

10 Conducted RF Output Power (Unit: dBm)

<WLAN Conducted Power>

General Note:

1. Per FCC KDB 248227 D01 v01r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
2. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate.
3. Per FCC KDB 248227 D01 v01r02, 11g, 11n-HT20 output power is less than 1/4dB higher than 11b mode, thus the SAR can be excluded.

<2.4GHz WLAN >

WLAN 2.4GHz 802.11b Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		1Mbps	
CH 1	2412	13.14	13.50
CH 6	2437	13.45	
CH 11	2462	13.23	

WLAN 2.4GHz 802.11g Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		6Mbps	
CH 1	2412	13.40	13.50
CH 6	2437	13.24	
CH 11	2462	13.41	

WLAN 2.4GHz 802.11n-HT20 Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		MCS8	
CH 1	2412	13.10	13.50
CH 6	2437	13.04	
CH 11	2462	13.46	

WLAN 2.4GHz 802.11n-HT40 Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		MCS8	
CH 3	2422	13.16	13.50
CH 6	2437	13.12	
CH 9	2452	13.11	

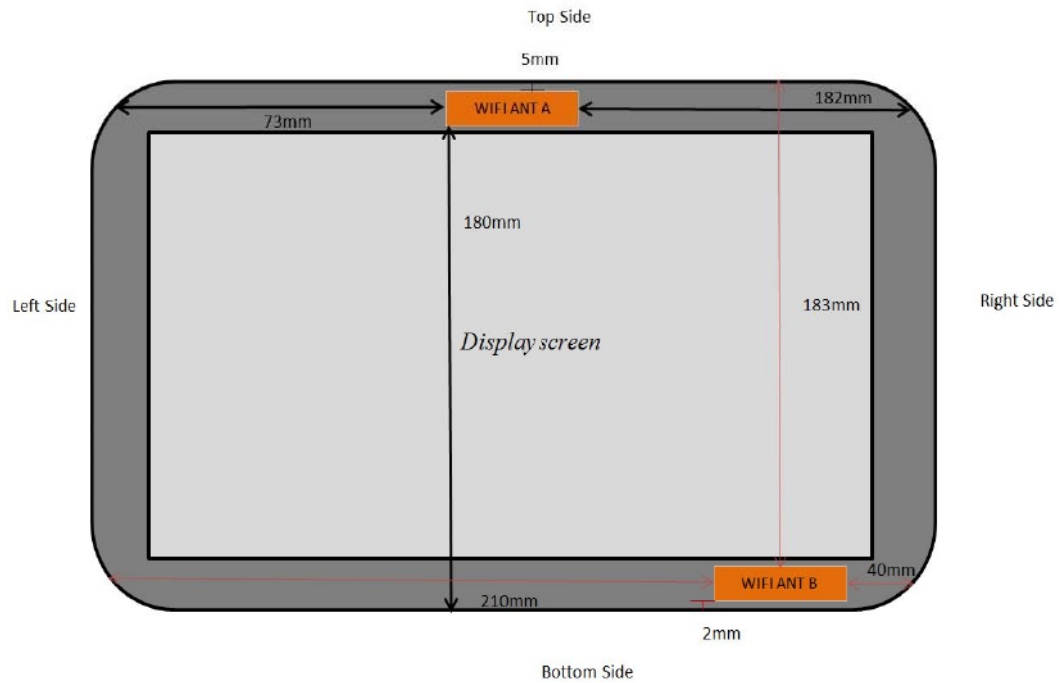
1. <5GHz WLAN >

WLAN 5GHz 802.11a Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		6Mbps	
CH 149	5745	13.11	13.50
CH 153	5765	13.29	
CH 157	5785	13.45	
CH 161	5805	13.41	
CH 165	5825	13.02	

WLAN 5GHz 802.11n-HT20 Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		MCS8	
CH 149	5745	13.08	13.50
CH 153	5765	13.14	
CH 157	5785	13.14	
CH 161	5805	13.20	
CH 165	5825	13.22	

WLAN 5GHz 802.11n-HT40 Average Power (dBm)			Tune up Limit (dBm)
Power vs. Channel			
Channel	Frequency (MHz)	Data Rate	
		MCS8	
CH 151	5755	13.15	
CH 159	5795	13.29	

11 Antenna Location



12 SAR Test Results

General Note:

1. Per KDB 447498 D01v05r02, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
2. Per KDB 447498 D01v05r02, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 616217 D04v01r01, the additional separation introduced by the contour against a flat phantom is < 5 mm and reported SAR is < 1.2 W/kg, a curved or contoured back surface or edge SAR is not required, more detail information please refer to the setup photo.
4. When the WLAN transmission was verified using a spectrum analyzer.

12.1 Body SAR

<2.4G WLAN >

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Ant	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
1	802.11b	-	Rear Face	0	6	2437	A	13.45	13.5	1.000	-0.12	0.236	0.24
2	802.11b	-	Left Side	0	6	2437	A	13.45	13.5	1.000	0.07	0.00702	0.0071
3	802.11b	-	Right Side	0	6	2437	A	13.45	13.5	1.000	0.07	0.00522	0.0053
4	802.11b	-	Top Side	0	6	2437	A	13.45	13.5	1.000	0.09	0.348	0.35
5	802.11b	-	Bottom Side	0	6	2437	A	13.45	13.5	1.000	-0.11	0.00131	0.00133
11	802.11n	HT20	Rear Face	0	11	2462	A+B	13.46	13.5	1.000	0.04	0.175	0.18
12	802.11n	HT20	Left Side	0	11	2462	A+B	13.46	13.5	1.000	-0.03	0.00624	0.0063
13	802.11n	HT20	Right Side	0	11	2462	A+B	13.46	13.5	1.000	0.03	0.018	0.02
14	802.11n	HT20	Top Side	0	11	2462	A+B	13.46	13.5	1.000	0.01	0.21	0.21
15	802.11n	HT20	Bottom Side	0	11	2462	A+B	13.46	13.5	1.000	-0.06	0.157	0.16

<5G WLAN >

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Ant	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
16	802.11a	-	Rear Face	0	157	5785	A	13.45	13.5	1.000	0.05	0.478	0.48
17	802.11a	-	Left Side	0	157	5785	A	13.45	13.5	1.000	0.01	0.00249	0.00252
18	802.11a	-	Right Side	0	157	5785	A	13.45	13.5	1.000	-0.11	0.00135	0.00137
19	802.11a	-	Top Side	0	157	5785	A	13.45	13.5	1.000	0.06	1.31	1.33
20	802.11a	-	Bottom Side	0	157	5785	A	13.45	13.5	1.000	-0.06	0.00156	0.0016
31	802.11a	-	Top Side	0	149	5745	A	13.02	13.5	1.000	0.1	1.13	1.26
32	802.11a	-	Top Side	0	165	5825	A	13.45	13.5	1.000	-0.01	1.35	1.37
33	802.11a	-	Top Side	0	157	5785	A	13.45	13.5	1.000	0.09	1.22	1.23
26	802.11n	HT40	Rear Face	0	159	5795	A+B	13.29	13.5	1.128	-0.03	0.262	0.28
27	802.11n	HT40	Left Side	0	159	5795	A+B	13.29	13.5	1.128	-0.04	0.0016	0.002
28	802.11n	HT40	Right Side	0	159	5795	A+B	13.29	13.5	1.128	-0.05	0.0065	0.007
29	802.11n	HT40	Top Side	0	159	5795	A+B	13.29	13.5	1.128	-0.06	0.636	0.67
30	802.11n	HT40	Bottom Side	0	159	5795	A+B	13.29	13.5	1.128	-0.09	0.057	0.06

13 Uncertainty Assessment

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table 14.1

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (±%) (1g)
Measurement System					
Probe Calibration	6.0	Normal	1.0	1.0	6.0
Axial Isotropy	4.7	Rectangular	$\sqrt{3}$	0.7	1.9
Hemispherical Isotropy	9.6	Rectangular	$\sqrt{3}$	0.7	3.9
Boundary effects	1.0	Rectangular	$\sqrt{3}$	1.0	0.6
Linearity	4.7	Rectangular	$\sqrt{3}$	1.0	2.7
System Detection Limits	1.0	Rectangular	$\sqrt{3}$	1.0	0.6
Modulation Response	2.4	Rectangular	$\sqrt{3}$	1.0	1.4
Readout Electronics	0.3	Normal	1.0	1.0	0.3
Response Time	0.8	Rectangular	$\sqrt{3}$	1.0	0.5
Integration Time	2.6	Rectangular	$\sqrt{3}$	1.0	1.5
RF Ambient Noise	3.0	Rectangular	$\sqrt{3}$	1.0	1.7
RF Ambient Reflections	3.0	Rectangular	$\sqrt{3}$	1.0	1.7
Probe Positioner	0.4	Rectangular	$\sqrt{3}$	1.0	0.2
Probe Positioning	2.9	Rectangular	$\sqrt{3}$	1.0	1.7
Max. SAR Eval.	2.0	Rectangular	$\sqrt{3}$	1.0	1.2
Dipole Related					
Device Positioning	2.9	Normal	1.0	1.0	2.9
Device Holder	3.6	Normal	1.0	1.0	3.6
Power Drift	5.0	Rectangular	$\sqrt{3}$	1.0	2.9
Power Scaling	0.0	Rectangular	$\sqrt{3}$	1.0	0.0
Phantom and Tissue parameters					
Phantom Uncertainty	6.1	Rectangular	$\sqrt{3}$	1.0	3.5
SAR correction	1.9	Normal	1.0	1.0	1.9
Liquid Conductivity (measurement)	2.0	Normal	1.0	0.8	1.6
Liquid Permittivity (measurement)	2.1	Normal	1.0	0.3	0.5
Temp. unc. - Conduct	3.4	Rectangular	$\sqrt{3}$	0.8	1.5
Temp. unc. - Permittivity	0.4	Rectangular	$\sqrt{3}$	0.2	0.1
Combined Standard Uncertainty					11.2
Coverage Factor for 95 %					Kp=2
Expanded Uncertainty					22.4

Uncertainty Budget for frequency range 30 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (±%) (1g)
Measurement System					
Probe Calibration	6.6	Normal	1.0	1.0	6.6
Axial Isotropy	4.7	Rectangular	$\sqrt{3}$	0.7	1.9
Hemispherical Isotropy	9.6	Rectangular	$\sqrt{3}$	0.7	3.9
Boundary effects	2.0	Rectangular	$\sqrt{3}$	1.0	1.2
Linearity	4.7	Rectangular	$\sqrt{3}$	1.0	2.7
System Detection Limits	1.0	Rectangular	$\sqrt{3}$	1.0	0.6
Modulation Response	2.4	Rectangular	$\sqrt{3}$	1.0	1.4
Readout Electronics	0.3	Normal	1.0	1.0	0.3
Response Time	0.8	Rectangular	$\sqrt{3}$	1.0	0.5
Integration Time	2.6	Rectangular	$\sqrt{3}$	1.0	1.5
RF Ambient Noise	3.0	Rectangular	$\sqrt{3}$	1.0	1.7
RF Ambient Reflections	3.0	Rectangular	$\sqrt{3}$	1.0	1.7
Probe Positioner	0.8	Rectangular	$\sqrt{3}$	1.0	0.5
Probe Positioning	6.7	Rectangular	$\sqrt{3}$	1.0	3.9
Max. SAR Eval.	4.0	Rectangular	$\sqrt{3}$	1.0	2.3
Dipole Related					
Device Positioning	2.9	Normal	1.0	1.0	2.9
Device Holder	3.6	Normal	1.0	1.0	3.6
Power Drift	5.0	Rectangular	$\sqrt{3}$	1.0	2.9
Power Scaling	0.0	Rectangular	$\sqrt{3}$	1.0	0.0
Phantom and Tissue parameters					
Phantom Uncertainty	6.6	Rectangular	$\sqrt{3}$	1.0	3.8
SAR correction	1.9	Normal	1.0	1.0	1.9
Liquid Conductivity (measurement)	2.0	Normal	1.0	0.8	1.6
Liquid Permittivity (measurement)	2.1	Normal	1.0	0.3	0.5
Temp. unc. - Conduct	3.4	Rectangular	$\sqrt{3}$	0.8	1.5
Temp. unc. - Permittivity	0.4	Rectangular	$\sqrt{3}$	0.2	0.1
Combined Standard Uncertainty					12.3
Coverage Factor for 95 %					Kp=2
Expanded Uncertainty					24.7

Uncertainty Budget for frequency range 3 GHz to 6 GHz

14 References

- [1] Council Recommendation 1999/519/EC of July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)
- [2] EN 50566:2013, "Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)" March 2013.
- [3] EN 62311:2008, "Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)", January 2008
- [4] EN 62209-2:2010, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices. Human models, instrumentation, and procedures. Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", August 2010
- [5] EN 62479:2010 "Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)", December 2010
- [6] SPEAG DASY System Handbook



Appendix A. Plots of System Performance Check

System Check_B2450_150123**DUT: Dipole D2450V2 _SN:929**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.005$ S/m; $\epsilon_r = 51.281$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 20.1 W/kg

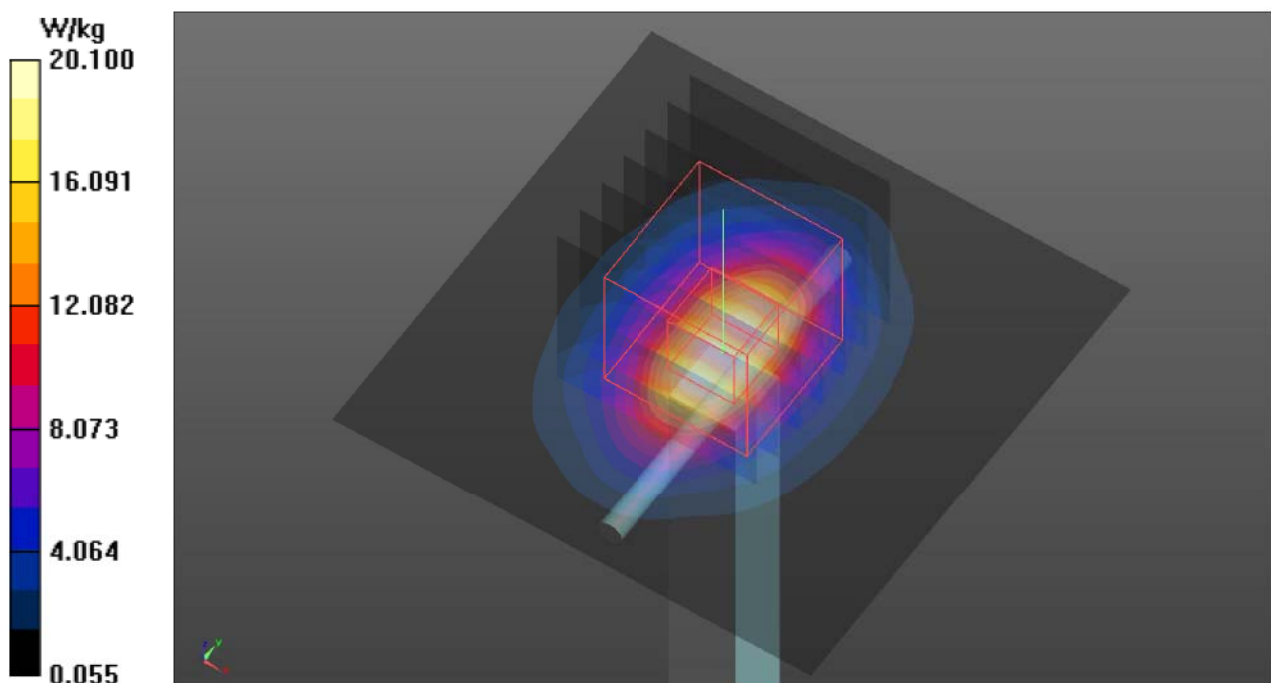
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.0 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 27.7 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.89 W/kg

Maximum value of SAR (measured) = 20.1 W/kg



System Check_B2450_150126

DUT: Dipole D2450V2 _SN:929

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.002$ S/m; $\epsilon_r = 51.299$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 19.0 W/kg

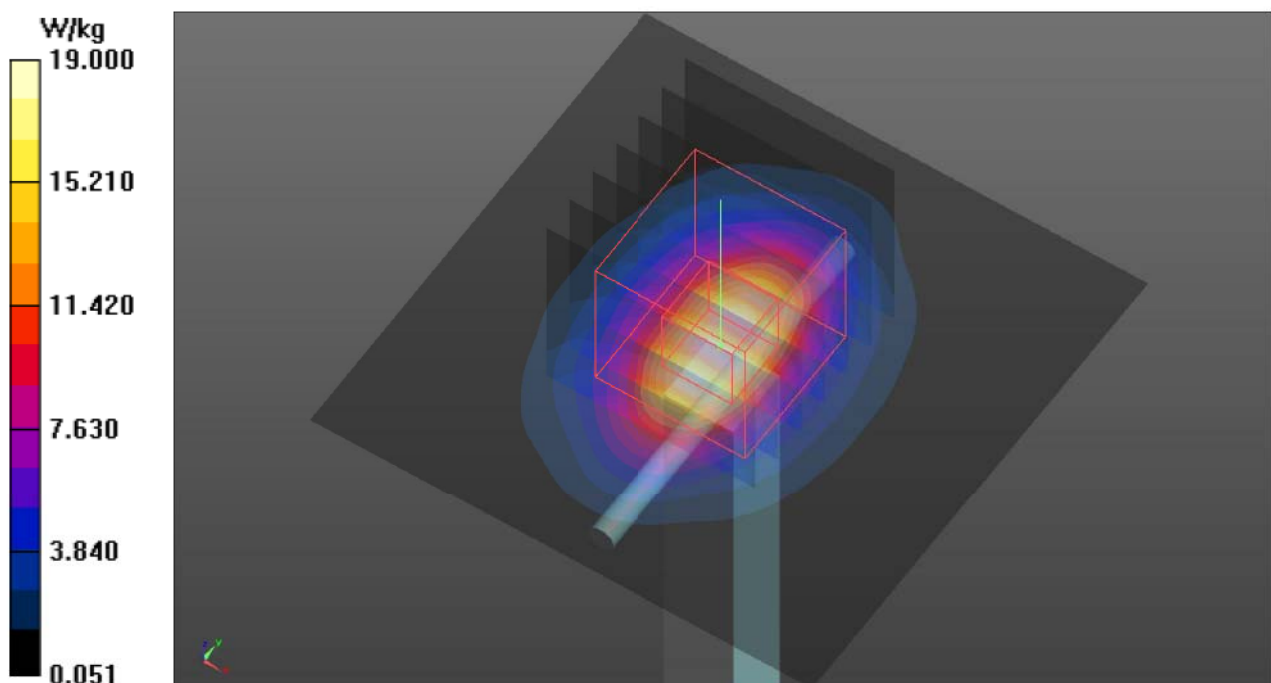
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.78 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 26.1 W/kg

SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.53 W/kg

Maximum value of SAR (measured) = 19.0 W/kg



System Check_B5800_150122**DUT: Dipole D5GHz_SN: 1171**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: B5G_141022 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.19$ S/m; $\epsilon_r = 47.972$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.8 °C; Liquid Temperature : 22.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(4.26, 4.26, 4.26); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.8 W/kg

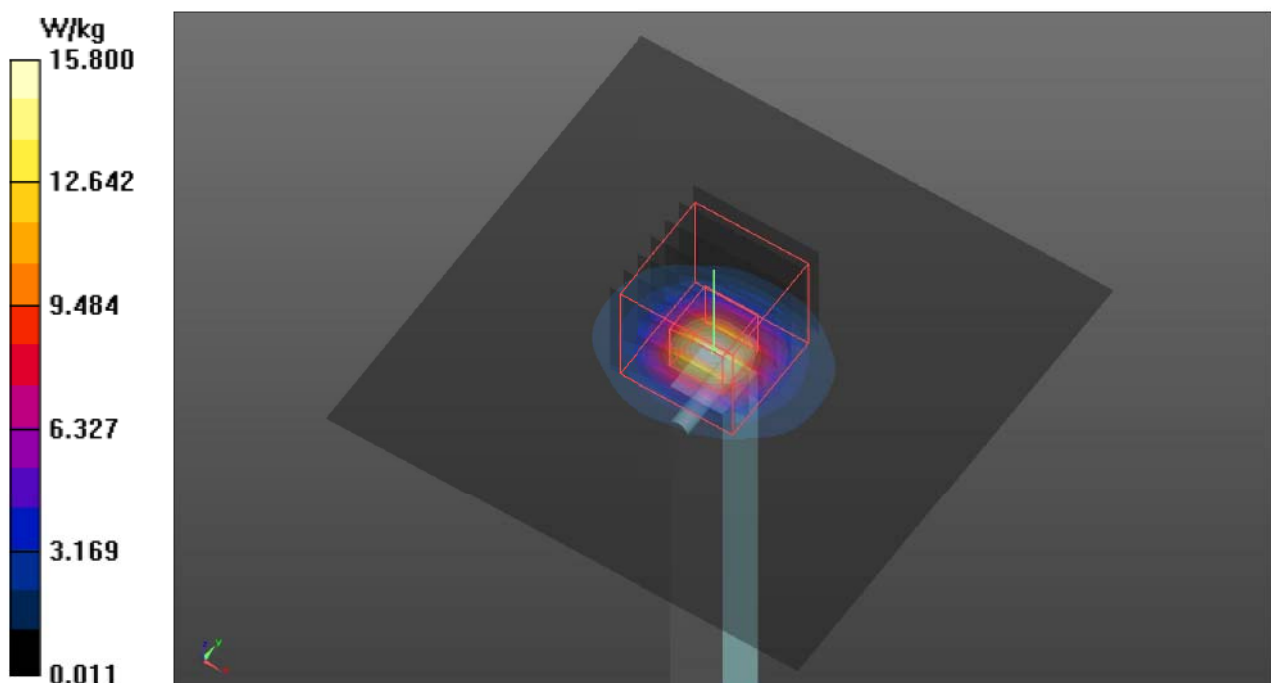
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.94 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 36.4 W/kg

SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 16.7 W/kg



System Check_B5800_150123**DUT: Dipole D5GHz_SN: 1171**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: B5G_150123 Medium parameters used: $f = 5800$ MHz; $\sigma = 5.993$ S/m; $\epsilon_r = 46.842$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(4.26, 4.26, 4.26); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.4 W/kg

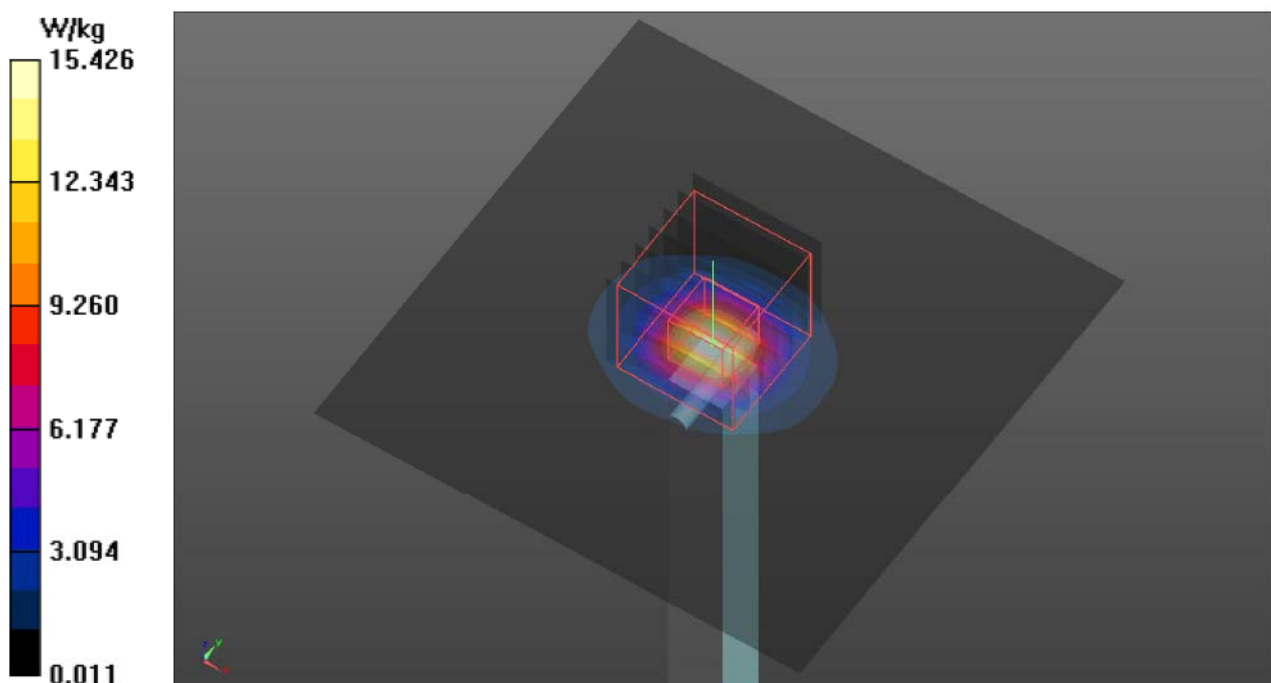
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 57.02 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 35.4 W/kg

SAR(1 g) = 7.56 W/kg; SAR(10 g) = 2.11 W/kg

Maximum value of SAR (measured) = 16.3 W/kg





Appendix B. Plots of SAR Measurement

P01 802.11b_Rear Face_0cm_Ch6_Ant 0

DUT: 510861

Communication System: WLAN_2.4G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.989$ S/m; $\epsilon_r = 51.323$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (181x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.197 W/kg

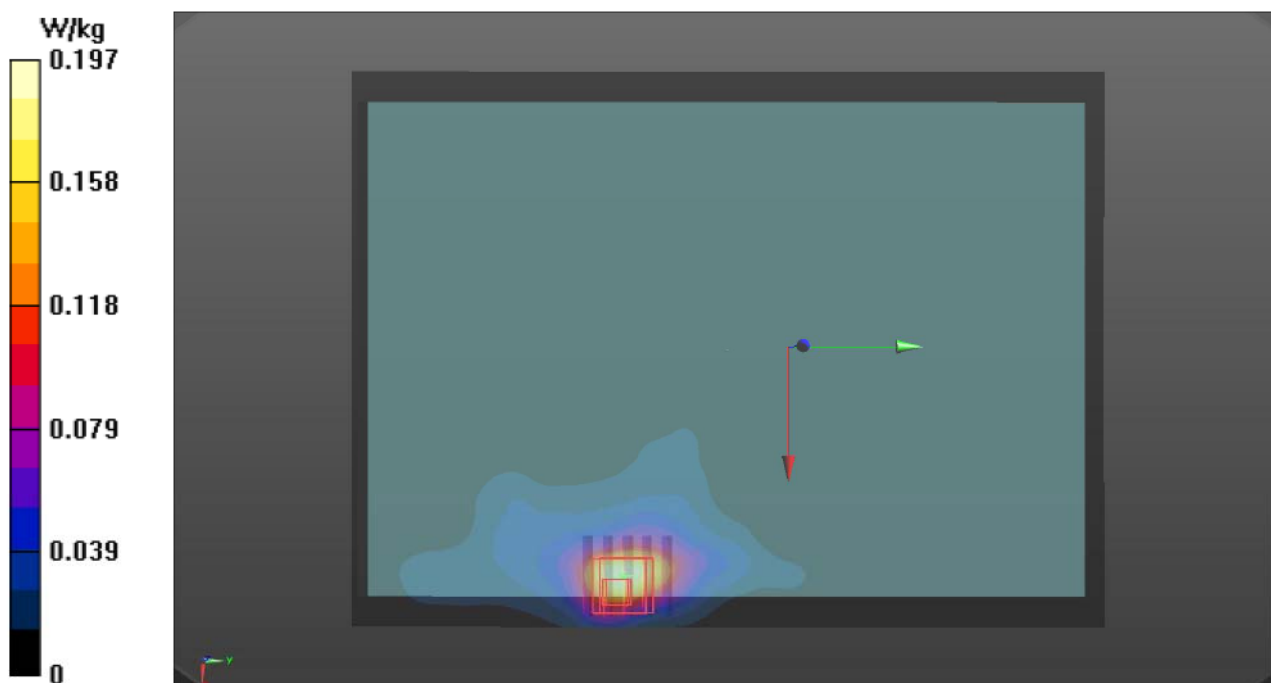
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.584 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (measured) = 0.364 W/kg



P02 802.11b_Left Side_0cm_Ch6_Ant 0**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.989$ S/m; $\epsilon_r = 51.323$; $\rho = 1000$ kg/m³**Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0173 W/kg

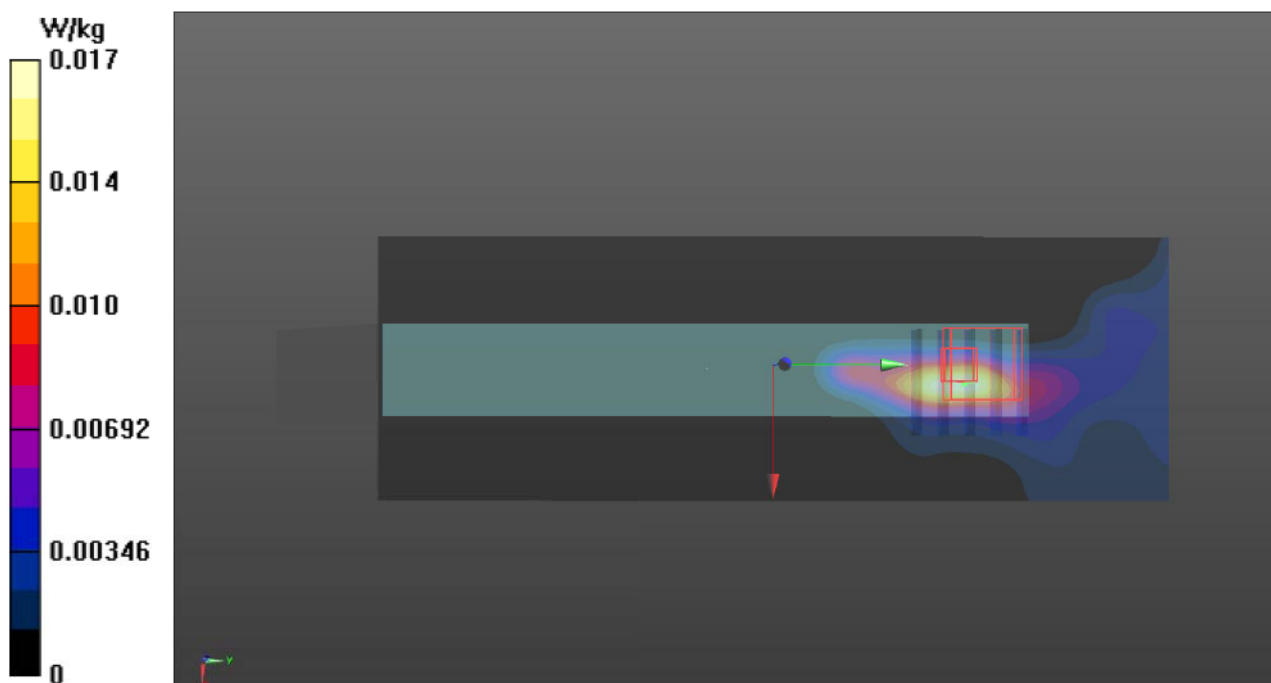
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.463 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.0160 W/kg

SAR(1 g) = 0.00702 W/kg; SAR(10 g) = 0.00331 W/kg

Maximum value of SAR (measured) = 0.0108 W/kg



P03 802.11b_Right Side_0cm_Ch6_Ant 0**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.989$ S/m; $\epsilon_r = 51.323$; $\rho = 1000$ kg/m³**Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0114 W/kg

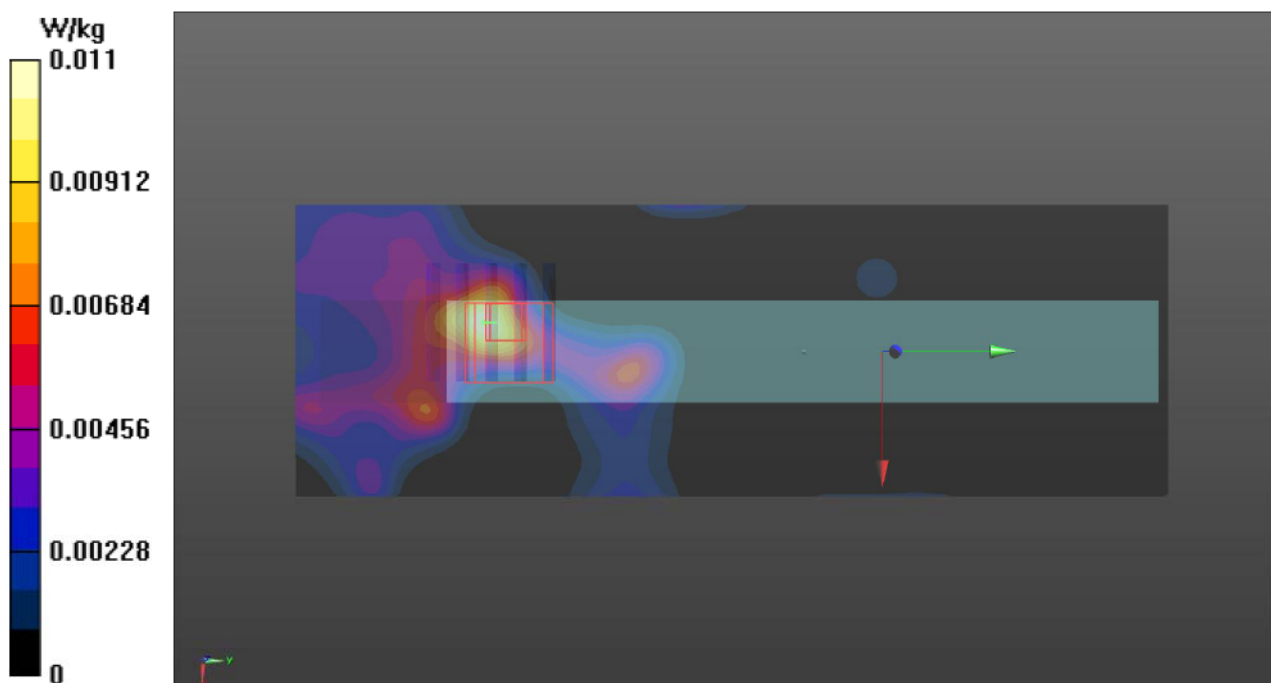
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.837 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.00974 W/kg

SAR(1 g) = 0.00522 W/kg; SAR(10 g) = 0.00311 W/kg

Maximum value of SAR (measured) = 0.00691 W/kg



P04 802.11b_Top Side_0cm_Ch6_Ant 0**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.989$ S/m; $\epsilon_r = 51.323$; $\rho = 1000$ kg/m³**Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.455 W/kg

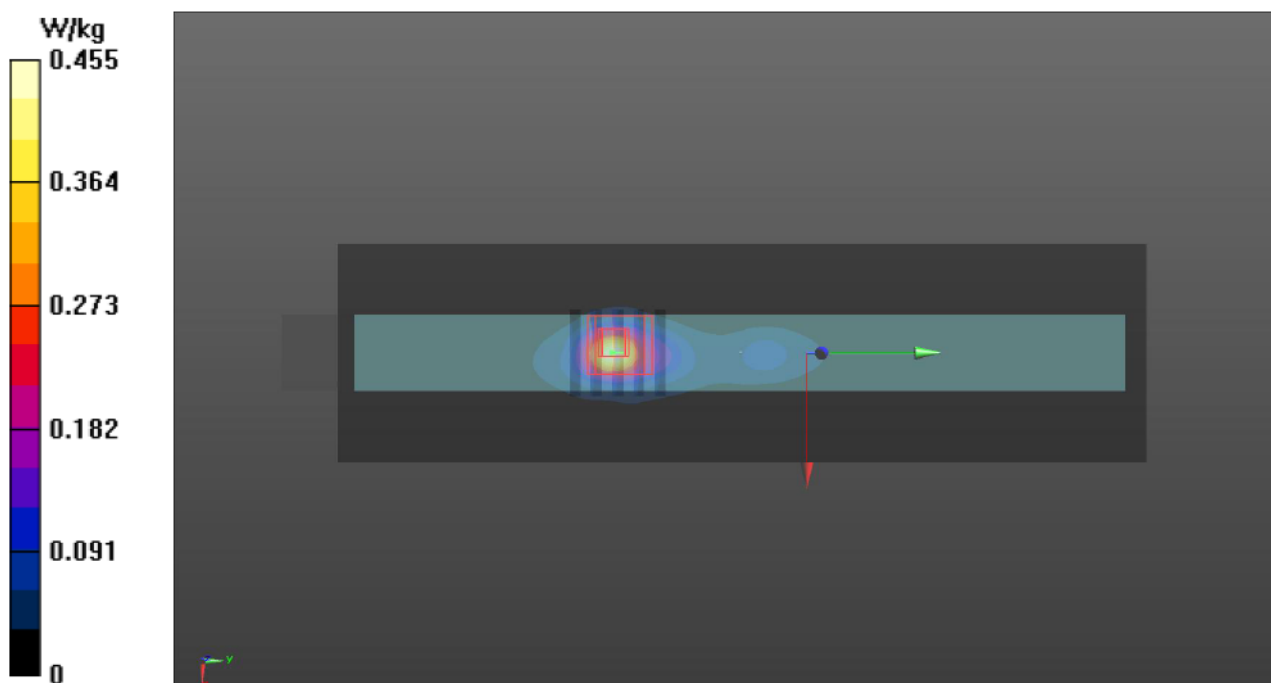
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.02 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.348 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.482 W/kg



P05 802.11b_Bottom Side_0cm_Ch6_Ant 0**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_150123 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.989$ S/m; $\epsilon_r = 51.323$; $\rho = 1000$ kg/m³**Ambient Temperature : 22.9 °C; Liquid Temperature : 22.4 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x281x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.00303 W/kg

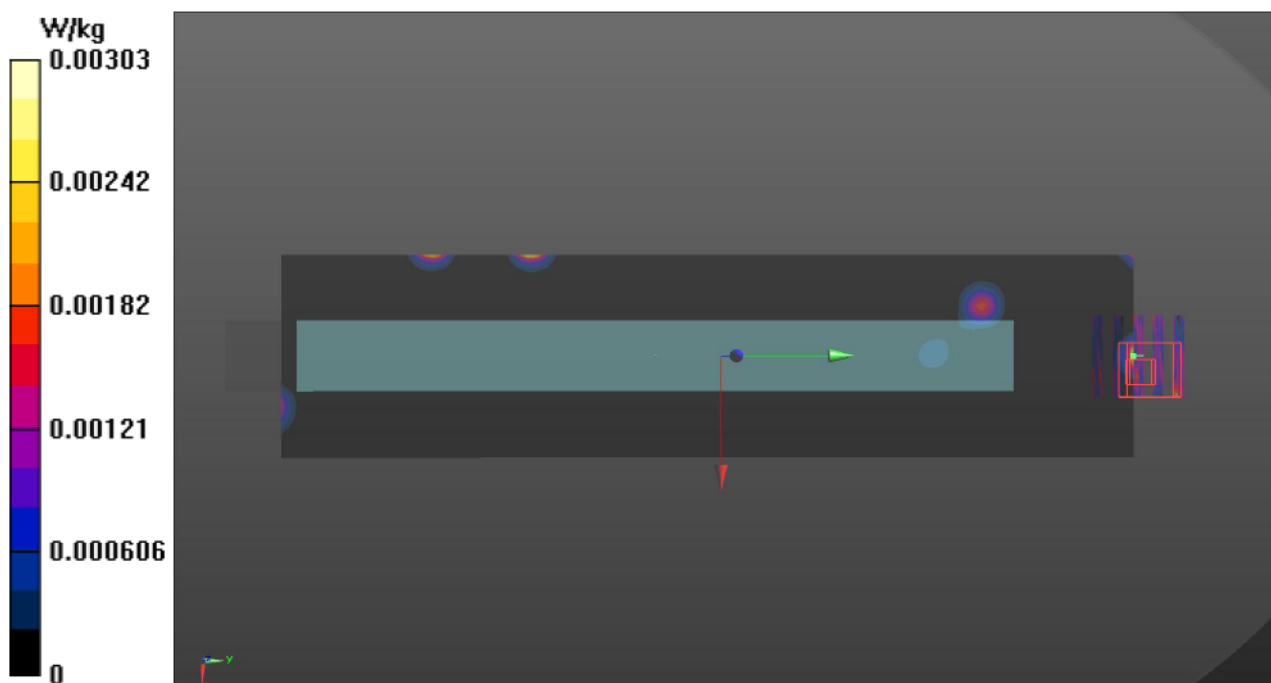
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.7690 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.00321 W/kg

SAR(1 g) = 0.00131 W/kg; SAR(10 g) = 0.000447 W/kg

Maximum value of SAR (measured) = 0.00229 W/kg



P11 802.11n_HT20_Rear Face_0cm_Ch11_Ant 0+1**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 51.266$; $\rho = 1000$ kg/m³**Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (181x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.185 W/kg

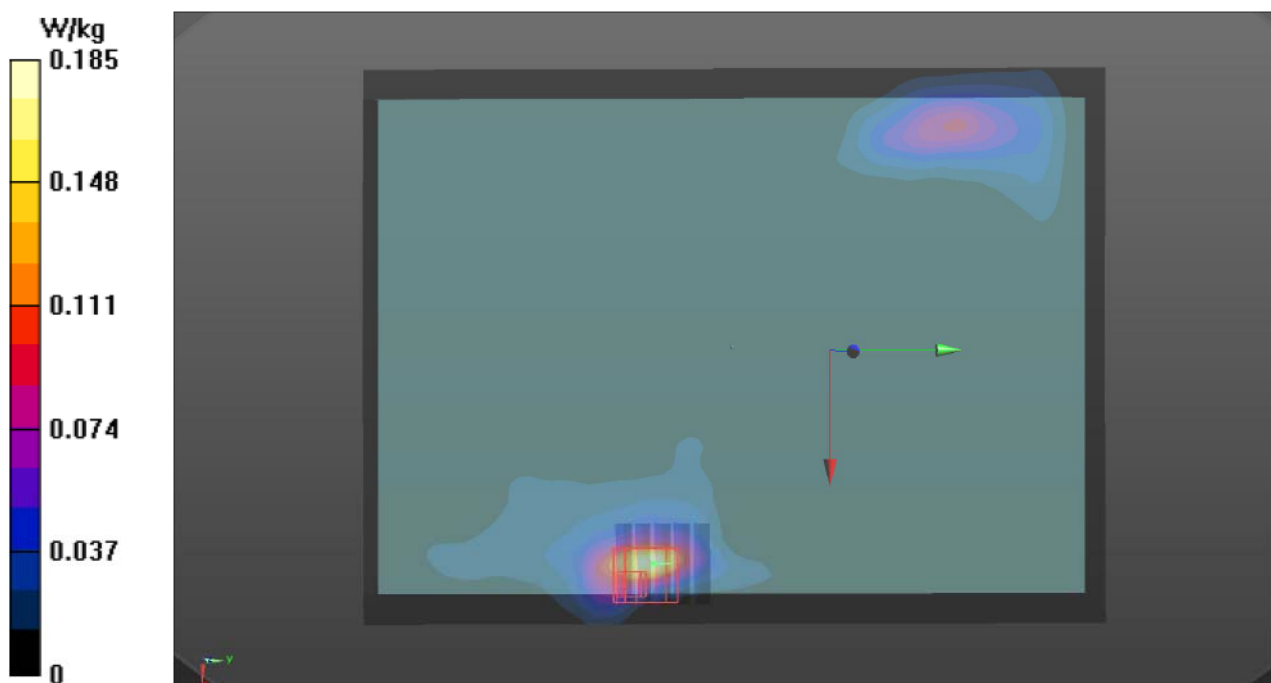
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.967 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.506 W/kg

SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.066 W/kg

Maximum value of SAR (measured) = 0.274 W/kg



P12 802.11n_HT20_Left Side_0cm_Ch11_Ant 0+1**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 51.266$; $\rho = 1000$ kg/m³**Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (71x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0131 W/kg

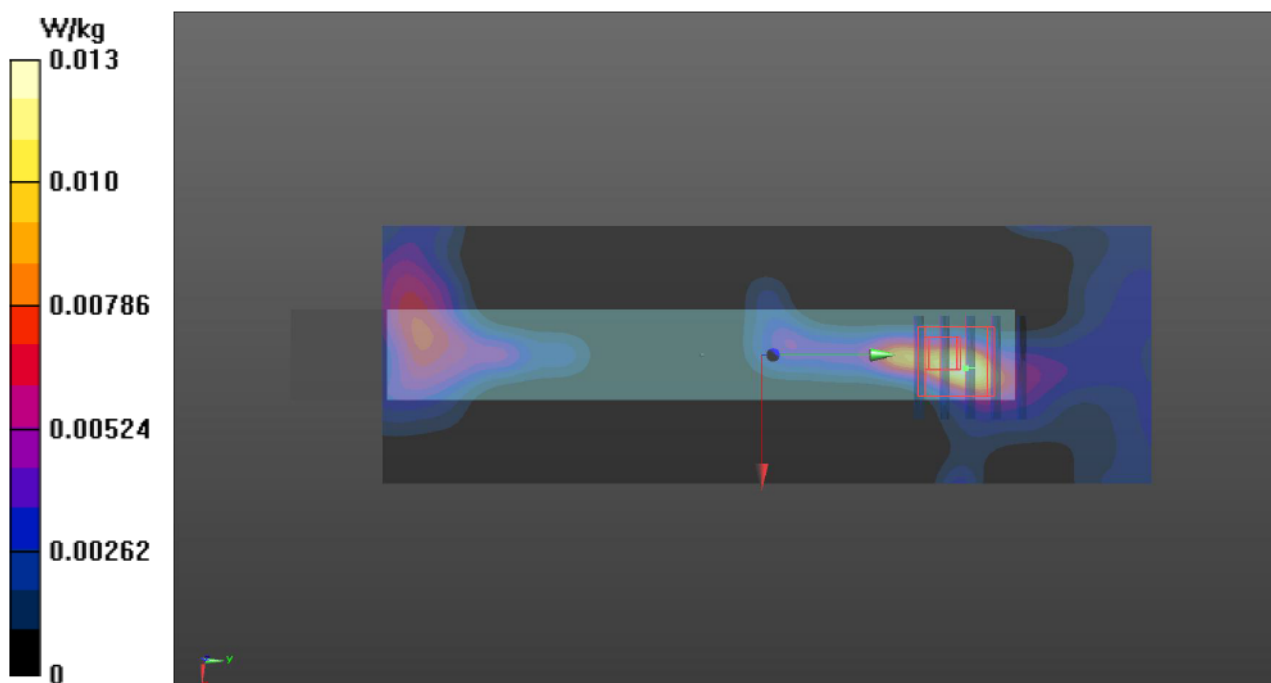
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.324 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.0180 W/kg

SAR(1 g) = 0.00624 W/kg; SAR(10 g) = 0.00286 W/kg

Maximum value of SAR (measured) = 0.00876 W/kg



P13 802.11n_HT20_Right Side_0cm_Ch11_Ant 0+1**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 51.266$; $\rho = 1000$ kg/m³**Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (71x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0348 W/kg

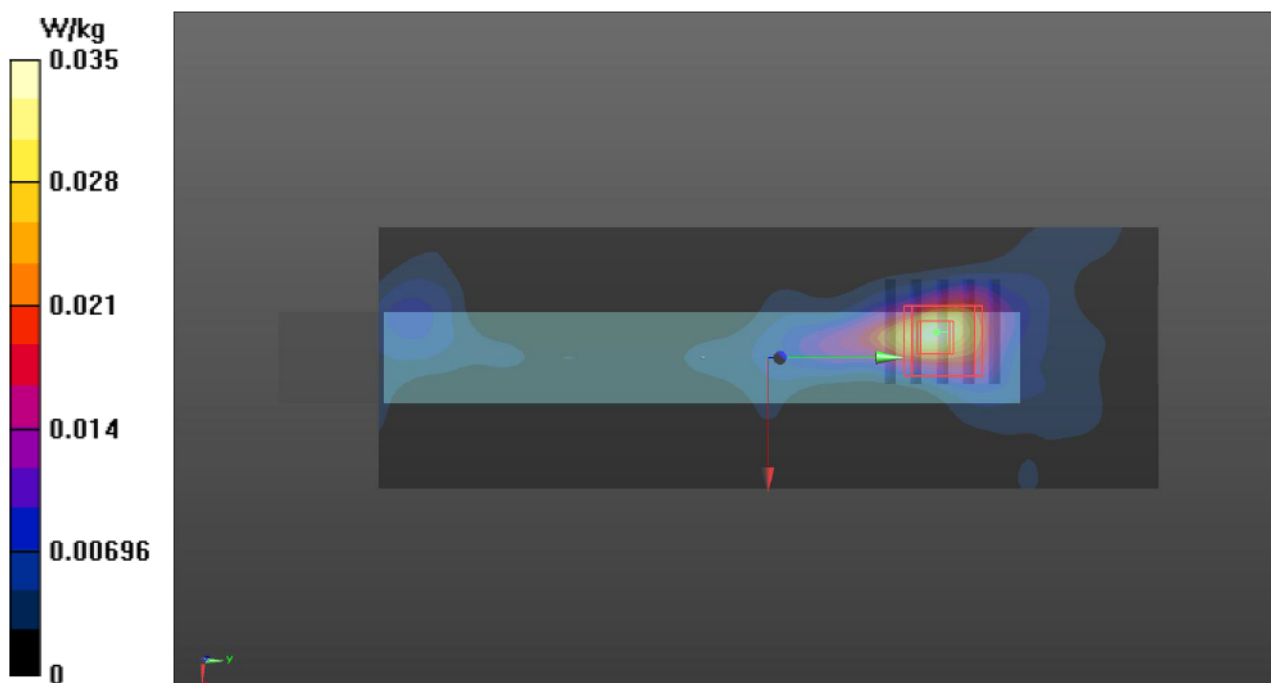
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.005 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.0510 W/kg

SAR(1 g) = 0.018 W/kg; SAR(10 g) = 0.00881 W/kg

Maximum value of SAR (measured) = 0.0251 W/kg



P14 802.11n_HT20_Top Side_0cm_Ch11_Ant 0+1**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 51.266$; $\rho = 1000$ kg/m³**Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (71x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.199 W/kg

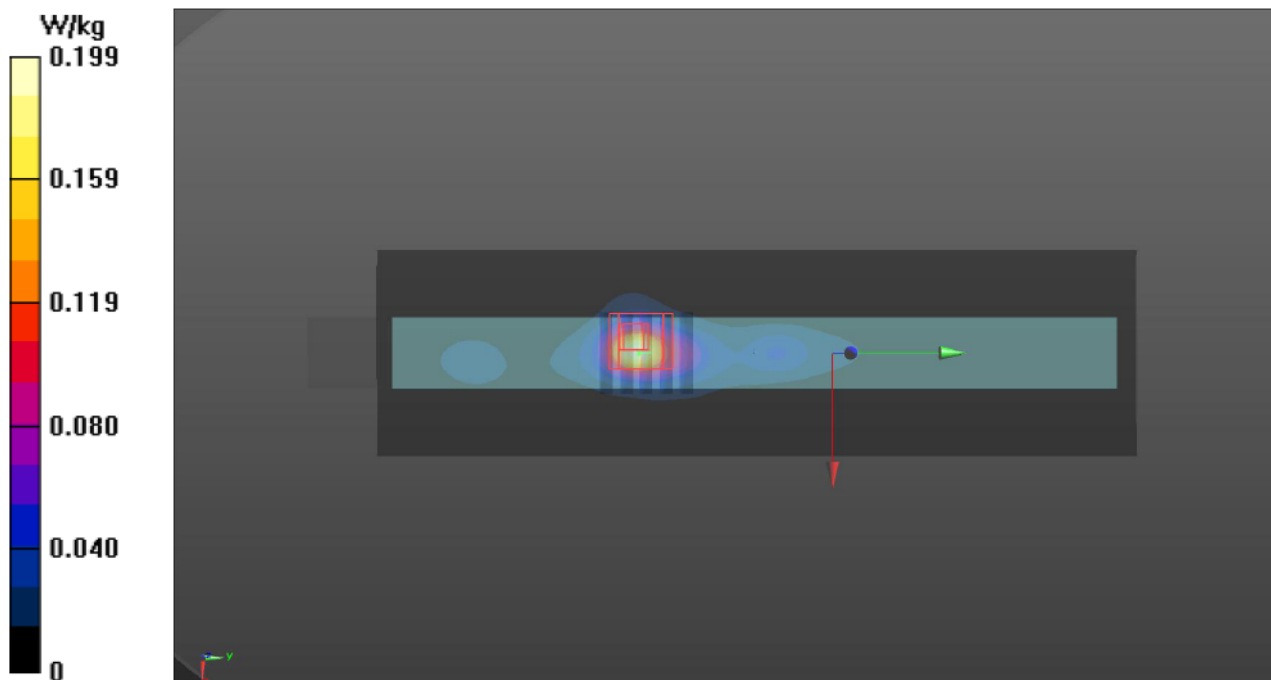
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.33 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.572 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.083 W/kg

Maximum value of SAR (measured) = 0.356 W/kg



P15 802.11n_HT20_Bottom Side_0cm_Ch11_Ant 0+1**DUT: 510861**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_150126 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 51.266$; $\rho = 1000$ kg/m³**Ambient Temperature : 23.0 °C; Liquid Temperature : 22.5 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(7.4, 7.4, 7.4); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (71x251x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.245 W/kg

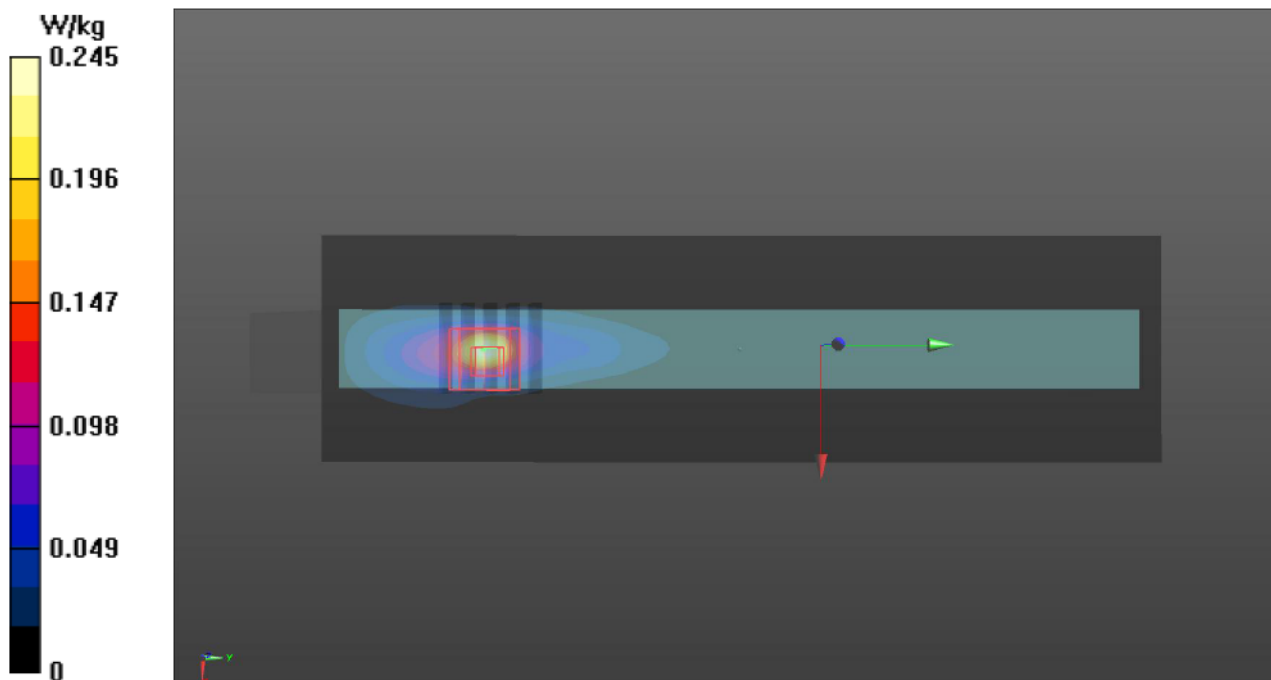
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.12 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.058 W/kg

Maximum value of SAR (measured) = 0.276 W/kg



P16 802.11a_Rear Face_0cm_Ch157_Ant 0

DUT: 510861

Communication System: WLAN_5G; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: B5G_150122 Medium parameters used: $f = 5785$ MHz; $\sigma = 6.167$ S/m; $\epsilon_r = 48.003$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.8 °C; Liquid Temperature : 22.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(4.26, 4.26, 4.26); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch157/Area Scan (221x301x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.530 W/kg

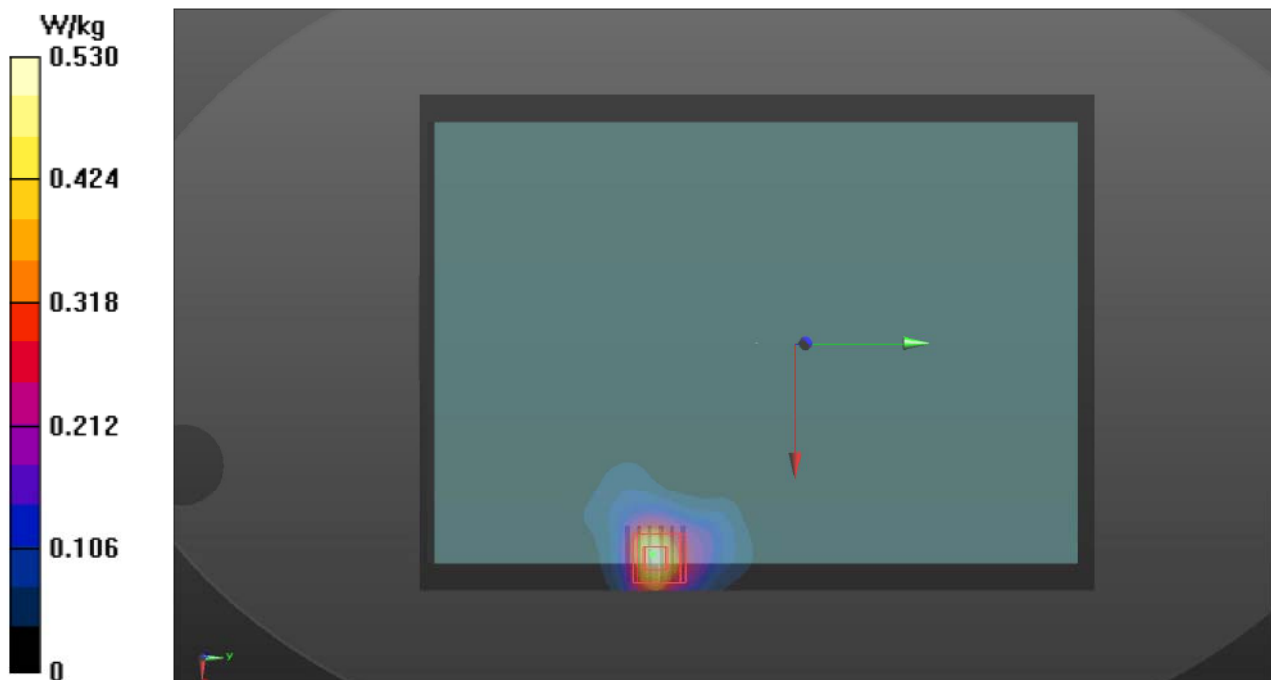
Ch157/Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 9.273 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 0.478 W/kg; SAR(10 g) = 0.143 W/kg

Maximum value of SAR (measured) = 0.995 W/kg



P17 802.11a_Left Side_0cm_Ch157_Ant 0**DUT: 510861**

Communication System: WLAN_5G; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: B5G_150123 Medium parameters used: $f = 5785$ MHz; $\sigma = 5.972$ S/m; $\epsilon_r = 46.856$; $\rho = 1000$ kg/m³**Ambient Temperature : 22.7 °C; Liquid Temperature : 21.9 °C**

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(4.26, 4.26, 4.26); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch157/Area Scan (81x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0428 W/kg

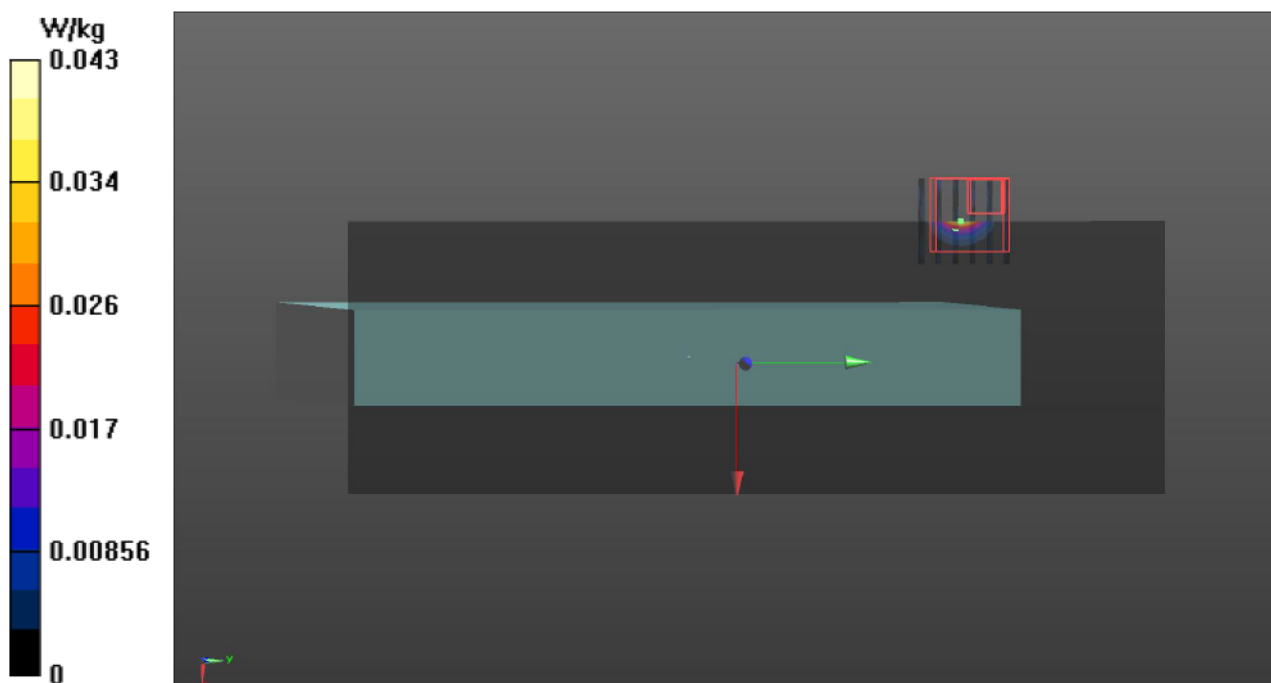
Ch157/Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 0.1570 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0660 W/kg

SAR(1 g) = 0.00249 W/kg; SAR(10 g) = 0.000658 W/kg

Maximum value of SAR (measured) = 0.0119 W/kg



P18 802.11a_Right Side_0cm_Ch157_Ant 0

DUT: 510861

Communication System: WLAN_5G; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: B5G_150123 Medium parameters used: $f = 5785$ MHz; $\sigma = 5.972$ S/m; $\epsilon_r = 46.856$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3976; ConvF(4.26, 4.26, 4.26); Calibrated: 2014/2/17;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1424; Calibrated: 2014/2/11
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1238
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch157/Area Scan (81x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0146 W/kg

Ch157/Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 0.9460 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.0520 W/kg

SAR(1 g) = 0.00135 W/kg; SAR(10 g) = 0.000621 W/kg

Maximum value of SAR (measured) = 0.0103 W/kg

