



Accredited by the Swiss Accreditation Service (SAS)
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **Sporton**

Certificate No: **D3700V2-1037_Apr19**

CALIBRATION CERTIFICATE

Object **D3700V2 - SN:1037**

Calibration procedure(s) **QA CAL-22.v4
Calibration Procedure for SAR Validation Sources between 3-6 GHz**

Calibration date: **April 29, 2019**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 3503	25-Mar-19 (No. EX3-3503_Mar19)	Mar-20
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	07-Oct-15 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

Calibrated by:	Name Michael Weber	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Technical Manager Technical Manager	

Issued: April 29, 2019

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Accreditation No.: **SCS 0108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3700 MHz \pm 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.7	3.12 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	37.1 \pm 6 %	3.06 mho/m \pm 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.85 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	68.5 W/kg \pm 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.49 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.8 W/kg \pm 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	46.4 Ω - 0.6 j Ω
Return Loss	- 28.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.138 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: 29.04.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN:1037

Communication System: UID 0 - CW; Frequency: 3700 MHz

Medium parameters used: $f = 3700$ MHz; $\sigma = 3.06$ S/m; $\epsilon_r = 37.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(7.5, 7.5, 7.5) @ 3700 MHz; Calibrated: 25.03.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3700MHz/Zoom Scan,

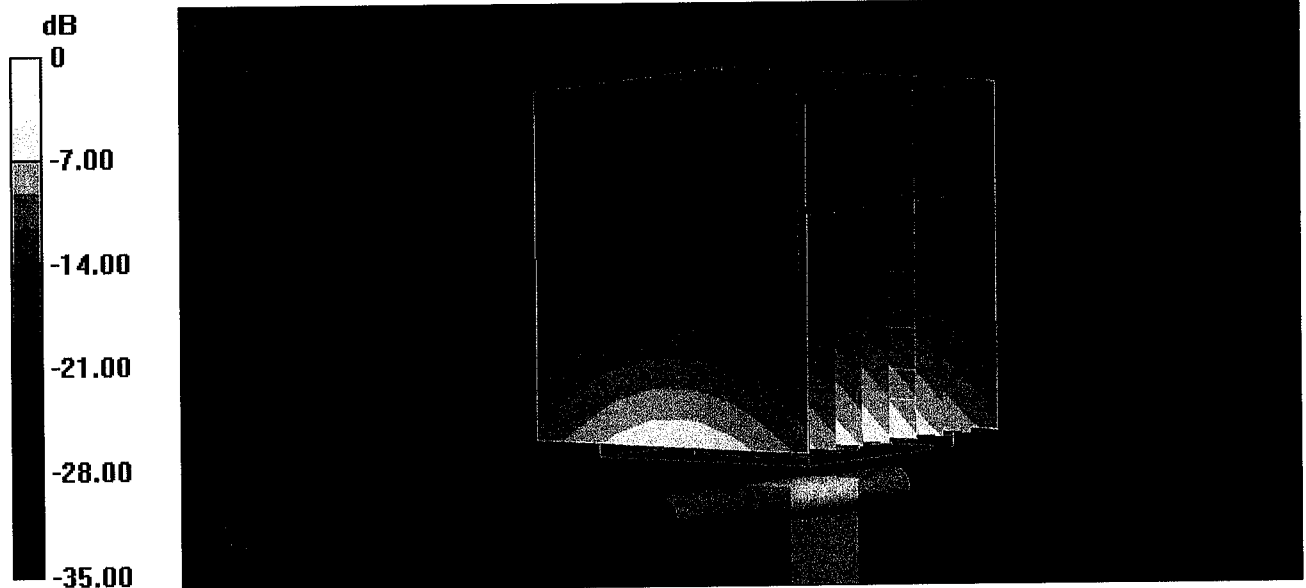
dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 71.88 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 19.5 W/kg

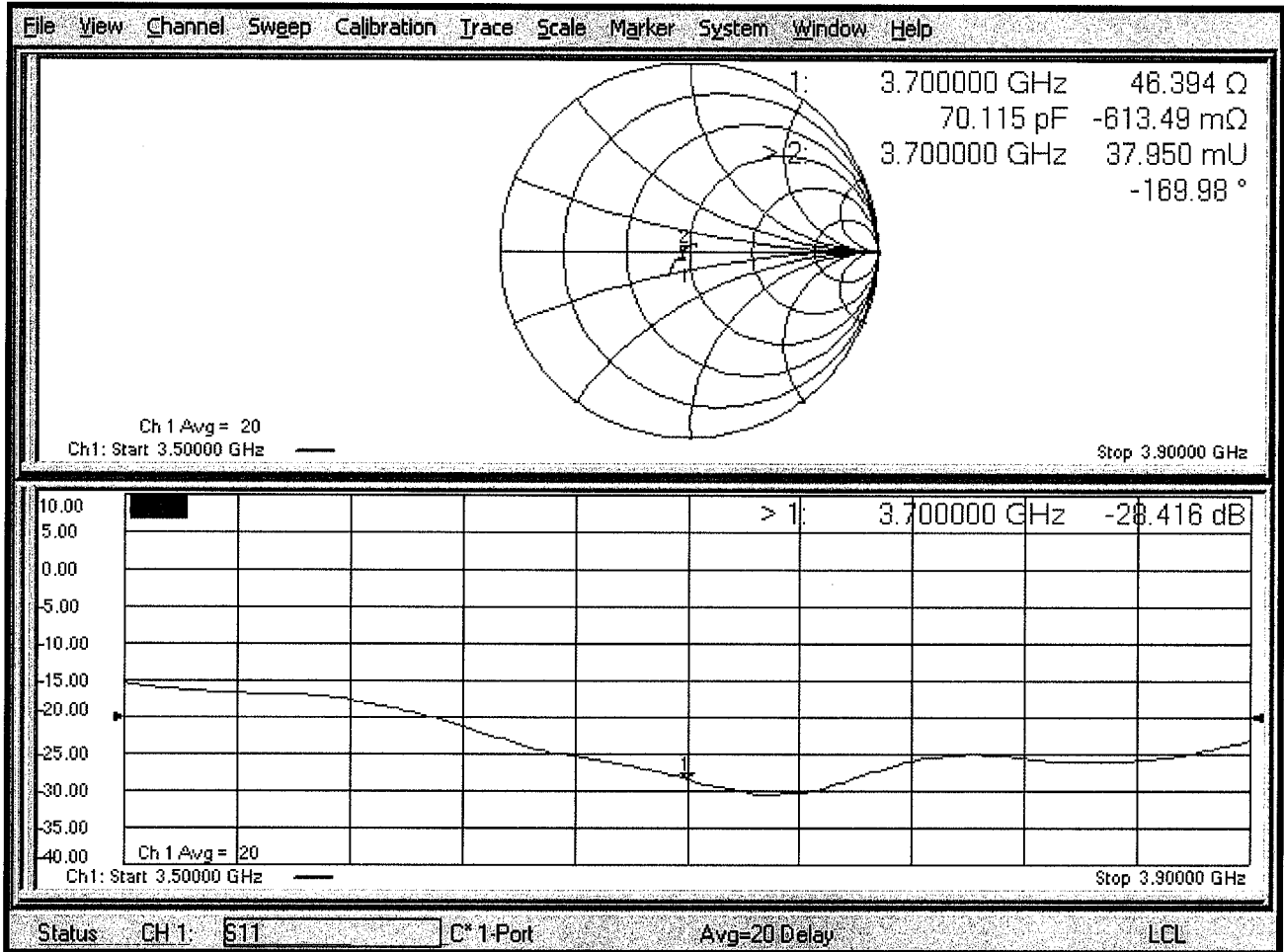
SAR(1 g) = 6.85 W/kg; SAR(10 g) = 2.49 W/kg

Maximum value of SAR (measured) = 13.5 W/kg



0 dB = 13.5 W/kg = 11.30 dBW/kg

Impedance Measurement Plot for Head TSL





D3700V2, Serial No. 1037 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.

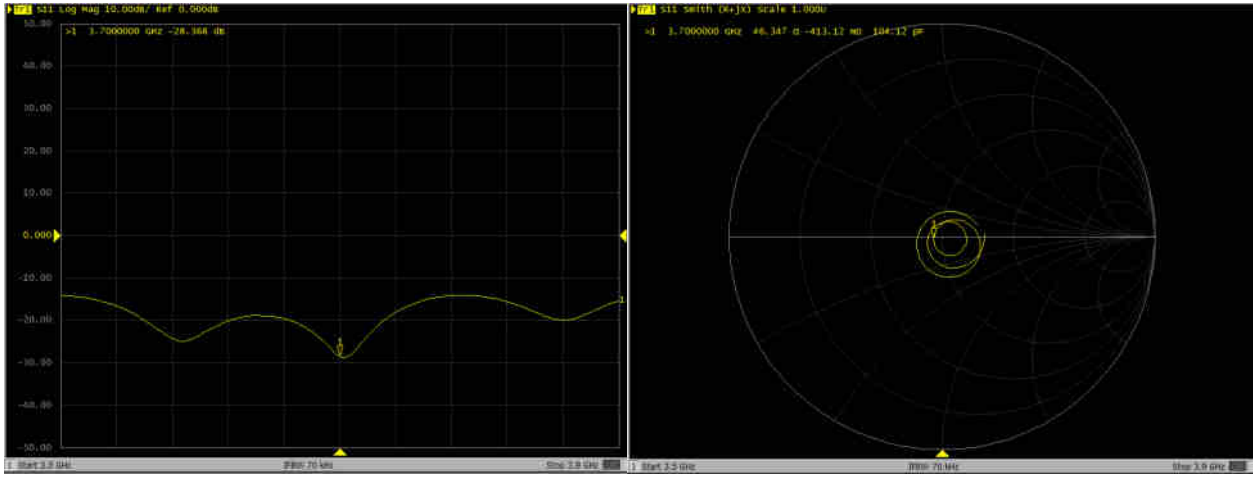
D3700V2 – serial no. 1037						
3700 Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2019.4.29	-28.4		46.4		-0.6	
2020.4.15	-28.4	0	46.3	-0.1	-0.4	0.2

<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> D3700V2, serial no. 1037

3700MHz - Head





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Certificate No: **D3900V2-1022_Jul19**

Client **Sporton**

CALIBRATION CERTIFICATE

Object **D3900V2 - SN:1022**

Calibration procedure(s) **QA CAL-22.v4
Calibration Procedure for SAR Validation Sources between 3-6 GHz**

Calibration date: **July 11, 2019**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
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Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 3503	25-Mar-19 (No. EX3-3503_Mar19)	Mar-20
DAE4	SN: 601	30-Apr-19 (No. DAE4-601_Apr19)	Apr-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

Calibrated by: **Jeton Kastrati** (Name) / **Laboratory Technician** (Function)

Approved by: **Katja Pokovic** (Name) / **Technical Manager** (Function)

Signature

Issued: July 11, 2019

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- 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"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3900 MHz ± 1 MHz 4100 MHz ± 1 MHz	

Head TSL parameters at 3900 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.5	3.32 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.2 ± 6 %	3.23 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 3900 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.03 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	70.5 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.6 W/kg ± 19.5 % (k=2)

Head TSL parameters at 4100 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.2	3.53 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.0 ± 6 %	3.41 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 4100 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.64 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	66.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.2 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 3900 MHz

Impedance, transformed to feed point	47.2 Ω - 4.1 j Ω
Return Loss	- 25.9 dB

Antenna Parameters with Head TSL at 4100 MHz

Impedance, transformed to feed point	57.0 Ω + 0.7 j Ω
Return Loss	- 23.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.101 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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Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3900 MHz; Type: D3900V2; Serial: D3900V2 - SN:1022

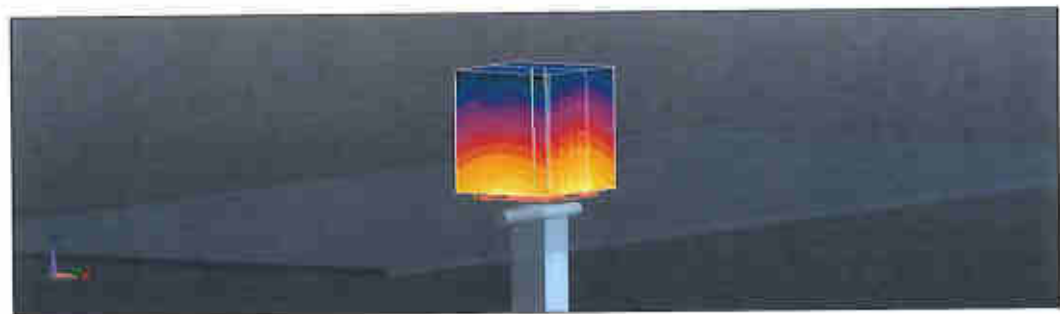
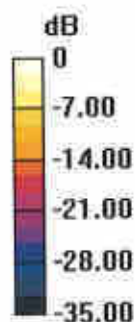
Communication System: UID 0 - CW; Frequency: 3900 MHz, Frequency: 4100 MHz
Medium parameters used: $f = 3900$ MHz; $\sigma = 3.23$ S/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 4100$ MHz; $\sigma = 3.41$ S/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(7.25, 7.25, 7.25) @ 3900 MHz, ConvF(7.05, 7.05, 7.05) @ 4100 MHz; Calibrated: 25.03.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

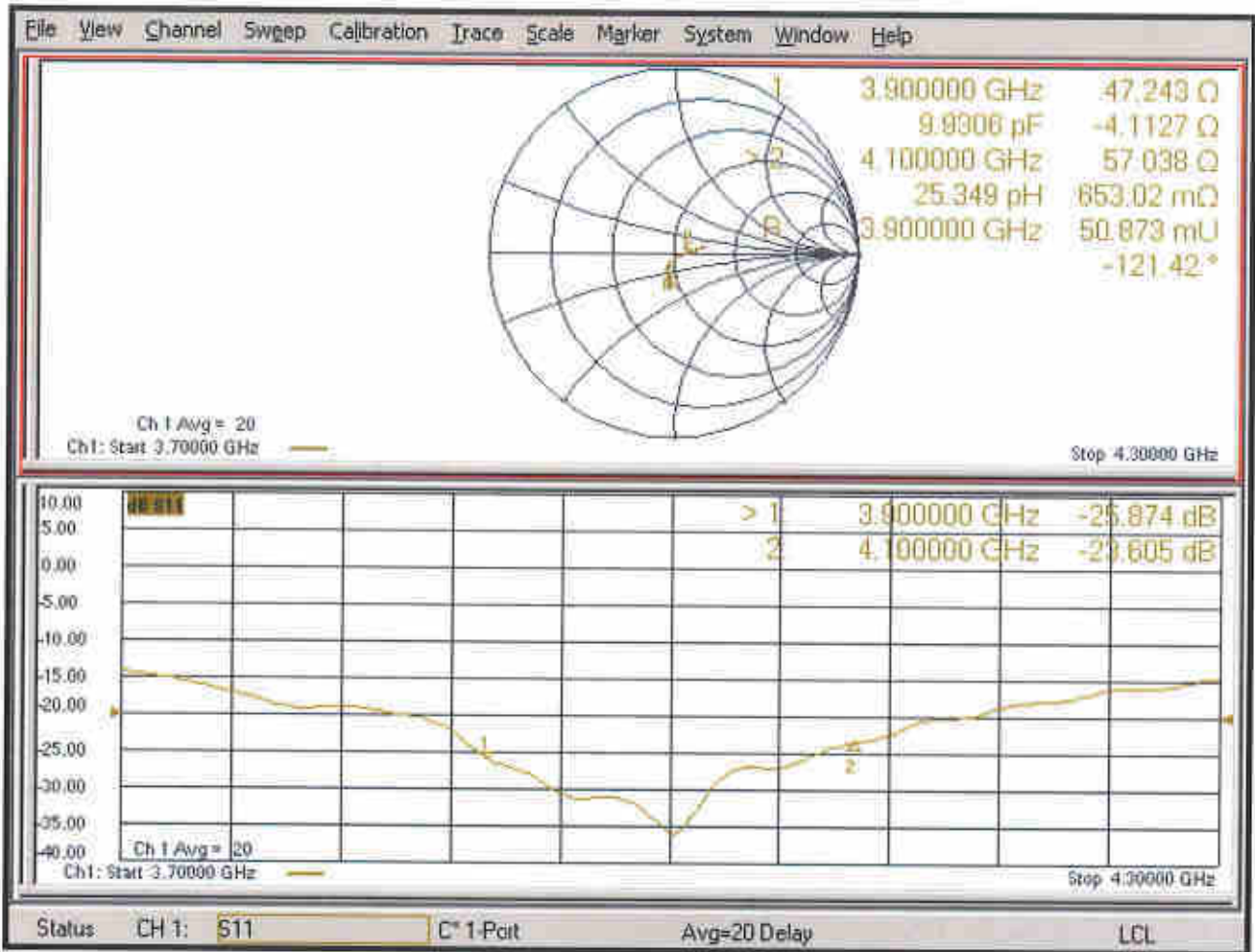
Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3900MHz/Zoom Scan, dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 73.25 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 20.0 W/kg
SAR(1 g) = 7.03 W/kg; SAR(10 g) = 2.46 W/kg
Maximum value of SAR (measured) = 13.7 W/kg

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=4100MHz/Zoom Scan, dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 69.96 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 19.0 W/kg
SAR(1 g) = 6.64 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 13.2 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

Impedance Measurement Plot for Head TSL





D3900V2, Serial No. 1022 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.

D3900V2 – serial no. 1022						
3900 Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2019.7.11	-25.9		47.2		-4.1	
2020.7.7	-26.3	-1.5	47.9	0.7	-1.7	2.4
D3900V2 – serial no. 1022						
4100 Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2019.7.11	-23.6		57.0		0.7	
2020.7.7	-23.3	1.3	58.2	1.2	-1.1	-1.8

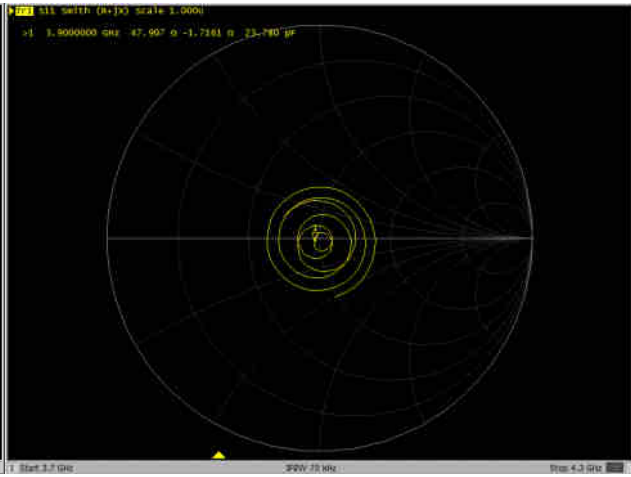
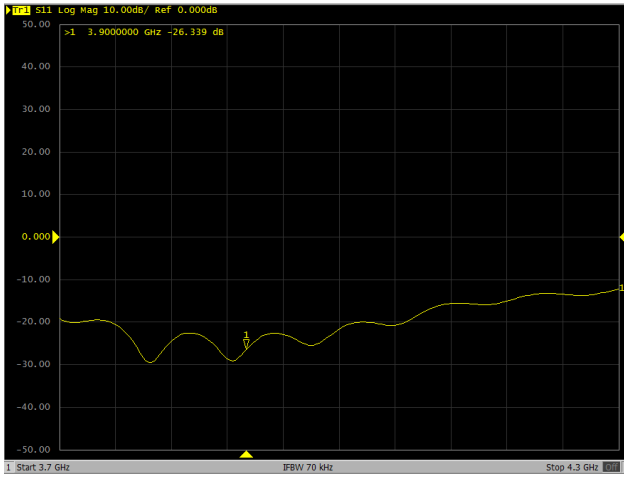
<Justification of the extended calibration>

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.

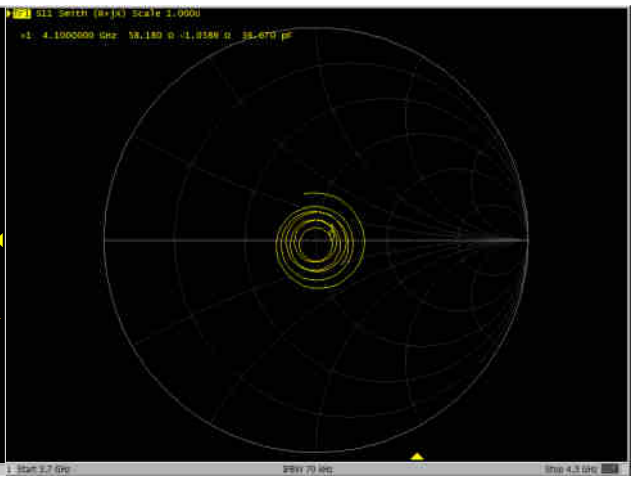
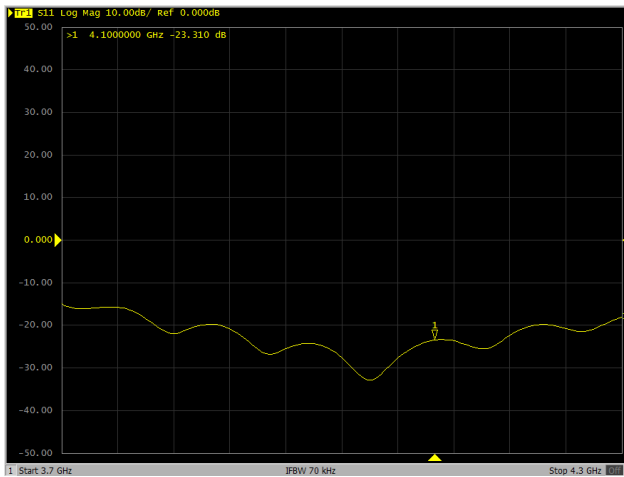


Dipole Verification Data > D3900V2, serial no. 1022

3900MHz - Head



4100MHz - Head





In Collaboration with
s p e a g
 CALIBRATION LABORATORY



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 国际互认
 校准
 CALIBRATION
 CNAS L0570

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

Client **Sporton**

Certificate No: **Z18-60259**

CALIBRATION CERTIFICATE

Object **D5GHzV2 - SN: 1167**

Calibration Procedure(s) **FF-Z11-003-01**
Calibration Procedures for dipole validation kits

Calibration date: **August 03, 2018**

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Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	102083	01-Nov-17 (CTTL, No.J17X08756)	Oct-18
Power sensor NRP-Z91	100542	01-Nov-17 (CTTL, No.J17X08756)	Oct-18
ReferenceProbe EX3DV4	SN 7464	12-Sep-17(SPEAG,No.EX3-7464_Sep17)	Sep-18
DAE4	SN 1524	13-Sep-17(SPEAG,No.DAE4-1524_Sep17)	Sep-18
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	23-Jan-18 (CTTL, No.J18X00560)	Jan-19
NetworkAnalyzerE5071C	MY46110673	24-Jan-18 (CTTL, No.J18X00561)	Jan-19

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

Issued: August 6, 2018

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

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- 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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
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- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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%.



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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.10.1.1476
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.9 ± 6 %	4.82 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.69 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	77.0 mW / g ± 24.4 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.20 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	22.0 mW / g ± 24.2 % (k=2)



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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

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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

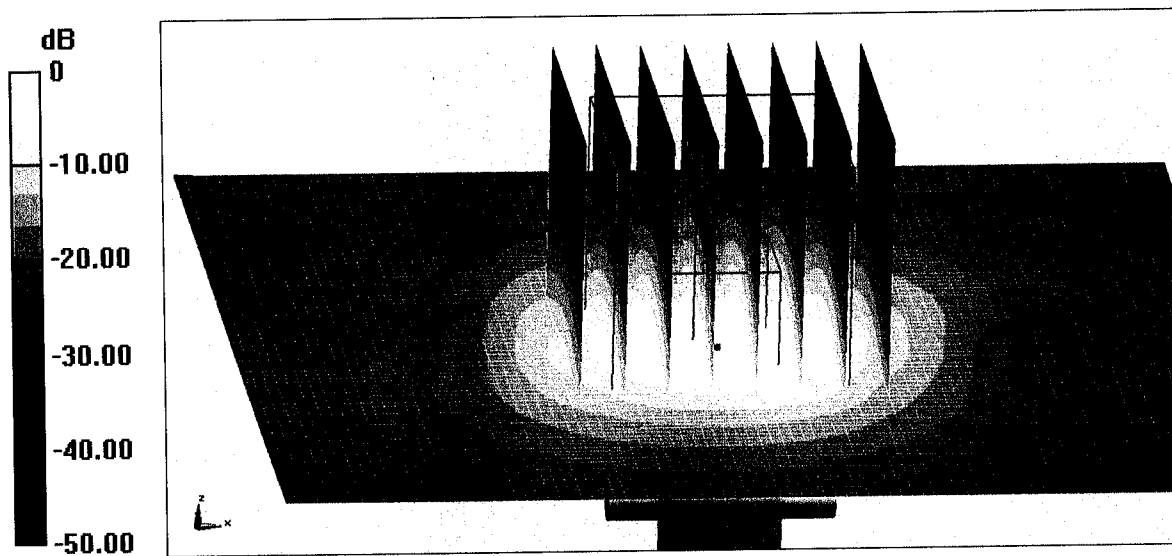
Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.53 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 36.2 W/kg
SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 19.7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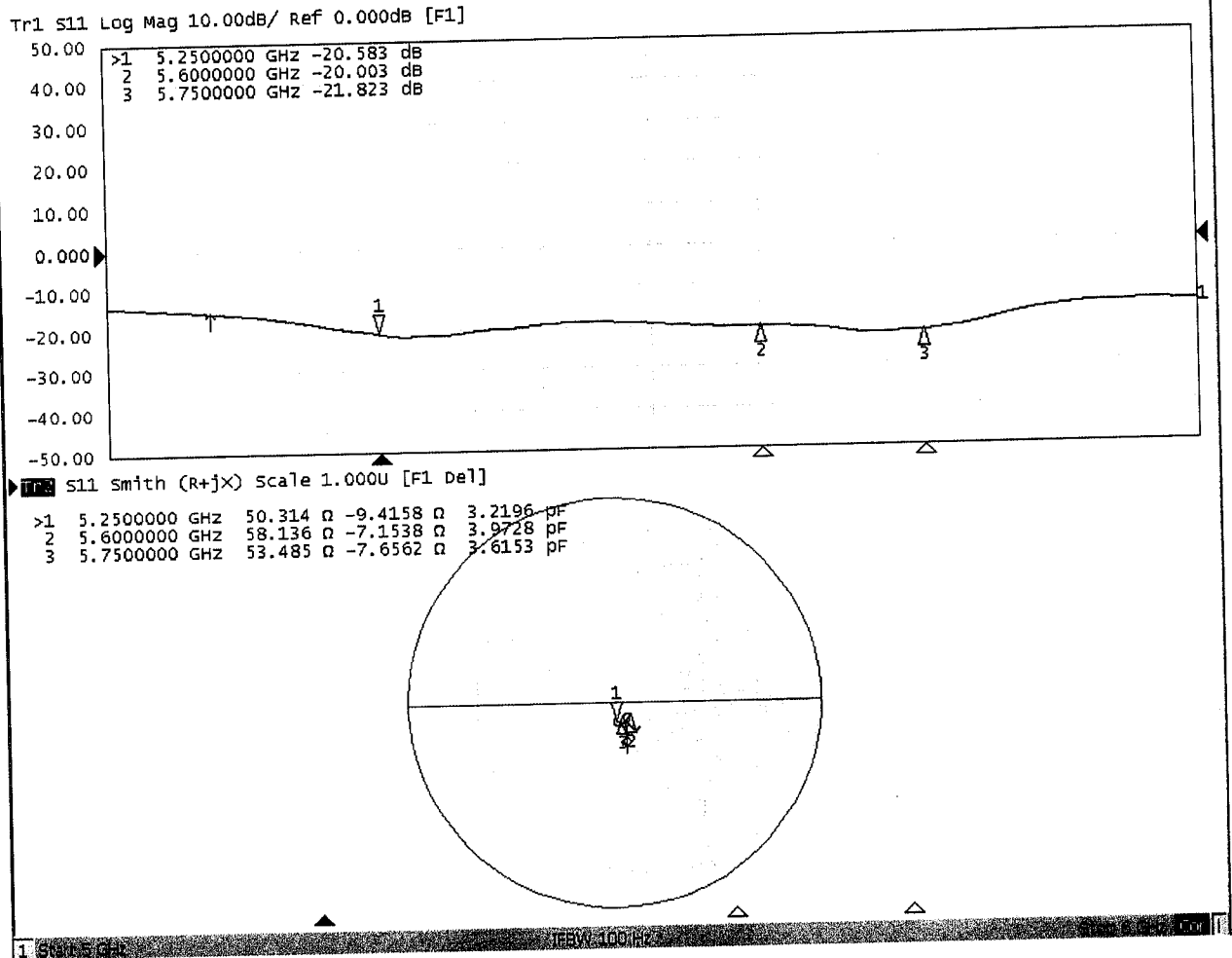


0 dB = 19.0 W/kg = 12.79 dBW/kg



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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)

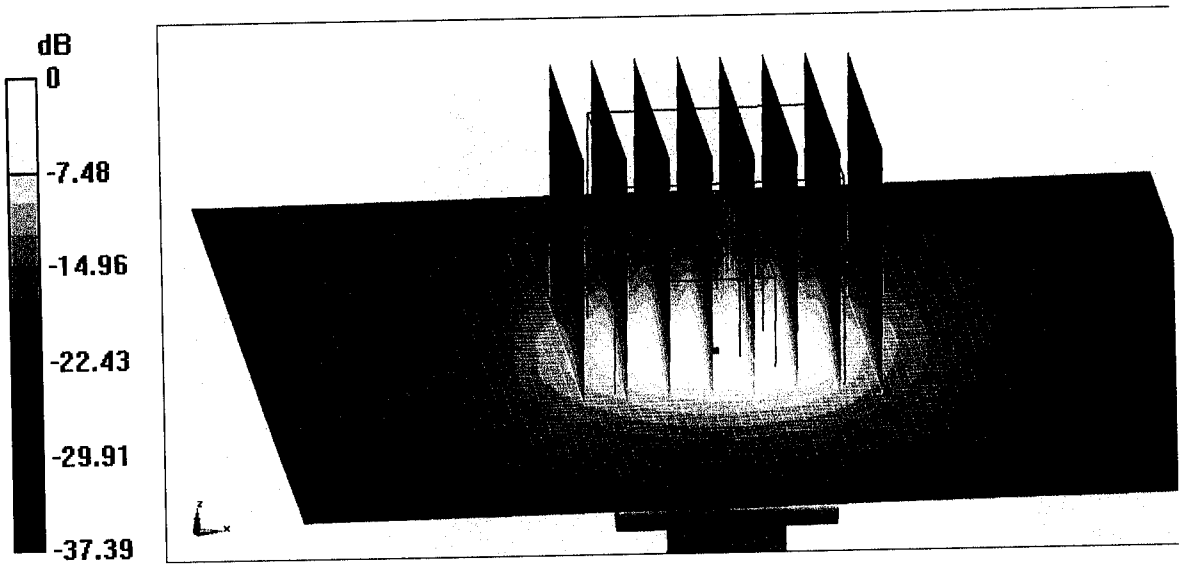
Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.14 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 31.9 W/kg
SAR(1 g) = 7.46 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 17.6 W/kg

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

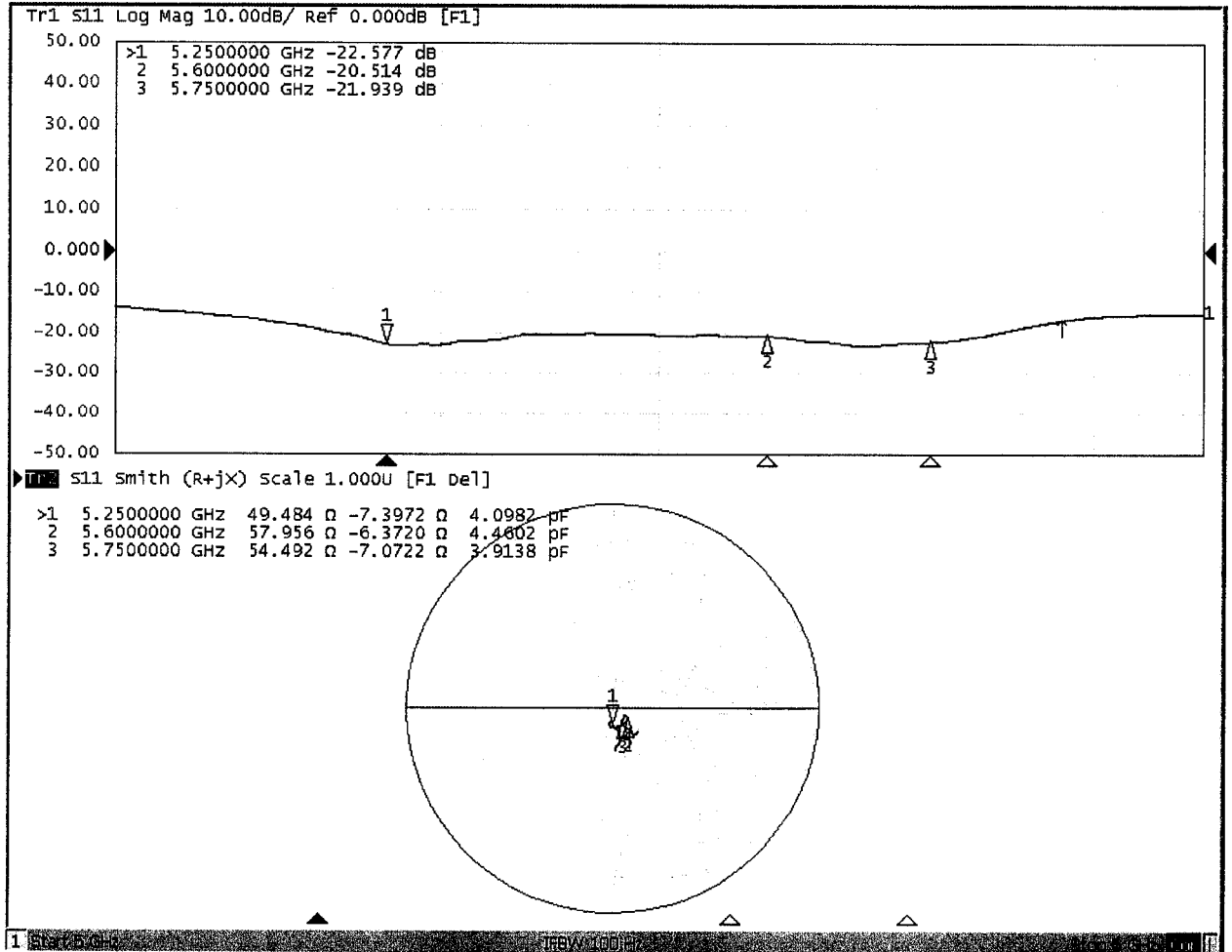


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Impedance Measurement Plot for Body TSL





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

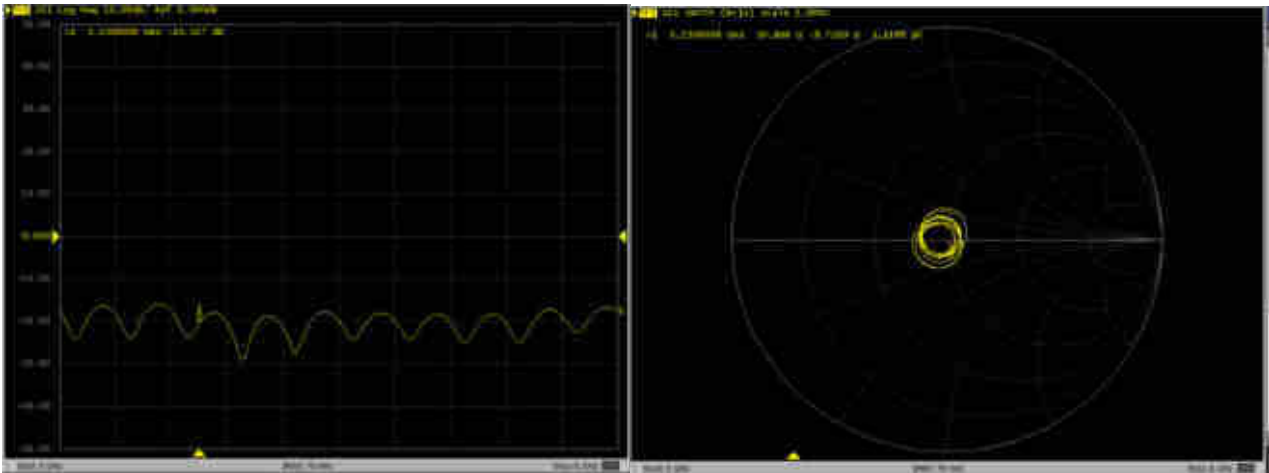
D5GHzV3 – serial no. 1167												
	5750 Head						5750 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2018.08.03	-21.8		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>

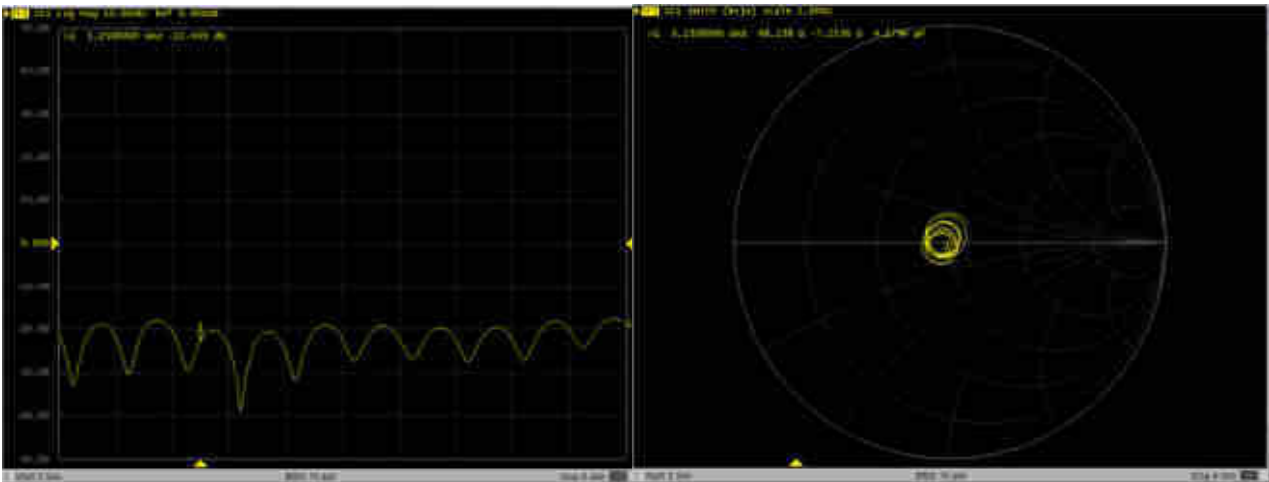
The return loss is $< -20\text{dB}$, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data> D5GHzV3, serial no. 1167

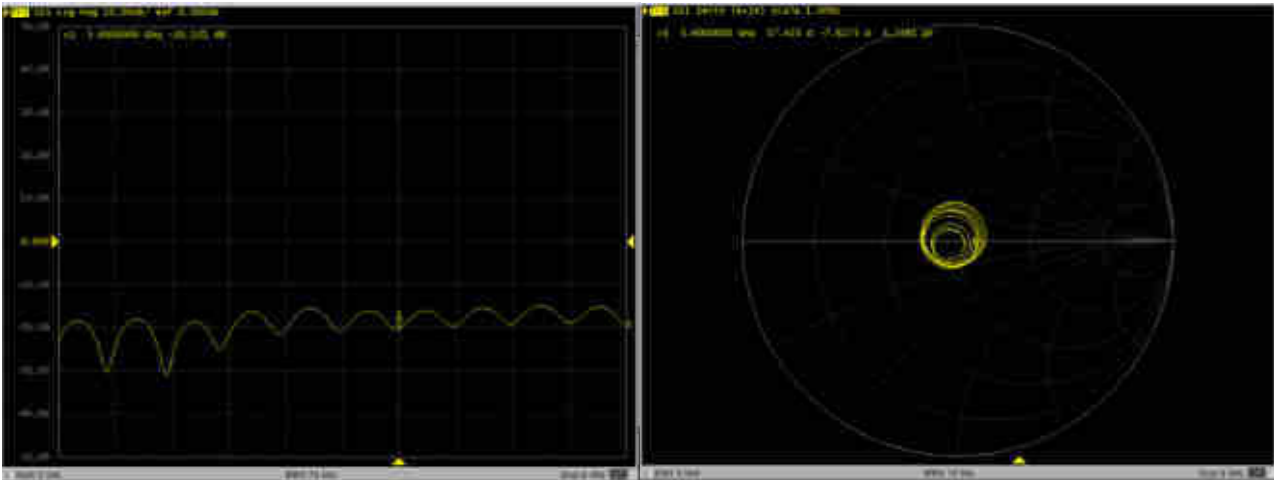
5250MHz – Head----2019.10.30



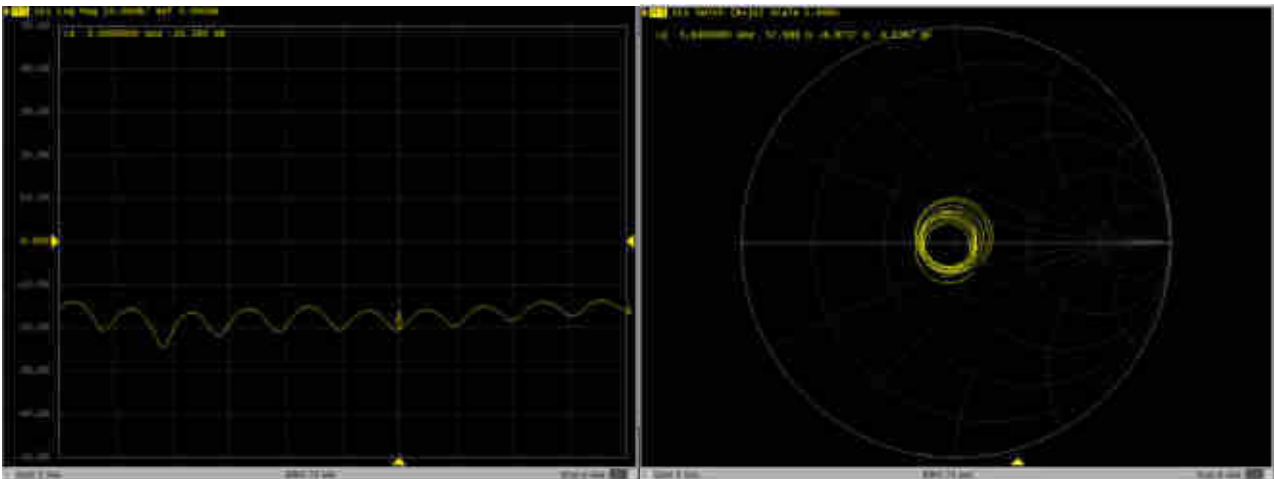
5250MHz – Body----2019.10.30



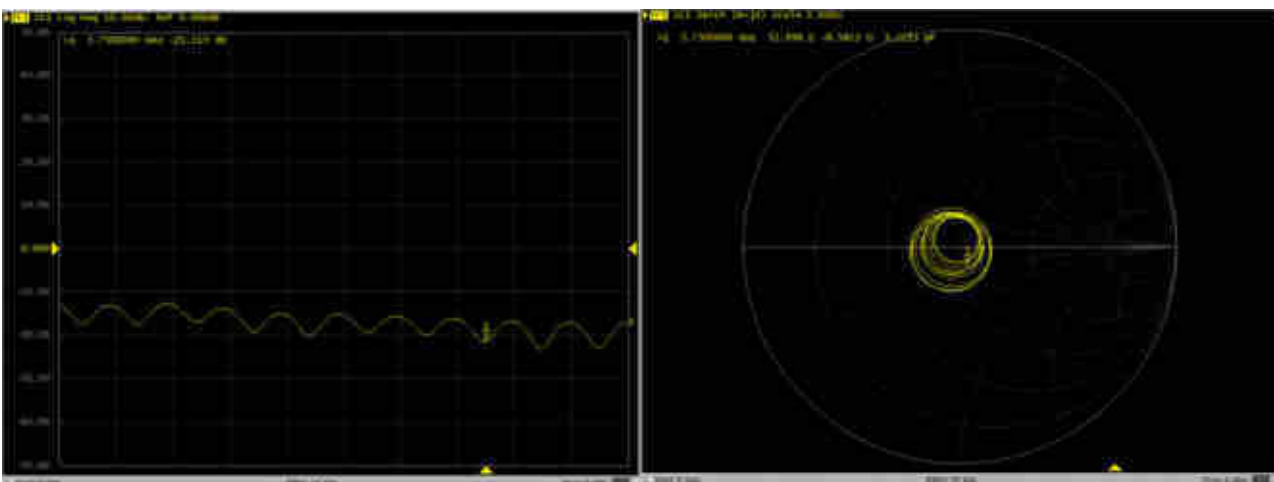
5600MHz – Head----2019.10.30



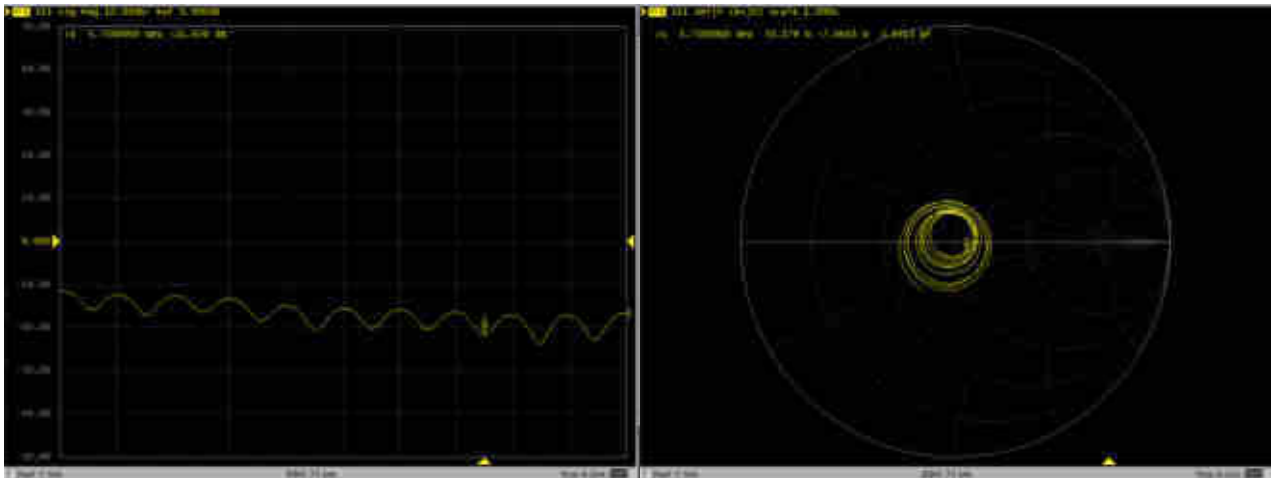
5600MHz – Body----2019.10.30



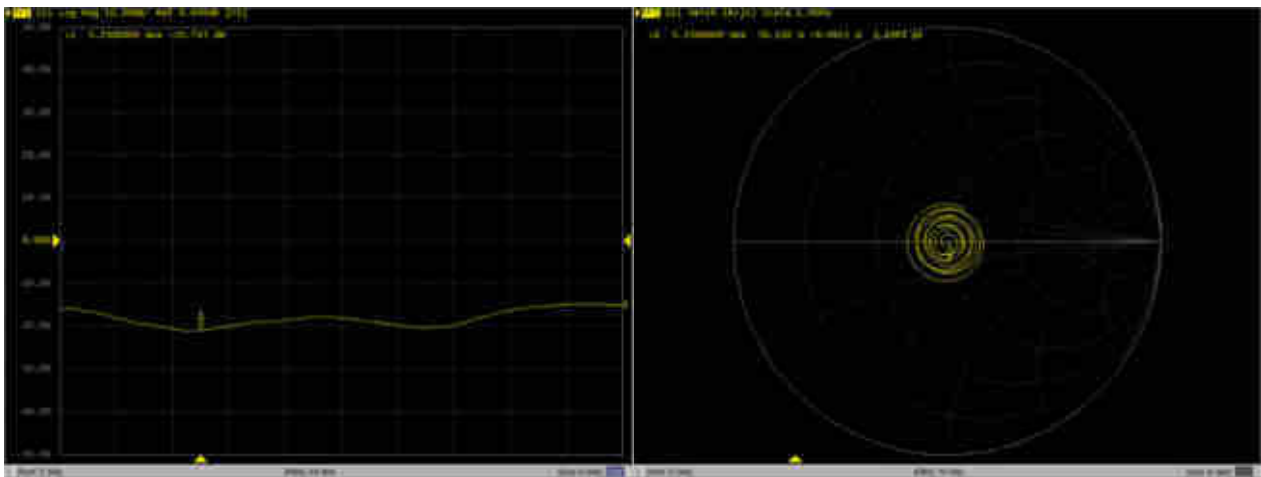
5750MHz – Head----2019.10.30



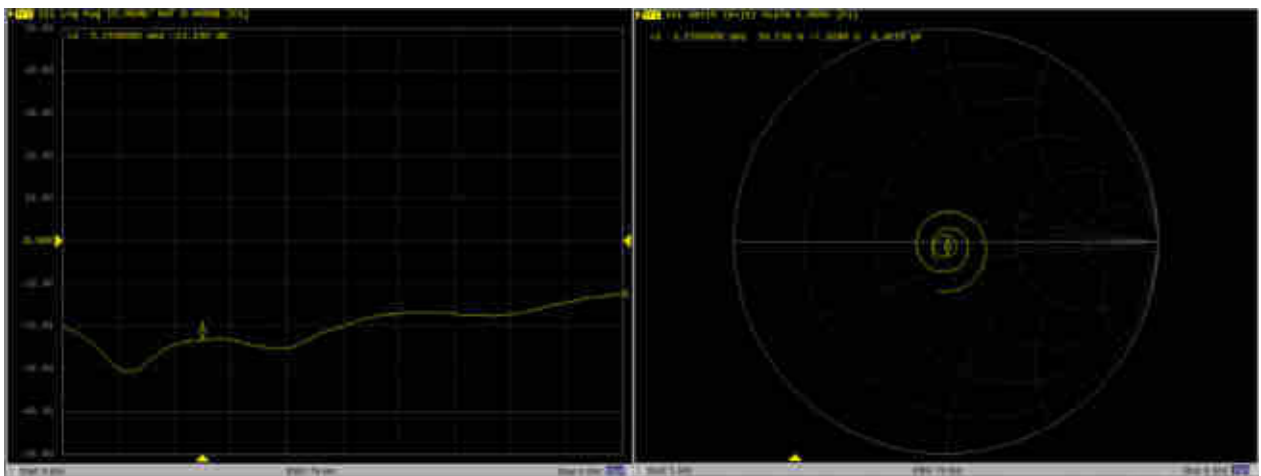
5750MHz – Body----2019.10.30



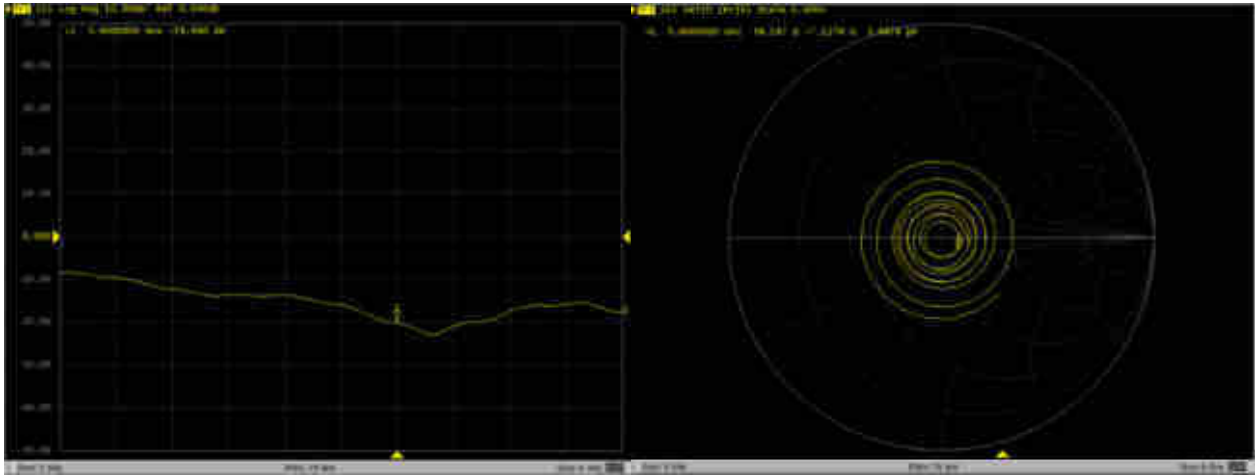
5250MHz – Head----2020.10.30



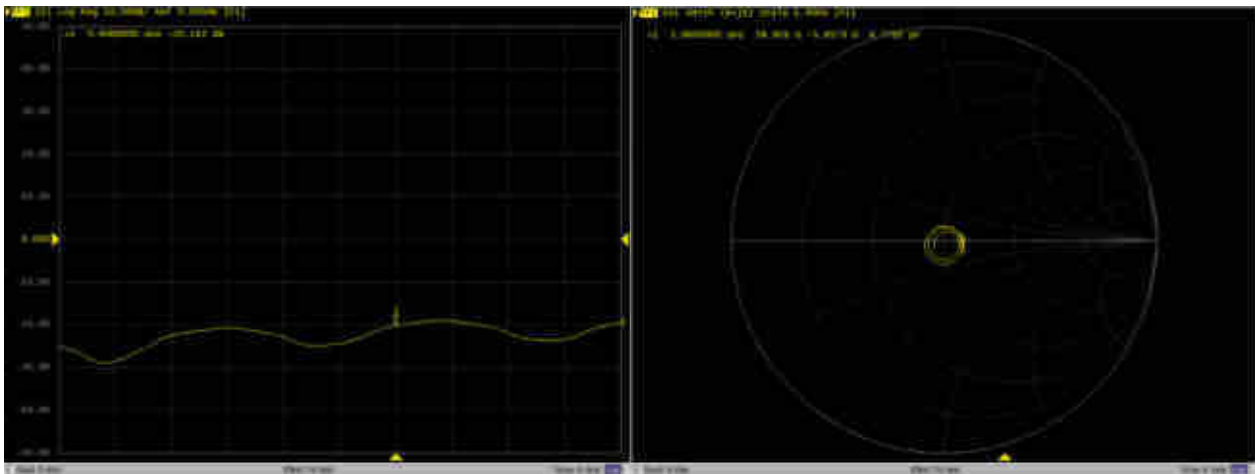
5250MHz – Body----2020.10.30



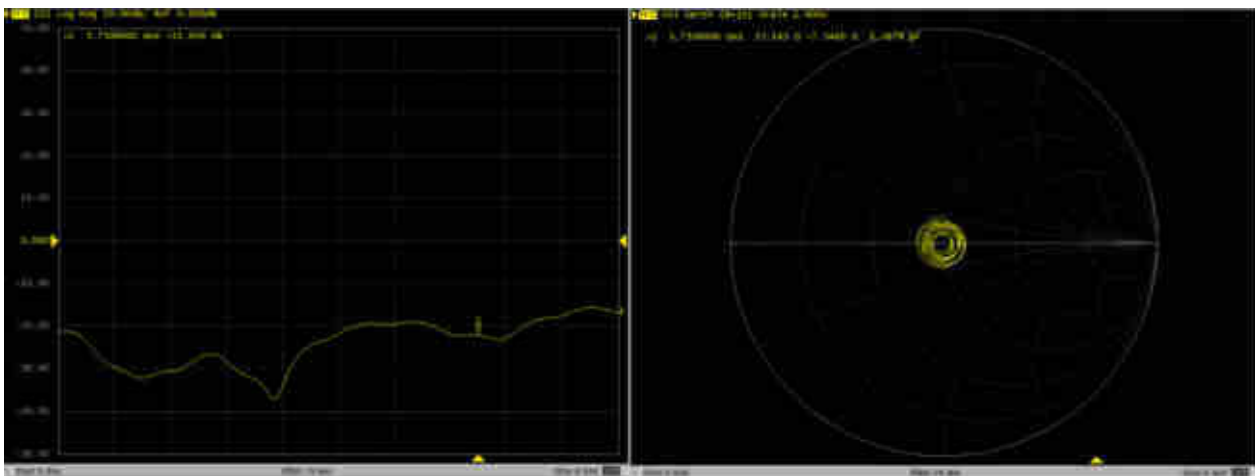
5600MHz – Head----2020.10.30



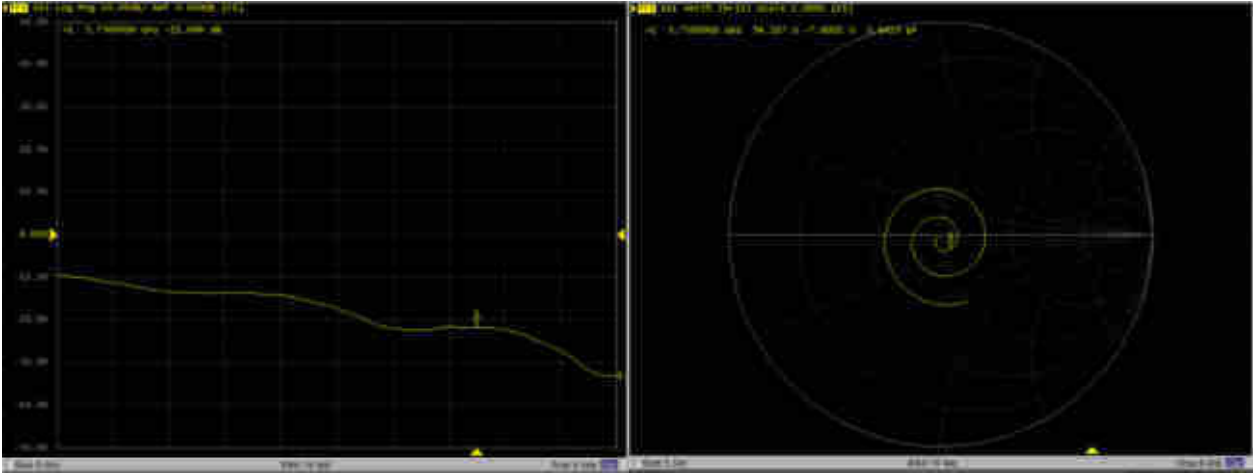
5600MHz – Body----2020.10.30



5750MHz – Head----2020.10.30



5750MHz – Body----2020.10.30





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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

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Accreditation No.: **SCS 0108**

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



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Accreditation No.: **SCS 0108**

Client **Sporton**

Certificate No: **EX3-7576_Jan20**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7576**

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

Calibration date: **January 22, 2020**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^\circ\text{C}$ 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
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Accreditation No.: SCS 0108

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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., $\theta = 0$ 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 $\theta = 0$ ($f \leq 900$ 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

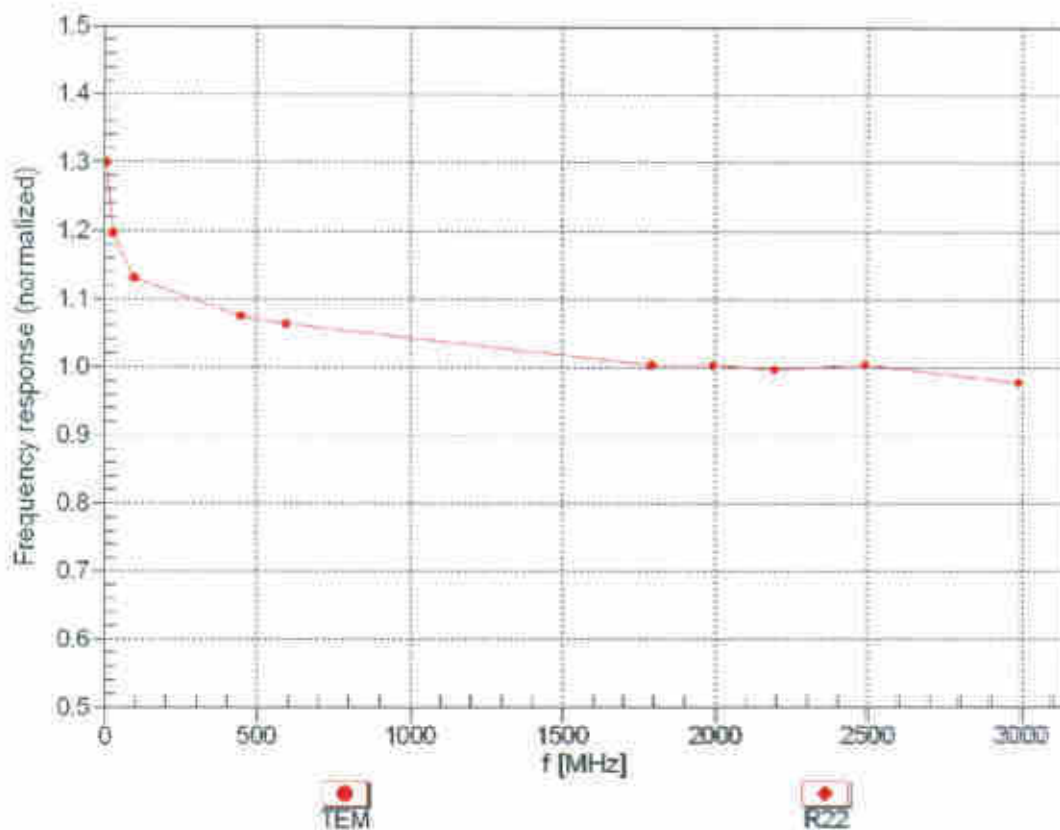
f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^o	Depth (mm) ^o	Unc (k=2)
750	41.9	0.89	10.71	10.71	10.71	0.62	0.80	± 12.0 %
835	41.5	0.90	10.45	10.45	10.45	0.46	0.94	± 12.0 %
900	41.5	0.97	10.16	10.16	10.16	0.33	1.09	± 12.0 %
1750	40.1	1.37	8.88	8.88	8.88	0.42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

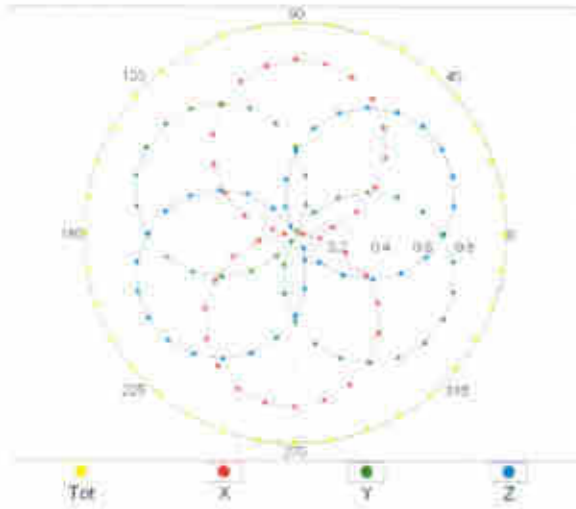
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



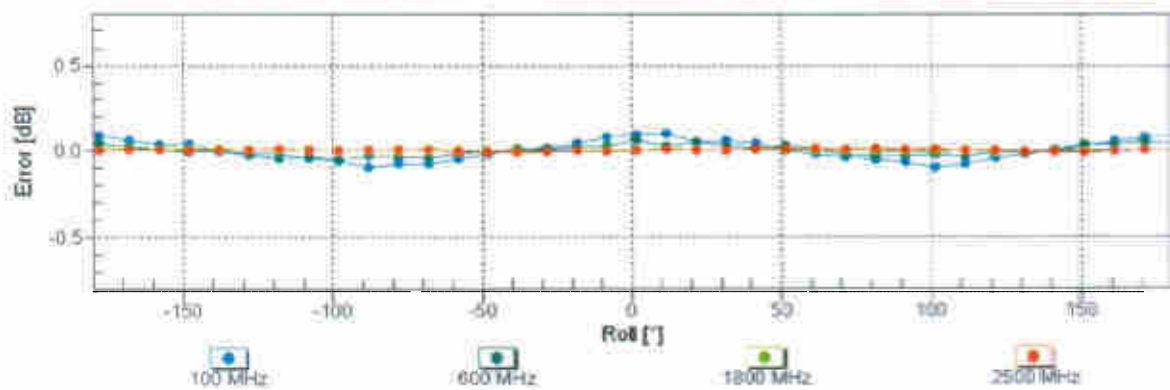
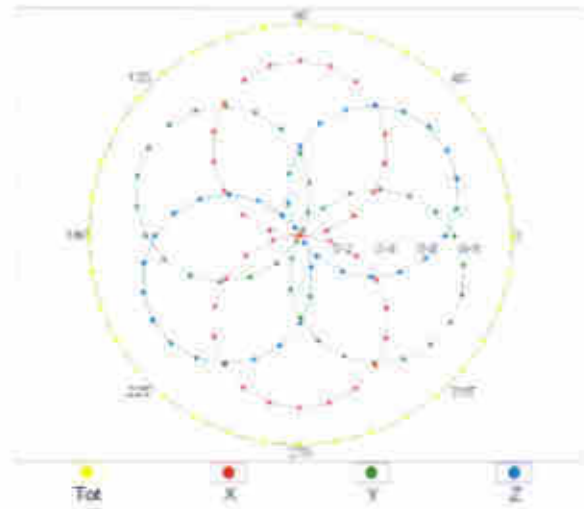
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

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

f=600 MHz,TEM

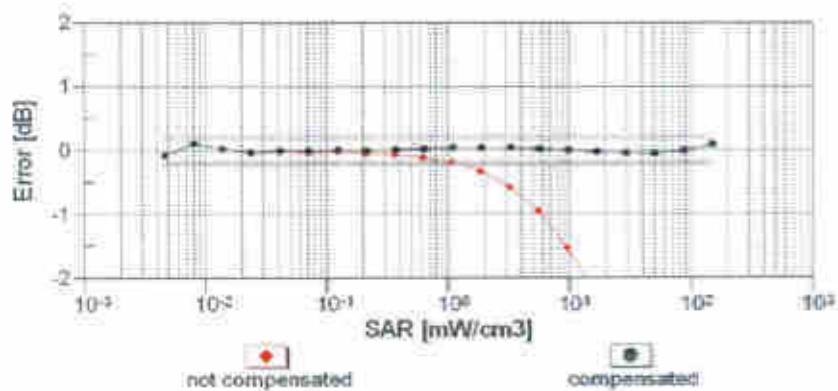
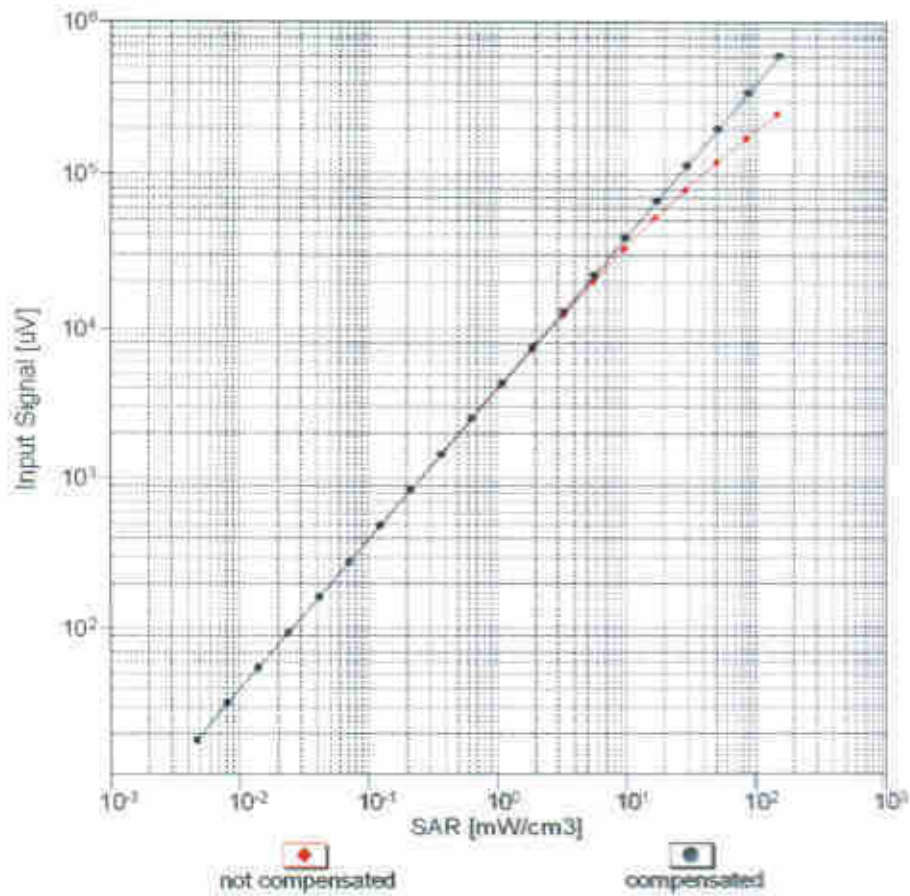


f=1800 MHz,R22



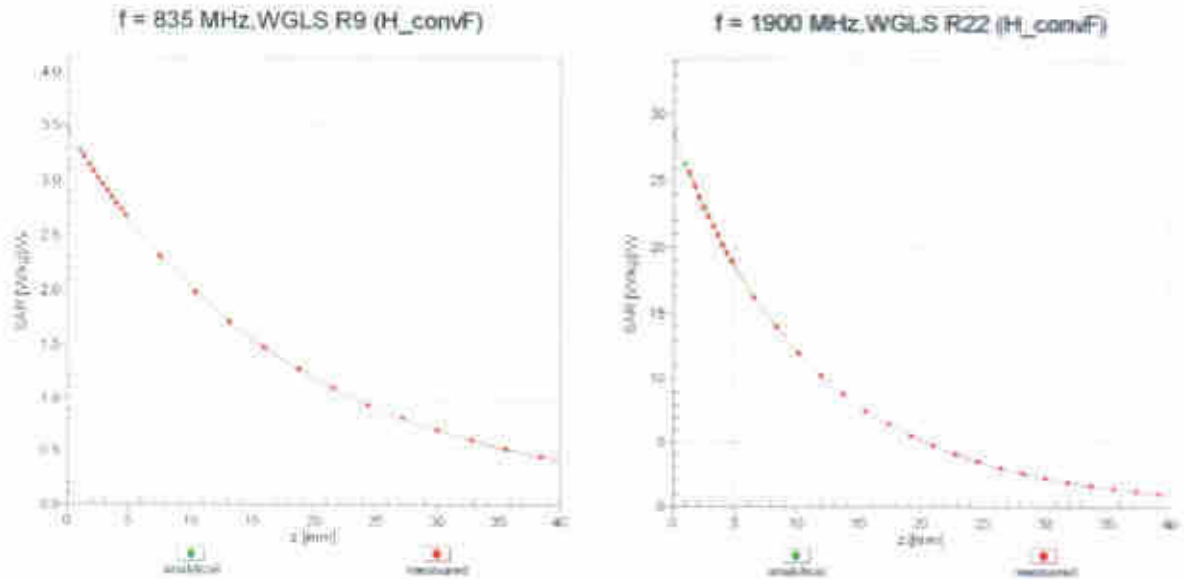
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

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



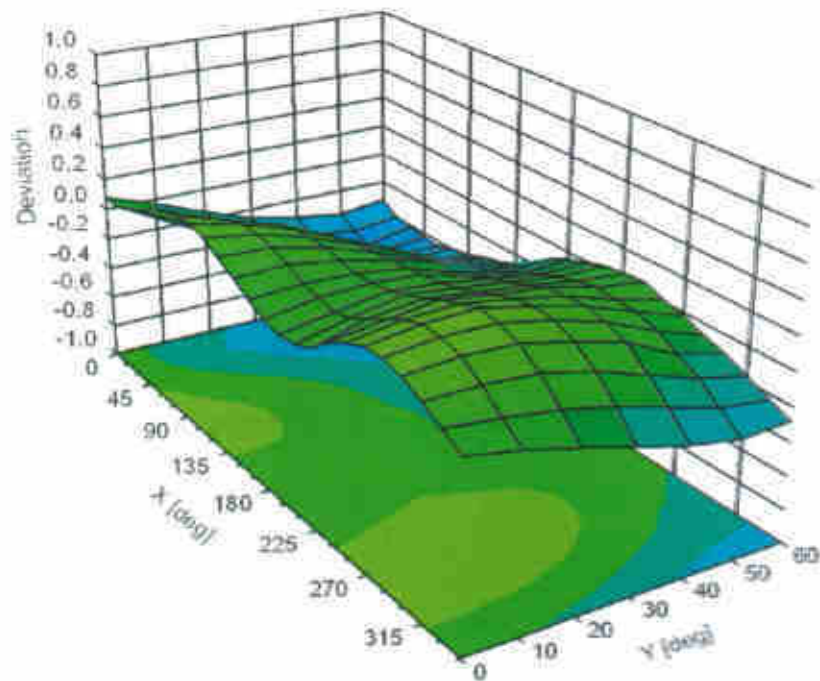
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

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	154.8
OSM1 Tx (dB)	23.10	22.88	23.02	23.80	24.10	23.88	24.02
OSM1 Tx (dB)	23.12	22.90	23.05	23.80	24.12	23.90	24.05
OSM2 Tx (dB)	20.44	20.44	20.38	20.80	21.44	21.44	21.38
OSM3 Tx (dB)	21.66	21.66	21.60	22.00	21.66	21.66	21.60
OSM4 Tx (dB)	20.01	27.52	27.95	28.50	20.01	24.52	24.95
EDGE 1 Tx (dB)	20.58	21.54	20.74	21.60	18.58	18.54	18.74
EDGE 2 Tx (dB)	22.82	22.82	22.82	24.00	17.82	17.82	17.82
EDGE 3 Tx (dB)	22.08	23.02	23.10	23.80	18.72	18.70	18.84
EDGE 4 Tx (dB)	22.14	22.23	22.32	22.80	18.14	18.23	18.32

GSM1800		Sub-Average Power (dBm)			Frame-Average Power (dBm)		
Tx Channel	1812	1813	1814	Time-up Limit (dBm)	1812	1813	1814
Frequency (MHz)	1805.2	1806	1806.8	1805.2	1806	1806.8	1807.6
OSM1 Tx (dB)	22.00	22.70	22.89	23.80	20.00	19.70	19.89
OSM2 Tx (dB)	20.00	20.00	20.04	20.80	19.00	19.00	19.04
OSM3 Tx (dB)	21.00	21.00	21.01	21.80	19.00	19.00	19.01
OSM3 Tx (dB)	24.48	24.53	24.18	25.50	20.22	20.37	19.92
OSM4 Tx (dB)	24.00	23.87	23.80	24.80	21.00	20.87	20.80
EDGE 1 Tx (dB)	24.58	24.35	24.54	25.50	19.58	19.35	19.54
EDGE 2 Tx (dB)	22.10	22.05	22.89	23.80	17.10	17.05	18.89
EDGE 3 Tx (dB)	22.02	22.23	22.42	22.70	18.02	18.23	18.44
EDGE 4 Tx (dB)	21.05	21.11	21.10	21.70	18.05	18.11	18.10

Band	WCDMA 8			Time-up Limit (dBm)	WCDMA 11			Time-up Limit (dBm)	WCDMA 17			Time-up Limit (dBm)
	8262	8400	8638		4152	4162	4228		4152	4162	4228	
Tx Channel	8602	8600	8638	1312	1413	1413	1512	1512	1512	1512	1512	1512
Frequency (MHz)	8602.4	8600	8637.8	1712.4	1734.6	1734.6	1756.8	1756.8	1756.8	1756.8	1756.8	1756.8
SCPP Rel 99	ARR 12.2600s	23.78	23.84	23.84	24.12	24.21	24.22	24.80	24.80	24.03	23.80	24.80
SCPP Rel 99	RRG 12.2600s	22.70	22.58	23.86	24.00	24.74	25.01	25.24	24.80	25.01	25.00	24.80
SCPP Rel 6	HSDPA-Subclass1	22.71	22.78	22.81	23.80	22.37	22.44	22.41	23.80	23.72	23.78	23.84
SCPP Rel 6	HSDPA-Subclass2	22.89	22.77	22.42	23.80	22.43	22.53	22.41	23.80	23.66	23.71	23.64
SCPP Rel 6	HSDPA-Subclass3	22.70	22.23	21.82	23.30	21.03	21.08	21.02	23.30	22.95	22.88	22.83
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	22.80
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	21.83	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	21.82	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	22.02	22.02	21.98
SCPP Rel 6	HSPA-Subclass2	22.31	22.50	22.77	21.80	20.37	20.73	20.87	21.80	20.38	21.23	21.50
SCPP Rel 6	HSPA-Subclass3	22.34	22.20	21.78	22.80	19.78	19.83	19.89	22.80	19.80	20.26	20.50
SCPP Rel 6	HSPA-Subclass4	22.70	22.80	22.58	21.80	20.82	20.75	20.88	21.80	20.87	21.05	21.80
SCPP Rel 6	HSPA-Subclass5	22.85	22.85	22.85	23.80	22.58	22.65	22.68	23.80	22.61	22.61	23.79
SCPP Rel 7	HSPA+ (MCS) Subclass1	21.10	21.21	21.02	21.80	20.77	21.00	20.98	21.80	20.83	21.10	20.98

Band	CDMA BC3			Time-up Limit (dBm)	CDMA BC1			Time-up Limit (dBm)	CDMA BC1b			Time-up Limit (dBm)
	1813	184	777		25	1175	1175		476	505	684	
Tx Channel	1813	184	777	25	1175	1175	476	505	684	684	684	
Frequency (MHz)	824.7	838.52	848.31	1851.28	1850	1858.75	1817.8	820.5	821.1	821.1	821.1	
TC1 HCS0	22.82	22.80	22.87	24.80	23.89	23.80	23.80	22.87	23.80	23.80	24.70	
HCS0 HCS0	22.80	22.80	22.80	24.80	23.87	23.89	23.80	22.86	23.81	23.87	24.70	
HCS0 HCS0 (F-DCS)	22.79	22.80	22.84	24.80	23.86	23.88	23.47	24.80	23.86	23.80	23.80	
HCS0 HCS0 (F-DCS)	22.77	22.80	22.82	24.80	23.84	23.89	23.49	24.80	23.85	23.80	24.70	
NETAP 15.8000s	22.76	22.84	22.81	24.80	23.83	23.84	23.45	24.80	23.81	23.87	23.82	
NETAP 40.8000s	22.75	22.82	22.80	24.80	23.82	23.83	23.43	24.80	23.80	23.88	23.82	



Band 41 (2.6G Band HPU (Limit 2))													
BW (MHz)	Modulation	RB Size	RB Offset	Power					Time-up limit (dBm)	MPR (dB)			
				Low	Mid	High	Low	Mid			High		
Channel				30790	40195	43020	43995	44690					
Frequency (MHz)				2508	2548.5	2593	2638.5	2680					
20	QPSK	1	0	25.88	26.11	26.05	26.09	25.69	26.8	0	0	0	
20	QPSK	1	0	25.85	26.08	26.02	26.06	25.66					
20	QPSK	1	0	25.89	26.12	26.06	26.10	25.72					
20	QPSK	50	0	25.03	25.28	25.09	25.24	25.22					
20	QPSK	50	50	25.02	25.25	25.15	25.19	25.19					
20	QPSK	100	0	25.15	25.38	25.34	25.32	25.30					
20	HQAM	1	0	25.25	25.40	25.13	25.38	25.46					
20	HQAM	1	0	25.22	25.47	25.22	25.31	25.39					
20	HQAM	1	99	25.22	25.41	25.37	25.33	25.28					
20	HQAM	50	0	24.01	24.46	24.23	24.31	24.37					
20	HQAM	50	24	24.17	24.45	24.34	24.32	24.38					
20	HQAM	50	50	24.19	24.37	24.32	24.23	24.32					
20	HQAM	100	0	24.17	24.39	24.27	24.35	24.41					
20	BQAM	1	0	23.95	24.22	24.22	24.31	24.30					
20	BQAM	1	49	23.95	24.32	24.24	24.31	24.37					
20	BQAM	1	99	24.05	24.33	24.41	24.40	24.32					
20	BQAM	50	0	23.16	23.23	23.21	23.32	23.48					
20	BQAM	50	24	23.16	23.45	23.38	23.37	23.38					
20	BQAM	50	50	23.12	23.41	23.37	23.41	23.42					
20	BQAM	100	0	23.24	23.44	23.30	23.40	23.42					
20	SSQAM	1	0	21.00	21.25	21.20	21.12	21.08					
20	SSQAM	1	49	20.85	21.02	21.03	21.06	21.15					
20	SSQAM	1	99	20.94	21.14	21.05	21.05	20.81					
20	SSQAM	50	0	21.13	21.38	21.29	21.20	21.03					
20	SSQAM	50	24	21.19	21.23	21.24	21.21	21.12					
20	SSQAM	50	50	21.14	21.22	21.23	21.18	21.08					
20	SSQAM	100	0	21.09	21.21	21.10	21.03	21.08					
Channel				2503.5	2548.3	2593.5	2637.8	2682.5					
Frequency (MHz)				2676.5	2682.5	2682.5	2682.5	2682.5					
16	QPSK	1	0	25.86	26.08	26.01	26.08	25.66	26.8	0	0	0	
16	QPSK	1	37	25.98	26.09	25.97	26.07	26.01					
16	QPSK	1	49	26.01	26.11	26.12	26.11	26.11					
16	QPSK	36	0	24.90	25.34	25.15	25.11	25.13					
16	QPSK	36	20	25.10	25.35	25.23	25.05	25.05					
16	QPSK	36	39	24.99	25.36	25.26	25.02	25.02					
16	QPSK	75	0	25.14	25.39	25.20	25.06	25.12					
16	HQAM	1	0	25.17	25.47	25.32	25.32	25.28					
16	HQAM	1	37	25.19	25.41	25.38	25.09	25.17					
16	HQAM	1	74	25.16	25.60	25.40	25.02	25.20					
16	HQAM	36	0	24.02	24.28	24.12	24.10	24.14					
16	HQAM	36	20	24.01	24.28	24.19	24.06	24.02					
16	HQAM	36	39	24.04	24.35	24.26	24.04	24.04					
16	HQAM	75	0	24.11	24.44	24.19	24.02	24.10					
16	BQAM	1	0	23.83	24.03	24.01	24.24	24.20					
16	BQAM	1	37	24.06	24.17	24.08	24.05	24.03					
16	BQAM	1	74	24.04	24.28	24.23	23.98	23.90					
16	BQAM	36	0	22.87	22.89	23.18	23.25	23.10					
16	BQAM	36	20	23.14	23.29	23.19	23.22	23.17					
16	BQAM	36	39	23.04	23.52	23.07	23.02	23.00					
16	BQAM	75	0	23.31	23.15	23.12	23.05	23.07					
16	SSQAM	1	0	20.92	21.04	21.17	21.10	20.81					
16	SSQAM	1	37	20.81	20.99	20.97	21.02	21.14					
16	SSQAM	1	74	20.93	21.13	21.09	21.03	20.75					
16	SSQAM	36	0	21.03	21.10	21.04	21.13	20.85					
16	SSQAM	36	20	21.18	21.22	21.17	21.07	21.01					
16	SSQAM	36	39	21.13	21.15	21.09	21.14	20.98					
16	SSQAM	75	0	21.03	21.28	21.06	21.05	21.29					
Channel				3670	4790	5020	4388	4390					
Frequency (MHz)				3680	3687	3690	3685	3685					
10	QPSK	1	0	25.78	26.13	25.97	25.98	25.99	26.8	0	0	0	
10	QPSK	1	25	25.82	26.12	26.00	25.90	25.86					
10	QPSK	1	49	25.87	26.15	26.14	26.72	25.80					
10	QPSK	25	0	25.03	25.38	25.15	25.15	25.15					
10	QPSK	25	25	25.05	25.41	25.31	25.07	25.21					
10	QPSK	100	0	25.02	25.39	25.26	25.46	25.11					
10	QPSK	100	49	25.01	25.36	25.39	25.02	25.16					
10	HQAM	1	0	25.02	25.41	25.32	25.25	25.43					
10	HQAM	1	25	25.09	25.47	25.39	25.14	25.27					
10	HQAM	1	49	25.39	25.42	25.40	24.99	25.18					
10	HQAM	25	0	23.95	24.18	24.24	24.17	24.25					
10	HQAM	25	12	24.02	24.38	24.27	24.16	24.14					
10	HQAM	25	25	23.95	24.42	24.30	24.05	24.19					
10	HQAM	50	0	24.12	24.42	24.30	24.13	24.14					
10	BQAM	1	0	23.85	24.11	24.04	24.22	24.16					
10	BQAM	1	25	23.90	24.19	24.04	24.31	24.17					
10	BQAM	1	49	23.93	24.25	24.25	24.80	23.80					
10	BQAM	25	0	23.46	23.01	23.22	23.41	23.22					
10	BQAM	25	12	23.22	23.18	23.19	23.29	23.33					
10	BQAM	25	25	23.15	23.46	23.17	23.08	23.10					
10	BQAM	50	0	23.21	23.13	23.19	23.32	23.08					
10	SSQAM	1	0	20.98	21.04	21.09	21.10	20.97					
10	SSQAM	1	25	20.84	20.83	21.01	21.05	21.02					
10	SSQAM	1	49	20.74	21.10	20.96	20.99	20.70					
10	SSQAM	25	0	21.03	20.99	21.12	21.22	20.83					
10	SSQAM	25	12	21.07	21.24	21.28	21.12	21.07					
10	SSQAM	25	25	21.07	21.39	21.50	21.11	21.06					
10	SSQAM	50	0	20.92	21.18	20.99	21.14	21.21					
Channel				3967.5	4019.8	4062.0	4109.0	4166.5					
Frequency (MHz)				4061.5	4062.0	4062.0	4062.0	4062.0					
5	QPSK	1	0	25.78	26.12	25.97	25.81	25.84	26.8	0	0	0	
5	QPSK	1	12	25.09	26.24	25.99	25.73	25.87					
5	QPSK	1	24	25.92	26.12	26.05	25.68	25.79					
5	QPSK	12	0	25.00	25.38	25.26	24.96	25.09					
5	QPSK	12	7	25.04	25.38	25.23	24.96	25.15					
5	QPSK	12	13	25.04	25.36	25.24	24.91	25.13					
5	QPSK	26	0	25.05	25.34	25.19	24.85	25.07					
5	HQAM	1	0	24.99	25.40	25.28	25.04	25.23					
5	HQAM	1	12	25.02	25.42	25.41	24.98	25.29					
5	HQAM	12	0	24.02	24.41	24.24	24.01	24.11					
5	HQAM	12	7	24.07	24.43	24.30	23.86	24.16					
5	HQAM	12	13	24.15	24.41	24.25	23.97	24.10					
5	HQAM	25	0	24.17	24.38	24.28	23.98	24.17					
5	BQAM	1	0	23.98	23.99	24.04	24.34	24.03					
5	BQAM	1	12	24.01	24.00	24.04	24.23	24.20					
5	BQAM	1	24	23.99	24.20	24.27	24.02	23.96					
5	BQAM	12	0	22.90	23.02	23.14	23.41	23.05					
5	BQAM	12	7	23.09	23.12	23.19	23.23	23.22					
5	BQAM	12	13	23.11	23.42	23.15	22.95	22.96					
5	BQAM	25	0	23.14	23.20	23.03	22.95	23.04					
5	SSQAM	1	0	21.00	21.10	21.07	21.02	20.82					
5	SSQAM	1	12	20.84	20.88	21.00	20.99	21.12					
5	SSQAM	1	24	20.83	20.97	21.08	21.04	20.85					
5	SSQAM	12	0	21.10	21.03	21.16	21.06	20.90					
5	SSQAM	12	7	20.99	21.23	21.15	21.14	21.06					
5	SSQAM	12	13	21.13	21.18	21.14	21.15	20.94					
5	SSQAM	25	0	20.89	21.10	21.19	21.04	21.28					

Band 48 (3.5G Band)													
BW (MHz)	Modulation	RB Size	RB Offset	Power					Time-up limit (dBm)	MPR (dB)			
				Low	Mid	High	Low	Mid			High		
Channel				55340	55830	56150	56640						
Frequency (MHz)				3560	3600	3641	3680						
20	QPSK	1	0	23.38	23.46	23.49	23.07	24.8	0	0	0	0	
20	QPSK	1	0	23.32	23.43	23.47	23.43						23.43
20	QPSK	1	99	23.30	23.45	23.48	23.43						23.53
20	QPSK	50	0	22.58	22.68	22.73	22.75						22.75
20	QPSK	50	50	22.66	22.67	22.66	22.72	22.72					
20	QPSK	100	0	22.55	22.65	22.71	22.73	22.73					
20	QPSK	100	0										



Reduced Power level 1 for Head – UAT

Tx Channel	SAR 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	
CDMA1	31.20	31.30	30.92	31.70	22.20	22.03	21.92	22.70
CDMA1 Tx test	31.18	31.30	30.90	31.70	22.18	22.03	21.90	22.70
OPHS 2 Tx test	27.86	28.23	28.15	28.08	21.98	22.25	22.15	23.00
OPHS 3 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	22.68	22.28	23.15
EDGE 1 Tx test	20.58	20.54	20.74	20.60	18.58	18.54	18.74	17.00
EDGE 2 Tx test	20.82	20.67	20.81	20.46	17.82	17.67	17.91	16.40
EDGE 3 Tx test	20.88	20.52	20.10	20.30	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

Tx Channel	SAR 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	
CDMA1	24.15	24.00	24.01	25.00	15.15	15.00	15.01	16.00
CDMA1 Tx test	24.13	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	18.35	18.32	18.34	20.00	13.09	14.89	14.88	16.24
OPHS 4 Tx test	16.28	16.40	16.08	20.00	13.28	13.25	13.08	17.00
EDGE 1 Tx test	20.02	20.00	20.00	20.00	15.02	14.98	14.98	16.00
EDGE 2 Tx test	21.01	20.94	20.88	21.00	15.01	14.94	14.88	15.80
EDGE 3 Tx test	19.30	19.33	19.00	19.70	14.58	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

Tx Channel	WCDMA 8			Turn-up Limit (dBm)	WCDMA 1V			Turn-up Limit (dBm)	WCDMA 5			Turn-up Limit (dBm)
	9262	9500	9538		9312	1413	1513		4152	4162	4228	
CDMA1	9502	9500	9508	9537	9530	1759	4357	4407	4458	9504	9504	9508
Frequency (MHz)	9504.2	9500	9507.8	9512.4	1759.6	1759.2	4356.4	4354	4407	4458	9504	9508
3GPP Ref #1	AWR 12.200a	17.28	17.40	17.34	16.50	16.62	16.23	16.15	19.00	22.50	22.82	23.21
3GPP Ref #1	NRK 12.200a	17.30	17.40	17.38	16.50	16.50	16.18	16.00	22.50	22.80	22.80	23.50
3GPP Ref #1	TRP/A Subtest1	16.37	16.20	16.48	17.00	17.14	17.07	16.00	21.60	21.60	21.60	22.50
3GPP Ref #1	TRP/A Subtest2	16.37	16.32	16.50	17.00	17.18	17.13	16.00	21.40	21.60	21.60	22.50
3GPP Ref #1	TRP/A Subtest3	14.84	14.80	14.60	17.00	16.60	16.64	16.00	21.10	21.10	21.10	22.00
3GPP Ref #1	TRP/A Subtest4	15.83	15.91	15.84	17.00	16.50	16.84	16.84	17.30	21.21	21.13	21.10
3GPP Ref #1	DC-HSPA Subtest1	16.26	16.50	16.47	17.00	16.90	16.90	17.00	19.00	21.40	21.57	21.80
3GPP Ref #1	DC-HSPA Subtest2	15.20	15.09	15.43	17.00	16.00	16.00	17.00	18.40	21.40	21.40	22.00
3GPP Ref #1	DC-HSPA Subtest3	15.74	15.68	15.91	17.00	16.51	16.43	16.51	17.30	20.30	21.06	21.50
3GPP Ref #1	DC-HSPA Subtest4	15.73	15.64	15.95	17.00	16.48	16.41	16.49	17.30	20.30	21.04	20.97
3GPP Ref #1	TRP/A Subtest1	16.22	16.42	16.34	17.00	16.80	16.97	17.00	19.00	21.76	22.04	21.90
3GPP Ref #1	TRP/A Subtest2	14.31	14.58	14.38	15.50	14.83	15.03	15.04	16.80	19.61	19.84	19.80
3GPP Ref #1	TRP/A Subtest3	13.37	13.57	13.43	14.80	13.87	14.04	13.93	15.00	18.42	18.83	18.61
3GPP Ref #1	TRP/A Subtest4	14.06	14.20	14.01	15.50	14.80	14.85	14.89	16.00	19.38	19.83	19.80
3GPP Ref #1	TRP/A Subtest5	16.30	16.50	16.40	17.00	16.80	17.00	17.00	18.00	21.20	21.22	21.20
3GPP Ref #1	TRP/A Subtest6	14.80	14.80	14.72	15.40	15.00	15.18	15.10	16.00	19.54	19.81	19.84

Tx Channel	CDMA BC0			Turn-up Limit (dBm)	CDMA BC1			Turn-up Limit (dBm)
	824.7	836	848.51		85	1680	1686.75	
NC1 BC05	22.38	23.41	22.40	24.00	17.50	17.57	17.54	18.50
NC1 BC06	23.38	23.41	23.30	24.00	17.40	17.56	17.50	18.50
NC1 BC07 (FDD)	23.35	23.42	23.37	24.00	17.47	17.54	17.51	18.50
NC1 BC07 (TDD)	23.34	23.40	23.30	24.00	17.46	17.52	17.50	18.50
NC1F 15.800a	23.32	23.38	23.34	24.00	17.45	17.51	17.48	18.50
NC1F 15.800b	23.30	23.37	23.33	24.00	17.43	17.49	17.47	18.50



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). Rows include Frequency (MHz) and Channel for various modulation types like QPSK, 16QAM, 64QAM, etc.

Band 4 (100 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). Rows include Frequency (MHz) and Channel for various modulation types like QPSK, 16QAM, 64QAM, etc.

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). Rows include Frequency (MHz) and Channel for various modulation types like QPSK, 16QAM, 64QAM, etc.

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). Rows include Frequency (MHz) and Channel for various modulation types like QPSK, 16QAM, 64QAM, etc.



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 multiple rows of frequency allocation data for various QPSK and QAM modulations.

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 multiple rows of frequency allocation data for various QPSK and QAM modulations.

Band 30

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 multiple rows of frequency allocation data for various QPSK and QAM modulations.

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 multiple rows of frequency allocation data for various QPSK and QAM modulations.



Band 3(only on channel required)								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Co [F/Hz]	Power Middle Co [F/Hz]	Power High Co [F/Hz]	Turn-up time (dBm)	MPR (dB)
Channel								
Frequency (MHz)								
20	QPSK	1	0	17.24	17.62	17.11	18	0
20	QPSK	50	0	17.28	17.66	17.23		
20	QPSK	1	50	17.27	17.23	17.26		
20	QPSK	50	0	17.18	17.11	17.11		
20	QPSK	50	50	17.15	17.61	17.07	18	0
20	QPSK	100	0	17.21	17.17	17.20		
20	HQAM	1	0	17.62	16.82	16.74		
20	HQAM	1	40	16.87	16.92	16.87		
20	HQAM	1	50	17.04	17.00	16.96	18	0
20	HQAM	50	0	16.98	16.99	17.03		
20	HQAM	50	50	17.08	17.06	17.00		
20	HQAM	50	50	17.17	17.16	17.25		
20	HQAM	100	0	17.08	16.82	17.00	18	0
20	HQAM	1	40	16.87	16.84	16.88		
20	HQAM	1	50	16.71	17.10	17.11		
20	HQAM	50	0	16.98	17.05	16.99		
20	HQAM	50	50	17.12	17.06	17.02	18	0
20	HQAM	50	50	16.98	17.17	17.07		
20	HQAM	100	0	17.05	16.84	16.91		
20	HQAM	1	40	17.04	17.02	17.00		
20	256QAM	1	40	17.02	17.07	16.99	18	0
20	256QAM	1	50	17.01	17.00	16.98		
20	256QAM	50	0	17.08	17.06	17.02		
20	256QAM	50	50	17.04	17.23	17.20		
20	256QAM	50	50	17.22	17.21	17.17	18	0
20	256QAM	100	0	17.22	17.24	17.18		
Channel								
Frequency (MHz)								
15	QPSK	1	0	17.69	16.66	16.97	18	0
15	QPSK	1	50	17.11	17.12	17.12		
15	QPSK	1	74	17.24	17.27	17.22		
15	QPSK	36	0	17.08	17.18	16.88		
15	QPSK	36	0	16.98	17.12	16.98	18	0
15	QPSK	36	50	17.03	16.96	16.92		
15	QPSK	75	0	16.91	16.88	17.07		
15	HQAM	1	0	17.12	16.91	16.91		
15	HQAM	1	37	16.99	17.00	16.98	18	0
15	HQAM	1	74	17.16	17.02	17.02		
15	HQAM	36	0	16.96	17.16	17.06		
15	HQAM	36	50	17.04	17.12	17.11		
15	HQAM	36	50	17.08	17.23	17.19	18	0
15	HQAM	75	0	17.18	17.02	17.08		
15	HQAM	1	0	17.09	16.98	17.03		
15	HQAM	1	37	17.16	16.88	17.03		
15	HQAM	1	74	17.11	17.07	17.05	18	0
15	HQAM	36	0	16.97	17.19	17.11		
15	HQAM	36	50	17.14	17.09	17.05		
15	HQAM	36	50	17.03	17.16	17.05		
15	HQAM	75	0	17.03	17.10	17.13	18	0
15	256QAM	1	37	17.07	16.82	17.00		
15	256QAM	1	74	16.89	16.79	17.01		
15	256QAM	36	0	17.14	17.14	17.14		
15	256QAM	36	50	17.10	17.19	16.98	18	0
15	256QAM	36	50	17.18	17.06	17.08		
15	256QAM	75	0	16.99	17.06	16.98		
Channel								
Frequency (MHz)								
10	QPSK	1	0	17.62	16.62	16.97	18	0
10	QPSK	1	50	16.94	16.95	16.82		
10	QPSK	1	40	17.24	17.23	17.08		
10	QPSK	25	0	16.95	17.12	16.88		
10	QPSK	25	0	16.91	16.88	17.08	18	0
10	QPSK	25	25	17.04	17.03	16.72		
10	QPSK	50	0	17.18	16.84	17.09		
10	HQAM	1	0	17.15	16.78	16.78		
10	HQAM	1	25	16.87	17.04	16.84	18	0
10	HQAM	1	40	17.03	16.86	16.93		
10	HQAM	25	0	17.03	16.89	17.13		
10	HQAM	25	25	17.12	16.99	17.04		
10	HQAM	25	25	17.07	17.28	17.03	18	0
10	HQAM	50	0	16.99	16.77	17.06		
10	HQAM	1	0	17.19	17.01	16.86		
10	HQAM	1	25	17.13	16.83	16.87		
10	HQAM	1	40	16.93	17.04	16.94	18	0
10	HQAM	25	0	16.94	17.00	17.01		
10	HQAM	25	12	16.95	16.98	17.04		
10	HQAM	25	25	16.96	17.07	17.04		
10	HQAM	50	0	17.00	16.94	16.94	18	0
10	256QAM	1	0	17.00	16.94	17.04		
10	256QAM	1	25	17.01	16.79	17.03		
10	256QAM	1	40	16.92	16.92	16.73		
10	256QAM	25	0	17.03	17.00	17.16	18	0
10	256QAM	25	12	17.04	17.10	17.21		
10	256QAM	25	25	17.27	17.14	16.92		
10	256QAM	50	0	17.21	17.02	17.21		
Channel								
Frequency (MHz)								
5	QPSK	1	0	17.69	17.06	16.98	18	0
5	QPSK	1	12	16.85	16.92	17.00		
5	QPSK	1	24	17.06	17.04	17.24		
5	QPSK	12	0	16.99	17.01	16.85		
5	QPSK	12	0	17.08	17.06	16.84	18	0
5	QPSK	12	12	16.99	17.03	16.95		
5	QPSK	25	0	17.08	17.19	17.22		
5	HQAM	1	0	16.86	16.79	16.89		
5	HQAM	1	12	17.06	16.97	16.90	18	0
5	HQAM	1	24	17.16	17.06	17.06		
5	HQAM	12	0	17.08	17.07	17.12		
5	HQAM	12	7	17.16	17.18	16.91		
5	HQAM	12	12	17.21	17.19	17.16	18	0
5	HQAM	25	0	16.92	16.86	17.07		
5	HQAM	1	0	17.17	17.00	17.22		
5	HQAM	1	12	17.05	16.84	16.96		
5	HQAM	1	24	16.93	16.86	17.11	18	0
5	HQAM	12	0	17.07	17.00	16.86		
5	HQAM	12	7	17.02	16.91	16.85		
5	HQAM	12	12	16.89	17.21	17.13		
5	HQAM	12	13	16.89	17.21	17.13	18	0
5	HQAM	25	0	17.02	17.02	16.97		
5	256QAM	1	0	16.98	16.87	17.05		
5	256QAM	1	12	16.99	16.83	17.00		
5	256QAM	1	24	16.76	17.00	16.96	18	0
5	256QAM	12	0	17.12	17.00	17.20		
5	256QAM	12	7	17.15	17.13	17.21		
5	256QAM	12	13	17.03	16.99	16.94		
5	256QAM	25	0	17.12	17.20	16.99	18	0

Band 41 (2.60 Band)										
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Co [F/Hz]	Power Low Middle Co [F/Hz]	Power Middle Co [F/Hz]	Power High Middle Co [F/Hz]	Power High Co [F/Hz]	Turn-up time (dBm)	MPR (dB)
Channel										
Frequency (MHz)										
20	QPSK	1	0	17.27	17.23	17.27	17.27	17.26	18	0
20	QPSK	1	50	17.29	17.29	17.32	17.32	17.31		
20	QPSK	1	50	17.32	17.43	17.30	17.30	17.41		
20	QPSK	50	0	17.22	17.29	17.23	17.28	17.24		
20	QPSK	50	50	17.21	17.27	17.26	17.21	17.16	18	0
20	QPSK	100	0	17.26	17.38	17.34	17.30	17.35		
20	HQAM	1	0	17.06	17.21	17.20	17.14	17.15		
20	HQAM	1	40	17.02	17.30	17.31	17.14	17.11		
20	HQAM	1	50	17.09	17.29	17.28	17.28	17.31	18	0
20	HQAM	50	0	17.11	17.15	17.39	17.13	17.39		
20	HQAM	50	50	17.20	17.16	17.32	17.30	17.40		
20	HQAM	50	50	17.28	17.25	17.24	17.23	17.23		
20	HQAM	100	0	17.25	17.19	17.38	17.43	17.21	18	0
20	HQAM	1	40	17.29	17.30	17.32	17.35	17.31		
20	HQAM	1	40	17.31	17.30	17.27	17.07	17.12		
20	HQAM	1	50	17.19	17.11	17.26	17.26	17.18		
20	HQAM	50	0	17.30	17.14	17.34	17.16	17.26	18	0
20	HQAM	50	50	17.31	17.18	17.30	17.30	17.30		
20	HQAM	50	50	17.23	17.24	17.42	17.36	17.35		
20	HQAM	100	0	17.18	17.17	17.34	17.26	17.30		
20	256QAM	1	0	17.21	17.06	17.24	17.28	17.20	18	0
20	256QAM	1	40	17.21	17.02	17.18	17.20	17.30		
20	256QAM	1	50	17.19	17.00	17.15	17.24	17.28		
20	256QAM	50	0	17.29	17.29	17.25	17.25	17.25		
20	256QAM	50	24	17.34	17.20	17.25	17.22	17.30	18	0
20	256QAM	50	50	17.32	17.19	17.27	17.20	17.28		
20	256QAM	100	0	17.21	17.23	17.24	17.24	17.27		
Channel										
Frequency (MHz)										
15	QPSK	1	0	17.17	17.18	17.22	17.12	17.16	18	0
15	QPSK	1	50	17.31	17.12	17.21	17.23	17.18		
15	QPSK	1	74	17.02	17.41	17.23	17.10	17.10		
15	QPSK	36	0	17.08	17.14	17.22	17.02	17.15		
15	QPSK	36	0	17.10	17.26	17.10	17.10	17.23	18	0
15	QPSK	36	50	17.16	17.27	17.25	17.24	17.23		
15	QPSK	75	0	17.18	17.42	17.30	17.34	17.18		
15	HQAM	1	0	17.02	16.91	17.22	16.86	17.05		
15	HQAM	1	37	17.07	17.28	17.14	17.29	17.38	18	0
15	HQAM	1	74	16.96	17.22	16.99	16.95	17.29		
15	HQAM	36	0	17.02	17.13	17.26	17.15	17.21		
15	HQAM	36	50	17.12	17.13	17.17	17.20	17.20		
15	HQAM	36	50	17.22	17.23	17.34	17.17	17.32	18	0
15	HQAM	75	0	17.14	17.33	17.07	17.23	17.23		
15	HQAM	1	0	17.05	17.18	17.17	17.08	17.11		
15	HQAM	1	37	16.83	17.18	17.19	16.88	17.31		
15	HQAM	1	74	16.84	16.84	17.31	16.98	17.09	18	0
15	HQAM	36	0	17.21	17.26	17.11	17.23	17.26		
15	HQAM	36	50	17.23	17.05	17.22	16.94	16.96		
15	HQAM	36	50	17.13	17.12	17.35	16.99	17.01		
15	HQAM	75	0	16.86	17.01	17.09	16.71	17.03	18	0
15	256QAM	1	0	17.19	16.86	17.06				



Band 41 (2.6G Band HPUE (Linet 27))										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (7.7MHz)	Power Low Middle Ch. (7.7MHz)	Power Middle Ch. (7.7MHz)	Power High Middle Ch. (7.7MHz)	Power High Ch. (7.7MHz)	Time-up (min) (dBm)	MPS (dB)
Channel										
Frequency (MHz)				2096	2548.5	2998	3638.5	3896		
20	QPSK	1	0	18.99	19.02	18.91	18.99	19.11	19.8	0
20	QPSK	1	49	19.08	19.06	19.01	19.06	19.12	19.8	0
20	QPSK	1	98	19.11	19.20	19.13	19.10	19.15	19.8	0
20	QPSK	56	0	19.87	19.95	19.83	19.84	19.98	19.8	0
20	QPSK	56	24	19.08	19.06	19.01	19.06	19.12	19.8	0
20	QPSK	56	49	19.01	19.04	18.94	18.90	18.86	19.8	0
20	QPSK	100	0	19.85	19.18	19.08	19.04	19.15	19.8	0
20	16QAM	1	0	19.16	19.16	19.06	19.03	19.13	19.8	0
20	16QAM	1	49	19.06	19.07	19.00	19.04	19.14	19.8	0
20	16QAM	1	98	19.07	19.06	18.98	18.95	19.04	19.8	0
20	16QAM	56	0	19.83	19.87	19.79	19.72	19.14	19.8	0
20	16QAM	56	24	19.10	19.03	18.95	18.94	19.05	19.8	0
20	16QAM	56	49	19.04	19.00	18.91	18.95	19.18	19.8	0
20	16QAM	100	0	19.10	19.99	19.88	19.80	19.07	19.8	0
20	16QAM	100	24	19.18	19.09	19.01	19.07	19.16	19.8	0
20	16QAM	100	49	19.18	19.03	18.95	19.07	19.07	19.8	0
20	16QAM	1	98	19.14	19.06	19.06	19.11	19.13	19.8	0
20	16QAM	56	0	19.09	19.14	19.06	19.16	19.07	19.8	0
20	16QAM	56	24	19.06	19.14	19.00	19.16	19.08	19.8	0
20	16QAM	56	49	19.07	19.14	19.02	19.13	19.12	19.8	0
20	16QAM	100	0	19.09	19.14	19.06	19.10	19.08	19.8	0
20	16QAM	100	24	19.18	19.08	19.12	19.04	19.15	19.8	0
20	16QAM	100	49	19.17	19.00	19.10	19.03	19.12	19.8	0
20	16QAM	1	99	19.14	19.02	19.08	19.02	19.14	19.8	0
20	256QAM	1	0	19.14	19.08	19.10	19.10	19.11	19.8	0
20	256QAM	1	49	19.01	19.07	19.11	19.15	19.18	19.8	0
20	256QAM	56	0	19.10	19.04	19.10	19.14	19.03	19.8	0
20	256QAM	100	0	19.13	19.12	19.16	19.14	19.12	19.8	0
Channel										
Frequency (MHz)				2991	2548.3	2993	2937.8	2992.5		
15	QPSK	1	0	19.15	19.15	19.09	19.03	19.04	19.8	0
15	QPSK	1	37	19.83	19.18	19.01	19.06	19.16	19.8	0
15	QPSK	1	74	19.73	19.80	19.82	19.73	19.84	19.8	0
15	QPSK	36	0	19.09	19.09	19.09	19.04	19.89	19.8	0
15	QPSK	36	36	19.89	19.86	19.89	19.86	19.89	19.8	0
15	QPSK	36	72	19.93	19.79	19.89	19.08	19.81	19.8	0
15	QPSK	75	0	19.82	19.87	19.09	19.86	19.86	19.8	0
15	16QAM	1	0	19.14	19.12	19.10	19.07	19.03	19.8	0
15	16QAM	1	37	19.89	19.86	19.90	19.87	19.92	19.8	0
15	16QAM	1	74	19.79	19.74	19.84	19.73	19.82	19.8	0
15	16QAM	36	0	19.09	19.84	19.82	19.96	19.82	19.8	0
15	16QAM	36	36	19.12	19.89	19.89	19.83	19.92	19.8	0
15	16QAM	36	72	19.95	19.85	19.82	19.84	19.87	19.8	0
15	16QAM	75	0	19.09	19.04	19.05	19.98	19.94	19.8	0
15	16QAM	1	99	19.14	19.07	19.06	19.03	19.08	19.8	0
15	16QAM	1	37	19.20	19.91	19.02	19.03	19.92	19.8	0
15	16QAM	1	74	19.92	19.99	19.19	19.01	19.96	19.8	0
15	16QAM	36	0	19.86	19.86	19.92	19.88	19.99	19.8	0
15	16QAM	36	36	19.81	19.19	19.95	19.07	19.94	19.8	0
15	16QAM	36	72	19.16	19.69	19.02	19.84	19.19	19.8	0
15	16QAM	75	0	19.89	19.19	19.98	19.93	19.98	19.8	0
15	256QAM	1	0	19.02	19.07	19.09	19.04	19.05	19.8	0
15	256QAM	1	37	19.19	19.83	19.86	19.84	19.86	19.8	0
15	256QAM	1	74	19.89	19.85	19.91	19.91	19.11	19.8	0
15	256QAM	36	0	19.84	19.16	19.99	19.80	19.89	19.8	0
15	256QAM	36	36	19.98	19.84	19.09	19.09	19.17	19.8	0
15	256QAM	36	72	19.05	19.87	19.15	19.86	19.00	19.8	0
15	256QAM	75	0	19.03	19.08	19.07	19.01	19.11	19.8	0
Channel										
Frequency (MHz)				2991	2547	2993	2993	2993		
10	QPSK	1	0	19.92	19.10	19.14	19.86	19.93	19.8	0
10	QPSK	1	25	19.84	19.09	19.89	19.82	19.84	19.8	0
10	QPSK	1	49	19.87	19.82	19.81	19.82	19.80	19.8	0
10	QPSK	25	0	19.95	19.85	19.90	19.82	19.74	19.8	0
10	QPSK	25	12	19.14	19.84	19.81	19.81	19.81	19.8	0
10	QPSK	25	25	19.87	19.88	19.89	19.94	19.77	19.8	0
10	QPSK	56	0	19.87	19.94	19.88	19.91	19.78	19.8	0
10	16QAM	1	0	19.86	19.12	19.86	19.86	19.86	19.8	0
10	16QAM	1	25	19.89	19.90	19.93	19.96	19.02	19.8	0
10	16QAM	1	49	19.73	19.87	19.83	19.83	19.86	19.8	0
10	16QAM	25	0	19.89	19.96	19.91	19.92	19.83	19.8	0
10	16QAM	25	12	19.88	19.81	19.89	19.84	19.90	19.8	0
10	16QAM	25	25	19.83	19.89	19.81	19.85	19.72	19.8	0
10	16QAM	56	0	19.98	19.88	19.94	19.13	19.87	19.8	0
10	16QAM	1	98	19.15	19.74	19.99	19.94	19.83	19.8	0
10	16QAM	1	25	19.15	19.90	19.00	19.12	19.79	19.8	0
10	16QAM	1	49	19.84	19.92	19.12	19.11	19.78	19.8	0
10	16QAM	25	0	19.87	19.13	19.99	19.01	19.02	19.8	0
10	16QAM	25	12	19.93	19.94	19.91	19.07	19.00	19.8	0
10	16QAM	25	25	19.91	19.98	19.14	19.09	19.19	19.8	0
10	16QAM	56	0	19.84	19.96	19.06	19.99	19.04	19.8	0
10	16QAM	1	99	19.19	19.94	19.19	19.82	19.98	19.8	0
10	256QAM	1	0	19.18	19.81	19.15	19.05	19.19	19.8	0
10	256QAM	1	49	19.08	19.95	19.89	19.92	19.08	19.8	0
10	256QAM	25	0	19.94	19.09	19.11	19.06	19.06	19.8	0
10	256QAM	25	12	19.14	19.93	19.01	19.20	19.12	19.8	0
10	256QAM	25	25	19.07	19.99	19.96	19.12	19.13	19.8	0
10	256QAM	56	0	19.93	19.96	19.92	19.96	19.91	19.8	0
Channel										
Frequency (MHz)				2991	2546.5	2993	2940.30	2997.5		
5	QPSK	1	0	19.73	19.87	19.72	19.89	19.90	19.8	0
5	QPSK	1	24	19.83	19.74	19.86	19.90	19.77	19.8	0
5	QPSK	1	49	19.83	19.82	19.83	19.79	19.84	19.8	0
5	QPSK	12	0	19.88	19.49	19.88	19.79	19.88	19.8	0
5	QPSK	12	7	19.89	19.57	19.86	19.76	19.74	19.8	0
5	QPSK	12	13	19.72	19.59	19.81	19.88	19.71	19.8	0
5	QPSK	25	0	19.86	19.80	19.82	19.86	19.75	19.8	0
5	16QAM	1	0	19.92	19.93	19.91	19.96	19.96	19.8	0
5	16QAM	1	12	19.91	19.80	19.86	19.91	19.78	19.8	0
5	16QAM	1	24	19.89	19.83	19.87	19.86	19.82	19.8	0
5	16QAM	12	0	19.89	19.82	19.81	19.79	19.82	19.8	0
5	16QAM	12	7	19.77	19.89	19.75	19.74	19.72	19.8	0
5	16QAM	12	13	19.88	19.85	19.81	19.86	19.85	19.8	0
5	16QAM	25	0	19.74	19.99	19.70	19.70	19.84	19.8	0
5	16QAM	1	99	19.82	19.71	19.82	19.87	19.87	19.8	0
5	16QAM	1	12	19.76	19.74	19.86	19.76	19.87	19.8	0
5	16QAM	1	24	19.87	19.69	19.84	19.77	19.82	19.8	0
5	16QAM	12	0	19.79	19.76	19.86	19.76	19.84	19.8	0
5	16QAM	12	7	19.84	19.73	19.89	19.74	19.70	19.8	0
5	16QAM	12	13	19.75	19.79	19.88	19.91	19.99	19.8	0
5	16QAM	25	0	19.79	19.81	19.88	19.78	19.88	19.8	0
5	256QAM	1	0	19.19	19.91	19.96	19.97	19.16	19.8	0
5	256QAM	1	12	19.99	19.91	19.80	19.80	19.81	19.8	0
5	256QAM	1	24	19.17	19.98	19.86	19.87	19.97	19.8	0
5	256QAM	12	0	19.81	19.91	19.90	19.99	19.06	19.8	0
5	256QAM	12	7	19.88	19.89	19.89	19.12	19.87	19.8	0
5	256QAM	12	13	19.09	19.94	19.13	19.89	19.94	19.8	0
5	256QAM	25	0	19.93	19.95	19.93	19.99	19.96	19.8	0

Band 48 (1.5G Band)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (7.7MHz)	Power Low Middle Ch. (7.7MHz)	Power High Middle Ch. (7.7MHz)	Power High Ch. (7.7MHz)	Time-up (min) (dBm)	MPS (dB)	
Channel										
Frequency (MHz)				5594	5950	5910	5640			
20	QPSK	1	0	17.94	17.95	17.89	17.89	18.09	19.3	0
20	QPSK	1	49	17.89	17.94	17.87	17.87	17.91	19.3	0
20	QPSK	1	98	17.85	17.88	17.87	17.87	17.98	19.3	0
20	QPSK	56	0	17.92	17.93	17.89	17.88	18.07	19.3	0
20	QPSK	56	24	17.89	17.94	17.89	17.88	17.94	19.3	0
20	QPSK	56	49	17.89	17.86	17.				



Reduced Power level 2/3 for Head – UAT

TX Channel	Base Average Power (dBm)			Turn-up Limit (dBm)	Pwr/Average Power (dBm)			Turn-up Limit (dBm)
	125	180	251		125	180	251	
Frequency (MHz)	854.2	856.4	858.8	854.2	856.4	858.8	854.2	856.4
GSMT 1 Tx Ant	27.26	28.25	28.75	29.60	27.96	28.25	28.75	29.60
GSMT 2 Tx Ant	27.26	28.25	28.75	29.60	27.96	28.25	28.75	29.60
GSMT 3 Tx Ant	27.26	28.25	28.75	29.60	27.96	28.25	28.75	29.60
EDGE 1 Tx Ant	25.58	25.54	25.74	26.00	25.58	25.54	25.74	26.00
EDGE 2 Tx Ant	25.58	25.54	25.74	26.00	25.58	25.54	25.74	26.00
EDGE 3 Tx Ant	25.58	25.54	25.74	26.00	25.58	25.54	25.74	26.00
EDGE 4 Tx Ant	25.58	25.54	25.74	26.00	25.58	25.54	25.74	26.00

TX Channel	Base Average Power (dBm)			Turn-up Limit (dBm)	Pwr/Average Power (dBm)			Turn-up Limit (dBm)
	125	180	251		125	180	251	
Frequency (MHz)	854.2	856.4	858.8	854.2	856.4	858.8	854.2	856.4
GSMT 1 Tx Ant	24.15	24.00	24.01	24.00	24.15	24.00	24.01	24.00
GSMT 2 Tx Ant	24.15	24.00	24.01	24.00	24.15	24.00	24.01	24.00
GSMT 3 Tx Ant	24.15	24.00	24.01	24.00	24.15	24.00	24.01	24.00
EDGE 1 Tx Ant	24.01	23.98	23.95	24.00	24.01	23.98	23.95	24.00
EDGE 2 Tx Ant	24.01	23.98	23.95	24.00	24.01	23.98	23.95	24.00
EDGE 3 Tx Ant	24.01	23.98	23.95	24.00	24.01	23.98	23.95	24.00
EDGE 4 Tx Ant	24.01	23.98	23.95	24.00	24.01	23.98	23.95	24.00

Base	WCDMA 1			Turn-up Limit (dBm)	WCDMA 4			Turn-up Limit (dBm)	WCDMA 5			Turn-up Limit (dBm)	
	854.2	856.4	858.8		1312	1413	1513		4152	4153	4253		
Frequency (MHz)	854.2	856.4	858.8	854.2	1312	1413	1513	4152	4153	4253	854.2	856.4	858.8
3GPP Rel 99	17.28	17.40	17.34	18.50	18.02	18.23	18.15	18.00	21.09	21.18	21.24	22.20	
3GPP Rel 6	18.37	18.29	18.46	17.40	17.08	17.14	17.17	18.00	20.19	20.31	20.27	21.28	
3GPP Rel 6	18.37	18.12	18.50	17.00	17.00	17.18	17.13	18.00	20.05	20.34	20.20	21.20	
3GPP Rel 6	18.34	18.30	18.05	17.00	18.01	18.04	18.07	17.00	19.01	19.73	19.70	20.70	
3GPP Rel 6	18.83	18.91	18.84	17.00	18.00	18.84	18.84	17.00	19.07	19.83	19.88	20.70	
3GPP Rel 6	18.28	18.10	18.47	17.00	18.00	18.02	17.00	18.00	19.00	20.10	20.01	21.20	
3GPP Rel 6	18.28	18.00	18.43	17.00	18.00	18.00	17.01	18.00	20.00	20.24	20.14	21.20	
3GPP Rel 6	18.74	18.06	18.91	17.00	18.01	18.43	18.31	17.00	19.01	19.79	19.59	20.70	
3GPP Rel 6	18.79	18.84	18.09	17.00	18.00	18.41	18.40	17.00	19.00	19.60	19.68	20.70	
3GPP Rel 6	18.22	18.42	18.34	17.00	18.00	18.07	17.00	18.00	20.20	20.32	20.23	21.20	
3GPP Rel 6	14.31	14.58	14.38	16.00	14.83	15.03	15.04	16.00	18.31	18.52	18.46	19.00	
3GPP Rel 6	15.37	15.57	15.43	16.00	15.87	16.00	15.81	16.00	18.00	17.02	17.28	18.20	
3GPP Rel 6	14.08	14.30	14.01	16.00	14.80	14.85	14.89	16.00	18.09	18.32	18.15	19.00	
3GPP Rel 6	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	14.62	14.89	14.72	16.00	15.00	15.18	15.19	16.00	18.30	18.38	18.18	19.70	

Base	CDMA 800			Turn-up Limit (dBm)	CDMA 800			Turn-up Limit (dBm)	CDMA 800			Turn-up Limit (dBm)	
	854.2	856.4	858.8		854.2	856.4	858.8		854.2	856.4	858.8		
Frequency (MHz)	854.2	856.4 <td>858.8 <td>854.2</td> <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td></td></td></td></td></td>	858.8 <td>854.2</td> <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td></td></td></td></td>	854.2	854.2	856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td></td></td></td>	858.8 <td>854.2</td> <td>856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td></td></td>	854.2	856.4 <td>858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td></td>	858.8 <td>854.2</td> <td>856.4 <td>858.8</td> </td>	854.2	856.4 <td>858.8</td>	858.8
CDMA 800	21.87	21.98	21.91	23.00	17.40	17.56	17.52	18.50	21.58	21.95	21.51	24.50	
CDMA 800 (F-SSC)	21.80	21.98	21.88	23.00	17.47	17.54	17.51	18.50	21.57	21.83	21.50	24.50	
CDMA 800 (H-SSC)	21.96	21.95	21.95	23.00	17.46	17.52	17.50	18.50	21.52	21.92	21.49	24.50	
WAP 141.6000	21.92	21.92	21.98	23.00	17.45	17.51	17.48	18.50	21.53	21.92	21.47	24.50	
WAP 141.6000	21.81	21.91	21.84	23.00	17.43	17.49	17.47	18.50	21.52	21.49	21.45	24.50	



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Band 2 (180MHz Band) Part 24E

Table with columns: BW (MHz), Modulation, RB Slot, RB Offset, Power (Ch./F./Fms), Power (Ch./F./Fms), Turn-up (dB), MPR (dB). Contains frequency allocation data for Band 2 (180MHz Band) Part 24E.

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

Table with columns: BW (MHz), Modulation, RB Slot, RB Offset, Power (Ch./F./Fms), Power (Ch./F./Fms), Turn-up (dB), MPR (dB). Contains frequency allocation data for Band 4 (AHS Band) Part 27L.

Band 5 (Colour Band) Part 24H (only on channel required)

Table with columns: BW (MHz), Modulation, RB Slot, RB Offset, Power (Ch./F./Fms), Power (Ch./F./Fms), Turn-up (dB), MPR (dB). Contains frequency allocation data for Band 5 (Colour Band) Part 24H.

Band 7 (260MHz Band) Part 27

Table with columns: BW (MHz), Modulation, RB Slot, RB Offset, Power (Ch./F./Fms), Power (Ch./F./Fms), Turn-up (dB), MPR (dB). Contains frequency allocation data for Band 7 (260MHz Band) Part 27.



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

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Level, Power Max Ch./Freq, Power Min Ch./Freq, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

Band 13(700MHz Band)
Part 27F

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Level, Power Max Ch./Freq, Power Min Ch./Freq, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

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

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Level, Power Max Ch./Freq, Power Min Ch./Freq, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.

Band 25 (1000MHz Band)
Part 24E

Table with columns: BW (MHz), Modulation, RB Size, RB Offset, Power Level, Power Max Ch./Freq, Power Min Ch./Freq, Turn-up (dBm), MPR (dB). Includes sub-tables for Frequency (MHz) and Channel.



Band 26 for FCC (only on channel required)										
EW (MHz)	Modulation	RB Size	RB Offset	Power Ch / F/Freq	Power Ch / F/Freq	Power Ch / F/Freq	Turn-up (dBm)	MPR (dB)		
Channel										
Frequency (MHz)										
15	QPSK	1	0	21.31	21.29	21.37				
15	QPSK	1	37	21.28	21.27	21.32	22.5	0		
15	QPSK	1	74	21.26	21.24	21.18				
15	QPSK	36	0	21.26	21.24	21.14				
15	QPSK	36	26	21.29	21.27	21.35	22.5	0		
15	QPSK	36	50	21.24	21.22	21.28				
15	QPSK	74	0	21.27	21.24	21.21				
15	16QAM	1	0	21.27	21.24	21.21				
15	16QAM	1	37	21.33	21.20	21.28	22.5	0		
15	16QAM	1	74	21.29	21.25	21.29				
15	16QAM	36	0	21.29	21.27	21.18				
15	16QAM	36	26	21.21	21.27	21.19	22.5	0		
15	16QAM	36	50	21.22	21.20	21.07				
15	16QAM	74	0	21.31	21.19	21.10				
15	64QAM	1	0	21.23	21.20	21.35				
15	64QAM	1	37	21.09	21.30	21.24	22.5	0		
15	64QAM	1	74	21.34	21.34	21.30				
15	64QAM	36	0	20.90	20.70	20.73				
15	64QAM	36	26	20.95	20.77	20.90	21.5	1		
15	64QAM	36	50	20.84	20.77	20.75				
15	64QAM	74	0	20.98	20.84	20.76				
15	256QAM	1	0	18.84	18.86	18.80				
15	256QAM	1	37	18.70	18.86	18.76	19.5	3		
15	256QAM	1	74	18.70	18.85	18.88				
15	256QAM	36	0	18.92	18.97	19.00				
15	256QAM	36	26	18.91	19.04	19.08	19.5	3		
15	256QAM	36	50	18.95	18.98	18.88				
15	256QAM	74	0	18.89	18.86	18.81				
Channel										
Frequency (MHz)										
5	QPSK	1	0	16.74	16.72	16.79				
5	QPSK	1	12	16.84	16.77	16.70	17.5	0		
5	QPSK	1	24	16.79	16.75	16.71				
5	QPSK	12	0	16.76	16.77	16.78	17.5	0		
5	QPSK	12	13	16.85	16.78	16.70				
5	QPSK	25	0	16.74	16.76	16.81				
5	16QAM	1	0	16.77	16.71	16.73	17.5	0		
5	16QAM	1	12	16.80	16.88	16.82				
5	16QAM	1	24	16.87	16.84	16.82				
5	16QAM	12	0	16.70	16.83	16.82	17.5	0		
5	16QAM	12	7	16.84	16.87	16.87				
5	16QAM	12	13	16.82	16.83	16.81	17.5	0		
5	16QAM	25	0	16.78	16.78	16.82				
5	64QAM	1	0	16.69	16.84	16.85				
5	64QAM	1	12	16.79	16.80	16.82	17.5	0		
5	64QAM	1	24	16.97	16.84	16.74				
5	64QAM	12	0	16.82	16.80	16.81	17.5	0		
5	64QAM	12	7	16.82	16.80	16.86				
5	64QAM	12	13	16.82	16.78	16.76	17.5	0		
5	64QAM	25	0	16.76	16.84	16.78				
5	256QAM	1	0	16.87	16.76	16.76				
5	256QAM	1	12	16.75	16.85	16.80	17.5	0		
5	256QAM	1	24	16.79	16.77	16.82				
5	256QAM	12	0	16.87	16.88	16.78	17.5	0		
5	256QAM	12	7	16.71	16.87	16.84				
5	256QAM	12	13	16.78	16.77	16.80	17.5	0		
5	256QAM	25	0	16.69	16.80	16.77				
Channel										
Frequency (MHz)										
5	QPSK	1	0	21.13	21.06	21.13				
5	QPSK	1	37	20.90	21.08	21.24	22.5	0		
5	QPSK	1	74	21.00	21.11	21.04				
5	QPSK	12	0	21.20	20.82	20.92				
5	QPSK	12	13	21.19	20.78	20.92	22.5	0		
5	QPSK	25	0	20.93	21.10	21.18				
5	16QAM	1	0	21.03	21.05	20.94				
5	16QAM	1	37	21.02	20.99	21.08	22.5	0		
5	16QAM	1	74	21.03	21.24	21.21				
5	16QAM	12	0	21.19	21.01	21.04				
5	16QAM	12	13	21.05	20.98	20.96	22.5	0		
5	16QAM	12	25	21.01	20.95	20.98				
5	16QAM	25	0	20.91	20.82	21.15				
5	64QAM	1	0	20.93	20.90	20.87	22.5	0		
5	64QAM	1	37	21.15	20.92	20.85				
5	64QAM	1	74	20.98	20.45	20.53				
5	64QAM	12	0	20.96	20.89	20.90	21.5	1		
5	64QAM	12	13	20.42	20.95	20.36				
5	64QAM	25	0	20.85	20.73	20.42				
5	256QAM	1	0	18.98	18.94	18.99	19.5	3		
5	256QAM	1	37	18.92	18.93	18.93				
5	256QAM	1	74	18.40	18.80	18.84				
5	256QAM	12	0	18.73	18.99	18.89				
5	256QAM	12	7	18.51	18.92	18.71	19.5	3		
5	256QAM	12	13	18.80	18.82	18.82				
5	256QAM	25	0	18.63	18.79	18.73				
Channel										
Frequency (MHz)										
3	QPSK	1	0	21.05	21.16	21.15				
3	QPSK	1	8	21.08	21.07	21.11	22.5	0		
3	QPSK	1	14	21.02	21.09	21.05				
3	QPSK	8	0	21.04	21.08	20.99				
3	QPSK	8	4	21.04	21.13	21.14	22.5	0		
3	QPSK	8	7	21.11	20.98	21.02				
3	QPSK	15	0	21.12	21.08	21.18				
3	16QAM	1	0	21.11	21.08	21.08				
3	16QAM	1	8	21.07	21.09	21.15	22.5	0		
3	16QAM	1	14	21.18	21.18	21.18				
3	16QAM	8	0	21.05	21.13	20.99				
3	16QAM	8	4	21.00	21.08	20.99	22.5	0		
3	16QAM	8	7	20.99	21.18	20.85				
3	16QAM	15	0	21.15	20.92	20.95				
3	64QAM	1	0	20.90	20.92	21.14				
3	64QAM	1	8	20.97	21.18	20.99	22.5	0		
3	64QAM	1	14	21.22	21.11	21.18				
3	64QAM	8	0	20.88	20.91	20.90	21.5	1		
3	64QAM	8	4	20.85	20.59	20.65				
3	64QAM	8	7	20.70	20.68	20.60				
3	64QAM	15	0	20.74	20.67	20.59				
3	256QAM	1	0	18.63	18.72	18.73				
3	256QAM	1	8	18.53	18.72	18.63	19.5	3		
3	256QAM	1	14	18.59	18.79	18.73				
3	256QAM	8	0	18.72	18.86	18.86				
3	256QAM	8	4	18.78	18.82	18.82	19.5	3		
3	256QAM	8	7	18.78	18.79	18.79				
3	256QAM	15	0	18.49	18.72	18.69				
Channel										
Frequency (MHz)										
1.4	QPSK	1	0	21.12	21.07	21.21				
1.4	QPSK	1	3	21.08	21.15	21.18	22.5	0		
1.4	QPSK	1	5	21.14	21.07	20.92				
1.4	QPSK	3	0	21.09	21.06	20.88				
1.4	QPSK	3	1	21.05	21.06	21.13				
1.4	QPSK	3	3	21.13	21.05	21.14	22.5	0		
1.4	16QAM	1	0	21.11	21.11	21.03				
1.4	16QAM	1	3	21.11	21.08	21.03	22.5	0		
1.4	16QAM	1	5	21.18	21.09	20.99				
1.4	16QAM	3	0	21.01	21.10	21.02				
1.4	16QAM	3	1	21.10	21.13	20.81				
1.4	64QAM	1	0	21.03	21.08	21.14	22.5	0		
1.4	64QAM	1	3	20.88	21.09	21.05				
1.4	64QAM	1	5	20.79	21.17	21.07				
1.4	64QAM	3	0	20.75	20.64	20.61	22.5	0		
1.4	64QAM	3	1	20.84	20.59	20.74				
1.4	64QAM	3	3	20.58	20.52	20.60				
1.4	256QAM	1	0	18.73	18.74	18.74	21.5	1		
1.4	256QAM	1	3	18.55	18.67	18.62				
1.4	256QAM	1	5	18.60	18.62	18.62				
1.4	256QAM	3	0	18.65	18.94	18.93	19.5	3		
1.4	256QAM	3	1	18.78	18.61	18.82				
1.4	256QAM	3	3	18.71	18.80	18.82				
1.4	256QAM	5	0	18.45	18.62	18.62	19.5	3		

Band 30										
EW (MHz)	Modulation	RB Size	RB Offset	Power Ch / F/Freq	Power Ch / F/Freq	Power Ch / F/Freq	Turn-up (dBm)	MPR (dB)		
Channel										
Frequency (MHz)										
10	QPSK	1	0	18.86						
10	QPSK	1	26	18.89			17.5	0		
10	QPSK	1	49	18.80						
10	QPSK	25	0	16.76						
10	QPSK	25	12	18.86			17.5	0		
10	QPSK	25	25	18.83						
10	QPSK	50	0	18.83						
10	16QAM	1	0	18.83						
10	16QAM	1	26	18.83			17.5	0		
10	16QAM	1	49	18.77						
10	16QAM	25	0	17.18						
10	16QAM	25	12	18.85			17.5	0		
10	16QAM	25	25	18.81						
10	16QAM	50	0	18.80						
10	64QAM	1	0	18.83			17.5	0		
10	64QAM	1	26	18.79		</				



Band 38(only on channel required)										
BW (MHz)	Modulation	RB Size	RB Offset	Power			Take-up link (dBm)	MRR (dB)		
				Low Ch. (Fw)	Mid Ch. (Fw)	High Ch. (Fw)				
Channel										
Frequency (MHz)				2590	2655	2630				
20	QPSK	1	0	17.24	17.02	17.15	18	0		
20	QPSK	1	49	17.25	17.05	17.20				
20	QPSK	1	98	17.27	17.23	17.26				
20	QPSK	50	0	17.18	17.11	17.01				
20	QPSK	50	24	17.26	17.06	17.20				
20	QPSK	50	50	17.15	17.01	17.07				
20	QPSK	100	0	17.21	17.17	17.20				
20	16QAM	1	0	17.00	16.92	16.74	18	0		
20	16QAM	1	49	16.97	16.95	16.97				
20	16QAM	1	98	17.04	17.06	16.98				
20	16QAM	50	0	16.88	16.99	17.03				
20	16QAM	50	24	17.02	17.08	16.95				
20	16QAM	50	50	17.17	17.10	17.00				
20	16QAM	100	0	17.08	16.92	17.00				
20	64QAM	1	0	16.81	16.96	16.85	18	0		
20	64QAM	1	49	16.87	16.94	16.88				
20	64QAM	1	98	16.71	17.13	17.11				
20	64QAM	50	0	16.84	17.03	16.92				
20	64QAM	50	24	17.12	17.08	17.02				
20	64QAM	50	50	16.98	17.17	17.07				
20	64QAM	100	0	17.05	16.94	16.91				
Channel										
Frequency (MHz)				2700	2755	2740				
15	QPSK	1	0	17.09	16.95	16.97	18	0		
15	QPSK	1	37	17.11	17.12	17.12				
15	QPSK	1	74	17.24	17.21	17.22				
15	QPSK	36	0	17.08	17.18	16.88				
15	QPSK	36	24	17.03	17.13	16.93				
15	QPSK	36	39	17.03	16.98	16.82				
15	QPSK	75	0	16.91	16.88	17.07				
15	16QAM	1	0	17.12	16.93	16.91	18	0		
15	16QAM	1	37	16.99	17.00	16.98				
15	16QAM	1	74	17.16	17.02	17.02				
15	16QAM	36	0	16.98	17.16	17.06				
15	16QAM	36	24	17.04	17.12	16.95				
15	16QAM	36	39	17.08	17.23	17.19				
15	16QAM	75	0	17.18	17.02	17.06				
15	64QAM	1	0	17.09	16.95	17.00	18	0		
15	64QAM	1	37	17.16	16.88	17.03				
15	64QAM	1	74	17.11	17.01	17.00				
15	64QAM	36	0	16.97	17.15	17.11				
15	64QAM	36	24	17.14	17.00	17.05				
15	64QAM	36	39	17.03	17.16	17.06				
15	64QAM	75	0	17.03	17.19	17.13				
15	256QAM	1	0	17.03	17.04	16.99	18	0		
15	256QAM	1	37	17.07	16.92	17.06				
15	256QAM	1	74	16.80	16.79	17.01				
15	256QAM	36	0	17.14	17.18	17.08				
15	256QAM	36	24	17.10	17.19	16.98				
15	256QAM	36	39	17.08	17.05	17.18				
15	256QAM	75	0	17.19	17.01	16.98				
Channel										
Frequency (MHz)				2775	2830	2815				
10	QPSK	1	0	17.02	16.92	16.97	18	0		
10	QPSK	1	25	16.94	16.95	16.92				
10	QPSK	1	49	17.24	17.23	17.08				
10	QPSK	25	0	16.95	17.12	16.88				
10	QPSK	25	12	16.91	16.88	17.08				
10	QPSK	25	25	17.04	17.03	16.72				
10	QPSK	50	0	17.16	16.94	17.00				
10	16QAM	1	0	16.95	16.79	16.70	18	0		
10	16QAM	1	25	16.87	17.04	16.84				
10	16QAM	1	49	17.03	16.85	16.93				
10	16QAM	25	0	17.07	16.99	17.13				
10	16QAM	25	12	17.12	16.99	17.04				
10	16QAM	25	25	17.07	17.26	17.03				
10	16QAM	50	0	16.90	16.77	17.06				
10	64QAM	1	0	17.19	17.01	16.98	18	0		
10	64QAM	1	25	17.13	16.89	16.87				
10	64QAM	1	49	16.83	17.04	16.94				
10	64QAM	25	0	16.94	17.09	17.01				
10	64QAM	25	12	16.95	16.98	17.04				
10	64QAM	25	25	16.88	17.07	17.04				
10	256QAM	1	0	17.00	16.94	17.04	18	0		
10	256QAM	1	25	17.01	16.79	17.03				
10	256QAM	1	49	16.82	16.93	16.73				
10	256QAM	25	0	17.02	17.09	17.26				
10	256QAM	25	12	17.04	17.19	17.21				
10	256QAM	25	25	17.27	17.14	16.82				
10	256QAM	50	0	17.21	17.23	17.21				
Channel										
Frequency (MHz)				2875	2930	2915				
5	QPSK	1	0	16.99	17.00	16.96	18	0		
5	QPSK	1	24	16.92	16.92	17.00				
5	QPSK	12	0	16.99	17.01	16.85				
5	QPSK	12	7	17.06	17.06	16.84				
5	QPSK	12	13	16.99	17.03	16.95				
5	QPSK	25	0	17.08	17.19	17.22				
5	16QAM	1	0	16.95	16.75	16.80	18	0		
5	16QAM	1	12	17.06	16.97	16.80				
5	16QAM	1	24	17.16	17.06	17.08				
5	16QAM	12	0	17.08	17.01	17.12				
5	16QAM	12	7	17.16	17.16	16.89				
5	16QAM	12	13	17.21	17.19	17.18				
5	16QAM	25	0	16.92	16.86	17.07				
5	64QAM	1	0	17.17	17.00	16.77	18	0		
5	64QAM	1	12	17.05	16.94	16.98				
5	64QAM	1	24	16.93	16.98	17.11				
5	64QAM	12	0	17.07	17.00	16.86				
5	64QAM	12	7	17.02	16.91	16.85				
5	64QAM	12	13	16.85	17.21	17.13				
5	64QAM	25	0	17.23	17.02	16.97				
5	256QAM	1	0	16.90	16.97	17.05	18	0		
5	256QAM	1	12	16.99	16.83	17.00				
5	256QAM	1	24	16.76	17.00	16.96				
5	256QAM	12	0	17.12	17.09	17.25				
5	256QAM	12	7	17.18	17.15	17.21				
5	256QAM	12	13	17.83	16.99	16.94				
5	256QAM	25	0	17.15	17.06	16.90				

Band 41 (2.6G Band)										
BW (MHz)	Modulation	RB Size	RB Offset	Power			Take-up link (dBm)	MRR (dB)		
				Low Ch. (Fw)	Mid Ch. (Fw)	High Ch. (Fw)				
Channel										
Frequency (MHz)				3070	4195	4000				
20	QPSK	1	0	17.27	17.33	17.07	18	0		
20	QPSK	1	49	17.30	17.30	17.26				
20	QPSK	1	98	17.32	17.43	17.30				
20	QPSK	50	0	17.22	17.20	17.28				
20	QPSK	50	24	17.26	17.40	17.26				
20	QPSK	50	50	17.21	17.27	17.36				
20	QPSK	100	0	17.28	17.38	17.34				
20	16QAM	1	0	17.08	17.21	17.00	18	0		
20	16QAM	1	49	17.06	17.16	17.00				
20	16QAM	1	98	17.09	17.26	17.08				
20	16QAM	50	0	17.11	17.15	17.36				
20	16QAM	50	24	17.30	17.28	17.30				
20	16QAM	50	50	17.28	17.26	17.24				
20	16QAM	100	0	17.35	17.19	17.38				
20	64QAM	1	0	17.09	16.90	17.07	18	0		
20	64QAM	1	49	17.11	17.30	17.27				
20	64QAM	1	98	17.19	17.11	17.06				
20	64QAM	50	0	17.10	17.44	17.36				
20	64QAM	50	24	17.21	17.16	17				



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

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Tx)	Power Low Middle Ch. (Tx)	Power High Middle Ch. (Tx)	Power High Ch. (Tx)	Time-up (ms)	MPS (dB)
Channel									
Frequency (MHz)				2575	2581.5	2588	2595		
20	QPSK	1	0	18.59	18.62	18.65	18.69	19.11	
20	QPSK	1	49	19.58	19.59	19.61	19.66	19.12	
20	QPSK	1	98	19.11	19.20	19.13	19.10	19.15	
20	QPSK	50	0	18.87	19.05	18.83	18.84	18.98	
20	QPSK	50	24	19.58	19.59	19.61	19.66	19.12	
20	QPSK	50	50	19.01	19.04	18.94	18.80	18.86	
20	QPSK	100	0	18.85	19.18	19.08	19.04	19.10	
20	16QAM	1	0	19.16	19.16	19.06	18.93	19.13	
20	16QAM	1	49	19.06	19.07	18.96	18.84	19.14	
20	16QAM	1	98	18.97	18.96	18.88	18.85	19.04	
20	16QAM	50	0	18.83	18.87	18.79	18.72	18.14	
20	16QAM	50	24	19.16	19.03	18.95	18.80	19.14	
20	16QAM	50	50	19.04	18.90	18.91	18.95	19.18	
20	16QAM	100	0	19.10	18.99	18.88	18.80	19.07	
20	84QAM	1	0	19.16	18.99	18.93	18.96	19.10	
20	84QAM	1	49	19.18	19.03	18.95	19.07	19.07	
20	84QAM	1	98	18.14	18.92	19.06	19.11	19.13	
20	84QAM	50	0	19.09	19.04	18.95	18.92	19.07	
20	84QAM	50	24	19.06	19.14	18.99	19.16	19.08	
20	84QAM	50	50	19.07	19.14	19.02	18.13	19.12	
20	84QAM	100	0	19.09	19.14	18.98	19.10	19.08	
20	256QAM	1	0	19.16	19.08	19.12	19.04	19.15	
20	256QAM	1	49	19.17	19.00	19.10	19.03	19.12	
20	256QAM	1	98	19.14	19.02	19.08	19.02	19.14	
20	256QAM	1	24	19.14	19.06	19.10	19.10	19.11	
20	256QAM	50	0	19.10	19.07	19.11	19.15	19.18	
20	256QAM	50	24	19.10	19.04	19.19	19.14	19.19	
20	256QAM	100	0	19.13	19.17	19.16	19.17	19.18	
Channel									
Frequency (MHz)				2591.5	2598.5	2605	2612.5		
15	QPSK	1	0	19.15	19.15	18.99	19.00	19.04	
15	QPSK	1	37	19.83	19.83	19.80	19.80	19.84	
15	QPSK	1	74	18.73	18.80	18.92	18.73	18.94	
15	QPSK	38	0	19.09	18.99	18.99	19.04	18.89	
15	QPSK	38	24	19.09	18.96	19.00	19.00	19.00	
15	QPSK	38	50	18.93	18.78	18.89	19.08	18.81	
15	QPSK	75	0	18.82	18.87	19.09	18.86	19.00	
15	16QAM	1	0	19.14	19.12	19.10	19.07	19.03	
15	16QAM	1	37	19.86	19.80	19.80	19.87	19.82	
15	16QAM	1	74	18.79	18.74	18.94	18.73	19.02	
15	16QAM	38	0	19.09	18.94	18.92	19.06	18.82	
15	16QAM	38	24	19.12	18.99	18.87	18.83	19.02	
15	16QAM	38	50	18.95	18.85	18.82	18.84	19.07	
15	16QAM	75	0	19.09	19.04	19.05	19.08	19.04	
15	84QAM	1	0	19.14	19.07	19.06	19.00	19.06	
15	84QAM	1	37	19.20	19.21	19.02	19.03	19.02	
15	84QAM	1	74	18.92	18.98	19.19	19.01	19.06	
15	84QAM	38	0	18.98	18.95	19.10	19.08	19.06	
15	84QAM	38	24	19.21	19.19	19.06	19.07	19.14	
15	84QAM	38	50	18.10	18.99	19.02	18.84	19.19	
15	84QAM	75	0	18.89	18.19	18.98	18.93	18.98	
15	256QAM	1	0	19.02	19.07	19.05	19.06	19.05	
15	256QAM	1	37	19.19	19.85	19.08	19.94	19.06	
15	256QAM	1	74	18.99	19.95	19.01	19.91	19.11	
15	256QAM	38	0	19.04	19.10	19.00	19.01	19.11	
15	256QAM	38	24	19.98	19.94	19.09	19.09	19.17	
15	256QAM	38	50	19.05	18.87	19.10	18.98	19.00	
15	256QAM	75	0	19.03	19.05	19.01	19.01	19.11	
Channel									
Frequency (MHz)				2607	2614	2621	2628.5		
10	QPSK	1	0	18.92	19.10	19.14	18.86	19.03	
10	QPSK	1	25	19.04	19.09	19.09	19.02	19.14	
10	QPSK	1	49	18.97	18.82	18.91	18.82	18.80	
10	QPSK	25	0	18.95	18.85	18.90	18.82	18.74	
10	QPSK	12	0	19.14	19.04	19.11	19.11	19.04	
10	QPSK	25	25	19.87	19.88	19.89	19.94	19.77	
10	QPSK	50	0	18.87	18.94	18.88	18.91	18.76	
10	16QAM	1	0	19.08	19.12	19.09	19.06	19.06	
10	16QAM	1	25	18.89	19.00	18.93	19.06	19.02	
10	16QAM	1	49	18.73	18.87	18.83	18.83	18.96	
10	16QAM	25	0	18.96	18.96	19.01	19.02	18.83	
10	16QAM	25	12	19.88	19.81	19.80	19.74	19.80	
10	16QAM	25	25	18.83	18.89	18.81	18.85	18.72	
10	16QAM	50	0	18.98	18.88	18.94	19.13	18.87	
10	84QAM	1	0	19.15	19.14	19.09	19.06	19.83	
10	84QAM	1	25	19.15	19.30	19.20	19.12	19.79	
10	84QAM	1	49	19.04	19.82	19.12	19.11	19.78	
10	84QAM	25	0	18.97	19.13	19.09	19.07	19.02	
10	84QAM	25	12	19.03	19.04	19.01	19.07	19.00	
10	84QAM	25	25	19.01	18.98	19.14	19.00	19.19	
10	84QAM	50	0	18.84	18.96	19.06	18.90	19.04	
10	256QAM	1	0	19.10	19.04	19.10	19.02	19.08	
10	256QAM	1	25	19.18	19.81	19.15	19.05	19.19	
10	256QAM	1	49	19.08	19.95	18.89	19.92	19.08	
10	256QAM	25	0	19.04	19.09	19.11	19.06	19.06	
10	256QAM	25	12	19.14	19.33	19.01	19.20	19.12	
10	256QAM	25	25	19.07	19.09	18.98	19.12	19.13	
10	256QAM	50	0	18.93	18.95	19.02	18.96	19.01	
Channel									
Frequency (MHz)				2613.5	2620.5	2627.5	2635		
5	QPSK	1	0	18.73	18.87	19.12	18.86	18.90	
5	QPSK	1	24	19.83	19.74	19.80	19.80	19.77	
5	QPSK	1	24	18.83	18.82	18.83	18.78	18.84	
5	QPSK	12	0	18.88	18.49	18.88	18.79	18.58	
5	QPSK	12	7	19.80	19.87	19.80	19.76	19.74	
5	QPSK	12	13	18.72	18.50	18.61	18.88	18.71	
5	QPSK	25	0	18.86	18.80	18.82	18.88	18.75	
5	16QAM	1	0	19.02	19.02	18.91	19.08	19.06	
5	16QAM	1	12	19.91	19.80	19.88	19.91	19.78	
5	16QAM	1	24	18.59	18.83	18.87	18.88	19.52	
5	16QAM	12	0	18.89	18.82	18.81	18.78	18.72	
5	16QAM	12	7	19.77	19.59	19.75	19.74	19.72	
5	16QAM	12	13	18.88	18.55	18.81	18.86	18.55	
5	16QAM	25	0	18.74	18.99	19.70	19.70	19.54	
5	84QAM	1	0	19.82	19.71	19.82	19.87	19.87	
5	84QAM	1	12	19.78	19.74	18.80	19.70	19.87	
5	84QAM	1	24	18.87	18.89	18.84	18.77	18.82	
5	84QAM	12	0	19.79	19.76	19.86	19.79	19.84	
5	84QAM	12	7	19.84	19.73	19.59	19.74	19.70	
5	84QAM	12	13	18.75	18.79	18.80	18.91	19.09	
5	84QAM	25	0	19.19	19.81	19.80	19.78	19.88	
5	256QAM	1	0	19.19	19.08	19.08	19.07	19.16	
5	256QAM	1	12	19.99	19.91	19.90	19.83	19.83	
5	256QAM	1	24	19.17	19.98	19.86	19.87	19.97	
5	256QAM	12	0	19.81	19.81	19.82	19.89	19.88	
5	256QAM	12	7	19.86	19.90	19.89	19.12	19.87	
5	256QAM	12	13	19.09	19.94	19.13	18.89	19.84	
5	256QAM	25	0	19.83	19.85	19.83	19.90	19.86	

Band 48 (1.8G Band)

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Tx)	Power Low Middle Ch. (Tx)	Power High Middle Ch. (Tx)	Power High Ch. (Tx)	Time-up (ms)	MPS (dB)
Channel									
Frequency (MHz)				5594	5593	5610	5640		
20	QPSK	1	0	17.94	17.95	17.89	17.89	18.09	
20	QPSK	1	49	17.88	17.88	17.87	17.87	18.01	
20	QPSK	1	98	17.80	17.80	17.87	17.87	17.98	
20	QPSK	50	0	17.82	17.83	17.88	17.88	18.07	
20	QPSK	50	24	17.98	17.88	17.90	17.89	18.02	
20	QPSK	50	50	17.88	17.88	17.85	17.86	17.98	
20	QPSK	100	0	17.80	17.91	17.80	17.85	18.04	
20	16QAM	1	0	17.86	18.00	17.86	17.84	17.94	
20	16QAM	1	49	17.89	17.89	17.86	17.86	17.98	
20	16QAM	1	98	17.81	17.88	17.88	17.88	17.98	
20	16QAM	50	0	17.86	17.87	17.71	17.88	17.88	
20	16QAM	50	24	17.86	17.86	17.86	17.86	17.84	
20	16QAM	50	50	17.85	17.84	17.62	17.91	17.91	
20	16QAM	100	0	17.89	17.81	17.85	17.87	17.87	
20	84QAM	1	0	17.86	17.88	17.87	17.87	17.91	
20	84QAM	1	49	17.83	17.77	17.75	17.82	17.92	
20	84QAM	1	98	17.74	17.60	17.88	17.88	17.88	
20	84QAM	50	0	17.72	17.74	17.89	17.88	17.98	
20	84QAM	50	24	17.84	17.79	17.79	17.79	17.88	
20	84QAM	50	50	17.85	17.84	17.81	17.98	17.88	
20	84QAM	100	0	17.75	17.81	17.82	17.83	17.83	
20	256QAM	1	49	17.76	17.78	17.80	1		



Reduced power for Hotspot on-UAT

Band	WCDMA I			Turn-up Limit (dBm)	WCDMA IV			Turn-up Limit (dBm)
	9052	9650	9938		1312	1453	1513	
TX Channel	9662	9950	9938	1537	1698	1738		
Frequency (MHz)	9852	1000	9990	1312	1329.8	1329.8		
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 5	HSPA Subcat 2	21.02	21.22	20.92	22.20	21.02	21.08	21.08
SCPP Rel 6	HSPA Subcat 2	21.03	21.21	20.76	22.20	21.07	21.17	21.05
SCPP Rel 6	HSPA Subcat 2	20.53	20.57	20.26	21.70	20.87	20.62	20.56
SCPP Rel 6	HSPA Subcat 4	20.54	20.54	20.44	21.70	20.78	20.59	20.57
SCPP Rel 6	DC-HSPA Subcat 1	20.80	20.69	20.74	22.20	20.84	20.82	20.80
SCPP Rel 6	DC-HSPA Subcat 2	20.82	20.81	20.80	22.20	20.86	20.94	20.91
SCPP Rel 6	DC-HSPA Subcat 3	20.38	20.42	20.23	21.70	20.46	20.56	20.51
SCPP Rel 6	DC-HSPA Subcat 4	20.38	20.43	20.24	21.70	20.44	20.58	20.49
SCPP Rel 6	HSPA Subcat 1	21.25	21.33	21.12	22.20	21.70	21.55	21.51
SCPP Rel 6	HSPA Subcat 2	19.25	19.32	19.11	20.20	19.21	19.37	19.31
SCPP Rel 6	HSPA Subcat 3	18.28	18.34	18.12	19.20	18.37	18.57	18.49
SCPP Rel 6	HSPA Subcat 4	19.54	19.54	19.26	20.20	19.24	19.76	19.52
SCPP Rel 6	HSPA Subcat 6	21.18	21.20	21.10	22.20	21.19	21.20	21.20
SCPP Rel 7	HSPA (TSCM) Subcat 1	19.49	19.55	19.41	20.20	19.41	19.64	19.52

Band	GSM RCT			Turn-up Limit (dBm)
	26	800	1175	
TX Channel	1801.2	1800	1800.2	
Frequency (MHz)	22.44	22.43	22.41	23.50
RCT 50dB	22.43	22.45	22.40	23.50
RCT 50dB	22.41	22.45	22.38	23.50
RCT 50dB (SCM)	22.43	22.44	22.38	23.50
REAP 20kops	22.36	22.41	22.35	23.50
REAP 40kops	22.37	22.40	22.34	23.50



Band 2 (1600MHz Band) Part 24E														
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Tune-up (dBm)	MPPR (dB)						
Channel									2400	2400	2400			
Frequency (MHz)									1670	1890	1910			
20	QPSK	1	0	22.42	22.42	22.39								
20	QPSK	1	48	22.39	22.33	22.30	23.5	0						
20	QPSK	1	96	22.46	22.46	22.43								
20	QPSK	5	0	22.40	22.40	22.38								
20	QPSK	5	24	22.47	22.43	22.40	23.5	0						
20	QPSK	5	50	22.42	22.40	22.40								
20	QPSK	10	0	22.44	22.44	22.44								
20	QPSK	10	24	22.47	22.46	22.52								
20	16QAM	1	48	22.51	22.48	22.48	23.5	0						
20	16QAM	1	96	22.38	22.40	22.43								
20	16QAM	5	0	22.02	21.97	22.02								
20	16QAM	5	24	22.06	21.97	22.02	23	0.5						
20	16QAM	5	50	22.02	22.01	21.98								
20	16QAM	10	0	21.96	21.96	21.97								
20	16QAM	10	24	22.00	22.01	22.01								
20	16QAM	10	50	22.00	22.00	22.00	23	0.5						
20	16QAM	20	0	21.92	21.91	21.91								
20	16QAM	20	24	22.07	22.00	22.07	23	0.5						
20	16QAM	20	50	22.04	22.01	22.04								
20	16QAM	40	0	22.04	22.04	22.07	23	0.5						
20	16QAM	40	24	22.17	21.99	21.96								
20	16QAM	40	50	21.99	21.98	21.91								
20	16QAM	80	0	20.91	20.88	20.90	22	1.5						
20	16QAM	80	24	21.81	21.80	21.85								
20	16QAM	80	50	21.72	21.84	21.84	23	0.5						
20	16QAM	160	0	21.73	21.76	21.83								
20	16QAM	160	24	21.92	22.02	22.05	23	0.5						
20	16QAM	160	50	21.77	21.99	21.96								
20	16QAM	320	0	21.76	21.86	21.91	23	0.5						
20	16QAM	320	24	21.79	21.89	21.91								
20	16QAM	320	50	21.78	21.86	21.91	23	0.5						
20	16QAM	640	0	20.81	20.76	20.80	22	1.5						
20	16QAM	640	24	20.82	20.84	20.83								
20	16QAM	640	50	20.75	20.82	20.86								
20	16QAM	1280	0	20.77	20.80	20.81	22	1.5						
20	16QAM	1280	24	20.84	21.48	21.71								
20	16QAM	1280	50	20.82	20.86	20.88	22	1.5						
20	16QAM	2560	0	19.62	19.63	19.68	19.5	4						
20	16QAM	2560	24	19.63	19.63	19.68								
20	16QAM	2560	50	19.62	19.64	19.65								
20	16QAM	5120	0	18.60	18.66	18.67	19.5	4						
20	16QAM	5120	24	18.61	18.61	18.63								
20	16QAM	5120	50	18.64	18.64	18.63								
20	16QAM	10240	0	18.63	18.63	18.63	19.5	4						
20	16QAM	10240	24	18.65	18.67	18.63								
20	16QAM	10240	50	18.65	18.63	18.63								
Channel									1915	1915	1915			
Frequency (MHz)									1807.5	1880	1902.5			
15	QPSK	1	0	22.40	22.30	22.30								
15	QPSK	1	37	22.33	22.22	22.16	23.5	0						
15	QPSK	1	74	22.46	22.46	22.46								
15	QPSK	36	0	22.34	22.23	22.31								
15	QPSK	36	20	22.43	22.28	22.41	23.5	0						
15	QPSK	36	39	22.40	22.39	22.39								
15	QPSK	75	0	22.42	22.40	22.41								
15	16QAM	1	0	22.45	22.35	22.43	23.5	0						
15	16QAM	1	37	22.37	22.41	22.47								
15	16QAM	1	74	22.27	22.35	22.41								
15	16QAM	36	0	21.97	21.91	21.81								
15	16QAM	36	20	21.96	21.84	21.88	23	0.5						
15	16QAM	36	39	21.97	21.82	21.89								
15	16QAM	75	0	21.92	21.91	21.87								
15	16QAM	75	0	22.10	22.08	22.02	23	0.5						
15	16QAM	1	37	22.08	22.01	21.83								
15	16QAM	1	74	22.18	21.86	21.88								
15	16QAM	36	20	20.99	20.93	20.93	22	1.5						
15	16QAM	36	20	21.00	20.97	20.99								
15	16QAM	75	0	20.97	20.98	20.97								
15	16QAM	75	0	18.54	18.57	18.58	19.5	4						
15	16QAM	1	37	18.57	18.69	18.67								
15	16QAM	1	74	18.54	18.62	18.64								
15	16QAM	36	0	18.54	18.56	18.70								
15	16QAM	36	20	18.83	18.67	18.82	19.5	4						
15	16QAM	36	39	18.83	18.83	18.81								
15	16QAM	75	0	18.85	18.85	18.89								
Channel									1915	1915	1915			
Frequency (MHz)									1885	1890	1915			
10	QPSK	1	0	22.38	22.38	22.38								
10	QPSK	1	28	22.39	22.30	22.28	23.5	0						
10	QPSK	1	48	22.41	22.44	22.36								
10	QPSK	25	0	22.28	22.24	22.36								
10	QPSK	25	12	22.43	22.38	22.38	23.5	0						
10	QPSK	25	25	22.38	22.39	22.31								
10	QPSK	50	0	22.34	22.37	22.43								
10	QPSK	50	0	22.41	22.41	22.47								
10	16QAM	1	0	22.39	22.41	22.42	23.5	0						
10	16QAM	1	48	22.33	22.34	22.40								
10	16QAM	25	0	21.96	21.91	21.88								
10	16QAM	25	12	21.99	21.92	21.93	23	0.5						
10	16QAM	25	25	21.90	21.89	21.88								
10	16QAM	50	0	21.95	21.82	21.91								
10	16QAM	1	0	22.18	22.15	21.85	23	0.5						
10	16QAM	1	24	22.20	22.20	22.00								
10	16QAM	1	48	22.02	21.91	21.93								
10	16QAM	25	0	20.97	20.98	20.79	22	1.5						
10	16QAM	25	12	21.07	20.89	20.95								
10	16QAM	25	25	20.93	20.98	20.93								
10	16QAM	50	0	21.04	20.91	20.87								
10	16QAM	50	0	18.54	18.70	18.58	19.5	4						
10	16QAM	1	12	18.57	18.63	18.57								
10	16QAM	25	0	18.57	18.59	18.58								
10	16QAM	25	12	18.57	18.61	18.63	19.5	4						
10	16QAM	25	25	18.54	18.53	18.83								
10	16QAM	50	0	18.63	18.56	18.83								
Channel									1895	1890	1915			
Frequency (MHz)									2075	2100	2145			
5	QPSK	1	0	22.42	22.42	22.36								
5	QPSK	1	12	22.32	22.27	22.26	23.5	0						
5	QPSK	1	24	22.45	22.39	22.52								
5	QPSK	12	0	22.33	22.28	22.28								
5	QPSK	12	7	22.38	22.33	22.49	23.5	0						
5	QPSK	12	13	22.38	22.27	22.43								
5	QPSK	25	0	22.37	22.27	22.36								
5	16QAM	1	0	22.37	22.41	22.41	23.5	0						
5	16QAM	1	12	22.39	22.34	22.43								
5	16QAM	1	24	22.34	22.35	22.29								
5	16QAM	12	0	22.00	21.98	21.78	23	0.5						
5	16QAM	12	7	21.90	21.90	21.84								
5	16QAM	12	13	21.90	21.90	21.88								
5	16QAM	25	0	22.02	21.98	21.87	23	0.5						
5	16QAM	25	0	22.23	22.14	22.04								
5	16QAM	1	12	22.02	22.05	22.01	23	0.5						
5	16QAM	1	24	22.01	21.91	22.02								
5	16QAM	12	0	21.87	20.99	20.79	22	1.5						
5	16QAM	12	7	21.06	20.89	20.90								
5	16QAM	12	13	21.04	20.94	20.98								
5	16QAM	25	0	21.00	20.91	20.90								
5	16QAM	25	0	18.54	18.64	18.64	19.5	4						
5	16QAM	1	12	18.57	18.63	18.57								
5	16QAM	1	24	18.54	18.57	18.55								
5	16QAM	12	0	18.57	18.66	18.60								
5	16QAM	12	7	18.58	18.56	18.64	19.5	4						
5	16QAM	12	13	18.55	18.54	18.52								
5	16QAM	25	0	18.63	18.69	18.54								
Channel									1895	1890	1915			
Frequency (MHz)									1867.5	1880	1902.5			
3	QPSK	1	0	22.42	22.40	22.43								
3	QPSK	1	8	22.28	22.20	22.25	23.5	0						
3	QPSK	1	14	22.44	22.37	22.44								
3	QPSK	8	0	22.40	22.32	22.38								
3	QPSK	8	4	22.41	22.34	22.43	23.5	0						
3	QPSK	8	7	22.29	22.35	22.45								
3	16QAM	1	0	22.42	22.39	22.48								
3	16QAM	1	8	22.40	22.32	22.46	23.5	0						
3	16QAM	1	14	22.28	22.36	22.40					</			



Band 25 (100MHz Band) Part 24E

RF Band	Modulation	RB Size	RB Offset	Power Class	Power Class	Power Class	Turn-up (dBm)	MPR (dB)
Channel		RB Offset	RB Offset	24E	24E	24E		
Frequency (MHz)		2440	2440	2440	2440	2440		
20	QPSK	1	0	22,27	22,36	22,36	23,5	0
20	QPSK	1	48	22,37	22,37	22,33		
20	QPSK	1	96	22,34	22,31	22,20		
20	QPSK	1	144	22,27	22,27	22,18		
20	QPSK	50	24	22,34	22,38	22,30		
20	QPSK	50	50	22,25	22,25	22,21		
20	QPSK	50	76	22,33	22,33	22,24		
20	16QAM	1	0	22,30	22,38	22,33	23,5	0
20	16QAM	1	48	22,35	22,37	22,32		
20	16QAM	1	96	22,19	22,21	22,17		
20	16QAM	1	144	21,78	21,81	21,74		
20	16QAM	50	24	21,81	21,81	21,73		0,5
20	16QAM	50	50	21,72	21,78	21,76		
20	16QAM	50	76	21,81	21,81	21,74		
20	16QAM	1	144	22,04	21,99	21,87		0,5
20	16QAM	1	48	21,93	21,91	21,87		
20	16QAM	1	96	21,85	21,79	21,78		
20	16QAM	50	24	20,78	20,86	20,76		1,5
20	16QAM	50	50	20,83	20,83	20,73		
20	16QAM	50	76	20,74	20,80	20,75		
20	16QAM	50	102	20,84	20,86	20,74		
20	16QAM	50	128	20,78	20,78	20,77		
20	16QAM	50	154	20,78	20,78	20,75		
20	16QAM	1	48	18,70	18,78	18,75		4
20	16QAM	1	96	18,69	18,75	18,73		
20	16QAM	1	144	18,73	18,73	18,73		
20	16QAM	50	24	18,71	18,73	18,70		4
20	16QAM	50	50	18,68	18,71	18,69		
20	16QAM	50	76	18,72	18,72	18,71		
Channel		2440	2440	2440	2440	2440	Turn-up (dBm)	MPR (dB)
Frequency (MHz)		1867,5	1880	1907,5				
15	QPSK	1	0	22,18	22,30	22,28	23,5	0
15	QPSK	1	48	22,26	22,28	22,24		
15	QPSK	1	96	22,26	22,26	22,18		
15	QPSK	36	0	22,14	22,23	22,12		
15	QPSK	36	36	22,24	22,28	22,20		0
15	QPSK	36	72	22,36	22,38	22,34		
15	QPSK	72	0	22,21	22,23	22,19		
15	16QAM	1	0	22,17	22,32	22,29	23,5	0
15	16QAM	1	36	22,27	22,28	22,26		
15	16QAM	1	72	22,09	22,09	22,09		
15	16QAM	36	0	21,78	21,77	21,85		
15	16QAM	36	36	21,72	21,70	21,73		0,5
15	16QAM	36	72	21,78	21,78	21,80		
15	16QAM	72	0	21,73	21,67	21,68		
15	16QAM	1	0	21,97	21,80	21,83		0,5
15	16QAM	1	36	21,92	21,80	21,85		
15	16QAM	1	72	21,86	21,86	21,86		
15	16QAM	36	0	20,73	20,75	20,78		1,5
15	16QAM	36	36	20,78	20,71	20,72		
15	16QAM	36	72	20,78	20,78	20,78		
15	16QAM	72	0	20,78	20,86	20,88		
15	16QAM	1	0	18,73	18,77	18,86		4
15	16QAM	1	36	18,82	18,87	18,89		
15	16QAM	1	72	18,82	18,82	18,82		
15	16QAM	36	0	18,69	18,83	18,85		
15	16QAM	36	36	18,84	18,81	18,70		4
15	16QAM	36	72	18,80	18,80	18,80		
15	16QAM	72	0	18,80	18,80	18,80		
Channel		2600	2630	2660			Turn-up (dBm)	MPR (dB)
Frequency (MHz)		1855	1885	1915				
10	QPSK	1	0	22,13	22,28	22,25	23,5	0
10	QPSK	1	48	22,21	22,19	22,07		
10	QPSK	25	0	22,27	22,25	22,11		
10	QPSK	25	48	22,38	22,38	22,16		
10	QPSK	25	25	22,12	22,17	22,16		
10	QPSK	50	0	22,19	22,31	22,16		
10	16QAM	1	0	22,26	22,27	22,19	23,5	0
10	16QAM	1	48	22,35	22,35	22,25		
10	16QAM	1	96	22,13	22,23	22,07		
10	16QAM	25	0	21,77	21,73	21,66		0,5
10	16QAM	25	48	21,82	21,82	21,86		
10	16QAM	25	96	21,88	21,78	21,87		
10	16QAM	50	0	21,74	21,75	21,74		
10	16QAM	1	0	21,99	21,84	21,81		0,5
10	16QAM	1	48	21,81	21,78	21,86		
10	16QAM	1	96	21,82	21,68	21,83		
10	16QAM	25	0	20,73	20,84	20,78		1,5
10	16QAM	25	48	20,74	20,84	20,78		
10	16QAM	25	96	20,72	20,78	20,71		
10	16QAM	50	0	20,76	20,80	20,87		
10	16QAM	50	48	18,82	18,85	18,85		4
10	16QAM	50	96	18,85	18,85	18,83		
10	16QAM	50	144	18,81	18,83	18,73		
10	16QAM	25	0	18,69	18,84	18,71		
10	16QAM	25	48	18,81	18,81	18,84		4
10	16QAM	25	96	18,81	18,80	18,84		
10	16QAM	50	0	18,70	18,73	18,84		
Channel		2605	2635	2665			Turn-up (dBm)	MPR (dB)
Frequency (MHz)		1865	1895	1925				
5	QPSK	1	0	22,19	22,27	22,35	23,5	0
5	QPSK	1	12	22,27	22,28	22,25		
5	QPSK	1	24	22,18	22,20	22,16		
5	QPSK	12	0	22,18	22,18	22,18		
5	QPSK	12	12	22,24	22,28	22,28		0
5	QPSK	12	24	22,32	22,21	22,16		
5	16QAM	1	0	22,26	22,27	22,21	23,5	0
5	16QAM	1	12	22,35	22,32	22,24		
5	16QAM	1	24	22,25	22,33	22,29		
5	16QAM	1	36	22,09	22,31	22,05		
5	16QAM	12	0	21,84	21,74	21,80		0,5
5	16QAM	12	12	21,77	21,68	21,71		
5	16QAM	12	24	21,71	21,68	21,75		
5	16QAM	25	0	21,81	21,69	21,59		
5	16QAM	1	0	21,97	21,84	21,75		0,5
5	16QAM	1	12	21,84	21,77	21,74		
5	16QAM	1	24	21,74	21,72	21,63		
5	16QAM	12	0	20,76	20,84	20,75		1,5
5	16QAM	12	12	20,78	20,80	20,73		
5	16QAM	12	24	20,86	20,80	20,83		
5	16QAM	25	0	20,73	20,73	20,72		
5	16QAM	1	0	18,65	18,83	18,84		4
5	16QAM	1	12	18,59	18,54	18,60		
5	16QAM	1	24	18,84	18,89	18,71		
5	16QAM	12	0	18,69	18,70	18,80		4
5	16QAM	12	12	18,88	18,80	18,70		
5	16QAM	12	24	18,83	18,88	18,87		
5	16QAM	25	0	18,69	18,86	18,81		
Channel		2607	2637	2667			Turn-up (dBm)	MPR (dB)
Frequency (MHz)		1867,5	1897,5	1927,5				
3	QPSK	1	0	22,14	22,23	22,28	23,5	0
3	QPSK	1	8	22,24	22,36	22,19		
3	QPSK	1	16	22,37	22,38	22,17		
3	QPSK	8	0	22,12	22,27	22,17		
3	QPSK	8	8	22,32	22,24	22,27		0
3	QPSK	8	16	22,13	22,17	22,07		
3	16QAM	1	0	22,18	22,24	22,17	23,5	0
3	16QAM	1	8	22,25	22,29	22,21		
3	16QAM	1	16	22,38	22,38	22,16		
3	16QAM	8	0	21,70	21,70	21,82		0,5
3	16QAM	8	8	21,78	21,73	21,82		
3	16QAM	8	16	21,70	21,71	21,86		
3	16QAM	1	0	21,74	21,75	21,69		
3	16QAM	1	8	21,86	21,88	21,75		0,5
3	16QAM	1	16	21,78	21,87	21,88		
3	16QAM	8	0	20,71	20,72	20,71		1,5
3	16QAM	8	8	20,71	20,74	20,69		
3	16QAM	8	16	20,78	20,75	20,72		
3	16QAM	1	0	18,74	18,78	18,75		4
3	16QAM	1	8	18,59	18,72	18,87		
3	16QAM	1	16	18,81	18,74	18,86		4
3	16QAM	8	0	18,86	18,86	18,89		
3	16QAM	8	8	18,87	18,82	18,89		4
3	16QAM	8	16	18,84	18,86	18,85		
3	16QAM	16						



Band 38 (only on channel required)											
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Co [Freq]	Power Middle Co [Freq]	Power High Co [Freq]	Take-up (ms) (dBm)	MPR (dB)			
Channel											
Frequency (MHz)											
20	DPSK	1	0	19.81	19.91	19.93		20.8	0		
20	DPSK	1	48	19.81	19.91	19.93					
20	DPSK	1	96	19.81	19.91	19.93					
20	DPSK	50	0	19.88	19.92	19.98					
20	DPSK	50	24	19.87	19.91	19.96					
20	DPSK	50	50	19.84	19.87	19.91					
20	DPSK	100	0	19.93	20.01	20.06					
20	HQAM	1	0	19.81	19.89	19.94					
20	HQAM	1	48	19.81	19.89	19.94					
20	HQAM	1	96	19.81	19.89	19.94					
20	HQAM	50	0	19.88	19.92	19.98					
20	HQAM	50	24	19.87	19.91	19.96					
20	HQAM	50	50	19.84	19.87	19.91					
20	HQAM	100	0	19.93	20.02	20.05					
20	HQAM	1	0	19.81	19.91	19.93					
20	HQAM	1	48	19.74	19.73	19.55		20.8	0		
20	HQAM	1	96	19.81	19.83	19.87					
20	HQAM	50	0	19.84	19.88	19.93					
20	HQAM	50	24	19.84	19.87	19.91					
20	HQAM	50	50	19.80	19.84	19.88					
20	HQAM	100	0	19.97	19.97	19.97					
20	ZSSBAM	1	0	18.50	18.90	18.95					
20	ZSSBAM	1	48	18.50	18.98	18.99		19.8	1		
20	ZSSBAM	1	96	18.50	18.95	18.93					
20	ZSSBAM	50	0	19.06	19.10	19.03					
20	ZSSBAM	50	24	19.06	19.11	19.25					
20	ZSSBAM	50	50	19.12	19.12	19.25					
20	ZSSBAM	100	0	19.06	19.11	19.24					
Channel											
Frequency (MHz)											
15	DPSK	1	0	19.76	19.85	19.76					
15	DPSK	1	48	19.81	19.91	19.91		20.8	0		
15	DPSK	1	96	19.87	20.03	19.96					
15	DPSK	36	0	19.75	19.77	19.85					
15	DPSK	36	36	19.85	19.85	19.85					
15	DPSK	36	72	19.85	19.86	19.94					
15	DPSK	75	0	19.80	19.99	20.01					
15	HQAM	1	0	19.81	19.89	19.94					
15	HQAM	1	37	19.80	19.78	19.80		20.8	0		
15	HQAM	1	74	19.80	19.87	19.94					
15	HQAM	36	0	19.80	19.94	20.02					
15	HQAM	36	26	19.80	19.92	19.92					
15	HQAM	36	55	19.80	19.99	20.02		20.8	0		
15	HQAM	75	0	19.80	19.89	19.97					
15	HQAM	1	0	19.81	19.88	19.93					
15	HQAM	1	37	19.70	19.63	19.43		20.8	0		
15	HQAM	1	74	19.72	19.78	19.86					
15	HQAM	36	0	19.80	19.96	19.99					
15	HQAM	36	26	19.80	19.91	19.97					
15	HQAM	36	55	19.80	19.95	20.03		20.8	0		
15	HQAM	75	0	19.80	19.92	19.91					
15	ZSSBAM	1	0	18.80	18.86	18.86		19.8	1		
15	ZSSBAM	1	37	18.80	18.86	18.86					
15	ZSSBAM	1	74	18.80	18.85	18.73					
15	ZSSBAM	36	0	19.00	19.06	19.08					
15	ZSSBAM	36	20	19.00	19.13	19.04		19.8	1		
15	ZSSBAM	36	38	19.00	19.13	19.18					
15	ZSSBAM	75	0	19.00	19.00	19.00					
Channel											
Frequency (MHz)											
10	DPSK	1	0	19.86	19.88	19.92					
10	DPSK	1	24	19.80	19.83	19.88		20.8	0		
10	DPSK	1	48	20.01	19.98	20.05					
10	DPSK	25	0	19.88	19.91	19.78					
10	DPSK	25	12	19.80	19.88	19.96					
10	DPSK	25	25	19.84	19.97	19.92		20.8	0		
10	DPSK	50	0	19.85	19.98	19.92					
10	HQAM	1	0	19.80	19.89	19.97					
10	HQAM	1	25	19.78	19.73	19.79		20.8	0		
10	HQAM	1	49	19.84	19.91	19.97					
10	HQAM	25	0	19.86	19.97	20.00					
10	HQAM	25	12	19.84	19.92	20.05					
10	HQAM	25	25	19.86	19.91	19.99		20.8	0		
10	HQAM	1	0	19.82	19.84	19.85					
10	HQAM	1	25	19.50	19.58	19.49		20.8	0		
10	HQAM	1	49	19.81	19.81	19.79					
10	HQAM	25	0	19.82	19.89	19.89					
10	HQAM	25	12	19.84	19.93	19.94		20.8	0		
10	HQAM	25	25	19.82	19.91	20.06					
10	HQAM	50	0	19.81	19.88	19.86					
10	ZSSBAM	1	0	18.80	18.87	18.85					
10	ZSSBAM	1	25	18.80	18.86	18.86		19.8	1		
10	ZSSBAM	1	49	19.00	19.83	18.83					
10	ZSSBAM	25	0	19.00	19.87	19.00					
10	ZSSBAM	25	12	19.03	19.14	19.07					
10	ZSSBAM	25	25	19.22	19.12	19.04		19.8	1		
10	ZSSBAM	50	0	19.00	19.04	19.05					
Channel											
Frequency (MHz)											
5	DPSK	1	0	19.86	19.86	19.84					
5	DPSK	1	12	19.80	19.88	19.98		20.8	0		
5	DPSK	1	24	20.00	20.00	20.00					
5	DPSK	12	0	19.84	19.89	19.93					
5	DPSK	12	6	19.80	19.84	19.91					
5	DPSK	12	13	19.87	20.04	19.95		20.8	0		
5	DPSK	25	0	20.00	19.89	19.97					
5	HQAM	1	0	19.84	19.96	19.99					
5	HQAM	1	12	19.84	19.93	19.91		20.8	0		
5	HQAM	1	24	20.00	19.89	20.06					
5	HQAM	12	0	19.84	19.89	19.89					
5	HQAM	12	6	20.00	19.93	19.97					
5	HQAM	12	13	19.98	20.05	20.05		20.8	0		
5	HQAM	25	0	19.80	19.88	19.97					
5	HQAM	1	0	19.81	19.80	19.85					
5	HQAM	1	12	19.73	19.71	19.50		20.8	0		
5	HQAM	1	24	19.78	19.70	19.85					
5	HQAM	12	0	19.80	19.80	19.87					
5	HQAM	12	6	19.80	19.90	19.91		20.8	0		
5	HQAM	12	13	19.98	20.00	20.08					
5	HQAM	25	0	19.80	19.84	19.98					
5	ZSSBAM	1	0	18.80	18.80	18.88					
5	ZSSBAM	1	12	18.81	18.86	18.84		19.8	1		
5	ZSSBAM	1	24	18.80	18.85	18.78					
5	ZSSBAM	12	0	19.00	19.02	19.08					
5	ZSSBAM	12	7	19.00	19.16	19.00		19.8	1		
5	ZSSBAM	12	13	18.80	19.03	19.14					
5	ZSSBAM	25	0	19.00	18.91	19.11					

Band 41 (2.6G Band)											
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Co [Freq]	Power Middle Co [Freq]	Power High Co [Freq]	Take-up (ms) (dBm)	MPR (dB)			
Channel											
Frequency (MHz)											
20	DPSK	1	0	20.02	19.95	19.99					
20	DPSK	1	48	20.08	20.07	20.04		20.8	0		
20	DPSK	1	96	20.08	20.12	20.05					
20	DPSK	50	0	20.00	20.04	20.03					
20	DPSK	50	24	20.07	20.08	20.06					
20	DPSK	50	50	20.02	20.04	20.00					
20	DPSK	100	0	20.04	20.08	20.01					
20	HQAM	1	0	19.92	19.92	19.95					
20	HQAM	1	48	19.82	19.89	19.94					
20	HQAM	1	96	19.80	19.83	19					



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Band 41 (2.6G Band) HPUe (Limit 27)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Co. (Tx)	Power Low Middle Co. (Tx)	Power Middle Co. (Tx)	Power High Middle Co. (Tx)	Power High Co. (Tx)	Tune-up freq. (dBm)	MFR (dB)
Channel										
39750				40185	40520	41055	41490			
Frequency (MHz)										
20	QPSK	1	0	2178	2169	2169	2169	2180	22.4	0
20	QPSK	1	48	2178	2168	2168	2168	2179		
20	QPSK	1	96	2178	2161	2178	2181	2183		
20	QPSK	50	0	2172	2181	2182	2188	2177		
20	QPSK	50	24	2172	2188	2175	2178	2187		
20	QPSK	50	48	2172	2179	2173	2175	2177	22.4	0
20	QPSK	100	0	2172	2183	2172	2178	2178		
20	16QAM	1	0	2185	2177	2171	2172	2178	22.4	0
20	16QAM	1	48	2185	2179	2174	2179	2185		
20	16QAM	1	96	2187	2175	2180	2185	2178		
20	16QAM	50	0	2172	2173	2158	2186	2171		
20	16QAM	50	24	2181	2176	2181	2173	2179		
20	16QAM	50	48	2180	2174	2187	2174	2182	22.4	0
20	16QAM	100	0	2183	2178	2184	2182	2172		
20	16QAM	1	0	2186	2188	2180	2182	2189	22.4	0
20	16QAM	1	48	2187	2184	2158	2180	2173		
20	16QAM	1	96	2189	2181	2189	2171	2179		
20	16QAM	50	0	2188	2172	2183	2189	2171		
20	16QAM	50	24	2179	2174	2183	2174	2174		
20	16QAM	50	48	2178	2172	2183	2173	2181	22.4	0
20	16QAM	100	0	2180	2170	2182	2181	2171		
20	256QAM	1	0	2186	2183	2188	2093	2094	21.8	0.8
20	256QAM	1	48	2082	2091	2087	2082	2092		
20	256QAM	1	96	2185	2090	2093	2079	2080		
20	256QAM	50	0	2088	2111	2088	2188	2088	21.8	0.8
20	256QAM	50	24	2114	2103	2092	2108	2101		
20	256QAM	50	48	2091	2115	2116	2092	2100		
20	256QAM	100	0	2082	2104	2103	2100	2080		
Channel										
29315				2943	2993	3037.8	3082.5			
Frequency (MHz)										
15	QPSK	1	0	2162	2156	2160	2161	2178	22.4	0
15	QPSK	1	48	2170	2172	2164	2172	2183		
15	QPSK	1	74	2178	2173	2178	2173	2183		
15	QPSK	36	0	2180	2178	2154	2181	2172		
15	QPSK	36	18	2178	2186	2172	2178	2186	22.4	0
15	QPSK	36	54	2178	2187	2166	2186	2171		
15	QPSK	75	0	2182	2183	2186	2191	2180		
15	16QAM	1	0	2171	2188	2150	2170	2177	22.4	0
15	16QAM	1	48	2180	2185	2170	2187	2177		
15	16QAM	1	74	2178	2175	2171	2174	2187		
15	16QAM	36	0	2187	2170	2145	2187	2183	22.4	0
15	16QAM	36	18	2188	2172	2183	2182	2182		
15	16QAM	36	54	2188	2187	2186	2174	2182		
15	16QAM	75	0	2188	2178	2187	2181	2180	22.4	0
15	16QAM	1	0	2188	2184	2181	2183	2184		
15	16QAM	1	37	2187	2182	2182	2183	2182	22.4	0
15	16QAM	1	74	2187	2184	2184	2180	2182		
15	16QAM	36	0	2188	2188	2188	2188	2188	22.4	0
15	16QAM	36	18	2187	2189	2183	2183	2171		
15	16QAM	36	54	2178	2187	2181	2189	2188		
15	16QAM	75	0	2185	2188	2188	2188	2180	21.8	0.8
15	256QAM	1	0	2090	2090	2090	2090	2090		
15	256QAM	1	37	2084	2077	2077	2087	2081		
15	256QAM	1	74	2086	2080	2082	2085	2081		
15	256QAM	36	0	2083	2108	2088	2188	2088	21.8	0.8
15	256QAM	36	20	2108	2094	2083	2107	2093		
15	256QAM	36	38	2082	2107	2108	2085	2100		
15	256QAM	75	0	2078	2102	2102	2102	2081		
Channel										
29078				4099	4050	41060	41460			
Frequency (MHz)										
10	QPSK	1	0	2166	2164	2158	2160	2168	22.4	0
10	QPSK	1	24	2167	2167	2158	2168	2168		
10	QPSK	1	48	2168	2185	2186	2178	2180		
10	QPSK	36	0	2187	2187	2182	2188	2171		
10	QPSK	36	18	2171	2184	2181	2183	2182	22.4	0
10	QPSK	36	25	2184	2170	2187	2175	2177		
10	QPSK	50	0	2187	2183	2186	2188	2177		
10	16QAM	1	0	2188	2188	2188	2188	2171	22.4	0
10	16QAM	1	24	2182	2174	2188	2187	2188		
10	16QAM	1	48	2186	2184	2177	2186	2188		
10	16QAM	36	0	2186	2188	2184	2180	2186	22.4	0
10	16QAM	36	12	2179	2188	2182	2186	2188		
10	16QAM	36	24	2188	2185	2188	2185	2188		
10	16QAM	50	0	2178	2183	2183	2187	2184		
10	16QAM	1	0	2188	2188	2186	2188	2186	22.4	0
10	16QAM	1	24	2183	2183	2144	2140	2188		
10	16QAM	1	48	2182	2158	2184	2158	2174		
10	16QAM	36	0	2188	2182	2180	2189	2188	22.4	0
10	16QAM	36	12	2178	2180	2186	2189	2171		
10	16QAM	36	24	2185	2171	2187	2189	2187		
10	16QAM	50	0	2188	2181	2186	2186	2188		
10	256QAM	1	0	2189	2082	2085	2081	2089	21.8	0.8
10	256QAM	1	24	2082	2091	2087	2074	2082		
10	256QAM	1	48	2086	2075	2091	2084	2085		
10	256QAM	36	0	2079	2105	2098	2102	2090	21.8	0.8
10	256QAM	36	12	2101	2092	2092	2090	2090		
10	256QAM	36	24	2080	2108	2108	2081	2082		
10	256QAM	50	0	2086	2099	2117	2087	2080		
Channel										
38875				4014	4050	41060	41565			
Frequency (MHz)										
5	QPSK	1	0	2182	2184	2184	2188	2177	22.4	0
5	QPSK	1	24	2185	2172	2186	2171	2188		
5	QPSK	1	24	2184	2177	2186	2179	2183		
5	QPSK	12	0	2171	2173	2148	2183	2177		
5	QPSK	12	12	2171	2182	2181	2180	2186	22.4	0
5	QPSK	12	12	2187	2174	2170	2173	2178		
5	QPSK	36	0	2181	2182	2188	2174	2171		
5	16QAM	1	0	2179	2188	2170	2188	2178	22.4	0
5	16QAM	1	12	2174	2179	2180	2170	2181		
5	16QAM	1	24	2172	2172	2187	2180	2188		
5	16QAM	12	0	2187	2181	2189	2188	2188	22.4	0
5	16QAM	12	12	2171	2180	2187	2188	2188		
5	16QAM	12	12	2188	2188	2188	2188	2188		
5	16QAM	36	0	2186	2188	2184	2180	2186	22.4	0
5	16QAM	36	12	2183	2183	2144	2158	2171		
5	16QAM	1	24	2187	2147	2180	2183	2174		
5	16QAM	12	0	2188	2188	2180	2188	2188	22.4	0
5	16QAM	12	12	2171	2183	2183	2182	2188		
5	16QAM	12	12	2180	2184	2182	2182	2188	22.4	0
5	16QAM	36	0	2178	2178	2182	2180	2188		
5	256QAM	1	0	2089	2087	2088	2088	2080	21.8	0.8
5	256QAM	1	12	2080	2091	2079	2075	2083		
5	256QAM	1	24	2086	2075	2085	2079	2088		
5	256QAM	12	0	2073	2173	2188	2092	2090	21.8	0.8
5	256QAM	12	12	2111	2102	2081	2089	2091		
5	256QAM	12	12	2081	2107	2118	2080	2100		
5	256QAM	36	0	2070	2186	2188	2088	2087		

Band 48 (3.9G Band)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Co. (Tx)	Power Low Middle Co. (Tx)	Power High Middle Co. (Tx)	Power High Co. (Tx)	Tune-up freq. (dBm)	MFR (dB)	
Channel										
5340				5830	5830	5830	5830			



Full Power Mode - LAT

CDM800	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	824.2	834.4	848.8		
Frequency (MHz)	33.02	32.99	32.98	33.30	34.02	33.99	33.98	24.30
OSM1 Tx Load	23.90	23.90	23.90	23.90	24.00	23.90	23.90	24.30
OSM2 Tx Load	30.38	30.40	30.38	31.10	24.36	24.40	24.38	25.10
OSM3 Tx Load	23.80	23.81	23.80	23.80	24.07	24.08	24.08	25.04
OSM4 Tx Load	26.10	27.60	27.90	28.30	25.10	24.80	24.90	25.30
EDGE 1 Tx Load	26.50	26.60	26.91	26.60	16.50	16.60	16.91	17.60
EDGE 2 Tx Load	22.80	22.80	24.10	25.20	17.60	17.60	18.10	18.30
EDGE 3 Tx Load	22.81	23.00	22.85	24.30	18.50	18.74	18.50	20.04
EDGE 4 Tx Load	22.06	22.30	22.13	22.70	19.08	19.30	19.13	20.70

CDM1000	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	860.2	860.2	860.2	860.2	860.2		
Frequency (MHz)	30.72	29.60	29.88	30.80	20.72	20.68	20.88	21.80
OSM1 Tx Load	25.70	26.66	26.65	26.66	20.70	20.66	20.65	21.66
OSM2 Tx Load	25.84	25.55	25.85	25.55	21.84	21.55	21.85	22.10
OSM3 Tx Load	38.12	25.98	26.63	27.60	21.88	21.70	21.77	22.74
OSM4 Tx Load	29.71	26.08	25.60	26.00	21.71	22.08	22.00	22.00
EDGE 1 Tx Load	25.08	24.85	25.12	25.00	16.08	15.85	15.12	16.30
EDGE 2 Tx Load	24.05	23.75	24.10	24.00	16.05	17.75	18.10	18.00
EDGE 3 Tx Load	22.13	22.20	23.00	22.80	18.87	18.87	19.04	19.54
EDGE 4 Tx Load	22.02	21.85	22.07	22.30	19.02	18.85	19.07	19.30

Band	WCDMA 9			Time-up Limit (dBm)	WCDMA 1V			Time-up Limit (dBm)	WCDMA V			Time-up Limit (dBm)	
	8262	8400	8638		1312	1413	1513		4152	4162	4220		
TX Channel	8602	8600	8608	8537	1504	1729	4287	4287	4287	4450			
Frequency (MHz)	862.4	1038.0	969.8	1712.4	1724.6	1702.4	826.4	836.4	846.8				
SCPP Rel 99	ARF 12.2Rel99	38.31	24.38	24.23	24.80	24.31	24.39	24.27	24.80	24.40	24.44	24.40	24.80
SCPP Rel 99	HRG 12.2Rel99	26.36	26.38	24.56	24.80	24.41	24.68	24.78	24.80	24.40	24.40	24.41	24.80
SCPP Rel 6	HRDPA Subclass1	23.33	23.41	23.27	23.80	23.22	23.40	23.34	23.80	23.52	23.50	23.40	23.80
SCPP Rel 6	HRDPA Subclass2	23.34	23.40	23.27	23.80	23.30	23.40	23.32	23.80	23.56	23.50	23.47	23.80
SCPP Rel 6	HRDPA Subclass3	22.81	22.81	22.73	23.30	22.82	22.83	22.83	23.30	23.00	22.98	22.93	23.30
SCPP Rel 6	HRDPA Subclass4	22.82	22.88	22.78	23.30	22.79	22.81	22.82	23.30	23.10	22.82	22.81	23.30
SCPP Rel 6	DC-HRDPAs Subclass1	23.25	23.38	23.17	23.80	23.07	23.20	23.17	23.80	23.00	23.56	23.34	23.80
SCPP Rel 6	DC-HRDPAs Subclass2	22.23	22.32	22.11	22.80	22.10	22.07	22.10	22.80	21.84	22.13	21.30	22.80
SCPP Rel 6	DC-HRDPAs Subclass3	22.81	22.84	22.62	23.30	22.69	22.81	22.74	23.30	23.01	23.05	22.87	23.30
SCPP Rel 6	DC-HRDPAs Subclass4	22.80	22.72	22.68	23.30	22.67	22.70	22.72	23.30	23.00	23.08	22.86	23.30
SCPP Rel 6	HRDPA Subclass1	23.22	23.27	23.00	23.80	23.18	23.28	23.24	23.80	23.10	23.50	23.44	23.80
SCPP Rel 6	HRDPA Subclass2	21.34	21.42	21.30	21.80	21.46	21.37	21.51	21.80	21.52	21.30	21.34	21.80
SCPP Rel 6	HRDPA Subclass3	21.32	21.40	21.28	21.80	21.31	21.48	21.39	21.80	21.08	21.46	21.40	21.80
SCPP Rel 6	HRDPA Subclass4	21.08	21.22	21.00	21.60	21.28	21.40	21.32	21.60	21.10	21.27	21.24	21.60
SCPP Rel 6	HRDPA Subclass5	21.30	21.50	21.30	21.80	21.32	21.52	21.42	21.80	21.56	21.56	21.48	21.80
SCPP Rel 6	HRDPA Subclass6	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 BC1b			Time-up Limit (dBm)
	1013	384	777		25	600	1175		476	580	684	
TX Channel	1013	1013	1013	1013	600	1175	476	580	684			
Frequency (MHz)	23.16	23.12	23.12	24.80	23.68	23.70	23.40	23.68	23.81	23.71	23.71	24.80
NCI BC3S5	23.87	23.70	23.30	24.80	23.87	23.88	23.40	24.80	23.87	23.81	23.74	24.80
NCI BC3S10	23.86	23.88	23.79	24.80	23.69	23.67	23.39	24.80	23.69	23.66	23.72	24.80
NCI BC3S15	23.84	23.85	23.38	24.80	23.83	23.85	23.37	24.80	23.84	23.78	23.71	24.80
RTAP 153.80000	23.82	23.65	23.27	24.80	23.81	23.64	23.35	24.80	23.88	23.77	23.70	24.80
RTAP 153.80000	23.81	23.64	23.25	24.80	23.81	23.62	23.34	24.80	23.81	23.76	23.68	24.80



Band 12 (700MHz Low Band) Part 27F (only on channel required)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Turn-up (dBm)	MPR (dB)
Channel		Frequency (MHz)		2396	2395	2394	2393	2392		
10	QPSK	1	0	23.30	23.68	23.83				
10	QPSK	1	26	23.56	23.62	23.52			24.8	0
10	QPSK	1	49	23.64	23.75	23.67				
10	QPSK	25	0	22.67	22.82	22.74				
10	QPSK	25	12	22.80	22.83	22.79			23.8	1
10	QPSK	25	25	22.81	22.87	22.86				
10	QPSK	50	0	22.66	22.80	22.69				
10	QPSK	1	0	22.52	23.04	22.91				
10	HQAM	1	26	23.08	23.00	22.87			23.8	1
10	HQAM	1	49	23.16	23.09	23.00				
10	HQAM	25	0	21.74	21.78	21.74				
10	HQAM	25	12	21.81	21.80	21.73			22.8	2
10	HQAM	25	25	21.82	21.86	21.81				
10	HQAM	50	0	21.61	21.76	21.70				
10	HQAM	1	0	21.72	21.80	21.50				
10	HQAM	1	26	21.88	21.50	21.45			22.8	2
10	HQAM	1	49	21.88	21.52	21.55				
10	HQAM	25	0	21.21	20.94	20.91				
10	HQAM	25	12	21.11	20.90	20.78			21.8	3
10	HQAM	25	25	20.85	20.76	20.83				
10	HQAM	50	0	20.61	20.55	20.58				
10	HQAM	50	12	20.67	20.56	20.61				
10	ZSSBAM	1	26	19.68	19.36	19.64			19.8	5
10	ZSSBAM	1	49	19.43	19.54	19.56				
10	ZSSBAM	25	0	19.64	19.56	19.63				
10	ZSSBAM	25	12	19.51	19.42	19.61			19.8	5
10	ZSSBAM	25	25	19.54	19.57	19.59				
10	ZSSBAM	50	0	19.25	19.47	19.47				
Channel				2395	2395	2395			Turn-up (dBm)	MPR (dB)
Frequency (MHz)				7015	7015	7113				
5	QPSK	1	0	23.57	23.61	23.64				
5	QPSK	1	12	23.43	23.72	23.70			24.8	0
5	QPSK	1	24	23.66	23.71	23.69				
5	QPSK	12	0	22.72	22.79	22.75				
5	QPSK	12	7	22.77	22.83	22.77			23.8	1
5	QPSK	12	13	22.88	22.89	22.84				
5	QPSK	25	0	22.75	22.79	22.74				
5	HQAM	1	0	22.98	23.00	22.98			23.8	1
5	HQAM	1	12	22.99	23.18	23.04				
5	HQAM	1	24	22.97	23.07	23.01				
5	HQAM	12	0	21.78	21.80	21.84				
5	HQAM	12	7	21.79	21.83	21.81			22.8	2
5	HQAM	12	13	21.77	21.80	21.74				
5	HQAM	25	0	21.78	21.84	21.75				
5	HQAM	1	0	21.45	21.41	21.77			22.8	2
5	HQAM	1	12	21.83	21.50	21.74				
5	HQAM	1	24	21.85	21.67	21.81				
5	HQAM	12	0	20.83	20.55	21.01				
5	HQAM	12	7	20.97	20.53	20.88			21.8	3
5	HQAM	12	13	20.71	20.80	20.76				
5	HQAM	25	0	20.80	20.51	20.89				
5	ZSSBAM	1	0	19.39	19.83	19.58				
5	ZSSBAM	1	12	19.63	19.51	19.59			19.8	5
5	ZSSBAM	1	24	19.61	19.52	19.55				
5	ZSSBAM	12	0	19.51	19.50	19.51				
5	ZSSBAM	12	7	19.48	19.33	19.35			19.8	5
5	ZSSBAM	12	13	19.48	19.42	19.43				
5	ZSSBAM	25	0	19.50	19.48	19.52				
Channel				2392	2395	2395			Turn-up (dBm)	MPR (dB)
Frequency (MHz)				7015	7015	7145				
3	QPSK	1	0	23.61	23.71	23.73				
3	QPSK	1	14	23.66	23.73	23.56			24.8	0
3	QPSK	8	0	22.70	22.74	22.70				
3	QPSK	8	7	22.85	22.74	22.67			23.8	1
3	QPSK	16	0	22.78	22.78	22.66				
3	HQAM	1	0	22.90	23.02	22.96			23.8	1
3	HQAM	1	14	22.94	23.02	22.91				
3	HQAM	1	14	22.98	23.04	22.92			22.8	2
3	HQAM	8	0	21.83	21.88	21.83				
3	HQAM	8	7	21.81	21.87	21.80				
3	HQAM	8	7	21.77	21.80	21.81			22.8	2
3	HQAM	16	0	21.79	21.80	21.70				
3	HQAM	1	0	21.80	21.48	21.97			22.8	2
3	HQAM	1	14	21.87	21.48	21.67				
3	HQAM	8	0	20.85	20.54	21.03				
3	HQAM	8	7	20.98	20.55	20.61			21.8	3
3	HQAM	8	7	21.01	20.59	20.94				
3	HQAM	16	0	21.60	20.52	21.61				
3	ZSSBAM	1	0	19.55	19.51	19.55				
3	ZSSBAM	8	0	19.61	19.48	19.57			19.8	5
3	ZSSBAM	8	7	19.33	19.47	19.47				
3	ZSSBAM	8	0	19.45	19.48	19.49			19.8	5
3	ZSSBAM	8	7	19.47	19.50	19.48				
3	ZSSBAM	16	0	19.43	19.46	19.50				
Channel				2397	2395	2397			Turn-up (dBm)	MPR (dB)
Frequency (MHz)				7017	7015	7153				
1.4	QPSK	1	0	23.57	23.55	23.48				
1.4	QPSK	1	3	23.57	23.72	23.62			24.8	0
1.4	QPSK	1	5	23.51	23.59	23.48				
1.4	QPSK	3	0	23.55	23.80	23.53				
1.4	QPSK	3	1	23.68	23.71	23.67			23.8	1
1.4	QPSK	3	3	23.53	23.67	23.56				
1.4	QPSK	6	0	22.66	22.68	22.64			23.8	1
1.4	HQAM	1	0	22.84	22.96	22.91				
1.4	HQAM	1	3	22.92	23.06	22.99				
1.4	HQAM	1	5	22.87	22.91	22.82			23.8	1
1.4	HQAM	3	0	22.73	22.72	22.70				
1.4	HQAM	3	1	22.73	22.78	22.77				
1.4	HQAM	3	3	22.72	22.73	22.74			22.8	2
1.4	HQAM	1	0	21.89	21.71	21.66				
1.4	HQAM	1	0	21.84	21.51	21.58				
1.4	HQAM	1	3	21.81	21.45	21.94			22.8	2
1.4	HQAM	1	5	21.89	21.44	21.73				
1.4	HQAM	3	0	21.80	21.53	21.68				
1.4	HQAM	3	1	21.79	21.40	21.93			21.8	3
1.4	HQAM	3	3	21.47	21.51	21.78				
1.4	HQAM	6	0	20.94	20.55	20.78			21.8	3
1.4	ZSSBAM	1	0	19.51	19.57	19.52				
1.4	ZSSBAM	1	5	19.29	19.43	19.43			19.8	5
1.4	ZSSBAM	3	0	19.41	19.47	19.45				
1.4	ZSSBAM	3	1	19.41	19.34	19.31				
1.4	ZSSBAM	3	3	19.43	19.43	19.42			19.8	5
1.4	ZSSBAM	6	0	19.39	19.42	19.46			19.8	5

Band 13(900MHz Band) Part 27F										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Power Ch./Freq.	Turn-up (dBm)	MPR (dB)
Channel		Frequency (MHz)		2392	2392	2392	2392	2392		
10	QPSK	1	0		23.47					
10	QPSK	1	26		23.53				24.8	0
10	QPSK	1	49		23.26					
10	QPSK	25	0		22.69					
10	QPSK	25	12		22.64				23.8	1
10	QPSK	25	25		22.66					
10	QPSK	50	0		22.69					
10	HQAM	1	0		22.57					
10	HQAM	1	26		22.80				23.8	1
10	HQAM	1	49		22.79					
10	HQAM	25	0		21.63					
10	HQAM	25	12		21.69				22.8	2
10	HQAM	25	25		21.58					
10	HQAM	50	0		21.62					
10	HQAM	1	0		21.52					
10	HQAM	1	26		21.70				22.8	2
10	HQAM	1	49		21.55					
10	HQAM	25	0		20.61					
10	HQAM	25	12		20.51				21.8	3
10	HQAM	25	25		20.48					
10	HQAM	50	0		20.16					
10	ZSSBAM	1	0		19.48				19.8	5
10	ZSSBAM	1	26		19.38					
10	ZSSBAM	1	49		19.65					
10	ZSSBAM	25	0		19.43					
10	ZSSBAM	25	12		19.48				19.8	5
10	ZSSBAM	25	25		19.43					
10	ZSSBAM	50	0		19.42					
Channel				2392	2392	2392			Turn-up (dBm)	MPR (dB)
Frequency (MHz)				7015	762	746.5				
5	QPSK	1	0		23.47	23.43	23.50			
5	QPSK	1	12		23.34	23.54	23.43		24.8	0
5	QPSK	1	24		23.54	23.49	23.34			
5	QPSK	12	0		22.71	22.68	22.66			
5	QPSK	12	7		22.72	22.60	22.58		23.8	1
5	QPSK	12	13		22.68	22.69	22.54			
5	QPSK	25	0		22.67	22.59	22.56			
5	HQAM	1	0		22.82	22.84	22.83		23.8	1
5	HQAM	1	12		22.98	22.63	22.78		23.8	1
5	HQAM	1								



Band 26 for FCC (only on channel required)

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



Band 38(only on channel required)

BW [MHz]	Modulation	RB Size	RB Offset	Power				Turn-up time (dBm)	MPR (dB)
				Low	Mid	High	Power Hdr		
Channel				37950	38000	38150			
Frequency (MHz)				2580	2595	2610			
20	QPSK	1	0	23.91	23.77	23.67			
20	QPSK	1	40	23.93	23.79	23.69			
20	QPSK	1	80	23.95	23.81	23.71	24.8	0	
20	QPSK	56	0	23.13	22.94	22.92			
20	QPSK	56	40	23.15	22.96	22.95			
20	QPSK	56	80	23.18	22.99	22.99	23.8	1	
20	16QAM	1	0	23.21	23.01	23.00			
20	16QAM	1	40	23.23	23.03	23.02			
20	16QAM	1	80	23.25	23.05	23.05	23.8	1	
20	16QAM	56	0	22.16	22.08	22.10			
20	16QAM	56	40	22.18	22.10	22.12			
20	16QAM	56	80	22.21	22.07	22.10	22.8	2	
20	16QAM	100	0	22.22	22.01	22.11			
20	16QAM	100	40	21.93	21.75	21.88			
20	16QAM	100	80	21.90	21.74	21.87	22.8	2	
20	64QAM	1	0	21.85	21.67	21.92			
20	64QAM	1	40	21.90	21.74	21.87			
20	64QAM	1	80	21.92	21.76	21.92	21.8	3	
20	64QAM	56	0	21.52	21.34	21.53			
20	64QAM	56	40	21.53	21.35	21.55			
20	64QAM	56	80	21.55	21.37	21.57	21.8	5	
20	256QAM	1	0	21.27	21.08	21.13			
20	256QAM	1	40	21.28	21.09	21.17			
20	256QAM	1	80	21.29	21.11	21.19	19.8	5	
20	256QAM	56	0	19.28	19.25	19.28			
20	256QAM	56	40	19.28	19.25	19.28			
20	256QAM	56	80	19.28	19.25	19.28	19.8	5	
20	256QAM	100	0	19.27	19.22	19.25			
Channel				38150	38200	38250			
Frequency (MHz)				2677.5	2692.5	2707.5			
15	QPSK	1	0	23.99	23.83	23.87			
15	QPSK	1	37	23.91	23.75	23.80			
15	QPSK	1	74	23.91	23.80	23.88	24.8	0	
15	QPSK	36	0	23.88	23.66	23.66			
15	QPSK	36	36	23.91	23.69	23.69			
15	QPSK	75	0	23.22	22.96	22.96			
15	QPSK	75	37	23.22	22.93	22.97			
15	QPSK	75	74	23.24	22.93	22.93	23.8	1	
15	16QAM	1	0	23.22	22.93	22.97			
15	16QAM	1	37	23.24	22.93	22.97			
15	16QAM	1	74	23.24	22.93	22.93	23.8	1	
15	16QAM	36	0	22.20	21.88	21.88			
15	16QAM	36	36	22.21	21.89	21.89			
15	16QAM	36	72	22.15	21.81	22.07	22.8	2	
15	16QAM	75	0	22.24	21.82	22.00			
15	16QAM	75	37	22.25	21.83	22.01			
15	16QAM	75	74	22.25	21.82	22.01	21.8	5	
15	64QAM	1	0	22.17	21.89	22.09			
15	64QAM	1	37	22.17	21.89	22.09			
15	64QAM	1	74	22.19	21.88	22.10	21.8	2	
15	64QAM	36	0	21.21	21.35	21.35			
15	64QAM	36	36	21.21	21.35	21.35			
15	64QAM	36	72	21.21	21.35	21.35	21.8	3	
15	64QAM	75	0	21.19	21.32	21.31			
15	64QAM	75	37	21.19	21.32	21.31			
15	64QAM	75	74	21.19	21.32	21.31	21.8	5	
15	256QAM	1	0	19.08	19.27	19.27			
15	256QAM	1	37	19.08	19.27	19.27			
15	256QAM	1	74	19.23	19.34	19.34	19.8	5	
15	256QAM	36	0	19.23	19.34	19.34			
15	256QAM	36	36	19.23	19.34	19.34			
15	256QAM	36	72	19.23	19.34	19.34	19.8	5	
15	256QAM	75	0	19.40	19.42	19.43			
15	256QAM	75	37	19.40	19.42	19.43			
15	256QAM	75	74	19.40	19.42	19.43	19.8	5	
Channel				38250	38300	38350			
Frequency (MHz)				2775	2790	2805			
10	QPSK	1	0	24.10	23.84	23.92			
10	QPSK	1	24	23.98	23.88	23.96			
10	QPSK	1	48	24.10	23.82	24.00	24.8	0	
10	QPSK	36	0	23.17	22.92	23.11			
10	QPSK	36	36	23.18	22.93	23.12			
10	QPSK	36	72	23.18	22.94	23.12	23.8	1	
10	QPSK	56	0	23.20	22.92	23.12			
10	16QAM	1	0	23.24	22.96	23.16			
10	16QAM	1	36	23.26	22.95	23.17			
10	16QAM	1	72	23.24	22.92	23.13	23.8	1	
10	16QAM	36	0	22.09	21.80	22.00			
10	16QAM	36	36	22.10	21.81	22.01			
10	16QAM	36	72	22.09	21.79	22.00	22.8	2	
10	16QAM	56	0	22.22	21.97	22.15			
10	16QAM	56	36	22.23	21.98	22.16			
10	16QAM	56	72	22.23	21.97	22.16	22.8	2	
10	64QAM	1	0	22.22	22.11	22.22			
10	64QAM	1	36	22.23	22.12	22.23			
10	64QAM	1	72	22.21	22.10	22.21	22.8	2	
10	64QAM	36	0	21.19	21.33	21.33			
10	64QAM	36	36	21.19	21.33	21.33			
10	64QAM	36	72	21.19	21.33	21.33	21.8	3	
10	64QAM	56	0	21.11	21.30	21.31			
10	64QAM	56	36	21.11	21.30	21.31			
10	64QAM	56	72	21.11	21.30	21.31	21.8	5	
10	256QAM	1	0	19.40	19.58	19.59			
10	256QAM	1	36	19.40	19.58	19.59			
10	256QAM	1	72	19.32	19.51	19.51	19.8	5	
10	256QAM	36	0	19.40	19.58	19.58			
10	256QAM	36	36	19.40	19.58	19.58			
10	256QAM	36	72	19.40	19.58	19.58	19.8	5	
10	256QAM	56	0	19.23	19.46	19.45			
10	256QAM	56	36	19.23	19.46	19.45			
10	256QAM	56	72	19.23	19.46	19.45	19.8	5	
Channel				38350	38400	38450			
Frequency (MHz)				2872.5	2887.5	2902.5			
5	QPSK	1	0	24.03	23.86	23.91			
5	QPSK	1	12	23.98	23.88	23.96			
5	QPSK	1	24	24.02	23.81	23.98	24.8	0	
5	QPSK	12	0	23.17	22.91	23.17			
5	QPSK	12	12	23.18	22.96	23.19			
5	QPSK	12	24	23.23	22.98	23.17	23.8	1	
5	QPSK	36	0	23.22	22.93	23.11			
5	QPSK	36	12	23.23	22.94	23.12			
5	QPSK	36	24	23.24	22.95	23.13	23.8	1	
5	16QAM	1	0	23.26	22.97	23.19			
5	16QAM	1	12	23.27	22.98	23.21			
5	16QAM	1	24	23.29	22.98	23.23	23.8	1	
5	16QAM	12	0	22.09	21.80	22.00			
5	16QAM	12	12	22.10	21.81	22.01			
5	16QAM	12	24	22.09	21.79	22.00	22.8	2	
5	16QAM	36	0	22.11	21.82	22.03			
5	16QAM	36	12	22.11	21.82	22.03			
5	16QAM	36	24	22.11	21.82	22.03	22.8	2	
5	64QAM	1	0	21.88	21.67	21.91			
5	64QAM	1	12	21.88	21.67	21.91			
5	64QAM	1	24	21.88	21.67	21.91	21.8	2	
5	64QAM	12	0	21.19	21.32	21.32			
5	64QAM	12	12	21.19	21.32	21.32			
5	64QAM	12	24	21.19	21.32	21.32	21.8	3	
5	64QAM	36	0	21.19	21.32	21.32			
5	64QAM	36	12	21.19	21.32	21.32			
5	64QAM	36	24	21.19	21.32	21.32	21.8	5	
5	256QAM	1	0	19.12	19.31	19.31			
5	256QAM	1	12	19.12	19.31	19.31			
5	256QAM	1	24	19.13	19.40	19.40	19.8	5	
5	256QAM	12	0	19.12	19.31	19.31			
5	256QAM	12	12	19.12	19.31	19.31			
5	256QAM	12	24	19.12	19.31	19.31	19.8	5	
5	256QAM	36	0	19.23	19.46	19.45			
5	256QAM	36	12	19.23	19.46	19.45			
5	256QAM	36	24	19.23	19.46	19.45	19.8	5	

Band 41 (2.6G Band)

BW [MHz]	Modulation	RB Size	RB Offset	Power				Turn-up time (dBm)	MPR (dB)
				Low	Mid	High	Power Hdr		
Channel				39750	40185	40620	41055	41490	



Reduced power for Hotspot on-LAT

Band	CDMA 1X			Turn-up Limit (dBm)	WCDMA EV			Turn-up Limit (dBm)
	9452	9450	9438		1412	1413	1413	
Tx Channel	9452	9450	9438	1412	1413	1413	1413	
Frequency (MHz)	1852.4	1850	1847.8	1712.4	1712.5	1712.5	1712.4	
ISMP Max dB	19.82	19.68	19.65	20.30	20.29	20.36	20.36	
ISMP Min dB	18.86	18.74	18.74	20.30	20.32	20.44	20.40	
ISMP Max E	18.74	18.81	18.87	19.30	19.32	19.30	19.44	
ISMP Min E	18.74	18.80	18.87	19.30	19.40	19.30	19.42	
ISMP Max S	18.70	18.71	18.73	18.88	18.92	18.93	18.94	
ISMP Min S	18.22	18.20	18.16	18.80	18.80	18.97	18.92	
ISMP Max C	18.85	18.79	18.57	19.30	19.37	19.35	19.27	
ISMP Min C	18.83	18.72	18.51	19.30	19.30	19.37	19.29	
ISMP Max U	18.21	18.24	18.02	18.88	18.79	18.91	18.84	
ISMP Min U	18.00	18.12	18.08	18.80	18.77	18.89	18.82	
ISMP Max V	18.82	18.87	18.49	19.30	19.28	19.24	19.24	
ISMP Min V	18.74	18.82	18.70	17.30	17.56	17.87	17.81	
ISMP Max W	18.72	18.80	18.88	18.30	18.41	18.58	18.48	
ISMP Min W	18.49	18.82	18.40	17.38	17.56	17.42	18.08	
ISMP Max X	18.70	18.80	18.80	19.30	19.32	19.82	19.82	
ISMP Min X	18.72	18.88	18.75	17.48	17.82	17.81	18.88	

Band	CDMA BC1			Turn-up Limit (dBm)
	94	900	3170	
Tx Channel	1851.23	1850	1848.73	1413
Frequency (MHz)	1851.23	1850	1848.73	1413
ISMP Max	20.88	20.82	20.88	22.00
ISMP Min	20.88	20.71	20.82	22.00
ISMP Max E	20.85	20.80	20.83	22.00
ISMP Min E	20.84	20.88	20.82	22.00
ISMP Max S	20.82	20.88	20.80	22.00
ISMP Min S	20.80	20.80	20.78	22.00



Band 2 (1900MHz Band)										
Part 24E										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. / Freq. (1670)	Power Ch. / Freq. (1680)	Power Ch. / Freq. (1700)	Turn-up (dB)	MPR (dB)		
Frequency (MHz)	Channel									
20	QPSK	1	0	19.36	19.60	19.50				
20	QPSK	1	49	19.37	19.63	19.60	20.8	0		
20	QPSK	1	99	19.44	19.64	19.70				
20	QPSK	1	149	19.37	19.68	19.70				
20	QPSK	50	24	19.41	19.62	19.68				
20	QPSK	50	74	19.34	19.60	19.66	20.8	0		
20	QPSK	100	0	19.40	19.60	19.60				
20	16QAM	1	0	19.62	19.67	19.67				
20	16QAM	1	49	19.57	19.63	19.68	20.8	0		
20	16QAM	1	99	19.53	19.61	19.62				
20	16QAM	50	0	19.57	19.60	19.62				
20	16QAM	50	24	19.59	19.57	19.59	20.8	0		
20	16QAM	50	74	19.67	19.59	19.54				
20	16QAM	100	0	19.59	19.67	19.68				
20	64QAM	1	0	19.62	19.63	19.69				
20	64QAM	1	49	19.53	19.58	19.67	20.8	0		
20	64QAM	1	99	19.45	19.55	19.51				
20	64QAM	50	0	19.57	19.52	19.52				
20	64QAM	50	24	19.51	19.52	19.52	20.8	0		
20	64QAM	50	74	19.62	19.58	19.65				
20	64QAM	100	0	19.58	19.67	19.62				
20	256QAM	1	0	19.66	19.66	19.64				
20	256QAM	1	49	19.03	19.07	19.06	19.8	1		
20	256QAM	1	99	19.00	19.04	19.09				
20	256QAM	50	0	19.03	19.03	19.03				
20	256QAM	50	24	19.06	19.06	19.02				
20	256QAM	50	74	19.52	19.03	19.06	19.8	1		
20	256QAM	100	0	19.04	19.04	19.02				

Band 2 (1900MHz Band)										
Part 24E (continued)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. / Freq. (1670)	Power Ch. / Freq. (1680)	Power Ch. / Freq. (1700)	Turn-up (dB)	MPR (dB)		
Frequency (MHz)	Channel									
15	QPSK	1	0	19.28	19.52	19.42				
15	QPSK	1	37	19.30	19.40	19.52	20.8	0		
15	QPSK	74	0	19.34	19.64	19.64				
15	QPSK	36	0	19.28	19.43	19.52				
15	QPSK	36	20	19.41	19.57	19.61	20.8	0		
15	QPSK	36	39	19.33	19.43	19.52				
15	QPSK	75	0	19.36	19.50	19.58				
15	16QAM	1	0	19.51	19.57	19.58				
15	16QAM	1	37	19.42	19.45	19.51	20.8	0		
15	16QAM	36	0	19.38	19.49	19.56				
15	16QAM	36	20	19.54	19.55	19.59	20.8	0		
15	16QAM	36	39	19.39	19.49	19.54				
15	16QAM	75	0	19.39	19.51	19.51				
15	64QAM	1	0	19.57	19.49	19.40				
15	64QAM	1	37	19.49	19.47	19.53	20.8	0		
15	64QAM	36	0	19.46	19.46	19.49				
15	64QAM	36	20	19.46	19.47	19.57	20.8	0		
15	64QAM	36	39	19.37	19.37	19.47				
15	64QAM	75	0	19.57	19.63	19.52				
15	256QAM	1	0	19.03	19.05	19.05				
15	256QAM	1	37	19.00	19.07	19.06	19.8	1		
15	256QAM	36	0	19.03	19.03	19.03				
15	256QAM	36	20	19.05	19.02	19.09	20.8	0		
15	256QAM	75	0	19.06	19.06	19.06				
15	64QAM	1	0	19.57	19.49	19.40				
15	64QAM	1	37	19.49	19.47	19.53	20.8	0		
15	64QAM	36	0	19.46	19.46	19.49				
15	64QAM	36	20	19.46	19.47	19.57	20.8	0		
15	64QAM	36	39	19.37	19.37	19.47				
15	64QAM	75	0	19.57	19.63	19.52				
15	256QAM	1	0	19.03	19.05	19.05				
15	256QAM	1	37	19.00	19.07	19.06	19.8	1		
15	256QAM	36	0	19.03	19.03	19.03				
15	256QAM	36	20	19.05	19.02	19.09	20.8	0		
15	256QAM	75	0	19.06	19.06	19.06				
15	64QAM	1	0	19.57	19.49	19.40				
15	64QAM	1	37	19.49	19.47	19.53	20.8	0		
15	64QAM	36	0	19.46	19.46	19.49				
15	64QAM	36	20	19.46	19.47	19.57	20.8	0		
15	64QAM	36	39	19.37	19.37	19.47				
15	64QAM	75	0	19.57	19.63	19.52				
15	256QAM	1	0	19.03	19.05	19.05				
15	256QAM	1	37	19.00	19.07	19.06	19.8	1		
15	256QAM	36	0	19.03	19.03	19.03				
15	256QAM	36	20	19.05	19.02	19.09	20.8	0		
15	256QAM	75	0	19.06	19.06	19.06				

Band 4 (AMS Band)										
Part 27L (only on channel required)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. / Freq. (2090)	Power Ch. / Freq. (2075)	Power Ch. / Freq. (2030)	Turn-up (dB)	MPR (dB)		
Frequency (MHz)	Channel									
20	QPSK	1	0	20.09	20.31	20.21				
20	QPSK	1	49	19.96	20.13	20.11	21.2	0		
20	QPSK	1	99	20.00	19.91	19.92				
20	QPSK	50	24	20.07	20.16	20.19				
20	QPSK	50	74	20.03	20.10	20.12	21.2	0		
20	16QAM	1	0	20.08	20.10	20.15				
20	16QAM	1	49	20.08	20.16	20.07	21.2	0		
20	16QAM	1	99	20.13	20.12	20.18				
20	16QAM	50	24	20.10	20.19	20.10				
20	16QAM	50	74	20.01	20.06	20.07	21.2	0		
20	16QAM	100	0	20.08	20.06	20.06				
20	64QAM	1	0	20.07	20.14	20.13				
20	64QAM	1	49	19.94	20.16	20.16	21.2	0		
20	64QAM	1	99	20.11	20.15	20.17				
20	64QAM	50	24	20.19	20.19	20.06				
20	64QAM	50	74	20.23	20.19	20.08	21.2	0		
20	64QAM	100	0	20.13	20.09	20.12				
20	256QAM	1	0	19.15	19.26	19.26				
20	256QAM	1	49	19.10	19.23	19.12	19.8	1.4		
20	256QAM	1	99	19.08	19.19	19.19				
20	256QAM	50	24	19.08	19.05	19.01				
20	256QAM	50	74	19.57	19.03	19.09	19.8	1.4		
20	256QAM	100	0	19.02	19.02	19.02				

Band 4 (AMS Band)										
Part 27L (continued)										
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. / Freq. (2090)	Power Ch. / Freq. (2075)	Power Ch. / Freq. (2030)	Turn-up (dB)	MPR (dB)		
Frequency (MHz)	Channel									
15	QPSK	1	0	20.02	20.30	20.10				
15	QPSK	1	37	19.92	20.07	19.96	21.2	0		
15	QPSK	36	0	19.92	19.76	19.88				
15	QPSK	36	20	19.97	20.03	20.09	21.2	0		
15	QPSK	75	0	19.98	19.10	19.09				
15	16QAM	1	0	19.77	19.56	19.59				
15	16QAM	1	37	19.62	19.16	19.21	21.2	0		
15	16QAM	36	0	19.69	19.12	19.05				
15	16QAM	36	20	19.65	19.09	19.00	21.2	0		
15	16QAM	75	0	19.05	19.04	19.04				
15	64QAM	1	0	19.52	19.02	19.08				
15	64QAM	1	37	19.44	19.05	19.09	21.2	0		
15	64QAM	36	0	19.43	19.02	19.04				
15	64QAM	36	20	19.45	19.08	19.04	21.2	0		
15	64QAM	75	0	19.51	19.07	19.18				
15	256QAM	1	0	19.08	19.13	19.07				
15	256QAM	1	37	19.09	19.11	19.12	19.8	1.4		
15	256QAM	36	0	19.03	19.16	19.16				
15	256QAM	36	20	19.05	19.02	19.07	20.8	0		
15	256QAM	75	0	19.02	19.06	19.02				



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

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch / Freq.	Power Mid Ch / Freq.	Power High Ch / Freq.	Turn-up (dB)	MPR (dB)
Channel								
Frequency (MHz)								
10	QPSK	1	0	22.82	22.77	22.79	24	0
10	QPSK	1	24	22.83	22.86	22.85		
10	QPSK	1	48	22.86	22.92	22.82		
10	QPSK	25	0	22.81	22.88	22.88		
10	QPSK	25	12	22.83	22.88	22.77	24	0
10	QPSK	25	24	22.86	22.90	22.80		
10	QPSK	25	36	22.88	22.96	22.80		
10	QPSK	25	48	22.90	22.98	22.80		
10	16QAM	1	0	22.85	22.80	22.80	24	0
10	16QAM	1	24	22.88	22.90	22.82		
10	16QAM	1	48	22.86	22.75	22.65		
10	16QAM	25	0	22.82	21.80	21.80	23	1
10	16QAM	25	12	21.95	21.84	21.79		
10	16QAM	25	24	21.73	21.78	21.88		
10	16QAM	50	0	21.86	21.81	21.88		
10	84QAM	1	0	21.97	21.78	22.01	23	1
10	84QAM	1	24	22.24	22.28	22.17		
10	84QAM	1	48	21.97	22.13	21.91		
10	84QAM	25	0	20.90	20.90	20.95	22	2
10	84QAM	25	12	20.98	20.97	20.90		
10	84QAM	25	24	20.81	20.93	20.99		
10	84QAM	50	0	20.86	20.87	20.84	19.8	4.2
10	84QAM	50	12	19.98	19.91	19.96		
10	256QAM	1	24	19.05	19.07	19.04	19.8	4.2
10	256QAM	1	48	19.01	18.95	19.02		
10	256QAM	25	0	18.93	18.96	18.90	19.8	4.2
10	256QAM	25	12	18.99	19.02	18.99		
10	256QAM	25	24	18.97	19.00	18.96		
10	256QAM	50	0	18.94	19.00	18.95	19.8	4.2
Channel								
Frequency (MHz)								
5	QPSK	1	0	22.67	22.72	22.70	24	0
5	QPSK	1	12	22.77	22.71	22.76		
5	QPSK	12	0	22.67	22.83	22.84	24	0
5	QPSK	12	7	22.70	22.86	22.86		
5	QPSK	12	14	22.81	22.99	22.80		
5	QPSK	25	0	22.83	22.77	22.68		
5	16QAM	1	0	22.83	22.69	22.87	24	0
5	16QAM	1	12	22.66	22.76	22.73		
5	16QAM	12	0	21.91	21.80	21.83	23	1
5	16QAM	12	0	21.91	21.76	21.75		
5	16QAM	12	7	21.93	21.73	21.78		
5	16QAM	12	14	21.86	21.96	22.11		
5	16QAM	25	0	21.86	21.71	21.80	23	1
5	84QAM	1	0	21.86	21.62	21.62	23	1
5	84QAM	1	12	22.21	22.23	22.14		
5	84QAM	12	0	20.95	20.95	20.99	22	2
5	84QAM	12	7	20.96	20.79	20.85		
5	84QAM	12	14	20.94	20.91	20.79		
5	84QAM	25	0	20.96	20.77	20.88	19.8	4.2
5	256QAM	1	0	18.97	18.99	18.94	19.8	4.2
5	256QAM	1	12	18.91	18.95	18.92		
5	256QAM	12	0	18.96	18.96	18.96	19.8	4.2
5	256QAM	12	0	18.98	18.94	18.86		
5	256QAM	12	7	18.93	18.93	18.97	19.8	4.2
5	256QAM	12	14	18.96	18.92	18.85		
Channel								
Frequency (MHz)								
3	QPSK	1	0	22.74	22.77	22.74	24	0
3	QPSK	1	14	22.84	22.88	22.82		
3	QPSK	8	0	22.69	22.79	22.78	24	0
3	QPSK	8	7	22.86	22.89	22.86		
3	QPSK	15	0	22.73	22.80	22.72		
3	16QAM	1	0	22.76	22.75	22.82	24	0
3	16QAM	1	14	22.73	22.83	22.48		
3	16QAM	8	0	21.90	21.83	21.78	23	1
3	16QAM	8	4	21.86	21.89	21.87		
3	16QAM	8	7	21.71	21.78	21.75		
3	16QAM	15	0	21.91	21.70	21.83	23	1
3	84QAM	1	0	21.97	21.65	21.69	23	1
3	84QAM	1	14	21.97	22.12	21.76		
3	84QAM	8	0	20.77	20.91	20.71	22	2
3	84QAM	8	4	20.94	20.91	20.79		
3	84QAM	8	7	20.72	20.93	20.83		
3	84QAM	15	0	20.87	20.83	20.81	19.8	4.2
3	256QAM	1	0	18.96	18.90	19.04	19.8	4.2
3	256QAM	1	14	19.04	18.98	18.96		
3	256QAM	8	0	18.96	18.93	18.91	19.8	4.2
3	256QAM	8	4	18.94	18.95	18.97		
3	256QAM	8	7	18.93	18.91	18.89		
3	256QAM	15	0	18.95	18.95	18.90	19.8	4.2
Channel								
Frequency (MHz)								
1.4	QPSK	1	0	22.60	22.64	22.63	24	0
1.4	QPSK	1	3	22.76	22.73	22.75		
1.4	QPSK	1	5	22.75	22.90	22.70		
1.4	QPSK	3	0	22.70	22.78	22.74	24	0
1.4	QPSK	3	3	22.78	22.71	22.65		
1.4	QPSK	3	3	22.79	22.75	22.74		
1.4	16QAM	1	0	22.78	22.87	22.69	24	0
1.4	16QAM	1	3	22.86	22.89	22.89		
1.4	16QAM	1	5	22.73	22.84	22.82	24	0
1.4	16QAM	3	0	22.97	22.97	22.90		
1.4	16QAM	3	3	22.33	22.28	22.29		
1.4	16QAM	3	3	22.13	22.28	22.27		
1.4	16QAM	8	0	21.87	21.73	21.73	23	1
1.4	84QAM	1	0	22.80	21.71	21.83	23	1
1.4	84QAM	1	3	22.24	22.16	22.09		
1.4	84QAM	1	5	21.89	22.00	21.89	23	1
1.4	84QAM	3	0	21.92	21.87	21.82		
1.4	84QAM	3	3	21.87	21.45	21.47		
1.4	84QAM	3	3	21.45	21.51	21.46		
1.4	84QAM	8	0	20.83	20.87	20.83	22	2
1.4	256QAM	1	0	19.04	18.91	18.95	19.8	4.2
1.4	256QAM	1	3	18.91	18.98	18.92		
1.4	256QAM	1	5	18.96	19.05	18.92	19.8	4.2
1.4	256QAM	3	0	18.96	18.93	18.90		
1.4	256QAM	3	3	18.90	18.96	18.95		
1.4	256QAM	3	3	18.84	18.86	18.87	19.8	4.2
1.4	256QAM	8	0	18.90	19.01	18.95	19.8	4.2

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

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch / Freq.	Power Mid Ch / Freq.	Power High Ch / Freq.	Turn-up (dB)	MPR (dB)
Channel								
Frequency (MHz)								
10	QPSK	1	0	22.74	22.69	22.71	24	0
10	QPSK	1	24	22.66	22.77	22.71		
10	QPSK	1	48	22.67	22.87	22.84		
10	QPSK	25	0	22.69	22.73	22.69	24	0
10	QPSK	25	12	22.79	22.76	22.71		
10	QPSK	25	24	22.85	22.84	22.82		
10	QPSK	25	36	22.83	22.81	22.90		
10	16QAM	1	0	22.75	22.84	22.74	24	0
10	16QAM	1	24	22.77	22.83	22.78		
10	16QAM	1	48	22.77	22.81	22.71		
10	16QAM	25	0	21.75	21.80	21.87	23	1
10	16QAM	25	12	21.91	21.78	21.78		
10	16QAM	25	24	21.90	21.83	21.83		
10	16QAM	50	0	21.75	21.82	21.89		
10	84QAM	1	0	21.80	21.71	21.74	23	1
10	84QAM	1	24	21.87	21.87	21.84		
10	84QAM	1	48	21.84	21.88	21.97		
10	84QAM	25	0	20.87	20.88	20.83	22	2
10	84QAM	25	12	20.93	20.89	20.83		
10	84QAM	25	24	20.79	20.83	20.78		
10	84QAM	50	0	20.76	20.88	20.70	19.8	4.2
10	256QAM	1	0	19.00	19.10	19.07	19.8	4.2
10	256QAM	1	24	19.08	19.08	19.02		
10	256QAM	1	48	19.03	19.07	19.03	19.8	4.2
10	256QAM	25	0	19.08	19.11	19.06		
10	256QAM	25	12	19.04	19.05	19.02		
10	256QAM	25	24	19.00	19.01	18.99	19.8	4.2
10	256QAM	50	0	19.02	19.03	19.01	19.8	4.2
Channel								
Frequency (MHz)								
5	QPSK	1	0	22.67	22.60	22.67	24	0
5	QPSK	1	12	22.49	22.40	22.52		
5	QPSK	12	0	22.60	22.84	22.89	24	0
5	QPSK	12	7	22.61	22.99	22.80		
5	QPSK	25	0	22.68	22.62	22.67	24	0



MINISTRY OF NATIONAL DEFENSE

Band 30									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power High Ch. / Freq.	Power Max Ch. / Freq.	Turn-up (dBm)	MPR (dB)	
Channel									
Frequency (MHz)									
10	QPSK	1	0	20.83	20.83	20.83	21.7	0	
10	QPSK	1	26	20.83	20.83	20.83	21.7	0	
10	QPSK	1	49	20.78	20.78	20.78	21.7	0	
10	QPSK	25	0	20.73	20.73	20.73	21.7	0	
10	QPSK	25	12	20.68	20.68	20.68	21.7	0	
10	QPSK	25	25	20.70	20.70	20.70	21.7	0	
10	QPSK	50	0	20.63	20.63	20.63	21.7	0	
10	16QAM	1	0	20.75	20.75	20.75	21.7	0	
10	16QAM	1	26	20.80	20.80	20.80	21.7	0	
10	16QAM	1	49	20.58	20.58	20.58	21.7	0	
10	16QAM	25	0	20.53	20.53	20.53	21.7	0	
10	16QAM	25	12	20.55	20.55	20.55	21.7	0	
10	16QAM	25	25	20.64	20.64	20.64	21.7	0	
10	16QAM	50	0	20.48	20.48	20.48	21.7	0	
10	16QAM	1	0	20.65	20.65	20.65	21.7	0	
10	16QAM	1	26	20.76	20.76	20.76	21.7	0	
10	16QAM	1	49	20.77	20.77	20.77	21.7	0	
10	16QAM	25	0	20.57	20.57	20.57	21.7	0	
10	16QAM	25	12	20.54	20.54	20.54	21.7	0	
10	16QAM	25	25	20.79	20.79	20.79	21.7	0	
10	16QAM	50	0	20.76	20.76	20.76	21.7	0	
10	256QAM	1	0	19.93	19.93	19.93	19.7	2	
10	256QAM	1	26	19.13	19.13	19.13	19.7	2	
10	256QAM	1	49	19.68	19.68	19.68	19.7	2	
10	256QAM	25	0	19.20	19.20	19.20	19.7	2	
10	256QAM	25	12	18.97	18.97	18.97	19.7	2	
10	256QAM	25	25	18.93	18.93	18.93	19.7	2	
10	256QAM	50	0	18.94	18.94	18.94	19.7	2	
Channel									
Frequency (MHz)									
8	QPSK	1	0	20.74	20.69	20.72	21.7	0	
8	QPSK	1	12	20.74	20.71	20.73	21.7	0	
8	QPSK	1	24	20.65	20.61	20.69	21.7	0	
8	QPSK	12	0	20.58	20.53	20.64	21.7	0	
8	QPSK	12	7	20.68	20.64	20.64	21.7	0	
8	QPSK	12	13	20.58	20.52	20.48	21.7	0	
8	QPSK	25	0	20.67	20.78	20.69	21.7	0	
8	16QAM	1	0	20.58	20.51	20.64	21.7	0	
8	16QAM	1	12	20.73	20.74	20.73	21.7	0	
8	16QAM	1	24	20.47	20.41	20.48	21.7	0	
8	16QAM	12	0	20.33	20.32	20.37	21.7	0	
8	16QAM	12	7	20.43	20.38	20.38	21.7	0	
8	16QAM	12	13	20.65	20.48	20.48	21.7	0	
8	16QAM	25	0	20.41	20.48	20.48	21.7	0	
8	16QAM	1	0	20.65	20.73	20.75	21.7	0	
8	16QAM	1	12	20.58	20.59	20.51	21.7	0	
8	16QAM	1	24	20.67	20.65	20.64	21.7	0	
8	16QAM	12	0	20.23	20.30	20.30	21.7	0	
8	16QAM	12	7	20.73	20.71	20.71	21.7	0	
8	16QAM	12	13	20.68	20.72	20.76	21.7	0	
8	256QAM	1	0	18.98	18.92	18.95	19.7	2	
8	256QAM	1	0	18.99	18.95	18.93	19.7	2	
8	256QAM	1	12	18.94	18.95	18.99	19.7	2	
8	256QAM	1	0	18.98	18.92	18.95	19.7	2	
8	256QAM	12	0	18.79	18.85	18.92	19.7	2	
8	256QAM	12	7	18.69	18.71	18.70	19.7	2	
8	256QAM	12	13	18.78	18.71	18.81	19.7	2	
8	256QAM	25	0	18.98	18.95	18.93	19.7	2	

Band 66									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power High Ch. / Freq.	Power Max Ch. / Freq.	Turn-up (dBm)	MPR (dB)	
Channel									
Frequency (MHz)									
20	QPSK	1	0	20.14	20.17	20.27	21.2	0	
20	QPSK	1	49	20.10	20.28	20.28	21.2	0	
20	QPSK	1	99	20.03	20.16	20.15	21.2	0	
20	QPSK	50	0	20.04	20.27	20.19	21.2	0	
20	QPSK	50	24	20.12	20.35	20.28	21.2	0	
20	QPSK	50	50	19.97	20.22	20.13	21.2	0	
20	QPSK	100	0	20.10	20.33	20.25	21.2	0	
20	16QAM	1	0	20.32	20.19	20.24	21.2	0	
20	16QAM	1	49	19.94	20.29	20.27	21.2	0	
20	16QAM	1	99	20.28	20.28	20.22	21.2	0	
20	16QAM	50	0	20.03	20.30	20.23	21.2	0	
20	16QAM	50	24	20.10	20.03	20.28	21.2	0	
20	16QAM	50	50	20.13	20.18	20.10	21.2	0	
20	16QAM	100	0	20.08	20.34	20.26	21.2	0	
20	16QAM	1	0	20.22	20.28	20.27	21.2	0	
20	16QAM	1	49	20.11	20.25	20.25	21.2	0	
20	16QAM	1	99	20.12	20.25	20.25	21.2	0	
20	16QAM	50	0	20.02	20.29	20.15	21.2	0	
20	16QAM	50	24	20.21	20.21	19.90	21.2	0	
20	16QAM	50	50	20.20	20.13	20.15	21.2	0	
20	16QAM	100	0	20.03	20.30	20.12	21.2	0	
20	16QAM	36	0	19.07	19.08	19.08	19.7	1.5	
20	256QAM	1	49	19.06	19.04	19.05	19.7	1.5	
20	256QAM	1	99	19.04	19.02	19.02	19.7	1.5	
20	256QAM	36	0	18.98	18.98	18.98	19.7	1.5	
20	256QAM	36	24	18.89	18.90	18.89	19.7	1.5	
20	256QAM	50	0	18.85	18.88	18.87	19.7	1.5	
20	256QAM	100	0	18.87	18.88	18.84	19.7	1.5	
Channel									
Frequency (MHz)									
15	QPSK	1	0	20.09	20.14	20.27	21.2	0	
15	QPSK	1	37	20.05	20.14	20.12	21.2	0	
15	QPSK	1	74	19.94	20.10	20.06	21.2	0	
15	QPSK	36	0	20.03	20.19	20.09	21.2	0	
15	QPSK	36	20	20.01	20.32	20.18	21.2	0	
15	QPSK	36	37	19.99	20.11	20.11	21.2	0	
15	QPSK	75	0	20.02	20.23	20.10	21.2	0	
15	16QAM	1	0	20.19	20.12	20.10	21.2	0	
15	16QAM	1	37	19.91	20.21	20.23	21.2	0	
15	16QAM	1	74	20.25	20.18	20.18	21.2	0	
15	16QAM	36	0	19.99	20.02	20.09	21.2	0	
15	16QAM	36	20	19.97	19.97	20.15	21.2	0	
15	16QAM	36	37	19.99	20.08	20.08	21.2	0	
15	16QAM	75	0	20.03	20.07	19.98	21.2	0	
15	16QAM	1	0	20.11	20.24	20.20	21.2	0	
15	16QAM	1	37	20.05	20.11	20.20	21.2	0	
15	16QAM	1	74	20.07	20.15	20.07	21.2	0	
15	16QAM	36	0	20.13	20.15	19.78	21.2	0	
15	16QAM	36	20	20.12	20.21	19.93	21.2	0	
15	16QAM	36	37	19.98	20.14	20.13	21.2	0	
15	16QAM	75	0	19.88	19.93	20.02	21.2	0	
15	256QAM	1	0	18.97	18.98	18.99	19.7	1.5	
15	256QAM	1	37	18.93	18.93	18.94	19.7	1.5	
15	256QAM	1	74	18.95	18.99	18.92	19.7	1.5	
15	256QAM	36	0	18.85	18.89	18.90	19.7	1.5	
15	256QAM	36	20	18.85	18.87	18.89	19.7	1.5	
15	256QAM	36	37	18.97	18.98	18.94	19.7	1.5	
15	256QAM	75	0	18.79	18.79	18.74	19.7	1.5	
Channel									
Frequency (MHz)									
10	QPSK	1	0	20.08	20.27	20.25	21.2	0	
10	QPSK	1	49	19.90	20.07	20.08	21.2	0	
10	QPSK	25	0	20.02	20.18	20.15	21.2	0	
10	QPSK	25	12	20.11	20.34	20.26	21.2	0	
10	QPSK	25	25	19.85	20.08	20.13	21.2	0	
10	QPSK	50	0	20.01	20.21	20.16	21.2	0	
10	QPSK	1	0	20.29	20.17	20.10	21.2	0	
10	16QAM	25	0	19.80	19.81	20.11	21.2	0	
10	16QAM	1	0	20.12	20.27	20.19	21.2	0	
10	16QAM	25	0	19.96	20.03	20.03	21.2	0	
10	16QAM	25	12	20.03	20.09	20.09	21.2	0	
10	16QAM	25	25	20.07	20.05	20.04	21.2		



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 2, 20 QPSK 3, 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 2, 20 QPSK 3, 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 2, 20 QPSK 3, etc.



Reduced power for Sensor on-LAT

Band	WCDMA II			Time-to- Limit (min)	WCDMA IV			Time-to- Limit (min)
	TA Channel	9402	9406		9408	1172	1174	
Frequency (MHz)	9402	9406	9408		1172	1174	1176	
SCPP Ref ID	1102.4	1102	1107.6		1172.4	1172.6	1172.8	
SCPP Ref ID	1488.12 (30bps)	15.62	15.68	15.66	20.30	20.36	20.36	21.06
SCPP Ref ID	RNC 12 (30bps)	15.66	15.75	15.74	20.30	20.32	20.44	21.00
SCPP Ref ID	HSPA Subtest-1	15.73	15.81	15.87	19.30	19.32	19.35	19.44
SCPP Ref ID	HSPA Subtest-2	15.74	15.80	15.87	19.30	19.40	19.50	19.45
SCPP Ref ID	HSPA Subtest-3	15.21	15.31	15.33	18.80	18.92	19.03	18.93
SCPP Ref ID	HSPA Subtest-4	15.22	15.25	15.19	18.80	18.89	19.01	18.92
SCPP Ref ID	DC-HSPA Subtest-1	15.65	15.75	15.67	19.30	19.17	19.35	19.27
SCPP Ref ID	DC-HSPA Subtest-2	15.63	15.72	15.51	19.30	19.20	19.37	19.20
SCPP Ref ID	DC-HSPA Subtest-3	15.21	15.25	15.02	18.80	18.79	18.91	18.84
SCPP Ref ID	DC-HSPA Subtest-4	15.00	15.12	15.08	18.80	18.77	18.90	18.82
SCPP Ref ID	HSPA Subtest-1	15.62	15.67	15.49	19.30	19.20	19.38	19.34
SCPP Ref ID	HSPA Subtest-2	15.74	15.80	15.70	17.30	17.58	17.61	17.61
SCPP Ref ID	HSPA Subtest-3	15.72	15.80	15.65	16.30	16.41	16.58	16.45
SCPP Ref ID	HSPA Subtest-4	15.49	15.62	15.49	17.30	17.38	17.58	17.42
SCPP Ref ID	HSPA Subtest-5	15.70	15.80	15.60	16.30	16.32	16.62	16.52
SCPP Ref ID	HSPA (HSPA) Subtest-1	15.72	15.66	15.75	17.40	17.52	17.41	18.00

Band	CDMA BC1			Time-to- Limit (min)
	TA Channel	25	800	
Frequency (MHz)	25	800	1175	
SCPP Ref ID	20.11	20.16	20.12	21.20
SCPP Ref ID	20.10	20.14	20.11	21.20
SCPP Ref ID	20.08	20.11	20.09	21.20
SCPP Ref ID	20.05	20.11	20.05	21.20
SCPP Ref ID	20.05	20.10	20.08	21.20
SCPP Ref ID	20.04	20.08	20.06	21.20



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

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch./F.Freq.	Power Mid Ch./F.Freq.	Power High Ch./F.Freq.	Turn-up (dBm)	MPR (dB)
20	QPSK	1	0	19.84	19.84	19.88	21	0
20	QPSK	1	40	19.85	19.85	19.91		
20	QPSK	1	80	19.90	19.90	19.95		
20	QPSK	50	0	19.84	19.84	19.88		
20	QPSK	50	24	19.88	19.88	19.93		
20	QPSK	50	50	19.88	19.82	19.87		
20	QPSK	50	75	19.86	19.86	19.90		
20	QPSK	1	0	19.88	19.84	19.90		
20	16QAM	1	40	19.90	19.90	19.93		
20	16QAM	1	80	19.78	19.82	19.76		
20	16QAM	50	0	19.83	19.83	19.85		
20	16QAM	50	24	19.94	19.92	19.94		
20	16QAM	50	50	19.88	19.88	19.88		
20	16QAM	100	0	19.88	19.77	19.86		
20	16QAM	1	0	19.92	19.86	19.94		
20	16QAM	1	40	19.89	19.83	19.89		
20	16QAM	1	80	19.91	19.87	19.92		
20	16QAM	50	0	19.98	19.97	19.95		
20	16QAM	50	24	19.94	19.92	19.93		
20	16QAM	50	50	19.90	19.91	19.91		
20	16QAM	100	0	19.94	19.82	19.92		
20	256QAM	1	0	19.92	19.86	19.92		
20	256QAM	1	40	19.19	19.43	19.11	19.8	1.2
20	256QAM	1	80	19.88	19.36	19.20		
20	256QAM	50	0	19.86	19.34	19.18		
20	256QAM	50	24	19.88	19.18	19.11		
20	256QAM	50	50	19.07	19.14	19.04		
20	256QAM	100	0	19.47	19.13	19.04		
Channel								
Frequency (MHz)	Channel	Turn-up (dBm)	MPR (dB)					
1807.5	1880	19.02						
15	QPSK	1	0	19.95	19.89	19.82		
15	QPSK	1	37	19.89	19.83	19.84		
15	QPSK	1	74	19.84	19.77	19.82		
15	QPSK	36	0	19.69	19.72	19.75		
15	QPSK	36	20	19.65	19.67	19.62		
15	QPSK	36	25	19.62	19.65	19.66		
15	QPSK	75	0	19.67	19.70	19.63		
15	16QAM	1	0	19.85	19.74	19.73		
15	16QAM	1	37	19.67	19.68	19.65		
15	16QAM	1	74	19.78	19.66	19.71		
15	16QAM	36	0	19.69	19.67	19.69		
15	16QAM	36	20	19.61	19.78	19.64		
15	16QAM	36	25	19.69	19.67	19.68		
15	16QAM	75	0	19.75	19.63	19.68		
15	16QAM	1	0	19.66	19.77	19.81		
15	16QAM	1	37	19.92	19.82	19.89		
15	16QAM	1	74	19.82	19.89	19.87		
15	16QAM	36	0	19.74	19.66	19.68		
15	16QAM	36	20	19.88	19.65	19.64		
15	16QAM	36	25	19.79	19.67	19.66		
15	16QAM	75	0	19.84	19.83	19.86		
15	256QAM	1	0	19.20	19.08	19.12		
15	256QAM	1	37	19.87	19.27	19.87		1.2
15	256QAM	1	74	19.41	19.18	19.18		
15	256QAM	36	0	19.84	19.08	19.09		
15	256QAM	36	20	18.89	19.14	19.09		1.2
15	256QAM	36	25	19.84	19.07	19.09		
15	256QAM	75	0	19.11	19.16	19.08		
Channel								
Frequency (MHz)	Channel	Turn-up (dBm)	MPR (dB)					
1860	1890	19.05						
10	QPSK	1	0	19.87	19.84	19.85		
10	QPSK	1	40	19.82	19.85	19.81		
10	QPSK	25	0	19.89	19.72	19.71		
10	QPSK	25	25	19.69	19.68	19.68		
10	QPSK	50	0	19.80	19.87	19.84		
10	16QAM	1	0	19.83	19.82	19.84		
10	16QAM	1	40	19.86	19.81	19.81		
10	16QAM	1	80	19.84	19.81	19.82		
10	16QAM	25	0	19.77	19.74	19.70		
10	16QAM	25	25	19.70	19.67	19.67		
10	16QAM	50	0	19.84	19.80	19.79		
10	16QAM	1	0	19.74	19.84	19.89		
10	16QAM	1	40	19.74	19.68	19.64		
10	16QAM	25	0	19.75	19.83	19.78		
10	16QAM	25	25	19.78	19.82	19.74		
10	16QAM	50	0	19.89	19.86	19.74		
10	256QAM	1	0	19.09	19.05	19.05		1.2
10	256QAM	1	40	19.07	19.07	19.08		
10	256QAM	1	80	19.08	19.11	19.25		
10	256QAM	25	0	18.89	19.06	19.08		
10	256QAM	25	25	19.01	19.07	19.12		1.2
10	256QAM	50	0	19.10	19.07	19.08		
Channel								
Frequency (MHz)	Channel	Turn-up (dBm)	MPR (dB)					
1865	1890	19.05						
5	QPSK	1	0	19.85	19.89	19.89		
5	QPSK	1	12	19.68	19.88	19.86		
5	QPSK	1	24	19.68	19.81	19.93		
5	QPSK	12	0	19.68	19.88	19.86		
5	QPSK	12	7	19.90	19.78	19.69		
5	QPSK	12	13	19.72	19.72	19.91		
5	QPSK	25	0	19.80	19.70	19.87		
5	16QAM	1	0	19.79	19.81	19.81		
5	16QAM	1	12	19.78	19.81	19.91		
5	16QAM	1	24	19.71	19.71	19.69		
5	16QAM	12	0	19.86	19.82	19.84		
5	16QAM	12	7	19.89	19.87	19.69		
5	16QAM	12	13	19.83	19.80	19.89		
5	16QAM	25	0	19.77	19.81	19.72		
5	16QAM	1	0	19.76	19.81	19.84		
5	16QAM	1	12	19.87	19.87	19.87		
5	16QAM	1	24	19.80	19.90	19.86		
5	16QAM	12	0	19.89	19.86	19.88		
5	16QAM	12	7	19.89	19.87	19.89		
5	16QAM	12	13	19.77	19.85	19.72		
5	16QAM	25	0	19.72	19.79	19.81		
5	256QAM	1	0	19.70	19.07	19.07		1.2
5	256QAM	1	12	19.13	19.25	19.27		
5	256QAM	1	24	19.19	19.20	19.09		
5	256QAM	12	0	19.83	19.86	19.00		
5	256QAM	12	7	19.03	19.86	19.89		
5	256QAM	12	13	19.89	19.04	19.89		
5	256QAM	25	0	19.17	19.06	19.09		
Channel								
Frequency (MHz)	Channel	Turn-up (dBm)	MPR (dB)					
1865	1890	19.05						
3	QPSK	1	0	19.80	19.67	19.76		
3	QPSK	1	8	19.77	19.82	19.83		
3	QPSK	1	14	19.69	19.88	19.86		
3	QPSK	8	0	19.77	19.84	19.66		
3	QPSK	8	4	19.75	19.78	19.87		
3	QPSK	8	7	19.65	19.69	19.81		
3	16QAM	1	0	19.80	19.86	19.84		
3	16QAM	1	8	19.73	19.91	19.93		
3	16QAM	1	14	19.76	19.88	19.84		
3	16QAM	8	0	19.82	19.86	19.88		
3	16QAM	8	4	19.78	19.79	19.86		
3	16QAM	8	7	19.80	19.72	19.85		
3	16QAM	15	0	19.71	19.82	19.80		
3	16QAM	1	0	19.67	19.89	19.86		
3	16QAM	1	8	19.79	19.98	19.96		
3	16QAM	1	14	19.86	19.86	19.84		
3	16QAM	8	0	19.85	19.79	19.82		
3	16QAM	8	4	19.86	19.87	19.85		
3	16QAM	8	7	19.65	19.69	19.81		
3	16QAM	15	0	19.73	19.92	19.91		
3	256QAM	1	0	19.10	19.06	19.07		
3	256QAM	1	8	19.85	19.19	19.92		1.2
3	256QAM	1	14	19.88	19.21	19.86		
3	256QAM	8	0	19.88	19.77	19.85		
3	256QAM	8	4	19.78	19.01	19.86		1.2
3	256QAM	8	7	19.11	19.11	19.87		
3	256QAM	15	0	19.11	19.02	19.03		
Channel								
Frequency (MHz)	Channel	Turn-up (dBm)	MPR (dB)					
1867	1900	19.03						
1.4	QPSK	1	0	19.78	19.68	19.81		
1.4	QPSK	1	4	19.83	19.81	19.80		
1.4	QPSK	1	5	19.81	19.65	19.66		
1.4	QPSK	3	0	19.71	19.72	19.82		
1.4	QPSK	3	1	19.83	19.82	19.83		
1.4	QPSK	3	2	19.82	19.77	19.80		
1.4	QPSK	6	0	19.68	19.78	19.85		
1.4	16QAM	1	0	19.81	19.81	19.86		
1.4	16QAM	1	4	19.89	19.86	19.79		
1.4	16QAM	1	5	19.71	19.87	19.78		
1.4	16QAM	3	0	19.67	19.79	19.69		
1.4	16QAM	3	1	19.89	19.89	19.94		
1.4	16QAM	3	2	19.67	19.89	19.87		
1.4	16QAM	6	0	19.74	19.72	19.89		
1.4	16QAM	1	0	19.67	19.90	19.78		
1.4	16QAM	1	4	19.88	19.87	19.86		
1.4	16QAM	1	5	19.81	19.68	19.69		
1.4	16QAM	3	0	19.88	19.82	19.74		
1.4	16QAM	3	1	19.83	19.70	19.87		
1.4	16QAM	3	2	19.82	19.83	19.86		
1.4	16QAM	6	0	19.84	19.62	19.83		
1.4	256QAM	1	0	19.23	19.21	19.15		1.2
1.4	256QAM	1	4	19.87	19.20	19.84		
1.4	256QAM	1	5	19.27	19.20	19.80		
1.4	256QAM	3	0	19.86	19.18	19.95		1.2
1.4	256QAM	3	1	19.19	19.84	19.19		
1.4	256QAM	3	2	19.18	19.88	19.18		
1.4	256QAM	6	0	19.89	19.00	19.71		1.2

**Band 4 (4M5 Band)
Part 27L (only on channel required)**

BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch./F.Freq.	Power Mid Ch./F.Freq.	Power High Ch./F.Freq.	Turn-up (dBm)	MPR (dB)
20	QPSK	1	0	21.00	21.05	21.03		
20	QPSK	1	40	20.82	20.99	20.92		



Band 25 (900MHz Band) Part 24E												
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch / Freq.	Power Ch / Freq.	Power Ch / Freq.	Turn-on Time (ms)	MPR (dB)				
Channel												
Frequency (MHz)												
20	QPSK	1	0	19.93	20.01	19.98						
20	QPSK	1	49	19.95	20.05	19.97		21	0			
20	QPSK	1	99	19.94	19.97	19.97						
20	QPSK	50	0	19.95	19.97	19.98						
20	QPSK	50	24	19.93	20.02	19.94			21	0		
20	QPSK	50	50	19.88	19.92	19.90						
20	QPSK	100	0	19.96	19.98	19.97						
20	16QAM	1	0	20.01	19.94	19.90						
20	16QAM	1	49	19.89	19.97	19.95		21	0			
20	16QAM	1	99	19.90	19.92	19.97						
20	16QAM	50	0	19.98	19.98	19.98						
20	16QAM	50	24	19.85	19.81	19.78			21	0		
20	16QAM	50	50	19.73	19.83	19.82						
20	16QAM	100	0	19.99	19.98	19.78						
20	16QAM	1	49	19.95	19.94	19.98						
20	16QAM	1	99	19.84	19.95	19.93						
20	16QAM	50	0	19.98	19.98	19.98						
20	16QAM	50	24	19.95	19.89	19.88						
20	16QAM	50	50	19.79	19.85	19.82						
20	16QAM	100	0	19.94	19.92	19.89						
20	256QAM	1	0	19.84	19.89	19.84						
20	256QAM	1	49	19.12	19.08	19.20			19.8	1.2		
20	256QAM	1	99	19.09	19.07	19.09						
20	256QAM	50	0	19.04	19.07	19.07						
20	256QAM	50	24	19.08	19.13	19.08						
20	256QAM	50	50	19.12	19.92	19.15			19.8	1.2		
20	256QAM	100	0	19.87	19.88	19.94						
Channel												
Frequency (MHz)												
15	QPSK	1	0	19.72	19.88	19.92						
15	QPSK	1	49	19.86	19.81	19.81			21	0		
15	QPSK	1	99	19.85	19.72	19.82						
15	QPSK	50	0	19.77	19.82	19.82						
15	QPSK	50	24	19.77	19.79	19.89						
15	QPSK	50	50	19.85	19.85	19.82			21	0		
15	QPSK	75	0	19.77	19.87	19.87						
15	16QAM	1	0	20.00	19.80	19.84						
15	16QAM	1	49	19.84	19.79	19.82						
15	16QAM	1	99	19.79	19.79	19.84						
15	16QAM	50	0	19.82	19.73	19.64						
15	16QAM	50	24	19.87	19.84	19.87						
15	16QAM	50	50	19.89	19.85	19.86						
15	16QAM	75	0	19.89	19.80	19.82						
15	16QAM	1	0	19.75	19.70	19.80						
15	16QAM	1	49	19.76	19.78	19.82						
15	16QAM	1	99	19.82	19.73	19.64						
15	16QAM	50	0	19.73	19.84	19.75						
15	16QAM	50	24	19.89	19.72	19.88						
15	16QAM	50	50	19.89	19.79	19.88						
15	16QAM	75	0	19.89	19.89	19.89						
15	16QAM	75	0	19.89	19.89	19.89						
15	256QAM	1	0	19.29	19.89	19.87						
15	256QAM	1	49	19.01	19.85	19.82			19.8	1.2		
15	256QAM	1	99	19.01	19.85	19.82						
15	256QAM	50	0	19.87	19.85	19.84						
15	256QAM	50	24	19.87	19.85	19.72						
15	256QAM	50	50	19.12	19.01	19.36						
15	256QAM	75	0	19.87	19.85	19.84						
15	256QAM	75	0	19.87	19.85	19.84						
Channel												
Frequency (MHz)												
10	QPSK	1	0	19.84	19.89	19.87						
10	QPSK	1	49	19.83	19.82	19.88						
10	QPSK	25	0	19.89	19.82	19.80						
10	QPSK	25	25	19.85	19.84	19.78						
10	QPSK	50	0	19.80	19.80	19.77						
10	16QAM	1	0	20.03	19.79	19.79						
10	16QAM	1	49	19.85	19.72	19.80						
10	16QAM	25	0	19.83	19.79	19.78						
10	16QAM	25	25	19.85	19.81	19.71						
10	16QAM	50	0	19.82	19.84	19.86						
10	16QAM	1	0	19.85	19.87	19.87						
10	16QAM	1	49	19.88	19.74	19.82						
10	16QAM	25	0	19.79	19.79	19.73						
10	16QAM	25	25	19.74	19.84	19.78						
10	16QAM	50	0	19.86	19.82	19.86						
10	16QAM	1	0	19.29	19.82	19.88						
10	16QAM	1	49	19.84	19.89	19.82						
10	16QAM	25	0	19.82	19.80	19.84						
10	16QAM	25	25	19.07	19.12	19.00						
10	16QAM	50	0	19.87	19.87	19.81						
10	16QAM	50	0	19.77	19.87	19.81						
Channel												
Frequency (MHz)												
5	QPSK	1	0	19.88	19.83	19.87						
5	QPSK	1	12	19.81	20.05	19.72						
5	QPSK	1	24	19.82	19.85	19.75						
5	QPSK	1	36	19.87	19.85	19.85						
5	QPSK	12	7	19.85	20.03	19.80						
5	QPSK	12	13	19.72	19.71	19.88						
5	QPSK	25	0	19.83	19.83	19.84						
5	16QAM	1	0	19.80	19.82	19.77						
5	16QAM	1	12	19.79	19.84	19.87						
5	16QAM	1	24	19.85	19.80	19.88						
5	16QAM	1	36	19.86	19.85	19.85						
5	16QAM	12	7	19.75	19.81	19.75						
5	16QAM	12	13	19.71	19.82	19.73						
5	16QAM	25	0	19.82	19.84	19.87						
5	16QAM	1	0	19.82	19.74	19.78						
5	16QAM	1	12	19.81	19.89	19.89						
5	16QAM	1	24	19.79	19.75	19.88						
5	16QAM	12	0	19.89	19.83	19.85						
5	16QAM	12	7	19.82	19.89	19.87						
5	16QAM	12	13	19.89	19.75	19.89						
5	16QAM	25	0	19.71	19.84	19.79						
5	256QAM	1	0	19.04	19.03	19.05						
5	256QAM	1	12	19.04	19.04	19.09						
5	256QAM	1	24	19.13	18.87	19.92						
5	256QAM	12	0	19.86	19.84	19.87						
5	256QAM	12	7	19.82	19.89	19.84						
5	256QAM	12	13	19.86	19.88	19.81						
5	256QAM	25	0	19.82	19.89	19.84						
Channel												
Frequency (MHz)												
3	QPSK	1	0	19.90	19.87	19.98						
3	QPSK	1	8	19.72	20.00	19.79						
3	QPSK	1	14	19.73	19.85	19.85						
3	QPSK	8	0	19.86	19.86	19.82						
3	QPSK	8	4	19.72	19.94	19.89						
3	QPSK	8	7	19.87	19.74	19.78						
3	QPSK	16	0	19.71	19.79	19.75						
3	16QAM	1	0	19.84	19.83	19.85						
3	16QAM	1	8	19.88	19.86	19.83						
3	16QAM	1	14	19.84	19.86	19.86						
3	16QAM	8	0	19.78	19.82	19.78						
3	16QAM	8	4	19.74	19.84	19.85						
3	16QAM	8	7	19.87	19.75	19.82						
3	16QAM	16	0	19.80	19.83	19.83						
3	16QAM	1	0	19.78	19.79	19.83						
3	16QAM	1	8	19.74	19.89	19.96						
3	16QAM	1	14	19.81	19.88	19.79						
3	16QAM	8	0	19.85	19.83	19.85						
3	16QAM	8	4	19.82	19.78	19.73						
3	16QAM	8	7	19.82	19.84	19.79						
3	16QAM	16	0	19.84	19.86	19.78						
3	256QAM	1	0	19.24	19.12	19.02						
3	256QAM	1	8	19.05	19.05	19.12						
3	256QAM	1	14	19.04	19.14	19.04						
3	256QAM	8	0	19.89	19.89	19.78						
3	256QAM	8	4	18.96	19.01	19.04						
3	256QAM	8	7	19.03	19.82	19.09						
3	256QAM	16	0	19.84	19.86	19.86						
Channel												
Frequency (MHz)												
1.4	QPSK	1	0	19.89	19.85	19.78						
1.4	QPSK	1	4	19.83	19.83	19.8						



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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 MPR Level (dB)			
33730	33688	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	33688	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.24	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	33688	QPSK	50	24	0	0	1	0	Hold-on	16.76	16.80
40185	40203	QPSK	50	24	0	0	1	0	Hold-on	16.34	16.80
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.26	16.80
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	16.18	16.80
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	16.30	16.80

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 MPR Level (dB)			
33730	33688	QPSK	1	0	0	0	1	0	Full	23.06	23.80
40185	40203	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
41025	41043	QPSK	1	0	0	0	1	0	Full	23.25	23.80
41025	41043	QPSK	1	0	0	0	1	0	Full	23.22	23.80
41865	41883	QPSK	1	0	0	0	1	0	Full	23.19	23.80
33730	33688	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.00	14.00
40185	40203	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.01	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.09	14.00
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.00	14.00
41865	41883	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.06	14.00
33730	33688	QPSK	50	24	0	0	1	0	Hold-on	17.70	16.80
40185	40203	QPSK	50	24	0	0	1	0	Hold-on	17.36	16.80
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	17.66	16.80
41025	41043	QPSK	50	24	0	0	1	0	Hold-on	17.80	16.80
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	17.70	16.80

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 MPR Level (dB)			
33730	33688	QPSK	1	0	0	0	1	0	Full	23.50	24.40
40185	40203	QPSK	1	0	0	0	1	0	Full	23.49	24.40
40185	40203	QPSK	1	0	0	0	1	0	Full	23.35	24.40
41025	41043	QPSK	1	0	0	0	1	0	Full	23.50	24.40
41025	41043	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.36	14.50
41865	41883	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.31	14.50
33730	33688	QPSK	50	24	0	0	1	0	Reduced Power Level 1/2/3	13.41	14.50
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
41865	41883	QPSK	50	24	0	0	1	0	Hold-on	16.60	20.50



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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)											
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	RB Size	RB offset							
18700	20050	QPSK	1	0	1	0	21.98	14.88	22.85	24	16.8	24.8	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	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	21.23	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	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)											
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	RB Size	RB offset							
20050	18700	QPSK	1	0	1	0	21.74	16.75	22.77	23.70	18.20	24.8	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	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	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)											
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	RB Size	RB offset							
18700	20050	QPSK	1	0	1	0	22.87	17.80	23.77	23.60	18.60	24.8	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	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	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)											
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	RB Size	RB offset							
20050	18700	QPSK	1	0	1	0	22.79	17.63	23.84	23.50	19.00	24.8	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	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	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	
18800	23095	QPSK	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	
			1	49	1	25	22.38	17.23	23.54	23.60	18.60	24.8	
			1	99	1	49	22.31	17.17	23.48	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	
19100	23130	QPSK	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	
			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	

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	23.60	18.60	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	
23095	18900	QPSK	50	0	100	0	21.25	18.77	23.15	22.90	20.30	24.8	
			1	0	1	0	22.75	15.55	23.45	24.00	17.00	24.8	
			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	
23130	19100	QPSK	50	25	50	50	21.05	18.90	23.15	22.90	20.30	24.8	
			100	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	
			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	

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	19.59	24.06	22.80	20.50	24.8	
			50	50	25	25	21.96	19.30	24.00	22.80	20.50	24.8	
18800	23095	QPSK	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	
			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	
19100	23130	QPSK	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	
			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	

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	
23095	18900	QPSK	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	
			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	
23130	19100	QPSK	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	
			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	



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	23.18	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	23.17	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	



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)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							PCC1	PCC2
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		
23095	132322	QPSK	25	25	50	50	21.45	18.45	23.26	23.00	20.10	24.8		
			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		
23130	132572	QPSK	25	12	50	24	21.58	18.57	23.26	23.00	20.10	24.8		
			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		

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)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							PCC1	PCC2
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		
132322	23095	QPSK	25	25	50	25	21.04	18.85	23.23	23.00	20.10	24.8		
			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		
132572	23130	QPSK	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		
			50	50	25	25	21.19	18.99	23.26	23.00	20.10	24.8		
			100	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		

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)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							PCC1	PCC2
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		
23095	132322	QPSK	25	25	50	50	21.92	19.29	24.01	22.80	20.50	24.8		
			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		
23130	132572	QPSK	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		
			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		

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)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							PCC1	PCC2
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		
132322	23095	QPSK	25	25	50	25	21.99	19.22	24.02	22.80	20.50	24.8		
			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		
132572	23130	QPSK	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		
			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		



Tune up Power (dBm)

PCC:Ant0		SCC:Ant2		CA_13A-66A									
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	
23230	132572	QPSK	25	12	50	24	23.17	17.73	24.20	23.60	18.70	24.8	
			25	25	50	50	23.03	17.51	24.10	23.60	18.70	24.8	
			50	0	100	0	22.99	17.64	24.21	23.60	18.70	24.8	

Tune up Power (dBm)

PCC:Ant2		SCC:Ant0		CA_66A-13A									
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	50	50	21.22	21.40	24.05	21.80	21.80	24.8	
			50	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	
132572	23230	QPSK	50	24	25	12	20.89	20.97	24.10	21.80	21.80	24.8	
			50	50	25	25	21.15	21.26	24.03	21.80	21.80	24.8	
			100	0	50	0	21.21	21.1	24.12	21.80	21.80	24.8	

Tune up Power (dBm)

PCC:Ant1		SCC:Ant3		CA_13A-66A									
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	23.25	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	
23230	132572	QPSK	25	12	50	24	20.94	19.48	23.33	22.50	21.00	24.8	
			25	25	50	50	20.92	19.52	23.28	22.50	21.00	24.8	
			50	0	100	0	20.82	19.59	23.19	22.50	21.00	24.8	

Tune up Power (dBm)

PCC:Ant3		SCC:Ant1		CA_66A-13A									
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	
132572	23230	QPSK	50	24	25	12	22.09	18.41	23.74	23.30	19.50	24.8	
			50	50	25	25	22.11	18.35	23.71	23.30	19.50	24.8	
			100	0	50	0	22.23	18.05	23.58	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	23.93			
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	2560			
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)										
20	PI2 BPSK	1	1	24.09	24.16	24.13				
20	PI2 BPSK	1	53	24.02	24.06	24.04	24.8			
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)										
15	PI2 BPSK	1	1	187.5	188.5	187.5	Tune-up limit (dBm)	MPR (dB)		
Channel										
Frequency (MHz)										
10	PI2 BPSK	1	1	24.12	24.05	24.14	24.8	0.0		
Channel										
Frequency (MHz)										
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)										
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	24.3	0.5		
20	QPSK	100	0	23.36	23.40	23.48				
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)										
15	PI2 BPSK	1	1	171.5	174.5	172.5	Tune-up limit (dBm)	MPR (dB)		
Channel										
Frequency (MHz)										
10	PI2 BPSK	1	1	24.18	24.05	24.11	24.8	0.0		
Channel										
Frequency (MHz)										
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)										
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	23.86	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)										
15	PI2 BPSK	1	1	131.00	130.00	130.00	Tune-up limit (dBm)	MPR (dB)		
Channel										
Frequency (MHz)										
10	PI2 BPSK	1	1	23.92	23.75	23.73	24.8	0.0		
Channel										
Frequency (MHz)										
5	PI2 BPSK	1	1	23.71	23.88	23.77	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				500200	518598	528000			
Frequency (MHz)				2546.01	2592.99	2640			
100	PI2 BPSK	1	1	23.00	23.08	22.96			
100	PI2 BPSK	1	137	22.99	23.01	22.91	24.1	0.0	
100	PI2 BPSK	1	271	22.95	22.98	22.95			
100	PI2 BPSK	135	0	22.37	22.34	22.48			
100	PI2 BPSK	135	69	22.97	23.02	22.94	24.1	0.0	
100	PI2 BPSK	135	138	22.96	22.48	22.85			
100	PI2 BPSK	270	0	22.45	22.52	22.43	23.6	0.5	
100	QPSK	1	1	22.90	22.98	23.00			
100	QPSK	1	137	22.98	23.00	22.95	24.1	0.0	
100	QPSK	1	271	22.94	23.01	22.99			
100	QPSK	135	0	22.36	21.97	21.94			
100	QPSK	135	69	22.96	22.93	23.03	24.1	0.0	
100	QPSK	135	138	22.43	21.97	22.99			
100	QPSK	270	0	22.43	21.95	22.04	23.1	1.0	
100	64QAM	1	1	21.83	21.85	21.85	23.1	1.0	
100	64QAM	1	1	20.34	20.48	20.42	21.6	2.5	
100	256QAM	1	1	18.24	18.36	18.31	19.6	4.5	
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2544	2592.99	2644.98			
50	PI2 BPSK	1	1	22.85	23.02	22.88	24.1	0.0	
Channel				507204	518598	529596	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	22.88	22.91	22.87	24.1	0.0	
Channel				505204	518598	529296	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	22.93	22.88	22.96	24.1	0.0	
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2676			
40	PI2 BPSK	1	1	23.03	22.90	23.01	24.1	0.0	
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2592.99	2674.98			
30	PI2 BPSK	1	1	22.98	22.94	22.98	24.1	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
20	PI2 BPSK	1	1	22.89	22.96	22.90	24.1	0.0	

n41(HPU)_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				500200	518598	528000			
Frequency (MHz)				2546.01	2592.99	2640			
100	PI2 BPSK	1	1	26.12	26.18	26.11			
100	PI2 BPSK	1	137	26.11	26.15	26.14	26.8	0.0	
100	PI2 BPSK	1	271	26.05	26.14	26.05			
100	PI2 BPSK	135	0	25.41	25.56	25.54			
100	PI2 BPSK	135	69	26.02	26.03	26.00	26.8	0.0	
100	PI2 BPSK	135	138	26.08	25.66	25.61			
100	PI2 BPSK	270	0	25.79	25.88	25.81	26.3	0.5	
100	QPSK	1	1	26.04	26.10	26.05			
100	QPSK	1	137	26.11	26.13	26.04	26.8	0.0	
100	QPSK	1	271	26.04	26.14	26.09			
100	QPSK	135	0	25.04	25.08	25.11			
100	QPSK	135	69	26.01	26.05	26.13	26.8	0.0	
100	QPSK	135	138	26.07	25.06	25.12			
100	QPSK	270	0	25.05	25.01	25.09	25.8	1.0	
100	16QAM	1	1	25.36	25.31	25.34	25.9	1.0	
100	64QAM	1	1	23.18	23.26	23.31	24.3	2.5	
100	256QAM	1	1	21.49	21.52	21.44	22.3	4.5	
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2544	2592.99	2644.98			
50	PI2 BPSK	1	1	26.00	26.05	26.05	26.8	0.0	
Channel				507204	518598	529596	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	25.97	26.06	26.01	26.8	0.0	
Channel				505204	518598	529296	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	25.98	26.04	26.02	26.8	0.0	
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2676			
40	PI2 BPSK	1	1	25.96	26.02	25.95	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	26.00	26.06	26.04	26.8	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
20	PI2 BPSK	1	1	25.95	26.07	26.03	26.8	0.0	

n77									
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				650000	650000	652000			
Frequency (MHz)				3750	3840	3930			
100	PI2 BPSK	1	1	23.97	24.22	24.18			
100	PI2 BPSK	1	137	23.96	24.20	23.94	24.8	0.0	
100	PI2 BPSK	1	271	23.81	24.08	23.96			
100	PI2 BPSK	135	0	23.75	24.08	24.01			
100	PI2 BPSK	135	69	23.92	24.13	24.12	24.8	0.0	
100	PI2 BPSK	135	138	23.95	23.98	23.92			
100	PI2 BPSK	270	0	23.82	24.12	23.88	24.8	0.0	
100	QPSK	1	1	23.94	24.08	23.95			
100	QPSK	1	137	23.75	23.82	23.89	24.8	0.0	
100	QPSK	1	271	23.71	23.94	23.83			
100	QPSK	135	0	23.82	23.85	23.73			
100	QPSK	135	69	23.85	23.77	23.79	24.8	0.0	
100	QPSK	135	138	23.69	23.86	23.81			
100	QPSK	270	0	23.88	23.79	23.78	24.8	0.0	
100	16QAM	1	1	23.42	23.70	23.68	24.0	0.0	
100	64QAM	1	1	22.18	22.53	22.34	23.3	1.5	
100	256QAM	1	1	19.99	20.12	20.19	22.8	2.0	
Channel				648634	650000	652334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3748.02	3840	3930.01			
50	PI2 BPSK	1	1	23.98	24.21	24.18	24.8	0.0	
Channel				648334	650000	652634	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3740.01	3840	3940.02			
80	PI2 BPSK	1	1	23.94	24.20	24.18	24.8	0.0	
Channel				645656	650000	653334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3730.02	3840	3950.01			
60	PI2 BPSK	1	1	23.92	24.18	24.20	24.8	0.0	
Channel				648334	650000	653668	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3728.01	3840	3955.02			
50	PI2 BPSK	1	1	23.99	24.21	24.18	24.8	0.0	
Channel				648000	650000	654000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3720	3840	3960			
40	PI2 BPSK	1	1	23.92	24.19	24.18	24.8	0.0	
Channel				645656	650000	653334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3715.02	3840	3965.01			
30	PI2 BPSK	1	1	23.99	24.20	24.17	24.8	0.0	
Channel				647334	650000	654668	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3710.01	3840	3970.02			
20	PI2 BPSK	1	1	23.95	24.21	24.21	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.	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
20	PI2 BPSK	1	104	17.03	16.92	16.93	
20	PI2 BPSK	50	0	17.05	16.97	16.99	18.2
20	PI2 BPSK	50	28	17.09	17.11	17.00	18.2
20	PI2 BPSK	50	56	16.94	17.00	16.96	18.2
20	PI2 BPSK	100	0	17.05	17.06	16.97	18.2
20	QPSK	1	1	17.05	17.04	17.01	
20	QPSK	1	53	17.05	17.06	16.98	18.2
20	QPSK	1	104	16.98	16.94	16.94	
20	QPSK	50	0	16.97	17.07	16.98	18.2
20	QPSK	50	28	16.95	17.06	17.02	18.2
20	QPSK	50	56	17.02	17.05	16.99	18.2
20	QPSK	100	0	16.97	16.99	16.94	18.2
20	16QAM	1	1	17.10	17.01	17.01	18.2
20	16QAM	1	1	17.01	17.06	16.96	18.2
20	256QAM	1	1	16.94	16.98	16.98	18.2
Channel				371500	376000	380500	
Frequency (MHz)				1857.5	1880	1902.5	
15	PI2 BPSK	1	1	16.97	17.08	17.00	18.2
Channel				371000	376000	381000	
Frequency (MHz)				1855	1880	1905	
10	PI2 BPSK	1	1	17.00	17.09	17.04	18.2
Channel				370500	376000	381500	
Frequency (MHz)				1852.5	1880	1907.5	
5	PI2 BPSK	1	1	16.96	17.01	17.03	18.2

n7							
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch / Freq.	Power Middle Ch / Freq.	Power High Ch / Freq.	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
20	PI2 BPSK	1	104	15.57	15.49	15.48	
20	PI2 BPSK	50	0	15.52	15.51	15.46	16.2
20	PI2 BPSK	50	28	15.56	15.58	15.51	16.2
20	PI2 BPSK	50	56	15.46	15.55	15.48	16.2
20	PI2 BPSK	100	0	15.52	15.58	15.49	16.2
20	QPSK	1	1	15.60	15.55	15.57	
20	QPSK	1	53	15.58	15.54	15.53	16.2
20	QPSK	1	104	15.57	15.55	15.47	
20	QPSK	50	0	15.58	15.55	15.54	16.2
20	QPSK	50	28	15.59	15.60	15.55	16.2
20	QPSK	50	56	15.57	15.55	15.48	16.2
20	QPSK	100	0	15.56	15.57	15.54	16.2
20	16QAM	1	1	15.59	15.61	15.53	16.2
20	16QAM	1	1	15.47	15.50	15.57	16.2
20	256QAM	1	1	15.61	15.59	15.57	16.2
Channel				501500	507000	512500	
Frequency (MHz)				2507.5	2535	2562.5	
15	PI2 BPSK	1	1	15.50	15.62	15.49	16.2
Channel				501000	507000	513000	
Frequency (MHz)				2505	2535	2565	
10	PI2 BPSK	1	1	15.46	15.48	15.38	16.2
Channel				500500	507000	513500	
Frequency (MHz)				2502.5	2535	2567.5	
5	PI2 BPSK	1	1	15.45	15.46	15.35	16.2



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				509202	518598	528000			
Frequency (MHz)				2546.01	2592.99	2640			
100	PI2 BPSK	1	1	14.17	14.20	14.18			
100	PI2 BPSK	1	137	14.13	14.16	14.13			
100	PI2 BPSK	1	271	14.16	14.15	13.10	15.2	0.0	
100	PI2 BPSK	135	0	14.07	14.05	14.07			
100	PI2 BPSK	135	69	14.14	14.18	14.12			
100	PI2 BPSK	135	135	14.09	14.17	14.13	15.2	0.0	
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	14.16	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	13.01	14.02	14.08	15.2	0.0	
100	6QAM	1	1	13.98	13.89	13.98	15.2	0.0	
100	256QAM	1	1	14.13	14.10	14.16	15.2	0.0	
Channel				508200	518598	528998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	13.84	13.85	13.86	15.2	0.0	
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	13.83	13.85	13.82	15.2	0.0	
Channel				506204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	14.09	14.10	14.08	15.2	0.0	
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2680			
40	PI2 BPSK	1	1	13.98	14.01	13.99	15.2	0.0	
Channel				502200	518598	534998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2592.99	2674.98			
30	PI2 BPSK	1	1	14.03	14.00	14.04	15.2	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
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				509202	518598	528000			
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	14.28	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			
100	PI2 BPSK	135	138	14.17	14.30	14.32	15.2	0.0	
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	14.02	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				508200	518598	528998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	14.14	14.16	14.19	15.2	0.0	
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	14.31	14.40	14.22	15.2	0.0	
Channel				506204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	14.18	14.24	14.14	15.2	0.0	
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2680			
40	PI2 BPSK	1	1	14.15	14.21	14.19	15.2	0.0	
Channel				502200	518598	534998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2592.99	2674.98			
30	PI2 BPSK	1	1	14.14	14.24	14.08	15.2	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
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				650000	656000	662000			
Frequency (MHz)				3750	3840	3930			
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			
100	PI2 BPSK	135	138	17.17	17.34	17.15	18.2	0.0	
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	17.27	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	17.36	18.2	0.0	
100	256QAM	1	1	17.12	17.13	17.21	18.2	0.0	
Channel				649668	656000	662334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3744.02	3840	3931.02			
90	PI2 BPSK	1	1	17.22	17.30	17.27	18.2	0.0	
Channel				648334	656000	662668	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3740.01	3840	3940.02			
80	PI2 BPSK	1	1	17.23	17.24	17.27	18.2	0.0	
Channel				646998	656000	663002	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3735.02	3840	3950.01			
60	PI2 BPSK	1	1	17.32	17.26	17.39	18.2	0.0	
Channel				645334	656000	663334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3729.01	3840	3963.02			
50	PI2 BPSK	1	1	17.11	17.28	17.21	18.2	0.0	
Channel				644000	656000	664000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3720	3840	3960			
40	PI2 BPSK	1	1	17.25	17.31	17.38	18.2	0.0	
Channel				642668	656000	664334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3715.02	3840	3965.01			
30	PI2 BPSK	1	1	17.38	17.24	17.22	18.2	0.0	
Channel				641334	656000	664668	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3710.01	3840	3968.02			
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.	Tune-up limit (dBm)	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	0.0
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	0.0
100	PI2 BPSK	135	138	15.55	15.55	15.45		
100	PI2 BPSK	270	0	15.60	15.68	15.64	16.7	0.0
100	QPSK	1	1	15.65	15.55	15.57		
100	QPSK	1	137	15.61	15.59	15.57	16.7	0.0
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	0.0
100	QPSK	135	138	15.59	15.52	15.52		
100	QPSK	270	0	15.58	15.64	15.61	16.7	0.0
100	16QAM	1	1	15.59	15.61	15.56	16.7	0.0
100	16QAM	1	1	15.61	15.54	15.56	15.2	1.5
100	256QAM	1	1	15.43	15.44	15.56	14.7	2.0
Channel				648668	656000	662334	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3745.02	3840	3935.01		
50	PI2 BPSK	1	1	15.62	15.58	15.69	16.7	0.0
Channel				649204	656000	662668	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3740.01	3840	3940.02		
80	PI2 BPSK	1	1	15.68	15.61	15.57	16.7	0.0
Channel				648668	656000	662334	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3733.02	3840	3943.01		
60	PI2 BPSK	1	1	15.71	15.57	15.56	16.7	0.0
Channel				648334	656000	662668	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3725.01	3840	3955.02		
50	PI2 BPSK	1	1	15.71	15.54	15.64	16.7	0.0
Channel				649204	656000	662668	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3720	3840	3960		
40	PI2 BPSK	1	1	15.57	15.58	15.67	16.7	0.0
Channel				647668	656000	664334	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3715.02	3840	3965.01		
30	PI2 BPSK	1	1	15.70	15.61	15.53	16.7	0.0
Channel				647334	656000	664668	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3710.01	3840	3970.02		
20	PI2 BPSK	1	1	15.64	15.64	15.70	16.7	0.0



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	21.85	21.44	21.42	22.5	1.5
20	256QAM	1	1	20.00	19.84	19.85	21.0	3.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1837.5	1860	1822.5	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)				2477.5	2500	2462.5	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	1882.5	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	23.08	23.20	23.01	24.0	0.0	
20	16QAM	1	1	23.96	23.07	23.04	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	1892.5	1907.5			
15	PI2 BPSK	1	1	23.08	23.12	23.11	24.0	0.0	
Channel				371000	376500	382000			
Frequency (MHz)				1865	1882.5	1910			
10	PI2 BPSK	1	1	23.04	23.15	23.13	24.0	0.0	
Channel				370500	376500	382500			
Frequency (MHz)				1852.5	1882.5	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	23.65	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	23.81	23.85	23.80			
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	22.88	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	23.57	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.	Tune-up limit (dBm)	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	18.1	0.0	
100	PI2 BPSK	1	271	17.09	17.15	17.10			
100	PI2 BPSK	135	0	17.13	17.12	17.12			
100	PI2 BPSK	135	69	17.15	17.16	17.14	18.1	0.0	
100	PI2 BPSK	135	138	17.14	17.13	17.12			
100	PI2 BPSK	270	0	17.12	17.15	17.11	18.1	0.0	
100	QPSK	1	1	17.17	17.13	17.10			
100	QPSK	1	137	17.14	17.11	17.09	18.1	0.0	
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	0.0	
100	QPSK	135	138	17.13	17.13	17.11			
100	QPSK	270	0	17.19	17.10	17.10	18.1	0.0	
100	64QAM	1	1	17.16	17.16	17.15	18.1	0.0	
100	64QAM	1	1	17.10	17.12	17.09	18.1	0.0	
100	256QAM	1	1	17.05	17.13	17.04	18.1	0.0	
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	17.12	17.16	17.15	18.1	0.0	
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	17.10	17.13	17.12	18.1	0.0	
Channel				506204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	17.09	17.11	17.10	18.1	0.0	
Channel				505202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2681			
40	PI2 BPSK	1	1	17.05	17.10	17.09	18.1	0.0	
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2592.99	2674.98			
30	PI2 BPSK	1	1	17.10	17.13	17.11	18.1	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
20	PI2 BPSK	1	1	17.06	17.11	17.08	18.1	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	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	0.0	
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	0.0	
100	PI2 BPSK	135	138	17.07	17.07	17.02			
100	PI2 BPSK	270	0	17.03	17.05	17.00	18.1	0.0	
100	QPSK	1	1	17.13	17.11	17.06			
100	QPSK	1	137	17.12	17.10	17.02	18.1	0.0	
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	0.0	
100	QPSK	135	138	17.00	17.03	16.99			
100	QPSK	270	0	17.09	17.10	17.02	18.1	0.0	
100	16QAM	1	1	17.12	17.15	17.11	18.1	0.0	
100	64QAM	1	1	17.07	17.11	17.08	18.1	0.0	
100	256QAM	1	1	17.06	17.08	17.05	18.1	0.0	
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2541	2592.99	2644.98			
90	PI2 BPSK	1	1	17.13	17.15	17.12	18.1	0.0	
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2536.02	2592.99	2649.99			
80	PI2 BPSK	1	1	17.14	17.13	17.03	18.1	0.0	
Channel				506204	518598	530998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2521.02	2592.99	2664.99			
50	PI2 BPSK	1	1	17.11	17.12	17.09	18.1	0.0	
Channel				505202	518598	534000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2516.01	2592.99	2681			
40	PI2 BPSK	1	1	17.14	17.16	17.13	18.1	0.0	
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2511	2592.99	2674.98			
30	PI2 BPSK	1	1	17.09	17.13	17.14	18.1	0.0	
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2506.02	2592.99	2679.99			
20	PI2 BPSK	1	1	17.15	17.14	17.16	18.1	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				650000	660000	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	0.0	
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	0.0	
100	PI2 BPSK	135	138	19.12	19.13	19.19			
100	PI2 BPSK	270	0	19.23	19.50	19.44	20.6	0.0	
100	QPSK	1	1	19.26	19.40	19.27			
100	QPSK	1	137	19.07	19.14	19.21	20.6	0.0	
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	0.0	
100	QPSK	135	138	18.94	19.11	19.06			
100	QPSK	270	0	19.19	19.04	19.03	20.6	0.0	
100	16QAM	1	1	18.71	19.59	18.97	20.6	0.0	
100	64QAM	1	1	18.97	19.32	19.13	20.6	0.0	
100	256QAM	1	1	19.06	19.21	19.28	21.6	0.0	
Channel				648668	650000	652334	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3745.02	3840	3935.01			
90	PI2 BPSK	1	1	19.25	19.50	19.49	20.6	0.0	
Channel				648334	650000	652668	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3740.01	3840	3940.02			
80	PI2 BPSK	1	1	19.23	19.49	19.47	20.6	0.0	
Channel				647998	650000	653004	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3735.02	3840	3945.02			
60	PI2 BPSK	1	1	19.24	19.46	19.45	20.6	0.0	
Channel				647664	650000	653338	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3730.02	3840	3950.01			
50	PI2 BPSK	1	1	19.24	19.46	19.45	20.6	0.0	
Channel				647330	650000	653672	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3725.01	3840	3955.02			
40	PI2 BPSK	1	1	19.25	19.47	19.45	20.6	0.0	
Channel				646996	650000	654006	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3720.01	3840	3960.01			
30	PI2 BPSK	1	1	19.20	19.48	19.44	20.6	0.0	
Channel				647000	650000	654340	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				3715.02	3840	3965.01			
20	PI2 BPSK	1	1	19.21	19.44	19.43	20.6	0.0	



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	23.79	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	23.56			
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	23.66	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	21.53	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)				1860	1862.5	1865			
20	Pi/2 BPSK	1	1	23.02	24.06	24.01			
20	Pi/2 BPSK	1	53	23.86	24.05	23.99	24.8	0.0	
20	Pi/2 BPSK	1	104	23.83	23.95	23.88			
20	Pi/2 BPSK	50	0	23.21	23.43	23.41	24.3	0.5	
20	Pi/2 BPSK	50	28	23.89	24.03	23.95	24.8	0.0	
20	Pi/2 BPSK	50	56	23.26	23.47	23.37	24.3	0.5	
20	Pi/2 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	22.88	23.28	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)				1872.5	1862.5	1872.5			
15	Pi/2 BPSK	1	1	23.83	23.07	23.93	24.8	0.0	
Channel				371000	376500	382000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1865	1862.5	1810			
10	Pi/2 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)				1852.5	1852.5	1852.5			
5	Pi/2 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	Pi/2 BPSK	1	1	24.07	24.09	24.00			
20	Pi/2 BPSK	1	53	23.96	23.94	23.84	24.8	0.0	
20	Pi/2 BPSK	1	104	24.03	23.97	23.91			
20	Pi/2 BPSK	50	0	23.50	23.47	23.43	24.3	0.5	
20	Pi/2 BPSK	50	28	24.00	24.03	23.97	24.8	0.0	
20	Pi/2 BPSK	50	56	23.43	23.43	23.48	24.3	0.5	
20	Pi/2 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	Pi/2 BPSK	1	1	23.94	23.96	23.98	24.8	0.0	
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1715	1745	1775			
10	Pi/2 BPSK	1	1	23.95	24.03	23.94	24.8	0.0	
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				1712.5	1745	1777.5			
5	Pi/2 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	1376000			
Frequency (MHz)				673	680.5	688			
20	Pi/2 BPSK	1	1	24.06	24.08	23.93			
20	Pi/2 BPSK	1	53	23.96	23.84	23.83	24.8	0.0	
20	Pi/2 BPSK	1	104	23.84	23.73	23.55			
20	Pi/2 BPSK	50	0	23.44	23.40	23.34	24.3	0.5	
20	Pi/2 BPSK	50	28	23.99	24.02	23.88	24.8	0.0	
20	Pi/2 BPSK	50	56	23.40	23.24	23.19	24.3	0.5	
20	Pi/2 BPSK	100	0	23.42	23.47	23.28			
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	22.91	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	22.88	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	136100	138100	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				670.5	680.5	690.5			
15	Pi/2 BPSK	1	1	23.91	23.94	23.87	24.8	0.0	
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				668	680.5	693			
10	Pi/2 BPSK	1	1	23.82	23.83	23.78	24.8	0.0	
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				665.5	680.5	695.5			
5	Pi/2 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	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
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
100	PI2 BPSK	135	135	23.90	23.90	23.89	
100	PI2 BPSK	270	0	23.88	23.92	23.90	24.8
100	QPSK	1	1	23.85	23.93	23.92	
100	QPSK	1	137	23.97	23.98	23.98	24.8
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
100	QPSK	135	135	23.41	23.40	23.62	
100	QPSK	270	0	23.36	23.40	23.60	24.8
100	16QAM	1	1	23.15	23.10	23.14	24.3
100	64QAM	1	1	21.72	21.89	21.75	22.8
100	256QAM	1	1	19.77	19.74	19.76	20.6
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
90	PI2 BPSK	1	1	23.92	23.95	23.90	24.6
Channel				507204	518598	528998	
Frequency (MHz)				2536.02	2592.99	2646.99	
80	PI2 BPSK	1	1	23.83	23.88	23.82	24.8
Channel				505204	518598	528996	
Frequency (MHz)				2521.02	2592.99	2644.99	
50	PI2 BPSK	1	1	23.87	23.93	23.85	24.8
Channel				503202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	23.91	23.96	23.90	24.8
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	23.94	23.97	23.95	24.8
Channel				501204	518598	535996	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	23.93	23.96	23.92	24.8

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	25.94	26.00	25.94	
100	PI2 BPSK	1	137	25.78	25.90	25.91	26.8
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
100	PI2 BPSK	135	135	25.77	25.94	25.89	
100	PI2 BPSK	270	0	25.80	25.90	25.88	26.8
100	QPSK	1	1	25.66	25.89	25.77	
100	QPSK	1	137	25.83	25.97	25.95	26.8
100	QPSK	1	271	25.71	25.99	25.86	
100	QPSK	135	0	25.18	25.44	25.21	
100	QPSK	135	69	25.77	25.98	25.99	26.8
100	QPSK	135	135	25.40	25.90	25.45	
100	QPSK	270	0	25.38	25.33	25.32	26.8
100	16QAM	1	1	25.18	25.20	24.65	26.3
100	64QAM	1	1	23.50	23.90	22.89	24.3
100	256QAM	1	1	21.41	21.76	21.47	22.3
Channel				508200	518598	528996	
Frequency (MHz)				2541	2592.99	2644.98	
90	PI2 BPSK	1	1	25.81	25.94	25.85	26.8
Channel				507204	518598	528998	
Frequency (MHz)				2536.02	2592.99	2646.99	
80	PI2 BPSK	1	1	25.77	25.87	25.80	26.8
Channel				505204	518598	533996	
Frequency (MHz)				2521.02	2592.99	2644.99	
50	PI2 BPSK	1	1	25.84	25.98	25.90	26.8
Channel				503202	518598	534000	
Frequency (MHz)				2516.01	2592.99	2670	
40	PI2 BPSK	1	1	25.80	25.92	25.84	26.8
Channel				502200	518598	534996	
Frequency (MHz)				2511	2592.99	2674.98	
30	PI2 BPSK	1	1	25.83	25.93	25.88	26.8
Channel				501204	518598	535996	
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI2 BPSK	1	1	25.81	25.95	25.87	26.8



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)				1862.5	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	512000	Tune-up limit (dBm)	MPR
Frequency (MHz)				2507.5	2531	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	20.40	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
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
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
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
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
Frequency (MHz)				1715	1745	1775		
10	PI2 BPSK	1	1	19.86	19.84	19.82	21.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR
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.	Tune-up limit (dBm)	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	0.0
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	0.0
100	PI2 BPSK	135	135	20.14	20.16	20.13		
100	PI2 BPSK	270	0	20.15	20.20	20.13	21.2	0.0
100	QPSK	1	1	20.13	20.16	20.12		
100	QPSK	1	137	20.12	20.14	20.11	21.2	0.0
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	0.0
100	QPSK	135	138	20.11	20.14	20.09		
100	QPSK	270	0	20.09	20.17	20.13	21.2	0.0
100	16QAM	1	1	20.14	20.15	20.09	21.2	0.0
100	64QAM	1	1	20.12	20.14	20.10	21.2	0.0
100	256QAM	1	1	19.89	20.00	19.96	21.2	0.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
80	PI2 BPSK	1	1	19.99	19.98	20.11	21.2	0.0
Channel				507204	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2646.99		
80	PI2 BPSK	1	1	19.98	19.99	20.04	21.2	0.0
Channel				505204	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2644.99		
50	PI2 BPSK	1	1	19.99	19.98	19.96	21.2	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2640		
40	PI2 BPSK	1	1	20.05	20.06	20.02	21.2	0.0
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2511	2592.99	2674.98		
30	PI2 BPSK	1	1	20.00	20.08	20.03	21.2	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	20.01	19.97	19.93	21.2	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	20.13	20.16	20.11		
100	PI2 BPSK	1	137	20.11	20.13	20.06	21.2	0.0
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	0.0
100	PI2 BPSK	135	135	20.08	20.07	20.07		
100	PI2 BPSK	270	0	20.08	20.10	20.07	21.2	0.0
100	QPSK	1	1	20.08	20.11	20.04		
100	QPSK	1	137	20.03	20.05	20.11	21.2	0.0
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	0.0
100	QPSK	135	138	20.05	20.07	20.05		
100	QPSK	270	0	20.02	20.06	20.04	21.2	0.0
100	16QAM	1	1	20.08	20.10	20.03	21.2	0.0
100	64QAM	1	1	20.06	20.09	20.07	21.2	0.0
100	256QAM	1	1	20.05	20.08	20.03	21.2	0.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
80	PI2 BPSK	1	1	20.06	20.11	20.07	21.2	0.0
Channel				507204	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2646.99		
80	PI2 BPSK	1	1	20.04	20.07	20.03	21.2	0.0
Channel				505204	518598	532996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2644.99		
50	PI2 BPSK	1	1	20.02	20.09	20.05	21.2	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2640		
40	PI2 BPSK	1	1	20.04	20.05	20.02	21.2	0.0
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2511	2592.99	2674.98		
30	PI2 BPSK	1	1	20.04	20.00	20.03	21.2	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	20.00	20.04	20.01	21.2	0.0



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 Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	Tune-up limit (dBm)	MPR (dB)
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	19.89	19.80		
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	19.90	19.94		
20	QPSK	50	0	19.86	19.95	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	19.98	19.65	19.82	21.3	0.0
Channel				371500	376500	381500	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)				1885	1882.5	1910		
10	PI2 BPSK	1	1	19.87	20.03	19.96	21.3	0.0
Channel				370500	376500	382500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1892.5	1882.5	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 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	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	20.98	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	1775		
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									
Frequency (MHz)									
100	P2 BPSK	1	1	19.09	19.10	19.07	20.2	0.0	
100	P2 BPSK	1	137	19.05	19.08	19.03	20.2	0.0	
100	P2 BPSK	1	271	19.01	19.07	18.99	20.2	0.0	
100	P2 BPSK	135	0	18.98	19.02	18.97	20.2	0.0	
100	P2 BPSK	135	69	19.06	19.07	19.04	20.2	0.0	
100	P2 BPSK	135	138	18.95	18.99	18.95	20.2	0.0	
100	P2 BPSK	270	0	19.02	19.04	19.00	20.2	0.0	
100	QPSK	1	1	19.04	19.09	19.04	20.2	0.0	
100	QPSK	1	137	19.03	19.07	19.03	20.2	0.0	
100	QPSK	1	271	19.00	19.05	19.01	20.2	0.0	
100	QPSK	135	0	19.00	19.06	19.03	20.2	0.0	
100	QPSK	135	69	18.99	19.04	18.99	20.2	0.0	
100	QPSK	135	138	18.97	19.02	18.96	20.2	0.0	
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									
Frequency (MHz)									
90	P2 BPSK	1	1	19.05	19.08	19.06	20.2	0.0	
Channel									
Frequency (MHz)									
80	P2 BPSK	1	1	19.06	19.07	19.04	20.2	0.0	
Channel									
Frequency (MHz)									
50	P2 BPSK	1	1	18.99	19.03	19.00	20.2	0.0	
Channel									
Frequency (MHz)									
40	P2 BPSK	1	1	18.96	19.00	18.98	20.2	0.0	
Channel									
Frequency (MHz)									
30	P2 BPSK	1	1	18.94	18.98	18.95	20.2	0.0	
Channel									
Frequency (MHz)									
20	P2 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									
Frequency (MHz)									
100	P2 BPSK	1	1	19.04	19.10	19.05	20.2	0.0	
100	P2 BPSK	1	137	19.05	19.09	19.01	20.2	0.0	
100	P2 BPSK	1	271	18.99	19.06	18.99	20.2	0.0	
100	P2 BPSK	135	0	19.02	19.06	19.02	20.2	0.0	
100	P2 BPSK	135	69	19.03	19.07	19.01	20.2	0.0	
100	P2 BPSK	135	138	19.02	19.03	19.00	20.2	0.0	
100	P2 BPSK	270	0	19.01	19.06	19.00	20.2	0.0	
100	QPSK	1	1	19.00	19.05	18.97	20.2	0.0	
100	QPSK	1	137	19.00	19.04	19.00	20.2	0.0	
100	QPSK	1	271	18.98	19.03	19.05	20.2	0.0	
100	QPSK	135	0	18.96	19.00	18.97	20.2	0.0	
100	QPSK	135	69	18.95	18.99	18.95	20.2	0.0	
100	QPSK	138	138	18.93	18.96	18.94	20.2	0.0	
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									
Frequency (MHz)									
90	P2 BPSK	1	1	18.97	19.04	18.98	20.2	0.0	
Channel									
Frequency (MHz)									
80	P2 BPSK	1	1	18.94	18.97	18.95	20.2	0.0	
Channel									
Frequency (MHz)									
50	P2 BPSK	1	1	18.99	19.03	19.00	20.2	0.0	
Channel									
Frequency (MHz)									
40	P2 BPSK	1	1	18.99	19.03	19.00	20.2	0.0	
Channel									
Frequency (MHz)									
30	P2 BPSK	1	1	18.98	19.01	18.93	20.2	0.0	
Channel									
Frequency (MHz)									
20	P2 BPSK	1	1	18.97	19.00	18.93	20.2	0.0	



LTE&5GNR EN-DC Power

Full Power Mode - Ant0

n66							
BR (MHz)	Multicast	RB Size	RB Offset	Power Low Ch. Freq.	Power Middle Ch. Freq.	Power High Ch. Freq.	MPE (dB)
Channel				344000	349000	354000	
Frequency (MHz)				17200	17450	17700	
20	PI2 BPSK	1	1	23.90	23.95	23.93	0.0
20	PI2 BPSK	1	63	23.74	23.87	23.82	24.8
20	PI2 BPSK	1	104	23.85	23.90	23.80	0.0
20	PI2 BPSK	50	0	23.23	23.29	23.26	24.8
20	PI2 BPSK	50	26	23.87	23.93	23.80	0.0
20	PI2 BPSK	50	56	23.29	23.41	23.33	24.8
20	PI2 BPSK	100	0	23.84	23.90	23.78	0.0
20	QPSK	1	1	23.81	23.93	23.77	
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	24.8
20	QPSK	50	26	23.78	23.74	23.68	0.0
20	QPSK	50	56	23.76	23.73	23.68	24.8
20	QPSK	100	0	23.78	23.74	23.65	0.0
20	HQAM	1	1	23.79	23.89	23.88	24.8
20	HQAM	1	1	23.34	23.33	23.26	3.5
20	HQAM	1	1	20.27	20.25	20.11	3.5
Channel				343000	348000	353000	
Frequency (MHz)				17100	17350	17600	
15	PI2 BPSK	1	1	23.85	23.87	23.77	24.8
Channel				343000	348000	353000	
Frequency (MHz)				17100	17350	17600	
15	PI2 BPSK	1	1	23.87	23.88	23.80	24.8
Channel				342000	347000	352000	
Frequency (MHz)				17000	17250	17500	
5	PI2 BPSK	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	25.31	25.37	25.45				
100	PI2 BPSK	155	0	25.49	25.28	25.25				
100	PI2 BPSK	155	88	25.50	25.35	25.27	24.1	0.0		
100	PI2 BPSK	155	158	25.52	25.34	25.52				
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	937	25.28	25.34	25.52	24.1	0.0		
100	QPSK	1	271	25.32	25.30	25.28				
100	QPSK	155	0	25.28	25.27	25.18				
100	QPSK	155	88	25.28	25.34	25.17	24.1	0.0		
100	QPSK	155	158	25.24	25.35	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	25.30	24.1	0.0		
100	8QAM	1	1	25.20	25.28	25.45	23.1	1.0		
Channel				50250	51896	53600				
Frequency (MHz)				2541	2552.50	2544.50				
90	PI2 BPSK	1	1	25.28	25.30	25.28	24.1	0.0		
Channel				50250	51896	53600				
Frequency (MHz)				2558.00	2552.50	2556.50				
80	PI2 BPSK	1	1	25.25	25.30	25.20	24.1	0.0		
Channel				50250	51896	53600				
Frequency (MHz)				2571.00	2552.50	2565.50				
50	PI2 BPSK	1	1	25.30	25.30	25.16	24.1	0.0		
Channel				50250	51896	53400				
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				
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				
Frequency (MHz)				2504.00	2552.50	2515.50				
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	26.00	26.8	0.0		
100	PI2 BPSK	1	271	26.09	26.13	26.02				
100	PI2 BPSK	155	0	26.84	26.86	26.82				
100	PI2 BPSK	155	88	26.08	26.13	26.00	26.8	0.0		
100	PI2 BPSK	155	158	26.08	26.11	26.01				
100	PI2 BPSK	270	0	26.00	26.11	26.04	26.8	0.0		
100	QPSK	1	1	26.30	26.74	26.05				
100	QPSK	1	137	26.02	26.08	26.03	26.8	0.0		
100	QPSK	1	271	26.08	26.09	26.02				
100	QPSK	155	0	26.30	26.08	26.02				
100	QPSK	155	88	26.04	26.00	26.04	26.8	0.0		
100	QPSK	155	158	26.06	26.04	26.07				
100	QPSK	270	0	26.77	26.97	26.98	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	16QAM	1	1	25.33	22.55	22.45	23.8	3.0		
Channel				50250	51896	53600				
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				
Frequency (MHz)				2558.00	2552.50	2556.50				
80	PI2 BPSK	1	1	26.00	26.04	25.97	26.8	0.0		
Channel				50250	51896	53496				
Frequency (MHz)				2571.00	2552.50	2565.50				
50	PI2 BPSK	1	1	26.02	26.11	26.05	26.8	0.0		
Channel				50250	51896	53400				
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				
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				
Frequency (MHz)				2504.00	2552.50	2515.50				
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	34510	34510			
Frequency (MHz)				1717.5	1745	1772.5			
15	P13 BPSK	1	1	16.93	17.05	16.85	18.0	0.0	
Channel				34510	34510	34510			
Frequency (MHz)				1715	1745	1775			
10	P13 BPSK	1	1	16.96	17.03	16.88	18.0	0.0	
Channel				34510	34510	34510			
Frequency (MHz)				1732.5	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 Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel									
Frequency (MHz)									
100	PQ2 BPSK	1	1	17.12	17.27	17.21			
100	PQ2 BPSK	1	137	17.11	17.26	17.18	18.0	0.0	
100	PQ2 BPSK	1	271	17.02	17.08	17.19			
100	PQ2 BPSK	135	0	17.06	17.12	17.09			
100	PQ2 BPSK	135	89	17.12	17.25	17.19	18.0	0.0	
100	PQ2 BPSK	135	138	18.06	17.11	18.00			
100	PQ2 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	17.12	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	PQ2 BPSK	1	1	18.30	17.00	18.01	18.0	0.0	
Channel									
Frequency (MHz)									
80	PQ2 BPSK	1	1	18.89	18.96	18.84	18.0	0.0	
Channel									
Frequency (MHz)									
50	PQ2 BPSK	1	1	18.85	18.92	18.90	18.0	0.0	
Channel									
Frequency (MHz)									
40	PQ2 BPSK	1	1	18.84	18.97	18.88	18.0	0.0	
Channel									
Frequency (MHz)									
30	PQ2 BPSK	1	1	18.83	18.96	18.95	18.0	0.0	
Channel									
Frequency (MHz)									
20	PQ2 BPSK	1	1	18.82	18.96	18.93	18.0	0.0	

n41(NPUE)_FCC									
RF (MHz)	Modulation	RB Size	RB Offset	Power Line Ch. / Freq.	Power Main Ch. / Freq.	Power Up Ch. / Freq.	Tune-up limit (dB)	MPR (dB)	
Channel									
Frequency (MHz)									
100	PQ2 BPSK	1	1	17.02	17.27	17.21			
100	PQ2 BPSK	1	137	17.11	17.26	17.18	18.0	0.0	
100	PQ2 BPSK	1	271	17.02	17.08	17.19			
100	PQ2 BPSK	135	0	17.06	17.12	17.09			
100	PQ2 BPSK	135	89	17.12	17.25	17.19	18.0	0.0	
100	PQ2 BPSK	135	138	18.06	17.11	18.00			
100	PQ2 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	17.12	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	PQ2 BPSK	1	1	18.90	17.00	18.01	18.0	0.0	
Channel									
Frequency (MHz)									
80	PQ2 BPSK	1	1	18.89	18.96	18.84	18.0	0.0	
Channel									
Frequency (MHz)									
50	PQ2 BPSK	1	1	18.85	18.92	18.90	18.0	0.0	
Channel									
Frequency (MHz)									
40	PQ2 BPSK	1	1	18.84	18.97	18.88	18.0	0.0	
Channel									
Frequency (MHz)									
30	PQ2 BPSK	1	1	18.83	18.96	18.95	18.0	0.0	
Channel									
Frequency (MHz)									
20	PQ2 BPSK	1	1	18.82	18.96	18.93	18.0	0.0	



Reduced power for Hotspot on-Air

n66									
W/ (MHz)	Modulation	RB Size	RB Offset	Power Lvl Ch. / Freq.	Power Mask Ch. / Freq.	Power Flg Ch. / Freq.	Tune-up Int. (min)	MPO (dB)	
Channel				244000	245000	246000			
Frequency (MHz)				1730	1745	1775			
20	PIQ BPSK	1	1	19.18	19.21	19.10			
20	PIQ BPSK	1	53	19.15	19.16	19.09	20.2	0.0	
20	PIQ BPSK	1	104	19.08	19.13	19.05			
20	PIQ BPSK	50	0	19.02	19.08	19.06	20.2	0.0	
20	PIQ BPSK	50	26	19.15	19.16	19.09	20.2	0.0	
20	PIQ BPSK	50	55	19.05	19.07	19.07	20.2	0.0	
20	PIQ BPSK	100	0	19.14	19.15	19.07			
20	QPSK	1	1	19.09	19.08	19.05			
20	QPSK	1	53	19.13	19.08	19.08	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	19.16	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	19.08			
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				245000	245000	245000			
Frequency (MHz)				1737.5	1745	1772.5			
15	PIQ BPSK	1	1	19.14	19.17	19.04	20.2	0.0	
Channel				246000	246000	246000			
Frequency (MHz)				1735	1745	1775			
10	PIQ BPSK	1	1	19.11	19.15	19.07	20.2	0.0	
Channel				245000	245000	245000			
Frequency (MHz)				1732.5	1745	1777.5			
5	PIQ BPSK	1	1	19.08	19.12	19.05	20.2	0.0	



n41_FCC									
RF (MHz)	Modulation	RF Size	RF Offset	Power Linc Ch / Freq	Power Main Ch / Freq	Power Pig. 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	18.1	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	210	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	210	0	17.08	17.13	18.09	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									
Frequency (MHz)									
90	PI2 BPSK	1	1	18.30	17.00	18.01	18.1	0.0	
Channel									
Frequency (MHz)									
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.1	0.0	
Channel									
Frequency (MHz)									
50	PI2 BPSK	1	1	18.85	18.82	18.90	18.1	0.0	
Channel									
Frequency (MHz)									
40	PI2 BPSK	1	1	18.84	18.97	18.88	18.1	0.0	
Channel									
Frequency (MHz)									
30	PI2 BPSK	1	1	18.83	18.96	18.95	18.1	0.0	
Channel									
Frequency (MHz)									
20	PI2 BPSK	1	1	18.82	18.96	18.93	18.1	0.0	

n41(NPUE)_FCC									
RF (MHz)	Modulation	RF Size	RF Offset	Power Linc Ch / Freq	Power Main Ch / Freq	Power Pig. 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	18.1	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	210	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	210	0	17.08	17.13	18.09	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									
Frequency (MHz)									
90	PI2 BPSK	1	1	18.90	17.00	18.91	18.1	0.0	
Channel									
Frequency (MHz)									
80	PI2 BPSK	1	1	18.89	18.96	18.84	18.1	0.0	
Channel									
Frequency (MHz)									
50	PI2 BPSK	1	1	18.85	18.82	18.90	18.1	0.0	
Channel									
Frequency (MHz)									
40	PI2 BPSK	1	1	18.84	18.96	18.88	18.1	0.0	
Channel									
Frequency (MHz)									
30	PI2 BPSK	1	1	18.83	18.96	18.95	18.1	0.0	
Channel									
Frequency (MHz)									
20	PI2 BPSK	1	1	18.82	18.96	18.93	18.1	0.0	



Reduced power for Sensor on-AirB

n66									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tonegap (Hz)	dBm	dB
Channel				34500	35000	36000			
Frequency (MHz)				1700	1745	1795			
20	P13 QPSK	1	1	18.78	18.81	18.79		19.8	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		19.8	0.0
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		19.8	0.0
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		19.8	0.0
20	QPSK	1	53	18.73	18.69	18.68		19.8	0.0
20	QPSK	1	104	18.74	18.65	18.64		19.8	0.0
20	QPSK	50	0	18.72	18.69	18.65		19.8	0.0
20	QPSK	50	26	18.78	18.74	18.78		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		19.8	0.0
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	40500			
Frequency (MHz)				1715	1745	1795			
10	P13 QPSK	1	1	18.71	18.75	18.67		19.8	0.0
Channel				42500	43000	43500			
Frequency (MHz)				1732.5	1745	1777.5			
5	P13 QPSK	1	1	18.68	18.72	18.65		19.8	0.0



n41_FCC									
RF (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	2568.0	2645.0			
100	PI2 BPSK	1	1	18.13	18.24	18.17			
100	PI2 BPSK	1	137	18.07	18.21	18.14	20.0	0.0	
100	PI2 BPSK	1	271	18.99	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	18.08	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	25QAM	1	1	18.02	18.08	18.01	20.0	0.0	
Channel				34000	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
90	PI2 BPSK	1	1	18.83	18.00	18.94	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
80	PI2 BPSK	1	1	18.82	18.98	18.85	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
50	PI2 BPSK	1	1	18.78	18.94	18.91	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
40	PI2 BPSK	1	1	18.77	18.99	18.89	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
30	PI2 BPSK	1	1	18.76	18.91	18.86	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
20	PI2 BPSK	1	1	18.75	18.98	18.94	20.0	0.0	

n41(NPUE)_FCC									
RF (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	2052.98	2148.01			
100	PI2 BPSK	1	1	18.13	18.24	18.17			
100	PI2 BPSK	1	137	18.07	18.21	18.14	20.0	0.0	
100	PI2 BPSK	1	271	18.99	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	18.08	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	25QAM	1	1	18.02	18.08	18.01	20.0	0.0	
Channel				34000	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
90	PI2 BPSK	1	1	18.83	18.00	18.94	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
80	PI2 BPSK	1	1	18.82	18.98	18.85	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
50	PI2 BPSK	1	1	18.78	18.94	18.91	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
40	PI2 BPSK	1	1	18.77	18.99	18.89	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
30	PI2 BPSK	1	1	18.76	18.91	18.86	20.0	0.0	
Channel				34200	31808	33600			
Frequency (MHz)				2541	2592.0	2644.98			
20	PI2 BPSK	1	1	18.75	18.98	18.94	20.0	0.0	



Full Power Mode - Ant1

n66									
ERP (dB)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle 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	23.98	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										
SW (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch / Freq	Power Min Ch / Freq	Power Max Ch / Freq	Tune-up limit (dB)	MPR (dB)		
Channel				309202	318958	328700				
Frequency (MHz)				2445.01	2542.59	2640.18				
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	0.0		
100	25QAM	1	1	20.43	20.57	20.53	21.8	3.0		
Channel				340202	349958	359700				
Frequency (MHz)				2541	2592.59	2644.18				
90	PI2 BPSK	1	1	24.15	24.00	24.09	24.8	0.0		
Channel				341202	349958	359700				
Frequency (MHz)				2592.02	2592.59	2644.18				
80	PI2 BPSK	1	1	24.09	24.15	24.03	24.8	0.0		
Channel				342202	349958	359700				
Frequency (MHz)				2611.02	2592.59	2644.18				
50	PI2 BPSK	1	1	24.03	24.20	24.12	24.8	0.0		
Channel				343202	349958	359700				
Frequency (MHz)				2518.02	2592.59	2644.18				
40	PI2 BPSK	1	1	24.11	24.18	24.08	24.8	0.0		
Channel				344202	349958	359700				
Frequency (MHz)				2511	2592.59	2644.18				
30	PI2 BPSK	1	1	24.08	24.16	24.02	24.8	0.0		
Channel				345202	349958	359700				
Frequency (MHz)				2612.04	2592.59	2644.18				
20	PI2 BPSK	1	1	24.10	24.14	24.07	24.8	0.0		

n41(NPUE)_FCC										
SW (MHz)	Modulation	RB Size	RB Offset	Power Limit Ch / Freq	Power Min Ch / Freq	Power Max Ch / Freq	Tune-up limit (dB)	MPR (dB)		
Channel				309202	318958	328700				
Frequency (MHz)				2445.01	2542.59	2640.18				
100	PI2 BPSK	1	1	25.36	25.48	25.20				
100	PI2 BPSK	1	137	25.21	25.15	24.85	26.8	0.0		
100	PI2 BPSK	1	271	25.14	25.08	24.85				
100	PI2 BPSK	135	0	24.60	24.67	24.44				
100	PI2 BPSK	135	89	25.22	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	25.23	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	24.49	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	349958	359700				
Frequency (MHz)				2541	2592.59	2644.18				
90	PI2 BPSK	1	1	25.33	25.38	25.18	26.8	0.0		
Channel				341202	349958	359700				
Frequency (MHz)				2592.02	2592.59	2644.18				
80	PI2 BPSK	1	1	25.28	25.40	25.09	26.8	0.0		
Channel				342202	349958	359700				
Frequency (MHz)				2511.02	2592.59	2644.18				
50	PI2 BPSK	1	1	25.11	25.30	25.11	26.8	0.0		
Channel				343202	349958	359700				
Frequency (MHz)				2518.02	2592.59	2644.18				
40	PI2 BPSK	1	1	25.08	25.42	25.03	26.8	0.0		
Channel				344202	349958	359700				
Frequency (MHz)				2511	2592.59	2644.18				
30	PI2 BPSK	1	1	25.16	25.33	25.10	26.8	0.0		
Channel				345202	349958	359700				
Frequency (MHz)				2612.04	2592.59	2644.18				
20	PI2 BPSK	1	1	25.27	25.40	25.11	26.8	0.0		



Full Power Mode - Ant0

Band 7 (200MHz Band) Part 27														
BW (MHz)	Modulation	RB Size	RB Offset	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Time-up limit (min)	MPR (dB)						
Channel										20000	21100	21600		
Frequency (MHz)														
20	QPSK	1	0	23.87	24.10	24.13								
20	QPSK	1	48	23.87	24.10	24.15	24.8	0						
20	QPSK	1	96	23.89	24.10	24.13								
20	QPSK	50	0	23.96	23.92	23.99								
20	QPSK	50	24	23.97	23.97	23.95								
20	QPSK	50	50	23.95	23.95	23.93	23.8	1						
20	QPSK	100	0	23.95	23.95	23.93								
20	HQAM	1	0	23.23	23.46	23.46								
20	HQAM	1	48	23.27	23.52	23.47	23.8	1						
20	HQAM	1	96	23.23	23.46	23.39								
20	HQAM	50	0	21.98	22.23	22.20								
20	HQAM	50	24	22.08	22.28	22.33	22.8	2						
20	HQAM	50	50	22.08	22.28	22.30								
20	HQAM	100	0	22.06	22.28	22.28								
20	HQAM	1	0	22.22	22.52	22.29								
20	HQAM	1	48	22.18	22.43	22.28	22.8	2						
20	HQAM	1	96	22.18	22.46	22.29								
20	HQAM	50	0	20.98	21.28	21.21								
20	HQAM	50	24	21.10	21.28	21.33	21.8	3						
20	HQAM	100	0	21.08	21.28	21.29								
20	ZSSBAM	1	0	19.32	19.36	19.40								
20	ZSSBAM	1	48	19.39	19.36	19.38	19.8	5						
20	ZSSBAM	1	96	19.08	19.08	19.32								
20	ZSSBAM	50	0	18.35	18.98	19.10								
20	ZSSBAM	50	24	18.96	18.98	19.10	19.8	5						
20	ZSSBAM	50	50	18.96	18.98	19.21								
20	ZSSBAM	100	0	18.05	18.06	19.18								
Channel										20000	21100	21600		
Frequency (MHz)														
15	QPSK	1	0	24.15	24.08	24.05								
15	QPSK	1	37	24.16	24.12	24.13	24.8	0						
15	QPSK	1	74	24.16	24.13	24.17								
15	QPSK	1	111	23.92	23.92	23.91								
15	QPSK	36	20	23.37	23.34	23.34	23.8	1						
15	QPSK	36	56	23.32	23.32	23.31								
15	QPSK	72	0	23.32	23.46	23.32								
15	HQAM	1	0	23.48	23.47	23.49								
15	HQAM	1	37	23.51	23.53	23.51	23.8	1						
15	HQAM	1	74	23.54	23.58	23.58								
15	HQAM	36	0	22.29	22.23	22.19								
15	HQAM	36	20	22.34	22.32	22.32	22.8	2						
15	HQAM	36	56	22.34	22.32	22.32								
15	HQAM	72	0	22.32	22.36	22.32								
15	HQAM	1	0	22.37	22.37	22.31								
15	HQAM	1	37	22.50	22.41	22.43	22.8	2						
15	HQAM	1	74	22.50	22.41	22.43								
15	HQAM	36	0	21.34	21.25	21.25								
15	HQAM	36	20	21.41	21.41	21.38	21.8	3						
15	HQAM	36	56	21.38	21.38	21.38								
15	HQAM	72	0	21.34	21.33	21.32								
15	ZSSBAM	1	0	19.31	19.28	19.96								
15	ZSSBAM	1	37	19.38	19.27	19.16	19.8	5						
15	ZSSBAM	1	74	19.35	19.27	19.27								
15	ZSSBAM	36	0	18.28	18.24	19.38								
15	ZSSBAM	36	20	18.20	18.26	19.45	19.8	5						
15	ZSSBAM	36	56	18.18	18.26	19.45								
15	ZSSBAM	72	0	18.27	18.22	18.40								
Channel										20000	21100	21600		
Frequency (MHz)														
10	QPSK	1	0	24.03	24.03	24.02								
10	QPSK	1	25	23.95	24.06	24.06	24.8	0						
10	QPSK	1	49	24.09	24.04	24.16								
10	QPSK	1	73	23.95	24.06	24.06								
10	QPSK	25	12	23.32	23.33	23.27	23.8	1						
10	QPSK	25	25	23.19	23.38	23.22								
10	QPSK	50	0	23.24	23.31	23.43								
10	HQAM	1	25	23.35	23.33	23.43	23.8	1						
10	HQAM	1	25	23.28	23.09	23.48								
10	HQAM	1	49	23.26	23.26	23.19								
10	HQAM	1	73	23.37	23.37	23.19								
10	HQAM	25	12	22.35	22.38	22.33	22.8	2						
10	HQAM	25	25	22.59	22.25	22.35								
10	HQAM	50	0	22.18	22.48	22.18								
10	HQAM	1	0	22.38	22.37	22.40								
10	HQAM	1	25	22.35	22.48	22.48	22.8	2						
10	HQAM	1	49	22.48	22.38	22.34								
10	HQAM	25	0	21.04	21.24	21.15								
10	HQAM	25	12	21.28	21.37	21.41	21.8	3						
10	HQAM	25	25	21.24	21.34	21.16								
10	HQAM	50	0	21.38	21.44	21.15								
10	ZSSBAM	1	0	18.14	18.18	19.38								
10	ZSSBAM	1	25	18.08	18.15	18.44	19.8	5						
10	ZSSBAM	1	49	18.18	18.08	19.38								
10	ZSSBAM	25	0	18.27	18.21	18.43								
10	ZSSBAM	25	12	18.15	18.25	19.38	19.8	5						
10	ZSSBAM	25	25	18.05	18.26	19.37								
10	ZSSBAM	50	0	18.18	18.24	19.37								
Channel										20775	21000	21425		
Frequency (MHz)														
5	QPSK	1	0	24.13	24.08	24.02								
5	QPSK	1	12	24.06	24.13	24.10	24.8	0						
5	QPSK	1	24	24.14	24.10	24.12								
5	QPSK	12	0	23.24	23.14	23.25								
5	QPSK	12	12	23.30	23.21	23.23	23.8	1						
5	QPSK	12	13	23.22	23.32	23.26								
5	QPSK	25	0	23.30	23.26	23.22								
5	HQAM	1	6	23.29	23.39	23.33	23.8	1						
5	HQAM	1	12	23.33	23.38	23.32								
5	HQAM	1	24	23.37	23.36	23.33								
5	HQAM	12	0	22.18	22.38	22.33								
5	HQAM	12	7	22.25	22.32	22.33	22.8	2						
5	HQAM	12	13	22.25	22.34	22.34								
5	HQAM	25	0	22.23	22.38	22.34								
5	HQAM	1	1	22.36	22.38	22.23								
5	HQAM	1	12	22.31	22.40	22.38	22.8	2						
5	HQAM	1	24	22.31	22.40	22.39								
5	HQAM	12	0	21.31	21.39	21.12								
5	HQAM	12	7	21.31	21.38	21.36	21.8	3						
5	HQAM	12	13	21.35	21.43	21.21								
5	HQAM	25	0	20.18	20.38	20.18								
5	ZSSBAM	1	0	18.24	18.13	18.38								
5	ZSSBAM	1	12	18.24	18.23	18.48	19.8	5						
5	ZSSBAM	1	24	18.22	18.16	18.48								
5	ZSSBAM	12	0	18.21	18.21	18.42								
5	ZSSBAM	12	7	18.13	18.12	18.34	19.8	5						
5	ZSSBAM	12	13	18.08	18.26	18.21								
5	ZSSBAM	25	0	18.25	18.21	18.45								

Band 66														
BW (MHz)	Modulation	RB Size	RB Offset	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Power Class / (Freq. Ch. / Freq. Ch. / Freq. Ch. / Freq.)	Time-up limit (min)	MPR (dB)						
Channel										13002	13022	13072		
Frequency (MHz)														
20	QPSK	1	0	23.71	23.77	23.63								
20	QPSK	1	48	23.37	23.52	23.61	24.8	0						
20	QPSK	1	96	23.41	23.41	23.71								
20	QPSK	50	0	22.87	22.87	22.82								
20	QPSK	50	24	22.78	22.85	22.75	23.8	1						
20	QPSK	50	50	22.72	22.84	22.71								
20	QPSK	100	0	22.77	22.80	22.73								
20	HQAM	1	0	23.04	23.04	23.09								
20	HQAM	1	48	22.83	23.11	23.02	23.8	1						
20	HQAM	1	96	23.02	23.06	23.06								
20	HQAM	50	0	21.51	21.86	21.75								
20	HQAM	50	24	21.78	21.83	21.78	22.8	2						
20	HQAM	50	50	21.77	21.82	21.71								



Reduced Power level 1 for Head - Ant1

Band 7 (200MHz band)									
Part 27									
SV (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq)	Power High Ch. (Freq)	Power Max Ch. (Freq)	Time-up time (min)	MPR (dB)	
Channel									
Frequency (MHz)									
20	QPSK	1	0	18.59	18.72	18.82			
20	QPSK	1	49	18.60	18.71	18.86	17.5	0	
20	QPSK	1	98	18.61	18.76	18.94			
20	QPSK	50	0	18.55	18.64	18.81			
20	QPSK	50	24	18.55	18.71	18.85	17.5	0	
20	QPSK	50	50	18.55	18.64	18.84			
20	QPSK	100	0	18.62	18.68	18.83			
20	HQAM	1	0	18.68	18.83	18.98			
20	HQAM	1	49	18.71	18.86	19.08	17.5	0	
20	HQAM	1	99	18.84	18.94	19.00			
20	HQAM	50	0	18.80	18.48	18.50			
20	HQAM	50	24	18.50	18.43	18.80	17.5	0	
20	HQAM	50	50	18.66	18.81	18.89			
20	HQAM	100	0	18.58	18.58	18.81			
20	HQAM	1	0	18.67	18.63	18.89	17.5	0	
20	HQAM	1	49	18.66	18.69	18.99			
20	HQAM	1	99	18.70	18.81	18.86			
20	HQAM	50	0	18.50	18.46	18.49			
20	HQAM	50	24	18.49	18.54	18.49	17.5	0	
20	HQAM	50	50	18.54	18.54	18.83			
20	ZSSBAM	1	0	18.57	18.64	18.49			
20	ZSSBAM	1	49	18.63	18.46	18.81	17.5	0	
20	ZSSBAM	1	99	18.50	18.54	18.50			
20	ZSSBAM	50	0	18.54	18.63	18.44			
20	ZSSBAM	50	24	18.53	18.49	18.47	17.5	0	
20	ZSSBAM	50	50	18.51	18.43	18.45			
20	ZSSBAM	100	0	18.50	18.45	18.51			
Channel									
Frequency (MHz)									
15	QPSK	1	0	18.47	18.68	18.81			
15	QPSK	1	37	18.54	18.68	18.83	17.5	0	
15	QPSK	1	74	18.55	18.48	18.84			
15	QPSK	36	0	18.44	18.55	18.49			
15	QPSK	36	20	18.45	18.71	18.81	17.5	0	
15	QPSK	36	40	18.48	18.65	18.84			
15	QPSK	75	0	18.51	18.84	18.51			
15	HQAM	1	0	18.81	18.91	18.28			
15	HQAM	1	37	18.83	18.94	18.50	17.5	0	
15	HQAM	1	74	18.91	18.91	18.84			
15	HQAM	36	0	18.58	18.30	18.50			
15	HQAM	36	20	18.39	18.20	18.46	17.5	0	
15	HQAM	36	40	18.53	18.49	18.47			
15	HQAM	75	0	18.58	18.54	18.50			
15	HQAM	1	0	18.80	18.80	18.56			
15	HQAM	1	37	18.83	18.83	18.58	17.5	0	
15	HQAM	1	74	18.83	18.80	18.53			
15	HQAM	36	0	18.42	18.40	18.49			
15	HQAM	36	20	18.53	18.34	18.50	17.5	0	
15	HQAM	36	40	18.41	18.45	18.81			
15	HQAM	75	0	18.54	18.43	18.47			
15	ZSSBAM	1	0	18.43	18.52	18.38			
15	ZSSBAM	1	37	18.58	18.50	18.44	17.5	0	
15	ZSSBAM	1	74	18.38	18.44	18.44			
15	ZSSBAM	36	0	18.49	18.41	18.49			
15	ZSSBAM	36	20	18.53	18.44	18.44	17.5	0	
15	ZSSBAM	36	40	18.50	18.30	18.38			
15	ZSSBAM	75	0	18.49	18.42	18.39			
Channel									
Frequency (MHz)									
10	QPSK	1	0	18.57	18.71	18.41			
10	QPSK	1	25	18.58	18.88	18.80	17.5	0	
10	QPSK	1	49	18.61	18.69	18.80			
10	QPSK	25	0	18.46	18.53	18.55			
10	QPSK	25	12	18.56	18.60	18.54	17.5	0	
10	QPSK	25	25	18.48	18.51	18.56			
10	QPSK	50	0	18.47	18.56	18.60			
10	HQAM	1	0	18.87	18.83	18.24			
10	HQAM	1	25	18.58	18.47	18.54	17.5	0	
10	HQAM	1	49	18.55	18.56	18.24			
10	HQAM	25	0	18.54	18.48	18.37			
10	HQAM	25	12	18.50	18.42	18.39	17.5	0	
10	HQAM	25	25	18.57	18.46	18.44			
10	HQAM	50	0	18.50	18.45	18.58			
10	HQAM	1	0	18.84	18.80	18.81			
10	HQAM	1	25	18.81	18.84	18.44	17.5	0	
10	HQAM	1	49	18.81	18.80	18.54			
10	HQAM	25	0	18.46	18.34	18.45			
10	HQAM	25	12	18.47	18.30	18.38	17.5	0	
10	HQAM	25	25	18.41	18.30	18.47			
10	HQAM	50	0	18.42	18.42	18.50			
10	ZSSBAM	1	0	18.44	18.37	18.47			
10	ZSSBAM	1	25	18.57	18.46	18.46	17.5	0	
10	ZSSBAM	1	49	18.36	18.54	18.42			
10	ZSSBAM	25	0	18.44	18.44	18.39			
10	ZSSBAM	25	12	18.44	18.44	18.30	17.5	0	
10	ZSSBAM	25	25	18.39	18.30	18.37			
10	ZSSBAM	50	0	18.44	18.30	18.39			
Channel									
Frequency (MHz)									
5	QPSK	1	0	18.55	18.68	18.42			
5	QPSK	1	12	18.45	18.59	18.60	17.5	0	
5	QPSK	1	24	18.66	18.64	18.59			
5	QPSK	12	0	18.54	18.81	18.50			
5	QPSK	12	7	18.56	18.71	18.81	17.5	0	
5	QPSK	12	13	18.55	18.62	18.49			
5	QPSK	25	0	18.81	18.66	18.24			
5	HQAM	1	0	18.58	18.81	18.24			
5	HQAM	1	12	18.83	18.86	18.54	17.5	0	
5	HQAM	1	24	18.36	18.38	18.80			
5	HQAM	12	0	18.56	18.33	18.37			
5	HQAM	12	7	18.44	18.41	18.46	17.5	0	
5	HQAM	12	13	18.53	18.51	18.56			
5	HQAM	25	0	18.50	18.49	18.80			
5	HQAM	1	0	18.86	18.83	18.37			
5	HQAM	1	12	18.59	18.37	18.51	17.5	0	
5	HQAM	1	24	18.44	18.51	18.54			
5	HQAM	12	0	18.49	18.38	18.40			
5	HQAM	12	7	18.48	18.38	18.31	17.5	0	
5	HQAM	12	13	18.59	18.46	18.48			
5	HQAM	25	0	18.39	18.30	18.30			
5	HQAM	25	0	18.39	18.47	18.41			
5	ZSSBAM	1	0	18.54	18.59	18.37			
5	ZSSBAM	1	12	18.57	18.34	18.33	17.5	0	
5	ZSSBAM	1	24	18.38	18.30	18.30			
5	ZSSBAM	12	0	18.44	18.40	18.38			
5	ZSSBAM	12	7	18.42	18.42	18.44	17.5	0	
5	ZSSBAM	12	13	18.40	18.41	18.31			
5	ZSSBAM	25	0	18.39	18.37	18.45			

Band 66									
Part 27									
SV (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq)	Power High Ch. (Freq)	Power Max Ch. (Freq)	Time-up time (min)	MPR (dB)	
Channel									
Frequency (MHz)									
20	QPSK	1	0	18.59	18.18	18.30			
20	QPSK	1	49	18.60	18.14	18.38	17	0	
20	QPSK	1	99	18.61	18.08	18.81			
20	QPSK	50	0	18.54	18.06	18.84			
20	QPSK	50	24	18.67	18.15	18.90	17	0	
20	QPSK	50	50	18.61	18.04	18.84			
20	QPSK	100	0	18.65	18.14	18.98			
20	HQAM	1	0	18.12	18.04	18.83			
20	HQAM	1	49	18.09	18.13	18.96	17	0	
20	HQAM	1	99	18.05	18.00	18.96			
20	HQAM	50	0	18.93	18.99	18.83			
20	HQAM	50	24	18.91	18.96	18.80	17	0	
20	HQAM	50	50	18.96	18.98	18.90			
20	HQAM	100	0	18.91	18.87	18.90			
20	HQAM	1	0	18.65	18.93	18.90	17	0	
20	HQAM	1	49	18.71	18.14	18.84			
20	HQAM	1	99	18.54	18.13	18.86			
20	HQAM	50	0	18.78	18.02	18.74			
20	HQAM	50	24	18.69	18.06	18.90	17	0	
20	HQAM	50	50	18.89	18.89	18.77			
20	HQAM	100	0	18.90	18.83	18.86			
20	ZSSBAM	1	0	18.94	18.10	18.80			
20	ZSSBAM	1	49	18.89	18.02	18.84	17	0	
20	ZSSBAM	1	99	18.86	18.06	18.86			
20	ZSSBAM	50	0	18.86	18.97	18.91			
20	ZSSBAM	50	24	18.94	18.04	18.84	17	0	
20	ZSSBAM	50	50	18.84	18.95	18.90			
20	ZSSBAM	100	0	18.93	18.98	18.93			
Channel									
Frequency (MHz)									
15	QPSK	1	0	18.08	18.08	18.03			
15	QPSK	1	37	18.62	18.99	18.93	17	0	
15	QPSK	1	74	18.56	18.18	18.88			
15	QPSK	36	0	18.88	18.00	18.88			
15	QPSK	36	20	18.60	18.00	18.88	17	0	
15	QPSK	36	40	18.56	18.18	18.88			
15	QPSK	75	0	18.04	18.05	18.95			
15	HQAM	1	0	18.05	18.89	18.80			
15	HQAM	1	37	18.90	18.00	18.82	17	0	
15	HQAM	1	74	18.94	18.00	18.91			
15	HQAM	36	0	18.89	18.94	18.86			
15	HQAM	36	20	18.63	18.94	18.81	17	0	
15	HQAM	36	40	18.60	18.94	18.81			
15	HQAM	75	0	18.81	18.94	18.82			
15	HQAM	1	0	18.77	18.79	18.82			
15	HQAM	1	0	18.80	18.90	18.91			
15	HQAM	1	37	18.90	18.91</				



Reduced Power level 2/3 for Head – Ant0

Band 7 (2600MHz Band)									
Part 27									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq)	Power Main Ch. (Freq)	Power High Ch. (Freq)	Time-up limit (min)	MPR (dB)	
Channel									
Frequency (MHz)									
20	QPSK	1	0	18.52	18.72	18.82			
20	QPSK	1	49	18.62	18.71	18.86	17.5	0	
20	QPSK	1	99	18.67	18.78	18.93			
20	QPSK	50	0	18.55	18.64	18.81			
20	QPSK	50	24	18.65	18.71	18.85	17.5	0	
20	QPSK	50	49	18.69	18.80	18.95			
20	QPSK	100	0	18.52	18.58	18.83			
20	HQAM	1	0	18.63	18.63	18.38			
20	HQAM	1	49	18.71	18.69	18.38	17.5	0	
20	HQAM	1	99	18.44	18.34	18.90			
20	HQAM	50	0	18.52	18.48	18.50			
20	HQAM	50	24	18.56	18.41	18.80	17.5	0	
20	HQAM	50	49	18.60	18.61	18.59			
20	HQAM	100	0	18.58	18.58	18.81			
20	HQAM	1	0	18.67	18.63	18.69	17.5	0	
20	HQAM	1	49	18.92	18.68	18.39			
20	HQAM	1	99	18.70	18.67	18.58			
20	HQAM	50	0	18.52	18.46	18.49	17.5	0	
20	HQAM	50	24	18.49	18.54	18.49			
20	HQAM	50	49	18.53	18.53	18.53			
20	HQAM	100	0	18.54	18.52	18.53			
20	ZSSBAM	1	0	18.57	18.62	18.62	17.5	0	
20	ZSSBAM	1	49	18.63	18.62	18.62			
20	ZSSBAM	1	99	18.52	18.54	18.56			
20	ZSSBAM	50	0	18.54	18.60	18.44			
20	ZSSBAM	50	24	18.53	18.48	18.67	17.5	0	
20	ZSSBAM	50	49	18.51	18.42	18.45			
20	ZSSBAM	100	0	18.50	18.45	18.51			
Channel									
Frequency (MHz)									
15	QPSK	1	0	18.47	18.68	18.81			
15	QPSK	1	37	18.54	18.88	18.63	17.5	0	
15	QPSK	1	74	18.55	18.68	18.81			
15	QPSK	38	0	18.44	18.50	18.49			
15	QPSK	38	20	18.55	18.71	18.81	17.5	0	
15	QPSK	38	39	18.49	18.68	18.81			
15	QPSK	75	0	18.51	18.64	18.51			
15	HQAM	1	0	18.61	18.51	18.28			
15	HQAM	1	37	18.65	18.56	18.50	17.5	0	
15	HQAM	1	74	18.31	18.21	18.64			
15	HQAM	38	0	18.58	18.38	18.36			
15	HQAM	38	20	18.39	18.28	18.48	17.5	0	
15	HQAM	38	39	18.52	18.45	18.47			
15	HQAM	75	0	18.58	18.54	18.50			
15	HQAM	1	0	18.62	18.58	18.56	17.5	0	
15	HQAM	1	37	18.53	18.48	18.48			
15	HQAM	1	74	18.63	18.60	18.53			
15	HQAM	38	0	18.42	18.40	18.49			
15	HQAM	38	20	18.43	18.43	18.26	17.5	0	
15	HQAM	38	39	18.41	18.41	18.26			
15	HQAM	75	0	18.54	18.43	18.47			
15	ZSSBAM	1	0	18.43	18.52	18.38	17.5	0	
15	ZSSBAM	1	37	18.53	18.43	18.47			
15	ZSSBAM	1	74	18.38	18.44	18.44			
15	ZSSBAM	38	0	18.49	18.41	18.40			
15	ZSSBAM	38	20	18.53	18.46	18.38	17.5	0	
15	ZSSBAM	38	39	18.50	18.38	18.38			
15	ZSSBAM	75	0	18.49	18.42	18.39			
Channel									
Frequency (MHz)									
10	QPSK	1	0	18.57	18.71	18.41			
10	QPSK	1	28	18.58	18.58	18.80	17.5	0	
10	QPSK	1	49	18.61	18.63	18.85			
10	QPSK	25	0	18.48	18.63	18.85			
10	QPSK	25	12	18.56	18.60	18.84	17.5	0	
10	QPSK	25	25	18.49	18.51	18.56			
10	QPSK	50	0	18.47	18.48	18.80			
10	HQAM	1	0	18.67	18.63	18.24	17.5	0	
10	HQAM	1	25	18.58	18.47	18.54			
10	HQAM	1	50	18.20	18.23	18.47			
10	HQAM	25	0	18.54	18.48	18.37			
10	HQAM	25	12	18.50	18.42	18.39	17.5	0	
10	HQAM	25	25	18.57	18.46	18.35			
10	HQAM	50	0	18.54	18.50	18.61			
10	HQAM	1	25	18.51	18.51	18.44	17.5	0	
10	HQAM	1	49	18.61	18.61	18.54			
10	HQAM	25	0	18.46	18.34	18.45			
10	HQAM	25	12	18.47	18.38	18.38	17.5	0	
10	HQAM	25	25	18.41	18.33	18.47			
10	HQAM	50	0	18.42	18.42	18.30			
10	ZSSBAM	1	0	18.44	18.37	18.47	17.5	0	
10	ZSSBAM	1	25	18.52	18.54	18.42			
10	ZSSBAM	25	0	18.44	18.44	18.39			
10	ZSSBAM	25	12	18.44	18.46	18.39	17.5	0	
10	ZSSBAM	25	25	18.39	18.30	18.27			
10	ZSSBAM	50	0	18.44	18.38	18.39			
Channel									
Frequency (MHz)									
5	QPSK	1	0	18.55	18.88	18.42			
5	QPSK	1	12	18.45	18.58	18.60	17.5	0	
5	QPSK	1	24	18.69	18.64	18.59			
5	QPSK	12	0	18.54	18.61	18.59			
5	QPSK	12	7	18.56	18.71	18.81	17.5	0	
5	QPSK	12	13	18.85	18.60	18.49			
5	QPSK	25	0	18.61	18.68	18.64			
5	HQAM	1	0	18.61	18.61	18.24			
5	HQAM	1	12	18.63	18.56	18.54	17.5	0	
5	HQAM	1	24	18.38	18.28	18.30			
5	HQAM	12	0	18.56	18.33	18.27			
5	HQAM	12	7	18.44	18.41	18.48	17.5	0	
5	HQAM	12	13	18.53	18.51	18.56			
5	HQAM	25	0	18.55	18.48	18.60			
5	HQAM	1	0	18.66	18.63	18.67	17.5	0	
5	HQAM	1	12	18.69	18.67	18.51			
5	HQAM	1	24	18.64	18.57	18.54			
5	HQAM	12	0	18.49	18.38	18.40			
5	HQAM	12	7	18.48	18.38	18.31	17.5	0	
5	HQAM	12	13	18.59	18.46	18.48			
5	HQAM	25	0	18.50	18.47	18.41			
5	ZSSBAM	1	0	18.54	18.58	18.37	17.5	0	
5	ZSSBAM	1	12	18.57	18.54	18.33			
5	ZSSBAM	1	24	18.38	18.28	18.28			
5	ZSSBAM	12	0	18.44	18.40	18.38			
5	ZSSBAM	12	7	18.42	18.42	18.44	17.5	0	
5	ZSSBAM	12	13	18.42	18.41	18.31			
5	ZSSBAM	25	0	18.39	18.37	18.45			

Band 66									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq)	Power Main Ch. (Freq)	Power High Ch. (Freq)	Time-up limit (min)	MPR (dB)	
Channel									
Frequency (MHz)									
20	QPSK	1	0	18.09	18.13	18.03			
20	QPSK	1	49	18.03	18.14	18.08	17	0	
20	QPSK	1	99	18.01	18.08	18.01			
20	QPSK	50	0	18.04	18.06	18.04			
20	QPSK	50	24	18.07	18.15	18.00	17	0	
20	QPSK	50	49	18.08	18.04	18.00			
20	QPSK	100	0	18.05	18.14	18.08			
20	HQAM	1	0	18.12	18.04	18.03			
20	HQAM	1	49	18.09	18.12	18.06	17	0	
20	HQAM	1	99	18.03	18.00	18.06			
20	HQAM	50	0	18.00	18.09	18.03			
20	HQAM	50	24	18.01	18.06	18.00	17	0	
20	HQAM	50	49	18.00	18.08	18.00			
20	HQAM	100	0	18.01	18.07	18.00			
20	HQAM	1	0	18.08	18.09	18.00	17	0	
20	HQAM	1	49	18.11	18.14	18.04			
20	HQAM	1	99	18.05	18.13	18.08			
20	HQAM	50	0	18.78	18.02	18.74			
20	HQAM	50	24	18.06	18.08	18.00	17	0	
20	HQAM	50	49	18.09	18.09	18.77			
20	HQAM	100	0	18.00	18.03	18.00			
20	ZSSBAM	1	0	18.04	18.10	18.00	17	0	
20	ZSSBAM	1	49	18.07	18.09	18.00			



Reduced power for Hotspot on Ant0

Band 7 (2600MHz Band) Part 27										
BW (MHz)	Modulation	RIS Size	RIS Offset	Power Low Ch. (Freq.)	Power Main Ch. (Freq.)	Power High Ch. (Freq.)	Turn-up time (min)	MPR (dB)		
Channel 2600 2700 2760										
20	QPSK	1	0	17.66	17.56	17.60		18.5	0	
20	QPSK	1	45	17.65	17.66	17.65				
20	QPSK	1	90	17.67	17.59	17.79				
20	QPSK	50	0	17.57	17.72	17.83				
20	QPSK	50	24	17.83	17.74	17.87		18.5	0	
20	QPSK	50	48	17.82	17.80	17.83				
20	QPSK	100	0	17.55	17.71	17.84				
20	HQAM	1	0	17.55	17.57	17.46				
20	HQAM	1	45	17.55	17.56	17.48		18.5	0	
20	HQAM	1	90	17.55	17.45	17.56				
20	HQAM	50	0	17.54	17.62	17.49				
20	HQAM	50	24	17.70	17.66	17.74		18.5	0	
20	HQAM	50	48	17.67	17.70	17.87				
20	HQAM	100	0	17.84	17.81	17.84				
20	HQAM	1	0	17.86	17.83	17.60		18.5	0	
20	HQAM	1	45	17.82	17.68	17.74				
20	HQAM	1	90	17.68	17.65	17.51				
20	HQAM	50	0	17.84	17.85	17.56				
20	HQAM	50	24	17.56	17.66	17.67		18.5	0	
20	HQAM	50	48	17.67	17.67	17.80				
20	HQAM	100	0	17.54	17.57	17.54				
20	ZSSBAM	1	0	17.57	17.54	17.45		18.5	0	
20	ZSSBAM	1	45	17.81	17.61	17.81				
20	ZSSBAM	1	90	17.54	17.66	17.59				
20	ZSSBAM	50	0	17.42	17.68	17.48		18.5	0	
20	ZSSBAM	50	24	17.82	17.68	17.53				
20	ZSSBAM	50	48	17.62	17.62	17.43				
20	ZSSBAM	100	0	17.52	17.68	17.41				
Channel 2617.5 2700 2762.5										
15	QPSK	1	0	17.66	17.58	17.81		18.5	0	
15	QPSK	1	37	17.86	17.68	17.63				
15	QPSK	1	74	17.67	17.70	17.85				
15	QPSK	36	0	17.45	17.50	17.52				
15	QPSK	36	20	17.57	17.73	17.57		18.5	0	
15	QPSK	36	39	17.58	17.66	17.69				
15	QPSK	75	0	17.55	17.58	17.81				
15	HQAM	1	0	17.47	17.46	17.41		18.5	0	
15	HQAM	1	37	17.50	17.46	17.54				
15	HQAM	1	74	17.46	17.48	17.45				
15	HQAM	36	0	17.51	17.55	17.43		18.5	0	
15	HQAM	36	20	17.83	17.68	17.25				
15	HQAM	36	39	17.82	17.68	17.63				
15	HQAM	75	0	17.53	17.55	17.45		18.5	0	
15	HQAM	1	0	17.50	17.50	17.57				
15	HQAM	1	37	17.56	17.66	17.48		18.5	0	
15	HQAM	1	74	17.63	17.68	17.46				
15	HQAM	36	0	17.53	17.46	17.55				
15	HQAM	36	20	17.59	17.61	17.59		18.5	0	
15	HQAM	36	39	17.61	17.61	17.61				
15	HQAM	75	0	17.53	17.53	17.43		18.5	0	
15	ZSSBAM	1	0	17.83	17.54	17.59				
15	ZSSBAM	1	37	17.41	17.45	17.43		18.5	0	
15	ZSSBAM	1	74	17.52	17.47	17.44				
15	ZSSBAM	36	0	17.52	17.57	17.44		18.5	0	
15	ZSSBAM	36	20	17.66	17.64	17.48				
15	ZSSBAM	36	39	17.52	17.58	17.35				
15	ZSSBAM	75	0	17.49	17.57	17.36		18.5	0	
Channel 2600 2700 2760										
10	QPSK	1	0	17.61	17.47	17.69		18.5	0	
10	QPSK	1	26	17.54	17.69	17.85				
10	QPSK	1	45	17.56	17.71	17.87				
10	QPSK	25	0	17.64	17.68	17.82		18.5	0	
10	QPSK	25	12	17.57	17.70	17.84				
10	QPSK	25	25	17.57	17.68	17.86				
10	QPSK	50	0	17.47	17.61	17.81		18.5	0	
10	HQAM	1	0	17.51	17.47	17.36		18.5	0	
10	HQAM	1	25	17.48	17.38	17.44				
10	HQAM	1	50	17.48	17.68	17.63				
10	HQAM	25	0	17.46	17.50	17.43		18.5	0	
10	HQAM	25	12	17.55	17.53	17.29				
10	HQAM	25	25	17.57	17.66	17.61		18.5	0	
10	HQAM	50	0	17.57	17.54	17.43				
10	HQAM	1	0	17.52	17.46	17.52		18.5	0	
10	HQAM	1	25	17.46	17.65	17.27				
10	HQAM	1	45	17.54	17.46	17.62		18.5	0	
10	HQAM	25	0	17.47	17.48	17.46				
10	HQAM	25	12	17.57	17.58	17.63		18.5	0	
10	HQAM	25	25	17.57	17.63	17.45				
10	HQAM	50	0	17.57	17.43	17.45		18.5	0	
10	ZSSBAM	1	0	17.44	17.42	17.32		18.5	0	
10	ZSSBAM	1	25	17.67	17.66	17.61				
10	ZSSBAM	1	45	17.53	17.45	17.55				
10	ZSSBAM	25	0	17.27	17.46	17.36		18.5	0	
10	ZSSBAM	25	12	17.56	17.44	17.34				
10	ZSSBAM	25	25	17.56	17.65	17.37		18.5	0	
10	ZSSBAM	50	0	17.46	17.48	17.36				
Channel 2617.5 2700 2762.5										
5	QPSK	1	0	17.62	17.47	17.51		18.5	0	
5	QPSK	1	12	17.56	17.66	17.63				
5	QPSK	1	24	17.65	17.75	17.67		18.5	0	
5	QPSK	12	0	17.61	17.71	17.56				
5	QPSK	12	7	17.63	17.71	17.87		18.5	0	
5	QPSK	12	13	17.49	17.68	17.62				
5	QPSK	25	0	17.60	17.68	17.53		18.5	0	
5	HQAM	1	0	17.42	17.58	17.41		18.5	0	
5	HQAM	1	12	17.49	17.45	17.36				
5	HQAM	1	24	17.42	17.44	17.41		18.5	0	
5	HQAM	12	0	17.47	17.68	17.46				
5	HQAM	12	7	17.70	17.58	17.53		18.5	0	
5	HQAM	12	13	17.60	17.66	17.58				
5	HQAM	25	0	17.47	17.67	17.42		18.5	0	
5	HQAM	1	0	17.55	17.48	17.56				
5	HQAM	1	12	17.33	17.67	17.21		18.5	0	
5	HQAM	1	24	17.54	17.63	17.44				
5	HQAM	12	0	17.51	17.47	17.42		18.5	0	
5	HQAM	12	7	17.84	17.50	17.62				
5	HQAM	12	13	17.64	17.66	17.42		18.5	0	
5	HQAM	25	0	17.61	17.55	17.29				
5	ZSSBAM	1	0	17.43	17.52	17.30		18.5	0	
5	ZSSBAM	1	12	17.44	17.56	17.49				
5	ZSSBAM	1	24	17.46	17.52	17.46		18.5	0	
5	ZSSBAM	12	0	17.39	17.52	17.41				
5	ZSSBAM	12	7	17.84	17.50	17.53		18.5	0	
5	ZSSBAM	12	13	17.62	17.43	17.32				
5	ZSSBAM	25	0	17.50	17.45	17.35		18.5	0	

Band 66										
BW (MHz)	Modulation	RIS Size	RIS Offset	Power Low Ch. (Freq.)	Power Main Ch. (Freq.)	Power High Ch. (Freq.)	Turn-up time (min)	MPR (dB)		
Channel 12002 12022 12072										
20	QPSK	1	0	16.81	16.80	16.85		17.4	0	
20	QPSK	1	45	16.74	16.80	16.83				
20	QPSK	1	90	16.81	16.72	16.87				
20	QPSK	50	0	16.69	16.74	16.76		17.4	0	
20	QPSK	50	24	16.76	16.86	16.83				
20	QPSK	50	48	16.73	16.78	16.77				
20	QPSK	100	0	16.76	16.84	16.82				
20	HQAM	1	0	16.82	16.80	16.79		17.4	0	
20	HQAM	1	45	16.75	16.79	16.79				
20	HQAM	1	90	16.83	16.83	16.58				
20	HQAM	50	0	16.81	16.74	16.73		17.4	0	
20	HQAM	50	24	16.84	16.80	16.86				
20	HQAM	50	48	16.84	16.					



Reduced power for Sensor on-Ant0

Band 7 (2600MHz band)											Band 66												
Part 27											Channel												
BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. Freq.	Power Main Freq.	Power Pil Freq.	Time-up limit (min)	MPR (dB)			BW (MHz)	Modulation	RB Size	RB Offset	Power Ch. Freq.	Power Main Freq.	Power Pil Freq.	Time-up limit (min)	MPR (dB)				
Channel											Channel												
Frequency (MHz)											Frequency (MHz)												
20	QPSK	1	0	21.30	21.31	21.38					20	QPSK	1	0	18.30	18.31	18.38						
20	QPSK	1	49	21.30	21.31	21.37	22	0			20	QPSK	1	49	18.30	18.31	18.34	19	0				
20	QPSK	1	99	21.44	21.45	21.46					20	QPSK	1	99	18.30	18.31	18.34						
20	QPSK	50	0	21.23	21.34	21.36					20	QPSK	50	0	18.11	18.33	18.10						
20	QPSK	50	24	21.34	21.36	21.37	22	0			20	QPSK	50	24	18.30	18.34	18.16	19	0				
20	QPSK	50	74	21.32	21.34	21.37					20	QPSK	50	74	18.14	18.33	18.12						
20	QPSK	100	0	21.32	21.36	21.34					20	QPSK	100	0	18.28	18.32	18.14						
20	HQAM	1	0	21.33	21.38	21.27					20	HQAM	1	0	18.31	18.33	18.22						
20	HQAM	1	49	21.33	21.39	21.38	22	0			20	HQAM	1	49	18.30	18.33	18.14	19	0				
20	HQAM	1	99	21.24	21.23	21.29					20	HQAM	1	99	18.28	18.36	18.26						
20	HQAM	50	0	21.31	21.39	21.23					20	HQAM	50	0	18.14	18.27	18.16						
20	HQAM	50	24	21.28	21.27	21.28	22	0			20	HQAM	50	24	18.34	18.22	18.30	19	0				
20	HQAM	50	74	21.28	21.28	21.29					20	HQAM	50	74	18.30	18.26	18.17						
20	HQAM	100	0	21.36	21.34	21.24					20	HQAM	100	0	18.18	18.16	18.26						
20	HQAM	1	0	21.16	21.38	21.13	22	0			20	HQAM	1	0	18.27	18.34	18.26	19	0				
20	HQAM	1	49	21.28	21.28	21.21					20	HQAM	1	49	17.89	18.05	18.00						
20	HQAM	50	0	21.25	21.27	21.20					20	HQAM	50	0	18.19	18.33	18.21						
20	HQAM	50	24	21.29	21.28	21.28	22	0			20	HQAM	50	24	18.29	18.28	18.28	19	0				
20	HQAM	50	74	21.29	21.28	21.28					20	HQAM	50	74	18.17	18.23	18.10	19	0				
20	HQAM	100	0	21.22	21.34	21.27					20	HQAM	100	0	18.19	18.28	18.23						
20	ZSSBAM	1	0	18.25	18.22	18.20					20	ZSSBAM	1	0	17.81	18.29	18.18						
20	ZSSBAM	1	49	18.22	18.08	18.14	20	2			20	ZSSBAM	1	49	18.13	18.26	18.18	19	0				
20	ZSSBAM	1	99	18.20	18.08	18.16					20	ZSSBAM	1	99	18.15	18.19	18.09						
20	ZSSBAM	50	0	18.15	18.07	18.13					20	ZSSBAM	50	0	18.18	18.21	18.13						
20	ZSSBAM	50	24	18.13	18.15	18.16	20	2			20	ZSSBAM	50	24	18.14	18.11	18.16	19	0				
20	ZSSBAM	50	74	18.12	18.12	18.10					20	ZSSBAM	50	74	18.10	18.31	18.11						
20	ZSSBAM	100	0	18.01	18.04	18.09					20	ZSSBAM	100	0	18.16	18.17	18.20						
Channel											Channel												
Frequency (MHz)											Frequency (MHz)												
15	QPSK	1	0	21.17	21.08	21.07					15	QPSK	1	0	18.08	18.15	17.99						
15	QPSK	1	37	21.19	21.08	21.07	22	0			15	QPSK	1	37	17.80	18.11	17.92	19	0				
15	QPSK	1	74	21.19	21.08	21.08					15	QPSK	1	74	17.80	18.03	17.97						
15	QPSK	36	0	21.05	21.17	21.23					15	QPSK	36	0	17.82	17.99	17.89						
15	QPSK	36	20	21.13	21.28	21.18	22	0			15	QPSK	36	20	18.00	18.14	17.95	19	0				
15	QPSK	75	0	21.22	21.21	21.18					15	QPSK	75	0	18.02	18.03	17.80						
15	HQAM	1	0	21.08	21.08	21.08					15	HQAM	1	0	17.99	18.10	17.98						
15	HQAM	1	37	20.86	21.08	20.88	22	0			15	HQAM	1	37	18.11	17.99	17.94	19	0				
15	HQAM	1	74	21.02	21.10	21.10					15	HQAM	1	74	18.08	18.13	18.05						
15	HQAM	36	0	21.08	20.95	21.03					15	HQAM	36	0	17.84	17.96	17.82						
15	HQAM	36	20	21.08	21.23	21.08	22	0			15	HQAM	36	20	18.04	17.89	18.06	19	0				
15	HQAM	75	0	21.15	21.15	21.13					15	HQAM	75	0	17.80	18.10	17.90						
15	HQAM	75	0	21.15	21.11	21.04					15	HQAM	75	0	17.92	17.94	17.92						
15	HQAM	1	0	20.98	21.21	20.88					15	HQAM	1	0	18.03	18.05	18.06						
15	HQAM	1	37	21.11	21.08	21.10	22	0			15	HQAM	1	37	17.81	17.75	17.80	19	0				
15	HQAM	1	74	21.06	21.10	20.95					15	HQAM	1	74	18.03	18.00	17.96						
15	HQAM	36	0	21.02	21.09	20.99					15	HQAM	36	0	17.80	18.02	17.88						
15	HQAM	36	20	20.95	21.01	20.97	22	0			15	HQAM	36	20	18.01	17.95	18.00	19	0				
15	HQAM	75	0	21.11	21.08	21.02					15	HQAM	75	0	17.84	17.90	17.86						
15	ZSSBAM	1	0	18.05	18.05	18.07					15	ZSSBAM	1	0	17.88	17.86	17.84						
15	ZSSBAM	1	37	18.05	18.05	18.05	20	2			15	ZSSBAM	1	37	17.82	17.82	17.82	19	0				
15	ZSSBAM	1	74	18.02	18.04	18.05					15	ZSSBAM	1	74	17.82	17.90	17.79						
15	ZSSBAM	36	0	18.01	18.00	18.01					15	ZSSBAM	36	0	17.80	17.93	17.83						
15	ZSSBAM	36	20	18.00	18.00	18.00	20	2			15	ZSSBAM	36	20	17.86	18.07	17.96	19	0				
15	ZSSBAM	75	0	18.06	18.03	18.05					15	ZSSBAM	75	0	17.86	18.06	17.85						
15	ZSSBAM	75	0	18.06	18.06	18.03					15	ZSSBAM	75	0	17.90	17.87	17.81						
Channel											Channel												
Frequency (MHz)											Frequency (MHz)												
10	QPSK	1	0	21.19	21.11	21.19					10	QPSK	1	0	18.12	18.11	17.96						
10	QPSK	1	28	21.21	21.05	21.03	22	0			10	QPSK	1	28	17.78	18.00	17.84	19	0				
10	QPSK	1	49	21.13	21.21	21.16					10	QPSK	1	49	17.82	17.87	17.84						
10	QPSK	25	0	21.12	21.18	21.19					10	QPSK	25	0	17.84	18.04	17.80						
10	QPSK	25	12	21.22	21.21	21.23	22	0			10	QPSK	25	12	17.87	18.09	17.86	19	0				
10	QPSK	25	25	21.15	21.20	21.08					10	QPSK	25	25	17.84	17.97	17.84						
10	QPSK	12	0	21.05	21.08	21.21					10	QPSK	12	0	17.80	18.10	17.81						
10	HQAM	1	0	21.08	21.07	21.07	22	0			10	HQAM	1	0	18.01	18.04	17.92	19	0				
10	HQAM	1	25	20.81	21.04	20.96					10	HQAM	1	25	17.87	17.95	17.80						
10	HQAM	1	49	21.00	21.08</																		



Full Power Mode - Ant1

Band 7 (2600MHz Band) Part 27										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq.)	Power Mid Ch. (Freq.)	Power High Ch. (Freq.)	Time-up limit (min)	MFR (dB)		
Channel Frequency (MHz)										
20	QPSK	1	0	24.13	24.15	24.96				
20	QPSK	1	40	24.12	24.16	24.96	24.8	0		
20	QPSK	1	80	24.12	24.16	24.96				
20	QPSK	50	0	23.21	23.26	23.12				
20	QPSK	50	24	23.26	23.28	23.13	23.8	1		
20	QPSK	50	48	23.24	23.25	23.15				
20	QPSK	100	0	23.24	23.25	23.15				
20	HQAM	1	0	23.53	23.51	23.34				
20	HQAM	1	40	23.53	23.48	23.36	23.8	1		
20	HQAM	1	80	23.51	23.45	23.33				
20	HQAM	50	0	22.33	22.30	22.15				
20	HQAM	50	24	22.28	22.23	22.11	22.8	2		
20	HQAM	50	48	22.27	22.27	22.11				
20	HQAM	100	0	22.28	22.28	22.12				
20	HQAM	1	0	22.43	22.38	22.26				
20	HQAM	1	40	22.42	22.36	22.26	22.8	2		
20	HQAM	1	80	22.11	22.12	22.21				
20	HQAM	50	0	21.15	21.23	21.17				
20	HQAM	50	24	21.15	21.23	21.17	21.8	3		
20	HQAM	50	48	20.92	21.28	21.13				
20	HQAM	100	0	20.92	21.28	21.16				
20	ZSSBAM	1	0	18.12	18.08	18.20				
20	ZSSBAM	1	40	18.22	18.24	18.25	19.8	5		
20	ZSSBAM	1	80	18.22	18.24	18.24				
20	ZSSBAM	50	0	18.09	18.22	18.19				
20	ZSSBAM	50	24	18.12	18.11	18.15	19.8	5		
20	ZSSBAM	50	48	18.22	18.16	18.18				
20	ZSSBAM	100	0	18.18	18.05	18.14				
Channel Frequency (MHz)										
15	QPSK	1	0	24.08	24.14	23.82				
15	QPSK	1	37	24.10	24.14	23.91	24.8	0		
15	QPSK	1	74	24.08	24.14	23.82				
15	QPSK	36	0	23.30	23.19	23.11				
15	QPSK	36	20	23.30	23.24	23.15	23.8	1		
15	QPSK	36	40	23.17	23.28	23.19				
15	QPSK	75	0	23.14	23.13	23.13				
15	HQAM	1	0	23.58	23.67	23.61				
15	HQAM	1	37	23.58	23.71	23.63	23.8	1		
15	HQAM	1	74	23.42	23.37	23.12				
15	HQAM	36	0	22.20	22.28	22.04				
15	HQAM	36	20	22.34	22.27	22.09	22.8	2		
15	HQAM	36	40	22.22	22.26	22.13				
15	HQAM	75	0	22.18	22.19	22.02				
15	HQAM	1	0	22.44	22.44	22.24				
15	HQAM	1	37	22.12	22.28	22.28	23.8	2		
15	HQAM	1	74	21.99	22.05	22.12				
15	HQAM	36	0	21.10	21.26	21.16				
15	HQAM	36	20	21.25	21.26	21.09	21.8	3		
15	HQAM	36	40	21.21	21.26	21.25				
15	HQAM	75	0	21.04	21.38	21.05				
15	ZSSBAM	1	0	18.14	18.02	18.19				
15	ZSSBAM	1	37	18.11	18.14	18.15	19.8	5		
15	ZSSBAM	1	74	18.18	18.15	18.20				
15	ZSSBAM	36	0	18.15	18.30	18.09				
15	ZSSBAM	36	20	18.22	18.16	18.01	19.8	5		
15	ZSSBAM	36	40	18.23	18.08	18.12				
15	ZSSBAM	75	0	18.13	18.04	18.17				
Channel Frequency (MHz)										
10	QPSK	1	0	24.00	24.17	23.99				
10	QPSK	1	26	23.92	23.94	23.96	24.8	0		
10	QPSK	1	49	23.91	24.00	23.99				
10	QPSK	25	0	23.20	23.12	23.12				
10	QPSK	25	12	23.28	23.28	23.09	23.8	1		
10	QPSK	25	25	23.28	23.17	23.09				
10	QPSK	50	0	23.28	23.28	23.12				
10	HQAM	1	0	23.07	23.17	23.07				
10	HQAM	1	25	23.21	23.26	23.01	23.8	1		
10	HQAM	1	50	23.11	23.11	23.08				
10	HQAM	25	0	22.14	22.16	22.13				
10	HQAM	25	12	22.13	22.20	22.16	22.8	2		
10	HQAM	25	25	22.33	22.36	22.09				
10	HQAM	50	0	22.34	22.25	22.03				
10	HQAM	1	0	22.40	22.20	22.34				
10	HQAM	1	25	22.45	22.25	22.12	22.8	2		
10	HQAM	1	49	22.02	22.30	22.05				
10	HQAM	25	0	21.11	21.31	21.06				
10	HQAM	25	12	21.10	21.28	21.12	21.8	3		
10	HQAM	25	25	21.01	21.27	21.11				
10	ZSSBAM	1	0	18.22	18.05	18.33				
10	ZSSBAM	1	25	18.04	18.16	18.01	19.8	5		
10	ZSSBAM	1	49	18.15	18.10	18.10				
10	ZSSBAM	25	0	18.31	18.22	18.18				
10	ZSSBAM	25	12	18.04	18.07	18.12	19.8	5		
10	ZSSBAM	25	25	18.02	18.10	18.25				
10	ZSSBAM	50	0	18.22	18.03	18.21				
Channel Frequency (MHz)										
5	QPSK	1	0	23.98	24.10	23.94				
5	QPSK	1	12	24.03	24.08	23.99	24.8	0		
5	QPSK	1	24	24.08	24.05	23.94				
5	QPSK	12	0	23.21	23.28	23.04				
5	QPSK	12	7	23.22	23.24	23.00	23.8	1		
5	QPSK	12	13	23.25	23.21	23.06				
5	QPSK	25	0	23.20	23.28	23.08				
5	HQAM	1	0	23.02	23.12	23.09				
5	HQAM	1	12	23.02	23.10	23.25	23.8	1		
5	HQAM	1	24	23.08	23.08	23.02				
5	HQAM	12	0	22.30	22.28	22.02				
5	HQAM	12	7	22.28	22.26	22.02	22.8	2		
5	HQAM	12	13	22.27	22.21	21.98				
5	HQAM	25	0	22.28	22.31	22.11				
5	HQAM	1	0	22.28	22.10	22.10				
5	HQAM	1	12	22.38	22.01	21.89	22.8	2		
5	HQAM	1	24	21.90	22.08	22.08				
5	HQAM	12	0	21.10	21.30	21.09				
5	HQAM	12	7	21.29	21.27	21.07	21.8	3		
5	HQAM	12	13	21.22	21.26	20.91				
5	HQAM	25	0	21.13	21.25	20.91				
5	ZSSBAM	1	0	18.00	18.10	18.21				
5	ZSSBAM	1	12	18.23	18.24	18.22	19.8	5		
5	ZSSBAM	1	24	18.17	18.18	18.20				
5	ZSSBAM	12	0	18.19	18.25	18.06				
5	ZSSBAM	12	7	18.92	18.97	18.99	19.8	5		
5	ZSSBAM	12	13	18.92	18.98	18.99				
5	ZSSBAM	25	0	18.24	18.05	18.24				

Band 66										
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. (Freq.)	Power Mid Ch. (Freq.)	Power High Ch. (Freq.)	Time-up limit (min)	MFR (dB)		
Channel Frequency (MHz)										
20	QPSK	1	0	23.78	23.80	23.78				
20	QPSK	1	40	23.72	23.85	23.86	24.8	0		
20	QPSK	1	80	23.81	23.98	23.93				
20	QPSK	50	0	22.78	22.77	22.72				
20	QPSK	50	24	22.78	22.81	22.73	23.8	1		
20	QPSK	50	48	22.78	22.71	22.71				
20	QPSK	100	0	22.78	22.78	22.70				
20	HQAM	1	0	23.10	23.17	23.11				
20	HQAM	1	40	23.08	23.03	23.06	23.8	1		
20	HQAM	1	80	22.99	22.86	22.87				
20	HQAM	50	0	21.98	21.79	21.76				
20	HQAM	50	24	21.93	21.82	21.72	22.8	2		
20	HQAM	50	48	21.91	21.73	21.72				
20	HQAM	100	0	21.81	21.78	21.66				
20	HQAM	1	0	22.61	21.98	21.94				
20	HQAM	1	40	21.90	21.					



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		14.50
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	8.50		

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	17.98	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		17.50
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		

Full Power

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	
	Full	36	5180	19.61	21.00		
	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			
802.11ac-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		
	802.11ac-HE80 MCS0	Full	42	5210	20.51		22.00
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			
	Full	64	5320	20.23	22.00			
802.11ac-VHT40 MCS0	Full	54	5270	19.35	21.00	100.00		
	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	114	5570	20.56	21.00	
	Full	114	5570	20.56	21.00	
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		
996/67	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			
	Full	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 %	
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 %	
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 level 4						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	36	5180	14.67	15.00	98.63	
	40	5200	14.52	15.00		
	44	5220	14.61	15.00		
802.11a-HT20 MCS0	36	5180	13.62	15.00	100.00	
	40	5200	13.50	15.00		
	44	5220	13.70	15.00		
802.11a-HT40 MCS0	36	5180	13.57	15.00	100.00	
	40	5200	13.59	15.00		
	44	5220	13.59	15.00		
802.11ac-VHT20 MCS0	36	5180	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		
802.11ax-HE20 MCS0	36	5180	13.61	15.00	100.00	
	40	5200	13.53	15.00		
	44	5220	13.65	15.00		
802.11ax-HE40 MCS0	38	5190	13.62	15.00	100.00	
	46	5230	13.65	15.00		
	42	5210	14.51	16.00		

Reduced Power level 5						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	36	5180	17.67	19.00	98.63	
	40	5200	17.52	19.00		
	44	5220	17.61	19.00		
802.11a-HT20 MCS0	36	5180	16.62	18.00	100.00	
	40	5200	16.50	18.00		
	44	5220	16.70	18.00		
802.11a-HT40 MCS0	38	5190	16.57	18.00	100.00	
	46	5230	16.59	18.00		
	42	5210	17.37	19.00		
802.11ac-VHT20 MCS0	40	5200	16.47	18.00	100.00	
	44	5220	16.66	18.00		
	48	5240	16.55	18.00		
802.11ac-VHT40 MCS0	38	5190	16.47	18.00	100.00	
	46	5230	16.50	18.00		
	42	5210	17.37	19.00		
802.11ax-HE20 MCS0	36	5180	16.61	18.00	100.00	
	40	5200	16.53	18.00		
	44	5220	16.65	18.00		
802.11ax-HE40 MCS0	38	5190	16.62	18.00	100.00	
	46	5230	16.65	18.00		
	42	5210	17.51	19.00		

Reduced Power level 6						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	36	5180	17.67	19.00	98.63	
	40	5200	17.52	19.00		
	44	5220	17.61	19.00		
802.11a-HT20 MCS0	36	5180	16.62	18.00	100.00	
	40	5200	16.50	18.00		
	44	5220	16.70	18.00		
802.11a-HT40 MCS0	38	5190	16.57	18.00	100.00	
	46	5230	16.59	18.00		
	42	5210	17.37	19.00		
802.11ac-VHT20 MCS0	40	5200	16.47	18.00	100.00	
	44	5220	16.66	18.00		
	48	5240	16.55	18.00		
802.11ac-VHT40 MCS0	38	5190	16.47	18.00	100.00	
	46	5230	16.50	18.00		
	42	5210	17.37	19.00		
802.11ax-HE20 MCS0	36	5180	16.61	18.00	100.00	
	40	5200	16.53	18.00		
	44	5220	16.65	18.00		
802.11ax-HE40 MCS0	38	5190	16.62	18.00	100.00	
	46	5230	16.65	18.00		
	42	5210	17.51	19.00		

Reduced Power level 4						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	14.57	15.00	98.63	
	56	5280	14.39	15.00		
	64	5320	14.37	15.00		
802.11a-HT20 MCS0	52	5260	13.54	15.00	100.00	
	56	5280	14.30	15.00		
	64	5320	14.19	15.00		
802.11a-HT40 MCS0	54	5270	13.41	15.00	100.00	
	62	5310	14.26	15.00		
	62	5310	13.60	15.00		
802.11ac-VHT20 MCS0	56	5280	14.27	15.00	100.00	
	60	5300	14.15	15.00		
	64	5320	14.23	15.00		
802.11ac-VHT40 MCS0	54	5270	13.35	15.00	100.00	
	62	5310	14.15	15.00		
	58	5290	14.26	16.00		
802.11ax-HE20 MCS0	52	5260	13.51	15.00	100.00	
	56	5280	14.32	15.00		
	60	5300	14.14	15.00		
802.11ax-HE40 MCS0	54	5270	14.36	15.00	100.00	
	62	5310	14.24	15.00		
	58	5290	14.40	16.00		
802.11ax-HE100 MCS0	50	5250	15.00	15.00	100.00	
	52	5260	13.51	15.00		
	56	5280	14.32	15.00		

Reduced Power level 5						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	17.57	19.00	98.63	
	56	5280	17.39	19.00		
	64	5320	17.37	19.00		
802.11a-HT20 MCS0	52	5260	16.54	18.00	100.00	
	56	5280	17.30	19.00		
	64	5320	17.19	19.00		
802.11a-HT40 MCS0	54	5270	16.41	18.00	100.00	
	62	5310	17.26	19.00		
	62	5310	16.50	18.00		
802.11ac-VHT20 MCS0	56	5280	17.27	19.00	100.00	
	60	5300	17.15	19.00		
	64	5320	17.23	19.00		
802.11ac-VHT40 MCS0	54	5270	16.35	18.00	100.00	
	62	5310	17.15	19.00		
	58	5290	17.26	19.00		
802.11ax-HE20 MCS0	52	5260	16.51	18.00	100.00	
	56	5280	17.32	19.00		
	60	5300	17.14	19.00		
802.11ax-HE40 MCS0	54	5270	17.36	19.00	100.00	
	62	5310	17.24	19.00		
	58	5290	17.40	19.00		
802.11ax-HE100 MCS0	50	5250	18.00	18.00	100.00	
	52	5260	16.51	18.00		
	56	5280	17.32	19.00		

Reduced Power level 6						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	17.57	19.00	98.63	
	56	5280	17.39	19.00		
	64	5320	17.37	19.00		
802.11a-HT20 MCS0	52	5260	16.54	18.00	100.00	
	56	5280	17.30	19.00		
	64	5320	17.19	19.00		
802.11a-HT40 MCS0	54	5270	16.41	18.00	100.00	
	62	5310	17.26	19.00		
	62	5310	16.50	18.00		
802.11ac-VHT20 MCS0	56	5280	17.27	19.00	100.00	
	60	5300	17.15	19.00		
	64	5320	17.23	19.00		
802.11ac-VHT40 MCS0	54	5270	16.35	18.00	100.00	
	62	5310	17.15	19.00		
	58	5290	17.26	19.00		
802.11ax-HE20 MCS0	52	5260	16.51	18.00	100.00	
	56	5280	17.32	19.00		
	60	5300	17.14	19.00		
802.11ax-HE40 MCS0	54	5270	17.36	19.00	100.00	
	62	5310	17.24	19.00		
	58	5290	17.40	19.00		
802.11ax-HE100 MCS0	50	5250	18.00	18.00	100.00	
	52	5260	16.51	18.00		
	56	5280	17.32	19.00		

Reduced Power level 4						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	100	5500	12.08	14.00	98.63	
	116	5580	12.06	14.00		
	124	5620	12.05	14.00		
	132	5660	12.09	14.00		
	140	5700	12.06	14.00		
	144	5720	12.01	14.00		
802.11a-HT20 MCS0	100	5500	12.14	14.00	100.00	
	116	5580	12.11	14.00		
	124	5620	12.08	14.00		
	132	5660	12.07	14.00		
	140	5700	12.06	14.00		
	144	5720	12.04	14.00		
802.11a-HT40 MCS0	102	5510	12.04	14.00	100.00	
	110	5550	12.01	14.00		
	128	5630	12.13	14.00		
	134	5670	12.04	14.00		
	142	5710	12.06	14.00		
	142	5710	12.04	14.00		
802.11ac-VHT20 MCS0	100	5500	12.10	14.00	100.00	
	116	5580	12.09	14.00		
	124	5620	12.06	14.00		
	132	5660	12.01	14.00		
	140	5700	12.03	14.00		
	144	5720	12.01	14.00		
802.11ac-VHT40 MCS0	102	5510	12.02	14.00	100.00	
	110	5550	12.00	14.00		
	128	5630	12.09	14.00		
	134	5670	12.02	14.00		
	142	5710	12.04	14.00		
	142	5710	12.04	14.00		
802.11ax-HE20 MCS0	100	5500	12.01	14.00	100.00	
	116	5580	12.19	14.00		
	124	5620	12.00	14.00		
	132	5660	12.10	14.00		
	140	5700	12.11	14.00		
	144	5720	12.09	14.00		
802.11ax-HE40 MCS0	102	5510	12.07	14.00	100.00	
	110	5550	12.01	14.00		
	128	5630	12.01	14.00		
	134	5670	12.16	14.00		
	142	5710	12.15	14.00		
	142	5710	12.15	14.00		
802.11ax-HE80 MCS0	106	5530	12.12	14.00	100.00	
	122	5610	12.15	14.00		
	138	5690	12.09	14.00		
	142	5710	12.15	14.00		
	142	5710	12.15	14.00		
	142	5710	12.15	14.00		
802.11ax-HE100 MCS0	114	5570	13.49	14.00	100.00	
	100	5500	12.01	14.00		
	116	5580	12.19	14.00		
	124	5620	12.00	14.00		
	132	5660	12.10	14.00		
	140	5700	12.03	14.00		

Reduced Power level 5						
Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	100	5500	16.08	18.00	98.63	
	116	5580	16.06	18.00		
	124	5620	16.05	18.00		
	132	5660	16.09	18.00		
	140	5700	16.06	18.00		
	144	5720	16.01	18.00		
802.11a-HT20 MCS0	100	5500	16.14	18.00	100.00	
	116	5580	16.11	18.00		
	124	5620	16.08	18.00		
	132	5660	16.07	18.00		
	140	5700	16.06	18.00		
	144	5720	16.04	18.00		
802.11a-HT40 MCS0	102	5510	16.04	18.00	100.00	
	110	5550	16.01	18.00		
	128	5630	16.13	18.00		
	134	5670	16.04	18.00		
	142	5710	16.06	18.00		
	142	5710	16.04	18.00		
802.11ac-VHT20 MCS0	100	5500	16.10	18.00	100.00	
	116	5580	16.09	18.00		
	124	5620	16.06	18.00		
	132	5660	16.01	18.00		
	140	5700	16.03	18.00		
	144	5720	16.01	18.00		
802.11ac-VHT40 MCS0	102	5510	16.02	18.00	100.00	
	110	5550	16.00	18.00		
	128	5630	16.09	18.00		
	134	5670	16.02	18.00		
	142	5710	16.04	18.00		
	142	5710	16.04	18.00		
802.11ax-HE20 MCS0	100	5500	16.01	18.00	100.00	
	116	5580	16.19	18.00		
	124	5620	16.00	18.00		
	132	5660	16			



Reduced Power level 7							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
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	36	5180	13.27	16.00	100.00		
	40	5200	13.59	15.00			
	36	5180	13.59	15.00		100.00	
	40	5200	13.47	15.00			
44	5220	13.66	15.00				
48	5240	13.55	15.00				
802.11ac-VHT20 MCS0	36	5180	13.47	15.00	100.00		
	40	5200	13.66	15.00			
	44	5220	13.55	15.00			
	48	5240	13.55	15.00			
802.11ac-VHT40 MCS0	36	5180	13.47	15.00	100.00		
	40	5200	13.50	15.00			
	42	5210	14.37	16.00		100.00	
	36	5180	13.61	15.00			
40	5200	13.53	15.00	100.00			
44	5220	13.65	15.00				
48	5240	13.56	15.00		100.00		
36	5180	13.62	15.00				
40	5200	13.69	15.00	100.00			
42	5210	14.51	16.00				

Reduced Power level 8							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
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	36	5180	13.27	16.00	100.00		
	40	5200	13.59	15.00			
	36	5180	13.59	15.00		100.00	
	40	5200	13.47	15.00			
44	5220	13.66	15.00				
48	5240	13.55	15.00				
802.11ac-VHT20 MCS0	36	5180	13.47	15.00	100.00		
	40	5200	13.66	15.00			
	44	5220	13.55	15.00			
	48	5240	13.55	15.00			
802.11ac-VHT40 MCS0	36	5180	13.47	15.00	100.00		
	40	5200	13.50	15.00			
	42	5210	14.37	16.00		100.00	
	36	5180	13.61	15.00			
40	5200	13.53	15.00	100.00			
44	5220	13.65	15.00				
48	5240	13.56	15.00		100.00		
36	5180	13.62	15.00				
40	5200	13.69	15.00	100.00			
42	5210	14.51	16.00				

Reduced Power level 7							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
802.11a 6Mbps	52	5260	14.57	16.00	98.63		
	56	5280	14.39	16.00			
	60	5300	14.34	16.00			
	64	5320	14.37	16.00			
802.11n-HT20 MCS0	52	5260	13.54	15.00	100.00		
	56	5280	14.30	16.00			
	60	5300	14.19	16.00			
	64	5320	14.24	16.00			
802.11n-HT40 MCS0	54	5270	13.41	16.00	100.00		
	62	5310	14.26	16.00			
	52	5260	13.50	15.00		100.00	
	56	5280	14.27	16.00			
60	5300	14.15	16.00	100.00			
64	5320	14.23	16.00				
802.11ac-VHT20 MCS0	54	5270	13.35		15.00	100.00	
	62	5310	14.15		16.00		
	58	5290	14.26	16.00	100.00		
	50	5250	14.82	15.00			100
52	5260	13.51	15.00	100.00			
56	5280	14.32	16.00				
60	5300	14.14	16.00		100.00		
64	5320	14.28	16.00				
802.11ac-VHT40 MCS0	54	5270	14.38	16.00		100.00	
	62	5310	14.24	16.00			
	58	5290	14.40	16.00	100.00		
	50	5250	15.00	15.00			100.00

Reduced Power level 8							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
802.11a 6Mbps	52	5260	14.57	16.00	98.63		
	56	5280	14.39	16.00			
	60	5300	14.34	16.00			
	64	5320	14.37	16.00			
802.11n-HT20 MCS0	52	5260	13.54	15.00	100.00		
	56	5280	14.30	16.00			
	60	5300	14.19	16.00			
	64	5320	14.24	16.00			
802.11n-HT40 MCS0	54	5270	13.41	16.00	100.00		
	62	5310	14.26	16.00			
	52	5260	13.50	15.00		100.00	
	56	5280	14.27	16.00			
60	5300	14.15	16.00	100.00			
64	5320	14.23	16.00				
802.11ac-VHT20 MCS0	54	5270	13.35		15.00	100.00	
	62	5310	14.15		16.00		
	58	5290	14.26	16.00	100.00		
	50	5250	14.82	15.00			100
52	5260	13.51	15.00	100.00			
56	5280	14.32	16.00				
60	5300	14.14	16.00		100.00		
64	5320	14.28	16.00				
802.11ac-VHT40 MCS0	54	5270	14.38	16.00		100.00	
	62	5310	14.24	16.00			
	58	5290	14.40	16.00	100.00		
	50	5250	15.00	15.00			100.00

Reduced Power level 7							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
802.11a 6Mbps	100	5500	12.08	14.00	98.63		
	116	5580	12.06	14.00			
	124	5620	12.05	14.00			
	132	5660	12.00	14.00			
802.11n-HT20 MCS0	140	5700	12.00	14.00	100.00		
	144	5720	12.01	14.00			
	100	5500	12.14	14.00		100.00	
	116	5580	12.11	14.00			
124	5620	12.08	14.00				
132	5660	12.07	14.00				
802.11n-HT40 MCS0	140	5700	12.06	14.00	100.00		
	144	5720	12.04	14.00			
	102	5510	12.04	14.00		100.00	
	110	5550	12.01	14.00			
126	5630	12.13	14.00	100.00			
134	5670	12.04	14.00				
142	5710	12.06	14.00		100.00		
100	5500	12.10	14.00			100.00	
116	5580	12.09	14.00				
124	5620	12.06	14.00				
132	5660	12.01	14.00				
802.11ac-VHT20 MCS0	140	5700	12.03	14.00	100.00		
	144	5720	12.01	14.00			
	102	5510	12.02	14.00		100.00	
	110	5550	12.00	14.00			
126	5630	12.09	14.00	100.00			
134	5670	12.02	14.00				
142	5710	12.04	14.00		100.00		
106	5630	12.01	14.00			100.00	
122	5610	12.02	14.00				
138	5690	12.08	14.00	100.00			
114	5570	12.56	13.00		100.00		
100	5500	12.01	14.00			100.00	
116	5580	12.19	14.00				
124	5620	12.00	14.00	100.00			
132	5660	12.10	14.00				
140	5700	12.11	14.00		100.00		
144	5720	12.09	14.00				
802.11ac-VHT40 MCS0	102	5510	12.07	14.00		100.00	
	110	5550	12.01	14.00			
	126	5630	12.01	14.00	100.00		
	134	5670	12.16	14.00			
142	5710	12.15	14.00	100.00			
106	5630	12.12	14.00			100.00	
122	5610	12.15	14.00				
138	5690	12.09	14.00		100.00		
114	5570	13.49	14.00	100.00			

Reduced Power level 8							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
802.11a 6Mbps	100	5500	12.08	14.00	98.63		
	116	5580	12.06	14.00			
	124	5620	12.05	14.00			
	132	5660	12.00	14.00			
802.11n-HT20 MCS0	140	5700	12.00	14.00	100.00		
	144	5720	12.01	14.00			
	100	5500	12.14	14.00		100.00	
	116	5580	12.11	14.00			
124	5620	12.08	14.00				
132	5660	12.07	14.00				
802.11n-HT40 MCS0	140	5700	12.06	14.00	100.00		
	144	5720	12.04	14.00			
	102	5510	12.04	14.00		100.00	
	110	5550	12.01	14.00			
126	5630	12.13	14.00	100.00			
134	5670	12.04	14.00				
142	5710	12.06	14.00		100.00		
100	5500	12.10	14.00			100.00	
116	5580	12.09	14.00				
124	5620	12.06	14.00				
132	5660	12.01	14.00				
802.11ac-VHT20 MCS0	140	5700	12.03	14.00	100.00		
	144	5720	12.01	14.00			
	102	5510	12.02	14.00		100.00	
	110	5550	12.00	14.00			
126	5630	12.09	14.00	100.00			
134	5670	12.02	14.00				
142	5710	12.04	14.00		100.00		
106	5630	12.01	14.00			100.00	
122	5610	12.02	14.00				
138	5690	12.08	14.00	100.00			
114	5570	12.56	13.00		100.00		
100	5500	12.01	14.00			100.00	
116	5580	12.19	14.00				
124	5620	12.00	14.00	100.00			
132	5660	12.10	14.00				
140	5700	12.11	14.00		100.00		
144	5720	12.09	14.00				
802.11ac-VHT40 MCS0	102	5510	12.07	14.00		100.00	
	110	5550	12.01	14.00			
	126	5630	12.01	14.00	100.00		
	134	5670	12.16	14.00			
142	5710	12.15	14.00	100.00			
106	5630	12.12	14.00			100.00	
122	5610	12.15	14.00				
138	5690	12.09	14.00		100.00		
114	5570	13.49	14.00	100.00			

Reduced Power level 7							
Art 1-2							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit	Duty Cycle %		
802.11a 6Mbps	149	5745	11.09	13.00	98.63		
	157	5785	11.08	13.00			
	165	5825	11.14	13.00			
	149	5745	11.17	13.00			
802.11n-HT20 MCS0	157	5785	11.14	13.00	100.00		
	165	5825	11.01	13.00			
	151	5755	11.17	13.00		100.00	
	159	5795	11.09	13.00			
802.11n-HT40 MCS0	149	5745	11.07	13.00	100.00		
	157	5785	11.08	13.00			
	165	5825	11.00	13.00		100.00	
	151	5755	11.09	13.00			
802.11ac-VHT20 MCS0	151	5755	11.09	13.00	100.00		
	159	5795	11.05	13.00			
	155	5775	11.18	13.00		100.00	
	149	5745	11.01	13.00			
802.11ac-VHT40 MCS0	157	5785	11.08	13.00	100.00		
	165	5825	11.04	13.00			
	151	5755					



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 1

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	36	5180	18.67	20.00	98.63	
	40	5200	18.52	20.00		
	44	5220	18.61	20.00		
	48	5240	18.60	20.00		
802.11n-HT20 MCS0	36	5180	17.62	19.00	100.00	
	40	5200	17.50	19.00		
	44	5220	17.70	19.00		
	48	5240	17.59	19.00		
802.11n-HT40 MCS0	38	5190	17.57	19.00	100.00	
	46	5230	17.59	19.00		
	36	5180	17.59	19.00		
802.11ac- VHT20 MCS0	40	5200	17.47	19.00	100.00	
	44	5220	17.66	19.00		
	48	5240	17.55	19.00		
	38	5190	17.47	19.00		
802.11ac- VHT40 MCS0	46	5230	17.50	19.00	100.00	
	42	5210	18.37	20.00		
802.11ac- VHT80 MCS0	36	5180	17.61	19.00	100.00	
	40	5200	17.53	19.00		
802.11ac- HE20 MCS0	44	5220	17.65	19.00	100.00	
	48	5240	17.56	19.00		
	38	5190	17.62	19.00		
802.11ac- HE40 MCS0	46	5230	17.65	19.00	100.00	
	42	5210	18.51	20.00		
802.11ac- HE80 MCS0	42	5210	18.51	20.00	100.00	

Reduced Power level 2

Ant 1+2						
Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %		
36	5180	18.67	20.00	98.63		
40	5200	18.52	20.00			
44	5220	18.61	20.00			
48	5240	18.60	20.00			
36	5180	17.62	19.00	100.00		
40	5200	17.50	19.00			
44	5220	17.70	19.00			
48	5240	17.59	19.00			
38	5190	17.57	19.00	100.00		
46	5230	17.59	19.00			
36	5180	17.59	19.00			
40	5200	17.47	19.00	100.00		
44	5220	17.66	19.00			
48	5240	17.55	19.00			
38	5190	17.47	19.00			
46	5230	17.50	19.00	100.00		
42	5210	18.37	20.00			
36	5180	17.61	19.00	100.00		
40	5200	17.53	19.00			
44	5220	17.65	19.00	100.00		
48	5240	17.56	19.00			
38	5190	17.62	19.00			
46	5230	17.65	19.00	100.00		
42	5210	18.51	20.00			
42	5210	18.51	20.00	100.00		

Reduced Power level 3

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
	38	5190	15.47	17.00		
802.11ac- VHT40 MCS0	46	5230	15.50	17.00	100.00	
	42	5210	16.37	18.00		
802.11ac- VHT80 MCS0	36	5180	15.61	17.00	100.00	
	40	5200	15.53	17.00		
802.11ac- HE20 MCS0	44	5220	15.65	17.00	100.00	
	48	5240	15.56	17.00		
	38	5190	15.62	17.00		
802.11ac- HE40 MCS0	46	5230	15.65	17.00	100.00	
	42	5210	16.51	18.00		
802.11ac- HE80 MCS0	42	5210	16.51	18.00	100.00	

Reduced Power level 1

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	149	5745	19.09	21.00	98.63	
	157	5785	19.08	21.00		
	165	5825	19.14	21.00		
802.11n-HT20 MCS0	149	5745	19.17	21.00	100.00	
	157	5785	19.14	21.00		
	165	5825	19.01	21.00		
	151	5755	19.17	21.00		
802.11n-HT40 MCS0	159	5795	19.09	21.00	100.00	
	149	5745	19.07	21.00		
	157	5785	19.08	21.00		
802.11ac- VHT20 MCS0	165	5825	19.00	21.00	100.00	
	151	5755	19.08	21.00		
	159	5795	19.05	21.00		
802.11ac- VHT40 MCS0	155	5775	19.18	21.00	100.00	
	149	5745	19.01	21.00		
802.11ac- HE20 MCS0	157	5785	19.08	21.00	100.00	
	165	5825	19.04	21.00		
	151	5755	19.09	21.00		
802.11ac- HE40 MCS0	159	5795	19.07	21.00	100.00	
	155	5775	19.21	21.00		
802.11ac- HE80 MCS0	155	5775	19.21	21.00	100.00	

Reduced Power level 2

Ant 1+2						
Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %		
149	5745	19.09	21.00	98.63		
157	5785	19.08	21.00			
165	5825	19.14	21.00			
149	5745	19.17	21.00			
157	5785	19.14	21.00	100.00		
165	5825	19.01	21.00			
151	5755	19.17	21.00			
159	5795	19.09	21.00			
149	5745	19.07	21.00	100.00		
157	5785	19.08	21.00			
165	5825	19.00	21.00			
151	5755	19.08	21.00	100.00		
159	5795	19.05	21.00			
155	5775	19.18	21.00			
149	5745	19.01	21.00	100.00		
157	5785	19.08	21.00			
165	5825	19.04	21.00			
151	5755	19.09	21.00	100.00		
159	5795	19.07	21.00			
155	5775	19.21	21.00			
155	5775	19.21	21.00	100.00		

Reduced Power level 3

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	149	5745	18.09	20.00	98.63	
	157	5785	18.08	20.00		
	165	5825	18.14	20.00		
802.11n-HT20 MCS0	149	5745	18.17	20.00	100.00	
	157	5785	18.14	20.00		
	165	5825	18.01	20.00		
	151	5755	18.17	20.00		
802.11n-HT40 MCS0	159	5795	18.09	20.00	100.00	
	149	5745	18.07	20.00		
	157	5785	18.08	20.00		
802.11ac- VHT20 MCS0	165	5825	18.00	20.00	100.00	
	151	5755	18.08	20.00		
	159	5795	18.05	20.00		
802.11ac- VHT40 MCS0	155	5775	18.18	20.00	100.00	
	149	5745	18.01	20.00		
802.11ac- HE20 MCS0	157	5785	18.08	20.00	100.00	
	165	5825	18.04	20.00		
	151	5755	18.09	20.00		
802.11ac- HE40 MCS0	159	5795	18.07	20.00	100.00	
	155	5775	18.21	20.00		
802.11ac- HE80 MCS0	155	5775	18.21	20.00	100.00	



Reduced Power level 4

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
	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		
802.11ac-HE20 MCS0	44	5220	13.65	15.00	100.00	
	48	5240	13.56	15.00		
	38	5190	13.62	15.00		
	46	5230	13.65	15.00		
802.11ac-HE40 MCS0	42	5210	14.51	16.00	100.00	
	46	5230	13.65	15.00		

Reduced Power level 5

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
	38	5190	15.47	17.00		
802.11ac-VHT40 MCS0	46	5230	15.50	17.00	100.00	
	42	5210	16.37	18.00		
802.11ac-VHT80 MCS0	36	5180	15.61	17.00	100.00	
	40	5200	15.53	17.00		
802.11ac-HE20 MCS0	44	5220	15.65	17.00	100.00	
	48	5240	15.56	17.00		
	38	5190	15.62	17.00		
	46	5230	15.65	17.00		
802.11ac-HE40 MCS0	42	5210	16.51	18.00	100.00	
	46	5230	15.65	17.00		

Reduced Power level 6

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
	38	5190	15.47	17.00		
802.11ac-VHT40 MCS0	46	5230	15.50	17.00	100.00	
	42	5210	16.37	18.00		
802.11ac-VHT80 MCS0	36	5180	15.61	17.00	100.00	
	40	5200	15.53	17.00		
802.11ac-HE20 MCS0	44	5220	15.65	17.00	100.00	
	48	5240	15.56	17.00		
	38	5190	15.62	17.00		
	46	5230	15.65	17.00		
802.11ac-HE40 MCS0	42	5210	16.51	18.00	100.00	
	46	5230	15.65	17.00		

Reduced Power level 4

Ant 1+2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
802.11ac-VHT80 MCS0	165	5825	15.04	17.00	100.00	
	151	5755	15.09	17.00		
802.11ac-HE20 MCS0	159	5795	15.07	17.00	100.00	
	151	5755	15.09	17.00		
	159	5795	15.07	17.00		
802.11ac-HE40 MCS0	155	5775	15.21	17.00	100.00	
	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 %	
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		
802.11ac-VHT80 MCS0	165	5825	18.04	20.00	100.00	
	151	5755	18.09	20.00		
802.11ac-HE20 MCS0	159	5795	18.07	20.00	100.00	
	151	5755	18.09	20.00		
	159	5795	18.07	20.00		
802.11ac-HE40 MCS0	155	5775	18.21	20.00	100.00	
	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 %	
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		
802.11ac-VHT80 MCS0	165	5825	18.04	20.00	100.00	
	151	5755	18.09	20.00		
802.11ac-HE20 MCS0	159	5795	18.07	20.00	100.00	
	151	5755	18.09	20.00		
	159	5795	18.07	20.00		
802.11ac-HE40 MCS0	155	5775	18.21	20.00	100.00	
	155	5775	18.21	20.00		

**Reduced Power level 7**

Ant 1+2						
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		36	5180	14.67	16.00
40			5200	14.52	16.00	
44			5220	14.61	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	
802.11n-HT40 MCS0		38	5190	13.57	15.00	100.00
		46	5230	13.59	15.00	
		38	5190	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	
802.11ac- VHT80 MCS0		42	5210	14.37	16.00	100.00
		36	5180	13.61	15.00	
802.11ax- HE20 MCS0		40	5200	13.53	15.00	100.00
		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						
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		36	5180	14.67	16.00
40			5200	14.52	16.00	
44			5220	14.61	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	
802.11n-HT40 MCS0		38	5190	13.57	15.00	100.00
		46	5230	13.59	15.00	
		38	5190	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	
802.11ac- VHT80 MCS0		42	5210	14.37	16.00	100.00
		36	5180	13.61	15.00	
802.11ax- HE20 MCS0		40	5200	13.53	15.00	100.00
		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						
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		149	5745	15.09	17.00
157			5785	15.08	17.00	
165			5825	15.14	17.00	
802.11n-HT20 MCS0		149	5745	15.17	17.00	100.00
		157	5785	15.14	17.00	
		165	5825	15.01	17.00	
802.11n-HT40 MCS0		151	5755	15.17	17.00	100.00
		159	5795	15.09	17.00	
		149	5745	15.07	17.00	
802.11ac- VHT20 MCS0		157	5785	15.08	17.00	100.00
		165	5825	15.00	17.00	
		151	5755	15.08	17.00	
802.11ac- VHT40 MCS0		159	5795	15.05	17.00	100.00
		155	5775	15.18	17.00	
802.11ac- VHT80 MCS0		149	5745	15.01	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.04	17.00	
802.11ax- HE20 MCS0		151	5755	15.09	17.00	100.00
		159	5795	15.07	17.00	
		151	5755	15.09	17.00	
802.11ax- HE40 MCS0		159	5795	15.07	17.00	100.00
		155	5775	15.21	17.00	

Reduced Power level 8

Ant 1+2						
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		149	5745	15.09	17.00
157			5785	15.08	17.00	
165			5825	15.14	17.00	
802.11n-HT20 MCS0		149	5745	15.17	17.00	100.00
		157	5785	15.14	17.00	
		165	5825	15.01	17.00	
802.11n-HT40 MCS0		151	5755	15.17	17.00	100.00
		159	5795	15.09	17.00	
		149	5745	15.07	17.00	
802.11ac- VHT20 MCS0		157	5785	15.08	17.00	100.00
		165	5825	15.00	17.00	
		151	5755	15.08	17.00	
802.11ac- VHT40 MCS0		159	5795	15.05	17.00	100.00
		155	5775	15.18	17.00	
802.11ac- VHT80 MCS0		149	5745	15.01	17.00	100.00
		157	5785	15.08	17.00	
		165	5825	15.04	17.00	
802.11ax- HE20 MCS0		151	5755	15.09	17.00	100.00
		159	5795	15.07	17.00	
		151	5755	15.09	17.00	
802.11ax- HE40 MCS0		159	5795	15.07	17.00	100.00
		155	5775	15.21	17.00	



Reduced Power level 3

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
802.11a HT20 MCS0	36	5180	15.62	17.00	100.00	
	40	5200	15.59	17.00		
	44	5220	15.70	17.00		
	48	5240	15.59	17.00		
802.11a HT40 MCS0	36	5180	15.57	17.00	100.00	
	46	5230	15.59	17.00		
	36	5180	15.59	17.00		
	40	5200	15.47	17.00		
802.11ac VHT20 MCS0	44	5220	15.66	17.00	100.00	
	48	5240	15.55	17.00		
	38	5190	15.47	17.00		
	46	5230	15.50	17.00		
802.11ac VHT40 MCS0	42	5210	16.37	18.00	100.00	
	36	5180	15.61	17.00		
	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		
	42	5210	16.51	18.00		

Reduced Power for Body-worn&Extremity

Reduced Power level 4

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
802.11a HT20 MCS0	36	5180	15.62	17.00	100.00	
	40	5200	15.59	17.00		
	44	5220	15.70	17.00		
	48	5240	15.59	17.00		
802.11a HT40 MCS0	36	5180	15.57	17.00	100.00	
	46	5230	15.59	17.00		
	36	5180	15.59	17.00		
	40	5200	15.47	17.00		
802.11ac VHT20 MCS0	44	5220	15.66	17.00	100.00	
	48	5240	15.55	17.00		
	38	5190	15.47	17.00		
	46	5230	15.50	17.00		
802.11ac VHT40 MCS0	42	5210	16.37	18.00	100.00	
	36	5180	15.61	17.00		
	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		
	42	5210	16.51	18.00		

Reduced Power level 5

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
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		
802.11a HT20 MCS0	36	5180	15.62	17.00	100.00	
	40	5200	15.59	17.00		
	44	5220	15.70	17.00		
	48	5240	15.59	17.00		
802.11a HT40 MCS0	36	5180	15.57	17.00	100.00	
	46	5230	15.59	17.00		
	36	5180	15.59	17.00		
	40	5200	15.47	17.00		
802.11ac VHT20 MCS0	44	5220	15.66	17.00	100.00	
	48	5240	15.55	17.00		
	38	5190	15.47	17.00		
	46	5230	15.50	17.00		
802.11ac VHT40 MCS0	42	5210	16.37	18.00	100.00	
	36	5180	15.61	17.00		
	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		
	42	5210	16.51	18.00		

Reduced Power level 3

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	16.57	18.00	98.63	
	56	5280	16.39	18.00		
	60	5300	16.34	18.00		
	64	5320	16.37	18.00		
802.11a HT20 MCS0	52	5260	15.54	17.00	100.00	
	56	5280	16.30	18.00		
	60	5300	16.19	18.00		
	64	5320	16.24	18.00		
802.11a HT40 MCS0	54	5270	15.41	17.00	100.00	
	62	5310	16.26	18.00		
	52	5260	15.50	17.00		
	56	5280	16.27	18.00		
802.11ac VHT20 MCS0	60	5300	16.15	18.00	100.00	
	64	5320	16.23	18.00		
	54	5270	15.35	17.00		
	62	5310	16.15	18.00		
802.11ac VHT40 MCS0	58	5290	16.26	18.00	100.00	
	50	5250	16.82	17.00		
	52	5260	15.51	17.00		
	56	5280	16.32	18.00		
802.11ac HE20 MCS0	60	5300	16.14	18.00	100.00	
	64	5320	16.28	18.00		
	54	5270	16.38	18.00		
	62	5310	16.24	18.00		
802.11ac HE40 MCS0	58	5290	16.40	18.00	100.00	
	50	5250	17.00	17.00		

Reduced Power level 4

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	16.57	18.00	98.63	
	56	5280	16.39	18.00		
	60	5300	16.34	18.00		
	64	5320	16.37	18.00		
802.11a HT20 MCS0	52	5260	15.54	17.00	100.00	
	56	5280	16.30	18.00		
	60	5300	16.19	18.00		
	64	5320	16.24	18.00		
802.11a HT40 MCS0	54	5270	15.41	17.00	100.00	
	62	5310	16.26	18.00		
	52	5260	15.50	17.00		
	56	5280	16.27	18.00		
802.11ac VHT20 MCS0	60	5300	16.15	18.00	100.00	
	64	5320	16.23	18.00		
	54	5270	15.35	17.00		
	62	5310	16.15	18.00		
802.11ac VHT40 MCS0	58	5290	16.26	18.00	100.00	
	50	5250	16.82	17.00		
	52	5260	15.51	17.00		
	56	5280	16.32	18.00		
802.11ac HE20 MCS0	60	5300	16.14	18.00	100.00	
	64	5320	16.28	18.00		
	54	5270	16.38	18.00		
	62	5310	16.24	18.00		
802.11ac HE40 MCS0	58	5290	16.40	18.00	100.00	
	50	5250	17.00	17.00		

Reduced Power level 5

Art 11-2						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
802.11a 6Mbps	52	5260	16.57	18.00	98.63	
	56	5280	16.39	18.00		
	60	5300	16.34	18.00		
	64	5320	16.37	18.00		
802.11a HT20 MCS0	52	5260	15.54	17.00	100.00	
	56	5280	16.30	18.00		
	60	5300	16.19	18.00		
	64	5320	16.24	18.00		
802.11a HT40 MCS0	54	5270	15.41	17.00	100.00	
	62	5310	16.26	18.00		
	52	5260	15.50	17.00		
	56	5280	16.27	18.00		
802.11ac VHT20 MCS0	60	5300	16.15	18.00	100.00	
	64	5320	16.23	18.00		
	54	5270	15.35	17.00		
	62	5310	16.15	18.00		
802.11ac VHT40 MCS0	58	5290	16.26	18.00	100.00	
	50	5250	16.82	17.00		
	52	5260	15.51	17.00		
	56	5280	16.32	18.00		
802.11ac HE20 MCS0	60	5300	16.14	18.00	100.00	
	64	5320	16.28	18.00		
	54	5270	16.38	18.00		
	62	5310	16.24	18.00		
802.11ac HE40 MCS0	58	5290	16.40	18.00	100.00	
	50	5250	17.00	17.00		



Appendix F. Supplemental Tuner Head & Body SAR Results

The results are shown as follows.

RF exposure position – Ant1				Aperture 00																Aperture 01																Aperture 02																Aperture 03															
				Average Value of Time Sweep (W/kg)																Average Value of Time Sweep (W/kg)																Average Value of Time Sweep (W/kg)																Average Value of Time Sweep (W/kg)															
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	0	20	40	60	80	100	120	140	0	20	40	60	80	100	120	140	0	20	40	60	80	100	120	140	0	20	40	60	80	100	120	140																										
WLAN_Ant 1 Head	WCDMA-V	RMC 12.2MHz	Full Power	4233	64K	N/A	Right Cheek	Open	Measured to SAR (W/kg)	0.285	0	0	0	0	0	0	0	0	0	0.046	0.052	0.102	0.086	0.164	0	0.102	0.044	0.148	0.056	0.027	0.042	0.042	0.02	0.02	0	0.058	0.027	0.16	0.142	0.227	0	0.11																									
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	1	21	41	61	81	101	121	141	1	21	41	61	81	101	121	141	1	21	41	61	81	101	121	141	1	21	41	61	81	101	121	141																									
	CDMA2000 BC0	SC1-3.1MHz	Full Power	777	64K	N/A	Right Cheek	Open	Measured to SAR (W/kg)	0.171	0	0	0	0	0	0	0	0	0	0.058	0.153	0.164	0.027	0.047	0.138	0.056	0.162	0.116	0.111	0.116	0	0.134	0.054	0	0.054	0.068	0.162	0.115	0.091	0.058	0.133																										
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	2	22	42	62	82	102	122	142	2	22	42	62	82	102	122	142	2	22	42	62	82	102	122	142	2	22	42	62	82	102	122	142																									
	CDMA2000 BC10	SC1-3.1MHz	Full Power	561	64K	N/A	Right Cheek	Open	Measured to SAR (W/kg)	0.16	0	0	0	0	0	0	0	0.024	0	0.046	0.06	0.177	0.108	0.139	0.052	0.064	0.052	0.054	0	0.073	0	0	0.068	0.066	0.167	0.132	0.154	0.057	0.102																												
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	3	23	43	63	83	103	123	143	3	23	43	63	83	103	123	143	3	23	43	63	83	103	123	143	3	23	43	63	83	103	123	143																									
	LTE Band 71	20M-QPSK	Full Power	13330	64K	1	0	Right Cheek	Open	Measured to SAR (W/kg)	0.126	0	0	0	0	0	0.048	0	0	0	0	0.121	0.048	0	0	0	0.082	0	0	0	0	0	0	0	0	0	0.103	0.048	0	0	0	0.056	0																								
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	4	24	44	64	84	104	124	144	4	24	44	64	84	104	124	144	4	24	44	64	84	104	124	144	4	24	44	64	84	104	124	144																									
	LTE Band 12	15M-QPSK	Full Power	2385	70.5	1	49	Right Cheek	Open	Measured to SAR (W/kg)	0.166	0	0	0	0.043	0	0	0	0	0	0.111	0.107	0	0.082	0	0.047	0	0	0	0	0	0	0	0	0.102	0.102	0	0.082	0	0.058	0																										
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	5	25	45	65	85	105	125	145	5	25	45	65	85	105	125	145	5	25	45	65	85	105	125	145	5	25	45	65	85	105	125	145																									
	LTE Band 13	15M-QPSK	Full Power	2330	70	1	25	Right Cheek	Open	Measured to SAR (W/kg)	0.17	0	0	0	0	0	0	0	0	0	0.115	0.088	0.122	0.081	0.128	0.032	0	0.081	0	0	0	0	0	0	0.052	0	0.145	0.138	0.087	0.104	0.111	0.051	0																								
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	6	26	46	66	86	106	126	146	6	26	46	66	86	106	126	146	6	26	46	66	86	106	126	146	6	26	46	66	86	106	126	146																									
	LTE Band 5	15M-QPSK	Full Power	2025	83.5	1	49	Right Cheek	Open	Measured to SAR (W/kg)	0.233	0	0	0	0	0	0.033	0	0	0	0.134	0.027	0.161	0.086	0.163	0.102	0	0.084	0.038	0.079	0	0.102	0.049	0.115	0.052	0.222	0.118	0.165	0.109	0																											
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	7	27	47	67	87	107	127	147	7	27	47	67	87	107	127	147	7	27	47	67	87	107	127	147	7	27	47	67	87	107	127	147																									
	LTE Band 26	15M-QPSK	Full Power	2815	83.5	1	0	Right Cheek	Open	Measured to SAR (W/kg)	0.168	0	0	0	0	0	0	0	0	0	0.102	0.113	0.069	0.086	0.165	0.164	0	0.114	0	0.027	0	0.042	0	0	0.068	0.05	0.068	0.142	0.167	0.109	0.141	0.123	0																								
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	8	28	48	68	88	108	128	148	8	28	48	68	88	108	128	148	8	28	48	68	88	108	128	148	8	28	48	68	88	108	128	148																									
	NE_Ant	20M-QPSK	Full Power	18100	64K	50	28	Right Cheek	Open	Measured to SAR (W/kg)	0.085	0	0	0	0.082	0	0	0	0	0	0.045	0	0.059	0	0.051	0	0	0	0	0	0	0	0	0	0	0.048	0	0	0.048	0	0	0	0																								
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	9	29	49	69	89	109	129	149	9	29	49	69	89	109	129	149	9	29	49	69	89	109	129	149	9	29	49	69	89	109	129	149																									
	NE_Ant	20M-QPSK	Full Power	18700	64K	1	1	Right Cheek	Open	Measured to SAR (W/kg)	0.151	0	0	0	0	0	0	0	0	0	0.032	0	0	0.039	0	0	0.039	0	0	0	0	0	0	0	0	0.04	0.055	0.083	0.055	0.043	0	0																									
	Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	10	30	50	70	90	110	130	150	10	30	50	70	90	110	130	150	10	30	50	70	90	110	130	150	10	30	50	70	90	110	130	150																									
WCDMA-V	RMC 12.2MHz	Full Power	4182	64K	N/A	Right Side	10mm	Measured to SAR (W/kg)	0.034	0	0	0	0	0	0	0	0	0	0.088	0.243	0.253	0.243	0.24	0	0.07	0.082	0.143	0.061	0.284	0.119	0.136	0.037	0.436	0.481	0.448	0.321	0.249	0.365	0.323	0	0.082	0.06																									
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	11	31	51	71	91	111	131	151	11	31	51	71	91	111	131	151	11	31	51	71	91	111	131	151	11	31	51	71	91	111	131	151																										
CDMA2000 BC0	ETAP 13.96MHz	Full Power	777	64K	N/A	Right Side	10mm	Measured to SAR (W/kg)	0.273	0	0	0	0	0	0	0	0	0	0.056	0.222	0.259	0.35	0.248	0	0.084	0.11	0.264	0.114	0.303	0.194	0.102	0.127	0.383	0.358	0.15	0.331	0.247	0.247	0.258	0.261	0.109	0.142																									
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	12	32	52	72	92	112	132	152	12	32	52	72	92	112	132	152	12	32	52	72	92	112	132	152	12	32	52	72	92	112	132	152																										
CDMA2000 BC10	ETAP 13.96MHz	Full Power	884	64K	N/A	Right Side	10mm	Measured to SAR (W/kg)	0.401	0	0	0	0	0	0	0	0	0	0.182	0.31	0.328	0.302	0	0	0.11	0.076	0.171	0.076	0.19	0.095	0.138	0.188	0.288	0.28	0.248	0.331	0.287	0.271	0.053	0	0.129	0.137																									
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	13	33	53	73	93	113	133	153	13	33	53	73	93	113	133	153	13	33	53	73	93	113	133	153	13	33	53	73	93	113	133	153																										
LTE Band 71	20M-QPSK	Full Power	13320	64K	1	0	Right Side	10mm	Measured to SAR (W/kg)	0.264	0.144	0.145	0.213	0.112	0	0	0.088	0.09	0.142	0.268	0.154	0.048	0.242	0.122	0.088	0.131	0	0	0	0	0	0	0	0	0	0.167	0.058	0.055	0	0.221	0	0.138	0.083																								
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	14	34	54	74	94	114	134	154	14	34	54	74	94	114	134	154	14	34	54	74	94	114	134	154	14	34	54	74	94	114	134	154																										
LTE Band 12	15M-QPSK	Full Power	2385	70.5	25	25	Right Side	10mm	Measured to SAR (W/kg)	0.279	0.076	0.166	0	0	0	0	0	0	0	0.083	0.053	0.221	0.073	0.139	0	0.128	0	0.061	0.036	0	0	0	0	0	0	0.067	0	0.148	0.058	0.142	0	0.18	0	0.061	0.151																						
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	15	35	55	75	95	115	135	155	15	35	55	75	95	115	135	155	15	35	55	75	95	115	135	155	15	35	55	75	95	115	135	155																										
LTE Band 13	15M-QPSK	Full Power	2330	70	1	25	Right Side	10mm	Measured to SAR (W/kg)	0.247	0	0.052	0	0	0	0	0.044	0	0.207	0.162	0.118	0	0.1	0	0.146	0.22	0.088	0	0.076	0.032	0.114	0.109	0	0.042	0.22	0.134	0.178	0	0.134	0.065	0.116	0.211																									
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	16	36	56	76	96	116	136	156	16	36	56	76	96	116	136	156	16	36	56	76	96	116	136	156	16	36	56	76	96	116	136	156																										
LTE Band 5	15M-QPSK	Full Power	2025	83.5	1	49	Right Side	10mm	Measured to SAR (W/kg)	0.424	0	0	0.038	0	0	0	0	0	0	0.173	0	0.191	0.052	0.113	0.115	0.087	0.11	0.248	0.208	0.288	0.264	0.237	0.056	0.284	0.258	0	0.147	0.065	0.154	0.121	0.175	0.181																									
Band	Mode	Power Reduction	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured to SAR (W/kg)	17	37	57	77	97	117	137	157	17	37	57	77	97	117	137	157	17	37	57	77	97	117	137	157	17	37	57	77	97	117	137	157																										
LTE Band 26	15M-QPSK	Full Power	2815																																																																

		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	478	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	0.428	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	0.656	0.356	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	0.517	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_AntD	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_AntD	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_AntD	20M-BPSK	Full Power	136100	880.5	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_AntD	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
N8E_AntD	20M-BPSK	Reduced Power Level 1/2/3	354000	1770	1	1	Right Thigh	0mm	0.873	0.332	0.286	0.214	0.263	0.155
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_AntD	100M-BPSK	Reduced Power Level 1/2/3	528000	2640	1	1	Right Thigh	0mm	0.888	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
N410PUEI_AntD	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	0.089	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	0.307	0.072	0.083	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	0.352	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_AntD	20M-QPSK	Hotspot on	132372	1770	50	24	Top Side	10mm	0.621	0.396	0.285	0.31	0.2	0.138
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_AntD	20M-QPSK	Hotspot on	20850	2510	50	24	Top Side	10mm	0.674	0.519	0.534	0.493	0.528	0.198
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_AntD	20M-BPSK	Full Power	136100	880.5	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_AntD	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
N8E_AntD	20M-BPSK	Hotspot on	349000	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_AntD	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
N410PUEI_AntD	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	N/A	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	N/A	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	N/A	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(HFUE)_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_Ant2	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_Ant2	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_Ant2	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_Ant2	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(HFUE)_Ant2	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	N/A	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	N/A	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	N/A	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(HFUE)_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_Ant2	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_Ant2	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_Ant2	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_Ant2	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(HFUE)_Ant2	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	
N66_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	
N25_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	0.232	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	
N66_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	
N25_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	