



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS FCS RANGE BERYLLIUM COPPER FINGER CONTACT STRIP (STOCK)

Product overview

The FCS range of finger contact strip sections provides excellent EMI shielding performance due to a combination of high electrical conductivity and low contact resistance. The high resilience and fatigue resistance of individual contacts ensures high reliability and long service life in high cycle duty applications. One particular advantage is that a number of finger contact profiles are ideally suited to shear or wiping action from closing surfaces. In some applications this is advantageous as this wiping action keeps the contact surfaces clean and maintains a low impedance connection.

Key features

- High EMI shielding performance
- Wide range of sections available to suit clearances down to 0.25mm
- Very good high temperature resistance
- Low compression force
- A wide range of profiles and mounting options available to most applications
- Fixing options include self adhesive backing, clip on, push rivet, or slot mounting
- Possible to accommodate wide gap variations
- Available in a wide range of plated finishes e.g. tin to maintain low contact resistance or nickel to improve corrosion and wear characteristics



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Material Properties

Foil thickness	0.08mm
Beryllium copper alloy grade	25
Temper	½ HT
Finish	See text below
Tensile strength	>1.2GPa
Elastic modulus	125GPa
Electrical conductivity	13 x 10 ⁶ Sm ⁻¹

Plating / finish

Finger strip profiles are normally supplied either as unplated (natural) finish or tin plated to ASTM B-545. Other plated finishes such as zinc, nickel and gold are also available to special order. Depending on the application the plating type can be selected to improve corrosion resistance (galvanic compatibility), electrical contact / EMI performance or abrasion resistance.

Shielding performance

Finger strip gasket sections are capable of providing very high levels of shielding but the levels attained will depend on a number of factors such as the strip profile used, contact surface conductivity and the seam configuration. As with other EMI gasket types finger strip gaskets perform better when used in recessed or channel type positions rather than between 'open' parallel contact faces. Typically, shielding levels of in excess of 100dB can be achieved up to around 500MHz 'E' field.

Mounting options

Various configurations are available including clip-on panel edge mounting, pressure sensitive adhesive backing, slot mounting or push rivet.



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Profiles available

Sections are available that can accommodate gaps from <0.1mm up to around 8.0mm. The following list provides an overview of the main types available.

- General purpose – self adhesive or clip-on
- Symmetrical – ideally suited to two way sliding contact as well as direct compression
- Low profile sections – twisted fingers or low profile 'D' sections
- Non-snag – the sliding ends of the fingers either have a return or are retained preventing them from being accidentally snagged
- Low compression force – achieved by using a reduced thickness foil (typically 0.05mm)
- Perpendicular contacts – the fingers are formed at right angles to the section base allowing contact at right angles

In addition to the above there are a wide range of options suited to PCB grounding, contact rings and a wide range of shields / terminations for most connector types. For some particular applications standard sections can be modified or, if necessary, completely new sections produced.

Finger strip gasket can be supplied cut to length or, in most cases as a reel of a few metres in length.

Note: The values shown on this data sheet are typical of this product and are not intended as for use as a specification. In any event we recommend that the material is fully evaluated for suitability in its intended application.



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