
The Peak Atlas DCA Semiconductor Component Analyser – Frequently Asked Questions

Q. What does the *Atlas DCA* do?

A. It analyses electronic components (semiconductors) in order to identify the component type, component pinout and lots of other component parameters such as transistor current gain, MOSFET gate thresholds and pn junction characteristics. You don't need to know what the component is or which lead is which before you analyse it. Just connect it anyway round and press the "test" button.

Q. What components will the *Atlas DCA* analyse?

A. Bipolar and Darlington transistors (silicon and germanium), MOSFETs (depletion mode and enhancement mode types), Junction FETs, diodes, diode networks (common anode, common cathode and series types), LEDs (including 2 lead and 3 lead bicolour types), sensitive gate thyristors and sensitive gate triacs.

Q. What about transistors with diode protection and/or base-emitter shunt resistors built in such as the types used in televisions and other special applications?

A. The *Atlas DCA* will automatically identify these types of built-in transistor features. (Only if the base-emitter resistors are greater than 400 ohms).

Q. Are there any components that the *Atlas DCA* can't analyse?

A. Generally speaking, the *Atlas DCA* will not analyse component types that are not mentioned above, Unijunction transistors for example. Additionally, very low gain transistors ($H_{FE} < 4$ @ $I_C = 2.5\text{mA}$ and $V_{CEO} = 2.5\text{V}$) may not be analysed. Note that transistors with low base-emitter shunt resistors or very high power transistors can exhibit very low current gain at low test currents. The *Atlas DCA* however can still detect diode junctions within the transistor even if the gain is very low. Detailed measurement limits are given in the free *Atlas DCA* data sheet. Finally, the *Atlas DCA* cannot analyse thyristors (SCRs) and triacs that require gate or holding currents of 5mA or more.

Q. What will the *Atlas DCA* display for faulty components?

A. If the *Atlas DCA* cannot identify a working component of the types listed above then it may display "Unknown or Faulty Component". However, depending on the type of component and the type of fault, the *Atlas DCA* may find one or more pn (diode) junctions within the component or short circuits within the component, these situations will be clearly identified by the *Atlas DCA*.

Q. Can the *Atlas DCA* analyse components in-circuit?

A. No, it's not recommended.

Q. Why can the *Atlas DCA* only analyse "sensitive gate" thyristors and triacs?

A. Test current are kept to less than about 5mA to ensure that no damage is done to unknown and delicate components that can be potentially connected anyway round. Many thyristors and triacs require gate currents and holding currents of more than 5mA. Testing thyristors or triacs that require gate and holding currents of more than 5mA may result in "Unknown or Faulty Component" being displayed even if the part is working.

Q. Does it come with a battery and can I get spares?

A. The *Atlas DCA* is supplied with an Alkaline battery (Type GP23A) so you're ready to go. Replacement batteries are easily available from many outlets and directly from Peak Electronic Design Limited.

Q. What if I don't like it?

A. We are confident that you will love using the *Atlas DCA* but if you are not happy for any reason you can return it to us within 14 days for a full and immediate refund. This policy is in addition to the standard product guarantee.

Q. What about guarantees?

A. All our products are guaranteed for 12 months, we will cover the costs of carriage, parts and labour. After that period we endeavour to solve any problems quickly and economically, we want you to be happy with our products.

Q. Can I have some more detailed data on the *Atlas DCA*?

A. Of course, the full data sheet and copies of independent reviews are available on our website (www.peakelec.co.uk) or we can send you printed copies free of charge.

If you have any other questions then don't hesitate to contact us, we're here to help.