

# BGA Socket Adapter Systems



## 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)

### Contacts:

Beryllium Copper (C17200)

### Solder Ball:

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

### Plating:

G - Gold over Nickel  
 Note: Alignment pins are Nickel plated

# Micro-BGA Socket Adapter System

## 0.50mm and 0.65mm Pitch

### Table of Models

	Description: <b>Standard Adapter (A)</b> Material: FR-4 Fiberglass Epoxy Board Note: Mates with Standard Socket for BGA device socketing.	Insulator Size: BGA device body +.079/(2.00)
	Description: <b>SMT Adapter (A)</b> Material: FR-4 Fiberglass Epoxy Board Note: Mates with Standard Socket for LGA socketing or Board to Board applications.	Insulator Size: LGA device body +.079/(2.00)
	Description: <b>Standard Socket (S)</b> Material: FR-4 Fiberglass Epoxy Board Note: Mates with either Standard Adapter or SMT Adapter.	Insulator Size: BGA/LGA device body +.079/(2.00)

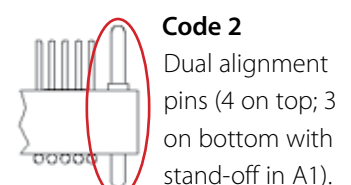
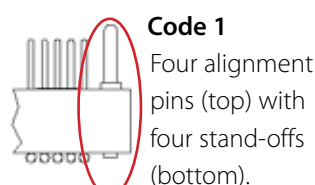
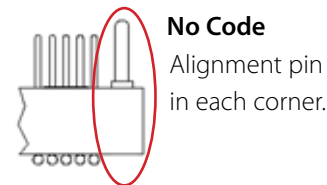
Note: Mated Height 0.214/(5.44)\* approx.

(\*will vary based on reflow profile, paste volume, and PC board pad size)

### Options

#### Alignment Pin Options

Note: Alignment pins are Nickel plated.



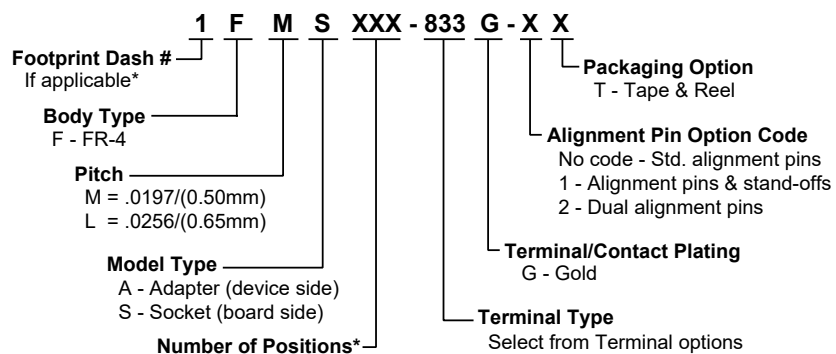
#### Packaging Options



#### 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



Note: If no packaging code is indicated, parts are supplied in standard trays. Sockets and adapters are supplied with pre-attached protective covers. One extraction tool (P/N 8794) is included with each order. Additional extraction tools may be ordered separately.

# Micro-BGA Socket Adapter System

## 0.50mm and 0.65mm Pitch

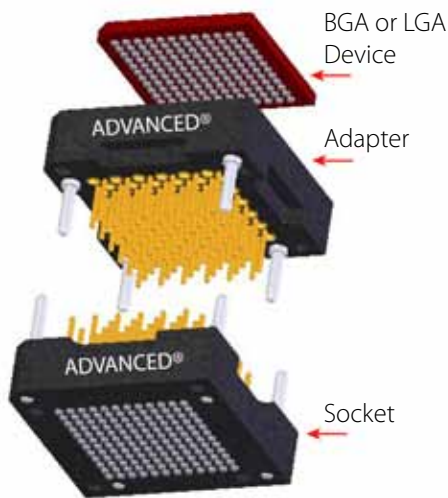
### Standard Terminals

Type -834	Tin/Lead: Type -832	Tin/Lead: Type -832
	Lead-free: Type -833	Lead-free: Type -833
<p><b>Standard Adapter</b></p>	<p><b>SMT Adapter</b></p>	<p><b>Standard Socket</b></p>

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

Please consult Sales office for footprint and part number.

### How It Works



- Adapter matches footprint of BGA/LGA device and plugs into mating socket using unique male/female terminals in an interstitial pattern.
- Socket matches footprint of BGA/LGA device. Use alignment pins to align Device/Adapter assembly during insertion into board-mounted Socket.
- Generic reflow profiles available online.
- 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.

Proprietary 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
<b>Differential Insertion Loss</b>	-0.40dB @ 1.0 GHz -0.55dB @ 1.9 GHz	-0.25dB @ 3.5 GHz
<b>Differential Return Loss</b>	-15.0dB @ 1.0 GHz -10.0dB @ 1.9 GHz	-14.0dB @ 3.5 GHz

#### Insertion/Extraction Force

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

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

For details relating to proprietary information protected by patents, see Pat. [www.advanced.com/patents](http://www.advanced.com/patents). Specifications subject to change without notice. inch/(mm)