

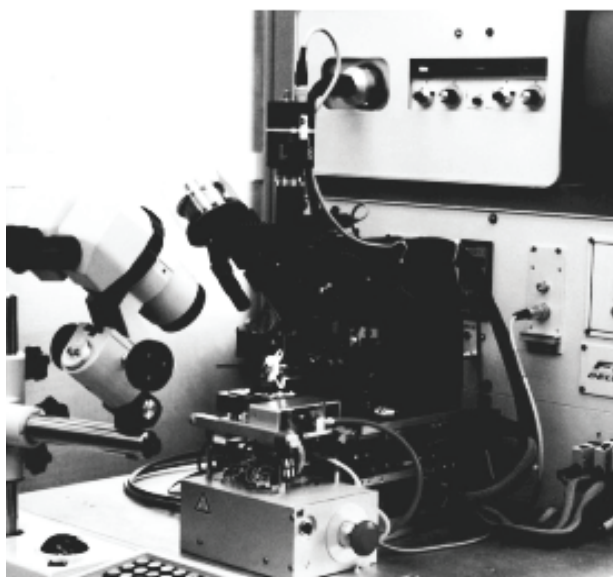


## Wire bonding

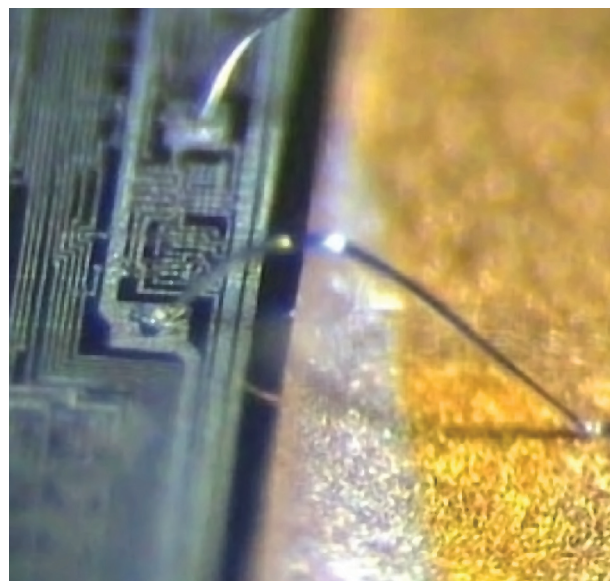
DELTA offers mounting and bonding of chips in standard ceramics packages for small series and prototypes

A stock of standard ceramic packages and wires enables fast delivery times when prototypes are ready for mounting and field test. DELTA's long experience in interconnection techniques ensures that bonding is carried out and samples are handled by a competent and professional DELTA team.

In order to get the correct set-up of parameters we advise that the customers deliver at least one "dummy" chip (preferable rejected chip of the same lot).



DELTA's semi-automatic ball wirebonder.



### Requirements

DELTA supplies the standard package (ceramic packages or thick film substrates); different packages can be provided by DELTA.

The customers supply the chips with clean bond surfaces along with a drawing indicating the correct connections from the chip to the package.

### Related services

- Replacement of defective wires
- Aluminium wire bonding
- Wire pull test
- Full functional and verification test
- Bumping of single chips or wafers for flip chip mounting
- Flip chip mounting



## Wire bonding

Bonding of prototypes includes  
Die-attach of chips in package  
Set-up of parameters including evaluation using wire pull tests and programming of the bonder  
Bonding of chips  
Mounting of lid

### Materials

Wires: Au 25 and 17.5  $\mu\text{m}$ , Al 25  $\mu\text{m}$   
Die-attach: Conductive or non-conductive

Typical wire pull strength is >5 gr. with 25  $\mu\text{m}$  Au wire, measured on Dage Microtester.

### Bondable metallisations

On ASIC: Al, Au, min. 3-5  $\mu\text{m}$  (plated)  
In package: Normally: Thick film Au or Al

Other packages and metallisations can be discussed.

### Equipment

F&K Delvotech 6110 ball bonder: Thermosonic semi-automatic ball-wedge wirebonder  
Dage Microtester 22: Wire pull tester  
West bonder: Thermosonic manual wedge-wedge bonder

### Packages for quick service

Leadless chip carrier packages, ceramics  
40 I/O's Cavity size 0.250" square  
44 I/O's Cavity size 0.400" square  
84 I/O's Cavity size 0.470" square

Other packages are ordered on request.

## For further information please contact

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