

- Automated, software-based oscillator, VCXO and TCXO temperature test system
- Measures frequency over temperature
- Parameter and curve fit characteristics are checked against easy to define QC limits
- Oscillators of different frequencies can be tested in a single temperature run
- All data is published in a *Microsoft Access*™ data base
- Data can be exported to *Microsoft Excel*™ for custom data analysis
- Oscillator part number can be used to set complete measurement parameters, QC limits, temperature test points and data printouts



- Electronic switching
- High speed frequency measurement
- Complete frequency perturbation testing of 512 parts in about 1.5 hours



- Chamber holds eight 64-position measurement boards for a total of 512 parts
- Socket PCBs available include 2.0x2.5, 2.5x3.2, 3.2x5, 3.5x6, 5x7, 5x7.5, 9x14, DIP (full & half)
- Measurement boards available for LVDS, PECL, ECL, CMOS, and TTL devices
- Sub PPB measurement

SPECIFICATIONS

Oscillator Frequency Range:	10 KHz to 1 GHz
Temperature Stability:	± 0.1° C
Temperature Uniformity:	± 0.6° C
Temperature Range:	-55° C to 85° C (LCO ₂) -65° C to 85° C (LN ₂)

Roditi International Corp. Ltd,

Machiavelli House, 102 Stewarts Road, London. SW8 4UG. Tel: +44 (0) 20 7819 8080
FAX: +44 (0) 20 7720 5261 E-Mail saunders@roditi.com - World Wide Web <http://www.roditi.com>

SYSTEM CONFIGURATION

- S&A 4350 Option 1 Temperature Test Chamber (LCO₂ or LN₂)
- Eight position card cage and backplane PCB
- Frequency Counter
- DUT Power Supply
- Computer
- S&A MFC-100 Card
- National GPIB Card
- **Windows®** based System Software

SAMPLE REPORTS

Oscillator Group Summary

Run Name: example run 0 to 90 degree
 Run Start: 02-Mar-2003 9:40 pm
 Run From: 02-Mar-2003 7:30 pm
 S&A W200 Rev: 0/0/1 Report: 1/00

Post: All Operator
 Ref: F @ 25.00°C (Std)

Setup: C:\Program Files\Saunders & Associates\Q200\data\MMH01.gps
 Reference Fr: 40,880,000 Hz Vco: 5.000 V Vco: 5.000 V Trigger: CMOS Level: 1.300 V
 Group S Default

Setup: C:\Program Files\Saunders & Associates\Q200\data\MMH01.gps
 Reference Fr: 40,880,000 Hz Vco: 5.000 V Vco: 5.000 V Trigger: CMOS Level: 1.300 V
 Group S Default
 A001 A002 A003 A004 A005 A006

Oscillator Run File

Run Name: 0 to 90 degree
 Author:
 Modifier:
 Operator:
 Configuration:
 Wheel Name: 00 Wheel Position: 104 Wheel
 Group: A001 - A006 Setup File: MMH01.gps
 Reference Fr: 40,880,000 Hz Vco: 5.000
 Group: A006 - A010 Setup File: MMH01.gps
 Reference Fr: 40,880,000 Hz Vco: 5.000

Temperature Table			
Set Temp:	0.00 °C	Step:	20.00 mK Max
Step Temp:	90.00 °C	Step:	5.00 °C

Oscillator Tabular

Run Name: example run 0 to 90 degree
 Run Start: 02-Mar-2003 9:40 pm
 Run From: 02-Mar-2003 7:30 pm
 S&A W200 Rev: 0/0/1 Report: 1/00

A001	A002	A003	A004	A005
Setup: MMH01.gps Ref F: 40,880,000 Hz % Fr: ppm	Setup: MMH01.gps Ref F: 40,880,750 Hz % Fr: ppm	Setup: MMH01.gps Ref F: 40,887,750 Hz % Fr: ppm	Setup: MMH01.gps Ref F: 40,889,100 Hz % Fr: ppm	Setup: MMH01.gps Ref F: 40,888,100 Hz % Fr: ppm
0.00 14.36	0.01 -0.37	0.00 -0.70	0.00 -0.20	0.00 -0.04
5.01 5.06	0.01 0.70	0.01 -0.88	0.01 -1.93	0.00 0.12
10.00 077.8	10.00 0.71	0.00 -0.95	0.00 -1.25	0.00 0.21
15.02 25.00	15.02 1.54	15.01 -0.70	15.00 -0.74	14.99 0.26
19.99 -0.05	19.99 0.20	19.99 -0.51	19.99 -0.21	19.99 0.24
25.01 0.00	25.01 0.00	25.01 0.00	25.00 0.00	24.99 0.00
29.97 0.50	29.97 -1.49	29.97 0.98	29.97 0.01	29.98 0.48
35.00 1.10	35.00 -2.80	35.00 1.63	35.00 1.21	34.99 0.36
40.01 1.90	40.01 -0.91	40.00 18.67	39.99 0.67	39.99 0.52
44.98 3.00	44.98 -4.84	44.98 383.5	44.98 3.04	45.00 61.95
50.00 4.04	49.99 -6.20	49.99 120.5	49.99 4.36	49.99 244.8
55.02 0.00	55.02 0.30	55.02 48.61	55.01 0.06	55.01 17.87
60.01 0.23	60.01 -4.95	60.02 172.5	60.01 0.52	60.00 883.7
65.03 12.41	65.03 -3.16	65.02 84.10	65.01 11.27	64.99 18.71
70.01 18.62	70.00 -1.29	70.01 26.15	70.01 14.84	70.01 18.40
75.02 21.21	75.01 1.40	75.01 14.13	75.01 19.21	75.00 14.20
79.99 26.45	79.99 5.82	79.99 18.99	80.00 34.82	80.00 19.10

Oscillator Temperature Trend

Run Start: 02-Mar-2003 9:40 pm
 Run From: 02-Mar-2003 7:30 pm
 S&A W200 Rev: 0/0/1 Report: 1/00

TC10 Crystal Oscillation Test

Run Start: 02-Mar-2003 9:40 pm
 Run From: 02-Mar-2003 7:30 pm
 S&A W200 Rev: 0/0/1 Report: 1/00

Setup: Test Device C

Run Date: 17-Dec-2003 0:46 pm
 Description: CMOS 0.50 µm
 Reference Fr: 40,880,000 Hz
 Post: All

Vco: 5.000 Vdc Vco: 2.000 Vdc
 Trigger: TTL Level: 1.300 Vdc
 S&A 200A Rev: 1.00 Report: 1/00

00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
ppm	ppm	ppm	ppm	ppm
Pass	Pass	Pass	Pass	Pass
-1.0	-1.0	-1.0	-1.0	-1.0

The Roditi International Corporation Ltd is the exclusive European representative of Saunders & Associates, LLC