
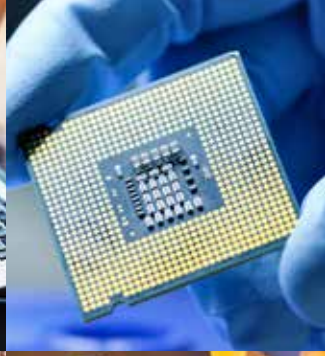




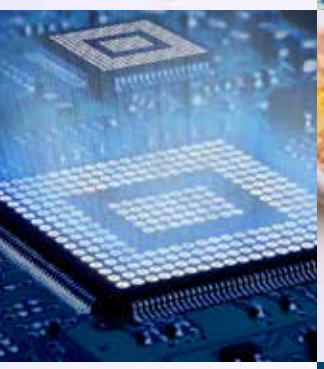



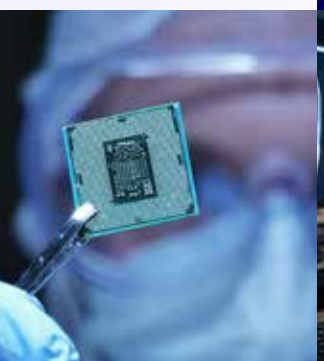
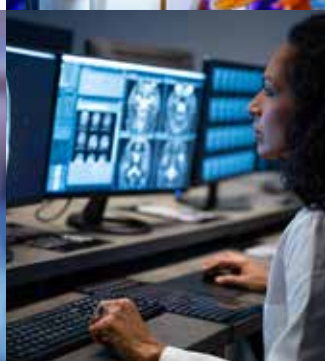

COINING™

AMETEK®

BOND PADS

- MOLYBDENUM DOUBLE CLAD NICKEL
- COPPER PLATED WITH NICKEL PLATED WITH GOLD
- COPPER CLAD ALUMINUM
- COPPER-CORE-CONNECT ™
- KOVAR SINGLE CLAD COPPER

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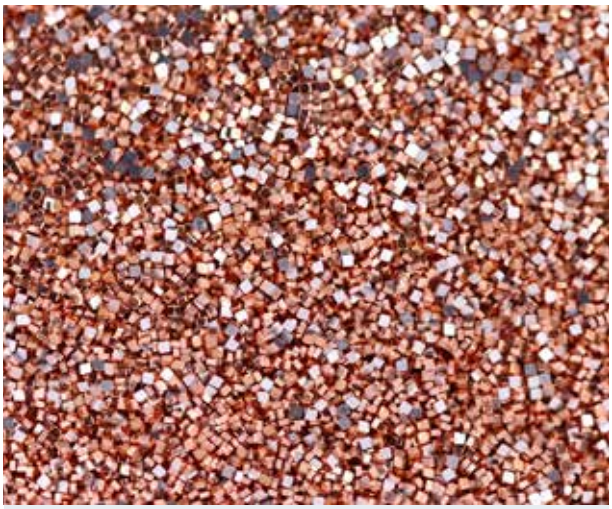

Bond Pads at a Glance

Bond Pads are extremely versatile. They allow an interconnection between a circuit board and a discrete electronic device. Bond Pads are typically connected to the circuit board by soldering and at the top side by a wire attachment.

COINING can create and manufacture a variety of different metallic combinations of Bond Pads specializing in the following:

- Molybdenum double clad Nickel
- Copper plated with Nickel plated with Gold
- Copper clad Aluminum
- Copper-Core-Connect ™
- Kovar Single clad Copper

Copper Clad Aluminum Bond Pad

COINING's Copper Clad Aluminum Bond Pads are especially developed for the automotive and power semiconductor industries. It is an intermediary piece to attach a sensing device and a circuit board. The Bond Pad is typically connected at the Copper side to the PCB by soldering and at the topside to the Al-wire by ultrasonic wedge bonding.

Advantages:

- Electrical conductivity
- Solderable on copper side
- Wire bondable on the aluminum side
- High reliability
- Cost effective
- Wide range of Pb- Free and Pb-containing solder alloys available

Sizes:

- 12.5µm (0.0005") min, for wedge bonding up to 200 µm (0.008") diameter wire
- 125µm (0.005") max, for Al4N/5N or AlMg heavy wire wedge bonding

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Copper Core Connect ™

COINING's Copper-Core Connect™ Bond Pads replaces the need for using thick solid Solder Preforms, while improving thermal and electrical conductivity by a factor up to 7x. The Copper-Core Connect™ enables designs for making a final, high-power, wire and ribbon connection to contact spots that otherwise cannot be reached or must be made in an earlier assembly step.

Advantages:

- Improved thermal management
- Increased reliability and connection density
- Exact solder volume allows reduced connection areas
- Enables easy accessibility for repair/ replacement work of components

Sizes:

For Soldering Applications

Configuration: Solder 1/Cu; Solder 1/Cu/ Solder 2

Overall Thickness: > 0.010 inches typical

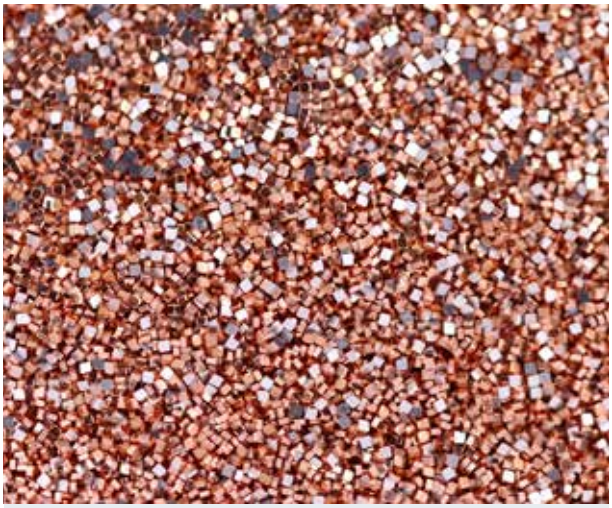
Solder 1 & 2 thickness: 0.001 to 0.003 inches typical

Wire and Ribbon Bonding Applications

Configuration: Cu/Al; Solder 2/Cu/Al; Solder 2/Cu/Au

Overall Thickness: > 0.010 inches typical

Thickness: 0.001 to 0.003 inches typical



Kovar Single Clad Copper Bond Pads

COINING's Kovar Single Clad Copper Bond Pads are used in high-reliability applications. Within the clad are two different pieces, and the substrate in the middle. Kovar is the substrate with a thin copper clad layer. The copper layer (the bottom layer) is used to solder to a circuit board. The Kovar layer is used to attach a bond wire, typically stainless-steel wire or gold wire. Our Kovar Single Clad Copper Bond Pads are the intermediary piece to attach to both wire and a circuit board.

Advantages:

- Solderable on one side
- Laserwire bondable on the other side
- High reliability
- Biocompatible
- Durable
- Environmental resistance
- Visual differentiation between top and bottom
- Ease of automated packaging
- Cost effective
- Flexibly made in different shapes and sizes

Sizes:

Dimensions: 0.025 inches by 0.25 inches minimum up to 1 inch by 1 inch square

Thickness: 0.005 inches up to 0.020 inches



Copper Plated with Nickel Plated with Gold Bond Pads

COINING's Copper plated with Nickel plated with Gold Bond Pads are an intermediary piece between a circuit board and another electronic device.

Advantages:

- High electrical conductivity
- High thermal conductivity
- Solderable
- Wire bondable
- Solderable
- Wire bondable
- Automated packaging
- Cost effective
- Corrosion-resistant electrical conductivity

Sizes:

Dimensions:
0.025 inches by 0.025 inches minimum
up to 1 inch square

Thickness:
0.005 inches up to 0.020 inches overall



Molybdenum Double Clad Nickel Bond Pads

COINING's Molybdenum Double Clad Nickel Bond Pads are an intermediary piece to attach to a power diode and a heat sink. We also offer additional layers such as Gold, Solder, and Copper.

Advantages:

- Low thermal expansion to match Silicon die
- High thermal conductivity
- Solderable
- Corrosion-resistant

Sizes:

Dimensions:
0.050 inches by 0.050 inches minimum
up to 0.5 inches by 0.5 inches

Thickness:
0.005 inches up to 0.020 inches overall









COINING at a Glance

COINING is a world-class manufacturer of micro components that have a big impact on people's lives. From sensors and satellites to implantable electronics, our high-performance metal products operate in a vast range of mission critical applications worldwide.

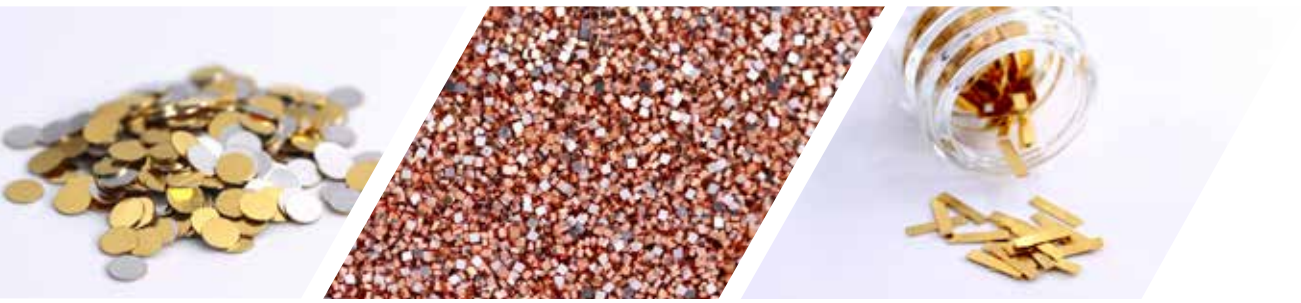
For people who demand precision, flexibility, and speed, COINING is the market leader in custom alloys, microstampings and solder preforms. COINING also offers specialized bonding wire, precision thermal management materials, and hermetic solutions.

In fact, we're the largest solder preform manufacturer in the world. With a broad range of products, the most extensive library of preform dies in the industry - about 15,000 different tools - and our very own COINING labs to make custom alloys, we can move faster to market than our competition.

Regardless of what you're looking for, we're your go-to team for high-performance, high-precision components custom-designed to meet your unique needs.

COINING is part of the AMETEK Specialty Metals business within AMETEK Inc., a leading global provider of electronic instruments and electromechanical devices.

BOND PADS



COINING™

AMETEK

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