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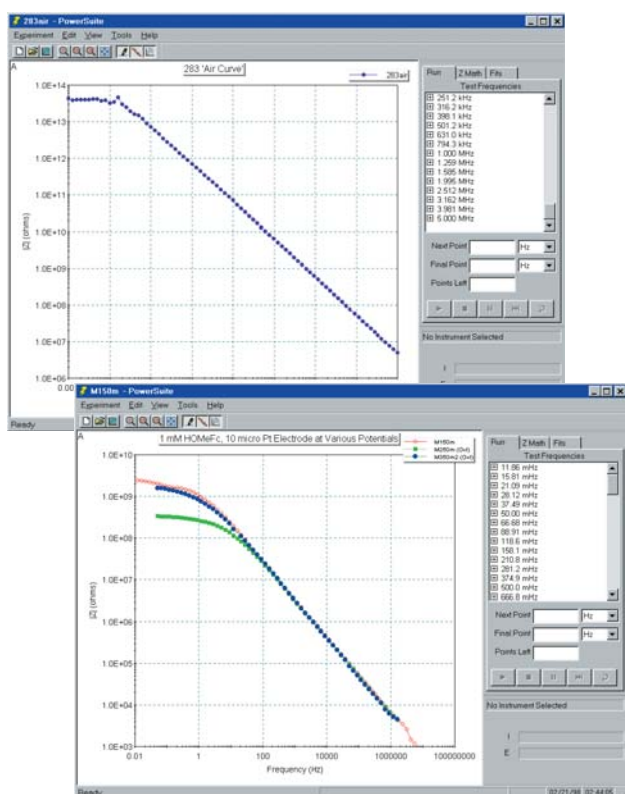
**Artisan Technology Group**

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### ***Raising the Performance Standards***

- Computer Controlled Potentiostat/Galvanostat
- 80 V Compliance, 100 mA Current Output
- High-Input Impedance ( $>10^{13} \Omega$ )
- Low-Input Capacitance ( $<100^{-15} \text{ F}$ )
- Large Bandwidth ( $>1 \text{ MHz}$ )
- Extremely Sensitive ( $<10^{-15} \text{ A}$  Resolution)
- 16 V Scan Range
- Fast Scan Capabilities and Data Acquisition Rate ( $>10 \text{ kV/s}$  and  $30 \mu\text{s}$ )
- Two, Three, and Four Terminal Measurements

## Specifications

### Power Amplifier

Compliance Voltage:  $\pm 80$  V  
 Maximum Current:  $\pm 100$  mA  
 Rise Time:  $< 300$  ns (No Load, unity gain, 1 V)  
 Slew Rate:  $> 10$  V/ $\mu$ s (No Load)

### System Performance

Minimum Timebase: 30  $\mu$ s  
 Minimum Potential Step: 250  $\mu$ V  
 Noise and Ripple:  $< 50$   $\mu$ V rms typical  
 Minimum Current Range: 1 nA (hardware)  
 Minimum Current Range: 10 pA\*  
 Minimum Current Resolution: 20 fA  
 Drift:  $< 50$   $\mu$ V/ $^{\circ}$ C

### iR Compensation

Positive Feedback  
 Range: 2 G $\Omega$  to 20  $\Omega$  depending on current range  
 Resolution: 0.05% of current range  
 Current Interrupt  
 12 Bit DAC Potential Error Correction  
 Total Int. Time:  $< 10$   $\mu$ s–2000  $\mu$ s

### Current Measurement

Ranges: 9 decades, 100 mA to 1 nA  
 Accuracy (dc) at Monitor  
 100 nA to 100 mA: 0.2% Full Scale  
 1 nA and 10 nA Ranges: 2% Full Scale,  $\pm 5$  nA  
 Frequency Response (small signal)  
 1 mA Range:  $-3$  dB at  $> 2$  MHz, 1k $\Omega$  source impedance  
 1  $\mu$ A Range:  $-3$  dB at  $> 200$  kHz, 1 M $\Omega$  source impedance

### Computer Interface

GPB IEEE-488  
 RS-232

### Differential Electrometer

Input Bias Current:  $< 10$  pA at 25 $^{\circ}$ C  
 Max. Voltage Range:  $\pm 12$  V  
 Max. Input Voltage Differential:  $\pm 10$  V  
 Bandwidth:  $-3$  dB at  $> 9$  MHz  
 Offset Voltage:  $< 100$   $\mu$ V  
 Offset Temperature Stability:  $< 50$   $\mu$ V/ $^{\circ}$ C  
 Common Mode Rejection:  
 $> 80$  dB at 100 Hz  
 $> 60$  dB at 1 MHz  
 Input Impedance:  $> 10^{13}$   $\Omega$ , typically  $10^{14}$   $\Omega$  in parallel with  $< 5$  pF, typical  $< 1$  pF

### Potential/Current Control

Digital/Analog Converters (DACs)  
 Bias DAC  
 Resolution: 14 bits  
 Range (Potentiostat):  $\pm 8$  V  
 Modulation DAC  
 Resolution: 16 bits  
 Range (Potentiostat):  $\pm 8$  V,  $\pm 0.8$  V,  $\pm 0.08$  V  
 Range (Galvanostat):  $\pm 200\%$ ,  $\pm 20.00\%$ ,  $\pm 2.00\%$

### Accuracy

Applied Potential: 0.2% of reading  $\pm 2$  mV

### Dimensions

17.0" L x 10.3" H x 20" D  
 40 lbs. (18.2 kg)

### Power Requirements

90–130 V ac or 200–260 V ac, 50–60 Hz,  
 125 Watts Maximum

\*This sensitivity is achieved through our proprietary application software

Specifications subject to change

092503



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