



In Collaboration with

s p e a g
CALIBRATION LABORATORY

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

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%.



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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	1950 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	38.9 $\pm$ 6 %	1.39 mho/m $\pm$ 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	10.1 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	40.3 W/kg $\pm$ 18.8 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.08 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	20.3 W/kg $\pm$ 18.7 % (k=2)



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$50.5\Omega + 2.19j\Omega$
Return Loss	- 33.0dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.102 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 10.28.2021

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN: 1229

Communication System: UID 0, CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 38.86$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.81, 7.81, 7.81) @ 1950 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)

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

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

Reference Value = 103.9 V/m; Power Drift = 0.06 dB

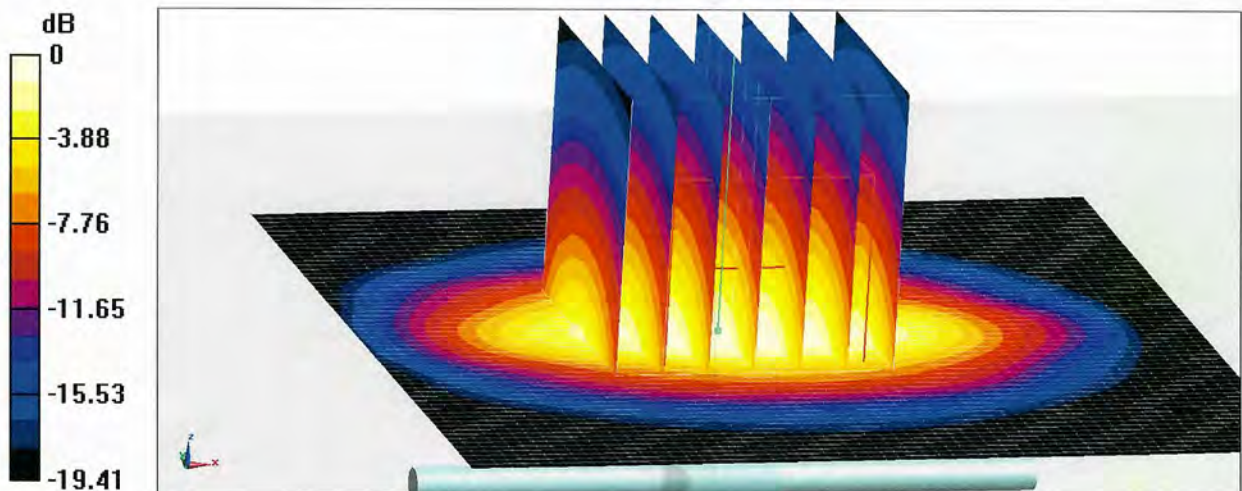
Peak SAR (extrapolated) = 20.0 W/kg

SAR(1 g) = 10.1 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 = 50.6%

Maximum value of SAR (measured) = 16.3 W/kg



0 dB = 16.3 W/kg = 12.12 dBW/kg

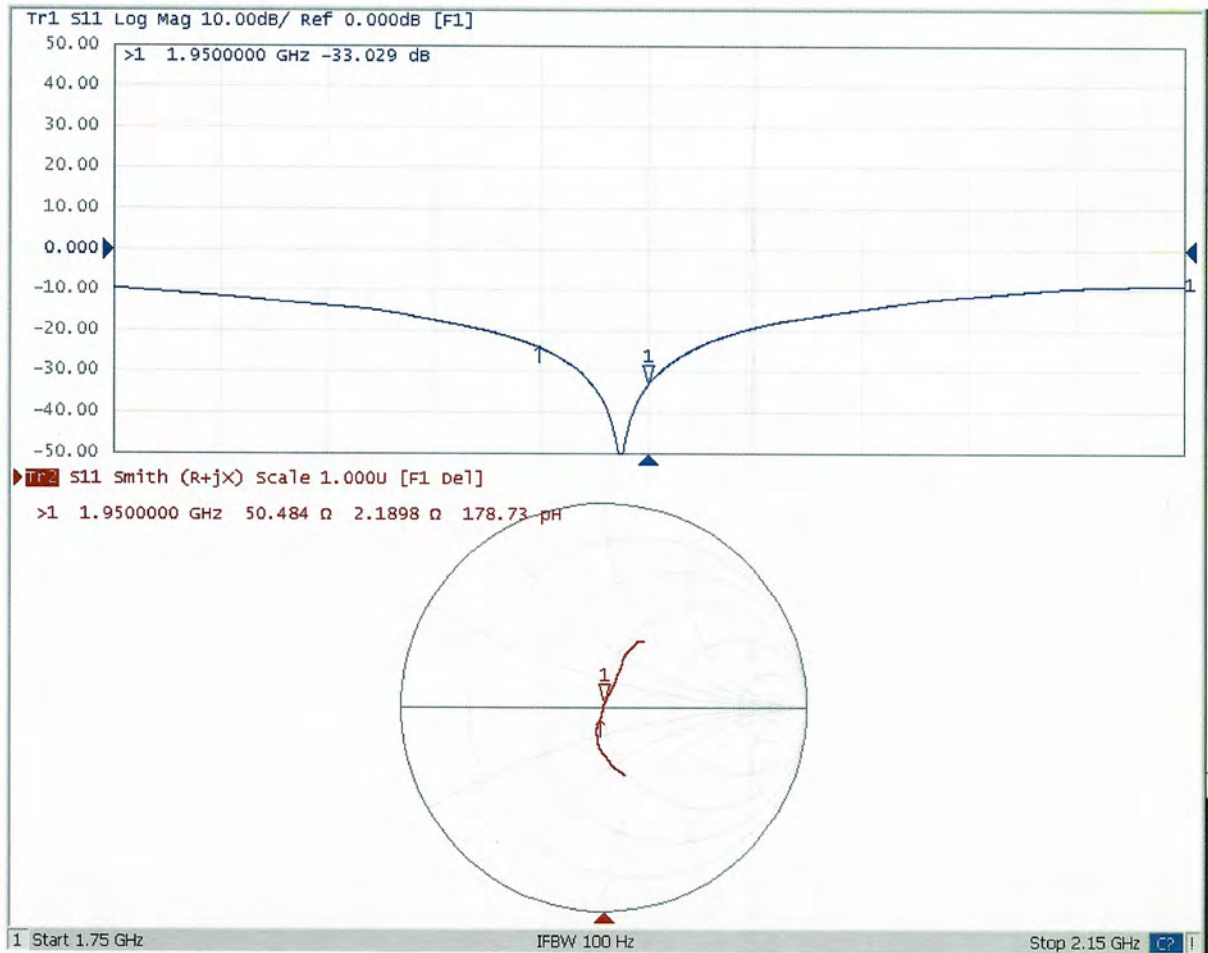


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Impedance Measurement Plot for Head TSL



D1950V3 - SN: 1229 Extended Dipole Calibrations

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

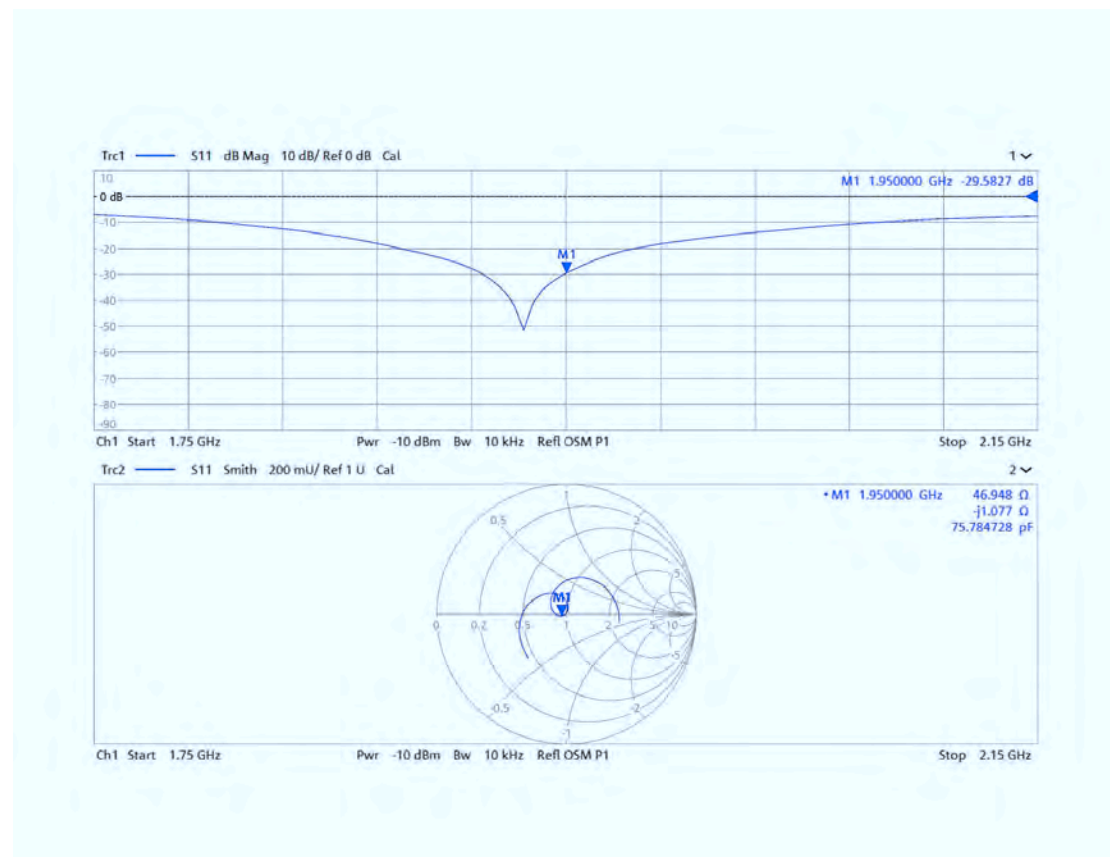
D1950V3 - SN: 1229						
1950MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.28.2021	-33		50.5		2.19	
10.27.2022	-29.58	-10.36	46.95	-3.55	-1.08	-3.27
10.26.2023	-28.50	-13.63	46.77	-3.73	3.33	1.14

<Justification of the extended calibration>

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

<Dipole Verification Data>

Head 1950MHz _2022.10.27

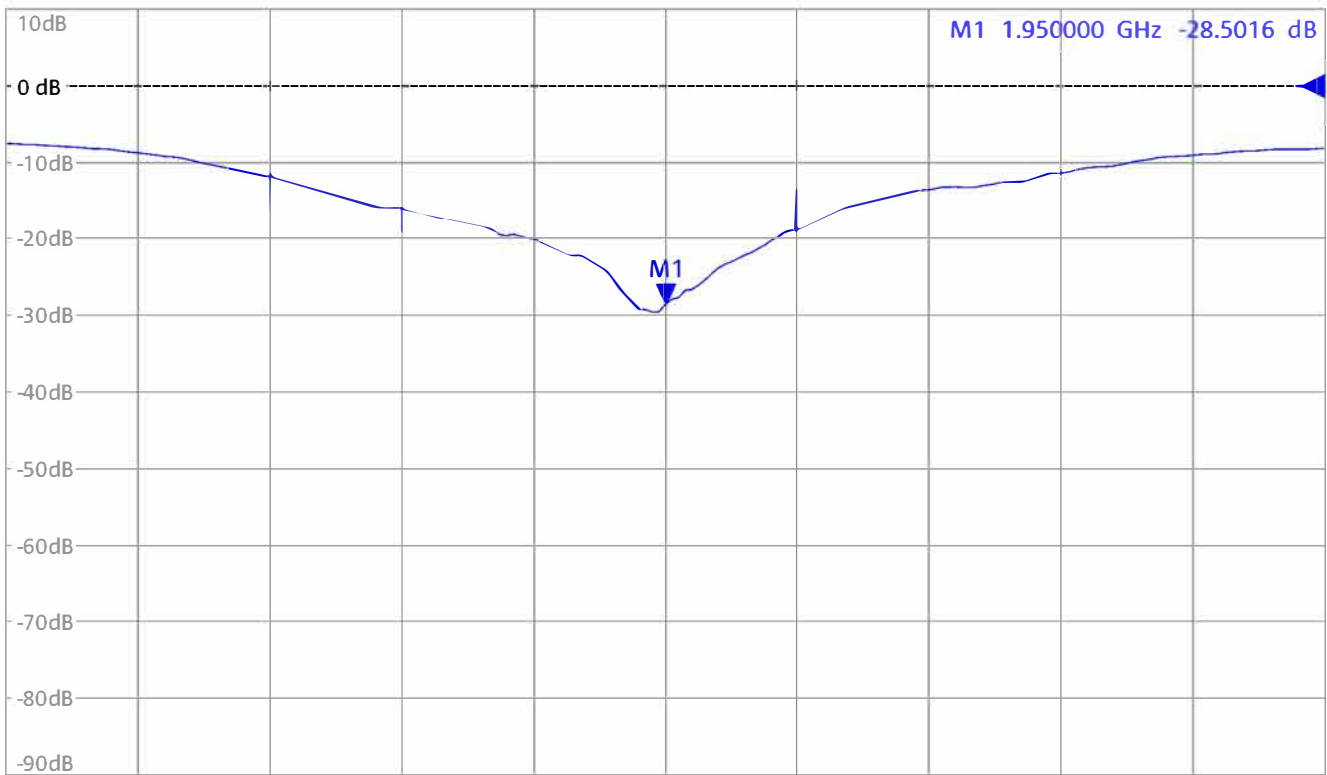


<Dipole Verification Data>

Head 1950MHz _2023.10.26

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1 ▾

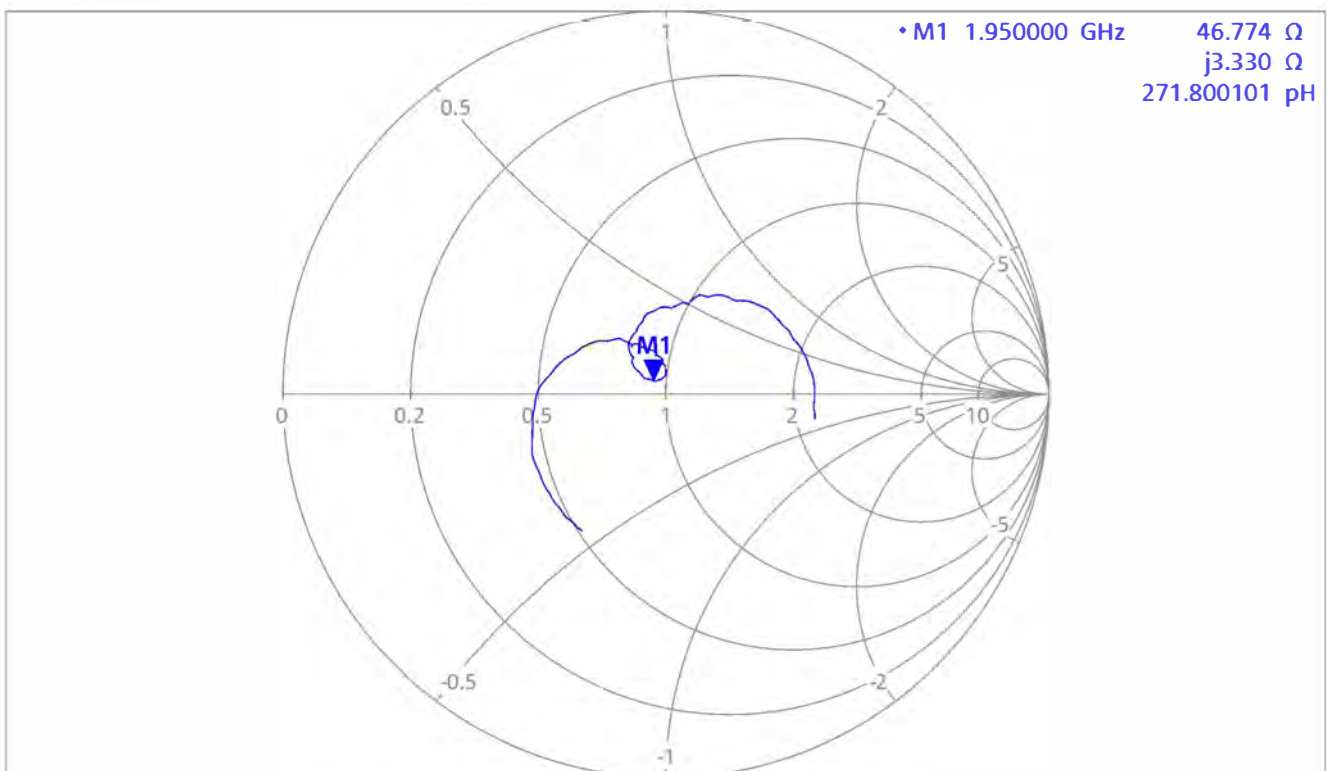


Ch1 Start 1.75 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.15 GHz

Trc2 — S11 Smith 200 mU/ Ref 1 U Cal

2 ▾



Ch1 Start 1.75 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.15 GHz



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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 $(22\pm3)^{\circ}\text{C}$ 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.



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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%.



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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 $\pm$ 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 $\pm$ 0.2) °C	39.5 $\pm$ 6 %	1.81 mho/m $\pm$ 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 $\pm$ 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 $\pm$ 18.7 % (k=2)



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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
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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E-mail: cttl@chinattl.com

http://www.chinattl.cn

DASY5 Validation Report for Head TSL

Date: 10.21.2021

Test Laboratory: CCTL, 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

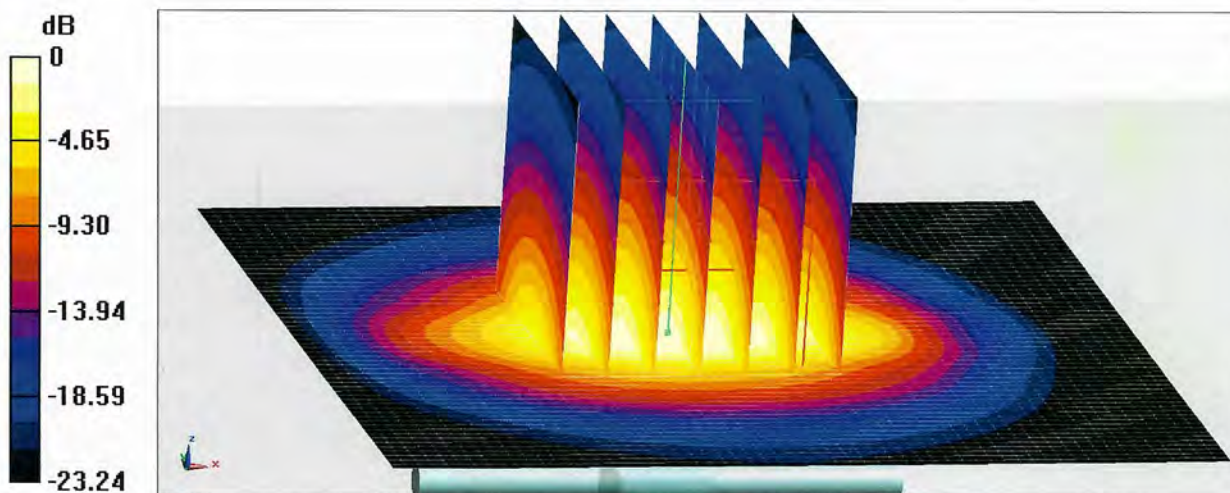
Peak SAR (extrapolated) = 28.0 W/kg

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



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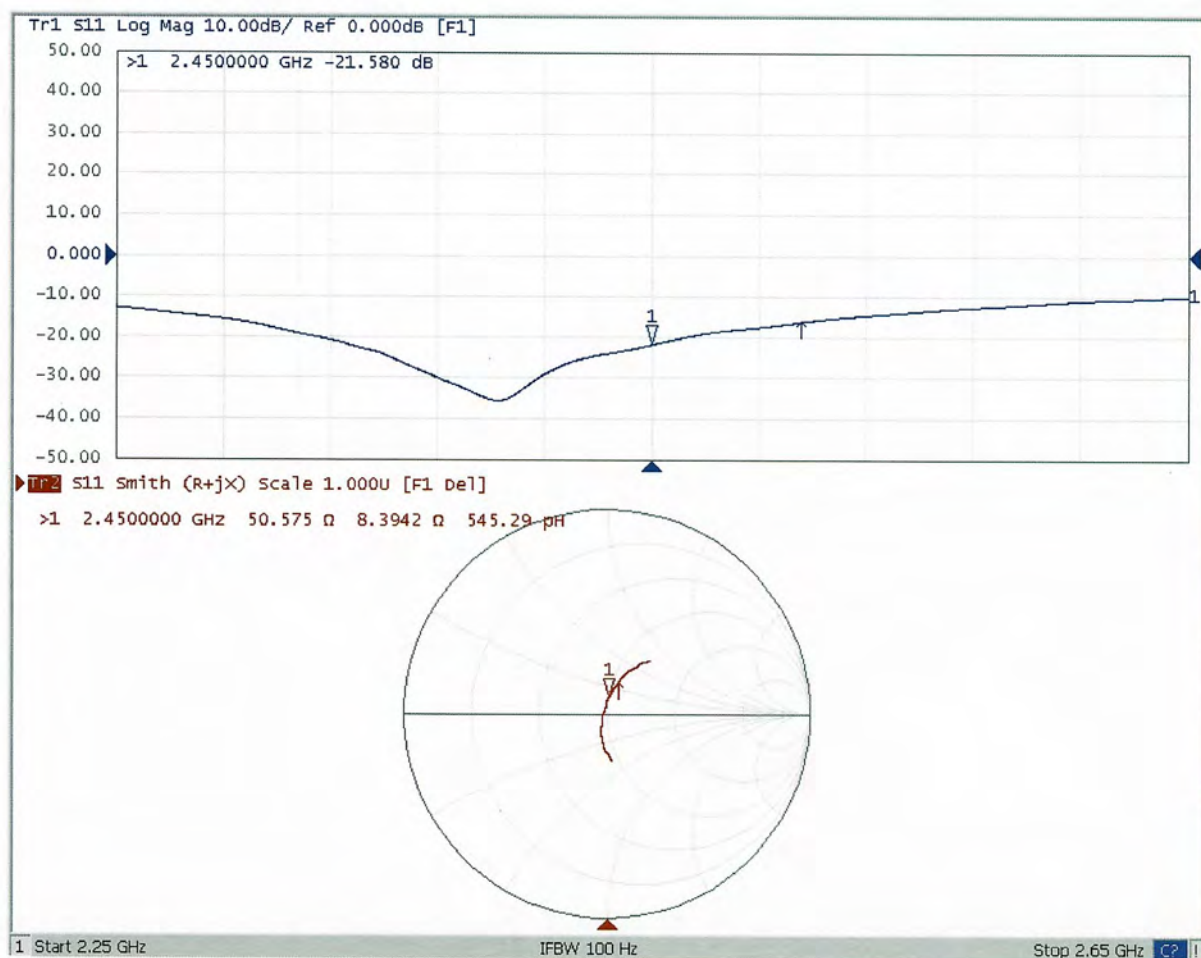
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Impedance Measurement Plot for Head TSL



D2450V2 - SN: 1048 Extended Dipole Calibrations

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

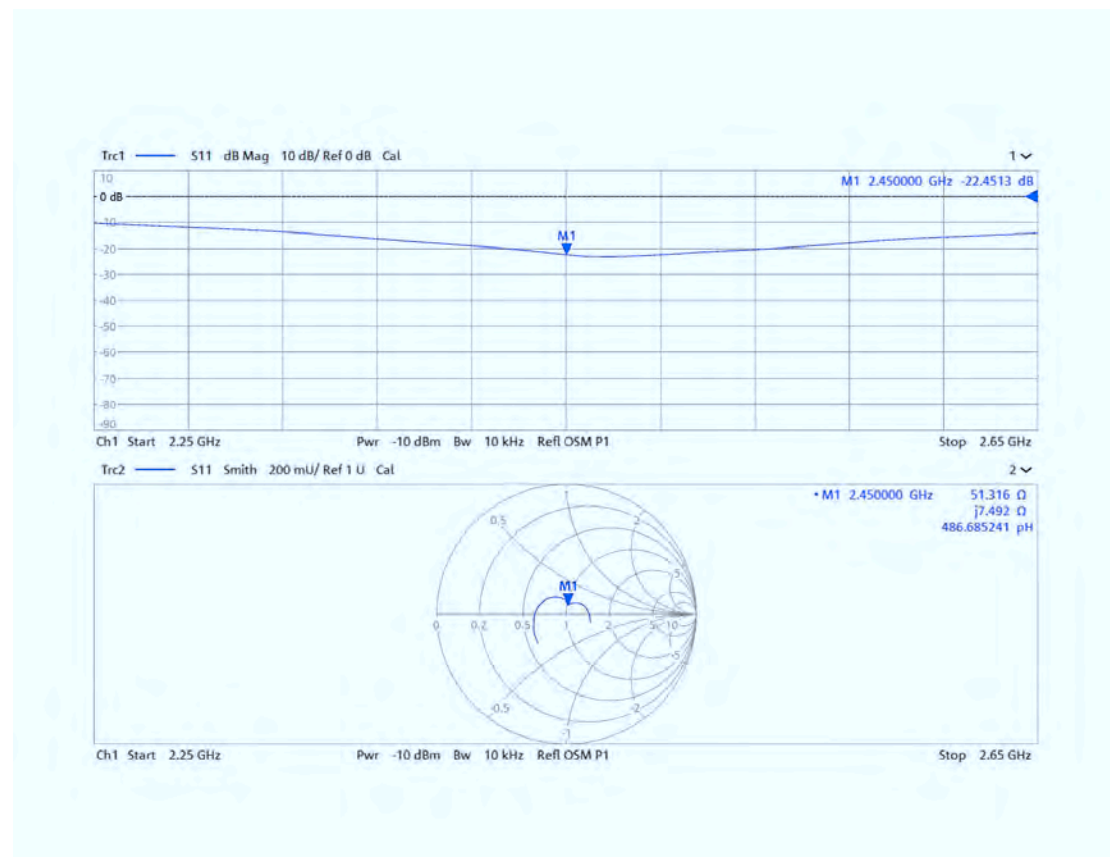
D2450V2 - SN: 1048						
2450MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.21.2021	-21.6		50.6		8.39	
10.20.2022	-22.45	3.94	51.32	0.72	7.49	-0.90
10.19.2023	-24.13	11.71	47.08	-3.52	5.46	-2.93

<Justification of the extended calibration>

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

<Dipole Verification Data>

Head 2450MHz _2022.10.20

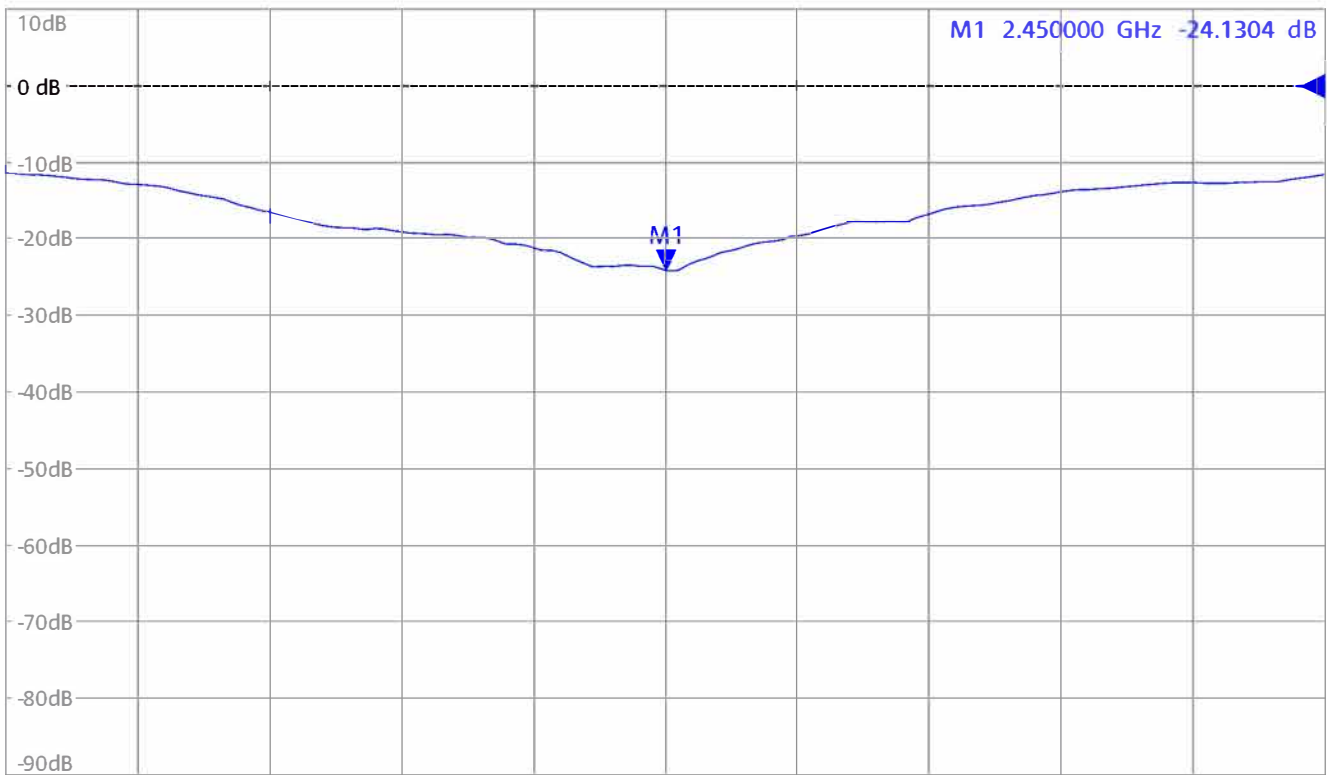


<Dipole Verification Data>

Head 2450MHz _2023.10.19

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1

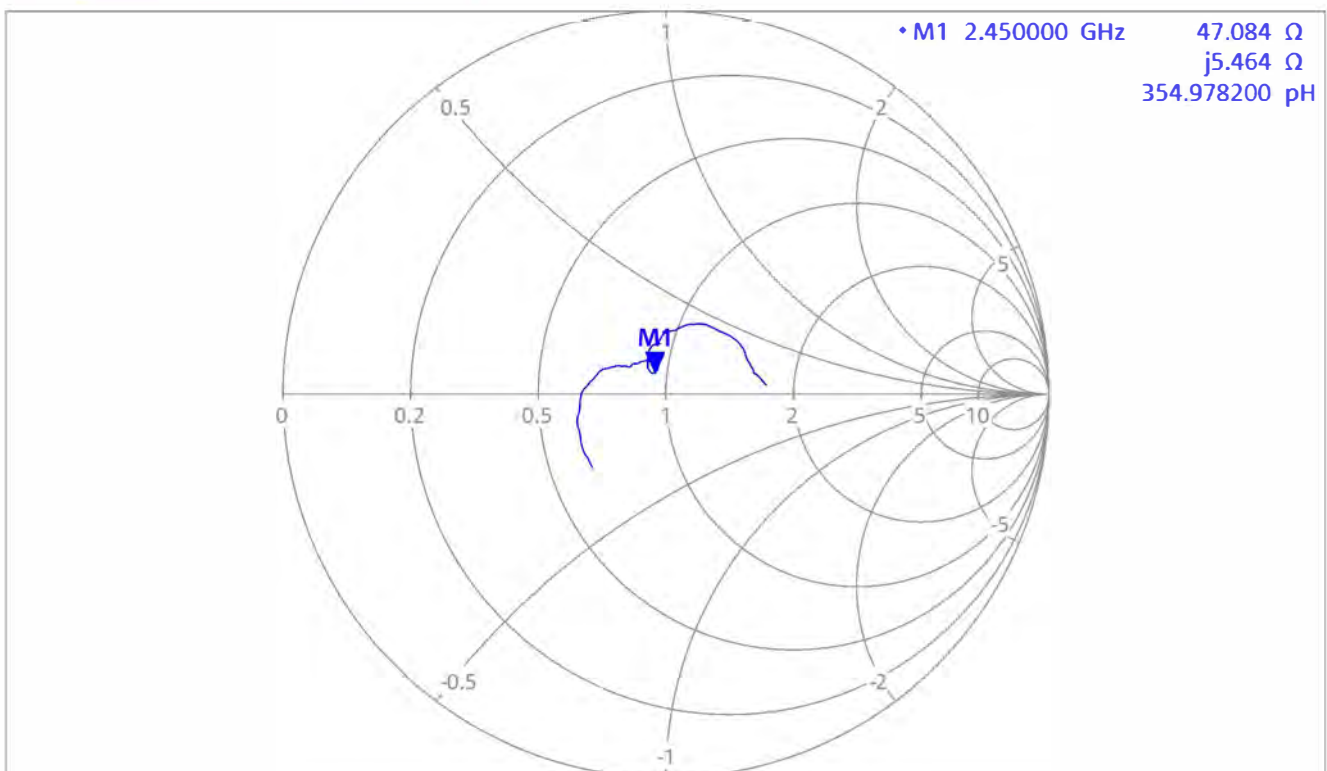


Ch1 Start 2.25 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

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



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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **7-Layers (Auden)**

Certificate No: **D2550V2-1022_Sep22**

CALIBRATION CERTIFICATE

Object **D2550V2 - SN:1022**

Calibration procedure(s) **QA CAL-05.v11
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **September 22, 2022**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349_Dec21)	Dec-22
DAE4	SN: 601	31-Aug-22 (No. DAE4-601_Aug22)	Aug-23
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22

Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature
Approved by:	Name Sven Kühn	Function Technical Manager	Signature

Issued: September 23, 2022

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Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Glossary:

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

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- c) DASY 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 source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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

Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2550 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.1	1.91 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	37.4 $\pm$ 6 %	1.95 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.5 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	53.0 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.2 W/kg $\pm$ 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.0 Ω - 4.0 j Ω
Return Loss	- 27.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.157 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
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DASY5 Validation Report for Head TSL

Date: 22.09.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2550 MHz; Type: D2550V2; Serial: D2550V2 - SN:1022

Communication System: UID 0 - CW; Frequency: 2550 MHz

Medium parameters used: $f = 2550$ MHz; $\sigma = 1.95$ S/m; $\epsilon_r = 37.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.85, 7.85, 7.85) @ 2550 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 31.08.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 113.1 V/m; Power Drift = 0.06 dB

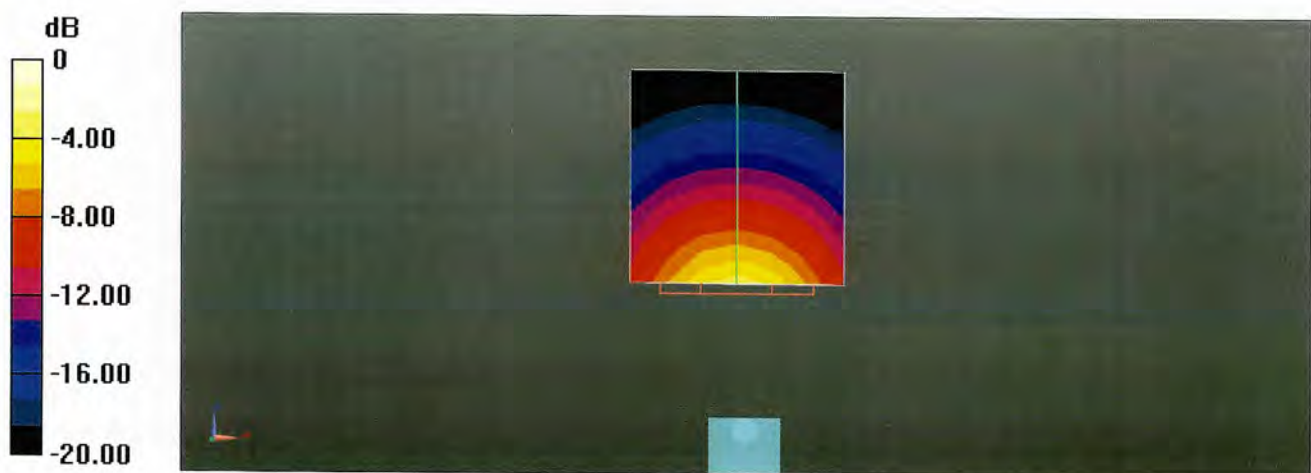
Peak SAR (extrapolated) = 27.5 W/kg

SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.13 W/kg

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

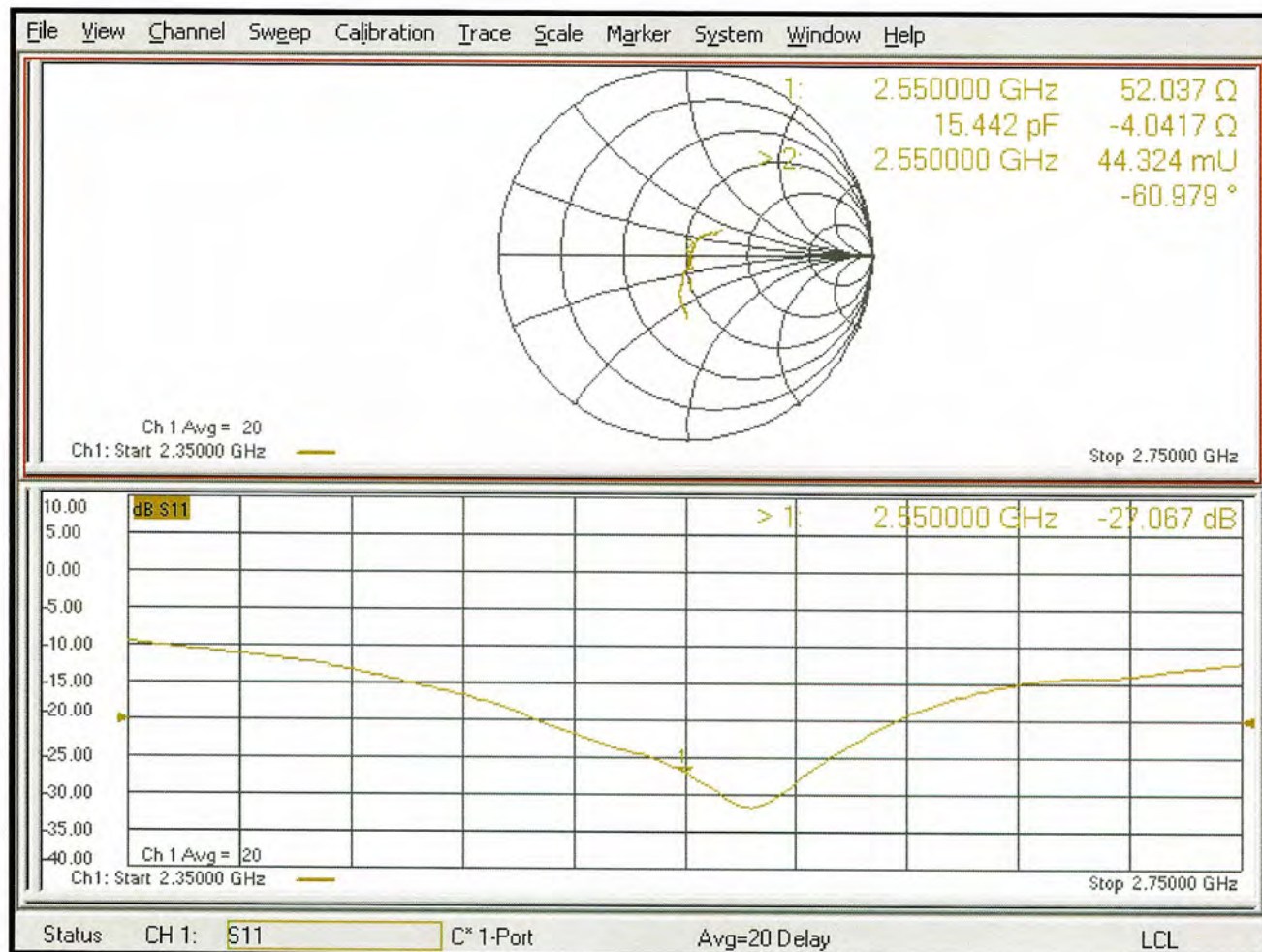
Ratio of SAR at M2 to SAR at M1 = 49%

Maximum value of SAR (measured) = 22.6 W/kg



0 dB = 22.6 W/kg = 13.54 dBW/kg

Impedance Measurement Plot for Head TSL



D2550V2 - SN: 1022 Extended Dipole Calibrations

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

D2550V2 - SN: 1022						
2550MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
9.22.2022	-27.1		52		-4	
9.21.2023	-23.13	-14.66	54.77	2.77	-5.52	-1.52

<Justification of the extended calibration>

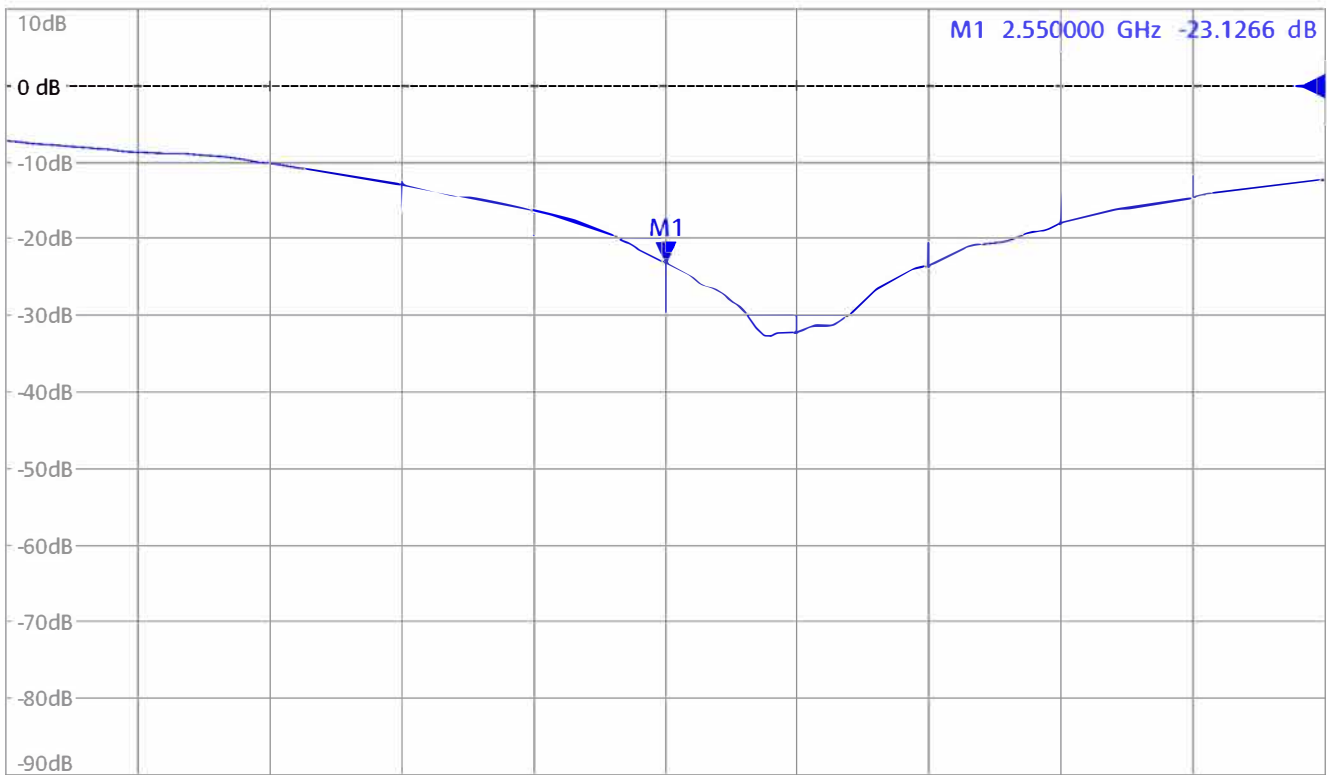
The return loss is $< -20\text{dB}$, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 2550MHz _2023.09.21

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1 ▾

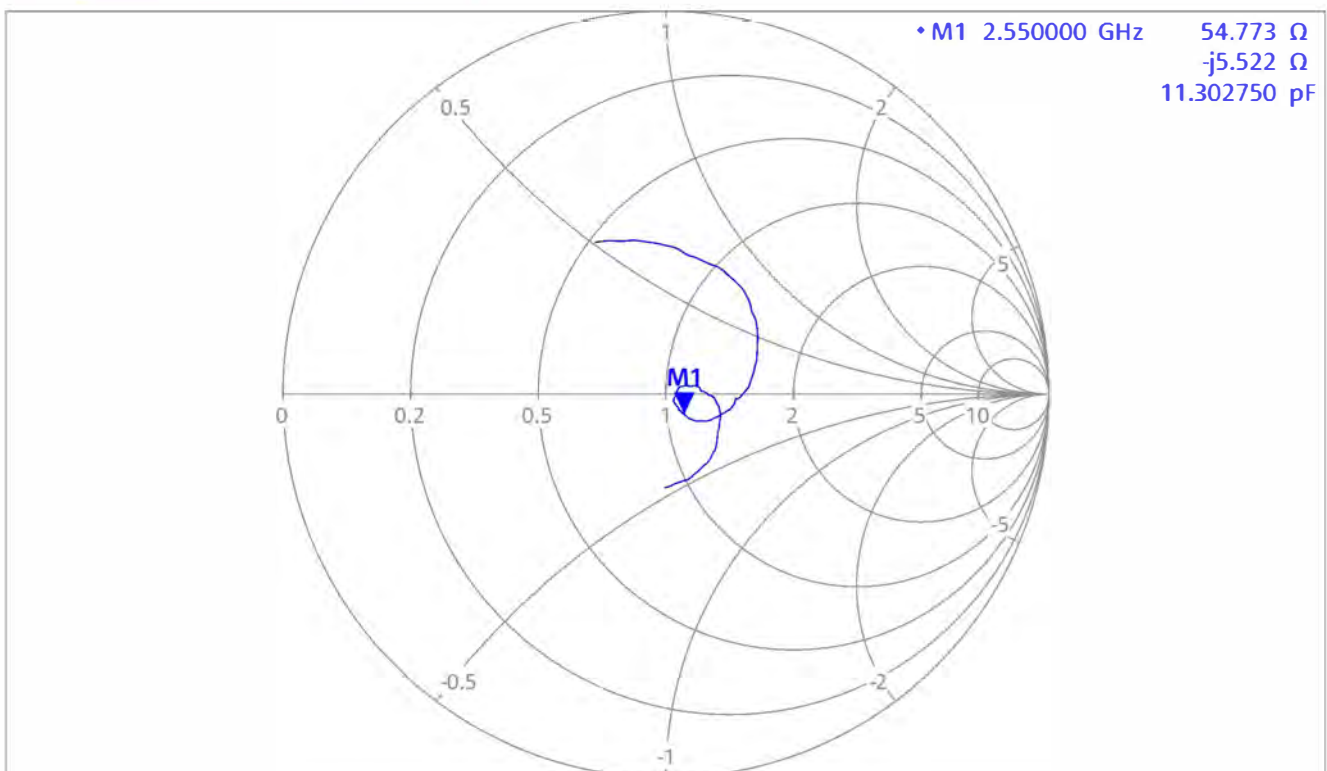


Ch1 Start 2.35 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.75 GHz

Trc2 — S11 Smith 200 mU/ Ref 1 U Cal

2 ▾



Ch1 Start 2.35 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

Stop 2.75 GHz

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

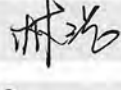
Calibration date: October 22, 2021

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 $(22\pm3)^{\circ}\text{C}$ 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.



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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%.



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Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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 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 $\pm$ 1 MHz 5600 MHz $\pm$ 1 MHz 5750 MHz $\pm$ 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 $\pm$ 0.2) °C	36.6 $\pm$ 6 %	4.70 mho/m $\pm$ 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 $\pm$ 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 $\pm$ 24.2 % (k=2)



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)



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Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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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	$50.5\Omega - 3.27j\Omega$
Return Loss	- 29.7dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	$54.2\Omega + 0.81j\Omega$
Return Loss	- 27.8dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	$49.4\Omega + 1.99j\Omega$
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
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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

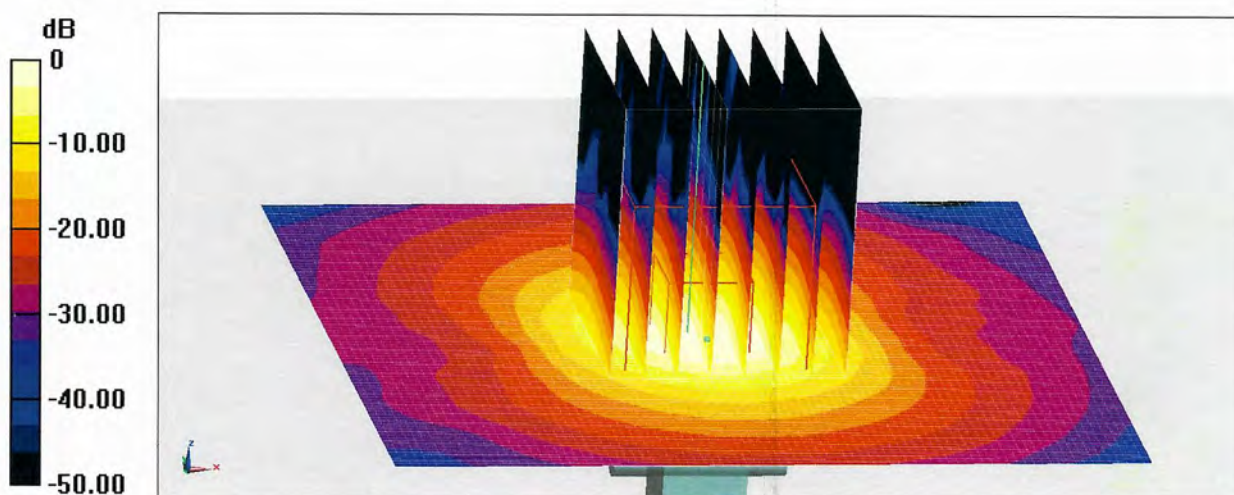


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Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 67.72 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.59 W/kg; SAR(10 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

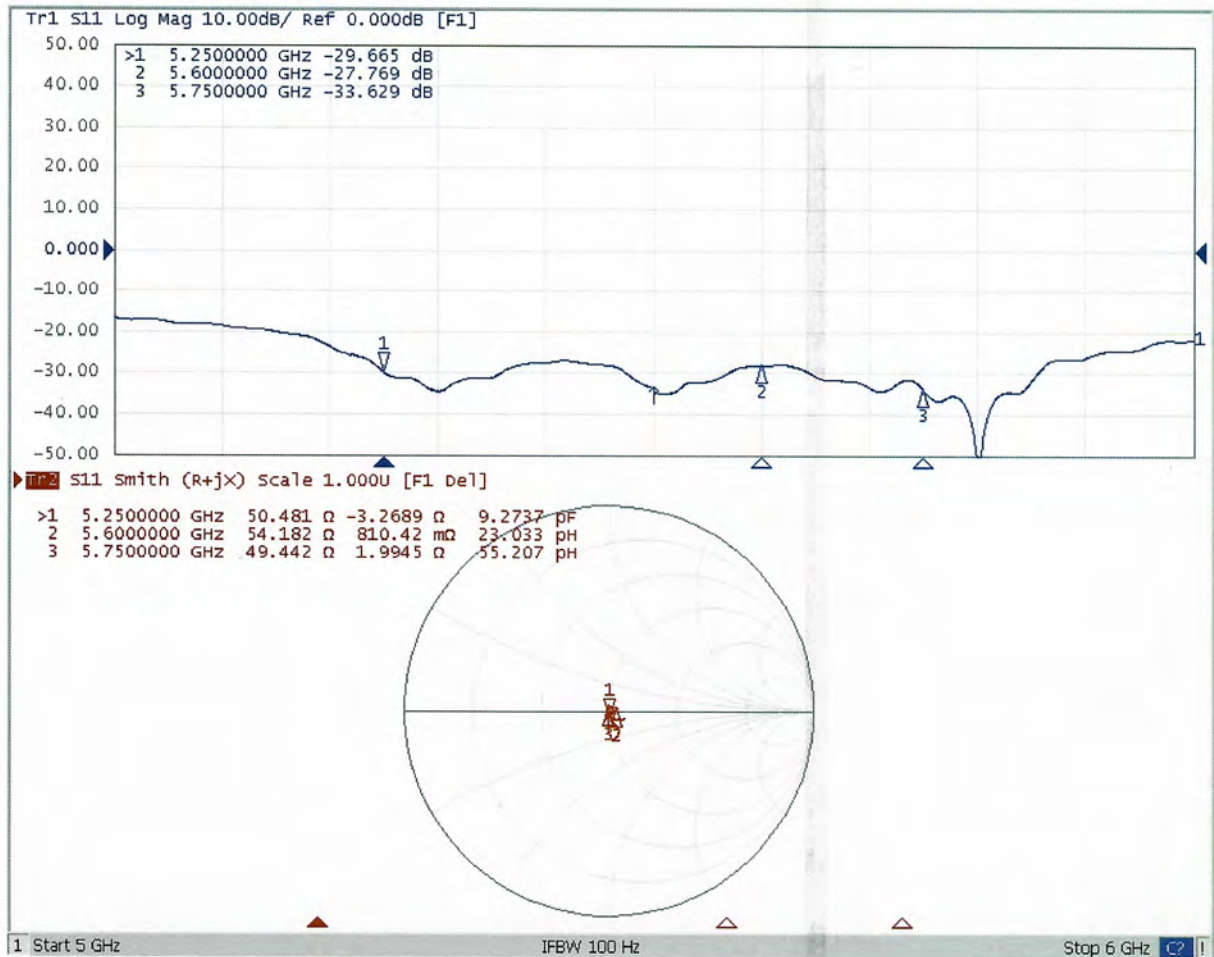




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Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
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Impedance Measurement Plot for Head TSL



D5GHzV2 - SN: 1315 Extended Dipole Calibrations

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

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

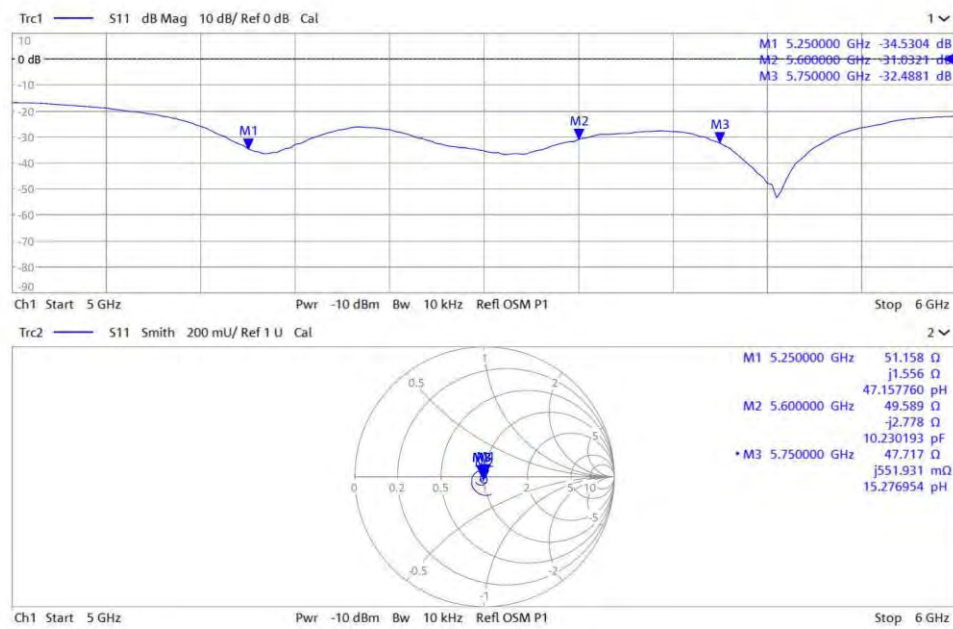
D5GHzV2 - SN: 1315						
5600MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
10.22.2021	-27.8		54.2		0.81	
10.21.2022	-31.03	11.63	49.59	-4.61	-2.79	-3.60
10.20.2023	-26.15	-5.95	54.92	0.71	-1.82	-2.63

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

<Dipole Verification Data>
Head 5250-5750MHz _2022.10.21

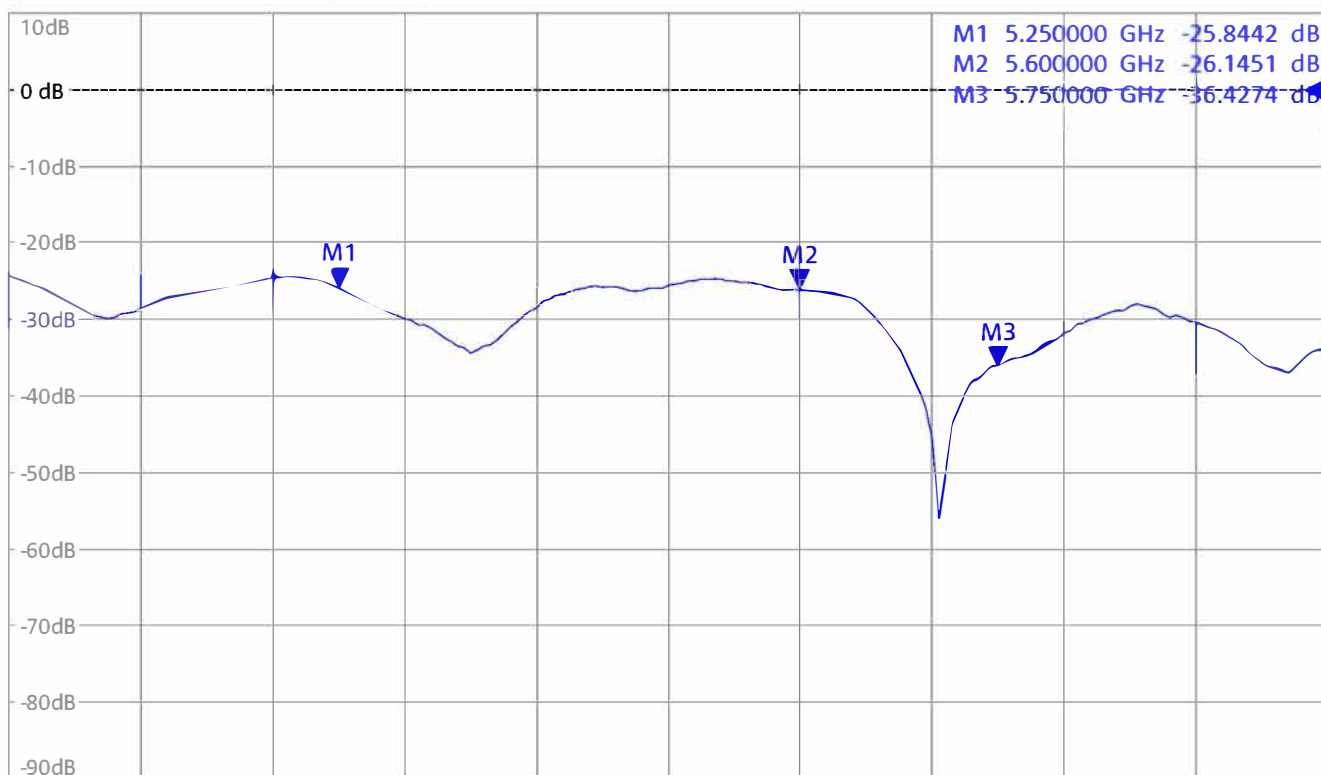


<Dipole Verification Data>

Head 5250-5750MHz _2023.10.20

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

1

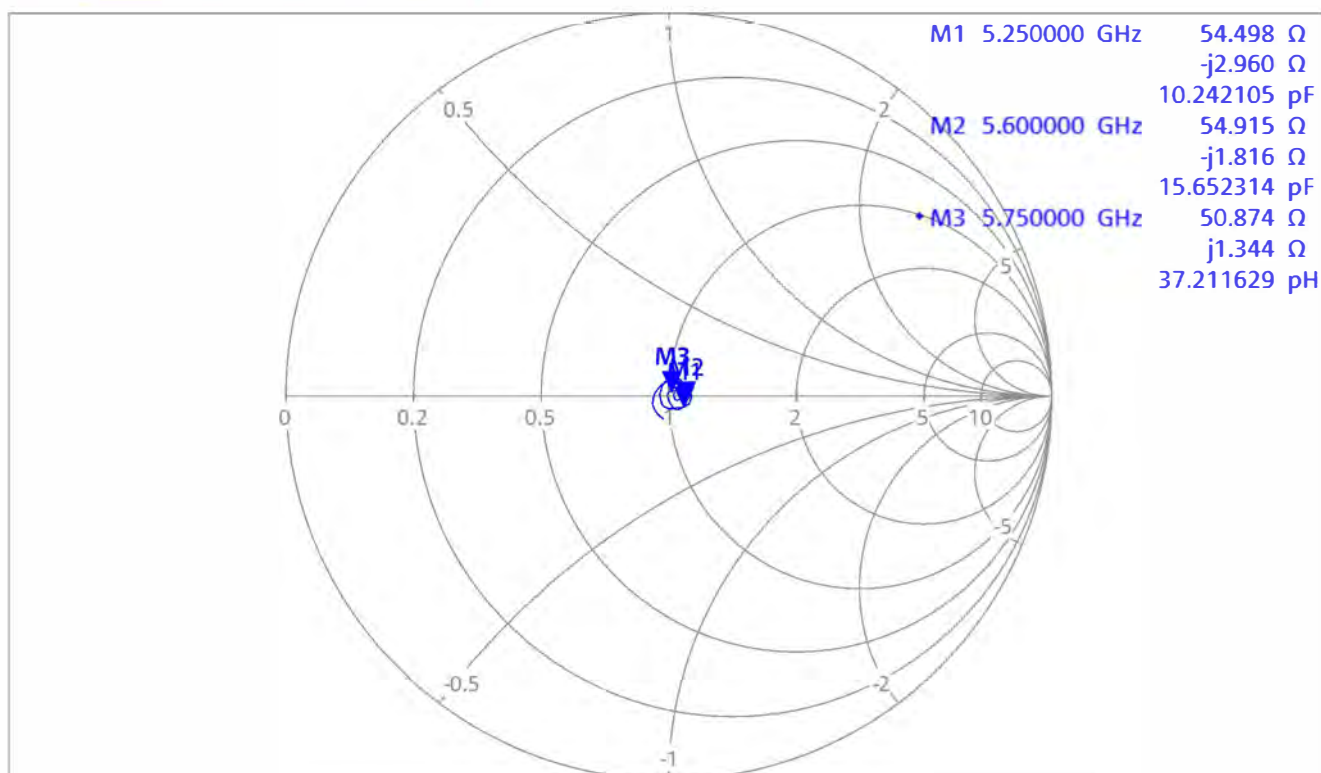


Ch1 Start 5 GHz Pwr -10 dBm Bw 10 kHz Refl OSM P1

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 RF Output Power Table

The detailed power table are shown as follows.

GSM&WCDMA Default

Ant1

Band	GSM850				GSM1900			
Channel	128	189	251	Max. Tune-up Power (dBm)	512	661	810	Max. Tune-up Power (dBm)
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.33	32.37	32.43	33.50	29.31	29.32	29.24	30.50
GPRS 1Tx Slot	32.26	32.33	32.41	33.50	29.30	29.31	29.20	30.50
GPRS 2Tx Slot	28.90	28.97	29.09	30.00	25.63	25.80	25.85	26.50
GPRS 3Tx Slot	27.43	27.51	27.63	28.50	23.80	24.01	24.14	25.00
GPRS 4Tx Slot	26.38	26.45	26.59	27.50	22.81	23.04	23.23	24.00
EDGE 1Tx Slot	26.97	27.15	27.04	28.00	25.67	25.91	25.89	27.00
EDGE 2Tx Slot	23.67	23.82	23.75	25.00	22.60	22.92	22.85	24.00
EDGE 3Tx Slot	21.98	22.11	22.03	23.00	20.84	21.10	21.07	22.00
EDGE 4Tx Slot	21.28	21.33	21.34	22.00	19.77	19.96	20.01	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.33	23.37	23.43	24.50	20.31	20.32	20.24	21.50
GPRS 1Tx Slot	23.26	23.33	23.41	24.50	20.30	20.31	20.20	21.50
GPRS 2Tx Slot	22.90	22.97	23.09	24.00	19.63	19.80	19.85	20.50
GPRS 3Tx Slot	23.17	23.25	23.37	24.24	19.54	19.75	19.88	20.74
GPRS 4Tx Slot	23.38	23.45	23.59	24.50	19.81	20.04	20.23	21.00
EDGE 1Tx Slot	17.97	18.15	18.04	19.00	16.67	16.91	16.89	18.00
EDGE 2Tx Slot	17.67	17.82	17.75	19.00	16.60	16.92	16.85	18.00
EDGE 3Tx Slot	17.72	17.85	17.77	18.74	16.58	16.84	16.81	17.74
EDGE 4Tx Slot	18.28	18.33	18.34	19.00	16.77	16.96	17.01	18.00

Band	WCDMA II			WCDMA II Max. Tune-up Power (dBm)	WCDMA IV			WCDMA IV Max. Tune-up Power (dBm)	WCDMA V			WCDMA V Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938	Max. Tune-up Power (dBm)	1537	1638	1738	Max. Tune-up Power (dBm)	4357	4407	4458	Max. Tune-up Power (dBm)
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	24.31	24.36	24.46	25.50	24.31	24.34	24.30	25.50	24.23	24.28	24.29	25.50
HSDPA Subtest-1	23.48	23.56	23.59	24.00	23.41	23.47	23.47	24.00	23.37	23.40	23.39	24.00
HSDPA Subtest-2	23.47	23.50	23.66	24.00	23.50	23.44	23.39	24.00	23.35	23.39	23.40	24.00
HSDPA Subtest-3	22.98	22.98	23.10	24.00	22.94	22.94	22.96	24.00	22.89	22.93	22.99	24.00
HSDPA Subtest-4	23.00	22.98	23.10	24.00	22.98	22.97	22.90	24.00	22.93	22.91	22.88	24.00
DC-HSDPA Subtest-1	23.42	23.51	23.65	24.00	23.41	23.52	23.47	24.00	23.35	23.38	23.39	24.00
DC-HSDPA Subtest-2	23.47	23.50	23.57	24.00	23.47	23.44	23.43	24.00	23.38	23.43	23.43	24.00
DC-HSDPA Subtest-3	23.00	23.02	23.12	24.00	22.98	22.97	22.93	24.00	22.86	22.95	22.90	24.00
DC-HSDPA Subtest-4	22.95	23.03	23.08	24.00	22.96	22.94	22.98	24.00	22.86	22.88	22.95	24.00
HSUPA Subtest-1	21.61	21.73	21.79	23.00	21.67	21.64	21.65	23.00	21.57	21.58	21.60	23.00
HSUPA Subtest-2	21.39	21.35	21.48	23.00	21.39	21.41	21.35	23.00	21.33	21.37	21.30	23.00
HSUPA Subtest-3	22.24	22.30	22.42	23.00	22.27	22.31	22.19	23.00	22.16	22.18	22.19	23.00
HSUPA Subtest-4	21.15	21.05	21.07	23.00	21.05	21.17	21.03	23.00	21.20	21.18	21.19	23.00
HSUPA Subtest-5	22.22	22.32	22.42	23.00	22.21	22.27	22.25	23.00	22.20	22.21	22.25	23.00
HSPA+ Subtest-1	21.58	21.57	21.73	23.00	21.53	21.55	21.50	23.00	21.44	21.52	21.50	23.00

LTE Default Power
Ant1

LTE Band 2									
BW	Modulation	RB Size	RB Offset	Low	Mid	High	SCPP	Max	
		Channel	Channel	1920	1920	1920	MPR	Time-up	
		Frequency (MHz)	1980	1980	1980	1980	(dB)	(dBm)	
20M	QPSK	1	0	23.71	23.76	23.71	0	25.5	
		1	50	24.11	24.10	24.04	0	25.5	
		1	99	23.68	23.66	23.76	0	25.5	
		50	0	23.04	23.02	23.02	1	24.5	
		50	25	23.05	23.03	23.04	1	24.5	
	16QAM	50	50	23.02	23.01	22.88	1	24.5	
		100	0	23.06	23.06	23.06	1	24.5	
		1	0	23.05	23.01	23.08	1	24.5	
		1	50	23.37	23.45	23.29	1	24.5	
		1	99	23.01	22.98	22.92	1	24.5	
10M	QPSK	50	0	22.02	22.13	22.05	2	23.5	
		50	25	22.09	22.17	22.10	2	23.5	
		50	50	22.07	22.11	21.93	2	23.5	
		100	0	22.06	22.06	21.99	2	23.5	
		1	0	21.92	21.96	21.97	2	23.5	
	16QAM	1	50	22.30	22.31	22.33	2	23.5	
		1	99	21.90	21.91	21.98	2	23.5	
		50	0	20.90	21.11	21.05	3	22.5	
		50	25	21.06	21.14	21.09	3	22.5	
		50	50	21.08	21.09	21.00	3	22.5	
5M	QPSK	Channel	1980	1980	1920	SCPP	Max	Time-up	
		Frequency (MHz)	1980	1980	1920	MPR	(dB)	(dBm)	
		1	0	23.88	23.85	23.84	0	25.5	
		1	37	24.17	24.12	23.83	0	25.5	
		1	74	23.80	23.73	23.80	0	25.5	
	16QAM	36	0	23.07	22.98	22.89	1	24.5	
		36	19	23.00	22.95	22.84	1	24.5	
		36	36	23.11	23.03	23.13	1	24.5	
		75	0	22.90	23.09	22.93	1	24.5	
		1	0	22.63	22.74	22.68	1	24.5	
1.4M	QPSK	1	37	22.99	22.83	22.80	1	24.5	
		1	74	22.92	22.85	22.80	1	24.5	
		36	0	21.91	21.84	21.82	2	23.5	
		36	19	21.95	21.96	22.01	2	23.5	
		36	36	21.97	21.98	21.79	2	23.5	
	16QAM	75	0	22.10	21.94	22.02	2	23.5	
		1	0	21.72	21.65	21.56	2	23.5	
		1	37	21.95	21.91	22.04	2	23.5	
		1	74	21.70	21.73	21.77	2	23.5	
		36	0	20.86	20.79	20.84	3	22.5	
3M	QPSK	36	19	20.83	20.85	20.80	3	22.5	
		36	36	20.87	20.86	20.83	3	22.5	
		75	0	20.86	20.89	20.79	3	22.5	
		Channel	1980	1980	1920	SCPP	Max	Time-up	
		Frequency (MHz)	1980	1980	1920	MPR	(dB)	(dBm)	
	16QAM	1	24	24.23	24.02	23.87	0	25.5	
		1	49	23.91	23.71	23.81	0	25.5	
		25	0	23.10	22.92	22.91	1	24.5	
		25	12	23.08	22.92	22.81	1	24.5	
		25	25	23.12	22.98	22.86	1	24.5	
1.4M	QPSK	50	0	22.89	23.01	22.97	1	24.5	
		50	25	22.86	22.91	22.82	1	24.5	
		1	0	22.66	22.71	22.52	1	24.5	
		1	24	23.00	22.82	22.79	1	24.5	
		1	49	22.56	22.67	22.54	1	24.5	
	16QAM	25	0	21.91	21.80	21.93	2	23.5	
		25	12	21.88	21.84	21.97	2	23.5	
		25	25	22.00	22.04	21.83	2	23.5	
		50	0	22.08	21.87	22.04	2	23.5	
		50	25	21.69	21.78	21.65	2	23.5	
3M	QPSK	1	24	22.09	21.88	22.13	2	23.5	
		1	49	21.70	21.70	21.63	2	23.5	
		25	0	20.91	20.79	20.76	3	22.5	
		25	12	20.88	20.91	20.89	3	22.5	
		25	25	21.06	20.85	20.88	3	22.5	
	16QAM	50	0	21.00	20.96	20.90	3	22.5	
		Channel	1980	1980	1920	SCPP	Max	Time-up	
		Frequency (MHz)	1980	1980	1920	MPR	(dB)	(dBm)	
		1	0	23.84	23.91	23.75	0	25.5	
		1	12	24.18	24.05	23.83	0	25.5	
1.4M	QPSK	1	24	23.93	23.74	23.73	0	25.5	
		12	0	23.08	22.95	22.91	1	24.5	
		12	6	22.99	22.89	22.89	1	24.5	
		12	13	23.06	22.99	22.91	1	24.5	
		25	0	22.80	23.11	22.91	1	24.5	
	16QAM	1	0	22.77	22.77	22.57	1	24.5	
		1	12	22.94	22.85	22.83	1	24.5	
		24	22.89	22.86	22.59	1	24.5		
		12	13	21.96	21.84	21.82	2	23.5	
		12	6	21.91	21.86	21.93	2	23.5	
3M	QPSK	12	13	21.99	22.09	21.88	2	23.5	
		28	0	22.04	21.94	21.96	2	23.5	
		1	0	21.85	21.76	21.83	2	23.5	
		1	24	22.00	21.90	22.11	2	23.5	
		1	24	21.89	21.86	21.84	2	23.5	
	16QAM	12	6	20.87	20.89	20.78	3	22.5	
		12	6	20.82	20.90	20.88	3	22.5	
		12	13	20.96	20.84	20.93	3	22.5	
		25	0	20.92	20.90	20.81	3	22.5	
		25	12	20.92	20.89	20.79	3	22.5	
1.4M	QPSK	Channel	1980	1980	1920	SCPP	Max	Time-up	
		Frequency (MHz)	1980	1980	1920	MPR	(dB)	(dBm)	
		1	0	23.88	23.89	23.83	0	25.5	
		1	7	24.23	24.04	23.84	0	25.5	
		1	14	23.81	23.71	23.74	0	25.5	
	16QAM	8	0	23.06	22.96	23.02	1	24.5	
		8	3	23.07	22.92	22.90	1	24.5	
		8	7	23.16	22.99	22.81	1	24.5	
		15	0	23.01	23.03	22.91	1	24.5	
		1	0	22.89	22.70	22.64	1	24.5	
3M	QPSK	1	7	23.01	22.82	22.72	1	24.5	
		1	14	22.87	22.68	22.53	1	24.5	
		8	0	22.00	21.94	21.91	2	23.5	
		8	3	21.95	21.86	21.97	2	23.5	
		8	7	21.97	21.82	21.87	2	23.5	
	16QAM	15	0	21.97	21.82	21.95	2	23.5	
		1	0	21.72	21.79	21.62	2	23.5	
		1	7	22.00	21.90	22.10	2	23.5	
		1	14	21.61	21.65	21.72	2	23.5	
		8	0	20.94	20.88	20.74	3	22.5	
1.4M	QPSK	8	3	20.85	20.87	20.84	3	22.5	
		8	7	21.01	20.88	20.92	3	22.5	
		15	0	20.92	20.89	20.82	3	22.5	
		Channel	1980	1980	1920	SCPP	Max	Time-up	
		Frequency (MHz)	1980	1980	1920	MPR	(dB)	(dBm)	
	16QAM	1	0	23.70	23.75	23.68	0	25.5	
		1	2	24.05	23.97	24.01	0	25.5	
		1	5	23.60	23.54	23.70	0	25.5	
		3	0	23.75	23.73	23.76	0	25.5	
		3	1	23.79	23.76	23.72	0	25.5	
1.4M	QPSK	3	3	23.69	23.76	23.57	0	25.5	
		6	0	22.97	22.96	22.94	1	24.5	
		1	0	23.04	23.00	22.98	1	24.5	
		1	2	23.26	23.36	23.21	1	24.5	
		1	5	22.92	22.86	22.86	1	24.5	
	16QAM	3	1	22.79	22.81	22.80	1	24.5	
		3	1	22.77	22.88	22.81	1	24.5	
		3	3	22.74	22.88	22.66	1	24.5	
		6	0	22.02	22.01	21.90	2	23.5	
		1	0	21.79	21.92	21.90	2	23.5	
3M	QPSK	1	2	22.22	22.22	22.19	2	23.5	
		1	5	21.86	21.80	21.94	2	23.5	
		3	0	21.72	21.84	21.83	2	23.5	
		3	1	21.96	21.96	21.88	2	23.5	
		3	3	21.82	21.84	21.80	2	23.5	
	16QAM	6	0	20.97	21.06	20.93	3	22.5	

LTE Band 7												
SW	Modulation	RB Size	RB Offset	Channel	RB	High	Low	High	Low	High	Low	Max. Tx Power (dBm)
OFDM		1	0	22.80	22.80	22.80	0	23				
		Frequency (MHz)	22.80	22.80	22.80	22.80	22.80	22.80	22.80	22.80	22.80	
		1	38	22.73	22.70	22.67	0	23				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
		100	10	22.85	22.81	22.87	-1	24				
25M	VQAM	1	0	22.81	22.80	22.82	1	24				
		1	38	22.63	22.67	22.61	-1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
E-OFDM		1	38	22.67	22.67	22.67	2	23				
		1	38	22.67	22.67	22.67	2	23				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				
		100	10	22.81	22.80	22.82	1	24				

LTE Band 38												
SW	Modulation	RB Size	RB Offset	Channel	RB	High	Low	High	Low	High	Low	Max. Tx Power (dBm)
OFDM		1	0	22.72	22.80	22.64	0	23				
		Frequency (MHz)	22.72	22.80	22.64	22.72	22.80	22.64	22.72	22.80	22.64	
		1	38	22.75	22.70	22.60	0	23				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
25M	VQAM	1	0	22.70	22.70	22.61	1	24				
		1	38	22.72	22.60	22.71	-1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
		100	10	22.70	22.70	22.61	1	24				
E-OFDM		1	38	22.65	22.65	22.73	-1	23				
		1	38	22.65	22.65	22.73	-1	23				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				
		100	10	22.82	22.66	22.62	-1	24				

LTE Band 41 (2480 - 2600MHz)												
SW	Modulation	RB Size	RB Offset	Channel	RB	High	Low	High	Low	High	Low	Max. Tx Power (dBm)
OFDM		1	0	22.72	22.67	22.64	0	23				
		Frequency (MHz)	22.72	22.67	22.64	22.72	22.67	22.64	22.72	22.67	22.64	
		1	38	22.65	22.60	22.58	0	23				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
		100	10	22.70	22.60	22.58	-1	24				
25M	VQAM	1	0	22.70	22.60	22.58	1	24				
		1	38	22.64	22.57	22.54	0	23				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
E-OFDM		1	38	22.63	22.57	22.54	0	23				
		1	38	22.63	22.57	22.54	0	23				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				
		100	10	22.70	22.60	22.58	1	24				

LTE Band 38												
SW	Modulation	RB Size	RB Offset	Channel	RB	High	Low	High	Low	High	Low	Max. Tx Power (dBm)
		Frequency (MHz)	Offset (MHz)	Frequency (MHz)	Offset (MHz)	Frequency (MHz)	Offset (MHz)	Frequency (MHz)	Offset (MHz)	Frequency (MHz)	Offset (MHz)	
25M	OFDM	1	0	22.67	22.58	22.58	0	23				
		1	38	22.60	22.56	22.52	0	23				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
25M	VQAM	1	0	22.67	22.55	22.58	1	24				
		1	38	22.60	22.50	22.52	0	23				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
25M	E-OFDM	1	38	22.58	22.52	22.48	0	23				
		1	38	22.58	22.52	22.48	0	23				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
25M	OFDM	1	0	22.67	22.58	22.58	0	23				
		1	38	22.60	22.56	22.52	0	23				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
25M	VQAM	1	0	22.67	22.55	22.58	1	24				
		1	38	22.60	22.50	22.52	0	23				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
25M	E-OFDM	1	38	22.58	22.52	22.48	0	23				
		1	38	22.58	22.52	22.48	0	23				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
25M	OFDM	1	0	22.67	22.58	22.58	0	23				
		1	38	22.60	22.56	22.52	0	23				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
25M	VQAM	1	0	22.67	22.55	22.58	1	24				
		1	38	22.60	22.50	22.52	0	23				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
25M	E-OFDM	1	38	22.58	22.52	22.48	0	23				
		1	38	22.58	22.52	22.48	0	23				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
25M	OFDM	1	0	22.67	22.58	22.58	0	23				
		1	38	22.60	22.56	22.52	0	23				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
		100	10	22.65	22.52	22.48	-1	24				
25M	VQAM	1	0	22.67	22.55	22.58	1	24				
		1	38	22.60	22.50	22.52	0	23				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
		100	10	22.67	22.55	22.58	1	24				
25M	E-OFDM	1	38	22.58	22.52	22.48	0	23				
		1	38	22.58	22.52	22.48	0	23				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				
		100	10	22.65	22.55	22.48	-1	24				

GSM&WCDMA DSI-1

Ant1

Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.33	32.37	32.43	33.50	29.31	29.32	29.24	30.50
GPRS 1Tx Slot	32.26	32.33	32.41	33.50	29.30	29.31	29.20	30.50
GPRS 2Tx Slot	28.90	28.97	29.09	30.00	25.63	25.80	25.85	26.50
GPRS 3Tx Slot	27.43	27.51	27.63	28.50	23.80	24.01	24.14	25.00
GPRS 4Tx Slot	26.38	26.45	26.59	27.50	22.81	23.04	23.23	24.00
EDGE 1Tx Slot	26.97	27.15	27.04	28.00	25.67	25.91	25.89	27.00
EDGE 2Tx Slot	23.67	23.82	23.75	25.00	22.60	22.92	22.85	24.00
EDGE 3Tx Slot	21.98	22.11	22.03	23.00	20.84	21.10	21.07	22.00
EDGE 4Tx Slot	21.28	21.33	21.34	22.00	19.77	19.96	20.01	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.33	23.37	23.43	24.50	20.31	20.32	20.24	21.50
GPRS 1Tx Slot	23.26	23.33	23.41	24.50	20.30	20.31	20.20	21.50
GPRS 2Tx Slot	22.90	22.97	23.09	24.00	19.63	19.80	19.85	20.50
GPRS 3Tx Slot	23.17	23.25	23.37	24.24	19.54	19.75	19.88	20.74
GPRS 4Tx Slot	23.38	23.45	23.59	24.50	19.81	20.04	20.23	21.00
EDGE 1Tx Slot	17.97	18.15	18.04	19.00	16.67	16.91	16.89	18.00
EDGE 2Tx Slot	17.67	17.82	17.75	19.00	16.60	16.92	16.85	18.00
EDGE 3Tx Slot	17.72	17.85	17.77	18.74	16.58	16.84	16.81	17.74
EDGE 4Tx Slot	18.28	18.33	18.34	19.00	16.77	16.96	17.01	18.00

Band	WCDMA II			Max. Tune-up Power (dBm)	WCDMA IV			Max. Tune-up Power (dBm)	WCDMA V			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	24.31	24.36	24.46	25.50	24.31	24.34	24.30	25.50	24.23	24.28	24.29	25.50
HSDPA Subtest-1	23.48	23.56	23.59	24.00	23.41	23.47	23.47	24.00	23.37	23.40	23.39	24.00
HSDPA Subtest-2	23.47	23.50	23.66	24.00	23.50	23.44	23.39	24.00	23.35	23.39	23.40	24.00
HSDPA Subtest-3	22.98	22.98	23.10	24.00	22.94	22.94	22.96	24.00	22.89	22.93	22.99	24.00
HSDPA Subtest-4	23.00	22.98	23.10	24.00	22.98	22.97	22.90	24.00	22.93	22.91	22.88	24.00
DC-HSDPA Subtest-1	23.42	23.51	23.65	24.00	23.41	23.52	23.47	24.00	23.35	23.38	23.39	24.00
DC-HSDPA Subtest-2	23.47	23.50	23.57	24.00	23.47	23.44	23.43	24.00	23.38	23.43	23.43	24.00
DC-HSDPA Subtest-3	23.00	23.02	23.12	24.00	22.98	22.97	22.93	24.00	22.86	22.95	22.90	24.00
DC-HSDPA Subtest-4	22.95	23.03	23.08	24.00	22.96	22.94	22.98	24.00	22.86	22.88	22.95	24.00
HSUPA Subtest-1	21.61	21.73	21.79	23.00	21.67	21.64	21.65	23.00	21.57	21.58	21.60	23.00
HSUPA Subtest-2	21.39	21.35	21.48	23.00	21.39	21.41	21.35	23.00	21.33	21.37	21.30	23.00
HSUPA Subtest-3	22.24	22.30	22.42	23.00	22.27	22.31	22.19	23.00	22.16	22.18	22.19	23.00
HSUPA Subtest-4	21.15	21.05	21.07	23.00	21.05	21.17	21.03	23.00	21.20	21.18	21.19	23.00
HSUPA Subtest-5	22.22	22.32	22.42	23.00	22.21	22.27	22.25	23.00	22.20	22.21	22.25	23.00
HSPA+ Subtest-1	21.58	21.57	21.73	23.00	21.53	21.55	21.50	23.00	21.44	21.52	21.50	23.00

GSM&WCDMA DSI-2

Ant1

Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.33	32.37	32.43	33.50	29.31	29.32	29.24	30.50
GPRS 1Tx Slot	32.26	32.33	32.41	33.50	29.30	29.31	29.20	30.50
GPRS 2Tx Slot	28.90	28.97	29.09	30.00	25.63	25.80	25.85	26.50
GPRS 3Tx Slot	27.43	27.51	27.63	28.50	23.80	24.01	24.14	25.00
GPRS 4Tx Slot	26.38	26.45	26.59	27.50	22.81	23.04	23.23	24.00
EDGE 1Tx Slot	26.97	27.15	27.04	28.00	25.67	25.91	25.89	27.00
EDGE 2Tx Slot	23.67	23.82	23.75	25.00	22.60	22.92	22.85	24.00
EDGE 3Tx Slot	21.98	22.11	22.03	23.00	20.84	21.10	21.07	22.00
EDGE 4Tx Slot	21.28	21.33	21.34	22.00	19.77	19.96	20.01	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.33	23.37	23.43	24.50	20.31	20.32	20.24	21.50
GPRS 1Tx Slot	23.26	23.33	23.41	24.50	20.30	20.31	20.20	21.50
GPRS 2Tx Slot	22.90	22.97	23.09	24.00	19.63	19.80	19.85	20.50
GPRS 3Tx Slot	23.17	23.25	23.37	24.24	19.54	19.75	19.88	20.74
GPRS 4Tx Slot	23.38	23.45	23.59	24.50	19.81	20.04	20.23	21.00
EDGE 1Tx Slot	17.97	18.15	18.04	19.00	16.67	16.91	16.89	18.00
EDGE 2Tx Slot	17.67	17.82	17.75	19.00	16.60	16.92	16.85	18.00
EDGE 3Tx Slot	17.72	17.85	17.77	18.74	16.58	16.84	16.81	17.74
EDGE 4Tx Slot	18.28	18.33	18.34	19.00	16.77	16.96	17.01	18.00

Band	WCDMA II			Max. Tune-up Power (dBm)	WCDMA IV			Max. Tune-up Power (dBm)	WCDMA V			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	23.71	23.82	23.95	25.00	24.31	24.34	24.30	25.50	24.23	24.28	24.29	25.50
HSDPA Subtest-1	22.95	23.07	23.19	23.50	23.41	23.47	23.47	24.00	23.37	23.40	23.39	24.00
HSDPA Subtest-2	23.03	23.04	23.13	23.50	23.50	23.44	23.39	24.00	23.35	23.39	23.40	24.00
HSDPA Subtest-3	22.57	22.56	22.66	23.50	22.94	22.94	22.96	24.00	22.89	22.93	22.99	24.00
HSDPA Subtest-4	22.59	22.49	22.65	23.50	22.98	22.97	22.90	24.00	22.93	22.91	22.88	24.00
DC-HSDPA Subtest-1	23.04	22.97	23.14	23.50	23.41	23.52	23.47	24.00	23.35	23.38	23.39	24.00
DC-HSDPA Subtest-2	22.93	23.08	23.08	23.50	23.47	23.44	23.43	24.00	23.38	23.43	23.43	24.00
DC-HSDPA Subtest-3	22.58	22.47	22.60	23.50	22.98	22.97	22.93	24.00	22.86	22.95	22.90	24.00
DC-HSDPA Subtest-4	22.42	22.55	22.62	23.50	22.96	22.94	22.98	24.00	22.86	22.88	22.95	24.00
HSUPA Subtest-1	21.09	21.26	21.29	22.50	21.67	21.64	21.65	23.00	21.57	21.58	21.60	23.00
HSUPA Subtest-2	20.97	20.89	21.05	22.50	21.39	21.41	21.35	23.00	21.33	21.37	21.30	23.00
HSUPA Subtest-3	21.71	21.80	21.89	22.50	22.27	22.31	22.19	23.00	22.16	22.18	22.19	23.00
HSUPA Subtest-4	20.73	20.57	20.59	22.50	21.05	21.17	21.03	23.00	21.20	21.18	21.19	23.00
HSUPA Subtest-5	21.72	21.92	21.99	22.50	22.21	22.27	22.25	23.00	22.20	22.21	22.25	23.00
HSPA+ Subtest-1	21.15	21.09	21.33	22.50	21.53	21.55	21.50	23.00	21.44	21.52	21.50	23.00

GSM&WCDMA DSI-3&4

Ant1

Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.33	32.37	32.43	33.50	29.31	29.32	29.24	30.50
GPRS 1Tx Slot	32.26	32.33	32.41	33.50	29.30	29.31	29.20	30.50
GPRS 2Tx Slot	28.90	28.97	29.09	30.00	25.63	25.80	25.85	26.50
GPRS 3Tx Slot	27.43	27.51	27.63	28.50	23.80	24.01	24.14	25.00
GPRS 4Tx Slot	26.38	26.45	26.59	27.50	22.81	23.04	23.23	24.00
EDGE 1Tx Slot	26.97	27.15	27.04	28.00	25.67	25.91	25.89	27.00
EDGE 2Tx Slot	23.67	23.82	23.75	25.00	22.60	22.92	22.85	24.00
EDGE 3Tx Slot	21.98	22.11	22.03	23.00	20.84	21.10	21.07	22.00
EDGE 4Tx Slot	21.28	21.33	21.34	22.00	19.77	19.96	20.01	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.33	23.37	23.43	24.50	20.31	20.32	20.24	21.50
GPRS 1Tx Slot	23.26	23.33	23.41	24.50	20.30	20.31	20.20	21.50
GPRS 2Tx Slot	22.90	22.97	23.09	24.00	19.63	19.80	19.85	20.50
GPRS 3Tx Slot	23.17	23.25	23.37	24.24	19.54	19.75	19.88	20.74
GPRS 4Tx Slot	23.38	23.45	23.59	24.50	19.81	20.04	20.23	21.00
EDGE 1Tx Slot	17.97	18.15	18.04	19.00	16.67	16.91	16.89	18.00
EDGE 2Tx Slot	17.67	17.82	17.75	19.00	16.60	16.92	16.85	18.00
EDGE 3Tx Slot	17.72	17.85	17.77	18.74	16.58	16.84	16.81	17.74
EDGE 4Tx Slot	18.28	18.33	18.34	19.00	16.77	16.96	17.01	18.00

Band	WCDMA II			WCDMA II	WCDMA IV			WCDMA IV	WCDMA V			WCDMA V
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6	Max. Tune-up Power (dBm)	1712.4	1732.6	1752.6	Max. Tune-up Power (dBm)	826.4	836.4	846.6	Max. Tune-up Power (dBm)
RMC 12.2K	20.75	20.81	20.89	22.00	20.22	20.25	20.17	21.50	24.23	24.28	24.29	25.50
HSDPA Subtest-1	19.71	19.96	19.86	20.50	19.17	19.34	19.33	20.00	23.37	23.40	23.39	24.00
HSDPA Subtest-2	19.88	19.91	20.03	20.50	19.31	19.20	19.17	20.00	23.35	23.39	23.40	24.00
HSDPA Subtest-3	19.24	19.33	19.31	20.50	18.84	18.83	18.85	20.00	22.89	22.93	22.99	24.00
HSDPA Subtest-4	19.29	19.30	19.45	20.50	18.79	18.79	18.70	20.00	22.93	22.91	22.88	24.00
DC-HSDPA Subtest-1	19.75	19.90	20.03	20.50	19.23	19.29	19.38	20.00	23.35	23.38	23.39	24.00
DC-HSDPA Subtest-2	19.77	19.86	20.00	20.50	19.45	19.31	19.24	20.00	23.38	23.43	23.43	24.00
DC-HSDPA Subtest-3	19.32	19.38	19.58	20.50	18.73	18.72	18.78	20.00	22.86	22.95	22.90	24.00
DC-HSDPA Subtest-4	19.34	19.40	19.40	20.50	18.86	18.86	18.88	20.00	22.86	22.88	22.95	24.00
HSUPA Subtest-1	17.98	18.07	18.09	19.50	17.59	17.49	17.48	19.00	21.57	21.58	21.60	23.00
HSUPA Subtest-2	17.72	17.72	17.89	19.50	17.09	17.33	17.19	19.00	21.33	21.37	21.30	23.00
HSUPA Subtest-3	18.71	18.61	18.78	19.50	18.08	18.16	17.96	19.00	22.16	22.18	22.19	23.00
HSUPA Subtest-4	17.60	17.57	17.55	19.50	17.13	17.08	17.11	19.00	21.20	21.18	21.19	23.00
HSUPA Subtest-5	18.54	18.67	18.81	19.50	18.07	18.18	18.06	19.00	22.20	22.21	22.25	23.00
HSPA+ Subtest-1	17.95	17.91	18.02	19.50	17.38	17.38	17.32	19.00	21.44	21.52	21.50	23.00

LTE DSI-1

Ann1

LTE Band 2									
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max Time-up (dBm)		
		Channel Frequency (MHz)	18750 18800	18900 18950	19100 19150				
20M	QPSK	15QAM	1	0	23.71	23.76	23.71	25.5	
			1	50	24.11	24.10	24.04	25.5	
			1	99	23.68	23.66	23.76	25.5	
			50	0	23.04	23.02	23.02	24.5	
			50	25	23.05	23.03	23.04	24.5	
			50	50	23.02	23.01	22.88	24.5	
			100	0	23.07	23.06	22.96	24.5	
			1	0	23.05	23.01	23.08	24.5	
	64QAM	15QAM	1	50	23.37	23.45	23.29	24.5	
			1	99	23.01	22.98	22.92	24.5	
			50	0	22.00	22.13	22.05	23.5	
			50	25	22.09	22.17	22.10	23.5	
			50	50	22.07	22.11	21.93	23.5	
			100	0	22.05	22.08	21.99	23.5	
			1	0	21.92	21.96	21.97	23.5	
			1	50	22.30	22.31	22.33	23.5	
5M	QPSK	15QAM	1	99	21.91	21.91	21.98	23.5	
			50	0	20.99	21.11	21.05	22.5	
			50	25	21.06	21.14	21.09	22.5	
			50	50	21.08	21.09	21.00	22.5	
			100	0	21.01	21.10	21.02	22.5	
			1	0	21.92	21.98	21.97	23.5	
			1	50	22.30	22.31	22.33	23.5	
			1	74	21.70	21.71	21.73	23.5	
	64QAM	15QAM	36	0	20.86	20.79	20.84	22.5	
			36	19	20.83	20.85	20.80	22.5	
			36	39	21.07	20.95	20.93	22.5	
			75	0	20.86	20.89	20.79	22.5	
			1	0	21.69	21.78	21.65	23.5	
			1	24	22.09	21.88	22.13	23.5	
			1	49	21.70	21.70	21.63	23.5	
			1	74	21.70	21.73	21.77	23.5	
10M	QPSK	15QAM	36	0	20.86	20.79	20.84	22.5	
			36	19	20.83	20.85	20.80	22.5	
			36	39	21.07	20.98	20.90	22.5	
			75	0	20.86	20.89	20.79	22.5	
			1	0	21.69	21.78	21.65	23.5	
			1	24	22.09	21.88	22.13	23.5	
			1	49	21.70	21.70	21.63	23.5	
			1	74	21.70	21.73	21.77	23.5	
	64QAM	15QAM	36	0	20.86	20.79	20.84	22.5	
			36	19	20.83	20.85	20.80	22.5	
			36	39	21.07	20.98	20.90	22.5	
			75	0	20.86	20.89	20.79	22.5	
			1	0	21.69	21.78	21.65	23.5	
			1	24	22.09	21.88	22.13	23.5	
			1	49	21.70	21.70	21.63	23.5	
			1	74	21.70	21.73	21.77	23.5	
5M	QPSK	15QAM	36	0	23.84	23.81	23.75	25.5	
			1	12	24.18	24.05	23.83	25.5	
			1	24	23.93	23.74	23.79	25.5	
			12	0	23.08	22.95	22.91	24.5	
			12	6	22.99	22.89	22.89	24.5	
			12	13	23.06	22.99	22.91	24.5	
			25	0	22.90	23.11	22.90	24.5	
			1	0	22.77	22.77	22.57	24.5	
	64QAM	15QAM	1	12	22.94	22.85	22.83	24.5	
			1	24	22.69	22.66	22.59	24.5	
			12	0	21.96	21.94	21.82	23.5	
			12	6	21.91	21.86	21.93	23.5	
			12	13	21.99	22.09	21.88	23.5	
			25	0	22.01	21.94	21.96	23.5	
			1	0	21.65	21.76	21.59	23.5	
			1	12	22.00	21.90	22.11	23.5	
3M	QPSK	15QAM	1	24	21.69	21.66	21.64	23.5	
			12	0	20.87	20.89	20.78	22.5	
			12	6	20.82	20.90	20.88	22.5	
			12	13	20.96	20.84	20.90	22.5	
			25	0	20.92	20.90	20.81	22.5	
			1	0	22.69	22.70	22.64	24.5	
			1	7	23.01	22.82	22.72	24.5	
			1	14	22.57	22.68	22.53	24.5	
	64QAM	15QAM	8	0	23.00	23.04	22.91	24.5	
			8	3	21.95	21.96	21.97	23.5	
			8	7	21.97	22.10	21.87	23.5	
			15	0	21.97	21.82	21.95	23.5	
			1	0	21.72	21.79	21.62	23.5	
			1	7	22.00	21.90	22.10	23.5	
			1	14	21.61	21.65	21.72	23.5	
			8	0	20.94	20.88	20.74	22.5	
1.4M	QPSK	15QAM	8	3	20.85	20.87	20.84	22.5	
			8	7	21.01	20.88	20.92	22.5	
			15	0	20.92	20.89	20.79	22.5	
			1	0	21.72	21.79	21.62	23.5	
			1	7	22.00	21.90	22.10	23.5	
			1	14	21.61	21.65	21.72	23.5	
			3	0	20.94	20.88	20.74	22.5	
			3	1	21.72	21.84	21.83	23.5	
	64QAM	15QAM	3	1	21.85	21.95	21.88	23.5	
			3	8	21.82	21.84	21.80	23.5	
			3	0	20.97	21.06	20.93	22.5	
			1	0	22.02	22.01	21.96	23.5	
			1	5	21.86	21.82	21.90	23.5	
			1	2	22.27	22.22	22.19	23.5	
			3	1	21.72	21.84	21.83	23.5	
			3	1	21.85	21.95	21.88	23.5	

LTE CSI-2
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		LTE Band 2						
BW	Modulation	RB Size	RB Offset	Low	Mid	High		Max. Tune-up (dBm)
		Channel	Frequency (MHz)	1865	1880	1900	1910	
20M	QPSK	1	0	23.38	23.42	23.33	25	25.5
		1	50	23.60	23.44	23.43	25	
		1	99	23.23	23.42	23.18	25	
		50	0	22.79	22.81	22.83	24.5	
		50	25	22.89	22.83	22.85	24.5	
		50	50	22.82	22.71	22.76	24.5	
	16QAM	100	0	22.91	22.80	22.87	24.5	24.5
		1	0	22.78	22.90	22.82	24.5	
		1	50	23.16	23.34	23.12	24.5	
		1	99	22.90	22.73	22.88	24.5	
		50	0	21.85	21.94	21.85	23.5	
		50	50	21.91	21.92	21.87	23.5	
64QAM	100	0	21.90	21.88	21.84	23.5	23.5	
	1	0	21.76	21.79	21.74	23.5		
	1	50	22.18	22.02	22.12	23.5		
	1	99	21.79	21.75	21.83	23.5		
	50	0	20.97	20.92	20.87	22.5		
	50	25	20.91	21.02	21.03	22.5		
15M	QPSK	36	0	22.70	22.78	22.84	24.5	24.5
		36	19	22.73	22.78	22.75	24.5	
		36	39	22.92	22.85	22.86	24.5	
		75	0	22.88	22.73	22.82	24.5	
		1	0	22.67	22.77	22.68	24.5	
		1	37	23.05	23.25	23.06	24.5	
	16QAM	1	74	22.89	22.69	22.81	24.5	24.5
		36	0	21.80	21.93	21.70	23.5	
		36	19	21.80	21.98	21.79	23.5	
		36	39	21.82	21.81	21.63	23.5	
		75	0	21.84	21.72	21.76	23.5	
		1	0	21.85	21.69	21.82	23.5	
64QAM	1	37	22.06	21.93	22.04	23.5	23.5	
	1	74	21.70	21.66	21.82	23.5		
	36	0	20.85	20.88	20.83	22.5		
	36	19	20.85	20.89	20.84	22.5		
	36	39	20.88	20.88	20.79	22.5		
	75	0	20.79	20.88	20.70	22.5		
10M	QPSK	Channel	1865	1880	1900	1910	Max. Tune-up (dBm)	
		Frequency (MHz)	1865	1880	1880	1907.5		
		1	0	23.34	23.40	23.19	25	
		1	24	23.36	23.33	23.29	25	
		1	49	23.16	23.34	23.08	25	
		25	0	22.67	22.69	22.90	24.5	
	16QAM	25	12	22.83	22.68	22.85	24.5	
		25	25	22.90	22.82	22.67	24.5	
		50	0	22.84	22.72	22.81	24.5	
		1	0	22.75	22.75	22.77	24.5	
		1	24	23.15	23.20	22.98	24.5	
		1	49	22.88	22.69	22.73	24.5	
64QAM	25	0	21.81	21.81	21.84	23.5		
	25	12	21.82	21.93	21.84	23.5		
	25	25	21.84	21.89	21.54	23.5		
	50	0	21.78	21.78	21.71	23.5		
	1	0	21.70	21.78	21.62	23.5		
	1	24	21.99	21.93	22.02	23.5		
5M	QPSK	1	49	21.76	21.72	21.72	23.5	23.5
		25	0	20.87	20.78	20.83	22.5	
		25	12	20.81	20.88	20.98	22.5	
		25	25	20.84	20.83	20.71	22.5	
		50	0	20.79	20.93	20.80	22.5	
		Channel	1862.5	1890	1907.5	1917.5	Max. Tune-up (dBm)	
	16QAM	Frequency (MHz)	1862.5	1890	1890	1907.5		
		1	0	23.24	23.40	23.25	25	
		1	12	23.39	23.37	23.38	25	
		1	24	23.09	23.40	23.17	25	
		12	0	22.66	22.77	22.82	24.5	
		12	6	22.83	22.78	22.85	24.5	
64QAM	12	13	22.89	22.81	22.84	24.5	24.5	
	25	0	22.79	22.76	22.79	24.5		
	1	0	22.72	22.75	22.80	24.5		
	1	12	23.01	23.26	23.00	24.5		
	1	24	22.87	22.71	22.83	24.5		
	12	6	21.78	21.79	21.81	23.5		
16QAM	12	6	21.82	21.95	21.83	23.5	23.5	
	12	13	21.89	21.82	21.53	23.5		
	25	0	21.78	21.83	21.73	23.5		
	1	0	21.62	21.69	21.66	23.5		
	1	12	22.01	21.97	22.04	23.5		
	1	24	21.71	21.74	21.80	23.5		
64QAM	12	0	20.96	20.85	20.80	22.5	22.5	
	12	6	20.76	20.99	20.90	22.5		
	12	13	20.82	20.86	20.71	22.5		
	25	0	20.80	20.87	20.82	22.5		
	Channel	1861.5	1890	1907.5	1917.5	Max. Tune-up (dBm)		
	Frequency (MHz)	1861.5	1890	1890	1907.5			
QPSK	1	0	23.35	23.33	23.27	25	25.5	
	1	7	23.37	23.38	23.42	25		
	1	14	23.12	23.32	23.16	25		
	8	0	22.74	22.74	22.82	24.5		
	8	3	22.74	22.73	22.88	24.5		
	8	7	22.95	22.79	22.65	24.5		
16QAM	15	0	22.85	22.67	22.80	24.5	24.5	
	1	0	22.66	22.67	22.70	24.5		
	1	7	23.05	23.25	23.11	24.5		
	1	14	22.86	22.58	22.82	24.5		
	8	0	21.84	21.80	21.73	23.5		
	8	3	21.73	21.93	21.86	23.5		
64QAM	8	7	21.81	21.78	21.57	23.5	23.5	
	15	0	21.83	21.82	21.79	23.5		
	1	0	21.68	21.70	21.73	23.5		
	1	7	21.85	21.98	21.67	23.5		
	1	14	21.75	21.71	21.73	23.5		
	8	0	20.96	20.80	20.74	22.5		
3M	QPSK	8	3	20.83	20.92	20.96	22.5	22.5
		8	7	20.81	20.85	20.82	22.5	
		15	0	20.67	20.85	20.75	22.5	
		Channel	1867	1890	1907.5	1917.5	Max. Tune-up (dBm)	
		Frequency (MHz)	1867	1890	1890	1907.5		
		1	0	23.37	23.37	23.20	25	
	16QAM	1	2	23.40	23.43	23.42	25	25.5
		1	5	23.08	23.27	23.05	25	
		3	0	23.13	23.11	23.23	25	
		3	1	23.14	23.18	23.18	25	
		3	3	23.34	23.34	23.36	25	
		6	0	22.87	22.86	22.79	24.5	
64QAM	1	0	22.73	22.75	22.76	24.5	24.5	
	1	2	23.13	23.32	22.98	24.5		
	1	5	22.86	22.62	22.87	24.5		
	3	0	22.85	22.70	22.83	24.5		
	3	1	22.69	22.85	22.84	24.5		
	3	3	22.72	22.67	22.53	24.5		
1.4M	QPSK	6	0	21.76	21.77	21.80	23.5	23.5
		1	0	21.65	21.70	21.69	23.5	
		1	2	21.79	21.62	22.00	23.5	
		1	5	21.72	21.62	21.76	23.5	
		3	0	21.79	21.67	21.68	23.5	
		3	1	21.64	21.80	21.78	23.5	
64QAM	3	3	21.66	21.65	21.63	23.5	23.5	
	6	0	20.73	20.84	20.80	22.5		

		LTE Band 4						
BW	Modulation	RB Size	RB Offset	Low	Mid	High		
		Channel	Frequency (MHz)	1720	1732.5	1745	Max. Time-up (dBm)	
20M	QPSK	1	0	23.78	23.68	23.79	25.5	
		1	50	24.11	24.15	24.20	25.5	
		1	99	23.90	23.80	23.78	25.5	
		50	0	23.23	23.18	23.21	24.5	
		50	25	23.27	23.21	23.25	24.5	
		50	50	23.26	23.23	23.25	24.5	
	16QAM	100	0	23.21	23.22	23.23	24.5	
		1	0	23.08	23.12	23.15	24.5	
		1	50	24.44	24.37	24.40	24.5	
		1	98	23.21	23.10	23.17	24.5	
		50	0	22.22	22.18	22.22	23.5	
		50	25	22.25	22.26	22.26	23.5	
64QAM	50	50	22.24	22.24	22.21	23.5		
	100	0	22.17	22.17	22.22	23.5		
	1	50	22.36	22.44	22.43	23.5		
	1	99	22.07	22.13	22.09	23.5		
	50	0	21.13	21.17	21.18	22.5		
	50	25	21.22	21.18	21.22	22.5		
30M	QPSK	50	50	21.18	21.23	21.19	22.5	
		100	0	21.14	21.20	21.27	22.5	
		Channel	1720	1717.5	1720.5	1727.5	Max. Time-up (dBm)	
		Frequency (MHz)	1716	1732.5	1745	1747.5		
		1	0	23.88	23.85	23.71	25.5	
		1	37	24.20	24.20	23.83	25.5	
	16QAM	1	74	23.90	23.82	23.68	25.5	
		36	0	22.98	22.90	22.89	24.5	
		36	19	23.04	22.87	22.82	24.5	
		36	39	23.18	23.03	22.91	24.5	
		75	0	22.90	22.84	22.84	24.5	
		1	0	22.77	22.76	22.81	24.5	
64QAM	1	37	22.91	22.91	22.74	24.5		
	1	74	22.67	22.55	22.50	24.5		
	36	0	21.99	21.88	21.81	23.5		
	36	19	21.98	21.80	21.80	23.5		
	36	39	21.99	22.03	21.78	23.5		
	75	0	21.60	21.69	21.97	23.5		
40M	QPSK	1	0	22.86	21.75	21.58	23.5	
		1	37	22.01	21.97	22.13	23.5	
		1	74	21.74	21.72	21.74	23.5	
		36	0	20.90	20.76	20.83	22.5	
		36	19	20.91	20.92	20.90	22.5	
		36	39	20.99	20.84	20.90	22.5	
	16QAM	75	0	20.90	20.92	20.77	22.5	
		Channel	1720	1717.5	1720.5	1727.5	Max. Time-up (dBm)	
		Frequency (MHz)	1716	1732.5	1745	1747.5		
		1	0	23.82	23.90	23.83	25.5	
		1	24	24.00	24.04	23.82	25.5	
		1	49	23.89	23.75	23.76	25.5	
10M	QPSK	25	0	23.80	23.80	23.80	24.5	
		25	12	23.03	22.95	22.88	24.5	
		25	25	23.16	23.02	22.83	24.5	
		50	0	22.96	23.08	22.94	24.5	
		1	0	22.67	22.79	22.59	24.5	
		1	24	22.81	22.82	22.82	24.5	
16QAM	1	49	22.61	22.64	22.62	24.5		
	25	0	21.98	21.90	21.85	23.5		
	25	12	21.89	21.95	21.95	23.5		
	25	25	21.97	21.98	21.88	23.5		
	50	0	22.26	22.18	22.14	23.5		
	1	0	21.73	21.68	21.62	23.5		
64QAM	1	24	22.08	21.99	22.09	23.5		
	1	49	21.71	21.71	21.71	23.5		
	25	0	20.80	20.88	20.75	22.5		
	25	12	20.94	20.88	20.88	22.5		
	25	25	20.97	20.89	20.83	22.5		
	50	0	20.92	20.98	20.79	22.5		
50M	QPSK	Channel	1720	1717.5	1720.5	1727.5	Max. Time-up (dBm)	
		Frequency (MHz)	1716	1732.5	1745	1747.5		
		1	0	23.88	23.85	23.62	25.5	
		1	12	24.21	24.06	23.92	25.5	
		1	24	23.93	23.76	23.79	25.5	
		12	0	23.03	22.85	22.99	24.5	
	16QAM	12	6	23.00	22.95	22.86	24.5	
		12	13	23.08	23.09	22.94	24.5	
		25	0	22.97	23.04	22.93	24.5	
		1	0	22.74	22.70	22.70	24.5	
		1	12	22.94	22.84	22.72	24.5	
		1	24	22.68	22.68	22.58	24.5	
64QAM	12	6	22.86	22.86	22.81	24.5		
	12	13	22.94	22.94	22.81	24.5		
	25	0	21.87	21.94	21.91	23.5		
	12	13	21.90	21.98	21.82	23.5		
	25	0	22.09	21.86	21.94	23.5		
	1	0	21.63	21.70	21.55	23.5		
70M	QPSK	1	0	21.99	21.88	22.15	23.5	
		1	24	21.70	21.60	21.68	23.5	
		12	0	20.83	20.82	20.73	22.5	
		12	6	20.82	20.88	20.88	22.5	
		12	13	20.12	20.88	20.92	22.5	
		25	0	21.00	21.00	20.86	22.5	
	16QAM	Channel	1720	1717.5	1720.5	1727.5	Max. Time-up (dBm)	
		Frequency (MHz)	1716	1732.5	1745	1747.5		
		1	0	23.88	23.79	23.62	25.5	
		1	7	24.25	24.13	23.86	25.5	
		1	14	23.96	23.84	23.72	25.5	
		8	0	23.10	23.07	23.01	24.5	
64QAM	8	3	22.99	22.97	22.88	24.5		
	8	7	23.09	23.05	22.94	24.5		
	15	0	23.02	22.98	22.84	24.5		
	1	0	22.68	22.80	22.58	24.5		
	1	7	22.94	22.94	22.71	24.5		
	1	14	22.58	22.67	22.49	24.5		
90M	QPSK	8	0	22.00	21.87	21.94	23.5	
		8	3	21.88	21.83	21.83	23.5	
		8	7	22.00	22.00	21.85	23.5	
		15	0	22.05	21.94	22.04	23.5	
		1	0	21.62	21.78	21.60	23.5	
		1	7	21.99	21.98	22.09	23.5	
	16QAM	1	14	21.73	21.70	21.71	23.5	
		8	0	20.80	20.80	20.76	22.5	
		8	3	20.83	20.82	20.80	22.5	
		8	7	20.98	20.84	20.89	22.5	
		15	0	20.86	20.97	20.80	22.5	
		Channel	1720	1717.5	1720.5	1727.5	Max. Time-up (dBm)	
120M	QPSK	Frequency (MHz)	1716	1732.5	1745	1747.5		
		1	0	23.89	23.76	23.74	25.5	
		1	2	24.01	24.05	24.15	25.5	
		1	5	23.81	23.65	23.77	25.5	
		3	0	23.96	23.95	23.89	25.5	
		3	1	24.07	24.05	24.01	25.5	
	16QAM	3	3	23.91	23.91	23.81	25.5	
		0	0	23.15	23.08	23.16	24.5	
		1	2	23.33	23.45	23.43	24.5	
		5	5	23.68	23.77	23.64	24.5	
		3	3	22.93	22.91	22.93	24.5	
		3	1	22.93	22.96	22.93	24.5	
64QAM	3	3	23.03	23.04	22.89	24.5		
	0	0	22.10	22.14	22.20	23.5		
	1	0	22.97	21.95	22.01	23.5		
	1	2	22.29	22.29	22.29	23.5		
	1	5	21.94	22.00	22.06	23.5		
	3	3	21.86	21.92	21.94	23.5		

LTE Band 2										
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Time-up (dBm)			
		Channel	Frequency (MHz)	18700	18900	19100				
20M	QPSK	1	0	20.28	20.42	20.27	22			
		1	50	20.08	20.54	20.49	22			
		1	99	20.29	20.42	20.33	22			
		50	0	20.24	20.19	20.31	22			
		50	25	20.38	20.30	20.35	22			
		50	50	20.26	20.21	20.17	22			
		100	0	20.43	20.28	20.22	22			
		1	0	20.24	20.28	20.29	22			
		1	50	20.54	20.40	20.39	22			
		1	99	20.31	20.20	20.22	22			
		50	0	20.29	20.38	20.24	22			
		50	25	20.31	20.43	20.35	22			
	16QAM	50	50	20.28	20.31	20.11	22			
		100	0	20.22	20.25	20.24	22			
		40M	1	0	20.21	20.21	20.17	22		
			1	50	20.50	20.32	20.17	22		
			1	99	20.20	20.19	20.16	22		
			50	0	20.24	20.39	20.27	22		
			50	25	20.31	20.41	20.40	22		
			50	50	20.37	20.35	20.29	22		
			100	0	20.24	20.29	20.23	22		
			BW	Channel	18675	18800	19100	Max. Time-up (dBm)		
				Frequency (MHz)	1867.5	1880	1902.5			
				QPSK	1	0	20.15	20.27	20.13	22
1	37				20.46	20.40	20.48	22		
1	74				20.15	20.35	20.23	22		
36	0	20.09			20.07	20.28	22			
36	19	20.32			20.23	20.28	22			
36	39	20.11			20.15	20.07	22			
75	0	20.29			20.23	20.17	22			
1	0	20.12			20.16	20.15	22			
16QAM	1	37			20.48	20.34	20.30	22		
	1	74			20.21	20.07	20.09	22		
	36	0			20.21	20.28	20.21	22		
	36	19			20.17	20.35	20.31	22		
	36	39		20.15	20.22	20.04	22			
	75	0		20.11	20.15	20.18	22			
	40M	1	0	20.12	20.07	20.13	22			
		1	37	20.35	20.25	20.02	22			
		1	74	20.08	20.08	20.05	22			
		36	0	20.16	20.26	20.21	22			
		36	19	20.19	20.29	20.31	22			
		36	39	20.24	20.20	20.18	22			
75		0	20.15	20.15	20.29	22				
BW		Channel	18825	18900	19100	Max. Time-up (dBm)				
		Frequency (MHz)	1882.5	1888	1902.5					
		QPSK	1	0	20.15	20.33	20.12	22		
			1	24	20.46	20.44	20.48	22		
			1	49	20.26	20.30	20.27	22		
	25		0	20.19	20.04	20.22	22			
	25		12	20.23	20.16	20.20	22			
	25		25	20.19	20.16	20.04	22			
	50		0	20.37	20.13	20.15	22			
	1		0	20.15	20.16	20.22	22			
	16QAM		1	24	20.53	20.36	20.28	22		
			1	49	20.28	20.15	20.21	22		
			25	0	20.20	20.27	20.19	22		
			25	12	20.21	20.33	20.32	22		
		25	25	20.27	20.18	20.13	22			
		50	0	20.12	20.13	20.15	22			
40M		1	0	20.17	20.12	20.08	22			
		1	24	20.37	20.20	20.05	22			
		1	49	20.15	20.10	20.13	22			
		25	0	20.21	20.37	20.19	22			
		25	12	20.21	20.29	20.28	22			
		25	25	20.36	20.27	20.27	22			
	50	0	20.19	20.16	20.25	22				
	BW	Channel	18925	18900	19175	Max. Time-up (dBm)				
		Frequency (MHz)	1892.5	1888	1907.5					
		QPSK	1	0	20.25	20.27	20.15	22		
			1	12	20.46	20.44	20.48	22		
			1	24	20.26	20.30	20.27	22		
12			0	20.14	20.06	20.21	22			
12			6	20.26	20.26	20.33	22			
12			13	20.25	20.07	20.09	22			
25			0	20.35	20.23	20.19	22			
1			0	20.12	20.16	20.22	22			
16QAM			1	12	20.40	20.29	20.28	22		
			1	24	20.18	20.12	20.13	22		
			12	0	20.27	20.31	20.15	22		
			12	6	20.21	20.39	20.31	22		
		12	13	20.21	20.16	20.11	22			
		25	0	20.13	20.17	20.10	22			
	40M	1	0	20.07	20.06	20.03	22			
		1	12	20.43	20.17	20.03	22			
		1	24	20.12	20.14	20.15	22			
		12	0	20.22	20.35	20.14	22			
		12	6	20.16	20.40	20.25	22			
		12	13	20.34	20.32	20.19	22			
25		0	20.15	20.22	20.28	22				
BW		Channel	18815	18900	19100	Max. Time-up (dBm)				
		Frequency (MHz)	1881.5	1888	1900					
		QPSK	1	0	20.19	20.30	20.17	22		
			1	7	20.55	20.41	20.44	22		
			1	14	20.16	20.38	20.21	22		
	8		0	20.14	20.07	20.22	22			
	8		3	20.36	20.17	20.22	22			
	8		7	20.14	20.08	20.06	22			
	15		0	20.34	20.14	20.08	22			
	1		0	20.14	20.16	20.17	22			
	16QAM		1	7	20.47	20.25	20.28	22		
			1	14	20.16	20.07	20.12	22		
			8	0	20.17	20.24	20.15	22		
			8	3	20.20	20.36	20.23	22		
		8	7	20.17	20.27	20.45	22			
		15	0	20.21	20.16	20.21	22			
40M		1	0	20.09	20.20	20.09	22			
		1	7	20.42	20.21	20.11	22			
		1	14	20.07	20.11	20.14	22			
		8	0	20.15	20.24	20.23	22			
		8	3	20.23	20.28	20.28	22			
		8	7	20.22	20.22	20.20	22			
	15	0	20.22	20.15	20.21	22				
	BW	Channel	18807	18900	19100	Max. Time-up (dBm)				
		Frequency (MHz)	1880.7	1888	1900					
		QPSK	1	0	20.19	20.32	20.21	22		
			1	2	20.46	20.44	20.48	22		
			1	5	20.22	20.40	20.32	22		
3			0	20.20	20.10	20.30	22			
3			1	20.34	20.17	20.30	22			
3			3	20.15	20.15	20.16	22			
6			0	20.42	20.27	20.14	22			
1			0	20.11	20.16	20.14	22			
16QAM			1	2	20.42	20.35	20.31	22		
			1	5	20.24	20.10	20.20	22		
			3	0	20.21	20.31	20.12	22		
			3	1	20.17	20.33	20.29	22		
		3	3	20.27	20.26	20.10	22			
		6	0	20.17	20.14	20.10	22			
	40M	1	0	20.13	20.13	20.12	22			
		1	2	20.36	20.19	20.08	22			
		1	5	20.16	20.18	20.06	22			
		3	0	20.14	20.31	20.16	22			
		3	1	20.18	20.33	20.26	22			
		3	3	20.30	20.30	20.28	22			
6		0	20.23	20.16	20.32	22				

GSM&WCDMA Default

Ant4

Band	GSM850				GSM1900			
Channel	128	189	251	Max. Tune-up Power (dBm)	512	661	810	Max. Tune-up Power (dBm)
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.20	32.37	32.43	33.50	29.30	29.41	29.44	30.50
GPRS 1Tx Slot	32.19	32.31	32.36	33.50	29.23	29.40	29.41	30.50
GPRS 2Tx Slot	28.81	28.92	29.05	30.00	25.57	25.77	25.99	26.50
GPRS 3Tx Slot	27.32	27.45	27.62	28.50	23.73	23.96	24.26	25.00
GPRS 4Tx Slot	26.27	26.40	26.54	27.50	22.77	23.00	23.33	24.00
EDGE 1Tx Slot	26.88	26.94	26.77	28.00	25.94	26.10	26.05	27.00
EDGE 2Tx Slot	23.63	23.66	23.42	25.00	22.89	23.12	23.04	24.00
EDGE 3Tx Slot	21.86	21.88	21.68	23.00	21.10	21.46	21.32	22.00
EDGE 4Tx Slot	21.03	20.98	21.04	22.00	20.16	20.35	20.28	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.20	23.37	23.43	24.50	20.30	20.41	20.44	21.50
GPRS 1Tx Slot	23.19	23.31	23.36	24.50	20.23	20.40	20.41	21.50
GPRS 2Tx Slot	22.81	22.92	23.05	24.00	19.57	19.77	19.99	20.50
GPRS 3Tx Slot	23.06	23.19	23.36	24.24	19.47	19.70	20.00	20.74
GPRS 4Tx Slot	23.27	23.40	23.54	24.50	19.77	20.00	20.33	21.00
EDGE 1Tx Slot	17.88	17.94	17.77	19.00	16.94	17.10	17.05	18.00
EDGE 2Tx Slot	17.63	17.66	17.42	19.00	16.89	17.12	17.04	18.00
EDGE 3Tx Slot	17.60	17.62	17.42	18.74	16.84	17.20	17.06	17.74
EDGE 4Tx Slot	18.03	17.98	18.04	19.00	17.16	17.35	17.28	18.00

Band	WCDMA II			WCDMA II	WCDMA IV			WCDMA IV	WCDMA V			WCDMA V
TX Channel	9262	9400	9538	Max. Tune-up Power (dBm)	1312	1413	1513	Max. Tune-up Power (dBm)	4132	4182	4233	Max. Tune-up Power (dBm)
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	24.28	24.36	24.45	25.50	24.46	24.44	24.41	25.50	24.17	24.19	24.25	25.50
HSDPA Subtest-1	23.41	23.45	23.61	24.00	23.64	23.61	23.54	24.00	23.26	23.35	23.43	24.00
HSDPA Subtest-2	23.39	23.50	23.59	24.00	23.56	23.58	23.56	24.00	23.37	23.36	23.42	24.00
HSDPA Subtest-3	22.91	22.97	23.14	24.00	23.16	23.12	23.03	24.00	22.77	22.80	22.88	24.00
HSDPA Subtest-4	22.98	23.06	23.07	24.00	23.15	23.11	23.06	24.00	22.84	22.78	22.87	24.00
DC-HSDPA Subtest-1	23.48	23.47	23.59	24.00	23.59	23.56	23.58	24.00	23.33	23.35	23.35	24.00
DC-HSDPA Subtest-2	23.45	23.53	23.61	24.00	23.65	23.57	23.54	24.00	23.34	23.32	23.39	24.00
DC-HSDPA Subtest-3	22.88	23.02	23.12	24.00	23.13	23.12	23.08	24.00	22.87	22.89	22.93	24.00
DC-HSDPA Subtest-4	22.95	22.96	23.07	24.00	23.12	23.09	23.04	24.00	22.79	22.81	22.90	24.00
HSUPA Subtest-1	21.59	21.68	21.84	23.00	21.78	21.76	21.71	23.00	21.51	21.55	21.58	23.00
HSUPA Subtest-2	21.32	21.45	21.49	23.00	21.52	21.44	21.41	23.00	21.16	21.29	21.27	23.00
HSUPA Subtest-3	22.21	22.35	22.43	23.00	22.43	22.35	22.40	23.00	22.13	22.10	22.24	23.00
HSUPA Subtest-4	21.17	21.08	21.18	23.00	21.23	21.14	21.11	23.00	21.10	21.16	21.20	23.00
HSUPA Subtest-5	22.22	22.34	22.40	23.00	22.36	22.33	22.33	23.00	22.13	22.08	22.15	23.00
HSPA+ Subtest-1	21.54	21.62	21.74	23.00	21.65	21.67	21.71	23.00	21.38	21.41	21.55	23.00

LTE Default

Ann 4

LTE Band 2										
BW	Modulation	RB Size	RB Offset	Low	Mid	High	SCPP	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Channel	Channel	1910	1930	1910	MPR			
		Frequency (MHz)	Frequency (MHz)	1910	1930	1910	MPR			
20M	QPSK	1	0	23.70	23.75	23.77	0	25.5		
		1	50	24.15	24.14	24.13	0	25.5		
		1	99	23.72	23.79	23.77	0	25.5		
		50	0	22.96	23.02	23.01	1	24.5		
		50	25	23.10	23.09	23.05	1	24.5		
	16QAM	50	50	23.07	23.08	23.04	1	24.5		
		100	0	23.08	23.07	23.07	1	24.5		
		1	0	22.90	22.96	23.10	1	24.5		
		1	50	23.36	23.48	23.40	1	24.5		
		1	99	23.04	22.99	23.09	1	24.5		
40QAM	16QAM	50	0	22.91	22.98	23.02	2	23.5		
		50	25	22.12	22.23	22.16	2	23.5		
		50	50	22.13	22.14	21.92	2	23.5		
		100	0	22.07	22.16	21.99	2	23.5		
		1	0	21.87	22.00	21.98	2	23.5		
	64QAM	1	50	22.30	22.39	22.38	2	23.5		
		1	99	22.05	21.96	22.03	2	23.5		
		50	0	20.98	21.16	21.04	3	22.5		
		50	25	21.08	21.20	21.13	3	22.5		
		50	50	21.15	21.14	20.91	3	22.5		
10M	QPSK	Channel	Channel	1987.5	1990	1912.5	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1987.5	1990	1912.5	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.61	23.61	23.71	0	25.5		
		1	37	24.01	24.01	24.01	0	25.5		
		1	74	23.60	23.60	23.69	0	25.5		
	16QAM	36	0	22.90	23.05	23.00	1	24.5		
		36	19	23.05	23.01	22.95	1	24.5		
		36	36	22.91	23.00	22.97	1	24.5		
		75	0	23.04	23.04	22.94	1	24.5		
		1	0	22.75	22.85	22.97	1	24.5		
64QAM	16QAM	1	37	23.26	23.42	23.39	1	24.5		
		1	74	22.89	22.88	22.97	1	24.5		
		36	0	21.88	22.15	21.95	2	23.5		
		36	19	22.00	22.20	22.14	2	23.5		
		36	36	22.00	22.00	21.80	2	23.5		
	64QAM	75	0	21.97	22.08	21.96	2	23.5		
		1	0	21.82	21.99	21.90	2	23.5		
		1	37	22.29	22.28	22.24	2	23.5		
		1	74	22.01	21.92	21.96	2	23.5		
		36	0	20.84	21.09	20.89	3	22.5		
BW	Modulation	Channel	Channel	1980	1990	1910	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1980	1990	1910	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.70	23.70	23.77	0	25.5		
		1	24	24.11	23.99	23.99	0	25.5		
		1	49	23.71	23.72	23.76	0	25.5		
	QPSK	25	0	23.08	23.01	22.86	1	24.5		
		25	12	23.08	23.06	23.02	1	24.5		
		25	25	22.95	23.07	23.01	1	24.5		
		50	0	23.00	22.91	22.87	1	24.5		
		1	0	22.85	22.86	22.97	1	24.5		
10M	16QAM	1	24	23.27	23.40	23.37	1	24.5		
		1	49	22.95	22.90	23.02	1	24.5		
		25	0	21.96	22.13	21.90	2	23.5		
		25	12	22.08	22.11	22.06	2	23.5		
		25	25	22.00	22.05	21.79	2	23.5		
	64QAM	50	0	21.97	22.14	21.98	2	23.5		
		1	0	21.81	21.89	21.97	2	23.5		
		1	24	22.15	22.25	22.24	2	23.5		
		1	49	21.96	21.85	21.92	2	23.5		
		25	12	20.95	21.11	21.02	3	22.5		
BW	Modulation	Channel	Channel	1980	1990	1910	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1980	1990	1910	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.62	23.64	23.70	0	25.5		
		1	12	24.09	24.01	23.98	0	25.5		
		1	24	23.68	23.71	23.69	0	25.5		
	QPSK	12	0	22.85	23.00	22.88	1	24.5		
		12	6	22.97	23.02	23.02	1	24.5		
		12	13	23.03	22.99	22.99	1	24.5		
		25	0	23.02	22.98	22.94	1	24.5		
		1	0	22.87	22.90	23.01	1	24.5		
5M	16QAM	1	12	23.25	23.46	23.25	1	24.5		
		1	24	23.01	23.07	23.08	1	24.5		
		12	0	21.98	22.17	21.91	2	23.5		
		12	6	22.00	22.12	21.85	2	23.5		
		12	13	22.00	22.12	21.83	2	23.5		
	64QAM	25	0	21.90	22.03	21.91	2	23.5		
		1	0	21.77	21.86	21.85	2	23.5		
		1	12	22.24	22.34	22.35	2	23.5		
		1	24	21.93	21.81	21.88	2	23.5		
		12	0	20.97	21.13	20.93	3	22.5		
BW	Modulation	Channel	Channel	1980	1990	1910	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1980	1990	1910	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.67	23.70	23.70	0	25.5		
		1	7	24.00	24.11	24.04	0	25.5		
		1	14	23.60	23.66	23.67	0	25.5		
	QPSK	8	0	22.87	23.02	22.90	1	24.5		
		8	3	23.04	23.05	22.99	1	24.5		
		8	7	23.03	23.02	23.00	1	24.5		
		15	0	23.05	23.02	22.91	1	24.5		
		1	0	22.86	22.81	23.07	1	24.5		
3M	16QAM	1	7	23.31	23.44	23.28	1	24.5		
		1	14	22.90	22.98	22.92	1	24.5		
		8	0	21.90	22.10	22.01	2	23.5		
		8	3	22.11	22.09	22.04	2	23.5		
		8	7	22.12	22.06	21.77	2	23.5		
	64QAM	15	0	22.04	22.13	21.92	2	23.5		
		1	0	21.84	21.89	21.84	2	23.5		
		1	7	22.25	22.28	22.36	2	23.5		
		1	14	21.95	21.80	21.88	2	23.5		
		8	0	20.92	21.08	21.00	3	22.5		
BW	Modulation	Channel	Channel	1987	1990	1910	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1987	1990	1910	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.68	23.70	23.66	0	25.5		
		1	2	24.04	24.14	24.05	0	25.5		
		1	5	23.71	23.72	23.69	0	25.5		
	QPSK	3	0	23.63	23.62	23.60	0	25.5		
		3	1	23.86	23.86	23.76	0	25.5		
		3	3	23.74	23.79	23.72	0	25.5		
		6	0	23.95	23.94	23.92	0	25.5		
		1	0	22.79	22.92	23.02	1	24.5		
1.4M	16QAM	1	2	23.35	23.35	23.26	1	24.5		
		1	5	23.03	22.91	22.94	1	24.5		
		3	0	22.71	22.89	22.74	1	24.5		
		3	1	22.79	23.02	22.85	1	24.5		
		3	3	22.84	22.86	22.62	1	24.5		
	64QAM	6	0	22.46	22.44	21.98	2	23.5		
		1	0	21.77	21.94	21.86	2	23.5		
		1	2	22.26	22.27	22.31	2	23.5		
		1	5	21.96	21.86	21.93	2	23.5		
		3	1	21.68	21.67	21.62	2	23.5		
BW	Modulation	Channel	Channel	1987	1990	1910	SCPP <th>Max.</th> <th data-kind="parent" data-rs="5">Turn-up (dBm)</th> <th data-kind="parent" data-rs="5">Max. Turn-up (dBm)</th>	Max.	Turn-up (dBm)	Max. Turn-up (dBm)
		Frequency (MHz)	Frequency (MHz)	1987	1990	1910	MPR <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
		1	0	23.68	23.70	23.66	0	25.5		
		1	2	24.04	24.14	24.05	0	25.5		
		1	5	23.71	23.72	23.69	0	25.5		
	QPSK	3	0	23.63	23.63	23.60	0	25.5		
		3	1	23.86	23.86	23.76	0	25.5		
		3	3	23.74	23.79	23.72	0	25.5		
		6	0	23.95	23.94	23.92	0	25.5		
		1	0	22.77	22.94	21.98	2	23.5		
1.4M	16QAM	1	2	23.35	23.35	23.26	1	24.5		
		1	5	23.03	22.91	22.94	1	24.5		
		3	0	22.71	22.89	21.81	2	23.5		
		3	1	21.86	21.87	21.62	2	23.5		
		3	3	21.86	21.88	21.62	2	23.5		
	64QAM	6	0	20.93	21.13	20.85	3	22.5		

LTE Band 7											
SR	Modulation	SR Size Channel	SR Offset Channel	SR	High SR	High SR	High SR	High SR	High SR	High SR	High SR
Frequency (MHz)	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel
1	0	23.12	23.12	23.12	0	23					
1	36	23.12	23.12	23.12	0	23					
1	72	23.12	23.12	23.12	0	23					
1	108	23.12	23.12	23.12	0	23					
1	144	23.12	23.12	23.12	0	23					
1	180	23.12	23.12	23.12	0	23					
1	216	23.12	23.12	23.12	0	23					
1	252	23.12	23.12	23.12	0	23					
1	288	23.12	23.12	23.12	0	23					
1	324	23.12	23.12	23.12	0	23					
1	360	23.12	23.12	23.12	0	23					
1	396	23.12	23.12	23.12	0	23					
1	432	23.12	23.12	23.12	0	23					
1	468	23.12	23.12	23.12	0	23					
1	504	23.12	23.12	23.12	0	23					
1	540	23.12	23.12	23.12	0	23					
1	576	23.12	23.12	23.12	0	23					
1	612	23.12	23.12	23.12	0	23					
1	648	23.12	23.12	23.12	0	23					
1	684	23.12	23.12	23.12	0	23					
1	720	23.12	23.12	23.12	0	23					
1	756	23.12	23.12	23.12	0	23					
1	792	23.12	23.12	23.12	0	23					
1	828	23.12	23.12	23.12	0	23					
1	864	23.12	23.12	23.12	0	23					
1	900	23.12	23.12	23.12	0	23					
1	936	23.12	23.12	23.12	0	23					
1	972	23.12	23.12	23.12	0	23					
1	1008	23.12	23.12	23.12	0	23					
1	1044	23.12	23.12	23.12	0	23					
1	1080	23.12	23.12	23.12	0	23					
1	1116	23.12	23.12	23.12	0	23					
1	1152	23.12	23.12	23.12	0	23					
1	1188	23.12	23.12	23.12	0	23					
1	1224	23.12	23.12	23.12	0	23					
1	1260	23.12	23.12	23.12	0	23					
1	1296	23.12	23.12	23.12	0	23					
1	1332	23.12	23.12	23.12	0	23					
1	1368	23.12	23.12	23.12	0	23					
1	1404	23.12	23.12	23.12	0	23					
1	1440	23.12	23.12	23.12	0	23					
1	1476	23.12	23.12	23.12	0	23					
1	1512	23.12	23.12	23.12	0	23					
1	1548	23.12	23.12	23.12	0	23					
1	1584	23.12	23.12	23.12	0	23					
1	1620	23.12	23.12	23.12	0	23					
1	1656	23.12	23.12	23.12	0	23					
1	1692	23.12	23.12	23.12	0	23					
1	1728	23.12	23.12	23.12	0	23					
1	1764	23.12	23.12	23.12	0	23					
1	1800	23.12	23.12	23.12	0	23					
1	1836	23.12	23.12	23.12	0	23					
1	1872	23.12	23.12	23.12	0	23					
1	1908	23.12	23.12	23.12	0	23					
1	1944	23.12	23.12	23.12	0	23					
1	1980	23.12	23.12	23.12	0	23					
1	2016	23.12	23.12	23.12	0	23					
1	2052	23.12	23.12	23.12	0	23					
1	2088	23.12	23.12	23.12	0	23					
1	2124	23.12	23.12	23.12	0	23					
1	2160	23.12	23.12	23.12	0	23					
1	2196	23.12	23.12	23.12	0	23					
1	2232	23.12	23.12	23.12	0	23					
1	2268	23.12	23.12	23.12	0	23					
1	2304	23.12	23.12	23.12	0	23					
1	2340	23.12	23.12	23.12	0	23					
1	2376	23.12	23.12	23.12	0	23					
1	2412	23.12	23.12	23.12	0	23					
1	2448	23.12	23.12	23.12	0	23					
1	2484	23.12	23.12	23.12	0	23					
1	2520	23.12	23.12	23.12	0	23					
1	2556	23.12	23.12	23.12	0	23					
1	2592	23.12	23.12	23.12	0	23					
1	2628	23.12	23.12	23.12	0	23					
1	2664	23.12	23.12	23.12	0	23					
1	2700	23.12	23.12	23.12	0	23					
1	2736	23.12	23.12	23.12	0	23					
1	2772	23.12	23.12	23.12	0	23					
1	2808	23.12	23.12	23.12	0	23					
1	2844	23.12	23.12	23.12	0	23					
1	2880	23.12	23.12	23.12	0	23					
1	2916	23.12	23.12	23.12	0	23					
1	2952	23.12	23.12	23.12	0	23					
1	2988	23.12	23.12	23.12	0	23					
1	3024	23.12	23.12	23.12	0	23					
1	3060	23.12	23.12	23.12	0	23					
1	3096	23.12	23.12	23.12	0	23					
1	3132	23.12	23.12	23.12	0	23					
1	3168	23.12	23.12	23.12	0	23					
1	3204	23.12	23.12	23.12	0	23					
1	3240	23.12	23.12	23.12	0	23					
1	3276	23.12	23.12	23.12	0	23					
1	3312	23.12	23.12	23.12	0	23					
1	3348	23.12	23.12	23.12	0	23					
1	3384	23.12	23.12	23.12	0	23					
1	3420	23.12	23.12	23.12	0	23					
1	3456	23.12	23.12	23.12	0	23					
1	3492	23.12	23.12	23.12	0	23					
1	3528	23.12	23.12	23.12	0	23					
1	3564	23.12	23.12	23.12	0	23					
1	3600	23.12	23.12	23.12	0	23					
1	3636	23.12	23.12	23.12	0	23					
1	3672	23.12	23.12	23.12	0	23					
1	3708	23.12	23.12	23.12	0	23					
1	3744	23.12	23.12	23.12	0	23					
1	3780	23.12	23.12	23.12	0	23					
1	3816	23.12	23.12	23.12	0	23					
1	3852	23.12	23.12	23.12	0	23					
1	3888	23.12	23.12	23.12	0	23					
1	3924	23.12	23.12	23.12	0	23					
1	3960	23.12	23.12	23.12	0	23					
1	3996	23.12	23.12	23.12	0	23					
1	4032	23.12	23.12	23.12	0	23					
1	4068	23.12	23.12	23.12	0	23					
1	4104	23.12	23.12	23.12	0	23					
1	4140	23.12	23.12	23.12	0	23					
1	4176	23.12	23.12	23.12	0	23					
1	4212	23.12	23.12	23.12	0	23					
1	4248	23.12	23.12	23.12	0	23					
1	4284	23.12	23.12	23.12	0	23					
1	4320	23.12	23.12	23.12	0	23					
1	4356	23.12	23.12	23.12	0	23					
1	4392	23.12	23.12	23.12	0	23					
1	4428	23.12	23.12	23.12	0	23					
1	4464	23.12	23.12	23.12	0	23					
1	4500	23.12	23.12	23.12	0	23					
1	4536	23.12	23.12	23.12	0	23					
1	4572	23.12	23.12	23.12	0	23					
1	4608	23.12	23.12	23.12	0	23					
1	4644	23.12	23.12	23.12	0	23					
1	4680	23.12	23.12	23.12	0	23					
1	4716	23.12	23.12	23.12	0	23					
1	4752	23.12	23.12	23.12	0	23					
1	4788	23.12	23.12	23.12	0	23					
1	4824	23.12	23.12	23.12	0	23					
1	4860	23.12	23.12	23.12	0	23					
1	4896	23.12	23.12	23.12	0	23					
1	4932	23.12	23.12	23.12	0	23					
1	4968	23.12	23.12	23.12	0	23					
1	5004	23.12	23.12	23.12	0	23					
1	5040	23.12	23.12	23.12	0	23					
1	5076	23.12	23.12	23.12	0	23					
1	5112	23.12	23.12	23.12	0	23					
1	5148	23.12	23.12	23.12	0	23					

GSM&WCDMA DSI-1

Ant4

Band	GSM850				GSM1900			
Channel	128	189	251	Max. Tune-up Power (dBm)	512	661	810	Max. Tune-up Power (dBm)
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	31.25	31.32	31.42	32.50	23.44	23.58	23.59	24.50
GPRS 1Tx Slot	31.22	31.28	31.45	32.50	23.45	23.53	23.57	24.50
GPRS 2Tx Slot	27.93	28.00	28.20	29.00	19.26	19.63	20.08	20.50
GPRS 3Tx Slot	26.34	26.42	26.61	27.50	17.60	18.08	18.41	19.00
GPRS 4Tx Slot	25.28	25.39	25.56	26.50	16.51	17.07	17.22	18.00
EDGE 1Tx Slot	27.04	27.02	26.82	28.00	22.18	22.17	22.24	23.00
EDGE 2Tx Slot	23.61	23.77	23.52	25.00	18.88	18.86	18.96	20.00
EDGE 3Tx Slot	21.83	22.02	21.74	23.00	16.93	17.01	17.09	18.00
EDGE 4Tx Slot	21.14	21.17	21.04	22.00	16.00	15.99	15.96	17.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	22.25	22.32	22.42	23.50	14.44	14.58	14.59	15.50
GPRS 1Tx Slot	22.22	22.28	22.45	23.50	14.45	14.53	14.57	15.50
GPRS 2Tx Slot	21.93	22.00	22.20	23.00	13.26	13.63	14.08	14.50
GPRS 3Tx Slot	22.08	22.16	22.35	23.24	13.34	13.82	14.15	14.74
GPRS 4Tx Slot	22.28	22.39	22.56	23.50	13.51	14.07	14.22	15.00
EDGE 1Tx Slot	18.04	18.02	17.82	19.00	13.18	13.17	13.24	14.00
EDGE 2Tx Slot	17.61	17.77	17.52	19.00	12.88	12.86	12.96	14.00
EDGE 3Tx Slot	17.57	17.76	17.48	18.74	12.67	12.75	12.83	13.74
EDGE 4Tx Slot	18.14	18.17	18.04	19.00	13.00	12.99	12.96	14.00

Band	WCDMA II			WCDMA II	WCDMA IV			WCDMA IV	WCDMA V			WCDMA V
TX Channel	9262	9400	9538	Max. Tune-up Power (dBm)	1312	1413	1513	Max. Tune-up Power (dBm)	4132	4182	4233	Max. Tune-up Power (dBm)
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407.00	4458	
Frequency (MHz)	1852.4	1880	1907.6	1712.4	1732.6	1752.6		826.4	836.40	846.6		
RMC 12.2K	14.19	14.24	14.25	15.50	14.95	14.93	14.88	16.00	21.63	21.65	21.68	23.00
HSDPA Subtest-1	13.28	13.36	13.46	14.00	14.06	14.07	14.03	14.50	20.79	20.77	20.86	21.50
HSDPA Subtest-2	13.30	13.32	13.43	14.00	14.02	14.03	13.92	14.50	20.81	20.84	20.85	21.50
HSDPA Subtest-3	12.71	12.77	12.98	14.00	13.58	13.54	13.45	14.50	20.22	20.25	20.31	21.50
HSDPA Subtest-4	12.82	12.99	13.00	14.00	13.61	13.66	13.40	14.50	20.33	20.25	20.24	21.50
DC-HSDPA Subtest-1	13.38	13.34	13.50	14.00	14.04	14.09	14.11	14.50	20.76	20.70	20.78	21.50
DC-HSDPA Subtest-2	13.25	13.44	13.54	14.00	14.04	14.06	14.00	14.50	20.82	20.74	20.88	21.50
DC-HSDPA Subtest-3	12.71	12.90	12.94	14.00	13.59	13.54	13.52	14.50	20.23	20.28	20.50	21.50
DC-HSDPA Subtest-4	12.80	12.81	12.96	14.00	13.48	13.58	13.52	14.50	20.23	20.19	20.38	21.50
HSUPA Subtest-1	11.40	11.49	11.70	13.00	12.24	12.20	12.28	13.50	18.96	19.02	19.11	20.50
HSUPA Subtest-2	11.20	11.33	11.41	13.00	12.02	11.93	11.92	13.50	18.63	18.75	18.67	20.50
HSUPA Subtest-3	12.14	12.21	12.33	13.00	12.85	12.73	12.75	13.50	19.54	19.51	19.66	20.50
HSUPA Subtest-4	11.11	11.23	11.18	13.00	11.66	11.74	11.62	13.50	18.92	18.90	18.92	20.50
HSUPA Subtest-5	12.11	12.26	12.22	13.00	12.94	12.70	12.78	13.50	19.59	19.56	19.65	20.50
HSPA+ Subtest-1	11.37	11.43	11.63	13.00	12.20	12.18	12.06	13.50	18.74	18.73	19.07	20.50

GSM&WCDMA DSI-2

Ant4

Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.20	32.37	32.43	33.50	29.30	29.41	29.44	30.50
GPRS 1Tx Slot	32.19	32.31	32.36	33.50	29.23	29.40	29.41	30.50
GPRS 2Tx Slot	28.81	28.92	29.05	30.00	25.57	25.77	25.99	26.50
GPRS 3Tx Slot	27.32	27.45	27.62	28.50	23.73	23.96	24.26	25.00
GPRS 4Tx Slot	26.27	26.40	26.54	27.50	22.77	23.00	23.33	24.00
EDGE 1Tx Slot	26.88	26.94	26.77	28.00	25.94	26.10	26.05	27.00
EDGE 2Tx Slot	23.63	23.66	23.42	25.00	22.89	23.12	23.04	24.00
EDGE 3Tx Slot	21.86	21.88	21.68	23.00	21.10	21.46	21.32	22.00
EDGE 4Tx Slot	21.03	20.98	21.04	22.00	20.16	20.35	20.28	21.00

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.20	23.37	23.43	24.50	20.30	20.41	20.44	21.50
GPRS 1Tx Slot	23.19	23.31	23.36	24.50	20.23	20.40	20.41	21.50
GPRS 2Tx Slot	22.81	22.92	23.05	24.00	19.57	19.77	19.99	20.50
GPRS 3Tx Slot	23.06	23.19	23.36	24.24	19.47	19.70	20.00	20.74
GPRS 4Tx Slot	23.27	23.40	23.54	24.50	19.77	20.00	20.33	21.00
EDGE 1Tx Slot	17.88	17.94	17.77	19.00	16.94	17.10	17.05	18.00
EDGE 2Tx Slot	17.63	17.66	17.42	19.00	16.89	17.12	17.04	18.00
EDGE 3Tx Slot	17.60	17.62	17.42	18.74	16.84	17.20	17.06	17.74
EDGE 4Tx Slot	18.03	17.98	18.04	19.00	17.16	17.35	17.28	18.00

Band	WCDMA II			Max. Tune-up Power (dBm)	WCDMA IV			Max. Tune-up Power (dBm)	WCDMA V			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	21.03	21.15	21.29	22.50	21.40	21.34	21.24	22.50	24.17	24.19	24.25	25.50
HSDPA Subtest-1	20.15	20.17	20.54	21.00	20.50	20.46	20.41	21.00	23.26	23.35	23.43	24.00
HSDPA Subtest-2	20.24	20.31	20.50	21.00	20.43	20.40	20.44	21.00	23.37	23.36	23.42	24.00
HSDPA Subtest-3	19.78	19.76	19.95	21.00	20.02	20.03	19.87	21.00	22.77	22.80	22.88	24.00
HSDPA Subtest-4	19.75	19.84	19.97	21.00	20.09	19.88	19.96	21.00	22.84	22.78	22.87	24.00
DC-HSDPA Subtest-1	20.36	20.28	20.30	21.00	20.38	20.28	20.46	21.00	23.33	23.35	23.35	24.00
DC-HSDPA Subtest-2	20.21	20.34	20.51	21.00	20.50	20.53	20.38	21.00	23.34	23.32	23.39	24.00
DC-HSDPA Subtest-3	19.74	19.91	20.05	21.00	19.95	20.05	19.90	21.00	22.87	22.89	22.93	24.00
DC-HSDPA Subtest-4	19.75	19.84	19.99	21.00	19.97	20.04	19.97	21.00	22.79	22.81	22.90	24.00
HSUPA Subtest-1	18.47	18.56	18.75	20.00	18.68	18.48	18.55	20.00	21.51	21.55	21.58	23.00
HSUPA Subtest-2	18.11	18.31	18.29	20.00	18.28	18.29	18.15	20.00	21.16	21.29	21.27	23.00
HSUPA Subtest-3	19.04	19.32	19.24	20.00	19.29	19.05	19.20	20.00	22.13	22.10	22.24	23.00
HSUPA Subtest-4	18.12	18.23	18.17	20.00	18.26	18.17	18.19	20.00	21.10	21.16	21.20	23.00
HSUPA Subtest-5	18.99	19.15	19.26	20.00	19.15	19.15	19.23	20.00	22.13	22.08	22.15	23.00
HSPA+ Subtest-1	18.39	18.54	18.54	20.00	18.42	18.51	18.51	20.00	21.38	21.41	21.55	23.00

GSM&WCDMA DSI-4

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Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
Frequency (MHz)	824.2	836.4	848.8		1850.2	1880	1909.8	
GSM	32.20	32.37	32.43	33.50	25.70	25.95	26.09	27.00
GPRS 1Tx Slot	32.19	32.31	32.36	33.50	25.67	25.88	26.05	27.00
GPRS 2Tx Slot	28.81	28.92	29.05	30.00	22.00	22.29	22.61	23.00
GPRS 3Tx Slot	27.32	27.45	27.62	28.50	20.17	20.54	20.95	21.50
GPRS 4Tx Slot	26.27	26.40	26.54	27.50	19.08	19.49	19.95	20.50
EDGE 1Tx Slot	26.88	26.94	26.77	28.00	24.55	24.71	24.58	25.50
EDGE 2Tx Slot	23.63	23.66	23.42	25.00	21.43	21.65	21.49	22.50
EDGE 3Tx Slot	21.86	21.88	21.68	23.00	19.68	19.85	19.66	20.50
EDGE 4Tx Slot	21.03	20.98	21.04	22.00	18.61	18.65	18.54	19.50

Source-Based Time-Averaged Power								
Band	GSM850			Max. Tune-up Power (dBm)	GSM1900			Max. Tune-up Power (dBm)
Channel	128	189	251		512	661	810	
GSM	23.20	23.37	23.43	24.50	16.70	16.95	17.09	18.00
GPRS 1Tx Slot	23.19	23.31	23.36	24.50	16.67	16.88	17.05	18.00
GPRS 2Tx Slot	22.81	22.92	23.05	24.00	16.00	16.29	16.61	17.00
GPRS 3Tx Slot	23.06	23.19	23.36	24.24	15.91	16.28	16.69	17.24
GPRS 4Tx Slot	23.27	23.40	23.54	24.50	16.08	16.49	16.95	17.50
EDGE 1Tx Slot	17.88	17.94	17.77	19.00	15.55	15.71	15.58	16.50
EDGE 2Tx Slot	17.63	17.66	17.42	19.00	15.43	15.65	15.49	16.50
EDGE 3Tx Slot	17.60	17.62	17.42	18.74	15.42	15.59	15.40	16.24
EDGE 4Tx Slot	18.03	17.98	18.04	19.00	15.61	15.65	15.54	16.50

Band	WCDMA II			Max. Tune-up Power (dBm)	WCDMA IV			Max. Tune-up Power (dBm)	WCDMA V			Max. Tune-up Power (dBm)
TX Channel	9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel	9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
RMC 12.2K	17.41	17.45	17.51	18.50	17.92	17.87	17.83	19.00	24.17	24.19	24.25	25.50
HSDPA Subtest-1	16.55	16.50	16.36	17.00	17.11	17.09	17.03	17.50	23.26	23.35	23.43	24.00
HSDPA Subtest-2	16.45	16.63	16.53	17.00	16.98	17.04	17.10	17.50	23.37	23.36	23.42	24.00
HSDPA Subtest-3	16.05	16.09	16.24	17.00	16.62	16.56	16.51	17.50	22.77	22.80	22.88	24.00
HSDPA Subtest-4	16.05	16.20	16.17	17.00	16.63	16.60	16.49	17.50	22.84	22.78	22.87	24.00
DC-HSDPA Subtest-1	16.57	16.48	16.69	17.00	17.09	17.09	17.08	17.50	23.33	23.35	23.35	24.00
DC-HSDPA Subtest-2	16.52	16.60	16.75	17.00	17.07	17.10	17.04	17.50	23.34	23.32	23.39	24.00
DC-HSDPA Subtest-3	15.95	16.17	16.26	17.00	16.61	16.66	16.54	17.50	22.87	22.89	22.93	24.00
DC-HSDPA Subtest-4	16.09	16.08	16.09	17.00	16.58	16.51	16.54	17.50	22.79	22.81	22.90	24.00
HSUPA Subtest-1	14.73	14.82	14.94	16.00	15.31	15.17	15.14	16.50	21.51	21.55	21.58	23.00
HSUPA Subtest-2	14.36	14.56	14.50	16.00	15.02	14.84	14.81	16.50	21.16	21.29	21.27	23.00
HSUPA Subtest-3	15.24	15.43	15.55	16.00	15.90	15.87	15.90	16.50	22.13	22.10	22.24	23.00
HSUPA Subtest-4	14.19	14.11	14.31	16.00	14.74	14.65	14.65	16.50	21.10	21.16	21.20	23.00
HSUPA Subtest-5	15.24	15.49	15.43	16.00	15.78	15.85	15.75	16.50	22.13	22.08	22.15	23.00
HSPA+ Subtest-1	14.58	14.64	14.82	16.00	15.11	15.15	15.16	16.50	21.38	21.41	21.55	23.00

LTE DS-1
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		LTE Band 2					
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel Frequency (MHz)	18700	18900	19100	19300	
20M	QPSK	1	0	13.83	13.90	13.89	15.5
		1	50	13.86	13.92	13.91	15.5
		1	99	13.87	13.92	13.92	15.5
		50	0	13.66	13.85	13.72	15.5
		50	25	13.93	13.89	13.82	15.5
		50	50	13.83	13.83	13.79	15.5
		100	0	13.90	13.89	13.73	15.5
		1	0	13.62	13.70	13.68	15.5
	16QAM	1	50	14.02	14.08	14.07	15.5
		1	99	13.78	13.70	13.82	15.5
		50	0	13.81	13.96	13.76	15.5
		50	25	13.88	13.95	13.91	15.5
		50	50	13.96	13.96	13.98	15.5
		100	0	13.90	13.90	13.71	15.5
	64QAM	1	0	13.97	13.76	13.70	15.5
		1	50	14.02	14.10	14.19	15.5
		1	99	13.75	13.69	13.81	15.5
		50	0	13.69	13.90	13.77	15.5
		50	25	13.99	13.97	13.97	15.5
		50	50	13.86	13.90	13.68	15.5
		100	0	13.79	14.05	13.80	15.5
		100	0	13.79	14.05	13.80	15.5
15M	QPSK	Channel	18675	18900	19125	Max. Tune-up (dBm)	
		Frequency (MHz)	1867.5	1890	1902.5		
		1	0	13.73	13.89	13.79	15.5
		1	37	14.19	14.08	14.18	15.5
		1	74	13.73	13.81	13.89	15.5
		36	0	13.63	13.79	13.63	15.5
		36	19	13.83	13.81	13.65	15.5
		36	39	13.76	13.70	13.72	15.5
	16QAM	75	0	13.86	13.84	13.66	15.5
		1	0	13.51	13.60	13.77	15.5
		1	37	13.97	14.07	13.98	15.5
		1	74	13.75	13.58	13.76	15.5
		36	0	13.74	13.90	13.62	15.5
		36	19	13.75	13.83	13.87	15.5
		36	39	13.85	13.87	13.67	15.5
		75	0	13.75	13.97	13.61	15.5
10M	QPSK	Channel	18650	18900	19150	Max. Tune-up (dBm)	
		Frequency (MHz)	1865	1890	1905		
		1	0	13.79	13.77	13.82	15.5
		1	24	14.27	14.16	14.13	15.5
		1	49	13.85	13.67	13.85	15.5
		25	0	13.62	13.74	13.71	15.5
		25	12	13.88	13.87	13.72	15.5
		25	25	13.78	13.78	13.80	15.5
	16QAM	50	0	13.79	13.83	13.81	15.5
		1	0	13.60	13.60	13.74	15.5
		1	24	13.98	13.98	14.06	15.5
		1	49	13.72	13.67	13.76	15.5
		25	0	13.67	13.81	13.64	15.5
		25	12	13.78	13.94	13.88	15.5
		25	25	13.82	13.81	13.84	15.5
		50	0	13.80	13.91	13.62	15.5
5M	QPSK	Channel	18625	18900	19175	Max. Tune-up (dBm)	
		Frequency (MHz)	1862.5	1890	1907.5		
		1	0	13.74	13.88	13.75	15.5
		1	12	14.17	14.10	14.17	15.5
		1	24	13.75	13.67	13.89	15.5
		12	0	13.65	13.73	13.60	15.5
		12	6	13.87	13.79	13.74	15.5
		12	13	13.81	13.82	13.78	15.5
	16QAM	25	0	13.77	13.84	13.59	15.5
		1	0	13.54	13.61	13.74	15.5
		1	12	13.95	14.05	13.98	15.5
		1	24	13.76	13.58	13.78	15.5
		12	0	13.72	13.84	13.68	15.5
		12	6	13.81	13.91	13.86	15.5
		12	13	13.82	13.82	13.82	15.5
		25	0	13.77	13.86	13.70	15.5
3M	QPSK	Channel	18615	18900	19195	Max. Tune-up (dBm)	
		Frequency (MHz)	1861.5	1890	1908.5		
		1	0	13.62	13.89	13.83	15.5
		1	7	14.16	14.10	14.13	15.5
		1	14	13.81	13.74	13.80	15.5
		8	0	13.52	13.78	13.58	15.5
		8	3	13.87	13.85	13.65	15.5
		8	7	13.72	13.78	13.76	15.5
	16QAM	15	0	13.89	13.78	13.85	15.5
		1	0	13.57	13.60	13.81	15.5
		1	7	13.91	14.06	13.93	15.5
		1	14	13.77	13.63	13.67	15.5
		8	0	13.77	13.90	13.68	15.5
		8	3	13.79	13.80	13.84	15.5
		8	7	13.94	13.89	13.84	15.5
		15	0	13.88	13.88	13.69	15.5
1.4M	QPSK	Channel	18607	18900	19193	Max. Tune-up (dBm)	
		Frequency (MHz)	1860.7	1890	1908.3		
		1	0	13.76	13.81	13.80	15.5
		1	2	14.20	14.13	14.23	15.5
		1	5	13.84	13.69	13.81	15.5
		3	0	13.62	13.79	13.62	15.5
		3	1	13.88	13.82	13.77	15.5
		3	3	13.72	13.71	13.78	15.5
	16QAM	6	0	13.76	13.80	13.63	15.5
		1	0	13.54	13.60	13.83	15.5
		1	2	13.92	14.00	13.99	15.5
		1	5	13.64	13.58	13.72	15.5
		3	0	13.72	13.92	13.67	15.5
		3	1	13.87	13.89	13.84	15.5
		3	3	13.98	13.96	13.83	15.5
		6	0	13.63	13.86	13.67	15.5
64QAM	QPSK	Channel	18607	18900	19193	Max. Tune-up (dBm)	
		Frequency (MHz)	1860.7	1890	1908.3		
		1	0	13.91	13.62	13.63	15.5
		1	2	13.95	14.04	14.16	15.5
		1	5	13.71	13.60	13.71	15.5
		3	0	13.57	13.77	13.66	15.5
		3	1	13.80	13.80	13.81	15.5
		3	3	13.75	13.80	13.55	15.5
	16QAM	6	0	13.72	13.99	13.68	15.5
		1	0	13.91	13.62	13.63	15.5
		1	2	13.95	14.04	14.16	15.5
		1	5	13.71	13.60	13.71	15.5
		3	0	13.57	13.77	13.66	15.5
		3	1	13.80	13.80	13.81	15.5
		3	3	13.75	13.80	13.55	15.5
		6	0	13.72	13.99	13.68	15.5

		LTE Band 4					
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel Frequency (MHz)	20950	20975	20980	21000	
20M	QPSK	1	0	13.70	13.62	13.87	15.5
		1	50	14.07	14.11	14.08	15.5
		1	99	13.91	13.72	13.84	15.5
		50	0	13.71	13.67	13.66	15.5
		50	25	13.84	13.86	13.83	15.5
		50	50	13.71	13.69	13.76	15.5
		100	0	13.82	13.74	13.79	15.5
		1	0	13.86	13.70	13.77	15.5
	16QAM	1	50	13.82	13.94	13.86	15.5
		1	99	13.94	13.71	13.99	15.5
		50	0	13.70	13.69	13.71	15.5
		50	25	13.73	13.80	13.89	15.5
		50	50	13.99	13.84	13.99	15.5
		100	0	13.75	13.75	13.69	15.5
	64QAM	1	0	13.70	13.74	13.85	15.5
		1	50	13.85	13.78	13.87	15.5
		1	99	13.79	13.83	13.84	15.5
		50	0	13.88	13.83	13.87	15.5
		50	25	13.89	14.05	13.86	15.5
		50	50	13.92	13.96	13.78	15.5
		100	0	13.81	13.76	13.86	15.5
		100	0	13.81	13.76	13.86	15.5
15M	QPSK	Channel	20925	20975	20926	Max. Tune-up (dBm)	
		Frequency (MHz)	1717.5	1722.5	1747.5		
		1	0	13.69	13.79	13.74	15.5
		1	37	14.08	14.03	14.06	15.5
		1	74	13.88	13.59	13.79	15.5
		36	0	13.65	13.61	13.63	15.5
		36	19	13.73	13.76	13.73	15.5
		36	39	13.69	13.60	13.66	15.5
	16QAM	75	0	13.75	13.72	13.75	15.5
		1	0	13.81	13.70	13.72	15.5
		1	37	13.80	13.84	13.73	15.5
		1	74	13.91	13.66	13.94	15.5
		36	0	13.62	13.66	13.60	15.5
		36	19	13.60	13.75	13.80	15.5
		36	39	13.54	13.69	13.69	15.5
		75	0	13.74	13.73	13.59	15.5
10M	QPSK	Channel	20900	20975	20980	Max. Tune-up (dBm)	
		Frequency (MHz)	1715	1722.5	1750		
		1	0	13.55	13.80	13.77	15.5
		1	12	14.05	14.03	14.05	15.5

LTE Band 7										
BW	Modulation	RB Size	RB Config	Channel	RB Size	RB Config	RB Size	RB Config	Max. Throughput (Mbps)	
		Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	
25M	OFDM	1	0	14.54	14.38	14.42	16	1	0	14.54
		1	50	14.41	14.26	14.34	16	1	50	14.41
		1	100	14.35	14.21	14.28	16	1	100	14.35
		1	150	14.30	14.16	14.23	16	1	150	14.30
		1	200	14.25	14.10	14.18	16	1	200	14.25
	SC-FDMA	1	250	14.19	14.04	14.13	16	1	250	14.19
		1	300	14.14	13.99	14.07	16	1	300	14.14
		1	350	14.09	13.94	14.02	16	1	350	14.09
		1	400	14.04	13.89	13.97	16	1	400	14.04
		1	450	14.00	13.85	13.93	16	1	450	14.00
15M	OFDM	1	0	14.54	14.53	14.53	10	1	0	14.54
		1	10	14.50	14.40	14.44	10	1	10	14.50
		1	20	14.46	14.36	14.40	10	1	20	14.46
		1	30	14.42	14.32	14.36	10	1	30	14.42
		1	40	14.38	14.28	14.32	10	1	40	14.38
	SC-FDMA	1	50	14.34	14.24	14.28	10	1	50	14.34
		1	60	14.30	14.20	14.24	10	1	60	14.30
		1	70	14.26	14.16	14.20	10	1	70	14.26
		1	80	14.22	14.12	14.16	10	1	80	14.22
		1	90	14.18	14.08	14.12	10	1	90	14.18
5M	OFDM	1	0	14.54	14.53	14.53	5	1	0	14.54
		1	5	14.50	14.40	14.44	5	1	5	14.50
		1	10	14.46	14.36	14.40	5	1	10	14.46
		1	15	14.42	14.32	14.36	5	1	15	14.42
		1	20	14.38	14.28	14.32	5	1	20	14.38
	SC-FDMA	1	25	14.34	14.24	14.28	5	1	25	14.34
		1	30	14.30	14.20	14.24	5	1	30	14.30
		1	35	14.26	14.16	14.20	5	1	35	14.26
		1	40	14.22	14.12	14.16	5	1	40	14.22
		1	45	14.18	14.08	14.12	5	1	45	14.18

LTE Band 38										
BW	Modulation	RB Size		Channel	RB Size		Channel	RB Size		
		Frequency (MHz)	RB Config		Frequency (MHz)	RB Config		Frequency (MHz)	RB Config	
25M	OFDM	1	0	17.15	17.05	17.10	15	1	0	17.15
		1	50	16.80	16.71	16.80	15	1	50	16.80
		1	100	16.75	16.65	16.75	15	1	100	16.75
		1	150	16.70	16.60	16.70	15	1	150	16.70
		1	200	16.65	16.55	16.65	15	1	200	16.65
	SC-FDMA	1	0	16.70	16.60	16.70	15	1	0	16.70
		1	50	16.65	16.55	16.65	15	1	50	16.65
		1	100	16.60	16.50	16.60	15	1	100	16.60
		1	150	16.55	16.45	16.55	15	1	150	16.55
		1	200	16.50	16.40	16.50	15	1	200	16.50
15M	OFDM	1	0	16.80	16.71	16.77	10	1	0	16.80
		1	50	16.77	16.67	16.77	10	1	50	16.77
		1	100	16.74	16.64	16.74	10	1	100	16.74
		1	150	16.71	16.61	16.71	10	1	150	16.71
		1	200	16.68	16.58	16.68	10	1	200	16.68
	SC-FDMA	1	0	16.74	16.64	16.74	10	1	0	16.74
		1	50	16.71	16.61	16.71	10	1	50	16.71
		1	100	16.68	16.58	16.68	10	1	100	16.68
		1	150	16.65	16.55	16.65	10	1	150	16.65
		1	200	16.62	16.52	16.62	10	1	200	16.62
5M	OFDM	1	0	16.80	16.72	16.78	5	1	0	16.80
		1	10	16.75	16.67	16.76	5	1	10	16.75
		1	20	16.70	16.62	16.71	5	1	20	16.70
		1	30	16.65	16.57	16.66	5	1	30	16.65
		1	40	16.60	16.52	16.61	5	1	40	16.60
	SC-FDMA	1	0	16.74	16.66	16.75	5	1	0	16.74
		1	10	16.69	16.61	16.70	5	1	10	16.69
		1	20	16.64	16.56	16.65	5	1	20	16.64
		1	30	16.59	16.51	16.60	5	1	30	16.59
		1	40	16.54	16.46	16.55	5	1	40	16.54
15M	OFDM	1	0	16.79	16.70	16.75	10	1	0	16.79
		1	20	16.74	16.65	16.72	10	1	20	16.74
		1	40	16.69	16.60	16.67	10	1	40	16.69
		1	60	16.64	16.55	16.62	10	1	60	16.64
		1	80	16.59	16.50	16.57	10	1	80	16.59
	SC-FDMA	1	0	16.73	16.64	16.72	10	1	0	16.73
		1	20	16.68	16.59	16.66	10	1	20	16.68
		1	40	16.63	16.54	16.61	10	1	40	16.63
		1	60	16.58	16.49	16.56	10	1	60	16.58
		1	80	16.53	16.44	16.51	10	1	80	16.53
5M	OFDM	1	0	16.80	16.72	16.78	5	1	0	16.80
		1	10	16.75	16.67	16.76	5	1	10	16.75
		1	20	16.70	16.62	16.71	5	1	20	16.70
		1	30	16.65	16.57	16.66	5	1	30	16.65
		1	40	16.60	16.52	16.61	5	1	40	16.60
	SC-FDMA	1	0	16.74	16.66	16.75	5	1	0	16.74
		1	10	16.69	16.61	16.70	5	1	10	16.69
		1	20	16.64	16.56	16.65	5	1	20	16.64
		1	30	16.59	16.51	16.60	5	1	30	16.59
		1	40	16.54	16.46	16.55	5	1	40	16.54
5M	OFDM	1	0	16.81	16.73	16.79	5	1	0	16.81
		1	10	16.76	16.68	16.77	5	1	10	16.76
		1	20	16.71	16.63	16.72	5	1	20	16.71
		1	30	16.66	16.58	16.67	5	1	30	16.66
		1	40	16.61	16.53	16.62	5	1	40	16.61
	SC-FDMA	1	0	16.75	16.67	16.78	5	1	0	16.75
		1	10	16.70	16.62	16.73	5	1	10	16.70
		1	20	16.65	16.57	16.68	5	1	20	16.65
		1	30	16.60	16.52	16.63	5	1	30	16.60
		1	40	16.55	16.47	16.58	5	1	40	16.55
5M	OFDM	1	0	16.82	16.74	16.80	5	1	0	16.82
		1	10	16.77	16.69	16.78	5	1	10	16.77
		1	20	16.72	16.64	16.73	5	1	20	16.72
		1	30	16.67	16.59	16.68	5	1	30	16.67
		1	40	16.62	16.54	16.63	5	1	40	16.62
	SC-FDMA	1	0	16.76	16.68	16.79	5	1	0	16.76
		1	10	16.71	16.63	16.74	5	1	10	16.71
		1	20	16.66	16.58	16.69	5	1	20	16.66
		1	30	16.61	16.53	16.64	5	1	30	16.61
		1	40	16.56	16.48	16.59	5	1	40	16.56

LTE Band 41 (2480 – 2690MHz)									
BW	Modulation	RB Size	RB Config	Channel	RB Size	RB Config	RB Size	RB Config	RB Size
		Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel
25M	OFDM	1	0	17.20	17.17	17.17	17.00	17.00	16.93
		1	50	17.45	17.36	17.41	17.01	17.01	16.93
		1	100	17.20	17.09	17.15	17.01	17.01	16.93
		1	150	17.05	16.93	17.04	16.82	16.82	16.70
		1	200	17.00	16.86	16.92	16.50	16.50	16.37
	SC-FDMA	1	250	16.95	16.83	16.91	16.66	16.66	16.53
		1	300	16.90	16.78	16.85	16.50	16.50	16.37
		1	350	16.85	16.73	16.80	16.37	16.37	16.25
		1	400	16.80	16.68	16.75	16.25	16.25	16.13
		1	450	16.75	16.63	16.70	16.13	16.13	16.01
15M	OFDM	1	0	17.20	17.14	17.14	16.80	16.80	16.70
		1	10	17.15	17.12	17.11	16.66	16.66	16.55
		1	20	17.10	17.06	17.07	16.50	16.50	16.40
		1	30	17.05	17.02	17.04	16.37	16.37	16.25
		1	40	17.00	16.97	17.00	16.25	16.25	16.13
	SC-FDMA	1	50	16.95	16.92	16.94	16.13	16.13	16.01
		1	60	16.90	16.87	16.89	15.90	15.90	15.77
		1	70	16.85	16.82	16.84	15.77	15.77	15.65
		1	80	16.80	16.77	16.79	15.65	15.65	15.53
		1	90	16.75	16.72	16.74	15.53	15.53	15.41
5M	OFDM	1	0	17.20	17.15	17.15	16.80	16.80	16.70
		1	10	17.15	17.12	17.11	16.66	16.66	16.55
		1	20	17.10	17.06	17.07	16.50	16.50	16.40
		1	30	17.05	17.02	17.04	16.37	16.37	16.25
		1	40	17.00	16.97	17.00	16.25	16.25	16.13
	SC-FDMA	1	50	16.95	16.92	16.94	16.13	16.13	16.01
		1	60	16.90	16.87	16.89	15.90	15.90	15.77
		1	70	16.85	16.82	16.84	15.77	15.77	15.65
		1	80	16.80	16.77	16.79	15.65	15.65	15.53
		1	90	16.75	16.72	16.74	15.53	15.53	15.41
2.5M	OFDM	1	0	17.20	17.17	17.17	17.00	17.00	16.93
		1	10	17.15	17.12	17.11	16.80	16.80	16.70
		1	20	17.10	17.06	17.07	16.66	16.66	16.55
		1	30	17.05	17.02	17.04	16.50	16.50	16.40
		1	40	17.00	16.97	17.00	16.37	16.37	16.25
	SC-FDMA	1	50	16.95	16.92	16.94	16.13	16.13	16.01
		1	60	16.90	16.87	16.89	15.90	15.90	15.77
		1	70	16.85	16.82	16.84	15.77	15.77	15.65
		1	80	16.80	16.77	16.79	15.65	15.65	15.53
		1	90	16.75	16.72	16.74	15.53	15.53	15.41
1.25M	OFDM	1	0	17.20	17.17	17.17	17.00	17.00	16.93
		1	10	17.15	17.12	17.11	16.80	16.80	16.70
		1	20	17.10	17.06	17.07	16.66	16.66	16.55
		1	30	17.05	17.02	17.04	16.50	16.50	16.40
		1	40	17.00	16.97	17.00	16.37	16.37	16.25
	SC-FDMA	1	50	16.95	16.92	16.94	16.13	16.13	16.01
		1	60	16.90	16.87	16.89	15.90	15.90	15.77
		1	70	16.85	16.82	16.84	15.77	15.77	15.65
		1	80	16.80	16.77	16.79	15.65	15.65	15.53
		1	90	16.75	16.72	16.74	15.53	15.53	15.41
625K	OFDM	1	0	17.20	17.17	17.17	17.00	17.00	16.93
		1	10	17.15	17.12	17.11	16.80	16.80	16.70
		1	20	17.10	17.06	17.07	16.66	16.66	16.55
		1	30	17.05	17.02	17.04	16.50	16.50	16.40
		1	40	17.00	16.97	17.00	16.37	16.37	16.25
	SC-FDMA	1	50	16.95	16.92	16.94	16.13	16.13	16.01
		1	60	16.90	16.87	16.89	15.90	15.90	15.77
		1	70	16.85	16.82	16.84	15.77	15.77	15.65
		1	80	16.80	16.77	16.79	15.65	15.65	15.53
		1	90	16.75	16.72	16.74	15.53	15.53	15.41

LTE Band 66										
BW	Modulation	RB Size	RB Config	Channel	RB Size	RB Config	RB Size	RB Config	RB Size	
		Frequency offset	Channel	Frequency offset	Channel	Frequency offset	Channel	Frequency offset	Channel	
25M	OFDM	1	0	13.80	13.79	13.79	15	1	0	13.80
		1	50	14.12	14.16	14.16	15	1	50	14.16
		1	100	13.80	13.71	13.80	15	1	100	13.80
		1	150	13.75	13.67	13.75	15	1	150	13.75
		1	200	13.70	13.63	13.70	15	1	200	13.70
	SC-FDMA	1	250	13.65	13.59	13.65	15	1	250	13.65
		1	300	13.60	13.55	13.60	15	1	300	13.60
		1	350	13.55	13.50	13.55	15	1	350	13.55
		1	400	13.50	13.45	13.50	15	1	400	13.50
		1	450	13.45	13.40	13.45	15	1	450	13.45
15M	OFDM	1	0	13.80	13.79	13.79	10	1	0	13.80
		1	10	13.75	13.69	13.69	10	1	10	13.75
		1	20	13.70	13.65	13.65	10	1	20	13.70
		1	30	13.65	13.61	13.61	10	1	30	13.65
		1	40	13.60	13.57	13.57	10	1	40	13.60
	SC-FDMA	1	50	13.55	13.53	13.53	10	1	50	13.55
		1	60	13.50	13.49	13.49	10	1	60	13.50
		1	70	13.45	13.44	13.44	10	1	70	13.45
		1	80	13.40	13.40	13.40	10	1	80	13.40
		1	90	13.35	13.35	13.35	10	1	90	13.35
5M	OFDM	1	0	13.80	13.79	13.79	5	1	0	13.80
		1	5	13.75	13.74	13.74	5	1	5	13.75
		1	10	13.70	13.70	13.70	5	1	10	13.70
		1	15	13.65	13.65	13.65	5	1	15	13.65
		1	20	13.60	13.60	13.60	5	1	20	13.60
	SC-FDMA	1	25	13.55	13.55	13.55	5	1	25	13.55
		1	30	13.50	13.50	13.50	5	1	30	13.50
		1	35	13.45	13.45	13.45	5	1	35	13.45
		1	40	13.40	13.40	13.40	5	1	40	13.40
		1	45	13.35	13.35	13.35	5	1	45	13.35
3M	OFDM	1	0	13.80	13.79	13.79	3	1	0	13.80
		1	3	13.75	13.75	13.75	3	1	3	13.75
		1	6	13.70	13.70	13.70	3	1	6	13.70
		1	9	13.65	13.65	13.65	3	1	9	13.65
		1	12	13.60	13.60	13.60	3	1	12	13.60
	SC-FDMA	1	15	13.55	13.55	13.55	3	1	15	13.55
		1	18	13.50	13.50	13.50	3	1	18	13.50
		1	21	13.45	13.45	13.45	3	1	21	13.45
		1	24	13.40	13.40	13.40	3	1	24	13.40
		1	27	13.35	13.35	13.35	3	1	27	13.35
1.4M	OFDM	1	0	13.80	13.79	13.79	1.4	1	0	13.80
		1	1	13.79	13.79	13.79	1.4	1	1	13.79
		1	2	13.78	13.78	13.78	1.4	1	2	13.78
		1	3	13.77	13.77	13.77	1.4	1	3	13.77
		1	4	13.76	13.76	13.76	1.4	1	4	13.76
	SC-FDMA	1	5	13.75	13.75	13.75	1.4	1	5	13.75
		1	6	13.74	13.74	13.74	1.4	1	6	13.74
		1	7	13.73	13.73	13.73	1.4	1	7	13.73
		1	8	13.72	13.72	13.72	1.4	1	8	13.72
		1	9	13.71	13.71	13.71	1.4	1	9	13.71

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		LTE Band 2					
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max Time-up (dBm)
		Channel	Frequency (MHz)	1860	1880	1900	
20M	QPSK	1	0	20.95	20.88	20.90	22.5
		1	50	21.11	21.07	21.03	22.5
		1	99	21.04	21.05	20.97	22.5
		50	0	20.72	20.88	20.76	22.5
		50	25	20.97	20.89	20.85	22.5
		50	50	20.73	20.84	20.81	22.5
	16QAM	100	0	20.96	20.88	20.87	22.5
		1	0	20.79	20.83	20.81	22.5
		1	50	20.97	21.05	21.00	22.5
		1	99	20.80	20.80	20.74	22.5
		50	0	20.81	20.98	20.78	22.5
		50	25	20.82	20.95	20.90	22.5
64QAM	50	50	20.86	20.84	20.82	22.5	
	100	0	20.86	21.02	20.85	22.5	
	1	0	20.98	20.88	20.63	22.5	
	1	50	21.05	20.79	20.64	22.5	
	1	99	20.86	20.71	20.85	22.5	
	50	0	20.84	20.89	20.68	22.5	
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
20M	QPSK	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.96	20.82	22.5
		1	0	20.86	20.87	20.69	22.5
		1	50	20.87	20.97	20.82	22.5
		1	99	20.86	20.87	20.69	22.5
	16QAM	50	25	20.88	21.00	20.94	22.5
		50	50	20.84	20.87	20.69	22.5
		100	0	20.70	20.		

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LTE Band 2									
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)		
		Channel Frequency (MHz)	Channel Offset (MHz)	18700 18800	18900 19000	19100 19200			
20M	QPSK	1	0	16.90	16.93	16.94	18.5		
		1	50	17.20	17.33	17.34	18.5		
		1	99	16.92	16.93	17.01	18.5		
		50	0	16.68	16.68	16.65	18.5		
		50	25	17.01	16.90	16.84	18.5		
		50	50	16.86	16.86	16.79	18.5		
		100	0	16.96	16.94	16.74	18.5		
		1	0	16.67	16.84	16.89	18.5		
		1	50	17.02	17.14	17.09	18.5		
		1	99	16.85	16.71	16.91	18.5		
	16QAM	50	0	16.90	16.96	16.76	18.5		
		50	25	16.97	16.85	16.90	18.5		
		50	50	16.98	17.00	16.82	18.5		
		100	0	16.93	17.11	16.75	18.5		
		1	0	17.07	16.68	16.75	18.5		
		1	50	17.05	17.05	17.28	18.5		
		1	99	16.81	16.72	16.83	18.5		
		50	0	16.60	16.92	16.79	18.5		
		50	25	16.85	16.96	16.97	18.5		
		50	50	16.99	16.92	16.72	18.5		
		100	0	16.85	17.13	16.85	18.5		
15M	QPSK	Channel Frequency (MHz)	Channel Offset (MHz)	1887.5 1885	1890 1895	1902.5 1905	Max. Tune-up (dBm)		
		1	0	16.88	16.85	16.83	18.5		
		1	37	17.33	17.05	17.24	18.5		
		1	74	16.84	16.88	16.97	18.5		
		36	0	16.65	16.76	16.57	18.5		
		36	19	16.53	16.77	16.77	18.5		
		36	39	16.75	16.77	16.75	18.5		
		75	0	16.68	16.79	16.72	18.5		
		1	0	16.57	16.61	16.85	18.5		
		1	37	16.88	17.01	16.94	18.5		
	16QAM	1	74	16.69	16.76	16.93	18.5		
		36	0	16.84	16.95	16.74	18.5		
		36	19	16.93	16.84	16.76	18.5		
		36	39	16.88	16.85	16.61	18.5		
		75	0	16.84	17.02	16.96	18.5		
		1	0	16.54	16.57	16.85	18.5		
		1	37	16.98	17.04	17.19	18.5		
		1	74	16.69	16.70	16.73	18.5		
		36	0	16.59	16.77	16.76	18.5		
		36	19	16.76	16.87	16.88	18.5		
10M	QPSK	Channel Frequency (MHz)	Channel Offset (MHz)	1885 1885	1885 1885	1885 1885	Max. Tune-up (dBm)		
		1	0	16.86	16.87	16.75	18.5		
		1	24	17.24	17.13	17.28	18.5		
		1	49	16.89	16.89	16.91	18.5		
		25	0	16.58	16.73	16.59	18.5		
		25	12	16.66	16.80	16.71	18.5		
		25	25	16.76	16.77	16.66	18.5		
		50	0	16.89	16.89	16.79	18.5		
		1	0	16.53	16.51	16.83	18.5		
		1	24	16.93	17.08	16.98	18.5		
	16QAM	1	49	16.71	16.58	16.90	18.5		
		25	0	16.84	16.83	16.83	18.5		
		25	12	16.86	16.80	16.94	18.5		
		25	25	16.85	16.98	16.78	18.5		
		50	0	16.89	17.08	16.61	18.5		
		1	0	17.05	16.59	16.71	18.5		
		1	24	16.92	17.03	17.14	18.5		
		1	49	16.68	16.61	16.98	18.5		
		25	0	16.85	16.85	16.78	18.5		
		25	12	16.82	16.84	16.94	18.5		
5M	QPSK	Channel Frequency (MHz)	Channel Offset (MHz)	1882.5 1882.5	1885 1885	1887.5 1887.5	Max. Tune-up (dBm)		
		1	0	16.79	16.80	16.82	18.5		
		1	12	17.21	17.19	17.20	18.5		
		1	24	16.81	16.85	16.96	18.5		
		12	0	16.60	16.82	16.51	18.5		
		12	6	16.60	16.83	16.64	18.5		
		12	13	16.74	16.83	16.72	18.5		
		25	0	16.89	16.84	16.65	18.5		
		1	0	16.55	16.53	16.78	18.5		
		1	12	16.89	17.00	16.95	18.5		
	16QAM	1	24	16.84	16.82	16.98	18.5		
		12	0	16.79	16.82	16.72	18.5		
		12	6	16.96	16.93	16.88	18.5		
		12	13	16.86	16.89	16.60	18.5		
		25	0	16.92	17.09	16.69	18.5		
		1	0	16.98	16.94	16.94	18.5		
		1	12	16.94	16.98	17.13	18.5		
		1	24	16.69	16.58	16.72	18.5		
		12	0	16.58	16.85	16.67	18.5		
		12	6	16.79	16.92	16.94	18.5		
3M	QPSK	Channel Frequency (MHz)	Channel Offset (MHz)	1881.5 1881.5	1880 1880	1880.5 1880.5	Max. Tune-up (dBm)		
		1	0	16.88	16.78	16.76	18.5		
		1	7	17.33	17.19	17.25	18.5		
		1	14	16.77	16.79	16.98	18.5		
		8	0	16.67	16.76	16.57	18.5		
		8	3	16.90	16.76	16.72	18.5		
		8	7	16.74	16.88	16.65	18.5		
		15	0	16.80	16.91	16.59	18.5		
		1	0	16.52	16.54	16.85	18.5		
		1	7	16.97	17.10	17.05	18.5		
	16QAM	1	14	16.75	16.57	16.82	18.5		
		8	0	16.80	16.91	16.75	18.5		
		8	3	16.94	16.82	16.77	18.5		
		8	7	16.90	16.89	16.55	18.5		
		15	0	16.79	17.08	16.74	18.5		
		1	0	16.94	16.57	16.66	18.5		
		1	7	16.95	17.04	17.15	18.5		
		1	14	16.72	16.57	16.72	18.5		
		8	0	16.55	16.80	16.77	18.5		
		8	3	16.78	16.92	16.94	18.5		
1.4M	QPSK	Channel Frequency (MHz)	Channel Offset (MHz)	1880.7 1880.7	1880 1880	1880.3 1880.3	Max. Tune-up (dBm)		
		1	0	16.89	16.82	16.89	18.5		
		1	2	17.21	17.18	17.29	18.5		
		1	5	16.78	16.83	16.97	18.5		
		3	0	16.55	16.75	16.83	18.5		
		3	1	16.92	16.85	16.73	18.5		
		3	3	16.76	16.82	16.87	18.5		
		6	0	16.83	16.90	16.61	18.5		
		1	0	16.55	16.61	16.77	18.5		
		1	2	16.87	17.09	17.05	18.5		
	16QAM	1	5	16.78	16.63	16.81	18.5		
		3	0	16.80	16.73	16.73	18.5		
		3	1	16.83	16.90	16.76	18.5		
		3	3	16.94	16.89	16.55	18.5		
		6	0	16.89	16.99	16.69	18.5		
		1	0	16.97	16.82	16.86	18.5		
		1	2	16.92	17.19	17.16	18.5		
		1	5	16.87	16.89	16.71	18.5		
		3	0	16.96	16.78	16.72	18.5		
		3	1	16.84	16.94	16.93	18.5		
		3	3	16.95	16.77	16.58	18.5		

LTE Band 4									
BW	Modulation	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)		
		Channel	Frequency (MHz)	20950	20975	20990			
20M	QPSK	1	0	17.28	17.49	17.45	19		
		1	50	17.60	17.59	17.66	19		
		1	99	17.37	17.24	17.39	19		
		50	0	17.29	17.19	17.29	19		
		50	25	17.40	17.33	17.31	19		
		50	50	17.31	17.10	17.31	19		
		100	0	17.30	17.19	17.41	19		
		1	0	17.50	17.23	17.31	19		
		1	50	17.34	17.40	17.41	19		
		1	99	17.34	17.21	17.10	19		
	16QAM	50	0	17.28	17.15	17.19	19		
		50	25	17.36	17.42	17.46	19		
		50	50	17.23	17.39	17.16	19		
		100	0	17.28	17.28	17.29	19		
		1	0	17.24	17.23	17.43	19		
		1	50	17.33	17.29	17.19	19		
		1	99	17.26	17.35	17.29	19		
		50	0	17.49	17.54	17.32	19		
		50	25	17.40	17.61	17.49	19		
		50	50	17.50	17.54	17.18	19		
100	0	17.20	17.23	17.45	19				
BW	Modulation	Channel	20950	20975	20990	Max. Tune-up (dBm)			
		Frequency (MHz)	1716.5	1732.5	1747.5				
	QPSK	1	0	17.13	17.41	17.21	19		
		1	37	17.55	17.46	17.55	19		
		1	74	17.35	17.19	17.31	19		
		36	0	17.24	17.10	17.16	19		
		36	19	17.27	17.11	17.18	19		
		36	39	17.20	17.08	17.22	19		
		75	0	17.22	17.06	17.35	19		
		1	0	17.37	17.15	17.19	19		
		1	37	17.25	17.27	17.32	19		
		1	74	17.24	17.24	17.65	19		
	16QAM	36	0	17.25	17.14	17.17	19		
		36	19	17.29	17.27	17.36	19		
		36	39	17.17	17.28	17.04	19		
		75	0	17.17	17.24	17.02	19		
		1	0	17.16	17.28	17.36	19		
		1	37	17.26	17.22	17.15	19		
		1	74	17.13	17.29	17.16	19		
		36	0	17.42	17.48	17.19	19		
36		19	17.25	17.80	17.46	19			
36		39	17.45	17.45	17.65	19			
75	0	17.11	17.14	17.33	19				
BW	Modulation	Channel	20900	20975	20990	Max. Tune-up (dBm)			
		Frequency (MHz)	1716.5	1732.5	1750				
	QPSK	1	0	17.27	17.34	17.21	19		
		1	24	17.52	17.45	17.62	19		
		1	49	17.48	17.28	17.29	19		
		25	0	17.16	17.06	17.18	19		
		25	12	17.35	17.30	17.29	19		
		25	25	17.27	17.08	17.24	19		
		50	0	17.26	17.08	17.39	19		
		1	0	17.43	17.24	17.27	19		
		1	24	17.31	17.38	17.33	19		
		1	49	17.27	17.08	17.01	19		
	16QAM	25	0	17.18	17.22	17.17	19		
		25	12	17.26	17.27	17.36	19		
		25	25	17.22	17.25	17.03	19		
		50	0	17.14	17.17	17.17	19		
		1	0	17.10	17.17	17.41	19		
		1	24	17.21	17.16	17.10	19		
		1	49	17.23	17.28	17.47	19		
		25	0	17.43	17.38	17.17	19		
25		12	17.36	17.28	17.27	19			
25		25	17.41	17.41	17.09	19			
50	0	17.13	17.10	17.39	19				
BW	Modulation	Channel	19875	20975	20990	Max. Tune-up (dBm)			
		Frequency (MHz)	1732.5	1752.5	1762.5				
	QPSK	1	0	17.16	17.46	17.23	19		
		1	12	17.51	17.60	17.63	19		
		1	24	17.35	17.15	17.33	19		
		12	0	17.19	17.10	17.26	19		
		12	6	17.36	17.25	17.23	19		
		12	13	17.16	17.23	17.27	19		
		25	0	17.21	17.27	17.39	19		
		1	0	17.38	17.09	17.18	19		
		1	12	17.29	17.33	17.33	19		
		1	24	17.26	17.15	17.16	19		
	16QAM	12	0	17.16	17.09	17.14	19		
		12	6	17.28	17.28	17.46	19		
		12	13	17.17	17.29	17.68	19		
		25	0	17.19	17.23	17.23	19		
		1	0	17.12	17.15	17.29	19		
		1	12	17.22	17.14	17.65	19		
		1	24	17.21	17.31	17.27	19		
		12	0	17.47	17.47	17.17	19		
12		6	17.27	17.52	17.40	19			
12		13	17.49	17.48	17.11	19			
25	0	17.19	17.13	17.44	19				
BW	Modulation	Channel	19965	20975	20990	Max. Tune-up (dBm)			
		Frequency (MHz)	1741.5	1761.5	1768.5				
	QPSK	1	0	17.18	17.42	17.17	19		
		1	7	17.55	17.45	17.52	19		
		1	14	17.28	17.14	17.36	19		
		8	0	17.24	17.04	17.14	19		
		6	3	17.27	17.27	17.07	19		
		8	7	17.19	17.22	17.16	19		
		15	0	17.19	17.18	17.36	19		
		1	0	17.42	17.10	17.22	19		
		1	7	17.23	17.38	17.26	19		
		1	14	17.27	17.16	17.06	19		
	16QAM	8	0	17.15	17.15	17.08	19		
		8	3	17.23	17.33	17.44	19		
		8	7	17.12	17.25	17.15	19		
		15	0	17.16	17.20	17.18	19		
		1	0	17.12	17.18	17.33	19		
		1	7	17.28	17.27	17.11	19		
		1	14	17.24	17.25	17.21	19		
		8	0	17.36	17.42	17.29	19		
8		3	17.37	17.48	17.41	19			
8		7	17.49	17.45	17.04	19			
15	0	17.10	17.10	17.38	19				
BW	Modulation	Channel	19987	20975	20990	Max. Tune-up (dBm)			
		Frequency (MHz)	1746.7	1762.7	1764.3				
	QPSK	1	0	17.19	17.34	17.21	19		
		1	2	17.49	17.51	17.54	19		
		1	5	17.30	17.09	17.26	19		
		3	0	17.45	17.27	17.27	19		
		3	1	17.32	17.31	17.19	19		
		3	3	17.30	17.15	17.16	19		
		6	0	17.23	17.16	17.35	19		
		1	0	17.42	17.15	17.28	19		
		1	7	17.28	17.30	17.37	19		
		1	5	17.32	17.19	17.07	19		
	16QAM	3	0	17.21	17.03	17.14	19		
		3	1	17.28	17.28	17.39	19		
		3	3	17.22	17.25	17.62	19		
		6	0	17.74	17.21	17.28	19		
		1	0	17.19	17.19	17.41	19		
		1	2	17.29	17.28	17.09	19		
		1	5	17.12	17.29	17.17	19		
		3	0	17.46	17.49	17.17	19		
1		1	17.38	17.54	17.35	19			
3		3	17.44	17.44	17.06	19			
8	0	17.17	17.10	17.38	19				

default Power					
2.4GHz WLAN					
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11b 1Mbps	1	2412	15.97	17.50
		6	2437	16.14	17.50
		11	2462	16.23	17.50
	802.11g 6Mbps	1	2412	14.91	16.50
		6	2437	15.07	16.50
		11	2462	15.21	16.50
	802.11n-HT20 MCS0	1	2412	13.90	15.50
		6	2437	14.17	15.50
		11	2462	14.04	15.50
5GHz WLAN					
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	36	5180	12.83	14.50
		40	5200	12.93	14.50
		44	5220	12.85	14.50
	802.11n-HT20 MCS0	48	5240	12.95	14.50
		36	5180	13.23	14.50
		40	5200	13.33	14.50
	802.11n-HT40 MCS0	44	5220	13.21	14.50
		48	5240	13.25	14.50
		38	5190	13.12	14.50
	802.11ac-VHT20 MCS0	46	5230	13.12	14.50
		36	5180	13.06	14.50
		40	5200	13.00	14.50
	802.11ac-VHT40 MCS0	44	5220	13.03	14.50
		48	5240	13.07	14.50
		38	5190	13.06	14.50
		46	5230	13.15	14.50
	802.11ac-VHT80 MCS0	42	5210	13.54	14.50
5.8GHz WLAN					
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	52	5260	13.03	14.50
		56	5280	13.01	14.50
		60	5300	13.02	14.50
	802.11n-HT20 MCS0	64	5320	13.18	14.50
		52	5260	13.34	14.50
		56	5280	13.25	14.50
	802.11n-HT40 MCS0	60	5300	13.21	14.50
		64	5320	13.36	14.50
		54	5270	13.09	14.50
	802.11ac-VHT20 MCS0	62	5310	13.06	14.50
		52	5260	13.01	14.50
		56	5280	13.03	14.50
	802.11ac-VHT40 MCS0	60	5300	13.04	14.50
		64	5320	13.17	14.50
		54	5270	13.13	14.50
	802.11ac-VHT80 MCS0	62	5310	13.11	14.50
		58	5290	13.28	14.50
5.9GHz WLAN					
5.9GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	100	5500	13.19	14.50
		116	5580	13.00	14.50
		124	5620	13.04	14.50
		132	5660	13.07	14.50
		140	5700	13.13	14.50
		144	5720	13.05	14.50
	802.11n-HT20 MCS0	100	5500	13.45	14.50
		116	5580	13.42	14.50
		124	5620	13.38	14.50
		132	5660	13.33	14.50
		140	5700	13.48	14.50
		144	5720	13.39	14.50
	802.11n-HT40 MCS0	102	5510	13.19	14.50
		110	5550	13.31	14.50
		126	5630	13.17	14.50
		134	5670	13.26	14.50
		142	5710	13.25	14.50
		146	5730	13.13	14.50
	802.11ac-VHT20 MCS0	106	5610	13.28	14.50
		112	5650	13.16	14.50
		120	5690	13.10	14.50
		128	5730	13.03	14.50
		136	5770	12.96	14.50
		144	5810	12.89	14.50
	802.11ac-VHT40 MCS0	108	5640	13.19	14.50
		114	5680	13.11	14.50
		122	5720	13.04	14.50
		130	5760	12.97	14.50
		138	5800	12.90	14.50
		146	5840	12.83	14.50
	802.11ac-VHT80 MCS0	110	5660	13.24	14.50
116		5700	13.16	14.50	
124		5740	13.09	14.50	
132		5780	13.02	14.50	
140		5820	12.95	14.50	
148		5860	12.88	14.50	
BT					
BLE	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	1M	0	2402	0.37	2.00
		19	2440	0.94	2.00
	2M	39	2480	1.40	3.00
		1	2404	0.69	2.00
	S2	19	2440	1.06	3.00
		38	2478	1.40	3.00
		0	2402	0.48	2.00
		19	2440	0.95	2.00
	S8	39	2480	1.44	3.00
0		2402	0.59	2.00	
19		2440	0.95	2.00	
39		2480	1.56	3.00	
BREDR	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	GFSK	0	2402	0.55	8.00
		39	2441	6.39	8.00
	DQPSK	78	2480	9.88	11.00
		39	2441	3.01	5.00
	BDPSK	78	2480	8.14	10.00
		0	2402	0.53	8.00
		39	2441	2.91	4.00
		78	2480	8.14	10.00

Receiver on (DSI-1)					
2.4GHz WLAN					
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11b 1Mbps	1	2412	12.86	14.50
		6	2437	13.27	14.50
		11	2462	13.34	14.50
	802.11g 6Mbps	1	2412		13.50
		6	2437		13.50
		11	2462		13.50
	802.11n-HT20 MCS0	1	2412		12.50
		6	2437		12.50
11		2462		12.50	
5GHz WLAN					
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	36	5180		9.50
		40	5200		9.50
		44	5220		9.50
	802.11n-HT20 MCS0	48	5240		9.50
		36	5180		9.50
		40	5200		9.50
	802.11n-HT40 MCS0	44	5220		9.50
		38	5190		9.50
		46	5230		9.50
	802.11ac-VHT20 MCS0	36	5180		9.50
		40	5200		9.50
		44	5220		9.50
	802.11ac-VHT40 MCS0	48	5240		9.50
		38	5190		9.50
		46	5230		9.50
	802.11ac-VHT80 MCS0	42	5210	8.63	9.50
5GHz WLAN					
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	52	5260		9.50
		56	5280		9.50
		60	5300		9.50
	802.11n-HT20 MCS0	64	5320		9.50
		52	5260	8.29	9.50
		56	5280	8.33	9.50
	802.11n-HT40 MCS0	60	5300	8.27	9.50
		64	5320	8.46	9.50
		54	5270		9.50
	802.11ac-VHT20 MCS0	62	5310		9.50
		52	5260		9.50
		56	5280		9.50
	802.11ac-VHT40 MCS0	60	5300		9.50
		64	5320		9.50
		54	5270		9.50
	802.11ac-VHT80 MCS0	62	5310		9.50
58		5290		9.50	
5GHz WLAN					
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	100	5500		9.50
		116	5580		9.50
		124	5620		9.50
		132	5660		9.50
		140	5700		9.50
	802.11n-HT20 MCS0	144	5720		9.50
		100	5500	8.41	9.50
		116	5580	8.31	9.50
		124	5620	8.44	9.50
		132	5660	8.29	9.50
	802.11ac-VHT20 MCS0	140	5700	8.56	9.50
		144	5720	8.42	9.50
		102	5510		9.50
		110	5550		9.50
		126	5630		9.50
	802.11ac-VHT40 MCS0	134	5670		9.50
		142	5710		9.50
		100	5500		9.50
		116	5580		9.50
124		5620		9.50	
802.11ac-VHT80 MCS0	132	5660		9.50	
	140	5700		9.50	
	144	5720		9.50	
	102	5510		9.50	
	110	5550		9.50	
802.11ac-VHT80 MCS0	126	5630		9.50	
	134	5670		9.50	
	142	5710		9.50	
	106	5530		9.50	
	122	5610		9.50	
802.11ac-VHT80 MCS0	138	5690		9.50	
	5GHz WLAN				
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	802.11a 6Mbps	140	5740		9.50
		157	5785		9.50
		165	5825		9.50
	802.11n-HT20 MCS0	149	5745		9.50
		157	5785		9.50
		165	5825		9.50
	802.11n-HT40 MCS0	157	5785		9.50
		151	5795		9.50
		159	5795		9.50
	802.11ac-VHT20 MCS0	149	5745		9.50
157		5785		9.50	
165		5825		9.50	
802.11ac-VHT40 MCS0	151	5755		9.50	
	159	5795		9.50	
	155	5775	8.65	9.50	
Ant2					
BLE	Mode	Channel	Frequency (MHz)	Average power (dBm)	Time-Up Limit
	1M	0	2402	0.37	2.00
		19	2440	0.94	2.00
		39	2480	1.40	3.00
	2M	1	2404	0.69	2.00
		19	2440	1.06	3.00
		38	2478	1.40	3.00
	S2	0	2402	0.48	2.00
		19	2440	0.95	2.00
		39	2480	1.44	3.00
	S8	19	2440	0.85	2.00
0		2402	0.59	2.00	
39		2480	1.56	3.00	
BREDR	GFSK	0	2402	6.53	10.00
		39	2441	6.39	4.00
		78	2480	9.50	11.00
	DQPSK	0	2402	6.50	11.00
		39	2441	3.01	5.00
		78	2480	8.14	10.00
8DPSK	0	2402	6.53	4.00	
	39	2441	2.91	4.00	
8DPSK	78	2480	8.14	10.00	