

LTE850-FDD26_CH26775 Rear

Date: 2/7/2020

Electronics: DAE4 Sn1289

Medium: head 835 MHz

Medium parameters used: $f = 822.5$ MHz; $\sigma = 0.876$ mho/m; $\epsilon_r = 40.71$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE850-FDD26 822.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(10.45,10.45,10.45)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.39 W/kg

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

Reference Value = 15.1 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.557 W/kg

SAR(1 g) = 0.335 W/kg; SAR(10 g) = 0.19 W/kg

Maximum value of SAR (measured) = 0.45 W/kg

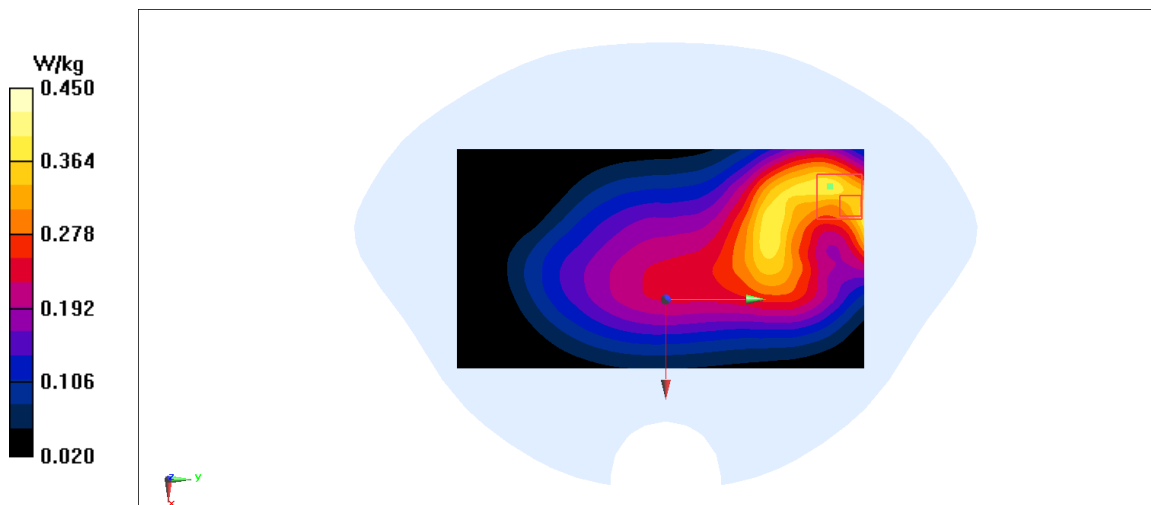


Fig A.24

LTE2600-TDD41_CH41055 Right Cheek

Date: 2/11/2020

Electronics: DAE4 Sn1289

Medium: head 2600 MHz

Medium parameters used: $f = 2636.5$; $\sigma = 1.992$ mho/m; $\epsilon_r = 38.98$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE2600-TDD41 2636.5 Duty Cycle: 1:1.58

Probe: EX3DV4 – SN7307 ConvF(7.65,7.65,7.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.951 W/kg

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

Reference Value = 7.046 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.653 W/kg; SAR(10 g) = 0.326 W/kg

Maximum value of SAR (measured) = 0.979 W/kg

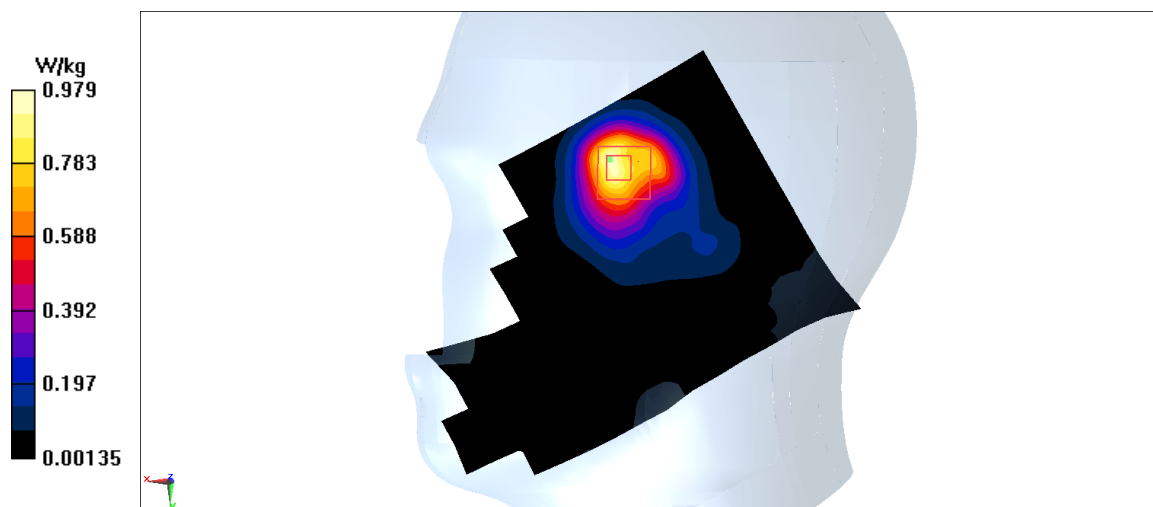


Fig A.25

LTE2600-TDD41_CH41055 Left

Date: 2/11/2020

Electronics: DAE4 Sn1289

Medium: head 2600 MHz

Medium parameters used: $f = 2636.5$; $\sigma = 1.992$ mho/m; $\epsilon_r = 38.98$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE2600-TDD41 2636.5 Duty Cycle: 1:1.58

Probe: EX3DV4 – SN7307 ConvF(7.65,7.65,7.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.566 W/kg

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

Reference Value = 3.808 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.749 W/kg

SAR(1 g) = 0.372 W/kg; SAR(10 g) = 0.182 W/kg

Maximum value of SAR (measured) = 0.556 W/kg

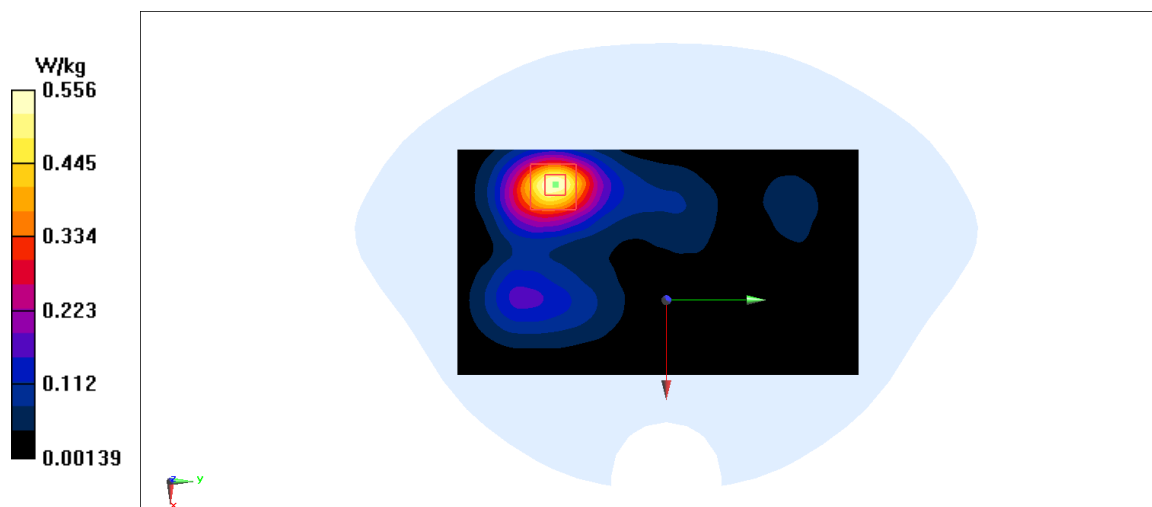


Fig A.26

LTE1700-FDD66_CH132072 Left Cheek

Date: 2/8/2020

Electronics: DAE4 Sn1289

Medium: head 1750 MHz

Medium parameters used: $f = 2636.5$; $\sigma = 2.196$ mho/m; $\epsilon_r = 39.14$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 2636.5 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(8.86,8.86,8.86)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.105 W/kg

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

Reference Value = 3.802 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.115 W/kg

SAR(1 g) = 0.081 W/kg; SAR(10 g) = 0.053 W/kg

Maximum value of SAR (measured) = 0.0919 W/kg

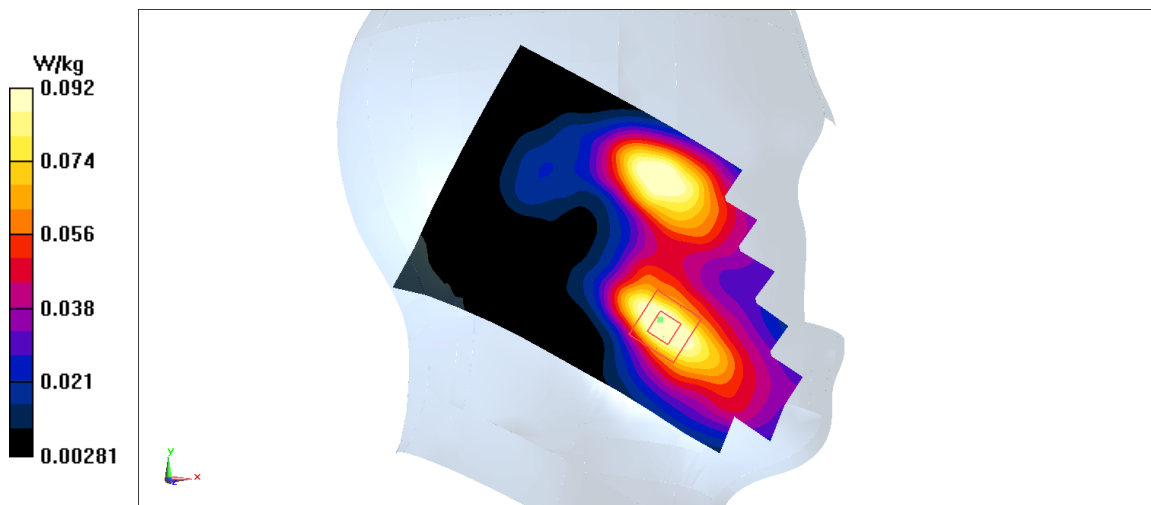


Fig A.27

LTE1700-FDD66_CH132322 Bottom

Date: 2/8/2020

Electronics: DAE4 Sn1289

Medium: head 1750 MHz

Medium parameters used: $f = 2636.5$; $\sigma = 2.196$ mho/m; $\epsilon_r = 39.14$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 2636.5 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(8.86,8.86,8.86)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.41 W/kg

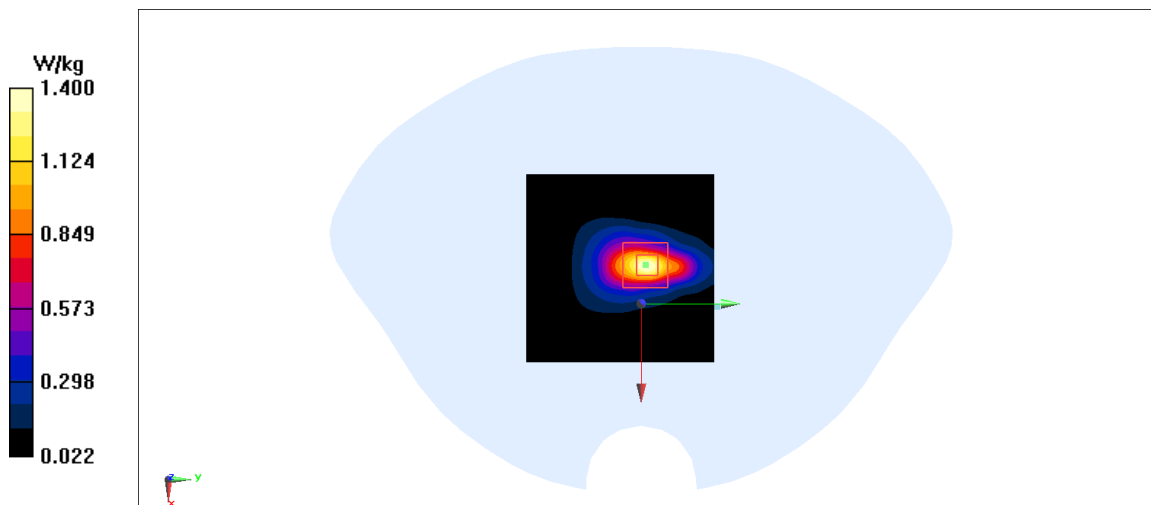
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.74 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.74 W/kg

SAR(1 g) = 0.991 W/kg; SAR(10 g) = 0.513 W/kg

Maximum value of SAR (measured) = 1.4 W/kg

**Fig A.28**

LTE1700-FDD66_CH132322 Rear

Date: 2/8/2020

Electronics: DAE4 Sn1289

Medium: head 1750 MHz

Medium parameters used: $f = 2636.5$; $\sigma = 2.196$ mho/m; $\epsilon_r = 39.14$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 2636.5 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(8.86,8.86,8.86)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.22 W/kg

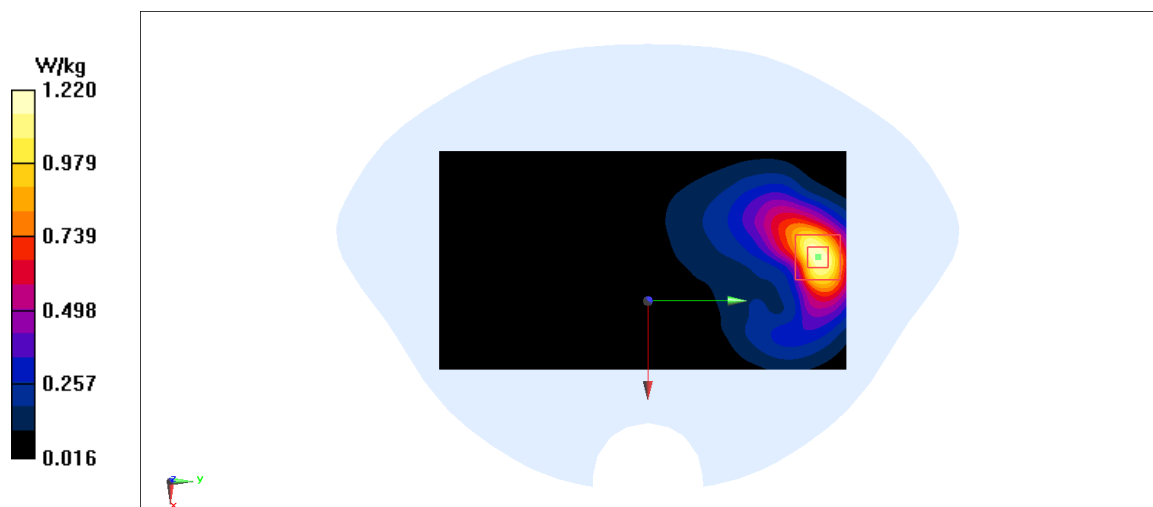
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.415 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.923 W/kg; SAR(10 g) = 0.536 W/kg

Maximum value of SAR (measured) = 1.22 W/kg

**Fig A.29**

WLAN2450_CH1 Left Cheek

Date: 2/10/2020

Electronics: DAE4 Sn1289

Medium: head 2450 MHz

Medium parameters used: $f = 2412$; $\sigma = 1.782$ mho/m; $\epsilon_r = 39.88$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2412 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(7.83,7.83,7.83)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.11 W/kg

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

Reference Value = 9.856 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.54 W/kg; SAR(10 g) = 0.265 W/kg

Maximum value of SAR (measured) = 0.564 W/kg

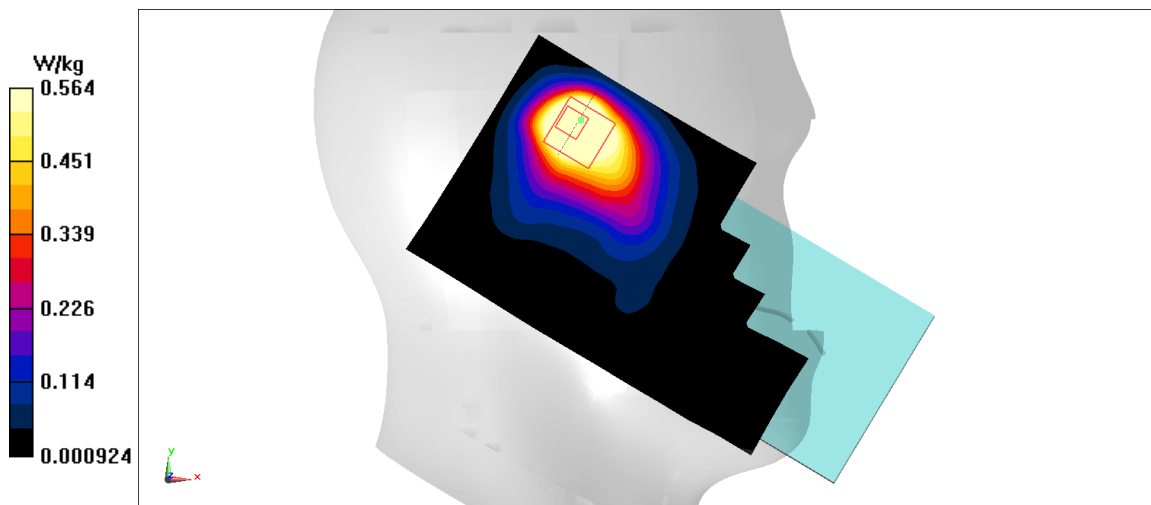


Fig A.30

WLAN2450_CH1 Right

Date: 2/10/2020

Electronics: DAE4 Sn1289

Medium: head 2450 MHz

Medium parameters used: $f = 2412$; $\sigma = 1.782$ mho/m; $\epsilon_r = 39.88$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2412 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(7.83,7.83,7.83)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.308 W/kg

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

Reference Value = 7.561 V/m; Power Drift = 0 dB

Peak SAR (extrapolated) = 0.394 W/kg

SAR(1 g) = 0.193 W/kg; SAR(10 g) = 0.096 W/kg

Maximum value of SAR (measured) = 0.213 W/kg

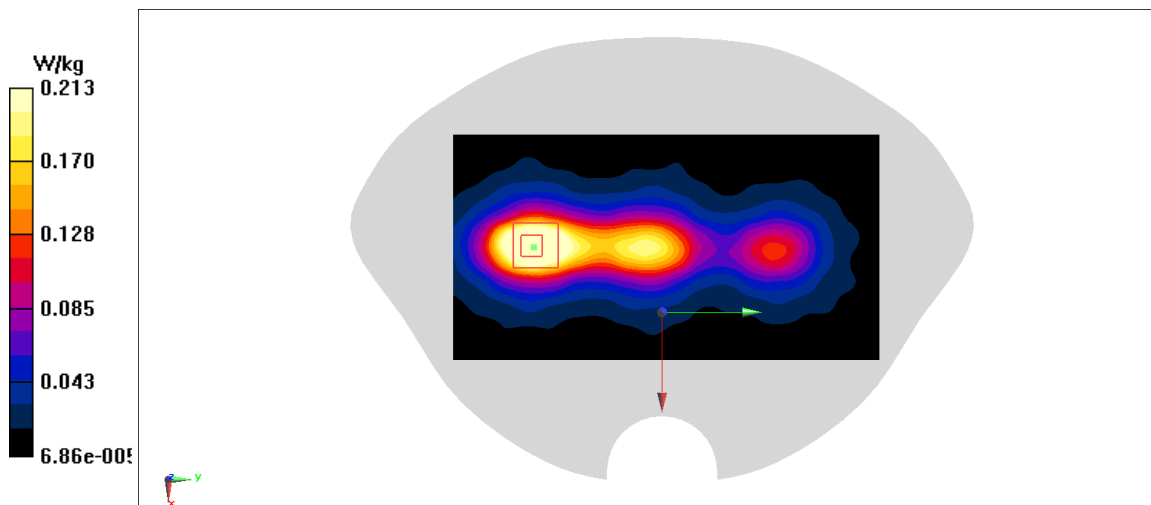


Fig A.31

WLAN5G_CH56 Left Tilt

Date: 2/12/2020

Electronics: DAE4 Sn1289

Medium: head 5250 MHz

Medium parameters used: $f = 5280$; $\sigma = 4.759$ mho/m; $\epsilon_r = 36.04$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN5G 5280 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(5.61,5.61,5.61)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.806 W/kg

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

Reference Value = 4.781 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (measured) = 0.989 W/kg

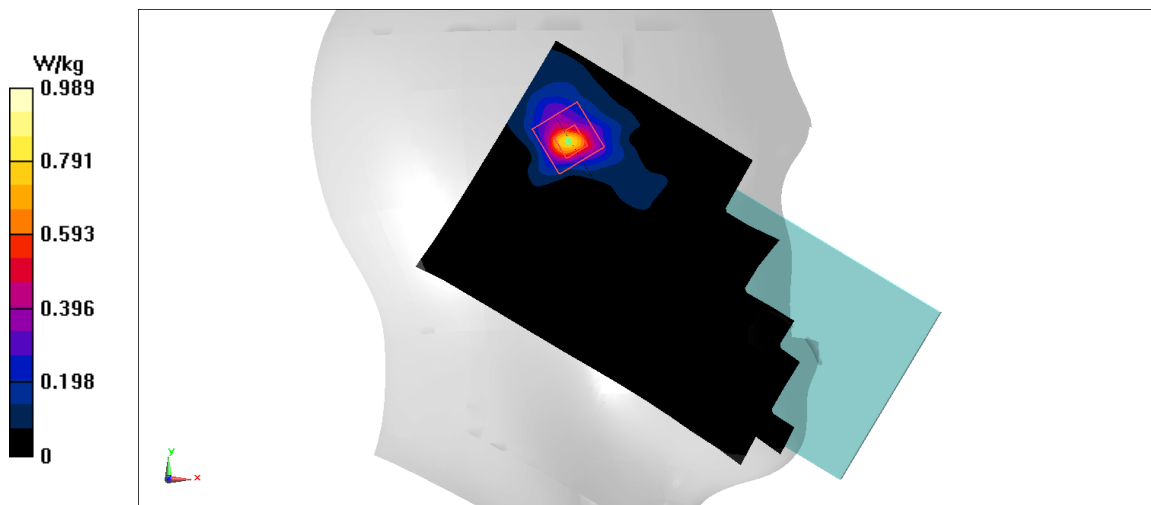


Fig A.32

WLAN5G_CH142 Rear

Date: 2/12/2020

Electronics: DAE4 Sn1289

Medium: head 5750 MHz

Medium parameters used: $f = 5710$; $\sigma = 5.231$ mho/m; $\epsilon_r = 35.7$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN5G 5710 Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(5.15,5.15,5.15)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.953 W/kg

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

Reference Value = 2.032 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 0.433 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 1.02 W/kg

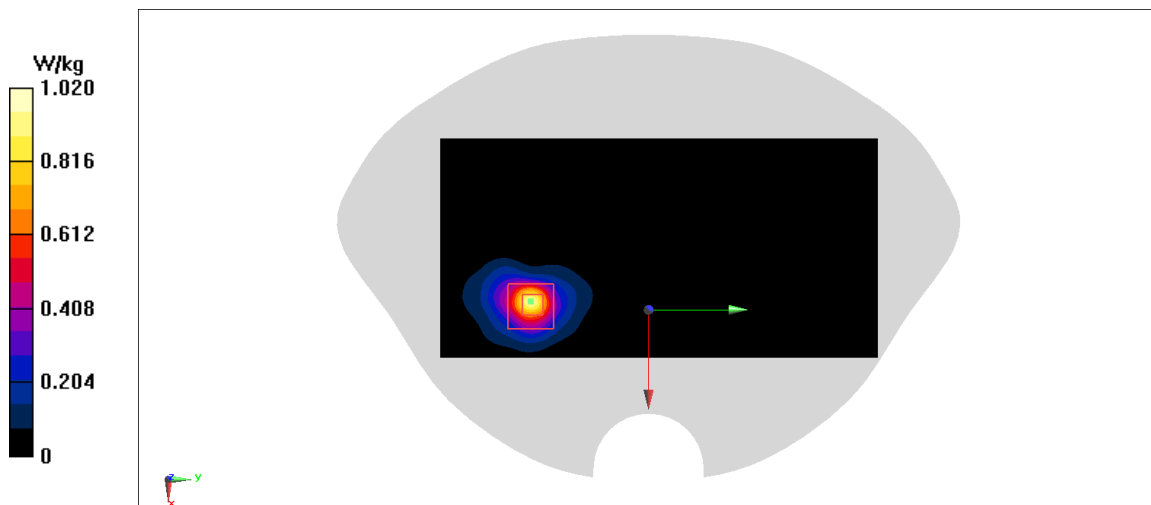


Fig A.33

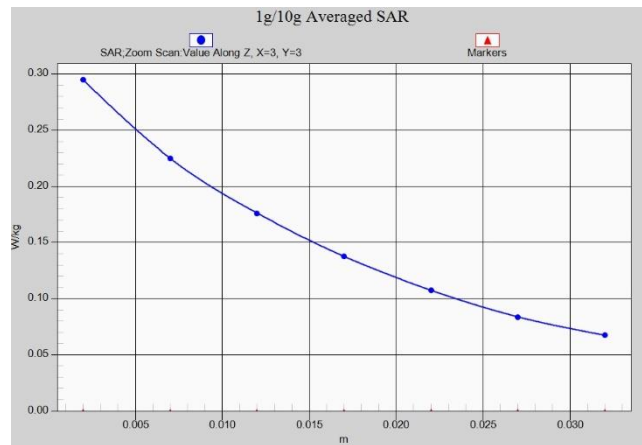


Fig. 1-1 Z-Scan at power reference point (850 MHz)

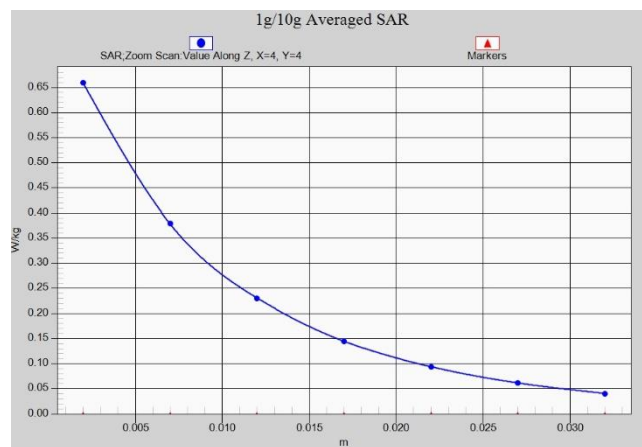


Fig. 1-2 Z-Scan at power reference point (850 MHz)

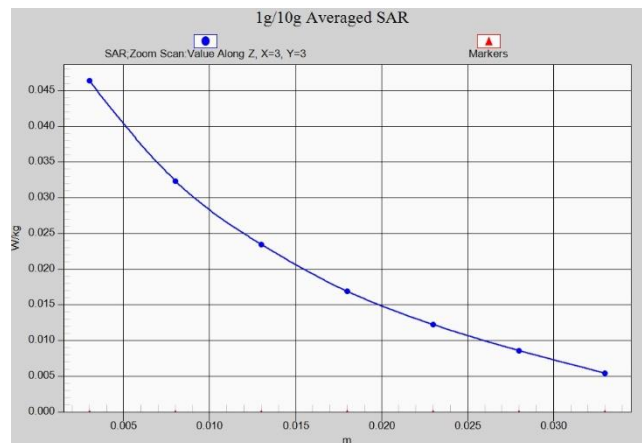


Fig. 1-3 Z-Scan at power reference point (1900 MHz)

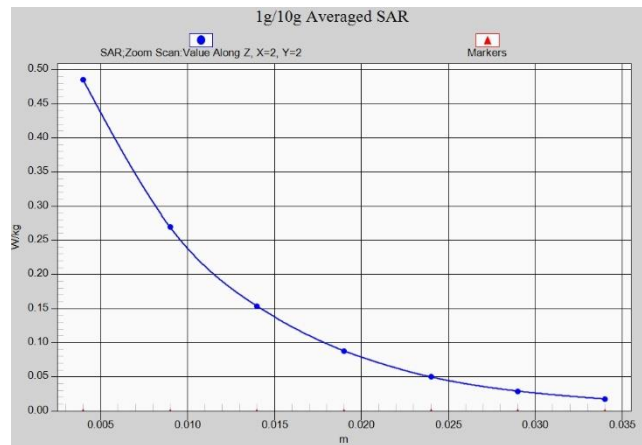


Fig. 1-4 Z-Scan at power reference point (1900 MHz)

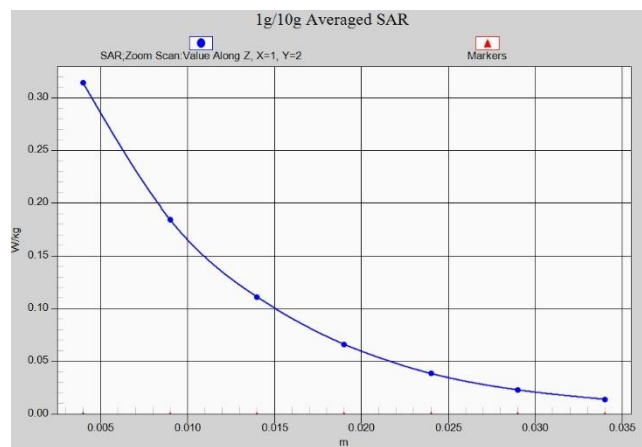


Fig. 1-5 Z-Scan at power reference point (1900 MHz)

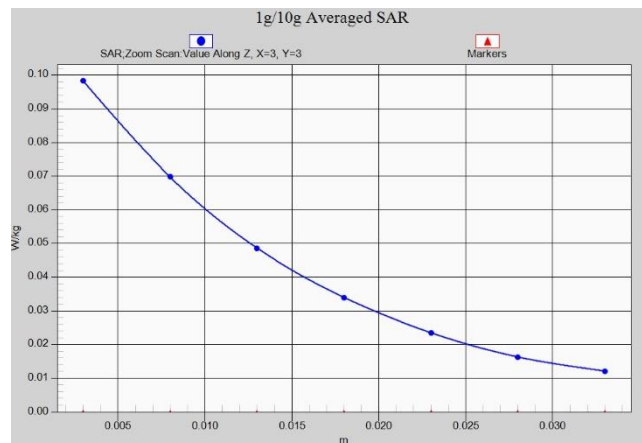


Fig. 1-6 Z-Scan at power reference point (WCDMA1900)

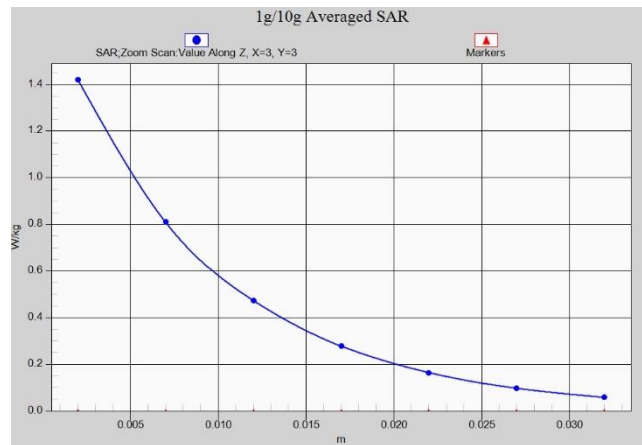


Fig. 1-7 Z-Scan at power reference point (WCDMA1900)

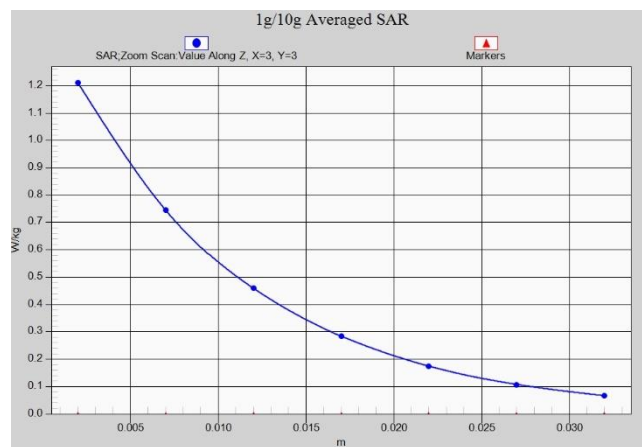


Fig. 1-8 Z-Scan at power reference point (WCDMA1900)

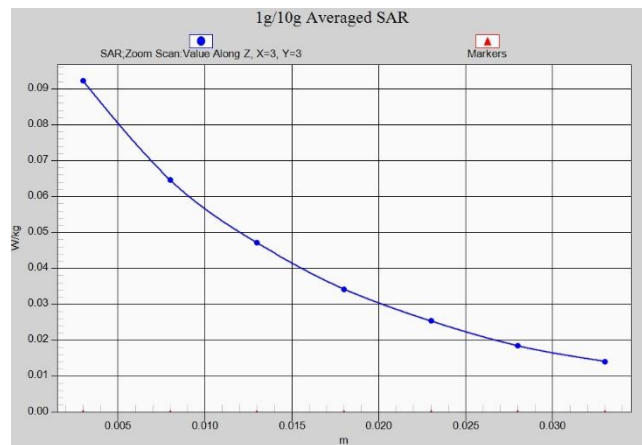


Fig. 1-9 Z-Scan at power reference point (WCDMA1700)

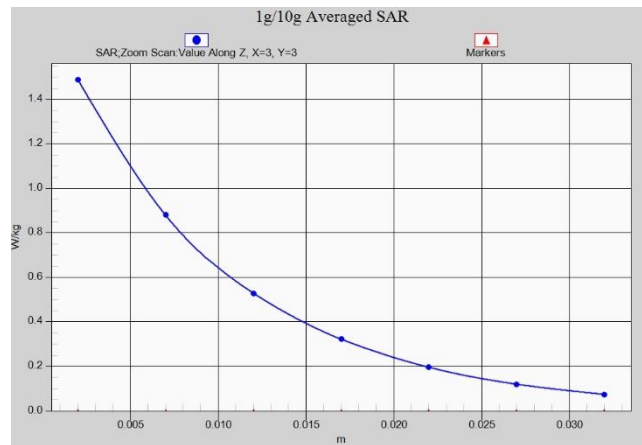


Fig. 1-10 Z-Scan at power reference point (WCDMA1700)

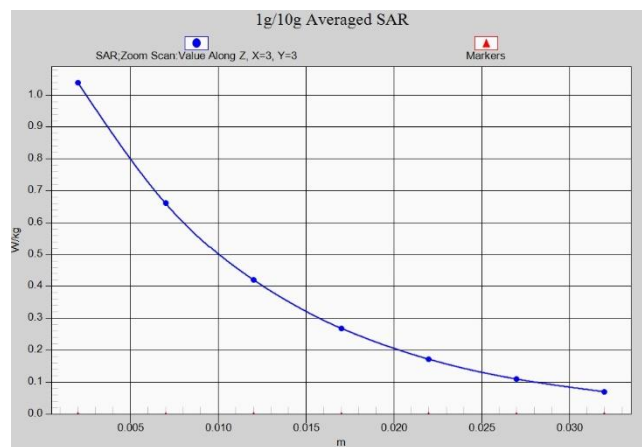


Fig. 1-11 Z-Scan at power reference point (WCDMA1700)

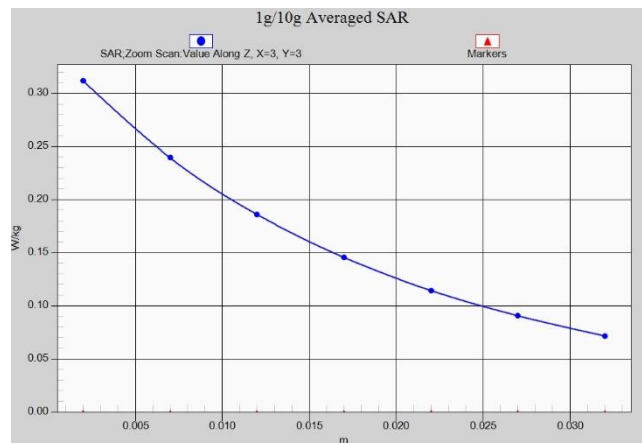


Fig. 1-12 Z-Scan at power reference point (WCDMA850)

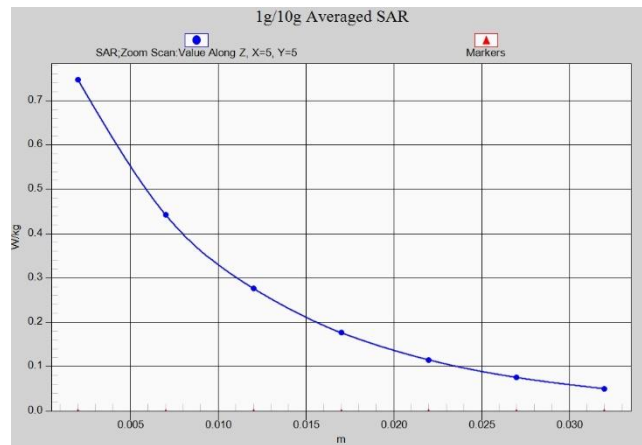


Fig. 1-13 Z-Scan at power reference point (WCDMA850)

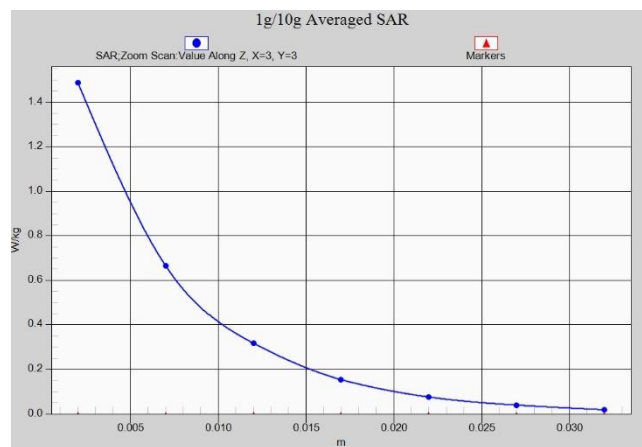


Fig. 1-14 Z-Scan at power reference point (LTE Band7)

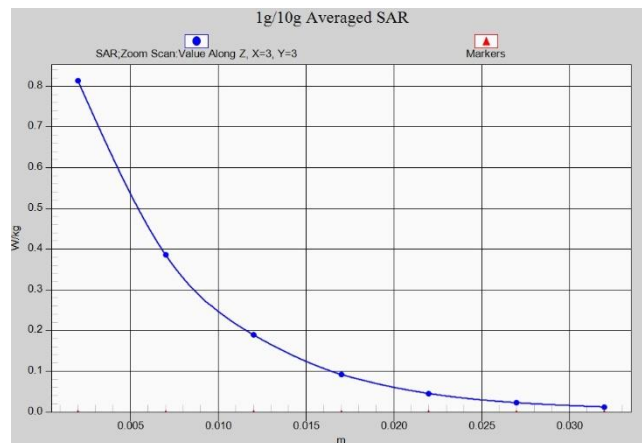


Fig. 1-15 Z-Scan at power reference point (LTE Band7)

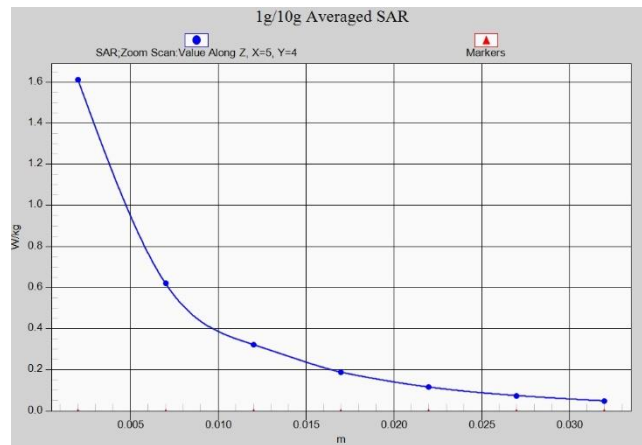


Fig. 1-16 Z-Scan at power reference point (LTE Band12)

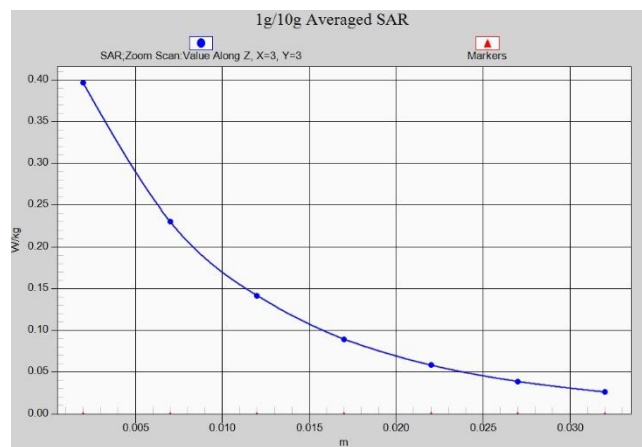


Fig. 1-17 Z-Scan at power reference point (LTE Band12)

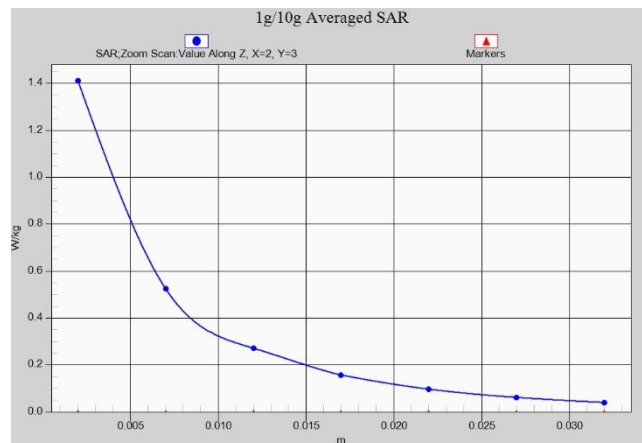


Fig. 1-18 Z-Scan at power reference point (LTE Band13)

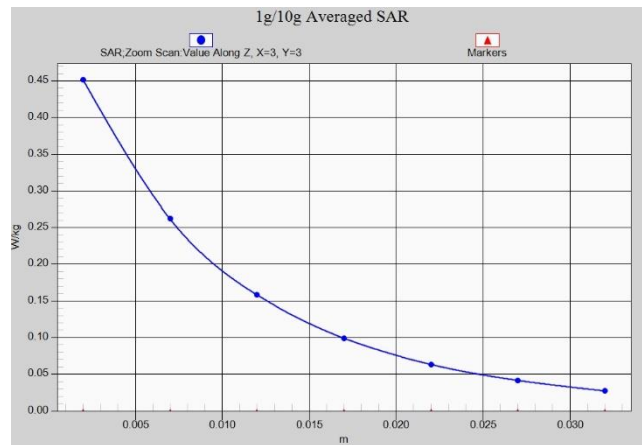


Fig. 1-19 Z-Scan at power reference point (LTE Band13)

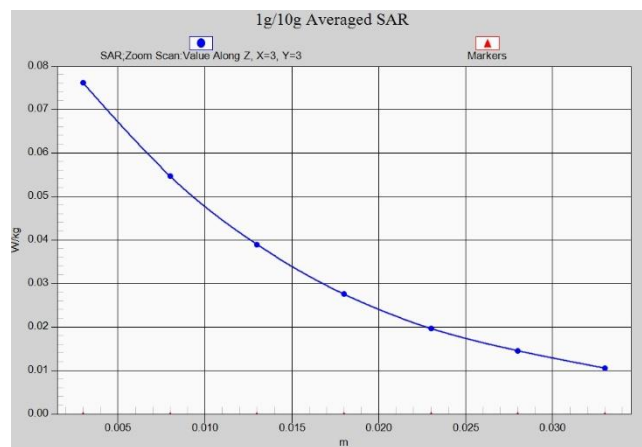


Fig. 1-20 Z-Scan at power reference point (LTE Band25)

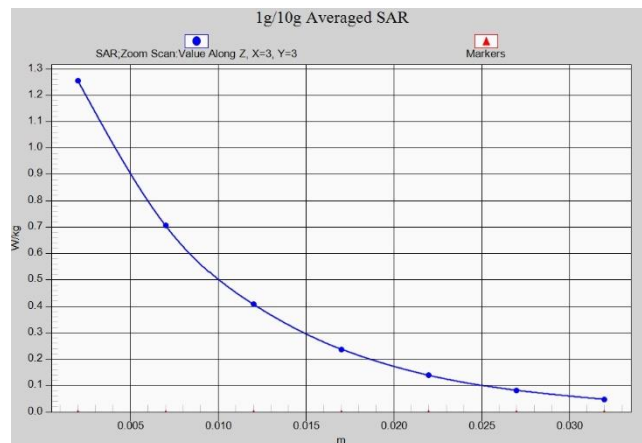


Fig. 1-21 Z-Scan at power reference point (LTE Band25)

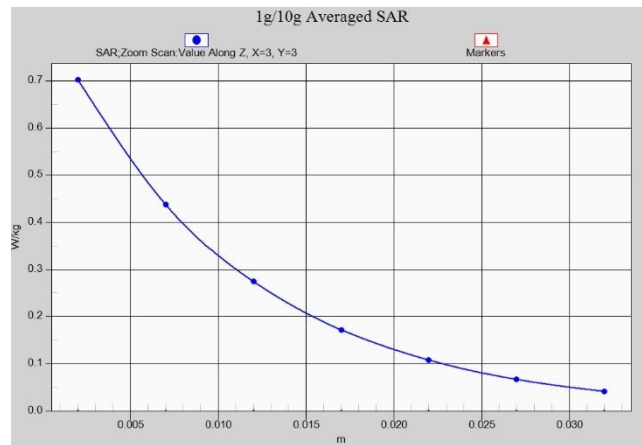


Fig. 1-22 Z-Scan at power reference point (LTE Band25)

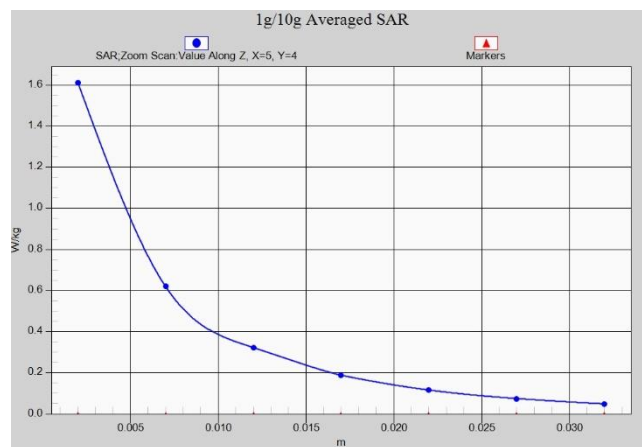


Fig. 1-23 Z-Scan at power reference point (LTE Band26)

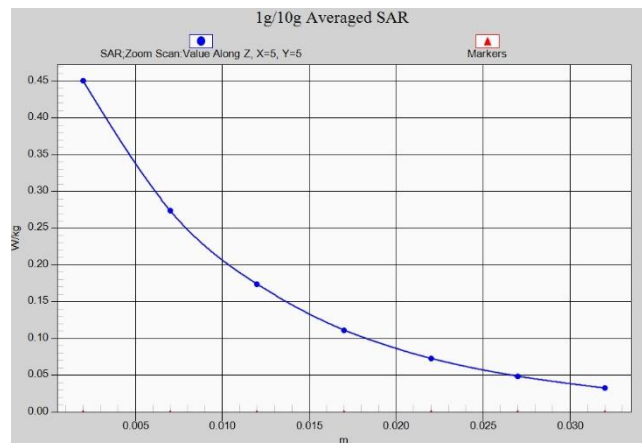


Fig. 1-24 Z-Scan at power reference point (LTE Band26)

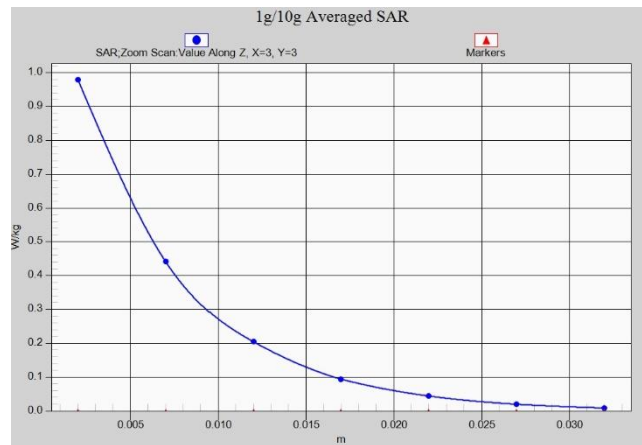


Fig. 1-25 Z-Scan at power reference point (LTE Band41)

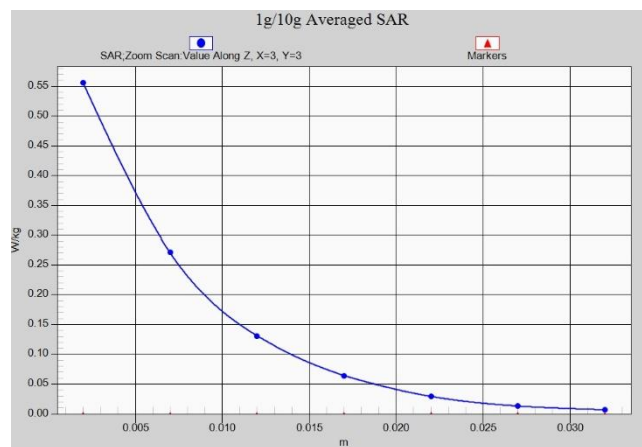


Fig. 1-26 Z-Scan at power reference point (LTE Band41)

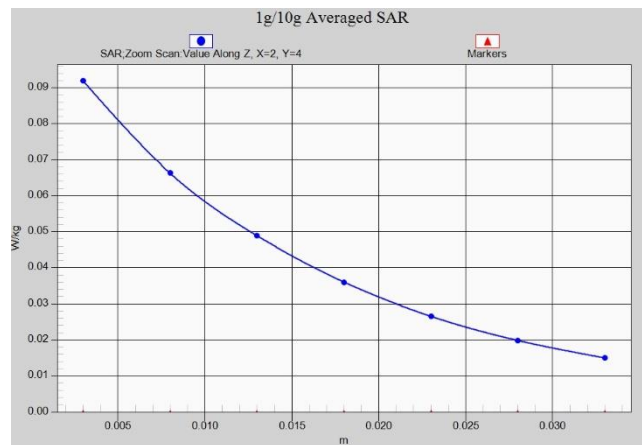


Fig. 1-27 Z-Scan at power reference point (LTE Band66)

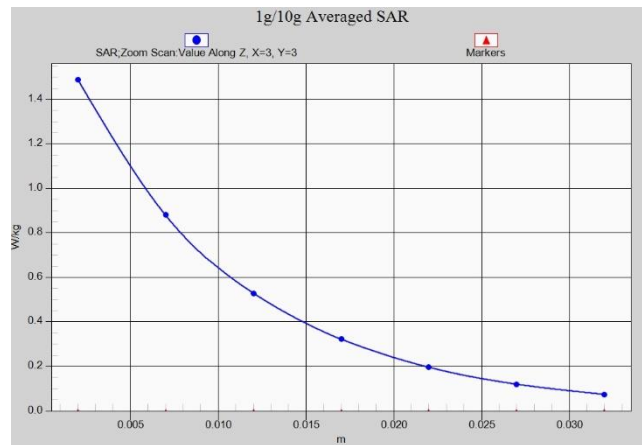


Fig. 1-28 Z-Scan at power reference point (LTE Band66)

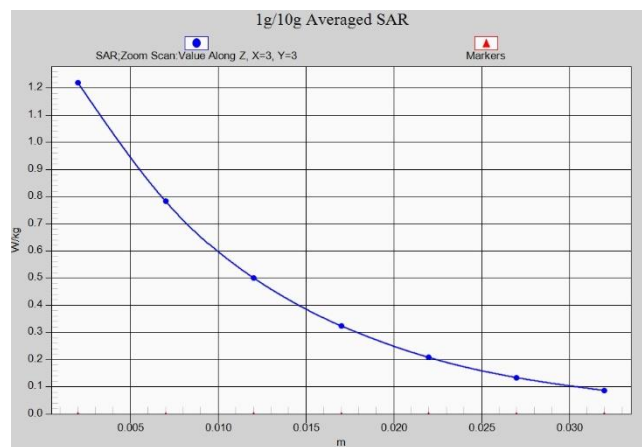


Fig. 1-29 Z-Scan at power reference point (LTE Band66)

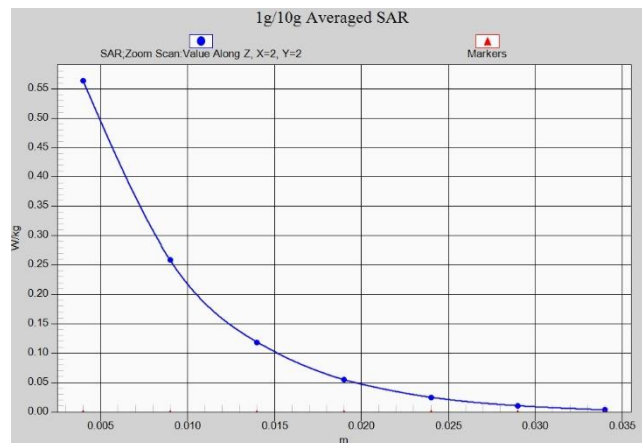


Fig. 1-30 Z-Scan at power reference point (wifi2450)

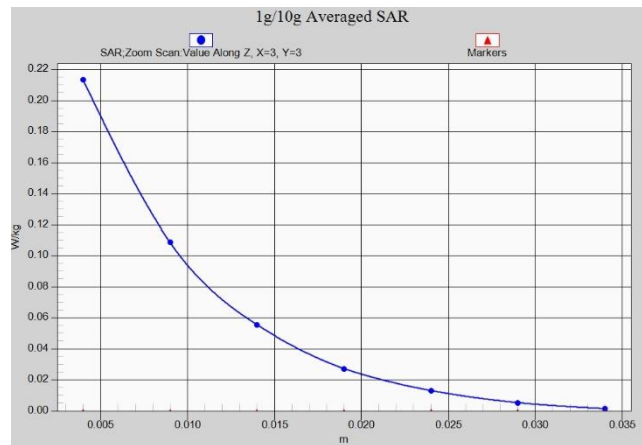


Fig. 1-31 Z-Scan at power reference point (wifi2450)

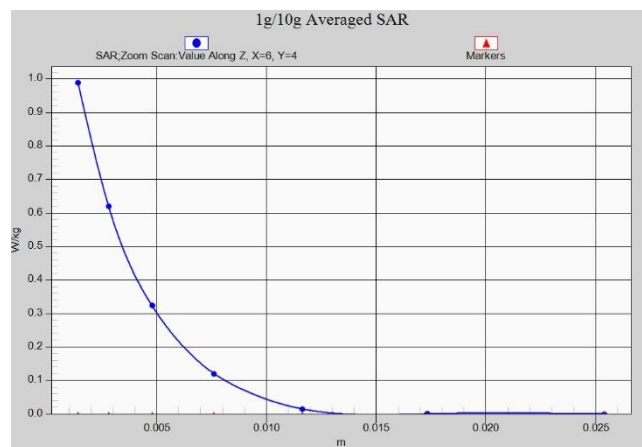


Fig. 1-32 Z-Scan at power reference point (wifi5G)

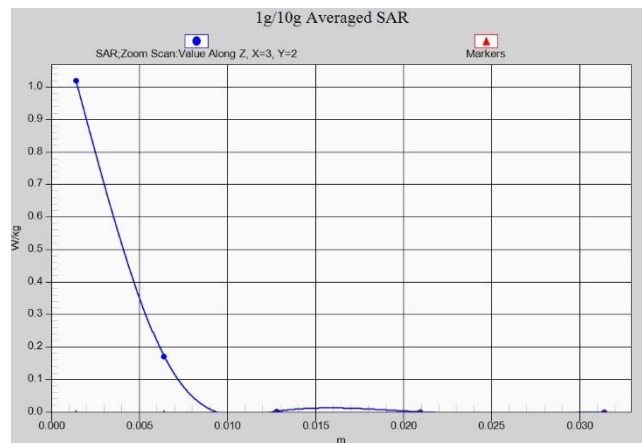


Fig. 1-33 Z-Scan at power reference point (wifi5G)

ANNEX B System Verification Results

750 MHz

Date: 2/6/2020

Electronics: DAE4 Sn1289

Medium: Head 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.89 \text{ mho/m}$; $\epsilon_r = 42.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.3°C

Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(10.58,10.58,10.58)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 58.99 V/m; Power Drift = -0.02

Fast SAR: SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.39 W/kg

Maximum value of SAR (interpolated) = 2.82 W/kg

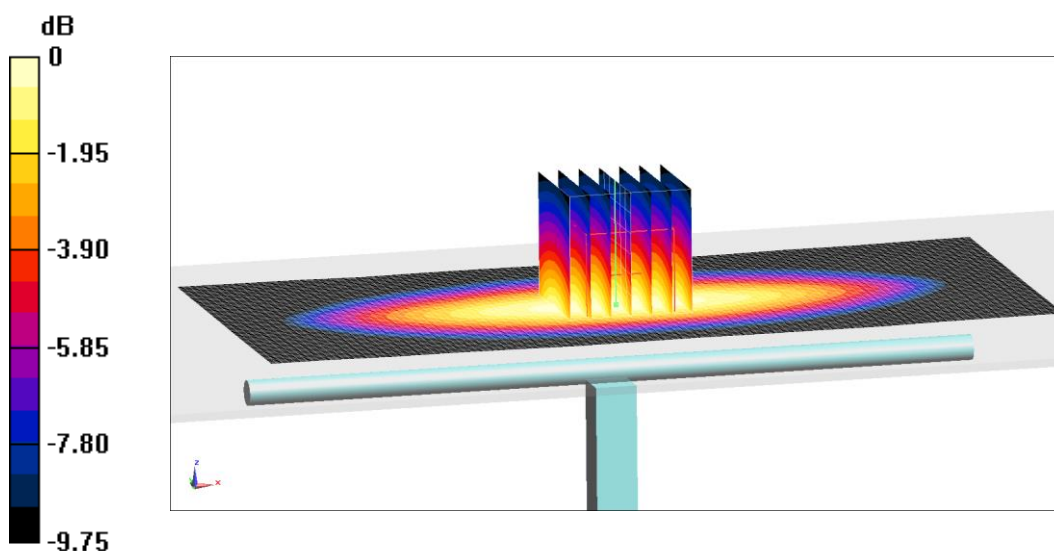
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 58.99 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.23 W/kg

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.36 W/kg

Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.5 dB W/kg

Fig.B.1 validation 750 MHz 250mW

835 MHz

Date: 2/7/2020

Electronics: DAE4 Sn1289

Medium: Head 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.888 \text{ mho/m}$; $\epsilon_r = 40.69$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.3°C

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(10.45,10.45,10.45)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 63.17 V/m ; Power Drift = 0.1

Fast SAR: SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (interpolated) = 3.11 W/kg

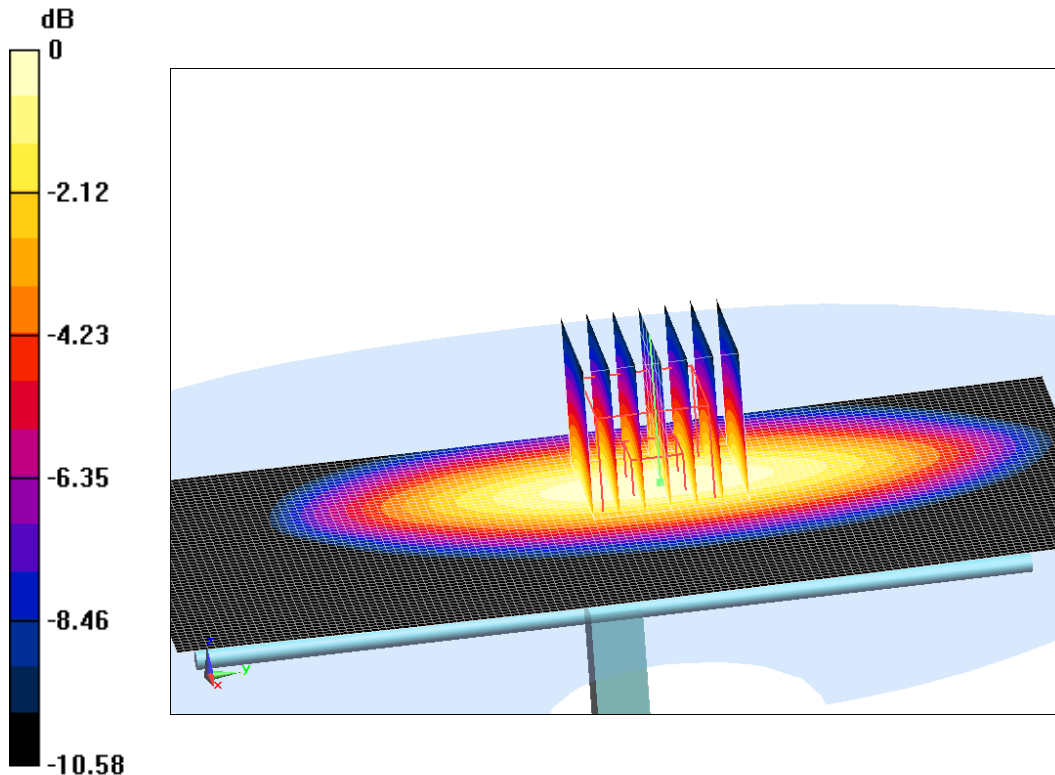
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 63.17 V/m ; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 3.59 W/kg

SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 3.23 W/kg



0 dB = $3.23 \text{ W/kg} = 5.09 \text{ dB W/kg}$

Fig.B.2 validation 835 MHz 250mW