

# 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

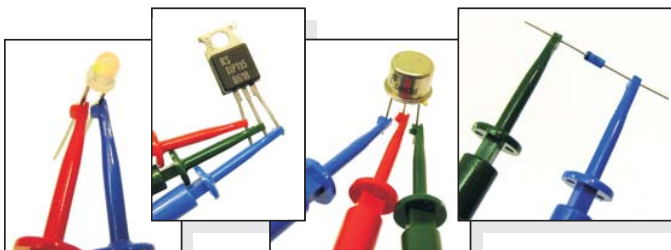
- Transistors (Germanium and Silicon).
- Darlingtons.
- MOSFETs.
- Junction FETs.
- Low power thyristors and triacs.
- LEDs (including bicolour types).
- Diodes and diode networks.



**Smart  
Convenient  
Accurate**

Example Display for a typical transistor:

NPN Silicon Transistor +	Here, the Atlas DCA has detected an NPN transistor.
RED GREEN BLUE Base Emit Coll +	The pinout is then identified.
Current gain H <sub>FE</sub> =117 +	DC current gain is measured at a collector current of 2.5mA.
Test current I <sub>C</sub> =2.50mA +	
Base-Emitter V V <sub>BE</sub> =0.71V +	The Base-Emitter voltage drop is measured.
Test current I <sub>B</sub> =4.58mA +	
Leakage current I <sub>C</sub> =0.00mA +	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 <sub>FE</sub> )	4		65000	2
Transistor gain accuracy	-3%-5 HFE		+3%+5 HFE	2,9
Transistor V <sub>CEO</sub>	2.0V		3.0V	2
Transistor V <sub>BE</sub> accuracy	-2%-20mV		+2%+20mV	9
V <sub>BE</sub> for Darlington identification		1.0V		3
V <sub>BE</sub> for Darlington identification (shunted)		0.8V		4
Acceptable transistor V <sub>BE</sub>			1.80V	
Base-emitter shunt resistance threshold		60kΩ		
Transistor collector-emitter test current	2.45mA	2.50mA	2.55mA	
Acceptable transistor collector leakage		0.7mA		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 <sub>F</sub> 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.

02/08

### Peak Electronic Design Limited

West Road House, West Road, Buxton, Derbyshire, SK17 6HF. Tel.+44 (0)1298 70012, Fax. +44 (0)1298 70046

See us on the Web: [www.peakelec.co.uk](http://www.peakelec.co.uk) Email: [sales@peakelec.co.uk](mailto:sales@peakelec.co.uk)

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