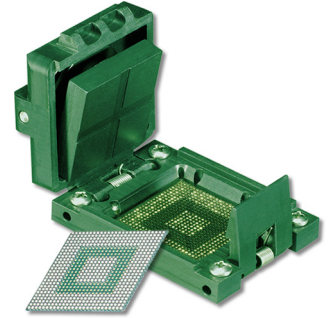




# High-Frequency Center Probe Test Socket for Devices up to 27mm Square

## 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.
- Pressure mounting, no soldering required.
- 4-point crown insures "scrub" on solder balls, raised tip provides "scrub" on pads.
- Signal path during test only 0.077 [1.96].
- Accommodates any package up to 27mm square.
- Small overall socket size/profile allows max. number of sockets per BIB and BIBs per oven, while being operator-friendly.



## ORDERING INFORMATION

Consult Factory

## CLEANING, HANDLING, MOUNTING & PROBE REPLACEMENT INFO

## GENERAL SPECIFICATIONS

- MOLDED SOCKET COMPONENTS: UL94V-0 PEEK and/or Ultem
- PIN INDUCTANCE: 0.51nH (large probe)
- CONTACT RESISTANCE: <40 m $\Omega$
- 1dB BANDWIDTH to 10.1GHz (0.80mm pitch) (large probe)
- ESTIMATED CONTACT LIFE: 500,000 cycles
- COMPRESSION SPRING PROBES: heat-treated BeCu with 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
- 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.
- ALL HARDWARE: Stainless Steel

## MOUNTING CONSIDERATIONS

- SOCKET: mounted with four #4-40 screws (to be removed at time of socket mounted to PCB) or a tapped, insulated backing plate to be used on underside of PCB for high pin count applications
- NOTE: Sockets must be handled with care when mounting or removing sockets to/from PCB
- 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.
- Some applications may require a Backup Plate. See drawing for more information.

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  $\mu$ BGA up to 6.5mm
- 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-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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