



#### **APPENDIX A - SAR MEASUREMENT DATA**

SAM Phantom; Flat Section; Position: (0°,0°) Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.215 mW/g, SAR (10g): 0.123 mW/g

Body SAR - Back of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Back of LCD Display to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

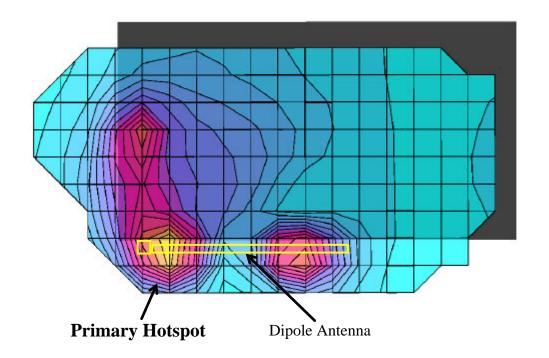
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

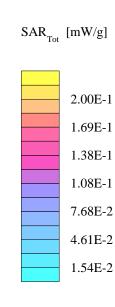
PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

# **Primary Hotspot Evaluation**





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55$  mho/m  $\varepsilon_r = 51.1 \ \rho = 1.00 \ g/cm^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.187 mW/g, SAR (10g): 0.108 mW/g

Body SAR - Back of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Back of LCD Display to Planar Phantom

Itronix IX260 Rugged Laptop PC

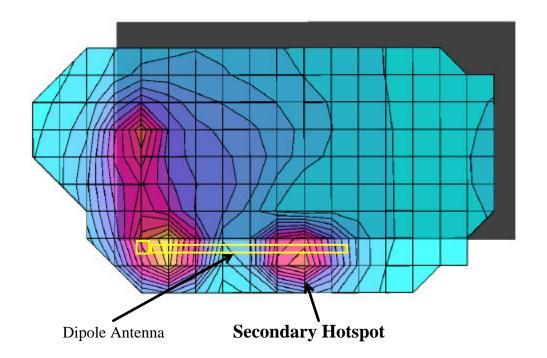
with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

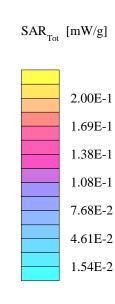
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

## **Secondary Hotspot Evaluation**





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0 1900 MHz Muscle:  $\sigma$  = 1.55 mho/m  $\epsilon_r$  = 51.1  $\rho$  = 1.00 g/cm<sup>3</sup> Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Body SAR - Back of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Back of LCD Display to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

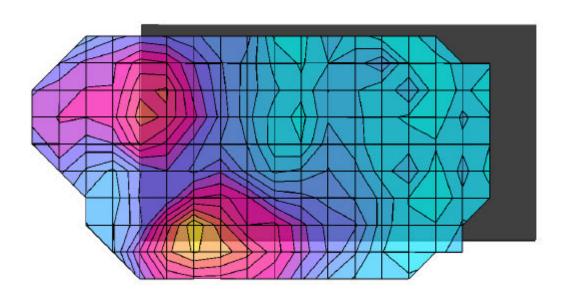
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

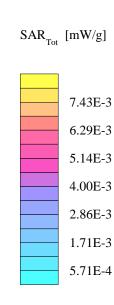
PCS GPRS Mode

Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

# Coarse scan to show Left Half of LCD Display (Back Side)





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

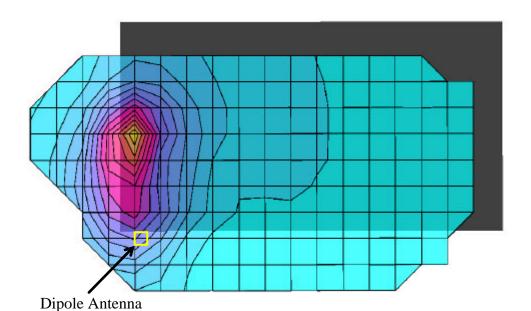
Cube 5x5x7

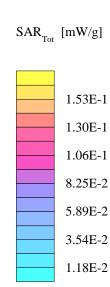
SAR (1g): 0.149 mW/g, SAR (10g): 0.0791 mW/g

Body SAR - Back of LCD Display (Closed) - Antenna Perpendicular to Planar Phantom (180°) 1.5 cm Separation Distance from Back of LCD Display to Planar Phantom Itronix IX260 Rugged Laptop PC with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

#### PCS GPRS Mode Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz] Conducted Power: 27.9 dBm Ambient Temp: 22.8°C; Fluid Temp: 23.1°C Date Tested: March 24, 2003





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.0828 mW/g, SAR (10g): 0.0413 mW/g

Body SAR - Bottom of Laptop PC (LCD Display Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

0.0 cm Separation Distance from Bottom of Laptop PC to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

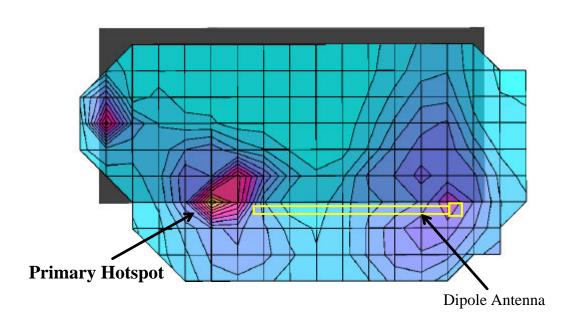
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

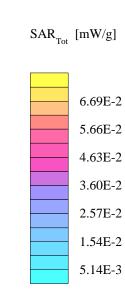
PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

## **Primary Hotspot Evaluation**





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ 

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.0706 mW/g, SAR (10g): 0.0284 mW/g

Body SAR - Bottom of Laptop PC (LCD Display Closed) - Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Bottom of Laptop PC to Planar Phantom

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Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

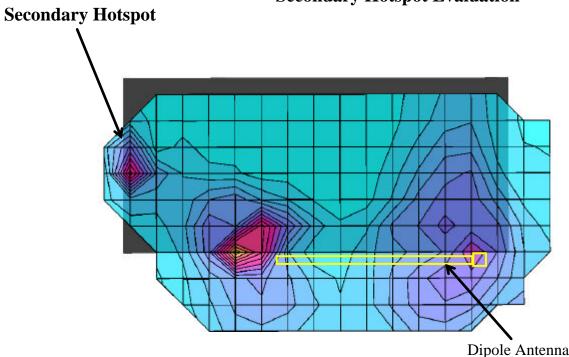
Channel 661 [1880.00 MHz]

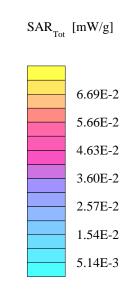
Conducted Power: 27.9 dBm

Ambient Temp: 22.8°C; Fluid Temp: 23.1°C

Date Tested: March 24, 2003

## **Secondary Hotspot Evaluation**





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ 

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.104 mW/g, SAR (10g): 0.0624 mW/g

Body SAR - Bottom of Laptop PC (LCD Display Closed) - Antenna Perpendicular to Planar Phantom (Extended Position) 0.0 cm Separation Distance from Bottom of Laptop PC to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode

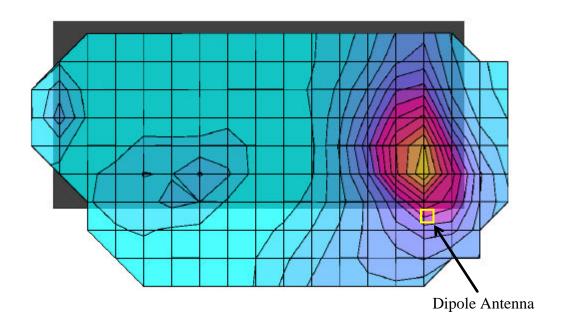
#### Simultaneous Transmit with co-located DSSS WLAN Card

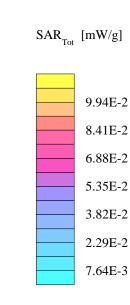
Channel 661 [1880.00 MHz]

Conducted Power: 27.9 dBm

Ambient Temp: 22.8°C; Fluid Temp: 23.1°C

Date Tested: March 24, 2003





SAM Phantom; Flat Section; Position:  $(0^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0 1900 MHz Muscle:  $\sigma$  = 1.55 mho/m  $\epsilon_r$  = 51.1  $\rho$  = 1.00 g/cm<sup>3</sup>

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Body SAR - Bottom of Laptop PC (LCD Display Closed) - Antenna Perpendicular to Planar Phantom (Extended Position)

0.0 cm Separation Distance from Bottom of Laptop PC to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

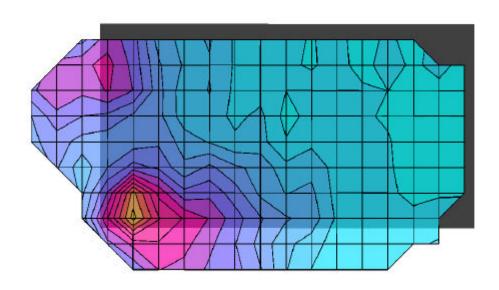
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

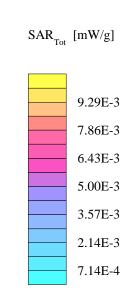
PCS GPRS Mode

Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

#### Coarse scan to show Left Half of Bottom Side





SAM Phantom; Flat Section; Position:  $(90^\circ,0^\circ)$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma$  = 1.55 mho/m  $\epsilon_r$  = 51.1  $\rho$  = 1.00 g/cm<sup>3</sup>

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.990 mW/g, SAR (10g): 0.523 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Dipole Antenna to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

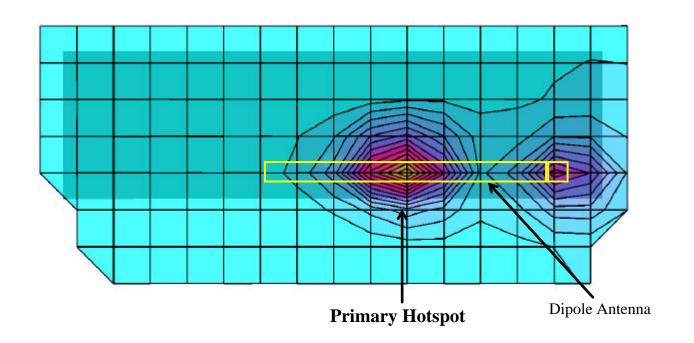
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

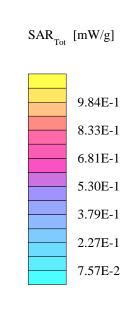
PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

# **Primary Hotspot Evaluation**





SAM Phantom; Flat Section Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0 1900 MHz Muscle:  $\sigma$  = 1.55 mho/m  $\epsilon_r$  = 51.1  $\rho$  = 1.00 g/cm³

#### Z-Axis Extrapolation at Peak SAR Location

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Dipole Antenna to Planar Phantom

Itronix IX260 Rugged Laptop PC

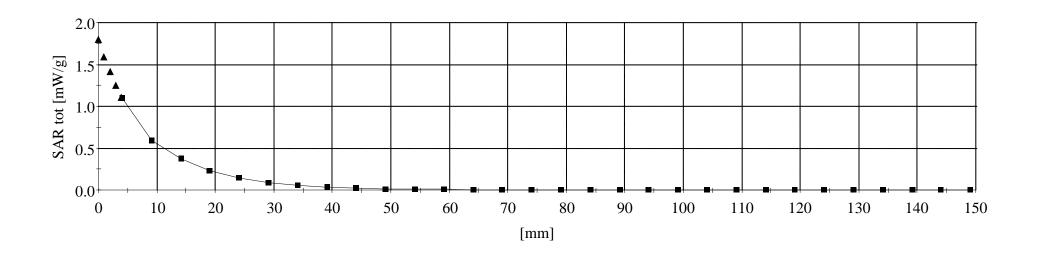
with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003



SAM Phantom; Flat Section; Position: (90°,0°)

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55$  mho/m  $\epsilon_r = 51.1~\rho = 1.00~g/cm^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.408 mW/g, SAR (10g): 0.215 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Dipole Antenna to Planar Phantom

Itronix IX260 Rugged Laptop PC

with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

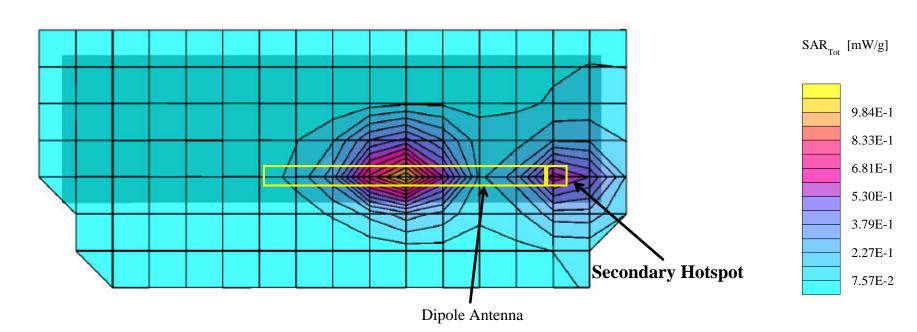
co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

# **Secondary Hotspot Evaluation**



SAM Phantom; Flat Section; Position: (90°,0°) Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \varepsilon_r = 51.1 \ \rho = 1.00 \ \text{g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.793 mW/g, SAR (10g): 0.438 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Dipole Antenna to Planar Phantom

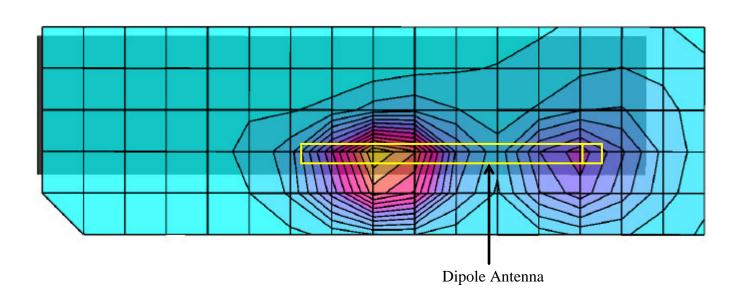
Itronix IX260 Rugged Laptop PC

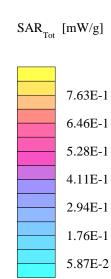
with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

#### PCS GPRS Mode Simultaneous Transmit with co-located DSSS WLAN Card

Channel 512 [1850.25 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003





SAM Phantom; Flat Section; Position:  $(90^\circ,0^\circ)$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.886 mW/g, SAR (10g): 0.470 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Stowed Position)

1.5 cm Separation Distance from Dipole Antenna to Planar Phantom

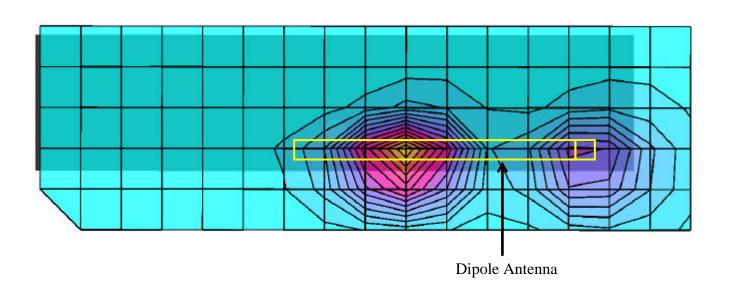
Itronix IX260 Rugged Laptop PC

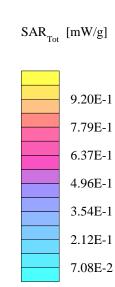
with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card

co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

PCS GPRS Mode
Simultaneous Transmit with co-located DSSS WLAN Card

Channel 810 [1909.875 MHz]
Conducted Power: 27.8 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003





SAM Phantom; Flat Section; Position: (90°,0°) Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

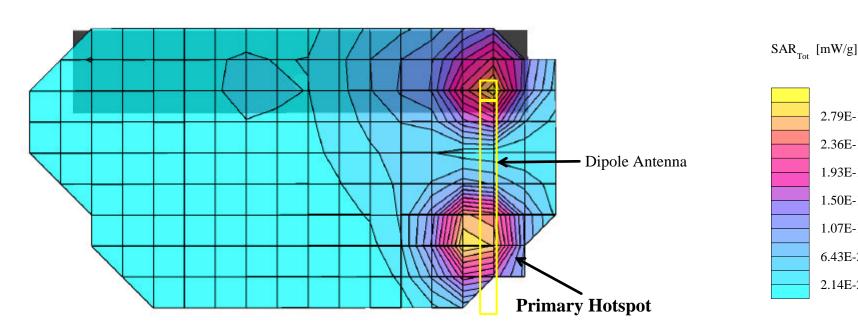
SAR (1g): 0.309 mW/g, SAR (10g): 0.180 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Extended Position) 1.5 cm Separation Distance from Dipole Antenna to Planar Phantom Itronix IX260 Rugged Laptop PC with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

#### PCS GPRS Mode Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz] Conducted Power: 27.9 dBm Ambient Temp: 22.8°C; Fluid Temp: 23.1°C Date Tested: March 24, 2003

# **Primary Hotspot Evaluation**



2.79E-1

2.36E-1

1.93E-1

1.50E-1

1.07E-1

6.43E-2

2.14E-2

SAM Phantom; Flat Section; Position: (90°,0°) Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 2.0

1900 MHz Muscle:  $\sigma = 1.55 \text{ mho/m } \varepsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$ 

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Cube 5x5x7

SAR (1g): 0.221 mW/g, SAR (10g): 0.129 mW/g

Body SAR - Right Side of LCD Display (Closed) - Antenna Parallel to Planar Phantom (Extended Position)
1.5 cm Separation Distance from Dipole Antenna to Planar Phantom
Itronix IX260 Rugged Laptop PC

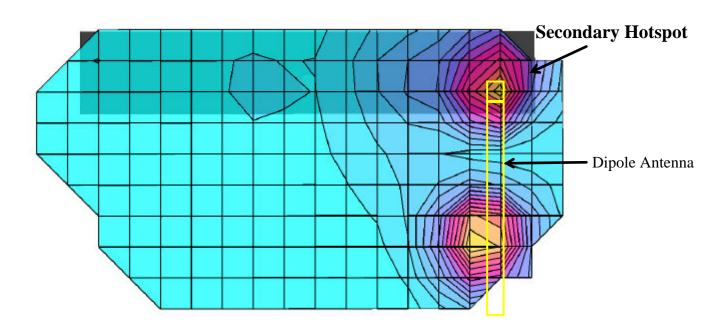
with Sierra Wireless AirCard 750 PCS GSM/GPRS Modem Card co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card

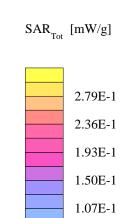
PCS GPRS Mode

#### Simultaneous Transmit with co-located DSSS WLAN Card

Channel 661 [1880.00 MHz]
Conducted Power: 27.9 dBm
Ambient Temp: 22.8°C; Fluid Temp: 23.1°C
Date Tested: March 24, 2003

## **Secondary Hotspot Evaluation**





6.43E-2

2.14E-2