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





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

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

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Client Auden

Certificate No: D2450V2-735 Dec16

#### **CALIBRATION CERTIFICATE**

Object D2450V2 - SN: 735

**QA CAL-05.v9** Calibration procedure(s)

Calibration procedure for dipole validation kits above 700 MHz

Calibration date: December 23, 2016

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	06-Apr-16 (No. 217-02288/02289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 103245	06-Apr-16 (No. 217-02289)	Apr-17
Reference 20 dB Attenuator	SN: 5058 (20k)	05-Apr-16 (No. 217-02292)	Apr-17
Type-N mismatch combination	SN: 5047.2 / 06327	05-Apr-16 (No. 217-02295)	Apr-17
Reference Probe EX3DV4	SN: 7349	15-Jun-16 (No. EX3-7349_Jun16)	Jun-17
DAE4	SN: 601	30-Dec-15 (No. DAE4-601_Dec15)	Dec-16
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17
	Name	Function	Signature
Calibrated by:	Michael Weber	Laboratory Technician	M.Meles
Approved by:	Katja Pokovic	Technical Manager	MM

Issued: December 23, 2016

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Certificate No: D2450V2-735\_Dec16

### Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Glossarv:

TSL

tissue simulating liquid

ConvE

sensitivity in TSL / NORM x,v,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, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)". February 2005
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

#### 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
- 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%.

Certificate No: D2450V2-735\_Dec16

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#### **Measurement Conditions**

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

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, $dy$ , $dz = 5 mm$	
Frequency	2450 MHz ± 1 MHz	

#### **Head TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.8 ± 6 %	1.85 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

#### SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.0 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	50.9 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.03 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.8 W/kg ± 16.5 % (k=2)

#### **Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.7 ± 6 %	1.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	#u	

#### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.9 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.6 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.02 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.8 W/kg ± 16.5 % (k=2)

Certificate No: D2450V2-735\_Dec16 Page 3 of 8

### Appendix (Additional assessments outside the scope of SCS 0108)

#### **Antenna Parameters with Head TSL**

Impedance, transformed to feed point	55.2 $\Omega$ + 4.8 j $\Omega$
Return Loss	- 23.4 dB

#### **Antenna Parameters with Body TSL**

Impedance, transformed to feed point	$50.5~\Omega + 5.8~\mathrm{j}\Omega$
Return Loss	- 24.8 dB

#### **General Antenna Parameters and Design**

Electrical Delay (one direction) 1.152 ns	Electrical Delay (one direction)	1.152 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
Manufactured on	May 07, 2003

Certificate No: D2450V2-735\_Dec16

#### **DASY5 Validation Report for Head TSL**

Date: 23.12.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 735

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz;  $\sigma = 1.85$  S/m;  $\varepsilon_r = 37.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

#### DASY52 Configuration:

• Probe: EX3DV4 - SN7349; ConvF(7.72, 7.72, 7.72); Calibrated: 15.06.2016;

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 30.12.2015

• Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

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

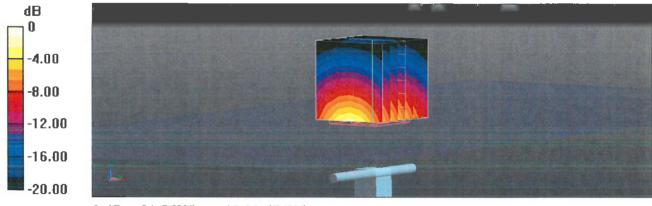
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 113.3 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 26.2 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.03 W/kg

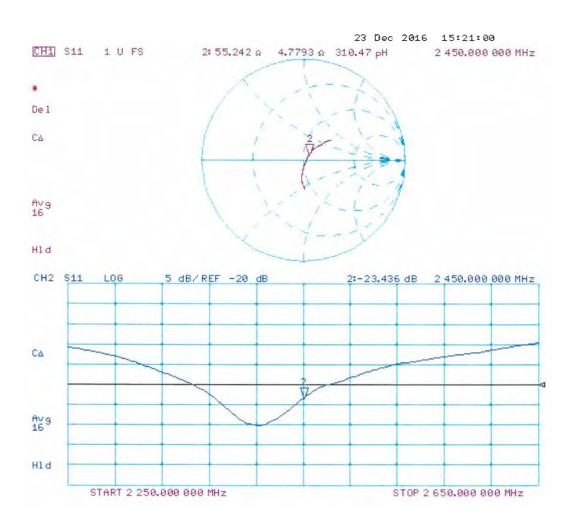
Maximum value of SAR (measured) = 21.5 W/kg



0 dB = 21.5 W/kg = 13.32 dBW/kg

Certificate No: D2450V2-735\_Dec16

#### Impedance Measurement Plot for Head TSL



#### **DASY5 Validation Report for Body TSL**

Date: 23.12.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 735

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz;  $\sigma = 1.99$  S/m;  $\epsilon_r = 50.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

#### DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.79, 7.79, 7.79); Calibrated: 15.06.2016;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.12.2015

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

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

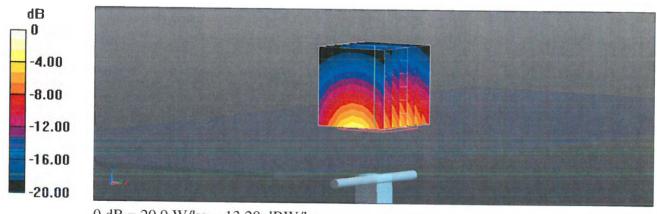
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.1 V/m; Power Drift = -0.04 dB

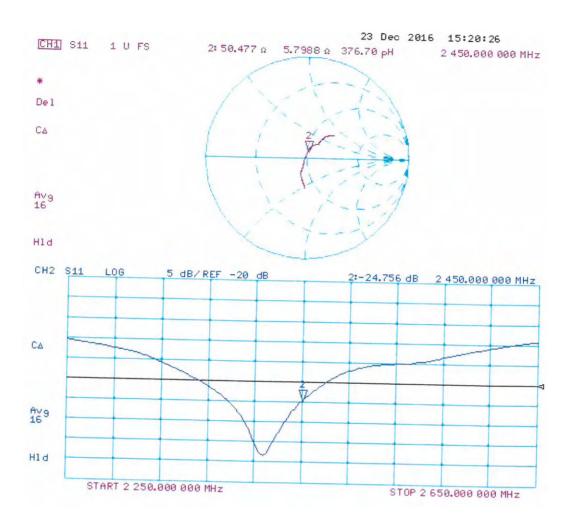
Peak SAR (extrapolated) = 25.7 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.02 W/kg

Maximum value of SAR (measured) = 20.9 W/kg



# Impedance Measurement Plot for Body TSL



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Client

Sporton - TW (Auden)

Certificate No: DAE3-577\_Sep16

Accreditation No.: SCS 0108

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#### IBRATION CERTIFICATE

Object

DAE3 - SD 000 D03 AA - SN: 577

Calibration procedure(s)

QA CAL-06.v29

Calibration procedure for the data acquisition electronics (DAE)

Calibration date:

September 28, 2016

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	09-Sep-16 (No:19065)	Sep-17
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	05-Jan-16 (in house check)	In house check: Jan-17
Calibrator Box V2.1	1	05-Jan-16 (in house check)	In house check: Jan-17

Name

Function

Calibrated by:

Eric Hainfeld

Technician

Signature

Approved by:

Fin Bomholt

Deputy Technical Manager

Issued: September 28, 2016

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#### Glossary

DAE

data acquisition electronics

Connector angle

Certificate No: DAE3-577\_Sep16

information used in DASY system to align probe sensor X to the robot

coordinate system.

#### Methods Applied and Interpretation of Parameters

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

#### **DC Voltage Measurement**

Low Range:

A/D - Converter Resolution nominal

High Range:

1LSB =

 $\begin{array}{ll} 6.1 \mu V \; , & \qquad \text{full range} = & -100...+300 \; \text{mV} \\ 61 \text{nV} \; , & \qquad \text{full range} = & -1......+3 \text{mV} \end{array}$ 

1LSB =

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

Calibration Factors	X	Y	Z
High Range	403.533 ± 0.02% (k=2)	403.512 ± 0.02% (k=2)	403.819 ± 0.02% (k=2)
Low Range	3.92648 ± 1.50% (k=2)	3.94206 ± 1.50% (k=2)	3.96074 ± 1.50% (k=2)

#### **Connector Angle**

Connector Angle to be used in DASY system	190.0 ° ± 1 °

Certificate No: DAE3-577\_Sep16

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# Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	200038.14	2.56	0.00
Channel X + Input	20010.51	5.45	0.03
Channel X - Input	-20002.01	3.17	-0.02
Channel Y + Input	200032.33	-3.18	-0.00
Channel Y + Input	20006.38	1.35	0.01
Channel Y - Input	-20004.73	0.65	-0.00
Channel Z + Input	200031.49	-4.11	-0.00
Channel Z + Input	20005.92	0.98	0.00
Channel Z - Input	-20007.03	-1.64	0.01

Low Range	<del>-</del>	Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2001.00	-0.10	-0.01
Channel X	+ Input	201.47	0.40	0.20
Channel X	- Input	-198.57	0.28	-0.14
Channel Y	+ Input	2001.38	0.31	0.02
Channel Y	+ Input	200.40	-0.54	-0.27
Channel Y	- Input	-199.63	-0.73	0.37
Channel Z	+ Input	2000.35	-0.56	-0.03
Channel Z	+ Input	199.97	-0.93	-0.46
Channel Z	- Input	-200.50	-1.56	0.79

2. Common mode sensitivity

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

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-2.76	-4.30
	- 200	6.04	3.73
Channel Y	200	-14.29	-14.35
	- 200	12.74	12.77
Channel Z	200	3.10	2.81
	- 200	-5.90	-5.65

#### 3. Channel separation

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

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	-1.07	-3.44
Channel Y	200	8.43	-	0.12
Channel Z	200	5.44	4.83	

4. AD-Converter Values with inputs shorted

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

	High Range (LSB)	Low Range (LSB)	
Channel X	16132	16062	
Channel Y	16099	16321	
Channel Z	16116	15372	

5. Input Offset Measurement

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

Input 10MΩ

11) Olivisz	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.37	-1.07	1.49	0.43
Channel Y	1.21	-0.41	3.21	0.59
Channel Z	-1.38	-2.63	-0.30	0.45

6. Input Offset Current

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

7. Input Resistance (Typical values for information)

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

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

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

9. Power Consumption (Typical values for information)

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

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Client

Sporton-TW (Auden)

Certificate No: EX3-3931\_Oct16

#### CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:3931

Calibration procedure(s)

QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6

Calibration procedure for dosimetric E-field probes

Calibration date:

October 3, 2016

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)

Certificate No: EX3-3931\_Oct16

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	06-Apr-16 (No. 217-02288/02289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 103245	06-Apr-16 (No. 217-02289)	Apr-17
Reference 20 dB Attenuator	SN: S5277 (20x)	05-Apr-16 (No. 217-02293)	Apr-17
Reference Probe ES3DV2	SN: 3013	31-Dec-15 (No. ES3-3013_Dec15)	Dec-16
DAE4	SN: 660	23-Dec-15 (No. DAE4-660_Dec15)	Dec-16
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr~16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-16)	In house check: Jun-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-15)	In house check: Oct-16

Name Function Signature

Calibrated by: Michael Weber Laboratory Technician

Approved by: Katja Pokovic Technical Manager

Issued: October 4, 2016

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#### Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A, B, C, D crest factor (1/duty\_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle

information used in DASY system to align probe sensor X to the robot coordinate system

#### Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- Techniques", June 2013
  b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

#### Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

# Probe EX3DV4

SN:3931

Manufactured:

July 24, 2013

Repaired:

September 27, 2016

Calibrated:

October 3, 2016

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

October 3, 2016

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3931

**Basic Calibration Parameters** 

Basic Campianon i ara-	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.50	0.56	0.47	± 10.1 %
DCP (mV) <sup>B</sup>	99.3	102.3	99.2	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	С	D dB	VR mV	Unc <sup>⊨</sup> (k=2)
0	CW	X	0.0	0.0	1.0	0.00	165.2	±2.2 %
		Y	0.0	0.0	1.0		169.6	
		Z.	0.0	0.0	1.0		158.4	

Note: For details on UID parameters see Appendix.

**Sensor Model Parameters** 

	C1 fF	C2 fF	α V-1	T1 ms.V <sup>-2</sup>	T2 ms.V <sup>-1</sup>	T3 ms	T4 V <sup>-2</sup>	T5 V <sup>-1</sup>	T6
X	39.73	299.4	36.38	13.81	1.099	5.004	0.119	0.351	1.005
Υ	59.82	447.7	35.85	21.83	1.546	5.045	0.719	0.472	1.007
Z	54.23	405.8	35.74	19.34	1.491	5.007	0.433	0.514	1.00 <u>5</u>

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%.

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

A The uncertainties of Norm X,Y,Z do not affect the E2-field uncertainty inside TSL (see Pages 5 and 6).

E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3931

#### Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity (S/m) F	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unc (k=2)
750	41.9	0.89	10.68	10.68	10.68	0.47	0.86	± 12.0 %
835	41.5	0.90	10.35	10.35	10.35	0.43	0.80	± 12.0 %
900	41.5	0.97	10.09	10.09	10.09	0.44	0.86	± 12.0 %
1450	40.5	1.20	8.73	8.73	8.73	0.45	0.80	± 12.0 %
1750	40.1	1.37	8.68	8.68	8.68_	0.37	0. <u>8</u> 0	± 12.0 %
1900	40.0	1.40	8.42	8.42	8.42_	0.34	0.80	± 12.0 %
2000	40.0	1.40	8.43	8.43	8.43	0.37	0.80	± 12.0 %
2300	39.5	1.67	7.94	7.94	7.94	0.28	0.86	± 12.0 %
2450	39.2	1.80	7.60	7.60	7 <u>.</u> 60	0.36	0.84	± 12.0 %
2600	39.0	1.96	7.37	7.37	7.37	0.31	0.97	± 12.0 %
5250	35.9	4,71	5.38	5.38	5.38	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.68	4.68	4.68	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.84	4.84	4.84	0.40	1.80	± 13.1 %

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

Validity can be extended to ± 110 MHz.

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

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

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3931

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity (S/m) <sup>F</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unc (k=2)
750	55.5	0.96	10.37	10.37	10.37	0.38	0.97	± 12.0 %
835	55.2	0.97	10.14	10.14	10.14	0.36	0.99	± 12.0 %
1450	54.0	1.30	8.53	8.53	8. <u>5</u> 3	0.31	0.80	± 12.0 %
1750	53. <u>4</u>	1.49	8.45	8.45	8. <u>4</u> 5	0.37	0.80	± 12.0 %
1900	53.3	1.52	8.1 <u>4</u>	8.14	8.14	0.33	0.90	± 12.0 %
2300	52.9	1.81	7.96	7.96	7.96	0.39	0.80	± 12.0 %
2450	52.7	1.95	7.73	7.73	7.73	0.38	0.85	± 12.0 %
2600	52.5	2.16	7.46	7.46	7.46	0.25	0.95	± 12.0 %
5250	48.9	5.3 <u>6</u>	4.57	4.57	4.57	0.50	1.90	± 13.1 %
5600	48.5	5.77	3.71	3.71	3.71	0.60	1.90	± 13.1 %
5750	48.3	5.94	4.01	4.01	4.01	0.60	1.90	± 13.1 %

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

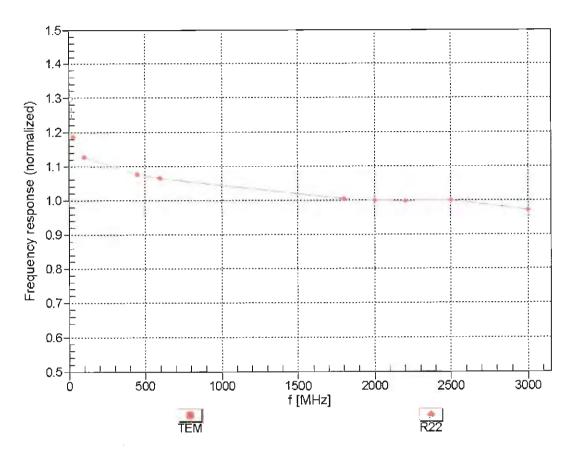
F At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to  $\pm$  10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to  $\pm$  5%. The uncertainty is the RSS of the ConyE uncertainty for indicated target tissue parameters

the ConvF uncertainty for indicated target tissue parameters.

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

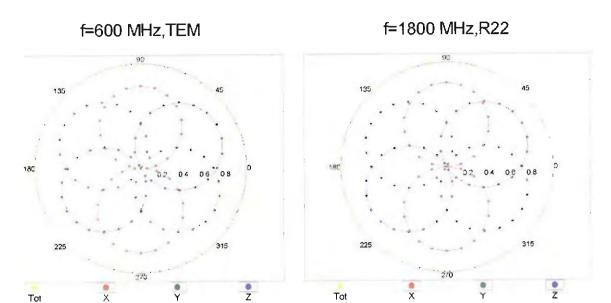
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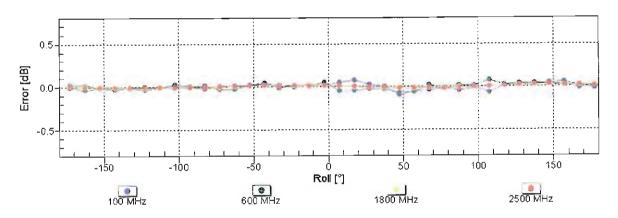
# Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



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

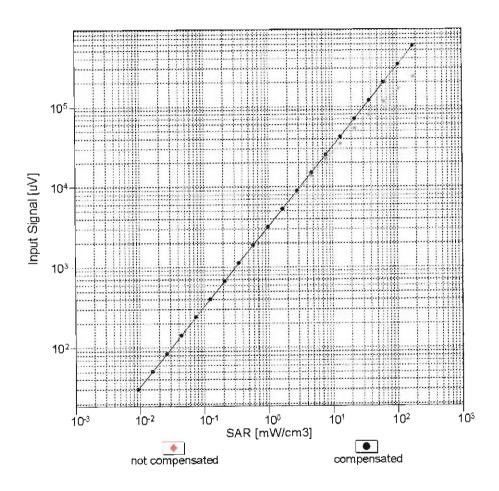
# Receiving Pattern ( $\phi$ ), $\vartheta = 0^{\circ}$

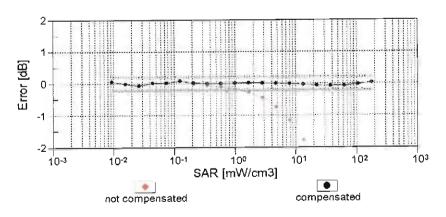




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

## Dynamic Range f(SAR<sub>head</sub>) (TEM cell , f<sub>eval</sub>= 1900 MHz)

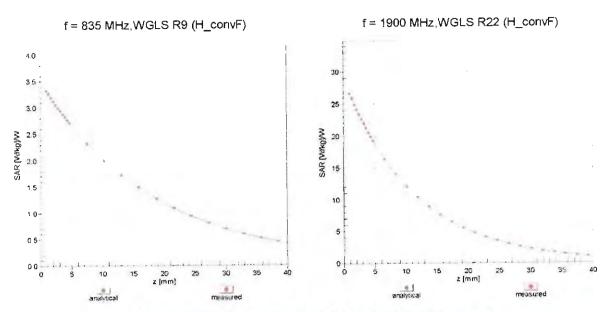




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

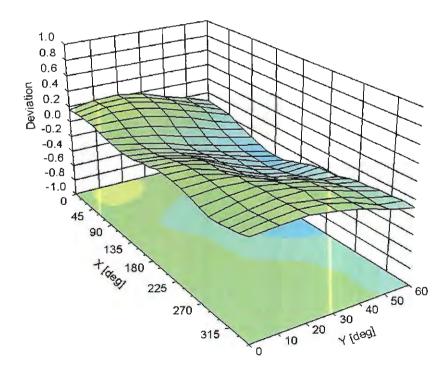
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# **Conversion Factor Assessment**



# Deviation from Isotropy in Liquid

Error  $(\phi, \theta)$ , f = 900 MHz



# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3931

#### **Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	127.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

**Appendix: Modulation Calibration Parameters** 

UID	ix: Modulation Calibration Paral Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max Unc <sup>E</sup> (k=2)
0	CW	Х	0.00	0.00	1.00	0.00	165.2	± 2.2 %
		Υ	0.00	0.00	1.00		169.6	
10010-	CAD Validation (Causes 100ms 10ms)	Z	0.00 3.48	0.00 69.31	1.00 12.63	10.00	158.4 20.0	± 9.6 %
CAA	SAR Validation (Square, 100ms, 10ms)	^	3.40	09.31	12.03	10.00	20.0	± 9.0 %
0/11		Υ	5.87	75.87	16.27		20.0	
		Z	4.02	70.66	13.78		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	1.30	72.39	18.20	0.00	150.0	± 9.6 %
	<del></del>	Y	1.19 1.01	69.63 66.38	16.77 14.76		150.0 150.0	
10012- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.24	65.29	16.42	0.41	150.0	± 9.6 %
<del></del>		Υ	1.26	64.91	16.05		150.0	
		Z	1.20	63.67	14.96		150.0	
10013- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps)	X	4.82	66.95	17.27	1.46	150.0	± 9.6 %
	_	Y	5.04	66.77	17.23		150.0 150.0	
10021- DAB	GSM-FDD (TDMA, GMSK)	X	4.95 100.00	66.50 114.09	16.90 27.93	9.39	50.0	± 9.6 %
D/ (D		Υ	100.00	118.26	30.54		50.0	
		Z	25.45	96.76	24.27		50.0	
10023- DAB	GPRS-FDD (TDMA, GMSK, TN 0)	X	83.93	111.52	27.32	9.57	50.0	± 9.6 %
	_	Y	99.99	118.26	30.60		50.0 50.0	
10024- DAB	GPRS-FDD (TDMA, GMSK, TN 0-1)	Z	19.40 100.00	92.86 112.26	23.18 25.94	6.56	60.0	± 9.6 %
DAD		Y	100.00	115.42	28.11		60.0	
		Z	100.00	112.41	26.50		60.0	
10025- DAB	EDGE-FDD (TDMA, 8PSK, TN 0)	Х	5.67	76.70	28.63	12.57	50.0	± 9.6 %
	_	Y	15.06	105.00	40.92 27.63		50.0 50.0	
10026- DAB	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	5.92 9.71	75.84 91.87	32.18	9.56	60.0	± 9.6 %
D) 10	-	Y	18.06	104.69	36.55		60.0	
		Z	11.21	92.21	31. <u>5</u> 5		60.0	
10027- DAB	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	Х	100.00	112.68	25.31	4.80	80.0	± 9.6 %
		Z	100.00 100.00	114.88	27.06 25.19		80.0 80.0	
10028- DAB	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	111.26 114.77	25.19	3.55	100.0	± 9.6 %
טייט	<del></del>	Y	100.00	115.72	26.71		100.0	
		Z	100.00	111.32	24.54		100.0	
10029- DAB	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.19	82.03	27.36	7.80	80.0	± 9.6 %
		Y	10.55	92.05	31.00		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	7,5 <u>3</u> 100.00	83.82 110.56	27.35 24.66	5.30	70.0	± 9.6 %
U/V1	<del>                                     </del>	Y	100.00	113.96	26.95		70.0	
		Z	100.00	110.53	25.16		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	116.75	24.95	1.88	100.0	± 9.6 %
		Y	100.00	117.62	26.11		100.0	
		Z	100.00	110.75	23.01	<u> </u>	100.0	L

10032-	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Х	100.00	131.18	29.75	1.17	100.0	± 9.6 %
CAA			100.00	405.00	00.00		100.0	
		Y	100.00	125.29	28.26 23.87		100.0	
		Z	100.00	114.95	23.87	5.30	70.0	± 9.6 %
10033- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Х	10.93	90.53		5.30		
*		Υ_	20.55	101.44	27.99		70.0	
		Z	7.67	84.45	21.88		70.0	
10034- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Х	5.70	84.58	20.06	1.88	100.0	± 9.6 %
O/M	B1107	Υ	5.85	85.75	22.03		100.0	
		Z	2.95	74.86	17.34		100.0	
10035- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Χ	3.92	81.20	18.80	1.17	100.0	± 9.6 %
<u> </u>		Υ	3.48	79.72	19.80		100.0	
		Z	2.10	71.76	15.97		100.0	
10036- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	15.13	95.54	24.90	5.30	70.0	± 9.6 %
0,01		Υ	28.86	107.18	29.66		70.0	
		Z	9.07	87.21	22.88		70.0	
10037- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	4.82	82.50	19.36	1.88	100.0	± 9.6 %
<u> </u>		Ŷ	5.58	85.13	21.78		100.0	
		Z	2.82	74.36	17.11		100.0	
10038- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	4.08	82.09	19.24	1.17	100.0	± 9.6 %
<u> </u>		Y	3.57	80.38	20.14		100.0	
		Z	2.12	72.10	16.20		100.0	
10039- CAB	CDMA2000 (1xRTT, RC1)	X	5.80	88.31	21.06	0.00	150.0	± 9.6 %
CAD	<del></del>	Υ	2.44	75.65	18.16		150.0	
	<del></del>	Z	1.80	71.10	15.73		150.0	
10042- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Halfrate)	X	100.00	110.27	25.32	7.78	50.0	± 9.6 %
CAD	DQF3K, Halliate)	Y	100.00	114.03	27.70		50.0	
		Ż	32.06	97.64	22.93		50.0	
10044-	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.00	105.67	0.52	0.00	150.0	± 9.6 %
CAA		Y	0.00	101.10	0.34		150.0	
		Z	0.00	94.56	3.16		150.0	_
10048-	DECT (TDD, TDMA/FDM, GFSK, Full	X	11.94	82.95	20.71	13.80	25.0	± 9.6 %
CAA_	Slot, 24)	Y	15.06	89.64	24.59		25.0	
		Z	9.78	81.31	21.11	-	25.0	
10049-	DECT (TDD, TDMA/FDM, GFSK, Double	X	15.54	88.48	21.39	10.79	40.0	± 9.6 %
CAA	Slot, 12)	Y	23.79	97.14	25.51		40.0	
		Z	11.46	84.91	21.03		40.0	
10056-	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	13.32	89.14	23.36	9.03	50.0	± 9.6 %
CAA		Y	16.34	93.59	26.16		50.0	
		Ż	10.18	84.57	22.45		50.0	
10059	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	4.78	77.20	24.69	6.55	100.0	± 9.6 %
10058- DAB	EDGE-FDD (1DWA, 0F3K, 114 0-1-2-3)	Y	7.46	84.92	27.60		100.0	_
		Z	5.76	78.94	24.73	1	100.0	
10059-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2	X	1.30	66.67	17.10	0.61	110.0	± 9.6 %
CAB	Mbps)	Υ	1.37	66.65	16.91	1	110.0	
		Z	1.27	64.87	15.53	1	110.0	
10060-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5	X	100.00	139.37	36.42	1.30	110.0	± 9.6 %
CAB	Mbps)	Y	100.00	134.75	34.85		110.0	
		Z	5.80	90.90	23.07		110.0	
		1 4	<u> </u>	30.30	1. 20.01	1		<del></del>

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10061- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	4.16	86.26	24.31	2.04	110.0	±9.6 %
		Y	6.78	92.08	26.03		110.0	
		Z	3.18	78.55	20.67		110.0	
10062- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	Х	4.62	66.99	16.77	0.49	100.0	± 9.6 %
		Y	4.83	66.75	16.66		100.0	
		Z	4.75	66.51	16.38		100.0	
10063- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.64	67.08	16.86	0.72	100.0	± 9.6 %
	- 15.27	Y	4.86	66.87	16.78		100.0	
		Z	4.77	66.60	16.47		100.0	
10064- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	Х	4.89	67.27	17.04	0.86	100.0	± 9.6 %
		Y	5.19	67.18	17.02		100.0	
		Z	5.08	66.89	16.71		100.0	
10065- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.77	67.14	17.11	1.21	100.0	± 9.6 %
		Y	5.06	67.12	17.13		100.0	
		Z	4.94	66.80	16.79		100.0	
10066- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	Х	4.78	67.15	17.25	1.46	100.0	± 9.6 %
		Y	5.09	67.18	17.31		100.0	
		Z	4.97	66.83	16.94		100.0	
10067- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.07	67.35	17.68	2.04	100.0	±9.6 %
		Y	5.38	67.26	17.72		100.0	
		Z	5.26	66.92	17.34		100.0	
10068- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.11	67.30	17.84	2.55	100.0	± 9.6 %
		Y	5.48	67.51	18.02		100.0	
		Z	5.34	67.10	17.60		100.0	
10069- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	Х	5.18	67.33	18.03	2.67	100.0	± 9.6 %
<u> </u>	,spoy	Y	5.55	67.43	18.19		100.0	
		Z	5.42	67.05	17.77		100.0	
10071- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.92	67.02	17.54	1.99	100.0	± 9.6 %
	, , , , , , , , , , , , , , , , , , , ,	Y	5.15	66.91	17.55		100.0	
		Z	5.05	66.61	17.20		100.0	
10072- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	Х	4.89	67.32	17.73	2.30	100.0	± 9.6 %
		Y	5.18	67.36	17.81		100.0	
		Z	5.06	66.97	17.41		100.0	
10073- ÇAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.97	67.51	18.05	2.83	100.0	± 9.6 %
		Y	5.26	67.57	18.16		100.0	
		Z	5.13	67.15	17.71		100.0	
10074- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.97	67.45	18.19	3.30	100.0	± 9.6 %
		Y	5.25	67.52	18.35		100.0	
		Z	5.12	67.08	17.88		100.0	
10075- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.01	67.53	18.46	3.82	90.0	±9.6 %
		Υ	5.35	67.85	18.77		90.0	
		Z	5.20	67.32	18.23		90.0	<del></del>
10076- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	Х	5.05	67.39	18.61	4.15	90.0	± 9.6 %
		Υ	5.33	67 <i>.</i> 57	18.84		90.0	
		Z	5.20	67.09	18.32		90.0	
10077-	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.08	67.49	18.72	4.30	90.0	± 9.6 %
LOAB								
CAB	(Beceret Bill, et illege)	Y	5.35	67.63	18.93		90.0	

10081-	CDMA2000 (1xRTT, RC3)	X	1.31	72.98	15.39	0.00	150.0	± 9.6 %
CAB		Y	1.11	69.20	15.13		150.0	_
		Z	0.87	65.58	12.79		150.0	
10082- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Fullrate)	X	0.85	60.00	5.02	4.77	80.0	± 9.6 %
JAD	DQF3N, 1 dillate)	Y	1.21	60.81	6.24		80.0	
		Z	1.05	60.00	5.50		80.0	
10090- DAB	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	112.28	25.96	6.56	60.0	± 9.6 %
		Υ	100.00	115.46	28.15		60.0	
		Z	100.00	112.45	26.54	0.00	60.0	± 9.6 %
10097- CAB	UMTS-FDD (HSDPA)	X	2.10	70.95	17.43	0.00	150.0 150.0	± 9.0 %
		Y	1.95	68.39	16.42 15.42		150.0	
		Z	1.81	67.01 70.93	17.43	0.00	150.0	± 9.6 %
10098- CAB	UMTS-FDD (HSUPA, Subtest 2)	X	2.06		16.41		150.0	20.0 //
		Y	1.91	68.38	15.38		150.0	
		Z	1.77 9.76	66.95 91.94	32.20	9.56	60.0	± 9.6 %
10099- DAB	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X		104.66	36.54	<del></del>	60.0	
		Y	18.08	92.22	31.54	<del></del>	60.0	
	1000/ 55 00	Z	11.25 3.35	72.13	17.90	0.00	150.0	± 9.6 %
10100- CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X		71.55	17.33		150.0	
		Y	3.43 3.14	69.99	16.48		150.0	
10101-	LTE-FDD (SC-FDMA, 100% RB, 20	Z	3.14	68.30	16.59	0.00	150.0	± 9.6 %
CAB	MHz, 16-QAM)	Y	3.42	68.10	16.32		150.0	
		Z	3.28	67.37	15.82		150.0	
10102-	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.39	68.25	16.67	0.00	150.0	± 9.6 %
CAB	W112, 04-QAW)	Y	3.51	67.99	16.38		150.0	
<del>.</del>		Ż	3.39	67.35	15.92		150.0	
10103- CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	Х	6.41	75.89	20.51	3.98	65.0	± 9.6 %
0,10		Υ	7.77	77.49	21.00		65.0	
		Z	6.54	74.47	19.52		65.0	
10104- CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.38	73.95	20.45	3.98	65.0	± 9.6 %
		Υ	7.62	75.73	21.18		65.0	
		Z	6.97	74.03	20.17		65.0	0.00
10105- CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	Х	5.88	72.23	19.98	3.98	65.0	± 9.6 %
		Υ	7.31	74.91	21.13		65.0	
		Z	6.85	73.64	20.32	0.00	65.0	± 9.6 %
10108- CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	Х	2.91	71.53	17.82	0.00	150.0	19.0 %
		Y	3.02	70.68	17.15		150.0	-
		Z	2.76	69.18	16.29	0.00	150.0 150.0	± 9.6 %
10109- CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	Х	2.95	68.44	16.61	0.00	150.0	2 3.0 70
		Y	3.08	67.93	_	<del> </del>	150.0	
10110-	LTE-FDD (SC-FDMA, 100% RB, 5 MHz,	Z X	2.95	67.17 71.08	15.72 17.59	0.00	150.0	± 9.6 %
CAC	QPSK)	Y	2.47	69.75	16.86		150.0	
		$\frac{1}{Z}$	2.25	68.18	15.88	1	150.0	
10111-	LTE-FDD (SC-FDMA, 100% RB, 5 MHz,	X	2.79	70.36	17.30	0.00	150.0	± 9.6 %
CAC	16-QAM)	Y	2.80	68.64	16.65		150.0	

							1	
10112- CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	×	3.07	68.42	16.64	0.00	150.0	± 9.6 %
Ψ, το		Υ	3.20	67.83	16.29		150.0	
		Z	3.07	67.16	15.79		150.0	
10113- CAC	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.94	70.45	17.39	0.00	150.0	± 9.6 %
0, 10	0.1 40.1111	Υ	2.95	68.67	16.72		150.0	
		Z	2.81	67.97	16.15		150.0	
10114- CAB	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	5.09	67.47	16.77	0.00	150.0	± 9.6 %
OVD.	(Nibps, Bi Sit)	Υ	5.23	67.24	16.53		150.0	
		Ż	5.18	67.08	16.35		150.0	
10115- CAB	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.34	67.51	16.78	0.00	150.0	± 9.6 %
		Υ	5.60	67.53	16.67		150.0	
		Z	5.52	67.36	16.50		150.0	
10116- CAB	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.18	67.67	16.79	0.00	150.0	± 9.6 %
		Υ	5.36	67.51	16.58		150.0	
		Z	5.29	67.32	16.39		150.0	
10117- CAB	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	5.07	67.38	16.74	0.00	150.0	± 9.6 %
		Υ	5.24	67.25	16.55		150.0	
		Z	5.16	67.03	16.34		150.0	
10118- CAB	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	Х	5.42	67.71	16.89	0.00	150.0	± 9.6 %
		Y	5.67	67.69	16.76		150.0	
		Z	5.59	67.53	16.59		150.0	
10119- CAB	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	Х	5.17	67.64	16.79	0.00	150.0	± 9.6 %
07.12	_	Y	5.33	67.45	16.57		150.0	
		Z	5.26	67.25	16.37		150.0	
10140- CAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	Х	3.41	68.25	16.57	0.00	150.0	± 9.6 %
0.12	111112, 10 00 000	Υ	3.56	67.99	16.30		150.0	
	-	Z	3.43	67.35	15.84		150.0	
10141- CAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.54	68.37	16.75	0.00	150.0	± 9.6 %
0710	111112, 3 1 32 1117	Υ	3.68	68.01	16.43		150.0	
	-	Ż	3.56	67.45	16.01		150.0	
10142~ CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	2.25	71.96	17.48	0.00	150.0	± 9.6 %
0.10		Υ	2.26	69.83	16.74		150.0	•
		Z	2.02	68.09	15.61		150.0	
10143- CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	Х	2.82	72.22	17.26	0.00	150.0	± 9.6 %
		Υ	2.71	69.55	16.65		150.0	
		Ζ	2.52	68.51	15.83		150.0	
10144- CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	Х	2.29	68.06	14.75	0.00	150.0	± 9.6 %
		Y	2.50	67.47	15.19		150.0	
		Z	2.32	66.44	14.34		150.0	
10145- CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.16	65.56	11.35	0.00	150.0	±9.6 %
		Υ	1.65	68.53	14.65		150.0	
		Z	1.36	65.83	12.76		150.0	
10146- CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	1.35	63.40	9.39	0.00	150.0	± 9.6 %
		Υ	3.12	72.00	15.52		150.0	
		Z	2.16	67.04	12.61		150.0	
10147- CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	1.53	64.72	10.19	0.00	150.0	± 9.6 %
		1	4.00	75.00	17.18		150.0	
		Υ	4.03	75.63	17.10		150.0	

10149-	LTE-FDD (SC-FDMA, 50% RB, 20 MHz,	Х	2.96	68.52	16.66	0.00	150.0	± 9.6 %
CAB	16-QAM)	Υ	3.09	67.99	16.32		150.0	
		ż	2.96	67.23	15.77		150.0	
10150- CAB	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.08	68.50	16.69	0.00	150.0	± 9.6 %
CAB	64-QAIVI)	Ÿ	3.21	67.88	16.33		150.0	
		Ż	3.08	67.21	15.83		150.0	
10151-	LTE-TDD (SC-FDMA, 50% RB, 20 MHz,	X	7.03	79.10	21.82	3.98	65.0	± 9.6 %
CAB	QPSK)	Y	8.21	79.75	22.00		65.0	
		Z	7.10	77.15	20.67		65.0	
10152- CAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	5.92	73.94	20.06	3.98	65.0	± 9.6 %
<u> </u>		Υ	7.21	75.88	21.03		65.0	
		Z	6.48	73.87	19.84		65.0	
10153- CAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.35	75.11	20.94	3.98	65.0	± 9.6 %
<u> </u>	01 90 007	Y	7.55	76.62	21.69		65.0	
		Z	6.87	74.79	20.60		65.0	
10154- CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.46	71.67	17.92	0.00	150.0	± 9.6 %
		Υ	2.54	70.24	17.15		150.0	
		Ζ	2.30	68.63	16.17		150.0	
10155- CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	Х	2.79	70.40	17.33	0.00	150.0	± 9.6 %
0,10	10 20 1117	Υ	2.80	68.64	16.65		150.0	
		Z.	2.66	67.83	16.02	_	150.0	
10156- CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	Х	2.17	72.73	17.45	0.00	150.0	± 9.6 %
CAC	<u> </u>	Υ	2.14	70.24	16.79		150.0	
		Z	1.88	68.21	15.48		150.0	
10157- CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.21	69.24	14.98	0.00	150.0	± 9.6 %
CAC	10 02/11/1/	Υ	2.36	68.31	15.46		150.0	
		Z	2.15	66.99	14.43		150.0	
10158- CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.95	70.56	17.46	0.00	150.0	± 9.6 %
OAO	<u> </u>	Υ	2.95	68.72	16.76		150.0	
	-	Z	2.82	68.03	16.20		150.0	
10159- CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.36	69.87	15.32	0.00	150.0	± 9.6 %
0/10	04 00 1111)	Υ	2.49	68.78	15.76		150.0	
		Z	2.27	67.50	14.75		150.0	
10160- CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.90	70.47	17.47	0.00	150.0	± 9.6 %
		Υ	2.94	69.28	16.77		150.0	
		Ζ	2.76	68.21	16.07		150.0	
10161- CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	Х	2.98	68.55	16.64	0.00	150.0	± 9.6 %
2, ,_		Υ	3.10	67.79	16.29		150.0	
		Z	2.98	67.13	15.77		150.0	
10162- CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.10	68.74	16.76	0.00	150.0	± 9.6 %
J. 12		Y	3.21	67.84	16.35		150.0	
		Z	3.09	67.25	15.86		150.0	
10166- CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	Х	3.31	69.42	19.40	3.01	150.0	± 9.6 %
		Y	3.85	69.94	19.41		150.0	
		Z	3.63	68.92	18.65		150.0	
10167-	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	Х	3.89	72.11	19.78	3.01	150.0	± 9.6 %
LLAI.								_
CAC	10 00 111)	Y	4.89	73.20	20.04		150.0	

10168-	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz,	X	4.43	75.02	21.48	3.01	150.0	± 9.6 %
CAC	64-QAM)							
		Y	5.37	75.20	21.21		150.0	
40400		Z	4.92	73.76	20.36	0.04	150.0	. 0 0 0/
10169- CAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	Х	2.61	67.65	18.68	3.01	150.0	± 9.6 %
		Y	3.41	71.01	19.90		150.0	
		Z	3.09	68.90	18.61		150.0	
10170- CAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.32	73.16	21.10	3.01	150.0	± 9.6 %
		Υ	5.09	78.14	22.55		150.0	
		Ζ	4.27	74.69	20.88		150.0	
10171- AAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	Х	2.74	69.02	18.13	3.01	150.0	± 9.6 %
		Y	4.10	73.53	19.72		150.0	
10170		Z	3.48	70.44	18.07		150.0	. 0.00/
10172- CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	5.53	83.56	25.72	6.02	65.0	± 9.6 %
		Y	21.34	105.31	32.41		65.0	
40470	LIFE TOP /OO FORM A ST COLUMN	Z	7.30	84.26	24.94	0.00	65.0	1000
10173- CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	Х	10.58	92.60	26.95	6.02	65.0	± 9.6 %
		Υ	29.30	105.74	30.57		65.0	
40/=/	LATE TOD (OR STANK AS TO A STANK	Z	12.37	90.08	25.23	0.0-	65.0	. 0 0 0′
10174- CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	Х	7.41	85.53	24.05	6.02	65.0	± 9.6 %
		Y	21.20	98.69	27.99		65.0	
		Z	10.53	86.42	23.55		65.0	
10175- CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	Х	2.58	67.36	18.42	3.01	150.0	± 9.6 %
		Υ	3.37	70.66	19.64		150.0	
		Z	3.05	68.56	18.35		150.0	
10176- CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.33	73.19	21.11	3.01	150.0	± 9.6 %
		Υ	5.10	78.16	22.56		150.0	
		Z	4.27	74.71	20.89		150.0	
10177- CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.60	67.50	18.51	3.01	150.0	± 9.6 %
		Υ	3.40	70.83	19.75		150.0	
		Z	3.07	68.74	18.46		150.0	
10178- CAC	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	Х	3.30	73.00	21.00	3.01	150.0	± 9.6 %
		Y	5.02	77.85	22.40		150.0	
		Z	4.22	74.44	20.74		150.0	
10179- CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.00	71.00	19.50	3.01	150.0	± 9.6 %
		Υ	4.55	75.67	20.98		150.0	
		Z	3.82	72.37	19.31		150.0	. 0.0.0
10180- CAC	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	2.73	68.97	18.09	3.01	150.0	± 9.6 %
		Υ	4.08	73.43	19.65	ļ	150.0	
		Z	3.47	70.35	18.01		150.0	
10181- CAB	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	Х	2.59	67.48	18.51	3.01	150.0	± 9.6 %
		Ÿ	3.39	70.81	19.74		150.0	
		Z	3.07	68.71	18.45		150.0	
10182- CAB	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	Х	3.30	72.98	20.99	3.01	150.0	± 9.6 %
		Υ	5.01	77.82	22.39		150.0	
		Z	4.21	74.41	20.73		150.0	
10183- AAA	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	Х	2.73	68.94	18.08	3.01	150.0	±9.6%
	,	Y	4.07	73.40	19.64		150.0	
		Z	3.46	70.33	18.00		150.0	

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10184- CAC	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.60	67.52	18.53	3.01	150.0	± 9.6 %
	Q( 010)	Υ	3.40	70.86	19.76		150.0	
		Z	3.08	68.76	18.47		150.0	
10185- CAC	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	Х	3.31	73.05	21.03	3.01	150.0	± 9.6 %
JAC	GA(IVI)	Y	5.04	77.90	22.43		150.0	
	<del>-</del>	Z	4.23	74.49	20.77		150.0	
10186-	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-	X	2.74	69.01	18.12	3.01	150.0	± 9.6 %
AAC	QAM)	Y	4.10	73.47	19.68		150.0	
		Z	3.48	70.39	18.03	_	150.0	
10187- CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.61	67.58	18.60	3.01	150.0	± 9.6 %
<u> </u>		Y	3.41	70.90	19.81		150.0	
		Z	3.09	68.80	18.52		150.0	
10188- CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	3.41	73.70	21.42	3.01	150.0	± 9.6 %
0/10	10 30 111)	Υ	5.24	78.69	22.84		150.0	
	<del></del>	Z	4.38	75.22	21.18		150.0	
10189- AAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	Х	2.80	69.41	18.40	3.01	150.0	± 9.6 %
. • . •		Y	4.20	73.97	19.98		150.0	
		Z	3.56	70.83	18.32		150.0	
10193- CAB	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.49	67.07	16.51	0.00	150.0	±9.6%
CAD	BI GIV	Υ	4.67	66.69	16.32		150.0	
-		Z	4.59	66.49	16.09		150.0	
10194- CAB	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	Х	4.64	67.34	16.63	0.00	150.0	± 9.6 %
CAD	10-02-111)	Υ	4.86	67.05	16.43		150.0	
		Z	4.77	66.83	16.21		150.0	
10195- CAB	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.68	67.36	16.65	0.00	150.0	± 9.6 %
CAD	04-Q/A(VI)	Υ	4.90	67.06	16.44		150.0	
	<del>-</del>	Z	4.82	66.86	16.22		150.0	
10196- CAB	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.48	67.10	16.51	0.00	150.0	± 9.6 %
CVD	- Broky	Υ	4.68	66.78	16.36		150.0	
		Z	4.60	66.57	16.12		150.0	
10197- CAB	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.66	67.35	16.64	0.00	150.0	± 9.6 %
CAD	G(AIVI)	Υ	4.88	67.07	16.45		150.0	
		Z	4.79	66.86	16.22		150.0	
10198- CAB	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.68	67.37	16.65	0.00	150.0	± 9.6 %
- O/ 1D		Υ	4.91	67.08	16.45		150.0	
		Z	4.82	66.87	16.23		150.0	
10219- CAB	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.44	67.14	16.49	0.00	150.0	± 9.6 %
0,10		Υ	4.63	66.80	16.32		150.0	
		Z	4.55	66.58	16.08		150.0	
10220- CAB	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.65	67.31	16.63	0.00	150.0	± 9.6 %
J, 10		Υ	4.87	67.06	16.44		150.0	
		Z	4.79	66.83	16.21		150.0	
10221- CAB	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.69	67.30	16.64	0.00	150.0	± 9.6 %
CAD	Security	Υ	4.91	67.01	16.44		150.0	
		Z	4.83	66.81	16.22		150.0	
10222-	IEEE 802.11n (HT Mixed, 15 Mbps,	X	5.04	67.37	16.73	0.00	150.0	± 9.6 %
CAB	BPSK)	Y	5.22	67.27	16.55		150.0	

10223- CAB	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	Х	5.33	67.57	16.84	0.00	150.0	± 9.6 %
		Υ	5.58	67.57	16.72		150.0	
		Z	5.46	67.24	16.46		150.0	
10224- CAB	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	Х	5.08	67.48	16.71	0.00	150.0	±9.6 %
		Υ	5.27	67.38	16.53		150.0	
		Z	5.19	67.14	16.31		150.0	
10225- CAB	UMTS-FDD (HSPA+)	Х	2.82	67.14	15.84	0.00	150.0	± 9.6 %
		Υ	2.95	66.38	15.78		150.0	
		Z	2.86	65.91	15.30		150.0	
10226- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	Х	11.41	94.07	27.52	6.02	65.0	± 9.6 %
		Υ	31.67	107.27	31.09		65.0	
		Ž	13.11	91.16	25.67		65.0	
10227- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	11.04	92.14	26.24	6.02	65.0	± 9.6 %
		Υ	24.12	100.92	28.72		65.0	
		Z	11.71	88.12	24.16		65.0	
10228- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	Х	7.63	90.07	28.10	6.02	65.0	± 9.6 %
		Υ	23.55	107.62	33.18		65.0	
		Z	10.51	91.21	27.39		65.0	
10229- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	10.66	92.71	26.99	6.02	65.0	± 9.6 %
		Y	29.42	105.79	30.60		65.0	
		Z	12.45	90.17	25.27		65.0	
10230- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	Х	10.25	90.80	25.74	6.02	65.0	± 9.6 %
		Y	22.68	99.76	28.30		65.0	
	-	Z	11.15	87.26	23.80		65.0	
10231- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	Х	7.27	89.04	27.66	6.02	65.0	± 9.6 %
		Y	22.20	106.36	32.73		65.0	
		Z	10.05	90.30	27.01		65.0	
10232- CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	Х	10.64	92.69	26.99	6.02	65.0	± 9.6 %
		Y	29.42	105.80	30.60		65.0	
		Z	12.43	90.15	25.26		65.0	
10233- CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	Х	10.23	90.76	25.73	6.02	65.0	± 9.6 %
		Y	22.67	99.78	28.30		65.0	
		Z	11.14	87.24	23.80		65.0	
10234- CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	Х	6.99	88.15	27.23	6.02	65.0	± 9.6 %
		Υ	20.93	105.02	32.23		65.0	
		Z	9.64	89.40	26. <u>6</u> 0		65.0	
10235- CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	10.65	92.73	27.00	6.02	65.0	± 9.6 %
		Y	29.50	105.86	30.62		65.0	
		Z	12.44	90.18	25.27		65.0	
10236- CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	10.34	90.92	25.77	6.02	65.0	± 9.6 %
		Υ	22.93	99.94	28.35		65.0	_
		Z	11.22	87.34	23.83		65.0	
				89.10	27.69	6.02	65.0	± 9.6 %
10237- CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	Х	7.28	09.10				
10237- CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	7.28	106.55	32.79		65.0	
		Y					65.0 65.0	
10238-	QPSK)  LTE-TDD (SC-FDMA, 1 RB, 15 MHz,		22.38	106.55	32.79	6.02		± 9.6 %
CAB	QPSK)	Y	22.38 10.07	106.55 90.36	32.79 27.03	6.02	65.0	± 9.6 %

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		V	40.40	00.72	25.72	6.02	65.0	± 9.6 %
10239- CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	10.19	90.73	25.12	0.02	05.0	± 3.0 %
CAB	04-QAIVI)	Υ	22.65	99.78	28.31		65.0	_
		Z	11.11	87.22	23.79		65.0	
		_			27.67	6.02	65.0	± 9.6 %
10240- CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	7.26	89.06		0.02		± 9.0 %
<i>5)</i> (D	<u> </u>	Y	22.30	106.48	32.77		65.0	
		Z	10.04	90.32	27.01		65.0	
40044	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz,	X	7.75	81.08	25.21	6.98	65.0	± 9.6 %
10241- CAA	16-QAM)							
		Υ	10 <u>.21</u>	83.82	26.43		65.0	
		Z	8.73	80.32	24.52		65.0	
10242- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	Х	6.80	78.38	24.02	6.98	65.0	± 9.6 %
	04 97 (17)	Y	9.63	82.52	25.83		65.0	
		Z	8.38	79.47	24.10		65.0	
10010	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz,	X	5.61	75.06	23.46	6.98	65.0	± 9.6 %
10243- CAA	QPSK)					<u> </u>		
		Y	7.74	79.46	25.50		65.0	
		Z	6.88	76.70	23.79		65.0	
10244- CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	4.85	72.20	16.09	3.98	65.0	± 9.6 %
OWD	10-90191)	Y	8.02	78.99	20.43		65.0	
		Z	6.19	74.48	17.94		65.0	<u> </u>
10245-	LTE-TDD (SC-FDMA, 50% RB, 3 MHz,	X	4.70	71.53	15.74	3.98	65.0	± 9.6 %
CAB	64-QAM)	Υ	7.89	78.48	20.19		65.0	
			6.13	74.10	17.74		65.0	
	500/ BB 0 MU	Z			18.28	3.98	65.0	± 9.6 %
10246- CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	5.22	76.54		3.96		2 3.0 70
		Υ	8.14	82.43	21.79		65.0	
		Z	5.87	76.86	19.08		65.0	
10247-	LTE-TDD (SC-FDMA, 50% RB, 5 MHz,	Х	4.92	73.01	17.55	3.98	65.0	± 9.6 %
CAB	16-QAM)	Y	6.62	76.59	20.16		65.0	
				73.71	18.45	<del></del>	65.0	
		Z	5.63			3.98	65.0	± 9.6 %
10248- CAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	4.84	72.32	17.23	3.90	ļ. <u> </u>	1 3.0 %
		Y	6.62	76.08	19.95		65.0	
		Z	5.66	73.31	18.26		65.0	
10249-	LTE-TDD (SC-FDMA, 50% RB, 5 MHz,	X	7.10	81.85	21.45	3.98	65.0	± 9.6 %
CAB	QPSK)	1	0.00	94.25	23.13		65.0	
		Y	9.09	84.35			65.0	
		↓ Z	6.82	79.25				1.0.0.0/
10250- CAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	6.14	76.72	21.07	3.98	65.0	± 9.6 %
		Y	7.40	78.29	22.09		65.0	
		Z	6.54	75.95	20.75		65.0	
10251-	LTE-TDD (SC-FDMA, 50% RB, 10 MHz,	X	5.70	74.17	19.61	3.98	65.0	± 9.6 %
CAB	64-QAM)	1	7.04	76.40	20.94	1	65.0	+
		Y	7.04	76.19				
		Z	6.27	74.04	19.64	0.00	65.0	1000
10252-	LTE-TDD (SC-FDMA, 50% RB, 10 MHz,	Х	7.47	82.32	22.88	3.98	65.0	± 9.6 %
	(QPSK)		0.00	83.02	23.29		65.0	
CAB	QPSK)	Y	8.82			1	1 00 0	1
	QPSK)			79.27	21.49		65.0	
10253-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Z X	7.18 5.82	_	21.49 19.80	3.98	65.0	± 9.6 %
CAB		Z X	7.18 5.82	79.27 73.49	19.80	3.98	65.0	± 9.6 %
10253-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Z X Y	7.18 5.82 6.99	79.27 73.49 75.20	19.80 20.79	3.98	65.0 65.0	± 9.6 %
10253- CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	Z   X   Y   Z	7.18 5.82 6.99 6.34	79.27 73.49 75.20 73.34	19.80 20.79 19.64		65.0 65.0 65.0	
10253- CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Z X Y	7.18 5.82 6.99	79.27 73.49 75.20	19.80 20.79	3.98	65.0 65.0	
10253- CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	Z   X   Y   Z	7.18 5.82 6.99 6.34	79.27 73.49 75.20 73.34	19.80 20.79 19.64		65.0 65.0 65.0	± 9.6 %

10256-   10257-   10258-   10259-   10259-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)  LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X Y Z X Y Z X	6.71 7.84 6.83 3.47 6.90 5.11 3.38	78.47 79.18 76.67 67.38	21.74 22.03 20.70 12.72	3.98	65.0 65.0 65.0	± 9.6 %
10257- CAA I 10258- CAA I 10259- I	MHz, 16-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4  MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4	Z X Y Z X	6.83 3.47 6.90 5.11	76.67 67.38 76.38	20.70 12.72	3.98	65.0	± 9.6 %
10257- CAA I 10258- CAA I 10259- I	MHz, 16-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4  MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4	Y Z X Y	3.47 6.90 5.11	67.38 76.38	12.72	3.98		± 9.6 %
10257- CAA I 10258- CAA I 10259- I	MHz, 16-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4  MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4	Y Z X	6.90 5.11	76.38		3.98	65.0	± 9.6 %
10257-   CAA   10258-   CAA   10259-   1	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 1.4	Z X Y	5.11					
10258- CAA I	MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4	Z X Y	5.11		18.57		65.0	
10258- CAA I	MHz, 64-QAM)  LTE-TDD (SC-FDMA, 100% RB, 1.4	X		71.48	15.77		65.0	
10258- I CAA I	LTE-TDD (SC-FDMA, 100% RB, 1.4			66.76	12.32	3.98	65.0	± 9.6 %
10259- I	•		6.74	75.67	18.20		65.0	
10259- I	•	Ζ	5.05	70.99	15.48		65.0	
10259-	MHz, QPSK)	X	3.49	70.18	14.59	3.98	65.0	± 9.6 %
		Υ	6.78	79.22	19.98	***	65.0	
		Z	4.80	73.56	17.06		65.0	
0/10	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.42	74.50	18.87	3.98	65.0	± 9.6 %
	10 97 (11)	Y	6.93	77.16	20.83		65.0	
		Z	5.98	74.51	19.26		65.0	1
10260-	LTE-TDD (SC-FDMA, 100% RB, 3 MHz,	X	5.41	74.15	18.72	3.98	65.0	± 9.6 %
I	64-QAM)					J.50	65.0	2 0.0 70
		Y	6.95	76.90	20.74			
		Z	6.03	74.34	19.21	0.00	65.0	
	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	Х	6.87	81.15	21.70	3.98	65.0	± 9.6 %
		Υ	8.53	83.00	22.95		65.0	
		Ζ	6.70	78.62	20.83		65.0	
I	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	6.12	76.64	21.02	3.98	65.0	± 9.6 %
	<u>;                                    </u>	Y	7.39	78.26	22.06		65.0	
	<del></del>	Ζ	6.53	75.90	20.71		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	Х	5.69	74.15	19.60	3.98	65.0	± 9.6 %
		Υ	7.03	76.18	20.94		65.0	
		Z	6.26	74.03	19.63		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	7.38	82.08	22.77	3.98	65.0	± 9.6 %
O/ (D		Y	8.75	82.86	23.22		65.0	
		Z	7.12	79.11	21.41		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	5.92	73.94	20.06	3.98	65.0	± 9.6 %
CAB		Υ	7.20	75.88	21.03		65.0	<del>-</del>
<del></del>	_	-	6.48	73.87	19.85		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.35	75.09	20.93	3.98	65.0	± 9.6 %
3		Υ	7.55	76.61	21.68		65.0	_
		Z	6.86	74.78	20.59		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	7.01	79.05	21.80	3.98	65.0	± 9.6 %
5/15		Y	8.19	79.71	21.98	-	65.0	
		Ż	7.09	77.11	20.65		65.0	_
	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.54	73.87	20.51	3.98	65.0	± 9.6 %
UND	10 50 101	Y	7.70	75.41	21.18		65.0	_
	<del></del>	ż	7.12	73.89	20.25		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.52	73.47	20.39	3.98	65.0	± 9.6 %
VΛD	Wiliz, 07-00 Wij	Υ	7.63	74.96	21.06		65.0	
-		Z	7.08	73.52	20.16		65.0	
	LTE-TDD (SC-FDMA, 100% RB, 15	X	6.72	76.10	20.81	3.98	65.0	± 9.6 %
CAB	MHz, QPSK)		7 77	76.91	21.02		65.0	<del>                                     </del>
_		Y Z	7.77 7.04	75.13	20.02		65.0	<del>-</del>

10274-	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	Х	2.68	67.93	16.00	0.00	150.0	± 9.6 %
CAB	1160.10/	Y	2.70	66.71	15.69		150.0	
		Z	2.60	66.12	15.13		150.0	
10275- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.86	71.35	17.51	0.00	150.0	± 9.6 %
CAB	1(0.4)	Y	1.79	69.27	16.54		150.0	
		Ż	1.60	67.20	15.22		150.0	
10277-	PHS (QPSK)	X	2.51	62.07	7.69	9.03	50.0	± 9.6 %
CAA		Υ	3.60	65.47	10.92		50.0	
		Z	3.21	64.00	9.69		50.0	
10278- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	4.14	68.90	13.57	9.03	50.0	± 9.6 %
		Υ	8.03	79.56	19.93		50.0	
		Z	5.72	73.56	16.82		50.0	
10279- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	Х	4.23	69.12	13.72	9.03	50.0	± 9.6 %
		Y	8.23	79.82	20.06		50.0	
		Ζ	5.85	73.80	16.95		50.0	
10290- AAB	CDMA2000, RC1, SO55, Full Rate	Х	2.16	75.12 	16.21	0.00	150.0	± 9.6 %
		Υ	1.91	71.91	16.34		150.0	
		Z	1.49	68.32	14.21		150.0	. 0 5 5′
10291- AAB	CDMA2000, RC3, SO55, Full Rate	Х	1.24	72.30	15.09	0.00	150.0	± 9.6 %
		Υ	1.08	68.86	14.96		150.0	
		Z	0.85	65.38	12.66		150.0	
10292- AAB	CDMA2000, RC3, SO32, Full Rate	X	13.33	104.67	25.79	0.00	150.0	± 9.6 %
		Υ	1.50	74.81	18.02		150.0	
		Ζ	1.03	68.79	14.75		150.0	
10293- AAB	CDMA2000, RC3, SO3, Full Rate	Х	100.00	135.60	33.89	0.00	150.0	± 9.6 %
		Υ	2.41	82.36	21.43		150.0	
		Z	1.44	73.75	17.42		150.0	
10295- AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	Х	11.05	85.41	22.93	9.03	50.0	± 9.6 %
		Υ	8.87	82.92	23.80		50.0	
		Z	7.57	79.23	21.65		50.0	
10297- AAA	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	Х	2.93	71.67	17.91	0.00	150.0	± 9.6 %
		Υ	3.03	70.79	17.22		150.0	
		Z	2.77	69.28	16.35		150.0	
10298- AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.80	70.98	15.29	0.00	150.0	± 9.6 %
		Υ	1.94	70.01	16.02		150.0	
		Ζ	1.64	67.53	14.38		150.0	
10299- AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	Х	2.25	68.93	13.39	0.00	150.0	± 9.6 %
		Υ	3.57	73.44	16. <u>9</u> 0		150.0	
		Z	2.68	69.23	14.47		150.0	
10300- AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	Х	1.52	63.47	9.92	0.00	150.0	± 9.6 %
		Υ	2.60	68.00	13.77		150.0	
		Z	2.12	65.38	11.93	ļ	150.0	
10301- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	Х	4.73	66.14	17.79	4,17	50.0	± 9.6 %
		Υ	5.14	66.14	17. <u>9</u> 8		50.0	
		Z	4.87	65.30	17.38		50.0	
10302- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	Х	5.19	66.64	18.43	4.96	50.0	± 9.6 %
		Υ	5.69	67.11	18.91		50.0	
		Z	5.42	66.20	18.24		50.0	

10303- AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	4.96	66.34	18.27	4.96	50.0	± 9.6 %
		Υ	5.48	66.96	18.88		50.0	
		Z	5.20	65.95	18.14		50.0	
10304- AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.76	66.23	17.80	4.17	50.0	± 9.6 %
		Y	5.21	66.54	18.19		50.0	
		Z	4.96	65.68	17.56		50.0	
10305- AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.83	70.07	20.50	6.02	35.0	± 9.6 %
		Υ	5.51	71.60	22.16		35.0	
		Z	4.98	69.23	20.55		35.0	
10306- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	Х	4.91	68.09	19.77	6.02	35.0	± 9.6 %
		Y	5.42	68.18	20.25		35.0	
		Z	5.11	67.47	19.73		35.0	
10307- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.83	68.37	19.78	6.02	35.0	± 9.6 %
		Y	5.47	69.61	21.06		35.0	
		Z	5.07	67.89	19.81		35.0	
10308- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	Х	4.84	68.69	19.98	6.02	35.0	± 9.6 %
		Y	5.46	69.92	21.24		35.0	
		Z	5.05	68.12	19.96		35.0	
10309- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	Х	4.94	68.23	19.88	6.02	35.0	± 9.6 %
	, , , , , , , , , , , , , , , , , , , ,	Y	5.52	68.51	20.43		35.0	
		Z	5.19	67.72	19.88		35.0	-
10310- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.88	68.25	19.79	6.02	35.0	±9.6%
7001	Towning at only mile and, to symbolic	Y	5.44	69.18	20.91		35.0	-
		Z	5.08	67.61	19.74		35.0	
10311- AAA	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	3.31	70.70	17.41	0.00	150.0	± 9.6 %
7001		Y	3.40	70.05	16.83		150.0	
		Z	3.13	68.65	16.04		150.0	
10313- AAA	iDEN 1:3	X	4.31	74.90	16.96	6.99	70.0	± 9.6 %
, , , ,		Y	5.76	76.90	17.84		70.0	
	-	Z	4.08	72.13	15.67		70.0	
10314- AAA	iDEN 1:6	X	7.33	84.94	23.33	10.00	30.0	± 9.6 %
7001		Ý	7.31	83.11	22.80		30.0	
		Z	4.98	76.71	20.14		30.0	
10315- AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.15	65.39	16.53	0.17	150.0	±9.6 %
		Υ	1.15	64.64	15.92		150.0	
		Z	1.10	63.46	14.86		150.0	
10316- AAB	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 96pc duty cycle)	Х	4.52	67.01	16.57	0.17	150.0	± 9.6 %
		Y	4.73	66.76	16.44		150.0	
		Ż	4.65	66.51	16.17		150.0	
10317- AAB	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	Х	4.52	67.01	16.57	0.17	150.0	± 9.6 %
		Y	4.73	66.76	16. <u>44</u>		150.0	
		Z	4.65	66.51	16.17		150.0	
10400- AAC	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	Х	4.62	67.36	16.62	0.00	150.0	± 9.6 %
		Y	4.87	67.12	16.43		150.0	
		Z	4.77	66.88	16.19		150.0	
	1555 000 44 MSE: /40MH= 64 OAM	X	5.32	67.33	16.68	0.00	150.0	± 9.6 %
10401-	IEEE 802.11ac WiFi (40MHz, 64-QAM,	``						
10401- AAC	99pc duty cycle)	Y	5.49	67.16	16.50		150.0	_

10402-	IEEE 802.11ac WiFi (80MHz, 64-QAM,	ΓxΤ	5.60	67.66	16.72	0.00	150.0	± 9.6 %
10402- AAC	99pc duty cycle)	^	0.00	07.00				
		Υ	5.79	67.68	16.60		150.0	
		Z	5.72	67. <u>4</u> 7	16.40		150.0	1000
10403- AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	2.16	75.12	16.21	0.00	115.0	± 9.6 %
		Y	1.91	71 <u>.9</u> 1	16.34		115.0	
		Ż	1.49	68.32	14.21		115.0	. 0 0 0/
10404- AAB	CDMA2000 (1xEV-DO, Rev. A)	Х	2.16	75.12	16.21	0.00	115.0	± 9.6 %
		Υ	1.91	71.91	16.34		115.0	
		Z	1.49	68.32	14.21	0.00	115.0	1000
10406- AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	127.59	32.37	0.00	100.0	± 9.6 %
		Υ	100.00	123.98	31.83		100.0	
		Z	14.26	95.15	24.05		100.0	
10410- AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	124.06	30.89	3.23	80.0	± 9.6 %
		Y	100.00	119.95	30.07		80.0	
		Z	11.66	89.63	21.52		80.0	1000
10415- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.06	64.51	16.01	0.00	150.0	± 9.6 %
, , ,		Y	1.04	63.51	15.25		150.0	
		Z	1.01	62.60	14.33		150.0	
10416- AAA	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 99pc duty cycle)	X	4.49	67.08	16.58	0.00	150.0	± 9.6 %
		Y	4.67	66.72	16.37		150.0	
		Z	4.59	66.53	16.14		150.0	
10417- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	Х	4.49	67.08	16.58	0.00	150.0	± 9.6 %
<del>/</del>		Ÿ	4.67	66.72	16.37		150.0	
		Z	4.59	66.53	16.14		150.0	
10418- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	4.49	67.30	16.63	0.00	150.0	± 9.6 %
		Y	4.65	66.87	16.37		150.0	
		Ž	4.58	66.67	16.15		150.0	
10419- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	×	4.50	67.22	16.62	0.00	150.0	± 9.6 %
		Υ	4.68	66.82	16.38		150.0	
		Z	4.60	66.63	16.16		150.0	
10422- AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.61	67.18	16.61	0.00	150.0	± 9.6 %
		Y	4.80	66.83	16.39		150.0	
		Z	4.73	66.64	16.18		150.0	
10423- AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.75	67.46	16.71	0.00	150.0	± 9.6 %
,		Υ	5.00	67.20	16.53		150.0	
···		Z	4.91	66.98	16.30		150.0	
10424-	IEEE 802.11n (HT Greenfield, 72.2	X	4.68	67.42	16.69	0.00	150.0	± 9.6 %
AAA	Mbps, 64-QAM)	Y	4.91	67.14	16.49		150.0	
		Z	4.82	66.93	16.27		150.0	
10425- AAA	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.29	67.59	16.82	0.00	150.0	± 9.6 %
7001		Υ	5.47	67.41	16.61		150.0	
-		Z	5.41	67.25	16.44		150.0	
10426-	JEEE 000 44 - /UT On and ald 00 Mbps	X	5.31	67.68	16.86	0.00	150.0	± 9.6 %
	IEEE 802.11n (HT Greenfield, 90 Mbps,							
10426- AAA	16-QAM)	Y	5.48	67.44	16.63		150.0	

10427- AAA	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	Х	5.29	67.52	16.78	0.00	150.0	± 9.6 %
7001		Y	5.50	67.46	16.63		150.0	
		Z	5.43	67.26	16.43		150.0	
10430- AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.63	73.67	19.48	0.00	150.0	± 9.6 %
		Υ	4.38	70.39	18.28		150.0	
	-	Z	4.34	70.59	18.21		150.0	
10431- AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.15	67.84	16.60	0.00	150.0	± 9.6 %
,,,,,,	_	Υ	4.40	67.31	16.45		150.0	
		Z	4.29	67.04	16.16		150.0	
10432- AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.45	67.57	16.66	0.00	150.0	±9.6 %
		Υ	4.69	67.19	16.47		150.0	
		Z	4.59	66.95	16.22		150.0	
10433- AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.70	67.46	16.71	0.00	150.0	± 9.6 %
		Υ	4.93	67.18	16.52		150.0	
		Ζ	4.84	66.96	16. <u>29</u>		150.0	
10434- AAA	W-CDMA (BS Test Model 1, 64 DPCH)	Х	4.94	75.22	19.61	0.00	150.0	± 9.6 %
		Υ	4.49	71. <u>19</u>	18.31		150.0	-
		Z	4.45	71.43	18.22		150.0	
10435- AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	123.75	30.75	3.23	80.0	± 9.6 %
		Υ	100.00	119.75	29.98		80.0	
		Z	11.13	88.92	21.27		80.0	
10447- AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	Х	3.46	68.09	15.85	0.00	150.0	± 9.6 %
		Υ	3.73	67.44	16.02		150.0	
		Z	3.59	67.02	15.56		150.0	
10448- AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	Х	4.01	67.64	16.48	0.00	150.0	± 9.6 %
, , , , ,		Y	4.23	67.09	16.31		150.0	
		Z	4.12	66.82	16.01		150.0	
10449- AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	4.28	67.42	16.58	0.00	150.0	± 9.6 %
7001	Supring 11707	Y	4.48	67.02	16.38		150.0	
		Ż	4.39	66.78	16.12		150.0	
10450- AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.48	67.25	16.58	0.00	150.0	± 9.6 %
7001	Chipping 7 1707	Y	4.66	66.95	16.38		150.0	
		Z	4.58	66.72	16.14		150.0	
10451- AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.33	68.18	15.32	0.00	150.0	± 9.6 %
		Y	3.67	67.76	15.79		150.0	
		Z	3.50	67.23	15.24		150.0	
10456- AAA	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	Х	6.23	68.21	17.00	0.00	150.0	± 9.6 %
		Y	6.33	68.03	16.78		150.0	
		Z	6.26	67.85	16.61		150.0	
10457- AAA	UMTS-FDD (DC-HSDPA)	X	3.79	65.76	16.30	0.00	150.0	± 9.6 %
		Y	3.86	65.36	16.10		150.0	
		Z	3.82	65.17	15.85		150.0	
10458- AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	Х	3.05	67.01	14.29	0.00	150.0	± 9.6 %
		Y	3.48	67.05	15.31		150.0	
		Z	3.32	66.56	14.71		150.0	
10459- AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.19	65.60	15.56	0.00	150.0	± 9.6 %
		+	+		1 - 3 -		450.0	
		Y	4.63	65.36	16.07		150.0	

10460- AAA	UMTS-FDD (WCDMA, AMR)	X	1.27	75.41	20.14	0.00	150.0	± 9.6 %
<del>////</del>		Υ	1.05	70.71	17.81		150.0	
		Z	0.86	66.76	15.37		150.0	
10461- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	100.00	127.84	32.72	3.29	80.0	± 9.6 %
	QI ON, OE GODING. NO DIO 117 1959)	Υ	100.00	123.27	31.69		80.0	
_		Z	6.47	83.77	20.46		80.0	
10462- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Χ	1.26	63.91	10.22	3.23	80.0	± 9.6 %
, , , ,		Υ	14.90	86.82	19.02		80.0	
		Z	1.81	64.45	10.77		80.0	
10463- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.85	60.00	7.76	3.23	80.0	± 9.6 %
		Υ	4.74	73.69	14.47		80.0	
		Z	1 <u>.46</u>	62.00	9.21		80.0	
10464- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	124.65	31.09	3.23	80.0	± 9.6 %
		Y	100.00	121.04	30.50		80.0	
		Z	5.02	79.91	18.70		80.0	
10465- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.13	62.86 	9.67	3.23	80.0	± 9.6 %
·		Y	9.25	81.62	17.45		80.0	
		Z	1.69	63.74	10.38		80.0	
10466- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Х	0.85	60.00	7.71	3.23	80.0	± 9.6 %
<del>,,,,,</del>		Y	3.78	71.31	13.57		80.0	
		Z	1.40	61.59	8.96		80.0	
10467- AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	125.03	31.26	3.23	80.0	± 9.6 %
7001	di ore, de debitatio ajoj eje joj.	Υ	100.00	121.26	30.60		80.0	
		Z	5.32	80.71	18.99		80.0	
10468- AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	Х	1.17	63.15	9.83	3.23	80.0	± 9.6 %
,,,,,	<u> </u>	Y	10.30	82.81	17.81		80.0	l
		Z	1.71	63.90	10.47		80.0	
10469- AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Х	0.85	60.00	7.71	3.23	80.0	± 9.6 %
,,,,,,	<u> </u>	Υ	3.80	71.39	13.60		80.0	
		Z	1.40	61.60	8.96		80.0	
10470- AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	125.05	31.26	3.23	80.0	± 9.6 %
7001	3, 3, 4, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	Y	100.00	121.29	30.60		80.0	
		Z	5.31	80.70	18.98		80.0	
10471- AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.16	63.09	9.79	3.23	80.0	± 9.6 %
		Υ	10.21	82.69	17.77		80.0	
		Z	1.70	63.86	10.44		80.0	
10472- AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	0.85	60.00	7.70	3.23	80.0	± 9.6 %
	<u> </u>	Υ	3.77	71.31	13.56		80.0	
		Z	1.40	61.57	8.94		80.0	
10473- AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	100.00	125.02	31.24	3.23	80.0	± 9.6 %
		Y	100.00	121.25	30.59		80.0	
		Z	5.30	80.66	18.96		80.0	
10474- AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	Х	1.15	63.05	9.77	3.23	80.0	± 9.6 %
<del></del>		Y	10.08	82.57	17.73		80.0	
		Z	1.70	63.84	10.43		80.0	
10475- AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.85	60.00	7.70	3.23	80.0	± 9.6 %
7007	G 111, 02 00010110 2,0,7,1,10,0/	Y	3.75	71.25	13.54		80.0	_
	T.	1 .	1.39		8.93		80.0	-

10477-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-	Х	1.12	62.81	9.63	3.23	80.0	± 9.6 %
AAA	QAM, UL Subframe=2,3,4,7,8,9)		0.00	04.00	47.40		00.0	
		Y	9.29	81.66	17.43		80.0	
10.1-0	1 TT TTD (00 FD) (1 TD) (00 N) (1 TD)	Z	1.68	63.69	10.35	0.00	80.0	. 0.0 %
10478- AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Х	0.85	60.00	7.69	3.23	80.0	± 9.6 %
		Υ	3.71	71.13	13.49		80.0	
		Z	1.39	61.52	8.91		80.0	
10479- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	16.34	98.15	26.22	3.23	80.0	± 9.6 %
		Υ	8.05	85.58	23.31		80.0	
		Z	4.44	75.80	19.08		80.0	
10480- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	8.15	82.28	19.17	3.23	80.0	± 9.6 %
		Y	9.14	82.89	20.82		80.0	
		Z	4.48	72.61	16.42		80.0	
10481- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	4.98	75.50	16.46	3.23	80.0	± 9.6 %
		Υ	7.94	80.29	19.62		80.0	
		Z	4.00	70.70	15.36		80.0	
10482- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.11	72.47	16.27	2.23	80.0	± 9.6 %
		Υ	4.49	76.30	19.03		80.0	
		Z	2.84	69.51	15.71		80.0	
10483- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.23	69.48	14.33	2.23	80.0	± 9.6 %
		Y	6.12	77.20	19.06		80.0	_
		Z	3.70	69.78	15.41		80.0	
10484- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.99	68.30	13.84	2.23	80.0	± 9.6 %
7001	5 : Q: iii, 62 645114116 2,6 <u>1,11,161</u> 67	Υ	5.80	76.19	18.70		80.0	
		Z	3.62	69.26	15.20		80.0	
10485- AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.90	76.03	18.96	2.23	80.0	± 9.6 %
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Q. 014, 02 04 10 10 10 10 10 10 10 10 10 10 10 10 10	Y	4.65	76.77	19.89		80.0	
		Z	3.19	70.88	17.04		80.0	
10486- AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.22	69.78	15.73	2.23	80.0	± 9.6 %
7001	10 00 (01, 02 000)(01,10 2,0,1,110,0)	Υ	4.07	71.59	17.54		80.0	
		Z	3.24	68.15	15.55		80.0	
10487- AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.17	69.19	15.46	2.23	80.0	± 9.6 %
<del>-                                      </del>	04-QAIVI, OE Oubiranie-2,3,4,7,5,5)	Y	4.05	71.16	17.36		80.0	
	<del>-</del>	Ż	3.26	67.91	15.45		80.0	
10488- AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.89	74.31	19.36	2.23	80.0	± 9.6 %
		Υ	4.74	75.31	19.78		80.0	
		Z	3.62	70.94	17.62		80.0	
10489- AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.61	70.11	17.53	2.23	80.0	± 9.6 %
		Υ	4.17	70.61	18.05		80.0	
		Z	3.61	68.29	16.66		80.0	
10490- AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.68	69.86	17.43	2.23	80.0	± 9.6 %
-		Υ	4.25	70.34	17.96		80.0	
		Z	3.72	68.19	16.64		80.0	
	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	X	3.96	72.11	18.69	2.23	80.0	± 9.6 %
10491- AAA	UPSK. UL Supirame=2.3.4.7.6.91		4 = 4	73.16	19.02		80.0	
10491- _AAA	QPSK, UL_Subframe=2,3,4,7,8,9)	Y	4./4	10.10				
	QPSK, UL Subirame=2,3,4,7,6,9)	Y Z	4.7 <u>4</u> 3.92				80.0	
AAA 10492-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Z X	3.92 3.88	70.03 69.01	17.39 17.48	2.23		±9.6 %
AAA		Z	3.92	70.03	17.39	2.23	80.0	± 9.6 %

10493-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Х	3.93	68.84	17.41	2.23	80.0	± 9.6 %
AAA	64-QAM, UL Subframe=2,3,4,7,8,9)	Y	4.52	69.48	17.82		80.0	
		Z	-	67.81	16.77		80.0	
			4.08	73.69	19.20	2.23	80.0	± 9.6 %
10494- AAA	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.32			2.25		
		Υ	5.29	75.06	19.58		80.0	
		Z	4.18	71.25	17.73		80.0	
10495-	LTE-TDD (SC-FDMA, 50% RB, 20 MHz,	X	3.92	69.34	17.70	2.23	80.0	± 9.6 %
AAA	16-QAM, UL Subframe=2,3,4,7,8,9)			70.19	40.00		80.0	
		Y	4.53		18.09	<del></del>	80.0	_
		Z	4.04	68.27	16.95	0.00		± 9.6 %
10496- AAA	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.98	69.05	17.60	2.23	80.0	± 9.0 %
,,,,,	01 00 001 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Y	4.58	69.81	17.97		80.0	
		Z	4.12	68.07	16.91		80.0	
40407	LTE-TDD (SC-FDMA, 100% RB, 1.4	$\frac{1}{x}$	1.72	64.88	11.75	2.23	80.0	± 9.6 %
10497- AAA	MHz, QPSK, UL Subframe=2,3,4,7,8,9)							
		Υ	3.58	73 <u>.16</u>	17.12		80.0	
		Z	2.20	66.42	13.58		80.0	·
10498- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	1.30	60.00	8.13	2.23	80.0	± 9.6 %
	Subirariie=2,3,4,7,0,3/	Ý	2.81	67.13	13.70		80.0	
		Z	1.98	62.85	11.00		80.0	
					7.98	2.23	80.0	± 9.6 %
10499- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.32	60.00		2.23		1 0.0 %
		Υ	2.75	66.54	13.31		80.0	
		Z	1.95	62.46	10.68		80.0	
10500- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	3.82	75.04	19.03	2.23	80.0	± 9.6 %
7001	<u> </u>	Υ	4.55	75.62	19.66		80.0	
		Z	3.32	70.66	17.20		80.0	
10501-	LTE-TDD (SC-FDMA, 100% RB, 3 MHz,	X	3.45	70.22	16.55	2.23	80.08	± 9.6 %
AAA	16-QAM, UL Subframe=2,3,4,7,8,9)	Y	4.10	71.10	17.69		80.0	
					15.99		80.0	_
		Z	3.41	68.23		2.22	80.0	± 9.6 %
10502- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.48	69.95	16.36	2.23		19.0 %
700		Y	4.15	70.89	17.57		80.0	
		Z	3.47	68.14	15.91		80.0	
10503-	LTE-TDD (SC-FDMA, 100% RB, 5 MHz,	X	3.83	74.06	19.24	2.23	80.0	± 9.6 %
AAA	QPSK, UL Subframe=2,3,4,7,8,9)	+	4.00	75.44	40.00	-	90.0	
		Y	4.68	75.11	19.69	<u> </u>	80.0	1
		Z	3.58	70.77	17.54	0.00	80.0	1000
10504- AAA	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.59	69.99	17.46	2.23	80.0	± 9.6 %
		Υ	4.16	70.53	18.00		80.0	
		Z	3.60	68.21	16.61		80.0	
10505-	LTE-TDD (SC-FDMA, 100% RB, 5 MHz,	X	3.66	69.75	17.36	2.23	80.0	± 9.6 %
AAA	64-QAM, UL Subframe=2,3,4,7,8,9)	Υ	4.23	70.25	17.91		80.0	1
					16.59		80.0	1
		Z	3.70	68.11		2.02		± 9.6 %
10506- AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.28	73.52	19.12	2.23	80.0	1 9.0 %
		Υ	5.24	74.92	19.51		80.0	
		Z	4.15	71.12	17.66		80.0	
10507- AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	X	3.90	69.27	17.66	2.23	80.0	± 9.6 %
~~~	Subframe=2,3,4,7,8,9)							
	Juditatile=2,3,4,7,0,3/	Y	4.51	70.14	18.06		80.0	
		$\frac{1}{Z}$	4.02	68.21	16.91		80.0	1
l .		_	4.02	00.21	10.01			

10508- AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.97	68.96	17.55	2.23	80.0	± 9.6 %
	Oubilain6=2,0,4,1,0,0/	Y	4.57	69.75	17.93		80.0	
	-	Z	4.11	68.00	16.87		80.0	
10509-	LTE-TDD (SC-FDMA, 100% RB, 15	X	4.54	71.87	18.48	2.23	80.0	± 9.6 %
AAA	MHz, QPSK, UL Subframe=2,3,4,7,8,9)					2,20		2 9.0 /0
	-	Y	5.35	73.05	18.77		80.0	
		Z	4.54	70.32	17.38	0.00	80.0	. 0 0 0/
10510- AAA	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.34	68.76	17.59	2,23	80.0	± 9.6 %
		Υ	4.97	69.73	17.95		80.0	
		Z	4.53	68.16	17.00		80.0	
10511- AAA	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.39	68.51	17.51	2.23	80.0	± 9.6 %
		Y	5.00	69.40	17.85		0.08	
	_	Z	4.59	67.95	16.96		80.0	
10512- AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.78	73.48	18.98	2.23	80.0	±9.6%
		Y	5.80	75.09	19.41		80.0	
		Z	4.67	71.54	17.71		80.0	
10513- AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL	X	4.24	69.00	17.69	2.23	80.0	± 9.6 %
	Subframe=2,3,4,7,8,9)	Y	4.89	70.17	18.11		80.0	
<del>.</del>		$\frac{1}{Z}$	4.41	68.40	17.07		80.0	
10514- AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.26	68.58	17.56	2.23	80.0	± 9.6 %
	Submarile=2,5,4,7,6,9)	Y	4.87	69.63	17.95		80.0	
<del></del>	<del>-</del>	Z	4.44	68.04	16.99		80.0	
10515-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2	X	1.03	64.84	16.18	0.00	150.0	± 9.6 %
AAA	Mbps, 99pc duty cycle)	Y	1.01	63.76	15.35		150.0	
		Z	0.97	62.74	14.37		150.0	
40546	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5	X	1.37	87.37	25.57	0.00	150.0	± 9.6 %
10516- AAA	Mbps, 99pc duty cycle)					0.00	150.0	
		Y	0.82	76.24	20.55		150.0	
		Z	0.54	67.46	15.73	0.00	150.0	± 9.6 %
10517- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	Х	0.93	68.34	17.75	0.00		± 9.0 %
		Y	0.89	66.40	16.42	-	150.0	_
		Z	0.81	64.28	14.78	6.64	150.0	
10518- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.48	67.19	16.57	0.00	150.0	± 9.6 %
		Y	4.6 <u>6</u>	66.80	16.35		150.0	
		Z	4.59	66.60	16.12		150.0	
10519- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	Х	4.64	67.36	16.66	0.00	150.0	± 9.6 %
		Υ	4.88	67.08	16.48		150.0	
		Z	4.7 <u>9</u>	66.86	16.25		150.0	
10520- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	Х	4.50	67.33	16.59	0.00	150.0	± 9.6 %
		Y	4.73	67.07	16.42		150.0	
		Z	4.64	66.83	16.17		150.0	
10521- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	Х	4.43	67.32	16.58	0.00	150.0	± 9.6 %
		Υ	4.66	67.08	16.41		150.0	
		Z	4.57	66.82	16.16		150.0	
10522- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	Х	4.49	67.45	16.68	0.00	150.0	± 9.6 %
		Y	4.71	67.07	16.44		150.0	
					16.22		150.0	

AAA	Mbps, 99pc duty cycle)	+ ·						
		Y	4.58	66.97	16.31		150.0	
		Z	4.50	66.74	16.07		150.0	
10524-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.44	67.39	16.66	0.00	150.0	± 9.6 %
AAA	Mbps, 99pc duty cycle)	T Y	4.66	67.02	16.43		150.0	
		z	4.57	66.80	16.19		150.0	
		$\frac{1}{x}$		66.48	16.28	0.00	150.0	± 9.6 %
10525- AAA	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)		4.46			0.00	150.0	
		Y	4.62	66.06	16.02			
		Z	4.54	65.85	15.79	0.00	150.0	. 0.6.0/
10526- AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.60	66.79	16.40	0.00	150.0	± 9.6 %
, , , ,		Ý	4.82	66.46	16.16		150.0	
		Z	4.72	66.22	15.93		150.0	
10527- AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.53	66.77	16.35	0.00	150.0	± 9.6 %
<del>^</del>	99pc daty cycle)	Y	4.74	66.44	16.12		150.0	
		Z	4.64	66.19	15.88		150.0	
40500	IEEE 802.11ac WiFi (20MHz, MCS3,	X	4.54	66.78	16.38	0.00	150.0	± 9.6 %
10528- AAA	99pc duty cycle)				16.15		150.0	
		Y	4.75	66.46			150.0	
		Z	4.66	66.21	15.91	0.00		± 9.6 %
10529- AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.54	66.78	16.38	0.00	150.0	± 9.6 %
		Y	4.75	66.46	16.15		150.0	
		Z	4.66	66.21	15.91		150.0	
10531-	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.52	66.84	16.38	0.00	150.0	± 9.6 %
AAA	99pc daty cycle)	+ <sub>Y</sub> -	4.76	66.60	16.18		150.0	-
		Ż	4.66	66.32	15.93		150.0	
10532-	IEEE 802.11ac WiFi (20MHz, MCS7,	X	4.39	66.72	16.32	0.00	150.0	± 9.6 %
<u> </u>	99pc duty_cycle)		4.04	66.47	16.13		150.0	
		Y	4.61	66.47			150.0	
		Z	4.51	66.18	15.86	0.00	150.0	± 9.6 %
10533- AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.55	66.87	16.39	0.00		19.0%
		Υ	4.77	66.48	16.13		150.0	
		Z	4.67	66.24	15.89		150.0	
10534-	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	Х	5.09	66.73	16.38	0.00	150.0	± 9.6 %
AAA	Jupo daty Gyoro)	Y	5.26	66.58	16.18		150.0	
		Z	5.19	66.36	15.98		150.0	
10535-	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.14	66.89	16.46	0.00	150.0	± 9.6 %
AAA		Y	5.33	66.72	16.24		150.0	
		Z	5.25	66.50	16.04		150.0	
10536-	IEEE 802.11ac WiFi (40MHz, MCS2,	X	5.03	66.89	16.44	0.00	150.0	± 9.6 %
AAA	99pc duty cycle)	Y	5.20	66.71	16.22		150.0	1
	-	Z	5.12	66.47	16.01	†	150.0	
40505	JEEE 000 444 - 1885: 740441 - 84000	X	5.08	66.84	16.42	0.00	150.0	± 9.6 %
10537- AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)					0.00	150.0	2 3.3 70
		Y	5.27	66.68	16.21	-		
10538-	IEEE 802.11ac WiFi (40MHz, MCS4,	Z	5.1 <u>8</u> 5.15	66.44 66.81	16.00 16.44	0.00	150.0 150.0	± 9.6 %
AAA	99pc duty cycle)					ļ		<del> -</del>
-	<u> </u>	Υ	5.37	66.74	16.28		150.0	<u></u>
		Z	5.28	66.49	16.06		150.0	
					16.45	0.00	150.0	± 9.6 %
10540-	IEEE 802.11ac WiFi (40MHz, MCS6,	X	5.09	66.80	10.43	0.00		20:070
10540- AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.09	66.69	16.27	0.00	150.0	

10541-	IEEE 802.11ac WiFi (40MHz, MCS7,	X	5.06	66.68	16.38	0.00	150.0	± 9.6 %
AAA	99pc duty cycle)	^	5.00	00.00	10.50	0.00	130.0	2 3.0 70
7001	Sopo daty syste)	Y	5.26	66.60	16.22		150.0	
	_	Z	5.18	66.36	16.00		150.0	
10542-	IEEE 802.11ac WiFi (40MHz, MCS8,	X	5.22	66.77	16.43	0.00	150.0	± 9.6 %
AAA	99pc duty cycle)							
		Υ	5.41	66.64	16.25		150.0	
		Z	5.33	66.43	16.05		150.0	
10543- AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.28	66.79	16.47	0.00	150.0	± 9.6 %
		Ý	5.50	66.65	16.27		150.0	
		Z	5.41	66.46	16.08		150.0	
10544- AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	Х	5.42	66.77	16.34	0.00	150.0	± 9.6 %
		Y	5.55	66.69	16.17		150.0	
		Z	5.48	66.48	15.98		150.0	
10545- AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.61	67.23	16.53	0.00	150.0	± 9.6 %
		Y	5.75	67.07	16.30		150.0	
		Z	5.67	66.87	16.11		150.0	
10546- AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	Х	5.46	66.92	16.38	0.00	150.0	± 9.6 %
		Υ	5.64	66.96	16.27		150.0	
		Z	5.56	66.72	16.06		150.0	
10547- AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	Х	5.54	67.00	16.42	0.00	150.0	± 9.6 %
		Υ	5.73	67.04	16.29		150.0	
		Z.	5.64	66.77	16.07		150.0	
10548- AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.73	67.79	16.78	0.00	150.0	± 9.6 %
		Υ	5.99	67.96	16.73		150.0	
		Z	5.87	67.64	16.48		150.0	
10550- AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	Х	5.52	67.07	16.47	0.00	150.0	± 9.6 %
		Y	5.66	66.92	16.25		150.0	
		Z	5.58	66.70	16. <u>06</u>		150.0	
10551- AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.47	66.93	16.36	0.00	150.0	± 9.6 %
		Υ	5.67	66.99	16.25		150.0	_
		Z	5.59	66.76	16.05		150.0	
10552- AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	Х	5.43	66.87	16.34	0.00	150.0	± 9.6 %
		Y	5.58	66.77	16.15		150.0	
		Z	5.50	66.55	15.96		150.0	
10553- AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	Х	5.49	66.84	16.35	0.00	150.0	± 9.6 %
<u> </u>		Y	5.67	66.82	16.21		150.0	
		Z	5.59	66.61	16.01		150.0	
10554- AAA	IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.84	67.09	16.40	0.00	150.0	± 9.6 %
		Υ	5.94	67.05	16.25		150.0	
		Z	5.88	66.85	16.07		150.0	
10555- AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.95	67.36	16.52	0.00	150.0	± 9.6 %
		Υ	6.0 <u>9</u>	67.37	16.39		150.0	
		Z	6.01	67.14	16.19		150.0	. 0 0 0/
10556- AAA	IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.98	67.45	16.56	0.00	150.0	± 9.6 %
-		Υ	6.10	67.39	16.39		150.0	
		Z	6.03	67.18	16.21		150.0	
10557- AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	Х	5.93	67.31	16.50	0.00	150.0	± 9.6 %
<del>^-</del>		Y	6.09	67.35	16.39		150.0	
		Z	6.01	67.12	16.19		150.0	

10558- AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.96	67.43	16.58	0.00	150.0	± 9.6 %
	3000 daily 0y010/	Y	6.14	67.53	16.50		150.0	
		Z	6.06	67.28	16.29		150.0	
10560-	IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	5.96	67.30	16.55	0.00	150.0	± 9.6 %
<u> </u>	99pc duty cycle)	Y	6.14	67.38	16.46		150.0	
		Z	6.06	67.14	16.26		150.0	
	THE LOOP AND THE MICE AND THE	X	5.90	67.30	16.59	0.00	150.0	± 9.6 %
10561- AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)				16.47		150.0	
		Y	6.05	67.33			150.0	
		Z	5.97	67.09	16.27	0.00	150.0	± 9.6 %
10562- AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	Х	5.97	67.52	16.70	0.00		
		Y	6.20	67.78	16.70		150.0	
		Z	6.10	67.49	16.47		150.0	
10563- AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.05	67.43	16.61	0.00	150.0	± 9.6 %
70.00		Y	6.51	68.26	16.88		150.0	
	<del>-</del>	Z	6.42	68.01	16.67		150.0	
40504	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.79	67.15	16.65	0.46	150.0	±9.6 %
10564- AAA	OFDM, 9 Mbps, 99pc duty cycle)		4.99	66.89	16.50		150.0	
		Y	4.91	66.68	16.27		150.0	
		Z			16.27	0.46	150.0	± 9.6 %
10565- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 99pc duty cycle)	X	5.00	67.58		U.46		± 9.0 %
		Y	5.25	67 <u>.37</u>	16.83		150.0	
		Z	5.16	67.16	16.61		150.0	2 2 2 /
10566- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 99pc duty cycle)	Х	4.83	67.41	16.78	0.46	150.0	± 9.6 %
	Of Divi, 10 wispe, cope day	Υ	5.08	67.24	16.66		150.0	
		Z	4.99	67.00	16.41		150.0	
10567-	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 99pc duty cycle)	X	4.88	67.87	17.20	0.46	150.0	± 9.6 %
<u> </u>	OFDIM, 24 Mibbs, 99pc duty cycle)	Y	5.11	67.62	16.99		150.0	_
		Z	5.02	67.41	16.78		150.0	
10568-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.73	67.14	16.52	0.46	150.0	± 9.6 %
AAA	OFDM, 36 Mbps, 99pc duty cycle)	\ \	4.00	66.97	16.41		150.0	
		Y	4.99				150.0	1
		Z	4.89	66.73	16.15	0.40		1069/
10569- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 99pc duty cycle)	Х	4.86	68.08	17.32	0.46	150.0	± 9.6 %
		Y	5.05	67.63	17.01		150.0	
		Z	4.97	67.46	16.82		150.0	
10570~ AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 99pc duty cycle)	Х	4.87	67.85	17.21	0.46	150.0	± 9.6 %
<u>`</u> ~~~	Or Divi, or mape, cope dad, eyers)	Υ	5.09	67.48	16.95		150.0	
		Ż	5.01	67.31	16.75		150.0	
10571-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1	X	1.23	65.85	16.68	0.46	130.0	± 9.6 %
<u> </u>	Mbps, 90pc duty cycle)	Y	1.28	65.62	16.38	1	130.0	1
		- <u>r</u>	1.20	64.12	15.14	<del>                                     </del>	130.0	1
					17.14	0.46	130.0	± 9.6 %
10572- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.26	66.61		0.46		± ₹.0 /0
		Υ	1.30	66.27	16.76	-	130.0	
		Z	1.21	64.64	15.46	<u> </u>	130.0	1000
10573- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	Х	15.61	122.59	34.86	0.46	130.0	± 9.6 %
· · · · · ·		Y	7.32	105.62	29.57		130.0	
		Z	1.41	77.28	19.61		130.0	
10574-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11	X	1.59	75.46	21.51	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	Y	1.56	73.46	20.23		130.0	_
		Z			17.90		130.0	
	T	1 Z	1.30	69.51	17.50	1	100.0	L

10575-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	Х	4.57	66.90	16.65	0.46	130.0	± 9.6 %
AAA	OFDM, 6 Mbps, 90pc duty cycle)						100.0	
		Y	4.78	66.67	16.55		130.0	
		Z	4.70	66.43	16.27	0.40	130.0	. 0.0.0/
10576- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 9 Mbps, 90pc duty cycle)	X	4.60	67.11	16.74	0.46	130.0	± 9.6 %
		Y	4.81	66.83	16.61		130.0	
		Z	4.72	66.59	16.34		130.0	
10577- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 90pc duty cycle)	Х	4.78	67.36	16.89	0.46	130.0	± 9.6 %
700.	J. 2111, 12 1113 po, 10 po san, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Y	5.04	67.16	16.78		130.0	
		Z	4.94	66.91	16.52		130.0	
10578- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 90pc duty cycle)	Х	4.68	67.55	17.03	0.46	130.0	± 9.6 %
	<u> </u>	Υ	4.93	67.32	16.88		130.0	
		Z	4.83	67.07	16.62		130.0	
10579- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 90pc duty cycle)	Х	4.43	66.68	16.24	0.46	130.0	± 9.6 %
7001	Of Bin, 2 i maps, sope daily system	Y	4.71	66.69	16.25		130.0	
		Ż	4.59	66.34	15.91		130.0	
10580- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 90pc duty cycle)	X	4.47	66.74	16.26	0.46	130.0	± 9.6 %
/V-V1	Or Divi, So wipps, Sopo dary cycle)	Y	4.75	66.68	16.26		130.0	
		Z	4.64	66.35	15.93		130.0	
10581-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.59	67.62	16.99	0.46	130.0	± 9.6 %
AAA	OFDM, 48 Mbps, 90pc duty cycle)	Y	4.83	67.38	16.83		130.0	
			4.73	67.09	16.54		130.0	<del>-</del>
10582-	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 90pc duty cycle)	X	4.35	66.42	16.00	0.46	130.0	± 9.6 %
AAA	OF DIM, 54 IMBDS, 90pc duty cycle)	Y	4.66	66.46	16.06		130.0	
		Z	4.54	66.09	15.70		130.0	
10583-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6	X	4.57	66.90	16.65	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	Y	1 70	66.67	16.55		130.0	
			4.78		16.33		130.0	<del>-</del>
	THE PART OF THE PA	Z	4.70	66.43 67.11	16.74	0.46	130.0	± 9.6 %
10584- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	Х	4.60			0.40		1 9.0 70
		Υ	4.8 <u>1</u>	66.83	16.61		130.0	
		Z	4.72	66.59	16.34		130.0	
10585- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	Х	4.78	67.36	16.89	0.46	130.0	± 9.6 %
		Υ	5.04	67.16	16.78		130.0	
		Z	4.94	66.91	16.52		130.0	
10586- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	Х	4.68	67.55	17.03	0.46	130.0	± 9.6 %
		Y	4.93	67.32	16.88		130.0	
		Z	4.83	67.07	16. <u>6</u> 2		130.0	1
10587- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	Х	4.43	66.68	16.24	0.46	130.0	± 9.6 %
, , , , ,		Υ	4.71	66.69	16.25		130.0	
		Z	4.59	66.34	15.91	l	130.0	
10588- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.47	66.74	16.26	0.46	130.0	± 9.6 %
		Y	4.75	66.68	16.26		130.0	
		Z	4.64	66.35	15.93		130.0	
10589- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.59	67.62	16.99	0.46	130.0	± 9.6 %
700	impo, copo daty cycle/	Y	4.83	67.38	16.83		130.0	
		Ż	4.73	67.09	16.54		130.0	
10590-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54	X	4.35	66.42	16.00	0.46	130.0	± 9.6 %
10590- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)				16.00 16.06	0.46	130.0	± 9.6 %

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10591-	IEEE 802.11n (HT Mixed, 20MHz,	X	4.72	66.97	16.76	0.46	130.0	± 9.6 %
4AA	MCS0, 90pc duty cycle)	Y	4.93	66.73	16.63		130.0	
		Z	4.85	66.51	16.38		130.0	
	THE COOK IN THE THE CONTRACT	X	4.85	67.28	16.89	0.46	130.0	± 9.6 %
10592- NAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)					0.40		
		Y	5 <u>.1</u> 0	67.07	16.76		130.0	
		Z	5 <u>.01</u>	66.85	16.51		130.0	
10593- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.77	67.16	16.75	0.46	130.0	± 9.6 %
		Y	5.03	67.02	16.67		130.0	
		Z	4.93	66.76	16.39		130.0	
10594- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.83	67.35	16.92	0.46	130.0	± 9.6 %
		Y	5.08	67.17	16.80		130.0	
		Z	4.99	66.92	16.54		130.0	
10595-	IEEE 802.11n (HT Mixed, 20MHz,	X	4.79	67.31	16.82	0.46	130.0	± 9.6 %
AAA	MCS4, 90pc duty cycle)	Y	5.06	67.14	16.71		130.0	
			4.95	66.87	16.44		130.0	
		Z	4.93	67.29	16.82	0.46	130.0	± 9.6 %
10596- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	Х				— <del>-</del>	130.0	2 3.0 70
		Y	4.99	67.14	16.71			
		Z	4.89	66.86	16.43		130.0	. 0 0 0
10597- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.68	67.16	16.68	0.46 	130.0	± 9.6 %
, , , , ,		Y	4.95	67.07	16.62		130.0	
<del></del> .		Z	4.84	66.78	16.32		130.0	
10598-	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.67	67.44	16.97	0.46	130.0	± 9.6 %
AAA	WOS1, sopo daty oyele)	Y	4.93	67.31	16.88		130.0	
		Z	4.82	67.03	16.60		130.0	
10599-	IEEE 802.11n (HT Mixed, 40MHz,	X	5.39	67.39	16.95	0.46	130.0	± 9.6 %
AAA	MCS0, 90pc duty cycle)	Y	5.60	67.32	16.82		130.0	_
			5.51	67.07	16.58		130.0	
10600-	IEEE 802.11n (HT Mixed, 40MHz,	Z X	5.51	67.80	17.12	0.46	130.0	± 9.6 %
AAA	MCS1, 90pc duty cycle)			07.04	17.04		130.0	
		Y	5.77	67.81			130.0	
		Z	5.65	67.49	16.76	0.40		. 0.6.9/
10601- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.41	67.56	17.02	0.46	130.0	± 9.6 %
,,,,,		Y	5.64	67.51	16.91		130.0	
		Z	5.54	67.24	16.65		130.0	
10602- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.54	67.73	17.02	0.46	130.0	± 9.6 %
, v v 1		Y	5.72	67.51	16.82		130.0	
	<del>                                     </del>	Z	5.62	67.22	16.56		130.0	
10603-	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.62	68.07	17.33	0.46	130.0	± 9.6 %
AAA	ivicion, sope duty cycle)	Y	5.82	67.83	17.11		130.0	Î
		Z	5.72	67.58	16.87	1	130.0	
	JEEE 000 44- /UT 845 3-40840-		5.49	67.68	17.12	0.46	130.0	± 9.6 %
10604- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X				0.40	130.0	
		Y	5.60	67.27	16.82	-		
		Z	5.51	67.03	16.58	0.10	130.0	1000
10605- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.51	67.70	17.12	0.46	130.0	± 9.6 %
- <del>*</del> ·		Y	5.70	67.55	16.96		130.0	
		Z	5.61	67.31	16.72		130.0	
10606-	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.26	67.01	16.63	0.46	130.0	± 9.6 %
AAA	ivicor, sope duty cycle)	Y	5.49	67.08	16.60		130.0	
		Z	5.39	66.79	16.33		130.0	

10607-	IEEE 802.11ac WiFi (20MHz, MCS0,	X	4.58	66.35	16.43	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)							
		Y	4.76	66.03	16.25		130.0	
		Z	4.68	65.79	15.98		130.0	
10608- AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.73	66.71	16.58	0.46	130.0	± 9.6 %
		Y	4.98	66.46	16.42		130.0	
		Z	4.87	66.20	16.15		130.0	
10609- AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.62	66.54	16.40	0.46	130.0	± 9.6 %
		Y	4.87	66.34	16.28		130.0	
		Z	4.76	66.05	15.99		130.0	
10610- AAA	IEEE 802.11ac WiFi (20MHz, MC\$3, 90pc duty cycle)	X	4.68	66.72	16.58	0.46	130.0	± 9.6 %
		Y	4.92	66.49	16.43		130.0	
		Z	4.81	66.21	16.15		130.0	_
10611- AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.59	66.51	16.42	0.46	130.0	± 9.6 %
		Υ	4.84	66.32	16.29		130.0	
		Z	4.73	66.02	16.00		130.0	
10612- AAA	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	Х	4.59	66.66	16.46	0.46	130.0	± 9.6 %
		Υ	4.85	66.48	16.33		130.0	
	_	Z	4.74	66.16	16.03		130.0	
10613- AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.58	66.47	16.30	0.46	130.0	± 9.6 %
		Υ	4.87	66.40	16.24		130.0	
		Z	4.75	66.06	15.92		130.0	
10614- AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	Х	4.55	66.74	16.59	0.46	130.0	± 9.6 %
		Y	4.80	66.57	16.46		130.0	
		Z	4.69	66.26	16.16		130.0	
10615- AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.58	66.31	16.16	0.46	130.0	± 9.6 %
7001	oopo aatij oyoloj	Y	4.84	66.15	16.08		130.0	
	-	Z	4.73	65.83	15.77		130.0	
10616- AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.21	66.65	16.56	0.46	130.0	± 9.6 %
7001	3555 331, 35515,	Y	5.41	66.58	16.44		130.0	
		Z	5.33	66.33	16.20		130.0	
10617- AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	Х	5.28	66.84	16.63	0.46	130.0	± 9.6 %
AAA	Sopo daty Systey	Y	5.47	66.68	16.45		130.0	
		Z	5.38	66.45	16.22		130.0	
10618- AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.18	66.90	16.68	0.46	130.0	± 9.6 %
7001		Y	5.37	66.76	16.51		130.0	
		Z	5.28	66.49	16.27		130.0	
10619- AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	Х	5.18	66.65	16.49	0.46	130.0	± 9.6 %
		Y	5.39	66.59	16.37		130.0	
		Z	5.30	66.32	16.11		130.0	
10620- AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.26	66.66	16.54	0.46	130.0	± 9.6 %
		Y	5.51	66.68	16.46		130.0	
		Z	5.40	66.39	16.19		130.0	
10621- AAA	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.27	66.82	16.75	0.46	130.0	± 9.6 %
		Y	5.48	66.74	16.60		130.0	
		Z	5.39	66.50	16.37		130.0	
10622-	IEEE 802.11ac WiFi (40MHz, MCS6,	X	5.27	66.93	16.80	0.46	130.0	± 9.6 %
						l		
10622- AAA	90pc duty cycle)	Y	5.48	66.86	16.65		130.0	

10623- AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.14	66.42	16.40	0.46	130.0	± 9.6 %
	sope duty cycle)	Υ	5.37	66.46	16.34		130.0	
		Z	5.27	66.17	16.07		130.0	
10624-	IEEE 802.11ac WiFi (40MHz, MCS8,	X	5.34	66.68	16.59	0.46	130.0	± 9.6 %
<u> </u>	90pc duty cycle)	Y	5.56	66.62	16.48		130.0	
		Z	5.47	66.37	16.24		130.0	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	X	5.51	67.05	16.84	0.46	130.0	± 9.6 %
10625- AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)						130.0	
		Υ	5.94	67.60	17.02			
		Z	5.85	67.36	16.78	0.46	130.0 130.0	± 9.6 %
10626- AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	Х	5.53	66.66	16.50	0.46		
		Υ	5.68	66.62	16.38		130.0	
		Z	5.60	66.40	16.16		130.0	
10627- AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.78	67.30	16.79	0.46	130.0	± 9.6 %
/VV\		Y	5.92	67.14	16.59		130.0	
		Z	5.84	66.92	16.37		130.0	
10628-	IEEE 802.11ac WiFi (80MHz, MCS2,	X	5.53	66.65	16.39	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Υ	5.74	66.79	16.36		130.0	
		Z	5.65	66.51	16.11		130.0	
10629-	IEEE 802.11ac WiFi (80MHz, MCS3,	X	5.63	66.79	16.45	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Y	5.82	66.85	16.38		130.0	
			5.74	66.60	16.14		130.0	
		Z		67.97	17.05	0.46	130.0	± 9.6 %
10630- AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	Х	5.95			0.40		2 9.0 %
		Y	6.32	68.49	17.20		130.0	
		Z	6.17	68.05	16.86		130.0	
10631- AAA	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	5.89	67.93	17.23	0.46	130.0	± 9.6 %
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Y	6.21	68.27	17.26		130.0	
		Z	6.09	67.93	17.00		130.0	
10632- AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.77	67.44	17.00	0.46	130.0	± 9.6 %
AAA	gope daily cycle)	Υ	5.90	67.22	16.76		130.0	
		Ż	5.82	67.00	16.55		130.0	
10633-	IEEE 802.11ac WiFi (80MHz, MCS7,	X	5.60	66.87	16.54	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Y	5.83	67.02	16.49		130.0	
		Z	5.72	66.69	16.23		130.0	
10634- AAA	IEEE 802.11ac WiFi (80MHz, MCS8,	X	5.59	66.92	16.62	0.46	130.0	± 9.6 %
	90pc duty cycle)	Y	5.81	67.01	16.55		130.0	
		Z	5.71	66.73	16.31		130.0	
10635- AAA	IEEE 802.11ac WiFi (80MHz, MCS9,	X	5.44	66.12	15.93	0.46	130.0	± 9.6 %
	90pc duty cycle)	Y	5.70	66.39	15.99		130.0	
		$\frac{1}{Z}$	5.70	66.05	15.69		130.0	-
10636-	IEEE 1602.11ac WiFi (160MHz, MCS0,	X	5.96	67.00	16.57	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Υ	6.08	67.01	16.47		130.0	
		Z	6.01	66.78	16.25		130.0	<u> </u>
10637- AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.10	67.36	16.74	0.46	130.0	± 9.6 %
	oopo daty oyoloj	Y	6.25	67.39	16.63		130.0	
		Z	6.17	67.14	16.41		130.0	
10638-	IEEE 1602.11ac WiFi (160MHz, MCS2,	X	6.11	67.36	16.71	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Y	6.25	67.36	16.60		130.0	
		Z	6.23	67.12	16.38	+	130.0	+

	<del>-</del>						1000	0.00
10639- AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	×	6.07	67.26	16.71	0.46	130.0	± 9.6 %
	0000000	Y	6.25	67.37	16.65		130.0	
		Z	6.16	67.11	16.42		130.0	
10640- AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.05	67.22	16.62	0.46	130.0	± 9.6 %
		Y	6.27	67.44	16.63		130.0	
	-	Ż	6.17	67.12	16.37		130.0	
10641- AAA	IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.13	67.23	16.65	0.46	130.0	± 9.6 %
7001		Y	6.27	67.20	16.53		130.0	
	-	Z	6.19	66.96	16.31		130.0	
10642- AAA	IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.16	67.45	16.94	0.46	130.0	± 9.6 %
		Y	6.34	67.53	16.85		130.0	
		Z	6.25	67.29	16.64		130.0	
10643- AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	Х	6.00	67.14	16.67	0.46	130.0	± 9.6 %
		Y	6.17	67.21	16.60		130.0	
		Z	6.08	66.93	16.36		130.0	
10644- AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	Х	6.08	67.39	16.82	0.46	130.0	± 9.6 %
		Υ	6.38	67.85	16.95		130.0	
		Z	6.26	67.49	16.66		130.0	
10645- AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.23	67.50	16.83	0.46	130.0	± 9.6 %
		Y	6.74	68.44	17.18		130.0	
		Z	6.68	68.29	17.00		130.0	_
10646- AAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	Х	13.71	101.95	34.43	9.30	60.0	± 9.6 %
		Υ	31.42	116.20	38.46		60.0	
		Z	15.59	99.47	32.52		60.0	
10647- AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	Х	12.18	100.02	33.95	9.30	60.0	± 9.6 %
		Y	30.06	116.00	38.55		60.0	
		Z	14.66	98.82	32.42		60.0	
10648- AAA_	CDMA2000 (1x Advanced)	X	0.74	65.73	11.50	0.00	150.0	± 9.6 %
		Y	0.86	65.73	12.88		150.0	
		Ż	0.73	63.45	11.13		150.0	

<sup>&</sup>lt;sup>E</sup> Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the field value.