

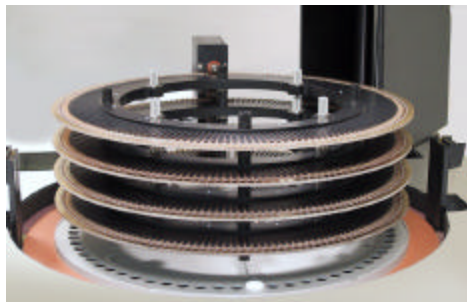


W-2200B DISC PALLET DUAL CHAMBER TEMPERATURE TEST SYSTEM With 250B-1 or 250C Network Analyzer

- Automated software based quartz crystal temperature test system
- Holds up to 1280 devices per run
- Standard sizes available include:

TYPE	DISC CAPACITY	TOTAL CHAMBER CAPACITY
SMD 5 x 7mm	140	560
SMD 4.5 x 8mm	140	560
SMD 3.5 x 6mm	160	640
SMD 3.2 x 5mm	160	640
SMD 2.5 x 4mm	160	640
SMD HC-49USMD	100	400
LEADED HC-45/49	100	400

- Custom SMD sizes available
- High speed fan mounted inside the chamber cover provides fast temperature soak time
- Disc pallet platform can be easily integrated into S&A 901A machine for automatic unloading / loading SMD devices



- Measures over 75 different parameters
- Parameter and curve fit characteristics checked against easy to define QC limits
- Crystals of different frequencies tested in a single temperature run
- All data published in a *Microsoft Access*™ database and can be exported to *Microsoft Excel*™ for custom data analysis
- Printouts are generated using *Crystal Reports*®

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:	±0.1°
Example Throughput:	5 temperature points (-20 0 25 50 85) 1200 parts per hour

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

SAUNDERS & ASSOCIATES, INC.

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SYSTEM CONFIGURATION

- S&A 250B-1 or 250C Network Analyzer
- Two S&A 2451 Switch Controllers
- Two S&A 4220 Temperature Test Chambers (LCO₂, LN₂, or Mechanical Refrigeration Cooling)
- Two IEC-444 Pi-Network Test Heads
- **Windows® based System Software**
- **Printer (Optional)**
- **Computer Requirements:**
 Minimum 500 MHz Pentium III
 One full PCI slot with +3.3V & 5V power,
 Windows 98®

SAMPLE REPORTS

Crystal Plots
Run Name: Crystal Test Run
Print All Operator: RMB
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 10-Nov-2001 9:37 am
Run Finish: 10-Nov-2001 10:15 am
S&A W200 Rev: 1722

Crystal Condensed Plots
Run Name: Crystal Test Run
Print All Operator: RMB
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 10-Nov-2001 9:37 am
Run Finish: 10-Nov-2001 10:15 am
S&A W200 Rev: 1722

Crystal Tabular
Run Name: Example Run
Print All Operator:
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 26-Oct-2001 4:51 pm
Run Finish: 26-Oct-2001 6:34 pm
S&A W200 Rev: 1722

AS1 <2a001>	AS2 <2a002>	AS3 <2a003>	AS4 <2a004>	AS5 <2a005>
Setup: 12magw0	Setup: 12magw0	Setup: 12magw0	Setup: 12magw0	Setup: 12magw0
Ref F: 12,795,817 Hz	Ref F: 12,795,866 Hz	Ref F: 12,795,917 Hz	Ref F: 12,795,942 Hz	Ref F: 12,795,977 Hz
% FR ppm	% FR ppm	% FR ppm	% FR ppm	% FR ppm
25.01	0.00	4.92	25.02	0.00
3.01	0.01	5.13	3.01	0.00
6.02	0.33	4.90	6.00	21.44
8.98	0.44	5.03	8.98	20.77
15.02	0.50	5.03	15.01	19.84
20.50	0.36	5.02	20.00	18.54
25.00	0.09	5.05	25.01	16.84
30.02	-3.12	5.04	30.01	14.88
34.98	-3.39	5.03	35.00	12.88
40.02	-3.55	5.04	40.02	10.88
45.03	-3.52	5.06	45.02	8.88
49.99	-3.20	5.00	49.99	6.88
54.99	0.33	4.98	55.00	4.88
59.99	1.33	5.05	59.99	2.88

Crystal Curvfit Summary
Run Name: Example Run
Print All Operator:
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 26-Oct-2001 4:51 pm
Run Finish: 26-Oct-2001 6:34 pm
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Crystal Curvfit Tabular
Run Name: Example Run
Print All Operator:
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 26-Oct-2001 4:51 pm
Run Finish: 26-Oct-2001 6:34 pm
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Crystal Setup File Parameters
Run Name: Example Run
Print All Operator:
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 26-Oct-2001 4:51 pm
Run Finish: 26-Oct-2001 6:34 pm
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Crystal Failures Only
Run Name: Example Run
Print All Operator:
Row A: Measured FL
Row B: Measured FL
Row C: Measured FL
Row D: Measured FL
Ref F: F @ 25.00°C (Set)
Run Start: 26-Oct-2001 4:51 pm
Run Finish: 26-Oct-2001 6:34 pm
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