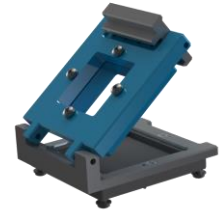


E-tec is now the leading BGA socket manufacturer.

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

Opened Clamshell sockets are available for any chip size and grid pattern. 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 solderless sockets are mounted with 2 to 8 mounting pegs to the PCB depending on the chip size. The Opened Clamshell retainer uses does not require any tools for opening/closing of the socket for chip smaller than, and use a thumbscrew for bigger component. In case of thumbscrew, a torque tools or adjustment of pressdown force are available with this locking system also.



We aim to solve your requirements – your custom sets our standards!

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

SMT style	Soldertail style	Solderless Compression style
<p><b>SMT style</b></p> <p>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</p>	<p><b>Soldertail dimension:</b></p> <p>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                      Ø 0,17mm/.007" if pitch 0,40mm</p> <p><b>PCB solder hole:</b></p> <p>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                      Ø 0,25mm/.010" if pitch 0,40mm</p>	<p>You may request any specific socket dimension from "</p> <p>gold plated pads Ø 0,70mm/.027" if pitch 1,27mm                      gold plated pads Ø 0,60mm/.024" if pitch 1,00mm                      gold plated pads Ø 0,50mm/.020" if pitch 0,80mm                      gold plated pads Ø 0,45mm/.018" if pitch 0,75mm                      gold plated pads Ø 0,40mm/.016" if pitch 0,65mm                      gold plated pads Ø 0,35mm/.012" if pitch 0,50mm                      gold plated pads Ø 0,25mm/.010" if pitch 0,40mm</p>

**Important Note:**

Please check the *ball diameters & heights of your chip* prior to ordering the standard E-tec BGA (BPC) 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 BUJ socket will generally be proposed.**

**Specifications**

**Mechanical data**

Contact life: 0.000 cycles min.  
 Solderability: as per IEC 60068-2-58  
 Individual contact force: 40 grams max. (20 grams on request)

**Material**

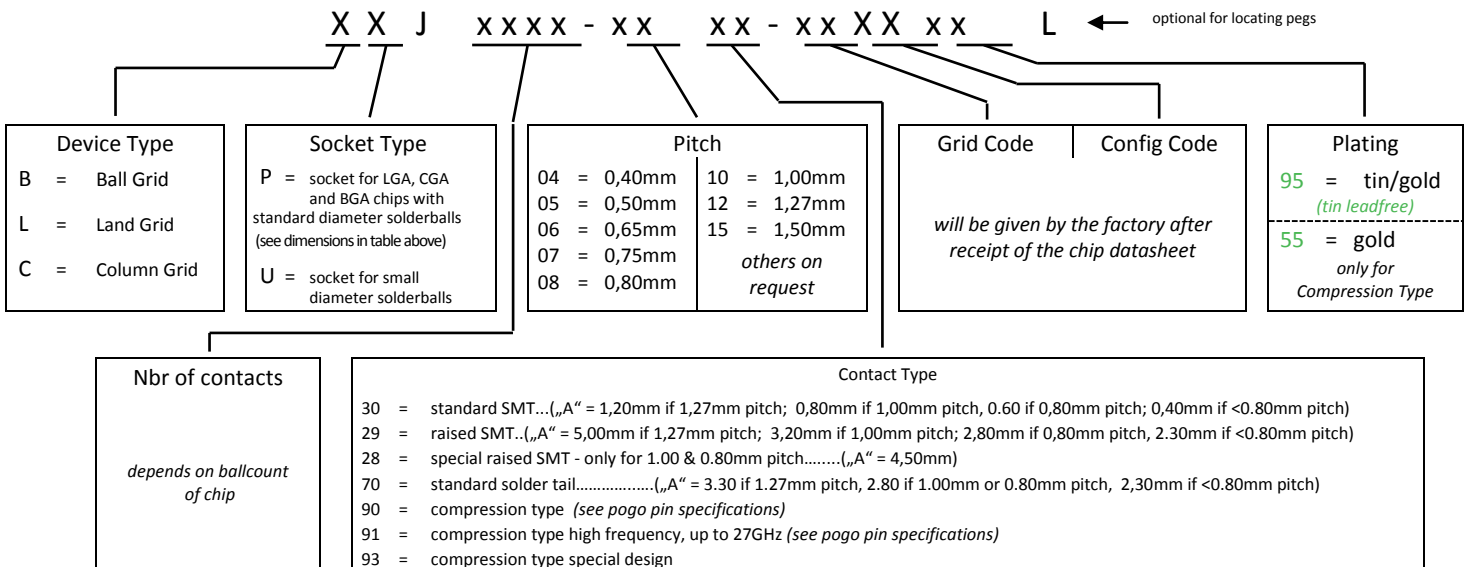
Insulator: (RoHS compliant) High temp plastic – Polyepoxy - aluminum  
 Terminal: (RoHS compliant) Brass  
 Contact: (RoHS compliant) BeCu

**Electrical data**

Contact resistance: < 100 mΩ (please refer to table 1.)  
 Current rating: 500 mA max.  
 Insulation resistance at 500V DC: 100 MΩ if <0.80mm pitch 500 MΩ upwards

Breakdown voltage at 60 Hz: 500V min  
 Capacitance: < 1 pF  
 Inductance: < 2 nH  
 Operating temperature: -55°C to +125°C (up to 250°C or 450°C on request)

### How to order

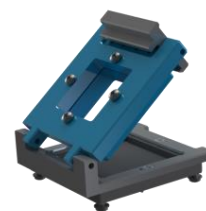


## OPEN CLAMSHELL DIMENSIONS,

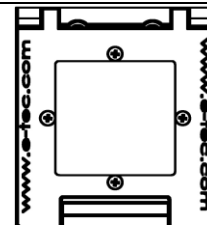
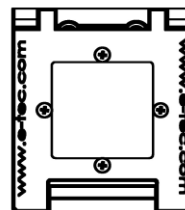
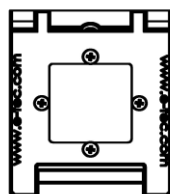
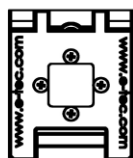
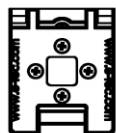
ACCORDING DIMENSIONS COMPONENT

Available for BGA, LGA, , QFN, PGA,

Ask dimensions for : Flatpack, gullwing, or special design.



Chip:	6 to 10 mm	11 to 15 mm	16 to 20mm	21 to 30 mm	31 to 35mm	36 to 40mm
A	31	36	43	53	58	63
B	23	28	33	43	48	53
C	27	27	27	27	27	27
D	45	45	45	45	45	45
E	4	4	4	4	4	4
F	5	8	12	22	27	32
G	10	10	15	15	20	25



CHIP 6 TO 10mm

CHIP 11 TO 15mm

CHIP 16 TO 20mm

CHIP 21 TO 30mm

CHIP 31 TO 35mm

CHIP 36 TO 40mm

Pin account:	your chip has < 200 positions	your chip has > 200 positions	your chip has > 200 positions
Type to use	Open clamshell – Code <b>N</b>	Full open clamshell – Code <b>L</b>	Open button clamshell – Code <b>J</b>
Side View AOL Dimensions	<p>Solderless Compression Style Example</p>	<p>Solderless Compression Style Example</p>	<p>Solderless Compression Style Example</p>
Top view AOL Dimensions			