

## Ordering Data Vertical Receptacles

Base number specifies configuration, solder tail length, and housing material.

Dash number specifies contact finish (X) and number of positions (YY).

□ □ □ □ □ - X Y Y

Base Number	Solder Tail Length		Housing Material	Color
	mm	in.		
86991	1.27	0.050	Glass-filled PBT	Black
87175	1.27	0.050	Glass-filled PCT	Cream
86456	1.50	0.059	Glass-filled PBT	Black
87174	1.50	0.059	Glass-filled PCT	Cream
86455	2.50	0.098	Glass-filled PBT	Black
87173	2.50	0.098	Glass-filled PCT	Cream

### Dash Number

#### X: Contact Finish

0 = 0.20 µm (8 µin.) gold

1 = 0.76 µm (30 µin.) gold

No. of Positions	Dash Number	Dimension A		Dimension B	
		mm	in.	mm	in.
2 x 2	X04	2.00	0.079	4.80	0.189
2 x 3	X06	4.00	0.157	6.80	0.268
2 x 4	X08	6.00	0.236	8.80	0.346
2 x 5	X10	8.00	0.315	10.80	0.425
2 x 6	X12	10.00	0.394	12.80	0.504
2 x 7	X14	12.00	0.472	14.80	0.583
2 x 8	X16	14.00	0.551	16.80	0.661
2 x 9	X18	16.00	0.630	18.80	0.740
2 x 10	X20	18.00	0.709	20.80	0.819
2 x 11	X22	20.00	0.787	22.80	0.898
2 x 12	X24	22.00	0.866	24.80	0.976
2 x 13	X26	24.00	0.945	26.80	1.055
2 x 14	X28	26.00	1.024	28.80	1.134
2 x 15	X30	28.00	1.102	30.80	1.213
2 x 16	X32	30.00	1.181	32.80	1.291
2 x 17	X34	32.00	1.260	34.80	1.370
2 x 18	X36	34.00	1.339	36.80	1.449
2 x 19	X38	36.00	1.417	38.80	1.528
2 x 20	X40	38.00	1.496	40.80	1.606
2 x 21	X42	40.00	1.575	42.80	1.685
2 x 22	X44	42.00	1.654	44.80	1.764
2 x 23	X46	44.00	1.732	46.80	1.843
2 x 24	X48	46.00	1.811	48.80	1.921
2 x 25	X50	48.00	1.890	50.80	2.000

Selected positions may be molded in/polarized on request.

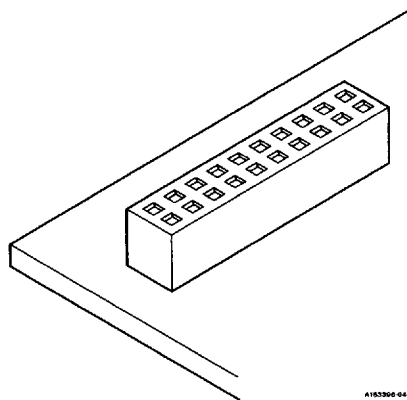
For polarization through post inserted plug, order part number 90543-001.

Ordering data shown is for our standard product offering. For non-standard or custom products, contact your authorized Berg Electronics representative.

# PCB Mounted Receptacles

2.00 x 2.00 mm (0.079 x 0.079 in.) Centerlines

**Minitek™ Vertical Receptacles**  
**Top-Entry, Through-Mount,**  
**4.50 mm (0.177 in.) Body Height**



## Features

- 2 x 2 through 2 x 25 positions
- Closed front and beveled lead-in ramps at receptacle openings protect against contact damage
- Housing stands 4.50 mm (0.177 in.) tall permitting close board-to-board spacing
- Dual-beam contact design for reliable electrical performance
- Duplex-plated with gold finish in contact areas and tin-lead in solder areas
- Standoffs provide clearance for easy cleaning after soldering
- Packaged in tubes for protection
- Available short solder tails eliminate lead-trimming on flex circuit assemblies

## Options

- High temperature plastic compatible with reflow soldering.
- Polarization through molded-in position or post inserted plug.
- Center key for latching with Minitek™ shrouded headers

## Mating Data

Mates with 0.50 mm (0.020 in.) square pin 4.00 mm (0.157 in.) long.


### Berg Electronics Products Page


- Minitek™ unshrouded headers . . . . . 9-8 to 9-21
- Minitek™ shrouded headers . . . . . 9-38 to 9-39
- Minitek™ straddle-mount headers . . . . . 9-22

## Specifications

- JIS-5020
- MIL-STD-202

## Approvals and Certifications

 File no. E66906

 File no. LR46923

## Technical Data

### Materials

- Standard Housing . . . . . Glass-filled PBT (UL 94 V-0)
  - ▶ Color . . . . . Black
  - ▶ Applicable soldering processes. . . . . wave
- High-temperature housing. . . . . Glass-filled PCT (UL 94 V-0)
  - ▶ Color . . . . . Cream
  - ▶ Applicable soldering processes. Wave, IR, vapor-phase
- Receptacle . . . . . Phosphor-bronze

### Mechanical Performance

- Insertion force . . . . . 1.8 N (180 gf) max per contact
- Withdrawal force . . . . . 0.20 N (20 gf) min per contact
- Terminal retention force. . . . . 4.9 N (500 gf) min
- Durability (mating cycles) . . . . . 100

### Electrical Performance

- Insulation resistance. . . . . 1000 MΩ min

- Withstanding voltage . . . . . 650 V rms
- Current rating . . . . . 2 amp continuous
- Contact resistance . . . . . 25 mΩ max
- Voltage rating . . . . . 200 V ac/dc

### Plating

- Underplate. . . . . 1.27 μm (50 μin.) min nickel
- Finish
  - ▶ Contact area . . . . . 0.20 μm (8 μin.) min gold or 0.76 μm (30 μin.) min gold
  - ▶ Solder area . . . . . 1.5 μm (60 μin.) min tin-lead

### Operating Environment

- Temperature range. . . . . PBT: -40°C to +105°C  
 PCT: -55°C to +105°C

### Packaging

- Tubes

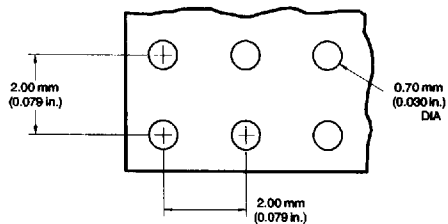
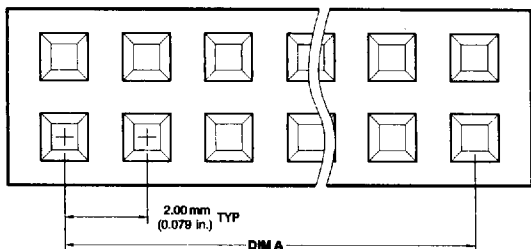
## Customer Support Materials

Description	Order No.	Description	Order No.
Customer Product Drawings. . . . .	By Part No.	Product Bulletin. . . . .	950522-001
Product Samples . . . . .	By Part No.	Product Specifications . . . . .	DPS-12-011

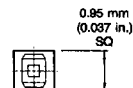
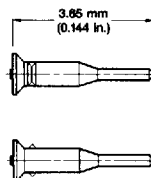
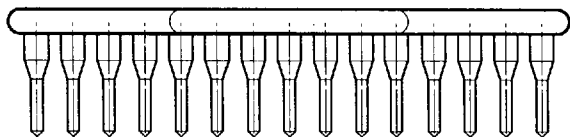
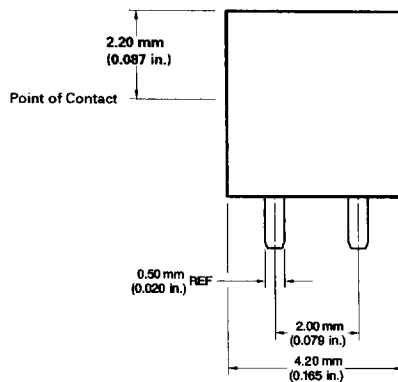
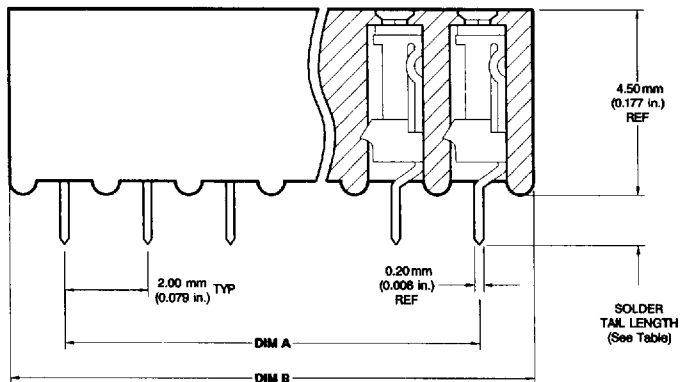
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## Description Vertical Receptacles

Through-Mount, Top-Entry, Unkeyed 4.50 mm (0.177 in.) Body Height



RECOMMENDED HOLE PATTERN



POST INSERTED POLARIZATION PLUG 90543-001

A183396-0466