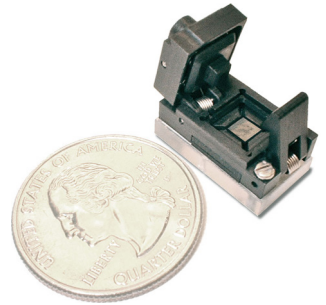




# CSP/ $\mu$ BGA Test & Burn-In Socket for Devices up to 6.5mm Square

## 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,  $\mu$ BGA, 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.
- Socket is easily mounted and removed to & from the BIB due to solderless pressure mount compression Spring-Probes which, are accurately located by two molded plastic alignment pins and mounted with two stainless steel screws.
- The Au over Ni-plated compression Spring-Probes leave very small witness marks on the bottom surface of the device solder balls.
- Small overall socket size/profile allows max. number of sockets per BIB and BIB's per oven, while being operator friendly.
- Standard molded socket format can accommodate any device package of 6.5mm 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 and allows for height variations in device thickness.
- 4-point crown insures "scrub" on solder oxides.
- Signal path during test only 0.077 [1.96].



## GENERAL SPECIFICATIONS

- MOLDED SOCKET COMPONENTS: UL 94V-0 Ultem
- MACHINED SOCKET COMPONENTS: UL 94V-0 PEEK or Torlon
- ALL HARDWARE: Stainless Steel
- COMPRESSION SPRING PROBES: heat-treated BeCu
- COMPRESSION SPRING PROBE PLATING: 30 $\mu$  [0.75 $\mu$ ] min. Au per Mil-G-45204 over 30 $\mu$  [0.75 $\mu$ ] 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°F] min. to 150°C [302°F] max.
- TYPICAL AVERAGE BURN-IN TEMPERATURE: 150°C max.

## MOUNTING CONSIDERATIONS

- See "PCB FOOTPRINT TOP VIEW" for requirements.
- Requires two #0-80 screws (supplied) and PEM nuts for mounting (not supplied). Mounting holes size shown may differ depending on PEM nut selected
- Sockets must be handled with care when mounting or removing sockets 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: 30 $\mu$  [0.75 $\mu$ ] min. Au per MIL-G-45204 over 30 $\mu$  [0.75 $\mu$ ] 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.

## ORDERING INFORMATION

Consult Factory

## CLEANING, HANDLING, MOUNTING & PROBE REPLACEMENT INFO

Need a Breakout Board?

[SPECIAL THERMAL REQUIREMENT WORKSHEET](#)

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

See Data Sheet for...

### CSP Sockets

[23016](#) Hybrid Socket

[23017](#)  $\mu$ BGA up to 13mm

[23018](#)  $\mu$ BGA up to 27mm

[23018-APP](#) w/Adj Pressure Pad

[23019](#)  $\mu$ BGA up to 40mm

[23020](#)  $\mu$ BGA 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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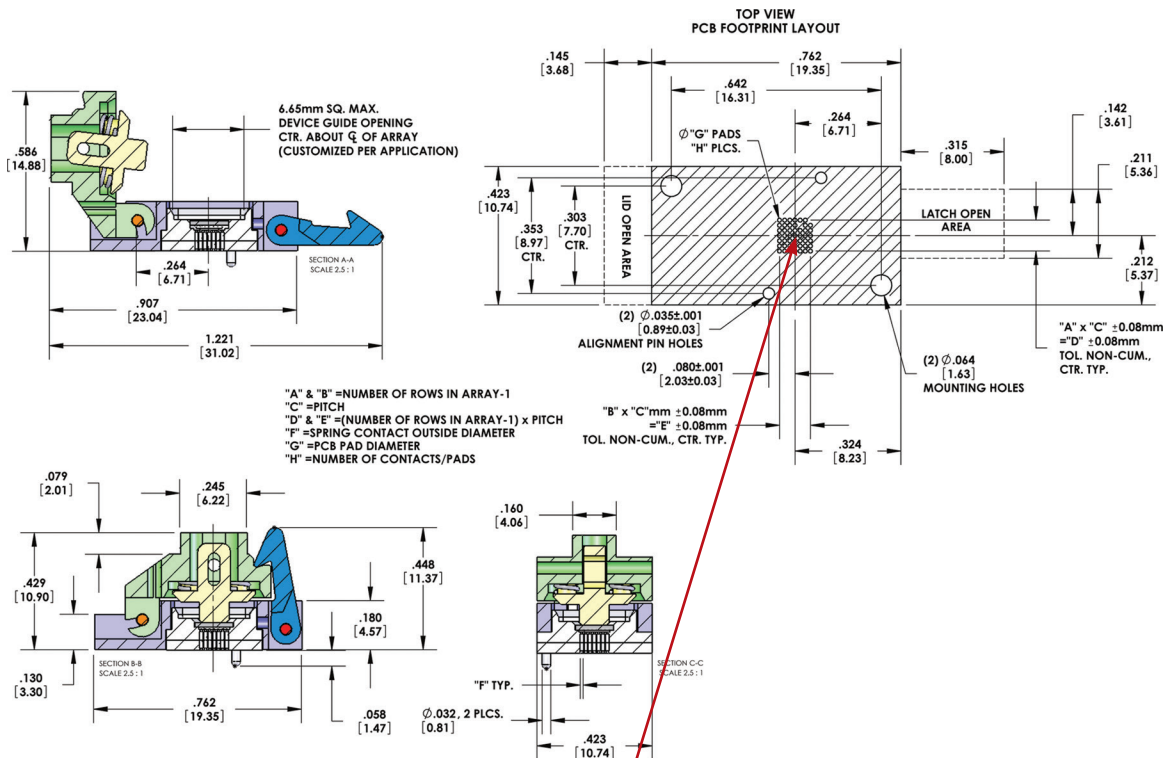
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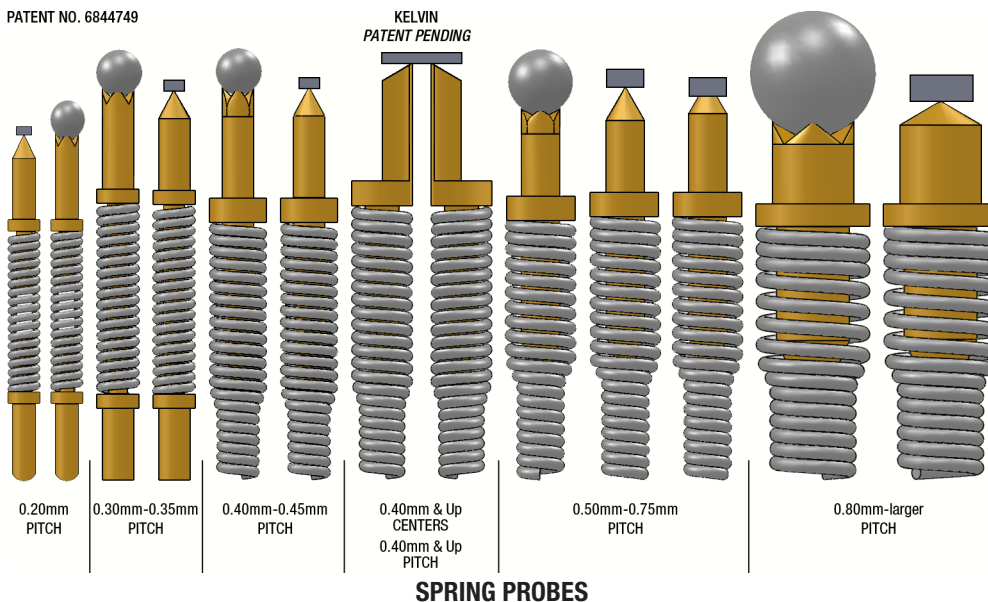
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# CSP/ $\mu$ BGA Test & Burn-In Socket for Devices up to 6.5mm Square



PATENT NO. 6844749



ALL DIMENSIONS: INCHES [MILLI-METERS]

ALL TOLERANCES:  $\pm 0.005$  [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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