Atlas DCA
semiconductor component analyser

Model: DCA55

Features

- Connect any way round.
- Automatic component type identification.
- Automatic pinout identification.
- Transistor gain measurement.
- MOSFET gate threshold measurement.
- PN junction characteristics measurements.
- Leakage current measurement.
- Auto power on and power off.
- Ultra-slim and compact design.

Supported Parts

- Transistors (Germanium and Silicon).
- Darlington.
- MOSFETs.
- Junction FETs (only gate pin identified).
- Low power thyristors and triacs.
- LEDs (including bicolour types).
- Diodes and diode networks.

Example Display for a typical transistor:

Here, the Atlas DCA has detected an NPN transistor. The pinout is then identified. DC current gain is measured at a collector current of 2.5mA. The Base-Emitter voltage drop is measured. Finally, the collector leakage is measured.

Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak test current into S/C</td>
<td>-5.5mA</td>
<td>5.5mA</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Peak test voltage across O/C</td>
<td>-5.1V</td>
<td>5.1V</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Measurable transistor gain range (hFE)</td>
<td>4</td>
<td>20000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Transistor gain accuracy (hFE&lt;1000)</td>
<td>-3% to +3%</td>
<td>2,9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transistor VCEO</td>
<td>20V</td>
<td>30V</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Collector-emitter test current</td>
<td>2.45mA</td>
<td>2.50mA</td>
<td>2.55mA</td>
<td></td>
</tr>
<tr>
<td>MOSFET gate threshold range</td>
<td>0.1V</td>
<td>5.0V</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>MOSFET gate threshold accuracy</td>
<td>-2% to +2%</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOSFET drain-source test current</td>
<td>2.45mA</td>
<td>2.50mA</td>
<td>2.55mA</td>
<td></td>
</tr>
<tr>
<td>MOSFET minimum gate resistance</td>
<td>6kΩ</td>
<td>1.80V</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Thyristor/Triac gate test current</td>
<td>4.5mA</td>
<td>5.0mA</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Thyristor/Triac load test current</td>
<td>5.0mA</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diode test current</td>
<td>5.0mA</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diode forward voltage accuracy</td>
<td>-2% to +2%</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vf for LED identification</td>
<td>1.30V</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Battery type: 6F22 9V Alkaline

Note: Specifications of our products are subject to change without notice. E&OE. 02/13
World’s First

The Atlas LCR is an advanced instrument that greatly simplifies the testing of passive components.

Traditional LCR bridges are inherently complex and very time consuming to use.

The Atlas LCR does everything automatically, it tells you the component type in addition to component value data.

What’s more, the Atlas LCR automatically selects the best signal level and frequency for the particular component under test.

Easy to use

Just clip the universal test leads to your component and press the test button. In seconds, the Atlas LCR will identify the type of component (Inductor, Capacitor or Resistor) together with the component’s main value. Additionally, further component data is also displayed, such as the DC resistance of an inductor.

The test frequency is automatically selected to suit the component under test and this is also confirmed on the scrollable display.

Flexible

The Atlas LCR is supplied with our brand new universal 2mm connectors including a pair of gold hook probes. The 2mm plugs are compatible with many probe types including our new improved SMD Tweezers and Crocs. Other accessories are available too, such as a padded carry case, spare batteries and more.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance</td>
<td>range</td>
<td>1Ω</td>
<td>2MΩ</td>
<td></td>
</tr>
<tr>
<td>Capacitance</td>
<td>resolution</td>
<td>0.3 Ω</td>
<td>0.6Ω</td>
<td></td>
</tr>
<tr>
<td>Inductance</td>
<td>range</td>
<td>μH</td>
<td>10H</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Within 12 months of factory calibration. Please contact us if you require a full re-calibration and certification of traceable calibration.
2. Specified at temperatures between 15°C and 30°C.
3. Subject to acceptable LCD visibility.
4. For inductance between 100μH and 100mH.
5. For capacitance between 200pF and 500nF.
6. For resistance between 10Ω and 1MR.

Feature Summary

- Automatic component identification.
- Automatic test frequency selection (DC, 1kHz, 15kHz, 200kHz).
- Delayed or instant analysis (for hands free operation).
- Auto power-off.
- Non-volatile probe and test lead compensation.
- Interchangeable probes sets.
- Automatic ranging and scaling with real units display.
- 1% basic resistance accuracy.
- 1.5% basic inductance/capacitance accuracy.

Peak test current (40°C) +1.05V +1.05V
Peak test current (40°C) +3.25mA +3.25mA
Test frequency +1.5% ±1% +1.5%
Sine purity Typically -60dB 3rd harmonic
Operating temperature range 10°C 40°C 3
Battery operating voltage 8.5V 13V

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