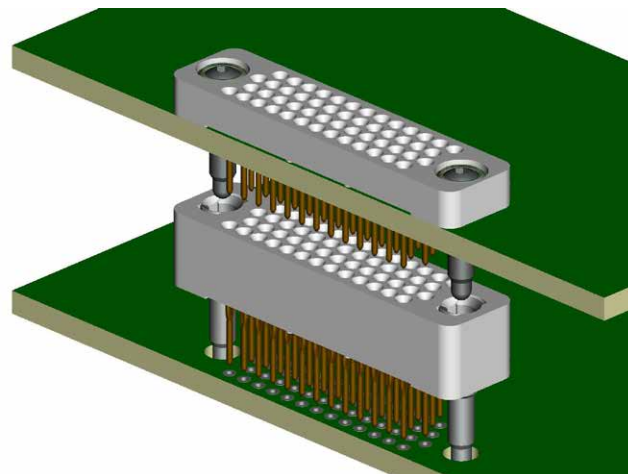




The AirBorn stackable compliant connector family is one of AirBorn's solutions for high-density, board-to-board stacking applications. This connector family is available in 0.075" contact spacing and 100  $\Omega$  and 85  $\Omega$  differential serial buses.

- Wide variety of standard pin/tail lengths accommodate any board-to-board spacing
- 0.075" contact spacing
- Reliable "eye of the needle"-compliant section design eliminates soldering
- BeCu contacts (special high-conductivity, high-temperature alloy)
- Very robust socket contact (low-stress design)
- Individually repairable contacts





## RC422 - Full Profile Board-to-Board Stackable Connector

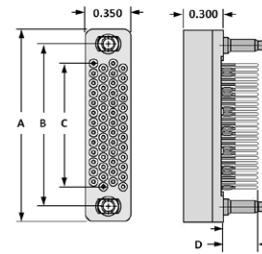
Contact spacing: 0.075" (1.91 mm)

A full bodied high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used in board-to-board stacking applications.

### DIMENSIONS

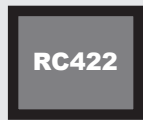
| SIZE | A     | B     | C     |
|------|-------|-------|-------|
| 28   | 1.014 | 0.784 | 0.450 |
| 52   | 1.464 | 1.234 | 0.900 |
| 76   | 1.914 | 1.684 | 1.350 |
| 100  | 2.364 | 2.134 | 1.800 |
| 128  | 2.889 | 2.659 | 2.325 |
| 152  | 3.339 | 3.109 | 2.775 |
| 200  | 4.239 | 4.009 | 3.675 |
| 252  | 5.214 | 4.984 | 4.650 |
| 300  | 6.114 | 5.884 | 5.550 |

Tolerances:  $\pm 0.010"$



| CONTACT SELECTION | CONTACT D | HARDWARE E |
|-------------------|-----------|------------|
| 10                | 0.095     | 0.195      |
| 20                | 0.270     | 0.370      |
| 21                | 0.300     | 0.400      |
| 22                | 0.400     | 0.500      |
| 23                | 0.500     | 0.600      |
| 24                | 0.700     | 0.800      |
| 25                | 0.800     | 0.900      |
| 26                | 0.900     | 1.000      |
| 27                | 0.600     | 0.700      |
| 28                | 1.000     | 1.100      |

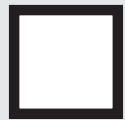
### Sample Part Number Format: RC422-052-211-4000



**SERIES**  
Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing



**CONFIGURATION**  
028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns  
200 – 4 Rows/50 Columns  
252 – 4 Rows/63 Columns  
300 – 4 Rows/75 Columns



**PLATING**  
1 – 50  $\mu$ " Au  
3 – 30  $\mu$ " Au  
7 – 50  $\mu$ " Au / 20  $\mu$ " Au  
9 – 30  $\mu$ " Au / 20  $\mu$ " Au



**TYPE**  
00 – None  
FT – Female thread  
MT – Male thread  
(#39 hardware, only)



**VARIATION**  
Blank – None  
XXX – Consult factory



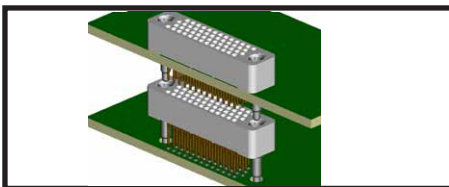
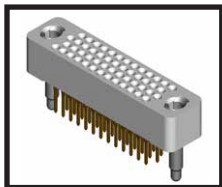
**CONTACT**  
10 – 0.095" Long  
20 – 0.270" Long  
21 – 0.300" Long  
22 – 0.400" Long  
23 – 0.500" Long  
24 – 0.700" Long  
25 – 0.800" Long  
26 – 0.900" Long  
27 – 0.600" Long  
28 – 1.000" Long  
30 – 0.270" Long  
31 – 0.300" Long  
32 – 0.400" Long  
33 – 0.500" Long  
34 – 0.700" Long  
35 – 0.800" Long  
36 – 0.900" Long  
37 – 0.600" Long  
38 – 1.000" Long

**HARDWARE**  
30 – 0.195" Long (use with #10 contact)  
39 – 0.370" Long (use with #20 contact)  
40 – 0.400" Long (use with #21 contact)  
41 – 0.500" Long (use with #22 contact)  
42 – 0.600" Long (use with #23 contact)  
43 – 0.800" Long (use with #24 contact)  
44 – 0.900" Long (use with #25 contact)  
45 – 1.000" Long (use with #26 contact)  
46 – 0.700" Long (use with #27 contact)  
47 – 1.100" Long (use with #28 contact)

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

The connector body height is 0.300" and, when used with the -20 or -30 (0.270") contact, the mounting is flush (board-bottom-mounted to connector top). This board-bottom to connector-top spacing can be modified based on the contact selected by approximately the difference in pin length (see Table 2 in top window).



### SI DATA – Differential 100 Ohm

|   |                      |                  |
|---|----------------------|------------------|
| 1 | Diff. Insertion Loss | 5.0 GHz @ -3 dB  |
| 2 | Diff. Return Loss    | 2.0 GHz @ -8 dB  |
| 3 | NEXT                 | 4.0 GHz @ -25 dB |
| 4 | FEXT                 | 4.0 GHz @ -35 dB |

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B768 (BeCu C17410 brush alloy 174)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per IAW QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A582, passivated per ASTM 967  
Guide Pin/Socket: ..... BeCu per ASTM B196/197, nickel-plated per QQ-N-290

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length-dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin  
Compliant Insertion Force: ..... 22.5 lb (10.21 Kg) max. per contact  
Compliant Removal Force: ..... 4.5 lb (2.04 Kg) min. per contact



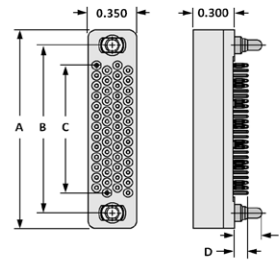
## RC422 - Bottom-of-Stack Board Mount Connector

Contact spacing: 0.075" (1.91 mm)

A full bodied high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used at the bottom of the stack in board-to-board stacking applications.

### DIMENSIONS

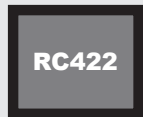
| SIZE | A     | B     | C     |
|------|-------|-------|-------|
| 28   | 1.014 | 0.784 | 0.450 |
| 52   | 1.464 | 1.234 | 0.900 |
| 76   | 1.914 | 1.684 | 1.350 |
| 100  | 2.364 | 2.134 | 1.800 |
| 128  | 2.889 | 2.659 | 2.325 |
| 152  | 3.339 | 3.109 | 2.775 |
| 200  | 4.239 | 4.009 | 3.675 |
| 252  | 5.214 | 4.984 | 4.650 |
| 300  | 6.114 | 5.884 | 5.550 |



| CONTACT SELECTION | CONTACT D | HARDWARE E |
|-------------------|-----------|------------|
| 10                | 0.095     | 0.195      |

Tolerances:  $\pm 0.010"$

### Sample Part Number Format: RC422-052-101-3000



**SERIES**  
Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing



**CONFIGURATION**  
028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns  
200 – 4 Rows/50 Columns  
252 – 4 Rows/63 Columns  
300 – 4 Rows/75 Columns



**PLATING**  
1 – 50  $\mu$ " Au  
3 – 30  $\mu$ " Au  
7 – 50  $\mu$ " Au / 20  $\mu$ " Au  
9 – 30  $\mu$ " Au / 20  $\mu$ " Au



**CONTACT**  
10 – 0.095" Long



**HARDWARE**  
30 – 0.195" Long  
(use with #10 contact)



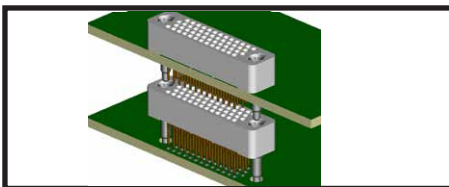
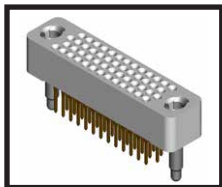
**VARIATION**  
Blank – None  
XXX – Consult factory



PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

The connector body height is 0.300" and, when used with the -20 or -30 (0.270") contact, the mounting is flush (board-bottom-mounted to connector top). This board-bottom to connector-top spacing can be modified based on the contact selected by approximately the difference in pin length (see Table 2 in top window).



### SI DATA – Differential 100 Ohm

|   |                      |                  |
|---|----------------------|------------------|
| 1 | Diff. Insertion Loss | 5.0 GHz @ -3 dB  |
| 2 | Diff. Return Loss    | 2.0 GHz @ -8 dB  |
| 3 | NEXT                 | 4.0 GHz @ -25 dB |
| 4 | FEXT                 | 4.0 GHz @ -35 dB |

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B768 (BeCu C17410 brush alloy 174)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per IAW QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A582, passivated per ASTM 967  
Guide Pin/Socket: ..... BeCu per ASTM B196/197, nickel-plated per QQ-N-290

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length-dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin  
Compliant Insertion Force: ..... 22.5 lb (10.21 Kg) max. per contact  
Compliant Removal Force: ..... 4.5 lb (2.04 Kg) min. per contact



## RC442 - Low Profile Board-to-Board Stackable Connector

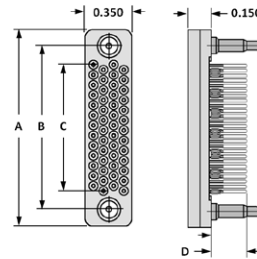
Contact spacing: 0.075" (1.91 mm)

A low profile bodied, high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used in board-to-board stacking applications.

### DIMENSIONS

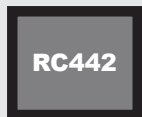
| SIZE | A     | B     | C     |
|------|-------|-------|-------|
| 28   | 1.014 | 0.784 | 0.450 |
| 52   | 1.464 | 1.234 | 0.900 |
| 76   | 1.914 | 1.684 | 1.350 |
| 100  | 2.364 | 2.134 | 1.800 |
| 128  | 2.889 | 2.659 | 2.325 |
| 152  | 3.339 | 3.109 | 2.775 |
| 200  | 4.239 | 4.009 | 3.675 |
| 252  | 5.214 | 4.984 | 4.650 |
| 300  | 6.114 | 5.884 | 5.550 |

Tolerances: ± 0.010"



| CONTACT SELECTION | CONTACT D | HARDWARE E |
|-------------------|-----------|------------|
| 30                | 0.270     | 0.370      |
| 31                | 0.300     | 0.400      |
| 32                | 0.400     | 0.500      |
| 33                | 0.500     | 0.600      |
| 34                | 0.700     | 0.800      |
| 35                | 0.800     | 0.900      |
| 36                | 0.900     | 1.000      |
| 37                | 0.600     | 0.700      |
| 38                | 1.000     | 1.100      |

### Sample Part Number Format: RC442-052-311-4000



**SERIES**  
Stackable  
Compliant  
Low-Profile  
4 Rows  
0.075" Spacing



**CONFIGURATION**  
028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns  
200 – 4 Rows/50 Columns  
252 – 4 Rows/63 Columns  
300 – 4 Rows/75 Columns



**PLATING**  
1 – 50 μ" Au  
3 – 30 μ" Au  
7 – 50 μ" Au / 20 μ" Au  
9 – 30 μ" Au / 20 μ" Au



**TYPE**  
00 – None



**VARIATION**  
Blank – None  
XXX – Consult factory

**CONTACT**  
30 – 0.270" Long  
31 – 0.300" Long  
32 – 0.400" Long  
33 – 0.500" Long  
34 – 0.700" Long  
35 – 0.800" Long  
36 – 0.900" Long  
37 – 0.600" Long  
38 – 1.000" Long

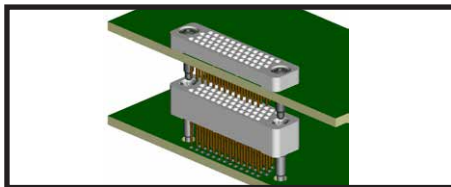
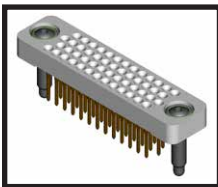
**HARDWARE**  
39 – 0.370" Long (use with #30 contact)  
40 – 0.400" Long (use with #31 contact)  
41 – 0.500" Long (use with #32 contact)  
42 – 0.600" Long (use with #33 contact)  
43 – 0.800" Long (use with #34 contact)  
44 – 0.900" Long (use with #35 contact)  
45 – 1.000" Long (use with #36 contact)  
46 – 0.700" Long (use with #37 contact)  
47 – 1.100" Long (use with #38 contact)



PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

The connector body height is 0.150" but the functional spacing (the bottom surface of the board, on which the connector is mounted, to the top of the connector below it) can be modified based on the contact/pin length selected (see Table 2 in top window).



### SI DATA – Differential 100 Ohm

|   |                      |                  |
|---|----------------------|------------------|
| 1 | Diff. Insertion Loss | 5.0 GHz @ -3 dB  |
| 2 | Diff. Return Loss    | 2.0 GHz @ -8 dB  |
| 3 | NEXT                 | 4.0 GHz @ -25 dB |
| 4 | FEXT                 | 4.0 GHz @ -35 dB |

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B768 (BeCu C17410 brush alloy 174)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per IAW QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A582, passivated per ASTM 967  
Guide Pin/Socket: ..... BeCu per ASTM B196/197, nickel-plated per QQ-N-290

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin  
Compliant Insertion Force: ..... 22.5 lb (10.21 Kg) max. per contact  
Compliant Removal Force: ..... 4.5 lb (2.04 Kg) min. per contact



## RC4B2 - Bottom-of-Stack Cable Mating Connector (Female)

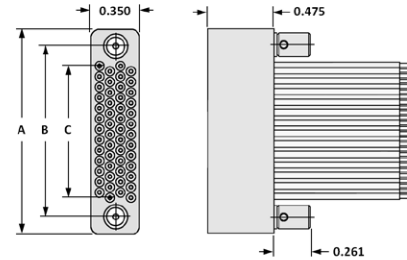
Contact spacing: 0.075" (1.91 mm)

A full profile bodied female cable connector for use at the bottom of an RC board stack application.

### DIMENSIONS

| TABLE 1 |       |       |       |
|---------|-------|-------|-------|
| SIZE    | A     | B     | C     |
| 28      | 1.014 | 0.784 | 0.450 |
| 52      | 1.464 | 1.234 | 0.900 |
| 76      | 1.914 | 1.684 | 1.350 |
| 100     | 2.364 | 2.134 | 1.800 |
| 128     | 2.889 | 2.659 | 2.325 |
| 152     | 3.339 | 3.109 | 2.775 |

Tolerances:  $\pm 0.010"$



### Sample Part Number Format: RC4B2-052-281-62ED



**SERIES**  
Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing  
Bottom-of-Stack  
Cable Female



**CONFIGURATION**  
028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns



**CONTACT**  
28 – Socket, crimp, 26-24 AWG  
29 – Socket, crimp, 30-28 AWG



**PLATING**  
1 – 50  $\mu$ " Au  
3 – 30  $\mu$ " Au



**TYPE**  
00 – None  
XX – See Wire Codes

**HARDWARE**  
00 – None  
58 – Guide socket, non-polarized  
62 – Jacksocket, hex, turning



**VARIATION**  
Blank – None  
XXX – Consult factory

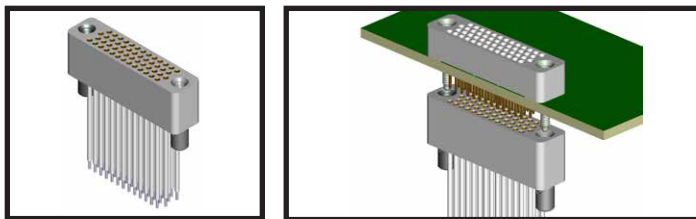
#### WIRE CODES

| TYPE and COLOR |        |               | LENGTH |                  |
|----------------|--------|---------------|--------|------------------|
| Code           | Size   | Color         | Code   | Length (+1"/-0") |
| Mil-W-16878/4  |        |               |        |                  |
| C              | 24 awg | Ten repeating | A      | 6"               |
| D              | 24 awg | White         | B      | 12"              |
| E              | 26 awg | Ten repeating | C      | 18"              |
| F              | 26 awg | White         | D      | 24"              |
| G              | 28 awg | Ten repeating | E      | 30"              |
| H              | 28 awg | White         | F      | 36"              |
| J              | 30 awg | Ten repeating | G      | 42"              |
| K              | 30 awg | White         | H      | 48"              |
| Mil-W-22759/33 |        |               |        |                  |
| N              | 24 awg | Ten repeating | J      | 54"              |
| P              | 24 awg | White         | K      | 60"              |
| R              | 26 awg | Ten repeating | L      | 66"              |
| S              | 26 awg | White         | M      | 72"              |
| T              | 28 awg | Ten repeating | N      | 84"              |
| U              | 28 awg | White         | P      | 96"              |
| V              | 30 awg | Ten repeating | R      | 108"             |
| W              | 30 awg | White         | S      | 120"             |

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

Connector body height is 0.475" and is designed to mount flush to the board bottom of the mating connector.



### NOTES

- The RC4B2 connector is designed to mate with an RC422 connector using contact option -21 (0.270" long) and -39MT hardware. This contact length and hardware combination assures proper connector mating when using boards having a thickness of 0.058"-0.125".
- When guide hardware is required on the RC4B2 connector, use hardware option -3900 on the mating connector.
- When jacksocket hardware is required on the RC4B2 connector, use hardware option -39MT on the mating connector.

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin



## RC4C2 - Top-of-Stack Cable Mating Connector (Male)

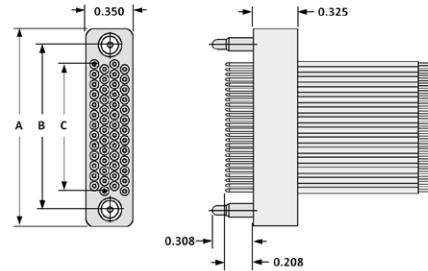
Contact spacing: 0.075" (1.91 mm)

A full profile bodied male pre-wired cable connector for use at the top of an RC board stack application.

### DIMENSIONS

| TABLE 1 |       |       |       |
|---------|-------|-------|-------|
| SIZE    | A     | B     | C     |
| 28      | 1.014 | 0.784 | 0.450 |
| 52      | 1.464 | 1.234 | 0.900 |
| 76      | 1.914 | 1.684 | 1.350 |
| 100     | 2.364 | 2.134 | 1.800 |
| 128     | 2.889 | 2.659 | 2.325 |
| 152     | 3.339 | 3.109 | 2.775 |

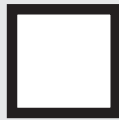
Tolerances:  $\pm 0.010"$



### Sample Part Number Format: RC4C2-052-181-57ED



**SERIES**  
Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing  
Top-of-Stack  
Cable Mate



**CONFIGURATION**  
028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns



**PLATING**  
1 – 50  $\mu$ " Au  
3 – 30  $\mu$ " Au

**CONTACT**  
18 – Pin, crimp, 26-24 AWG  
19 – Pin, crimp, 30-28 AWG



**HARDWARE**  
00 – None  
57 – Guide pin, non-polarized  
61 – Jackscrew, hex, turning\*



**TYPE**  
XX – See Wire Codes



**VARIATION**  
Blank – None  
XXX – Consult factory

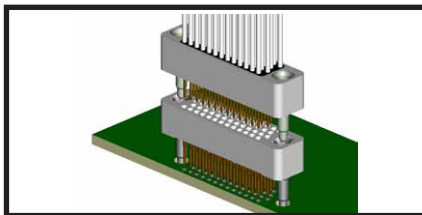
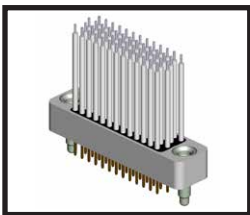
#### WIRE CODES

| TYPE and COLOR |        |               | LENGTH |                 |
|----------------|--------|---------------|--------|-----------------|
| Code           | Size   | Color         | Code   | Length (+1"-0") |
| Mil-W-16878/4  |        |               |        |                 |
| C              | 24 awg | Ten repeating | A      | 6"              |
| D              | 24 awg | White         | B      | 12"             |
| E              | 26 awg | Ten repeating | C      | 18"             |
| F              | 26 awg | White         | D      | 24"             |
| G              | 28 awg | Ten repeating | E      | 30"             |
| H              | 28 awg | White         | F      | 36"             |
| J              | 30 awg | Ten repeating | G      | 42"             |
| K              | 30 awg | White         | H      | 48"             |
| Mil-W-22759/33 |        |               |        |                 |
| N              | 24 awg | Ten repeating | J      | 54"             |
| P              | 24 awg | White         | K      | 60"             |
| R              | 26 awg | Ten repeating | L      | 66"             |
| S              | 26 awg | White         | M      | 72"             |
| T              | 28 awg | Ten repeating | N      | 84"             |
| U              | 28 awg | White         | P      | 96"             |
| V              | 30 awg | Ten repeating | R      | 108"            |
| W              | 30 awg | White         | S      | 120"            |

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

Connector body height is 0.325" and is designed to mount flush to the mating connector.



### NOTES

\* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin





## RC4C2 - Top-of-Stack Flex Circuit Mating Connector (Male)

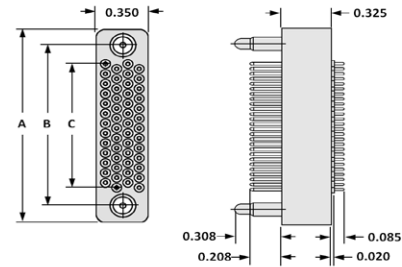
Contact spacing: 0.075" (1.91 mm)

A full profile bodied flex-circuit-ready male connector for use at the top of an RC board stack application.

### DIMENSIONS

| TABLE 1 |       |       |       |
|---------|-------|-------|-------|
| SIZE    | A     | B     | C     |
| 28      | 1.014 | 0.784 | 0.450 |
| 52      | 1.464 | 1.234 | 0.900 |
| 76      | 1.914 | 1.684 | 1.350 |
| 100     | 2.364 | 2.134 | 1.800 |
| 128     | 2.889 | 2.659 | 2.325 |
| 152     | 3.339 | 3.109 | 2.775 |

Tolerances:  $\pm 0.010$ "



### Sample Part Number Format: RC4C2-052-151-5700



#### SERIES

Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing  
Top-of-Stack  
Cable Mate



#### CONFIGURATION

028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns



#### CONTACT

15 – Pin, flex circuit



#### PLATING

1 – 50  $\mu$ " Au  
3 – 30  $\mu$ " Au



#### TYPE

00 – None



#### VARIATION

Blank – None  
XXX – Consult factory

#### HARDWARE

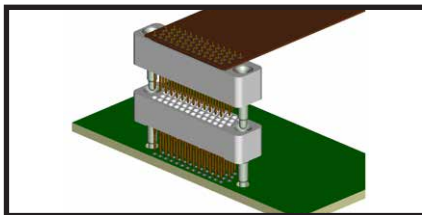
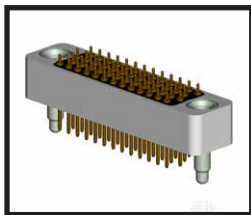
00 – None  
57 – Guide pin, non-polarized  
61 – Jackscrew, hex, turning\*



PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

Connector body height is 0.325" and is designed to mount flush to the mating connector.



### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

NOTE: AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... 3 to 5 milliohms (contact length dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin

### NOTES

\* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.



## RC4C2 - Top-of-Stack Solder Cup Cable Mating Connector (Male)

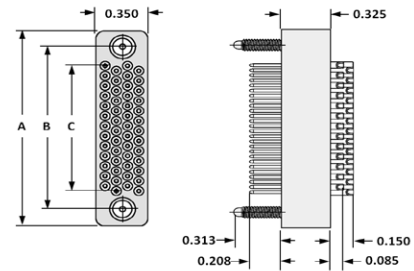
Contact spacing: 0.075" (1.91 mm)

A full profile bodied male wire-ready connector for use at the top of an RC board stack application.

### DIMENSIONS

| TABLE 1 |       |       |       |
|---------|-------|-------|-------|
| SIZE    | A     | B     | C     |
| 28      | 1.014 | 0.784 | 0.450 |
| 52      | 1.464 | 1.234 | 0.900 |
| 76      | 1.914 | 1.684 | 1.350 |
| 100     | 2.364 | 2.134 | 1.800 |
| 128     | 2.889 | 2.659 | 2.325 |
| 152     | 3.339 | 3.109 | 2.775 |

Tolerances: ± 0.010"

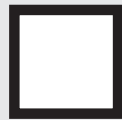


### Sample Part Number Format: RC4C2-052-111-6100



#### SERIES

Stackable  
Compliant  
Full-Profile  
4 Rows  
0.075" Spacing  
Top-of-Stack  
Cable Mate



#### CONFIGURATION

028 – 4 Rows/7 Columns  
052 – 4 Rows/13 Columns  
076 – 4 Rows/19 Columns  
100 – 4 Rows/25 Columns  
128 – 4 Rows/32 Columns  
152 – 4 Rows/38 Columns



#### CONTACT

11 – Pin, solder cup



#### PLATING

1 – 50 µ" Au  
3 – 30 µ" Au



#### HARDWARE

00 – None  
57 – Guide pin, non-polarized  
61 – Jackscrew, hex, turning\*



#### TYPE

00 – None



#### VARIATION

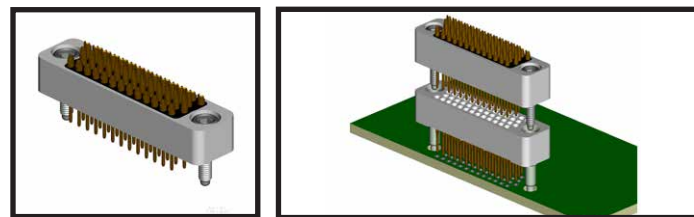
Blank – None  
XXX – Consult factory



PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

### MATED HEIGHT

Connector body height is 0.325" and is designed to mount flush to the mating connector.



### NOTES

\* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.

### MATERIALS and FINISHES

Contact: ..... BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)  
Contact Finish: ..... Gold per MIL-G-45204 over nickel per QQ-N-290  
Molded Insulator: ..... Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519  
Hardware: ..... Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

NOTE: AirBorn can manufacture special configurations to your exact specifications.

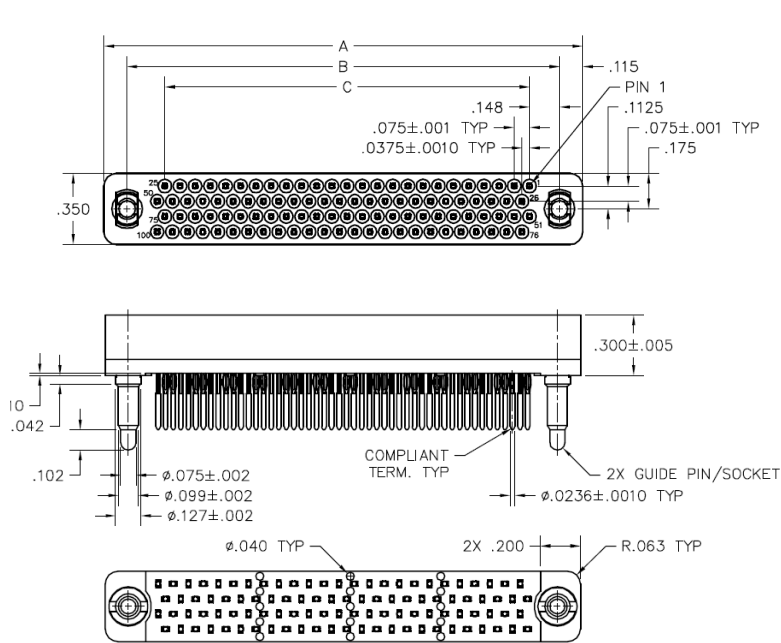
### PERFORMANCE

Contact Rating: ..... 3 amperes  
Operating Temperature: ..... -65° C to +125° C  
Insulation Resistance: ..... 5,000 megaohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Resistance: ..... .3 to 5 milliohms (contact length dependent)  
Contact Engagement Force: ..... 4.0 oz (113 g) max. w/0.0246" dia. test pin  
Contact Separation Force: ..... 0.5 oz (14 g) min. w/0.0226" dia. test pin

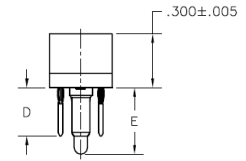




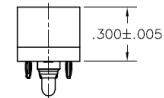
## RC 4-ROW DIMENSIONS



BODY STYLE  
422

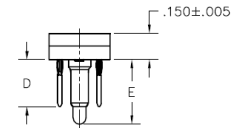


BODY STYLE  
422



CONTACT/HARDWARE  
OPTION 101  
(TERMINATES CIRCUIT)

BODY STYLE  
442



OPTIONAL INSULATOR FOR TOP CONNECTOR  
WITH TERMINATION OPTIONS: 301, 311, 321,  
331, 341, 351, 361, 371 AND 381  
(w/CIRCUIT TEST POINT).

| DIMENSIONS |       |       |       |
|------------|-------|-------|-------|
| SIZE       | A     | B     | C     |
| 28         | 1.014 | 0.784 | 0.450 |
| 52         | 1.464 | 1.234 | 0.900 |
| 76         | 1.914 | 1.684 | 1.350 |
| 100        | 2.364 | 2.134 | 1.800 |
| 128        | 2.889 | 2.659 | 2.325 |
| 152        | 3.339 | 3.109 | 2.775 |
| 200        | 4.239 | 4.009 | 3.675 |
| 252        | 5.214 | 4.984 | 4.650 |
| 300        | 6.114 | 5.884 | 5.500 |

| TABLE 1                |              |               |
|------------------------|--------------|---------------|
| CONTACT<br>TERMINATION | CONTACT<br>D | HARDWARE<br>E |
| 201, 301               | 0.270        | 0.370         |
| 211, 311               | 0.300        | 0.400         |
| 221, 321               | 0.400        | 0.500         |
| 231, 331               | 0.500        | 0.600         |
| 241, 341               | 0.700        | 0.800         |
| 251, 351               | 0.800        | 0.900         |
| 261, 361               | 0.900        | 1.000         |
| 271, 371               | 0.600        | 0.700         |
| 281, 381               | 1.000        | 1.100         |
| 101                    | 0.095        | 0.195         |

## PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper  
Board thickness: 0.058" minimum  
Drilled hole: Ø 0.033"

Copper plating thickness: 0.0020"  
Tin-lead plating thickness: 0.0005"  
Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)

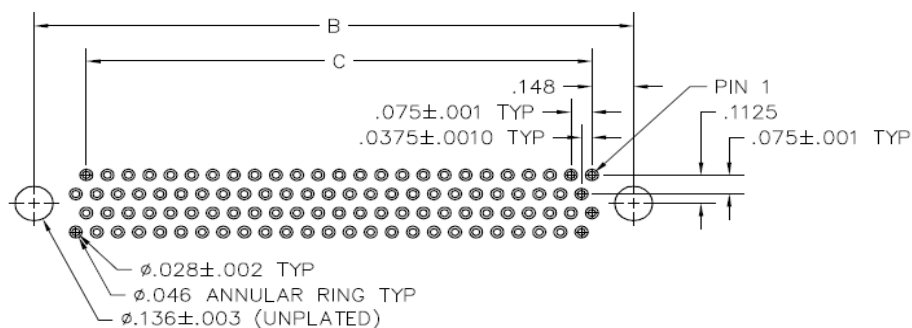


## RC 4-ROW DRAWINGS

### Board Footprint and Dimensions

| SIZE | CONTACT ID | SIZE | CONTACT ID |
|------|------------|------|------------|
| 28   |            | 152  |            |
| 52   |            | 200  |            |
| 76   |            | 252  |            |
| 100  |            | 300  |            |
| 128  |            |      |            |

| DIMENSIONS |       |       |       |
|------------|-------|-------|-------|
| SIZE       | A     | B     | C     |
| 28         | 1.014 | 0.784 | 0.450 |
| 52         | 1.464 | 1.234 | 0.900 |
| 76         | 1.914 | 1.684 | 1.350 |
| 100        | 2.364 | 2.134 | 1.800 |
| 128        | 2.889 | 2.659 | 2.325 |
| 152        | 3.339 | 3.109 | 2.775 |
| 200        | 4.239 | 4.009 | 3.675 |
| 252        | 5.214 | 4.984 | 4.650 |
| 300        | 6.114 | 5.884 | 5.500 |



### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

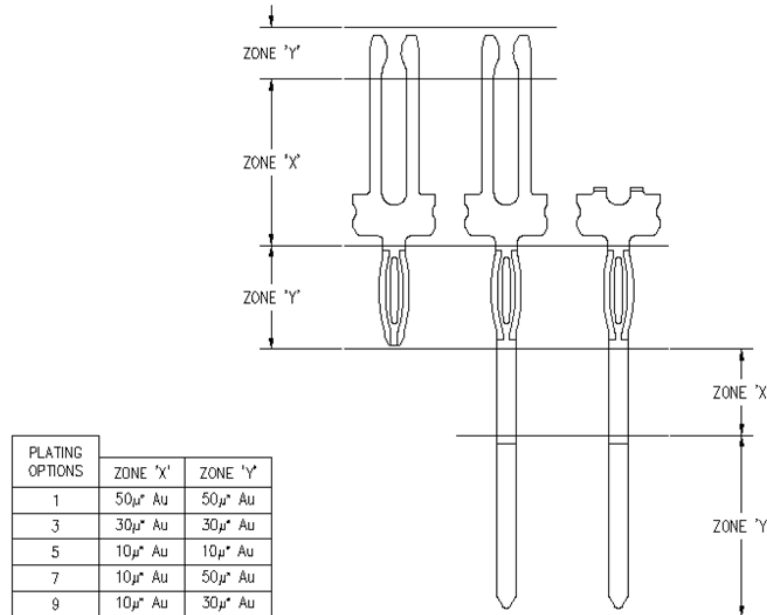
Board material: FR-4 (or equivalent) with 1.0 oz. copper  
Board thickness: 0.058" minimum  
Drilled hole: Ø 0.033"

Copper plating thickness: 0.0020"  
Tin-lead plating thickness: 0.0005"  
Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)



## RC 4-ROW DIMENSIONS

### Plating Options



### Determining the Required Termination Lead Length

To calculate the required termination lead length, use the example below. Measurements listed are in inches.

Dimension A = 0.720

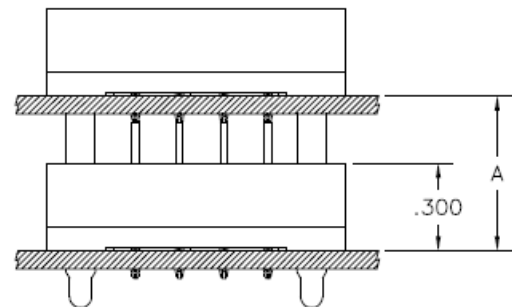
$0.720 - 0.300$  (insulator height) = 0.420

$0.420 + 0.114$  (minimum pin engagement) = 0.534

$0.420 + 0.214$  (maximum pin engagement) = 0.634

In this example, the termination option to choose is 0.600 lead length.

The contact termination option will be a length that falls between the calculated numbers resulting from using the minimum and maximum pin engagement.



### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole: Ø 0.033"

Copper plating thickness: 0.0020"

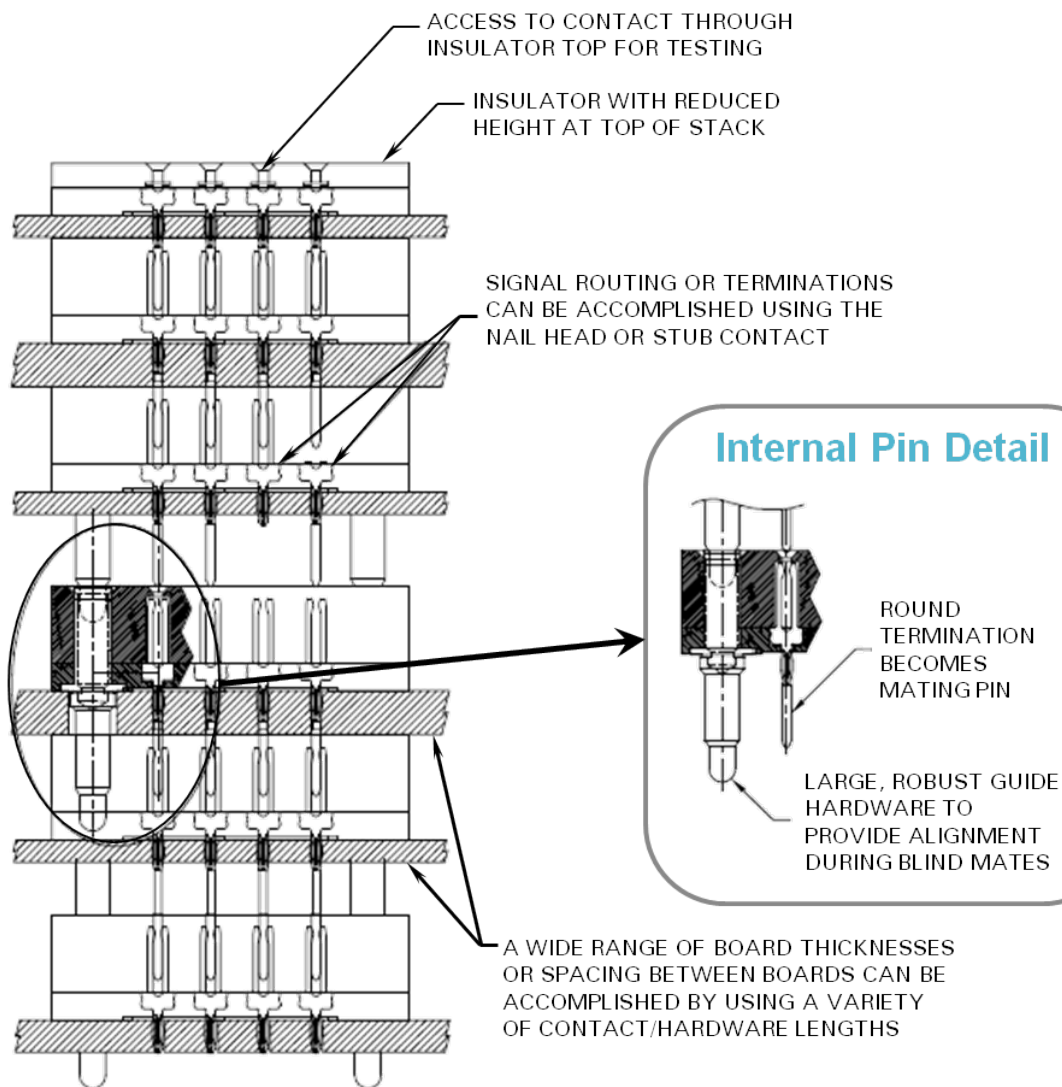
Tin-lead plating thickness: 0.0005"

Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)



## RC 4-ROW DRAWINGS

### Stacking Detail



### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole:  $\varnothing$  0.033"

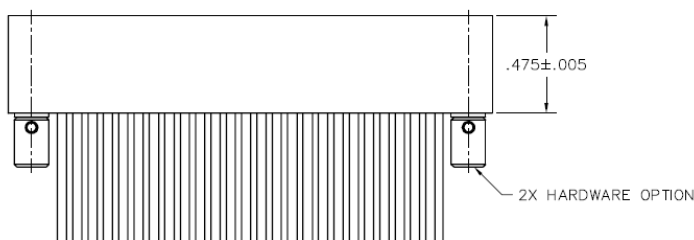
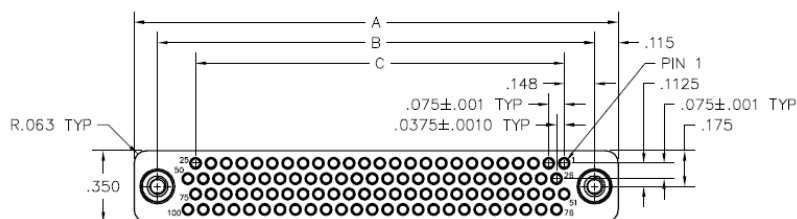
Copper plating thickness: 0.0020"

Tin-lead plating thickness: 0.0005"

Finished hold diameter:  $\varnothing$  0.028" ( $\varnothing$  0.028"  $\pm$  0.002" required)



## RC 4-ROW, BOTTOM-COMPLIANT DIMENSIONS



| DIMENSIONS |       |       |       |
|------------|-------|-------|-------|
| SIZE       | A     | B     | C     |
| 28         | 1.014 | 0.784 | 0.450 |
| 52         | 1.464 | 1.234 | 0.900 |
| 76         | 1.914 | 1.684 | 1.350 |
| 100        | 2.364 | 2.134 | 1.800 |
| 128        | 2.889 | 2.659 | 2.325 |
| 152        | 3.339 | 3.109 | 2.775 |
| 200        | 4.239 | 4.009 | 3.675 |

GUIDE SOCKET



HARDWARE STYLE 58

#2-56 JACKSOCKET



HARDWARE STYLE 62

### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole: Ø 0.033"

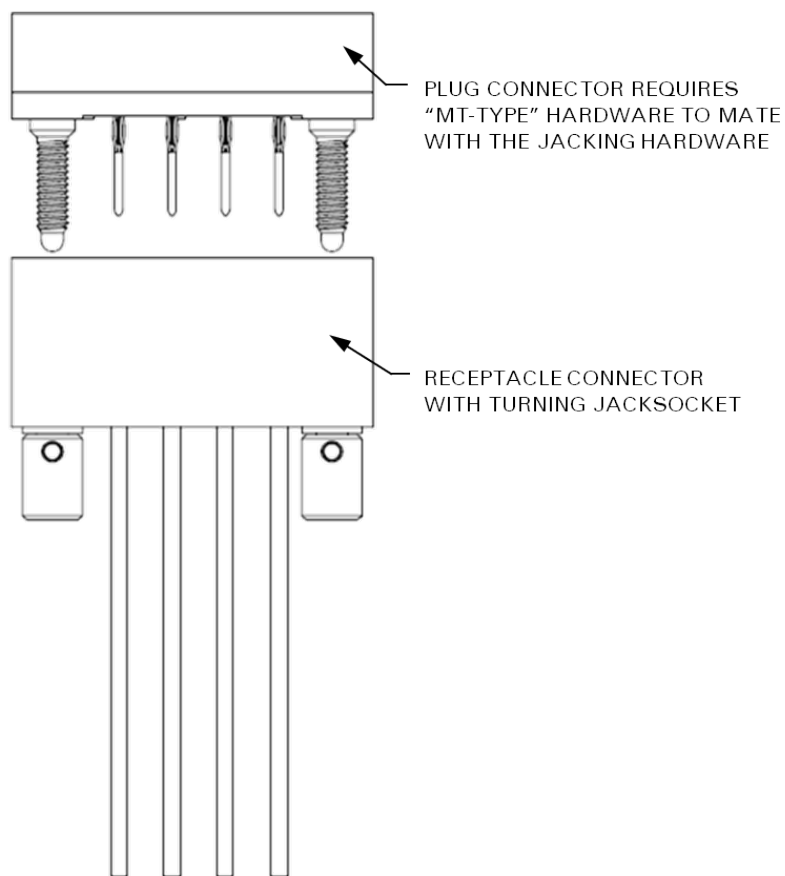
Copper plating thickness: 0.0020"

Tin-lead plating thickness: 0.0005"

Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)



## RC 4-ROW, BOTTOM-COMPLIANT DRAWINGS



### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole:  $\varnothing$  0.033"

Copper plating thickness: 0.0020"

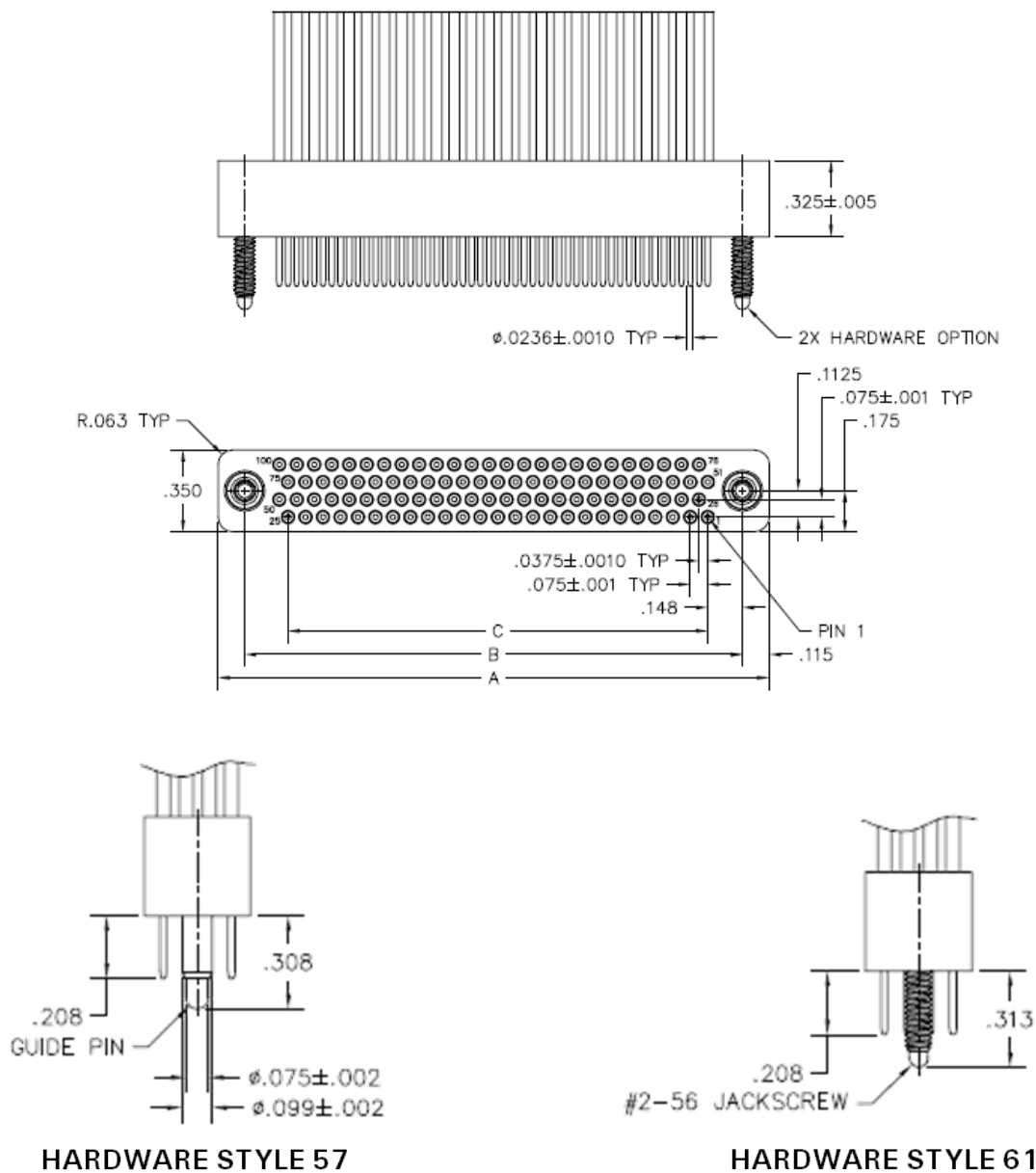
Tin-lead plating thickness: 0.0005"

Finished hold diameter:  $\varnothing$  0.028" ( $\varnothing$  0.028"  $\pm$  0.002" required)





## RC 4-ROW, TOP-COMPLIANT DIMENSIONS



## PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole: Ø 0.033"

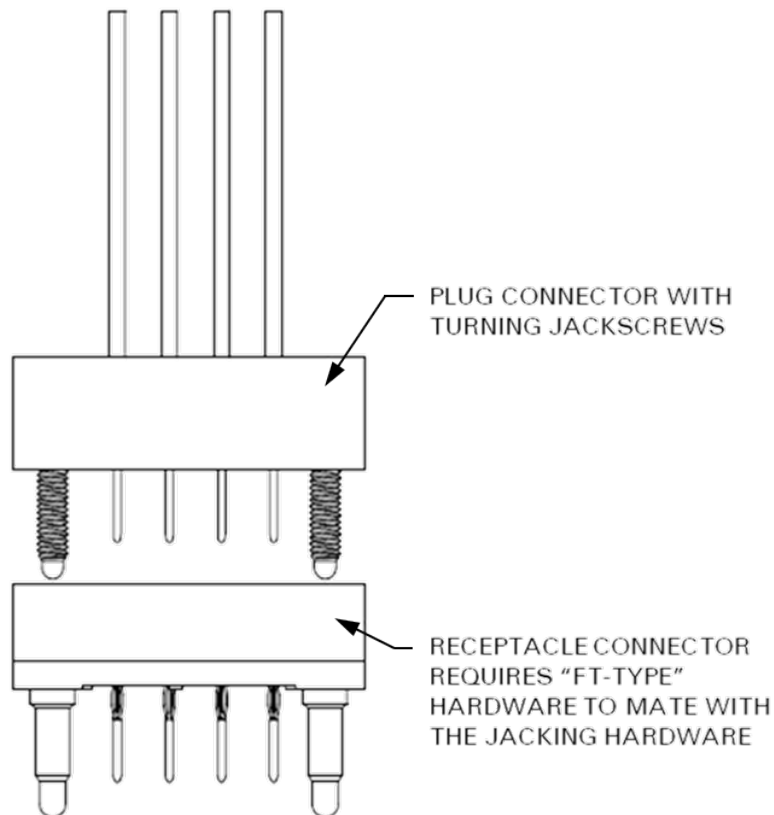
Copper plating thickness: 0.0020"

Tin-lead plating thickness: 0.0005"

Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)



## RC 4-ROW, TOP-COMPLIANT DRAWINGS



### PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole:  $\varnothing$  0.033"

Copper plating thickness: 0.0020"

Tin-lead plating thickness: 0.0005"

Finished hold diameter:  $\varnothing$  0.028" ( $\varnothing$  0.028"  $\pm$  0.002" required)

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