Atlas *LCR*

passive component analyser

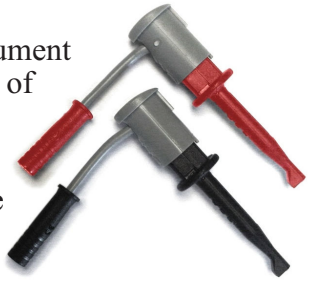
Model: LCR40

PEAK® electronic design ltd

PRODUCT BRIEF

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.

Instrument dimensions:
103mm x 72mm x 20mm

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.

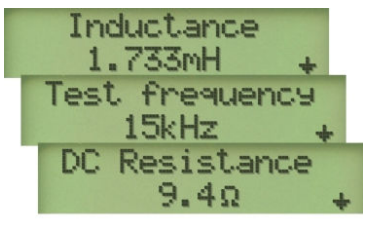
Parameter		Min	Typ	Max	Note
Resistance	range	1Ω		2MΩ	
	resolution	0.3 Ω	0.6Ω		
	accuracy	Typically ±1.0% ±1.2Ω			1,2,6
Capacitance	range	0.5pF		10,000µF	
	resolution	0.2pF	0.5pF		
	accuracy	Typically ±1.5% ±1.0pF			1,2,5
Inductance	range	1µH		10H	
	resolution	0.4µH	0.8µH		
	accuracy	Typically ±1.5% ±1.6µH			1,2,4
Peak test voltage (across O/C)		-1.05V		+1.05V	
Peak test current (thru S/C)		-3.25mA		+3.25mA	
Test frequency accuracy	1kHz	-1.5%	±1%	+1.5%	
	14.925kHz	-1.5%	±1%	+1.5%	
	200kHz	-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	

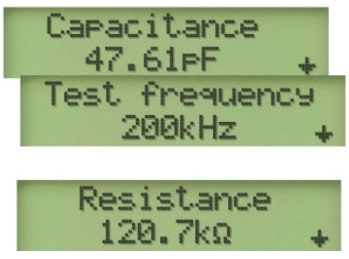
Notes:

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 100uH and 100mH.
5. For capacitance between 200pF and 500nF.
6. For resistance between 10R 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.





Please note that specifications of our products are subject to change without notice. E&OE. 08/12

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Atlas *DCA*

semiconductor component analyser

Model: DCA55

PEAK electronic design ltd

PRODUCT BRIEF

Features

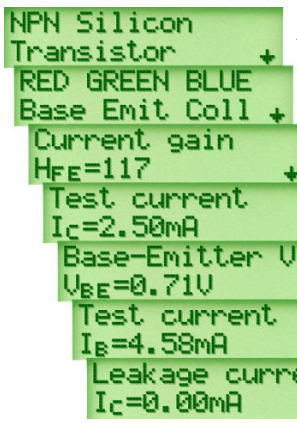
- Connect any way round.
- Automatic component type identification.
- Automatic pinout identification.
- Transistor gain measurement.
- MOSFET gate threshold measurement.
- PN junction characteristics measurements.
- Leakage current measurement.
- Auto power on and power off.
- Ultra-slim and compact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

Supported Parts

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

Smart
Convenient
Accurate

Example Display for a typical transistor:



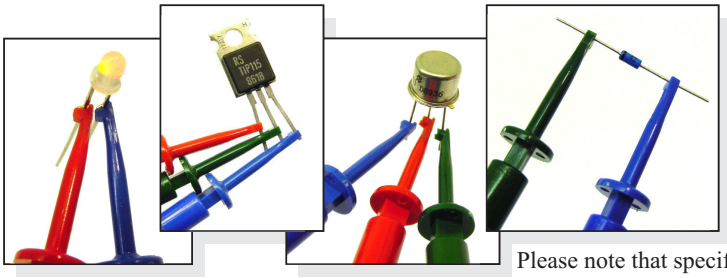
Here, the Atlas DCA has detected an NPN transistor.

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

Parameter	Minimum	Typical	Maximum	Notes
Peak test current into S/C	-5.5mA		5.5mA	1
Peak test voltage across O/C	-5.1V		5.1V	1
Measurable transistor gain range (H_{FE})	4		65000	2
Transistor gain accuracy (HFE<1000)	-3%-5 HFE		+3%+5 HFE	2,9
Transistor V_{CEO}	2.0V		3.0V	2
Transistor V_{BE} accuracy	-2%-20mV		+2%+20mV	9
V_{BE} for Darlington identification		1.0V		3
V_{BE} for Darlington identification (shunted)		0.8V		4
Acceptable transistor V_{BE}			1.80V	
Base-emitter shunt resistance threshold		60kΩ		
Transistor collector-emitter test current	2.45mA	2.50mA	2.55mA	
Acceptable transistor collector leakage		1.25mA		6
MOSFET gate threshold range	0.1V		5.0V	5
MOSFET gate threshold accuracy	-2%-20mV		+2%+20mV	5
MOSFET drain-source test current	2.45mA	2.50mA	2.55mA	
MOSFET minimum gate resistance		8kΩ		
Thyristor/Triac gate test current		4.5mA		7
Thyristor/Triac load test current		5.0mA		
Diode test current			5.0mA	
Diode forward voltage accuracy	-2%-20mV		+2%+20mV	
V_F for LED identification		1.50V		
Battery type	GP23A 12V Alkaline			
Battery voltage range	7.50V	12V		
Battery voltage warning threshold		8.25V		
Inactivity power-down period		30 secs		
Dimensions (excluding test leads)	103 x 70 x 20 mm			
Operating temperature range	0°C		50°C	8

1. Between any pair of test clips.
2. Collector current of 2.50mA.
3. Resistance across reverse biased base-emitter > 60k Ω.
4. Resistance across reverse biased base-emitter < 60k Ω.
5. Drain-source current of 2.50mA.
6. Collector-emitter voltage of 5.0V.
7. Thyristor quadrant I, Triac quadrants I and III.
8. Subject to acceptable LCD visibility.
9. BJT with no shunt resistors.

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