

A detailed photograph of a microelectronics assembly board, showing various components like capacitors, resistors, and integrated circuits mounted on a gold-colored substrate. The board is flanked by vertical gold strips.

MICROELECTRONICS ASSEMBLY

Microelectronics Assembly

With over four decades of experience in high reliability hybrid and RF technologies, NEO Tech has emerged as North America's largest microelectronics assembler. The microelectronic industry faces the challenge of controlling costs and risk while ensuring reliability, and we have thrived by offering our customers an unmatched understanding of materials, production equipment, standardized processes, and defect-elimination approaches.

MICROELECTRONICS ASSEMBLY

Microelectronics Capabilities

ELEMENT ATTACH

- Solder and epoxy solutions meeting both leaded and RoHS requirements
- Ball-grid-array, chip-on-board, chip and wire, plated through-hole, SMT, multi-chip, and mixed technology
- Eutectic component attach including GaN and GaAs die
- Flip chip uBGA & QFP
- Fluxless Soft-Solder
- Automatic and manual precision die placement
- Precision bare die attach with air bridge capability

INTERCONNECTS

- Automatic wire bonds at 20,000+ wires per hour
- Wire bonding:
 - Gold Ball (0.7 to 3.0 mil)
 - Gold Wedge (0.7 to 3.0 mil)
 - Gold Ribbon (2 to 10 mil)
 - Ultrasonic Aluminum Wedge (1 to 20 mil)
- Flip chip, BGA, uBGA, column grid arrays, and thermocompression
- Tack welding
- Stud bumping

HERMETIC PACKAGE SEAL

- Fully automatic linear welding and lid positioning system
- Semi-automatic linear weld systems
- Laser welding
- Inert gas sealing environment (Argon/N₂)
- DAP seal systems
- Tack welding
- One-shot resistance/inductance weld system
- Inert gas bake
- Vacuum bake
- Linear hydrogen furnace

PACKAGING

- Aluminum
- Kovar
- Titanium
- Ceramic

SUBSTRATES

- Thick Film Ceramic (Al₂O₃ & BeO)
- Direct Bond Copper (Al₂O₃ & BeO)
- Thin Film
- LTCC/HTCC/AlN Ceramic with buried RF filters
- FR4/Rogers/Duroid PCBs

Wide Range of RF Experience

RF FILTERS

- Lowpass, bandpass
- Tunable
- Multiplexers
- Waveguide, coaxial, ceramic
- Attenuators
- Isolators & circulators
- Frequency multipliers
- Microwave Integrated Circuits (MIC)



DC 100Hz 1KHz 10KHz 100KHz 1MHz 10MHz 100MHz 1GHz 10GHz 60GHz

From **DC** to **V-Band Microwave**

