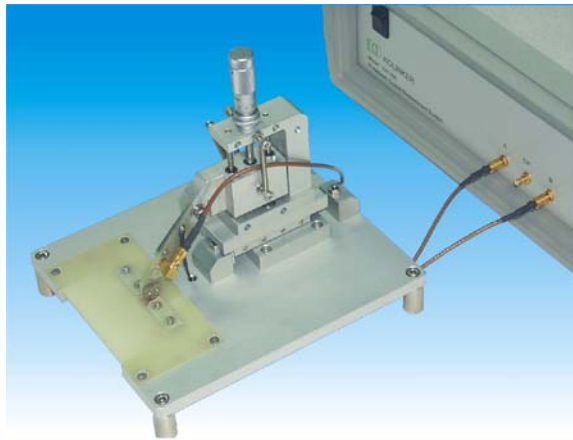


# *KH5406*

## *Pi-network Quartz Blank Measurement System*



The *KH5406* is a non-contact type pi-network measurement system for measuring the resonant frequency and relative resistance of quartz blanks.

The built-in *KH1120 / KH1240 / KH1200 Pi-network Crystal Measurement System* gives excellent measurement accuracy and repeatability over other oscillator type blank sorters. Frequency range is 1MHz to 250MHz. Testing specifications include resonant frequency, relative resistance and spurious scan.

The distance between the electrodes and the quartz blank determines the load capacitance of the blank and therefore determines the resonant frequency. Traditional blank sorters adjust the height of the upper electrode with a micrometer. That method gives an indirect relationship between height and frequency, and gives problems of correlating measurement results with other systems.

With *KH5406* the *Electrode capacitance*\*\* can be measured and adjusted such that repeatabilities of frequency measurement for different production batches are excellent. Therefore giving direct relationship between electrode capacitance and resonant frequency.

Calibration procedures are extremely simple that standard "open", "short" and "load" calibration for pi-network measurement systems are used.

\*\* *Electrode capacitance is the equivalent capacitance of the air gap between the quartz blank and the electrodes.*



### **Kolinker Industrial Equipments Limited**

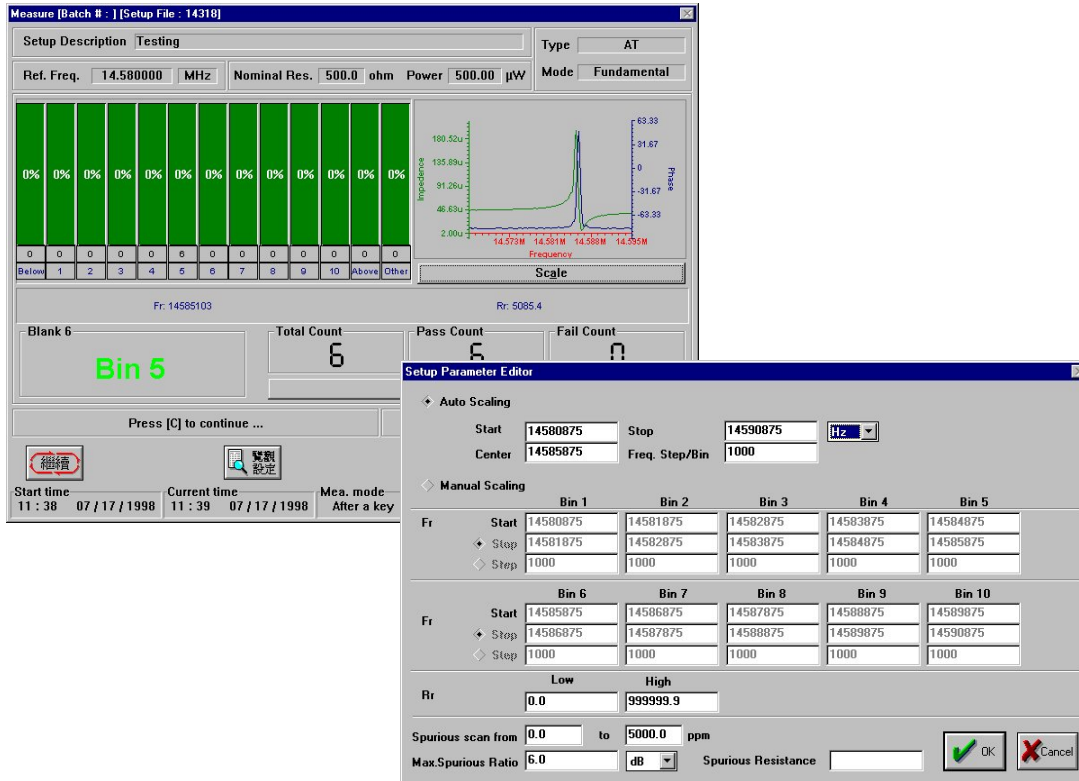
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## Specifications

- Frequency Range : KH1120 : 1 ~ 120MHz  
KH1240 : 1 ~ 240MHz  
KH1200 : 1 ~ 250MHz
- Fixture type : non-contact with height adjustment for the upper electrode.
- Crystal Measurement instrument : KH1120 / KH1240 / KH1200 Pi-network Crystal Measurement System.
- Measurement Method : High accuracy pi-network crystal measurement algorithm.
- Supported Parameters : Resonant frequency, relative resistance (activity), spurious scan.
- 30 bins for frequency sorting, with 1 bin for other parameters failed.
- Programmable frequency span for each bin – auto divisions or manual key in.
- Graphical frequency response characteristics.
- Microsoft Windows® 95 / 98 / ME operation allows high quality graph and report printout.
- Optional multi-language software for using in different countries ( Chinese, English, and more ... ).
- Operating voltage : KH1120 / KH1240 : Computer Interface Card,  
No external power required  
KH1200 : 90~250V a.c.
- Time Base error : exfactory calibration  $\leq \pm 1$  ppm  
aging for 1st year  $\leq \pm 2$  ppm  
aging for 2nd year and thereafter  $\leq \pm 1$  ppm
- Calibration Method : With standard resistor ( provided with machine ).
- Operates on IBM™ PC compatible computer – Pentium III 800MHz or above, 128MB RAM, 20MB Hard Disk Space, Windows® 95 / 98 / ME, 1024 x 768 SVGA display card and monitor, mouse, keyboard.



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