

# Test & Burn-In Grid ZIP Sockets

## Pin Grid Arrays



- Lever actuated zero insertion force mechanism
- Rugged 3-plate construction for durability and electrical reliability
- Available in 10 x 10 through 25 x 25 matrices
- PTFE coated stainless steel handle - durable and safe in high humidity environment
- Optical locating holes for robotics loading/unloading
- Repairable - contacts, handles, top-plate, and cam plate are replaceable
- Available with flush handle option for use with test probes and ease of board stacking

Date Issued: February 19, 2001

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## Physical

### Insulation

Material: Polyethersulfone (PES)  
Flammability: UL 94V-0  
Color: Black (PES)

**Marking:** Part Number Identifier and Logo on All

### Cam Handle

Material: Stainless Steel

### Contact

Material: Beryllium Copper  
Plating: 30  $\mu$ m (0.76  $\mu$ m) Gold over 50  $\mu$ m (1.3  $\mu$ m) Nickel

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## Electrical

**Current Rating:** 1 Amp  
**Insulation Resistance:**  $> 1 \times 10^{12} \Omega$  at 500 Vdc  
**Withstanding Voltage:** 1000 Vrms at Sea Level

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## Environmental

**Operating Temperature Rating:** PES: - 55° C to + 150° C

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## Mechanical

- PES/BeCu**
- When used as a test socket at room temperature 24° C the socket will last 25,000 actuations.
  - Based on field experience, under normal burn-in conditions up to a maximum of 150 C for PES, the socket should last an average of four years.

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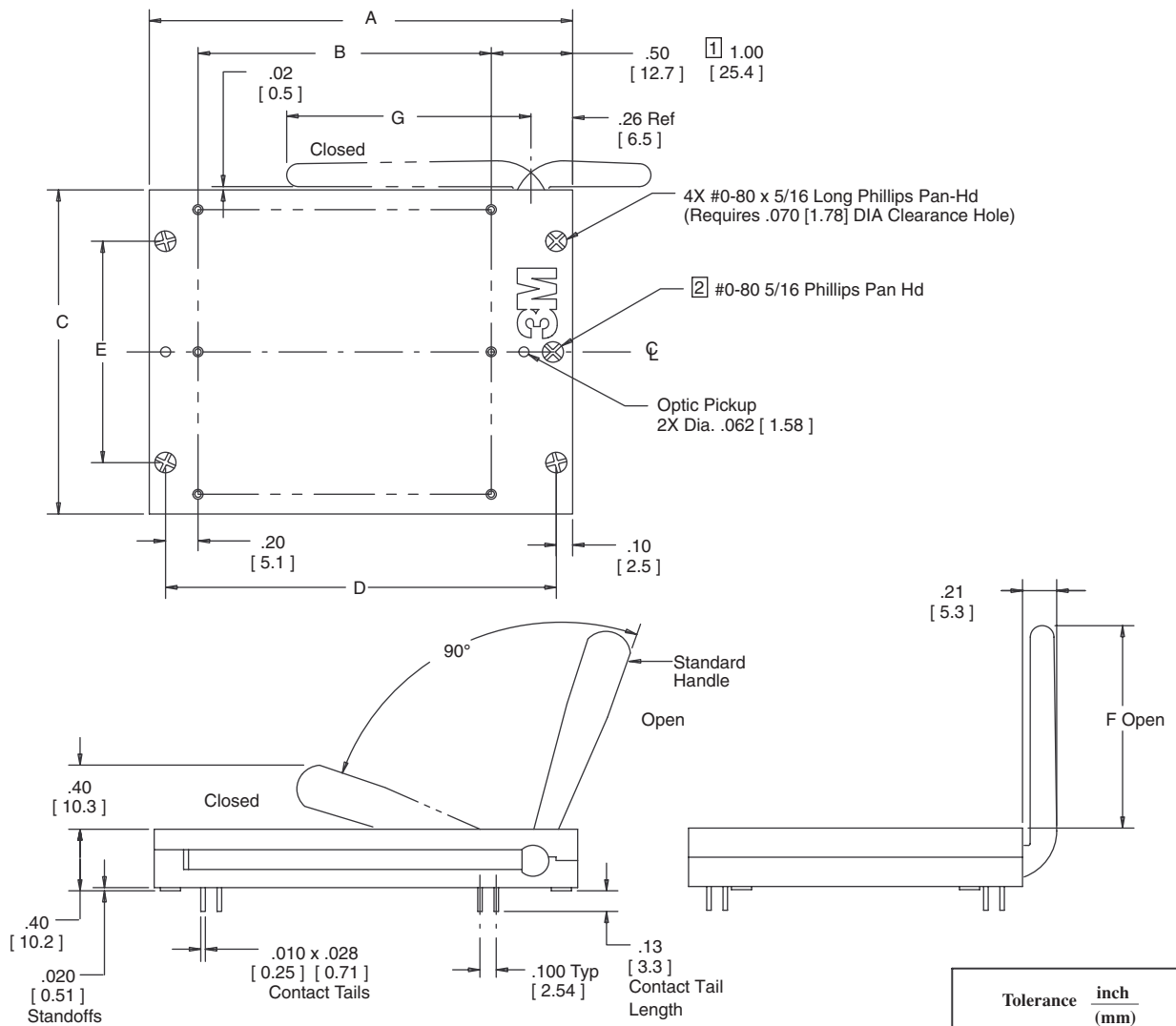
## 3M Electronic Handling and Protection Division

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Austin, TX 78726-9000

For technical, sales or ordering information call **800-328-0411**  
or visit our website: <http://www.3M.com/ehpd>

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## Pin Grid Arrays



**Notes:**

- 1 25 x 25 only.
- 2 Present only on 15 x 15 and larger

Dimension	Tolerance	
	inch (.00)	mm (.00)
Tolerance	± .010 (± .25)	± .005 (± .13)

### Ordering Information

**2XXX-63XX-XXX-1902**

Number of Contacts

- 6310 - 10x10
- 6311 - 11x11
- 6313 - 13x13
- 6315 - 15x15
- 6317 - 17x17
- 6319 - 19x19
- 6321 - 21x21
- 6325 - 25x25

Plating PES:  
1902 with / 30 □ Au/Ni on BeCu

- 0UA = Molded Pattern, Standard Handle
- 9UA = All holes open, Standard Handle
- 0RA = Molded Pattern, Flush Cam Handle
- 9RA = All holes open, Flush Cam Handle

**Note:** Additional ten hole plugs can be ordered separately part #200-4660-14-1900 (see page 33).

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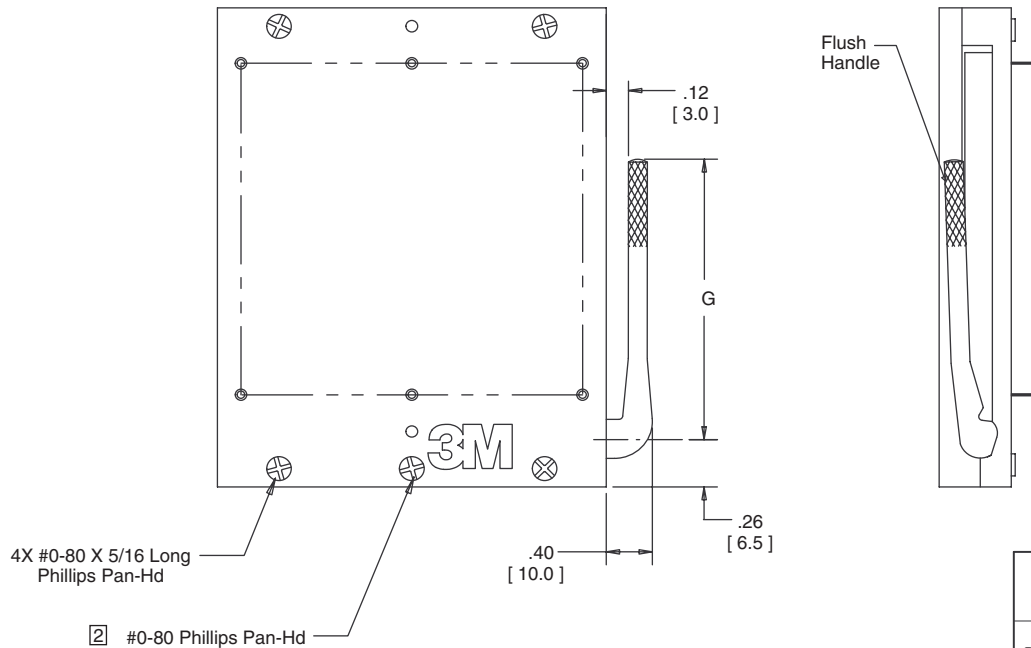
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## Pin Grid Arrays

Grid Matrix	Maximum Contact Quantity	Dimensions						Dimension G Cam Handle	
		A	B	C	D	E	F	Standard	**Flush
10 x 10	100	1.70 [ 43.2 ]	.90 [ 22.9 ]	1.15 [ 29.2 ]	1.50 [ 38.1 ]	.90 [ 22.9 ]	.80 [ 20.3 ]	.80 [ 20.3 ]	1.00 [ 25.4 ]
11 x 11	121	1.80 [ 45.7 ]	1.00 [ 25.4 ]	1.25 [ 31.8 ]	1.60 [ 40.6 ]	1.00 [ 25.4 ]	.80 [ 20.3 ]	.80 [ 20.3 ]	1.00 [ 25.4 ]
13 x 13	169	2.00 [ 50.8 ]	1.20 [ 31.8 ]	1.45 [ 36.8 ]	1.80 [ 45.7 ]	1.00 [ 25.4 ]	.80 [ 20.3 ]	.80 [ 20.3 ]	1.00 [ 25.4 ]
15 x 15	225	2.20 [ 55.9 ]	1.40 [ 35.6 ]	1.65 [ 41.9 ]	2.00 [ 50.8 ]	1.20 [ 30.5 ]	1.30 [ 33.0 ]	1.40 [ 35.6 ]	1.50 [ 38.1 ]
17 x 17	289	2.40 [ 61.0 ]	1.60 [ 40.6 ]	1.85 [ 47.0 ]	2.20 [ 55.9 ]	1.20 [ 30.5 ]	1.30 [ 33.0 ]	1.40 [ 35.6 ]	1.50 [ 38.1 ]
19 x 19	361	2.60 [ 66.0 ]	1.80 [ 45.7 ]	2.05 [ 52.1 ]	2.40 [ 61.0 ]	1.40 [ 35.6 ]	1.70 [ 43.2 ]	1.80 [ 45.7 ]	1.90 [ 48.2 ]
21 x 21	441	2.80 [ 71.1 ]	2.00 [ 50.8 ]	2.25 [ 57.2 ]	2.60 [ 66.0 ]	1.40 [ 35.6 ]	1.70 [ 43.2 ]	1.80 [ 45.7 ]	1.90 [ 48.2 ]
25 x 25	625	3.70 [ 94.0 ]	2.40 [ 61.0 ]	2.65 [ 67.3 ]	3.50 [ 88.9 ]	2.00 [ 50.8 ]	2.58 [ 65.5 ]	2.78 [ 70.6 ]	2.78 [ 70.6 ]

\*\*For -0RA and -9RA flush cam handle option only



### Flush Cam Handle Option

	Tolerance $\frac{\text{inch}}{\text{(mm)}}$	
Dimension	.00 (.0)	.000 (.00)
Tolerance	$\pm .010$ ( $\pm .25$ )	$\pm .005$ ( $\pm .13$ )

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## Pin Grid Arrays

**Top**

**Front**

Tolerance		inch	
		(mm)	
Dimension		$\frac{.00}{(.0)}$	$\frac{.000}{(.00)}$
Tolerance		$\pm .010$	$\pm .005$
		$(\pm .25)$	$(\pm .13)$

**Handle Side**

Mark Indications:

- No holes, no contacts
- Holes only, no contacts
- Holes with contacts

**Notes:**

1. This is only a work sheet. Do not proceed with any layout until a part number is assigned by Textool. The pattern is subject to repositioning.
2. Lead diameter = .022 [ 0.56 ] max, .014 [ 0.36 ] min. The standard socket has been designed to accept these lead diameters only. For all others please consult the factory.
3. Use this sheet to indicate which positions you intend to use.
4. Remember: for best results, keep your patterns as symmetrical with the centerline as possible.
5. The contact point for all sizes is .085 [ 2.16 ] below the top surface and we recommend a device lead length of .100 [ 2.54 ] below the solder standoffs.

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