



High-Temperature (250°C) Universal DIP ZIF Test Socket – Series 55

FEATURES

- Universal test socket accepts devices on 0.300 to 0.600 [7.62 to 15.24] centers
- All pin count sockets go into PCB with either 0.300 or 0.600 [7.62 or 15.24] centers
- Contacts are normally closed to eliminate dependence on plastic to sustain contact integrity
- Socket handle configured with closed contacts (on) when in the up or down position, and mounted on the right- or left-hand side
- Sockets can be soldered into PCBs or fit into Test Socket Receptacles (see [Data Sheet 10003](#))



GENERAL SPECIFICATIONS

- **SOCKET BODY:** Natural UL 94V-0 Glass-filled Polyetheretherketone (PEEK)
- **HANDLE:** Stainless Steel
- **CONTACTS:** BeNi 360, 1/2-hard
- **CONTACT PLATING:** 50µ [1.27µ] NiB
- **CONTACT CURRENT RATING:** 1 amp
- **OPERATING TEMPERATURE:** -55°C to 250°C max. (300°C special order)
- **RETENTION FORCE (closed):** 55g/pin based on a 0.020 [0.51] dia. test lead
- **INSULATION RESISTANCE:** 1000 MΩ min.
- **DIELECTRIC WITHSTANDING VOLTAGE:** 1000 VAC
- **LIFE CYCLE:** 25,000 to 50,000 cycles
- **ACCEPTS LEADS:** 0.015-0.045 [0.38-1.14] wide, 0.110-0.280 [2.79-7.11] long

MOUNTING CONSIDERATIONS

- See **SOCKET FOOTPRINT** below

ORDERING INFORMATION

XX-X55X-X X

Plating

8 = NiB

Termination

1 = Solder Pin Tail

Handle Options

1 = Left, up is on (closed)

2 = Right, up is on (closed)

3 = Left, down is on (closed)

4 = Right, down is on (closed) Std

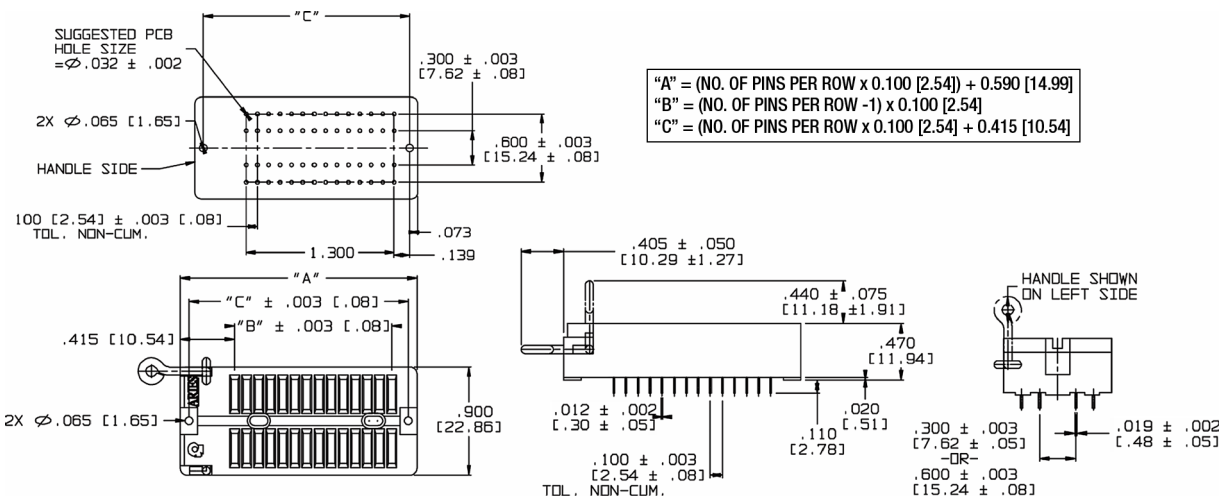
Row-to-Row Spacing (btm)

3 = 0.300 [7.62]

6 = 0.600 [15.24]

No. of Pins

24, 28, 32, 36, 40, 42, 44, 48



ALL DIMENSIONS: INCHES [MILLIMETERS]

ALL TOLERANCES: ± 0.005 [0.13] UNLESS OTHERWISE SPECIFIED

FOR TEST SOCKET RECEPTACLES, SEE [DATA SHEET 10003](#)

DO NOT USE THIS SOCKET IN A BURN-IN OVEN WITH CONTACTS IN OPEN POSITION, AS IT WILL DAMAGE THE SOCKET

CONSULT FACTORY FOR OTHER SIZES AND CONFIGURATIONS

CUSTOMIZATION: ARIES SPECIALIZES IN CUSTOM DESIGN AND PRODUCTION. SPECIAL MATERIALS, PLATINGS, SIZES, AND CONFIGURATIONS CAN BE FURNISHED, DEPENDING ON QUANTITY.

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WWW.ARIESELEC.COM • INFO@ARIESELEC.COM



10002
Rev. 1.7
1 of 1



High-Temp PGA ZIF Test & Burn-in Socket for Footprints on Std 8x8 to 21x21 Grid

FEATURES

- Strong Metal Cam Activates Normally-closed Contacts, Preventing Dependency on Plastic for Contact Force
- Handle mounted on Right- or Left-hand Side
- Any Footprint Accepted on Standard 8x8 to 21x21 Grid

GENERAL SPECIFICATIONS

- **SOCKET BODY:** black UL 94V-0 Polyphenylene Sulfide (PPS)
- **CONTACTS:** Spinodal
- **CONTACT PLATING:** 50μ [1.27μ] min. NiB
- **HANDLE:** Stainless Steel
- **CONTACT CURRENT RATING:** 1 amp
- **OPERATING TEMPERATURES:** -85°F to 392°F [-65°C to 200°C]
- **ACCEPTS LEADS:** 0.014-0.026 [0.36-0.66] dia., 0.120-0.290 [3.05-7.37] long



MOUNTING CONSIDERATIONS

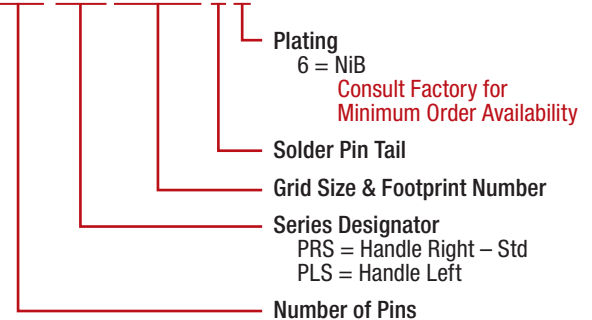
- **SUGGESTED PCB HOLE SIZE:** 0.032 ±0.002 [0.81 ±0.05] dia.
- See *PCB FOOTPRINT* below
- Plugs into standard PGA sockets

Grid Size	No. of Pins	Dim. "C"	Dim. "A"	Dim. "B"	Dim. "D"
8 x 8 *	64	0.700 [17.78]	1.695 [43.05]	1.110 [28.19]	1.275 [32.39]
9 x 9	81	0.800 [20.32]			
12 x 12 *	144	1.100 [27.94]	1.894 [48.10]	1.510 [38.35]	1.675 [42.55]
13 x 13	169	1.200 [30.48]			
14 x 14 *	196	1.300 [33.02]	2.094 [53.20]	1.710 [43.43]	1.875 [47.63]
15 x 15	225	1.400 [35.56]			
16 x 16 *	256	1.500 [38.10]	2.294 [58.27]	1.910 [48.51]	2.075 [52.71]
17 x 17	289	1.600 [40.64]			
18 x 18 *	324	1.700 [43.18]	2.494 [63.35]	2.110 [53.59]	2.275 [57.79]
19 x 19	361	1.800 [45.72]			
20 x 20 *	400	1.900 [48.26]	2.694 [68.43]	2.310 [58.67]	2.475 [62.87]
21 x 21	441	2.000 [50.80]			

* Top- and Right-hand Side Rows left out

ORDERING INFORMATION

XXX-PXX XXXXX-1 X



ALL DIMENSIONS: INCHES [MILLIMETERS]
 ALL TOLERANCES: ±0.005 [0.13] UNLESS OTHERWISE SPECIFIED
 SPECIAL HANDLE REQUIREMENTS: CONSULT FACTORY
 CONSULT FACTORY FOR OTHER SIZES AND CONFIGURATIONS

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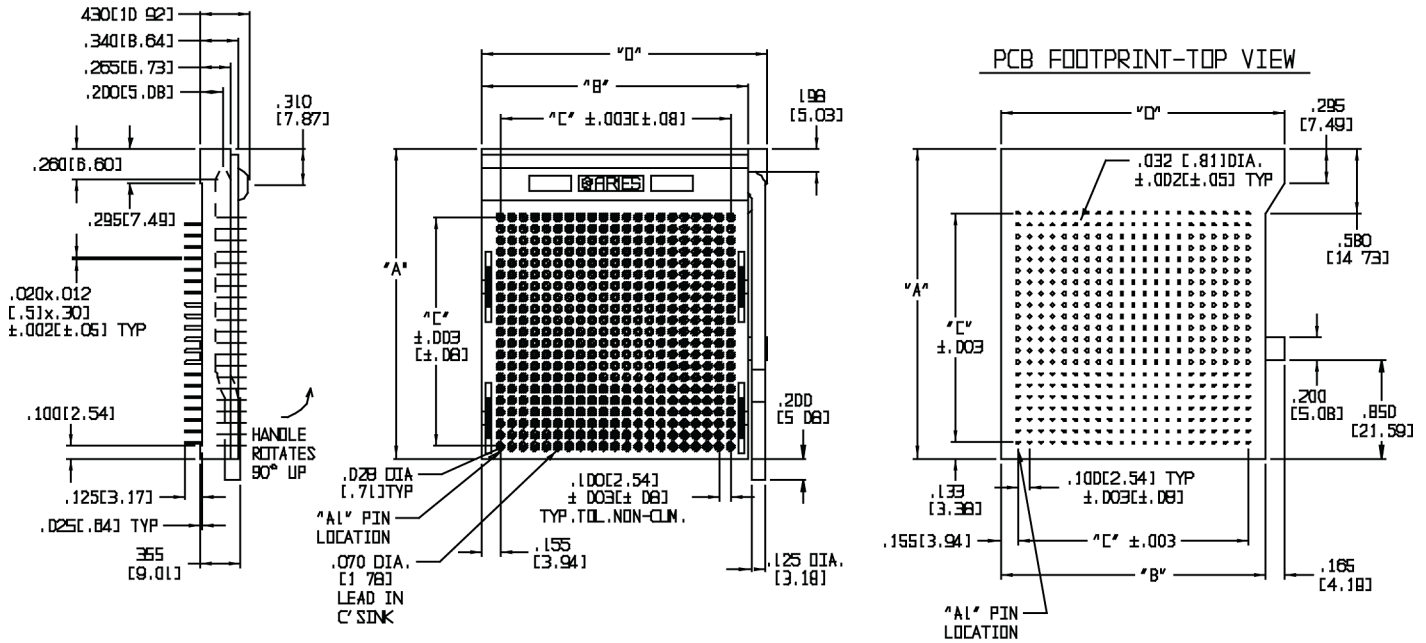
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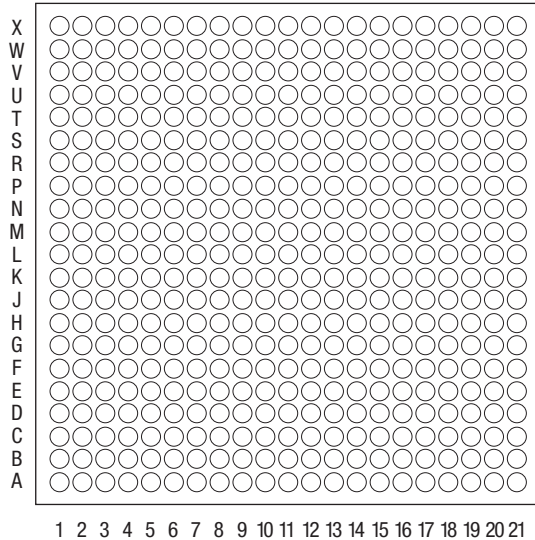
10004HT
Rev. 1.1
1 of 2



High-Temp PGA ZIF Test & Burn-in Socket for Any Footprint on Std 8x8 to 21x21 Grid

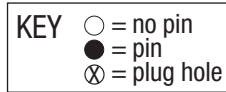


TOP VIEW



SPECIAL FOOTPRINT INSTRUCTIONS

1. Make a copy of this worksheet
2. Fill-in circles for footprint desired using the key below
3. Fill-in the information below. See Ordering Information above
4. Send worksheet to Aries for prompt quote



COMPANY NAME _____
 ADDRESS _____
 CITY _____
 REQUESTED BY _____
 PHONE _____
 DATE _____
 TOTAL NUMBER OF PINS _____
 SERIES (circle one): PRS (Right handle - std)
 PLS (Left handle)

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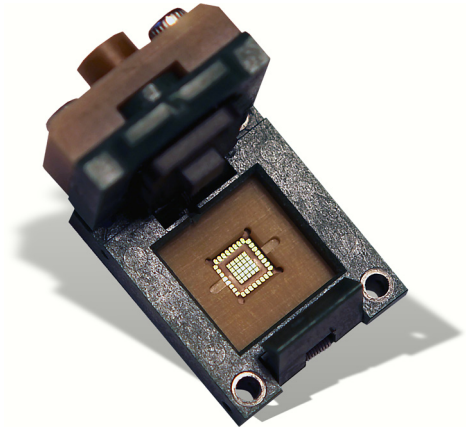




High-Temp 200°C Test & Burn-In Sockets for BGA, LGA, QFN, MLCC, and Bumped Die Devices

KEY PERFORMANCE ELEMENTS – Series AR4HT

- 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, MFL, 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.
- High-Temperature 200°C (high-frequency bandwidth, low inductance, and high-current applications in a reliable and durable socket housing).
- Excellent Compliance (shorter than other low-profile contacts, enables reliable ATE testing and burn-in). Excellent choice for low-cost hand test applications.



SILMAT® CONTACT TECHNOLOGY

- It is NOT a cheap conductive rubber sheet
- It is NOT a prototype or a copy
- It IS a cost-effective, low profile contact structure engineered with specific materials and features to provide electrical and mechanical advantages for high performance applications
- It IS an innovative, protected, validated and released product with capacity and quality control available to meet existing and emerging customer needs

MECHANICAL

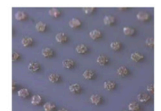
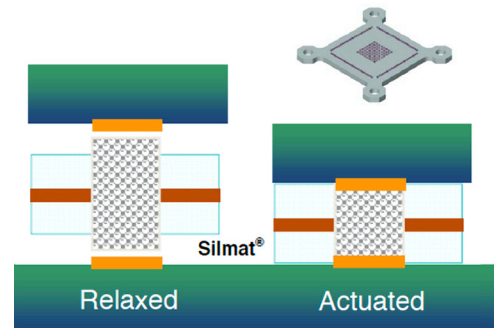
- CONTACT LENGTH (compressed): 0.45mm
- PITCH: Released to <0.4mm – Mixed Pitch Available
- PACKAGES: BGA, LGA, QFN, DFN, CSP, POP – Full and Partial Arrays Available
- STRUCTURE: Silmat® Interposer with Patented Core
- INTERPOSER MATERIALS: Ag Particles in Silicone Elastomer with Polyimide Core (patented)
- COMPLIANCE RANGE/TRAVEL: Up to 0.23mm
- CONTACT FORCE/LEAD (initial): 20-30 grams/lead
- OPERATING TEMPERATURE: -55°C to 200°C
- LIFE EXPECTANCY: Silmat® Interposer >10,000 actuations (influenced by introduction of bias to the IC and the plating of IC leads will impact the degradation of the contact performance)

ELECTRICAL (0.5mm pitch)

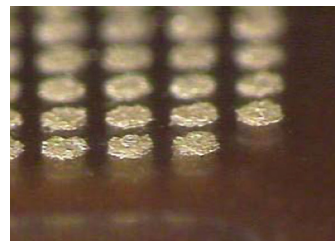
- BANDWIDTH (frequency response): -1dB at >40GHz
- SELF-INDUCTANCE: 0.10nH
- MUTUAL INDUCTANCE: 0.02nH
- CAPACITANCE TO GROUND: 0.14pF
- MUTUAL CAPACITANCE: 0.01pF
- CONTACT RESISTANCE (initial): <25mW
- CURRENT RATING: 4 amps at 14°C heat rise

ORDERING INFORMATION

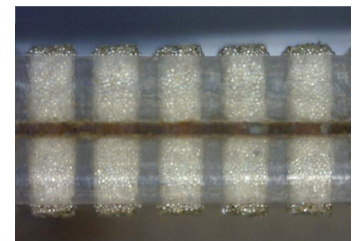
This material can be ordered with ANY [Aries CSP/BGA Sockets](#)



INTERPOSER



Cross Section
Elastomer Matrix Compliant Buttons



Column Array
Ag Particles

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FOR TEST SOCKET RECEPTACLES, SEE DATA SHEET 10003

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23026HT

Rev. 1.4

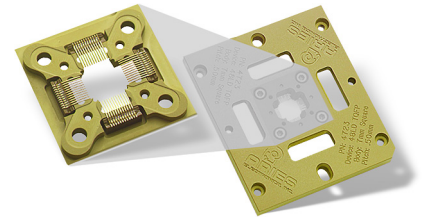
1 of 1



High-Temp (up to 250°C) RF Test Socket with Replaceable Contact Strips

FEATURES

- User replaceable patented Microstrip™ contacts which lie flat on the DUT board, and becomes part of the transmission line decreasing down-time
- Same high-frequency performance of our standard Microstrip™ contacts
- Available in lead pitches from 0.4mm to 5.0mm
- Easy-to-use removal / insertion tool shipped with every order
- Replaceable contact strips available in just one week
- Socket alignment pins provide accurate socket location to test board
- Frequency response data available up to 19GHz



GENERAL SPECIFICATIONS

- SOCKET BODY MATERIAL: either PEEK or Torlon® PAI
- HARDWARE: Stainless Steel
- CONTACT RESISTANCE: <70 mΩ
- CONTACT INDUCTANCE: 0.01nH
- ESTIMATED CONTACT LIFE: 500,000 cycles
- CONTACT FORCE: Consult Factory
- INSERTION LOSS: <1dB to 16.7GHz (at 0.50mm pitch)
- OPERATING TEMPERATURE: -40°C to 200°C (or 250°C upon request)

ORDERING INFORMATION

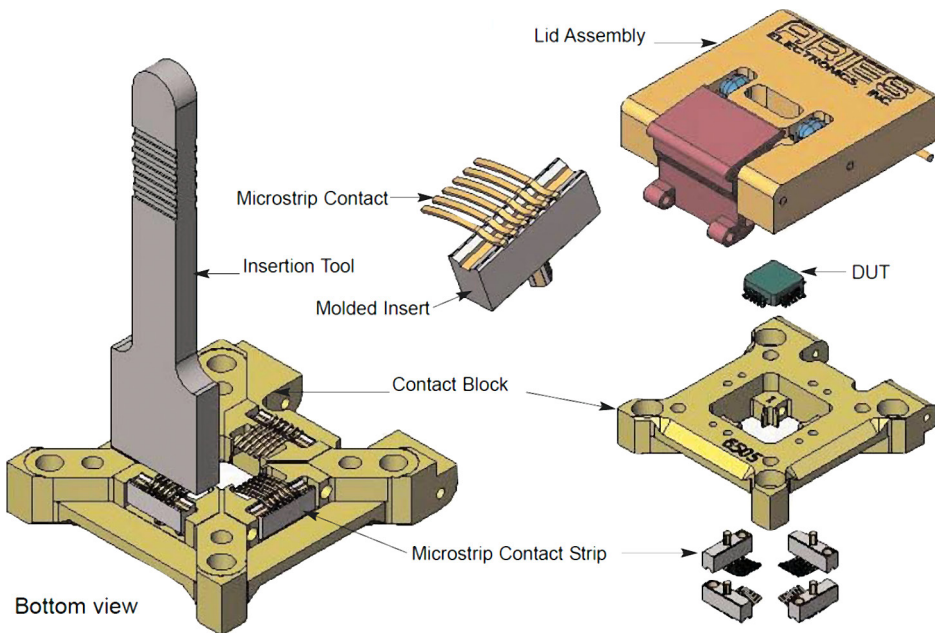
Consult Factory for P/N

MOUNTING CONSIDERATIONS

- SUGGESTED MOUNTING HOLE SIZE: 0.120 [3.05] 4 places for #4-40 Screws
- SUGGESTED LOCATING PIN HOLE SIZE: 0.063 [1.6] 4 places
- SUGGESTED TEST BOARD PLATING: 30µ min. hard Au over 50µ min. Ni

TEST REPORTS

- [Microstrip CSP Socket DC Cycling](#)
- [Microstrip CSP Socket DC Measurement](#)
- [Microstrip CSP Socket RF Cycling](#)
- [Microstrip QFP 0.5mm 64-pin Socket Electrical Characterization](#)
- [Microstrip QFP 0.5mm Socket Return Loss Graph](#)
- [Microstrip QFP Socket DC Cycling](#)
- [Microstrip QFP Socket RF Cycling](#)
- [Microstrip QFP Socket RF Measurement](#)
- [Microstrip SSOP 20-pin 0.65mm Pitch Socket Return Loss Graph](#)
- [Microstrip SSOP 20-pin Test Socket Electrical Characterization](#)



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