SMART
MICROSYSTEMS

Your Microelectronic
Package Assembly Solution
for MEMS Sensors

WIRE BONDING SERVICES

Wire bonding is a key manufacturing process for microelectronics and MEMS sensor products. The core wire bonding capabilities and expertise at SMART Microsystems support process development, testing, and manufacturing of sub-assemblies designed by our customers. Wire bonding processes are flexible and robust, allowing our customers to quickly realize a microelectronic package assembly solution for their products. For additional information you can visit our website, or you can call or send us an email to discuss your wire bonding needs.

FINE GAUGE WIRE/RIBBON BONDING

- Wire diameters: 17.5µm to 50µm (0.7 to 2.0 mil)
- Ribbon: 6x35µm to 25x250µm (0.25x1.4 mil to 1x10 mil)
- Wire and ribbon materials: aluminum, gold
- Fine pitch is available
- Bond area: 305mm x 410mm (12.3" x 16.14")
- Accuracy: 1um at 3 sigma
- Speed: up to 6 wires/second
- Loop Length: 70 µm up to 20 mm, depending on wire diameter
- Various loop form functions:
  - Constant wire length
  - Constant loop height
  - Individual loop shapes

HEAVY GAUGE WIRE/RIBBON BONDING

- Wire diameters: 100µm to 500µm (4 to 20 mil)
- Ribbon: 0.075x0.75mm to 0.4mm x 2mm (3x30 mil to 16x80 mil)
- Wire and ribbon materials: aluminum, copper
- Bond area: 300mm x 500mm (13.8" x 19.7")
- Accuracy: 2µm at 3 sigma
- Speed: up to 3 wires/sec

GOLD BALL BONDING

- Wire diameters: 15 to 50µm (0.6 to 2.0 mil)
- Wire materials: gold
- Fine pitch capability: 40µm
- Minimum loop height: 100µm (standard and worked loops)
- Bond area: 56mm x 80mm
- Accuracy: +/- 2.0µm
- Speed: up to 15 bonds/second including programmable looping
- Looping capability: standard and worked (BGA1-BGA3, Spider, J Wire, CSB)
- Stand-off Stitch bond (SSB) capable
- Stud bumping
- Wire material: gold
- Speed: Up to 30 bumps/second including programmable smoothing

Hesse Mechatronics
Fine Gauge Wedge Bonder

Hesse Mechatronics
Heavy Gauge Wedge Bonder

K&S IConn Gold Ball Bonder

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