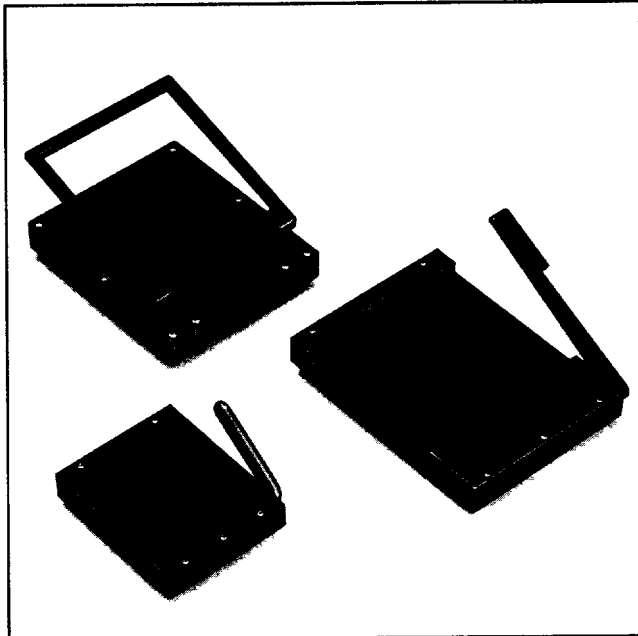


430-511 | 523 | 535 | 547



12

Textool Grid ZIPs are well known for their durability and reliability in test or burn-in of devices in PGA packages or other packages with pin outs in a matrix format. Available in matrices from 10 x 10 through 25 x 25 on 100 mil centers. Also available in carrier compatible versions for industry standard 2 inch and 2-3/4 inch square carriers. A staggered (interstitial) 100 mil center (effective pitch 70.7 mil) with an outer matrix of 19 x 19 and inner matrix of 18 x 18 is also available.

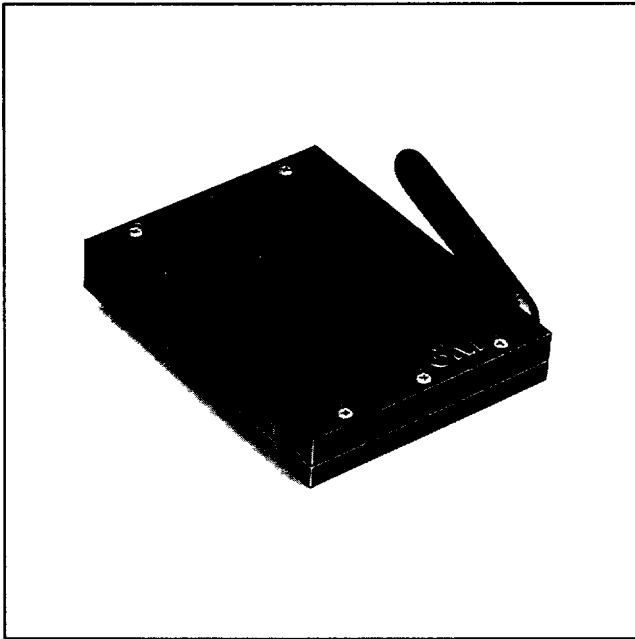
All Grid ZIP™ sockets employ a rugged 3-plate socket body, normally open contacts, and a lever actuated zero insertion force mechanism.

Section Contents

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100" Centers PGA	26
Grid ZIP Sockets, Carrier Compatible	
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Grid ZIP Sockets

.100" Centers PGA



13

- Lever actuated zero insertion force mechanism
- Rugged 3-plate construction for durability and electrical reliability
- Available in 10 × 10 through 25 × 25 matrices
- New PTFE coated stainless steel handle — improves life and is safe in high humidity environment
- Optical locating holes for robotic 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

Physical:

Insulation Material: Polyethersulfone (PES) or Polyamideimide (PAI, TORLON®)
Color: Black (PES), Brown (PAI)
Marking: Part Number Identification
CAM Handle Material: Stainless Steel
Contact Material: Beryllium Copper or Beryllium Nickel
Plating: 30 μ" (0.76 μm) Gold — MIL-G-45204, Type II, Grade C over 50 μ" (1.3 μm) Sulfamate Nickel Per QQ-N-290A, Class 2 or 75 μ" (1.9 μm) Nickel Boron

Electrical:

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

Environmental:

Temperature Rating Operating: PES: - 67°F (- 55°C) to + 302°F (+ 150°C)
PAI: - 67°F (- 55°C) to + 347°F (+ 175°C)

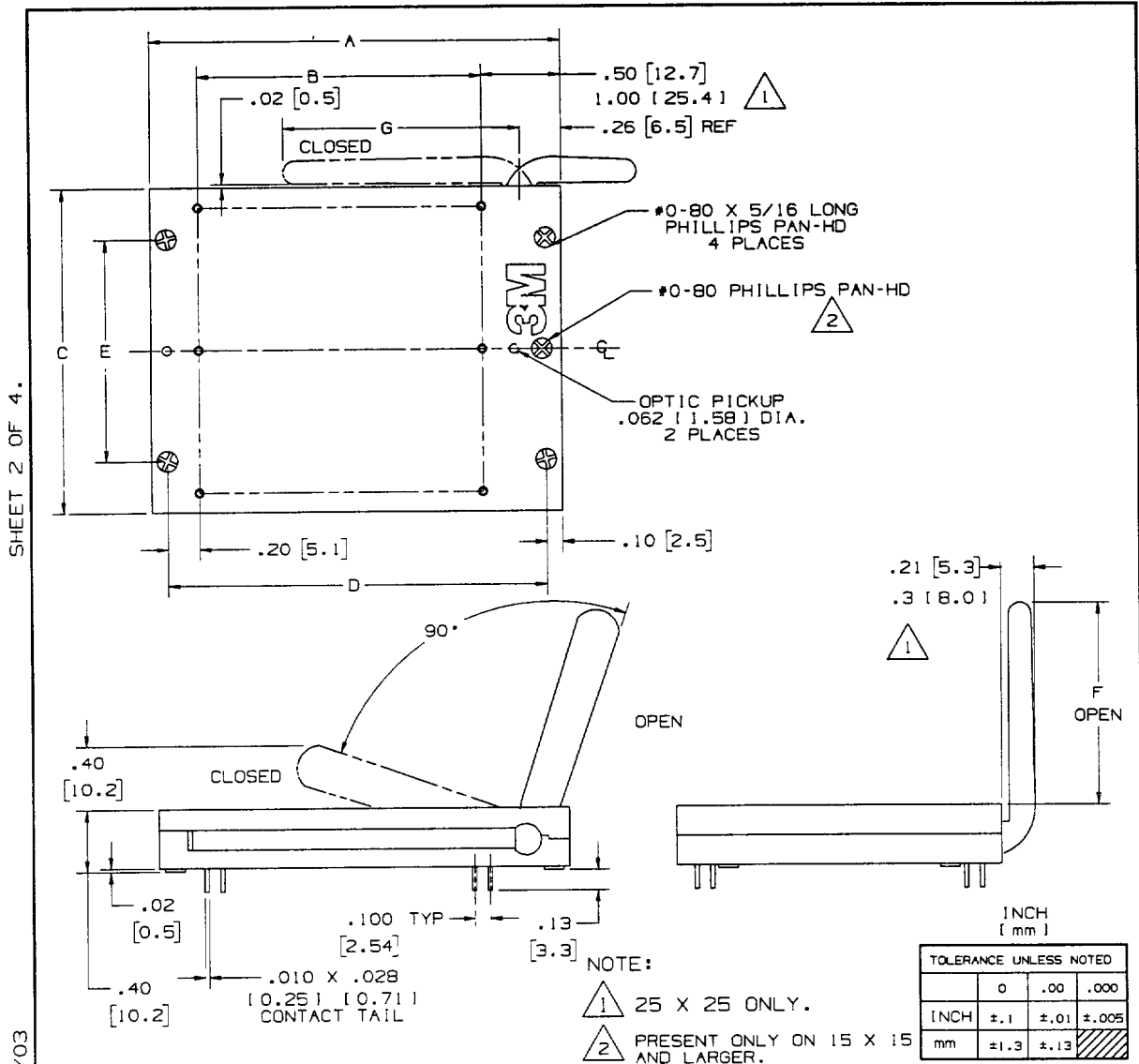
Mechanical:

- I. PES/BeCu**
- A When used as a test socket at room temperature 75°F (24°C) the socket will last 25,000 actuations.
 - B. When used as a burn-in socket at 302°F (150°C) the socket will last 35,000 hours at the elevated temperature.
- II. PAI/BeNi:**
- A When used as a test socket at room temperature 75°F (24°C) the socket will last 25,000 actuations.
 - B. When used as a burn-in socket at 347°F (175°C) the socket will last 35,000 hours at the elevated temperature.

Textool Products
3M Electronic Products Division

PO Box 2963
Austin, TX 78769-2963

Grid ZIP Sockets .100" Centers PGA



SHEET 2 OF 4.

TS/0358/03

ORDERING INFORMATION

2-OXXX-OXXXX-1XX-OXX-OXX

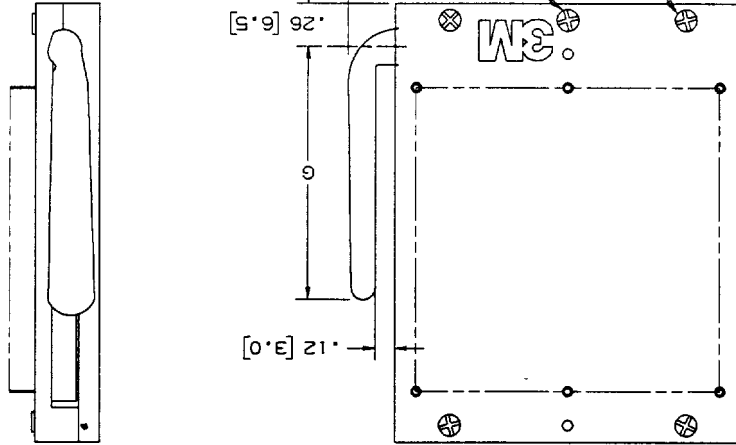
NUMBER OF CONTACTS

PIN PATTERN
(CONSULT 3M CUSTOMER SERVICE FOR NUMBER)

- 19-02 PES WITH 30 μ m Au/Ni ON BeCu
- 19-05 PES WITH 75 μ m NiB ON BeCu
- 24-22 TORLON WITH 30 μ m Au/Ni ON BeNi
- 24-25 TORLON WITH 75 μ m NiB ON BeNi
- 00 CUSTOM MOLDED HOLE PATTERN
- 90 ALL HOLES OPEN
- 50 4 LONG SCREWS (#0-80 X 9/16 LONG EXTENDING .20" BELOW STAND-OFFS IN EACH CORNER), MOLDED PATTERN
- 65 MOLDED PATTERN, FLUSH CAM
- 95 ALL HOLES OPEN, FLUSH CAM

Grid ZIP Sockets .100" Center PGA

FLUSH CAM DESIGN



GRID MATRIX	MAXIMUM LEAD COUNT	"A" DIM	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	STANDARD CAM	FLUSH CAM
10 x 10	100	[43.2]	[22.9]	[1.15]	[1.50]	[22.9]	[20.3]	[0.80]	[1.00]
11 x 11	121	[45.7]	[25.4]	[1.25]	[1.60]	[25.4]	[20.3]	[0.80]	[1.00]
13 x 13	169	[50.8]	[30.5]	[1.45]	[1.80]	[25.4]	[20.3]	[0.80]	[1.00]
15 x 15	225	[55.9]	[35.6]	[1.65]	[2.00]	[30.5]	[33.0]	[1.40]	[1.50]
17 x 17	289	[61.0]	[40.6]	[1.85]	[2.20]	[30.5]	[33.0]	[1.40]	[1.50]
19 x 19	361	[66.0]	[45.7]	[2.05]	[2.40]	[35.6]	[43.2]	[1.70]	[1.90]
21 x 21	441	[71.1]	[50.8]	[2.25]	[2.60]	[35.6]	[43.2]	[1.70]	[1.90]
25 x 25	625	[94.0]	[61.0]	[2.40]	[3.50]	[50.8]	[50.8]	[2.00]	[2.84]

* FOR .65 & .95 FLUSH CAM OPTION ONLY.

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SHEET 3 OF 4.



Grid Zip[®] Kit

Assembly instructions for 30 insertion force

PCIA sockets

PC's 43-5.1
523
535
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Jlv

3M

Assembly Instructions

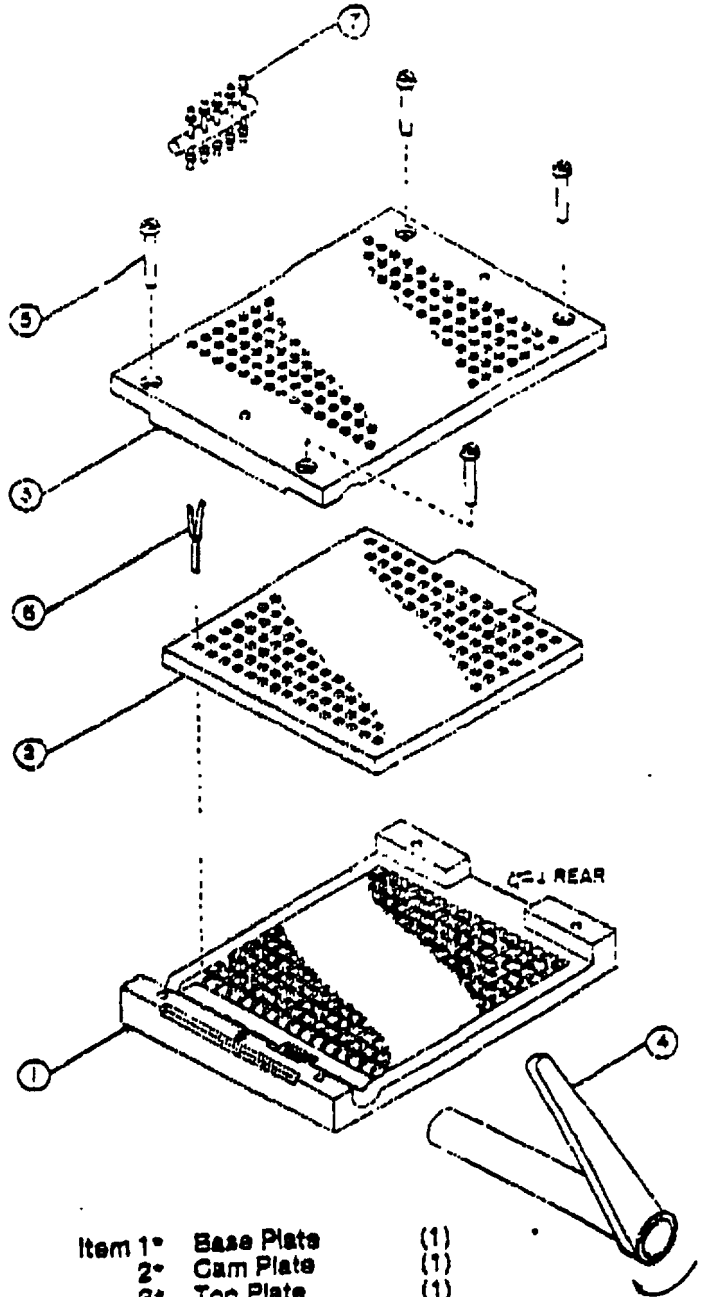
1) Load pattern pins (Item 7) into top plate (Item 3) by press fitting into place. Remove from tie bar by cutting with commercially available 8 1/2" flush diagonal cutter pliers.

2) Place cam plate (Item 2) into recessed area of base plate (Item 1), load contacts (Item 6) in desired locations, being careful that the bent leaf of the contact is loaded in correct position (away from cam rod).

3) Insert cam rod (Item 4) into position in the base plate (Item 1).

4) Now make a final check that all contacts are in desired location and that all are fairly even at the top. Also check cam to make sure it is still in position. Now take top plate (Item 3) and place into position and start to lower over contacts. Start at the rear of the socket and rotate downward toward the front, and then snap locating bosses into place. Several very slight back and forth motions may be necessary in order to get contacts to snap into place. Care should be taken that too much downward pressure isn't applied which could bend or damage the contacts. Insert screws (Item 5) and tighten.

5) Now make an operation check by rotating handle 90°. Make a visual check of movement and closure of all contacts. Rotate handle and check the freedom of movement of cam plate and that the moving leaf of the contact clears the entry hole. A continuity check can be made before final soldering by placing device in socket, then closing and making check. Soldering should be done with socket in the open position.



Part Number	Matrix
2XX-8310-70-3000	10 x 10
2XX-8311-70-3000	11 x 11
2XX-8313-70-3000	13 x 13
2XX-8315-70-3000	16 x 15
2XX-8317-70-3000	17 x 17
2XX-8319-70-3000	18 x 19
2XX-8321-70-3000	21 x 21

Item 1*	Base Plate	(1)
2*	Cam Plate	(1)
3*	Top Plate	(1)
4*	Cam	(1)
5*	Assembly Screws	(4)
6	Contact	(As Req'd)
7	Pattern Pin	(As Req'd)

*Items Included in each kit.

Contact (P/N 300-2740-06-000X) and Pattern Pins (P/N 2XX-4860-14-0100) are ordered separately.

Note: See Grid Zip Socket Bulletin for dimensional information on assembled socket.