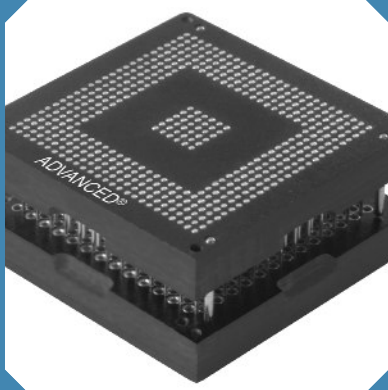


BGA Socket Adapter System



Features:

- Advanced's field-proven screw-machined terminals with multi-finger contacts, arranged in an interstitial male/female pin pattern are gold plated for gold/gold interconnect.
- Small overall size & same footprint as device – only 2.00mm larger than device.
- No external hold-downs required.
- Unique alignment pins protect pin field and aid in hand placement with optional stand-offs available.
- Sockets and Adapters are provided with protective covers which facilitate automated pick & place.
- Superior electrical performance – very low signal attenuation.

Specifications:

Terminals:

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

Contacts:

Beryllium Copper
(C17200) ASTM-B-194

Solder Ball:

Standard: 63Sn/37Pb
Lead-free: 0.50mm Pitch:
96.5Sn/3.0Ag/0.5Cu
0.65mm Pitch:
95.5Sn/4.0Ag/0.5Cu

Plating:

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

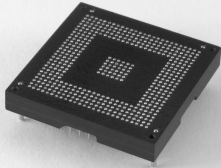
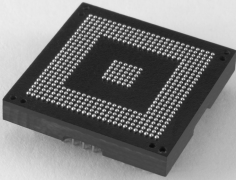
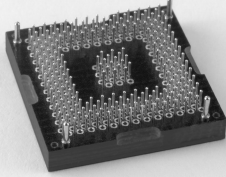
Note: Alignment pins are Nickel plated.



5 Energy Way, West Warwick, RI 02893 USA
Tel: 800.424.9850 | 401.823.5200
Fax: 401.823.8723
info@advanced.com | www.advanced.com
Catalog 16A

Fine Pitch BGA Socket Adapter System 0.50mm and 0.65mm Pitch

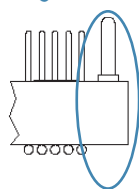
Table of Models

	Description: Standard Adapter (A) Material: FR-4 Fiberglass Epoxy Board Index: -40°C to 140°C (-40°F to 284°F) Note: Mates with Standard Socket for BGA device socketing.	Insulator Size: BGA device body +.079/(2.00)
	Description: SMT Adapter (A) Material: FR-4 Fiberglass Epoxy Board Index: -40°C to 140°C (-40°F to 284°F) Note: Mates with Standard Socket for LGA Socketing or Board to Board applications.	Insulator Size: LGA device body +.079/(2.00)
	Description: Standard Socket (S) Material: FR-4 Fiberglass Epoxy Board Index: -40°C to 140°C (-40°F to 284°F) Note: Mates with either Standard Adapter or SMT Adapter.	Insulator Size: BGA/LGA device body +.079/(2.00)

Note: Mated Height 0.214/(5.44)* approx.
(*will vary based on reflow profile, paste volume and PC board pad size)

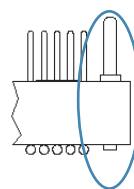
Options

Alignment Pin Options



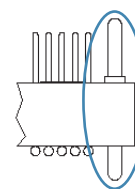
No Code

Alignment pin in each corner.



Code 1

Four alignment pins (top) with four stand-offs (bottom).



Code 2

Dual alignment pins (4 on top; 3 on bottom with stand-off in A1).

Note: Alignment pins are Nickel plated.

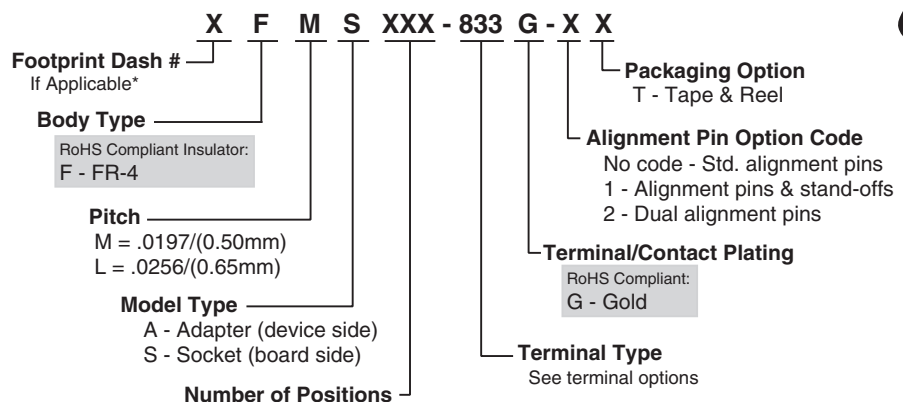
Packaging Options



Tape and Reel Packaging

- Conforms to EIA-481 Standard.
- Pick-up caps included.
- Add -T to end of part number when ordering.

How To Order



*See footprints section or online database.

Note: If no packaging code is indicated, parts are supplied in standard trays.
Both sockets and adapters are supplied with protective covers and one extraction tool.
Extraction Tool is also available separately; order P/N 8794.



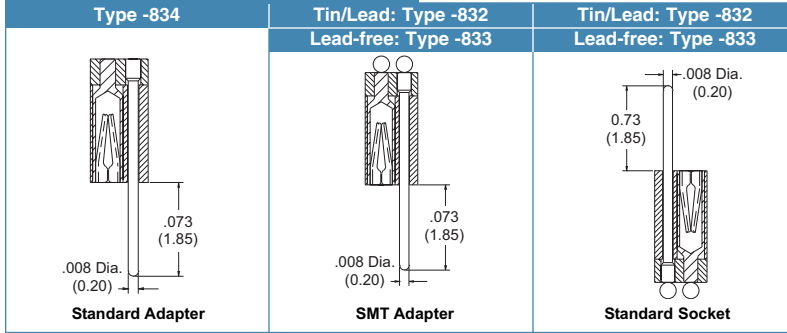
Products shown covered by patents issued and/or pending. Specifications subject to change without notice.

inch/(mm)

Fine Pitch BGA Socket Adapter System

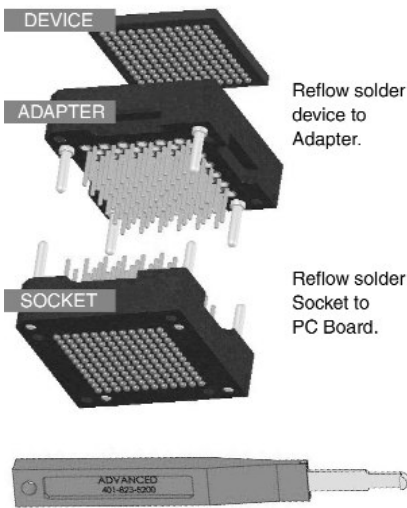
0.50mm and 0.65mm Pitch

Standard Terminals



Note: Solder ball diameter is 0.012/(0.30mm) on 0.50mm pitch models and 0.014/(0.36mm) on 0.65mm pitch models.

How It Works



See page 15 for Generic Reflow Profiles.

Reflow solder device to Adapter.

- Adapter matches footprint of BGA/LGA device and plugs into mating socket using unique male/female terminals in an interstitial pattern (patented design).

Reflow solder Socket to PC Board.

- Socket matches footprint of BGA/LGA device. Use alignment pins to align Device/Adapter assembly during insertion into board-mounted Socket.

- One extraction tool (P/N 8794) is supplied with each order.

Performance

Superior Electrical Performance

Even with adjacent Aggressor excitation, our socket system provides a Differential Data path of +/- 175mV @ 100psec and a Single-ended Data path of +/- 125mV @ 140psec.

Patented hybrid design ensures that adjacent terminal electromagnetic coupling is trivial; greatly reducing NeXT & FeXT, while creating a pseudo-matched impedance environment; stabilizing the Insertion & Return Loss response rates.

	0.50mm Pitch	0.65mm Pitch
Differential Insertion Loss	-0.40dB @ 1.0 GHz -0.55dB @ 1.9 GHz	-0.25dB @ 3.5 GHz
Differential Return Loss	-15.0dB @ 1.0 GHz -10.0dB @ 1.9 GHz	-14.0dB @ 3.5 GHz

Note: U.S. Patents 7,179,108 and 7,419,398

Insertion/Extraction Force

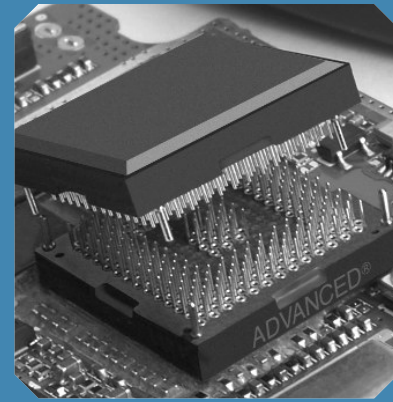
35g avg. Insertion & 30g Withdrawal (per pin)

Additional electrical performance, signal integrity data and models available online.

inch/(mm)

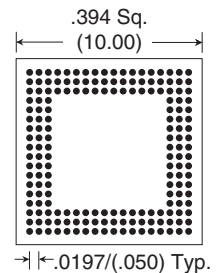
Products shown covered by patents issued and/or pending. Specifications subject to change without notice.

BGA Socket Adapter System



Footprints:

180 Pins
Footprint Number 180-2



18 x 18 rows

- Footprint specific insulators drilled to exact device pattern.
- Many footprints available - see page 88, search online or submit your device specs.
- Use our Build-A-Part feature or search in our online BGA Socket Finder™ at www.bgasockets.com.

Available Online:

- RoHS Qualification Test Report
- Application specification
- Technical articles
- Test data
- Signal Integrity Performance
- CAD drawings
- BGA Footprints



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