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SAR EVALUATION REPORT

Applicant Name:
WiTricity
57 Water Street
Watertow, MA 02472

Date of Testing:
02/15/17
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1702160065.EMJC

FCC ID:	**EMJCPM30W17**
APPLICANT:	**WITRICITY**

DUT Type:	Wireless Power Transfer System
Application Type:	Certification
FCC Rule Part(s):	CFR §2.1093
Model:	PM30W17

Technology	Tx Frequency	SAR	
		1 gm Body (W/kg)	10 gm Extremity (W/kg)
Airfuel Resonant	6.78 MHz	<0.1	1.07

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.

Randy Ortanez
President

The SAR Tick is an initiative of the Mobile Manufacturers Forum (MMF). While a product may be considered eligible, use of the SAR Tick logo requires an agreement with the MMF. Further details can be obtained by emailing: sartick@mmfai.info.

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1 DEVICE UNDER TEST

1.1 Device Overview

Technology	Operating Modes	Tx Frequency
Airfuel Resonant	Power	6.78 MHz

1.2 Guidance Applied

- FCC KDB Publication 447498 D01v06, Section 4.4 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 680106 D01v02
- February 17th, 2016 TCB Conference Call
- April 2015 TCB Workshop RF Exposure
- April 2016 TCB Workshop Notes

1.3 Device Serial Numbers

The manufacturer has confirmed that the device tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.

	Device Serial Number
Airfuel Resonant	0216-1

2 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

2.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 2-1).

Equation 2-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho dv}\right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/m^3)
E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

3 SAR MEASUREMENT SETUP

3.1 Robotic System

Measurements are performed using the DASY5 automated dosimetric assessment system. The DASY5 is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland and consists of a high precision robotics system (Staubli), robot controller, desktop computer, near-field probe, probe alignment sensor, and the SAM phantom containing the head or body equivalent material. The robot is a six-axis industrial robot, performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure 3-1).

3.2 System Hardware

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and a remote control used to drive the robot motors. The PC consists of the SAR Measurement Software DASY52, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit that performs the signal amplification, signal multiplexing, A/D conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal from the DAE and transfers data to the PC card.

3.3 System Electronics

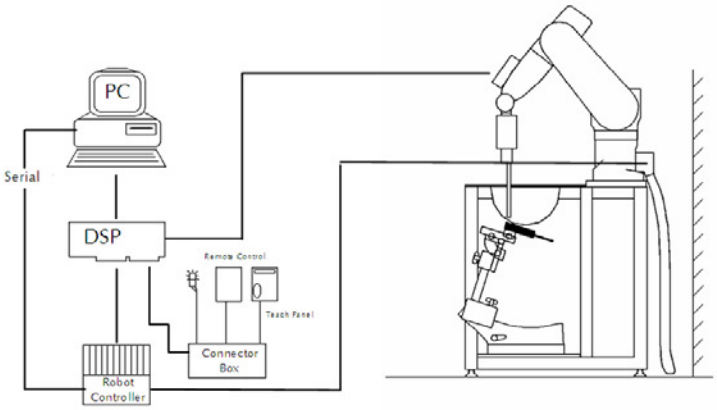


Figure 3-1
SAR Measurement System Setup

The DAE consists of a highly sensitive electrometer-grade auto-zeroing preamplifier, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

3.4 Automated Test System Specifications

Test Software:	SPEAG DASY52 version 52.8 Measurement Software
Robot:	Stäubli Unimation Corp. Robot RX60L, Robot TX90XL
Repeatability:	0.02 mm
No. of Axes:	6

Data Acquisition Electronic System (DAE)

Data Converter

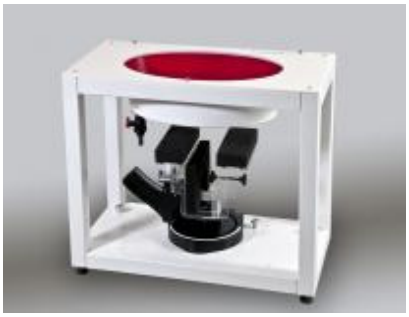
Features:	Signal Amplifier, multiplexer, A/D converter & control logic
Software:	SEMCAD X software
Connecting Lines:	Optical Downlink for data and status info Optical upload for commands and clock

PC Interface Card

Function:	Link to DAE 16-bit A/D converter for surface detection system Two Serial & Ethernet link to robotics Direct emergency stop output for robot

Phantom

Type:	ELI V4.0/5.0/6.0
Shell Material:	Composite
Thickness:	2.0 ± 0.2 mm



ELI is constructed of a fiberglass shell and can be integrated into standard phantom tables. ELI Phantom is made for compliance testing of handheld and body-mounted wireless devices. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The shell phantom has a 2 mm shell thickness.

Figure 3-2
ELI Phantoms

4 DASY E-FIELD PROBE SYSTEM

4.1 Probe Measurement System

Figure 5-1
SAR System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration (see Figure 4-3) and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multi-fiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 software reads the reflection during a software approach and looks for the maximum using a 2nd order curve fitting. The approach is stopped at reaching the maximum.

4.2 Probe Specifications

Model(s):	EX3DV4
Frequency Range:	4 MHz – 6.0 GHz (EX3DV4)
Calibration:	In head and body simulating tissue at Frequencies from 4 up to 6000MHz
Linearity:	± 0.2 dB (4 MHz to 6 GHz) for EX3DV4
Dynamic Range:	10 mW/kg – 100 W/kg
Probe Length:	337 mm
Probe Tip Length:	9 mm
Body Diameter:	10 mm
Tip Diameter:	2.5 mm for EX3DV4
Tip-Center:	1 mm for EX3DV4
Application:	SAR Dosimetry Testing Compliance tests of mobile phones Dosimetry in strong gradient fields

Figure 4-2
Near-Field Probe

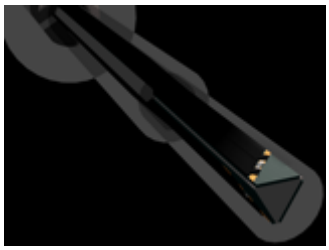


Figure 4-3
Triangular Probe Configuration

5 DOSIMETRIC ASSESSMENT

5.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

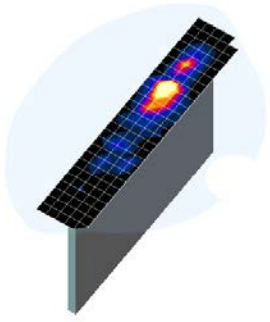


Figure 5-1
Sample SAR Area Scan

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 5-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 5-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 5-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 5-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area}, Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom}, Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)$*	$\Delta z_{zoom}(n>1)$*	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

6.2 Position of the device under test in relation to the phantom

Per FCC Guidance, the DUT was tested against a flat phantom. The DUT was positioned as close to the phantom as possible so that the peak spatial-average SAR can be measured. The DUT was oriented in accordance with the intended use conditions, as indicated in Figure 6-1. Per the manufacturer, the bottom surface of the device is not intended to be used close to a person's body.

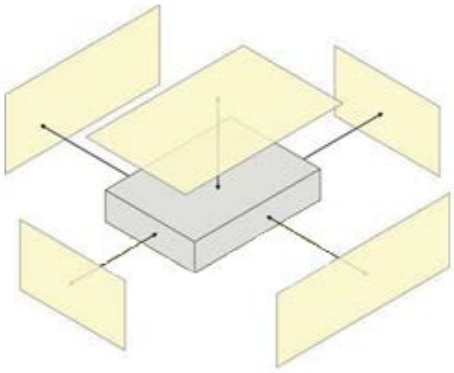


Figure 6-1
Required Test Positions for FCC Guidance

7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 7-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8 SYSTEM VERIFICATION

8.1 Tissue Verification

Table 8-1
Measured Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
2/15/2017	6 MHz	21.8	6	0.717	57.517	0.750	55.500	*-4.40%*	*3.63%*
			7	0.717	56.210	0.750	55.500	*-4.40%*	*1.28%*

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

Per the April 2016 TCB Workshop Slides, the desired average muscle dielectric parameters are ε_R = 211 and σ = 0.63 S/m at 6.78 MHz. However, numerical simulation results have determined that SAR is not sensitive to ε_R at 6.78 MHz for ε_R = 50~300 and σ = 0.63 S/m. Therefore, the IEC 30 MHz target values were used for the evaluation.

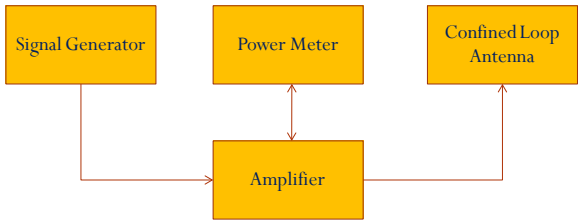
8.2 Test System Verification

Prior to SAR assessment, the system is verified to ±10% of the SAR measurement on the Confined Loop Antenna at the time of calibration by the calibration facility.

Table 8-2
System Verification Results

System Verification TARGET & MEASURED															
SAR System #	Tissue Frequency (MHz)	Date:	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	CLA SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)	Measured SAR_{10g} (W/kg)	1 W Target SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	$Deviation_{10g}$ (%)
D	6	02/15/2017	22.8	22.1	1.000	1002	7420	0.166	0.180	0.166	-7.78%	0.102	0.113	0.102	-9.73%

Figure 8-1
System Verification Setup Diagram



9 SAR DATA SUMMARY

9.1 Standalone Body SAR Data

Table 9-1
Airfuel Resonant Body SAR Data

MEASUREMENT RESULTS								
FREQUENCY MHz	Mode	PTU Resonator Coil Current (Arms)	Drift [dB]	Spacing	Device Serial Number	Side	SAR (1g) (W/kg)	Plot #
6.78	Airfuel Resonant	1.05	0.11	0 mm	0216-1	back	0.002	
6.78	Airfuel Resonant	1.05	0.16	0 mm	0216-1	front	**0.013**	A1
6.78	Airfuel Resonant	1.05	-0.11	0 mm	0216-1	right	0.003	
6.78	Airfuel Resonant	1.05	0.06	0 mm	0216-1	left	0.003	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**				**Body** **1.6 W/kg (mW/g)** averaged over 1 gram				

9.2 Standalone Extremity SAR Data

Table 9-2
Airfuel Resonant Extremity SAR Data

MEASUREMENT RESULTS								
FREQUENCY MHz	Mode	PTU Resonator Coil Current (Arms)	Drift [dB]	Spacing	Device Serial Number	Side	SAR (10g) (W/kg)	Plot #
6.78	Airfuel Resonant	1.05	0.00	0 mm	0216-1	Top	**1.070**	A2
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**				**Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams				

9.3 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified from FCC KDB Publication 447498 D01v06, FCC KDB Publication 865664 D01v01r04, February 17th 2016 TCB Conference Call, April 2015 TCB Workshop RF Exposure Notes, April 2016 TCB Workshop Notes.
2. Liquid tissue depth was at least 15.0 cm for all frequencies.
3. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
4. Per the manufacturer, the bottom surface of the device is not intended to be used close to a person's body.
5. In order to set the device to continuously transmit at a constant field, the test device was configured via a test computer and the test settings were adjusted using a PTU Simulator program provided by the manufacturer. The power level field was set to 255, which is the designated maximum for PTU Resonator Coil Current of 1.05 Arms.

10 SAR MEASUREMENT VARIABILITY

10.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01, SAR measurement variability was not assessed for any frequency band since all measured SAR values were less than 0.80 W/kg (1g) and 2.0 W/kg (10g).

10.2 Measurement Uncertainty

The measured 1g SAR was <1.5 W/kg and measured 10g SAR was <3.75 W/kg for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

11 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
SPEAG	CLA-6	Confined Loop Antenna	10/3/2016	Annual	10/3/2017	1002
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/16/2017	Annual	1/16/2018	1466
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	PWR-SENS-4RMS	USB Power Sensor	3/4/2016	Annual	3/4/2017	11210140001
Mini-Circuits	PWR-SENS-4RMS	USB Power Sensor	3/4/2016	Annual	3/4/2017	11210140001
Mini-Circuits	TVA-11-422	RF Power Amp	CBT	N/A	CBT	QA1303002
Agilent	N9020A	MXA Signal Analyzer	10/28/2016	Annual	10/28/2017	US46470561
Agilent	N5182A	MXG Vector Signal Generator	10/27/2016	Annual	10/27/2017	MY47420603
SPEAG	DAK-12	Dielectric Assessment Kit	3/1/2016	Annual	3/1/2017	1102
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
SPEAG	EX3DV4	SAR Probe	11/15/2016	Annual	11/15/2017	7420
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/19/2016	Annual	8/19/2017	MY40003841
Pasternack	NC-100	Torque Wrench	5/21/2015	Biennial	5/21/2017	N/A
Control Company	4352	Ultra Long Stem Thermometer	3/8/2016	Biennial	3/8/2018	160261701

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

12 MEASUREMENT UNCERTAINTIES

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	6.65	N	1	1	1	6.7	6.7	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	1	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Modulation Response	E.2.5	0	R	1.73	1	1	0.0	0.0	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	2	R	1.73	1	1	1.2	1.2	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	0	N	1	1	1	0.0	0.0	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	5.7	R	1.73	1.0	1.0	3.3	3.3	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1.0	0.8	1.9	1.6	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				10.6	10.3	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				21.1	20.5	

13 CONCLUSION

13.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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[32] April 2015 TCB Workshop RF Exposure

[33] April 2016 TCB Workshop Notes

APPENDIX A: SAR TEST DATA

PCTEST ENGINEERING LABORATORY, INC.

DUT: EMJCPM30W17; Type: Wireless Power Transfer System; Serial: 0216-1

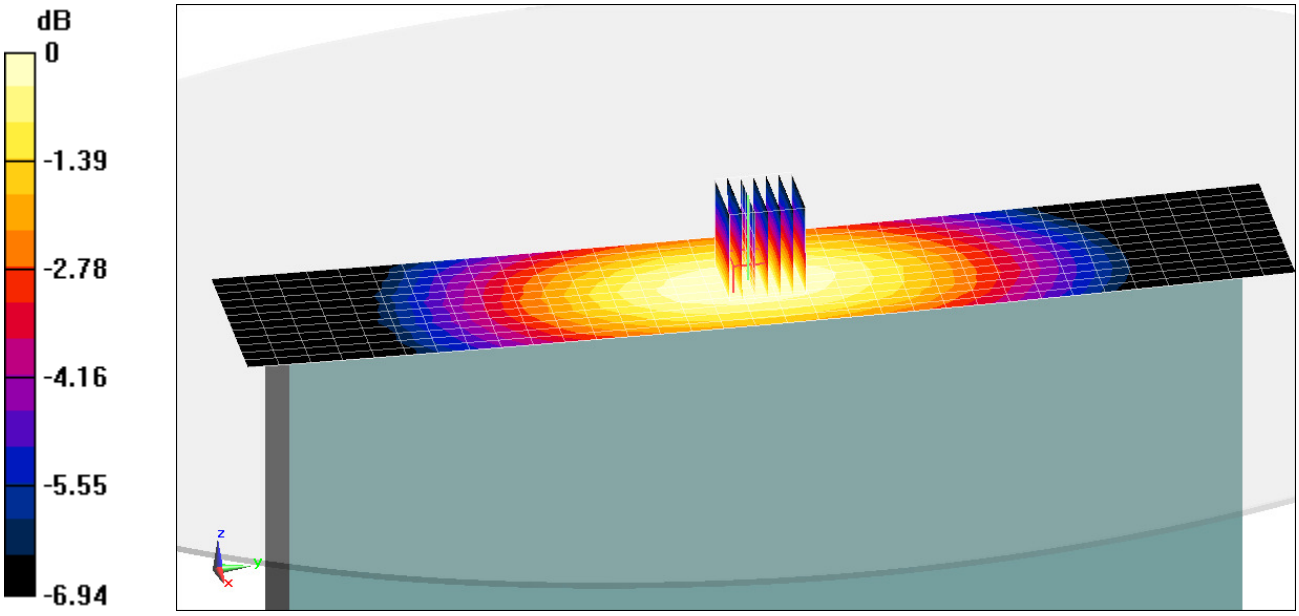
Communication System: UID 0, Airfuel Resonant; Frequency: 6.78 MHz; Duty Cycle: 1:1
Medium: 6 MHz, Medium parameters used:
f = 7 MHz; σ = 0.717 S/m; ε_r = 56.210; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-15-2017; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7420; ConvF(21.72, 21.72, 21.72); Calibrated: 11/15/2016;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1466; Calibrated: 1/16/2017
Phantom: ELI v4.0; Type: QDOVA001BB; Serial: 1202
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: Airfuel Resonant, Body SAR, Front Edge

Area Scan (13x34x1): Measurement grid: dx=5mm, dy=10mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 4.200 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.0210 W/kg
SAR(1 g) = 0.013 W/kg (SAR corrected for target medium)



0 dB = 0.0163 W/kg = -17.88 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: EMJCPM30W17; Type: Wireless Power Transfer System; Serial: 0216-1

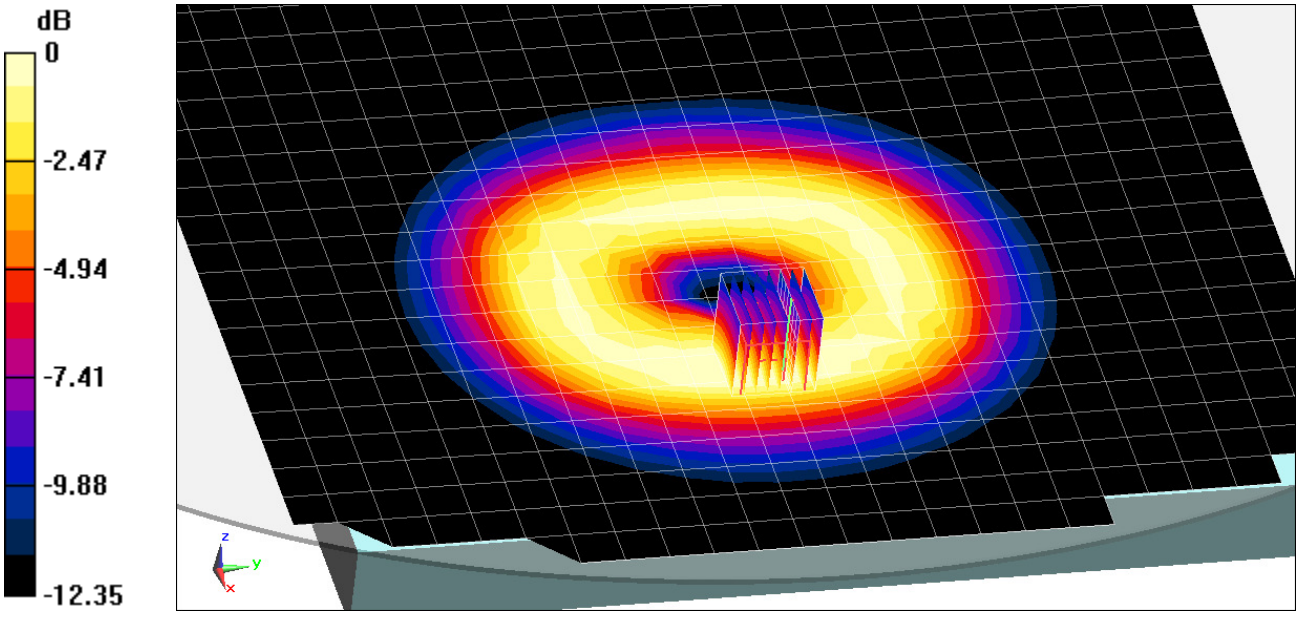
Communication System: UID 0, Airfuel Resonant; Frequency: 6.78 MHz; Duty Cycle: 1:1
Medium: 6 MHz, Medium parameters used:
f = 7 MHz; σ = 0.717 S/m; ε_r = 56.210; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-15-2017; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7420; ConvF(21.72, 21.72, 21.72); Calibrated: 11/15/2016;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1466; Calibrated: 1/16/2017
Phantom: ELI v4.0; Type: QDOVA001BB; Serial: 1202
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: Airfuel Resonant, Extremity SAR, Top Side

Area Scan (25x25x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 46.78 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.13 W/kg
SAR(10 g) = 1.07 W/kg (SAR corrected for target medium)



0 dB = 2.01 W/kg = 3.03 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

DUT: CLA 6 MHz; Type: CLA-6; Serial: 1002

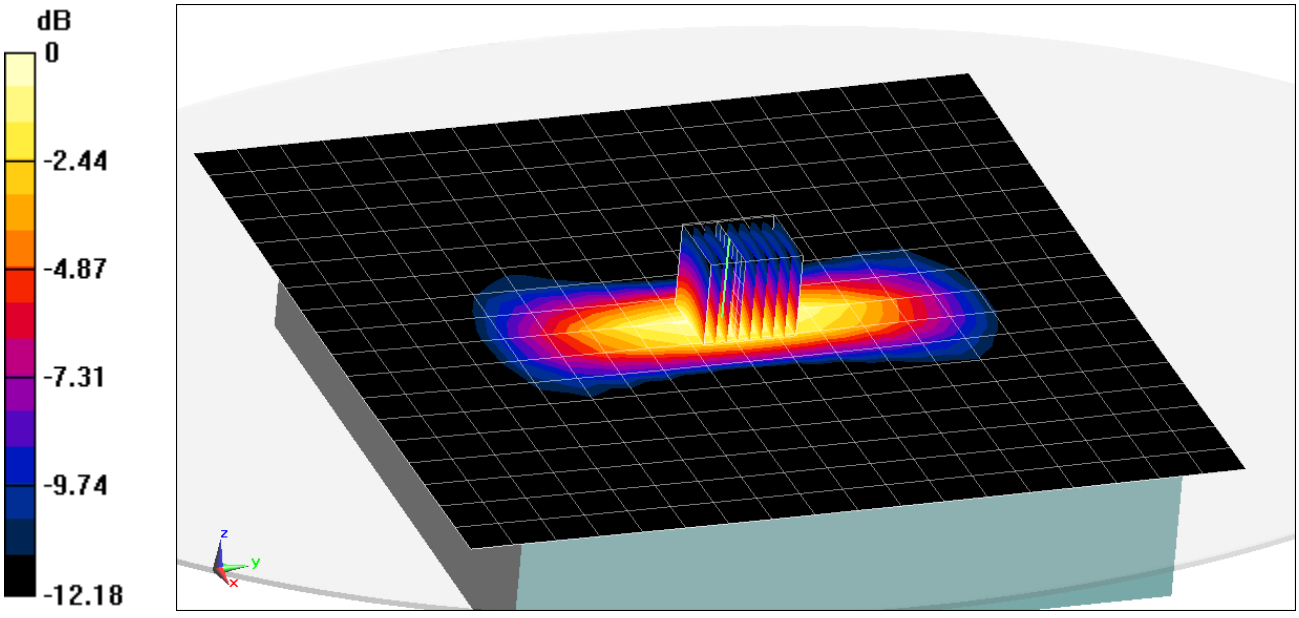
Communication System: UID 0, CW; Frequency: 6 MHz; Duty Cycle: 1:1
Medium: 6 MHz, Medium parameters used:
f = 6 MHz; σ = 0.717 S/m; ε_r = 57.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-15-2017; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7420; ConvF(21.72, 21.72, 21.72); Calibrated: 11/15/2016;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1466; Calibrated: 1/16/2017
Phantom: ELI v4.0; Type: QDOVA001BB; Serial: 1202
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

6 MHz System Verification at 30.0 dBm (1000 mW)

Area Scan (19x19x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (8x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 0.331 W/kg
SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.102 W/kg (SAR corrected for target medium)
Deviation(1 g) = -7.78%; Deviation(10 g) = -9.73%



0 dB = 0.237 W/kg = -6.25 dBW/kg

APPENDIX C: PROBE CALIBRATION

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

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

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **PC Test** **Certificate No: EX3-7420_Nov16**

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:7420

Calibration procedure(s) QA CAL-01.v9, QA CAL-12.v9, QA CAL-23.v5, QA CAL-25.v6
Calibration procedure for dosimetric E-field probes

BN 11-21-2016

Calibration date: November 15, 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: 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-16)	In house check: Oct-17

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: November 15, 2016

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

S Schweizerischer Kalibrierdienst
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S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) **Accreditation No.: SCS 0108**
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 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
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 ϑ = 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 E^2-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:7420

Manufactured:	March 10, 2016
Repaired:	November 8, 2016
Calibrated:	November 15, 2016

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7420

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.49	0.53	0.58	± 10.1 %
DCP (mV)[B]	98.5	97.1	93.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	159.5	±2.7 %
		Y	0.0	0.0	1.0		171.4	
		Z	0.0	0.0	1.0		164.1	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	54.53	413.6	36.71	12.12	0.91	4.967	0.549	0.367	1.004
Y	47.64	366.1	37.44	7.862	0.678	4.984	1.127	0.29	1.005
Z	23.04	180.7	38.89	4.68	0.726	5.002	0	0	1.008

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

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7420

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
6	55.5	0.75	21.72	21.72	21.72	0.00	1.00	± 13.3 %
13	55.5	0.75	19.24	19.24	19.24	0.00	1.00	± 13.3 %
750	41.9	0.89	10.76	10.76	10.76	0.53	0.82	± 12.0 %
835	41.5	0.90	10.10	10.10	10.10	0.48	0.88	± 12.0 %
1750	40.1	1.37	8.50	8.50	8.50	0.25	0.85	± 12.0 %
1900	40.0	1.40	8.17	8.17	8.17	0.31	0.85	± 12.0 %
2300	39.5	1.67	7.74	7.74	7.74	0.33	0.80	± 12.0 %
2450	39.2	1.80	7.38	7.38	7.38	0.36	0.80	± 12.0 %
2600	39.0	1.96	7.20	7.20	7.20	0.39	0.82	± 12.0 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz

[F] At frequencies 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.

[G] 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:7420

Calibration Parameter Determined in Body Tissue Simulating Media

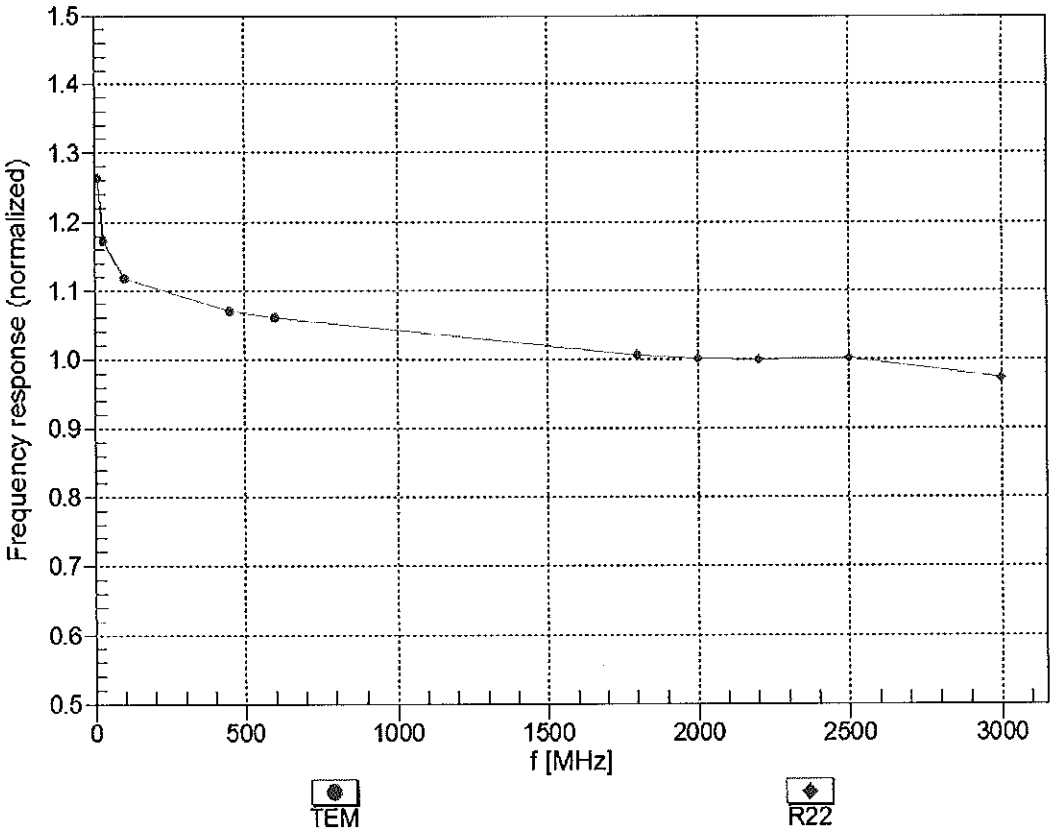
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	55.5	0.96	9.79	9.79	9.79	0.44	0.80	± 12.0 %
835	55.2	0.97	9.73	9.73	9.73	0.39	0.92	± 12.0 %
1750	53.4	1.49	8.05	8.05	8.05	0.39	0.87	± 12.0 %
1900	53.3	1.52	7.79	7.79	7.79	0.34	0.92	± 12.0 %
2300	52.9	1.81	7.59	7.59	7.59	0.40	0.88	± 12.0 %
2450	52.7	1.95	7.45	7.45	7.45	0.39	0.80	± 12.0 %
2600	52.5	2.16	7.18	7.18	7.18	0.31	0.95	± 12.0 %

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

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

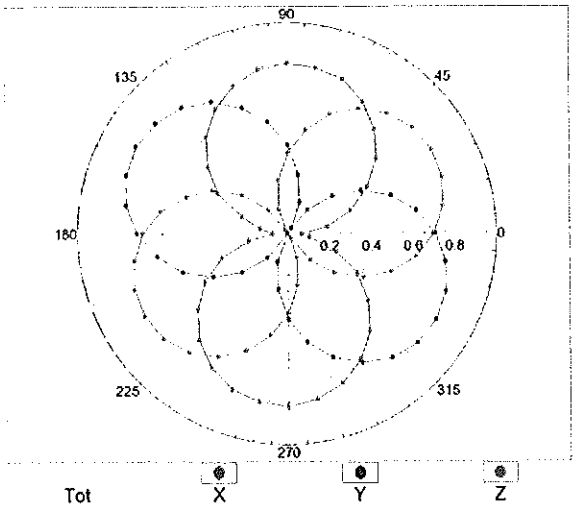
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



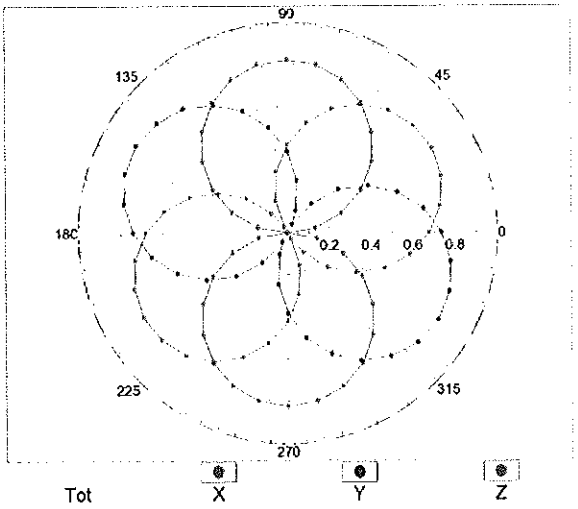
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

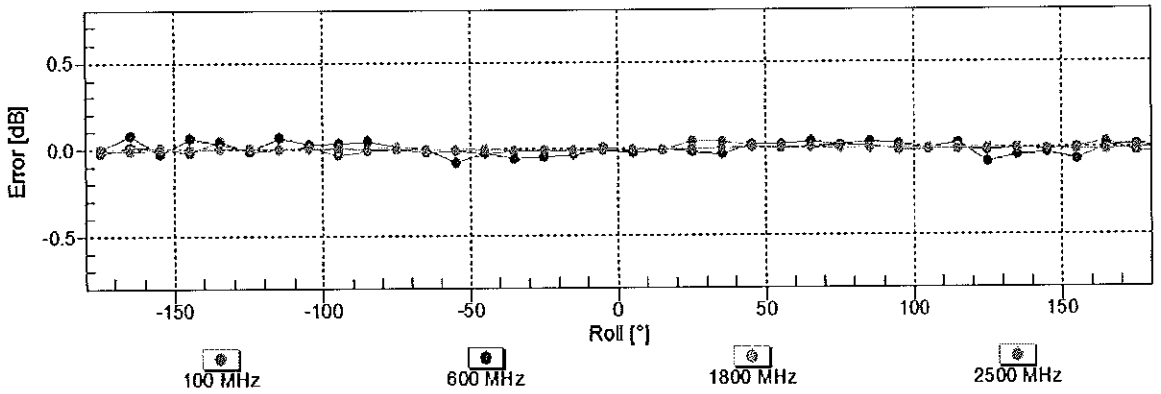
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



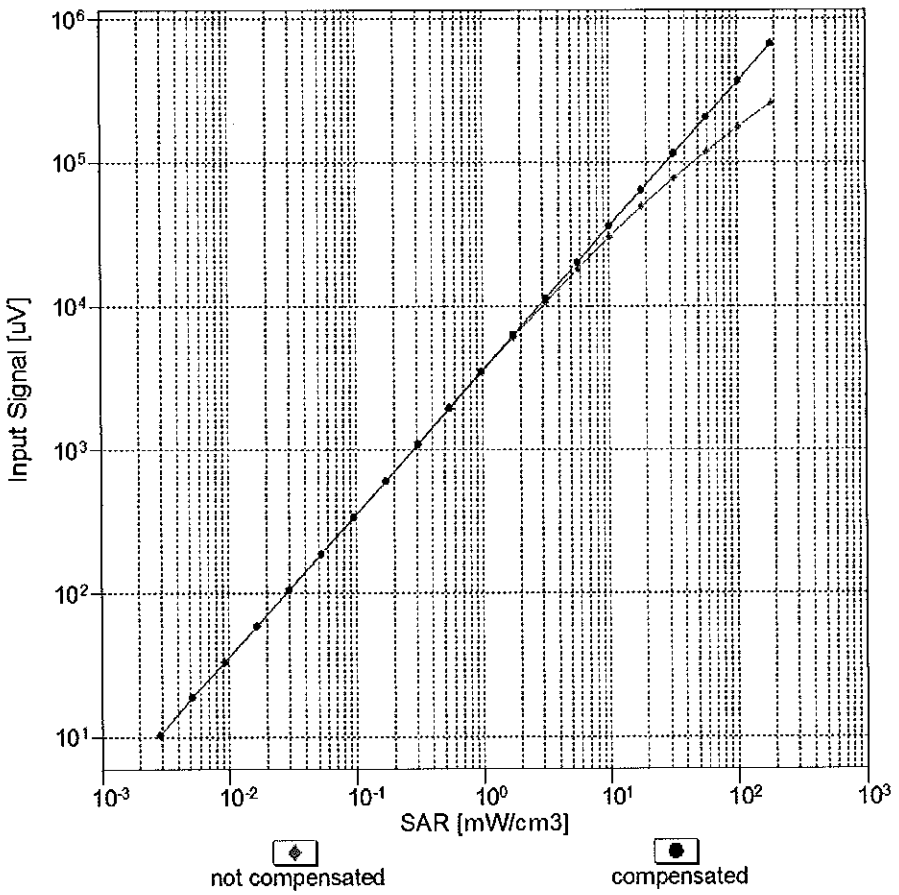
f=1800 MHz,R22

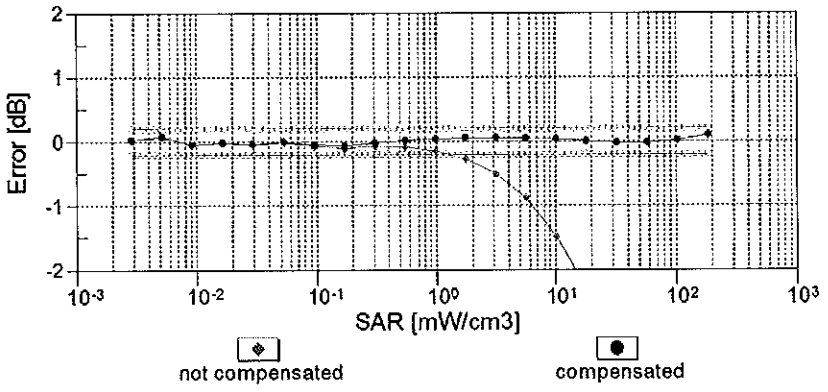




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})
(TEM cell , f_{eval}= 1900 MHz)

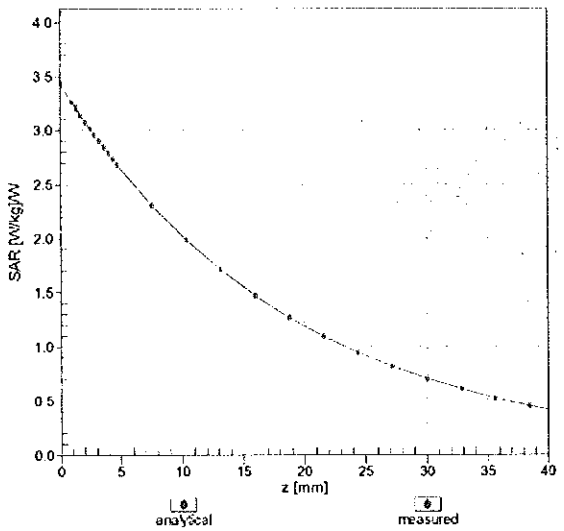




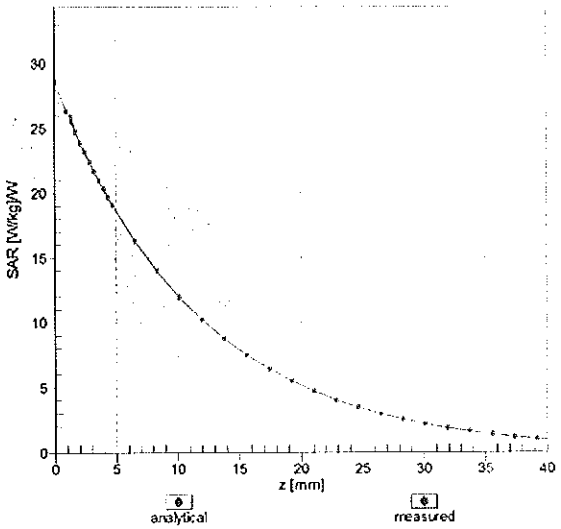
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

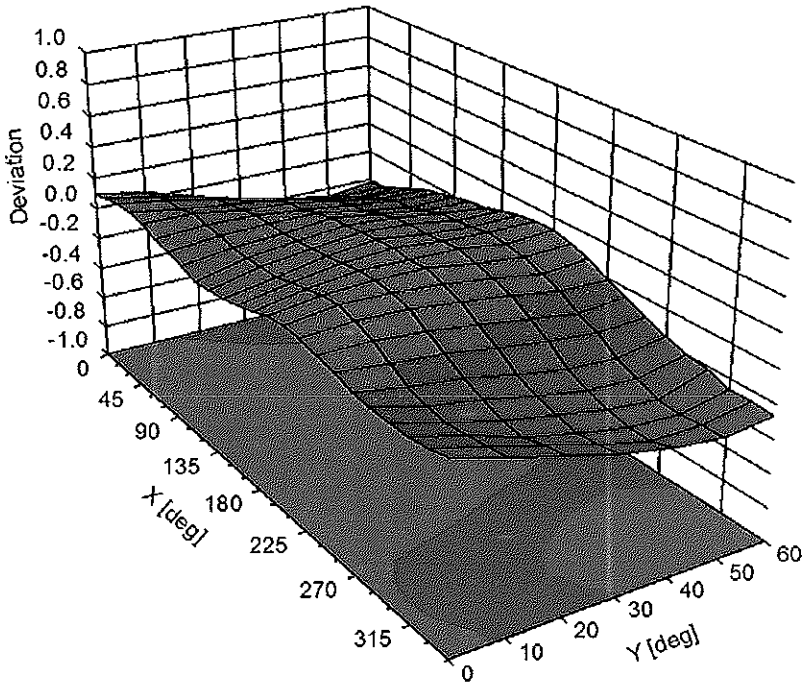


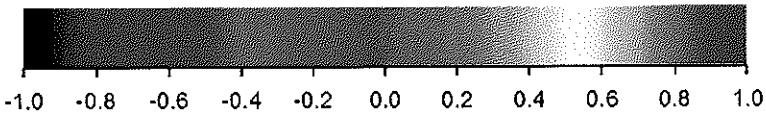
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7420

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	45.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max Unc^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	159.5	± 2.7 %
		Y	0.00	0.00	1.00		171.4	
		Z	0.00	0.00	1.00		164.1	
10010-CAA	SAR Validation (Square, 100ms, 10ms)	X	2.43	65.22	10.13	10.00	20.0	± 9.6 %
		Y	2.32	65.38	10.14		20.0	
		Z	3.73	71.16	13.29		20.0	
10011-CAB	UMTS-FDD (WCDMA)	X	1.16	69.21	16.55	0.00	150.0	± 9.6 %
		Y	1.01	66.29	14.74		150.0	
		Z	1.14	70.56	16.72		150.0	
10012-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.19	64.01	15.52	0.41	150.0	± 9.6 %
		Y	1.15	62.97	14.69		150.0	
		Z	1.19	64.38	15.67		150.0	
10013-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.90	66.42	16.96	1.46	150.0	± 9.6 %
		Y	4.84	66.28	16.85		150.0	
		Z	4.51	67.15	17.24		150.0	
10021-DAB	GSM-FDD (TDMA, GMSK)	X	8.14	79.57	17.13	9.39	50.0	± 9.6 %
		Y	18.20	89.87	20.28		50.0	
		Z	100.00	114.91	27.89		50.0	
10023-DAB	GPRS-FDD (TDMA, GMSK, TN 0)	X	7.25	77.99	16.61	9.57	50.0	± 9.6 %
		Y	12.46	85.17	18.90		50.0	
		Z	100.00	113.91	27.49		50.0	
10024-DAB	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	12.21	85.07	17.62	6.56	60.0	± 9.6 %
		Y	100.00	108.36	23.50		60.0	
		Z	100.00	117.27	27.55		60.0	
10025-DAB	EDGE-FDD (TDMA, 8PSK, TN 0)	X	12.60	102.15	39.77	12.57	50.0	± 9.6 %
		Y	5.29	76.62	28.97		50.0	
		Z	9.79	97.99	39.91		50.0	
10026-DAB	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	10.93	94.76	33.07	9.56	60.0	± 9.6 %
		Y	7.23	86.02	30.15		60.0	
		Z	6.12	84.62	30.99		60.0	
10027-DAB	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	105.63	21.84	4.80	80.0	± 9.6 %
		Y	100.00	108.61	22.82		80.0	
		Z	100.00	123.15	29.12		80.0	
10028-DAB	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	106.04	21.40	3.55	100.0	± 9.6 %
		Y	100.00	110.01	22.75		100.0	
		Z	100.00	132.68	32.27		100.0	
10029-DAB	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.36	82.64	27.40	7.80	80.0	± 9.6 %
		Y	4.66	76.48	25.11		80.0	
		Z	4.04	74.94	25.54		80.0	
10030-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	9.54	82.58	16.27	5.30	70.0	± 9.6 %
		Y	48.33	99.84	20.78		70.0	
		Z	100.00	115.72	26.19		70.0	
10031-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	105.08	19.85	1.88	100.0	± 9.6 %
		Y	100.00	108.46	20.90		100.0	
		Z	100.00	137.60	32.47		100.0	

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	100.00	111.95	21.84	1.17	100.0	± 9.6 %
		Y	100.00	115.72	23.02		100.0	
		Z	100.00	164.49	41.88		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	5.81	82.16	20.87	5.30	70.0	± 9.6 %
		Y	4.09	78.14	19.48		70.0	
		Z	4.63	78.38	17.73		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	2.41	73.80	17.05	1.88	100.0	± 9.6 %
		Y	1.74	69.75	15.06		100.0	
		Z	1.27	66.42	10.71		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	1.88	71.77	16.19	1.17	100.0	± 9.6 %
		Y	1.41	68.07	14.15		100.0	
		Z	0.94	64.64	9.52		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	6.91	84.95	21.90	5.30	70.0	± 9.6 %
		Y	4.70	80.45	20.41		70.0	
		Z	5.41	80.68	18.63		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	2.30	73.30	16.82	1.88	100.0	± 9.6 %
		Y	1.66	69.27	14.82		100.0	
		Z	1.14	65.43	10.27		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	1.90	72.14	16.45	1.17	100.0	± 9.6 %
		Y	1.41	68.26	14.34		100.0	
		Z	0.95	64.81	9.73		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	2.40	75.60	17.85	0.00	150.0	± 9.6 %
		Y	1.67	70.34	14.99		150.0	
		Z	0.53	61.46	7.22		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	5.44	75.50	14.64	7.78	50.0	± 9.6 %
		Y	9.51	82.43	16.91		50.0	
		Z	100.00	112.60	25.89		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.00	99.83	0.17	0.00	150.0	± 9.6 %
		Y	0.01	90.98	0.51		150.0	
		Z	0.03	60.00	40.49		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	5.85	71.88	15.77	13.80	25.0	± 9.6 %
		Y	6.97	74.08	16.43		25.0	
		Z	13.27	83.05	20.11		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	5.94	74.47	15.58	10.79	40.0	± 9.6 %
		Y	7.25	77.38	16.54		40.0	
		Z	25.83	94.84	22.75		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	9.57	84.03	21.52	9.03	50.0	± 9.6 %
		Y	10.06	85.68	22.07		50.0	
		Z	12.46	87.97	21.95		50.0	
10058-DAB	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	4.74	76.96	24.36	6.55	100.0	± 9.6 %
		Y	3.71	72.29	22.51		100.0	
		Z	3.31	71.10	22.94		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.22	64.96	15.96	0.61	110.0	± 9.6 %
		Y	1.15	63.58	15.00		110.0	
		Z	1.19	65.12	16.08		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	8.58	99.97	26.18	1.30	110.0	± 9.6 %
		Y	1.86	78.57	19.65		110.0	
		Z	5.26	98.42	27.56		110.0	

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	2.49	77.11	20.52	2.04	110.0	± 9.6 %
		Y	1.69	71.29	18.25		110.0	
		Z	1.88	74.76	20.40		110.0	
10062-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.74	66.55	16.54	0.49	100.0	± 9.6 %
		Y	4.67	66.38	16.39		100.0	
		Z	4.30	67.07	16.64		100.0	
10063-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.75	66.61	16.60	0.72	100.0	± 9.6 %
		Y	4.67	66.43	16.45		100.0	
		Z	4.32	67.19	16.75		100.0	
10064-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	5.06	66.90	16.83	0.86	100.0	± 9.6 %
		Y	4.96	66.70	16.67		100.0	
		Z	4.51	67.34	16.91		100.0	
10065-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.91	66.75	16.87	1.21	100.0	± 9.6 %
		Y	4.81	66.53	16.72		100.0	
		Z	4.39	67.10	16.95		100.0	
10066-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.92	66.73	17.00	1.46	100.0	± 9.6 %
		Y	4.82	66.51	16.84		100.0	
		Z	4.39	67.02	17.04		100.0	
10067-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.19	66.80	17.37	2.04	100.0	± 9.6 %
		Y	5.10	66.65	17.25		100.0	
		Z	4.62	67.19	17.44		100.0	
10068-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.25	66.90	17.59	2.55	100.0	± 9.6 %
		Y	5.13	66.66	17.43		100.0	
		Z	4.73	67.40	17.79		100.0	
10069-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	5.32	66.86	17.75	2.67	100.0	± 9.6 %
		Y	5.21	66.66	17.62		100.0	
		Z	4.75	67.30	17.89		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.99	66.46	17.21	1.99	100.0	± 9.6 %
		Y	4.92	66.31	17.10		100.0	
		Z	4.62	67.24	17.55		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	4.96	66.77	17.39	2.30	100.0	± 9.6 %
		Y	4.88	66.56	17.26		100.0	
		Z	4.54	67.32	17.67		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	5.01	66.86	17.65	2.83	100.0	± 9.6 %
		Y	4.92	66.64	17.52		100.0	
		Z	4.63	67.62	18.07		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.97	66.72	17.77	3.30	100.0	± 9.6 %
		Y	4.89	66.50	17.63		100.0	
		Z	4.69	67.78	18.33		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.02	66.89	18.09	3.82	90.0	± 9.6 %
		Y	4.92	66.58	17.91		90.0	
		Z	4.74	67.88	18.62		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	5.01	66.62	18.15	4.15	90.0	± 9.6 %
		Y	4.92	66.36	18.01		90.0	
		Z	4.80	67.77	18.80		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.03	66.66	18.24	4.30	90.0	± 9.6 %
		Y	4.94	66.40	18.10		90.0	
		Z	4.84	67.93	18.96		90.0	

10081-CAB	CDMA2000 (1xRTT, RC3)	X	1.05	68.64	14.58	0.00	150.0	± 9.6 %
		Y	0.82	65.12	12.17		150.0	
		Z	0.36	60.39	6.28		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.78	60.00	4.56	4.77	80.0	± 9.6 %
		Y	0.48	56.90	2.11		80.0	
		Z	0.43	57.76	3.09		80.0	
10090-DAB	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	11.80	84.69	17.53	6.56	60.0	± 9.6 %
		Y	100.00	108.35	23.52		60.0	
		Z	100.00	117.22	27.54		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.94	68.36	16.36	0.00	150.0	± 9.6 %
		Y	1.81	67.03	15.38		150.0	
		Z	1.97	71.02	16.31		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.90	68.34	16.34	0.00	150.0	± 9.6 %
		Y	1.77	66.97	15.34		150.0	
		Z	1.94	71.01	16.34		150.0	
10099-DAB	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	10.99	94.83	33.08	9.56	60.0	± 9.6 %
		Y	7.27	86.12	30.18		60.0	
		Z	6.16	84.75	31.03		60.0	
10100-CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	3.35	71.21	17.25	0.00	150.0	± 9.6 %
		Y	3.08	69.65	16.46		150.0	
		Z	2.87	70.34	17.33		150.0	
10101-CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	3.37	67.92	16.28	0.00	150.0	± 9.6 %
		Y	3.24	67.17	15.83		150.0	
		Z	3.01	67.57	16.26		150.0	
10102-CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.47	67.83	16.35	0.00	150.0	± 9.6 %
		Y	3.35	67.16	15.93		150.0	
		Z	3.11	67.59	16.35		150.0	
10103-CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	5.76	73.38	19.17	3.98	65.0	± 9.6 %
		Y	5.24	72.46	18.97		65.0	
		Z	4.95	73.85	20.23		65.0	
10104-CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.21	72.97	19.88	3.98	65.0	± 9.6 %
		Y	5.53	71.41	19.32		65.0	
		Z	4.98	71.43	19.66		65.0	
10105-CAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	6.14	72.63	20.07	3.98	65.0	± 9.6 %
		Y	5.23	70.10	19.01		65.0	
		Z	4.82	70.47	19.47		65.0	
10108-CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.94	70.41	17.08	0.00	150.0	± 9.6 %
		Y	2.69	68.91	16.28		150.0	
		Z	2.47	70.18	17.24		150.0	
10109-CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	3.03	67.79	16.23	0.00	150.0	± 9.6 %
		Y	2.89	67.00	15.71		150.0	
		Z	2.65	67.93	16.07		150.0	
10110-CAC	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.41	69.55	16.78	0.00	150.0	± 9.6 %
		Y	2.19	68.00	15.85		150.0	
		Z	1.98	69.85	16.50		150.0	
10111-CAC	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.76	68.62	16.61	0.00	150.0	± 9.6 %
		Y	2.59	67.72	15.92		150.0	
		Z	2.41	69.63	15.94		150.0	

10112-CAC	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.15	67.72	16.26	0.00	150.0	± 9.6 %
		Y	3.02	67.02	15.77		150.0	
		Z	2.77	68.05	16.14		150.0	
10113-CAC	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.91	68.69	16.70	0.00	150.0	± 9.6 %
		Y	2.75	67.89	16.07		150.0	
		Z	2.51	69.63	15.95		150.0	
10114-CAB	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	5.22	67.25	16.58	0.00	150.0	± 9.6 %
		Y	5.17	67.10	16.47		150.0	
		Z	4.81	67.26	16.78		150.0	
10115-CAB	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.57	67.54	16.73	0.00	150.0	± 9.6 %
		Y	5.46	67.24	16.55		150.0	
		Z	5.08	67.56	16.89		150.0	
10116-CAB	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.34	67.50	16.64	0.00	150.0	± 9.6 %
		Y	5.26	67.29	16.49		150.0	
		Z	4.89	67.52	16.83		150.0	
10117-CAB	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	5.20	67.18	16.57	0.00	150.0	± 9.6 %
		Y	5.13	66.94	16.41		150.0	
		Z	4.79	67.16	16.74		150.0	
10118-CAB	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.65	67.72	16.83	0.00	150.0	± 9.6 %
		Y	5.55	67.48	16.68		150.0	
		Z	5.06	67.43	16.83		150.0	
10119-CAB	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	5.31	67.44	16.61	0.00	150.0	± 9.6 %
		Y	5.25	67.25	16.48		150.0	
		Z	4.88	67.45	16.80		150.0	
10140-CAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.51	67.84	16.27	0.00	150.0	± 9.6 %
		Y	3.38	67.17	15.85		150.0	
		Z	3.10	67.67	16.25		150.0	
10141-CAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.63	67.89	16.41	0.00	150.0	± 9.6 %
		Y	3.51	67.28	16.02		150.0	
		Z	3.23	67.91	16.46		150.0	
10142-CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	2.20	69.68	16.62	0.00	150.0	± 9.6 %
		Y	1.95	67.92	15.46		150.0	
		Z	1.65	69.03	14.75		150.0	
10143-CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	2.66	69.59	16.55	0.00	150.0	± 9.6 %
		Y	2.44	68.32	15.56		150.0	
		Z	1.81	67.19	12.91		150.0	
10144-CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	2.43	67.32	14.98	0.00	150.0	± 9.6 %
		Y	2.23	66.19	14.01		150.0	
		Z	1.44	63.62	10.46		150.0	
10145-CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.52	67.63	13.84	0.00	150.0	± 9.6 %
		Y	1.20	64.56	11.54		150.0	
		Z	0.49	60.00	4.97		150.0	
10146-CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	2.13	67.25	12.71	0.00	150.0	± 9.6 %
		Y	1.79	65.02	10.89		150.0	
		Z	0.56	60.00	4.14		150.0	
10147-CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	2.53	69.48	13.90	0.00	150.0	± 9.6 %
		Y	2.02	66.44	11.72		150.0	
		Z	0.56	60.00	4.19		150.0	

10149-CAB	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.04	67.85	16.28	0.00	150.0	± 9.6 %
		Y	2.90	67.06	15.75		150.0	
		Z	2.66	68.01	16.12		150.0	
10150-CAB	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.16	67.77	16.30	0.00	150.0	± 9.6 %
		Y	3.03	67.07	15.82		150.0	
		Z	2.78	68.13	16.19		150.0	
10151-CAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	6.19	76.02	20.34	3.98	65.0	± 9.6 %
		Y	5.35	74.38	19.86		65.0	
		Z	5.11	76.57	21.20		65.0	
10152-CAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	5.73	72.80	19.55	3.98	65.0	± 9.6 %
		Y	5.04	71.14	18.89		65.0	
		Z	4.46	71.23	18.81		65.0	
10153-CAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.06	73.61	20.27	3.98	65.0	± 9.6 %
		Y	5.36	72.01	19.65		65.0	
		Z	4.81	72.39	19.70		65.0	
10154-CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.47	70.02	17.07	0.00	150.0	± 9.6 %
		Y	2.23	68.38	16.10		150.0	
		Z	2.02	70.21	16.71		150.0	
10155-CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.76	68.63	16.62	0.00	150.0	± 9.6 %
		Y	2.60	67.73	15.94		150.0	
		Z	2.42	69.73	16.00		150.0	
10156-CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	2.07	70.05	16.61	0.00	150.0	± 9.6 %
		Y	1.79	67.92	15.21		150.0	
		Z	1.33	67.25	13.04		150.0	
10157-CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.29	68.15	15.20	0.00	150.0	± 9.6 %
		Y	2.05	66.66	14.00		150.0	
		Z	1.15	62.54	9.17		150.0	
10158-CAC	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.91	68.75	16.75	0.00	150.0	± 9.6 %
		Y	2.75	67.95	16.12		150.0	
		Z	2.53	69.76	16.03		150.0	
10159-CAC	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.42	68.65	15.50	0.00	150.0	± 9.6 %
		Y	2.15	67.08	14.26		150.0	
		Z	1.17	62.48	9.13		150.0	
10160-CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.90	69.22	16.78	0.00	150.0	± 9.6 %
		Y	2.74	68.23	16.15		150.0	
		Z	2.46	69.34	16.71		150.0	
10161-CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.06	67.71	16.25	0.00	150.0	± 9.6 %
		Y	2.92	67.01	15.74		150.0	
		Z	2.65	68.11	15.90		150.0	
10162-CAB	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.16	67.80	16.33	0.00	150.0	± 9.6 %
		Y	3.03	67.16	15.85		150.0	
		Z	2.75	68.40	16.05		150.0	
10166-CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	3.57	69.05	18.90	3.01	150.0	± 9.6 %
		Y	3.53	69.12	18.92		150.0	
		Z	2.52	66.47	18.63		150.0	
10167-CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	4.34	71.85	19.36	3.01	150.0	± 9.6 %
		Y	4.34	72.23	19.47		150.0	
		Z	2.47	67.78	18.67		150.0	

10168-CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	4.77	73.89	20.59	3.01	150.0	± 9.6 %
		Y	4.85	74.66	20.88		150.0	
		Z	2.66	69.66	20.05		150.0	
10169-CAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.94	68.86	18.87	3.01	150.0	± 9.6 %
		Y	2.90	68.59	18.70		150.0	
		Z	2.02	64.07	17.48		150.0	
10170-CAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	4.00	74.84	21.23	3.01	150.0	± 9.6 %
		Y	4.04	75.11	21.31		150.0	
		Z	1.95	66.00	18.66		150.0	
10171-AAB	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	3.29	70.75	18.48	3.01	150.0	± 9.6 %
		Y	3.27	70.65	18.37		150.0	
		Z	1.75	64.10	16.62		150.0	
10172-CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	5.76	82.38	24.47	6.02	65.0	± 9.6 %
		Y	4.72	80.10	24.04		65.0	
		Z	2.36	71.61	22.43		65.0	
10173-CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	10.12	88.77	24.73	6.02	65.0	± 9.6 %
		Y	8.35	87.50	24.76		65.0	
		Z	2.70	76.00	22.91		65.0	
10174-CAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	8.70	85.16	22.98	6.02	65.0	± 9.6 %
		Y	6.21	81.66	22.20		65.0	
		Z	2.37	73.32	21.17		65.0	
10175-CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.90	68.57	18.62	3.01	150.0	± 9.6 %
		Y	2.87	68.28	18.45		150.0	
		Z	2.01	63.94	17.31		150.0	
10176-CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	4.00	74.86	21.24	3.01	150.0	± 9.6 %
		Y	4.05	75.14	21.33		150.0	
		Z	1.95	66.01	18.67		150.0	
10177-CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.93	68.72	18.72	3.01	150.0	± 9.6 %
		Y	2.89	68.43	18.55		150.0	
		Z	2.01	63.99	17.34		150.0	
10178-CAC	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.96	74.61	21.11	3.01	150.0	± 9.6 %
		Y	4.01	74.90	21.20		150.0	
		Z	1.95	65.97	18.64		150.0	
10179-CAC	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.61	72.67	19.72	3.01	150.0	± 9.6 %
		Y	3.61	72.72	19.69		150.0	
		Z	1.84	65.09	17.60		150.0	
10180-CAC	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.28	70.68	18.43	3.01	150.0	± 9.6 %
		Y	3.26	70.58	18.32		150.0	
		Z	1.75	64.10	16.62		150.0	
10181-CAB	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.92	68.70	18.71	3.01	150.0	± 9.6 %
		Y	2.89	68.41	18.54		150.0	
		Z	2.01	63.98	17.34		150.0	
10182-CAB	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.95	74.59	21.10	3.01	150.0	± 9.6 %
		Y	4.00	74.87	21.19		150.0	
		Z	1.94	65.96	18.63		150.0	
10183-AAA	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.27	70.65	18.42	3.01	150.0	± 9.6 %
		Y	3.26	70.56	18.31		150.0	
		Z	1.75	64.09	16.61		150.0	

10184-CAC	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.93	68.74	18.74	3.01	150.0	± 9.6 %
		Y	2.90	68.46	18.56		150.0	
		Z	2.01	64.00	17.35		150.0	
10185-CAC	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.97	74.66	21.14	3.01	150.0	± 9.6 %
		Y	4.02	74.95	21.23		150.0	
		Z	1.95	66.00	18.66		150.0	
10186-AAC	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.29	70.72	18.46	3.01	150.0	± 9.6 %
		Y	3.27	70.63	18.35		150.0	
		Z	1.75	64.13	16.64		150.0	
10187-CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.94	68.79	18.79	3.01	150.0	± 9.6 %
		Y	2.91	68.51	18.63		150.0	
		Z	2.02	64.07	17.44		150.0	
10188-CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	4.10	75.34	21.53	3.01	150.0	± 9.6 %
		Y	4.16	75.68	21.64		150.0	
		Z	1.97	66.25	18.88		150.0	
10189-AAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.37	71.15	18.74	3.01	150.0	± 9.6 %
		Y	3.35	71.07	18.64		150.0	
		Z	1.77	64.31	16.82		150.0	
10193-CAB	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.63	66.67	16.33	0.00	150.0	± 9.6 %
		Y	4.55	66.47	16.14		150.0	
		Z	4.21	67.33	16.43		150.0	
10194-CAB	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.81	67.01	16.45	0.00	150.0	± 9.6 %
		Y	4.72	66.78	16.26		150.0	
		Z	4.31	67.41	16.55		150.0	
10195-CAB	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.85	67.03	16.46	0.00	150.0	± 9.6 %
		Y	4.76	66.81	16.28		150.0	
		Z	4.32	67.35	16.53		150.0	
10196-CAB	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.64	66.75	16.36	0.00	150.0	± 9.6 %
		Y	4.55	66.53	16.15		150.0	
		Z	4.18	67.25	16.37		150.0	
10197-CAB	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.83	67.03	16.46	0.00	150.0	± 9.6 %
		Y	4.73	66.80	16.28		150.0	
		Z	4.31	67.41	16.55		150.0	
10198-CAB	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.86	67.05	16.47	0.00	150.0	± 9.6 %
		Y	4.76	66.83	16.29		150.0	
		Z	4.31	67.34	16.52		150.0	
10219-CAB	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.59	66.77	16.33	0.00	150.0	± 9.6 %
		Y	4.50	66.54	16.11		150.0	
		Z	4.14	67.35	16.39		150.0	
10220-CAB	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.82	67.01	16.46	0.00	150.0	± 9.6 %
		Y	4.73	66.77	16.27		150.0	
		Z	4.30	67.36	16.53		150.0	
10221-CAB	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.86	66.98	16.46	0.00	150.0	± 9.6 %
		Y	4.77	66.76	16.28		150.0	
		Z	4.33	67.33	16.52		150.0	
10222-CAB	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	5.18	67.20	16.57	0.00	150.0	± 9.6 %
		Y	5.10	66.94	16.40		150.0	
		Z	4.78	67.19	16.75		150.0	

10223-CAB	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.50	67.40	16.68	0.00	150.0	± 9.6 %
		Y	5.42	67.19	16.55		150.0	
		Z	4.97	67.26	16.75		150.0	
10224-CAB	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	5.23	67.30	16.54	0.00	150.0	± 9.6 %
		Y	5.15	67.05	16.39		150.0	
		Z	4.81	67.33	16.74		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.91	66.35	15.72	0.00	150.0	± 9.6 %
		Y	2.81	65.85	15.20		150.0	
		Z	2.42	66.27	14.05		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	10.73	89.86	25.19	6.02	65.0	± 9.6 %
		Y	8.86	88.63	25.23		65.0	
		Z	2.80	76.73	23.30		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	9.43	86.40	23.44	6.02	65.0	± 9.6 %
		Y	8.40	86.42	23.85		65.0	
		Z	2.76	76.19	22.42		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	8.24	89.17	26.91	6.02	65.0	± 9.6 %
		Y	5.74	84.06	25.60		65.0	
		Z	2.66	74.15	23.62		65.0	
10229-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	10.19	88.87	24.77	6.02	65.0	± 9.6 %
		Y	8.41	87.60	24.80		65.0	
		Z	2.72	76.05	22.94		65.0	
10230-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	8.98	85.53	23.07	6.02	65.0	± 9.6 %
		Y	7.95	85.44	23.44		65.0	
		Z	2.65	75.39	22.03		65.0	
10231-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	7.91	88.34	26.54	6.02	65.0	± 9.6 %
		Y	5.54	83.33	25.25		65.0	
		Z	2.60	73.64	23.32		65.0	
10232-CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	10.17	88.85	24.77	6.02	65.0	± 9.6 %
		Y	8.39	87.58	24.79		65.0	
		Z	2.71	76.04	22.93		65.0	
10233-CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	8.96	85.52	23.06	6.02	65.0	± 9.6 %
		Y	7.93	85.42	23.43		65.0	
		Z	2.64	75.35	22.02		65.0	
10234-CAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	7.62	87.51	26.15	6.02	65.0	± 9.6 %
		Y	5.38	82.66	24.88		65.0	
		Z	2.56	73.33	23.07		65.0	
10235-CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	10.18	88.88	24.78	6.02	65.0	± 9.6 %
		Y	8.40	87.61	24.80		65.0	
		Z	2.71	76.05	22.94		65.0	
10236-CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	9.05	85.64	23.10	6.02	65.0	± 9.6 %
		Y	8.01	85.56	23.48		65.0	
		Z	2.67	75.50	22.07		65.0	
10237-CAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	7.93	88.41	26.57	6.02	65.0	± 9.6 %
		Y	5.54	83.37	25.26		65.0	
		Z	2.59	73.63	23.32		65.0	
10238-CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	10.15	88.83	24.76	6.02	65.0	± 9.6 %
		Y	8.37	87.55	24.78		65.0	
		Z	2.71	76.02	22.93		65.0	

10239-CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	8.94	85.50	23.06	6.02	65.0	± 9.6 %
		Y	7.90	85.39	23.42		65.0	
		Z	2.63	75.32	22.01		65.0	
10240-CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	7.90	88.36	26.55	6.02	65.0	± 9.6 %
		Y	5.53	83.32	25.25		65.0	
		Z	2.59	73.63	23.32		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	7.49	78.69	24.04	6.98	65.0	± 9.6 %
		Y	6.89	78.00	23.89		65.0	
		Z	4.84	77.47	25.10		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	6.48	75.65	22.66	6.98	65.0	± 9.6 %
		Y	6.28	76.06	22.97		65.0	
		Z	4.43	75.69	24.24		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	6.06	75.47	23.50	6.98	65.0	± 9.6 %
		Y	5.16	72.72	22.35		65.0	
		Z	4.09	72.94	23.72		65.0	
10244-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	4.97	72.35	16.93	3.98	65.0	± 9.6 %
		Y	4.29	70.89	16.03		65.0	
		Z	1.96	62.93	9.43		65.0	
10245-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	4.94	72.01	16.73	3.98	65.0	± 9.6 %
		Y	4.25	70.48	15.80		65.0	
		Z	1.95	62.65	9.21		65.0	
10246-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	4.79	75.18	18.40	3.98	65.0	± 9.6 %
		Y	3.74	72.37	17.07		65.0	
		Z	1.95	64.95	11.21		65.0	
10247-CAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	4.77	72.28	17.89	3.98	65.0	± 9.6 %
		Y	4.03	70.34	16.84		65.0	
		Z	2.62	65.66	12.25		65.0	
10248-CAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	4.83	71.98	17.75	3.98	65.0	± 9.6 %
		Y	4.08	70.04	16.69		65.0	
		Z	2.59	65.10	11.95		65.0	
10249-CAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	5.71	77.87	20.27	3.98	65.0	± 9.6 %
		Y	4.55	75.26	19.22		65.0	
		Z	3.24	71.88	16.24		65.0	
10250-CAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	5.62	74.54	20.31	3.98	65.0	± 9.6 %
		Y	4.86	72.71	19.55		65.0	
		Z	4.26	72.62	18.63		65.0	
10251-CAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	5.49	72.91	19.30	3.98	65.0	± 9.6 %
		Y	4.77	71.21	18.53		65.0	
		Z	3.92	70.14	17.01		65.0	
10252-CAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	6.13	78.03	21.15	3.98	65.0	± 9.6 %
		Y	5.08	75.85	20.42		65.0	
		Z	4.83	77.91	21.05		65.0	
10253-CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	5.60	72.25	19.33	3.98	65.0	± 9.6 %
		Y	4.95	70.70	18.67		65.0	
		Z	4.38	70.82	18.31		65.0	
10254-CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	5.92	73.04	19.99	3.98	65.0	± 9.6 %
		Y	5.25	71.51	19.36		65.0	
		Z	4.66	71.73	19.00		65.0	

10255-CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	5.94	75.49	20.37	3.98	65.0	± 9.6 %
		Y	5.14	73.82	19.83		65.0	
		Z	4.88	75.84	20.84		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	3.99	69.19	14.54	3.98	65.0	± 9.6 %
		Y	3.33	67.40	13.33		65.0	
		Z	1.43	60.45	6.66		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	3.97	68.79	14.27	3.98	65.0	± 9.6 %
		Y	3.30	66.96	13.03		65.0	
		Z	1.43	60.28	6.43		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	3.80	71.58	16.14	3.98	65.0	± 9.6 %
		Y	2.92	68.66	14.53		65.0	
		Z	1.40	61.36	7.85		65.0	
10259-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.11	73.14	18.77	3.98	65.0	± 9.6 %
		Y	4.36	71.27	17.85		65.0	
		Z	3.20	68.21	14.53		65.0	
10260-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	5.17	72.98	18.72	3.98	65.0	± 9.6 %
		Y	4.42	71.12	17.79		65.0	
		Z	3.21	67.93	14.36		65.0	
10261-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	5.65	77.30	20.42	3.98	65.0	± 9.6 %
		Y	4.59	74.90	19.49		65.0	
		Z	3.77	73.88	17.90		65.0	
10262-CAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	5.62	74.50	20.28	3.98	65.0	± 9.6 %
		Y	4.85	72.67	19.51		65.0	
		Z	4.25	72.53	18.57		65.0	
10263-CAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	5.48	72.89	19.29	3.98	65.0	± 9.6 %
		Y	4.76	71.19	18.53		65.0	
		Z	3.92	70.13	17.01		65.0	
10264-CAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	6.09	77.88	21.07	3.98	65.0	± 9.6 %
		Y	5.04	75.70	20.34		65.0	
		Z	4.78	77.70	20.93		65.0	
10265-CAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	5.73	72.80	19.56	3.98	65.0	± 9.6 %
		Y	5.03	71.14	18.89		65.0	
		Z	4.46	71.24	18.81		65.0	
10266-CAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.06	73.60	20.26	3.98	65.0	± 9.6 %
		Y	5.35	72.00	19.64		65.0	
		Z	4.81	72.38	19.69		65.0	
10267-CAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	6.18	75.99	20.32	3.98	65.0	± 9.6 %
		Y	5.34	74.35	19.84		65.0	
		Z	5.10	76.52	21.18		65.0	
10268-CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.36	72.81	19.95	3.98	65.0	± 9.6 %
		Y	5.70	71.36	19.41		65.0	
		Z	5.15	71.65	19.76		65.0	
10269-CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.34	72.44	19.86	3.98	65.0	± 9.6 %
		Y	5.71	71.04	19.32		65.0	
		Z	5.21	71.46	19.67		65.0	
10270-CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	6.22	74.02	19.68	3.98	65.0	± 9.6 %
		Y	5.54	72.70	19.30		65.0	
		Z	5.27	74.38	20.58		65.0	

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.68	66.72	15.64	0.00	150.0	± 9.6 %
		Y	2.59	66.16	15.10		150.0	
		Z	2.33	67.35	14.46		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.76	69.04	16.41	0.00	150.0	± 9.6 %
		Y	1.58	67.10	15.18		150.0	
		Z	1.63	70.33	16.26		150.0	
10277-CAA	PHS (QPSK)	X	2.45	62.05	7.75	9.03	50.0	± 9.6 %
		Y	2.12	61.26	6.92		50.0	
		Z	1.76	60.43	5.79		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	4.42	70.58	14.70	9.03	50.0	± 9.6 %
		Y	3.79	68.99	13.66		50.0	
		Z	2.59	63.43	9.19		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	4.56	70.89	14.89	9.03	50.0	± 9.6 %
		Y	3.91	69.27	13.85		50.0	
		Z	2.61	63.46	9.26		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	1.82	71.50	15.87	0.00	150.0	± 9.6 %
		Y	1.37	67.58	13.45		150.0	
		Z	0.45	60.18	6.17		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	1.02	68.31	14.41	0.00	150.0	± 9.6 %
		Y	0.81	64.93	12.05		150.0	
		Z	0.36	60.29	6.20		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	1.48	74.65	17.64	0.00	150.0	± 9.6 %
		Y	0.98	68.34	14.14		150.0	
		Z	0.48	63.41	8.29		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	2.63	83.63	21.55	0.00	150.0	± 9.6 %
		Y	1.41	73.49	16.88		150.0	
		Z	4.11	82.58	15.67		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	7.10	79.19	21.31	9.03	50.0	± 9.6 %
		Y	7.47	80.40	21.54		50.0	
		Z	100.00	111.12	27.46		50.0	
10297-AAA	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.95	70.52	17.15	0.00	150.0	± 9.6 %
		Y	2.70	69.00	16.34		150.0	
		Z	2.48	70.30	17.32		150.0	
10298-AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.84	69.59	15.59	0.00	150.0	± 9.6 %
		Y	1.51	66.79	13.67		150.0	
		Z	0.66	60.79	7.28		150.0	
10299-AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	2.69	69.79	14.77	0.00	150.0	± 9.6 %
		Y	2.42	68.23	13.46		150.0	
		Z	0.71	60.00	5.82		150.0	
10300-AAB	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	2.08	65.53	12.03	0.00	150.0	± 9.6 %
		Y	1.89	64.44	10.91		150.0	
		Z	0.55	58.24	4.01		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.66	64.70	17.30	4.17	50.0	± 9.6 %
		Y	4.61	64.80	17.22		50.0	
		Z	4.29	66.50	17.40		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.22	65.72	18.24	4.96	50.0	± 9.6 %
		Y	5.07	65.38	17.91		50.0	
		Z	4.71	66.70	17.94		50.0	

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	4.97	65.36	18.10	4.96	50.0	± 9.6 %
		Y	4.81	64.96	17.72		50.0	
		Z	4.58	67.09	18.10		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.77	65.19	17.56	4.17	50.0	± 9.6 %
		Y	4.63	64.86	17.23		50.0	
		Z	4.33	66.43	17.27		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.36	66.79	19.64	6.02	35.0	± 9.6 %
		Y	4.15	66.01	18.87		35.0	
		Z	4.26	69.10	18.26		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.70	65.87	19.16	6.02	35.0	± 9.6 %
		Y	4.53	65.38	18.62		35.0	
		Z	4.45	68.13	18.59		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.60	66.11	19.17	6.02	35.0	± 9.6 %
		Y	4.41	65.48	18.57		35.0	
		Z	4.35	68.14	18.46		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.57	66.26	19.28	6.02	35.0	± 9.6 %
		Y	4.38	65.63	18.68		35.0	
		Z	4.37	68.53	18.72		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.77	66.15	19.33	6.02	35.0	± 9.6 %
		Y	4.58	65.58	18.76		35.0	
		Z	4.47	68.24	18.74		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.64	65.94	19.13	6.02	35.0	± 9.6 %
		Y	4.47	65.41	18.59		35.0	
		Z	4.44	68.34	18.69		35.0	
10311-AAA	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	3.32	69.75	16.76	0.00	150.0	± 9.6 %
		Y	3.06	68.32	16.02		150.0	
		Z	2.82	69.13	16.88		150.0	
10313-AAA	iDEN 1:3	X	2.85	69.50	14.30	6.99	70.0	± 9.6 %
		Y	2.34	68.58	14.28		70.0	
		Z	3.06	74.56	17.98		70.0	
10314-AAA	iDEN 1:6	X	3.65	73.83	18.77	10.00	30.0	± 9.6 %
		Y	3.16	73.18	18.96		30.0	
		Z	5.12	83.09	23.87		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.10	64.02	15.56	0.17	150.0	± 9.6 %
		Y	1.07	62.98	14.68		150.0	
		Z	1.12	64.56	15.75		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.66	66.61	16.36	0.17	150.0	± 9.6 %
		Y	4.58	66.41	16.19		150.0	
		Z	4.20	67.07	16.42		150.0	
10317-AAB	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.66	66.61	16.36	0.17	150.0	± 9.6 %
		Y	4.58	66.41	16.19		150.0	
		Z	4.20	67.07	16.42		150.0	
10400-AAC	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.82	67.08	16.45	0.00	150.0	± 9.6 %
		Y	4.71	66.83	16.26		150.0	
		Z	4.20	67.20	16.42		150.0	
10401-AAC	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	5.48	67.20	16.57	0.00	150.0	± 9.6 %
		Y	5.45	67.14	16.50		150.0	
		Z	5.27	68.15	17.17		150.0	

10402-AAC	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.76	67.61	16.62	0.00	150.0	± 9.6 %
		Y	5.67	67.34	16.46		150.0	
		Z	5.36	67.54	16.81		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.82	71.50	15.87	0.00	115.0	± 9.6 %
		Y	1.37	67.58	13.45		115.0	
		Z	0.45	60.18	6.17		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.82	71.50	15.87	0.00	115.0	± 9.6 %
		Y	1.37	67.58	13.45		115.0	
		Z	0.45	60.18	6.17		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	51.83	114.56	29.10	0.00	100.0	± 9.6 %
		Y	100.00	119.32	29.13		100.0	
		Z	100.00	135.37	32.78		100.0	
10410-AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	7.29	84.74	19.59	3.23	80.0	± 9.6 %
		Y	6.18	84.58	19.90		80.0	
		Z	6.36	99.32	27.49		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.04	63.42	15.20	0.00	150.0	± 9.6 %
		Y	1.03	62.56	14.36		150.0	
		Z	1.07	64.13	15.42		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.63	66.71	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.51	16.21		150.0	
		Z	4.18	67.17	16.45		150.0	
10417-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.63	66.71	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.51	16.21		150.0	
		Z	4.18	67.17	16.45		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	4.62	66.86	16.40	0.00	150.0	± 9.6 %
		Y	4.54	66.66	16.23		150.0	
		Z	4.17	67.41	16.55		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	4.64	66.81	16.41	0.00	150.0	± 9.6 %
		Y	4.56	66.61	16.23		150.0	
		Z	4.18	67.33	16.52		150.0	
10422-AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.76	66.81	16.42	0.00	150.0	± 9.6 %
		Y	4.68	66.62	16.25		150.0	
		Z	4.28	67.26	16.52		150.0	
10423-AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.95	67.16	16.54	0.00	150.0	± 9.6 %
		Y	4.84	66.93	16.36		150.0	
		Z	4.37	67.47	16.59		150.0	
10424-AAA	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.86	67.11	16.52	0.00	150.0	± 9.6 %
		Y	4.76	66.88	16.33		150.0	
		Z	4.30	67.39	16.55		150.0	
10425-AAA	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.46	67.44	16.68	0.00	150.0	± 9.6 %
		Y	5.38	67.24	16.55		150.0	
		Z	5.00	67.47	16.86		150.0	
10426-AAA	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.46	67.44	16.68	0.00	150.0	± 9.6 %
		Y	5.40	67.31	16.58		150.0	
		Z	5.05	67.69	16.96		150.0	

10427-AAA	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.47	67.42	16.67	0.00	150.0	± 9.6 %
		Y	5.40	67.25	16.55		150.0	
		Z	5.00	67.41	16.82		150.0	
10430-AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.36	70.70	18.38	0.00	150.0	± 9.6 %
		Y	4.24	70.59	18.09		150.0	
		Z	4.03	73.00	17.64		150.0	
10431-AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.34	67.30	16.45	0.00	150.0	± 9.6 %
		Y	4.22	67.02	16.16		150.0	
		Z	3.69	67.76	15.99		150.0	
10432-AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.63	67.16	16.48	0.00	150.0	± 9.6 %
		Y	4.52	66.91	16.26		150.0	
		Z	4.06	67.59	16.42		150.0	
10433-AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.88	67.14	16.54	0.00	150.0	± 9.6 %
		Y	4.78	66.91	16.35		150.0	
		Z	4.32	67.44	16.59		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.48	71.59	18.41	0.00	150.0	± 9.6 %
		Y	4.33	71.41	18.03		150.0	
		Z	3.64	71.72	16.16		150.0	
10435-AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	6.93	84.01	19.32	3.23	80.0	± 9.6 %
		Y	5.90	83.87	19.62		80.0	
		Z	5.99	98.13	27.06		80.0	
10447-AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.66	67.42	15.92	0.00	150.0	± 9.6 %
		Y	3.49	66.94	15.40		150.0	
		Z	2.70	66.27	13.43		150.0	
10448-AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	4.17	67.08	16.31	0.00	150.0	± 9.6 %
		Y	4.06	66.80	16.02		150.0	
		Z	3.59	67.60	15.91		150.0	
10449-AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	4.43	66.99	16.38	0.00	150.0	± 9.6 %
		Y	4.34	66.73	16.16		150.0	
		Z	3.93	67.43	16.34		150.0	
10450-AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.62	66.91	16.40	0.00	150.0	± 9.6 %
		Y	4.54	66.67	16.20		150.0	
		Z	4.17	67.22	16.45		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.58	67.70	15.64	0.00	150.0	± 9.6 %
		Y	3.37	67.06	14.97		150.0	
		Z	2.28	64.72	11.73		150.0	
10456-AAA	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	6.31	67.98	16.82	0.00	150.0	± 9.6 %
		Y	6.26	67.81	16.72		150.0	
		Z	6.11	68.22	17.21		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.85	65.33	16.11	0.00	150.0	± 9.6 %
		Y	3.82	65.15	15.90		150.0	
		Z	3.66	66.22	16.26		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	3.40	67.04	15.11	0.00	150.0	± 9.6 %
		Y	3.19	66.38	14.34		150.0	
		Z	1.76	61.63	8.89		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.56	65.45	16.02	0.00	150.0	± 9.6 %
		Y	4.24	64.65	15.32		150.0	
		Z	3.25	63.42	12.24		150.0	

10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.02	70.30	17.59	0.00	150.0	± 9.6 %
		Y	0.87	66.69	15.35		150.0	
		Z	1.14	73.24	18.45		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.58	77.69	18.16	3.29	80.0	± 9.6 %
		Y	2.50	74.76	17.54		80.0	
		Z	3.60	91.29	25.97		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.31	8.09	3.23	80.0	± 9.6 %
		Y	0.88	60.00	7.92		80.0	
		Z	0.44	60.00	7.80		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.47	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.40		80.0	
		Z	1.71	67.83	9.40		80.0	
10464-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.75	73.96	16.26	3.23	80.0	± 9.6 %
		Y	2.03	71.83	15.85		80.0	
		Z	3.60	90.77	25.01		80.0	
10465-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.97	60.00	7.86	3.23	80.0	± 9.6 %
		Y	0.88	60.00	7.85		80.0	
		Z	0.44	60.00	7.71		80.0	
10466-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.42	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.35		80.0	
		Z	0.39	59.25	6.35		80.0	
10467-AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.88	74.59	16.52	3.23	80.0	± 9.6 %
		Y	2.10	72.38	16.10		80.0	
		Z	3.92	92.32	25.58		80.0	
10468-AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.97	60.03	7.89	3.23	80.0	± 9.6 %
		Y	0.88	60.00	7.87		80.0	
		Z	0.44	60.00	7.77		80.0	
10469-AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.42	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.35		80.0	
		Z	0.45	60.00	6.64		80.0	
10470-AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.87	74.56	16.51	3.23	80.0	± 9.6 %
		Y	2.10	72.36	16.08		80.0	
		Z	3.96	92.56	25.67		80.0	
10471-AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.97	60.00	7.86	3.23	80.0	± 9.6 %
		Y	0.88	60.00	7.85		80.0	
		Z	0.44	60.00	7.75		80.0	
10472-AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.40	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.33		80.0	
		Z	0.27	56.71	5.19		80.0	
10473-AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.87	74.54	16.49	3.23	80.0	± 9.6 %
		Y	2.09	72.34	16.07		80.0	
		Z	3.94	92.46	25.63		80.0	
10474-AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.97	60.00	7.86	3.23	80.0	± 9.6 %
		Y	0.87	60.00	7.85		80.0	
		Z	0.43	60.00	7.75		80.0	
10475-AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.40	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.33		80.0	
		Z	0.24	55.72	4.20		80.0	

10477-AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.97	60.00	7.84	3.23	80.0	± 9.6 %
		Y	0.87	60.00	7.83		80.0	
		Z	0.44	60.00	7.71		80.0	
10478-AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.00	60.00	7.39	3.23	80.0	± 9.6 %
		Y	0.90	60.00	7.32		80.0	
		Z	0.70	62.65	7.59		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.47	73.41	18.12	3.23	80.0	± 9.6 %
		Y	3.21	73.18	17.98		80.0	
		Z	16.52	107.26	29.58		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.38	69.92	15.16	3.23	80.0	± 9.6 %
		Y	3.03	69.25	14.64		80.0	
		Z	4.04	78.80	17.14		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.01	68.05	14.05	3.23	80.0	± 9.6 %
		Y	2.63	67.15	13.39		80.0	
		Z	1.41	66.56	11.98		80.0	
10482-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.46	68.61	15.39	2.23	80.0	± 9.6 %
		Y	1.88	65.62	13.74		80.0	
		Z	0.90	60.00	8.17		80.0	
10483-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.96	67.65	14.40	2.23	80.0	± 9.6 %
		Y	2.48	65.87	13.25		80.0	
		Z	1.07	60.00	7.17		80.0	
10484-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.92	67.24	14.24	2.23	80.0	± 9.6 %
		Y	2.44	65.44	13.06		80.0	
		Z	1.10	60.00	7.13		80.0	
10485-AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.80	70.08	16.83	2.23	80.0	± 9.6 %
		Y	2.24	67.40	15.52		80.0	
		Z	1.77	66.90	13.65		80.0	
10486-AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.89	67.33	15.27	2.23	80.0	± 9.6 %
		Y	2.44	65.48	14.13		80.0	
		Z	1.32	60.61	9.25		80.0	
10487-AAA	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.92	67.10	15.16	2.23	80.0	± 9.6 %
		Y	2.48	65.30	14.03		80.0	
		Z	1.31	60.31	9.03		80.0	
10488-AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.24	70.22	17.48	2.23	80.0	± 9.6 %
		Y	2.72	68.01	16.53		80.0	
		Z	2.61	70.55	17.52		80.0	
10489-AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.28	67.53	16.45	2.23	80.0	± 9.6 %
		Y	2.93	66.18	15.74		80.0	
		Z	2.66	67.47	15.53		80.0	
10490-AAA	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.39	67.45	16.44	2.23	80.0	± 9.6 %
		Y	3.03	66.17	15.76		80.0	
		Z	2.69	67.15	15.34		80.0	
10491-AAA	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.56	69.35	17.25	2.23	80.0	± 9.6 %
		Y	3.11	67.62	16.53		80.0	
		Z	2.89	69.38	17.55		80.0	
10492-AAA	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.68	67.20	16.60	2.23	80.0	± 9.6 %
		Y	3.36	66.07	16.05		80.0	
		Z	3.08	67.28	16.33		80.0	

10493-AAA	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.76	67.13	16.59	2.23	80.0	± 9.6 %
		Y	3.44	66.04	16.05		80.0	
		Z	3.11	67.11	16.21		80.0	
10494-AAA	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.80	70.59	17.59	2.23	80.0	± 9.6 %
		Y	3.25	68.59	16.80		80.0	
		Z	3.06	70.37	18.06		80.0	
10495-AAA	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.71	67.57	16.77	2.23	80.0	± 9.6 %
		Y	3.37	66.34	16.20		80.0	
		Z	3.12	67.49	16.71		80.0	
10496-AAA	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.80	67.37	16.73	2.23	80.0	± 9.6 %
		Y	3.47	66.23	16.19		80.0	
		Z	3.20	67.34	16.65		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.86	65.28	13.05	2.23	80.0	± 9.6 %
		Y	1.41	62.47	11.20		80.0	
		Z	0.88	60.00	6.23		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.70	61.84	10.41	2.23	80.0	± 9.6 %
		Y	1.36	60.00	8.86		80.0	
		Z	1.24	60.00	4.71		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.68	61.48	10.09	2.23	80.0	± 9.6 %
		Y	1.38	60.00	8.72		80.0	
		Z	1.34	60.00	4.49		80.0	
10500-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.95	69.91	17.02	2.23	80.0	± 9.6 %
		Y	2.42	67.55	15.90		80.0	
		Z	2.16	68.91	15.39		80.0	
10501-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.07	67.46	15.75	2.23	80.0	± 9.6 %
		Y	2.66	65.88	14.81		80.0	
		Z	1.83	63.51	11.73		80.0	
10502-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.13	67.38	15.67	2.23	80.0	± 9.6 %
		Y	2.72	65.84	14.74		80.0	
		Z	1.81	63.13	11.44		80.0	
10503-AAA	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.21	70.07	17.40	2.23	80.0	± 9.6 %
		Y	2.69	67.87	16.45		80.0	
		Z	2.57	70.35	17.41		80.0	
10504-AAA	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.27	67.46	16.41	2.23	80.0	± 9.6 %
		Y	2.91	66.11	15.70		80.0	
		Z	2.64	67.35	15.45		80.0	
10505-AAA	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.37	67.38	16.40	2.23	80.0	± 9.6 %
		Y	3.02	66.10	15.71		80.0	
		Z	2.67	67.04	15.27		80.0	
10506-AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.77	70.47	17.53	2.23	80.0	± 9.6 %
		Y	3.23	68.48	16.74		80.0	
		Z	3.05	70.25	17.99		80.0	
10507-AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.69	67.51	16.73	2.23	80.0	± 9.6 %
		Y	3.36	66.29	16.17		80.0	
		Z	3.11	67.43	16.67		80.0	

10508-AAA	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	67.31	16.69	2.23	80.0	± 9.6 %
		Y	3.46	66.17	16.16		80.0	
		Z	3.19	67.27	16.60		80.0	
10509-AAA	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.17	69.67	17.23	2.23	80.0	± 9.6 %
		Y	3.70	68.12	16.63		80.0	
		Z	3.46	69.29	17.73		80.0	
10510-AAA	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.21	67.50	16.84	2.23	80.0	± 9.6 %
		Y	3.88	66.42	16.36		80.0	
		Z	3.56	67.01	16.88		80.0	
10511-AAA	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.27	67.29	16.80	2.23	80.0	± 9.6 %
		Y	3.95	66.28	16.34		80.0	
		Z	3.64	66.93	16.85		80.0	
10512-AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.28	70.91	17.58	2.23	80.0	± 9.6 %
		Y	3.71	69.02	16.86		80.0	
		Z	3.48	70.06	17.96		80.0	
10513-AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.08	67.73	16.91	2.23	80.0	± 9.6 %
		Y	3.74	66.53	16.39		80.0	
		Z	3.47	67.00	16.94		80.0	
10514-AAA	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.12	67.37	16.82	2.23	80.0	± 9.6 %
		Y	3.80	66.27	16.34		80.0	
		Z	3.53	66.77	16.86		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	1.00	63.66	15.30	0.00	150.0	± 9.6 %
		Y	0.99	62.70	14.40		150.0	
		Z	1.03	64.39	15.53		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.78	75.12	20.02	0.00	150.0	± 9.6 %
		Y	0.56	67.50	15.79		150.0	
		Z	0.93	77.72	21.40		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.88	66.17	16.29	0.00	150.0	± 9.6 %
		Y	0.82	64.21	14.80		150.0	
		Z	0.90	66.89	16.63		150.0	
10518-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.63	66.79	16.37	0.00	150.0	± 9.6 %
		Y	4.54	66.58	16.18		150.0	
		Z	4.17	67.34	16.48		150.0	
10519-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.83	67.04	16.50	0.00	150.0	± 9.6 %
		Y	4.72	66.81	16.30		150.0	
		Z	4.28	67.45	16.54		150.0	
10520-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.68	67.02	16.43	0.00	150.0	± 9.6 %
		Y	4.57	66.76	16.22		150.0	
		Z	4.14	67.36	16.46		150.0	
10521-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.61	67.02	16.42	0.00	150.0	± 9.6 %
		Y	4.51	66.75	16.20		150.0	
		Z	4.07	67.23	16.39		150.0	
10522-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.67	67.07	16.48	0.00	150.0	± 9.6 %
		Y	4.57	66.85	16.29		150.0	
		Z	4.08	67.22	16.40		150.0	

10523-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.54	66.95	16.33	0.00	150.0	± 9.6 %
		Y	4.45	66.72	16.14		150.0	
		Z	4.08	67.55	16.53		150.0	
10524-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.61	67.00	16.45	0.00	150.0	± 9.6 %
		Y	4.51	66.77	16.26		150.0	
		Z	4.06	67.36	16.51		150.0	
10525-AAA	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.59	66.04	16.04	0.00	150.0	± 9.6 %
		Y	4.50	65.82	15.85		150.0	
		Z	4.15	66.59	16.20		150.0	
10526-AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.77	66.43	16.19	0.00	150.0	± 9.6 %
		Y	4.66	66.17	15.99		150.0	
		Z	4.22	66.74	16.27		150.0	
10527-AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.69	66.40	16.14	0.00	150.0	± 9.6 %
		Y	4.58	66.13	15.93		150.0	
		Z	4.17	66.77	16.23		150.0	
10528-AAA	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.71	66.41	16.17	0.00	150.0	± 9.6 %
		Y	4.60	66.15	15.96		150.0	
		Z	4.17	66.73	16.23		150.0	
10529-AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.71	66.41	16.17	0.00	150.0	± 9.6 %
		Y	4.60	66.15	15.96		150.0	
		Z	4.17	66.73	16.23		150.0	
10531-AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.71	66.55	16.19	0.00	150.0	± 9.6 %
		Y	4.59	66.24	15.97		150.0	
		Z	4.13	66.70	16.19		150.0	
10532-AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.56	66.40	16.13	0.00	150.0	± 9.6 %
		Y	4.45	66.08	15.90		150.0	
		Z	4.04	66.60	16.14		150.0	
10533-AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.72	66.45	16.15	0.00	150.0	± 9.6 %
		Y	4.61	66.20	15.95		150.0	
		Z	4.18	66.89	16.27		150.0	
10534-AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	5.23	66.52	16.21	0.00	150.0	± 9.6 %
		Y	5.15	66.27	16.05		150.0	
		Z	4.79	66.53	16.36		150.0	
10535-AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.30	66.68	16.28	0.00	150.0	± 9.6 %
		Y	5.22	66.47	16.14		150.0	
		Z	4.81	66.63	16.42		150.0	
10536-AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	5.17	66.65	16.25	0.00	150.0	± 9.6 %
		Y	5.08	66.40	16.08		150.0	
		Z	4.70	66.59	16.37		150.0	
10537-AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	5.23	66.62	16.23	0.00	150.0	± 9.6 %
		Y	5.14	66.37	16.07		150.0	
		Z	4.81	66.77	16.47		150.0	
10538-AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.33	66.66	16.29	0.00	150.0	± 9.6 %
		Y	5.23	66.39	16.12		150.0	
		Z	4.83	66.57	16.39		150.0	
10540-AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.25	66.65	16.30	0.00	150.0	± 9.6 %
		Y	5.17	66.42	16.15		150.0	
		Z	4.75	66.47	16.37		150.0	

10541-AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	5.22	66.52	16.23	0.00	150.0	± 9.6 %
		Y	5.14	66.27	16.07		150.0	
		Z	4.77	66.50	16.35		150.0	
10542-AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.38	66.59	16.28	0.00	150.0	± 9.6 %
		Y	5.29	66.35	16.12		150.0	
		Z	4.90	66.56	16.40		150.0	
10543-AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.46	66.61	16.31	0.00	150.0	± 9.6 %
		Y	5.37	66.39	16.16		150.0	
		Z	4.96	66.66	16.49		150.0	
10544-AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.53	66.62	16.19	0.00	150.0	± 9.6 %
		Y	5.47	66.39	16.05		150.0	
		Z	5.19	66.47	16.33		150.0	
10545-AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.73	67.05	16.35	0.00	150.0	± 9.6 %
		Y	5.67	66.84	16.22		150.0	
		Z	5.35	66.97	16.55		150.0	
10546-AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.61	66.88	16.28	0.00	150.0	± 9.6 %
		Y	5.53	66.59	16.11		150.0	
		Z	5.21	66.56	16.35		150.0	
10547-AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.69	66.93	16.30	0.00	150.0	± 9.6 %
		Y	5.60	66.64	16.13		150.0	
		Z	5.39	67.09	16.62		150.0	
10548-AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.98	67.97	16.79	0.00	150.0	± 9.6 %
		Y	5.87	67.62	16.59		150.0	
		Z	5.29	66.94	16.53		150.0	
10550-AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.63	66.85	16.28	0.00	150.0	± 9.6 %
		Y	5.56	66.64	16.15		150.0	
		Z	5.42	67.36	16.77		150.0	
10551-AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.64	66.91	16.27	0.00	150.0	± 9.6 %
		Y	5.56	66.65	16.12		150.0	
		Z	5.18	66.51	16.31		150.0	
10552-AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.55	66.69	16.17	0.00	150.0	± 9.6 %
		Y	5.48	66.45	16.02		150.0	
		Z	5.20	66.69	16.39		150.0	
10553-AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.64	66.74	16.22	0.00	150.0	± 9.6 %
		Y	5.55	66.48	16.07		150.0	
		Z	5.21	66.51	16.32		150.0	
10554-AAA	IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.93	66.99	16.28	0.00	150.0	± 9.6 %
		Y	5.88	66.76	16.14		150.0	
		Z	5.66	66.77	16.40		150.0	
10555-AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	6.07	67.30	16.41	0.00	150.0	± 9.6 %
		Y	6.01	67.08	16.28		150.0	
		Z	5.75	67.03	16.53		150.0	
10556-AAA	IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	6.09	67.34	16.42	0.00	150.0	± 9.6 %
		Y	6.03	67.12	16.30		150.0	
		Z	5.80	67.20	16.61		150.0	
10557-AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	6.06	67.27	16.41	0.00	150.0	± 9.6 %
		Y	5.99	67.01	16.26		150.0	
		Z	5.71	66.93	16.48		150.0	

10558-AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	6.11	67.44	16.51	0.00	150.0	± 9.6 %
		Y	6.04	67.17	16.35		150.0	
		Z	5.66	66.81	16.44		150.0	
10560-AAA	IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	6.11	67.28	16.46	0.00	150.0	± 9.6 %
		Y	6.03	67.01	16.31		150.0	
		Z	5.71	66.82	16.48		150.0	
10561-AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	6.02	67.24	16.49	0.00	150.0	± 9.6 %
		Y	5.96	67.00	16.34		150.0	
		Z	5.64	66.79	16.49		150.0	
10562-AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	6.17	67.69	16.71	0.00	150.0	± 9.6 %
		Y	6.07	67.35	16.52		150.0	
		Z	5.70	66.99	16.59		150.0	
10563-AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.51	68.28	16.95	0.00	150.0	± 9.6 %
		Y	6.24	67.48	16.55		150.0	
		Z	6.02	67.71	16.93		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.95	66.84	16.50	0.46	150.0	± 9.6 %
		Y	4.86	66.64	16.33		150.0	
		Z	4.48	67.28	16.60		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	5.19	67.30	16.82	0.46	150.0	± 9.6 %
		Y	5.09	67.09	16.65		150.0	
		Z	4.63	67.65	16.90		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	5.02	67.16	16.65	0.46	150.0	± 9.6 %
		Y	4.92	66.92	16.46		150.0	
		Z	4.48	67.42	16.70		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	5.05	67.53	16.98	0.46	150.0	± 9.6 %
		Y	4.95	67.29	16.81		150.0	
		Z	4.52	67.79	17.06		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.93	66.90	16.40	0.46	150.0	± 9.6 %
		Y	4.83	66.68	16.22		150.0	
		Z	4.32	66.93	16.29		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.99	67.57	17.00	0.46	150.0	± 9.6 %
		Y	4.90	67.37	16.86		150.0	
		Z	4.52	68.14	17.28		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	5.04	67.45	16.97	0.46	150.0	± 9.6 %
		Y	4.94	67.26	16.82		150.0	
		Z	4.48	67.81	17.11		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.17	64.35	15.65	0.46	130.0	± 9.6 %
		Y	1.12	63.15	14.74		130.0	
		Z	1.16	64.64	15.77		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.18	64.91	16.00	0.46	130.0	± 9.6 %
		Y	1.12	63.58	15.03		130.0	
		Z	1.17	65.20	16.15		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	2.11	86.49	23.73	0.46	130.0	± 9.6 %
		Y	0.93	72.47	18.07		130.0	
		Z	1.80	85.73	24.45		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.29	70.65	18.93	0.46	130.0	± 9.6 %
		Y	1.12	67.52	17.14		130.0	
		Z	1.24	70.64	19.17		130.0	

10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.70	66.52	16.45	0.46	130.0	± 9.6 %
		Y	4.63	66.33	16.28		130.0	
		Z	4.24	66.97	16.51		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.73	66.68	16.51	0.46	130.0	± 9.6 %
		Y	4.65	66.49	16.35		130.0	
		Z	4.28	67.25	16.65		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.95	66.99	16.69	0.46	130.0	± 9.6 %
		Y	4.85	66.79	16.53		130.0	
		Z	4.40	67.42	16.76		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.84	67.15	16.79	0.46	130.0	± 9.6 %
		Y	4.74	66.92	16.62		130.0	
		Z	4.32	67.56	16.89		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.61	66.47	16.12	0.46	130.0	± 9.6 %
		Y	4.50	66.19	15.91		130.0	
		Z	4.06	66.57	16.03		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.66	66.48	16.14	0.46	130.0	± 9.6 %
		Y	4.55	66.25	15.94		130.0	
		Z	4.05	66.48	15.95		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.74	67.18	16.72	0.46	130.0	± 9.6 %
		Y	4.64	66.94	16.54		130.0	
		Z	4.26	67.74	16.93		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.56	66.24	15.93	0.46	130.0	± 9.6 %
		Y	4.45	65.97	15.71		130.0	
		Z	3.97	66.34	15.81		130.0	
10583-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.70	66.52	16.45	0.46	130.0	± 9.6 %
		Y	4.63	66.33	16.28		130.0	
		Z	4.24	66.97	16.51		130.0	
10584-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.73	66.68	16.51	0.46	130.0	± 9.6 %
		Y	4.65	66.49	16.35		130.0	
		Z	4.28	67.25	16.65		130.0	
10585-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.95	66.99	16.69	0.46	130.0	± 9.6 %
		Y	4.85	66.79	16.53		130.0	
		Z	4.40	67.42	16.76		130.0	
10586-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.84	67.15	16.79	0.46	130.0	± 9.6 %
		Y	4.74	66.92	16.62		130.0	
		Z	4.32	67.56	16.89		130.0	
10587-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.61	66.47	16.12	0.46	130.0	± 9.6 %
		Y	4.50	66.19	15.91		130.0	
		Z	4.06	66.57	16.03		130.0	
10588-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.66	66.48	16.14	0.46	130.0	± 9.6 %
		Y	4.55	66.25	15.94		130.0	
		Z	4.05	66.48	15.95		130.0	
10589-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.74	67.18	16.72	0.46	130.0	± 9.6 %
		Y	4.64	66.94	16.54		130.0	
		Z	4.26	67.74	16.93		130.0	
10590-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.56	66.24	15.93	0.46	130.0	± 9.6 %
		Y	4.45	65.97	15.71		130.0	
		Z	3.97	66.34	15.81		130.0	

10591-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.86	66.58	16.55	0.46	130.0	± 9.6 %
		Y	4.78	66.41	16.40		130.0	
		Z	4.41	67.10	16.68		130.0	
10592-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	5.02	66.92	16.68	0.46	130.0	± 9.6 %
		Y	4.93	66.74	16.53		130.0	
		Z	4.48	67.30	16.78		130.0	
10593-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.94	66.85	16.57	0.46	130.0	± 9.6 %
		Y	4.85	66.63	16.40		130.0	
		Z	4.41	67.21	16.65		130.0	
10594-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	5.00	67.00	16.72	0.46	130.0	± 9.6 %
		Y	4.90	66.80	16.56		130.0	
		Z	4.45	67.34	16.80		130.0	
10595-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.96	66.96	16.61	0.46	130.0	± 9.6 %
		Y	4.87	66.75	16.45		130.0	
		Z	4.41	67.34	16.72		130.0	
10596-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.90	66.96	16.62	0.46	130.0	± 9.6 %
		Y	4.80	66.74	16.45		130.0	
		Z	4.33	67.20	16.66		130.0	
10597-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.85	66.87	16.51	0.46	130.0	± 9.6 %
		Y	4.75	66.63	16.33		130.0	
		Z	4.30	67.10	16.51		130.0	
10598-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.83	67.10	16.77	0.46	130.0	± 9.6 %
		Y	4.73	66.85	16.58		130.0	
		Z	4.33	67.43	16.84		130.0	
10599-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.53	67.15	16.75	0.46	130.0	± 9.6 %
		Y	5.47	67.02	16.66		130.0	
		Z	5.40	68.39	17.55		130.0	
10600-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.70	67.67	16.99	0.46	130.0	± 9.6 %
		Y	5.62	67.49	16.87		130.0	
		Z	5.25	67.93	17.29		130.0	
10601-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.57	67.36	16.85	0.46	130.0	± 9.6 %
		Y	5.49	67.18	16.73		130.0	
		Z	5.17	67.70	17.19		130.0	
10602-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.65	67.36	16.76	0.46	130.0	± 9.6 %
		Y	5.60	67.26	16.69		130.0	
		Z	5.22	67.64	17.08		130.0	
10603-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.74	67.69	17.06	0.46	130.0	± 9.6 %
		Y	5.67	67.53	16.96		130.0	
		Z	5.20	67.63	17.22		130.0	
10604-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.53	67.12	16.76	0.46	130.0	± 9.6 %
		Y	5.49	67.04	16.70		130.0	
		Z	5.18	67.49	17.11		130.0	
10605-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.65	67.46	16.93	0.46	130.0	± 9.6 %
		Y	5.60	67.36	16.86		130.0	
		Z	5.17	67.50	17.13		130.0	
10606-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.41	66.90	16.52	0.46	130.0	± 9.6 %
		Y	5.32	66.61	16.34		130.0	
		Z	5.16	67.62	17.04		130.0	

10607-AAA	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.69	65.89	16.17	0.46	130.0	± 9.6 %
		Y	4.61	65.70	16.01		130.0	
		Z	4.26	66.48	16.35		130.0	
10608-AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.89	66.31	16.33	0.46	130.0	± 9.6 %
		Y	4.79	66.10	16.17		130.0	
		Z	4.35	66.68	16.46		130.0	
10609-AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.78	66.17	16.18	0.46	130.0	± 9.6 %
		Y	4.68	65.93	16.00		130.0	
		Z	4.26	66.55	16.29		130.0	
10610-AAA	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.83	66.32	16.34	0.46	130.0	± 9.6 %
		Y	4.73	66.09	16.16		130.0	
		Z	4.30	66.69	16.45		130.0	
10611-AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.75	66.13	16.19	0.46	130.0	± 9.6 %
		Y	4.65	65.89	16.01		130.0	
		Z	4.22	66.47	16.28		130.0	
10612-AAA	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.76	66.28	16.23	0.46	130.0	± 9.6 %
		Y	4.65	66.04	16.05		130.0	
		Z	4.16	66.45	16.25		130.0	
10613-AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.77	66.20	16.13	0.46	130.0	± 9.6 %
		Y	4.65	65.92	15.93		130.0	
		Z	4.18	66.33	16.11		130.0	
10614-AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.70	66.36	16.35	0.46	130.0	± 9.6 %
		Y	4.60	66.09	16.16		130.0	
		Z	4.18	66.62	16.41		130.0	
10615-AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.75	65.96	15.97	0.46	130.0	± 9.6 %
		Y	4.64	65.73	15.79		130.0	
		Z	4.20	66.34	16.05		130.0	
10616-AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.35	66.42	16.37	0.46	130.0	± 9.6 %
		Y	5.28	66.22	16.24		130.0	
		Z	4.92	66.50	16.57		130.0	
10617-AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.41	66.56	16.41	0.46	130.0	± 9.6 %
		Y	5.35	66.42	16.32		130.0	
		Z	4.94	66.59	16.60		130.0	
10618-AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.30	66.60	16.44	0.46	130.0	± 9.6 %
		Y	5.23	66.40	16.32		130.0	
		Z	4.85	66.60	16.62		130.0	
10619-AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.33	66.44	16.30	0.46	130.0	± 9.6 %
		Y	5.25	66.21	16.16		130.0	
		Z	4.93	66.68	16.60		130.0	
10620-AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.43	66.50	16.38	0.46	130.0	± 9.6 %
		Y	5.33	66.26	16.23		130.0	
		Z	4.92	66.41	16.49		130.0	
10621-AAA	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.41	66.57	16.53	0.46	130.0	± 9.6 %
		Y	5.34	66.39	16.42		130.0	
		Z	4.95	66.56	16.70		130.0	
10622-AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.42	66.73	16.60	0.46	130.0	± 9.6 %
		Y	5.35	66.56	16.50		130.0	
		Z	4.93	66.62	16.73		130.0	

10623-AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.30	66.27	16.26	0.46	130.0	± 9.6 %
		Y	5.23	66.08	16.13		130.0	
		Z	4.87	66.33	16.43		130.0	
10624-AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.49	66.48	16.42	0.46	130.0	± 9.6 %
		Y	5.42	66.29	16.30		130.0	
		Z	5.02	66.49	16.58		130.0	
10625-AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.90	67.57	17.02	0.46	130.0	± 9.6 %
		Y	5.77	67.23	16.82		130.0	
		Z	5.18	66.95	16.89		130.0	
10626-AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.63	66.48	16.32	0.46	130.0	± 9.6 %
		Y	5.58	66.30	16.21		130.0	
		Z	5.31	66.43	16.53		130.0	
10627-AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.88	67.05	16.56	0.46	130.0	± 9.6 %
		Y	5.83	66.91	16.49		130.0	
		Z	5.53	67.10	16.86		130.0	
10628-AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.68	66.62	16.29	0.46	130.0	± 9.6 %
		Y	5.61	66.38	16.15		130.0	
		Z	5.29	66.37	16.41		130.0	
10629-AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.77	66.71	16.32	0.46	130.0	± 9.6 %
		Y	5.68	66.43	16.17		130.0	
		Z	5.55	67.15	16.81		130.0	
10630-AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	6.28	68.40	17.17	0.46	130.0	± 9.6 %
		Y	6.15	68.02	16.97		130.0	
		Z	5.44	66.97	16.72		130.0	
10631-AAA	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	6.14	68.08	17.20	0.46	130.0	± 9.6 %
		Y	6.01	67.70	17.00		130.0	
		Z	5.52	67.35	17.10		130.0	
10632-AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.84	67.09	16.72	0.46	130.0	± 9.6 %
		Y	5.80	66.96	16.65		130.0	
		Z	5.74	68.01	17.44		130.0	
10633-AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.75	66.78	16.39	0.46	130.0	± 9.6 %
		Y	5.66	66.52	16.25		130.0	
		Z	5.32	66.53	16.53		130.0	
10634-AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.73	66.80	16.46	0.46	130.0	± 9.6 %
		Y	5.65	66.55	16.33		130.0	
		Z	5.38	66.83	16.73		130.0	
10635-AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.62	66.17	15.89	0.46	130.0	± 9.6 %
		Y	5.53	65.89	15.73		130.0	
		Z	5.18	65.89	15.97		130.0	
10636-AAA	IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	6.04	66.87	16.42	0.46	130.0	± 9.6 %
		Y	6.00	66.68	16.31		130.0	
		Z	5.80	66.76	16.62		130.0	
10637-AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.21	67.25	16.59	0.46	130.0	± 9.6 %
		Y	6.17	67.09	16.50		130.0	
		Z	5.94	67.18	16.84		130.0	
10638-AAA	IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.20	67.23	16.55	0.46	130.0	± 9.6 %
		Y	6.16	67.05	16.46		130.0	
		Z	5.98	67.31	16.88		130.0	

10639-AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	6.19	67.20	16.59	0.46	130.0	± 9.6 %
		Y	6.13	66.98	16.47		130.0	
		Z	5.86	66.94	16.73		130.0	
10640-AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.21	67.25	16.56	0.46	130.0	± 9.6 %
		Y	6.13	66.99	16.41		130.0	
		Z	5.76	66.65	16.52		130.0	
10641-AAA	IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.23	67.07	16.48	0.46	130.0	± 9.6 %
		Y	6.19	66.93	16.41		130.0	
		Z	5.92	66.95	16.70		130.0	
10642-AAA	IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.28	67.36	16.79	0.46	130.0	± 9.6 %
		Y	6.22	67.14	16.68		130.0	
		Z	5.90	66.99	16.88		130.0	
10643-AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	6.11	67.04	16.54	0.46	130.0	± 9.6 %
		Y	6.06	66.85	16.43		130.0	
		Z	5.74	66.66	16.60		130.0	
10644-AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.31	67.65	16.87	0.46	130.0	± 9.6 %
		Y	6.21	67.29	16.67		130.0	
		Z	5.83	66.94	16.76		130.0	
10645-AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.78	68.59	17.28	0.46	130.0	± 9.6 %
		Y	6.47	67.69	16.83		130.0	
		Z	6.16	67.68	17.11		130.0	
10646-AAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	15.43	101.95	33.58	9.30	60.0	± 9.6 %
		Y	10.29	95.44	32.08		60.0	
		Z	4.66	83.40	29.88		60.0	
10647-AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	13.96	100.46	33.24	9.30	60.0	± 9.6 %
		Y	9.15	93.43	31.51		60.0	
		Z	4.18	81.18	29.09		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.81	65.18	12.30	0.00	150.0	± 9.6 %
		Y	0.69	63.02	10.51		150.0	
		Z	0.33	60.00	5.45		150.0	

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

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
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The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **PC Test**

Certificate No: CLA6-1002_Oct16

CALIBRATION CERTIFICATE

Object CLA6 - SN: 1002

Calibration procedure(s) QA CAL-15.v8
Calibration procedure for system validation sources below 700 MHz

BN ✓
11/03/2016

Calibration date: October 03, 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: 5277 (20x)	05-Apr-16 (No. 217-02293)	Apr-17
Type-N mismatch combination	SN: 5047.2 / 06327	05-Apr-16 (No. 217-02295)	Apr-17
Reference Probe EX3DV4	SN: 3877	31-Dec-15 (No. EX3-3877_Dec15)	Dec-16
DAE4	SN: 654	04-Jul-16 (No. DAE4-654_Jul16)	Jul-17

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (No. 217-02285/02284)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr-16 (No. 217-02285)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (No. 217-02284	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:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: October 4, 2016

Glossary:

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

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "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 source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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

Measurement Conditions

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

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	ELI4 Flat Phantom	Shell thickness: 2 ± 0.2 mm
EUT Positioning	Touch Position	
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	6 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	55.5	0.75 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	53.2 ± 6 %	0.72 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	1 W input power	0.176 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**0.180 W/kg ± 18.4 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	1 W input power	0.110 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**0.113 W/kg ± 18.0 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	46.1 Ω + 1.8 jΩ
Return Loss	- 26.9 dB

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 02, 2015

DASY5 Validation Report for Head TSL

Date: 03.10.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: CLA6; Type: CLA6; Serial: CLA6 - SN: 1002

Communication System: UID 0 - CW; Frequency: 6 MHz
Medium parameters used: f = 6 MHz; σ = 0.72 S/m; ε_r = 53.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

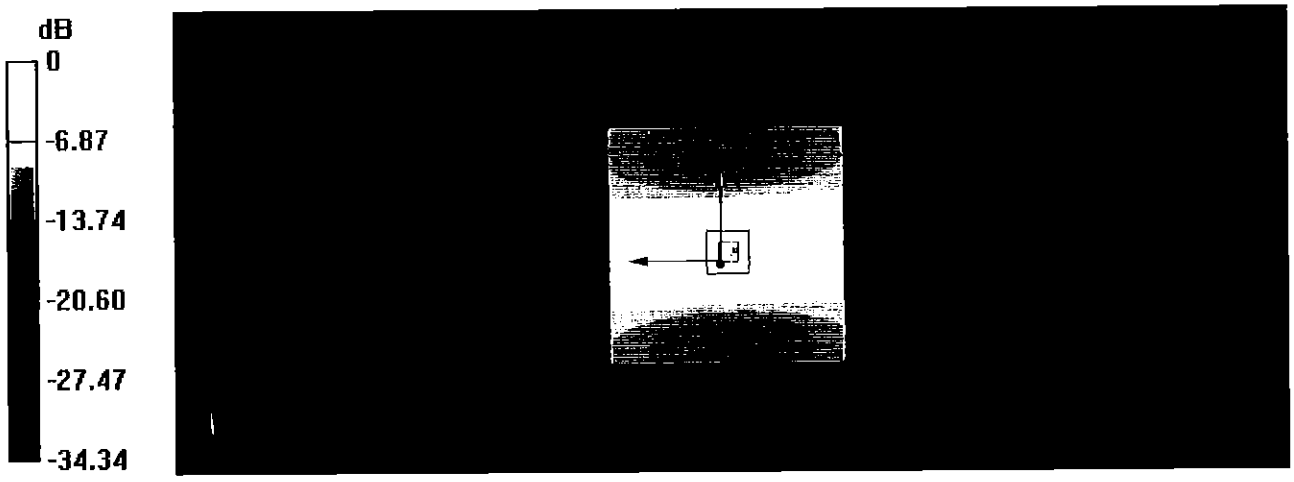
- Probe: EX3DV4 - SN3877; ConvF(17.79, 17.79, 17.79); Calibrated: 31.12.2015;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 12.08.2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1003
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Configuration/CLA-6, touch cnfiguration, Pin=1W/Area Scan (81x81x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.260 W/kg

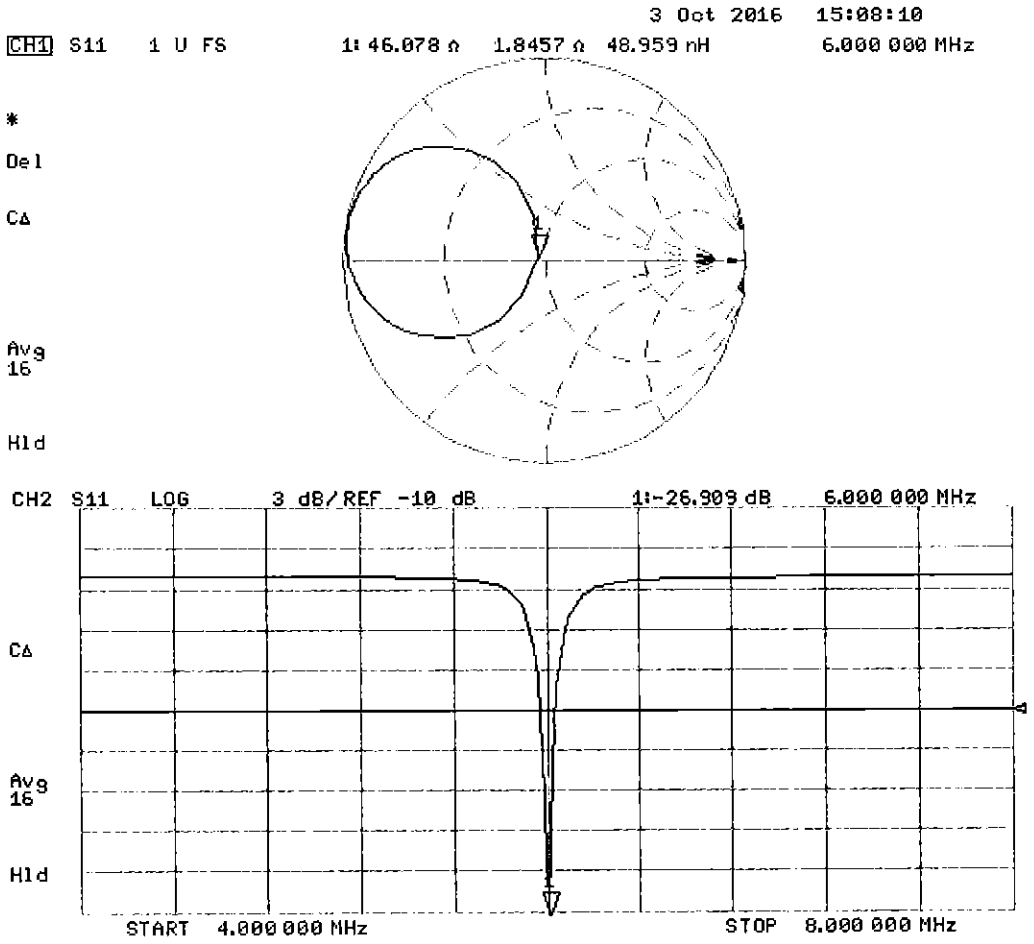
Configuration/CLA-6, touch cnfiguration, Pin=1W/Zoom Scan, dist=1.4mm (8x9x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 19.01 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.347 W/kg
SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.110 W/kg
Maximum value of SAR (measured) = 0.256 W/kg



0 dB = 0.260 W/kg = -5.85 dBW/kg

Impedance Measurement Plot for Head TSL



APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

1) The network analyzer and probe system was configured and calibrated.
2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
3) The complex admittance with respect to the probe aperture was measured
4) The complex relative permittivity ε can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{\left[\ln(b/a)\right]^2}\int_a^b\int_a^b\int_0^\pi \cos\phi' \frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r} d\phi' d\rho' d\rho$$

where Y is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

Table D-I
Composition of the Tissue Equivalent Matter

Frequency (MHz)	6 MHz
Tissue	
Ingredients (% by weight)	
Bactericide	See Page 2
DGBE	
HEC	
NaCl	
Sucrose	
Polysorbate (Tween) 80	
Water	

Measurement Certificate / Material Test

Item Name	**Head Tissue Simulating Liquid (HBBL30-250V3)**
Product No.	SL AAH 005 AD (Batch: 141125-1)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Setup Validation

Validation results were within ± 2.5% towards the target values of Methanol.

Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

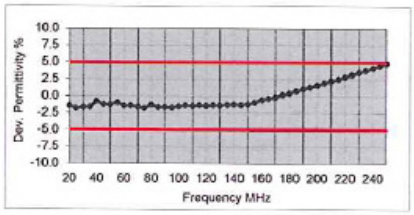
Test Condition

Ambient	Environment temperatur (22 ± 3)°C and humidity < 70%.
TSL Temperature	22°C
Test Date	14-Apr-16
Operator	WM

Additional Information

TSL Density	1.042 g/cm3
TSL Heat-capacity	3.574 kJ/(kg*K)

	Measured			Target		Diff.to Target [%]	
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
20	54.4	663.46	0.74	55.2	0.75	-1.5	-1.1
25	54.1	530.83	0.74	55.1	0.75	-1.8	-1.1
30	54.1	442.69	0.74	55.0	0.75	-1.6	-1.2
35	54.0	380.50	0.74	54.9	0.75	-1.6	-1.3
40	54.3	333.21	0.74	54.8	0.75	-0.9	-1.3
45	54.0	296.76	0.74	54.7	0.75	-1.2	-1.4
50	53.9	267.29	0.74	54.6	0.75	-1.2	-1.4
55	53.9	243.63	0.75	54.4	0.75	-1.0	-0.1
60	53.5	223.41	0.75	54.3	0.75	-1.5	-0.2
65	53.4	208.42	0.75	54.2	0.75	-1.5	-0.3
70	53.2	191.91	0.75	54.1	0.75	-1.7	-0.3
75	53.0	179.54	0.75	54.0	0.75	-1.8	-0.4
80	53.1	168.58	0.75	53.9	0.75	-1.4	-0.4
85	52.9	159.16	0.75	53.8	0.75	-1.6	-0.5
90	52.8	150.53	0.75	53.7	0.75	-1.6	-0.5
95	52.6	142.85	0.75	53.5	0.75	-1.8	-0.6
100	52.6	136.08	0.76	53.4	0.75	-1.6	0.7
105	52.6	129.84	0.76	53.3	0.76	-1.3	0.6
110	52.4	124.22	0.76	53.2	0.76	-1.5	0.6
115	52.4	119.11	0.76	53.1	0.76	-1.3	0.5
120	52.2	114.42	0.76	53.0	0.76	-1.5	0.5
125	52.1	110.08	0.77	52.9	0.76	-1.4	1.7
130	52.0	106.10	0.77	52.8	0.76	-1.4	1.7
135	51.9	102.44	0.77	52.6	0.76	-1.4	1.6
140	51.9	99.02	0.77	52.5	0.76	-1.2	1.6
145	51.7	95.89	0.77	52.4	0.76	-1.4	1.5
150	51.7	92.91	0.78	52.3	0.76	-1.1	2.8
155	51.6	90.14	0.78	52.1	0.76	-0.9	2.3
160	51.5	87.54	0.78	51.8	0.77	-0.6	1.8
165	51.4	85.10	0.78	51.6	0.77	-0.4	1.3
170	51.3	82.78	0.78	51.4	0.77	-0.1	0.8
175	51.2	80.67	0.79	51.1	0.78	0.1	1.6
180	51.1	78.63	0.79	50.9	0.78	0.4	1.2
185	51.0	76.69	0.79	50.7	0.78	0.7	0.7
190	51.0	74.91	0.79	50.4	0.79	1.1	0.2
195	50.9	73.18	0.79	50.2	0.79	1.4	-0.2
200	50.8	71.54	0.80	50.0	0.80	1.7	0.6
205	50.7	69.96	0.80	49.7	0.80	2.0	0.1
210	50.6	68.49	0.80	49.5	0.80	2.2	-0.4
215	50.5	67.08	0.80	49.3	0.81	2.5	-0.8
220	50.4	65.74	0.80	49.0	0.81	2.8	-1.3
225	50.3	64.45	0.81	48.8	0.81	3.1	-0.5
230	50.3	63.25	0.81	48.6	0.82	3.6	-0.9
235	50.2	62.07	0.81	48.3	0.82	3.9	-1.4
240	50.1	60.96	0.81	48.1	0.82	4.2	-1.8
245	50.0	59.88	0.82	47.9	0.83	4.4	-1.0
250	49.9	58.87	0.82	47.6	0.83	4.8	-1.5



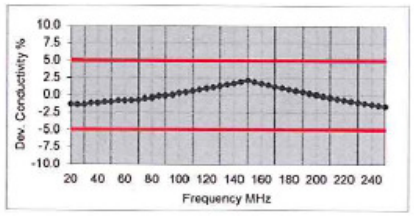


Figure D-1
6 MHz Tissue Equivalent Matter