Multichannel frequency Comparator VCH-315

The frequency comparator VCH-315, controlled by Personal Computer is a multichannel system for frequency instability measuring.

Input signals: sine form of 5 or 10 or 100 MHz nominal frequency, (0.8–1.2) V on 50 Ohm load.

Number of measuring channels: 8 (two groups with four tested and one reference inputs).

Input impedance: 50 Ohm

Measured relative frequency difference: ±5.0×10^{-9}

Frequency fluctuation passband: (10±3) Hz

Averaging time range: from 1 s up to 1×10^6 s.

Main error ("noise floor", when df/f=0): not more values given in the table.

<table>
<thead>
<tr>
<th>Averaging time, t</th>
<th>Main error, two sample Allan variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 s</td>
<td>1.5×10^{-13}</td>
</tr>
<tr>
<td>10 s</td>
<td>2.0×10^{-14}</td>
</tr>
<tr>
<td>100 s</td>
<td>3.0×10^{-15}</td>
</tr>
<tr>
<td>1000 s and more</td>
<td>5.0×10^{-16}</td>
</tr>
</tbody>
</table>

Additional error (spurious phase modulation at df/f): not more 2.0×10^{-3} df/f.

Application software:
- runs under Microsoft Windows 2000, XP, Vista, 7;
- calculates phase and frequency differences, two-sample Allan variance, frequency fluctuations spectra for each channel.
- represents results as tables and plots, stores information in files.

Interface: RS-232C, USB.

Power:
- AC power supply voltage (198–242) V, 50; 60 Hz;
- DC power supply voltage (22–32) V.

Power consumption: not more 40 B A.

Dimensions: 145×450×315 mm.

Weight: not more 8 kg.