

APPENDIX A: SAR TEST DATA

ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10670 - AAA, CW; MAIA: Y; Frequency: 2441.0 MHz

Medium: 2450 Head; Medium parameters used:

$f = 2441.0$ MHz; $\text{cond} = 1.85$ S/m; $\text{perm} = 38.8$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.0 mm

Test Date: 08/19/2024; Ambient Temp: 20.1°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7499; ConvF:(7.13,7.46,7.69); Calibrated: 2024-01-16

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1644; Calibrated: 2023-12-07

Phantom: Twin-SAM V8.0; Serial: 1357

Measurement SW: DASY Module SAR V16.2.4.2524

Mode: 2.4 GHz Bluetooth, Exp: Head| Front Side, Ch. 39, 1 Mbps

Area Scan (60.0 x 60.0): Measurement grid: $\text{dx}=10.0$ mm, $\text{dy}=10.0$ mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: $\text{dx}=1.9$ mm, $\text{dy}=1.9$ mm, $\text{dz}=1.2$ mm; Graded Ratio: 1.2

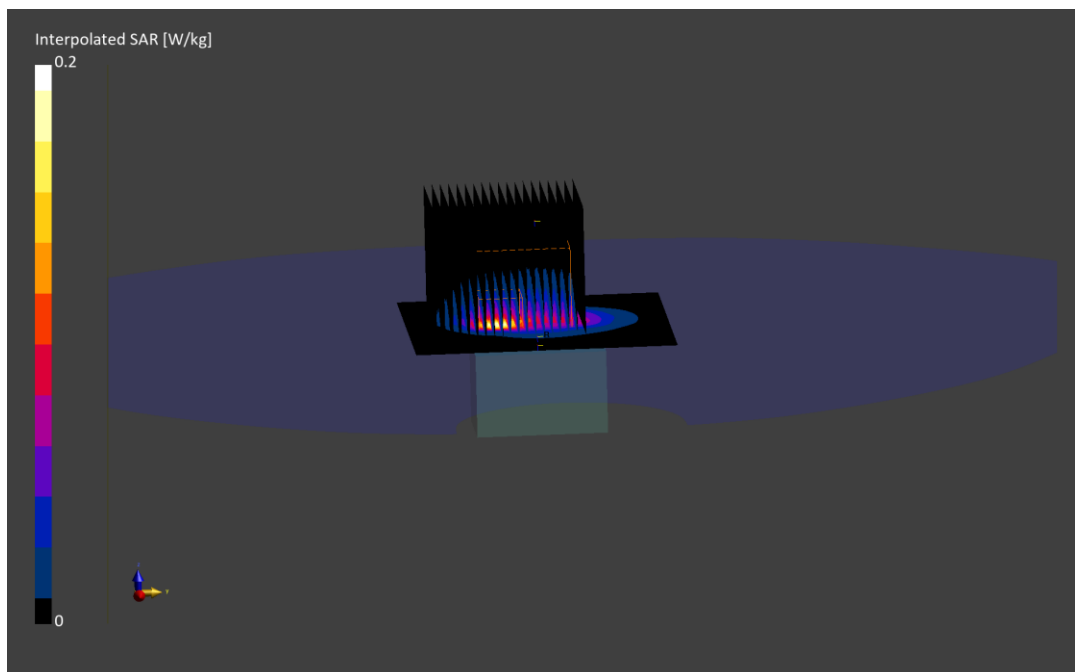
Reference Value = 0.13 W/kg; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.109 W/kg

Smallest distance from peaks to all points 3 dB below is 2.5 mm

Ratio of SAR at M2 to SAR at M1 = 34.5 %



ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10981 - CAA, CW; MAIA: Y; Frequency: 5844.0 MHz
Medium: 5200-5800 Head; Medium parameters used:
 $f = 5844.0$ MHz; $\text{cond} = 5.11$ S/m; $\text{perm} = 33.6$; $\text{density} = 1000$ kg/m³
Phantom Section: Flat; Space: 0.0 mm

Test Date: 07/23/2024; Ambient Temp: 23.2°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7427; ConvF:(4.04,4.57,4.63); Calibrated: 2024-02-09
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn467; Calibrated: 2024-02-09
Phantom: Twin-SAM V8.0; Serial: 2070
Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 3, Exp: Head| Front Side, Ch. High, 4 Mbps

Area Scan (60.0 x 60.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: $dx=2.7$ mm, $dy=2.7$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

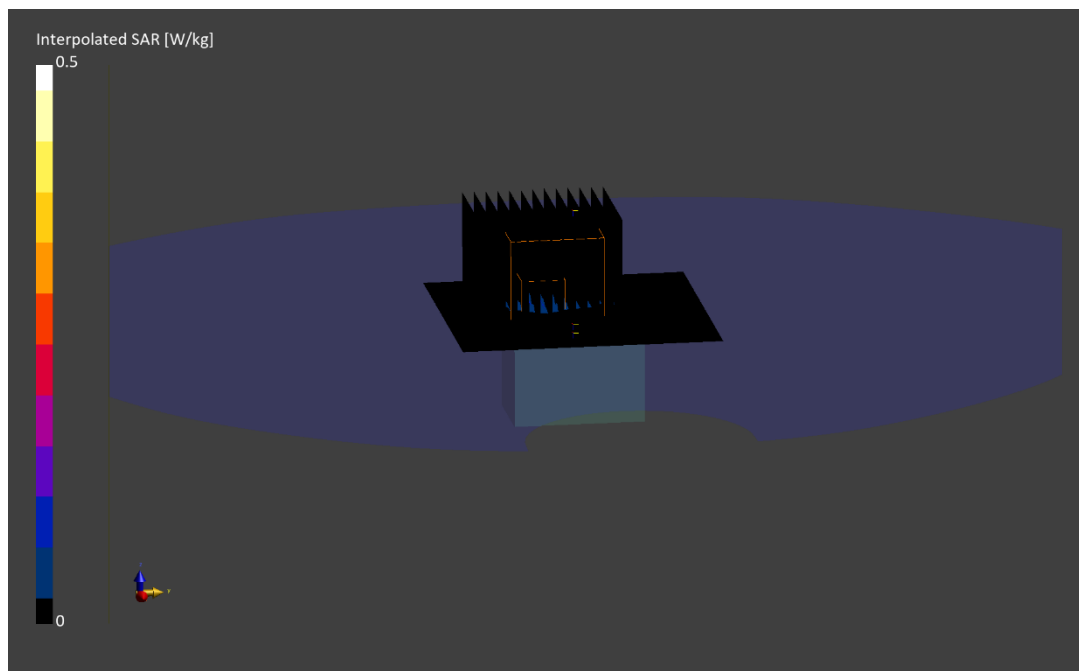
Reference Value = 0.03 W/kg; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.069 W/kg

Smallest distance from peaks to all points 3 dB below is 4.2 mm

Ratio of SAR at M2 to SAR at M1 = 40.4 %



ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10982 - AAA, CW; MAIA: Y; Frequency: 6420.0 MHz
Medium: 6000 Head; Medium parameters used:
 $f = 6420.0 \text{ MHz}$; $\text{cond} = 5.88 \text{ S/m}$; $\text{perm} = 35.0$; $\text{density} = 1000 \text{ kg/m}^3$
Phantom Section: Flat; Space: 0.0 mm

Test Date: 08/14/2024; Ambient Temp: 21.2°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7420; ConvF:(5.21,5.12,5.28); Calibrated: 2023-10-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1333; Calibrated: 2023-10-18
Phantom: Twin-SAM V4.0; Serial: 1275
Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 5, Exp: Head| Front Side, Ch. High, 8 Mbps

Area Scan (51.0 x 68.0): Measurement grid: $dx=8.5 \text{ mm}$, $dy=8.5 \text{ mm}$

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: $dx=3.4 \text{ mm}$, $dy=3.4 \text{ mm}$, $dz=1.4 \text{ mm}$; Graded Ratio: 1.4

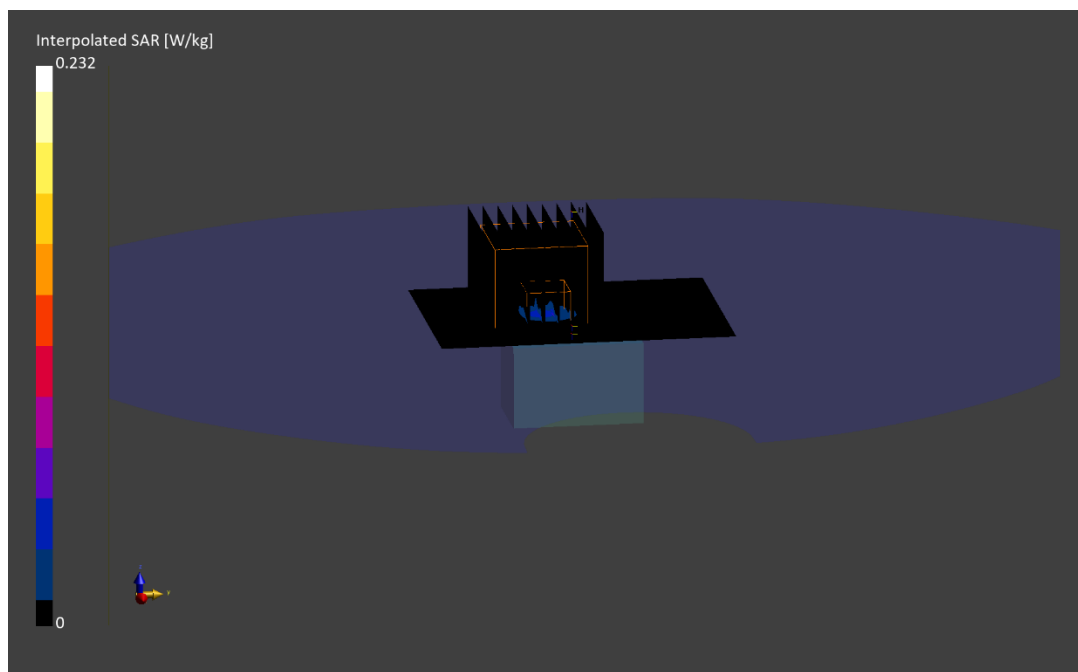
Reference Value = 0.09 W/kg; Power Drift = -0.21 dB

Peak SAR (extrapolated) = 0.232 W/kg

SAR(1 g) = 0.038 W/kg; APD(4 cm²) = .213 W/m²

Smallest distance from peaks to all points 3 dB below is 4.4 mm

Ratio of SAR at M2 to SAR at M1 = 56.1 %



ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10670 - AAA, CW; MAIA: Y; Frequency: 2402.0 MHz

Medium: 2450 Head; Medium parameters used:

$f = 2402.0$ MHz; $\text{cond} = 1.81$ S/m; $\text{perm} = 39.0$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.0 mm

Test Date: 08/19/2024; Ambient Temp: 20.1°C; Tissue Temp: 24°C

Probe: EX3DV4 - SN7499; ConvF:(7.13,7.46,7.69); Calibrated: 2024-01-16

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1644; Calibrated: 2023-12-07

Phantom: Twin-SAM V8.0; Serial: 1357

Measurement SW: DASY Module SAR V16.2.4.2524

Mode: 2.4 GHz Bluetooth, Exp: Body-worn| Button, Ch. 0, 1 Mbps

Area Scan (60.0 x 60.0): Measurement grid: $\text{dx}=10.0$ mm, $\text{dy}=10.0$ mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: $\text{dx}=2.6$ mm, $\text{dy}=2.6$ mm, $\text{dz}=1.2$ mm; Graded Ratio: 1.2

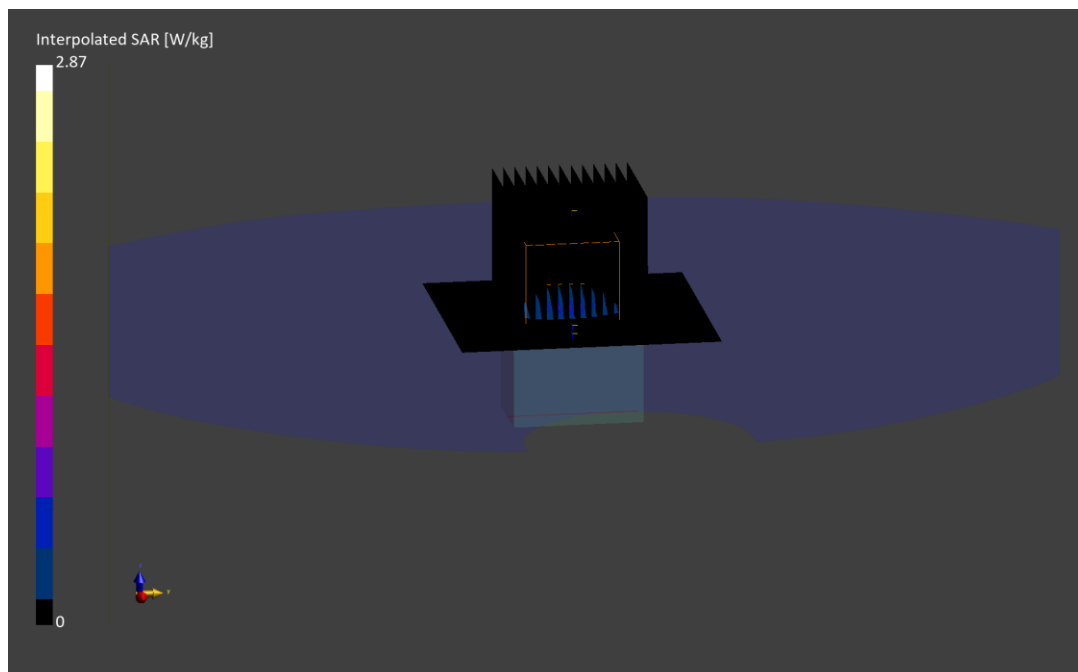
Reference Value = 1.22 W/kg; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.87 W/kg

SAR(1 g) = 0.551 W/kg

Smallest distance from peaks to all points 3 dB below is 3.7 mm

Ratio of SAR at M2 to SAR at M1 = 60.5 %



ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10981 - AAA, CW; MAIA: Y; Frequency: 5788.0 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5788.0 MHz; cond = 5.05 S/m; perm = 33.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 0.0 mm

Test Date: 07/23/2024; Ambient Temp: 23.2°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7427; ConvF:(4.35,4.78,4.93); Calibrated: 2024-02-09
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn467; Calibrated: 2024-02-09
Phantom: Twin-SAM V8.0; Serial: 2070
Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 3, Exp: Body-worn| Back Side, Ch. Mid, 4 Mbps

Area Scan (60.0 x 60.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=1.8 mm, dy=1.8 mm, dz=1.2 mm; Graded Ratio: 1.2

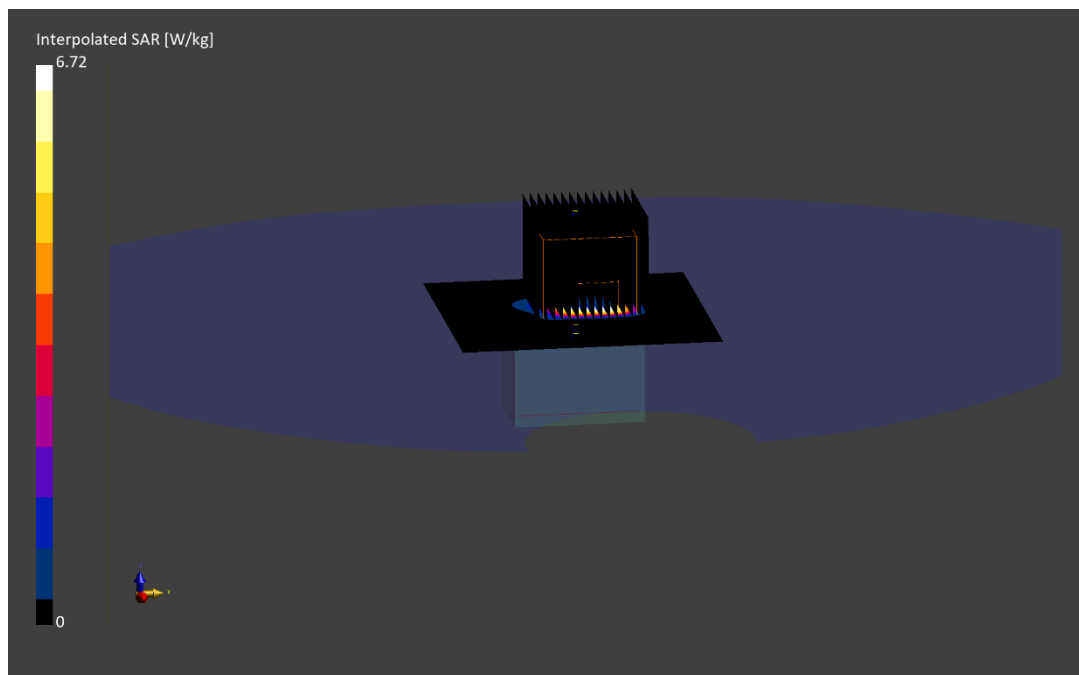
Reference Value = 0.40 W/kg; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 6.72 W/kg

SAR(1 g) = 0.770 W/kg

Smallest distance from peaks to all points 3 dB below is 3.1 mm

Ratio of SAR at M2 to SAR at M1 = 57.2 %



ELEMENT

DUT: BCG-A3056; Type: Wireless Earbud; Serial: H5RH72001QW0000B31

Communication System: UID:10982 - AAA, CW; MAIA: Y; Frequency: 6420.0 MHz

Medium: 6000 Head; Medium parameters used:

$f = 6420.0$ MHz; $\text{cond} = 5.88$ S/m; $\text{perm} = 35.0$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.0 mm

Test Date: 08/14/2024; Ambient Temp: 21.2°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7420; ConvF:(5.21,5.12,5.28); Calibrated: 2023-10-16

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1333; Calibrated: 2023-10-18

Phantom: Twin-SAM V4.0; Serial: 1275

Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 5, Exp: Body-worn| Back Side, Ch. High, 8 Mbps

Area Scan (51.0 x 68.0): Measurement grid: $\text{dx}=8.5$ mm, $\text{dy}=8.5$ mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: $\text{dx}=1.8$ mm, $\text{dy}=1.8$ mm, $\text{dz}=1.2$ mm; Graded Ratio: 1.2

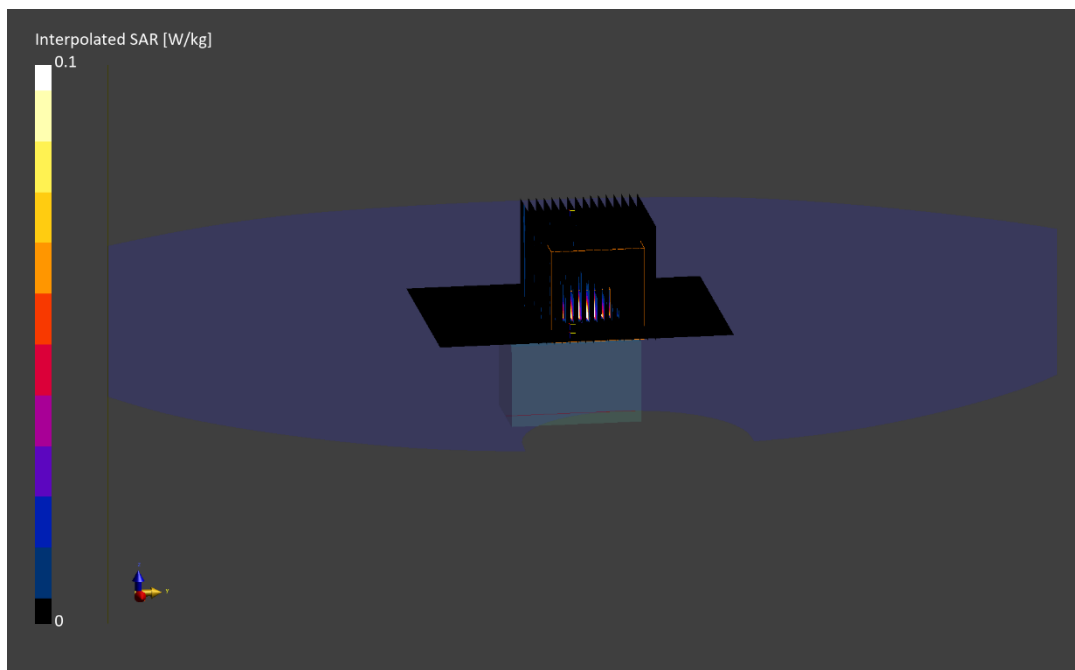
Reference Value = 0.69 W/kg; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 3.33 W/kg

SAR(1 g) = 0.318 W/kg; APD(4 cm²) = 1.010 W/m²

Smallest distance from peaks to all points 3 dB below is 2.6 mm

Ratio of SAR at M2 to SAR at M1 = 46.0 %



Date: 08/15/2024

Mode: NB-UNII 5, Exp: Body-worn| Button, Ch. High, 8 Mbps

Device Under Test Properties

DUT	Serial Number	DUT Type
BCG-A3056	H5RH72001QW0000831	Wireless Earbud

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Channel	Group, UID	Frequency [MHz]
5G	Custom Button	2.0	6420000	10982	6420.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 – SN9487, 04/08/2024	DAE4 – SN1582, 04/09/2024

Software Setup

Software	Software Version
cDASY6 Module mmWave	3.2.0.1840

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	25.0 x 25.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	2.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm²]	4.0
pS _{tot} avg [W/m²]	0.813
pS _n avg [W/m²]	0.777
E _{peak} [V/m]	24.0
Power Drift [dB]	-0.19

