

Ball / Land Grid Array Sockets

Solderless Compression Type



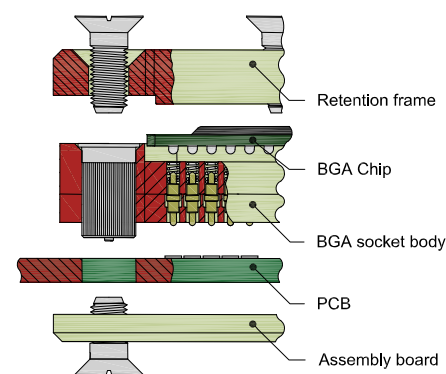
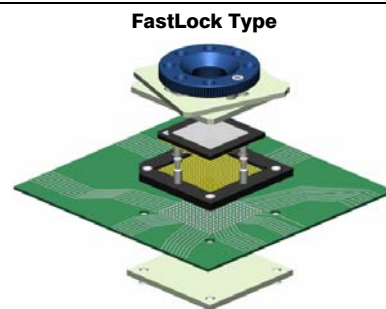
E-tec is now the leading BGA socket manufacturer and offers a solderless socket where board to chip contact is made without the need to solder.

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 available with FastLock, TwistLock, "Economy" ClamShell, QuickLock, LeverLock and "Professional" ClamShell retention systems. 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.



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

Recommendations:

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
 Ø 0,25mm/.010" if pitch 0,40mm

PCB thickness:

E-tec solderless sockets are adapted to a standard PCB thickness of 1.60mm.
 For a different PCB thickness, please inform E-tec first!

Important Note:

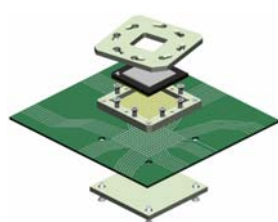
Please check the ball diameters & heights of your chip prior to ordering the standard E-tec BGA (BPW) sockets. Any deviation has to be communicated to E-tec in order to check compatibility with the standard socket design and if necessary to obtain a special order code adapted to your chip dimensions.

The standard solderball diameters & heights are the following:

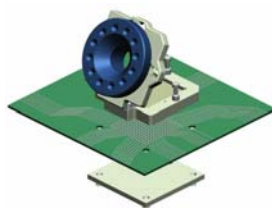
Pitch	ball diameters min/max	ball height min/max
0.50mm	0.25mm / 0.35mm	0.20mm / 0.30mm
0.65mm	0.25mm / 0.45mm	0.20mm / 0.30mm
0.75mm	0.25mm / 0.45mm	0.20mm / 0.40mm
0.80mm	0.40mm / 0.55mm	0.25mm / 0.45mm
1.00mm	0.50mm / 0.70mm	0.30mm / 0.50mm
1.27mm & higher	0.60mm / 1.00mm	0.50mm / 1.00mm

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

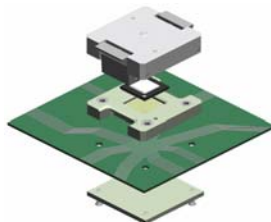
TwistLock Type



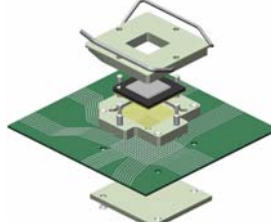
ClamShell "Economy" Type



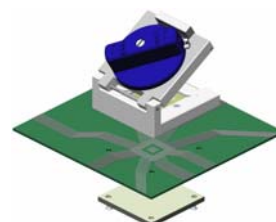
QuickLock Type



LeverLock Type



ClamShell "Professional" Type



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

Specifications

Mechanical data

Contact life 10.000 cycles min.
 Retention System life TwistLock & LeverLock 1.000 cycles min.
 Fast-, QuickLock & ClamShell 10.000 cycles min.
 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 W x x x x - x x x x - x x x x 55 L

Device Type

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

Socket Type

P = socket for LGA, CGA and BGA chips with std diameter solderballs in 0.80mm pitch or higher (see dimensions in table above)
 U = socket for BGA chips with small diameter solderballs and for all chips with a pitch of 0.75mm or lower

Pitch

04 = 0,40mm
 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

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

Config Code

Plating

55 = gold

Locking Type

F = FastLock
 C = ClamShell "Professional" Type
 E = ClamShell "Economy" Type
 Q = QuickLock
 W = TwistLock
 Z = LeverLock

Nbr of contacts

depends on ballcount of chip

Option

90 = standard probes up to 3 GHz
 91 = high speed probes exceeding 10 GHz