAM	1	0	20.73	20.68	20.63	20.62	20.86	22	0
20	16QAM	1	49	21.17	21.08	21.03	21.12	21.06		
20	16QAM	1	99	20.77	20.65	20.78	20.73	20.90		
20	16QAM	50	0	21.00	20.81	20.81	20.61	20.85	22	0
20	16QAM	50	24	20.71	20.68	20.99	21.08	21.08		
20	16QAM	50	50	20.80	20.86	20.62	20.83	20.75		
20	16QAM	100	0	20.57	20.56	20.88	20.48	20.75		
20	64QAM	1	0	20.90	21.07	20.32	20.54	20.75	22	0
20	64QAM	1	49	20.97	21.00	20.62	20.68	20.70		
20	64QAM	1	99	20.37	20.32	20.65	20.46	20.58		
20	64QAM	50	0	20.75	20.83	20.62	20.69	20.82	22	0
20	64QAM	50	24	20.85	20.91	20.83	20.85	20.94		
20	64QAM	50	50	20.73	20.72	20.71	20.73	20.80		
20	64QAM	100	0	20.74	20.85	20.74	20.76	20.95		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	20.62	20.66	20.16	20.18	20.87	22	0
15	QPSK	1	37	20.43	20.39	20.33	20.08	20.74		
15	QPSK	1	74	20.42	20.45	20.44	20.53	21.02		
15	QPSK	36	0	20.99	21.05	20.79	20.82	20.95	22	0
15	QPSK	36	20	20.92	21.05	20.98	20.82	20.92		
15	QPSK	36	39	20.93	21.04	20.86	20.92	20.95		
15	QPSK	75	0	20.82	21.03	20.66	20.71	20.80		
15	16QAM	1	0	20.87	20.86	20.44	20.57	21.11	22	0
15	16QAM	1	37	20.66	20.66	20.59	20.57	20.65		
15	16QAM	1	74	20.71	20.59	20.62	20.71	21.10		
15	16QAM	36	0	20.96	20.80	20.78	20.81	20.94	22	0
15	16QAM	36	20	21.01	20.76	21.08	21.04	20.96		
15	16QAM	36	39	21.14	20.84	21.09	21.06	20.99		
15	16QAM	75	0	20.93	21.05	20.93	20.64	20.78		
15	64QAM	1	0	20.79	20.75	20.22	20.35	21.04	22	0
15	64QAM	1	37	21.08	20.34	20.51	20.81	20.69		
15	64QAM	1	74	20.48	20.40	20.08	20.50	20.62		
15	64QAM	36	0	20.83	20.87	20.71	20.73	20.92	22	0
15	64QAM	36	20	20.92	20.97	20.91	20.92	21.02		
15	64QAM	36	39	20.93	21.06	20.99	20.93	20.98		
15	64QAM	75	0	20.77	20.89	20.78	20.79	20.98		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	21.04	20.98	20.85	20.96	20.77	22	0
10	QPSK	1	25	20.86	21.01	20.94	20.94	20.75		
10	QPSK	1	49	20.68	20.78	20.79	20.85	20.63		
10	QPSK	25	0	20.75	20.86	20.84	20.78	20.66	22	0
10	QPSK	25	12	20.86	20.91	20.87	20.83	20.73		
10	QPSK	25	25	20.83	20.83	20.90	20.89	20.66		
10	QPSK	50	0	20.83	20.86	20.83	20.79	20.69		
10	16QAM	1	0	21.11	21.18	20.82	21.02	21.00	22	0
10	16QAM	1	25	21.15	21.18	21.11	21.12	20.98		
10	16QAM	1	49	21.21	21.15	20.89	21.15	21.03		
10	16QAM	25	0	20.67	20.89	20.75	20.82	20.78	22	0
10	16QAM	25	12	20.87	20.96	20.92	20.91	20.87		
10	16QAM	25	25	20.73	20.74	20.73	20.71	20.80		
10	16QAM	50	0	20.83	20.89	20.78	20.86	20.84		
10	64QAM	1	0	20.61	20.87	20.76	20.62	20.99	22	0
10	64QAM	1	25	20.98	20.85	21.08	21.01	20.90		
10	64QAM	1	49	21.01	21.00	20.89	20.54	20.86		
10	64QAM	25	0	20.78	21.05	20.88	20.91	20.74	22	0
10	64QAM	25	12	20.82	20.96	20.91	20.94	20.78		
10	64QAM	25	25	20.96	21.00	20.93	20.96	20.77		
10	64QAM	50	0	20.79	20.86	20.81	20.83	20.70		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	21.15	21.21	21.15	21.08	20.79	22	0
5	QPSK	1	12	20.96	20.80	20.75	20.73	20.50		
5	QPSK	1	24	20.90	20.74	20.94	20.81	20.54		
5	QPSK	12	0	20.78	21.18	21.16	21.12	20.88	22	0
5	QPSK	12	7	20.83	21.09	20.82	20.99	20.82		
5	QPSK	12	13	20.99	20.88	20.82	21.03	20.73		
5	QPSK	25	0	20.98	20.92	21.11	20.85	20.75		
5	16QAM	1	0	21.17	21.13	21.11	21.07	21.14	22	0
5	16QAM	1	12	21.19	21.08	21.23	21.12	21.22		
5	16QAM	1	24	21.13	21.19	21.21	20.95	20.86		
5	16QAM	12	0	21.04	21.06	21.06	21.13	20.67	22	0
5	16QAM	12	7	20.76	21.07	21.17	20.87	20.72		
5	16QAM	12	13	20.80	21.11	20.87	20.76	21.05		
5	16QAM	25	0	20.69	20.83	20.81	21.13	20.88		
5	64QAM	1	0	21.13	21.20	20.89	21.18	20.98	22	0
5	64QAM	1	12	21.10	20.99	21.20	21.00	20.74		
5	64QAM	1	24	20.83	21.18	21.09	20.97	20.72		
5	64QAM	12	0	20.75	21.02	20.97	20.81	20.79	22	0
5	64QAM	12	7	20.82	20.97	20.94	20.85	20.82		
5	64QAM	12	13	20.92	20.98	20.87	20.91	20.80		
5	64QAM	25	0	20.86	20.90	20.84	20.78	20.68		

UL CA

Full Power
Head SAR

Tune up Power (dBm)

CA_41C 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	49	0	0	1	0	23.73	25.00
40185	39987	QPSK	1	49	0	0	1	0	23.31	25.00
40620	40422	QPSK	1	49	0	0	1	0	23.21	25.00
41055	40857	QPSK	1	49	0	0	1	0	23.18	25.00
41490	41292	QPSK	1	49	0	0	1	0	23.25	25.00

Hotspot on
Sensor On

Tune up Power (dBm)

CA_41C 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	100	0	0	0	1	0	19.83	21.00
40185	39987	QPSK	100	0	0	0	1	0	19.69	21.00
40620	40422	QPSK	100	0	0	0	1	0	19.42	21.00
41055	40857	QPSK	100	0	0	0	1	0	19.5	21.00
41490	41292	QPSK	100	0	0	0	1	0	19.56	21.00

Handheld

CA_41C 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	50	24	0	0	1	0	20.54	22
40185	39987	QPSK	50	24	0	0	1	0	20.21	22
40620	40422	QPSK	50	24	0	0	1	0	20.57	22
41055	40857	QPSK	50	24	0	0	1	0	20.23	22
41490	41292	QPSK	50	24	0	0	1	0	20.46	22

DL CA Full Power

2CC

Configure		CA Configuration (BCS)	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		CA_2A-4A	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	22.90	22.94
		CA_2A-5A	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	22.87	22.94
		CA_2A-7A	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	22.89	22.94
		CA_2A-12A	2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	22.91	22.94
		CA_2A-13A	2	20	1860	18700	QPSK	1	0	13	10	751	5230	22.88	22.94
		CA_2A-14A	2	20	1860	18700	QPSK	1	0	14	10	763	5330	22.83	22.94
		CA_2A-17A	2	10	1855	18650	QPSK	1	0	17	10	740	5790	22.72	22.81
		CA_2A-29A	2	20	1860	18700	QPSK	1	0	29	10	722.5	9715	22.84	22.94
		CA_2A-30A	2	20	1860	18700	QPSK	1	0	30	10	2355	9820	22.78	22.94
		CA_2A-66A	2	20	1860	18700	QPSK	1	0	66	20	2155	66886	22.90	22.94
		CA_2A-71A	2	20	1860	18700	QPSK	1	0	71	20	637	68786	22.69	22.94
		CA_4A-5A	4	20	1732.5	20175	QPSK	1	99	5	10	881.5	2525	22.67	22.98
		CA_4A-7A	4	20	1732.5	20175	QPSK	1	99	7	20	2655	3100	22.54	22.98
		CA_4A-12A	4	20	1732.5	20175	QPSK	1	99	12	10	737.5	5095	22.74	22.98
		CA_4A-13A	4	20	1732.5	20175	QPSK	1	99	13	10	751	5230	22.69	22.98
		CA_4A-17A	4	10	1732.5	20175	QPSK	1	0	17	10	740	5790	22.40	22.98
		CA_4A-29A	4	20	1732.5	20175	QPSK	1	99	29	10	722.5	9715	22.74	22.98
		CA_4A-30A	4	20	1732.5	20175	QPSK	1	99	30	10	2355	9820	22.91	22.98
		CA_4A-71A	4	20	1732.5	20175	QPSK	1	99	71	20	637	68786	22.58	22.98
		CA_5A-7A	5	10	836.5	20525	QPSK	1	49	7	20	2655	3100	22.77	23.01
		CA_5A-30A	5	10	836.5	20525	QPSK	1	49	30	10	2355	9820	22.98	23.01
		CA_5A-66A	5	10	836.5	20525	QPSK	1	49	66	20	2155	66886	22.93	23.01
		CA_7A-12A	7	20	2560	21350	QPSK	1	99	12	10	737.5	5095	23.04	23.46
		CA_7A-66A	7	20	2560	21350	QPSK	1	99	66	20	2155	66886	23.05	23.46
		CA_12A-30A	12	10	707.5	23095	QPSK	1	0	30	10	2355	9820	22.86	22.90
		CA_12A-66A	12	10	707.5	23095	QPSK	1	0	66	20	2155	66886	22.75	22.90
		CA_13A-66A	13	10	782	23230	QPSK	1	0	66	20	2155	66886	22.56	22.63
		CA_14A-30A	14	10	793	23330	QPSK	1	49	30	10	2355	9820	22.65	22.72
		CA_14A-66A	14	10	793	23330	QPSK	1	49	66	20	2155	66886	22.68	22.72
		CA_25A-26A	25	20	1905	26590	QPSK	1	0	26	15	876.5	8865	22.78	22.93
		CA_25A-41A	25	20	1905	26590	QPSK	1	0	41	20	2593	40620	22.82	22.93
		CA_26A-41A	26	15	831.5	26865	QPSK	1	74	41	20	2593	40620	22.50	23.08
		CA_29A-30A	30	10	2310	27710	QPSK	1	0	29	10	722.5	9715	22.71	22.92
		CA_29A-66A	66	20	1770	132572	QPSK	1	99	29	10	722.5	9715	23.15	23.36
		CA_30A-66A	30	10	2310	27710	QPSK	1	0	66	20	2155	66886	22.87	22.92
		CA_66A-71A	66	20	1770	132572	QPSK	1	99	71	20	637	68786	23.23	23.36
Inter-Band	Non-Contiguous	CA_2A-2A	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	22.87	22.94
		CA_4A-4A	4	20	1732.5	20175	QPSK	1	99	4	5	2152.5	2375	22.53	22.98
		CA_7A-7A	7	20	2560	21350	QPSK	1	99	7	5	2622.5	2775	23.01	23.46
		CA_25A-25A	25	20	1905	26590	QPSK	1	0	25	5	1932.5	8065	22.77	22.93
		CA_41A-41A	41	20	2680	39750	QPSK	1	49	41	5	2498.5	41565	23.91	24.02
		CA_66A-66A	66	20	1770	132572	QPSK	1	99	66	5	2112.5	66461	23.19	23.36
	Contiguous	CA_2C	2	20	1860	18700	QPSK	1	0	2	20	1959.80	898	22.82	22.94
		CA_5B	5	10	836.5	20501	QPSK	1	49	5	10	891.40	20600	22.75	23.01
		CA_7C	7	20	2560	21350	QPSK	1	99	7	20	2660.20	3152	22.97	23.46
		CA_12B	12	5	707.5	23058	QPSK	1	0	12	10	744.70	23130	22.78	22.90
		CA_38C	38	20	2580	37850	QPSK	1	99	38	20	2599.80	38048	23.17	23.29
		CA_41C	41	20	2680	39750	QPSK	1	49	41	20	2660.20	39948	23.78	24.02
		CA_66B	66	15	1772.5	132597	QPSK	1	74	66	5	2188.20	67218	23.08	23.14
		CA_66C	66	20	1770	132072	QPSK	1	99	66	20	2170.20	132270	23.25	23.36

Bluetooth BR/EDR

Mode	Channel	Frequency (MHz)	Average power (dBm)									Tune-up Limit
			Packet Type									
			DH1	DH3	DH5	2DH1	2DH3	2DH5	3DH1	3DH3	3DH5	
Bluetooth	CH 0	2402	8.20	8.24	8.32	6.27	5.69	5.22	6.25	5.51	5.34	10
	CH 39	2441	8.92	8.94	**9.31**	6.71	6.51	5.86	6.66	6.10	5.91	
	CH 78	2480	8.47	8.77	9.19	**7.32**	6.82	6.55	**6.86**	6.57	6.24	

Bluetooth LE

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	2.45
	CH 19	2440	3.49
	CH 39	2480	4.56
Tune-up Limit			5

Bluetooth LE v5.0

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402		2.82
	CH 19	2440		3.57
	CH 39	2480		4.70
Tune-up Limit				5

Full Power

2.4GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	21.07	22.50	100.00
		6	2437	20.94	22.50	
		11	2462	21.11	22.50	
	802.11g 6Mbps	1	2412	19.03	20.50	98.28
		6	2437	18.90	20.50	
		11	2462	19.19	20.50	
	802.11n-HT20 MCS0	1	2412	18.87	20.50	98.15
		6	2437	18.77	20.50	
		11	2462	19.10	20.50	

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.22	19.00	98.28
		40	5200	17.97	19.50	
		44	5220	17.90	19.50	
		48	5240	17.87	19.50	
	802.11n-HT20 MCS0	36	5180	16.30	18.00	98.16
		40	5200	16.75	18.50	
		44	5220	16.67	18.50	
		48	5240	16.81	18.50	
	802.11n-HT40 MCS0	38	5190	10.85	12.50	96.76
		46	5230	16.23	18.00	
	802.11ac-VHT20 MCS0	36	5180	16.34	18.00	98.01
		40	5200	16.98	18.50	
		44	5220	16.88	18.50	
		48	5240	16.87	18.50	
	802.11ac-VHT40 MCS0	38	5190	10.80	12.50	96.47
		46	5230	15.75	17.50	
	802.11ac-VHT80 MCS0	42	5210	10.42	12.00	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.80	19.50	98.28
		56	5280	17.84	19.50	
		60	5300	17.91	19.50	
		64	5320	17.86	19.50	
	802.11n-HT20 MCS0	52	5260	16.81	18.50	98.16
		56	5280	16.92	18.50	
		60	5300	17.00	18.50	
		64	5320	16.95	18.50	
	802.11n-HT40 MCS0	54	5270	16.43	18.00	96.76
		62	5310	15.26	17.00	
	802.11ac-VHT20 MCS0	52	5260	16.85	18.50	98.01
		56	5280	16.95	18.50	
		60	5300	16.92	18.50	
		64	5320	16.98	18.50	
	802.11ac-VHT40 MCS0	54	5270	15.72	17.50	96.47
		62	5310	15.89	17.50	
	802.11ac-VHT80 MCS0	58	5290	14.54	16.50	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.91	19.50	98.28
		116	5580	17.94	19.50	
		132	5660	18.17	19.50	
		140	5700	18.10	19.50	
	802.11n-HT20 MCS0	100	5500	16.72	18.50	98.16
		116	5580	16.96	18.50	
		132	5660	16.92	18.50	
		140	5700	16.86	18.50	
	802.11n-HT40 MCS0	102	5510	16.37	18.00	96.76
		110	5550	16.35	18.00	
		134	5670	15.75	17.50	
	802.11ac-VHT20 MCS0	100	5500	16.90	18.50	98.01
		116	5580	16.98	18.50	
		132	5660	17.04	18.50	
		140	5700	16.91	18.50	
	802.11ac-VHT40 MCS0	102	5510	15.67	17.50	96.47
		110	5550	15.62	17.50	
		134	5670	15.85	17.50	
	802.11ac-VHT80 MCS0	106	5530	14.00	15.00	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.87	17.50	98.28
		157	5785	15.44	16.50	
		165	5825	15.24	16.50	
	802.11n-HT20 MCS0	149	5745	15.70	17.50	98.16
		157	5785	15.29	16.50	
		165	5825	15.07	16.50	
	802.11n-HT40 MCS0	151	5755	14.57	16.50	96.76
		159	5795	14.13	15.50	
	802.11ac-VHT20 MCS0	149	5745	15.70	17.50	98.01
		157	5785	15.30	16.50	
		165	5825	15.11	16.50	
	802.11ac-VHT40 MCS0	151	5755	14.64	16.50	96.47
		159	5795	14.18	15.50	
	802.11ac-VHT80 MCS0	155	5775	14.79	16.50	93.08

Reduced Power Mode for Head						
2.4GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	18.26	20.00	100.00
		6	2437	18.21	20.00	
		11	2462	18.31	20.00	
	802.11g 6Mbps	1	2412	18.60	20.00	98.28
		6	2437	18.70	20.00	
		11	2462	18.91	20.00	
	802.11n-HT20 MCS0	1	2412	18.46	20.00	98.15
		6	2437	18.48	20.00	
		11	2462	18.70	20.00	

Reduced Power Mode for Hotspot On

2.4GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	19.49	21.00	100.00
		6	2437	19.28	21.00	
		11	2462	19.64	21.00	
	802.11g 6Mbps	1	2412	19.03	20.50	98.28
		6	2437	18.90	20.50	
		11	2462	19.19	20.50	
	802.11n-HT20 MCS0	1	2412	18.87	20.50	98.15
		6	2437	18.77	20.50	
		11	2462	19.10	20.50	

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	9.69	11.00	98.28
		40	5200	9.56	11.00	
		44	5220	9.66	11.00	
		48	5240	9.53	11.00	
	802.11n-HT20 MCS0	36	5180	8.44	10.00	98.16
		40	5200	8.40	10.00	
		44	5220	8.37	10.00	
		48	5240	8.56	10.00	
	802.11n-HT40 MCS0	38	5190	7.88	9.50	96.76
		46	5230	8.06	9.50	
	802.11ac-VHT20 MCS0	36	5180	8.54	10.00	98.01
		40	5200	8.40	10.00	
		44	5220	8.33	10.00	
		48	5240	8.38	10.00	
	802.11ac-VHT40 MCS0	38	5190	7.44	9.00	96.47
		46	5230	7.70	9.00	
	802.11ac-VHT80 MCS0	42	5210	7.80	9.50	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	9.69	11.00	98.28
		157	5785	8.73	10.00	
		165	5825	8.89	10.00	
	802.11n-HT20 MCS0	149	5745	9.27	11.00	98.16
		157	5785	8.91	10.00	
		165	5825	8.72	10.00	
	802.11n-HT40 MCS0	151	5755	8.19	9.50	96.76
		159	5795	7.56	8.50	
	802.11ac-VHT20 MCS0	149	5745	9.37	11.00	98.01
		157	5785	8.75	10.00	
		165	5825	8.61	10.00	
	802.11ac-VHT40 MCS0	151	5755	8.31	9.50	96.47
		159	5795	7.57	8.50	
	802.11ac-VHT80 MCS0	155	5775	8.23	9.50	93.08

Reduced Power Mode for P-Sensor On

2.4GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	20.09	21.50	100.00
		6	2437	20.05	21.50	
		11	2462	20.12	21.50	
	802.11g 6Mbps	1	2412	19.03	20.50	98.28
		6	2437	18.90	20.50	
		11	2462	19.19	20.50	
	802.11n-HT20 MCS0	1	2412	18.87	20.50	98.15
		6	2437	18.77	20.50	
		11	2462	19.10	20.50	

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	9.69	11.00	98.28
		40	5200	9.56	11.00	
		44	5220	9.66	11.00	
		48	5240	9.53	11.00	
	802.11n-HT20 MCS0	36	5180	8.44	10.00	98.16
		40	5200	8.40	10.00	
		44	5220	8.37	10.00	
		48	5240	8.56	10.00	
	802.11n-HT40 MCS0	38	5190	7.88	9.50	96.76
		46	5230	8.06	9.50	
	802.11ac-VHT20 MCS0	36	5180	8.54	10.00	98.01
		40	5200	8.40	10.00	
		44	5220	8.33	10.00	
		48	5240	8.38	10.00	
	802.11ac-VHT40 MCS0	38	5190	7.44	9.00	96.47
		46	5230	7.57	9.00	
	802.11ac-VHT80 MCS0	42	5210	7.80	9.50	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	9.17	11.00	98.28
		56	5280	9.22	11.00	
		60	5300	9.55	11.00	
		64	5320	9.41	11.00	
	802.11n-HT20 MCS0	52	5260	8.11	10.00	98.16
		56	5280	8.37	10.00	
		60	5300	8.40	10.00	
		64	5320	8.62	10.00	
	802.11n-HT40 MCS0	54	5270	8.10	9.50	96.76
		62	5310	8.38	9.50	
	802.11ac-VHT20 MCS0	52	5260	8.44	10.00	98.01
		56	5280	8.45	10.00	
		60	5300	8.56	10.00	
		64	5320	8.67	10.00	
	802.11ac-VHT40 MCS0	54	5270	7.33	9.00	96.47
		62	5310	7.59	9.00	
	802.11ac-VHT80 MCS0	58	5290	8.65	9.50	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	9.99	11.50	98.28
		116	5580	10.06	11.50	
		132	5660	10.09	11.50	
		140	5700	10.11	11.50	
	802.11n-HT20 MCS0	100	5500	9.24	10.50	98.16
		116	5580	9.55	10.50	
		132	5660	9.36	10.50	
		140	5700	9.30	10.50	
	802.11n-HT40 MCS0	102	5510	8.89	10.00	96.76
		110	5550	8.83	10.00	
		134	5670	8.55	9.50	
	802.11ac-VHT20 MCS0	100	5500	9.50	10.50	98.01
		116	5580	9.60	10.50	
		132	5660	9.60	10.50	
		140	5700	9.58	10.50	
	802.11ac-VHT40 MCS0	102	5510	8.22	9.50	96.47
		110	5550	8.20	9.50	
		134	5670	8.30	9.50	
	802.11ac-VHT80 MCS0	106	5530	6.70	7.00	93.08

5GHz WLAN	Ant 1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	9.69	11.00	98.28
		157	5785	8.73	10.00	
		165	5825	8.89	10.00	
	802.11n-HT20 MCS0	149	5745	9.27	11.00	98.16
		157	5785	8.91	10.00	
		165	5825	8.72	10.00	
	802.11n-HT40 MCS0	151	5755	8.19	9.50	96.76
		159	5795	7.56	8.50	
	802.11ac-VHT20 MCS0	149	5745	9.37	11.00	98.01
		157	5785	8.75	10.00	
		165	5825	8.61	10.00	
	802.11ac-VHT40 MCS0	151	5755	8.31	9.50	96.47
		159	5795	7.57	8.50	
	802.11ac-VHT80 MCS0	155	5775	8.23	9.50	93.08

Appendix F. Supplemental Tuner Head & Body SAR Results

The results are shown as follows.

RF exposure position												Aperture 00										
												Average Value of Time Sweep (W/kg)										
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	0	14	28	42	56	70	84	98	112	126	140
	WCDMA V	RMC 12.2Kbps	Full Power	4233	846.6	N/A	N/A	Right Cheek	0mm	0.373	0.469	0	0.217	0.126	0.185	0.061	0.171	0.07	0.204	0.048	0	0.084
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	1	15	29	43	57	71	85	99	113	127	141
	WCDMA IV	RMC 12.2Kbps	Full Power	1413	1732.6	N/A	N/A	Left Cheek	0mm	0.113	0.166	0.046	0.052	0	0	0	0	0	0	0	0	0
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	2	16	30	44	58	72	86	100	114	128	142
	WCDMA II	RMC 12.2Kbps	Full Power	9538	1907.6	N/A	N/A	Left Cheek	0mm	0.136	0.211	0	0	0.059	0	0.055	0	0.069	0	0.056	0	0
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	3	17	31	45	59	73	87	101	115	129	143
	CDMA2000 BC0	RC3 SO55	Full Power	1013	824.7	N/A	N/A	Right Cheek	0mm	0.297	0.381	0.089	0.233	0.228	0	0.134	0	0.107	0.134	0.063	0	0.042
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	4	18	32	46	60	74	88	102	116	130	
	CDMA2000 BC10	RC3 SO55	Full Power	580	820.5	N/A	N/A	Right Cheek	0mm	0.377	0.479	0.134	0.077	0.227	0.047	0.139	0	0.116	0.159	0.12	0.063	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	5	19	33	47	61	75	89	103	117	131	
	CDMA2000 BC1	RC3 SO55	Full Power	1175	1908.75	N/A	N/A	Left Cheek	0mm	0.0931	0.143	0	0	0.048	0.052	0.042	0.051	0.083	0.049	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	6	20	34	48	62	76	90	104	118	132	
	LTE Band 71	20M-QPSK	Full Power	133322	683	1	99	Right Cheek	0mm	0.299	0.375	0.083	0	0	0.097	0	0.013	0	0.041	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	7	21	35	49	63	77	91	105	119	133	
	LTE Band 12	10M-QPSK	Full Power	23095	707.5	1	0	Right Cheek	0mm	0.292	0.354	0.083	0.07	0	0.058	0	0	0	0	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	8	22	36	50	64	78	92	106	120	134	
	LTE Band 13	10M-QPSK	Full Power	23230	782	1	0	Right Cheek	0mm	0.325	0.406	0.122	0.169	0	0.088	0	0.082	0.167	0.059	0.049	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	9	23	37	51	65	79	93	107	121	135	
	LTE Band 14	10M-QPSK	Full Power	23330	793	1	49	Right Cheek	0mm	0.202	0.252	0.088	0.155	0	0.07	0.159	0.065	0.059	0	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	10	24	38	52	66	80	94	108	122	136	
	LTE Band 5	10M-QPSK	Full Power	20525	836.5	1	49	Right Cheek	0mm	0.315	0.402	0	0.183	0	0.107	0.093	0.168	0.061	0	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	11	25	39	53	67	81	95	109	123	137	
	LTE Band 26	15M-QPSK	Full Power	26915	836.5	1	74	Right Cheek	0mm	0.408	0.526	0.08	0.273	0.076	0.235	0.161	0	0.113	0	0.071	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	12	26	40	54	68	82	96	110	124	138	
	LTE Band 25	20M-QPSK	Full Power	26590	1905	1	0	Left Cheek	0mm	0.0962	0.149	0	0	0	0	0.051	0	0.06	0	0	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	13	27	41	55	69	83	97	111	125	139	
Head	LTE Band 66	20M-QPSK	Full Power	132322	1745	1	99	Left Cheek	0mm	0.105	0.154	0.052	0.047	0	0	0	0	0	0	0	0	

RF exposure position												Aperture 00										
												Average Value of Time Sweep (W/kg)										
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	0	14	28	42	56	70	84	98	112	126	140
	WCDMA V	RMC 12.2Kbps	sensor	4233	846.6	N/A	N/A	Back	5mm	1.11	2.31	0.163	0.573	0	0.509	0.55	0.538	0.185	0.61	0.13	0	0.243
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	1	15	29	43	57	71	85	99	113	127	141
	WCDMA IV	RMC 12.2Kbps	sensor	1513	1752.6	N/A	N/A	Front	5mm	1.00	2.07	0.748	0.664	0.404	0.539	0.527	0.13	0.188	0.255	0.131	0.097	0.057
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	2	16	30	44	58	72	86	100	114	128	142
	WCDMA II	RMC 12.2Kbps	sensor	9538	1907.6	N/A	N/A	Front	5mm	1.11	2.44	0.34	0.593	1.01	0.538	0.556	0.35	1.01	0.458	0.804	0.271	0.273
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	3	17	31	45	59	73	87	101	115	129	143
	CDMA2000 BC0	RC3 SO32(F+SCH)	Full power	1013	824.7	N/A	N/A	Back	5mm	1.13	2.21	0.331	0.958	0.853	0.074	0.072	0	0.451	0.331	0.3	0.167	0.249
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	4	18	32	46	60	74	88	102	116	130	
	CDMA2000 BC10	RC3 SO32(F+SCH)	Full power	580	820.5	N/A	N/A	Back	5mm	1.01	2.17	0.451	0.171	0.85	0.127	0.125	0.082	0.464	0.5	0.549	0.241	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	5	19	33	47	61	75	89	103	117	131	
	CDMA2000 BC1	RC3 SO32(F+SCH)	sensor	600	1880	N/A	N/A	Front	5mm	1.14	2.42	0.476	0.745	1.1	0.883	0.893	0.97	0.841	0.411	0.108	0.324	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	6	20	34	48	62	76	90	104	118	132	
	LTE Band 71	20M-QPSK	Full power	133322	683	1	99	Back	5mm	0.741	1.63	0.321	0.099	0.139	0.385	0.287	0.086	0	0.183	0	0.042	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	7	21	35	49	63	77	91	105	119	133	
	LTE Band 12	10M-QPSK	Full power	23095	707.5	1	0	Back	5mm	0.707	1.44	0.363	0.342	0.337	0.238	0.234	0.14	0	0.122	0.103	0.064	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	8	22	36	50	64	78	92	106	120	134	
	LTE Band 13	10M-QPSK	Full power	23230	782	1	0	Back	5mm	0.904	1.94	0.57	0.569	0.061	0.327	0.331	0.242	0.388	0.244	0.166	0.134	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	9	23	37	51	65	79	93	107	121	135	
	LTE Band 14	10M-QPSK	Full power	23330	793	1	49	Back	5mm	0.718	1.5	0.212	0.49	0.046	0.274	0.274	0.241	0.196	0.134	0.092	0	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	10	24	38	52	66	80	94	108	122	136	
	LTE Band 5	10M-QPSK	Full power	20525	836.5	1	49	Back	5mm	1.17	2.29	0.105	0.734	0.058	0.498	0.505	0.758	0.229	0	0.152	0.041	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	11	25	39	53	67	81	95	109	123	137	
	LTE Band 26	15M-QPSK	sensor	26915	836.5	1	74	Front	5mm	1.05	2.23	0.193	0.731	0.2	0.761	0.786	0	0.336	0	0.268	0.079	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	12	26	40	54	68	82	96	110	124	138	
	LTE Band 25	20M-QPSK	sensor	26340	1880	50	0	Front	5mm	0.914	1.95	0.836	0.757	0.869	0.545	0.55	0.366	0.752	0.202	0.301	0.16	
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Auto-Tune	13	27	41	55	69	83	97	111	125	139	
Body	LTE Band 66	20M-QPSK	hotspot	132322	1745	1	99	bottom side	5mm	1.3	2.55	0.964	0.758	0.734	0.405	0.415	0.118	0.291	0.177	0.148	0.107	

Aperture 00

Average Value of Time Sweep (W/kg)

58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
1.02	1.02	1.01	0.994	0.822	1.05	0.571	1.04	0.443	1.06	1.62	0.529	0.538	1.04	1.04	1.06	1.05	1.02	0.69	0.066
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.475	0.621	0.589	0.425	0.238	0.274	0.221	0.174	0.144	0.139	0.138	0.134	0.125	0.123	0.143	0.171	0.206	0.243	0.274	0.273
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.541	0.485	0.897	0.884	0.859	0.563	0.634	0.612	0.72	0.759	0.789	0.794	0.758	0.782	0.306	0.487	0.785	0.964	0.957	0.957
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.444	0.078	0.216	0.108	0.464	0.083	0.078	0.057	0.079	0.462	0.555	0.614	0.636	0.685	0	0	0.053	0.147	0.234	0.309
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.917	0.946	0.955	0.97	0.956	0.467	0.469	0.55	0.517	0.534	0.541	0.532	0.542	0.516	0.25	0.375	0.611	0.874	0.996	1.01
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.39	0.365	0.349	0.326	0.275	0.083	0.184	0.514	0.687	0.477	0.413	0.331	0.28	0.188	0.043	0.059	0.097	0.159	0.203	0.226
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.368	0.409	0.495	0.557	0.715	0.084	0.125	0.209	0.466	0.421	0.453	0.485	0.478	0.5	0	0	0.045	0.119	0.195	0.245
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.39	0.411	0.513	0.538	0.672	0.068	0.132	0.207	0.384	0.749	0.48	0.512	0.507	0.53	0	0	0.049	0.135	0.219	0.274
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.796	0.783	0.812	0.8	0.822	0.394	0.404	0.424	0.404	0.429	0.528	0.417	0.421	0.437	0.212	0.316	0.503	0.732	0.794	0.81
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
0.306	0.322	0.317	0.329	0.322	0.376	0.294	0.23	0.198	0.188	0.191	0.382	0.16	0.178	0.191	0.222	0.262	0.338	0.361	0.346

78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
1.06	0.228	0.05	0	0	0.321	0.185	1.02	0	0	0.138	0.242	1.02	1.02	0.04	0.581	1.02
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.279	0.289	0.307	0.18	0.178	0.172	0.17	0.172	0.169	0.169	0.161	0.164	0.18	0.178	0.176	0.173	0.171
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.926	0.928	0.856	0.322	0.45	0.626	0.791	0.874	0.983	0.921	0.902	0.938	0.322	0.45	0.65	0.827	0.885
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.441	0.517	0.907	0	0	0.078	0.191	0.289	0.341	0.482	0.497	0.776	0	0.046	0.085	0.209	0.315
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
1.04	1.03	1.03	0.285	0.35	0.476	0.585	0.676	0.674	0.673	0.783	0.85	0.275	0.355	0.487	0.626	0.69
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.251	0.276	0.352	0.185	0.236	0.288	0.299	0.313	0.277	0.269	0.27	0.247	0.178	0.286	0.407	0.363	0.331
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.35	0.411	0.826	0	0	0.067	0.158	0.234	0.278	0.378	0.405	0.587	0	0	0.077	0.17	0.264
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.374	0.442	0.732	0	0	0.074	0.171	0.241	0.319	0.399	0.436	0.611	0	0.042	0.087	0.192	0.297
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.859	0.88	0.929	0.226	0.387	0.374	0.47	0.512	0.539	0.555	0.576	0.615	0.23	0.292	0.405	0.503	0.552
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
0.343	0.376	0.376	0.239	0.221	0.139	0.235	0.225	0.227	0.229	0.21	0.218	0.24	0.245	0.238	0.246	0.232

95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.382	0.442	1.04	0.061	1.04	0.258	0.521	0.07	1.06	0.09	0.345	0.08	0.252	0.09	0	0.02
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.17	0.187	0.169	0.167	0.238	0.184	0.143	0.118	0.103	0.109	0.093	0.1	0.097	0.063	0.075	0.092
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.894	0.967	0.911	0.912	0.333	0.493	0.451	0.522	0.52	0.543	0.536	0.549	0.556	0.088	0.148	0.257
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.377	0.521	0.543	0.765	0.045	0.083	0.385	0.322	0.409	0.448	0.513	0.547	0.581	0	0	0
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.692	0.71	0.721	0.771	0.29	0.319	0.334	0.349	0.36	0.358	0.36	0.359	0.415	0.077	0.119	0.191
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.304	0.287	0.27	0.234	0.042	0.096	0.358	0.583	0.438	0.399	0.301	0.251	0.168	0	0	0.053
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.296	0.397	0.413	0.576	0.046	0.077	0.141	0.263	0.328	0.348	0.381	0.42	0.415	0	0	0
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.324	0.453	0.429	0.601	0.044	0.073	0.133	0.269	0.343	0.351	0.396	0.417	0.435	0	0	0
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.583	0.679	0.595	0.618	0.249	0.261	0.267	0.288	0.284	0.293	0.294	0.292	0.301	0.065	0.1	0.158
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
0.23	0.231	0.243	0.221	0.318	0.256	0.197	0.17	0.147	0.15	0.144	0.136	0.134	0.082	0.098	0.115

111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.05	0.13	1.05	1.03	1.02	1.04	1.04	1.03	1.05	1.02	1.05	1.04	0.987	1.06	1.01	0	1.04
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.102	0.111	0.121	0.115	0.118	0.128	0.088	0.085	0.081	0.083	0.077	0.08	0.078	0.08	0.087	0.091	0.089
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.448	0.615	0.664	0.777	0.705	0.77	0.101	0.141	0.206	0.3	0.347	0.373	0.4	0.414	0.475	0.104	0.148
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.088	0.157	0.209	0.284	0.45	0.51	0	0	0.055	0.125	0.188	0.239	0.31	0.341	0.549	0	0
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.308	0.404	0.418	0.469	0.504	0.578	0.096	0.121	0.16	0.218	0.237	0.258	0.268	0.282	0.298	0.097	0.128
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.08	0.12	0.138	0.144	0.152	0.212	0.103	0.139	0.165	0.186	0.17	0.173	0.163	0.168	0.15	0.105	0.171
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.065	0.123	0.144	0.224	0.256	0.574	0	0	0	0.098	0.146	0.178	0.219	0.256	0.389	0	0
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.074	0.128	0.161	0.23	0.279	0.58	0	0	0.042	0.102	0.149	0.189	0.241	0.264	0.413	0	0
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.267	0.327	0.336	0.411	0.406	0.518	0.082	0.114	0.139	0.182	0.2	0.211	0.22	0.225	0.247	0.09	0.113
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
0.141	0.15	0.161	0.164	0.165	0.171	0.109	0.121	0.113	0.106	0.113	0.11	0.11	0.109	0.135	0.108	0.116

128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.367	0.392	0.458	0.245	0.179	0.09	0.421	0.08	0.02	0.545	0.626	0.07	0.285	0.098	0.28	0.01
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.088	0.085	0.082	0.082	0.086	0.086	0.084	0.146	0.109	0.083	0.064	0.057	0.062	0.055	0.054	0.052
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.224	0.334	0.392	0.399	0.445	0.467	0.506	0.128	0.149	0.178	0.209	0.216	0.227	0.231	0.234	0.239
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.055	0.252	0.202	0.245	0.324	0.332	0.539	0	0.043	0.089	0.193	0.27	0.289	0.328	0.351	0.289
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.173	0.233	0.277	0.285	0.3	0.311	0.34	0.128	0.135	0.144	0.156	0.156	0.139	0.162	0.163	0.165
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.239	0.23	0.21	0.189	0.175	0.175	0.136	0	0.053	0.226	0.544	0.292	0.242	0.189	0.17	0.103
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.047	0.11	0.158	0.193	0.232	0.263	0.396	0	0.045	0.083	0.166	0.218	0.225	0.237	0.252	0.272
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.046	0.104	0.17	0.2	0.243	0.277	0.394	0	0	0.085	0.163	0.221	0.227	0.259	0.276	0.288
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.144	0.198	0.225	0.224	0.245	0.243	0.262	0.11	0.114	0.126	0.13	0.147	0.137	0.132	0.133	0.132
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
0.116	0.129	0.11	0.111	0.114	0.113	0.113	0.19	0.148	0.11	0.089	0.079	0.08	0.073	0.076	0.068