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SAR EVALUATION REPORT

Applicant Name:
Diversey, Inc.
2415 Cascade Pointe Blvd
Charlotte, NC 28208
United States

Date of Testing:
07/06/17
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1706070189-05.2ANCJ

FCC ID:	**2ANCJ-R37615-00**
APPLICANT:	**DIVERSEY, INC.**

DUT Type:	Soap Dispenser
Application Type:	Certification
FCC Rule Part(s):	CFR §2.1093
Model:	R37615-00-B
Serial Number:	Pre-Production [S/N: 030]

Equipment Class	Band & Mode	Tx Frequency	SAR
			10 gm Extremity (W/kg)
DTS	900 MHz ISM (500 kHz)	903 - 914.2 MHz	< 0.1
DSS	900 MHz ISM (125 kHz)	902.3 - 914.9 MHz	< 0.1

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.7 of this report; for North American frequency bands only.

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

Band & Mode	Operating Modes	Tx Frequency
900 MHz ISM (500 kHz)	Data	903 - 914.2 MHz
900 MHz ISM (125 kHz)	Data	902.3 - 914.9 MHz

1.2 Power Reduction for SAR

There is no power reduction used for any band/mode implemented in this device for SAR purposes.

1.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06.

Mode / Band		Modulated Average (dBm)
900 MHz ISM (500 kHz)	Maximum	**14.0**
	Nominal	**13.0**
900 MHz ISM (125 kHz)	Maximum	**14.0**
	Nominal	**13.0**

1.4 Simultaneous Transmission Capabilities

900 MHz ISM (500 kHz) and 900 MHz ISM (125 kHz) cannot transmit simultaneously since they share the same antenna path. This device does not contain multiple transmitters that may operate simultaneously, and therefore does not require a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

1.5 Miscellaneous SAR Testing Considerations

The soap dispenser has enclosed the transmitter that can transmit the ISM signal.

The front surface and bottom edge of the device should be tested for SAR compliance with the device touching the phantom based on user scenarios and per FCC KDB 447498 D01v06.

1.6 Guidance Applied

- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)

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 DOSIMETRIC ASSESSMENT

3.1 Measurement Procedure

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

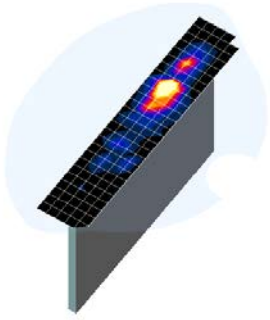

Figure 3-1
Sample SAR Area Scan

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 3-1) 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 3-1) 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 3-1. 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 3-1
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

4 TEST CONFIGURATION POSITIONS

4.1 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.

4.2 SAR Testing Configurations

The front surface and bottom edge of the device should be tested for SAR compliance with the device touching the phantom based on user scenarios. The device was evaluated for Extremity 10g SAR since it is intended to be operated only by an extremity (hand).

5 RF EXPOSURE LIMITS

5.1 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.

5.2 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 5-1
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.

6 FCC MEASUREMENT PROCEDURES

6.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

7 RF CONDUCTED POWERS

7.1 Conducted Powers

Table 7-1
Average RF Power

Frequency [MHz]	Channel BW [kHz]	Measured Conducted Power [dBm]
903	500	**13.31**
909.4	500	13.27
914.2	500	13.24
902.3	125	13.26
908.7	125	13.28
914.9	125	**13.30**

Note: The bolded data rate and channel above were tested for SAR.

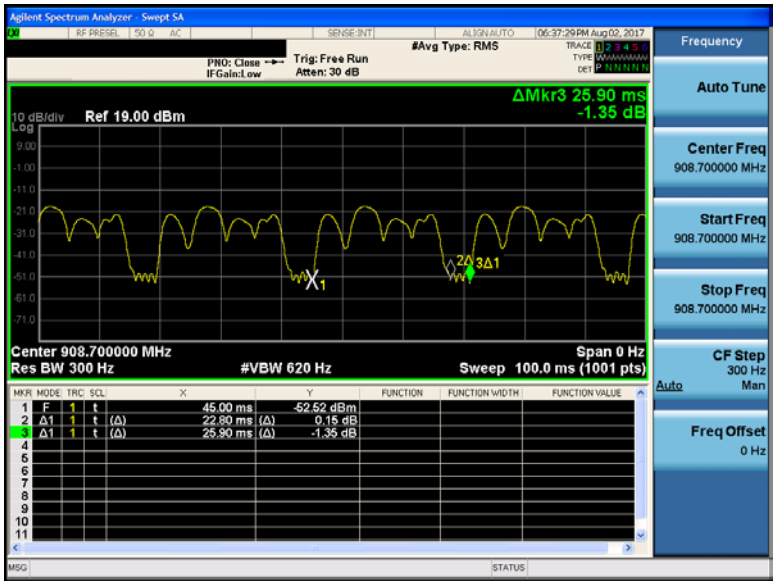

Figure 7-1
Bluetooth Transmission Plot

Equation 2
Bluetooth Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{22.80ms}{25.90ms} * 100\% = 88.0\%$$

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
7/6/2017	835B	20.4	835	0.988	53.181	0.970	55.200	*1.86%*	*-3.66%*
			875	1.029	52.720	1.019	55.077	*0.98%*	*-4.28%*
			895	1.051	52.490	1.044	55.015	*0.67%*	*-4.59%*
			915	1.074	52.286	1.060	55.000	*1.32%*	*-4.93%*

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.

8.2 Test System Verification

Prior to SAR assessment, the system is verified to ±10% of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in Appendix E.

Table 8-2
System Verification Results

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date:	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{10g} (W/kg)	1 W Target SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	$Deviation_{10g}$ (%)
K	835	BODY	07/06/2017	21.1	20.4	0.200	4d180	7406	1.370	6.320	6.850	8.39%

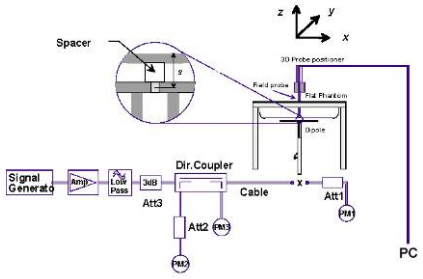

Figure 8-1
System Verification Setup Diagram

Figure 8-2
System Verification Setup Photo

9 SAR DATA SUMMARY

9.1 Standalone Extremity SAR Data

Table 9-1
Extremity SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (bps)	Duty Cycle (%)	Side	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz											(W/kg)			(W/kg)	
903.00	Low	900 MHz ISM (500 kHz)	14.0	13.31	0.18	0 mm	030	980	88.0	front	0.000005	1.172	1.136	0.000006	
903.00	Low	900 MHz ISM (500 kHz)	14.0	13.31	0.20	0 mm	030	980	88.0	bottom	0.000013	1.172	1.136	**0.000017**	A1
909.40	Mid	900 MHz ISM (500 kHz)	14.0	13.27	0.20	0 mm	030	980	88.0	bottom	0.000004	1.183	1.136	0.000005	
914.20	High	900 MHz ISM (500 kHz)	14.0	13.24	0.21	0 mm	030	980	88.0	bottom	0.000005	1.191	1.136	0.000007	
914.90	High	900 MHz ISM (125 kHz)	14.0	13.30	0.12	0 mm	030	980	88.0	front	0.000004	1.175	1.136	0.000005	A2
914.90	High	900 MHz ISM (125 kHz)	14.0	13.30	0.21	0 mm	030	980	88.0	bottom	0.000004	1.175	1.136	0.000005	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**							**Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams								

9.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. 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.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Per FCC KDB Publication 865664 D01v01r04, variability SAR tests were not required since measured SAR results for all frequency bands were less than 2.0 W/kg. Please see Section 10 for variability analysis.
7. SAR tests are required for the front surface and bottom edges of the device with the device touching the phantom based on user scenarios.
8. It was confirmed the device was operating at the maximum output power level for the duration of the SAR tests.
9. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 7.1 for the time-domain plot and calculation for the duty factor of the device.

10 SAR MEASUREMENT VARIABILITY

10.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01, SAR measurement variability was not assessed for each frequency band since all measured SAR values are < 2.0 W/kg for 10g SAR, respectively

10.2 Measurement Uncertainty

The measured 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
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/19/2016	Annual	8/19/2017	MY40003841
Agilent	E8257D	(250kHz-20GHz) Signal Generator	3/22/2017	Annual	3/22/2018	MY45470194
Agilent	N5182A	MXG Vector Signal Generator	10/27/2016	Annual	10/27/2017	MY47420603
Agilent	N9020A	MXA Signal Analyzer	10/28/2016	Annual	10/28/2017	US46470561
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA24106A	USB Power Sensor	6/7/2017	Annual	6/7/2018	1231535
Anritsu	MA24106A	USB Power Sensor	6/7/2017	Annual	6/7/2018	1231538
Anritsu	ML2495A	Power Meter	10/16/2015	Biennial	10/16/2017	941001
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
Control Company	4352	Ultra Long Stem Thermometer	3/8/2016	Biennial	3/8/2018	160261694
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mitutoyo	CD-6"CSX	Digital Caliper	3/2/2016	Biennial	3/2/2018	13264162
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	NC-100	Torque Wrench	3/8/2017	Annual	3/8/2018	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
SPEAG	D835V2	850 MHz SAR Dipole	5/11/2017	Annual	5/11/2018	4d180
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/11/2017	Annual	4/11/2018	1407
SPEAG	DAK-12	Dielectric Assessment Kit (10MHz - 3GHz)	3/16/2017	Annual	3/16/2018	1102
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/10/2017	Annual	5/10/2018	1070
SPEAG	EX3DV4	SAR Probe	4/18/2017	Annual	4/18/2018	7406

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	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i 1gm**	**c_i 10 gms**	**1gm u_i (± %)**	**10gms u_i (± %)**	**v_i**
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)		RSS				11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2				23.0	22.6	

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]

14 REFERENCES

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.

[2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.

[3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.

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APPENDIX A: SAR TEST DATA

PCTEST ENGINEERING LABORATORY, INC.

DUT: 2ANCJ-R37615-00; Type: Soap Dispenser; Serial: 030

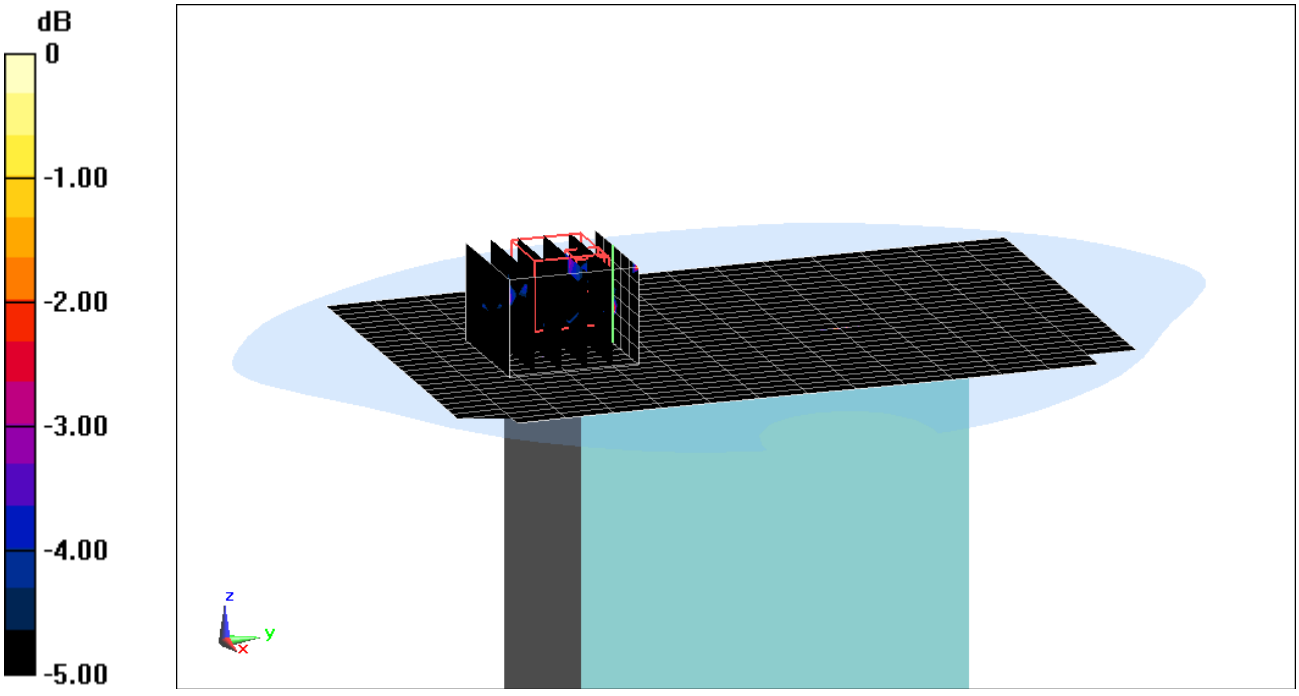
Communication System: UID 0, ISM; Frequency: 903 MHz; Duty Cycle: 1:1.136
Medium: 835 Body Medium parameters used (interpolated):
f = 903 MHz; σ = 1.06 S/m; ε_r = 52.408; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-06-2017; Ambient Temp: 21.1°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7406; ConvF(9.77, 9.77, 9.77); Calibrated: 4/18/2017;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2017
Phantom: SAM Right; Type: QD000P40CD; Serial: TP:7535
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: 900 MHz ISM, 500 kHz Bandwidth, 980 bps, Extremity SAR, Bottom Edge, Low.ch

Area Scan (27x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.4480 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.00124 W/kg
SAR(10 g) = 1.26e-005 W/kg



0 dB = 0.00124 W/kg = -29.07 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: 2ANCJ-R37615-00; Type: Soap Dispenser; Serial: 030

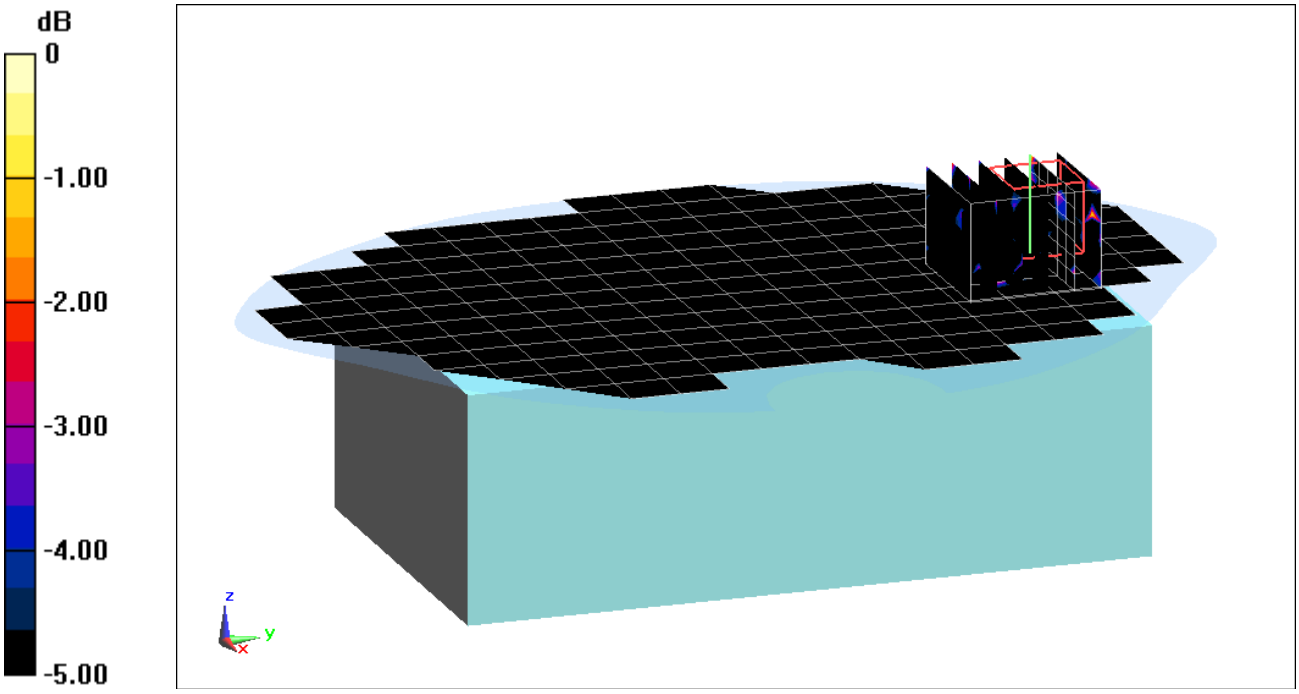
Communication System: UID 0, ISM; Frequency: 914.9 MHz; Duty Cycle: 1:1.136
Medium: 835 Body Medium parameters used:
f = 915 MHz; σ = 1.074 S/m; ε_r = 52.286; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-06-2017; Ambient Temp: 21.1°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7406; ConvF(9.77, 9.77, 9.77); Calibrated: 4/18/2017;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2017
Phantom: SAM Right; Type: QD000P40CD; Serial: TP:7535
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: 900 MHz ISM, 125 kHz Bandwidth, 980 bps, Extremity SAR, Front Side, High.ch

Area Scan (15x19x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2800 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.000768 W/kg
SAR(10 g) = 3.99e-006 W/kg



0 dB = 0.000936 W/kg = -30.29 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d180

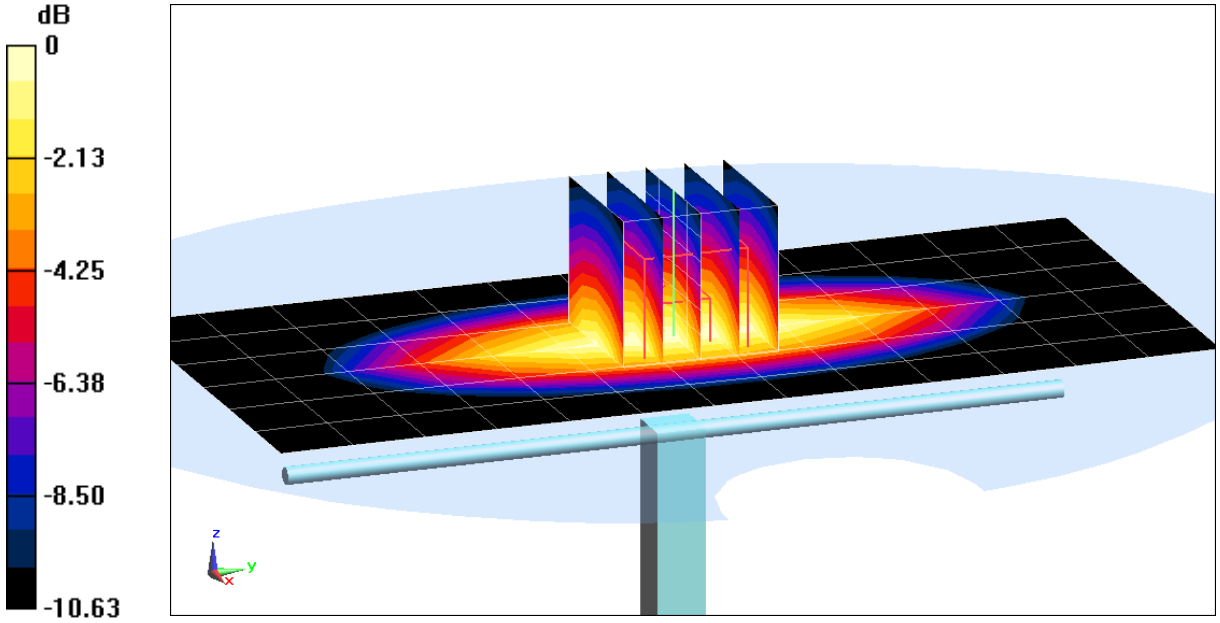
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.988 S/m; ε_r = 53.181; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-06-2017; Ambient Temp: 21.1°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7406; ConvF(9.77, 9.77, 9.77); Calibrated: 4/18/2017;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2017
Phantom: SAM Right; Type: QD000P40CD; Serial: TP:7535
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.19 W/kg
SAR(10 g) = 1.37 W/kg
Deviation(10 g) = 8.39%



0 dB = 2.80 W/kg = 4.47 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
S 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: D835V2-4d180_May17

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d180
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	May 11, 2017

BN ✓
05-23-2017

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	31-Dec-16 (No. EX3-7349_Dec16)	Dec-17
DAE4	SN: 601	28-Mar-17 (No. DAE4-601_Mar17)	Mar-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17

	Name	Function	Signature
Calibrated by:	Johannes Kurikka	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: May 11, 2017

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

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

Measurement Conditions

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

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.8 ± 6 %	0.94 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.26 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.56 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.07 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.2 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.44 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**9.61 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.60 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.32 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.9 Ω - 5.0 jΩ
Return Loss	- 25.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.7 Ω - 8.6 jΩ
Return Loss	- 20.5 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.393 ns

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

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	September 24, 2014

DASY5 Validation Report for Head TSL

Date: 11.05.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d180

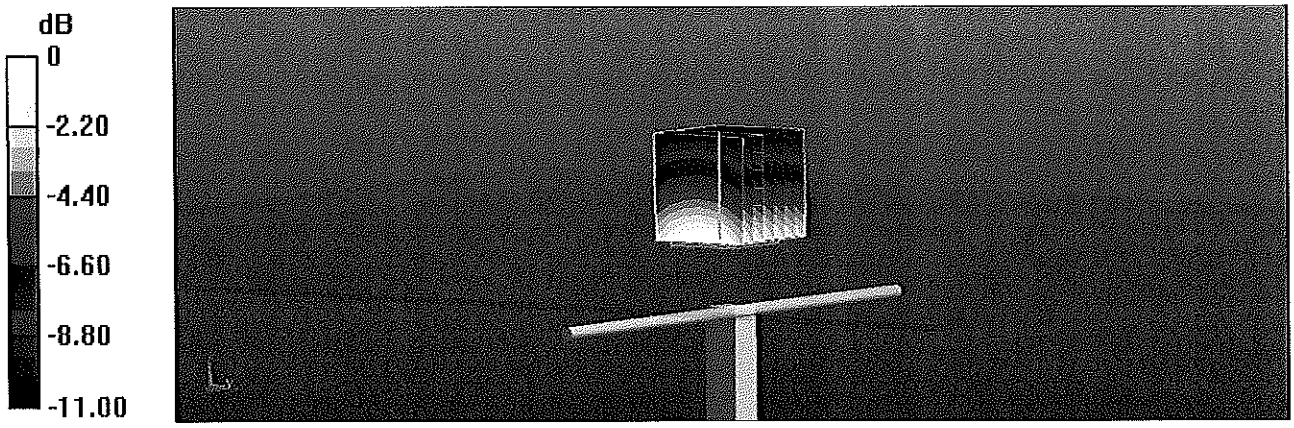
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma = 0.94$ S/m; $\varepsilon_r = 40.8$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(9.72, 9.72, 9.72); Calibrated: 31.12.2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

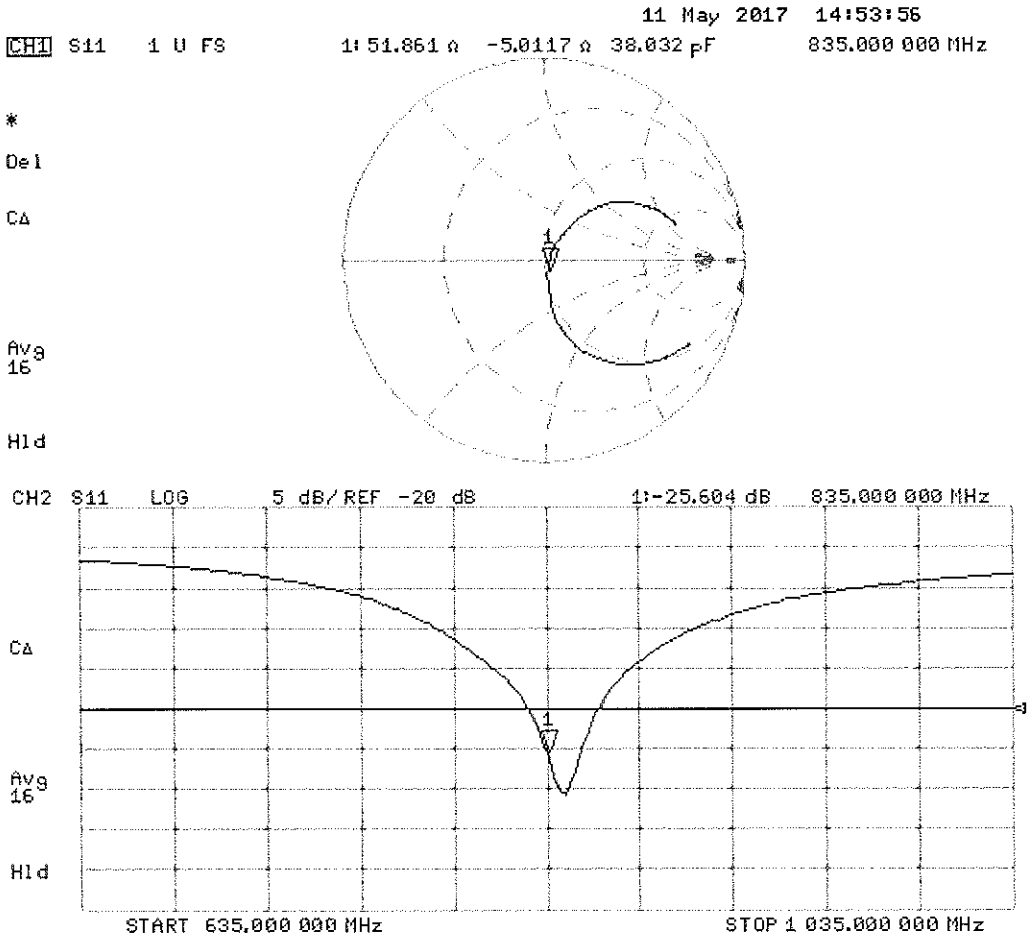
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.02 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.58 W/kg
SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 3.21 W/kg



0 dB = 3.21 W/kg = 5.07 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 11.05.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d180

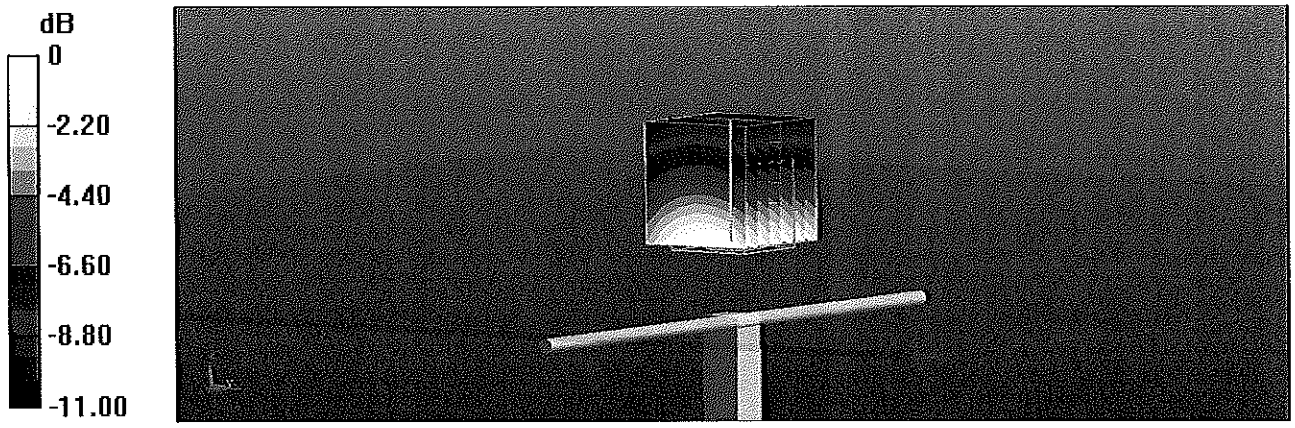
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.99 S/m; ε_r = 55.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(9.73, 9.73, 9.73); Calibrated: 31.12.2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

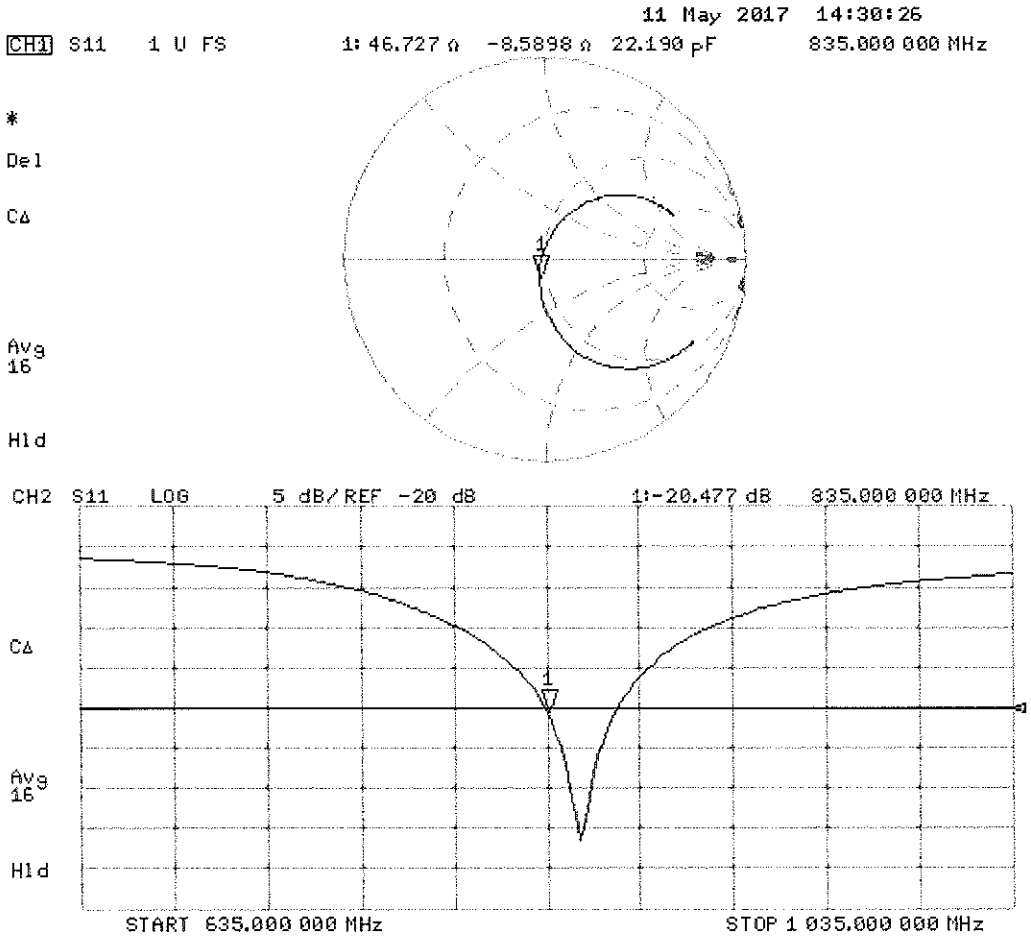
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.10 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.58 W/kg
SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.6 W/kg
Maximum value of SAR (measured) = 3.19 W/kg



0 dB = 3.19 W/kg = 5.04 dBW/kg

Impedance Measurement Plot for Body TSL



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

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Swiss Calibration Service

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Accreditation No.: SCS 0108

Client **PC Test** **Certificate No: EX3-7406_Apr17**

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7406
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
Calibration date:	April 18, 2017

BNV 5-3-2017

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02525)	Apr-18
Reference 20 dB Attenuator	SN: S5277 (20x)	07-Apr-17 (No. 217-02528)	Apr-18
Reference Probe ES3DV2	SN: 3013	31-Dec-16 (No. ES3-3013_Dec16)	Dec-17
DAE4	SN: 660	7-Dec-16 (No. DAE4-660_Dec16)	Dec-17
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:	**Michael Weber**	**Laboratory Technician**	
Approved by:	**Katja Pokovic**	**Technical Manager**	

Issued: April 18, 2017

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) **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:7406

Manufactured: November 24, 2015
Calibrated: April 18, 2017

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7406

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.47	0.42	0.45	± 10.1 %
DCP (mV)[B]	99.5	98.3	95.1	

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	138.9	±2.5 %
		Y	0.0	0.0	1.0		129.6	
		Z	0.0	0.0	1.0		128.2	

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	48.83	366.9	36.13	15.06	1.101	4.968	0.251	0.437	1.003
Y	19.57	145.7	35.6	3.888	0.704	4.934	0	0.021	1.004
Z	45.42	343.9	36.58	10.69	0.846	4.98	0	0.36	1.004

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:7406

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)
600	42.7	0.88	10.42	10.42	10.42	0.10	1.20	± 13.3 %
750	41.9	0.89	10.26	10.26	10.26	0.52	0.80	± 12.0 %
835	41.5	0.90	9.97	9.97	9.97	0.53	0.81	± 12.0 %
1750	40.1	1.37	8.88	8.88	8.88	0.42	0.80	± 12.0 %
1900	40.0	1.40	8.40	8.40	8.40	0.26	0.87	± 12.0 %
2300	39.5	1.67	8.04	8.04	8.04	0.25	0.80	± 12.0 %
2450	39.2	1.80	7.68	7.68	7.68	0.38	0.80	± 12.0 %
2600	39.0	1.96	7.44	7.44	7.44	0.40	0.83	± 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.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7406

Calibration Parameter Determined in Body Tissue Simulating Media

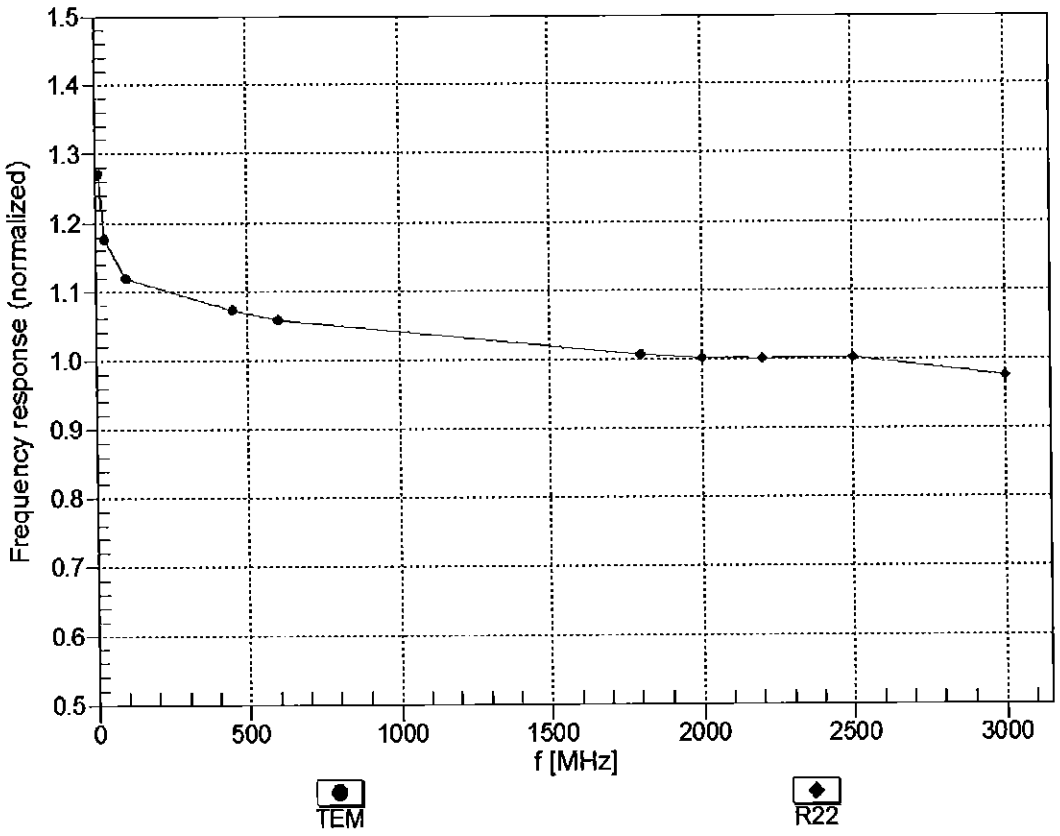
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
600	56.1	0.95	10.82	10.82	10.82	0.10	1.20	± 13.3 %
750	55.5	0.96	9.90	9.90	9.90	0.51	0.83	± 12.0 %
835	55.2	0.97	9.77	9.77	9.77	0.46	0.80	± 12.0 %
1750	53.4	1.49	8.08	8.08	8.08	0.41	0.85	± 12.0 %
1900	53.3	1.52	7.81	7.81	7.81	0.44	0.80	± 12.0 %
2300	52.9	1.81	7.65	7.65	7.65	0.38	0.84	± 12.0 %
2450	52.7	1.95	7.60	7.60	7.60	0.33	0.89	± 12.0 %
2600	52.5	2.16	7.31	7.31	7.31	0.31	0.94	± 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.

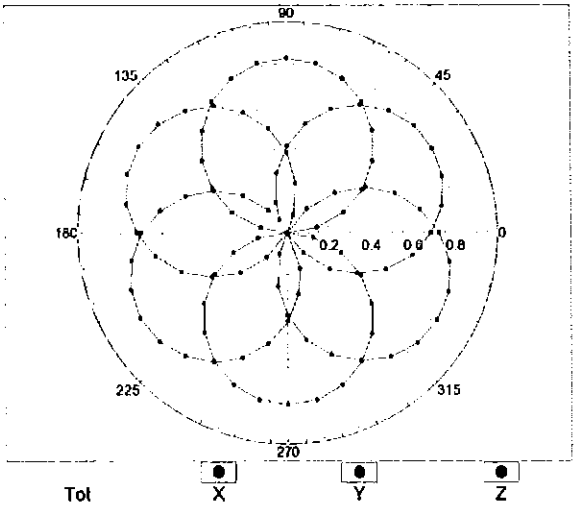
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



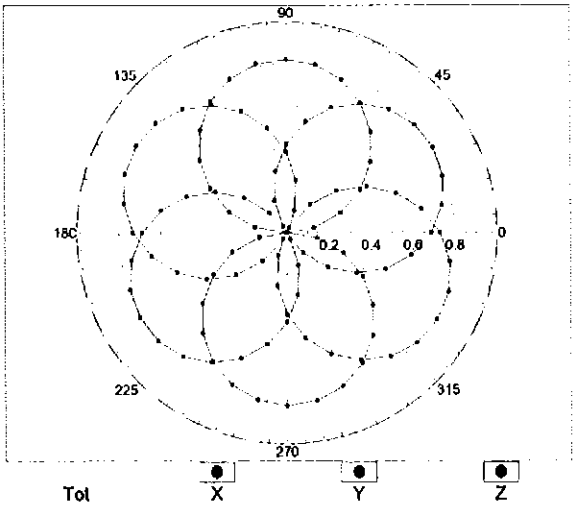
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

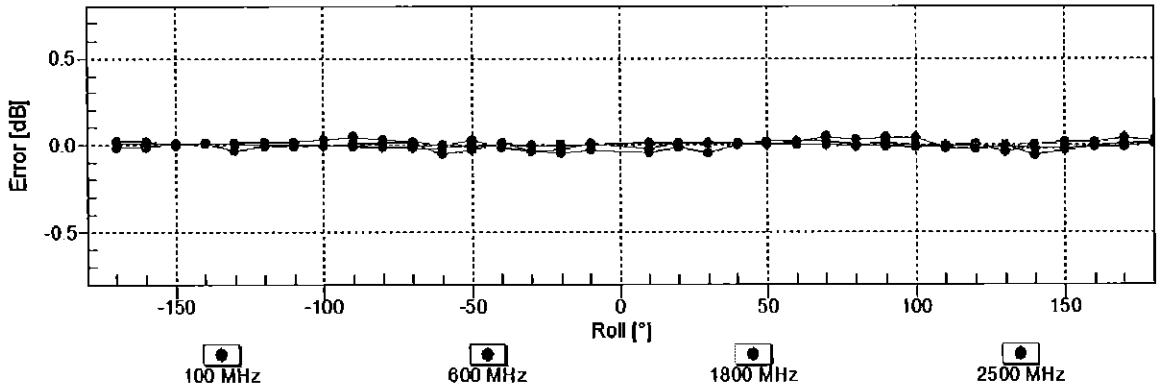
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



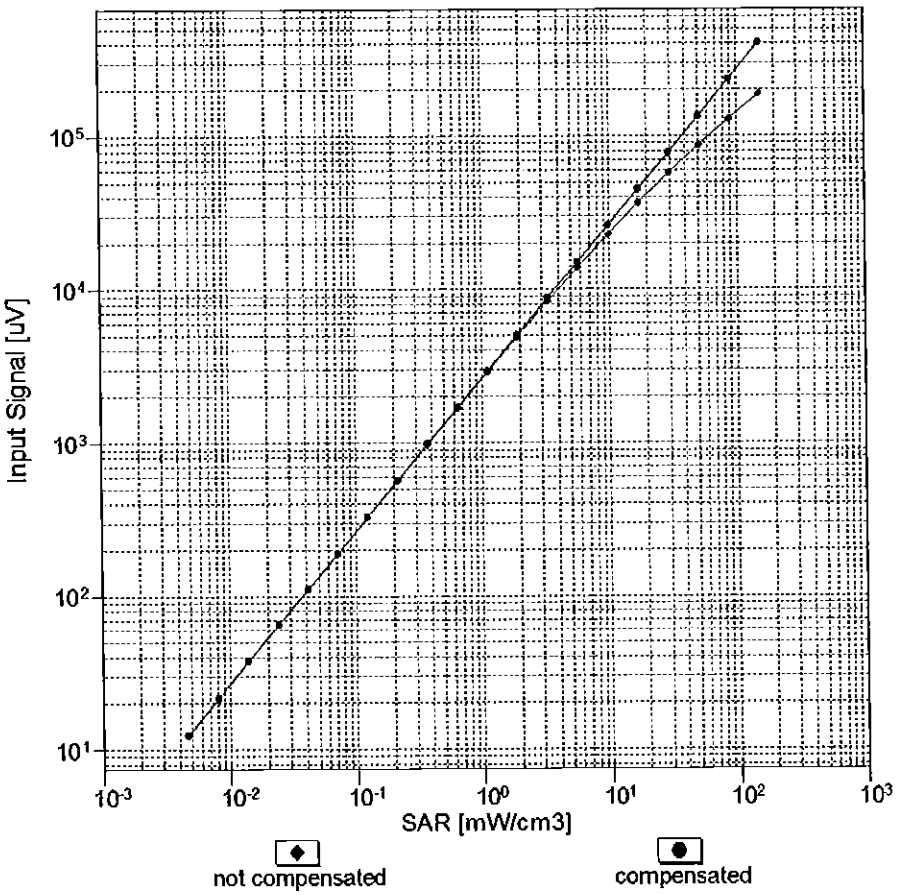
f=1800 MHz,R22

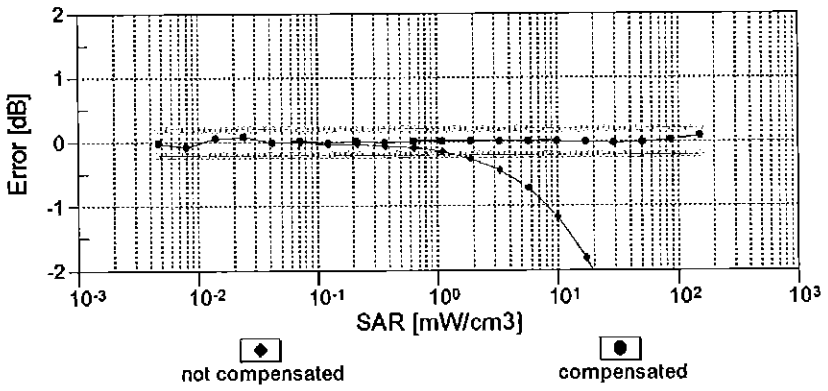




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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

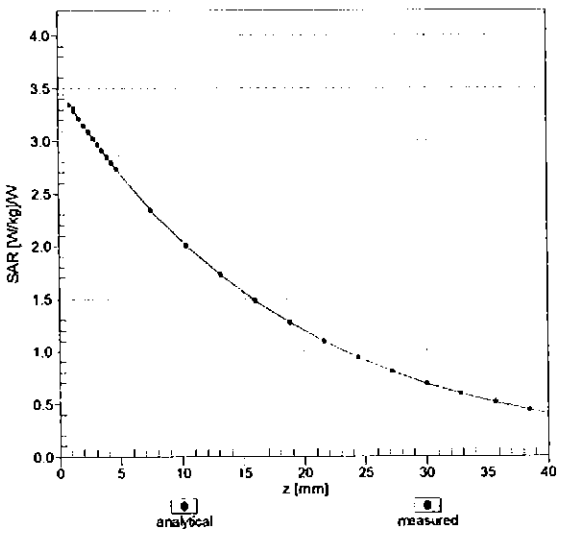




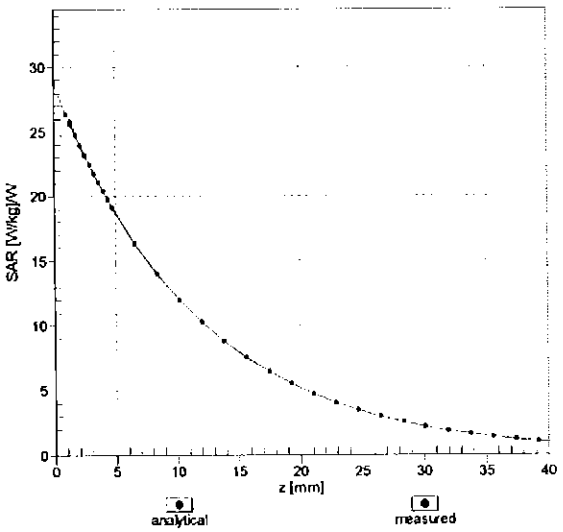
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

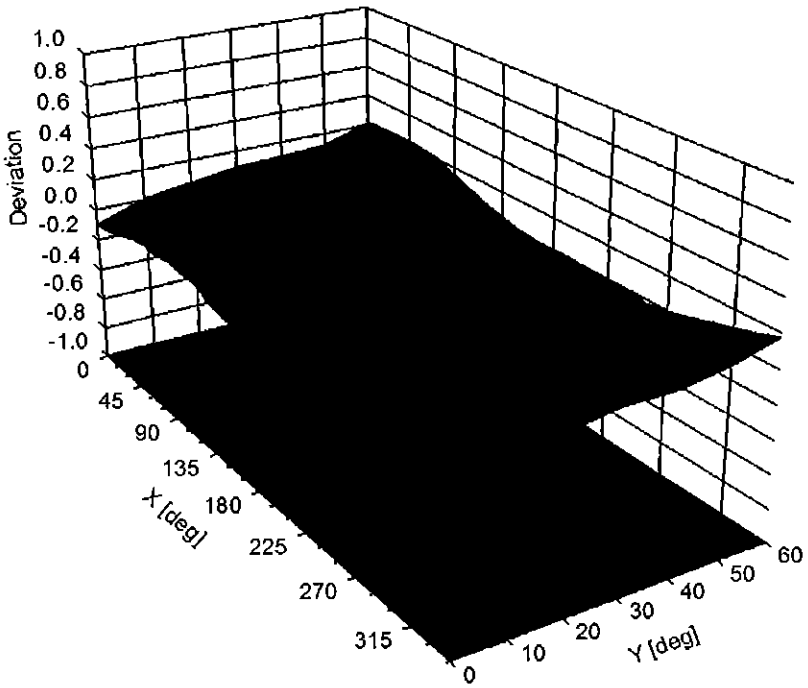


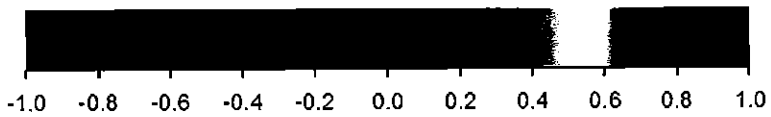
f = 1900 MHz,WGLS R22 (H_convF)



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:7406

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	0
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	138.9	± 2.5 %
		Y	0.00	0.00	1.00		129.6	
		Z	0.00	0.00	1.00		128.2	
10010-CAA	SAR Validation (Square, 100ms, 10ms)	X	2.73	66.22	10.89	10.00	20.0	± 9.6 %
		Y	2.50	65.91	10.39		20.0	
		Z	2.53	65.90	10.54		20.0	
10011-CAB	UMTS-FDD (WCDMA)	X	1.16	69.53	16.71	0.00	150.0	± 9.6 %
		Y	1.55	76.79	19.47		150.0	
		Z	1.09	68.24	15.96		150.0	
10012-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.21	64.38	15.70	0.41	150.0	± 9.6 %
		Y	1.20	65.37	16.13		150.0	
		Z	1.18	63.82	15.33		150.0	
10013-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.87	66.56	16.98	1.46	150.0	± 9.6 %
		Y	4.34	67.27	16.96		150.0	
		Z	4.83	66.50	16.95		150.0	
10021-DAC	GSM-FDD (TDMA, GMSK)	X	9.99	82.36	18.50	9.39	50.0	± 9.6 %
		Y	13.63	85.86	18.88		50.0	
		Z	18.22	90.00	20.60		50.0	
10023-DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	8.49	80.16	17.78	9.57	50.0	± 9.6 %
		Y	7.32	78.16	16.31		50.0	
		Z	12.47	85.19	19.17		50.0	
10024-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	18.19	89.55	19.31	6.56	60.0	± 9.6 %
		Y	100.00	107.67	23.01		60.0	
		Z	100.00	108.36	23.76		60.0	
10025-DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	5.54	75.78	27.74	12.57	50.0	± 9.6 %
		Y	8.76	92.32	36.08		50.0	
		Z	4.44	70.37	25.26		50.0	
10026-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	9.90	90.96	31.21	9.56	60.0	± 9.6 %
		Y	5.70	81.99	28.84		60.0	
		Z	7.85	86.95	30.11		60.0	
10027-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	106.69	22.59	4.80	80.0	± 9.6 %
		Y	100.00	110.45	23.34		80.0	
		Z	100.00	108.23	22.93		80.0	
10028-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	107.01	22.11	3.55	100.0	± 9.6 %
		Y	100.00	117.41	25.54		100.0	
		Z	100.00	109.42	22.79		100.0	
10029-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.41	81.80	26.70	7.80	80.0	± 9.6 %
		Y	3.86	73.74	24.21		80.0	
		Z	5.17	78.18	25.56		80.0	
10030-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	13.75	86.21	17.68	5.30	70.0	± 9.6 %
		Y	8.41	82.76	15.88		70.0	
		Z	100.00	106.60	22.49		70.0	
10031-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	106.42	20.68	1.88	100.0	± 9.6 %
		Y	100.00	120.98	25.51		100.0	
		Z	100.00	108.89	21.35		100.0	

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	100.00	113.18	22.62	1.17	100.0	± 9.6 %
		Y	100.00	160.14	39.75		100.0	
		Z	100.00	117.70	24.05		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	6.02	81.27	20.17	5.30	70.0	± 9.6 %
		Y	2.18	67.67	12.00		70.0	
		Z	5.24	80.63	20.08		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	2.82	75.11	17.10	1.88	100.0	± 9.6 %
		Y	0.75	61.82	7.32		100.0	
		Z	2.29	73.13	16.28		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	2.17	73.18	16.32	1.17	100.0	± 9.6 %
		Y	0.59	61.24	6.75		100.0	
		Z	1.79	71.19	15.39		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	7.12	83.90	21.15	5.30	70.0	± 9.6 %
		Y	2.26	68.25	12.32		70.0	
		Z	6.24	83.43	21.13		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	2.66	74.41	16.79	1.88	100.0	± 9.6 %
		Y	0.71	61.41	7.10		100.0	
		Z	2.15	72.41	15.96		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	2.20	73.62	16.61	1.17	100.0	± 9.6 %
		Y	0.60	61.36	6.93		100.0	
		Z	1.80	71.51	15.64		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	2.76	78.09	18.48	0.00	150.0	± 9.6 %
		Y	0.37	60.00	5.64		150.0	
		Z	2.22	74.97	16.93		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	7.43	78.80	16.12	7.78	50.0	± 9.6 %
		Y	8.26	80.71	16.15		50.0	
		Z	12.01	84.59	17.75		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.00	100.49	0.10	0.00	150.0	± 9.6 %
		Y	0.04	60.00	50.13		150.0	
		Z	0.00	96.59	0.05		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	6.27	73.35	16.78	13.80	25.0	± 9.6 %
		Y	5.47	69.78	14.42		25.0	
		Z	7.09	74.59	16.89		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	6.62	76.07	16.59	10.79	40.0	± 9.6 %
		Y	5.50	73.13	14.63		40.0	
		Z	7.47	77.74	16.92		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	8.73	81.97	20.70	9.03	50.0	± 9.6 %
		Y	5.30	74.02	15.71		50.0	
		Z	9.70	84.35	21.49		50.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	4.93	77.02	24.10	6.55	100.0	± 9.6 %
		Y	3.18	70.36	21.96		100.0	
		Z	4.10	73.99	23.08		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.26	65.49	16.19	0.61	110.0	± 9.6 %
		Y	1.20	65.95	16.36		110.0	
		Z	1.20	64.67	15.74		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	13.21	104.87	27.26	1.30	110.0	± 9.6 %
		Y	4.90	96.93	26.57		110.0	
		Z	4.52	91.43	23.95		110.0	

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	2.92	78.86	20.97	2.04	110.0	± 9.6 %
		Y	1.70	73.25	19.05		110.0	
		Z	2.19	75.27	19.88		110.0	
10062-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.70	66.68	16.55	0.49	100.0	± 9.6 %
		Y	4.18	67.42	16.56		100.0	
		Z	4.65	66.61	16.51		100.0	
10063-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.70	66.73	16.62	0.72	100.0	± 9.6 %
		Y	4.18	67.49	16.63		100.0	
		Z	4.66	66.66	16.57		100.0	
10064-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	4.99	66.98	16.82	0.86	100.0	± 9.6 %
		Y	4.36	67.60	16.75		100.0	
		Z	4.94	66.90	16.78		100.0	
10065-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.85	66.84	16.87	1.21	100.0	± 9.6 %
		Y	4.23	67.25	16.71		100.0	
		Z	4.80	66.75	16.83		100.0	
10066-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.86	66.83	16.99	1.46	100.0	± 9.6 %
		Y	4.21	67.08	16.71		100.0	
		Z	4.80	66.72	16.95		100.0	
10067-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.14	66.93	17.36	2.04	100.0	± 9.6 %
		Y	4.40	67.10	16.99		100.0	
		Z	5.08	66.86	17.34		100.0	
10068-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.19	66.98	17.55	2.55	100.0	± 9.6 %
		Y	4.52	67.37	17.35		100.0	
		Z	5.12	66.84	17.50		100.0	
10069-CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	5.27	66.95	17.72	2.67	100.0	± 9.6 %
		Y	4.52	67.17	17.38		100.0	
		Z	5.20	66.85	17.69		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.96	66.60	17.22	1.99	100.0	± 9.6 %
		Y	4.44	67.29	17.20		100.0	
		Z	4.91	66.53	17.19		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	4.94	66.90	17.40	2.30	100.0	± 9.6 %
		Y	4.35	67.27	17.25		100.0	
		Z	4.87	66.79	17.36		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.99	67.03	17.67	2.83	100.0	± 9.6 %
		Y	4.41	67.49	17.58		100.0	
		Z	4.92	66.90	17.63		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.97	66.91	17.78	3.30	100.0	± 9.6 %
		Y	4.49	67.70	17.84		100.0	
		Z	4.90	66.77	17.74		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.02	67.05	18.08	3.82	90.0	± 9.6 %
		Y	4.55	67.83	18.12		90.0	
		Z	4.94	66.85	18.01		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	5.03	66.84	18.17	4.15	90.0	± 9.6 %
		Y	4.61	67.72	18.28		90.0	
		Z	4.95	66.65	18.12		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.06	66.90	18.26	4.30	90.0	± 9.6 %
		Y	4.65	67.85	18.42		90.0	
		Z	4.98	66.71	18.21		90.0	

10081-CAB	CDMA2000 (1xRTT, RC3)	X	1.05	69.26	14.55	0.00	150.0	± 9.6 %
		Y	0.28	60.00	5.33		150.0	
		Z	0.92	67.44	13.36		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.71	58.22	3.69	4.77	80.0	± 9.6 %
		Y	0.41	56.78	1.87		80.0	
		Z	0.54	57.53	2.88		80.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	17.35	89.03	19.19	6.56	60.0	± 9.6 %
		Y	100.00	107.61	23.00		60.0	
		Z	100.00	108.37	23.77		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.96	68.94	16.57	0.00	150.0	± 9.6 %
		Y	2.57	76.20	18.23		150.0	
		Z	1.90	68.41	16.17		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.92	68.91	16.54	0.00	150.0	± 9.6 %
		Y	2.54	76.26	18.30		150.0	
		Z	1.86	68.36	16.14		150.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	9.94	91.01	31.21	9.56	60.0	± 9.6 %
		Y	5.73	82.09	28.86		60.0	
		Z	7.90	87.03	30.13		60.0	
10100-CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	3.32	71.40	17.37	0.00	150.0	± 9.6 %
		Y	2.95	71.83	18.07		150.0	
		Z	3.20	70.72	17.06		150.0	
10101-CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	3.33	67.99	16.32	0.00	150.0	± 9.6 %
		Y	3.00	68.42	16.63		150.0	
		Z	3.27	67.68	16.15		150.0	
10102-CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.43	67.94	16.40	0.00	150.0	± 9.6 %
		Y	3.10	68.46	16.71		150.0	
		Z	3.37	67.66	16.24		150.0	
10103-CAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	6.02	73.90	19.30	3.98	65.0	± 9.6 %
		Y	4.68	73.18	19.41		65.0	
		Z	5.62	73.49	19.33		65.0	
10104-CAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.42	73.34	19.91	3.98	65.0	± 9.6 %
		Y	4.72	70.79	18.81		65.0	
		Z	5.88	72.35	19.63		65.0	
10105-CAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	6.34	73.01	20.09	3.98	65.0	± 9.6 %
		Y	4.65	70.25	18.83		65.0	
		Z	5.51	70.92	19.28		65.0	
10108-CAD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.90	70.63	17.22	0.00	150.0	± 9.6 %
		Y	2.58	72.09	18.15		150.0	
		Z	2.79	69.99	16.90		150.0	
10109-CAD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.99	67.94	16.29	0.00	150.0	± 9.6 %
		Y	2.69	69.27	16.60		150.0	
		Z	2.93	67.61	16.08		150.0	
10110-CAD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.37	69.82	16.91	0.00	150.0	± 9.6 %
		Y	2.17	72.66	17.66		150.0	
		Z	2.27	69.17	16.53		150.0	
10111-CAD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.75	69.14	16.80	0.00	150.0	± 9.6 %
		Y	2.72	72.65	17.00		150.0	
		Z	2.68	68.77	16.52		150.0	

10112-CAD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.11	67.90	16.33	0.00	150.0	± 9.6 %
		Y	2.81	69.41	16.67		150.0	
		Z	3.05	67.61	16.14		150.0	
10113-CAD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.91	69.24	16.90	0.00	150.0	± 9.6 %
		Y	2.80	72.45	16.91		150.0	
		Z	2.83	68.91	16.64		150.0	
10114-CAB	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	5.18	67.36	16.63	0.00	150.0	± 9.6 %
		Y	4.69	67.54	16.80		150.0	
		Z	5.15	67.30	16.59		150.0	
10115-CAB	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.48	67.50	16.70	0.00	150.0	± 9.6 %
		Y	4.94	67.76	16.85		150.0	
		Z	5.42	67.37	16.64		150.0	
10116-CAB	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.28	67.57	16.65	0.00	150.0	± 9.6 %
		Y	4.76	67.79	16.84		150.0	
		Z	5.24	67.47	16.61		150.0	
10117-CAB	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	5.14	67.22	16.57	0.00	150.0	± 9.6 %
		Y	4.68	67.44	16.77		150.0	
		Z	5.11	67.13	16.53		150.0	
10118-CAB	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.56	67.71	16.81	0.00	150.0	± 9.6 %
		Y	4.92	67.65	16.80		150.0	
		Z	5.51	67.59	16.75		150.0	
10119-CAB	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	5.26	67.51	16.64	0.00	150.0	± 9.6 %
		Y	4.75	67.71	16.81		150.0	
		Z	5.23	67.43	16.60		150.0	
10140-CAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.47	67.94	16.32	0.00	150.0	± 9.6 %
		Y	3.08	68.53	16.60		150.0	
		Z	3.41	67.65	16.15		150.0	
10141-CAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.59	68.02	16.48	0.00	150.0	± 9.6 %
		Y	3.23	68.87	16.85		150.0	
		Z	3.53	67.77	16.33		150.0	
10142-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	2.17	70.14	16.75	0.00	150.0	± 9.6 %
		Y	1.93	72.39	15.85		150.0	
		Z	2.06	69.38	16.26		150.0	
10143-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	2.69	70.39	16.77	0.00	150.0	± 9.6 %
		Y	1.77	67.88	12.65		150.0	
		Z	2.58	69.83	16.31		150.0	
10144-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	2.37	67.50	14.86	0.00	150.0	± 9.6 %
		Y	1.24	63.02	9.52		150.0	
		Z	2.27	66.99	14.42		150.0	
10145-CAD	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.43	67.32	13.24	0.00	150.0	± 9.6 %
		Y	0.41	60.00	4.04		150.0	
		Z	1.25	65.61	11.99		150.0	
10146-CAD	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	1.83	65.71	11.47	0.00	150.0	± 9.6 %
		Y	19.01	355.37	40.53		150.0	
		Z	1.52	64.01	10.27		150.0	
10147-CAD	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	2.14	67.65	12.55	0.00	150.0	± 9.6 %
		Y	123.11	63.95	2.67		150.0	
		Z	1.70	65.34	11.08		150.0	

10149-CAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.00	68.01	16.34	0.00	150.0	± 9.6 %
		Y	2.71	69.38	16.67		150.0	
		Z	2.94	67.68	16.14		150.0	
10150-CAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.12	67.96	16.38	0.00	150.0	± 9.6 %
		Y	2.83	69.51	16.73		150.0	
		Z	3.06	67.68	16.19		150.0	
10151-CAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	6.55	76.73	20.51	3.98	65.0	± 9.6 %
		Y	4.65	75.11	19.92		65.0	
		Z	5.91	75.87	20.37		65.0	
10152-CAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	5.92	73.14	19.51	3.98	65.0	± 9.6 %
		Y	4.14	70.22	17.64		65.0	
		Z	5.38	72.11	19.20		65.0	
10153-CAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.32	74.15	20.32	3.98	65.0	± 9.6 %
		Y	4.49	71.52	18.62		65.0	
		Z	5.75	73.14	20.03		65.0	
10154-CAD	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.44	70.37	17.23	0.00	150.0	± 9.6 %
		Y	2.24	73.24	17.96		150.0	
		Z	2.32	69.67	16.83		150.0	
10155-CAD	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.75	69.15	16.81	0.00	150.0	± 9.6 %
		Y	2.75	72.83	17.10		150.0	
		Z	2.68	68.79	16.53		150.0	
10156-CAD	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	2.05	70.60	16.74	0.00	150.0	± 9.6 %
		Y	1.46	69.42	13.50		150.0	
		Z	1.92	69.63	16.11		150.0	
10157-CAD	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.25	68.47	15.12	0.00	150.0	± 9.6 %
		Y	0.93	61.53	7.91		150.0	
		Z	2.13	67.76	14.53		150.0	
10158-CAD	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.91	69.31	16.96	0.00	150.0	± 9.6 %
		Y	2.84	72.68	17.03		150.0	
		Z	2.84	68.99	16.70		150.0	
10159-CAD	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.39	69.07	15.47	0.00	150.0	± 9.6 %
		Y	0.94	61.44	7.84		150.0	
		Z	2.25	68.30	14.85		150.0	
10160-CAC	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.87	69.48	16.90	0.00	150.0	± 9.6 %
		Y	2.53	71.06	17.44		150.0	
		Z	2.80	69.08	16.66		150.0	
10161-CAC	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.02	67.94	16.33	0.00	150.0	± 9.6 %
		Y	2.72	69.68	16.46		150.0	
		Z	2.96	67.65	16.13		150.0	
10162-CAC	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.13	68.07	16.43	0.00	150.0	± 9.6 %
		Y	2.84	70.03	16.63		150.0	
		Z	3.07	67.81	16.24		150.0	
10166-CAD	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	3.48	69.00	18.84	3.01	150.0	± 9.6 %
		Y	2.37	66.02	18.17		150.0	
		Z	3.30	68.39	18.62		150.0	
10167-CAD	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	4.17	71.58	19.19	3.01	150.0	± 9.6 %
		Y	2.29	67.15	18.12		150.0	
		Z	3.79	70.56	18.83		150.0	

10168-CAD	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	4.66	74.00	20.63	3.01	150.0	± 9.6 %
		Y	2.48	69.25	19.67		150.0	
		Z	4.22	72.96	20.30		150.0	
10169-CAC	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.83	68.21	18.52	3.01	150.0	± 9.6 %
		Y	1.98	64.24	17.28		150.0	
		Z	2.57	66.84	17.97		150.0	
10170-CAC	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.78	73.87	20.84	3.01	150.0	± 9.6 %
		Y	1.95	66.56	18.68		150.0	
		Z	3.16	71.49	20.02		150.0	
10171-AAC	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	3.08	69.63	17.94	3.01	150.0	± 9.6 %
		Y	1.72	64.21	16.34		150.0	
		Z	2.64	67.80	17.26		150.0	
10172-CAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	5.42	80.62	23.60	6.02	65.0	± 9.6 %
		Y	2.15	69.85	20.42		65.0	
		Z	4.45	78.76	23.36		65.0	
10173-CAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	8.97	86.28	23.79	6.02	65.0	± 9.6 %
		Y	2.26	72.00	19.72		65.0	
		Z	6.61	83.59	23.38		65.0	
10174-CAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	7.82	83.09	22.18	6.02	65.0	± 9.6 %
		Y	1.97	69.58	18.06		65.0	
		Z	5.22	78.89	21.15		65.0	
10175-CAD	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.79	67.90	18.26	3.01	150.0	± 9.6 %
		Y	1.97	64.07	17.08		150.0	
		Z	2.54	66.56	17.72		150.0	
10176-CAD	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.78	73.89	20.85	3.01	150.0	± 9.6 %
		Y	1.95	66.57	18.69		150.0	
		Z	3.16	71.52	20.03		150.0	
10177-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.82	68.06	18.36	3.01	150.0	± 9.6 %
		Y	1.98	64.12	17.12		150.0	
		Z	2.56	66.70	17.81		150.0	
10178-CAD	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.74	73.65	20.71	3.01	150.0	± 9.6 %
		Y	1.95	66.53	18.65		150.0	
		Z	3.13	71.32	19.91		150.0	
10179-CAD	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.39	71.59	19.23	3.01	150.0	± 9.6 %
		Y	1.82	65.39	17.45		150.0	
		Z	2.87	69.52	18.50		150.0	
10180-CAD	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.08	69.55	17.88	3.01	150.0	± 9.6 %
		Y	1.72	64.21	16.33		150.0	
		Z	2.64	67.75	17.21		150.0	
10181-CAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.81	68.04	18.35	3.01	150.0	± 9.6 %
		Y	1.97	64.11	17.12		150.0	
		Z	2.56	66.68	17.80		150.0	
10182-CAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.73	73.62	20.70	3.01	150.0	± 9.6 %
		Y	1.95	66.51	18.64		150.0	
		Z	3.13	71.29	19.90		150.0	
10183-AAB	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.07	69.53	17.87	3.01	150.0	± 9.6 %
		Y	1.72	64.19	16.32		150.0	
		Z	2.64	67.72	17.20		150.0	

10184-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.82	68.08	18.37	3.01	150.0	± 9.6 %
		Y	1.98	64.13	17.13		150.0	
		Z	2.56	66.72	17.83		150.0	
10185-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.75	73.70	20.74	3.01	150.0	± 9.6 %
		Y	1.96	66.56	18.67		150.0	
		Z	3.14	71.36	19.94		150.0	
10186-AAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.09	69.60	17.91	3.01	150.0	± 9.6 %
		Y	1.73	64.23	16.35		150.0	
		Z	2.65	67.78	17.23		150.0	
10187-CAD	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.83	68.13	18.43	3.01	150.0	± 9.6 %
		Y	1.99	64.22	17.23		150.0	
		Z	2.57	66.77	17.89		150.0	
10188-CAD	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	3.88	74.41	21.15	3.01	150.0	± 9.6 %
		Y	1.98	66.86	18.93		150.0	
		Z	3.23	71.97	20.32		150.0	
10189-AAD	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.15	70.02	18.19	3.01	150.0	± 9.6 %
		Y	1.74	64.44	16.55		150.0	
		Z	2.70	68.15	17.50		150.0	
10193-CAB	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.57	66.79	16.35	0.00	150.0	± 9.6 %
		Y	4.14	67.99	16.59		150.0	
		Z	4.54	66.72	16.28		150.0	
10194-CAB	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.75	67.11	16.47	0.00	150.0	± 9.6 %
		Y	4.22	68.00	16.68		150.0	
		Z	4.70	67.02	16.41		150.0	
10195-CAB	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.79	67.14	16.49	0.00	150.0	± 9.6 %
		Y	4.23	67.92	16.65		150.0	
		Z	4.74	67.05	16.43		150.0	
10196-CAB	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.58	66.86	16.37	0.00	150.0	± 9.6 %
		Y	4.11	67.92	16.54		150.0	
		Z	4.54	66.78	16.30		150.0	
10197-CAB	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.76	67.13	16.48	0.00	150.0	± 9.6 %
		Y	4.23	68.00	16.69		150.0	
		Z	4.71	67.04	16.42		150.0	
10198-CAB	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.79	67.15	16.50	0.00	150.0	± 9.6 %
		Y	4.22	67.91	16.64		150.0	
		Z	4.74	67.07	16.44		150.0	
10219-CAB	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.53	66.88	16.34	0.00	150.0	± 9.6 %
		Y	4.08	68.06	16.58		150.0	
		Z	4.49	66.80	16.27		150.0	
10220-CAB	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.76	67.10	16.47	0.00	150.0	± 9.6 %
		Y	4.22	67.96	16.67		150.0	
		Z	4.71	67.01	16.41		150.0	
10221-CAB	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.80	67.08	16.48	0.00	150.0	± 9.6 %
		Y	4.25	67.92	16.65		150.0	
		Z	4.75	67.00	16.42		150.0	
10222-CAB	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	5.12	67.23	16.57	0.00	150.0	± 9.6 %
		Y	4.67	67.48	16.77		150.0	
		Z	5.09	67.14	16.52		150.0	

10223-CAB	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.42	67.42	16.68	0.00	150.0	± 9.6 %
		Y	4.85	67.57	16.77		150.0	
		Z	5.40	67.40	16.67		150.0	
10224-CAB	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	5.17	67.35	16.56	0.00	150.0	± 9.6 %
		Y	4.71	67.68	16.79		150.0	
		Z	5.13	67.25	16.51		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.87	66.58	15.73	0.00	150.0	± 9.6 %
		Y	2.38	67.09	13.98		150.0	
		Z	2.82	66.38	15.50		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	9.50	87.34	24.24	6.02	65.0	± 9.6 %
		Y	2.34	72.67	20.10		65.0	
		Z	6.98	84.60	23.83		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	8.72	84.77	22.80	6.02	65.0	± 9.6 %
		Y	2.21	71.55	18.95		65.0	
		Z	6.78	83.00	22.65		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	7.70	87.24	26.02	6.02	65.0	± 9.6 %
		Y	2.35	71.63	21.26		65.0	
		Z	5.43	82.72	24.92		65.0	
10229-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	9.03	86.38	23.83	6.02	65.0	± 9.6 %
		Y	2.27	72.06	19.75		65.0	
		Z	6.67	83.69	23.42		65.0	
10230-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	8.29	83.90	22.43	6.02	65.0	± 9.6 %
		Y	2.13	70.90	18.60		65.0	
		Z	6.44	82.12	22.26		65.0	
10231-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	7.38	86.38	25.64	6.02	65.0	± 9.6 %
		Y	2.30	71.12	20.95		65.0	
		Z	5.24	81.97	24.56		65.0	
10232-CAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	9.02	86.36	23.83	6.02	65.0	± 9.6 %
		Y	2.27	72.05	19.75		65.0	
		Z	6.65	83.67	23.41		65.0	
10233-CAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	8.28	83.89	22.42	6.02	65.0	± 9.6 %
		Y	2.13	70.87	18.59		65.0	
		Z	6.43	82.09	22.25		65.0	
10234-CAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	7.10	85.54	25.23	6.02	65.0	± 9.6 %
		Y	2.26	70.79	20.68		65.0	
		Z	5.08	81.30	24.19		65.0	
10235-CAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	9.02	86.38	23.84	6.02	65.0	± 9.6 %
		Y	2.27	72.05	19.76		65.0	
		Z	6.65	83.69	23.42		65.0	
10236-CAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	8.34	83.99	22.45	6.02	65.0	± 9.6 %
		Y	2.15	70.97	18.63		65.0	
		Z	6.48	82.21	22.28		65.0	
10237-CAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	7.38	86.43	25.66	6.02	65.0	± 9.6 %
		Y	2.30	71.11	20.95		65.0	
		Z	5.24	82.00	24.57		65.0	
10238-CAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	9.00	86.33	23.82	6.02	65.0	± 9.6 %
		Y	2.26	72.03	19.74		65.0	
		Z	6.63	83.64	23.40		65.0	

10239-CAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	8.25	83.86	22.41	6.02	65.0	± 9.6 %
		Y	2.13	70.85	18.59		65.0	
		Z	6.41	82.06	22.24		65.0	
10240-CAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	7.36	86.38	25.64	6.02	65.0	± 9.6 %
		Y	2.30	71.11	20.95		65.0	
		Z	5.22	81.96	24.56		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	7.65	78.90	23.86	6.98	65.0	± 9.6 %
		Y	4.15	74.63	23.03		65.0	
		Z	6.65	77.23	23.41		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	7.40	78.25	23.51	6.98	65.0	± 9.6 %
		Y	3.84	73.21	22.33		65.0	
		Z	6.07	75.38	22.52		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	6.13	75.50	23.22	6.98	65.0	± 9.6 %
		Y	3.68	71.24	22.18		65.0	
		Z	5.17	72.72	22.17		65.0	
10244-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	4.96	71.78	16.23	3.98	65.0	± 9.6 %
		Y	1.47	60.59	6.86		65.0	
		Z	4.27	70.57	15.63		65.0	
10245-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	4.90	71.39	16.01	3.98	65.0	± 9.6 %
		Y	1.47	60.48	6.73		65.0	
		Z	4.22	70.14	15.39		65.0	
10246-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	4.94	75.03	17.94	3.98	65.0	± 9.6 %
		Y	1.46	62.04	8.51		65.0	
		Z	4.23	73.72	17.40		65.0	
10247-CAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	4.94	72.43	17.57	3.98	65.0	± 9.6 %
		Y	2.10	63.24	9.90		65.0	
		Z	4.38	71.34	17.07		65.0	
10248-CAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	4.96	72.03	17.39	3.98	65.0	± 9.6 %
		Y	2.10	62.93	9.72		65.0	
		Z	4.40	70.92	16.87		65.0	
10249-CAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	6.07	78.35	20.13	3.98	65.0	± 9.6 %
		Y	2.33	67.19	12.94		65.0	
		Z	5.28	77.21	19.80		65.0	
10250-CAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	5.95	75.24	20.37	3.98	65.0	± 9.6 %
		Y	3.82	70.93	16.95		65.0	
		Z	5.33	74.14	20.02		65.0	
10251-CAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	5.69	73.28	19.20	3.98	65.0	± 9.6 %
		Y	3.45	68.36	15.25		65.0	
		Z	5.13	72.25	18.83		65.0	
10252-CAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	6.58	78.88	21.28	3.98	65.0	± 9.6 %
		Y	4.11	75.12	18.99		65.0	
		Z	5.80	77.80	21.07		65.0	
10253-CAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	5.80	72.65	19.29	3.98	65.0	± 9.6 %
		Y	4.01	69.64	16.98		65.0	
		Z	5.29	71.67	18.98		65.0	
10254-CAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	6.17	73.58	20.02	3.98	65.0	± 9.6 %
		Y	4.31	70.68	17.76		65.0	
		Z	5.63	72.60	19.71		65.0	

10255-CAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	6.29	76.23	20.52	3.98	65.0	± 9.6 %
		Y	4.41	74.27	19.43		65.0	
		Z	5.67	75.30	20.34		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	3.88	68.28	13.63	3.98	65.0	± 9.6 %
		Y	1.05	58.86	4.54		65.0	
		Z	3.28	66.95	12.85		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	3.85	67.85	13.35	3.98	65.0	± 9.6 %
		Y	1.05	58.75	4.36		65.0	
		Z	3.25	66.51	12.54		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	3.78	70.85	15.35	3.98	65.0	± 9.6 %
		Y	1.11	60.00	5.99		65.0	
		Z	3.18	69.35	14.58		65.0	
10259-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.33	73.49	18.59	3.98	65.0	± 9.6 %
		Y	2.60	65.55	12.14		65.0	
		Z	4.76	72.43	18.16		65.0	
10260-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	5.38	73.29	18.52	3.98	65.0	± 9.6 %
		Y	2.62	65.36	12.01		65.0	
		Z	4.80	72.23	18.08		65.0	
10261-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	6.02	77.89	20.37	3.98	65.0	± 9.6 %
		Y	2.87	69.70	14.96		65.0	
		Z	5.26	76.76	20.06		65.0	
10262-CAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	5.94	75.19	20.32	3.98	65.0	± 9.6 %
		Y	3.80	70.83	16.88		65.0	
		Z	5.32	74.09	19.98		65.0	
10263-CAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	5.68	73.26	19.19	3.98	65.0	± 9.6 %
		Y	3.45	68.35	15.24		65.0	
		Z	5.12	72.23	18.82		65.0	
10264-CAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	6.52	78.70	21.19	3.98	65.0	± 9.6 %
		Y	4.06	74.89	18.86		65.0	
		Z	5.75	77.62	20.97		65.0	
10265-CAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	5.92	73.14	19.52	3.98	65.0	± 9.6 %
		Y	4.14	70.23	17.64		65.0	
		Z	5.38	72.12	19.20		65.0	
10266-CAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.31	74.13	20.31	3.98	65.0	± 9.6 %
		Y	4.49	71.50	18.60		65.0	
		Z	5.75	73.12	20.02		65.0	
10267-CAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	6.54	76.70	20.49	3.98	65.0	± 9.6 %
		Y	4.64	75.05	19.89		65.0	
		Z	5.90	75.83	20.35		65.0	
10268-CAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.58	73.24	19.99	3.98	65.0	± 9.6 %
		Y	4.89	71.06	18.92		65.0	
		Z	6.05	72.29	19.72		65.0	
10269-CAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.56	72.88	19.90	3.98	65.0	± 9.6 %
		Y	4.96	70.94	18.86		65.0	
		Z	6.05	71.95	19.63		65.0	
10270-CAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	6.52	74.64	19.85	3.98	65.0	± 9.6 %
		Y	4.97	73.67	19.72		65.0	
		Z	5.98	73.87	19.71		65.0	

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.66	67.03	15.70	0.00	150.0	± 9.6 %
		Y	2.34	68.55	14.63		150.0	
		Z	2.62	66.83	15.48		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.75	69.41	16.56	0.00	150.0	± 9.6 %
		Y	2.02	74.91	18.12		150.0	
		Z	1.67	68.59	16.06		150.0	
10277-CAA	PHS (QPSK)	X	2.57	62.13	7.82	9.03	50.0	± 9.6 %
		Y	1.60	59.68	4.94		50.0	
		Z	2.26	61.44	7.11		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	4.26	69.41	14.02	9.03	50.0	± 9.6 %
		Y	2.29	61.84	7.55		50.0	
		Z	3.87	68.64	13.41		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	4.37	69.66	14.18	9.03	50.0	± 9.6 %
		Y	2.31	61.88	7.61		50.0	
		Z	3.97	68.90	13.58		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	1.85	72.31	15.88	0.00	150.0	± 9.6 %
		Y	0.36	60.00	5.29		150.0	
		Z	1.58	70.17	14.63		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	1.02	68.88	14.36	0.00	150.0	± 9.6 %
		Y	0.28	60.00	5.31		150.0	
		Z	0.90	67.15	13.20		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	1.80	77.95	18.61	0.00	150.0	± 9.6 %
		Y	0.38	62.69	7.21		150.0	
		Z	1.39	74.03	16.69		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	5.83	95.82	25.10	0.00	150.0	± 9.6 %
		Y	100.00	107.50	20.43		150.0	
		Z	3.54	87.74	22.15		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	7.34	78.85	20.80	9.03	50.0	± 9.6 %
		Y	17.07	85.10	19.02		50.0	
		Z	7.80	80.40	21.29		50.0	
10297-AAB	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.92	70.76	17.30	0.00	150.0	± 9.6 %
		Y	2.60	72.27	18.25		150.0	
		Z	2.80	70.10	16.98		150.0	
10298-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.81	69.98	15.49	0.00	150.0	± 9.6 %
		Y	0.52	60.00	6.04		150.0	
		Z	1.63	68.52	14.51		150.0	
10299-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	2.47	68.97	14.03	0.00	150.0	± 9.6 %
		Y	0.58	60.00	4.73		150.0	
		Z	2.10	67.38	13.05		150.0	
10300-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	1.87	64.64	11.20	0.00	150.0	± 9.6 %
		Y	0.56	60.00	4.04		150.0	
		Z	1.64	63.62	10.41		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.64	64.99	17.32	4.17	50.0	± 9.6 %
		Y	3.97	66.09	16.87		50.0	
		Z	4.63	65.19	17.38		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.19	65.93	18.20	4.96	50.0	± 9.6 %
		Y	4.41	66.55	17.60		50.0	
		Z	5.08	65.68	18.02		50.0	

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	4.95	65.59	18.05	4.96	50.0	± 9.6 %
		Y	4.26	66.62	17.49		50.0	
		Z	4.83	65.30	17.84		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.75	65.47	17.56	4.17	50.0	± 9.6 %
		Y	4.05	66.34	16.93		50.0	
		Z	4.65	65.23	17.38		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.49	67.73	19.78	6.02	35.0	± 9.6 %
		Y	3.71	67.28	16.67		35.0	
		Z	4.28	66.94	19.23		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.75	66.48	19.22	6.02	35.0	± 9.6 %
		Y	4.04	67.06	17.49		35.0	
		Z	4.60	65.99	18.86		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.67	66.74	19.24	6.02	35.0	± 9.6 %
		Y	3.93	66.99	17.33		35.0	
		Z	4.50	66.15	18.83		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.65	66.96	19.39	6.02	35.0	± 9.6 %
		Y	3.96	67.42	17.62		35.0	
		Z	4.47	66.34	18.96		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.80	66.69	19.36	6.02	35.0	± 9.6 %
		Y	4.07	67.23	17.68		35.0	
		Z	4.64	66.17	18.98		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.70	66.58	19.22	6.02	35.0	± 9.6 %
		Y	4.03	67.27	17.61		35.0	
		Z	4.55	66.06	18.84		35.0	
10311-AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	3.29	69.98	16.90	0.00	150.0	± 9.6 %
		Y	2.90	70.63	17.62		150.0	
		Z	3.17	69.35	16.60		150.0	
10313-AAA	iDEN 1:3	X	3.28	70.39	14.65	6.99	70.0	± 9.6 %
		Y	2.53	71.17	15.80		70.0	
		Z	2.85	70.12	14.78		70.0	
10314-AAA	iDEN 1:6	X	4.28	75.46	19.37	10.00	30.0	± 9.6 %
		Y	4.79	80.62	22.06		30.0	
		Z	4.09	76.26	19.99		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.12	64.41	15.77	0.17	150.0	± 9.6 %
		Y	1.15	65.92	16.47		150.0	
		Z	1.10	63.89	15.39		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.61	66.72	16.37	0.17	150.0	± 9.6 %
		Y	4.09	67.47	16.39		150.0	
		Z	4.56	66.65	16.32		150.0	
10317-AAB	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.61	66.72	16.37	0.17	150.0	± 9.6 %
		Y	4.09	67.47	16.39		150.0	
		Z	4.56	66.65	16.32		150.0	
10400-AAC	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.74	67.15	16.46	0.00	150.0	± 9.6 %
		Y	4.09	67.65	16.48		150.0	
		Z	4.69	67.06	16.40		150.0	
10401-AAC	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	5.44	67.31	16.60	0.00	150.0	± 9.6 %
		Y	4.84	67.31	16.60		150.0	
		Z	5.42	67.27	16.57		150.0	

10402-AAC	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.69	67.61	16.60	0.00	150.0	± 9.6 %
		Y	5.24	67.76	16.80		150.0	
		Z	5.65	67.50	16.56		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.85	72.31	15.88	0.00	115.0	± 9.6 %
		Y	0.36	60.00	5.29		115.0	
		Z	1.58	70.17	14.63		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.85	72.31	15.88	0.00	115.0	± 9.6 %
		Y	0.36	60.00	5.29		115.0	
		Z	1.58	70.17	14.63		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	53.12	115.17	29.24	0.00	100.0	± 9.6 %
		Y	100.00	124.65	27.76		100.0	
		Z	28.83	109.13	27.97		100.0	
10410-AAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	6.68	83.50	19.17	3.23	80.0	± 9.6 %
		Y	1.37	73.33	16.57		80.0	
		Z	5.13	82.70	19.33		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.04	63.68	15.36	0.00	150.0	± 9.6 %
		Y	1.11	65.66	16.32		150.0	
		Z	1.04	63.32	15.03		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.58	66.83	16.42	0.00	150.0	± 9.6 %
		Y	4.11	67.78	16.58		150.0	
		Z	4.54	66.76	16.35		150.0	
10417-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.58	66.83	16.42	0.00	150.0	± 9.6 %
		Y	4.11	67.78	16.58		150.0	
		Z	4.54	66.76	16.35		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	4.57	67.00	16.44	0.00	150.0	± 9.6 %
		Y	4.09	68.01	16.69		150.0	
		Z	4.53	66.93	16.39		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	4.59	66.94	16.44	0.00	150.0	± 9.6 %
		Y	4.11	67.93	16.65		150.0	
		Z	4.55	66.87	16.38		150.0	
10422-AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.71	66.93	16.45	0.00	150.0	± 9.6 %
		Y	4.19	67.82	16.64		150.0	
		Z	4.66	66.86	16.39		150.0	
10423-AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.87	67.25	16.56	0.00	150.0	± 9.6 %
		Y	4.27	68.04	16.70		150.0	
		Z	4.82	67.16	16.50		150.0	
10424-AAA	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.79	67.20	16.54	0.00	150.0	± 9.6 %
		Y	4.21	67.94	16.67		150.0	
		Z	4.74	67.12	16.47		150.0	
10425-AAA	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.39	67.48	16.69	0.00	150.0	± 9.6 %
		Y	4.86	67.72	16.85		150.0	
		Z	5.35	67.38	16.64		150.0	
10426-AAA	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.40	67.51	16.70	0.00	150.0	± 9.6 %
		Y	4.89	67.85	16.91		150.0	
		Z	5.37	67.47	16.68		150.0	

10427-AAA	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.41	67.49	16.68	0.00	150.0	± 9.6 %
		Y	4.87	67.71	16.83		150.0	
		Z	5.37	67.41	16.64		150.0	
10430-AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.48	71.93	18.89	0.00	150.0	± 9.6 %
		Y	5.16	77.88	19.19		150.0	
		Z	4.43	71.96	18.79		150.0	
10431-AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.27	67.46	16.46	0.00	150.0	± 9.6 %
		Y	3.63	68.54	16.11		150.0	
		Z	4.21	67.36	16.35		150.0	
10432-AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.56	67.28	16.50	0.00	150.0	± 9.6 %
		Y	3.98	68.25	16.55		150.0	
		Z	4.51	67.19	16.43		150.0	
10433-AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.81	67.24	16.56	0.00	150.0	± 9.6 %
		Y	4.24	68.00	16.70		150.0	
		Z	4.76	67.15	16.49		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.67	73.09	18.99	0.00	150.0	± 9.6 %
		Y	4.20	74.62	16.81		150.0	
		Z	4.61	73.09	18.84		150.0	
10435-AAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	6.37	82.80	18.90	3.23	80.0	± 9.6 %
		Y	1.33	72.76	16.26		80.0	
		Z	4.91	82.00	19.05		80.0	
10447-AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.58	67.63	15.88	0.00	150.0	± 9.6 %
		Y	2.52	66.35	12.95		150.0	
		Z	3.50	67.43	15.64		150.0	
10448-AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	4.11	67.25	16.33	0.00	150.0	± 9.6 %
		Y	3.54	68.41	16.05		150.0	
		Z	4.05	67.14	16.22		150.0	
10449-AAA	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	4.38	67.12	16.41	0.00	150.0	± 9.6 %
		Y	3.87	68.13	16.50		150.0	
		Z	4.33	67.03	16.33		150.0	
10450-AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.57	67.02	16.42	0.00	150.0	± 9.6 %
		Y	4.09	67.80	16.59		150.0	
		Z	4.53	66.93	16.35		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.49	67.88	15.53	0.00	150.0	± 9.6 %
		Y	2.00	64.08	10.79		150.0	
		Z	3.38	67.58	15.21		150.0	
10456-AAA	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	6.26	68.00	16.81	0.00	150.0	± 9.6 %
		Y	6.16	68.95	17.43		150.0	
		Z	6.24	67.94	16.79		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.82	65.46	16.13	0.00	150.0	± 9.6 %
		Y	3.61	66.92	16.42		150.0	
		Z	3.81	65.40	16.06		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	3.29	67.12	14.89	0.00	150.0	± 9.6 %
		Y	1.44	60.53	7.42		150.0	
		Z	3.18	66.78	14.49		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.43	65.51	15.86	0.00	150.0	± 9.6 %
		Y	2.62	61.35	10.29		150.0	
		Z	4.37	65.53	15.72		150.0	

10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.04	71.02	17.96	0.00	150.0	± 9.6 %
		Y	1.96	84.00	22.92		150.0	
		Z	0.97	69.34	16.98		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.48	77.15	17.91	3.29	80.0	± 9.6 %
		Y	0.97	69.25	15.91		80.0	
		Z	2.58	75.48	17.77		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.03	60.33	8.14	3.23	80.0	± 9.6 %
		Y	0.21	55.42	3.53		80.0	
		Z	0.84	60.00	7.93		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.51	3.23	80.0	± 9.6 %
		Y	28.36	203.22	3.05		80.0	
		Z	0.86	60.00	7.39		80.0	
10464-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.64	73.32	15.98	3.23	80.0	± 9.6 %
		Y	0.75	66.12	13.77		80.0	
		Z	2.03	72.11	15.91		80.0	
10465-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.99	60.00	7.91	3.23	80.0	± 9.6 %
		Y	29.96	194.97	5.15		80.0	
		Z	0.84	60.00	7.86		80.0	
10466-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.46	3.23	80.0	± 9.6 %
		Y	30.98	196.96	1.83		80.0	
		Z	0.86	60.00	7.34		80.0	
10467-AAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.77	73.96	16.25	3.23	80.0	± 9.6 %
		Y	0.77	66.65	14.10		80.0	
		Z	2.12	72.73	16.19		80.0	
10468-AAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.99	60.08	7.96	3.23	80.0	± 9.6 %
		Y	0.21	55.39	3.50		80.0	
		Z	0.84	60.00	7.88		80.0	
10469-AAB	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.46	3.23	80.0	± 9.6 %
		Y	30.66	197.41	1.31		80.0	
		Z	0.86	60.00	7.34		80.0	
10470-AAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.76	73.94	16.23	3.23	80.0	± 9.6 %
		Y	0.77	66.67	14.10		80.0	
		Z	2.11	72.72	16.18		80.0	
10471-AAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.99	60.05	7.93	3.23	80.0	± 9.6 %
		Y	29.34	196.18	6.49		80.0	
		Z	0.84	60.00	7.87		80.0	
10472-AAB	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.45	3.23	80.0	± 9.6 %
		Y	30.49	197.73	1.27		80.0	
		Z	0.86	60.00	7.33		80.0	
10473-AAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.76	73.90	16.22	3.23	80.0	± 9.6 %
		Y	0.77	66.63	14.08		80.0	
		Z	2.11	72.69	16.16		80.0	
10474-AAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.99	60.03	7.93	3.23	80.0	± 9.6 %
		Y	29.25	196.25	6.42		80.0	
		Z	0.84	60.00	7.87		80.0	
10475-AAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.45	3.23	80.0	± 9.6 %
		Y	30.47	197.62	1.42		80.0	
		Z	0.86	60.00	7.33		80.0	

10477-AAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.98	60.00	7.89	3.23	80.0	± 9.6 %
		Y	29.49	195.72	5.56		80.0	
		Z	0.84	60.00	7.84		80.0	
10478-AAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.01	60.00	7.44	3.23	80.0	± 9.6 %
		Y	30.62	197.39	1.80		80.0	
		Z	0.86	60.00	7.32		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.88	74.90	18.39	3.23	80.0	± 9.6 %
		Y	2.49	77.92	19.26		80.0	
		Z	3.49	74.59	18.40		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.37	69.78	14.78	3.23	80.0	± 9.6 %
		Y	0.68	60.27	8.31		80.0	
		Z	2.92	69.11	14.47		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.92	67.65	13.55	3.23	80.0	± 9.6 %
		Y	0.66	60.00	7.51		80.0	
		Z	2.50	66.84	13.14		80.0	
10482-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.52	68.86	15.13	2.23	80.0	± 9.6 %
		Y	0.83	60.00	6.91		80.0	
		Z	2.14	67.39	14.41		80.0	
10483-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.86	67.07	13.71	2.23	80.0	± 9.6 %
		Y	1.05	60.00	5.62		80.0	
		Z	2.44	65.81	13.01		80.0	
10484-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.80	66.60	13.51	2.23	80.0	± 9.6 %
		Y	1.07	60.00	5.60		80.0	
		Z	2.40	65.34	12.79		80.0	
10485-AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.96	70.85	16.91	2.23	80.0	± 9.6 %
		Y	1.17	62.58	10.56		80.0	
		Z	2.58	69.54	16.39		80.0	
10486-AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.96	67.72	15.13	2.23	80.0	± 9.6 %
		Y	1.13	60.00	7.87		80.0	
		Z	2.66	66.76	14.61		80.0	
10487-AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.97	67.43	14.99	2.23	80.0	± 9.6 %
		Y	1.16	60.00	7.81		80.0	
		Z	2.67	66.49	14.47		80.0	
10488-AAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.38	70.90	17.67	2.23	80.0	± 9.6 %
		Y	2.25	69.00	16.17		80.0	
		Z	3.02	69.76	17.29		80.0	
10489-AAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.39	68.12	16.57	2.23	80.0	± 9.6 %
		Y	2.32	66.16	14.18		80.0	
		Z	3.13	67.37	16.26		80.0	
10490-AAB	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.49	68.02	16.54	2.23	80.0	± 9.6 %
		Y	2.33	65.79	13.96		80.0	
		Z	3.23	67.30	16.25		80.0	
10491-AAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.68	69.90	17.42	2.23	80.0	± 9.6 %
		Y	2.62	68.57	16.67		80.0	
		Z	3.36	68.97	17.13		80.0	
10492-AAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.77	67.68	16.72	2.23	80.0	± 9.6 %
		Y	2.84	66.78	15.53		80.0	
		Z	3.53	67.02	16.47		80.0	

10493-AAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.84	67.59	16.70	2.23	80.0	± 9.6 %
		Y	2.87	66.60	15.40		80.0	
		Z	3.60	66.95	16.45		80.0	
10494-AAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.93	71.14	17.78	2.23	80.0	± 9.6 %
		Y	2.77	69.47	17.23		80.0	
		Z	3.56	70.11	17.48		80.0	
10495-AAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.80	68.03	16.89	2.23	80.0	± 9.6 %
		Y	2.91	67.12	16.06		80.0	
		Z	3.55	67.32	16.64		80.0	
10496-AAB	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.89	67.83	16.85	2.23	80.0	± 9.6 %
		Y	2.99	66.99	16.00		80.0	
		Z	3.64	67.16	16.61		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.81	64.83	12.37	2.23	80.0	± 9.6 %
		Y	0.97	60.00	4.80		80.0	
		Z	1.52	63.38	11.47		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.56	60.98	9.46	2.23	80.0	± 9.6 %
		Y	19.60	209.65	15.97		80.0	
		Z	1.35	60.00	8.64		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.53	60.58	9.11	2.23	80.0	± 9.6 %
		Y	17.31	229.94	5.52		80.0	
		Z	1.37	60.00	8.51		80.0	
10500-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.10	70.67	17.16	2.23	80.0	± 9.6 %
		Y	1.60	65.48	12.91		80.0	
		Z	2.73	69.49	16.71		80.0	
10501-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.16	67.97	15.73	2.23	80.0	± 9.6 %
		Y	1.34	60.72	9.33		80.0	
		Z	2.88	67.15	15.31		80.0	
10502-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.22	67.87	15.63	2.23	80.0	± 9.6 %
		Y	1.33	60.43	9.07		80.0	
		Z	2.93	67.06	15.21		80.0	
10503-AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.34	70.72	17.57	2.23	80.0	± 9.6 %
		Y	2.22	68.78	16.06		80.0	
		Z	2.98	69.59	17.20		80.0	
10504-AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.37	68.03	16.51	2.23	80.0	± 9.6 %
		Y	2.30	66.01	14.09		80.0	
		Z	3.11	67.28	16.20		80.0	
10505-AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.47	67.93	16.49	2.23	80.0	± 9.6 %
		Y	2.31	65.66	13.87		80.0	
		Z	3.21	67.21	16.19		80.0	
10506-AAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.90	71.01	17.71	2.23	80.0	± 9.6 %
		Y	2.75	69.34	17.15		80.0	
		Z	3.53	69.98	17.41		80.0	
10507-AAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.78	67.97	16.85	2.23	80.0	± 9.6 %
		Y	2.90	67.04	16.01		80.0	
		Z	3.53	67.26	16.61		80.0	

10508-AAB	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.87	67.76	16.81	2.23	80.0	± 9.6 %
		Y	2.97	66.90	15.95		80.0	
		Z	3.63	67.09	16.57		80.0	
10509-AAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.29	70.13	17.39	2.23	80.0	± 9.6 %
		Y	3.19	68.68	17.10		80.0	
		Z	3.96	69.31	17.16		80.0	
10510-AAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.29	67.87	16.94	2.23	80.0	± 9.6 %
		Y	3.35	66.74	16.37		80.0	
		Z	4.04	67.22	16.73		80.0	
10511-AAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.35	67.67	16.90	2.23	80.0	± 9.6 %
		Y	3.43	66.67	16.35		80.0	
		Z	4.11	67.05	16.70		80.0	
10512-AAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.41	71.37	17.74	2.23	80.0	± 9.6 %
		Y	3.20	69.31	17.29		80.0	
		Z	4.03	70.41	17.47		80.0	
10513-AAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.17	68.08	17.01	2.23	80.0	± 9.6 %
		Y	3.27	66.70	16.44		80.0	
		Z	3.92	67.38	16.78		80.0	
10514-AAB	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.20	67.73	16.93	2.23	80.0	± 9.6 %
		Y	3.34	66.53	16.38		80.0	
		Z	3.96	67.07	16.71		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	1.01	63.92	15.46	0.00	150.0	± 9.6 %
		Y	1.07	66.05	16.52		150.0	
		Z	1.00	63.52	15.11		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.80	76.03	20.57	0.00	150.0	± 9.6 %
		Y	1.63	90.26	26.95		150.0	
		Z	0.67	72.14	18.59		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.88	66.52	16.52	0.00	150.0	± 9.6 %
		Y	0.99	69.72	18.29		150.0	
		Z	0.86	65.67	15.91		150.0	
10518-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.57	66.91	16.40	0.00	150.0	± 9.6 %
		Y	4.10	67.98	16.63		150.0	
		Z	4.53	66.84	16.34		150.0	
10519-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.75	67.14	16.51	0.00	150.0	± 9.6 %
		Y	4.20	68.09	16.69		150.0	
		Z	4.70	67.05	16.44		150.0	
10520-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.61	67.11	16.44	0.00	150.0	± 9.6 %
		Y	4.07	67.97	16.60		150.0	
		Z	4.56	67.01	16.37		150.0	
10521-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.54	67.11	16.43	0.00	150.0	± 9.6 %
		Y	4.00	67.83	16.53		150.0	
		Z	4.49	67.00	16.36		150.0	
10522-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.60	67.20	16.52	0.00	150.0	± 9.6 %
		Y	4.00	67.82	16.53		150.0	
		Z	4.55	67.12	16.45		150.0	

10523-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.49	67.08	16.37	0.00	150.0	± 9.6 %
		Y	4.01	68.16	16.68		150.0	
		Z	4.44	67.01	16.31		150.0	
10524-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.54	67.12	16.48	0.00	150.0	± 9.6 %
		Y	3.97	67.92	16.63		150.0	
		Z	4.49	67.03	16.42		150.0	
10525-AAA	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.54	66.18	16.08	0.00	150.0	± 9.6 %
		Y	4.09	67.26	16.38		150.0	
		Z	4.50	66.10	16.02		150.0	
10526-AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.71	66.55	16.22	0.00	150.0	± 9.6 %
		Y	4.14	67.37	16.43		150.0	
		Z	4.65	66.45	16.16		150.0	
10527-AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.63	66.51	16.17	0.00	150.0	± 9.6 %
		Y	4.11	67.44	16.42		150.0	
		Z	4.58	66.41	16.10		150.0	
10528-AAA	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.64	66.53	16.20	0.00	150.0	± 9.6 %
		Y	4.10	67.35	16.39		150.0	
		Z	4.59	66.42	16.13		150.0	
10529-AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.64	66.53	16.20	0.00	150.0	± 9.6 %
		Y	4.10	67.35	16.39		150.0	
		Z	4.59	66.42	16.13		150.0	
10531-AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.64	66.64	16.22	0.00	150.0	± 9.6 %
		Y	4.06	67.36	16.37		150.0	
		Z	4.58	66.51	16.14		150.0	
10532-AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.50	66.50	16.16	0.00	150.0	± 9.6 %
		Y	3.98	67.28	16.33		150.0	
		Z	4.44	66.37	16.07		150.0	
10533-AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.65	66.58	16.19	0.00	150.0	± 9.6 %
		Y	4.11	67.58	16.46		150.0	
		Z	4.60	66.49	16.13		150.0	
10534-AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	5.17	66.59	16.23	0.00	150.0	± 9.6 %
		Y	4.70	66.96	16.45		150.0	
		Z	5.13	66.48	16.18		150.0	
10535-AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.24	66.77	16.31	0.00	150.0	± 9.6 %
		Y	4.70	67.00	16.48		150.0	
		Z	5.20	66.68	16.26		150.0	
10536-AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	5.11	66.73	16.27	0.00	150.0	± 9.6 %
		Y	4.62	67.02	16.47		150.0	
		Z	5.07	66.63	16.22		150.0	
10537-AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	5.17	66.69	16.25	0.00	150.0	± 9.6 %
		Y	4.71	67.16	16.55		150.0	
		Z	5.13	66.59	16.20		150.0	
10538-AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.26	66.70	16.30	0.00	150.0	± 9.6 %
		Y	4.72	66.92	16.45		150.0	
		Z	5.21	66.59	16.24		150.0	
10540-AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.19	66.73	16.33	0.00	150.0	± 9.6 %
		Y	4.66	66.87	16.46		150.0	
		Z	5.14	66.60	16.27		150.0	

10541-AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	5.16	66.59	16.25	0.00	150.0	± 9.6 %
		Y	4.67	66.90	16.44		150.0	
		Z	5.12	66.48	16.19		150.0	
10542-AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.31	66.65	16.29	0.00	150.0	± 9.6 %
		Y	4.80	66.97	16.49		150.0	
		Z	5.27	66.55	16.25		150.0	
10543-AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.39	66.68	16.33	0.00	150.0	± 9.6 %
		Y	4.85	67.01	16.54		150.0	
		Z	5.34	66.57	16.28		150.0	
10544-AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.48	66.68	16.21	0.00	150.0	± 9.6 %
		Y	5.09	66.77	16.36		150.0	
		Z	5.46	66.59	16.17		150.0	
10545-AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.68	67.10	16.37	0.00	150.0	± 9.6 %
		Y	5.20	67.11	16.51		150.0	
		Z	5.65	67.02	16.33		150.0	
10546-AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.55	66.89	16.28	0.00	150.0	± 9.6 %
		Y	5.10	66.84	16.37		150.0	
		Z	5.51	66.77	16.22		150.0	
10547-AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.62	66.93	16.29	0.00	150.0	± 9.6 %
		Y	5.22	67.15	16.53		150.0	
		Z	5.58	66.82	16.24		150.0	
10548-AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.87	67.85	16.72	0.00	150.0	± 9.6 %
		Y	5.13	67.04	16.46		150.0	
		Z	5.82	67.71	16.65		150.0	
10550-AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.58	66.91	16.30	0.00	150.0	± 9.6 %
		Y	5.24	67.42	16.68		150.0	
		Z	5.55	66.83	16.27		150.0	
10551-AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.58	66.96	16.28	0.00	150.0	± 9.6 %
		Y	5.07	66.77	16.33		150.0	
		Z	5.54	66.84	16.23		150.0	
10552-AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.50	66.76	16.19	0.00	150.0	± 9.6 %
		Y	5.09	66.99	16.43		150.0	
		Z	5.47	66.66	16.15		150.0	
10553-AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.58	66.78	16.23	0.00	150.0	± 9.6 %
		Y	5.11	66.82	16.35		150.0	
		Z	5.54	66.67	16.18		150.0	
10554-AAA	IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.89	67.03	16.29	0.00	150.0	± 9.6 %
		Y	5.55	66.98	16.39		150.0	
		Z	5.87	66.94	16.25		150.0	
10555-AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	6.02	67.33	16.41	0.00	150.0	± 9.6 %
		Y	5.61	67.17	16.48		150.0	
		Z	5.99	67.24	16.37		150.0	
10556-AAA	IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	6.04	67.38	16.43	0.00	150.0	± 9.6 %
		Y	5.65	67.28	16.52		150.0	
		Z	6.02	67.29	16.39		150.0	
10557-AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	6.01	67.28	16.40	0.00	150.0	± 9.6 %
		Y	5.60	67.14	16.47		150.0	
		Z	5.97	67.17	16.35		150.0	

10558-AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	6.05	67.44	16.50	0.00	150.0	± 9.6 %
		Y	5.55	67.02	16.43		150.0	
		Z	6.02	67.33	16.45		150.0	
10560-AAA	IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	6.05	67.29	16.46	0.00	150.0	± 9.6 %
		Y	5.59	67.02	16.46		150.0	
		Z	6.01	67.17	16.41		150.0	
10561-AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.97	67.26	16.48	0.00	150.0	± 9.6 %
		Y	5.53	66.98	16.46		150.0	
		Z	5.94	67.16	16.44		150.0	
10562-AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	6.09	67.63	16.67	0.00	150.0	± 9.6 %
		Y	5.59	67.19	16.57		150.0	
		Z	6.05	67.48	16.60		150.0	
10563-AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.29	67.85	16.73	0.00	150.0	± 9.6 %
		Y	5.86	67.78	16.84		150.0	
		Z	6.16	67.47	16.55		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.89	66.92	16.50	0.46	150.0	± 9.6 %
		Y	4.37	67.73	16.65		150.0	
		Z	4.84	66.85	16.44		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	5.12	67.38	16.83	0.46	150.0	± 9.6 %
		Y	4.53	68.17	16.98		150.0	
		Z	5.07	67.30	16.78		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.95	67.23	16.64	0.46	150.0	± 9.6 %
		Y	4.37	67.89	16.75		150.0	
		Z	4.90	67.13	16.58		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	4.98	67.65	17.02	0.46	150.0	± 9.6 %
		Y	4.44	68.37	17.19		150.0	
		Z	4.94	67.56	16.97		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.85	66.96	16.38	0.46	150.0	± 9.6 %
		Y	4.20	67.26	16.25		150.0	
		Z	4.80	66.87	16.32		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.94	67.75	17.08	0.46	150.0	± 9.6 %
		Y	4.45	68.76	17.43		150.0	
		Z	4.90	67.68	17.04		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	4.98	67.59	17.02	0.46	150.0	± 9.6 %
		Y	4.39	68.33	17.21		150.0	
		Z	4.93	67.52	16.97		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.19	64.81	15.85	0.46	130.0	± 9.6 %
		Y	1.17	65.59	16.16		130.0	
		Z	1.15	64.12	15.44		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.21	65.43	16.24	0.46	130.0	± 9.6 %
		Y	1.18	66.27	16.61		130.0	
		Z	1.17	64.67	15.80		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	2.73	90.43	24.99	0.46	130.0	± 9.6 %
		Y	2.86	95.55	28.03		130.0	
		Z	1.51	81.07	21.85		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.39	72.10	19.60	0.46	130.0	± 9.6 %
		Y	1.35	73.36	20.46		130.0	
		Z	1.26	70.26	18.73		130.0	

10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.65	66.62	16.45	0.46	130.0	± 9.6 %
		Y	4.13	67.33	16.45		130.0	
		Z	4.61	66.55	16.40		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.68	66.80	16.53	0.46	130.0	± 9.6 %
		Y	4.17	67.68	16.63		130.0	
		Z	4.64	66.73	16.48		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.88	67.09	16.70	0.46	130.0	± 9.6 %
		Y	4.28	67.86	16.75		130.0	
		Z	4.83	67.01	16.65		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.78	67.27	16.82	0.46	130.0	± 9.6 %
		Y	4.22	68.05	16.92		130.0	
		Z	4.73	67.18	16.77		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.53	66.48	16.08	0.46	130.0	± 9.6 %
		Y	3.91	66.80	15.89		130.0	
		Z	4.48	66.37	16.01		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.58	66.51	16.09	0.46	130.0	± 9.6 %
		Y	3.89	66.66	15.78		130.0	
		Z	4.53	66.42	16.03		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.68	67.30	16.76	0.46	130.0	± 9.6 %
		Y	4.14	68.18	16.94		130.0	
		Z	4.63	67.21	16.71		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.47	66.23	15.85	0.46	130.0	± 9.6 %
		Y	3.80	66.45	15.61		130.0	
		Z	4.42	66.12	15.78		130.0	
10583-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.65	66.62	16.45	0.46	130.0	± 9.6 %
		Y	4.13	67.33	16.45		130.0	
		Z	4.61	66.55	16.40		130.0	
10584-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.68	66.80	16.53	0.46	130.0	± 9.6 %
		Y	4.17	67.68	16.63		130.0	
		Z	4.64	66.73	16.48		130.0	
10585-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.88	67.09	16.70	0.46	130.0	± 9.6 %
		Y	4.28	67.86	16.75		130.0	
		Z	4.83	67.01	16.65		130.0	
10586-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.78	67.27	16.82	0.46	130.0	± 9.6 %
		Y	4.22	68.05	16.92		130.0	
		Z	4.73	67.18	16.77		130.0	
10587-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.53	66.48	16.08	0.46	130.0	± 9.6 %
		Y	3.91	66.80	15.89		130.0	
		Z	4.48	66.37	16.01		130.0	
10588-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.58	66.51	16.09	0.46	130.0	± 9.6 %
		Y	3.89	66.66	15.78		130.0	
		Z	4.53	66.42	16.03		130.0	
10589-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.68	67.30	16.76	0.46	130.0	± 9.6 %
		Y	4.14	68.18	16.94		130.0	
		Z	4.63	67.21	16.71		130.0	
10590-AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.47	66.23	15.85	0.46	130.0	± 9.6 %
		Y	3.80	66.45	15.61		130.0	
		Z	4.42	66.12	15.78		130.0	

10591-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.80	66.69	16.56	0.46	130.0	± 9.6 %
		Y	4.29	67.48	16.65		130.0	
		Z	4.76	66.62	16.52		130.0	
10592-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	4.96	67.02	16.69	0.46	130.0	± 9.6 %
		Y	4.35	67.66	16.74		130.0	
		Z	4.91	66.95	16.65		130.0	
10593-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.87	66.92	16.57	0.46	130.0	± 9.6 %
		Y	4.28	67.58	16.60		130.0	
		Z	4.82	66.84	16.52		130.0	
10594-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.93	67.10	16.73	0.46	130.0	± 9.6 %
		Y	4.32	67.69	16.75		130.0	
		Z	4.88	67.02	16.68		130.0	
10595-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.90	67.04	16.62	0.46	130.0	± 9.6 %
		Y	4.28	67.67	16.66		130.0	
		Z	4.85	66.97	16.57		130.0	
10596-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.83	67.04	16.62	0.46	130.0	± 9.6 %
		Y	4.19	67.48	16.58		130.0	
		Z	4.78	66.95	16.57		130.0	
10597-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.78	66.93	16.50	0.46	130.0	± 9.6 %
		Y	4.17	67.42	16.44		130.0	
		Z	4.73	66.84	16.44		130.0	
10598-AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.77	67.20	16.78	0.46	130.0	± 9.6 %
		Y	4.23	67.87	16.85		130.0	
		Z	4.72	67.09	16.72		130.0	
10599-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.48	67.23	16.77	0.46	130.0	± 9.6 %
		Y	5.11	68.05	17.18		130.0	
		Z	5.44	67.15	16.74		130.0	
10600-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.60	67.61	16.93	0.46	130.0	± 9.6 %
		Y	5.02	67.79	17.02		130.0	
		Z	5.57	67.57	16.91		130.0	
10601-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.49	67.38	16.83	0.46	130.0	± 9.6 %
		Y	4.99	67.77	17.04		130.0	
		Z	5.46	67.31	16.81		130.0	
10602-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.59	67.40	16.75	0.46	130.0	± 9.6 %
		Y	5.00	67.54	16.84		130.0	
		Z	5.57	67.40	16.76		130.0	
10603-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.67	67.72	17.05	0.46	130.0	± 9.6 %
		Y	5.02	67.69	17.07		130.0	
		Z	5.64	67.68	17.04		130.0	
10604-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.49	67.21	16.78	0.46	130.0	± 9.6 %
		Y	5.00	67.56	16.96		130.0	
		Z	5.49	67.27	16.82		130.0	
10605-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.59	67.50	16.92	0.46	130.0	± 9.6 %
		Y	4.95	67.41	16.89		130.0	
		Z	5.56	67.47	16.92		130.0	
10606-AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.33	66.83	16.44	0.46	130.0	± 9.6 %
		Y	4.96	67.58	16.81		130.0	
		Z	5.28	66.72	16.40		130.0	

10607-AAA	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.64	66.02	16.19	0.46	130.0	± 9.6 %
		Y	4.16	66.91	16.36		130.0	
		Z	4.60	65.95	16.15		130.0	
10608-AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.83	66.42	16.36	0.46	130.0	± 9.6 %
		Y	4.22	67.08	16.44		130.0	
		Z	4.78	66.34	16.31		130.0	
10609-AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.71	66.26	16.19	0.46	130.0	± 9.6 %
		Y	4.14	66.94	16.27		130.0	
		Z	4.67	66.17	16.14		130.0	
10610-AAA	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.77	66.42	16.36	0.46	130.0	± 9.6 %
		Y	4.18	67.09	16.43		130.0	
		Z	4.72	66.34	16.31		130.0	
10611-AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.68	66.22	16.20	0.46	130.0	± 9.6 %
		Y	4.10	66.87	16.26		130.0	
		Z	4.63	66.13	16.14		130.0	
10612-AAA	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.69	66.36	16.23	0.46	130.0	± 9.6 %
		Y	4.03	66.77	16.18		130.0	
		Z	4.63	66.26	16.18		130.0	
10613-AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.69	66.24	16.12	0.46	130.0	± 9.6 %
		Y	4.05	66.68	16.06		130.0	
		Z	4.63	66.13	16.05		130.0	
10614-AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.64	66.46	16.37	0.46	130.0	± 9.6 %
		Y	4.09	67.10	16.44		130.0	
		Z	4.59	66.36	16.31		130.0	
10615-AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.68	66.02	15.96	0.46	130.0	± 9.6 %
		Y	4.06	66.66	15.97		130.0	
		Z	4.62	65.94	15.90		130.0	
10616-AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.29	66.48	16.38	0.46	130.0	± 9.6 %
		Y	4.78	66.74	16.52		130.0	
		Z	5.26	66.40	16.35		130.0	
10617-AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.36	66.65	16.44	0.46	130.0	± 9.6 %
		Y	4.78	66.75	16.51		130.0	
		Z	5.33	66.60	16.42		130.0	
10618-AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.25	66.67	16.46	0.46	130.0	± 9.6 %
		Y	4.72	66.85	16.58		130.0	
		Z	5.21	66.61	16.44		130.0	
10619-AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.26	66.46	16.29	0.46	130.0	± 9.6 %
		Y	4.77	66.81	16.49		130.0	
		Z	5.22	66.38	16.26		130.0	
10620-AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.35	66.50	16.36	0.46	130.0	± 9.6 %
		Y	4.78	66.60	16.41		130.0	
		Z	5.31	66.41	16.33		130.0	
10621-AAA	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.35	66.65	16.56	0.46	130.0	± 9.6 %
		Y	4.83	66.85	16.68		130.0	
		Z	5.32	66.59	16.54		130.0	
10622-AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.37	66.81	16.63	0.46	130.0	± 9.6 %
		Y	4.79	66.84	16.68		130.0	
		Z	5.33	66.74	16.61		130.0	

10623-AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.24	66.32	16.25	0.46	130.0	± 9.6 %
		Y	4.72	66.50	16.34		130.0	
		Z	5.20	66.24	16.22		130.0	
10624-AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.43	66.52	16.42	0.46	130.0	± 9.6 %
		Y	4.88	66.72	16.52		130.0	
		Z	5.40	66.45	16.39		130.0	
10625-AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.79	67.47	16.94	0.46	130.0	± 9.6 %
		Y	5.00	67.06	16.76		130.0	
		Z	5.70	67.26	16.85		130.0	
10626-AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.59	66.53	16.33	0.46	130.0	± 9.6 %
		Y	5.18	66.57	16.44		130.0	
		Z	5.56	66.46	16.31		130.0	
10627-AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.83	67.09	16.57	0.46	130.0	± 9.6 %
		Y	5.32	67.03	16.66		130.0	
		Z	5.81	67.05	16.57		130.0	
10628-AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.62	66.61	16.26	0.46	130.0	± 9.6 %
		Y	5.14	66.45	16.28		130.0	
		Z	5.58	66.50	16.22		130.0	
10629-AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.69	66.66	16.28	0.46	130.0	± 9.6 %
		Y	5.30	66.90	16.51		130.0	
		Z	5.66	66.57	16.25		130.0	
10630-AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	6.12	68.14	17.02	0.46	130.0	± 9.6 %
		Y	5.23	66.85	16.50		130.0	
		Z	6.06	67.97	16.95		130.0	
10631-AAA	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	6.03	67.99	17.15	0.46	130.0	± 9.6 %
		Y	5.35	67.44	17.00		130.0	
		Z	5.98	67.84	17.09		130.0	
10632-AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.80	67.18	16.76	0.46	130.0	± 9.6 %
		Y	5.50	67.84	17.20		130.0	
		Z	5.78	67.15	16.76		130.0	
10633-AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.68	66.78	16.38	0.46	130.0	± 9.6 %
		Y	5.16	66.59	16.40		130.0	
		Z	5.65	66.69	16.35		130.0	
10634-AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.67	66.82	16.47	0.46	130.0	± 9.6 %
		Y	5.24	66.99	16.65		130.0	
		Z	5.63	66.72	16.43		130.0	
10635-AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.54	66.10	15.82	0.46	130.0	± 9.6 %
		Y	5.01	65.92	15.79		130.0	
		Z	5.50	65.99	15.78		130.0	
10636-AAA	IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	6.00	66.89	16.41	0.46	130.0	± 9.6 %
		Y	5.65	66.81	16.48		130.0	
		Z	5.98	66.82	16.39		130.0	
10637-AAA	IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.16	67.27	16.58	0.46	130.0	± 9.6 %
		Y	5.75	67.13	16.64		130.0	
		Z	6.14	67.21	16.57		130.0	
10638-AAA	IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.15	67.24	16.55	0.46	130.0	± 9.6 %
		Y	5.76	67.17	16.64		130.0	
		Z	6.13	67.17	16.53		130.0	

10639-AAA	IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	6.13	67.20	16.57	0.46	130.0	± 9.6 %
		Y	5.71	67.01	16.60		130.0	
		Z	6.11	67.11	16.54		130.0	
10640-AAA	IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.13	67.19	16.51	0.46	130.0	± 9.6 %
		Y	5.60	66.69	16.38		130.0	
		Z	6.11	67.10	16.47		130.0	
10641-AAA	IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.18	67.10	16.48	0.46	130.0	± 9.6 %
		Y	5.73	66.87	16.49		130.0	
		Z	6.17	67.05	16.47		130.0	
10642-AAA	IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.23	67.38	16.79	0.46	130.0	± 9.6 %
		Y	5.75	67.07	16.76		130.0	
		Z	6.20	67.30	16.77		130.0	
10643-AAA	IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	6.06	67.04	16.51	0.46	130.0	± 9.6 %
		Y	5.58	66.67	16.43		130.0	
		Z	6.04	66.97	16.50		130.0	
10644-AAA	IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.22	67.52	16.78	0.46	130.0	± 9.6 %
		Y	5.68	67.01	16.62		130.0	
		Z	6.17	67.37	16.71		130.0	
10645-AAA	IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.52	68.03	16.98	0.46	130.0	± 9.6 %
		Y	6.07	67.95	17.07		130.0	
		Z	6.34	67.53	16.76		130.0	
10646-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	13.12	97.57	31.83	9.30	60.0	± 9.6 %
		Y	3.90	78.39	26.30		60.0	
		Z	9.88	93.63	31.05		60.0	
10647-AAB	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	12.04	96.40	31.56	9.30	60.0	± 9.6 %
		Y	3.54	76.66	25.68		60.0	
		Z	8.93	92.04	30.63		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.77	65.21	11.99	0.00	150.0	± 9.6 %
		Y	0.27	60.00	4.67		150.0	
		Z	0.71	64.17	11.12		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.

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)	835
Tissue	Body
Ingredients (% by weight)	
Bactericide	0.1
HEC	1
NaCl	0.94
Sucrose	44.9
Water	53.06

APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Table E-I
SAR System Validation Summary

SAR SYSTEM #	FREQ. [MHz]	DATE	PROBE SN	PROBE TYPE	PROBE CAL. POINT		COND. (σ)	PERM. (εr)	CW VALIDATION			MOD. VALIDATION		
									SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
K	835	5/2/2017	7406	EX3DV4	835	Body	0.966	53.380	PASS	PASS	PASS	GMSK	PASS	N/A

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.