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Report On

Specific Absorption Rate Testing of the A2681

Covering FCC 47CFR 2.1093, RSS 102 Issue 5 and related documents

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IC: 579C-A2681

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REPORT ON

Specific Absorption Rate Testing of the A2681

Document 7595444 Report 22 Issue 2

May 2022

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SECTION 1

REPORT SUMMARY

Specific Absorption Rate Testing of the
A2681



1.1 REPORT MODIFICATION RECORD

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

| Issue | Description of Change | Date of Issue |
|-------|-------------------------------|---------------|
| 1 | First Issue | 11 May 2022 |
| 2 | IC Certification Number added | 16 May 2022 |



1.2 INTRODUCTION

The information contained in this report is intended to show verification of the Specific Absorption Rate Testing of the A2681 to the requirements of KDB 447498 D01 v06 General RF Exposure Guidance.

| | |
|-------------------------------|---|
| Objective | To perform Specific Absorption Rate testing to determine the Equipment Under Test's (EUT's) compliance with the requirements specified of KDB 447498 D01 v06 General RF Exposure Guidance, for the series of tests carried out. |
| Applicant | Apple Inc |
| Manufacturer | Apple Inc |
| Manufacturing Description | Laptop Computer |
| Model Number | A2681 |
| Serial/IMEI Number(s) | WR7HKYWH9Q CFPJXR7DGX |
| Number of Samples Tested | 2 |
| Hardware Version | REV 1.0 |
| Software Version | 21E61410w |
| Test Specification/Issue/Date | KDB 447498 D01 v06 General RF Exposure Guidance RSS-102 Issue 5 March 2015 |
| Order Number | 0540240615 |
| Date of Receipt | 08/02/2022 |
| Start of Test | 06-April-2022 |
| Finish of Test | 10-May-2022 |
| Related Document(s) | FCC 47CFR 2.1093: 2015 KDB 865664 – D01 v01r04 KDB 865664 – D02 v01r02 KDB 648474 – D04 v01r03 KDB 248227 – D01 v02r02 IEEE Std 1528 - 2013 IEC/IEEE 62209-1528:2020 |
| Name of Engineer(s) | Kamil Nawabzada Mohamud Mohamud |



1.3 BRIEF SUMMARY OF RESULTS (FCC)

The measurements shown in this report were made in accordance with the requirements specified KDB 447498 D01 v06 General RF Exposure Guidance.

The maximum 1g volume averaged SAR found during this Assessment:

| | | |
|---|----------------------|---------------|
| Max 1g SAR (W/kg) Body - Stand-alone | 0.84 (Measured) | 1.02 (Scaled) |
| Max 1g SAR (W/kg) Body - Simultaneous Transmission | 1.34 (Scaled) | |
| The maximum 1g volume averaged SAR level measured for all the tests performed did not exceed the limits for General Population/Uncontrolled Exposure (W/kg) Partial Body of 1.6 W/kg. | | |

The maximum 1g volume averaged stand-alone Reported SAR found during this Assessment for each supported mode:

| RAT | Band | Test Configuration | Max Reported SAR (W/kg) (Scaled) |
|--|-----------------|--------------------|----------------------------------|
| Bluetooth (5 GHz WLAN off) | 2450 MHz | Body | 0.41 |
| Bluetooth (5 GHz WLAN on) | 2450 MHz | Body | 0.32 |
| WLAN | 2450 MHz | Body | 1.00 |
| WLAN | 5200 / 5300 MHz | Body | 0.89 |
| WLAN | 5500 MHz | Body | 1.02 |
| WLAN | 5800 MHz | Body | 0.99 |
| The maximum 1g volume averaged SAR level measured for all the tests performed (including simultaneous transmission analysis results) did not exceed the limits for General Population/Uncontrolled Exposure (W/kg) Partial Body of 1.6 W/kg. | | | |

Simultaneous Transmission.

| Position | 5GHz WLAN-1g SAR (W/kg) | Bluetooth (5 GHz WLAN on) 1g SAR (W/kg) | Sum of 1g SAR (W/Kg) | Peak Location Separation Ratio required? | Peak Location Separation Ratio |
|----------|-------------------------|---|----------------------|--|--------------------------------|
| Bottom | 1.02 | 0.32 | 1.34 | No. | N/A |

Each antenna is separated to the extent that the SAR distributions do not overlap, however Bluetooth and 5GHz WLAN can operate on the same antenna. Bluetooth operates at a lower power level when the 5 GHz WLAN is active. The highest overall reported SAR values of 5GHz WLAN and Bluetooth (5GHz WLAN on) results were used for the summation of the simultaneous transmission as shown in the table above.

KDB 447498 D01 - Section 4.3.2: Simultaneous test exclusion is applicable as the sum of 1g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit.



1.4 BRIEF SUMMARY OF RESULTS (ISED)

The measurements shown in this report were made in accordance with the requirements specified RSS-102 Issue 5 March 2015.

The maximum 1g volume averaged SAR found during this Assessment:

| | | |
|---|-----------------|---------------|
| Max 1g SAR (W/kg) Body - Stand-alone | 0.80 (Measured) | 0.86 (Scaled) |
| Max 1g SAR (W/kg) Body - Simultaneous Transmission | 1.27 (Scaled) | |
| The maximum 1g volume averaged SAR level measured for all the tests performed did not exceed the limits for General Population/Uncontrolled Exposure (W/kg) Partial Body of 1.6 W/kg. | | |

The maximum 1g volume averaged stand-alone Reported SAR found during this Assessment for each supported mode:

| RAT | Band | Test Configuration | Max Reported SAR (W/kg) |
|----------------------------|-----------------|--------------------|-------------------------|
| Bluetooth (5 GHz WLAN off) | 2450 MHz | Body | 0.40 |
| Bluetooth (5 GHz WLAN on) | 2450 MHz | Body | 0.41 |
| WLAN | 2450 MHz | Body | 0.84 |
| WLAN | 5200 / 5300 MHz | Body | 0.75 |
| WLAN | 5500 MHz | Body | 0.86 |
| WLAN | 5800 MHz | Body | 0.84 |

The maximum 1g volume averaged SAR level measured for all the tests performed (including simultaneous transmission analysis results) did not exceed the limits for General Population/Uncontrolled Exposure (W/kg) Partial Body of 1.6 W/kg.

Simultaneous Transmission.

| Position | 5GHz WLAN-1g SAR (W/kg) | Bluetooth (5 GHz WLAN on) 1g SAR (W/kg) | Sum of 1g SAR (W/Kg) | Peak Location Separation Ratio required? | Peak Location Separation Ratio |
|----------|-------------------------|---|----------------------|--|--------------------------------|
| Bottom | 0.86 | 0.41 | 1.27 | No | N/A |

Each antenna is separated to the extent that the SAR distributions do not overlap, however Bluetooth and 5GHz WLAN can operate on the same antenna. Bluetooth operates at a lower power level when the 5 GHz WLAN is active. The highest overall 5GHz WLAN and Bluetooth (5 GHz WLAN on) results were used for a conservative estimate.

KDB 447498 D01 - Section 4.3.2: Simultaneous test exclusion is applicable as the sum of 1g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit.



1.5 TEST RESULTS SUMMARY

1.5.1 System Performance / Validation Check Results

Prior to formal testing being performed a System Check was performed in accordance with KDB 865664 and the results were compared against published data in Standard IEEE 1528-2003. The following results were obtained: -

System performance / Validation results

| Date | Frequency (MHz) | Fluid Type | Measured Max 1g SAR (W/kg) * | Max 1g SAR (W/kg) Target | Percentage Drift on Reference (%) |
|------------|-----------------|------------|------------------------------|--------------------------|-----------------------------------|
| 04/04/2022 | 2450 | HBBL | 50.28 | 52.4 | -4.04 |
| 06/04/2022 | 5200 | HBBL | 78.81 | 76.5 | 3.02 |
| 06/04/2022 | 2450 | HBBL | 50.68 | 52.4 | -3.28 |
| 07/04/2022 | 2450 | HBBL | 50.48 | 52.4 | -3.66 |
| 08/04/2022 | 5200 | HBBL | 77.42 | 76.5 | 1.20 |
| 08/04/2022 | 5500 | HBBL | 81.61 | 83.3 | -2.03 |
| 09/04/2022 | 5200 | HBBL | 77.62 | 76.5 | 1.46 |
| 09/04/2022 | 5500 | HBBL | 84.60 | 83.3 | 1.56 |
| 10/04/2022 | 5300 | HBBL | 78.41 | 78.3 | 0.15 |
| 12/04/2022 | 5300 | HBBL | 78.27 | 78.3 | -0.03 |
| 13/04/2022 | 5200 | HBBL | 72.62 | 76.5 | -4.80 |
| 19/04/2022 | 5800 | HBBL | 77.22 | 78.0 | -1.00 |
| 19/04/2022 | 2450 | HBBL | 51.88 | 52.4 | -1.00 |
| 20/04/2022 | 5800 | HBBL | 79.01 | 78.0 | 1.30 |
| 10/05/2022 | 5200 | HBBL | 79.41 | 76.5 | 3.81 |

*Normalised to a forward power of 1W



1.5.2 Results Summary Tables (FCC)

Bluetooth - EDR – 3-DH5 – SISO Core 0 (5GHz WIFI OFF) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 16.18 | 16.50 | Full | 0.37 | 0.40 | - |
| 0mm Rear of Display | 0 | 2402 | 16.18 | 16.50 | Full | 0.14 | 0.16 | - |
| 0mm Bottom | 39 | 2441 | 16.12 | 16.50 | Full | 0.38 | 0.41 | C.1 |
| 0mm Bottom | 78 | 2480 | 16.47 | 16.50 | Full | 0.36 | 0.36 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz *Bluetooth operates at lower power when the 5GHz WiFi is enabled. | | | | | | | | |

Bluetooth - EDR – 3-DH5 – SISO Core 1 (5GHz WIFI OFF) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 16.48 | 16.50 | Full | 0.38 | 0.38 | C.2 |
| 0mm Rear of Display | 0 | 2402 | 16.48 | 16.50 | Full | 0.14 | 0.14 | - |
| 0mm Bottom | 39 | 2441 | 16.50 | 16.50 | Full | 0.37 | 0.37 | - |
| 0mm Bottom | 78 | 2480 | 16.49 | 16.50 | Full | 0.35 | 0.35 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz *Bluetooth operates at lower power when the 5GHz WiFi is enabled. | | | | | | | | |



Bluetooth - EDR – 3-DH5 – SISO Core 0 (5GHz WIFI ON) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 15.43 | 15.50 | Full | 0.30 | 0.30 | - |
| 0mm Rear of Display | 0 | 2402 | 15.43 | 15.50 | Full | 0.12 | 0.13 | - |
| 0mm Bottom | 39 | 2441 | 15.48 | 15.50 | Full | 0.32 | 0.32 | C.3 |
| 0mm Bottom | 78 | 2480 | 15.43 | 15.50 | Full | 0.31 | 0.32 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz *Bluetooth operates at lower power when the 5GHz WiFi is enabled. | | | | | | | | |

Bluetooth - EDR – 3-DH5 – SISO Core 1 (5GHz WIFI ON) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 15.48 | 15.50 | Full | 0.28 | 0.28 | C.4 |
| 0mm Bottom | 39 | 2441 | 15.12 | 15.50 | Full | 0.26 | 0.28 | - |
| 0mm Bottom | 78 | 2480 | 15.17 | 15.50 | Full | 0.24 | 0.25 | - |
| 0mm Rear of Display | 0 | 2402 | 15.48 | 15.50 | Full | 0.11 | 0.11 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 *Bluetooth operates at lower power when the 5GHz WiFi is enabled. | | | | | | | | |



WLAN - 2450 MHz - 802.11b - 20 MHz - 1 Mbps – SISO Core 0:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 1 | 2412 | 18.47 | 19.50 | Full | 0.79 | 1.00 | C.5 |
| 0mm Rear of Display | 1 | 2412 | 18.47 | 19.50 | Full | 0.23 | 0.29 | - |
| 0mm Bottom | 7 | 2442 | 18.74 | 19.50 | Full | 0.69 | 0.83 | - |
| 0mm Bottom | 11 | 2462 | 18.51 | 19.50 | Full | 0.68 | 0.86 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - 2450 MHz - 802.11b - 20 MHz - 1 Mbps – SISO Core 1:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 1 | 2412 | 18.71 | 19.75 | Full | 0.55 | 0.70 | - |
| 0mm Rear of Display | 7 | 2442 | 18.81 | 19.75 | Full | 0.21 | 0.26 | - |
| 0mm Bottom | 7 | 2442 | 18.81 | 19.75 | Full | 0.63 | 0.77 | C.6 |
| 0mm Bottom | 11 | 2462 | 18.66 | 19.75 | Full | 0.59 | 0.24 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - 2450 MHz - 802.11n - HT20– 2x2 MIMO Core 0 and Core 1:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core0) | 2 | 2417 | 18.70 | 19.50 | Full | 0.70 | 0.84 | C.7 |
| 0mm Bottom (Core1) | 2 | 2417 | 18.58 | 19.50 | Full | 0.68 | 0.85 | |
| 0mm Bottom (Core 0) | 7 | 2442 | 18.43 | 19.50 | Full | 0.68 | 0.87 | C.8 |
| 0mm Bottom (core 1) | 7 | 2442 | 18.52 | 19.50 | Full | 0.62 | 0.77 | |
| 0mm Bottom (Core0) | 10 | 2457 | 18.69 | 19.50 | Full | 0.67 | 0.81 | - |
| 0mm Bottom (Core1) | 10 | 2457 | 18.71 | 19.50 | Full | 0.62 | 0.75 | |
| 0mm Rear of Display (Core0) | 7 | 2442 | 18.43 | 19.50 | Full | 0.18 | 0.23 | - |
| 0mm Rear of Display(Core1) | 7 | 2442 | 18.52 | 19.50 | Full | 0.24 | 0.30 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-1 - 802.11ac – SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 38 | 5190 | 13.94 | 15.25 | Full | 0.56 | 0.75 | C.9 |
| 0mm Rear of Display | 38 | 5190 | 13.94 | 15.25 | Full | 0.15 | 0.20 | - |
| 0mm Bottom | 46 | 5230 | 13.65 | 15.25 | Full | 0.52 | 0.75 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-1 - 802.11ac – SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 38 | 5190 | 13.80 | 15.50 | Full | 0.42 | 0.62 | - |
| 0mm Rear of Display | 38 | 5190 | 13.80 | 15.50 | Full | 0.10 | 0.15 | - |
| 0mm Bottom | 46 | 5230 | 13.66 | 15.50 | Full | 0.51 | 0.78 | C.10 |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-2A - 802.11ac - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 54 | 5270 | 13.98 | 15.00 | Full | 0.47 | 0.60 | C.11 |
| 0mm Bottom | 62 | 5310 | 13.96 | 15.00 | Full | 0.48 | 0.61 | - |
| 0mm Rear of Display | 62 | 5310 | 13.96 | 15.00 | Full | 0.13 | 0.16 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2A - 802.11ac - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 54 | 5270 | 14.68 | 15.50 | Full | 0.74 | 0.89 | C.12 |
| 0mm Rear of Display | 54 | 5270 | 14.68 | 15.50 | Full | 0.17 | 0.21 | - |
| 0mm Bottom | 62 | 5310 | 14.47 | 15.00 | Full | 0.68 | 0.76 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-2C - 802.11ac - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 138 | 5690 | 13.22 | 14.00 | Full | 0.84 | 1.01 | C.13 |
| 0mm Rear of Display | 138 | 5690 | 13.22 | 14.00 | Full | 0.19 | 0.23 | - |
| 0mm Bottom | 106 | 5530 | 13.96 | 14.00 | Full | 0.77 | 0.78 | - |
| 0mm Bottom | 122 | 5610 | 12.91 | 14.00 | Full | 0.63 | 0.82 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2C - 802.11ac - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 138 | 5690 | 13.16 | 14.00 | Full | 0.53 | 0.64 | C.14 |
| 0mm Rear of Display | 138 | 5690 | 13.16 | 14.00 | Full | 0.17 | 0.21 | - |
| 0mm Bottom | 106 | 5530 | 13.05 | 14.00 | Full | 0.36 | 0.45 | - |
| 0mm Bottom | 122 | 5610 | 13.10 | 14.00 | Full | 0.42 | 0.51 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-2A - 802.11ac HT40 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core 0) | 54 | 5270 | 13.99 | 14.50 | Full | 0.52 | 0.58 | C.15 |
| 0mm Bottom (Core1) | 54 | 5270 | 13.36 | 14.50 | Full | 0.49 | 0.64 | |
| 0mm Bottom (Core0) | 62 | 5310 | 14.02 | 14.50 | Full | 0.52 | 0.59 | - |
| 0mm Bottom (Core1) | 62 | 5310 | 13.62 | 14.50 | Full | 0.47 | 0.57 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2C - 802.11ac VHT80 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core0) | 138 | 5690 | 12.95 | 14.00 | Full | 0.81 | 1.02 | C.16 |
| 0mm Bottom (Core1) | 138 | 5690 | 13.19 | 14.00 | Full | 0.81 | 0.98 | |
| 0mm Rear of Display (Core0) | 138 | 5690 | 13.95 | 14.00 | Full | 0.19 | 0.19 | C.17 |
| 0mm Rear of Display (Core1) | 138 | 5690 | 13.19 | 14.00 | Full | 0.14 | 0.17 | |
| 0mm Bottom (Core0) | 106 | 5530 | 13.02 | 14.00 | Full | 0.63 | 0.79 | - |
| 0mm Bottom (Core1) | 106 | 5530 | 12.83 | 14.00 | Full | 0.46 | 0.60 | |
| 0mm Bottom (Core0) | 122 | 5610 | 12.66 | 14.00 | Full | 0.75 | 1.02 | C.17 |
| 0mm Bottom (Core1) | 122 | 5610 | 13.13 | 14.00 | Full | 0.51 | 0.62 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-3 - 802.11ac VHT80 - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---------------------|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 155 | 5775 | 13.47 | 14.25 | Full | 0.83 | 1.00 | C.18 |
| 0mm Rear of Display | 155 | 5775 | 13.47 | 14.25 | Full | 0.14 | 0.16 | - |

Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g)
 KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is:
 ≤ 0.8W/kg when the transmission band is ≤ 100MHz
 ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz
 ≤ 0.4W/kg when the transmission band is ≥ 200MHz
 KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2
 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2

WLAN - U-NII-3 - 802.11ac VHT80 - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---------------|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 155 | 5775 | 13.18 | 14.25 | Full | 0.71 | 1.00 | C19 |

Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g)
 KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is:
 ≤ 0.8W/kg when the transmission band is ≤ 100MHz
 ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz
 ≤ 0.4W/kg when the transmission band is ≥ 200MHz
 KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2
 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2



WLAN - U-NII-3 - 802.11ac VHT80 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core0) | 155 | 5775 | 13.27 | 14.25 | Full | 0.73 | 0.91 | C.20 |
| 0mm Bottom (Core1) | 155 | 5775 | 13.21 | 14.25 | Full | 0.73 | 0.93 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



1.5.3 Results Summary Tables (ISED)

Bluetooth - EDR – 3-DH5 – SISO Core 0 (5GHz WIFI OFF) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 16.18 | 16.50 | Full | 0.37 | 0.40 | - |
| 0mm Rear of Display | 0 | 2402 | 16.12 | 16.50 | Full | 0.14 | 0.16 | - |
| 0mm Bottom | 78 | 2480 | 16.47 | 16.50 | Full | 0.36 | 0.36 | - |
| 0mm Bottom | 39 | 2441 | 16.12 | 16.50 | Full | 0.38 | 0.41 | C.1 |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | |

Bluetooth - EDR – 3-DH5 – SISO Core 1 (5GHz WIFI OFF) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 16.48 | 16.50 | Full | 0.38 | 0.38 | C.2 |
| 0mm Rear of Display | 0 | 2402 | 16.48 | 16.50 | Full | 0.14 | 0.14 | - |
| 0mm Bottom | 39 | 2441 | 16.50 | 16.50 | Full | 0.37 | 0.37 | - |
| 0mm Bottom | 78 | 2480 | 16.49 | 16.50 | Full | 0.35 | 0.35 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | |



Bluetooth - EDR – 3-DH5 – SISO Core 0 (5GHz WIFI ON) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 15.43 | 15.50 | Full | 0.30 | 0.30 | - |
| 0mm Rear of Display | 0 | 2402 | 15.43 | 15.50 | Full | 0.12 | 0.13 | - |
| 0mm Bottom | 39 | 2441 | 15.48 | 15.50 | Full | 0.32 | 0.32 | C.3 |
| 0mm Bottom | 78 | 2480 | 15.43 | 15.50 | Full | 0.31 | 0.32 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | |

Bluetooth - EDR – 3-DH5 – SISO Core 1 (5GHz WIFI ON) (ePA):
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 0 | 2402 | 15.48 | 15.50 | Full | 0.28 | 0.28 | C.4 |
| 0mm Bottom | 39 | 2441 | 15.12 | 15.50 | Full | 0.26 | 0.28 | - |
| 0mm Bottom | 78 | 2480 | 15.17 | 15.50 | Full | 0.24 | 0.25 | - |
| 0mm Rear of Display | 0 | 2402 | 15.48 | 15.50 | Full | 0.11 | 0.11 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - 2450 MHz - 802.11b - 20 MHz - 1 Mbps – SISO Core 0:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 1 | 2412 | 18.47 | 18.75 | Full | 0.79 | 0.84 | C.5 |
| 0mm Rear of Display | 1 | 2412 | 18.47 | 18.75 | Full | 0.23 | 0.24 | - |
| 0mm Bottom | 7 | 2442 | 18.74 | 18.75 | Full | 0.69 | 0.69 | - |
| 0mm Bottom | 11 | 2462 | 18.51 | 18.75 | Full | 0.68 | 0.72 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - 2450 MHz - 802.11b - 20 MHz - 1 Mbps – SISO Core 1:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 1 | 2412 | 18.71 | 19.00 | Full | 0.54 | 0.58 | - |
| 0mm Bottom | 7 | 2442 | 18.81 | 19.00 | Full | 0.62 | 0.65 | C7 |
| 0mm Bottom | 11 | 2462 | 18.66 | 19.00 | Full | 0.58 | 0.62 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - 2450 MHz - 802.11n - HT20– 2x2 MIMO Core 0 and Core 1:
Body Specific Absorbtion Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core0) | 2 | 2417 | 18.70 | 18.75 | Full | 0.69 | 0.71 | C.8 |
| 0mm Bottom (Core1) | 2 | 2417 | 18.58 | 18.75 | Full | 0.68 | 0.71 | |
| 0mm Bottom (Core0) | 7 | 2442 | 18.43 | 18.75 | Full | 0.68 | 0.73 | C.9 |
| 0mm Bottom (Core1) | 7 | 2442 | 18.52 | 18.75 | Full | 0.62 | 0.65 | |
| 0mm Bottom (Core0) | 10 | 2457 | 18.69 | 18.75 | Full | 0.67 | 0.68 | - |
| 0mm Bottom (Core1) | 10 | 2457 | 18.71 | 18.75 | Full | 0.62 | 0.63 | |
| 0mm Rear of Display (Core0) | 7 | 2442 | 18.43 | 18.75 | Full | 0.18 | 0.19 | - |
| 0mm Rear of Display (Core1) | 7 | 2442 | 18.52 | 18.75 | Full | 0.24 | 0.25 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-1 - 802.11ac – SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 38 | 5190 | 13.94 | 14.00 | Full | 0.56 | 0.57 | C.10 |
| 0mm Rear of Display | 38 | 5190 | 13.94 | 14.00 | Full | 0.15 | 0.15 | - |
| 0mm Bottom | 46 | 5230 | 13.65 | 14.00 | Full | 0.52 | 0.56 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-1 - 802.11ac – SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 38 | 5190 | 13.80 | 14.00 | Full | 0.42 | 0.44 | - |
| 0mm Rear of Display | 38 | 5190 | 13.80 | 14.00 | Full | 0.10 | 0.11 | - |
| 0mm Bottom | 46 | 5230 | 13.66 | 14.00 | Full | 0.51 | 0.55 | C.10 |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2A - 802.11ac - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 54 | 5270 | 13.98 | 14.25 | Full | 0.47 | 0.50 | C.11 |
| 0mm Bottom | 62 | 5310 | 13.96 | 14.25 | Full | 0.48 | 0.51 | - |
| 0mm Rear of Display | 62 | 5310 | 13.96 | 14.25 | Full | 0.13 | 0.14 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-2A - 802.11ac - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 54 | 5270 | 14.68 | 14.75 | Full | 0.74 | 0.75 | C.11 |
| 0mm Rear of Display | 54 | 5270 | 14.68 | 14.75 | Full | 0.17 | 0.17 | - |
| 0mm Bottom | 62 | 5310 | 14.47 | 14.75 | Full | 0.68 | 0.72 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2C - 802.11ac - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 138 | 5690 | 13.22 | 13.25 | Full | 0.84 | 0.85 | C.12 |
| 0mm Rear of Display | 138 | 5690 | 13.22 | 13.25 | Full | 0.19 | 0.19 | - |
| 0mm Bottom | 106 | 5530 | 13.96 | 13.25 | Full | 0.77 | 0.83 | - |
| 0mm Bottom | 122 | 5610 | 12.91 | 13.25 | Full | 0.63 | 0.69 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-2C - 802.11ac - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 138 | 5690 | 13.16 | 13.25 | Full | 0.53 | 0.54 | C.13 |
| 0mm Rear of Display | 138 | 5690 | 13.16 | 13.25 | Full | 0.17 | 0.18 | - |
| 0mm Bottom | 106 | 5530 | 13.05 | 13.25 | Full | 0.36 | 0.38 | - |
| 0mm Bottom | 122 | 5610 | 13.10 | 13.25 | Full | 0.42 | 0.43 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2A - 802.11ac VHT80 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|--|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom (Core0) | 54 | 5270 | 13.99 | 14.25 | Full | 0.52 | 0.55 | C.14 |
| 0mm Bottom (Core1) | 54 | 5270 | 13.62 | 14.25 | Full | 0.49 | 0.57 | |
| 0mm Bottom (Core0) | 62 | 5310 | 14.02 | 14.25 | Full | 0.52 | 0.55 | |
| 0mm Bottom (Core1) | 62 | 5310 | 13.62 | 14.25 | Full | 0.47 | 0.54 | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: ≤ 0.8W/kg when the transmission band is ≤ 100MHz ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz ≤ 0.4W/kg when the transmission band is ≥ 200MHz KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-2C - 802.11ac VHT80 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number | |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|--|
| 0mm Bottom (Core0) | 138 | 5690 | 12.95 | 13.25 | Full | 0.81 | 0.86 | C.16 | |
| 0mm Bottom (Core1) | 138 | 5690 | 13.19 | 13.25 | Full | 0.81 | 0.82 | | |
| 0mm Rear of Display (Core0) | 138 | 5690 | 12.95 | 13.25 | Full | 0.19 | 0.21 | - | |
| 0mm Rear of Display (Core1) | 138 | 5690 | 13.19 | 13.25 | Full | 0.14 | 0.14 | | |
| 0mm Bottom (Core0) | 106 | 5530 | 13.02 | 13.25 | Full | 0.63 | 0.66 | - | |
| 0mm Bottom (Core1) | 106 | 5530 | 12.83 | 13.25 | Full | 0.46 | 0.50 | | |
| 0mm Bottom (Core0) | 122 | 5610 | 12.66 | 13.25 | Full | 0.75 | 0.86 | - | |
| 0mm Bottom (Core1) | 122 | 5610 | 13.13 | 13.25 | Full | 0.51 | 0.53 | | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) | | | | | | | | | |
| KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: | | | | | | | | | |
| ≤ 0.8W/kg when the transmission band is ≤ 100MHz | | | | | | | | | |
| ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz | | | | | | | | | |
| ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | | |
| KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 | | | | | | | | | |
| KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | | |

WLAN - U-NII-3 - 802.11ac VHT80 - SISO Core 0
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 155 | 5775 | 13.47 | 13.50 | Full | 0.83 | 0.84 | C.18 |
| 0mm Rear of Display | 155 | 5775 | 13.47 | 13.50 | Full | 0.14 | 0.14 | - |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) | | | | | | | | |
| KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: | | | | | | | | |
| ≤ 0.8W/kg when the transmission band is ≤ 100MHz | | | | | | | | |
| ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz | | | | | | | | |
| ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | |
| KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 | | | | | | | | |
| KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |



WLAN - U-NII-3 - 802.11ac VHT80 - SISO Core 1
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|
| 0mm Bottom | 155 | 5775 | 13.18 | 13.50 | Full | 0.71 | 0.76 | C.19 |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) | | | | | | | | |
| KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: | | | | | | | | |
| ≤ 0.8W/kg when the transmission band is ≤ 100MHz | | | | | | | | |
| ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz | | | | | | | | |
| ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | |
| KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 | | | | | | | | |
| KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | |

WLAN - U-NII-3 - 802.11ac VHT80 2x2 MIMO Core 0 and Core 1:
Body Specific Absorption Rate (SAR) 1g Results

| Test Position | Channel Number | Frequency (MHz) | Measured Average Power (dBm) | Tune Up (dBm) | SAR Scan Type | Measured 1g SAR (W/kg) | Scaled 1g SAR (W/kg) | Scan Figure Number | |
|---|----------------|-----------------|------------------------------|---------------|---------------|------------------------|----------------------|--------------------|--|
| 0mm Bottom (Core0) | 155 | 5775 | 13.27 | 13.50 | Full | 0.73 | 0.76 | C.20 | |
| 0mm Bottom (Core1) | 155 | 5775 | 13.21 | 13.50 | Full | 0.73 | 0.78 | | |
| Limit for General Population (Uncontrolled Exposure) 1.6 W/kg (1g) | | | | | | | | | |
| KDB 447498 D01 - Testing of other required channels within the operation mode of a frequency band is not required when the reported 1g SAR for mid-band or highest output power channel is: | | | | | | | | | |
| ≤ 0.8W/kg when the transmission band is ≤ 100MHz | | | | | | | | | |
| ≤ 0.6W/kg when the transmission band is between 100MHz and 200MHz | | | | | | | | | |
| ≤ 0.4W/kg when the transmission band is ≥ 200MHz | | | | | | | | | |
| KDB248227 D01 v02 - Testing was not required for OFDM as per Section 5.2.2 | | | | | | | | | |
| KDB248227 D01 v02 – A duty factor scaling was applied to the scaled SAR as per section 2.2 | | | | | | | | | |



1.5.4 Technical Description

The equipment under test was an Apple laptop computer with Bluetooth and IEEE 802.11 a/b/g/n/ac/ax Wi-Fi in the 2.4 GHz and 5 GHz bands. A full technical description can be found in the manufacturer's documentation.

1.5.5 Test Configuration and Modes of Operation

The testing was performed with an integral battery supplied and manufactured by Apple Inc. The battery was fully charged before each measurement and there were no external connections.

Supported technologies are Bluetooth (BDR/EDR//HDR/LE-1M/LE-M2), 2.4 GHz WLAN (802.11b/g/n/ax) and 5 GHz WLAN (802.11a/n/ac/ax). 2x2 MIMO is supported for WLAN.

Bluetooth operates at lower power when the 5GHz WLAN is enabled. The report makes references to Bluetooth (5GHz Wi-Fi on) and Bluetooth (5GHz Wi-Fi off), for clarity testing was performed with the Bluetooth and Wi-Fi transmitters working independently, the references are pointing to Bluetooth power levels only.

WLAN and Bluetooth testing were achieved using the device's internal software, scripts and settings supplied by the customer. For each scan, the device was configured into a continuous transmission test mode at maximum power. Testing was performed in each position at the frequency that gave the highest output power for each band. Some SAR levels were found to be higher than the thresholds set in KDB 447498 D01 therefore additional testing was required at the relevant frequencies / channels of the bands.

Conducted power measurements were performed on a modified device (accessible conducted ports) and the measured SAR results were power scaled to the maximum declared tune-up level.

For each antenna, the bottom surface, and the rear of the EUT display were assessed for SAR.

For the 5GHz frequency bands the transmission mode used for testing was determined by the 802.11 configuration with the highest declared output power in each frequency band. Where multiple 802.11 configurations have the same specified output power, testing was performed using the mode with the largest channel bandwidth with the lowest order modulation and lowest data rate.

For SAR assessment, the relevant surfaces of the device were placed against an Elliptical phantom with a 0mm separation distance.

The Elliptical Flat Phantom dimensions are 600mm major axis and 400mm minor axis with a shell thickness of 2mm. The phantom was filled to a minimum depth of 150mm with the



1.6 FCC POWER TABLES (TUNE UP VALUES)

Note: All Values in dBm

Bluetooth 5GHz Off

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 16.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 16.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz Off – TXBF

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz On

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 15.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 15.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz On – TXBF

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |

NS = Not Supported



2.4 GHz WiFi SISO Core 0

| Channel | Center Frequency (MHz) | b (SISO) | g (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 1 | 2412 | 19.5 | 19 | 18.75 | 17.5 | 17.5 | 17.5 | 14.5 |
| 2 | 2417 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 3 | 2422 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 4 | 2427 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 5 | 2432 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 6 | 2437 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 7 | 2442 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 8 | 2447 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 9 | 2452 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 10 | 2457 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 11 | 2462 | 19.5 | 17.5 | 17.5 | 16 | 17.25 | 17 | 14.5 |
| 12 | 2467 | 18.5 | 15.5 | 15.5 | 14 | 14.25 | 15 | 14 |
| 13 | 2472 | 16.75 | 6 | 6 | 4.5 | 2 | 0.75 | -2.25 |

2.4 GHz WiFi SISO Core 1

| Channel | Center Frequency (MHz) | b (SISO) | g (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 1 | 2412 | 19.75 | 19 | 18.75 | 17.5 | 17.5 | 17.5 | 14.5 |
| 2 | 2417 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 3 | 2422 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 4 | 2427 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 5 | 2432 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 6 | 2437 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 7 | 2442 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 8 | 2447 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 9 | 2452 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 10 | 2457 | 19.75 | 19.75 | 19.75 | 19.75 | 19.75 | 17.5 | 14.5 |
| 11 | 2462 | 19.75 | 17.5 | 17.5 | 16 | 17.25 | 17 | 14.5 |
| 12 | 2467 | 18.5 | 15.5 | 15.5 | 14 | 14.25 | 15 | 14 |
| 13 | 2472 | 16.75 | 6 | 6 | 4.5 | 2 | 0.75 | -2.25 |



2.4 GHz WiFi MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | b (2Tx, DSSS) | 11n/11ac HT20 (2Tx, non TXBF) | 11ax HE20 (2Tx, non TXBF) | 11ax HE20 RU106 (2Tx, non TXBF) | 11ax HE20 RU52 (2Tx, non TXBF) | 11ax HE20 RU26 (2Tx, non TXBF) |
|---------|------------------------|---------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|
| 1 | 2412 | NS | 17.25 | 16.5 | 17.25 | 17.5 | 14.5 |
| 2 | 2417 | NS | 19.5 | 19.5 | 18.75 | 17.5 | 14.5 |
| 3 | 2422 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 4 | 2427 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 5 | 2432 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 6 | 2437 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 7 | 2442 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 8 | 2447 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 9 | 2452 | NS | 19.5 | 19.5 | 19.5 | 17.5 | 14.5 |
| 10 | 2457 | NS | 19.5 | 18.5 | 19.5 | 17.5 | 14.5 |
| 11 | 2462 | NS | 16 | 14.5 | 17.25 | 17 | 14.5 |
| 12 | 2467 | NS | 13.5 | 12 | 14.25 | 15 | 14 |
| 13 | 2472 | NS | 3.5 | 2 | 0.25 | 0 | -4.75 |



5 GHz WiFi- 20 MHz BW – SISO Core 0

| Channel | Center Frequency (MHz) | a (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 36 | 5180 | 15.25 | 15.25 | 15.25 | 13 | 13.5 | 7 |
| 40 | 5200 | 15.25 | 15.25 | 15.25 | 15.25 | 13.5 | 10.5 |
| 44 | 5220 | 15.25 | 15.25 | 15.25 | 15.25 | 13.5 | 10.5 |
| 48 | 5240 | 15.25 | 15.25 | 15.25 | 15.25 | 13.5 | 10.5 |
| 52 | 5260 | 15 | 15 | 15 | 15 | 13 | NS |
| 56 | 5280 | 15 | 15 | 15 | 15 | 13 | NS |
| 60 | 5300 | 15 | 15 | 15 | 15 | 13 | NS |
| 64 | 5320 | 15 | 15 | 15 | 13 | 10 | NS |
| 100 | 5500 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 104 | 5520 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 108 | 5540 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 112 | 5560 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 116 | 5580 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 120 | 5600 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 124 | 5620 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 128 | 5640 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 132 | 5660 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 136 | 5680 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 140 | 5700 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 144 | 5720 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 149 | 5745 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 153 | 5765 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 157 | 5785 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 161 | 5805 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 165 | 5825 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |



5 GHz WiFi- 20 MHz BW – SISO Core 1

| Channel | Center Frequency (MHz) | a (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 36 | 5180 | 15.5 | 15.5 | 15.5 | 13 | 13.5 | 7 |
| 40 | 5200 | 15.5 | 15.5 | 15.5 | 15.5 | 13.5 | 10.5 |
| 44 | 5220 | 15.5 | 15.5 | 15.5 | 15.5 | 13.5 | 10.5 |
| 48 | 5240 | 15.5 | 15.5 | 15.5 | 15.5 | 13.5 | 10.5 |
| 52 | 5260 | 15.5 | 15.5 | 15.5 | 15.5 | 13 | NS |
| 56 | 5280 | 15.5 | 15.5 | 15.5 | 15.5 | 13 | NS |
| 60 | 5300 | 15.5 | 15.5 | 15.5 | 15.5 | 13 | NS |
| 64 | 5320 | 15.5 | 15.5 | 15.5 | 13 | 10 | NS |
| 100 | 5500 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 104 | 5520 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 108 | 5540 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 112 | 5560 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 116 | 5580 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 120 | 5600 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 124 | 5620 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 128 | 5640 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 132 | 5660 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 136 | 5680 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 140 | 5700 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 144 | 5720 | 14 | 14 | 14 | 14 | 13.5 | NS |
| 149 | 5745 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 153 | 5765 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 157 | 5785 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 161 | 5805 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 165 | 5825 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |

NS = Not Supported



5 GHz WiFi- 20 MHz BW – MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT20 (2Tx, non TXBF) | 11ax HE20 (2Tx, non TXBF) | 11ax HE20 RU106 (2Tx, non TXBF) | 11ax HE20 RU52 (2Tx, non TXBF) | 11ax HE20 RU26 (2Tx, non TXBF) | 11n/11ac HT20 (2Tx, TxBF) |
|---------|------------------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------|
| 36 | 5180 | 15.25 | 14 | 14 | 11 | 8 | 14.5 |
| 40 | 5200 | 15.25 | 15.25 | 14 | 11 | 8 | 15.25 |
| 44 | 5220 | 15 | 15 | 13 | 10 | NS | 14.5 |
| 48 | 5240 | 15 | 13.75 | 13 | 8 | NS | 13.25 |
| 52 | 5260 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 56 | 5280 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 60 | 5300 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 64 | 5320 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 100 | 5500 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 104 | 5520 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 108 | 5540 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |
| 112 | 5560 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |
| 116 | 5580 | 15.25 | 14 | 14 | 11 | 8 | 14.5 |
| 120 | 5600 | 15.25 | 15.25 | 14 | 11 | 8 | 15.25 |
| 124 | 5620 | 15 | 15 | 13 | 10 | NS | 14.5 |
| 128 | 5640 | 15 | 13.75 | 13 | 8 | NS | 13.25 |
| 132 | 5660 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 136 | 5680 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 140 | 5700 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 144 | 5720 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 149 | 5745 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 153 | 5765 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 157 | 5785 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |
| 161 | 5805 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |
| 165 | 5825 | 15.25 | 14 | 14 | 11 | 8 | 14.5 |

NS = Not Supported



5 GHz WiFi- 40 MHz BW – SISO Core 0

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (SISO) | 11ax HE40 (SISO) | 11ax HE40 RU106 (SISO) | 11ax HE40 RU52 (SISO) | 11ax HE40 RU26 (SISO) |
|---------|------------------------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 38 | 5190 | 15.25 | 14.5 | 15.25 | 13.5 | 10.5 |
| 46 | 5230 | 15.25 | 15.25 | 15.25 | 13.5 | 10.5 |
| 54 | 5270 | 15 | 15 | 15 | 13 | NS |
| 62 | 5310 | 15 | 14.5 | 14.5 | 13 | NS |
| 102 | 5510 | 14 | 14 | 14 | 13.25 | NS |
| 110 | 5550 | 14 | 14 | 14 | 13.5 | NS |
| 118 | 5590 | 14 | 14 | 14 | 13.5 | NS |
| 126 | 5630 | 14 | 14 | 14 | 13.5 | NS |
| 134 | 5670 | 14 | 14 | 14 | 13.5 | NS |
| 142 | 5710 | 14 | 14 | 14 | 13.5 | NS |
| 151 | 5755 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 159 | 5795 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |

5 GHz WiFi- 40 MHz BW – SISO Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (SISO) | 11ax HE40 (SISO) | 11ax HE40 RU106 (SISO) | 11ax HE40 RU52 (SISO) | 11ax HE40 RU26 (SISO) |
|---------|------------------------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 38 | 5190 | 15.5 | 14.5 | 15.5 | 13.5 | 10.5 |
| 46 | 5230 | 15.5 | 15.5 | 15.5 | 13.5 | 10.5 |
| 54 | 5270 | 15.5 | 15.5 | 15.5 | 13 | NS |
| 62 | 5310 | 15 | 14.5 | 14.5 | 13 | NS |
| 102 | 5510 | 14 | 14 | 14 | 13.25 | NS |
| 110 | 5550 | 14 | 14 | 14 | 13.5 | NS |
| 118 | 5590 | 14 | 14 | 14 | 13.5 | NS |
| 126 | 5630 | 14 | 14 | 14 | 13.5 | NS |
| 134 | 5670 | 14 | 14 | 14 | 13.5 | NS |
| 142 | 5710 | 14 | 14 | 14 | 13.5 | NS |
| 151 | 5755 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |
| 159 | 5795 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |

NS = Not Supported



5 GHz WiFi – 40 MHz BW – MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (2Tx, non TXBF) | 11ax HE40 (2Tx, non TXBF) | 11ax HE40 RU106 (2Tx, non TXBF) | 11ax HE40 RU52 (2Tx, non TXBF) | 11ax HE40 RU26 (2Tx, non TXBF) | 11n/11ac HT40 (2Tx, TXBF) |
|---------|------------------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------|
| 38 | 5190 | 15.25 | 14 | 14 | 11 | 8 | 14.5 |
| 46 | 5230 | 15.25 | 15.25 | 14 | 11 | 8 | 15.25 |
| 54 | 5270 | 15 | 15 | 13 | 10 | NS | 14.5 |
| 62 | 5310 | 15 | 13.75 | 13 | 8 | NS | 13.25 |
| 102 | 5510 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 110 | 5550 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 118 | 5590 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 126 | 5630 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 134 | 5670 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 142 | 5710 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 151 | 5755 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |
| 159 | 5795 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |

NS = Not Supported



5 GHz – 80 MHz BW SISO Core 0 / Core 1

| Channel | Center Frequency (MHz) | 11ac VHT80 (SISO) | 11ax HE80 (SISO) | 11ax HE80 RU106 (SISO) | 11ax HE80 RU52 (SISO) | 11ax HE80 RU26 (SISO) |
|---------|------------------------|-------------------|------------------|------------------------|-----------------------|-----------------------|
| 42 | 5210 | 13.5 | 13.75 | 13 | 11 | 9 |
| 58 | 5290 | 13.25 | 13.5 | 11 | 7 | NS |
| 106 | 5530 | 14 | 14 | 12 | 11 | NS |
| 122 | 5610 | 14 | 14 | 14 | 13.5 | NS |
| 138 | 5690 | 14 | 14 | 14 | 13.5 | NS |
| 155 | 5775 | 14.25 | 14.25 | 14.25 | 14.25 | 13 |

NS = Not Supported

5 GHz – 80 MHz BW MIMO Core 0 and Core1

| Channel | Center Frequency (MHz) | 11ac VHT80 (2Tx, non TXBF) | 11ax HE80 (2Tx, non TXBF) | 11ax HE80 RU106 (2Tx, non TXBF) | 11ax HE80 RU52 (2Tx, non TXBF) | 11ax HE80 RU26 (2Tx, non TXBF) | 11ac VHT80 (2Tx, TXBF) |
|---------|------------------------|----------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|------------------------|
| 42 | 5210 | 13.5 | 12.5 | 11 | 9 | 7 | 12 |
| 58 | 5290 | 12.75 | 11.75 | 8.5 | 5.5 | NS | 11.25 |
| 106 | 5530 | 14 | 14 | 9 | 7 | NS | 14 |
| 122 | 5610 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 138 | 5690 | 14 | 14 | 13.75 | 10.75 | NS | 14 |
| 155 | 5775 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | 14.25 |

NS = Not Supported



1.7 ISED POWER TABLES (TUNE UP VALUES)

Note: All Values in dBm

Bluetooth 5GHz Off

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 16.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 16.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz Off – TXBF

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz On

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 15.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 15.5 | 13 | 13 | 15 | 15 |

Bluetooth 5GHz On – TXBF

| BT Core | PA | Channel | BDR | EDR | LE Data | LE ADV | HDR4 | HDR8 |
|---------|-----|---------|-----|------|---------|--------|------|------|
| 0 | iPA | All | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 0 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |
| 1 | iPA | | 13 | 9.5 | 13 | 13 | 6 | 6 |
| 1 | ePA | | 13 | 13.5 | 13 | 13 | 15 | 15 |

NS = Not Supported



2.4 GHz WiFi SISO Core 0

| Channel | Center Frequency (MHz) | b (SISO) | g (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 1 | 2412 | 18.75 | 18.75 | 18.75 | 17.5 | 17.5 | 17.5 | 14.5 |
| 2 | 2417 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 3 | 2422 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 4 | 2427 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 5 | 2432 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 6 | 2437 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 7 | 2442 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 8 | 2447 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 9 | 2452 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 10 | 2457 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 11 | 2462 | 18.75 | 17.5 | 17.5 | 16 | 17.25 | 17 | 14.5 |
| 12 | 2467 | 18.5 | 15.5 | 15.5 | 14 | 14.25 | 15 | 14 |
| 13 | 2472 | 16.75 | 6 | 6 | 4.5 | 2 | 0.75 | -2.25 |

2.4 GHz WiFi SISO Core 1

| Channel | Center Frequency (MHz) | b (SISO) | g (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 1 | 2412 | 19 | 19 | 18.75 | 17.5 | 17.5 | 17.5 | 14.5 |
| 2 | 2417 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 3 | 2422 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 4 | 2427 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 5 | 2432 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 6 | 2437 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 7 | 2442 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 8 | 2447 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 9 | 2452 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 10 | 2457 | 19 | 19 | 19 | 19 | 19 | 17.5 | 14.5 |
| 11 | 2462 | 19 | 17.5 | 17.5 | 16 | 17.25 | 17 | 14.5 |
| 12 | 2467 | 18.5 | 15.5 | 15.5 | 14 | 14.25 | 15 | 14 |
| 13 | 2472 | 16.75 | 6 | 6 | 4.5 | 2 | 0.75 | -2.25 |



2.4 GHz WiFi MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | b (2Tx, DSSS) | 11n/11ac HT20 (2Tx, non TXBF) | 11ax HE20 (2Tx, non TXBF) | 11ax HE20 RU106 (2Tx, non TXBF) | 11ax HE20 RU52 (2Tx, non TXBF) | 11ax HE20 RU26 (2Tx, non TXBF) |
|---------|------------------------|---------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|
| 1 | 2412 | NS | 17.25 | 16.5 | 17.25 | 17.5 | 14.5 |
| 2 | 2417 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 3 | 2422 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 4 | 2427 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 5 | 2432 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 6 | 2437 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 7 | 2442 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 8 | 2447 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 9 | 2452 | NS | 18.75 | 18.75 | 18.75 | 17.5 | 14.5 |
| 10 | 2457 | NS | 18.75 | 18.5 | 18.75 | 17.5 | 14.5 |
| 11 | 2462 | NS | 16 | 14.5 | 17.25 | 17 | 14.5 |
| 12 | 2467 | NS | 13.5 | 12 | 14.25 | 15 | 14 |
| 13 | 2472 | NS | 3.5 | 2 | 0.25 | 0 | -4.75 |



5 GHz WiFi- 20 MHz BW – SISO Core 0

| Channel | Center Frequency (MHz) | a (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 36 | 5180 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 40 | 5200 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 44 | 5220 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 48 | 5240 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 52 | 5260 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | NS |
| 56 | 5280 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | NS |
| 60 | 5300 | 14.25 | 14.25 | 14.25 | 14.25 | 13 | NS |
| 64 | 5320 | 14.25 | 14.25 | 14.25 | 13 | 10 | NS |
| 100 | 5500 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 104 | 5520 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 108 | 5540 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 112 | 5560 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 116 | 5580 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 120 | 5600 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 124 | 5620 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 128 | 5640 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 132 | 5660 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 136 | 5680 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 140 | 5700 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 144 | 5720 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 149 | 5745 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 153 | 5765 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 157 | 5785 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 161 | 5805 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 165 | 5825 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |

NS = Not Supported



5 GHz WiFi- 20 MHz BW – SISO Core 1

| Channel | Center Frequency (MHz) | a (SISO) | 11n/11ac HT20 (SISO) | 11ax HE20 (SISO) | 11ax HE20 RU106 (SISO) | 11ax HE20 RU52 (SISO) | 11ax HE20 RU26 (SISO) |
|---------|------------------------|----------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 36 | 5180 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 40 | 5200 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 44 | 5220 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 48 | 5240 | 11.5 | 11.5 | 11.5 | 9.5 | 6.5 | 3.5 |
| 52 | 5260 | 14.75 | 14.75 | 14.75 | 14.75 | 13 | NS |
| 56 | 5280 | 14.75 | 14.75 | 14.75 | 14.75 | 13 | NS |
| 60 | 5300 | 14.75 | 14.75 | 14.75 | 14.75 | 13 | NS |
| 64 | 5320 | 14.75 | 14.75 | 14.75 | 13 | 10 | NS |
| 100 | 5500 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 104 | 5520 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 108 | 5540 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 112 | 5560 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 116 | 5580 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 120 | 5600 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 124 | 5620 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 128 | 5640 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 132 | 5660 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 136 | 5680 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 140 | 5700 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 144 | 5720 | 13.25 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 149 | 5745 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 153 | 5765 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 157 | 5785 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 161 | 5805 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 165 | 5825 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |

NS = Not Supported



5 GHz WiFi- 20 MHz BW – MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT20 (2Tx, non TXBF) | 11ax HE20 (2Tx, non TXBF) | 11ax HE20 RU106 (2Tx, non TXBF) | 11ax HE20 RU52 (2Tx, non TXBF) | 11ax HE20 RU26 (2Tx, non TXBF) | 11n/11ac HT20 (2Tx, TxBF) |
|---------|------------------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------|
| 36 | 5180 | 9 | 9 | 7 | 4 | 1 | 6 |
| 40 | 5200 | 9 | 9 | 7 | 4 | 1 | 6 |
| 44 | 5220 | 9 | 9 | 7 | 4 | 1 | 6 |
| 48 | 5240 | 9 | 9 | 7 | 4 | 1 | 6 |
| 52 | 5260 | 14.25 | 14.25 | 13 | 10 | NS | 12 |
| 56 | 5280 | 14.25 | 14.25 | 13 | 10 | NS | 12 |
| 60 | 5300 | 14.25 | 14.25 | 13 | 10 | NS | 12 |
| 64 | 5320 | 14.25 | 14.25 | 12.5 | 10 | NS | 12 |
| 100 | 5500 | 13.25 | 13.25 | 13 | 10.75 | NS | 12.5 |
| 104 | 5520 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 108 | 5540 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 112 | 5560 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 116 | 5580 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 120 | 5600 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 124 | 5620 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 128 | 5640 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 132 | 5660 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 136 | 5680 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 140 | 5700 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 144 | 5720 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 12.5 |
| 149 | 5745 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |
| 153 | 5765 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |
| 157 | 5785 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |
| 161 | 5805 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |
| 165 | 5825 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |

NS = Not Supported



5 GHz WiFi- 40 MHz BW – SISO Core 0

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (SISO) | 11ax HE40 (SISO) | 11ax HE40 RU106 (SISO) | 11ax HE40 RU52 (SISO) | 11ax HE40 RU26 (SISO) |
|---------|------------------------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 38 | 5190 | 14 | 14 | 9.5 | 6.5 | 3.5 |
| 46 | 5230 | 14 | 14 | 9.5 | 6.5 | 3.5 |
| 54 | 5270 | 14.25 | 14.25 | 14.25 | 13 | NS |
| 62 | 5310 | 14.25 | 14.25 | 14.25 | 13 | NS |
| 102 | 5510 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 110 | 5550 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 118 | 5590 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 126 | 5630 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 134 | 5670 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 142 | 5710 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 151 | 5755 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 159 | 5795 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |

5 GHz WiFi- 40 MHz BW – SISO Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (SISO) | 11ax HE40 (SISO) | 11ax HE40 RU106 (SISO) | 11ax HE40 RU52 (SISO) | 11ax HE40 RU26 (SISO) |
|---------|------------------------|----------------------|------------------|------------------------|-----------------------|-----------------------|
| 38 | 5190 | 14 | 14 | 9.5 | 6.5 | 3.5 |
| 46 | 5230 | 14 | 14 | 9.5 | 6.5 | 3.5 |
| 54 | 5270 | 14.75 | 14.75 | 14.75 | 13 | NS |
| 62 | 5310 | 14.75 | 14.5 | 14.5 | 13 | NS |
| 102 | 5510 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 110 | 5550 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 118 | 5590 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 126 | 5630 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 134 | 5670 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 142 | 5710 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 151 | 5755 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |
| 159 | 5795 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |

NS = Not Supported



5 GHz WiFi – 40 MHz BW – MIMO Core 0 and Core 1

| Channel | Center Frequency (MHz) | 11n/11ac HT40 (2Tx, non TXBF) | 11ax HE40 (2Tx, non TXBF) | 11ax HE40 RU106 (2Tx, non TXBF) | 11ax HE40 RU52 (2Tx, non TXBF) | 11ax HE40 RU26 (2Tx, non TXBF) | 11n/11ac HT40 (2Tx, TXBF) |
|---------|------------------------|-------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------|
| 38 | 5190 | 11.5 | 11.5 | 7 | 4 | 1 | 8.5 |
| 46 | 5230 | 11.5 | 11.5 | 7 | 4 | 1 | 8.5 |
| 54 | 5270 | 14.25 | 14.25 | 13 | 10 | NS | 14.25 |
| 62 | 5310 | 14.25 | 13.75 | 13 | 8 | NS | 13.25 |
| 102 | 5510 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 110 | 5550 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 118 | 5590 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 126 | 5630 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 134 | 5670 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 142 | 5710 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 151 | 5755 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |
| 159 | 5795 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |

NS = Not Supported



5 GHz – 80 MHz BW SISO Core 0 / Core 1

| Channel | Center Frequency (MHz) | 11ac VHT80 (SISO) | 11ax HE80 (SISO) | 11ax HE80 RU106 (SISO) | 11ax HE80 RU52 (SISO) | 11ax HE80 RU26 (SISO) |
|---------|------------------------|-------------------|------------------|------------------------|-----------------------|-----------------------|
| 42 | 5210 | 13.5 | 13.75 | 9.5 | 6.5 | 3.5 |
| 58 | 5290 | 13.25 | 13.5 | 11 | 7 | NS |
| 106 | 5530 | 13.25 | 13.25 | 12 | 11 | NS |
| 122 | 5610 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 138 | 5690 | 13.25 | 13.25 | 13.25 | 13.25 | NS |
| 155 | 5775 | 13.5 | 13.5 | 13.5 | 13.5 | 13 |

NS = Not Supported

5 GHz – 80 MHz BW MIMO Core 0 and Core1

| Channel | Center Frequency (MHz) | 11ac VHT80 (2Tx, non TXBF) | 11ax HE80 (2Tx, non TXBF) | 11ax HE80 RU106 (2Tx, non TXBF) | 11ax HE80 RU52 (2Tx, non TXBF) | 11ax HE80 RU26 (2Tx, non TXBF) | 11ac VHT80 (2Tx, TXBF) |
|---------|------------------------|----------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------|------------------------|
| 42 | 5210 | 12.5 | 12.5 | 7 | 4 | 1 | 9.5 |
| 58 | 5290 | 12.75 | 11.75 | 8.5 | 5.5 | NS | 11.25 |
| 106 | 5530 | 13.25 | 13.25 | 9 | 7 | NS | 13.25 |
| 122 | 5610 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 138 | 5690 | 13.25 | 13.25 | 13.25 | 10.75 | NS | 13.25 |
| 155 | 5775 | 13.5 | 13.5 | 13.5 | 13.5 | 13 | 13.5 |

NS = Not Supported



1.8 POWER MEASUREMENTS

1.8.1 Method

Conducted power measurements were made using Boonton power meters.

1.8.2 Conducted Power Measurements

Bluetooth (5 GHz Wifi Off) - EDR

(BT Core 0 - ePA)

| Technology | Channel | Modulation | Packet Type | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|-------------|-----------------|----------------------|-------------------|--------------------|
| EDR | 0 | 8-DPSK | 3-DH5 | 2402 | 16.18 | 16.50 | 16.50 |
| EDR | 39 | 8-DPSK | 3-DH5 | 2441 | 16.12 | 16.50 | 16.50 |
| EDR | 78 | 8-DPSK | 3-DH5 | 2480 | 16.47 | 16.50 | 16.50 |

(BT Core 1 - ePA)

| Technology | Channel | Modulation | Packet Type | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|-------------|-----------------|----------------------|-------------------|--------------------|
| EDR | 0 | 8-DPSK | 3-DH5 | 2402 | 16.48 | 16.50 | 16.50 |
| EDR | 39 | 8-DPSK | 3-DH5 | 2441 | 16.50 | 16.50 | 16.50 |
| EDR | 78 | 8-DPSK | 3-DH5 | 2480 | 16.49 | 16.50 | 16.50 |



Bluetooth (5 GHz Wifi On) - EDR

(BT Core 0 -ePA)

| Technology | Channel | Modulation | Packet Type | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|-------------|-----------------|----------------------|-------------------|--------------------|
| BDR | 0 | GFSK | DH5 | 2402 | 15.43 | 15.50 | 15.50 |
| BDR | 39 | GFSK | DH5 | 2441 | 15.48 | 15.50 | 15.50 |
| BDR | 78 | GFSK | DH5 | 2480 | 15.43 | 15.50 | 15.50 |

(BT Core 1 -ePA)

| Technology | Channel | Modulation | Packet Type | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|-------------|-----------------|----------------------|-------------------|--------------------|
| BDR | 0 | GFSK | DH5 | 2402 | 15.48 | 15.50 | 15.50 |
| BDR | 39 | GFSK | DH5 | 2441 | 15.12 | 15.50 | 15.50 |
| BDR | 78 | GFSK | DH5 | 2480 | 15.17 | 15.50 | 15.50 |



WLAN 2450 MHz - SISO

(2.4 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11b | 1 | BPSK | 100 | 1 | 2412 | 18.47 | 19.50 | 18.75 |
| 802.11b | 7 | BPSK | 100 | 1 | 2442 | 18.74 | 19.50 | 18.75 |
| 802.11b | 11 | BPSK | 100 | 1 | 2462 | 18.51 | 19.50 | 18.75 |

(2.4 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11b | 1 | BPSK | 100 | 1 | 2412 | 18.71 | 19.75 | 19.00 |
| 802.11b | 7 | BPSK | 100 | 1 | 2442 | 18.81 | 19.75 | 19.00 |
| 802.11b | 11 | BPSK | 100 | 1 | 2462 | 18.66 | 19.75 | 19.00 |



WLAN 2450 MHz - 2x2 MIMO

(2.4 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11n | 2 | BPSK | 100 | 6.5 | 2417 | 18.70 | 19.50 | 18.75 |
| 802.11n | 7 | BPSK | 100 | 6.5 | 2442 | 18.43 | 19.50 | 18.75 |
| 802.11n | 10 | BPSK | 100 | 6.5 | 2457 | 18.69 | 19.50 | 18.75 |

(2.4 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11n | 2 | BPSK | 100 | 6.5 | 2417 | 18.58 | 19.50 | 18.75 |
| 802.11n | 7 | BPSK | 100 | 6.5 | 2442 | 18.52 | 19.50 | 18.75 |
| 802.11n | 10 | BPSK | 100 | 6.5 | 2457 | 18.71 | 19.50 | 18.75 |



WLAN U-NII 1 - SISO

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|----------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 | 38 | BPSK | 100 | 29.3 | 5190 | 13.94 | 15.25 | 14.00 |
| 802.11ac VHT80 | 46 | BPSK | 100 | 29.3 | 5230 | 13.65 | 15.25 | 14.00 |

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|----------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 | 46 | BPSK | 100 | 29.3 | 5230 | 13.65 | 15.25 | 14.00 |



WLAN U-NII 1 - 2x2 MIMO SDM

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|----------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT40 | 46 | BPSK | 100 | 29.3 | 5230 | 15.2* | 15.25 | 11.50 |

* Tested at FCC Power setting.

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|----------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT40 | 46 | BPSK | 100 | 29.3 | 5230 | 14.90 | 15.25 | 11.50 |



WLAN U-NII 2A - SISO

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|----------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT40 | 54 | BPSK | 100 | 29.3 | 5270 | 14.68 | 15.5 | 14.75 |
| 802.11ac VHT40 | 62 | BPSK | 100 | 29.3 | 5310 | 14.47 | 15.00 | 14.75 |

WLAN U-NII 2A - 2x2 MIMO SDM

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|--------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT40 SDM | 54 | BPSK | 100 | 29.3 | 5270 | 13.99 | 15.25 | 14.25 |
| 802.11ac VHT40 SDM | 62 | BPSK | 100 | 29.3 | 5310 | 14.02 | 15 | 14.25 |

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|--------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT40 SDM | 54 | BPSK | 100 | 29.3 | 5270 | 12.36 | 15.5 | 14.25 |
| 802.11ac VHT40 SDM | 62 | BPSK | 100 | 29.3 | 5310 | 13.62 | 15 | 14.25 |



WLAN U-NII 2C - SISO

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|---------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -CDD | 106 | BPSK | 100 | 29.3 | 5530 | 12.96 | 14.00 | 13.25 |
| 802.11ac VHT80 -CDD | 122 | BPSK | 100 | 29.3 | 5610 | 12.91 | 14.00 | 13.25 |
| 802.11ac VHT80 -CDD | 138 | BPSK | 100 | 29.3 | 5690 | 13.22 | 14.00 | 13.25 |

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|---------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -CDD | 106 | BPSK | 100 | 29.3 | 5530 | 13.05 | 14.00 | 13.25 |
| 802.11ac VHT80 -CDD | 122 | BPSK | 100 | 29.3 | 5610 | 13.1 | 14.00 | 12.75 |
| 802.11ac VHT80 -CDD | 138 | BPSK | 100 | 29.3 | 5690 | 13.16 | 14.00 | 13.25 |



WLAN U-NII 2C - 2x2 MIMO

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|---------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -SDM | 106 | BPSK | 100 | 29.3 | 5530 | 13.02 | 14.00 | 13.25 |
| 802.11ac VHT80 -SDM | 122 | BPSK | 100 | 29.3 | 5610 | 12.66 | 14.00 | 13.25 |
| 802.11ac VHT80 -SDM | 138 | BPSK | 100 | 29.3 | 5690 | 12.95 | 14.00 | 13.25 |

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|---------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -SDM | 106 | BPSK | 100 | 29.3 | 5530 | 12.83 | 14.00 | 13.25 |
| 802.11ac VHT80 -SDM | 122 | BPSK | 100 | 29.3 | 5610 | 13.13 | 14.00 | 13.25 |
| 802.11ac VHT80 -SDM | 138 | BPSK | 100 | 29.3 | 5690 | 13.19 | 14.00 | 13.25 |



WLAN U-NII 3 - SISO

(5 GHz Core 0)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -SDM | 155 | BPSK | 100 | 29.3 | 5775 | 13.47 | 14.25 | 13.50 |

(5 GHz Core 1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|------------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -SDM | 155 | BPSK | 100 | 29.3 | 5775 | 13.18 | 14.25 | 13.50 |



WLAN U-NII 3 – MIMO

5 GHz (Core 0-1)

| Technology | Channel | Modulation | Duty Cycle (%) | Rate (Mbps) | Frequency (MHz) | Measured Power (dBm) | FCC Tune Up (dBm) | ISED Tune Up (dBm) |
|-----------------------------|---------|------------|----------------|-------------|-----------------|----------------------|-------------------|--------------------|
| 802.11ac VHT80 -SDM (Core0) | 155 | BPSK | 100 | 29.3 | 5775 | 13.27 | 14.25 | 13.50 |
| 802.11ac VHT80 -SDM (Core1) | 155 | BPSK | 100 | 29.3 | 5775 | 13.21 | 14.25 | 13.50 |



SECTION 2

TEST DETAILS

Specific Absorption Rate Testing of the
A2681



2.1 DASY5 MEASUREMENT SYSTEM

2.1.1 System Description

The DASY5 system for performing compliance tests consists of the following items:

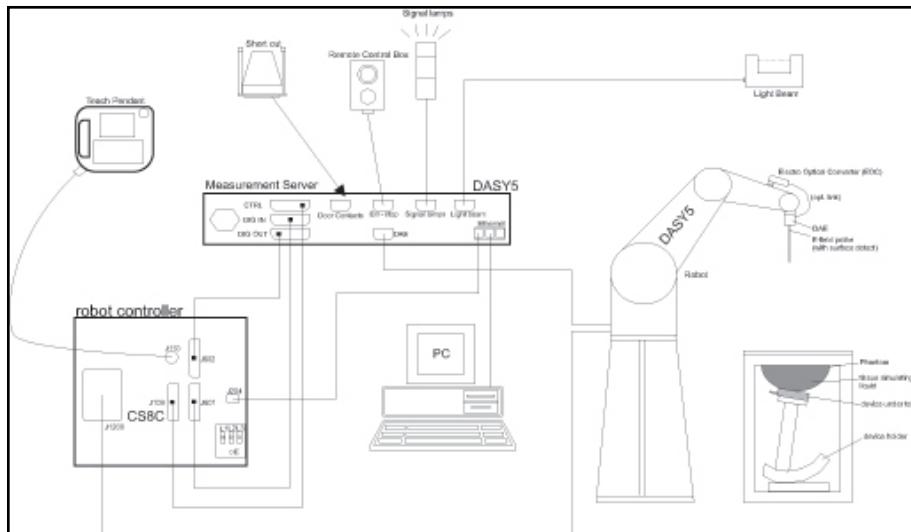


Figure 1 System Description Diagram

A standard high precision 6-axis robot (Stäubli TX-RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).

An isotropic field probe optimized and calibrated for the targeted measurement.

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.

The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

A computer running Win10 professional operating system and the DASY6 software.

Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

The phantom, the device holder and other accessories according to the targeted measurement.



2.1.2 Probe Specification

The probes used by the DASY system are isotropic E-field probes, constructed with a symmetric design and a triangular core. The probes have built-in shielding against static charges and are contained within a PEEK enclosure material. These probes are specially designed and calibrated for use in liquids with high permittivities. The frequency range of the probes are from 6 MHz to 6 GHz.

2.1.3 Data Acquisition Electronics

The data acquisition electronics (DAE4 or DAE3) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16-bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection. The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

2.1.4 SAR Evaluation Description

The DASY6 software includes all numerical procedures necessary to evaluate the spatial peak SAR values.

Based on the IEEE 1528 standard, a new algorithm has been implemented. The spatial-peak SAR can be computed over any required mass.

The base for the evaluation is a "cube" measurement in a volume of 30mm³ (7x7x7 points). The measured volume must include the 1 g and 10 g cubes with the highest averaged SAR values. For that purpose, the centre of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan. If the 10g cube or both cubes are not entirely inside the measured volumes, the system issues a warning regarding the evaluated spatial peak values within the Post processing engine (SEMCAD X). This means that if the measured volume is shifted, higher values might be possible. To get the correct values you can use a finer measurement grid for the area scan. In complicated field distributions, a large grid spacing for the area scan might miss some details and give an incorrectly interpolated peak location.

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD X). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. extraction of the measured data (grid and values) from the Zoom Scan
2. calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. generation of a high-resolution mesh within the measured volume
4. interpolation of all measured values from the measurement grid to the high-resolution grid
5. extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. calculation of the averaged SAR within masses of 1 g and 10 g



2.1.5 Interpolation, Extrapolation and Detection of Maxima

The probe is calibrated at the centre of the dipole sensors which is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated.

In DASY5, the choice of the coordinate system defining the location of the measurement points has no influence on the uncertainty of the interpolation, Maxima Search and extrapolation routines. The interpolation, extrapolation and maximum search routines are all based on the modified Quadratic Shepard's method. Thereby, the interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation. The DASY5 routines construct a once-continuously differentiable function that interpolates the measurement values as follows:

For each measurement point a trivariate (3-D) / bivariate (2-D) quadratic is computed. It interpolates the measurement values at the data point and forms a least-square fit to neighbouring measurement values. The spatial location of the quadratic with respect to the measurement values is attenuated by an inverse distance weighting. This is performed since the calculated quadratic will fit measurement values at nearby points more accurate than at points located further away.

After the quadratics are calculated for all measurement points, the interpolating function is calculated as a weighted average of the quadratics.

There are two control parameters that govern the behaviour of the interpolation method. One specifies the number of measurement points to be used in computing the least-square fits for the local quadratics. These measurement points are the ones nearest the input point for which the quadratic is being computed. The second parameter specifies the number of measurement points that will be used in calculating the weights for the quadratics to produce the final function. The input data points used there are the ones nearest the point at which the interpolation is desired. Appropriate defaults are chosen for each of the control parameters

The trivariate quadratics that have been previously computed for the 3-D interpolation and whose input data are at the closest distance from the phantom surface, are used in order to extrapolate the fields to the surface of the phantom.

In order to determine all the field maxima in 2-D (Area Scan) and 3-D (Zoom Scan), the measurement grid is refined by a default factor of 10 and the interpolation function is used to evaluate all field values between corresponding measurement points. Subsequently, a linear search is applied to find all the candidate maxima. In a last step, nonphysical maxima are removed and only those maxima which are within 2 dB of the global maximum value are retained.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extrema of the SAR distribution. The uncertainty on the locations of the extrema is less than 1/20 of the grid size. Only local maxima within 2 dB of the global maximum are searched and passed for the Zoom Scan measurement.

In the Zoom Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.



2.1.6 Averaging and Determination of Spatial Peak SAR

The interpolated data is used to average the SAR over the 1g and 10g cubes by spatially discretising the entire measured volume. The resolution of this spatial grid used to calculate the averaged SAR is 1mm or about 42875 interpolated points. The resulting volumes are defined as cubical volumes containing the appropriate tissue parameters that are centred at the location. The location is defined as the centre of the incremental volume (voxel).

The spatial-peak SAR must be evaluated in cubical volumes containing a mass that is within 5% of the required mass. The cubical volume centred at each location, as defined above, should be expanded in all directions until the desired value for the mass is reached, with no surface boundaries of the averaging volume extending beyond the outermost surface of the considered region. In addition, the cubical volume should not consist of more than 10% of air. If these conditions are not satisfied, then the centre of the averaging volume is moved to the next location. Otherwise, the exact size of the final sampling cube is found using an inverse polynomial approximation algorithm, leading to results with improved accuracy. If one boundary of the averaging volume reaches the boundary of the measured volume during its expansion, it will not be evaluated at all. Reference is kept of all locations used and those not used for averaging the SAR. All average SAR values are finally assigned to the centred location in each valid averaging volume.

All locations included in an averaging volume are marked to indicate that they have been used at least once. If a location has been marked as used but has never been assigned to the centre of a cube, the highest averaged SAR value of all other cubical volumes which have used this location for averaging is assigned to this location. Only those locations that are not part of any valid averaging volume should be marked as unused. For the case of an unused location, a new averaging volume must be constructed which will have the unused location centred at one surface of the cube. The remaining five surfaces are expanded evenly in all directions until the required mass is enclosed, regardless of the amount of included air. Of the six possible cubes with one surface centred on the unused location, the smallest cube is used, which still contains the required mass.

If the final cube containing the highest averaged SAR touches the surface of the measured volume, an appropriate warning is issued within the Post-processing engine.



SECTION 3

TEST EQUIPMENT USED



3.1 TEST EQUIPMENT USED

The following test equipment was used at TÜV SÜD:

| Instrument | Manufacturer | Type No. | TE No. | Calibration Period (months) | Calibration Expiry Date |
|---|-----------------------|--|---------|-----------------------------|-------------------------|
| Thermometer | Digitron | T208 | 2340 | 12 | 24-Nov-2022 |
| Hygrometer | Rotronic | Hygropalm | 2404 | 12 | 15-Jun-2022 |
| Balun Transformer | Minns Baluns | KDL 04 E | 3063 | - | TU |
| Meter & T/C | R.S Components | Meter 615-8206 & Type K T/C | 3612 | 12 | 12-Aug-2022 |
| Laptop Device Holder | SPEAG | MDA4LAP | 4693 | - | TU |
| SAR 2450 MHz Dipole | SPEAG | D2450V2 | 3875 | 12 | 09-Dec-2022 |
| SAR 5GHz Dipole | SPEAG | D5GHzV2 | 4309 | 12 | 13-Dec-2022 |
| Dosimetric SAR Probe | SPEAG | EX3DV4 | 5330 | 12 | 18-Jun-2022 |
| Dosimetric SAR Probe | SPEAG | EX3DV4 | 4700 | 12 | 13-Dec-2022 |
| Data Acquisition Electronics | SPEAG | DAE 4 - SD 000 D04 BM | 4689 | 12 | 06-Dec-2022 |
| Dielectric Assessment Kit | SPEAG | DAK 200MHz to 20GHz | 4690 | - | TU |
| Dielectric Probe Stand | SPEAG | Stand | 4691 | - | TU |
| Measurement Server | SPEAG | DASY 5 Measurement Server | 4692 | - | TU |
| Mounting Platform for TX90XL Robot and Phantoms | SPEAG | MP6C-TX90XL Mounting Platform Extended | 4702 | - | TU |
| Robot | SPEAG | TX90 XLspeag Robot | 4704 | - | TU |
| Network Analyser | Keysight Technologies | E5063A | 5018 | 12 | 30-Jul-2022 |
| Data Acquisition Electronics | SPEAG | DAE 4 - SD 000 D04 BN | 5327 | 12 | 09-Jun-2022 |
| Measurement server | SPEAG | DASY 6 Measurement Server | 5337 | - | TU |
| Mounting Platform TX90XL Robot & Phantoms | SPEAG | MP6C-TX90XL Mounting Platform Extended | 5338 | - | TU |
| Robot | SPEAG | TX90 XL Stäubli Robot | 5340 | - | TU |
| Power Sensor | Boonton | RTP5008 | 5830 | 12 | 10-Jun-2022 |
| Power Sensor | Boonton | RTP5008 | 5832 | 12 | 10-Jun-2022 |
| Power Source for SAR system validation | SPEAG | POWER SOURCE 1-SE UMS 160 BA | 5371 | 12 | 08-Dec-2022 |
| Tissue Simulant Liquid | SPEAG | HBBL 600 -6000 | Batch 1 | Weekly | 27-Apr-2022 |
| Tissue Simulant Liquid | SPEAG | HBBL 600 -6000 | Batch 2 | Weekly | 17-May-2022 |

TU - Traceability Unscheduled



3.2 TEST SOFTWARE

The following software was used to control the TÜV SÜD DASY System.

| Instrument | Version Number |
|-------------|-------------------|
| DASY system | DASY6 V6.14.0.959 |



3.3 DIELECTRIC PROPERTIES OF SIMULANT LIQUIDS

The fluid properties of the simulant fluids used during routine SAR evaluation meet the dielectric properties required KDB 865665.

The dielectric properties of the tissue simulant liquids used for the SAR testing at TÜV SÜD Product Service are as follows:-

| Fluid Type and Frequency | Relative Permittivity Target | Relative Permittivity Measured | Conductivity Target (S/m) | Conductivity Measured (S/m) | Date | Fluid Temperature °C |
|--------------------------|------------------------------|--------------------------------|---------------------------|-----------------------------|------------|----------------------|
| HBBL @ 2450 MHz | 39.20 | 39.08 | 1.80 | 1.72 | 04/04/2022 | 21.5 |
| HBBL @ 2450 MHz | 39.20 | 39.53 | 1.80 | 1.81 | 07/04/2022 | 21.4 |
| HBBL @ 2450 MHz | 39.20 | 41.31 | 1.80 | 1.81 | 13/04/2022 | 20.7 |
| HBBL @ 5200 MHz | 35.98 | 35.43 | 4.65 | 4.60 | 07/04/2022 | 21.6 |
| HBBL @ 5300 MHz | 35.87 | 35.23 | 4.75 | 4.77 | 07/04/2022 | 21.6 |
| HBBL @ 5500 MHz | 35.64 | 34.84 | 4.96 | 4.95 | 07/04/2022 | 21.6 |
| HBBL @ 5200 MHz | 35.98 | 34.59 | 4.65 | 4.34 | 04/04/2022 | 21.5 |
| HBBL @ 5300 MHz | 35.87 | 34.41 | 4.75 | 4.45 | 04/04/2022 | 21.5 |
| HBBL @ 5500 MHz | 35.64 | 34.07 | 4.96 | 4.67 | 04/04/2022 | 21.5 |
| HBBL @ 5800 MHz | 35.30 | 34.33 | 5.27 | 5.08 | 20/04/2022 | 22.0 |
| HBBL @ 5200 MHz | 35.98 | 35.68 | 4.65 | 4.48 | 10/05/2022 | 20.5 |



3.4 TEST CONDITIONS

3.4.1 Test Laboratory Conditions

Ambient temperature: Within +15°C to +35°C.

The actual temperature during the testing ranged from 22.4°C to 23.4°C.

The actual humidity during the testing ranged from 19.6% to 37.9% RH.

3.4.2 Test Fluid Temperature Range

| Frequency | Body / Head Fluid | Min Temperature °C | Max Temperature °C |
|-----------|-------------------|--------------------|--------------------|
| 2450 MHz | Body | 21.5 | 21.8 |
| 5500 MHz | Body | 20.74 | 21.89 |

3.4.3 SAR Drift

The SAR Drift was within acceptable limits during scans. The maximum SAR Drift was recorded as -0.20 dB. The measurement uncertainty budget for this assessment includes the maximum SAR Drift figures.



3.5 MEASUREMENT UNCERTAINTY

Body, Full SAR Measurements, 300 MHz to 3 GHz -

| Source of Uncertainty | Uncertainty \pm % | Probability distribution | Div | c_i (1g) | Standard Uncertainty \pm % (1g) | $V_i (V_{eff})$ |
|--------------------------------------|---------------------|--------------------------|------|------------|-----------------------------------|-----------------|
| Measurement System | | | | | | |
| Probe calibration | 6.0 | N | 1.00 | 1.00 | 6.0 | Infinity |
| Axial Isotropy | 4.7 | R | 1.73 | 0.70 | 1.9 | Infinity |
| Hemispherical Isotropy | 9.6 | R | 1.73 | 0.70 | 3.9 | Infinity |
| Boundary effect | 1.0 | R | 1.73 | 1.00 | 0.6 | Infinity |
| Linearity | 4.7 | R | 1.73 | 1.00 | 2.7 | Infinity |
| System Detection limits | 1.0 | R | 1.73 | 1.00 | 0.6 | Infinity |
| Modulation response | 2.4 | R | 1.73 | 1.00 | 1.4 | Infinity |
| Readout electronics | 0.3 | N | 1.00 | 1.00 | 0.3 | Infinity |
| Response time | 0.8 | R | 1.73 | 1.00 | 0.5 | Infinity |
| Integration time | 2.6 | R | 1.73 | 1.00 | 1.5 | Infinity |
| RF ambient noise | 3.0 | R | 1.73 | 1.00 | 1.7 | Infinity |
| RF ambient reflections | 3.0 | R | 1.73 | 1.00 | 1.7 | Infinity |
| Probe positioner | 0.4 | R | 1.73 | 1.00 | 0.2 | Infinity |
| Probe positioning | 2.9 | R | 1.73 | 1.00 | 1.7 | Infinity |
| Max SAR Evaluation | 2.0 | R | 1.73 | 1.00 | 1.2 | Infinity |
| Test sample related | | | | | | |
| Device Positioning | 2.9 | N | 1.00 | 1.00 | 2.9 | 145 |
| Device Holder | 3.6 | N | 1.00 | 1.00 | 3.6 | 5 |
| Input Power and SAR Drift | 5.0 | R | 1.73 | 1.00 | 2.9 | Infinity |
| Phantom and Setup | | | | | | |
| Phantom uncertainty | 6.1 | R | 1.73 | 1.00 | 3.5 | Infinity |
| SAR Correction | 1.9 | R | 1.73 | 1.00 | 1.1 | Infinity |
| Liquid conductivity Meas. | 2.5 | R | 1.73 | 0.78 | 1.1 | Infinity |
| Liquid Permittivity Meas. | 2.5 | R | 1.73 | 0.23 | 0.3 | Infinity |
| Temp. Unc. Conductivity | 3.4 | R | 1.73 | 0.78 | 1.5 | Infinity |
| Temp. Unc. Permittivity | 0.4 | R | 1.73 | 0.23 | 0.1 | Infinity |
| Combined Standard Uncertainty | | RSS | | | 11.2 | 361 |
| Expanded Standard Uncertainty | | K=2 | | | 22.3 | |



Body, Full SAR Measurements, 3 GHz to 6 GHz

| Source of Uncertainty | Uncertainty \pm % | Probability distribution | Div | c_i (1g) | Standard Uncertainty \pm % (1g) | $v_i (V_{eff})$ |
|--------------------------------------|---------------------|--------------------------|------|------------|-----------------------------------|-----------------|
| Measurement System | | | | | | |
| Probe calibration | 6.6 | N | 1.00 | 1.00 | 6.6 | Infinity |
| Axial Isotropy | 4.7 | R | 1.73 | 0.70 | 1.9 | Infinity |
| Hemispherical Isotropy | 9.6 | R | 1.73 | 0.70 | 3.9 | Infinity |
| Boundary effect | 2.0 | R | 1.73 | 1.00 | 1.2 | Infinity |
| Linearity | 4.7 | R | 1.73 | 1.00 | 2.7 | Infinity |
| System Detection limits | 1.0 | R | 1.73 | 1.00 | 0.6 | Infinity |
| Modulation response | 2.4 | R | 1.73 | 1.00 | 1.4 | Infinity |
| Readout electronics | 0.3 | N | 1.00 | 1.00 | 0.3 | Infinity |
| Response time | 0.8 | R | 1.73 | 1.00 | 0.5 | Infinity |
| Integration time | 2.6 | R | 1.73 | 1.00 | 1.5 | Infinity |
| RF ambient noise | 3.0 | R | 1.73 | 1.00 | 1.7 | Infinity |
| RF ambient reflections | 3.0 | R | 1.73 | 1.00 | 1.7 | Infinity |
| Probe positioner | 0.8 | R | 1.73 | 1.00 | 0.5 | Infinity |
| Probe positioning | 6.7 | R | 1.73 | 1.00 | 3.9 | Infinity |
| Max SAR Evaluation | 4.0 | R | 1.73 | 1.00 | 2.3 | Infinity |
| Test sample related | | | | | | |
| Device Positioning | 2.9 | N | 1.00 | 1.00 | 2.9 | 145 |
| Device Holder | 3.6 | N | 1.00 | 1.00 | 3.6 | 5 |
| Input Power and SAR Drift | 5.0 | R | 1.73 | 1.00 | 2.9 | Infinity |
| Phantom and Setup | | | | | | |
| Phantom uncertainty | 6.6 | R | 1.73 | 1.00 | 3.8 | Infinity |
| SAR Correction | 1.9 | R | 1.73 | 1.00 | 1.1 | Infinity |
| Liquid conductivity Meas. | 2.5 | R | 1.73 | 0.78 | 1.1 | Infinity |
| Liquid Permittivity Meas. | 2.5 | R | 1.73 | 0.23 | 0.3 | Infinity |
| Temp. Unc. Conductivity | 3.4 | R | 1.73 | 0.78 | 1.5 | Infinity |
| Temp. Unc. Permittivity | 0.4 | R | 1.73 | 0.23 | 0.1 | Infinity |
| Combined Standard Uncertainty | | RSS | | | 12.3 | 748 |
| Expanded Standard Uncertainty | | K=2 | | | 24.6 | |

Decision Rule - Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2007, Clause 4.4.3 and 4.5.1. (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8."



SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT



4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).

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ANNEX A

PROBE CALIBRATION REPORT



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



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

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

Accreditation No.: **SCS 0108**Client **TÜV SÜD UK**Certificate No: **EX3-3759_Dec21**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3759**

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: **December 13, 2021**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^\circ\text{C}$ and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID | Cal Date (Certificate No.) | Scheduled Calibration |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 09-Apr-21 (No. 217-03291/03292) | Apr-22 |
| Power sensor NRP-Z91 | SN: 103244 | 09-Apr-21 (No. 217-03291) | Apr-22 |
| Power sensor NRP-Z91 | SN: 103245 | 09-Apr-21 (No. 217-03292) | Apr-22 |
| Reference 20 dB Attenuator | 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 | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-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 | 06-Apr-16 (in house check Jun-20) | In house check: Jun-22 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-20) | In house check: Jun-22 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-20) | In house check: Oct-22 |

| Calibrated by: | Name | Function | Signature |
|----------------|---------------|-----------------------|-----------|
| | Leif Klynsner | Laboratory Technician | |
| Approved by: | Niels Kuster | Quality Manager | |

Issued: December 14, 2021

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



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



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

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

Accreditation No.: **SCS 0108**

Glossary:

| | |
|--------------------------|---|
| TSL | tissue simulating liquid |
| NORM x,y,z | sensitivity in free space |
| ConvF | sensitivity in TSL / NORM x,y,z |
| DCP | diode compression point |
| CF | crest factor (1/duty_cycle) of the RF signal |
| A, B, C, D | modulation dependent linearization parameters |
| Polarization φ | φ rotation around probe axis |
| Polarization ϑ | ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ 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:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

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



EX3DV4 – SN:3759

December 13, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3759

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|---|----------|----------|----------|--------------|
| Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A | 0.47 | 0.44 | 0.43 | $\pm 10.1\%$ |
| DCP (mV) ^B | 100.9 | 99.9 | 100.8 | |

Calibration Results for Modulation Response

| UID | Communication System Name | A dB | B dB/ μV | C | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|---------------|-----------------------------|---------|------------------------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | X 0.00 | 0.00 | 1.00 | 0.00 | 135.1 | $\pm 1.9\%$ | $\pm 4.7\%$ |
| | | Y 0.00 | 0.00 | 1.00 | | 140.4 | | |
| | | Z 0.00 | 0.00 | 1.00 | | 148.7 | | |
| 10352- AAA | Pulse Waveform (200Hz, 10%) | X 20.00 | 88.93 | 18.84 | 10.00 | 60.0 | $\pm 4.0\%$ | $\pm 9.6\%$ |
| | | Y 20.00 | 90.24 | 20.31 | | 60.0 | | |
| | | Z 20.00 | 91.57 | 20.69 | | 60.0 | | |
| 10353- AAA | Pulse Waveform (200Hz, 20%) | X 20.00 | 90.21 | 18.41 | 6.99 | 80.0 | $\pm 2.6\%$ | $\pm 9.6\%$ |
| | | Y 20.00 | 90.79 | 19.28 | | 80.0 | | |
| | | Z 20.00 | 93.01 | 20.40 | | 80.0 | | |
| 10354- AAA | Pulse Waveform (200Hz, 40%) | X 20.00 | 93.76 | 18.81 | 3.98 | 95.0 | $\pm 1.7\%$ | $\pm 9.6\%$ |
| | | Y 20.00 | 90.62 | 17.60 | | 95.0 | | |
| | | Z 20.00 | 96.75 | 20.88 | | 95.0 | | |
| 10355- AAA | Pulse Waveform (200Hz, 60%) | X 20.00 | 92.22 | 16.91 | 2.22 | 120.0 | $\pm 1.2\%$ | $\pm 9.6\%$ |
| | | Y 20.00 | 85.76 | 13.95 | | 120.0 | | |
| | | Z 20.00 | 100.66 | 21.33 | | 120.0 | | |
| 10387- AAA | QPSK Waveform, 1 MHz | X 1.62 | 66.27 | 14.69 | 1.00 | 150.0 | $\pm 3.0\%$ | $\pm 9.6\%$ |
| | | Y 1.49 | 64.76 | 13.67 | | 150.0 | | |
| | | Z 1.59 | 65.96 | 14.64 | | 150.0 | | |
| 10388- AAA | QPSK Waveform, 10 MHz | X 2.17 | 67.87 | 15.51 | 0.00 | 150.0 | $\pm 1.0\%$ | $\pm 9.6\%$ |
| | | Y 2.02 | 66.62 | 14.60 | | 150.0 | | |
| | | Z 2.13 | 67.64 | 15.43 | | 150.0 | | |
| 10396- AAA | 64-QAM Waveform, 100 kHz | X 2.61 | 68.79 | 18.10 | 3.01 | 150.0 | $\pm 0.9\%$ | $\pm 9.6\%$ |
| | | Y 2.59 | 67.83 | 17.41 | | 150.0 | | |
| | | Z 3.00 | 71.03 | 18.96 | | 150.0 | | |
| 10399- AAA | 64-QAM Waveform, 40 MHz | X 3.50 | 67.21 | 15.73 | 0.00 | 150.0 | $\pm 2.8\%$ | $\pm 9.6\%$ |
| | | Y 3.38 | 66.60 | 15.27 | | 150.0 | | |
| | | Z 3.44 | 66.98 | 15.63 | | 150.0 | | |
| 10414- AAA | WLAN CCDF, 64-QAM, 40MHz | X 4.66 | 65.15 | 15.23 | 0.00 | 150.0 | $\pm 4.6\%$ | $\pm 9.6\%$ |
| | | Y 4.83 | 65.62 | 15.40 | | 150.0 | | |
| | | Z 4.79 | 65.61 | 15.46 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

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

^B Numerical linearization parameter: uncertainty not required.

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



EX3DV4- SN:3759

December 13, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3759

Sensor Model Parameters

| | C1 fF | C2 fF | α V ⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V ⁻¹ | T6 |
|---|----------|----------|-----------------------------|--------------------------|--------------------------|----------|-----------------------|-----------------------|------|
| X | 41.2 | 306.62 | 35.33 | 11.59 | 0.00 | 5.07 | 0.21 | 0.35 | 1.01 |
| Y | 44.7 | 337.78 | 36.15 | 11.99 | 0.41 | 5.10 | 0.00 | 0.51 | 1.01 |
| Z | 42.7 | 316.28 | 35.03 | 14.82 | 0.06 | 5.10 | 1.16 | 0.27 | 1.01 |

Other Probe Parameters

| | |
|---|------------|
| Sensor Arrangement | Triangular |
| Connector Angle (°) | 173.2 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

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



EX3DV4- SN:3759

December 13, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3759

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^c | Relative Permittivity ^f | Conductivity (S/m) ^f | ConvF X | ConvF Y | ConvF Z | Alpha ^g | Depth ^g (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 128 | 52.8 | 0.76 | 12.08 | 12.08 | 12.08 | 0.00 | 1.00 | ± 13.3 % |
| 450 | 43.5 | 0.87 | 10.68 | 10.68 | 10.68 | 0.16 | 1.30 | ± 13.3 % |
| 750 | 41.9 | 0.89 | 10.22 | 10.22 | 10.22 | 0.29 | 1.06 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.88 | 9.88 | 9.88 | 0.27 | 1.06 | ± 12.0 % |
| 900 | 41.5 | 0.97 | 9.53 | 9.53 | 9.53 | 0.37 | 0.80 | ± 12.0 % |
| 1300 | 40.8 | 1.14 | 9.01 | 9.01 | 9.01 | 0.30 | 1.29 | ± 12.0 % |
| 1450 | 40.5 | 1.20 | 8.63 | 8.63 | 8.63 | 0.36 | 0.86 | ± 12.0 % |
| 1640 | 40.2 | 1.31 | 8.55 | 8.55 | 8.55 | 0.22 | 0.86 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.44 | 8.44 | 8.44 | 0.23 | 0.86 | ± 12.0 % |
| 1810 | 40.0 | 1.40 | 8.39 | 8.39 | 8.39 | 0.19 | 0.86 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.25 | 8.25 | 8.25 | 0.25 | 0.86 | ± 12.0 % |
| 2000 | 40.0 | 1.40 | 7.98 | 7.98 | 7.98 | 0.29 | 0.86 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 7.66 | 7.66 | 7.66 | 0.16 | 0.90 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.43 | 7.43 | 7.43 | 0.25 | 0.90 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.20 | 7.20 | 7.20 | 0.24 | 0.90 | ± 12.0 % |
| 3300 | 38.2 | 2.71 | 6.53 | 6.53 | 6.53 | 0.35 | 1.30 | ± 13.1 % |
| 3500 | 37.9 | 2.91 | 6.50 | 6.50 | 6.50 | 0.35 | 1.35 | ± 13.1 % |
| 3700 | 37.7 | 3.12 | 6.45 | 6.45 | 6.45 | 0.35 | 1.35 | ± 13.1 % |
| 4100 | 37.2 | 3.53 | 5.95 | 5.95 | 5.95 | 0.40 | 1.60 | ± 13.1 % |
| 5200 | 36.0 | 4.66 | 4.53 | 4.53 | 4.53 | 0.40 | 1.80 | ± 13.1 % |
| 5300 | 35.9 | 4.76 | 4.43 | 4.43 | 4.43 | 0.40 | 1.80 | ± 13.1 % |
| 5500 | 35.6 | 4.96 | 3.95 | 3.95 | 3.95 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 3.81 | 3.81 | 3.81 | 0.40 | 1.80 | ± 13.1 % |
| 5800 | 35.3 | 5.27 | 3.85 | 3.85 | 3.85 | 0.40 | 1.80 | ± 13.1 % |

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

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

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



EX3DV4- SN:3759

December 13, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3759

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 6500 | 34.5 | 6.07 | 5.10 | 5.10 | 5.10 | 0.20 | 0.25 | ± 18.6 % |

^C Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies 6-10 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz; below ± 2% for frequencies between 3-6 GHz; and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.

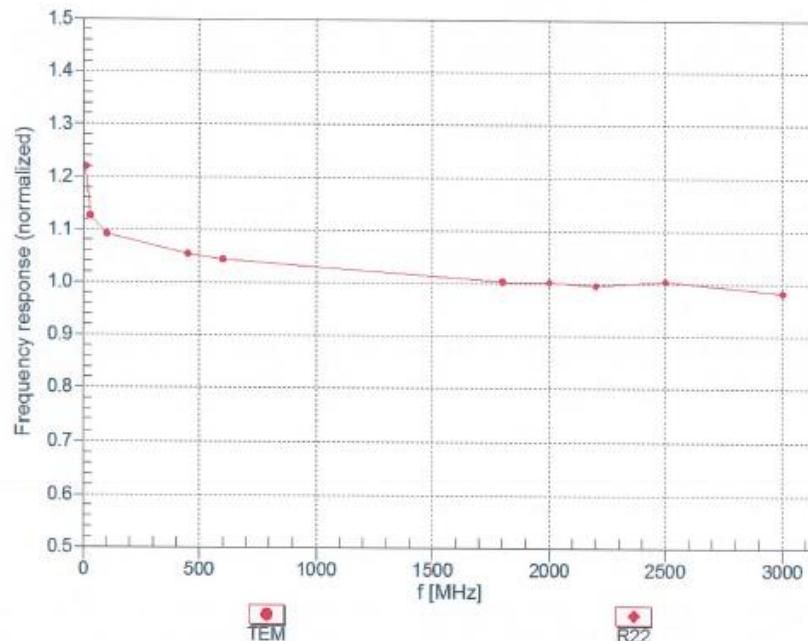


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Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)

Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

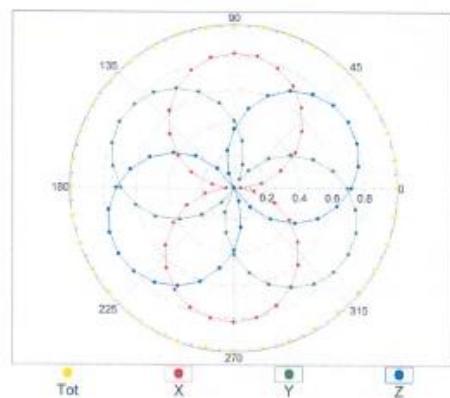


EX3DV4- SN:3759

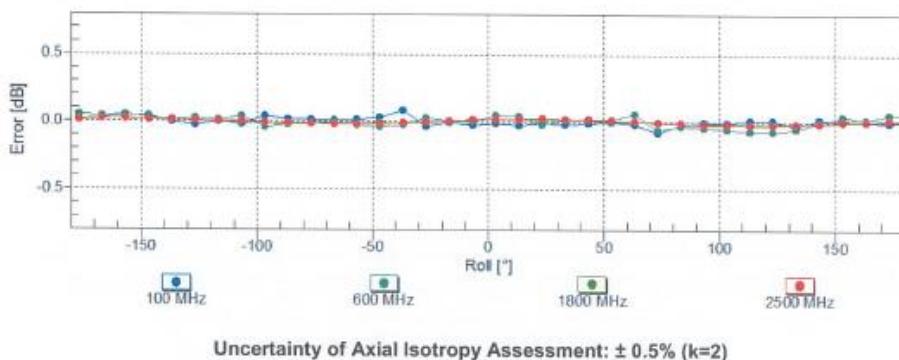
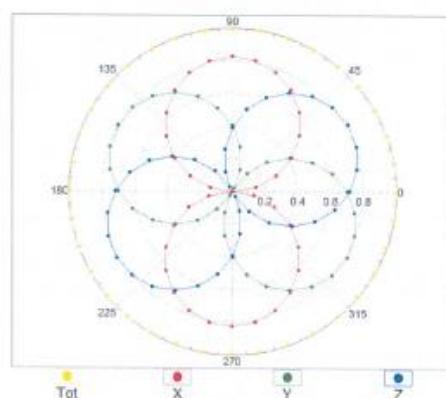
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Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM



f=1800 MHz,R22

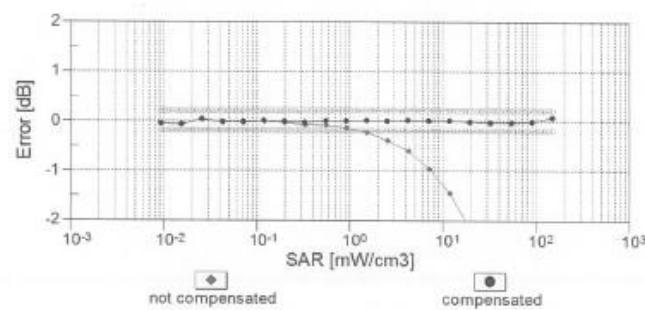
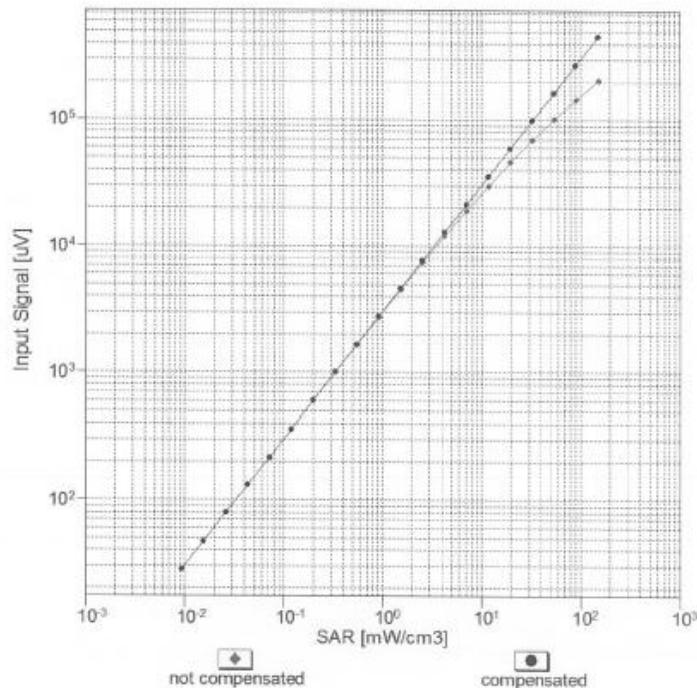




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Dynamic Range f(SAR_{head})
(TEM cell , f_{eval}= 1900 MHz)



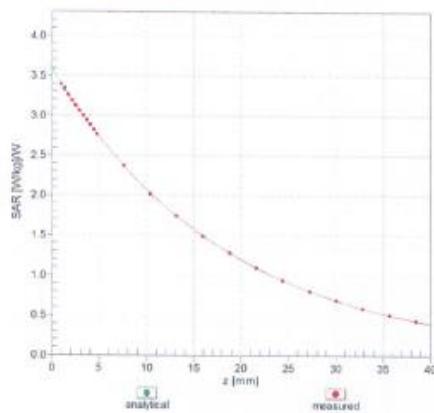
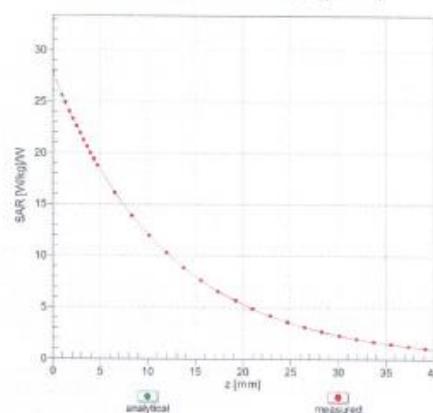
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)



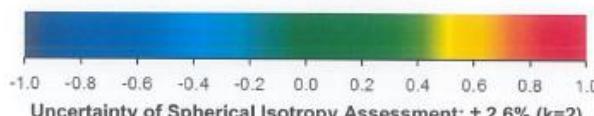
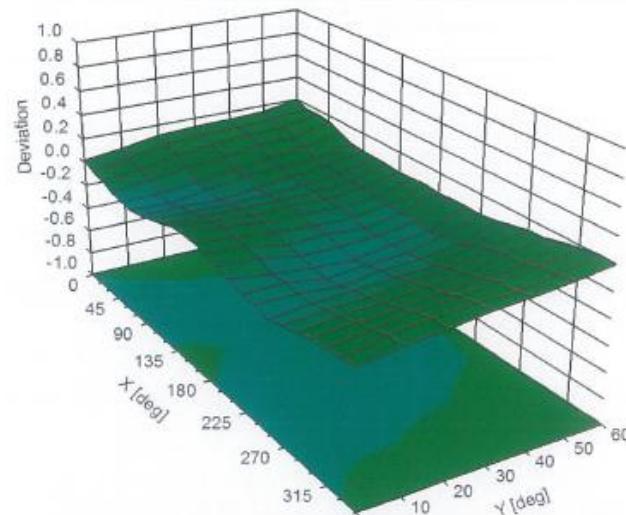
EX3DV4- SN:3759

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Conversion Factor Assessment

 $f = 835 \text{ MHz}, \text{WGLS R9 (H_convF)}$  $f = 1810 \text{ MHz}, \text{WGLS R22 (H_convF)}$ 

Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$ 



EX3DV4- SN:3759

December 13, 2021

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 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ± 9.6 % |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ± 9.6 % |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ± 9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ± 9.6 % |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ± 9.6 % |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ± 9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ± 9.6 % |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ± 9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 7.78 | ± 9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth | 1.87 | ± 9.6 % |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 | ± 9.6 % |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (Pi/4-DQPSK, DH1) | Bluetooth | 7.74 | ± 9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (Pi/4-DQPSK, DH3) | Bluetooth | 4.53 | ± 9.6 % |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (Pi/4-DQPSK, DH5) | Bluetooth | 3.83 | ± 9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ± 9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | 4.77 | ± 9.6 % |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ± 9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, Pi/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ± 9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, Pi/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSUPA) | WCDMA | 3.98 | ± 9.6 % |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ± 9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ± 9.6 % |

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|-------|-----|--|---------|-------|-------------|
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | $\pm 9.6\%$ |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | $\pm 9.6\%$ |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-TDD | 9.29 | $\pm 9.6\%$ |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | $\pm 9.6\%$ |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | $\pm 9.6\%$ |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | $\pm 9.6\%$ |
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 5.75 | $\pm 9.6\%$ |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | $\pm 9.6\%$ |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 | $\pm 9.6\%$ |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.62 | $\pm 9.6\%$ |
| 10114 | CAD | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | $\pm 9.6\%$ |
| 10115 | CAD | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | WLAN | 8.46 | $\pm 9.6\%$ |
| 10116 | CAD | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN | 8.15 | $\pm 9.6\%$ |
| 10117 | CAD | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN | 8.07 | $\pm 9.6\%$ |
| 10118 | CAD | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10119 | CAD | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | $\pm 9.6\%$ |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | $\pm 9.6\%$ |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | $\pm 9.6\%$ |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | $\pm 9.6\%$ |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | $\pm 9.6\%$ |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | $\pm 9.6\%$ |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | $\pm 9.6\%$ |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | $\pm 9.6\%$ |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | $\pm 9.6\%$ |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | $\pm 9.6\%$ |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.05 | $\pm 9.6\%$ |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-FDD | 5.75 | $\pm 9.6\%$ |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 5.79 | $\pm 9.6\%$ |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.62 | $\pm 9.6\%$ |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.56 | $\pm 9.6\%$ |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-FDD | 5.82 | $\pm 9.6\%$ |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.58 | $\pm 9.6\%$ |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.46 | $\pm 9.6\%$ |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | $\pm 9.6\%$ |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.79 | $\pm 9.6\%$ |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | $\pm 9.6\%$ |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | $\pm 9.6\%$ |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |

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|-------|---|---|---------|---------|---------|
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10183 | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % | |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | ± 9.6 % |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10193 | CAD | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | WLAN | 8.09 | ± 9.6 % |
| 10194 | CAD | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN | 8.12 | ± 9.6 % |
| 10195 | CAD | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.21 | ± 9.6 % |
| 10196 | CAD | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.10 | ± 9.6 % |
| 10197 | CAD | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10198 | CAD | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10219 | CAD | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | ± 9.6 % |
| 10220 | CAD | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10221 | CAD | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10222 | CAD | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.06 | ± 9.6 % |
| 10223 | CAD | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | ± 9.6 % |
| 10224 | CAD | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | WLAN | 8.08 | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+) | WCDMA | 5.97 | ± 9.6 % |
| 10226 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.49 | ± 9.6 % |
| 10227 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.26 | ± 9.6 % |
| 10228 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.22 | ± 9.6 % |
| 10229 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10230 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10231 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | ± 9.6 % |
| 10232 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10233 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10234 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10235 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10236 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.82 | ± 9.6 % |
| 10242 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 9.86 | ± 9.6 % |
| 10243 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.46 | ± 9.6 % |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10245 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10246 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.91 | ± 9.6 % |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | ± 9.6 % |
| 10249 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.81 | ± 9.6 % |
| 10251 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.17 | ± 9.6 % |
| 10252 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 9.90 | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-TDD | 9.20 | ± 9.6 % |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | ± 9.6 % |
| 10257 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | ± 9.6 % |
| 10258 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | ± 9.6 % |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.98 | ± 9.6 % |
| 10260 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TDD | 9.97 | ± 9.6 % |



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|-------|-----|---|----------|-------|-------------|
| 10261 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-TDD | 9.24 | $\pm 9.6\%$ |
| 10262 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | $\pm 9.6\%$ |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.16 | $\pm 9.6\%$ |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | $\pm 9.6\%$ |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 | $\pm 9.6\%$ |
| 10266 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.07 | $\pm 9.6\%$ |
| 10267 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | $\pm 9.6\%$ |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.06 | $\pm 9.6\%$ |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.13 | $\pm 9.6\%$ |
| 10270 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-TDD | 9.58 | $\pm 9.6\%$ |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | WCDMA | 4.87 | $\pm 9.6\%$ |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | $\pm 9.6\%$ |
| 10277 | CAA | PHS (QPSK) | PHS | 11.81 | $\pm 9.6\%$ |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | $\pm 9.6\%$ |
| 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | $\pm 9.6\%$ |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | $\pm 9.6\%$ |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate | CDMA2000 | 3.46 | $\pm 9.6\%$ |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | $\pm 9.6\%$ |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | $\pm 9.6\%$ |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | CDMA2000 | 12.49 | $\pm 9.6\%$ |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.81 | $\pm 9.6\%$ |
| 10298 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-FDD | 5.72 | $\pm 9.6\%$ |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | $\pm 9.6\%$ |
| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10301 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WiMAX | 12.03 | $\pm 9.6\%$ |
| 10302 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL) | WiMAX | 12.57 | $\pm 9.6\%$ |
| 10303 | AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 12.52 | $\pm 9.6\%$ |
| 10304 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 11.86 | $\pm 9.6\%$ |
| 10305 | AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC) | WiMAX | 15.24 | $\pm 9.6\%$ |
| 10306 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC) | WiMAX | 14.67 | $\pm 9.6\%$ |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC) | WiMAX | 14.49 | $\pm 9.6\%$ |
| 10308 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WiMAX | 14.46 | $\pm 9.6\%$ |
| 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3) | WiMAX | 14.58 | $\pm 9.6\%$ |
| 10310 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3) | WiMAX | 14.57 | $\pm 9.6\%$ |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | $\pm 9.6\%$ |
| 10313 | AAA | IDEN 1:3 | IDEN | 10.51 | $\pm 9.6\%$ |
| 10314 | AAA | IDEN 1:6 | IDEN | 13.48 | $\pm 9.6\%$ |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc) | WLAN | 1.71 | $\pm 9.6\%$ |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10317 | AAD | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10352 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | $\pm 9.6\%$ |
| 10353 | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | $\pm 9.6\%$ |
| 10354 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | $\pm 9.6\%$ |
| 10355 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | $\pm 9.6\%$ |
| 10356 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | $\pm 9.6\%$ |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 | $\pm 9.6\%$ |
| 10388 | AAA | QPSK Waveform, 10 MHz | Generic | 5.22 | $\pm 9.6\%$ |
| 10396 | AAA | 64-QAM Waveform, 100 kHz | Generic | 6.27 | $\pm 9.6\%$ |
| 10399 | AAA | 64-QAM Waveform, 40 MHz | Generic | 6.27 | $\pm 9.6\%$ |
| 10400 | AAE | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc) | WLAN | 8.37 | $\pm 9.6\%$ |
| 10401 | AAE | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc) | WLAN | 8.60 | $\pm 9.6\%$ |
| 10402 | AAE | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc) | WLAN | 8.53 | $\pm 9.6\%$ |
| 10403 | AAB | CDMA2000 (1xEV-DQ, Rev. 0) | CDMA2000 | 3.76 | $\pm 9.6\%$ |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A) | CDMA2000 | 3.77 | $\pm 9.6\%$ |
| 10406 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 | 5.22 | $\pm 9.6\%$ |
| 10410 | AAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9) | LTE-TDD | 7.82 | $\pm 9.6\%$ |



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|-------|-----|--|----------|-------|---------|
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc) | WLAN | 1.54 | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc) | WLAN | 8.23 | ± 9.6 % |
| 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, 99pc, Short) | WLAN | 8.19 | ± 9.6 % |
| 10422 | AAC | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | ± 9.6 % |
| 10423 | AAC | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | ± 9.6 % |
| 10424 | AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | WLAN | 8.40 | ± 9.6 % |
| 10425 | AAC | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | WLAN | 8.41 | ± 9.6 % |
| 10426 | AAC | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN | 8.45 | ± 9.6 % |
| 10427 | AAC | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN | 8.41 | ± 9.6 % |
| 10430 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | LTE-FDD | 8.28 | ± 9.6 % |
| 10431 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | LTE-FDD | 8.38 | ± 9.6 % |
| 10432 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | LTE-FDD | 8.34 | ± 9.6 % |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | LTE-FDD | 8.34 | ± 9.6 % |
| 10434 | AAA | W-CDMA (BS Test Model 1, 64 DPCH) | WCDMA | 8.60 | ± 9.6 % |
| 10435 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10447 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.56 | ± 9.6 % |
| 10448 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.53 | ± 9.6 % |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.51 | ± 9.6 % |
| 10450 | AAC | 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 DPCH, Clipping 44%) | WCDMA | 7.59 | ± 9.6 % |
| 10453 | AAD | Validation (Square, 10ms, 1ms) | Test | 10.00 | ± 9.6 % |
| 10456 | AAC | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc) | WLAN | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ± 9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10462 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.30 | ± 9.6 % |
| 10463 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.56 | ± 9.6 % |
| 10464 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | ± 9.6 % |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | ± 9.6 % |
| 10467 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | ± 9.6 % |
| 10469 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.56 | ± 9.6 % |
| 10470 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10471 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | ± 9.6 % |
| 10472 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | ± 9.6 % |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | ± 9.6 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | ± 9.6 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | ± 9.6 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | ± 9.6 % |
| 10479 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | ± 9.6 % |
| 10480 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.18 | ± 9.6 % |
| 10481 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.45 | ± 9.6 % |
| 10482 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.71 | ± 9.6 % |
| 10483 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub) | LTE-TDD | 8.39 | ± 9.6 % |
| 10484 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.47 | ± 9.6 % |
| 10485 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.59 | ± 9.6 % |
| 10486 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.38 | ± 9.6 % |
| 10487 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.60 | ± 9.6 % |
| 10488 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.70 | ± 9.6 % |



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|-------|-----|---|---------|------|-------------|
| 10489 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.41 | $\pm 9.6\%$ |
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.37 | $\pm 9.6\%$ |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10497 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10498 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.40 | $\pm 9.6\%$ |
| 10499 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.68 | $\pm 9.6\%$ |
| 10500 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10501 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.44 | $\pm 9.6\%$ |
| 10502 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.52 | $\pm 9.6\%$ |
| 10503 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.72 | $\pm 9.6\%$ |
| 10504 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10505 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10506 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10507 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.36 | $\pm 9.6\%$ |
| 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.99 | $\pm 9.6\%$ |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.49 | $\pm 9.6\%$ |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.51 | $\pm 9.6\%$ |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.42 | $\pm 9.6\%$ |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.45 | $\pm 9.6\%$ |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc) | WLAN | 1.58 | $\pm 9.6\%$ |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc) | WLAN | 1.57 | $\pm 9.6\%$ |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc) | WLAN | 1.58 | $\pm 9.6\%$ |
| 10518 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc) | WLAN | 8.23 | $\pm 9.6\%$ |
| 10519 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc) | WLAN | 8.39 | $\pm 9.6\%$ |
| 10520 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc) | WLAN | 8.12 | $\pm 9.6\%$ |
| 10521 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc) | WLAN | 7.97 | $\pm 9.6\%$ |
| 10522 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10523 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc) | WLAN | 8.08 | $\pm 9.6\%$ |
| 10524 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc) | WLAN | 8.27 | $\pm 9.6\%$ |
| 10525 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10526 | AAC | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc) | WLAN | 8.42 | $\pm 9.6\%$ |
| 10527 | AAC | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc) | WLAN | 8.21 | $\pm 9.6\%$ |
| 10528 | AAC | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10529 | AAC | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10531 | AAC | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc) | WLAN | 8.43 | $\pm 9.6\%$ |
| 10532 | AAC | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc) | WLAN | 8.29 | $\pm 9.6\%$ |
| 10533 | AAC | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc) | WLAN | 8.38 | $\pm 9.6\%$ |
| 10534 | AAC | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10535 | AAC | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10536 | AAC | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc) | WLAN | 8.32 | $\pm 9.6\%$ |
| 10537 | AAC | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc) | WLAN | 8.44 | $\pm 9.6\%$ |
| 10538 | AAC | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc) | WLAN | 8.54 | $\pm 9.6\%$ |
| 10540 | AAC | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc) | WLAN | 8.39 | $\pm 9.6\%$ |
| 10541 | AAC | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc) | WLAN | 8.46 | $\pm 9.6\%$ |
| 10542 | AAC | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc) | WLAN | 8.65 | $\pm 9.6\%$ |
| 10543 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc) | WLAN | 8.65 | $\pm 9.6\%$ |
| 10544 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc) | WLAN | 8.47 | $\pm 9.6\%$ |
| 10545 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc) | WLAN | 8.55 | $\pm 9.6\%$ |
| 10546 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc) | WLAN | 8.35 | $\pm 9.6\%$ |

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|-------|-----|---|------|------|---------|
| 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 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc) | WLAN | 8.39 | ± 9.6 % |
| 10551 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc 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 | AAD | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc) | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAD | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc) | WLAN | 8.47 | ± 9.6 % |
| 10556 | AAD | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc) | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAD | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc) | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAD | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAD | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAD | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc) | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAD | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc) | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAD | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc) | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc) | WLAN | 8.25 | ± 9.6 % |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc) | WLAN | 8.45 | ± 9.6 % |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc) | WLAN | 8.13 | ± 9.6 % |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc) | WLAN | 8.00 | ± 9.6 % |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc) | WLAN | 8.37 | ± 9.6 % |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc) | WLAN | 8.10 | ± 9.6 % |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc) | WLAN | 8.30 | ± 9.6 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc) | WLAN | 1.99 | ± 9.6 % |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc) | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc) | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc) | WLAN | 8.59 | ± 9.6 % |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc) | WLAN | 8.60 | ± 9.6 % |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc) | WLAN | 8.70 | ± 9.6 % |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc) | WLAN | 8.49 | ± 9.6 % |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc) | WLAN | 8.36 | ± 9.6 % |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc) | WLAN | 8.76 | ± 9.6 % |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc) | WLAN | 8.35 | ± 9.6 % |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc) | WLAN | 8.67 | ± 9.6 % |
| 10583 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc) | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc) | WLAN | 8.60 | ± 9.6 % |
| 10585 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc) | WLAN | 8.70 | ± 9.6 % |
| 10586 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc) | WLAN | 8.49 | ± 9.6 % |
| 10587 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc) | WLAN | 8.36 | ± 9.6 % |
| 10588 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc) | WLAN | 8.76 | ± 9.6 % |
| 10589 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc) | WLAN | 8.35 | ± 9.6 % |
| 10590 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc) | WLAN | 8.67 | ± 9.6 % |
| 10591 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc) | WLAN | 8.63 | ± 9.6 % |
| 10592 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc) | WLAN | 8.79 | ± 9.6 % |
| 10593 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc) | WLAN | 8.64 | ± 9.6 % |
| 10594 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc) | WLAN | 8.74 | ± 9.6 % |
| 10595 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc) | WLAN | 8.74 | ± 9.6 % |
| 10596 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc) | WLAN | 8.71 | ± 9.6 % |
| 10597 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc) | WLAN | 8.72 | ± 9.6 % |
| 10598 | AAC | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc) | WLAN | 8.50 | ± 9.6 % |
| 10599 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc) | WLAN | 8.79 | ± 9.6 % |
| 10600 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc) | WLAN | 8.88 | ± 9.6 % |
| 10601 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc) | WLAN | 8.82 | ± 9.6 % |
| 10602 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc) | WLAN | 8.94 | ± 9.6 % |
| 10603 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc) | WLAN | 9.03 | ± 9.6 % |
| 10604 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc) | WLAN | 8.76 | ± 9.6 % |

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| | | | | | |
|-------|-----|---|-----------|-------|-------------|
| 10605 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc) | WLAN | 8.97 | $\pm 9.6\%$ |
| 10606 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10607 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc) | WLAN | 8.64 | $\pm 9.6\%$ |
| 10608 | AAC | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10609 | AAC | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc dc) | WLAN | 8.57 | $\pm 9.6\%$ |
| 10610 | AAC | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc dc) | WLAN | 8.78 | $\pm 9.6\%$ |
| 10611 | AAC | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc) | WLAN | 8.70 | $\pm 9.6\%$ |
| 10612 | AAC | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10613 | AAC | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc dc) | WLAN | 8.94 | $\pm 9.6\%$ |
| 10614 | AAC | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10615 | AAC | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10616 | AAC | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10617 | AAC | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10618 | AAC | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc dc) | WLAN | 8.58 | $\pm 9.6\%$ |
| 10619 | AAC | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc dc) | WLAN | 8.86 | $\pm 9.6\%$ |
| 10620 | AAC | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc dc) | WLAN | 8.87 | $\pm 9.6\%$ |
| 10621 | AAC | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10622 | AAC | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc dc) | WLAN | 8.68 | $\pm 9.6\%$ |
| 10623 | AAC | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10624 | AAC | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc) | WLAN | 8.96 | $\pm 9.6\%$ |
| 10625 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc dc) | WLAN | 8.96 | $\pm 9.6\%$ |
| 10626 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10627 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc) | WLAN | 8.88 | $\pm 9.6\%$ |
| 10628 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc dc) | WLAN | 8.71 | $\pm 9.6\%$ |
| 10629 | AAC | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc dc) | WLAN | 8.85 | $\pm 9.6\%$ |
| 10630 | AAC | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc dc) | WLAN | 8.72 | $\pm 9.6\%$ |
| 10631 | AAC | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10632 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc) | WLAN | 8.74 | $\pm 9.6\%$ |
| 10633 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10634 | AAC | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc dc) | WLAN | 8.80 | $\pm 9.6\%$ |
| 10635 | AAC | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10636 | AAD | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10637 | AAD | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc) | WLAN | 8.79 | $\pm 9.6\%$ |
| 10638 | AAD | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc) | WLAN | 8.86 | $\pm 9.6\%$ |
| 10639 | AAD | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc dc) | WLAN | 8.85 | $\pm 9.6\%$ |
| 10640 | AAD | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc dc) | WLAN | 8.98 | $\pm 9.6\%$ |
| 10641 | AAD | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc) | WLAN | 9.06 | $\pm 9.6\%$ |
| 10642 | AAD | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc dc) | WLAN | 9.06 | $\pm 9.6\%$ |
| 10643 | AAD | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc dc) | WLAN | 8.89 | $\pm 9.6\%$ |
| 10644 | AAD | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc) | WLAN | 9.05 | $\pm 9.6\%$ |
| 10645 | AAD | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc dc) | WLAN | 9.11 | $\pm 9.6\%$ |
| 10646 | AAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7) | LTE-TDD | 11.96 | $\pm 9.6\%$ |
| 10647 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7) | LTE-TDD | 11.96 | $\pm 9.6\%$ |
| 10648 | AAA | CDMA2000 (1x Advanced) | CDMA2000 | 3.45 | $\pm 9.6\%$ |
| 10652 | AAE | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | $\pm 9.6\%$ |
| 10653 | AAE | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.42 | $\pm 9.6\%$ |
| 10654 | AAD | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.96 | $\pm 9.6\%$ |
| 10655 | AAE | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.21 | $\pm 9.6\%$ |
| 10658 | AAA | Pulse Waveform (200Hz, 10%) | Test | 10.00 | $\pm 9.6\%$ |
| 10659 | AAA | Pulse Waveform (200Hz, 20%) | Test | 6.99 | $\pm 9.6\%$ |
| 10660 | AAA | Pulse Waveform (200Hz, 40%) | Test | 3.98 | $\pm 9.6\%$ |
| 10661 | AAA | Pulse Waveform (200Hz, 60%) | Test | 2.22 | $\pm 9.6\%$ |
| 10662 | AAA | Pulse Waveform (200Hz, 80%) | Test | 0.97 | $\pm 9.6\%$ |
| 10670 | AAA | Bluetooth Low Energy | Bluetooth | 2.19 | $\pm 9.6\%$ |
| 10671 | AAC | IEEE 802.11ax (20MHz, MCS0, 90pc dc) | WLAN | 9.09 | $\pm 9.6\%$ |
| 10672 | AAC | IEEE 802.11ax (20MHz, MCS1, 90pc dc) | WLAN | 8.57 | $\pm 9.6\%$ |

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|-------|-----|---------------------------------------|------|------|---------|
| 10673 | AAC | IEEE 802.11ax (20MHz, MCS2, 90pc dc) | WLAN | 8.78 | ± 9.6 % |
| 10674 | AAC | IEEE 802.11ax (20MHz, MCS3, 90pc dc) | WLAN | 8.74 | ± 9.6 % |
| 10675 | AAC | IEEE 802.11ax (20MHz, MCS4, 90pc dc) | WLAN | 8.90 | ± 9.6 % |
| 10676 | AAC | IEEE 802.11ax (20MHz, MCS5, 90pc dc) | WLAN | 8.77 | ± 9.6 % |
| 10677 | AAC | IEEE 802.11ax (20MHz, MCS6, 90pc dc) | WLAN | 8.73 | ± 9.6 % |
| 10678 | AAC | IEEE 802.11ax (20MHz, MCS7, 90pc dc) | WLAN | 8.78 | ± 9.6 % |
| 10679 | AAC | IEEE 802.11ax (20MHz, MCS8, 90pc dc) | WLAN | 8.89 | ± 9.6 % |
| 10680 | AAC | IEEE 802.11ax (20MHz, MCS9, 90pc dc) | WLAN | 8.80 | ± 9.6 % |
| 10681 | AAC | IEEE 802.11ax (20MHz, MCS10, 90pc dc) | WLAN | 8.62 | ± 9.6 % |
| 10682 | AAC | IEEE 802.11ax (20MHz, MCS11, 90pc dc) | WLAN | 8.83 | ± 9.6 % |
| 10683 | AAC | IEEE 802.11ax (20MHz, MCS0, 99pc dc) | WLAN | 8.42 | ± 9.6 % |
| 10684 | AAC | IEEE 802.11ax (20MHz, MCS1, 99pc dc) | WLAN | 8.26 | ± 9.6 % |
| 10685 | AAC | IEEE 802.11ax (20MHz, MCS2, 99pc dc) | WLAN | 8.33 | ± 9.6 % |
| 10686 | AAC | IEEE 802.11ax (20MHz, MCS3, 99pc dc) | WLAN | 8.28 | ± 9.6 % |
| 10687 | AAC | IEEE 802.11ax (20MHz, MCS4, 99pc dc) | WLAN | 8.45 | ± 9.6 % |
| 10688 | AAC | IEEE 802.11ax (20MHz, MCS5, 99pc dc) | WLAN | 8.29 | ± 9.6 % |
| 10689 | AAC | IEEE 802.11ax (20MHz, MCS6, 99pc dc) | WLAN | 8.55 | ± 9.6 % |
| 10690 | AAC | IEEE 802.11ax (20MHz, MCS7, 99pc dc) | WLAN | 8.29 | ± 9.6 % |
| 10691 | AAC | IEEE 802.11ax (20MHz, MCS8, 99pc dc) | WLAN | 8.25 | ± 9.6 % |
| 10692 | AAC | IEEE 802.11ax (20MHz, MCS9, 99pc dc) | WLAN | 8.29 | ± 9.6 % |
| 10693 | AAC | IEEE 802.11ax (20MHz, MCS10, 99pc dc) | WLAN | 8.25 | ± 9.6 % |
| 10694 | AAC | IEEE 802.11ax (20MHz, MCS11, 99pc dc) | WLAN | 8.57 | ± 9.6 % |
| 10695 | AAC | IEEE 802.11ax (40MHz, MCS0, 90pc dc) | WLAN | 8.78 | ± 9.6 % |
| 10696 | AAC | IEEE 802.11ax (40MHz, MCS1, 90pc dc) | WLAN | 8.91 | ± 9.6 % |
| 10697 | AAC | IEEE 802.11ax (40MHz, MCS2, 90pc dc) | WLAN | 8.61 | ± 9.6 % |
| 10698 | AAC | IEEE 802.11ax (40MHz, MCS3, 90pc dc) | WLAN | 8.89 | ± 9.6 % |
| 10699 | AAC | IEEE 802.11ax (40MHz, MCS4, 90pc dc) | WLAN | 8.82 | ± 9.6 % |
| 10700 | AAC | IEEE 802.11ax (40MHz, MCS5, 90pc dc) | WLAN | 8.73 | ± 9.6 % |
| 10701 | AAC | IEEE 802.11ax (40MHz, MCS6, 90pc dc) | WLAN | 8.86 | ± 9.6 % |
| 10702 | AAC | IEEE 802.11ax (40MHz, MCS7, 90pc dc) | WLAN | 8.70 | ± 9.6 % |
| 10703 | AAC | IEEE 802.11ax (40MHz, MCS8, 90pc dc) | WLAN | 8.82 | ± 9.6 % |
| 10704 | AAC | IEEE 802.11ax (40MHz, MCS9, 90pc dc) | WLAN | 8.56 | ± 9.6 % |
| 10705 | AAC | IEEE 802.11ax (40MHz, MCS10, 90pc dc) | WLAN | 8.69 | ± 9.6 % |
| 10706 | AAC | IEEE 802.11ax (40MHz, MCS11, 90pc dc) | WLAN | 8.66 | ± 9.6 % |
| 10707 | AAC | IEEE 802.11ax (40MHz, MCS0, 99pc dc) | 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 dc) | WLAN | 8.33 | ± 9.6 % |
| 10710 | AAC | IEEE 802.11ax (40MHz, MCS3, 99pc dc) | WLAN | 8.29 | ± 9.6 % |
| 10711 | AAC | IEEE 802.11ax (40MHz, MCS4, 99pc dc) | WLAN | 8.39 | ± 9.6 % |
| 10712 | AAC | IEEE 802.11ax (40MHz, MCS5, 99pc dc) | WLAN | 8.67 | ± 9.6 % |
| 10713 | AAC | IEEE 802.11ax (40MHz, MCS6, 99pc dc) | WLAN | 8.33 | ± 9.6 % |
| 10714 | AAC | IEEE 802.11ax (40MHz, MCS7, 99pc dc) | WLAN | 8.26 | ± 9.6 % |
| 10715 | AAC | IEEE 802.11ax (40MHz, MCS8, 99pc dc) | WLAN | 8.45 | ± 9.6 % |
| 10716 | AAC | IEEE 802.11ax (40MHz, MCS9, 99pc 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) | WLAN | 8.24 | ± 9.6 % |
| 10719 | AAC | IEEE 802.11ax (80MHz, 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, MCS2, 90pc dc) | 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, 90pc dc) | WLAN | 8.70 | ± 9.6 % |
| 10724 | AAC | IEEE 802.11ax (80MHz, MCS5, 90pc dc) | WLAN | 8.90 | ± 9.6 % |
| 10725 | AAC | IEEE 802.11ax (80MHz, MCS6, 90pc dc) | WLAN | 8.74 | ± 9.6 % |
| 10726 | AAC | IEEE 802.11ax (80MHz, MCS7, 90pc dc) | WLAN | 8.72 | ± 9.6 % |
| 10727 | AAC | IEEE 802.11ax (80MHz, MCS8, 90pc dc) | WLAN | 8.66 | ± 9.6 % |
| 10728 | AAC | IEEE 802.11ax (80MHz, MCS9, 90pc dc) | WLAN | 8.65 | ± 9.6 % |

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|-------|-----|--|---------------|------|-------------|
| 10729 | AAC | IEEE 802.11ax (80MHz, MCS10, 90pc dc) | WLAN | 8.64 | $\pm 9.6\%$ |
| 10730 | AAC | IEEE 802.11ax (80MHz, MCS11, 90pc dc) | WLAN | 8.67 | $\pm 9.6\%$ |
| 10731 | AAC | IEEE 802.11ax (80MHz, MCS0, 99pc dc) | WLAN | 8.42 | $\pm 9.6\%$ |
| 10732 | AAC | IEEE 802.11ax (80MHz, MCS1, 99pc dc) | WLAN | 8.46 | $\pm 9.6\%$ |
| 10733 | AAC | IEEE 802.11ax (80MHz, MCS2, 99pc dc) | WLAN | 8.40 | $\pm 9.6\%$ |
| 10734 | AAC | IEEE 802.11ax (80MHz, MCS3, 99pc dc) | WLAN | 8.25 | $\pm 9.6\%$ |
| 10735 | AAC | IEEE 802.11ax (80MHz, MCS4, 99pc dc) | WLAN | 8.33 | $\pm 9.6\%$ |
| 10736 | AAC | IEEE 802.11ax (80MHz, MCS5, 99pc dc) | WLAN | 8.27 | $\pm 9.6\%$ |
| 10737 | AAC | IEEE 802.11ax (80MHz, MCS6, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10738 | AAC | IEEE 802.11ax (80MHz, MCS7, 99pc dc) | WLAN | 8.42 | $\pm 9.6\%$ |
| 10739 | AAC | IEEE 802.11ax (80MHz, MCS8, 99pc dc) | WLAN | 8.29 | $\pm 9.6\%$ |
| 10740 | AAC | IEEE 802.11ax (80MHz, MCS9, 99pc dc) | WLAN | 8.48 | $\pm 9.6\%$ |
| 10741 | AAC | IEEE 802.11ax (80MHz, MCS10, 99pc dc) | WLAN | 8.40 | $\pm 9.6\%$ |
| 10742 | AAC | IEEE 802.11ax (80MHz, MCS11, 99pc dc) | WLAN | 8.43 | $\pm 9.6\%$ |
| 10743 | AAC | IEEE 802.11ax (160MHz, MCS0, 90pc dc) | WLAN | 8.94 | $\pm 9.6\%$ |
| 10744 | AAC | IEEE 802.11ax (160MHz, MCS1, 90pc dc) | WLAN | 9.16 | $\pm 9.6\%$ |
| 10745 | AAC | IEEE 802.11ax (160MHz, MCS2, 90pc dc) | WLAN | 8.93 | $\pm 9.6\%$ |
| 10746 | AAC | IEEE 802.11ax (160MHz, MCS3, 90pc dc) | WLAN | 9.11 | $\pm 9.6\%$ |
| 10747 | AAC | IEEE 802.11ax (160MHz, MCS4, 90pc dc) | WLAN | 9.04 | $\pm 9.6\%$ |
| 10748 | AAC | IEEE 802.11ax (160MHz, MCS5, 90pc dc) | WLAN | 8.93 | $\pm 9.6\%$ |
| 10749 | AAC | IEEE 802.11ax (160MHz, MCS6, 90pc dc) | WLAN | 8.90 | $\pm 9.6\%$ |
| 10750 | AAC | IEEE 802.11ax (160MHz, MCS7, 90pc dc) | WLAN | 8.79 | $\pm 9.6\%$ |
| 10751 | AAC | IEEE 802.11ax (160MHz, MCS8, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10752 | AAC | IEEE 802.11ax (160MHz, MCS9, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10753 | AAC | IEEE 802.11ax (160MHz, MCS10, 90pc dc) | WLAN | 9.00 | $\pm 9.6\%$ |
| 10754 | AAC | IEEE 802.11ax (160MHz, MCS11, 90pc dc) | WLAN | 8.94 | $\pm 9.6\%$ |
| 10755 | AAC | IEEE 802.11ax (160MHz, MCS0, 99pc dc) | WLAN | 8.64 | $\pm 9.6\%$ |
| 10756 | AAC | IEEE 802.11ax (160MHz, MCS1, 99pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10757 | AAC | IEEE 802.11ax (160MHz, MCS2, 99pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10758 | AAC | IEEE 802.11ax (160MHz, MCS3, 99pc dc) | WLAN | 8.69 | $\pm 9.6\%$ |
| 10759 | AAC | IEEE 802.11ax (160MHz, MCS4, 99pc dc) | WLAN | 8.58 | $\pm 9.6\%$ |
| 10760 | AAC | IEEE 802.11ax (160MHz, MCS5, 99pc dc) | WLAN | 8.49 | $\pm 9.6\%$ |
| 10761 | AAC | IEEE 802.11ax (160MHz, MCS6, 99pc dc) | WLAN | 8.58 | $\pm 9.6\%$ |
| 10762 | AAC | IEEE 802.11ax (160MHz, MCS7, 99pc dc) | WLAN | 8.49 | $\pm 9.6\%$ |
| 10763 | AAC | IEEE 802.11ax (160MHz, MCS8, 99pc dc) | WLAN | 8.53 | $\pm 9.6\%$ |
| 10764 | AAC | IEEE 802.11ax (160MHz, MCS9, 99pc dc) | WLAN | 8.54 | $\pm 9.6\%$ |
| 10765 | AAC | IEEE 802.11ax (160MHz, MCS10, 99pc dc) | WLAN | 8.54 | $\pm 9.6\%$ |
| 10766 | AAC | IEEE 802.11ax (160MHz, MCS11, 99pc dc) | WLAN | 8.51 | $\pm 9.6\%$ |
| 10767 | AAE | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 7.99 | $\pm 9.6\%$ |
| 10768 | AAD | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.01 | $\pm 9.6\%$ |
| 10769 | AAD | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.01 | $\pm 9.6\%$ |
| 10770 | AAD | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.02 | $\pm 9.6\%$ |
| 10771 | AAD | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.02 | $\pm 9.6\%$ |
| 10772 | AAD | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.23 | $\pm 9.6\%$ |
| 10773 | AAD | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.03 | $\pm 9.6\%$ |
| 10774 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.02 | $\pm 9.6\%$ |
| 10775 | AAD | 5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.31 | $\pm 9.6\%$ |
| 10776 | AAD | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.30 | $\pm 9.6\%$ |
| 10777 | AAC | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.30 | $\pm 9.6\%$ |
| 10778 | AAD | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.34 | $\pm 9.6\%$ |
| 10779 | AAC | 5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.42 | $\pm 9.6\%$ |
| 10780 | AAD | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.38 | $\pm 9.6\%$ |
| 10781 | AAD | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.38 | $\pm 9.6\%$ |
| 10782 | AAD | 5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.43 | $\pm 9.6\%$ |
| 10783 | AAE | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.31 | $\pm 9.6\%$ |
| 10784 | AAD | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.29 | $\pm 9.6\%$ |

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| | | | | | |
|-------|-----|---|---------------|------|---------|
| 10785 | AAD | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10786 | AAD | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10787 | AAD | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.44 | ± 9.6 % |
| 10788 | AAD | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10789 | AAD | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10790 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10791 | AAE | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.83 | ± 9.6 % |
| 10792 | AAD | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.92 | ± 9.6 % |
| 10793 | AAD | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.95 | ± 9.6 % |
| 10794 | AAD | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.82 | ± 9.6 % |
| 10795 | AAD | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.84 | ± 9.6 % |
| 10796 | AAD | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.82 | ± 9.6 % |
| 10797 | AAD | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10798 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10799 | AAD | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.93 | ± 9.6 % |
| 10801 | AAD | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10802 | AAD | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.87 | ± 9.6 % |
| 10803 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.93 | ± 9.6 % |
| 10805 | AAD | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10806 | AAD | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10809 | AAD | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10810 | AAD | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10812 | AAD | 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10817 | AAE | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10818 | AAD | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10819 | AAD | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.33 | ± 9.6 % |
| 10820 | AAD | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10821 | AAD | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10822 | AAD | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10823 | AAD | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10824 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10825 | AAD | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10827 | AAD | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.42 | ± 9.6 % |
| 10828 | AAD | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.43 | ± 9.6 % |
| 10829 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10830 | AAD | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.63 | ± 9.6 % |
| 10831 | AAD | 5G NR (CP-OFDM, 1 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 | 7.74 | ± 9.6 % |
| 10833 | AAD | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10834 | AAD | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.75 | ± 9.6 % |
| 10835 | AAD | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10836 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.66 | ± 9.6 % |
| 10837 | AAD | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.68 | ± 9.6 % |
| 10839 | AAD | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10840 | AAD | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.67 | ± 9.6 % |
| 10841 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.71 | ± 9.6 % |
| 10843 | AAD | 5G NR (CP-OFDM, 50% 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 | 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 TDD | 8.34 | ± 9.6 % |
| 10855 | AAD | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10856 | AAD | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10857 | AAD | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 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 TDD | 8.34 | ± 9.6 % |
| 10860 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |

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|-------|-----|--|---------------|------|---------|
| 10861 | AAD | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10863 | AAD | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10864 | AAD | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10865 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10866 | 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-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10870 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.86 | ± 9.6 % |
| 10871 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10872 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 6.52 | ± 9.6 % |
| 10873 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.61 | ± 9.6 % |
| 10874 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.65 | ± 9.6 % |
| 10875 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 7.78 | ± 9.6 % |
| 10876 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 8.39 | ± 9.6 % |
| 10877 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 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, 64QAM, 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 TDD | 8.38 | ± 9.6 % |
| 10881 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10882 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.96 | ± 9.6 % |
| 10883 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 6.57 | ± 9.6 % |
| 10884 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 6.53 | ± 9.6 % |
| 10885 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.61 | ± 9.6 % |
| 10886 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.65 | ± 9.6 % |
| 10887 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 7.78 | ± 9.6 % |
| 10888 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 8.35 | ± 9.6 % |
| 10889 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 8.02 | ± 9.6 % |
| 10890 | 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, 64QAM, 120 kHz) | 5G 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 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.66 | ± 9.6 % |
| 10898 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.67 | ± 9.6 % |
| 10899 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.67 | ± 9.6 % |
| 10900 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10901 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10902 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10903 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10904 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10905 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10906 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10907 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.78 | ± 9.6 % |
| 10908 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.93 | ± 9.6 % |
| 10909 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.96 | ± 9.6 % |
| 10910 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.83 | ± 9.6 % |
| 10911 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.93 | ± 9.6 % |
| 10912 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10913 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10914 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.85 | ± 9.6 % |
| 10915 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.83 | ± 9.6 % |
| 10916 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.87 | ± 9.6 % |
| 10917 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.94 | ± 9.6 % |
| 10918 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.86 | ± 9.6 % |
| 10919 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.86 | ± 9.6 % |
| 10920 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.87 | ± 9.6 % |
| 10921 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10922 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.82 | ± 9.6 % |

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|-------|-----|---|---------------|-------|---------|
| 10923 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10924 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10925 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.95 | ± 9.6 % |
| 10926 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10927 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.94 | ± 9.6 % |
| 10928 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.52 | ± 9.6 % |
| 10929 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.52 | ± 9.6 % |
| 10930 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.52 | ± 9.6 % |
| 10931 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.51 | ± 9.6 % |
| 10932 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.51 | ± 9.6 % |
| 10933 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.51 | ± 9.6 % |
| 10934 | AAC | 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.51 | ± 9.6 % |
| 10935 | AAD | 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-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.90 | ± 9.6 % |
| 10937 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.77 | ± 9.6 % |
| 10938 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.90 | ± 9.6 % |
| 10939 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.82 | ± 9.6 % |
| 10940 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.89 | ± 9.6 % |
| 10941 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.83 | ± 9.6 % |
| 10942 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.85 | ± 9.6 % |
| 10943 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.95 | ± 9.6 % |
| 10944 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.81 | ± 9.6 % |
| 10945 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.85 | ± 9.6 % |
| 10946 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.83 | ± 9.6 % |
| 10947 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.87 | ± 9.6 % |
| 10948 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.94 | ± 9.6 % |
| 10949 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.87 | ± 9.6 % |
| 10950 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.94 | ± 9.6 % |
| 10951 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 FDD | 5.92 | ± 9.6 % |
| 10952 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) | 5G NR FR1 FDD | 8.25 | ± 9.6 % |
| 10953 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) | 5G NR FR1 FDD | 8.15 | ± 9.6 % |
| 10954 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) | 5G NR FR1 FDD | 8.23 | ± 9.6 % |
| 10955 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) | 5G NR FR1 FDD | 8.42 | ± 9.6 % |
| 10956 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) | 5G NR FR1 FDD | 8.14 | ± 9.6 % |
| 10957 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) | 5G NR FR1 FDD | 8.31 | ± 9.6 % |
| 10958 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) | 5G NR FR1 FDD | 8.61 | ± 9.6 % |
| 10959 | AAA | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) | 5G NR FR1 FDD | 8.33 | ± 9.6 % |
| 10960 | AAC | 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-OFDM, 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, 64-QAM, 15 kHz) | 5G NR FR1 TDD | 9.40 | ± 9.6 % |
| 10963 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) | 5G NR FR1 TDD | 9.55 | ± 9.6 % |
| 10964 | AAC | 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 3.1, 10 MHz, 64-QAM, 30 kHz) | 5G NR FR1 TDD | 9.37 | ± 9.6 % |
| 10966 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) | 5G NR FR1 TDD | 9.55 | ± 9.6 % |
| 10967 | AAB | 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) | 5G NR FR1 TDD | 9.49 | ± 9.6 % |
| 10969 | 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 TDD | 9.06 | ± 9.6 % |
| 10974 | AAB | 5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz) | 5G NR FR1 TDD | 10.28 | ± 9.6 % |
| 10978 | AAA | ULLA BDR | ULLA | 2.23 | ± 9.6 % |
| 10979 | AAA | ULLA HDR4 | ULLA | 7.02 | ± 9.6 % |
| 10980 | AAA | ULLA HDR8 | ULLA | 8.82 | ± 9.6 % |
| 10981 | AAA | ULLA HDRp4 | ULLA | 1.50 | ± 9.6 % |
| 10982 | AAA | ULLA HDRp8 | ULLA | 1.44 | ± 9.6 % |

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



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Accreditation No.: SCS 0108

Client TÜV SÜD UK

Certificate No: EX3-7536_Jun21

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:7536

Calibration procedure(s) QA CAL-01.v9, QA CAL-14.v6, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: June 18, 2021

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

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID | Cal Date (Certificate No.) | Scheduled Calibration |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 09-Apr-21 (No. 217-03291/03292) | Apr-22 |
| Power sensor NRP-Z91 | SN: 103244 | 09-Apr-21 (No. 217-03291) | Apr-22 |
| Power sensor NRP-Z91 | SN: 103245 | 09-Apr-21 (No. 217-03292) | Apr-22 |
| Reference 20 dB Attenuator | 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 | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-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 | 06-Apr-16 (in house check Jun-20) | In house check: Jun-22 |
| RF generator HP 8848C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-20) | In house check: Jun-22 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-20) | In house check: Oct-21 |

| Calibrated by: | Name | Function | Signature |
|----------------|-----------------|-----------------------|-----------|
| | Jelton Kastrati | Laboratory Technician | |
| Approved by: | Katja Pokovac | Technical Manager | |

Issued: June 21, 2021

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



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary:

| | |
|-----------------------|--|
| TSL | tissue simulating liquid |
| NORM x,y,z | sensitivity in free space |
| ConvF | sensitivity in TSL / NORM x,y,z |
| DCP | diode compression point |
| CF | crest factor (1/duty_cycle) of the RF signal |
| A, B, C, D | modulation dependent linearization parameters |
| Polarization ϕ | ϕ rotation around probe axis |
| Polarization θ | θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ 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:

- 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
- 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
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 5 GHz"

Methods Applied and Interpretation of Parameters:

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



EX3DV4 – SN:7536

June 18, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7536

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|---|----------|----------|----------|--------------|
| Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A | 0.56 | 0.62 | 0.65 | $\pm 10.1\%$ |
| DCP (mV) ^B | 93.7 | 99.7 | 97.6 | |

Calibration Results for Modulation Response

| UID | Communication System Name | | A dB | B dB/ μV | C | D dB | VR mV | Max dev. | Max Unc ^C (k=2) |
|---------------|-----------------------------|---|---------|------------------------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | X | 0.00 | 0.00 | 1.00 | 0.00 | 135.0 | $\pm 2.5\%$ | $\pm 4.7\%$ |
| | | Y | 0.00 | 0.00 | 1.00 | | 140.4 | | |
| | | Z | 0.00 | 0.00 | 1.00 | | 128.5 | | |
| 10352- AAA | Pulse Waveform (200Hz, 10%) | X | 2.03 | 64.57 | 9.42 | 10.00 | 60.0 | $\pm 4.8\%$ | $\pm 9.6\%$ |
| | | Y | 20.00 | 90.60 | 19.90 | | 60.0 | | |
| | | Z | 2.89 | 67.95 | 11.11 | | 60.0 | | |
| 10353- AAA | Pulse Waveform (200Hz, 20%) | X | 1.38 | 63.65 | 8.27 | 6.99 | 80.0 | $\pm 3.4\%$ | $\pm 9.6\%$ |
| | | Y | 20.00 | 92.61 | 19.76 | | 80.0 | | |
| | | Z | 2.68 | 69.17 | 10.84 | | 80.0 | | |
| 10354- AAA | Pulse Waveform (200Hz, 40%) | X | 1.20 | 65.62 | 8.54 | 3.98 | 95.0 | $\pm 1.8\%$ | $\pm 9.6\%$ |
| | | Y | 20.00 | 97.59 | 20.87 | | 95.0 | | |
| | | Z | 20.00 | 86.87 | 15.41 | | 95.0 | | |
| 10355- AAA | Pulse Waveform (200Hz, 60%) | X | 15.56 | 85.19 | 14.00 | 2.22 | 120.0 | $\pm 1.0\%$ | $\pm 9.6\%$ |
| | | Y | 20.00 | 103.77 | 22.60 | | 120.0 | | |
| | | Z | 20.00 | 92.50 | 17.20 | | 120.0 | | |
| 10387- AAA | QPSK Waveform, 1 MHz | X | 1.72 | 65.73 | 15.00 | 1.00 | 150.0 | $\pm 1.8\%$ | $\pm 9.6\%$ |
| | | Y | 1.61 | 64.67 | 14.16 | | 150.0 | | |
| | | Z | 1.83 | 67.12 | 15.78 | | 150.0 | | |
| 10388- AAA | QPSK Waveform, 10 MHz | X | 2.27 | 67.78 | 15.69 | 0.00 | 150.0 | $\pm 1.0\%$ | $\pm 9.6\%$ |
| | | Y | 2.09 | 66.35 | 14.82 | | 150.0 | | |
| | | Z | 2.43 | 69.12 | 16.47 | | 150.0 | | |
| 10396- AAA | 64-QAM Waveform, 100 kHz | X | 2.85 | 70.35 | 18.91 | 3.01 | 150.0 | $\pm 0.8\%$ | $\pm 9.6\%$ |
| | | Y | 2.71 | 69.16 | 18.19 | | 150.0 | | |
| | | Z | 2.94 | 70.91 | 19.35 | | 150.0 | | |
| 10399- AAA | 64-QAM Waveform, 40 MHz | X | 3.56 | 67.04 | 15.79 | 0.00 | 150.0 | $\pm 0.8\%$ | $\pm 9.6\%$ |
| | | Y | 3.47 | 66.50 | 15.37 | | 150.0 | | |
| | | Z | 3.52 | 67.01 | 15.87 | | 150.0 | | |
| 10414- AAA | WLAN CCDF, 64-QAM, 40MHz | X | 4.94 | 65.60 | 15.56 | 0.00 | 150.0 | $\pm 1.9\%$ | $\pm 9.6\%$ |
| | | Y | 4.88 | 65.42 | 15.35 | | 150.0 | | |
| | | Z | 4.84 | 65.39 | 15.50 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

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



EX3DV4- SN:7536

June 18, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7536

Sensor Model Parameters

| | C1 ff | C2 ff | α V ⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V ⁻¹ | T6 |
|---|----------|----------|-----------------------------|--------------------------|--------------------------|----------|-----------------------|-----------------------|------|
| X | 49.5 | 372.25 | 35.96 | 11.39 | 0.00 | 4.96 | 1.51 | 0.14 | 1.01 |
| Y | 45.9 | 342.63 | 35.35 | 9.76 | 0.00 | 5.03 | 1.46 | 0.14 | 1.01 |
| Z | 46.7 | 349.47 | 35.68 | 12.24 | 0.00 | 4.97 | 1.08 | 0.21 | 1.01 |

Other Probe Parameters

| | |
|---|------------|
| Sensor Arrangement | Triangular |
| Connector Angle (") | -143.4 |
| 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 an *Area Scan* job.



DASY/EASY - Parameters of Probe: EX3DV4 - SN:7536

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^c | Relative Permittivity ^f | Conductivity (S/m) ^g | ConvF X | ConvF Y | ConvF Z | Alpha ^g | Depth ^g (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 450 | 43.5 | 0.87 | 11.78 | 11.78 | 11.78 | 0.16 | 1.30 | ± 13.3 % |
| 750 | 41.9 | 0.89 | 11.00 | 11.00 | 11.00 | 0.48 | 0.98 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 10.60 | 10.60 | 10.60 | 0.40 | 1.01 | ± 12.0 % |
| 900 | 41.5 | 0.97 | 10.41 | 10.41 | 10.41 | 0.58 | 0.80 | ± 12.0 % |
| 1450 | 40.5 | 1.20 | 9.20 | 9.20 | 9.20 | 0.42 | 0.80 | ± 12.0 % |
| 1640 | 40.2 | 1.31 | 9.02 | 9.02 | 9.02 | 0.32 | 0.86 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.98 | 8.98 | 8.98 | 0.31 | 0.86 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.58 | 8.58 | 8.58 | 0.34 | 0.86 | ± 12.0 % |
| 2100 | 39.8 | 1.49 | 8.49 | 8.49 | 8.49 | 0.35 | 0.86 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 8.21 | 8.21 | 8.21 | 0.33 | 0.90 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.82 | 7.82 | 7.82 | 0.34 | 0.90 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.63 | 7.63 | 7.63 | 0.37 | 0.90 | ± 12.0 % |
| 5200 | 36.0 | 4.66 | 5.48 | 5.48 | 5.48 | 0.40 | 1.80 | ± 13.1 % |
| 5300 | 35.9 | 4.76 | 5.37 | 5.37 | 5.37 | 0.40 | 1.80 | ± 13.1 % |
| 5500 | 35.6 | 4.96 | 4.90 | 4.90 | 4.90 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 4.85 | 4.85 | 4.85 | 0.40 | 1.80 | ± 13.1 % |
| 5800 | 35.3 | 5.27 | 4.80 | 4.80 | 4.80 | 0.40 | 1.80 | ± 13.1 % |

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

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

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



EX3DV4- SN:7536

June 18, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7536

Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^H (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 2450 | 52.7 | 1.95 | 7.80 | 7.80 | 7.80 | 0.39 | 0.90 | ± 12.0 % |
| 5200 | 49.0 | 5.30 | 4.95 | 4.95 | 4.95 | 0.50 | 1.90 | ± 13.1 % |
| 5300 | 48.9 | 5.42 | 4.85 | 4.85 | 4.85 | 0.50 | 1.90 | ± 13.1 % |
| 5500 | 48.6 | 5.65 | 4.50 | 4.50 | 4.50 | 0.50 | 1.90 | ± 13.1 % |
| 5600 | 48.5 | 5.77 | 4.41 | 4.41 | 4.41 | 0.50 | 1.90 | ± 13.1 % |
| 5800 | 48.2 | 6.00 | 4.40 | 4.40 | 4.40 | 0.50 | 1.90 | ± 13.1 % |

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

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

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

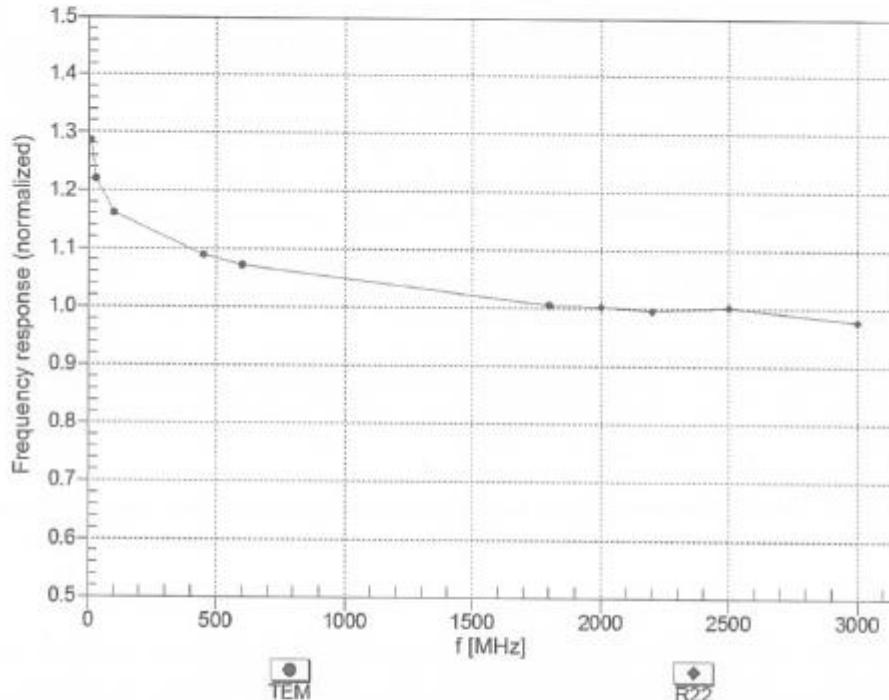


EX3DV4- SN:7536

June 18, 2021

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

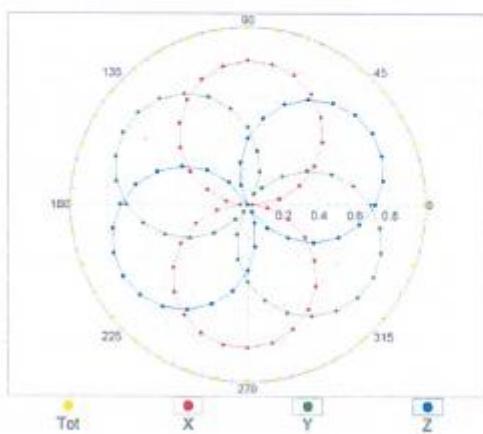


EX3DV4- SN:7536

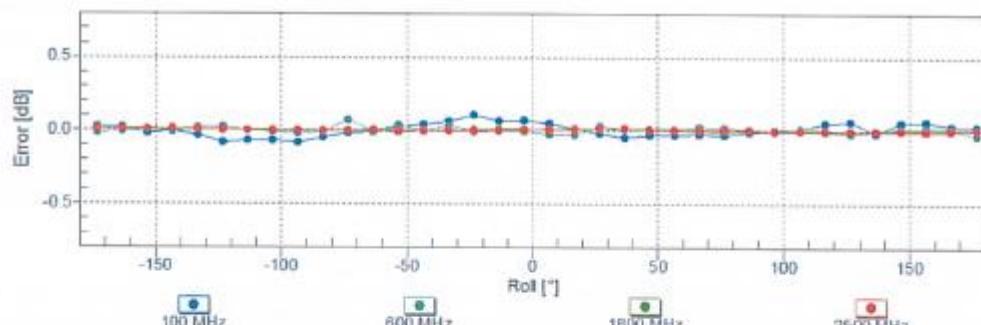
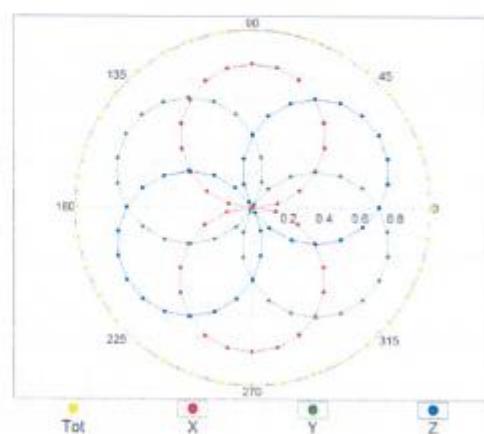
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Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz, TEM



f=1800 MHz, R22

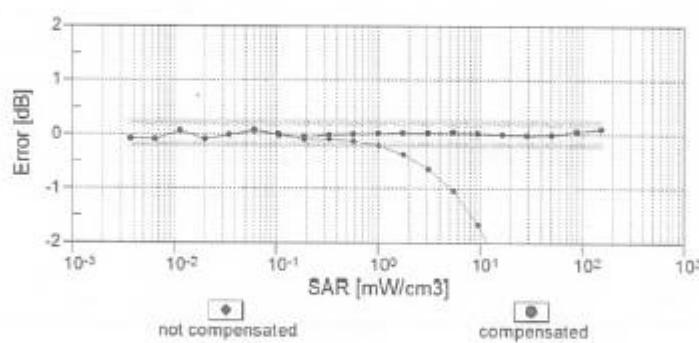
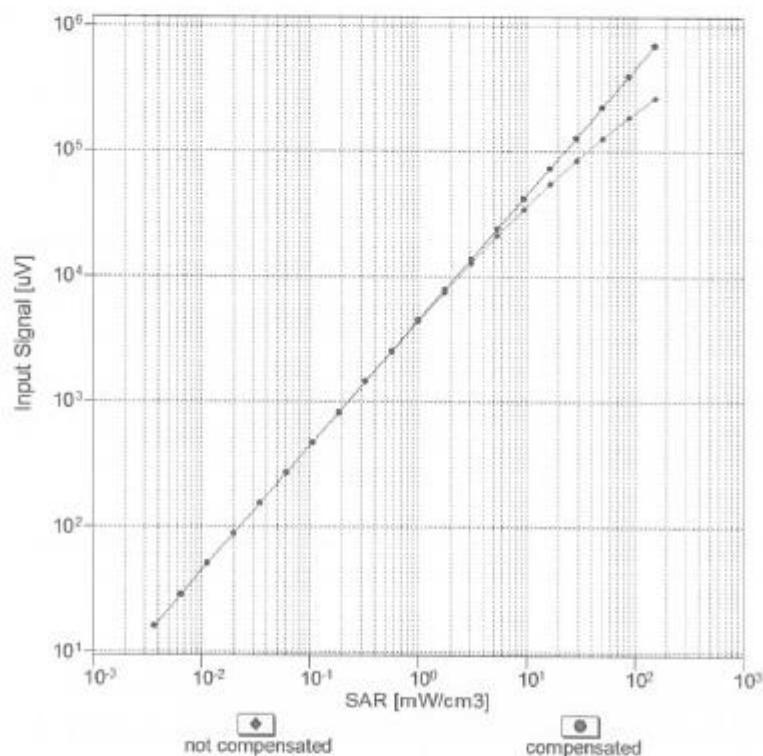
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)



EX3DV4- SN:7536

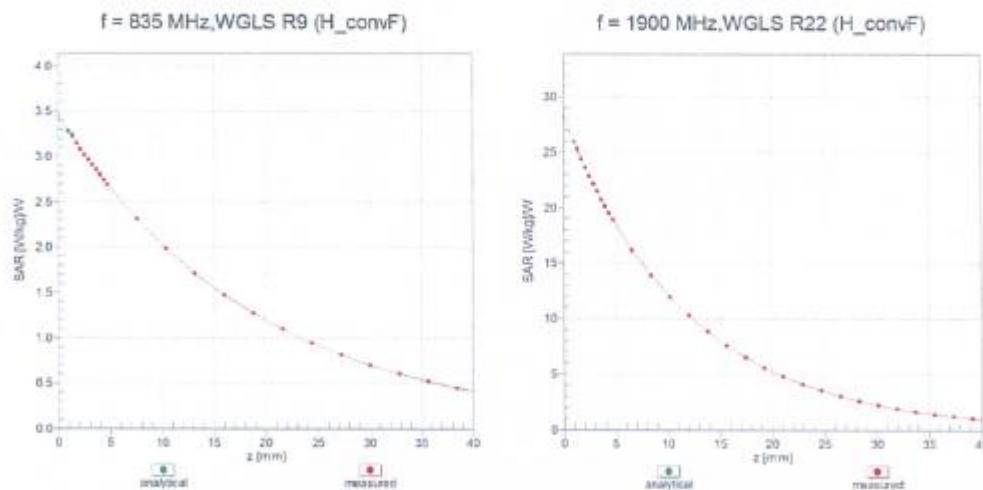
June 18, 2021

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900$ MHz)

Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

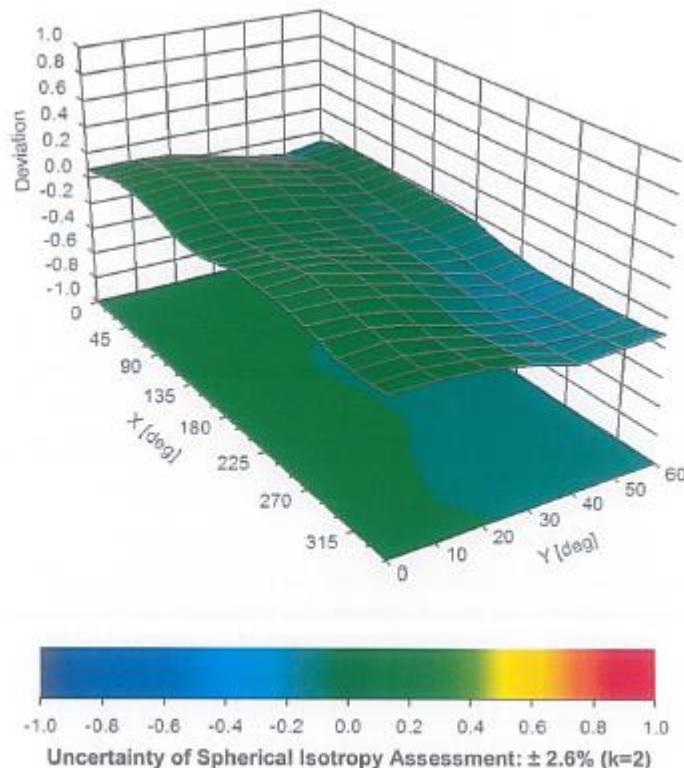


Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$





Appendix: Modulation Calibration Parameters

| UID | Rev | Communication System Name | Group | PAR (dB) | Unc ^b (k=2) |
|-------|-----|---|-----------|----------|------------------------|
| 0 | | CW | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ± 9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ± 9.6 % |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ± 9.6 % |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ± 9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ± 9.6 % |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ± 9.6 % |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ± 9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ± 9.6 % |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ± 9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | GSM | 7.78 | ± 9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth | 1.87 | ± 9.6 % |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 | ± 9.6 % |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 7.74 | ± 9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) | Bluetooth | 4.53 | ± 9.6 % |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth | 3.83 | ± 9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ± 9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | 4.77 | ± 9.6 % |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ± 9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ± 9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAC | UMTS-FDD (HSOPA) | WCDMA | 3.98 | ± 9.6 % |
| 10098 | 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 | $\pm 9.6\%$ |
| 10100 | CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | $\pm 9.6\%$ |
| 10101 | CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | $\pm 9.6\%$ |
| 10102 | CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10103 | DAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-TDD | 9.29 | $\pm 9.6\%$ |
| 10104 | CAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | $\pm 9.6\%$ |
| 10105 | CAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | $\pm 9.6\%$ |
| 10108 | CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | $\pm 9.6\%$ |
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 5.75 | $\pm 9.6\%$ |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | $\pm 9.6\%$ |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 | $\pm 9.6\%$ |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.62 | $\pm 9.6\%$ |
| 10114 | CAG | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | $\pm 9.6\%$ |
| 10115 | CAG | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | WLAN | 8.46 | $\pm 9.6\%$ |
| 10116 | CAG | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN | 8.15 | $\pm 9.6\%$ |
| 10117 | CAG | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN | 8.07 | $\pm 9.6\%$ |
| 10118 | CAD | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10119 | CAD | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | $\pm 9.6\%$ |
| 10140 | CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10141 | CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | $\pm 9.6\%$ |
| 10142 | CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10143 | CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | $\pm 9.6\%$ |
| 10144 | CAC | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | $\pm 9.6\%$ |
| 10145 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | $\pm 9.6\%$ |
| 10146 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | $\pm 9.6\%$ |
| 10147 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | $\pm 9.6\%$ |
| 10148 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | $\pm 9.6\%$ |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10151 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | $\pm 9.6\%$ |
| 10152 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | $\pm 9.6\%$ |
| 10153 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.05 | $\pm 9.6\%$ |
| 10154 | CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-FDD | 5.75 | $\pm 9.6\%$ |
| 10155 | CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10156 | CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 5.79 | $\pm 9.6\%$ |
| 10157 | CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10158 | CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.62 | $\pm 9.6\%$ |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.56 | $\pm 9.6\%$ |
| 10160 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-FDD | 5.82 | $\pm 9.6\%$ |
| 10161 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.43 | $\pm 9.6\%$ |
| 10162 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.58 | $\pm 9.6\%$ |
| 10166 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.46 | $\pm 9.6\%$ |
| 10167 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | $\pm 9.6\%$ |
| 10168 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.79 | $\pm 9.6\%$ |
| 10169 | CAG | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10170 | CAG | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10171 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | $\pm 9.6\%$ |
| 10172 | CAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | $\pm 9.6\%$ |
| 10173 | CAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10174 | CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10175 | CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | $\pm 9.6\%$ |
| 10176 | CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10177 | CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10178 | CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10179 | AAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |

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|-------|-----|---|---------|-------|-------------|
| 10181 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.72 | $\pm 9.6\%$ |
| 10182 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10183 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10184 | CAG | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10185 | CAI | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | $\pm 9.6\%$ |
| 10186 | CAG | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10187 | CAG | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | $\pm 9.6\%$ |
| 10188 | CAG | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | $\pm 9.6\%$ |
| 10189 | CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.50 | $\pm 9.6\%$ |
| 10193 | CAE | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | WLAN | 8.09 | $\pm 9.6\%$ |
| 10194 | AAD | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN | 8.12 | $\pm 9.6\%$ |
| 10195 | CAE | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.21 | $\pm 9.6\%$ |
| 10196 | CAE | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.10 | $\pm 9.6\%$ |
| 10197 | AAE | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.13 | $\pm 9.6\%$ |
| 10198 | CAF | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | WLAN | 8.27 | $\pm 9.6\%$ |
| 10219 | CAF | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | $\pm 9.6\%$ |
| 10220 | AAF | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN | 8.13 | $\pm 9.6\%$ |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.27 | $\pm 9.6\%$ |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.06 | $\pm 9.6\%$ |
| 10223 | CAD | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | $\pm 9.6\%$ |
| 10224 | CAD | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | WLAN | 8.08 | $\pm 9.6\%$ |
| 10225 | CAD | UMTS-FDD (HSPA+) | WCDMA | 5.97 | $\pm 9.6\%$ |
| 10226 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.49 | $\pm 9.6\%$ |
| 10227 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.26 | $\pm 9.6\%$ |
| 10228 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.22 | $\pm 9.6\%$ |
| 10229 | DAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10230 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | $\pm 9.6\%$ |
| 10232 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10233 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10234 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.21 | $\pm 9.6\%$ |
| 10235 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10236 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10237 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | $\pm 9.6\%$ |
| 10238 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | $\pm 9.6\%$ |
| 10239 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TDD | 10.25 | $\pm 9.6\%$ |
| 10240 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD | 9.21 | $\pm 9.6\%$ |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.82 | $\pm 9.6\%$ |
| 10242 | CAD | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 9.86 | $\pm 9.6\%$ |
| 10243 | CAD | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.46 | $\pm 9.6\%$ |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | $\pm 9.6\%$ |
| 10245 | CAG | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-TDD | 10.06 | $\pm 9.6\%$ |
| 10246 | CAG | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-TDD | 9.30 | $\pm 9.6\%$ |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.91 | $\pm 9.6\%$ |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | $\pm 9.6\%$ |
| 10249 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | $\pm 9.6\%$ |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.81 | $\pm 9.6\%$ |
| 10251 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.17 | $\pm 9.6\%$ |
| 10252 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.24 | $\pm 9.6\%$ |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 9.90 | $\pm 9.6\%$ |
| 10254 | CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.14 | $\pm 9.6\%$ |
| 10255 | CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-TDD | 9.20 | $\pm 9.6\%$ |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | $\pm 9.6\%$ |
| 10257 | CAD | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | $\pm 9.6\%$ |
| 10258 | CAD | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | $\pm 9.6\%$ |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.98 | $\pm 9.6\%$ |

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|-------|-----|---|----------|-------|-------------|
| 10260 | CAG | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TDD | 9.97 | $\pm 9.6\%$ |
| 10261 | CAG | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-TDD | 9.24 | $\pm 9.6\%$ |
| 10262 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | $\pm 9.6\%$ |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.16 | $\pm 9.6\%$ |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | $\pm 9.6\%$ |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 | $\pm 9.6\%$ |
| 10266 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.07 | $\pm 9.6\%$ |
| 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | $\pm 9.6\%$ |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.06 | $\pm 9.6\%$ |
| 10269 | CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.13 | $\pm 9.6\%$ |
| 10270 | CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-TDD | 9.58 | $\pm 9.6\%$ |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | WCDMA | 4.87 | $\pm 9.6\%$ |
| 10275 | CAD | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | $\pm 9.6\%$ |
| 10277 | CAD | PHS (QPSK) | PHS | 11.81 | $\pm 9.6\%$ |
| 10278 | CAD | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | $\pm 9.6\%$ |
| 10279 | CAG | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | $\pm 9.6\%$ |
| 10290 | CAG | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | $\pm 9.6\%$ |
| 10291 | CAG | CDMA2000, RC3, SO55, Full Rate | CDMA2000 | 3.46 | $\pm 9.6\%$ |
| 10292 | CAG | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | $\pm 9.6\%$ |
| 10293 | CAG | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | $\pm 9.6\%$ |
| 10295 | CAG | CDMA2000, RC1, SO3, 1/6th Rate 25 fr. | CDMA2000 | 12.49 | $\pm 9.6\%$ |
| 10297 | CAF | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.81 | $\pm 9.6\%$ |
| 10298 | CAF | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-FDD | 5.72 | $\pm 9.6\%$ |
| 10299 | CAF | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | $\pm 9.6\%$ |
| 10300 | CAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.60 | $\pm 9.6\%$ |
| 10301 | CAC | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WIMAX | 12.03 | $\pm 9.6\%$ |
| 10302 | CAB | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL) | WIMAX | 12.57 | $\pm 9.6\%$ |
| 10303 | CAB | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WIMAX | 12.52 | $\pm 9.6\%$ |
| 10304 | CAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | WIMAX | 11.86 | $\pm 9.6\%$ |
| 10305 | CAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC) | WIMAX | 15.24 | $\pm 9.6\%$ |
| 10306 | CAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC) | WIMAX | 14.67 | $\pm 9.6\%$ |
| 10307 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC) | WIMAX | 14.49 | $\pm 9.6\%$ |
| 10308 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WIMAX | 14.46 | $\pm 9.6\%$ |
| 10309 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3) | WIMAX | 14.58 | $\pm 9.6\%$ |
| 10310 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3) | WIMAX | 14.57 | $\pm 9.6\%$ |
| 10311 | AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | $\pm 9.6\%$ |
| 10313 | AAD | IDEN 1:3 | IDEN | 10.51 | $\pm 9.6\%$ |
| 10314 | AAD | IDEN 1:6 | IDEN | 13.48 | $\pm 9.6\%$ |
| 10315 | AAD | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc) | WLAN | 1.71 | $\pm 9.6\%$ |
| 10316 | AAD | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10317 | AAA | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10352 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | $\pm 9.6\%$ |
| 10353 | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | $\pm 9.6\%$ |
| 10354 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | $\pm 9.6\%$ |
| 10355 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | $\pm 9.6\%$ |
| 10356 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | $\pm 9.6\%$ |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 | $\pm 9.6\%$ |
| 10388 | AAA | QPSK Waveform, 10 MHz | Generic | 5.22 | $\pm 9.6\%$ |
| 10396 | AAA | 64-QAM Waveform, 100 kHz | Generic | 6.27 | $\pm 9.6\%$ |
| 10399 | AAA | 64-QAM Waveform, 40 MHz | Generic | 6.27 | $\pm 9.6\%$ |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc) | WLAN | 8.37 | $\pm 9.6\%$ |
| 10401 | AAA | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc) | WLAN | 8.60 | $\pm 9.6\%$ |
| 10402 | AAA | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc) | WLAN | 8.53 | $\pm 9.6\%$ |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. D) | CDMA2000 | 3.76 | $\pm 9.6\%$ |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A) | CDMA2000 | 3.77 | $\pm 9.6\%$ |
| 10406 | AAD | CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 | 5.22 | $\pm 9.6\%$ |

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| | | | | | |
|-------|-----|--|----------|-------|-------------|
| 10410 | AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | $\pm 9.6\%$ |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc) | WLAN | 1.54 | $\pm 9.6\%$ |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc) | WLAN | 8.23 | $\pm 9.6\%$ |
| 10417 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc) | WLAN | 8.23 | $\pm 9.6\%$ |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long) | WLAN | 8.14 | $\pm 9.6\%$ |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short) | WLAN | 8.19 | $\pm 9.6\%$ |
| 10422 | AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | $\pm 9.6\%$ |
| 10423 | AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | $\pm 9.6\%$ |
| 10424 | AAE | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | WLAN | 8.40 | $\pm 9.6\%$ |
| 10425 | AAE | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | WLAN | 8.41 | $\pm 9.6\%$ |
| 10426 | AAE | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10427 | AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN | 8.41 | $\pm 9.6\%$ |
| 10430 | AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | LTE-FDD | 8.28 | $\pm 9.6\%$ |
| 10431 | AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | LTE-FDD | 8.38 | $\pm 9.6\%$ |
| 10432 | AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | LTE-FDD | 8.34 | $\pm 9.6\%$ |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | LTE-FDD | 8.34 | $\pm 9.6\%$ |
| 10434 | AAG | W-CDMA (BS Test Model 1, 64 DPCH) | WCDMA | 8.60 | $\pm 9.6\%$ |
| 10435 | AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10447 | AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.56 | $\pm 9.6\%$ |
| 10448 | AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.53 | $\pm 9.6\%$ |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.51 | $\pm 9.6\%$ |
| 10450 | AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.48 | $\pm 9.6\%$ |
| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.59 | $\pm 9.6\%$ |
| 10453 | AAC | Validation (Square, 10ms, 1ms) | Test | 10.00 | $\pm 9.6\%$ |
| 10456 | AAC | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc) | WLAN | 8.63 | $\pm 9.6\%$ |
| 10457 | AAC | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | $\pm 9.6\%$ |
| 10458 | AAC | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | $\pm 9.6\%$ |
| 10459 | AAC | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | $\pm 9.6\%$ |
| 10460 | AAC | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | $\pm 9.6\%$ |
| 10461 | AAC | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10462 | AAC | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.30 | $\pm 9.6\%$ |
| 10463 | AAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.56 | $\pm 9.6\%$ |
| 10464 | AAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10467 | AAA | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10469 | AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.56 | $\pm 9.6\%$ |
| 10470 | AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10471 | AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10472 | AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10473 | AAA | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10474 | AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10475 | AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10477 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10478 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10479 | AAC | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10480 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.18 | $\pm 9.6\%$ |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.45 | $\pm 9.6\%$ |
| 10482 | AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.71 | $\pm 9.6\%$ |
| 10483 | AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub) | LTE-TDD | 8.39 | $\pm 9.6\%$ |
| 10484 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.47 | $\pm 9.6\%$ |
| 10485 | AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.59 | $\pm 9.6\%$ |
| 10486 | AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.38 | $\pm 9.6\%$ |
| 10487 | AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.60 | $\pm 9.6\%$ |

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|-------|-----|---|---------|------|-------------|
| 10488 | AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.70 | $\pm 9.6\%$ |
| 10489 | AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10491 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10492 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.41 | $\pm 9.6\%$ |
| 10493 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.37 | $\pm 9.6\%$ |
| 10496 | AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10497 | AAE | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub) | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10498 | AAE | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.40 | $\pm 9.6\%$ |
| 10499 | AAC | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.68 | $\pm 9.6\%$ |
| 10500 | AAF | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub) | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10501 | AAF | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.44 | $\pm 9.6\%$ |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.52 | $\pm 9.6\%$ |
| 10503 | AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub) | LTE-TDD | 7.72 | $\pm 9.6\%$ |
| 10504 | AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10505 | AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10506 | AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10507 | AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.36 | $\pm 9.6\%$ |
| 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10509 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub) | LTE-TDD | 7.99 | $\pm 9.6\%$ |
| 10510 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.49 | $\pm 9.6\%$ |
| 10511 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.51 | $\pm 9.6\%$ |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub) | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.42 | $\pm 9.6\%$ |
| 10514 | AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.45 | $\pm 9.6\%$ |
| 10515 | AAE | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc) | WLAN | 1.58 | $\pm 9.6\%$ |
| 10516 | AAE | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc) | WLAN | 1.57 | $\pm 9.6\%$ |
| 10517 | AAF | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc) | WLAN | 1.58 | $\pm 9.6\%$ |
| 10518 | AAF | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc) | WLAN | 8.23 | $\pm 9.6\%$ |
| 10519 | AAF | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc) | WLAN | 8.39 | $\pm 9.6\%$ |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc) | WLAN | 8.12 | $\pm 9.6\%$ |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc) | WLAN | 7.97 | $\pm 9.6\%$ |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10523 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc) | WLAN | 8.08 | $\pm 9.6\%$ |
| 10524 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc) | WLAN | 8.27 | $\pm 9.6\%$ |
| 10525 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10526 | AAF | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc) | WLAN | 8.42 | $\pm 9.6\%$ |
| 10527 | AAF | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc) | WLAN | 8.21 | $\pm 9.6\%$ |
| 10528 | AAF | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10529 | AAF | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10531 | AAF | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc) | WLAN | 8.43 | $\pm 9.6\%$ |
| 10532 | AAF | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc) | WLAN | 8.29 | $\pm 9.6\%$ |
| 10533 | AAE | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc) | WLAN | 8.38 | $\pm 9.6\%$ |
| 10534 | AAE | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10535 | AAE | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10536 | AAF | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc) | WLAN | 8.32 | $\pm 9.6\%$ |
| 10537 | AAF | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc) | WLAN | 8.44 | $\pm 9.6\%$ |
| 10538 | AAF | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc) | WLAN | 8.54 | $\pm 9.6\%$ |
| 10540 | AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc) | WLAN | 8.39 | $\pm 9.6\%$ |
| 10541 | AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc) | WLAN | 8.46 | $\pm 9.6\%$ |
| 10542 | AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc) | WLAN | 8.65 | $\pm 9.6\%$ |
| 10543 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc) | WLAN | 8.65 | $\pm 9.6\%$ |
| 10544 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc) | WLAN | 8.47 | $\pm 9.6\%$ |
| 10545 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc) | WLAN | 8.55 | $\pm 9.6\%$ |

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|-------|-----|---|------|------|-------------|
| 10546 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc) | WLAN | 8.35 | $\pm 9.6\%$ |
| 10547 | AAC | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc) | WLAN | 8.49 | $\pm 9.6\%$ |
| 10548 | AAC | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc) | WLAN | 8.37 | $\pm 9.6\%$ |
| 10550 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc) | WLAN | 8.38 | $\pm 9.6\%$ |
| 10551 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc) | WLAN | 8.50 | $\pm 9.6\%$ |
| 10552 | AAC | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc) | WLAN | 8.42 | $\pm 9.6\%$ |
| 10553 | AAC | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc) | WLAN | 8.48 | $\pm 9.6\%$ |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc) | WLAN | 8.47 | $\pm 9.6\%$ |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc) | WLAN | 8.50 | $\pm 9.6\%$ |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc) | WLAN | 8.52 | $\pm 9.6\%$ |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc) | WLAN | 8.61 | $\pm 9.6\%$ |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc) | WLAN | 8.73 | $\pm 9.6\%$ |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc) | WLAN | 8.56 | $\pm 9.6\%$ |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc) | WLAN | 8.69 | $\pm 9.6\%$ |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10564 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc) | WLAN | 8.25 | $\pm 9.6\%$ |
| 10565 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc) | WLAN | 8.45 | $\pm 9.6\%$ |
| 10566 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc) | WLAN | 8.13 | $\pm 9.6\%$ |
| 10567 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc) | WLAN | 8.00 | $\pm 9.6\%$ |
| 10568 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc) | WLAN | 8.37 | $\pm 9.6\%$ |
| 10569 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc) | WLAN | 8.10 | $\pm 9.6\%$ |
| 10570 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc) | WLAN | 8.30 | $\pm 9.6\%$ |
| 10571 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc) | WLAN | 1.99 | $\pm 9.6\%$ |
| 10572 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc) | WLAN | 1.99 | $\pm 9.6\%$ |
| 10573 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc) | WLAN | 1.98 | $\pm 9.6\%$ |
| 10574 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc) | WLAN | 1.98 | $\pm 9.6\%$ |
| 10575 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10576 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc) | WLAN | 8.60 | $\pm 9.6\%$ |
| 10577 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc) | WLAN | 8.70 | $\pm 9.6\%$ |
| 10578 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc) | WLAN | 8.49 | $\pm 9.6\%$ |
| 10579 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10580 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc) | WLAN | 8.76 | $\pm 9.6\%$ |
| 10581 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc) | WLAN | 8.35 | $\pm 9.6\%$ |
| 10582 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc) | WLAN | 8.67 | $\pm 9.6\%$ |
| 10583 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10584 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc) | WLAN | 8.60 | $\pm 9.6\%$ |
| 10585 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc) | WLAN | 8.70 | $\pm 9.6\%$ |
| 10586 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc) | WLAN | 8.49 | $\pm 9.6\%$ |
| 10587 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc) | WLAN | 8.36 | $\pm 9.6\%$ |
| 10588 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc) | WLAN | 8.76 | $\pm 9.6\%$ |
| 10589 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc) | WLAN | 8.35 | $\pm 9.6\%$ |
| 10590 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc) | WLAN | 8.67 | $\pm 9.6\%$ |
| 10591 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc) | WLAN | 8.63 | $\pm 9.6\%$ |
| 10592 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc) | WLAN | 8.79 | $\pm 9.6\%$ |
| 10593 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc) | WLAN | 8.64 | $\pm 9.6\%$ |
| 10594 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc) | WLAN | 8.74 | $\pm 9.6\%$ |
| 10595 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc) | WLAN | 8.74 | $\pm 9.6\%$ |
| 10596 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc) | WLAN | 8.71 | $\pm 9.6\%$ |
| 10597 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc) | WLAN | 8.72 | $\pm 9.6\%$ |
| 10598 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc) | WLAN | 8.50 | $\pm 9.6\%$ |
| 10599 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc) | WLAN | 8.79 | $\pm 9.6\%$ |
| 10600 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc) | WLAN | 8.88 | $\pm 9.6\%$ |
| 10601 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10602 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc) | WLAN | 8.94 | $\pm 9.6\%$ |
| 10603 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc) | WLAN | 9.03 | $\pm 9.6\%$ |

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|-------|-----|---|-----------|-------|-------------|
| 10604 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc) | WLAN | 8.76 | $\pm 9.6\%$ |
| 10605 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc) | WLAN | 8.97 | $\pm 9.6\%$ |
| 10606 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10607 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc) | WLAN | 8.64 | $\pm 9.6\%$ |
| 10608 | AAC | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10609 | AAC | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc dc) | WLAN | 8.57 | $\pm 9.6\%$ |
| 10610 | AAC | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc dc) | WLAN | 8.78 | $\pm 9.6\%$ |
| 10611 | AAC | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc) | WLAN | 8.70 | $\pm 9.6\%$ |
| 10612 | AAC | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10613 | AAC | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc dc) | WLAN | 8.94 | $\pm 9.6\%$ |
| 10614 | AAC | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc) | WLAN | 8.59 | $\pm 9.6\%$ |
| 10615 | AAC | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10616 | AAC | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10617 | AAC | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10618 | AAC | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc dc) | WLAN | 8.58 | $\pm 9.6\%$ |
| 10619 | AAC | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc dc) | WLAN | 8.86 | $\pm 9.6\%$ |
| 10620 | AAC | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc dc) | WLAN | 8.87 | $\pm 9.6\%$ |
| 10621 | AAC | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc) | WLAN | 8.77 | $\pm 9.6\%$ |
| 10622 | AAC | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc dc) | WLAN | 8.68 | $\pm 9.6\%$ |
| 10623 | AAC | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc dc) | WLAN | 8.82 | $\pm 9.6\%$ |
| 10624 | AAC | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc) | WLAN | 8.96 | $\pm 9.6\%$ |
| 10625 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc dc) | WLAN | 8.96 | $\pm 9.6\%$ |
| 10626 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10627 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc) | WLAN | 8.88 | $\pm 9.6\%$ |
| 10628 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc dc) | WLAN | 8.71 | $\pm 9.6\%$ |
| 10629 | AAC | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc dc) | WLAN | 8.85 | $\pm 9.6\%$ |
| 10630 | AAC | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc dc) | WLAN | 8.72 | $\pm 9.6\%$ |
| 10631 | AAC | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10632 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc) | WLAN | 8.74 | $\pm 9.6\%$ |
| 10633 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10634 | AAC | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc dc) | WLAN | 8.80 | $\pm 9.6\%$ |
| 10635 | AAC | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc) | WLAN | 8.81 | $\pm 9.6\%$ |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc dc) | WLAN | 8.83 | $\pm 9.6\%$ |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc) | WLAN | 8.79 | $\pm 9.6\%$ |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc) | WLAN | 8.86 | $\pm 9.6\%$ |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc dc) | WLAN | 8.85 | $\pm 9.6\%$ |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc dc) | WLAN | 8.98 | $\pm 9.6\%$ |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc) | WLAN | 9.06 | $\pm 9.6\%$ |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc dc) | WLAN | 9.06 | $\pm 9.6\%$ |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc dc) | WLAN | 8.89 | $\pm 9.6\%$ |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc) | WLAN | 9.05 | $\pm 9.6\%$ |
| 10645 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc dc) | WLAN | 9.11 | $\pm 9.6\%$ |
| 10646 | AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7) | LTE-TDD | 11.96 | $\pm 9.6\%$ |
| 10647 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7) | LTE-TDD | 11.96 | $\pm 9.6\%$ |
| 10648 | AAC | CDMA2000 (1x Advanced) | CDMA2000 | 3.45 | $\pm 9.6\%$ |
| 10652 | AAC | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | $\pm 9.6\%$ |
| 10653 | AAC | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.42 | $\pm 9.6\%$ |
| 10654 | AAC | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.96 | $\pm 9.6\%$ |
| 10655 | AAC | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.21 | $\pm 9.6\%$ |
| 10658 | AAC | Pulse Waveform (200Hz, 10%) | Test | 10.00 | $\pm 9.6\%$ |
| 10659 | AAC | Pulse Waveform (200Hz, 20%) | Test | 6.99 | $\pm 9.6\%$ |
| 10660 | AAC | Pulse Waveform (200Hz, 40%) | Test | 3.98 | $\pm 9.6\%$ |
| 10661 | AAC | Pulse Waveform (200Hz, 60%) | Test | 2.22 | $\pm 9.6\%$ |
| 10662 | AAC | Pulse Waveform (200Hz, 80%) | Test | 0.97 | $\pm 9.6\%$ |
| 10670 | AAC | Bluetooth Low Energy | Bluetooth | 2.19 | $\pm 9.6\%$ |
| 10671 | AAD | IEEE 802.11ax (20MHz, MCS0, 90pc dc) | WLAN | 9.09 | $\pm 9.6\%$ |

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|-------|-----|---------------------------------------|------|------|--------------|
| 10672 | AAD | IEEE 802.11ax (20MHz, MCS1, 90pc dc) | WLAN | 8.57 | $\pm 9.6 \%$ |
| 10673 | AAD | IEEE 802.11ax (20MHz, MCS2, 90pc dc) | WLAN | 8.78 | $\pm 9.6 \%$ |
| 10674 | AAD | IEEE 802.11ax (20MHz, MCS3, 90pc dc) | WLAN | 8.74 | $\pm 9.6 \%$ |
| 10675 | AAD | IEEE 802.11ax (20MHz, MCS4, 90pc dc) | WLAN | 8.90 | $\pm 9.6 \%$ |
| 10676 | AAD | IEEE 802.11ax (20MHz, MCS5, 90pc dc) | WLAN | 8.77 | $\pm 9.6 \%$ |
| 10677 | AAD | IEEE 802.11ax (20MHz, MCS6, 90pc dc) | WLAN | 8.73 | $\pm 9.6 \%$ |
| 10678 | AAD | IEEE 802.11ax (20MHz, MCS7, 90pc dc) | WLAN | 8.78 | $\pm 9.6 \%$ |
| 10679 | AAD | IEEE 802.11ax (20MHz, MCS8, 90pc dc) | WLAN | 8.89 | $\pm 9.6 \%$ |
| 10680 | AAD | IEEE 802.11ax (20MHz, MCS9, 90pc dc) | WLAN | 8.80 | $\pm 9.6 \%$ |
| 10681 | AAG | IEEE 802.11ax (20MHz, MCS10, 90pc dc) | WLAN | 8.62 | $\pm 9.6 \%$ |
| 10682 | AAF | IEEE 802.11ax (20MHz, MCS11, 90pc dc) | WLAN | 8.83 | $\pm 9.6 \%$ |
| 10683 | AAA | IEEE 802.11ax (20MHz, MCS0, 99pc dc) | WLAN | 8.42 | $\pm 9.6 \%$ |
| 10684 | AAC | IEEE 802.11ax (20MHz, MCS1, 99pc dc) | WLAN | 8.26 | $\pm 9.6 \%$ |
| 10685 | AAC | IEEE 802.11ax (20MHz, MCS2, 99pc dc) | WLAN | 8.33 | $\pm 9.6 \%$ |
| 10686 | AAC | IEEE 802.11ax (20MHz, MCS3, 99pc dc) | WLAN | 8.28 | $\pm 9.6 \%$ |
| 10687 | AAE | IEEE 802.11ax (20MHz, MCS4, 99pc dc) | WLAN | 8.45 | $\pm 9.6 \%$ |
| 10688 | AAE | IEEE 802.11ax (20MHz, MCS5, 99pc dc) | WLAN | 8.29 | $\pm 9.6 \%$ |
| 10689 | AAD | IEEE 802.11ax (20MHz, MCS6, 99pc dc) | WLAN | 8.55 | $\pm 9.6 \%$ |
| 10690 | AAE | IEEE 802.11ax (20MHz, MCS7, 99pc dc) | WLAN | 8.29 | $\pm 9.6 \%$ |
| 10691 | AAB | IEEE 802.11ax (20MHz, MCS8, 99pc dc) | WLAN | 8.25 | $\pm 9.6 \%$ |
| 10692 | AAA | IEEE 802.11ax (20MHz, MCS9, 99pc dc) | WLAN | 8.29 | $\pm 9.6 \%$ |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc dc) | WLAN | 8.25 | $\pm 9.6 \%$ |
| 10694 | AAA | IEEE 802.11ax (20MHz, MCS11, 99pc dc) | WLAN | 8.57 | $\pm 9.6 \%$ |
| 10695 | AAA | IEEE 802.11ax (40MHz, MCS0, 90pc dc) | WLAN | 8.78 | $\pm 9.6 \%$ |
| 10696 | AAA | IEEE 802.11ax (40MHz, MCS1, 90pc dc) | WLAN | 8.91 | $\pm 9.6 \%$ |
| 10697 | AAA | IEEE 802.11ax (40MHz, MCS2, 90pc dc) | WLAN | 8.61 | $\pm 9.6 \%$ |
| 10698 | AAA | IEEE 802.11ax (40MHz, MCS3, 90pc dc) | WLAN | 8.89 | $\pm 9.6 \%$ |
| 10699 | AAA | IEEE 802.11ax (40MHz, MCS4, 90pc dc) | WLAN | 8.82 | $\pm 9.6 \%$ |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS5, 90pc dc) | WLAN | 8.73 | $\pm 9.6 \%$ |
| 10701 | AAA | IEEE 802.11ax (40MHz, MCS6, 90pc dc) | WLAN | 8.86 | $\pm 9.6 \%$ |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS7, 90pc dc) | WLAN | 8.70 | $\pm 9.6 \%$ |
| 10703 | AAA | IEEE 802.11ax (40MHz, MCS8, 90pc dc) | WLAN | 8.82 | $\pm 9.6 \%$ |
| 10704 | AAA | IEEE 802.11ax (40MHz, MCS9, 90pc dc) | WLAN | 8.56 | $\pm 9.6 \%$ |
| 10705 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc dc) | WLAN | 8.69 | $\pm 9.6 \%$ |
| 10706 | AAC | IEEE 802.11ax (40MHz, MCS11, 90pc dc) | WLAN | 8.66 | $\pm 9.6 \%$ |
| 10707 | AAC | IEEE 802.11ax (40MHz, MCS0, 99pc dc) | WLAN | 8.32 | $\pm 9.6 \%$ |
| 10708 | AAC | IEEE 802.11ax (40MHz, MCS1, 99pc dc) | WLAN | 8.55 | $\pm 9.6 \%$ |
| 10709 | AAC | IEEE 802.11ax (40MHz, MCS2, 99pc dc) | WLAN | 8.33 | $\pm 9.6 \%$ |
| 10710 | AAC | IEEE 802.11ax (40MHz, MCS3, 99pc dc) | WLAN | 8.29 | $\pm 9.6 \%$ |
| 10711 | AAC | IEEE 802.11ax (40MHz, MCS4, 99pc dc) | WLAN | 8.39 | $\pm 9.6 \%$ |
| 10712 | AAC | IEEE 802.11ax (40MHz, MCS5, 99pc dc) | WLAN | 8.67 | $\pm 9.6 \%$ |
| 10713 | AAC | IEEE 802.11ax (40MHz, MCS6, 99pc dc) | WLAN | 8.33 | $\pm 9.6 \%$ |
| 10714 | AAC | IEEE 802.11ax (40MHz, MCS7, 99pc dc) | WLAN | 8.26 | $\pm 9.6 \%$ |
| 10715 | AAC | IEEE 802.11ax (40MHz, MCS8, 99pc dc) | WLAN | 8.45 | $\pm 9.6 \%$ |
| 10716 | AAC | IEEE 802.11ax (40MHz, MCS9, 99pc dc) | WLAN | 8.30 | $\pm 9.6 \%$ |
| 10717 | AAC | IEEE 802.11ax (40MHz, MCS10, 99pc dc) | WLAN | 8.48 | $\pm 9.6 \%$ |
| 10718 | AAC | IEEE 802.11ax (40MHz, MCS11, 99pc dc) | WLAN | 8.24 | $\pm 9.6 \%$ |
| 10719 | AAC | IEEE 802.11ax (80MHz, MCS0, 90pc dc) | WLAN | 8.81 | $\pm 9.6 \%$ |
| 10720 | AAC | IEEE 802.11ax (80MHz, MCS1, 90pc dc) | WLAN | 8.87 | $\pm 9.6 \%$ |
| 10721 | AAC | IEEE 802.11ax (80MHz, MCS2, 90pc dc) | WLAN | 8.76 | $\pm 9.6 \%$ |
| 10722 | AAC | IEEE 802.11ax (80MHz, MCS3, 90pc dc) | WLAN | 8.55 | $\pm 9.6 \%$ |
| 10723 | AAC | IEEE 802.11ax (80MHz, MCS4, 90pc dc) | WLAN | 8.70 | $\pm 9.6 \%$ |
| 10724 | AAC | IEEE 802.11ax (80MHz, MCS5, 90pc dc) | WLAN | 8.80 | $\pm 9.6 \%$ |
| 10725 | AAC | IEEE 802.11ax (80MHz, MCS6, 90pc dc) | WLAN | 8.74 | $\pm 9.6 \%$ |
| 10726 | AAC | IEEE 802.11ax (80MHz, MCS7, 90pc dc) | WLAN | 8.72 | $\pm 9.6 \%$ |
| 10727 | AAC | IEEE 802.11ax (80MHz, MCS8, 90pc dc) | WLAN | 8.66 | $\pm 9.6 \%$ |

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