



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.2Ω+ 7.76jΩ
Return Loss	- 21.4dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.106 ns
----------------------------------	----------

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
-----------------	-------



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

DASY5 Validation Report for Head TSL

Date: 09.16.2021

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d159

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.416$ S/m; $\epsilon_r = 40.23$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.81, 7.81, 7.81) @ 1900 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2021-01-15
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 99.85 V/m; Power Drift = 0.00 dB

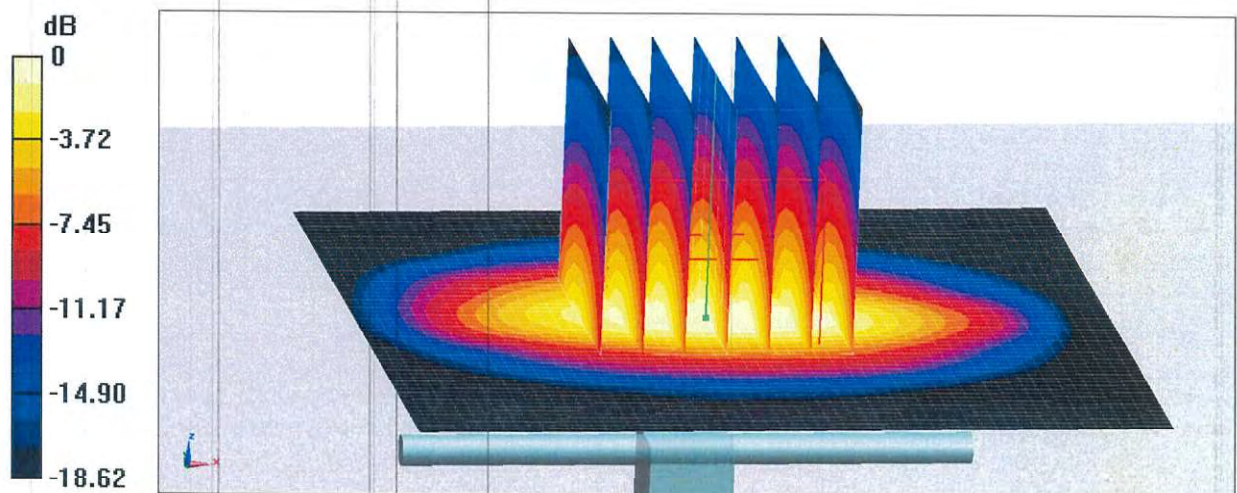
Peak SAR (extrapolated) = 19.4 W/kg

SAR(1 g) = 9.97 W/kg; SAR(10 g) = 5.08 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 51.3%

Maximum value of SAR (measured) = 15.9 W/kg

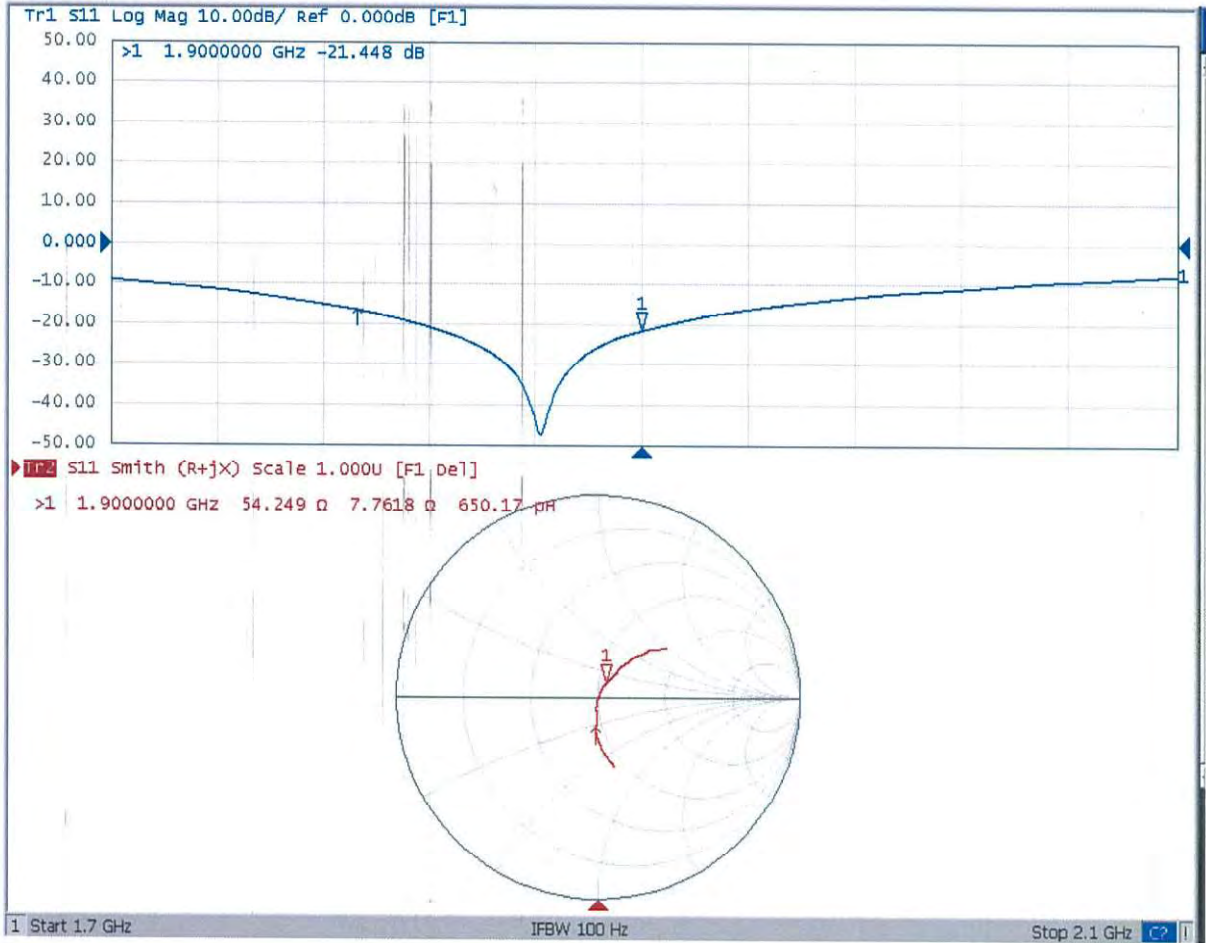


0 dB = 15.9 W/kg = 12.01 dBW/kg



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Impedance Measurement Plot for Head TSL



D1900V2 - SN: 5d159 Extended Dipole Calibrations

Referring to KDB 865664 D01, if dipoles are verified in return loss (<-20dB, 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.

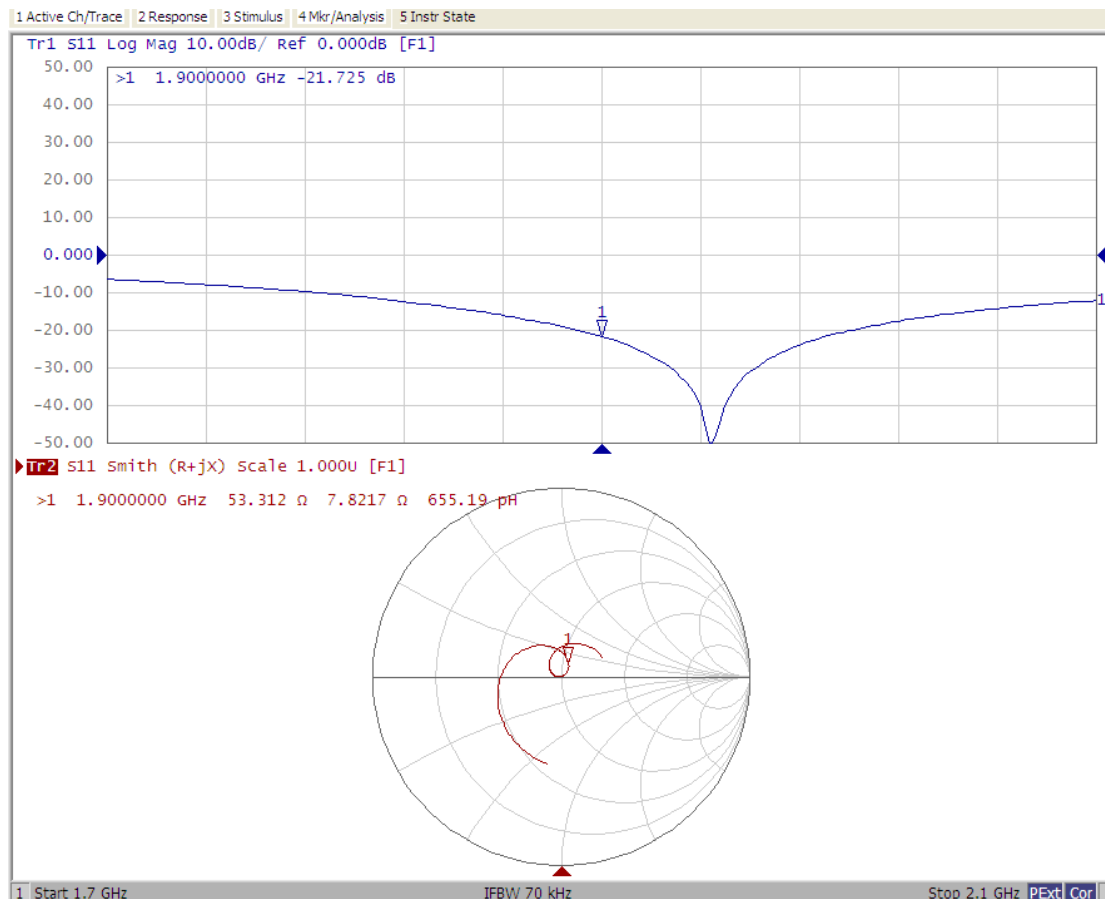
D1900V2 - SN: 5d159						
1900 Head						
Date of Measurement	Return-loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2021.09.16	-21.4		54.2		7.8	
2022.09.16	-21.7	-1.4	53.3	-0.9	7.8	0
2023.09.16	-24.3	-13.6	53.5	-0.7	5.3	-2.5

<Justification of the extended calibration>

The return loss is <-20dB, within 20% of prior calibration, and the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

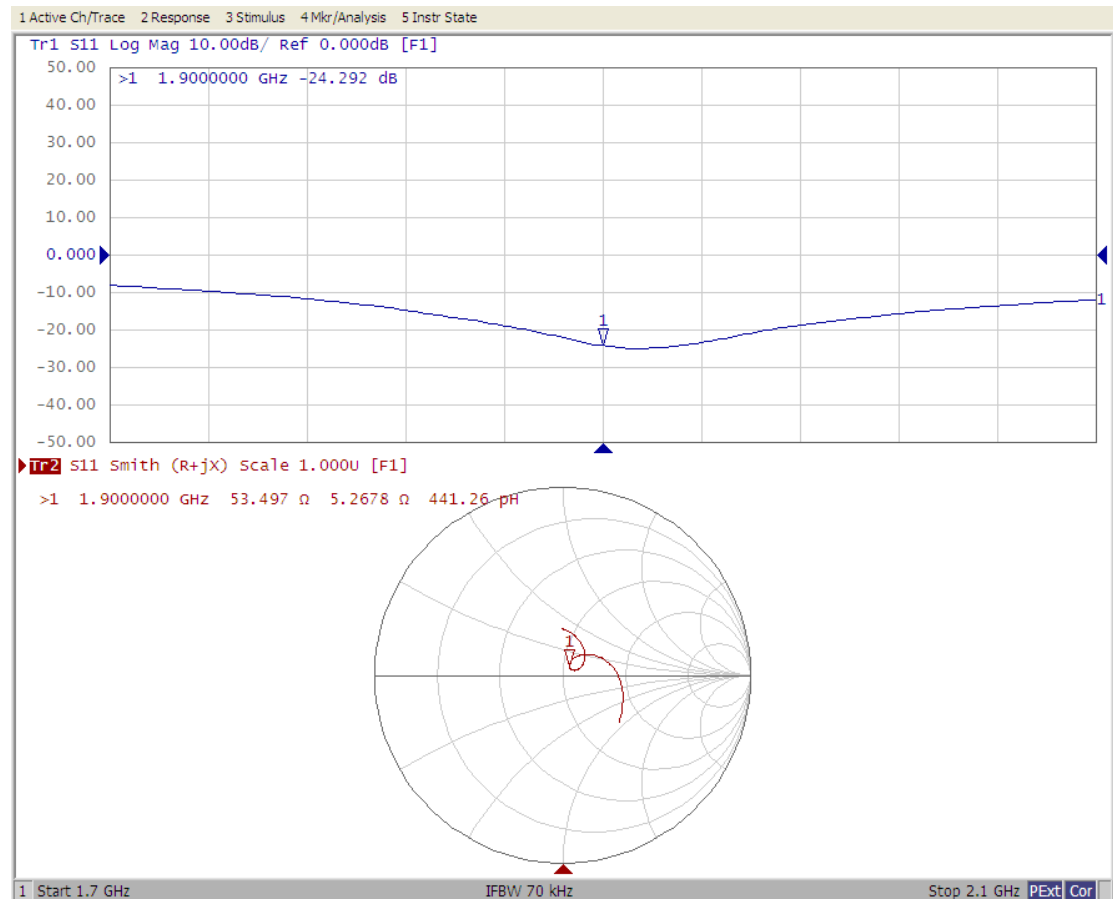
<Dipole Verification Data>

Head 1900MHz _2022.09.16



<Dipole Verification Data>

Head 1900MHz _2023.09.16





In Collaboration with
s p e a g
CALIBRATION LABORATORY



中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, Chi
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Client **7layers**

Certificate No: **Z21-60425**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 1048**

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

Calibration date: **October 21, 2021**

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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
Power sensor NRP8S	104291	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
Reference Probe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE4	SN 1556	15-Jan-21(SPEAG,No.DAE4-1556_Jan21)	Jan-22
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	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: October 27, 2021

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



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 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.
- 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%.



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
 Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
 E-mail: cttl@chinattl.com http://www.chinattl.cn

Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.5 ± 6 %	1.81 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.2 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.8 W/kg ± 18.8 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.05 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.2 W/kg ± 18.7 % (k=2)



Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.6Ω+ 8.39jΩ
Return Loss	- 21.6dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.057 ns
----------------------------------	----------

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
-----------------	-------



DASY5 Validation Report for Head TSL

Date: 10.21.2021

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 1048

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.809$ S/m; $\epsilon_r = 39.51$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.34, 7.34, 7.34) @ 2450 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2021-01-15
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.6 V/m; Power Drift = -0.02 dB

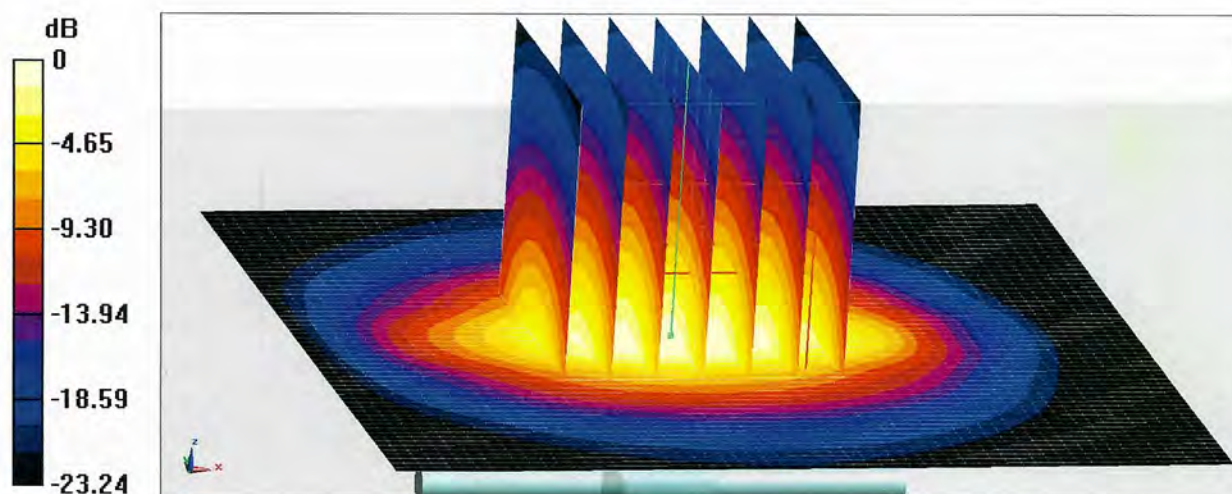
Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.05 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 47.1%

Maximum value of SAR (measured) = 22.5 W/kg

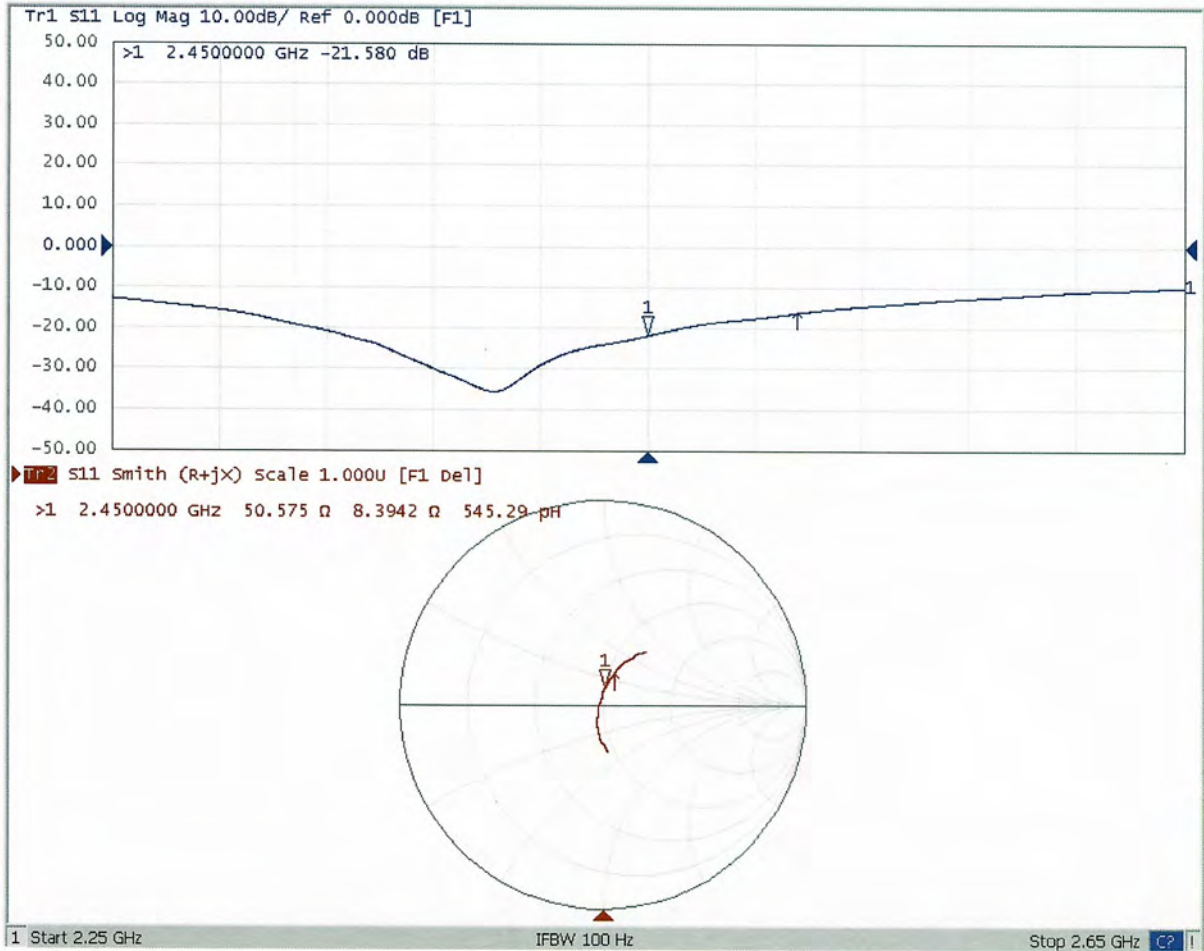


0 dB = 22.5 W/kg = 13.52 dBW/kg



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Impedance Measurement Plot for Head TSL



D2450V2 - SN: 1048 Extended Dipole Calibrations

Referring to KDB 865664 D01, if dipoles are verified in return loss (<-20dB, 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.

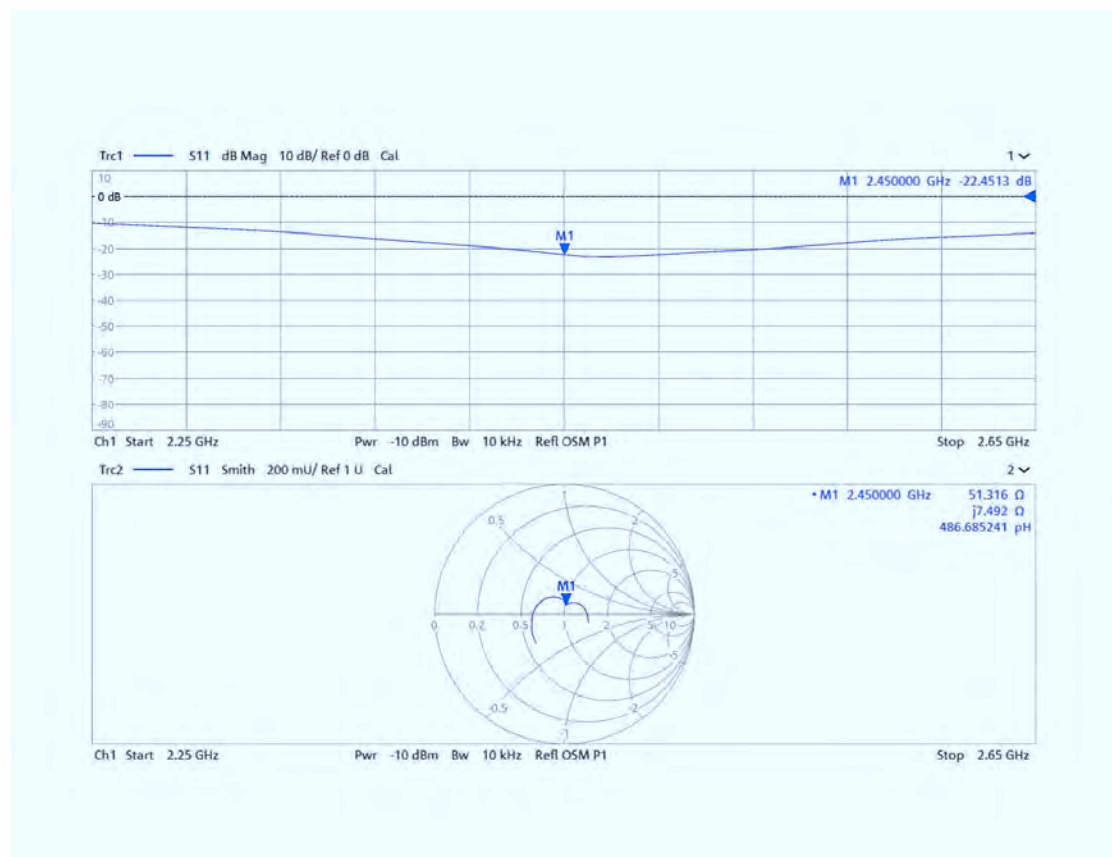
D2450V2 - SN: 1048						
2450MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.21.2021	-21.6		50.6		8.39	
10.20.2022	-22.45	3.94	51.32	0.72	7.49	-0.90
10.19.2023	-24.13	11.71	47.08	-3.52	5.46	-2.93

<Justification of the extended calibration>

The return loss is < -20dB, 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>

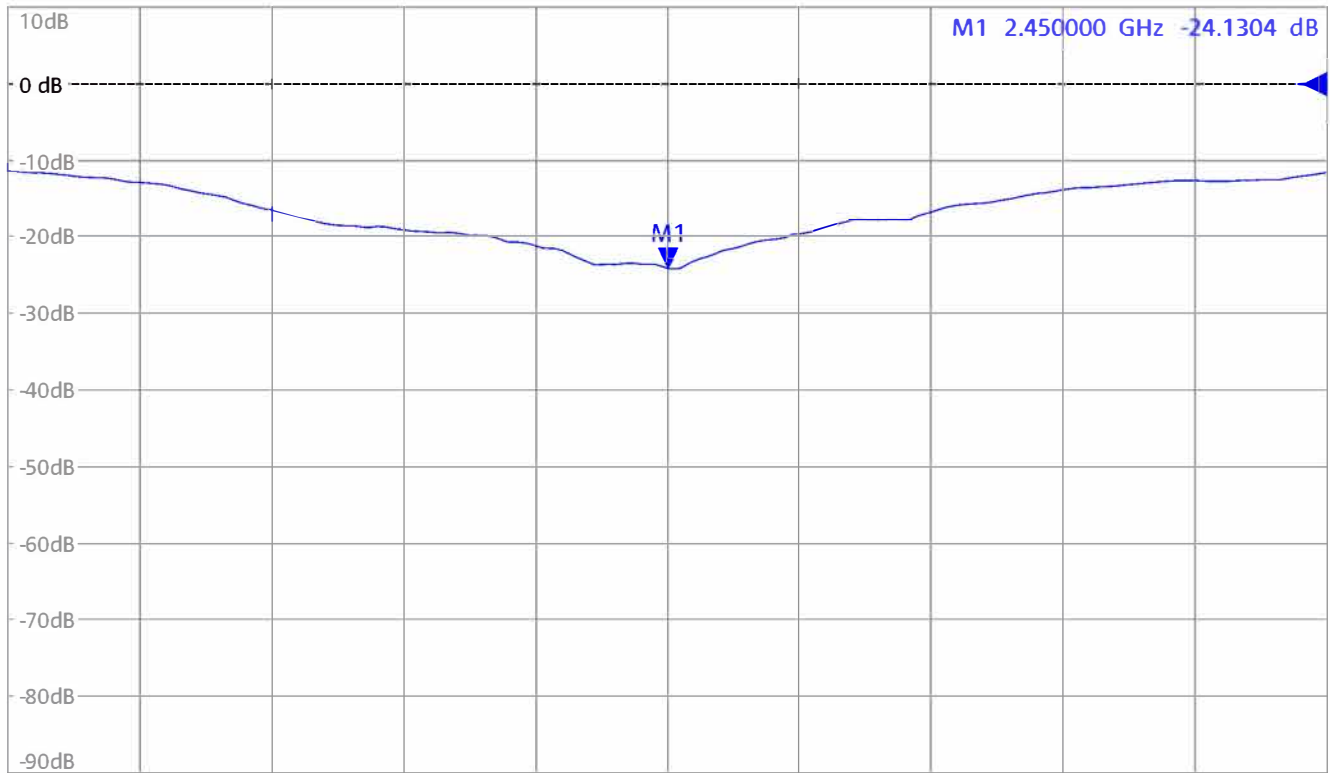
Head 2450MHz_2022.10.20



<Dipole Verification Data>
Head 2450MHz_2023.10.19

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1

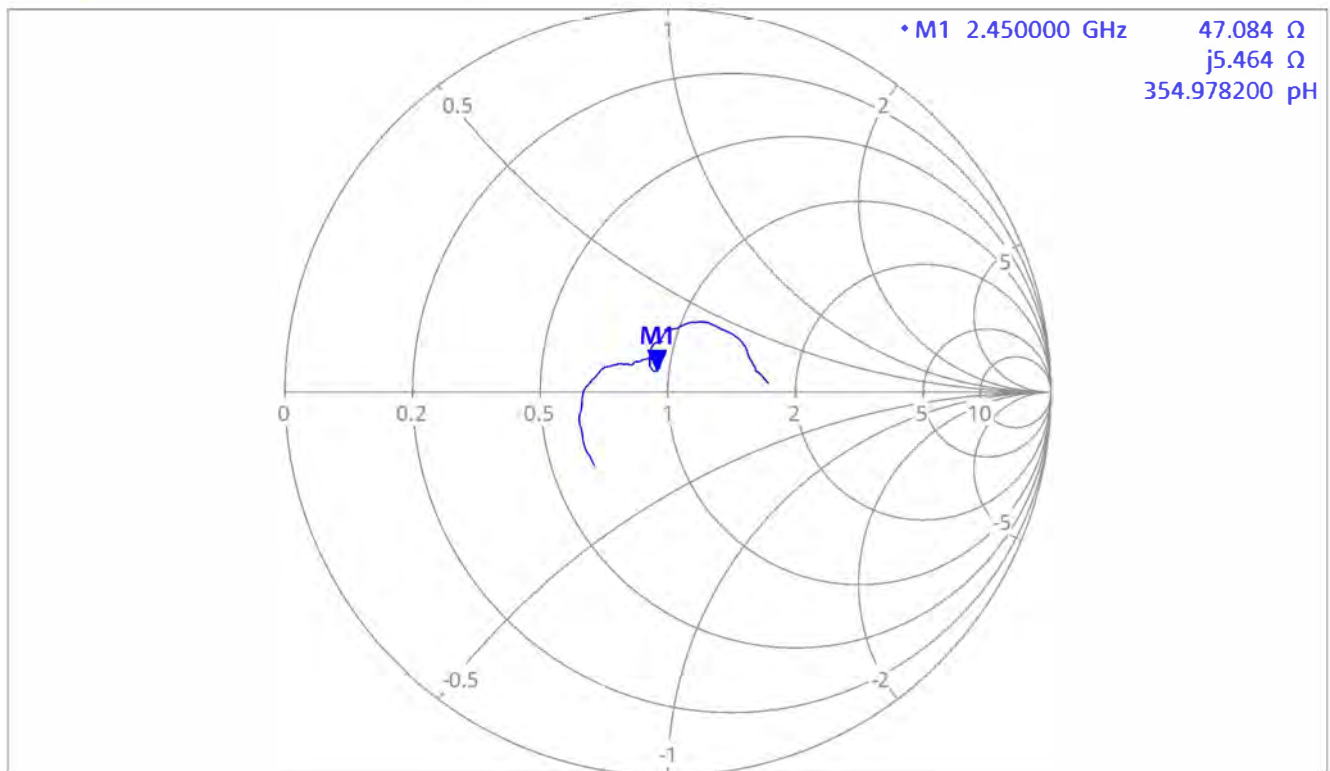


Ch1 Start 2.25 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.65 GHz

Trc2 — S11 Smith 200 mU/ Ref 1 U Cal

2



Ch1 Start 2.25 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.65 GHz



In Collaboration with
s p e a g
CALIBRATION LABORATORY



中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, Chi
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Client

7layers

Certificate No: Z21-60431

CALIBRATION CERTIFICATE

Object D5GHzV2 - SN: 1315

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

Calibration date: October 22, 2021

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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
Power sensor NRP8S	104291	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
ReferenceProbe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE4	SN 1556	15-Jan-21(SPEAG,No.DAE4-1556_Jan21)	Jan-22
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzerE5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	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: October 27, 2021

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



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Glossary:

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

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for 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
- c) 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
- d) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- e) 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%.



Add: No.52 HuaYuanBei 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

Measurement Conditions

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

DASY Version	DASY52	V52.10.4
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	36.6 ± 6 %	4.70 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.66 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	76.9 W/kg ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.1 W/kg ± 24.2 % (k=2)



Add: No.52 HuaYuanBei 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

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	36.0 ± 6 %	5.08 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.17 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.9 W/kg ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg ± 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	35.8 ± 6 %	5.25 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.59 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	76.1 W/kg ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	21.7 W/kg ± 24.2 % (k=2)



Add: No.52 HuaYuanBei 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

Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	50.5Ω - 3.27jΩ
Return Loss	- 29.7dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	54.2Ω + 0.81jΩ
Return Loss	- 27.8dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	49.4Ω + 1.99jΩ
Return Loss	- 33.6dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.098 ns
----------------------------------	----------

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
-----------------	-------



DASY5 Validation Report for Head TSL

Date: 10.22.2021

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1315

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

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.704$ S/m; $\epsilon_r = 36.62$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.084$ S/m; $\epsilon_r = 36$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5750$ MHz; $\sigma = 5.248$ S/m; $\epsilon_r = 35.78$; $\rho = 1000$ kg/m³,

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(5.42, 5.42, 5.42) @ 5250 MHz; ConvF(4.75, 4.75, 4.75) @ 5600 MHz; ConvF(4.82, 4.82, 4.82) @ 5750 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2021-01-15
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

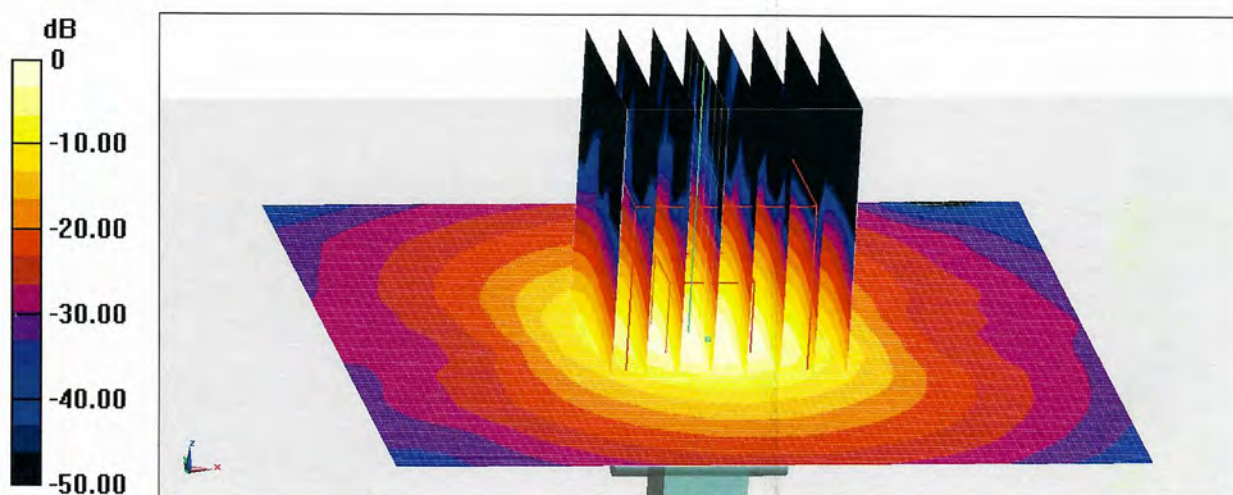
Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 70.32 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.2 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 65%
Maximum value of SAR (measured) = 18.2 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 = 71.09 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 34.9 W/kg
SAR(1 g) = 8.17 W/kg; SAR(10 g) = 2.34 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 63.3%
Maximum value of SAR (measured) = 19.9 W/kg



Add: No.52 HuaYuanBei 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

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 = 67.72 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.59 W/kg; SAR(10 g) = 2.16 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 62.4%
Maximum value of SAR (measured) = 18.6 W/kg

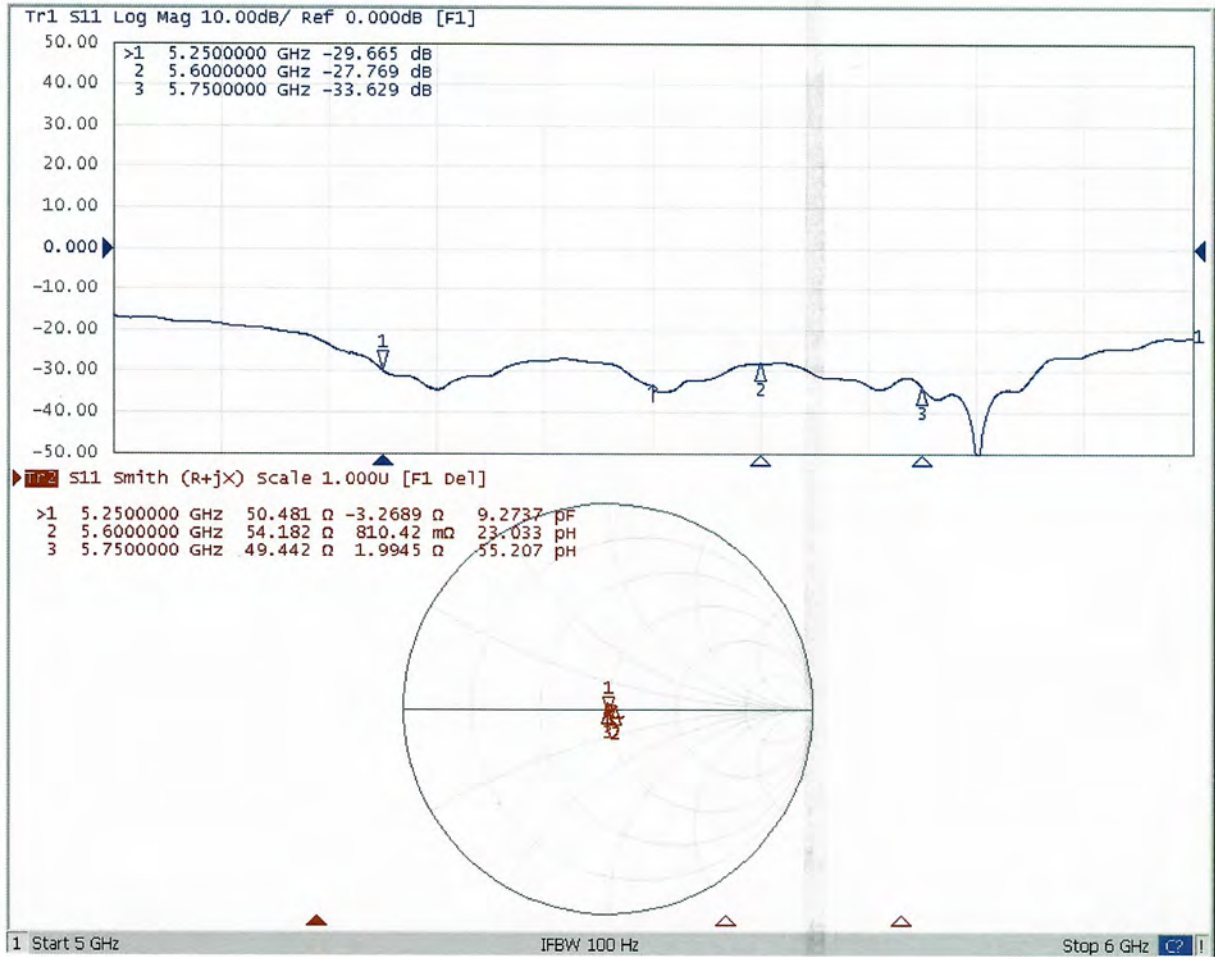


0 dB = 18.6 W/kg = 12.70 dBW/kg



Add: No.52 HuaYuanBei 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

Impedance Measurement Plot for Head TSL



D5GHzV2 - SN: 1315 Extended Dipole Calibrations

Referring to KDB 865664 D01, if dipoles are verified in return loss (<-20dB, 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.

D5GHzV2 - SN: 1315						
5250MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.22.2021	-29.7		50.5		-3.27	
10.21.2022	-34.53	16.26	51.16	0.66	1.56	4.83
10.20.2023	-25.84	-12.98	54.50	4.00	-2.96	0.31

D5GHzV2 - SN: 1315						
5600MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.22.2021	-27.8		54.2		0.81	
10.21.2022	-31.03	11.63	49.59	-4.61	-2.79	-3.60
10.20.2023	-26.15	-5.95	54.92	0.71	-1.82	-2.63

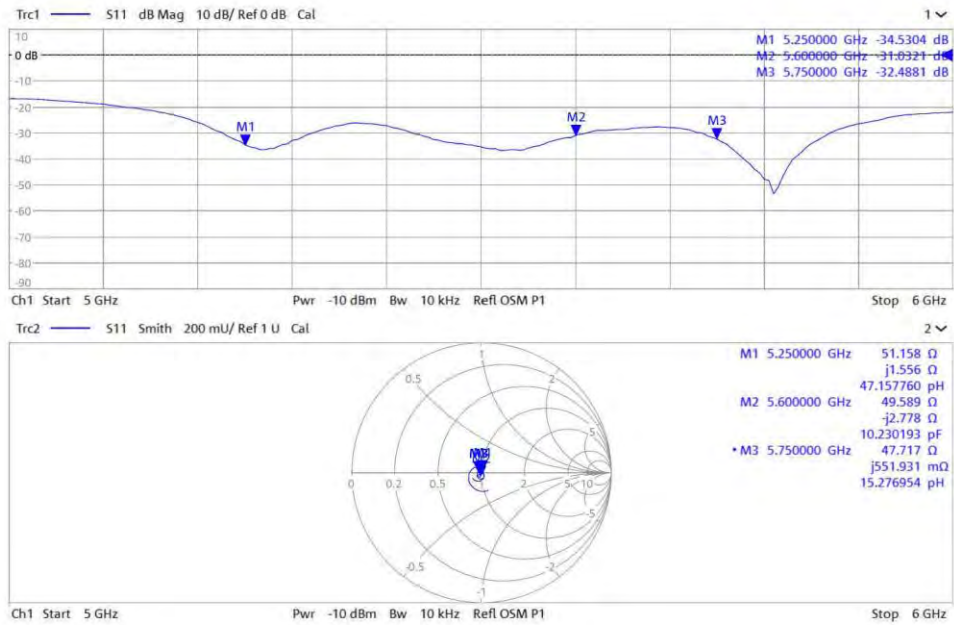
D5GHzV2 - SN: 1315						
5750MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.22.2021	-33.6		49.4		1.99	
10.21.2022	-32.49	-3.31	47.72	-1.68	0.55	-1.44
10.20.2023	-36.43	8.41	50.87	1.47	1.34	-0.65

<Justification of the extended calibration>

The return loss is < -20dB, 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>

Head 5250-5750MHz _2022.10.21

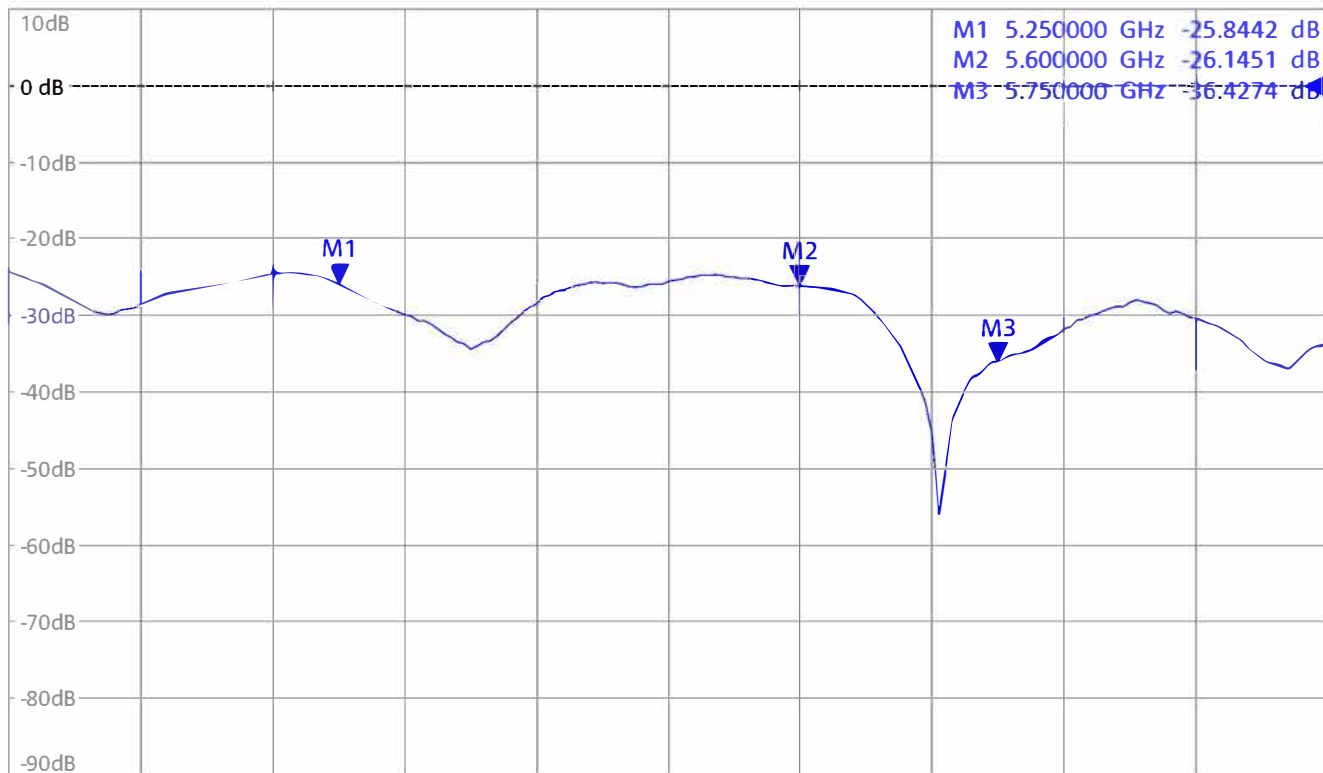


<Dipole Verification Data>

Head 5250-5750MHz_2023.10.20

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1

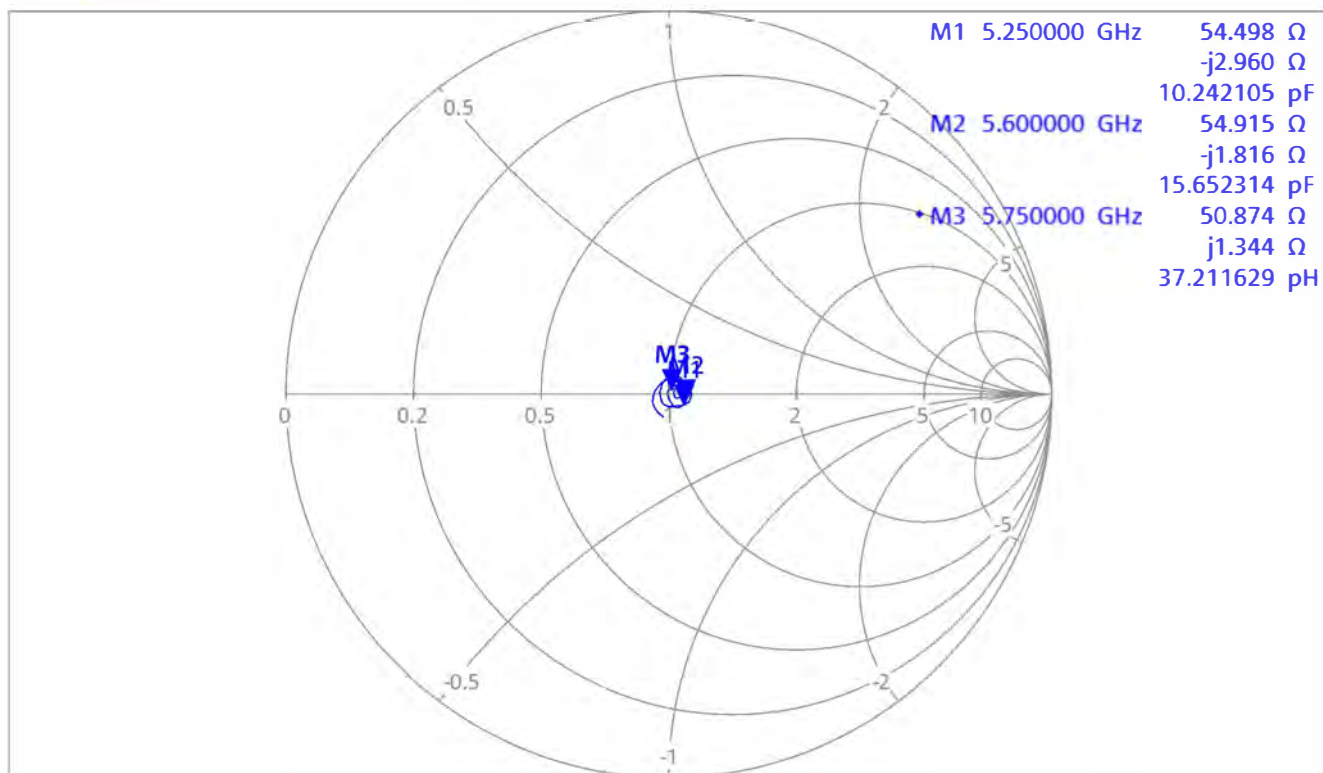


Ch1 Start 5 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 6 GHz

Trc2 — S11 Smith 200 mU/ Ref 1 U Cal

2



Ch1 Start 5 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 6 GHz



Appendix D. Conducted Power Result

Full Power

Band	GSM850				GSM1900			
	Channel	128	189	251	Max. Tune-up Power (dBm)	512	661	810
Frequency (MHz)	824.2	836.4	848.8	1850.2		1880	1909.8	
GSM	32.96	32.91	32.99	34.50	30.04	29.93	29.92	31.50
GPRS 1Tx Slot	32.97	32.87	33.01	34.50	29.84	29.97	30.09	31.50
GPRS 2Tx Slot	30.43	30.16	30.38	32.00	27.89	27.83	28.08	29.50
GPRS 3Tx Slot	29.23	29.08	29.26	31.00	26.79	26.76	26.93	28.50
GPRS 4Tx Slot	28.05	28.01	28.06	30.00	25.62	25.54	25.84	27.50
EDGE 1Tx Slot	27.09	26.76	26.75	28.50	25.64	25.76	25.97	27.50
EDGE 2Tx Slot	24.02	23.68	23.70	25.50	24.16	24.22	24.45	25.50
EDGE 3Tx Slot	22.31	22.06	22.12	24.00	23.07	23.12	23.37	24.50
EDGE 4Tx Slot	21.94	21.67	21.78	23.50	21.78	21.76	21.88	22.50

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
	Channel	128	189		251	512	661	
GSM	23.96	23.91	23.99	25.50	21.04	20.93	20.92	22.50
GPRS 1Tx Slot	23.97	23.87	24.01	25.50	20.84	20.97	21.09	22.50
GPRS 2Tx Slot	24.43	24.16	24.38	26.00	21.89	21.83	22.08	23.50
GPRS 3Tx Slot	24.97	24.82	25.00	26.74	22.53	22.50	22.67	24.24
GPRS 4Tx Slot	25.05	25.01	25.06	27.00	22.62	22.54	22.84	24.50
EDGE 1Tx Slot	18.09	17.76	17.75	19.50	16.64	16.76	16.97	18.50
EDGE 2Tx Slot	18.02	17.68	17.70	19.50	18.16	18.22	18.45	19.50
EDGE 3Tx Slot	18.05	17.80	17.86	19.74	18.81	18.86	19.11	20.24
EDGE 4Tx Slot	18.94	18.67	18.78	20.50	18.78	18.76	18.88	19.50

Band	WCDMA II			WCDMA II	WCDMA V			WCDMA V
	TX Channel	9262	9400		9538	4132	4182	
Rx Channel	9662	9800	9938	Max. Tune-up Power (dBm)	4357	4407	4458	Max. Tune-up Power (dBm)
Frequency (MHz)	1852.4	1880	1907.6		826.4	836.4	846.6	
RMC 12.2K	23.56	23.52	23.69	25.50	23.76	23.86	23.75	25.50
HSDPA Subtest-1	22.63	22.52	22.66	24.00	22.53	22.44	22.56	24.00
HSDPA Subtest-2	22.61	22.56	22.57	24.00	22.60	22.50	22.63	24.00
HSDPA Subtest-3	22.23	22.00	22.15	23.50	22.19	22.03	22.19	23.50
HSDPA Subtest-4	22.20	22.04	22.19	23.50	22.17	21.97	22.09	23.50
DC-HSDPA Subtest-1	22.40	22.40	22.47	24.00	22.54	22.38	22.48	24.00
DC-HSDPA Subtest-2	22.47	22.50	22.53	24.00	22.46	22.58	22.59	24.00
DC-HSDPA Subtest-3	22.14	21.91	21.95	23.50	22.15	21.80	22.05	23.50
DC-HSDPA Subtest-4	22.22	21.90	22.09	23.50	22.21	21.94	22.11	23.50
HSUPA Subtest-1	22.56	22.39	22.55	24.00	22.51	22.43	22.54	24.00
HSUPA Subtest-2	21.63	21.52	21.51	22.50	21.60	21.48	21.60	22.50
HSUPA Subtest-3	22.13	21.90	21.92	23.50	22.12	21.93	21.99	23.50
HSUPA Subtest-4	21.58	21.50	21.50	22.50	21.62	21.38	21.53	22.50
HSUPA Subtest-5	22.63	22.50	22.52	24.00	22.64	22.47	22.59	24.00

LTE Band 2										
BW	Modulation	RB Size Channel	RB Offset	Low			High	3GPP MPR (dB)	Max. Time-avg. (dBm)	
				1875	1890	1910				
LTE Band 4										
BW	Modulation	RB Size Channel	RB Offset	Low			High	3GPP MPR (dB)	Max. Time-avg. (dBm)	
				1920	1935	1945				
20M	QPSK	50	0	23.28	23.29	23.36	0	25		
				23.42	23.43	23.46	0	25		
				23.01	23.02	23.02	0	25		
				22.41	22.46	22.49	1	24		
				22.56	22.62	22.56	1	24		
				22.33	22.33	22.38	1	24		
				22.42	22.46	22.44	1	24		
				22.44	22.48	22.46	1	24		
				22.76	22.78	22.74	1	24		
				22.35	22.43	22.43	2	23		
20M	16QAM	50	0	21.38	21.42	21.42	2	23		
				21.56	21.58	21.55	2	23		
				21.39	21.41	21.37	2	23		
				21.36	21.43	21.50	2	23		
				21.24	21.35	21.32	2	23		
				21.38	21.48	21.56	2	23		
				21.19	21.19	21.14	2	23		
				20.37	20.48	20.43	3	22		
				20.48	20.47	20.58	3	22		
				20.34	20.36	20.43	3	22		
20M	64QAM	50	0	20.41	20.36	20.45	3	22		
				18.75	18.90	19.12	3GPP MPR (dB)	Max. Time-avg. (dBm)		
				18.75	18.80	18.93	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	16QAM	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42	3	22		
10M	64QAM	36	0	20.34	20.33	20.53	3	22		
				20.33	20.22	20.32	3	22		
				20.30	20.22	20.36	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.38	22.34	22.37	1	24		
				22.34	22.34	22.37	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
10M	16QAM	36	0	21.38	21.42	21.42	2	23		
				21.56	21.58	21.55	2	23		
				21.39	21.41	21.37	2	23		
				21.36	21.43	21.50	2	23		
				21.24	21.35	21.32	2	23		
				21.38	21.48	21.56	2	23		
				21.19	21.19	21.14	2	23		
				20.37	20.48	20.43	3	22		
				20.48	20.47	20.58	3	22		
				20.34	20.36	20.43	3	22		
10M	64QAM	36	0	20.41	20.36	20.45	3	22		
				18.75	18.90	19.12	3GPP MPR (dB)	Max. Time-avg. (dBm)		
				18.75	18.80	18.93	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42	3	22		
10M	64QAM	36	0	20.34	20.33	20.53	3	22		
				20.33	20.22	20.32	3	22		
				20.30	20.22	20.36	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.38	22.34	22.37	1	24		
				22.34	22.34	22.37	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
				22.38	22.38	22.36	1	24		
10M	16QAM	36	0	21.38	21.42	21.42	2	23		
				21.56	21.58	21.55	2	23		
				21.39	21.41	21.37	2	23		
				21.36	21.43	21.50	2	23		
				21.24	21.35	21.32	2	23		
				21.38	21.48	21.56	2	23		
				21.19	21.19	21.14	2	23		
				20.37	20.48	20.43	3	22		
				20.48	20.47	20.58	3	22		
				20.34	20.36	20.43	3	22		
10M	64QAM	36	0	20.41	20.36	20.45	3	22		
				18.75	18.90	19.12	3GPP MPR (dB)	Max. Time-avg. (dBm)		
				18.75	18.80	18.93	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42	3	22		
10M	64QAM	36	0	20.34	20.33	20.53	3	22		
				20.33	20.22	20.32	3	22		
				20.30	20.22	20.36	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42	3	22		
10M	64QAM	36	0	20.34	20.33	20.53	3	22		
				20.33	20.22	20.32	3	22		
				20.30	20.22	20.36	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42	3	22		
10M	64QAM	36	0	20.34	20.33	20.53	3	22		
				20.33	20.22	20.32	3	22		
				20.30	20.22	20.36	3	22		
				23.07	23.09	23.34	0	25		
				23.03	23.05	23.11	0	25		
				22.28	22.42	22.38	1	24		
				22.61	22.61	22.68	1	24		
				22.29	22.24	22.31	1	24		
				22.32	22.42	22.35	1	24		
				22.38	22.40	22.34	1	24		
10M	QPSK	36	0	22.66	22.77	22.69	1	24		
				22.25	22.29	22.22	1	24		
				21.34	21.48	21.50	2	23		
				21.45	21.43	21.53	2	23		
				21.25	21.31	21.32	2	23		
				21.22	21.32	21.45	2	23		
				21.19	21.19	21.17	2	23		
				21.46	21.46	21.50	2	23		
				21.24	21.18	21.13	2	23		
				20.24	20.43	20.42				

LTE Band 12										
BW	MCS Index	RB Size	RB Offset	Mid	High	SPP	Max. Time-up	MPP	Max. Time-up	
		Channel	Channel	794	2399					2373
10M	QPSK	1	0	24.22	24.23	24.24	0	25.5		
		1	24	24.02	24.12	24.03	0	25.5		
		1	49	24.01	24.08	24.21	0	25.5		
		25	0	23.12	23.18	23.23	1	24.5		
		25	12	23.09	23.10	23.10	1	24.5		
	16QAM	1	0	23.04	23.03	23.10	1	24.5		
		1	0	23.41	23.45	23.56	1	24.5		
		1	24	23.27	23.24	23.41	1	24.5		
		1	49	23.26	23.25	23.53	1	24.5		
		25	0	22.06	22.16	22.19	2	23.5		
64QAM	25	12	22.03	22.05	22.17	2	23.5			
	25	25	22.06	22.07	22.16	3	22.5			
	50	0	21.99	22.02	22.19	2	23.5			
	1	0	22.29	22.36	22.36	2	23.5			
	1	24	22.09	22.16	22.26	2	23.5			
5M	QPSK	1	0	24.19	24.21	24.20	0	25.5		
		1	12	24.01	24.02	23.98	0	25.5		
		1	24	23.97	24.01	24.18	0	25.5		
		12	0	22.98	23.14	23.12	1	24.5		
		12	6	23.06	23.08	22.97	1	24.5		
	16QAM	12	13	23.04	22.93	23.09	1	24.5		
		25	0	22.91	22.95	22.96	1	24.5		
		1	0	23.14	23.15	23.15	1	24.5		
		1	12	23.24	23.23	23.32	1	24.5		
		1	24	23.23	23.13	23.38	1	24.5		
64QAM	12	0	21.94	22.10	22.15	2	23.5			
	12	6	21.95	21.95	22.07	2	23.5			
	12	13	21.85	21.91	21.96	2	23.5			
	25	0	21.93	21.89	22.12	2	23.5			
	1	0	22.14	22.21	22.22	2	23.5			
1.4M	QPSK	1	0	24.19	24.12	24.13	0	25.5		
		1	7	23.88	24.07	23.89	0	25.5		
		1	14	23.89	23.95	24.15	0	25.5		
		8	0	22.98	23.12	23.11	1	24.5		
		8	3	23.01	23.06	23.00	1	24.5		
	16QAM	8	7	22.92	23.06	23.10	1	24.5		
		15	0	22.96	22.98	22.99	1	24.5		
		1	0	23.28	23.43	23.55	1	24.5		
		1	7	23.20	23.11	23.33	1	24.5		
		1	14	23.16	23.22	23.42	1	24.5		
64QAM	8	0	21.91	22.05	22.14	2	23.5			
	8	3	21.99	21.88	22.09	2	23.5			
	8	7	21.86	21.93	21.94	2	23.5			
	15	0	21.90	21.95	22.04	2	23.5			
	1	0	22.23	22.33	22.31	2	23.5			
1.4M	QPSK	1	0	24.14	24.02	24.12	0	25.5		
		1	2	23.81	23.98	23.80	0	25.5		
		1	5	23.86	23.79	24.03	0	25.5		
		3	0	23.93	23.96	24.02	0	25.5		
		3	1	23.91	23.95	23.81	0	25.5		
	16QAM	3	3	23.79	23.99	24.02	0	25.5		
		6	0	22.93	22.90	22.94	1	24.5		
		1	0	23.27	23.40	23.53	1	24.5		
		1	2	23.07	23.06	23.21	1	24.5		
		1	5	23.05	23.20	23.36	1	24.5		
64QAM	3	0	23.06	23.28	23.38	1	24.5			
	3	1	23.20	23.19	23.26	1	24.5			
	3	3	22.98	23.18	23.08	1	24.5			
	6	0	21.81	21.81	21.88	2	23.5			
	1	0	22.10	22.20	22.20	2	23.5			
1.4M	QPSK	1	0	21.96	21.88	22.10	2	23.5		
		1	5	21.96	22.07	22.28	2	23.5		
		3	0	21.83	21.86	21.85	2	23.5		
		3	1	21.89	21.92	22.05	2	23.5		
		3	3	21.81	21.95	21.91	2	23.5		
	16QAM	6	0	20.82	20.73	21.05	3	22.5		

LTE Band 13										
BW	Modulation	RB Size	RB Offset	Mid	High	SPP	Max. Time-up	MPP	Max. Time-up	
		Channel	Channel	792	2320					792
10M	QPSK	1	0	24.05	24.02	24.03	0	25.5		
		1	24	23.82	23.84	23.83	0	25.5		
		1	49	23.81	23.84	23.86	0	25.5		
		25	0	23.14	23.14	23.14	1	24.5		
		25	12	23.11	23.11	23.11	1	24.5		
	16QAM	25	25	23.10	23.10	23.10	1	24.5		
		50	0	23.10	23.10	23.10	1	24.5		
		1	0	23.10	23.10	23.10	1	24.5		
		1	24	23.14	23.14	23.14	1	24.5		
		1	49	23.24	23.24	23.24	1	24.5		
64QAM	25	0	22.14	22.14	22.14	2	23.5			
	25	12	22.05	22.05	22.05	2	23.5			
	25	25	22.13	22.13	22.13	2	23.5			
	50	0	22.13	22.13	22.13	2	23.5			
	1	0	22.34	22.34	22.34	2	23.5			
5M	QPSK	1	0	23.99	24.01	24.02	0	25.5		
		1	12	23.96	23.98	23.99	0	25.5		
		1	24	23.92	23.99	23.98	0	25.5		
		12	0	23.08	22.95	23.16	1	24.5		
		12	6	22.97	23.07	23.18	1	24.5		
	16QAM	12	13	22.96	23.10	23.02	1	24.5		
		25	0	23.01	23.09	23.04	1	24.5		
		1	0	23.21	23.19	23.21	1	24.5		
		1	12	23.03	23.17	23.24	1	24.5		
		1	24	23.01	23.19	23.17	1	24.5		
64QAM	12	0	21.93	21.97	22.13	2	23.5			
	12	6	21.97	22.06	22.03	2	23.5			
	12	13	22.01	22.12	22.02	2	23.5			
	25	0	22.04	22.05	22.13	2	23.5			
	1	0	22.06	22.10	22.08	2	23.5			
1.4M	QPSK	1	0	22.06	22.04	22.12	2	23.5		
		1	24	22.07	22.11	22.08	2	23.5		
		12	0	21.08	21.04	21.10	3	22.5		
		12	6	21.04	21.09	21.15	3	22.5		
		12	13	20.99	21.07	21.03	3	22.5		
	16QAM	25	0	21.05	21.08	21.07	3	22.5		

LTE Band 66										
BW	Modulation	RB Size	RB Offset	Mid	High	SPP	Max. Time-up	MPP	Max. Time-up	
		Channel	Channel	1728	13872					13872
10M	QPSK	1	0	23.13	23.09	23.12	0	25		
		1	50	23.21	23.26	23.18	0	25		
		1	99	23.30	23.35	23.35	0	25		
		50	0	22.21	22.20	22.15	1	24		
		50	25	22.32	22.27	22.24	1	24		
	16QAM	50	50	22.34	22.29	22.28	1	24		
		100	0	22.23	22.25	22.18	1	24		
		1	0	22.24	22.25	22.25	1	24		
		1	50	22.47	22.59	22.51	1	24		
		1	99	22.46	22.77	22.75	1	24		
5M	QPSK	1	0	21.18	21.13	21.05	2	23		
		1	50	21.47	21.37	21.29	2	23		
		1	100	21.07	21.05	21.05	2	23		
		50	0	20.18	20.14	20.13	3	22		
		50	25	20.24	20.27	20.28	3	22		
	16QAM	50	50	20.22	20.28	20.27	3	22		
		100	0	21.16	21.23	21.14	2	23		
		1	0	21.18	21.13	21.05	2	23		
		1	50	21.47	21.37	21.29	2	23		
		1	100	21.07	21.05	21.05	2	23		
1.4M	QPSK	1	0	23.05	23.05	23.05	0	25		
		1	37	23.15	23.13	23.05	0	25		
		1	74	23.24	23.35	23.22	0	25		
		36	0	22.08	22.09	22.03	1	24		
		36	18	22.06	22.11	22.21	1	24		
	16QAM	36	36	22.33	22.22	22.18	1	24		
		75	0	22.09	22.12	22.13	1	24		
		1	0	22.21	22.15	22.26	1	24		
		1	37	22.37	22.58	22.49	1	24		
		1	74	22.50	22.66	22.61	1	24		
1.4M	QPSK	36	0	21.08	21.15	21.11	2	23		
		36	18	21.16	21.31	21.28	2	23		
		36	36	21.16	21.30	21.08	2	23		
		75	0	21.10	21.22	21.10	2	23		
		1	0	21.08	21.03	21.08	2	23		

Reduce Power

Band	DSI-2 Power			Max. Tune-up Power (dBm)
	GSM1900 DSI-2			
Channel	512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	
GSM	28.89	28.91	29.12	30.00
GPRS 1Tx Slot	29.08	29.07	29.24	30.00
GPRS 2Tx Slot	25.97	25.88	26.26	27.00
GPRS 3Tx Slot	24.08	24.01	24.36	25.50
GPRS 4Tx Slot	22.87	22.72	23.10	24.50
EDGE 1Tx Slot	25.95	26.01	26.04	27.00
EDGE 2Tx Slot	23.81	23.86	23.96	25.00
EDGE 3Tx Slot	21.78	21.98	22.12	23.00
EDGE 4Tx Slot	20.69	20.73	20.82	22.00

Band	Source-Based Time-Averaged Power			Max. Tune-up Power (dBm)
	GSM1900			
Channel	512	661	810	
GSM	19.89	19.91	20.12	21.00
GPRS 1Tx Slot	20.08	20.07	20.24	21.00
GPRS 2Tx Slot	19.97	19.88	20.26	21.00
GPRS 3Tx Slot	19.82	19.75	20.10	21.24
GPRS 4Tx Slot	19.87	19.72	20.10	21.50
EDGE 1Tx Slot	16.95	17.01	17.04	18.00
EDGE 2Tx Slot	17.81	17.86	17.96	19.00
EDGE 3Tx Slot	17.52	17.72	17.86	18.74
EDGE 4Tx Slot	17.69	17.73	17.82	19.00

Band	WCDMA II DSI-2		Max. Tune-up Power (dBm)	
	9362	9400		9538
Tx Channel	9662	9800	9938	
Rx Channel	1852.4	1880	1907.6	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	20.04	19.96	20.07	21.00
HSDPA Subtest-1	19.07	18.88	19.08	20.00
HSDPA Subtest-2	19.05	19.05	19.06	20.00
HSDPA Subtest-3	18.88	18.35	18.63	19.50
HSDPA Subtest-4	18.67	18.51	18.68	19.50
DC-HSDPA Subtest-1	18.88	18.89	18.84	20.00
DC-HSDPA Subtest-2	18.85	18.95	18.89	20.00
DC-HSDPA Subtest-3	18.62	18.36	18.42	19.50
DC-HSDPA Subtest-4	18.62	18.31	18.47	19.50
HSUPA Subtest-1	18.91	18.78	19.00	20.00
HSUPA Subtest-2	18.08	17.90	17.93	18.50
HSUPA Subtest-3	18.61	18.39	18.29	19.50
HSUPA Subtest-4	17.95	17.98	17.99	18.50
HSUPA Subtest-5	19.09	18.91	18.92	20.00

Band	DSI-3 Power			Max. Tune-up Power (dBm)
	GSM1900 DSI-3			
Channel	512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	
GSM	25.85	25.96	25.87	27.00
GPRS 1Tx Slot	25.98	25.93	25.88	27.00
GPRS 2Tx Slot	22.95	22.89	23.03	24.00
GPRS 3Tx Slot	21.00	21.07	21.22	22.50
GPRS 4Tx Slot	20.16	20.09	20.25	22.00
EDGE 1Tx Slot	26.50	26.13	26.17	27.50
EDGE 2Tx Slot	23.96	24.07	24.06	24.50
EDGE 3Tx Slot	22.04	22.10	22.05	23.00
EDGE 4Tx Slot	20.64	20.67	20.78	21.50

Band	Source-Based Time-Averaged Power			Max. Tune-up Power (dBm)
	GSM1900			
Channel	512	661	810	
GSM	16.85	16.96	16.87	18.00
GPRS 1Tx Slot	16.98	16.93	16.88	18.00
GPRS 2Tx Slot	16.95	16.89	17.03	18.00
GPRS 3Tx Slot	16.74	16.81	16.96	18.24
GPRS 4Tx Slot	17.16	17.09	17.25	19.00
EDGE 1Tx Slot	17.50	17.13	17.17	18.50
EDGE 2Tx Slot	17.96	18.07	18.06	18.50
EDGE 3Tx Slot	17.78	17.84	17.79	18.74
EDGE 4Tx Slot	17.64	17.67	17.78	18.50

Band	WCDMA II DSI-3		Max. Tune-up Power (dBm)	
	9262	9400		9538
Tx Channel	9662	9800	9938	
Rx Channel	1852.4	1880	1907.6	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	17.85	17.67	17.88	19.00
HSDPA Subtest-1	16.79	16.56	16.78	18.00
HSDPA Subtest-2	16.74	16.72	16.73	18.00
HSDPA Subtest-3	16.47	16.14	16.31	17.50
HSDPA Subtest-4	16.41	16.27	16.46	17.50
DC-HSDPA Subtest-1	16.67	16.62	16.49	18.00
DC-HSDPA Subtest-2	16.64	16.63	16.67	18.00
DC-HSDPA Subtest-3	16.41	16.11	16.18	17.50
DC-HSDPA Subtest-4	16.35	16.00	16.14	17.50
HSUPA Subtest-1	16.82	16.43	16.71	19.00
HSUPA Subtest-2	15.73	15.60	15.61	16.50
HSUPA Subtest-3	16.26	16.08	16.01	17.50
HSUPA Subtest-4	15.74	15.63	15.66	16.50
HSUPA Subtest-5	16.82	16.56	16.60	18.00

Band	DSI-4 Power			Max. Tune-up Power (dBm)
	GSM1900 DSI-4			
Channel	512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	
GSM	26.97	26.99	27.26	28.00
GPRS 1Tx Slot	26.94	27.23	27.33	28.00
GPRS 2Tx Slot	23.96	24.28	24.20	25.00
GPRS 3Tx Slot	22.08	22.16	22.33	23.50
GPRS 4Tx Slot	20.75	20.86	21.05	22.50
EDGE 1Tx Slot	26.99	26.92	26.01	27.00
EDGE 2Tx Slot	23.92	24.02	24.04	25.00
EDGE 3Tx Slot	21.91	22.11	21.97	23.00
EDGE 4Tx Slot	20.70	20.84	20.89	22.00

Band	Source-Based Time-Averaged Power			Max. Tune-up Power (dBm)
	GSM1900			
Channel	512	661	810	
GSM	17.97	17.99	18.26	19.00
GPRS 1Tx Slot	17.94	18.23	18.33	19.00
GPRS 2Tx Slot	17.99	18.28	18.20	19.00
GPRS 3Tx Slot	17.82	17.92	18.07	19.24
GPRS 4Tx Slot	17.75	17.86	18.05	19.50
EDGE 1Tx Slot	16.99	16.92	17.01	18.00
EDGE 2Tx Slot	17.92	18.02	18.04	19.00
EDGE 3Tx Slot	17.65	17.85	17.71	18.74
EDGE 4Tx Slot	17.70	17.84	17.89	19.00

Band	WCDMA II DSI-4		Max. Tune-up Power (dBm)	
	9262	9400		9538
Tx Channel	9662	9800	9938	
Rx Channel	1852.4	1880	1907.6	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	19.00	18.87	19.03	20.00
HSDPA Subtest-1	17.86	17.67	17.93	19.00
HSDPA Subtest-2	17.81	17.90	17.80	19.00
HSDPA Subtest-3	17.53	17.29	17.41	18.50
HSDPA Subtest-4	17.51	17.34	17.65	18.50
DC-HSDPA Subtest-1	17.79	17.77	17.60	19.00
DC-HSDPA Subtest-2	17.69	17.82	17.74	19.00
DC-HSDPA Subtest-3	17.60	17.26	17.34	18.50
DC-HSDPA Subtest-4	17.43	17.07	17.25	18.50
HSUPA Subtest-1	17.73	17.52	17.88	19.00
HSUPA Subtest-2	16.88	16.68	16.80	17.50
HSUPA Subtest-3	17.43	17.16	17.06	18.50
HSUPA Subtest-4	16.82	16.74	16.76	17.50
HSUPA Subtest-5	17.93	17.62	17.69	19.00

Band	GSM1900 DSI-5			Max. Tune-up Power (dBm)
Channel	512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	
GSM	28.89	28.91	29.12	30.00
GPRS 1Tx Slot	29.08	29.07	29.24	30.00
GPRS 2Tx Slot	25.97	25.88	26.26	27.00
GPRS 3Tx Slot	24.08	24.01	24.36	25.50
GPRS 4Tx Slot	22.87	22.72	23.10	24.50
EDGE 1Tx Slot	25.95	26.01	26.04	27.00
EDGE 2Tx Slot	23.81	23.86	23.96	25.00
EDGE 3Tx Slot	21.78	21.98	22.12	23.00
EDGE 4Tx Slot	20.69	20.73	20.82	22.00

Band	GSM1900 DSI-6			Max. Tune-up Power (dBm)
Channel	512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	
GSM	25.85	25.96	25.87	27.00
GPRS 1Tx Slot	25.98	25.93	25.88	27.00
GPRS 2Tx Slot	22.95	22.89	23.03	24.00
GPRS 3Tx Slot	21.00	21.07	21.22	22.50
GPRS 4Tx Slot	20.16	20.09	20.25	22.00
EDGE 1Tx Slot	26.50	26.13	26.17	27.50
EDGE 2Tx Slot	23.96	24.07	24.06	24.50
EDGE 3Tx Slot	22.04	22.10	22.05	23.00
EDGE 4Tx Slot	20.64	20.67	20.78	21.50

Source-Based Time-Averaged Power				
Band	GSM1900			Max. Tune-up Power (dBm)
Channel	512	661	810	
GSM	19.89	19.91	20.12	21.00
GPRS 1Tx Slot	20.08	20.07	20.24	21.00
GPRS 2Tx Slot	19.97	19.88	20.26	21.00
GPRS 3Tx Slot	19.82	19.75	20.10	21.24
GPRS 4Tx Slot	19.87	19.72	20.10	21.50
EDGE 1Tx Slot	16.95	17.01	17.04	18.00
EDGE 2Tx Slot	17.81	17.86	17.96	19.00
EDGE 3Tx Slot	17.52	17.72	17.86	18.74
EDGE 4Tx Slot	17.69	17.73	17.82	19.00

Source-Based Time-Averaged Power				
Band	GSM1900			Max. Tune-up Power (dBm)
Channel	512	661	810	
GSM	16.85	16.96	16.87	18.00
GPRS 1Tx Slot	16.98	16.93	16.88	18.00
GPRS 2Tx Slot	16.95	16.89	17.03	18.00
GPRS 3Tx Slot	16.74	16.81	16.96	18.24
GPRS 4Tx Slot	17.16	17.09	17.25	19.00
EDGE 1Tx Slot	17.50	17.13	17.17	18.50
EDGE 2Tx Slot	17.96	18.07	18.06	18.50
EDGE 3Tx Slot	17.78	17.84	17.79	18.74
EDGE 4Tx Slot	17.64	17.67	17.78	18.50

Band	WCDMA II DSI-5			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538	
Rx Channel	9662	9800	9938	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	20.04	19.96	20.07	21.00
HSDPA Subtest-1	19.07	18.88	19.08	20.00
HSDPA Subtest-2	19.05	19.05	19.06	20.00
HSDPA Subtest-3	18.68	18.35	18.63	19.50
HSDPA Subtest-4	18.67	18.51	18.68	19.50
DC-HSDPA Subtest-1	18.88	18.89	18.84	20.00
DC-HSDPA Subtest-2	18.85	18.95	18.89	20.00
DC-HSDPA Subtest-3	18.62	18.36	18.42	19.50
DC-HSDPA Subtest-4	18.62	18.31	18.47	19.50
HSUPA Subtest-1	18.91	18.78	19.00	20.00
HSUPA Subtest-2	18.08	17.90	17.93	18.50
HSUPA Subtest-3	18.61	18.39	18.29	19.50
HSUPA Subtest-4	17.95	17.98	17.99	18.50
HSUPA Subtest-5	19.09	18.91	18.92	20.00

Band	WCDMA II DSI-6			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538	
Rx Channel	9662	9800	9938	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	17.47	17.26	17.51	18.50
HSDPA Subtest-1	16.19	16.02	16.22	17.50
HSDPA Subtest-2	16.23	16.20	16.25	17.50
HSDPA Subtest-3	15.95	15.68	15.72	17.00
HSDPA Subtest-4	15.82	15.68	16.02	17.00
DC-HSDPA Subtest-1	16.16	16.09	15.93	17.50
DC-HSDPA Subtest-2	16.00	16.29	16.12	17.50
DC-HSDPA Subtest-3	15.88	15.69	15.67	17.00
DC-HSDPA Subtest-4	15.76	15.34	15.50	17.00
HSUPA Subtest-1	16.03	15.87	16.18	17.50
HSUPA Subtest-2	15.26	15.14	15.12	16.00
HSUPA Subtest-3	15.74	15.48	15.53	17.00
HSUPA Subtest-4	15.11	15.18	15.03	16.00
HSUPA Subtest-5	16.22	16.04	16.08	17.50

LTE Band 2 DSI-2											
BW	Modulation	RB Size	RB Offset		Low	Mid	High	Max. Turn-up (dBm)			
			Channel	RB Offset							
20M	QPSK	1	0	21.87	21.49	21.99	23				
			1	50	22.02	22.10	22.07	23			
			1	99	21.59	21.41	21.62	23			
		50	0	21.40	21.32	21.42	23				
			50	25	21.44	21.58	21.54	23			
			50	50	21.41	21.22	21.49	23			
		100	0	21.42	21.49	21.40	23				
			1	0	21.29	21.17	21.45	23			
			1	50	21.51	21.64	21.52	23			
		16QAM	1	0	21.23	21.17	21.13	23			
				1	0	21.02	20.98	21.10	22		
				50	25	21.13	21.07	21.25	22		
	50		0	20.89	20.87	21.11	22				
			50	25	20.14	20.07	20.25	21			
			100	0	20.89	20.85	21.15	22			
	64QAM		1	0	21.28	21.09	21.23	22			
				1	50	21.46	21.32	21.43	22		
				1	99	21.27	21.05	20.94	22		
			50	0	19.96	20.01	20.12	21			
				50	25	20.14	20.07	20.25	21		
				100	0	19.91	19.84	20.11	21		
		100	0	19.94	19.95	20.13	21				
			1	0	19.88	19.92	20.09	21			
			1	50	19.88	19.90	19.96	21			
15M		QPSK	1	0	21.79	21.37	21.95	23			
				1	37	22.00	21.98	22.06	23		
				1	74	21.53	21.38	21.58	23		
	36		0	21.29	21.21	21.29	23				
			36	19	21.29	21.51	21.47	23			
			36	39	21.40	21.08	21.44	23			
	75		0	21.11	21.01	21.38	23				
			1	0	21.15	21.02	21.33	23			
			1	37	21.46	21.50	21.46	23			
	16QAM		1	0	21.13	21.03	21.09	23			
				36	0	20.96	20.96	20.99	22		
				36	19	20.99	20.99	21.19	22		
		36	0	20.81	20.84	21.08	22				
			36	19	20.08	19.97	20.17	21			
			36	39	19.76	19.80	20.00	21			
		75	0	19.88	19.92	20.09	21				
			1	0	19.88	19.90	19.96	21			
			1	37	21.33	21.27	21.29	22			
		64QAM	1	0	21.44	21.20	21.53	23			
				36	0	19.81	19.96	20.02	21		
				36	19	20.08	19.97	20.17	21		
	36		0	19.88	19.80	20.00	21				
			36	19	19.76	19.80	20.00	21			
			75	0	19.88	19.92	20.09	21			
10M	QPSK		1	0	21.74	21.47	21.85	23			
				1	24	21.88	22.02	22.02	23		
				1	49	21.45	21.35	21.52	23		
			25	0	21.23	21.23	21.31	23			
				25	12	21.30	21.52	21.39	23		
				25	25	21.34	21.21	21.38	23		
		50	0	21.41	21.35	21.28	23				
			1	0	21.27	21.07	21.41	23			
			1	24	21.44	21.48	21.48	23			
		16QAM	1	0	21.15	21.16	21.03	23			
				25	0	20.88	20.96	21.01	22		
				25	12	21.00	20.97	21.18	22		
	25		0	20.23	20.72	20.99	22				
			25	19	20.96	20.99	21.19	22			
			50	0	20.93	20.89	21.10	22			
	64QAM		1	0	21.19	20.95	21.17	22			
				1	24	21.41	21.26	21.29	22		
				1	49	21.24	20.99	20.89	22		
			25	0	19.95	19.94	20.04	21			
				25	12	20.07	20.02	20.16	21		
				25	25	19.83	19.77	20.09	21		
		50	0	19.88	19.93	20.08	21				
			1	0	19.88	19.90	19.96	21			
			1	24	21.20	21.16	21.16	23			
5M		QPSK	1	0	21.74	21.47	21.85	23			
				1	24	21.88	22.02	22.02	23		
				1	49	21.45	21.35	21.52	23		
	12		0	21.31	21.25	21.27	23				
			12	6	21.29	21.46	21.42	23			
			12	13	21.33	21.09	21.34	23			
	25		0	21.36	21.29	21.32	23				
			1	0	21.26	21.02	21.35	23			
			1	12	21.47	21.52	21.49	23			
	16QAM		1	0	21.10	21.08	21.00	23			
				12	0	20.93	20.83	21.04	22		
				12	6	21.00	20.96	21.12	22		
		12	0	20.86	20.80	21.06	22				
			12	13	20.85	20.80	21.06	22			
			25	0	20.95	20.80	21.06	22			
		64QAM	1	0	21.14	21.02	21.10	22			
				1	12	21.28	21.28	21.31	22		
				1	24	21.20	20.98	20.93	22		
			12	0	19.91	19.86	20.09	21			
				12	6	20.10	19.94	20.15	21		
				12	13	19.84	19.75	19.97	21		
	25		0	19.86	19.87	20.02	21				
			1	0	19.86	19.88	19.94	21			
			1	24	21.20	21.16	21.16	23			
3M	QPSK		1	0	21.77	21.44	21.88	23			
				1	7	22.01	22.05	22.05	23		
				1	14	21.57	21.37	21.50	23		
		8	0	21.35	21.28	21.30	23				
			8	3	21.38	21.46	21.46	23			
			8	7	21.31	21.18	21.40	23			
		15	0	21.38	21.37	21.32	23				
			1	0	21.15	21.10	21.32	23			
			1	7	21.46	21.54	21.40	23			
		16QAM	1	0	21.10	21.08	21.03	23			
				8	0	20.89	20.96	21.02	22		
				8	3	21.12	21.02	21.10	22		
	8		0	20.80	20.79	21.04	22				
			8	3	20.91	20.91	21.09	22			
			15	0	20.92	20.91	21.01	22			
	64QAM		1	0	21.20	21.08	21.18	22			
				1	7	21.40	21.19	21.33	22		
				1	14	21.12	20.98	20.90	22		
			8	0	19.87	19.93	20.03	21			
				8	3	20.10	20.01	20.19	21		
				8	7	19.79	19.72	19.96	21		
		15	0	19.80	19.92	20.01	21				
			1	0	19.80	19.82	19.88	21			
			1	7	21.10	21.06	21.06	23			
1.4M		QPSK	1	0	21.74	21.47	21.85	23			
				1	2	21.97	22.01	21.95	23		
				1	5	21.47	21.26	21.47	23		
	3		0	21.26	21.27	21.31	23				
			3	1	21.39	21.43	21.53	23			
			3	3	21.39	21.39	21.39	23			
	6		0	21.33	21.43	21.34	23				
			1	0	21.23	21.05	21.34	23			
			1	2	21.40	21.49	21.40	23			
	16QAM		1	0	21.16	21.14	21.06	23			
				3	0	20.96	20.96	21.06	22		
				3	1	21.38	21.33	21.56	23		
		3	0	21.13	21.12	21.45	23				
			3	1	21.38	21.33	21.56	23			
			6	0	21.27	21.17	21.40	22			
		64QAM	1	0	21.21	21.07	21.18	22			
				1	2	21.40	21.27	21.35	22		
				1	5	21.25	20.95	20.93	22		
			3	0	20.73	20.73	20.92	22			
				3	1	20.99	20.83	21.11	22		
				3	3	20.73	20.67	20.95	22		
	6		0	19.79	19.88	20.11	21				
			1	0	19.80	19.82	19.88	21			
			1	2	21.10	21.06	21.06	23			
20M	QPSK		1	0	22.01	21.88	22.03	23			
				1	50	22.03	22.03	22.12	23		
				1	99	22.07	22.08	22.18	23		
		50	0	21.50	21.69	21.58	23				
			50	25	21.61	21.59	21.55	23			
			50	50	21.64	21.58	21.71	23			
		100	0	21.60	21.55	21.66	23				
			1	0	21.54	21.52	21.51	23			
			1	50	21.63	21.51	21.69	23			
		16QAM	1	0	21.13	21.04	21.09	22			
				50	25	21.16	21.07	21.05	22		
				50	50	21.14	21.04	21.21	22		
	100		0	21.15	21.05	21.1					

LTE Band 2 DSI-3									
BW	Modulation	RB Size	RB Offset	Channel			Mid	High	Max. Turn-up (dBm)
				Low	1970	1990			
Channel									
Frequency (MHz)									
20M	QPSK	16QAM	0	18.79	18.45	18.57	20		
			1	50	18.82	18.89	18.68	20	
			1	99	18.59	18.34	18.21	20	
			50	0	18.30	18.31	20		
			50	25	18.36	18.68	18.37	20	
			50	50	18.19	18.14	18.23	20	
	64QAM	0	18.24	18.30	18.26	20			
		1	0	18.66	18.67	18.69	20		
		1	50	18.83	18.95	18.75	20		
		1	99	18.38	18.58	18.40	20		
		50	0	18.29	18.38	18.39	20		
		50	25	18.40	18.47	18.43	20		
15M	QPSK	16QAM	0	18.25	18.31	18.44	20		
			1	0	18.48	18.38	18.62	20	
			1	50	18.63	18.68	18.67	20	
			1	99	18.27	18.31	18.22	20	
			50	0	18.29	18.38	18.43	20	
			50	25	18.42	18.43	18.51	20	
	64QAM	0	18.20	18.22	18.35	20			
		1	0	18.24	18.29	18.45	20		
		1	50	18.63	18.68	18.67	20		
		1	99	18.27	18.31	18.22	20		
		50	0	18.29	18.38	18.43	20		
		50	25	18.42	18.43	18.51	20		
10M	QPSK	16QAM	0	18.25	18.31	18.44	20		
			1	0	18.48	18.38	18.62	20	
			1	50	18.63	18.68	18.67	20	
			1	99	18.27	18.31	18.22	20	
			50	0	18.29	18.38	18.43	20	
			50	25	18.42	18.43	18.51	20	
	64QAM	0	18.20	18.22	18.35	20			
		1	0	18.24	18.29	18.45	20		
		1	50	18.63	18.68	18.67	20		
		1	99	18.27	18.31	18.22	20		
		50	0	18.29	18.38	18.43	20		
		50	25	18.42	18.43	18.51	20		
5M	QPSK	16QAM	0	18.25	18.31	18.44	20		
			1	0	18.48	18.38	18.62	20	
			1	50	18.63	18.68	18.67	20	
			1	99	18.27	18.31	18.22	20	
			50	0	18.29	18.38	18.43	20	
			50	25	18.42	18.43	18.51	20	
	64QAM	0	18.20	18.22	18.35	20			
		1	0	18.24	18.29	18.45	20		
		1	50	18.63	18.68	18.67	20		
		1	99	18.27	18.31	18.22	20		
		50	0	18.29	18.38	18.43	20		
		50	25	18.42	18.43	18.51	20		
1.4M	QPSK	16QAM	0	18.25	18.31	18.44	20		
			1	0	18.48	18.38	18.62	20	
			1	50	18.63	18.68	18.67	20	
			1	99	18.27	18.31	18.22	20	
			50	0	18.29	18.38	18.43	20	
			50	25	18.42	18.43	18.51	20	
	64QAM	0	18.20	18.22	18.35	20			
		1	0	18.24	18.29	18.45	20		
		1	50	18.63	18.68	18.67	20		
		1	99	18.27	18.31	18.22	20		
		50	0	18.29	18.38	18.43	20		
		50	25	18.42	18.43	18.51	20		

LTE Band 4 DSI-3									
BW	Modulation	RB Size	RB Offset	Channel			Mid	High	Max. Turn-up (dBm)
				Low	2090	2175			
Channel									
Frequency (MHz)									
20M	QPSK	16QAM	0	20.72	20.52	20.63	22		
			1	50	20.74	20.81	20.81	22	
			1	99	20.78	20.68	20.86	22	
			50	0	20.51	20.39	20.41	22	
			50	25	20.52	20.40	20.46	22	
			50	50	20.55	20.37	20.61	22	
	64QAM	0	20.48	20.38	20.54	22			
		1	0	20.54	20.21	20.31	22		
		1	50	20.44	20.25	20.44	22		
		1	99	20.53	20.32	20.60	22		
		50	0	20.54	20.37	20.46	22		
		50	25	20.57	20.41	20.44	22		
15M	QPSK	16QAM	0	20.69	20.36	20.55	22		
			1	0	20.50	20.22	20.31	22	
			1	50	20.59	20.34	20.50	22	
			1	99	20.56	20.21	20.51	22	
			50	0	20.06	19.90	19.98	21	
			50	25	20.06	19.97	19.97	21	
	64QAM	0	20.06	19.88	20.14	21			
		1	0	20.02	19.85	20.05	21		
		1	50	20.59	20.34	20.50	22		
		1	99	20.56	20.21	20.51	22		
		50	0	20.06	19.90	19.98	21		
		50	25	20.06	19.97	19.97	21		
10M	QPSK	16QAM	0	20.69	20.36	20.55	22		
			1	0	20.50	20.22	20.31	22	
			1	50	20.59	20.34	20.50	22	
			1	99	20.56	20.21	20.51	22	
			50	0	20.06	19.90	19.98	21	
			50	25	20.06	19.97	19.97	21	
	64QAM	0	20.06	19.88	20.14	21			
		1	0	20.02	19.85	20.05	21		
		1	50	20.59	20.34	20.50	22		
		1	99	20.56	20.21	20.51	22		
		50	0	20.06	19.90	19.98	21		
		50	25	20.06	19.97	19.97	21		
5M	QPSK	16QAM	0	20.69	20.36	20.55	22		
			1	0	20.50	20.22	20.31	22	
			1	50	20.59	20.34	20.50	22	
			1	99	20.56	20.21	20.51	22	
			50	0	20.06	19.90	19.98	21	
			50	25	20.06	19.97	19.97	21	
	64QAM	0	20.06	19.88	20.14	21			
		1	0	20.02	19.85	20.05	21		
		1	50	20.59	20.34	20.50	22		
		1	99	20.56	20.21	20.51	22		
		50	0	20.06	19.90	19.98	21		
		50	25	20.06	19.97	19.97	21		
1.4M	QPSK	16QAM	0	20.69	20.36	20.55	22		
			1	0	20.50	20.22	20.31	22	
			1	50	20.59	20.34	20.50	22	
			1	99	20.56	20.21	20.51	22	
			50	0	20.06	19.90	19.98	21	
			50	25	20.06	19.97	19.97	21	
	64QAM	0	20.06	19.88	20.14	21			
		1	0	20.02	19.85	20.05	21		
		1	50	20.59	20.34	20.50	22		
		1	99	20.56	20.21	20.51	22		
		50	0	20.06	19.90	19.98	21		
		50	25	20.06	19.97	19.97	21		

LTE Band 66 DSI-3									
BW	Modulation	RB Size	RB Offset	Channel			Mid	High	Max. Turn-up (dBm)
				Low	13272	13372			
Channel									
Frequency (MHz)									
20M	QPSK	16QAM	0	20.76	20.50	20.75	22		
			1	50	20.71	20.81	20.66	22	
			1	99	20.95	21.11	20.87	22	
			50	0	20.45	20.41	20.50	22	
			50	25	20.52	20.56	20.51	22	
			50	50	20.53	20.87	20.54	22	
	64QAM	0	20.52	20.55	20.52	22			
		1	0	20.22	20.31	20.25	22		
		1	50	20.49	20.64	20.52	22		
		1	99	20.72	20.78	20.73	22		
		50	0	20.53	20.46	20.54	22		
		50	25	20.56	20.56	20.65	22		
15M	QPSK	16QAM	0	20.76	20.50	20.75	22		
			1	50	20.71	20.81	20.66	22	
			1	99	20.95	21.11	20.87	22	
			50	0	20.45	20.41	20.50	22	
			50	25	20.52	20.56	20.51	22	
			50	50	20.53	20.87	20.54	22	
	64QAM	0	20.52	20.55	20.52	22			
		1	0	20.22	20.31	20.25	22		
		1	50	20.49	20.64	20.52	22		
		1	99	20.72	20.78	20.73	22		
		50	0	20.53	20.46	20.54	22		
		50	25	20.56	20.56	20.65	22		
10M	QPSK	16QAM	0	20.76	20.50	20.75	22		
			1	50	20.71	20.81	20.66	22	
			1	99	20.95	21.11	20.87	22	
			50	0	20.45	20.41	20.50	22	
			50	25	20.52	20.56	20.51	22	
			50	50	20.53	20.87	20.54	22	
	64QAM	0	20.52	20.55	20.52	22			
		1	0	20.22	20.31	20.25	22		
		1	50	20.49	20.64	20.52	22		
		1	99	20.72	20.78	20.73	22		
		50	0	20.53	20.46	20.54	22		
		50	25	20.56	20.56	20.65	22		
5M	QPSK	16QAM	0	20.76	20.50	20.75	22		
			1	50	20.71	20.81	20.66	22	
			1	99	20.95	21.11	20.87	22	
			50	0	20.45	20.41	20.50	22	
			50	25	20.52	20.56	20.51	22	
			50	50	20.53	20.87	20.54	22	
	64QAM	0	20.52	20.55	20.52	22			
		1	0	20.22	20.31	20.25	22		
		1	50	20.49	20.64	20.52	22		
		1	99	20.72	20.78	20.73	22		
		50	0	20.53	20.46	20.54	22		
		50	25	20.56	20.56	20.65	22		
1.4M	QPSK	16QAM	0	20.76	20.50	20.75	22		
			1	50	20.71	20.81	20.66	22	
			1	99	20.95	21.11	20.87	22	
			50	0	20.45	20.41	20.50	22	
			50	25	20.52	20.56	20.51	22	
			50	50	20.53	20.87			

		LTE Band 2 DS1-4							
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Turn-up (dBm)		
				Channel	1870	1890		1910	
20M	QPSK	16QAM	0	1860	1880	1900	21		
				1	19.35	19.37	19.51	21	
				1	50	19.55	19.76	19.86	21
				1	99	19.13	19.18	19.15	21
				50	0	19.45	19.51	19.53	21
				50	25	19.51	19.64	19.61	21
		50	50	19.28	19.36	19.56	21		
		100	0	19.31	19.65	19.53	21		
		1	0	19.21	19.35	19.46	21		
		1	50	19.43	19.61	19.67	21		
		1	99	19.45	19.38	19.68	21		
		50	0	19.38	19.62	19.58	21		
	50	25	19.51	19.67	19.72	21			
	50	50	19.29	19.45	19.59	21			
	100	0	19.36	19.65	19.71	21			
	1	0	19.52	19.55	19.51	21			
	1	50	19.57	19.48	19.64	21			
	1	99	19.03	19.53	19.38	21			
	50	0	19.48	19.59	19.60	21			
	50	25	19.60	19.50	19.58	21			
	50	50	19.39	19.41	19.58	21			
	100	0	19.44	19.51	19.61	21			
	15M	QPSK	16QAM	0	1867.5	1890	1912.5	21	
					1	0	19.27	19.23	19.42
1					37	19.47	19.61	19.81	21
1					74	19.07	19.17	19.05	21
36					0	19.37	19.47	19.48	21
36					19	19.38	19.63	19.54	21
36			39	19.17	19.33	19.53	21		
75			0	19.20	19.62	19.47	21		
1			0	19.07	19.32	19.34	21		
1			37	19.35	19.58	19.63	21		
1			74	19.34	19.33	19.54	21		
36			0	19.26	19.55	19.57	21		
36		19	19.40	19.62	19.68	21			
36		39	19.26	19.30	19.58	21			
75		0	19.23	19.46	19.56	21			
1		0	19.45	19.53	19.39	21			
1		37	19.43	19.36	19.59	21			
1		74	19.49	19.48	19.38	21			
36		0	19.37	19.58	19.59	21			
36		19	19.55	19.60	19.58	21			
36		39	19.37	19.27	19.54	21			
75		0	19.36	19.41	19.50	21			
10M		QPSK	16QAM	0	1868	1890	1916	21	
					1	0	19.27	19.24	19.38
	1				24	19.44	19.70	19.51	21
	1				49	19.09	19.13	19.03	21
	25				0	19.35	19.37	19.52	21
	25				12	19.46	19.50	19.58	21
	25		25	19.17	19.22	19.55	21		
	50		0	19.18	19.59	19.48	21		
	1		0	19.10	19.23	19.35	21		
	1		24	19.38	19.50	19.64	21		
	1		49	19.34	19.33	19.66	21		
	25		0	19.29	19.53	19.55	21		
	25	12	19.41	19.65	19.69	21			
	25	25	19.23	19.41	19.44	21			
	50	0	19.28	19.46	19.51	21			
	1	0	19.44	19.45	19.44	21			
	1	24	19.43	19.33	19.57	21			
	1	49	19.56	19.45	19.27	21			
	25	0	19.41	19.48	19.52	21			
	25	12	19.54	19.63	19.57	21			
	25	25	19.34	19.38	19.47	21			
	50	0	19.38	19.49	19.47	21			
	5M	QPSK	16QAM	0	1862.5	1890	1917.5	21	
					1	0	19.27	19.30	19.43
1					12	19.43	19.67	19.55	21
1					24	19.03	19.15	19.13	21
12					0	19.33	19.42	19.56	21
12					6	19.45	19.60	19.56	21
12			13	19.25	19.29	19.45	21		
25			0	19.21	19.60	19.44	21		
1			0	19.11	19.30	19.36	21		
1			12	19.35	19.57	19.63	21		
1			24	19.37	19.29	19.53	21		
12			0	19.35	19.49	19.55	21		
12		6	19.41	19.55	19.60	21			
12		13	19.20	19.40	19.46	21			
25		0	19.32	19.41	19.56	21			
1		0	19.49	19.49	19.50	21			
1		12	19.51	19.39	19.51	21			
1		24	19.30	19.45	19.36	21			
12		0	19.43	19.46	19.47	21			
12		6	19.51	19.58	19.57	21			
12		13	19.25	19.39	19.51	21			
25		0	19.29	19.42	19.50	21			
3M		QPSK	16QAM	0	1867	1890	1919	21	
					1	0	19.23	19.29	19.50
	1				7	19.44	19.62	19.60	21
	1				14	19.06	19.08	19.11	21
	8				0	19.43	19.44	19.55	21
	8				3	19.46	19.53	19.57	21
	8		7	19.21	19.31	19.48	21		
	15		0	19.21	19.62	19.45	21		
	1		0	19.15	19.27	19.38	21		
	1		7	19.40	19.53	19.54	21		
	1		14	19.44	19.30	19.55	21		
	8		0	19.34	19.56	19.56	21		
	8	3	19.49	19.59	19.68	21			
	8	7	19.15	19.43	19.51	21			
	15	0	19.24	19.37	19.58	21			
	1	0	19.37	19.47	19.49	21			
	1	7	19.51	19.41	19.61	21			
	1	14	19.94	19.50	19.26	21			
	8	0	19.43	19.53	19.45	21			
	8	3	19.52	19.54	19.65	21			
	8	7	19.31	19.40	19.57	21			
	15	0	19.39	19.42	19.56	21			
	1.4M	QPSK	16QAM	0	1867	1890	1919	21	
					1	0	19.21	19.30	19.36
1					2	19.46	19.64	19.68	21
1					5	19.02	19.15	19.06	21
3					0	19.33	19.38	19.58	21
3					1	19.49	19.49	19.48	21
3			3	19.23	19.25	19.47	21		
6			0	19.26	19.58	19.40	21		
1			0	19.16	19.21	19.36	21		
1			2	19.36	19.55	19.59	21		
1			5	19.40	19.33	19.53	21		
3			0	19.33	19.58	19.46	21		
3		1	19.36	19.59	19.63	21			
3		3	19.26	19.34	19.44	21			
6		0	19.35	19.50	19.58	21			
1		0	19.47	19.42	19.40	21			
1		2	19.51	19.38	19.54	21			
1		5	19.94	19.43	19.36	21			
3		0	19.48	19.59	19.59	21			
3		1	19.50	19.55	19.58	21			
3		3	19.25	19.26	19.48	21			
6		0	19.43	19.40	19.49	21			

		LTE Band 4 DS1-4							
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Turn-up (dBm)		
				Channel	2050 <th>2075 <th>2090 </th></th>	2075 <th>2090 </th>		2090	
20M	QPSK	16QAM	0	1720	1724.5	1745	23.5		
				1	0	22.12	22.04	21.95	23.5
				1	50	22.14	22.09	22.10	23.5
				1	99	22.18	22.11	22.26	23.5
				50	0	22.15	22.15	22.15	23.5
				50	25	22.17	22.14	22.02	23.5
		50	50	22.15	22.13	22.14	23.5		
		100	0	22.12	22.09	22.10	23.5		
		1	0	22.05	21.97	21.95	23.5		
		1	50	22.07	22.11	22.08	23.5		
		1	99	22.06	22.11	22.13	23.5		
		50	0	21.15	21.11	21.01	22.5		
	50	25	21.19	21.13	20.99	22.5			
	50	50	21.16	21.08	21.14	22.5			
	100	0	21.18	21.11	21.10	22.5			
	1	0	21.13	20.91	21.30	22.5			
	1	50	21.25	20.97	21.54	22.5			
	1	99	21.16	20.85	21.45	22.5			
	50	0	20.30	20.18	20.14	21.5			
	50	25	20.36	20.16	20.12	21.5			
	50	50	20.34	20.13	20.27	21.5			
	100	0	20.15	20.11	20.14	21.5			
	15M	QPSK	16QAM	0	1717.5	1722.5	1742.5	23.5	
					1	0	22.07	22.01	21.85
1					37	22.11	22.07	22.02	23.5
1					74	22.05	22.07	22.21	23.5
36					0	22.05	22.02	21.95	23.5
36					19	22.13	22.09	21.97	23.5
36			39	22.10	21.99	21.99	23.5		
75			0	22.07	22.07	22.07	23.5		
1			0	21.93	21.84	21.85	23.5		
1			37	21.92	22.01	21.97	23.5		
1			74	22.03	21.98	21.99	23.5		
36			0	21.13	21.10	20.88	22.5		
36		19	21.17	22.03	21.95	22.5			
36		39	21.11	20.95	21.08	22.5			
75		0	21.18	21.05	21.06	22.5			
1		0	21.06	20.84	21.23	22.5			
1		37	21.23	20.91	21.48	22.5			
1		74	21.03	20.74	20.92	22.5			
36		0	20.22	20.10	20.03	21.5			
36		19	20.33	20.11	20.06	21.5			
36		39	20.29	20.10	20.23	21.5			
75		0	20.09	19.99	20.01	21.5			
10M		QPSK	16QAM	0	1715	1722.5	1739	23.5	
					1	0	22.07	21.98	21.85
	1				24	21.99	21.96	22.09	23.5
	1				49	22.16	21.96	22.17	23.5
	25				0	22.07	22.12	22.04	23.5
	25				12	21.16	22.03	21.95	23.5
	25		25	22.12	22.06	21.99	23.5		
	50		0	21.98	22.07	21.98			

BW	Modulation	LTE Band 2 DSI-5					
		Channel	RB Offset	Low	Mid	High	Max. Time-upt (dBm)
		Frequency (MHz)	1867.5	1869	1870.5	1872	1873.5
20M	QPSK	1	0	21.25	21.40	21.45	22.5
		1	50	21.56	21.72	21.89	22.5
		1	99	21.18	21.28	21.20	22.5
		50	0	21.13	20.98	21.22	22
		50	25	21.24	21.39	21.28	22
		50	50	21.16	20.81	21.14	22
	16QAM	100	0	21.13	21.25	21.17	22
		1	0	21.02	21.02	21.14	22
		1	50	21.25	21.20	21.24	22
		1	99	20.93	20.83	21.07	22
		50	0	21.12	21.06	21.31	22
		50	25	21.30	21.10	21.38	22
64QAM	100	0	21.19	20.85	21.18	22	
	1	0	21.23	21.04	21.11	22	
	1	50	21.15	21.28	21.28	22	
	1	99	20.82	20.96	20.92	22	
	50	0	20.07	20.01	20.31	21	
	50	25	20.21	20.06	20.37	21	
15M	QPSK	1	0	21.23	21.04	21.11	22
		1	37	21.20	21.08	21.18	22
		1	74	20.92	20.72	21.00	22
		36	19	21.23	21.31	21.21	22
		36	39	21.08	20.87	21.12	22
		75	0	21.01	21.11	21.08	22
	16QAM	100	0	20.90	20.90	20.99	22
		1	37	21.20	21.08	21.18	22
		1	74	20.92	20.72	21.00	22
		36	19	21.25	21.00	21.18	22
		36	39	21.25	21.00	21.35	22
		75	0	21.14	20.84	21.17	22
64QAM	100	0	21.12	20.91	21.07	22	
	1	37	21.00	21.18	21.19	22	
	1	74	20.79	20.87	20.80	22	
	36	19	20.79	20.88	20.98	21	
	36	39	20.10	19.96	20.32	21	
	75	0	20.10	19.72	20.07	21	
10M	QPSK	1	0	21.14	21.26	21.38	22.5
		1	24	21.55	21.63	21.54	22.5
		1	49	21.05	21.22	21.09	22.5
		25	0	21.09	20.88	21.08	22
		25	12	21.17	21.23	21.27	22
		25	25	21.13	20.76	20.99	22
	16QAM	50	0	21.12	21.15	21.12	22
		1	0	20.99	21.01	21.10	22
		1	24	21.10	21.05	21.22	22
		1	49	20.88	20.88	20.95	22
		25	0	20.99	21.02	21.25	22
		25	12	21.26	20.97	21.26	22
64QAM	50	0	21.10	20.85	21.03	22	
	1	0	21.16	21.02	21.03	22	
	1	24	21.05	21.24	21.24	22	
	1	49	20.77	20.91	20.84	22	
	25	0	20.06	19.98	20.27	21	
	25	12	20.18	20.04	20.24	21	
5M	QPSK	1	0	21.14	21.32	21.32	22.5
		1	12	21.44	21.64	21.64	22.5
		1	24	21.10	21.12	21.12	22.5
		12	0	21.04	20.93	21.16	22
		12	6	21.23	21.31	21.27	22
		12	13	21.09	20.80	21.00	22
	16QAM	25	0	21.01	21.14	21.11	22
		1	0	20.94	20.85	21.05	22
		1	12	21.17	21.16	21.16	22
		1	24	20.85	20.68	20.99	22
		12	0	21.10	20.91	21.24	22
		12	6	21.16	21.04	21.34	22
64QAM	25	0	20.92	20.85	21.16	22	
	12	0	21.15	20.84	21.07	22	
	1	0	21.16	20.91	21.02	22	
	1	12	21.12	21.19	21.13	22	
	1	24	20.72	20.88	20.85	22	
	12	0	19.94	19.86	20.23	21	
3M	QPSK	1	0	21.23	21.42	21.42	22.5
		1	7	21.49	21.70	21.58	22.5
		1	14	21.14	21.22	21.05	22.5
		8	0	20.98	20.91	21.20	22
		8	7	21.14	21.18	21.18	22
		8	7	21.11	20.75	21.03	22
	16QAM	15	0	21.04	21.19	21.02	22
		1	0	20.88	20.91	21.01	22
		1	7	21.12	21.05	21.11	22
		1	14	20.78	20.82	20.94	22
		8	0	21.03	20.97	21.19	22
		8	3	21.21	20.88	21.30	22
64QAM	15	0	21.12	20.82	21.07	22	
	1	0	21.19	20.91	21.00	22	
	1	7	21.12	21.25	21.23	22	
	1	14	20.72	20.88	20.77	22	
	8	0	19.99	19.93	20.18	21	
	8	3	20.14	19.97	20.35	21	
1.4M	QPSK	1	0	21.23	21.36	21.36	22.5
		1	2	21.41	21.58	21.64	22.5
		1	5	21.03	21.16	21.14	22.5
		3	0	21.09	20.93	21.08	22.5
		3	1	21.19	21.18	21.26	22.5
		3	3	21.12	20.70	21.10	22.5
	16QAM	8	0	21.06	20.86	21.05	22
		1	0	20.88	20.86	21.05	22
		1	2	21.13	21.09	21.19	22
		1	5	20.86	20.72	21.00	22
		3	0	21.08	20.84	21.17	22
		3	1	21.22	20.86	21.20	22
64QAM	8	0	20.95	20.88	21.10	22	
	6	0	21.06	20.86	21.03	22	
	1	0	21.17	20.96	21.07	22	
	1	2	21.11	21.26	21.17	22	
	1	5	20.68	20.64	20.68	22	
	3	0	20.96	20.93	21.21	22	

BW	Modulation	LTE Band 4 DSI-5					
		Channel	RB Offset	Low	Mid	High	Max. Time-upt (dBm)
		Frequency (MHz)	2092.5	2094	2095.5	2097	2098.5
20M	QPSK	1	0	21.42	21.45	21.48	23
		1	50	21.61	21.67	21.73	23
		1	99	21.70	21.56	21.74	23
		50	0	21.65	21.52	21.64	23
		50	25	21.62	21.65	21.68	23
		50	50	21.67	21.64	21.69	23
	16QAM	100	0	21.71	21.55	21.73	23
		1	0	21.24	21.15	21.42	23
		1	50	21.57	21.61	21.67	23
		1	99	21.45	21.49	21.54	23
		50	0	21.08	21.09	21.11	23
		50	25	21.20	21.12	21.18	23
64QAM	100	0	21.10	21.02	21.29	23	
	1	0	21.28	21.20	21.17	23	
	1	50	21.45	21.47	21.35	23	
	1	99	21.56	21.54	21.44	23	
	50	0	20.16	20.07	20.13	22	
	50	25	20.20	20.14	20.16	22	
15M	QPSK	1	0	21.33	21.41	21.43	23
		1	37	21.48	21.48	21.60	23
		1	74	21.46	21.46	21.61	23
		36	0	21.62	21.37	21.52	23
		36	19	21.58	21.52	21.60	23
		36	39	21.52	21.54	21.67	23
	16QAM	75	0	21.65	21.52	21.70	23
		1	0	21.10	21.02	21.25	23
		1	37	21.42	21.51	21.61	23
		1	74	21.41	21.40	21.48	23
		36	0	20.93	21.08	21.05	23
		36	19	21.16	21.01	21.04	23
64QAM	75	0	21.09	21.02	21.27	23	
	1	0	21.06	20.91	21.14	23	
	1	0	21.21	21.13	21.12	23	
	1	37	21.34	21.37	21.29	23	
	1	74	21.52	21.49	21.43	23	
	36	0	20.27	20.27	20.12	22	
10M	QPSK	1	0	21.35	21.40	21.36	23
		1	24	21.49	21.55	21.60	23
		1	49	21.58	21.52	21.60	23
		25	0	21.51	21.37	21.59	23
		25	12	21.56	21.58	21.67	23
		25	25	21.62	21.59	21.66	23
	16QAM	50	0	21.64	21.50	21.63	23
		1	0	21.17	21.08	21.22	23
		1	24	21.44	21.50	21.53	23
		1	49	21.40	21.43	21.44	23
		25	0	21.09	21.13	21.08	23
		25	12	21.07	21.08	21.03	23
64QAM	50	0	21.07	21.15	21.24	23	
	1	0	21.29	21.07	21.06	23	
	1	24	21.39	21.39	21.25	23	
	1	49	21.44	21.43	21.35	23	
	25	0	20.02	20.14	20.12	22	
	25	12	20.16	20.04	20.06	22	
5M	QPSK	1	0	21.31	21.42	21.36	23
		1	12	21.48	21.53	21.66	23
		1	24	21.56	21.56	21.56	23
		12	0	21.56	21.48	21.56	23
		12	6	21.60	21.56	21.62	23
		12	13	21.54	21.49	21.64	23
	16QAM	25	0	21.57	21.51	21.72	23
		1	0	21.17	21.07	21.26	23
		1	12	21.42	21.59	21.56	23
		1	24	21.30	21.40	21.48	23
		12	0	21.22	21.22	21.19	23
		12	6	21.35	21.39	21.21	23
64QAM	25	0	21.29	21.29	21.29	23	
	1	0	21.29	21.26	21.31	23	
	1	12	21.56	21.58	21.42	23	
	1	24	21.63	21.55	21.45	23	
	12	0	20.29	20.27	20.12	22	
	12	6	20.23	20.23	20.22	22	
3M	QPSK	1	0	21.33	21.42	21.36	

LTE Band 2 DSI-6									
BW	Modulation	RB Size	RB Offset	Channel			Max. Tune-up (dBm)		
				Low	Mid	High			
20M	QPSK	50	0	18.31	18.30	18.38	19		
			1	18.47	18.87	18.51	19		
			1	17.98	18.09	17.92	19		
			50	18.02	18.12	18.13	19		
			50	18.10	18.43	18.16	19		
			50	18.03	17.98	17.99	19		
	16QAM	50	0	18.08	18.12	18.11	19		
			1	17.73	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			1	17.87	18.00	17.94	19		
			50	17.99	18.26	18.06	19		
			50	18.17	18.30	18.14	19		
	64QAM	50	0	18.07	18.01	18.02	19		
			1	18.03	18.22	18.15	19		
			1	18.13	18.32	18.21	19		
			1	17.99	17.89	17.70	19		
			50	18.17	18.24	18.16	19		
			50	18.26	18.31	18.27	19		
15M	QPSK	36	0	17.87	17.89	17.92	19		
			1	18.13	18.32	18.21	19		
			1	17.99	17.89	17.70	19		
			36	18.02	18.12	18.13	19		
			36	18.10	18.43	18.16	19		
			36	17.98	17.98	17.99	19		
	16QAM	36	0	17.88	18.12	17.96	19		
			1	17.78	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			1	17.87	18.00	17.94	19		
			36	18.02	18.26	18.06	19		
			36	18.17	18.30	18.14	19		
	64QAM	36	0	17.88	18.13	18.12	19		
			1	17.88	18.29	18.18	19		
			1	17.78	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			36	18.17	18.25	18.19	19		
			36	18.26	18.31	18.27	19		
10M	QPSK	25	0	17.88	18.13	18.12	19		
			1	17.88	18.29	18.18	19		
			1	17.78	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			25	18.17	18.25	18.19	19		
			25	18.26	18.31	18.27	19		
	16QAM	25	0	17.88	18.13	18.12	19		
			1	17.88	18.29	18.18	19		
			1	17.78	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			25	18.17	18.25	18.19	19		
			25	18.26	18.31	18.27	19		
	64QAM	25	0	17.88	18.13	18.12	19		
			1	17.88	18.29	18.18	19		
			1	17.78	17.82	18.04	19		
			1	18.00	18.04	18.12	19		
			25	18.17	18.25	18.19	19		
			25	18.26	18.31	18.27	19		
5M	QPSK	12	0	18.28	18.19	18.29	19		
			1	18.45	18.42	18.41	19		
			1	17.90	18.01	17.91	19		
			25	17.89	18.09	18.08	19		
			25	18.18	18.18	18.02	19		
			25	17.95	17.92	17.95	19		
	16QAM	12	0	17.99	18.01	18.09	19		
			1	17.87	17.78	17.95	19		
			1	17.96	17.98	18.07	19		
			1	17.87	18.00	17.94	19		
			25	17.88	18.15	17.95	19		
			25	18.02	18.24	18.02	19		
	64QAM	12	0	17.87	17.86	17.83	19		
			1	17.87	18.03	18.07	19		
			1	18.00	18.04	18.12	19		
			1	17.87	18.00	17.94	19		
			25	18.17	18.25	18.19	19		
			25	18.26	18.31	18.27	19		
3M	QPSK	8	0	18.28	18.19	18.29	19		
			1	18.45	18.42	18.41	19		
			1	17.90	18.01	17.91	19		
			25	17.89	18.09	18.08	19		
			25	18.18	18.18	18.02	19		
			25	17.95	17.92	17.95	19		
	16QAM	8	0	17.99	18.01	18.09	19		
			1	17.87	17.78	17.95	19		
			1	17.96	17.98	18.07	19		
			1	17.87	18.00	17.94	19		
			25	17.88	18.15	17.95	19		
			25	18.02	18.24	18.02	19		
	64QAM	8	0	17.87	17.86	17.83	19		
			1	17.87	18.03	18.07	19		
			1	18.00	18.04	18.12	19		
			1	17.87	18.00	17.94	19		
			25	18.17	18.25	18.19	19		
			25	18.26	18.31	18.27	19		
1.4M	QPSK	3	0	18.28	18.19	18.29	19		
			1	18.34	18.81	18.37	19		
			1	17.92	17.95	17.83	19		
			3	17.88	18.01	18.07	19		
			3	18.11	18.14	18.07	19		
			3	17.98	17.91	17.96	19		
	16QAM	3	0	18.02	18.03	18.06	19		
			1	17.72	17.78	17.93	19		
			1	17.87	17.91	18.09	19		
			1	17.86	17.95	17.85	19		
			3	17.97	18.19	17.97	19		
			3	18.05	18.26	18.05	19		
	64QAM	3	0	17.82	17.97	17.92	19		
			1	18.02	17.86	17.96	19		
			1	17.99	18.19	18.09	19		
			1	17.77	17.77	17.83	19		
			3	17.85	18.16	18.06	19		
			3	17.88	17.94	17.95	19		
1.4M	QPSK	3	0	18.29	18.16	18.23	19		
			1	18.42	18.63	18.49	19		
			1	17.91	18.04	17.85	19		
			3	17.88	18.11	18.09	19		
			3	18.11	18.12	18.06	19		
			3	17.88	17.83	17.88	19		
	16QAM	3	0	18.03	18.08	17.98	19		
			1	17.62	17.68	17.96	19		
			1	17.87	17.91	18.02	19		
			1	17.77	17.97	17.83	19		
			3	17.85	18.16	18.06	19		
			3	17.88	17.94	17.95	19		
	64QAM	3	0	17.92	17.95	17.99	19		
			1	17.93	18.19	18.14	19		
			1	18.09	18.20	18.12	19		
			1	17.86	17.83	17.87	19		
			3	18.15	18.38	18.05	19		
			3	17.92	17.95	17.98	19		

LTE Band 4 DSI-6									
BW	Modulation	RB Size	RB Offset	Channel			Max. Tune-up (dBm)		
				Low	Mid	High			
20M	QPSK	50	0	19.63	19.61	19.71	21		
			1	19.72	19.71	19.85	21		
			1	19.79	19.81	19.96	21		
			50	19.67	19.64	19.72	21		
			50	19.71	19.73	19.73	21		
			50	19.80	19.70	19.86	21		
	16QAM	50	0	19.67	19.69	19.79	21		
			1	19.58	19.61	19.53	21		
			1	19.69	19.73	19.74	21		
			1	19.75	19.81	19.85	21		
			50	19.69	19.63	19.68	21		
			50	19.77	19.75	19.85	21		
	64QAM	50	0	19.68	19.69	19.79	21		
			1	19.35	19.45	19.66	21		
			1	19.70	19.68	19.66	21		
			1	19.69	19.60	19.64	21		
			50	19.64	19.68	19.68	21		
			50	19.75	19.69	19.85	21		
15M	QPSK	36	0	19.51	19.57	19.57	21		
			1	19.60	19.64	19.71	21		
			1	19.74	19.64	19.81	21		
			36	19.56	19.58	19.66	21		
			36	19.58	19.61	19.58	21		
			36	19.68	19.60	19.74	21		
	16QAM	36	0	19.63	19.63	19.70	21		
			1	19.55	19.45	19.51	21		
			1	19.67	19.66	19.71	21		
			1	19.74	19.71	19.83	21		
			36	19.57	19.50	19.67	21		
			36	19.70	19.70	19.51	21		
	64QAM	36	0	19.68	19.68	19.77	21		
			1	19.20	19.35	19.51	21		
			1	19.74	19.78	19.45	21		
			1	19.67	19.67	19.68	21		
			36	19.57	19.57	19.54	21		
			36	19.67	19.70	19.75	21		
10M	QPSK	25	0	19.49	19.48	19.61	21		
			1	19.61	19.68	19.79	21		
			1	19.68	19.79	19.77	21		
			25	19.58	19.49	19.67	21		
			25	19.73	19.63	19.84	21		
			25	19.75	19.61	19.74	21		
	16QAM	25	0	19.55	19.61	19.76	21		
			1	19.48	19.53	19.40	21		
			1	19.54	19.68	19.78	21		
			1	19.67	19.77	19.72	21		
			25	19.61	19.49	19.67	21		
			25	19.70	19.68	19.54	21		
	64QAM	25	0	19.62	19.64	19.80	21		
			1	19.29	19.35	19.84	21		
			1	19.62	19.64	19.66	21		
			1	19.49	19.16	19.52	21		
			25	19.62	19.65	19.59	21		
			25	19.74	19.62	19.80	21		
5M	QPSK	12	0	19.61	19.53	19.64	21		
			1	19.68	19.65	19.65	21		
			1	19.71	19.75	19.86	21		
			12	19.63	19.56	19.69	21		
			12	19.58	19.70	19.68	21		
			12	19.76	19.67	19.78	21		
	16QAM	12	0	19.57	19.67	19.64	21		
			1	19.46	19.57	19.45	21		
			1	19.54	19.65	19.69	21		
			1	19.65	19.79	19.76	21		
			12	19.56	19.58	19.53	21		
			12	19.71	19.72	19.51	21		
	64QAM	12	0	19.69	19.69	19.82	21		
			1	19.24	19.56	19.52	21		
			1	19.62	19.56	19.62	21		
			12	19.63	19.54	19.62	21		
			12	19.75	19.65	19.77	21		
			12	19.76	19.67	19.78	21		
3M	QPSK	8	0	19.61	19.67	19.70	21		
			1	19.76	19.70	19.80	21		
			1	19.6					

Full Power					
2.4GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.99	19.50
		6	2437	18.62	19.50
		11	2462	18.25	19.50
	802.11g 6Mbps	1	2412	15.57	17.00
		6	2437	17.06	18.00
		11	2462	15.38	17.00
802.11n-HT20 MCS0	1	2412	15.37	17.00	
	6	2437	16.88	18.00	
	11	2462	15.20	17.00	
802.11n-HT40 MCS0	3	2422	13.52	15.00	
	6	2437	14.08	15.00	
	9	2452	13.29	15.00	

DSI-2					
2.4GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.99	19.50
		6	2437	18.62	19.50
		11	2462	18.25	19.50
	802.11g 6Mbps	1	2412	15.57	17.00
		6	2437	17.06	18.00
		11	2462	15.38	17.00
802.11n-HT20 MCS0	1	2412	15.37	17.00	
	6	2437	16.88	18.00	
	11	2462	15.20	17.00	
802.11n-HT40 MCS0	3	2422	13.52	15.00	
	6	2437	14.08	15.00	
	9	2452	13.29	15.00	

DSI-3					
2.4GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.99	19.50
		6	2437	18.62	19.50
		11	2462	18.25	19.50
	802.11g 6Mbps	1	2412	15.57	17.00
		6	2437	17.06	18.00
		11	2462	15.38	17.00
802.11n-HT20 MCS0	1	2412	15.37	17.00	
	6	2437	16.88	18.00	
	11	2462	15.20	17.00	
802.11n-HT40 MCS0	3	2422	13.52	15.00	
	6	2437	14.08	15.00	
	9	2452	13.29	15.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.2GHz WLAN	802.11a 6Mbps	36	5180	16.09	18.00
		40	5200	16.20	18.00
		44	5220	16.12	18.00
	802.11n-HT20 MCS0	48	5240	16.15	18.00
		36	5180	16.87	18.00
		40	5200	16.38	18.00
802.11n-HT40 MCS0	44	5220	16.28	18.00	
	48	5240	16.39	18.00	
	38	5190	13.99	15.00	
802.11ac-VHT20 MCS0	46	5230	15.35	17.00	
	36	5180	16.07	18.00	
	40	5200	16.01	18.00	
802.11ac-VHT40 MCS0	44	5220	16.26	18.00	
	48	5240	16.46	18.00	
	38	5190	13.93	15.00	
802.11ac-VHT80 MCS0	46	5230	15.36	17.00	
	42	5210	12.21	14.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.52	15.50
		40	5200	14.74	15.50
		44	5220	14.63	15.50
	802.11n-HT20 MCS0	48	5240	14.57	15.50
		36	5180	16.39	17.00
		40	5200	16.12	17.00
802.11n-HT40 MCS0	44	5220	15.94	17.00	
	48	5240	15.98	17.00	
	38	5190	14.65	15.50	
802.11ac-VHT20 MCS0	46	5230	14.09	15.50	
	36	5180	14.51	15.50	
	40	5200	14.23	15.50	
802.11ac-VHT40 MCS0	44	5220	14.77	15.50	
	48	5240	14.07	15.50	
	38	5190	14.65	15.50	
802.11ac-VHT80 MCS0	46	5230	14.46	15.50	
	42	5210	13.24	15.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.52	15.50
		40	5200	14.74	15.50
		44	5220	14.55	15.50
	802.11n-HT20 MCS0	48	5240	14.63	15.50
		36	5180	13.88	15.00
		40	5200	13.95	15.00
802.11n-HT40 MCS0	44	5220	13.45	15.00	
	48	5240	13.67	15.00	
	38	5190	13.03	15.00	
802.11ac-VHT20 MCS0	46	5230	13.56	15.00	
	36	5180	14.27	15.00	
	40	5200	14.11	15.00	
802.11ac-VHT40 MCS0	44	5220	14.32	15.00	
	48	5240	13.89	15.00	
	38	5190	14.00	15.00	
802.11ac-VHT80 MCS0	46	5230	13.78	15.00	
	42	5210	13.24	15.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.3GHz WLAN	802.11a 6Mbps	52	5260	16.44	18.00
		56	5280	16.31	18.00
		60	5300	16.84	18.00
	802.11n-HT20 MCS0	64	5320	16.12	18.00
		52	5260	16.26	18.00
		56	5280	16.15	18.00
802.11n-HT40 MCS0	60	5300	16.35	18.00	
	64	5320	16.49	18.00	
	54	5270	15.05	17.00	
802.11ac-VHT20 MCS0	62	5310	12.66	14.00	
	52	5260	16.26	18.00	
	56	5280	16.14	18.00	
802.11ac-VHT40 MCS0	60	5300	16.31	18.00	
	64	5320	16.47	18.00	
	54	5270	15.04	17.00	
802.11ac-VHT80 MCS0	62	5310	12.69	14.00	
	58	5290	11.47	13.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.3GHz WLAN	802.11a 6Mbps	52	5260	16.44	18.00
		56	5280	16.31	18.00
		60	5300	16.84	18.00
	802.11n-HT20 MCS0	64	5320	16.12	18.00
		52	5260	16.26	18.00
		56	5280	16.15	18.00
802.11n-HT40 MCS0	60	5300	16.35	18.00	
	64	5320	16.49	18.00	
	54	5270	15.05	17.00	
802.11ac-VHT20 MCS0	62	5310	12.66	14.00	
	52	5260	16.26	18.00	
	56	5280	16.14	18.00	
802.11ac-VHT40 MCS0	60	5300	16.31	18.00	
	64	5320	16.47	18.00	
	54	5270	15.04	17.00	
802.11ac-VHT80 MCS0	62	5310	12.72	14.00	
	58	5290	11.49	13.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.3GHz WLAN	802.11a 6Mbps	52	5260	14.88	15.50
		56	5280	14.72	15.50
		60	5300	14.82	15.50
	802.11n-HT20 MCS0	64	5320	14.62	15.50
		52	5260	14.63	15.50
		56	5280	14.71	15.50
802.11n-HT40 MCS0	60	5300	14.89	15.50	
	64	5320	14.52	15.50	
	54	5270	13.18	15.00	
802.11ac-VHT20 MCS0	62	5310	13.24	15.00	
	52	5260	14.25	15.00	
	56	5280	14.31	15.00	
802.11ac-VHT40 MCS0	60	5300	14.30	15.00	
	64	5320	14.78	15.00	
	54	5270	13.93	15.00	
802.11ac-VHT80 MCS0	62	5310	14.15	15.00	
	58	5290	12.21	14.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.5GHz WLAN	802.11a 6Mbps	100	5500	16.37	18.00
		116	5580	16.11	18.00
		124	5620	16.72	18.00
		132	5660	16.07	18.00
		140	5700	17.81	18.00
		144	5720	16.91	18.00
	802.11n-HT20 MCS0	100	5500	16.22	18.00
		116	5580	16.39	18.00
		124	5620	16.58	18.00
		132	5660	16.88	18.00
		140	5700	16.81	18.00
		144	5720	16.71	18.00
802.11n-HT40 MCS0	102	5510	15.68	17.00	
	110	5550	15.85	17.00	
	126	5630	15.70	17.00	
	134	5670	16.01	17.00	
	142	5710	16.26	17.00	
	100	5500	16.27	18.00	
802.11ac-VHT20 MCS0	116	5580	16.37	18.00	
	124	5620	16.57	18.00	
	132	5660	16.42	18.00	
	140	5700	16.86	18.00	
	144	5720	16.76	18.00	
	102	5510	15.89	17.00	
802.11ac-VHT40 MCS0	110	5550	15.86	17.00	
	126	5630	15.70	17.00	
	134	5670	16.01	17.00	
	142	5710	16.25	17.00	
	106	5530	12.99	14.00	
	122	5610	15.34	16.00	
802.11ac-VHT80 MCS0	138	5690	15.38	16.00	

5GHz WLAN					
Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit (dBm)	
5.5GHz WLAN	802.11a 6Mbps	100	5500	16.37	18.00
		116	5580	16.11	18.00
		124	5620	16.72	18.00
		132	5660	16.07	18.00
		140	5700	17.81	18.00
		144	5720	16.91	18.00
	802.11n-HT20 MCS0	100	5500	16.22	18.00
		116	5580	16.39	18.00
		124	5620	16.58	18.00
		132	5660	16.88	18.00
		140	5700	16.81	18.00
		144	5720	16.71	18.00
802.11n-HT40 MCS0	102	5510	15.68	17.00	
	110	5550	15.85	17.00	
	126	5630	15.70	17.00	
	134	5670	16.01	17.00	
	142	5710	16.26	17.00	
	100	5500	16.27	18.00	
802.11ac-VHT20 MCS0	116	5580	16.37	18.00	
	124	5620	16.57	18.00	
	132	5660	16.42	18.00	
	140	5700	16.86	18.00	
	144	5720	16.76	18.00	
	102	5510	15.89	17.00	
802.11ac-VHT40 MCS0	110	5550	15.86	17.00	
	126	5630	15.70	17.00	
	134	5670	16.01	17.00	
	142	5710	16.25	17.00	
	106	5530	15.75	16.00	
	122	5610	15.34	16.00	
802.11ac-VHT80 MCS0	138	5690	15.38	16.00	

DSI-5					
2.4GHz WLAN					
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11b 1Mbps		1	2412	16.38
6			2437	16.95	17.50
11			2462	16.89	17.50
802.11g 6Mbps		1	2412	15.57	17.00
		6	2437	15.98	17.00
		11	2462	15.38	17.00
802.11n-HT20 MCS0		1	2412	15.37	17.00
		6	2437	15.74	17.00
		11	2462	15.20	17.00
802.11n-HT40 MCS0		3	2422	13.52	15.00
		6	2437	14.08	15.00
		9	2452	13.29	15.00
		12	2484	13.29	15.00

DSI-6					
2.4GHz WLAN					
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11b 1Mbps		1	2412	12.57
6			2437	13.01	14.00
11			2462	12.78	14.00
802.11g 6Mbps		1	2412	11.52	13.00
		6	2437	12.28	13.00
		11	2462	11.83	13.00
802.11n-HT20 MCS0		1	2412	11.98	13.00
		6	2437	12.15	13.00
		11	2462	12.07	13.00
802.11n-HT40 MCS0		3	2422	12.01	13.00
		6	2437	12.37	13.00
		9	2452	11.89	13.00
		12	2484	11.89	13.00

5GHz WLAN					
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		36	5180	12.19
40			5200	12.07	13.00
44			5220	11.89	13.00
48			5240	12.15	13.00
802.11n-HT20 MCS0		36	5180	13.04	14.00
		40	5200	12.42	14.00
		44	5220	12.56	14.00
		48	5240	12.78	14.00
802.11n-HT40 MCS0		38	5190	12.19	13.00
		46	5230	11.67	13.00
802.11ac-VHT20 MCS0		36	5180	12.02	13.00
		40	5200	11.88	13.00
		44	5220	11.76	13.00
802.11ac-VHT40 MCS0		48	5240	11.88	13.00
		38	5190	12.14	13.00
		46	5230	12.08	13.00
802.11ac-VHT80 MCS0		42	5210	12.40	13.00

5GHz WLAN					
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		36	5180	8.15
40			5200	8.28	9.00
44			5220	8.09	9.00
48			5240	8.21	9.00
802.11n-HT20 MCS0		38	5180	7.28	8.00
		40	5200	7.73	8.00
		44	5220	7.56	8.00
		48	5240	7.42	8.00
802.11n-HT40 MCS0		38	5190	7.86	8.00
		46	5230	7.42	8.00
802.11ac-VHT20 MCS0		36	5180	7.43	8.00
		40	5200	7.67	8.00
		44	5220	7.13	8.00
802.11ac-VHT40 MCS0		48	5240	7.09	8.00
		38	5190	7.56	8.00
		46	5230	7.67	8.00
802.11ac-VHT80 MCS0		42	5210	7.23	8.00

5GHz WLAN					
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		52	5260	10.94
56			5280	10.03	12.00
60			5300	11.21	12.00
64			5320	11.15	12.00
802.11n-HT20 MCS0		52	5260	10.86	12.00
		56	5280	10.77	12.00
		60	5300	11.03	12.00
802.11n-HT40 MCS0		64	5320	10.93	12.00
		54	5270	10.47	11.50
		62	5310	10.78	11.50
802.11ac-VHT20 MCS0		52	5260	10.88	12.00
		56	5280	10.69	12.00
		60	5300	11.02	12.00
802.11ac-VHT40 MCS0		64	5320	10.97	12.00
		54	5270	10.39	11.50
		62	5310	10.46	11.50
802.11ac-VHT80 MCS0		58	5290	10.91	11.50

5GHz WLAN					
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		52	5260	10.78
56			5280	11.03	12.00
60			5300	11.21	12.00
64			5320	10.98	12.00
802.11n-HT20 MCS0		52	5260	10.86	12.00
		56	5280	10.77	12.00
		60	5300	11.03	12.00
802.11n-HT40 MCS0		64	5320	10.93	12.00
		54	5270	10.47	11.50
		62	5310	10.78	11.50
802.11ac-VHT20 MCS0		52	5260	10.88	12.00
		56	5280	10.69	12.00
		60	5300	11.02	12.00
802.11ac-VHT40 MCS0		64	5320	10.97	12.00
		54	5270	10.39	11.50
		62	5310	10.46	11.50
802.11ac-VHT80 MCS0		58	5290	10.91	11.50

5GHz WLAN					
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		100	5500	14.89
116			5580	14.93	16.50
124			5620	15.23	16.50
132			5660	15.31	16.50
140			5700	15.54	16.50
144			5720	15.47	16.50
802.11n-HT20 MCS0		100	5500	14.35	16.00
		116	5580	14.67	16.00
		124	5620	14.88	16.00
		132	5660	14.61	16.00
		140	5700	14.93	16.00
		144	5720	14.82	16.00
802.11n-HT40 MCS0		102	5510	14.23	16.00
		110	5550	14.16	16.00
		126	5630	14.35	16.00
		134	5670	14.54	16.00
		142	5710	14.67	16.00
		100	5500	14.48	16.00
802.11ac-VHT20 MCS0		116	5580	14.67	16.00
		124	5620	14.72	16.00
		132	5660	14.88	16.00
		140	5700	14.90	16.00
		144	5720	14.82	16.00
		102	5510	14.12	16.00
802.11ac-VHT40 MCS0		110	5550	14.31	16.00
		126	5630	14.39	16.00
		134	5670	14.48	16.00
		142	5710	14.67	16.00
		106	5530	14.34	16.00
		122	5610	14.72	16.00
802.11ac-VHT80 MCS0		138	5690	14.55	16.00

5GHz WLAN					
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		100	5500	12.23
116			5580	12.56	13.50
124			5620	12.78	13.50
132			5660	12.34	13.50
140			5700	12.87	13.50
144			5720	12.85	13.50
802.11n-HT20 MCS0		100	5500	12.43	13.50
		116	5580	12.52	13.50
		124	5620	12.44	13.50
		132	5660	12.69	13.50
		140	5700	12.71	13.50
		144	5720	12.41	13.50
802.11n-HT40 MCS0		102	5510	10.87	12.50
		110	5550	11.09	12.50
		126	5630	11.42	12.50
		134	5670	11.58	12.50
		142	5710	11.66	12.50
		100	5500	12.23	13.50
802.11ac-VHT20 MCS0		116	5580	12.67	13.50
		124	5620	12.83	13.50
		132	5660	12.71	13.50
		140	5700	12.79	13.50
		144	5720	12.62	13.50
		102	5510	10.98	12.50
802.11ac-VHT40 MCS0		110	5550	11.29	12.50
		126	5630	11.37	12.50
		134	5670	11.61	12.50
		142	5710	10.89	12.50
		106	5530	11.21	12.50
		122	5610	11.34	12.50
802.11ac-VHT80 MCS0		138	5690	11.42	12.50

5GHz WLAN					
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		149	5745	15.34
157			5785	15.56	16.50
165			5825	15.19	16.50
802.11n-HT20 MCS0		149	5745	15.89	16.50
		157	5785	15.67	16.50
		165	5825	15.08	16.50
802.11n-HT40 MCS0		151	5755	14.90	16.00
		159	5795	15.34	16.00
		149	5745	16.39	17.00
802.11ac-VHT20 MCS0		157	5785	15.96	17.00
		165	5825	15.74	17.00
		151	5755	14.95	16.00
802.11ac-VHT40 MCS0		159	5795	14.18	16.00
		155	5775	14.73	16.00

5GHz WLAN					
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit (dBm)
	802.11a 6Mbps		149	5745	11.40
157			5785	11.12	13.00
165			5825	11.35	13.00
802.11n-HT20 MCS0		149	5745	11.25	13.00
		157	5785	11.09	13.00
		165	5825	11.33	13.00
802.11n-HT40 MCS0		151	5755	11.22	12.50
		159	5795	11.56	12.50
		149	5745	12.74	13.50
802.11ac-VHT20 MCS0		157	5785	12.34	13.50
		165	5825	12.09	13.50
		151	5755	11.24	12.50
802.11ac-VHT40 MCS0		159	5795	10.98	12.50
		155	5775	10.65	12.50