

DIGI-KLIP High Performance Data Contacts and Technical Specifications

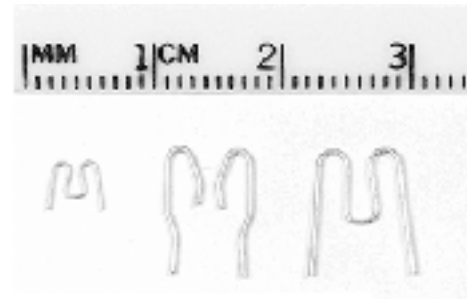
The patented *DIGI-KLIP*®, free-standing card edge interconnect system is based upon a unique contact principle, distinctive from traditional methods of connector fabrication. The *DIGI-KLIP*® contact is formed from soft beryllium copper alloy wire and heat treated after forming, while typical card edge contacts are progressive die stamped from mill-hardened strip stock.



Significant advantages in contact structure and performance result from this manufacturing process. Post forming heat treatment utilizes the full potential of the beryllium copper alloy in optimizing the spring temper of the contact and enhancing its ability to withstand stress relaxation. Due to the forming of the contact profile from soft material, relatively small bend radii may be employed while alloying for a very compact overall design which provides space savings and an extremely short signal path. Additionally, the *DIGI-KLIP*® contact point provides a "ball" type footprint. This feature insures an extremely high unit pressure at the mating junction which guarantees a "gas tight" interconnect while offering a true "wiping action" contact. This capability is of particular advantage in today's high speed, low level switching environments. In these critical applications, the most minute presence of surface oxides, film or contamination can result in loss of signal or contact disruption.

Contact Style Choices

All *DIGI-KLIP*® free-standing card edge contacts are designed for use in "board-to-board" interconnect applications. There are four series from which to choose, and all of them are provided pre-loaded on disposable injection molded carrier strips for mass mounting,



Typical *DIGI-KLIP*® Contact Styles

alignment and soldering.

SRP SERIES: standard single row applications; for 0.062" daughter card mating; available in increments of 0.100", 0.150" and 0.156".

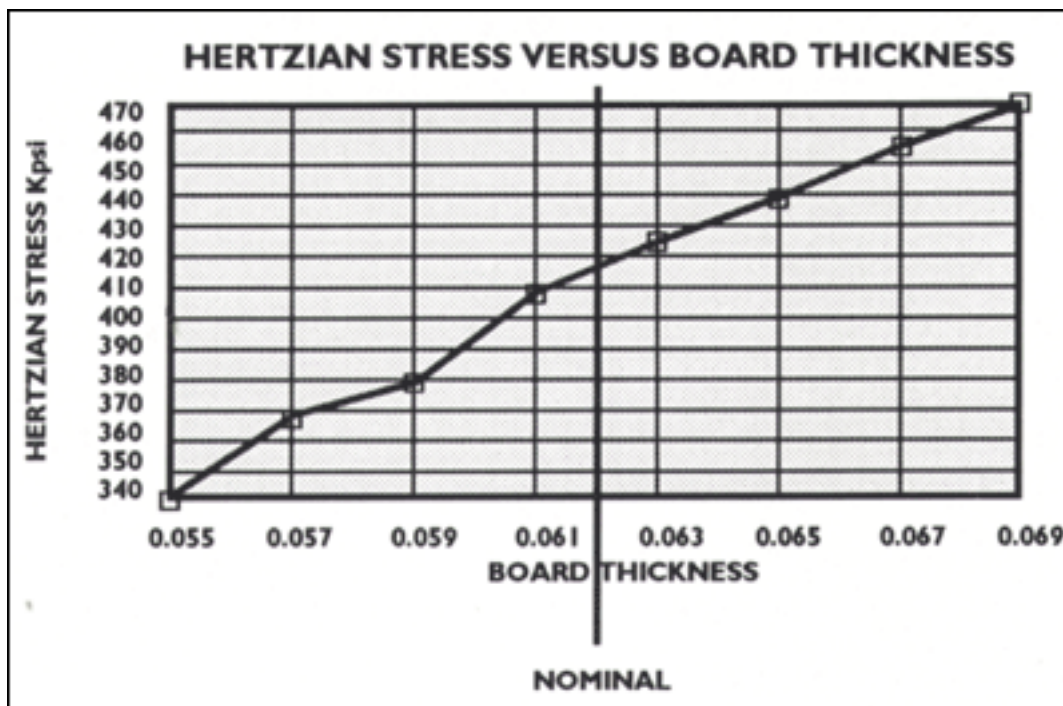
DRP SERIES: standard dual row applications; for 0.062" daughter card mating; available in increments of 0.100", 0.150" and 0.156".

SMA SERIES: micro-miniature single row applications; for 0.062" daughter card mating; available in increments of 0.050" and 0.100".

SMP SERIES: micro-miniature single row applications; for 0.031" daughter card mating; available in increments of 0.050" and 0.100".

Performance Specifications for High-Speed Applications

The following parameters are expressed for the SRP series DIGI-KLIP contact as a typical example of the performance of these products in high speed digital switching environments.



Hertzian Stress

This calculation, expressed in thousands of pounds per square inch, has come to be recognized as a more valid predictor of reliability than normal force for demanding interconnect applications. Hertzian stress is a formula which incorporates normal force with such factors as actual contact surface area, mating component geometries and the modulus of elasticity of surface finishes. A minimum Hertzian stress value of 250 Kpsi has been established for prediction of long term reliability in a single contact design.

Performance Values Comparison

Three significant measurements can strongly affect the performance of an interconnect system in today's high speed/low level switching applications. These are: adjacent contact capacitance, inductance and propagation delay (contact rise time). The chart depicted below shows a comparison of these values between an SRP series contact and several other popular card edge contact profiles.

Performance Values

Series	Capacitance	Inductance	Propagation Delay
SRP	0.13pF	5.6nH	37p.s.
Bifurcated Cantilever	0.48pF	7.7nH	95p.s.
Bifurcated Bellows	0.52pF	9.0nH	132p.s.
SIMM Contact	0.38pF	2.4nH	61p.s.

Certificate of Compliance with Directive 2002/95/EC RoHS and REACH Regulations EC 1907/2006

This is to certify that Components Corporation designs, manufactures and supplies products to our customers that are in compliance with RoHS Directive 2002/95/EC and REACH Regulations EC 1907/2006. This also pertains to procurement of raw material, component parts and processes.