

6.1 SYSTEM SPECIFICATIONS

6.2 Robotic System Specifications

Specifications

POSITIONER: IDX Robot with 6 axis
Repeatability: 0.002 in.
Accuracy: 0.004 in.

Data Acquisition

Processor: Pentium PRO CPU
Clock Speed: 200 MHz
Operating System: Windows NT
Data Card: National Instruments Analog Card
Software: IDX Flexware
AMPLIFIER GAIN: Adjustable 20 - 40, high isolation between channels
Connecting Lines: High Impedance 4.5 kohm/foot
Sample Rate: 6000

E-Field Probe

Probe Offset:
Frequency Band:
Conversion Factor:
Conversion Factor:
Dynamic Response:
Input:
Isotropy:
Resolution:

E-Probe #1

2.5 mm
150 - 2200 MHz
0.601 (800-880MHz)
1.20 (1850-1910MHz)
2 μ W/g - 10 mW/g
2.2 meg
 \pm 0.5 dB
0.1 cm³

E-Probe #2

2.5 mm
150 - 2200 MHz
0.79 (800-880MHz)
1.20 (1850-1910MHz)
2 μ W/g - 10 mW/g
2.2 meg
 \pm 0.5 dB
0.1 cm³

Phantom

Phantoms:
Shell Material:
Thickness:
Head:

Phantom #1 (Left)

Homogenous
Fiberglass
1 - 1.5 mm
with Left ear

Phantom #2 (Right)

Homogenous
Fiberglass
1 - 1.5 mm
with Right ear

Brain Tissue Equivalent

Dielectric Constant: ϵ
Conductivity: σ

800-850 MHz

43.4
0.90

1850-1910 MHz

42.9
1.65