







#### **DECLARATION OF COMPLIANCE SAR ASSESSMENT PCII Report Part 1 of 2**

**Motorola Solutions Inc. EME Test Laboratory** 

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Date of Report: 12/13/2021

**Report Revision:** A

**Responsible Engineer:** Saw Sun Hock (EME Engineer)

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Date/s Tested: 11/13/2021, 11/17/2021, 11/19/2021-11/20/2021, 12/09/2021-12/10/2021

Motorola Solutions Inc. Manufacturer:

**DUT Description:** Handheld Portable – APX6000 and APX6000XE Refresh UHF2 450-520 MHz

CW (PTT), Bluetooth, WLAN 802.11 b/g/n Test TX mode(s):

Max. Power output: Refer Table 4 **Nominal Power:** Refer Table 4

LMR 450-520 MHz; Bluetooth 2.402-2.480 GHz; WLAN 802.11 b/g/n 2.412-Tx Frequency Bands:

2.462 GHz

FM (LMR), FHSS (Bluetooth), 802.11 b/g/n (WLAN) **Signaling type:** 

H98SDD9PW5BN (PMUE4975C) Model(s) Tested:

Model(s) Certified: Refer Table 1 **Serial Number(s):** 481TXV0563

Occupational/Controlled Classification: Motorola Solutions Inc. **Applicant Name:** 

8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322 **Applicant Address:** FCC ID: AZ489FT7085; LMR 450-512 MHz, Bluetooth 2.402-2.480 GHz,

WLAN 802.11 b/g/n 2.412-2.462 GHz

This report contains results that are immaterial for FCC equipment approval, which

are clearly identified.

FCC Test Firm Registration

823256 Number:

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of FCC 47 CFR § 2.1093.

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 4.0 of this report (no deviation from standard methods). This report shall not be reproduced without written approval from an officially designated representative of the Motorola **Solutions Inc EME Laboratory.** 

I attest to the accuracy of the data and assume full responsibility for the completeness of these measurements. This reporting format is consistent with the suggested guidelines of the TIA TSB-150 December 2004. The results and statements contained in this report pertain only to the device(s) evaluated.

> Pei Loo Tey (Approved Signatory) **Approval Date: 12/14/2021**

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# **Report Revision History**

Date	Revision	Comments
12/13/2021	A	Release of PCII results

#### FCC ID: AZ489FT7085

#### 1.0 Introduction

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (SAR) measurements performed at the Motorola Solutions Inc. EME Test Laboratory for handheld portable model number H98SDD9PW5BN (PMUE4975C).

Table 1

- 11.0 - 1				
Model Number	Description			
H98SDD9PW5BNI	APX5000 UHF2 Model 1.5			
H98SDH9PW7BNI	APX5000 UHF2 Model 3.5			
H98SDF9PW6BNI	APX5000 UHF2 Model 2.5			
H98SDD9PW5BN	APX6000 / APX6000Li UHF2 Model 1.5			
H98SDH9PW7BN	APX6000 / APX6000Li UHF2 Model 3.5			
H98SDF9PW6BN	APX6000 / APX6000Li UHF2 Model 2.5			
H98SDD9PW5BN	APX6000XE UHF2 Model 1.5			
H98SDH9PW7BN	APX6000XE UHF2 Model 3.5			
H98SDF9PW6BN	APX6000XE UHF2 Model 2.5			

This device is classified as Occupational/Controlled.

The information herein is to show evidence of Class II Permissive Change compliance based on the SAR evaluation of BT/WIFI chipset redesign.

## 2.0 FCC SAR Summary

Table 2

<b>Equipment Class</b>	Frequency band (MHz)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	
		1g-SAR	1g-SAR
TNF	450-512 MHz	4.07	3.97
*DSS	2402-2480 MHz (Bluetooth)	NA	NA
DTS	2412-2462 MHz (WLAN 802.11 b/g/n)	0.027	0.278
Simultaneo	ous Results	4.097	4.248

#### **Note:**

- 1) \* Results not required per KDB (refer to original filing)
- No degradation observed for Face and Body, the current on filed SAR value at the Face and Body are 4.16W/kg and 4.86W/kg, simultaneous at Body is 5.03W/kg are remains the unchanged.

# 3.0 Abbreviations / Definitions

BT: Bluetooth

FCC ID: AZ489FT7085

CNR: Calibration Not Required

CW: Continuous Wave
DUT: Device Under Test
EME: Electromagnetic Energy
FM: Frequency Modulation
LMR: Land Mobile Radio

NA: Not Applicable PTT: Push to Talk

RSM: Remote Speaker Microphone SAR: Specific Absorption Rate

TNF: Licensed Non-Broadcast Transmitter Held to Face

Audio accessories: These accessories allow communication while the DUT is worn on the body.

Body worn accessories: These accessories allow the DUT to be worn on the body of the user.

Maximum Power: Defined as the upper limit of the production line final test station.

#### 4.0 Referenced Standards and Guidelines

This product is designed to comply with the following applicable national and international standards and guidelines.

- IEC62209-1 (2016) Procedure to determine the specific absorption rate (SAR) for handheld devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)
- Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields", OET Bulletin 65, FCC, Washington, D.C.: 1997.
- IEEE 1528 (2013), Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronics Engineers (IEEE) C95.1-2005
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6 (2015), Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz

- RSS-102 (Issue 5) Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)
- Australian Communications Authority Radio communications (Electromagnetic Radiation -Human Exposure) Standard (2014)
- ANATEL, Brazil Regulatory Authority, Resolution No. 303 of July 2, 2002 "Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9 kHz and 300 GHz." and "Attachment to resolution # 303 from July 2, 2002"
- IEC62209-2 Edition 1.0 2010-03, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices Human models, instrumentation, and procedures Part 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).
- FCC KDB 643646 D01 SAR Test for PTT Radios v01r03
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 RF Exposure Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02

#### 5.0 SAR Limits

Table 3

	SAR (W/kg)			
EXPOSURE LIMITS	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)		
Spatial Average - ANSI -				
(averaged over the whole body)	0.08	0.4		
Spatial Peak - ANSI -				
(averaged over any 1-g of tissue)	1.6	8.0		
Spatial Peak – ICNIRP/ANSI -				
(hands/wrists/feet/ankles averaged over 10-g)	4.0	20.0		
Spatial Peak - ICNIRP -				
(Head and Trunk 10-g)	2.0	10.0		

# 6.0 Description of Device Under Test (DUT)

This portable device operates in the LMR bands using frequency modulation (FM). This device also contains WLAN technology for data capabilities over 802.11b/g/n wireless networks and Bluetooth technology for short range wireless devices.

The LMR band in this device operates in a half duplex system. A half duplex system only allows the user to transmit or receive. This device cannot transmit and receive simultaneously. The user must stop transmitting in order to receive a signal or listen for a response, regardless of PTT button or use of voice activated audio accessories. This type of

operation, along with the RF safety booklet, which instructs the user to transmit no more than 50% of the time, justifies the use of 50% duty factor for this device.

This device also incorporates a Bluetooth v4.0, which includes classis Bluetooth, Bluetooth high speed and Bluetooth low energy. It is Class 1 Bluetooth device with Frequency Hopping Spread Spectrum (FHSS) technology. The Bluetooth radio modem is used to wireless link audio accessories. The maximum actual transmission duty cycle is imposed by the Bluetooth standard. Packet types varying duty cycles: 1-slot, 3-slots and 5-slots packets. A 5-slot packet type receives on 1-slot and transmits on 5-slots, and thus maximum duty cycle = 76.1%.

WLAN 802.11 b/g/n operates using Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency-Division Multiplexing (OFDM) accordance with the IEEE 802.11 b/g/n.

Table below summarizes the technologies, bands, maximum duty cycles and maximum output powers. Maximum output powers are defined as upper limit of the production line final test station.

Radio Type Band (MHz) **Transmission Duty Cycle (%)** Max Power (W) \*50 **LMR** 450-520 FM 5.6 76.1 BT2402-2480 **FHSS** 0.01 BT LE 2402-2480 **DSSS** 76.1 0.00198 **WLAN** 2412-2484 802.11b 100 0.0631 **WLAN** 2412-2484 802.11g 100 0.0251 2412-2484 802.11n **WLAN** 100 0.0155

Table 4

Note - \* includes 50% PTT operation

#### 7.0 **Optional Accessories and Test Criteria**

This device is offered with optional accessories. All accessories were individually evaluated during the test plan creation to determine if testing was required per the guidelines outlined in section 4.0 to assess compliance of these devices. The following sections identify the test criteria and details for each accessory category applicable for this PCII filing only. Detail listing of all approved offered accessories available in the original filing report

#### 7.1 Antennas

There are one removable antennas and one internal BT/WLAN antenna applicable for this PCII filing. The Table below lists its descriptions.

Table 5

Antenna No.	Antenna Models	Description	Selected for test	Tested
1	FAF5260A	Stubby, 450-520 MHz and 1575 MHz, ¼ Wave, -2 dBd	Yes	Yes
2	84009370002	Internal BT/WLAN, 2.4 – 2.4835 GHz, ½ Wave, 2.58 dBi	Yes	Yes; for WLAN only

# 7.2 Battery

There are only two batteries applicable for this PCII filing. The Table below lists its descriptions.

Table 6

Battery No.	<b>Battery Models</b>	Description	Selected for test	Tested	Comments
1	PMNN4485A	APX Gen 2 Impress slim Delta-T 2400 mAh	Yes	Yes	
2	PMNN4403B	Battery standard IP67 Li-ion 2050mAh Black	Yes	Yes	

# 7.3 Body worn Accessories

There are four body worn applicable for this PCII filing. The Table below lists its descriptions.

Table 7

Body worn No.	<b>Body worn Models</b>	Description	Selected for test	Tested	Comments
1	1 PMI N363/B	Leather Carry case with D-Ring and 2.75" swivel belt loop	Yes	Yes	Tested with AY000223A01, RLN6487A and RLN6488A
2	1 AYUUU <i>11113</i> AUI	Carry accessory- strap with button back holder	Yes	Yes	Tested with PMLN5657B
3	RLN6487A	Boston Leather Fireman's radio strap -XL	Yes	Yes	Tested with PMLN5657B and RLN6488A
4	RLN6488A	Boston leather anti-strap for Boston leather fireman's radio strap	Yes	Yes	Tested with PMLN5657B and RLN6487A

# 7.4 Audio Accessories

There is only one audio applicable for this PCII filing. The Table below lists its descriptions.

Table 8

Audio No.	Audio Models	Description	Selected for test	Tested	Comments
1	NNTN8203A	Impress XE remote speaker microphone	Yes	Yes	

# 8.0 Description of Test System



# 8.1 Descriptions of Robotics/Probes/Readout Electronics

Table 9

<b>Dosimetric System type</b>	System version	DAE type	Probe Type
Schmid & Partner Engineering AG SPEAG DASY 5	52.10.4.1527	DAE3 & DAE4	EX3DV4 (E-Field)

The DASY5™ system is operated per the instructions in the DASY5™ Users Manual. The complete manual is available directly from SPEAG™. All measurement equipment used to assess SAR compliance was calibrated according to ISO/IEC 17025 A2LA guidelines. Section 9.0 presents additional test equipment information. Appendices B and C present the applicable calibration certificates. The E-field probe first scans a coarse grid over a large area inside the phantom in order to locate the interpolated maximum SAR distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position as reference for the cube evaluations.

## 8.2 Description of Phantom(s)

Table 10

Phantom Type	Phantom(s) Used	Material Parameters	Phantom Dimensions LxWxD (mm)	Material Thickness (mm)	Support Structure Material	Loss Tangent (wood)
Triple Flat	NA	200MHz -6GHz; Er = 3-5, Loss Tangent = ≤0.05	280x175x175			
SAM	NA	300MHz -6GHz; Er = < 5, Loss Tangent = <0.05	Human Model	2mm +/- 0.2mm	Wood	< 0.05
Oval Flat	V	300MHz -6GHz; Er = 4+/- 1, Loss Tangent = ≤0.05	600x400x190			

# 8.3 Description of Simulated Tissue

The sugar based simulate tissue is produced by placing the correct measured amount of De-ionized water into a large container. Each of the dried ingredients are weighed and added to the water carefully to avoid clumping. If the solution has a high sugar concentration the water is pre-heated to aid in dissolving the ingredients. For Diacetin and similar type simulates, sugar and HEC ingredients are not needed. The solution is mixed thoroughly, covered, and allowed to sit overnight prior to use.

The simulated tissue mixture was mixed based on the Simulated Tissue Composition indicated in Table 11. During the daily testing of this product, the applicable mixture was used to measure the Di-electric parameters at each of the tested frequencies to verify that the Di-electric parameters were within the tolerance of the tissue specifications.

Simulated Tissue Composition (percent by mass)
Table 11

	450	MHz	2450 MHz			
Ingredients	Head Body		Head	Body		
Sugar	56.00	46.50	0	0		
Diacetin	0	0	51.00	34.50		
De ionized –Water	39.10	50.53	48.75	65.20		
Salt	3.80	1.87	0.15	0.20		
HEC	1.00	1.00	0	0		
Bact.	0.10	0.10	0.10	0.10		

# 9.0 Additional Test Equipment

The Table below lists additional test equipment used during the SAR assessment.

Table 12

1 able 12								
Equipment Type	Model Number	Serial Number	Calibration Date	Calibration Due Date				
Speag Probe	EX3DV4	7534	4/19/2021	4/19/2022				
Speag Probe	EX3DV4	7533	4/19/2021	4/19/2022				
Speag DAE	DAE4	1598	4/7/2021	4/7/2022				
Speag DAE	DAE3	374	4/8/2021	4/8/2022				
POWER AMPLIFIER	50W 1000A	14715	CNR	CNR				
POWER AMPLIFIER	50W100D	0357646	CNR	CNR				
VECTOR SIGNAL GENERATOR	E4438C	MY45091270	9/9/2021	9/9/2022				
BI-DIRECTIONAL COUPLER	3020A	40295	7/8/2021	7/8/2022				
*POWER METER	E4418B	GB40206480	11/25/2020	11/25/2021				
*POWER METER	E4419B	GB42420608	11/27/2020	11/27/2021				
POWER SENSOR	E9301B	MY41495594	5/29/2021	5/29/2022				
POWER SENSOR	E4412A	MY61050006	4/21/2021	4/21/2022				
VECTOR SIGNAL GENERATOR	E4438C	MY42081753	8/27/2021	8/27/2022				
POWER METER	E4419B	MY45103725	6/29/2021	6/29/2022				
POWER METER	E4418B	MY45107917	7/23/2021	7/23/2022				
POWER SENSOR	E9301B	MY55210003	5/29/2021	5/29/2022				
POWER SENSOR	E9301B	MY41495733	5/29/2021	5/29/2022				
BI-DIRECTIONAL COUPLER	3020A	41931	7/27/2021	7/27/2022				
*DATA LOGGER	DSB	16398306	11/24/2020	11/24/2021				
*TEMPERATURE PROBE	80PK-22	06032017	11/25/2020	11/25/2021				
*THERMOMETER	HH806AU	080307	11/25/2020	11/25/2021				
DATA LOGGER	DSB	16398050	8/18/2021	8/18/2022				
*THERMOMETER	HH202A	35881	12/3/2020	12/3/2021				
*TEMPERATURE PROBE	80PK-22	05032017	12/3/2020	12/3/2021				
*NETWORK ANALYZER	E5071B	MY42403147	12/1/2020	12/1/2021				
*THERMOMETER	HH202A	35881	12/3/2020	12/3/2021				
*TEMPERATURE PROBE	80PK-22	05032017	12/3/2020	12/3/2021				
DIGITAL THERMOMETER	1523	3492108	9/28/2021	9/28/2022				
TEMPERATURE PROBE	PR-10L-4-100- 1/4-6-BX	WNWR037791	9/17/2021	9/17/2022				
DIELECTRIC ASSESSMENT KIT	DAK-3.5	1156	4/7/2021	4/7/2022				
SPEAG DIPOLE	D450V3	1054	11/3/2019	11/3/2022				
SPEAG DIPOLE	D2450V2	782	2/20/2020	2/20/2023				
POWER METER	E4418B	MY45107917	7/23/2021	7/23/2022				
POWER METER	E4418B	GB40206480	11/24/2021	11/24/2022				
*POWER METER	E4418B	MY45100739	12/3/2020	12/3/2021				
POWER SENSOR	E9301B	MY55210006	5/7/2021	5/7/2022				

Note \* Equipment used for test dates prior to equipment calibration due date.

#### FCC ID: AZ489FT7085

## 10.0 SAR Measurement System Validation and Verification

DASY output files of the probe/dipole calibration certificates and system verification test results are included in appendices B, C & D respectively.

## 10.1 System Validation

The SAR measurement system was validated according to procedures in KDB 865664. The validation status summary Table is below.

Table 13

Dates	Probe Ca Poi		Probe SN		Measured Tissue Parameters		Validation	
	ru	IIIt	SIN	σ	σ ε,		Linearity	Isotropy
CW								
5/31/2021	Body	2450	7522	2.01	51.9	Pass	Pass	Pass
5/23/2021	Head	2450	7533	1.89	39.6	Pass	Pass	Pass
				CV	V		•	
08/18/2021	Body	450	7534	0.96	56.0	Pass	Pass	Pass
08/13/2021	Head	450	/334	0.83	41.9	Pass	Pass	Pass

# 10.2 System Verification

System verification checks were conducted each day during the SAR assessment. The results are normalized to 1W. Appendix D includes DASY plots for each day during the SAR assessment. The Table below summarizes the daily system check results used for the SAR assessment.

Table 14

Probe Serial #	Tissue Type	Dipole Kit / Serial #	Ref SAR @ 1W (W/kg)	System Check Results Measured (W/kg)	System Check Test Results when normalized to 1W (W/kg)	Tested Date
	ECC Dody	SPEAG D2450V2 /	51.90 ± 10%		55.60	11/17/2021
7522	FCC Body		$31.90 \pm 10\%$	14.0	56.00	11/20/2021
7533	IEEE/IEC II 4	782	54.40 + 100/	14.1	56.40	11/13/2021
	IEEE/IEC Head		$54.40 \pm 10\%$	13.4	53.60	11/19/2021#
7534	FCC Body	SPEAG D450V3 /	$4.54 \pm 10\%$	1.23	4.92	12/10/2021#
7334	IEEE/IEC Head	1054	$4.57\pm10\%$	1.24	4.96	12/09/2021

Note: # system verification check covers next testing day (within 24 hours)

## **10.3** Equivalent Tissue Test Results

Simulated tissue prepared for SAR measurements is measured daily and within 24 hours prior to actual SAR testing to verify that the tissue is within +/- 5% of target parameters at the center of the transmit band. This measurement is done using the applicable equipment indicated in section 9.0. The Table below summarizes the measured tissue parameters used for the SAR assessment

Table 15

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
450	IEEE/ IEC Head	0.87 (0.83-0.91)	43.5 (41.3-45.7)	0.90	43.0	12/09/2021
430	FCC Body	0.94 (0.89-0.99)	56.7 (53.9-59.5)	0.93	55.0	12/09/2021#
466	IEEE/ IEC Head	0.87 (0.83-0.91)	43.4 (41.2-45.6)	0.91	42.6	12/09/2021
2412	FCC Body	1.91 (1.82-2.01)	52.8 (47.5-58.0)	1.93	48.8	11/17/2021
2412	IEEE/ IEC Head	1.77 (1.68-1.86)	39.3 (35.3-43.2)	1.84	36.0	11/13/2021
2437	FCC Body	1.94 (1.84-2.03)	52.7 (47.4-58.0)	1.98	48.7	11/20/2021
2437	IEEE/ IEC Head	1.79 (1.70-1.86)	39.2 (35.3-43.1)	1.86	35.6	11/19/2021#
	FCC Body	1.95 (1.85-2.05)	52.7 (47.4-58.0)	1.98	48.7	11/17/2021
2450	rcc Body	1.95 (1.85-2.05)	52.7 (47.4-58.0)	1.99	48.7	11/20/2021
	IEEE/	1.80 (1.71-1.89)	39.2 (35.3-43.1)	1.88	35.8	11/13/2021
	IEC Head	1.80 (1.71-1.89)	39.2 (35.3-43.1)	1.88	35.5	11/19/2021#
2462	FCC Body	1.97 (1.87-2.07)	52.7 (47.4-58.0)	2.00	48.7	11/20/2021
2402	IEEE/ IEC Head	1.81 (1.72-1.90)	39.2 (35.3-43.1)	1.89	35.5	11/19/2021#

Note: # notes that the system verification check covers next testing day (within 24 hours)

#### 11.0 Environmental Test Conditions

The EME Laboratory's ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/ - 2°C of the temperature at which the dielectric properties were determined. The liquid depth within the phantom used for measurements was at least 15cm. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored. The Table below presents the range and average environmental conditions during the SAR tests reported herein:

Table 16

	Target	Measured
Ambient Temperature	18 − 25 °C	Range: 21.6 – 24.4°C Avg. 22.9 °C
Tissue Temperature	18 − 25 °C	Range: 21.4-22.8°C Avg. 22.5°C

Relative humidity target range is a recommended target

The EME Lab RF environment uses a Spectrum Analyzer to monitor for extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the SAR scans are repeated.

# 12.0 DUT Test Setup and Methodology

#### 12.1 Measurements

SAR measurements were performed using the DASY system described in section 8.0 using zoom scans. Oval flat phantoms filled with applicable simulated tissue were used for body and face testing.

The Table below includes the step sizes and resolution of area and zoom scans per KDB 865664 requirements.

Table 17

Description	≤3 GHz	> 3 GHz			
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$			
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°			
	≤ 2 GHz: ≤ 15 mm	$3-4$ GHz: $\leq 12$ mm			
	$2-3 \text{ GHz} \le 12 \text{ mm}$	$4-6 \text{ GHz:} \leq 10 \text{ mm}$			
	When the x or y dimension	on of the test device, in			
Maximum area scan spatial resolution: ΔxArea, ΔyArea	the measurement plane o	the measurement plane orientation, is smaller			
wiaxinium area scan spaniai resolution. AxArea, AyArea	than the above, the meas	than the above, the measurement resolution must			
	be $\leq$ the corresponding x	or y dimension of the			
	test device with at least of	ne measurement point			
	on the test device.				
Maximum zoom scan spatial resolution: ΔxZoom, ΔyZoon	$\leq 2 \text{ GHz: } \leq 8 \text{ mm}$	$3-4 \text{ GHz:} \leq 5 \text{ mm*}$			
	$2-3$ GHz: $\leq 5$ mm*	$4-6 \text{ GHz: } \leq 4 \text{ mm*}$			
Maximum zoom scan spatial uniform grid: ΔzZoom(n)		$3-4$ GHz: $\leq 4$ mm			
resolution, normal to	≤ 5 mm	$4-5$ GHz: $\leq 3$ mm			
phantom surface		$5-6$ GHz: $\leq 2$ mm			

Note:  $\delta$  is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

#### 12.2 **DUT Configuration(s)**

The DUT is a portable device operational at the body and face as described in section 6.0 while using the applicable accessories listed in section 7.0. All accessories listed in section 7.0 of this report were considered when implementing the guidelines specified in KDB 643646.

# 12.3 **DUT Positioning Procedures**

The positioning of the device for each body location is described below and illustrated in Appendix G.

<sup>\*</sup> When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is  $\leq$  1.4 W/kg,  $\leq$  8 mm,  $\leq$  7 mm and  $\leq$  5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

#### 12.3.1 Body

The DUT was positioned in normal use configuration against the phantom with the offered body worn accessory as well as with and without the offered audio accessories as applicable.

#### 12.3.2 Head

Not applicable.

#### 12.3.3 Face

The DUT was positioned with its' front and back sides separated 2.5cm from the phantom.

#### 12.4 DUT Test Channels

The number of test channels was determined by using the following IEEE 1528 equation. The use of this equation produces the same or more test channels compared to the FCC KDB 447498 number of test channels formula.

$$N_c = 2 * roundup[10 * (f_{high} - f_{low}) / f_c] + 1$$

Where

 $N_c$  = Number of channels

 $F_{high} = Upper channel$ 

 $F_{low} = Lower channel$ 

 $F_c$  = Center channel

### 12.5 SAR Result Scaling Methodology

The calculated 1-gram and 10-gram averaged SAR results indicated as "Max Calc. 1g-SAR"in the data Tables is determined by scaling the measured SAR to account for power leveling variations and drift. Appendix F includes a shortened scan to justify SAR scaling for drift. For this device the "Max Calc. 1g-SAR" are scaled using the following formula:

$$Max\_Calc = SAR\_meas \cdot 10^{\frac{-Drift}{10}} \cdot \frac{P\_max}{P \text{ int}} \cdot DC$$

 $P \max = Maximum Power(W)$ 

P int = Initial Power (W)

Drift = DASY drift results (dB)

SAR\_meas = Measured 1-g or 10-g Avg. SAR (W/kg)

DC = Transmission mode duty cycle in % where applicable

50% duty cycle is applied for PTT operation

Note: for conservative results, the following are applied:

If P int > P max, then P max/P int = 1.

Drift = 1 for positive drift

Additional SAR scaling was applied using the methodologies outlined in FCC KDB 865664 using tissue sensitivity values. SAR was scaled for conditions where the

tissue permittivity was measured above the nominal target and for tissue conductivity that was measured below the nominal target. Negative or reduced SAR scaling is not permitted.

#### 12.6 DUT Test Plan

The DUT was assessed at the body and face using the highest applicable configuration found during initial compliance assessment on filed with the FCC and ISED. All modes of operation identified in section 6.0 were considered during the development of the test plan. All tests were performed in CW and 50% duty cycle was applied to PTT configurations in the final results.

#### 13.0 DUT Test Data

## 13.1 Assessment for LMR Body

Battery PMNN4494A was used during conducted power measurements for all test channels according to FCC allocated frequency range (450-512 MHz) which are listed in below. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 18

Test Freq (MHz)	Power (W)
450.0000	5.600
465.5000	5.590
481.0000	5.580
496.5000	5.580
512.0000	5.570

The DUT was assessed at the highest applicable configuration at the body found during the previous compliance assessment on file with FCC. SAR plots of the highest results are presented in appendix E.

Table below indicated the SAR result that have performed based on previous highest body configuration.

Table 19

Antenna	Battery	Carry Accessory	Cable Accessory Highest Bod	Test Freq (MHz)	(W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g- SAR (W/kg)	Run#
FAF5260A	PMNN4403B	PMLN5657B w/ RLN6487A & RLN6488A	5	450.000	5.37	0.15	9.33	4.86	Previous Highest SAR at Body AZ(FD)-AB- 160204-05
FAF5260A	PMNN4403B	PMLN5657B w/ RLN6487A & RLN6488A	NNTN8203A	450.000	5.6.	-0.13	7.75	3.99	AF-AB-211210- 03#

#### 13.2 Assessment for LMR Face

The DUT was assessed at the highest applicable configuration at the face found during the previous compliance assessment on file with FCC. SAR plots of the highest results are presented in appendix E.

Table below indicated the SAR result that have performed based on previous highest face configuration.

Table 20

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g- SAR (W/kg)	Run#
			Highest Fac	ce Configura	ation				
FAF52560A	PMNN4485A	@front	NONE	465.500	5.43	0.18	8.07	4.16	Previous Highest SAR at Face AZ(KBK)-FACE- 160212-15
FAF52560A	PMNN4485A	@front	NONE	465.500	5.60	-0.08	7.79	3.97	AF-FACE-211209- 14

#### 13.3 Assessment for WLAN

The tables below represent the output power measurements for WLAN 2.4 GHz 802.11b/g/n.

Table 21

Band	Mode	Ch. BW	Ch.	Freq. (MHz)	Measured conducted power (W)	Antenna max power (W)
	802.11b		1	2412	0.0466	
		20	6	2437	0.0471	0.0631
	(1Mbps)		11	2462	0.0458	
	902 11-		1	2412	0.0191	
2.4 GHz	802.11g	20	6	2437	0.0189	0.0251
	(6Mbps)		11	2462	0.0186	
	902 11		1	2412	0.0126	
	802.11n	20	6	2437	0.0126	0.0155
	(6.5Mbps)		11	2462	0.0124	

Note: 802.11b was chosen over 802.11 g & n for testing because it has the highest max power.

Table below indicated the SAR results that have performed based on previous highest configurations and across the frequencies bands.

Table 22

			1 abi						
Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	0	Max Calc. 1g- SAR (W/kg)	Run#
			Assessmen	nt at Body					
				2412	0.0466	0.03	0.013	0.018	MA(BAD)-AB- 211117-07
84009370002 WiFi Ant	PMNN4403B	PMLN5657B w/AY000223A01	NONE	2437	0.0471	0.03	0.019	0.025	AR-AB- 211120-04
				2462	0.0458	-0.24	0.019	0.027	AR-AB- 211120-05
			Assessmer	nt at Face					
84000270002				2412	0.0466	-0.45	0.185	0.278	MA(BAD)- FACE-211113- 13
84009370002 WiFi Ant	PMNN4485A 2.5cm @ Front	NONE	2437 0.0471	-0.39	0.180	0.264	AR-FACE- 211120-01#		
				2462	0.0458	-0.34	0.168	0.251	AR-FACE- 211120-02#

#### 13.4 Shortened Scan Assessment

A "shortened" scan using the highest SAR configuration overall from above was performed to validate the SAR drift of the full DASY5<sup>TM</sup> coarse and zoom scans. Note that the shortened scan represents the zoom scan performance result; this is obtained by first running a coarse scan to find the peak area and then, using a newly charged battery, a zoom scan only was performed. The results of the shortened cube scan presented in Appendix D demonstrate that the scaling methodology used to determine the calculated SAR results presented herein are valid. The SAR result from the Table below is provided in Appendix F.

Table 23

		Carry	Cable	Test Freq	Init Pwr	SAR Drift	Meas. 1g-SAR	Max Calc. 1g- SAR	
Antenna	Battery	Accessory	Accessory	(MHz)	(W)	(dB)	(W/kg)	(W/kg)	Run#
		PMLN5657B							
FAF5260A	PMNN4403B	w/ RLN6487A	NNTN8203A	450.000	5.60	-0.08	8.00	4.07	AF-AB-211210-05#
		& RLN6488A							

# 14.0 Simultaneous Transmission Exclusion for BT

Per guidelines in KDB 447498, the following formula was used to determine the test exclusion to an antenna that transmits simultaneously with other antennas for test distances  $\leq 50$ mm:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] \*[ $\sqrt{F(GHz)/X}$ ] = 0.32 W/kg, which is  $\leq$  0.4 W/kg (1g)

Where:

X = 7.5 for 1g-SAR; 18.75 for 10g

Max. Power = 7.61 mW (10 mW \* 76.1% duty cycle)

Min. test separation distance = 5mm for actual test separation < 5mm

F(GHz) = 2.48 GHz

Per the result from the calculation above, simultaneous exclusion is applied and therefore SAR results are not reported herein.

# 15.0 Simultaneous Transmission between LMR, WLAN and BT

These devices use a single transmitter module and antenna for both WLAN and BT. WLAN and BT cannot transmit simultaneously. Simultaneous transmission for BT had been excluded as mentioned in section 14.0. Therefore the measured SAR from 802.11b is used in conjunction with LMR for simultaneous results.

# 16.0 Results Summary

Based on the test guidelines from section 4.0 and satisfying frequencies within FCC bands and ISED Canada Frequency bands, the highest Operational Maximum Calculated 1-gram average SAR values found for this filing:

Table 24

Designator	Frequency band (MHz)	Max Calc at Body (W/kg) 1g-SAR	Max Calc at Face (W/kg) 1g-SAR
		FCC	
LMR	450-520	4.07	3.97
WLAN	2412-2462	0.027	0.278

All results are scaled to the maximum output power.

The highest combined 1g-SAR results for simultaneous is indicated in the following Table:

Table 25

Designator	Frequency bands	Combined 1g- SAR (W/kg)	Combined 10g- SAR (W/kg)
	Body		
FCC	LMR (450-512 MHz) and		
rcc	WLAN band	4.097	2.995
	Face		
FCC	LMR (450-512 MHz) and WLAN band	4.248	3.111

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of FCC 47 CFR § 2.1093.

#### FCC ID: AZ489FT7085

# 17.0 Variability Assessment

Per the guidelines in KDB 865664 SAR variability assessment is required because SAR results are above 4.0W/kg (Occupational).

The Table below includes test results of the original measurement(s), the repeated measurement(s), and the ratio  $(SAR_{high}/SAR_{low})$  for the applicable test configuration(s).

Table 26

Run#	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq. (MHz)	Adj Calc. 1g-SAR (W/kg)	Ratio	Comments
AF-AB-211210-05#	FAF5260A		PMLN5657B w/	NNTN8203A	450.000	4.07	1.02	No additional repeated scans is required due to
AF-AB-211210-03#	FAF3200A	FIVIININ44U3D	& RLN6488A	1NIN11N02U3A	450.000	3.99	1.02	the Ratio $(SAR_{high}/SAR_{low}) \le 1.20$

# 18.0 System Uncertainty

A system uncertainty analysis is not required for this report per KDB 865664 because the highest report SAR value for Occupational exposure is less than 7.5W/kg.

Per the guidelines of ISO 17025 a reported system uncertainty is required and therefore measurement uncertainty budget is included in Appendix A.

# Appendix A Measurement Uncertainty Budget

# Uncertainty Budget for System Validation (dipole & flat phantom) for 450 MHz

							h = c x f	i =	
a	b	c	d	e = f(d,k)	f	g	c x j   / e	$\begin{array}{c c} c x \\ g/e \end{array}$	k
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	c <sub>i</sub> (1 g)	c <sub>i</sub> (10 g)	1 g U <sub>i</sub> (±%)	10 g U <sub>i</sub> (±%)	v <sub>i</sub>
Measurement System									
Probe Calibration	E.2.1	6.7	N	1.00	1	1	6.7	6.7	8
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	8
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	8
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	8
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	8
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	8
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	8
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	8
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	8
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t. Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	$\infty$
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	2.0	R	1.73	1	1	1.2	1.2	∞
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	$\infty$
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	$\infty$
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	8
Liquid Conductivity (measurement)	E.3.3	3.3	R	1.73	0.64	0.43	1.2	0.8	$\infty$
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	8
Liquid Permittivity (measurement)	E.3.3	1.9	R	1.73	0.6	0.49	0.6	0.5	8
Combined Standard Uncertainty			RSS				10	9	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				19	18	

- a) Column headings *a-k* are given for reference.
- b) Tol. tolerance in influence quantity.
- c) Prob. Dist. Probability distribution
- d) N, R normal, rectangular probability distributions
- e) Div. divisor used to translate tolerance into normally distributed standard uncertainty
- f) *ci* sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) *ui* SAR uncertainty
- h) vi degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

# **Uncertainty Budget for Device Under Test, for 450 MHz**

а	b	с	d	e = f(d,k)	f	g	h = c x f / e	$i = c \times g / e$	k
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	$c_i$ (1 g)	$c_i$ (10 g)	1 g u <sub>i</sub> (±%)	10 g u <sub>i</sub> (±%)	$v_i$
Measurement System									
Probe Calibration	E.2.1	6.7	N	1.00	1	1	6.7	6.7	$\infty$
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	$\infty$
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	$\infty$
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	$\infty$
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	$\infty$
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	$\infty$
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	$\infty$
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	$\infty$
Integration Time	E.2.8	1.1	R	1.73	1	1	0.6	0.6	$\infty$
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	$\infty$
RF Ambient Conditions -									
Reflections		0.0			1	1		0.0	$\infty$
		0.4				1		-	$\infty$
	E.6.3	1.4	R	1.73	1	1	0.8	0.8	$\infty$
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		2.4	-	1.50			2.0	2.0	
	E.5	3.4	R	1.73	1	1	2.0	2.0	$\infty$
-					-				
Combined   Component   Component   Combined   Combine		29							
						_			8
	6.6.2	5.0	R	1.73	1	1	2.9	2.9	$\infty$
									$\infty$
• • •									$\infty$
•									$\infty$
					0.6				$\infty$
Liquid Permittivity (measurement)	E.3.3	1.9		1.00	0.6	0.49			$\infty$
Combined Standard Uncertainty			RSS				11	11	477
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				23	22	

- a) Column headings a-k are given for reference.
- b) Tol. tolerance in influence quantity.
- c) Prob. Dist. Probability distribution
- d) N, R normal, rectangular probability distributions
- e) Div. divisor used to translate tolerance into normally distributed standard uncertainty
- f) *ci* sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) ui SAR uncertainty
- h) vi degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

## Uncertainty Budget for System Validation (dipole & flat phantom) for 2450 MHz

							h =	i =	
	7.		1	e =	£		cxf	cx	1-
<u>a</u>	b	c	d	f(d,k)	J	g	/ e	g/e	<u>k</u>
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	c <sub>i</sub> (1 g)	$c_i$ (10 g)	1 g U <sub>i</sub> (±%)	10 g U <sub>i</sub> (±%)	$v_i$
Measurement System									
Probe Calibration	E.2.1	6.0	N	1.00	1	1	6.0	6.0	∞
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	8
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	8
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	8
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t. Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	2.0	R	1.73	1	1	1.2	1.2	$\infty$
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	$\infty$
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	$\infty$
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	$\infty$
Liquid Conductivity (measurement)	E.3.3	3.3	R	1.73	0.64	0.43	1.2	0.8	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	$\infty$
Liquid Permittivity (measurement)	E.3.3	1.9	R	1.73	0.6	0.49	0.6	0.5	∞
Combined Standard Uncertainty			RSS				9	9	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				18	17	

- a) Column headings *a-k* are given for reference.
- b) Tol. tolerance in influence quantity.
- c) Prob. Dist. Probability distribution
- d) N, R normal, rectangular probability distributions
- e) Div. divisor used to translate tolerance into normally distributed standard uncertainty
- f) *ci* sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) ui SAR uncertainty
- h) vi degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

# **Uncertainty Budget for Device Under Test, for 2450 MHz**

а	b	с	d	e = f(d,k)	f	g	h = c x f / e	$i = c \times g / e$	k
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	$c_i$ (1 g)	$c_i$ (10 g)	1 g u <sub>i</sub> (±%)	10 g u <sub>i</sub> (±%)	$v_i$
Measurement System									
Probe Calibration	E.2.1	6.0	N	1.00	1	1	6.0	6.0	$\infty$
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	$\infty$
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	$\infty$
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	$\infty$
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	$\infty$
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	$\infty$
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	$\infty$
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	$\infty$
Integration Time	E.2.8	1.1	R	1.73	1	1	0.6	0.6	$\infty$
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	$\infty$
RF Ambient Conditions -									
Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	$\infty$
Probe Positioner Mech. Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	$\infty$
Probe Positioning w.r.t Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	$\infty$
Max. SAR Evaluation (ext., int.,	Б.б	2.4	D	1.72	1	1	2.0	2.0	
avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	$\infty$
Test sample Related	E 4.0	2.2	N.T.	1.00	1	1	2.2	2.2	20
Test Sample Positioning	E.4.2	3.2	N	1.00	1	1	3.2	3.2	29
Device Holder Uncertainty	E.4.1	4.0	N	1.00	1	1	4.0	4.0	8
SAR drift	6.6.2	5.0	R	1.73	1	1	2.9	2.9	$\infty$
Phantom and Tissue Parameters	E 0.1	4.0	<b>D</b>	1.50	4		2.2	2.2	
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	$\infty$
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	$\infty$
Liquid Conductivity (measurement)	E.3.3	3.3	N	1.00	0.64	0.43	2.1	1.4	$\infty$
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	$\infty$
Liquid Permittivity (measurement)	E.3.3	1.9	N	1.00	0.6	0.49	1.1	0.9	∞
Combined Standard Uncertainty			RSS				11	11	419
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				22	22	

- a) Column headings *a-k* are given for reference.
- b) Tol. tolerance in influence quantity.
- c) Prob. Dist. Probability distribution
- d) N, R normal, rectangular probability distributions
- e) Div. divisor used to translate tolerance into normally distributed standard uncertainty
- f) *ci* sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) ui SAR uncertainty
- h) *vi* degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

FCC ID: AZ489FT7085 Report ID: P3878-EME-00079/80/81/82

# **Appendix B Probe Calibration Certificates**

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





Schweizerischer Kalibrierdienst Service suisse d'étalennage Servizio svizzero di taratura 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 Motorola Solutions MY

Certificate No: EX3-7533\_Apr21

# CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7533

Calibration procedure(s)

QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v6, QA CAL-23.v5;

QA CAL-25.V7

Calibration procedure for dosimetric E-field probes

Calibration date:

April 19, 2021

The calibration certificate documents the traceability to resional standards, which realize the physical units of measurements (St). 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%.

Colibration Equipment used (M&TE critical for calibration)

Primary Standards	10	Call Date (Certificate No.)	Scheduled Calibration
Power meler NRP	SN: 104778	09-Apr-21 (No. 217-03291/03292)	Apr-22
Power sensor NRP-Z91	SN: 103244	00-Apr-21 (No. 217-G3291)	Apr-22
Power servior NRP-Z91	SN: 103245	09-Apr-21 (No. 217-03292)	Apr-22
Reference 20 d8 Alternator	SN: CC2552 (20x)	09-Apr-21 (No. 217-03343)	Apr-22
DAE4	SN: 660	23-Dec-20 (No. DAE4-660_Dec20)	Dec-21
Reference Probe ES3DV2	SN: 3013	30-Dec-20 (No. ES3-3013_Dec20)	Dec-21
Secondary Standards	(D	Check Date (in nouse)	Scheduled Check
Power mater E4419E	SN: GB41293874	08-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	08-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642IJ01700	04-Aug-96 (in house sheck Jun-20)	In house check: Jun-22
Network Analyter E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	III house check: Oct-21

Calibrated by Jeffrey Katzman Laboratory Technician July

Approved by Katja Pokovic Technical Minnager

Insued: April 21, 2021

This calibration certificate shall not be reproduced except in full without written approval of the isboratory.

Certificate No: EX3-7533, Apr21

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





S Schweizerlecher Kalibrierdienst C Service suisse d'étaionnage Servizió svizzero di teratore Swisz Calibration Service

Accreditation No.: SCS 0108

Accredited by the Settle Accreditation Service (SAS)

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Glossary:

TSL Itabue simulating liquid NORMx,y,z sensitivity in free space ConvF sensitivity in TSL / NORMx,y,z bDCP diode compression point

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

Potenzation around probe axis

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

i.e., # = 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:

 i) 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

 EC 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 5 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 865864, 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 E<sup>1</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z \* traquency\_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 date 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.
- CorryF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for t ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for t > 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 \* CorryF whereby the uncertainty corresponds to that given for CorryF. A frequency dependent CorryF is used in DASY version t.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 mensurement center from the probe tip.
  (on probe tixls). No tolerance required.
- Gonnoctor Angle. The angle is assessed using the information gained by determining the NORMs (no uncertainty required).

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EX3DV4 - SN:7533 April 19, 2021

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:7533

**Basic Calibration Parameters** 

	Sensor X	Sensor Y	Sensor Z	Unc (k≈2)
Norm (μV/(V/m)²) <sup>A</sup> DCP (mV) <sup>®</sup>	0.42	0.45	0.41	± 10.1 %
DCP (mV)"	98.1	99.3	103.4	

Calibration Results for Modulation Response

ÜID	Communication System Name		dB	dBõV	C	dB.	mV	Max dev.	Max Unc∈ (k=2)
0	CW	X	0.00	0.00	1.00	0.00	141.2	± 3.5 %	± 4.7 %
	land and a second	Y	0.00	0.00	1.00	-235	141.1	E 91-3 3%	2000
		Z	0.00	0.00	1.00	100	141.9		
10352-	Pulse Waveform (200Hz, 10%)	X	2.40	65.60	10.01	10.00	60.0	±2.8%	± 9.6 %
AAA	C.M. C.	Y	1.75	62.29	7.82	1	60.0		3.34634
	Manager and the second	Z	3,80	70.37	12.36		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	1.37	64.59	8.68	8.99	80.0	±22%	±9.6%
AAA		-Y-	0.87	60,46	5.99	1.7	80:0	10000	200
		Z	6.72	78.25	14.06		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	1.64	69.97	10.02	3.98	95.0	±1.2%	±9.6%
AAA	( 10.1 H. 11.1 ( 2.1	- Y	0.43	60.00	5.14	6.16	95.0		c ace to
	of the same of the same of	Z	20.00	91.39	17.04		95.0		
10355-	Pulse Waveform (200Hz, 60%)	×	20.00	93.50	16.70	2.22	126.0	± 1.0 %	± 9.6 %
AAA	A series and the series of	Y	0.32	61.69	80.3	33530	120.0		0.012
	List of Control of Control	2	20.00	101.20	20.43	100	120.0		
10387-	QPSK Wayeform; 1 MHz	X	1.63	66.38	14.99	1.00	150.0	±1.8%	±98%
AAA	han with the state of the state	Y	1.62	66,57	14.96	-	150.0		e.c.a.
		Z	1.56	65.84	14.60		150.0		
10388-	QPSK Waveform, 10 MHz	X	2.14	67.39	15.59	0.00	750.0	±113%	±9.6%
AAA	The second secon	Y.	2.11	67.25	15.49	1000	150.0	E de	63.00
		- Z	2.06	66.85	15.23	-	150.0		in a second
10396-	64-QAM Wayeform, 100 kHz	X	2.34	67.98	17.70	3.01	150.0	±0.6%	198%
AAA	The state of the s	Y	2.24	67.31	17.29	3000	150.0	Vince.	4
	The second second second	Z	2,30	67.65	17.41		150.0	1000	1000
10399-	64-QAM Waveform, 40 MHz	X	3.50	66.97	15.77	0.00	150.0	±0.7%	±9.6%
AAA	Automotive Control of the Control	Y	3.47	86.93	15.71		150.0	4.4.	
	the same of the same of	Z	3.42	66.71	15.55		150.0		
10414	WLAN CCDF, 64-QAM, 40MHz	X	4.83	65.71	15.61	0.00	150.0	±13%	19.6%
AAA		Y	4,59	65.02	15.21	1000	150.0		37.00
		Z	4.74	65.53	15.43	-	150.0		

Note: For détails 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%.

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<sup>\*</sup> The undertainties of Norm X\_Y,Z do not affect the E\*-field undertainty matter TSL (see Pages 8 and 6).

\*\*Mumerical linearization parameter undertainty not required.

\*\*Uncertainty is determined using the max\_deviation from mean response applying restangular distribution and its expressor for the square or me. field value.

EX3DV4-SN:7533

April 19, 2021

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:7533

#### Sensor Model Parameters

	C1 fF	C2 fF	V-1	ms.V-2	T2 ms.V-1	T3 ms	T4 V-3	T5	76
X	37.3	278.85	35.60	3.32	0.00	4.96	1.49	0.00	1.00
Y	34.5	254.64	34.79	4.92	0.00	4.90	1.32	0.00	1.00
Z	36.5	267.86	34.51	4.09	0.00	4.98	1.50	0.00	1.00

#### Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-86.8
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1.mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for im Aroa Scan job.

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April 19, 2021

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:7533

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

r (MHz) <sup>c</sup>	Relative Permittivity F	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha <sup>6</sup>	Depth c (mm)	Unc (k=2)
150	52.3	0.76	14.08	14.08	14.08	0.00	1.00	± 13.3 %
300	45.3	0.87	13.10	13.10	13.10	0.09	1.25	± 13.3 %
450	43.5	0,87	11.86	11.88	11,86	0.16	1.30	±13.3%
750	41.9	0.89	10.83	10,83	10.83	0.46	0.83	± 12.0 %
835	41.5	0.90	10.60	10.50	10.50	0.53	0.83	± 12.0 9
900	41.5	0.97	10.32	10,32	10.32	0.50	0.80	± 12.0 9
1450	40.5	1,20	9.04	9.04	9.04	0.41	0.80	± 12.0 9
1810	40.0	1.40	8.50	8.50	8.50	0.34	0.86	± 12.0 9
1900	40.0	1.40	6.39	8.39	8.39	0.30	0.86	± 12.0 9
2100	39.8	1.49	8.20	8.20	8.20	0.33	0.86	± 12.0 9
2300	39.5	1.67	80.6	8.08	8.08	0.32	0.90	± 12.0 9
2450	39.2	1.80	7.83	7.83	7.83	0.32	0.90	± 12.0 %
2600	39.0	1.96	7.74	7.74	7.74	0.29	0.90	± 12.0 %
3500	37.9	2.91	7.26	7.26	7.26	0.30	1.35	± 14.0 %
3700	37.7	3.12	7.01	7.01	7.01	0.30	1.35	± 14.0 %
5250	35.9	4.71	5.40	5,40	5.40	0.40	1.80	±14.0%
5500	35.6	4.96	4.92	4.92	4.92	0.40	1.80	± 14.0 %
5800	35.5	5,07	4.82	4.82	4.82	0.40	1.80	± 14.0 %
5750	35.4	5.22	4.89	4.89	4,89	0.40	1.80	± 14.0 %

Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else if its restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF amordality at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz as ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 20 MHz respectively. Validity of ConvF assessments at 36, 64, 128, 150 and 200 MHz respectively. Validity of ConvF assessments at 36, 64, 128, 150 and 200 MHz respectively. Validity of ConvF assessments at 30, 64, 128, 150 and 200 MHz assessments at 36 MHz as 40 MHz. Above 5 GHz frequency validity can be operated by a 100 MHz. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

Application of the determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always feet than 12 ft/s for frequencies below 3 GHz and below 1.2% for frequencies between 3.6 GHz at any distance target than half the probe tip dismeler from the boundary.

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April 19, 2021

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:7533

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

I (MHz) <sup>G</sup>	Relative Permittivity <sup>®</sup>	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha 5	Depth (mm)	Unc (k=2)
150	61.9	0.80	13.77	13,77	13.77	0,00	1.00	± 13.3 %
300	58.2	0.92	12.74	12,74	12.74	0.02	1.35	± 133%
450	56.7	0.94	12.07	12.07	12.07	0.11	1.30	± 13.3 %
750	55.5	0.98	10.68	10.68	10.68	0.49	0.80	± 12.0 %
835	55.2	0.97	10.30	10.30	10.30	0.47	0.80	± 12.0 %
900	55.0	1,05	10.10	10.10	10.10	0.50	0.80	± 12.0 %
1450	54.0	1,30	9.34	9.34	9.34	0.40	0.80	± 12,0 %
1810	53.3	1.52	8.44	8.44	8.44	0.44	0.86	± 12.0 %
1900	53.3	1.52	6.23	8.23	8.23	0,32	0.88	± 12.0 %
2100	53.2	1,62	8.04	8.04	8.04	0.41	0.86	± 12.0 %
2300	62,9	1.61	7.91	7.91	7.91	0.40	0.90	± 12.0 %
2450	52,7	1.95	7.82	7.82	7.82	0.36	0.90	± 12.0 %
2600	52.5	2,16	7.71	7.71	7.71	0.35	0.90	± 12.0 %
3500	51.3	3.31	6.59	6.69	6.59	0.40	1,35	± 14.0 %
3700	51.0	3.55	6.51	8,51	6.51	0.40	1.35	± 14.0 %
5250	48.9	5,36	4.86	4.86	4.86	0,50	1.90	± 14.0 %
5500	48.6	5.65	4.24	4.24	4.24	0.50	1.90	±14.0%
5800	48.5	5.77	4.17	4.17	4.17	0.50	1.90	± 14.0 %
5750	48.3	5.94	4.26	4.26	4.26	0.50	1.90	± 14.0 %

Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), also it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicased 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 9-10 MHz. Above 5 GHz frequency on be extended to ± 140 MHz.
\* All frequencies up to 10 GHz, the Validity of lissue paterneters (a and a) can be released to ± 10% if liquid companisation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty to indicated target tissue parameters. Application and the properties of the parameters are supplied to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies belowers 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

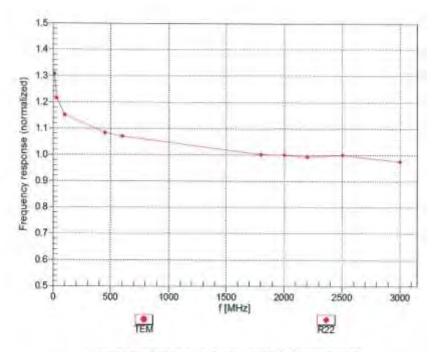
Cartificate No: EX3-7533 Apr21

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April 19, 2021

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



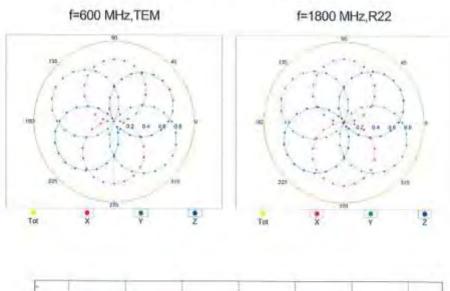
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

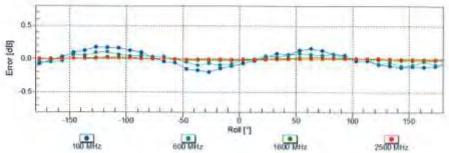
Certificate No: EX3-7533\_Apr21

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# Receiving Pattern (\$\phi\$), 9 = 0°

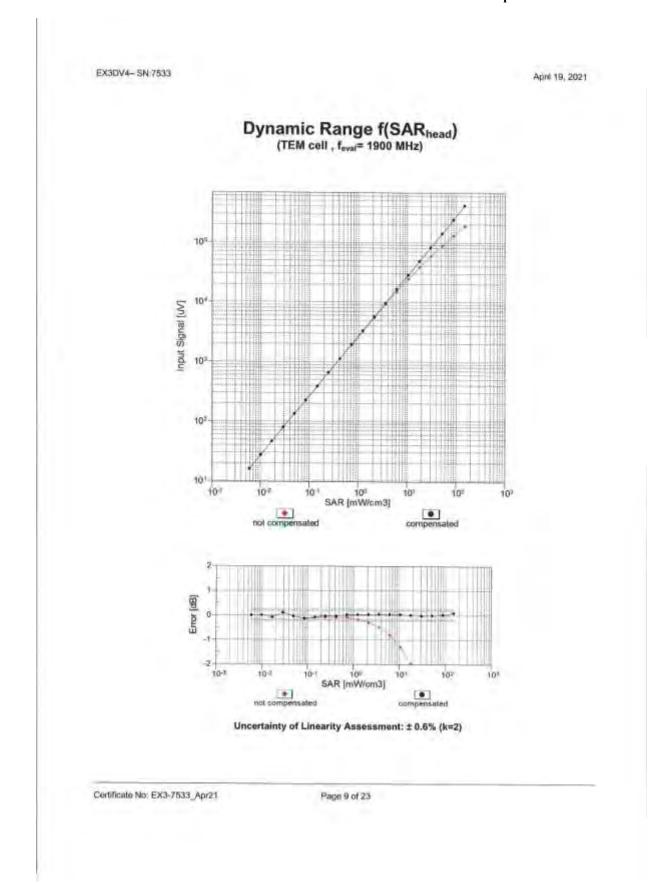


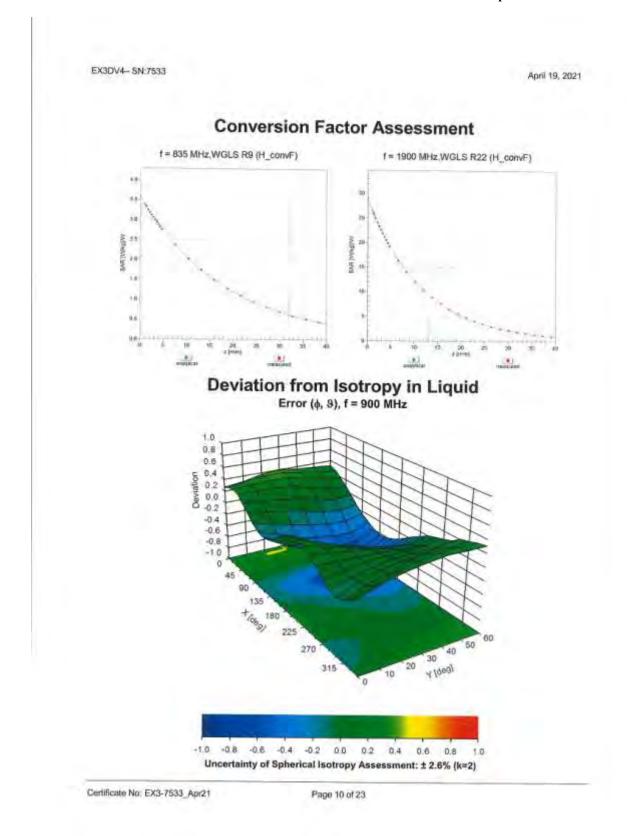


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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## Appendix: Modulation Calibration Parameters

UID Rev		Communication System Name	Group	PAR (dB)	Unc* (k=2)
0		CW	CW	0.00	±4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10017	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 Maps)	WLAN	9.46	±96%
10021	DAG	GSM-FDD (TDMA, GMSK)	GSM	9,39	±9.6 %
10023	DAC	GPRS-FOD (TDMA, GMSK, TN 0)	GSM	9.57	±9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6,56	±9.5 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6 %
10026	DAC	EDGE-FDD (TDMA, BPSK, TN (I-1)	GSM	9.55	#9.6%
10027	DAC	GPRS-FDD (TDMA, GMSK_ FN 0-1-2)	GSM	4.80	* 9.6 %
10029	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.65	±9.6%
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	±9.6%
10030	CAA	IEEE 802 15.1 Bluelooth (GFSK, DH1)	Biuntootn	5.30	±96%
10031	CAA	IEEE 802 15.1 Bluewoth (GFSK, DH3)	Bluetooin	1,67	± 9.6 %
10032	CAA	IEEE 602 15.1 Bluetauth (GFSK, DH5).	Bluetootn	2.16	± 9.6 %
10033	CAA	IEEE 802 15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluelooth	7.74	± 9.6 %
10034	CAA	IEEE 802 15.1 Bluetooth (Pt/4-DQPSK, DHS)	Bluetoper	4.53	± 9.6 %
10035	CAA	IEEE 802 15.1 Bluetooth (Pt/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	GAA	IEEE 802 15.1 Bluetooth (8-DPSK, DH1)	Bluetonth	8.01	19.6%
10037	CAA	IEEE 802 15 1 Bluetooth (6-DPSK, DH3)	Blustoph	4.77	± 9.6 %
10038	CAA	IEEE 802 15.1 Bluetooty (8-DPSK, DMt)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2080	4.57	±9.6%
10042	CAB	IS-54 / LS-136 FDD (TDMA/FDM, PV4-DQPSK, Hallrete)	AMPS	7.78	±9.6 %
10044	CAA	IS-91/EIA/TIA-563 FOO (FDMA, FM)	AMPS	0.00	± 9.8 %
10046	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6%
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Stat. 12)	DECT	10.79	196%
10056	CAA	LIMITS-TOD (TD-SCDMA, 1.28 Mcgs)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6 %
10059	CAB	(EEE 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)	WEAN	2.83	±9.6 %
10065	CAB	IEEE 802.11b W/Fi 2.4 GHz (DSSS, 11 Mbps)	WIAN	3.60	±96%
10062	CAD	IEEE 802.11am WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/N WIFI 5 GHz (OFDM, 0 Mops)	WEAN	8.63	± 9.6 %
10064	CAD	IEEE 802 1 tavn WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	29.6 %
10065	CAD	IEEE B02 11am WiFi 5 GHz (OFDM: 18 Mbps)	WLAN	9.00	19.6%
10068	CAD	(EEE 802 11s/h W(F) 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	19.6 %
10067	CAD	IEEE 802 11a/n WiFLS GHz (OFDM, 36 Mbps)	WLAN	10.12	£ 9.6 %
10088	CAD	IFEE 802 11a/n WIFI 5 GH2 (OFDM, 46 Mitors)	WLAN	10.12	19.6%
10069	CAD	IEEE 802 11am WIFI 5 GHz (OFDM, 54 Minps)	WLAN	10.56	£9.6 %
10071	CAB	IEEE 802 11g WiFi 2,4 GHz (DSSS/OFDM, 9 Minps)	WLAN	9.83	±9.6 %
10072	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9 62	t 9.6 %
10073	CAB	IEEE 802.11g WiFl 2.4 GHz (DSSS/OFDM 18 Mbps)	WLAN	9.94	±96%
10074	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	196%
10075	GAB	IEEE 802.11g WIFI 2.4 GHz (DBSS/OFDM, 36 Mbgs)	WLAN	10.77	The second
0076	CAB	IEEE 802,11q WIFI 2.4 GHz (DSSS/OFDM, 48 Mbps)	WEAN	10.77	± 9.6 %
10077	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 54 Migns)	WAN	11.00	1 107 7 7 7 7 7 7 7
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000		±9.6%
0082		IS-64 / IS-138 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)		3.97	196%
10090	CAB	GPRS-FDD (TDMA, GMSK, TN 0-0)	AMPS	4.77	196%
10097	DAC	UMTS-FDD (HSDPA)	GSM	6.56	± 9.6 %
10097	CAC		WCDMA	3.98	±96%
I WHAT	DAC	UMTS-FDD (HSUPA, Subtest 2):	WCDMA	3.98	± 9,6 %

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10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	1 196%
10100	CAC	LTE-FDD (SC FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FDD (SC-FDMA 100% RB, 20 MHz, 16-QAM)	LTE-FOXO	6.42	± 9.6 %
10102	CAB	LTE-FOD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FUO	6,60	± 9.6 %
10103	DAG	LTE-TOD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TOD	9,29	±96%
10104	CAE	LTE-T00 (SC-FDMA_100% RB, 20 MHz, 16-GAM)	LTE-TOO	9.97	± 9.6 %
10105	CAE	LTE-TOD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-100	10.01	± 9.6 %
10108	CAE	LTE-FOD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	EAG	LTE-FDD (SC FDMA, 100% RB, 10 MHz, 18-QAM)	LTE-FOD	6.43	± 9.6 %
10110	CAG	L'TÉ-FOD (SG-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE FDD (SC-FDMA 100% RB 5 MHz 16 QAM)	LTE-FOO	5.75	± 9.6 %
10112	CAG	LTE-FOD (SC-FDMA 100% RB 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-F0D (SC-FDMA: 100% RB, 5 MHz, 64-QAM)	LTE-FOD	6.62	± 9.6 %
10114	CAG	IEEE 802,11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	19.6%
10115	CAG	IEEE 802,11n (HT Grennlield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAG	IEEE 002.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	31 14 1 15
10117	CAG	(EEE 902,11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	B.07	± 9.6 %
10118	CAD	(EEE 802.11n (HT Missd, 81 Mbps, 16-QAM)	WLAN	8.59	± 9,6 %
10119	CAD	[EEE 802.11n (HT Mixed, 125 Mbps, 64-QAM)	WLAN		±9.6 %
10140	CAD	LTE-FDD (SC-FDMA, 106% RB, 15 MHz, 16-QAM)	LTE-FOO	8.13	±9.6 %
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.49	±9.6 %
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, GPSK)		6,53	±9.6 %
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	5.73	±96%
10144	The second second	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 84-QAM)	L7E-FDD	6.35	± 9.6 %
10145	CAC	LTE-FDD (SC FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	6.65	±9.6 %
10146	CAC	LTE-FBD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	5.76	±98%
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDO	6.41	± 8.6 %
10149	CAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.72	±96%
10150	CAE		L7E-F00	6.42	±9.6%
10151	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 84-QAM)	LTE-FDG	6.60	±9.6 %
10162	CAE	LTE-TOD (SC-FDMA, 60% RB, 20 MHz, QFSK)	LTE-TD0	9.28	±96%
10153	CAE	LTE-TOO (SC-FOMA, 50% RB 20 MHz. 18-QANI)	LTE-TDO	9.92	±9.6%
10154	CAE	LTE-TOO (SC FDMA 60% Rtl, 20 MHz, 64-QAM)	LTE-TOO	10.05	± 9.5 %
10155	CAF	LTE-FDD (SC-FDMA 55% RB, 10 MHz, QPSIC)	LTE-FDO	5.75	± 9.6 %
10156	CAF	LTE-FDO (SC-FDMA, 50% RB, 10 MHz, 16 QAM)	LTE-FOD	6,43	± 9.6 %
10157	CAF	LTE FDO (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5,79	±9,6%
10158	CAE	LTE-FOD (SC-FDMA, 50% RB, 5 MHz, 18 QAM)	LTE-FD0	6,49	± 9,6 %
	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FOO	6.62	±9.8%
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10100	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FD07	5,82	±9,6 %
10161	DAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz. 16-QAM)	LTE-FDD	6,43	±9.6 %
10162	CAC	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6,58	±9.6%
10156	GAG	LTE-FOD (SC-FDMA, 50% R8, 1.4 MHz, GPSK)	LTE-FDD	5.46	± 9.6 %
10187	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz 16-QAM)	LTE-FDD	6.21	±9.6%
10168	CAG	LTE-FOD (SC-FDMA, 50% RB, 1.4 MHZ, 84-QAM)	LTE-FDD	6.79	19.6%
10169	CAG	LTE FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	19.6 %
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 18-QAM)	LTE-FDD	6.52	196%
10171	CAE	LTE-FDB (SC-FDMA, 1 RB, 20 MHz: 64-QAM)	LTE-FDD	5.49	±9.6 %
10572	CVE	LTE-TD0 (SC-FDMA, 1 RB, 20 MHz, QPSK).	LTE-TOO	9.21	# 9.6 %
0173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE/TOD	9.48	± 9.6 %
0174	CAF	LTE-TDQ (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TOO	10.25	± 9.6 %
0175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QP5K)	LTE-F00	5.72	± 9.6 %
0176	CAF	LTE-FOO (SC-FDMA 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAE	LTE-FDD (SC-FDMA 1 RB, 5 MHz. QPSK)	LTE-FDD	5/73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 HB, 5 MHz, 16-DAM)	LTE-FOD	0.52	± 9.6 %
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.5 %
0180	CAG	LTE-FDD (SG-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.8 %

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10161	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FOD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 3
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	8.50	±9.63
16184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDO	5.73	1963
10185	GAL	LTE-FDD (SC-FDMA 1 RB, 3 MHz. 18-QAM)	LTE-FOD	6.51	±9.63
10196	CAG	LTE-FDD (SC-FDMA 1 R8, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.69
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1,4 MHz, QPSK)	LTE-FOD	5.73	±9.69
10188	GAG	LTE-FDD (SC-FDMA_1 RB, 1,4 MHz, 16-QAM)	LTE-FDD	6.52	±9.69
10189	CAE	L1E-FDD (SC-FDMA, 1/88, 1,4 MHz, 64-QAM)	LTE-FDD	6.50	±9.69
10193	CAE	IEEE 802.11n (HT Greenfield, (i.5 Mbps, EPSK)	WLAN	8.09	±9.6
10194	AAD	IEEE 802,17n (HT Greenfield, 39 Mbps, 18-DAM)	WLAN	8.12	±96
10195	CAE	IEEE 802,11n (HT Greenfield, 85 Mbps, 64-QAM)	WLAN	8.21	±9.61
10196	CAE	IEEE 802,11n (HT Mixed, 6.5 Milps, BPSK)	WLAN	8.10	±985
10197	AAE	IEEE 802,11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.69
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	±9.65
10219	CAF	IEEE 902,11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	2965
10220	AAF	IEEE 802,110 (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	29.65
10221	CAC	EEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±965
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK).	WLAN	8.66	#9.65
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	196
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 84-QAM)	WLAN	80.8	= 9.6
10225	CAD	UMTS-FDD (HSFA+)	WCDMA	5.97	± 9.6 °
10226	GAD	LTE-TDD (SC-FDMA, 1 RB, 1,4 MHz, 16-QAM)	LTE-TOD	9.49	±96
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 84-QAM)	LTE-TOD	10.26	£9.6 °
10228	CAD	LTE-TOO (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	L7E-TDD	9,22	± 9.6
10228	DAC	LTE-TOD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	L7E-TDD	9.48	± 9.6
16230	CAC	LTE-TOD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	£9.6 f
10231	CAC	LTE-TOD (SC-FDMA, 1 RB, 3 MHz, QPSi()	LIE-TOO	9.19	± 9.6 *
10232	CAD	LTE-TDD (SC-FDWA, 1 RB, 5 MHz. 16-QAM)	LTE-TDO	9.48	19.65
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDO	10.25	: 9.6 °
10234	CAD	LTE-TOD (SC-FDMA, 1 RB, 5 MHz. QPSK)	LTE-TOO	9.21	± 9.6 °
10235	CAD	LTE-TOD (SC-FDMA, 1 RB. 10 MHz. 16-QAM)	LTE-TDO	9.48	± 9.6 °
10236	CAD	LTE-TOD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TOO	10.25	± 9.6 °
10237	CAD	LTE-TDD (SC FDMA, 1 RB, 10 MHz, QPSK).	LTE-TOD	9.21	± 9.6 9
10238	CAB	LTE-TOD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	19.63
10239	CAB	LTE-TOD (SC-FOMA, TRB, 15 MHz, 64-QAM)	LTE-TDO	10.25	± 9.8 %
10240	CAB	LTE-TOD (SC-FDMA, 1 RB. 15 MHz, QPSK)	LTE-TOD	9.21	± 9.6 %
10241	CAB	LTE-TOD (5C-FDMA, 50% RB, 1.4 MHz. 16-QAM)	LTE-TOD	9.82	1969
10242	CAD	LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, 84-QAM)	LTE-TOD	9.86	19.69
10243	CAD	LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-700	9.45	1969
10244	CAD	L7E-TOD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TOO	10.06	±969
10245	CAG	L7E-TDD (SC-FDMA, 50% RB, 3 MHz, 84-QAM)	LTE-TOD	10.08	1969
10246	CAG	LTE-TOD (SC-FDMA, 60% RS, 3 MHz, QPSK)	LTE-TDD	9.30	# 9.6 9
0247	CAG	LTE-TDD (SC FDMA, 50% R8, 5 MHz, 16-QAM)	LTE-TOD	9.91	± 9.6 5
10248	CAG	LTE-TOD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TOD	10.09	#9.61
10249	CAG	LTE-TOD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TOD	9.29	± 9.6 5
0250	CAG	LTE TOO (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	= 9.6 1
10251	CAF	LTE-TDO (SC-FDMA, 50% RB, 10 MHz, 84-QAM)	LIE-TDD	10.17	= 9.6 %
0252	CAF	LTE-TOO (SC-FDMA, 50% RB, 10 MHz, CIPSK)	LTE-TOD	9.24	± 9.6
0253	CAF	LTE-TOO (SC-FDMA, 50% RB, 15 MNz, 16 QAM)	LTE-TOD	9.90	± 9.6 %
0254	CAB	LTE-TOO (SC-FDMA, 50% RB, 15 MHz, 84-QAM)	LTE-TOO	10.14	t B.6 %
0255	CAB	LTE-TOO (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TOO	9.20	4 9.6 9
0256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz. 16-QAM)	LTE-TOD	9.96	± 9.6 °
0257	CAD	LTE-TOD (SC-FDMA, 100% RB, 1.4 MHz, 54-QAM)	LTE-TOD	10.08	19.63
0258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TOD	9.34	1969
0259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-DAM)	LTE-TOD	9.98	1969

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10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 84-QAM)	LTE-TOD	9.97	#98%
10261	CAG	LTE-TDD (SC-FDMA, 180% RB, 3 MHz, QPSK)	LTE-TDO	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz. 18-QAM)	LTE-TDO	9.83	±96%
10263	CAG	LTE TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDO	10.16	± 9.6 %
10264	CAG	LTE-TOD (SC-FDMA, 100% RB, 5 MHz. GPSK)	LTE-TDD	9.23	±96%
10265	CAG	LTE-TOD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	±96%
10266	CAF	LTE-TOD (SC-FOMA, 100% RB, 10 MHz, 64-GAM)	LTE-TOD	10.07	± 9.0 %
10267	CAF	LTE-TOD (SC-FDMA, 100½ RB, 10 MHz, QPSK)	LTE-TOO	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-PDMA, 100% RB, 15 MHz, 18-QAM)	LTE-TDO	10.06	± 9.6 %
10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM).	LTE-TOO	1013	1969
10270	CAB	LTE-TOD (SC-FOMA, 190% RB, 15 MHz, QPSK)	LTE-TEID	9.58	± 9,6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rei8 10)	WCDMA	4.87	± 9.6 %
10275	CAD	UMTS-FDD (HSUPA, Sublest 5, 3GPP Rel8.4)	WICDMA	3,96	± 9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 984MHz, Rolloft 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloft 0.38)	PHS	12.18	19.63
10290	CAG	CDMA2000, RC1, 9055, Full Rate	CDMA2000	3.91	± 9.6 %
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3,46	+9,63
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	+9.63
10293	CAG	CDMA2000, RC3, SO3, Full Rale	CDMA2000	3.50	±9.63
10295	CAG	GDMA2000, RC1, SQ3, 1/8th Rate 25 fr.	CDMA2000	12.49	±9.69
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6%
10298	CAF	LTE-FOD (SC-FDMA 50% R8, 3 MHz, QPSK)	LTE-FDD	5.72	19.63
10299	CAF	LTE-FDD (SC-FDMA, 50% R8, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
10300	CAC	LTE-FDD (SC-FDMA 50% R5. 3 MHz, 84-QAM)	LTE-FOD	6.80	19.69
10301	CAC	(EEE 802 16e WIMAX (29:18, 5ms, 10MHz, OPSK, PUSC)	WMAX	12.03	±9.63
10302	CAE	IEEE 802,16v WIMAX (29:18, 5ms, 10MHz, GPSK, PUSC, 3CTRL)	WIMAX	12.57	±9.69
10303	CAB	IEEE 802,16e WIMAX (31.15, 5ms, 10MHz-84QAM, PUSC)	WIMAX	12.52	19.69
10304	CAA	IEEE 802.18e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11,86	± 9.6 %
10305	CAA	IEEE 802.18e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	15,24	±9.6%
10306	CAA	IEEE 802.166 WIMAX (29:18, 10ms, 10MHz, 84QAM, PUSC)	WMAX	14.67	1969
10307	AAB	IEEE 802.18e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WIMAX	14.49	±969
10308	AAB	(EEE 802,16e WIMAX (29:16, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	1963
10309	AAB	IEEE 802.16e WIMAX (29:18, 10me, 10MHz, 10QAM,AMC 2x3)	WIMAX	14.58	1969
10310	AAB	IEEE 802.16e WIMAX (29.16, 10ms, 10MHz, DPSK, AMC 2x3	WIMAX	14.57	196%
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	196%
10313	AAD	IDEN 1:3	IDEN	10.51	1907
10314	AAD	IDEN 1:8	IDEN	13.48	2967
10315	AAD	IEEE 802 11b WIF 2.4 GHz (DS\$8, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802 11g WIFI 2.4 GHz (ERP-CFDM, 6 Mbps, 96pc dc)	WLAN	B.36	± 9.6 %
10317	AAA	IEEE 802.11a W/Fi 5 GHz (OFDM 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
0352	AAA	Pulse: Wavetorn (200Hz. 10%)	Generic	10.00	19.6%
10353	AAA	Pulse Waveform (200Hz. 20%)	Generic	6.99	29.6 %
10354	AAA	Pulse Wavetorm (200Hz. 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz 60%)	Generic	2.22	2 9.6 %
10366	AAA	Pulse Waveform (200Hz: 80%)	Generic	0.97	19.6%
10367	AAA	OPSK Waveform, 1 MHz.	Generic	5.10	1 9.6 %
10388	MA	QPSK Waveform, 10 MHz	Generic	5.22	The second second
0396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	196%
10390	AAA	64-QAM Waveform, 40 MHz	Generic		± 9.6 %
0400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.27	± 9.6 %
10401	AAA	IEEE 802.17ac WiFI (40MHz, 64-QAM, 99pc dc)	WLAN	8.37	196%
0402	AAA	JEEE 802 11ac WIFI (80MHz, 64-DAM, 99pc sq)	WLAN	8,60	
0403	AAA	CDMA2000 (1xEV-DO, Rev. 0)	CDMAZUOD	8,53	19.69
0404	AAS	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.76	± 9.6 %
10406	MAD	CDMA2000, RC3, SO32, SCH0, Full Raile	CDMA2000	3.77	±9.6 %

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10410	AAA	LTE-TDD (SC-FOMA, 1 RB. 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TOO	7.82	± 9.6 %
10414	MA.	WLAN CCDF, 84-QAM, 40MHz	Generic:	6.54	± 9.6 %
10415	AAA.	IEEE 802.116 WIFI 2.4 CHz (DSSS, 1 Mbps, 99pc do)	WLAN	1.54	±9.6 %
10416	AAA	IEEE 802,11g WIFI 2.4 GHz (ERP-OFDM, 6 Mbps, 99pe dc)	WLAN	8.23	# 9.6 %
10417	AAA	IEEE 802 11ah WIFI 5 GHz (OFOM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10/18	AAA	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	814	±96%
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Grannfield, 7.2 Mbps, SPSK)	WLAN	6.32	± 9.6 %
10423	ARA	IEEE 802 11n (HT Grannfield, 43.3 Mbps, 16-QAM)	WLAN	B.47	± 9.6 %
10424	AAE	IEEE 802.11ts (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8,40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Maps., BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	IEEE 802 11n (HT Greenfield, 90 Mbps., 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802 11n (HT Greenfield, 150 Mbps, 64-(2AM)	WLAN	8,41	± 9.6 %
10430	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FOD	8.28	± 9.6 %
10431	AAC	LTE-FDD (QFDMA, 10 MHz, E-YM 3.1)	LTE-FOO	8.38	± 9.6 %
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDO	8,34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz. E-TM 3.1)	LTE-FDO	8.34	± 9.6 %
10434	AAG	W-CDMA (BS Tast Model 1, 64 DPCH)	WCDMA	8.60	±96%
10435	AAA	LTE-TOO (SC-FDMA, 1 RB, 20 MHz, CPSK, UL Sub)	LTE-TOD	7.82	±96%
10447	AAA	LTE-FDD (QFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.58	19.6%
10448	MA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AKC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	# 9.6 %
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3,1, Clipping 44%)	LTE-FDD	7.48	±9.6 %
10451	AAA	W-CDMA (BS Test Model 1, 64 DFCH, Clipping 44%)	WCDMA	7.59	±9,6 %
10458	AAC	Validation (Square, 16ms, 1ms)	Test	10.00	±9.6 %
10456	AAC	IEEE 802 11ac WiFI (160MHz, 64-QAM, 99pc.de)	WLAN	8.63	± 9.6 %
10457	AAC	UMTS-FDD (OC-HSDPA)	WCDMA	5.62	±9.6 %
10458	AAC	CDMA2000 (1xEV-DO, Rev. B. 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAC	CDMA2000 (1xEV-DO, Rev. B. 3 carners)	COMA2000	8.25	± 9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAC	LTE-TOD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6%
10462	AAC	LTE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 16-GAM, UL Sub)	LTE-TDD	8.30	± 9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TOD	8.56	±9.6%
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QRSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10465	MAG	LTE-TOD (SC-FDMA: 1 RB, 3 MHz, 16-QAM, UL Sub).	LTE-TOD	8.32	± 9.8 %
10486	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64 QAM, UL Sub)	LTE-TOD	8.57	± 9.6 %
10467	AAA.	LTE-TOD (EC-FDMA, 1 RB, 5 MHz, QPSK, UL Sab).	LTE-TOD	7.82	± 9.8 %
10466	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL SUB).	LTE-TDD	8.32	± 9.6 %
10489	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM), UL Sub)	LTE-TOD	8.56	± 9.6 %
10470	DAA	LTE-TOD (SC FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6%
10471	AAC	LTE-TOD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TOD	8.32	± 9.6 %
10472	AAC	LTE-TOD (SC-FDMA, 1 RB, 10 MHz 64-QAM, UL Sub)	LTE-TDD	8,57	± 9,5 %
10473	AAA	LTE-TOO (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LYE-TDO	7.82	± 9.6 %
10474	AAC	LTE-TOD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, IAL Sub)	LTE-ITED	8.32	±9.6%
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 84-QAM, UL Sub)	LTE-TDD	8,57	± 9.6 %
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LIE-TOD	8,32	±9.6%
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TOO	8.57	19.6%
10479	AAC	LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TOD	7.74	± 9.6 %
10480	AAA	LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TOD	8.18	= 9.6 %
10481	AAA	LTE-TOD (SC-FDMA, 60% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TOD	8.45	± 9.6 %
10482.	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TOD	7.71	: 9.6 %
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TOD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LIE-TOD	8.47	1 9.6 %
10485	AAB	LTE-TOD (SC-FDMA: 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TOD	7.59	± 9.6 %
10486	AAB	LTE-TOD (SC-FOMA, 50% RB, 5 MHz, 18-QAM, UL Sub)	LTE-TOD	8.38	± 9.6 %
10487	AAC	LTE-TOD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TOD	8.00	± 9.6 %

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10488	AAC	LTE-TOD (SC FDMA 50% RB 10 MHz, QPSK, UL SUD)	LTE-TDO	7.70	±9.6%
10489	AAC	LTE-TOD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL SVB)	LTE-TOO	8.31	±96%
10490	AAF	LTE TOD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.0%
10491	AAF	LTE-TOO (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TOO	7.74	±96%
10492	AAF	LTE-TIDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TOO	8.41	±96%
10493	AAF.	LTE-TDO (SC-FDMA, 50% RB, 15 MHz; 61-QAM, UL Sub)	LTE-TDO	8.55	± 9.6 %
10494	AAF	LTE-TOO (SC.FOMA, 50% RB; 20 MHz, OPSX, UL Sub)	LTE-TOO	7.74	±9.6%
10495	MAF	LTE-TOD (SC FDMA, 50% RB; 20 MHz, 16 QAM, IJL Sub)	LTE-TOD	6.37	± 9.6 %
10496	AAE	LTE-TOD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sun)	LTE-TOD	8.54	19.6%
10497	AAE	LTE-TOD (SC-FDMA, 180% RB, 1.4 MHz, QFSK, UL Sub)	LTE-TOD	7.67	± 9.6 %
10498	AAE	LTE TOD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL SUB)	LTE-TOO	8.40	± 9.6 %
10499	AAC	LTE-TOD (SC-FDMA, 100% RB. 1.4 MHz. 64-QAM, UL SLB)	LTE-TOD	8.88	198%
10500	AAF	LTE-TOD (SC-FDMA, 100% RB, 3 MH2, GPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10501	AAF	LTE-TOD (SC-FDMA, 100% RB 3 MHz 16-QAM, UL S(b)	LTE-TOD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB. 3 MHz, 84-QAM, Ut. Sub)	LTE-7DD	8.52	± 9.6 %
10503	AAB	LTE-TOD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TOD	7.72	±9.6%
10504	AAB	LTE-TOD (SC-FDMA, 100%, RB, 5 MHz, 16-QAM, UL Sub)	LTE-FOD	8.31	±36%
10505	AAC	LTE-TOD (SC-FDMA, 100% RB, 5 MHz, 64-DAM, UL Sub)	LTE-TOD	8.54	196%
10506	AAC	LTE-TOD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TOD	7.74	196%
10507	AAC	LTE-TIXD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	L1E-TDD	8.36	196%
10508	AAF	LTE-TOD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	+96%
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDO	7.99	196%
105/10	AAF	LTE-TOD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE/TOD	8.49	2 9.6 %
10511	MAF	LTE-TOO (SC-FDMA, 100% RB, 15 MHz, 04-QAM, UL Sub)	LTE-TDO	8.51	2.9.6 %
10512	AAF	LTE-TDD (SC FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TOD	7.74	± 9.6 %
10513	AAF	LTE TDO (SC-FDMA, 100% RB, 20 MHz, 18-QAM, UL Sub)	LTE-TOD	8.42	± 9.6 %
10514	AAE	LTE-TD0 (SC-FDMA, 108% RB, 20 MHz, 04-QAM, UK Sub)	LTE-700	8.45	2 9.6 %
10515	AAE	IEEE 802,116 WIFI 2.4 GHz (DSSS: 2 Mbps, 99pc dt.)	WLAN	1.58	19.6%
10516	AAE	IEEE 802,11b WiFI 2,4 GHz (DSSS, 5-5 Mbps, 99cc dc)	WEAR	1.57	196%
10517	AAF	IEEE 802,116 WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10518	AAF	IEEE 802,11a/h WiFi 5 GHz (OFOM, 8 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10519	.AAF	IEEE 802,11a/h WIFI 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8,39	± 9.5 %
10520	AAB	(EEE 802,11a/h WIFI 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	A.12	±9.5%
10521	NAB	IEEE 902.11a/h WIF/ 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	± 9.6%
10522	AAB	IEEE 802.1 lash WiFi 5 GHz (OFDM, 36 Mbps. 99pc dc)	WLAN	8.45	198%
10523	AAC	EEE 802 1 la/h W/Fi 5 GHz (DFDM, 48 Mbps, 99pc dc)	WLAN	80.8	±9.6 %
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IEEE 802.11a/h WIFI 5 GHz (OFDM, 64 Mbps, 99pc dc)

IEEE 802 11ac W/FI (20MHz, MCS0, 99pc dc)

IEEE 802.11ac W/F/ (20MHz, MCS1, 89pc dc)

IEEE 802 11ac W/Fi (20MHz, MCS2, 99cc dc)

IEEE 802 11ac WIFI (20MHz, MCS3, 99pc dc)

IEEE 802, 11ac W/FI (20MHz, MCS4, 99oc dc)

IEEE 802.11ac WiFI (20MHz, MCS6, 99pc dc)

IEEE 802,11ac WiFi (20MHz, MCS7, 39pc nc)

IEEE 802 11ac WIFI (20MHz, MCS8, 99pc de)

IEEE 802,11ac WiFI (40MHz, MCS0, 99pc oct)

IEEE 802.11ac WiFi (40MHz, MCS1, 99pc bc).

IEEE 802,11ac WIFI (40MHz, MCS2, 99pc dc)

IEEE 802.11ac WIFI (40MHz, MCS3, 93pc dc)

EEE 802 11ac WIFI (40MHz, MCS4, 98ac dc)

IEEE 802 11ac WIFI (40MHz, MCS6, 99pc dc)

HEEE B02 11ac WIFI (40MHz, MCS7, 88pc dc)

IEEE 802 11ac WIF) (40MHz, MCS8, 99pc dc)

(EEE 802,11ac WiFt (40MHz, MCS9, 39pc dc)

IEEE 802,17ac WiFI (80MHz, MCS0, 99pt de)

(EEE 802.11ac WiFi (BOMHz, MCS1, 98pc do)

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10546	AAC	IEEE 802,11ac WIFI (BOMHz, MCS2, 39pc do)	WLAN	8.35	±9.6%
10547	AAC	IEEE 802,11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN.	8.49	±9.6%
10548	AAC	IEEE 802.11ac WIFI (80MHz, MCS4, 99pc dc)	WLAN	8.37	±9.6 %
10550	MC	IEEE 802.11ac WIFI (80MHz, MCS8, 98ps dc)	WLAN	8.38	±96%
16551	AAC	IEEE 802.11ac WIF (80MHz, MCS7, 99pc do)	WLAN	8.50	± 9.6 %
10552	ANC	IEEE 802.11sc WiFi (80MHz, MCS8, 99pc oc)	WLAN	8.42	± 9.6 %
10553	AAC	IEEE 802 11ac WiFi (80MHz, MCS9, 99pc 0c)	WLAN	8.45	± 9.5 %
10664	AAC	IEEE 802.11ac WiFI (100MHz, MCS0, 99oc dc)	WLAN	8.48	196%
10555	AAC	IEEE 802,11ac WIFI (160MHz, MCS1, 995c dc)	WLAN	8.47	±96%
10556	AAC	EEE 802,11ac WiFi (100MHz, MCSz, 99oc de)	WLAN	8.50	19.6%
10557	AAC	IEEE 802,11ac WiFi (160MHz, MCS3, 99pc dc)	WEAN	8.52	±96%
10558	AAC	IEEE 802,11ac W/F (160MHz, MCS4, 99pc do)	WLAN	9.61	± 9.6 %
10580	AAC	IEEE 802.11ac WIFI (160MHz, MCS6, 98pc do)	WLAN	8.73	±96%
10561	AAC	IEEE 802.11ac WIFI (180MHz, MC\$7, 59pc do)	WLAN	8.56	±9.8 %
10582	AAC	IEEE 802 11sq W/F (160MHz, MCS8, 99pc dc)	WEAN	8.69	±96%
10563	AAC	IEEE 802.11ac WiFi (180MHz, MCS0, 95pc dc)	WLAN	8.77	± 9.6 %
0564	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 9 Maps, 99pc do)	WLAN	8.25	196%
10565	AAC	(EEE 802.11g W/Fi 2.4 CHz (DSSS-OFDM: 12 Mbps, 99pc dp)	WLAN	8.45	19.6%
10566	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM 18 Mbps, 99pc dc)	WLAN	813	19.6%
10567	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 89pc dc)	WLAN	8.00	-
10568	AAC	(EEE 802 11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	19,6%
10569	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM: 48 Mbps, J9pc dc)	WLAN	8 10	± 9,6 %
10570	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM: 54 Mbps, 98pc dc)	WLAN	and the second	±9,6 %
10571	MC	IEEE 802 11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	8,30	± 9.6 %
10572	AAC	IEEE BOZ 11b WiFi 2.4 GHz (DSSS, 2 Mops, 90pc dc)	The second secon	1,99	± 9,6 %
10573	AAC	IEEE 802,11b WFi 2,4 GHz (DSSS, 5,5 Mbps, 90pc dc)	WLAN	1,99	± 9.6 %
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 80bc dc)	WLAN	1,98	± 9.6 %
10575	Total Control	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pg dc)	WLAN	1,98	± 9.6 %
10576	DAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 8 Mbps, 90pc dc)	WLAN	8,59	±9.6 %
10577	AAC	IEEE 802,11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mhps, 90pc dc)	WLAN	8.60	± 9.6 %
10576	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mips, 90pc dc)	WLAN	8.70	19.6%
10579	AAD		WLAN	8.49	195%
10680	AAG	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc oc)	WLAN	6.36	±9.6 %
10581	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	±9.5%
10582	N/D	IEEE 802.11g WIF 2.4 GHz (DBSS-OFDM, 48 Mops, 90pc dic)	WLAN	8.35	± 9.6 %
10583	AAD	IEEE 802.11g WIF12.4 GHz (DSSS-QFDM, 54 Mbps, 90pc de)	WLAN	8.67	±95%
10584	AAD	(EEE 802.11a/h W/F/ 5 GHz (OFDM, 6 Mbps, 80pc dc)	WEAN	8.59	19.6%
	AAO	IEEE 802. Travh WiFr 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10585	AAD	IEEE 802.11e/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	195%
10586	AAD	IEEE 802 Halli WIFI 5 GHz (OFOM, 18 Mbps, 90pc dc)	WLAN	8.49	19.6%
10587	AAA	IEEE IKI2 11e/n WiFi 5 GHz (QFDM, 24 Mbps, 90pc dc)	WLAN	8.36	= 9.5 %
10588	AAA.	IEEE 802.11e/h WiFl 5 GHz (OFDM, 36 Mbps, 90pc dc)	WEAN	8.76	+9.6%
10589	AAA.	IEEE B02.11s/h WiFi 5 GHz (OFDM, 46 Mbps, 80pc do)	WLAN	8.35	± 9.6 %
10590	AAA	IEEE 802 11am WIFI 5 GHz (OFDM, 54 Mbps, 80pc do)	WLAN	8.67	± 9,6 %
10591	AAA.	IEEE 802 11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8,63	± 9.6 %
10592	AAA	IEEE 802 11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	6,79	± 9,6 %
10593	AAA	IEEE 802 11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	±9.6%
10594	AAA	IEEE 802,11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
0595	AAA	IEEE 802,11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	± 9.6 %
0598	AAA	IEEE 802,1 m (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
0597	AAA.	IEEE 802.11rr (HT Mixed, 20MHz, MCS6, 90pc.do)	WLAN	8.72	19.6%
0599	AAA.	IEEE 802,11n (HT Mixed, 20MHz, MCS7, 90ps db)	WLAN	8,50	± 9.6 %
0599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	± 9.6 %
8600	AAA	IEEE 802,11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	196%
10604	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc de)	WEAN	8.62	±96%
10002	AAA	(EEE 802.11h (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.54	496 W
10603	AAA	(EEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WEAN	9.03	±96%

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10604	AAA	IEEE 802.11v (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	±9.6%
10605		IEEE 802 11n (HT Mixed, 40MHz, MCS6, 90cc;dc)	WIND	1 107	4068

10604	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	±9.6%
10605	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	8.97	± 9.6 %
10000	MAG	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc).	WLAN	8.62	± 9.6 %
10607	AAC	IEEE 802.11ac WIFI (20MHz, MCS0, 90pc de)	WLAN	8.64	± 9.6 %
10608	AAC	IEEE 802.1 (ac WiFi (20MHz, MCS1, 90pc dc)	WLAN	8.77	£9.6 %
10809	AAC	IEEE II02 11ac WiFI (20MHz, MCS2, 90pc dc)	WLAN	8.57	± 9.6 %
10610	AAC	IEEE 802 11ac WIFI (20MHz, MCS3; 90pc dc)	WLAN	8.78	±9.6%
10811	AAC	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10612	MAC	IEEE BOZ 11ac WIFI (20MHz, MCS5, 90pc dc)	WLAN	8.77	±9.6%
10613	AAC	IEEE 802.11ac WiFI (20MHz, MCS6, 90pc dc)	WLAN	8,94	± 9.6 %
10614	AAC	IEEE 802.11ac WiFI (20MHz, MCS7, 90pc 0c)	WLAN	8,59	± 9.6 %
10615	AAC	IEEE 802.11ac WiFI (20MHz, MC58, 90pc do)	WLAN	8.82	± 9.6 %
10616	AAC	IEEE 802 11ac WiFI (40MHz, MCS0; 80pc do)	WLAN	8.82	± 9.6 %
10617	AAC	IEEE 802,11ad WiFI (40MHz, MCS1, 90pc rtc)	WLAN	8.81	£ 9.6 %
10818	AAC	IEEE 802,11ac WiFi (40MHz, MCS2, 90pc tid)	WLAN	8.58	±9.6%
10519	AAC	IEEE 802,11ac WiFi (40MHz, MCS3, 90pc do)	WEAN	8.86	± 9.6 %
10620	MAC	IEEE 802,11sc WIFI (40MHz, MCS4, 80pc 60)	WEAN	8.87	±96%
10621	MAC	IEEE 802.11ac WIFI (40MHz, MC55, 90pc dc)	WLAN	8.77	± 9.6 %
10622	MAC	IEEE 802,11ac WIFI (40MHz, MCS6, 90pc do)	WLAN	8.68	±9.6%
10823	AAC	FEEE 802.11ac WiFt (40MHz MCS7, 90pc dc)	WCAN	8.82	± 9.6 %
10624	AAC	(EEE 802,11ac WiFi (40MHz, MCS8, 90pc dc)	WLAN	8.96	± 9.6 %
10625	AAC	IEEE 802,11ac WiFi (40MHz, MCS9, 90pc dc)	WLAN	8.96	±9.6%
10826	AAC	IEEE 802.11ac WIFI (80MHz, MCS0, 90pc dc)	WLAN	8.83	±96%
10827	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc)	WLAN	8.88	+96%
10628	AAC	IEEE 802.11sc WIFI (80MHz, WCS2, 90pc dc)	WLAN	8.71	± 9.6 %
10829	AAC	(EEE 802.11ac WIFI (80MHz, MCS3, 90pc dc)	WLAN	8,85	±9.6%
10630	AAC	EEE 802.11ac WiFi (80MHz, MCS4, 90oc dc)	WLAN	8,72	± 9.6 %
10631	AAC	IEEE 802.11ac WIFI (80MHz, WCS5, 90pc dc)	WEAN	8,81	±96%
10632	AAC	IEEE 802.11ac WiFi (80MHz, MCSe, 90pc dc)	WLAN	8.74	±9.6 %
10633	AAC	IEEE 802.1 fac WiFI (80MHz, MCS7, 90pc dc)	WLAN	8.83	± 9.6 %
10634	AAC	IEEE 802,11ac WiFI (80MHz, MCS8, 90pc dc)	WLAN	8.80	±9.6 %
10635	AAC	IEEE 802,1 tac WiFi (80MHz, MCS9, 90pc dc)	WLAN	8.81	±9.6 %
10836	AAC	IESE 802,11ec WiFi (160MHz, MCS0, 90pc dg)	WLAN	8,83	± 9.6 %
10637	AAC	(EEE 802.11ac WiFI (160MHz, MCS1, 90pc do)	WLAN	8,79	5 9.6 %
10638	AAC	IEEE 802.11ac Wifi (160MHz. MCS2, 90pc dc)	WLAN	8.86	± 9.6 %
10639	AAC	/EEE 802.11ac WiFi (160MHz. MC53, 90pc itc)	WLAH	8.85	±9.6%
10640	AAC	IEEE 802 11ac WiFi (160MHz, MCS4, 90pc dc)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 602.1 (no W/Fi (100MHz, MCS5, 90pc dc)	WLAN	9.06	±9.6%
10642	AAC	IEEE 802 11ac WiFi (160MHz, MCS6, 80pc dc)	WLAN	9.06	±9.6%
10643	AAC	IEEE 802.11ac WIFI (160MHz. MCS7, 90pc dc)	WLAN	8.89	± 9.5 %
10644	AAC	IEEE 802,11ac WIFI (160MHz, WCS8, 90pc dc)	WLAN	9.05	±9.5 %
10645	AAD	IEEE 802.11ac WIFI (160MHz, MCS9, 90pc dc)	WLAN	9.11	± 9.6 %
10846	AAC	LTE-TOD (SC-FDMA, 1 R8, 5 MHz, QPSK, UL Sub=2.7)	LTE-TDD	11.96	19.6%
10847	AAC	LTE-TOD (5C-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7)	LTE-TOD	11.95	296%
1064B	AVC	CDMA2000 (1s Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	196%
10653	AAC	LTE-TDD (OFDMA, 16 MHz, E-TM 3.1, Clipping 44%)	LTE-TOD	7.42	±9.6 %
10654	AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3 1, Clipping 44%)	LTE-TOD	6.96	±9.6 %
10865	AAC	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6 %
10858	AAC	Pulsa Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAC	Pulsa Waveform (200Hz, 20%)	Test	6,99	± 9.6 %
10880	AAC	Pulsa Waveform (200Hz, 40%)	Test	3,98	± 9.6 %
10881	AAC	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6%
10662	AAC	Pulse Wavetomi (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAC	Bluetooth Law Energy	Bluetooth	2,19	± 9.6 %
10671	AAD	IEEE 802.11ax (20MHz, MCS0, 90pc dol	WLAN	9.09	± 9.6 %

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10872	AAD	IEEE 802.11ax (20MHz, MCS1, 90pc dc)	WLAN	8.57	±9.6%
10673	AAD	IEEE 802.11ax (20MHz, MCS2, 90pc de)	WLAN	8.78	±9.6 %
10674	AAD	IEEE 802.11ax (20MHz, MCS3, 90pc pc)	WLAN	8.74	±9.6 %
10875	AAD	IEEE 802.11ax (20MHz, MCS4, 90pc dc)	WLAN	8.90	± 9.6 %
10678	AAD	IEEE 802.11ax (20MHz, MCS5, 90pc pc)	WLAN	8.77	±9.6%
10677	AAD	JEEE 802.11ax (20MHz, MCS6, 90pc 6c)	WLAN	8.73	±9.6%
10676	AAD	(EEE 802 11ax (20MHz, MCS7, 90pc cc)	WLAN	8.78	±9.6 %
10879	AAD	IEEE 802.11ax (20MHz, MCS8, 90pc dc)	WLAN	8.89	±96%
10080	AAD	IEEE 802.11ax (20MHz, MCSII (Opc do)	WLAN	8.80	±9.6 %
10861	AAG	IEEE 802.11ax (20MHz, MCS10, 30pc dc)	WLAN	8,62	±9.6 %
10582	AAF	IEEE 802 11ax (20MHz, MCS11, 90pc dc)	WLAN	8.83	±9.6 %
10683	AAA	IEEE 802,11ax (20MHz, MCS0, 99pq 8c)	WLAN	8.42	196%
10584	AAC	IEEE 802 11ax (20MHz, MOS1, 99pc dg).	WLAN	8.26	196%
10885	AAC	IEEE 802,11ax (20MHz, MCS2, 99pc dc)	WLAN	8.33	£ 9.6 %
10886	AAC	(EEE 802.11ax (20MHz. MCS2, 99pc dc)	WLAN	8.28	±96%
10887	AAE	(EEE 802.11ax (20MHz, MCS4, 99pp.dc)	WLAN	8.45	±9.6%
10686	AAE	(EEE 802.11ax (20MHz, MCSs 99pc dc)	WLAN	8.29	±9.6 %
10689	AAD	(EEE 802.11ak (20MHz, MCS6, 99pc de)	WLAN	8.55	196%
10690	AAE	IEEE 802.11as (20MHz, MCS7, 99pc dc)	WLAN		2006
10691	AAS	IEEE 802.11ax (20MHz, MCS8, 99pc dc)	WLAN	8.29 8.25	±9.6 %
10692	AAA	IEEE 802.11ax (20MHz. MCS9. 99pc dc)	WLAN	8.29	the second second
10693	AAA	IEEE 802 11ax (20MHz, MCS10, 99ac dq)	WLAN	8.25	± 9.6 %
10894	AAA	(EEE 802 11ex (20MHz, MCS11, 99pc dp)	WLAN	8,57	±9.6%
10895	AAA	IEEE 802 118x (40MHz, MCS0, 90pc do)	WLAN		
10696	AAA	(EEE 802 11ax (40MHz, MCS1, 90pc dc)	WLAN	8.78	19.6 %
10697	AAA	IEEE 802 11as (40MHz, MCSZ 90pc dc)	WLAN	8,91	±9.6%
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc dg)	WLAN	8,61	±9.6 %
10899	AAA	IEEE 802 11ax (40MHz, MCS4, 90pc dc)	WLAN	8.69	±9,6%
10700	AAA	IEEE 802 11ax (40MHz, MCS5, 90pc do)	WLAN	6,82	±9,6%
10701	AAA	REE 802 11ax (40MHz, MCS6, 90pc do)	WLAN	8,73	± 9.6 %
10702	AAA	IEEE 802 11ax (40MHz, MCS7, 90pc do)	WLAN	8,86	±9,6%
10763	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc do)	WLAN	8.70	± 9,6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90gc do)	WLAN	8,82	±9.6 %
10705	and the second second	REEE 802.11ax (40MHz, MCS10, 90pc do)		8,56	19.6%
10708	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc dg)	WLAN	8.69	1 9.6 %
10707	MAC	IEEE 802,11ax (40MHz, MGS0, 99pc dc)	WEAN	8.68	±9.6 %
1070a	AAC	IEEE 802.11ax (40MHz, MCS1, 990c dc)		8.32	± 9.6 %
10709	AAC	IEEE 802 11ax (40MHz, MCS2 99ec de)	WLAN	8,55	±9.6%
10710	AAC	IEEE 802 11ax (40MHz, MCS3, 99ac dc)	WLAN	R.33	±9.6%
10711	AAC	The state of the s	WLAN	8.29	±9.5%
10712	MG	IEEE 802 11ax (40MHz, MCS4, 99ac do) IEEE 802 11ax (40MHz, MCS5, 39ac do)	WLAN	8.39	±9.6%
10713	AAC	IEEE 802.11ax (40MHz, MCS6, 99pc dc)	WLAN	8.67	± 9.6 %
10714	AAC		WLAN	8.33	± 9 6 %
10715	AAC	IEEE 802.11ax (40MHz, MCS7, 99pc dc)	WLAN	8.26	196%
10716	AAC	IEEE 802.11ax (40MHz, MCS8, 99pc dc)	WLAN	8.45	19.6%
10717	AAC	IEEE 802.11ax (40MHz, MCS9, 99pc dc)	WLAN	8.30	19.6%
	AAG	IEEE 802.11ax (40MHz, MCS10, 90pc dc)	WLAN	8,48	195%
10718	AAC	IEEE 802.11ax (40MHz, MCS11, 90pc dc)	WLAN	8,24	± 9.6 %
10719	AAC	IEEE 802,11ax (90MHz, MCS0, 90pc dc)	WLAN	8.81	±9.6 %
10720	AAC	IEEE 802 11ax (80MHz, MCS1, 90pc dc)	WLAN	8,87	± 9.6 %
10721	AAC	IEEE 802 11ax (80MHz, MCSZ, 90pc 6c)	WLAN	8,76	± 9.6 %
10722	AAC	IEEE 802 11ax (80MHz, MC53, 90pc dc)	WLAN	8,55	± 9.6 %
10723	AAC	IEEE 802 11ax (80MHz, MCS4, 80pc dq)	WLAN	8,70	± 9.6 %
10724	AAC	(EEE 802-11ex (80MHz, MCS5, 90pc du)	WLAN	8,90	± 9.6 %
10725	AAC	(EEE 802 11ax (80MHz, MCS8, 90ps dc)	WLAN	8,74	± 9.6 %
10726	AAC	(EEE 802-11ax (80MHz, MCS7, 90pc tfc)	WLAN	8,72	£ 9.6 %
18727	AAC	(EEE 802 11ax (BOMHz, MCSB 90pc tto)	WLAN	8,66	± 9.6 %

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WLAN	8.65	1 ± 9.6 %
WLAN	8.64	± 9.6 %
WLAN	8.67	±96%
WLAN	8.42	±96%
WLAN	8.46	196%
WLW	8.40	±9.6 %
WLAN	8.25	±9.6%
WLAN	8.33	±96%
WLAN	8.27	± 9.6 %
WLAN	8.36	±9.6%
WLAN	8.42	±9.6 %
WLAN	8.29	± 9.6 %
WLAN	8.48	± 9.6 %
WLAN	8.40	± 9.6 %
WLAN	8.43	± 9.6 %
WLAN	8.04	± 9.6 %
WLAN	9.16	± 9.6 %
WLAN	8.93	± 9.6 %
WLAN	9.11	±9.6 %
WLAN	9.04	± 9.6 %
WLAN	8.93	± 9.6 %
WLAN	8.90	± 9.6 %
WLAN	8.79	196%
WLAN	8.82	± 9.6 %
WLAN	8.81	±9.6 %
WLAN	9.00	± 9.6 %
WLAN	8.94	±9.6%
WLAN	8.64	±9.6%
WLAN	8.77	±9.6%
WLAN	8.77	±9.5%
WLAN	8.69	±96%
WLAN	8.58	±9.6%
WLAN	8.49	±96%
WLAN	8.58	196%
WLAN	8.49	196%
WLAN	8.53	±9.6 %
WLAN	8.54	± 9.6 %
WLAN	8.54	±9.6 %
WLAN	8.51	±9.6 %
50 NR FRI TOD	7.99	± 9.6 %
5G NR FR1 TOD	8.01	196%
5G NR FRI TOD	8.01	19.6%
5G NR FR1 TDD	8.02	19.6 %
5G NR FR1 TOD	8.02	19.5%
5G NR FR1 YOU	8.23	19.6%
5G NR FR1 TOD	8,03	#9.6%
5G NR FRI TOD	the contraction of the contracti	
5G NR FR1 TDD	8.02	±96%
5G NR FR1 TDD	8.30	±9.6 %
5G NR FR1 TDD	8.30	and the second second
5G NR FR1 TDD	100,000	±9.6 %
5G NR FR1 TDD	8,34	±9.6 %
5G NR FR1 TDD	8,42	± 9.6 %
5G NR FR1 TDD	8,38	±96%
	B,38	±96%
the same of the sa		±96% ±96%
	6G NR FR1 TDD	

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10784	AAC	5G NR (CP-OFDM: 100% RB, 10 MHz, QPSK: 15 kHz)	5G NR FR1 TDD	8.29	±9.6%
10785	MAC	5G NR (CP-OFDM: 100% RB, 15 MHz, QPSK, 15 KHz)	5G NR FR1 TOD	8.40	19.6%
10786	AAC	5G NR (CP-DFDM, 100% RB, 20 MHz, QPSK, 15 KHz)	5G NR FR1 TOD	8.35	±9.6%
10787	AAG	5G NR (CP OFDM 100% RB. 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	19.6%
10788	AAC	5G NR (CP OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6 %
10789	AAC	5G NR (CP-QFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TOD	8.37	±96%
10790	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	SG NR FR1 TOD	8,39	±9.6%
10791	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 lc4z)	5G NR FR1 TDD	7.83	±9.6 %
10792	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6%
10793	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6%
10794	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, CPSK, 30 kHz)	5G NR FR1 TOD	7.82	196%
10798	AAC	5G NR (CP-OFDM, 1 RB, 28 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	7.84	19.6%
10796	AAC	5G NR (CP-DFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	7,82	296%
10797	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, CPSK, 30 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10798	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	7.89	± 9.6 %
10799	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	50 NR FR1 TOD	7.93	±96%
10801	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	7.89	±96%
10802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	± 9.6 %
10803	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	6G NR FR1 TOD	7.93	± 9.6 %
10805	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8 34	196%
10806	AAD	5G NR (CP-0FDM, 60% RB, 15 MHz, QPSK, 30 kHz)	6G NR FR1 TOO	8.37	19.6%
10809	AAD	5G NR (CP-QFDM, 50% RB, 30 MHz, QPSK, 30 KHz)	50 NR FR1 TDD	8.34	19.6%
10810	AAD	5G NR (CP-0FDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TOO	8.34	± 9.6 %
10812	AAG	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	835	±96%
10817	AAD	5G NR (CP-0FDM, 100%, RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TOO	8.35	±96%
10818	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	50 NR FR1 TOD	834	±9:6%
10819	AAZ	5G NR (CP-OFDM, 100% RB, 16 MHz, QPSK, 30 kHz)	50 NR FR1 TOD	833	± 9.6 %
10820	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 80 kHz)	SG NR FR1 TOD	8.30	196%
10821	AAG	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6%
10822	AAO	5G NR (CP-0FDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TOO	841	± 9.6 %
10623	AAC	5G NR (CP-0FDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TOO	6.36	19.6 %
10824	AAD	5G NR (CP-0FDM, 100% RB, 50 MHz, QP5K, 30 kHz)	5G NR FR1 TDD	8.39	19.6%
10825	AAB	5G NR (CP-OFDM, 100% RB, 80 MHz, QP5K, 30 kHz)	5G NR FR1 TOO	8.41	19.6%
10827	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	56.NR FR1 TDD	8.42	19.6%
10828	AAE	5G NR (CP-0FDM, 100% RB, 90 MHz, OPSK, 30 kHz)	5G NR FR1 TDD	8.43	19.6%
10829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, OPSK, 30 kHz)	5G NR FR1 TDO	8.40	±9.6 %
10820	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 80 kHz)	50 NR FR1 TDD	7.63	±9.6 %
10831	CAA	5G NR (CP-OPDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	10.00
10832	CAA	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	± 9.6 %
10833	AAD	5G NR (CP-OFDM, 1 RR, 25 MHz, QPSK, 80 kHz)	5G NR FR1 TOD	7.70	± 9.6 %
10834		50 NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 80 kHz)	6G NR FR1 TOO		±9.6%
10835	AAD	50 NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 80 kHz)	6G NR FRI TOD	7.75	19.6%
10836	AAU	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 80 KHz)	5G NR FR1 TDD		196%
10837	AAE	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 80 KHz)		7.66	± 9.6 %
10839	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, CPSK, 60 KHz)	5G NR FR1 TDD	7.68	± 9.6 %
10840	AAD		5G NR FR1 TDD	7.70	±9.6 %
	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, OPSK, 80 kHz)	5G NR FR I TOD	7.67	±96%
10841	MAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 80 kHz)	5G NR FR1 TOD	7.71	196%
10843	AAD	5G NR (CP-OFDM, 80% RB, 15 MHz, QPSK, 80 kHz)	5G NR FR1 100	8,49	±9.5%
10844	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 100	8.34	±9.6%
10846	AAD	5G NR (CP OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8,41	± 9.6 %
10854	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	8,34	±9.6%
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 80 kHz)	50 NR FR1 TDD	B.36	±9.6 %
10856	AAD	5G NR (CP-OFDM, 100% RB 20 MHz, QPS(C 60 kHz)	SG NR FR1 TDD	8.37	± 9.6 %
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QFSK, 60 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10858	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8,36	± 9.6 %
10859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	8.34	± 9.6 %

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5.87

5.94

5.86

5.86

5.87

5.84

5G NR FR1 TDD

55 NR FR1 TOD

5G NR FR1 TOD

50 NR FR1 TOD

5G NR FR1 TDD

5G NA FR1 TOO

± 9,6 %

£ 9.6 %

± 9.6 %

± 9.6 %

t 9.6 %

£ 9.6 %

10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	50 NR FR1 TDD	8.41	± 9.6 %
10861	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	196%
16663	AAD	59 NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	8.41	19.6%
10864	AAE	5G NR (CP-OFDM, 100%, RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	8.37	±9.6 %
10865	AAO	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 66 kHz)	5G NR FRA TOD	8.41	± 9.6 %
10966	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5,68	± 9.6 %
10868	AAD	5G NR (DFT-s-OFDM 100% RB, 100 MHz QPSK, 30 KHZ)	5G NR FR1 TDD	5.89	± 9.6 %
10869	AAD	5G NR (DFT-s-DFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAD	5G NR (DFT-8-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TOD	5.86	± 9.6 %
10871	AAD	5G NR (DFT-s-OFDM, 1 RB, 10) MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10872	AAD	5G NR (OFT-s-OFOM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	± 9.6 %
10873	MAD	5G NR (DFT-s-QFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10874	AAD	5G NR (DFT 6-OFDM, 190% RB, 100 MHz, 84QAM, 120 KHz)	5G NR FR2 TDD	6.65	± 9.6 %
10875	AAD	5G NR (CP-OFDM, 1 RB: 100 MHz, OPSK, 120 kHz)	5G NR FR2 TDD	7.78	19.6 %
10876	CAA	59 NR (CP-0FDM, 100% RS, 100 MHz, QPSK, 129 kHz)	5G NR FR2 TDD	8.39	± 9.6 %
10877	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 18QAM, 120 kHz)	5G NR FR2 TDD	7.95	± 9.6 %
10878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10879	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, B4QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6 %
10880	AAD	5G NR (CP-OFDM: 100% RB, 100 MHz, 64QAM: 120 kHz)	5G NR FR2 TOO	8.38	± 9.6 %
10891	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, GPSK, 120 kHz)	50 NR FR2 TDD	5.75	198%
10882	AAD	5G NR (DFT 6-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	196%
10883	AAD	5G NR (DET-s-OFDM, 1 RB, 50 MHz, 18QAM, 120 kHz)	5G NR FR2 TDD	6.57	196%
10884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TOD	6.53	±96%
10895	DAAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 84QAM, 120 kHz)	5G NR FR2 TD0	8.61	±96%
10896	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 640AM, 120 kHz)	5G NR FR2 TDD	6.85	±96%
10687	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, OPSK, 190 kHz)	5G NR FR2 TOD	7.78	± 9.6 %
10888	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QP5K, 120 kHz)	5G NR FR2 TDD	8.35	±9.8%
10889	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 160AM, 120 kHz)	5G NR FR2 TDD	8.02	± 9.6 %
10890	DAA	5G NR (CP-QFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 %
10891	AAG	5G NR (CP-OFDM, 1 RB, 50 MHz, 640AM, 120 kHz)	50 NR FR2 TDD	8.13	19.6%
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	50 NR FR2 TDD	8.41	±9.6 %
10897	AAD	5G NR (DFT + OFDM, 1 RB, 5 MHz, QPSK, 30 MHz)	5G NR FR1 TDD	5.66	198%
10898	AAD	5G NR (DFT-S-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10899	AAD	5G NR (DFT-s-OFDM: 1 RB, 15 MHz, QPSK, 30 4Hz)	5G NR FR1 TDD	5.67	£ 9.6 %
10900	AAD	50 NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.68	± 9.6 %
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 KHz)	5G NR FR1 TOO	5.68	± 9.6 %
10902	AAD	SG NR (DFT-s-OFDM: 1 RB, 30 MHz, QPSK, 30 kHz)	SG NR FR1 TOD	5.68	± 9.6 %
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6 %
10984	AAD	5G NR (DFT-s-OFDM 1 RB, 50 MHz, QFSK, 30 kHz)	5G NR FR1 TDO	5,66	19.6 %
10905	AAD	5G NR (DFT-s-OFDM 1 R8, 60 MHz, QPSK, 30 letz)	50 NR FRI TDO	5.6B	± B.B %
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TEO	5.66	196%
10907	AAD	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR I TDO	5.78	± 9.6 %
10908	AAD	5G NR (DFT-8-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.93	± 9.6 %
10909	AAD	5G NR (DFT:s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TOO	5.96	±96%
10910	AAD	5G NR (DFT-s-QFDM, 50% RB, 20 MHz, QPSK, 30 NHz)	SG NR FR1 TDD	5.83	±9.6%
10911	AAD	5G NR (DFT-s-DFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	SG NR FR1 7DD	5.93	±96%
10912	AAD	5G NR (DFT a-OFDM, 50% RB, 30 MHz, QPSK, 30 MHz)	SG NR FR1 TOD	5.84	#9.6%
10913	AAD	5G NR (DFT s-QFDM, 50% RB, 40 (MHz, QPSx, 30 kHz)	5G NR FR1 TOD	5.84	19.6%
10914	AAD	5G NR (DFT s-OFDM, 50% RB, 50 MHz, QPSK, 36 kHz)	5G NR FR1 TOD	5.85	± 9.6 %
10915	AAD	5G NR (DFT 5-OFDM, 50% RB, 60 MHz, QPSK, 30 MHz)	5G NR FR1 TDD	5.83	± 9.6 %
10916	AAD	SO NE /DET + OEDA KON DE BOUNE COOK MOULE	BOARD FRATEDO	0.00	1, 3,0 %

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AAD

AAD

AAD

AAD

MAD

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5G NR (DFT & OFDM, 50% RB, 80 MHz, GPSK, 30 KHz)

5G NR (DFT %-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)

6G NR (DFT-6-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)

5G NR (DFT s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)

5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)

AAD 5G NR (0FT s-0FDM, 100% RB, 20 MHz, QPSK, 30 kHz)

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10922	AAD	JG NR (DFT->-OFOM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.82	1 ± 9.6 %
10923	AAD	50 NR (DFT+; OFDM, 100% RB, 30 MHz, QPSK, 30 KHz)	AG NR FR1 TDD	5.84	± 9.6 %
10924	WAD	5G.NR (DFT-s OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.84	1 9.6 %
10925	CAA	5G NR IDFT-s OFOM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5,95	4 9.8 W
10926	CAA	5G NR (DFT is-DFDM, 100% RB, 60 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	5.84	± 9.6 %
10927	AAD	5G NR (DFT's-OFDM, 100% RB, 80 MHz, QPSK, 30 KHz)	50 NR FR1 TOD	5.94	± 9.6 %
10928	AAD	5G NR (DFT-8-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6 %
10930	AAD	5G NR (DFT-s-DFDM, 1 RB, 15 MHz, CPSK, 15 W/z)	50 NR FR1 FDD	5.52	±9.6%
10931	AAD	5G NR (DFT-s-DFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6 %
10932	AAB	50 NR (DFT s-QFDM 1 RB, 25 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.51	±96%
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 3D MHX, QPSK, 16 kHz)	5G NR FR1 FDD	5.61	± 9.6 %
10934	MAA	5G NR (DFT.s-OFDM, 1 RB, ID MHZ, GPSK, 15 kHz)	5G NR FR1 FD0	5.51	19.6 %
10935	AAA	5G NR (DFT & OFDM, 1 RB, 50 MHz, DPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10938	MC	5G NR (DFT & OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6%
10937	AAB	5G NR (DFT-e-OFOM, 50% RB, 10 MHz, QFSK, 15 kHz)	50 NR FR1 FD0	5.77	± 9.6 %
10038	BAA	0G NR (DFT-s-OFDM: 50% RB: 15 MHz; QPSK: 15 kHz)	5G NR FR1 FOD	5.90	±9.6%
10939	BAA	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FRI FDD	5.82	±9.6%
10940	AAB	5G NR (DFT-s-OFDM; 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FRI FOO	5.89	±9.6%
10941	BAA	50 NR (DFT-e-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6 %
10942	AAB	5G NR (DFT 6-DFDM, 50% RB, 4D MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6%
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,95	19.6%
10944	AAB	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	≥ 9.6 %
10945	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	50 NR FR1 FDD	5.85	± 9.6 %
10946	AAC	5G NR (DF1-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	50 NR FR1 FDD	5.83	±9.6%
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSR, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10048	AAB	5G NR (DFT-6-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.5 %
10849	AAB	5G NR (DFT-s-OFDM, 100% R8, 30 MHz, QPSK; 15 kHz)	5G NR FR1 FDD	5.87	±9.6%
10960	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSX, 15 kHz)	5G NR FR1 FD0	5.94	±96%
10951	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, OPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.5%
10952	AAR	5G NR OL (CP-OFDM, TM 3.1, 5 MHz, 64 OAM, 15 kHz)	5G NR FR + FOD	8.25	± 9.6 %
10053	AAB	5G NR DL (CP-OFDM, TM 3.7, 10 MHz, 84-QAM, 15 kHz)	5G NR FR1 FDD	8.15	± 9.6 %
10994	AAB	5G NR OL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G MR FR1 FDD	8.23	19.6%
10955	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	± 9.6 %
10956	AAB	5G NR DL (CP-DFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	± 9.6 %
10957	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 6/1-QAM, 30 kHz)	SC NR FR1 FD0	8.31	1.9.6%
10958	AAB	6G NH DL (CP-OFDM, TM 3 1, 15 MHz, 84-QAM, 30 kHz)	5G NR FR1 FDD	8.61	± 9.6 %
10959	AAB	5G NR DL (CP-OFDM TM 3 1, 20 MHz, 64-QAM, 30 kHz)	SG NR FR1 FDD	B.33	±9.6%
10960	AAB	50 NR DL (CP OFDM: TM 3.1.5 MHz, 64-QAM, 15 kHz)	5G NR FRI TOD	9.32	= 9.6 %
10961	AAB	5G NR DL (CP-DFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	± 9.6 %
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz. (4-QAM, 15 KHz)	5G NR FR1 TDD	9.40	£ 9.6 %
10963	AAB	5G NR GL (CP-OFDM, TM 3.1, 20 MHz, (4-QAM, 15 kHz)	3G NR FRT TOD	9.55	± 9.6 %
0964	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 HHz)	EG NR FR1 TOD	9.29	19.6%
10965	AAB	6G NR DL (CP-OFDM, TM 3 1, 10 MHz, 64-QAM, 30 KHz)	5G NR FR1 TDD	9.37	19.6%
10988	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 84-QAM, 30 kHz)	5G NR FR1 TOO	9.55	19.6%
10967	AAB	5G NR DL (CP-OFDM, TM 3 1, 20 MHz, 64-QAM, 30 MHz)	5G NR FRI TOD	9.42	£9.6%
10988	EAA.	5G NR DL (CPI-DFDM, TM 3 1, 100 MHz. 64-DAM, 30 kHz)	5G NR FR1 TOO	9.49	± 9.6 %
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSx, 15 kHz)	50 NR FR1 TOD	11.59	£9.6%
10973	AAB	5G NR (DFT-s-DFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	9.06	£ 9.6 %
10974	AAB	50 NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TOD	10.28	±9.6%

<sup>\*\*</sup> Uncertainty is determined using the may, deviation from these response applying reclangular distribution and is expressed for the square of the field value.

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





Schweizerischer Kalibriertlienst Service suibse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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Client

Motorola Solutions MY

Certificate No: EX3-7534\_Apr21

### CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7534

Cathration procedure(s)

QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v6, QA CAL-23.v5,

QA CAL-25.V7

Calibration procedure for dosimetric E-field probes

Calibration date:

April 19, 2021

This calibration certificate documents the traceobility 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 ± 1)°C and humiday < 70%

Colibration Equipment and (M&TE critical for calibration)

Primary Standards	10	Call Date (Certificate No.)	Scheduled Calibration
Power maker NRP	SN: 104778	09-Apr-21 (No. 217-03291/03292)	Apr-22
Power sensor NRP-Z01	SN: 103244	09-Apr-21 (No. 217-03291)	Apr-22
Power sensor NRP-Z91	5N: 103245	09-Apr-21 (No. 217-03292)	Apr-22
Reference 20 dB Attenuator	SN: CC2582 (20x)	09-Apr-21 (No. 217-03343)	Apr-22
DAE4	SN: 560	23-Dec-20 (No. DAE4-860 Dec20)	Duc-21
Reference Probe ES3DV2	5N: 3013	30-Dec-20 (No. ES3-3013_Dec20)	Dec-21
Secondary Standards	iD.	Check Date (in house)	Scheduled Check
Power moter E44199	SN: G841293874	06-Apr-16 (in house check Jun-20)	in house check: Jun-22
Power sensor E4412A	SN: MY41498087	00-Apr-16 (in house check Jun-20)	In house sheck: Jun-22
Power sessor E4412A	5N: 000110210	06-Apri-16 (in house check Jun-20)	In house check Jun-22
RF generator HP 8648C	5N: US3642U01700	04-Aug-99 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E6358A	5N: US41090477	31-Mar-14 (in house check Oct-20)	In house check: Oct-21

Calibrated by:

Jeffrey Kalzman

Function Laboratory Technician Signature

Appleved by:

Katu Pokovio

Technical Manager

liestett: April 21, 2021

Triss calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Calibration Laboratory of Schmid & Partner Engineering AG Zoughousstrasso 43, 5004 Zurich, Switzerland





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Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL Itssue simulating liquid NORMx,y,z sensitivity in free space convF sensitivity in TSL / NORMx,y,z DCP diede compression point

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

Polarization in entition around probe take

Polarization 8 A rotation around an axis that is in the plane normal to probe axis (at measurement center).

i.e., 0 = 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:

 i) 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

 EC 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

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 865684, "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 E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z \* Inquency\_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 date 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 date 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.c.\* 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.
- Sphurical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phentom exposed by a patch antenna.
- Sensor Offsor. The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe exis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMs (no uncertainty required).

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## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7534

**Basic Calibration Parameters** 

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m)²) <sup>8</sup>	0.46	0.40	0.50	± 10.1%
DCP (mV) <sup>E</sup>	98.4	99,0	98.6	

Calibration Results for Modulation Response

UID	Communication System Name		dB.	dB√pV B	C	dB.	mV mV	Max dev.	Max Unc≅ (k=2)
0	CW	X	0.00	0.00	1.00	0.00	180.7	±3.5 %	±4.7%
	12	Y	0.00	0.00	1.00	0.00	173.5		1000
		Z	0.00	0.00	1.00		190.0		
10352-	Pulse Waveform (200Hz, 10%)	X	2.83	67.26	10.80	70.00	60.0	13.1%	±9.6%
AAA	Section Conference and Conference Conference	Y	1.76	62.38	7.83	la march	60.D	-	4,500
		Z	3.15	88.47	11.46	15.00	60 D		
10353-	Puise Waveform (200Hz, 20%)	X	1.56	65.61	9.33	6.99	0.06	±23%	±9.6%
AAA		Y	0.92	60.B1	6.13	12.74	80.0		2 614 14
	And a second process of the second	Z	2.10	68.22	10.53	trop in	80.0		
10354	Pulse Waveform (200Hz, 40%)	X	4.64	77.37	12.61	3.98	95.0	214%	19.6%
AAA	The Court of the C	· Y	12.00	78.00	11.00		95.0		-37
	The state of the s	Z	3.63	76.30	12.59		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	20.00	94.23	17.31	2.22	120.0	±0.8%	± 9.5 %
AAA	17	Y	0.50	64.23	7.14		120.0		
		Z	5.60	85.07	15.38		120.0		
10387-	QPSK Waveform, I MHz	X	1.88	66.42	15.02	1.00	150.C	=18%	±96%
AAA	A STATE OF THE STA	Y	1.70	68.00	15.73		150.0		
		Z	1.52	64.88	14.01	D	150.0		
10388-	OPSK Waveform, 10 MHz	X	2.21	67.72	15.67	0.00	150.0	± 1.0 %	19.6%
AAA	and the same of the same	Y	2.18	68.13	16.06	3100	150.0		
		2	2.01	66.08	14.73		150.0		
10396-	64-QAM Waveform, 100 kHz	X	2.49	68.87	18.21	3.01	150.0	+09%	±9.6%
AAA	-0-21 Apr	· Y	2.16	67.08	17.29	2.00	150.0	1.000 6	1.544 /4
		Z	2.36	67.73	17.48	-	150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.39	56.42	15.47	0.00	150.0	= 0.7%	246%
AAA	and the second second	Y	3.51	67.30	15.98	1	150.0	200	200
		Z	3.41	66.37	15.33		150.0		_
10414	WLAN CCDF, 84-QAM, 40MHz	×	4.71	65.23	15.33	0.00	150.0	21.1%	±9,6%
AAA		Y	4.62	65.33	15.43		150.0		
			4.77	65.42	15.36		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%.

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The undertainties of Norm X,Y,Z do not affect the E\*-field uncertainty inside TSL (see Pages 5 and 8).

Numerical invarianties parameter uncertainty not required.

Uncertainty is determined using the max, deviction from linear response applying rectangular detribution and is expressed for the equate of the field lyable.

EX3DV4- SN:7534

April 19, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7534

#### Sensor Model Parameters

	C1 fF	C2 fF	V-1	T1 ms.V-2	ms.V <sup>-1</sup>	T3 ms	T4 V-2	T5	T6
X	39.2	290.68	35.12	4,79	0.00	4.96	1.27	0.05	1.01
Y	32.6	240.06	34.7B	5,15	0.00	4.90	1.15	0.00	1.00
Z	37.3	278.36	35.32	4.46	0.00	4.97	1,58	0.00	1.01

#### Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (*)	-96.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Langth	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Cal bration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an Area Scan job.

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FX3/DV4-SN:7534

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## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7534

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

(MHz) <sup>S</sup>	Relative Permittivity	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>0</sup> (mm)	Uno (k=2)
150	52.3	0.76	13.84	13.84	13.84	0,00	1.00	± 13.3 %
300	45,3	0.87	12.83	12.83	12.83	0.08	1.20	± 13.3 %
450	43.5	0,87	11.65	11.65	11,65	0.16	1,30	± 13.3 %
750	41.9	0.89	10.25	10.25	10.25	0.54	0.81	± 12.0 %
835	41.5	0,90	9.98	9.98	9.98	0.47	0.84	± 12.0 %
900	41.5	0.97	9.86	9.86	9.86	0.48	0.82	± 12.0 %
1460	40.5	1,20	8.63	8.83	8.63	0.54	0.80	± 12.0 %
1810	40.0	1,40	8.15	8.15	8.15	0.38	0.86	± 12.0 %
1900	40.0	1.40	8.07	8.07	8.07	0.34	0.86	±12.0%
2100	39.8	1,49	8.02	8.02	8.02	0.33	0.86	±12.0 %
2300	39.5	1.67	7.85	7.85	7.85	0.35	0.90	± 12.0 %
2450	39.2	1.80	7.63	7.63	7.63	0.38	0.90	± 12.0 %
2600	39.0	1.96	7.39	7.39	7.39	0.39	0.90	± 12.0 %
3500	37.9	2.91	8.83	6.63	6.63	0.30	1.35	± 14.0 %
3700	37.7	3,12	8,54	6.54	6.54	0.30	1.35	± 14.0 %
5250	35.9	4.71	5.38	5.38	5.38	0.40	1.80	± 14.0 %
5500	35.6	4.96	5.03	5.03	5.03	0.40	1.80	± 14.0 %
5600	35.5	5.07	4,86	4,86	4.86	0.40	1.80	± 14.0 %
5750	35.4	5.22	4.88	4.88	4.88	0.40	1.80	± 14.0 %

Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and regner (see Page 2), else it is restricted to ± 50 MHz. The incomainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the included 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 assessment is MHz is ± 4.9 MHz, and ConvF assessment at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 10 MHz.

All frequencies up to 10 GHz, the validity of itscan parameters (x and x) can be related to ± 10% if flyind compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncorrowing for indicated singlet assue parameters.

Altha/Depth are determined during calibration. SPEAC warrants that the remaining develop due to the boundary effect after componisation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies below 3.3 GHz at any distance larger than half the probe tip diameter from the boundary.

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diameter from the boundary.

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April 19, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7534

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

f (MHz) =	Relative Permittivity	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha <sup>q</sup>	Depth (mm)	Unc (k=2)
150	61.9	0.80	13.51	13,51	13,51	0.00	1.00	± 13.3 %
300	58.2	0.92	12.50	12.50	12.50	0.02	1.35	± 13.3 %
450	56.7	0.94	11.86	11.86	11.86	:0.11	1.30	± 13.3 %
750	55.5	0.96	10.29	10.29	10,29	0.47	0.80	± 12.0 %
835	55.2	0.97	10.08	10.08	10.08	0.43	0.80	± 12.0 %
900	55.0	1.05	9.86	9.85	9.85	0.50	0.80	± 12.0 %
1450	54.0	1.30	8.75	8.75	8.75	0.34	0.80	± 12.0 %
1810	53,3	1.52	8.38	8.38	8.38	0.37	0.86	± 12.0 9
1900	53.3	1.52	8.16	8.16	8.16	0.42	0.86	± 12.0 %
2100	53,2	1.62	8.14	6.14	8.14	0.29	0.86	± 12,0 %
2300	52.9	1.81	7.82	7.82	7.82	0.37	0.90	± 12.0 %
2450	52.7	1.95	7.78	7.76	7.76	0.36	0.90	± 12.0 9
2600	52.5	2.16	7.47	7.47	7.47	0.37	0.90	± 12:0 %
3500	51.3	3.31	6.35	6.35	6,36	0.40	1.35	± 14.0 %
3700	51,0	3.55	6.17	6.17	6,17	0.40	1.35	±14.0%
5250	48.9	5.36	4.86	4,85	4.86	0.50	1.90	± 14.0 %
5500	48,6	5.65	4.41	4.41	4.41	0,50	1,90	± 14.0 %
5600	48,5	5.77	4.32	4.32	4.32	0.50	1.90	± 14.0 %
5750	48.3	5.94	4.43	4,43	4,43	0,50	1,90	± 14.0 %

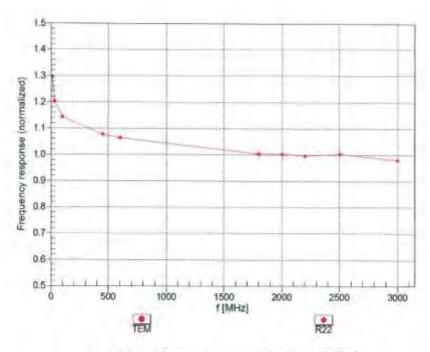
Frequency vandity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), class it is realizable to ± 50 MHz. The uncertainty is the RSS of the CornF uncommity at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity failure 300 MHz is ± 10, 25, 40, 50 and 70 MHz for CornF assessments at 30, 64, 126, 150 and 220 MHz respectively. Validity of CornF assessment at 6 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 4-9 MHz, and CornF assessment at 10 MHz is 10 MHz. Alter a 10 MHz is 10 MHz. Alter a 10 MHz is 10 MHz. Alter a 10 MHz is 10

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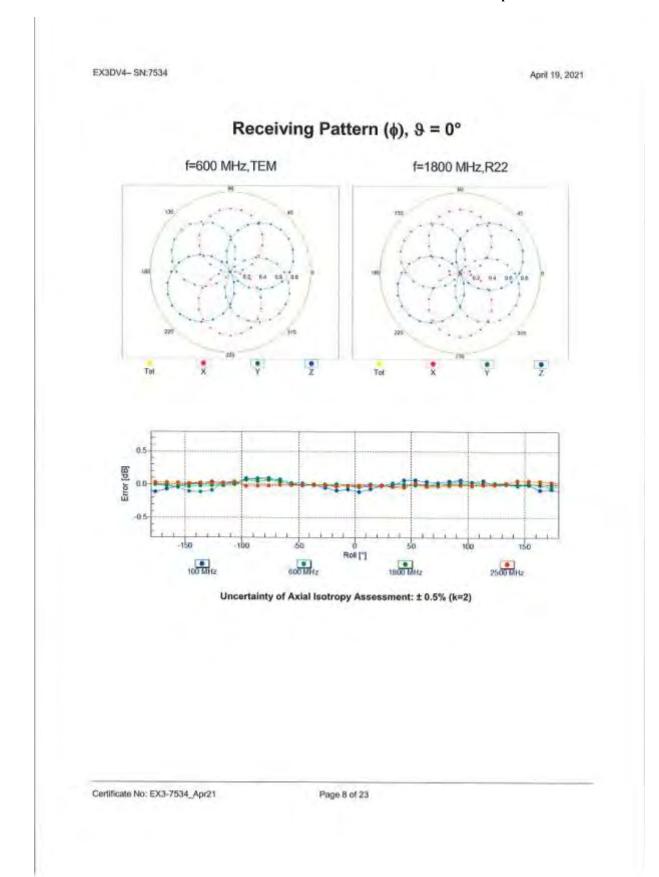
## Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



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

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EX3DV4-SN:7534 April 19, 2021 Dynamic Range f(SAR<sub>head</sub>) (TEM cell , f<sub>eval</sub>= 1900 MHz) 10" 105 Input Signal [uV] 104 105 10 100 102 10: 10<sup>0</sup> SAR [mW/cm3] not compensated compensated Error (dB) 5AR [mW/cm3]

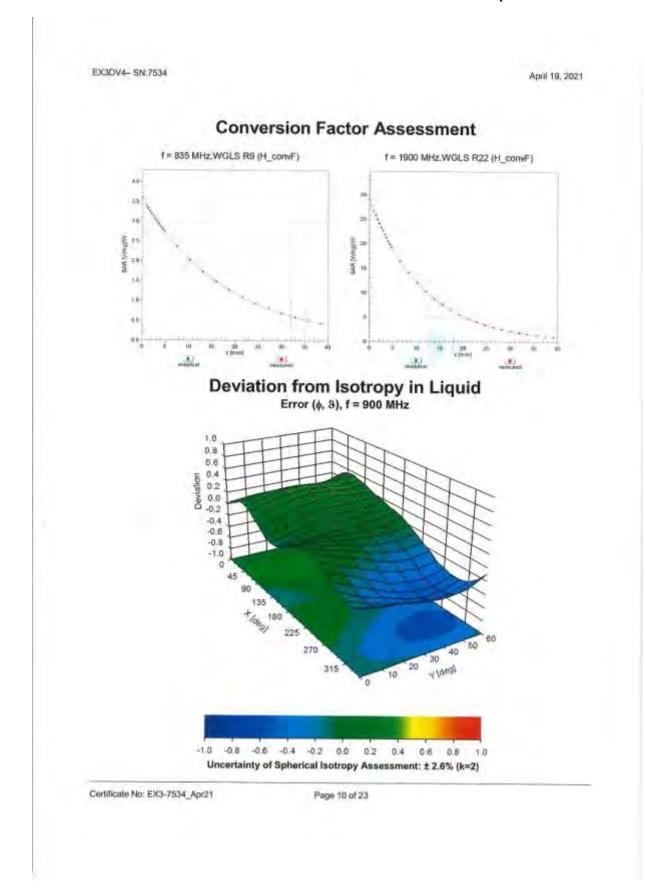
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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#### Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc <sup>c</sup> (k=2)
0	-	CM	CW	0.00	±4,7%
10010	CAA	SAR Validation (Squere, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802,116 WIFI 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 8.6 %
10013	CAB	IEEE 862,11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10921	DAG	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FOD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	8.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAG	EDGE-FDD (TDMA, RPSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, QMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-F00 (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDOE-FDD (TDMA, BPSK, TN 0-1-2).	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802,15.1 Bluetouth (GFSIC DH1)	Bluetonin	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetoom	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DHS)	Bluetopin	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PV4-DQPSK, DH1)	Blustooth	7.74	± 9.6 %
10034	CAA	IEEE 802,15 1 Studiooth (PV4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802,15 1 Bluetooth (PV4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetpoth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802,15 1 Bluelpoth (B-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	19.6%
10042	CAE	IS-54 / IS-136 FDD (TDMA/FDM, PV4-DQPSK, Halfrele)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-653 FDD (FDMA, FM)	AMPS	0.00	±96%
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Skit, 24)	DECT	13.80	±9.6%
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Stet. 12)	DECT	10.79	±9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCOMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10069	CAB	(EEE 802.11h WIFI 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	19.6%
10060	CAB	IEEE 802.11b WIFI Z.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	19.6%
10061	CAB	IEEE 802.116 WIFI 2.4 GHz (DSSS, 11 Mbos)	WLAN	3.60	±9.6 %
10062	CAD	IEEE 802.11e/r WIFI 5 GHz (QFDM, 6 Mbps)	WLAN	8.68	196%
10063	CAD	IEEE 802.11ally Wiff 5 GHz (OFOM, 9 Mbps)	WLAN	8.63	±96%
10064	CAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±96%
10065	CAD	(EEE 802.11mm WIFI 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	
10056	CAD	IEEE 802,11a/n Will- 5 GHz (OFDM, 24 Mbgs)	WLAN	9.38	±9.6%
10067	CAD	IEEE BIQ 11a/n WIFI 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	
10088	CAD	IEEE 802 1 ta/n WiFi 5 GHz (OFOM, 48 Mbps)	WLAN	10.12	±96%
10089	CAD	IEEE 802,11a/n WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±96%
10071	CAB	TERE 802 11g WIFI 2,4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±96%
10072	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN		±95%
10073	CAB	IEEE 802 11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9,62	± 9.6 %
10074	CAB	IEEE 802 11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	9,94	±9.6 %
10075	CAB	IEEE 802.11g WIFI 2,4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	太明日報
10076	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 36 MDbs)	WLAN	10.77	£ 9.6 %
10077	The second second	IEEE 802.1 Ig WIFI 2.4 GHz (DBSS/OFDM, 48 Mbps)		10,94	± 9.6 %
10081	CAB	The state of the s	WLAN	11.00	≥ 9.6 %
10082	CAB	CDMA2000 (1xRTT, RG3)	CDMA2000	3.97	± 9.6 %
10090	CAB	IS-54 / IS-138 FOO (TOMA/FOM, PIN-DQPSIC Fulrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FOO (TOMA, GMSK, TN 0-4)	GSM	6.56	± 9,6 %
	CAC	UMTS-FRO (HSDPA)	WCDMA	3.98	±9.6 %
10098	DAC	UMTS-FDD (HSUPA, Sublest 2)	WCDMA	3,98	±9.8%

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10099	GAC	EDGE-FOD (TOMA, BPSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDO	5.67	± 9.6 %
10105	10000	THE PROPERTY AND ADDRESS OF THE PARTY OF THE	Triblet and	40.00	A 1010 14

10099	CAC	EDGE-FDD (TOMA, BPSK, TN 0-4)	GSM	9.55	±9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FOO (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	5.42	2 9.6 %
10102	CAB	LTE-FOD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	19.6%
10103	DAC	LTE-TDD (SC-FDMA 100% RB, 20 MHz, QPSK)	LTE-TOD	9.29	196%
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TOD	9.97	± 9.8 %
10105	CAE	LTE-TOD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE TOD	10.01	±9.6 %
10108	CAE	LTE-FOD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	CAG	LTE-FDD (SC-FDMA: 100% RB, 10 MHz, 16-QAM).	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz. QPSK)	LTE-PDD	5,75	±9.5%
10111	CAG	LTE-FDD (SC-FDMA: 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6:44	±9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	196%
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±96%
10114	CAG	IEEE 802,11n (HT Greenfield, 13,5 Mbps, BPSK)	WLAN	8.10	19.6%
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 18-QAM)	WLAN	8.46	±9.6 %
10116	CAG	IEEE 802,11n (HT Greenfield, 135 Mbps, 64 QAM)	WLAN	B.15	±96%
10117	CAG	IEEE 802.11n (HT Mixed, 13.5 Mbps. BPSK)	WEAN	8.07	± 9.6 %
10110	CAD	IEEE 802.13/1 (HT Mixed, 81 Mbps, 18-QAM)	WLAN	8.50	±96%
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 84-QAM).	WLAN	8.13	196%
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz., 18-QAM)	LTE-FDD	6.49	±96%
10141	CAD	LTE-FDD (SC FDMA, 100% RB, 15 MHz, 84-QAM)	LTE-FDD	6.53	196%
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, OPSK)	LTE-FDD	5.73	19.6%
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 84-QAM)	LTE-FDD	0.65	± 9.6 %
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	196%
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-DAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	L7E-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, 84-QAM)	LTE-FDO	6.60	29.6%
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	L'TE-TDO	9.28	± 9.6 %
10152	CAE	LTE-TOD (SC-FDMA, 50% RB, 20 MHz, 16-DAM)	LTE-TOO	9.92	± 9.6 %
10153	CAE	LTE-TOD (SC-FDMA, 50% RB, 20 MHz, 84-QAM)	LTE-TOO	10.05	£ 9.6 %.
10154	CAF	LTE FOD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	£ 9.6 %
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	19.6%
20156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz. QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAE	LTE-FDD (SC-FDMA, BO% RB, 6 MHz. 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 84-QAM)	LTE-FOD	6.62	± 9.6 %
10159	CAO	LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAG	LTE-FOO (SC-FOMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAG	LTE-FDD (SC-FDMA: 90% RB, 15 MHz. 16-QAM)	LTE-PDD	5.43	± 9.6 %
10162	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64 QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAG	LTE-FDO (SC-FDMA, 50% RB, 1,4 MHz, QPSK)	LTE-FDD	5.46	£98%
10187	CAG	LTS-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE FOD	6.21	£9.6%
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FOD -	6,79	+9.6%
10166	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FOD	5.73	±9.6%
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE FOD	6.52	±9.6%
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FD0	5.49	196%
10172	CAE	LTE-TOD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TOD	9.21	±9.6%
10173	CAE	LTE-TOD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6 %
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz. OPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz. 16-QAM)	LTE-FDD	6,52	±9.6 %
10177	ÇAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDO	5.73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FOO	6,52	± 9.6 %
10179	AAE	I,TE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FD0	6.50	19.6%
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz. 84-QAM)	LTE-FDD	6.50	£ 9.6 %

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10181	CAG	LTE-FDD (SC-FDMA, 1 RB: 16 MHz, QPSK)	LTE-FOO	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB. 15 MHz, 18-DAM)	LTE-FDO	6.52	±9.6%
10183	CAG	LTE-FDD (SC-FDMA, 1 RB. 15 MHz, 64-QAM)	LTE-FDO	6.50	196%
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9,6 %
10185	CAL	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FOO	6.51	±9.6%
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz. B4-QAM)	LTE-FDQ	6.50	±9.6%
10187	DAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FIND	5.73	± 9.6 %
10188	CAG	LTE-FOO (SC-FOMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6%
10189.	CAE	LTE FOO (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6,50	±9.6%
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, 8PSK)	WLAN	8.09	± 9.5 %
10194	AAD	IEEE 802.11n (HT Greunfield, 39 Mops, 16-QAM)	WLAN	8.12	±9.6 %
10195	CAE	IEEE 802.11n (HT Grannfield, 65 Mbps, 64-QAM)	WLAN	8.21	£ 9.6 %
10198	CAE	IEEE 802.11n (HT Mixed, 6,5 Mbps, BPSK)	WLAN	8.10	19.6 W
10197	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 18-QAM)	WLAN	8.13	4 9.6 %
10196	CAF	IEEE 902 1 in (HT Mixed, 65 Mbbs, 64 QAM)	WLAN	8.27	19.6%
10219	CAF	IEEE 802 11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6%
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	B.13	± 9.5 %
10221	CAC	IEEE 802,11n (HT Mixed, 72.2 Mbps, 54-QAM)	WLAN	9.27	1 9.5 %
10222	CAC	IEEE 802.11n (HT Mixed, 16 Mbps, BPSK)	WLAN	8.06	±9.6%
10223	CAD	IEEE 902.11n (HT Mixed, 90 Maps, 16-QAM)	V/LAN	B.48	196%
10224	CAD	IEEE 802.13n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	The second second
10225	CAD	UMTS-FOO (HSPA+)	WCDMA	5.97	2 9.6 %
10226	CAD	LTE-TOD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TOD	9.49	# 9.6 %
10227	CAD	LTE-TOD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTG-TOD	-	±9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-100	10,26	
10229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TOD	9.22	±9.6 %
1023D	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TOD		± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, OPSK)	LTE-TOD	10.25	± 9.6 %
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TOD	9 19	± 9.6 %
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 84-QAM)	LTE-TOD	9.48	19.6%
10234	CAD	LTE-TOD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TOD	10.25	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.21	19.6%
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TOD	9.48	196%
10237	CAD	LTE-TOD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TOB	10.25	196%
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TOO	9.21	19.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)		9.48	±9.6%
10240	-	LTE-TDD (SC-FDMA, 1 RB. 15 MHz, QPSK)	LTE TOO	10.25	± 9.6 %
10241	CAB	LTE-TOD (SC-FDMA, 17% RB 1.4 MHz, 16-QAM)	LTE-TOD	9.21	± 9.6 %
10242	-	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TOO	9.82	± 9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LYE-TOO	9.85	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 1 MHz, 16-QAM)	LTE-TDO	9.46	± 9.6 %
10245	CAD	LTE-TIDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDO	10.06	19.6%
10246	CAG	The second secon	LTE-TOD	10.06	196%
10247	CAG	LTE-TOD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TD0	9.30	± 9.6 %
10248	CAG	LTE-TDO (SC-FDMA, 53% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	19.6%
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE TOO	10,09	±9.6 %
77577	CAG	LTE-TOD (SC-FDMA, 50% RB, 5 MHz. QPSK)	LTE-TOD	9.29	±9.6 %
10250 10251	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-DAM)	L'IE TOD	9.81	± 9.6 %
	CAF	LTE-TOO (SC-FDMA, 50% RB, 10 MHz 64-DAM)	LTE-TOD	10,17	± 0.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz. OPSK)	LTE-TOD	9.24	± 9,6 %
10253	CAF	LTE-TOO (SC-FDMA, 50% RB, 15 MHz 18-QAM)	LTE-TOD	9,90	±9.5%
10254	CAB	LTE-TOD (SC-FDMA 50% RB, 15 MHz 84-DAM)	LTE-TOD	10,14	± 9.6 %
10255	CAB	LTE-TOD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TOD	9,20	±9.6%
10256	CAB	LTE-TOD (SC-FDMA, 100% RB, 1.4 MHz, 18-QAM)	LTE-TOD	9,96	上9.6%
10257	CAD	LTE-TOD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TOD	10.08	±9.6 %
10258	CAD	LTE-TOD (SC-FDMA, 100% RB, 1,4 MHz, QPSK)	LTE-TOD	9.34	上9.6%
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 18-QAM)	LTE-TDD	9,98	± 9.6 %

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10260	CAG	LTE-TOD (SC-FDMA, 100% RH.3 MHz, 64-QAM)	L76-100	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDO	9.24	±9.6%
10262	CAG	LTE-TDD (SC-FDMA 100% RB, 5 MHz, 16 OAM)	LTE-TOD	9.83	± 9.6 %
10263	CAG	LTE-TOD (SC-FDMA 100% RB, 5 MHz, 84-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz. QPSK)	LTE-TOD	9 23	± 9.6 %
10265	CAG	LTE TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM).	LTE-TOO	9.92	19.6%
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TOO	10.07	49.6%
10267	CAF	LTE-TOD (SC-FDMA, 100% RB, 10 MHz, GPSK)	LTE-TOO	9.36	±9.6%
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TOD	10.06	± 9.6 %
10269	CAR	LTE-TOD (SC-FDMA, 100% RB, 15 MHz, 84-QAM)	LTE-TOIS	10.13	±96%
10270	CAB	LTE-TOD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TUD	9.58	± 9.6 %
10274	CAH	LIMTS-FDD (HSUPA, Sultest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.5 %
10275	CAD	UMTS FDD (HSUPA, Subtest 5, 3GPP Ret8.4)	WCDMA	3.96	±9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff (I,5)	PHS	11.81	±9.6%
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	49.6%
10290	CAG	CDMA2000, RC1, SQ55, Full Rate	CDMA2000	3.91	±96%
10291	CAG	CDMA2000, RC3, SQ56, Full Rate	CDMA2080	3.46	±9.5%
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.5%
10293	CAG	CDMA2000, RC3, SD3, Full Rate	CDMA2000	3.50	±95%
10295	CAG	CDMA2600, RC1, S03, 1/8th Rate 25 fr.	CDMA2000	12,49	±9.6 %
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	CAF	LTE-FOD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	196%
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FOD	6.39	19.6 %
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	
10301	CAG	IEEE 802.18e WIMAX (29:16, 5ms, 10MHz, QPSK, PUSC)	WMAX	12.03	±9.6%
10302	CAB	(EEE 802 18n WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WMAX	_	± 9.6 %
10303	CAB	IEEE 802.16e WIMAX (31:19, 5ms, 10MHz, 640AM, PUSC)	WMAX	12,57	±9.6 %
10304	CAA	IEEE 802 16e WIMAX (29:18, 5ms, 10MHz, 84DAM, PUSC)	WMAX	12,52	± 9.6 %
10305	CAA	IEEE 802 156 WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WMAX	11.86	±9.6%
10306	CAA	IEEE 802 18e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WMAX	15.24	± 9.6 %
10307	-	IEEE 802,16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WMAX	14.67	±9.6%
10308	AAB	IEEE 802, 16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WMAX	74,49	19.6%
10300	AAB	IEEE 802 18e WIMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	2000000	14,46	±96%
10310	AAB	IEEE 802.18e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3)	WMAX	14.58	196%
10311	AAB		WMAX	14.57	± 9.6 %
10313	AAB	LTE-FDD (SC-FDMA 100% RB 15 MHz, OPSK) DEN 1:7	LTE FDD	5.06	29.6%
10314	AAD	DEN 18	IDEN	10.51	196 K
10316	AAD	200 A C C C C C C C C C C C C C C C C C C	IDEN	13.48	±96%
10316	DAA	IEEE 802,116 WIFI 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WEAN	1.71	±9.6 %
	AAD	IBBE 802.11g WIFI 2.4 GHz (ERP-OFDM, 6 Mbps, 95pc dc)	WLAN	B.36	世界6%
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc 4c)	WLAN	8.36	±9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	# 9.6 %
10354	AAA.	Pulsa Waveform (200Hz, 40%)	Generic	3.98	±95 %
10355	AAA	Pulse Wavefurn (200Hz, 60%)	Genetic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 60%)	Genetic	0.97	196%
10387	AAA.	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Genuric	5,22	: 9.6 %
10396	AAA	84-QAM Waveform, 100 kHz	Generic	6.27	196%
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9,6 %
10400	AAD	(EEE 602.11ac WIFI (20MHz. 64-QAM, 99pc dc)	WLAN	8,37	± 9.6 %
10401	AAA	EEE 802.11ac WIFI (40MHz, 84-QAM, 89pc dc)	WLAN	8,60	± 9.6 %
10402	AAA	IEEE 802:11sc WIFI (80MHz, 84-QAM, 99pc.dc)	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 %
10466	AAD	CDMA2000_RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %

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10410	AAA	LTE TOO (SC-FDMA, 1 RB, 10 MHz, OPSK, UL Sub=2,3.4.7,8,9)	LTE-100	7.82	± 9.6 %.
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %.
10415	AAA	IEEE 802.116 WIF: 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10416	MAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mups, 98pc dc)	WLAN	8.23	19.6%
10417	AAA	IEEE 802.11ah WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WEAN	8.23	196%
10418	AAA	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	±9.6%
10419	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 896c, Short)	WLAN	6.19	196%
10422	AAA	IEEE 802.11n (HT Greanfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.14n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	±9.6%
10424	AAE	IEEE 802 11n (HT Greenfield, 72.2 Mbps, 84-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Maps, BPSK)	WLAN	8,41	± 9.6 %
10426	AAE	JEEE 802 11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8,45	± 9.6 %
10427	AAB	(EEE 802 11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	±9.6%
10430	AAB	LTE-FOD (OFDMA, 5 MHz, E TM 3.1)	LTE-FOD	8.28	198%
10431	AACI	LTE-FDD (OFDMA, 10 MHz, E-7M 3.1)	LTE-FDD	8.38	±9.6%
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FOO	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FOO	B.34	±9.6%
10434	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAA	LTE-TOD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sib)	LTE-TDD	7.82	± 9.6 %
10447	AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FOO	7.56	± 9.6 %
10448	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FOD	7.53	196%
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3,1; Cliping 64%)	LTE-FD0	7.51	19.6%
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1; Clipping 44%)	LTE-FOO	7.48	± 9.6 %
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9,6%
10453	AAC	Validation (Square, 10ms, 1ms)	Test	10.00	±9.6 %
10456	AAG	(EEE 802,11ac WiFI (160MHz, 64-QAM, 99pc dq)	WLAN	8.63	±9.6 %
10457	AAG	UMFS-FDD (DC-HSDPA)	WCDMA	8.62	± 9.6 %
10458	AAC	COMA2000 (1xEV-DO, Rev. S. 2 carriers)	CDMA2000	6.55	±9.6 %
10459	AAC	CDMA2008 (fxEV-DO, Rev. B. 3 carriers)	CDMA2000	8.25	±9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	MCDWV	2.39	± 9.6 %
30461	AAC	LTE-TDD (SC-FDMA, 1 RB. 1.4 MHz, QFSK, UL Sub)	LTE-TOD.	7.82	± 9.5 %
10462	AAC	LTE TDD (SC FDMA, 1 RB. 1.4 MHz, 18-QAM, UL Sub)	LTE-TOO	8,30	±9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB. 1.4 MHz, 64-QAM, UL Sub)	LTE-TOD	8,56	±9.6%
10464	AAD	LTE-TDD (SC-FDMA, 1 RB. 3 MHz, QPSK, UL Sub)	LTE-TOD	7.82	± 9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 18-QAM, UL Sub)	LTE-TOD.	8.32	± 9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz 84-QAM, UL Sub)	LTE-TDO	8.57	±9.6 %
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDO	7.82	±9.6 %
10468	AAF	LTE-TOD (SC-FOMA, 1 RB, 5 MHz. 16-QAM, UL Sub)	LTE-TOO	8.32	± 9.6 %
10469	AAD	LTE-TOD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UIL Sub)	LTE-TOO	8.56	± 9.6 %
10470	AAD	LTE-TOD (SC-FOMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TOD	7.82	± 9.6 %
10471	AAC	LTE-TOD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TOO	8.32	± 9.5 %
10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TOD	8.57	± 9.6 %
10473	AAA	LTE-TUD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	CTE-TOD	7.82	± 9.6 %
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TD0	H.32	19.6%
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LTE-TDD (3C-FDMA, 1 RB, 15 MHz, 64-QAM, UL SUD)

LTE-TOD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)

LTE-TOD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, IJL Sub)

LTE-TOD (SO-FOMA, 50% RB, 1.4 MHz, QPSK, UIL Sub).

LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)

LTE-TDD (SC-FDMA, 50% R8, 1.4 MHz, 64-QAM, UL Sub)

LTE-TDD (SC-FDMA, 50% RB, 3 MHz, DPSK, UL Sub)

LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)

LTE TOO (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL 3ub)

LTE-TOD (SC-FDMA, 50% RS, 5 MHz, 64-QAM, UL Sub)

LTE-TOD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)

LTE-TOD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, 5ub)

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April 19, 2021

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10469	AAC	LTE-TOD (SC-FDMA, 60% RB, 10 MHz; 16-QAM, UL SW)	LTE-TOO	8.31	±9.6%
10490	AAF	LTE-TOD (3C-FDMA, 50% RB, 10 MHz, 61-QAM, UL Star)	LYE-TOD	B.54	±9.6%
10491	MAF	L'TE-TOD (SC-FDMA, 60% RB, 15 MHz, QPSK, UL Sub)	LTE-TOD	7.74	± 9.6 %
10492	AAF	LTE-TOO (SC-FOMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TOD	8.41	± 9.6 %
10493	AAF	LTE-TOD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	L'TE-TOD	8.55	4.9.6%
10494	AAF	LTE TOO (SC-FOMA, 50% RB, 20 MMz, OPSK, UL Suti)	LTE-TOD	7.74	± 9.6 %
10495	AAF	LTE-TOB (SC-FDMA, 50% RB, 20 MHz, 18-QAM, DL Sub)	LTE-TOO	8.37	±9.6%
10496	AAE	LTE-TOD (SC-FOMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TOD	B.54	± 9.6 %
10497	AAE	LTE-TOD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE TOO	7.67	±96%
10498	AAE	LTE-TOD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TOD	B.40	±9.6%
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TOO	9.68	±9.6 %
10500	AAF	LTE-TOO (SC-FDMA, 100W RB, 3 MHz, QPSK, UL Sub)	LTE-TOO	7.67	±9.6 %
10501	AAF	LTE-TOD (SC-FDMA: 160% RB, 3 MHz; 16-QAM, UL Sub)	LTE-TOO	8.44	± 9.6 %
72.00.0	-	The state of the s		46.7	A 1000 M

AAC LTE-TOO (SC-FDMA 50% RB, 10 MHz, QPSK, UL Sub)

LTE-TOD (SC-FDMA, 100% RB, 3 MHz; 64-QAM, Lit. Sub)

LTE TOD (SC-FDMA, 100% RB, 5 MHz, OPSK, UL Sub)

LTE TOO (SC-FDMA, 100% RB, 5 MHz, 16-QAM UL Sub)

LTE-TOD (SC-FDMA, 100% RB, 5 MHz; 64-QAM, UL Sub)

LTE-TOD (5C-FDMA, 100% RB, 10 MHz, QPSK, UIL Sub).

LTE-TOD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL SAID

LTE-TOD (SC-FDMA, 100% RB, 10 MHz, 54-QAM, UL Sub)

LTE-TOD (SC FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)

LTE TOD (SC-FDMA, 100% RB, 15 MHz, 84-QAM, UL Sult)

LTE-TOO (SC-FDMA, 100% RB, 20 MHz, 16-OAM, UL SUBI

LTE-TOD (SC-FDMA, 100% RB, 20 MHz, 84-QAM, UL Sub)

IEEE 802,116 WIFI 2.4 GHz (DSSS: 2 Mbps: 99pc dc)

IEEE 802,116 WIFI 2.4 GHz (DSSS, 5,5 Mbps, 89pc dc)

(EEE 802.116 WIFI 2.4 GHz (DSSS, 11 Mbps, 99pc db)

IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps, 99pp dc)

(EEE 802.11ath WIFLS GHz (OFDM, 12 Mbps, 99pc oc)

(EEE 802.11avh WiFI 5 GHz (OFDM, 18 Maps, 99pc.dc)

IEEE 802.11a/h WiFl 5 GHz (OFDM, 24 Mbps, 99pc dc)

IEEE 802,11a/n WIFI 5 GHz (OFDM, 36 Mbps, 98pc dc)

IEEE 802.11a/s WFi 5 GHz (OFDM, 48 Mbps, 99pc dc)

IEEE 802.11a/h WIFI 5 GHz (OFDM, 54 Mbps, 98pc do)

IEEE IID2. Hac WIFI (BOMHz, MCSO, 99pc dc)

IEEE 807.1 fac WIFI (80MHz, MCS1, 95pc do)

LTE TOD (SC-FDMA, 100% RB 20 MHz, QPSK, UL Sub)

LTE-TOD (SC-FDMA, 100% RB, 15 MHz, OPSK, UL Sub)

± 9.6 % 10525 IEEE 802.11ac WiFi (20MHz, MCS0, 98pc dc) WLAN 8.36 ± 9.6 % 10526 IEEE 802.11ac WIFI (20MHz, MCS1, 99pc dc) WLAN AAF 8.42 196% IEEE 802.11er; WiFI (20MHz, MCS2, 99pc dc) 10527 AAF WEAN 8.21 ± 9.6 % 10528 IEEE 602 flac WiFi (20MHz, MCS3, 99pc dc) WLAN AAF 8.36 ± 9.6 % 10529 IEEE 802,11gc WiFI (20MHz, MCS4, 99pc do) WLAN AAF 8.36 ± 9.6 % 10531 IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc) WLAN 8.43 ± 9.6 % 10532 IEEE 802.119c WiFi (20MHz, MCS7, 99pc do) WLAN AAF 8.29 ± 9.6 % 10533 IEEE 802 11ac WIFI (20MHz, MCS6, 99po do) AAE WLAN 8.38 19.6 % 10834 IEEE 802 11sc WiFI (40MHz, MCS0, 99pc.dc) WLAN AAE 8.45 ± 9.6 % 10535 IEEE 802 11sc WIFI (40MHz, MCS1, 98pc dc) AAE WLAN 8.45 ± 9.6 % 10536 AAF IEEE 802 11sc WiFi (40MHz, MCS2, 99pc.dc) WLAN B.32 £ 9.6 % IEEE 802 f fac WIFI (40MHz, MCS3, 39pc dc) 10537 AAF WI DAG B.44 ± 9.6 % 10538 AAF IEEE 802 11ac WiFi (40MHz, MCS4, 99pc dc) WLAN 8.54 ±96% 10540 IEEE 802 1 fac WiFT (40MHz, MCS6, 99pc dc) WLAN AAA B.39 ± 9.6 % 10541 IEEE 802 11ac WiFi (40MHz, MCS7, 99pc dc) AAA WEAN 8,46 £9.6 % 10542 IEEE 802.11ac WiFI (40MHz, MCSA, 99pc dc) WEAN AAA 8.65 ±96% 10543 IEEE 802, Flac WIFI (40MHz, MCS9, 99pc dc) AAC WEAN 8.65 ± 9.6 %

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10546	AAC	JEEE 802.11ac W/FI (80MHz, MCS2, 99oc de)	WLAN	B.35	± 9.6 %
10547	AAC	IEEE 802.11ac WiFI (80MHz, MCS3, 99ec dc)	WLAN	8.49	4 9.6 %
10548	AAC	IEEE 802.11ac WFI (80MHz, MCS4, 99pp dc)	WLAN	8.37	±9.6 %
10550	AAC	IEEE 802.11ac WFI (80MHz, MCS8, 99pc dc)	WLAN	8.38	±9.6 %
10551	AAC	IESE 802 11ac WAFI (BOMPs, MCS7, 96pc dc)	WLAN	8.50	± 9.6 %
10552	AAC	IEEE 802 11ac WIFI (80MHz, MCS8, 99pc dc)	WLAN	8.42	±9.6 %
10553	AAC	IEEE 802 11ac WIFI (80MHz, MCS9, 99pc dc)	WLAN	8.45	±9.6 %
10554	AAC	IEEE 802 11ac WIFI (160MHz, MCS0, 89pc do)	WLAN	8.48	±9.6 %
10555	AAC	IEEE 602 11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.47	±9.6 %
10556	AAC	IEEE 802 11ac WIFI (160MHz, MCS2, 89pc dc)	WLAN	8.50	±9.6 %
10657	AAC	IEEE 802 11ac WIFI (180MHz, MCS3, 98pc dcl	WLAN	8.52	19.6 %
10558	AAC	IEEE 802 1 fac WIFI (160MHz, MCS4, 99pc dc)	WLAN	8.61	4 9.6 %
10568	AAC	IEEE 802 11ac WiFI (160MHz, MCS6, 59pc dc)	WLAN	8.73	±9.6 %
10561	AAC	IEEE 802,11ac WiFi (160MHz, MCS7, 99pc do)	WLAN	8.56	±9.6%
10562	AAC	IEEE 802 11se WIFI (160MHz, MCS8, 89pc dc)	WLAN	8.69	±9.6%
10563	AAC	IEEE 802 11sic WIFI (160MHz, MCS9, 99cc do)	WLAN	8.77	± 9.6 %
10564	AAC	(EEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc.dc)	WLAN	8.25	± 9.6 %
10585	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc-dc)	WLAN	8.45	19.6%
10566	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 98oc dc)	WLAN	8.13	1 9.6 %
10567	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	1 9.6 %
10568	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	Annual Control of the
10569	AAC	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 48 Mbps, 98pc dc)	WLAN	8 10	± 9,6 % + 9.6 %
10570	AAC	IEEE 802 11g WiFl 2.4 GHz (DSSS-OFDM, 54 Mbps, 98pc dc)	WEAN		
10571	AAC	(EEE 802.11a WIFI 2.4 GHz (DSSS, 1 Maps, 90pc dc)	WLAN	8,30	± 9,6 14
10572	AAC	IEEE 802 11b WIFI 2 4 GHz (DSSS, 2 Mbps, 80pc dc)	WLAN		±9.6 %
10573	AAC	IEEE 802 116 WIFI 2.4 GHz (DSSS, 5.5 Mbps, 90pc de)	WLAN	1.99	±9.6%
10574	AAC	IEEE 802 116 WIFI 2 4 GHz (DSSS, 11 Maps, 90pc dc)	WLAN	1.98	±9,5 %
10575	AAC	IEEE 802 11g WiFi 2 4 GHz (DSSS-DFDM, 6 Mbps, 90pc dc)	WLAN		± 9.6 %
10576	AAC	IEEE 802.11g WIFI 2.4 GHz (DSSS-DFDM, 9 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-DFDM 12 Mbps, 90pc dc)	WLAN	8.70	± 9.5 %
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	19.6%
10578	AAD	IEEE B02.11g WIFI 2.4 GHz (DSSS-DFDM, 24 Mbps, 90pc dc)	WLAN	0.49	±9.6%
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-DFDM, 36 Maps, 90pc dc)	WLAN	8.76	±9.6%
10581	AAD	IEEE 802.11g WiFl 2.4 GHz (DSSS-DFDM, 48 Mbps, 98pc dc)	WLAN	8.35	29.6%
10582	AAD	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)	WLAN		± 9.6 %
10583	AAD	IEEE 802 11a/h WIFI 5 GHz (OFDM, 6 Mbps, 90pc.dc)	WLAN	8.67	± 9.6 %
10584	AAD	IEEE 802.11aih WIFI 5 GHz (OFDM, 8 Mbps, 90pc dc)	WLAN		± 9,8 %
10585	AAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 12 Mops, 90pc dc)	WLAN	8.60	± 9.6 %
10686	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 16 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10587	AAA	IEEE 802.11ah WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	30, 19	1 9.6 %
10568	AAA	IEEE 802,11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.36	196%
10589	AAA	IEEE 802.11a/h W/Fl 5 GHz (OFDM, 46 Mbps, 90pc dc)	WLAN	-	19.6%
10590	AAA	IEEE 802.11a/h W/Fi 5 GHz (OFDM, 64 Mbps, 90pc 0c)	WLAN	8.35	19.6%
10591	AAA	IEEE 802,11n (HT Mixed, 20MHz, MCS0, 80pc dc)	WEAN	8.63	# 9.6 %
10592		IEEE 802,111 (HT Mixed, 20MHz, MCS1, 90pc dc)	and the second second	and the second second	# 9.6 %
10593	AAA	IEEE 802 11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.79	±9.6 %
10594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.64	± 9.6 %
10595	10000	IEEE 802 110 (HT Moved, 20MHz, MCS4, 90pc dc)	WEAN	8,74	= 9.6 %
10596	AAA	IEEE 802 11n (HT Mixed, 20MHz, MCSS, 80ac dc)	WLAN	8,74	± 9.6 %
10597	AAA	IEEE 802,11n (HT Mixed, 20MHz, MCSS, 90ac dc)	WLAN	8.71	±9,6%
10596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.72	19.6%
10590		IEEE 802.11n (HT Mixer, 40MHz, MCS0, 90pp dc)	WLAN	8,50	19.6%
10800	AAA	IEEE 802.17n (HT Missel, 40MHz, MCS1, 90pp dc)	and the state of t	8,79	± 9.6 %
10601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MGS1, 30pp dc)	WLAN	8.58	±9.6 %
10602	AAA	EEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.62	± 9.6 %
10603	AAA		WLAN	8.94	±9.6 %
- PAPPE	AAA	IEEE 802.11n (HT Mixed, 40MHz, MC54, 90pc dc)	WLAN	9.03	± 9.6 %

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10804	AAA	IEEE 802.11n (HT Mixed, 40MHz, MC65, 90pc dc)	WLAN	B.76	±9.6%
10805	AAA	/EEE 802 11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	B.97	± 9.6 %
10805	AAC	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc)	WLAN	8.82	±96%
10807	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 80pc dc)	WLAN	8.64	± 9.6 %
0608	AAC	(EEE 802.1 lac WIFI (20MHz, MCS1, 80pc dc)	WLAN	8.77	± 9.6 %
10609	AAC	IEEE 802, 11ac WiFi (20MHz, MCS2, 90pc dc)	WLAN	8.57	± 9.6 %
10810	AAU	IEEE 802 11ac WiFi (20MHz, MCS3, 90pc dc)	WLAN	8.78	± 9.6 %
10811	AAC	IEEE 802,11ac WiFI (20MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10612	AVC	IEEE 802,11ac WIFI (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10613	AAC	IEEE 802.11ac WiFI (20MHz, MCS6, 90pc dc)	WLAN	8.94	± 9,6 %
10614	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90uc dc)	WLAN	8.59	± 9,6 %
10515	AAC	IEEE 802 11ac WiFI (20MHz, MCS8, 90pc dc)	WLAN	8.82	± 9,6 %
10618	AAC	IEEE 802 11ac WiFI (40MHz, MCS0, 90ge dc)	WLAN	8.82	±9.6 %
10817	AAC	IEEE 802 11ac WiFI (40MHz, MCS1, 90pc dc)	WLAN	8.81	±9.6 %
10616	AAC	IEEE 802 11ac WiFI (40MHz, MCS2, 90pc ric)	WLAN	8,58	19.6 %
10619	AAC	IEEE 802 11ac WiFi (40MHz, MCS3, 90pc dc)	WEAN	8.86	±9.6 %
10820	AAC	IEEE 802.11ac WiFI (40MHz, MCS4, 90pc dc)	WLAN	8.87	and the second
10621	AAC	(EEE 802.11ac WiFi (40MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10622	AAC	(EEE 802.11ac W/F (40MHz, MCS6, 90pc dc)	WLAN	8.68	1.75.70.10
10823	AAC	JEEE 802 11ac W/Fi (40MHz, MCS7, 90pc dc)	WLAN		±96%
10624	AAC	IEEE 802.11ac WiF (40MHz, WCSB, 80pc dc)	WLAN	8.82	±96%
10625	AAC	IEEE 802 11ac WiFi (40MHz, MCSR, 90pc dc)	WLAN	8.96	±96%
10826	-	IEEE 802 11ac WIFI (80MHz, WCS0, 90pc dc)	WLAN	8.96	± 9.6 %
10627	AAC	IEEE 802.11ac WIFI (80MHz, WCS1, 90pc.dc)	The state of the s	8,83	±96%
10828	11000	IEEE 802 11sc WIFI (80MHz, VICS2, 90pc dc)	WLAN	8.88	196%
0629	AAC	IEEE 802.11ac WIFI (80MHz, MCS3, 90pc dc)	WLAN	8,71	± 9.6 %
17630	AAC	IEEE 802,11ac WiFi (80MHz, WCS4, 90oc dc)	WLAN	8.85	196%
10631	AAC	IEEE 802.11ac WiF (80MHz, WCS5, 80pc dc)	WLAN	8,72	±96%
10532	AAC;	(EEE 802 11ac WiFi (80MHz, MCS6, 90pc dc)	WEAN	8.81	#.9.6.%
10833	AAC	IFPE 802 11ac WIFI (80MHz, MCS7, 90pc dc)	WLAN	8,74	±9.6 %
10834	AAC	TEEE 802 11ac WF (80MHz, WCSR, 90pc de)	TWLAN	8,83	± 9,6 %
10835	AAC	IEEE 802.11ac WIFI (80MHz, MCS9, 90pc dc)	WLAN	8,80	± 9.6 %
10636	AAC	and the state of t	WLAN	8,81	± 9.6 %
10637	AAC	IEEE 802 11ac WIFI (160MHz, MCS0, 90pc dc)	WLAN	8,83	± 9.6 %
10638	AAC	IEEE 802 11ac WiFi (160MHz, MCS1, 90pt; dc)	WLAN	8,79	±9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc)	WLAN	8.86	± 9.8 %
10639 1064D	AAU	(EEE 802 11ac WiFi (160MHz, MCS3, 90ps 6c)	WEAN	8.85	± 9.5 %
	AAC	TEEE 802.11ac WIFI (160MHz, MCS4, 90pc 6c)	WLAN	8.98	£9.6 %
10841	AAC	IEEE 902 11ac WiFI (160MHz: MCS5, 90pc du)	WLAN	9.06	±9.8 %
10842	AAC	ISEE 802 11ac W/Fi (160MHz, MCS6, 90pc dc)	WLAN	9.06	±9.6 %
10843	AAC	IEEE 802.11ac W/Fi (160MHz: MCS7, 90pc do)	WLAN	II.89.	±96%
10644	AAG	IEEE 502 11ac W/FI (160MHz, MCS8, 90pc ac)	WLAN	9.05	±96%
10645	AAC	IEEE 802 11ac WIF (160MHz. MCS9, 90pc dc)	WLAN	9.11	±9.6 %
10646	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2.7)	LTE-TOD	11.96	± 9.5 %
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2.7)	LTE-TDD	11.96	± 9.6 %
10648	AAC	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10852	AAC	LTE TOD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TOO	5.91	± 9.6 %
10853	AAC	LTE-TOG (OFDMA, 18 MHz. E-TM 3.1, Clipping 44%)	LTE TDD	7,42	±9.6 %
10654	AAC	LTE-TDD (OFDMA, 15 MHz. E-TM 3.1, Clipping 44%)	LTE-TOO	5.96	£ 9.6 %
10855	AAC	LTE TOO (OFDMA, 20 MHz. E-TM 3.1, Clipping 44%)	ETE-TOD	7.21	£ 9,6 %
10858	AAC	Pulse Waveform (200Hz, 10%)	Test	10,00	±9,6 %
10859	AAC	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6%
0880	AAC	Pulso Waveform (200Hz, 40%)	Test	3,98	±9.6%
10661	AAC	Pulse Waveform (200Hz. 60%)	Test	2.22	±9.6%
10662	AAC	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10870	AAC	Bluetooth Low Energy	Binelooth	2.19	±9.6%
10671	AAD.	(EEE 802.11ax (20MHz, MCS0, 90pc dc)	WLAN	9.09	±9.5%

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10672	AAD.	HEEE 802,11mx (20MHz, MCS1, 90pc dc)	WLAN	8.57	± 9.6 %
10673	AAD	IEEE 902.11ax (20MHz, MCS2, 90pc pc)	WLAN	8.78	± 9.6 %
10674	AAD	IEEE 802,11as (20MHz, MCS3, 90pc pc)	WLAN	8.74	± 9.6 %
10675	AAD	IEEE 802.11ax (20MHz, MCS4, 90pc pc)	WLAN	8.90	± 9.6 %
10678	AAD	IEEE 802.11ax (20MHz, MCS5, 90pc.oc)	WLAN	8.77	±9.6 %
10677	AND	IEEE 802.118x (20MHz, MCS6, 90pc dc)	WLAN	8.73	196%
10878	MAD	IEEE 802.11ax (20MHz, MCS7, 90pc cc)	WLAN	8.78	£9.6%
10879	AAD	IEEE 802.11ax (20MHz, MCSB, 30pc dc)	WLAN	8,89	± 9.6 %
10850	AAD	IEEE 802.11ax (20MHz, MCS9, 90pc dc)	WLAN	0.80	± 9.6 %
10881	AAG	IEEE 802.11ax (20MHz, MCS10, 90pc dc)	WLAN	6.62	± 9.6 %
10682	AAF	IEEE 802.11ax (20MHz, MCS11, B0pc dc)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802,11ax (20MHz, MCS0, 89pc dc)	WLAN	8.42	19.6%
10884	AAC	IEEE 802.11ax (20MHz, MCS1, 99pc de)	WLAN	B.26	± 9.6 %
10885	AAC	IEEE 802.11ax (20MHz, MCS2, 99pc sic)	WLAN	8.33	± 9.6 %
10686	AAC	IEEE 802.11ax (20MHa, MCS3, 80pc-dc)	WLAN	8.25	± 9.6 %
10687	AAE	IEEE 802.11ax (20MHz. MCS4, 99pc oc)	WLAN	B.45	± 9.6 %
10688	AAE	(EEE 802.11ax (20MHz, MCS5, 99pc dc))	WLAN	8.29	± 9.6 %
10689	AAD	IEEE 802.1 fax (20MHz, MCSB, 99pc ttc)	WLAN	8.55	±9.6 %
10690	AAE	(EEE 802.11ax (20MHz, MCS7 99pc (sc)	WLAN	8.29	± 9.6 %
10691	AAB	IEEE 802 11ax (20MHz, MCS8, 99pc oc)	WLAN	8.25	±9,6%
10892	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc-oc)	WLAN	8.29	19.6%
10893	AAA	IEEE 802.11ax (20MHz, MC\$10, 99pc dq)	WLAN	8.25	19.6%
10894	AAA	IEEE BOZ 11ax (20MHz_MCS11, 89pc do)	WLAN	8,57	± 9.6 %
10695	AAA	IEEE 802.11aa (40MHz, MCS0, 90pc do)	WLAN	8.78	± 9.6 %
10696	AAA	(EEE 802.11as (40MHz, MCS1, 90pc dc)	WLAN	8.91	±9.6 %
10897	AAA	IEEE B02 11ax (40MHz, MCSZ, 90pc dc)	WLAN	B.61	± 9,6 %
10598	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc qc).	WLAN	8.89	±9.6%
10899	AAA	IEEE 802,11ax (40MHz, MCS4, 90pc-0c)	WLAN	8,82	±9,6 %
10700	AAA	IEEE 802.11ex (40MHz, MCS5, 90pc do)	WLAN	8,73	± 9,6 %
10701	AAA	IEEE 802.11ax (40MHz. MCS6, 90pc no)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc dc)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802,11ax (40MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802,11 lix (40MHz, MCS9, 90pc de)	WEAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11iix (40MHz, MCS10, I/Opc dc)	WEAN	8.69	1 9.6 %
10706	AAC	(EEE 802.11mx (40MHz, MCS11, 90pc dg)	WLAN	8.66	± 9.6 %
10707	AAD	IEEE 802.1 lax (40MHz, MCS0, 99pc 5c)	WLAN	8.32	± 9.6 %
10708	AAC	IEEE 802.11ax (40MHz, MCS1, 99pc dc)	WLAN	8,55	± 9.6 %
10709	AAC	IEEE 802,11ax (40MHz, MCS2, 99pc (ic)	WLAN	8.33	± 9.6 %
10710	AAC	IEEE 802.11ax (40MHz, MCS3; 99pc dc)	WLAN	8.29	19.6%
10711	AAC	IEEE 802,11ax (40MHz, MC\$4, 99pc dc)	WLAN	6.39	19.6%
10712	AAC	IEEE 802.11ux (40MHz, MCS5, 69pc dc)	WEAN -	B.67	19.6%
10713	AAC	JEEE 802,11ax (40MHz, MCS6, 99pc 6c).	WLAN	8.33	±9.6%
10714	AAC	IEEE 802.11ax (40MHz, MCS7, 99pc dg)	WEAN	8.26	± 9.6 %
10715	AAC	IEEE 802.11ax (40MHz, MCS8, 89pc dc)	WLAN	8.45	±9.6%
10716	AAC	IEEE 802,11ax (40MHz, MCS9, 89pc-dc)	WLAN	8.30	±9.6%
10717	AAC	IEEE 802.11ax (40MHz, MCS10, 99pc dc)	WLAN	8.48	±9.6%
10718	AAC	IEEE 802.11ax (40MHz, MCS11, 99pc dc)	WEAN	8.24	± 9.6 %
10719	AAC	IEEE 802.11ax (80MHz, MCS0, 80pc (lc)	WLAN	8.81	±9.6%
10720	AAC	IEEE 802.11ax (80MHz, MCS1, 90pc dc)	WLAN	8.87	± 9.6 %
10721	AAC	IEEE 802,11ax (80MHz, MCS2, 90pc ds)	WLAN	8.76	±9.6 %
10722	AAC	IEEE 802.11ax (80MHz, MCS3, 90pc.dc)	WLAN	8.55	±9.6%
10723	AAC	IEEE 802.11ax (80MHz, MCS4, 40pc.dc)	WLAN	8,70	± 9.5 %
10724	AAC	(EEE 802.11ax (80MHz, MCS5, 90pc dc)	WLAN	8.90	196%
10725	AAC	(EEE 802.11ax (80MHz, MCS6, 90pc dc)	WLAN	8.74	496%
10726	AAC	(EEE 802.11ax (80MHz, MCS7, 90pc dc)	WLAN	8.72	± 9.6 %
10727	AAC	IEEE 802.11ax (BOMHz, MCS8, 90pc dc)	WLAN	8.66	# 9.6 W

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10728	AAC	(EEE 802.11ax (80MHz, MGS9, 90gc dc)	WLAN	8.66	= 9.6 %
10729	AAC	IEEE 802.11ax (80MHz, MCS10, 90pc pc)	WLAN	8.64	2.9.6 %
10730	AAG	IEEE 802.11ax (80MHz, MCS11, 90pc dc)	WLAN	8.67	196%
10731	AAC	(EEE 802.11ax (80MHz, MCS0, 99pc do)	WLAN	8.42	±96%
10732	AAG	IBEE 802 1 vax (BOMHz, MCS1, 99pc dc)	WLAN	8.46	± 9.6 %
10733	AAC	IEEE 602.19ax (BOMHz, MCS2, 99pc do)	WEAN	8.40	± 9.6 %
10734	AAC:	IEEE 802.11ax (80MHz, MCS3, 99pc dc)	WLAN	8.25	± 9.6 %
10735	AAC	IEEE 802.11ax (80MHz, MCS4, 99pc do)	WLAN	8.33	= 9.6 %
10736	AAC	IEEE 802.11ax (80MHz, MCS5, 99pc dc)	WLAN	8.27	± 9.6 %
10737	AAC	IEEE 802 11ax (80MHz, MCS6, 99pc do)	WLAN	8.36	± 9.6 %
10738	AAC	IEEE 802,118x (80MHz, MCS7, 99pc do)	WLAN	8.42	± 9.6 %
10739	AAC	IEEE 802 11ax (80MHz, MCS8, 98pc do)	WLAN	8.29	4 9.6 %
10740	AAC	IEEE 802.11ax (BOMHz, MCS9, 98pc dp)	WLAN	B.48	± 9.6 %
10741	AAC	(EEE 802.11ax (80MHz, MCS10, 90pc dc)	WLAN	8.40	± 9.6 %
10742	AAC	(EEE 802.11ax (80MHz, MCS11, 99pc dc)	WLAN	8.43	1
10743	AAG	IEEE 802.11ax (160MHz, MCS0, 90pc dc)	WLAN	8.94	± 9.6 %
10744	AAG	(EEE 002.11ax (160MHz, MCS1, 90pc ttc)	WLAN	9.16	19.6%
10745	AAC	IEEE 802 11ax (160MHz, MCS2, 90pc dc)	WLAN	19.74	19.6%
10746	AAC	IEEE 802 11ax (160MHz, MCS3, 90pp dc)	WLAN	8.93	29.6%
10747	AAC	IEEE 802 11ax (160MHz, MCS4, 90pc dc)	WLAN	9.11	± 9.6 %
10748	AAC	IEEE 802.11ax (160MHz, MCS5, 90pc dc)		9.04	± 9.6 %
10749	AAC	IEEE 802.11ax (180MHz, MC56, 90pc dc)	WLAN WLAN	8,93	19.6%
10750		IEEE 802.11ax (160MHz, MCS7, 90pc.dc)		8.90	± 9.6 %
10751	AAC	IEEE 802.11ax (160MHz, MCSR, 90pc 0c)	WEAN	8.79	±9.6%
10752	AAC	IEEE 802.11ax (160MHz, MCS9, 90pc dc)	WLAN	8.82	29.6%
10753	AAC	(EEE 802.11ax (160MHz, MCS10, 90pc dc)	WLAN	8.81	± 9.6 %
10754	AAC		WLAN	9.00	± 9.6 %
10755	AAC	IEEE R02.11ax (160MHz, IACS11, 90pc dc)	WLAN	8.94	= 9.6.9
10756	AAC	IEEE 802 11ax (160MHz, MCSD, 9Epc oc)	WLAN	8.64	19.67
10757	AAC	IEEE 802 11ax (160MHz, MCS1, 99pc dc)	WLAN	8.77	# 9.6 %
10758	AAC	IEEE 802.11ax (160MHz, MCS2, 99pc dc)	WEAN	8.77	±96%
1000	AAC	IEEE 802-11ax (160MHz, MCS3, 99ps dc)	WLAN	8.69	± 9.6 %
10759	AAC	IEEE 802.11ax (160MHz, MCS4, 99po dc)	WLAN	B.58	± 9.6 %
740 241	AAC	IEEE 602.11ax (160MHz, MCS5, 90pc dc)	WLAN	8.49	± 9.6 %
10761	AAC	IEEE 802.11ax (160MHz, MCS6, 99pc do)	WLAN	8.58	± 9.6 %
10762	AAC	IEEE (02 11ax (180MHz, MCS7, 98pc dc)	WLAN	8.49	± 9.6 %
10763	AAG	IEEE IVI2 11ax (16tiMHz, MCS8, 99pc de)	WLAN	8.53	± 9.6 %
10764	MC	TEEE 802 116x (180MHz, MCS9, 99pc de)	WLAN	8.54	± 9.6 %
10765	AAC	IEEE 802 11sx (160MHz, MCS10, 99pc ac)	WLAN	B.54	±9.6 %
10766	AAC	IEEE 802 11ax (160MHz, MCS11, 99pc oc)	WLAN	8.51	19.6 %
10767	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TOD	7.99	£9.6%
10768	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, CPSK, 15 kHz)	5G NR FR1 TOD	8.01	£9,6%
10769	AAC	5G NR (CP-OFDM: 1'RB, 15 MHz, QPSK, 15 kHz)	58 NR FR1 T00	8.01	±9,6 %
10776	AAC	5G NR (CP-OFCM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TOD	8.02	± 9.6 %
10771	AAC	5G NR (CP-OFDM 1 RB, 25 MHz, CRSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10772	AAC	5G NR (CP-OFOM, 1 RB, 30 MHz, GPSK, 15 kHz)	5G NR FR1 TDD	8.23	± 9,6 %
10773	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	50 NR FR1 TDD	8.03	£ 9.6 %
10774	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, CPSK, 15 kHz)	5G NR FR1 TDO	8.02	£ 9.6.%
10775	AAC	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDO	8.31	± 9.6 %
19776	AAC	5G NR (CP-OFOM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FRI TDO	8.30	£ 9.6 %
10777	AAC	5G NR (CP-GFDM, 50% RB. 15 MHz, GPSK, 15 kHz)	5G NR FR1 TOD	8.30	± 9.6 %
10778	AAC	5G NR (CP-OFDM: 50% RB, 20 MHz, GPSK; 15 MHz)	5G NR FRI TOO	8.34	±9.6%
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 xHz)	5G NR FR1 TOO	8.42	4969
10780	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TOD	8.38	£96%
10781	AAC	5G NR (CP-DFDM, 50% RB. 40 MHz, QPSK, 15 kHz)	5G NR FR1 TOO	8.38	±9.6 %
10782	AAC	5G NR (CP-DFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6 %
10793	AAC	5G NR (CP-0FDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	± 9.6 %

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10784	LAAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	SG NR FR1 TDD	6.28	±9.6%
10785	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	50 NR FR1 TDD	8.40	± 9.6 %
10788	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	50 NR FR1 TDD	8.35	± 9.6 %
10787	AAC	5G NR (CF-OFDM, 100% RB; 25 MHz, OPSK, 15 kHz)	5G NR FR1 TDD	8.44	± 9.6 %
10788	AAC	50 NR (CP-OFDM 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10789	AAC	5G NR (CP-OFDM: 100% RB; 40 MHz, QPSK; 15 kHz)	5G NR FR1 TOD	8.37	1 9.6 %
10790	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	19.6%
10791	AAC	5G NR (CP-OFDM, 1 RB; 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6%
10792	AAC	5G NR (CP-OFOM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±96%
10793	AAC	5G NR (CP-C)FDM, 1 RB, 15 MHz, QPSK, 30 KHz)	5G NR FR1 FD0	7.95	± 9.6 %
10794	AAC	5G NR (CP-OFDM: 1 RB, 20 MHz, QPSK: 30 MHz)	5G NR FR1 TDD	7,82	± 9.6 %
10795	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	50 NR FR1 TDD	7.84	±9.6%
10798	AAC	50 NR (CP-OFDM: 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7,82	± 9.6 %
10797	AAC	5G NR (CP-OFDM: \ RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10798	AAC	SG NR (CP-OFDM: 1 RB, 50 MHz, OPSK, 30 NHz)	5G NR FR1 TDD	7.89	± 9.6 %
10799	AAC	5G NR (CP-OFDM: 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	1 9.6 %
10801	MAC	5G NR (CP-OFDM 1 RB, 80 MHz, OPSK, 30 kHz)	5G NR FR1 TOD	7.89	± 9.6 %
10802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	50 NR FR1 TOD	7.87	±9.6%
10903	MAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	± 9.6 %
10805	AAD	SG NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.34	± 9.6 %
10806	AAD	50 NR (CP-DFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	SG NR FR1 TOD	8.37	± 9.6 %
10609	AAD	5G NR (CP-OFDM, 50%, RB, 30 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	B.34	19.6%
10810	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	B.34	±9.6 %
10812	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, OPSK, 30 kHz)	5G NR FR1 TDD	8.35	+96%
10617	DAA	8G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±96%
10818	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	+96%
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, OPSK, 30 kHz)	5G NR FR1 100	8.33	±9.6%
10820	AAD	50 NR (CP-OFDM, 100% RB, 20 MHz, OPSK, 30 MHz)	5G NR FR1 TDD	8.30	±96%
10821	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±96%
10822	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, CIPSK, 30 kHz)	5G NR FR1 TDD	8.41	±96%
10823	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.36	± 9.6 %
10824	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.39	±9.6 %
10825	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QP5K, 30 MHz)	5G MR FR1 TOD	8.41	± 9.6 %
10827	CAA	4G NR (CP-OFDM, 100% RB, B0 MHz, QP5K, 30 WHz)	5G NR PR1 TOO	8.42	±9.6%
10828	MAE	5G NR (CP-OFDM, 100% RB, 90 MHz. OPSK, 30 lbtz)	5G NR FR1 TOO	8.43	19.6%
10829	DAA	5G NR (CP-CFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NA FRI TOO	8.40	± 9.6 %
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	7.63	296%
10831	AAD	5G NR (CP-GFDM, I RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	± 9.6 %
10832	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	-7.7A -	19.6%
10833	LAAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10834	CAA	5G NR (CP-0F0M, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	19.6%
10835	CAA	5G NR (CP-GFDM, 1 RB 40 MHz, QPSX, 60 kHz)	5G NR FR1 TDD	7.70	196%
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	29.6%
10837	AAD	50 NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 80 kHz)	5G NR FR1 TOD	7.68	196%
10839	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, OPSK, 80 kHz)	AG NR FRI TOD	7.70	±96%
10840	AAD	5G NR (CP-OFDM, 1 RB 90 MHz, QPSK, 80 kHz)	AG NR FR1 TDD	7.67	±96%
10841	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 80 kHz)	5G NR FR1 100	7.71	±9.6 %
10843	MAD	5G NR (CP-OFDM, 60% RB. 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6%
10844	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8,34	± 9.6 %
10846	DAA	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	50 NR FRI TOD	8,41	± 9.6 %
10854	AAD	5G NR (CP-OFDM, 100% RB. 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8,34	± 9.6 %
10855	AAD	5G NR (CP-0FDM, 100% RB, 15 MHz, QPSK, 60 MHz)	5G NR FR1 TOD	8,36	± 9.6 %
10856	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 80 kHz)	5G NR FR1 TDD	8.37	19.6%
10857	NAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	8.35	29.6%
10868	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8,36	29.6%
10859	DAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR 1 TOD	8.34	4 9.6 %

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10960	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, DPSK, 60 kHz)	5G NR FRY TOO	8.41	± 9.6 %
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 80 kHz).	5G NR FR1 TDD	8.40	±96%
10863	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, GPSK, 80 kHz).	5G NR FR1 TDO	8.41	± 9.6 %
0864	AAE	5G NR (CP-OFOM, 100% RB, 90 MHz, QPSK, 80 kHz)	8G NA FR1 TDD	8.37	± 9.6 %
0665	AAD	6G NR (CP-OFDM, 100% RB, 100 MHz, QPSX, 60 kHz)	50 NR FR1 TDO	8.41	± 9.6 %
10866	AND	5G NR (DFT-s-OFDM 1 R8, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
0868	AAD	50 NR (DFT-s-OFDM 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	± 9.6 %
19869	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAD	56 NR (DFT-s-OFDM, 100% RB, 100 MHz, OPSK, 120 kHz)	5G NR FR2 TDD	5.66	±9.65
10871	AAD	5G NR (DFT s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	1963
0872	AAD	5G NR (DFT & OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TOD	8.52	1969
10873	LAAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 84QAM, 120 NHz)	5G NR FR2 TDD	6,61	±9.65
10874	CAA	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 640AM, 120 kHz)	5G NR FR2 TOD	6.65	±9.69
0875	AAD	5G NR (CP-OFDM. 1 RB, 100 MHz, QPSK, 120 kHz)	SG NR FRE TOD	7.78	±9.69
0976	AAD	56 NR (CP-OFDM: 100% RB, 100 MHz, QPSK, 120 kHz)	SO NR FR2 TDD	8.39	± 9.6 9
0877	AAD	5G NR (CP-OFDM 1 RB, 100 MHz, 100AM, 120 kHz)	5G NR FR2 TDD	7.95	±9.69
0878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 160AM, 120 kHz)	5G NR FR2 TDD	B.41	± 9.6 9
0879	AAD	5G NR (CP-OFDM, 1 R8, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	± 9.6 %
0880	AAD	5G NR (CP-OFDM 100% RB, 100 MHz B4QAM, 120 kHz)	5G NR FR2 TDD	B.38	± 9.6 3
0881	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.63
0882	AAD	5G NR (DFT-s-DEDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	± 9.6 %
0883	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.57	± 9.6 %
0884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 °
0885	AAD	5G NR (DFT & OFDM, 1 RB, N0 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	1 9.6
0886	AAD	5G NR (DFT:s-OFDM, 100% RB, 50 MHz, 64QAM, 126 kHz)	5G NR FR2 TDD	5.85	± 9.6 9
0887	AAD	5G NR (CP-OFDM: 1 RB, 50 MHz, QPSK, 120 kHz)	6G NR FR2 TDD	7.78	1 9.6 %
0888	AAD	5G NR (CP-OFDM 100% R8, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	± 9.6 9
0889	AAD	5G NR (CP-OFDM, 1 R8, 50 MHz, 18QAM, 120 KHz)	6G NR FR2 1DD	8.02	± 9.6°
0890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 °
10891	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 84QAM, 120 kHz)	50 NR FR2 TDD	8.13	± 9.6 %
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 °
10897	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, OPSK, 30 kHz)	SG NR FR1 TDD	5.66	19.69
0898	AAD	50 NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 °
10899	AAD	5G NR (DFT e-OFDM, 1 RB. 18 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10900	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.68	1969
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NB FR1 TOD	5.68	19.63
10902	AAD	5G NR (DFT-s-OFOM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD		A CONTRACTOR OF THE PARTY OF TH
10903	AAD	6G NR (OFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 letz)	5G NR FR1 TOD	5.68	±9.63
10904	AAD	56 NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 KHz)	5G NR FR1 1DD	The state of the s	± 9.6 %
10905	A Section Services	50 NR (DFT-s-DFDM, 1 RB, 60 MHz, QPSK, 30 MHz)	5G NR FR1 TOD	5.68	± 9.6 %
10906	DAA	5G NR (DFT s-GFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	50 NR FR1 TDD	5.68	±9.63
10907	DAA	5G NR (DFT-s-QFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	50 NR FR1 TDD	5.68	± 9.6 9
HOSON	AAD	5G NR (DFT-s-QFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	19.63
10909	-	5G NR (DFT s-OFDM, 50% RB, 15 MHz, QPSK, 30 MHz)	5G NR FR1 TDD		± 9.6 %
10910	AAD	5G NR (DFT 4-DFDM, 50% RB, 20 MHz, QPSK, 30 MHz)	5G NR FR1 TDD	5.96	± 9.6 %
10911	AAD	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10917	AAD	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 MHz)		5.93	± 9.6 %
10912	AAD		5G NR FR1 TDD	5.84	±969
0914	AAD	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	SG NR FR1 TDD	5.84	± 9.6 %
0915	AAD		5G NR FR1 TDD	5.85	±9.69
0915 0918	AAD	56 NR (DET & DEDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5,83	±9,63
	AAD	SG NR (OFT & OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	19.63
0917	AAD	5G NR (DFT-s-DFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 9
10918	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, GPSK, 30 kHz)	50 NR FR1 TDO	5,86	±9.69
10919	AAD	5G NR (DFT = OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	SO NR FR1 TDD	5,86	± 9.6 %
10920	AAD	5G NR (DFT-s-DFDM, 100% RB, 15 MHz, QPSK, 36 kHz)	5G NR FR1 TDD	5,87	± 9,6 9
10921	AAD	5G NR (DFT 5-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	50 NR FR1 TDD	5.84	± 9.6 %

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EX3DV4- SN:7534 April 19, 2021

10922	CAA	5G NR (OFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR ( TOD	5.82	± 9.6 %
10923	AAD	5G NR (DFT-s-OFDM, 100% R8, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.84	±95%
10924	AAD	5G NR (DFT-e-DFDM, 100%, RB, 40 MHz, QPSK, 30 kHz)	50 NR FR1 TOD	5.84	±9.5 %
10925	CAA	5G NR (DFT-s-QFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±96%
10926	CAA	5G NR (DFT-s-DFDM; 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.84	±96%
10027	AAD	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	5.94	+96%
10928	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6 %
0929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10930	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, OPSK, 15 kHz)	5G NR FR1 FDD	5,52	± 9.6 %
10931	AAD	5G NR (DFT-s-OFDM, 1 RB_20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,51	±9.6%
10932	AAR	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, OPSK, 15 KHz)	5G NR FR1 FDD	5,51	± 9.6 %
10938	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 KHz)	50 NR FR1 FDD	5,51	19.6 %
10934	AAA	5G NR (DFT 5-OFDM, 1 RB. 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10936	AAC	5G NR (DFT-6-DFDM, 50% RB, 5 MHz, GPSK, 15 kHz)	5G NR FR1 FDD	5.90	£96%
10937	BAA	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FD0	5.77	±96%
10938	AAB	5G NR (DFT-8-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FD0	5.90	±96%
10939	AAB	5G NR (DFT-8-OFDM, 50% RB, 20 MHz, OPSK, 15 kHz)	5G NR FR1 FOD	5.82	±9.6 %
10940	AAB	5G NR (DFT-6-OFDM, 60% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FD0	5.89	±96%
10941	AAS	SQ NR (DFT-4-DFDM; 50% RB, 30 MHz, QPSK, 15 RHz)	56 NR FR1 FDD	5.83	±9.6%
10942	AAB.	5G NR (DFT-d-OFDM, 50%, RB, 40 MHz, QPSK, 16 MHz)	50 NR FR1 FDD	5.85	± 9.6 %
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 18 kHz)	50 NR FR1 FDD	5.95	19,6%
10944	AAB.	6G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	± 9.6 %
10945	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
109/AB	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 MHz)	5G NR FR1 FDD	5.83	±9.6 %
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6 %
10948	AAE	50 NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,94	±9.6%
10949	AAB	50 NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,67	±9,6 %
10950	AAB	5G NR (DFT-s-QFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,94	±9.6 %
10951	AAB	5G NR (DFT-s-OFDM; 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,92	± 9,6 %
10952	AAB	5G NR OL (CP-DFDM, TM 3.1, 5 MHz, 84-QAM, 15 kHz)	5G NR FR1 FDD	8.25	±9.6%
10953	AAB	5G NR OL (CP-OFDM, TM 3.1, 10 MHz 84-QAM, 15 kHz)	8G NR FR1 FD0	8,15	± 9.8 %
10954	AAB	5G NR OL (CP-DFDM, TM 3.1, 15 MHz, 84-DAM, 15 kHz)	5G NR FR1 FDD	0.23	± 9.6 %
10955	AAB	5G NR DL (GP-DFDM, TM 3:1, 20 MHz, 64-QAM, 15 kHz)	6G NR FR1 FDD	B.42	±9.6%
10956	AAB	5G NR DL (CP-DFDM, TM 3.1, 5 MHz, 54-QAM, 30 kHz)	5G NR FR1 FDD	8.14	±9.6%
10957	AAC	6G NR DL (CP-DFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	6G NR FR1 FD0	8.31	±9.0%
10958	AAB	50 NR DL (CP-OFDM, TM 3.1, 15 MHz, 54-QAM, 30 kHz)	5G NR FR1 FDD	B.61	±9.5%
10959	AAB	6G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	H.33	± 9.6 %
10860	AAB	5G NR DL (CP OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	± 9.6 %
10961	AAB	5G NR DL (CP-DFDM, TM 3.1, 10 MHz, 84-QAM, 15 kHz)	5G NR FR1 TDD	9.36	主见5%
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 84-QAM, 16 kHz)	5G NR FR1 TDD	9.40	1 B B W
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 84-QAM, 15 kHz)	5G NR FR1 TDO	9.55	19.6%
10964	AAE	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	± 9.6 %
10965	AAB	5G NR DL (CP-OFDM, TM 3.7, TO MHz, 84-QAM, 30 ld+z)	5G NR FR1 TDD	9.37	19.6%
10966	AAB	5G NR DL (CP-DFDM, TM 8.1, 15 MHz, 64-QAM, 30 KHz)	5G NR FR1 TOD	9.55	± 9.6 %
10987	AVB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 KHz)	5G NR FR1 TDD	9.42	= 9.6 %
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	SG NR FR1 TOD	9.49	± 9,6 %
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	±9.6 %
10973	AAB	5G NR (DFT-s-OFDM, 1 RB. 100 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	9.06	± 9.6 %
10974	AAB	5G NR (CP-DFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	± 9,6 %

<sup>\*</sup> Uncertainty is determined using the max, deviation from linear response applying realizingular distribution and is expressed for the equate of the field value.

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# Appendix C Dipole Calibration Certificates

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





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

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA

Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client Motorola Solutions MY

Certificate No: D2450V2-782 Feb20

	ERTIFICATI		
Object	D2450V2 - SN:78	82	
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz		s between 0.7-3 GHz.
Calibration date:	February 20, 202	20	-
This calibration certificate documer	nts the traceability to nati	onal standards, which realize the physical un	its of measurements (SI).
The measurements and the uncert	ainties with confidence p	robability are given on the following pages ar	nd are part of the certificate.
All calibrations have been conduct	ed in the closed laborator	ry facility: environment temperature (22 ± 3)°0	C and humidity < 70%.
Calibration Equipment used (M&TE	E 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
ower 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
Outor action (dist. co.)	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Reference 20 dB Attenuator			
Reference 20 dB Attenuator Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4			
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards	SN: 7349 SN: 601	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)	Dec-20 Dec-20
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A	SN: 7349 SN: 601	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  Check Date (In house) 30-Oct-14 (In house check Feb-19) 07-Oct-15 (In house check Oct-18)	Dec-20 Dec-20 Scheduled Check
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: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  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)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
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: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  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)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
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: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  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)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4  Secondary Standards Power meter E4419B Power sensor HP 8481A	SN: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  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)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20 In house check: Oct-20
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: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  Check Date (in house)  30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-19)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 Signature
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  Calibrated by:	SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 Name	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19) Check Date (in house) 30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-19) Function Laboratory Technician	Dec-20 Dec-20 Scheduled Check In house check: Oct-20
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: 7349 SN: 601 ID# SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 Name	31-Dec-19 (No. EX3-7349_Dec19) 27-Dec-19 (No. DAE4-601_Dec19)  Check Date (in house)  30-Oct-14 (in house check Feb-19) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-19)	Dec-20 Dec-20 Scheduled Check In house check: Oct-20 Signature

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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

ConvF N/A sensitivity in TSL / NORM x,y,z 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
- 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%.

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# **Measurement Conditions**

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

DASY Version	DASY5	V52,10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	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	38.4 ± 6 %	1.86 mho/m ± 6 %
Head TSL temperature change during test	< 0.5°C	ensaire	-

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.9 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	54.4 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	25.3 W/kg ± 16.5 % (k=2)

# **Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.4 ± 6 %	2.03 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.3 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	51.9 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6:21 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	24.5 W/kg ± 16.5 % (k=2)

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

# Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.2 Ω + 3.8 jΩ
Return Loss	- 26.3 dB

# Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.6 Ω + 5.9 jΩ
Return Loss	- 24.6 dB

# General Antenna Parameters and Design

Electrical Delay (one direction)	1.153 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: 20.02.2020

Test Laboratory: SPEAG, Zurich, Switzerland

### DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:782

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

Medium parameters used: f = 2450 MHz;  $\sigma = 1.86$  S/m;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

### DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.98, 7.98, 7.98) @ 2450 MHz; Calibrated: 31.12.2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 27.12.2019

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

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

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

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

Reference Value = 120.1 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 27.7 W/kg

# SAR(1 g) = 13.9 W/kg; SAR(10 g) = 6.41 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 50%

Maximum value of SAR (measured) = 23.0 W/kg

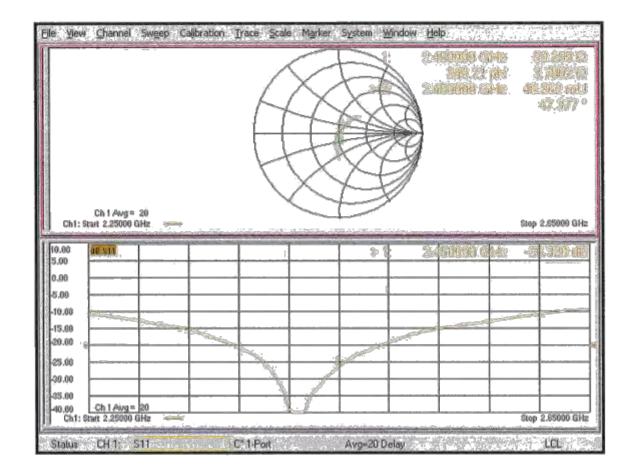


0 dB = 23.0 W/kg = 13.62 dBW/kg

Certificate No: D2450V2-782\_Feb20

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# Impedance Measurement Plot for Head TSL



Certificate No: D2450V2-782\_Feb20

# **DASY5 Validation Report for Body TSL**

Date: 20.02,2020

Test Laboratory: SPEAG, Zurich, Switzerland

### DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:782

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

Medium parameters used: f = 2450 MHz;  $\sigma = 2.03 \text{ S/m}$ ;  $\varepsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

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

### DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.02, 8.02, 8.02) @ 2450 MHz; Calibrated: 31.12.2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics; DAE4 Sn601; Calibrated: 27.12.2019

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

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

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

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

Reference Value = 110.9 V/m; Power Drift = -0.06 dB

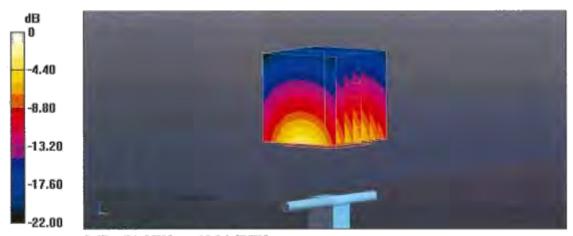
Peak SAR (extrapolated) = 25.6 W/kg

### SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.21 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 52.9%

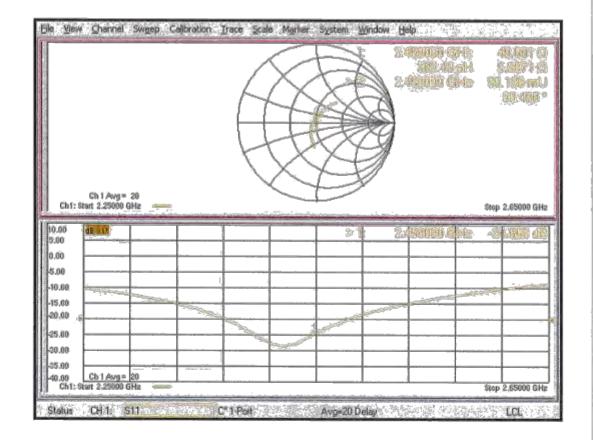
Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kg = 13.34 dBW/kg

Certificate No: D2450V2-782\_Feb20

# Impedance Measurement Plot for Body TSL



Certificate No: D2450V2-782\_Feb20

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





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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client

Motorola Solutions MY

Certificate No: D450V3-1054\_Mar19

#### CALIBRATION CERTIFICATE Object D450V3 - SN:1054 Calibration procedure(s) QA CAL+15.v9 Calibration Procedure for SAR Validation Sources below 700 MHz Calibration date: March 11, 2019 This calibration certificate documents the traceability to national standards, which sealize 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 Cai Date (Certificate No.) Scheduled Calibration Power moter NRP SN: 104778 04-Apr-18 (No. 217-02672/02673) Apr-19 Power sensor NRP-Z91 SN: 103244 04-Apr-18 (No. 217-02672) Apr-19 Power sensor NRP-Z91 SN: 103245 04-Apr-18 (No. 217-02673) Apr-19 Reference 20 dB Attenuator SN: 5277 (20x) 04-Apr-18 (No. 217-02682) Apr-19 Type-N mismatch combination SN: 5047.2 / 06327 04-Apr-18 (No. 217-02683) Apr-19 Reference Probe EX3DV4 SN: 3877 31-Dec-18 (No. EX3-3877\_Dec18) Dec-19 DAE4 SN: 654 05-Jul-18 (No. DAE4-854\_Jul18) Jul-19. Secondary Standards 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 05-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 Aglient EB358A SN: US41080477 31-Mar-14 (in house check Oct-18) in house check: Oct-19 Function Calibrated by: Claudio Leubler Laboratory Technician Approved by: Katja Pokovic Technical Manager Issued: March 11, 2019 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D450V5-1054\_Mar19

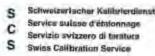
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### Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland







Accreditation No.1 SCS 0108

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Glossary:

TSL tissue simulating liquid

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

Calibration is Performed According to the Following Standards:

- 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
- 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%.

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### Measurement Conditions

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

DASY Version	DASY5	V52.10,2
Extrapolation	Advanced Extrapolation	
Phantom	ELI4 Flat Phantom	Shell thickness: 2 ± 0.2 mm
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	450 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied:

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	43.5	0.87 mha/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	44.1 ± 6 %	0.87 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		-

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	4.57 W/kg ± 18.1 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	0.763 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	3.06 W/kg ± 17.6 % (k=2)

### **Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	56.7	0.04 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.7 ± 6 %	0,93 mbo/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

# SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	1.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	4.54 W/kg = 18.1 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	0.762 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	3.06 W/kg = 17.6 % (k=2)

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

### Antenna Parameters with Head TSL

Impedance, transformed to feed point	60.2 Ω - 0.4 jΩ	
Return Loss	- 20.7 dB	

### Antenna Parameters with Body TSL

Impedance, transformed to feed point	57.7 Ω - 3.6 μΩ		
Return Loss	-22.1 dB		

### General Antenna Parameters and Design

Electrical Delay (one direction)	1.346 ns

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

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

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

### Additional EUT Data

Manufactured by	SPEAG

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### DASY5 Validation Report for Head TSL

Date: 11.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

### DUT: Dipole 450 MHz; Type: D450V3; Serial: D450V3 - SN:1054

Communication System: UID 0 - CW; Frequency: 450 MHz

Medium parameters used: f = 450 MHz;  $\sigma = 0.87 \text{ S/m}$ ;  $\varepsilon_r = 44.1$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

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

### DASY52 Configuration:

Probe: EX3DV4 - SN3877; ConvF(10.5, 10.5, 10.5) @ 450 MHz; Calibrated: 31.12.2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn654; Calibrated: 05.07.2018

Phantom: ELI v4.0; Type: QDOVA001BB; Serial; TP:1003

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

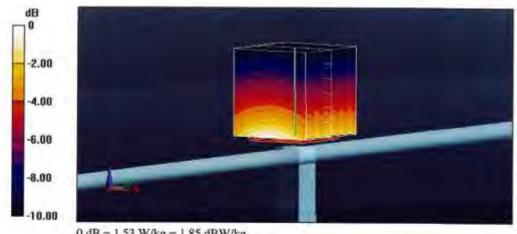
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 38.90 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.763 W/kg

Maximum value of SAR (measured) = 1.53 W/kg

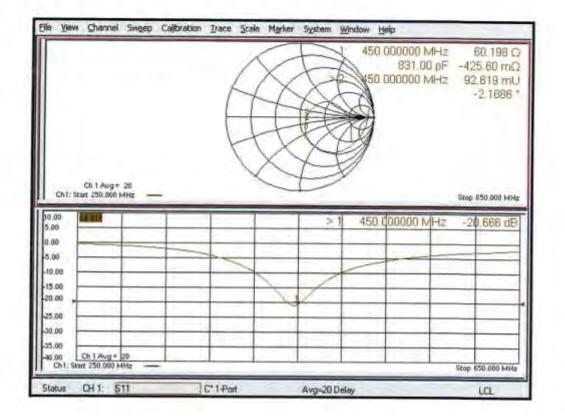


0 dB = 1.53 W/kg = 1.85 dBW/kg

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### Impedance Measurement Plot for Head TSL



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### DASY5 Validation Report for Body TSL

Date: 11.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

# DUT: Dipole 450 MHz; Type: D450V3; Serial: D450V3 - SN:1054

Communication System: UID 0 - CW; Frequency: 450 MHz

Medium parameters used: f = 450 MHz;  $\sigma = 0.93 \text{ S/m}$ ;  $\varepsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

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

### DASY52 Configuration:

Probe: EX3DV4 - SN3877; ConvF(10.7, 10.7, 10.7) @ 450 MHz; Calibrated: 31.12.2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn654; Calibrated: 05.07.2018

Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1003

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

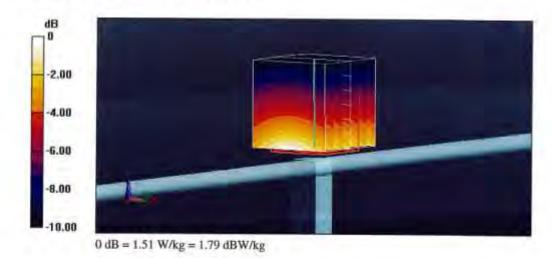
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 41.61 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.762 W/kg

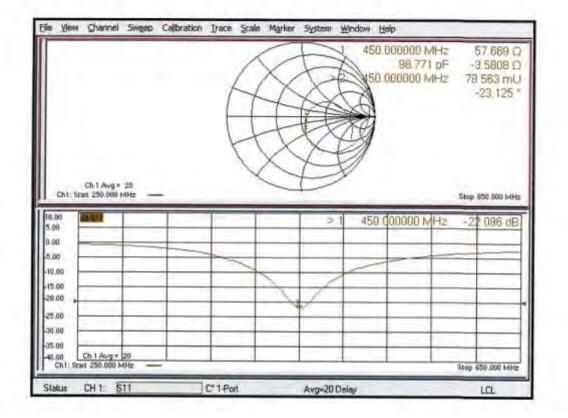
Maximum value of SAR (measured) = 1.51 W/kg



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# Impedance Measurement Plot for Body TSL



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# **Dipole Data**

The table below includes dipole impedance and return loss measurement data measured by Motorola Solutions' EME lab. The results meet the requirements stated in KDB 865664.

<b>Dipole 450-1054</b>	Head		Body			
Dipole 450-1054	Impeda	Impedance Return Loss		Impedance		<b>Return Loss</b>
<b>Date Measured</b>	real Ω	imag jΩ	dB	real Ω	imag jΩ	dB
04/08/19	59.46	-4.57	-20.36	56.02	-6.09	-21.87
04/13/20	57.08	-6.58	-20.38	56.08	-3.56	-24.43
04/26/21	54.62	-6.32	-22.56	52.47	-6.56	-21.36

<b>Dipole 2450-782</b>	Head			Body		
	Impedance		<b>Return Loss</b>	Impedance		<b>Return Loss</b>
<b>Date Measured</b>	real Ω	imag jΩ	dB	real Ω	imag jΩ	dB
04/13/2020	52.88	5.04	-24.71	46.60	4.69	-24.53
04/23/2021	50.90	3.21	-29.40	48.13	3.70	-25.41