

**APPENDIX A: TEST DATA**  
**Liquid Level Photo**

**MSL 2450MHz D=152mm**



Test Laboratory: Advance Data Technology

## G430-11b-CH1-Mode 1

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2412 MHz**

Communication System: 802.11b ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: DBPSK  
Medium: MSL2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.98$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.423 mW/g

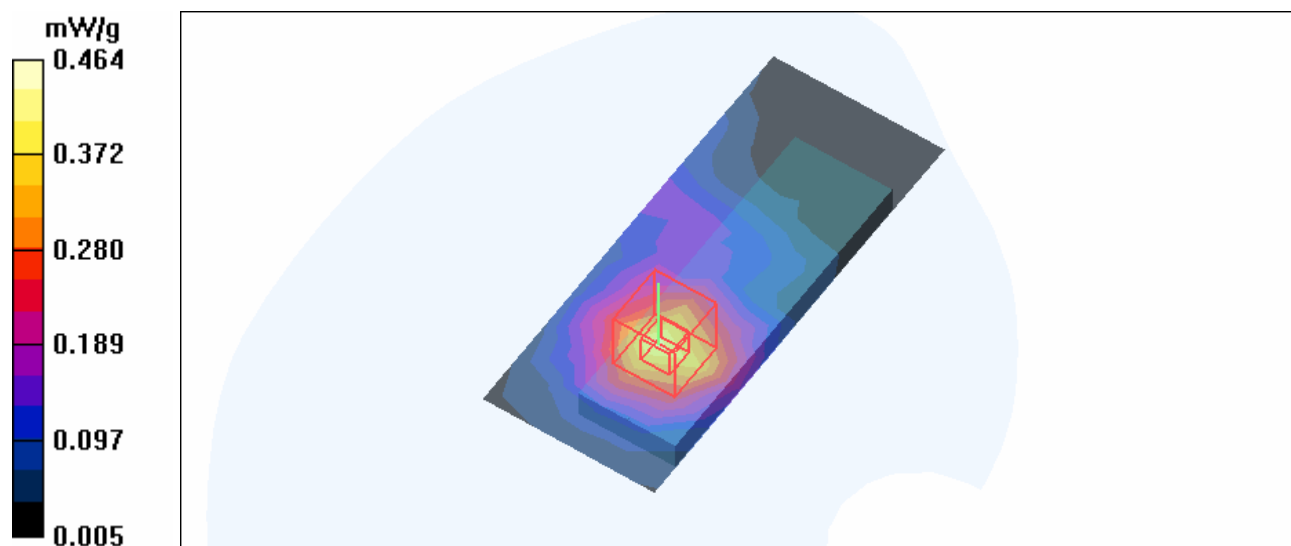
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

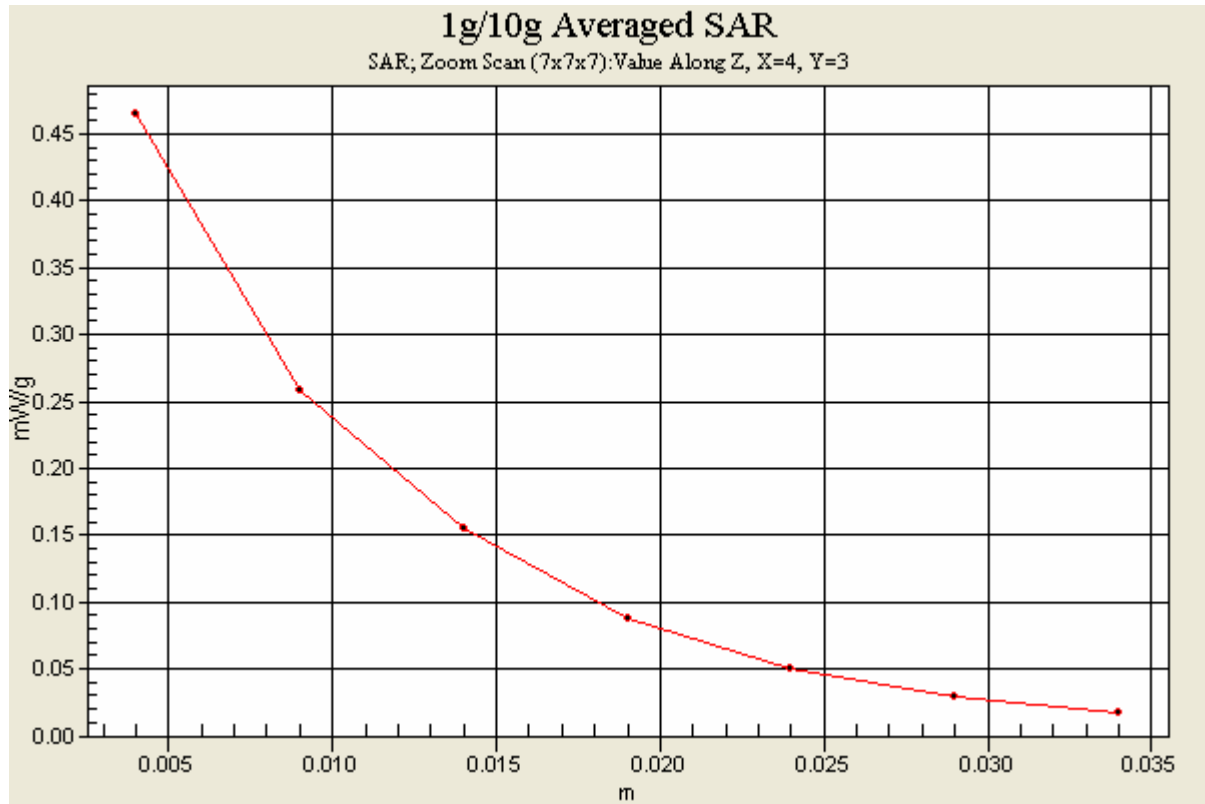
Reference Value = 12.0 V/m

Peak SAR (extrapolated) = 0.857 W/kg

**SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.242 mW/g**

Maximum value of SAR (measured) = 0.464 mW/g





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### G430-11b-CH6-Mode 1

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11b ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: DBPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.311 mW/g

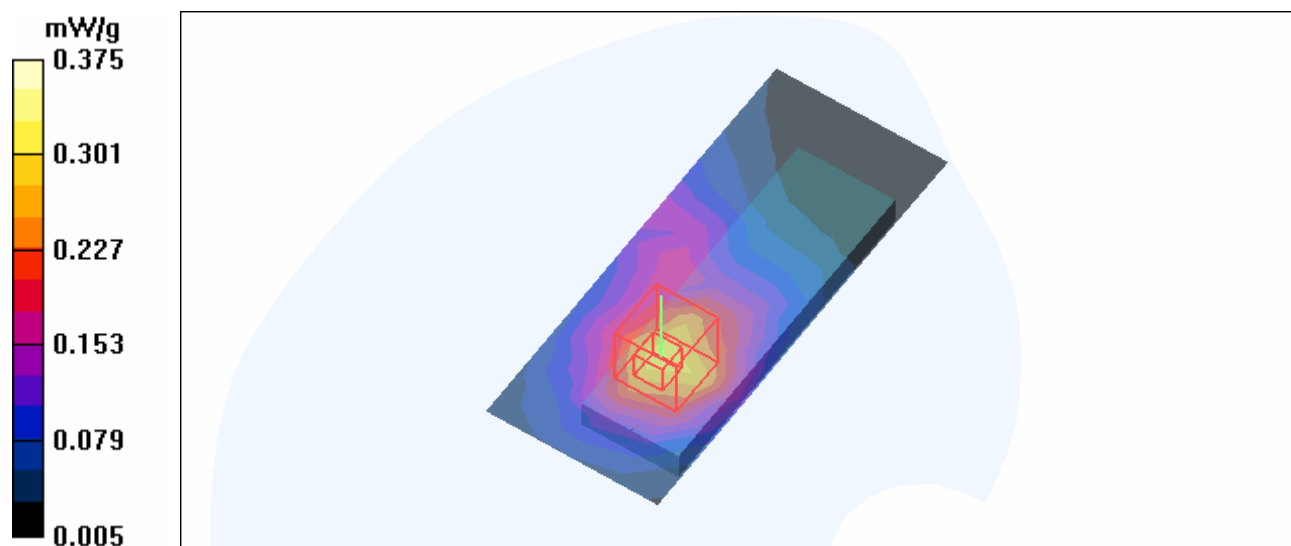
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.0 V/m

Peak SAR (extrapolated) = 0.845 W/kg

**SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.168 mW/g**

Maximum value of SAR (measured) = 0.375 mW/g



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## G430-11b-CH11-Mode 1

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2462 MHz**

Communication System: 802.11b ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: DBPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2462$  MHz;  $\sigma = 2.05$  mho/m;  $\epsilon_r = 51.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**High Channel 11/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.280 mW/g

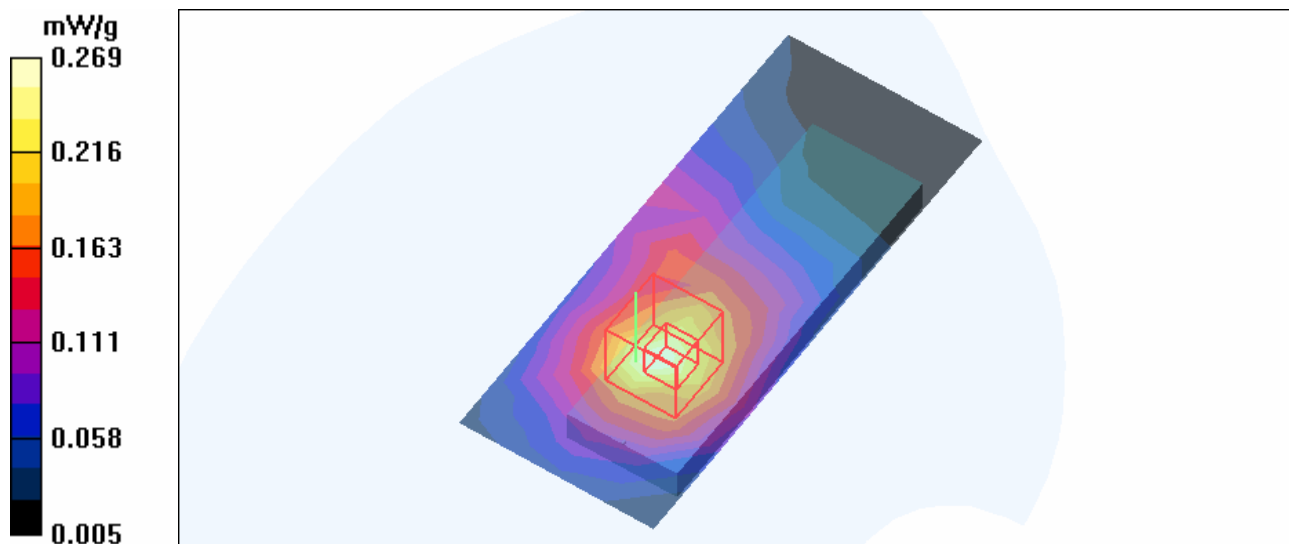
**High Channel 11/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.80 V/m

Peak SAR (extrapolated) = 0.620 W/kg

**SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.135 mW/g**

Maximum value of SAR (measured) = 0.269 mW/g



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## G430-11g-CH1-Mode 2

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2412 MHz**

Communication System: 802.11g ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.98$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.205 mW/g

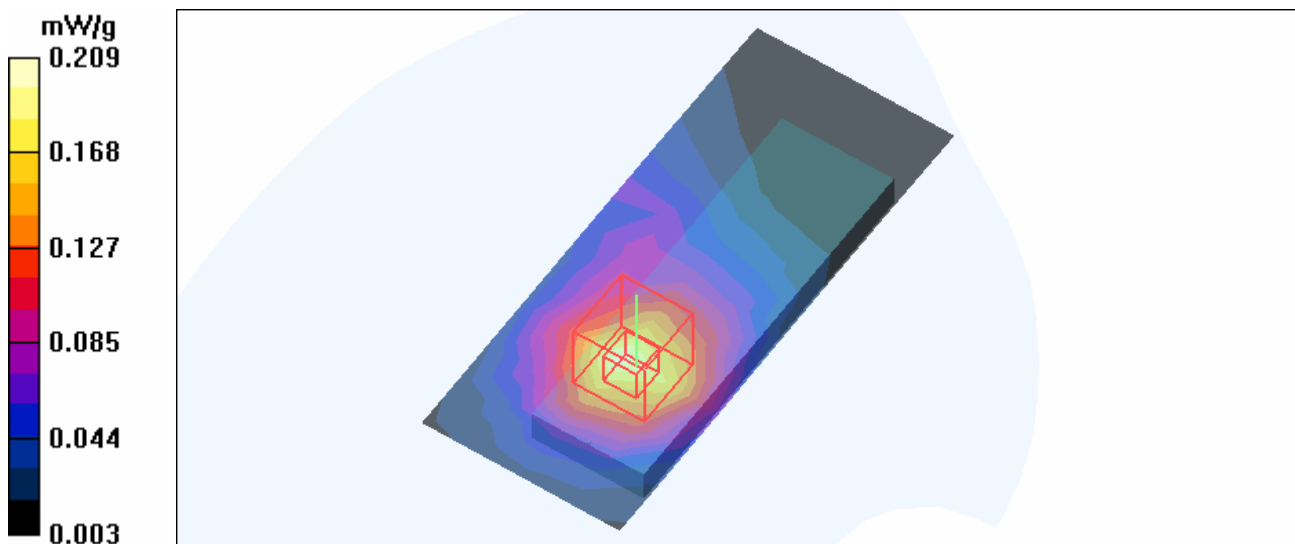
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.76 V/m

Peak SAR (extrapolated) = 0.406 W/kg

**SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.108 mW/g**

Maximum value of SAR (measured) = 0.209 mW/g



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## G430-11g-CH6-Mode 2

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11g ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.379 mW/g

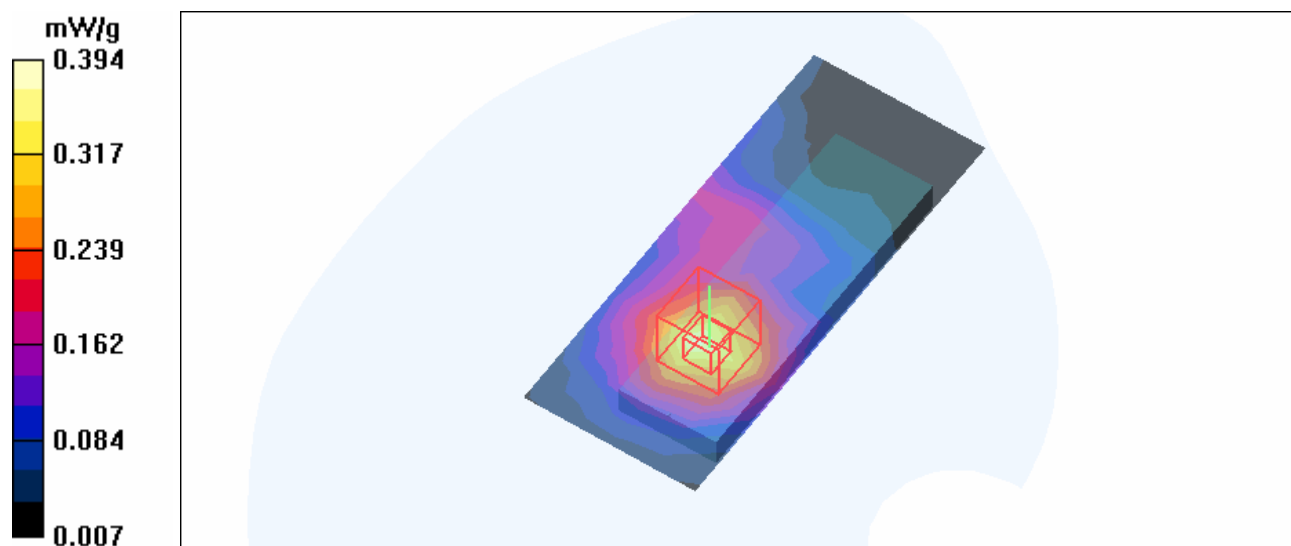
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.6 V/m

Peak SAR (extrapolated) = 0.747 W/kg

**SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.207 mW/g**

Maximum value of SAR (measured) = 0.394 mW/g



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## G430-11g-CH11-Mode 2

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2462 MHz**

Communication System: 802.11g ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.05 \text{ mho/m}$ ;  $\epsilon_r = 51.3$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**High Channel 11/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.183 mW/g

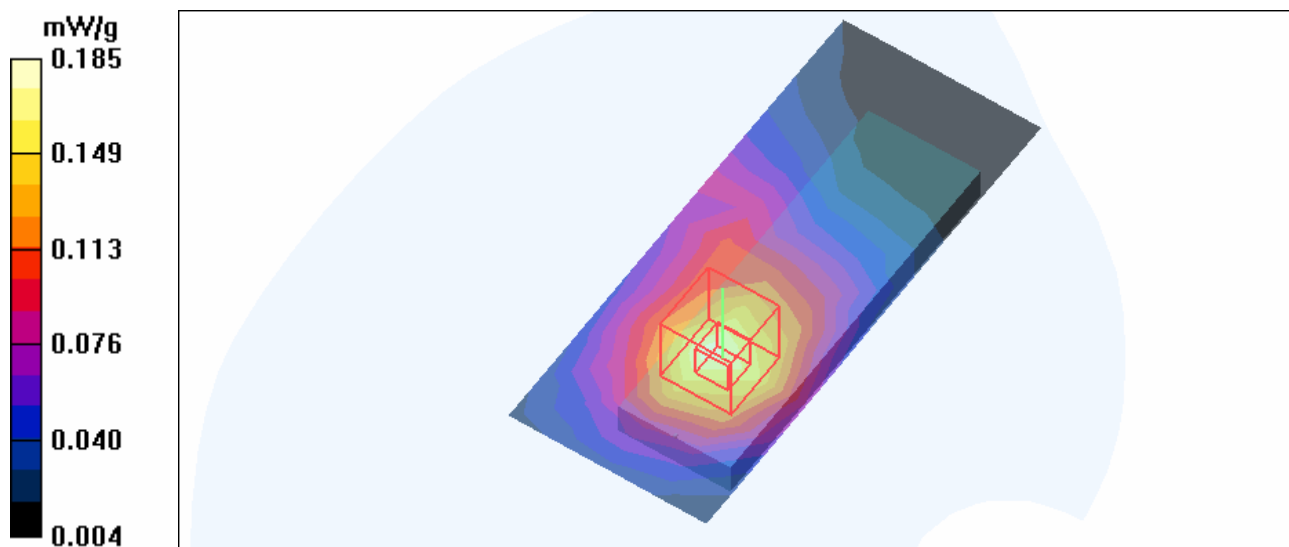
**High Channel 11/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 8.74 V/m

Peak SAR (extrapolated) = 0.362 W/kg

**SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.099 mW/g**

Maximum value of SAR (measured) = 0.185 mW/g





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### G430-SPAN20-CH1-Mode 3

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2412 MHz**

Communication System: 802.11n ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.98 \text{ mho/m}$ ;  $\epsilon_r = 51.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm  
 Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.163 mW/g

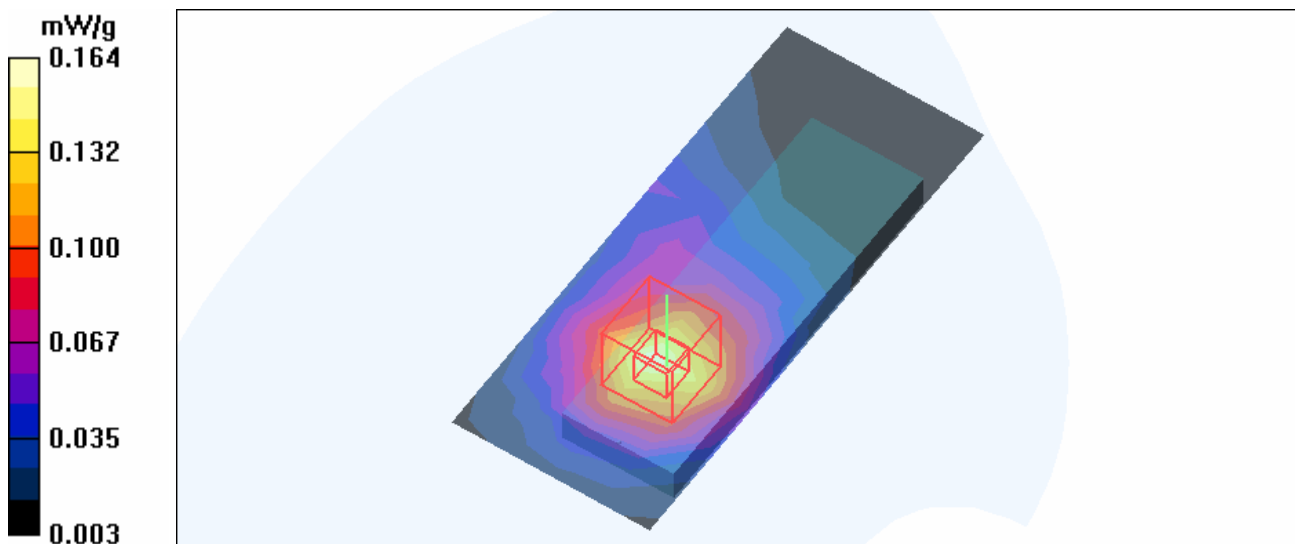
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.84 V/m

Peak SAR (extrapolated) = 0.313 W/kg

**SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.086 mW/g**

Maximum value of SAR (measured) = 0.164 mW/g



Test Laboratory: Advance Data Technology

### G430-SPAN20-CH6-Mode 3

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.232 mW/g

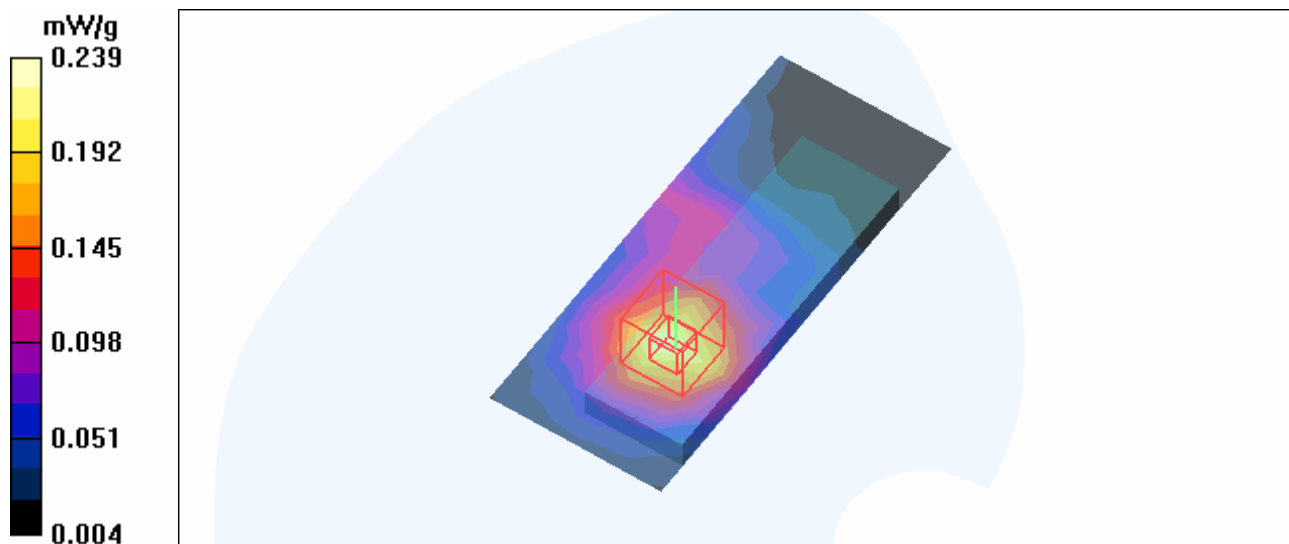
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.11 V/m

Peak SAR (extrapolated) = 0.454 W/kg

**SAR(1 g) = 0.224 mW/g; SAR(10 g) = 0.125 mW/g**

Maximum value of SAR (measured) = 0.239 mW/g



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### G430-SPAN20-CH11-Mode 3

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2462 MHz**

Communication System: 802.11n ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.05 \text{ mho/m}$ ;  $\epsilon_r = 51.3$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm  
 Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**High Channel 11/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.121 mW/g

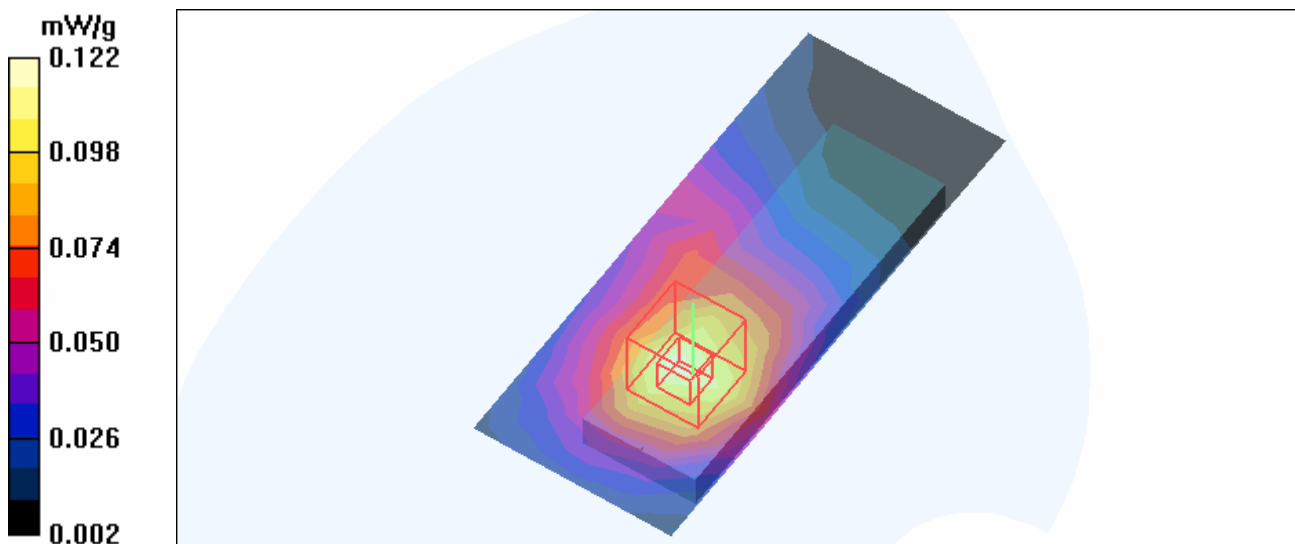
**High Channel 11/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.17 V/m

Peak SAR (extrapolated) = 0.239 W/kg

**SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.066 mW/g**

Maximum value of SAR (measured) = 0.122 mW/g



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### G430-SPAN40-CH1-Mode 4

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2422 MHz**

Communication System: 802.11n ; Frequency: 2422 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
Medium: MSL2450 Medium parameters used :  $f = 2422$  MHz;  $\sigma = 1.99$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm  
Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.094 mW/g

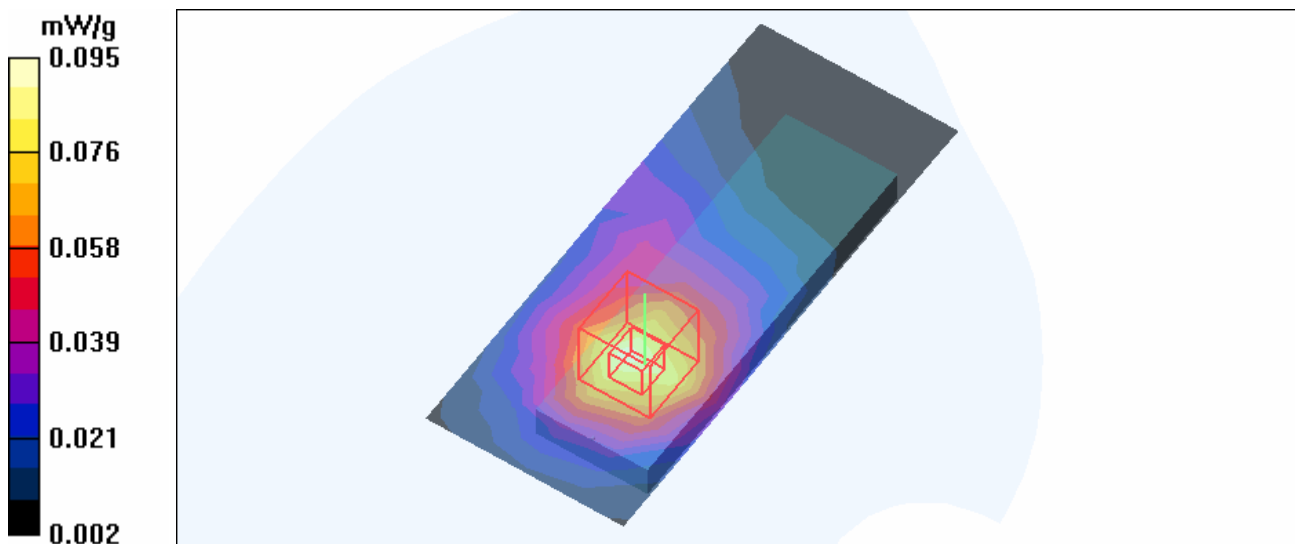
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.96 V/m

Peak SAR (extrapolated) = 0.182 W/kg

**SAR(1 g) = 0.090 mW/g; SAR(10 g) = 0.050 mW/g**

Maximum value of SAR (measured) = 0.095 mW/g



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### G430-SPAN40-CH4-Mode 4

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 4/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.145 mW/g

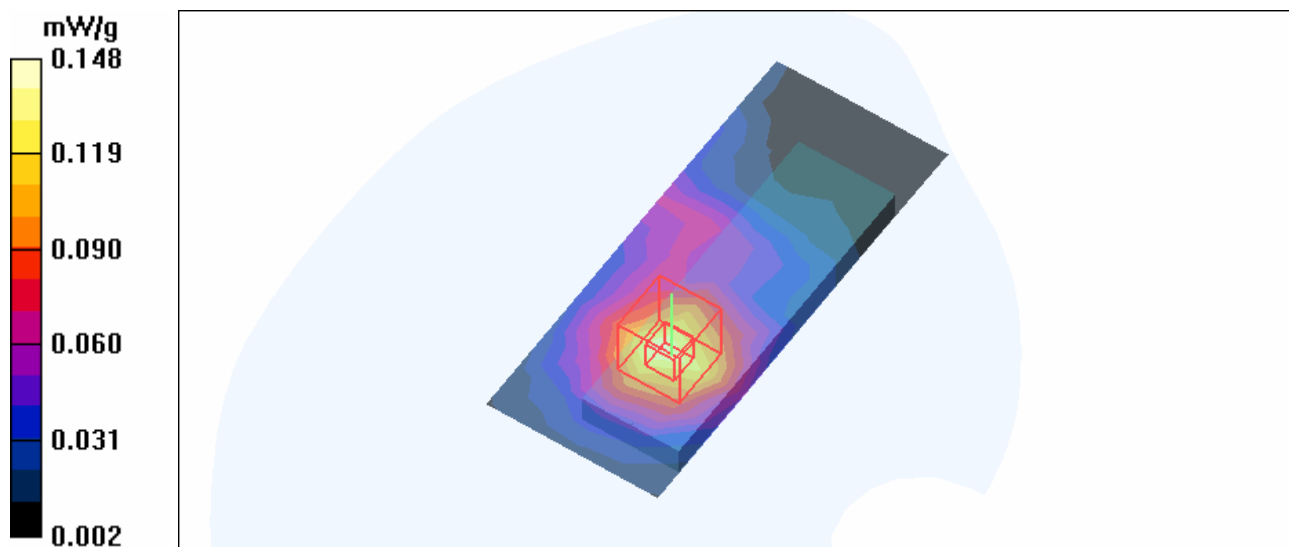
**Mid Channel 4/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.26 V/m

Peak SAR (extrapolated) = 0.281 W/kg

**SAR(1 g) = 0.139 mW/g; SAR(10 g) = 0.077 mW/g**

Maximum value of SAR (measured) = 0.148 mW/g



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### G430-SPAN40-CH7-Mode 4

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2452 MHz**

Communication System: 802.11n ; Frequency: 2452 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used :  $f = 2452 \text{ MHz}$ ;  $\sigma = 2.03 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 14 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**High Channel 7/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.082 mW/g

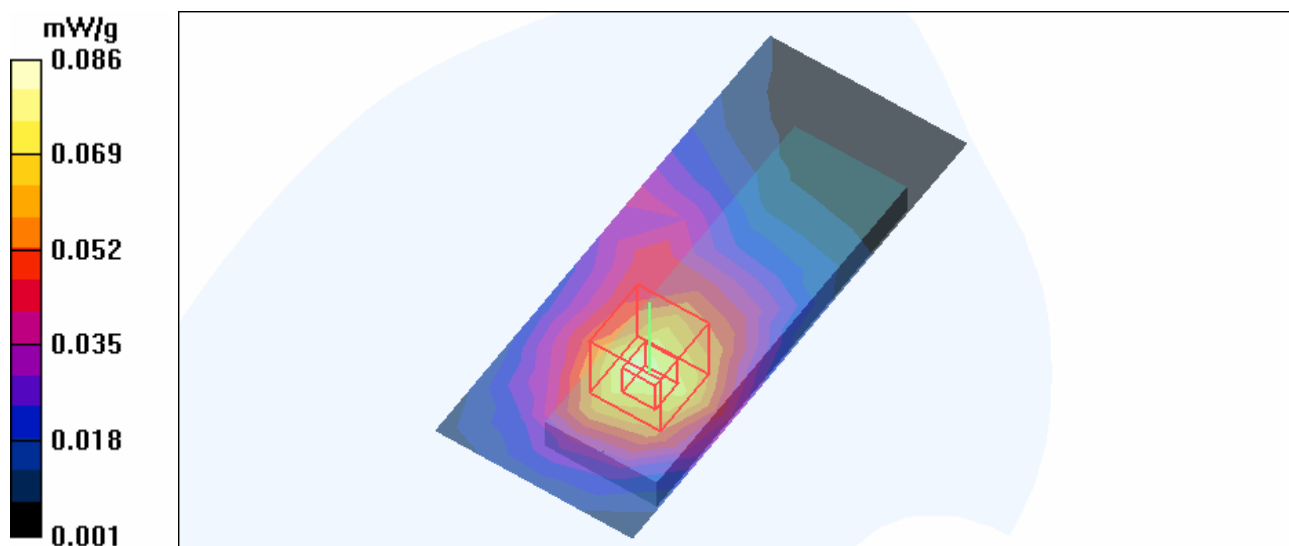
**High Channel 7/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 5.85 V/m

Peak SAR (extrapolated) = 0.170 W/kg

**SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.045 mW/g**

Maximum value of SAR (measured) = 0.086 mW/g



Test Laboratory: Advance Data Technology

## G410-11b-CH1-Mode 5

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2412 MHz**

Communication System: 802.11b ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: DBPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.98$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 15 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.390 mW/g

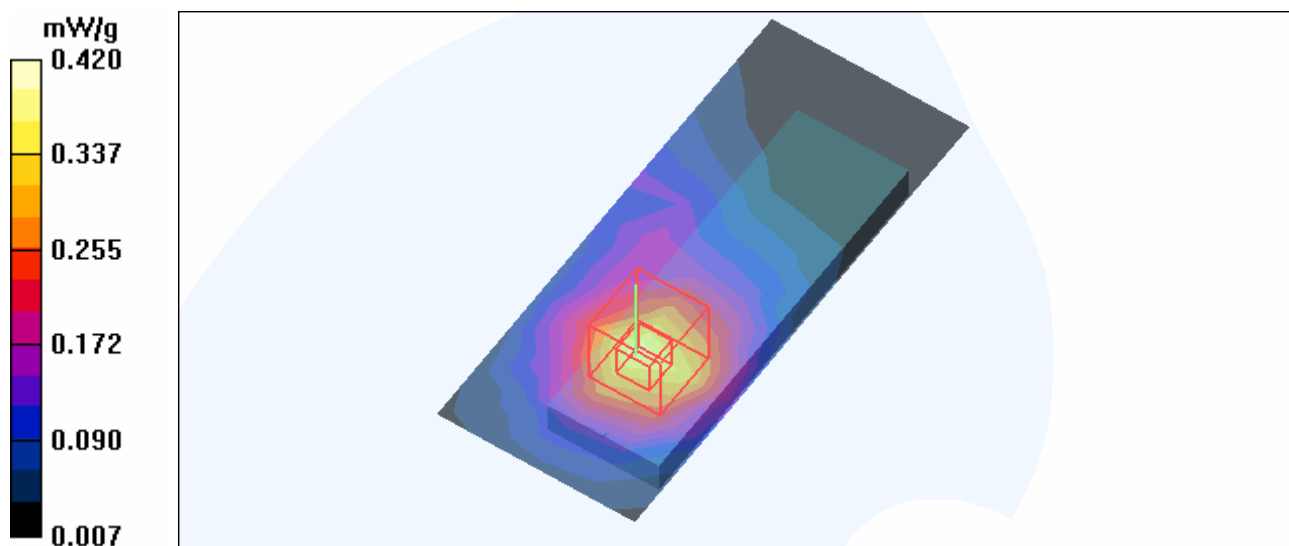
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.0 V/m

Peak SAR (extrapolated) = 0.843 W/kg

**SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.218 mW/g**

Maximum value of SAR (measured) = 0.420 mW/g



Test Laboratory: Advance Data Technology

## G410-11g-CH6-Mode 6

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11g ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 15 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.338 mW/g

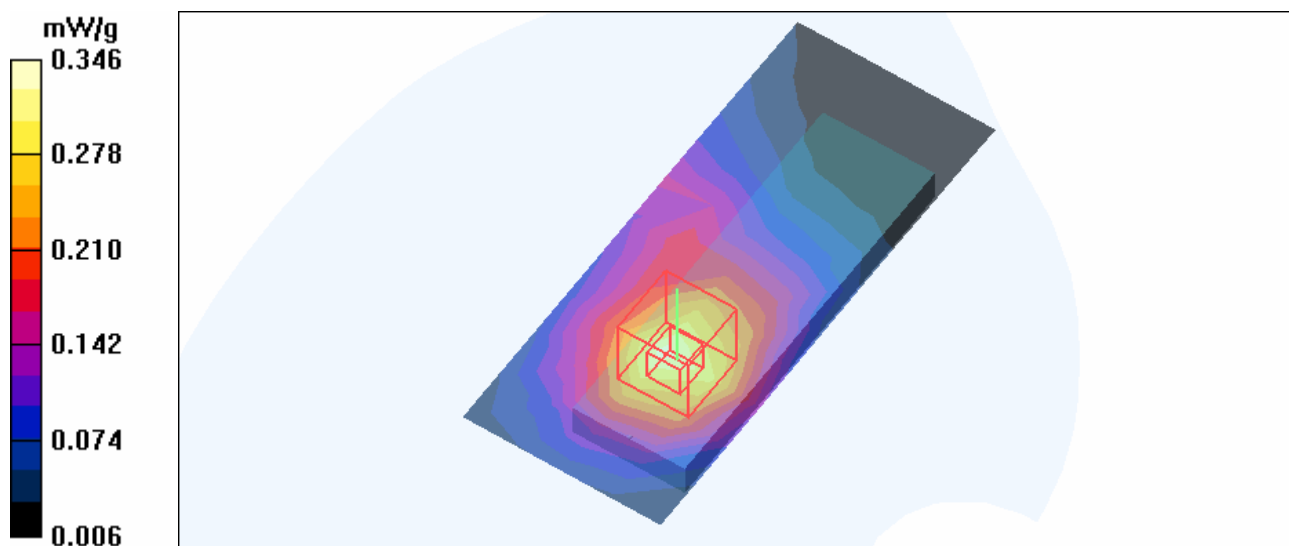
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.6 V/m

Peak SAR (extrapolated) = 0.664 W/kg

**SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.185 mW/g**

Maximum value of SAR (measured) = 0.346 mW/g





Test Laboratory: Advance Data Technology

### G410-SPAN20-CH6-Mode 7

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 15 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.212 mW/g

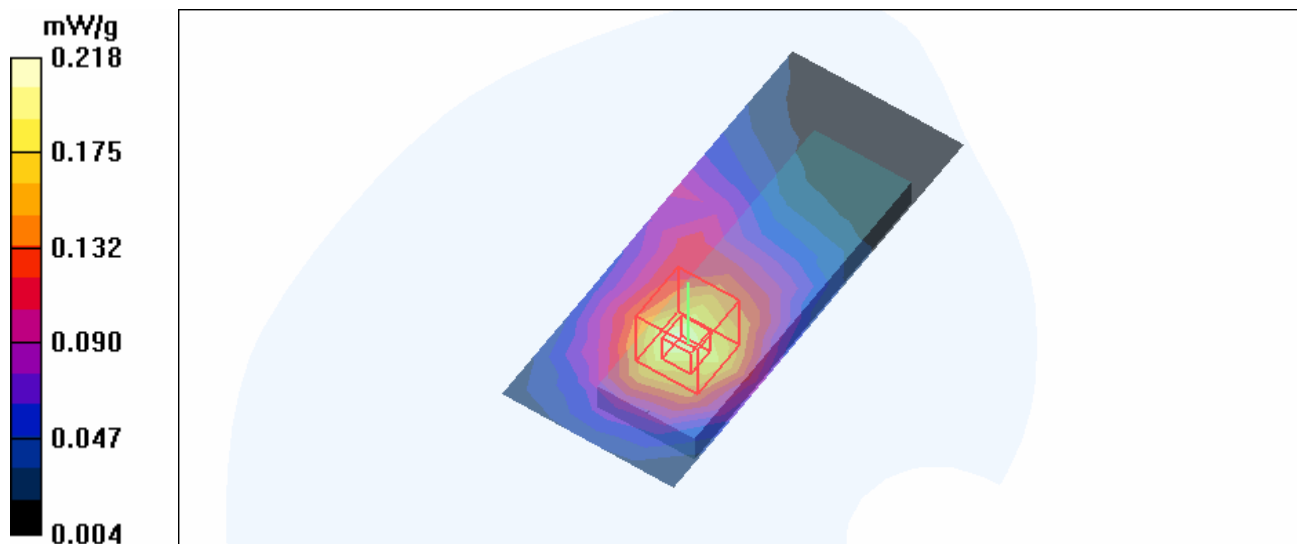
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 9.20 V/m

Peak SAR (extrapolated) = 0.418 W/kg

**SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.117 mW/g**

Maximum value of SAR (measured) = 0.218 mW/g



Test Laboratory: Advance Data Technology

### G410-SPAN40-CH4-Mode 8

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 15 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 4/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.139 mW/g

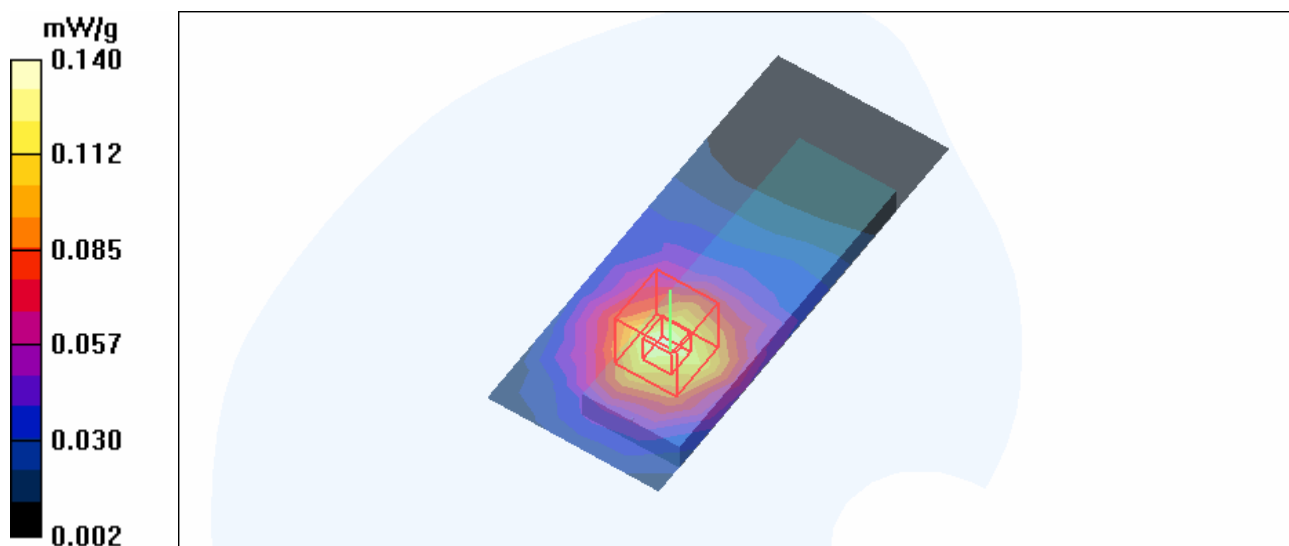
**Mid Channel 4/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.13 V/m

Peak SAR (extrapolated) = 0.271 W/kg

**SAR(1 g) = 0.132 mW/g; SAR(10 g) = 0.073 mW/g**

Maximum value of SAR (measured) = 0.140 mW/g



Test Laboratory: Advance Data Technology

## NX6125-11b-CH1-Mode 9

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2412 MHz**

Communication System: 802.11b ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: DBPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.98 \text{ mho/m}$ ;  $\epsilon_r = 51.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 16 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Low Channel 1/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.370 mW/g

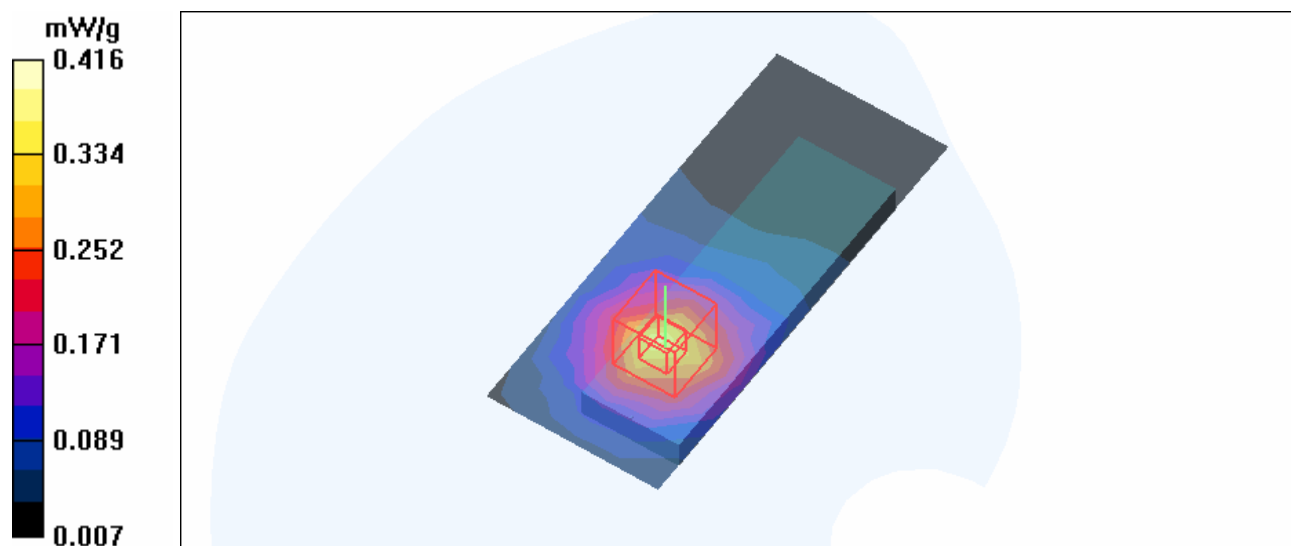
**Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.9 V/m

Peak SAR (extrapolated) = 0.819 W/kg

**SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.207 mW/g**

Maximum value of SAR (measured) = 0.416 mW/g



Test Laboratory: Advance Data Technology

### NX6125-11g-CH6-Mode 10

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11g ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 16 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.320 mW/g

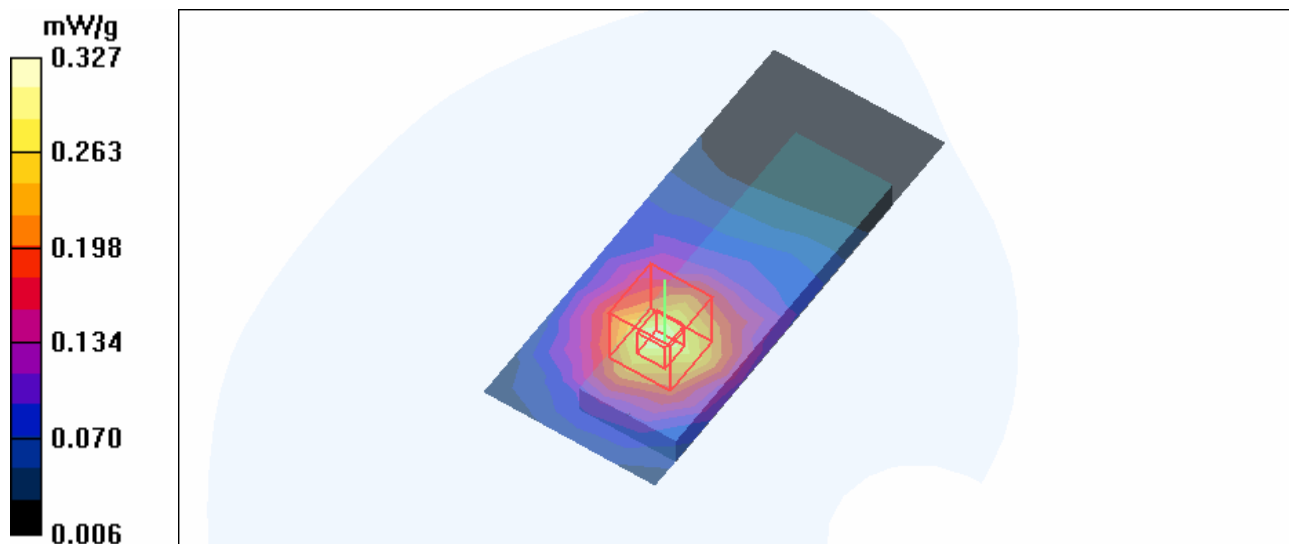
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 10.7 V/m

Peak SAR (extrapolated) = 0.630 W/kg

**SAR(1 g) = 0.311 mW/g; SAR(10 g) = 0.173 mW/g**

Maximum value of SAR (measured) = 0.327 mW/g



Test Laboratory: Advance Data Technology

### NX6125-SPAN20-CH6-Mode 11

**DUT: D-Link DWA-643 Xtreme N™ ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2.01 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 16 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 6/Area Scan (5x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.221 mW/g

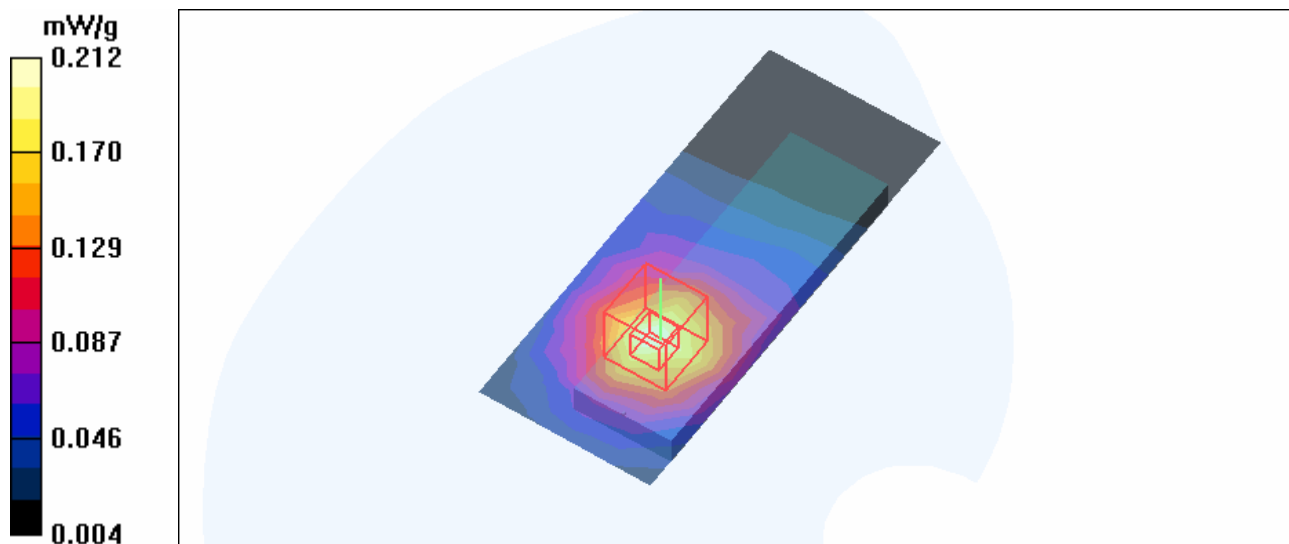
**Mid Channel 6/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 9.04 V/m

Peak SAR (extrapolated) = 0.405 W/kg

**SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.110 mW/g**

Maximum value of SAR (measured) = 0.212 mW/g



Test Laboratory: Advance Data Technology

## NX6125-SPAN40-CH4-Mode 12

**DUT: D-Link DWA-643 Xtreme N<sup>TM</sup> ExpressCard Notebook Adapter ; Type: DWA-643 ; Test Frequency: 2437 MHz**

Communication System: 802.11n ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK  
 Medium: MSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 16 mm (The Bottom side of the EUT to the Phantom)  
 Antenna type : PIFA Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2006/3/15
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44 ; Postprocessing SW: SEMCAD, V1.8 Build 171

**Mid Channel 4/Area Scan (5x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.132 mW/g

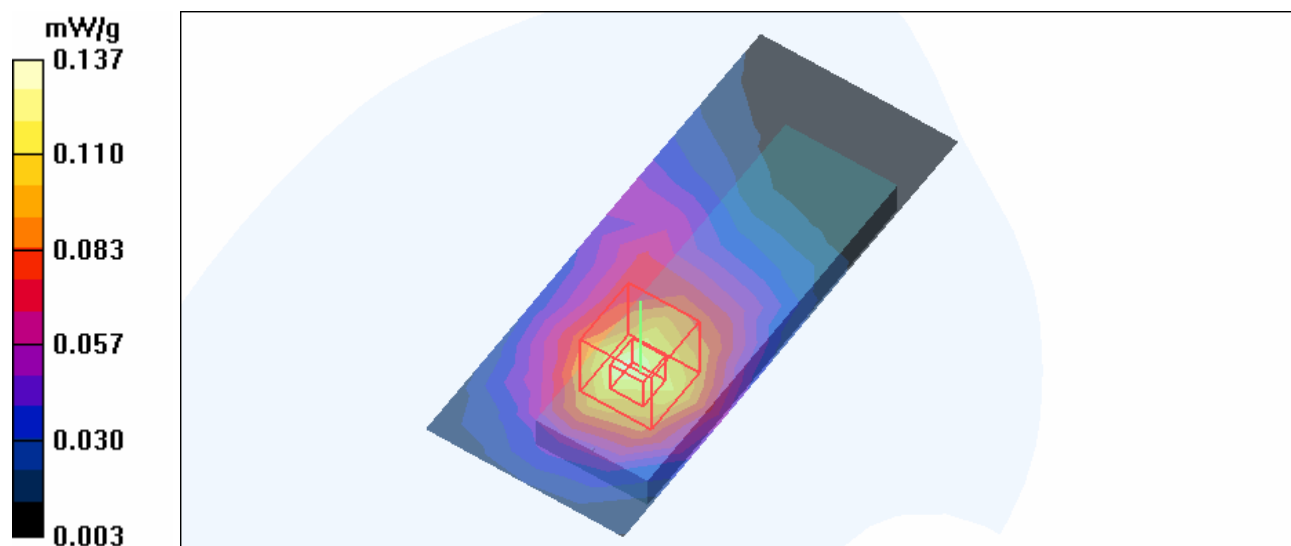
**Mid Channel 4/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.22 V/m

Peak SAR (extrapolated) = 0.264 W/kg

**SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.072 mW/g**

Maximum value of SAR (measured) = 0.137 mW/g



Test Laboratory: Advance Data Technology

## System Validation Check-MSL 2450MHz

**DUT: Dipole 2450 MHz ; Type: D2450V2 ; Serial: 737 ; Test Frequency: 2450 MHz**

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: MSL2450; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 2.03$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 152 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom) Air temp. : 23.0 degrees ; Liquid temp. : 22.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(6.47, 6.47, 6.47) ; Calibrated: 2006/3/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2006/3/15
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**d=10mm, Pin=250mW/Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 15.8 mW/g

**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.0 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 31.2 W/kg

**SAR(1 g) = 14 mW/g; SAR(10 g) = 6.42 mW/g**

Maximum value of SAR (measured) = 15.6 mW/g

