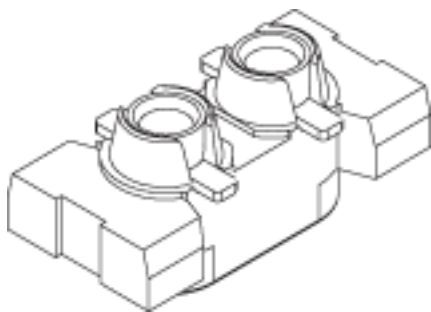


SIP Socket.....	J-2
Camera Socket.....	J-2
LGA Sockets.....	J-3
Micro PGA Sockets.....	J-4 to J-7

## 1.90mm (.075") Pitch SIP Socket

**94123**

**2 Circuit  
SMT, Bottom Entry**



### Features and Benefits

- Stamped "four beam" contact
- SMT soldering tabs
- Suitable for round pins
- Anti-solderwicking feature

### Reference Information

Product Specification: PS-94123-007  
Packaging: Tape and reel  
Designed In: Millimeters

### Electrical

Voltage: 125V  
Current: 1.0A  
Contact Resistance: 15 milliohms max.  
Dielectric Withstanding Voltage: 1000V  
Insulation Resistance: 5000 Megohms min.

### Mechanical

Contact Insertion Force: 3.5N max.  
Contact Retention to Housing: 1.5N min.

### Physical

Housing: Black glass-filled PA 4.6  
Contact: Phosphor Bronze  
Plating: Preplated Tin  
Operating Temperature: -40 to +85°C

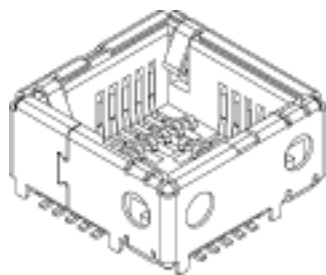
Circuits	Order No.	Solder Tail Length	Lead-free
2	<a href="#">94123-1012</a>	2.25mm	Yes
	<a href="#">94123-1032</a>	2.70mm	

[www.molex.com/product/sockets/sockets.html](http://www.molex.com/product/sockets/sockets.html)

## 0.65mm (.026") Pitch 6X6 Camera Socket

**47217**

**Surface Mount  
With Cap**



### Features and Benefits

- Lead-free type accommodates environmental requirement
- Applies to 6X6 camera module
- Removable pick-and-place cap allows for automated placement onto PCB

### Reference Information

Product Specification: PS-47217-001  
Packaging: Tape on reel  
Designed In: Millimeters

### Electrical

Voltage: 50V  
Current: 0.5A  
Contact Resistance: 60 milliohms max.  
Dielectric Withstanding Voltage: 150V AC  
Insulation Resistance: 400 Megohms min.

### Mechanical

Unmating Force: 1.00N  
Durability: 30 cycles

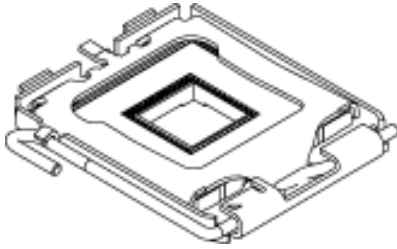
### Physical

Housing: PA Polyamide (nylon), UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—12µ" Gold  
Solder Tail Area—Gold  
Underplating: Nickel  
Operating Temperature: -55 to +85°C

Order No.	Lead-free
<a href="#">47217-0010</a>	Yes

# 1.09mm (.043") Pitch LGA Socket

## 47213 Ball Grid Array (BGA) Solder Mount



### Features and Benefits

- Raised housing walls to protect LGA contacts from damage
- Robust and wider LGA contact design provides higher product reliability
- Raised housing ribs to prevent solder bridging
- Flexible solderpad design to absorb CTE (Coefficient of Thermal Expansion) mismatch and prevent solder cracking
- Ball Grid Array (BGA) solderballs are self-centering and avoid the problem of bent pins

### Reference Information

Product Specification: PS-75319-002  
Packaging: Tray  
Designed In: Millimeters

### Electrical

Voltage: 30V  
Current: 0.8A  
Contact Resistance: 15.2 milliohms max. average/  
28 milliohms max. chain  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 500 Megohms min.

### Mechanical

Durability: 20 cycles

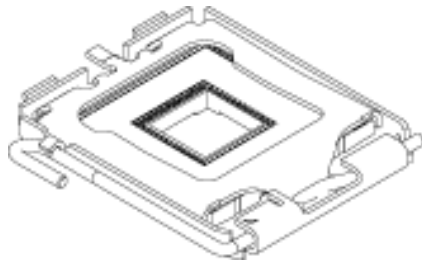
### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—15 or 30µ" Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -40 to +90°C

Circuits	Order No.	Plating	Pick-and-Place Type	Lead-free
771	<a href="#">47213-0015</a>	15µ" Gold	Flat Tab	Yes
	<a href="#">47213-0010</a>			No
	<a href="#">47213-1015</a>		Raised Tab	Yes
	<a href="#">47213-1010</a>			No
	<a href="#">47213-0005</a>	30µ" Gold	Flat Tab	Yes
	<a href="#">47213-0000</a>			No

# 1.09mm (.043") by 1.17mm (.046") Pitch LGA Socket

## 75319 Ball Grid Array (BGA) Solder Mount 775 Circuits



### Features and Benefits

- Designed for Intel Pentium® 4 Processor (775 package)
- Raised housing walls to protect LGA contacts from damage
- Robust and wider LGA contact design provides higher product reliability
- Raised housing ribs to prevent solder bridging
- Flexible solder pad design to absorb CTE (Coefficient of Thermal Expansion) mismatch and prevent solder cracking
- Ball Grid Array (BGA) solderballs are self-centering and avoid the problem of bent pins

### Reference Information

Product Specification: PS-75319-002  
Packaging: Tray  
Designed In: Millimeters

### Electrical

Voltage: 3.0V  
Current: 0.8A  
Contact Resistance: 15.2 milliohms max. average  
28 milliohms max. chain  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

### Mechanical

Durability: 20 cycles

### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—15µ" Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -40 to +90°C

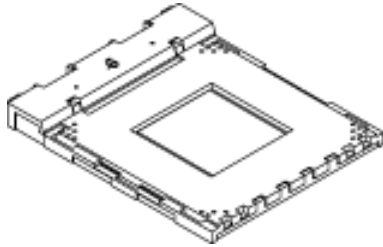
Circuits	Order No.	Pick-and-Place Type	Packaging	Lead-free
775	<a href="#">75319-0115</a>	Flat Tab	Straight Lever	Yes
	<a href="#">75319-1015</a>	Raised Tab		
	<a href="#">75319-2015</a>	Flat Tab	Shepherd Hook Lever	
	<a href="#">75319-0110</a>	Flat Tab	Straight Lever	No
	<a href="#">75319-1010</a>	Raised Tab		
	<a href="#">75319-2010</a>	Flat Tab	Shepherd Hook Lever	

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## 1.27mm (.050") Pitch Micro PGA Socket

47170

Key Version A  
Ball Grid Array (BGA)  
Solder Mount



### Features and Benefits

- Accepts Mobile Pentium® 4 and Mobile Celeron® Processor-M series
- Ball Grid Array (BGA) solder balls are self-centering and avoid the problem of bent tails
- LCP housing and cover with profile height of 3.30mm (.130")
- Dual-beam chamfered contact design provides low insertion force and good electrical performance
- Stainless steel cam retainer protects plastic cover from wear

### Reference Information

Product Specification: PS-51248-005 or PS-51248-020  
Packaging: Tray or tape on reel  
Designed In: Millimeters

### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 25 milliohms max.  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

### Mechanical

Durability: 50 cycles

### Physical

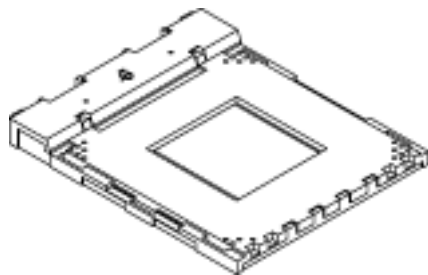
Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—0.25 $\mu$ m (10 $\mu$ ) Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -20 to +90°C

Circuits	Order No.	Pick-and-Place Type	Packaging	Lead-free
478	<a href="#">47170-4781</a>	Pick-and-Place Cover	Tray	Yes
	<a href="#">47170-4782</a>			No
	<a href="#">47170-4783</a>			Yes
	<a href="#">47170-4784</a>	Mylar		No
	<a href="#">47170-4785</a>	Pick-and-Place Cover		Yes
	<a href="#">47170-4786</a>			No
	<a href="#">47170-4787</a>			Yes
	<a href="#">47170-4788</a>	Mylar		No

## 1.27mm (.050") Pitch Micro PGA Socket

500161

Key Version B, (Rotate 180°)  
Ball Grid Array (BGA)  
Solder Mount



### Features and Benefits

- Accepts Mobile Pentium® 4 and Mobile Celeron® Processor-M series
- Ball Grid Array (BGA) solder balls are self-centering and avoid the problem of bent tails
- LCP housing and cover with profile height of 3.30mm (.130")
- Dual-beam chamfered contact design provides low insertion force and good electrical performance
- Stainless steel cam retainer protects plastic cover from wear

### Reference Information

Product Specification: PS-51248-005  
Packaging: Tray or tape on reel  
Designed In: Millimeters

### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 25 milliohms max.  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

### Mechanical

Durability: 50 cycles

### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—10 $\mu$  Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -20 to +90°C

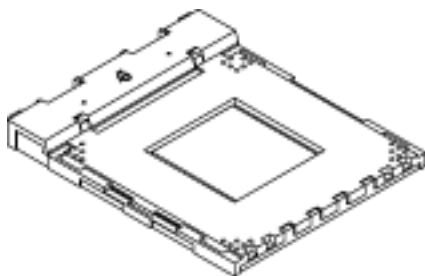
Circuits	Order No.	Packaging	Lead-free
478	<a href="#">500161-4786</a>	Tray	Yes
	<a href="#">500161-4787</a>	Tape on Reel	
	<a href="#">500161-4782</a>	Tray	No
	<a href="#">500161-4784</a>	Tape on Reel	

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## 1.27mm (.050") Pitch Micro PGA Socket

### 500210

Key Version C  
Ball Grid Array (BGA)  
Solder Mount



#### Features and Benefits

- Accepts Mobile Pentium® 4 and Mobile Celeron® Processor-M series
- Ball Grid Array (BGA) solder balls are self-centering and avoid the problem of bent tails
- LCP housing and cover with profile height of 3.30mm (.130")
- Dual-beam chamfered contact design provides low insertion force and good electrical performance
- Stainless steel cam retainer protects plastic cover from wear

#### Reference Information

Product Specification: PS-51248-005  
Packaging: Tray or tape on reel  
Designed In: Millimeters

#### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 25 milliohms max.  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

#### Mechanical

Durability: 50 cycles

#### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—10µ" Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -20 to +90°C

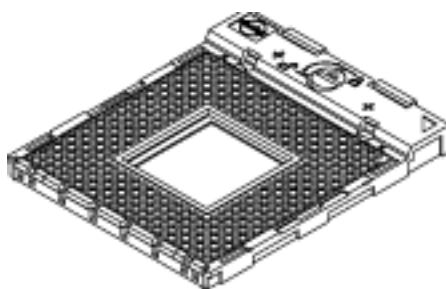
Circuits	Order No.	Pick-and-Place Type	Packaging	Lead-free
478	<a href="#">500210-4785</a>	Mylar	Tape on Reel	Yes
	<a href="#">500210-4786</a>	Pick-and-Place Cover	Tray	
	<a href="#">500210-4787</a>	Pick-and-Place Cover	Tape on Reel	
	<a href="#">500210-4780</a>	Mylar	Tape on Reel	No
	<a href="#">500210-4782</a>	Pick-and-Place Cover	Tray	
	<a href="#">500210-4784</a>	Pick-and-Place Cover	Tape on Reel	

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## 1.27mm (.050") Pitch Micro PGA Socket

### 51248

Ball Grid Array (BGA)  
Solder Mount  
479 Circuits



#### Features and Benefits

- Accepts Mobile Pentium® 4 and Mobile Celeron® Processor-M series
- Ball Grid Array (BGA) solder balls are self-centering and avoid the problem of bent tails
- LCP housing and cover with profile height of 3.30mm (.130")
- Dual-beam chamfered contact design provides low insertion force and good electrical performance
- Stainless steel cam retainer protects plastic cover from wear

#### Reference Information

Product Specification: PS-51248-005 or PS-51248-020  
Packaging: Tray or tape on reel  
Designed In: Millimeters

#### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 25 milliohms max.  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

#### Mechanical

Durability: 50 cycles

#### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—10µ" Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: Nickel  
Operating Temperature: -20 to +90°C

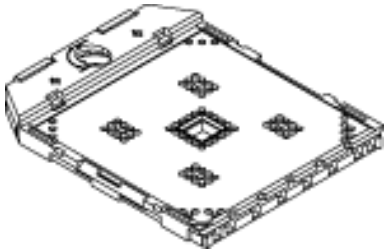
Circuits	Order No.	Pick-and-Place Type	Packaging	Lead-free
479	<a href="#">51248-4798</a>	Pick-and-Place Cover	Tray	Yes
	<a href="#">51248-4799</a>	Pick-and-Place Cover	Tape on Reel	
	<a href="#">51248-4790</a>	Mylar	Tape on Reel	
	<a href="#">51248-4792</a>	Pick-and-Place Cover	Tray	No
	<a href="#">51248-4793</a>	Pick-and-Place Cover	Tray	
	<a href="#">51248-4794</a>	Pick-and-Place Cover	Tape on Reel	

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## 1.27mm (.050") Pitch Micro PGA Socket

**47296**

**Ball Grid Array (BGA)  
Solder Mount  
638 Sockets**



Order No.	Packaging	Lead-free
<a href="#">47296-6111</a>	Tape on Reel	Yes
<a href="#">47296-7111</a>	Tray	

### Features and Benefits

- Lower profile offers better electrical performance
- Small footprint allows space savings
- BGA solder balls are self-centering and prevent bent leads
- Reliable design ensures solder ball true position and coplanarity conformance
- LCP housing and cover with profile height of 3.20mm (.126") after reflow

### Reference Information

Product Specification: PS-47296-001  
Packaging: Tape on reel, JEDEC handling hard tray  
Designed In: Millimeters

### Electrical

Voltage: 100V DC  
Current: 0.5A  
Contact Resistance: 17 milliohms max.  
Dielectric Withstanding Voltage: 650V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Durability: 30 cycles

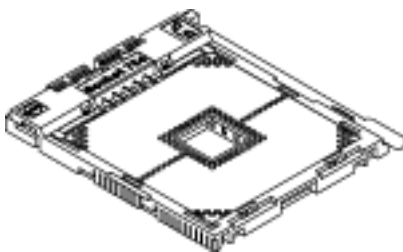
### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Solder Tail Area—Tin/Silver/Copper  
Underplating: 50 $\mu$ " Nickel

## 1.27mm (.050") Pitch Micro PGA Socket

**67766**

**Ball Grid Array (BGA)  
Solder Mount  
754 Circuits**



Circuits	Order No.	Contact Plating	Lead-free
754	<a href="#">67766-1001</a>	Gold Flash	Yes
	<a href="#">67766-1002</a>	15 $\mu$ " Gold	
	<a href="#">67766-1003</a>	30 $\mu$ " Gold	
	<a href="#">67766-0001</a>	Gold Flash	No
	<a href="#">67766-0002</a>	15 $\mu$ " Gold	
	<a href="#">67766-0003</a>	30 $\mu$ " Gold	

### Features and Benefits

- Lower profile height reduces inductance and offers better electrical performance
- Small footprint allows space savings
- Micro PGA socket with BGA solder is self-centering and prevents bent leads
- Reliable solderball attachment ensures solderball true position and coplanarity conformance
- Durable actuation lever designed for reliable processor mounting retention and release

### Reference Information

Product Specification: PS-67766-001 or PS-67766-002  
Packaging: Tray  
Designed In: Millimeters

### Electrical

Current: 1.2A  
Contact Resistance: 20 milliohms max.  
Dielectric Withstanding Voltage: 650V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Durability: 50 cycles

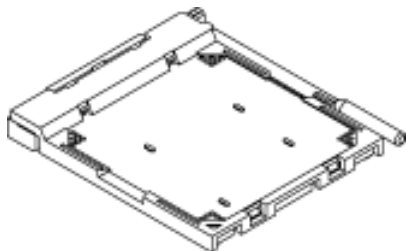
### Physical

Housing: Glass-filled LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: 50 $\mu$ " Nickel  
Operating Temperature: -40 to +85°C

## 1.27mm (.050") Pitch Micro PGA Socket

### 47099

**Ball Grid Array (BGA)  
Solder Mount  
939 and 940 Circuits**



#### Features and Benefits

- High-temperature thermoplastic housing/cover for PCB processing
- Mylar tape and JEDEC hard packaging tray facilitates automation socket placement
- PGA contact/BGA solder balls prevent CPU misalignment
- Easy and visible triangle pin 1 identification on cover and visible socket number marking on cover ensure correct CPU loading
- Highly-durable actuation lever design for reliable processor mounting and dismounting
- Zero Insertion Force (ZIF) feature socket prevents contact from being damaged
- Dual-beam contact design provides reliable electrical and mechanical performance

#### Reference Information

Packaging: Tray  
Designed In: Millimeters

#### Electrical

Voltage: 100V DC  
Current: 1.5A  
Contact Resistance: 20 milliohms max.  
Dielectric Withstanding Voltage: 650V AC  
Insulation Resistance: 1000 Megohms min.

#### Mechanical

Lever Actuation/De-Actuation Force: 3.6kgf (8.6 lbf) max.  
Durability: 50 cycles

#### Physical

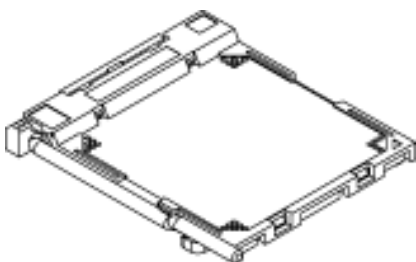
Housing: Glass-filled LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Solder Tail Area—Tin/Silver/Copper or Tin/Lead  
Underplating: 50 $\mu$ " Nickel

Circuits	Order No.		Plating
	Lead-free	Tin/Lead	
939	<a href="#">47099-9131</a>	<a href="#">47099-9130</a>	0.76 $\mu$ m (30 $\mu$ " Gold)
	<a href="#">47099-9121</a>	<a href="#">47099-9120</a>	0.38 $\mu$ m (15 $\mu$ " Gold)
	<a href="#">47099-9111</a>	<a href="#">47099-9110</a>	Gold Flash
940	<a href="#">47099-0131</a>	<a href="#">47099-0130</a>	0.76 $\mu$ m (30 $\mu$ " Gold)
	<a href="#">47099-0121</a>	<a href="#">47099-0120</a>	0.38 $\mu$ m (15 $\mu$ " Gold)

## 1.27mm (.050") Pitch Micro PGA Socket

### 51289

**Ball Grid Array (BGA)  
Solder Mount  
959 Circuits**



#### Features and Benefits

- Lower profile offers better electrical performance
- Small footprint allows space saving
- BGA solder balls are self-centering and prevent bent leads
- Reliable design ensures solder ball true position and coplanarity conformance
- Durable and proven lever actuation design
- LCP housing and cover with profile height of 3.80mm (.150") to 4.20mm (.165") after reflow

#### Reference Information

Product Specification: RPS-51289-003  
Packaging: Tray  
Designed In: Millimeters

#### Electrical

Voltage: 120V  
Current: 0.5A  
Contact Resistance: 30 milliohms max.  
Dielectric Withstanding Voltage: 360V AC  
Insulation Resistance: 800 Megohms min.

#### Mechanical

Durability: 50 cycles

#### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—12 $\mu$ " Gold  
Solder Tail Area—Tin/Lead or Tin/Silver/Copper  
Underplating: 50 $\mu$ " Nickel  
Operating Temperature: -40 to +100°C

Circuits	Order No.	Pick-and-Place Type	Lead-free
959	<a href="#">51289-9599</a>	Pick-and-Place Cover	Yes
	<a href="#">51289-9591</a>		No
	<a href="#">51289-9598</a>	Mylar	Yes
	<a href="#">51289-9592</a>		No