

INTRODUCTION:

Adam Tech BBA series connectors are an extremely low profile, surface mounted, narrow pitched, polarized, mated set of board to board connectors available in five different pitches. This series has a stacking height of .100" (2.54) and is available in pin counts up to 90 circuits. Adam Tech features a unique bellows type contact and a body design which provides space for automatic insertion machine pick up. This connector is ideal for cell phones, pagers, video equipment, small portable equipment and anywhere an LCD display is used.

FEATURES:

- Multiple board stacking heights
- All common pin counts
- Locating peg on 0.8mm pitch versions
- Hi-Temp material
- High reliability precision formed contacts

SPECIFICATIONS:

Material:

Insulator:
0.5mm: LCP or Nylon 6T, glass reinforced, rated UL94V-0
Contacts: Phosphor Bronze

Contact Plating:

Tin or Gold flash over copper underplate

Electrical:

Operating voltage: 50V AC max.
Current rating:
0.5mm: 0.3 Amps max
0.8mm: 0.5 Amps max.
Contact resistance: 40 mΩ max. initial
Insulation resistance: 1000 MΩ min.
Dielectric withstanding voltage: 500V AC for 1 minute

Mechanical:

Mating durability: 250 Cycles min.

Temperature Rating:

Operating temperature: -65°C to +155°C

PACKAGING:

Anti-ESD plastic trays or tubes
Tape and Reel with pick & place pad

APPLICATION & CONFIGURATION OVERVIEW

0.4mm Centerline Pitch

Series BB4-PO/SO offers a fixed height 0.039mm male connector matched with a fixed height 0.049mm female connector to provide a total stacking height of 1.5mm. These sets are available in positions 10-100 (see drawing page details)

Series BB4-PE/SE offers a fixed height 1.25mm male connector which is matched with a fixed height 1.25mm female providing a total stacking height of 1.5mm. These sets are available in positions 10-100 (see details on drawing page)

0.5mm Centerline Pitch

Series BB5-PO/SO offers a fixed height 3.15mm male connector which can be matched to four different female connector heights (3.00, 3.50, 4.00, 6.00) to provide four choices of total stacking heights (4.00, 4.50, 5.00, 6.00) These sets are available in positions 10-100 (see details on drawing page)

Series BB5-PN/SN offers a male connector in five different heights (2.20, 2.70, 3.00, 3.20, 3.50) and a matched female connector in four different heights (3.00, 3.50, 4.00, 6.00) to provide four choices of total stacking heights (4.00, 4.50, 5.00, 6.00) These sets are available in positions 10-120 (see details on drawing page)

0.635mm Centerline Pitch

Series BB635-PE/SE offers a male connector in two different heights (4.00, 5.00) which is matched to a fixed height female connector (4.00) to provide a choice of two total stacking heights (5.00, 6.00) These sets are available in positions 20, 30, 40 & 50P (see details on drawing page)

0.8mm Centerline Pitch

Series BB8-PO/SO offers a fixed height (3.55mm) male connector which can be matched to four different female connector heights (3.55, 5.05, 5.45, 6.05) to provide four choices of total stacking heights (4.60, 6.00, 6.50, 7.00) These sets are available in positions 10 - 100 (see details on drawing page)

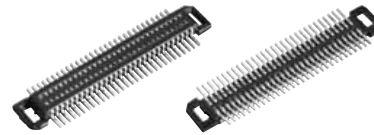
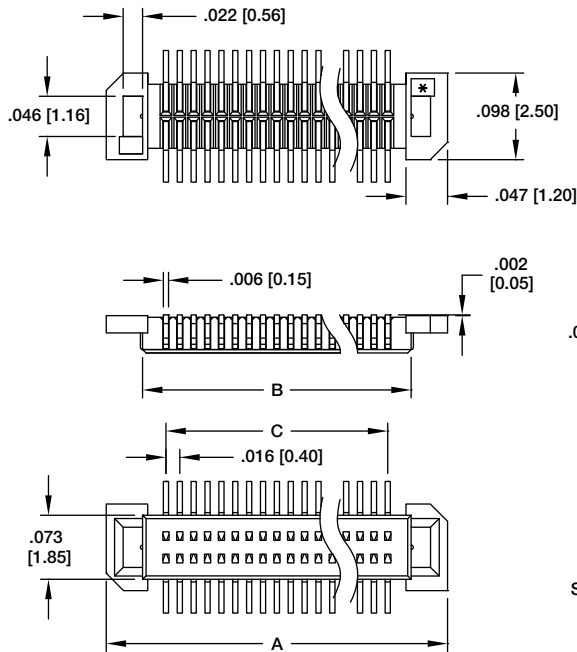
Series BB8-PN/SN offers a male connector in two different heights (3.55, 4.05) which can be matched to five different female connector heights (3.65, 4.15, 4.70, 5.15, 5.65) to provide eight choices of total stacking heights (4.50, 5.00, 5.15, 5.65, 6.00, 6.15, 6.50, 7.00) These sets are available in positions 10 - 100 positions (see details on drawing page)

1.00mm Centerline Pitch

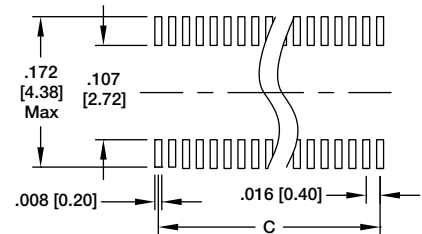
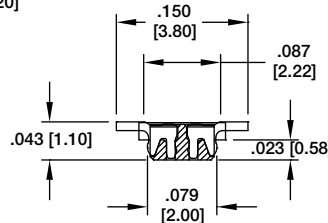
Series BB10-PO/SO offers a male connector in three different heights (6.35, 7.35, 8.35) which can be matched to four different female connector heights (5.37, 7.37, 8.37, 10.37) to provide eight choices of total stacking heights (8.00, 9.00, 10.00, 11.00, 12.00, 13.00, 14.00, 15.00) These sets are available in positions 10 - 100 positions (see details on drawing page)



BB4-PO-XXX-G-1.00-NP-T/R 0.4mm MALE

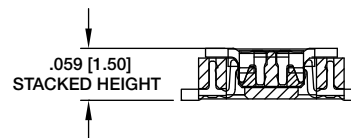


BB4-PO-060-G-1.00-NP-T/R

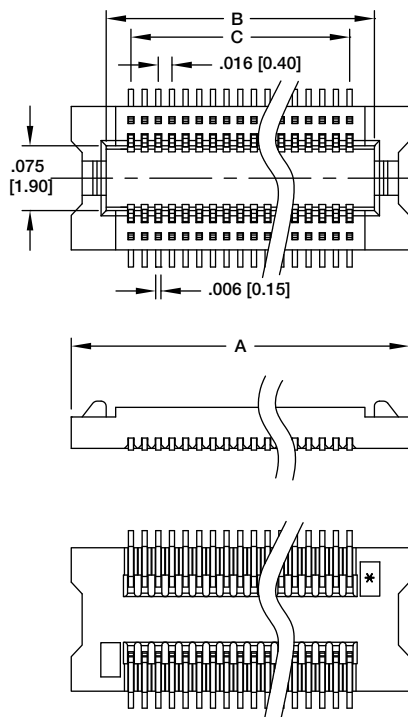


Recommended PCB Layout

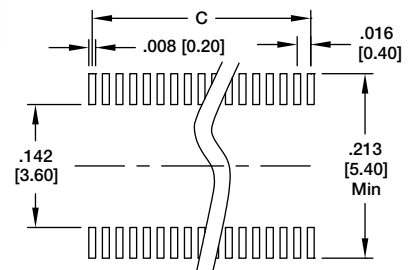
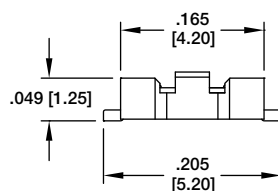
Replace (XXX) in Part No. with No. of Positions
Options: (-PP) pick/place pad, (-TR) tape and reel packaging
Positions: 10, 12, 14, 16, 20, 22, 24, 26, 30, 34, 40, 50, 60, 70, 72, 80, 90, 100
A = $.016 [0.40] \times \text{No. of Positions}/2 + .138 [3.50]$
B = $.016 [0.40] \times \text{No. of Positions}/2 + .053 [1.35]$
C = $.016 [0.40] \times \text{No. of Positions}/2 - .016 [0.40]$



BB4-SO-XXX-G-1.25-NP-T/R 0.4mm FEMALE



BB4-SO-060-G-1.25-NP-T/R

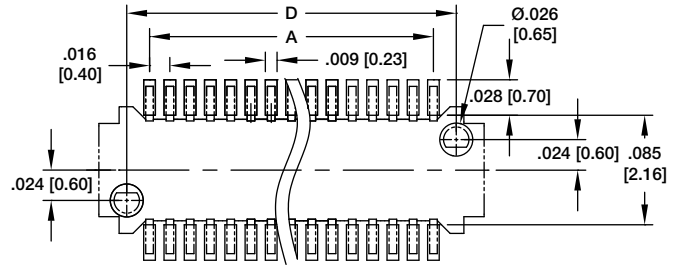
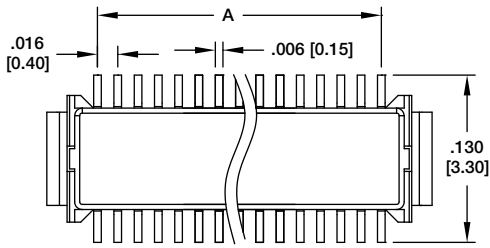


Recommended PCB Layout

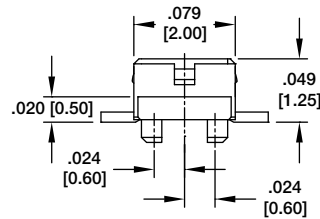
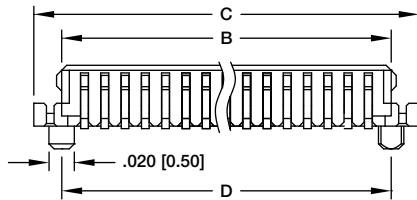
PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.039 [1.00]	.049 [1.25]	.059 [1.50]

Replace (XXX) in Part No. with No. of Positions
Positions: 10 Thru 100
A = $.016 [0.40] \times \text{No. of Positions}/2 + .122 [3.10]$
B = $.016 [0.40] \times \text{No. of Positions}/2 + .037 [0.95]$
C = $.016 [0.40] \times \text{No. of Positions}/2 - .016 [0.40]$

BB4-PE-XX-G-1.25-T/R 0.4mm MALE



Recommended PCB Layout



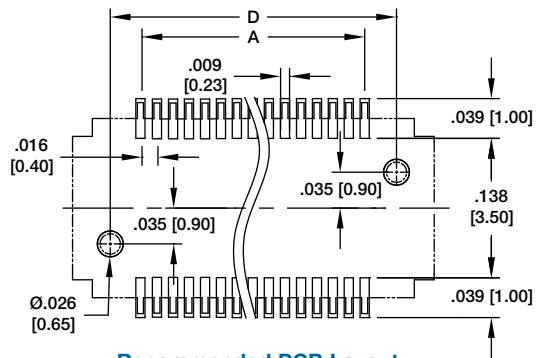
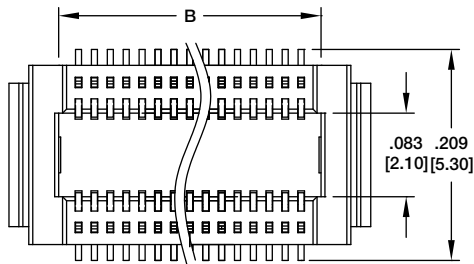
BB4-PE-20-G-1.25-T/R

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.049 [1.25]	.049 [1.25]	.059 [1.50]

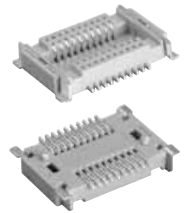
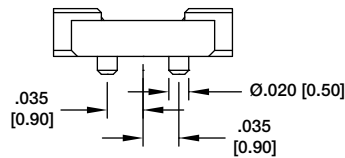
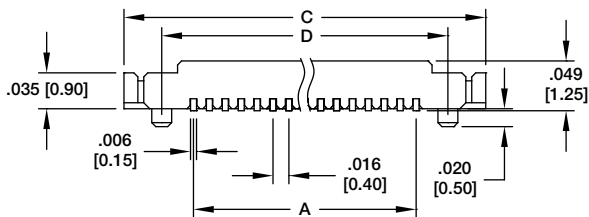
Replace (XX) in Part No. with No. of Positions
Positions: 20, 30, 40

A = .016 [0.40] x (No. of Contacts per row - 1)
B = .016 [0.40] x (No. of Contacts per row - 1) + .035 [0.90]
C = .016 [0.40] x (No. of Contacts per row - 1) + .079 [2.00]
D = .016 [0.40] x (No. of Contacts per row - 1) + .035 [0.90]

BB4-SE-XX-G-1.25-T/R 0.4mm FEMALE



Recommended PCB Layout



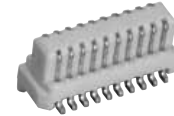
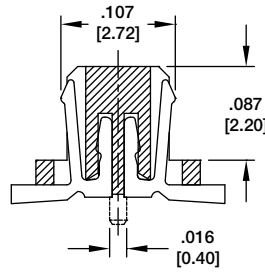
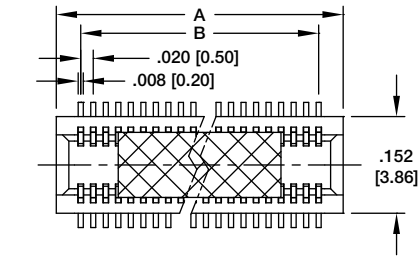
BB4-SE-20-G-1.25-T/R

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.049 [1.25]	.049 [1.25]	.059 [1.50]

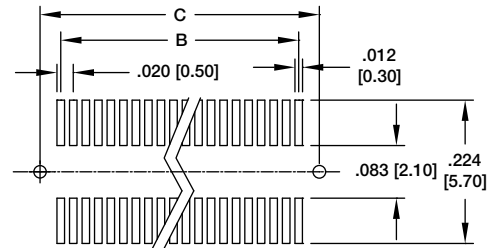
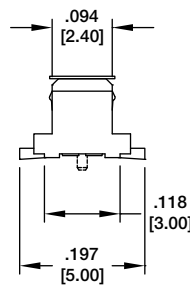
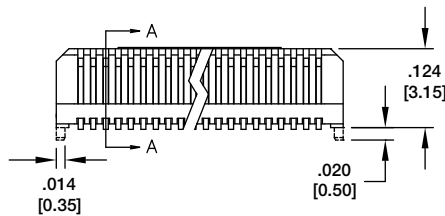
Replace (XX) in Part No. with No. of Positions
Positions: 20, 30, 40

A = .016 [0.40] x (No. of Contacts per row - 1)
B = .016 [0.40] x (No. of Contacts per row - 1) + .039 [1.00]
C = .016 [0.40] x (No. of Contacts per row - 1) + .138 [3.50]
D = .016 [0.40] x (No. of Contacts per row - 1) + .063 [1.60]

BB5-PO-XXX-G-3.15-PP-T/R 0.5mm MALE



BB5-PO-020-G-3.15-T/R



PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.124 [3.15]	.118 [3.00]	.157 [4.00]
.124 [3.15]	.138 [3.50]	.177 [4.50]
.124 [3.15]	.157 [4.00]	.197 [5.00]
.124 [3.15]	.236 [6.00]	.276 [5.00]

Recommended PCB Layout

Replace (XXX) in Part No. with No. of Positions

Positions: 10 thru 100

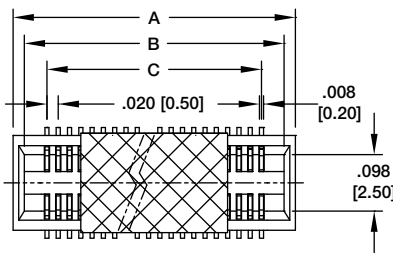
Options: (-PP) pick/place pad, (-TR) tape and reel packaging

A = .020 [0.50] x (No. of Positions per row) + .059 [1.50]

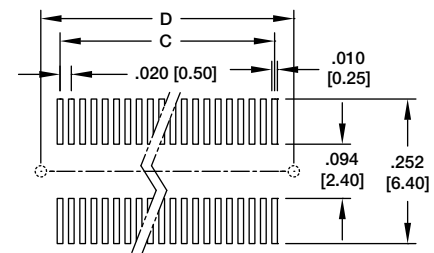
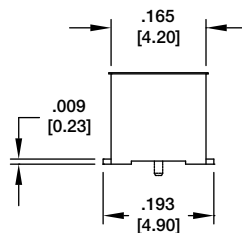
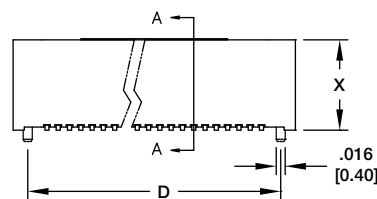
B = .020 [0.50] x (No. of Positions per row) - .020 [0.50]

C = .020 [0.20] x (No. of Positions per row) + .047 [1.20]

BB5-SO-XXX-G-X.XX-PP-T/R 0.5mm FEMALE



BB5-SO-014-G-X.XX-PP-T/R



PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.124 [3.15]	.118 [3.00]	.157 [4.00]
.124 [3.15]	.138 [3.50]	.177 [4.50]
.124 [3.15]	.157 [4.00]	.197 [5.00]
.124 [3.15]	.236 [6.00]	.276 [5.00]

Recommended PCB Layout

Replace (XXX) in Part No. with No. of Positions

Replace (X.XX) in Part No. with stacking height

Positions: 10 thru 100

Options: (-PP) pick/place pad, (-TR) tape and reel packaging

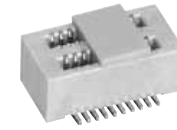
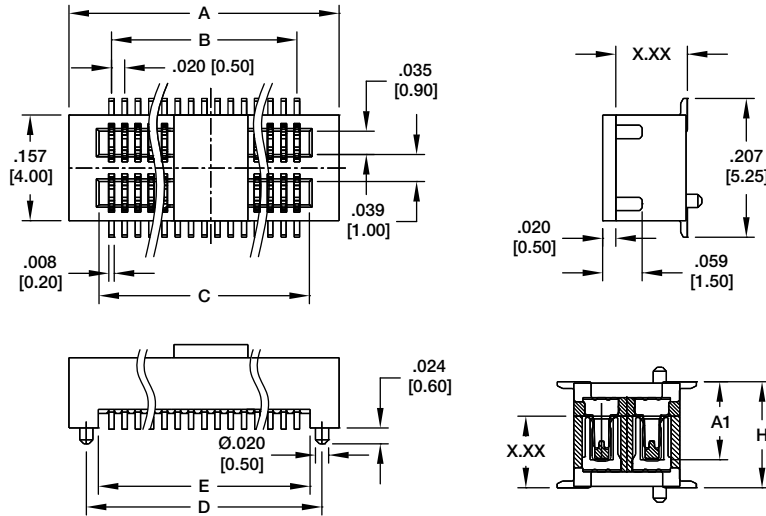
A = .020 [0.50] x (No. of Positions per row) + .098 [2.50]

B = .020 [0.50] x (No. of Positions per row) + .059 [1.50]

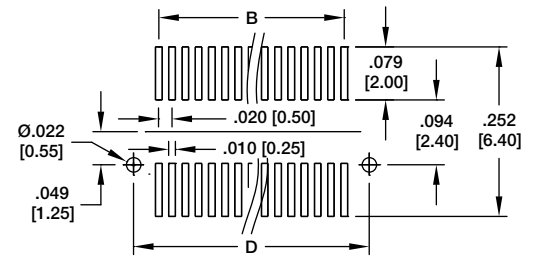
C = .020 [0.50] x (No. of Positions per row) - .020 [0.50]

D = .020 [0.20] x (No. of Positions per row) + .047 [1.20]

BB5-PN-XXX-G-X.XX-PP-T/R 0.5mm MALE



BB5-PN-020-G-X.XX-PP-T/R



Recommended PCB Layout

PLUG (X.XX)	SOCKET HEIGHT (A1)	MATING HEIGHT (H)
.087 [2.20]	.094 [2.40]	.118 [3.00]
	.114 [2.90]	.138 [3.50]
.106 [2.70]	.114 [2.90]	.157 [4.00]
.126 [3.20]	.114 [2.90]	.177 [4.50]
.118 [3.00]	.154 [3.90]	.197 [5.00]
	.173 [4.40]	.217 [5.50]
.138 [3.50]	.173 [4.40]	.236 [6.00]

Replace (XXX) in Part No. with No. of Positions

Replace (X.XX) in Part No. with stacking height

Options: (-PP) pick/place pad, (-TR) tape and reel packaging

Positions: 10, 12, 14 thru 50, 60, 70, 80, 90, 100, 120

A = .020 [0.50] x (No. of Positions per row - 1) + .126 [3.20]

B = .020 [0.50] x (No. of Positions per row - 1)

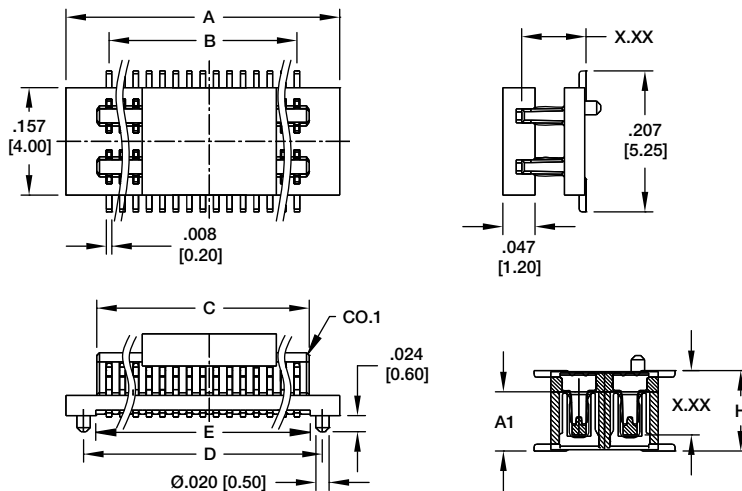
C = .020 [0.50] x (No. of Positions per row - 1) + .038 [0.96]

D = .020 [0.50] x (No. of Positions per row - 1) + .074 [1.90]

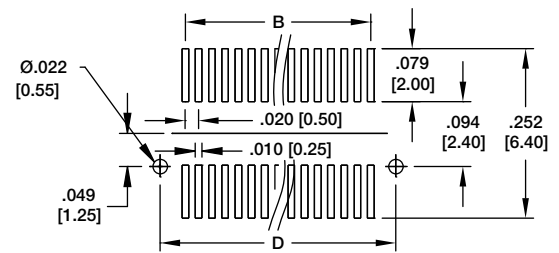
E = .020 [0.50] x (No. of Positions per row - 1) + .039 [1.00]

F = 10-30 POS = .110 [2.80] 32-120 Pos = .157 [4.00]

BB5-SN-XXX-G-X.XX-PP-T/R 0.5mm FEMALE



BB5-SN-020-G-X.XX-PP-T/R



Recommended PCB Layout

SOCKET (X.XX)	PLUG HEIGHT (A1)	MATING HEIGHT (H)
.094 [2.40]	.087 [2.20]	.118 [3.00]
	.087 [2.20]	.138 [3.50]
.114 [2.90]	.106 [2.70]	.157 [4.00]
	.126 [3.20]	.177 [4.50]
.154 [3.90]	.118 [3.00]	.197 [5.00]
	.118 [3.00]	.217 [5.50]
.173 [4.40]	.138 [3.50]	.236 [6.00]

Replace (XXX) in Part No. with No. of Positions

Replace (X.XX) in Part No. with stacking height

Options: (-PP) pick/place pad, (-TR) tape and reel packaging

Positions: 10, 12, 14 thru 50, 60, 70, 80, 90, 100, 120

A = .020 [0.50] x (No. of Positions per row - 1) + .126 [3.20]

B = .020 [0.50] x (No. of Positions per row - 1)

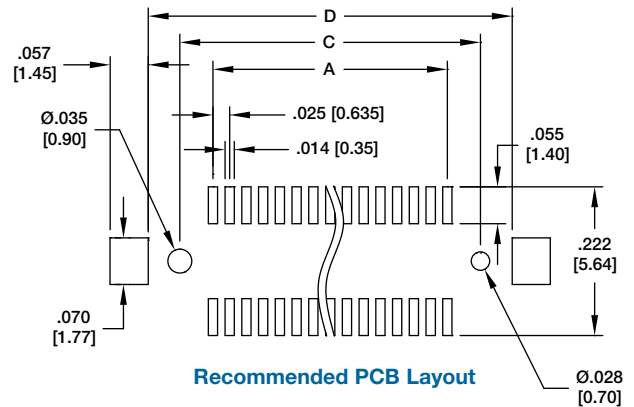
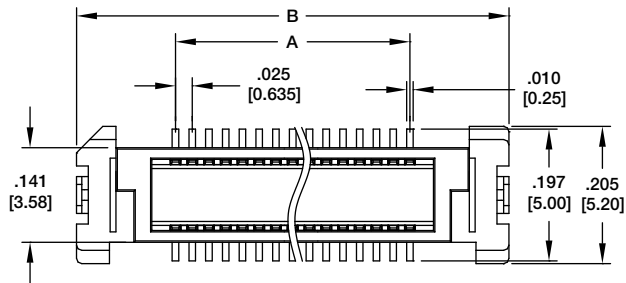
C = .020 [0.50] x (No. of Positions per row - 1) + .036 [0.92]

D = .020 [0.50] x (No. of Positions per row - 1) + .074 [1.90]

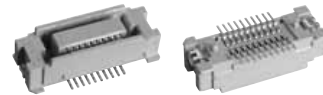
E = .020 [0.50] x (No. of Positions per row - 1) + .039 [1.00]

BB635-PE-XX-G-X.XX-T/R

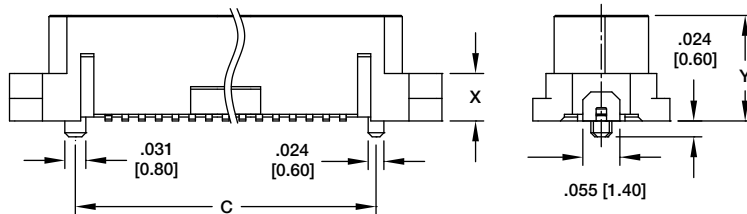
0.635mm MALE



Recommended PCB Layout



BB635-PE-XX-G-X.XX-T/R



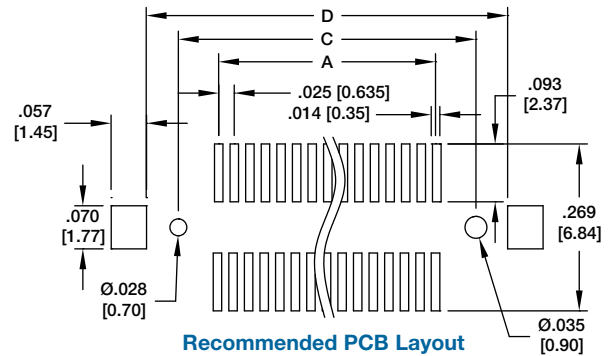
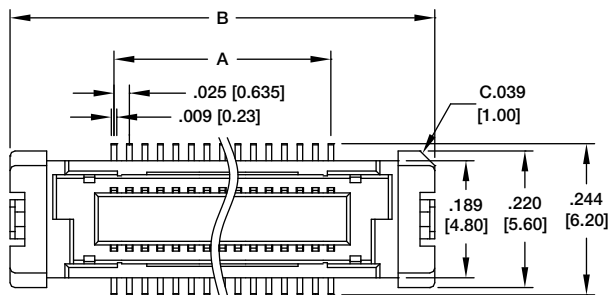
Replace (XX) in Part No. with No. of Positions
 Replace (X.XX) in Part No. with stacking height of 4.00 or 5.00
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 20, 30, 40, 50

ADAM P/N	X	Y
BB635-PE-XX-G-4.00-T/R	.071 [1.80]	.157 [4.00]
BB635-PE-XX-G-5.00-T/R	.138 [3.50]	.197 [5.00]

A = .025 [0.635] x (No. of Contacts per row - 1)
 B = .025 [0.635] x (No. of Contacts per row - 1) + .296 [7.51]
 C = .025 [0.635] x (No. of Contacts per row - 1) + .099 [2.51]
 D = .025 [0.635] x (No. of Contacts per row - 1) + .207 [5.26]

BB635-SE-XX-G-4.0-T/R

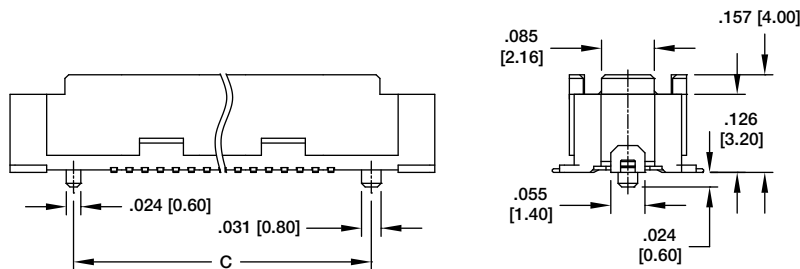
0.635mm FEMALE



Recommended PCB Layout



BB635-SE-20-G-4.0-T/R

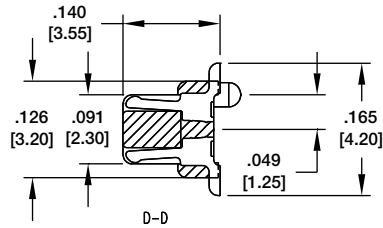
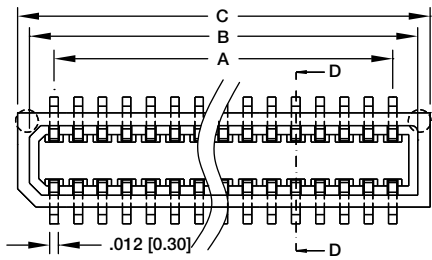


Replace (XX) in Part No. with No. of Positions
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 20, 30, 40, 50

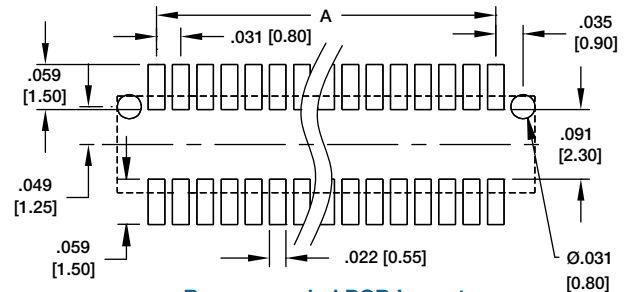
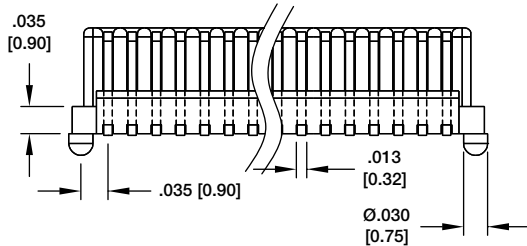
PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.157 [4.00]	.157 [4.00]	.197 [5.00]
.197 [5.00]	.157 [4.00]	.236 [6.00]

A = .025 [0.635] x (No. of Contacts per row - 1)
 B = .025 [0.635] x (No. of Contacts per row - 1) + .335 [8.50]
 C = .025 [0.635] x (No. of Contacts per row - 1) + .130 [3.31]
 D = .025 [0.635] x (No. of Contacts per row - 1) + .233 [5.91]

BB8-PL-XXX-G-3.55-T/R 0.8mm MALE



BB8-PL-010-G-3.55-T/R



Recommended PCB Layout

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.140 [3.55]	.140 [3.55]	.181 [4.60]
.140 [3.55]	.199 [5.05]	.236 [6.00]
.140 [3.55]	.215 [5.45]	.256 [6.50]
.140 [3.55]	.238 [6.05]	.276 [7.00]

Replace (XX) in Part No. with No. of Positions

Replace (X.XX) in Part No. with stacking height

Options: (-PP) pick/place pad, (-TR) tape and reel packaging

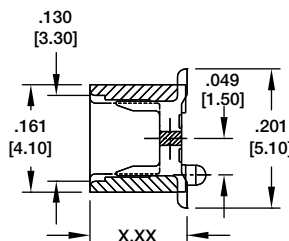
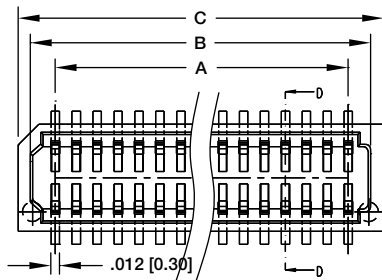
Position: 10 thru 100

A = .020 [0.50] x (No. of Contacts/2 - 1)

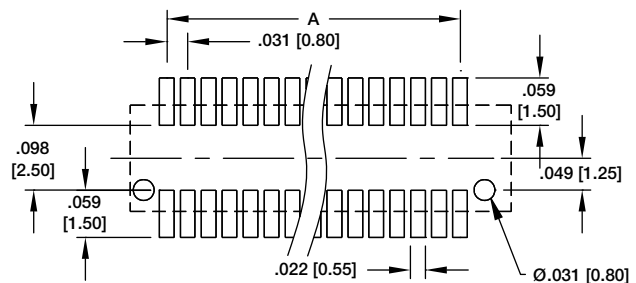
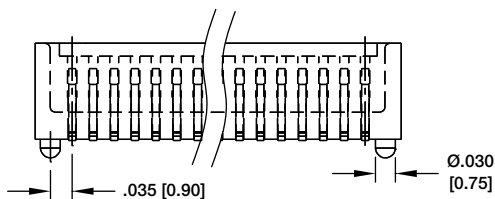
B = .020 [0.50] x (No. of Contacts/2 - 1) + .063 [1.60]

C = .020 [0.50] x (No. of Contacts/2 - 1) + .098 [2.50]

BB8-SL-XXX-G-X.XX-T/R 0.8mm FEMALE



BB8-SL-010-G-X.XX-T/R



Recommended PCB Layout

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.140 [3.55]	.140 [3.55]	.181 [4.60]
.140 [3.55]	.199 [5.05]	.236 [6.00]
.140 [3.55]	.215 [5.45]	.256 [6.50]
.140 [3.55]	.238 [6.05]	.276 [7.00]

Replace (XX) in Part No. with No. of Positions

Replace (X.XX) in Part No. with stacking height

Options: (-PP) pick/place pad, (-TR) tape and reel packaging

Position: 10 thru 100

A = .031 [0.80] x (No. of Contacts/2 - 1)

B = .031 [0.80] x (No. of Contacts/2 - 1) + .063 [1.60]

C = .031 [0.80] x (No. of Contacts/2 - 1) + .126 [3.20]

BB8-PN-010-G-X.XX-T/R

BB8-PN-XXX-G-X.XX-T/R
0.8mm MALE

BB8-SN-010-G-X.XX-T/R

BB8-SN-XXX-G-X.XX-T/R
0.8mm FEMALE

PLUG (X.XX)	Socket Height (A1)	Mating Height (H)
.140 [3.55]	.144 [3.65]	.177 [4.50]
	.163 [4.15]	.197 [5.00]
	.203 [5.15]	.236 [6.00]
	.222 [5.65]	.256 [6.50]
.159 [4.05]	.185 [4.70]	.222 [5.65]
	.163 [4.15]	.217 [5.50]
	.222 [5.65]	.276 [7.00]
	.185 [4.70]	.242 [6.15]

Replace (XX) in Part No. with No. of Positions
 Replace (X.XX) in Part No. with stacking height
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 50, 60, 68, 70, 80, 90, 100

A = .031 [0.80] x (No. of Positions per row - 1)
 B = .031 [0.80] x (No. of Positions per row - 1) + .065 [1.65]
 C = .031 [0.80] x (No. of Positions per row - 1) + .094 [2.40]
 D = .031 [0.80] x (No. of Positions per row - 1) + .071 [1.80]

BB8-PN-010-G-X.XX-T/R

BB8-PN-XXX-G-X.XX-T/R
0.8mm MALE

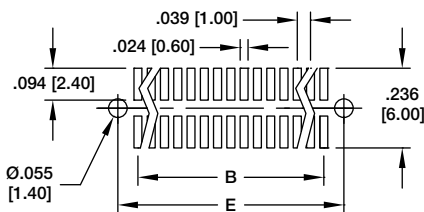
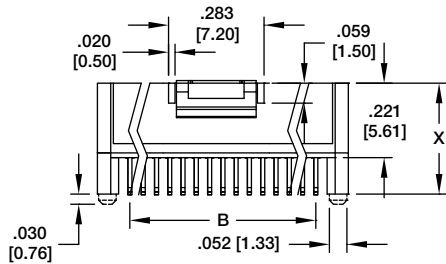
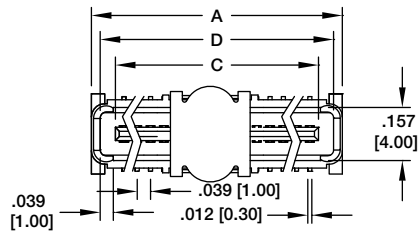
BB8-SN-010-G-X.XX-T/R

BB8-SN-XXX-G-X.XX-T/R
0.8mm FEMALE

Socket (X.XX)	Plug Height (A1)	Mating Height (H)
.144 [3.65]	.140 [3.55]	.177 [4.50]
	.163 [4.15]	.197 [5.00]
	.203 [5.15]	.236 [6.00]
	.222 [5.65]	.256 [6.50]
.159 [4.05]	.140 [3.55]	.217 [5.50]
	.159 [4.05]	.276 [7.00]
	.140 [3.55]	.222 [5.65]
.185 [4.70]	.159 [4.05]	.242 [6.15]

Replace (XX) in Part No. with No. of Positions
 Replace (X.XX) in Part No. with stacking height
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 50, 60, 68, 70, 80, 90, 100

A = .031 [0.80] x (No. of Positions per row - 1)
 B = .031 [0.80] x (No. of Positions per row - 1) + .067 [1.70]
 C = .031 [0.80] x (No. of Positions per row - 1) + .118 [3.00]
 D = .031 [0.80] x (No. of Positions per row - 1) + .071 [1.80]



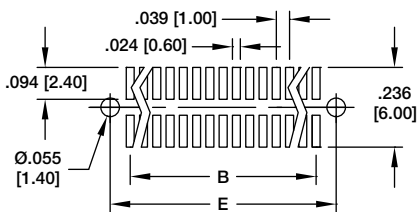
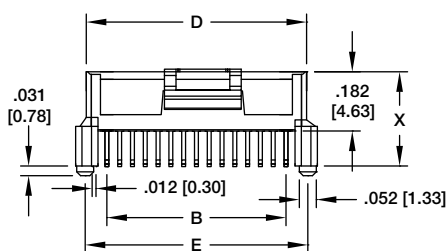
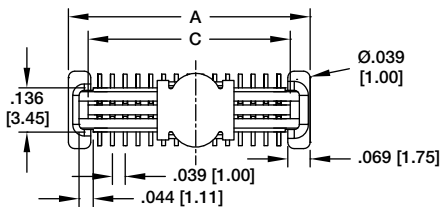
BB10-PO-XXX-G-X.XX-PP-T/R
1.00mm MALE



BB10-PO-020-G-X.XX-PP-T/R

Replace (XX) in Part No. with No. of Positions
 Replace (X.XX) in Part No. with stacking height
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 10 thru 100
 $A = .039 [1.00] \times (\text{No. of Positions per row}) + .154 [3.90]$
 $B = .039 [1.00] \times (\text{No. of Positions per row}) - .039 [1.00]$
 $C = .039 [1.00] \times (\text{No. of Positions per row}) + .012 [0.30]$
 $D = .039 [1.00] \times (\text{No. of Positions per row}) + .102 [2.58]$
 $E = .039 [1.00] \times (\text{No. of Positions per row}) + .094 [2.40]$

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.250 [6.35]	.211 [5.37]	.315 [8.00]
.250 [6.35]	.290 [7.37]	.394 [10.00]
.250 [6.35]	.330 [8.37]	.433 [11.00]
.250 [6.35]	.408 [10.37]	.512 [13.00]
.289 [7.35]	.211 [5.37]	.354 [9.00]
.289 [7.35]	.330 [8.37]	.472 [12.00]
.289 [7.35]	.408 [10.37]	.551 [14.00]
.329 [8.35]	.408 [10.37]	.591 [15.00]



BB10-SO-XXX-G-X.XX-PP-T/R
1.00mm FEMALE



BB10-SO-020-G-X.XX-PP-T/R

Replace (XX) in Part No. with No. of Positions
 Replace (X.XX) in Part No. with stacking height
 Options: (-PP) pick/place pad, (-TR) tape and reel packaging
 Positions: 10 thru 100
 $A = .039 [1.00] \times (\text{No. of Positions per row}) + .154 [3.90]$
 $B = .039 [1.00] \times (\text{No. of Positions per row}) - .039 [1.00]$
 $C = .039 [1.00] \times (\text{No. of Positions per row}) + .031 [0.80]$
 $D = .039 [1.00] \times (\text{No. of Positions per row}) + .087 [2.22]$
 $E = .039 [1.00] \times (\text{No. of Positions per row}) + .094 [2.40]$

PLUG HEIGHT	SOCKET HEIGHT	STACKING HEIGHT
.250 [6.35]	.211 [5.37]	.315 [8.00]
.289 [7.35]	.211 [5.37]	.354 [9.00]
.250 [6.35]	.290 [7.37]	.394 [10.00]
.250 [6.35]	.330 [8.37]	.433 [11.00]
.289 [7.35]	.330 [8.37]	.472 [12.00]
.250 [6.35]	.408 [10.37]	.512 [13.00]
.289 [7.35]	.408 [10.37]	.551 [14.00]
.329 [8.35]	.408 [10.37]	.591 [15.00]