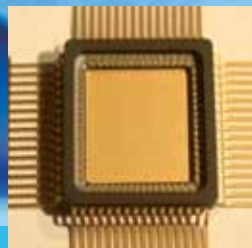
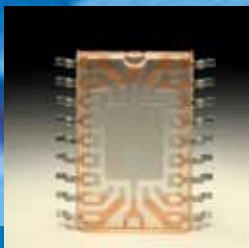


# PACKAGING FOR ELECTRONIC PARTS AND COMPONENTS

Since 1998 MAF GmbH has been specialist for the assembly of microelectronic circuits and offers a competent service at the highest level:

- **Electrical Wafer Test**
- **Wafer-Cutting / Dicing**
- **Chip-Bonding & Wire-Bonding**
- **Housing / Packaging**
- **Laser Marking**
- **Electrical Test & Lead Inspection**
- **Packing: Tube, Tray, Tape & Reel**
- **Sample Assembly (Ceramic Packages / Premold Packages)**



Microelectronic  
Assembly  
Frankfurt (Oder) GmbH





## INDIVIDUAL PACKAGING & CONSULTING

You define the problem and we gladly manufacture the ideal, demanded package for this purpose in accordance with your specific requirements. Use, for instance, our multi-die-technique for saving surface area of printed circuit boards or benefit from our transparent packages for optical applications.

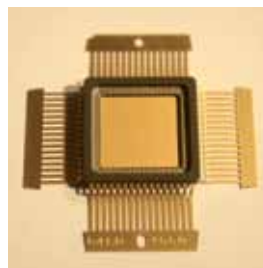
In addition, we offer the bonding of chips into ceramic packages or premold packages (open cavity) in support of your product development.

## OPTIMIZED MANUFACTURING

Thanks to the headquarters in Frankfurt (Oder) you can obtain samples within the shortest period of time and drastically reduce your development processes due to short delivery times.

MAF GmbH is therefore a reliable partner of your product development and enables a smooth start-up of production and manufacturing process.

Also in the ongoing manufacturing process we are open for your ideas and even then can still implement required modifications.



## CUSTOMER-SPECIFIC PACKAGE DEVELOPMENT

You want a own package or special leadframes as unique selling proposition? We gladly advise you in the selection and the appropriate design of your new package.

Via specific leadframes we enable the integration of several chips or an entire functional group into a single package. Also structural groups of components in one package are possible.

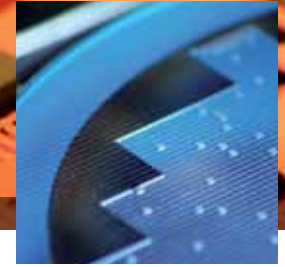
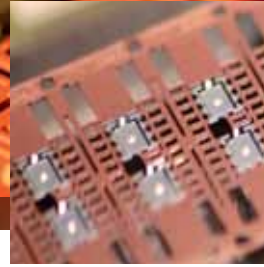
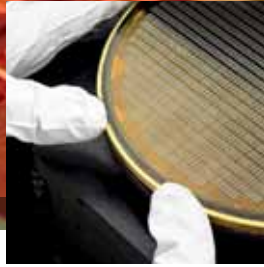
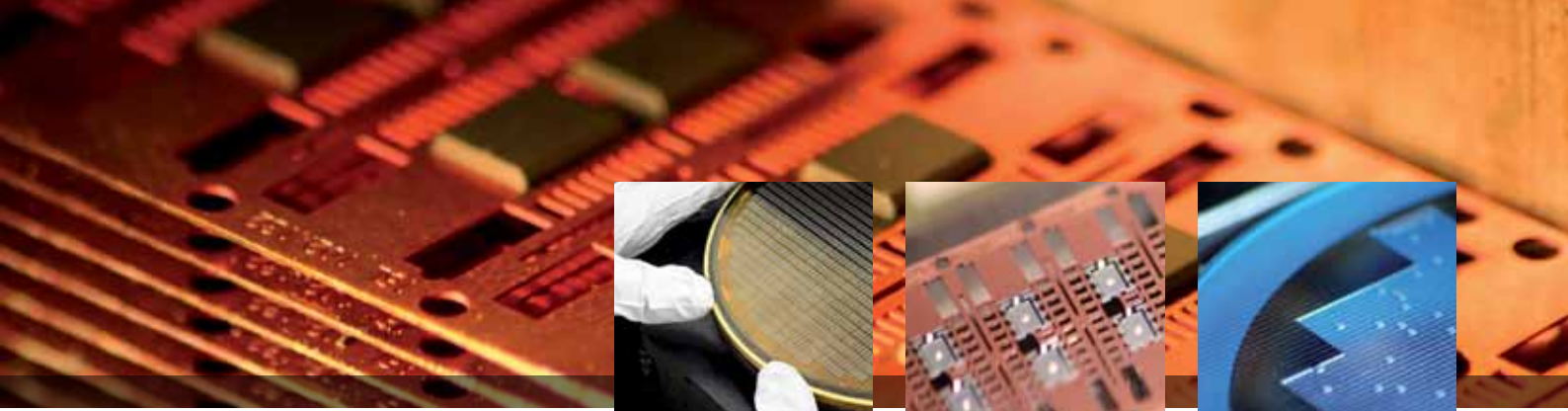
## STANDARD PACKAGES

Of course, MAF GmbH also offers the assembly of ICs into most diverse standard package designs, such as:

- SOP (JEDEC MS-012 and MS-013)
- SSOP (JEDEC MO-137)
- QFP (JEDEC MS-022)
- FOQ (JEDEC MO-220)
- FOD (JEDEC MO-229)

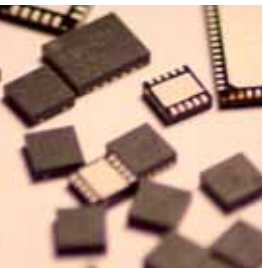
## OTHER SERVICES

Waffle-pack for your chips, laser marking of components and many other services are also part of our product range.



## DYNAMIC COMPANY NETWORK

Specialists of the HTV-group of companies are able to work out solutions in the areas of measurement technology, analytics and long-term conservation of electronic components at any time and on short notice.



## ELECTRICAL TEST AND COMPONENT QUALIFICATION

Wafers and also ready housed components can electrically be tested via the HTV-group of companies.

In addition, a variety of methods are available for analysis and qualification of your electronic components. These include inter alia the creation of micrographs and X-ray images, Burn-In and the Long-Term Storage of electronic components or entire assemblies.

## QUALITY

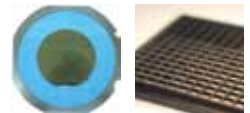
Since 1998 MAF GmbH has been specialist for the assembly of microelectronic circuits. From this long experience a high quality standard has established.

Processes of MAF GmbH are certified according to DIN EN ISO 9001:2008 and all processes are strictly monitored.

## MAF SERVICES AND WORKING STEPS

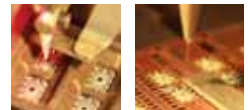
### Chip separating

- Wafer lamination
- Wafer-Cutting, Dicing, Waffle-pack



### Chip assembly

- Chip bonding (leadframe, premold package or printed board (for COB))
- Wire bonding
- Shear- and Pulltest



### Encapsulation

- Standard and special packages
  - Molding with epoxy resin
  - Marking with laser
  - Dambar cutting
  - Tin plating
  - Tempering
  - Singulation
- Chip on board (COB)
- Premold package (ceramic or plastic)
  - Marking
  - Encapsulation (cap, glob top)



### Other services

- Packaging: tube, tray, tape & reel
- Shipment
- Wafer test
- Testing of electronic components
- Analysis & qualification of components (e.g.: microsection, EDX, X-ray)
- Long-term conservation of electronic components





# SHAPING A SUCCESSFUL FUTURE TOGETHER WITH **MAF GmbH**

Together with MAF GmbH and the HTV-group of companies you can create unique products which cope with the demands of the market and are optimally adjusted to your needs.

## **WE ARE LOOKING FORWARD TO YOUR INQUIRY!**



**Microelectronic  
Assembly  
Frankfurt (Oder) GmbH**

MAF Microelectronic Assembly  
Frankfurt (Oder) GmbH

Otto-Hahn-Straße 24  
15236 Frankfurt (Oder), Germany

Phone: +49 335 3871963

E-Mail: [maf@maf-ffo.de](mailto:maf@maf-ffo.de)

Web: [www.maf-ffo.de](http://www.maf-ffo.de)