Radeberg, Germany

Production site for hybrid circuits and microelectronic assembly

The Cicor site in Radeberg (RHe Microsystems GmbH) is specialized in the production of complex substrates in thick-film technology as well as microelectronic assembly on ceramics or PCBs. Its core industries are aerospace and defence, medical and demanding industrial applications. The site’s range of services includes development support, prototype construction, serial production and industry-specific product qualifications. The testing stations for functional tests in series production are developed and set up internally. This approach ensures that even the most demanding quality requirements are met. The production site has 1'300 m² of clean rooms up to ISO class 5 (class 100). Various encapsulation processes up to hermetic housings complete the capabilities of the production site.
Competencies and services

Development
- Feasability studies
- Qualification of components and products
- Redesign and obsolescence management
- PCB layout
- Support in product development
- Optimization of manufacturing processes
- Development of customer-specific test equipment
- Project management

Thick-film substrates
- Processing of ceramic, steel or glass substrates
- Screen printing of conductive pastes and resistor pastes
- Structure resolution down to 80 µm line/space
- Solderable and bondable surface finalization
- Active and passive resistance adjustment with laser

Microelectronic assembly
- Processing of thick-film substrates and PCBs
- Traceability of all assembled components
- Solder paste inspection (SPI) and component inspection (AOI)
- Assembly of SMD components from 01005
- COB or flip chip from wafer or waffle pack
- Reflow soldering and vacuum soldering
- Processing of lead-free and lead-containing solders
- Bonding with insulating and conductive adhesives
- Ball/wedge and wedge/wedge wire bonding 12.5 µm to 500 µm
- Ribbon bonding
- Glob top, coating and hermetic encapsulation

Testing and inspection
- Flying probe
- Temperature cycling test
- Moisture test
- Burn-in
- Acceleration and vibration test
- Leakage
- X-ray
- In-circuit
- Electrical test
- Endurance test

Markets

- Industrial
- Medical
- Aerospace and defence
- Communication

Certifications
- ISO 9001 Quality
- ISO 13485 Medical
- EN 9100 Aerospace
- KTA 1401 Nuclear power plants

RHe Microsystems GmbH
Heidestrasse 70
01454 Radeberg, Germany
Tel. +49 3528 4199-0
info-me@cicor.com

The Cicor Group is a globally active development and manufacturing partner with innovative technology solutions for the electronics industry. With about 2100 employees at ten production sites, Cicor offers highly complex printed circuit boards, printed electronics, hybrid circuits and substrates as well as comprehensive electronic manufacturing services (EMS) including microelectronic assembly and plastic injection molding. Cicor supplies customized products and services from design to the finished product from one source.