

Annex C. Test System Plots

1. GSM850, Voice 1UL, CH128 / Head Right Touch	69
2. GSM850, Voice 1UL, CH128 / Body Back Face.....	70
3. GSM1900, Voice 1UL, CH810 / Head Left Touch	71
4. GSM1900, Voice 1UL, CH810 / Body Front Face	72
5. WCDMA FDD II, 12.2kbps RMC, CH9538 / Head Left Touch	73
6. WCDMA FDD II, 12.2kbps RMC, CH9538 / Body Front Face	74
7. WCDMA FDD IV, 12.2kbps RMC, CH1413 / Head Left Touch.....	75
8. WCDMA FDD IV, 12.2kbps RMC, CH1312 / Body Back Face	76
9. WCDMA FDD V, 12.2kbps RMC, CH4233 / Head Right Touch	77
10. WCDMA FDD V, 12.2kbps RMC, CH4233 / Body Back Face.....	78
11. LTE Band 2, 1RB Low @ QPSK - 20MHz, CH18900 / Head Left Touch.....	79
12. LTE Band 2, 1RB Low @ QPSK - 20MHz, CH18900 / Body Front Face	80
13. LTE Band 4, 1RB Low @ QPSK - 20MHz, CH20300 / Head Right Touch	81
14. LTE Band 4, 1RB Low @ QPSK - 20MHz, CH20300 / Body Front Face	82
15. LTE Band 5, 1RB Low @ QPSK - 10MHz, CH20450 / Head Right Touch	83
16. LTE Band 5, 1RB Low @ QPSK - 10MHz, CH20400 / Body Back Face	84
17. LTE Band 7, 1RB Low @ QPSK - 20MHz, CH21449 / Head Right Touch	85
18. LTE Band 7, 1RB Low @ QPSK - 20MHz, CH21449 / Body Bottom Edge	86
19. LTE Band 13, 1RB Low @ QPSK - 10MHz, CH23230 / Head Right Touch	87
20. LTE Band 13, 1RB Low @ QPSK - 10MHz, CH23230 / Body Back Face	88
21. LTE Band 17, 1RB Low @ QPSK - 10MHz, CH23730 / Head Right Touch	89
22. LTE Band 17, 1RB Low @ QPSK - 10MHz, CH23730 / Body Back Face	90
23. LTE Band 25, 1RB Low @ QPSK - 20MHz, CH26365 / Head Left Touch.....	91
24. LTE Band 25, 1RB Low @ QPSK - 20MHz, CH26365 / Body Front Face	92
25. LTE Band 26, 1RB Low @ QPSK - 15MHz, CH23230 / Head Left Touch.....	93
26. LTE Band 26, 1RB Low @ QPSK - 15MHz, CH23230 / Body Back Face	94
27. 2.4GHz - 802.11b, CH11 - Head Right Touch	95
28. 2.4GHz - 802.11b, CH1 - Body Front Face	96
29. 5.2GHz - 802.11a, CH48 - Head Right Tilt.....	97
30. 5.2GHz - 802.11a, CH48 - Body Top Edge.....	98
31. 5.3GHz - 802.11a, CH64 - Head Right Tilt.....	99
32. 5.3GHz - 802.11a, CH60 - Body Top Edge.....	100
33. 5.6GHz - 802.11a, CH116 - Head Right Tilt.....	101
34. 5.6GHz - 802.11a, CH108 - Body Top Edge.....	102
35. 5.8GHz - 802.11a, CH157 - Head Right Tilt.....	103
36. 5.8GHz - 802.11a, CH157 - Body Top Edge.....	104
37. 2.4GHz - 802.15, CH 0 - Head Right Tilt.....	105

38.	2.4GHz – 802.15, CH0 - Body Front Face	108
39.	System Check Head Liquid 750MHz	109
40.	System Check Head Liquid 835MHz	110
41.	System Check Head Liquid 1800MHz	111
42.	System Check Head Liquid 1900MHz	112
43.	System Check Head Liquid 2450MHz	113
44.	System Check Head Liquid 2600MHz	114
45.	System Check Head Liquid 5200MHz	115
46.	System Check Head Liquid 5600MHz	116
47.	System Check Head Liquid 5800MHz	117
48.	System Check Body Liquid 750MHz	118
49.	System Check Body Liquid 835MHz	119
50.	System Check Body Liquid 1800MHz	120
51.	System Check Body Liquid 1900MHz	121
52.	System Check Body Liquid 2450MHz	122
53.	System Check Body Liquid 2600MHz	123
54.	System Check Body Liquid 5200MHz	124
55.	System Check Body Liquid 5600MHz	125
56.	System Check Body Liquid 5800MHz	126

1. GSM850, Voice 1UL, CH128 / Head Right Touch

A. Experimental conditions

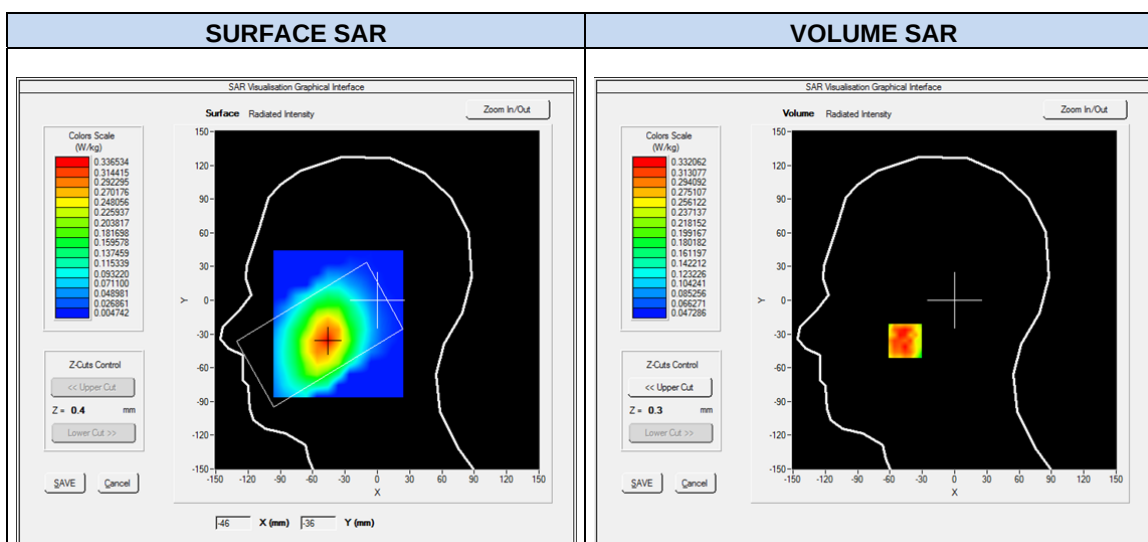
Date	16/09/2014
Area Scan	dx=10mm dy=10mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=10mm dy=10mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.99	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	824.200000
Relative permittivity (real part)	43.339764
Relative permittivity (imaginary part)	18.564976
Conductivity (S/m)	0.850070



Maximum location: X=-46.00, Y=-36.00

SAR Peak: 0.48 W/kg

SAR 10g (W/kg)	0.231925
SAR 1g (W/kg)	0.321923
Power Drift (%)	-3.440000

2. GSM850, Voice 1UL, CH128 / Body Back Face

A. Experimental conditions

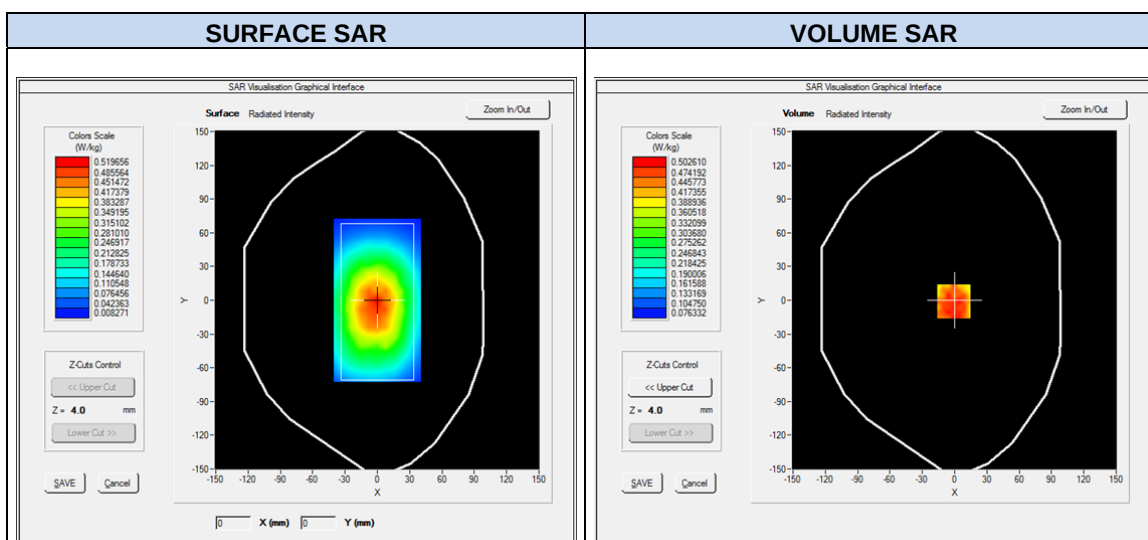
Date	25/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	GSM850
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 5.16	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	824.200000
Relative permittivity (real part)	55.940022
Relative permittivity (imaginary part)	20.988636
Conductivity (S/m)	0.961046



Maximum location: X=-1.00, Y=-1.00

SAR Peak: 0.8 W/kg

SAR 10g (W/kg)	0.396538
SAR 1g (W/kg)	0.539169
Power Drift (%)	-1.200000

3. GSM1900, Voice 1UL, CH810 / Head Left Touch

A. Experimental conditions

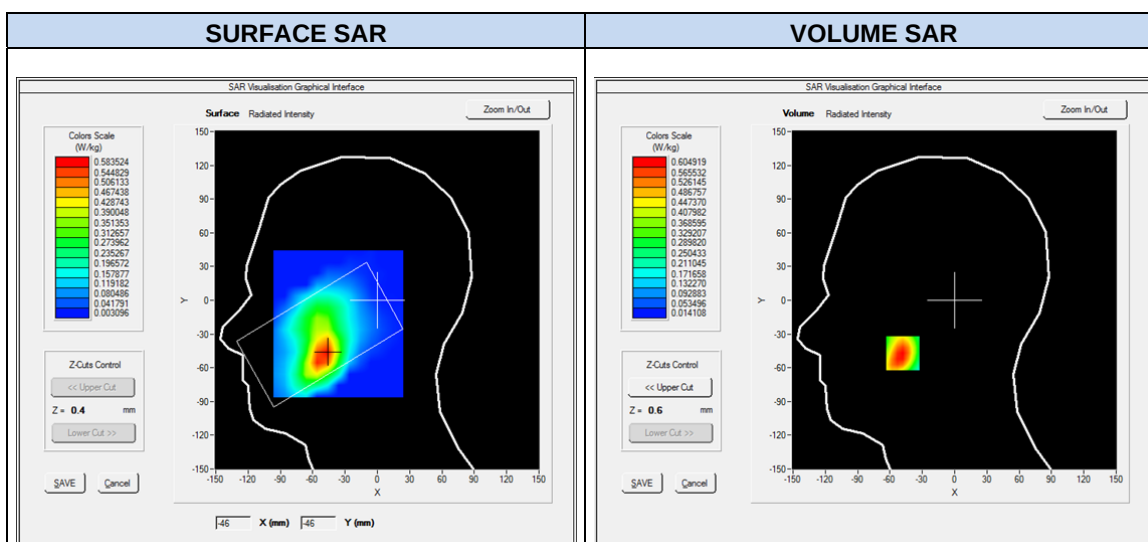
Date	02/09/2014
Area Scan	dx=10mm dy=10mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=10mm dy=10mm, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA (Crest factor: 8.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.84	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative permittivity (real part)	38.127214
Relative permittivity (imaginary part)	14.047202
Conductivity (S/m)	1.492440



Maximum location: X=-66.00, Y=-66.00

SAR Peak: 0.35 W/kg

SAR 10g (W/kg)	0.113347
SAR 1g (W/kg)	0.226637
Power Drift (%)	-3.020000

4. GSM1900, Voice 1UL, CH810 / Body Front Face

A. Experimental conditions

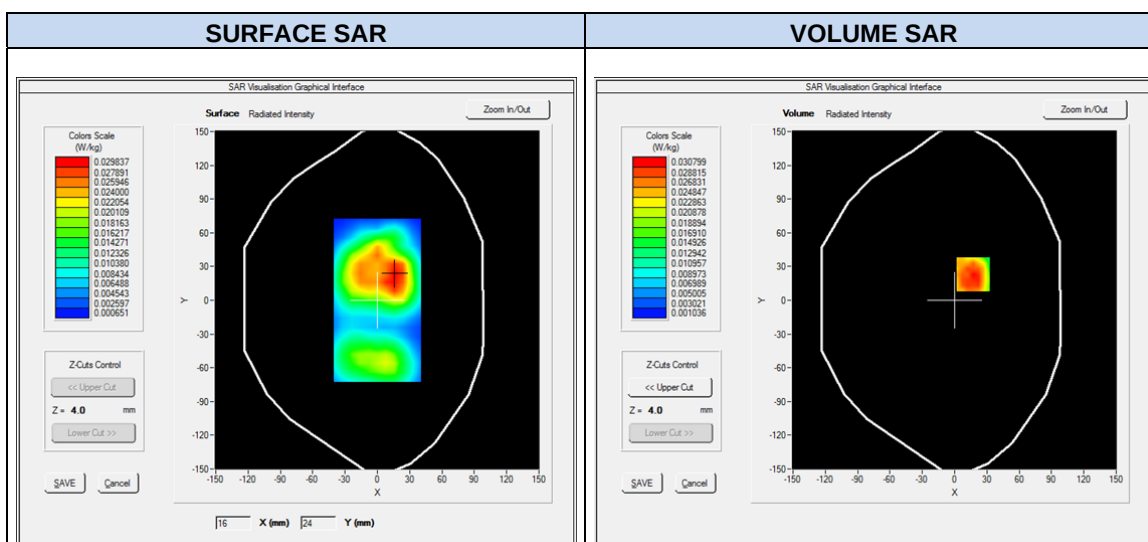
Date	22/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Front Face
Band	GSM1900
Channels	High
Signal	TDMA (Crest factor: 8.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.92	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative permittivity (real part)	52.535294
Relative permittivity (imaginary part)	15.307894
Conductivity (S/m)	1.624168



Maximum location: X=17.00, Y=23.00

SAR Peak: 0.05 W/kg

SAR 10g (W/kg)	0.019789
SAR 1g (W/kg)	0.031710
Power Drift (%)	-1.630000

5. WCDMA FDD II, 12.2kbps RMC, CH9538 / Head Left Touch

A. Experimental conditions

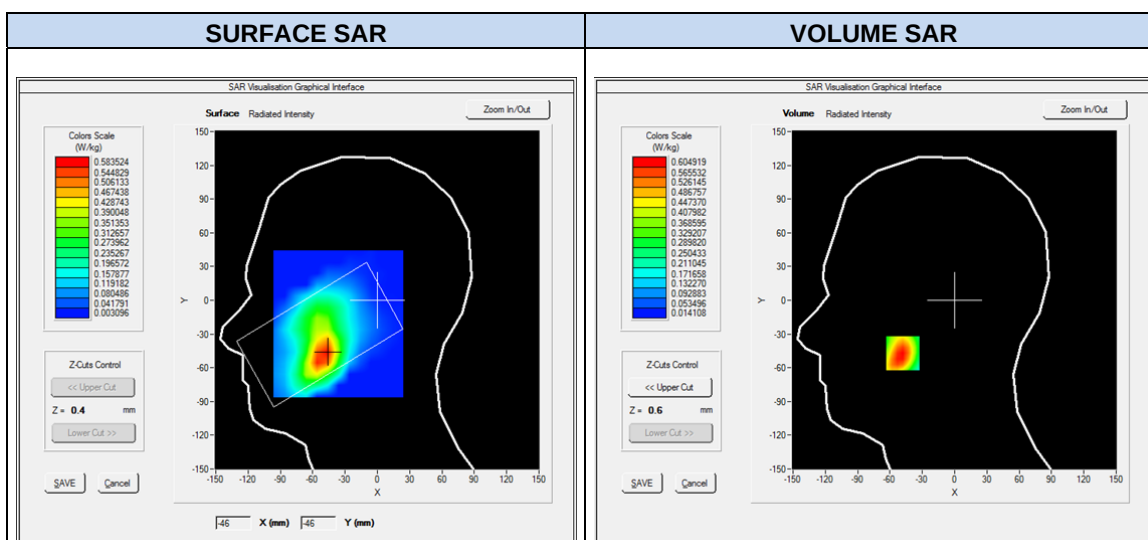
Date	02/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	WCDMA FDD II
Channels	High
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.84	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1907.600000
Relative permittivity (real part)	38.114168
Relative permittivity (imaginary part)	14.069224
Conductivity (S/m)	1.493048



Maximum location: X=-48.00, Y=-47.00

SAR Peak: 0.87 W/kg

SAR 10g (W/kg)	0.336829
SAR 1g (W/kg)	0.574053
Power Drift (%)	-0.120000

6. WCDMA FDD II, 12.2kbps RMC, CH9538 / Body Front Face

A. Experimental conditions

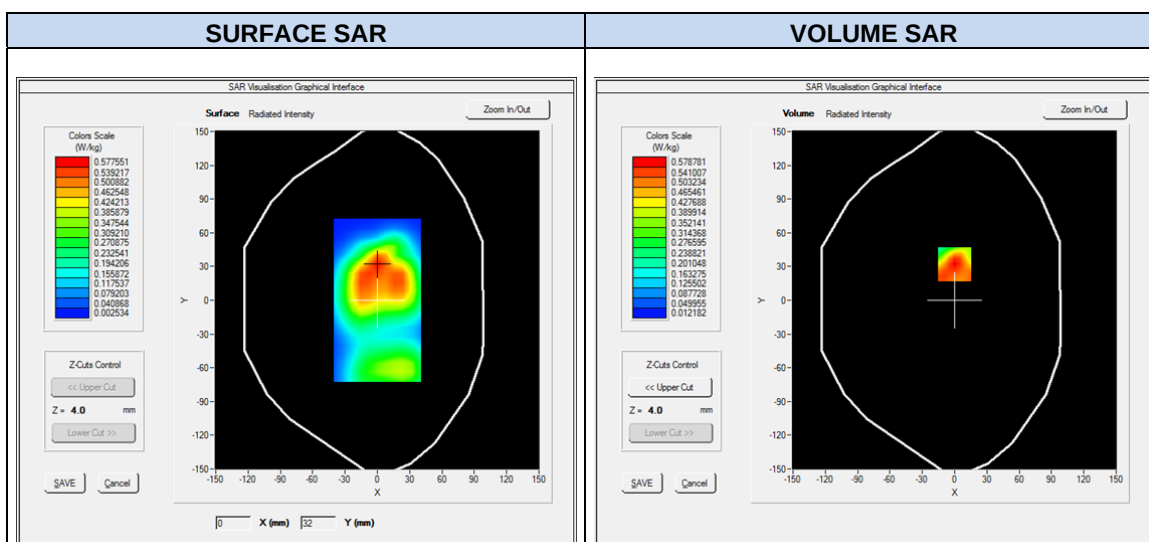
Date	22/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Front Face
Band	WCDMA FDD II
Channels	High
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.92	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1907.600000
Relative permittivity (real part)	52.526779
Relative permittivity (imaginary part)	15.309210
Conductivity (S/m)	1.621926



Maximum location: X=0.00, Y=32.00

SAR Peak: 0.90 W/kg

SAR 10g (W/kg)	0.326255
SAR 1g (W/kg)	0.572846
Power Drift (%)	-1.020000

7. WCDMA FDD IV, 12.2kbps RMC, CH1413 / Head Left Touch

A. Experimental conditions

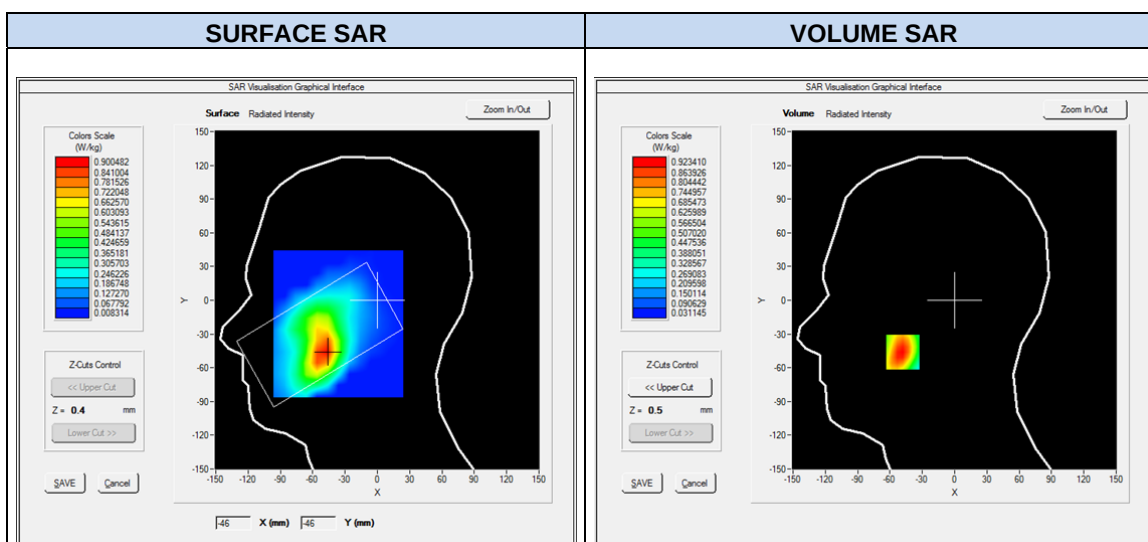
Date	28/08/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	WCDMA FDD IV
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.41	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	37.529999
Relative permittivity (imaginary part)	13.878640
Conductivity (S/m)	1.335434



Maximum location: X=-48.00, Y=-46.00

SAR Peak: 1.29 W/kg

SAR 10g (W/kg)	0.537770
SAR 1g (W/kg)	0.875258
Power Drift (%)	-0.810000

8. WCDMA FDD IV, 12.2kbps RMC, CH1312 / Body Back Face

A. Experimental conditions

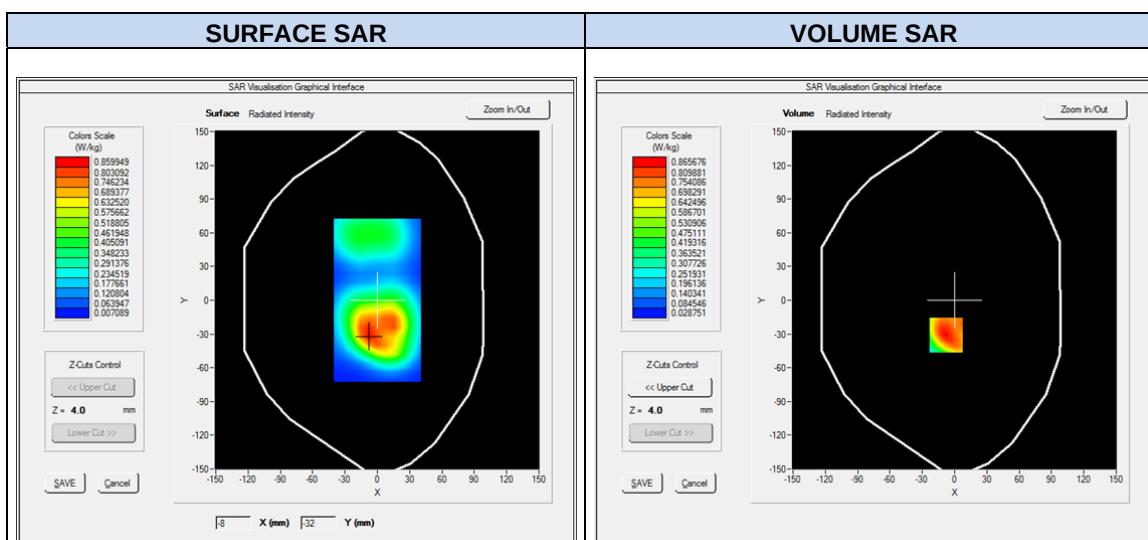
Date	19/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	WCDMA FDD IV
Channels	Low
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.42	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1712.400000
Relative permittivity (real part)	53.432224
Relative permittivity (imaginary part)	15.047968
Conductivity (S/m)	1.433519



Maximum location: X=-8.00, Y=-31.00

SAR Peak: 1.37 W/kg

SAR 10g (W/kg)	0.554913
SAR 1g (W/kg)	0.902149
Power Drift (%)	-0.280000

9. WCDMA FDD V, 12.2kbps RMC, CH4233 / Head Right Touch

A. Experimental conditions

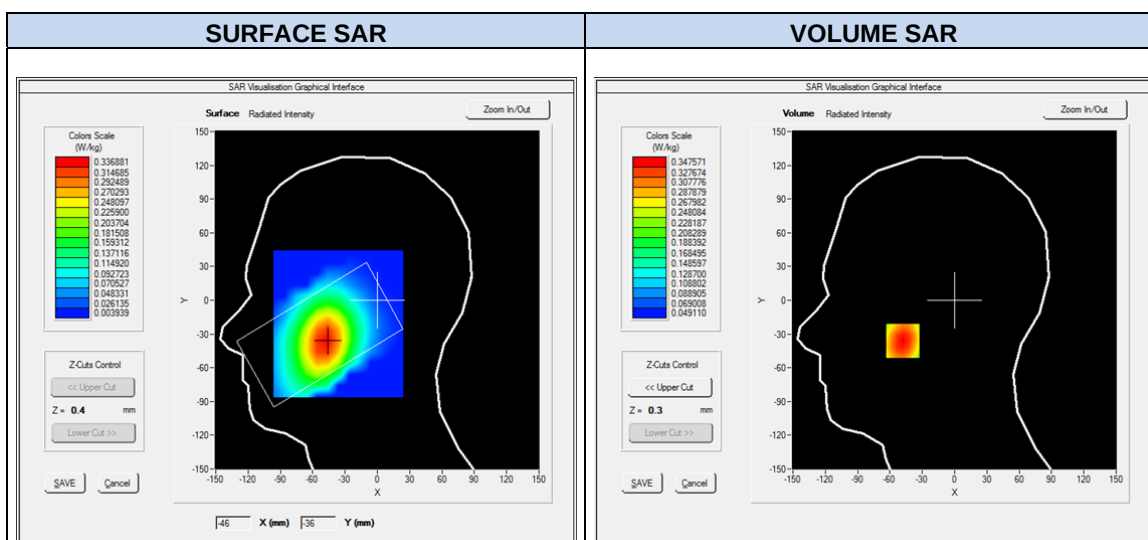
Date	16/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7, dx=5mm dy=5mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	WCDMA FDD V
Channels	High
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.99	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	846.600000
Relative permittivity (real part)	42.914101
Relative permittivity (imaginary part)	18.810181
Conductivity (S/m)	0.884078



Maximum location: X=-48.00, Y=-36.00

SAR Peak: 0.42 W/kg

SAR 10g (W/kg)	0.248770
SAR 1g (W/kg)	0.334003
Power Drift (%)	-0.660000

10. WCDMA FDD V, 12.2kbps RMC, CH4233 / Body Back Face

A. Experimental conditions

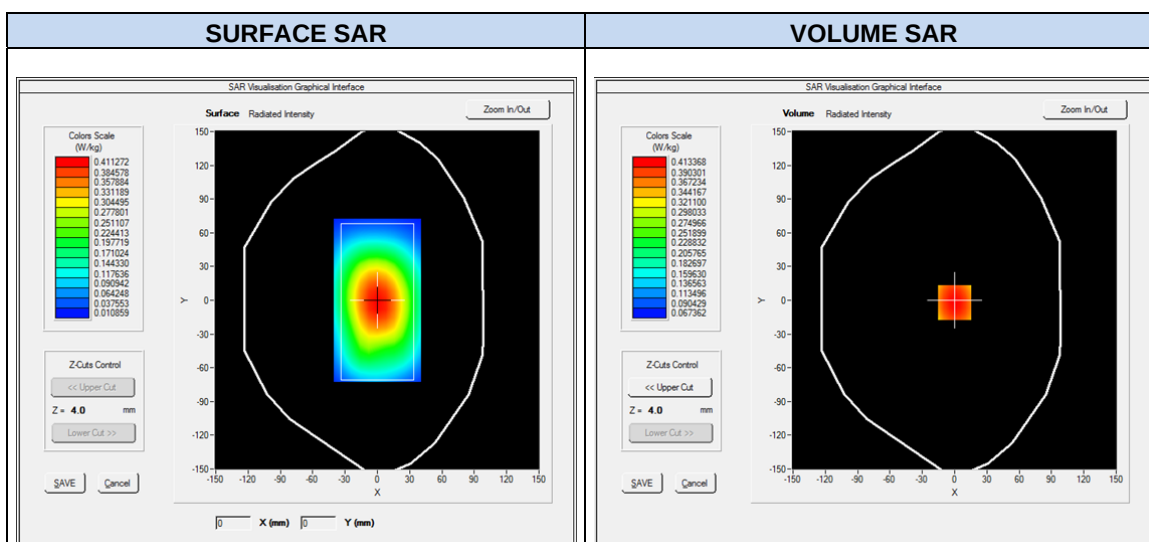
Date	25/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	WCDMA FDD V
Channels	High
Signal	WCDMA (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 5.16	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	846.600000
Relative permittivity (real part)	55.603802
Relative permittivity (imaginary part)	21.108101
Conductivity (S/m)	0.992081



Maximum location: X=0.00, Y=-2.00

SAR Peak: 0.56 W/kg

SAR 10g (W/kg)	0.341453
SAR 1g (W/kg)	0.450359
Power Drift (%)	0.070000

11. LTE Band 2, 1RB Low @ QPSK - 20MHz, CH18900 / Head Left Touch

A. Experimental conditions

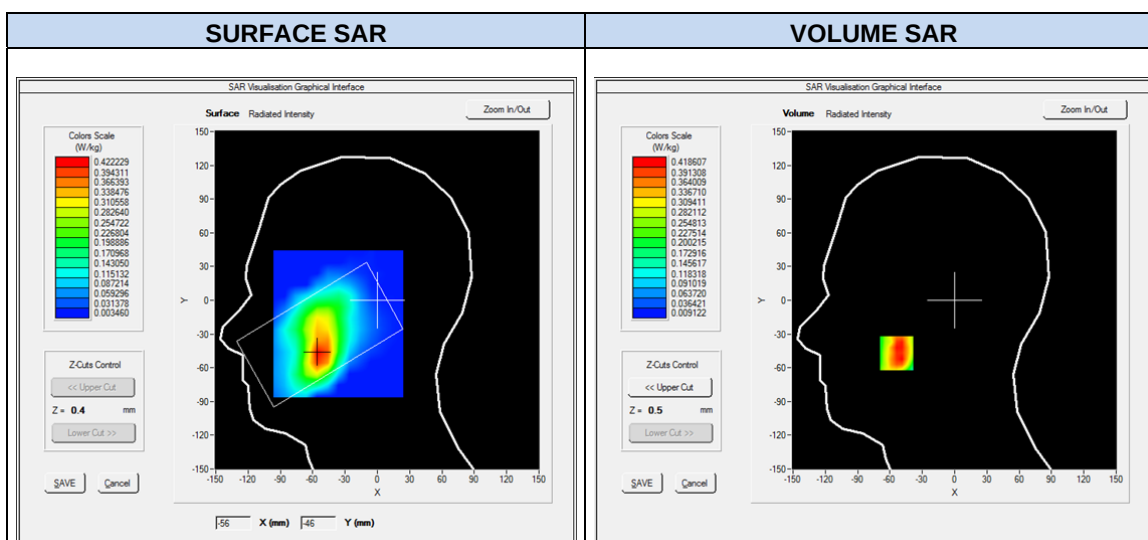
Date	02/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	LTE B2
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.84	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.074250
Relative permittivity (imaginary part)	14.184650
Conductivity (S/m)	1.483133



Maximum location: X=-54.00, Y=-47.00

SAR Peak: 0.64 W/kg

SAR 10g (W/kg)	0.242825
SAR 1g (W/kg)	0.413748
Power Drift (%)	-1.240000

12. LTE Band 2, 1RB Low @ QPSK - 20MHz, CH18900 / Body Front Face

A. Experimental conditions

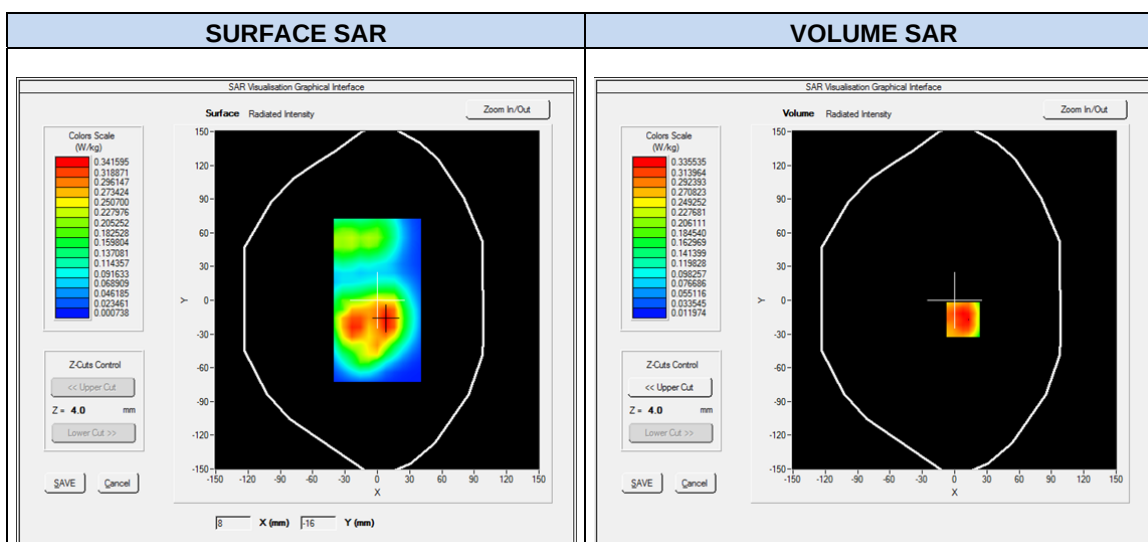
Date	22/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Front Face
Band	LTE B2
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.92	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	52.580807
Relative permittivity (imaginary part)	15.303575
Conductivity (S/m)	1.597948



Maximum location: X=8.00, Y=-17.00

SAR Peak: 0.49 W/kg

SAR 10g (W/kg)	0.219967
SAR 1g (W/kg)	0.348417
Power Drift (%)	-1.780000

13. LTE Band 4, 1RB Low @ QPSK - 20MHz, CH20300 / Head Right Touch

A. Experimental conditions

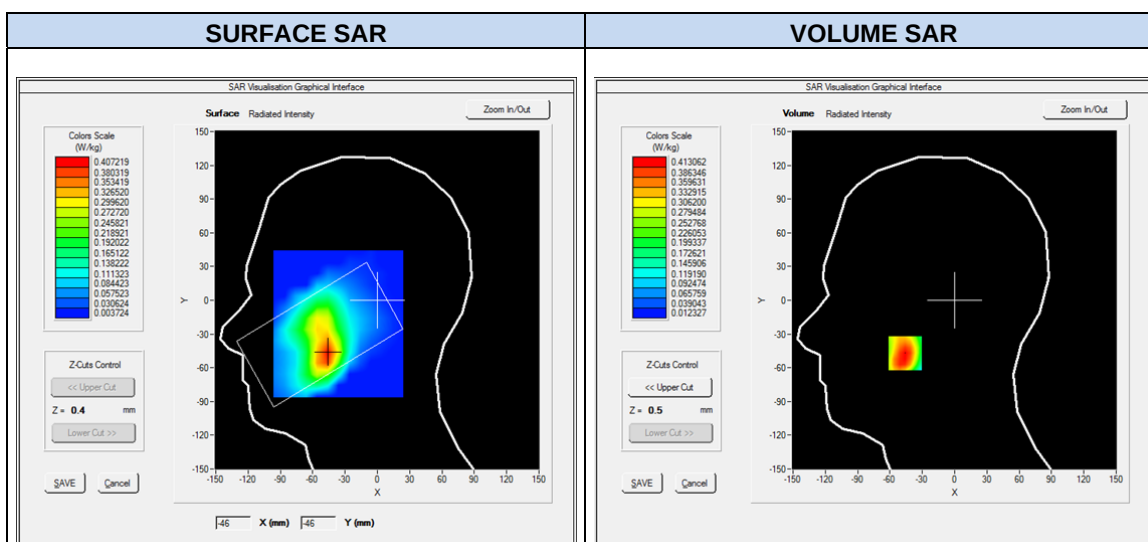
Date	28/08/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	LTE B4
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.41	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1745.000000
Relative permittivity (real part)	37.492550
Relative permittivity (imaginary part)	13.871075
Conductivity (S/m)	1.346560



Maximum location: X=-46.00, Y=-47.00

SAR Peak: 0.60 W/kg

SAR 10g (W/kg)	0.246975
SAR 1g (W/kg)	0.400082
Power Drift (%)	1.630000

14. LTE Band 4, 1RB Low @ QPSK - 20MHz, CH20300 / Body Front Face

A. Experimental conditions

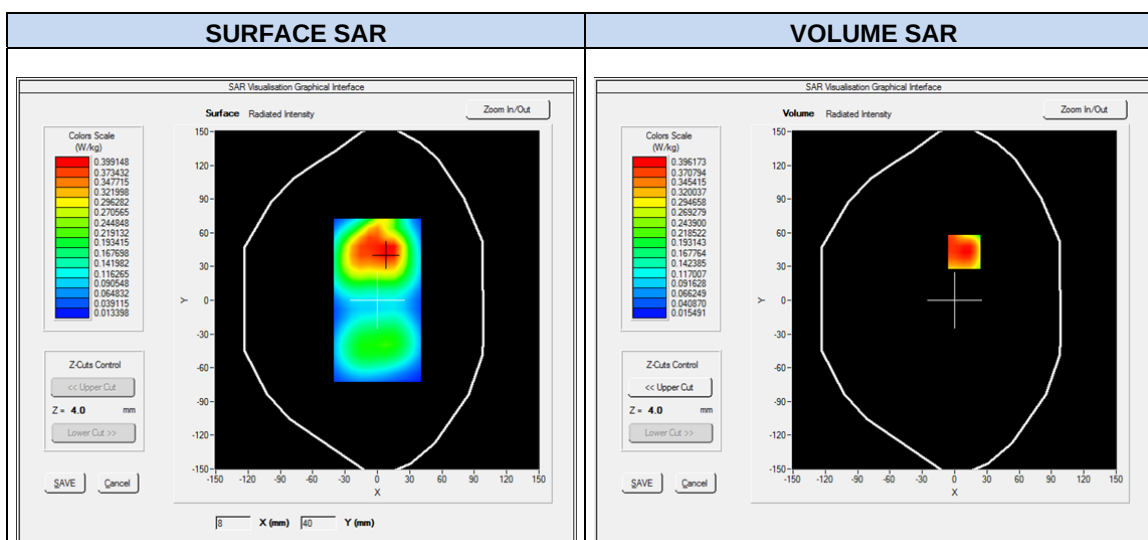
Date	19/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Front Face
Band	LTE B4
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.42	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1745.000000
Relative permittivity (real part)	53.329300
Relative permittivity (imaginary part)	15.234150
Conductivity (S/m)	1.478895



Maximum location: X=9.00, Y=43.00

SAR Peak: 0.60 W/kg

SAR 10g (W/kg)	0.261145
SAR 1g (W/kg)	0.403218
Power Drift (%)	-0.850000

15. LTE Band 5, 1RB Low @ QPSK - 10MHz, CH20450 / Head Right Touch

A. Experimental conditions

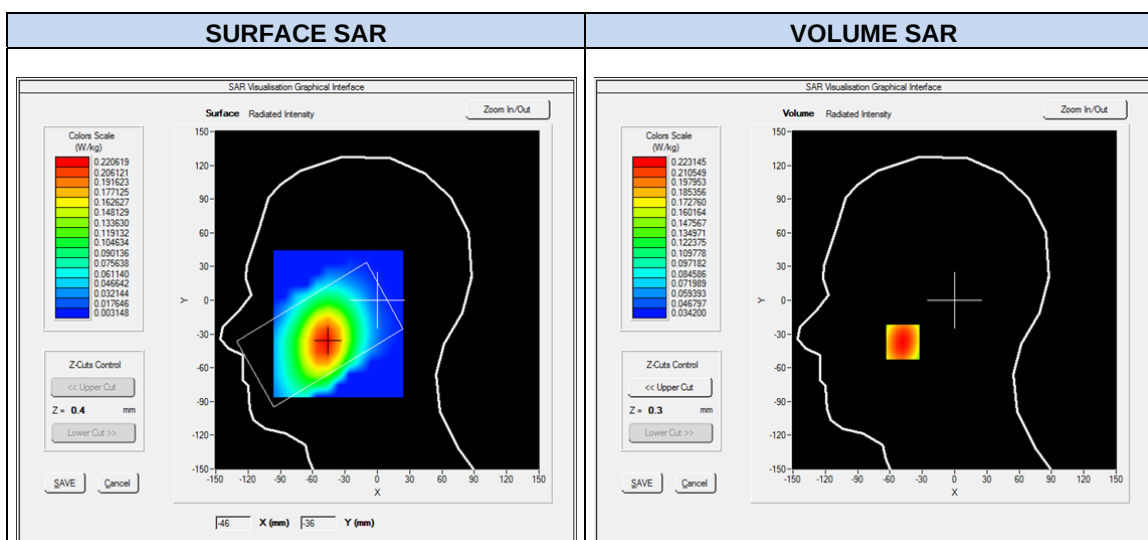
Date	16/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7, dx=5mm dy=5mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	LTE B5
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.99	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	829.00000
Relative permittivity (real part)	43.210500
Relative permittivity (imaginary part)	18.646000
Conductivity (S/m)	0.859927



Maximum location: X=-48.00, Y=-37.00

SAR Peak: 0.27 W/kg

SAR 10g (W/kg)	0.163781
SAR 1g (W/kg)	0.215078
Power Drift (%)	0.460000

16. LTE Band 5, 1RB Low @ QPSK - 10MHz, CH20450 / Body Back Face

A. Experimental conditions

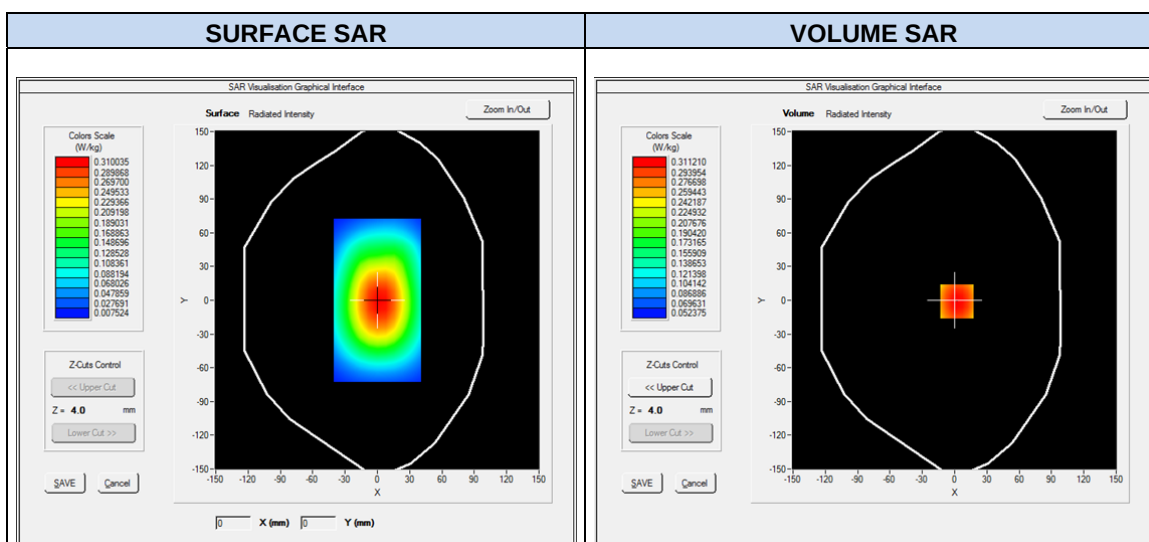
Date	25/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	LTE B5
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 5.16	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	829.000000
Relative permittivity (real part)	55.829060
Relative permittivity (imaginary part)	21.010700
Conductivity (S/m)	0.968981



Maximum location: X=2.00, Y=-1.00

SAR Peak: 0.42 W/kg

SAR 10g (W/kg)	0.257943
SAR 1g (W/kg)	0.340039
Power Drift (%)	-1.320000

17. LTE Band 7, 1RB Low @ QPSK - 20MHz, CH21350 / Head Right Touch

A. Experimental conditions

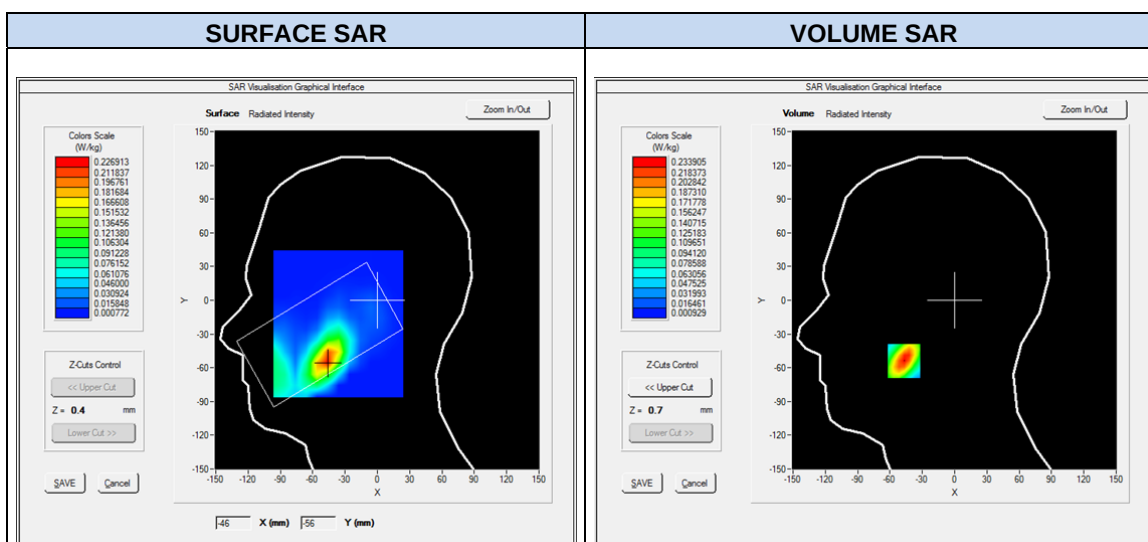
Date	18/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	LTE B7
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.10	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	2560.000000
Relative permittivity (real part)	38.463100
Relative permittivity (imaginary part)	13.894200
Conductivity (S/m)	1.978759



Maximum location: X=-47.00, Y=-54.00

SAR Peak: 0.38 W/kg

SAR 10g (W/kg)	0.108943
SAR 1g (W/kg)	0.221066
Power Drift (%)	1.230000

18. LTE Band 7, 1RB Low @ QPSK - 20MHz, CH21300 / Body Bottom Edge

A. Experimental conditions

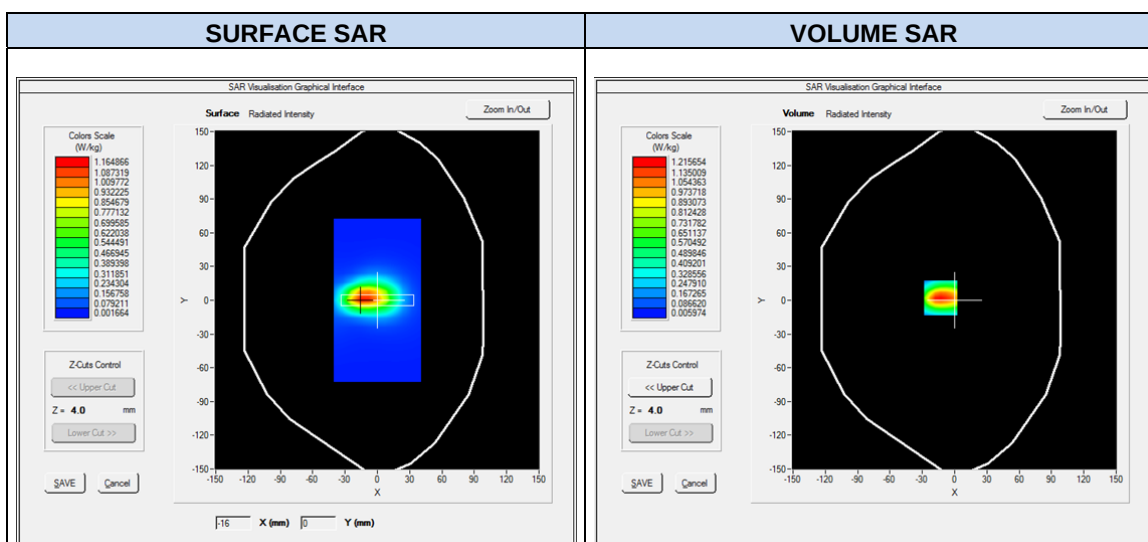
Date	26/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Bottom Edge
Band	LTE B7
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.18	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	2560.000000
Relative permittivity (real part)	51.438000
Relative permittivity (imaginary part)	14.846200
Conductivity (S/m)	2.114339



Maximum location: X=-13.00, Y=2.00

SAR Peak: 2.04 W/kg

SAR 10g (W/kg)	0.578908
SAR 1g (W/kg)	1.181987
Power Drift (%)	-0.490000

19. LTE Band 13, 1RB Low @ QPSK - 10MHz, CH23230 / Head Right Touch

A. Experimental conditions

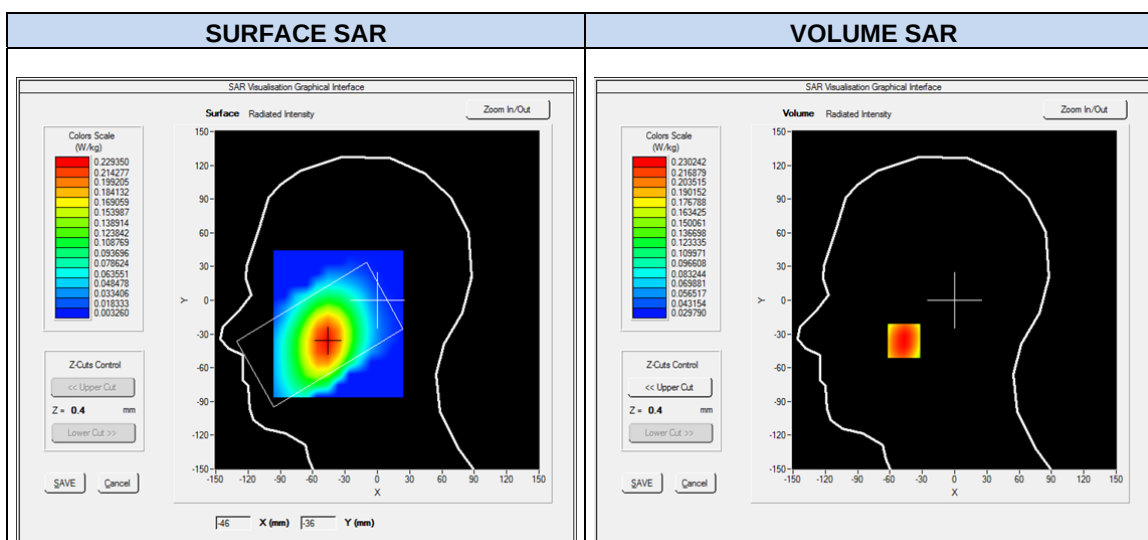
Date	17/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	LTE B13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.71	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	782.000000
Relative permittivity (real part)	41.809100
Relative permittivity (imaginary part)	21.796500
Conductivity (S/m)	0.948235



Maximum location: X=-47.00, Y=-36.00

SAR Peak: 0.28 W/kg

SAR 10g (W/kg)	0.169657
SAR 1g (W/kg)	0.230490
Power Drift (%)	-0.190000

20. LTE Band 13, 1RB Low @ QPSK - 10MHz, CH23230 / Body Back Face

A. Experimental conditions

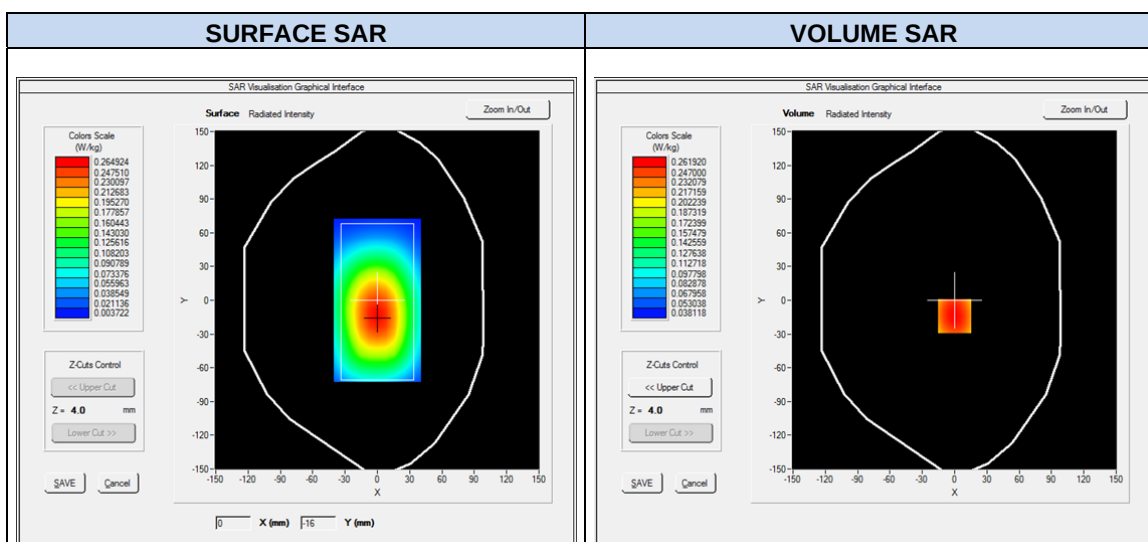
Date	24/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	LTE B13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.86	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	782.000000
Relative permittivity (real part)	58.031800
Relative permittivity (imaginary part)	23.953280
Conductivity (S/m)	1.042054



Maximum location: X=0.00, Y=-14.00

SAR Peak: 0.37 W/kg

SAR 10g (W/kg)	0.228420
SAR 1g (W/kg)	0.306555
Power Drift (%)	-1.130000

21. LTE Band 17, 1RB Low @ QPSK - 10MHz, CH23780 / Head Right Touch

A. Experimental conditions

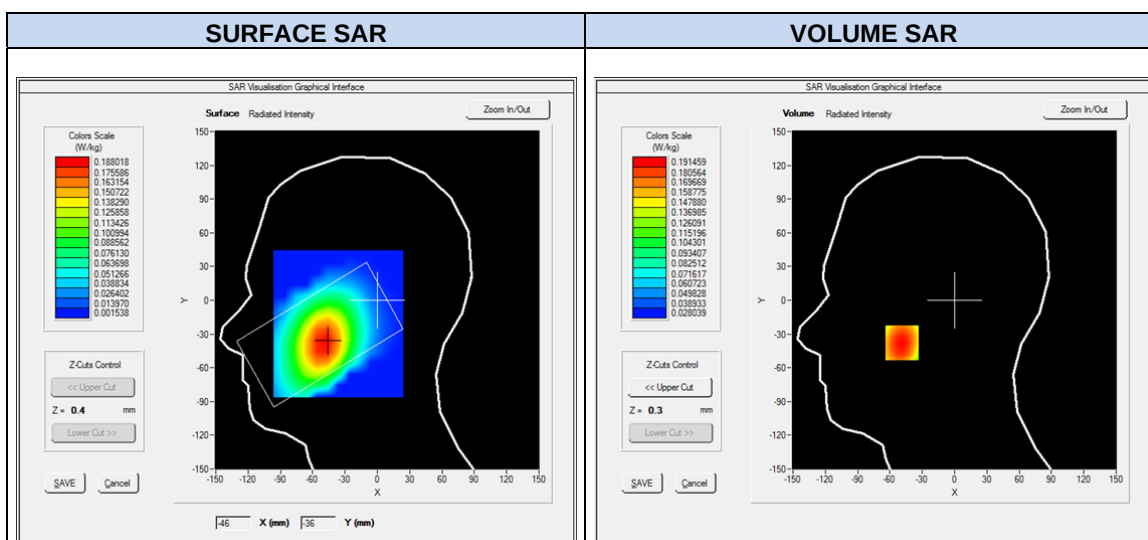
Date	17/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Right head
Device Position	Cheek
Band	LTE B17
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.71	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	709.000000
Relative permittivity (real part)	42.773810
Relative permittivity (imaginary part)	22.110240
Conductivity (S/m)	0.872084



Maximum location: X=-49.00, Y=-38.00

SAR Peak: 0.23 W/kg

SAR 10g (W/kg)	0.139714
SAR 1g (W/kg)	0.184458
Power Drift (%)	-0.150000

22. LTE Band 17, 1RB Low @ QPSK - 10MHz, CH23780 / Body Back Face

A. Experimental conditions

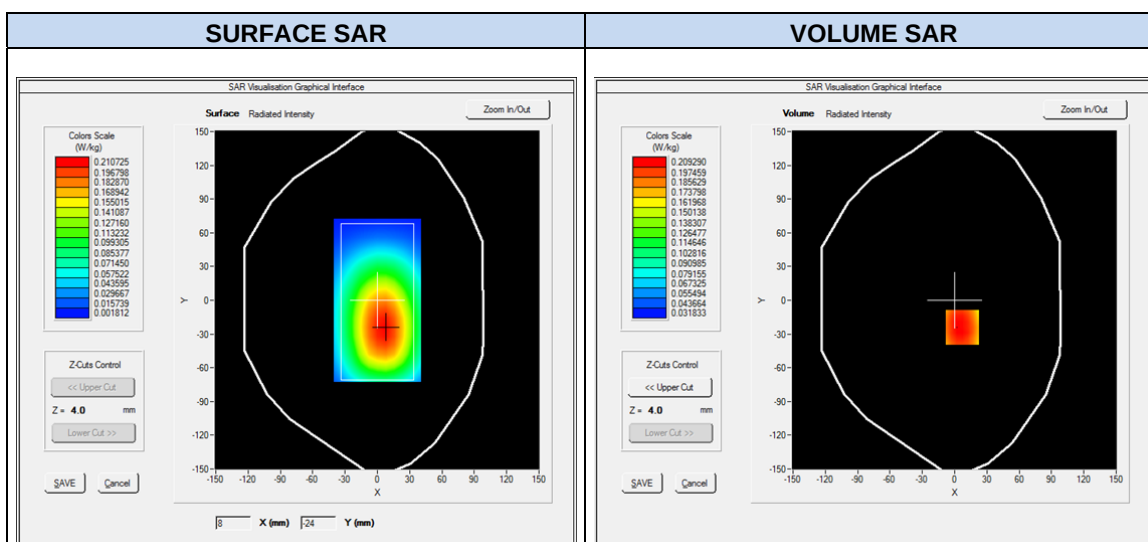
Date	24/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	LTE B17
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.86	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	709.000000
Relative permittivity (real part)	58.653560
Relative permittivity (imaginary part)	24.891220
Conductivity (S/m)	0.981769



Maximum location: X=7.00, Y=-24.00

SAR Peak: 0.27 W/kg

SAR 10g (W/kg)	0.163610
SAR 1g (W/kg)	0.217752
Power Drift (%)	-1.530000

23. LTE Band 25, 1RB Low @ QPSK - 20MHz, CH26365 / Head Left Touch

A. Experimental conditions

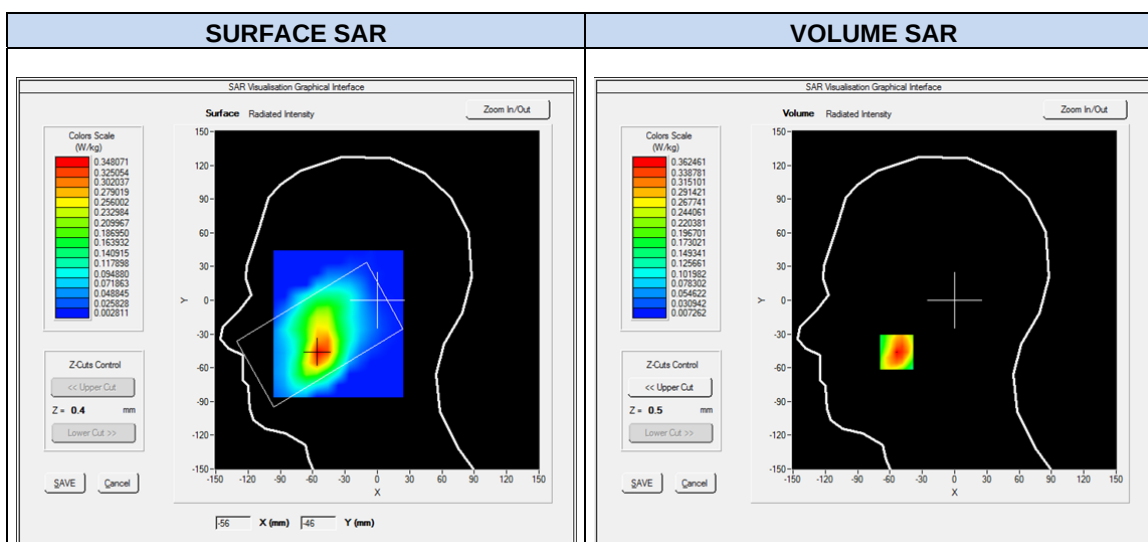
Date	02/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	LTE B25
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.84	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1882.500000
Relative permittivity (real part)	38.071300
Relative permittivity (imaginary part)	14.176950
Conductivity (S/m)	1.484693



Maximum location: X=-54.00, Y=-46.00

SAR Peak: 0.53 W/kg

SAR 10g (W/kg)	0.207752
SAR 1g (W/kg)	0.351919
Power Drift (%)	-0.540000

24. LTE Band 25, 1RB Low @ QPSK - 20MHz, CH26365 / Body Front Face

A. Experimental conditions

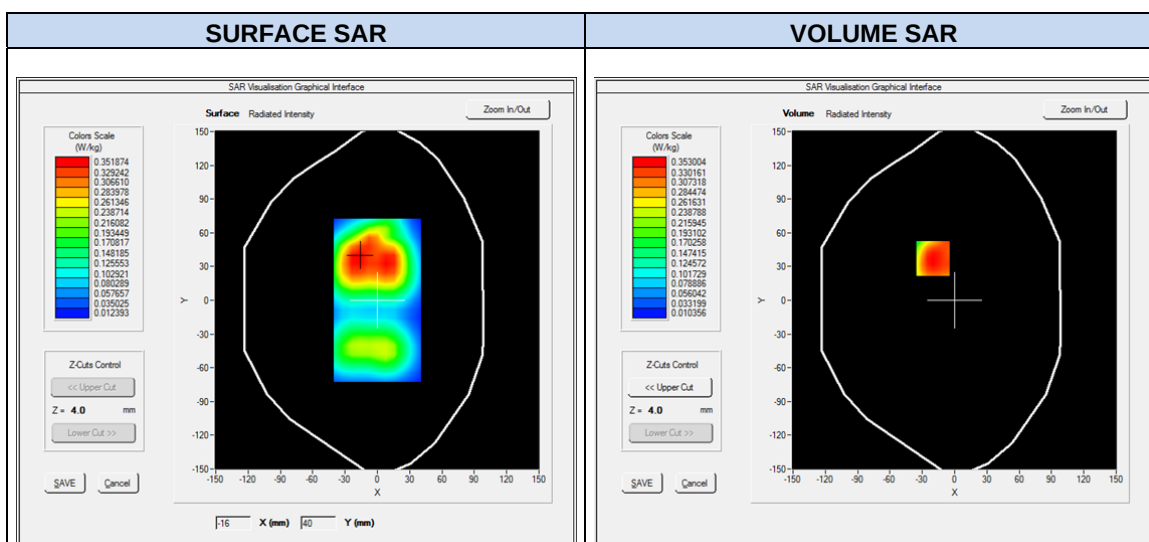
Date	22/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Front Face
Band	LTE B25
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.92	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1882.500000
Relative permittivity (real part)	52.556438
Relative permittivity (imaginary part)	15.307660
Conductivity (S/m)	1.600501



Maximum location: X=-22.00, Y=37.00

SAR Peak: 0.55 W/kg

SAR 10g (W/kg)	0.235669
SAR 1g (W/kg)	0.369657
Power Drift (%)	-0.890000

25. LTE Band 26, 1RB Low @ QPSK - 15MHz, CH26965 / Head Left Touch

A. Experimental conditions

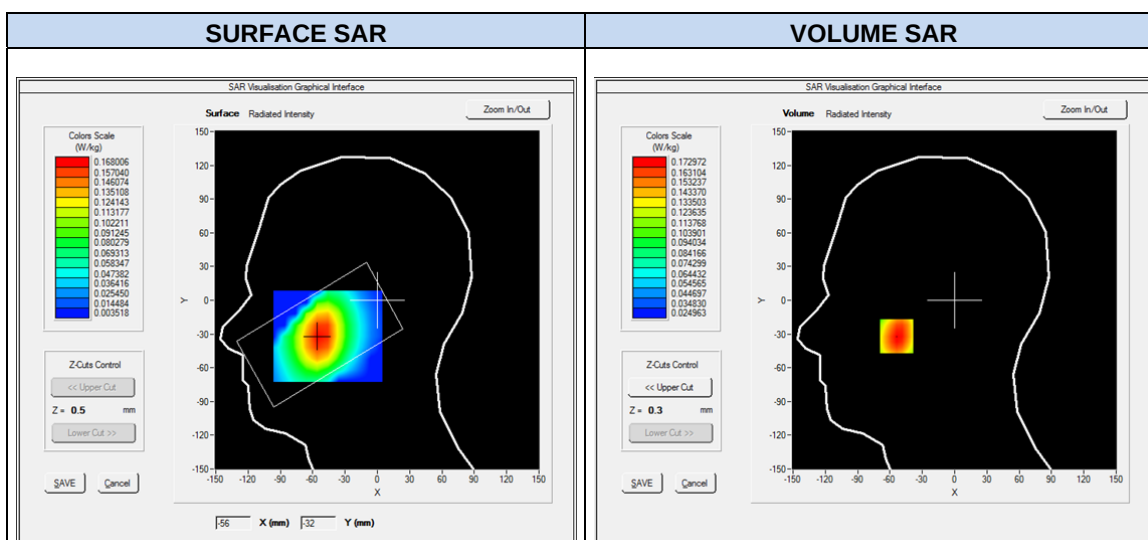
Date	16/09/2014
Area Scan	sam_direct_droit2_surf8mm.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsam_direct_droit2_surf8m m.txt, h= 5.00 mm
Phantom	Left head
Device Position	Cheek
Band	LTE B26
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.99	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	841.500000
Relative permittivity (real part)	42.982150
Relative permittivity (imaginary part)	18.770080
Conductivity (S/m)	0.878701



Maximum location: X=-54.00, Y=-32.00

SAR Peak: 0.21 W/kg

SAR 10g (W/kg)	0.123487
SAR 1g (W/kg)	0.167010
Power Drift (%)	0.970000

26. LTE Band 26, 1RB Low @ QPSK - 15MHz, CH26965 / Body Back Face

A. Experimental conditions

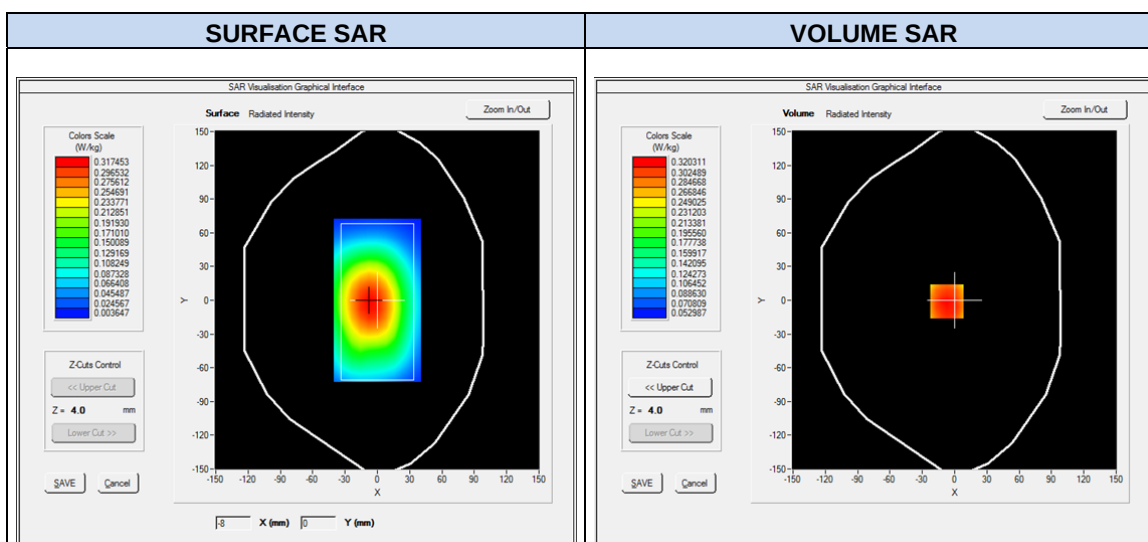
Date	25/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body Back Face
Band	LTE B26
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 5.16	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	841.500000
Relative permittivity (real part)	55.647830
Relative permittivity (imaginary part)	21.125600
Conductivity (S/m)	0.988967



Maximum location: X=-7.00, Y=-1.00

SAR Peak: 0.39 W/kg

SAR 10g (W/kg)	0.232884
SAR 1g (W/kg)	0.311111
Power Drift (%)	-0.120000

27. 2.4GHz - 802.11b, CH11 - Head Right Touch

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 2.4GHz; Frequency: 2462 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.889$ S/m; $\epsilon_r = 37.661$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(6.93, 6.93, 6.93); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Head Right 2400MHz/802.11b, 1Mbps, CH 11, Right Touch/Area Scan 2 (181x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.17 W/kg

Head Right 2400MHz/802.11b, 1Mbps, CH 11, Right Touch/Zoom Scan 2 (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

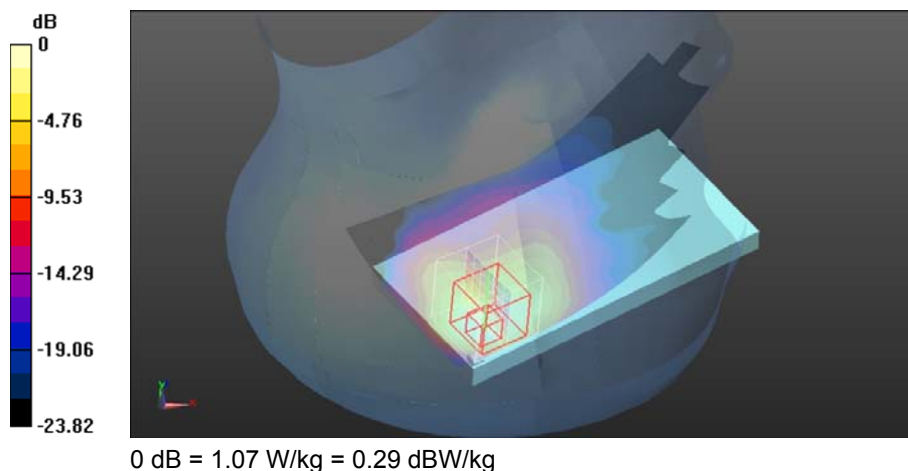
Reference Value = 23.68 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 0.955 W/kg; SAR(10 g) = 0.441 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.07 W/kg



28. 2.4GHz - 802.11b, CH1 - Body Front Face

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 2.4GHz; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.855$ S/m; $\epsilon_r = 50.431$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

802.11b Body 2400MHz/802.11b, 1Mbps, CH 1, Front Face/Area Scan (191x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.177 W/kg

802.11b Body 2400MHz/802.11b, 1Mbps, CH 1, Front Face/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

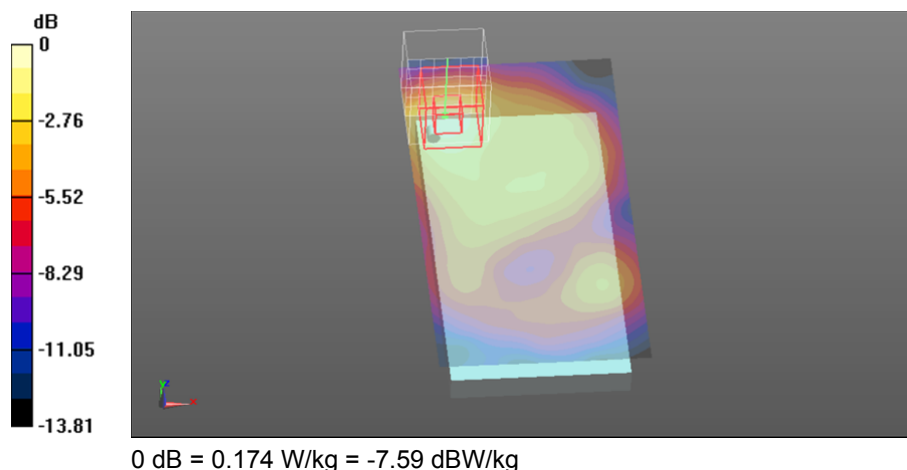
Reference Value = 9.492 V/m; Power Drift = 0.34 dB

Peak SAR (extrapolated) = 0.275 W/kg

SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.088 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.174 W/kg



29. 5.2GHz - 802.11a, CH48 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 8/12/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5240 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.41$ S/m; $\epsilon_r = 36.566$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.89, 4.89, 4.89); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Head Right/802.11a, 6Mbps, CH 48, Right Tilt/Area Scan (181x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.20 W/kg

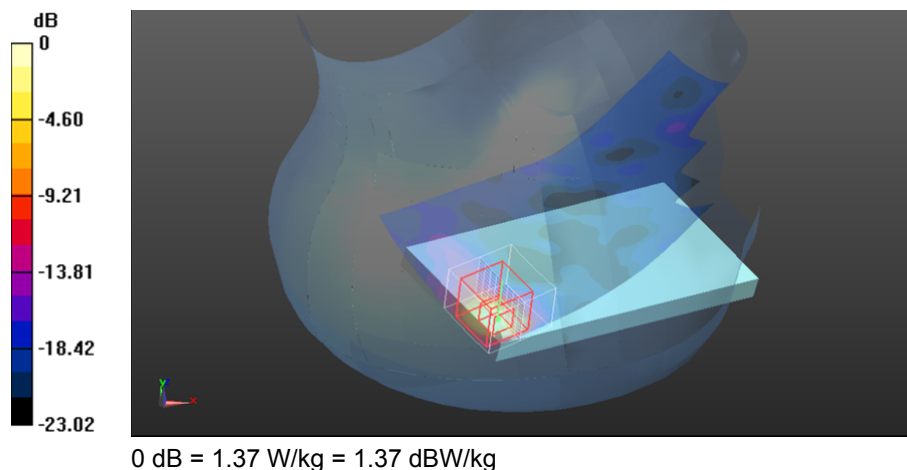
Head Right/802.11a, 6Mbps, CH 48, Right Tilt/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 4.327 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 2.75 W/kg

SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.165 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.37 W/kg



30. 5.2GHz - 802.11a, CH48 - Body Top Edge

Test Laboratory: Intel WRF Lab; Date/Time: 8/21/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

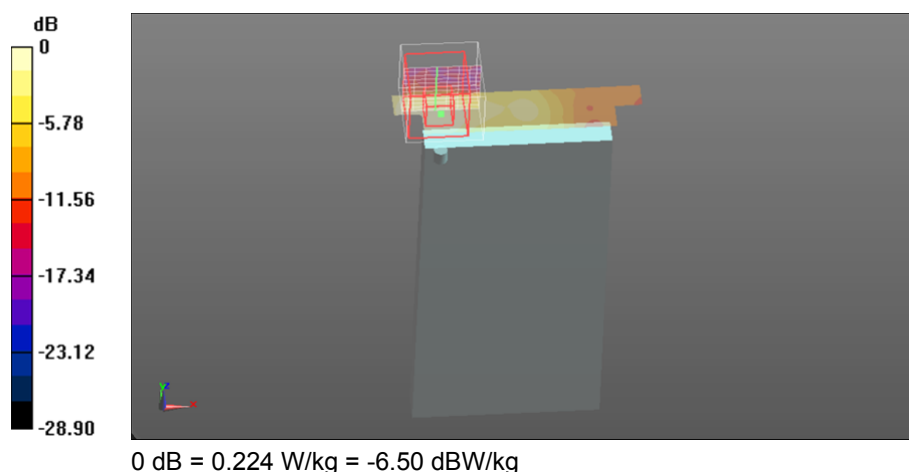
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5240 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5240$ MHz; $\sigma = 5.503$ S/m; $\epsilon_r = 48.443$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.4, 4.4, 4.4); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Fix Surface), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

802.11a Body 5000MHz/802.11a, 6Mbps, CH 48, Top edge/Area Scan (81x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 0.272 W/kg

802.11a Body 5000MHz/802.11a, 6Mbps, CH 48, Top edge/Zoom Scan (8x8x12)/Cube 0:
Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 7.098 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.441 W/kg
SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.052 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.224 W/kg



31. 5.3GHz - 802.11a, CH64 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 8/12/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5320 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5320$ MHz; $\sigma = 4.504$ S/m; $\epsilon_r = 36.835$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.63, 4.63, 4.63); Calibrated: 6/24/2014;
 - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Head Right reported SAR 26_08_14/802.11a, 6Mbps, CH 64, Right Tilt 6/Area Scan (181x101x1):

Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.29 W/kg

Head Right reported SAR 26_08_14/802.11a, 6Mbps, CH 64, Right Tilt 6/Zoom Scan

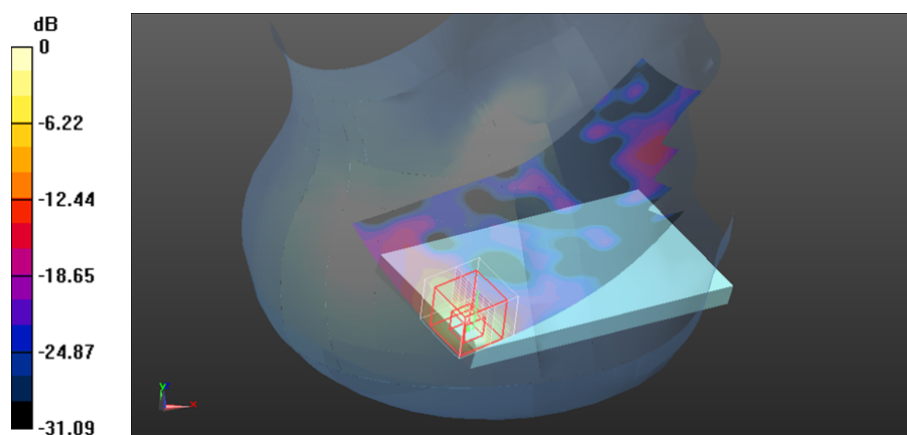
(8x8x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 19.53 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 5.09 W/kg

SAR(1 g) = 0.678 W/kg; SAR(10 g) = 0.167 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

32. 5.3GHz - 802.11a, CH60 - Body Top Edge

Test Laboratory: Intel WRF Lab; Date/Time: 8/21/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

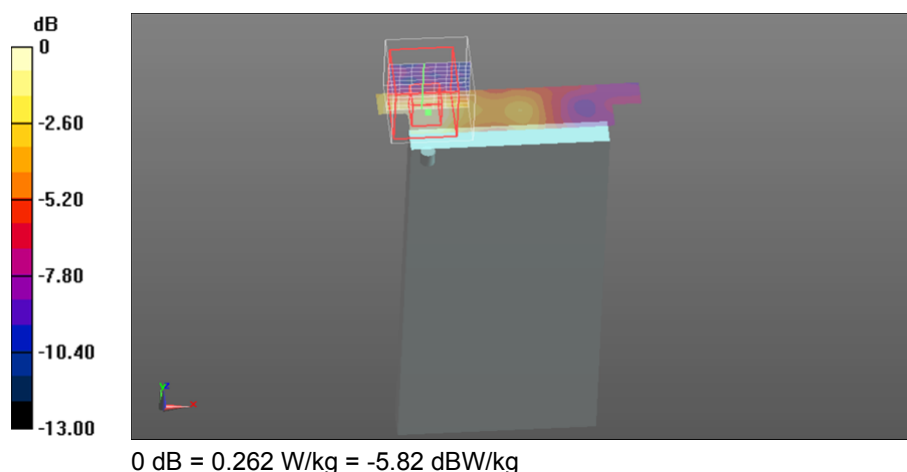
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5300 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5300$ MHz; $\sigma = 5.551$ S/m; $\epsilon_r = 48.192$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.2, 4.2, 4.2); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Fix Surface), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

802.11a Body 5000MHz/802.11a, 6Mbps, CH 60, Top edge/Area Scan 2 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 0.316 W/kg

802.11a Body 5000MHz/802.11a, 6Mbps, CH 60, Top edge/Zoom Scan (8x8x12)/Cube 0:
Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 7.611 V/m; Power Drift = 0.34 dB
Peak SAR (extrapolated) = 0.570 W/kg
SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.077 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.262 W/kg



33. 5.6GHz - 802.11a, CH116 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 8/19/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5580 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 5580$ MHz; $\sigma = 4.706$ S/m; $\epsilon_r = 36.202$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.25, 4.25, 4.25); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Head Right/802.11a, 6Mbps, CH 116, Right Tilt/Area Scan (181x101x1): Interpolated grid:

$dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.86 W/kg

Head Right/802.11a, 6Mbps, CH 116, Right Tilt/Zoom Scan (8x8x12)/Cube 0: Measurement grid:

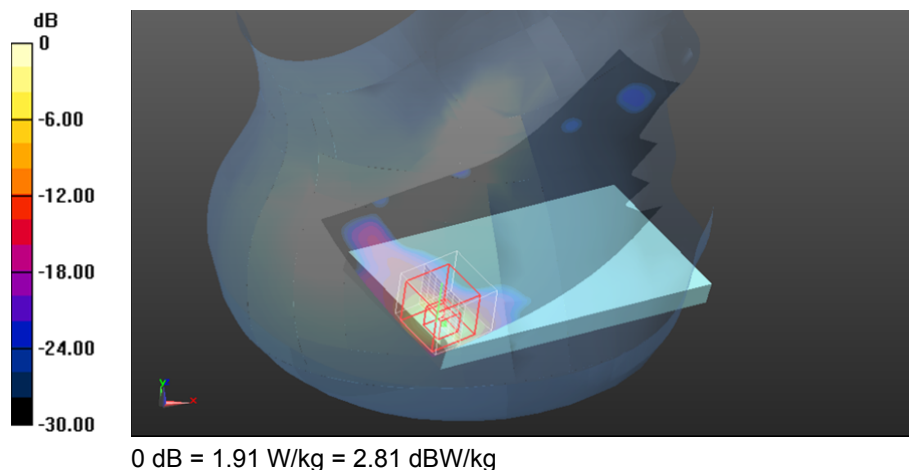
$dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 16.26 V/m; Power Drift = 0.29 dB

Peak SAR (extrapolated) = 4.20 W/kg

SAR(1 g) = 0.912 W/kg; SAR(10 g) = 0.225 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.91 W/kg



34. 5.6GHz - 802.11a, CH108 - Body Top Edge

Test Laboratory: Intel WRF Lab; Date/Time: 8/22/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5540 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 5540$ MHz; $\sigma = 5.853$ S/m; $\epsilon_r = 48.211$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.86, 3.86, 3.86); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Fix Surface), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

802.11a Body 5000MHz/802.11a, 6Mbps, CH 108, Top edge/Area Scan 2 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.376 W/kg

802.11a Body 5000MHz/802.11a, 6Mbps, CH 108, Top edge/Zoom Scan (8x8x12)/Cube 0:

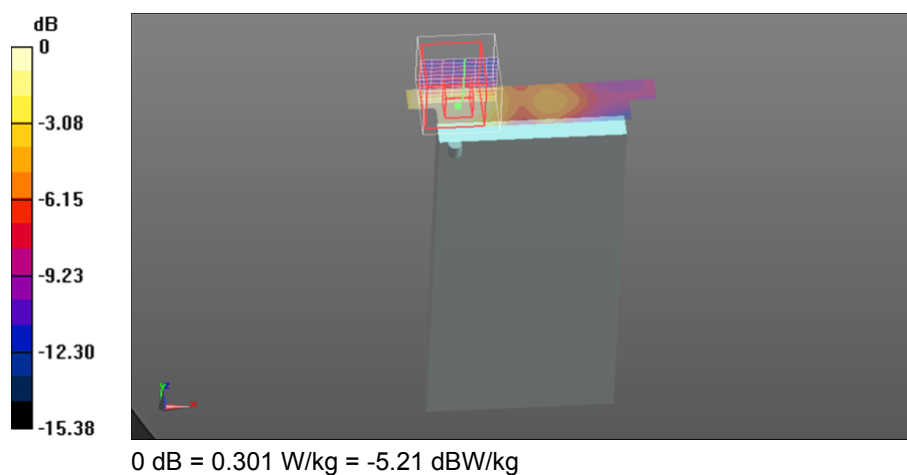
Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 7.955 V/m; Power Drift = 0.28 dB

Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.174 W/kg; SAR(10 g) = 0.087 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.301 W/kg



35. 5.8GHz - 802.11a, CH157 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 8/20/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5785 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 4.761$ S/m; $\epsilon_r = 36.841$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.3, 4.3, 4.3); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASYS 52.8.8(1222);

Head Right/802.11a, 6Mbps, CH 157, Right Tilt/Area Scan (181x101x1): Interpolated grid:

$dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.69 W/kg

Head Right/802.11a, 6Mbps, CH 157, Right Tilt/Zoom Scan (8x8x12)/Cube 0: Measurement grid:

$dx=4$ mm, $dy=4$ mm, $dz=2$ mm

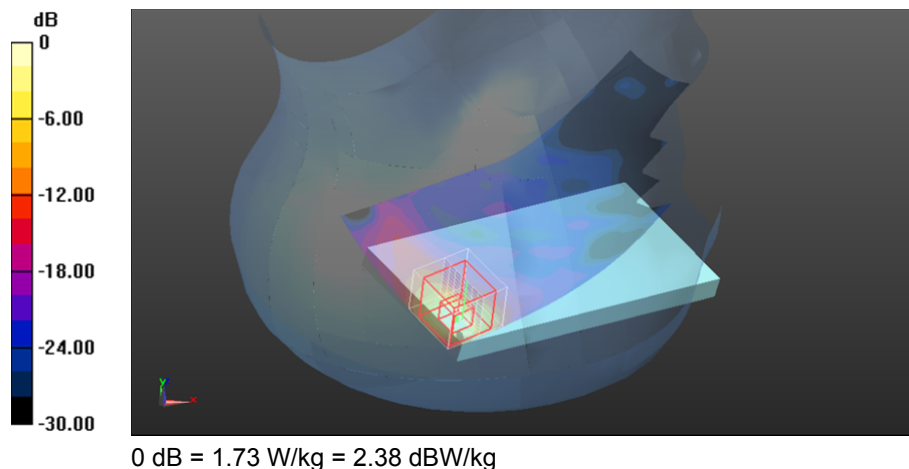
Reference Value = 14.95 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 4.01 W/kg

SAR(1 g) = 0.833 W/kg; SAR(10 g) = 0.207 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.73 W/kg



36. 5.8GHz - 802.11a, CH157 - Body Top Edge

Test Laboratory: Intel WRF Lab; Date/Time: 8/25/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5785 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 6.106$ S/m; $\epsilon_r = 47.765$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Fix Surface), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASYS 52.8.8(1222);

802.11a Body 5000MHz/802.11a, 6Mbps, CH 157, Top edge/Area Scan 2 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.302 W/kg

802.11a Body 5000MHz/802.11a, 6Mbps, CH 157, Top edge/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

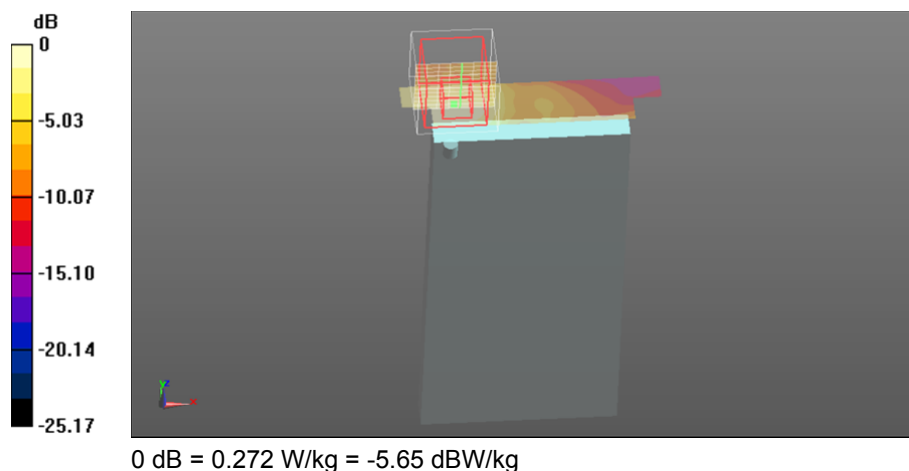
Reference Value = 7.238 V/m; Power Drift = 0.28 dB

Peak SAR (extrapolated) = 0.562 W/kg

SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.081 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.272 W/kg



37. 5.8GHz - 802.11n40, CH159 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 11/6/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5795 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 5795$ MHz; $\sigma = 5.039$ S/m; $\epsilon_r = 35.347$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.3, 4.3, 4.3); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASYS 52.8.8(1222);

Head Righth 5800MHz/802.11n40, MCS0, CH 159, Right Tilt/Area Scan 2 (191x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.55 W/kg

Head Righth 5800MHz/802.11n40, MCS0, CH 159, Right Tilt/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

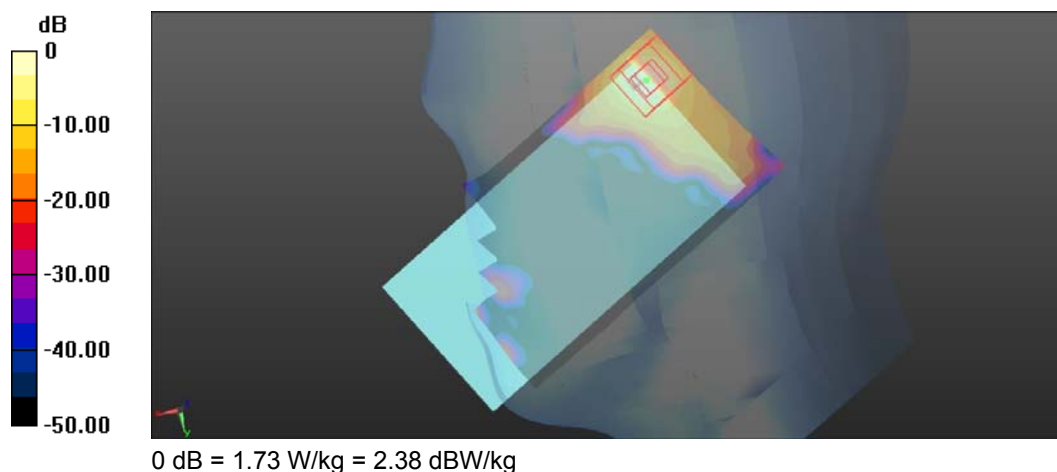
Reference Value = 19.88 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 0.762 W/kg; SAR(10 g) = 0.188 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.73 W/kg



38. 5.8GHz - 802.11n40, CH151 – Body Top Edge

Test Laboratory: Intel WRF Lab; Date/Time: 11/5/2014

DUT: Moorefield PR2 VOL ND; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5755 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 5755$ MHz; $\sigma = 6.022$ S/m; $\epsilon_r = 45.634$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASYS 52.8.8(1222);

802.11a Body 5800MHz 5_11_14/802.11n40, MCS0, CH 151, Top edge/Area Scan 2 (111x121x1):

Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.265 W/kg

802.11a Body 5800MHz 5_11_14/802.11n40, MCS0, CH 151, Top edge/Zoom Scan (9x9x12)/Cube

0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

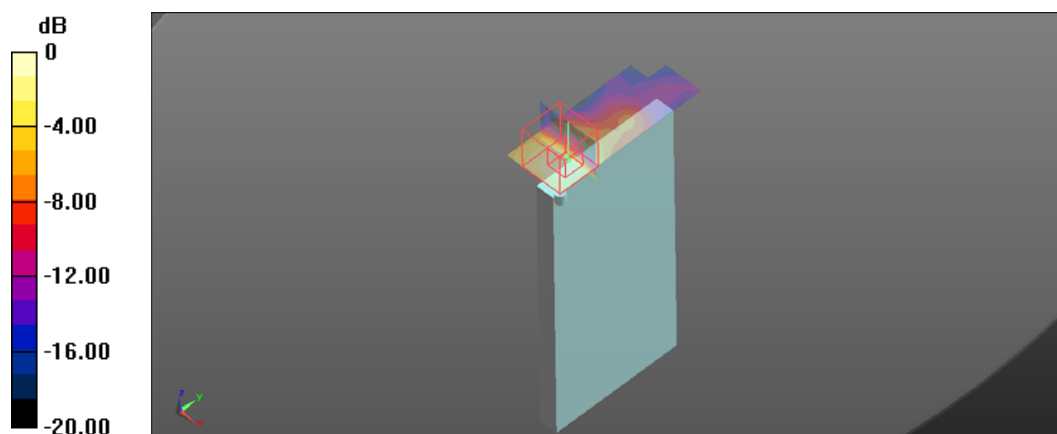
Reference Value = 4.752 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.561 W/kg

SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.055 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.267 W/kg



0 dB = 0.267 W/kg = -5.73 dBW/kg

39. 2.4GHz - 802.15, CH 0 - Head Right Tilt

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.15 (0); Communication System Band: 2.4GHz; Frequency: 2402 MHz; Communication System PAR: 1.133 dB

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.814$ S/m; $\epsilon_r = 37.175$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(6.93, 6.93, 6.93); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Bluetooth Head Right/802.15, CH 0 2402MHz, Right Touch/Area Scan 2 (181x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.233 W/kg

Bluetooth Head Right/802.15, CH 0 2402MHz, Right Touch/Zoom Scan 2 (8x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

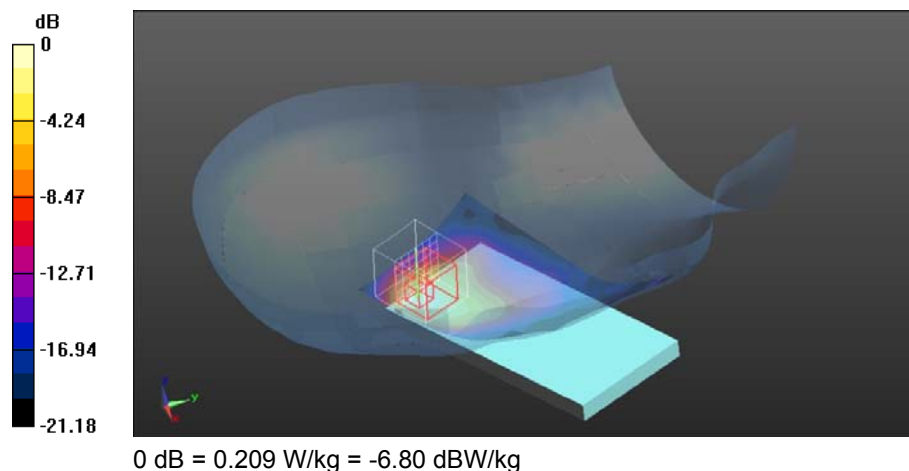
Reference Value = 5.236 V/m; Power Drift = -0.22 dB

Peak SAR (extrapolated) = 0.303 W/kg

SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.066 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.209 W/kg



40. 2.4GHz – 802.15, CH0 - Body Front Face

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

DUT: EP110; Type: Smartphone; Serial: INV141401627

Communication System: UID 0, 802.15 (0); Communication System Band: 2.4GHz; Frequency: 2402 MHz; Communication System PAR: 1.133 dB

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.834$ S/m; $\epsilon_r = 49.802$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Bluetooth/Bluetooth Channel 0 2402MHz , Front Face/Area Scan (191x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.0374 W/kg

Bluetooth/Bluetooth Channel 0 2402MHz , Front Face/Zoom Scan (8x7x9)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=4$ mm

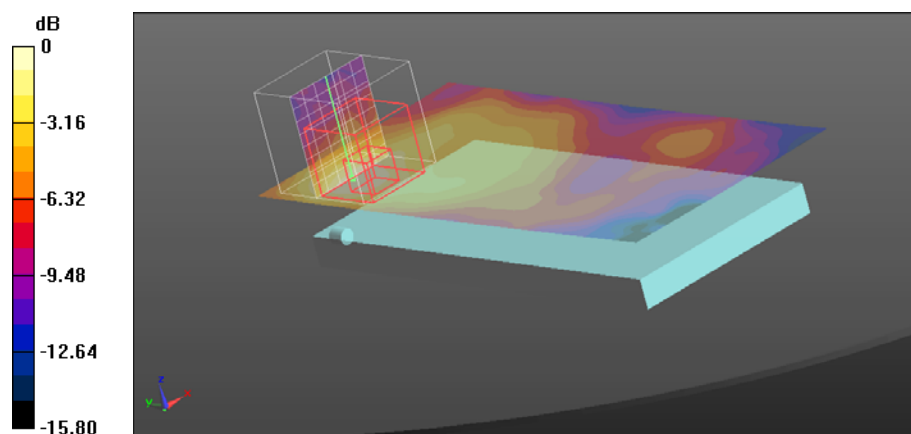
Reference Value = 4.153 V/m; Power Drift = 0.36 dB

Peak SAR (extrapolated) = 0.0450 W/kg

SAR(1 g) = 0.026 W/kg; SAR(10 g) = 0.016 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.0343 W/kg



0 dB = 0.0343 W/kg = -14.65 dBW/kg

41. System Check Head Liquid 750MHz

A. Experimental conditions

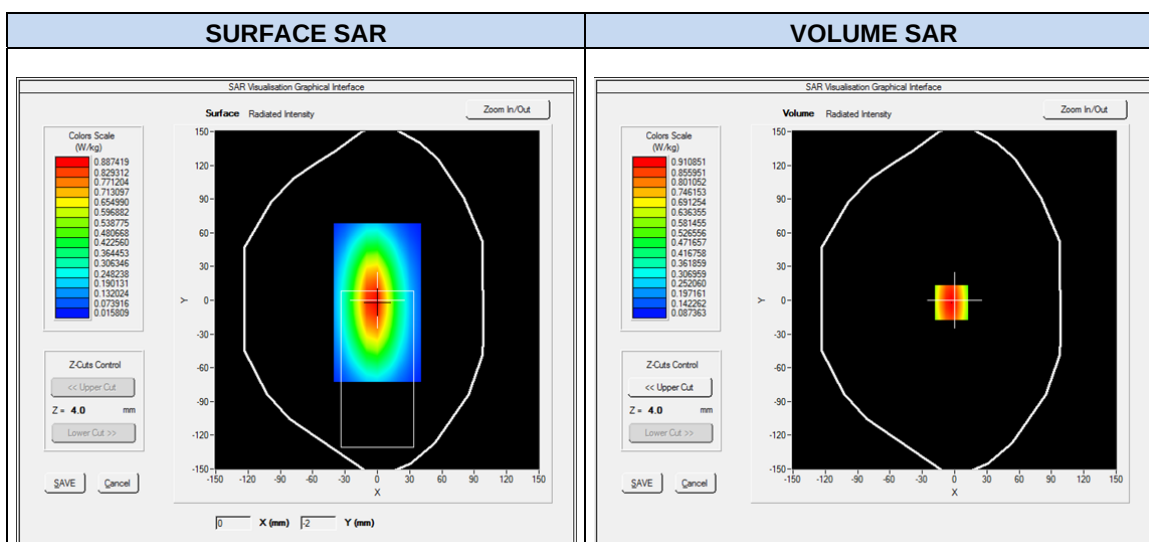
Date	17/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	High
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.71	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	750.000000
Relative permittivity (real part)	42.331501
Relative permittivity (imaginary part)	21.823799
Conductivity (S/m)	0.909325



Maximum location: X=-3.00, Y=-2.00
SAR Peak: 1.26 W/kg

SAR 10g (W/kg)	0.574222
SAR 1g (W/kg)	0.879916
Power Drift (%)	0.410000

42. System Check Head Liquid 835MHz

A. Experimental conditions

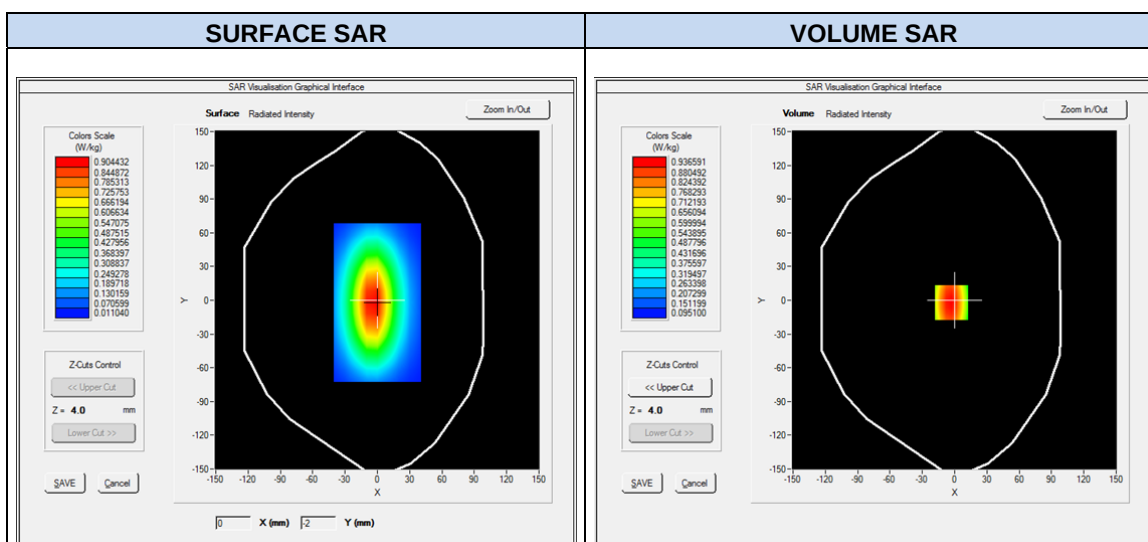
Date	16/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.99	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	43.134700
Relative permittivity (imaginary part)	18.690600
Conductivity (S/m)	0.868219



Maximum location: X=-3.00, Y=-2.00
SAR Peak: 1.27 W/kg

SAR 10g (W/kg)	0.594238
SAR 1g (W/kg)	0.894291
Power Drift (%)	-0.050000

43. System Check Head Liquid 1800MHz

A. Experimental conditions

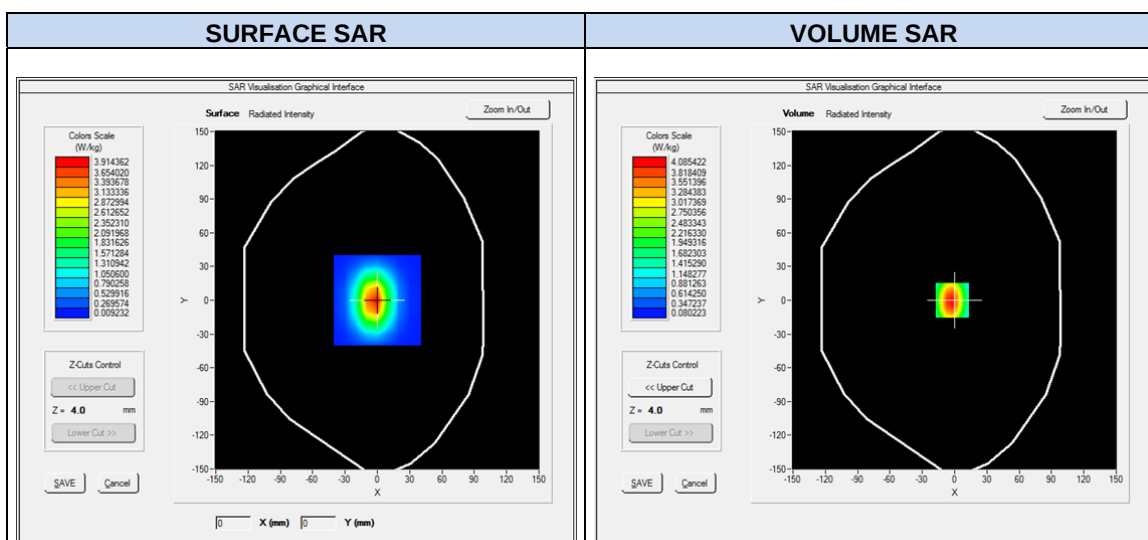
Date	28/08/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7, dx=5mm dy=5mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.41	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	37.312200
Relative permittivity (imaginary part)	13.916200
Conductivity (S/m)	1.393518



Maximum location: X=-2.00, Y=0.00

SAR Peak: 6.41 W/kg

SAR 10g (W/kg)	2.034581
SAR 1g (W/kg)	3.818258
Power Drift (%)	0.270000

44. System Check Head Liquid 1900MHz

A. Experimental conditions

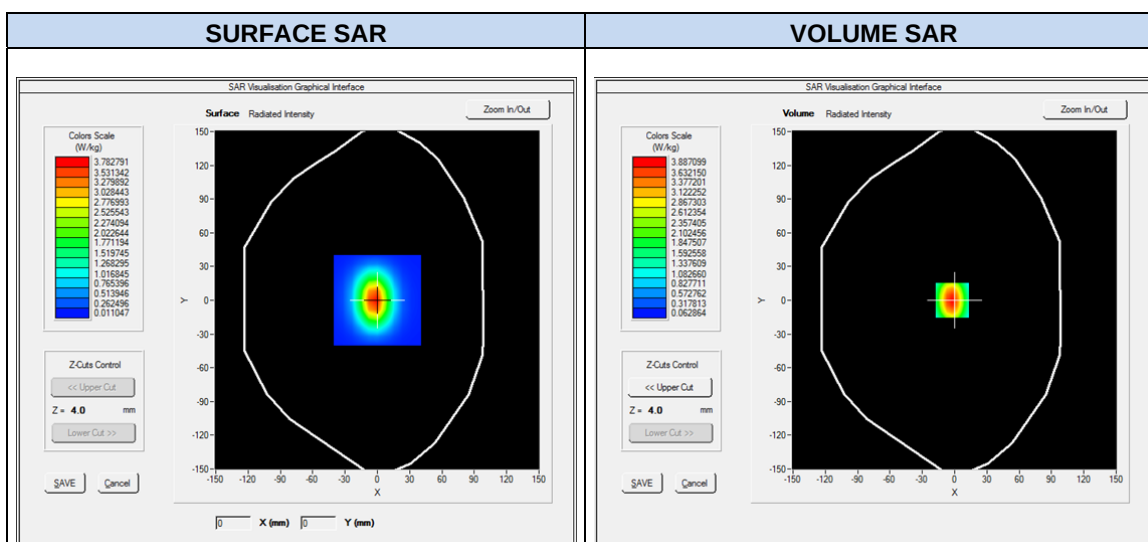
Date	02/09/2014
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x7, dx=5mm dy=5mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_2713_EP184 / nCF: 4.84	09/2013	09/2014
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.069099
Relative permittivity (imaginary part)	14.145300
Conductivity (S/m)	1.493115



Maximum location: X=-2.00, Y=0.00
SAR Peak: 6.16 W/kg

SAR 10g (W/kg)	1.935734
SAR 1g (W/kg)	3.786725
Power Drift (%)	-0.770000

45. System Check Head Liquid 2450MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

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

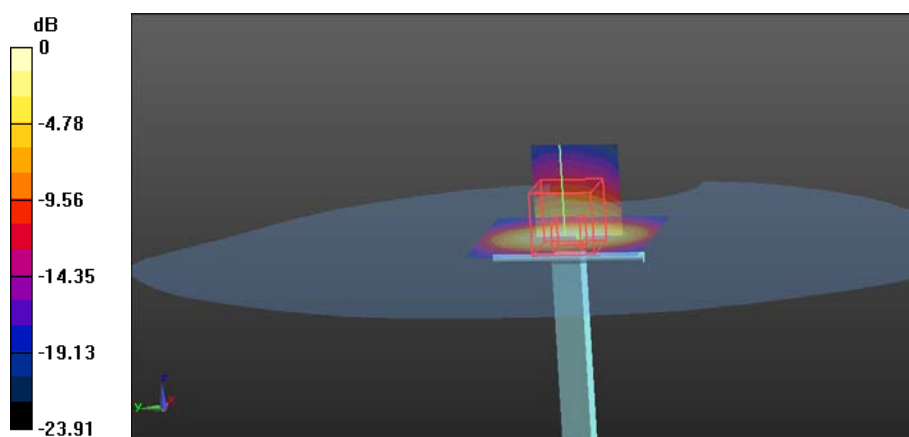
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz);
Frequency: 2450 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 2450$ MHz; $\sigma = 1.85$ S/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(6.93, 6.93, 6.93); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Validation Head 2450 MHz/Validation 2450 MHz 27/08/2014/Area Scan (61x61x1): Interpolated
grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 5.94 W/kg

Validation Head 2450 MHz/Validation 2450 MHz 27/08/2014/Zoom Scan (7x7x9)/Cube 0:
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=4$ mm
Reference Value = 57.44 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 11.1 W/kg
SAR(1 g) = 5.15 W/kg; SAR(10 g) = 2.37 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 5.80 W/kg



0 dB = 5.80 W/kg = 7.63 dBW/kg

46. System Check Head Liquid 2600MHz

A. Experimental conditions

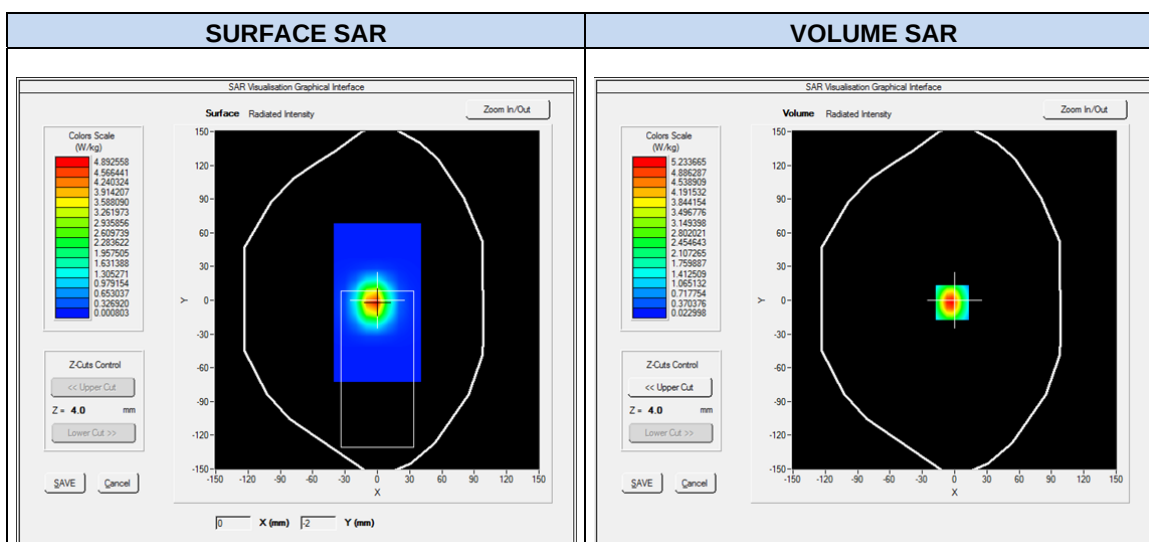
Date	18/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	High
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.10	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	38.348000
Relative permittivity (imaginary part)	14.093000
Conductivity (S/m)	2.035656



Maximum location: X=-2.00, Y=-2.00
SAR Peak: 9.00 W/kg

SAR 10g (W/kg)	2.230099
SAR 1g (W/kg)	4.963134
Power Drift (%)	0.360000

47. System Check Head Liquid 5200MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/12/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

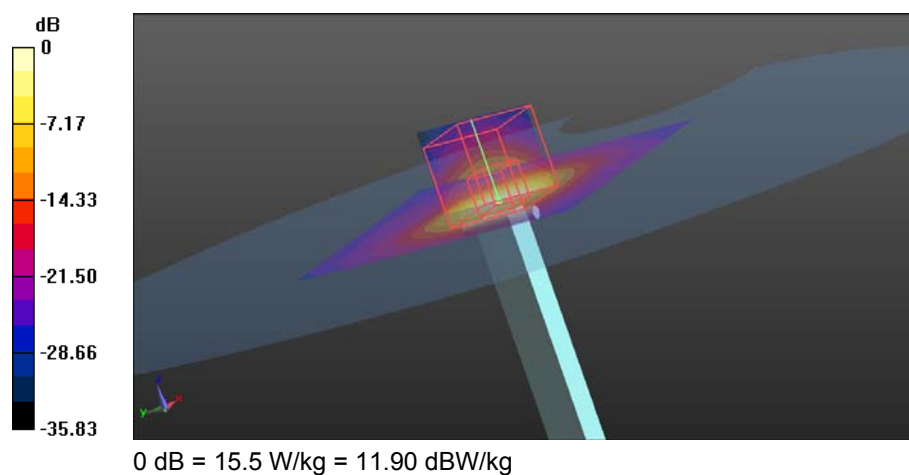
Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5200$ MHz; $\sigma = 4.29$ S/m; $\epsilon_r = 36.852$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.89, 4.89, 4.89); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Validation Head/Validation 5200MHz 2/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 15.1 W/kg

Validation Head/Validation 5200MHz 2/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 61.06 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 30.4 W/kg
SAR(1 g) = 7.63 W/kg; SAR(10 g) = 2.21 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 15.5 W/kg



48. System Check Head Liquid 5600MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/19/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5600 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 5600$ MHz; $\sigma = 4.668$ S/m; $\epsilon_r = 36.329$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.25, 4.25, 4.25); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Validation Head/Validation 5600MHz/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 16.6 W/kg

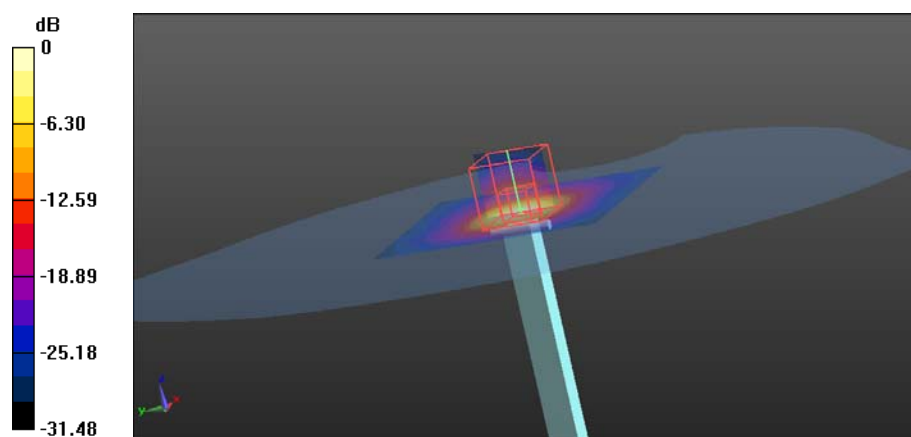
Validation Head/Validation 5600MHz/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 66.54 V/m; Power Drift = -0.37 dB

Peak SAR (extrapolated) = 31.2 W/kg

SAR(1 g) = 7.65 W/kg; SAR(10 g) = 2.2 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 16.0 W/kg



0 dB = 16.0 W/kg = 12.04 dBW/kg

49. System Check Head Liquid 5800MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/20/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

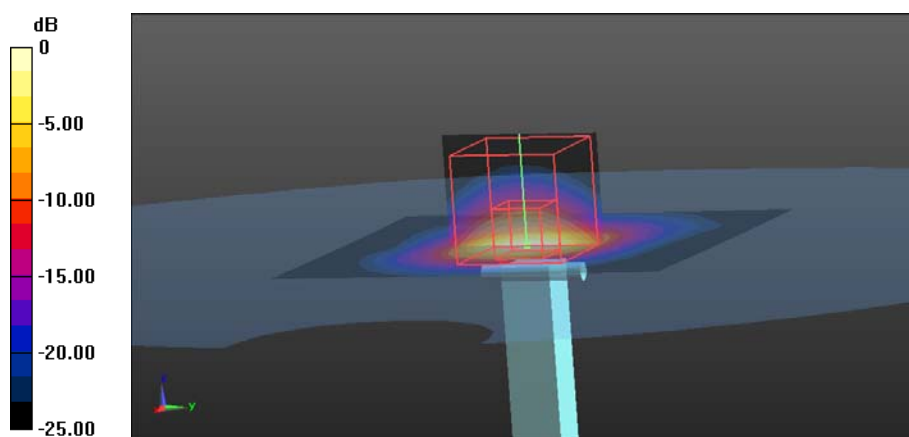
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5800 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5800$ MHz; $\sigma = 4.783$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.3, 4.3, 4.3); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222);

Validation Head/Validation 5800MHz/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 15.6 W/kg

Validation Head/Validation 5800MHz/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 59.12 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 28.7 W/kg
SAR(1 g) = 6.68 W/kg; SAR(10 g) = 1.91 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

50. System Check Body Liquid 750MHz

A. Experimental conditions

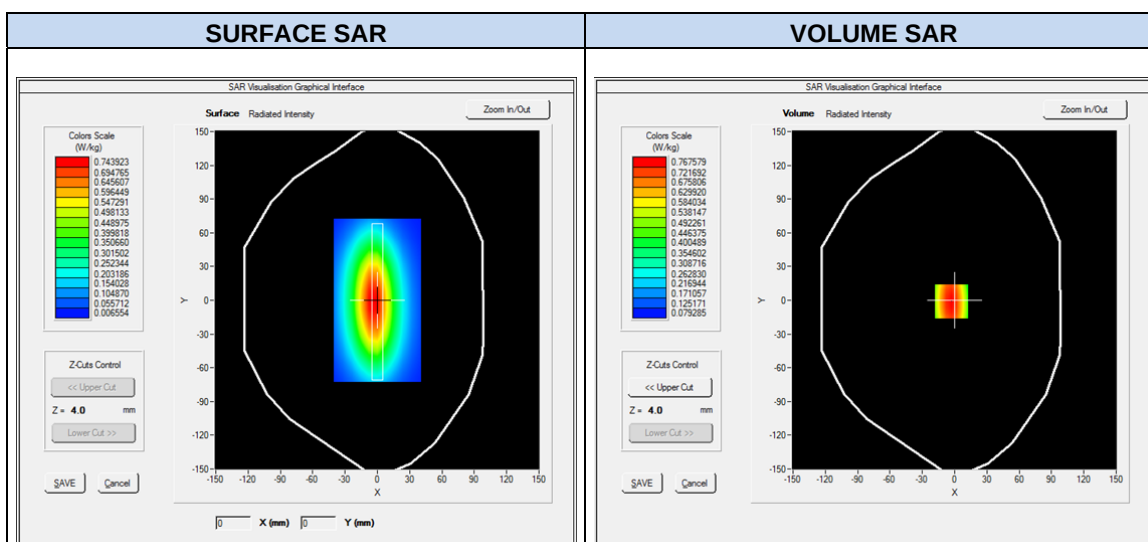
Date	24/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Body
Band	CW750
Channels	Low
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.86	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	750.000000
Relative permittivity (real part)	58.299599
Relative permittivity (imaginary part)	24.210600
Conductivity (S/m)	1.008775



Maximum location: X=-3.00, Y=-1.00

SAR Peak: 1.18 W/kg

SAR 10g (W/kg)	0.559447
SAR 1g (W/kg)	0.848974
Power Drift (%)	0.240000

51. System Check Body Liquid 835MHz

A. Experimental conditions

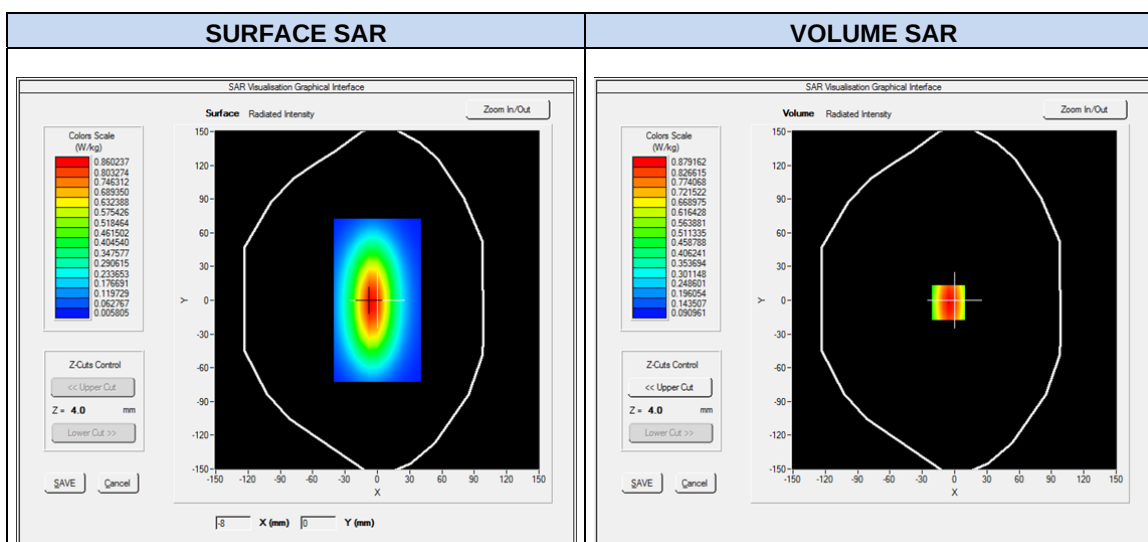
Date	25/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Low
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 5.16	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.755400
Relative permittivity (imaginary part)	21.056000
Conductivity (S/m)	0.978097



Maximum location: X=-6.00, Y=-2.00

SAR Peak: 1.32 W/kg

SAR 10g (W/kg)	0.621357
SAR 1g (W/kg)	0.933005
Power Drift (%)	0.210000

52. System Check Body Liquid 1800MHz

A. Experimental conditions

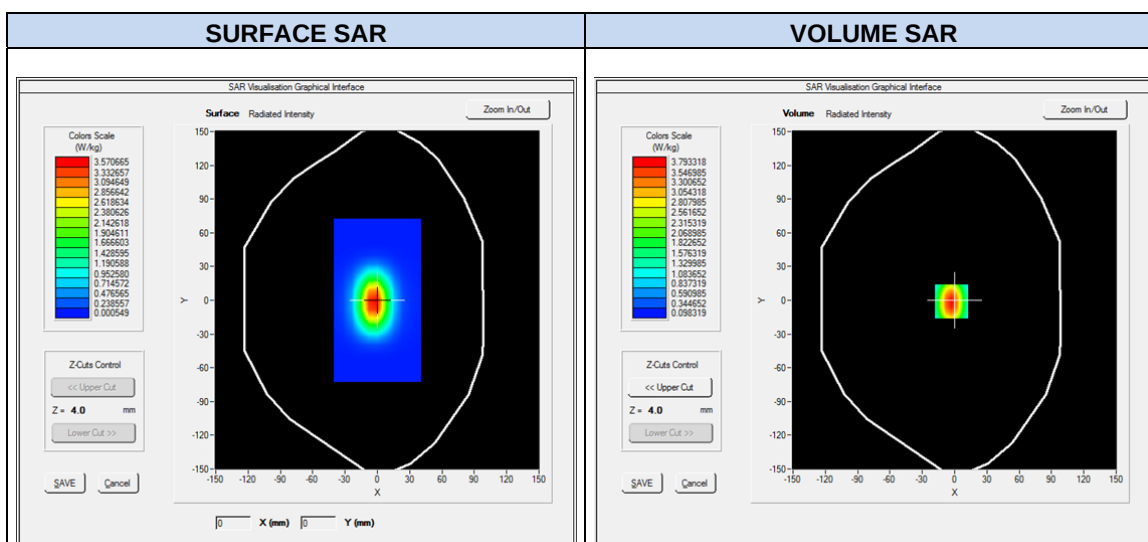
Date	19/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.42	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	52.953499
Relative permittivity (imaginary part)	15.427600
Conductivity (S/m)	1.542760



Maximum location: X=-3.00, Y=-1.00
SAR Peak: 6.00 W/kg

SAR 10g (W/kg)	2.030347
SAR 1g (W/kg)	3.710539
Power Drift (%)	-0.050000

53. System Check Body Liquid 1900MHz

A. Experimental conditions

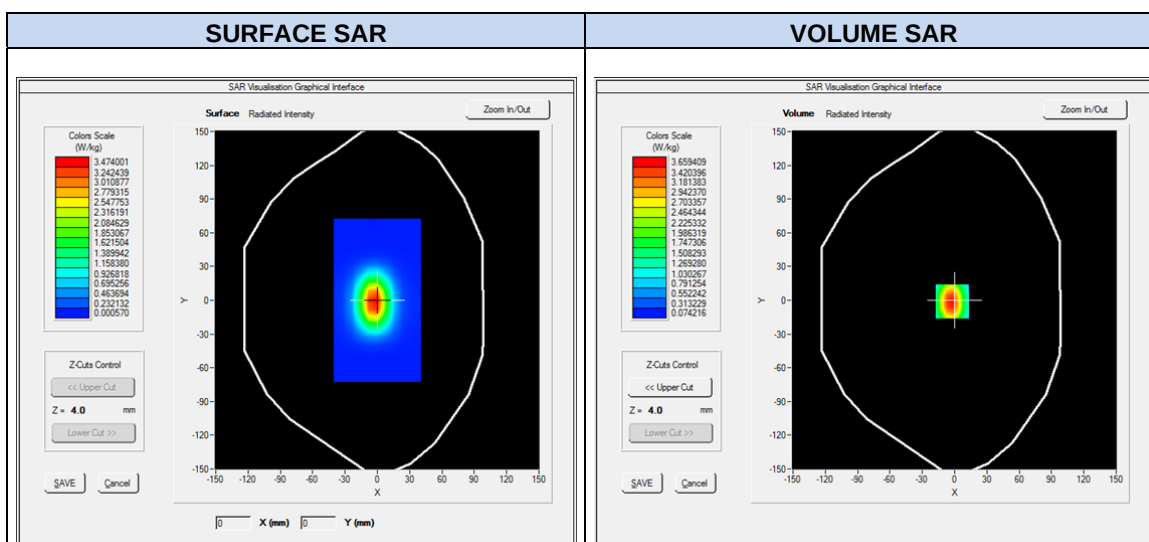
Date	22/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.92	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.505501
Relative permittivity (imaginary part)	15.312500
Conductivity (S/m)	1.616319



SAR 10g (W/kg)	1.974185
SAR 1g (W/kg)	3.739502
Power Drift (%)	-0.400000

54. System Check Body Liquid 2450MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/27/2014

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

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz);
Frequency: 2450 MHz; Communication System PAR: 0 dB
Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.915$ S/m; $\epsilon_r = 50.31$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Validation Body 2450 MHz/Validation 2450 MHz 27/08/2014/Area Scan (61x61x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 5.39 W/kg

Validation Body 2450 MHz/Validation 2450 MHz 27/08/2014/Zoom Scan (7x7x9)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=4$ mm

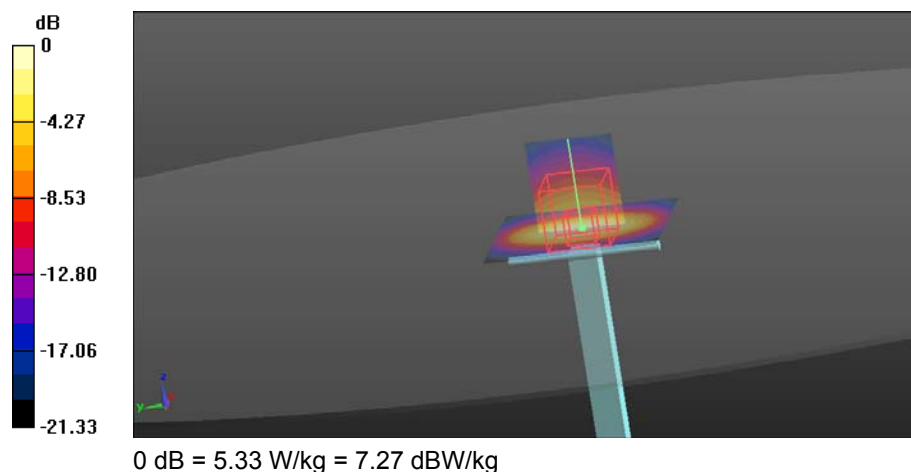
Reference Value = 50.88 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 9.46 W/kg

SAR(1 g) = 4.64 W/kg; SAR(10 g) = 2.18 W/kg (SAR corrected for target medium)

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 5.33 W/kg



55. System Check Body Liquid 2600MHz

A. Experimental conditions

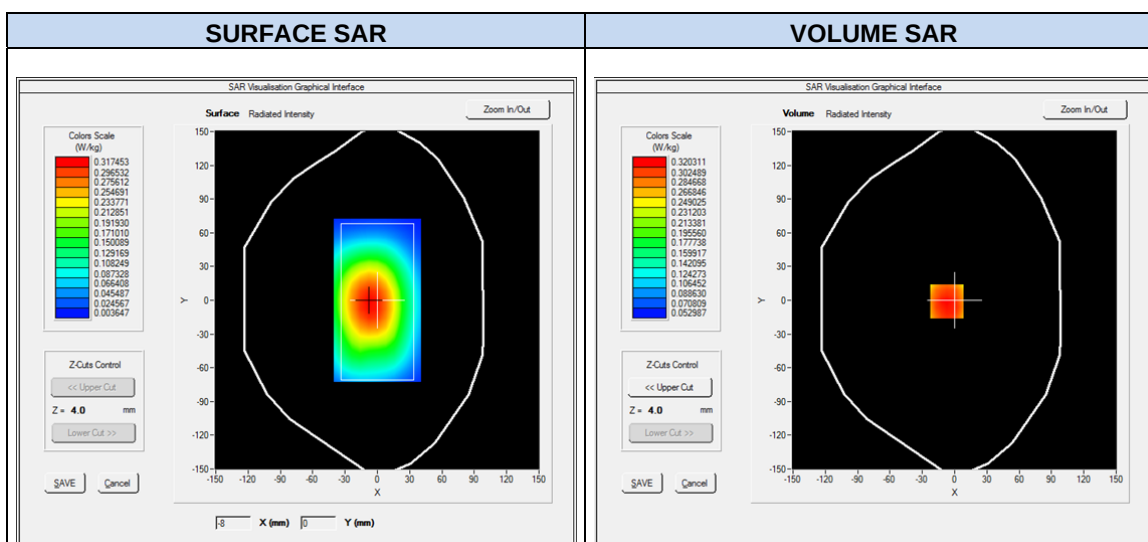
Date	26/09/2014
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete/nsurf_sam_plan.txt, h= 5.00 mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	High
Signal	CW (Crest factor: 1.0)

B. Instrumentations

Equipment description	Manufacturer / Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN_1714_EP224 / nCF: 4.18	09/2014	09/2015
Phantom	SATIMO	SN_4712_SAM96	Validated. No cal required.	Validated. No cal required.

C. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	51.359300
Relative permittivity (imaginary part)	15.001300
Conductivity (S/m)	2.169810



Maximum location: X=-2.00, Y=-2.00

SAR Peak: 9.00 W/kg

SAR 10g (W/kg)	2.361019
SAR 1g (W/kg)	5.066171
Power Drift (%)	0.470000

56. System Check Body Liquid 5200MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/21/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

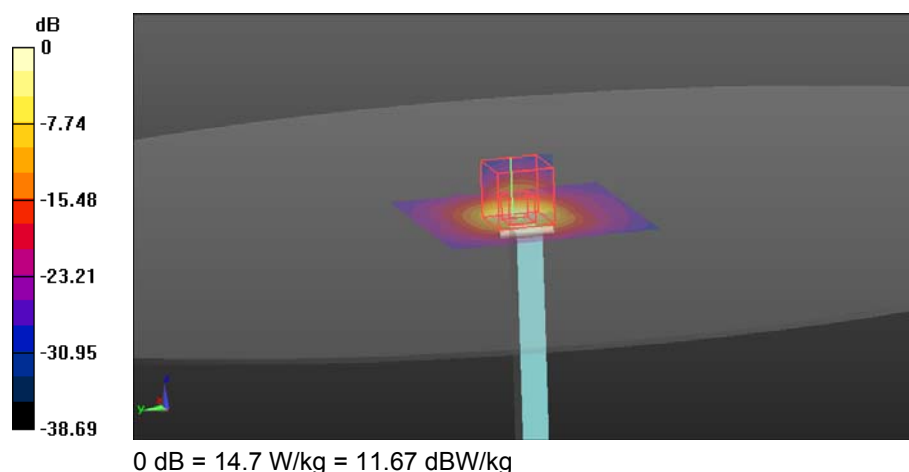
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5200 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5200$ MHz; $\sigma = 5.389$ S/m; $\epsilon_r = 48.503$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.4, 4.4, 4.4); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Validation Body/Validation 5200MHz Body/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 15.3 W/kg

Validation Body/Validation 5200MHz Body/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 56.01 V/m; Power Drift = 0.35 dB
Peak SAR (extrapolated) = 30.9 W/kg
SAR(1 g) = 7.59 W/kg; SAR(10 g) = 2.15 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 14.7 W/kg



57. System Check Body Liquid 5600MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/22/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

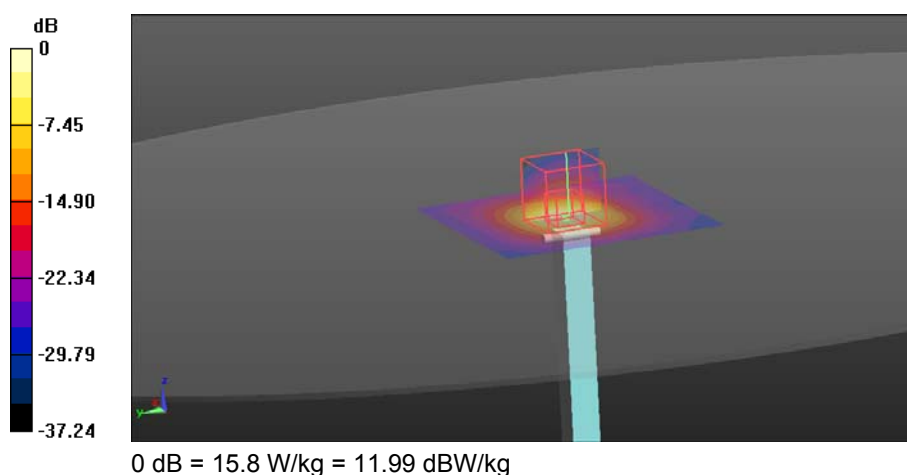
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5600 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.948$ S/m; $\epsilon_r = 47.908$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.86, 3.86, 3.86); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASYS 52.8.8(1222);

Validation Body/Validation 5600 22/08/14/Area Scan 2 (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 16.5 W/kg

Validation Body/Validation 5600 22/08/14/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 56.62 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 35.4 W/kg
SAR(1 g) = 7.99 W/kg; SAR(10 g) = 2.24 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 15.8 W/kg



58. System Check Body Liquid 5800MHz

Test Laboratory: Intel WRF Lab; Date/Time: 8/25/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1164

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5800 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 5800$ MHz; $\sigma = 6.103$ S/m; $\epsilon_r = 47.556$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
 - o Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Validation Body/Validation 5800 22/08/14/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 14.9 W/kg

Validation Body/Validation 5800 22/08/14/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 52.23 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 28.5 W/kg
SAR(1 g) = 7.53 W/kg; SAR(10 g) = 2.13 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 13.1 W/kg

