

Test Report #:	SAR-IRHYT-011-18001-ZIO-Gateway	FCC ID:	2AFBP-AT18G	<b>CETECOM</b> <sup>TM</sup>
Date of Report:	2018-04-23			

## Plot 1

Date/Time: 4/6/2018 4:56:55 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Zio AT Gateway; Type: Heart Rate Monitor; Serial: G737350247

Communication System: UID 10175 - CAD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 777 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 777$  MHz;  $\sigma = 0.961$  S/m;  $\epsilon_r = 55.401$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Joseph Air Temperature: 22.3°C Medium Temperature: 22°C; Comments:

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8.8(1222);

Flat-Section/FrontCase 0mm/Area Scan (10x14x1): Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 0.584 W/kg

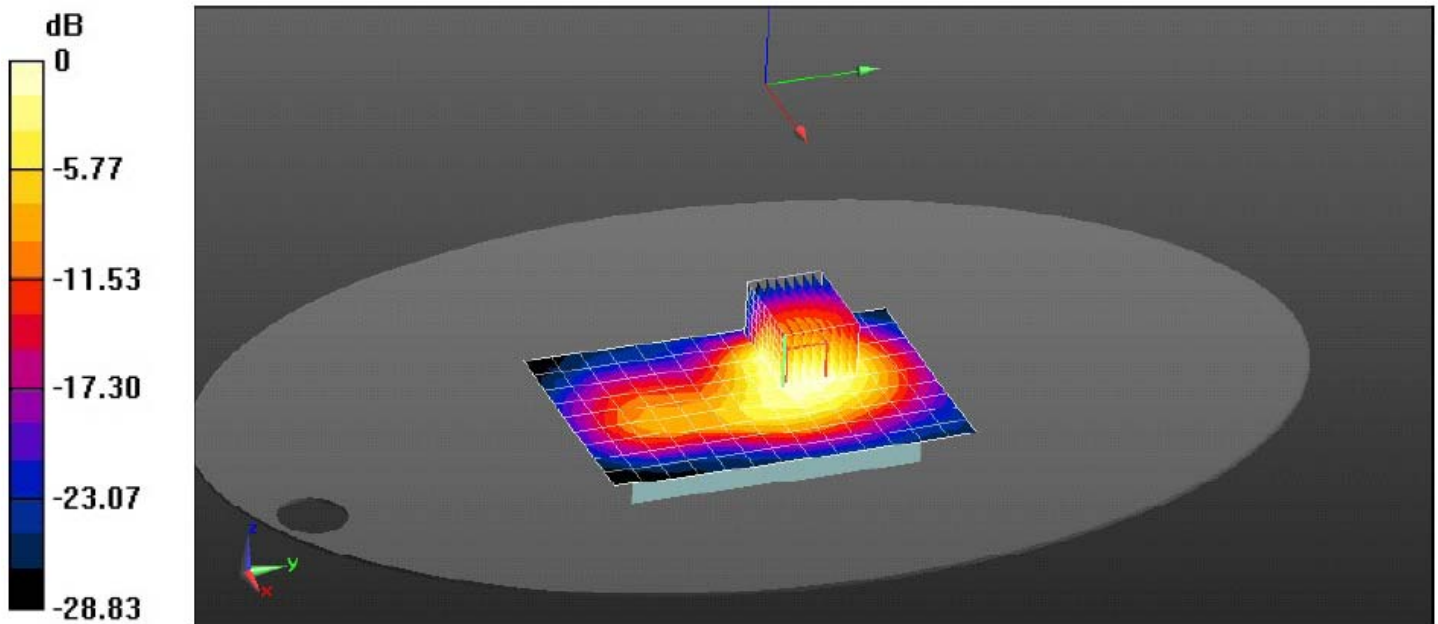
Flat-Section/FrontCase 0mm/Zoom Scan (12x9x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 14.39 V/m; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 0.923 W/kg

SAR(1 g) = 0.521 W/kg; SAR(10 g) = 0.364 W/kg

Maximum value of SAR (measured) = 0.629 W/kg



0 dB = 0.584 W/kg = -2.34 dBW/kg

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## Plot 2

Date/Time: 4/11/2018 5:55:02 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Zio AT Gateway; Type: Heart Rate Monitor; Serial: G737350247

Communication System: UID 10175 - CAD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 777 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 777$  MHz;  $\sigma = 0.961$  S/m;  $\epsilon_r = 55.401$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Joseph Air Temperature: 22.2°C Medium Temperature: 22°C; Comments:

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8.8(1222);

Flat-Section/BackCase 0mm/Area Scan (20x14x1): Measurement grid:  $dx=8$ mm,  $dy=8$ mm

Maximum value of SAR (measured) = 0.479 W/kg

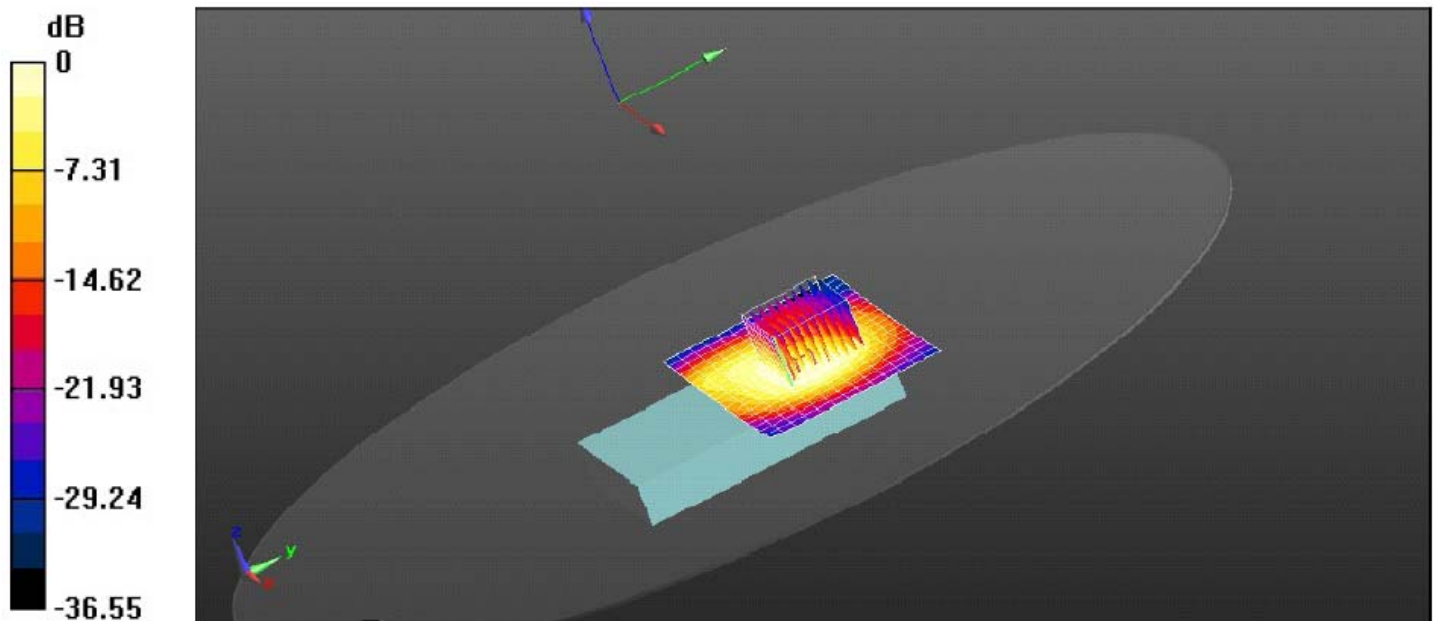
Flat-Section/BackCase 0mm/Zoom Scan (10x10x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 10.53 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.569 W/kg

SAR(1 g) = 0.428 W/kg; SAR(10 g) = 0.306 W/kg

Maximum value of SAR (measured) = 0.481 W/kg



0 dB = 0.479 W/kg = -3.19 dBW/kg

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### Plot 3

Date/Time: 4/6/2018 8:09:13 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Zio AT Gateway; Type: Heart Rate Monitor; Serial: G737350247

Communication System: UID 10175 - CAD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 786.9 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 787$  MHz;  $\sigma = 0.963$  S/m;  $\epsilon_r = 55.365$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Joseph Air Temperature: 22.3°C Medium Temperature: 22°C; Comments:

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8.8(1222);

Flat-Section/CaseFront High Ch. 0mm/Area Scan (10x14x1): Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 0.474 W/kg

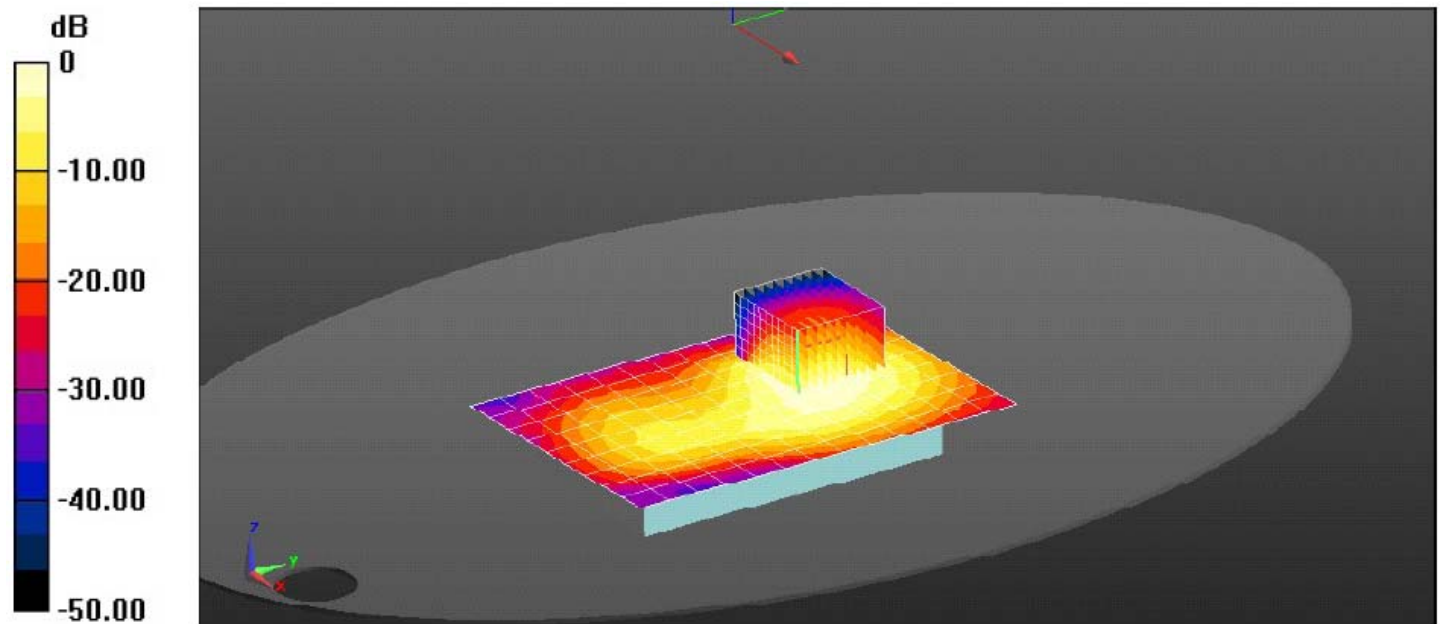
Flat-Section/CaseFront High Ch. 0mm/Zoom Scan (11x10x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 9.159 V/m; Power Drift = 1.83 dB

Peak SAR (extrapolated) = 0.794 W/kg

SAR(1 g) = 0.431 W/kg; SAR(10 g) = 0.288 W/kg

Maximum value of SAR (measured) = 0.511 W/kg



0 dB = 0.474 W/kg = -3.24 dBW/kg

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#### Plot 4

Date/Time: 4/11/2018 7:03:37 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Zio AT Gateway; Type: Heart Rate Monitor; Serial: G737350247

Communication System: UID 10175 - CAD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 786.9 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 787 \text{ MHz}$ ;  $\sigma = 0.963 \text{ S/m}$ ;  $\epsilon_r = 55.365$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Joseph Air Temperature:  $22.7^\circ\text{C}$  Medium Temperature:  $21.2^\circ\text{C}$ ; Comments:

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8.8(1222);

Flat-Section/BackCase 0mm/Area Scan (20x14x1): Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$

Maximum value of SAR (measured) =  $0.371 \text{ W/kg}$

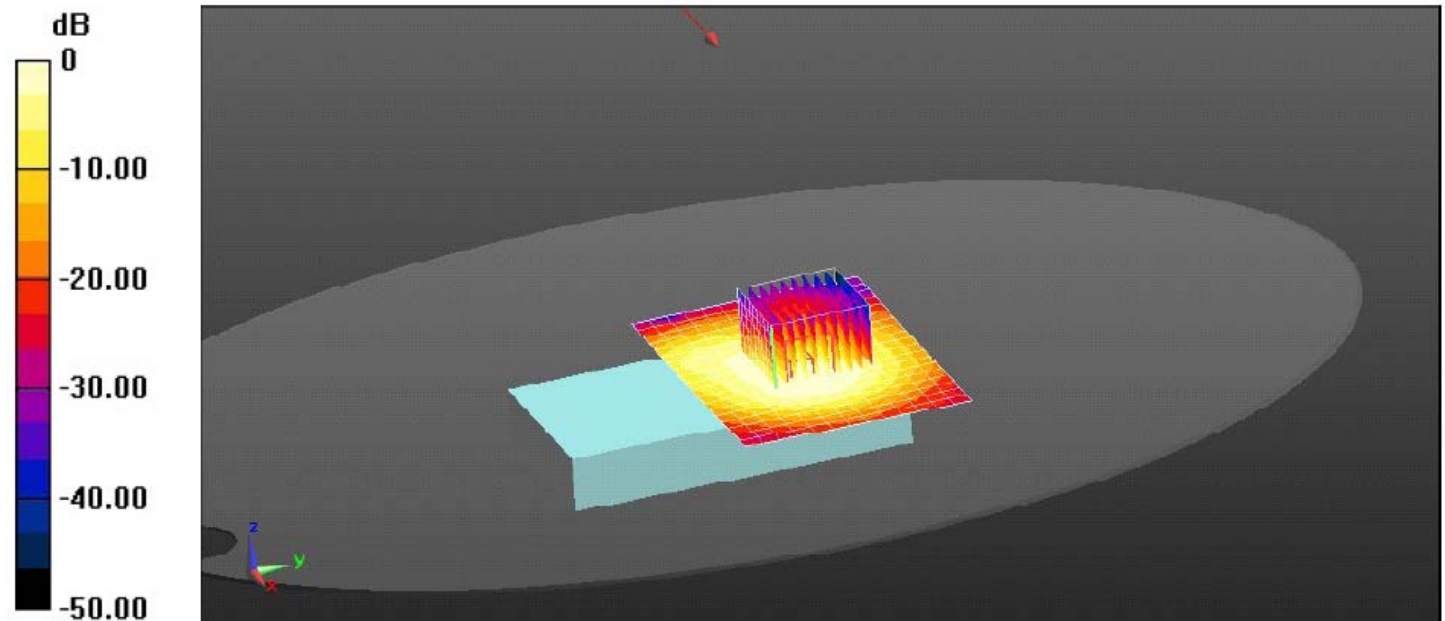
Flat-Section/BackCase 0mm/Zoom Scan (10x10x7)/Cube 0: Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.02 \text{ V/m}$ ; Power Drift =  $-2.27 \text{ dB}$

Peak SAR (extrapolated) =  $0.381 \text{ W/kg}$

SAR(1 g) =  $0.275 \text{ W/kg}$ ; SAR(10 g) =  $0.189 \text{ W/kg}$

Maximum value of SAR (measured) =  $0.317 \text{ W/kg}$



$$0 \text{ dB} = 0.371 \text{ W/kg} = -4.30 \text{ dBW/kg}$$

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## Plot 5

Date/Time: 4/6/2018 11:50:21 AM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Dipole 750 MHz - D750V3 - SN1032\_April 2016; Type: D750V3; Serial: D750V3 - SN:1032

Communication System: UID 0, CW (0); Frequency: 750 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.959$  S/m;  $\epsilon_r = 55.498$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: John; Air Temperature: 21.8°C; Medium Temperature: 21°C; Comments: ;

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 2.0, 32.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8(1222);

System Performance Check at Frequencies above 1 GHz/OBS\_d=15mm, Pin=250mW, dist=2.0mm (ES-Probe)/Area Scan

(31x31x1): Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 52.95 V/m; Power Drift = -0.04 dB

Fast SAR: SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (interpolated) = 2.71 W/kg

System Performance Check at Frequencies above 1 GHz/OBS\_d=15mm, Pin=250mW, dist=2.0mm (ES-Probe)/Zoom Scan (7x7x7)

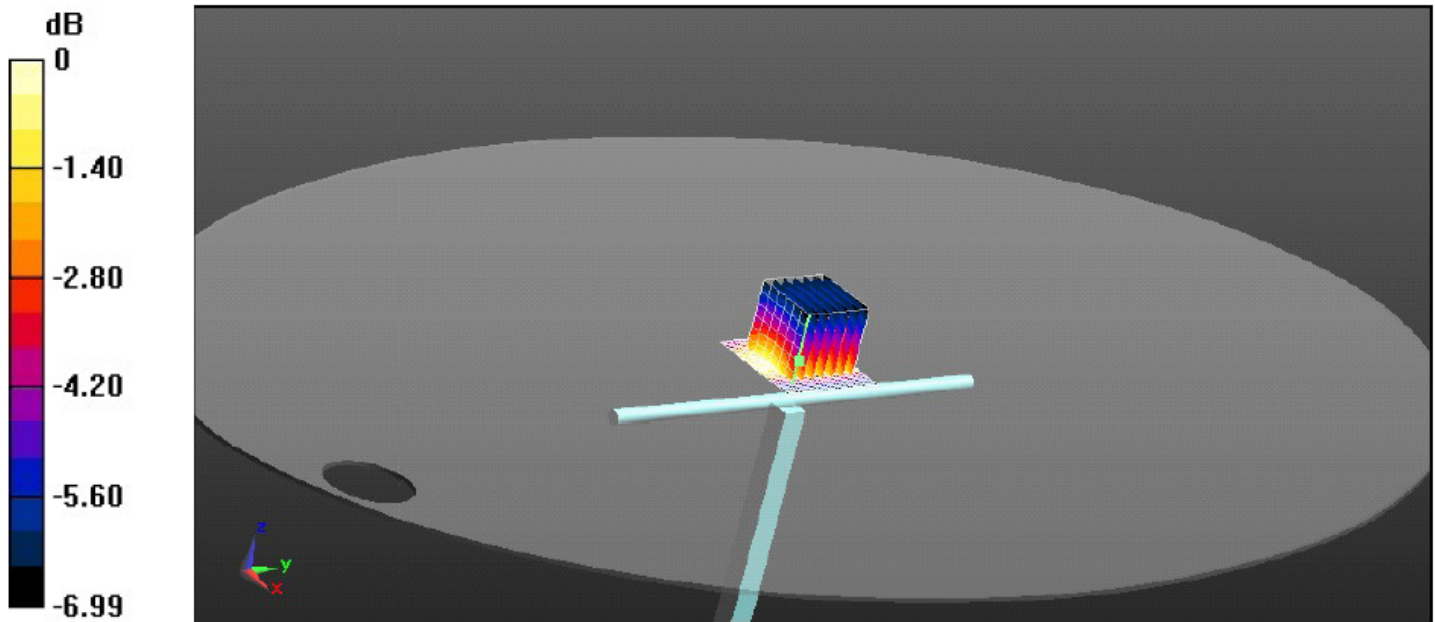
(7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 52.95 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.49 W/kg

Maximum value of SAR (measured) = 2.91 W/kg



0 dB = 2.71 W/kg = 4.34 dBW/kg



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## Plot 6

Date/Time: 4/11/2018 12:25:17 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Dipole 750 MHz - D750V3 - SN1032\_April 2016; Type: D750V3; Serial: D750V3 - SN:1032

Communication System: UID 0, CW (0); Frequency: 750 MHz

Medium: MSL750\_Batch 110526-1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.959$  S/m;  $\epsilon_r = 55.498$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: John; Air Temperature: 21.8°C; Medium Temperature: 21°C; Comments: ;

DASY Configuration:

I Probe: ES3DV3 - SN3323; ConvF(6.49, 6.49, 6.49); Calibrated: 5/12/2017;

I Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 2.0, 32.0$

I Electronics: DAE4 Sn1266; Calibrated: 5/16/2017

I Phantom: ELI v4.0\_Front; Type: QDOVA001BB; Serial: 1124

I DASY52 52.8(1222);

System Performance Check at Frequencies above 1 GHz/OBS\_d=15mm, Pin=250mW, dist=2.0mm (ES-Probe)/Area Scan (4x4x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.25 W/kg

System Performance Check at Frequencies above 1 GHz/OBS\_d=15mm, Pin=250mW, dist=2.0mm (ES-Probe)/Zoom Scan (7x7x7)

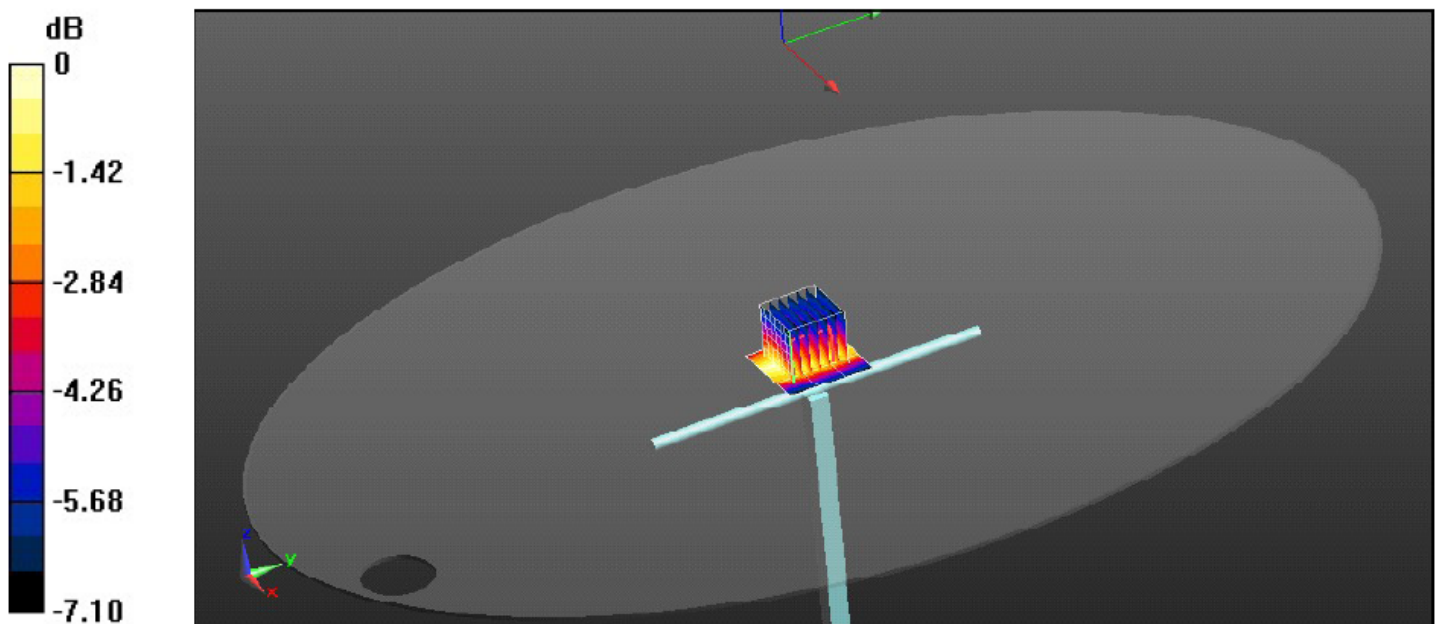
(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.67 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.43 W/kg

SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg