Ball / Land Grid Array Sockets

Solderless Compression Type

RoHS 2002/95/EC compliant

E-tec Interconnect

E-tec is now the leading BGA socket manufacturer and offers a solderless socket where board to chip contact is made without the need to solder.

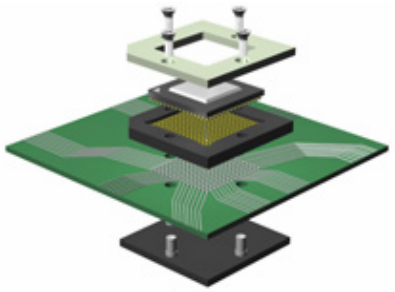
EP patents 0829188, 0897655 US patents 6190181, 6249440 Patented in other countries.

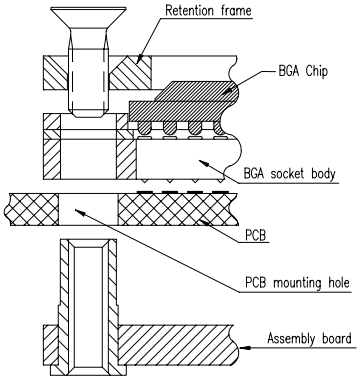
Solderless compression type sockets are available for any chip size and grid pattern.

The solderless socket is easily mounted to the PCB with 4 through hole mounting pegs. The assembly board ensures perfect coplanarity of the socket. Contact reliability is guaranteed with spring loaded gold plated contacts, which are pressed onto gold plated PCB pads. Solderless compression type sockets are generally supplied with a screw lock retention system, but knob lock, lever lock, quick lock and clam shell retention systems are also available on request. We aim to solve your requirements - many different terminals and configurations are available. Your custom sets our standards!

Please note, we will always request the chip data to ensure we offer a compatible socket.

Screw Lock Type





You may request any specific socket dimension from info@e-tec.com

Recommended PCB layout gold plated pads:

Ø 0,70mm/.027“ if pitch 1,27mm
Ø 0,60mm/.024“ if pitch 1,00mm
Ø 0,50mm/.020“ if pitch 0,80mm
Ø 0,45mm/.018“ if pitch 0,75mm
Ø 0,40mm/.016“ if pitch 0,65mm
Ø 0,35mm/.012“ if pitch 0,50mm

Important Note:

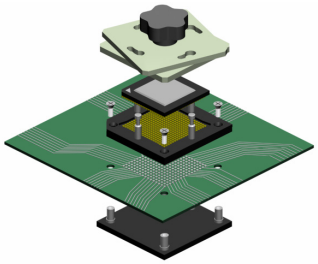
Please check the ball diameters & heights of your chip prior to ordering the standard E-tec BGA (BCP, BPP) sockets. Any deviation has to be communicated to E-tec in order to check compatibility with the standard socket design and if necessary to obtain a special order code adapted to your chip dimensions.

The standard solderball diameters & heights are the following:

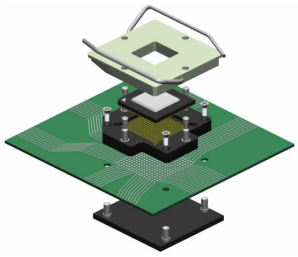
Pitch	ball *diameters min/max*	ball *height min/max*
0.50mm	*0.25mm / 0.35mm*	*0.15mm / 0.30mm*
0.65mm	*0.25mm / 0.45mm*	*0.15mm / 0.30mm*
0.75mm	*0.25mm / 0.45mm*	*0.15mm / 0.40mm*
0.80mm	*0.40mm / 0.55mm*	*0.25mm / 0.45mm*
1.00mm	*0.50mm / 0.70mm*	*0.30mm / 0.50mm*
1.27mm & 1.50mm		
a) plastic chips (BPP)	*0.60mm / 1.00mm*	*0.50mm / 0.70mm*
b) ceramic chips (BCP)	*0.60mm / 1.00mm*	*0.80mm / 1.00mm*

If the minimum ball diameter of a given chip falls below the above indications, then a BUP socket will generally be proposed.

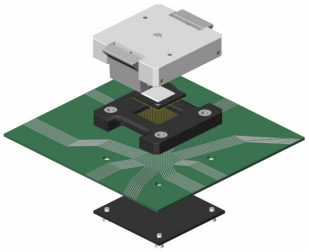
Knob Lock Type



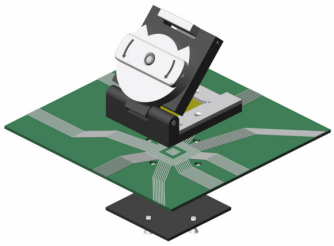
Lever Lock Type



Quick Lock Type



Clam Shell Type



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Specifications

Mechanical data

Contact life	10.000 cycles min.
Retention System life	Twist- & Lever-Lock 1.000 cycles min. Knob-, Quick-Lock & Clamshell 10.000 cycles min.
Solderability	exceeds MIL-STD-202 Method 208
Individual contact force	40 grams max.

Material

Insulator	*(RoHS compliant)*	High temp plastic or epoxy FR4
Terminal	*(RoHS compliant)*	Brass
Contact	*(RoHS compliant)*	BeCu

Electrical data

Contact resistance	< 100 mΩ
Current rating	500 mA max.
Insulation resistance at 500V DC	100 MΩ if 0.50 to 0.80mm pitch 500 MΩ 1.00mm pitch upwards
Breakdown voltage at 60 Hz	500V min.
Capacitance	< 1 pF
Inductance	< 2 nH
Operating temperature	–55°C to +125°C ; 260°C for 60 sec.

How to order

X X P xxxx - xx 90 - xx XX 55

Device Type

B = Ball Grid
L = Land Grid
C = Column Grid

Device Material

C = std. socket for ceramic device
P = std. socket for plastic device
U = socket adapted to small diameter solderballs

Pitch

05 = 0,50mm
06 = 0,65mm
07 = 0,75mm
08 = 0,80mm
10 = 1,00mm
12 = 1,27mm
15 = 1,50mm
others on request

Grid Code | Config Code

will be given by the factory after receipt of the chip datasheet

Plating

55 = gold

Socket Type

P = Screw Lock *(standard)*

C = Clamshell
Q = Quick Lock
K = Knob Lock
Z = Lever Lock

Nbr of contacts

depends on ballcount of chip