## 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 environments
- Optical locating holes for robotics loading/ unloading
- Repairable contacts, handles, top-plate, and cam plate are replaceable

Date Modified: November 8, 2004

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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:  $30\mu$ " (0.76  $\mu$ m) Gold over  $50\mu$ " (1.3  $\mu$ m) Nickel

### **Electrical**

Current Rating: 1 Amp

**Insulation Resistance:**  $> 1 \times 10^{12}$  at 500 Vdc Withstanding Voltage: 1000 Vrms at sea level

### **Environmental**

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

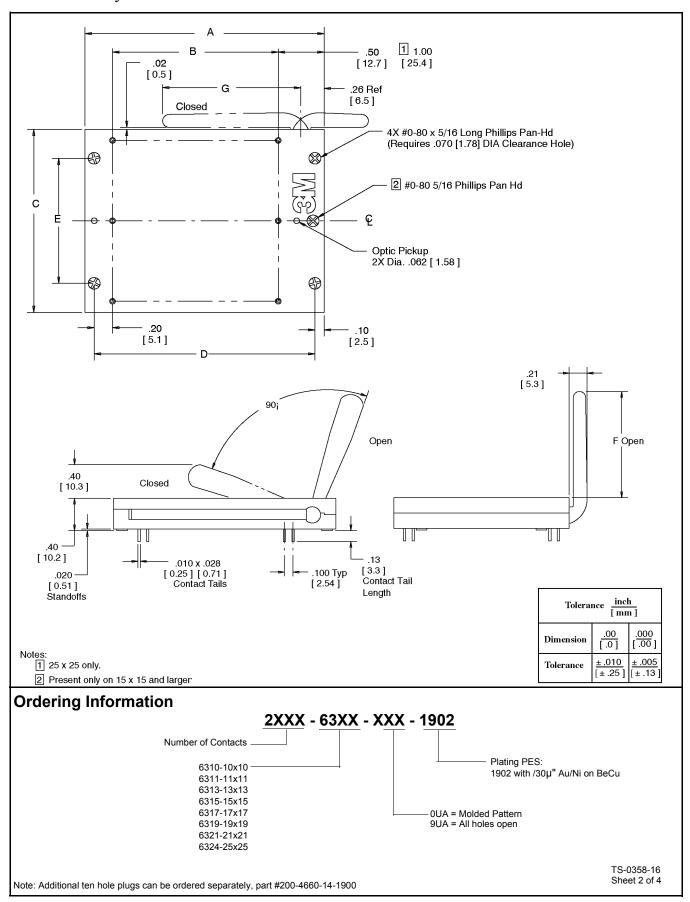
### Mechanical

PES/BeCu A. When used as a test socket at room temperature 24°C the socket will last 25,000 actuations.

> B. 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 4 years.

> > Textool is a trademark of 3M Company.

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| Grid    | Maximum<br>Contact<br>Quantity | Dimensions       |                  |                  |                  |                  |                  |                  |  |
|---------|--------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
| Matrix  |                                | A                | В                | С                | D                | E                | F                | G                |  |
| 10 x 10 | 100                            | 1.70<br>[ 43.2 ] | .90<br>[ 22.9 ]  | 1.15<br>[ 29.2 ] | 1.50<br>[ 38.1 ] | .90<br>[ 22.9 ]  | .80<br>[ 20.3 ]  | .80<br>[ 20.3 ]  |  |
| 11 x 11 | 121                            | 1.80<br>[ 45.7 ] | 1.00<br>[ 25.4 ] | 1.25<br>[ 31.8 ] | 1.60<br>[ 40.6 ] | 1.00<br>[ 25.4 ] | .80<br>[ 20.3 ]  | .80<br>[ 20.3 ]  |  |
| 13 x 13 | 169                            | 2.00<br>[ 50.8 ] | 1.20<br>[ 31.8 ] | 1.45<br>[ 36.8 ] | 1.80<br>[ 45.7 ] | 1.00<br>[ 25.4 ] | .80<br>[ 20.3 ]  | .80<br>[ 20.3 ]  |  |
| 15 x 15 | 225                            | 2.20<br>[ 55.9 ] | 1.40<br>[ 35.6 ] | 1.65<br>[ 41.9 ] | 2.00<br>[ 50.8 ] | 1.20<br>[ 30.5 ] | 1.30<br>[ 33.0 ] | 1.40<br>[ 35.6 ] |  |
| 17 x 17 | 289                            | 2.40<br>[ 61.0 ] | 1.60<br>[ 40.6 ] | 1.85<br>[ 47.0 ] | 2.20<br>[ 55.9 ] | 1.20<br>[ 30.5 ] | 1.30<br>[ 33.0 ] | 1.40<br>[ 35.6 ] |  |
| 19 x 19 | 361                            | 2.60<br>[ 66.0 ] | 1.80<br>[ 45.7 ] | 2.05<br>[ 52.1 ] | 2.40<br>[ 61.0 ] | 1.40<br>[ 35.6 ] | 1.70<br>[ 43.2 ] | 1.80<br>[ 45.7 ] |  |
| 21 x 21 | 441                            | 2.80<br>[ 27.1 ] | 2.00<br>[ 50.8 ] | 2.25<br>[ 57.2 ] | 2.60<br>[ 66.0 ] | 1.40<br>[ 35.6 ] | 1.70<br>[ 43.2 ] | 1.80<br>[ 45.7 ] |  |
| 25 x 25 | 625                            | 3.70<br>[ 94.0 ] | 2.40<br>[ 61.0 ] | 2.65<br>[ 67.3 ] | 3.50<br>[ 88.9 ] | 2.00<br>[ 50.8 ] | 2.58<br>[ 65.5 ] | 2.78<br>[ 70.6 ] |  |

| Tolera    | Tolerance inch [ mm ] |                          |  |  |  |  |
|-----------|-----------------------|--------------------------|--|--|--|--|
| Dimension | <u>.00</u><br>[ 0. ]  | . <u>000</u><br>[ 00. ]  |  |  |  |  |
| Tolerance | ± .010<br>[± .25]     | <u>± .005</u><br>[± .13] |  |  |  |  |

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Pin Grid Arrays

| Тор                                      |   |
|--|---|
| 000000000000000000000000000000000000000  | Tolerance inch [mm]   |
| 000000000000000000000000000000000000000  | Dimension .00 .000  |
|  | [.01] [.00]   |
|  | Tolerance $\begin{bmatrix} \pm .010 \\ [\pm .25] \end{bmatrix} \begin{bmatrix} \pm .005 \\ [\pm .13] \end{bmatrix}$ |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  | Handle Side   |
|  |   |
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|  |   |
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|  |   |
| 10 x 10                                  |   |
|  |   |
| 13 x 13                                  |   |
| 15 x 15 17 x 17                          |   |
| 19 x19—————————————————————————————————— | Mark Indications:  X No holes, no contacts  |
| 21 x 21                                  | <ul><li> Holes only, no contacts</li></ul>  |
| 25 x 25                                  | <ul><li>Holes with contacts</li></ul>   |
| 20 X 20                                  |   |

#### Front

#### Notes:

- 1. This is only a work sheet. Do not proceed with any layout until a part number is assigned by 3M. 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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