E-tec test & production sockets

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Which information is needed by E-tec to propose the right customized socket

1) What kind of IC package is tested?

E-tec needs to know:

- What kind of IC package is it: BGA, LGA, CGA, QFN, MLF, TSOP, SSOP, Gullwing chips,…

- The external chip dimensions, the pitch and the footprint

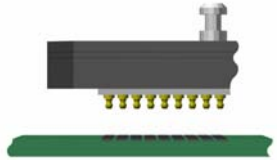
- The best is to receive the PDF file of the footprint with all dimensions

2) What is the maximum frequency needed by the IC package?

-E-tec has different kind of connections possibilities for the test sockets, this depends on the frequency needed by the IC package.

3) Which kind of soldering type is needed on the PCB?

- E-tec can propose different type of soldering to fix the socket on the PCB, this depends on how the PCB of the customer is designed.

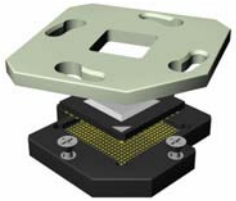


4) Which kind of retainer is needed?

- How many times will the socket be open every day?

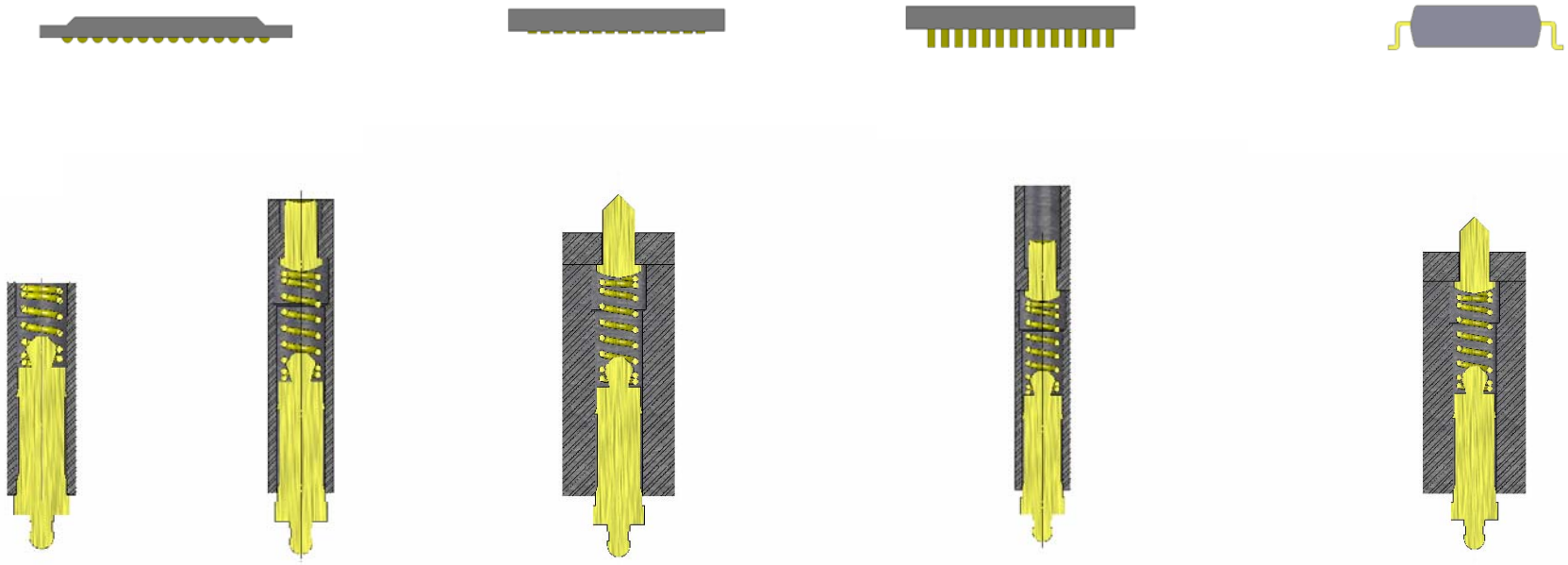
- Is there a space limit above the socket?

- How many contacts has the IC package?



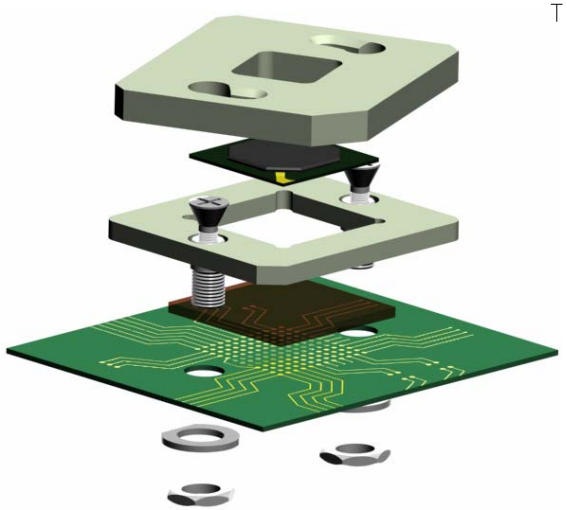
What kind of IC package is tested?
What is the maximum frequency needed by the IC package?

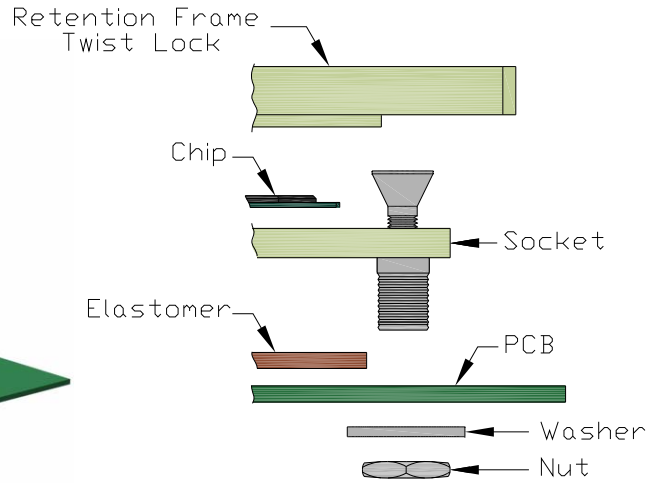
BGA Ball Grid Array	LGA Land Grid Array	CGA Column Grid Array	Gullwing and QFN/MLF socket

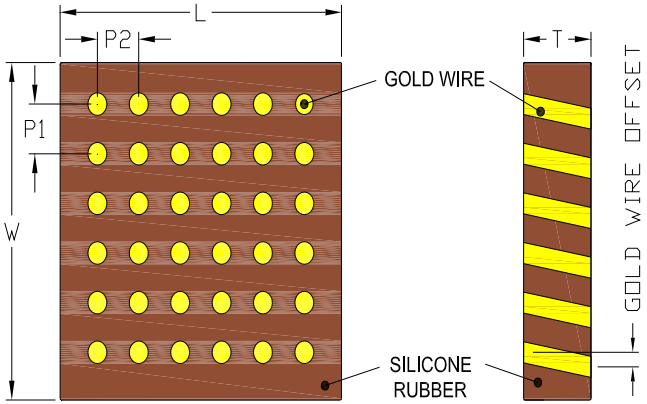


Pins for standard grid array up to 3.4 GHz
Probe pins up to more than 10GHz

Elastomer sockets for test & prototyping up to 10 GHz





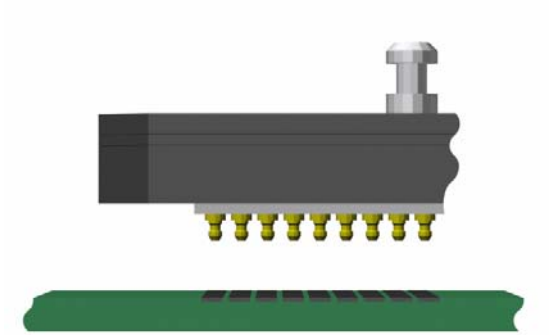


The main features offered with this elastomer socket system are :

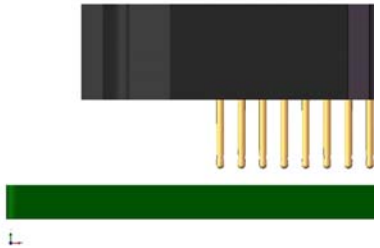
- high frequency with up to 10 GHz
- full grid contact for any grid design
- accepts any pitch down to 0.30mm
- short current paths of 0.50 and 1.00mm thick elastomer interposers
- adapted to most chip styles (LGA, BGA, QFN, etc)
- quick & easy replacement of elastomer interposers

Which kind of soldering type is needed on the PCB?

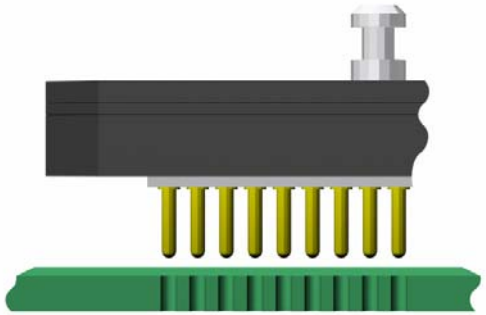
SMD Type



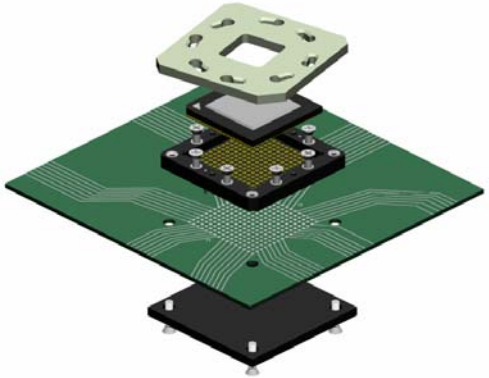
Raised SMD Type



Thru-Hole Type

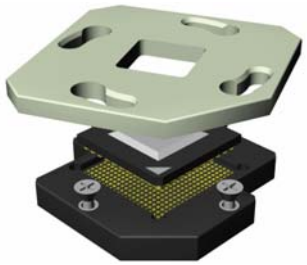


Solderless Type

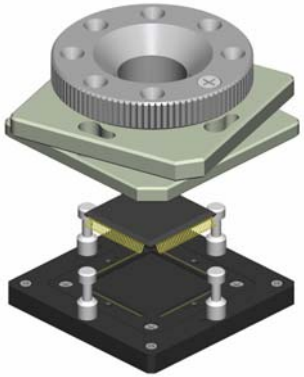


Which kind of retainer is needed?

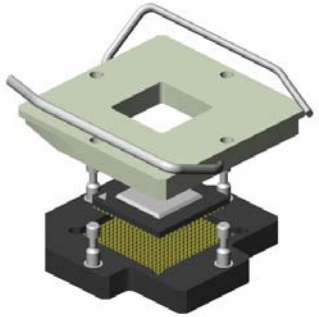
TwistLock



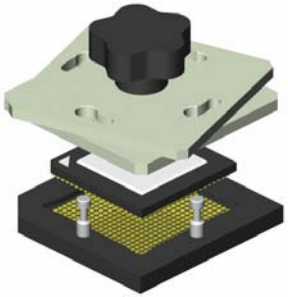
FastLock



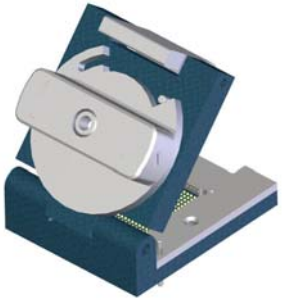
Zif leverLock



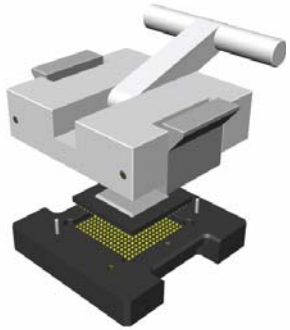
KnobLock

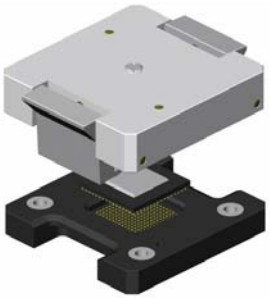


Clamshell



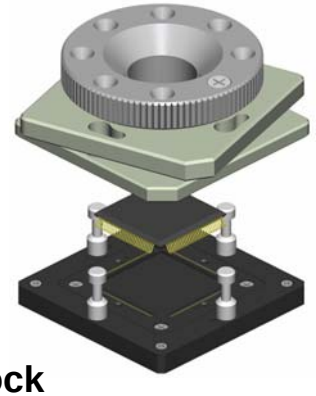
QuickLock with/without lever



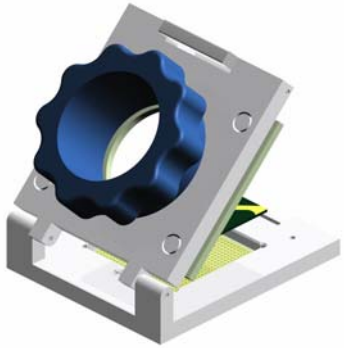


Open top sockets series for test & prototyping

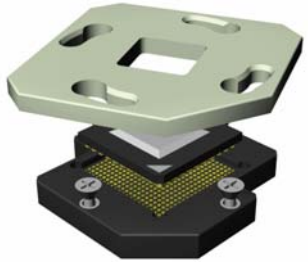
Open top FastLock



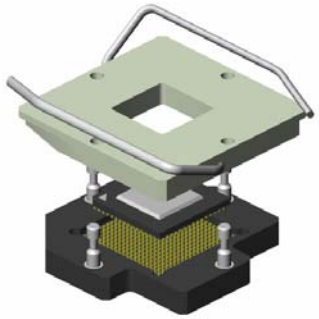
Open top Clamshell



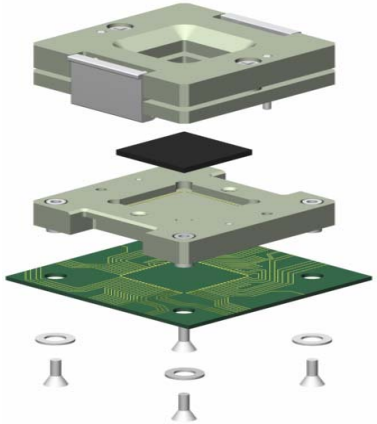
Open top TwistLock



Open top Zif leverLock

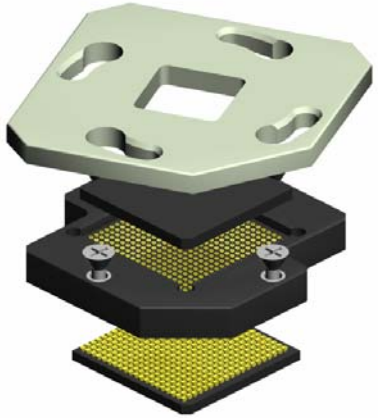


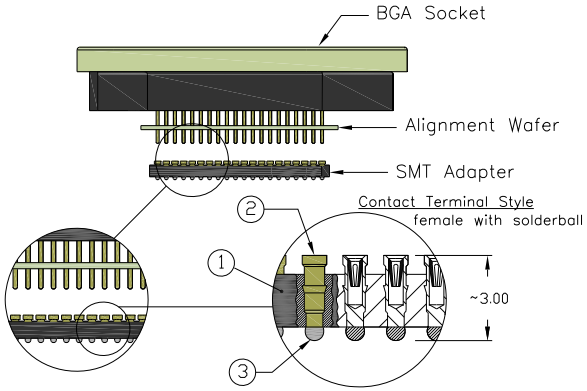
Open top QuickLock

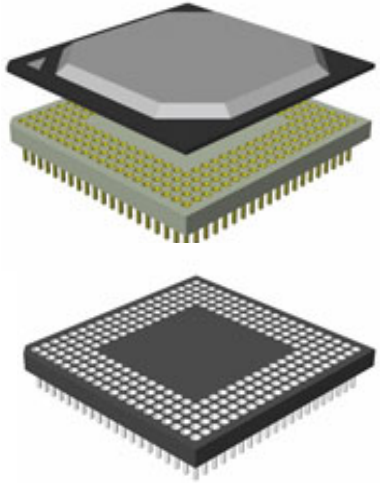


The main features offered with these open top socket styles are :
-access to the die of the chip for probing
-improved heat dissipation
-possibility to attach heatsinks
-simple opening & closing of the retainers
-more than 10’000 cycles

MiniGrid and SMT solderball adapter for BGA, LGA & CGA sockets



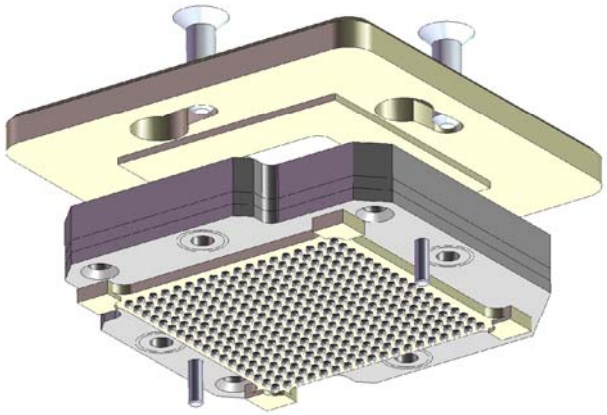




The main features of this BGA SMT solder adapter are the following:
-alternative to raised SMT socket (adapter creates additional height above board)
-easier soldering of the adapter compared to direct soldering of the SMT sockets
-mini-grid socket available with solid SMT pins or pins with solderball terminations
-the adapter has the same footprint as the BGA chip
-available in 0.80, 1.00 and 1.27mm pitch
-adapted to the E-tec sockets for BGA, LGA & CGA chips
-adapted to various socket locking systems: FastLock, TwistLock, KnobLock, QuickLock socket

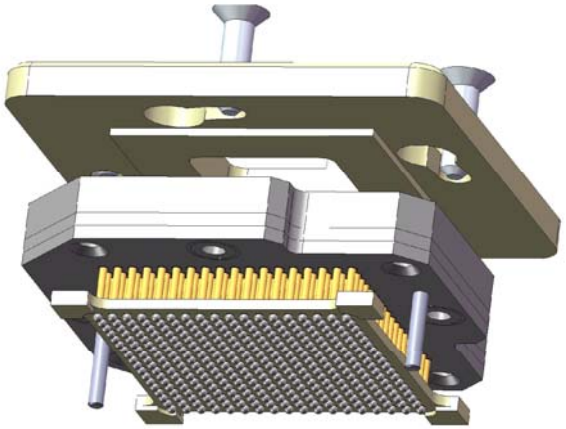
Test socket with soldering balls

SMT



NEW by E-tec

Raised SMT



The main features of this BGA SMT solderballs are the following:
-alternative to SMT and Raised SMT pin socket
-easier soldering of the socket compared to pin soldering
-the socket has the same footprint as the BGA chip
-Currently available in 1.00mm and 1.27mm pitch
-Other pitches to follow soon (new pin set-up time around 8 weeks)
-adapted to the E-tec sockets for BGA, LGA & CGA, QFN, Gullwing chips
-adapted to various socket locking systems: FastLock, TwistLock, KnobLock, QuickLock sockets

Advantages of each socket

- Standard Pin/Spring Socket:
  Pitch as from 0.40mm
  Up to 3.4 GHz (special HF probe pin available on request also up to more than 10GHz as from 0.4mm pitch)
  More resistant
  Possiblity to clean the contacts
  Insertions (up to 10’000 cycles)
  Possibility of rush service (5,7,10 and 15 days) or a standard delivery time 4 – 6 weeks

- Elastomer Socket:
  Pitch as from 0.30mm
  Up to 10 GHz
  Insertions (up to 1’000 cycles) depending of the user gracefulness
  Use of different chips on the same sockets as long as the external dimensions are the same
  Easy change of the elastomer interposer
  Possiblity of rush service but on request only or a standard delivery time 4- 6 weeks

Which questions to ask to receive a quote?

1) What kind of IC package is tested?

E-tec needs to know:

- What kind of IC package is it: BGA, LGA, CGA, QFN, MLF, TSOP, SSOP, Gullwing chips,…

- The external chip dimensions, the pitch and the footprint

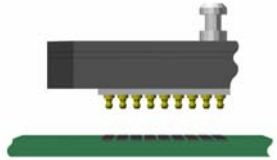
- The best is to receive the PDF file of the footprint with all dimensions

2) What is the maximum frequency needed by the IC package?

-E-tec has different kind of connections possibilities for the test sockets, this depends on the frequency needed by the IC package.

3) Which kind of soldering type is needed on the PCB?

- E-tec can propose different type of soldering to fix the socket on the PCB, this depends on how the PCB of the customer is designed.

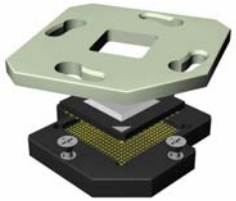


4) Which kind of retainer is needed?

- How many times will the socket be open every day?

- Is there a space limit above the socket?

- How many contacts has the IC package?



5) How many parts needs the customer?

- How many parts of each product does the customer need per delivery?

1, 2, 10, 25 pcs…