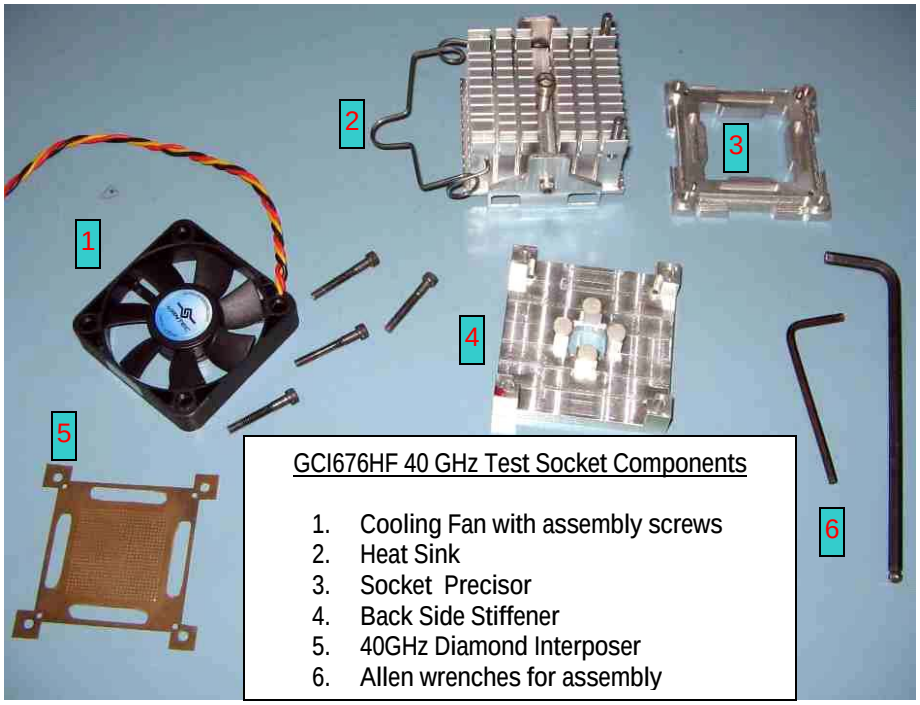
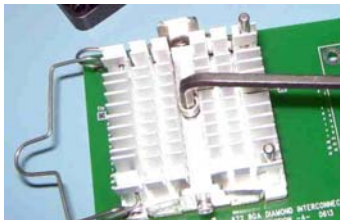
- 40 GHz Bandwidth
- High Pin count BGA Test Socket
- No Measurable Inductance or Capacitance

GCi Giga Connections, inc

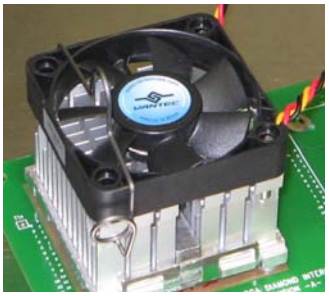
"Performance as good a solder"

Giga Connections, Inc. integrates a *Diamond Plated (DP) Interposer* with a new one-screw heat sink/fan test socket assembly to create a new line of low cost and easy-to-assemble BGA test sockets with interconnect bandwidths beyond 40 GHz. The socket assembly requires only 3-4 inch lb torque to achieve continuity on all 672 BGA balls. This socket can be sized to meet specific pin count. The (DP) interposer consistently demonstrates almost no inductance or capacitance following thousands of insertions. The typical 1% impedance interconnect discontinuity is similar to a soldered junction, such that for Gigabit applications, the (DP) socket makes an excellent replacement for RF pogo pin or spring type socket architectures.

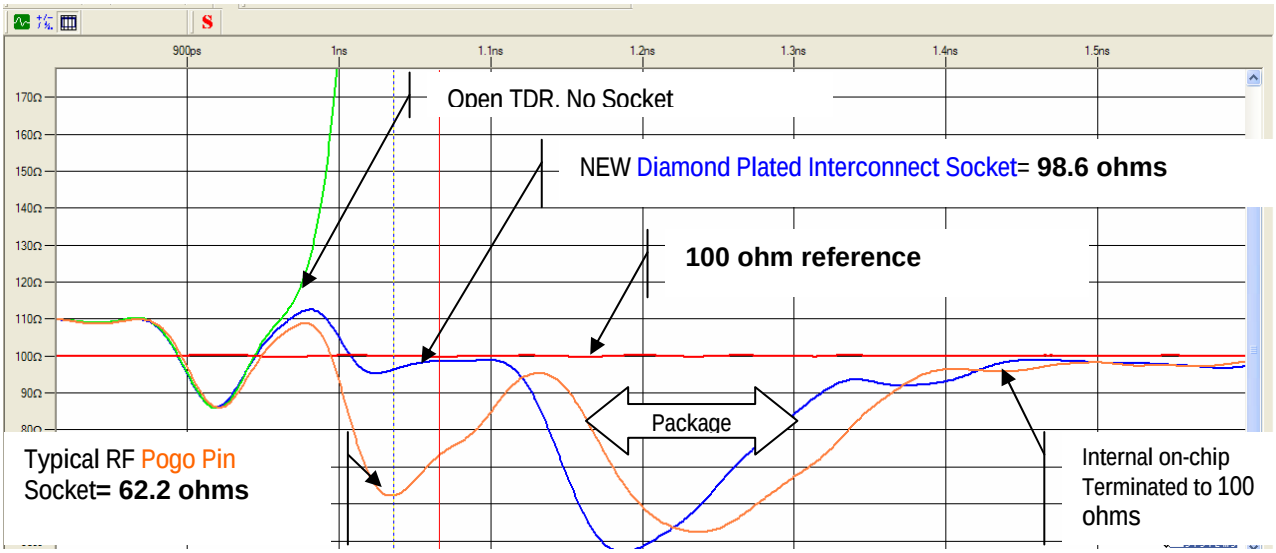




3-4 in. lb torque one screw assembly



Complete GCI676HF Assembly

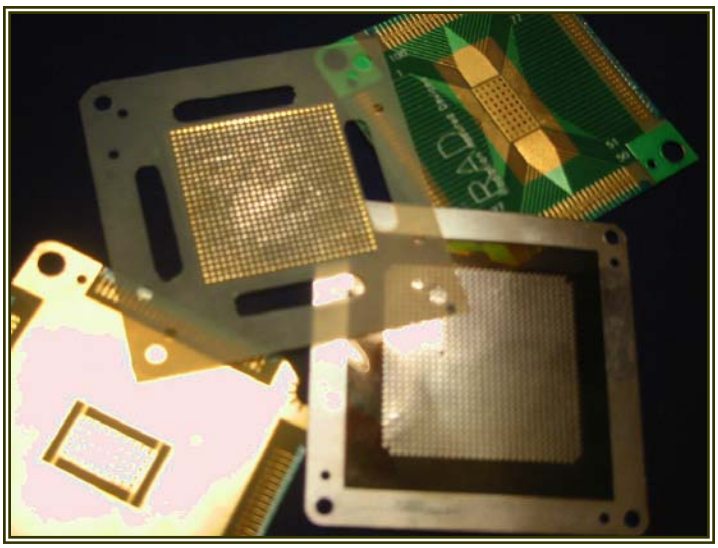


The **GCI676HF** Diamond Plated (DP) socket is a better match for the PCB and the transceiver IC onboard terminator. Most significantly, the (DP) shows no capacitive or inductive reactance. With a uniform impedance profile, the DI socket improves the interconnect system Return Loss.

Diamond Plated Interposer Specifications

- > 40 GHZ bandwidth
- No scrubbing
- Gold plated 30-50 micro-inches of hard gold (standard). Tin or solder plating is available. Contact surface can be refurbished.
- >1.5 million insertions without measurable degradation in signal integrity.
- As little as 10 Grams of force requirement to achieve continuity connection.
- Current handling for 10 mil diameter pad is ~15amps.
- No inductance, no capacitance, 1 % increase in impedance.
- (DP) material is not harmed by compression.
- Ability to withstand environmental changes: temperature/humidity/vibration/shock
- Corrosive resistant, and can be exposed to salt.
- (DP) Material can be custom designed to withhold up to 26 Gs of shock and vibration.
- Temperature dependence is determined by the substrate material:
  - –40C to 150C FR4
  - –60C to 200C for Kapton film
  - 4K to 400 C on crystalline (ceramic or silicon) substrate.

- Contact point size is 5um; 4-mil pitch can be achieved.
- Clean with an ultrasound. Otherwise use an adhesive tape that leaves no residue.
- RoHs compliance - lead free



40GHz Diamond Plated Interposers for any size test socket or device

Contact Information

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GCI
Giga Connections, inc.