Atlas *DCA*

semiconductor component analyser

Model: DCA55

PEAK electronic design ltd

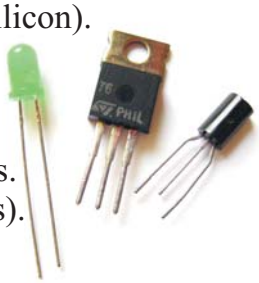
PRODUCT BRIEF

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.



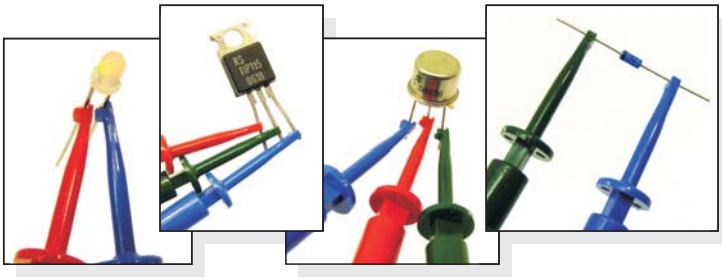
Smart

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_{FE}=117	DC current gain is measured at a collector current of 2.5mA.
Test current I_C=2.50mA	
Base-Emitter V V_{BE}=0.71V	The Base-Emitter voltage drop is measured.
Test current I_B=4.58mA	
Leakage current I_C=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_{FE})	4		65000	2
Transistor gain accuracy	-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		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_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.

02/08

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