

# Board to Board Connectors

# B2B® High Density SMT Connectors .050/(1.27mm) Pitch



## Features:

- Robust, shrouded design with screw-machined terminals and multi-finger contacts can withstand the rigorous demands of blind mating and mating/unmating cycles.
- At 3 amps per pin, more contacts can be assigned to data/signal transfer (fewer pins needed to handle power and ground).
- High density - over 400 contacts per square inch.
- Industry standard footprints in four mated heights.
- Precision molded with integral polarization keying features.

## Specifications:

### Terminals:

Brass - Copper Alloy  
(C36000) ASTM-B-16

### Contacts:

Beryllium Copper  
(C17200) ASTM-B-194

### Solder Ball:

Standard: 63Sn/37Pb  
Lead-free: 95.5Sn/4.0Ag/0.5Cu

### Plating:

G - Gold over Nickel  
Gold per ASTM-B-488  
Nickel per QQ-N-290

## Table of Models

Female		<p>Description: <b>Molded B2B® Connector (BB)</b>                  Material: High Temp. Liquid Crystal Polymer (LCP)                  Index: -40°C to 260°C (-40°F to 500°F)</p>
Male		<p>Description: <b>Molded B2B® Connector (BA)</b>                  Material: High Temp. Liquid Crystal Polymer (LCP)                  Index: -40°C to 260°C (-40°F to 500°F)</p>

## Performance

Mated Height	Differential Insertion Loss	Differential Return Loss
6.00mm	-20dB @ 1.70 GHz -50dB @ 3.30 GHz	-10dB @ 3.30 GHz -15dB @ 1.70 GHz
8.00mm	-15dB @ 1.30 GHz -50dB @ 2.50 GHz	-10dB @ 2.50 GHz -15dB @ 1.30 GHz
12.70mm	-20dB @ 1.70 GHz -51dB @ 3.40 GHz	-10dB @ 3.40 GHz -15dB @ 1.70 GHz
19.05mm	-60dB @ 2.20 GHz -20dB @ 1.40 GHz	-10dB @ 2.20 GHz -15dB @ 1.40 GHz

Insertion Force (6.00mm, 300 position):  
50g average (per pin)

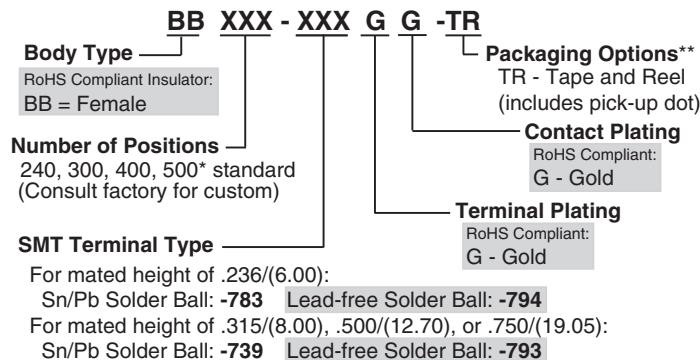
Durability (mated cycles):  
500 cycles (<10mΩ change in resistance)

Extraction Force (6.00mm, 300 position):  
45g average (per pin)

Additional performance and test data available online.

## How To Order

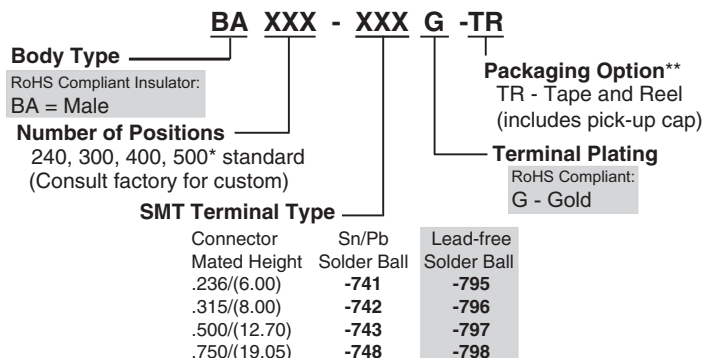
### Female



\*500 pos. available in 6mm mated height only.

\*\*If no packaging code is indicated, female connectors are supplied with pick-up dots in standard trays.

### Male



\*500 pos. available in 6mm mated height only.

\*\*If no packaging code is indicated, male connectors are supplied with pick-up caps in standard trays.



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Products shown covered by patents issued and/or pending. Specifications subject to change without notice.

inch/(mm)

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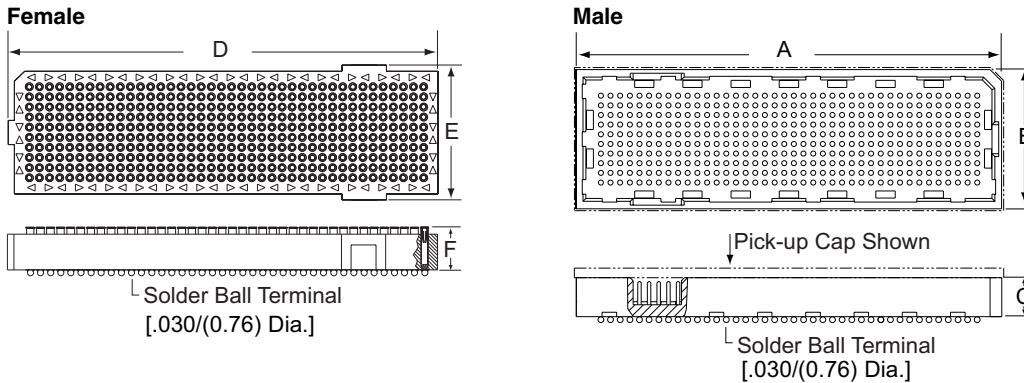
## Standard Footprints

1.27mm Pitch

	<ul style="list-style-type: none"> <li>• 240 Positions</li> <li>• 30x8 Rows</li> </ul>
	<ul style="list-style-type: none"> <li>• 300 Positions</li> <li>• 30x10 Rows</li> </ul>
	<ul style="list-style-type: none"> <li>• 400 Positions</li> <li>• 40x10 Rows</li> </ul>
	<ul style="list-style-type: none"> <li>• 500 Positions</li> <li>• 50x10 Rows</li> </ul>

Consult factory for custom sizes.

## Dimensional Information



Mated Board to Board Height*	A in./(mm)	B in./(mm)	C <sup>^</sup> in./(mm)	D <sup>^</sup> in./(mm)	E <sup>^</sup> in./(mm)	F <sup>^</sup> in./(mm)
.236/(6.00)	1.704/(43.28)	.622/(15.80)	.202/(5.13)	1.626/(41.30)	.567/(14.40)	.136/(3.45)
.315/(8.00)	1.704/(43.28)	.622/(15.80)	.273/(6.93)	1.626/(41.30)	.567/(14.40)	.211/(5.36)
.500/(12.70)	1.704/(43.28)	.622/(15.80)	.462/(11.73)	1.626/(41.30)	.567/(14.40)	.211/(5.36)
.750/(19.05)	1.704/(43.28)	.622/(15.80)	.712/(18.09)	1.626/(41.30)	.567/(14.40)	.211/(5.36)
.236/(6.00)	1.704/(43.28)	.722/(18.34)	.202/(5.13)	1.626/(41.30)	.667/(16.94)	.136/(3.45)
.315/(8.00)	1.704/(43.28)	.722/(18.34)	.273/(6.93)	1.626/(41.30)	.667/(16.94)	.211/(5.36)
.500/(12.70)	1.704/(43.28)	.722/(18.34)	.462/(11.73)	1.626/(41.30)	.667/(16.94)	.211/(5.36)
.750/(19.05)	1.704/(43.28)	.722/(18.34)	.712/(18.09)	1.626/(41.30)	.667/(16.94)	.211/(5.36)
.236/(6.00)	2.204/(55.98)	.722/(18.34)	.202/(5.13)	2.126/(54.00)	.667/(16.94)	.136/(3.45)
.315/(8.00)	2.204/(55.98)	.722/(18.34)	.273/(6.93)	2.126/(54.00)	.667/(16.94)	.211/(5.36)
.500/(12.70)	2.204/(55.98)	.722/(18.34)	.462/(11.73)	2.126/(54.00)	.667/(16.94)	.211/(5.36)
.750/(19.05)	2.204/(55.98)	.722/(18.34)	.712/(18.09)	2.126/(54.00)	.667/(16.94)	.211/(5.36)
.236/(6.00)	2.704/(68.68)	.722/(18.34)	.202/(5.13)	2.626/(66.70)	.667/(16.94)	.136/(3.45)

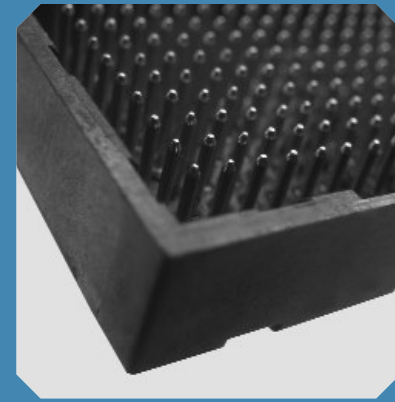
Additional mated heights coming soon. Consult factory.

\*Approximate dimension after soldering. <sup>^</sup>Dimensions do not include solder ball height.

inch/(mm)

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## Packaging & Options:

**Male connectors** - supplied with a pick-up cap to protect male pins and facilitate automated pick-and-place. Pick-up cap remains in place during reflow.



**Female connectors** - supplied with a polyimide dot to facilitate automated pick-and-place.

**Tape and Reel** - Add -TR to end of part number for Tape and Reel packaging.

**Standard Trays** - If no packaging code is indicated, connectors are shipped in standard trays (Note: Trays are not suitable for automated pick-and-place processes.)

## Available Online:

- RoHS Qualification Test Report
- Product Specification
- Test data
- Signal Integrity Data
- CAD Drawings



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