

Application example

Connector assembly

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

The electronic PCB must be fixed to the ABS connector assembly in a cost-effective manner. The process must not damage the electronic components on the PCB.

Solution

The ultrasonic riveting process is selected to fasten the PCB to the connector assembly. Due to the requirements regarding the positioning and strength of the connection, two rivet heads are provided. As the rivet shafts have a small diameter, a spring-loaded converter is used for small, even riveting forces. Both rivets are formed in a single step with a sonotrode with a double contour.

Configuration advantages

No consumables such as screws are required. The PCB is hardly exposed to the ultrasonics at all during the riveting process, which means that the electronic components are not damaged. In comparison with heat riveting, ultrasonics guarantee a strong rivet connection (without stringing). The spring-loaded converter generates a small, precise, constant riveting force independent of temperature (no stick-slip effect).



The application was produced on a USP750 35 kHz welding system with a spring-loaded converter.