Ultra-high stability. The continuously improving accuracy of capacitor calibrations by NIST brings a better knowledge of capacitance to standards laboratories - provided, of course, the laboratories have adequate reference standards. The 1408 Reference Standard Capacitors, with their high stability, are suitable for calibration in parts in 10^-7. The 1616 Precision Capacitance Bridge is highly recommended for accurate calibration of a wide range of working standards from such a reference.

- 10 pF and 100 pF combination
- High stability

SPECIFICATIONS

Nominal Value: 10 pF and 100 pF.

Calibration: A certificate of calibration is supplied with each capacitor, giving the measured direct capacitance at 1 kHz and at the specified temperature near 30°C, the air-bath temperature. The measured value is obtained by a comparison to a precision better than 0.5 ppm with standards whose values are determined and maintained by periodic calibrations made by NIST.

Adjustment Accuracy: ±5 ppm.

Stability: Estimated to be better than 1 ppm per year.

Temperature Coefficient: 2 ±2 ppm/°C for 100 pF; 5 ±2 ppm/°C for 10 pF.

Temperature Cycling: from 0 to 60°C, < 1 ppm hysteresis at 30°C.

Electrical:

Dissipation Factor: < 10^-5 at 1 kHz.

Voltage: 750 V max.

Residual Impedances: See Figure 1

<table>
<thead>
<tr>
<th>Value (pF)</th>
<th>LH, LL (μH)</th>
<th>CD (pF)</th>
<th>CH (pF)</th>
<th>CL (pF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.05</td>
<td>100</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>100</td>
<td>0.05</td>
<td>100</td>
<td>30</td>
<td>28</td>
</tr>
</tbody>
</table>

Terminals: Two locking G874 coaxial connectors or BNC connectors; various patch cords available.

Air-Bath Characteristics:

- Temperature: 30°C nominal with stability of 0.01°C/year, <0.005°C/hour if ambient temperature is kept within 1°C.
- Temperature Coefficient: 0+0.05ppm/°C from 17 to 29°C ambient temperature; thermometer well provided for calibration.

General: Connectors can be made to the front or the rear as your application dictates. A 12-volt input is provided to maintain a constant air-bath temperature even while the unit is in transit.

Power: 105 to 125 V or 210 to 250 V, 50 to 60 Hz, 5 W; 12 V at 0.4 A; for dc operation, battery connectors provided on rear.

Mechanical:

- Dimensions: 22.2 cm H x 21.4 cm W x 40.7 cm D (8.72" x 8.42" x 16"); (approx.)
- Weight: 12 kg (25 lb.) net, 16 kg (34 lb.) shipping; (approx.)

ORDERING INFORMATION

1408-9706 10/100 pF Air bath Reference Standard Capacitor