

KDB 865664 D01 SAR Measurement 100MHz to 6GHz FCC 47 CFR part 2 (2.1093)

SAR EVALUATION REPORT For PowerBeats Pro Wireless with Bluetooth Radio

> Model (Left Earbud): A2453 FCC ID (Left Earbud): BCGA2453

Model (Right Earbud): A2454 FCC ID (Right Earbud): BCGA2454

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Prepared for

APPLE INC. ONE APPLE PARK WAY CUPERTINO CA 95014-2084, USA

Prepared by

UL VS LTD UNIT 1-3 HORIZON, KINGSLAND BUSINESS PARK WADE ROAD, BASINGSTOKE, HAMPSHIRE, RG24 8AH, UK TEL: +44 (0) 1256 312000 FAX: +44 (0) 1256 312001



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Page 2 of 50

TABLE OF CONTENTS

1. Attestation of Test Results	4
2. Test Specification, Methods and Procedures 2.1. Test Specification 2.2. Methods and Procedures Reference Documentation 2.3. Definition of Measurement Equipment	5 5 5 5
3. Facilities and Accreditation	6
 4. SAR Measurement System & Test Equipment	7 7 8 10
5. Measurement Uncertainty	.12
 6. Device Under Test (DUT) Information 6.1. DUT Description 6.2. Wireless Technologies 6.3. Nominal and Maximum Output power: Bluetooth 	. 13 13 14 15
 7. RF Exposure Conditions (Test Configurations) 7.1. Configuration Consideration: A2453 (Left Earbud) 7.2. Configuration Consideration: A2454 (Right Earbud) 7.3. SAR Test Exclusion Consideration 	. 16 16 16 16
8. Conducted Output Power Measurements	. .17 17
 9. Dielectric Property Measurements & System Check	. 18 18 19 19 20
 10. Measurements, Examinations and Derived Results	. 21 22 23 24
11. Simultaneous Transmission Analysis	.25
 12. Appendixes 12.1. Photos and Ports Location 12.2. System Check Plots 12.3. SAR Test Plots 12.4. Calibration Certificate for E-Field Probes 12.5. Calibration Certificate for Dipoles 12.6. Tissues-Equivalent Media Recipes 	.26 26 40 43 48 49 50

1. Attestation of Test Results

Applicant Name	Apple Inc.					
Model (Left Earbud)	A2453					
Model (Right Earbud)	A2454	A2454				
Test Device is	A representative	A representative test sample				
Device category	Portable	Portable				
Date Tested	26 March 2020 to	31 March	n 2020			
ICNIRP Guidelines Limits for SAR Exposure Characteristics	General Population/Localised SAR (Head and trunk) – SAR limit 1.6 W/kg					
The highest reported	RE Exposure Co	nditions	Equipment Class			
SAR values			Licensed	DTS	U-NII	DSS
	Standalone	Head	N/A	N/A	N/A	0.02 W/kg
	(Left Earbud)	Body	N/A	N/A	N/A	0.25 W/kg
	Standalone	Head	N/A	N/A	N/A	0.02 W/kg
	(Right Earbud)	Body	N/A	N/A	N/A	0.32 W/kg
Applicable Standards	FCC 47 CFR part 2 (2.1093) KDB publication IEEE Std 1528: 2013					
Test Results	Pass					

UL Verification Services Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties are in accordance with the above standard and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample(s), under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by UKAS. This report is written to support regulatory compliance of the applicable standards stated above.

Issued By:	Prepared By:
M. Marcan	Monay
Naseer Mirza	Masood Khan
Lead Project Engineer	Test Engineer
UL VS Ltd.	UL VS Ltd.

2. Test Specification, Methods and Procedures

2.1. Test Specification

Reference:	KDB Publication Number: 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
Title:	SAR Measurement Requirements for 100 MHz to 6 GHz
Introduction:	The SAR Measurement procedures for 100MHz to 6GHz are described in this document. Field probes, tissue dielectric properties, SAR scans, measurement accuracy and variability of the measured results are discussed. The field probe and SAR scan requirements are derived from criteria considered in standard IEEE 1528-2013. The wireless product and technology specific procedures in applicable KDB publications are required to be used unless further guidance has been approved by the FCC.
Purpose of Test:	To determine if the Equipment Under Test complies with the Specific Absorption Rate for general population/uncontrolled exposure limit of 1.6 W/kg as specified in FCC 47 CFR part 2 (2.1093).

2.2. Methods and Procedures Reference Documentation

The methods and procedures used were as detailed in:

IEEE 1528:2013

IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques.

FCC KDB Publication:

KDB 447498 D01 General RF Exposure Guidance v06 KDB 447498 D03 Supplement C Cross-Reference v01 KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 KDB 865664 D02 RF Exposure Reporting v01r02

2.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Section 4.3 contains a list of the test equipment used.

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

Horizon Unit 1-3, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, UK	Facility Type
SAR Lab 64	Controlled Environment Chamber
LIL Marification Complete Ltd. is a serie dited by LIKAC (Lipited Kingdows	As a second station (Complete) at a sector station (UKAC

UL Verification Services Ltd, is accredited by UKAS (United Kingdom Accreditation Service), Laboratory UKAS Code 0644.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, ADconversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win 8.1 or Win 10 and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

4.2. SAR Measurement Procedure

4.2.1. Normal SAR Measurement Procedure

The following procedure shall be performed for each of the test conditions Measure the local SAR at a test point within 8 mm of the phantom inner surface that is closest to the DUT.

- a) Measure the two-dimensional SAR distribution within the phantom (area scan procedure).
- b) The boundary of the measurement area shall not be closer than 20 mm from the phantom side walls. The distance between the measurement points should enable the detection of the location of local maximum with an accuracy of better than half the linear dimension of the tissue cube after interpolation. A maximum grid spacing of 20 mm for frequencies below 3 GHz and (60/f [GHz]) mm for frequencies of 3 GHz and greater is recommended. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and $\delta \ln(2)/2$ mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. The maximum variation of the sensor-phantom surface distance shall be ± 1 mm for frequencies below 3 GHz and ± 0,5 mm for frequencies of 3 GHz and greater. At all measurement points the angle of the probe with respect to the line normal to the surface should be less than 5°. If this cannot be achieved for a measurement distance to the phantom inner surface shorter than the probe diameter, additional uncertainty evaluation is needed.
- From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify c) the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W /kg 1 g limit, or 1,26 W/kg for 2 W /kg, 10 g limit).
- Measure the three-dimensional SAR distribution at the local maxima locations identified in step c) (zoom d) scan procedure). The horizontal grid step shall be (24 / f [GHz]) mm or less but not more than 8 mm. The minimum zoom scan size is 30 mm by 30 mm by 30 mm for frequencies below 3 GHz. For higher frequencies, the minimum zoom scan size can be reduced to 22 mm by 22 mm. The grid step in the vertical direction shall be (8-f [GHz]) mm or less but not more than 5 mm, if uniform spacing is used. If variable spacing is used in the vertical direction, the maximum spacing between the two closest measured points to the phantom shell shall be (12/f [GHz]) mm or less but not more than 4 mm, and the spacing between farther points shall increase by an incremental factor not exceeding 1.5. When variable spacing is used, extrapolation routines shall be tested with the same spacing as used in measurements. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and $\delta \ln(2)/2$ mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. Separate grids shall be centred on each of the local SAR maxima found in step c). Uncertainties due to field distortion between the media boundary and the dielectric enclosure of the probe should also be minimized, which is achieved if the distance between the phantom surface and physical tip of the probe is larger than probe tip diameter. Other methods may utilize correction procedures for these boundary effects that enable high precision measurements closer than half the probe diameter. For all measurement points, the angle of the probe with respect to the flat phantom surface shall be less than 50
- e) Use post processing (e.g. interpolation and extrapolation) procedures to determine the local SAR values at the spatial resolution needed for mass averaging.
- The local SAR should be measured at the same location as in Step a). SAR drift is assessed f) and reported in the uncertainty budget.

In the event that the evaluation of measurement drift exceeds the 5 % tolerance, it is required that SAR be reassessed following guidelines contained within this standard.

If the drift is larger than 5 %, then the measurement drift shall be considered a bias, not an uncertainty. A correction shall be applied to the measured SAR value. It is not necessary to record the drift in the uncertainty budget (i.e. ui = 0 %). The uncertainty budget reported in a measurement report should correspond to the highest SAR value reported (after correction, if applicable). Alternatively, the all uncertainty budget reported should cover measurements, i.e., it should report а conservative value.

Area Scan Parameters:

	\leq 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	$5 \text{ mm} \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \text{ mm} \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	$20^{\circ} \pm 1^{\circ}$
	\leq 2 GHz: \leq 15 mm 2 - 3 GHz: \leq 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	When the x or y dimension measurement plane orientat above, the measurement res corresponding x or y dimen at least one measurement po	of the test device, in the ion, is smaller than the olution must be \leq the sion of the test device with bint on the test device.

Zoom Scan Parameters:

			\leq 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}			≤2 GHz: ≤8 mm 2 – 3 GHz: ≤5 mm [*]	$3 - 4 \text{ GHz:} \le 5 \text{ mm}^*$ $4 - 6 \text{ GHz:} \le 4 \text{ mm}^*$
	uniform grid: ∆z _{Zoom} (n)		$\leq 5 \text{ mm}$	$3 - 4$ GHz: ≤ 4 mm $4 - 5$ GHz: ≤ 3 mm $5 - 6$ GHz: ≤ 2 mm
Maximum zoom scan spatial resolution, normal to phantom surface	$\begin{array}{c} \begin{array}{c} \Delta z_{Zoom}(1) \text{: between} \\ 1^{\text{st}} \text{ two points closest} \\ \text{to phantom surface} \end{array} \\ \\ \begin{array}{c} \Delta z_{Zoom}(n > 1) \text{:} \\ \text{between subsequent} \\ \text{points} \end{array} \end{array}$	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤4 mm	$3 - 4 \text{ GHz:} \le 3 \text{ mm}$ $4 - 5 \text{ GHz:} \le 2.5 \text{ mm}$ $5 - 6 \text{ GHz:} \le 2 \text{ mm}$
		$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$		
Minimum zoom scan volume	x, y, z		≥ 30 mm	$3 - 4 \text{ GHz} \ge 28 \text{ mm}$ $4 - 5 \text{ GHz} \ge 25 \text{ mm}$ $5 - 6 \text{ GHz} \ge 22 \text{ mm}$

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

UL No.	Instrument	Manufacturer	Туре No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A1234	Data Acquisition Electronics	SPEAG	DAE4	450	09 Oct 2019	12
A1322	2450 MHz Dipole	SPEAG	D2450V2	725	08 Oct 2019	12
A2587	Probe	SPEAG	ES3DV3	3341	23 Aug 2019	12
A2810	Head Handset Positioner	SPEAG	MD4HHTV5	None	Calibrated before use	-
PRE0179700	Head Handset Positioner	SPEAG	MD4HHTV5	None	Calibrated as part of system	-
M1755	DAK Fluid Probe	SPEAG	SM DAK 040 CA	1089	Calibrated before use	-
A2621	Digital Camera	Nikon	S3600	41010357	N/A	-
PRE0151154	Network Analyser	R&S	ZND	100151	30 Jan 2020	12
A2551	Phantom	SPEAG	SAM Twin Phantom V5.0	1832	Calibrated as part of system	-
PRE0179698	Phantom Support Structure	SPEAG	Phantom Table	-	Calibrated as part of system	-
PRE0159221	PowerSource1	SPEAG	SE UMS 160 AC	1026	04 Feb 2020	12
PRE0178116	Robot Arm	Staubli	TX60 L	F17/5ETWB1/A/01	Calibrated as part of system	-
PRE0178124	Robot Power Supply	SPEAG	CS8C	F17/5ETWB1/C/01	Calibrated as part of system	-
M1855	Power Sensor	R&S	NRP-Z51	103246	30 Jan 2020	12

4.3.1. SAR System Specifications

Robot System				
Positioner:	Stäubli Unimation Corp. Robot Model: TX60L			
Repeatability:	±0.030 mm			
No. of Axis:	6			
Serial Number(s):	F17/5ETWB1/C/01			
Reach:	800 mm			
Payload:	2.0 kg			
Control Unit:	CS8C			
Programming Language:	V+			
Data Acquisition Electronic (DAE) System				
Serial Number:	DAE4 SN: 450			
PC Controller				
PC:	HP EliteDesk800			
Operating System:	Windows 10			
Data Card:	DASY Measurement Servers			
Data Converter	1			
Features:	Signal Amplifier, multiplexer, A/D converted and control logic.			
Software:	DASY6 PRO Software			
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.			
PC Interface Card				
Function:	24 bit (64 MHz) DSP for real time processing Link to DAE4 16 bit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.			
Phantom				
Phantom:	SAM Phantom			
Shell Material:	Fibreglass			
Thickness:	2.0 ±0.1 mm			
E-Field Probe	1			
Model:	ES3DV3			
Serial No:	3341			
Construction:	Triangular core			
Frequency:	10 MHz to > 4 GHz			
Linearity:	±0.2 dB (30 MHz to 4 GHz)			
Probe Length (mm):	337			
Probe Diameter (mm):	10			
Tip Length (mm):	10			
Tip Diameter (mm):	4			
Sensor X Offset (mm):	2			
Sensor Y Offset (mm):	2			
Sensor Z Offset (mm):	2			

5. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

As per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be \leq 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

6. Device Under Test (DUT) Information

6.1. DUT Description

DUT Description:	The device under test (PowerBeats Pro Wireless) is a pair of wireless earphones with Bluetooth Connectivity. The left and right earbud model numbers are A2453 and A2454 respectively.			
Serial Number:	Conducted Sample		CC2C903APNC9	
Model: A2453 (Left Earbud)	Radiated Samples		CC2C903CPNC9	
Serial Number:	Conducted Sample		CC2C901APNCC	
Model: A2454 (Right Earbud)	Radiated Samples		CC2C905BPNCC	
Hardware Version Number:	N/A (Applicable to both models)			
Software Version Number:	1A610 (Applicable to both models)			
Country of Manufacture:	China (Applicable to both models)			
Device dimension	Overall (Length x Width x Depth): 27.8 mm W x 37.0 mm D x 56.0 mm (Applicable to both models)			
Operating Configurations	Held to head Body-worn			
Date of Receipt:	26 March 2020			
Antenna Type:	Internal integral			
Antenna Length:	As specified in Appendix 12.1			
Number of	Antenna Type	Anten	na Description	
Antennas:	WPAN	Bluetooth 2.4 GHz		
Back Cover	 Normal Battery Cover Normal Battery Cover with NFC Wireless Charger Battery Cover Wireless Charger Battery Cover with NFC 			
Accessory				
Battery Type	Standard – Lithium-ion battery			

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR
Bluetooth	2.4 GHz	 □ Core Spec. 4.0 □ Core Spec. 4.1 □ Core Spec. 4.2 ⊠ Core Spec. 5.0 ⊠ Power Class 1 □ Power Class 2 □ Power Class 3 	 ☑ Basic Rate (BDR) ☑ Enhanced Data Rate (EDR) ☑ Low Energy (BLE) ☐ High Data Rate (HDR) 	31.11% ¹

Note¹: The maximum duty factor for BDR/EDR modes declared by the customer is limited to 34% and use DM1 packet types. The measured duty factor was 31.11% and was used for SAR evaluation.

Bluetooth												
Band		Description										
		Frequence	cy Range: 2402 - 2480 MHz	2								
	Mode	Channel Number	Channel Description	Frequency (MHz)								
		0	Low	2402.0								
Bluetooth	DDR/EDR Mode	39	Middle	2441.0								
	Mode	78	High	2480.0								
		1	Low	2404.0								
	LE Mode	19	Middle	2440.0								
		38	High	2478.0								

6.3. Nominal and Maximum Output power: Bluetooth

A2453 (Left Earbud) / A2454 (Right Earbud)

		Target + Max. Tolerances (dBm)					
Band	Channel	BDR	BLE				
Bluetooth	ALL	12.50	9.50	5.00			

7. RF Exposure Conditions (Test Configurations)

7.1. Configuration Consideration: A2453 (Left Earbud)

Technology Antenna	Configuration	Antenna-to- User Separation	Position	Antenna-to- Edge Separation (mm)	Evaluation Considered
Divete eth	Head	0.55	Touch Left	< 25	Yes
Bluetooth	Body	Unin	Flat Left	< 25	Yes

7.2. Configuration Consideration: A2454 (Right Earbud)

Technology Antenna	nna Configuration User Separation		Position	Antenna-to- Edge Separation (mm)	Evaluation Considered	
Bluetooth	Head	0mm	Touch Right	< 25	Yes	
	Body		Flat Right	< 25	Yes	

7.3. SAR Test Exclusion Consideration

Frequency Band	Configu	ration(s)
Frequency Band	Head	Body
Bluetooth	No	No

Note:

1. As per KDB 447498 D01, the frequency bands with rated power including upper tolerance, which qualify for **Standalone SAR Test Exclusion**, are as per the above table.

- 2. The details for the Maximum Rated Power and tolerances can be found in section 6.
- 3. SAR measurement is not required for EDR and BLE when secondary mode is ≤ ¼ dB higher than the primary mode (BDR).
- 4. BDR mode (12.5dBm, at 31.11% duty factor) has a source based average power of 7.4 dBm, higher than the secondary modes.

8. Conducted Output Power Measurements

8.1. RF Output Average Power Measurement: Bluetooth

A2453 (Left Earbud)

Channel Number	Frequency (MHz)	Avg Power (dBm)	Operating Mode
0	2402	12.20	PDP
39	2441	12.00	
78	2480	12.03	(GFSK)

A2454 (Right Earbud)

Channel Number	Frequency (MHz)	Avg Power (dBm)	Operating Mode
0	2402	11.80	808
39	2441	11.85	
78	2480	11.70	(GFSK)

Note:

SAR measurement is not required for EDR and BLE, when secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode (BDR).

9. Dielectric Property Measurements & System Check

9.1.Tissue Dielectric Parameters

The temperature of the tissue-equivalent medium used during measurement must also be within 18° C to 25° C and within $\pm 2^{\circ}$ C of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 - 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

IEEE 1528:2013

Target Frequency	He	ad	Body (FCC only)		
(MHz)	٤r	σ (S/m)	٤r	σ (S/m)	
150	52.30	0.76	61.90	0.80	
300	45.30	0.87	58.20	0.92	
450	43.50	0.87	56.70	0.94	
750	41.90	0.89	-	-	
835	41.50	0.90	55.20	0.97	
900	41.50	0.97	55.00	1.05	
915	41.50	0.98	55.00	1.06	
1450	40.50	1.20	54.00	1.30	
1500	40.40	1.23	-	-	
1610	40.30	1.29	53.80	1.40	
1640	40.20	1.31	-	-	
1750	40.10	1.37	-	-	
1800	40.00	1.40	53.30	1.52	
1900	40.00	1.40	53.30	1.52	
2000	40.00	1.40	53.30	1.52	
2100	39.80	1.49	-	-	
2300	39.50	1.67	-	-	
2450	39.20	1.80	52.70	1.95	
2600	39.00	1.96	-	-	
3000	38.50	2.40	52.00	2.73	
3500	37.90	2.91	-	-	
4000	37.40	3.43	-	-	
4500	36.80	3.94	-	-	
5000	36.20	4.45	49.30	5.07	
5100	36.10	4.55	49.10	5.18	
5200	36.00	4.66	49.00	5.30	
5250	35.90	4.71	48.90	5.36	
5300	35.90	4.76	48.90	5.42	
5400	35.80	4.86	48.70	5.53	
5500	35.60	4.96	48.60	5.65	
5600	35.50	5.07	48.50	5.77	
5700	35.40	5.17	48.30	5.88	
5750	35.40	5.22	48.30	5.94	
5800	35.30	5.27	48.20	6.00	
6000	35.10	5.48	-	-	

NOTE: For convenience, permittivity and conductivity values at some frequencies that are not part of the original data from Drossos et al. [B60] or the extension to 5800 MHz are provided (i.e., the values shown in italics). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6000 MHz that were linearly extrapolated from the values at 3000 MHz and 5800 MHz.

9.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

9.3. Reference Target SAR Values

The reference SAR values are obtained from the calibration certificate of system validation dipoles. The measured values are normalised to 1 Watt.

Overlage Divisio	Original Nation			Numerical SAR Target Values (W/kg)		
System Dipole	Serial No. Cal. Date Freq. (MHz		Freq. (MHZ)	1g/10g	Head	
	725 0		2450	1g	52.40	
D2450V2		08 Oct 2019		10g	24.00	

9.4. Dielectric Property Measurements & System Check Results

The 1-g SAR and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within $\pm 10\%$ of the numerical dipole SAR target. The internal limit is set to $\pm 10\%$.

Site 64

System check 2450 Head

Date: 26/03/2020

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp (℃)	Liquid Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
		20.9		٤r	39.20	39.00	-0.54	10.00
Llood	2450		20.9	Σ	1.80	1.84	1.91	10.00
Head	2450			1g (W/kg)	52.40	50.08	-4.42	10.00
				10g (W/kg)	24.00	23.34	-2.73	10.00

Date: 30/03/2020

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp (℃)	Liquid Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
		2450 20.9		٤r	39.20	40.04	2.14	10.00
Hood	2450		20.8	Σ	1.80	1.81	0.44	10.00
неаа	2450			1g (W/kg)	52.40	50.48	-3.66	10.00
				10g (W/kg)	24.00	23.54	-1.89	10.00

Notes:

1. Effective 19th February 2019, the FCC has permitted the use of the head-tissue simulating liquid specified in IEC 62209-1 for all SAR tests – "RF Exposure Procedures" TCB Presentation April 2019.

10. Measurements, Examinations and Derived Results

10.1. Specific Absorption Rate - Test Results - Model: A2453 (Left Earbud)

10.1.1. Bluetooth Head 1g Max Reported SAR = 0.02 (W/kg)

					Power	(dBm)	1g: SAR Results (W/kg)				
Mode	Dist. (mm)	EUT Position	Channel Number	Freq (MHz)	Tune Up Limit	Meas.	Meas. SAR Level	Reported SAR	Transmitting Core	Notes	Plot No.
GFSK	0	Touch Left	0	2402.0	12.50	12.20	0.01	0.02	Core 0	-	
GFSK	0	Touch Left	39	2441.0	12.50	11.85	0.02	0.02	Core 0	-	001
GFSK	0	Touch Left	78	2480.0	12.50	11.70	0.01	0.01	Core 0	-	
Note(s):		-	-								

10.1.2. Bluetooth Body 1g Max Reported SAR = 0.25 (W/kg)

					Power	(dBm)	1g: SAF (W	Results /kg)			
Mode	Dist. (mm)	EUT Position	Channel Number	Freq (MHz)	Tune Up Limit	Meas.	Meas. SAR Level	Reported SAR	Transmitting Core	Notes	Plot No.
GFSK	0	Flat Left	0	2402.0	12.50	12.20	0.23	0.25	Core 0	-	002
GFSK	0	Flat Left	39	2441.0	12.50	11.85	0.17	0.20	Core 0	-	
GFSK	0	Flat Left	78	2480.0	12.50	11.70	0.11	0.13	Core 0	-	
Note(s):											

Page 21 of 50

10.2. Specific Absorption Rate - Test Results - Model: A2454 (Right Earbud)

10.2.1. Bluetooth Head 1g Max Reported SAR = 0.02 (W/kg)

					Power	(dBm)	1g: SAF (W	Results /kg)			
Mode	Dist. (mm)	EUT Position	Channel Number	Freq (MHz)	Tune Up Limit	Meas.	Meas. SAR Level	Reported SAR	Transmitting Core	Notes	Plot No.
GFSK	0	Touch Right	0	2402.0	12.50	11.80	0.01	0.01	Core 0	-	
GFSK	0	Touch Right	39	2441.0	12.50	11.85	0.01	0.02	Core 0	-	003
GFSK	0	Touch Right	78	2480.0	12.50	11.70	0.01	0.01	Core 0	-	
Note(s):											

Note(s):

10.2.2. Bluetooth Body 1g Max Reported SAR = 0.32 (W/kg)

					Power	(dBm)	1g: SAR (W	Results /kg)			
Mode	Dist. (mm)	EUT Position	Channel Number	Freq (MHz)	Tune Up Limit	Meas.	Meas. SAR Level	Reported SAR	Transmitting Core	Notes	Plot No.
GFSK	0	Flat Right	0	2402.0	12.50	11.80	0.27	0.32	Core 0	-	004
GFSK	0	Flat Right	39	2441.0	12.50	11.85	0.21	0.25	Core 0	-	
GFSK	0	Flat Right	78	2480.0	12.50	11.70	0.17	0.21	Core 0	-	
Note(s):											

10.3. SAR Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is \geq 0.80 W/kg, repeat that measurement once.
- Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

Note: None of the measured 1g-SAR exceeded 0.8 W/Kg, hence no repeat measurements performed.

10.4. Highest Standalone Reported SAR

Individual Transmitter Evaluation per Band: Model: A2453 (Left Earbud)

Exposure Configuration	Technology Band	Reported 1g - SAR (W/Kg)	Equipment Class	Highest Reported 1g - SAR (W/Kg)
Head (Separation Distance 0mm)	Bluetooth	0.02	DSS	0.02

Exposure Configuration	Technology Band	Reported 1g - SAR (W/Kg)	Equipment Class	Highest Reported 1g - SAR (W/Kg)
Body (Separation Distance 0mm)	Bluetooth	0.25	DSS	0.25

Individual Transmitter Evaluation per Band: Model: A2454 (Right Earbud)

Exposure Configuration	Technology Band	Reported 1g - SAR (W/Kg)	Equipment Class	Highest Reported 1g - SAR (W/Kg)
Head (Separation Distance 0mm)	Bluetooth	0.02	DSS	0.02

Exposure Configuration	Technology Band	Reported 1g - SAR (W/Kg)	Equipment Class	Highest Reported 1g - SAR (W/Kg)
Body (Separation Distance 0mm)	Bluetooth	0.32	DSS	0.32

<u>11. Simultaneous Transmission Analysis</u>

Simultaneous transmission is determined for each operating configuration and exposure condition according to the *reported* standalone SAR of each applicable simultaneous transmitting antenna.

Note: DUT does support additional bands to determine the simultaneous transmission analysis.

12. Appendixes

12.1. Photos and Ports Location

Photo Reference Number	Title
PHT/001	Test configuration for the measurement of SAR Lab
	Model: A2453 (Left Earbud)
PHT/002	Touch Left
PHT/003	Flat Left
PHT/004	Front View of Radiated Sample (Left)
PHT/005	Back View of Radiated Sample (Left)
PHT/006	Front View of Conducted Sample (Left)
PHT/007	Back View of Conducted Sample (Left)
	Model: A2454 (Right Earbud)
PHT/008	Touch Right
PHT/009	Flat Right
PHT/010	Front View of Radiated Sample (Right)
PHT/011	Back View of Radiated Sample (Right)
PHT/012	Front View of Conducted Sample (Right)
PHT/013	Back View of Conducted Sample (Right)

12.2. System Check Plots

This appendix contains the following system validation distribution scans.

Scan Reference Number	Title
SYS/001	System Check 2450MHz Head (Site 64) - 26 03 20
SYS/002	System Check 2450MHz Head (Site 64) - 30 03 20

SYS/001: System Check 2450MHz Head (Site 64) - 26 03 20 Date: 26/03/2020 **DUT: D2450V2;Type: Dipole; Serial: SN725;**



Communication System: CW UID: 0; Frequency: 2450.0 MHz; Duty Cycle: 1;

Medium: HSL Site64_25Mar2020_143948_Head; Medium parameters used: f = 2450.0 MHz; σ = 1.84 S/m; ϵ r = 39.0; ρ = 1000 kg/m3; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019
- Sensor-Surface: 3.0 mm; Mother Scan
- Electronics: DAE4 SN450; Calibrated:09/10/2019
- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832
- DASY Software Version: 6.8.2.24

Area Scan (48x96): Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30):Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 2.98 V/m; Power Drift = -0.01 dB

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.17 W/kg

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Page 41 of 50

SYS/002: System Check 2450MHz Head (Site 64) - 30 03 20 Date: 30/03/2020 **DUT: D2450V2;Type: Dipole; Serial: SN725;**



Communication System: CW UID: 0; Frequency: 2450.0 MHz; Duty Cycle: 1; Medium: HSL Site64_30Mar2020_093011_Head; Medium parameters used: f = 2450.0 MHz; $\sigma = 1.81$ S/m; $\epsilon r = 40.0$; $\rho = 1000$ kg/m3; No correction Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 - SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019

- Sensor-Surface: 3.0 mm; Mother Scan

- Electronics: DAE4 - SN450; Calibrated:09/10/2019

- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832

- DASY Software Version: 6.8.2.24

Area Scan (48x96):Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30): Measurement grid: dx=5.0 mm, dy=5.0 mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value =

3.59 V/m; Power Drift = -0.02 dB

SAR(1 g) = 2.53 W/kg; SAR(10 g) = 1.18 W/kg

12.3. SAR Test Plots

Scan Reference Number	Title
SAR/001	Touch Left 0mm BT Core0 CH39
SAR/002	Flat Left 0mm BT Core0 CH0
SAR/003	Touch Right 0mm BT Core0 CH39
SAR/004	Flat Right 0mm BT Core0 CH0



Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH1) UID: 10030; Frequency: 2441.0 MHz; Duty Cycle: 0.31; Medium: HSL Site64_30Mar2020_093011_Head; Medium parameters used: f = 2441.0 MHz; $\sigma = 1.80 \text{ S/m}$; $\epsilon r = 40.1$; $\rho = 1000 \text{ kg/m3}$; No correction Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019
- Sensor-Surface: 3.0 mm; Mother Scan
- Electronics: DAE4 SN450; Calibrated:09/10/2019
- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832
- DASY Software Version: 6.8.2.24

Area Scan (120x120): Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30): Measurement grid: dx=5.0 mm, dy=5.0 mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value =

0.02 V/m; Power Drift = -0.13 dB

SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.006 W/kg



Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH1) UID: 10030; Frequency: 2402.0 MHz; Duty Cycle: 0.31; Medium: HSL Site64_30Mar2020_093011_Head; Medium parameters used: f = 2402.0 MHz; $\sigma = 1.78 \text{ S/m}$; $\epsilon r = 40.1$; $\rho = 1000 \text{ kg/m3}$; No correction Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 - SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019

- Sensor-Surface: 3.0 mm; Mother Scan

- Electronics: DAE4 - SN450; Calibrated:09/10/2019

- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832

- DASY Software Version: 6.8.2.24

Area Scan (96x72):Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30):Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value =

0.35 V/m; Power Drift = -0.02 dB

SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.076 W/kg



Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH1) UID: 10030; Frequency: 2441.0 MHz; Duty Cycle: 0.31; Medium: HSL Site64_25Mar2020_143948_Head; Medium parameters used: f = 2441.0 MHz; σ = 1.83 S/m; ϵ r = 39.0; ρ = 1000 kg/m3; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019
- Sensor-Surface: 3.0 mm; Mother Scan
- Electronics: DAE4 SN450; Calibrated:09/10/2019
- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832
- DASY Software Version: 6.8.2.24

Area Scan (96x72):Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30):Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 0.01 V/m; Power Drift = 0.08 dB

SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.007 W/kg



Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH1) UID: 10030; Frequency: 2402.0 MHz; Duty Cycle: 0.31; Medium: HSL Site64_25Mar2020_143948_Head; Medium parameters used: f = 2402.0 MHz; σ = 1.80 S/m; ϵ r = 39.1; ρ = 1000 kg/m3; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 SN3341; ConvF (4.52, 4.52, 4.52); Calibrated:23/08/2019
- Sensor-Surface: 3.0 mm; Mother Scan
- Electronics: DAE4 SN450; Calibrated:09/10/2019
- Phantom Type: Twin-SAM V5.0 (30deg probe tilt); Serial: 1832
- DASY Software Version: 6.8.2.24

Area Scan (96x72):Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30):Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 0.36 V/m; Power Drift = -0.03 dB

SAR(1 g) = 0.272 W/kg; SAR(10 g) = 0.086 W/kg

Page 47 of 50

12.4. Calibration Certificate for E-Field Probes

This sub-section contains Cal Certificates for E-Field Probes, and is not included in the total number of pages for this report.

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Checked

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

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

UL RFI UK Client

Certificate No: ES3-3341_Aug19

Schweizerischer Kalibrierdienst

Service suisse d'étalonnage

Servizio svizzero di taratura

Swiss Calibration Service

Accreditation No.: SCS 0108

CALIBRATION CERTIFICATE

ES3DV3 - SN:3341 QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure(s) Calibration procedure for dosimetric E-field probes

Calibration date:

Object

August 23, 2019

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	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	40
Approved by:	Katja Pokovic	Technical Manager	dette
			Issued: August 24, 2019
This calibration certificate	e shall not be reproduced except in ful	I without written approval of the laborator	ry.

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Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst

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

Accreditation No.: SCS 0108

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

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 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
	i.e., 9 = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3341

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.98	1.34	1.17	± 10.1 %
DCP (mV) ^B	106.5	102.3	101.3	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev.	Max Unc ^E (k=2)	
0	CW	X	0.00	0.00	1.00	0.00	218.5	± 3.8 %	±4.7 %	
		Y	0.00	0.00	1.00		193.0			
		Z	0.00	0.00	1.00		206.0		·	
10352-	Pulse Waveform (200Hz, 10%)	X	15.00	88.74	23.28	10.00	60.0	± 1.7 %	± 9.6 %	
AAA	- and the second second	Y	15.00	88.64	23.35		60.0			
	And a second sec	Z	14.32	88.06	23.28		60.0			
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	89.37	22.05	6.99	80.0	± 1.7 %	± 9.6 %	
AAA	1	Y	15.00	88.93	21.89		80.0			
2012	The second se	Z	15.00	89.15	22.11		80.0			
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	91.65	21.40	3.98	95.0	± 3.0 %	±9.6 %	
AAA		Y	15.00	90.12	20.58	1.000	95.0	100 100		
		Z	15.00	91.03	21.19		95.0		1.0	
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	95.88	21.94	2.22	120.0	± 3.3 %	± 9.6 %	
AAA		Y	15.00	92.68	20.21		120.0			
		Z	15.00	94.01	21.03		120.0			
10387-	QPSK Waveform, 1 MHz	X	1.09	66.91	12.66	0.00	150.0	± 2.3 %	±9.6 %	
AAA	A State and a state of a state of a	Y	0.72	61.25	9.20	18		150.0		
7001		Z	0.91	63.65	11.04		150.0	1	in the second second	
10388-	OPSK Waveform, 10 MHz	X	2.64	71.13	17.30	0.00	150.0	± 1.1 %	± 9.6 %	
AAA		Y	2.15	67.14	15.07	0.000	150.0		1.1	
		Z	2.39	68.91	15.99		150.0	11-1-1		
10396-	64-QAM Waveform, 100 kHz	X	4.37	77.52	21.84	3.01	150.0	±0.6 %	± 9.6 %	
AAA		Y	3.19	70.64	18.77	1966	150.0	1	1.000	
		Z	3.56	72.86	19.76		150.0	and and	1 COLOR	
10399-	64-QAM Waveform, 40 MHz	X	3.62	68.01	16.29	0.00	150.0	± 1.8 %	± 9.6 %	
AAA		Y	3.47	66.78	15.49		150.0	0.0	the second logist	
		Z	3.48	66.97	15.63		150.0			
10414-	WLAN CCDF, 64-QAM, 40MHz	X	4.93	65.98	15.73	0.00	150.0	± 3.7 %	± 9.6 %	
AAA	The state of the state of the state of the	Y	4.90	65.53	15.42		150.0]	Contra (S)	
~~~~		Z	4.86	65.41	15.35	1.000	150.0			

Note: For details on UID parameters see Appendix

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 E²-field uncertainty inside TSL (see Page 5).

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

^B Numerical linearization parameter: uncertainty not required.

# DASY/EASY - Parameters of Probe: ES3DV3 - SN:3341

#### 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	Т6
X	52.5	367.97	34.11	27.10	2.07	5.09	1.70	0.26	1.01
Y	53.4	388.09	36.07	29.11	2.23	5.10	0.68	0.49	1.01
Z	57.3	407.69	34.81	28.63	2.25	5.10	0.98	0.42	1.01

#### **Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	56.4
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

# DASY/EASY - Parameters of Probe: ES3DV3 - SN:3341

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	6.54	6.54	6.54	0.64	1.30	± 12.0 %
835	41.5	0.90	6.31	6.31	6.31	0.50	1.49	± 12.0 %
900	41.5	0.97	6.14	6.14	6.14	0.76	1.22	± 12.0 %
1750	40.1	1.37	5.32	5.32	5.32	0.79	1.20	± 12.0 %
1900	40.0	1.40	5.08	5.08	5.08	0.58	1.38	± 12.0 %
2100	39.8	1.49	5.06	5.06	5.06	0.80	1.25	± 12.0 %
2300	39.5	1.67	4.74	4.74	4.74	0.71	1.31	± 12.0 %
2450	39.2	1.80	4.52	4.52	4.52	0.71	1.40	± 12.0 %
2600	39.0	1.96	4.40	4.40	4.40	0.80	1.35	± 12.0 %
3500	37.9	2.91	4.06	4.06	4.06	0.85	1.45	± 13.1 %

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

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

^F At frequencies below 3 GHz, the validity of tissue parameters ( $\varepsilon$  and  $\sigma$ ) can be relaxed to  $\pm$  10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\varepsilon$  and  $\sigma$ ) is restricted to  $\pm$  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

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

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**

Certificate No: ES3-3341_Aug19

# **Appendix: Modulation Calibration Parameters**

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (k=2)
0	1	CW	CW	0.00	±4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	±9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	±9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	±9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	±9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	±9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	±9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6 %
10065	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6 %
10067	CAC	IEEE 802.11a/n WIFI 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/n WIFI 5 GHZ (OFDM, 48 Mbps)	WLAN	10.24	±9.6 %
10009	CAC		WLAN	10.56	±9.6 %
10071	CAB	IEEE 802.11g WIFI 2.4 GHZ (DSSS/OFDIM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 002.11g WIFI 2.4 GHZ (DSSS/OFDIM, 12 Mibps)	VVLAN	9.62	±9.6%
10073	CAB	IEEE 802.11g WIFI 2.4 GHZ (DSSS/OFDIN, 18 Mipps)	VVLAN	9.94	±9.6 %
10074	CAB	IEEE 802.11g WIFI 2.4 GHZ (DSSS/OFDM, 24 Mpps)	VVLAN	10.30	±9.6 %
10075	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 30 Mbps)	WLAN	10.77	± 9.6 %
10070	CAB	IEEE 802.11g WIFI 2.4 GHZ (DSSS/OFDM, 48 Mbps)	VVLAN	10.94	± 9.6 %
10077	CAB	CDMA2000 (12PTT BC2)	VVLAN	11.00	± 9.6 %
10087	CAB	IS 54 / IS 136 EDD (TDMA/EDM DI/4 DODSK Euliroto)		3.97	± 9.6 %
10002	DAC	GPRS EDD (TDMA GMSK TN 0.4)	AIVIPS	4.11	± 9.6 %
10090	CAB	LIMTS-EDD (HSDRA)	GSIVI	0.00	±9.6%
10097	CAR	LIMTS-FDD (HSUPA Subtest 2)	WODMA	3.98	± 9.0 %
10000	DAC	EDGE-EDD (TDMA 8PSK TN 0.4)	COM	0.55	19.0%
10100	CAE	LTE-EDD (SC-EDMA 100% PB 20 MH- OPSK)		9.00	19.0%
10101	CAE	TE-EDD (SC-EDMA 100% RP 20 MHz 16 00M)		5.07	19.0%
10102	CAF	LTE-EDD (SC-EDMA 100% RB 20 MHz 64 OAM)		6.60	19.0%
10102	CAG	LTE-TOD (SC-EDMA 100% RB 20 MHz OPSK)		0.00	10.6 %
10104	CAG	LTE-TOD (SC-EDMA 100% RB 20 MHz 46 0AM)		9.29	19.0%
10105	CAG	LTE-TDD (SC-FDMA 100% RB 20 MHz, 64-04M)	ITE-TOD	10.01	+06%
10108	CAG	LTE-EDD (SC-EDMA 100% RB 10 MHz OPSK)		5.80	+0.6 %
.0100	0,10			0.00	1 9.0 %

10100	CAG	LTE-EDD (SC-EDMA 100% RB 10 MHz 16-QAM)	LTE-FDD	6.43	± 9.6 %
10100	CAG	LTE EDD (SC EDMA 100% RB 5 MHz OPSK)	I TE-FDD	5.75	± 9.6 %
10110	CAG	LTE FDD (SC FDMA, 100% RB 5 MHz, 16 OAM)	I TE-EDD	644	+96%
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 3 MHZ, 10-QAM)	LTE-EDD	6.59	+96%
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)		6.62	+ 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHZ, 64-QAM)		0.02	+0.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	VVLAN	8.10	± 9.0 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802 11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6 %
10140	CAE	LTE-EDD (SC-EDMA 100% RB 15 MHz 16-QAM)	LTE-FDD	6.49	±9.6 %
10140	CAE	LTE EDD (SC EDMA 100% RB 15 MHz, 64-OAM)	LTE-FDD	6.53	± 9.6 %
10141	CAE	LTE EDD (SC EDMA, 100% PB, 3 MHz, OPSK)	I TE-EDD	5.73	+9.6 %
10142	CAE	LTE-FDD (30-FDMA, 100% RB, 3 MHz, QF 3R)	LTE-EDD	6.35	+96%
10143	CAE	LTE-FDD (SC-FDMA, 100% RD, 3 MHz, 10-QAM)		6.65	+96%
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHZ, 64-QAM)		5.76	+0.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LIE-FDD	5.70	19.0 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LIE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-EDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6 %
10152	CAG	LTE-TDD (SC-EDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10153	CAG	LTE-EDD (SC-EDMA 50% RB 10 MHz OPSK)	LTE-FDD	5.75	± 9.6 %
10154	CAG	LTE-FDD (SC FDMA, 50% RB, 10 MHz, 16-0AM)	I TE-EDD	6.43	+9.6 %
10155	CAG	LTE-FDD (SC-FDIMA, 50% RB, 10 WHZ, 10-GAW)	LTE-FDD	5 79	+96%
10156	CAG	LTE-FDD (SC-FDIMA, 50% RB, 5 MHZ, QFSK)	I TE EDD	6.19	+96%
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)		6.62	+96%
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LIE-FDD	0.02	± 9.0 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LIE-FDD	0.00	19.0 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LIE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6%
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-EDD (SC-EDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10160	CAE	LTE-EDD (SC-EDMA 1 RB 20 MHz OPSK)	LTE-FDD	5.73	± 9.6 %
10109	CAE	LTE EDD (SC EDMA 1 RB 20 MHz 16-OAM)	LTE-FDD	6.52	± 9.6 %
10170	DAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-0AM)	I TE-EDD	6.49	+9.6 %
10171	AAE	LTE-FDD (SC-FDIMA, TRB, 20 MILZ, 04-QAM)	LTE-TOD	9.21	+96%
10172	CAG	LTE-TDD (SC-FDMA, TRB, 20 MHz, QFSR)		9.48	+96%
10173	CAG	LTE-IDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)		10.25	+96%
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LIE-IDD	10.25	19.0 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LIE-FDD	5.72	± 9.0 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LIE-FUD	0.52	19.0 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAF	I TE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10102	AAD	LTE-EDD (SC-EDMA 1 RB 15 MHz 64-QAM)	LTE-FDD	6.50	± 9.6 %
10103	CAE	LTE-EDD (SC-EDMA 1 RB 3 MHz OPSK)	LTE-FDD	5.73	± 9.6 %
10184	CAE	LTE EDD (SC EDMA 1 PR 3 MHz 16-0AM)	I TE-FDD	6.51	± 9.6 %
10185	CAE	LTE-FDD (SO-FDIVIA, TRD, 3 WITZ, 10-QAW)	I TE-EDD	6.50	±9.6 %
10186	AAE		I TE-EDD	5.73	+96%
10187	CAF	LIE-FUD (SC-FUMA, 1 KB, 1.4 MHZ, QPSK)		6.52	+96%
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)		0.52	+0.6 0/
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LIE-FUD	0.50	19.0 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10107	CAC	IEEE 802.11n (HT Mixed. 39 Mbps. 16-QAM)	WLAN	8.13	± 9.6 %
10109	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10210	CAC	IEEE 802 11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
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August 23, 2019

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10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	+9.6%
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WIAN	8.06	+96%
10223	CAC	IFEE 802 11n (HT Mixed 90 Mbps 16-0AM)		0.00	+0.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 36 Mbps, 10 GAM)	VVLAN	0.40	19.0 %
10225	CAR	LIMTS EDD (LEDA.)	WLAN	8.08	± 9.6 %
10225	CAD		WCDMA	5.97	± 9.6 %
10226	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6 %
10228	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6 %
10229	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	I TE-TDD	9.48	+96%
10230	CAD	TE-TDD (SC-EDMA 1 RB 3 MHz 64-OAM)	I TE TOD	10.25	+0.6%
10231	CAD	LTE-TOD (SC-EDMA 1 PB 3 MHz OPSK)	LTE TOD	0.10	10.0%
10227	CAC	LTE TOD (SO FDMA 4 DB F MULE 40 OAM)	LIE-IDD	9.19	±9.6 %
10232	CAG	LTE-TOD (SC-FDIMA, TRB, 5 MHZ, TO-QAM)	LIE-IDD	9.48	±9.6%
10233	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	±9.6 %
10234	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10235	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
10236	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	+96%
10237	CAG	LTE-TDD (SC-EDMA 1 RB 10 MHz OPSK)	LTE-TDD	9.21	+96%
10238	CAE	LTE-TDD (SC-EDMA, 1 PB, 15 MHz, 16 OAM)	LTE TOD	0.49	10.6 %
10200	CAE	LTE TOD (CO FDMA, 1 RD, 15 MILE, 04 OAM)	LTE-TOD	9.40	± 9.0 %
10239	CAF	LTE-TOD (SC-FDMA, TRB, 15 MHZ, 64-QAM)	LIE-IDD	10.25	± 9.6 %
10240	CAF	LTE-TUD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	±9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz. 16-QAM)	LTE-TDD	10.06	±9.6 %
10245	CAD	LTE-TDD (SC-EDMA, 50% RB, 3 MHz, 64-QAM)	I TE-TOD	10.06	+96%
10246	CAD	LTE-TDD (SC-EDMA 50% RB 3 MHz OPSK)	LTE TOD	0.30	+0.6%
10247	CAG	1 TE TDD (SC EDMA, 50% PB 5 MHz, 46 OAM)		9.50	19.0 %
10247	CAG	LTE-TOD (SC-FDIMA, 50% RB, 5 MHZ, 10-QAIM)	LIE-IDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHZ, 64-QAM)	LIE-IDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	±9.6 %
10252	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	±9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM)	I TE-TDD	9.90	+96%
10254	CAF	LTE-TDD (SC-EDMA 50% BB 15 MHz 64-OAM)	LTE-TOD	10.14	+96%
10255	CAF	LTE-TOD (SC-EDMA 50% PB 15 MHz OPSK)		0.20	+0.6.%
10255	CAP	LTE TDD (SC EDMA, 30% ND, 13 WHZ, GESK)	LTE-TOD	9.20	± 9.0 %
10250	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LIE-IDD	9.96	±9.6 %
10257	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHZ, 64-QAM)	LIE-IDD	10.08	±9.6%
10258	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6 %
10261	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6 %
10262	CAG	LTE-TDD (SC-EDMA, 100% RB, 5 MHz, 16-OAM)	I TE-TDD	9.83	+96%
10263	CAG	LTE-TDD (SC-EDMA 100% RB 5 MHz 64-OAM)	LTE TOD	10.16	+96%
10260	CAG	LTE TOD (SC EDMA, 100% PB 5 MHz, OPSK)		0.22	+06%
10204	CAC	LTE TOD (SC EDMA 400% DB 40 MU- 40 OAM)		9.23	1 0.0 %
10200	CAG	LTE-TOD (SC-FDIVIA, 100% RD, 10 WHZ, 10-QAW)		9.92	19.0%
10200	CAG	LTE-TUD (SC-FUWA, 100% RB, 10 MHZ, 64-QAM)	LIE-IDD	10.07	± 9.6 %
10267	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	±9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	±9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, OPSK)	LTE-TDD	9.58	±9.6 %
10274	CAB	UMTS-EDD (HSUPA, Subtest 5, 3GPP Rel8 10)	WCDMA	4.87	+96%
10275	CAR	LIMTS-EDD (HSLIPA Subtect 5 3GPP Role 4)	WCDMA	3.06	+96%
10277	CAA	DHQ (ODCK)	DUS	14.04	10.0%
10277	CAA		DUO	11.01	19.0%
10278	CAA		PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	±9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	±9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	±9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6 %
10295	AAB	CDMA2000 RC1 SO3 1/8th Rate 25 fr	CDMA2000	12.49	+96%
10207		ITE-EDD (SC-EDMA 50% PR 20 MH- ODOK)	I TE EDD	5.94	+0.6 %
10297				5.01	10.0%
10298	AAD	LTE-FUD (SC-FUMA, SU% KB, 3 MHZ, QPSK)	LIE-FDD	5.72	± 9.0 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LIE-FDD	6.39	± 9.6 %

			Limminan		1
10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	± 9.6 %
10302	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL	WIMAX	12.57	± 9.6 %
	der	symbols)	1		
10303	AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	± 9.6 %
10304	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	± 9.6 %
10305	AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15	WIMAX	15.24	± 9.6 %
		symbols)		1.18.11	
10306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18	WiMAX	14.67	± 9.6 %
12010	1000	symbols)		1.000	1
10307	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18	WiMAX	14.49	± 9.6 %
	1.2.3.4	symbols)		11.205	
10308	AAA	IEEE 802,16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	± 9.6 %
10309	AAA	IEEE 802,16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18	WIMAX	14.58	± 9.6 %
		symbols)		11112	
10310	AAA	IEEE 802,16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18	WIMAX	14.57	± 9.6 %
		symbols)			
10311	AAD	LTE-EDD (SC-EDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAA	IDEN 1:3	IDEN	10.51	± 9.6 %
10314	ΔΔΔ	IDEN 1:6	IDEN	13.48	± 9.6 %
10315	AAR	IEEE 802 11h WiEi 2 4 GHz (DSSS 1 Mbps 96pc duty cycle)	WLAN	1.71	+9.6 %
10316	AAP	IEEE 802 11a WiFi 2 4 GHz (ERP-OEDM 6 Mbre 96nc duty cycle)	WLAN	8.36	+9.6 %
10310	AAD	IEEE 802.11g WIFI 2.4 GHZ (CENF-OF DM, 0 Mbps, 50pc ddy cycle)	WLAN	8.36	+96%
10317	AAC	Rules Wayeform (200Hz, 10%)	Generic	10.00	+96%
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	6.00	+96%
10353	AAA	Pulse Waveform (200Hz, 20%)	Ceneric	0.99	19.0 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.90	19.0 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.0 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.0 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
10110		Subframe=2.3.4.7.8.9. Subframe Conf=4)			
10414	AAA	WLAN CCDF 64-QAM 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802 11b WiEi 2 4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	± 9.6 %
10416	ΔΔΔ	IEEE 802 11a WiFi 2 4 GHz (ERP-OEDM 6 Mbns 99nc duty cycle)	WLAN	8.23	± 9.6 %
10410	AAB	IEEE 802 11a/b WiEi 5 GHz (OEDM 6 Mbns 99nc duty cycle)	WLAN	8.23	+ 9.6 %
10417		IEEE 802 11a WiEi 2 4 GHz (DSSS-OEDM 6 Mbps, 99pc duty cycle	WLAN	8 14	+9.6 %
10410	1000	Long preambule)			
10/10		IEEE 802 11a WiEi 2 4 GHz (DSSS-OEDM 6 Mbns 99nc duty cycle	WLAN	8.19	±9.6 %
10419	~~~	Short preambule)		0.10	
40400		Short preambule)		8 32	+96%
10422	AAB	IEEE 002.1111 (TT Greenfield, 7.2 Mbps, DFOK)	WLAN	8.47	+96%
10423	AAB	IEEE 002.1111 (FT Greenfield, 43.3 Mbps, 10-QAM)		8.40	+96%
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)		0.40	+06%
10425	AAB	IEEE 802.11n (HI Greenfield, 15 Mbps, BPSK)		0.41	+0.0 %
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	0.45	19.0%
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	±9.0%
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LIE-FDD	8.28	± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LIE-FDD	8.38	± 9.6 %
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
	1997	Subframe=2,3,4,7,8,9)			
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10440	AAC	LTE-EDD (OEDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAC	LTE-EDD (OEDMA 20 MHz E-TM 3.1 Clipping 44%)	LTE-FDD	7.48	± 9.6 %
10400	1000				

10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7 50	+96%
10456	AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	+96%
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	+96%
10458	AAA	CDMA2000 (1xEV-DO, Rev. B. 2 carriers)	CDMA2000	6.55	+96%
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	+96%
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2 30	+96%
10461	AAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2.3.4.7.8.9)	LTE-TDD	7.82	± 9.6 %
10462	AAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2.3.4.7.8.9)	LTE-TDD	8.30	± 9.6 %
10463	AAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.56	±9.6 %
10464	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2.3.4.7.8.0)	LTE-TDD	7.82	± 9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2 3 4 7 8 9)	LTE-TDD	8.32	± 9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2 3 4 7 8 9)	LTE-TDD	8.57	± 9.6 %
10467	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2 3 4 7 8 9)	LTE-TDD	7.82	±9.6 %
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2 3 4 7 8 9)	LTE-TDD	8.32	± 9.6 %
10469	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2 3 4 7 8 9)	LTE-TDD	8.56	±9.6 %
10470	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2.3.4.7.8.9)	LTE-TDD	7.82	± 9.6 %
10471	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10479	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6 %
10480	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6 %
10481	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6 %
10482	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	±9.6 %
10483	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±9.6 %
10484	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±9.6 %
10485	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±9.6 %
10486	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±9.6 %
10487	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±9.6 %
10488	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	±9.6 %
10489	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6 %
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6 %

August 23, 2019

Diag         Are         Life ToD (Set Probability of WR, R) is Mirz, 16:02M, 0L         Life ToD         0.43           10433         AAE         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability of WR, R) is Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL         Life ToD (Set Probability OW, RB, 51:Mirz, 64:0AM, UL <th>10100</th> <th>LAAF.</th> <th>LTE TOD (SC EDMA EOV DR 15 MHZ 16 OAM III</th> <th>LTE-TOD</th> <th>841</th> <th>+96%</th>	10100	LAAF.	LTE TOD (SC EDMA EOV DR 15 MHZ 16 OAM III	LTE-TOD	841	+96%
10493         AAE         Distribution Color May Neg, 15 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10494         AAF         LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10493         AAF         LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 46-QAM, UL         LTE-TDD         8.37         ± 9.6 %           10496         AAF         LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 46-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10496         AAF         LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.64         ± 9.6 %           10497         AAB         LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 0FSK, UL         LTE-TDD         8.64         ± 9.6 %           10498         AAB         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 0FSK, UL         LTE-TDD         8.68         ± 9.6 %           10499         AAB         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 0FGAM, UL         LTE-TDD         8.64         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 0FGAM, UL         LTE-TDD         8.62         ± 9.6 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0FGAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAF         LTE-TDD (SC-FD	10492	AAE	LTE-TDD (SC-FDIVIA, 50% KB, 15 MIHZ, 10-QAW, 0L	LIE-IDD	0.41	1 0.0 70
Interson         Are         Energy of a start st	40402		Subirame=2,3,4,7,0,9)	I TE-TOD	8 55	+96%
10494         AF         Distributes (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	10493	AAE	LTE-TDD (SC-FDIVIA, 50% KB, 15 MIHZ, 04-QAWI, 0L	LILIDD	0.00	1 0.0 /0
Name         Subframe-2.3.4.7.89         Mark 10         Los Subframe-2.3.4.7.89           10496         AAF         LTE-TOD         8.37         ± 9.6 %           10496         AAF         LTE-TOD         8.37         ± 9.6 %           10496         AAF         LTE-TOD         8.54         ± 9.6 %           10497         AAF         LTE-TOD         8.564         ± 9.6 %           10497         AAB         LTE-TOD         8.664         ± 9.6 %           10498         AAB         LTE-TOD         7.67         ± 9.6 %           10498         AAB         LTE-TOD         8.640         ± 9.6 %           10499         AAB         LTE-TOD         7.67         ± 9.6 %           10499         AAB         LTE-TOD         7.67         ± 9.6 %           10500         AAC         LTE-TOD (% RB, 1.4 MHz, 64-QAM, UL         LTE-TOD         7.67         ± 9.6 %           10501         AAC         LTE-TOD (% RB, 3 MHz, QPSK, UL         LTE-TOD         8.64         ± 9.6 %           10502         AAC         LTE-TOD (% RB, 3 MHz, GA-QAM, UL         LTE-TOD         8.52         ± 9.6 %           10503         AAF         LTE-TOD (% RB, 5 MHz, 16-QAM, UL         LTE-TOD	10404	AAE	LTE-TOD (SC-EDMA 50% RB 20 MHz OPSK U	LTE-TDD	7.74	+9.6 %
10485         AAF         LTE-TDD         (62-FDMA, 50%, RB, 20 MHz, 16-QAM, UL)         LTE-TDD         8.37         ± 9.6 %           10496         AAF         LTE-TDD         (62-FDMA, 50%, RB, 20 MHz, 64-QAM, UL)         LTE-TDD         8.54         ± 9.6 %           10497         AAB         LTE-TDD (5C-FDMA, 100%, RB, 1.4 MHz, 16-QAM, UL)         LTE-TDD         8.64         ± 9.6 %           10497         AAB         LTE-TDD (5C-FDMA, 100%, RB, 1.4 MHz, 16-QAM, UL)         LTE-TDD         8.40         ± 9.6 %           10498         AAB         LTE-TDD (5C-FDMA, 100%, RB, 1.4 MHz, 16-QAM, UL)         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (5C-FDMA, 100%, RB, 3 MHz, 04-QAM, UL)         LTE-TDD         7.67         ± 9.6 %           10501         AAC         LTE-TDD (5C-FDMA, 100%, RB, 3 MHz, 04-QAM, UL)         LTE-TDD         8.44         ± 9.6 %           10501         AAC         LTE-TDD (5C-FDMA, 100%, RB, 5 MHz, 0FSA, UL)         LTE-TDD         8.52         ± 9.6 %           10502         AAC         LTE-TDD (5C-FDMA, 100%, RB, 5 MHz, 0FSA, UL)         LTE-TDD         8.52         ± 9.6 %           10503         AAF         LTE-TDD (5C-FDMA, 100%, RB, 5 MHz, 0FSA, UL)         LTE-TDD         8.54         ± 9.6 % <td< td=""><td>10454</td><td></td><td>Subframe=2.3.4.7.8.9)</td><td>212 100</td><td></td><td></td></td<>	10454		Subframe=2.3.4.7.8.9)	212 100		
Number Office         Subframe-23.4.7.8.9)         Image of the state of the stat	10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.37	± 9.6 %
10466         AAF         LTE-TDD         8.54         ± 9.8 %           10467         AAB         LTE-TDD         8.54         ± 9.8 %           10467         AAB         LTE-TDD         7.67         ± 9.8 %           10468         AAB         LTE-TDD         7.67         ± 9.8 %           10468         AAB         LTE-TDD         8.40         ± 9.6 %           10469         AAB         LTE-TDD         8.40         ± 9.6 %           10469         AAB         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 04-QAM, UL         LTE-TDD         8.68         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 04-QAM, UL         LTE-TDD         8.44         ± 9.6 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10503         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL	10100		Subframe=2.3.4.7.8.9)			1.000
Subframe-2,3,4,7,8,9)         LTE-TDD         7.67         ± 9.8 %           10497         AAB         LTE-TDD (SC-FDMA, 100% RB, 14 MHz, GPSK, UL         LTE-TDD         8.40         ± 9.8 %           10498         AAB         LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM, UL         LTE-TDD         8.40         ± 9.8 %           10499         AAB         LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM, UL         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LTE-TDD         8.64         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LTE-TDD         8.44         ± 9.6 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10503         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD	10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10447         AAB         LTE-TDD         7.67         ± 9.8 %           10488         AAB         LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL         LTE-TDD         8.40         ± 9.6 %           10498         AAB         LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QFSK, UL         LTE-TDD         8.68         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL         LTE-TDD         8.64         ± 9.8 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL         LTE-TDD         8.44         ± 9.8 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.52         ± 9.8 %           10503         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.51         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 04-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 04-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 04-QAM, UL         LTE-T			Subframe=2,3,4,7,8,9)			
Subframe-2,3,4,7,8,9)         LTE-TOD         8.40         ± 9.6 %           10498         AAB         LTE-TOD         8.40         ± 9.6 %           10499         AAB         LTE-TOD         8.68         ± 9.6 %           10500         AAC         LTE-TOD         8.68         ± 9.6 %           10500         AAC         LTE-TOD         8.64         ± 9.6 %           10501         AAC         LTE-TOD         8.44         ± 9.6 %           10502         AAC         LTE-TOD         8.44         ± 9.6 %           10503         AAC         LTE-TOD (5C-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAC         LTE-TDD (5C-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAF         LTE-TDD (5C-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10504         AAF         LTE-TDD (5C-FDMA, 100% RB, 5 MHz, 0PSK, UL         LTE-TDD         8.31         ± 9.6 %           10506         AAF         LTE-TDD (5C-FDMA, 100% RB, 10 MHz, 0PSK, UL         LTE-TDD         8.54         ± 9.6 %           10507         AAF         LTE-TDD (5C-FDMA, 100% RB, 10 MHz, 0PSK, UL	10497	AAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.67	± 9.6 %
10488         AAB         LTE-TDD         8.40         ± 9.6 %           10499         AAB         LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL         LTE-TDD         7.67         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL         LTE-TDD         8.44         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL         LTE-TDD         8.52         ± 9.6 %           10503         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL         LTE-TDD         8.31         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G-QAM, UL         LTE-TDD         8.34         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G-QAM, UL         LTE-TDD         8.34         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G-QAM, UL         LTE-TDD         8.49 ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55 <td></td> <td></td> <td>Subframe=2,3,4,7,8,9)</td> <td></td> <td></td> <td></td>			Subframe=2,3,4,7,8,9)			
Subframe-2,3,4,7,8,9)         LTE-TDD         8.68         ± 9.6 %           10500         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL         LTE-TDD         7.67         ± 9.6 %           10501         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL         LTE-TDD         8.44         ± 9.6 %           10502         AAC         LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LTE-TDD         8.44         ± 9.6 %           10503         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAC         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         8.54         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD	10498	AAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.40	± 9.6 %
10499         AAB         LTE-TDD         8.69         ± 95.%           10500         AAC         LTE-TDD         10507         AAC         LTE-TDD         7.67         ± 95.%           10501         AAC         LTE-TDD         10507         AAS         1.0507         4.95.%           10501         AAC         LTE-TDD         10507         8.44         ± 95.%           10502         AAC         LTE-TDD         10507         8.44         ± 95.%           10503         AAF         LTE-TDD ISC-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LTE-TDD         8.52         ± 9.6 %           10504         AAF         LTE-TDD ISC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10505         AAF         LTE-TDD ISC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD ISC-FDMA, 100% RB, 5 MHz, 0PSK, UL         LTE-TDD         8.54         ± 9.6 %           10507         AAF         LTE-TDD ISC-FDMA, 100% RB, 10 MHz, 0PSK, UL         LTE-TDD         7.74         ± 9.6 %           10508         AAF         LTE-TDD ISC-FDMA, 100% RB, 10 MHz, 0PSK, UL         LTE-TDD         7.99         ± 9.6 %           10507			Subframe=2,3,4,7,8,9)		0.00	
Subframe=2,3,4,7,8,9         ITE-TDD         7.67         ± 9.6 %           10500         AAC         LTE-TDD         7.67         ± 9.6 %           10501         AAC         LTE-TDD         8.44         ± 9.6 %           10502         AAC         LTE-TDD         8.54         ± 9.6 %           10503         AAC         LTE-TDD         8.52         ± 9.6 %           10504         AAC         LTE-TDD         8.57 / 8.9         9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10510         AAE <td>10499</td> <td>AAB</td> <td>LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL</td> <td>LIE-IDD</td> <td>8.68</td> <td>± 9.6 %</td>	10499	AAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL	LIE-IDD	8.68	± 9.6 %
10500         AAC         LTE-TDD         (SoldTame2,3,4,7,8)           10501         AAC         LTE-TDD         (SoldTame2,3,4,7,8)           10502         AAC         LTE-TDD         (SoldTame2,3,4,7,8)           10503         AAF         LTE-TDD         (SoldTame2,3,4,7,8)           10504         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10505         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10506         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10506         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10506         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10506         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10507         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10508         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10509         AAF         LTE-TDD         (SoldTame2,3,4,7,8,9)           10509         AAE         LTE-TDD         (SoldTame2,3,4,7,8,9)           10509         AAE         LTE-TDD         (SoldTame2,3,4,7,8,9)           10509         AAE         LTE-TDD         (SoldTame2,3,4,7,8,9) <td< td=""><td>10000</td><td></td><td>Subtrame=2,3,4,7,8,9)</td><td></td><td>7.67</td><td>+06%</td></td<>	10000		Subtrame=2,3,4,7,8,9)		7.67	+06%
AC         LITE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL         LTE-TDD         8.44         ± 9.6 %           10501         AAC         LITE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL         LITE-TDD         8.52         ± 9.6 %           10502         AAC         LITE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL         LITE-TDD         8.52         ± 9.6 %           10503         AAF         LITE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL         LITE-TDD         8.31         ± 9.6 %           10504         AAF         LITE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LITE-TDD         8.54         ± 9.6 %           10505         AAF         LITE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LITE-TDD         8.54         ± 9.6 %           10506         AAF         LITE-TDD (SC-FDMA, 100% RB, 10 MHz, 0PSK, UL         LITE-TDD         8.34         ± 9.6 %           10507         AAF         LITE-TDD (SC-FDMA, 100% RB, 10 MHz, 0ACM, UL         LITE-TDD         8.36         ± 9.6 %           10508         AAF         LITE-TDD (SC-FDMA, 100% RB, 10 MHz, 0ACM, UL         LITE-TDD         8.36         ± 9.6 %           10509         AAE         LITE-TDD (SC-FDMA, 100% RB, 15 MHz, 0ACM, UL         LITE-TDD         7.99         ± 9.6 %           10510         AAE         LITE-TDD (SC-FDMA, 100	10500	AAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHZ, QPSK, UL	LIE-IDD	1.07	± 9.0 %
IDS01         ARC         ETE-TDD         Stabframe=2,3,4,7,8,9           10502         AAC         LTE-TDD         (5.2)         ±9,6 %           10503         AAF         LTE-TDD         (5.2)         ±9,6 %           10503         AAF         LTE-TDD         (5.2)         ±9,6 %           10503         AAF         LTE-TDD         (5.2)         ±9,6 %           10504         AAF         LTE-TDD         (5.2)         ±9,6 %           10505         AAF         LTE-TDD         (5.2)         ±9,6 %           10506         AAF         LTE-TDD         (5.2)         ±9,6 %           10507         AAF         LTE-TDD         (5.2)         ±9,6 %           10508         AAF         LTE-TDD         (5.2)         ±9,6 %           10507         AAF         LTE-TDD         (5.2)         ±9,6 %           10508         AAF         LTE-TDD         (5.2)         ±9,6 %           10509         AAF         LTE-TDD         (5.2)         ±9,6 %           10509         AAF         LTE-TDD         (5.2)         ±9,6 %           10510         AAE         LTE-TDD         (5.2)         ±9,6 %           10510<	40504	1000	SUDITAME=2,3,4,7,8,9)	I TE-TOD	8 44	+96%
AAC         LTE-TDD         S.52         ± 9.6 %           10502         AAC         LTE-TDD         S.52         ± 9.6 %           10503         AAF         LTE-TDD         S.52         ± 9.6 %           10503         AAF         LTE-TDD         S.72         ± 9.6 %           10504         AAF         LTE-TDD         S.72         ± 9.6 %           10505         AAF         LTE-TDD         S.74 / 8.9         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 0PSK, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 04-QAM, UL         LTE-TDD         8.49 & 50 & 5           10511	10501	AAC	LTE-TDD (SC-FDIMA, 100% RB, 3 MHZ, 10-QAM, 0L	LIE-IDD	0.44	1 3.0 70
No.2         Arc         ETE TD         TT         ETE TD         TT         ETE TD         TT         ETE TD         TT         TT         ETE TD         TT         TT         Ete TD         Statuframe=2.3.47.8.9         TT         TT <tht< th="">         TT         <tht< th=""> <tht< th=""></tht<></tht<></tht<>	10502	AAC	SUDITAINE-2,3,4,7,0,5)	I TE-TDD	8.52	+9.6%
10503         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.72         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.31         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.36         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.35         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0PSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.55         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.41         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20	10502	AAC	Subframe=2.3.4.7.8.9)	LILIUD	0.02	20.0 /0
No.50         Subframe=2,3,4,7,8,9         LTE-TDD         S.31         ± 9.6 %           10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 0PSK, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.35         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 0PSK, UL         LTE-TDD         8.51         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL	10503	AAF	LTE-TDD (SC-EDMA, 100% RB, 5 MHz, QPSK, UL	LTE-TDD	7.72	± 9.6 %
10504         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL         LTE-TDD         8.31         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.35         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10511         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 0PSK, UL         LTE-TDD         7.74         ± 9.6 %           10512         AAF         LTE-T	10000		Subframe=2.3.4.7.8.9)			
Subframe=2,3,4,7,8,9)         LTE-TDD         8.54         ± 9.6 %           10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, GPSK, UL         LTE-TDD         8.49         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD	10504	AAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.31	± 9.6 %
10505         AAF         LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL         LTE-TDD         8.54         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL         LTE-TDD         8.36         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.35         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-			Subframe=2,3,4,7,8,9)			
Subframe=2.3.4.7.8.9)         LTE-TDD         7.74         ± 9.6 %           10506         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.36         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.49         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, G-QAM, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.51         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.42         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2.3.4.7.8.9)         LTE-TDD         8.45         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45 <td>10505</td> <td>AAF</td> <td>LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL</td> <td>LTE-TDD</td> <td>8.54</td> <td>± 9.6 %</td>	10505	AAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10506       AAF       LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL       LTE-TDD       7.74       ±9.6 %         10507       AAF       LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL       LTE-TDD       8.36       ±9.6 %         10508       AAF       LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL       LTE-TDD       8.55       ±9.6 %         10509       AAE       LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL       LTE-TDD       7.99       ±9.6 %         10501       AAE       LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL       LTE-TDD       8.49       ±9.6 %         10511       AAE       LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL       LTE-TDD       8.51       ±9.6 %         10511       AAE       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL       LTE-TDD       8.51       ±9.6 %         10511       AAE       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL       LTE-TDD       7.74       ±9.6 %         10513       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL       LTE-TDD       7.74       ±9.6 %         10513       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, GAQAM, UL       LTE-TDD       8.42       ±9.6 %         10514       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, GAQAM, UL       LTE-TDD       8.42       ±9.6 %       10516			Subframe=2,3,4,7,8,9)	-	1.000	
Subframe=2,3,4,7,8,9)         LTE-TDD         8.36         ± 9.6 %           10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         7.74         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.116 WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	10506	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10507         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL         LTE-TDD         8.36         ± 9.6 %           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL         LTE-TDD         8.55         ± 9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 0PSK, UL         LTE-TDD         8.51         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 0PSK, UL         LTE-TDD         7.74         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE	-		Subframe=2,3,4,7,8,9)		0.00	1.0.0.0/
Subframe=2,3,4,7,8,9)         LTE-TDD         Stabframe=2,3,4,7,8,9)           10508         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ±9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ±9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ±9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.51         ±9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL         LTE-TDD         7.74         ±9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL         LTE-TDD         7.74         ±9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.42         ±9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ±9.6 %           10515         AAA         IEEE 802.11b WiF12.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ±9.6 %           10516         AAA         IEEE 802.11a/h WiF15 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN <td>10507</td> <td>AAF</td> <td>LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL</td> <td>LTE-TDD</td> <td>8.36</td> <td>± 9.6 %</td>	10507	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.36	± 9.6 %
10508         AAF         LTE-TDD         SUBframe=2,3,4,7,8,9)         LTE-TDD         S.35         ±9.6 %           10509         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL         LTE-TDD         7.99         ±9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ±9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.51         ±9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         7.74         ±9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ±9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ±9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ±9.6 %           10514         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.58         ±9.6 %           10515         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 14 Mbps, 99pc duty cycle)         WLAN         1.58         ±9.6 %           10516         AAA			Subframe=2,3,4,7,8,9)		0.55	+06%
Subframe=2,3,4,7,8,9)         LTE-TDD         Starter         Subframe=2,3,4,7,8,9)         LTE-TDD         Starter         Subframe=2,3,4,7,8,9)         LTE-TDD         Starter         Subframe=2,3,4,7,8,9)           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL         LTE-TDD         8.49         ± 9.6 %           10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.51         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL         LTE-TDD         8.51         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10517         AAA         IEEE 802.11a/b WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10518         AAB         IEEE 802.11a/b WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty	10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL	LIE-IDD	0.55	± 9.0 %
10509       AAE       LTE-TDD       1.5.5       1.5.6 %         10510       AAE       LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)       LTE-TDD       8.49       ± 9.6 %         10511       AAE       LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)       LTE-TDD       8.51       ± 9.6 %         10512       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)       LTE-TDD       7.74       ± 9.6 %         10513       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)       LTE-TDD       8.42       ± 9.6 %         10514       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)       LTE-TDD       8.42       ± 9.6 %         10514       AAF       LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)       LTE-TDD       8.45       ± 9.6 %         10516       AAA       IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)       WLAN       1.58       ± 9.6 %         10517       AAA       IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)       WLAN       1.58       ± 9.6 %         10517       AAA       IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)       WLAN       1.58       ± 9.6 %         10517       AAA       IEEE 802.11a/h WiF	10500		SUDITAME=2,3,4,7,8,9)	I TE-TOD	7 99	+96%
Submanie 2, 5, 4, 7, 5, 9)         LTE-TDD         8.49         ± 9.6 %           10510         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.51         ± 9.6 %           10511         AAF         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.33         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.	10509	AAE	Subframe=2.3.4.7.8.9)	LILIDO	1.00	1 0.0 /0
10:10         AAL         ETE-TDD (SC-FDMA, 100% RB, 15 MHz, 16 dt M, 92         ETE-TDD           10:511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL         LTE-TDD         8.51         ± 9.6 %           10:512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10:513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL         LTE-TDD         7.74         ± 9.6 %           10:513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL         LTE-TDD         8.42         ± 9.6 %           10:514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ± 9.6 %           10:515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10:516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10:517         AAA         IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10:518         AAB         IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.39         ± 9.6 %           10:520         AAB <td< td=""><td>10510</td><td>AAE</td><td>LTE-TDD (SC-EDMA 100% RB 15 MHz 16-OAM UI</td><td>I TE-TDD</td><td>8.49</td><td>± 9.6 %</td></td<>	10510	AAE	LTE-TDD (SC-EDMA 100% RB 15 MHz 16-OAM UI	I TE-TDD	8.49	± 9.6 %
10511         AAE         LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.51         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10517         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	10510	- ML	Subframe=2.3.4.7.8.9)			1000
Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10519         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.39         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 14 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10521         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %	10511	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL	LTE-TDD	8.51	± 9.6 %
10512         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)         LTE-TDD         7.74         ± 9.6 %           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10521         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10522         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) <t< td=""><td>10011</td><td></td><td>Subframe=2,3,4,7,8,9)</td><td></td><td></td><td></td></t<>	10011		Subframe=2,3,4,7,8,9)			
Subframe=2,3,4,7,8,9)         LTE-TDD         Subframe=2,3,4,7,8,9)           10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.39         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 44 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10522         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.45         ± 9.6 %           10524<	10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10513         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.42         ± 9.6 %           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (DSSS, 11 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10510         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.39         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10521         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10522         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)         WLAN <td></td> <td></td> <td>Subframe=2,3,4,7,8,9)</td> <td>A</td> <td></td> <td></td>			Subframe=2,3,4,7,8,9)	A		
Subframe=2,3,4,7,8,9)         LTE-TDD         Subframe=2,3,4,7,8,9)           10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10517         AAA         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10523         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.45         ± 9.6 %           10524         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)         WLAN         8.27         ± 9.6 %           10524	10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.42	± 9.6 %
10514         AAF         LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL         LTE-TDD         8.45         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10517         AAA         IEEE 802.11a/k WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10519         AAB         IEEE 802.11a/k WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10520         AAB         IEEE 802.11a/k WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10521         AAB         IEEE 802.11a/k WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10522         AAB         IEEE 802.11a/k WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.45         ± 9.6 %           10523         AAB         IEEE 802.11a/k WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)         WLAN         8.27 <t< td=""><td></td><td>1.1.1.1</td><td>Subframe=2,3,4,7,8,9)</td><td></td><td></td><td></td></t<>		1.1.1.1	Subframe=2,3,4,7,8,9)			
Subframe=2,3,4,7,8,9)         WLAN         1.58         ± 9.6 %           10515         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10516         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         WLAN         1.57         ± 9.6 %           10517         AAA         IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)         WLAN         1.58         ± 9.6 %           10518         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)         WLAN         8.23         ± 9.6 %           10519         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)         WLAN         8.39         ± 9.6 %           10520         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10521         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)         WLAN         8.12         ± 9.6 %           10522         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)         WLAN         8.45         ± 9.6 %           10523         AAB         IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)         WLAN         8.08         ± 9.6 %           10524         AA	10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
10515AAAIEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)WLAN1.58 $\pm 9.6 \%$ 10516AAAIEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)WLAN1.57 $\pm 9.6 \%$ 10517AAAIEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)WLAN1.58 $\pm 9.6 \%$ 10518AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)WLAN8.23 $\pm 9.6 \%$ 10519AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)WLAN8.39 $\pm 9.6 \%$ 10520AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)WLAN8.12 $\pm 9.6 \%$ 10521AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)WLAN8.12 $\pm 9.6 \%$ 10522AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)WLAN8.45 $\pm 9.6 \%$ 10523AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN8.08 $\pm 9.6 \%$ 10524AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN8.27 $\pm 9.6 \%$ 10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN8.26 $\pm 9.6 \%$ 10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.42 $\pm 9.6 \%$ 10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN8.42 $\pm 9.6 \%$ 10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN8.36 $\pm 9.6 \%$ 10529AAB	_		Subframe=2,3,4,7,8,9)	140 441	4.50	1000
10516AAAIEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)WLAN1.57 $\pm$ 9.6 %10517AAAIEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)WLAN1.58 $\pm$ 9.6 %10518AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)WLAN8.23 $\pm$ 9.6 %10519AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)WLAN8.23 $\pm$ 9.6 %10520AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)WLAN8.12 $\pm$ 9.6 %10521AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)WLAN8.12 $\pm$ 9.6 %10522AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)WLAN8.45 $\pm$ 9.6 %10523AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN8.08 $\pm$ 9.6 %10524AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN8.27 $\pm$ 9.6 %10525AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN8.26 $\pm$ 9.6 %10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.42 $\pm$ 9.6 %10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN8.42 $\pm$ 9.6 %10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN8.36 $\pm$ 9.6 %10524AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN8.36 $\pm$ 9.6 %10526AAB <td>10515</td> <td>AAA</td> <td>IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)</td> <td>WLAN</td> <td>1.58</td> <td>± 9.6 %</td>	10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10517AAAIEEE 802.11b WiFI 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)WLAN1.361.96 %10518AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)WLAN $8.23$ $\pm 9.6$ %10519AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)WLAN $8.39$ $\pm 9.6$ %10520AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)WLAN $8.12$ $\pm 9.6$ %10521AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)WLAN $8.12$ $\pm 9.6$ %10522AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6$ %10523AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6$ %10524AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN $8.27$ $\pm 9.6$ %10525AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN $8.27$ $\pm 9.6$ %10526AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.42$ $\pm 9.6$ %10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10529AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10531AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10532 <td>10516</td> <td>AAA</td> <td>IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)</td> <td>VVLAN</td> <td>1.57</td> <td>± 9.0 %</td>	10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	VVLAN	1.57	± 9.0 %
10518AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)WLAN $6.23$ $19.0\%$ 10519AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)WLAN $8.39$ $\pm 9.6\%$ 10520AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)WLAN $8.12$ $\pm 9.6\%$ 10521AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)WLAN $8.12$ $\pm 9.6\%$ 10522AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6\%$ 10523AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6\%$ 10524AABIEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN $8.27$ $\pm 9.6\%$ 10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN $8.42$ $\pm 9.6\%$ 10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.42$ $\pm 9.6\%$ 10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10529AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10531AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN $8.29$ $\pm 9.6\%$ 10532AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN $8.29$ $\pm 9.6\%$ 10533AABIEEE 802.1	10517	AAA	IEEE 802.11b WIFI 2.4 GHZ (DSSS, 11 Mbps, 99pc duty cycle)		0.00	± 9.0 %
10519       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)       WLAN       5.39       1.9.0 %         10520       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)       WLAN       8.12       ± 9.6 %         10521       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)       WLAN       7.97       ± 9.6 %         10522       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)       WLAN       8.45       ± 9.6 %         10523       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)       WLAN       8.08       ± 9.6 %         10524       AAB       IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)       WLAN       8.27       ± 9.6 %         10525       AAB       IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)       WLAN       8.36       ± 9.6 %         10526       AAB       IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)       WLAN       8.42       ± 9.6 %         10527       AAB       IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)       WLAN       8.42       ± 9.6 %         10528       AAB       IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)       WLAN       8.36       ± 9.6 %         10529       AAB       IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) </td <td>10518</td> <td>AAB</td> <td>IEEE 802.11a/n WIFI 5 GHZ (OFDM, 9 Mbps, 99pc duty cycle)</td> <td></td> <td>0.23</td> <td>+96%</td>	10518	AAB	IEEE 802.11a/n WIFI 5 GHZ (OFDM, 9 Mbps, 99pc duty cycle)		0.23	+96%
10520AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 18 Mbps, 99pc duty cycle)WLAN $0.12$ $10.52$ 10521AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)WLAN $7.97$ $\pm 9.6\%$ 10522AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6\%$ 10523AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6\%$ 10524AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN $8.27$ $\pm 9.6\%$ 10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN $8.42$ $\pm 9.6\%$ 10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.42$ $\pm 9.6\%$ 10528AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10529AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN $8.36$ $\pm 9.6\%$ 10531AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN $8.43$ $\pm 9.6\%$ 10532AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN $8.43$ $\pm 9.6\%$ 10533AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN $8.29$ $\pm 9.6\%$ 10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN $8.29$ $\pm 9.6\%$ 10533AABIEEE 802.11ac WiFi (20MHz,	10519	AAB	IEEE 802.11a/n WIFI 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)		8.12	+96%
10521AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 24 Mbps, 99pc duty cycle)WLAN1.571.5710522AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 36 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6$ %10523AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 48 Mbps, 99pc duty cycle)WLAN $8.45$ $\pm 9.6$ %10524AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 54 Mbps, 99pc duty cycle)WLAN $8.27$ $\pm 9.6$ %10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN $8.42$ $\pm 9.6$ %10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.42$ $\pm 9.6$ %10528AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10529AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN $8.36$ $\pm 9.6$ %10531AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN $8.43$ $\pm 9.6$ %10532AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN $8.29$ $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN $8.29$ $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN $8.29$ $\pm 9.6$ %10534AABIEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)WLAN $8.29$ $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, M	10520	AAB	IEEE 802.11a/n WIFI 5 GHz (OFDM, 16 Mbps, 99pc duty cycle)		7.97	+96%
10522AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 30 Mbps, 35pc duty cycle)WLAN5.4010.5710523AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)WLAN8.08 $\pm 9.6$ %10524AABIEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)WLAN8.27 $\pm 9.6$ %10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.32 $\pm 9.6$ %10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN8.42 $\pm 9.6$ %10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10529AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10531AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN8.43 $\pm 9.6$ %10532AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN8.43 $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.29 $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %10534AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %10534AABIEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %	10521	AAB	IEEE 802.11a/n WIFI 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.45	+96%
10523AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 40 Mbps, 50pc duty cycle)WDAN8.302.0610524AABIEEE 802.11a/h WiFi 5 GH2 (OFDM, 54 Mbps, 99pc duty cycle)WLAN8.27 $\pm 9.6$ %10525AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.42 $\pm 9.6$ %10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN8.21 $\pm 9.6$ %10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10529AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN8.36 $\pm 9.6$ %10531AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN8.43 $\pm 9.6$ %10532AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN8.29 $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %10534AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %10534AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6$ %	10522	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 38 Mbps, 99pc duty cycle)	WLAN	8.08	+9.6 %
10524AABIEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)WLAN8.36 $\pm 9.6 \%$ 10525AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.42 $\pm 9.6 \%$ 10526AABIEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)WLAN8.42 $\pm 9.6 \%$ 10527AABIEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)WLAN8.21 $\pm 9.6 \%$ 10528AABIEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)WLAN8.36 $\pm 9.6 \%$ 10529AABIEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)WLAN8.36 $\pm 9.6 \%$ 10531AABIEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)WLAN8.43 $\pm 9.6 \%$ 10532AABIEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)WLAN8.43 $\pm 9.6 \%$ 10533AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6 \%$ 10534AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6 \%$ 10534AABIEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)WLAN8.38 $\pm 9.6 \%$	10525	AAB	IEEE 802.11a/h WIF15 GHz (OFDM, 46 Mbps, 50pc duty cycle)	WLAN	8.27	± 9.6 %
10526         AAB         IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)         WLAN $8.42 \pm 9.6 \%$ 10527         AAB         IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)         WLAN $8.21 \pm 9.6 \%$ 10528         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN $8.21 \pm 9.6 \%$ 10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN $8.36 \pm 9.6 \%$ 10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)         WLAN $8.36 \pm 9.6 \%$ 10531         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN $8.43 \pm 9.6 \%$ 10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN $8.29 \pm 9.6 \%$ 10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN $8.38 \pm 9.6 \%$ 10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)         WLAN $8.38 \pm 9.6 \%$ 10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)         WLAN $8.45 \pm 9.6 \%$	10525	AAR	IFEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10527         AAB         IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)         WLAN         8.21         ± 9.6 %           10528         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10531         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN         8.43         ± 9.6 %           10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.29         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)         WLAN         8.38         ± 9.6 %	10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10528         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10531         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN         8.43         ± 9.6 %           10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.29         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS9, 99pc duty cycle)         WLAN         8.45         ± 9.6 %	10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10529         AAB         IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)         WLAN         8.36         ± 9.6 %           10531         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN         8.43         ± 9.6 %           10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN         8.43         ± 9.6 %           10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.29         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)         WLAN         8.45         ± 9.6 %	10528	AAB	IEEE 802.11ac WiFi (20MHz, MCS3. 99pc duty cycle)	WLAN	8.36	± 9.6 %
10531         AAB         IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)         WLAN         8.43         ± 9.6 %           10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.29         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)         WLAN         8.45         ± 9.6 %	10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10532         AAB         IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)         WLAN         8.29         ± 9.6 %           10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %	10531	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10533         AAB         IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)         WLAN         8.38         ± 9.6 %           10534         AAB         IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)         WLAN         8.45         ± 9.6 %	10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10534 AAB JEEE 802 11ac WiEi (40MHz MCS0, 99pc duty cycle) WIAN 845 + 9.6 %	10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	± 9.6 %
	10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	± 9.6 %

10535	AAR	IEEE 802 11ac W/iEi /A0MHz MCC1 00pc duty avala	10/1 0.61	0.45	1000
10555	AAD		WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WIFI (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	+96%
10540	AAB	IEEE 802 11ac WiEi (40MHz MCS6, 99pc duty cycle)	W/LAN	8 30	+96%
10541	AAR	IEEE 802 11ac WiEi (40MHz, MCSZ, 00pc duty cycle)	MILANI	0.00	10.0%
10541	AAD		VVLAN	8.46	± 9.6 %
10542	AAD	IEEE 802.11ac WIFI (4010HZ, MCS8, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10543	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10544	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10545	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.55	+96%
10546	AAB	IEEE 802 11ac WiEi (80MHz MCS2 99pc duty cycle)	W/LAN	8 35	+96%
10547	AAR	IEEE 802 11ac WiEi (80MHz, MCS3, 90pc duty cyclo)		0.00	10.0%
10549	AAP	IEEE 002.11ac WiFi (00MHz, MCC3, 99pc duty cycle)	VVLAIN	0.49	19.0%
10540	AAD		WLAN	8.37	±9.6%
10550	AAB	IEEE 802.11ac WIFI (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	±9.6 %
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6 %
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6 %
10553	AAB	IEEE 802,11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8 45	+96%
10554	AAC	IEEE 802 11ac WiEi (160MHz MCS0, 99pc duty cycle)	WLAN	8.49	+0.6 %
10555	AAC	IEEE 802 11cc WiFi (160MHz, MCC1, 00pc duty cycle)		0.40	19.0 %
10555	AAC		VVLAN	8.47	±9.6%
10556	AAC	IEEE 802.11ac WIFI (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	±9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	±9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6%
10560	AAC	IEEE 802,11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	+9.6%
10561	AAC	IEEE 802 11ac WiEi (160MHz MCS7 99pc duty cycle)	M/LAN	9.56	+0.6.9/
10562	AAC	IEEE 002.11ac WiT (160MHz, MCCP, 95pc duty cycle)		0.00	19.0 %
10502	AAC		WLAN	8.69	±9.6%
10563	AAC	TEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.6 %
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty	WLAN	8.25	± 9.6 %
		cycle)		1 Lander	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
10565	AAA	IEEE 802,11g WiFi 2.4 GHz (DSSS-OEDM 12 Mbps 99pc duty	WLAN	8 45	+96%
		cycle)		0.40	20.0 /0
10566	۸۸۸	IEEE 902 11a WiEi 2 4 CHz (DSSS OEDM 18 Mbps 00ps duty		0.10	1000
10300	AAA		VVLAN	0.13	±9.0 %
		cycle)			
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
		cycle)			100 March 100
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	±9.6 %
	10000	cvcle)	TO MESSARY	0100	
10569	ΔΔΔ	IEEE 802 11a WiEi 2.4 GHz (DSSS-OEDM 48 Mbps, 99pc duty		9 10	+06%
10505	1004	avela)	VVLAN	0.10	1 9.0 %
10570				0.00	
10570	AAA	TEEE 802.11g WIFI 2.4 GHZ (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	± 9.6 %
		cycle)			
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6 %
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6 %
10573	AAA	IEEE 802 11b WiEi 2 4 GHz (DSSS 5 5 Mbps 90pc duty cycle)	WIAN	1 98	+96%
10574	ΔΔΔ	IEEE 802 11b WiFi 2.4 CHz (DSSS 11 Mbps, obpolity cyclo)	WI ANI	1.00	+0.6.9/
10574		IEEE 802.110 WIFI 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	VVLAIN	1.90	19.0%
10575	AAA	IEEE 802.11g WIFI 2.4 GHZ (DSSS-OFDIM, 6 Mbps, 90pc duty	WLAN	8.59	±9.6%
	-	cycle)	-		
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN	8.60	±9.6 %
		cycle)	And the factor of the factor o		100 C 100 C
10577	AAA	IEEE 802,11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty	WLAN	8.70	+9.6%
			ine at	0.10	- 0.0 /0
10579	۸۸۸	IEEE 902 11a W/IEI 2 4 CHz (DSSS OEDM 19 Mbrs O0rs duty		0.40	1069/
10576	AAA	TEEE 602.11g WIFT 2.4 GHZ (DSSS-OFDIVI, TO WIDPS, SUPC duty	VVLAIN	0.49	± 9.0 %
		cycle)			
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty	WLAN	8.36	± 9.6 %
		cycle)			
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN	8.76	±9.6 %
		cvcle)	a provider	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
10581	۸۸۸	IEEE 802 11a WiEi 2 4 GHz (DSSS OEDM 48 Mbps 90pc duty		8 35	+06%
10301	AAA	TEEE 002.11g WIFI 2.4 GHZ (DSSS-OFDIVI, 40 WIDPS, 90pc duty	VVLAIN	0.55	± 9.0 %
10500			10/1 0.51	0.07	
10582	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty	WLAN	8.67	± 9.6 %
		cycle)	-		
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10585	AAB	IEEE 802 11a/b WiEi 5 GHz (OEDM 12 Mbps 90pc duty cycle)	WLAN	8 70	+96%
10586	AAP	IEEE 802 11a/b W/iEi 5 GHz (OEDM 18 Mbps, 00pc duty byde)		840	+0.6 %
10500	AAD	IEEE 002.11 an WIFLD GHZ (OF DIVI, TO WUPS, SUPE OULY CYCle)	VVLAIN	0.49	19.0%
10587	AAB	ILEE 602.11a/n WIFI 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	VVLAN	8.36	± 9.6 %

10588	AAB	IEEE 802 11a/h WiEi 5 GHz (OEDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10589	AAB	IEEE 802 11a/h WiEi 5 GHz (OEDM 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10500	AAR	IEEE 802 11a/h WiFi 5 GHz (OEDM 54 Mbps, 90pc duty cycle)	WLAN	8.67	+9.6 %
10590	AAD	IEEE 802 11p (HT Mixed 20MHz MCS0 90pc duty cycle)	WLAN	8.63	+96%
10591	AAD	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8 79	+96%
10592	AAD	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.64	+96%
10593	AAD	IEEE 802.1111 (HT Mixed, 20MHz, MCS2, 90pc duty cycle)		8 74	+96%
10594	AAB			0.74	+06%
10595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)		9.74	+ 9.6 %
10596	AAB	TEEE 802.11n (HT Mixed, 20MHz, MCSS, 90pc duty cycle)	VVLAN	0.71	+0.6 %
10597	AAB	TEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	0.72	± 9.0 %
10598	AAB	TEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	VVLAN	0.50	± 9.0 %
10599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	VVLAN	0.79	± 9.0 %
10600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	VVLAN	0.00	± 9.0 %
10601	AAB	IEEE 802.11n (H1 Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	0.02	± 9.0 %
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	± 9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10615	AAB	IEEE 802,11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB	IEEE 802 11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10618	AAB	IEEE 802 11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	± 9.6 %
10619	AAB	IEEE 802 11ac WiEi (40MHz MCS3 90pc duty cycle)	WLAN	8.86	± 9.6 %
10620	AAB	IEEE 802 11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10621	AAB	IEEE 802 11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10622	AAB	IEEE 802 11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
10622	AAB	IEEE 802 11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	+9.6%
10623	AAD	IEEE 802 11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	+9.6 %
10624	AAD	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	+9.6 %
10625	AAD	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.83	+96%
10626	AAB	IEEE 802.11ac WIFI (80MHz, MCS0, 90pc duty cycle)	WLAN	8.88	+96%
10627	AAB	IEEE 802.11ac WIFI (80MHz, MCS1, 90pc duty cycle)	WLAN	8 71	+96%
10628	AAB	IEEE 802.11ac WIFI (80MHz, MCS2, 90pc duty cycle)		8.85	+96%
10629	AAB	IEEE 802.11ac WIFI (80MHz, MCS3, 90pc duty cycle)		8.72	+96%
10630	AAB			8.81	+96%
10631	AAB			9.74	+06 %
10632	AAB	IEEE 802.11ac WIFI (80MHz, MCS6, 90pc duty cycle)		0.74	+0.6 %
10633	AAB	IEEE 802.11ac WIFI (80MHz, MCS7, 90pc duty cycle)		0.03	+0.6.0/
10634	AAB	IEEE 802.11ac WIFI (80MHz, MCS8, 90pc duty cycle)	WLAN	0.00	19.0%
10635	AAB	IEEE 802.11ac WIFI (80MHz, MCS9, 90pc duty cycle)	WLAN	0.01	19.0%
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.0 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10646	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAF	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAF	LTE-TDD (OEDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6 %
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %
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10655	AAE	LTE-TDD (OFDMA 20 MHz E-TM 3.1 Clipping 44%)	I TE-TOD	7.21	+96%
10658	AAA	Pulse Waveform (200Hz, 10%)	Teet	10.00	+9.6%
10659	AAA	Pulse Waveform (200Hz, 20%)	Toet	6.00	+0.6%
10660	AAA	Pulse Waveform (200Hz, 40%)	Tost	0.99	19.0 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Toet	2.90	±9.0 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	2.22	± 9.0 %
10670	AAA	Bluetooth Low Energy	Bluetooth	0.97	±9.0 %
10671	AAA	IEEE 802 11ax (20MHz MCS0 90pc duty cycle)		2.19	±9.0 %
10672	AAA	IEEE 802 11ax (20MHz, MCS1, 90pc duty cycle)		9.09	±9.0 %
10673	AAA	IEEE 802 11ax (20MHz, MCS1, 90pc duty cycle)	VVLAIN MILANI	0.07	±9.0%
10674	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)		0.70	± 9.0 %
10675	AAA	IEEE 802 11ax (20MHz, MCS4, 90pc duty cycle)		0.74	±9.0 %
10676	AAA	IEEE 802 11ax (20MHz, MCS5, 90pc duty cycle)		0.90	± 9.0 %
10677	AAA	IEEE 802 11ax (20MHz, MCS6, 90pc duty cycle)		0.11	± 9.0 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)		0.75	±9.0 %
10679	AAA	IEEE 802 11ax (20MHz, MCS8, 90pc duty cycle)		0.70	±9.0 %
10680	AAA	IEEE 802 11ax (20MHz, MCS9, 90pc duty cycle)		8.80	+9.6 %
10681	AAA	IEEE 802 11ax (20MHz, MCS10, 90pc duty cycle)		0.00	19.0 %
10682	AAA	IEEE 802 11ax (20MHz, MCS11, 90pc duty cycle)		0.02	19.0 %
10683	AAA	IEEE 802 11ax (20MHz, MCS0, 99pc duty cycle)		9.42	+0.6 %
10684	AAA	IEEE 802 11ax (20MHz, MCS1, 99pc duty cycle)		9.26	19.0%
10685	AAA	IEEE 802 11ax (20MHz MCS2 99pc duty cycle)		8 33	+96%
10686	AAA	IEEE 802.11ax (20MHz MCS3, 99pc duty cycle)		8.29	+96%
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle)	WI AN	8.45	+9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99nc duty cycle)	WLAN	8 20	+96%
10689	AAA	IEEE 802 11ax (20MHz, MCS6, 99pc duty cycle)	WLAN	8.55	+96%
10690	AAA	IEEE 802 11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8 20	+96%
10691	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8.25	+96%
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle)	WLAN	8.29	+96%
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle)	WLAN	8.25	+96%
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.57	+96%
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)	WLAN	8.78	+96%
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle)	WLAN	8.91	+9.6 %
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.61	±9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle)	WLAN	8.89	±9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)	WLAN	8.82	±9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle)	WLAN	8.73	±9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)	WLAN	8.86	±9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle)	WLAN	8.70	±9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	±9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6 %
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6 %
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle)	WLAN	8.24	±9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	±9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6 %
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	±9.6 %
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle)	WLAN	8.55	±9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6 %
10724	AAA	IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN	8.90	±9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6 %
10726	AAA	IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6 %
10727	AAA	IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6 %

10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle)	WLAN	8.65	± 9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10730	AAA	IEEE 802 11ax (80MHz_MCS11_90pc duty cycle)	WLAN	8.67	± 9.6 %
10731		IEEE 802.11ax (80MHz, MCS0, 99nc duty cycle)	WIAN	8.42	+96%
10731	AAA	IEEE 002.11ax (00MHz, MCS0, 990c duty cycle)		9.46	+ 0.6 %
10732	AAA		VVLAN	0.40	1 9.0 %
10733	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle)	VVLAN	8.40	± 9.0 %
10734	AAA	IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10735	AAA	IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10737	AAA	IEEE 802 11ax (80MHz, MCS6, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10738	ΔΔΔ	IEEE 802 11ax (80MHz MCS7 99pc duty cycle)	WIAN	8.42	+9.6%
10730		IEEE 002.11ax (00MHz, MCC9, 00pc duty cyclo)		8 29	+96%
10739	AAA	IEEE 002.11ax (00MHz, MCSO, 00pc duty cycle)		8.48	+96%
10740	AAA			0.40	1 9.0 %
10/41	AAA	IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle)	VVLAN	0.40	± 9.0 %
10742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle)	VVLAN	8.43	± 9.6 %
10743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle)	WLAN	9.16	± 9.6 %
10745	AAA	IEEE 802,11ax (160MHz, MCS2, 90pc duty cycle)	WLAN	8.93	± 9.6 %
10746	AAA	IEEE 802 11ax (160MHz_MCS3, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10747		IEEE 802 11ax (160MHz MCS4 90pc duty cycle)	WIAN	9.04	+96%
10747		IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle)	WLAN	8.03	+96%
10740	AAA	IEEE 002.11ax (100MHz, MCSS, 90pc duty cycle)		0.00	+06%
10749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle)	VVLAN	0.90	19.0%
10750	AAA	IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle)	VVLAN	8.79	± 9.6 %
10751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle)	WLAN	9.00	± 9.6 %
10754	AAA	IEEE 802 11ax (160MHz, MCS11, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10755	ΔΔΔ	IEEE 802 11ax (160MHz MCS0, 99pc duty cycle)	WLAN	8.64	+9.6 %
10755		IEEE 802.11ax (160MHz, MCS1, 00pc duty cyclo)	W/LAN	877	+96%
10750	AAA	IEEE 002.11ax (100MHz, MCS1, 99pc duty cycle)		0.77	+06%
10757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	VVLAN	0.11	± 9.0 %
10758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	VVLAN	8.69	± 9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10761	AAA	IEEE 802,11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10762	ΔΔΔ	IEEE 802 11ax (160MHz_MCS7_99pc duty cycle)	WLAN	8.49	± 9.6 %
10762		IEEE 802 11ax (160MHz, MCS8, 99pc duty cycle)	WIAN	8.53	+96%
10703	AAA	IEEE 002.11ax (100MHz, MCS0, 00pc duty cycle)		8.54	+96%
10764	AAA			9.54	+06%
10765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	VVLAN	0.54	19.0 %
10766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	± 9.6 %
10767	AAA	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	± 9.6 %
10768	AAA	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1	8.01	± 9.6 %
				0.04	+0.00
10769	AAA	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	TDD	8.01	± 9.6 %
10770	AAA	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1	8.02	± 9.6 %
10771		5G NR (CP-OEDM 1 RB 25 MHz OPSK 15 kHz)	5G NR FR1	8.02	+9.6%
10//1	AAA	36 NK (CF-OFDM, 1 KB, 23 MHZ, QF3K, 13 KHZ)		0.02	2 0.0 /0
10772	AAA	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1	8.23	± 9.6 %
12002		A CONTRACTOR OF	TDD	1.000	1.000
10773	AAA	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1	8.03	± 9.6 %
				0.00	1000
10774	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1	8.02	± 9.6 %
			TDD		
10776	AAA	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1	8.30	± 9.6 %
10778	AAA	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1	8.34	± 9.6 %
			TDD		172.00
10780	ΑΑΑ	5G NR (CP-OEDM, 50% RB, 30 MHz, OPSK, 15 kHz)	5G NR FR1	8.38	± 9.6 %
10100	1000		TDD		
10704	A A A	FC NP (CP OFDM 50% PP 40 MHZ OPEK 15 KHZ)	5G NR ER1	8 28	+96%
10781	AAA	00 MA (0F-0FDIVI, 30% AD, 40 WINZ, QF3A, 13 KHZ)		0.00	2 0.0 70
10700		FOND OD OFDM FOW PR FOMULE OPOK 45 KLIEN	5C ND ED4	8 12	+06%
10782	AAA	06 NR (CP-OPDINI, 20% RD, 20 MITZ, QPSR, 13 KHZ)	TDD	0.45	1 0.0 %

August 23, 2019

10783	AAA	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1	8.31	± 9.6 %
10784	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1	8.29	± 9.6 %
10785	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1	8.40	± 9.6 %
10786	AAA	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10787	AAA	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1	8.44	±9.6 %
10788	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1	8.39	± 9.6 %
10789	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1	8.37	± 9.6 %
10790	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1	8.39	± 9.6 %
10791	AAA	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1	7.83	± 9.6 %
10792	AAA	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	7.92	± 9.6 %
10793	AAA	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	7.95	± 9.6 %
10794	AAA	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1	7.82	± 9.6 %
10795	AAA	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1	7.84	± 9.6 %
10796	AAA	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	7.82	± 9.6 %
10797	AAA	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1	8.01	± 9.6 %
10798	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1	7.89	±9.6 %
10799	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1	7.93	± 9.6 %
10801	AAA	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1	7.89	±9.6 %
10802	AAA	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1	7.87	±9.6 %
10803	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	7.93	± 9.6 %
10805	AAA	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	8.34	±9.6 %
10806	AAA	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	8.37	±9.6 %
10809	AAA	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	8.34	±9.6 %
10810	AAA	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1	8.34	±9.6 %
10812	AAA	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1	8.35	±9.6 %
10817	AAA	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1	8.35	±9.6 %
10818	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	8.34	± 9.6 %
10819	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	8.33	± 9.6 %
10820	AAA	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1	8.30	±9.6 %
10821	AAA	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1	8.41	± 9.6 %
10822	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	8.41	± 9.6 %
10823	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1	8.36	± 9.6 %
10824	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6 %

Certificate No: ES3-3341_Aug19

Page 20 of 22

August 23, 2019

10825	AAA	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1	8.41	± 9.6 %
10827	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1	8.42	± 9.6 %
10828	AAA	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1	8.43	± 9.6 %
10829	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	8.40	± 9.6 %
10830	AAA	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	7.63	± 9.6 %
10831	AAA	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1	7.73	± 9.6 %
10832	AAA	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1	7.74	± 9.6 %
10833	AAA	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10834	AAA	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	± 9.6 %
10835	AAA	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10836	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	± 9.6 %
10837	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	± 9.6 %
10839	AAA	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10840	AAA	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	± 9.6 %
10841	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	± 9.6 %
10843	AAA	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	± 9.6 %
10844	AAA	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10846	AAA	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10854	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10855	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10856	AAA	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10857	AAA	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10858	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10859	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10860	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10861	AAA	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10863	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10864	AAA	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10865	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10866	AAA	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10868	AAA	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	± 9.6 %
10869	AAA	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAA	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	± 9.6 %

August 23, 2019

10871	AAA	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10872	AAA	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6 %
10873	AAA	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6 %
10874	AAA	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6 %
10875	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6 %
10876	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6 %
10877	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	± 9.6 %
10878	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6 %
10879	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6 %
10880	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6 %
10881	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6 %
10882	AAA	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	± 9.6 %
10883	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6 %
10884	AAA	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 %
10885	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10886	AAA	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10887	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10888	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6 %
10889	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6 %
10890	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6 %
10891	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6 %
10892	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6 %

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

# **12.5.** Calibration Certificate for Dipoles

This sub-section contains Cal Certificates for Dipoles, and is not included in the total number of pages for this report.

A1322 (preo131865)

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



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

S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client UL RFI UK

Certificate No: D2450V2-725_Oct19

# **CALIBRATION CERTIFICATE**

	D2450V2 - SN:72	25	
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	edure for SAR Validation Sources	between 0.7-3 GHz
Calibration date:	October 08, 2019	9	
This calibration certificate documen The measurements and the uncerta	its the traceability to nati ainties with confidence p	ional standards, which realize the physical un probability are given on the following pages an	its of measurements (SI). Id are part of the certificate.
All calibrations have been conducte Calibration Equipment used (M&TE	ed in the closed laborato	ry facility: environment temperature (22 $\pm$ 3)°(	C and humidity < 70%.
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Dower motor NDD	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
-ower meter NRF	0111 101110		
ower sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91 Power sensor NRP-Z91	SN: 103244 SN: 103245	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893)	Apr-20 Apr-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator	SN: 103244 SN: 103245 SN: 5058 (20k)	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894)	Apr-20 Apr-20 Apr-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Fype-N mismatch combination	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895)	Apr-20 Apr-20 Apr-20 Apr-20 Apr-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Spe-N mismatch combination Reference Probe EX3DV4	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19)	Apr-20 Apr-20 Apr-20 Apr-20 May-20
Power meter NAP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) Check Date (in house)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) Check Date (in house) 30-Oct-14 (in house check Feb-19)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check In house check: Oct-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) Check Date (in house) 30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check In house check: Oct-20 In house check: Oct-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: WY41092317	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) 0-Apr-19 (No. DAE4-601_Apr19) Check Date (in house) 30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: WY41092317 SN: 100972	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) 0-Apr-19 (No. DAE4-601_Apr19) Check Date (in house) 30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477	03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02895) 29-May-19 (No. EX3-7349_May19) 30-Apr-19 (No. DAE4-601_Apr19) Check Date (in house) 30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-18)	Apr-20 Apr-20 Apr-20 Apr-20 May-20 Apr-20 Scheduled Check In house check: Oct-20 In house check: Oct-19
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# **Calibration Laboratory of**

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



Schweizerischer Kalibrierdienst

- S Service suisse d'étalonnage
- C 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

#### **Glossarv:**

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

# Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- 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%.

Accreditation No.: SCS 0108

# **Measurement Conditions**

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

DASY Version	DASY5	V52.10.3
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

## **Head TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.9 ± 6 %	1.87 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

# SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.0 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	50.7 W/kg ± 17.0 % (k=2)
SAB averaged over $10 \text{ cm}^3$ (10 d) of Head TSI	condition	
		6.04 \W/kg

SAR measured	250 mW input power	6.04 W/kg			
SAR for nominal Head TSL parameters	normalized to 1W	23.8 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	54.5 Ω + 9.2 jΩ				
Return Loss	- 20.2 dB				

## **General Antenna Parameters and Design**

Electrical Delay (one direction)	1.155 ns

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

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

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

## **Additional EUT Data**

Manufactured by	SPEAG

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

Date: 08.10.2019

Test Laboratory: SPEAG, Zurich, Switzerland

## DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 725

Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz;  $\sigma$  = 1.87 S/m;  $\epsilon_r$  = 37.9;  $\rho$  = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

#### DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 29.05.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 115.4 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 25.4 W/kg SAR(1 g) = 13 W/kg; SAR(10 g) = 6.04 W/kg Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 51% Maximum value of SAR (measured) = 21.3 W/kg



0 dB = 21.3 W/kg = 13.28 dBW/kg

# Impedance Measurement Plot for Head TSL

Eile	⊻iew	<u>C</u> hannel	Sw <u>e</u> ep	Calibration	Irace	<u>S</u> cale	M <u>a</u> rker	System	Window	Hel	P			
					Ć		XAX			2.4	50000 G 597.27 50000 G	àHz pH àHz	5 9 97.	4.541 Ω .1942 Ω 712 mU 58.691 °
	Ch1: St	Ch 1 Avg = art 2.25000 (	20 GHz —					5		All Control of Control			Stop	2.65000 GHz
10. 5.( 0.( -5.)	00 00 00 00	dB S11						>	1:	2.4	50000 G	Hz	-20	).201 dB
-10 -15 -20 -25	1.00 1.00 1.00													
30 35 40	1.00 i.00 1.00 Ch1: St	Ch 1 Avg = art 2.25000	20 GHz —		K	Á							Stop	2.65000 GHz
St	atus	CH 1:	S11		C* 1-Po	rt	1 Mar 1 /	Avg=20	Delay	-			1. 4	LCL

## 12.6. Tissues-Equivalent Media Recipes

The SPEAG Broadband Tissue Simulation Liquid HBBL600-6000V6 has been used for Head and Body testing. The composition of this fluid is undisclosed and proprietary to SPEAG.

Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.