



## Case Study:

### TDI Designs Custom System that Meets Customer's Expectations Abroad

#### Challenge

To develop a complex, custom power system in the US and transition manufacturing to China on an aggressive schedule.

#### Project Details

Kulicke & Soffa provides equipment, tools and materials that are used in the production of a wide range of semiconductor devices. Their customers produce the "chips" that drive the information economy and enable products such as computers, cellular phones and pacemakers. They are the world's leader in this market segment.

Serving the IC and MCM/hybrid assembly markets, K&S supports complex packages and higher productivity and yields at the lowest cost. K&S automatic and manual wire bonders, bonding tools and wire deliver a complete range of product and process solutions designed to maximize assembly productivity and help keep companies ahead of the technology curve.

TDI is currently involved in a project at K&S with the Maxum Ultra which is used in High Speed Ball Bonders. These machines wire silicon ICs to pins in an IC package with very fine gold wire and placement precision down to micron level. TDI supplies a multi-output power supply with voltages ranging from 5VDC to 400VDC and AC outputs as well. Each design has its own embedded microprocessor based controller. Each design also requires a minimum of 200mS holdup.



K&S approached TDI with specific requirements that would require a custom design. Moreover, they were on a tight schedule that required manufacturing out of our China facility. Engineering from both the Hackettstown and Long Island design groups worked closely with K&S to develop a product that met their needs and their deadlines. In order to accomplish this goal, it was imperative that TDI have an in depth understanding of the issues at hand and be able to support the product in a timely fashion.

Input: Wide range AC, 90 – 265VAC, 50/60 Hz  
Output: 9 regulated low voltage DC outputs, 132VDC@4a  
AC output w/ 200ms holdup  
Total Power: ~ 2200w  
Dimensions: 14" x 14" x 10"  
Control Interface: USB

Because TDI stands behind their product, we were able to meet K&S's expectations. TDI delivered a truly reliable product, in large part due to the experience of the engineering staff and the HALT/HASS testing practices.

Transistor Devices, Inc. (TDI) is a global supplier of power systems solutions for the computer/networking, telecommunications, military/aerospace, medical and industrial markets. We carry the broadest range of high technology power conversion products available in the marketplace, including DC and AC power systems, power supplies, rectifiers, converters and accessory equipment.