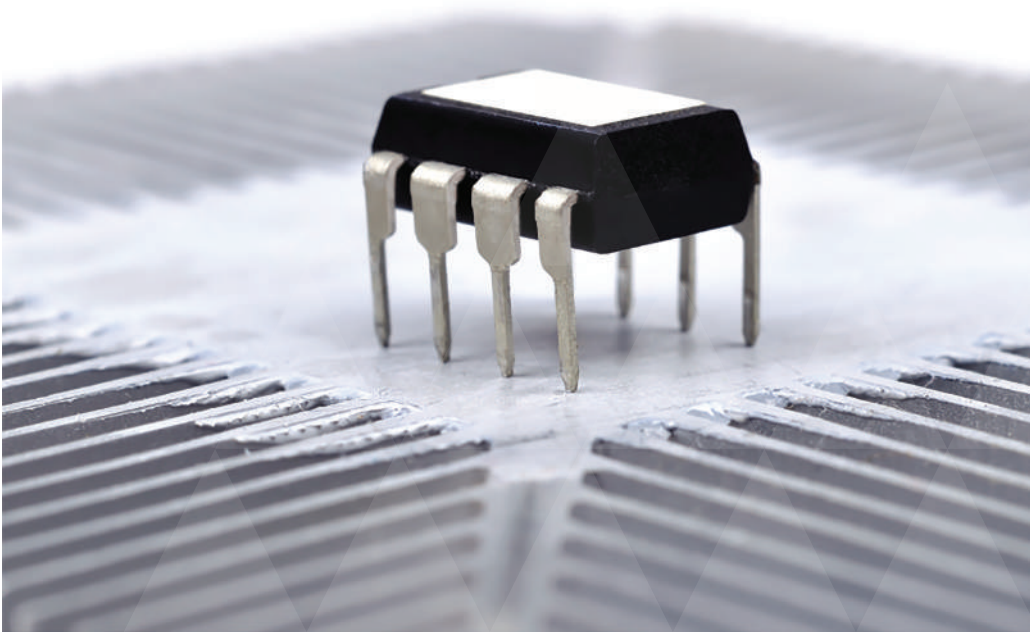




**MATERION**

**HIGH STRENGTH ALUMINUM  
for WIRE BONDABLE  
LEAD FRAMES**



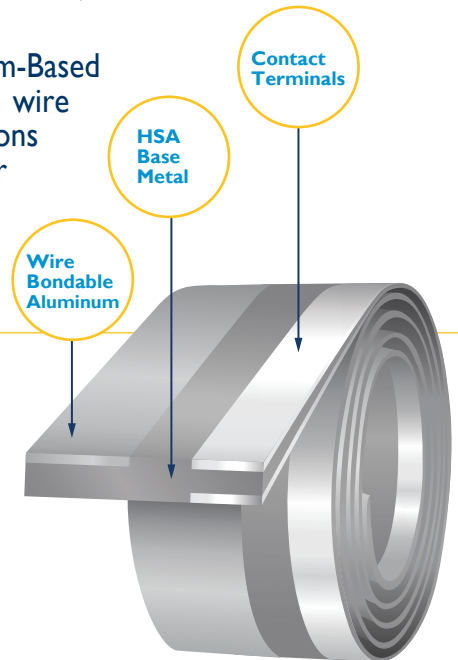
**MATERION TECHNICAL MATERIALS**

5 Wellington Road Lincoln, RI 02865 401.333.1700 [www.materion.com/technicalmaterials](http://www.materion.com/technicalmaterials)

## HSA WIRE BONDABLE LEAD FRAMES

**THE NEW COST LEADER IN WIRE BONDABLE MATERIALS, WITHOUT SACRIFICING PERFORMANCE.**

High Strength Aluminum (HSA) materials are high performance Aluminum-Based alternatives to common copper alloys used in electrical components. In wire bondable Lead Frames, HSA materials provide weight and cost reductions over electroplated Brass and Bronze alloys, without sacrificing strength or conductivity. Utilizing heat treated alloys, HSA Lead Frame materials are provided in coil form ready for stamping and forming.



### ADVANTAGES

- LOWER COST THAN ELECTROPLATED COPPER ALTERNATIVES
- SAME HIGH RELIABILITY BOND PADS AS “ALUMINUM INLAY”
- 70% LIGHTER THAN COPPER ALLOYS
- SUPERIOR ELECTRICAL CONDUCTIVITY
- FORMABLE FOR REEL-TO-REEL STAMPING

### Properties of HSA Aluminum Materials vs. Common Brass & Bronze Alloys

	Electrical Conductivity (%IACS)	Yield Strength (MPa)	Thermal Conductivity (W/m·K)	Density (g/cm <sup>3</sup> )
AL 6061-TX	43%	275	166	2.70
AL 2024-TX	38%	379	150	2.78
C260 BRASS 1/4H	32%	152-317	120	8.53
C519 BRONZE 1/4H	15%	365-455	60	8.53

**HSA Electronic Materials enable 100% Aluminum systems, easing integration of aluminum wiring and eliminating the potential for galvanic attack that is ever-present in mixed Copper-Aluminum systems.**