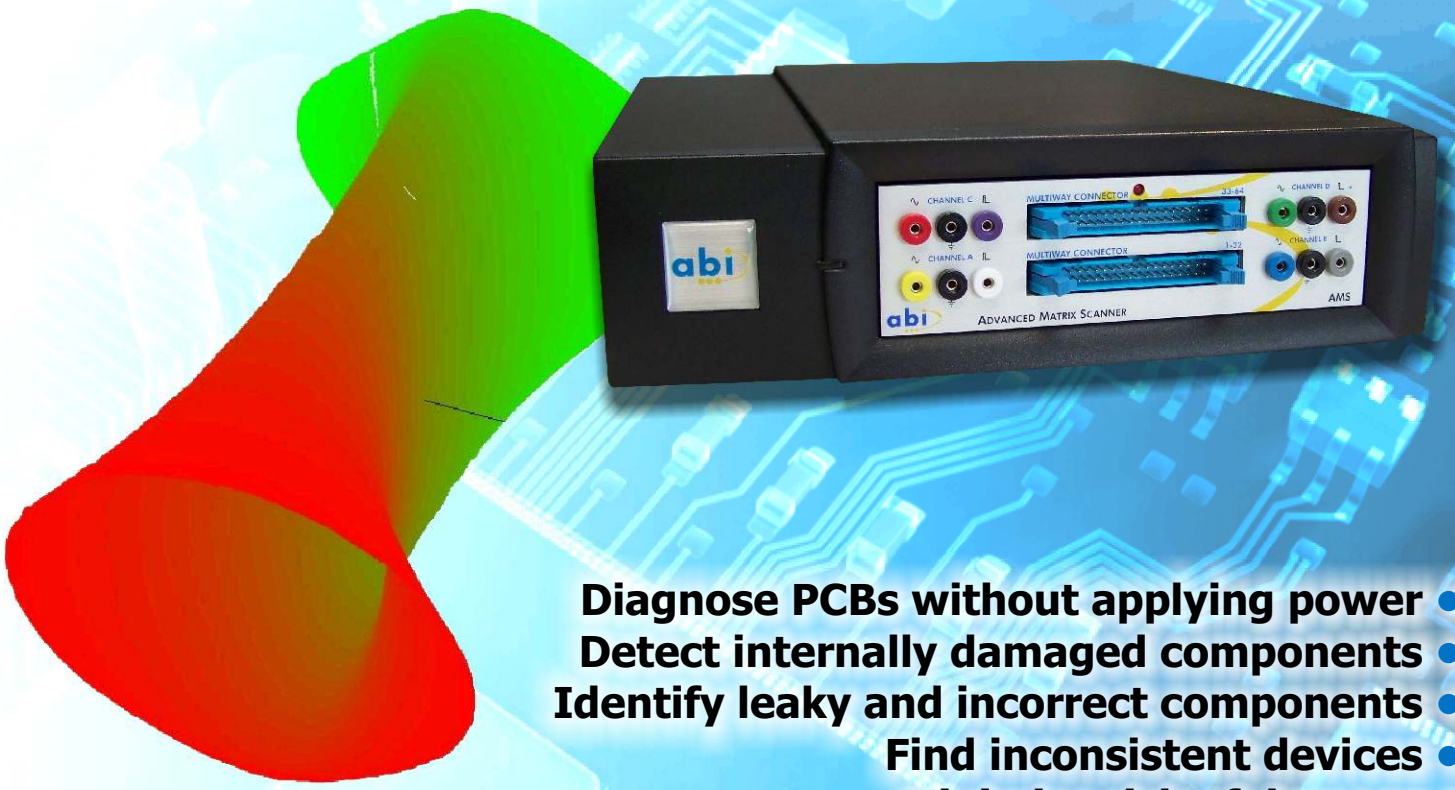
Detect more faults on PCBs by increasing test coverage



- Diagnose PCBs without applying power
- Detect internally damaged components
- Identify leaky and incorrect components
- Find inconsistent devices
- Minimise risk of damage
- Reduce testing time

SYSTEM 8 Advanced Matrix Scanner

V/I signature tester with frequency sweep

The SYSTEM 8 AMS is an innovative solution for the analysis of components and complete PCB assemblies under power off conditions.

Using a unique test technique, the AMS offers access to electrical signatures for the detection of faults including internal damage and inconsistencies.

The AMS simply increases fault coverage and, at the same time, reduces fault-finding time .

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What is V/I signature testing ?

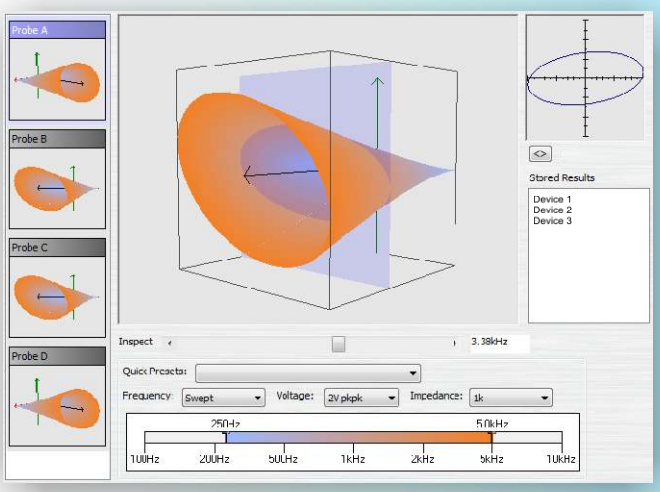
V/I signature testing is an established and reliable method for fault finding on both analogue and digital boards. An AC voltage is applied, via a current limiting resistor, to a test point and the resulting current is measured. The results are plotted on a voltage/current graph which displays the signature of the test point.

Analysis of a V/I signature, usually by comparison with a reference, can lead to finding faults such as:

- ✓ Leaky components
- ✓ Internally damaged components
- ✓ Incorrect value components
- ✓ Inconsistent components
- ✓ Short and open circuits

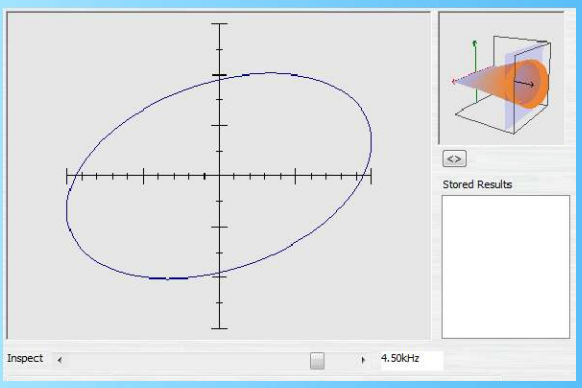
Increased fault coverage with frequency sweep

The Advanced Matrix Scanner (AMS) module increases the fault coverage by varying the frequency of the AC voltage at which the V/I signature is acquired. The resulting curve is plotted on a 3D viewer which allows the variations of the V/I signatures to be observed over a frequency range. This can lead to finding faults that are not visible with a standard V/I analysis.



Increased fault coverage with matrix V/I

The AMS module also increases fault coverage by acquiring V/I signatures in Matrix scan. In this mode, the module acquires the V/I signatures of each pin of a component or board with reference to all the other pins available (as opposed to a single reference pin in standard V/I testing). This generates an unprecedented set of data (400 signatures for a 20 pin device) that allows the most elusive faults to be detected.



Power off = safe test

Signatures are acquired when no power is applied to the board under test. This is beneficial as it reduces the risk of damage to components during test and allows semi-skilled operators to run initial tests. More importantly, it is a major advantage as it allows even completely "dead" boards to be diagnosed.

Multiple channels = faster test

The AMS module is equipped with 64 test channels (expandable) to allow acquisition of signatures on high pin count components and even complete board assemblies (via a connector for instance). This drastically reduces the time needed to acquire data and enables PCBs to be diagnosed quickly without manually checking each pin.

To get the latest information for this new product, scan this code with your smartphone or click on it to visit the product page.

Test capabilities

The Advanced Matrix Scanner (AMS) offers various forms of the V/I signature test with configurable parameters to extend its range of applications and increase test coverage. These include:

- V/I signature tests with frequency sweep
- V/I signature tests with configurable frequency
- Matrix V/I tests with multiple reference
- Dynamic V/T tests with pulse outputs

ABI Electronics Limited
Dodworth Business Park
Dodworth, Barnsley
South Yorkshire S75 3SP
United Kingdom
Tel: +44 1226 207420
Fax: +44 1226 207620
www.abielectronics.co.uk