

MICRO RUGGED TIGER EYE CONTACT

Samtec's Tiger Eye contact is a rugged contact for micro pitch interconnects. It is ideal for high reliability and high mating cycle applications.

MULTI-FINGER DESIGN

The Tiger Eye contact is reliable and rugged because it features a multi-finger design. On .050" (1,27mm) pitch it has three fingers for redundant points of contact, and on 2mm pitch it boasts four fingers.

The Tiger Eye contact is side-wipe, meaning the mating area is on the flat, smooth side of the contact area (beam, or finger). Smooth surfaces allow more mating cycles because the plating wear-life is minimized. This provides lower contact resistance and better plating life.

BERYLLIUM COPPER

In addition to the multi-finger design, the base metal is heat treated beryllium copper (BeCu). BeCu provides the best combination of mechanical and electrical properties for a high reliability interconnection. The superior spring properties of BeCu make it ideal for high mating cycle applications.

For applications where Beryllium Copper is not required, Samtec offers Tiger Eye LITE, featuring cost effective Phosphor Bronze.

MECHANICAL STRENGTH

The SMT version of the Tiger Eye has a "micro slot tail." The solder penetrates the slot and wets a larger surface



SFM .050" pitch socket strip

area on the lead for higher solder joint strength. It has also been reported that this lead construction can provide a path for organics to escape, reducing the occurrence of voids in the solder, a particular concern with reflow soldering. Also, connectors with slots in their tails tend to adhere to the wet solder paste prior to reflow better than flat leads.

Several Samtec series feature the Tiger Eye contact.

.050" (1,27mm) PITCH

The [SFM](#) and [TFM](#) are a socket and shrouded terminal combination on .050" (1,27mm) pitch. The system is polarized to ensure proper mating, is available with optional friction locks to increase unmating force, and is available in stack heights from .235" (6mm) to .450" (11,4mm). These are available in both surface mount or through-hole versions and are [Extended Life Products](#) (E.L.P.), capable of from 250 to 2500 mating cycles with gold-flashed palladium nickel plating.

The SFM and TFM connectors are also available as Rugged Discrete Wire Cable Assemblies. The [SFSD](#) assembly

and the [TFSD](#) assemblies are offered in multiple numbers of positions, either 28 or 30 gauge wire, and are available in single, double or transfer ends.

The [FFSD](#) Series is a .050" pitch IDC assembly with the Tiger Eye contact.

.8mm (.0315") PITCH

The [SEM](#), [TEM](#) Series are the next generation of the Tiger Eye family. The SEM/TEM incorporates the Tiger Eye contact into a .8mm (.0315") pitch connector system providing reliability and ruggedness in a micro footprint. The pair is currently offered with a 6mm stack height and will soon be available in both 7mm and 10mm stack heights. Weld tabs and locking clips are also available for increased retention to the PCB, and a discrete wire cable assembly is in development.

2mm (.0787") PITCH

The [SMM](#) Series is a 2mm (.0787") pitch socket strip. The SMM is low profile (.140" (3,56mm) tall), and has four points of contact instead of three on smaller versions. The [TCSD](#) Series is a 2mm pitch IDC assembly with the Tiger Eye contact.