

APPENDIX A: SAR TEST DATA

ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

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: 0.00 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: $dx=10.0$ mm, $dy=10.0$ mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: $dx=3.4$ mm, $dy=3.4$ mm, $dz=1.4$ mm; Graded Ratio: 1.4

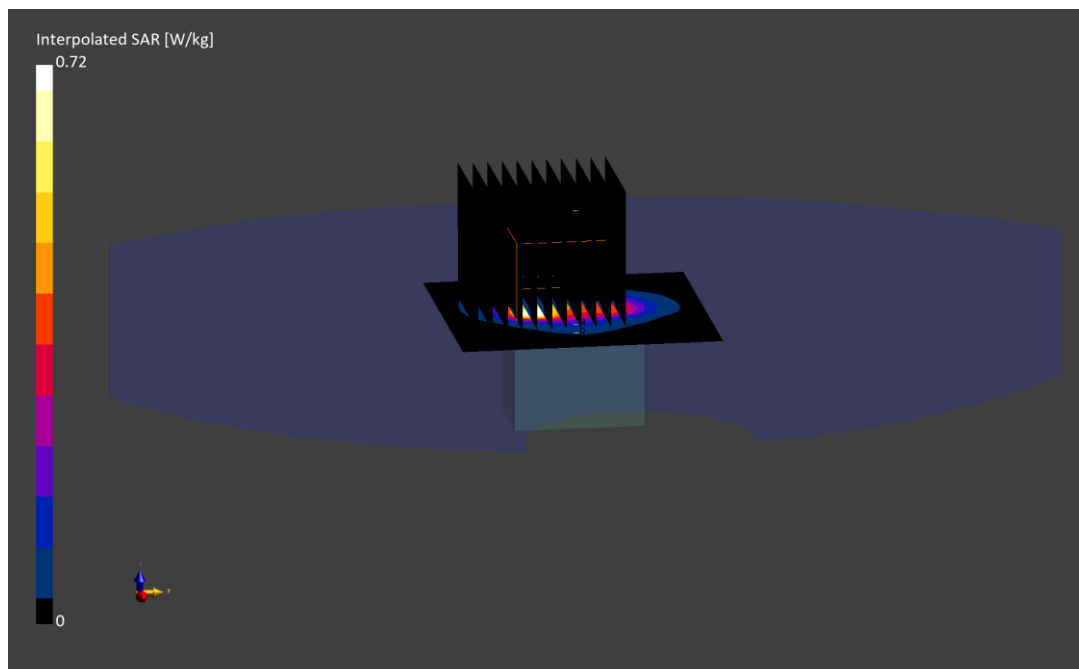
Reference Value = 0.12 W/kg; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.720 W/kg

SAR(1 g) = 0.080 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 39.1 %



ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

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

Medium: 5200-5800 Head; Medium parameters used:

$f = 5844.0$ MHz; $\text{cond} = 5.16$ S/m; $\text{perm} = 35.7$; $\text{density} = 1000$ 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:(4.5,4.5,4.5); 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: 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 (24.0 x 24.0 x 22.0): Measurement grid: $dx=4.0$ mm, $dy=4.0$ mm, $dz=1.4$ mm; Graded Ratio: 1.4

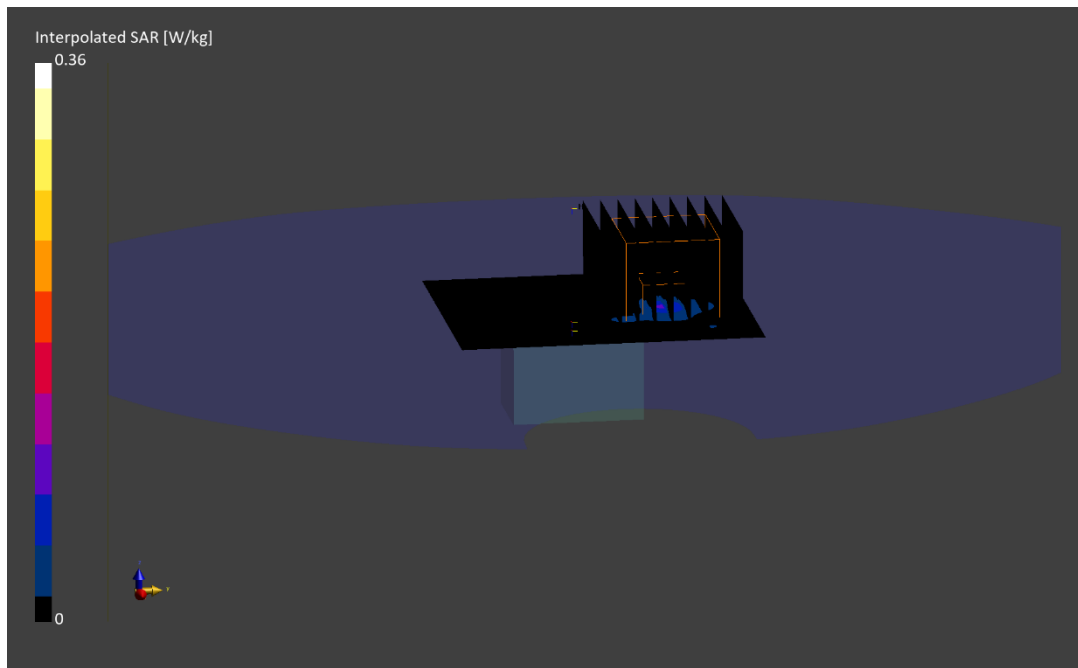
Reference Value = 0.01 W/kg; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.361 W/kg

SAR(1 g) = 0.050 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 42.5 %



ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

Communication System: UID:10982 - AAA, CW; MAIA: Y; Frequency: 6108.0 MHz

Medium: 6500 Head; Medium parameters used:

$f = 6108.0$ MHz; $\text{cond} = 5.40$ S/m; $\text{perm} = 35.7$; $\text{density} = 1000$ 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. Low, 8 Mbps

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

Zoom Scan (23.8 x 23.8 x 22.0): Measurement grid: $dx=3.4$ mm, $dy=3.4$ mm, $dz=1.4$ mm; Graded Ratio: 1.4

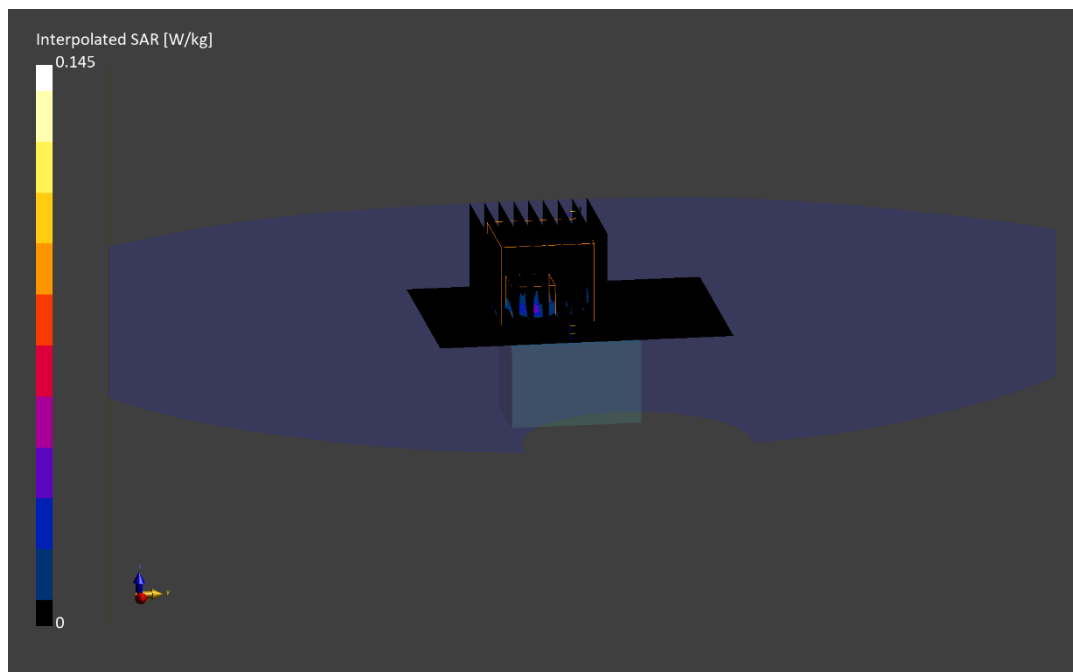
Reference Value = 0.04 W/kg; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.145 W/kg

SAR(1 g) = 0.027 W/kg; APD(4 cm²) = 0.169 W/m²

Smallest distance from peaks to all points 3 dB below is 4.1 mm

Ratio of SAR at M2 to SAR at M1 = N/A



ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

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| Button, 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: $dx=2.5$ mm, $dy=2.5$ mm, $dz=1.2$ mm; Graded Ratio: 1.2

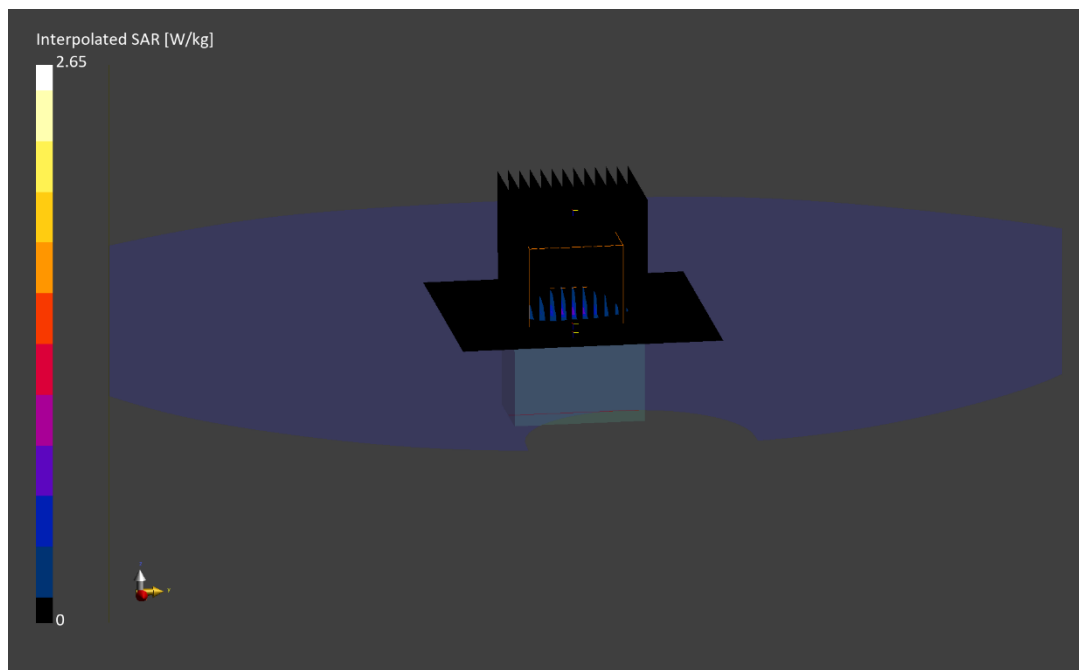
Reference Value = 1.14 W/kg; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.65 W/kg

SAR(1 g) = 0.491 W/kg

Smallest distance from peaks to all points 3 dB below is 3.0 mm

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



ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

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

Medium: 5200-5800 Head; Medium parameters used:

$f = 5844.0$ MHz; $\text{cond} = 5.11$ S/m; $\text{perm} = 34.2$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 0.00 mm

Test Date: 07/24/2024; Ambient Temp: 21.5°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN3746; ConvF:(4.5,4.5,4.5); 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

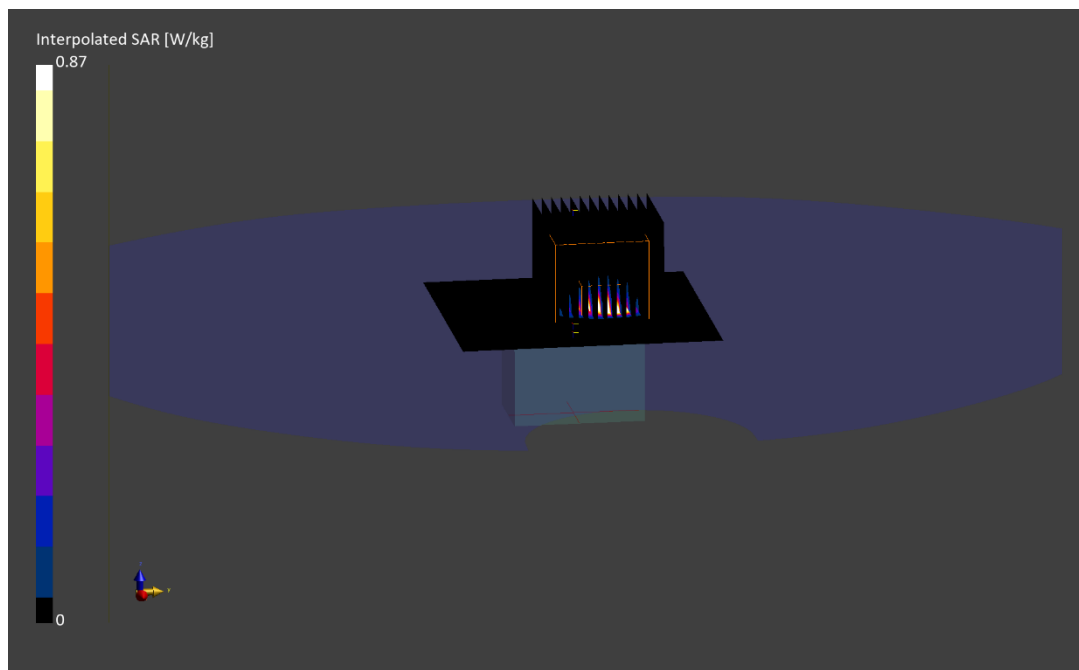
Reference Value = 0.87 W/kg; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 6.90 W/kg

SAR(1 g) = 0.721 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 = 52.5 %



ELEMENT

DUT: BCG-A3053; Type: Wireless Earbud; Serial: H5RH71002DM0000B30

Communication System: UID:10982 - AAA, CW; MAIA: Y; Frequency: 6342.0 MHz

Medium: 6500 Head; Medium parameters used:

$f = 6342.0$ MHz; $\text{cond} = 5.73$ S/m; $\text{perm} = 35.2$; $\text{density} = 1000$ 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. Mid-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, $dz=1.4$ mm; Graded Ratio: 1.4

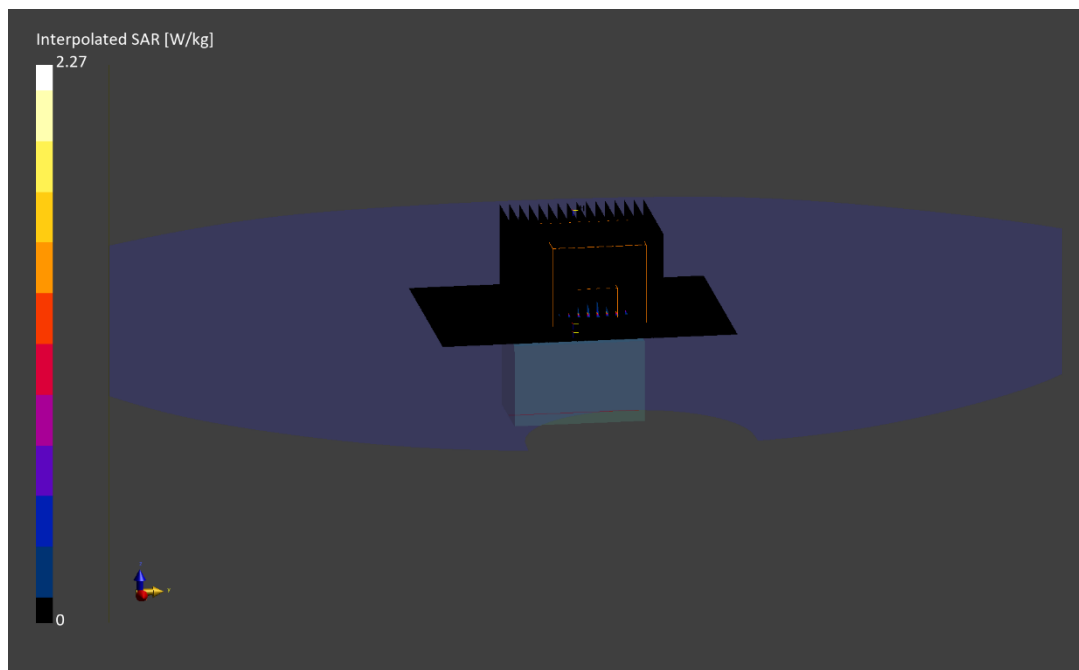
Reference Value = 0.39 W/kg; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.27 W/kg

SAR(1 g) = 0.247 W/kg; APD(4 cm²) = 0.802 W/m²

Smallest distance from peaks to all points 3 dB below is 3.0 mm

Ratio of SAR at M2 to SAR at M1 = 47.0 %



Date: 08/17/2024

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

Device Under Test Properties

DUT	Serial Number	DUT Type
BCG-A3053	H5RH71002CE0000B30	Wireless Earbud

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Channel	Group, UID	Frequency [MHz]
5G	Back	2.00	6342000	10982	6342.0

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]	0.653
pS _n avg [W/m²]	0.546
E _{peak} [V/m]	22.6
Power Drift [dB]	0.05

