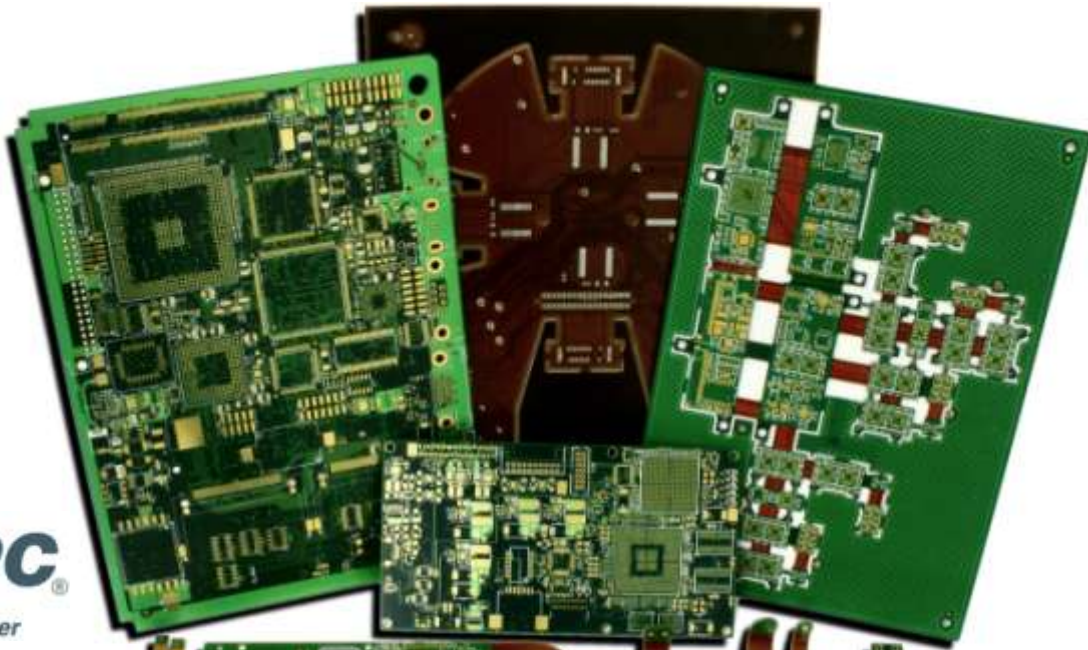


# Innovative Circuits, Inc.

**Real Quality is Innovative!**

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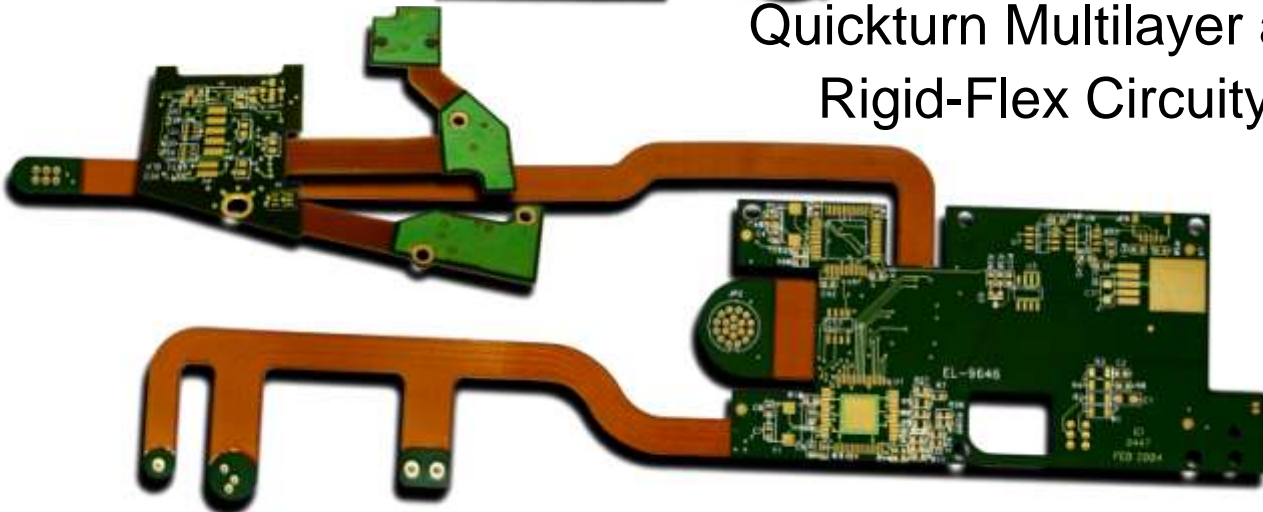
*"Enabling Technology into the 21st Century"*



Underwriters  
Laboratories

**ITAR**

Quickturn Multilayer and  
Rigid-Flex Circuitry.



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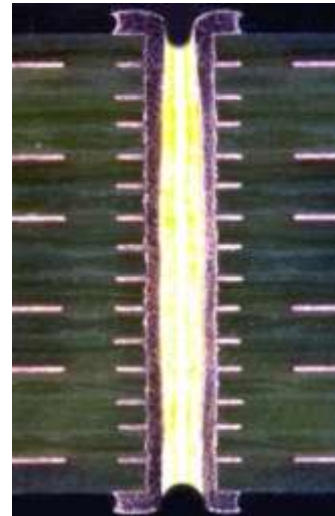
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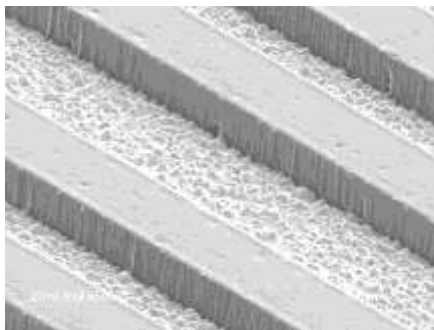
State of The Art Equipment Means Better Accuracy and Repeatability.



We have replaced our older drilling and routing equipment with state of the art **Hitachi single spindle high speed drills** and routers equipped with **precision vision systems**. The drills are equipped with 160K low run-out spindles. That combined with Hitachi's **automatic scaling** and offsetting make **perfect registration** a reality without the need of x-ray equipment. The routing vision aligns on each part for highly accurate edge to feature routing and precision **surface sensing** automates the drilling and routing of blind features. The drills electrically sense the surface when the drill tip touches the foil allowing us to control **blind hole** drilling depth with extreme accuracy. The routers sense the surface accurately by precision pressure foot movement. All together the acquisition of Hitachi equipment has raised the bar considerably.



16 Layers, .080 thick with a .008 finished hole



LDI resist with 3 mil lines and spaces.

With our sights set on the future and image consistency being a major focus in the market we have recently acquired a state of the art Orbotech Paragon 8800HI **Laser Direct Imager**. With **.001 total front to back registration** (.0005 per side), **automatic scaling** and **centering**, wide depth of field, and **.001 mil lines**, with **+ - 12um positioning** capability we can assure your pads will be aligned and your images will be dimensionally correct. Large scale optics allow a large depth of field enabling us to print multiple thickness substrates including rigid flex panels, and defined cavity imaging. Equipped with an 8 watt laser the 8800HI is solder mask capable for perfectly registered **mask defined BGA's**.

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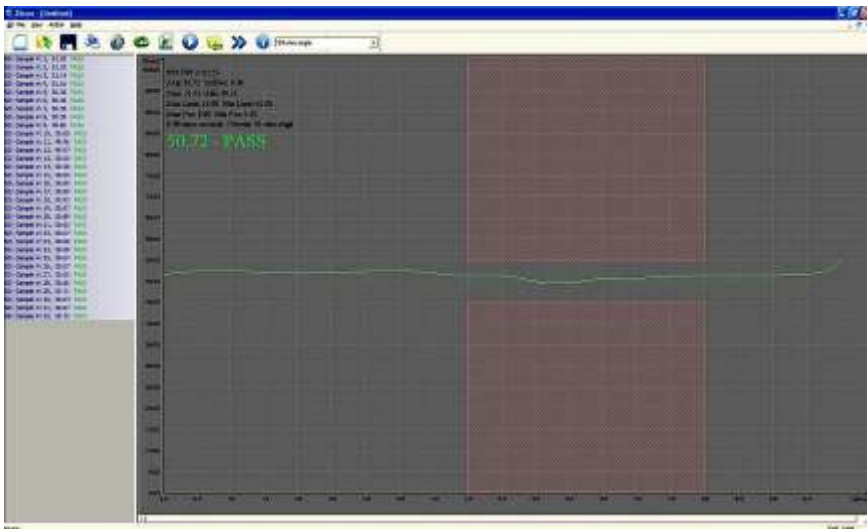
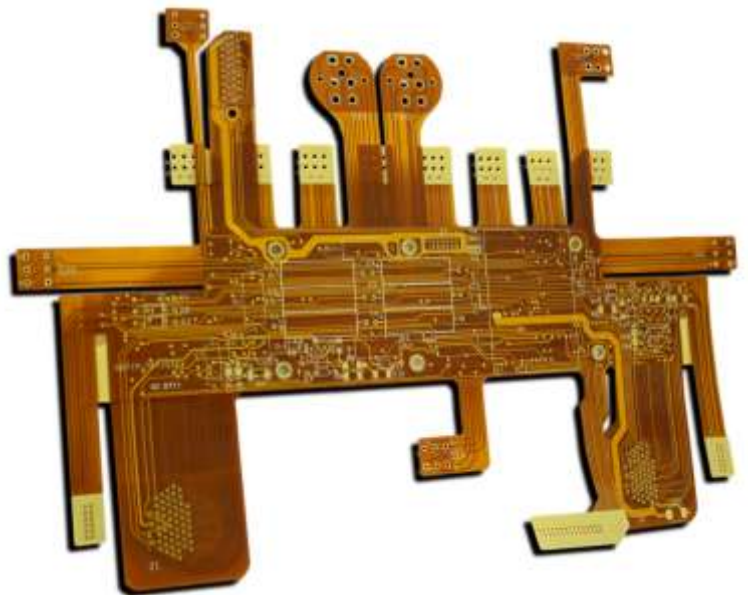
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## All the Right Tools Insure Quality Products



To keep up with increasing densities technology we have purchased a **Microcraft EMMA 6146 precision flying probe tester**. Using needle point probes we can accurately test **.005 pads @ .010 pitch at 250 volts and 10 Mohm**. The sensitivity of this equipment far exceeds the needs of the most demanding designs. All products are **Net list tested** to your supplied **IPC-D356 or Gerber files**. You can be confident that your circuits are electrically correct.

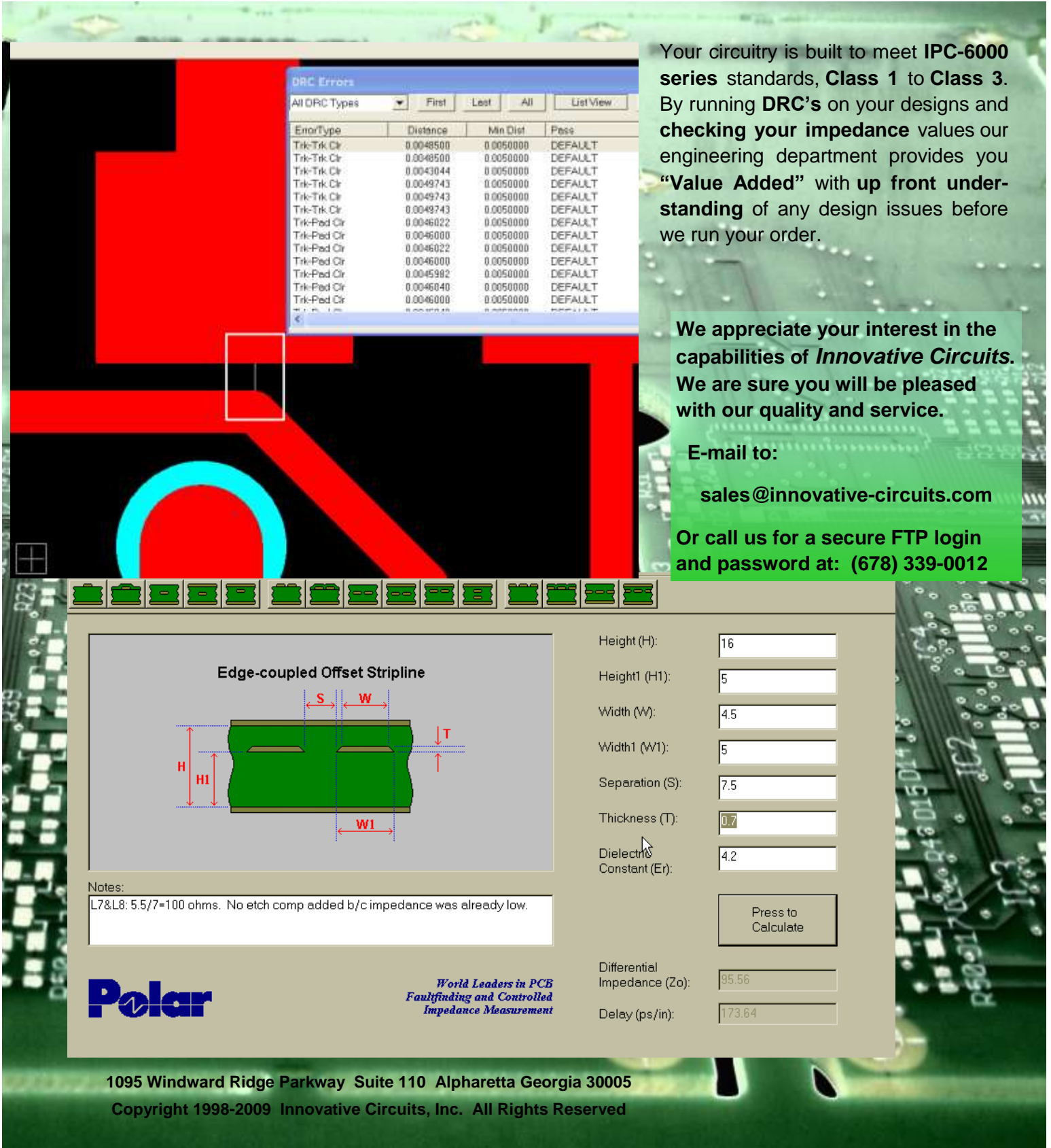


To ensure that your product meets your impedance requirements we have added a **Zmetrix ST200 impedance verification station**. With **NIST traceable standards** and custom designed coupons, we can assure you that your controlled impedance will be where you want it.

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Your circuitry is built to meet IPC-6000 series standards, Class 1 to Class 3. By running DRC's on your designs and checking your impedance values our engineering department provides you "Value Added" with up front understanding of any design issues before we run your order.

We appreciate your interest in the capabilities of *Innovative Circuits*. We are sure you will be pleased with our quality and service.

E-mail to:

[sales@innovative-circuits.com](mailto:sales@innovative-circuits.com)

Or call us for a secure FTP login and password at: (678) 339-0012