

Ball / Land Grid Array Sockets

Lever Lock Type

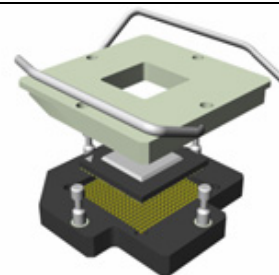


E-tec is now the leading BGA socket manufacturer.

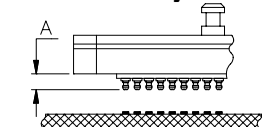
EP patents 0829188, 0897655 US patents 6190181, 6249440 Patented in other countries.

Lever lock sockets are available for a large variety of chip sizes. The SMT socket is simply placed and reflowed onto the PCB in the same way as the chip and occupies only a small amount of additional board space. The 1.27mm pitch Lever lock socket extends ≈ 6.00mm beyond the outer ball row with no fixing holes required. 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.



SMT Style

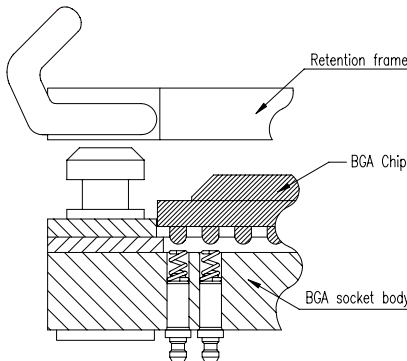


PCB Pad Layout

Pitch

Solder Pad

Ø 0,60mm/.024" if pitch 1,27mm
Ø 0,50mm/.020" if pitch 1,00mm
Ø 0,40mm/.016" if pitch 0,80mm
Ø 0,35mm/.014" if pitch 0,75mm
Ø 0,35mm/.014" if pitch 0,65mm
Ø 0,30mm/.012" if pitch 0,50mm



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

Important Note:

Please check the ball diameters & heights of your chip prior to ordering the standard E-tec BGA (BCZ, BPZ) 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:

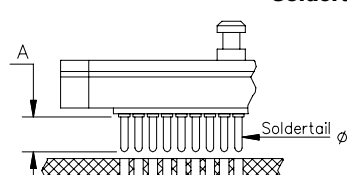
Pitch	ball diameters min/max	ball height min/max
0.50mm	0.25mm / 0.35mm	0.15mm / 0.30mm
0.65mm	0.25mm / 0.45mm	0.15mm / 0.30mm
0.75mm	0.25mm / 0.45mm	0.15mm / 0.40mm
0.80mm	0.40mm / 0.55mm	0.25mm / 0.45mm
1.00mm	0.50mm / 0.70mm	0.30mm / 0.50mm

1.27mm & 1.50mm

- a) plastic chips (BPZ) 0.60mm / 1.00mm 0.50mm / 0.70mm
b) ceramic chips (BCZ) 0.60mm / 1.00mm 0.80mm / 1.00mm

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

Soldertail Style



Soldertail:

Ø 0,42mm/.016" if pitch 1,27mm
Ø 0,29mm/.011" if pitch 1,00mm
Ø 0,29mm/.011" if pitch 0,80mm
Ø 0,27mm/.010" if pitch 0,75mm
Ø 0,27mm/.010" if pitch 0,65mm
Ø 0,27mm/.010" if pitch 0,50mm

PCB Hole Layout

Pitch

solder hole

PCB solder hole:

Ø 0,60mm/.024" if pitch 1,27mm
Ø 0,50mm/.020" if pitch 1,00mm
Ø 0,40mm/.016" if pitch 0,80mm
Ø 0,35mm/.014" if pitch 0,75mm
Ø 0,35mm/.014" if pitch 0,65mm
Ø 0,35mm/.014" if pitch 0,50mm

The pitch dimension depends on your Ball Grid Array

Specifications

Mechanical data

Contact life 10.000 cycles min.
Retention System life 1.000 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.

Recommendations

Solder paste Please use a solder paste w/o any silver!
Solder profile Please refer to our website www.e-tec.com

How to order

X X Z x x x x - x x x x - x x X X x x L ← optional for locating pegs

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

08 = 0,80mm
10 = 1,00mm
12 = 1,27mm
15 = 1,50mm

others on request

Grid Code

will be given by factory after receipt of the chip datasheet.
Chips with dimensions over 35x35mm: Lever lock not available.
Chips with dimensions below 21x21mm: please contact E-tec for availability first.

Config Code

Plating

95 = tin/gold (tin leadfree)
55 = gold
only for solderless Compression Type

Nbr of contacts

Depends on ballcount of chip. For chips with ballcount <100 or >800 please contact E-tec for availability first

Contact Type

30 = standard SMT... („A“ = 1,20mm if 1,27mm pitch; 0,80mm if 1,00mm pitch; 0,60 if 0,80mm pitch; 0,40mm if <0,80mm pitch)
29 = raised SMT... („A“ = 5,00mm if 1,27mm pitch; 3,20mm if 1,00mm pitch; 2,80mm if 0,80mm pitch; 2,30mm if <0,80mm pitch)
28 = special raised SMT - only for 1.00 & 0.80mm pitch..... („A“ = 4,50mm)
70 = standard solder tail..... („A“ = 3,30 if 1,27mm pitch; 2,80 if 1,00mm or 0,80mm pitch; 2,30mm if <0,80mm pitch)
90 = solderless compression type sockets