

APPENDIX A - SAR MEASUREMENT DATA

SAM Phantom; Flat Section; Position: $(90^\circ,0^\circ)$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: σ = 1.52 mho/m ϵ_r = 51.1 ρ = 1.00 g/cm³

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0 Cube 5x5x7: Powerdrift: -0.07 dB

SAR (1g): 1.21 mW/g, SAR (10g): 0.633 mW/g

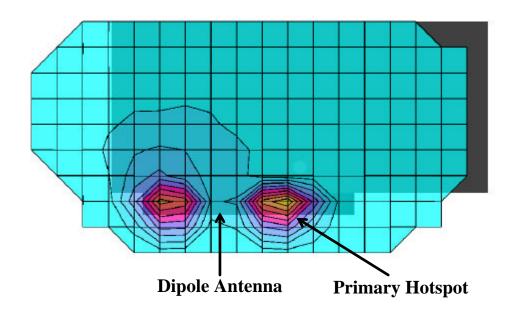
Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

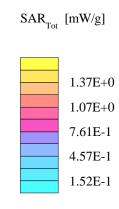
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 600 [1880.00 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003





SAM Phantom

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0 Muscle 1900 MHz: σ = 1.52 mho/m ϵ_r = 51.1 ρ = 1.00 g/cm³

Z-Axis Extrapolation at Peak SAR Location

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)

0.0 cm Separation Distance from Back of LCD to Planar Phantom

IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna

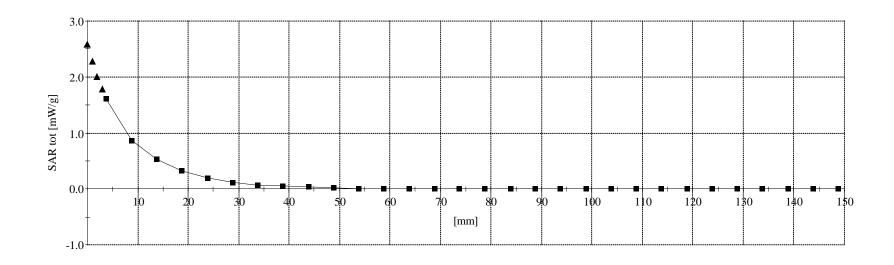
Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna

and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 600 [1880.00 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003



SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52$ mho/m $\epsilon_r = 51.1$ $\rho = 1.00$ g/cm³

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0Cube 5x5x7; Powerdrift: -0.07 dB

SAR (1g): 1.07 mW/g, SAR (10g): 0.556 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

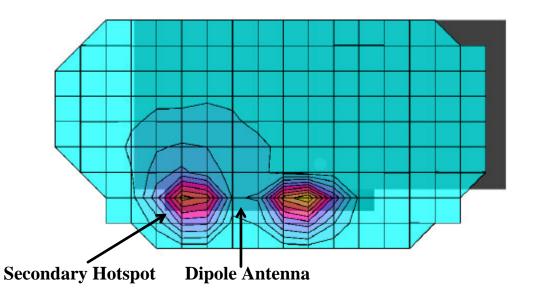
PCS CDMA Mode

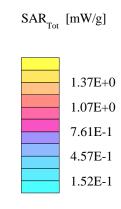
Single Transmit - PCS CDMA only

Channel 600 [1880.00 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C

Date Tested: August 27, 2003

Secondary Hotspot Evaluation





SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0 Muscle 1900 MHz: σ = 1.52 mho/m ϵ_r = 51.1 ρ = 1.00 g/cm³ Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna

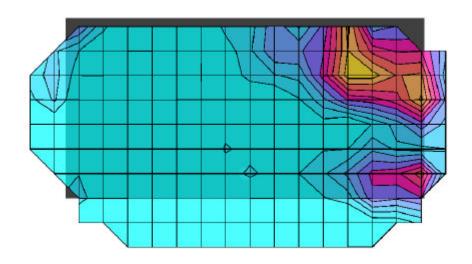
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

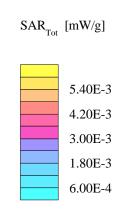
PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 600 [1880.00 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003

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





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

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52$ mho/m $\epsilon_r = 51.1~\rho = 1.00~g/cm^3$

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0 Cube 5x5x7: Powerdrift: -0.05 dB

SAR (1g): 0.770 mW/g, SAR (10g): 0.408 mW/g

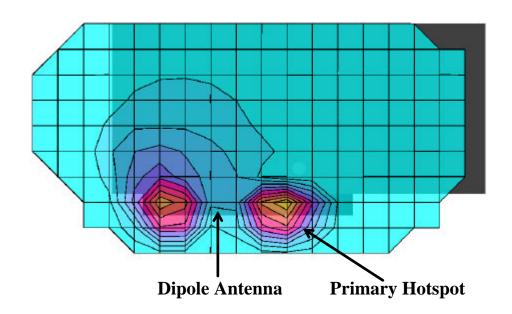
Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

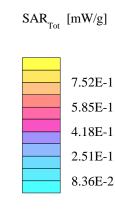
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 25 [1851.25 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003





SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0 Muscle 1900 MHz: $\sigma = 1.52$ mho/m $\epsilon_r = 51.1$ $\rho = 1.00$ g/cm³

> Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0Cube 5x5x7; Powerdrift: -0.05 dB SAR (1g): 0.693 mW/g, SAR (10g): 0.364 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

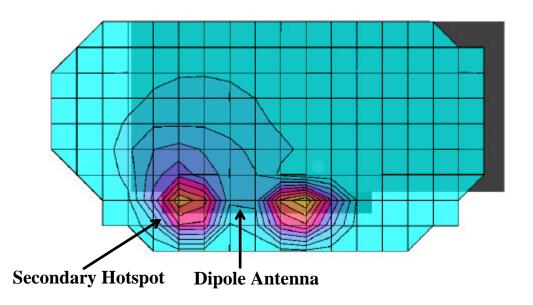
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

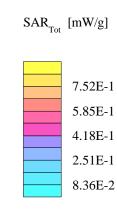
PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 25 [1851.25 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003

Secondary Hotspot Evaluation





SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0 Muscle 1900 MHz: $\sigma = 1.52$ mho/m $\varepsilon_r = 51.1$ $\rho = 1.00$ g/cm³

> Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0Cube 5x5x7; Powerdrift: -0.10 dB SAR (1g): 0.920 mW/g, SAR (10g): 0.479 mW/g

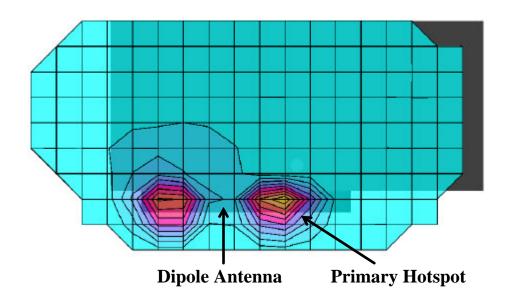
Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

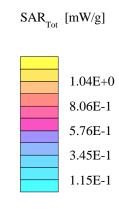
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 1175 [1908.75 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003





SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0 Muscle 1900 MHz: $\sigma = 1.52$ mho/m $\epsilon_r = 51.1$ $\rho = 1.00$ g/cm³

> Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0Cube 5x5x7; Powerdrift: -0.10 dB SAR (1g): 0.869 mW/g, SAR (10g): 0.440 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

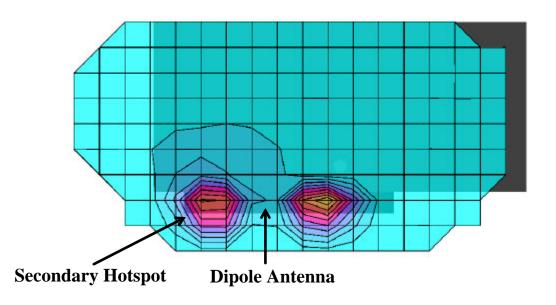
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

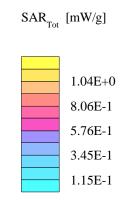
PCS CDMA Mode

Single Transmit - PCS CDMA only

Channel 1175 [1908.75 MHz] Conducted Power: 23.0 dBm Ambient Temp: 24.7°C; Fluid Temp: 22.4°C Date Tested: August 27, 2003

Secondary Hotspot Evaluation





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

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \ \text{g/cm}^3$

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

Cube 5x5x7; Powerdrift: -0.15 dB

SAR (1g): 1.12 mW/g, SAR (10g): 0.592 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

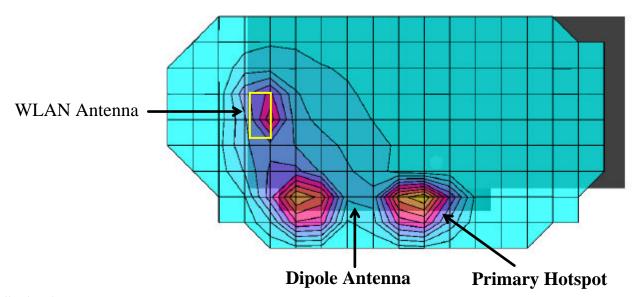
Simultaneous Transmit with co-located DSSS WLAN Transmitter

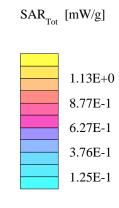
Channel 600 [1880.00 MHz]

Conducted Power: 23.0 dBm

Ambient Temp: 24.7°C; Fluid Temp: 22.4°C

Date Tested: August 27, 2003





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

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$

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

Cube 5x5x7; Powerdrift: -0.15 dB

SAR (1g): 1.06 mW/g, SAR (10g): 0.554 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN Transmitter

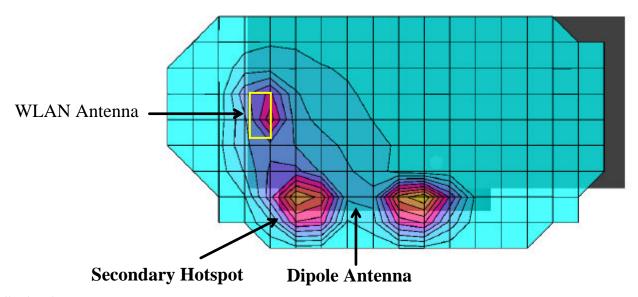
Channel 600 [1880.00 MHz]

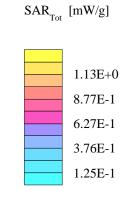
Conducted Power: 23.0 dBm

Ambient Temp: 24.7°C; Fluid Temp: 22.4°C

Date Tested: August 27, 2003

Secondary Hotspot Evaluation





Celltech Labs Inc.

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

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$

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

Cube 5x5x7; Powerdrift: -0.17 dB

SAR (1g): 1.13 mW/g, SAR (10g): 0.593 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

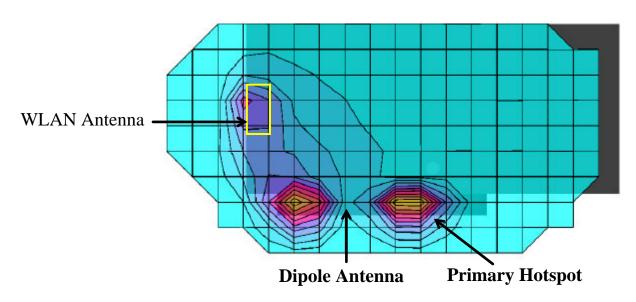
Simultaneous Transmit with co-located DSSS WLAN and Bluetooth Transmitters

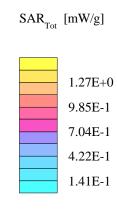
Channel 600 [1880.00 MHz]

Conducted Power: 23.0 dBm

Ambient Temp: 24.7°C; Fluid Temp: 22.4°C

Date Tested: August 27, 2003





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

Probe: ET3DV6 - SN1387; ConvF(4.90,4.90,4.90); Crest factor: 1.0

Muscle 1900 MHz: $\sigma = 1.52 \text{ mho/m } \epsilon_r = 51.1 \ \rho = 1.00 \text{ g/cm}^3$

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

Cube 5x5x7; Powerdrift: -0.17 dB

SAR (1g): 1.08 mW/g, SAR (10g): 0.568 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

PCS CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN and Bluetooth Transmitters

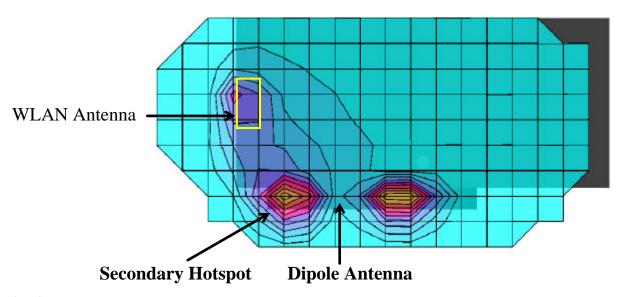
Channel 600 [1880.00 MHz]

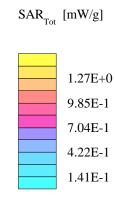
Conducted Power: 23.0 dBm

Ambient Temp: 24.7°C; Fluid Temp: 22.4°C

Date Tested: August 27, 2003

Secondary Hotspot Evaluation





Celltech Labs Inc.

SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(6.40,6.40,6.40); Crest factor: 1.0 Muscle 835 MHz: $\sigma = 1.00$ mho/m $\epsilon_r = 55.3$ $\rho = 1.00$ g/cm³

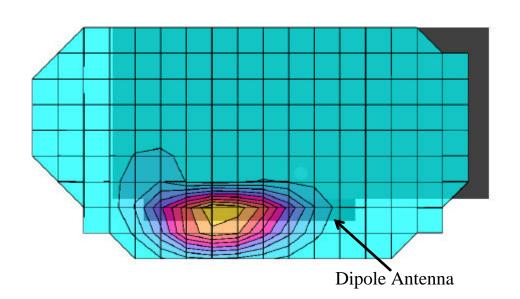
> Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0Cube 5x5x7; Powerdrift: -0.20 dB SAR (1g): 0.489 mW/g, SAR (10g): 0.297 mW/g

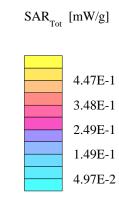
Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

Cellular CDMA Mode Single Transmit - Cellular CDMA only

Channel 363 [835.89 MHz] Conducted Power: 23.0 dBm Ambient Temp: 23.9°C; Fluid Temp: 23.2°C Date Tested: August 28, 2003





SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(6.40,6.40,6.40); Crest factor: 1.0

Muscle 835 MHz: $\sigma = 1.00$ mho/m $\epsilon_r = 55.3~\rho = 1.00~g/cm^3$

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0 Cube 5x5x7; Powerdrift: -0.13 dB

SAR (1g): 0.496 mW/g, SAR (10g): 0.300 mW/g

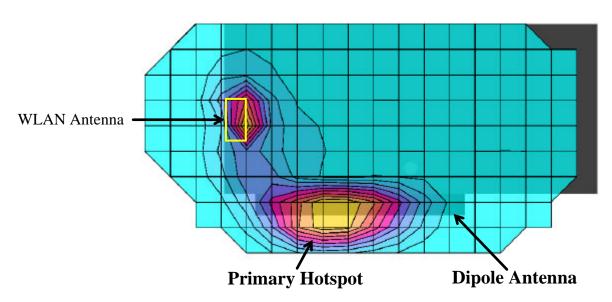
Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC

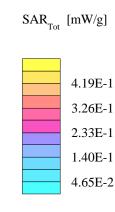
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

Cellular CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN Transmitter

Channel 363 [835.89 MHz] Conducted Power: 23.0 dBm Ambient Temp: 23.9°C; Fluid Temp: 23.2°C Date Tested: August 28, 2003





SAM Phantom

Probe: ET3DV6 - SN1387; ConvF(6.40,6.40,6.40); Crest factor: 1.0 Muscle 835 MHz: $\sigma = 1.00$ mho/m $\epsilon_r = 55.3$ $\rho = 1.00$ g/cm³

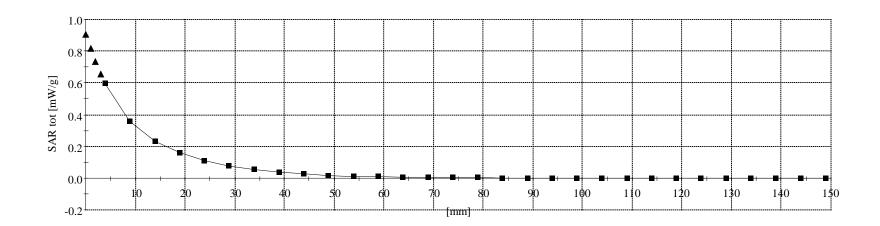
Z-Axis Extrapolation at Peak SAR Location

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom
IX260 Rugged Laptop PC
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna
Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna
and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

Cellular CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN Transmitter

Channel 363 [835.89 MHz] Conducted Power: 23.0 dBm Ambient Temp: 23.9°C; Fluid Temp: 23.2°C Date Tested: August 28, 2003



SAM Phantom; Flat Section; Position: $(90^{\circ},0^{\circ})$ Probe: ET3DV6 - SN1387; ConvF(6.40,6.40,6.40); Crest factor: 1.0 Muscle 835 MHz: $\sigma = 1.00$ mho/m $\epsilon_r = 55.3$ $\rho = 1.00$ g/cm³ Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)

0.0 cm Separation Distance from Back of LCD to Planar Phantom

IX260 Rugged Laptop PC

with Signar Wireless AirCord 555 Duel Bond CDMA Modern Cord with Enternal Dipole Antenna

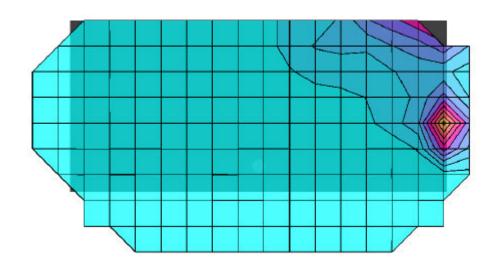
with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

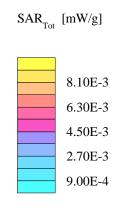
Cellular CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN Transmitter

Channel 363 [835.89 MHz]
Conducted Power: 23.0 dBm
Ambient Temp: 23.9°C; Fluid Temp: 23.2°C
Date Tested: August 28, 2003

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





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

Probe: ET3DV6 - SN1387; ConvF(6.40,6.40,6.40); Crest factor: 1.0

Muscle 835 MHz: $\sigma = 1.00$ mho/m $\varepsilon_r = 55.3$ $\rho = 1.00$ g/cm³

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

Cube 5x5x7; Powerdrift: -0.08 dB

SAR (1g): 0.482 mW/g, SAR (10g): 0.291 mW/g

Back of LCD (Display Closed) - CDMA Dipole Antenna Parallel to Planar Phantom (Stowed Position)
0.0 cm Separation Distance from Back of LCD to Planar Phantom

IX260 Rugged Laptop PC

with Sierra Wireless AirCard 555 Dual Band CDMA Modem Card with External Dipole Antenna Co-located with Cisco MPI-350 Mini-PCI DSSS WLAN Card with Internal Antenna

and Mitsumi WML-C11N Bluetooth Transmitter with Internal Antenna

Cellular CDMA Mode

Simultaneous Transmit with co-located DSSS WLAN and Bluetooth Transmitters

Channel 363 [835.89 MHz]

Conducted Power: 23.0 dBm

Ambient Temp: 23.9°C; Fluid Temp: 23.2°C

Date Tested: August 28, 2003

