

APPENDIX A: SAR TEST DATA

ELEMENT

DUT: BCG-A3050; Type: Wireless Earbud; Serial: H5RH710021A0000B32

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

Medium: 2450 Head; Medium parameters used:

$f = 2402.0$ MHz; $\text{cond} = 1.77$ S/m; $\text{perm} = 38.2$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.00 mm

Test Date: 8/15/2024; Ambient Temp: 22.5°C; Tissue Temp: 22.6°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. 0, 1 Mbps

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

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: $dx=2.2$ mm, $dy=2.2$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

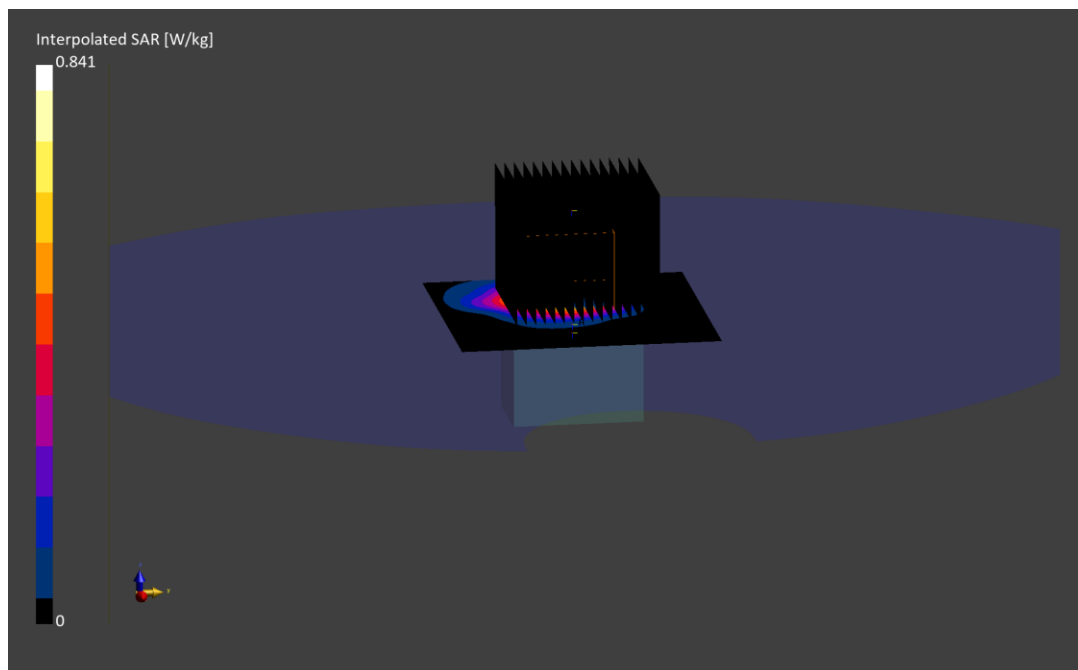
Reference Value = 0.13 W/kg; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.841 W/kg

SAR(1 g) = 0.088 W/kg

Smallest distance from peaks to all points 3 dB below is 2.8 mm

Ratio of SAR at M2 to SAR at M1 = 46.5 %



ELEMENT

DUT: BCG-A3050 Type: Wireless Earbud; Serial: H5RH710021A0000B32

Communication System: UID:10981 - AAA, CW; MAIA: Y; Frequency: 5157.0 MHz

Medium: 5200-5800 Head; Medium parameters used:

$f = 5157.0$ MHz; $\text{cond} = 4.47$ S/m; $\text{perm} = 36.8$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.00 mm

Test Date: 08/02/2024; Ambient Temp: 21.1°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN3746; ConvF:(5.12,5.12,5.12); Calibrated: 2023-10-16

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

Electronics: DAE4 Sn1237; Calibrated: 2023-10-18

Phantom: Twin-SAM V8.0; Serial: 2027

Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 1, Antenna Right, Exp: Head| Front Side, Ch. Low, 4 Mbps

Area Scan (80.0 x 80.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: $dx=2.1$ mm, $dy=2.1$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

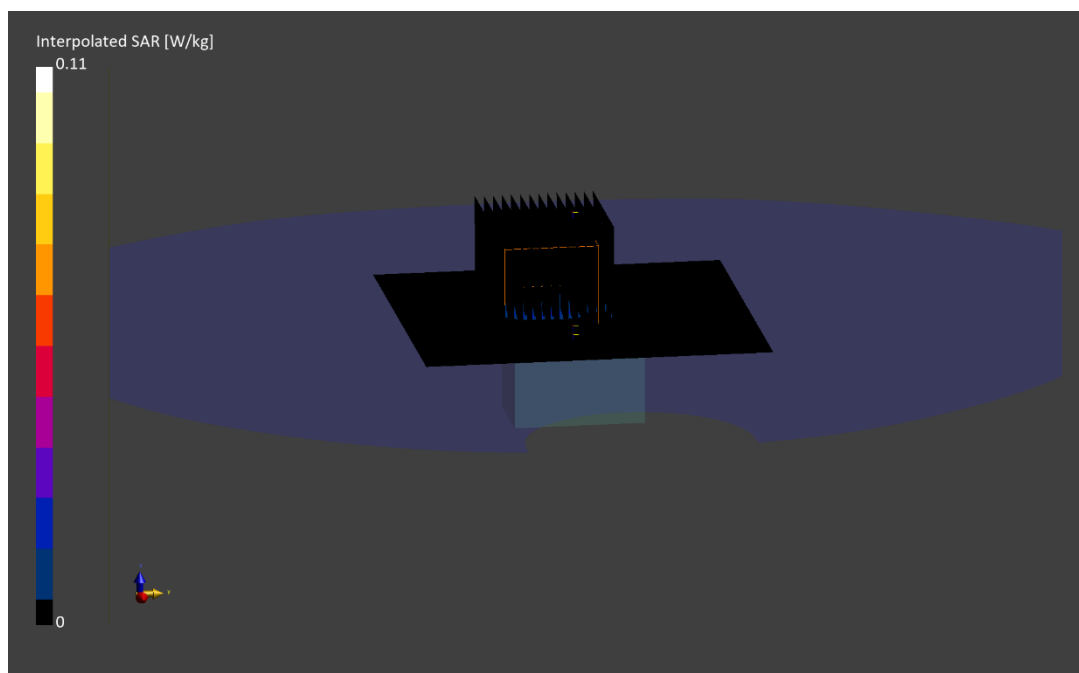
Reference Value = -0.00 W/kg; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.026 W/kg

Smallest distance from peaks to all points 3 dB below is N/A

Ratio of SAR at M2 to SAR at M1 = 39.3 %



ELEMENT

DUT: BCG-A3050 Type: Wireless Earbud; Serial: H5RH710021A0000B32

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

Medium: 6500 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: 0.00 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: $dx=8.5$ mm, $dy=8.5$ mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: $dx=2.2$ mm, $dy=2.2$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

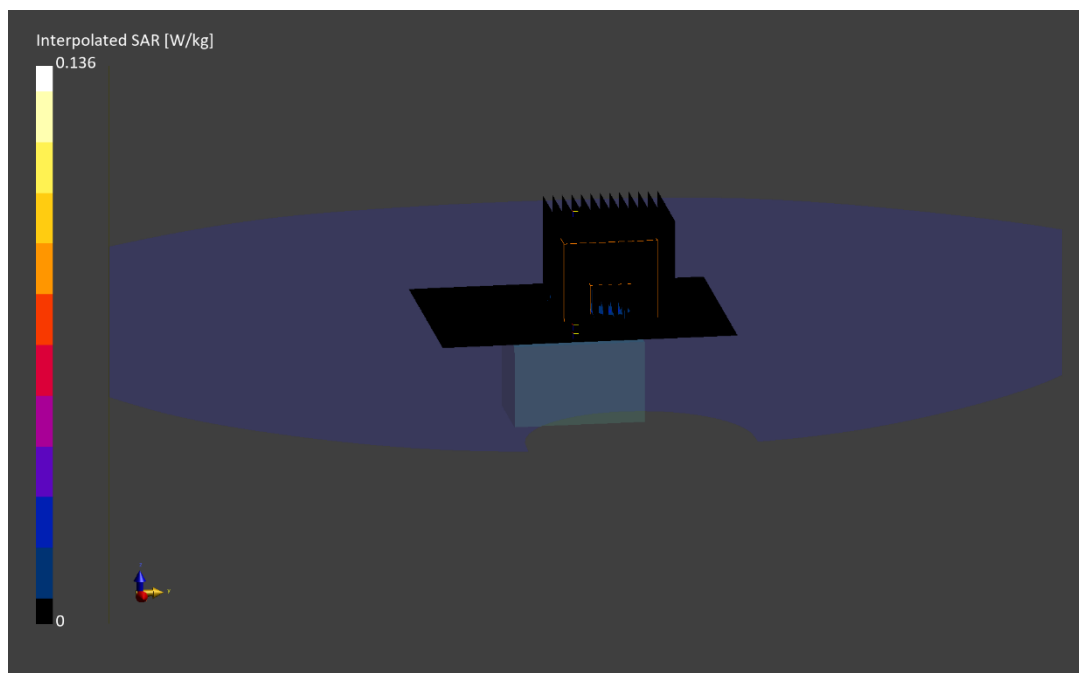
Reference Value = -0.00 W/kg; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.136 W/kg

SAR(1 g) = 0.018 W/kg; APD(4 cm²) = 0.111 W/m²

Smallest distance from peaks to all points 3 dB below is 3.4 mm

Ratio of SAR at M2 to SAR at M1 = 53.8 %



ELEMENT

DUT: BCG-A3050; Type: Wireless Earbud; Serial: H5RH710021A0000B32

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

Medium: 2450 Head; Medium parameters used:

$f = 2402.0$ MHz; $\text{cond} = 1.78$ S/m; $\text{perm} = 38.8$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.00 mm

Test Date: 8/13/2024; Ambient Temp: 22.5°C; Tissue Temp: 22.5°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| Antenna Touching, Ch. 0, 4 Mbps

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

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: $dx=3.8$ mm, $dy=3.8$ mm, $dz=1.4$ mm; Graded Ratio: 1.4

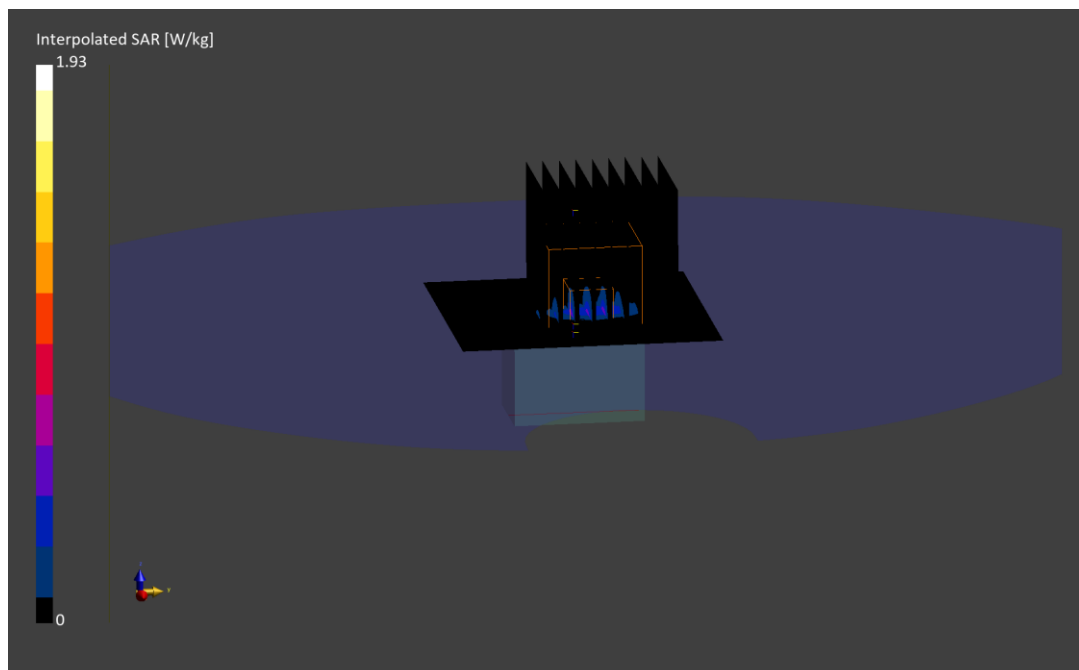
Reference Value = 0.69 W/kg; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 0.436 W/kg

Smallest distance from peaks to all points 3 dB below is 3.9 mm

Ratio of SAR at M2 to SAR at M1 = 56.0 %



ELEMENT

DUT: BCG-A3050; Type: Wireless Earbud; Serial: H5RH710021A0000B32

Communication System: UID:10981 - AAA, CW; MAIA: Y; Frequency: 5844.0 MHz

Medium: 5200-5800 Head; Medium parameters used:

$f = 5844.0$ MHz; $\text{cond} = 5.04$ S/m; $\text{perm} = 35.8$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.00 mm

Test Date: 07/29/2024; Ambient Temp: 21.7°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN3746; ConvF:(4.59,4.59,4.59); Calibrated: 2023-10-16

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

Electronics: DAE4 Sn1237; Calibrated: 2023-10-18

Phantom: Twin-SAM V8.0; Serial: 2027

Measurement SW: DASY Module SAR V16.2.4.2524

Mode: NB U-NII 3, Exp: Body-worn| Back 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: $dx=2.2$ mm, $dy=2.2$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

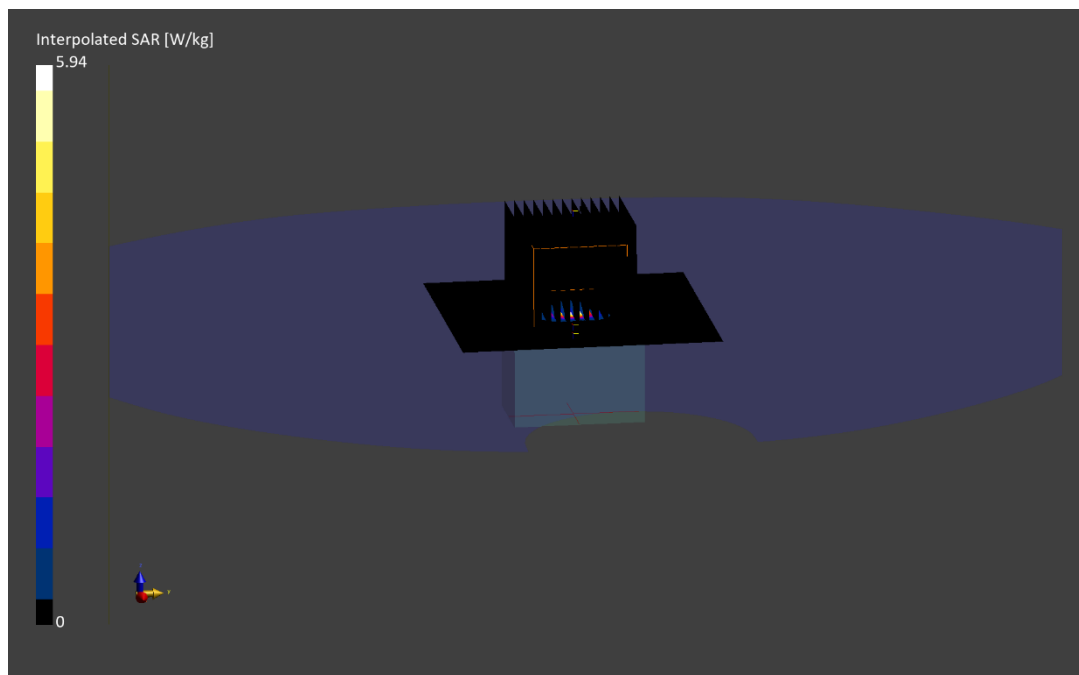
Reference Value = 0.67 W/kg; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 5.94 W/kg

SAR(1 g) = 0.738 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 = 61.4 %



ELEMENT

DUT: BCG-A3050; Type: Wireless Earbud; Serial: H5RH710021A0000B32

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

Medium: 6500 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: 0.00 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: $dx=8.5$ mm, $dy=8.5$ 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

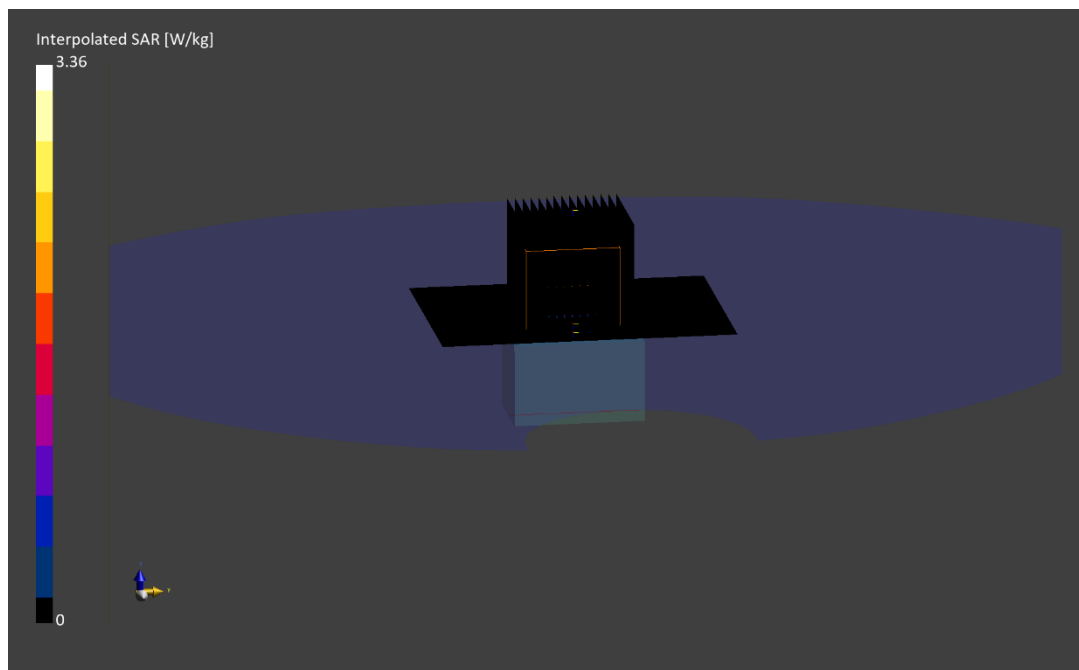
Reference Value = 0.56 W/kg; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.36 W/kg

SAR(1 g) = 0.296 W/kg; APD(4 cm²) = 0.905 W/m²

Smallest distance from peaks to all points 3 dB below is 2.3 mm

Ratio of SAR at M2 to SAR at M1 = 52.8 %



Date: 08/17/2024

Mode: NB-UNII 5, Exp: Body-worn| Back, Ch. Mid, 8 Mbps

Device Under Test Properties

DUT	Serial Number	DUT Type
BCG-A3050	H5RH710022Y0000B32	Wireless Earbud

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Channel	Group, UID	Frequency [MHz]
5G	Back	2.00	6264000	10982	6264.0

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]	4.00
pS _{tot} avg [W/m²]	0.752
pS _n avg [W/m²]	0.741
E _{peak} [V/m]	19.7
Power Drift [dB]	0.07

