

KH1120 / KH1240

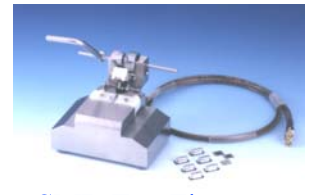
PI - network Crystal Measurement System



High Speed DLD
Low Cost



- 2002 Hong Kong Award for Industry :
CMA Machinery and Equipment Design Award



SMD Test Fixture



Supports Physical Load Capacitor

- High Accuracy IEC444 PI-Network Measurement.
- Supports "Direct Impedance Measurement" and "Physical Load Capacitance" methods for FL measurement.
- Microsoft Windows® 95/98/Me operation.
- Full Network Analyser Configuration with built-in Frequency synthesizer and Vector-voltmeter.
- Frequency Range : KH1120 : 1-120MHz
KH1240 : 20KHz – 400KHz, 500KHz – 240MHz
- Drive Level : 10nW - 1mW into 25 Ohm.
- Measurement capabilities (more than 48 parameters): Fr, Fs, FL, Rr, Rs, RL, CL, C0, C1, L1, Q, Ts, C0/C1, DF1, DF2, FL1, FL2, DLD-F, DLD-R, DLD- γ (gamma : IEC444-6 standard), spurious scan.
- Automatic spurious response measurement.
- Automatic drive level dependence measurement.
- Extensible measurement head. Optional test fixture for SMD packages.
- Optional Test Fixture for Tuning Fork Crystal (For KH1240).
- Microsoft Windows® operation allows high quality graph and report printout.
- High speed PASS/FAIL measurement and sorting upto 5 bins (sorting results displayed on screen).
- All sorting limits of each bins are individually programmable by operator.
- User friendly system operation including menu driven, mouse operation and easy system calibration.
- Flexible data storage and printing features.
- Optional multi-language operating software for using in different countries (Chinese, English, and more ...).
- External time base interface.
- Repeatability : $F_s \leq \pm \text{Time base error} \pm 1 \text{ ppm}$.
 $F_L \leq \pm \text{Time base error} \pm 1 \text{ ppm} \pm (0.2\text{pF} \times T_s \text{ of crystal})$.
 $R_s \leq \pm 8\% \pm 1\Omega$.
- Time Base error : exfactory calibration $\leq 1 \text{ ppm}$
aging for 1st year $\leq 2 \text{ ppm}$
aging for 2nd year and thereafter $\leq 1 \text{ ppm}$
- Calibration Method : 3 terms (open, short and load) calibration with standard resistor (provided with system).
- Requirements on IBM™ PC compatible computer supplied by user :

Minimum Pentium III 300MHz, 3.25" floppy, 64MB RAM, 20M hard disk space, Windows® 95, mouse, 800 x 600 SVGA display adaptor (Pentium III 800MHz or better with Windows 98 is strongly recommended for optimum performance).

Full size PCI slot with +3V and +5V is required



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GRAPHICAL DISPLAY FORMAT

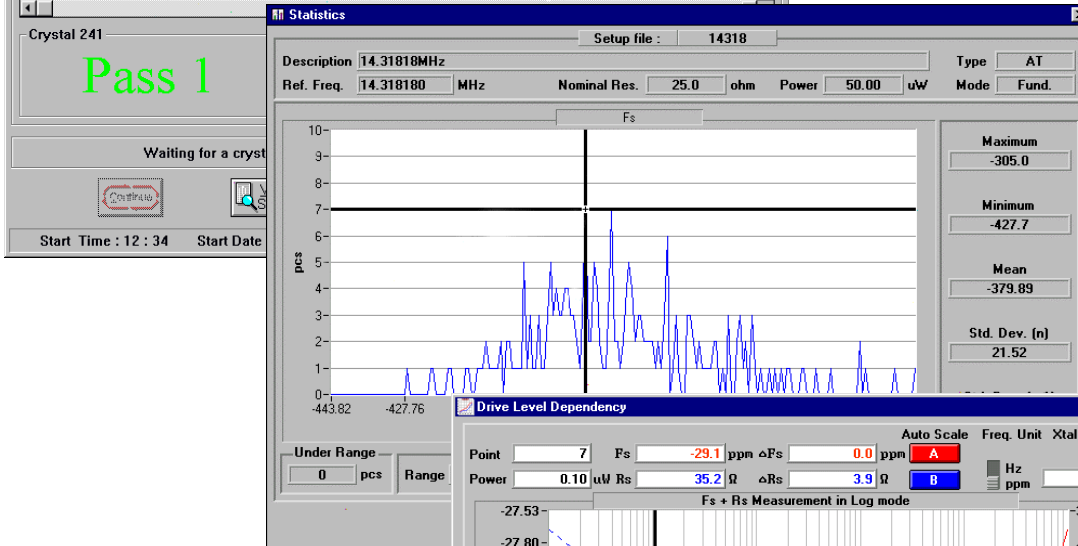
Measure [Batch # :] [Setup File : 14318]

Setup Description 14.31818MHz

Ref. Freq. 14.318180 MHz Nominal Res. 25.0 ohm Power 50.00 μ W Mode Fundamental Type AT

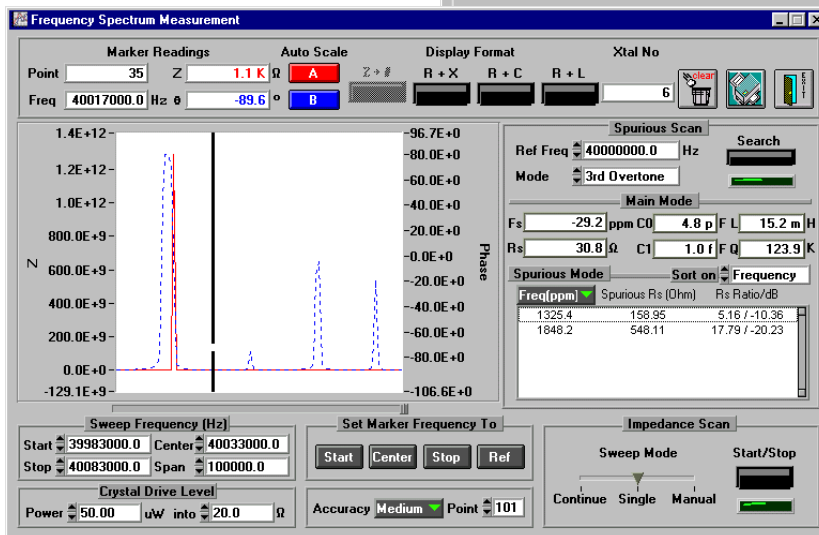
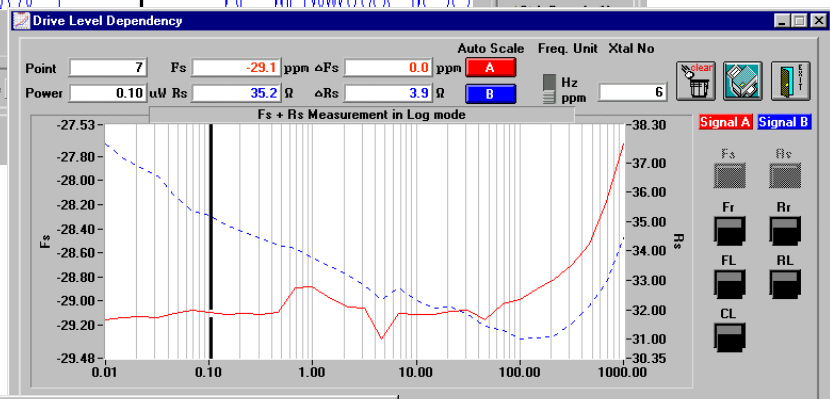
Xtal	Status	Fs [ppm]	FL:20.0pF [ppm]	Rs [ohm]	CO [pF]	CL [pF]	TS [ppm/pF]	Q [K]	L [mH]	CO/CL
241	Pass 1	-399.7	-0.8	6.6	5.1	19.7	15.6	86.0	6.3	259.8
240	Pass 1	-391.0	0.1	6.3	4.8	19.6	15.9	68.8	6.3	244.4
239	Pass 1	-380.1	-19.4	6.6	4.9	17.5	14.2	95.5	7.1	276.8
238	Pass 1	-345.3	-5.8	7.1	4.2	16.8	14.4	92.6	7.4	248.8
237	Pass 1	-404.8	-18.5	7.6	4.5	19.2	16.0	76.3	6.4	232.8
236	Pass 1	-407.2	-6.3	6.0	4.4	19.6	16.4	93.8	6.3	225.4
235	Pass 1	-387.0	-16.5	7.7	3.9	17.7	15.5	81.1	7.0	222.1
234	Pass 1	-383.0	7.9	10.6	4.0	19.2	16.6	54.9	6.5	211.2
233	Pass 1	-382.8	-1.9	7.8	4.2	18.3	15.6	77.7	6.7	230.3
232	Pass 1	-379.1	-3.2	7.6	4.3	18.5	15.6	78.8	6.7	234.5

QC Measurement



Statistical Graph

Drive Level Dependency (DLD)



Spurious Response Scanning

Agent :

Specifications are subject to change without prior notice.

Photo shown is for reference only.

Windows is a registered trademark of Microsoft Corp.

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