



Machined High-Frequency Center Probe Test Socket for BGA, CSP, & MLF Packages

FEATURES

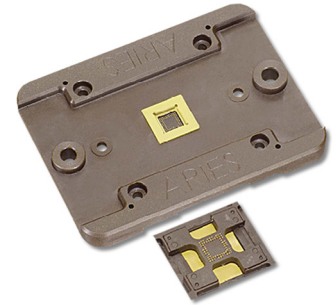
- Aries unique universal socketing system allows the socket to be easily configured for any package, on any pitch (or multiple pitch) from 0.2mm or greater, in any configuration, with little or no tooling charge or extra lead-time.
- For Test & Burn-In of CSP, μ BGA, Bump-Array, QFN, QFP, MLF, DFN, SSOP, 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.
- Solderless Spring-Probes pressure mount to the test board and device solder ball or pad.
- Only 0.077 [1.96] signal path.
- Very low inductance and capacitance.
- Small footprint allows max. use of test board area.
- Chip guides allow accurate device location.
- Spring loaded contacts provide high cycle life.
- 4-point edge male contacts provide accurate mating.
- Socket locating posts provide accurate socket location to board.
- Bottom contact allows for via in center of PCB pad.

GENERAL SPECIFICATIONS

- SOCKET BODY MATERIAL: Torlon PAI
- HARDWARE: Stainless Steel
- SPRING LOADED CONTACTS: Au-plated BeCu
- CONTACT RESISTANCE: <40 m Ω
- ACCEPTS SOLDER BALL SIZES: 0.15mm-0.93mm
- ESTIMATED CONTACT LIFE: 500,000 cycles
- 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
- PROBE SELF INDUCTANCE: 0.51nH (large probe); 0.59nH (small probe)
- INSERTION LOSS: 1dB to 10.1GHz (larger probe at 0.80mm pitch); 1dB to 18.7Ghz (smaller probe at 0.50mm pitch)

MOUNTING CONSIDERATIONS

- SUGGESTED LOCATING PIN HOLE SIZE: 0.063 [1.6mm] 2 places
- SUGGESTED MOUNTING HOLE SIZE: 0.120 [3.05mm] 4 places for #4-40 screws
- 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 μ [0.75 μ] min. Au per MIL-G-45204 over 30 μ [0.75 μ] 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

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](#) μ BGA up to 6.5mm
- [23017](#) μ BGA up to 13mm
- [23018](#) μ BGA up to 27mm
- [23018-APP](#) w/Adj Pressure Pad
- [23019](#) μ BGA up to 40mm
- [23020](#) μ 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
- [23022](#) Kelvin Test Socket



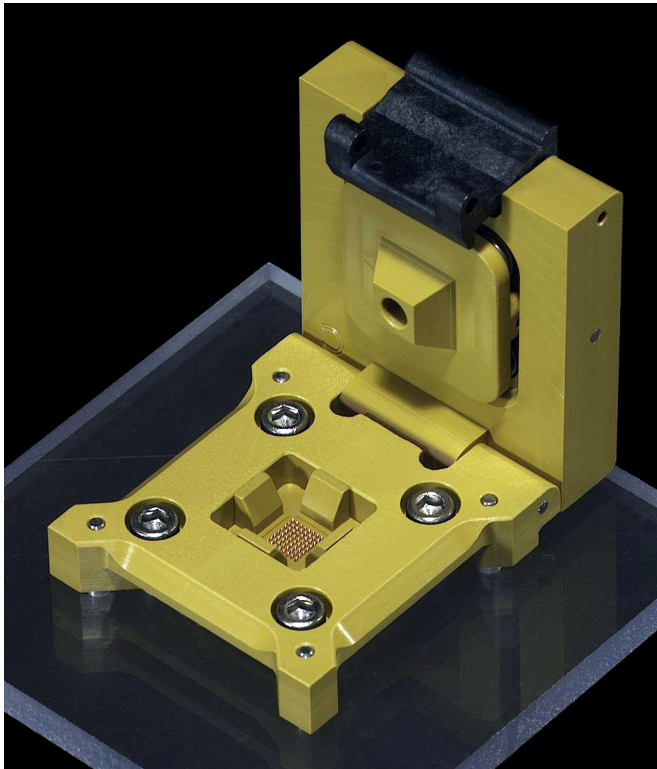
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Rev. 1.5

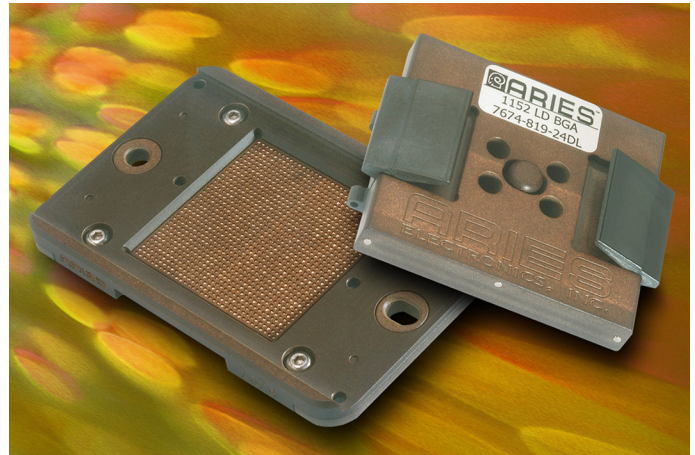


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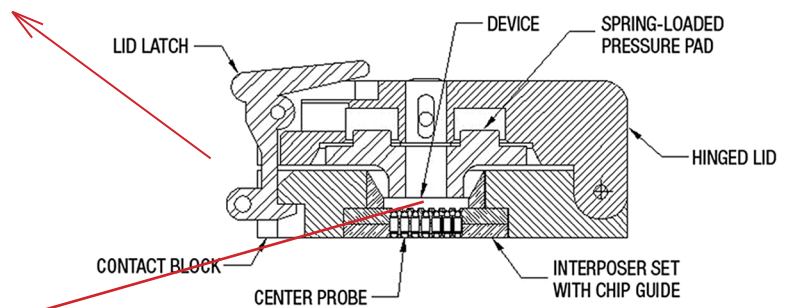


"-24HL" HINGED LID VERSION SHOWN

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

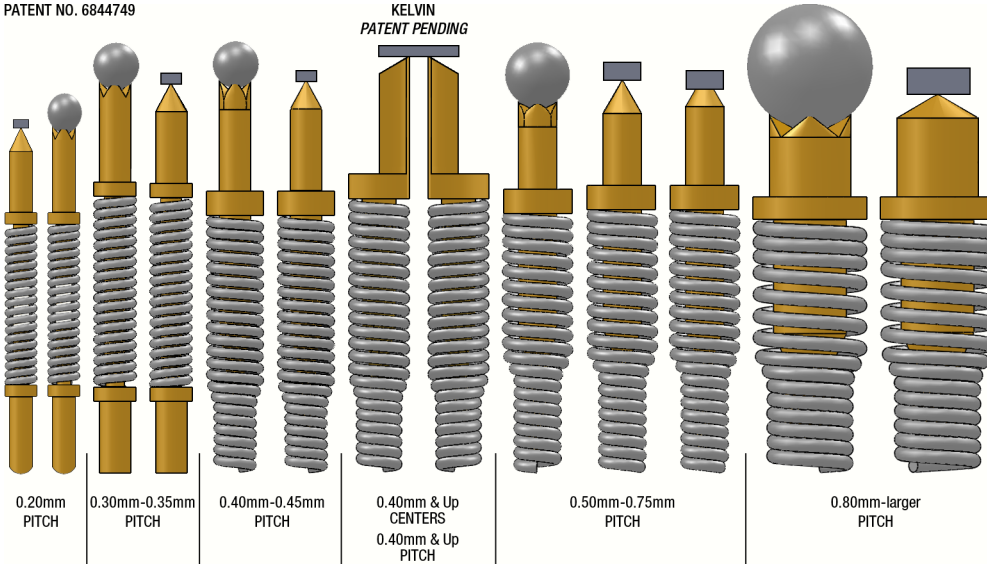


"-24DL" DOUBLE-LATCHED REMOVABLE LID VERSION SHOWN



"-24HL" HINGED LID VERSION SECTION

PATENT NO. 6844749



SPRING PROBES

ALL DIMENSIONS: INCHES [MILLI-METERS]
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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