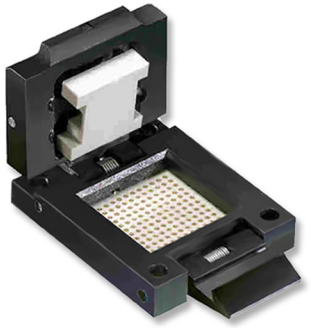
CSP/µBGA Test & Burn-In Socket for Devices up to 13mm Square

FEATURES



- Aries unique universal socketing system allows the socket to be easily configured for any package, on any pitch (or multiple pitch) from 0.2mm or greater, in any configuration, with little or no tooling charge or extra lead-time.
- For Test & Burn-In of CSP, µBGA, Bump-Array, QFN, QFP, MLF, DFN, SSOP, TSSOP, TSOP, SOP, SOIC, LGA, LCC, PLCC, TO and any SMT package style made. Also can be compatible with PGA packaged devices.
- Quick and easy **Probe Replacement System**: the complete set of probes can be removed and a new set (interposer) can be inserted quickly and easily. The old set can be returned to the factory for repair and sent back within one day.
- Sockets are easily mounted/removed to and from BIBs via solderless pressure mount compression spring-probes, accurately located with two molded plastic alignment pins mounted with four stainless steel screws.
- Au over Ni-plated compression spring-probe pins leave small witness marks on the bottom surface of the device contact points insuring solder oxide scrub for better electrical connections.
- Small socket profile allows maximum number of sockets per BIB and BIBs per oven, while being operator-friendly.
- Standard molded socket format can accommodate any device package of 13mm or smaller by using machined (for small quantities) or custom molded (for large quantities) pressure pads and interposers.
- Pressure pad compression spring provides proper force against device allowing for height variations in device thickness.
- Signal path during test only 0.077 [1.96].

CLEANING, HANDLING, MOUNTING & PROBE REPLACEMENT INFO

Need a Breakout Board?
SPECIAL THERMAL REQUIREMENT WORKSHEET

GENERAL SPECIFICATIONS

- MOLDED SOCKET COMPONENTS: UL 94V-0 Ultem
- MACHINED SOCKET COMPONENTS: UL 94V-0 PEEK or Torlon
- ALL HARDWARE: Stainless Steel
- COMPRESSION SPRING PROBE: heat-treated BeCu
- COMPRESSION SPRING PROBE PLATING: 30µ [0.75µ] min. Au per Mil-G-45204 over 30µ [0.75µ] min. Ni per SAE-AMS-QQ-N-290
- DURABILITY: 500,000 cycles min.
- CONTACT FORCE : 6g per contact on 0.20-0.29mm pitch
  : 15g per contact on 0.30-0.35mm pitch
  : 16g per contact on 0.40-0.45mm pitch
  : 25g per contact on 0.50-0.75mm pitch
  : 25g per contact on 0.80mm pitch or larger
- OPERATING TEMPERATURE: -55°C [-67°] min. to 302°F [150°C] max.
- TYPICAL AVERAGE BURN-IN TEMPERATURE: 150°C max.

MOUNTING CONSIDERATIONS

- See “PCB FOOTPRINT TOP VIEW” for requirements
- REQUIRES: four #2-56 screws and PEM nuts for mounting (not supplied – mounting holes size shown may differ depending on PEM nut selected)
- NOTE: Sockets must be handled with care when mounting or removing to/from BIB to avoid damaging sensitive spring contacts
- TEST PCB MINIMUM DIAMETER “G” : 0.025 [0.64] (large probe 0.80mm pitch and larger)
  : 0.015 [0.38] (small probe 0.50-0.75mm pitch)
  : 0.012 [0.31] (small probe 0.40-0.45mm pitch)
  : 0.009 [0.23] (small probe 0.30-0.35mm pitch)
  : 0.004 [0.10] (small probe 0.20-0.20mm pitch)
- TEST PCB DIAMETER SPRING PROBE PAD PLATING: 30µ [0.75µ] min. Au per MIL-G-45204 over 30µ [0.75µ] min. Ni per SEA-AMS-QQ-N-290. Pad must be the same height as top surface of PCB. Please refer to the Custom Socket Drawing supplied by Aries after receipt of your order for your specific application.

A detailed device drawing must be sent to Aries to quote and design a socket.

See Data Sheet for...

CSP Sockets

23016 Hybrid Socket
23021 µBGA up to 6.5mm
23018 µBGA up to 27mm
23018-APP w/Adj Pressure Pad
23019 µBGA up to 40mm
23020 µBGA up to 55mm
23023 Optical Failure Analysis

RF Sockets

24013 RF up to 6.5mm
24008 RF up to 13mm
24009 RF up to 27mm
24009-APP w/Adj Pressure Pad
24011 RF up to 40mm
24012 RF up to 55mm
24010 RF Machined Socket
23022 Kelvin Test Socket

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RoHS Compliant

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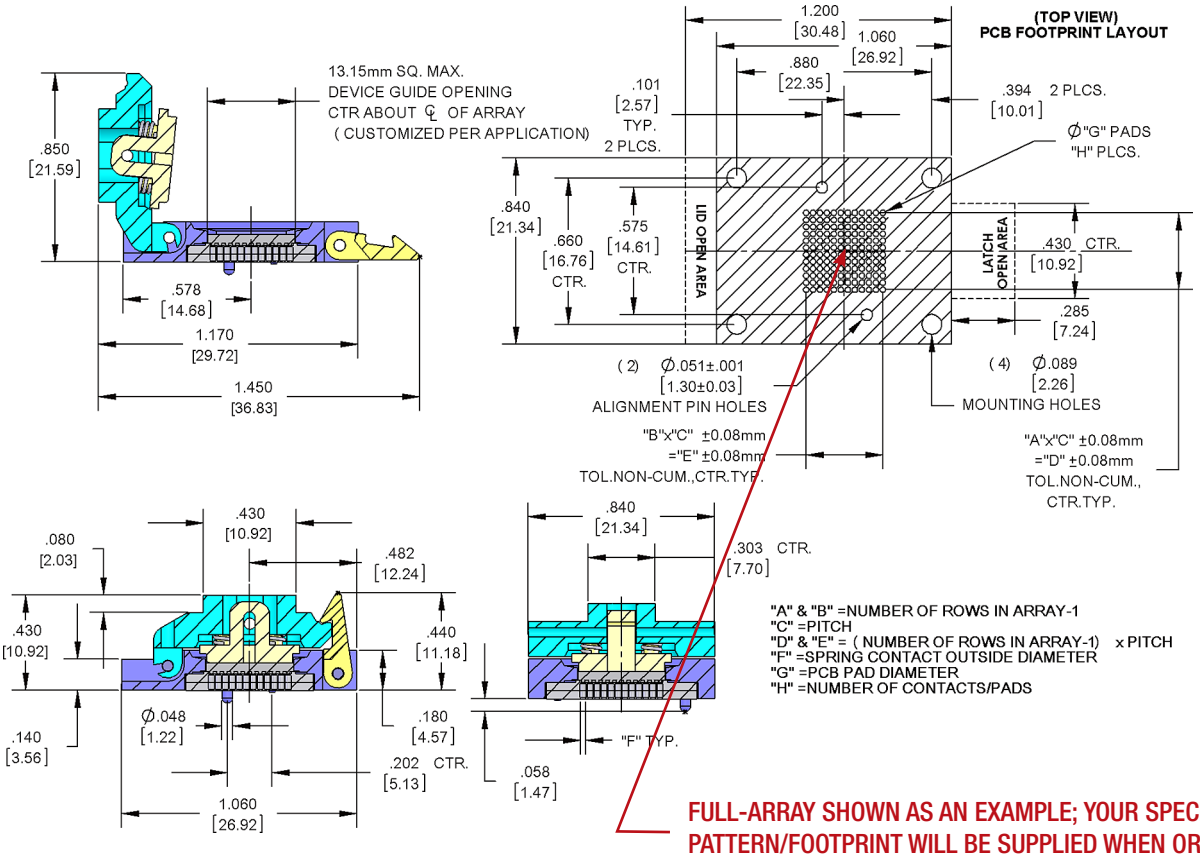
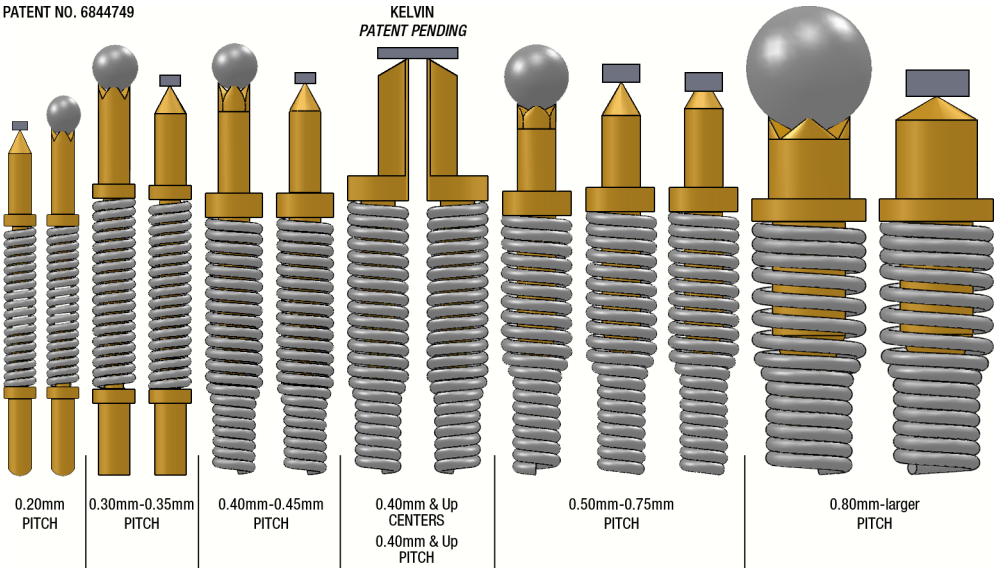


FULL-ARRAY SHOWN AS AN EXAMPLE; YOUR SPECIFIC DEVICE PATTERN/FOOTPRINT WILL BE SUPPLIED WHEN ORDERED.



SPRING PROBES

ALL DIMENSIONS: INCHES [MILLIMETERS]

ALL TOLERANCES: ±0.005 [0.13] UNLESS OTHERWISE SPECIFIED

CUSTOMIZATION: In addition to the standard products shown on this page, Aries specializes in custom design and production. Special materials, platings, sizes, and configurations can be furnished, depending on the quantity. NOTE: Aries reserves the right to change product general specifications without notice.

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