

Annex A. Plots of System Verification

The plots for system verification are shown as follows.

Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

S01 System Check_H2450_220825

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.881$ S/m; $\epsilon_r = 39.283$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 2022/05/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.18 W/kg

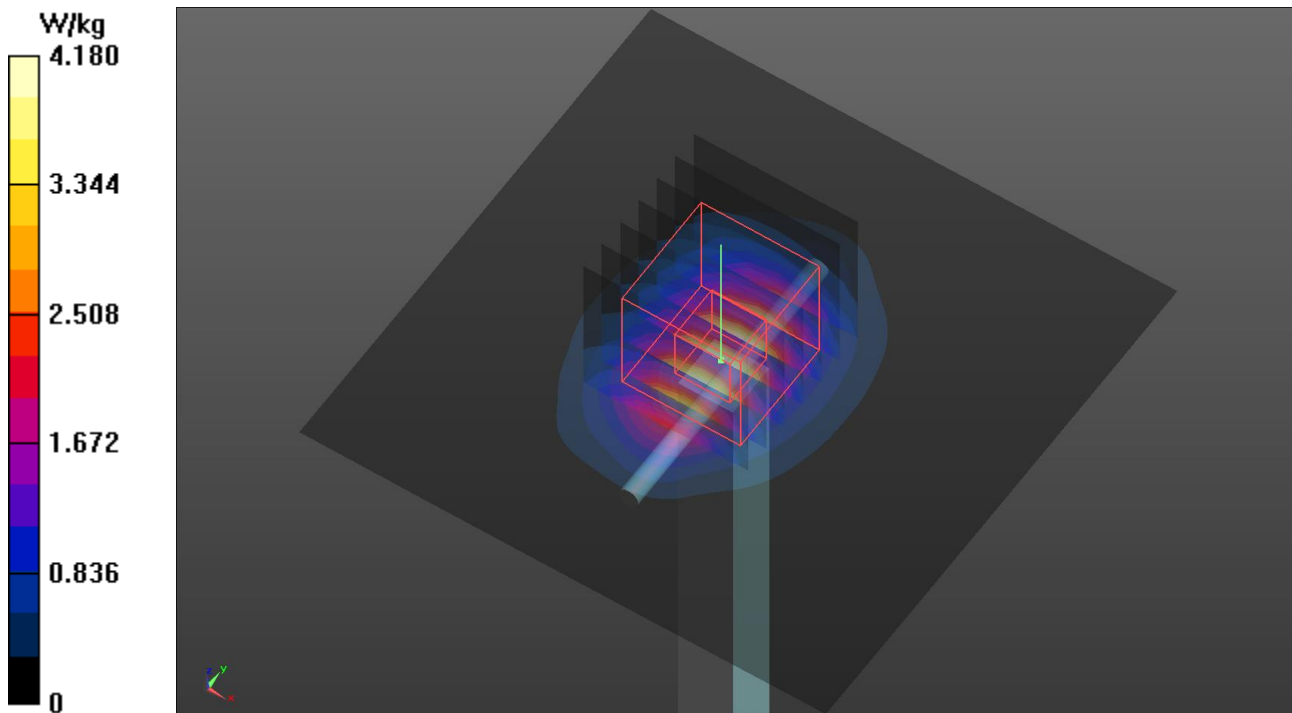
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 47.97 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 5.26 W/kg

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.20 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

S02 System Check_H5250_220824

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.736$ S/m; $\epsilon_r = 36.971$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.74, 5.74, 5.74) @ 5250 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.70 W/kg

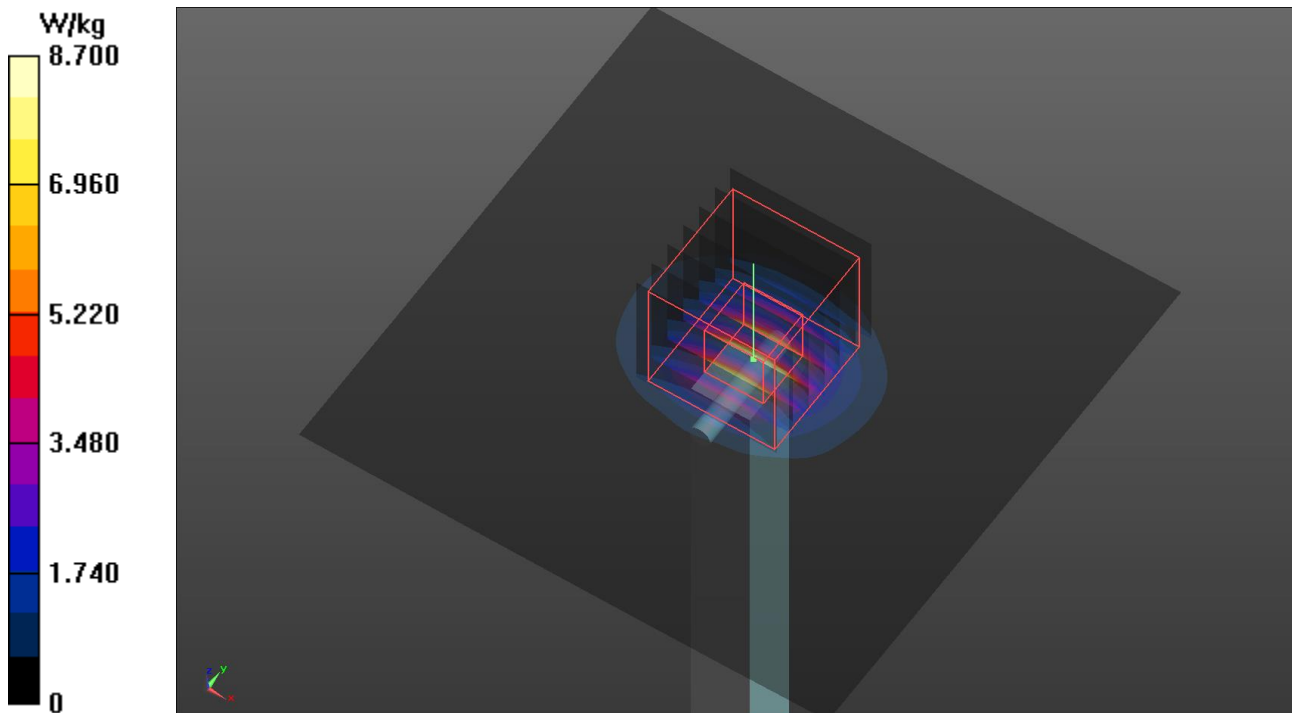
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.69 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 15.3 W/kg

SAR(1 g) = 3.81 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 9.42 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

S03 System Check_H5600_220824

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.09$ S/m; $\epsilon_r = 36.503$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(4.93, 4.93, 4.93) @ 5600 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 10.6 W/kg

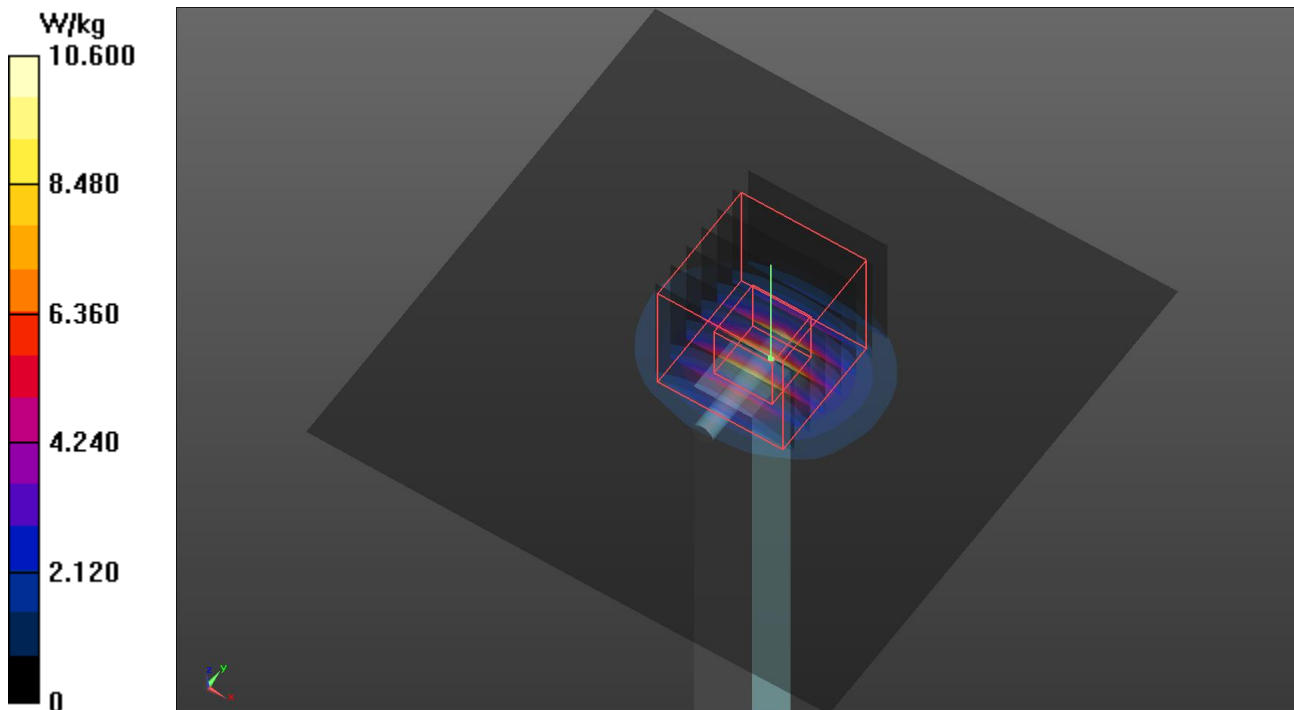
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 48.43 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 19.4 W/kg

SAR(1 g) = 4.37 W/kg; SAR(10 g) = 1.27 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 11.2 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

S04 System Check_H5750_220824

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.249$ S/m; $\epsilon_r = 36.283$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.39 W/kg

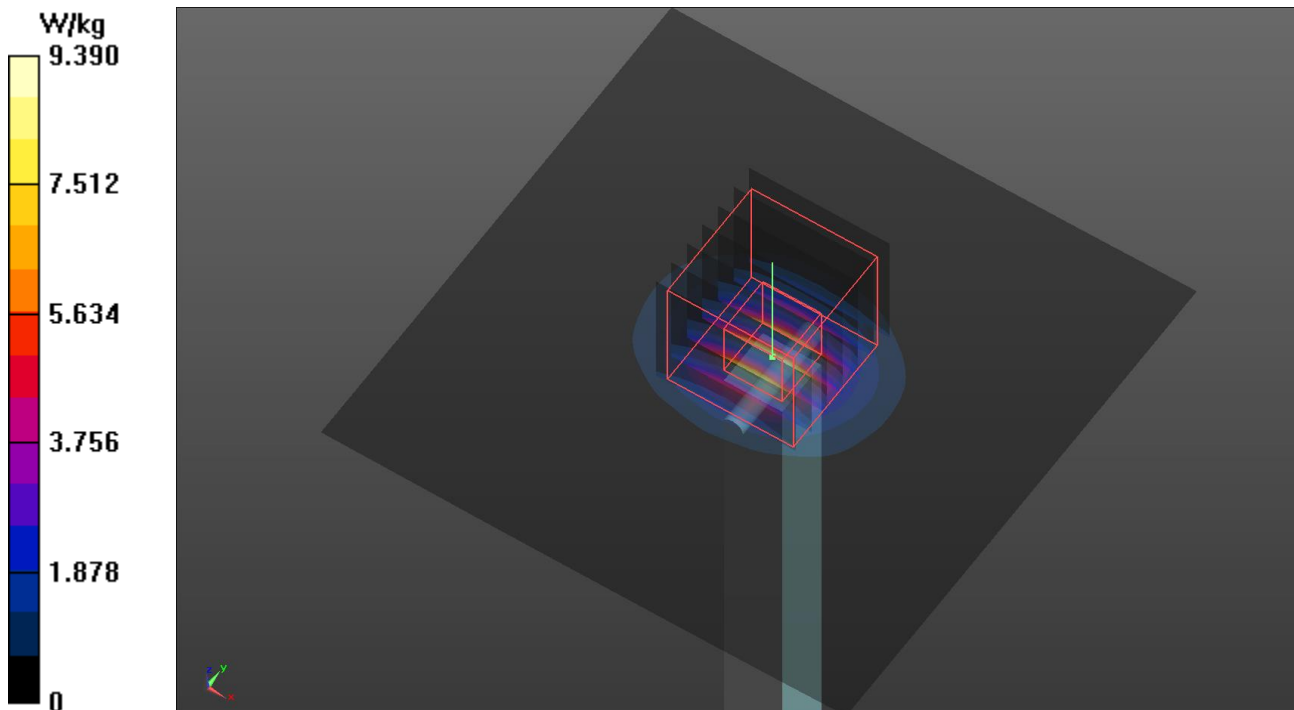
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.66 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.13 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.1 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

S05 System Check_H5750_220824

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.249$ S/m; $\epsilon_r = 36.283$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.39 W/kg

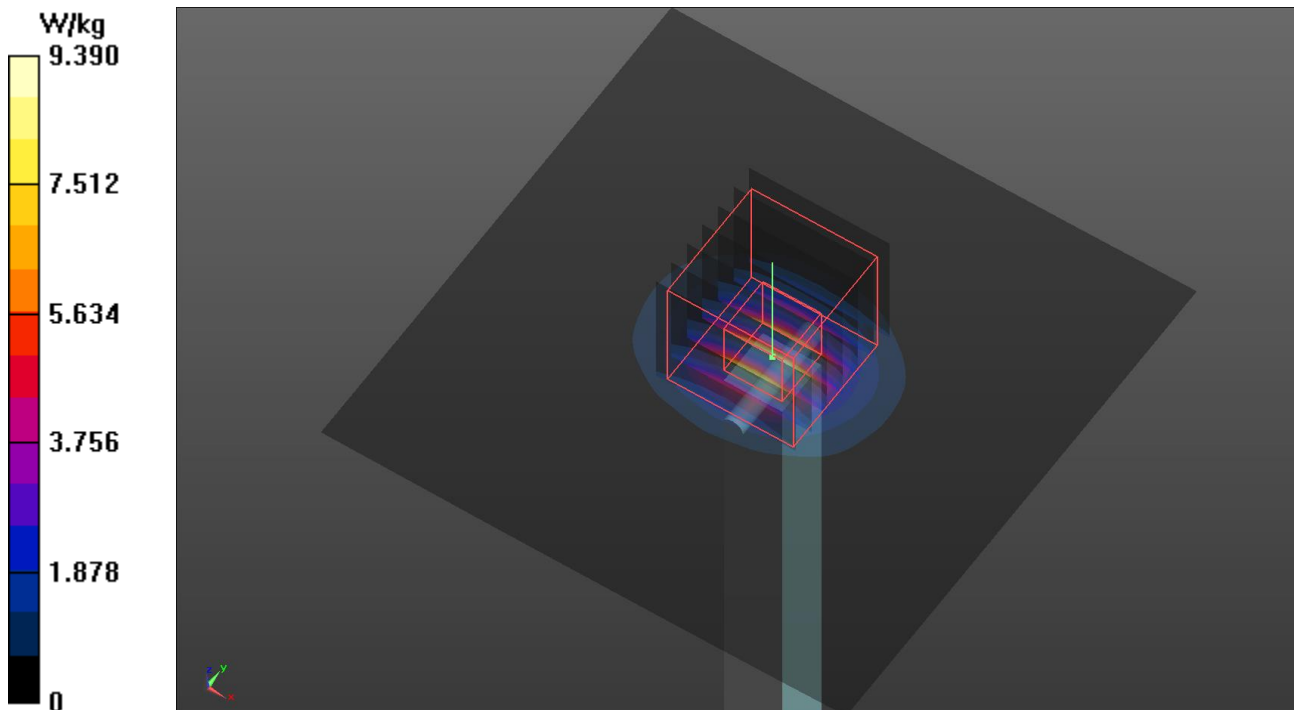
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.66 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.13 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.1 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

S06 System Check_H2450_220825

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.881$ S/m; $\epsilon_r = 39.283$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 2022/05/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.18 W/kg

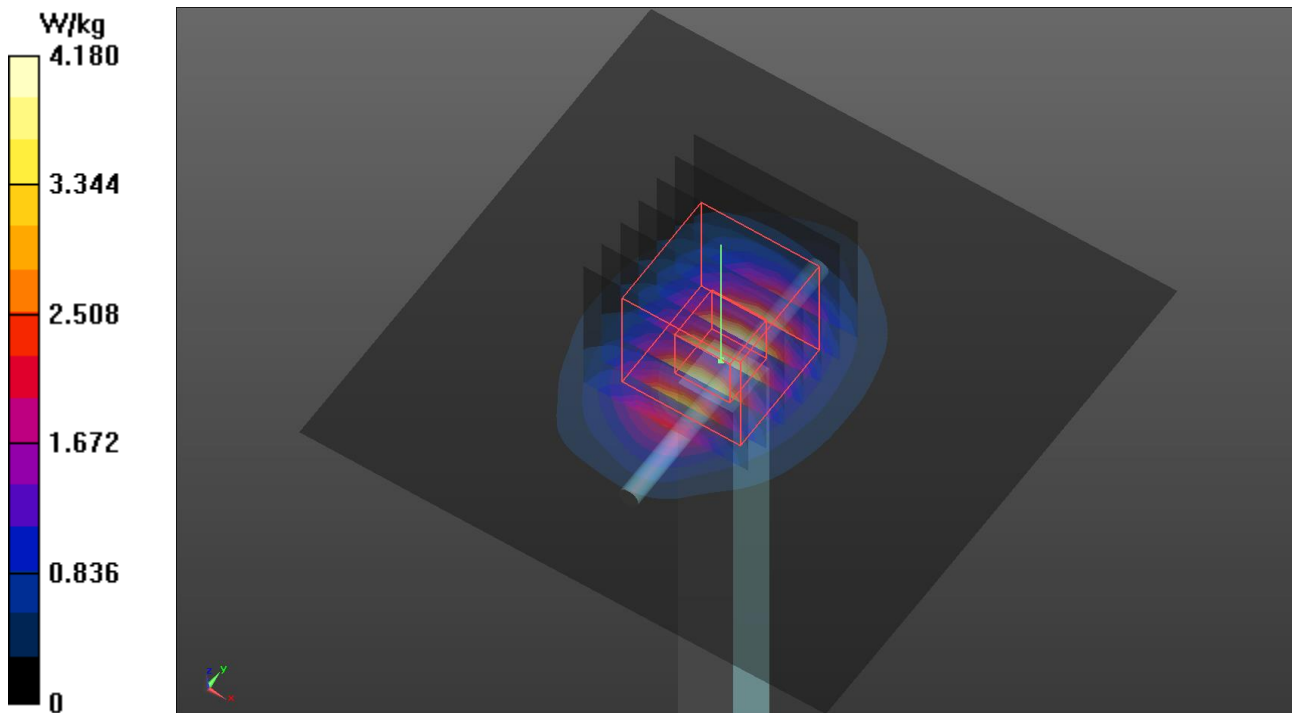
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 47.97 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 5.26 W/kg

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.20 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

S07 System Check_H2450_220825

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.881$ S/m; $\epsilon_r = 39.283$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 2022/05/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.18 W/kg

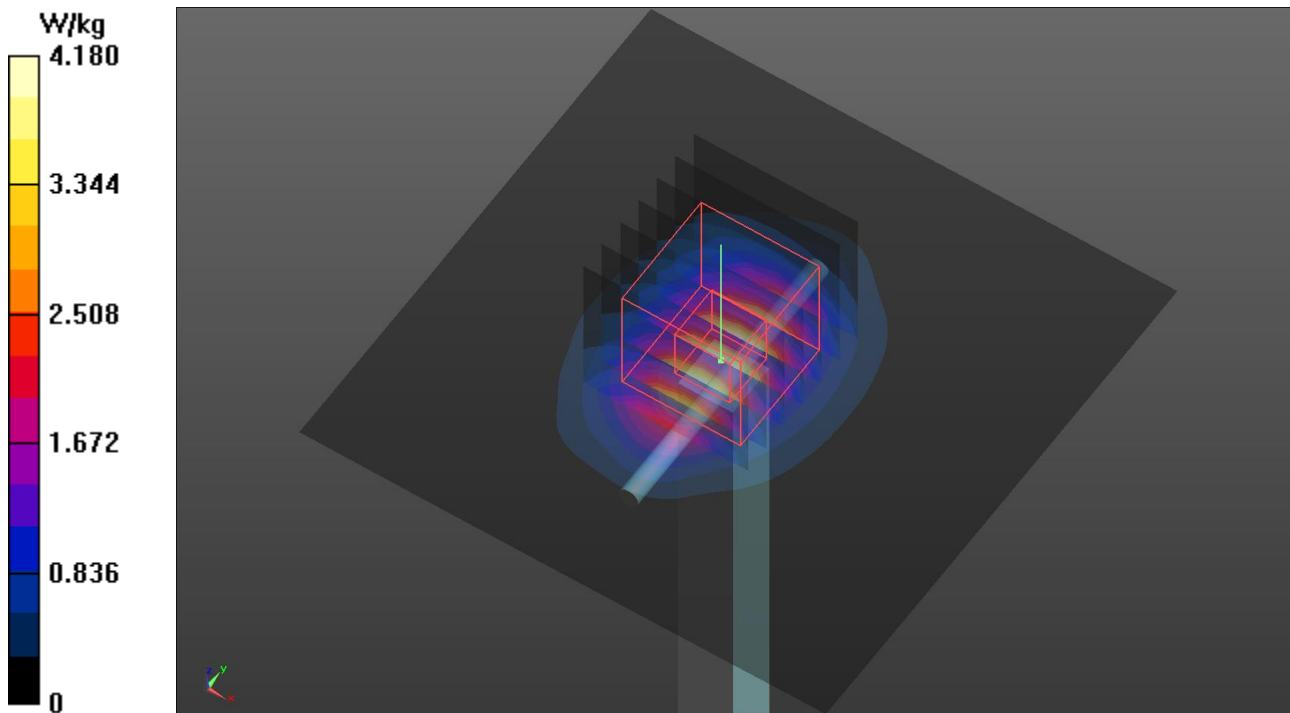
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 47.97 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 5.26 W/kg

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.20 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.27 W/kg



Annex B. Plots of Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination are shown as follows.

Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

P01 WLAN2.4G_802.11b_Bottom Side_5mm_Ch12_USB_Ant 0+1

DUT: BBUI-WTW-P22031043

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2467 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2467$ MHz; $\sigma = 1.898$ S/m; $\epsilon_r = 39.238$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2467 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax; Serial: 1204
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (101x281x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.967 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.03 V/m; Power Drift = 0.09 dB

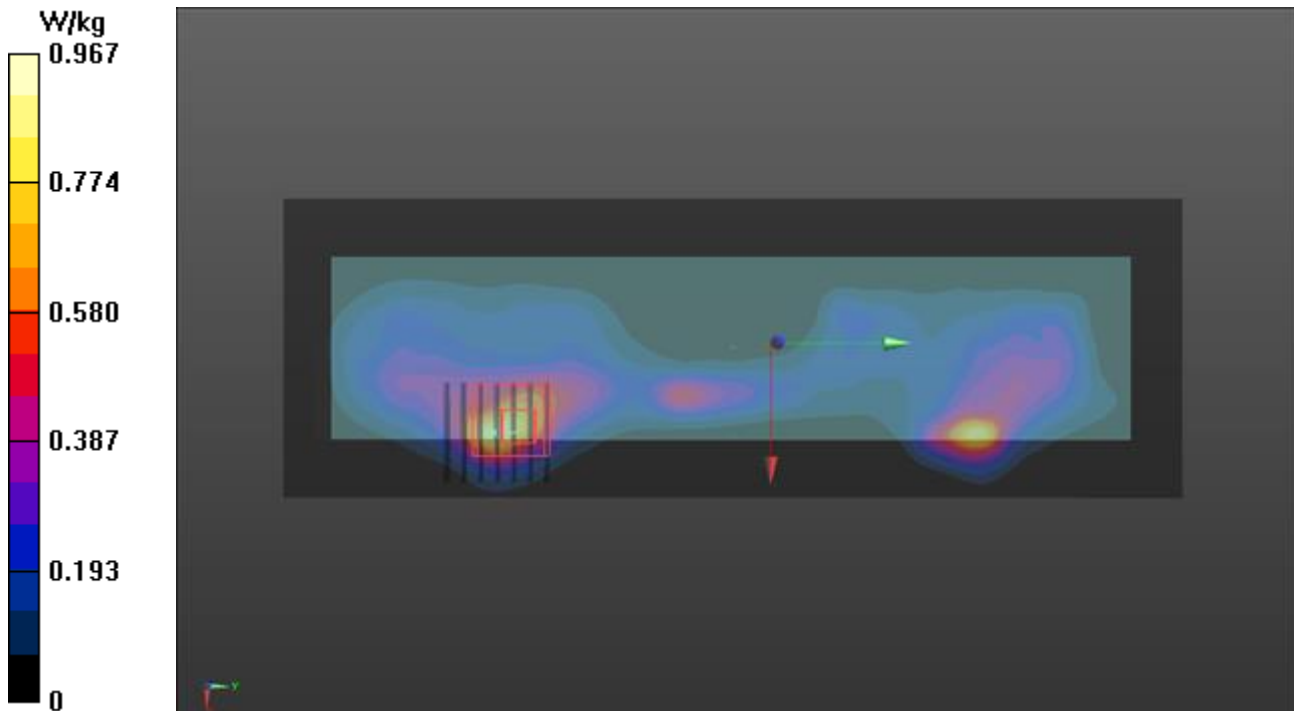
Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.265 W/kg

Smallest distance from peaks to all points 3 dB below = 7.8 mm

Ratio of SAR at M2 to SAR at M1 = 38.9%

Maximum value of SAR (measured) = 1.06 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

P02 WLAN5.3G_802.11ac_VHT80_Bottom Side_5mm_Ch58_USB_Ant 0+1

DUT: BBUI-WTW-P22031043

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5290 MHz; Duty Cycle: 1:1.03

Medium: H34T60N1_0824 Medium parameters used (interpolated): $f = 5290$ MHz; $\sigma = 4.775$ S/m; $\epsilon_r = 36.932$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.74, 5.74, 5.74) @ 5290 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax; Serial: 1204
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (91x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.20 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 12.08 V/m; Power Drift = -0.08 dB

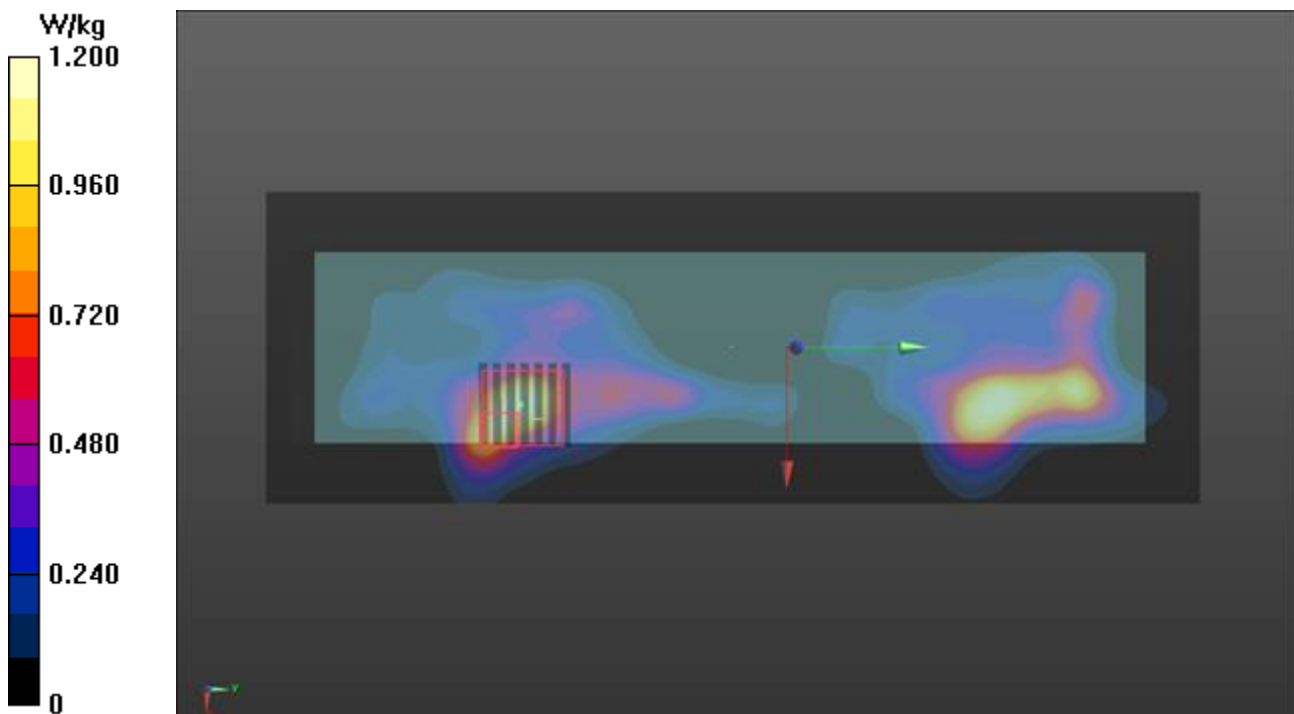
Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 0.434 W/kg; SAR(10 g) = 0.147 W/kg

Smallest distance from peaks to all points 3 dB below = 5.6 mm

Ratio of SAR at M2 to SAR at M1 = 57.6%

Maximum value of SAR (measured) = 0.951 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

P03 WLAN5.6G_802.11ac_VHT80_Bottom Side_5mm_Ch138_USB_Ant 0+1

DUT: BBUI-WTW-P22031043

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5690 MHz; Duty Cycle: 1:1.03

Medium: H34T60N1_0824 Medium parameters used (interpolated): $f = 5690$ MHz; $\sigma = 5.185$ S/m; $\epsilon_r = 36.371$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.05, 5.05, 5.05) @ 5690 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax; Serial: 1204
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (131x371x1): Interpolated grid: $dx=1.100$ mm, $dy=1.100$ mm
Maximum value of SAR (interpolated) = 1.29 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 14.29 V/m; Power Drift = -0.06 dB

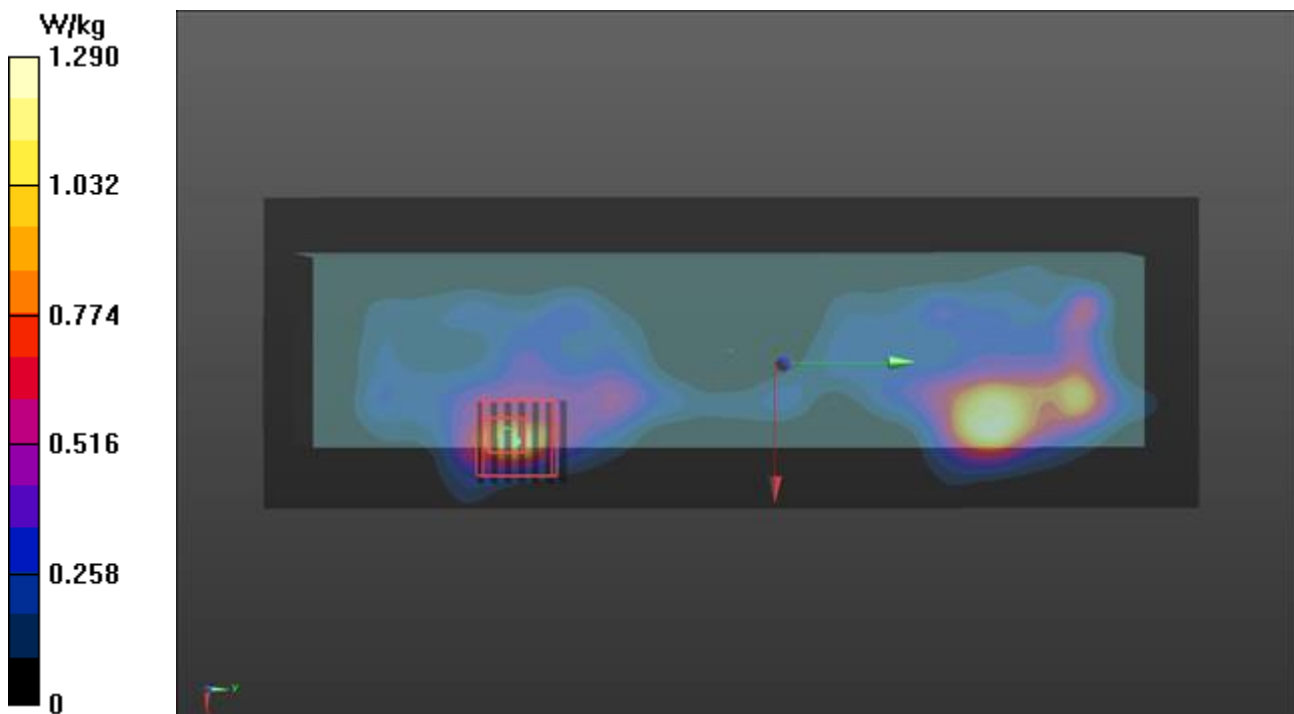
Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.126 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 59.2%

Maximum value of SAR (measured) = 0.831 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

P04 WLAN5.8G_802.11ac VHT80_Bottom Side_5mm_Ch155_USB_Ant 0+1

DUT: BBUI-WTW-P22031043

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5775 MHz; Duty Cycle: 1:1.03

Medium: H34T60N1_0824 Medium parameters used: $f = 5775$ MHz; $\sigma = 5.274$ S/m; $\epsilon_r = 36.261$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.05, 5.05, 5.05) @ 5775 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (131x371x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.02 W/kg

Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 13.48 V/m; Power Drift = -0.17 dB

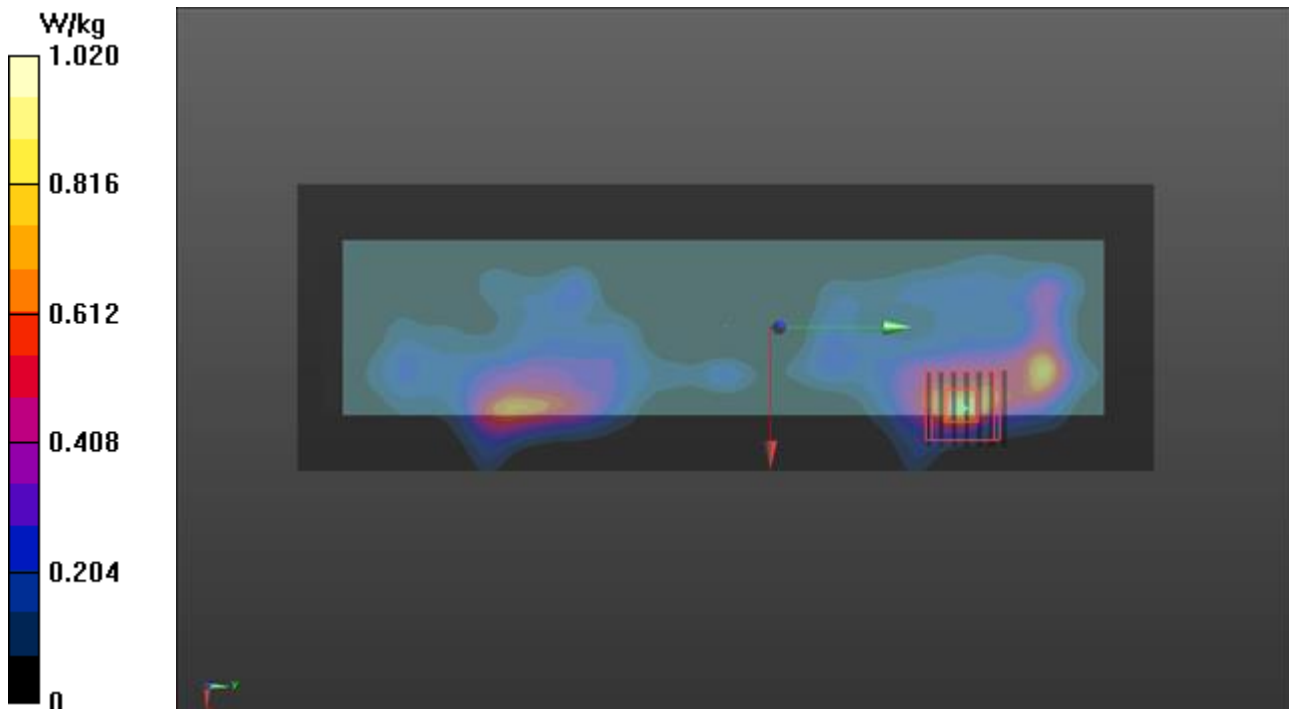
Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.138 W/kg

Smallest distance from peaks to all points 3 dB below = 7.5 mm

Ratio of SAR at M2 to SAR at M1 = 59.1%

Maximum value of SAR (measured) = 1.02 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/24

P05 WLAN5.9G_802.11ac VHT80_Bottom Side_5mm_Ch171_USB_Ant 0+1

DUT: BBUI-WTW-P22031043

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5855 MHz; Duty Cycle: 1:1.03

Medium: H34T60N1_0824 Medium parameters used: $f = 5855$ MHz; $\sigma = 5.356$ S/m; $\epsilon_r = 36.142$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(5.05, 5.05, 5.05) @ 5855 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (91x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.12 W/kg

Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 9.171 V/m; Power Drift = 0.08 dB

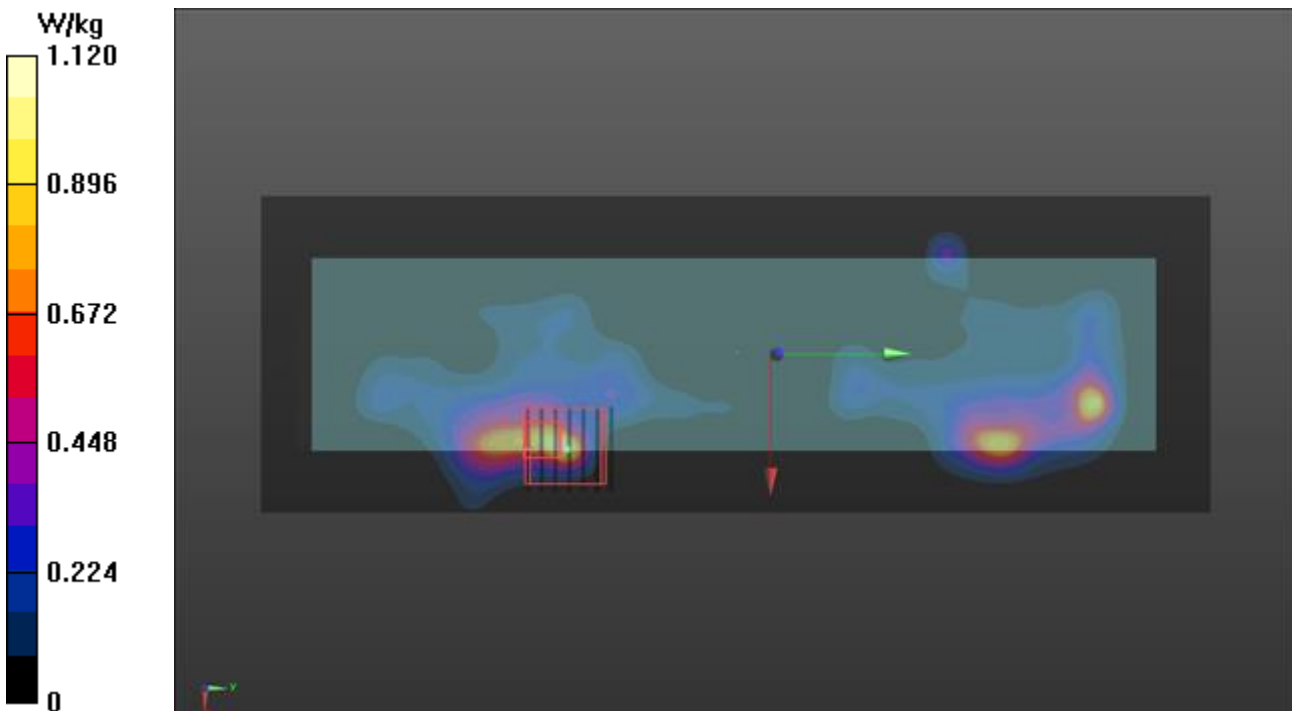
Peak SAR (extrapolated) = 2.99 W/kg

SAR(1 g) = 0.459 W/kg; SAR(10 g) = 0.123 W/kg

Smallest distance from peaks to all points 3 dB below = 5.8 mm

Ratio of SAR at M2 to SAR at M1 = 57.5%

Maximum value of SAR (measured) = 1.58 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

P06 BT_BDR_Bottom Side_5mm_Ch39_USB_Ant 0

DUT: BBUI-WTW-P22031043

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2441 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.871$ S/m; $\epsilon_r = 39.301$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2441 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax; Serial: 1204
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (81x231x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.315 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 10.30 V/m; Power Drift = -0.09 dB

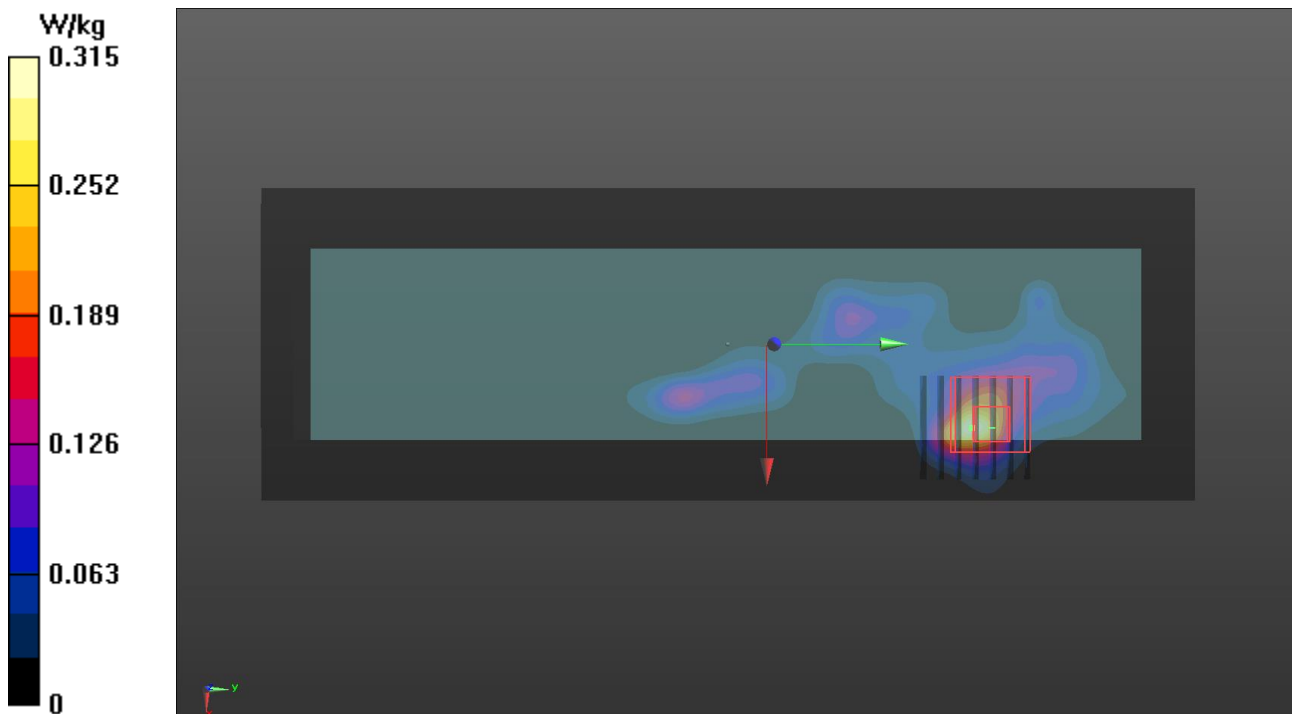
Peak SAR (extrapolated) = 0.428 W/kg

SAR(1 g) = 0.171 W/kg; SAR(10 g) = 0.077 W/kg

Smallest distance from peaks to all points 3 dB below = 7.1 mm

Ratio of SAR at M2 to SAR at M1 = 41.9%

Maximum value of SAR (measured) = 0.324 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/08/25

P07 BT_BDR_Bottom Side_5mm_Ch39_USB_Ant 0

DUT: BBUI-WTW-P22031043

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2441 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0825 Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.871$ S/m; $\epsilon_r = 39.301$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7736; ConvF(8.12, 8.12, 8.12) @ 2441 MHz; Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2022/6/1
- Phantom: ELI Phantom_1204; Type: QD OVA 002 Ax; Serial: 1204
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (81x231x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.181 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.099 V/m; Power Drift = 0.11 dB

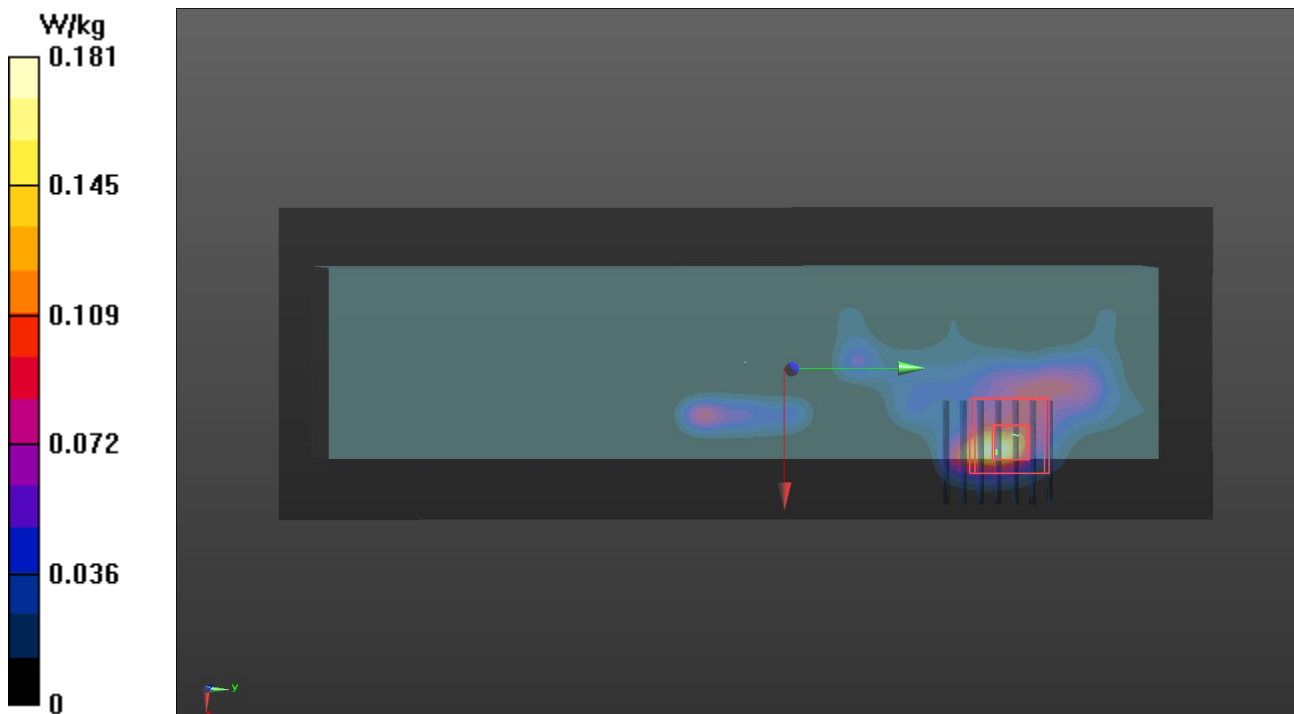
Peak SAR (extrapolated) = 0.244 W/kg

SAR(1 g) = 0.080 W/kg; SAR(10 g) = 0.046 W/kg

Smallest distance from peaks to all points 3 dB below = 7.3 mm

Ratio of SAR at M2 to SAR at M1 = 41.1%

Maximum value of SAR (measured) = 0.190 W/kg



Annex C. Tissue & System Verification

The measuring results for tissue simulating liquid and system check are shown as below.

Note:

1. For Section 4.3, the dielectric properties of the tissue simulating liquid have been measured within 24 hours before the SAR testing and within $\pm 10\%$ of the target values. Liquid temperature during the SAR testing has kept within $\pm 2^\circ\text{C}$.
2. For Section 4.4, The SAR measurement system was validated according to procedures in KDB 865664 D01 . The validation status in tabulated summary is as below.
3. For Section 4.5, Comparing to the reference SAR value provided by SPEAG in dipole calibration certificate, the deviation of system check results is within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots please refer to Annex A of this report.

Tissue Verification									Validation for CW			Validation for Modulation			System Validation						Note			
Plot No.	Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Targeted Conductivity (σ)	Targeted Permittivity (ε _r)	Deviation Conductivity (σ)	Deviation Permittivity (ε _r)	Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR	Date	Frequency (MHz)	Targeted 1g SAR (W/kg)	Measured 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N	Output Power (dB)
S01	2450	23.1	1.881	39.283	1.8	39.2	4.50	0.21	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 25, 2022	2450	52.60	2.51	50.08	-4.79	737	7736	579	17
S02	5250	23.2	4.736	36.971	4.71	35.9	0.55	2.98	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2022	5250	80.60	3.81	76.02	-5.68	1019	7736	579	17
S03	5600	23.2	5.09	36.503	5.07	35.5	0.39	2.83	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2022	5600	82.40	4.37	87.19	5.82	1019	7736	579	17
S04	5750	23.2	5.249	36.283	5.22	35.4	0.56	2.49	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2022	5750	79.40	3.91	78.01	-1.74	1019	7736	579	17
S05	5750	23.2	5.249	36.283	5.22	35.4	0.56	2.49	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2022	5750	79.40	3.91	78.01	-1.74	1019	7736	579	17
S06	2450	23.1	1.881	39.283	1.8	39.2	4.50	0.21	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 25, 2022	2450	52.60	2.51	50.08	-4.79	737	7736	579	17
S07	2450	23.1	1.881	39.283	1.8	39.2	4.50	0.21	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 25, 2022	2450	52.60	2.51	50.08	-4.79	737	7736	579	17

Annex D. Maximum Target Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

Tune-up Power							
WLAN 2.4GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11b	1	2412	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	11	2462	15.0	15.0	15.0	15.0	18.0
	12	2467	15.0	15.0	15.0	15.0	18.0
	13	2472	12.0	12.0	12.0	12.0	15.0
802.11g	1	2412	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	11	2462	15.0	15.0	15.0	15.0	18.0
	12	2467	13.5	13.5	13.5	13.5	16.5
	13	2472	12.5	12.5	12.5	12.5	15.5
802.11ac VHT20	1	2412	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	11	2462	15.0	15.0	15.0	15.0	18.0
	12	2467	13.5	13.5	13.5	13.5	16.5
	13	2472	12.5	12.5	12.5	12.5	15.5
802.11ac VHT40	3	2422	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	9	2452	15.0	15.0	15.0	15.0	18.0
	10	2457	12.5	12.5	12.5	12.5	15.5
	11	2462	11.5	11.5	11.5	11.5	14.5
802.11ax HE20	1	2412	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	11	2462	15.0	15.0	15.0	15.0	18.0
	12	2467	13.5	13.5	13.5	13.5	16.5
	13	2472	12.5	12.5	12.5	12.5	15.5
802.11ax HE40	3	2422	15.0	15.0	15.0	15.0	18.0
	6	2437	15.0	15.0	15.0	15.0	18.0
	9	2452	15.0	15.0	15.0	15.0	18.0
	10	2457	12.5	12.5	12.5	12.5	15.5
	11	2462	11.5	11.5	11.5	11.5	14.5

Tune-up Power				
Bluetooth				
Mode	Channel	Frequency	Max Tune-up (Higher Power)	Max Tune-up (Lower Power)
BR / EDR	0	2402	12.5	6.0
	39	2441	12.5	6.0
	78	2480	12.5	6.0
LE	0	2402	12.5	6.0
	19	2440	12.5	6.0
	39	2480	12.5	6.0

Tune-up Power							
WLAN 5.2GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	36	5180	13.5	13.5	13.5	13.5	16.5
	40	5200	13.5	13.5	13.5	13.5	16.5
	44	5220	13.5	13.5	13.5	13.5	16.5
	48	5240	13.5	13.5	13.5	13.5	16.5
802.11ac VHT20	36	5180	13.5	13.5	13.5	13.5	16.5
	40	5200	13.5	13.5	13.5	13.5	16.5
	44	5220	13.5	13.5	13.5	13.5	16.5
	48	5240	13.5	13.5	13.5	13.5	16.5
802.11ac VHT40	38	5190	13.5	13.5	13.5	13.5	16.5
	46	5230	13.5	13.5	13.5	13.5	16.5
802.11ac VHT80	42	5210	13.5	13.5	13.5	13.5	16.5
802.11ax HE20	36	5180	13.5	13.5	13.5	13.5	16.5
	40	5200	13.5	13.5	13.5	13.5	16.5
	44	5220	13.5	13.5	13.5	13.5	16.5
	48	5240	13.5	13.5	13.5	13.5	16.5
802.11ax HE40	38	5190	13.5	13.5	13.5	13.5	16.5
	46	5230	13.5	13.5	13.5	13.5	16.5
802.11ax HE80	42	5210	13.5	13.5	13.5	13.5	16.5

Tune-up Power							
WLAN 5.3GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	52	5260	13.5	13.5	13.5	13.5	16.5
	56	5280	13.5	13.5	13.5	13.5	16.5
	60	5300	13.5	13.5	13.5	13.5	16.5
	64	5320	13.5	13.5	13.5	13.5	16.5
802.11ac VHT20	52	5260	13.5	13.5	13.5	13.5	16.5
	56	5280	13.5	13.5	13.5	13.5	16.5
	60	5300	13.5	13.5	13.5	13.5	16.5
	64	5320	13.5	13.5	13.5	13.5	16.5
802.11ac VHT40	54	5270	13.5	13.5	13.5	13.5	16.5
	62	5310	13.5	13.5	13.5	13.5	16.5
802.11ac VHT80	58	5290	13.5	13.5	13.5	13.5	16.5
802.11ax HE20	52	5260	13.5	13.5	13.5	13.5	16.5
	56	5280	13.5	13.5	13.5	13.5	16.5
	60	5300	13.5	13.5	13.5	13.5	16.5
	64	5320	13.5	13.5	13.5	13.5	16.5
802.11ax HE40	54	5270	13.5	13.5	13.5	13.5	16.5
	62	5310	13.5	13.5	13.5	13.5	16.5
802.11ax HE80	58	5290	13.5	13.5	13.5	13.5	16.5

Tune-up Power							
WLAN 5.6GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	100	5500	13.5	13.5	13.5	13.5	16.5
	116	5580	13.5	13.5	13.5	13.5	16.5
	120	5600	13.5	13.5	13.5	13.5	16.5
	124	5620	13.5	13.5	13.5	13.5	16.5
	132	5660	13.5	13.5	13.5	13.5	16.5
	140	5700	13.5	13.5	13.5	13.5	16.5
	144	5720	13.5	13.5	13.5	13.5	16.5
802.11ac VHT20	100	5500	13.5	13.5	13.5	13.5	16.5
	116	5580	13.5	13.5	13.5	13.5	16.5
	120	5600	13.5	13.5	13.5	13.5	16.5
	124	5620	13.5	13.5	13.5	13.5	16.5
	132	5660	13.5	13.5	13.5	13.5	16.5
	140	5700	13.5	13.5	13.5	13.5	16.5
802.11ac VHT40	102	5510	13.5	13.5	13.5	13.5	16.5
	110	5550	13.5	13.5	13.5	13.5	16.5
	118	5590	13.5	13.5	13.5	13.5	16.5
	126	5630	13.5	13.5	13.5	13.5	16.5
	134	5670	13.5	13.5	13.5	13.5	16.5
	142	5710	13.5	13.5	13.5	13.5	16.5
802.11ac VHT80	106	5530	13.5	13.5	13.5	13.5	16.5
	122	5610	13.5	13.5	13.5	13.5	16.5
	138	5690	13.5	13.5	13.5	13.5	16.5
802.11ax HE20	100	5500	13.5	13.5	13.5	13.5	16.5
	116	5580	13.5	13.5	13.5	13.5	16.5
	120	5600	13.5	13.5	13.5	13.5	16.5
	124	5620	13.5	13.5	13.5	13.5	16.5
	132	5660	13.5	13.5	13.5	13.5	16.5
	140	5700	13.5	13.5	13.5	13.5	16.5
	144	5720	13.5	13.5	13.5	13.5	16.5
802.11ax HE40	102	5510	13.5	13.5	13.5	13.5	16.5
	110	5550	13.5	13.5	13.5	13.5	16.5
	118	5590	13.5	13.5	13.5	13.5	16.5
	126	5630	13.5	13.5	13.5	13.5	16.5
	134	5670	13.5	13.5	13.5	13.5	16.5
	142	5710	13.5	13.5	13.5	13.5	16.5
802.11ax HE80	106	5530	13.5	13.5	13.5	13.5	16.5
	122	5610	13.5	13.5	13.5	13.5	16.5
	138	5690	13.5	13.5	13.5	13.5	16.5

Tune-up Power							
WLAN 5.8GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	149	5745	13.5	13.5	13.5	13.5	16.5
	153	5765	13.5	13.5	13.5	13.5	16.5
	157	5785	13.5	13.5	13.5	13.5	16.5
	161	5805	13.5	13.5	13.5	13.5	16.5
	165	5825	13.5	13.5	13.5	13.5	16.5
802.11ac VHT20	149	5745	13.5	13.5	13.5	13.5	16.5
	153	5765	13.5	13.5	13.5	13.5	16.5
	157	5785	13.5	13.5	13.5	13.5	16.5
	161	5805	13.5	13.5	13.5	13.5	16.5
	165	5825	13.5	13.5	13.5	13.5	16.5
802.11ac VHT40	151	5755	13.5	13.5	13.5	13.5	16.5
	159	5795	13.5	13.5	13.5	13.5	16.5
802.11ac VHT80	155	5775	13.5	13.5	13.5	13.5	16.5
802.11ax HE20	149	5745	13.5	13.5	13.5	13.5	16.5
	153	5765	13.5	13.5	13.5	13.5	16.5
	157	5785	13.5	13.5	13.5	13.5	16.5
	161	5805	13.5	13.5	13.5	13.5	16.5
	165	5825	13.5	13.5	13.5	13.5	16.5
802.11ax HE40	151	5755	13.5	13.5	13.5	13.5	16.5
	159	5795	13.5	13.5	13.5	13.5	16.5
802.11ax HE80	155	5775	13.5	13.5	13.5	13.5	16.5

Tune-up Power							
WLAN 5.9GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	169	5845	13.5	13.5	13.5	13.5	16.5
	173	5865	13.5	13.5	13.5	13.5	16.5
	177	5885	13.5	13.5	13.5	13.5	16.5
802.11ac VHT20	169	5845	13.5	13.5	13.5	13.5	16.5
	173	5865	13.5	13.5	13.5	13.5	16.5
	177	5885	13.5	13.5	13.5	13.5	16.5
802.11ac VHT40	167	5835	13.5	13.5	13.5	13.5	16.5
	175	5875	13.5	13.5	13.5	13.5	16.5
802.11ac VHT80	171	5855	13.5	13.5	13.5	13.5	16.5
802.11ax HE20	169	5845	13.5	13.5	13.5	13.5	16.5
	173	5865	13.5	13.5	13.5	13.5	16.5
	177	5885	13.5	13.5	13.5	13.5	16.5
802.11ax HE40	167	5835	13.5	13.5	13.5	13.5	16.5
	175	5875	13.5	13.5	13.5	13.5	16.5
802.11ax HE80	171	5855	13.5	13.5	13.5	13.5	16.5

Annex E. Measured Conducted Power Result

The measuring conducted power (Unit: dBm) are shown as below.

WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11b	1	2412	14.95
	6	2437	14.99
	11	2462	14.97
	12	2467	14.93
	13	2472	11.86
802.11g	1	2412	14.65
	6	2437	14.77
	11	2462	14.59
	12	2467	12.62
	13	2472	11.69
802.11ac VHT20	1	2412	14.51
	6	2437	14.71
	11	2462	14.61
	12	2467	12.59
	13	2472	11.71
802.11ac VHT40	3	2422	14.51
	6	2437	14.66
	9	2452	14.67
	10	2457	11.77
	11	2462	10.59
802.11ax HE20	1	2412	14.73
	6	2437	14.54
	11	2462	14.62
	12	2467	12.68
	13	2472	11.61
802.11ax HE40	3	2422	14.52
	6	2437	14.67
	9	2452	14.6
	10	2457	11.62
	11	2462	10.56

WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11b	1	2412	14.93
	6	2437	14.99
	11	2462	14.87
	12	2467	14.67
	13	2472	11.79
802.11g	1	2412	14.75
	6	2437	14.66
	11	2462	14.76
	12	2467	12.8
	13	2472	11.67
802.11ac VHT20	1	2412	14.79
	6	2437	14.71
	11	2462	14.53
	12	2467	12.78
	13	2472	11.77
802.11ac VHT40	3	2422	14.78
	6	2437	14.62
	9	2452	14.58
	10	2457	11.71
	11	2462	10.59
802.11ax HE20	1	2412	14.52
	6	2437	14.77
	11	2462	14.79
	12	2467	12.74
	13	2472	11.59
802.11ax HE40	3	2422	14.57
	6	2437	14.73
	9	2452	14.55
	10	2457	11.76
	11	2462	10.64

WLAN Conducted Power (Full)

WLAN2.4GHz Ant 0+1

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11b	1	2412	14.83	14.96	17.91
	6	2437	14.96	14.99	17.99
	11	2462	14.73	14.79	17.77
	12	2467	14.81	14.64	17.74
	13	2472	11.86	11.81	14.85
802.11g	1	2412	14.71	14.59	17.66
	6	2437	14.52	14.68	17.61
	11	2462	14.76	14.73	17.76
	12	2467	12.68	12.53	15.62
	13	2472	11.71	11.65	14.69
802.11ac VHT20	1	2412	14.51	14.5	17.52
	6	2437	14.74	14.79	17.78
	11	2462	14.77	14.51	17.65
	12	2467	12.72	12.74	15.74
	13	2472	11.67	11.62	14.66
802.11ac VHT40	3	2422	14.57	14.67	17.63
	6	2437	14.73	14.74	17.75
	9	2452	14.67	14.52	17.61
	10	2457	11.74	11.59	14.68
	11	2462	10.5	10.55	13.54
802.11ax HE20	1	2412	14.55	14.78	17.68
	6	2437	14.59	14.59	17.60
	11	2462	14.73	14.6	17.68
	12	2467	12.78	12.79	15.80
	13	2472	11.79	11.77	14.79
802.11ax HE40	3	2422	14.79	14.64	17.73
	6	2437	14.56	14.79	17.69
	9	2452	14.75	14.65	17.71
	10	2457	11.53	11.51	14.53
	11	2462	10.52	10.72	13.63

WLAN Conducted Power (Full)			
Bluetooth (Higher Power)			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
BR / EDR	0	2402	12.35
	39	2441	12.44
	78	2480	12.22
LE	0	2402	12.37
	19	2440	12.11
	39	2480	12.16

WLAN Conducted Power (Full)			
Bluetooth (Lower Power)			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
BR / EDR	0	2402	5.79
	39	2441	5.92
	78	2480	5.88
LE	0	2402	5.69
	19	2440	5.74
	39	2480	5.59

WLAN Conducted Power (Full)			
WLAN 5.2GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	36	5180	13.01
	40	5200	13.25
	44	5220	13.21
	48	5240	13.12
802.11ac VHT20	36	5180	13.09
	40	5200	13.06
	44	5220	13.14
	48	5240	13.26
802.11ac VHT40	38	5190	13.16
	46	5230	13.28
802.11ac VHT80	42	5210	13.21
802.11ax HE20	36	5180	13.26
	40	5200	13.17
	44	5220	13.04
	48	5240	13.04
802.11ax HE40	38	5190	13.28
	46	5230	13.23
802.11ax HE80	42	5210	13.22

WLAN Conducted Power (Full)			
WLAN 5.2GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	36	5180	13.01
	40	5200	13.12
	44	5220	13.06
	48	5240	13.01
802.11ac VHT20	36	5180	13.3
	40	5200	13.09
	44	5220	13.3
	48	5240	13.28
802.11ac VHT40	38	5190	13.21
	46	5230	13.27
802.11ac VHT80	42	5210	13.19
802.11ax HE20	36	5180	13.25
	40	5200	13.09
	44	5220	13.25
	48	5240	13.09
802.11ax HE40	38	5190	13.12
	46	5230	13.29
802.11ax HE80	42	5210	13.16

WLAN Conducted Power (Full)**WLAN 5.2GHz Ant 0+1**

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11a	36	5180	13.11	13.02	16.08
	40	5200	13.3	13.03	16.18
	44	5220	13.22	13.06	16.15
	48	5240	13.1	13	16.06
802.11ac VHT20	36	5180	13.06	13.22	16.15
	40	5200	13.27	13.18	16.24
	44	5220	13.07	13.03	16.06
	48	5240	13.21	13.19	16.21
802.11ac VHT40	38	5190	13.09	13.26	16.19
	46	5230	13.05	13.19	16.13
802.11ac VHT80	42	5210	13.02	13.18	16.11
802.11ax HE20	36	5180	13.01	13.2	16.12
	40	5200	13.22	13.16	16.2
	44	5220	13.25	13.26	16.27
	48	5240	13.08	13.08	16.09
802.11ax HE40	38	5190	13.08	13.23	16.17
	46	5230	13.14	13.25	16.21
802.11ax HE80	42	5210	13.29	13.25	16.28

WLAN Conducted Power (Full)			
WLAN 5.3GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	52	5260	13.06
	56	5280	13.13
	60	5300	13.28
	64	5320	13.12
802.11ac VHT20	52	5260	13.06
	56	5280	13.02
	60	5300	13.13
	64	5320	13.2
802.11ac VHT40	54	5270	13.19
	62	5310	13.22
802.11ac VHT80	58	5290	13.47
802.11ax HE20	52	5260	13.17
	56	5280	13.25
	60	5300	13.03
	64	5320	13.27
802.11ax HE40	54	5270	13
	62	5310	13.01
802.11ax HE80	58	5290	13.19

WLAN Conducted Power (Full)			
WLAN 5.3GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	52	5260	13.28
	56	5280	13.26
	60	5300	13.1
	64	5320	13.11
802.11ac VHT20	52	5260	13.29
	56	5280	13.06
	60	5300	13
	64	5320	13.24
802.11ac VHT40	54	5270	13.23
	62	5310	13.28
802.11ac VHT80	58	5290	13.41
802.11ax HE20	52	5260	13.09
	56	5280	13.03
	60	5300	13.06
	64	5320	13.18
802.11ax HE40	54	5270	13.25
	62	5310	13
802.11ax HE80	58	5290	13.12

WLAN Conducted Power (Full)**WLAN 5.3GHz Ant 0+1**

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11a	52	5260	13.16	13.3	16.24
	56	5280	13.14	13.26	16.21
	60	5300	13.05	13.12	16.1
	64	5320	13.24	13.07	16.17
802.11ac VHT20	52	5260	13.13	13.17	16.16
	56	5280	13.16	13.17	16.18
	60	5300	13.23	13.16	16.21
	64	5320	13.14	13.03	16.1
802.11ac VHT40	54	5270	13.23	13.24	16.25
	62	5310	13.04	13.04	16.05
802.11ac VHT80	58	5290	13.23	13.13	16.19
802.11ax HE20	52	5260	13.05	13.04	16.06
	56	5280	13.16	13.08	16.13
	60	5300	13.28	13.04	16.17
	64	5320	13.1	13.25	16.19
802.11ax HE40	54	5270	13.21	13.16	16.2
	62	5310	13.05	13.04	16.06
802.11ax HE80	58	5290	13.08	13.16	16.13

WLAN Conducted Power (Full)			
WLAN 5.6GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	100	5500	13.25
	116	5580	13.25
	120	5600	13.09
	124	5620	13.26
	132	5660	13.19
	140	5700	13.22
	144	5720	13.3
802.11ac VHT20	100	5500	13.3
	116	5580	13.02
	120	5600	13.27
	124	5620	13.15
	132	5660	13.14
	140	5700	13.03
	144	5720	13.1
802.11ac VHT40	102	5510	13.05
	110	5550	13.05
	118	5590	13.09
	126	5630	13.02
	134	5670	13.06
	142	5710	13.12
802.11ac VHT80	106	5530	13.39
	122	5610	13.36
	138	5690	13.49
802.11ax HE20	100	5500	13.19
	116	5580	13.06
	120	5600	13.12
	124	5620	13.18
	132	5660	13.13
	140	5700	13.22
	144	5720	13.22
802.11ax HE40	102	5510	13.05
	110	5550	13.01
	118	5590	13.12
	126	5630	13.06
	134	5670	13.01
	142	5710	13.26
802.11ax HE80	106	5530	13.17
	122	5610	13.07
	138	5690	13.14

WLAN Conducted Power (Full)			
WLAN 5.6GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	100	5500	13.28
	116	5580	13.02
	120	5600	13.09
	124	5620	13.17
	132	5660	13.06
	140	5700	13.25
	144	5720	13.16
802.11ac VHT20	100	5500	13.2
	116	5580	13.27
	120	5600	13.1
	124	5620	13.18
	132	5660	13.2
	140	5700	13.09
	144	5720	13.18
802.11ac VHT40	102	5510	13.08
	110	5550	13.12
	118	5590	13
	126	5630	13.05
	134	5670	13.06
	142	5710	13.16
802.11ac VHT80	106	5530	13.39
	122	5610	13.32
	138	5690	13.49
802.11ax HE20	100	5500	13.04
	116	5580	13.1
	120	5600	13.25
	124	5620	13.28
	132	5660	13.25
	140	5700	13.25
	144	5720	13.21
802.11ax HE40	102	5510	13.15
	110	5550	13.27
	118	5590	13.01
	126	5630	13.12
	134	5670	13.06
	142	5710	13.29
802.11ax HE80	106	5530	13.07
	122	5610	13.15
	138	5690	13.23

WLAN Conducted Power (Full)

WLAN 5.6GHz Ant 0+1

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11a	100	5500	13.04	13.11	16.09
	116	5580	13.27	13.04	16.17
	120	5600	13.28	13.23	16.27
	124	5620	13.11	13.28	16.21
	132	5660	13.16	13.02	16.1
	140	5700	13.08	13.12	16.11
	144	5720	13.11	13.27	16.2
802.11ac VHT20	100	5500	13.1	13.02	16.07
	116	5580	13	13	16.01
	120	5600	13.12	13.25	16.2
	124	5620	13.24	13.26	16.26
	132	5660	13.24	13.19	16.23
	140	5700	13.1	13.17	16.15
	144	5720	13.03	13.06	16.06
802.11ac VHT40	102	5510	13.29	13.13	16.22
	110	5550	13.19	13.12	16.17
	118	5590	13.24	13	16.13
	126	5630	13.03	13.06	16.06
	134	5670	13.27	13.2	16.25
	142	5710	13.18	13.22	16.21
802.11ac VHT80	106	5530	12.36	13.47	15.96
	122	5610	12.74	13.35	16.07
	138	5690	12.79	13.49	16.16
802.11ax HE20	100	5500	13.13	13.14	16.15
	116	5580	13.05	13.25	16.16
	120	5600	13.29	13.11	16.21
	124	5620	13.06	13.14	16.11
	132	5660	13.25	13.29	16.28
	140	5700	13.23	13.15	16.2
	144	5720	13.05	13.15	16.11
802.11ax HE40	102	5510	13.26	13.23	16.26
	110	5550	13.15	13.14	16.16
	118	5590	13.09	13.09	16.1
	126	5630	13.28	13	16.15
	134	5670	13.07	13.21	16.15
	142	5710	13.21	13.13	16.18
802.11ax HE80	106	5530	13.21	13.29	16.26
	122	5610	13.14	13.03	16.1
	138	5690	13.28	13.03	16.17

WLAN Conducted Power (Full)			
WLAN 5.8GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	149	5745	13.01
	153	5765	13.27
	157	5785	13.03
	161	5805	13.26
	165	5825	13.2
802.11ac VHT20	149	5745	13.29
	153	5765	13.19
	157	5785	13.12
	161	5805	13
	165	5825	13.2
802.11ac VHT40	151	5755	13.2
	159	5795	13.11
802.11ac VHT80	155	5775	13.48
802.11ax HE20	149	5745	13.23
	153	5765	13.29
	157	5785	13.05
	161	5805	13.22
	165	5825	13.24
802.11ax HE40	151	5755	13.03
	159	5795	13.28
802.11ax HE80	155	5775	13.14

WLAN Conducted Power (Full)			
WLAN 5.8GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	149	5745	13.15
	153	5765	13.28
	157	5785	13.21
	161	5805	13.03
	165	5825	13.05
802.11ac VHT20	149	5745	13.16
	153	5765	13.3
	157	5785	13.14
	161	5805	13.24
	165	5825	13.03
802.11ac VHT40	151	5755	13.18
	159	5795	13.03
802.11ac VHT80	155	5775	13.48
802.11ax HE20	149	5745	13.02
	153	5765	13.06
	157	5785	13.27
	161	5805	13.06
	165	5825	13.14
802.11ax HE40	151	5755	13.05
	159	5795	13.26
802.11ax HE80	155	5775	13.2

WLAN Conducted Power (Full)

WLAN 5.8GHz Ant 0+1

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11a	149	5745	13.14	13.07	16.12
	153	5765	13.14	13.05	16.11
	157	5785	13.01	13.02	16.03
	161	5805	13.14	13.12	16.14
	165	5825	13.11	13.05	16.09
802.11ac VHT20	149	5745	13.01	13.02	16.03
	153	5765	13.01	13	16.02
	157	5785	13.26	13.2	16.24
	161	5805	13.01	13.13	16.08
	165	5825	13.15	13.07	16.12
802.11ac VHT40	151	5755	13.26	13.25	16.27
	159	5795	13.29	13.19	16.25
802.11ac VHT80	155	5775	13.34	13.32	16.34
802.11ax HE20	149	5745	13.06	13.24	16.16
	153	5765	13.1	13.23	16.18
	157	5785	13.07	13.24	16.17
	161	5805	13.28	13	16.15
	165	5825	13.1	13.28	16.2
802.11ax HE40	151	5755	13.23	13.12	16.19
	159	5795	13.04	13.06	16.06
802.11ax HE80	155	5775	13.28	13.15	16.23

WLAN Conducted Power (Full)			
WLAN 5.9GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	169	5845	13.28
	173	5865	13.29
	177	5885	13.04
802.11ac VHT20	169	5845	13.11
	173	5865	13.26
	177	5885	13.26
802.11ac VHT40	167	5835	13.13
	175	5875	13.14
802.11ac VHT80	171	5855	13.49
802.11ax HE20	169	5845	13.11
	173	5865	13.1
	177	5885	13.17
802.11ax HE40	167	5835	13.25
	175	5875	13.07
802.11ax HE80	171	5855	13.15

WLAN Conducted Power (Full)			
WLAN 5.9GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	169	5845	13.16
	173	5865	13.21
	177	5885	13.01
802.11ac VHT20	169	5845	13.19
	173	5865	13.24
	177	5885	13.07
802.11ac VHT40	167	5835	13.21
	175	5875	13.13
802.11ac VHT80	171	5855	13.46
802.11ax HE20	169	5845	13.03
	173	5865	13.09
	177	5885	13.16
802.11ax HE40	167	5835	13.01
	175	5875	13.14
802.11ax HE80	171	5855	13.16

WLAN Conducted Power (Full)**WLAN 5.9GHz Ant 0+1**

Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11a	169	5845	13.19	13.24	16.23
	173	5865	13.09	13.15	16.13
	177	5885	13.2	13.09	16.16
802.11ac VHT20	169	5845	13.12	13.03	16.09
	173	5865	13	13.2	16.11
	177	5885	13.28	13.21	16.26
802.11ac VHT40	167	5835	13.2	13.12	16.17
	175	5875	13.25	13.18	16.23
802.11ac VHT80	171	5855	13.33	13.49	16.42
802.11ax HE20	169	5845	13.17	13.03	16.11
	173	5865	13.01	13	16.02
	177	5885	13.11	13.06	16.1
802.11ax HE40	167	5835	13.04	13.22	16.14
	175	5875	13.19	13.02	16.12
802.11ax HE80	171	5855	13.13	13.3	16.23

Annex F. SAR Test Result

SAR Results for Body Exposure Condition.

Note:

1. SAR testing for WLAN was performed on the maximum power mode.

Body SAR Test Result

System & Position						DUT & Accessory		SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Interface	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Front Face	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	0.13	0.253	0.25
	WLAN2.4G	802.11b	Rear Face	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	-0.14	0.153	0.15
	WLAN2.4G	802.11b	Left Side	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	0.17	0.321	0.32
	WLAN2.4G	802.11b	Right Side	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	0.11	0.357	0.36
	WLAN2.4G	802.11b	Top Side	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	0.16	0.382	0.38
	WLAN2.4G	802.11b	Bottom Side	5	6	USB	Ant 0	100.00	1.00	15.00	14.99	1.00	-0.13	0.418	0.42
	WLAN2.4G	802.11b	Front Face	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	0.13	0.157	0.16
	WLAN2.4G	802.11b	Rear Face	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	-0.06	0.109	0.11
	WLAN2.4G	802.11b	Left Side	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	0.11	0.26	0.26
	WLAN2.4G	802.11b	Right Side	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	-0.16	0.3	0.30
	WLAN2.4G	802.11b	Top Side	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	0.12	0.324	0.32
	WLAN2.4G	802.11b	Bottom Side	5	6	USB	Ant 1	100.00	1.00	15.00	14.99	1.00	0.13	0.423	0.42
	WLAN2.4G	802.11b	Front Face	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	0.1	0.251	0.25
	WLAN2.4G	802.11b	Rear Face	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	0.19	0.15	0.15
	WLAN2.4G	802.11b	Left Side	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	0.17	0.316	0.32
	WLAN2.4G	802.11b	Right Side	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	0.17	0.348	0.35
	WLAN2.4G	802.11b	Top Side	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	-0.12	0.37	0.37
	WLAN2.4G	802.11b	Bottom Side	5	6	USB	Ant 0+1	100.00	1.00	18.00	17.99	1.00	-0.02	0.428	0.43
	WLAN2.4G	802.11b	Bottom Side	5	1	USB	Ant 0+1	100.00	1.00	18.00	17.91	1.02	0.04	0.421	0.43
	WLAN2.4G	802.11b	Bottom Side	5	11	USB	Ant 0+1	100.00	1.00	18.00	17.77	1.05	-0.16	0.405	0.43
1	WLAN2.4G	802.11b	Bottom Side	5	12	USB	Ant 0+1	100.00	1.00	18.00	17.74	1.06	0.09	0.579	0.61
	WLAN2.4G	802.11b	Bottom Side	5	13	USB	Ant 0+1	100.00	1.00	15.00	14.85	1.04	0.02	0.199	0.21
	WLAN2.4G	802.11b	Bottom Side	5	12	UART	Ant 0+1	100.00	1.00	18.00	17.74	1.06	-0.1	0.446	0.47
	WLAN5.3G	802.11ac VHT80	Front Face	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	0.04	0.224	0.23
	WLAN5.3G	802.11ac VHT80	Rear Face	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	-0.14	0.08	0.08
	WLAN5.3G	802.11ac VHT80	Left Side	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	-0.09	0.177	0.18
	WLAN5.3G	802.11ac VHT80	Right Side	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	-0.17	0.054	0.05
	WLAN5.3G	802.11ac VHT80	Top Side	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	-0.08	0.32	0.32
	WLAN5.3G	802.11ac VHT80	Bottom Side	5	58	USB	Ant 0	100.00	1.00	13.50	13.47	1.01	0.12	0.343	0.35
	WLAN5.3G	802.11ac VHT80	Front Face	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	-0.07	0.369	0.38
	WLAN5.3G	802.11ac VHT80	Rear Face	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	-0.18	0.055	0.06
	WLAN5.3G	802.11ac VHT80	Left Side	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	0.07	0.111	0.11
	WLAN5.3G	802.11ac VHT80	Right Side	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	-0.02	0.06	0.06
	WLAN5.3G	802.11ac VHT80	Top Side	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	0.1	0.399	0.41
	WLAN5.3G	802.11ac VHT80	Bottom Side	5	58	USB	Ant 1	100.00	1.00	13.50	13.41	1.02	-0.19	0.427	0.44
	WLAN5.3G	802.11ac VHT80	Front Face	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	-0.12	0.311	0.35
	WLAN5.3G	802.11ac VHT80	Rear Face	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	-0.14	0.082	0.09
	WLAN5.3G	802.11ac VHT80	Left Side	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	0.02	0.125	0.14
	WLAN5.3G	802.11ac VHT80	Right Side	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	-0.15	0.065	0.07
	WLAN5.3G	802.11ac VHT80	Top Side	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	0.02	0.425	0.48
2	WLAN5.3G	802.11ac VHT80	Bottom Side	5	58	USB	Ant 0+1	97.30	1.03	16.50	16.08	1.10	-0.08	0.434	0.49
	WLAN5.3G	802.11ac VHT80	Bottom Side	5	58	UART	Ant 0+1	97.30	1.03	16.50	16.08	1.10	0.02	0.404	0.46

Body SAR Test Result

System & Position						DUT & Accessory		SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Interface	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WLAN5.6G	802.11ac VHT80	Front Face	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.09	0.211	0.21
	WLAN5.6G	802.11ac VHT80	Rear Face	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.11	0.075	0.08
	WLAN5.6G	802.11ac VHT80	Left Side	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	-0.01	0.167	0.17
	WLAN5.6G	802.11ac VHT80	Right Side	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.16	0.051	0.05
	WLAN5.6G	802.11ac VHT80	Top Side	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	-0.11	0.302	0.30
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	138	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.05	0.324	0.32
	WLAN5.6G	802.11ac VHT80	Front Face	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	0.19	0.348	0.35
	WLAN5.6G	802.11ac VHT80	Rear Face	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	0.06	0.051	0.05
	WLAN5.6G	802.11ac VHT80	Left Side	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	-0.09	0.105	0.11
	WLAN5.6G	802.11ac VHT80	Right Side	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	0.15	0.056	0.06
	WLAN5.6G	802.11ac VHT80	Top Side	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	-0.09	0.376	0.38
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	138	USB	Ant 1	100.00	1.00	13.50	13.49	1.00	-0.07	0.402	0.40
	WLAN5.6G	802.11ac VHT80	Front Face	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	-0.01	0.293	0.33
	WLAN5.6G	802.11ac VHT80	Rear Face	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	-0.15	0.077	0.09
	WLAN5.6G	802.11ac VHT80	Left Side	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	0.11	0.117	0.13
	WLAN5.6G	802.11ac VHT80	Right Side	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	-0.15	0.061	0.07
	WLAN5.6G	802.11ac VHT80	Top Side	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	-0.14	0.4	0.44
3	WLAN5.6G	802.11ac VHT80	Bottom Side	5	138	USB	Ant 0+1	97.30	1.03	16.50	16.16	1.08	-0.06	0.409	0.45
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	106	USB	Ant 0+1	97.30	1.03	16.50	15.96	1.13	-0.08	0.194	0.23
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	122	USB	Ant 0+1	97.30	1.03	16.50	16.07	1.10	0.01	0.138	0.16
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	138	UART	Ant 0+1	97.30	1.03	16.50	16.16	1.08	0.18	0.381	0.42
	WLAN5.8G	802.11ac VHT80	Front Face	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.14	0.209	0.21
	WLAN5.8G	802.11ac VHT80	Rear Face	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.19	0.074	0.07
	WLAN5.8G	802.11ac VHT80	Left Side	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.05	0.165	0.17
	WLAN5.8G	802.11ac VHT80	Right Side	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.18	0.05	0.05
	WLAN5.8G	802.11ac VHT80	Top Side	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.09	0.298	0.30
	WLAN5.8G	802.11ac VHT80	Bottom Side	5	155	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	-0.06	0.32	0.32
	WLAN5.8G	802.11ac VHT80	Front Face	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.1	0.344	0.35
	WLAN5.8G	802.11ac VHT80	Rear Face	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.03	0.051	0.05
	WLAN5.8G	802.11ac VHT80	Left Side	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.05	0.103	0.10
	WLAN5.8G	802.11ac VHT80	Right Side	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	0.06	0.056	0.06
	WLAN5.8G	802.11ac VHT80	Top Side	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.14	0.371	0.37
	WLAN5.8G	802.11ac VHT80	Bottom Side	5	155	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.03	0.397	0.40
	WLAN5.8G	802.11ac VHT80	Front Face	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.05	0.29	0.30
	WLAN5.8G	802.11ac VHT80	Rear Face	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.03	0.076	0.08
	WLAN5.8G	802.11ac VHT80	Left Side	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.04	0.116	0.12
	WLAN5.8G	802.11ac VHT80	Right Side	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.14	0.06	0.06
	WLAN5.8G	802.11ac VHT80	Top Side	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.03	0.395	0.41
4	WLAN5.8G	802.11ac VHT80	Bottom Side	5	155	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.17	0.404	0.42
	WLAN5.8G	802.11ac VHT80	Bottom Side	5	155	UART	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.08	0.376	0.40

Body SAR Test Result

System & Position						DUT & Accessory		SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Interface	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WLAN5.9G	802.11ac VHT80	Front Face	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.17	0.237	0.24
	WLAN5.9G	802.11ac VHT80	Rear Face	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	-0.07	0.085	0.09
	WLAN5.9G	802.11ac VHT80	Left Side	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.03	0.188	0.19
	WLAN5.9G	802.11ac VHT80	Right Side	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.04	0.057	0.06
	WLAN5.9G	802.11ac VHT80	Top Side	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	0.01	0.339	0.34
	WLAN5.9G	802.11ac VHT80	Bottom Side	5	171	USB	Ant 0	100.00	1.00	13.50	13.49	1.00	-0.07	0.363	0.36
	WLAN5.9G	802.11ac VHT80	Front Face	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.01	0.391	0.39
	WLAN5.9G	802.11ac VHT80	Rear Face	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	0.08	0.058	0.06
	WLAN5.9G	802.11ac VHT80	Left Side	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.01	0.118	0.12
	WLAN5.9G	802.11ac VHT80	Right Side	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.16	0.063	0.06
	WLAN5.9G	802.11ac VHT80	Top Side	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	0.03	0.421	0.43
	WLAN5.9G	802.11ac VHT80	Bottom Side	5	171	USB	Ant 1	100.00	1.00	13.50	13.46	1.01	-0.06	0.451	0.46
	WLAN5.9G	802.11ac VHT80	Front Face	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.03	0.329	0.35
	WLAN5.9G	802.11ac VHT80	Rear Face	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.06	0.087	0.09
	WLAN5.9G	802.11ac VHT80	Left Side	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.17	0.132	0.14
	WLAN5.9G	802.11ac VHT80	Right Side	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.13	0.069	0.07
	WLAN5.9G	802.11ac VHT80	Top Side	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	-0.18	0.449	0.47
5	WLAN5.9G	802.11ac VHT80	Bottom Side	5	171	USB	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.08	0.459	0.48
	WLAN5.9G	802.11ac VHT80	Bottom Side	5	171	UART	Ant 0+1	97.30	1.03	16.50	16.42	1.02	0.14	0.428	0.45
	BT (Higher Power)	BDR	Front Face	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	0.17	0.103	0.10
	BT (Higher Power)	BDR	Rear Face	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	-0.08	0.061	0.06
	BT (Higher Power)	BDR	Left Side	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	0.06	0.131	0.13
	BT (Higher Power)	BDR	Right Side	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	-0.09	0.145	0.15
	BT (Higher Power)	BDR	Top Side	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	-0.01	0.155	0.16
6	BT (Higher Power)	BDR	Bottom Side	5	39	USB	Ant 0	100.00	1.00	12.50	12.44	1.01	-0.09	0.171	0.17
	BT (Higher Power)	BDR	Bottom Side	5	0	USB	Ant 0	100.00	1.00	12.50	12.35	1.04	-0.18	0.165	0.17
	BT (Higher Power)	BDR	Bottom Side	5	78	USB	Ant 0	100.00	1.00	12.50	12.22	1.07	-0.06	0.158	0.17
	BT (Higher Power)	BDR	Bottom Side	5	39	UART	Ant 0	100.00	1.00	12.50	12.44	1.01	0.05	0.155	0.16
	BT (Lower Power)	BDR	Front Face	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	-0.11	0.046	0.05
	BT (Lower Power)	BDR	Rear Face	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	0.12	0.028	0.03
	BT (Lower Power)	BDR	Left Side	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	0.12	0.06	0.06
	BT (Lower Power)	BDR	Right Side	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	-0.18	0.064	0.07
	BT (Lower Power)	BDR	Top Side	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	-0.15	0.071	0.07
7	BT (Lower Power)	BDR	Bottom Side	5	39	USB	Ant 0	100.00	1.00	6.00	5.92	1.02	0.11	0.08	0.08
	BT (Lower Power)	BDR	Bottom Side	5	0	USB	Ant 0	100.00	1.00	6.00	5.79	1.05	-0.05	0.068	0.07
	BT (Lower Power)	BDR	Bottom Side	5	78	USB	Ant 0	100.00	1.00	6.00	5.88	1.03	-0.01	0.071	0.07
	BT (Lower Power)	BDR	Bottom Side	5	39	UART	Ant 0	100.00	1.00	6.00	5.92	1.02	-0.07	0.066	0.07

Annex G. SAR Measurement Variability

Since all the measured SAR1g are less than 0.8 W/kg, the repeated measurement is not required.

Annex H. Analysis of Simultaneous Transmission SAR.

The analysis of simultaneous transmission SAR are shown as below.

<Possibilities of Simultaneous Transmission>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition
A	WLAN 2.4G + BT	Yes
B	WLAN 5G + BT	Yes

Notes

1. The WLAN 2.4G and WLAN 5G cannot transmit simultaneously.

Simultaneous Transmission SAR Evaluation

Position	1	2	3	4	WLAN + BT with Higher Power		WLAN + BT with Lower Power	
	Max WLAN 2.4GHz	Max WLAN 5GHz	Max BT (Higher Power)	Max BT (Lower Power)	A (1 + 3)	B (2 + 3)	A (1 + 4)	B (2 + 4)
	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	Summing result 1g SAR W/kg	Summing result 1g SAR W/kg	Summing result 1g SAR W/kg	Summing result 1g SAR W/kg
Front Face	0.25	0.39	0.10	0.05	0.35	0.49	0.30	0.44
Rear Face	0.15	0.09	0.06	0.03	0.21	0.15	0.18	0.12
Left Side	0.32	0.19	0.13	0.06	0.45	0.32	0.38	0.25
Right Side	0.36	0.07	0.15	0.07	0.51	0.22	0.43	0.14
Top Side	0.38	0.48	0.16	0.07	0.54	0.64	0.45	0.55
Bottom Side	0.61	0.49	0.17	0.08	0.78	0.66	0.69	0.57

Annex I. SAR to Peak Location Separation Ratio Analysis.

Since sum of simultaneous transmission SAR is less than the SAR limit for Body : SAR_{1g} 1.6 W/kg .
There is no requirement for SAR to Peak Location Separation Ratio Analysis.

Annex J. Calibration of Test Equipment List

Calibration of Test Equipment List are shown as below.

Equipment for SAR Test					
Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D2450V2	737	Aug. 26, 2021	2 Years
System Validation Dipole	SPEAG	D5GHzV2	1019	Mar. 19, 2021	2 Years
Dosimetric E-Field Probe	SPEAG	EX3DV4	7736	May. 30, 2022	1 Year
Data Acquisition Electronics	SPEAG	DAE3	579	Jun. 01, 2022	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Apr. 13, 2022	1 Year
Universal Wireless Test Set	Anritsu	MT8870A	6262411397	Feb. 25, 2022	1 Year
Thermometer	YFE	YF-160A	150601220	May. 26, 2022	1 Year
Dielectric Assessment Kit	SPEAG	DAKS-3.5	1092	May. 23, 2022	1 Year
Dielectric Assessment Kit	SPEAG	DAKS_VNA R140	0010917	May. 23, 2022	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4260	Jan. 13, 2022	1 Year

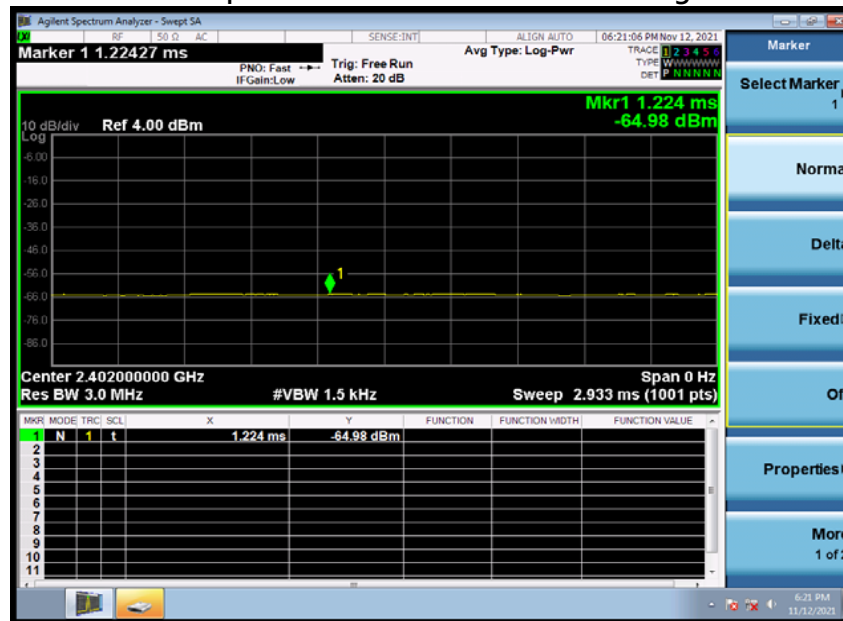
Annex K. Considerations Related to Bluetooth for Setup and Testing

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

The Bluetooth call box has been used during SAR measurement and the EUT was set to **DH5** mode at the maximum output power. Its duty factor was calculated as below and the measured SAR for Bluetooth would be scaled to the 100% transmission duty factor to determine compliance.

The duty factor of Bluetooth signal are shown as below.

<Time-domain plot for Bluetooth transmission signal>



Time-domain plot for Bluetooth transmission signal

The duty factor of Bluetooth signal has been calculated as following.

$$\text{Duty Factor} = \text{Pulse Width} / \text{Total Period} = (1 - 0) / (1 - 0) = 100.00\%$$

Annex Z. Calibration Certificate for Probe and Dipole

The SPEAG calibration certificates are shown as follows.



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Client

B.V.ADT

Certificate No: **Z21-60284**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 737**

Calibration Procedure(s) **FF-Z11-003-01
Calibration Procedures for dipole validation kits**

Calibration date: **August 26, 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±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Power sensor NRP8S	104291	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Reference Probe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE3	SN 536	06-Nov-20(CTTL-SPEAG,No.Z20-60452)	Nov-21
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: August 31, 2021

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



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Glossary:

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

Calibration is Performed According to the Following Standards:

- 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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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



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Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.0 ± 6 %	1.77 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.0 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.6 W/kg ± 18.8 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.92 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.9 W/kg ± 18.7 % (k=2)



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.0Ω+ 4.29jΩ
Return Loss	- 25.0dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.067 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

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

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

Additional EUT Data

Manufactured by	SPEAG
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Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

DASY5 Validation Report for Head TSL

Date: 08.26.2021

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.772$ S/m; $\epsilon_r = 40.04$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.34, 7.34, 7.34) @ 2450 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm|(Mechanical Surface Detection)
- Electronics: DAE3 Sn536; Calibrated: 2020-11-06
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.5 V/m; Power Drift = -0.01 dB

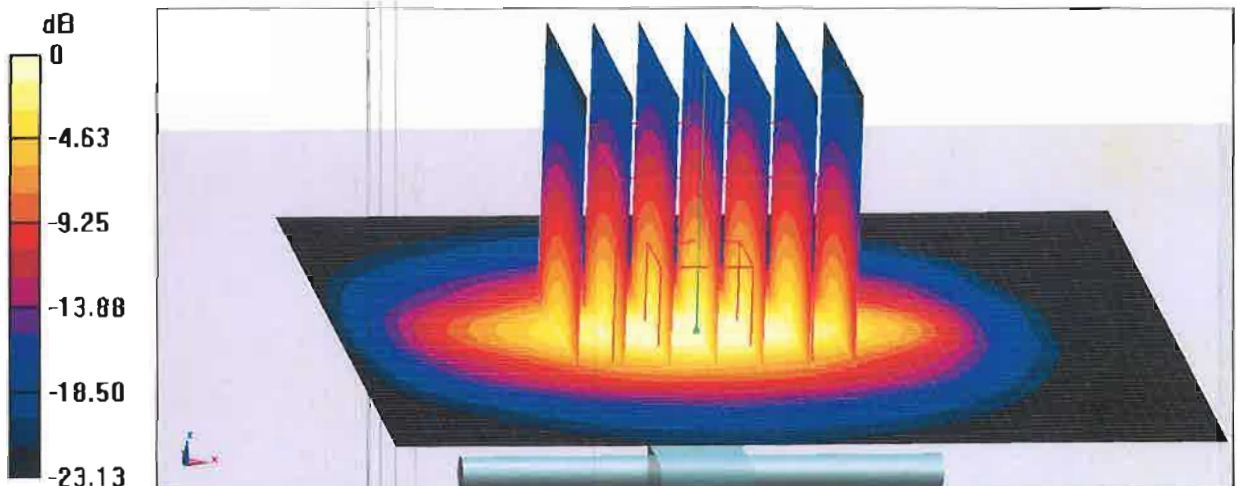
Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 5.92 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 46.7%

Maximum value of SAR (measured) = 22.3 W/kg



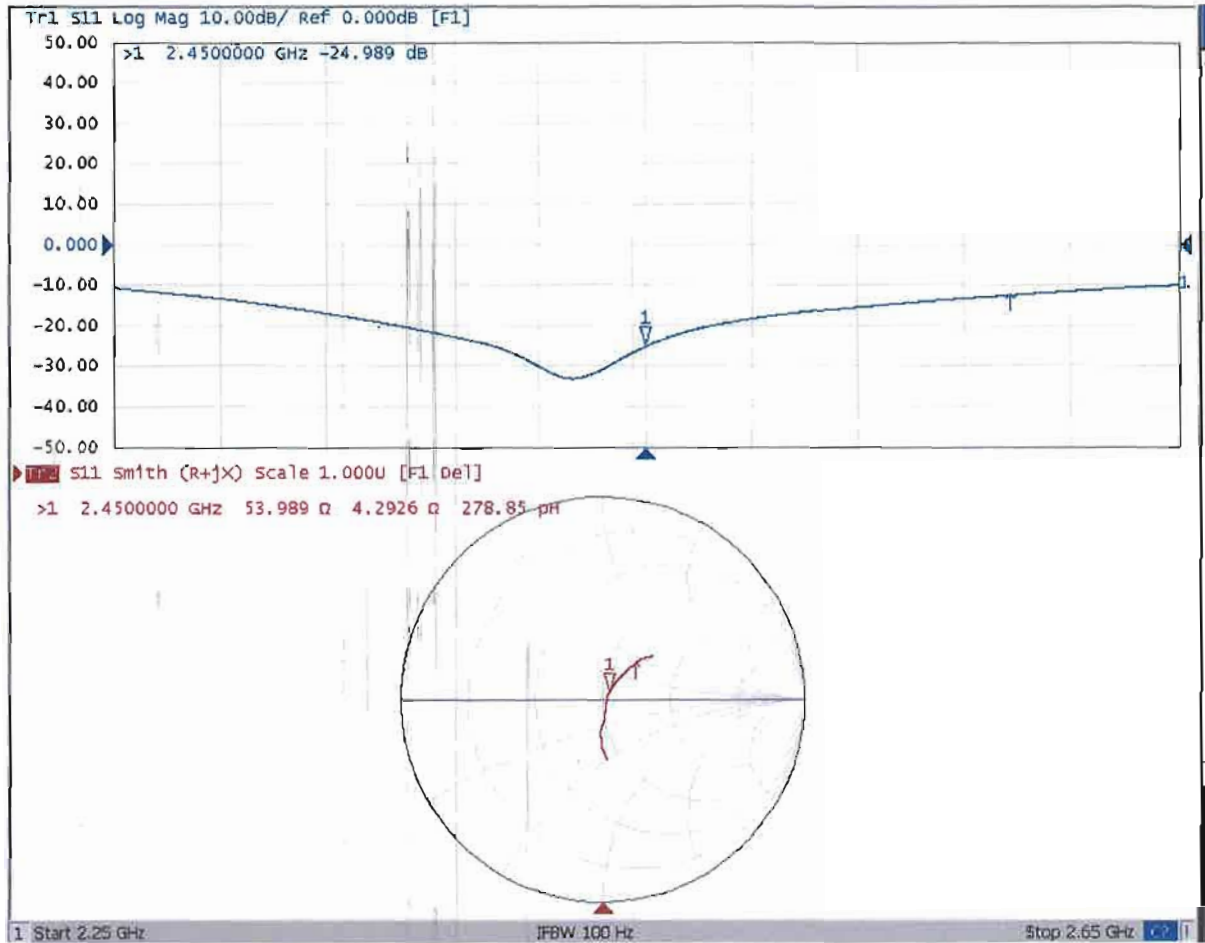
0 dB = 22.3 W/kg = 13.48 dBW/kg



In Collaboration with
s p e a g
CALIBRATION LABORATORY

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Impedance Measurement Plot for Head TSL





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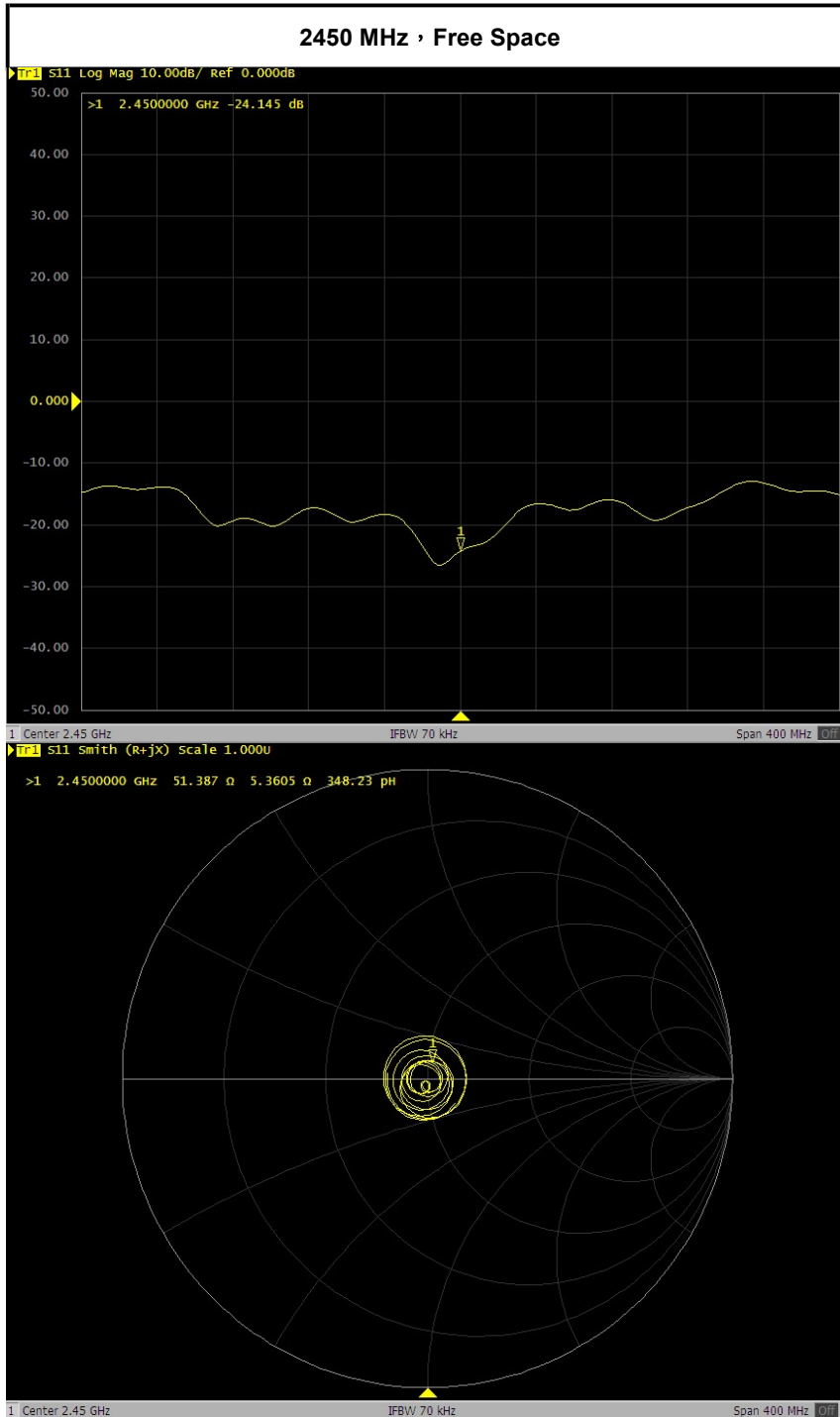
Annual Confirmation of SAR Reference Dipole

Model : D2450V2

S/N : 737

Measurement Date : 2022/8/25

Frequency (MHz)	Type	Item	Previous Measurement	Annual Check	Deviation	Accepted Tolerance	Result
2450	Free Space	Real Impedance	53.989	51.387	-2.602	$\pm 5\Omega$	PASS
		Imaginary Impedance	4.2926	5.3605	1.07	$\pm 5\Omega$	PASS
		Return Loss	-24.989	-24.145	-3.38%	$\pm 20\%$	PASS





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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **B.V. ADT (Auden)**

Certificate No: **D5GHzV2-1019_Mar21**

CALIBRATION CERTIFICATE

Object **D5GHzV2 - SN:1019**

Calibration procedure(s) **QA CAL-22.v6
Calibration Procedure for SAR Validation Sources between 3-10 GHz**

Calibration date: **March 19, 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	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: BH9394 (20k)	31-Mar-20 (No. 217-03106)	Apr-21
Type-N mismatch combination	SN: 310982 / 06327	31-Mar-20 (No. 217-03104)	Apr-21
Reference Probe EX3DV4	SN: 3503	30-Dec-20 (No. EX3-3503_Dec20)	Dec-21
DAE4	SN: 601	02-Nov-20 (No. DAE4-601_Nov20)	Nov-21
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-21

Calibrated by: **Claudio Leubler** **Laboratory Technician**

Signature

Approved by: **Katja Pokovic** **Technical Manager**

Issued: March 19, 2021

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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Multilateral Agreement for the recognition of calibration certificates

Glossary:

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

Calibration is Performed According to the Following Standards:

- 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 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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

Measurement Conditions

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

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.7 ± 6 %	4.51 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.0 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.2 ± 6 %	4.86 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	82.4 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.3 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.0 ± 6 %	5.01 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.4 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.27 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.4 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	54.1 Ω - 6.4 j Ω
Return Loss	- 22.7 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	57.6 Ω - 2.5 j Ω
Return Loss	- 22.6 dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	57.9 Ω + 3.1 j Ω
Return Loss	- 22.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.203 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

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

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

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 19.03.2021

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1019

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.51$ S/m; $\epsilon_r = 34.7$; $\rho = 1000$ kg/m³

Medium parameters used: $f = 5600$ MHz; $\sigma = 4.86$ S/m; $\epsilon_r = 34.2$; $\rho = 1000$ kg/m³

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.01$ S/m; $\epsilon_r = 34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.5, 5.5, 5.5) @ 5250 MHz, ConvF(5.1, 5.1, 5.1) @ 5600 MHz, ConvF(5.08, 5.08, 5.08) @ 5750 MHz; Calibrated: 30.12.2020
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.11.2020
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 79.20 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 27.6 W/kg

SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.32 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 70.7%

Maximum value of SAR (measured) = 18.1 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 77.00 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 31.0 W/kg

SAR(1 g) = 8.32 W/kg; SAR(10 g) = 2.36 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 66.9%

Maximum value of SAR (measured) = 19.6 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.22 V/m; Power Drift = -0.08 dB

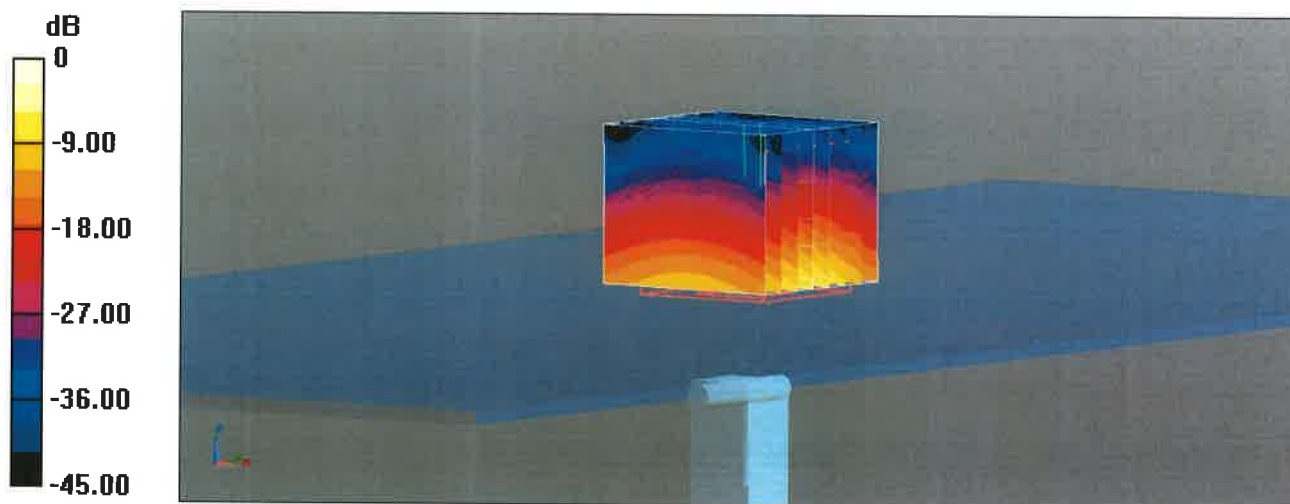
Peak SAR (extrapolated) = 31.6 W/kg

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.27 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

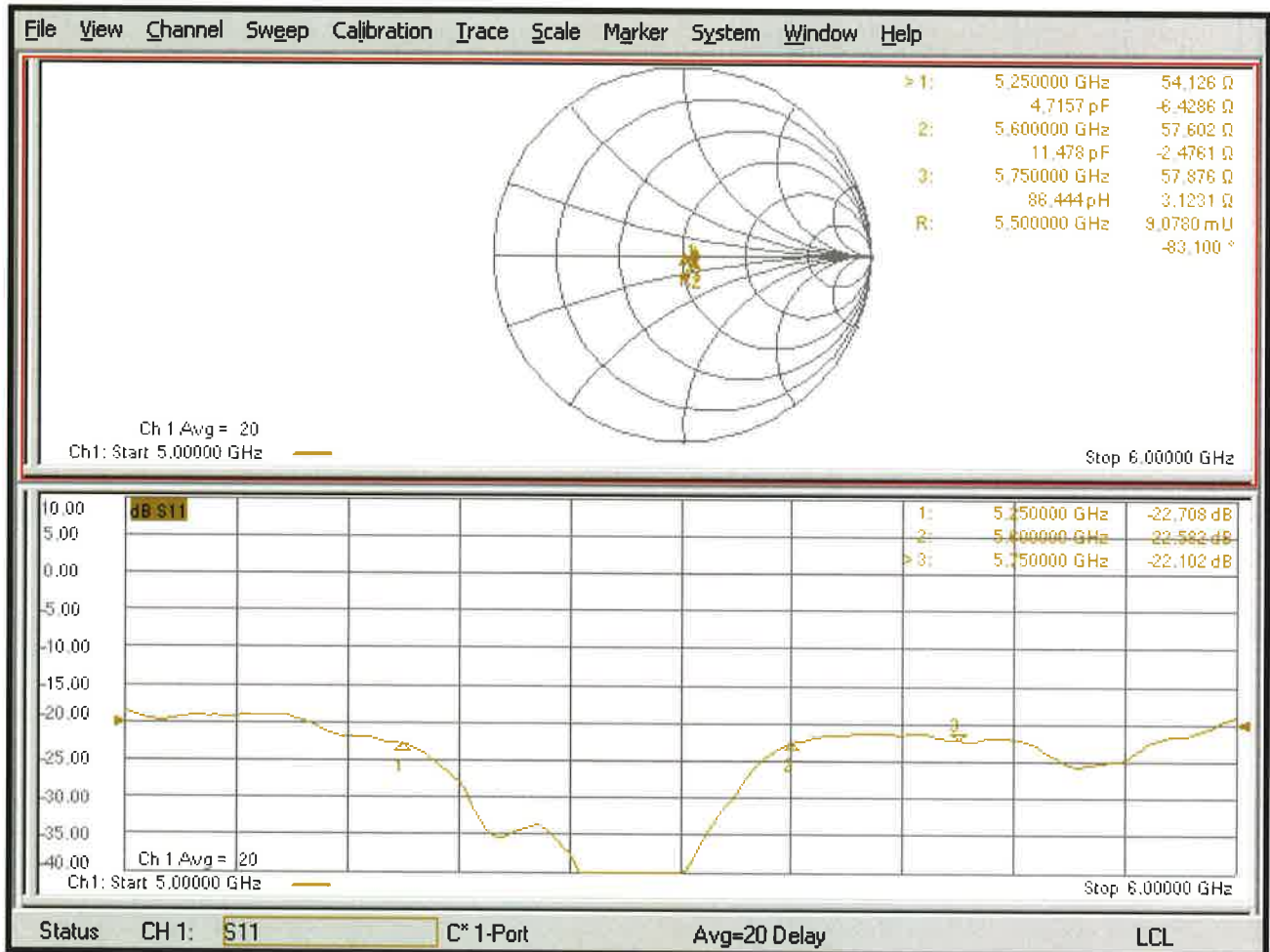
Ratio of SAR at M2 to SAR at M1 = 65%

Maximum value of SAR (measured) = 19.2 W/kg



0 dB = 19.6 W/kg = 12.92 dBW/kg

Impedance Measurement Plot for Head TSL





Annual Confirmation of SAR Reference Dipole

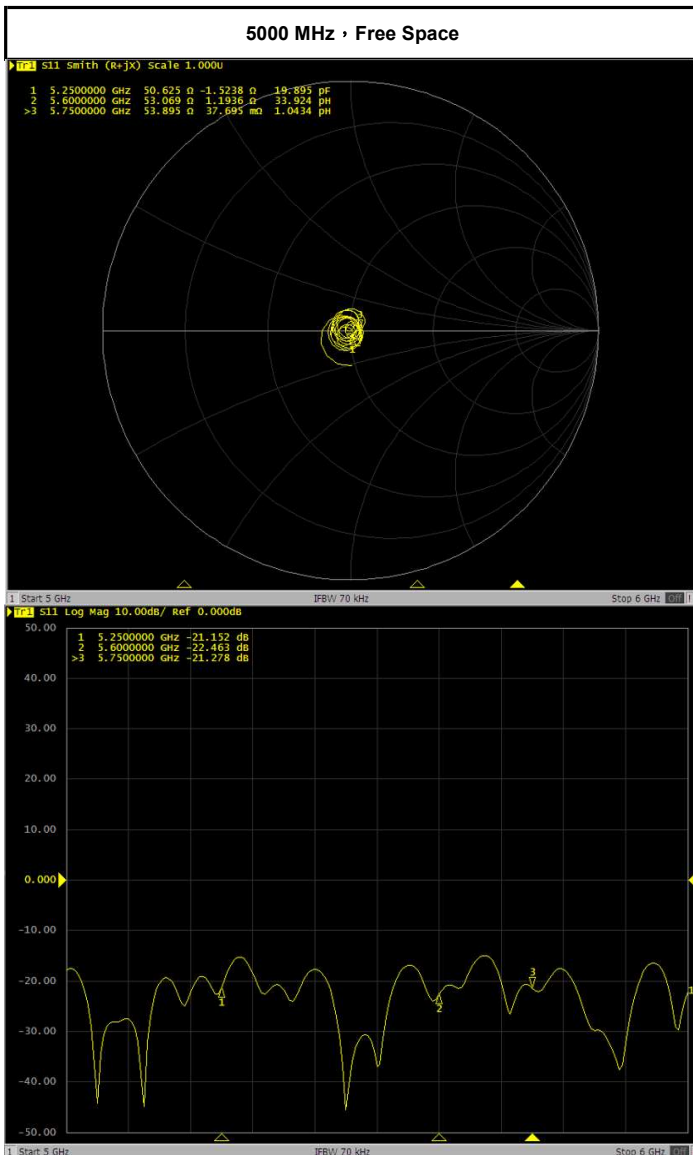
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Model : D5000V2

S/N : 1019

Measurement Date : 2022/3/18

Frequency (MHz)	Type	Item	Previous Measurement	Annual Check	Deviation	Accepted Tolerance	Result
5250	Free Space	Real Impedance	54.126	50.625	-3.501	$\pm 5\Omega$	PASS
		Imaginary Impedance	-6.4286	-1.5238	4.905	$\pm 5\Omega$	PASS
		Return Loss	-22.708	-21.152	-6.85%	$\pm 20\%$	PASS
Frequency (MHz)	Type	Item	Previous Measurement	Annual Check	Deviation	Accepted Tolerance	Result
5600	Free Space	Real Impedance	57.602	53.069	-4.533	$\pm 5\Omega$	PASS
		Imaginary Impedance	-2.4761	1.1936	3.670	$\pm 5\Omega$	PASS
		Return Loss	-22.582	-22.463	-0.53%	$\pm 20\%$	PASS
Frequency (MHz)	Type	Item	Previous Measurement	Annual Check	Deviation	Accepted Tolerance	Result
5750	Free Space	Real Impedance	57.876	53.895	-3.981	$\pm 5\Omega$	PASS
		Imaginary Impedance	3.1231	0.0377	-3.085	$\pm 5\Omega$	PASS
		Return Loss	-22.102	-21.278	-3.73%	$\pm 20\%$	PASS





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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **B.V.ADT (Auden)**

Certificate No: **EX3-7736_May22**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7736**

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: **May 30, 2022**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23
Reference 20 dB Attenuator	SN: CC2552 (20x)	04-Apr-22 (No. 217-03527)	Apr-23
DAE4	SN: 660	13-Oct-21 (No. DAE4-660_Oct21)	Oct-22
Reference Probe ES3DV2	SN: 3013	27-Dec-21 (No. ES3-3013_Dec21)	Dec-22
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: US3842U01700	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

	Name	Function	Signature
Calibrated by:	Leif Klynsner	Laboratory Technician	
Approved by:	Sven Kühn	Technical Manager	
			Issued: May 31, 2022

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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:

- a) 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.
- b) 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}** = 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
- **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 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).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7736

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.42	0.47	0.46	± 10.1 %
DCP (mV) ^B	105.5	102.0	103.8	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	139.4	± 2.7 %	± 4.7 %
		Y	0.00	0.00	1.00		138.6		
		Z	0.00	0.00	1.00		146.2		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.58	61.34	7.22	10.00	60.0	± 2.7 %	± 9.6 %
		Y	1.39	60.09	6.00		60.0		
		Z	1.59	61.27	7.02		60.0		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	0.89	60.55	5.69	6.99	80.0	± 2.7 %	± 9.6 %
		Y	20.00	74.00	9.00		80.0		
		Z	0.79	60.00	5.23		80.0		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.43	60.00	4.21	3.98	95.0	± 2.7 %	± 9.6 %
		Y	0.13	137.62	0.05		95.0		
		Z	0.02	121.85	0.21		95.0		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	7.45	159.85	18.73	2.22	120.0	± 2.2 %	± 9.6 %
		Y	7.19	159.92	13.92		120.0		
		Z	4.00	159.68	13.75		120.0		
10387-AAA	QPSK Waveform, 1 MHz	X	0.48	63.38	12.37	1.00	150.0	± 4.5 %	± 9.6 %
		Y	0.64	66.14	14.09		150.0		
		Z	0.48	62.98	11.50		150.0		
10388-AAA	QPSK Waveform, 10 MHz	X	1.40	67.09	14.46	0.00	150.0	± 0.9 %	± 9.6 %
		Y	1.46	67.31	14.91		150.0		
		Z	1.25	65.24	13.49		150.0		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.79	65.59	16.66	3.01	150.0	± 1.3 %	± 9.6 %
		Y	1.60	63.86	15.86		150.0		
		Z	1.57	63.46	15.42		150.0		
10399-AAA	64-QAM Waveform, 40 MHz	X	2.86	66.74	15.38	0.00	150.0	± 2.4 %	± 9.6 %
		Y	2.87	66.55	15.41		150.0		
		Z	2.74	65.85	14.89		150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	3.83	66.31	15.47	0.00	150.0	± 4.1 %	± 9.6 %
		Y	3.99	66.67	15.75		150.0		
		Z	3.88	66.22	15.42		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.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7736

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	9.3	68.11	34.13	3.91	0.00	4.97	0.73	0.00	1.00
Y	10.0	73.17	34.20	3.54	0.00	4.90	0.16	0.02	1.00
Z	10.0	74.27	34.84	3.20	0.00	4.98	0.00	0.07	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	168.6
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:7736

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)
750	41.9	0.89	10.21	10.21	10.21	0.57	0.90	± 12.0 %
835	41.5	0.90	9.93	9.93	9.93	0.49	0.98	± 12.0 %
1450	40.5	1.20	8.98	8.98	8.98	0.54	0.80	± 12.0 %
1750	40.1	1.37	8.71	8.71	8.71	0.28	0.86	± 12.0 %
1900	40.0	1.40	8.34	8.34	8.34	0.30	0.86	± 12.0 %
2000	40.0	1.40	8.30	8.30	8.30	0.26	0.86	± 12.0 %
2300	39.5	1.67	8.29	8.29	8.29	0.31	0.90	± 12.0 %
2450	39.2	1.80	8.12	8.12	8.12	0.31	0.90	± 12.0 %
2600	39.0	1.96	7.86	7.86	7.86	0.28	0.90	± 12.0 %
3300	38.2	2.71	6.89	6.89	6.89	0.30	1.35	± 13.1 %
3500	37.9	2.91	6.82	6.82	6.82	0.30	1.35	± 13.1 %
3700	37.7	3.12	6.79	6.79	6.79	0.30	1.35	± 13.1 %
3900	37.5	3.32	6.38	6.38	6.38	0.40	1.60	± 13.1 %
4100	37.2	3.53	6.35	6.35	6.35	0.40	1.60	± 13.1 %
4200	37.1	3.63	6.20	6.20	6.20	0.40	1.70	± 13.1 %
4400	36.9	3.84	6.17	6.17	6.17	0.40	1.70	± 13.1 %
4600	36.7	4.04	6.15	6.15	6.15	0.40	1.80	± 13.1 %
4800	36.4	4.25	6.10	6.10	6.10	0.40	1.80	± 13.1 %
4950	36.3	4.40	6.04	6.04	6.04	0.40	1.80	± 13.1 %
5250	35.9	4.71	5.74	5.74	5.74	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.93	4.93	4.93	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.05	5.05	5.05	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.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7736

Calibration Parameter Determined in Head Tissue Simulating Media

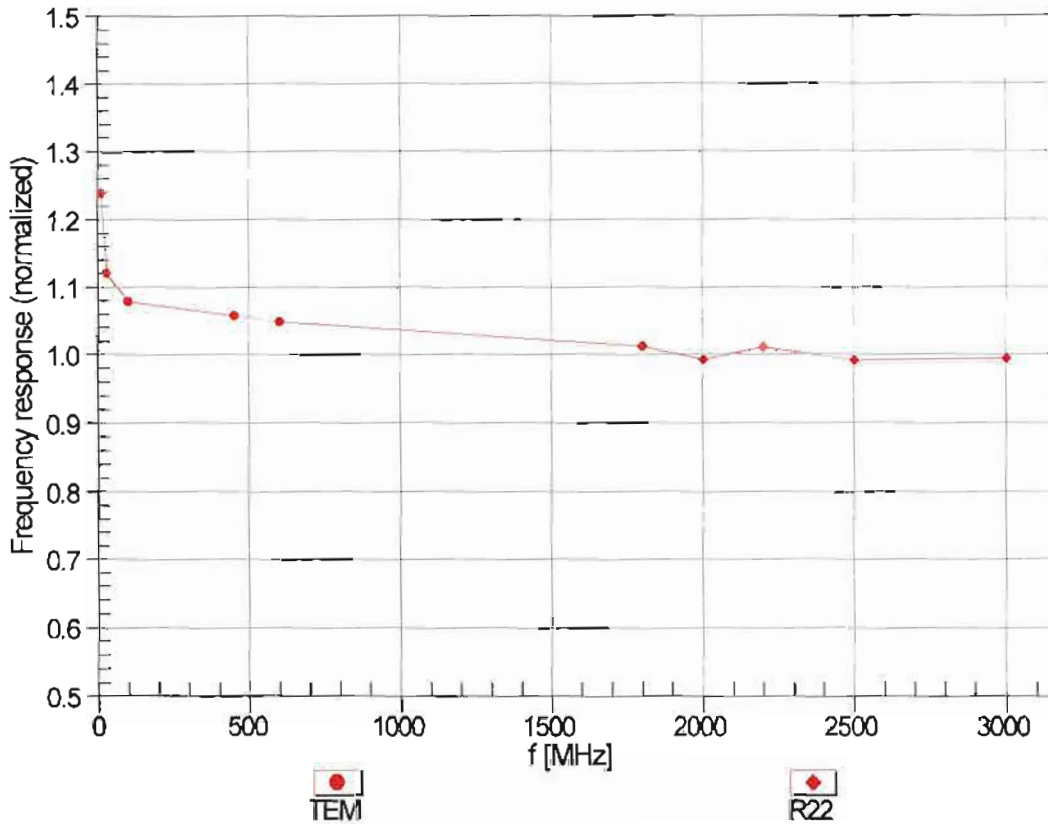
f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
6500	34.5	6.07	5.45	5.45	5.45	0.20	2.50	± 18.6 %

^c Frequency validity at 6.5 GHz is -600/+700 MHz, and ± 700 MHz at or above 7 GHz. 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.

Frequency Response of E-Field (TEM-Cell:if1110 EXX, Waveguide: R22)

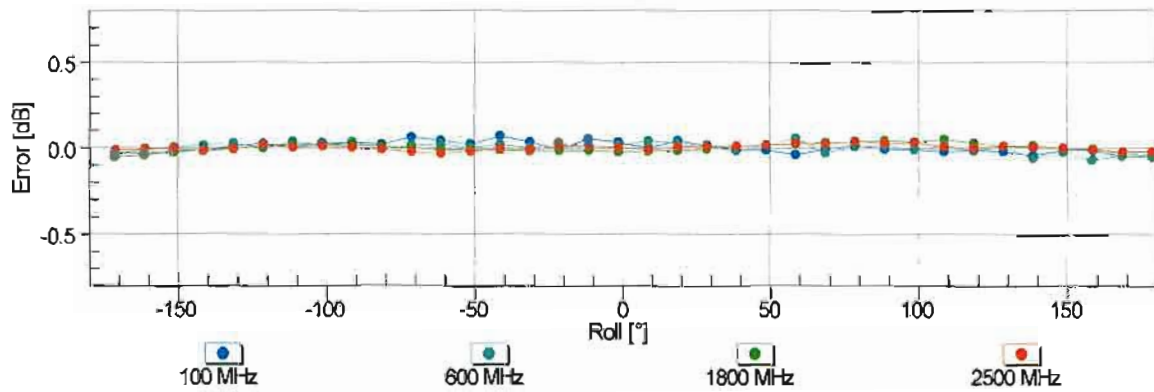
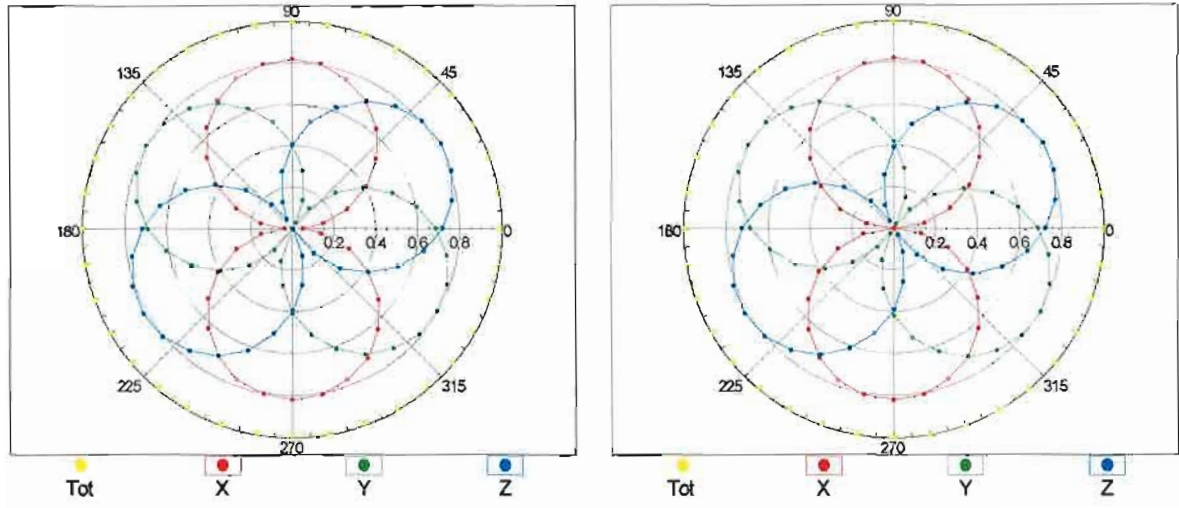


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

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

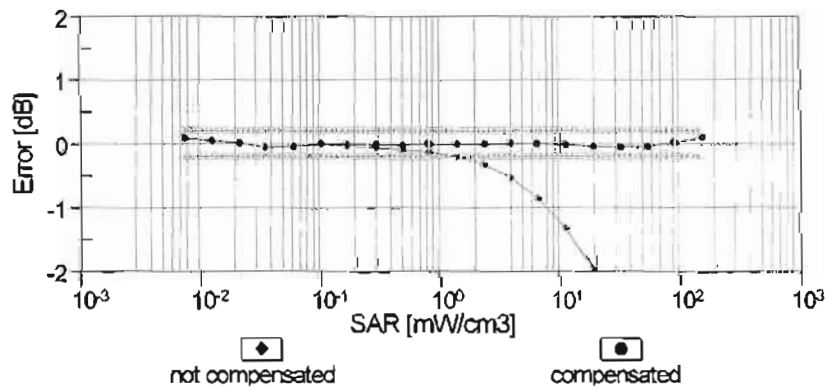
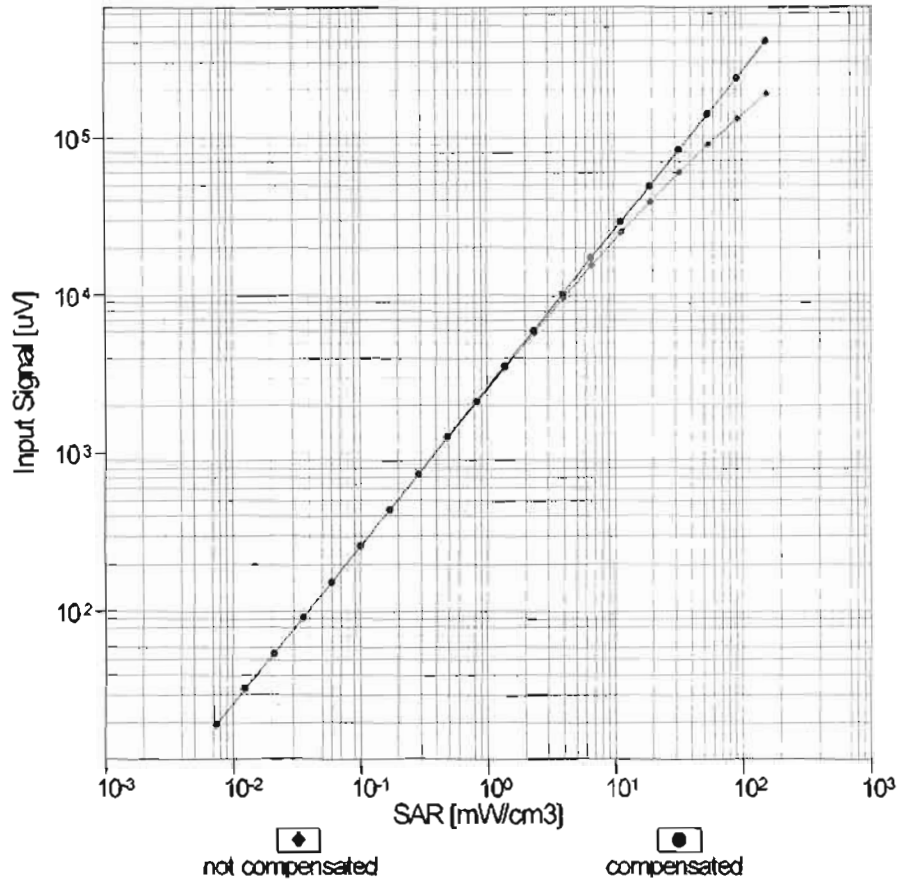
f=600 MHz,TEM

f=1800 MHz,R22



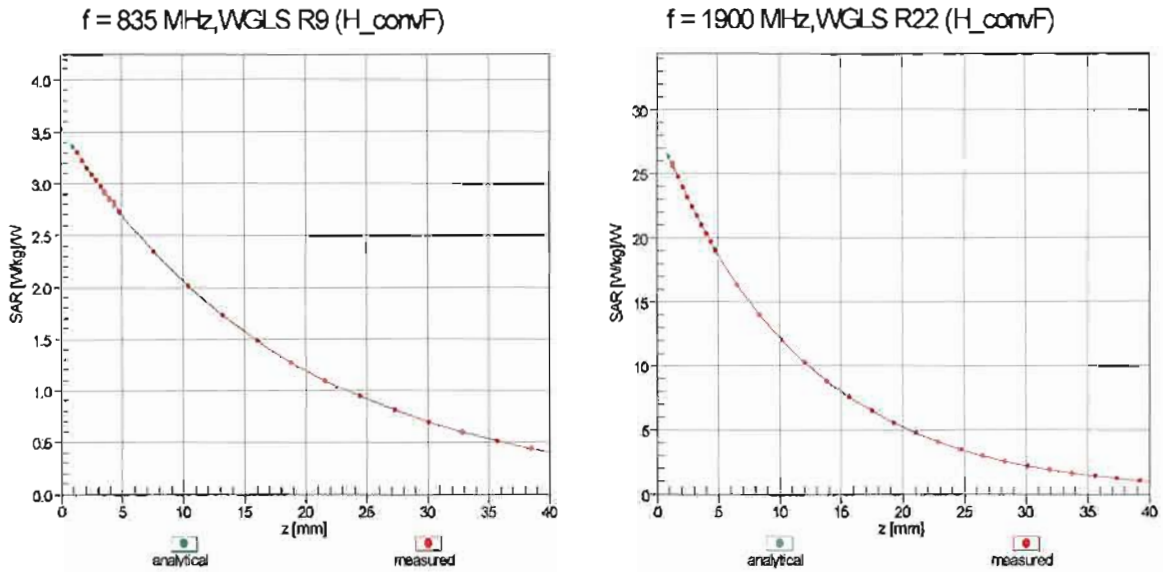
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

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



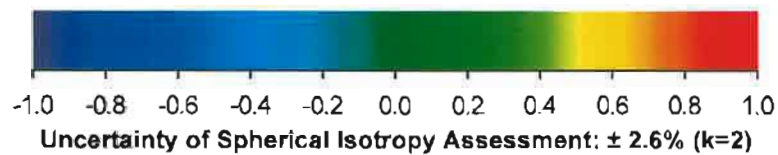
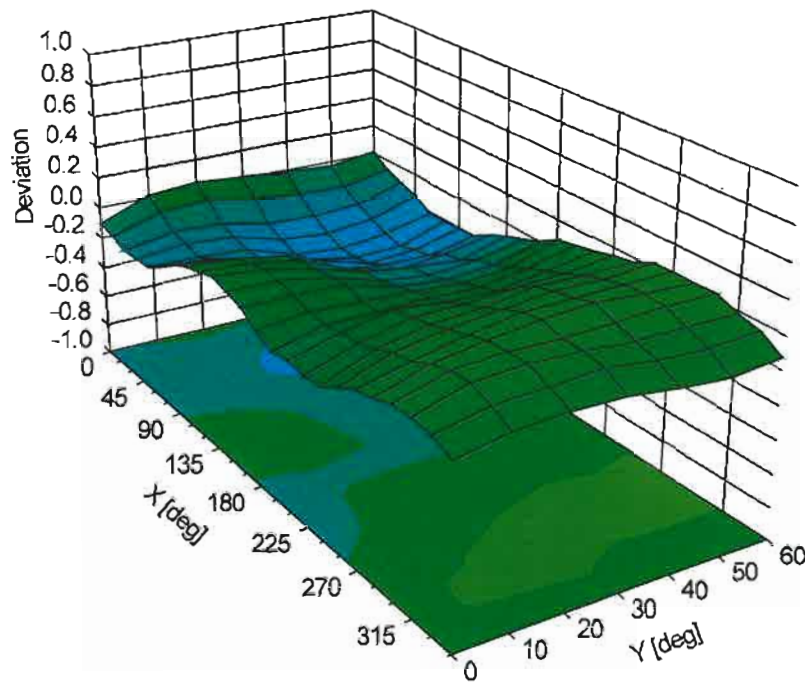
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), f = 900 MHz



Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (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	CAB	UMTS-FDD (HSDPA)	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 %

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

10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	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 %

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

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 %

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

10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.49	± 9.6 %
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN	8.37	± 9.6 %
10550	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 %

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

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 %

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

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 %

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 %

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 %
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	± 9.6 %
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 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 %
10983	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	± 9.6 %
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	± 9.6 %

10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	± 9.6 %
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	± 9.6 %
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	± 9.6 %
10988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	± 9.6 %
10989	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	± 9.6 %
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	± 9.6 %

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