

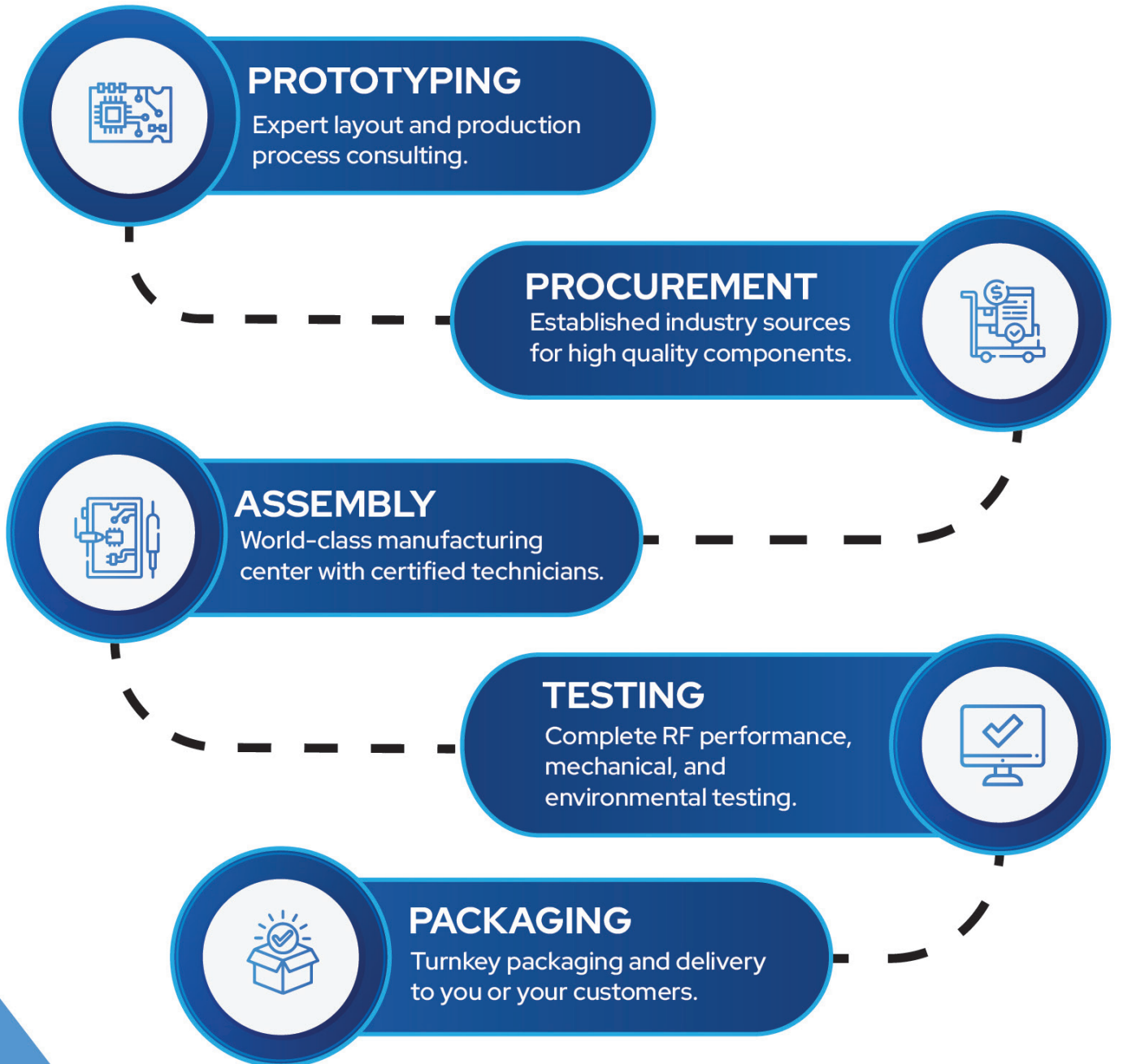
MICROSEMBLY



Expert Manufacturing
and Testing Services for
Advanced RF/Microwave
Suppliers

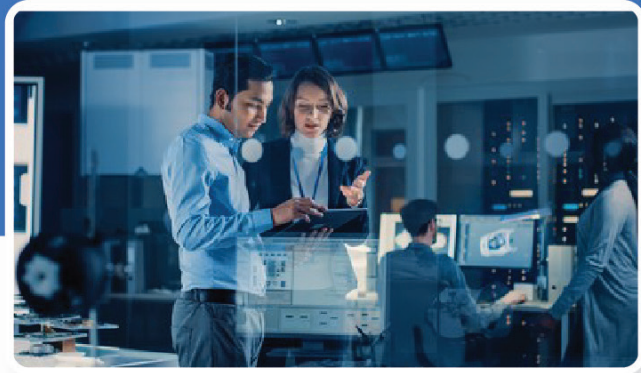
SUPPORTING YOU AT EVERY STAGE

We understand the design and production objectives you have, and the budget and time pressures you're under. We're here to help you optimize every step of the process.



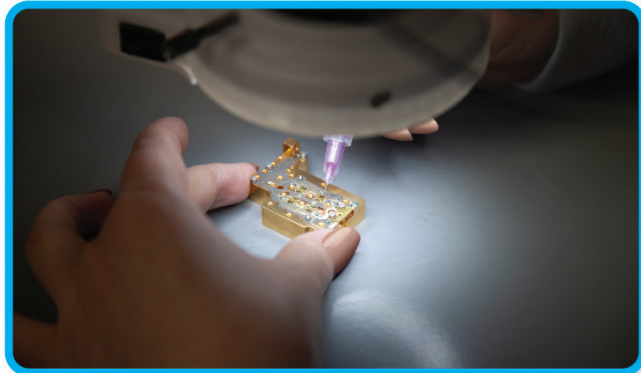
SERVICES

Count on us to take care of your troubleshooting, repair, and refurbishment needs, too!



Design for Manufacturability (DFM), Prototype, and Procedural Consulting

- Design, Layout and Material Consulting
- Manufacturing Process Consulting
- Procurement Consulting and Purchasing
- Standards Development for Performance and Environmental Testing
- MIL-STD Supply Chain
- Documentation Consulting
- Prototype Manufacturing and Testing



Manual and Automated Assembly

- Wire / Ribbon Bonding
- Void-free Eutectic Die Attach
- Die Attach
- Hand Soldering
- Surface Mount Technology (SMT)
- Epoxy Encapsulation
- Coil Winding and Tacking
- Beamlead Diode Attachment
- RF Feedthrough Installation
- Board Installation (epoxy, solder, screw-down)



RF Performance Testing

- Tuning/Testing up to 110 GHz
- Input/Output Impedance
- Conversion Gain
- Insertion Loss/Loss Flatness
- Noise Figure
- Power Handling/Return Loss
- VSWR
- Isolation
- Spurious Response
- Phase Shift (analog/digital)
- Step Atten. (analog/digital)
- Group Delay
- Linearity
- S-parameter Testing
- EMI/EMC Testing

Screening Services

- Class H
- Class K
- JAN
- JANTX
- JANTXV
- JANS
- IAW MIL-PRF-19500



Mechanical Testing

- Bond Pull
- Ball Shear
- Die Shear
- Vibration
- Shock
- External / Internal Visual Inspection
- IAW MIL-PRF-38534

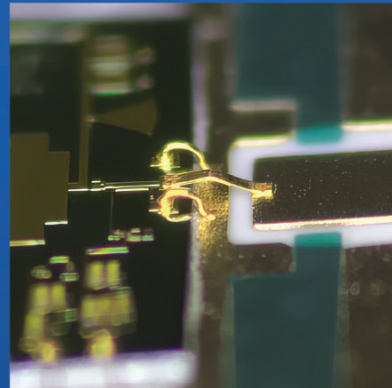
Environmental Testing

- Temperature Cycling
- Thermal Shock
- Humidity Testing
- Helium Fine Leak
- Burn-in
- Stabilization Bake Cycling
- Radiography (X-RAY)
- Steady State Life
- Temperature Cycle
- Element Evaluation
- Reliability

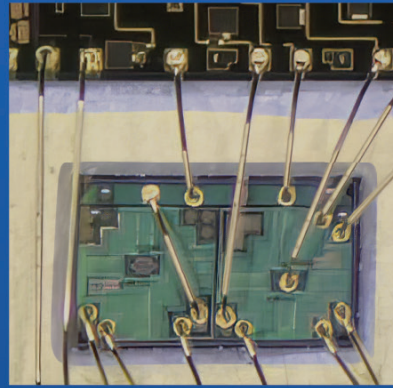


EXPERTISE

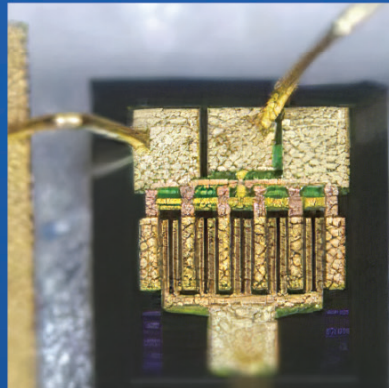
With Microassembly, you can plan on consistently low loops, short bond lengths, and targeting on the smallest bond pads/mesas.



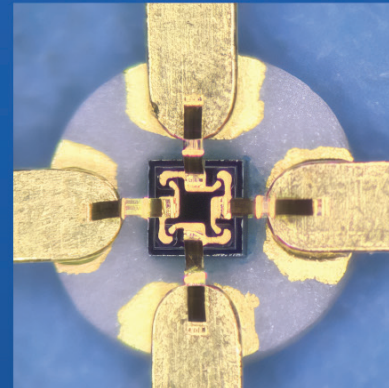
AU ribbon bonds as small as .003" X .0005"



AU ball bonds and stitch-on-ball (SOB) bonds down to .001"



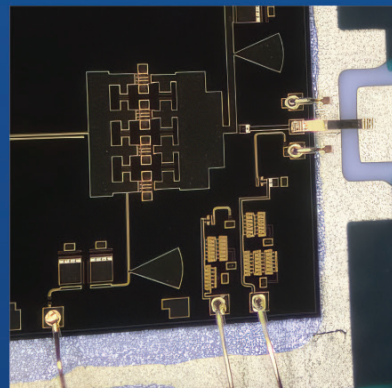
AU wedge bonds down to .0007" on FETs



Quad diode package AU ribbon bonds down to .003" X .00025"



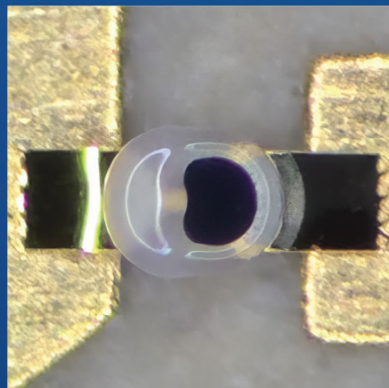
Conductive epoxy die attach bond lines as thin as .002"



Combination bonds including AU ball bonds, stitch-on-ball (SOB), and ribbon bonds



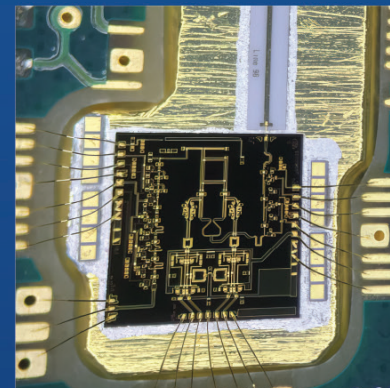
Omega wrap (Double-C) ribbon bonds on feedthroughs



Beam lead tacking with waffle patterning

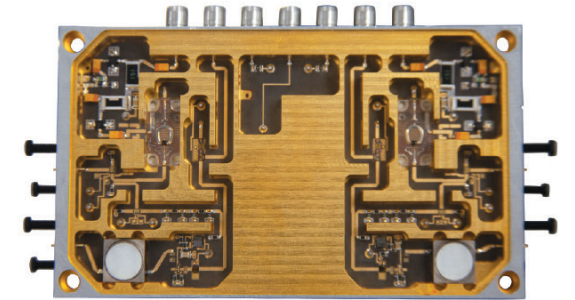


Cross bond stitching on ultra-small mesa diodes

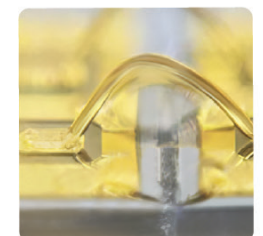


Precise MMIC to capacitor connections

EXPERIENCE



- Amplifiers
- Attenuators
- Circuit Card Assemblies (CCAs)
- Control Components
- Detectors
- Drivers (chip/wire)
- Exciters
- Filters
- Integrated Microwave Assemblies (IMAs)
- Limiters
- Mixers
- Multi-Chip Modules (MCMs)
- Receivers
- Sensor Chip Assemblies (SCAs)
- Signal Generators
- Synthesizers
- System-in-package (SiP)
- T/R Modules
- Transmitters
- Up/downconverters





GET THE MICROSEMBLY 10-POINT ADVANTAGE

- ✓ Immediate increase in your product capabilities
- ✓ Faster/more efficient prototype development
- ✓ Reduced production costs
- ✓ Reduced overhead
- ✓ Increased quality and consistency
- ✓ Well-documented performance/reliability
- ✓ Improved scalability/flexibility of your manufacturing
- ✓ Streamlined design-to-production workflow
- ✓ Improved time to market and customer satisfaction
- ✓ Confidence from concept to delivery

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