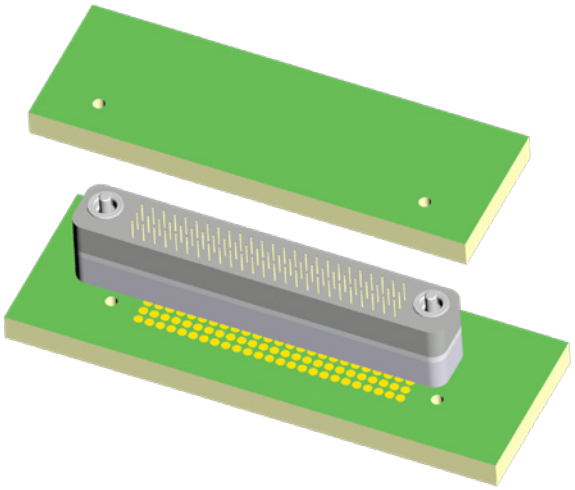
RZ™

The RZ family of high-density, board-to-board or flex circuit stacking applications is unique, offering users a reliable one-piece contact system. Its solder-less interconnect is compressed or "sandwiched" under pressure between parallel printed wiring boards or between a printed wiring board and other electronic components such as an IC or multichip module.

- **0.050" staggered grid array**
- **Up to 400 contacts per square inch**
- **BeCu contacts for reliable mating**
- **Standard heights from 0.100" to 0.350"**
- **Custom configurations available to meet your specific design needs.**



RZ™

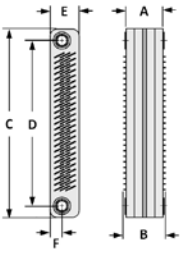
Vertical Compression (Z-axis), Open-Pin Field

Contact spacing: 0.050″ (1.27 mm)

A high-density, open-field, vertically-compressed connector utilizing a patented z-axis contact system configured for between-board (board-to-board) compression applications.

DIMENSIONS

COLUMNS	C	D
10	0.952	0.742
15	1.202	0.992
20	1.452	1.242
25	1.702	1.492
ROWS	E	F
2	0.210	0.105
3	0.260	0.105
4	0.310	0.155
5	0.360	0.155
6	0.410	0.205
7	0.460	0.205



HARDWARE HEIGHT (A)	CONTACT HEIGHT (B)
0.100	0.120
0.150	0.170
0.200	0.230
0.250	0.280
0.300	0.330
0.350	0.380

Sample Part Number Format: RZ250-320-115-1000

RZ		–			–			–		–	

SERIES
Vertical (Z-Axis) Compression Multi-Rows 0.050" Spacing Open-Field

HEIGHT
100 – 0.100"
150 – 0.150"
200 – 0.200"
250 – 0.250"
300 – 0.300"
350 – 0.350"

ROWS
2 – 2 Rows
3 – 3 Rows
4 – 4 Rows
5 – 5 Rows
6 – 6 Rows
7 – 7 Rows

COLUMNS
10 – 10 Columns
15 – 15 Columns
20 – 20 Columns
25 – 25 Columns

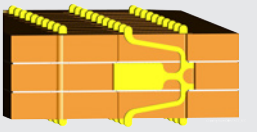
CONTACT
11 – Double compression

PLATING
5 – 50 µ" Au
3 – 30 µ" Au

HARDWARE
10 – Ø.090" Thru-hole
20 – Ø.050" Guide pin

TYPE
00 – No polarization

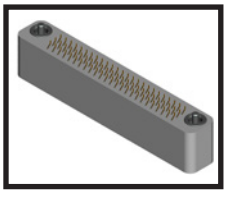
VARIATION
Blank – None
XXX – Consult factory

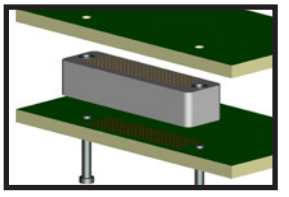


PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

MATED HEIGHT

Mated height is defined as the space between the hardware clamping surfaces (top hardware surface to bottom hardware surface.) See Table 1.





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	3.0 GHz @ -3 dB
2	Diff. Return Loss	1.0 GHz @ -20 dB
3	NEXT	2.0 GHz @ -50 dB
4	FEXT	2.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu C17200 per ASTM B194 (brush alloy 190)
Contact Finish: . . . . . Gold per ASTM B488 over nickel per SAE AMS-QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A582/582M, passivated per SAE AMS-2700

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

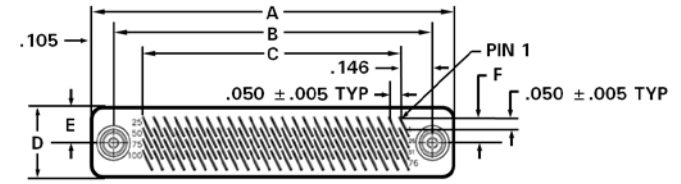
PERFORMANCE

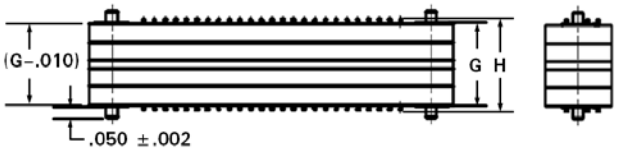
Contact Compression: . . . . . 0.010 inches per side (nominal) for 0.100" and 0.150" connector heights; 0.015" per side (nominal) for 0.200", 0.250", 0.300" and 0.350" connector heights
Compression Force: . . . . . 25-40 grams per contact having a 0.010" deflection
35-50 grams per contact having a 0.015" deflection
Contact Wipe: . . . . . ≈0.007" for 0.100" and 0.150" connector heights
≈0.014" for 0.200", 0.250", 0.300" and 0.350" connector heights
Current Rating: . . . . . 0.5 amperes
Contact Resistance: . . . . . 0.025 ohms typical (contact height-dependent)
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 100 VDC
Durability: . . . . . 50 connector mating cycles
Dielectric Withstanding: . . . . . 250 VDC @ sea level, 100 VDC @ altitude

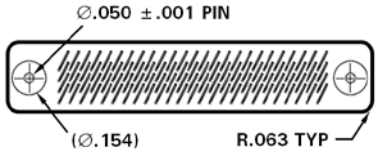
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

RZ DIMENSIONS

Guide Pin Hardware Option

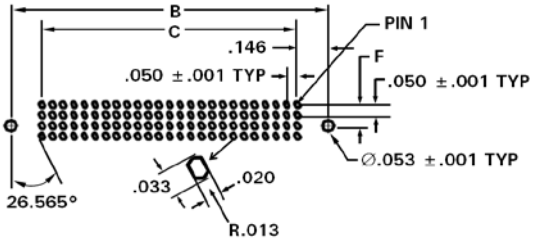






DIMENSIONS								
SIZE	ROWS	COLS	A	B	C	D	E	F
20	2	10	0.952	0.742	0.450	0.210	0.105	0.050
30	2	15	1.202	0.992	0.700	0.210	0.105	0.050
40	2	20	1.452	1.242	0.950	0.210	0.105	0.050
50	2	25	1.702	1.492	1.200	0.210	0.105	0.050
30	3	10	0.952	0.742	0.450	0.260	0.105	0.050
45	3	15	1.202	0.992	0.700	0.260	0.105	0.050
60	3	20	1.452	1.242	0.950	0.260	0.105	0.050
75	3	25	1.702	1.492	1.200	0.260	0.105	0.050
40	4	10	0.952	0.742	0.450	0.310	0.155	0.100
60	4	15	1.202	0.992	0.700	0.310	0.155	0.100
80	4	20	1.452	1.242	0.950	0.310	0.155	0.100
100	4	25	1.702	1.492	1.200	0.310	0.155	0.100
50	5	10	0.952	0.742	0.450	0.360	0.155	0.100
75	5	15	1.202	0.992	0.700	0.360	0.155	0.100
100	5	20	1.452	1.242	0.950	0.360	0.155	0.100
125	5	25	1.702	1.492	1.200	0.360	0.155	0.100
60	6	10	0.952	0.742	0.450	0.410	0.205	0.150
90	6	15	1.202	0.992	0.700	0.410	0.205	0.150
120	6	20	1.452	1.242	0.950	0.410	0.205	0.150
150	6	25	1.702	1.492	1.200	0.410	0.205	0.150
70	7	10	0.952	0.742	0.450	0.460	0.205	0.150
105	7	15	1.202	0.992	0.700	0.460	0.205	0.150
140	7	20	1.452	1.242	0.950	0.460	0.205	0.150
175	7	25	1.702	1.492	1.200	0.460	0.205	0.150

PWB Layout (Recommended)



DIMENSIONS	
HARDWARE "G"	CONTACT "H"
0.100+/-.002	0.120+/-.006
0.150+/-.002	0.170+/-.010
0.200+/-.002	0.230+/-.010
0.250+/-.002	0.280+/-.010
0.300+/-.002	0.330+/-.010
0.350+/-.002	0.380+/-.010

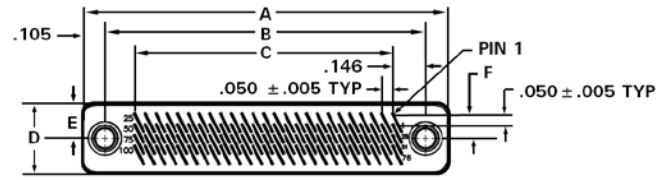
Note: All dimensions are in inches.

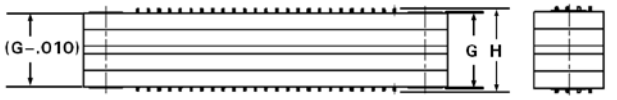
PWB-PLATED PAD RECOMMENDATIONS:

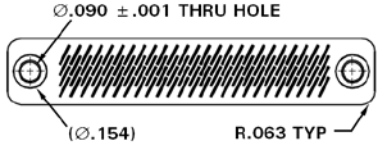
Board to be made in accordance with ANSI/EIA-616
Laminate material per MIL-P-13949, Type GF
Copper foil thickness: 1 oz per square foot
Plate all surface features with 50 µ", minimum, electrolytic hard gold over 50-150 µ" nickel.
(Optionally, plate all surface features with 50 µ", minimum, electrolytic hard gold over 5-10 µ" of electrolytic soft gold over 100 µ", minimum, nickel.)

RZ DIMENSIONS

Thru-Hole Hardware Option

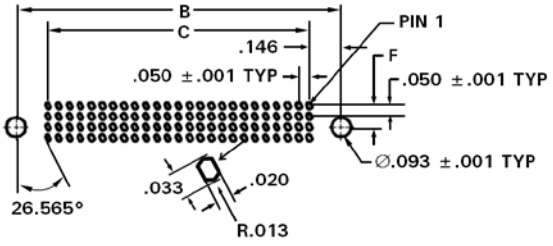






DIMENSIONS								
SIZE	ROWS	COLS	A	B	C	D	E	F
20	2	10	0.952	0.742	0.450	0.210	0.105	0.050
30	2	15	1.202	0.992	0.700	0.210	0.105	0.050
40	2	20	1.452	1.242	0.950	0.210	0.105	0.050
50	2	25	1.702	1.492	1.200	0.210	0.105	0.050
30	3	10	0.952	0.742	0.450	0.260	0.105	0.050
45	3	15	1.202	0.992	0.700	0.260	0.105	0.050
60	3	20	1.452	1.242	0.950	0.260	0.105	0.050
75	3	25	1.702	1.492	1.200	0.260	0.105	0.050
40	4	10	0.952	0.742	0.450	0.310	0.155	0.100
60	4	15	1.202	0.992	0.700	0.310	0.155	0.100
80	4	20	1.452	1.242	0.950	0.310	0.155	0.100
100	4	25	1.702	1.492	1.200	0.310	0.155	0.100
50	5	10	0.952	0.742	0.450	0.360	0.155	0.100
75	5	15	1.202	0.992	0.700	0.360	0.155	0.100
100	5	20	1.452	1.242	0.950	0.360	0.155	0.100
125	5	25	1.702	1.492	1.200	0.360	0.155	0.100
60	6	10	0.952	0.742	0.450	0.410	0.205	0.150
90	6	15	1.202	0.992	0.700	0.410	0.205	0.150
120	6	20	1.452	1.242	0.950	0.410	0.205	0.150
150	6	25	1.702	1.492	1.200	0.410	0.205	0.150
70	7	10	0.952	0.742	0.450	0.460	0.205	0.150
105	7	15	1.202	0.992	0.700	0.460	0.205	0.150
140	7	20	1.452	1.242	0.950	0.460	0.205	0.150
175	7	25	1.702	1.492	1.200	0.460	0.205	0.150

PWB Layout (Recommended)



DIMENSIONS	
HARDWARE "G"	CONTACT "H"
0.100+/-.002	0.120+/-.006
0.150+/-.002	0.170+/-.010
0.200+/-.002	0.230+/-.010
0.250+/-.002	0.280+/-.010
0.300+/-.002	0.330+/-.010
0.350+/-.002	0.380+/-.010

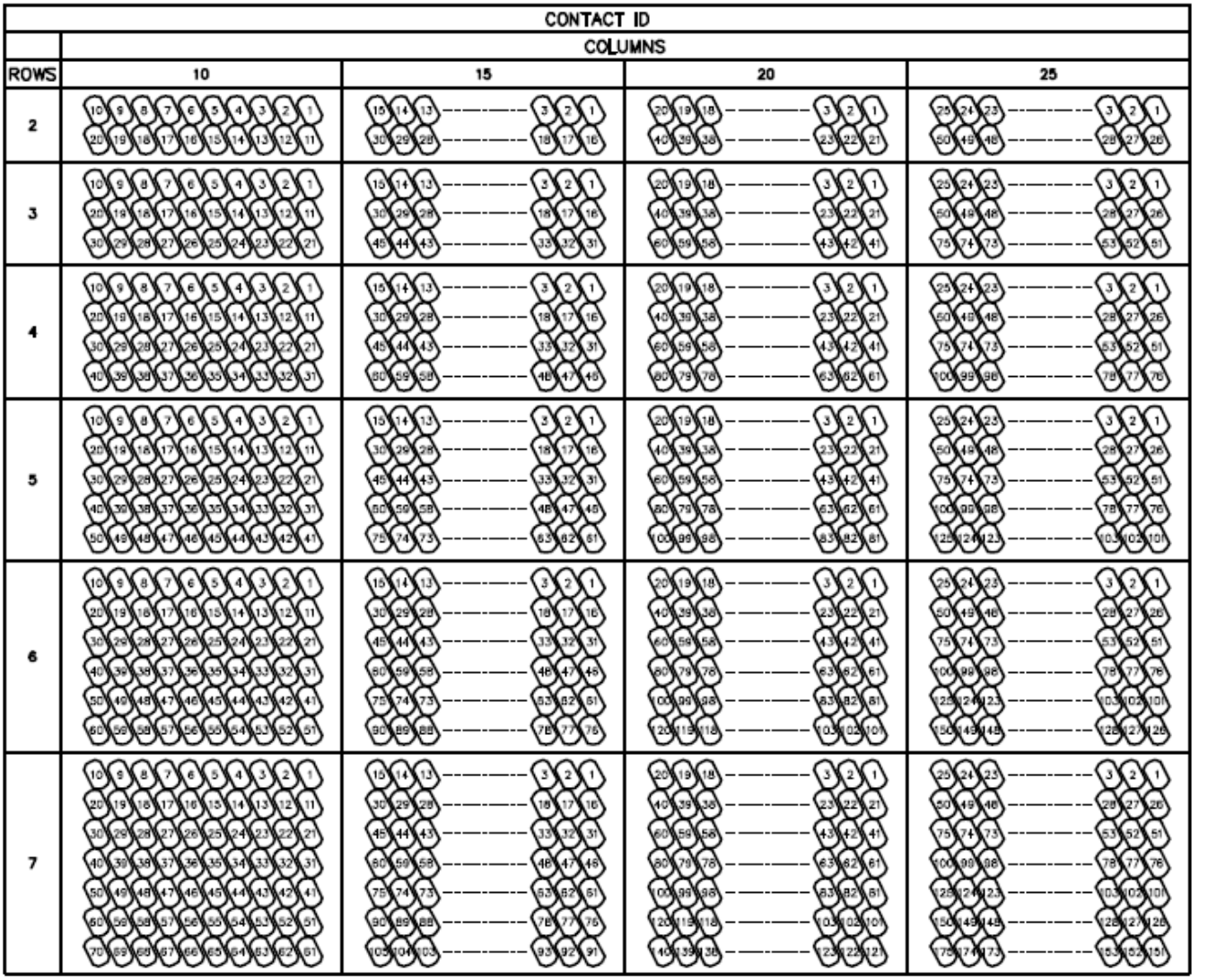
Note: All dimensions are in inches.

PWB-PLATED PAD RECOMMENDATIONS:

Board to be made in accordance with ANSI/EIA-616
Laminate material per MIL-P-13949, Type GF
Copper foil thickness: 1 oz per square foot
Plate all surface features with 50 µ", minimum, electrolytic hard gold over 50-150 µ" nickel.
(Optionally, plate all surface features with 50 µ", minimum, electrolytic hard gold over 5-10 µ" of electrolytic soft gold over 100 µ", minimum, nickel.)

RZ DRAWINGS

Board Footprint



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