KH7700
Quartz Crystals Temperature Test System
with
PI - network Measurement

New State of the Art Features

- Multi-Tasking operation in Microsoft Windows® allows testing in background while generating reports and graphs by operator
- Test limits such as Temperature range and ppm can be changed after actual testing, this gives better reports and graphs presentation for customers
- Support both “Direct impedance measure” & “Phy. CL “ for FL measurement (Optional Phy CL head)
- User Programmable Drive Level : 10nW - 1mW (max and min power depends on Rr of crystal)
- Crystal Measurement through passive π network techniques with KH1800 / KH1820 network analyzer
- Multiple crystal types may be accommodated in the same temperature run
- Automatic C0 cancellation for high frequencies
- User friendly system operation including menu driven, mouse operation and easy system calibration
- Perform pass/fail testing to user specified limits
- Stacked dual row test wheels can hold up to 508 crystals per chamber (depends on crystal type)
- Measures : Fs, FL, Rs, CL, C0, C1, L1, Q, Ts, C0/C1, DF, DLD, Spurious scan, Fs/T, and FL/T
- Optional Chinese operating software
- Frequency Range : KH1800 : 1 - 120 MHz
  KH1820 : 1 - 240 MHz

Standard System Configuration

- KH1800 or KH1820 Crystal π Network Analyzer
- KH7700 System Operating Software & System Cabling
- KM5901 Switch Box
- Work table

Kolinker Precision Technology Limited
Member of Kolinker Group
Unit C, 24/F., Shield Industrial Centre, 84 - 92 Chai Wan Kok Street, Tsuen Wan, N.T., Hong Kong
Tel: (852) 3511 2388 Fax: (852) 35112300
E-mail: kolinker@kolinker.com Home page: https://www.kolinker.com

- KH7220 Chamber
- Dual Row π network test head and 4 inch cover
- Dual row test wheel (for 49U, 49S Leaded-type crystals)
- Industrial computer or Lenovo Computer (or compatible) with Windows® XP (From better performance, suggest to use Intel Core 2 Duo E4500 2.2 GHz or above with 1G RAM, USB port, PCI slot (For long card) with 3.3V & 5V.

System Options

- Dual Chamber, Multi-Task, Time sharing Testing
- Stacked Dual Row π Network Test Head and 8" cover
- Test Head & Disk Pallet (for SMD crystals 7050, 5032, 3225, 2520…..etc)
- Chinese Language Support

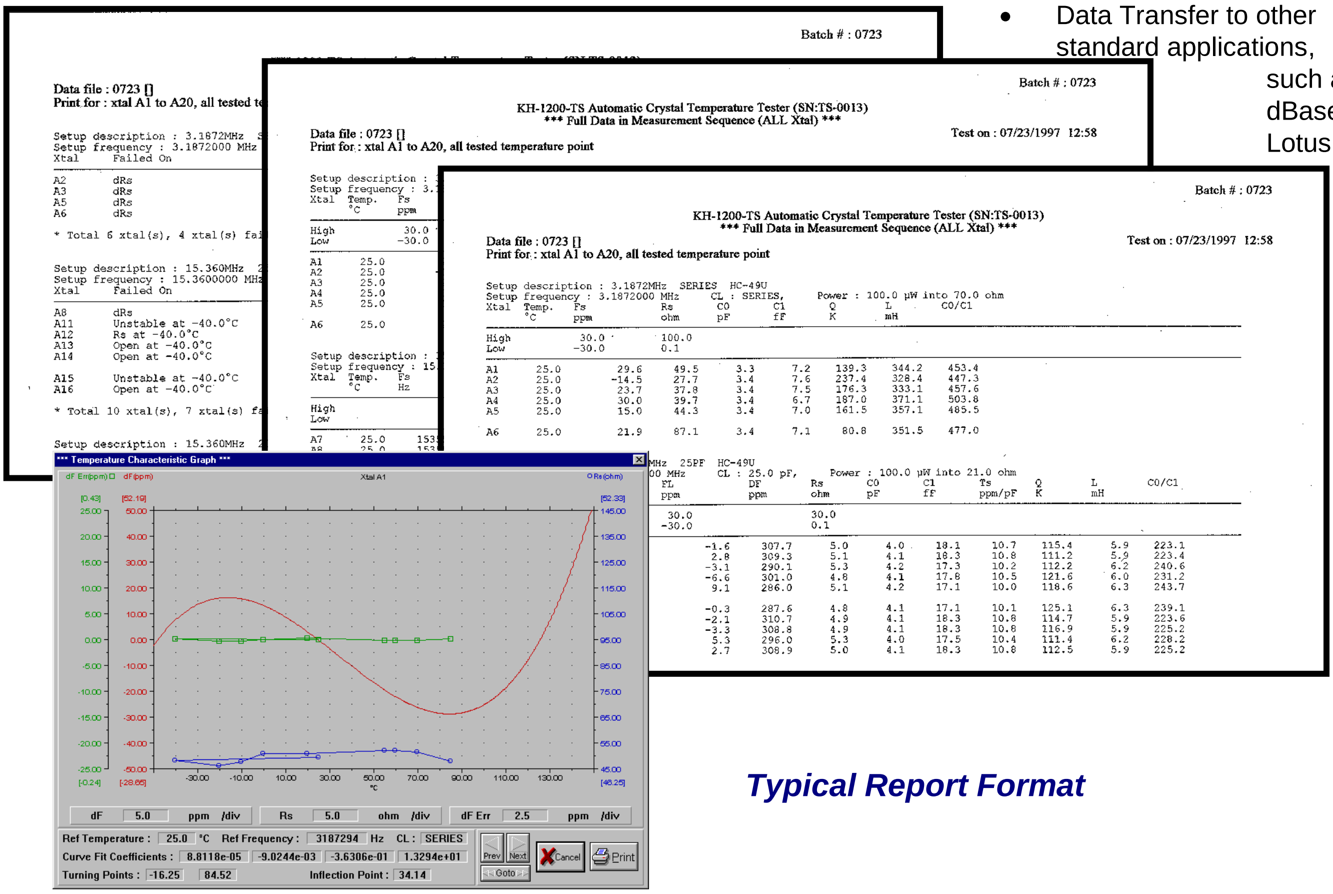
Software Capabilities

Easy Test Set up and Operation

- The user friendly Windows® environment eliminates the need of remembering how to operate or program a test.

Other Standard Reports

- Printout of Crystal Failures
- Printout of Crystal Measurements
- Printout of Frequency and Resistance vs. Temperature
- Plot of Frequency and Resistance vs. Temperature
- Tabular Printout of the Curve-fit Data
- Data Transfer to other standard applications, such as dBase, Lotus



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                                                                        Batch # : 0723

            KH-1200-TS Automatic Crystal Temperature Tester (SN:TS-0013)
                  *** Full Data in Measurement Sequence (ALL Xtal) ***
Data file : 0723 []                                                 Test on : 07/23/1997  12:58
Print for : xtal A1 to A20, all tested temperature point

Setup description : 3.1872MHz  SERIES  HC-49U
Setup frequency : 3.1872000 MHz     CL : SERIES,     Power : 100.0 µW into 70.0 ohm
Xtal  Temp.    Fs           Rs      C0       C1       Q        L      C0/C1
      °C       ppm          ohm     pF       fF       K        mH
-----------------------------------------------------------------------------
High           30.0         100.0
Low           -30.0         0.1
-----------------------------------------------------------------------------
A1    25.0         29.6     49.5     3.3      7.2    139.3    344.2    453.4
A2    25.0        -14.5     27.7     3.4      7.6    237.4    328.4    447.3
A3    25.0         23.7     37.8     3.4      7.5    176.3    333.1    457.6
A4    25.0         30.0     39.7     3.4      6.7    187.0    371.1    503.8
A5    25.0         15.0     44.3     3.4      7.0    161.5    357.1    485.5

A6    25.0         21.9     87.1     3.4      7.1     80.8    351.5    477.0

MHz   25PF   HC-49U
00 MHz      CL : 25.0 pF,      Power : 100.0 µW into 21.0 ohm
 FL              DF        Rs       C0       C1       Ts         Q        L        C0/C1
 ppm             ppm       ohm      pF       fF       ppm/pF     K        mH
-----------------------------------------------------------------------------------------
 30.0                      30.0
-30.0                      0.1
-----------------------------------------------------------------------------------------
         -1.6    307.7     5.0      4.0      18.1     10.7     115.4      5.9     223.1
          2.8    309.3     5.1      4.1      18.3     10.8     111.2      5.9     223.4
         -3.1    290.1     5.3      4.2      17.3     10.2     112.2      6.2     240.6
         -6.6    301.0     4.8      4.1      17.8     10.5     121.6      6.0     231.2
          9.1    286.0     5.1      4.2      17.1     10.0     118.6      6.3     243.7

         -0.3    287.6     4.8      4.1      17.1     10.1     125.1      6.3     239.1
         -2.1    310.7     4.9      4.1      18.3     10.8     114.7      5.9     223.6
         -3.3    308.8     4.9      4.1      18.3     10.8     116.9      5.9     225.2
          5.3    296.0     5.3      4.0      17.5     10.4     111.4      6.2     228.2
          2.7    308.9     5.0      4.1      18.3     10.8     112.5      5.9     225.2
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*** Temperature Characteristic Graph ***

dF 5.0 ppm /div | Rs 5.0 ohm /div | dF Err 2.5 ppm /div

Ref Temperature : 25.0 °C Ref Frequency : 3187294 Hz CL : SERIES

Curve Fit Coefficients : 8.8118e-05 -9.0244e-03 -3.6306e-01 1.3294e+01

Turning Points : -16.25 84.52 Inflection Point : 34.14

Typical Report Format

Specification herein are preliminary, and are subject to change without prior notice.
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