



Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
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 E-mail: cttl@chinattl.com http://www.chinattl.cn

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.1 ± 6 %	5.18 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.09 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	80.8 mW / g ± 24.4 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.32 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	23.2 mW / g ± 24.2 % (k=2)

Head TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.9 ± 6 %	5.37 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.70 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	76.9 mW / g ± 24.4 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.17 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	21.6 mW / g ± 24.2 % (k=2)



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Body TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.36 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.4 ± 6 %	5.32 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.46 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	74.4 mW / g ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Body TSL	Condition	
SAR measured	100 mW input power	2.10 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	20.9 mW / g ± 24.2 % (k=2)

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.7 ± 6 %	5.79 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.73 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	77.1 mW / g ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Body TSL	Condition	
SAR measured	100 mW input power	2.16 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	21.5 mW / g ± 24.2 % (k=2)



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Body TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.3	5.94 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.5 ± 6 %	5.93 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5750 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.43 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	74.3 mW /g ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Body TSL	Condition	
SAR measured	100 mW input power	2.08 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	20.8 mW /g ± 24.2 % (k=2)



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	50.3Ω - 9.42jΩ
Return Loss	- 20.6dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	58.1Ω - 7.15jΩ
Return Loss	- 20.0dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	53.5Ω - 7.66jΩ
Return Loss	- 21.8dB

Antenna Parameters with Body TSL at 5250 MHz

Impedance, transformed to feed point	49.5Ω - 7.40jΩ
Return Loss	- 22.6dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	58.0Ω - 6.37jΩ
Return Loss	- 20.5dB

Antenna Parameters with Body TSL at 5750 MHz

Impedance, transformed to feed point	54.5Ω - 7.07jΩ
Return Loss	- 21.9dB



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General Antenna Parameters and Design

Electrical Delay (one direction)	1.065 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 07.27.2018

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1167

Communication System: CW; Frequency: 5250 MHz, Frequency: 5600 MHz,
Frequency: 5750 MHz,

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.822$ S/m; $\epsilon_r = 35.92$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.184$ S/m; $\epsilon_r = 35.14$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5750$ MHz; $\sigma = 5.365$ S/m; $\epsilon_r = 34.88$; $\rho = 1000$ kg/m³,

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(5.68, 5.68, 5.68) @ 5250 MHz; Calibrated: 9/12/2017, ConvF(4.98, 4.98, 4.98) @ 5600 MHz; Calibrated: 9/12/2017, ConvF(5.04, 5.04, 5.04) @ 5750 MHz; Calibrated: 9/12/2017,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1524; Calibrated: 9/13/2017
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

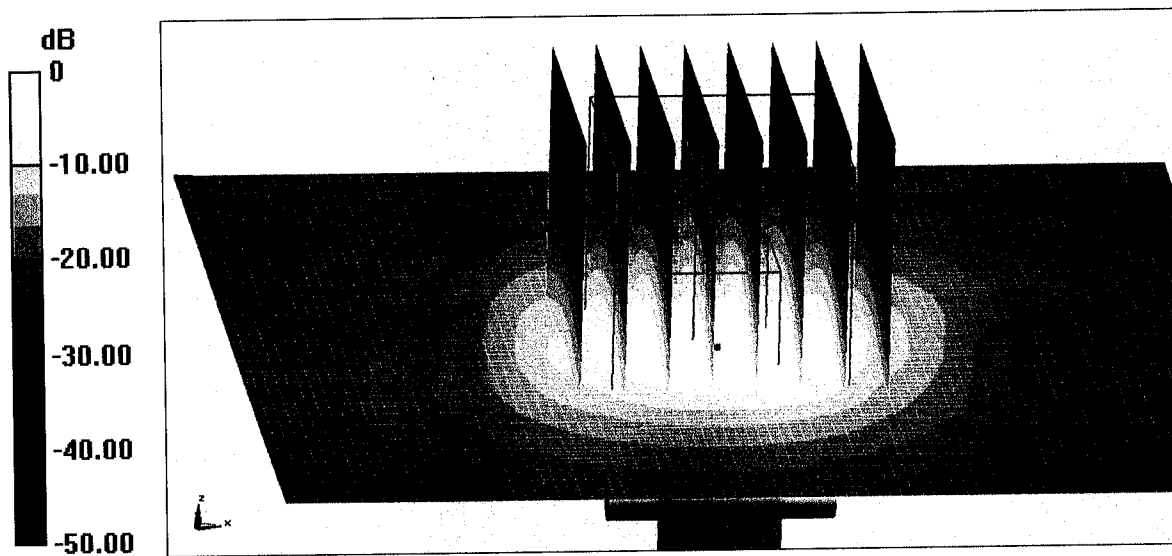
Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.09 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 32.4 W/kg
SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.2 W/kg
Maximum value of SAR (measured) = 18.0 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.53 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 36.2 W/kg
SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 19.7 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.79 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 36.2 W/kg
SAR(1 g) = 7.7 W/kg; SAR(10 g) = 2.17 W/kg
Maximum value of SAR (measured) = 19.0 W/kg



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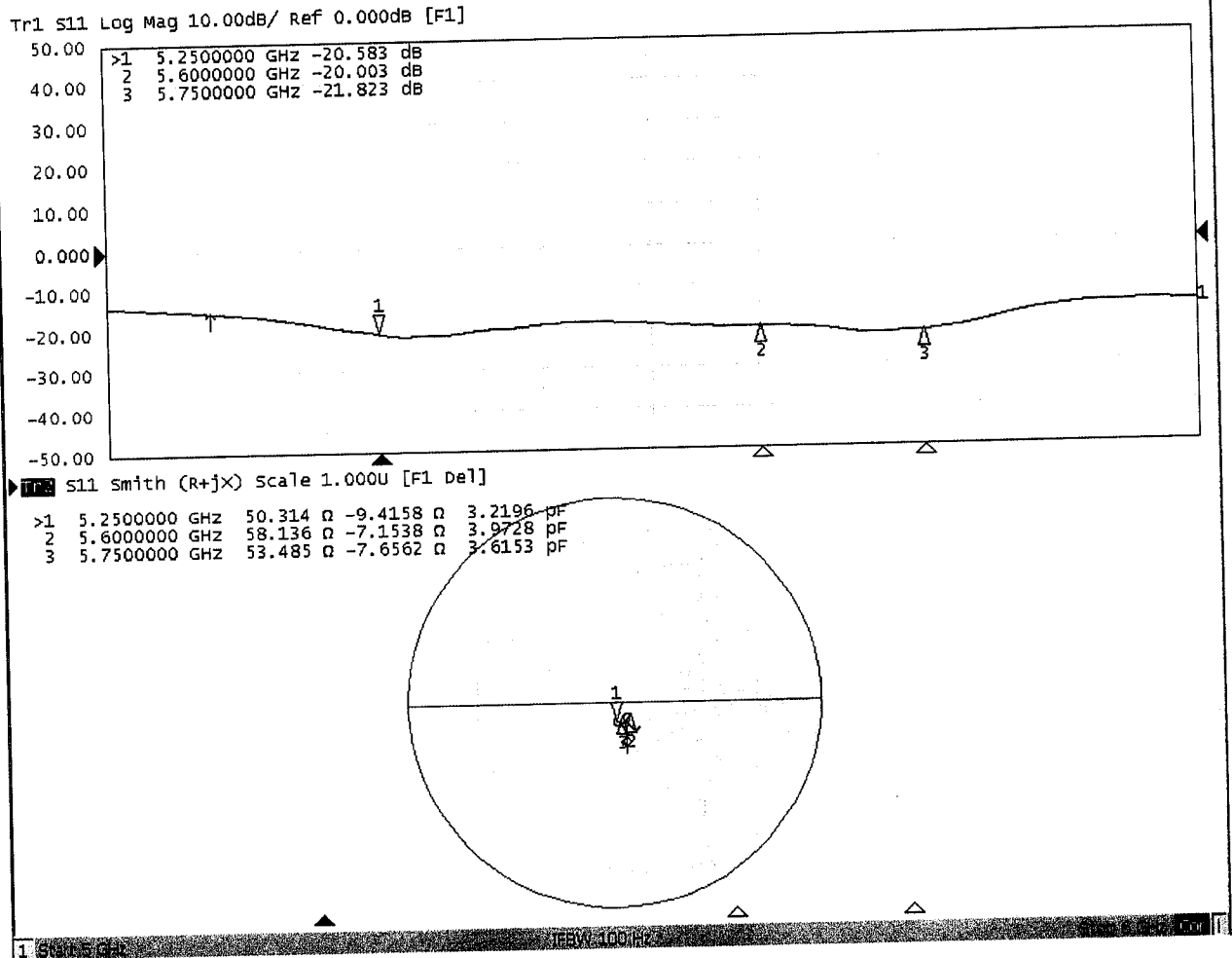


0 dB = 19.0 W/kg = 12.79 dBW/kg



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Impedance Measurement Plot for Head TSL





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DASY5 Validation Report for Body TSL

Date: 08.02.2018

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1167

Communication System: CW; Frequency: 5250 MHz, Frequency: 5600 MHz,
Frequency: 5750 MHz,

Medium parameters used: $f = 5250$ MHz; $\sigma = 5.316$ S/m; $\epsilon_r = 48.42$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.789$ S/m; $\epsilon_r = 47.7$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5750$ MHz; $\sigma = 5.926$ S/m; $\epsilon_r = 48.45$; $\rho = 1000$ kg/m³,

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(5.29, 5.29, 5.29) @ 5250 MHz; Calibrated: 9/12/2017, ConvF(4.5, 4.5, 4.5) @ 5600 MHz; Calibrated: 9/12/2017, ConvF(4.59, 4.59, 4.59) @ 5750 MHz; Calibrated: 9/12/2017,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1524; Calibrated: 9/13/2017
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

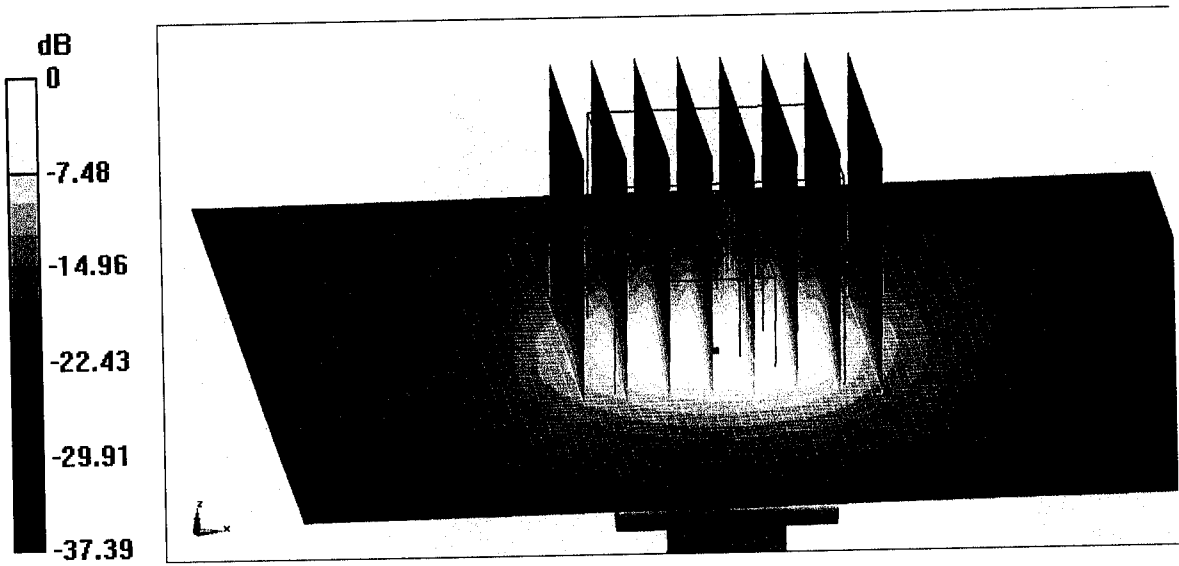
Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.14 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 31.9 W/kg
SAR(1 g) = 7.46 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 17.6 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 62.32 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.16 W/kg
Maximum value of SAR (measured) = 19.1 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.99 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 35.2 W/kg
SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.08 W/kg
Maximum value of SAR (measured) = 18.0 W/kg



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0 dB = 18.0 W/kg = 12.55 dBW/kg



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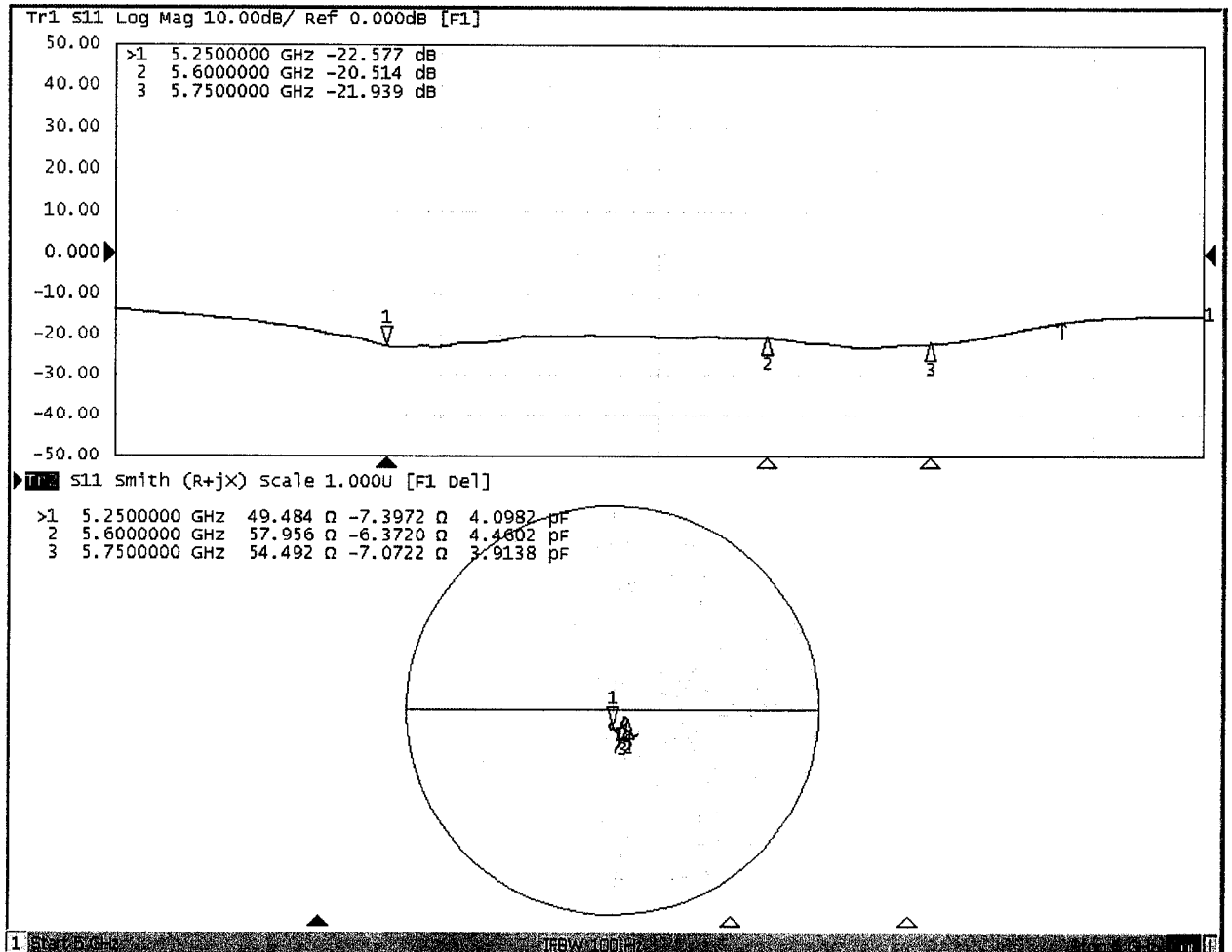
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Impedance Measurement Plot for Body TSL





D5GHzV3, Serial No. 1167 Extended Dipole Calibrations

Referring to KDB 865664 D01 v01r02, if dipoles are verified in return loss ($< -20\text{dB}$, within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

5250MHz

D5GHzV3 – serial no. 1167												
	5250 Head						5250 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2018.08.03	-20.6		50.3		-9.42		-22.6		49.5		-7.40	
2019.10.30	-20.3	1.5	50.9	0.6	-9.72	-0.3	-22.4	0.9	48.2	-1.3	-7.25	0.15
2020.10.30	-20.7	-0.05	50.19	-0.11	-9.09	0.33	-23.1	-2.2	50.2	0.7	-7.03	0.37

5600MHz

D5GHzV3 – serial no. 1167												
	5600 Head						5600 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2018.08.03	-20.0		58.1		-7.15		-20.5		58.0		-6.37	
2019.10.30	-20.1	-0.5	57.4	-0.7	-7.63	-0.48	-20.4	0.5	57.7	-0.3	-6.87	-0.5
2020.10.30	-19.99	0.05	58.2	0.1	-7.13	0.02	-20.1	1.95	58.9	0.9	-5.96	0.41

5750MHz

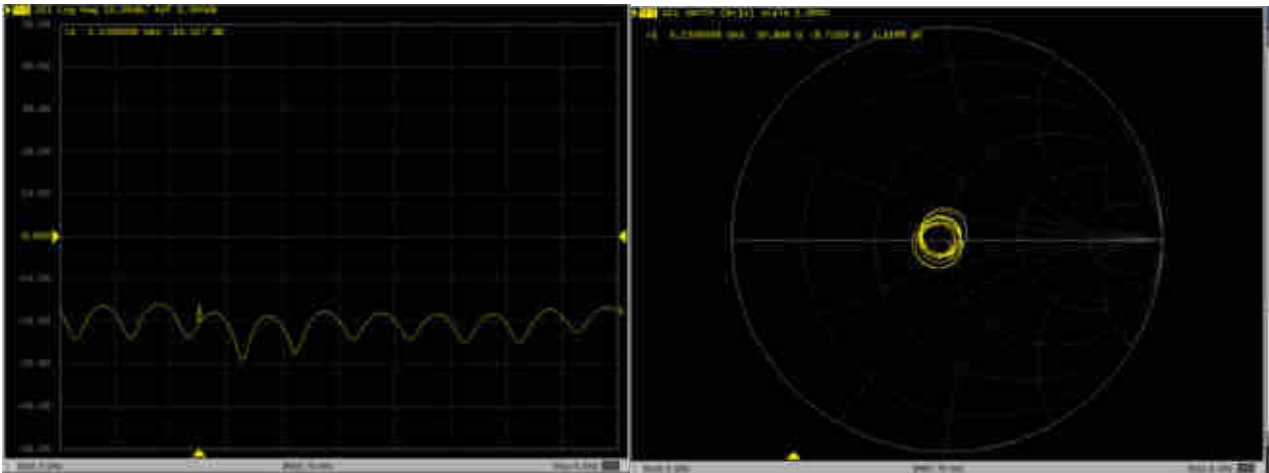
D5GHzV3 – serial no. 1167												
	5750 Head						5750 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2018.08.03	-21.8		53.5		-7.66		-21.9		54.5		-7.07	
2019.10.30	-21.1	3.2	53.0	-0.5	-8.58	-0.92	-21.6	1.4	55.2	0.7	-7.04	0.03
2020.10.30	-21.9	0.05	53.2	-0.3	-7.35	0.31	-21.6	1.4	54.2	-0.3	-7.60	-0.53

<Justification of the extended calibration>

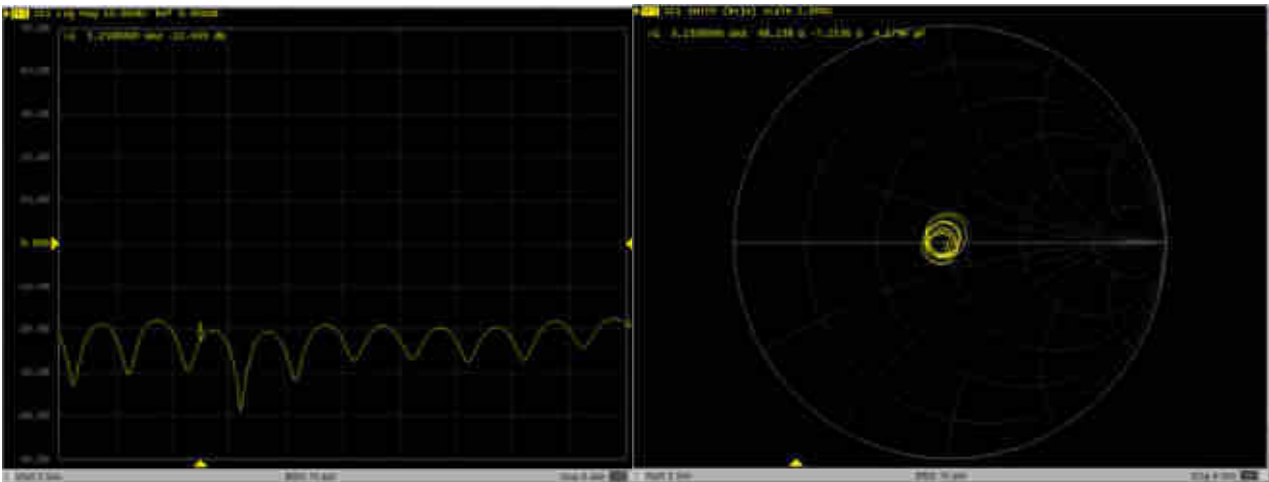
The return loss is $< -20\text{dB}$, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data> D5GHzV3, serial no. 1167

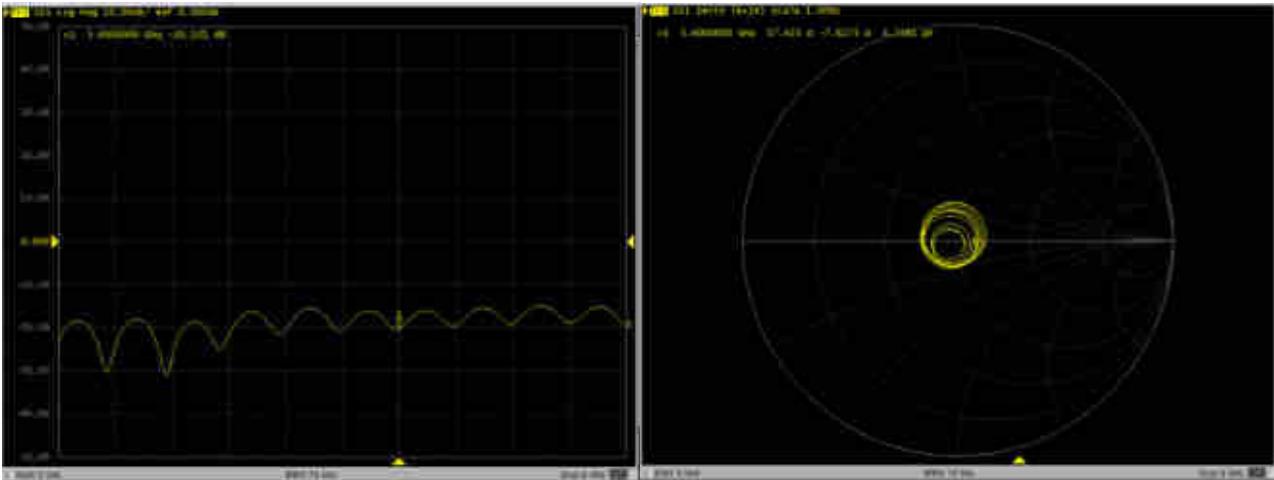
5250MHz – Head----2019.10.30



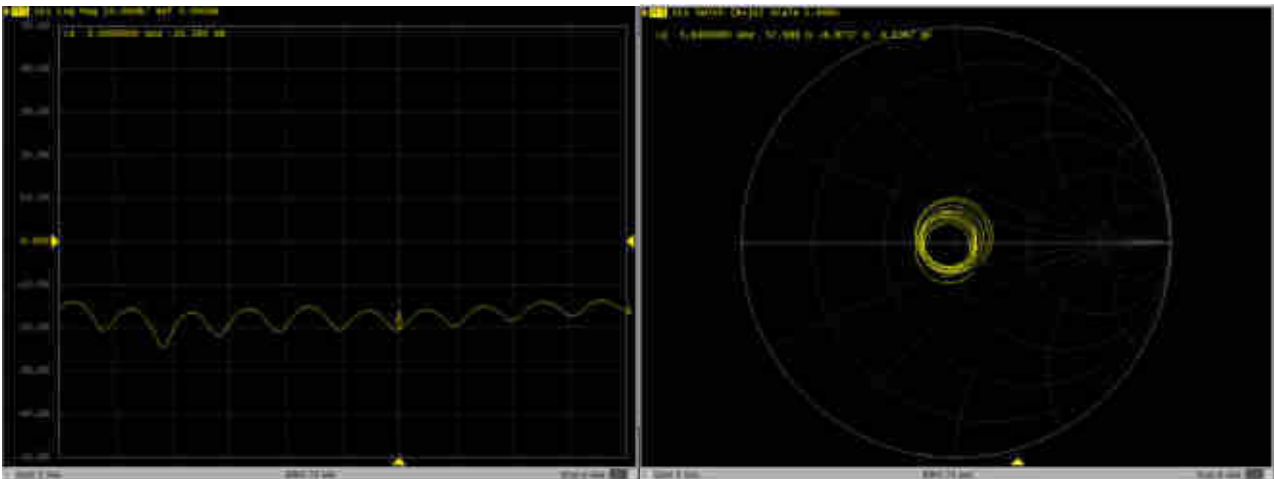
5250MHz – Body----2019.10.30



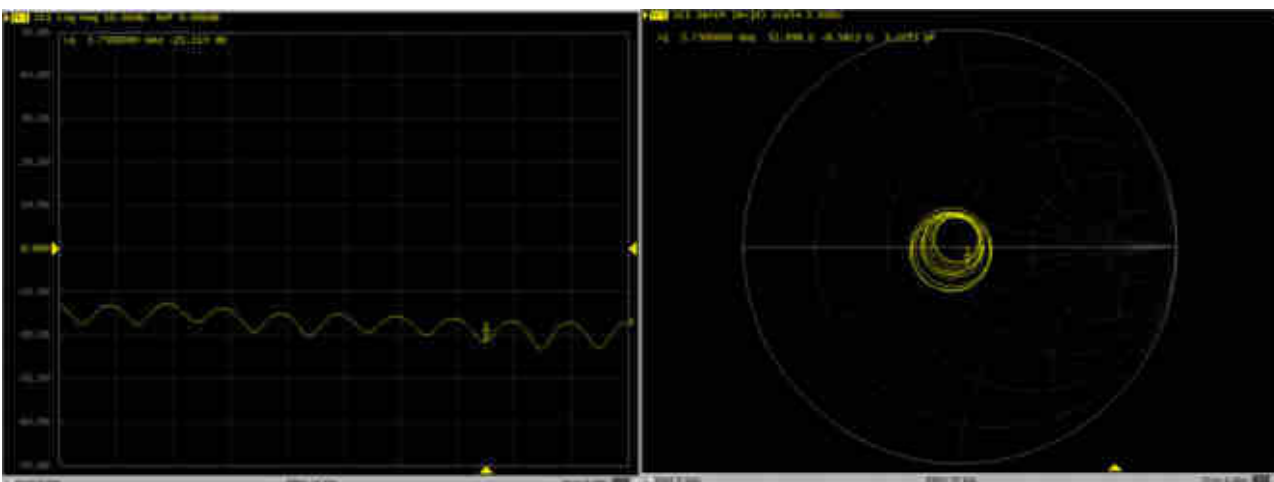
5600MHz – Head----2019.10.30



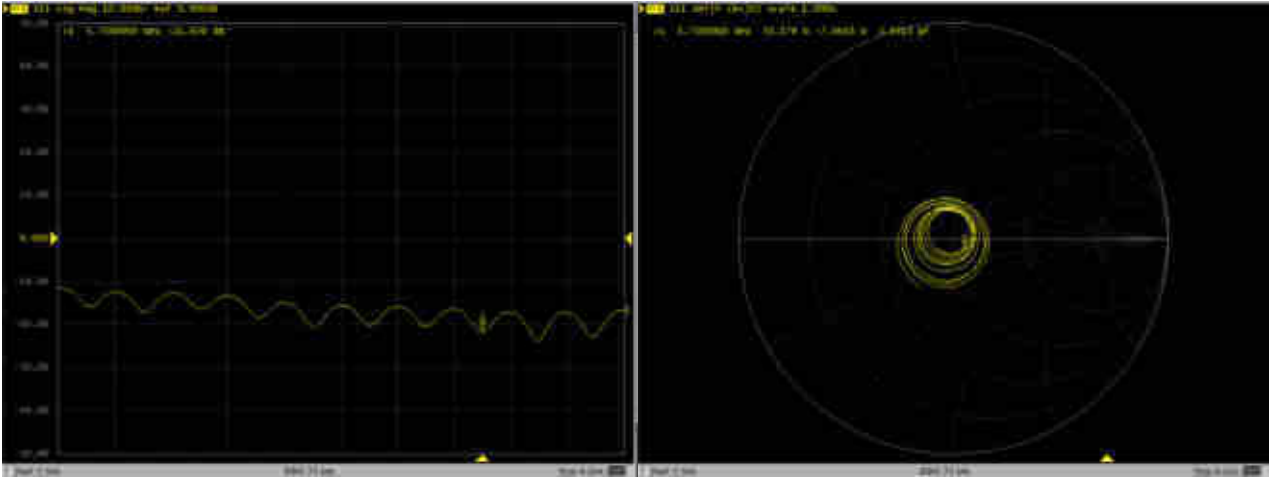
5600MHz – Body----2019.10.30



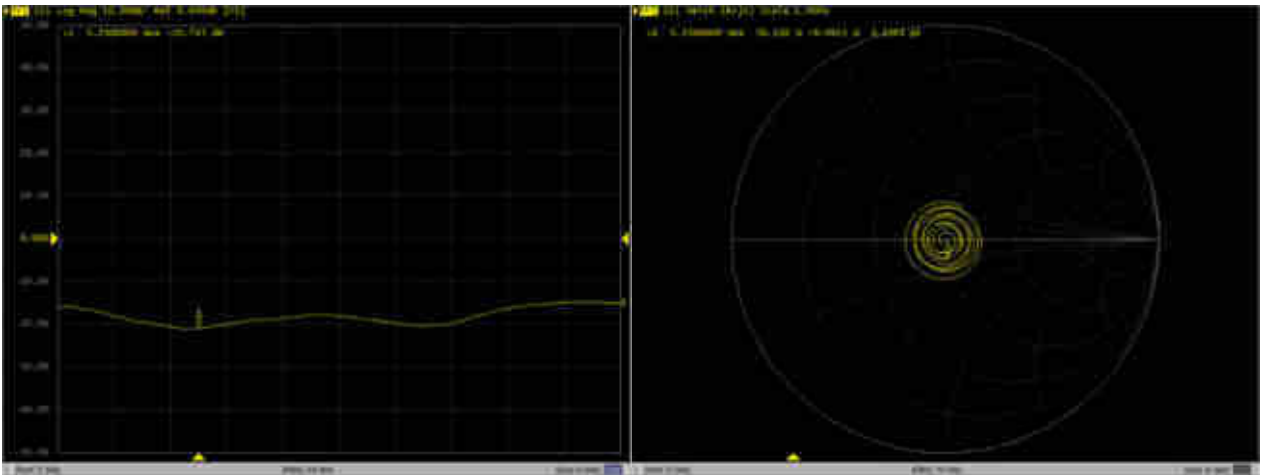
5750MHz – Head----2019.10.30



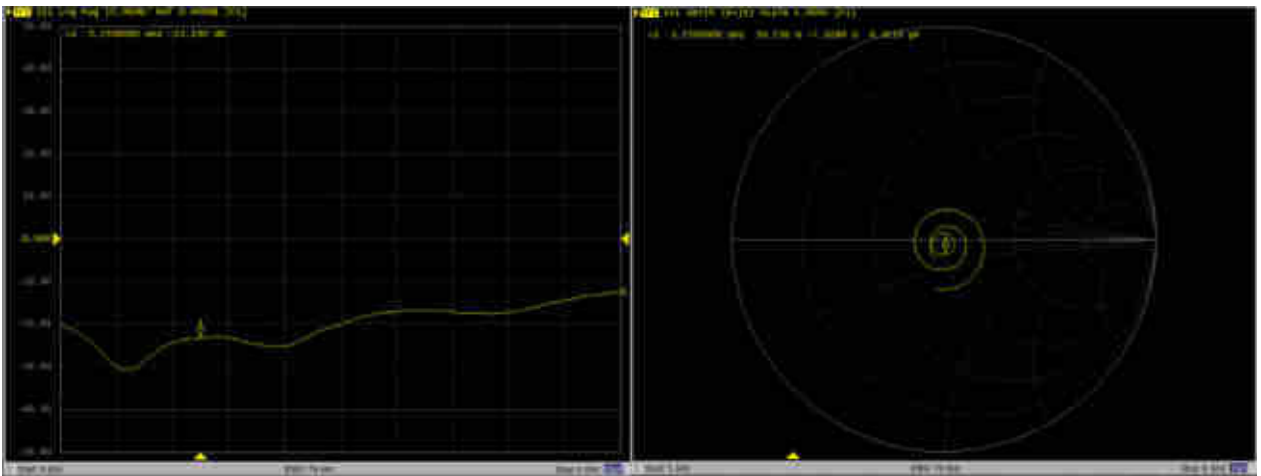
5750MHz – Body----2019.10.30



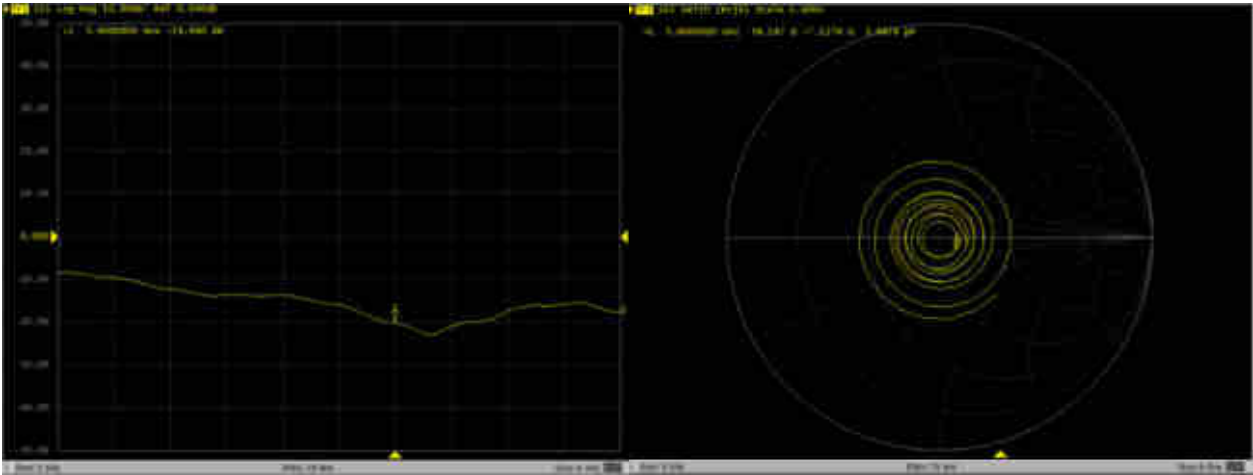
5250MHz – Head----2020.10.30



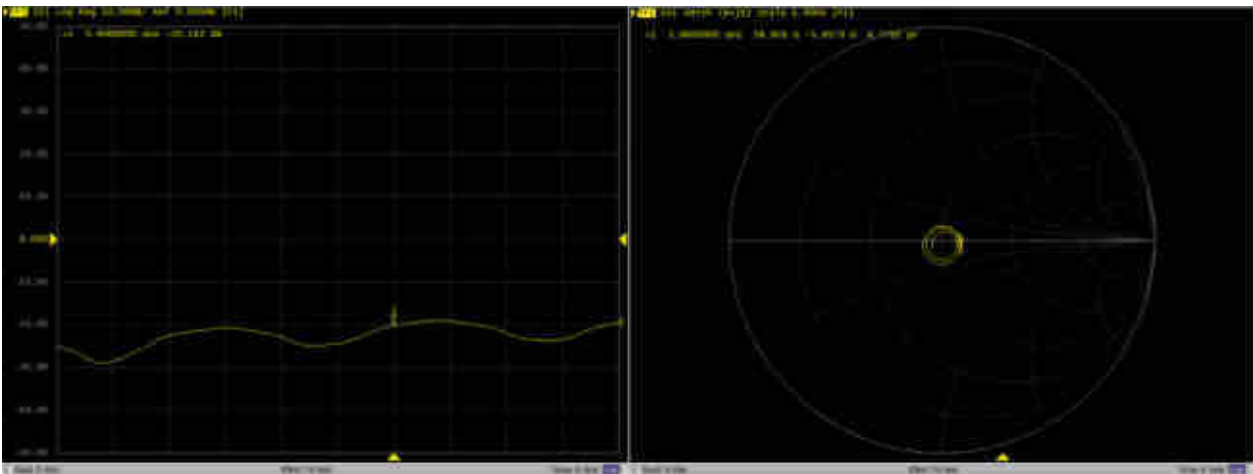
5250MHz – Body----2020.10.30



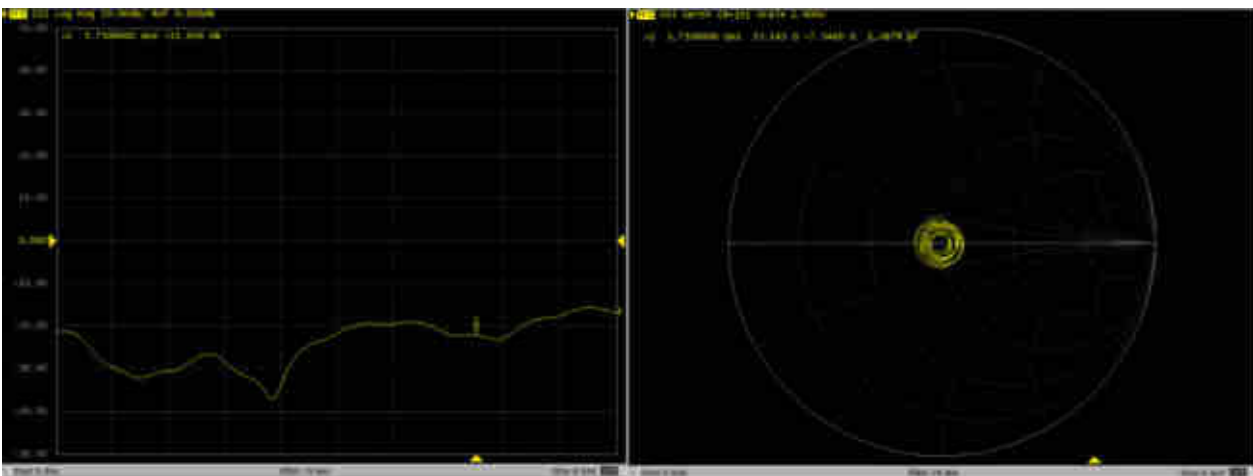
5600MHz – Head----2020.10.30



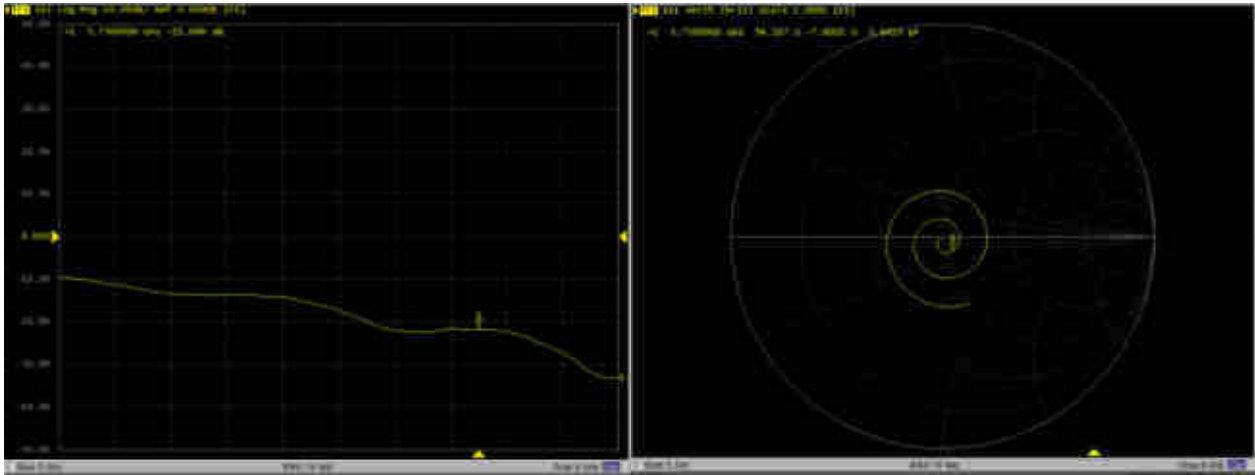
5600MHz – Body----2020.10.30



5750MHz – Head----2020.10.30



5750MHz – Body----2020.10.30





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**

Client **Auden**

Certificate No: **DAE3-528_Mar20**

CALIBRATION CERTIFICATE

Object **DAE3 - SD 000 D03 AA - SN: 528**

Calibration procedure(s) **QA CAL-06.v30
Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **March 16, 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 $(22 \pm 3)^{\circ}\text{C}$ 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

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

Issued: March 16, 2020

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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 = 6.1 μ V, 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	404.513 \pm 0.02% (k=2)	404.615 \pm 0.02% (k=2)	404.537 \pm 0.02% (k=2)
Low Range	3.97109 \pm 1.50% (k=2)	3.95930 \pm 1.50% (k=2)	3.96568 \pm 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	50.0 ^o \pm 1 ^o
---	--

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	200037.58	3.28	0.00
Channel X + Input	20009.65	3.92	0.02
Channel X - Input	-20001.89	3.62	-0.02
Channel Y + Input	200037.90	3.50	0.00
Channel Y + Input	20005.83	0.31	0.00
Channel Y - Input	-20005.73	-0.03	0.00
Channel Z + Input	200033.51	-0.62	-0.00
Channel Z + Input	20006.48	0.89	0.00
Channel Z - Input	-20006.01	-0.27	0.00

Low Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	2001.68	0.24	0.01
Channel X + Input	201.09	-0.22	-0.11
Channel X - Input	-198.93	-0.12	0.06
Channel Y + Input	2001.70	0.49	0.02
Channel Y + Input	200.70	-0.24	-0.12
Channel Y - Input	-199.76	-0.76	0.38
Channel Z + Input	2001.03	-0.04	-0.00
Channel Z + Input	201.25	0.40	0.20
Channel Z - Input	-199.29	-0.32	0.16

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	9.59	7.82
	- 200	-7.34	-8.76
Channel Y	200	14.74	14.93
	- 200	-16.81	-17.15
Channel Z	200	-3.39	-3.82
	- 200	3.03	3.16

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	-	3.19	-1.66
Channel Y	200	6.79	-	4.73
Channel Z	200	7.16	5.28	-

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 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
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



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**

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 $(22 \pm 3)^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&E 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-16)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	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

Calibrated by:	Name Jeton Kasrati	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature
			Issued: January 25, 2020
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: SCS 0108

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Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,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., $\vartheta = 0$ 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:

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

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,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.
- DCP_{x,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
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,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 $f \leq 800$ 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 NORM_{x,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 NORM_x (no uncertainty required).

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

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.48	0.63	0.63	$\pm 10.1\%$
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 (k=2) ^E
0	CW	X	0.0	0.0	1.0	0.00	164.4	$\pm 2.7\%$	$\pm 4.7\%$
		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 E²-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

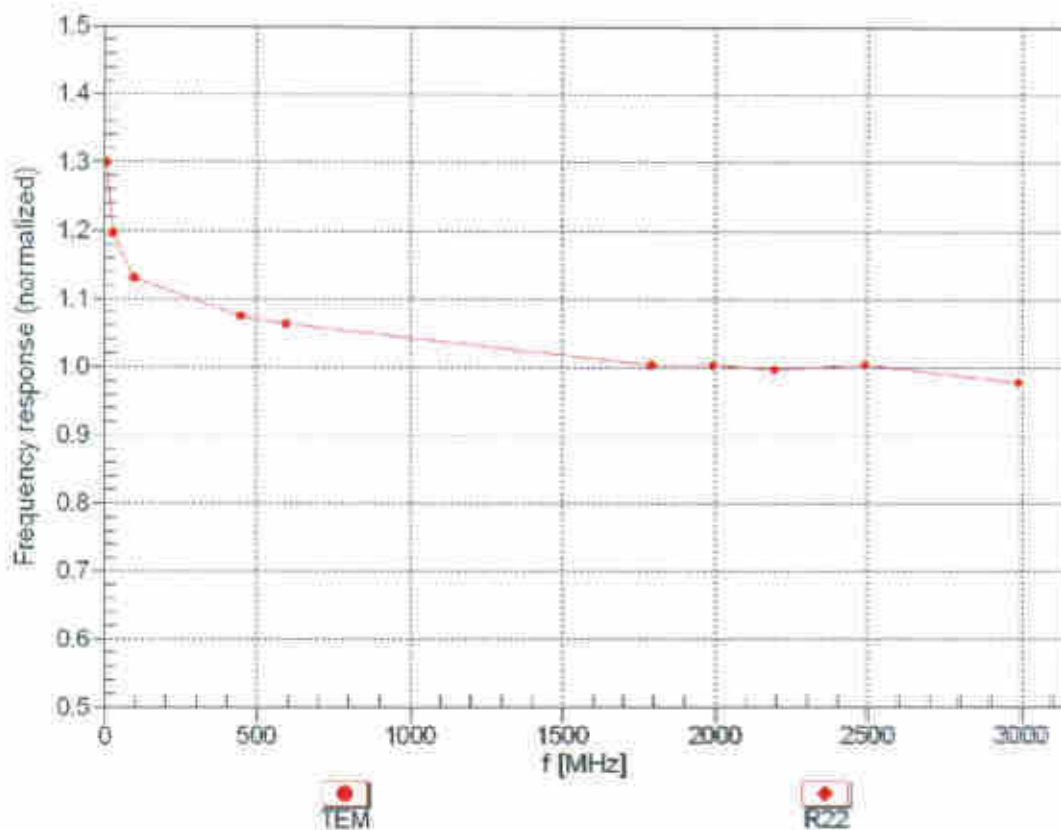
f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^o	Depth (mm) ^o	Unc (k=2)
750	41.9	0.89	10.71	10.71	10.71	0.62	0.80	± 12.0 %
835	41.5	0.90	10.45	10.45	10.45	0.46	0.94	± 12.0 %
900	41.5	0.97	10.16	10.16	10.16	0.33	1.09	± 12.0 %
1750	40.1	1.37	8.88	8.88	8.88	0.42	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.

^o 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.

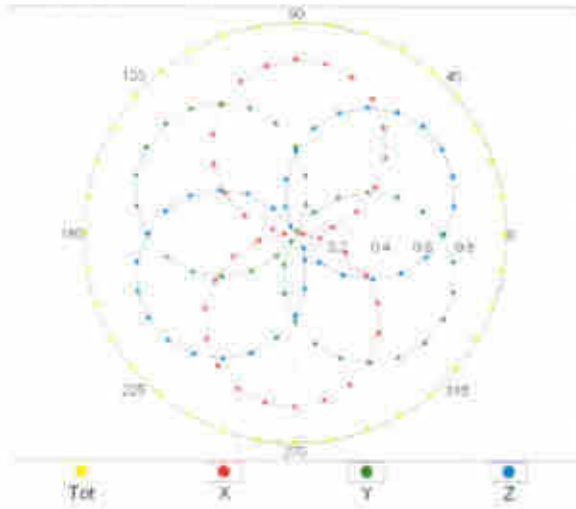
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



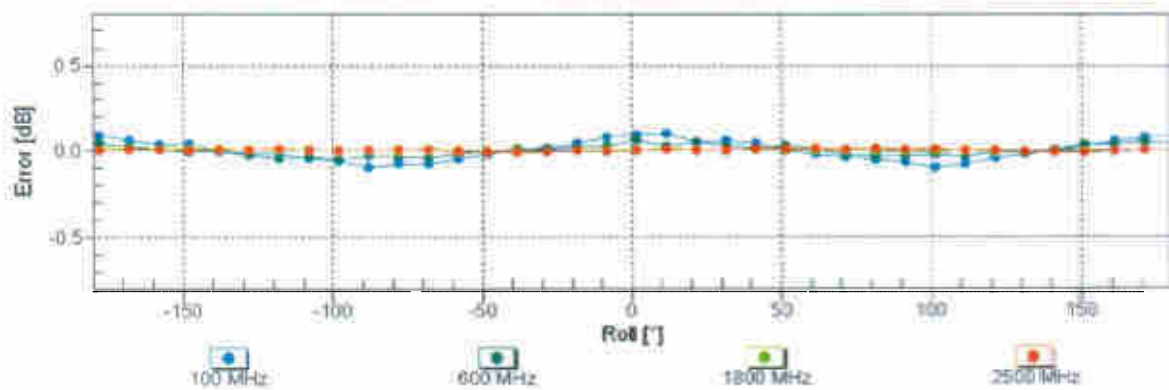
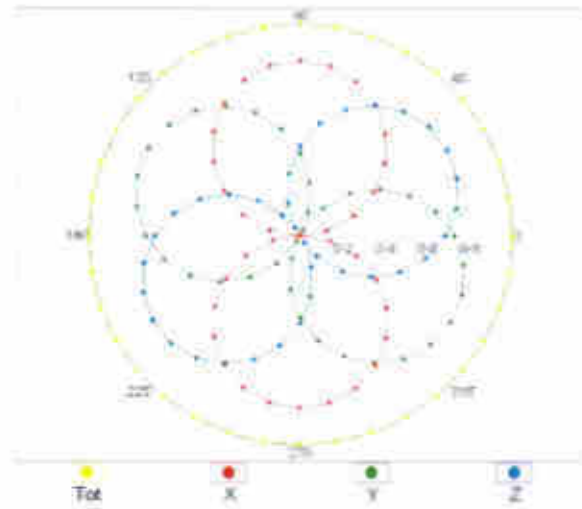
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

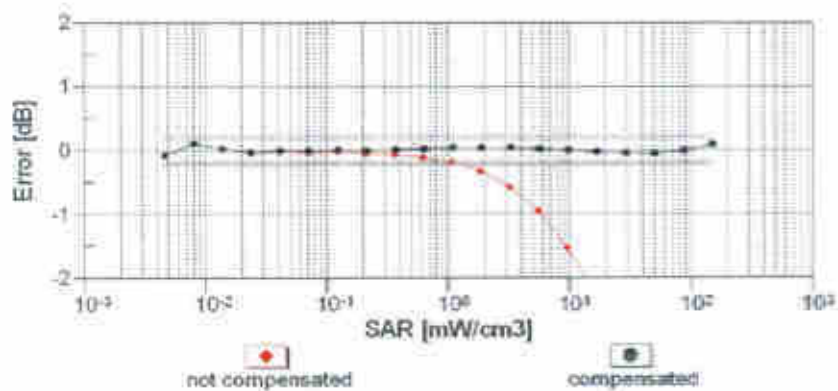
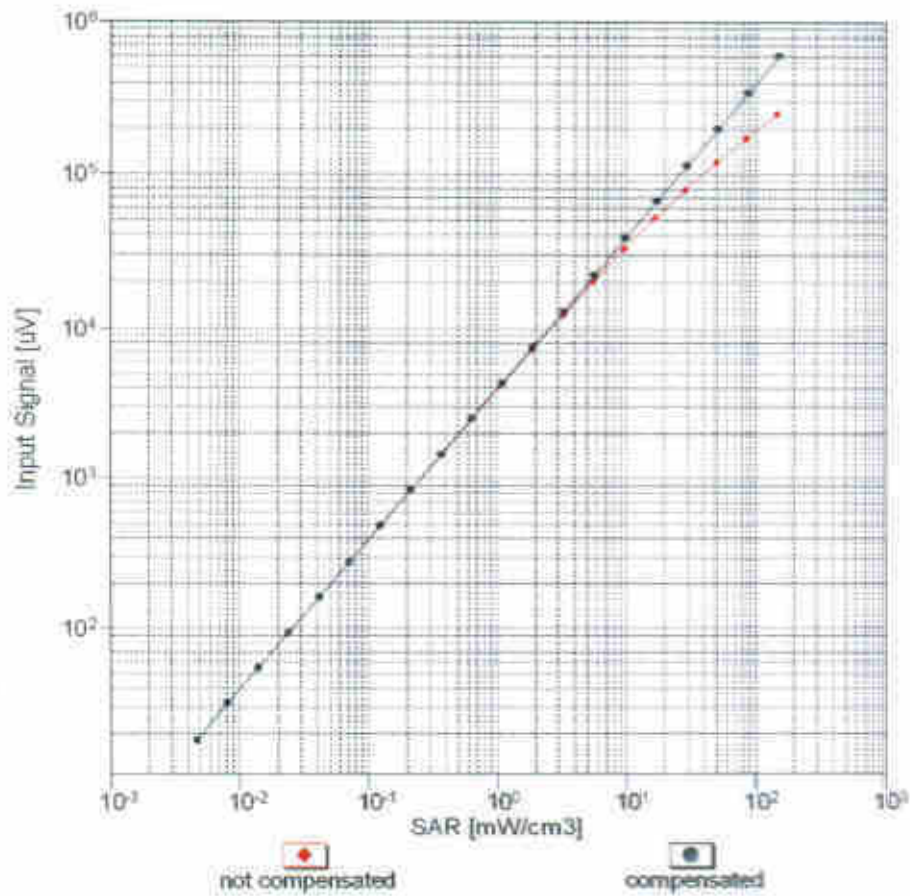


f=1800 MHz,R22



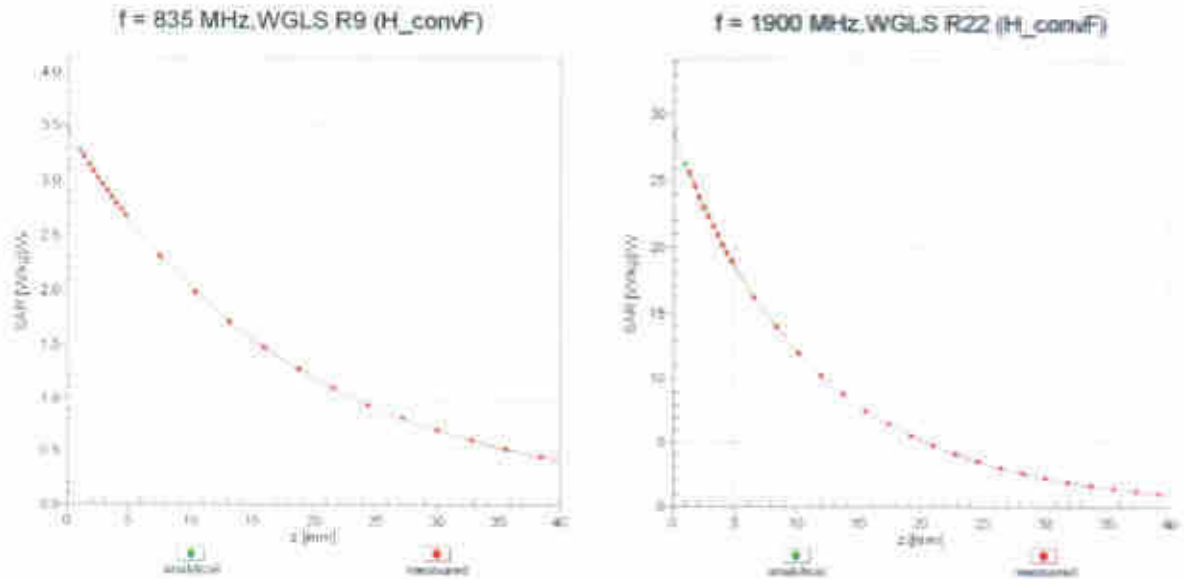
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

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



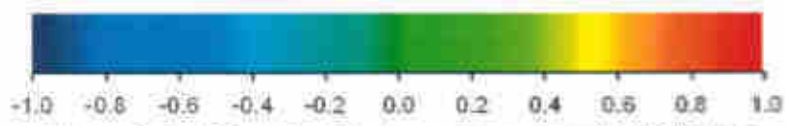
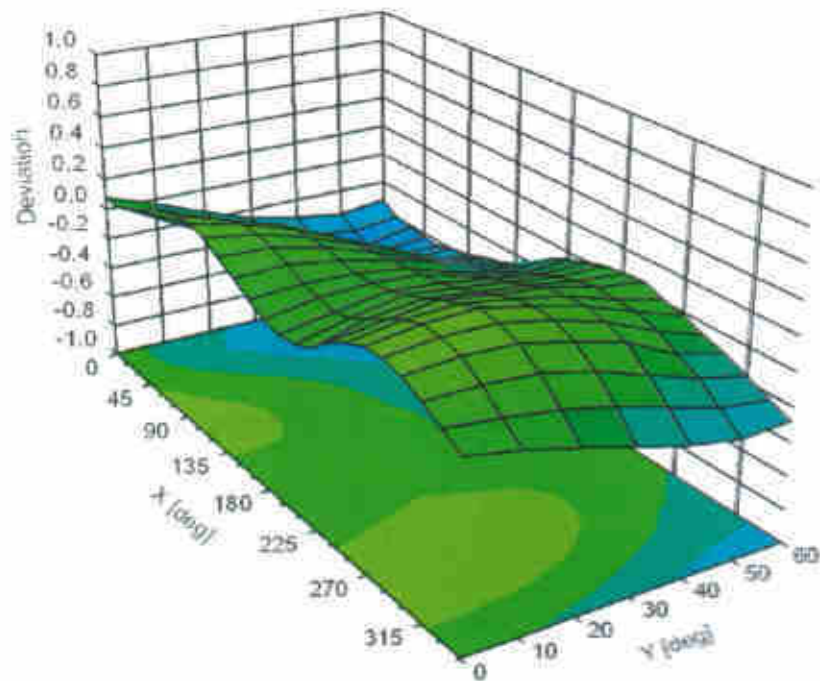
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ (k=2)



Appendix E. Conducted RF Output Power Table

The detailed power tables are shown as follows.



Full Power Mode - UAT

GSM900		Sub-Average Power (dBm)			Frame-Average Power (dBm)		
Tx Channel	128	129	251	Time-up Limit (dBm)	128	129	251
Frequency (MHz)	824.2	834.4	844.6	124.2	134.4	144.6	
OSM1 Tx (sat)	23.10	22.88	23.02	23.80	24.10	23.88	24.02
OSM1 Tx (sub)	23.12	22.90	23.05	23.80	24.12	23.90	24.05
OSM2 Tx (sat)	23.44	23.44	23.38	23.80	24.44	24.44	24.38
OSM2 Tx (sub)	23.46	23.46	23.40	23.80	24.46	24.46	24.40
OSM4 Tx (sat)	23.01	27.52	27.95	23.80	23.01	24.52	24.95
EDGE 1 Tx (sat)	23.58	23.54	23.74	23.80	18.38	18.54	18.74
EDGE 1 Tx (sub)	23.62	23.67	23.81	23.80	18.62	18.81	19.01
EDGE 2 Tx (sat)	23.38	23.02	23.10	23.80	18.72	18.76	18.84
EDGE 2 Tx (sub)	23.34	22.23	22.32	23.80	18.34	18.23	18.32

GSM1800		Sub-Average Power (dBm)			Frame-Average Power (dBm)		
Tx Channel	1812	1811	1810	Time-up Limit (dBm)	1812	1811	1810
Frequency (MHz)	1809.2	1808	1809.8	1809.2	1808	1809.8	
OSM1 Tx (sat)	22.00	23.70	23.89	23.80	20.00	19.70	19.89
OSM1 Tx (sub)	22.00	23.70	23.84	23.80	19.97	19.69	19.84
OSM2 Tx (sat)	23.02	23.52	23.91	23.80	23.02	23.52	23.91
OSM2 Tx (sub)	23.04	24.53	24.18	23.80	23.22	20.97	19.92
OSM4 Tx (sat)	24.06	23.87	23.86	24.80	21.06	20.97	20.96
EDGE 1 Tx (sat)	24.58	24.35	24.54	25.30	15.58	15.35	15.54
EDGE 2 Tx (sat)	23.50	23.05	22.89	23.80	17.10	17.05	16.89
EDGE 2 Tx (sub)	23.52	22.23	22.42	23.70	16.52	16.27	16.46
EDGE 3 Tx (sat)	21.05	21.11	21.10	21.70	18.05	18.11	18.10

Band	WCDMA S			Time-up Limit (dBm)	WCDMA T			Time-up Limit (dBm)	WCDMA V			Time-up Limit (dBm)
	3682	3680	3688		4132	4131	4133		4132	4131	4133	
Tx Channel	3682	3680	3688	1712	1711	1713	4132	4131	4133	4132	4131	4133
Frequency (MHz)	3682.4	3680	3687.6	1712.4	1713.6	1713.6	4132.4	4131.6	4133.6	4132.4	4131.6	4133.6
SCPP Rel 99	ARR 12.2Rel99	23.78	23.84	23.84	24.80	24.12	24.21	24.22	24.80	24.36	24.03	23.80
SCPP Rel 99	RRG 12.2Rel99	23.76	23.86	23.86	24.80	24.74	25.07	25.24	24.80	25.05	24.66	23.80
SCPP Rel 6	HSDPA-Subclass1	22.71	22.78	22.81	23.80	22.37	22.44	22.41	23.80	23.12	23.18	23.54
SCPP Rel 6	HSDPA-Subclass2	22.89	22.77	22.42	23.80	22.43	22.53	22.41	23.80	23.66	23.11	23.64
SCPP Rel 6	HSDPA-Subclass3	22.70	22.23	21.82	23.30	21.03	21.08	21.02	23.30	22.45	22.06	22.53
SCPP Rel 6	HSDPA-Subclass4	22.20	22.30	22.10	23.30	21.94	22.01	21.93	23.30	22.81	22.83	22.65
SCPP Rel 6	DC-HSDPA-Subclass1	22.46	22.65	22.40	23.80	22.20	22.28	22.25	23.80	22.17	22.46	22.47
SCPP Rel 6	DC-HSDPA-Subclass2	22.48	22.60	22.32	23.80	22.22	22.20	22.27	23.80	22.11	22.47	22.45
SCPP Rel 6	DC-HSDPA-Subclass3	22.54	22.08	21.89	23.30	21.81	21.92	21.87	23.30	21.63	21.98	21.91
SCPP Rel 6	DC-HSDPA-Subclass4	22.02	22.14	21.90	23.30	21.80	21.94	21.89	23.30	21.60	21.87	21.94
SCPP Rel 6	HSPA-Subclass1	22.91	22.80	22.78	23.80	22.05	22.11	22.06	23.80	22.90	23.22	23.68
SCPP Rel 6	HSPA-Subclass2	22.91	22.98	22.77	21.80	20.97	20.73	20.87	21.80	20.38	21.23	21.68
SCPP Rel 6	HSPA-Subclass3	23.44	22.20	21.78	22.80	19.78	19.83	19.89	22.80	19.80	20.36	20.80
SCPP Rel 6	HSPA-Subclass4	23.70	22.80	23.08	21.80	20.80	20.75	20.88	21.80	20.87	21.05	21.80
SCPP Rel 6	HSPA-Subclass5	22.85	22.95	22.85	23.80	22.58	22.65	22.68	23.80	22.81	23.11	23.79
SCPP Rel 7	HSPA+ (MIMO) Subclass5	21.10	19.21	21.07	21.80	20.77	21.00	20.98	21.80	20.93	21.10	20.98

Band	CDMA BC3			Time-up Limit (dBm)	CDMA BC1			Time-up Limit (dBm)	CDMA BC1b			Time-up Limit (dBm)
	1813	368	777		25	1195	1175		478	567	684	
Tx Channel	1813	368	777	25	1195	1175	478	567	684			
Frequency (MHz)	824.7	838.52	848.31	1813.28	1895	1898.75	817.8	822.5	831.1			
HC1 HCS0	23.82	23.80	23.87	24.80	23.89	23.90	23.90	24.80	23.97	23.93	23.80	
HC1 HCS0 (F-DCS)	23.80	23.80	23.86	24.80	23.87	23.89	23.90	24.80	23.96	23.91	23.87	
HC1 HCS2 (F-DCS)	23.79	23.80	23.84	24.80	23.86	23.88	23.47	24.80	23.94	23.90	23.80	
HC1 HCS2 (F-DCS)	23.77	23.80	23.82	24.80	23.84	23.88	23.49	24.80	23.90	23.86	23.70	
HC1 HCS3 (F-DCS)	23.76	23.54	23.81	24.80	23.83	23.84	23.45	24.80	23.91	23.87	23.82	
HC1 HCS4 (F-DCS)	23.75	23.82	23.80	24.80	23.82	23.83	23.43	24.80	23.90	23.88	23.82	



Band 2 (800MHz Band) Part 24E

BV (MHz)	Modulation	RB Size	RB Offset	Power Ch. (Tx/Freq)	Power Ch. (Tx/Freq)	Power Ch. (Tx/Freq)	Time-use (min)	MFR (%)
Channel								
25	QPSK	1	0	23.66	23.63	23.65	24.8	0
25	QPSK	1	50	23.57	23.52	23.57	24.8	0
25	QPSK	35	0	22.63	22.78	22.69	23.8	1
25	QPSK	35	50	22.73	22.68	22.70	23.8	1
25	QPSK	100	0	22.71	22.69	22.72	23.8	1
25	QPSK	100	50	22.81	22.76	22.78	23.8	1
25	QPSK	1	40	22.87	22.86	22.84	23.8	1
25	QPSK	1	90	22.90	22.94	22.92	23.8	1
25	QPSK	1	140	21.62	21.61	21.61	22.8	1
25	QPSK	50	24	21.74	21.81	21.75	22.8	1
25	QPSK	50	74	21.72	21.78	21.75	22.8	1
25	QPSK	1	0	21.81	21.86	21.84	22.8	1
25	QPSK	1	49	21.74	21.83	21.78	22.8	2
25	QPSK	1	99	21.77	21.86	21.71	22.8	2
25	QPSK	1	0	20.89	20.82	20.82	21.8	3
25	QPSK	50	24	20.75	20.82	20.75	21.8	3
25	QPSK	50	74	20.74	20.83	20.74	21.8	3
25	QPSK	1	0	19.79	19.80	19.79	19.8	5
25	QPSK	50	24	19.83	19.80	19.84	19.8	5
25	QPSK	50	74	19.84	19.86	19.83	19.8	5
25	QPSK	50	124	19.84	19.82	19.80	19.8	5
25	QPSK	100	0	18.83	18.87	18.84	18.8	5
Channel								
15	QPSK	1	0	23.51	23.59	23.54	24.8	0
15	QPSK	1	50	23.42	23.51	23.46	24.8	0
15	QPSK	1	74	23.52	23.35	23.51	24.8	0
15	QPSK	36	0	22.67	22.71	22.69	23.8	1
15	QPSK	36	50	22.66	22.64	22.68	23.8	1
15	QPSK	36	74	22.63	22.66	22.67	23.8	1
15	QPSK	75	0	22.63	22.60	22.66	23.8	1
15	QPSK	75	50	22.66	22.68	22.64	23.8	1
15	QPSK	1	37	22.78	22.68	22.75	23.8	1
15	QPSK	1	74	22.82	22.81	22.84	23.8	1
15	QPSK	1	111	21.94	21.94	21.95	22.8	2
15	QPSK	36	20	21.89	21.83	21.84	22.8	2
15	QPSK	36	70	21.89	21.83	21.86	22.8	2
15	QPSK	1	37	21.71	21.66	21.68	22.8	2
15	QPSK	1	74	21.81	21.66	21.68	22.8	2
15	QPSK	36	0	20.73	20.77	20.74	21.8	3
15	QPSK	36	50	20.72	20.76	20.73	21.8	3
15	QPSK	36	74	20.68	20.69	20.71	21.8	3
15	QPSK	75	0	20.58	20.62	20.57	21.8	3
15	QPSK	75	50	20.57	20.61	20.56	21.8	3
15	QPSK	1	37	18.75	18.87	18.75	19.8	5
15	QPSK	1	74	18.70	18.73	18.72	19.8	5
15	QPSK	36	0	18.55	18.54	18.50	19.8	5
15	QPSK	36	50	18.65	18.63	18.64	19.8	5
15	QPSK	75	0	18.47	18.49	18.49	19.8	5
Channel								
5	QPSK	1	0	23.60	23.68	23.64	24.8	0
5	QPSK	1	49	23.57	23.55	23.57	24.8	0
5	QPSK	35	0	22.60	22.63	22.61	23.8	1
5	QPSK	35	50	22.58	22.61	22.59	23.8	1
5	QPSK	100	0	22.74	22.74	22.74	23.8	1
5	QPSK	100	50	22.83	22.82	22.84	23.8	1
5	QPSK	1	25	22.20	22.21	22.20	23.8	1
5	QPSK	1	49	22.28	22.22	22.26	23.8	1
5	QPSK	1	74	22.36	22.22	22.30	23.8	1
5	QPSK	1	99	22.38	22.27	22.33	23.8	1
5	QPSK	25	12	21.58	21.59	21.59	22.8	2
5	QPSK	25	37	21.58	21.57	21.58	22.8	2
5	QPSK	1	0	21.58	21.59	21.58	22.8	2
5	QPSK	1	49	21.59	21.57	21.58	22.8	2
5	QPSK	25	12	20.73	20.73	20.74	21.8	3
5	QPSK	25	37	20.73	20.73	20.74	21.8	3
5	QPSK	1	0	19.79	19.80	19.79	19.8	5
5	QPSK	1	49	19.81	19.83	19.79	19.8	5
5	QPSK	25	12	18.70	18.74	18.73	19.8	5
5	QPSK	25	37	18.69	18.71	18.69	19.8	5
5	QPSK	1	0	18.55	18.55	18.50	19.8	5
5	QPSK	1	49	18.65	18.63	18.64	19.8	5
5	QPSK	25	12	18.48	18.54	18.49	19.8	5
5	QPSK	25	37	18.58	18.67	18.58	19.8	5
5	QPSK	75	0	18.47	18.52	18.47	19.8	5
Channel								
15	QPSK	1	0	23.51	23.59	23.54	24.8	0
15	QPSK	1	50	23.42	23.51	23.46	24.8	0
15	QPSK	1	74	23.52	23.35	23.51	24.8	0
15	QPSK	36	0	22.67	22.71	22.69	23.8	1
15	QPSK	36	50	22.66	22.64	22.68	23.8	1
15	QPSK	36	74	22.63	22.66	22.67	23.8	1
15	QPSK	75	0	22.63	22.60	22.66	23.8	1
15	QPSK	75	50	22.66	22.68	22.64	23.8	1
15	QPSK	1	37	22.78	22.68	22.75	23.8	1
15	QPSK	1	74	22.82	22.81	22.84	23.8	1
15	QPSK	1	111	21.94	21.94	21.95	22.8	2
15	QPSK	36	20	21.89	21.83	21.84	22.8	2
15	QPSK	36	70	21.89	21.83	21.86	22.8	2
15	QPSK	1	37	21.71	21.66	21.68	22.8	2
15	QPSK	1	74	21.81	21.66	21.68	22.8	2
15	QPSK	36	0	20.73	20.77	20.74	21.8	3
15	QPSK	36	50	20.72	20.76	20.73	21.8	3
15	QPSK	36	74	20.68	20.69	20.71	21.8	3
15	QPSK	75	0	20.58	20.62	20.57	21.8	3
15	QPSK	75	50	20.57	20.61	20.56	21.8	3
15	QPSK	1	37	18.75	18.87	18.75	19.8	5
15	QPSK	1	74	18.70	18.73	18.72	19.8	5
15	QPSK	36	0	18.55	18.54	18.50	19.8	5
15	QPSK	36	50	18.65	18.63	18.64	19.8	5
15	QPSK	75	0	18.47	18.49	18.49	19.8	5
Channel								
5	QPSK	1	0	23.60	23.68	23.64	24.8	0
5	QPSK	1	49	23.57	23.55	23.57	24.8	0
5	QPSK	35	0	22.60	22.63	22.61	23.8	1
5	QPSK	35	50	22.58	22.61	22.59	23.8	1
5	QPSK	100	0	22.74	22.74	22.74	23.8	1
5	QPSK	100	50	22.83	22.82	22.84	23.8	1
5	QPSK	1	25	22.20	22.21	22.20	23.8	1
5	QPSK	1	49	22.28	22.22	22.26	23.8	1
5	QPSK	1	74	22.36	22.22	22.30	23.8	1
5	QPSK	1	99	22.38	22.27	22.33	23.8	1
5	QPSK	25	12	21.58	21.59	21.59	22.8	2
5	QPSK	25	37	21.58	21.57	21.58	22.8	2
5	QPSK	1	0	21.58	21.59	21.58	22.8	2
5	QPSK	1	49	21.59	21.57	21.58	22.8	2
5	QPSK	25	12	20.73	20.73	20.74	21.8	3
5	QPSK	25	37	20.73	20.73	20.74	21.8	3
5	QPSK	1	0	19.79	19.80	19.79	19.8	5
5	QPSK	1	49	19.81	19.83	19.79	19.8	5
5	QPSK	25	12	18.70	18.74	18.73	19.8	5
5	QPSK	25	37	18.69	18.71	18.69	19.8	5
5	QPSK	1	0	18.55	18.55	18.50	19.8	5
5	QPSK	1	49	18.65	18.63	18.64	19.8	5
5	QPSK	25	12	18.48	18.54	18.49	19.8	5
5	QPSK	25	37	18.58	18.67	18.58	19.8	5
5	QPSK	75	0	18.47	18.52	18.47	19.8	5

Band 4 (400MHz Band) Part 27L (only on channel required)

BV (MHz)	Modulation	RB Size	RB Offset	Power Ch. (Tx/Freq)	Power Ch. (Tx/Freq)	Power Ch. (Tx/Freq)	Time-use (min)	MFR (%)
Channel								
25	QPSK	1	0	23.80	24.03	24.95	24.8	0
25	QPSK	1	49	23.82	23.80	23.82	24.8	0
25	QPSK	1	99	23.77	23.88	23.84	24.8	0
25	QPSK	35	0	22.90	23.08	23.02	23.8	1
25	QPSK	35	50	22.88	22.94	22.92	23.8	1
25	QPSK	100	0	22.88	22.92	22.93	23.8	1
25	QPSK	100	50	22.95	22.95	22.94	23.8	1
25	QPSK	1	49	22.98	23.25	23.28	23.8	1
25	QPSK	1	99	23.01	23.28	23.25	23.8	1
25	QPSK	1	149	21.58	21.58	21.58	22.8	2
25	QPSK	50	24	21.49	21.65	21.63	22.8	2



Band 17 (700MHz Low Band) Part 27F(only on channel required)										
BW (MHz)	Modulation	RS Size	RS Offset	Power Max Ch./Freq.	Power Min Ch./Freq.	Power High Ch./Freq.	Power Low Ch./Freq.	Time-up (min)	MFR (dB)	
Channel										
Frequency (MHz)										
10	QPSK	1	0	23.62	23.67	23.80				
10	QPSK	1	26	23.68	23.66	23.80				
10	QPSK	1	49	23.67	23.71	23.68				
10	QPSK	25	0	22.74	22.78	22.78				
10	QPSK	25	12	22.78	22.76	22.76				
10	QPSK	25	25	22.79	22.84	22.81				
10	QPSK	50	0	22.80	22.85	22.76				
10	HQAM	1	25	23.08	23.05	23.05				
10	HQAM	1	49	23.11	23.01	23.06				
10	HQAM	25	0	21.84	21.77	21.77				
10	HQAM	25	12	21.85	21.86	21.78				
10	HQAM	25	25	21.86	21.85	21.79				
10	HQAM	50	0	21.89	21.91	21.91				
10	HQAM	1	25	21.82	21.91	21.80				
10	HQAM	1	49	22.01	22.00	21.92				
10	HQAM	25	0	20.79	20.82	20.83				
10	HQAM	25	12	20.86	20.83	20.83				
10	HQAM	25	25	20.86	20.87	20.82				
10	HQAM	50	0	20.84	20.85	20.79				
10	ZSMBM	1	0	18.86	18.86	18.77				
10	ZSMBM	1	26	18.88	18.88	18.83				
10	ZSMBM	1	49	18.83	18.83	18.85				
10	ZSMBM	25	0	18.71	18.82	18.78				
10	ZSMBM	25	12	18.82	18.72	18.78				
10	ZSMBM	25	25	18.71	18.77	18.74				
10	ZSMBM	50	0	18.74	18.74	18.72				
Channel										
Frequency (MHz)										
8	QPSK	1	0	23.61	23.58	23.59				
8	QPSK	1	24	23.57	23.63	23.64				
8	QPSK	1	48	23.62	23.55	23.62				
8	QPSK	12	0	22.64	22.70	22.69				
8	QPSK	12	7	22.68	22.74	22.67				
8	QPSK	12	13	22.67	22.70	22.68				
8	QPSK	25	0	22.64	22.66	22.63				
8	HQAM	1	24	22.86	22.87	22.82				
8	HQAM	1	48	22.92	22.95	22.87				
8	HQAM	12	0	21.73	21.80	21.86				
8	HQAM	12	7	21.77	21.74	21.88				
8	HQAM	12	13	21.80	21.79	21.89				
8	HQAM	25	0	21.69	21.70	21.80				
8	HQAM	1	0	21.89	21.89	21.86				
8	HQAM	1	24	21.73	21.85	21.73				
8	HQAM	1	48	21.81	21.90	21.81				
8	HQAM	12	0	21.73	21.80	21.73				
8	HQAM	12	7	21.76	21.82	21.76				
8	HQAM	12	13	21.79	21.78	21.78				
8	HQAM	25	0	20.73	20.79	20.78				
8	ZSMBM	1	12	18.75	18.88	18.91				
8	ZSMBM	1	24	18.74	18.80	18.80				
8	ZSMBM	12	0	18.63	18.71	18.76				
8	ZSMBM	12	7	18.67	18.75	18.72				
8	ZSMBM	12	13	18.67	18.69	18.71				
8	ZSMBM	25	0	18.67	18.69	18.76				
Channel										
Frequency (MHz)										
3	QPSK	1	0	23.66	23.60	23.64				
3	QPSK	1	14	23.58	23.60	23.57				
3	QPSK	8	0	22.66	22.69	22.68				
3	QPSK	8	7	22.68	22.73	22.74				
3	QPSK	8	13	22.64	22.70	22.65				
3	HQAM	1	8	22.84	22.98	22.96				
3	HQAM	1	14	22.84	22.97	22.89				
3	HQAM	8	0	21.73	21.74	21.79				
3	HQAM	8	4	21.73	21.79	21.79				
3	HQAM	15	0	21.76	21.85	21.76				
3	HQAM	1	0	21.81	21.82	21.79				
3	HQAM	1	14	21.71	21.87	21.79				
3	HQAM	8	0	20.76	20.79	20.77				
3	HQAM	8	4	20.74	20.78	20.79				
3	HQAM	8	7	20.71	20.74	20.76				
3	HQAM	15	0	20.74	20.72	20.89				
3	ZSMBM	1	0	18.63	18.68	18.61				
3	ZSMBM	1	8	18.67	18.67	18.68				
3	ZSMBM	8	4	18.71	18.76	18.75				
3	ZSMBM	8	7	18.67	18.69	18.65				
3	ZSMBM	15	0	18.67	18.69	18.66				
Channel										
Frequency (MHz)										
1.4	QPSK	1	0	23.59	23.58	23.58				
1.4	QPSK	1	3	23.58	23.61	23.55				
1.4	QPSK	1	5	23.47	23.56	23.52				
1.4	QPSK	3	0	22.58	22.63	22.63				
1.4	QPSK	3	1	22.54	22.56	22.52				
1.4	QPSK	3	3	22.52	22.53	22.50				
1.4	HQAM	1	0	22.58	22.61	22.60				
1.4	HQAM	1	0	22.58	22.78	22.54				
1.4	HQAM	3	0	22.61	22.62	22.66				
1.4	HQAM	3	1	22.65	22.68	22.68				
1.4	HQAM	3	1	22.64	22.67	22.65				
1.4	HQAM	3	1	22.68	22.67	22.68				
1.4	HQAM	8	0	21.71	21.89	21.74				
1.4	HQAM	1	0	21.89	21.73	21.70				
1.4	HQAM	3	0	21.63	21.88	21.80				
1.4	HQAM	1	5	21.70	21.78	21.65				
1.4	HQAM	3	0	21.73	21.68	21.79				
1.4	HQAM	3	1	21.71	21.72	21.80				
1.4	HQAM	3	3	21.72	21.86	21.72				
1.4	HQAM	8	0	20.62	20.57	20.62				
1.4	ZSMBM	1	0	18.74	18.68	18.81				
1.4	ZSMBM	1	3	18.75	18.87	18.85				
1.4	ZSMBM	1	5	18.67	18.78	18.71				
1.4	ZSMBM	3	0	18.62	18.67	18.68				
1.4	ZSMBM	3	1	18.68	18.69	18.75				
1.4	ZSMBM	3	3	18.61	18.64	18.73				
1.4	ZSMBM	8	0	18.62	18.68	18.68				

Band 17 (700MHz Band) Part 27F										
BW (MHz)	Modulation	RS Size	RS Offset	Power Max Ch./Freq.	Power Min Ch./Freq.	Power High Ch./Freq.	Power Low Ch./Freq.	Time-up (min)	MFR (dB)	
Channel										
Frequency (MHz)										
10	QPSK	1	0	23.44						
10	QPSK	1	26	23.48						
10	QPSK	1	49	23.43						
10	QPSK	25	0	22.80						
10	QPSK	25	12	22.83						
10	QPSK	25	24	22.84						
10	QPSK	50	0	22.57						
10	HQAM	1	24	22.73						
10	HQAM	1	49	22.76						
10	HQAM	25	0	21.47						
10	HQAM	25	12	21.52						
10	HQAM	25	12	21.78						
10	HQAM	25	25	21.57						
10	HQAM	50	0	21.52						
10	HQAM	1	0	21.56						
10	HQAM	1	25	21.74						
10	HQAM	1	49	21.87						
10	HQAM	25	0	20.43						
10	HQAM	25	12	20.48						
10	HQAM	25	25	20.53						
10	HQAM	50	0	20.45						
10	ZSMBM	1	0	18.80						
10	ZSMBM	1	26	18.81						
10	ZSMBM	1	49	18.81						
10	ZSMBM	25	0	18.84						
10	ZSMBM	25	12	18.86						
10	ZSMBM	25	25	18.88						
10	ZSMBM	50	0	18.87						
Channel										
Frequency (MHz)										
5	QPSK	1	0	23.35	23.32	23.33				
5	QPSK	1	24	23.27	23.32	23.32				
5	QPSK	12	0	22.51	22.52	22.49				
5	QPSK	12	7	22.53	22.51	22.50				
5	QPSK	12								



Band 26 for FCC (only on channel release)									
BW (MHz)	Modulation	RS Size	RS Offset	Power Low Ch./Freq.	Power High Ch./Freq.	Power Max Ch./Freq.	Time-up (min)	MFR (dB)	MFR (dB)
Channel									
Frequency (MHz)									
15	QPSK	1	0	23.63	23.66	23.71			
15	QPSK	1	48	23.64	23.69	23.74	24.8	0	
15	QPSK	1	96	23.65	23.73	23.81			
15	QPSK	36	0	23.66	23.69	23.68			
15	QPSK	36	24	23.71	23.76	23.81	23.8	1	
15	QPSK	36	48	23.75	23.76	23.80			
15	QPSK	75	0	23.74	23.75	23.79			
15	QPSK	75	24	23.77	23.78	23.82	23.8	1	
15	QPSK	75	48	23.83	23.83	23.88			
15	QPSK	144	0	23.87	23.89	23.89			
15	QPSK	144	72	23.92	23.92	23.96	23.8	1	
15	QPSK	144	144	23.97	23.99	23.99			
15	QPSK	288	0	23.98	23.99	24.03			
15	QPSK	288	144	23.99	24.01	24.03	23.8	2	
15	QPSK	288	288	24.01	24.02	24.06			
15	QPSK	576	0	24.02	24.03	24.07			
15	QPSK	576	288	24.03	24.04	24.08	23.8	2	
15	QPSK	576	576	24.05	24.06	24.10			
15	QPSK	1152	0	24.06	24.07	24.11			
15	QPSK	1152	576	24.07	24.08	24.12	23.8	3	
15	QPSK	1152	1152	24.09	24.10	24.14			
15	QPSK	2304	0	24.10	24.11	24.15			
15	QPSK	2304	1152	24.11	24.12	24.16	23.8	5	
15	QPSK	2304	2304	24.13	24.14	24.18			
15	QPSK	4608	0	24.14	24.15	24.19			
15	QPSK	4608	2304	24.15	24.16	24.20	23.8	5	
15	QPSK	4608	4608	24.17	24.18	24.22			
15	QPSK	9216	0	24.18	24.19	24.23			
15	QPSK	9216	4608	24.19	24.20	24.24	23.8	5	
15	QPSK	9216	9216	24.21	24.22	24.26			
15	QPSK	18432	0	24.22	24.23	24.27			
15	QPSK	18432	9216	24.23	24.24	24.28	23.8	5	
15	QPSK	18432	18432	24.25	24.26	24.30			
15	QPSK	36864	0	24.26	24.27	24.31			
15	QPSK	36864	18432	24.27	24.28	24.32	23.8	5	
15	QPSK	36864	36864	24.29	24.30	24.34			
15	QPSK	73728	0	24.30	24.31	24.35			
15	QPSK	73728	36864	24.31	24.32	24.36	23.8	5	
15	QPSK	73728	73728	24.33	24.34	24.38			
15	QPSK	147456	0	24.34	24.35	24.39			
15	QPSK	147456	73728	24.35	24.36	24.40	23.8	5	
15	QPSK	147456	147456	24.37	24.38	24.42			
15	QPSK	294912	0	24.38	24.39	24.43			
15	QPSK	294912	147456	24.39	24.40	24.44	23.8	5	
15	QPSK	294912	294912	24.41	24.42	24.46			
15	QPSK	589824	0	24.42	24.43	24.47			
15	QPSK	589824	589824	24.43	24.44	24.48	23.8	5	
15	QPSK	1179648	0	24.44	24.45	24.49			
15	QPSK	1179648	1179648	24.45	24.46	24.50	23.8	5	
15	QPSK	1179648	2359296	24.47	24.48	24.52			
15	QPSK	2359296	0	24.48	24.49	24.53			
15	QPSK	2359296	1179648	24.49	24.50	24.54	23.8	5	
15	QPSK	2359296	2359296	24.51	24.52	24.56			
15	QPSK	4718592	0	24.52	24.53	24.57			
15	QPSK	4718592	4718592	24.53	24.54	24.58	23.8	5	
15	QPSK	9437184	0	24.54	24.55	24.59			
15	QPSK	9437184	9437184	24.55	24.56	24.60	23.8	5	
15	QPSK	18874368	0	24.56	24.57	24.61			
15	QPSK	18874368	18874368	24.57	24.58	24.62	23.8	5	
15	QPSK	37748736	0	24.58	24.59	24.63			
15	QPSK	37748736	37748736	24.59	24.60	24.64	23.8	5	
15	QPSK	75497472	0	24.60	24.61	24.65			
15	QPSK	75497472	75497472	24.61	24.62	24.66	23.8	5	
15	QPSK	150994944	0	24.62	24.63	24.67			
15	QPSK	150994944	150994944	24.63	24.64	24.68	23.8	5	
15	QPSK	301989888	0	24.64	24.65	24.69			
15	QPSK	301989888	301989888	24.65	24.66	24.70	23.8	5	
15	QPSK	603979776	0	24.66	24.67	24.71			
15	QPSK	603979776	603979776	24.67	24.68	24.72	23.8	5	
15	QPSK	1207959552	0	24.68	24.69	24.73			
15	QPSK	1207959552	1207959552	24.69	24.70	24.74	23.8	5	
15	QPSK	2415919104	0	24.70	24.71	24.75			
15	QPSK	2415919104	2415919104	24.71	24.72	24.76	23.8	5	
15	QPSK	4831838208	0	24.72	24.73	24.77			
15	QPSK	4831838208	4831838208	24.73	24.74	24.78	23.8	5	
15	QPSK	9663676416	0	24.74	24.75	24.79			
15	QPSK	9663676416	9663676416	24.75	24.76	24.80	23.8	5	
15	QPSK	19327352832	0	24.76	24.77	24.81			
15	QPSK	19327352832	19327352832	24.77	24.78	24.82	23.8	5	
15	QPSK	38654705664	0	24.78	24.79	24.83			
15	QPSK	38654705664	38654705664	24.79	24.80	24.84	23.8	5	
15	QPSK	77309411328	0	24.80	24.81	24.85			
15	QPSK	77309411328	77309411328	24.81	24.82	24.86	23.8	5	
15	QPSK	154618822656	0	24.82	24.83	24.87			
15	QPSK	154618822656	154618822656	24.83	24.84	24.88	23.8	5	
15	QPSK	309237645312	0	24.84	24.85	24.89			
15	QPSK	309237645312	309237645312	24.85	24.86	24.90	23.8	5	
15	QPSK	618475290624	0	24.86	24.87	24.91			
15	QPSK	618475290624	618475290624	24.87	24.88	24.92	23.8	5	
15	QPSK	1236950581248	0	24.88	24.89	24.93			
15	QPSK	1236950581248	1236950581248	24.89	24.90	24.94	23.8	5	
15	QPSK	2473901162496	0	24.90	24.91	24.95			
15	QPSK	2473901162496	2473901162496	24.91	24.92	24.96	23.8	5	
15	QPSK	4947802324992	0	24.92	24.93	24.97			
15	QPSK	4947802324992	4947802324992	24.93	24.94	24.98	23.8	5	
15	QPSK	9895604649984	0	24.94	24.95	25.01			
15	QPSK	9895604649984	9895604649984	24.95	24.96	25.02	23.8	5	
15	QPSK	19791209299968	0	24.96	24.97	25.03			
15	QPSK	19791209299968	19791209299968	24.97	24.98	25.04	23.8	5	
15	QPSK	39582418599936	0	24.98	24.99	25.05			
15	QPSK	39582418599936	39582418599936	24.99	25.00	25.06	23.8	5	
15	QPSK	79164837199872	0	25.00	25.01	25.07			
15	QPSK	79164837199872	79164837199872	25.01	25.02	25.08	23.8	5	
15	QPSK	158329674399744	0	25.02	25.03	25.09			
15	QPSK	158329674399744	158329674399744	25.03	25.04	25.10	23.8	5	
15	QPSK	316659348799488	0	25.04	25.05	25.11			
15	QPSK	316659348799488	316659348799488	25.05	25.06	25.12	23.8	5	
15	QPSK	633318697598976	0	25.06	25.07	25.13			
15	QPSK	633318697598976	633318697598976	25.07	25.08	25.14	23.8	5	
15	QPSK	1266637395197952	0	25.08	25.09	25.15			
15	QPSK	1266637395197952	1266637395197952	25.09	25.10	25.16	23.8	5	
15	QPSK	2533274790395904	0	25.10	25.11	25.17			
15	QPSK	2533274790395904	2533274790395904	25.11	25.12	25.18	23.8	5	
15	QPSK	5066549580791808	0	25.12	25.13	25.19			
15	QPSK	5066549580791808	5066549580791808	25.13	25.14	25.20	23.8	5	
15	QPSK	10133099161583616	0	25.14	25.15	25.21			
15	QPSK	10133099161583616	10133099161583616	25.15	25.16	25.22	23.8	5	
15	QPSK	20266198323167232	0	25.16	25.17	25.23			
15	QPSK	20266198323167232	20266198323167232	25.17	25.18	25.24	23.8	5	
15	QPSK	40532396646334464	0	25.18	25.19	25.25			
15	QPSK	40532396646334464	40532396646334464	2					



Band 38(only on channel required)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Fwh)	Power Middle Ch. (Fwh)	Power High Ch. (Fwh)	Tune-up limit (dBm)	MPR (dB)		
Channel				3760	3800	3815				
Frequency (MHz)										
50	QPSK	1	0	2308	2374	2377	24.8	0		
50	QPSK	1	40	2314	2374	2377				
50	QPSK	1	80	2320	2374	2377				
50	QPSK	50	0	2317	2374	2377				
50	QPSK	50	40	2323	2374	2377				
50	QPSK	50	80	2329	2374	2377				
50	QPSK	100	0	2321	2374	2377	23.8	1		
50	QPSK	100	40	2327	2374	2377				
50	QPSK	100	80	2333	2374	2377				
50	16QAM	1	0	2329	2374	2377	23.8	1		
50	16QAM	1	40	2335	2374	2377				
50	16QAM	1	80	2341	2374	2377				
50	16QAM	50	0	2327	2374	2377				
50	16QAM	50	40	2333	2374	2377				
50	16QAM	50	80	2339	2374	2377				
50	16QAM	100	0	2331	2374	2377	22.8	2		
50	16QAM	100	40	2337	2374	2377				
50	16QAM	100	80	2343	2374	2377				
50	64QAM	1	0	2337	2374	2377	22.8	2		
50	64QAM	1	40	2343	2374	2377				
50	64QAM	1	80	2349	2374	2377				
50	64QAM	50	0	2335	2374	2377				
50	64QAM	50	40	2341	2374	2377				
50	64QAM	50	80	2347	2374	2377				
50	64QAM	100	0	2333	2374	2377	21.8	3		
50	64QAM	100	40	2339	2374	2377				
50	64QAM	100	80	2345	2374	2377				
50	256QAM	1	0	1833	1834	1836	19.8	5		
50	256QAM	1	40	1839	1834	1836				
50	256QAM	1	80	1845	1834	1836				
50	256QAM	50	0	1831	1834	1836				
50	256QAM	50	40	1837	1834	1836				
50	256QAM	50	80	1843	1834	1836				
50	256QAM	100	0	1831	1834	1836	19.8	5		
50	256QAM	100	40	1837	1834	1836				
50	256QAM	100	80	1843	1834	1836				
Channel										
Frequency (MHz)				2577.5	2585	2612.5				
15	QPSK	1	0	2388	2377	2384	24.8	0		
15	QPSK	1	37	2395	2377	2389				
15	QPSK	1	74	2402	2377	2395				
15	QPSK	36	0	2378	2377	2384				
15	QPSK	36	20	2380	2377	2384				
15	QPSK	36	39	2382	2377	2384	23.8	1		
15	QPSK	75	0	2377	2377	2384				
15	QPSK	75	0	2377	2377	2384				
15	16QAM	1	0	2378	2377	2384	23.8	1		
15	16QAM	1	37	2385	2377	2389				
15	16QAM	1	74	2392	2377	2395				
15	16QAM	36	0	2372	2377	2384				
15	16QAM	36	20	2374	2377	2384				
15	16QAM	36	39	2376	2377	2384	22.8	2		
15	16QAM	75	0	2373	2377	2384				
15	16QAM	75	0	2373	2377	2384				
15	64QAM	1	0	2379	2377	2384	22.8	2		
15	64QAM	1	37	2386	2377	2389				
15	64QAM	1	74	2393	2377	2395				
15	64QAM	36	0	2374	2377	2384				
15	64QAM	36	20	2376	2377	2384				
15	64QAM	36	39	2378	2377	2384	21.8	3		
15	64QAM	75	0	2375	2377	2384				
15	256QAM	1	0	1835	1835	1838	19.8	5		
15	256QAM	1	37	1837	1835	1838				
15	256QAM	1	74	1839	1835	1838				
15	256QAM	36	0	1831	1835	1838				
15	256QAM	36	20	1833	1835	1838				
15	256QAM	36	39	1835	1835	1838	19.8	5		
15	256QAM	75	0	1832	1835	1838				
Channel										
Frequency (MHz)				3760	3800	3815				
10	QPSK	1	0	2300	2379	2377	24.8	0		
10	QPSK	1	25	2303	2377	2382				
10	QPSK	1	49	2306	2376	2377				
10	QPSK	25	0	2303	2376	2376				
10	QPSK	25	12	2308	2376	2376				
10	QPSK	25	25	2313	2376	2376	23.8	1		
10	QPSK	50	0	2306	2376	2376				
10	QPSK	50	0	2306	2376	2376				
10	16QAM	1	0	2304	2371	2371	23.8	1		
10	16QAM	1	25	2307	2371	2371				
10	16QAM	1	49	2310	2371	2371				
10	16QAM	25	0	2307	2371	2371				
10	16QAM	25	12	2312	2371	2371				
10	16QAM	25	25	2317	2371	2371	22.8	2		
10	16QAM	50	0	2310	2371	2371				
10	16QAM	50	0	2310	2371	2371				
10	64QAM	1	0	2316	2371	2371	22.8	2		
10	64QAM	1	25	2319	2371	2371				
10	64QAM	1	49	2322	2371	2371				
10	64QAM	25	0	2313	2371	2371				
10	64QAM	25	12	2318	2371	2371				
10	64QAM	25	25	2323	2371	2371	21.8	3		
10	64QAM	50	0	2316	2371	2371				
10	64QAM	50	0	2316	2371	2371				
10	256QAM	1	0	1832	1838	1841	19.8	5		
10	256QAM	1	25	1835	1838	1841				
10	256QAM	1	49	1838	1838	1841				
10	256QAM	25	0	1835	1838	1841				
10	256QAM	25	12	1838	1838	1841				
10	256QAM	25	25	1841	1838	1841	19.8	5		
10	256QAM	50	0	1833	1838	1841				
Channel										
Frequency (MHz)				3775	3800	3825				
5	QPSK	1	0	2305	2374	2380	24.8	0		
5	QPSK	1	12	2308	2374	2377				
5	QPSK	1	24	2311	2374	2377				
5	QPSK	12	0	2304	2374	2377	23.8	1		
5	QPSK	12	7	2307	2374	2377				
5	QPSK	12	13	2311	2374	2377				
5	QPSK	25	0	2307	2374	2377				
5	16QAM	1	0	2306	2371	2371	23.8	1		
5	16QAM	1	12	2309	2371	2371				
5	16QAM	1	24	2312	2371	2371				
5	16QAM	12	0	2309	2371	2371				
5	16QAM	12	7	2312	2371	2371				
5	16QAM	12	13	2316	2371	2371	22.8	2		
5	16QAM	25	0	2312	2371	2371				
5	16QAM	25	0	2312	2371	2371				
5	64QAM	1	0	2318	2371	2371	22.8	2		
5	64QAM	1	12	2321	2371	2371				
5	64QAM	1	24	2324	2371	2371				
5	64QAM	12	0	2315	2371	2371				
5	64QAM	12	7	2318	2371	2371				
5	64QAM	12	13	2322	2371	2371	21.8	3		
5	64QAM	25	0	2318	2371	2371				
5	256QAM	1	0	1837	1832	1834	19.8	5		
5	256QAM	1	12	1839	1832	1834				
5	256QAM	1	24	1841	1832	1834				
5	256QAM	12	0	1835	1832	1834				
5	256QAM	12	7	1838	1832	1834				
5	256QAM	12	13	1842	1832	1834	19.8	5		
5	256QAM	25	0	1834	1832	1834				

Band 41 (2.6G Band)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Fwh)	Power Middle Ch. (Fwh)	Power High Ch. (Fwh)	Tune-up limit (dBm)	MPR (dB)		
Channel				3870	4085	4060	4105	4140		
Frequency (MHz)										
20	QPSK	1	0	2386	2407	2406	24.8	0		
20	QPSK	1	40	2392	2406	2406				
20	QPSK	1	80							



Band 41 (2.6G Band HPUe (Limit 2))												
BW (MHz)	Modulation	RB Size	RB Offset	Channel	Power Low Co. (Frac)	Power Low Middle Co. (Frac)	Power Middle Co. (Frac)	Power High Middle Co. (Frac)	Power High Co. (Frac)	Power Hgt. (Frac)	Time-up limit (dBm)	MPR (dB)
Channel												
Frequency (MHz)					36790	40196	43602	47008	50414	53820		
20	QPSK	1	0	2508	2548.5	2589	2629.5	2670	2710.5	2751	26.8	0
20	QPSK	1	0	2508	2616	2656.5	2697	2737.5	2778	2818.5	26.8	0
20	QPSK	1	0	2508	2684	2724.5	2765	2805.5	2846	2886.5	26.8	0
20	QPSK	1	0	2508	2752	2792.5	2833	2873.5	2914	2954.5	26.8	0
20	QPSK	50	0	2508	2528	2568	2608	2648	2688	2728	26.8	1
20	QPSK	50	0	2508	2596	2636	2676	2716	2756	2796	26.8	1
20	QPSK	50	0	2508	2664	2704	2744	2784	2824	2864	26.8	1
20	QPSK	100	0	2508	2548	2588	2628	2668	2708	2748	26.8	1
20	HQAM	1	0	2520	2560	2600	2640	2680	2720	2760	26.8	1
20	HQAM	1	0	2520	2580	2620	2660	2700	2740	2780	26.8	1
20	HQAM	1	0	2520	2640	2680	2720	2760	2800	2840	26.8	1
20	HQAM	50	0	2401	2440	2480	2520	2560	2600	2640	24.8	2
20	HQAM	50	0	2417	2456	2496	2536	2576	2616	2656	24.8	2
20	HQAM	50	0	2433	2472	2512	2552	2592	2632	2672	24.8	2
20	HQAM	100	0	2417	2456	2496	2536	2576	2616	2656	24.8	2
20	HQAM	100	0	2433	2472	2512	2552	2592	2632	2672	24.8	2
20	HQAM	1	49	2396	2435	2474	2513	2552	2591	2630	24.8	2
20	HQAM	1	49	2412	2451	2490	2529	2568	2607	2646	24.8	2
20	HQAM	1	49	2428	2467	2506	2545	2584	2623	2662	24.8	2
20	HQAM	50	0	2416	2455	2494	2533	2572	2611	2650	23.8	3
20	HQAM	50	0	2432	2471	2510	2549	2588	2627	2666	23.8	3
20	HQAM	100	0	2416	2455	2494	2533	2572	2611	2650	23.8	3
20	HQAM	100	0	2432	2471	2510	2549	2588	2627	2666	23.8	3
20	SSQAM	1	49	2035	2102	2169	2236	2303	2370	2437	21.8	5
20	SSQAM	1	49	2051	2118	2185	2252	2319	2386	2453	21.8	5
20	SSQAM	50	0	2113	2152	2191	2230	2269	2308	2347	21.8	5
20	SSQAM	50	0	2129	2168	2207	2246	2285	2324	2363	21.8	5
20	SSQAM	100	0	2113	2152	2191	2230	2269	2308	2347	21.8	5
20	SSQAM	100	0	2129	2168	2207	2246	2285	2324	2363	21.8	5
Channel												
Frequency (MHz)					25615	2548.5	2593	2637.8	2682.5	2727.5		
16	QPSK	1	0	2586	2626	2666	2706	2746	2786	2826	26.8	0
16	QPSK	1	0	2586	2654	2694	2734	2774	2814	2854	26.8	0
16	QPSK	1	0	2586	2722	2762	2802	2842	2882	2922	26.8	0
16	QPSK	36	0	2496	2536	2576	2616	2656	2696	2736	25.8	1
16	QPSK	36	0	2512	2552	2592	2632	2672	2712	2752	25.8	1
16	QPSK	36	0	2528	2568	2608	2648	2688	2728	2768	25.8	1
16	QPSK	75	0	2512	2552	2592	2632	2672	2712	2752	25.8	1
16	HQAM	1	0	2517	2557	2597	2637	2677	2717	2757	25.8	1
16	HQAM	1	0	2517	2585	2625	2665	2705	2745	2785	25.8	1
16	HQAM	1	0	2517	2645	2685	2725	2765	2805	2845	25.8	1
16	HQAM	50	0	2402	2441	2480	2519	2558	2597	2636	24.8	2
16	HQAM	50	0	2418	2457	2496	2535	2574	2613	2652	24.8	2
16	HQAM	50	0	2434	2473	2512	2551	2590	2629	2668	24.8	2
16	HQAM	100	0	2418	2457	2496	2535	2574	2613	2652	24.8	2
16	HQAM	100	0	2434	2473	2512	2551	2590	2629	2668	24.8	2
16	HQAM	1	49	2404	2443	2482	2521	2560	2599	2638	24.8	2
16	HQAM	1	49	2420	2459	2498	2537	2576	2615	2654	24.8	2
16	HQAM	1	49	2436	2475	2514	2553	2592	2631	2670	24.8	2
16	HQAM	36	0	2287	2326	2365	2404	2443	2482	2521	23.8	3
16	HQAM	36	0	2303	2342	2381	2420	2459	2498	2537	23.8	3
16	HQAM	36	0	2319	2358	2397	2436	2475	2514	2553	23.8	3
16	HQAM	75	0	2303	2342	2381	2420	2459	2498	2537	23.8	3
16	HQAM	75	0	2319	2358	2397	2436	2475	2514	2553	23.8	3
16	SSQAM	1	0	2032	2104	2177	2250	2323	2396	2469	21.8	5
16	SSQAM	1	0	2048	2120	2193	2266	2339	2412	2485	21.8	5
16	SSQAM	50	0	2103	2133	2163	2193	2223	2253	2283	21.8	5
16	SSQAM	50	0	2119	2149	2179	2209	2239	2269	2299	21.8	5
16	SSQAM	100	0	2103	2133	2163	2193	2223	2253	2283	21.8	5
16	SSQAM	100	0	2119	2149	2179	2209	2239	2269	2299	21.8	5
Channel												
Frequency (MHz)					36790	40196	43602	47008	50414	53820		
16	QPSK	1	0	2576	2616	2656	2696	2736	2776	2816	26.8	0
16	QPSK	1	0	2576	2644	2684	2724	2764	2804	2844	26.8	0
16	QPSK	1	0	2576	2712	2752	2792	2832	2872	2912	26.8	0
16	QPSK	1	0	2576	2780	2820	2860	2900	2940	2980	26.8	0
16	QPSK	25	0	2508	2548	2588	2628	2668	2708	2748	25.8	1
16	QPSK	25	0	2524	2564	2604	2644	2684	2724	2764	25.8	1
16	QPSK	25	0	2540	2580	2620	2660	2700	2740	2780	25.8	1
16	QPSK	50	0	2508	2548	2588	2628	2668	2708	2748	25.8	1
16	HQAM	1	0	2520	2560	2600	2640	2680	2720	2760	25.8	1
16	HQAM	1	0	2520	2580	2620	2660	2700	2740	2780	25.8	1
16	HQAM	1	0	2520	2640	2680	2720	2760	2800	2840	25.8	1
16	HQAM	50	0	2402	2441	2480	2519	2558	2597	2636	24.8	2
16	HQAM	50	0	2418	2457	2496	2535	2574	2613	2652	24.8	2
16	HQAM	50	0	2434	2473	2512	2551	2590	2629	2668	24.8	2
16	HQAM	100	0	2418	2457	2496	2535	2574	2613	2652	24.8	2
16	HQAM	100	0	2434	2473	2512	2551	2590	2629	2668	24.8	2
16	HQAM	1	49	2404	2443	2482	2521	2560	2599	2638	24.8	2
16	HQAM	1	49	2420	2459	2498	2537	2576	2615	2654	24.8	2
16	HQAM	1	49	2436	2475	2514	2553	2592	2631	2670	24.8	2
16	HQAM	36	0	2272	2311	2350	2389	2428	2467	2506	23.8	3
16	HQAM	36	0	2288	2327	2366	2405	2444	2483	2522	23.8	3
16	HQAM	36	0	2304	2343	2382	2421	2460	2499	2538	23.8	3
16	HQAM	75	0	2288	2327	2366	2405	2444	2483	2522	23.8	3
16	HQAM	75	0	2304	2343	2382	2421	2460	2499	2538	23.8	3
16	SSQAM	1	0	2034	2106	2178	2250	2322	2394	2466	21.8	5
16	SSQAM	1	0	2050	2122	2194	2266	2338	2410	2482	21.8	5
16	SSQAM	50	0	2105	2135	2165	2195	2225	2255	2285	21.8	5
16	SSQAM	50	0	2121	2151	2181	2211	2241	2271	2301	21.8	5
16	SSQAM	100	0	2105	2135	2165	2195	2225	2255	2285	21.8	5
16	SSQAM	100	0	2121	2151	2181	2211	2241	2271	2301	21.8	5
Channel												
Frequency (MHz)					36790	40196	43602	47008	50414	53820		
5	QPSK	1	0	2576	2616	2656	2696	2736	2776	2816	26.8	0
5	QPSK	1	0	2576	2644	2684	2724	2764	2804	2844	26.8	0
5	QPSK	1	0	2576	2712	2752	2792	2832	2872	2912	26.8	0
5	QPSK	12	0	2508	2548	2588	2628	2668	2708	2748	25.8	1
5	QPSK	12	0	2524	2564	2604	2644	2684	2724	2764		



Reduced Power level 1 for Head – UAT

SMB5	SMB Average Power (dBm)			Turn-up Limit (dBm)	Frame Average Power (dBm)			Turn-up Limit (dBm)
	824.2	832.4	848.8		824.2	832.4	848.8	
TX Channel	31.20	31.30	30.90	31.70	22.20	22.03	21.80	22.70
Frequency (MHz)	824.2	832.4	848.8	824.2	832.4	848.8	824.2	832.4
CDMA 1 Tx test	27.86	28.23	28.15	28.08	21.96	22.25	22.15	23.00
OPHS 2 Tx test	26.49	26.74	26.58	27.00	22.23	22.48	22.29	22.94
OPHS 4 Tx test	25.33	25.48	25.28	25.70	22.50	22.69	22.28	23.15
EDGE 1 Tx test	25.58	25.54	25.74	26.00	18.58	18.54	18.74	17.00
EDGE 2 Tx test	25.82	25.67	25.81	26.40	17.82	17.67	17.91	16.40
EDGE 3 Tx test	25.88	25.52	25.15	25.30	18.72	18.70	18.54	19.04
EDGE 4 Tx test	22.14	22.23	22.32	22.80	19.14	19.23	19.32	19.80

SMB5	SMB Average Power (dBm)			Turn-up Limit (dBm)	Frame Average Power (dBm)			Turn-up Limit (dBm)
	824.2	832.4	848.8		824.2	832.4	848.8	
TX Channel	24.15	24.00	24.01	25.00	15.15	15.00	15.01	16.00
Frequency (MHz)	824.2	832.4	848.8	824.2	832.4	848.8	824.2	832.4
CDMA 1 Tx test	24.15	23.98	23.99	25.00	15.13	14.98	14.99	16.00
OPHS 2 Tx test	21.15	20.94	20.77	22.00	15.15	14.94	14.77	16.00
OPHS 3 Tx test	19.35	19.32	18.94	20.00	13.09	14.89	14.88	16.24
OPHS 4 Tx test	18.28	18.40	18.08	20.00	13.28	14.05	14.08	17.00
EDGE 1 Tx test	24.02	23.80	23.85	25.00	15.02	14.88	14.88	16.00
EDGE 2 Tx test	21.01	20.94	20.88	21.80	15.01	14.94	14.88	15.80
EDGE 3 Tx test	19.30	19.33	19.00	19.70	14.84	14.88	14.88	16.44
EDGE 4 Tx test	18.22	18.25	18.12	18.70	15.22	15.20	15.12	15.70

Band	WCDMA 8			Turn-up Limit (dBm)	WCDMA 14			Turn-up Limit (dBm)	WCDMA 17			Turn-up Limit (dBm)	
	8262	8600	8638		8312	8413	8513		4152	4162	4228		
TX Channel	9002	9000	9008	1037	1030	1038	1159	4387	4407	4458	4504	4508	
Frequency (MHz)	8262.4	8599.6	8637.2	8312.4	8413.6	8513.2	4152.4	4162.4	4228.4	4387.6	4407.6	4458.4	
3GPP Ref #1	ARM 12.288ba	17.28	17.40	17.34	16.50	16.62	16.23	16.15	16.00	22.50	22.82	23.31	23.50
3GPP Ref #1	ARM 12.288ba	17.30	17.40	17.38	16.50	16.50	16.18	16.00	22.50	22.80	23.25	23.50	
3GPP Ref #1	HSPA Subtest1	16.37	16.20	16.48	17.00	17.00	17.14	17.01	16.90	21.40	21.40	21.60	22.00
3GPP Ref #1	HSPA Subtest2	16.37	16.32	16.50	17.00	17.00	17.13	17.00	21.40	21.60	21.60	22.00	
3GPP Ref #1	HSPA Subtest3	14.84	14.80	14.60	17.00	16.60	16.64	16.67	21.10	21.10	21.20	21.60	
3GPP Ref #1	HSPA Subtest4	15.83	15.91	15.84	17.00	16.50	16.84	16.84	21.21	21.13	21.10	22.00	
3GPP Ref #1	DC-HSPA Subtest1	16.28	16.50	16.47	17.00	16.90	16.90	17.03	18.00	21.40	21.57	21.80	22.00
3GPP Ref #1	DC-HSPA Subtest2	15.25	15.09	15.43	17.00	16.90	16.90	17.01	18.00	21.45	21.60	21.60	22.00
3GPP Ref #1	DC-HSPA Subtest3	15.74	15.68	15.91	17.00	16.51	16.43	16.51	17.00	20.30	21.06	21.00	22.00
3GPP Ref #1	DC-HSPA Subtest4	15.73	15.64	15.95	17.00	16.48	16.41	16.49	17.00	20.30	21.04	20.97	22.00
3GPP Ref #1	HSPA Subtest1	16.22	16.42	16.34	17.00	16.80	16.97	17.02	18.00	21.78	22.04	21.80	22.00
3GPP Ref #1	HSPA Subtest2	14.31	14.58	14.38	15.00	14.83	15.03	15.04	16.00	19.61	19.84	19.80	20.30
3GPP Ref #1	HSPA Subtest3	13.37	13.57	13.43	14.00	13.87	14.04	13.93	15.00	18.42	18.83	18.61	18.50
3GPP Ref #1	HSPA Subtest4	14.08	14.20	14.01	15.00	14.80	14.85	14.89	16.00	19.38	19.83	19.80	20.30
3GPP Ref #1	HSPA Subtest5	16.30	16.50	16.40	17.00	16.80	17.00	17.00	18.00	21.20	21.22	21.20	22.40
3GPP Ref #1	HSPA (VDDMAX) Subtest1	14.80	14.80	14.72	15.00	15.00	15.18	15.10	16.00	19.94	19.81	19.94	20.00

Band	CDMA 800			Turn-up Limit (dBm)	CDMA 1900			Turn-up Limit (dBm)
	824.7	832.4	848.51		824.7	832.4	848.51	
TX Channel	1813	1813	1813	1813	1813	1813	1813	1813
Frequency (MHz)	824.7	832.4	848.51	824.7	832.4	848.51	824.7	832.4
NC1 800S	23.38	23.41	23.40	24.00	17.50	17.57	17.54	18.00
NC1 800S	23.38	23.41	23.39	24.00	17.49	17.56	17.52	18.00
NC1 800S (#100Hz)	23.35	23.42	23.37	24.00	17.47	17.54	17.51	18.00
NC1 800S (#500Hz)	23.34	23.40	23.36	24.00	17.46	17.52	17.50	18.00
NC1 800S (#1000Hz)	23.32	23.38	23.34	24.00	17.45	17.51	17.48	18.00
NC1 800S (#2000Hz)	23.30	23.37	23.33	24.00	17.43	17.49	17.47	18.00



Band 2 (100MHz Band) Part 2E

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power (W), Power Ch./Frac., Power F./Frac., Turn-up (dB), MPR (dB), and MPR (dB). Contains 100 rows of data for various frequencies and power levels.

Band 4 (400 MHz Band) Part 2L (Only on channel required)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power (W), Power Ch./Frac., Power F./Frac., Turn-up (dB), MPR (dB), and MPR (dB). Contains 100 rows of data for various frequencies and power levels.

Band 5 (Carrier Band) Part 2P (Only on channel required)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power (W), Power Ch./Frac., Power F./Frac., Turn-up (dB), MPR (dB), and MPR (dB). Contains 100 rows of data for various frequencies and power levels.

Band 7 (200MHz Band) Part 2T

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power (W), Power Ch./Frac., Power F./Frac., Turn-up (dB), MPR (dB), and MPR (dB). Contains 100 rows of data for various frequencies and power levels.



Band 25 (100MHz) Band Part 24E

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./Frac, Power Ch./Frac, Power Ch./Frac, Turn-up (dBm), MPR (dB). Contains frequency allocation data for Band 25 (100MHz) Part 24E.

Band 26 for FCC (only on channel required)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./Frac, Power Ch./Frac, Power Ch./Frac, Turn-up (dBm), MPR (dB). Contains frequency allocation data for Band 26 for FCC.

Band 26

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./Frac, Power Ch./Frac, Power Ch./Frac, Turn-up (dBm), MPR (dB). Contains frequency allocation data for Band 26.

Band 66

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./Frac, Power Ch./Frac, Power Ch./Frac, Turn-up (dBm), MPR (dB). Contains frequency allocation data for Band 66.



Reduced Power level 2/3 for Head – UAT

TX Channel	Base Average Power (dBm)			Turn-up Limit (dBm)	Power/Average Power (dBm)			Turn-up Limit (dBm)
	125	180	251		125	180	251	
Frequency (MHz)	854.2	856.4	858.8	857	854.2	856.4	858.8	857
GSMT 1 Tx Ant	31.18	31.30	30.95	31.70	22.18	22.30	21.95	22.70
GSMT 2 Tx Ant	27.98	28.25	28.15	29.60	21.98	22.25	22.15	23.00
GSMT 3 Tx Ant	28.48	28.74	28.65	29.30	22.23	22.48	22.28	23.04
GSMT 4 Tx Ant	25.53	25.46	25.28	26.70	22.53	22.46	22.28	23.70
EDGE 1 Tx Ant	25.58	25.54	25.74	26.80	18.58	18.54	18.74	17.80
EDGE 2 Tx Ant	23.82	23.87	23.91	24.40	17.82	17.87	17.81	18.40
EDGE 3 Tx Ant	22.88	23.82	23.10	23.35	18.72	18.76	18.84	18.94
EDGE 4 Tx Ant	22.14	22.23	22.35	22.80	18.14	18.23	18.32	18.80

TX Channel	Base Average Power (dBm)			Turn-up Limit (dBm)	Power/Average Power (dBm)			Turn-up Limit (dBm)
	125	180	251		125	180	251	
Frequency (MHz)	859.2	861	863	862	859.2	861	863	862
GSMT 1 Tx Ant	24.15	24.00	24.01	24.80	18.15	18.00	18.01	18.80
GSMT 2 Tx Ant	28.13	27.98	27.99	28.90	18.13	18.08	18.09	19.00
GSMT 3 Tx Ant	21.15	20.94	20.77	22.80	16.15	16.04	16.77	18.00
GSMT 4 Tx Ant	19.35	19.12	18.94	20.50	15.00	14.86	14.89	16.24
GSMT 5 Tx Ant	18.28	18.25	18.08	20.00	15.28	15.25	15.08	17.00
EDGE 1 Tx Ant	24.01	23.98	23.81	24.80	18.01	18.08	18.01	18.80
EDGE 2 Tx Ant	21.81	20.94	20.88	21.80	15.81	14.94	14.88	15.80
EDGE 3 Tx Ant	19.25	19.12	18.95	19.70	14.80	14.80	14.80	15.44
EDGE 4 Tx Ant	18.22	18.25	18.10	18.70	15.22	15.25	15.10	16.70

Base	WCDMA 1			Turn-up Limit (dBm)	WCDMA 4			WCDMA 5			Turn-up Limit (dBm)		
	8502	8505	8538		1312	1413	1513	4152	4155	4253			
TX Channel	8502	8505	8538	857	1312	1413	1513	4152	4155	4253	857		
Frequency (MHz)	8502.8	8505.8	8537.8	857	1312.8	1413.8	1513.8	4152.8	4155.8	4253.8	857		
3GPP Rel 99	AMR 12.2kbit	17.28	17.40	17.34	18.50	18.62	18.23	18.15	18.80	21.09	21.18	21.24	22.20
3GPP Rel 99	AMR 12.2kbit	17.26	17.43	17.36	18.50	18.58	18.30	18.25	18.80	21.11	21.20	21.25	22.20
3GPP Rel 6	HSDPA Subclass1	18.37	18.29	18.48	17.40	17.68	17.14	17.17	18.00	20.19	20.31	20.27	21.28
3GPP Rel 6	HSDPA Subclass2	18.37	18.12	18.50	17.50	17.60	17.18	17.13	18.00	20.05	20.34	20.28	21.28
3GPP Rel 6	HSDPA Subclass3	15.84	15.80	15.85	17.00	16.60	16.64	16.67	17.00	19.83	19.73	19.70	20.70
3GPP Rel 6	HSDPA Subclass4	15.83	15.81	15.84	17.00	16.50	16.84	16.84	17.00	19.87	19.83	19.88	20.70
3GPP Rel 6	EC-HSDPA Subclass1	18.28	18.10	18.47	17.00	18.00	18.02	17.80	18.00	19.80	20.10	20.01	21.20
3GPP Rel 6	EC-HSDPA Subclass2	18.28	18.00	18.43	17.00	18.00	18.00	17.81	18.00	20.00	20.24	20.14	21.20
3GPP Rel 6	EC-HSDPA Subclass3	15.74	15.86	15.91	17.00	16.51	16.43	16.51	17.00	19.61	19.78	19.88	20.70
3GPP Rel 6	EC-HSDPA Subclass4	15.73	15.84	15.89	17.00	16.46	16.41	16.46	17.00	19.61	19.66	19.68	20.70
3GPP Rel 6	HSPA Subclass1	18.22	18.42	18.34	17.00	18.00	18.07	17.80	18.00	20.20	20.32	20.23	21.20
3GPP Rel 6	HSPA Subclass2	14.31	14.58	14.38	16.80	14.83	15.03	15.04	16.80	18.31	18.52	18.46	19.80
3GPP Rel 6	HSPA Subclass3	13.37	13.57	13.43	16.80	13.87	14.08	13.81	16.80	18.08	17.87	17.88	19.20
3GPP Rel 6	HSPA Subclass4	14.08	14.30	14.01	16.80	14.80	14.85	14.89	16.80	18.09	18.32	18.15	19.80
3GPP Rel 6	HSPA Subclass5	18.30	18.30	18.40	17.00	18.00	17.00	17.00	18.00	19.78	19.80	19.79	21.10
3GPP Rel 7	HSPA+ (MCS) Subclass1	14.62	14.88	14.72	16.80	15.00	15.18	15.18	16.80	18.32	18.38	18.18	19.70

Base	CDMA 800			Turn-up Limit (dBm)	CDMA 800			CDMA 1900			Turn-up Limit (dBm)	
	8513	861	777		25	800	1175	478	800	664		
TX Channel	8513	861	777	857	25	800	1175	478	800	664	857	
Frequency (MHz)	854.7	856.52	848.31	857	853.722	860	1007.75	877.0	820.5	821.1	857	
IS-97B	21.87	21.98	21.91	23.00	17.40	17.56	17.52	18.50	21.58	21.85	21.81	24.50
IS-97B (F-SSCH)	21.85	21.98	21.88	23.00	17.47	17.54	17.51	18.50	21.67	21.83	21.80	24.50
IS-97B (F-SSCH)	17.96	21.85	21.85	23.00	17.40	17.50	17.50	18.50	21.50	21.80	21.80	24.50
IS-97B (F-SSCH)	21.82	21.92	21.88	23.00	17.45	17.51	17.48	18.50	21.53	21.82	21.87	24.50
IS-97B (F-SSCH)	21.81	21.91	21.84	23.00	17.43	17.49	17.47	18.50	21.52	21.80	21.85	24.50



Reduced power for Hotspot on-UAT

Band	WCDMA I			Turn-up Limit (dBm)	WCDMA IV			Turn-up Limit (dBm)
	9052	9050	9038		1512	1415	1513	
TX Channel	9052	9050	9038	1507	1408	1508	1507	
Frequency (MHz)	9052	9050	9038	1507	1408	1508	1507	
SCPP Rel 50	AMR 12.2kops	22.18	22.50	22.25	23.20	22.72	22.88	22.87
SCPP Rel 50	AMR 12.2kops	22.21	22.52	22.28	23.20	22.74	22.90	22.89
SCPP Rel 6	HSPA Subclass2	21.02	21.02	20.95	22.20	21.02	21.08	21.08
SCPP Rel 6	HSPA Subclass2	21.03	21.01	20.76	22.20	21.07	21.17	21.05
SCPP Rel 6	HSPA Subclass2	20.53	20.57	20.26	21.70	20.57	20.62	20.56
SCPP Rel 6	HSPA Subclass4	20.54	20.54	20.44	21.70	20.58	20.61	20.57
SCPP Rel 6	DC-HSPA Subclass1	20.80	20.69	20.74	22.20	20.84	20.82	20.80
SCPP Rel 6	DC-HSPA Subclass2	20.82	20.84	20.88	22.20	20.86	20.94	20.91
SCPP Rel 6	DC-HSPA Subclass3	20.38	20.42	20.23	21.70	20.40	20.56	20.51
SCPP Rel 6	DC-HSPA Subclass4	20.38	20.43	20.24	21.70	20.44	20.58	20.49
SCPP Rel 6	HSPA Subclass1	21.25	21.33	21.12	22.20	21.19	21.05	21.13
SCPP Rel 6	HSPA Subclass2	19.25	19.32	19.11	20.20	19.21	19.37	19.31
SCPP Rel 6	HSPA Subclass3	18.28	18.34	18.12	19.20	18.37	18.57	18.49
SCPP Rel 6	HSPA Subclass4	19.54	19.54	19.26	20.20	19.24	19.36	19.32
SCPP Rel 6	HSPA Subclass5	21.18	21.20	21.10	22.20	21.19	21.20	21.20
SCPP Rel 7	HSPA (HS-AM) Subclass1	19.49	19.55	19.41	20.20	19.41	19.64	19.52

Band	GSM-RCT			Turn-up Limit (dBm)
	26	900	1175	
TX Channel	26 <td>900 <td>1175 <td>1800</td> </td></td>	900 <td>1175 <td>1800</td> </td>	1175 <td>1800</td>	1800
Frequency (MHz)	1801.5	1800	1800.75	
RCT 50dB	22.44	22.43	22.41	23.50
RCT 50dB	22.43	22.45	22.49	23.50
RCT 50dB F-SCCH	22.41	22.45	22.38	23.50
RCT 50dB (SCCH)	22.40	22.44	22.38	23.50
RFAP 20kops	22.36	22.41	22.35	23.50
RFAP 40kops	22.37	22.40	22.34	23.50



Full Power Mode - LAT

OSM90	Sub-Average Power (dBm)			Time-up Limit (dBm)	Frame-Average Power (dBm)			Time-up Limit (dBm)
	150	180	201		150	180	201	
TX Channel	824.2	834.4	848.8	150	150	150	150	
Frequency (MHz)	824.2	834.4	848.8	150	150	150	150	
OSM1 TX rate	33.02	32.99	32.98	33.30	34.02	33.99	33.98	
OSM1 TX peak	33.90	33.90	33.90	33.90	34.00	33.99	33.99	
OSM2 TX rate	30.38	30.40	30.38	31.10	31.38	31.40	31.38	
OSM2 TX peak	31.00	31.00	31.00	31.00	31.00	31.00	31.00	
OSM3 TX rate	28.10	27.60	27.60	28.30	28.10	28.00	28.00	
OSM3 TX peak	28.00	28.00	28.00	28.00	28.00	28.00	28.00	
EDGE 1 TX rate	25.50	25.60	25.91	26.60	18.50	18.60	18.91	
EDGE 1 TX peak	22.80	23.00	24.10	25.20	17.60	17.80	18.30	
EDGE 2 TX rate	22.81	23.00	22.85	24.30	18.50	18.74	18.50	
EDGE 2 TX peak	22.08	22.30	22.13	23.70	18.00	18.30	18.10	

OSM100	Sub-Average Power (dBm)			Time-up Limit (dBm)	Frame-Average Power (dBm)			Time-up Limit (dBm)
	150	180	201		150	180	201	
TX Channel	860.2	860	860	150	150	150	150	
Frequency (MHz)	860.2	860	860	150	150	150	150	
OSM1 TX rate	29.72	29.60	29.88	30.80	29.72	29.68	29.88	
OSM1 TX peak	29.70	29.68	29.85	30.80	29.70	29.68	29.85	
OSM2 TX rate	25.94	25.95	25.95	26.10	25.94	25.95	25.95	
OSM2 TX peak	26.12	25.98	26.03	27.00	21.88	21.70	21.77	
OSM3 TX rate	23.71	23.68	23.60	23.90	23.71	23.68	23.60	
OSM3 TX peak	23.68	23.65	23.52	23.80	18.08	18.05	18.12	
EDGE 1 TX rate	24.05	23.75	24.10	24.60	18.95	17.75	18.10	
EDGE 1 TX peak	23.13	22.90	23.00	23.80	18.87	18.87	18.94	
EDGE 2 TX rate	22.02	21.85	22.07	22.30	18.60	18.85	18.07	

Band	WCDMA S			Time-up Limit (dBm)	WCDMA T			Time-up Limit (dBm)	WCDMA V			Time-up Limit (dBm)	
	8262	8400	8638		1312	1413	1513		4152	4162	4228		
TX Channel	8602	8600	8638	150	150	150	150	150	150	150	150	150	
Frequency (MHz)	8602	8600	8638	150	150	150	150	150	150	150	150	150	
SCFP Rate 50	ARF 12.2500s	38.31	24.38	24.23	24.80	24.31	24.39	24.27	24.80	24.40	24.44	24.40	24.80
SCFP Rate 80	ARF 12.2500s	26.36	26.38	26.35	26.80	26.41	26.38	26.36	26.80	26.40	26.40	26.41	26.80
SCFP Rate 6	HS-PA Submode1	23.33	23.41	23.27	23.80	23.22	23.40	23.34	23.80	23.52	23.50	23.40	23.80
SCFP Rate 6	HS-PA Submode2	23.34	23.40	23.27	23.80	23.30	23.40	23.32	23.80	23.56	23.50	23.47	23.80
SCFP Rate 6	HS-PA Submode3	22.81	22.81	22.73	23.30	22.82	22.83	22.83	23.30	23.00	22.98	22.93	23.30
SCFP Rate 6	HS-PA Submode4	22.82	22.88	22.78	23.30	22.79	22.81	22.82	23.30	23.10	22.82	22.81	23.30
SCFP Rate 6	DC-HS-PA Submode1	23.25	23.38	23.17	23.80	23.07	23.20	23.17	23.80	23.00	23.56	23.34	23.80
SCFP Rate 6	DC-HS-PA Submode2	23.23	23.32	23.11	23.80	23.10	23.07	23.10	23.80	23.84	23.53	23.30	23.80
SCFP Rate 6	DC-HS-PA Submode3	22.81	22.84	22.62	23.30	22.69	22.81	22.74	23.30	23.01	23.05	22.87	23.30
SCFP Rate 6	DC-HS-PA Submode4	22.80	22.72	22.68	23.30	22.67	22.78	22.72	23.30	23.00	23.08	22.86	23.30
SCFP Rate 6	HS-PA Submode1	21.32	21.27	21.00	21.80	21.18	21.28	21.24	21.80	21.50	21.50	21.41	21.80
SCFP Rate 6	HS-PA Submode2	21.34	21.42	21.30	21.80	21.46	21.37	21.31	21.80	21.52	21.50	21.34	21.80
SCFP Rate 6	HS-PA Submode3	21.32	21.40	21.28	21.80	21.31	21.40	21.35	21.80	21.58	21.46	21.40	21.80
SCFP Rate 6	HS-PA Submode4	21.08	21.22	21.00	21.60	21.28	21.40	21.32	21.60	21.30	21.27	21.24	21.60
SCFP Rate 6	HS-PA Submode5	21.30	21.50	21.30	21.80	21.32	21.52	21.42	21.80	21.56	21.58	21.48	21.80
SCFP Rate 6	HS-PA (DC-HS-PA) Submode5	21.30	21.50	21.30	21.80	21.30	21.42	21.31	21.80	21.38	21.44	21.38	21.80

Band	CDMA BC3			Time-up Limit (dBm)	CDMA BC1			Time-up Limit (dBm)	CDMA BC3			Time-up Limit (dBm)
	1013	384	777		25	600	1175		476	580	684	
TX Channel	1013	384	777	25	600	1175	476	580	684	476	580	684
Frequency (MHz)	1013	384	777	25	600	1175	476	580	684	476	580	684
NCI BC3S	23.68	23.70	23.30	24.80	23.68	23.68	23.40	24.80	23.87	23.81	23.74	24.80
NCI BC3S	23.67	23.70	23.30	24.80	23.67	23.68	23.40	24.80	23.87	23.81	23.74	24.80
NCI BC3S (F-RS)	23.68	23.68	23.29	24.80	23.68	23.67	23.39	24.80	23.88	23.86	23.72	24.80
NCI BC3S (F-RS)	23.64	23.65	23.28	24.80	23.63	23.65	23.37	24.80	23.84	23.78	23.71	24.80
RTAP 153.8000s	23.82	23.65	23.27	24.80	23.81	23.84	23.35	24.80	23.88	23.77	23.70	24.80
RTAP 153.8000s	23.81	23.64	23.25	24.80	23.81	23.82	23.34	24.80	23.81	23.76	23.68	24.80

Band 2 (160MHz Band) Part 24E

SW (MHz)	Modulation	RB Slot	RB Offset	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Turn-up (dB)	MPR (dB)
Channel	Channel	Channel	Channel	1800	1805	1810		(dB)
20	QPSK	1	0	23.90	23.71	23.93		0
20	QPSK	1	48	23.86	23.84	23.85	24.8	0
20	QPSK	1	96	23.84	23.88	23.86		
20	QPSK	1	144	23.86	23.82	23.87	23.8	1
20	QPSK	50	24	23.96	23.92	23.94		
20	QPSK	50	50	23.94	23.91	23.94	23.8	1
20	QPSK	100	0	23.98	23.99	23.98		
20	16QAM	1	0	23.94	23.19	23.28		
20	16QAM	1	48	23.28	23.31	23.20	23.8	1
20	16QAM	1	96	23.18	23.25	23.14		
20	16QAM	1	144	23.22	23.22	23.15		
20	16QAM	50	24	23.11	22.83	23.07	22.8	2
20	16QAM	50	50	22.98	22.87	22.87		
20	16QAM	100	0	22.98	22.98	23.00		
20	16QAM	1	0	22.92	22.90	23.13		
20	16QAM	1	48	23.12	22.16	22.16	22.8	2
20	16QAM	1	96	22.92	22.92	22.88		
20	16QAM	50	24	21.12	21.08	20.38	21.8	3
20	16QAM	50	50	21.12	21.12	20.38		
20	16QAM	100	0	21.08	21.12	20.38		
20	16QAM	1	0	19.07	19.14	19.08		
20	16QAM	1	48	19.05	19.26	19.24	19.8	5
20	16QAM	1	96	19.12	19.28	19.24		
20	16QAM	50	24	19.02	19.08	19.08		
20	16QAM	50	50	19.03	19.08	19.17	19.8	5
20	16QAM	100	0	19.01	19.18	19.15		
20	16QAM	100	0	19.04	19.08	19.04		
20	16QAM	100	0	19.03	19.05	19.05		

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

SW (MHz)	Modulation	RB Slot	RB Offset	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Turn-up (dB)	MPR (dB)
Channel	Channel	Channel	Channel	2050	2075	2100		(dB)
20	QPSK	1	0	23.82	23.98	23.90		
20	QPSK	1	48	23.86	23.76	23.78	24.8	0
20	QPSK	1	96	23.87	23.76	23.81		
20	QPSK	1	144	23.82	23.86	23.82	23.8	1
20	QPSK	50	24	23.85	23.95	23.84		
20	QPSK	50	50	23.78	23.90	23.90	23.8	1
20	QPSK	100	0	23.82	23.88	23.88		
20	16QAM	1	0	23.16	23.23	23.34		
20	16QAM	1	48	23.06	23.17	23.17	23.8	1
20	16QAM	1	96	23.06	23.07	23.10		
20	16QAM	1	144	23.02	23.08	23.12		
20	16QAM	50	24	21.85	21.93	22.01	22.8	2
20	16QAM	50	50	21.81	21.90	21.95		
20	16QAM	100	0	21.86	21.96	21.88		
20	16QAM	1	0	21.83	21.77	22.14		
20	16QAM	1	48	21.87	22.07	21.99	22.8	2
20	16QAM	1	96	21.96	22.04	21.95		
20	16QAM	50	24	20.50	20.54	20.22	21.8	3
20	16QAM	50	50	20.42	20.91	20.93		
20	16QAM	100	0	20.88	20.94	20.82		
20	16QAM	1	0	19.23	19.34	19.22		
20	16QAM	1	48	19.23	19.25	19.11	19.8	5
20	16QAM	1	96	19.25	19.35	19.18		
20	16QAM	50	24	18.09	18.06	18.06		
20	16QAM	50	50	18.19	18.09	18.15	19.8	5
20	16QAM	100	0	18.18	18.23	18.12		
20	16QAM	100	0	18.13	18.19	18.22		

Band 5 (Cellular Band) Part 24 (only on channel required)

SW (MHz)	Modulation	RB Slot	RB Offset	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Turn-up (dB)	MPR (dB)
Channel	Channel	Channel	Channel	2040	2025	2000		(dB)
10	QPSK	1	0	23.51	23.63	23.48		
10	QPSK	1	25	23.47	23.49	23.30	24.8	0
10	QPSK	1	49	23.47	23.34	23.34		
10	QPSK	1	73	23.51	23.50	23.52		
10	QPSK	25	12	23.58	23.57	23.53	23.8	1
10	QPSK	25	25	22.62	22.59	22.58		
10	QPSK	25	49	22.64	22.58	23.00	23.8	1
10	16QAM	1	0	22.50	22.92	22.90		
10	16QAM	1	25	22.85	22.87	22.88	23.8	1
10	16QAM	1	49	22.81	22.94	23.82		
10	16QAM	25	12	21.61	21.61	21.61		
10	16QAM	25	25	21.65	21.60	21.68	22.8	2
10	16QAM	50	0	21.68	21.58	21.69		
10	16QAM	50	25	21.58	21.58	21.64	22.8	2
10	16QAM	1	25	21.90	21.89	21.90	22.8	2
10	16QAM	1	49	21.91	21.89	21.93		
10	16QAM	25	12	21.59	21.63	21.71	21.8	3
10	16QAM	25	25	21.60	21.62	21.59		
10	16QAM	50	0	21.66	21.58	21.69		
10	16QAM	50	25	21.48	21.58	21.60	21.8	3
10	16QAM	1	25	19.52	19.65	19.53	19.8	5
10	16QAM	1	49	19.69	19.54	19.52		
10	16QAM	25	12	19.50	19.50	19.50		
10	16QAM	25	25	19.53	19.40	19.54	19.8	5
10	16QAM	50	0	19.43	19.41	19.41		
10	16QAM	50	25	19.44	19.48	19.43		

Band 7 (200MHz Band) Part 27

SW (MHz)	Modulation	RB Slot	RB Offset	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Power (Ch / Fr / Freq)	Turn-up (dB)	MPR (dB)
Channel	Channel	Channel	Channel	2050	2100	2150		(dB)
20	QPSK	1	0	24.13	24.16	23.98		
20	QPSK	1	48	24.12	24.16	23.98	24.8	0
20	QPSK	1	96	24.16	24.16	24.00		
20	QPSK	1	144	24.13	24.13	24.02	23.8	1
20	QPSK	50	24	24.08	24.08	23.93		
20	QPSK	50	50	24.24	24.24	24.08	23.8	1
20	QPSK	100	0	24.24	24.25	24.16		
20	16QAM	1	0	23.03	23.51	23.34		
20	16QAM	1	48	22.90	23.48	23.35	22.8	1
20	16QAM	1	96	23.21	23.45	23.33		
20	16QAM	1	144	23.16	23.23	23.17		
20	16QAM	50	24	22.28	22.31	22.17	22.8	2
20	16QAM	50	50	22.27	22.27	22.11		
20	16QAM	100	0	22.28	22.28	22.12		
20	16QAM	1	0	20.43	20.29	20.26		
20	16QAM	1	48	20.42	20.38	20.21	21.8	3
20	16QAM	1	96	20.21	20.22	20.21		
20	16QAM	50	24	20.02	20.29	20.21	21.8	3
20	16QAM	50	50	20.02	20.29	20.21		
20	16QAM	100	0	20.02	20.29	20.21		
20	16QAM	1	0	18.22	18.24	18.24	19.8	5
20	16QAM	1	48	18.22	18.24	18.24		
20	16QAM	1	96	18.22	18.24	18.24		
20	16QAM	50	24	18.22	18.24	18.24	19.8	5
20	16QAM	50	50	18.22	18.24	18.24		
20	16QAM	100	0	18.22	18.24	18.24		



Band 12 (700MHz Low Band) Part 27F (only on channel required)
Band 13(800MHz Band) Part 27F
Band 17 (700MHz Band) Part 27H(only on channel required)

Band 25 (800MHz Band) Part 24E
Band 25 (800MHz Band) Part 24E (continued)
Band 25 (800MHz Band) Part 24E (continued)



Band 26 for FCC (only on channel required)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./F.Frac, Power Pch./F.Frac, Power Ppch./F.Frac, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

Band 30

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./F.Frac, Power Pch./F.Frac, Power Ppch./F.Frac, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

Band 66

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./F.Frac, Power Pch./F.Frac, Power Ppch./F.Frac, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

Band 71

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power, Power Ch./F.Frac, Power Pch./F.Frac, Power Ppch./F.Frac, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.



Reduced power for Hotspot on-LAT

Band	CDMA EV			WCDMA TV				
	TX Channel	9492	9400	9498	Turn-up Limit (dBm)	1413	1413	Turn-up Limit (dBm)
Frequency (MHz)	9492	9400	9498	1712.4	1712.4	1712.4	1712.4	1712.4
ISMP Max (dB)	19.82	19.68	19.65	20.30	20.29	20.36	20.36	21.00
ISMP Min (dB)	18.85	18.71	18.74	20.30	20.32	20.44	20.40	21.00
ISMP Max (dB)	18.74	18.81	18.87	19.30	19.32	19.30	19.44	20.00
ISMP Min (dB)	18.74	18.80	18.87	19.30	19.40	19.30	19.42	20.00
ISMP Max (dB)	18.70	18.71	18.73	18.80	18.80	18.80	18.80	19.00
ISMP Min (dB)	18.22	18.20	18.16	18.80	18.80	18.07	18.02	19.30
ISMP Max (dB)	18.85	18.79	18.57	19.30	19.37	19.35	19.27	20.00
ISMP Min (dB)	18.83	18.72	18.51	19.30	19.30	19.37	19.29	20.00
ISMP Max (dB)	18.21	18.24	18.02	18.80	18.79	18.91	18.84	19.80
ISMP Min (dB)	18.00	18.32	18.08	18.80	18.77	18.89	18.82	19.30
ISMP Max (dB)	18.82	18.87	18.49	19.30	19.28	19.28	19.24	20.00
ISMP Min (dB)	18.74	18.82	18.70	17.30	17.56	17.87	17.81	18.00
ISMP Max (dB)	18.72	18.80	18.88	18.30	18.41	18.58	18.48	17.00
ISMP Min (dB)	18.49	18.82	18.40	17.30	17.56	17.42	17.42	18.00
ISMP Max (dB)	18.70	18.80	18.80	19.30	19.32	19.82	19.82	20.00
ISMP Min (dB)	18.72	18.80	18.75	17.30	17.48	17.82	17.81	18.00

Band	CDMA BC1			Turn-up Limit (dBm)
	TX Channel	9500	1170	
Frequency (MHz)	1851.23	1858	1858.73	
ISMP Max (dB)	20.88	20.82	20.88	22.00
ISMP Min (dB)	20.88	20.71	20.82	22.00
ISMP Max (dB)	20.85	20.80	20.83	22.00
ISMP Min (dB)	20.84	20.88	20.82	22.00
ISMP Max (dB)	20.82	20.88	20.80	22.00
ISMP Min (dB)	20.80	20.80	20.78	22.00



Band 2 (1800MHz Band) Part 24E

Table with columns: BFF (MHz), Modulation, RB Size, RB Offset, Power Ch./Freq., Power Ch./Freq., Power Ch./Freq., Turn-up (dB), MPR (dB). Rows include frequencies from 1800 to 1950 MHz and various modulation types like QPSK, 16QAM, 64QAM, 256QAM.

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

Table with columns: BFF (MHz), Modulation, RB Size, RB Offset, Power Ch./Freq., Power Ch./Freq., Power Ch./Freq., Turn-up (dB), MPR (dB). Rows include frequencies from 1715 to 1755 MHz and various modulation types like QPSK, 16QAM, 64QAM, 256QAM.

Band 7 (2600MHz Band) Part 27

Table with columns: BFF (MHz), Modulation, RB Size, RB Offset, Power Ch./Freq., Power Ch./Freq., Power Ch./Freq., Turn-up (dB), MPR (dB). Rows include frequencies from 2600 to 2650 MHz and various modulation types like QPSK, 16QAM, 64QAM, 256QAM.

Band 2 (1800MHz Band) Part 24E (continued)

Continuation of Band 2 table, frequencies from 1805 to 1950 MHz.

Band 4 (AMS Band) Part 27L (continued)

Continuation of Band 4 table, frequencies from 1715 to 1755 MHz.

Band 7 (2600MHz Band) Part 27 (continued)

Continuation of Band 7 table, frequencies from 2600 to 2650 MHz.



Band 38(only on channel required)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Low, Power High, Power Mid, Power High, Power High, Turn-up time (dBm), MPR (dB). Rows include channels like 20 QPSK 1, 20 QPSK 1, 20 QPSK 1, etc.

Band 41 (2.6G Band)

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Low, Power High, Power Mid, Power High, Power High, Turn-up time (dBm), MPR (dB). Rows include channels like 20 QPSK 1, 20 QPSK 1, 20 QPSK 1, etc.

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

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Low, Power High, Power Mid, Power High, Power High, Turn-up time (dBm), MPR (dB). Rows include channels like 20 QPSK 1, 20 QPSK 1, 20 QPSK 1, etc.



Reduced power for Sensor on-LAT

Band	WCDMA II			Time-avg Limit (dBm)	WCDMA IV			Time-avg Limit (dBm)
	TA Channel	9402	9406		9408	1172	1174	
Frequency (MHz)	9402	9406	9408		1172	1174	1176	
SCPP Ref #1	102.4	1102	1007		1732.4	1732.6	1732.8	
SCPP Ref #2	10.62	10.68	10.66	20.30	20.30	20.30	20.30	21.00
SCPP Ref #3	RAC 12 20bps	10.66	10.70	20.30	20.32	20.44	20.40	21.00
SCPP Ref #4	HSPA Subclass 1	10.73	10.81	10.87	19.30	19.30	19.44	20.00
SCPP Ref #5	HSPA Subclass 2	10.74	10.80	10.87	19.30	19.40	19.40	20.00
SCPP Ref #6	HSPA Subclass 3	10.21	10.31	10.33	18.80	18.92	18.93	19.30
SCPP Ref #7	HSPA Subclass 4	10.22	10.26	10.30	18.80	18.89	19.01	19.30
SCPP Ref #8	DC-HSPA Subclass 1	10.65	10.70	10.67	19.30	19.37	19.30	20.00
SCPP Ref #9	DC-HSPA Subclass 2	10.63	10.72	10.61	19.30	19.30	19.30	20.00
SCPP Ref #10	DC-HSPA Subclass 3	10.21	10.24	10.24	18.80	18.79	18.91	19.30
SCPP Ref #11	DC-HSPA Subclass 4	10.00	10.32	10.00	18.80	18.77	18.90	19.30
SCPP Ref #12	HSPA Subclass 1	10.62	10.67	10.49	19.30	19.20	19.38	20.00
SCPP Ref #13	HSPA Subclass 2	10.74	10.80	10.70	17.30	17.40	17.40	18.00
SCPP Ref #14	HSPA Subclass 3	10.72	10.80	10.66	16.30	16.41	16.38	17.00
SCPP Ref #15	HSPA Subclass 4	10.49	10.62	10.49	17.30	17.38	17.42	18.00
SCPP Ref #16	HSPA Subclass 5	10.70	10.80	10.60	18.30	18.32	18.52	20.00
SCPP Ref #17	HSPA (HSPA) Subclass 1	10.72	10.66	10.75	17.40	17.52	17.41	18.00

Band	CDMA BC1			Time-avg Limit (dBm)
	TA Channel	26	800	
Frequency (MHz)	26	800	1175	
SC1 SCSS	20.11	20.10	20.12	21.00
SC2 SCSS	20.10	20.14	20.11	21.00
SC3 SCSS (eSCS)	20.08	20.11	20.09	21.00
SC4 SCSS (eSCS)	20.08	20.11	20.08	21.00
RTAP 113 50bps	20.05	20.10	20.08	21.00
RTAP 100bps	20.04	20.08	20.06	21.00



Intra Band UL CA Power for UAT

CA_41C											
PCC Channel	SCC Channel	Modulation	PCC				SCC		Power Reduction	Measured Power (dBm)	Txm up Power (dBm)
			RB Size	RB offset	RB Size	RB offset	Total RB Size	Target MPE Level (dB)			
33730	33698	QPSK	1	0	0	0	1	0	Full	23.10	23.80
40185	40203	QPSK	1	0	0	0	1	0	Full	23.22	23.80
40185	40203	QPSK	1	0	0	0	1	0	Full	23.26	23.80
41025	41043	QPSK	1	0	0	0	1	0	Full	23.25	23.80
41025	41043	QPSK	1	0	0	0	1	0	Full	23.10	23.80
41865	41883	QPSK	1	0	0	0	1	0	Full	23.14	23.80
33730	33698	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.74	14.00
40185	40203	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.22	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.15	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.15	14.00
41865	41883	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.22	14.00
33730	33698	QPSK	50	24	0	0	1	0	Hold-on	15.79	16.40
40185	40203	QPSK	50	24	0	0	1	0	Hold-on	16.34	16.40
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.26	16.40
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.18	16.40
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	16.30	16.40

CA_41C(HRUE)											
PCC Channel	SCC Channel	Modulation	PCC				SCC		Power Reduction	Measured Power (dBm)	Txm up Power (dBm)
			RB Size	RB offset	RB Size	RB offset	Total RB Size	Target MPE Level (dB)			
33730	33698	QPSK	1	0	0	0	1	0	Full	23.06	23.80
33730	33698	QPSK	1	0	0	0	1	0	Full	23.06	23.80
40185	40203	QPSK	1	0	0	0	1	0	Full	23.25	23.80
40185	40203	QPSK	1	0	0	0	1	0	Full	23.25	23.80
41025	41043	QPSK	1	0	0	0	1	0	Full	23.22	23.80
41025	41043	QPSK	1	0	0	0	1	0	Full	23.22	23.80
41865	41883	QPSK	1	0	0	0	1	0	Full	23.19	23.80
33730	33698	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.60	14.00
33730	33698	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.61	14.00
40185	40203	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.59	14.00
40185	40203	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.61	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.59	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.59	14.00
41865	41883	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.56	14.00
33730	33698	QPSK	50	24	0	0	1	0	Hold-on	15.70	16.40
40185	40203	QPSK	50	24	0	0	1	0	Hold-on	15.86	16.40
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	15.86	16.40
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	15.80	16.40
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	15.70	16.40

CA_41C											
PCC Channel	SCC Channel	Modulation	PCC				SCC		Power Reduction	Measured Power (dBm)	Txm up Power (dBm)
			RB Size	RB offset	RB Size	RB offset	Total RB Size	Target MPE Level (dB)			
33730	33698	QPSK	1	0	0	0	1	0	Full	23.50	24.40
33730	33698	QPSK	1	0	0	0	1	0	Full	23.49	24.40
40185	40203	QPSK	1	0	0	0	1	0	Full	23.30	24.40
40185	40203	QPSK	1	0	0	0	1	0	Full	23.30	24.40
41025	41043	QPSK	1	0	0	0	1	0	Full	23.22	24.40
41025	41043	QPSK	1	0	0	0	1	0	Full	23.22	24.40
41865	41883	QPSK	1	0	0	0	1	0	Full	23.19	24.40
33730	33698	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.36	16.20
33730	33698	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.31	16.20
40185	40203	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.41	16.20
40185	40203	QPSK	50	24	0	0	1	0	Hold-on	16.59	20.50
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.51	20.50
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.50	20.50
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	16.60	20.50



Intra Band UL CA Power for LAT

CA_41C											
Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
39790	39988	QPSK	1	99	0	0	1	0	Full	24.07	24.80
39750	39948	QPSK	1	99	0	0	1	0	Full	23.99	24.80
40185	40383	QPSK	1	99	0	0	1	0	Full	24.11	24.80
40620	40422	QPSK	1	99	0	0	1	0	Full	24.10	24.80
41055	40857	QPSK	1	99	0	0	1	0	Full	24.05	24.80
41490	41292	QPSK	1	99	0	0	1	0	Full	24.08	24.80
39790	39988	QPSK	50	24	0	0	1	0	Hotspot on	19.31	20.10
39750	39948	QPSK	50	24	0	0	1	0	Hotspot on	19.27	20.10
40185	40383	QPSK	50	24	0	0	1	0	Hotspot on	19.33	20.10
40620	40422	QPSK	50	24	0	0	1	0	Hotspot on	19.30	20.10
41055	40857	QPSK	50	24	0	0	1	0	Hotspot on	19.25	20.10
41490	41292	QPSK	50	24	0	0	1	0	Hotspot on	19.30	20.10

CA_41C(HPUE)											
Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
39790	39988	QPSK	1	99	0	0	1	0	Full	26.08	26.80
39750	39948	QPSK	1	99	0	0	1	0	Full	26.02	26.80
40185	40383	QPSK	1	99	0	0	1	0	Full	26.15	26.80
40620	40422	QPSK	1	99	0	0	1	0	Full	26.08	26.80
41055	40857	QPSK	1	99	0	0	1	0	Full	25.96	26.80
41490	41292	QPSK	1	99	0	0	1	0	Full	26.11	26.80
39790	39988	QPSK	50	24	0	0	1	0	Hotspot on	21.25	21.90
39750	39948	QPSK	50	24	0	0	1	0	Hotspot on	21.20	21.90
40185	40383	QPSK	50	24	0	0	1	0	Hotspot on	21.30	21.90
40620	40422	QPSK	50	24	0	0	1	0	Hotspot on	21.29	21.90
41055	40857	QPSK	50	24	0	0	1	0	Hotspot on	21.19	21.90
41490	41292	QPSK	50	24	0	0	1	0	Hotspot on	21.28	21.90



Inter Band UL CA Power

PCC:Ant2		SCC:Ant1		CA_2A-4A											
Combination 20MHz+20MHz (100RB+100RB)												Tune up Power (dBm)			
PCC Channel	SCC Channel	Modulation	PCC			SCC			PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset									
18700	20050	QPSK	1	0	1	0	21.98	14.88			22.85	24	16.8	24.8	
			1	49	1	49	22.00	15.99			22.86	24	16.8	24.8	
			1	99	1	99	21.88	16.01			22.83	24	16.8	24.8	
			50	0	50	0	21.16	17.98			22.81	23.1	19.8	24.8	
			50	24	50	24	21.33	18.01			22.82	23.1	19.8	24.8	
			50	50	50	50	21.87	17.85			22.85	23.1	19.8	24.8	
18900	20175	QPSK	100	0	100	0	21.53	18.02			22.89	23.1	19.8	24.8	
			1	0	1	0	22.02	14.86			22.86	24	16.8	24.8	
			1	49	1	49	22.04	16.01			22.91	24	16.8	24.8	
			1	99	1	99	22.03	16.09			22.83	24	16.8	24.8	
			50	0	50	0	21.21	18.05			22.88	23.1	19.8	24.8	
			50	24	50	24	21.46	18.09			22.87	23.1	19.8	24.8	
19100	20300	QPSK	50	50	50	50	22.01	17.89			22.90	23.1	19.8	24.8	
			100	0	100	0	21.37	17.82			22.87	23.1	19.8	24.8	
			1	0	1	0	21.94	14.82			22.88	24	16.8	24.8	
			1	49	1	49	22.03	15.86			22.86	24	16.8	24.8	
			1	99	1	99	21.91	15.98			22.81	24	16.8	24.8	
			50	0	50	0	21.19	17.92			22.86	23.1	19.8	24.8	

PCC:Ant1		SCC:Ant2		CA_4A-2A											
Combination 20MHz+20MHz (100RB+100RB)												Tune up Power (dBm)			
PCC Channel	SCC Channel	Modulation	PCC			SCC			PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset									
20050	18700	QPSK	1	0	1	0	21.74	16.75			22.77	23.70	18.20	24.8	
			1	49	1	49	21.80	16.45			22.81	23.70	18.20	24.8	
			1	99	1	99	21.88	16.44			22.90	23.70	18.20	24.8	
			50	0	50	0	21.11	19.03			22.96	23.10	21.00	25.2	
			50	24	50	24	20.50	19.06			22.88	22.50	20.90	24.8	
			50	50	50	50	20.53	19.02			22.81	22.50	20.90	24.8	
20175	18900	QPSK	100	0	100	0	20.47	18.95			22.89	22.50	20.90	24.8	
			1	0	1	0	21.71	16.82			22.90	23.70	18.20	24.8	
			1	49	1	49	21.83	16.38			22.88	23.70	18.20	24.8	
			1	99	1	99	21.95	16.55			23.01	23.70	18.20	24.8	
			50	0	50	0	21.14	19.05			23.08	23.10	21.00	25.2	
			50	24	50	24	20.61	19.18			22.91	22.50	20.90	24.8	
20300	19100	QPSK	50	50	50	50	20.58	19.11			22.92	22.50	20.90	24.8	
			100	0	100	0	20.55	19.10			22.90	22.50	20.90	24.8	
			1	0	1	0	21.78	16.73			22.83	23.70	18.20	24.8	
			1	49	1	49	21.76	16.48			22.84	23.70	18.20	24.8	
			1	99	1	99	21.93	16.53			22.97	23.70	18.20	24.8	
			50	0	50	0	21.13	19.01			23.05	23.10	21.00	25.2	

PCC:Ant3		SCC:Ant0		CA_2A-4A											
Combination 20MHz+20MHz (100RB+100RB)												Tune up Power (dBm)			
PCC Channel	SCC Channel	Modulation	PCC			SCC			PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset									
18700	20050	QPSK	1	0	1	0	22.87	17.80			23.77	23.60	18.60	24.8	
			1	49	1	49	22.87	17.35			23.76	23.60	18.60	24.8	
			1	99	1	99	22.68	17.03			23.55	23.60	18.60	24.8	
			50	0	50	0	22.17	19.50			23.95	22.80	20.50	24.8	
			50	24	50	24	22.27	19.40			23.90	22.80	20.50	24.8	
			50	50	50	50	22.17	19.36			23.89	22.80	20.50	24.8	
18900	20175	QPSK	100	0	100	0	21.98	19.35			23.94	22.80	20.50	24.8	
			1	0	1	0	22.95	17.61			23.88	23.60	18.60	24.8	
			1	49	1	49	22.88	17.43			23.78	23.60	18.60	24.8	
			1	99	1	99	22.78	17.11			23.67	23.60	18.60	24.8	
			50	0	50	0	22.27	19.59			24.01	22.80	20.50	24.8	
			50	24	50	24	22.32	19.47			23.98	22.80	20.50	24.8	
19100	20300	QPSK	50	50	50	50	22.28	19.44			23.99	22.80	20.50	24.8	
			100	0	100	0	22.09	19.38			23.93	22.80	20.50	24.8	
			1	0	1	0	22.85	17.47			23.83	23.60	18.60	24.8	
			1	49	1	49	22.81	17.31			23.70	23.60	18.60	24.8	
			1	99	1	99	22.73	17.01			23.58	23.60	18.60	24.8	
			50	0	50	0	22.22	19.50			23.90	22.80	20.50	24.8	

PCC:Ant0		SCC:Ant3		CA_4A-2A											
Combination 20MHz+20MHz (100RB+100RB)												Tune up Power (dBm)			
PCC Channel	SCC Channel	Modulation	PCC			SCC			PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset									
20050	18700	QPSK	1	0	1	0	22.79	17.63			23.84	23.50	19.00	24.8	
			1	49	1	49	22.73	17.33			23.85	23.50	19.00	24.8	
			1	99	1	99	22.85	17.46			23.81	23.50	19.00	24.8	
			50	0	50	0	21.92	19.64			23.94	22.70	20.70	24.8	
			50	24	50	24	21.86	19.50			23.83	22.70	20.70	24.8	
			50	50	50	50	21.87	19.67			23.88	22.70	20.70	24.8	
20175	18900	QPSK	100	0	100	0	22.05	19.58			23.91	22.70	20.70	24.8	
			1	0	1	0	22.94	17.68			23.92	23.50	19.00	24.8	
			1	49	1	49	22.87	17.44			23.94	23.50	19.00	24.8	
			1	99	1	99	22.91	17.58			23.87	23.50	19.00	24.8	
			50	0	50	0	21.92	19.70			24.03	22.70	20.70	24.8	
			50	24	50	24	21.88	19.56			23.97	22.70	20.70	24.8	
20300	19100	QPSK	50	50	50	50	21.91	19.67			23.94	22.70	20.70	24.8	
			100	0	100	0	22.09	19.59			23.97	22.70	20.70	24.8	
			1	0	1	0	22.88	17.59			23.92	23.50	19.00	24.8	
			1	49	1	49	22.82	17.40			23.93	23.50	19.00	24.8	
			1	99	1	99	22.90	17.58			23.81	23.50	19.00	24.8	
			50	0	50	0	21.79	19.58			23.98	22.70	20.70	24.8	



Tune up Power (dBm)

PCC:Ant2		SCC:Ant1		CA_2A-66A									
Combination 20MHz+20MHz (100RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
18700	132072	QPSK	1	0	1	0	22.26	16.18	22.88	23.80	17.80	24.8	
			1	49	1	49	22.65	15.00	23.00	24.00	17.00	24.8	
			1	99	1	99	22.01	16.00	22.94	23.80	17.80	24.8	
			50	0	50	0	21.28	18.20	22.95	23.10	19.90	24.8	
			50	24	50	24	21.09	18.27	22.87	23.10	19.90	24.8	
			50	50	50	50	21.11	18.30	22.92	23.10	19.90	24.8	
18800	132322	QPSK	100	0	100	0	21.23	18.04	22.97	23.10	19.90	24.8	
			1	0	1	0	22.32	16.28	23.02	23.80	17.80	24.8	
			1	49	1	49	22.86	15.11	23.05	24.00	17.00	24.8	
			1	99	1	99	22.13	15.89	22.94	23.80	17.80	24.8	
			50	0	50	0	21.29	18.22	22.98	23.10	19.90	24.8	
			50	24	50	24	21.13	18.42	22.97	23.10	19.90	24.8	
19100	132572	QPSK	50	50	50	50	21.21	18.38	22.99	23.10	19.90	24.8	
			100	0	100	0	21.37	18.07	23.02	23.10	19.90	24.8	
			1	0	1	0	22.29	16.28	22.98	23.80	17.80	24.8	
			1	49	1	49	22.64	15.10	22.99	24.00	17.00	24.8	
			1	99	1	99	22.06	15.94	22.92	23.80	17.80	24.8	
			50	0	50	0	21.27	18.14	22.94	23.10	19.90	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant2		CA_66A-2A									
Combination 20MHz+20MHz (100RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	18700	QPSK	1	0	1	0	21.82	15.98	22.83	23.80	17.80	24.8	
			1	49	1	49	21.84	16.13	22.92	23.80	17.80	24.8	
			1	99	1	99	21.85	16.01	22.90	23.80	17.80	24.8	
			50	0	50	0	21.09	19.19	23.06	22.60	20.80	24.8	
			50	24	50	24	21.12	19.03	23.02	22.60	20.80	24.8	
			50	50	50	50	21.10	18.93	23.05	22.60	20.80	24.8	
132322	18900	QPSK	100	0	100	0	21.04	18.88	22.92	22.60	20.80	24.8	
			1	0	1	0	21.84	15.95	22.98	23.80	17.80	24.8	
			1	49	1	49	21.87	16.14	22.95	23.80	17.80	24.8	
			1	99	1	99	21.94	16.09	22.90	23.80	17.80	24.8	
			50	0	50	0	21.09	19.24	23.11	22.60	20.80	24.8	
			50	24	50	24	21.21	19.05	23.08	22.60	20.80	24.8	
132572	19100	QPSK	50	50	50	50	21.16	19.07	23.08	22.60	20.80	24.8	
			100	0	100	0	21.15	18.95	22.96	22.60	20.80	24.8	
			1	0	1	0	21.89	15.97	22.92	23.80	17.80	24.8	
			1	49	1	49	21.76	16.07	22.95	23.80	17.80	24.8	
			1	99	1	99	21.91	16.00	22.88	23.80	17.80	24.8	
			50	0	50	0	21.08	19.24	22.97	22.60	20.80	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant0		CA_2A-66A									
Combination 20MHz+20MHz (100RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
18700	132072	QPSK	1	0	1	0	23.00	16.43	24.00	23.90	17.40	24.8	
			1	49	1	49	22.87	16.60	23.93	23.90	17.40	24.8	
			1	99	1	99	22.90	16.55	23.90	23.90	17.40	24.8	
			50	0	50	0	22.21	19.83	24.12	22.80	20.50	24.8	
			50	24	50	24	22.19	19.88	24.01	22.80	20.50	24.8	
			50	50	50	50	22.18	19.68	24.01	22.80	20.50	24.8	
18800	132322	QPSK	100	0	100	0	22.24	19.63	24.04	22.80	20.50	24.8	
			1	0	1	0	23.05	16.58	24.06	23.90	17.40	24.8	
			1	49	1	49	22.98	16.70	23.98	23.90	17.40	24.8	
			1	99	1	99	23.04	16.59	23.91	23.90	17.40	24.8	
			50	0	50	0	22.32	19.87	24.19	22.80	20.50	24.8	
			50	24	50	24	22.22	19.88	24.11	22.80	20.50	24.8	
19100	132572	QPSK	50	50	50	50	22.19	19.81	24.09	22.80	20.50	24.8	
			100	0	100	0	22.31	19.70	24.18	22.80	20.50	24.8	
			1	0	1	0	22.92	16.53	24.03	23.90	17.40	24.8	
			1	49	1	49	22.85	16.55	23.93	23.90	17.40	24.8	
			1	99	1	99	23.02	16.44	23.87	23.90	17.40	24.8	
			50	0	50	0	22.17	19.83	24.14	22.80	20.50	24.8	

Tune up Power (dBm)

PCC:Ant0		SCC:Ant3		CA_66A-2A									
Combination 20MHz+20MHz (100RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	18700	QPSK	1	0	1	0	23.24	17.26	24.10	23.80	18.00	24.8	
			1	49	1	49	23.25	16.78	23.98	23.80	18.00	24.8	
			1	99	1	99	23.19	16.81	24.02	23.80	18.00	24.8	
			50	0	50	0	22.18	19.32	24.03	23.00	20.10	24.8	
			50	24	50	24	22.12	19.48	24.08	23.00	20.10	24.8	
			50	50	50	50	22.19	19.47	24.01	23.00	20.10	24.8	
132322	18900	QPSK	100	0	100	0	22.19	19.46	24.07	23.00	20.10	24.8	
			1	0	1	0	23.34	17.32	24.15	23.80	18.00	24.8	
			1	49	1	49	23.33	16.89	24.13	23.80	18.00	24.8	
			1	99	1	99	23.19	16.94	24.09	23.80	18.00	24.8	
			50	0	50	0	22.32	19.46	24.12	23.00	20.10	24.8	
			50	24	50	24	22.19	19.51	24.09	23.00	20.10	24.8	
132572	19100	QPSK	50	50	50	50	22.27	19.48	24.05	23.00	20.10	24.8	
			100	0	100	0	22.28	19.54	24.11	23.00	20.10	24.8	
			1	0	1	0	23.31	17.32	24.14	23.80	18.00	24.8	
			1	49	1	49	23.29	16.85	24.09	23.80	18.00	24.8	
			1	99	1	99	23.07	16.87	23.99	23.80	18.00	24.8	
			50	0	50	0	22.30	19.40	23.99	23.00	20.10	24.8	



Tune up Power (dBm)

PCC:Ant2		SCC:Ant0		CA_2A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
18700	23060	QPSK	1	0	1	0	22.38	17.26	23.58	23.60	18.60	24.8	
			1	49	1	25	22.34	17.15	23.52	23.60	18.60	24.8	
			1	99	1	49	22.28	17.14	23.48	23.60	18.60	24.8	
			50	0	25	0	21.20	18.57	23.26	22.60	20.80	24.8	
			50	24	25	12	21.22	18.75	23.43	22.60	20.80	24.8	
			50	50	25	25	21.31	18.88	23.37	22.60	20.80	24.8	
			100	0	50	0	21.28	18.18	23.16	22.60	20.80	24.8	
			1	0	1	0	22.44	17.32	23.63	23.60	18.60	24.8	
18900	23095	QPSK	1	49	1	25	22.38	17.23	23.54	23.60	18.60	24.8	
			1	99	1	49	22.31	17.17	23.46	23.60	18.60	24.8	
			50	0	25	0	21.29	18.72	23.41	22.60	20.80	24.8	
			50	24	25	12	21.31	18.88	23.44	22.60	20.80	24.8	
			50	50	25	25	21.35	18.78	23.37	22.60	20.80	24.8	
			100	0	50	0	21.41	18.22	23.29	22.60	20.80	24.8	
			1	0	1	0	22.40	17.18	23.52	23.60	18.60	24.8	
			1	49	1	25	22.35	17.23	23.48	23.60	18.60	24.8	
19100	23130	QPSK	1	99	1	49	22.20	17.02	23.36	23.60	18.60	24.8	
			50	0	25	0	21.20	18.61	23.40	22.60	20.80	24.8	
			50	24	25	12	21.25	18.92	23.34	22.60	20.80	24.8	
			50	50	25	25	21.34	18.73	23.22	22.60	20.80	24.8	
			100	0	50	0	21.38	18.08	23.14	22.60	20.80	24.8	

Tune up Power (dBm)

PCC:Ant0		SCC:Ant2		CA_12A-2A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	18700	QPSK	1	0	1	0	22.74	15.52	23.34	24.00	17.00	24.8	
			1	25	1	49	22.63	15.55	23.11	24.00	17.00	24.8	
			1	49	1	99	22.64	15.51	23.30	24.00	17.00	24.8	
			25	0	50	0	21.30	18.77	23.37	22.90	20.30	24.8	
			25	12	50	24	21.06	18.56	23.26	22.90	20.30	24.8	
			25	25	50	50	21.08	18.81	23.08	22.90	20.30	24.8	
			50	0	100	0	21.25	18.77	23.15	22.90	20.30	24.8	
			1	0	1	0	22.76	15.65	23.45	24.00	17.00	24.8	
23095	18900	QPSK	1	25	1	49	22.73	15.61	23.23	24.00	17.00	24.8	
			1	49	1	99	22.69	15.56	23.31	24.00	17.00	24.8	
			25	0	50	0	21.43	18.81	23.39	22.90	20.30	24.8	
			25	12	50	24	21.13	18.66	23.11	22.90	20.30	24.8	
			25	25	50	50	21.05	18.90	23.15	22.90	20.30	24.8	
			50	0	100	0	21.26	18.91	23.22	22.90	20.30	24.8	
			1	0	1	0	22.72	15.53	23.38	24.00	17.00	24.8	
			1	25	1	49	22.71	15.56	23.09	24.00	17.00	24.8	
23130	19100	QPSK	1	49	1	99	22.63	15.45	23.23	24.00	17.00	24.8	
			25	0	50	0	21.28	18.77	23.29	22.90	20.30	24.8	
			25	12	50	24	21.10	18.61	23.23	22.90	20.30	24.8	
			25	25	50	50	21.05	18.84	23.12	22.90	20.30	24.8	
			50	0	100	0	21.12	18.83	23.10	22.90	20.30	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant1		CA_2A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
18700	23060	QPSK	1	0	1	0	23.02	16.43	23.87	23.90	17.60	24.8	
			1	49	1	25	22.98	16.80	24.07	23.90	17.60	24.8	
			1	99	1	49	23.06	16.92	24.01	23.90	17.60	24.8	
			50	0	25	0	22.06	19.53	24.10	22.80	20.50	24.8	
			50	24	25	12	22.00	19.50	24.06	22.80	20.50	24.8	
			50	50	25	25	21.96	19.30	24.00	22.80	20.50	24.8	
			100	0	50	0	22.04	19.56	24.11	22.80	20.50	24.8	
			1	0	1	0	23.11	16.58	23.93	23.90	17.60	24.8	
18900	23095	QPSK	1	49	1	25	22.98	16.88	24.17	23.90	17.60	24.8	
			1	99	1	49	23.21	16.92	24.09	23.90	17.60	24.8	
			50	0	25	0	22.10	19.58	24.12	22.80	20.50	24.8	
			50	24	25	12	22.15	19.62	24.06	22.80	20.50	24.8	
			50	50	25	25	22.01	19.44	24.04	22.80	20.50	24.8	
			100	0	50	0	22.11	19.64	24.11	22.80	20.50	24.8	
			1	0	1	0	23.05	16.46	23.89	23.90	17.60	24.8	
			1	49	1	25	22.90	16.81	24.02	23.90	17.60	24.8	
19100	23130	QPSK	1	99	1	49	23.17	16.92	24.06	23.90	17.60	24.8	
			50	0	25	0	21.98	19.49	24.00	22.80	20.50	24.8	
			50	24	25	12	22.14	19.55	23.98	22.80	20.50	24.8	
			50	50	25	25	21.86	19.38	23.93	22.80	20.50	24.8	
			100	0	50	0	22.07	19.61	24.05	22.80	20.50	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant3		CA_12A-2A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	18700	QPSK	1	0	1	0	22.83	17.74	23.71	23.50	19.00	24.8	
			1	25	1	49	22.81	17.34	23.73	23.50	19.00	24.8	
			1	49	1	99	22.82	17.59	23.67	23.50	19.00	24.8	
			25	0	50	0	22.32	19.32	23.99	23.00	20.20	24.8	
			25	12	50	24	22.28	19.35	24.15	23.00	20.20	24.8	
			25	25	50	50	22.18	19.24	24.09	23.00	20.20	24.8	
			50	0	100	0	22.27	19.57	24.14	23.00	20.20	24.8	
			1	0	1	0	22.93	17.76	23.81	23.50	19.00	24.8	
23095	18900	QPSK	1	25	1	49	22.82	17.34	23.79	23.50	19.00	24.8	
			1	49	1	99	22.88	17.66	23.71	23.50	19.00	24.8	
			25	0	50	0	22.36	19.45	24.11	23.00	20.20	24.8	
			25	12	50	24	22.28	19.41	24.18	23.00	20.20	24.8	
			25	25	50	50	22.21	19.38	24.12	23.00	20.20	24.8	
			50	0	100	0	22.32	19.70	24.15	23.00	20.20	24.8	
			1	0	1	0	22.80	17.74	23.68	23.50	19.00	24.8	
			1	25	1	49	22.77	17.24	23.71	23.50	19.00	24.8	
23130	19100	QPSK	1	49	1	99	22.80	17.61	23.62	23.50	19.00	24.8	
			25	0	50	0	22.29	19.33	23.98	23.00	20.20	24.8	
			25	12	50	24	22.18	19.31	24.08	23.00	20.20	24.8	
			25	25	50	50	22.19	19.23	24.05	23.00	20.20	24.8	
			50	0	100	0	22.29	19.68	24.02	23.00	20.20	24.8	



Tune up Power (dBm)

PCC:Ant2		SCC:Ant0		CA_4A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
20050	23060	QPSK	1	0	1	0	22.39	15.76	23.12	23.80	18.00	24.8	
			1	49	1	25	22.37	16.13	23.13	23.80	18.00	24.8	
			1	99	1	49	22.37	16.57	23.08	23.80	18.00	24.8	
			50	0	25	0	21.33	18.92	23.19	22.80	20.50	24.8	
			50	24	25	12	21.33	18.71	23.30	22.80	20.50	24.8	
			50	50	25	25	21.20	18.83	23.16	22.80	20.50	24.8	
20175	23095	QPSK	100	0	50	0	21.17	18.72	23.10	22.80	20.50	24.8	
			1	0	1	0	22.50	15.83	23.12	23.80	18.00	24.8	
			1	49	1	25	22.52	16.23	23.22	23.80	18.00	24.8	
			1	99	1	49	22.44	16.66	23.16	23.80	18.00	24.8	
			50	0	25	0	21.37	19.01	23.23	22.80	20.50	24.8	
			50	24	25	12	21.43	18.86	23.33	22.80	20.50	24.8	
20300	23130	QPSK	50	50	25	25	21.35	18.98	23.11	22.80	20.50	24.8	
			100	0	50	0	21.25	18.79	23.17	22.80	20.50	24.8	
			1	0	1	0	22.46	15.83	23.04	23.80	18.00	24.8	
			1	49	1	25	22.47	16.21	23.22	23.80	18.00	24.8	
			1	99	1	49	22.41	16.59	23.09	23.80	18.00	24.8	
			50	0	25	0	21.34	18.97	23.13	22.80	20.50	24.8	

Tune up Power (dBm)

PCC:Ant0		SCC:Ant2		CA_12A-4A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	20050	QPSK	1	0	1	0	22.55	16.28	23.44	23.90	17.50	24.8	
			1	25	1	49	22.62	16.29	23.48	23.90	17.50	24.8	
			1	49	1	99	22.59	16.19	23.40	23.90	17.50	24.8	
			25	0	50	0	21.43	18.65	23.20	23.00	20.10	24.8	
			25	12	50	24	21.21	18.66	23.13	23.00	20.10	24.8	
			25	25	50	50	21.08	18.62	23.07	23.00	20.10	24.8	
23095	20175	QPSK	50	0	100	0	21.16	18.57	23.15	23.00	20.10	24.8	
			1	0	1	0	22.64	16.34	23.56	23.90	17.50	24.8	
			1	25	1	49	22.68	16.33	23.48	23.90	17.50	24.8	
			1	49	1	99	22.59	16.23	23.40	23.90	17.50	24.8	
			25	0	50	0	21.55	18.78	23.25	23.00	20.10	24.8	
			25	12	50	24	21.23	18.69	23.22	23.00	20.10	24.8	
23130	20300	QPSK	50	25	50	50	21.10	18.67	23.13	23.00	20.10	24.8	
			100	0	100	0	21.25	18.68	23.17	23.00	20.10	24.8	
			1	0	1	0	22.64	16.31	23.55	23.90	17.50	24.8	
			1	25	1	49	22.63	16.27	23.41	23.90	17.50	24.8	
			1	49	1	99	22.55	16.19	23.25	23.90	17.50	24.8	
			25	0	50	0	21.46	18.70	23.21	23.00	20.10	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant1		CA_4A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
20050	23060	QPSK	1	0	1	0	23.05	16.72	24.05	23.90	17.70	24.8	
			1	49	1	25	23.00	16.70	23.92	23.90	17.70	24.8	
			1	99	1	49	22.90	16.74	23.92	23.90	17.70	24.8	
			50	0	25	0	22.28	19.54	24.19	22.90	20.30	24.8	
			50	24	25	12	22.49	19.57	24.02	22.90	20.30	24.8	
			50	50	25	25	22.47	19.21	24.09	22.90	20.30	24.8	
20175	23095	QPSK	100	0	50	0	22.26	19.68	24.10	22.90	20.30	24.8	
			1	0	1	0	23.14	16.81	24.13	23.90	17.70	24.8	
			1	49	1	25	23.01	16.77	24.02	23.90	17.70	24.8	
			1	99	1	49	22.99	16.89	24.01	23.90	17.70	24.8	
			50	0	25	0	22.40	19.63	24.20	22.90	20.30	24.8	
			50	24	25	12	22.54	19.62	24.16	22.90	20.30	24.8	
20300	23130	QPSK	50	50	25	25	22.53	19.31	24.18	22.90	20.30	24.8	
			100	0	50	0	22.30	19.81	24.19	22.90	20.30	24.8	
			1	0	1	0	23.12	16.88	24.08	23.90	17.70	24.8	
			1	49	1	25	22.98	16.76	23.87	23.90	17.70	24.8	
			1	99	1	49	22.90	16.79	23.87	23.90	17.70	24.8	
			50	0	25	0	22.34	19.49	24.12	22.90	20.30	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant3		CA_12A-4A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	20050	QPSK	1	0	1	0	22.66	17.41	23.74	23.70	18.40	24.8	
			1	25	1	49	22.64	17.30	23.76	23.70	18.40	24.8	
			1	49	1	99	22.66	17.35	23.81	23.70	18.40	24.8	
			25	0	50	0	22.07	19.78	24.16	22.80	20.50	24.8	
			25	12	50	24	22.03	19.67	23.98	22.80	20.50	24.8	
			25	25	50	50	22.47	19.65	24.07	22.80	20.50	24.8	
23095	20175	QPSK	50	0	100	0	22.33	19.78	24.16	22.80	20.50	24.8	
			1	0	1	0	22.78	17.46	23.86	23.70	18.40	24.8	
			1	25	1	49	22.71	17.33	23.77	23.70	18.40	24.8	
			1	49	1	99	22.69	17.41	23.81	23.70	18.40	24.8	
			25	0	50	0	22.21	19.91	24.24	22.80	20.50	24.8	
			25	12	50	24	22.11	19.79	24.11	22.80	20.50	24.8	
23130	20300	QPSK	25	25	50	50	22.49	19.77	24.13	22.80	20.50	24.8	
			50	0	100	0	22.40	19.81	24.18	22.80	20.50	24.8	
			1	0	1	0	22.76	17.41	23.73	23.70	18.40	24.8	
			1	25	1	49	22.59	17.29	23.74	23.70	18.40	24.8	
			1	49	1	99	22.67	17.41	23.81	23.70	18.40	24.8	
			25	0	50	0	22.15	19.87	24.21	22.80	20.50	24.8	



Tune up Power (dBm)

PCC:Ant0		SCC:Ant2		CA_12A-66A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	132072	QPSK	1	0	1	0	22.39	16.43	23.34	23.80	18.00	24.8	
			1	25	1	49	22.37	16.33	23.26	23.80	18.00	24.8	
			1	49	1	99	22.31	16.41	23.21	23.80	18.00	24.8	
			25	0	50	0	21.58	18.51	23.25	23.00	20.10	24.8	
			25	12	50	24	21.47	18.59	23.21	23.00	20.10	24.8	
			25	25	50	50	21.45	18.45	23.26	23.00	20.10	24.8	
23095	132322	QPSK	50	0	100	0	21.24	18.37	23.17	23.00	20.10	24.8	
			1	0	1	0	22.54	16.58	23.48	23.80	18.00	24.8	
			1	25	1	49	22.48	16.40	23.33	23.80	18.00	24.8	
			1	49	1	99	22.39	16.44	23.34	23.80	18.00	24.8	
			25	0	50	0	21.58	18.57	23.26	23.00	20.10	24.8	
			25	12	50	24	21.51	18.67	23.22	23.00	20.10	24.8	
23130	132572	QPSK	25	25	50	50	21.48	18.54	23.26	23.00	20.10	24.8	
			50	0	100	0	21.24	18.48	23.22	23.00	20.10	24.8	
			1	0	1	0	22.49	16.55	23.33	23.80	18.00	24.8	
			1	25	1	49	22.38	15.99	23.25	23.80	18.00	24.8	
			1	49	1	99	22.27	16.38	23.22	23.80	18.00	24.8	
			25	0	50	0	21.47	18.53	23.12	23.00	20.10	24.8	

Tune up Power (dBm)

PCC:Ant2		SCC:Ant0		CA_66A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	23060	QPSK	1	0	1	0	22.18	16.87	22.99	23.80	18.00	24.8	
			1	49	1	25	22.20	16.94	23.04	23.80	18.00	24.8	
			1	99	1	49	22.12	16.97	23.10	23.80	18.00	24.8	
			50	0	25	0	21.17	18.93	23.23	23.00	20.10	24.8	
			50	24	25	12	21.22	18.91	23.16	23.00	20.10	24.8	
			50	50	25	25	21.04	18.85	23.23	23.00	20.10	24.8	
132322	23095	QPSK	100	0	50	0	21.12	18.83	23.10	23.00	20.10	24.8	
			1	0	1	0	22.21	17.00	23.14	23.80	18.00	24.8	
			1	49	1	25	22.23	16.99	23.09	23.80	18.00	24.8	
			1	99	1	49	22.15	16.98	23.03	23.80	18.00	24.8	
			50	0	25	0	21.26	19.04	23.30	23.00	20.10	24.8	
			50	24	25	12	21.23	19.02	23.29	23.00	20.10	24.8	
132572	23130	QPSK	25	25	50	25	21.19	18.99	23.26	23.00	20.10	24.8	
			50	0	50	0	21.24	18.92	23.21	23.00	20.10	24.8	
			1	0	1	0	22.19	16.92	22.99	23.80	18.00	24.8	
			1	49	1	25	22.10	16.95	22.94	23.80	18.00	24.8	
			1	99	1	49	22.06	16.93	22.94	23.80	18.00	24.8	
			50	0	25	0	21.12	18.89	23.23	23.00	20.10	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant3		CA_12A-66A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23060	132072	QPSK	1	0	1	0	22.67	17.72	23.82	23.60	18.70	24.8	
			1	25	1	49	22.61	17.71	23.66	23.60	18.70	24.8	
			1	49	1	99	22.68	17.40	23.61	23.60	18.70	24.8	
			25	0	50	0	22.08	19.60	24.01	22.80	20.50	24.8	
			25	12	50	24	22.07	19.38	23.98	22.80	20.50	24.8	
			25	25	50	50	21.92	19.29	24.01	22.80	20.50	24.8	
23095	132322	QPSK	50	0	100	0	22.32	19.55	24.14	22.80	20.50	24.8	
			1	0	1	0	22.82	17.84	23.88	23.60	18.70	24.8	
			1	25	1	49	22.64	17.76	23.77	23.60	18.70	24.8	
			1	49	1	99	22.71	17.45	23.74	23.60	18.70	24.8	
			25	0	50	0	22.20	19.88	24.10	22.80	20.50	24.8	
			25	12	50	24	22.17	19.40	24.06	22.80	20.50	24.8	
23130	132572	QPSK	25	25	50	50	22.05	19.32	24.03	22.80	20.50	24.8	
			50	0	100	0	22.43	19.64	24.18	22.80	20.50	24.8	
			1	0	1	0	22.77	17.74	23.77	23.60	18.70	24.8	
			1	25	1	49	22.60	17.68	23.66	23.60	18.70	24.8	
			1	49	1	99	22.67	17.45	23.71	23.60	18.70	24.8	
			25	0	50	0	22.19	19.74	24.04	22.80	20.50	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant1		CA_66A-12A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	23060	QPSK	1	0	1	0	23.03	16.52	23.93	23.90	17.50	24.8	
			1	49	1	25	23.12	16.46	23.87	23.90	17.50	24.8	
			1	99	1	49	23.01	16.30	23.80	23.90	17.50	24.8	
			50	0	25	0	22.22	19.58	23.95	22.80	20.50	24.8	
			50	24	25	12	22.14	19.53	23.90	22.80	20.50	24.8	
			50	50	25	25	21.99	19.22	24.02	22.80	20.50	24.8	
132322	23095	QPSK	100	0	50	0	22.04	19.79	24.07	22.80	20.50	24.8	
			1	0	1	0	23.03	16.57	24.04	23.90	17.50	24.8	
			1	49	1	25	23.12	16.48	23.98	23.90	17.50	24.8	
			1	99	1	49	23.05	16.33	23.91	23.90	17.50	24.8	
			50	0	25	0	22.27	19.70	24.10	22.80	20.50	24.8	
			50	24	25	12	22.21	19.68	24.02	22.80	20.50	24.8	
132572	23130	QPSK	50	50	25	25	22.11	19.36	24.08	22.80	20.50	24.8	
			100	0	50	0	22.18	19.93	24.17	22.80	20.50	24.8	
			1	0	1	0	23.00	16.54	24.01	23.90	17.50	24.8	
			1	49	1	25	23.07	16.39	23.87	23.90	17.50	24.8	
			1	99	1	49	23.01	16.33	23.87	23.90	17.50	24.8	
			50	0	25	0	22.14	19.68	23.96	22.80	20.50	24.8	



Tune up Power (dBm)

PCC:Ant0		SCC:Ant2		CA_13A-66A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23230	132072	QPSK	1	0	1	0	23.71	15.71	24.33	24.10	16.50	24.8	
			1	25	1	49	23.74	14.92	24.19	24.10	16.50	24.8	
			1	49	1	99	23.73	15.31	24.35	24.10	16.50	24.8	
			25	0	50	0	23.22	17.79	24.33	23.60	18.70	24.8	
			25	12	50	24	23.14	17.67	24.18	23.60	18.70	24.8	
			25	25	50	50	23.04	17.64	24.16	23.60	18.70	24.8	
23230	132322	QPSK	50	0	100	0	22.97	17.72	24.17	23.60	18.70	24.8	
			1	0	1	0	23.81	15.78	24.44	24.10	16.50	24.8	
			1	25	1	49	23.78	15.01	24.32	24.10	16.50	24.8	
			1	49	1	99	23.76	15.42	24.35	24.10	16.50	24.8	
			25	0	50	0	23.28	17.83	24.37	23.60	18.70	24.8	
			25	12	50	24	23.19	17.75	24.30	23.60	18.70	24.8	
23230	132572	QPSK	25	25	50	50	23.11	17.65	24.20	23.60	18.70	24.8	
			50	0	100	0	23.08	17.79	24.21	23.60	18.70	24.8	
			1	0	1	0	23.66	15.63	24.36	24.10	16.50	24.8	
			1	25	1	49	23.69	14.86	24.32	24.10	16.50	24.8	
			1	49	1	99	23.65	15.33	24.28	24.10	16.50	24.8	
			25	0	50	0	23.16	17.89	24.27	23.60	18.70	24.8	

Tune up Power (dBm)

PCC:Ant2		SCC:Ant0		CA_66A-13A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	23230	QPSK	1	0	1	0	22.13	18.80	23.72	23.10	20.00	24.8	
			1	49	1	25	21.97	18.05	23.71	23.10	20.00	24.8	
			1	99	1	49	22.03	18.47	23.64	23.10	20.00	24.8	
			50	0	25	0	21.02	20.96	24.17	21.80	21.80	24.8	
			50	24	25	12	20.91	20.97	24.14	21.80	21.80	24.8	
			50	50	25	25	21.15	21.36	23.92	21.80	21.80	24.8	
132322	23230	QPSK	100	0	50	0	21.09	21.06	24.07	21.80	21.80	24.8	
			1	0	1	0	22.26	18.81	23.85	23.10	20.00	24.8	
			1	49	1	25	22.04	18.10	23.75	23.10	20.00	24.8	
			1	99	1	49	22.11	18.56	23.70	23.10	20.00	24.8	
			50	0	25	0	21.05	21.10	24.20	21.80	21.80	24.8	
			50	24	25	12	21.01	21.11	24.18	21.80	21.80	24.8	
132572	23230	QPSK	25	25	25	25	21.22	21.40	24.05	21.80	21.80	24.8	
			100	0	50	0	21.23	21.20	24.12	21.80	21.80	24.8	
			1	0	1	0	22.25	18.71	23.81	23.10	20.00	24.8	
			1	49	1	25	22.02	18.04	23.64	23.10	20.00	24.8	
			1	99	1	49	21.99	18.42	23.66	23.10	20.00	24.8	
			50	0	25	0	20.98	21.03	24.19	21.80	21.80	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant3		CA_13A-66A									
Combination 10MHz+20MHz (50RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
23230	132072	QPSK	1	0	1	0	22.00	16.33	23.31	23.80	18.00	24.8	
			1	25	1	49	22.12	16.63	23.18	23.80	18.00	24.8	
			1	49	1	99	21.95	16.57	22.98	23.80	18.00	24.8	
			25	0	50	0	20.88	19.48	23.25	22.50	21.00	24.8	
			25	12	50	24	20.85	19.39	23.27	22.50	21.00	24.8	
			25	25	50	50	20.90	19.40	23.37	22.50	21.00	24.8	
23230	132322	QPSK	50	0	100	0	20.70	19.60	23.11	22.50	21.00	24.8	
			1	0	1	0	22.14	16.44	23.35	23.80	18.00	24.8	
			1	25	1	49	22.23	16.63	23.21	23.80	18.00	24.8	
			1	49	1	99	22.04	16.72	23.11	23.80	18.00	24.8	
			25	0	50	0	21.01	19.61	23.33	22.50	21.00	24.8	
			25	12	50	24	20.98	19.50	23.41	22.50	21.00	24.8	
23230	132572	QPSK	25	25	50	50	21.03	19.54	23.39	22.50	21.00	24.8	
			50	0	100	0	20.84	19.71	23.24	22.50	21.00	24.8	
			1	0	1	0	22.04	16.31	23.27	23.80	18.00	24.8	
			1	25	1	49	22.11	16.54	23.16	23.80	18.00	24.8	
			1	49	1	99	22.02	16.70	23.03	23.80	18.00	24.8	
			25	0	50	0	20.97	19.58	23.21	22.50	21.00	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant1		CA_66A-13A									
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	SCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
132072	23230	QPSK	1	0	1	0	23.12	16.79	23.92	23.80	18.00	24.8	
			1	49	1	25	22.99	16.61	23.76	23.80	18.00	24.8	
			1	99	1	49	23.09	16.50	23.73	23.80	18.00	24.8	
			50	0	25	0	22.18	18.50	23.69	23.30	19.50	24.8	
			50	24	25	12	22.09	18.54	23.67	23.30	19.50	24.8	
			50	50	25	25	22.11	18.39	23.70	23.30	19.50	24.8	
132322	23230	QPSK	100	0	50	0	22.22	18.00	23.57	23.30	19.50	24.8	
			1	0	1	0	23.23	16.83	23.93	23.80	18.00	24.8	
			1	49	1	25	23.11	16.70	23.78	23.80	18.00	24.8	
			1	99	1	49	23.18	16.58	23.81	23.80	18.00	24.8	
			50	0	25	0	22.24	18.64	23.74	23.30	19.50	24.8	
			50	24	25	12	22.15	18.55	23.75	23.30	19.50	24.8	
132572	23230	QPSK	50	50	25	25	22.22	18.41	23.71	23.30	19.50	24.8	
			100	0	50	0	22.25	18.11	23.70	23.30	19.50	24.8	
			1	0	1	0	23.20	16.68	23.82	23.80	18.00	24.8	
			1	49	1	25	23.06	16.69	23.65	23.80	18.00	24.8	
			1	99	1	49	23.09	16.49	23.73	23.80	18.00	24.8	
			50	0	25	0	22.11	18.56	23.66	23.30	19.50	24.8	



Full Power Mode - UAT

n2									
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									
Frequency (MHz)				372000	376000	380000			
				1860	1860	1900			
20	PI2 BPSK	1	1	23.87	23.95	23.90			
20	PI2 BPSK	1	53	23.71	23.83	23.82	24.8	0.0	
20	PI2 BPSK	1	104	23.85	23.86	23.73			
20	PI2 BPSK	50	0	23.33	23.28	23.31	24.3	0.5	
20	PI2 BPSK	50	28	23.82	23.90	23.88	24.8	0.0	
20	PI2 BPSK	50	56	23.41	23.38	23.33			
20	PI2 BPSK	100	0	23.25	23.35	23.33	24.3	0.5	
20	QPSK	1	1	23.88	23.91	23.78			
20	QPSK	1	53	23.84	23.85	23.62	24.8	0.0	
20	QPSK	1	104	23.78	23.84	23.78			
20	QPSK	50	0	22.83	22.89	22.85	23.8	1.0	
20	QPSK	50	28	23.90	23.88	23.79	24.8	0.0	
20	QPSK	50	56	22.88	22.82	22.78			
20	QPSK	100	0	22.98	22.86	22.84	23.8	1.0	
20	16QAM	1	1	22.68	22.67	22.62	23.8	1.0	
20	64QAM	1	1	21.23	21.27	21.18	22.3	2.5	
20	256QAM	1	1	19.35	19.44	19.21	20.3	4.5	
Channel									
Frequency (MHz)				371500	376000	380500			
				1867.5	1868	1902.5			
15	PI2 BPSK	1	1	23.78	23.80	23.85	24.8	0.0	
Channel									
Frequency (MHz)				371000	376000	381000			
				1865	1868	1905			
10	PI2 BPSK	1	1	23.83	23.79	23.76	24.8	0.0	
Channel									
Frequency (MHz)				370500	376000	381500			
				1862.5	1868	1907.5			
5	PI2 BPSK	1	1	23.83	23.85	23.58	24.8	0.0	

n5									
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									
Frequency (MHz)				169000	167300	169700			
				845	845.5	839			
20	PI2 BPSK	1	1	23.83	23.66	23.60			
20	PI2 BPSK	1	53	23.06	23.62	23.48	24.3	0.0	
20	PI2 BPSK	1	104	23.48	23.57	23.36			
20	PI2 BPSK	50	0	23.06	23.09	23.09	23.8	0.5	
20	PI2 BPSK	50	28	23.58	23.61	23.54	24.3	0.0	
20	PI2 BPSK	50	56	22.97	23.02	22.86			
20	PI2 BPSK	100	0	23.07	23.08	23.00	23.8	0.5	
20	QPSK	1	1	23.86	23.65	23.54			
20	QPSK	1	53	23.55	23.61	23.48	24.3	0.0	
20	QPSK	1	104	23.45	23.62	23.42			
20	QPSK	50	0	22.57	22.66	22.53	23.3	1.0	
20	QPSK	50	28	23.56	23.65	23.38	24.3	0.0	
20	QPSK	50	56	22.38	22.57	22.32			
20	QPSK	100	0	22.51	22.65	22.44	23.3	1.0	
20	16QAM	1	1	22.74	22.86	22.68	23.3	1.0	
20	64QAM	1	1	20.56	20.99	20.51	21.8	2.5	
20	256QAM	1	1	18.70	18.88	18.68	19.3	4.5	
Channel									
Frequency (MHz)				169300	167300	169300			
				831.5	836.5	841.5			
15	PI2 BPSK	1	1	23.44	23.61	23.16	24.3	0.0	
Channel									
Frequency (MHz)				169000	167300	169300			
				830	836.5	844			
10	PI2 BPSK	1	1	23.22	23.43	23.11	24.3	0.0	
Channel									
Frequency (MHz)				169300	167300	169300			
				826.5	836.5	846.5			
5	PI2 BPSK	1	1	23.36	23.52	23.44	24.3	0.0	

n7									
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									
Frequency (MHz)				505000	507000	510000			
				2525	2535	2550			
20	PI2 BPSK	1	1	24.01	24.14	24.04			
20	PI2 BPSK	1	53	23.87	23.93	23.92	24.8	0.0	
20	PI2 BPSK	1	104	23.96	23.98	23.94			
20	PI2 BPSK	50	0	23.83	23.92	23.95	24.8	0.0	
20	PI2 BPSK	50	28	23.96	24.08	24.00	24.8	0.0	
20	PI2 BPSK	50	56	23.87	23.99	23.96			
20	PI2 BPSK	100	0	23.93	24.04	23.96	24.8	0.0	
20	QPSK	1	1	23.98	24.00	23.99			
20	QPSK	1	53	23.95	23.99	23.97	24.8	0.0	
20	QPSK	1	104	23.96	23.97	23.92			
20	QPSK	50	0	23.44	23.45	23.47	24.3	0.5	
20	QPSK	50	28	23.86	23.96	23.87	24.8	0.0	
20	QPSK	50	56	23.34	23.31	23.33			
20	QPSK	100	0	23.20	23.37	23.36	24.3	0.5	
20	16QAM	1	1	23.41	23.43	23.48	24.3	0.5	
20	64QAM	1	1	21.95	21.87	21.88	22.8	2.0	
20	256QAM	1	1	19.83	19.85	19.94	20.8	4.0	
Channel									
Frequency (MHz)				501500	507000	512500			
				2507.5	2535	2562.5			
15	PI2 BPSK	1	1	23.66	23.78	23.63	24.8	0.0	
Channel									
Frequency (MHz)				501000	507000	513000			
				2505	2535	2565			
10	PI2 BPSK	1	1	23.69	23.79	23.76	24.8	0.0	
Channel									
Frequency (MHz)				500500	507000	513500			
				2502.5	2535	2567.5			
5	PI2 BPSK	1	1	23.72	23.82	23.79	24.8	0.0	



n25									
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									
Frequency (MHz)				372500	376500	381000			
				1860	1882.5	1905			
20	PI2 BPSK	1	1	24.09	24.16	24.13			
20	PI2 BPSK	1	53	24.02	24.06	24.04	24.8	0.0	
20	PI2 BPSK	1	104	24.05	24.07	23.96			
20	PI2 BPSK	50	1	24.05	24.08	24.05	24.8	0.0	
20	PI2 BPSK	50	28	24.08	24.12	24.10	24.8	0.0	
20	PI2 BPSK	50	56	23.98	23.61	24.01			
20	PI2 BPSK	100	0	23.95	24.00	23.98	24.8	0.0	
20	QPSK	1	1	23.94	24.10	24.12			
20	QPSK	1	53	24.08	24.09	24.08	24.8	0.0	
20	QPSK	1	104	24.04	24.10	23.94			
20	QPSK	50	0	23.99	23.69	23.63	24.3	0.5	
20	QPSK	50	28	23.98	24.09	24.06	24.8	0.0	
20	QPSK	50	56	23.46	23.42	23.50			
20	QPSK	100	0	23.48	23.66	23.42	24.3	0.5	
20	16QAM	1	1	23.41	23.42	23.38	24.3	0.5	
20	64QAM	1	1	22.08	22.12	22.16	22.8	2.0	
20	256QAM	1	1	20.07	20.17	20.10	20.8	4.0	
Channel									
Frequency (MHz)				371500	375500	381500	Tune-up limit (dBm)	MPR (dB)	
				1857.5	1882.5	1907.5			
15	PI2 BPSK	1	1	24.12	24.05	24.14	24.8	0.0	
Channel									
Frequency (MHz)				371000	376000	382000	Tune-up limit (dBm)	MPR (dB)	
				1865	1883.5	1910			
10	PI2 BPSK	1	1	24.12	24.02	24.01	24.8	0.0	
Channel									
Frequency (MHz)				370500	376500	382500	Tune-up limit (dBm)	MPR (dB)	
				1862.5	1882.5	1912.5			
5	PI2 BPSK	1	1	24.00	24.08	23.93	24.8	0.0	

n66									
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									
Frequency (MHz)				344800	349000	354000			
				1720	1745	1770			
20	PI2 BPSK	1	1	24.18	24.21	24.14			
20	PI2 BPSK	1	53	24.04	24.07	24.10	24.8	0.0	
20	PI2 BPSK	1	104	24.09	24.12	24.04			
20	PI2 BPSK	50	1	24.12	24.07	24.03	24.8	0.0	
20	PI2 BPSK	50	28	24.13	24.15	24.10	24.8	0.0	
20	PI2 BPSK	50	56	24.09	24.04	24.08			
20	PI2 BPSK	100	0	24.05	24.08	24.03	24.8	0.0	
20	QPSK	1	1	24.08	24.08	23.92			
20	QPSK	1	53	24.00	24.01	24.03	24.8	0.0	
20	QPSK	1	104	23.92	23.71	24.00			
20	QPSK	50	0	23.93	23.30	23.47	24.3	0.5	
20	QPSK	50	28	24.07	24.03	24.00	24.8	0.0	
20	QPSK	50	56	23.47	23.25	23.46			
20	QPSK	100	0	23.36	23.40	23.48	24.3	0.5	
20	16QAM	1	1	23.24	23.08	23.12	24.3	0.5	
20	64QAM	1	1	21.83	21.97	21.89	22.8	2.0	
20	256QAM	1	1	20.09	20.15	19.77	20.8	4.0	
Channel									
Frequency (MHz)				343500	349500	355500	Tune-up limit (dBm)	MPR (dB)	
				1717.5	1745	1772.5			
15	PI2 BPSK	1	1	24.08	24.17	24.08	24.8	0.0	
Channel									
Frequency (MHz)				343000	349500	355500	Tune-up limit (dBm)	MPR (dB)	
				1715	1745	1772.5			
10	PI2 BPSK	1	1	24.18	24.05	24.11	24.8	0.0	
Channel									
Frequency (MHz)				342500	349500	355500	Tune-up limit (dBm)	MPR (dB)	
				1712.5	1745	1772.5			
5	PI2 BPSK	1	1	23.98	24.08	24.11	24.8	0.0	

n71									
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									
Frequency (MHz)				134600	136100	137600			
				673	680.5	689.5			
20	PI2 BPSK	1	1	23.92	23.96	23.85			
20	PI2 BPSK	1	53	23.79	23.85	23.76	24.8	0.0	
20	PI2 BPSK	1	104	23.76	23.88	23.47			
20	PI2 BPSK	50	1	23.77	23.70	23.75	24.8	0.0	
20	PI2 BPSK	50	28	23.85	23.90	23.79	24.8	0.0	
20	PI2 BPSK	50	56	23.66	23.67	23.53			
20	PI2 BPSK	100	0	23.62	23.67	23.76	24.8	0.0	
20	QPSK	1	1	23.68	23.92	23.86			
20	QPSK	1	53	23.75	23.84	23.75	24.8	0.0	
20	QPSK	1	104	23.60	23.74	23.46			
20	QPSK	50	0	23.43	23.31	23.30	24.3	0.5	
20	QPSK	50	28	23.85	23.78	23.87	24.8	0.0	
20	QPSK	50	56	23.29	23.13	23.02			
20	QPSK	100	0	23.38	23.30	23.13	24.3	0.5	
20	16QAM	1	1	23.44	23.32	23.36	24.3	0.5	
20	64QAM	1	1	21.58	21.62	21.61	22.8	2.0	
20	256QAM	1	1	19.92	19.72	19.75	20.8	4.0	
Channel									
Frequency (MHz)				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)	
				670.5	680.5	690.5			
15	PI2 BPSK	1	1	23.91	23.65	23.85	24.8	0.0	
Channel									
Frequency (MHz)				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)	
				668	680.5	693			
10	PI2 BPSK	1	1	23.92	23.75	23.73	24.8	0.0	
Channel									
Frequency (MHz)				133100	136100	138100	Tune-up limit (dBm)	MPR (dB)	
				665.5	680.5	695.5			
5	PI2 BPSK	1	1	23.71	23.88	23.77	24.8	0.0	



Reduced Power level 1 for Head -- UAT

n2								
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				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI2 BPSK	1	1	17.14	17.15	17.03		
20	PI2 BPSK	1	53	16.99	16.98	17.01	18.2	0.0
20	PI2 BPSK	1	104	17.03	16.92	16.93		
20	PI2 BPSK	50	0	17.05	16.97	16.99	18.2	0.0
20	PI2 BPSK	50	28	17.09	17.11	17.00	18.2	0.0
20	PI2 BPSK	50	56	16.94	17.00	16.96	18.2	0.0
20	PI2 BPSK	100	0	17.05	17.06	16.97		
20	QPSK	1	1	17.05	17.04	17.01		
20	QPSK	1	53	17.05	17.06	16.98	18.2	0.0
20	QPSK	1	104	16.98	16.94	16.94		
20	QPSK	50	0	16.97	17.07	16.98	18.2	0.0
20	QPSK	50	28	16.95	17.06	17.02	18.2	0.0
20	QPSK	50	56	17.02	17.05	16.99		
20	QPSK	100	0	16.97	16.99	16.94	18.2	0.0
20	16QAM	1	1	17.10	17.01	17.01	18.2	0.0
20	16QAM	1	1	17.01	17.06	16.96	18.2	0.0
20	256QAM	1	1	16.94	16.98	16.98	18.2	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI2 BPSK	1	1	16.97	17.08	17.00	18.2	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI2 BPSK	1	1	17.00	17.09	17.04	18.2	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI2 BPSK	1	1	16.96	17.01	17.03	18.2	0.0

n7								
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				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI2 BPSK	1	1	15.38	15.62	15.54		
20	PI2 BPSK	1	53	15.53	15.52	15.52	16.2	0.0
20	PI2 BPSK	1	104	15.57	15.49	15.48		
20	PI2 BPSK	50	0	15.52	15.51	15.46	16.2	0.0
20	PI2 BPSK	50	28	15.56	15.58	15.51	16.2	0.0
20	PI2 BPSK	50	56	15.46	15.55	15.48		
20	PI2 BPSK	100	0	15.52	15.58	15.49	16.2	0.0
20	QPSK	1	1	15.60	15.55	15.57		
20	QPSK	1	53	15.58	15.54	15.53	16.2	0.0
20	QPSK	1	104	15.57	15.55	15.47		
20	QPSK	50	0	15.58	15.55	15.54	16.2	0.0
20	QPSK	50	28	15.59	15.60	15.55	16.2	0.0
20	QPSK	50	56	15.57	15.55	15.48		
20	QPSK	100	0	15.56	15.57	15.54	16.2	0.0
20	16QAM	1	1	15.59	15.61	15.53	16.2	0.0
20	16QAM	1	1	15.47	15.50	15.37	16.2	0.0
20	256QAM	1	1	15.61	15.59	15.57	16.2	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI2 BPSK	1	1	15.50	15.62	15.49	16.2	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI2 BPSK	1	1	15.46	15.48	15.38	16.2	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI2 BPSK	1	1	15.45	15.46	15.35	16.2	0.0



n25								
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				372000	376500	381000		
Frequency (MHz)				1860	1882.5	1905		
20	PI2 BPSK	1	1	17.35	17.41	17.36		
20	PI2 BPSK	1	53	17.26	17.40	17.30	18.2	0.0
20	PI2 BPSK	1	104	17.27	17.30	17.29		
20	PI2 BPSK	50	0	17.24	17.38	17.32	18.2	0.0
20	PI2 BPSK	50	28	17.33	17.40	17.34	18.2	0.0
20	PI2 BPSK	50	56	17.29	17.38	17.33	18.2	0.0
20	PI2 BPSK	100	0	17.31	17.39	17.32		
20	QPSK	1	1	17.25	17.32	17.24		
20	QPSK	1	53	17.24	17.30	17.27	18.2	0.0
20	QPSK	1	104	17.23	17.29	17.26		
20	QPSK	50	0	17.18	17.31	17.29	18.2	0.0
20	QPSK	50	28	17.19	17.24	17.21	18.2	0.0
20	QPSK	50	56	17.26	17.29	17.17		
20	QPSK	100	0	17.20	17.25	17.22	18.2	0.0
20	16QAM	1	1	17.27	17.25	17.32	18.2	0.0
20	16QAM	1	1	16.80	16.85	16.80	18.2	0.0
20	256QAM	1	1	17.15	17.30	17.25	18.2	0.0
Channel				371500	376500	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1882.5	1907.5		
15	PI2 BPSK	1	1	17.20	17.40	17.27	18.2	0.0
Channel				371000	376500	382000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1882.5	1910		
10	PI2 BPSK	1	1	17.18	17.38	17.36	18.2	0.0
Channel				370500	376500	382500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.2	1882.5	1912.5		
5	PI2 BPSK	1	1	17.13	17.32	17.20	18.2	0.0

n66								
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				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI2 BPSK	1	1	17.21	17.28	17.20		
20	PI2 BPSK	1	53	17.09	17.14	17.15	18.2	0.0
20	PI2 BPSK	1	104	17.20	17.24	17.16		
20	PI2 BPSK	50	0	17.13	17.19	17.13	18.2	0.0
20	PI2 BPSK	50	28	17.18	17.25	17.17	18.2	0.0
20	PI2 BPSK	50	56	17.11	17.18	17.15	18.2	0.0
20	PI2 BPSK	100	0	17.15	17.23	17.13		
20	QPSK	1	1	17.21	17.19	17.21		
20	QPSK	1	53	17.10	17.22	17.15	18.2	0.0
20	QPSK	1	104	17.22	17.27	17.17		
20	QPSK	50	0	17.14	17.26	17.13	18.2	0.0
20	QPSK	50	28	17.13	17.22	17.16	18.2	0.0
20	QPSK	50	56	17.20	17.21	17.13		
20	QPSK	100	0	17.15	17.27	17.14	18.2	0.0
20	16QAM	1	1	17.21	17.13	17.16	18.2	0.0
20	16QAM	1	1	16.83	16.85	16.77	18.2	0.0
20	256QAM	1	1	17.20	17.25	17.14	18.2	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI2 BPSK	1	1	17.16	17.24	17.23	18.2	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI2 BPSK	1	1	17.15	17.20	17.17	18.2	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.2	1745	1777.2		
5	PI2 BPSK	1	1	17.14	17.19	17.16	18.2	0.0



n41 FCC									
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									
Frequency (MHz)									
				2546.01	2592.99	2640			
100	Pi2 BPSK	1	1	14.17	14.20	14.15			
100	Pi2 BPSK	1	137	14.13	14.15	14.13	15.2	0.0	
Channel									
Frequency (MHz)									
				2546.01	2592.99	2640			
100	Pi2 BPSK	1	271	14.16	14.15	13.10			
100	Pi2 BPSK	135	0	14.07	14.05	14.07			
100	Pi2 BPSK	135	69	14.14	14.15	14.12	15.2	0.0	
100	Pi2 BPSK	135	135	14.09	14.17	14.13			
100	Pi2 BPSK	270	0	14.12	14.15	14.11	15.2	0.0	
100	QPSK	1	1	14.12	14.17	14.14			
100	QPSK	1	137	13.09	14.15	13.16	15.2	0.0	
100	QPSK	1	271	14.15	14.12	14.11			
100	QPSK	135	0	13.10	14.06	14.14			
100	QPSK	135	69	13.04	14.04	14.13	15.2	0.0	
100	QPSK	135	138	13.07	14.08	14.12			
100	QPSK	270	0	14.04	14.09	14.16	15.2	0.0	
100	6QAM	1	1	14.01	14.02	14.08	15.2	0.0	
100	6QAM	1	1	13.95	13.89	13.98	15.2	0.0	
100	256QAM	1	1	14.13	14.10	14.16	15.2	0.0	
Channel									
Frequency (MHz)									
				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	13.84	13.85	13.86	15.2	0.0	
Channel									
Frequency (MHz)									
				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
80	Pi2 BPSK	1	1	13.83	13.85	13.82	15.2	0.0	
Channel									
Frequency (MHz)									
				2521.02	2592.99	2664.99	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	14.09	14.10	14.08	15.2	0.0	
Channel									
Frequency (MHz)									
				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
40	Pi2 BPSK	1	1	13.98	14.01	13.99	15.2	0.0	
Channel									
Frequency (MHz)									
				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)	
30	Pi2 BPSK	1	1	14.03	14.00	14.04	15.2	0.0	
Channel									
Frequency (MHz)									
				2505.02	2592.99	2679.99	Tune-up limit (dBm)	MPR (dB)	
20	Pi2 BPSK	1	1	13.92	13.94	13.93	15.2	0.0	

n41(HPUe)_FCC									
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									
Frequency (MHz)									
				2546.01	2592.99	2640			
100	Pi2 BPSK	1	1	14.32	14.37	14.38			
100	Pi2 BPSK	1	137	14.24	14.26	14.33	15.2	0.0	
100	Pi2 BPSK	1	271	14.28	14.31	14.34			
100	Pi2 BPSK	135	0	14.21	14.28	14.30			
100	Pi2 BPSK	135	69	14.29	14.30	14.33	15.2	0.0	
100	Pi2 BPSK	135	138	14.17	14.30	14.32			
100	Pi2 BPSK	270	0	14.27	14.32	14.31	15.2	0.0	
100	QPSK	1	1	14.30	14.25	14.31			
100	QPSK	1	137	14.26	14.26	14.27	15.2	0.0	
100	QPSK	1	271	14.30	14.33	14.34			
100	QPSK	135	0	14.27	14.23	14.28			
100	QPSK	135	69	14.21	14.26	14.27	15.2	0.0	
100	QPSK	135	138	14.25	14.28	14.32			
100	QPSK	270	0	14.26	14.24	14.28	15.2	0.0	
100	6QAM	1	1	14.09	14.11	14.12	15.2	0.0	
100	6QAM	1	1	13.71	13.97	13.73	15.2	0.0	
100	256QAM	1	1	14.02	14.04	14.03	15.2	0.0	
Channel									
Frequency (MHz)									
				503200	518598	533996	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	14.14	14.15	14.19	15.2	0.0	
Channel									
Frequency (MHz)									
				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
80	Pi2 BPSK	1	1	14.31	14.40	14.40	15.2	0.0	
Channel									
Frequency (MHz)									
				2521.02	2592.99	2664.99	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	14.18	14.24	14.14	15.2	0.0	
Channel									
Frequency (MHz)									
				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
40	Pi2 BPSK	1	1	14.15	14.21	14.19	15.2	0.0	
Channel									
Frequency (MHz)									
				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)	
30	Pi2 BPSK	1	1	14.14	14.24	14.08	15.2	0.0	
Channel									
Frequency (MHz)									
				2505.02	2592.99	2679.99	Tune-up limit (dBm)	MPR (dB)	
20	Pi2 BPSK	1	1	14.31	14.18	14.15	15.2	0.0	

n77									
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									
Frequency (MHz)									
				650000	656000	662000			
100	Pi2 BPSK	1	1	17.28	17.44	17.41			
100	Pi2 BPSK	1	137	17.10	17.12	17.15	18.2	0.0	
100	Pi2 BPSK	1	271	17.23	17.36	17.32			
100	Pi2 BPSK	135	0	17.24	17.28	17.26			
100	Pi2 BPSK	135	69	17.26	17.41	17.38	18.2	0.0	
100	Pi2 BPSK	135	138	17.17	17.34	17.15			
100	Pi2 BPSK	270	0	17.24	17.38	17.35	18.2	0.0	
100	QPSK	1	1	17.15	17.22	17.13			
100	QPSK	1	137	17.37	17.31	17.22	18.2	0.0	
100	QPSK	1	271	17.27	17.23	17.17			
100	QPSK	135	0	17.27	17.22	17.18			
100	QPSK	135	69	17.28	17.24	17.29	18.2	0.0	
100	QPSK	135	138	17.09	17.15	17.05			
100	QPSK	270	0	17.21	17.19	17.21	18.2	0.0	
100	6QAM	1	1	17.22	17.32	17.32	18.2	0.0	
100	6QAM	1	1	17.33	17.35	17.38	18.2	0.0	
100	256QAM	1	1	17.12	17.13	17.21	18.2	0.0	
Channel									
Frequency (MHz)									
				649668	656000	662334	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	17.22	17.30	17.27	18.2	0.0	
Channel									
Frequency (MHz)									
				649334	656000	662668	Tune-up limit (dBm)	MPR (dB)	
80	Pi2 BPSK	1	1	17.23	17.34	17.27	18.2	0.0	
Channel									
Frequency (MHz)									
				648668	656000	663334	Tune-up limit (dBm)	MPR (dB)	
60	Pi2 BPSK	1	1	17.32	17.26	17.39	18.2	0.0	
Channel									
Frequency (MHz)									
				648334	656000	663668	Tune-up limit (dBm)	MPR (dB)	
50	Pi2 BPSK	1	1	17.11	17.28	17.21	18.2	0.0	
Channel									
Frequency (MHz)									
				648000	656000	664000	Tune-up limit (dBm)	MPR (dB)	
40	Pi2 BPSK	1	1	17.25	17.31	17.38	18.2	0.0	
Channel									
Frequency (MHz)									
				647334	656000	664668	Tune-up limit (dBm)	MPR (dB)	
30	Pi2 BPSK	1	1	17.38	17.24	17.22	18.2	0.0	
Channel									
Frequency (MHz)									
				647000	656000	665000	Tune-up limit (dBm)	MPR (dB)	
20	Pi2 BPSK	1	1	17.40	17.30	17.30	18.2	0.0	



Reduced Power level 2/3 for Head -- UAT

n77							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	MPR (dB)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI2 BPSK	1	1	15.64	15.74	15.71	
100	PI2 BPSK	1	137	15.61	15.67	15.51	16.7
100	PI2 BPSK	1	271	15.59	15.54	15.56	
100	PI2 BPSK	135	0	15.58	15.66	15.65	
100	PI2 BPSK	135	69	15.62	15.71	15.66	16.7
100	PI2 BPSK	135	138	15.55	15.55	15.45	
100	PI2 BPSK	270	0	15.60	15.68	15.64	16.7
100	QPSK	1	1	15.65	15.55	15.57	
100	QPSK	1	137	15.61	15.59	15.57	16.7
100	QPSK	1	271	15.72	15.64	15.72	
100	QPSK	135	0	15.63	15.71	15.70	
100	QPSK	135	69	15.64	15.59	15.56	16.7
100	QPSK	135	138	15.59	15.52	15.52	
100	QPSK	270	0	15.58	15.64	15.61	16.7
100	16QAM	1	1	15.59	15.61	15.56	16.7
100	16QAM	1	1	15.61	15.54	15.56	15.2
100	256QAM	1	1	15.43	15.44	15.56	14.7
Channel				648668	656000	662334	
Frequency (MHz)				3745.02	3840	3935.01	
50	PI2 BPSK	1	1	15.62	15.58	15.69	16.7
Channel				649204	656000	662666	
Frequency (MHz)				3740.01	3840	3940.02	
80	PI2 BPSK	1	1	15.68	15.61	15.57	16.7
Channel				648668	656000	662334	
Frequency (MHz)				3733.02	3840	3943.01	
60	PI2 BPSK	1	1	15.71	15.57	15.56	16.7
Channel				648334	656000	662668	
Frequency (MHz)				3725.01	3840	3955.02	
50	PI2 BPSK	1	1	15.71	15.54	15.64	16.7
Channel				649204	656000	662666	
Frequency (MHz)				3720	3840	3960	
40	PI2 BPSK	1	1	15.57	15.58	15.67	16.7
Channel				647668	656000	664334	
Frequency (MHz)				3715.02	3840	3965.01	
30	PI2 BPSK	1	1	15.70	15.61	15.53	16.7
Channel				647334	656000	664668	
Frequency (MHz)				3710.01	3840	3970.02	
20	PI2 BPSK	1	1	15.64	15.64	15.70	16.7



Reduced power for Hotspot on-UAT

n2								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI2 BPSK	1	1	23.09	23.15	23.10		
20	PI2 BPSK	1	53	23.08	23.12	23.04	24.0	0.0
20	PI2 BPSK	1	104	23.05	23.07	23.00		
20	PI2 BPSK	50	0	23.02	23.06	23.02	24.0	0.0
20	PI2 BPSK	50	28	23.08	23.11	23.05	24.0	0.0
20	PI2 BPSK	50	56	23.04	23.08	23.08		
20	PI2 BPSK	100	0	23.05	23.08	23.03	24.0	0.0
20	QPSK	1	1	23.01	23.03	23.05		
20	QPSK	1	53	23.05	23.08	23.02	24.0	0.0
20	QPSK	1	104	23.00	23.01	23.01		
20	QPSK	50	0	23.11	23.13	23.04	24.0	0.0
20	QPSK	50	28	23.08	23.11	23.02	24.0	0.0
20	QPSK	50	56	23.07	23.09	23.00		
20	QPSK	100	0	23.05	23.10	22.96	24.0	0.0
20	16QAM	1	1	22.95	22.99	22.97	24.0	0.0
20	64QAM	1	1	21.45	21.44	21.42	22.5	1.5
20	256QAM	1	1	20.00	19.94	19.95	21.0	3.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1877.5	1900	1922.5	24.0	0.0
15	PI2 BPSK	1	1	23.02	23.05	22.97	24.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905	24.0	0.0
10	PI2 BPSK	1	1	23.00	23.03	23.01	24.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5	24.0	0.0
5	PI2 BPSK	1	1	23.01	23.02	22.91	24.0	0.0

n7								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI2 BPSK	1	1	18.17	18.18	18.14		
20	PI2 BPSK	1	53	18.16	18.15	18.12	19.0	0.0
20	PI2 BPSK	1	104	18.12	18.14	18.13		
20	PI2 BPSK	50	0	18.11	18.12	18.10	19.0	0.0
20	PI2 BPSK	50	28	18.12	18.15	18.11	19.0	0.0
20	PI2 BPSK	50	56	18.09	18.10	18.08		
20	PI2 BPSK	100	0	18.10	18.13	18.11	19.0	0.0
20	QPSK	1	1	18.14	18.17	18.14		
20	QPSK	1	53	18.13	18.15	18.11	19.0	0.0
20	QPSK	1	104	18.10	18.13	18.08		
20	QPSK	50	0	18.15	18.12	18.13	19.0	0.0
20	QPSK	50	28	18.09	18.16	18.08	19.0	0.0
20	QPSK	50	56	18.10	18.13	18.07		
20	QPSK	100	0	18.11	18.14	18.09	19.0	0.0
20	16QAM	1	1	18.12	18.16	18.10	19.0	0.0
20	64QAM	1	1	18.08	18.11	18.07	19.0	0.0
20	256QAM	1	1	18.02	18.05	18.00	19.0	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2517.5	2535	2552.5	19.0	0.0
15	PI2 BPSK	1	1	18.10	18.13	18.12	19.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565	19.0	0.0
10	PI2 BPSK	1	1	18.11	18.14	18.10	19.0	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5	19.0	0.0
5	PI2 BPSK	1	1	18.09	18.13	18.11	19.0	0.0



n25								
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)
				Low Ch. Freq.	Middle Ch. Freq.	High Ch. Freq.		
Channel				372000	376500	381000		
Frequency (MHz)				1860	1862.5	1905		
20	PI2 BPSK	1	1	23.17	23.25	23.16		
20	PI2 BPSK	1	53	23.08	23.21	23.13	24.0	0.0
20	PI2 BPSK	1	104	23.05	23.10	23.12		
20	PI2 BPSK	50	0	23.04	23.18	23.09	24.0	0.0
20	PI2 BPSK	50	28	23.12	23.22	23.13	24.0	0.0
20	PI2 BPSK	50	56	23.07	23.16	23.08		
20	PI2 BPSK	100	0	23.06	23.18	23.05	24.0	0.0
20	QPSK	1	1	23.05	23.19	23.12		
20	QPSK	1	53	23.02	23.18	23.10	24.0	0.0
20	QPSK	1	104	23.00	23.06	23.04		
20	QPSK	50	0	23.06	23.23	23.09	24.0	0.0
20	QPSK	50	28	23.04	23.21	23.06	24.0	0.0
20	QPSK	50	56	23.06	23.17	23.03		
20	QPSK	100	0	23.06	23.20	23.01	24.0	0.0
20	16QAM	1	1	23.96	23.97	23.94	24.0	0.0
20	64QAM	1	1	21.75	21.97	21.96	23.0	1.0
20	256QAM	1	1	20.05	20.05	20.11	22.0	2.0
Channel				371500	376500	381500		
Frequency (MHz)				1877.5	1882.5	1927.5		
15	PI2 BPSK	1	1	23.08	23.12	23.11	24.0	0.0
Channel				371000	376500	382000		
Frequency (MHz)				1865	1862.5	1910		
10	PI2 BPSK	1	1	23.04	23.15	23.13	24.0	0.0
Channel				370500	376500	382500		
Frequency (MHz)				1852.5	1852.5	1912.5		
5	PI2 BPSK	1	1	22.89	23.03	22.91	24.0	0.0

n66								
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)
				Low Ch. Freq.	Middle Ch. Freq.	High Ch. Freq.		
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI2 BPSK	1	1	23.65	23.71	23.66		
20	PI2 BPSK	1	53	23.63	23.66	23.62	24.4	0.0
20	PI2 BPSK	1	104	23.58	23.70	23.66		
20	PI2 BPSK	50	0	23.60	23.62	23.63	24.4	0.0
20	PI2 BPSK	50	28	23.67	23.69	23.60	24.4	0.0
20	PI2 BPSK	50	56	23.65	23.67	23.61		
20	PI2 BPSK	100	0	23.54	23.68	23.58	24.4	0.0
20	QPSK	1	1	23.61	23.65	23.60		
20	QPSK	1	53	23.59	23.62	23.56	24.4	0.0
20	QPSK	1	104	23.56	23.32	23.35		
20	QPSK	50	0	22.94	22.95	23.04	24.4	0.0
20	QPSK	50	28	23.63	23.66	23.65	24.4	0.0
20	QPSK	50	56	23.10	23.14	23.09		
20	QPSK	100	0	23.04	23.07	23.05	24.4	0.0
20	16QAM	1	1	22.98	22.97	23.02	23.4	1.0
20	64QAM	1	1	21.49	21.53	21.50	22.4	2.0
20	256QAM	1	1	20.19	20.25	20.10	21.4	3.0
Channel				343500	349000	354500		
Frequency (MHz)				1717.5	1745	1772.5		
15	PI2 BPSK	1	1	23.55	23.60	23.56	24.4	0.0
Channel				343000	349000	350000		
Frequency (MHz)				1715	1745	1775		
10	PI2 BPSK	1	1	23.53	23.61	23.67	24.4	0.0
Channel				342500	349000	350500		
Frequency (MHz)				1712.5	1745	1777.5		
5	PI2 BPSK	1	1	23.40	23.48	23.47	24.4	0.0



n41_FCC							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Middle Ch. / Freq	Power High Ch. / Freq	MPR (dB)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI2 BPSK	1	1	17.17	17.19	17.15	
100	PI2 BPSK	1	137	17.14	17.11	17.13	
100	PI2 BPSK	1	271	17.09	17.15	17.10	18.1
100	PI2 BPSK	135	0	17.13	17.12	17.12	
100	PI2 BPSK	135	69	17.15	17.16	17.14	18.1
100	PI2 BPSK	135	138	17.14	17.13	17.12	
100	PI2 BPSK	270	0	17.12	17.15	17.11	18.1
100	QPSK	1	1	17.17	17.13	17.10	
100	QPSK	1	137	17.14	17.11	17.09	18.1
100	QPSK	1	271	17.15	17.14	17.24	
100	QPSK	135	0	17.16	17.07	17.15	
100	QPSK	135	69	17.12	17.09	17.14	18.1
100	QPSK	135	138	17.13	17.13	17.11	
100	QPSK	270	0	17.19	17.10	17.10	18.1
100	64QAM	1	1	17.16	17.16	17.15	18.1
100	64QAM	1	1	17.10	17.12	17.09	18.1
100	256QAM	1	1	17.05	17.13	17.04	18.1
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
90	PI2 BPSK	1	1	17.12	17.16	17.15	18.1
Channel				507204	518598	529998	
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI2 BPSK	1	1	17.10	17.13	17.12	18.1
Channel				506204	518598	530999	
Frequency (MHz)				2531.02	2592.99	2654.99	
50	PI2 BPSK	1	1	17.09	17.11	17.10	18.1
Channel				505202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	17.05	17.10	17.09	18.1
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	17.10	17.13	17.11	18.1
Channel				501204	518598	535999	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	17.06	17.11	17.08	18.1

n41(HPUE)_FCC							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Middle Ch. / Freq	Power High Ch. / Freq	MPR (dB)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI2 BPSK	1	1	17.13	17.18	17.10	
100	PI2 BPSK	1	137	17.10	17.09	17.08	18.1
100	PI2 BPSK	1	271	17.11	17.10	17.11	
100	PI2 BPSK	135	0	17.02	17.04	17.07	
100	PI2 BPSK	135	69	17.06	17.08	17.05	18.1
100	PI2 BPSK	135	138	17.07	17.07	17.02	
100	PI2 BPSK	270	0	17.03	17.05	17.00	18.1
100	QPSK	1	1	17.13	17.11	17.06	
100	QPSK	1	137	17.12	17.10	17.02	18.1
100	QPSK	1	271	17.08	17.09	17.03	
100	QPSK	135	0	17.09	17.04	17.03	
100	QPSK	135	69	17.05	17.09	17.00	18.1
100	QPSK	135	138	17.00	17.03	16.99	
100	QPSK	270	0	17.09	17.10	17.02	18.1
100	16QAM	1	1	17.12	17.15	17.11	18.1
100	64QAM	1	1	17.07	17.11	17.08	18.1
100	256QAM	1	1	17.06	17.08	17.05	18.1
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
90	PI2 BPSK	1	1	17.13	17.15	17.12	18.1
Channel				507204	518598	529998	
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI2 BPSK	1	1	17.14	17.13	17.08	18.1
Channel				506204	518598	530999	
Frequency (MHz)				2531.02	2592.99	2654.99	
50	PI2 BPSK	1	1	17.11	17.12	17.09	18.1
Channel				505202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	17.14	17.16	17.13	18.1
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	17.09	17.13	17.14	18.1
Channel				501204	518598	535999	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	17.15	17.14	17.16	18.1

n77							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Middle Ch. / Freq	Power High Ch. / Freq	MPR (dB)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI2 BPSK	1	1	19.28	19.55	19.48	
100	PI2 BPSK	1	137	19.18	19.52	19.26	20.6
100	PI2 BPSK	1	271	19.10	19.37	19.25	
100	PI2 BPSK	135	0	19.02	19.35	19.28	
100	PI2 BPSK	135	69	19.25	19.52	19.46	20.6
100	PI2 BPSK	135	138	19.12	19.13	19.10	
100	PI2 BPSK	270	0	19.23	19.50	19.44	20.6
100	QPSK	1	1	19.26	19.40	19.27	
100	QPSK	1	137	19.07	19.14	19.21	20.6
100	QPSK	1	271	19.03	19.16	19.16	
100	QPSK	135	0	19.07	19.10	18.96	
100	QPSK	135	69	19.11	19.02	19.04	20.6
100	QPSK	135	138	18.94	19.11	19.06	
100	QPSK	270	0	19.19	19.04	19.03	20.6
100	16QAM	1	1	18.71	19.09	18.97	20.6
100	64QAM	1	1	18.97	19.32	19.13	20.6
100	256QAM	1	1	19.06	19.21	19.28	21.6
Channel				649668	656000	662334	
Frequency (MHz)				3745.02	3840	3935.01	
90	PI2 BPSK	1	1	19.25	19.50	19.49	20.6
Channel				649334	656000	662668	
Frequency (MHz)				3740.01	3840	3940.02	
80	PI2 BPSK	1	1	19.23	19.49	19.47	20.6
Channel				648999	656000	663004	
Frequency (MHz)				3735.02	3840	3945.02	
60	PI2 BPSK	1	1	19.24	19.46	19.45	20.6
Channel				648668	656000	663334	
Frequency (MHz)				3730.02	3840	3950.01	
50	PI2 BPSK	1	1	19.24	19.46	19.45	20.6
Channel				648334	656000	663668	
Frequency (MHz)				3725.01	3840	3955.02	
40	PI2 BPSK	1	1	19.25	19.47	19.45	20.6
Channel				647999	656000	664004	
Frequency (MHz)				3720.02	3840	3960.01	
30	PI2 BPSK	1	1	19.20	19.48	19.44	20.6
Channel				647668	656000	664334	
Frequency (MHz)				3715.02	3840	3965.01	
20	PI2 BPSK	1	1	19.21	19.44	19.43	20.6



Full Power Mode - LAT

n2									
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				372000	376000	380000			
Frequency (MHz)				1860	1860	1900			
20	Pi/2 BPSK	1	1	24.02	24.06	24.00			
20	Pi/2 BPSK	1	53	23.97	24.03	23.99	24.8		0.0
20	Pi/2 BPSK	1	104	24.00	24.01	23.96			
20	Pi/2 BPSK	50	0	23.43	23.54	23.52	24.3		0.5
20	Pi/2 BPSK	50	28	23.97	24.02	23.95	24.8		0.0
20	Pi/2 BPSK	50	96	23.92	23.94	23.90	24.3		0.5
20	Pi/2 BPSK	100	0	23.48	23.51	23.43			
20	QPSK	1	1	24.01	23.99	23.97			
20	QPSK	1	53	24.03	24.00	24.05	24.8		0.0
20	QPSK	1	104	24.05	24.05	24.02			
20	QPSK	50	0	23.97	23.91	22.90	23.8		1.0
20	QPSK	50	28	23.97	24.05	24.01	24.8		0.0
20	QPSK	50	96	22.93	23.04	23.01	23.8		1.0
20	QPSK	100	0	22.97	23.05	23.00			
20	RCQAM	1	1	23.31	23.02	23.20	23.8		1.0
20	RCQAM	1	1	21.48	21.34	21.40	22.3		2.5
20	256QAM	1	1	19.27	19.47	19.23	20.3		4.5
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1837.5	1860	1922.5			
15	Pi/2 BPSK	1	1	23.97	24.01	23.93	24.8		0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1855	1860	1905			
10	Pi/2 BPSK	1	1	23.83	23.89	23.85	24.8		0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1852.5	1860	1907.5			
5	Pi/2 BPSK	1	1	23.84	23.93	23.85	24.8		0.0

n5									
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				166800	167300	167800			
Frequency (MHz)				834	836.5	839			
20	Pi/2 BPSK	1	1	23.73	23.70	23.73			
20	Pi/2 BPSK	1	53	23.67	23.64	23.69	24.3		0.0
20	Pi/2 BPSK	1	104	23.60	23.54	23.58			
20	Pi/2 BPSK	50	0	23.17	23.10	23.15	23.8		0.5
20	Pi/2 BPSK	50	28	23.68	23.70	23.65	24.3		0.0
20	Pi/2 BPSK	50	96	23.15	23.07	23.06	23.8		0.5
20	Pi/2 BPSK	100	0	23.12	23.15	23.10			
20	QPSK	1	1	23.73	23.67	23.60			
20	QPSK	1	53	23.70	23.74	23.59	24.3		0.0
20	QPSK	1	104	23.66	23.61	23.46			
20	QPSK	50	0	23.63	23.56	23.72	23.3		1.0
20	QPSK	50	28	23.60	23.55	23.61	24.3		0.0
20	QPSK	50	96	22.64	22.67	22.99	23.3		1.0
20	QPSK	100	0	23.70	22.70	22.67			
20	RCQAM	1	1	22.81	22.46	22.77	23.3		1.0
20	RCQAM	1	1	21.05	21.04	20.71	21.8		2.5
20	256QAM	1	1	18.97	18.92	18.86	19.6		4.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				831.5	836.5	841.5			
15	Pi/2 BPSK	1	1	23.65	23.68	23.63	24.3		0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				829	836.5	844			
10	Pi/2 BPSK	1	1	23.60	23.62	23.58	24.3		0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				826.5	836.5	846.5			
5	Pi/2 BPSK	1	1	23.65	23.67	23.64	24.3		0.0

n7									
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				502000	507000	512000			
Frequency (MHz)				2510	2535	2560			
20	Pi/2 BPSK	1	1	24.06	24.15	24.06			
20	Pi/2 BPSK	1	53	23.99	24.08	24.03	24.8		0.0
20	Pi/2 BPSK	1	104	24.06	24.08	24.01			
20	Pi/2 BPSK	50	0	23.46	23.58	23.49	24.3		0.5
20	Pi/2 BPSK	50	28	24.02	24.10	24.00	24.8		0.0
20	Pi/2 BPSK	50	96	23.45	23.59	23.47	24.3		0.5
20	Pi/2 BPSK	100	0	23.49	23.60	23.47			
20	QPSK	1	1	24.11	24.07	24.11			
20	QPSK	1	53	24.10	24.02	24.13	24.8		0.0
20	QPSK	1	104	24.12	24.05	24.06			
20	QPSK	50	0	23.05	23.12	23.03	23.8		1.0
20	QPSK	50	28	24.03	24.05	24.05	24.8		0.0
20	QPSK	50	96	22.88	23.10	23.04	23.8		1.0
20	QPSK	100	0	22.99	23.05	23.05			
20	RCQAM	1	1	22.34	22.12	22.46	23.8		1.0
20	RCQAM	1	1	21.07	21.31	21.03	22.3		2.5
20	256QAM	1	1	19.33	19.23	19.37	20.3		4.5
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2507.5	2535	2562.5			
15	Pi/2 BPSK	1	1	24.03	24.10	24.05	24.8		0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2505	2535	2565			
10	Pi/2 BPSK	1	1	24.04	24.08	24.03	24.8		0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2502.5	2535	2567.5			
5	Pi/2 BPSK	1	1	24.05	24.09	24.01	24.8		0.0



n25									
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				372000	376500	381000			
Frequency (MHz)				1890	1882.5	1895			
20	Pi2 BPSK	1	1	23.92	24.06	24.01			
20	Pi2 BPSK	1	53	23.86	24.05	23.99	24.8	0.0	
20	Pi2 BPSK	1	104	23.83	23.95	23.88			
20	Pi2 BPSK	50	0	23.21	23.43	23.41	24.3	0.5	
20	Pi2 BPSK	50	28	23.89	24.03	23.95	24.8	0.0	
20	Pi2 BPSK	50	56	23.26	23.47	23.37	24.3	0.5	
20	Pi2 BPSK	100	0	23.38	23.52	23.44			
20	QPSK	1	1	23.78	23.99	23.98			
20	QPSK	1	53	23.93	23.96	24.00	24.8	0.0	
20	QPSK	1	104	23.92	23.98	23.42			
20	QPSK	50	0	22.78	22.97	22.86	23.8	1.0	
20	QPSK	50	28	23.80	24.01	24.00	24.8	0.0	
20	QPSK	50	56	22.74	22.88	22.91	23.8	1.0	
20	QPSK	100	0	22.76	23.00	23.00			
20	16QAM	1	1	23.07	22.89	23.26	23.8	1.0	
20	16QAM	1	1	21.23	21.21	21.44	22.3	2.5	
20	256QAM	1	1	19.21	19.51	19.35	20.3	4.5	
Channel				371500	376500	381500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1897.5	1892.5	1907.5			
15	Pi2 BPSK	1	1	23.83	23.97	23.93	24.8	0.0	
Channel				371000	376500	382000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1895	1882.5	1890			
10	Pi2 BPSK	1	1	23.84	24.00	23.95	24.8	0.0	
Channel				370500	376500	382500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1892.5	1895.5	1892.5			
5	Pi2 BPSK	1	1	23.80	23.93	23.91	24.8	0.0	

n66									
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				344000	349000	354000			
Frequency (MHz)				1720	1745	1770			
20	Pi2 BPSK	1	1	24.07	24.09	24.00			
20	Pi2 BPSK	1	53	23.96	23.94	23.84	24.8	0.0	
20	Pi2 BPSK	1	104	24.03	23.97	23.91			
20	Pi2 BPSK	50	0	23.50	23.47	23.43	24.3	0.5	
20	Pi2 BPSK	50	28	24.00	24.03	23.97	24.8	0.0	
20	Pi2 BPSK	50	56	23.43	23.43	23.48	24.3	0.5	
20	Pi2 BPSK	100	0	23.41	23.44	23.37			
20	QPSK	1	1	24.03	24.02	23.21			
20	QPSK	1	53	23.93	23.94	23.78	24.8	0.0	
20	QPSK	1	104	23.37	23.38	23.65			
20	QPSK	50	0	23.04	23.01	23.37	23.8	1.0	
20	QPSK	50	28	23.90	23.95	23.65	24.8	0.0	
20	QPSK	50	56	22.73	22.92	22.88	23.8	1.0	
20	QPSK	100	0	22.94	22.97	22.57			
20	16QAM	1	1	23.37	23.01	22.21	23.8	1.0	
20	16QAM	1	1	21.44	21.22	20.38	22.3	2.5	
20	256QAM	1	1	19.47	19.53	18.63	20.3	4.5	
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1717.5	1745	1772.5			
15	Pi2 BPSK	1	1	23.94	23.95	23.98	24.3	0.0	
Channel				343000	349000	350000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1715	1745	1775			
10	Pi2 BPSK	1	1	23.95	24.03	23.94	24.8	0.0	
Channel				342500	349000	350500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1712.5	1745	1777.5			
5	Pi2 BPSK	1	1	23.90	24.00	23.93	24.8	0.0	

n71									
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				134500	136500	137600			
Frequency (MHz)				673	680.5	688			
20	Pi2 BPSK	1	1	24.06	24.08	23.93			
20	Pi2 BPSK	1	53	23.96	23.84	23.93	24.8	0.0	
20	Pi2 BPSK	1	104	23.84	23.73	23.55			
20	Pi2 BPSK	50	0	23.44	23.40	23.34	24.3	0.5	
20	Pi2 BPSK	50	28	23.99	24.02	23.88	24.8	0.0	
20	Pi2 BPSK	50	56	23.40	23.24	23.19	24.3	0.5	
20	Pi2 BPSK	100	0	23.42	23.47	23.26			
20	QPSK	1	1	24.04	24.05	24.02			
20	QPSK	1	53	23.93	23.94	23.77	24.8	0.0	
20	QPSK	1	104	23.88	23.80	23.71			
20	QPSK	50	0	23.17	23.91	22.87	23.8	1.0	
20	QPSK	50	28	23.96	23.84	23.75	24.8	0.0	
20	QPSK	50	56	22.96	22.88	22.74	23.8	1.0	
20	QPSK	100	0	23.01	22.88	22.76			
20	16QAM	1	1	23.31	22.86	23.83	23.8	1.0	
20	16QAM	1	1	21.41	21.28	21.87	22.3	2.5	
20	256QAM	1	1	19.44	19.27	18.19	20.3	4.5	
Channel				134100	136500	138100	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				670.5	680.5	690.5			
15	Pi2 BPSK	1	1	23.91	23.94	23.87	24.3	0.0	
Channel				133500	136500	138500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				668	680.5	693			
10	Pi2 BPSK	1	1	23.82	23.83	23.78	24.8	0.0	
Channel				133100	136500	139100	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				665.5	680.5	695.5			
5	Pi2 BPSK	1	1	23.85	23.88	23.82	24.8	0.0	



n41_FCC								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Mid Ch. / Freq	Power High Ch. / Freq	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI2 BPSK	1	1	23.90	24.00	23.94		
100	PI2 BPSK	1	137	23.89	23.96	23.84	24.8	0.0
100	PI2 BPSK	1	271	23.82	23.97	23.83		
100	PI2 BPSK	135	0	23.77	23.91	23.89		
100	PI2 BPSK	135	69	23.91	23.95	23.93	24.8	0.0
100	PI2 BPSK	135	135	23.90	23.90	23.89		
100	PI2 BPSK	270	0	23.88	23.92	23.90	24.8	0.0
100	QPSK	1	1	23.85	23.93	23.92		
100	QPSK	1	137	23.97	23.98	23.98	24.8	0.0
100	QPSK	1	271	23.98	23.93	23.97		
100	QPSK	135	0	23.25	23.40	23.48		
100	QPSK	135	69	23.91	23.96	23.95	24.8	0.0
100	QPSK	135	138	23.41	23.40	23.62		
100	QPSK	270	0	23.36	23.40	23.60	24.8	0.0
100	16QAM	1	1	23.15	23.10	23.14	24.3	0.5
100	64QAM	1	1	21.72	21.89	21.75	22.8	2.0
100	256QAM	1	1	19.77	19.74	19.76	20.6	4.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI2 BPSK	1	1	23.92	23.95	23.90	24.6	0.0
Channel				507204	518598	528998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2648.99		
80	PI2 BPSK	1	1	23.83	23.88	23.82	24.8	0.0
Channel				505204	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI2 BPSK	1	1	23.87	23.93	23.85	24.8	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI2 BPSK	1	1	23.91	23.96	23.90	24.8	0.0
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2511	2592.99	2674.98		
30	PI2 BPSK	1	1	23.94	23.97	23.95	24.8	0.0
Channel				501204	518598	535996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI2 BPSK	1	1	23.93	23.96	23.92	24.8	0.0

n41(HPUe)_FCC								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Mid Ch. / Freq	Power High Ch. / Freq	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI2 BPSK	1	1	25.94	26.00	25.94		
100	PI2 BPSK	1	137	25.78	25.90	25.91	26.8	0.0
100	PI2 BPSK	1	271	25.75	25.99	25.84		
100	PI2 BPSK	135	0	25.63	25.85	25.82		
100	PI2 BPSK	135	69	25.81	25.94	25.90	26.8	0.0
100	PI2 BPSK	135	135	25.77	25.94	25.89		
100	PI2 BPSK	270	0	25.80	25.90	25.88	26.8	0.0
100	QPSK	1	1	25.66	25.89	25.77		
100	QPSK	1	137	25.83	25.97	25.95	26.8	0.0
100	QPSK	1	271	25.71	25.99	25.89		
100	QPSK	135	0	25.18	25.44	25.21		
100	QPSK	135	69	25.77	25.98	25.99	26.8	0.0
100	QPSK	135	138	25.40	25.90	25.45		
100	QPSK	270	0	25.38	25.33	25.32	26.8	0.0
100	16QAM	1	1	25.18	25.20	24.65	26.3	0.5
100	64QAM	1	1	23.50	23.90	22.89	24.3	2.5
100	256QAM	1	1	21.41	21.76	21.47	22.3	4.5
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI2 BPSK	1	1	25.81	25.94	25.85	26.8	0.0
Channel				507204	518598	528998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI2 BPSK	1	1	25.77	25.87	25.80	26.8	0.0
Channel				505204	518598	533000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI2 BPSK	1	1	25.84	25.98	25.90	26.8	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI2 BPSK	1	1	25.80	25.92	25.84	26.8	0.0
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2511	2592.99	2674.98		
30	PI2 BPSK	1	1	25.83	25.93	25.88	26.8	0.0
Channel				501204	518598	535000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI2 BPSK	1	1	25.81	25.95	25.87	26.8	0.0



Reduced power for Hotspot on-LAT

n2								
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)
				Low Ch./Freq.	Mid Ch./Freq.	High Ch./Freq.		
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI2 BPSK	1	1	20.84	20.50	20.43	21.5	0.0
20	PI2 BPSK	1	53	20.81	20.50	20.42		
20	PI2 BPSK	1	104	20.49	20.48	20.40		
20	PI2 BPSK	50	0	20.40	20.42	20.33	21.5	0.0
20	PI2 BPSK	50	28	20.42	20.48	20.40	21.5	0.0
20	PI2 BPSK	50	56	20.45	20.46	20.39		
20	PI2 BPSK	100	0	20.40	20.45	20.37	21.5	0.0
20	QPSK	1	1	20.49	20.52	20.53		
20	QPSK	1	53	20.47	20.50	20.48	21.5	0.0
20	QPSK	1	104	20.45	20.48	20.49		
20	QPSK	50	0	20.50	20.52	20.48	21.5	0.0
20	QPSK	50	28	20.48	20.51	20.50	21.5	0.0
20	QPSK	50	56	20.46	20.48	20.47	21.5	0.0
20	QPSK	100	0	20.47	20.52	20.46		
20	16QAM	1	1	20.48	20.45	20.50	21.5	0.0
20	16QAM	1	1	20.50	20.53	20.54	21.5	0.0
20	256QAM	1	1	20.05	20.12	20.08	21.5	0.0
Channel				371500	376000	380500	Tune-up limit (dB)	MPR
Frequency (MHz)				1837.5	1850	1872.5	21.5	0.0
Channel				371000	376000	381000	Tune-up limit (dB)	MPR (dB)
Frequency (MHz)				1865	1880	1895		
10	PI2 BPSK	1	1	20.45	20.49	20.46	21.5	0.0
Channel				370500	376000	381500	Tune-up limit (dB)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI2 BPSK	1	1	20.41	20.42	20.40	21.5	0.0

n7								
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)
				Low Ch./Freq.	Mid Ch./Freq.	High Ch./Freq.		
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI2 BPSK	1	1	20.18	20.20	20.14	21.0	0.0
20	PI2 BPSK	1	53	20.15	20.16	20.13		
20	PI2 BPSK	1	104	20.14	20.15	20.12		
20	PI2 BPSK	50	0	20.11	20.14	20.06	21.0	0.0
20	PI2 BPSK	50	28	20.15	20.18	20.11	21.0	0.0
20	PI2 BPSK	50	56	20.13	20.07	20.01		
20	PI2 BPSK	100	0	20.13	20.16	20.09	21.0	0.0
20	QPSK	1	1	20.12	20.18	20.15		
20	QPSK	1	53	20.10	20.14	20.13	21.0	0.0
20	QPSK	1	104	20.13	20.12	20.10		
20	QPSK	50	0	20.12	20.15	20.16	21.0	0.0
20	QPSK	50	28	20.14	20.14	20.12	21.0	0.0
20	QPSK	50	56	19.85	20.02	20.01		
20	QPSK	100	0	19.89	20.11	20.10	21.0	0.0
20	16QAM	1	1	20.10	20.10	20.11	21.0	0.0
20	16QAM	1	1	20.05	20.08	20.04	21.0	0.0
20	256QAM	1	1	20.12	20.17	20.13	21.0	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR
Frequency (MHz)				2497.5	2525	2552.5	21.0	0.0
15	PI2 BPSK	1	1	20.14	20.15	20.13	21.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI2 BPSK	1	1	20.11	20.12	20.09	21.0	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI2 BPSK	1	1	20.08	20.11	20.09	21.0	0.0



n25								
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				372000	376500	381000		
Frequency (MHz)				1860	1882.5	1905		
20	PI2 BPSK	1	1	20.41	20.56	20.49		
20	PI2 BPSK	1	53	20.35	20.50	20.43	21.5	0.0
20	PI2 BPSK	1	104	20.36	20.42	20.42		
20	PI2 BPSK	50	0	20.33	20.51	20.45	21.5	0.0
20	PI2 BPSK	50	28	20.40	20.54	20.47		
20	PI2 BPSK	50	56	20.32	20.47	20.39	21.5	0.0
20	PI2 BPSK	100	0	20.38	20.52	20.45		
20	QPSK	1	1	20.40	20.47	20.43		
20	QPSK	1	53	20.43	20.50	20.46	21.5	0.0
20	QPSK	1	104	20.32	20.29	20.44		
20	QPSK	50	0	20.41	20.51	20.50	21.5	0.0
20	QPSK	50	28	20.40	20.49	20.48		
20	QPSK	50	56	20.41	20.48	20.45	21.5	0.0
20	QPSK	100	0	20.44	20.50	20.44		
20	16QAM	1	1	20.36	20.41	20.38	21.5	0.0
20	64QAM	1	1	20.40	20.49	20.50	21.5	0.0
20	256QAM	1	1	20.05	20.10	20.08	21.5	0.0
Channel				371500	376500	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1872.5	1892.5	1917.5		
15	PI2 BPSK	1	1	20.45	20.49	20.44	21.5	0.0
Channel				371000	376500	382000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1885	1882.5	1910		
10	PI2 BPSK	1	1	20.37	20.42	20.39	21.5	0.0
Channel				370500	376500	382500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1892.5	1892.5	1912.5		
5	PI2 BPSK	1	1	20.40	20.41	20.38	21.5	0.0

n66								
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				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI2 BPSK	1	1	20.07	20.14	20.03		
20	PI2 BPSK	1	53	20.03	20.04	19.97	21.0	0.0
20	PI2 BPSK	1	104	20.01	20.06	19.96		
20	PI2 BPSK	50	0	19.99	19.97	19.98	21.0	0.0
20	PI2 BPSK	50	28	20.05	20.11	20.00		
20	PI2 BPSK	50	56	19.97	20.01	19.91	21.0	0.0
20	PI2 BPSK	100	0	20.02	20.09	19.97		
20	QPSK	1	1	20.01	20.09	20.00		
20	QPSK	1	53	20.06	20.11	19.97	21.0	0.0
20	QPSK	1	104	20.00	20.03	19.99		
20	QPSK	50	0	20.03	20.10	20.02	21.0	0.0
20	QPSK	50	28	19.92	20.02	19.96		
20	QPSK	50	56	19.91	20.00	19.95	21.0	0.0
20	QPSK	100	0	20.01	20.07	19.98		
20	16QAM	1	1	19.96	20.01	19.96	21.0	0.0
20	64QAM	1	1	20.01	20.09	19.96	21.0	0.0
20	256QAM	1	1	20.08	20.16	19.84	21.0	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI2 BPSK	1	1	19.94	19.90	19.95	21.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI2 BPSK	1	1	19.88	19.84	19.82	21.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI2 BPSK	1	1	19.86	19.88	19.85	21.0	0.0



n41_FCC							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Mid Ch. / Freq	Power High Ch. / Freq	MPR (dB)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI2 BPSK	1	1	20.20	20.25	20.19	
100	PI2 BPSK	1	137	20.19	20.20	20.16	21.2
100	PI2 BPSK	1	271	20.17	20.21	20.14	
100	PI2 BPSK	135	0	20.15	20.17	20.13	
100	PI2 BPSK	135	69	20.18	20.22	20.16	21.2
100	PI2 BPSK	135	135	20.14	20.16	20.13	
100	PI2 BPSK	270	0	20.15	20.20	20.13	21.2
100	QPSK	1	1	20.13	20.16	20.12	
100	QPSK	1	137	20.12	20.14	20.11	21.2
100	QPSK	1	271	20.10	20.13	20.10	
100	QPSK	135	0	20.11	20.15	20.13	
100	QPSK	135	69	20.13	20.16	20.12	21.2
100	QPSK	135	135	20.11	20.14	20.09	
100	QPSK	270	0	20.09	20.17	20.13	21.2
100	16QAM	1	1	20.14	20.15	20.09	21.2
100	64QAM	1	1	20.12	20.14	20.10	21.2
100	256QAM	1	1	19.89	20.00	19.96	21.2
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
80	PI2 BPSK	1	1	19.99	19.98	20.11	21.2
Channel				507204	518598	529998	
Frequency (MHz)				2536.02	2592.99	2648.99	
80	PI2 BPSK	1	1	19.98	19.99	20.04	21.2
Channel				505204	518598	530998	
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI2 BPSK	1	1	19.99	19.98	19.96	21.2
Channel				503202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	20.05	20.06	20.02	21.2
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	20.00	20.08	20.03	21.2
Channel				2506.02	2592.99	2679.99	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	20.01	19.97	19.93	21.2

n41(HPUe)_FCC							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq	Power Mid Ch. / Freq	Power High Ch. / Freq	MPR (dB)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI2 BPSK	1	1	20.13	20.16	20.11	
100	PI2 BPSK	1	137	20.11	20.13	20.06	21.2
100	PI2 BPSK	1	271	20.09	20.14	20.08	
100	PI2 BPSK	135	0	20.07	20.10	20.06	
100	PI2 BPSK	135	69	20.10	20.12	20.09	21.2
100	PI2 BPSK	135	135	20.08	20.07	20.07	
100	PI2 BPSK	270	0	20.08	20.10	20.07	21.2
100	QPSK	1	1	20.08	20.11	20.04	
100	QPSK	1	137	20.03	20.05	20.11	21.2
100	QPSK	1	271	20.04	20.07	20.10	
100	QPSK	135	0	20.08	20.10	20.08	
100	QPSK	135	69	20.06	20.09	20.06	21.2
100	QPSK	135	135	20.05	20.07	20.05	
100	QPSK	270	0	20.02	20.06	20.04	21.2
100	16QAM	1	1	20.06	20.10	20.03	21.2
100	64QAM	1	1	20.06	20.09	20.07	21.2
100	256QAM	1	1	20.05	20.08	20.03	21.2
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
80	PI2 BPSK	1	1	20.06	20.11	20.07	21.2
Channel				507204	518598	529998	
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI2 BPSK	1	1	20.04	20.07	20.03	21.2
Channel				505204	518598	530998	
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI2 BPSK	1	1	20.02	20.09	20.05	21.2
Channel				503202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	20.04	20.05	20.02	21.2
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	20.04	20.00	20.03	21.2
Channel				2506.02	2592.99	2679.99	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	20.00	20.04	20.01	21.2



Reduced power for Sensor on-LAT

n2								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI2 BPSK	1	1	20.03	20.04	19.92	21.3	0.0
20	PI2 BPSK	1	53	20.00	20.01	19.90		
20	PI2 BPSK	1	104	19.96	19.97	19.89		
20	PI2 BPSK	50	0	19.97	19.98	19.87	21.3	0.0
20	PI2 BPSK	50	28	20.00	20.01	19.90	21.3	0.0
20	PI2 BPSK	50	56	19.94	19.97	19.86		
20	PI2 BPSK	100	0	19.98	19.99	19.88	21.3	0.0
20	QPSK	1	1	19.95	20.02	19.90		
20	QPSK	1	53	19.94	19.97	19.88	21.3	0.0
20	QPSK	1	104	19.90	19.92	19.86		
20	QPSK	50	0	19.93	19.97	19.82	21.3	0.0
20	QPSK	50	28	19.92	19.95	19.87	21.3	0.0
20	QPSK	50	56	19.90	19.96	19.86		
20	QPSK	100	0	19.97	19.99	19.88	21.3	0.0
20	16QAM	1	1	19.88	19.89	19.85	21.3	0.0
20	16QAM	1	1	19.99	20.01	19.90	21.3	0.0
20	256QAM	1	1	19.98	20.00	19.93	21.3	0.0
Channel				371500	376000	380500		
Frequency (MHz)				1857.5	1860	1862.5		
15	PI2 BPSK	1	1	19.99	20.00	19.93	21.3	0.0
Channel				371000	376000	381000		
Frequency (MHz)				1865	1880	1905		
10	PI2 BPSK	1	1	19.96	19.98	19.90	21.3	0.0
Channel				370500	376000	381500		
Frequency (MHz)				1862.5	1880	1907.5		
5	PI2 BPSK	1	1	19.92	19.95	19.88	21.3	0.0

n7								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI2 BPSK	1	1	18.83	18.87	18.80		
20	PI2 BPSK	1	53	18.82	18.85	18.78	19.8	0.0
20	PI2 BPSK	1	104	18.80	18.86	18.75		
20	PI2 BPSK	50	0	18.77	18.82	18.73	19.8	0.0
20	PI2 BPSK	50	28	18.81	18.85	18.78	19.8	0.0
20	PI2 BPSK	50	56	18.76	18.80	18.73		
20	PI2 BPSK	100	0	18.79	18.82	18.75	19.8	0.0
20	QPSK	1	1	18.75	18.83	18.79		
20	QPSK	1	53	18.73	18.79	18.77	19.8	0.0
20	QPSK	1	104	18.69	18.70	18.67		
20	QPSK	50	0	18.76	18.81	18.81	19.8	0.0
20	QPSK	50	28	18.80	18.82	18.79	19.8	0.0
20	QPSK	50	56	18.81	18.80	18.78		
20	QPSK	100	0	18.87	18.81	18.79	19.8	0.0
20	16QAM	1	1	18.73	18.80	18.78	19.8	0.0
20	16QAM	1	1	18.72	18.77	18.72	19.8	0.0
20	256QAM	1	1	18.80	18.81	18.76	19.8	0.0
Channel				501500	507000	512500		
Frequency (MHz)				2507.5	2535	2562.5		
15	PI2 BPSK	1	1	18.80	18.82	18.79	19.8	0.0
Channel				501000	507000	513000		
Frequency (MHz)				2505	2535	2565		
10	PI2 BPSK	1	1	18.75	18.78	18.75	19.8	0.0
Channel				500500	507000	513500		
Frequency (MHz)				2502.5	2535	2567.5		
5	PI2 BPSK	1	1	18.73	18.76	18.71	19.8	0.0



n25									
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)	
				Low Ch. Freq.	Middle Ch. Freq.	High Ch. Freq.			
Channel				372000	376500	381000			
Frequency (MHz)				1860	1862.5	1905			
20	PI2 BPSK	1	1	19.93	20.09	20.02			
20	PI2 BPSK	1	53	19.90	20.07	19.99	21.3	0.0	
20	PI2 BPSK	1	104	19.91	20.04	20.00			
20	PI2 BPSK	50	0	19.83	20.03	19.98	21.3	0.0	
20	PI2 BPSK	50	28	19.90	20.07	19.99	21.3	0.0	
20	PI2 BPSK	50	56	19.82	19.99	19.90			
20	PI2 BPSK	100	0	19.88	20.05	19.97	21.3	0.0	
20	QPSK	1	1	19.93	20.02	19.97			
20	QPSK	1	53	19.92	20.01	19.96	21.3	0.0	
20	QPSK	1	104	19.91	19.99	19.94			
20	QPSK	50	0	19.86	19.96	19.96	21.3	0.0	
20	QPSK	50	28	19.86	19.97	19.95	21.3	0.0	
20	QPSK	50	56	19.87	19.96	19.92			
20	QPSK	100	0	19.86	20.03	19.96	21.3	0.0	
20	16QAM	1	1	19.98	20.06	20.01	21.3	0.0	
20	64QAM	1	1	19.91	20.02	19.92	21.3	0.0	
20	256QAM	1	1	19.58	19.65	19.62	21.3	0.0	
Channel				371500	376000	381000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1877.5	1882.5	1927.5			
15	PI2 BPSK	1	1	20.00	20.07	20.03	21.3	0.0	
Channel				371000	376500	382000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1865	1862.5	1910			
10	PI2 BPSK	1	1	19.87	20.03	19.96	21.3	0.0	
Channel				370500	376000	382000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1852.5	1852.5	1912.5			
5	PI2 BPSK	1	1	19.95	19.98	19.94	21.3	0.0	

n66									
BW (MHz)	Modulation	RB Size	RB Offset	Power	Power	Power	Tune-up limit (dBm)	MPR (dB)	
				Low Ch. Freq.	Middle Ch. Freq.	High Ch. Freq.			
Channel				344000	349000	354000			
Frequency (MHz)				1720	1745	1770			
20	PI2 BPSK	1	1	21.03	21.06	21.01			
20	PI2 BPSK	1	53	21.01	21.04	20.96	22.0	0.0	
20	PI2 BPSK	1	104	20.96	21.03	20.92			
20	PI2 BPSK	50	0	20.91	21.01	20.91	22.0	0.0	
20	PI2 BPSK	50	28	21.00	21.03	20.97	22.0	0.0	
20	PI2 BPSK	50	56	20.93	20.99	20.88			
20	PI2 BPSK	100	0	20.97	21.02	20.95	22.0	0.0	
20	QPSK	1	1	20.95	21.05	20.95			
20	QPSK	1	53	20.97	21.04	20.89	22.0	0.0	
20	QPSK	1	104	20.98	21.03	20.86			
20	QPSK	50	0	20.92	21.01	20.92	22.0	0.0	
20	QPSK	50	28	20.88	21.00	20.93	22.0	0.0	
20	QPSK	50	56	20.87	20.96	20.92			
20	QPSK	100	0	20.94	21.02	20.92	22.0	0.0	
20	16QAM	1	1	20.97	21.04	20.97	22.0	0.0	
20	64QAM	1	1	20.91	21.01	20.87	22.0	0.0	
20	256QAM	1	1	20.96	21.00	20.73	22.0	0.0	
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1717.5	1745	1772.5			
15	PI2 BPSK	1	1	20.95	21.00	20.94	22.0	0.0	
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1715	1745	1775			
10	PI2 BPSK	1	1	20.96	20.98	20.97	22.0	0.0	
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1712.5	1745	1777.5			
5	PI2 BPSK	1	1	20.98	21.01	21.00	22.0	0.0	



n41_FCC									
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				502002	518598	526000			
Frequency (MHz)				2546.01	2572.9	2540			
100	PV2 BPSK	1	1	19.09	19.10	19.07			
100	PV2 BPSK	1	137	19.05	19.08	19.03	20.2	0.0	
100	PV2 BPSK	1	271	19.01	19.07	18.99			
100	PV2 BPSK	135	0	18.98	19.02	18.97			
100	PV2 BPSK	135	69	19.06	19.07	19.04	20.2	0.0	
100	PV2 BPSK	135	138	18.95	18.99	18.95			
100	PV2 BPSK	270	0	19.02	19.04	19.00	20.2	0.0	
100	QPSK	1	1	19.04	19.09	19.04			
100	QPSK	1	137	19.03	19.07	19.03	20.2	0.0	
100	QPSK	1	271	19.00	19.05	19.01			
100	QPSK	135	0	19.00	19.06	19.03			
100	QPSK	135	69	18.99	19.04	18.99	20.2	0.0	
100	QPSK	135	138	18.97	19.02	18.95			
100	QPSK	270	0	18.90	19.00	18.95	20.2	0.0	
100	16QAM	1	1	19.02	19.05	18.98	20.2	0.0	
100	16QAM	1	1	18.98	19.02	18.97	20.2	0.0	
100	256QAM	1	1	19.02	19.03	19.00	20.2	0.0	
Channel				502002	518598	526000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2562.99	2544.98			
90	PV2 BPSK	1	1	19.05	19.08	19.06	20.2	0.0	
Channel				502004	518598	526000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2538.02	2562.99	2543.99			
80	PV2 BPSK	1	1	19.06	19.07	19.04	20.2	0.0	
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2522.02	2522.99	2524.99			
50	PV2 BPSK	1	1	18.99	19.03	19.00	20.2	0.0	
Channel				503002	518598	530000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2562.99	2570			
40	PV2 BPSK	1	1	18.90	19.00	18.98	20.2	0.0	
Channel				502002	518598	530000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2562.99	2574.98			
30	PV2 BPSK	1	1	18.94	18.98	18.95	20.2	0.0	
Channel				501204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2526.02	2526.99	2528.99			
20	PV2 BPSK	1	1	18.98	19.00	18.99	20.2	0.0	

n41(HPUE)_FCC									
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				509202	518598	526000			
Frequency (MHz)				2546.01	2572.9	2540			
100	PV2 BPSK	1	1	19.04	19.10	19.05			
100	PV2 BPSK	1	137	19.05	19.09	19.01	20.2	0.0	
100	PV2 BPSK	1	271	18.99	19.06	18.99			
100	PV2 BPSK	135	0	19.02	19.06	19.02			
100	PV2 BPSK	135	69	19.03	19.07	19.01	20.2	0.0	
100	PV2 BPSK	135	138	19.02	19.03	19.00			
100	PV2 BPSK	270	0	19.01	19.06	19.00	20.2	0.0	
100	QPSK	1	1	19.00	19.05	18.97			
100	QPSK	1	137	19.00	19.04	19.00	20.2	0.0	
100	QPSK	1	271	18.98	19.03	19.05			
100	QPSK	135	0	18.96	19.00	18.97			
100	QPSK	135	69	18.95	18.99	18.95	20.2	0.0	
100	QPSK	135	138	18.93	18.96	18.94			
100	QPSK	270	0	18.96	19.02	18.99	20.2	0.0	
100	16QAM	1	1	19.02	19.06	18.98	20.2	0.0	
100	16QAM	1	1	18.97	19.02	18.99	20.2	0.0	
100	256QAM	1	1	19.02	19.07	19.01	20.2	0.0	
Channel				502002	518598	526000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2562.99	2544.98			
90	PV2 BPSK	1	1	18.97	19.04	18.98	20.2	0.0	
Channel				501204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2538.02	2562.99	2543.99			
80	PV2 BPSK	1	1	18.94	18.97	18.95	20.2	0.0	
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2522.02	2522.99	2524.99			
50	PV2 BPSK	1	1	18.99	19.03	19.05	20.2	0.0	
Channel				503002	518598	530000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2562.99	2570			
40	PV2 BPSK	1	1	18.90	19.03	19.00	20.2	0.0	
Channel				502002	518598	530000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2562.99	2574.98			
30	PV2 BPSK	1	1	18.98	19.01	18.93	20.2	0.0	
Channel				501204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2526.02	2526.99	2528.99			
20	PV2 BPSK	1	1	18.97	19.00	18.93	20.2	0.0	



LTE&5GNR EN-DC Power

Full Power Mode - Ant0

n66							
BRF (MHz)	Multicast	RB Size	RB Offset	Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	Power
Channel				344000	346000	348000	
Frequency (MHz)				17200	17400	17600	
20	PQPSK	1	1	23.90	23.95	23.93	24.8
20	PQPSK	1	63	23.74	23.87	23.82	0.0
20	PQPSK	1	104	23.85	23.90	23.80	0.0
20	PQPSK	50	0	23.23	23.29	23.26	24.8
20	PQPSK	50	26	23.87	23.93	23.80	0.0
20	PQPSK	50	56	23.29	23.41	23.33	24.8
20	PQPSK	100	0	23.84	23.90	23.78	0.0
20	QPSK	1	1	23.81	23.93	23.77	0.0
20	QPSK	1	63	23.70	23.77	23.65	24.8
20	QPSK	1	104	23.86	23.91	23.70	0.0
20	QPSK	50	0	23.79	23.73	23.71	0.0
20	QPSK	50	26	23.78	23.74	23.68	0.0
20	QPSK	50	56	23.76	23.73	23.66	0.0
20	QPSK	100	0	23.78	23.74	23.65	0.0
20	16QAM	1	1	23.79	23.69	23.68	0.0
20	16QAM	1	1	23.34	23.33	23.26	3.5
20	16QAM	1	1	20.27	20.25	20.11	3.5
Channel				343000	345000	347000	
Frequency (MHz)				17200	17400	17600	
15	PQPSK	1	1	23.85	23.87	23.77	24.8
Channel				343000	345000	347000	
Frequency (MHz)				17200	17400	17600	
15	PQPSK	1	1	23.87	23.88	23.80	24.8
Channel				343000	345000	347000	
Frequency (MHz)				17200	17400	17600	
5	PQPSK	1	1	23.79	23.86	23.78	24.8



n41_FCC									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (MHz)	MPR (dB)	
Channel				50250	51896	53600			
Frequency (MHz)				2548.01	2552.50	2560			
100	PI2 BPSK	1	1	25.94	25.38	25.30			
100	PI2 BPSK	1	197	25.25	25.30	25.28	24.1	0.0	
100	PI2 BPSK	1	271	25.21	25.27	25.25			
100	PI2 BPSK	155	0	25.28	25.28	25.25			
100	PI2 BPSK	155	88	25.52	25.52	25.27	24.1	0.0	
100	PI2 BPSK	155	158	25.22	25.24	25.22			
100	PI2 BPSK	270	0	25.30	25.33	25.28	24.1	0.0	
100	QPSK	1	1	25.36	25.38	25.25			
100	QPSK	1	197	25.28	25.24	25.22	24.1	0.0	
100	QPSK	1	271	25.22	25.20	25.20			
100	QPSK	155	0	25.28	25.27	25.18			
100	QPSK	155	88	25.28	25.24	25.17	24.1	0.0	
100	QPSK	155	158	25.24	25.25	25.18			
100	QPSK	270	0	25.37	25.34	25.20	24.1	0.0	
100	8QAM	1	1	25.28	25.28	25.22	24.1	0.0	
100	8QAM	1	1	25.82	25.28	25.20	24.1	0.0	
100	8QAM	1	1	25.20	25.28	25.43	23.1	1.0	
Channel				50250	51896	53600	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2541	2552.50	2544.50			
90	PI2 BPSK	1	1	25.28	25.25	25.28	24.1	0.0	
Channel				50250	51896	53600	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2558.02	2552.50	2556.50			
80	PI2 BPSK	1	1	25.25	25.30	25.20	24.1	0.0	
Channel				50250	51896	53600	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2571.02	2552.50	2565.50			
50	PI2 BPSK	1	1	25.30	25.25	25.16	24.1	0.0	
Channel				50250	51896	53400	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2518.01	2552.50	2515.50			
40	PI2 BPSK	1	1	25.31	25.25	25.23	24.1	0.0	
Channel				50250	51896	53496	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2511	2552.50	2515.50			
30	PI2 BPSK	1	1	25.24	25.30	25.27	24.1	0.0	
Channel				501204	51896	53598	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2508.02	2552.50	2512.50			
20	PI2 BPSK	1	1	25.28	25.33	25.22	24.1	0.0	

n41(RPUE)_FCC									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Mid Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (MHz)	MPR (dB)	
Channel				50250	51896	53600			
Frequency (MHz)				2548.01	2552.50	2560			
100	PI2 BPSK	1	1	26.10	26.15	26.08			
100	PI2 BPSK	1	197	26.00	26.11	26.05	26.8	0.0	
100	PI2 BPSK	1	271	26.00	26.13	26.02			
100	PI2 BPSK	155	0	26.04	26.06	26.02			
100	PI2 BPSK	155	88	26.08	26.13	26.05	26.8	0.0	
100	PI2 BPSK	155	158	26.08	26.11	26.01			
100	PI2 BPSK	270	0	26.05	26.11	26.04	26.8	0.0	
100	QPSK	1	1	26.00	26.04	26.05			
100	QPSK	1	197	26.02	26.08	26.03	26.8	0.0	
100	QPSK	1	271	26.08	26.09	26.02			
100	QPSK	155	0	26.00	26.08	26.02			
100	QPSK	155	88	26.04	26.00	26.04	26.8	0.0	
100	QPSK	155	158	26.08	26.04	26.07			
100	QPSK	270	0	26.07	26.07	26.08	26.8	0.0	
100	16QAM	1	1	26.00	26.07	26.04	26.8	0.0	
100	16QAM	1	1	24.95	24.38	24.87	25.8	1.0	
100	256QAM	1	1	25.33	22.55	22.45	23.8	3.0	
Channel				50250	51896	53600	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2541	2552.50	2544.50			
90	PI2 BPSK	1	1	26.08	26.14	26.02	26.8	0.0	
Channel				50250	51896	53598	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2558.02	2552.50	2556.50			
80	PI2 BPSK	1	1	26.05	26.04	25.97	26.8	0.0	
Channel				50250	51896	53598	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2571.02	2552.50	2565.50			
50	PI2 BPSK	1	1	26.02	26.11	26.05	26.8	0.0	
Channel				50250	51896	53400	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2518.01	2552.50	2515.50			
40	PI2 BPSK	1	1	26.00	26.10	26.03	26.8	0.0	
Channel				50250	51896	53496	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2511	2552.50	2515.50			
30	PI2 BPSK	1	1	26.08	26.08	25.99	26.8	0.0	
Channel				501204	51896	53598	Tune-up limit (MHz)	MPR (dB)	
Frequency (MHz)				2508.02	2552.50	2512.50			
20	PI2 BPSK	1	1	26.08	26.14	26.00	26.8	0.0	



Reduced Power level 1/2/3 for Head – Ant0

n66									
SW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up test (dBm)	MPO (dB)	
Channel				34500	34500	34500			
Frequency (MHz)				1790	1745	1775			
20	P13 BPSK	1	1	16.97	17.13	17.29			
20	P13 BPSK	1	51	16.91	17.01	16.96	18.0	0.0	
20	P13 BPSK	1	104	17.01	17.06	16.96			
20	P13 BPSK	50	0	16.84	16.90	16.83	18.0	0.0	
20	P13 BPSK	50	26	16.86	17.02	16.87			
20	P13 BPSK	50	50	16.82	16.84	16.85	18.0	0.0	
20	P13 BPSK	100	0	16.81	16.87	16.85			
20	QPSK	1	1	16.91	17.03	16.87			
20	QPSK	1	51	16.89	16.89	16.84	18.0	0.0	
20	QPSK	1	104	16.87	16.88	16.77			
20	QPSK	50	0	16.95	16.91	16.87	18.0	0.0	
20	QPSK	50	26	16.91	16.85	16.87			
20	QPSK	50	50	16.88	16.82	16.87	18.0	0.0	
20	QPSK	100	0	16.92	16.86	16.83			
20	16QAM	1	1	16.91	17.01	16.82	18.0	0.0	
20	16QAM	1	1	16.84	16.83	16.83	18.0	0.0	
20	256QAM	1	1	16.77	16.75	16.71	18.0	0.0	
Channel				34510	34500	34500			
Frequency (MHz)				1717.5	1745	1772.5			
15	P13 BPSK	1	1	16.93	17.05	16.85	18.0	0.0	
Channel				34510	34500	34500			
Frequency (MHz)				1715	1745	1775			
10	P13 BPSK	1	1	16.96	17.03	16.88	18.0	0.0	
Channel				34510	34500	34500			
Frequency (MHz)				1712.5	1745	1777.5			
5	P13 BPSK	1	1	16.87	17.04	16.86	18.0	0.0	



n41_FCC									
RF (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch. / Freq.	Power Margin Ch. / Freq.	Power Top Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel									
Frequency (MHz)									
100	PI2 BPSK	1	1	17.12	17.27	17.21			
100	PI2 BPSK	1	137	17.11	17.26	17.18	18.0	0.0	
100	PI2 BPSK	1	271	17.02	17.08	17.19			
100	PI2 BPSK	135	0	17.06	17.12	17.09			
100	PI2 BPSK	135	89	17.12	17.25	17.19	18.0	0.0	
100	PI2 BPSK	135	138	18.06	17.11	18.00			
100	PI2 BPSK	270	0	17.10	17.23	17.15	18.0	0.0	
100	QPSK	1	1	17.13	17.19	17.08			
100	QPSK	1	139	17.16	17.17	17.05	18.0	0.0	
100	QPSK	1	271	18.06	17.02	17.07			
100	QPSK	135	0	17.16	17.18	17.07			
100	QPSK	135	89	17.06	17.14	18.07	18.0	0.0	
100	QPSK	135	138	18.06	17.09	17.12			
100	QPSK	270	0	17.08	17.13	18.00	18.0	0.0	
100	8QAM	1	1	17.09	17.10	18.07	18.0	0.0	
100	8QAM	1	1	18.01	18.07	17.09	18.0	0.0	
100	256QAM	1	1	18.81	18.89	17.09	18.0	0.0	
Channel									
Frequency (MHz)									
90	PI2 BPSK	1	1	18.30	17.00	18.01	18.0	0.0	
Channel									
Frequency (MHz)									
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.0	0.0	
Channel									
Frequency (MHz)									
50	PI2 BPSK	1	1	18.85	18.92	18.90	18.0	0.0	
Channel									
Frequency (MHz)									
40	PI2 BPSK	1	1	18.84	18.97	18.88	18.0	0.0	
Channel									
Frequency (MHz)									
30	PI2 BPSK	1	1	18.83	18.96	18.95	18.0	0.0	
Channel									
Frequency (MHz)									
20	PI2 BPSK	1	1	18.82	18.96	18.93	18.0	0.0	

n41(NPUE)_FCC									
RF (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch. / Freq.	Power Margin Ch. / Freq.	Power Top Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel									
Frequency (MHz)									
100	PI2 BPSK	1	1	17.02	17.27	17.21			
100	PI2 BPSK	1	137	17.11	17.26	17.18	18.0	0.0	
100	PI2 BPSK	1	271	17.02	17.08	17.19			
100	PI2 BPSK	135	0	17.06	17.12	17.09			
100	PI2 BPSK	135	89	17.12	17.25	17.19	18.0	0.0	
100	PI2 BPSK	135	138	18.06	17.11	18.00			
100	PI2 BPSK	270	0	17.10	17.23	17.15	18.0	0.0	
100	QPSK	1	1	17.13	17.19	17.08			
100	QPSK	1	139	17.16	17.17	17.05	18.0	0.0	
100	QPSK	1	271	18.06	17.02	17.07			
100	QPSK	135	0	17.16	17.18	17.07			
100	QPSK	135	89	17.06	17.14	18.07	18.0	0.0	
100	QPSK	135	138	18.06	17.09	17.12			
100	QPSK	270	0	17.08	17.13	18.00	18.0	0.0	
100	8QAM	1	1	17.09	17.10	18.07	18.0	0.0	
100	8QAM	1	1	18.01	18.07	17.09	18.0	0.0	
100	256QAM	1	1	18.81	18.89	17.09	18.0	0.0	
Channel									
Frequency (MHz)									
90	PI2 BPSK	1	1	18.90	17.00	18.91	18.0	0.0	
Channel									
Frequency (MHz)									
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.0	0.0	
Channel									
Frequency (MHz)									
50	PI2 BPSK	1	1	18.85	18.92	18.90	18.0	0.0	
Channel									
Frequency (MHz)									
40	PI2 BPSK	1	1	18.84	18.97	18.88	18.0	0.0	
Channel									
Frequency (MHz)									
30	PI2 BPSK	1	1	18.83	18.96	18.95	18.0	0.0	
Channel									
Frequency (MHz)									
20	PI2 BPSK	1	1	18.82	18.96	18.93	18.0	0.0	



Reduced power for Hotspot on-Air

n06									
W/ (MHz)	Multicast	RB Size	RB Offset	Power Lvl Ch. / Freq.	Power Mask Ch. / Freq.	Power Flg Ch. / Freq.	Tune-up Int. (sec)	MPO (dB)	
Channel				24400	24500	24600			
Frequency (MHz)				1700	1745	1775			
20	PUSC	1	1	19.18	19.21	19.10			
20	PUSC	1	53	19.15	19.18	19.09	20.2	0.0	
20	PUSC	1	104	19.08	19.15	19.05			
20	PUSC	50	0	19.02	19.08	19.06	20.2	0.0	
20	PUSC	50	26	19.15	19.18	19.09	20.2	0.0	
20	PUSC	50	55	19.05	19.07	19.07	20.2	0.0	
20	PUSC	100	0	19.14	19.15	19.07			
20	QPSK	1	1	19.09	19.08	19.05			
20	QPSK	1	53	19.15	19.08	19.05	20.2	0.0	
20	QPSK	1	104	19.14	19.05	19.04			
20	QPSK	50	0	19.15	19.09	19.05	20.2	0.0	
20	QPSK	50	26	19.18	19.14	19.10	20.2	0.0	
20	QPSK	50	56	19.11	19.05	19.10	20.2	0.0	
20	QPSK	100	0	19.15	19.11	19.06			
20	16QAM	1	1	19.03	19.13	19.12	20.2	0.0	
20	64QAM	1	1	19.06	19.07	19.04	20.2	0.0	
20	256QAM	1	1	19.09	19.00	19.06	20.2	0.0	
Channel				24500	24500	24500			
Frequency (MHz)				1777.5	1745	1772.5			
15	PUSC	1	1	19.14	19.17	19.04	20.2	0.0	
Channel				24600	24600	24600			
Frequency (MHz)				1750	1745	1775			
10	PUSC	1	1	19.11	19.15	19.07	20.2	0.0	
Channel				24500	24500	24500			
Frequency (MHz)				1732.5	1745	1777.5			
5	PUSC	1	1	19.08	19.12	19.05	20.2	0.0	



n41_FCC									
SW (MHz)	Modulation	RB Size	RB Offset	Power Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (MHz)	MPR (dB)	
Channel				30920	31808	32800			
Frequency (MHz)				2643.0	2528.0	2643.0			
100	PI2 BPSK	1	1	17.12	17.27	17.21			
100	PI2 BPSK	1	137	17.11	17.25	17.18	18.1	0.0	
100	PI2 BPSK	1	271	17.02	17.08	17.19			
100	PI2 BPSK	135	0	17.06	17.12	17.09			
100	PI2 BPSK	135	89	17.12	17.25	17.19	18.1	0.0	
100	PI2 BPSK	135	138	18.06	17.11	18.00			
100	PI2 BPSK	270	0	17.10	17.23	17.15	18.1	0.0	
100	QPSK	1	1	17.13	17.19	17.08			
100	QPSK	1	139	17.12	17.17	17.05	18.1	0.0	
100	QPSK	1	271	18.06	17.02	17.07			
100	QPSK	135	0	17.16	17.18	17.07			
100	QPSK	135	89	17.06	17.14	18.07	18.1	0.0	
100	QPSK	135	138	18.06	17.09	17.12			
100	QPSK	270	0	17.08	17.13	18.00	18.1	0.0	
100	8QAM	1	1	17.09	17.10	18.07	18.1	0.0	
100	8QAM	1	1	18.01	18.07	17.09	18.1	0.0	
100	25QAM	1	1	18.81	18.89	17.09	18.1	0.0	
Channel				34020	31808	32800			
Frequency (MHz)				2541	2592.0	2644.98			
90	PI2 BPSK	1	1	18.30	17.00	18.01	18.1	0.0	
Channel				34228	31808	32800			
Frequency (MHz)				2580.02	2592.0	2644.98			
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.1	0.0	
Channel				34234	31808	32800			
Frequency (MHz)				2611.02	2592.0	2644.98			
80	PI2 BPSK	1	1	18.85	18.92	18.90	18.1	0.0	
Channel				34232	31808	32800			
Frequency (MHz)				2610.01	2592.0	2644.98			
40	PI2 BPSK	1	1	18.84	18.97	18.88	18.1	0.0	
Channel				34220	31808	32800			
Frequency (MHz)				2611	2592.0	2644.98			
30	PI2 BPSK	1	1	18.83	18.98	18.95	18.1	0.0	
Channel				34124	31808	32800			
Frequency (MHz)				2600.02	2592.0	2644.98			
20	PI2 BPSK	1	1	18.82	18.96	18.93	18.1	0.0	

n41(NPUE)_FCC									
SW (MHz)	Modulation	RB Size	RB Offset	Power Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (MHz)	MPR (dB)	
Channel				30920	31808	32800			
Frequency (MHz)				2148.01	2032.98	2148.01			
100	PI2 BPSK	1	1	17.02	17.27	17.21			
100	PI2 BPSK	1	137	17.11	17.25	17.18	18.1	0.0	
100	PI2 BPSK	1	271	17.02	17.08	17.19			
100	PI2 BPSK	135	0	17.06	17.12	17.09			
100	PI2 BPSK	135	89	17.12	17.25	17.19	18.1	0.0	
100	PI2 BPSK	135	138	18.06	17.11	18.00			
100	PI2 BPSK	270	0	17.10	17.23	17.15	18.1	0.0	
100	QPSK	1	1	17.13	17.19	17.08			
100	QPSK	1	139	17.12	17.17	17.05	18.1	0.0	
100	QPSK	1	271	18.06	17.02	17.07			
100	QPSK	135	0	17.16	17.18	17.07			
100	QPSK	135	89	17.06	17.14	18.07	18.1	0.0	
100	QPSK	135	138	18.06	17.09	17.12			
100	QPSK	270	0	17.08	17.13	18.00	18.1	0.0	
100	8QAM	1	1	17.09	17.10	18.07	18.1	0.0	
100	8QAM	1	1	18.01	18.07	17.09	18.1	0.0	
100	25QAM	1	1	18.81	18.89	17.09	18.1	0.0	
Channel				34020	31808	32800			
Frequency (MHz)				2541	2592.0	2644.98			
90	PI2 BPSK	1	1	18.90	17.00	18.91	18.1	0.0	
Channel				34228	31808	32800			
Frequency (MHz)				2580.02	2592.0	2644.98			
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.1	0.0	
Channel				34234	31808	32800			
Frequency (MHz)				2611.02	2592.0	2644.98			
80	PI2 BPSK	1	1	18.85	18.92	18.90	18.1	0.0	
Channel				34232	31808	32800			
Frequency (MHz)				2610.01	2592.0	2644.98			
40	PI2 BPSK	1	1	18.84	18.90	18.88	18.1	0.0	
Channel				34220	31808	32800			
Frequency (MHz)				2611	2592.0	2644.98			
30	PI2 BPSK	1	1	18.83	18.89	18.95	18.1	0.0	
Channel				34124	31808	32800			
Frequency (MHz)				2600.02	2592.0	2644.98			
20	PI2 BPSK	1	1	18.82	18.88	18.93	18.1	0.0	



Reduced power for Sensor on-AirB

n06									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tone-up Int. (dBm)	dBFS (dB)	
Channel				34500	35000	36000			
Frequency (MHz)				1700	1745	1795			
20	P13 QPSK	1	1	18.78	18.81	18.79			0.0
20	P13 QPSK	1	51	18.76	18.75	18.80		19.8	0.0
20	P13 QPSK	1	104	18.68	18.73	18.83			
20	P13 QPSK	50	0	18.62	18.68	18.86		19.8	0.0
20	P13 QPSK	50	26	18.78	18.79	18.89		19.8	0.0
20	P13 QPSK	50	55	18.65	18.67	18.67			
20	P13 QPSK	100	0	18.74	18.75	18.87		19.8	0.0
20	QPSK	1	1	18.68	18.68	18.59			
20	QPSK	1	53	18.73	18.69	18.65		19.8	0.0
20	QPSK	1	104	18.74	18.65	18.64			
20	QPSK	50	0	18.72	18.69	18.65		19.8	0.0
20	QPSK	50	26	18.78	18.74	18.76		19.8	0.0
20	QPSK	50	56	18.71	18.65	18.70		19.8	0.0
20	QPSK	100	0	18.75	18.71	18.66			
20	16QAM	1	1	18.63	18.73	18.72		19.8	0.0
20	16QAM	1	1	18.68	18.67	18.64		19.8	0.0
20	256QAM	1	1	18.62	18.60	18.56		19.8	0.0
Channel				37500	38000	39000			
Frequency (MHz)				1737.5	1745	1772.5			
15	P13 QPSK	1	1	18.74	18.77	18.64		19.8	0.0
Channel				39500	40000	41000			
Frequency (MHz)				1715	1745	1795			
10	P13 QPSK	1	1	18.71	18.75	18.67		19.8	0.0
Channel				42500	43000	44000			
Frequency (MHz)				1732.5	1745	1777.5			
5	P13 QPSK	1	1	18.68	18.72	18.65		19.8	0.0



n41_FCC									
SW (MHz)	Modulation	RB Size	RB Offset	Power Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (MHz)	MFR (dB)	
Channel				30200	31808	33600			
Frequency (MHz)				2645.0	2528.0	2645.0			
100	PI2 BPSK	1	1	18.13	18.24	18.17			
100	PI2 BPSK	1	137	18.27	18.21	18.14	20.0	0.0	
100	PI2 BPSK	1	271	18.89	18.18	18.13			
100	PI2 BPSK	135	0	18.00	18.18	18.13			
100	PI2 BPSK	135	89	18.10	18.22	18.15	20.0	0.0	
100	PI2 BPSK	135	138	18.84	18.04	18.04			
100	PI2 BPSK	270	0	18.08	18.20	18.12	20.0	0.0	
100	QPSK	1	1	18.18	18.11	18.05			
100	QPSK	1	139	18.11	18.18	18.01	20.0	0.0	
100	QPSK	1	271	18.08	18.00	18.04			
100	QPSK	135	0	18.17	18.11	18.14			
100	QPSK	135	89	18.04	18.18	18.01	20.0	0.0	
100	QPSK	135	138	18.03	18.04	18.07			
100	QPSK	270	0	18.08	18.12	18.08	20.0	0.0	
100	8QAM	1	1	18.10	18.11	18.09	20.0	0.0	
100	8QAM	1	1	18.03	18.08	18.15	20.0	0.0	
100	256QAM	1	1	18.02	18.08	18.01	20.0	0.0	
Channel				34000	31808	33600			
Frequency (MHz)				2541	2502.0	2644.98			
90	PI2 BPSK	1	1	18.83	18.00	18.04	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
80	PI2 BPSK	1	1	18.82	18.08	18.05	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
50	PI2 BPSK	1	1	18.78	18.04	18.01	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
40	PI2 BPSK	1	1	18.77	18.09	18.09	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2502.0	2644.98			
30	PI2 BPSK	1	1	18.76	18.01	18.06	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
20	PI2 BPSK	1	1	18.75	18.08	18.04	20.0	0.0	

n41(NPUE)_FCC									
SW (MHz)	Modulation	RB Size	RB Offset	Power Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (MHz)	MFR (dB)	
Channel				30200	31808	33600			
Frequency (MHz)				2148.01	2002.0	2148.0			
100	PI2 BPSK	1	1	18.13	18.24	18.17			
100	PI2 BPSK	1	137	18.27	18.21	18.14	20.0	0.0	
100	PI2 BPSK	1	271	18.89	18.18	18.13			
100	PI2 BPSK	135	0	18.00	18.18	18.13			
100	PI2 BPSK	135	89	18.10	18.22	18.15	20.0	0.0	
100	PI2 BPSK	135	138	18.84	18.04	18.04			
100	PI2 BPSK	270	0	18.08	18.20	18.12	20.0	0.0	
100	QPSK	1	1	18.18	18.11	18.05			
100	QPSK	1	139	18.11	18.18	18.01	20.0	0.0	
100	QPSK	1	271	18.08	18.00	18.04			
100	QPSK	135	0	18.17	18.11	18.14			
100	QPSK	135	89	18.04	18.18	18.01	20.0	0.0	
100	QPSK	135	138	18.03	18.04	18.07			
100	QPSK	270	0	18.08	18.12	18.08	20.0	0.0	
100	8QAM	1	1	18.10	18.11	18.09	20.0	0.0	
100	8QAM	1	1	18.03	18.08	18.15	20.0	0.0	
100	256QAM	1	1	18.02	18.08	18.01	20.0	0.0	
Channel				34000	31808	33600			
Frequency (MHz)				2541	2502.0	2644.98			
90	PI2 BPSK	1	1	18.83	18.00	18.04	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
80	PI2 BPSK	1	1	18.82	18.08	18.05	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
50	PI2 BPSK	1	1	18.78	18.04	18.01	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
40	PI2 BPSK	1	1	18.77	18.09	18.09	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2502.0	2644.98			
30	PI2 BPSK	1	1	18.76	18.01	18.06	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541.0	2502.0	2644.98			
20	PI2 BPSK	1	1	18.75	18.08	18.04	20.0	0.0	



Full Power Mode - Ant1

n66									
RF (MHz)	Modulation	RB Size	RB Offset	Power Low Ch / Freq	Power Mid Ch / Freq	Power High Ch / Freq	Tuning Int (dB)	MPR (dB)	
Channel				38400	38400	38400			
Frequency (MHz)				1745	1745	1770			
20	PI2 BPSK	1	1	24.54	25.18	25.87			
20	PI2 BPSK	1	10	24.11	24.02	23.75	24.8	0.0	
20	PI2 BPSK	1	104	24.15	24.05	23.64			
20	PI2 BPSK	50	0	24.12	24.01	23.72	24.8	0.0	
20	PI2 BPSK	50	20	24.15	24.10	23.84	24.8	0.0	
20	PI2 BPSK	50	50	24.05	23.94	23.63	24.8	0.0	
20	PI2 BPSK	100	0	24.10	24.12	23.81			
20	QPSK	1	1	24.10	24.03	23.84			
20	QPSK	1	53	23.92	23.94	23.38	24.8	0.0	
20	QPSK	1	104	23.97	23.90	23.47			
20	QPSK	50	0	24.15	24.01	23.70	24.8	0.0	
20	QPSK	50	20	24.05	23.90	23.68	24.8	0.0	
20	QPSK	50	50	24.10	24.03	23.97	24.8	0.0	
20	QPSK	100	0	24.05	24.03	23.70			
20	MSK	1	1	24.05	24.14	23.84	24.8	0.0	
20	MSK	1	1	23.20	23.35	23.50	23.8	1.0	
20	25GDM	1	1	21.01	20.91	20.78	21.8	3.0	
Channel				1712.5	1712.5	1772.5	Tuning Int (dB)	MPR (dB)	
Frequency (MHz)				1712.5	1745	1772.5			
15	PI2 BPSK	1	1	23.95	24.01	23.80	24.8	0.0	
Channel				1712.5	1712.5	1772.5	Tuning Int (dB)	MPR (dB)	
Frequency (MHz)				1715	1745	1770			
10	PI2 BPSK	1	1	24.00	24.02	23.80	24.8	0.0	
Channel				1712.5	1712.5	1772.5	Tuning Int (dB)	MPR (dB)	
Frequency (MHz)				1712.5	1745	1772.5			
5	PI2 BPSK	1	1	24.00	24.04	23.78	24.8	0.0	



n41_FCC									
RF (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch. / Freq.	Power Margin Ch. / Freq.	Power Top Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel				309202	518998	528000			
Frequency (MHz)				2445.02	2558.99	2648			
100	PI2 BPSK	1	1	24.18	24.22	24.14			
100	PI2 BPSK	1	137	24.13	24.19	24.11	24.8	0.0	
100	PI2 BPSK	1	271	24.11	24.13	24.09			
100	PI2 BPSK	135	0	23.81	23.84	23.55			
100	PI2 BPSK	135	89	24.15	24.19	24.11	24.8	0.0	
100	PI2 BPSK	135	138	23.51	23.64	23.27			
100	PI2 BPSK	270	0	24.13	24.16	24.09	24.8	0.0	
100	QPSK	1	1	23.92	24.12	24.07			
100	QPSK	1	139	24.11	24.01	23.88	24.8	0.0	
100	QPSK	1	271	24.05	23.93	24.04			
100	QPSK	135	0	23.99	24.05	23.95			
100	QPSK	135	89	24.03	23.98	23.91	24.8	0.0	
100	QPSK	135	138	24.05	23.97	23.93			
100	QPSK	270	0	24.05	24.03	23.95	24.8	0.0	
100	8QAM	1	1	23.84	24.10	23.81	24.8	0.0	
100	8QAM	1	1	22.45	22.88	22.42	23.8	1.0	
100	25QAM	1	1	20.43	20.57	20.53	21.8	3.0	
Channel				340202	518998	528000			
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	24.15	24.00	24.09	24.8	0.0	
Channel				341202	518998	528000			
Frequency (MHz)				2593.02	2592.99	2644.98			
80	PI2 BPSK	1	1	24.09	24.15	24.03	24.8	0.0	
Channel				342202	518998	528000			
Frequency (MHz)				2694.02	2592.99	2644.98			
50	PI2 BPSK	1	1	24.03	24.20	24.12	24.8	0.0	
Channel				343202	518998	528000			
Frequency (MHz)				2795.02	2592.99	2644.98			
40	PI2 BPSK	1	1	24.11	24.18	24.08	24.8	0.0	
Channel				344202	518998	528000			
Frequency (MHz)				2896.02	2592.99	2644.98			
30	PI2 BPSK	1	1	24.09	24.16	24.02	24.8	0.0	
Channel				345202	518998	528000			
Frequency (MHz)				2997.02	2592.99	2644.98			
20	PI2 BPSK	1	1	24.10	24.11	24.07	24.8	0.0	

n41(NPUE)_FCC									
RF (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch. / Freq.	Power Margin Ch. / Freq.	Power Top Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel				309202	518998	528000			
Frequency (MHz)				2445.01	2592.99	2648			
100	PI2 BPSK	1	1	25.36	25.48	25.20			
100	PI2 BPSK	1	137	25.21	25.13	24.85	26.8	0.0	
100	PI2 BPSK	1	271	25.14	24.88	24.65			
100	PI2 BPSK	135	0	24.60	24.67	24.44			
100	PI2 BPSK	135	89	25.32	25.30	25.09	26.8	0.0	
100	PI2 BPSK	135	138	24.69	24.46	24.19			
100	PI2 BPSK	270	0	24.60	24.60	24.53	25.8	1.0	
100	QPSK	1	1	25.29	25.38	25.18			
100	QPSK	1	137	25.28	25.13	25.02	26.8	0.0	
100	QPSK	1	271	24.77	24.89	24.68			
100	QPSK	135	0	24.59	24.65	24.48			
100	QPSK	135	89	24.59	24.69	24.83	26.8	0.0	
100	QPSK	135	138	24.73	24.29	23.05			
100	QPSK	270	0	24.20	24.40	24.13	25.8	1.0	
100	8QAM	1	1	24.23	24.37	24.16	25.8	1.0	
100	8QAM	1	1	22.77	22.82	22.69	23.8	3.0	
100	25QAM	1	1	20.32	20.83	20.70	21.8	3.0	
Channel				340202	518998	528000			
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	25.33	25.36	25.18	26.8	0.0	
Channel				341202	518998	528000			
Frequency (MHz)				2593.02	2592.99	2644.98			
80	PI2 BPSK	1	1	25.28	25.40	25.09	26.8	0.0	
Channel				342202	518998	528000			
Frequency (MHz)				2694.02	2592.99	2644.98			
50	PI2 BPSK	1	1	25.11	25.30	25.11	26.8	0.0	
Channel				343202	518998	528000			
Frequency (MHz)				2795.02	2592.99	2644.98			
40	PI2 BPSK	1	1	25.08	25.42	25.03	26.8	0.0	
Channel				344202	518998	528000			
Frequency (MHz)				2896.02	2592.99	2644.98			
30	PI2 BPSK	1	1	25.16	25.33	25.10	26.8	0.0	
Channel				345202	518998	528000			
Frequency (MHz)				2997.02	2592.99	2644.98			
20	PI2 BPSK	1	1	25.27	25.40	25.11	26.8	0.0	



Full Power

BT 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	12.40	12.20	12.10	11.00	10.70	10.60	11.00	10.70	10.60	14.10
	CH 39	2441	14.20	14.00	13.90	12.80	12.60	12.50	12.80	12.60	12.50	15.90
	CH 78	2480	13.20	12.90	12.80	11.80	11.50	11.40	11.80	11.50	11.40	14.80

BT LE

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			GFSK	Tune-up Limit
LE	CH 00	2402	7.70	9.70
	CH 19	2440	9.60	11.60
	CH 39	2480	8.80	10.80

BT LE 5.0

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			GFSK	Tune-up Limit
LE	CH 00	2402	7.80	9.80
	CH 19	2440	9.80	11.80
	CH 39	2480	8.90	10.90

Ant+

Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-up Limit
Ant+	CH 02	2402	-7.40	-5.40
	CH 41	2441	-5.70	-3.70
	CH 80	2480	-5.90	-3.90



Reduced Power for Head

BT 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	6.40	6.30	6.30	4.70	4.50	4.50	4.70	4.50	4.50	8.30
	CH 39	2441	7.70	7.60	7.60	6.10	6.00	5.90	6.10	6.00	6.00	9.60
	CH 78	2480	7.20	7.10	7.10	5.50	5.40	5.30	5.50	5.40	5.30	9.10



Full Power

Ant 2						
Mode	RU Config	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	Full	1	2412	14.80	16.50	100.00
	Full	6	2437	15.10	16.50	
	Full	11	2462	14.90	16.50	
802.11g 6Mbps	Full	1	2412	14.50	15.50	98.98
	Full	6	2437	14.70	15.50	
	Full	11	2462	14.60	15.50	
802.11n-HT20 MCS0	Full	1	2412	13.40	14.50	100.00
	Full	6	2437	13.70	14.50	
	Full	11	2462	13.60	14.50	
802.11n-HT40 MCS0	Full	3	2422	12.40	13.50	100.00
	Full	6	2437	12.70	13.50	
	Full	9	2452	12.20	13.50	
802.11ac-VHT20 MCS0	Full	1	2412	13.30	14.50	100.00
	Full	6	2437	13.60	14.50	
	Full	11	2462	13.50	14.50	
802.11ac-VHT40 MCS0	Full	3	2422	12.20	13.50	100.00
	Full	6	2437	12.50	13.50	
	Full	9	2452	12.10	13.50	
802.11ax-HE20 MCS0	Full	1	2412	13.30	14.50	100.00
	26/0	1	2412	4.40	5.50	
	52/37	1	2412	5.50	6.50	
	106/53	1	2412	8.80	9.50	
	Full	6	2437	13.70	14.50	
	26/4	6	2437	4.25	5.50	
	52/38	6	2437	5.35	6.50	
	106/53	6	2437	8.65	9.50	
	Full	11	2462	13.60	14.50	
	26/8	11	2462	3.30	4.50	
	52/40	11	2462	4.90	5.50	
	106/54	11	2462	7.70	8.50	
	802.11ax-HE40 MCS0	Full	3	2422	13.50	
26/0		3	2422	4.70	5.50	
52/37		3	2422	5.50	6.50	
106/53		3	2422	6.30	7.50	
242/61		3	2422	8.00	8.50	
Full		6	2437	13.60	14.50	
26/8		6	2437	4.80	5.50	
52/40		6	2437	5.60	6.50	
106/54		6	2437	6.40	7.50	
242/61		6	2437	8.10	8.50	
Full		9	2452	13.20	14.50	
26/18		9	2452	5.80	6.50	
52/44		9	2452	6.00	7.50	
106/56	9	2452	7.20	8.50		
242/62	9	2452	7.00	9.50		

Full Power

Ant 1+2						
Mode	RU Config	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
802.11b 1Mbps	Full	1	2412	17.96	19.50	100.00
	Full	6	2437	18.01	19.50	
	Full	11	2462	17.91	19.50	
802.11g 6Mbps	Full	1	2412	17.22	18.50	98.98
	Full	6	2437	17.28	18.50	
	Full	11	2462	17.23	18.50	
802.11n-HT20 MCS0	Full	1	2412	16.12	17.50	100.00
	Full	6	2437	16.28	17.50	
	Full	11	2462	16.23	17.50	
802.11n-HT40 MCS0	Full	3	2422	14.98	16.50	100.00
	Full	6	2437	15.20	16.50	
	Full	9	2452	14.83	16.50	
802.11ac-VHT20 MCS0	Full	1	2412	16.02	17.50	100.00
	Full	6	2437	16.18	17.50	
	Full	11	2462	16.13	17.50	
802.11ac-VHT40 MCS0	Full	3	2422	14.83	16.50	100.00
	Full	6	2437	15.04	16.50	
	Full	9	2452	14.73	16.50	
802.11ax-HE20 MCS0	Full	1	2412	16.02	17.50	100.00
	26/0	1	2412	7.20	8.50	
	52/37	1	2412	8.22	9.50	
	106/53	1	2412	11.57	12.50	
	Full	6	2437	16.20	17.50	
	26/4	6	2437	6.97	8.50	
	52/38	6	2437	8.07	9.50	
	106/53	6	2437	11.42	12.50	
	Full	11	2462	16.23	17.50	
	26/8	11	2462	6.02	7.50	
	52/40	11	2472	7.62	8.50	
	106/54	11	2472	10.66	11.50	
	802.11ax-HE40 MCS0	Full	3	2422	16.00	
26/0		3	2422	7.15	8.50	
52/37		3	2422	8.08	9.50	
106/53		3	2422	8.93	10.50	
242/61		3	2422	10.72	11.50	
Full		6	2437	16.10	17.50	
26/8		6	2437	7.25	8.50	
52/40		6	2437	8.18	9.50	
106/54		6	2437	9.03	10.50	
242/61		6	2437	10.82	11.50	
Full		9	2452	15.92	17.50	
26/18		9	2452	8.96	9.50	
52/44		9	2452	9.71	10.50	
106/56	9	2452	10.91	11.50		
242/62	9	2452	11.44	12.50		

Ant 1+2							
Mode	RU Config	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	Full	36	5180	20.67	22.00	98.63	
	Full	40	5200	20.52	22.00		
	Full	44	5220	20.61	22.00		
	Full	48	5240	20.60	22.00		
802.11n-HT20 MCS0	Full	36	5180	19.62	21.00	100.00	
	Full	40	5200	19.50	21.00		
	Full	44	5220	19.70	21.00		
802.11n-HT40 MCS0	Full	38	5190	19.57	21.00	100.00	
	Full	46	5230	19.59	21.00		
	Full	36	5180	19.59	21.00		
802.11ac-VHT20 MCS0	Full	40	5200	19.47	21.00	100.00	
	Full	44	5220	19.66	21.00		
	Full	48	5240	19.55	21.00		
802.11ac-VHT40 MCS0	Full	38	5190	19.47	21.00	100.00	
	Full	46	5230	19.50	21.00		
802.11ac-VHT80 MCS0	Full	42	5210	20.37	22.00	100.00	
802.11ax-HE20 MCS0	Full	36	5180	19.61	21.00	100.00	
	26/0	36	5180	10.36	12.00		
	52/37	36	5180	14.88	15.00		
	106/53	36	5180	17.08	18.00		
	Full	40	5200	19.53	21.00		
	26/2	40	5200	10.21	12.00		
	52/38	40	5200	14.73	15.00		
	106/53	40	5200	16.93	17.00		
	Full	44	5220	19.65	21.00		
	26/6	44	5220	10.70	12.50		
	52/39	44	5220	14.81	15.00		
	106/54	44	5220	16.88	17.00		
	Full	48	5240	19.56	21.00		
26/8	48	5240	10.85	12.50			
52/40	48	5240	14.96	15.00			
106/54	48	5240	17.03	18.00			
802.11ax-HE40 MCS0	Full	38	5190	19.62	21.00	100.00	
	26/0	38	5190	9.62	11.00		
	52/37	38	5190	12.26	13.00		
	106/53	38	5190	14.28	15.00		
	242/61	38	5190	17.26	18.00		
	Full	46	5230	19.65	21.00		
	26/18	46	5230	9.53	11.00		
	52/44	46	5230	12.41	13.00		
	106/56	46	5230	14.43	15.00		
	242/62	46	5230	18.22	19.00		
	Full	42	5210	20.51	22.00		100.00
	26/0	42	5210	6.85	8.00		
	52/37	42	5210	9.63	11.00		
106/53	42	5210	13.30	14.00			
242/61	42	5210	16.53	17.00			
484/65	42	5210	18.39	19.00			
484/66	42	5210	18.35	19.00			



Ant 1+2								
Mode	RU Config.	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %		
802.11a 6Mbps	Full	52	5260	20.57	22.00	98.63		
	Full	56	5280	20.39	22.00			
	Full	60	5300	20.34	22.00			
	Full	64	5320	20.37	22.00			
802.11n-HT20 MCS0	Full	52	5260	19.54	21.00	100.00		
	Full	56	5280	20.30	22.00			
	Full	60	5300	20.19	22.00			
802.11n-HT40 MCS0	Full	64	5320	20.24	22.00	100.00		
	Full	54	5270	19.41	21.00			
	Full	62	5310	20.26	22.00			
802.11ac-VHT20 MCS0	Full	52	5260	19.50	21.00	100.00		
	Full	56	5280	20.27	22.00			
	Full	60	5300	20.15	22.00			
802.11ac-VHT40 MCS0	Full	64	5320	20.23	22.00	100.00		
	Full	54	5270	19.35	21.00			
	Full	62	5310	20.15	22.00			
802.11ac-VHT80 MCS0	Full	58	5290	20.26	22.00	100.00		
802.11ac-VHT160 MCS0	Full	50	5250	20.82	21.00	100		
802.11ax-HE20 MCS0	Full	52	5260	19.51	21.00	100.00		
	26/0	52	5260	11.16	13.00			
	52/37	52	5260	14.90	15.00			
	106/53	52	5260	17.19	18.00			
	Full	56	5280	20.32	22.00			
	26/2	56	5280	11.03	13.00			
	52/38	56	5280	14.77	15.00			
	106/53	56	5280	17.06	18.00			
	Full	60	5300	20.14	22.00			
	26/8	60	5300	10.75	12.50			
	52/39	60	5300	14.77	15.00			
	106/54	60	5300	18.01	19.00			
	Full	64	5320	20.28	22.00			
	26/8	64	5320	10.88	12.50			
	52/40	64	5320	14.90	15.00			
	106/54	64	5320	18.14	19.00			
	802.11ax-HE40 MCS0	Full	54	5270	20.38		22.00	100.00
		26/0	54	5270	10.28		12.00	
		52/37	54	5270	13.43		14.00	
		106/53	54	5270	15.65		16.00	
242/61		54	5270	18.39	19.00			
Full		62	5310	20.24	22.00			
26/18		62	5310	10.06	11.00			
52/44		62	5310	11.78	13.00			
106/56		62	5310	13.80	15.00			
242/62		62	5310	18.30	19.00			
802.11ax-HE80 MCS0	Full	58	5290	20.40	22.00	100.00		
	26/36	58	5290	7.26	8.00			
	52/52	58	5290	10.07	11.00			
	106/60	58	5290	13.93	14.00			
	242/64	58	5290	17.16	18.00			
	484/65	58	5290	18.49	19.00			
	484/66	58	5290	18.39	19.00			
802.11ax-HE160 MCS0	Full	50	5250	21.00	21.00	100.00		
	26/0	50	5250	4.12	5.00			
	52/37	50	5250	5.58	7.00			
	106/53	50	5250	8.53	10.00			
	242/61	50	5250	11.73	13.00			
	484/65	50	5250	15.64	16.00			
	996/67	50	5250	17.34	18.00			



Ant 1+2						
Mode	RU Config.	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
802.11a 6Mbps	Full	100	5500	20.08	22.00	98.63
	Full	116	5580	20.06	22.00	
	Full	124	5620	20.05	22.00	
	Full	132	5660	20.60	22.00	
	Full	140	5700	20.00	22.00	
	Full	144	5720	20.01	22.00	
802.11n-HT20 MCS0	Full	100	5500	20.14	22.00	100.00
	Full	116	5580	20.11	22.00	
	Full	124	5620	20.08	22.00	
	Full	132	5660	20.07	22.00	
	Full	140	5700	20.06	22.00	
	Full	144	5720	20.04	22.00	
802.11n-HT40 MCS0	Full	102	5510	20.04	22.00	100.00
	Full	110	5550	20.01	22.00	
	Full	126	5630	20.13	22.00	
	Full	134	5670	20.04	22.00	
	Full	142	5710	20.06	22.00	
	Full	100	5500	20.10	22.00	
802.11ac- VHT20 MCS0	Full	116	5580	20.09	22.00	100.00
	Full	124	5620	20.06	22.00	
	Full	132	5660	20.01	22.00	
	Full	140	5700	20.03	22.00	
	Full	144	5720	20.01	22.00	
	Full	102	5510	20.02	22.00	
802.11ac- VHT40 MCS0	Full	110	5550	20.00	22.00	100.00
	Full	126	5630	20.09	22.00	
	Full	134	5670	20.02	22.00	
	Full	142	5710	20.04	22.00	
	Full	106	5530	20.01	22.00	
	Full	122	5610	20.02	22.00	
802.11ac- VHT80 MCS0	Full	138	5690	20.08	22.00	100.00
	Full	122	5610	20.02	22.00	
	Full	138	5690	20.08	22.00	
802.11ac- VHT160 MCS0	Full	114	5570	20.56	21.00	100.00
802.11ac- HE20 MCS0	Full	100	5500	20.01	22.00	100.00
	26/0	100	5500	12.69	13.00	
	52/37	100	5500	14.79	15.00	
	106/53	100	5500	18.06	19.00	
	Full	116	5580	20.19	22.00	
	26/2	116	5580	12.55	13.00	
	52/37	116	5580	14.65	15.00	
	106/53	116	5580	17.92	19.00	
	Full	124	5620	20.00	22.00	
	26/4	124	5620	12.83	13.00	
	52/38	124	5620	14.93	15.00	
	106/53	124	5620	18.20	19.00	
	Full	132	5660	20.10	22.00	
	26/6	132	5660	12.49	13.00	
	52/39	132	5660	14.59	15.00	
	106/54	132	5660	17.86	18.00	
	Full	140	5700	20.11	22.00	
	26/7	140	5700	12.59	13.00	
	52/39	140	5700	14.61	15.00	
	106/54	140	5700	17.92	18.00	
	Full	144	5720	20.09	22.00	
	26/8	144	5720	12.66	13.00	
	52/40	144	5720	14.83	15.00	
	106/54	144	5720	17.90	18.00	
	Full	102	5510	20.07	22.00	
	26/0	102	5510	9.64	11.00	
	52/37	102	5510	12.68	14.00	
	106/53	102	5510	15.12	16.00	
	242/61	102	5510	18.21	19.00	
	Full	110	5550	20.01	22.00	
26/4	110	5550	9.50	11.00		
52/39	110	5550	12.54	14.00		
106/53	110	5550	14.98	16.00		
242/61	110	5550	18.07	19.00		
Full	126	5630	20.01	22.00		
26/8	126	5630	9.39	11.00		
52/42	126	5630	12.15	14.00		
106/54	126	5630	14.59	16.00		
242/61	126	5630	18.13	19.00		
Full	134	5670	20.16	22.00		
26/13	134	5670	9.29	11.00		
52/44	134	5670	12.29	14.00		
106/55	134	5670	14.73	16.00		
242/62	134	5670	18.51	19.00		
Full	142	5710	20.15	22.00		
26/18	142	5710	9.38	11.00		
52/44	142	5710	12.42	14.00		
106/56	142	5710	14.41	16.00		
242/62	142	5710	17.88	18.00		
Full	106	5530	20.12	22.00		
26/0	106	5530	7.87	9.00		
52/37	106	5530	9.43	11.00		
106/53	106	5530	12.40	14.00		
242/61	106	5530	15.80	17.00		
484/65	106	5530	18.89	19.00		
Full	122	5610	20.15	22.00		
26/18	122	5610	7.27	9.00		
52/44	122	5610	9.07	11.00		
106/56	122	5610	11.27	13.00		
242/62	122	5610	14.93	16.00		
484/65	122	5610	18.76	19.00		
Full	138	5690	20.09	22.00		
26/36	138	5690	6.39	8.00		
52/52	138	5690	9.32	11.00		
106/60	138	5690	11.82	13.00		
242/64	138	5690	14.64	16.00		
484/66	138	5690	18.17	19.00		
Full	114	5570	21.49	22.00	100.00	
26/0	114	5570	3.94	5.00		
52/37	114	5570	5.71	7.00		
106/53	114	5570	7.53	9.00		
242/61	114	5570	10.39	12.00		
484/65	114	5570	13.50	15.00		
802.11ac- HE160 MCS0	Full	114	5570	17.15	18.00	



Ant 1+2							
Mode	RU Config.	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	Full	149	5745	20.09	22.00	98.63	
	Full	157	5785	20.08	22.00		
	Full	165	5825	20.14	22.00		
802.11n-HT20 MCS0	Full	149	5745	20.17	22.00	100.00	
	Full	157	5785	20.14	22.00		
	Full	165	5825	20.01	22.00		
802.11n-HT40 MCS0	Full	151	5755	20.17	22.00	100.00	
	Full	159	5795	20.09	22.00		
802.11ac- VHT20 MCS0	Full	149	5745	20.07	22.00	100.00	
	Full	157	5785	20.08	22.00		
	Full	165	5825	20.00	22.00		
802.11ac- VHT40 MCS0	Full	151	5755	20.08	22.00	100.00	
	Full	159	5795	20.05	22.00		
802.11ac- VHT80 MCS0	Full	155	5775	20.18	22.00	100.00	
5.8GHz WLAN	802.11ax- HE20 MCS0	Full	149	5745	20.01	22.00	100.00
		26/0	149	5745	11.71	13.00	
		52/37	149	5745	14.82	16.00	
		106/53	149	5745	17.60	19.00	
		Full	157	5785	20.08	22.00	
		26/4	157	5785	12.18	13.00	
		52/38	157	5785	15.09	16.00	
		106/53	157	5785	18.08	19.00	
		Full	165	5825	20.04	22.00	
		26/8	165	5825	12.40	13.00	
		52/40	165	5825	15.31	16.00	
		106/54	165	5825	18.30	19.00	
		Full	151	5755	20.09	22.00	
		26/0	151	5755	8.71	10.00	
		52/37	151	5755	11.07	13.00	
106/53	151	5755	14.33	16.00			
802.11ax- HE40 MCS0	242/61	151	5755	17.65	19.00	100.00	
	Full	159	5795	20.07	22.00		
	26/18	159	5795	8.94	10.00		
	52/44	159	5795	11.40	13.00		
	106/56	159	5795	14.47	16.00		
	242/62	159	5795	18.17	19.00		
	Full	155	5775	20.21	22.00		
	26/0	155	5775	5.36	7.00		
802.11ax- HE80 MCS0	52/37	155	5775	8.26	10.00	100.00	
	106/53	155	5775	11.21	13.00		
	242/61	155	5775	14.33	16.00		
	484/65	155	5775	17.81	18.00		
	484/66	155	5775	18.01	19.00		



Reduced Power level 2

Ant. 2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	12.80	14.50	100.00	
	6	2437	13.10	14.50		
	11	2462	12.90	14.50		
802.11g 6Mbps	1	2412	12.50	13.50	98.98	
	6	2437	12.70	13.50		
	11	2462	12.60	13.50		
802.11n-HT20 MCS0	1	2412	11.40	12.50	100.00	
	6	2437	11.70	12.50		
	11	2462	11.60	12.50		
802.11n-HT40 MCS0	3	2422	10.40	11.50	100.00	
	6	2437	10.70	11.50		
	9	2452	10.20	11.50		
802.11ac-VHT20 MCS0	1	2412	11.30	12.50	100.00	
	6	2437	11.60	12.50		
	11	2462	11.50	12.50		
802.11ac-VHT40 MCS0	3	2422	10.20	11.50	100.00	
	6	2437	10.50	11.50		
	9	2452	10.10	11.50		
802.11ax-HE20 MCS0	1	2412	11.30	12.50	100.00	
	6	2437	11.70	12.50		
	11	2462	11.60	12.50		
802.11ax-HE40 MCS0	3	2422	11.50	12.50	100.00	
	6	2437	11.60	12.50		
	9	2452	11.20	12.50		

**Reduced Power for Head
Reduced Power level 1**

Ant. 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	15.96	17.50	100.00	
	6	2437	16.01	17.50		
	11	2462	15.91	17.50		
802.11g 6Mbps	1	2412	15.22	16.50	98.98	
	6	2437	15.28	16.50		
	11	2462	15.23	16.50		
802.11n-HT20 MCS0	1	2412	14.12	15.50	100.00	
	6	2437	14.28	15.50		
	11	2462	14.23	15.50		
802.11n-HT40 MCS0	3	2422	12.98	14.50	100.00	
	6	2437	13.20	14.50		
	9	2452	12.83	14.50		
802.11ac-VHT20 MCS0	1	2412	14.02	15.50	100.00	
	6	2437	14.18	15.50		
	11	2462	14.13	15.50		
802.11ac-VHT40 MCS0	3	2422	12.83	14.50	100.00	
	6	2437	13.04	14.50		
	9	2452	12.73	14.50		
802.11ax-HE20 MCS0	1	2412	14.02	15.50	100.00	
	6	2437	14.20	15.50		
	11	2462	14.23	15.50		
802.11ax-HE40 MCS0	3	2422	14.00	15.50	100.00	
	6	2437	14.10	15.50		
	9	2452	13.92	15.50		



Reduced Power level 4

Art. 2						
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412		10.80	12.50
6		2437	11.10	12.50		
11		2462	10.90	12.50		
802.11g 6Mbps	1	2412		10.50	11.50	98.98
	6	2437	10.70	11.50		
	11	2462	10.60	11.50		
802.11n-HT20 MCS0	1	2412		9.40	10.50	100.00
	6	2437	9.70	10.50		
	11	2462	9.60	10.50		
802.11n-HT40 MCS0	1	2412		9.70	9.50	100.00
	6	2437	9.70	9.50		
	9	2452	9.20	9.50		
802.11ac-VHT20 MCS0	1	2412		9.30	10.50	100.00
	6	2437	9.60	10.50		
	11	2462	9.50	10.50		
802.11ac-VHT40 MCS0	3	2422		8.20	9.50	100.00
	6	2437	8.50	9.50		
	9	2452	8.10	9.50		
802.11ax-HE20 MCS0	1	2412		9.30	10.50	100.00
	6	2437	9.70	10.50		
	11	2462	9.60	10.50		
802.11ax-HE40 MCS0	3	2422		9.50	10.50	100.00
	6	2437	9.60	10.50		
	9	2452	9.20	10.50		

Reduced Power level 3

Art. 142						
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412		13.96	15.50
6		2437	14.01	15.50		
11		2462	13.91	15.50		
802.11g 6Mbps	1	2412		13.22	14.50	98.98
	6	2437	13.28	14.50		
	11	2462	13.23	14.50		
802.11n-HT20 MCS0	1	2412		12.12	13.50	100.00
	6	2437	12.28	13.50		
	11	2462	12.23	13.50		
802.11n-HT40 MCS0	3	2422		10.98	12.50	100.00
	6	2437	11.20	12.50		
	9	2452	10.83	12.50		
802.11ac-VHT20 MCS0	1	2412		12.02	13.50	100.00
	6	2437	12.18	13.50		
	11	2462	12.13	13.50		
802.11ac-VHT40 MCS0	3	2422		10.83	12.50	100.00
	6	2437	11.04	12.50		
	9	2452	10.73	12.50		
802.11ax-HE20 MCS0	1	2412		12.02	13.50	100.00
	6	2437	12.20	13.50		
	11	2462	12.23	13.50		
802.11ax-HE40 MCS0	3	2422		12.00	13.50	100.00
	6	2437	12.10	13.50		
	9	2452	11.92	13.50		



Reduced Power level 6

Ant 2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	9.80	11.50	100.00
		6	2437	10.10	11.50	
		11	2462	9.90	11.50	
	802.11g 6Mbps	1	2412	9.50	10.50	98.98
		6	2437	9.70	10.50	
		11	2462	9.60	10.50	
	802.11n-HT20 MCS0	1	2412	8.40	9.50	100.00
		6	2437	8.70	9.50	
		11	2462	8.60	9.50	
	802.11n-HT40 MCS0	3	2422	7.40	8.50	100.00
		6	2437	7.70	8.50	
		9	2452	7.20	8.50	
	802.11ac-VHT20 MCS0	1	2412	8.30	9.50	100.00
		6	2437	8.60	9.50	
		11	2462	8.50	9.50	
	802.11ac-VHT40 MCS0	3	2422	7.20	8.50	100.00
		6	2437	7.50	8.50	
		9	2452	7.10	8.50	
	802.11ax-HE20 MCS0	1	2412	8.30	9.50	100.00
		6	2437	8.70	9.50	
		11	2462	8.60	9.50	
	802.11ax-HE40 MCS0	3	2422	8.50	9.50	100.00
		6	2437	8.60	9.50	
		9	2452	8.20	9.50	

Reduced Power level 5

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	13.96	15.50	100.00
		6	2437	14.01	15.50	
		11	2462	13.91	15.50	
	802.11g 6Mbps	1	2412	13.22	14.50	98.98
		6	2437	13.28	14.50	
		11	2462	13.23	14.50	
	802.11n-HT20 MCS0	1	2412	12.12	13.50	100.00
		6	2437	12.28	13.50	
		11	2462	12.23	13.50	
	802.11n-HT40 MCS0	3	2422	10.98	12.50	100.00
		6	2437	11.20	12.50	
		9	2452	10.83	12.50	
	802.11ac-VHT20 MCS0	1	2412	12.02	13.50	100.00
		6	2437	12.18	13.50	
		11	2462	12.13	13.50	
	802.11ac-VHT40 MCS0	3	2422	10.83	12.50	100.00
		6	2437	11.04	12.50	
		9	2452	10.73	12.50	
	802.11ax-HE20 MCS0	1	2412	12.02	13.50	100.00
		6	2437	12.20	13.50	
		11	2462	12.23	13.50	
	802.11ax-HE40 MCS0	3	2422	12.00	13.50	100.00
		6	2437	12.10	13.50	
		9	2452	11.92	13.50	



Reduced Power level 8

		Ant 2				
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	8.80	10.50	100.00
		6	2437	9.10	10.50	
		11	2462	8.90	10.50	
	802.11g 6Mbps	1	2412	8.50	9.50	98.98
		6	2437	8.70	9.50	
		11	2462	8.60	9.50	
	802.11n-HT20 MCS0	1	2412	7.40	8.50	100.00
		6	2437	7.70	8.50	
		11	2462	7.60	8.50	
	802.11n-HT40 MCS0	3	2422	6.40	7.50	100.00
		6	2437	6.70	7.50	
		9	2452	6.20	7.50	
	802.11ac-VHT20 MCS0	1	2412	7.30	8.50	100.00
		6	2437	7.60	8.50	
		11	2462	7.50	8.50	
	802.11ac-VHT40 MCS0	3	2422	6.20	7.50	100.00
		6	2437	6.50	7.50	
		9	2452	6.10	7.50	
	802.11ax-HE20 MCS0	1	2412	7.30	8.50	100.00
		6	2437	7.70	8.50	
		11	2462	7.60	8.50	
	802.11ax-HE40 MCS0	3	2422	7.50	8.50	100.00
		6	2437	7.60	8.50	
		9	2452	7.20	8.50	

Reduced Power level 7

		Ant 1+2				
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	11.96	13.50	100.00
		6	2437	12.01	13.50	
		11	2462	11.91	13.50	
	802.11g 6Mbps	1	2412	11.22	12.50	98.98
		6	2437	11.28	12.50	
		11	2462	11.23	12.50	
	802.11n-HT20 MCS0	1	2412	10.12	11.50	100.00
		6	2437	10.28	11.50	
		11	2462	10.23	11.50	
	802.11n-HT40 MCS0	3	2422	8.98	10.50	100.00
		6	2437	9.20	10.50	
		9	2452	8.83	10.50	
	802.11ac-VHT20 MCS0	1	2412	10.02	11.50	100.00
		6	2437	10.18	11.50	
		11	2462	10.13	11.50	
	802.11ac-VHT40 MCS0	3	2422	8.83	10.50	100.00
		6	2437	9.04	10.50	
		9	2452	8.73	10.50	
	802.11ax-HE20 MCS0	1	2412	10.02	11.50	100.00
		6	2437	10.20	11.50	
		11	2462	10.23	11.50	
	802.11ax-HE40 MCS0	3	2422	10.00	11.50	100.00
		6	2437	10.10	11.50	
		9	2452	9.92	11.50	



Reduced Power for Hotspot on

Reduced Power level 2

Ant 2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	12.80	14.50	100.00	
	6	2437	13.10	14.50		
	11	2462	12.90	14.50		
802.11g 6Mbps	1	2412	12.50	13.50	98.98	
	6	2437	12.70	13.50		
	11	2462	12.60	13.50		
802.11n-HT20 MCS0	1	2412	11.40	12.50	100.00	
	6	2437	11.70	12.50		
	11	2462	11.60	12.50		
802.11n-HT40 MCS0	3	2422	10.40	11.50	100.00	
	6	2437	10.70	11.50		
	9	2452	10.20	11.50		
802.11ac-VHT20 MCS0	1	2412	11.30	12.50	100.00	
	6	2437	11.60	12.50		
	11	2462	11.50	12.50		
802.11ac-VHT40 MCS0	3	2422	10.20	11.50	100.00	
	6	2437	10.50	11.50		
	9	2452	10.10	11.50		
802.11ac-HE20 MCS0	1	2412	11.30	12.50	100.00	
	6	2437	11.70	12.50		
	11	2462	11.60	12.50		
802.11ac-HE40 MCS0	3	2422	11.50	12.50	100.00	
	6	2437	11.60	12.50		
	9	2452	11.20	12.50		

Reduced Power level 1

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	15.96	17.50	100.00	
	6	2437	16.01	17.50		
	11	2462	15.91	17.50		
802.11g 6Mbps	1	2412	15.22	16.50	98.98	
	6	2437	15.28	16.50		
	11	2462	15.23	16.50		
802.11n-HT20 MCS0	1	2412	14.12	15.50	100.00	
	6	2437	14.28	15.50		
	11	2462	14.23	15.50		
802.11n-HT40 MCS0	3	2422	12.98	14.50	100.00	
	6	2437	13.20	14.50		
	9	2452	12.83	14.50		
802.11ac-VHT20 MCS0	1	2412	14.02	15.50	100.00	
	6	2437	14.18	15.50		
	11	2462	14.13	15.50		
802.11ac-VHT40 MCS0	3	2422	12.83	14.50	100.00	
	6	2437	13.04	14.50		
	9	2452	12.73	14.50		
802.11ac-HE20 MCS0	1	2412	14.02	15.50	100.00	
	6	2437	14.20	15.50		
	11	2462	14.23	15.50		
802.11ac-HE40 MCS0	3	2422	14.00	15.50	100.00	
	6	2437	14.10	15.50		
	9	2452	13.92	15.50		



Reduced Power level 4

Ant 2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	11.80	13.50	100.00	
	6	2437	12.10	13.50		
	11	2462	11.90	13.50		
802.11g 6Mbps	1	2412	11.50	12.50	98.98	
	6	2437	11.70	12.50		
	11	2462	11.60	12.50		
802.11n-HT20 MCS0	1	2412	10.40	11.50	100.00	
	6	2437	10.70	11.50		
	11	2462	10.60	11.50		
802.11n-HT40 MCS0	3	2422	9.40	10.50	100.00	
	6	2437	9.70	10.50		
	9	2452	9.20	10.50		
802.11ac-VHT20 MCS0	1	2412	10.30	11.50	100.00	
	6	2437	10.60	11.50		
	11	2462	10.50	11.50		
802.11ac-VHT40 MCS0	3	2422	9.20	10.50	100.00	
	6	2437	9.50	10.50		
	9	2452	9.10	10.50		
802.11ax-HE20 MCS0	1	2412	10.30	11.50	100.00	
	6	2437	10.70	11.50		
	11	2462	10.60	11.50		
802.11ax-HE40 MCS0	3	2422	10.50	11.50	100.00	
	6	2437	10.60	11.50		
	9	2452	10.20	11.50		

Reduced Power level 3

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11b 1Mbps	1	2412	14.96	16.50	100.00	
	6	2437	15.01	16.50		
	11	2462	14.91	16.50		
802.11g 6Mbps	1	2412	14.22	15.50	98.98	
	6	2437	14.28	15.50		
	11	2462	14.23	15.50		
802.11n-HT20 MCS0	1	2412	13.12	14.50	100.00	
	6	2437	13.28	14.50		
	11	2462	13.23	14.50		
802.11n-HT40 MCS0	3	2422	11.98	13.50	100.00	
	6	2437	12.20	13.50		
	9	2452	11.83	13.50		
802.11ac-VHT20 MCS0	1	2412	13.02	14.50	100.00	
	6	2437	13.18	14.50		
	11	2462	13.13	14.50		
802.11ac-VHT40 MCS0	3	2422	11.83	13.50	100.00	
	6	2437	12.04	13.50		
	9	2452	11.73	13.50		
802.11ax-HE20 MCS0	1	2412	13.02	14.50	100.00	
	6	2437	13.20	14.50		
	11	2462	13.23	14.50		
802.11ax-HE40 MCS0	3	2422	13.00	14.50	100.00	
	6	2437	13.10	14.50		
	9	2452	12.92	14.50		

**Reduced Power level 4**

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.67	16.00	98.63
		40	5200	14.52	16.00	
		44	5220	14.61	16.00	
		48	5240	14.60	16.00	
	802.11n-HT20 MCS0	36	5180	13.62	15.00	100.00
		40	5200	13.50	15.00	
		44	5220	13.70	15.00	
		48	5240	13.59	15.00	
	802.11n-HT40 MCS0	38	5190	13.57	15.00	100.00
		46	5230	13.59	15.00	
		36	5180	13.59	15.00	
	802.11ac-VHT20 MCS0	40	5200	13.47	15.00	100.00
		44	5220	13.66	15.00	
		48	5240	13.55	15.00	
	802.11ac-VHT40 MCS0	38	5190	13.47	15.00	100.00
		46	5230	13.50	15.00	
		42	5210	14.37	16.00	
	802.11ac-VHT80 MCS0	36	5180	13.61	15.00	100.00
		40	5200	13.53	15.00	
		44	5220	13.65	15.00	
	802.11ac-HE20 MCS0	48	5240	13.56	15.00	100.00
		38	5190	13.62	15.00	
		46	5230	13.65	15.00	
	802.11ac-HE40 MCS0	42	5210	14.51	16.00	100.00
48		5240	13.56	15.00		

Reduced Power level 5

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	16.67	18.00	98.63
		40	5200	16.52	18.00	
		44	5220	16.61	18.00	
		48	5240	16.60	18.00	
	802.11n-HT20 MCS0	36	5180	15.62	17.00	100.00
		40	5200	15.50	17.00	
		44	5220	15.70	17.00	
		48	5240	15.59	17.00	
	802.11n-HT40 MCS0	38	5190	15.57	17.00	100.00
		46	5230	15.59	17.00	
		36	5180	15.59	17.00	
	802.11ac-VHT20 MCS0	40	5200	15.47	17.00	100.00
		44	5220	15.66	17.00	
		48	5240	15.55	17.00	
	802.11ac-VHT40 MCS0	38	5190	15.47	17.00	100.00
		46	5230	15.50	17.00	
		42	5210	16.37	18.00	
	802.11ac-VHT80 MCS0	36	5180	15.61	17.00	100.00
		40	5200	15.53	17.00	
		44	5220	15.65	17.00	
	802.11ac-HE20 MCS0	48	5240	15.56	17.00	100.00
		38	5190	15.62	17.00	
		46	5230	15.65	17.00	
	802.11ac-HE40 MCS0	42	5210	16.51	18.00	100.00
48		5240	15.56	17.00		

Reduced Power level 6

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	16.67	18.00	98.63
		40	5200	16.52	18.00	
		44	5220	16.61	18.00	
		48	5240	16.60	18.00	
	802.11n-HT20 MCS0	36	5180	15.62	17.00	100.00
		40	5200	15.50	17.00	
		44	5220	15.70	17.00	
		48	5240	15.59	17.00	
	802.11n-HT40 MCS0	38	5190	15.57	17.00	100.00
		46	5230	15.59	17.00	
		36	5180	15.59	17.00	
	802.11ac-VHT20 MCS0	40	5200	15.47	17.00	100.00
		44	5220	15.66	17.00	
		48	5240	15.55	17.00	
	802.11ac-VHT40 MCS0	38	5190	15.47	17.00	100.00
		46	5230	15.50	17.00	
		42	5210	16.37	18.00	
	802.11ac-VHT80 MCS0	36	5180	15.61	17.00	100.00
		40	5200	15.53	17.00	
		44	5220	15.65	17.00	
	802.11ac-HE20 MCS0	48	5240	15.56	17.00	100.00
		38	5190	15.62	17.00	
		46	5230	15.65	17.00	
	802.11ac-HE40 MCS0	42	5210	16.51	18.00	100.00
48		5240	15.56	17.00		

Reduced Power level 4

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.09	17.00	98.63
		157	5785	15.08	17.00	
		165	5825	15.14	17.00	
		149	5745	15.17	17.00	
	802.11n-HT20 MCS0	157	5785	15.14	17.00	100.00
		165	5825	15.01	17.00	
		151	5755	15.17	17.00	
		159	5795	15.09	17.00	
	802.11n-HT40 MCS0	149	5745	15.07	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.00	17.00	
	802.11ac-VHT20 MCS0	151	5755	15.08	17.00	100.00
		159	5795	15.05	17.00	
		155	5775	15.18	17.00	
	802.11ac-VHT40 MCS0	149	5745	15.01	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.04	17.00	
	802.11ac-VHT80 MCS0	151	5755	15.09	17.00	100.00
		159	5795	15.07	17.00	
		155	5775	15.21	17.00	

Reduced Power level 5

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	18.09	20.00	98.63
		157	5785	18.08	20.00	
		165	5825	18.14	20.00	
		149	5745	18.17	20.00	
	802.11n-HT20 MCS0	157	5785	18.14	20.00	100.00
		165	5825	18.01	20.00	
		151	5755	18.17	20.00	
		159	5795	18.09	20.00	
	802.11n-HT40 MCS0	149	5745	18.07	20.00	100.00
		157	5785	18.08	20.00	
		165	5825	18.00	20.00	
	802.11ac-VHT20 MCS0	151	5755	18.08	20.00	100.00
		159	5795	18.05	20.00	
		155	5775	18.18	20.00	
	802.11ac-VHT40 MCS0	149	5745	18.01	20.00	100.00
		157	5785	18.08	20.00	
		165	5825	18.04	20.00	
	802.11ac-VHT80 MCS0	151	5755	18.09	20.00	100.00
		159	5795	18.07	20.00	
		155	5775	18.21	20.00	

Reduced Power level 6

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	18.09	20.00	98.63
		157	5785	18.08	20.00	
		165	5825	18.14	20.00	
		149	5745	18.17	20.00	
	802.11n-HT20 MCS0	157	5785	18.14	20.00	100.00
		165	5825	18.01	20.00	
		151	5755	18.17	20.00	
		159	5795	18.09	20.00	
	802.11n-HT40 MCS0	149	5745	18.07	20.00	100.00
		157	5785	18.08	20.00	
		165	5825	18.00	20.00	
	802.11ac-VHT20 MCS0	151	5755	18.08	20.00	100.00
		159	5795	18.05	20.00	
		155	5775	18.18	20.00	
	802.11ac-VHT40 MCS0	149	5745	18.01	20.00	100.00
		157	5785	18.08	20.00	
		165	5825	18.04	20.00	
	802.11ac-VHT80 MCS0	151	5755	18.09	20.00	100.00
		159	5795	18.07	20.00	
		155	5775	18.21	20.00	



Reduced Power level 7

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.67	16.00	98.63
		40	5200	14.52	16.00	
		44	5220	14.61	16.00	
		48	5240	14.60	16.00	
	802.11n-HT20 MCS0	36	5180	13.62	15.00	100.00
		40	5200	13.50	15.00	
		44	5220	13.70	15.00	
		48	5240	13.59	15.00	
	802.11n-HT40 MCS0	38	5190	13.57	15.00	100.00
		46	5230	13.59	15.00	
		38	5180	13.59	15.00	
	802.11ac- VHT20 MCS0	40	5200	13.47	15.00	100.00
		44	5220	13.66	15.00	
		48	5240	13.55	15.00	
		38	5190	13.47	15.00	
	802.11ac- VHT40 MCS0	46	5230	13.50	15.00	100.00
		42	5210	14.37	16.00	
	802.11ac- VHT80 MCS0	36	5180	13.61	15.00	100.00
		40	5200	13.53	15.00	
		44	5220	13.65	15.00	
		48	5240	13.56	15.00	
	802.11ax- HE40 MCS0	38	5190	13.62	15.00	100.00
		46	5230	13.65	15.00	
	802.11ax- HE80 MCS0	42	5210	14.51	16.00	100.00

Reduced Power level 8

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.67	16.00	98.63
		40	5200	14.52	16.00	
		44	5220	14.61	16.00	
		48	5240	14.60	16.00	
	802.11n-HT20 MCS0	36	5180	13.62	15.00	100.00
		40	5200	13.50	15.00	
		44	5220	13.70	15.00	
		48	5240	13.59	15.00	
	802.11n-HT40 MCS0	38	5190	13.57	15.00	100.00
		46	5230	13.59	15.00	
		38	5180	13.59	15.00	
	802.11ac- VHT20 MCS0	40	5200	13.47	15.00	100.00
		44	5220	13.66	15.00	
		48	5240	13.55	15.00	
		38	5190	13.47	15.00	
	802.11ac- VHT40 MCS0	46	5230	13.50	15.00	100.00
		42	5210	14.37	16.00	
	802.11ac- VHT80 MCS0	36	5180	13.61	15.00	100.00
		40	5200	13.53	15.00	
		44	5220	13.65	15.00	
		48	5240	13.56	15.00	
	802.11ax- HE40 MCS0	38	5190	13.62	15.00	100.00
		46	5230	13.65	15.00	
	802.11ax- HE80 MCS0	42	5210	14.51	16.00	100.00

Reduced Power level 7

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.09	17.00	98.63
		157	5785	15.08	17.00	
		165	5825	15.14	17.00	
		149	5745	15.17	17.00	
	802.11n-HT20 MCS0	157	5785	15.14	17.00	100.00
		165	5825	15.01	17.00	
		151	5755	15.17	17.00	
		159	5795	15.09	17.00	
	802.11n-HT40 MCS0	149	5745	15.07	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.00	17.00	
	802.11ac- VHT20 MCS0	151	5755	15.08	17.00	100.00
		159	5795	15.05	17.00	
	802.11ac- VHT40 MCS0	155	5775	15.18	17.00	100.00
		149	5745	15.01	17.00	
		157	5785	15.08	17.00	
		165	5825	15.04	17.00	
	802.11ac- VHT80 MCS0	151	5755	15.09	17.00	100.00
		159	5795	15.07	17.00	
		155	5775	15.21	17.00	

Reduced Power level 8

Ant 1+2						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.09	17.00	98.63
		157	5785	15.08	17.00	
		165	5825	15.14	17.00	
		149	5745	15.17	17.00	
	802.11n-HT20 MCS0	157	5785	15.14	17.00	100.00
		165	5825	15.01	17.00	
		151	5755	15.17	17.00	
		159	5795	15.09	17.00	
	802.11n-HT40 MCS0	149	5745	15.07	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.00	17.00	
	802.11ac- VHT20 MCS0	151	5755	15.08	17.00	100.00
		159	5795	15.05	17.00	
	802.11ac- VHT40 MCS0	155	5775	15.18	17.00	100.00
		149	5745	15.01	17.00	
		157	5785	15.08	17.00	
		165	5825	15.04	17.00	
	802.11ac- VHT80 MCS0	151	5755	15.09	17.00	100.00
		159	5795	15.07	17.00	
		155	5775	15.21	17.00	



Appendix F. Supplemental Tuner Head & Body SAR Results

The results are shown as follows.

RF exposure position – ANTO										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)	0	30	60	90	120
WCDMA V	RAC 12.2Kbps	Reduced Power Level 1	4182	836.4	N/A	N/A	Right Cheek	0mm	0.366	0	0.152	0.279	0.754	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	1	31	61	91	121
CDMA2000 BC9	RC3-S055	Reduced Power Level 1	777	848.31	N/A	N/A	Right Cheek	0mm	0.526	0.066	0.171	0.419	0	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	2	32	62	92	122
CDMA2000 BC16	RC3-S055	Full Power	476	817.9	N/A	N/A	Right Cheek	0mm	0.909	0.054	0.28	0.582	0.967	0.948
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	3	33	63	93	123
LTE Band 71	20M-QPSK	Full Power	13332	863	1	0	Right Cheek	0mm	0.796	0.134	0.426	0.838	0.323	0.044
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	4	34	64	94	124
LTE Band 12	15M-QPSK	Full Power	2305	707.5	1	49	Right Cheek	0mm	0.882	0.141	0.525	0.696	0.396	0.073
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	5	35	65	95	125
LTE Band 13	15M-QPSK	Full Power	23230	782	1	25	Right Cheek	0mm	0.611	0.228	0.558	0.228	0.155	0.17
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	6	36	66	96	126
LTE Band 5	15M-QPSK	Reduced Power Level 1	20525	836.5	25	25	Right Cheek	0mm	0.917	0.302	0.632	0.148	0.257	0.87
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	7	37	67	97	127
LTE Band 26	15M-QPSK	Reduced Power Level 1	26965	841.5	36	20	Right Cheek	0mm	0.899	0.369	0	0.185	0.398	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	8	38	68	98	128
LTE Band 66_Ant0	20M-QPSK	Reduced Power Level 1/2/3	132372	1770	1	0	Right Thigh	0mm	0.783	0.383	0.397	0.369	0.259	0.27
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	9	39	69	99	129
LTE Band 7_Ant0	20M-QPSK	Reduced Power Level 1/2/3	20850	2510	50	24	Right Thigh	0mm	0.788	0.388	0.543	0.561	0.553	0.577
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	10	40	70	100	130
N7_Ant0	20M-BPSK	Full Power	136100	680.5	1	1	Right Cheek	0mm	0.572	0	0	0	0	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	11	41	71	101	131
N8_Ant0	20M-BPSK	Full Power	167300	836.5	1	1	Right Cheek	0mm	0.671	0.135	0.104	0.221	0	0.062
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	12	42	72	102	132
N86_Ant0	20M-BPSK	Reduced Power Level 1/2/3	345000	1770	1	1	Right Thigh	0mm	0.873	0.332	0.286	0.214	0.263	0.165
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	13	43	73	103	133
N41_Ant0	100M-BPSK	Reduced Power Level 1/2/3	528000	2640	1	1	Right Thigh	0mm	0.886	0.465	0.507	0.301	0.486	0.479
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	14	44	74	104	134
N410PUE1_Ant0	100M-BPSK	Reduced Power Level 1/2/3	528000	2640	1	1	Right Thigh	0mm	0.888	0.491	0.517	0.488	0.511	0.483
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	15	45	75	105	135
WCDMA V	RAC 12.2Kbps	Full Power	4233	846.6	N/A	N/A	Back	10mm	0.547	0.113	0	0	0.102	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	16	46	76	106	136
CDMA2000 BC9	RTAP 153.6Kbps	Full Power	777	848.31	N/A	N/A	Back	10mm	0.427	0.117	0	0	0.163	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	17	47	77	107	137
CDMA2000 BC10	RTAP 153.6Kbps	Full Power	684	823.1	N/A	N/A	Back	10mm	0.307	0.121	0	0	0.161	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	18	48	78	108	138
LTE Band 71	20M-QPSK	Full Power	13332	863	1	0	Back	10mm	0.232	0.069	0	0	0.111	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	19	49	79	109	139
LTE Band 12	15M-QPSK	Full Power	2305	707.5	1	49	Back	10mm	0.672	0.063	0.121	0	0.066	
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	20	50	80	110	140
LTE Band 13	15M-QPSK	Full Power	23230	782	1	25	Back	10mm	0.213	0.094	0.056	0.113	0	0.054
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	21	51	81	111	141
LTE Band 5	15M-QPSK	Full Power	20525	836.5	1	49	Back	10mm	0.511	0.059	0.123	0	0	0.087
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	22	52	82	112	142
LTE Band 26	15M-QPSK	Full Power	26965	841.5	1	0	Back	10mm	0.392	0.083	0.165	0	0	0.117
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	23	53	83	113	143
LTE Band 66_Ant0	20M-QPSK	Hotspot on	132372	1770	50	24	Top Side	10mm	0.621	0.396	0.285	0.31	0.2	0.136
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	24	54	84	114	0
LTE Band 7_Ant0	20M-QPSK	Hotspot on	20850	2510	50	24	Top Side	10mm	0.674	0.519	0.534	0.493	0.528	0.196
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	25	55	85	115	1
N7_Ant0	20M-BPSK	Full Power	136100	680.5	1	1	Back	10mm	0.194	0	0	0	0	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	26	56	86	116	2
N8_Ant0	20M-BPSK	Full Power	167300	836.5	1	1	Back	10mm	0.203	0.098	0	0	0	0
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	27	57	87	117	3
N86_Ant0	20M-BPSK	Hotspot on	345000	1745	50	28	Top Side	10mm	0.661	0.443	0.407	0.424	0.378	0.289
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	28	58	88	118	4
N41_Ant0	100M-BPSK	Hotspot on	528000	2640	135	69	Top Side	10mm	0.636	0.16	0.354	0.391	0.23	0.342
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	29	59	89	119	5
N410PUE1_Ant0	100M-BPSK	Hotspot on	528000	2640	135	69	Top Side	10mm	0.636	0.361	0.38	0.401	0.365	0.37

RF exposure position – ANT2											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)	0	27	55	83	111	139	
WCDMA IV_UAT	RMC 12.2Kbps	Reduced Power Level 1/2/3	1513	1732.6	NA	NA	Right Cheek	0mm	0.871	0.519	0.207	0.197	0.252	0.227	0.291	
WCDMA II_UAT	RMC 12.2Kbps	Reduced Power Level 1/2/3	9262	1852.4	NA	NA	Right Cheek	0mm	0.844	0.35	0.607	0.645	0.285	0.354	0.288	
CDMA2000 BC1_UAT	RC3 SC055	Reduced Power Level 1/2/3	1175	1908.75	NA	NA	Right Cheek	0mm	0.86	0.317	0.782	0.468	0.375	0.466	0.395	
LTE Band 66_UAT	20M-QPSK	Reduced Power Level 1/2/3	132572	1770	50	24	Right Cheek	0mm	0.805	0.502	0.327	0.743	0.171	0.238	0.148	
LTE Band 25_UAT	20M-QPSK	Reduced Power Level 1/2/3	26590	1905	50	24	Right Cheek	0mm	0.874	0.404	0.823	0.527	0.39	0.528	0.395	
LTE Band 30_UAT	10M-QPSK	Reduced Power Level 1/2/3	27710	2310	1	25	Right Cheek	0mm	0.989	0.671	0.613	0.623	0.748	0.756	0.233	
LTE Band 7_UAT	20M-QPSK	Reduced Power Level 1/2/3	21100	2535	50	24	Right Cheek	0mm	0.891	0.607	0.57	0.573	0.466	0.613	0.737	
LTE Band 41_UAT	20M-QPSK	Reduced Power Level 1/2/3	41055	2636.5	50	24	Right Cheek	0mm	0.942	0.496	0.467	0.49	0.743	0.434	0.695	
LTE Band 41(HPLUE)_UAT	20M-QPSK	Reduced Power Level 1/2/3	41490	2680	50	24	Right Cheek	0mm	0.947	0.172	0.162	0.192	0.199	0.131	0.21	
N6_Air2	20M-BPSK	Reduced Power Level 1/2/3	354000	1770	50	28	Right Cheek	0mm	0.854	0.819	0.288	0.271	0.214	0.203	0.458	
N5_Air2	20M-BPSK	Reduced Power Level 1/2/3	381000	1905	50	28	Right Cheek	0mm	0.932	0.515	0.192	0.8	0.399	0.479	0.442	
N7_Air2	20M-BPSK	Reduced Power Level 1/2/3	502000	2510	50	28	Right Cheek	0mm	0.988	0.681	0.902	0.715	0.584	0.556	0.733	
N4_Air2	100M-BPSK	Reduced Power Level 1/2/3	528000	2640	1	1	Right Cheek	0mm	0.745	0.417	0.545	0.435	0.318	0.345	0.414	
N4(HPLUE)_Air2	100M-BPSK	Reduced Power Level 1/2/3	528000	2640	135	69	Right Cheek	0mm	0.935	0.498	0.500	0.387	0.287	0.344	0.44	
WCDMA IV_UAT	RMC 12.2Kbps	Hotspot on	1413	1732.6	NA	NA	Left Side	10mm	0.518	0.3	0.263	0.185	0.084	0.097	0.342	
WCDMA II_UAT	RMC 12.2Kbps	Hotspot on	9538	1907.6	NA	NA	Left Side	10mm	0.477	0.276	0.117	0.321	0.173	0.247	0.249	
CDMA2000 BC1_UAT	RTAP 153.6Kbps	Hotspot on	25	1851.25	NA	NA	Left Side	10mm	0.659	0.316	0.134	0.387	0.202	0.253	0.287	
LTE Band 66_UAT	20M-QPSK	Hotspot on	132572	1770	1	0	Left Side	10mm	0.595	0.258	0.235	0.105	0.198	0.175	0.318	
LTE Band 25_UAT	20M-QPSK	Hotspot on	26140	1860	1	49	Left Side	10mm	0.592	0.354	0.268	0.152	0.164	0.188	0.358	
LTE Band 30_UAT	10M-QPSK	Hotspot on	27710	2310	1	25	Left Side	10mm	0.744	0.429	0.34	0.728	0.66	0.662	0.698	
LTE Band 7_UAT	20M-QPSK	Hotspot on	20850	2510	50	24	Left Side	10mm	0.948	0.514	0.482	0.445	0.409	0.409	0.52	
LTE Band 41_UAT	20M-QPSK	Hotspot on	41055	2636.5	50	24	Left Side	10mm	0.988	0.536	0.415	0.389	0.389	0.375	0.412	
LTE Band 41(HPLUE)_UAT	20M-QPSK	Hotspot on	41055	2636.5	50	24	Left Side	10mm	0.987	0.353	0.289	0.26	0.255	0.237	0.371	
N6_Air2	20M-BPSK	Hotspot on	354000	1770	50	28	Left Side	10mm	0.961	0.664	0.719	0.21	0.153	0.223	0.844	
N5_Air2	20M-BPSK	Hotspot on	381000	1905	50	28	Left Side	10mm	0.929	0.837	0.444	0.483	0.352	0.727	0.798	
N7_Air2	20M-BPSK	Hotspot on	512000	2560	50	28	Left Side	10mm	0.851	0.771	0.525	0.558	0.805	0.769	0.813	
N4_Air2	100M-BPSK	Hotspot on	528000	2640	135	69	Left Side	10mm	0.798	0.52	0.417	0.5	0.69	0.555	0.615	
N4(HPLUE)_Air2	100M-BPSK	Hotspot on	528000	2640	135	69	Left Side	10mm	0.798	0.543	0.407	0.476	0.614	0.513	0.573	

RF exposure position – ANT3											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)	0	27	55	83	111	139	
WCDMA IV_LAT	RMC 12.2Kbps	Full Power	1513	1752.6	NA	NA	Right Cheek	0mm	0.202	0	0	0.133	0.105	0	0.061	
WCDMA II_LAT	RMC 12.2Kbps	Full Power	9400	1880	NA	NA	Right Cheek	0mm	0.226	0	0.164	0.13	0.105	0.067	0.096	
CDMA2000 BC1_LAT	RC3 S055	Full Power	1175	1908.75	NA	NA	Right Cheek	0mm	0.271	0.056	0.187	0.142	0.118	0.087	0.11	
LTE Band 96_LAT	20M-QPSK	Full Power	132322	1745	1	0	Right Cheek	0mm	0.183	0	0.055	0.073	0.07	0	0	
LTE Band 25_LAT	20M-QPSK	Full Power	26590	1905	1	49	Right Cheek	0mm	0.219	0.065	0.175	0.135	0.119	0.09	0.069	
LTE Band 30_LAT	10M-QPSK	Full Power	27710	2310	1	25	Left Cheek	0mm	0.268	0.217	0.202	0.239	0.263	0.209	0.148	
LTE Band 7_LAT	20M-QPSK	Full Power	21100	2535	1	99	Left Cheek	0mm	0.387	0.224	0.291	0.262	0.216	0.311	0.289	
LTE Band 41_LAT	20M-QPSK	Full Power	39790	2510	1	99	Left Cheek	0mm	0.19	0.05	0.042	0.058	0.111	0.072	0.055	
LTE Band 41(HFUE)_LAT	20M-QPSK	Full Power	39750	2506	1	99	Right Cheek	0mm	0.207	0.061	0.056	0.067	0.121	0.088	0.076	
N6_Ant3	20M-BPSK	Full Power	349000	1745	50	28	Right Cheek	0mm	0.131	0.109	0.041	0.058	0.103	0.056	0	
N5_Ant3	20M-BPSK	Full Power	381000	1905	50	28	Right Cheek	0mm	0.244	0.067	0.049	0.151	0.108	0.085	0.056	
N7_Ant3	20M-BPSK	Full Power	502000	2510	1	1	Left Cheek	0mm	0.324	0.313	0.32	0.279	0.316	0.232	0.227	
N41_Ant3	100M-BPSK	Full Power	510000	2550	1	1	Left Cheek	0mm	0.338	0.318	0.297	0.258	0.270	0.190	0.187	
N41(HFUE)_Ant3	100M-BPSK	Full Power	509202	2546.01	1	1	Left Cheek	0mm	0.447	0.419	0.376	0.346	0.355	0.279	0.254	
WCDMA IV_LAT	RMC 12.2Kbps	Hotspot on	1513	1752.6	NA	NA	Bottom Side	10mm	0.495	0.28	0.192	0.188	0.249	0.11	0.397	
WCDMA II_LAT	RMC 12.2Kbps	Hotspot on	9538	1907.6	NA	NA	Bottom Side	10mm	0.502	0.226	0.239	0.278	0.251	0.247	0.223	
CDMA2000 BC1_LAT	RTAP 153.6Kbps	Hotspot on	1175	1908.75	NA	NA	Bottom Side	10mm	0.621	0.253	0.278	0.302	0.289	0.216	0.242	
LTE Band 96_LAT	20M-QPSK	Hotspot on	132572	1770	50	24	Bottom Side	10mm	0.429	0.223	0.187	0.162	0.230	0.103	0.371	
LTE Band 25_LAT	20M-QPSK	Hotspot on	26590	1905	1	49	Bottom Side	10mm	0.419	0.202	0.211	0.236	0.224	0.198	0.207	
LTE Band 30_LAT	10M-QPSK	Hotspot on	27710	2310	50	0	Bottom Side	10mm	0.592	0.326	0.213	0.189	0.202	0.167	0.224	
LTE Band 7_LAT	20M-QPSK	Hotspot on	21100	2535	50	24	Bottom Side	10mm	0.584	0.423	0.382	0.309	0.271	0.214	0.285	
LTE Band 41_LAT	20M-QPSK	Hotspot on	40620	2593	50	24	Bottom Side	10mm	0.536	0.299	0.286	0.217	0.219	0.211	0.189	
LTE Band 41(HFUE)_LAT	20M-QPSK	Hotspot on	40185	2549.5	50	24	Bottom Side	10mm	0.491	0.363	0.243	0.11	0.090	0.08	0.085	
N6_Ant3	20M-BPSK	Hotspot on	349000	1745	50	28	Bottom Side	10mm	0.4	0.33	0.24	0.165	0.182	0.085	0.228	
N5_Ant3	20M-BPSK	Hotspot on	381000	1905	50	28	Bottom Side	10mm	0.521	0.326	0.321	0.241	0.231	0.414	0.351	
N7_Ant3	20M-BPSK	Hotspot on	507000	2535	50	28	Bottom Side	10mm	0.584	0.307	0.304	0.256	0.435	0.321	0.486	
N41_Ant3	100M-BPSK	Hotspot on	509202	2546.01	135	69	Bottom Side	10mm	0.517	0.198	0.213	0.428	0.323	0.244	0.373	
N41(HFUE)_Ant3	100M-BPSK	Hotspot on	510000	2550	135	69	Bottom Side	10mm	0.58	0.156	0.368	0.432	0.295	0.223	0.325	