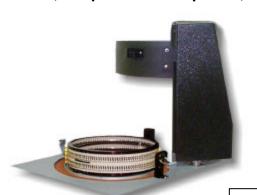
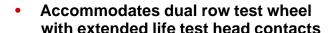


# W-2200 TEMPERATURE TEST SYSTEM

With 250B-1 or 250C Network Analyzer

- Automated, software-based quartz crystal temperature test system
- Measures over 75 different tests
- Parameter and curve fit characteristics are checked against easy to define QC limits
- Crystals of different frequencies can be tested in a single temperature run
- All data is published in a Microsoft Access<sup>™</sup> data base
- Data can be exported to Microsoft Excel<sup>™</sup> for custom data analysis
- Printouts are generated using Crystal Reports<sup>®</sup>
- Crystal part number can be used to set complete measurement parameters, QC limits, temperature test points, and data printouts





- Easily loaded S&A proprietary sockets accept HC-45, HC-49, HC-43, HC-49US, HC-18, SMD and tubular type packages
- Typically holds 254 devices per run
- Dual Chamber configuration available

#### **SPECIFICATIONS**

**250B-1 Frequency Range:** 15 KHz to 220 MHz **250C Frequency Range:** 15 KHz to 500 MHz

Frequency Correlation: ± 1 ppm\* at series (typical)

**Crystal Power:**1 nW to 1000 uW (1 MHz to 50 MHz)
1 nW to 500 uW (>50 MHz to 200 MHz)

Temperature Stability:  $\pm 0.1^{\circ}$  C

\* Proprietary measurement and calibration algorithms provide correlation to industry standard crystal measurement equipment.

### SAUNDERS & ASSOCIATES, LLC

2520 E. Rose Garden Lane - Phoenix, Arizona 85050 USA (602) 971-9977 FAX (602) 971-5522 E-Mail sales@saunders-assoc.com - World Wide Web http://www.saunders-assoc.com



#### **SYSTEM CONFIGURATION**

- S&A 250B-1 or 250C Network Analyzer
- S&A 2451 Switch Controller (only required in dual chamber configuration)
- S&A 4220 Temperature Test Chamber (LCO<sub>2</sub>, LN<sub>2</sub>, or Mechanical Refrigeration Cooling)
- IEC-444 Pi-Network Test Head

- Windows<sup>®</sup> based System Software
- Printer (Optional)
- Minimum 500 MHz Pentium III
  One full PCI slot with +3.3V & 5V power,
  Windows 98®

#### SAMPLE REPORTS Crystal Plots Crystal Condensed Plots Rul F F @ 25.00°C (Sec Run Start. 10-Nov-2001 -0:27 Am Run Firmsh: 10-Nov-2001 -10:15 am 88A W/2/200 Rev -1132 Run Name: Owatel Test Run Beff F @ 25.1PO Geb Row C: Measured FL Row C: Measured FL Roy R: Managed Ft. Ran Firesh: 10-New-2001, 10:15 am Row C. Meanwed FL 0.8 3 Group: A001 - A050 Total: 42 Crystal Tabular Run Name: Example Run Bar F. I Frint All Operator: Run Start: 26-0 From A. Managed Ft. New B. Measuran Ft. Nun Finish: 28-0 ( Row C: Measured FL A008 <38606 SHup 12mapub Helf 12,795,342 Hz \*C FR pan 25.01 0.00 11 -0.01 3.74 12 4.98 3.52 12 Setur 12megv0 frei f: 12,785,955 Hz 10 FR pain R 25.03 0.00 18.71 0.01 8.08 21.44 25.02 0.00 0.00 12.39 3.28 12.96 -55 -40 -23 -105.79 20.77 5.24 20.39 3.52 12.30 Ref FR: 16,005,785 Hz. Setup: Full Wheel Test Ref F F @ 25 00°C (Set) 40.02 Run Start 26-0-th-2001 4-51 pm Run Firesh 26-0-th-2001 6:34 pm -0.525.08 45,02 -0.20 0.33 1.33 Row A: Measured FL Row C: Measured FL Row D: Measured FL S&A W 2200 Rev: 1925 A503 - 2a002 Selsti 12megw2 Cut: AT Petative Angle: 2.51" Ref FR: 12,795,917 Hz A51 - 2,086913-6-01 TumP1 1 6.12 A52 - 1,0329416-03 TumP1 2 7.08 A53 - 6,12460-05 IntT 1 28,95 A4 2,246378-07 IntT 2 7.08 A4 2,246378-07 IntT 2 7.08 Crystal Setup File Parameters Rus Name: Example Run Her F : F @ 15,50°C (5)40 Row A: Measured FL Row C: Measured FL Crystal Fallures Only -64.7\* 4.6\* 4.0 119 -8.1 8.1 MT 8.68 AGDE Ease 4.1 2.7 18.7 24 8.6 8.6 83.4 bT 4.47 Ray C. Humared Fl. 86A W3300 Rev: 1235 Parr 3,3 5,6 12,4 82 12,2 12,65 122 12,5 122 12,65 122 12,65 122 12,65 122 12,65 122 12,65 122 12,65 122 12,65 122 12,65 122 12,75 121 1 Crydar Selair Setup Fite Parameters Find FW Law

## **SAUNDERS & ASSOCIATES, LLC**