TBA

Protective Solutions

EMI SHIELDING

EMI SHIELDING
FINGER STRIP

TBA Protective Solutions
EMI SHIELDING

Beryllium Copper Shielding

Beryllium copper finger stock provides maximum spring properties for strength and fatigue resistance, plus excellent conductivity. It comes in a variety of finishes and mounting styles including ***Clip-on, Stick-on, Snap-on and Special Mounting***.
Beryllium copper's unique material properties make it ideal for RFI/EMI shielding. Available with numerous plating options, BeCu has a high cycle time and also conforms to large gap variations.

Standard Products

TBA-PS offers the most complete line of standard BeCu shielding strips in the industry. Uncompressed heights of standard finger stock range from 0.76mm to 11.2mm, which will occupy gaps as low as 0.25mm. A line of standard connector gaskets is also available.

Custom Shielding

- **Board Level Shielding**
- **Connector Gaskets**

Semi-standard and custom designed shielding is offered for special applications such as board level shielding and connector gaskets. From high volume requirements using progressive dies, to prototype and low quantities utilising photoetch fabrication, TBA-PS can be your source for custom beryllium copper shielding.

- **NO-SNAG SERIES**
  Eliminates finger damage and snagging
- **SOFT NO-SNAG SERIES**
  Low compression forces and self cleaning
- **SYMMETRICAL SERIES**
  Bi-directional sliding contact
- **PANEL GASKET SERIES**
  Can be compressed to stock thickness
- **FOUR INSTALLATION OPTIONS**
  Design flexibility
- **CONTROLLED CONTACT RESISTANCE**
  Consistent attenuation over time
- **RANGE OF SHAPES AND SIZES**
  Custom fit at a standard cost

Use BeCu Because . . .

- **Excellent spring qualities**
- **Longevity**
- **Low closing force**
- **Cost effective**
- **Numerous plating options**
- **Conforms to large gap unevenness**
- **Attenuation exceeding 100 db for most styles**

TBA100

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Table of Contents

How to Order

- Each profile has its own unique number.
- Strips may be supplied as a standard length or custom cut to any length, provided that length is a multiple of a full finger.
- The fingerstock is normally supplied as clean and bright finish, other plating options are available, and designated with a part number suffix.
- Clip-On Gaskets may be supplied with a retaining D-Lance, and designated with a suffix L.
- Clip on gaskets may have different flange thickness, designated by suffix A, B, C etc.
- Low force compression options can be supplied designated by the prefix LC.

Examples

ECP 645	(pressure sensitive soft finger).
ECP 645/100mm	(do cut to 100mm).
ECP 645/02	(clean + bright).
ECP 645/08	(tin plated).
ECP 643/L/08	(lanced + tin plated).
ECP 672A/L	(Flange thickness 1.17mm with lances).
LC/ECP 615	(produced in 0.05mm strip instead of 0.09mm thick material).
ECP 25 D10	(25 Way D-Sub Connector in Stainless Steel).
ECP 25 D12/08	(25 Way D-Sub Connector in tin plated Becu).

Material Specifications

Beryllium copper alloy 25 (CA172) is used in these applications for maximum spring properties of strength and fatigue resistance. Consult us for high temperature applications.

Chemical Composition

- Beryllium 1.80–2.00%
- Cobalt plus nickel . . . . . .0.20% Min.
- Cobalt plus nickel plus iron . . . . . .0.6% Max.
- Copper . . . . . .Balance

Physical Properties (heat treated)

- Electrical conductivity (% IACS) 22–25
- Modulus of elasticity (GPa) 127.5

Mechanical Properties (heat treated)

- Temper . . . . . .½HT
- Tensile strength (MPa) . . . . . .1275 Min.
- Yield strength .2% offset (MPa) . . . . . .160 Min.

Manufacturing Tolerances (mm)

- Pitch . . . . . .±0.127
- Length . . . . . .±1.52
- Spring Height . . . . . .±0.51
- Cut Length . . . . . .±0.51

Finish

Finger Strips are stocked with a clean and bright finish. 02 finish standard

Other finishes available are:

- Solderable unplated 01
- Clean and Bright (unsolderable) 02
- Gold 03
- Silver 04
- Tin Lead 07
- Bright Tin 08
- Bright Nickel 09
- Zinc/Clear Chromate 15
- Electroless Nickel 18
- Other 00

For other requirements and specifications of these finishes, consult us.

Electrochemical Compatibility

To avoid galvanic action between contacting metals refer to the following chart. Materials in adjacent groups may be safely used together. Choosing materials from within a single group in the table will provide the least corrosion due to galvanic action, when the materials are in contact for an extended period of time with appropriate protective finish.

GROUPING OF METALS BY DECREASING GALVANIC ACTIVITY

ANODIC

Group 1	Group 2	Group 3	Group 4
Magnesium	Aluminium	Cadmium Plating	Brass
Magnesium Alloys	Aluminium Alloys	Carbon Steel	Stainless Steel
Aluminium	Beryllium	Iron	Copper & Copper Alloys
Aluminium Alloys	Zinc & Zinc Plating	Nickel & Nickel Plating	Nickel/Copper Alloys
Beryllium	Chromium Plating	Tin & Tin Plating	Monel
Zinc & Zinc Plating	Cadmium Plating	Tin/Lead Solder	Silver
Chromium Plating	Carbon Steel	Brass	
	Iron	Stainless Steel	
	Nickel & Nickel Plating	Copper & Copper Alloys	
	Tin & Tin Plating	Nickel/Copper Alloys	
	Tin/Lead Solder	Monel	

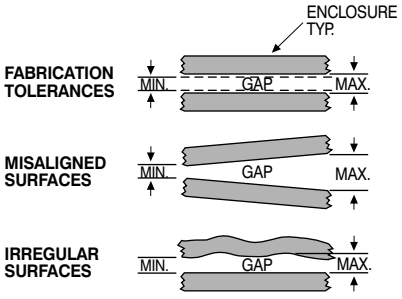
CATHODIC

Attenuation Management

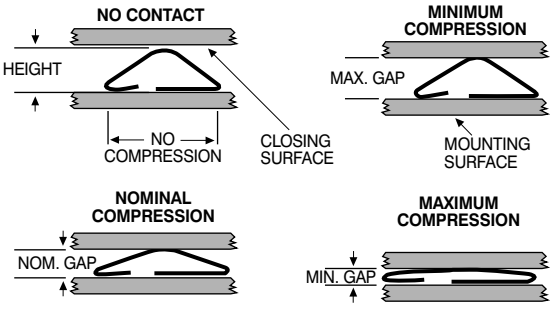
The purpose of shielding is to occupy and thereby shield the gap that exists between two adjoining surfaces. In order to be effective the gasket must be able to compensate for gaps which exist due to fabrication tolerances, misalignment of surfaces or irregular surfaces. Proper compresssion management is essential to ensure effective EMI shielding, for example at the maximum gap the gasket should be compressed in excess of 50% if needed. Attenuation exceeding 100dB for most styles can therefore be achievable.

Compression Management

Fingerstock can be compressed to a maximum deflection of 90% of the free height of the spring. It is generally recommended that a minimum of 25% compression is used to enable good electrical contact. The compresssion forces which result through this range are given in the performance data for each spring. Many of the springs are available in low compression material (designated LC in the data) and are used in applications where the closure force between the mating surfaces needs to be minimised.



OPERATING RANGE = MAX. GAP – MIN. GAP



Application Guide

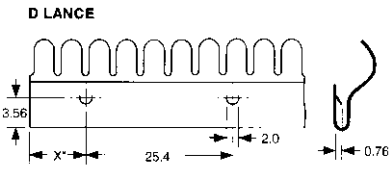
- The **Installation Options** guide (see page 5) details how the springs can be fitted to the panelwork.
- Select a spring which can give around 50% compression in sealing the gap between the surfaces for optimum performance. The choice of the largest gasket to meet this gap filling requirement generally ensures that minimum compression forces are obtained, the use of larger gaskets also allows for greater tolerance latitude in the panelwork construction. Selection for minimum compression force also minimises the chance of panel deformation and the subsequent increased cost and use of stiffening members.
- The springs naturally act in a sliding or shear mode on compression. This wiping action ensures that good electrical continuity is maintained, the harder spring surface cleans any build up of oxidation corrosion or contamination on the mating surface.
- The springs should be mounted in a manner which avoids damage to the fingers. When the spring is used in a sliding or shear application ensure that the wiping action occurs towards the free end of the spring. Gaskets mounted onto panels are better mounted on the demountable item, and in the case of a biscuit-tin lid design, mounted inside the lid. In door sealing applications, mounting on the frame is recommended.
- The material and plating should be chosen to minimise galvanic action between the gasket and mating surfaces. Refer to the **Electrochemical Compatibility** chart (see page 3) to select the most appropriate finish.

Installation Options

Shielding strips are designed for a wide variety of application requirements, and can be supplied cut to length or full size in any of the following mounting configurations. Consult our engineering department for special modifications to suit your requirements.

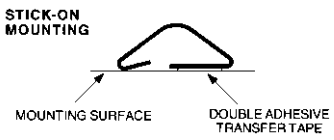
Clip-on Mounting

Clip-on Mounting provides a reliable mechanical installation when there is an accessible mounting flange. Various flange thicknesses can be accommodated, and lances can be incorporated to enhance the holding force to the flange.



Stick-on Mounting

Pressure Sensitive Mounting provides double-sided pressure sensitive transfer tape for a fast, reliable installation. 3M Y-9469 transfer tape is standard and may be used at ambient temperatures from –55°C to 150°C. Apply only on a clean, oil-free surface, and allow a 24-hour cure time. Consult the factory for other adhesives.



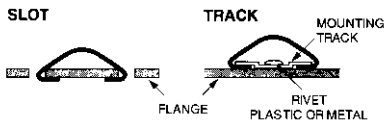
Special Mounting

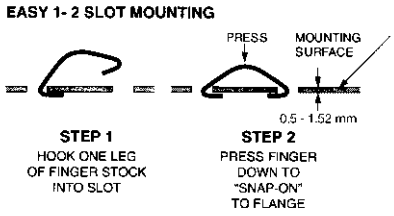
Special Mounting provides for riveting, spot welding, soldering or use of double sided tape to mount shielding strip.

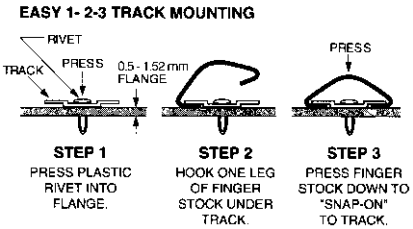
Snap-on Mounting

Snap-on shielding is ideal for bi-directional applications, such as sliding drawers, doors and rack mounted assemblies.

Snap-on shielding is easily mounted by snapping it into parallel slots or over a mounting track. The mounting track, sold separately, can be installed by screws, rivets, spot welding, or pressure-sensitive, double-adhesive transfer tape. Order "T" Retaining Caps (page 14) or Plastic Rivets for end stops for the shielding (See Figure 1 below and page 15). Stops can also be incorporated in sheet metal. Hole diameter to mount track should be 3.18mm. Specify Plastic Rivets (PR45 or PR60 on page 15), if preferred.

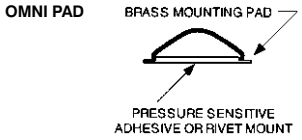






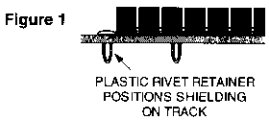
OMNI Mounting

OMNI Mounting offers snap-on shielding preassembled on brass pads. OMNI shielding comes in lengths up to 406mm and can be mounted as individual pads or in strips cut to multiples of the pad length. Double adhesive transfer tape or plastic rivets are available mounting options. The OMNI shielding configuration is also an excellent choice for bidirectional applications.



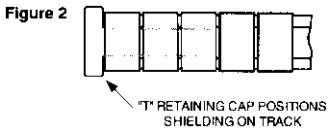
Plastic Rivets

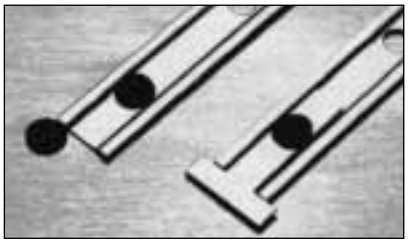
Plastic rivets can be used to install Track, OMNI and as rivet stops to retain shielding on a track as shown in Figure 1 and in photo below. When used on a flange, the hole diameter for the rivet should be 3.18mm. Two rivets are available: PR45 and PR60 (page 15).

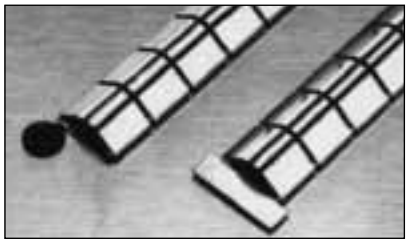


"T" Retaining Caps

"T" Retaining Caps (page 14) can also be used to hold shielding on the Track.







Track Mounting Options *Track in left photo shows two shielding retainer options: Plastic Rivet Stop on the left and "T" Retainer on the right. Right photo shows track with shielding snapped into place.*

“D” Connector Gaskets

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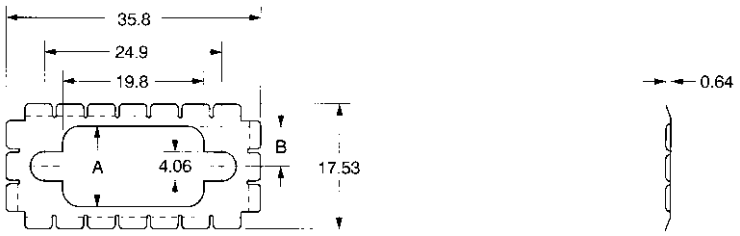
9DXX

9 Pin Connector

“D” CONNECTOR GASKET

Part #	Material	A	B
9D10	Stainless Steel	11.2	5.6
9D12	Beryllium Copper	11.2	5.6
9D20	Stainless Steel	8.9	4.6
9D22	Beryllium Copper	8.9	4.6

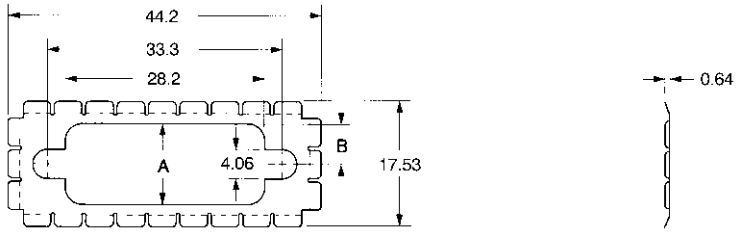


15DXX

15 Pin Connector

“D” CONNECTOR GASKET

Part #	Material	A	B
15D10	Stainless Steel	11.2	5.6
15D12	Beryllium Copper	11.2	5.6
15D20	Stainless Steel	8.9	4.6
15D22	Beryllium Copper	8.9	4.6

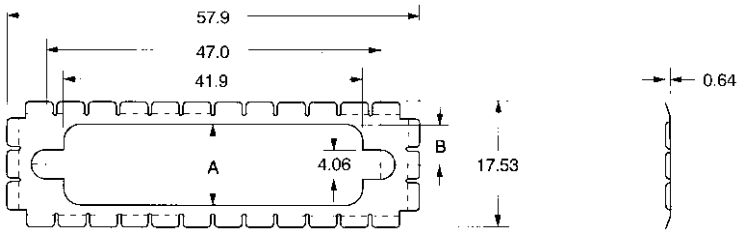


25DXX

25 Pin Connector

“D” CONNECTOR GASKET

Part #	Material	A	B
25D10	Stainless Steel	11.2	5.6
25D12	Beryllium Copper	11.2	5.6
25D20	Stainless Steel	8.9	4.6
25D22	Beryllium Copper	8.9	4.6

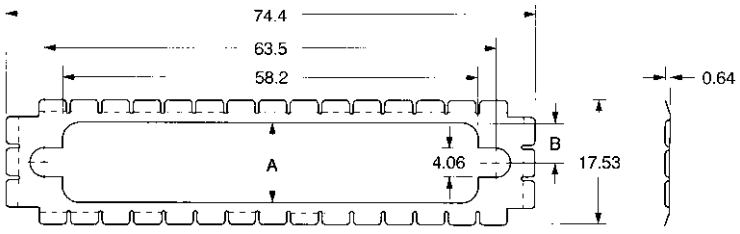


37DXX

37 Pin Connector

“D” CONNECTOR GASKET

Part #	Material	A	B
37D10	Stainless Steel	11.2	5.6
37D12	Beryllium Copper	11.2	5.6
37D20	Stainless Steel	8.9	4.6
37D22	Beryllium Copper	8.9	4.6

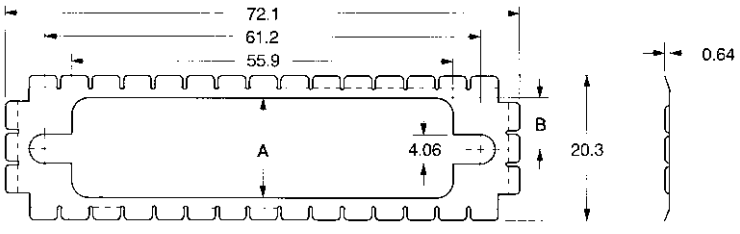


50DXX

50 Pin Connector

“D” CONNECTOR GASKET

Part #	Material	A	B
50D10	Stainless Steel	14.0	7.1
50D12	Beryllium Copper	14.0	7.1
50D20	Stainless Steel	11.4	5.8
50D22	Beryllium Copper	11.4	5.8



HOW TO ORDER

To order “D” Connector Gaskets, simply supply the appropriate Item Number appended with the desired 2-digit Finish Code opposite

FINISH	XX
Clean and Bright	02
Gold	03
Silver	04
Tin Lead	07
Bright Tin	08
Bright Nickel	09
Zinc/Clear Chromate	15
Electroless Nickel	18
Other	00

Pressure Sensitive Mounting

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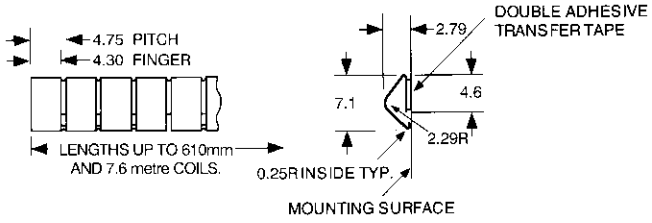
ECP 0622

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	22 kg/m	to	48 kg/m

Material: beryllium copper – .05 mm thick



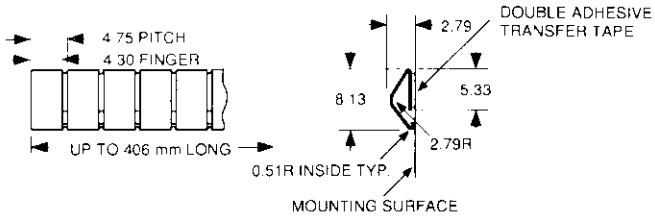
ECP 0644

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	21 kg/m	to	39 kg/m

Material: beryllium copper – .05 mm thick



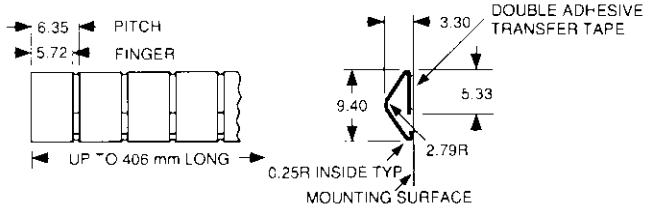
ECP 0645

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	15 kg/m	to	31 kg/m

Material: beryllium copper – .05 mm thick



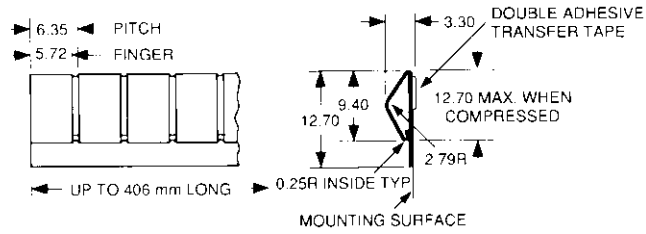
ECP 0626

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	15 kg/m	to	31 kg/m

Material: beryllium copper – .05 mm thick



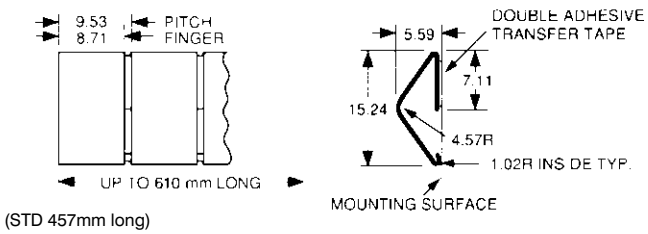
ECP 0646

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	15 kg/m	to	30 kg/m
"LC" Style 0.05 Thk.	3 kg/m	to	11 kg/m

Material: beryllium copper – .09 mm thick (LC style– .05 mm thick)



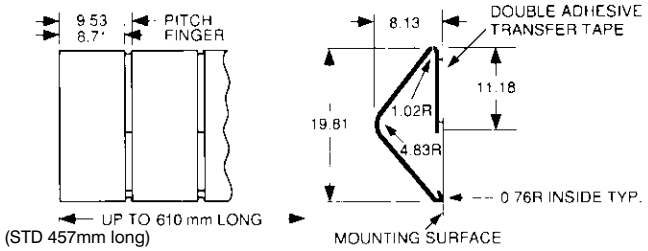
ECP 0648

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.10 Thk.	10 kg/m	to	25 kg/m

Material: beryllium copper – .10 mm thick



Pressure Sensitive Mounting

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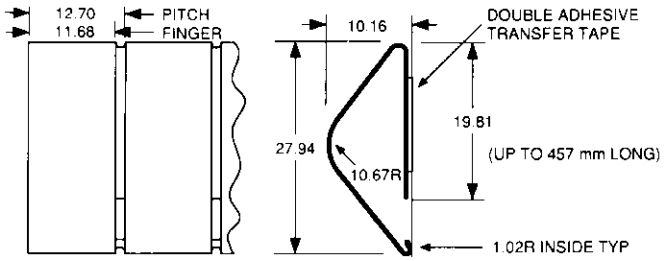
ECP 0647

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	18 kg/m	to	36 kg/m

Material: beryllium copper – .13 mm thick



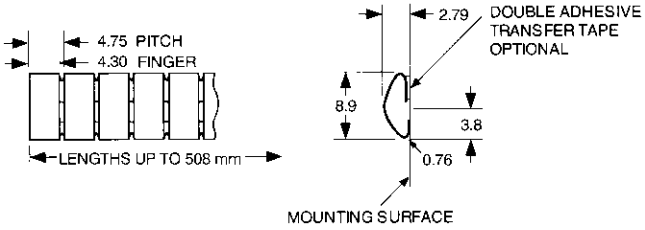
ECP 0649

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	37 kg/m	to	132 kg/m
"LC" Style 0.05 Thk.	9 kg/m	to	34 kg/m

Material: beryllium copper – .08 mm thick (LC style– .05 mm thick)



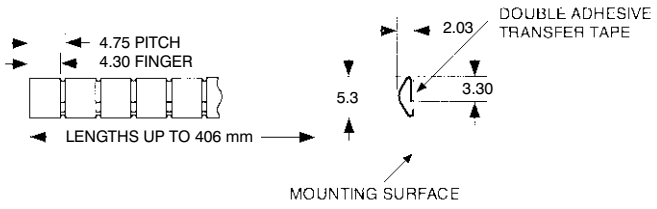
ECP 621

SOFT NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	*	to	*

Note: Consult factory for performance data.



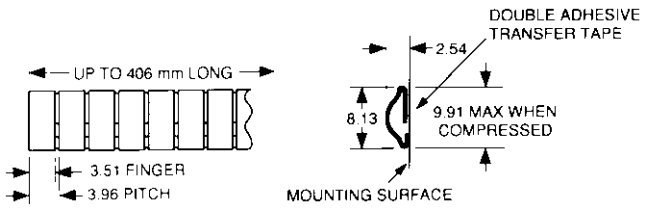
ECP 0650 (ECP 0651 with 4.75mm pitch)

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	45 kg/m	to	113 kg/m

Material: beryllium copper – .09 mm thick



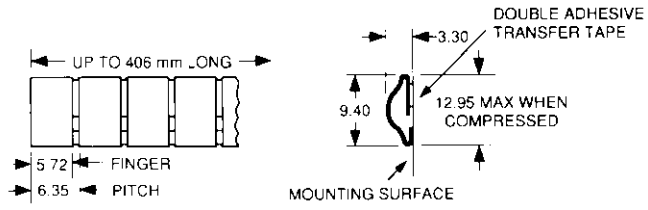
ECP 0654 (ECP 0653 with 3.2mm pitch)

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	45 kg/m	to	89 kg/m

Material: beryllium copper – .09 mm thick



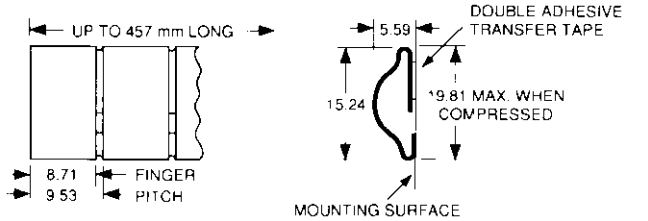
ECP 0657 (ECP 0656 with 4.75mm pitch)

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	19 kg/m	to	48 kg/m

Material: beryllium copper – .09 mm thick



Pressure Sensitive Mounting

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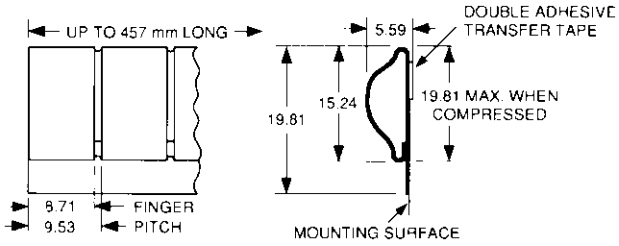
ECP 0658

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	19 kg/m	to	48 kg/m

Material: beryllium copper – .09 mm thick



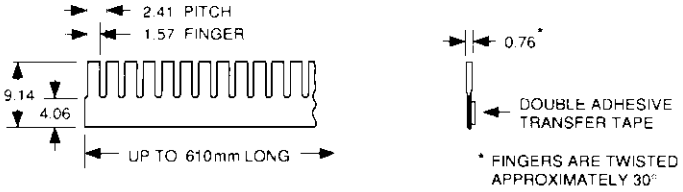
ECP 0699

PANEL GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	22 kg/m	to	103 kg/m

Material: beryllium copper – .13 mm thick



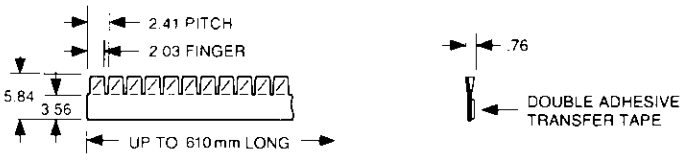
ECP 0625

PANEL GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	18 kg/m	to	71 kg/m
"LC" Style 0.05 Thk.	4 kg/m	to	15 kg/m

Material: beryllium copper – .08 mm thick (LC style– .05 mm thick)



(also available in 7.6 metre rolls)

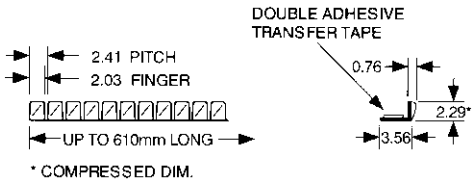
ECP 0625/90°

PANEL GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	18 kg/m	to	76 kg/m

Material: beryllium copper – .08 mm thick



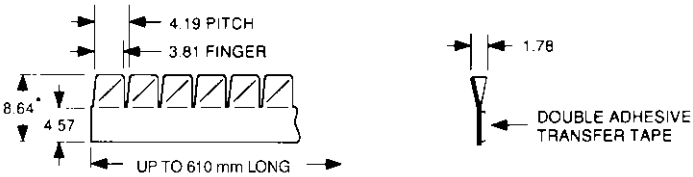
ECP 0697

PANEL GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	13 kg/m	to	33 kg/m
"LC" Style 0.05 Thk.	3 kg/m	to	10 kg/m

Material: beryllium copper – .08 mm thick (LC style– .05 mm thick)



(also available in 7.6 metre rolls)

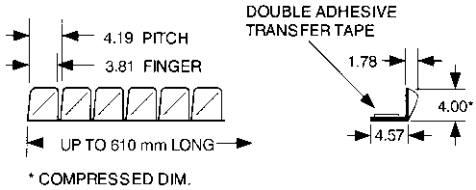
ECP 0697/90°

PANEL GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	13 kg/m	to	33 kg/m

Material: beryllium copper – .08 mm thick



Pressure Sensitive Mounting

TBA Protective Solutions
EMI SHIELDING

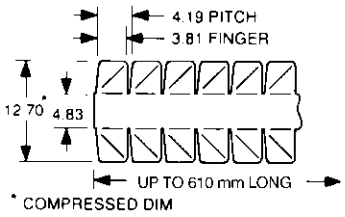
ECP 0698

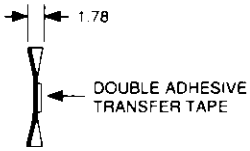
PANEL GASKETS

Performance Range

	25% Compression-50% Compression		
Standard 0.08 Thk.	28 kg/m	to	57 kg/m

Material: beryllium copper – .08 mm thick





(also available in 7.6 metre rolls)

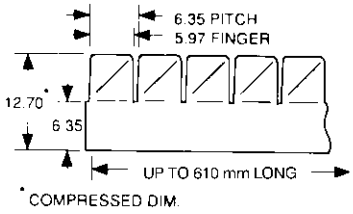
ECP 0627

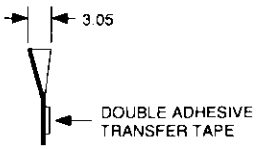
PANEL GASKETS

Performance Range

	25% Compression-50% Compression		
Standard 0.08 Thk.	7 kg/m	to	16 kg/m

Material: beryllium copper – .08 mm thick





(also available in 7.6 metre rolls)

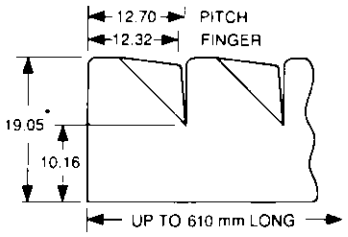
ECP 0623

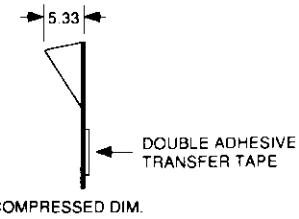
PANEL GASKETS

Performance Range

	25% Compression-50% Compression		
Standard 0.10 Thk.	21 kg/m	to	31 kg/m

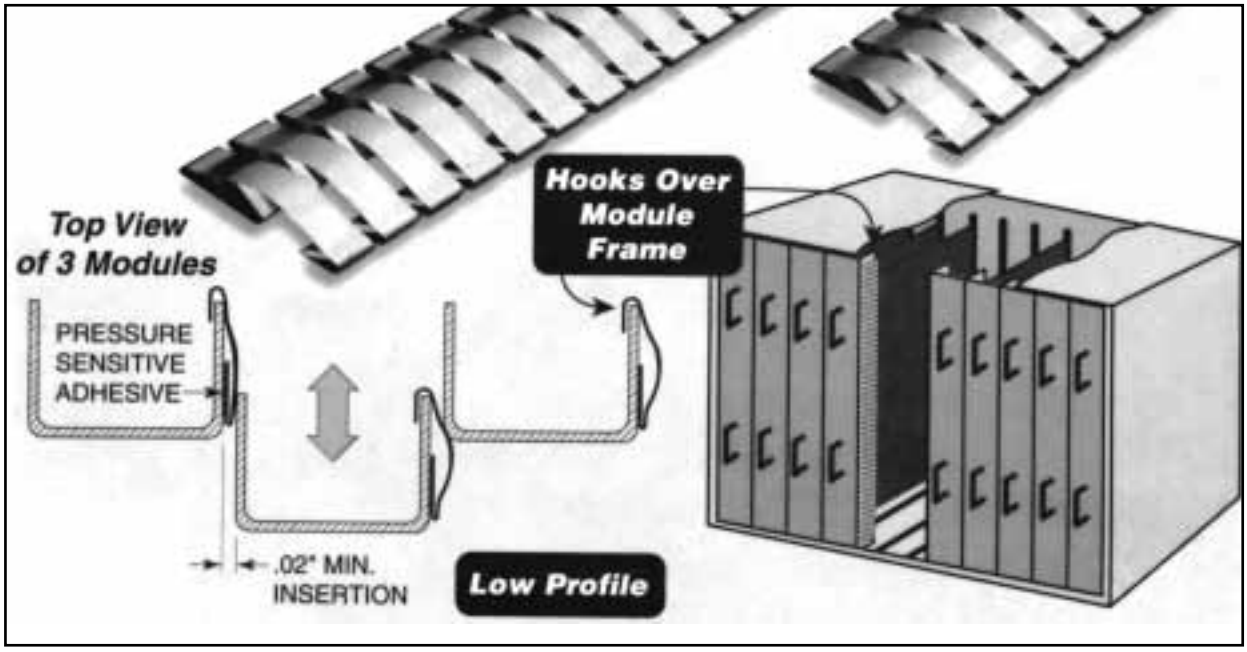
Material: beryllium copper – .10 mm thick





Low Profile Gaskets

TBA Protective Solutions
EMI SHIELDING



Hook-on gasket example

Ideal shielding for Telecommunications and Other Rack Modules

- Leading edge hooks over flange for full protection.
- Self-locating, secure installation.
- Low closing force, low profile.
- Bi-directional.
- Adhesive mounting.
- Beryllium copper.
- 100db attenuation.
- 360° no-snag.
- Durable.

Installation Guide

The leading edge of the gasket hooks over the mounting flange for full protection. The opposing side is then attached with double-sided pressure sensitive transfer tape for a fast, reliable installation.

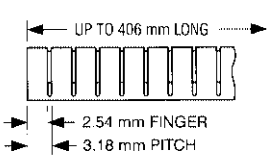
ECP 630

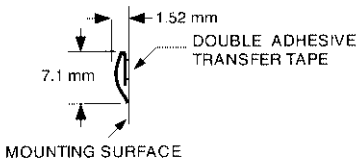
NO-SNAG FINGERS

Performance Range

	25% Compression-50% Compression		
Standard 0.05 mm	8 kg/m	to	30 kg/m

* Note: Consult factory for performance data.





Low Profile Gaskets "Eliminates Shearing"

TBA Protective Solutions
EMI SHIELDING

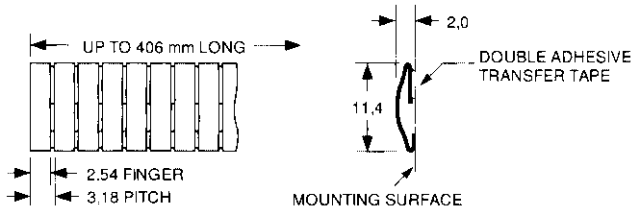
ECP 632

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	15 kg/m	to	28 kg/m
"LC" Style 0.069 Thk.	9 kg/m	to	24 kg/m

* Note: Consult factory for performance data.



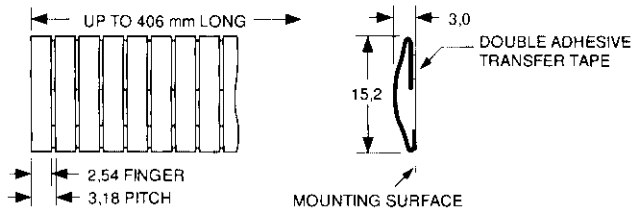
ECP 636

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	12 kg/m	to	23 kg/m
"LC" Style 0.069 Thk.	8 kg/m	to	13 kg/m

* Note: Consult factory for performance data.



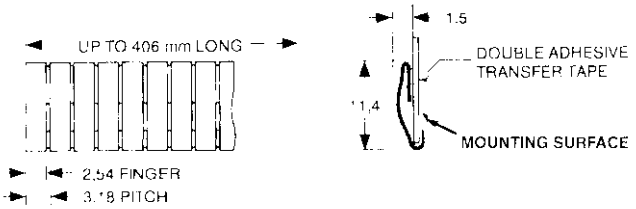
ECP 632HO

NO-SNAG FINGERS HOOK ON

Performance Range

	25% Compression		50% Compression
Standard 0.09 Thk.	17 kg/m	to	37 kg/m
"LC" Style 0.07 Thk.	9 kg/m	to	24 kg/m

* Note: Consult factory for performance data.



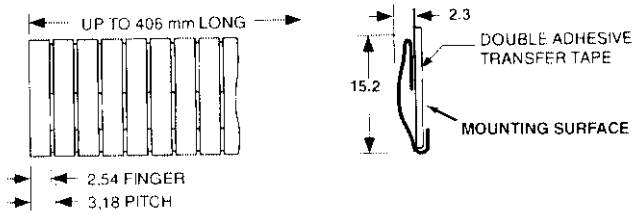
ECP 636HO

NO-SNAG FINGERS HOOK ON

Performance Range

	25% Compression		50% Compression
Standard 0.09 Thk.	12 kg/m	to	23 kg/m
"LC" Style 0.07 Thk.	8 kg/m	to	13 kg/m

* Note: Consult factory for performance data.



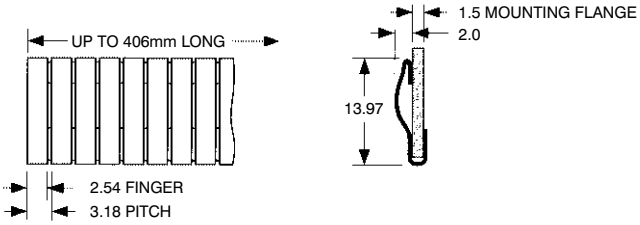
ECP 634

LOW PROFILE CLIP ON

Performance Range

	25% Compression		50% Compression
Standard 0.09 Thk.	*	to	*
"LC" Style 0.07 Thk.	*	to	*

* Note: Consult factory for performance data.



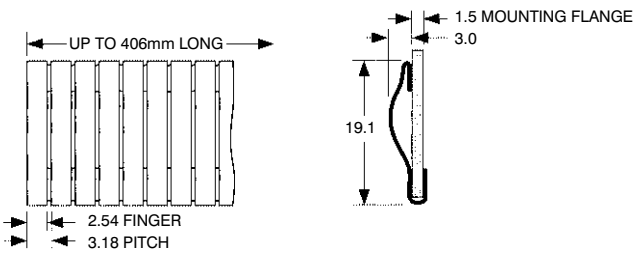
ECP 638

LOW PROFILE CLIP ON

Performance Range

	25% Compression		50% Compression
Standard 0.09 Thk.	*	to	*
"LC" Style 0.07 Thk.	*	to	*

* Note: Consult factory for performance data.

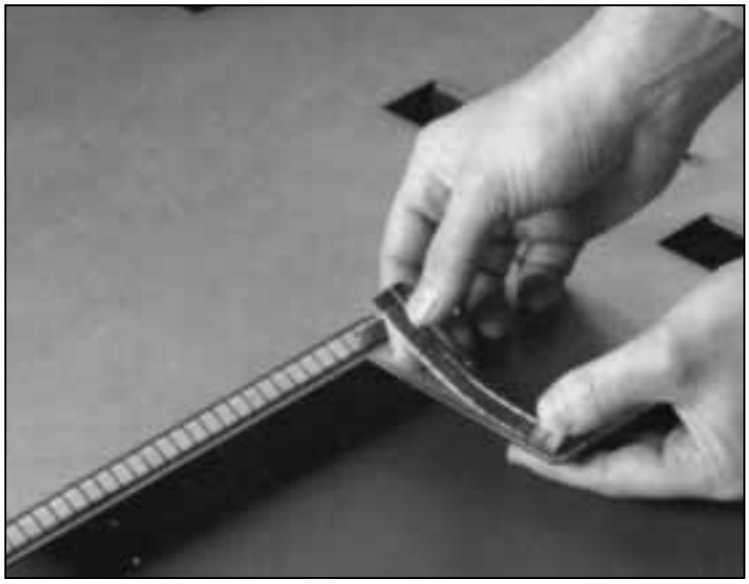


"SNAP-ON" RFI/EMI SHIELDING

SNAP-ON RFI/EMI SHIELDING SERIES

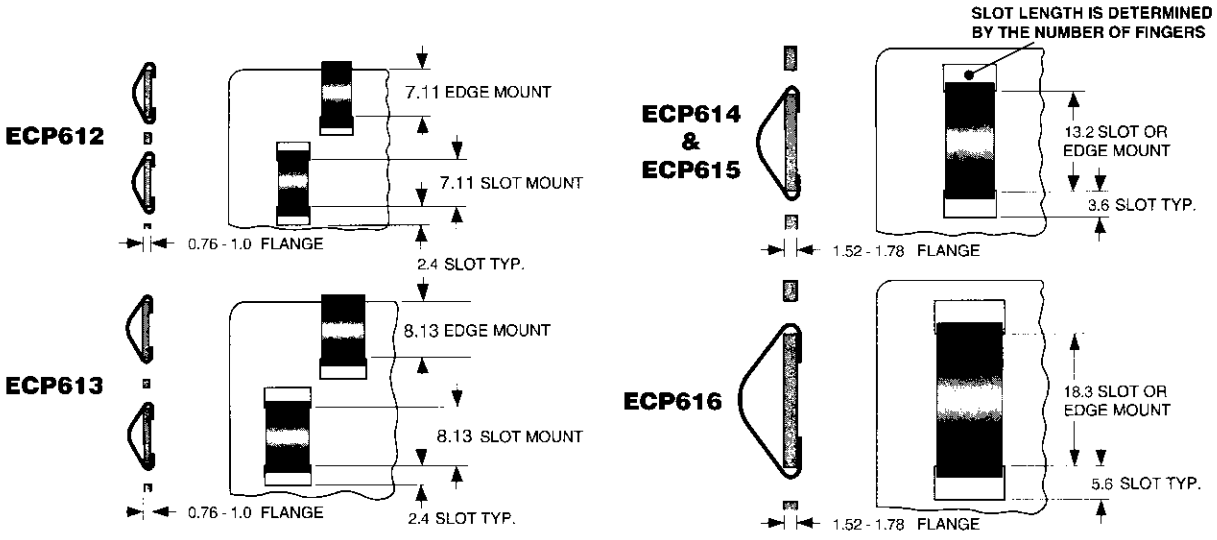
Snap-on shielding is easily mounted by snapping it either into parallel slots or over a mounting track. The mounting track can be installed by screws, rivets or spot welding. Where needed, "T" Retaining Caps hold the shielding strips on the track. Snap-on shielding features a no-snag design and provides secure mechanical fastening to insure long life for frequently used cabinet doors and panels.

Available in a wide range of plating options, the Snap-on Series is ideal for any bi-directional application, such as sliding drawers, doors and rack mounted assemblies. It comes in lengths up to 406mm and various widths.



The Snap-on Series provides the security of mechanical fastening and the performance of top-quality Beryllium Copper shield at a reasonable price.

SLOT MOUNTING



Snap-on Mounting

TBA Protective Solutions
EMI SHIELDING

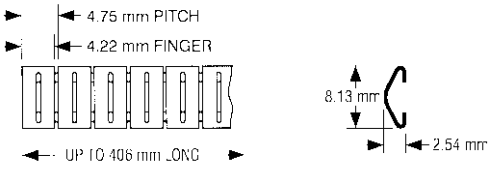
ECP 610

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.05 mm	14 kg/m	to	27 kg/m

* Note: Consult factory for performance data.



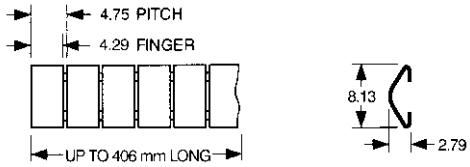
ECP 0612

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	43 kg/m	to	109 kg/m
"LC" Style 0.05 Thk.	13 kg/m	to	42 kg/m

Material: beryllium copper – .09 mm thick (LC style– .05 mm thick)



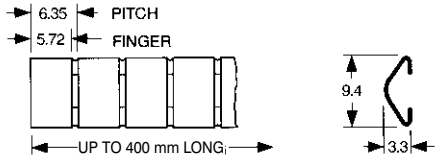
ECP 0613

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.05 Thk.	13 kg/m	to	25 kg/m

Material: beryllium copper – .05 mm thick



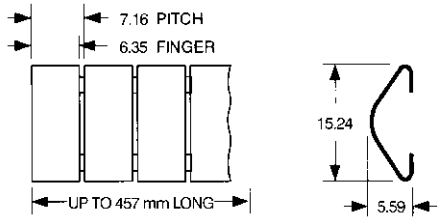
ECP 0614

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	65 kg/m	to	149 kg/m
"LC" Style 0.08 Thk.	6 kg/m	to	10 kg/m

Material: beryllium copper – .13 mm thick (LC style– .08 mm thick)



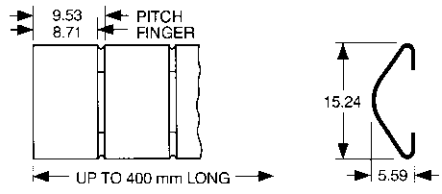
ECP 0615

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	18 kg/m	to	40 kg/m
"LC" Style 0.05 Thk.	4 kg/m	to	12 kg/m

Material: beryllium copper – .09 mm thick (LC style– .05 mm thick)



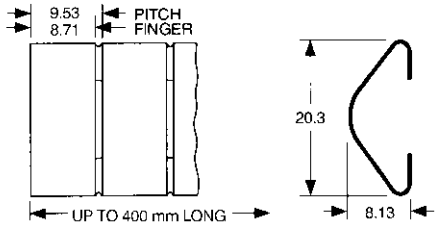
ECP 0616

SYMMETRICAL

Performance Range

	25% Compression		50% Compression
Standard 0.10 Thk.	25 kg/m	to	51 kg/m
"LC" Style 0.08 Thk.	6 kg/m	to	9 kg/m

Material: beryllium copper – .10 mm thick (LC style– .08 mm thick)



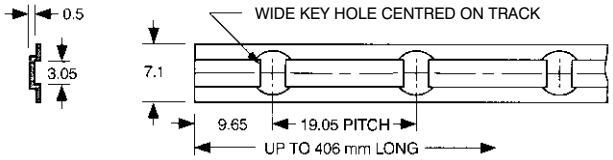
Track Mounting

TBA Protective Solutions
EMI SHIELDING

TR32

(FOR ECP 612)

Track sold separately.
Burr side of mounting hole should be opposite rivet entry side.
Material: Stainless Steel.
Finish: Bright.

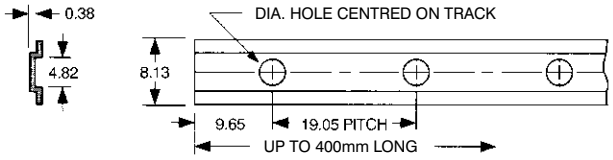


TR37A or B or C

(FOR ECP 613)

Track sold separately.
Burr side of mounting hole should be opposite rivet entry side.
Material: Brass.
Finish: Bright.

	HOLE
A	3.18 dia
B (STD)	3.45 dia.
C	3.56 x 5.08 slot

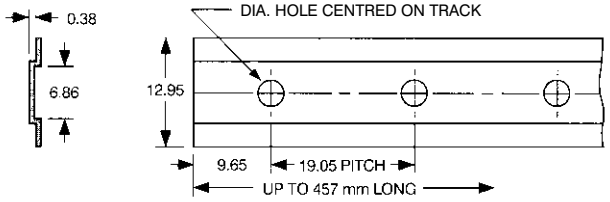


TR60A or B or C

(FOR ECP 615)

Track sold separately.
Burr side of mounting hole should be opposite rivet entry side.
Material: Brass.
Finish: Bright.

	HOLE
A	3.18 dia
B (STD)	3.45 dia.
C	3.56 x 5.08 slot

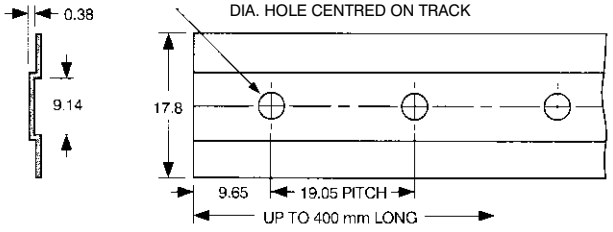


TR80A or B or C

(FOR ECP 0616)

Track sold separately.
Burr side of mounting hole should be opposite rivet entry side.
Material: Brass.
Finish: Bright.

	HOLE
A	3.18 dia
B (STD)	3.45 dia.
C	3.56 x 5.08 slot



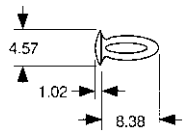
Track Mounting

TBA Protective Solutions
EMI SHIELDING

PR45

PLASTIC RIVET

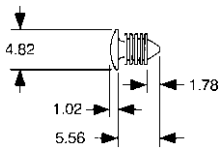
Used on Snap-on Track and OMNI Mounting Pads.
Panel Hole Dia. 3.1 – 3.22 mm
Panel Thickness 0.5 – 1.52 mm
Order PR45 Rivets, if required for your application.



PR60

PLASTIC RIVET

Used on Snap-on Track and OMNI Mounting Pads.
Panel Hole Dia. 3.0 – 3.18 mm
Panel Thickness 1.14 – 1.9 mm
Order PR60 Rivets, if required for your application.

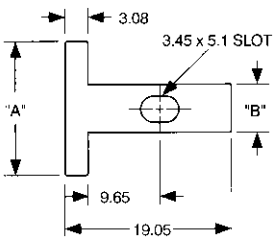


TCXX

"T" RETAINING CAPS

"T" Retaining Caps are used at the ends of Mounting Track to hold finger stock in place. Material: Brass. Finish: Bright.

"T" CAP	"A"	"B"
TC32	11.4	4.06
TC37	11.4	4.06
TC60	17.8	6.6
TC80	25.4	8.9



Omni Mounting

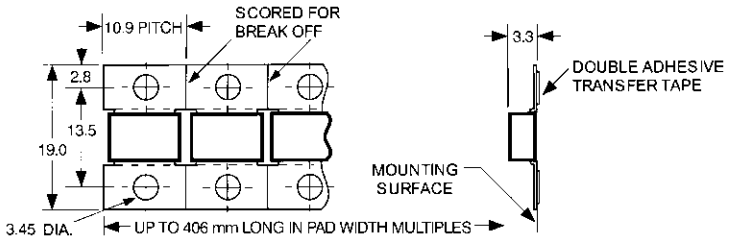
TBA Protective Solutions
EMI SHIELDING

ECP 613 OMNI

Performance Range – Single Contact

	25% Compression-50% Compression		
Standard 0.05 Thk.	0.09 kg	to	0.18 kg

Mounting Pad Material: Brass. Finish: Bright.
Other finishes are also available.
Material: beryllium copper – .05 mm thick

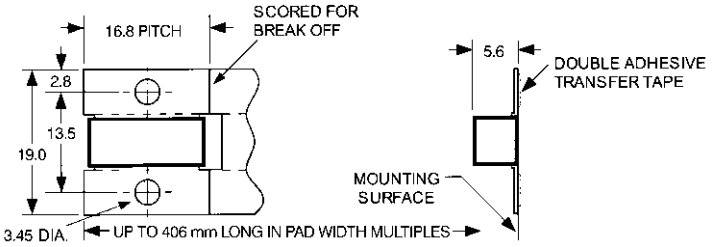


ECP 614 OMNI

Performance Range – Single Contact

	25% Compression-50% Compression		
Standard 0.08 Thk.	0.02 kg	to	0.09 kg

Mounting Pad Material: Brass. Finish: Bright.
Other finishes are also available.
Material: beryllium copper – .08 mm thick

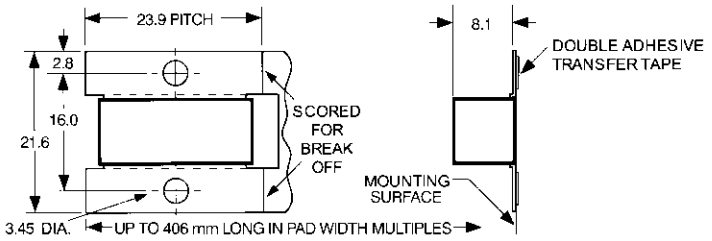


ECP 616 OMNI

Performance Range – Single Contact

	25% Compression-50% Compression		
Standard 0.10 Thk.	0.2 kg	to	0.9 kg

Mounting Pad Material: Brass. Finish: Bright.
Other finishes are also available.
Material: beryllium copper – .10 mm thick



Clip-on Mounting

TBA Protective Solutions
EMI SHIELDING

ECP 0682A or B

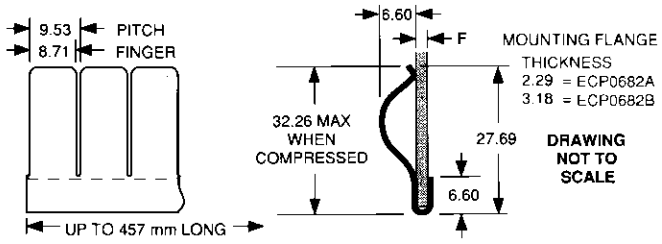
STRIP GASKETS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	25 kg/m	to	64 kg/m

Note: Drawing shown at reduced scale.

Material: beryllium copper – .13 mm thick



ECP 0640A

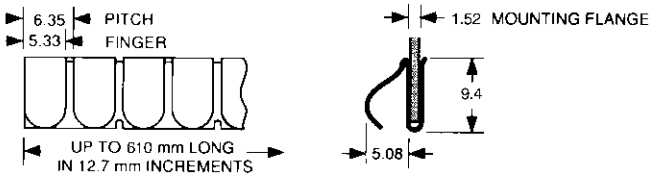
REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	7 kg/m	to	22 kg/m

Note: Also available in 7.6 metre rolls.

Scores for break off between 12.7 mm increments optional.
Material: beryllium copper – .13 mm thick



(Lanced as standard every 12.7mm)

ECP 0640B

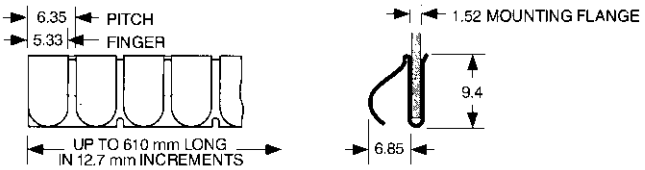
REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	12 kg/m	to	28 kg/m

Note: Also availabe in 7.6 metre rolls.

Scores for break off between 12.7 mm increments optional.
Material: beryllium copper – .13 mm thick



(Lanced as standard every 12.7mm)

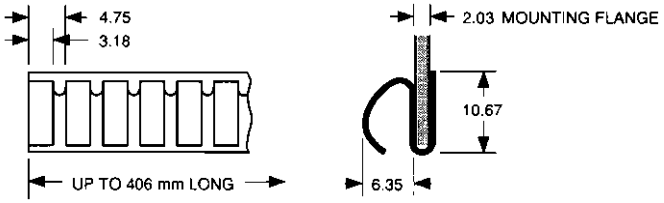
ECP 0692

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	18 kg/m	to	65 kg/m

Material: beryllium copper – .13 mm thick



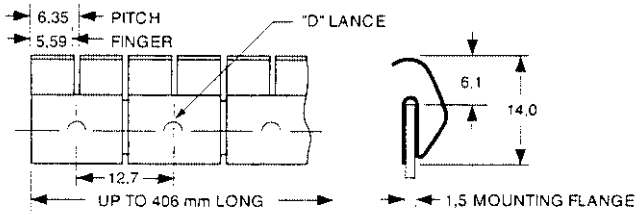
ECP 641

PERPENDICULAR CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	*	to	*
"LC" Style 0.08 Thk.	*	to	*

*Note: Consult factory for performance data.



Clip-on Mounting

TBA Protective Solutions
EMI SHIELDING

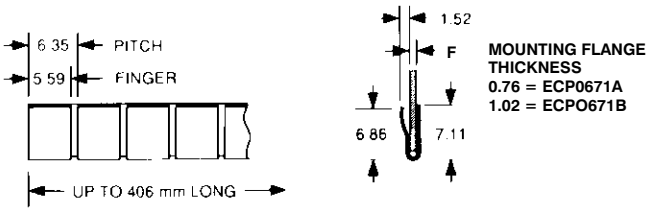
ECP 0671A or B

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.15 Thk.	22 kg/m	to	124 kg/m
"LC" Style 0.089 Thk.	10 kg/m	to	45 kg/m

Material: beryllium copper – .15 mm thick



(also available in LC style (.09mm thick))

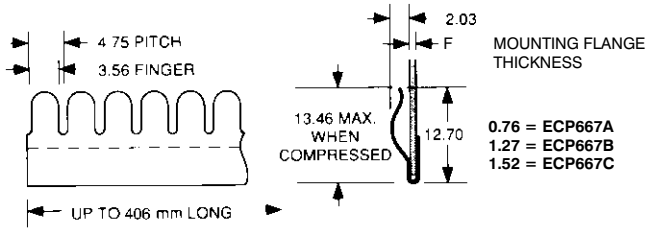
ECP 0667A or B or C

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	18 kg/m	to	138 kg/m

Material: beryllium copper – .13 mm thick



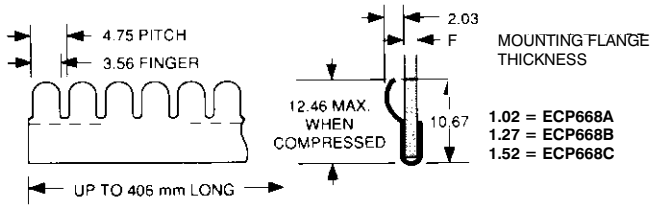
ECP 0668A or B or C

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	34 kg/m	to	208 kg/m

Material: beryllium copper – .13 mm thick



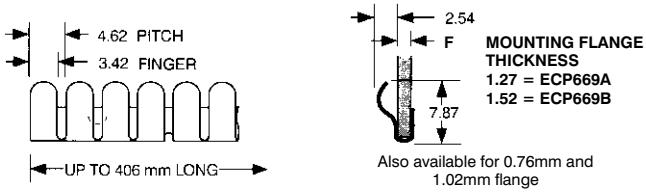
ECP 669A or B

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	21 kg/m	to	73 kg/m
"LC" Style 0.08 Thk.	7 kg/m	to	33 kg/m

Material: beryllium copper – .13 mm thick (LC style– .08 mm thick)



(Lanced as standard 18.5mm)

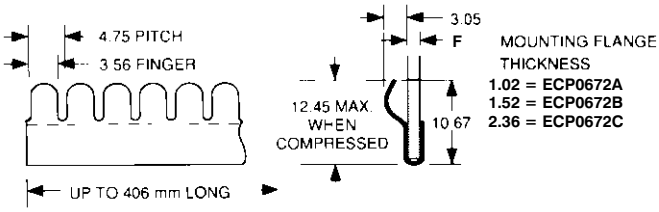
ECP 0672A or B or C

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	18 kg/m	to	125 kg/m

Material: beryllium copper – .13 mm thick



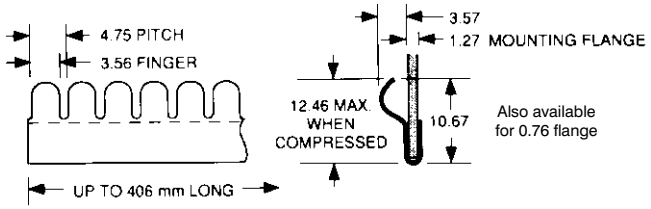
ECP 0674

CYLINDRICAL RADIUS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	27 kg/m	to	N/A
"LC" Style 0.089 Thk.	Consult the factory		

Material: beryllium copper – .13 mm thick (LC style – .09 mm thick)



Clip-on Mounting

TBA Protective Solutions
EMI SHIELDING

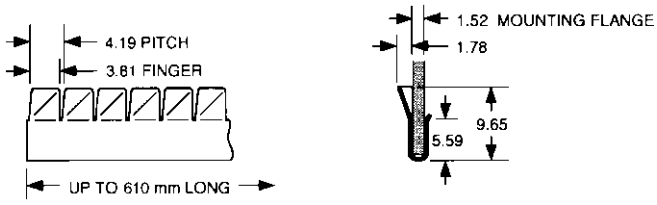
ECP 0643

TWISTED CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	15 kg/m	to	33 kg/m

Material: beryllium copper – .08 mm thick



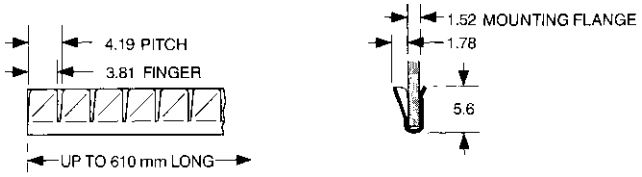
ECP 0643M

TWISTED CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	15 kg/m	to	33 kg/m

Material: beryllium copper – .08 mm thick



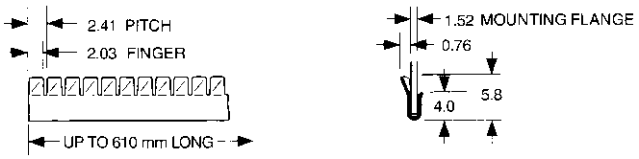
ECP 0625CO

TWISTED CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	48 kg/m	to	71kg/m

Material: beryllium copper – .08 mm thick



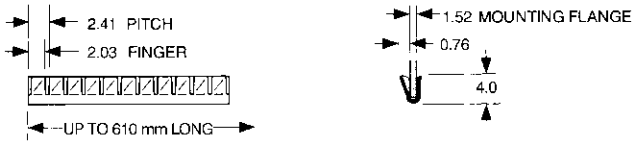
ECP 0625COM

TWISTED CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.08 Thk.	48 kg/m	to	71 kg/m

Material: beryllium copper – .08 mm thick



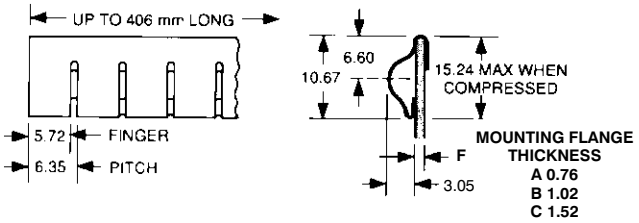
ECP 0652A or B or C

NO-SNAG FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	43 kg/m	to	103 kg/m
"LC" Style 0.064 Thk.	22 kg/m	to	51 kg/m

Material: beryllium copper – .09 mm thick (LC style– .06 mm thick)



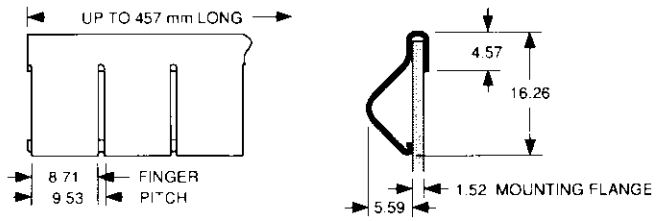
ECP 0629

SOFT FINGERS

Performance Range

	25% Compression		50% Compression
Standard 0.089 Thk.	27 kg/m	to	54 kg/m

Material: beryllium copper – .09 mm thick



Special Mounting

TBA Protective Solutions
EMI SHIELDING

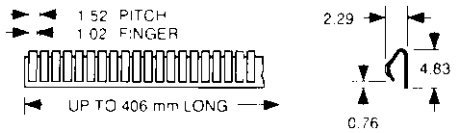
ECP 0693

REVERSE BEND SPHERICAL

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	10 kg/m	to	15 kg/m

Material: beryllium copper – .10 mm thick



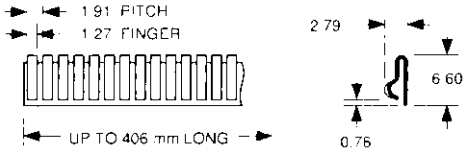
ECP 0694

REVERSE BEND SPHERICAL

Performance Range

	25% Compression		50% Compression
Standard 0.15 Thk.	13 kg/m	to	25 kg/m

Material: beryllium copper – .16 mm thick



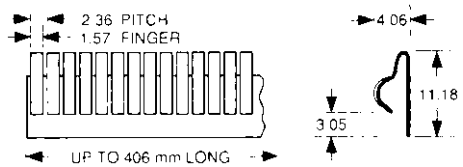
ECP 0696

REVERSE BEND SPHERICAL

Performance Range

	25% Compression		50% Compression
Standard 0.25 Thk.	22 kg/m	to	70 kg/m

Material: beryllium copper – .25 mm thick



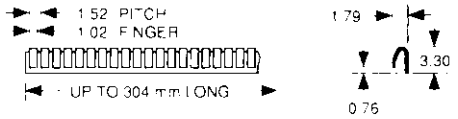
ECP 0689

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.10 Thk.	27 kg/m	to	61 kg/m

Material: beryllium copper – .10 mm thick



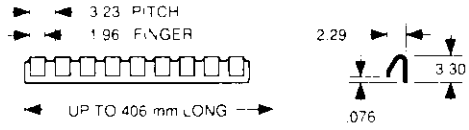
ECP 0683

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.13 Thk.	27 kg/m	to	73 kg/m

Material: beryllium copper – .13 mm thick



Special Mounting

TBA Protective Solutions
EMI SHIELDING

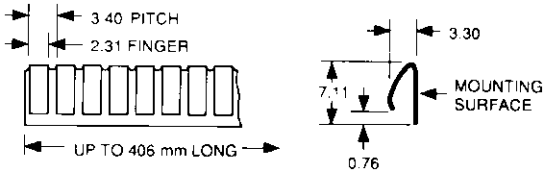
ECP 0685

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.25 Thk.	6 kg/m	to	143 kg/m

Material: beryllium copper – .25 mm thick



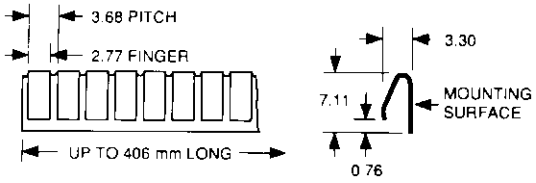
ECP 0690

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.25 Thk.	30 kg/m	to	91 kg/m

Material: beryllium copper – .25 mm thick



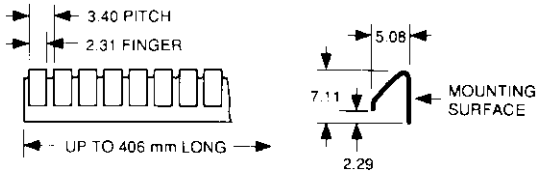
ECP 0686

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.25 Thk.	27 kg/m	to	238 kg/m
"LC" Style 0.14 Thk.	10 kg/m	to	40 kg/m

Material: beryllium copper – .25 mm thick (LC style– .13 mm thick)



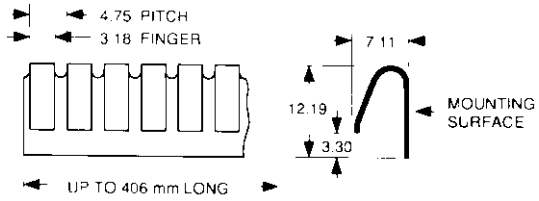
ECP 0691

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.15 Thk.	7 kg/m	to	22 kg/m

Material: beryllium copper – .15 mm thick



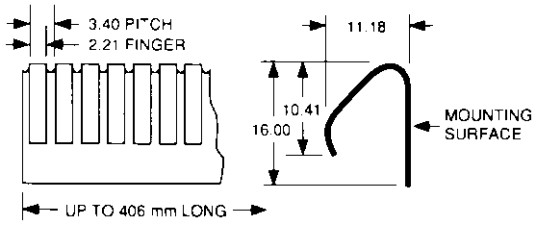
ECP 0688

REVERSE BEND CONTACTS

Performance Range

	25% Compression		50% Compression
Standard 0.25 Thk.	24 kg/m	to	68 kg/m

Material: beryllium copper – .25 mm thick



Special Mounting

TBA Protective Solutions
EMI SHIELDING

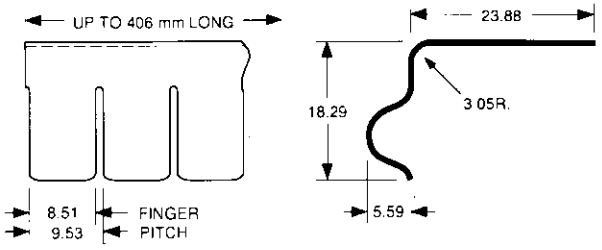
ECP 0681

CYLINDRICAL RADIUS

Performance Range

	25% Compression-50% Compression		
Standard 0.10 Thk.	27 kg/m	to	71 kg/m

Material: beryllium copper – .10 mm thick



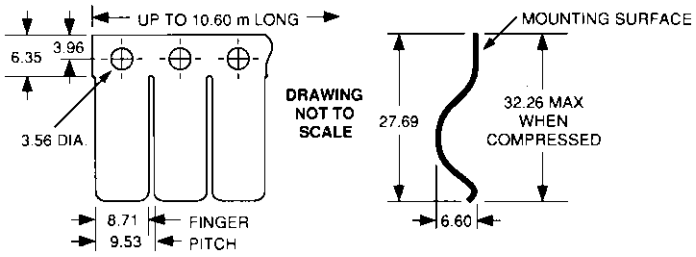
ECP 0680

STRIP GASKETS

Performance Range

	25% Compression-50% Compression		
Standard 0.13 Thk.	22 kg/m	to	61 kg/m

Note: Drawing shown at reduced scale.
Material: beryllium copper – .13 mm thick



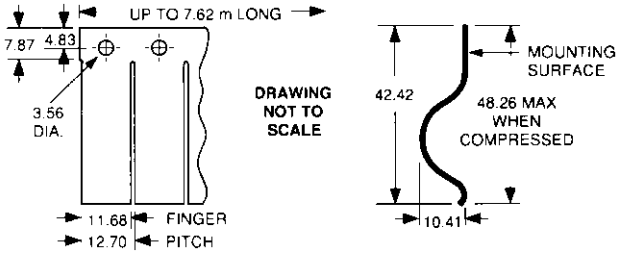
ECP 0624

STRIP GASKETS

Performance Range

	25% Compression-50% Compression		
Standard 0.18 Thk.	24 kg/m	to	48 kg/m

Note: Drawing shown at reduced scale.
Material: beryllium copper – .18 mm thick

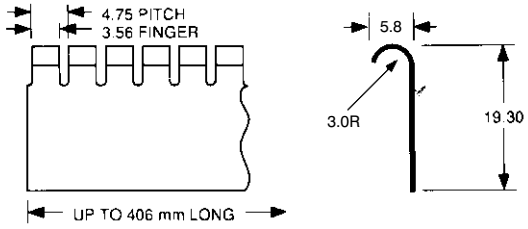


ECP 0676

CYLINDRICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .13 mm thick

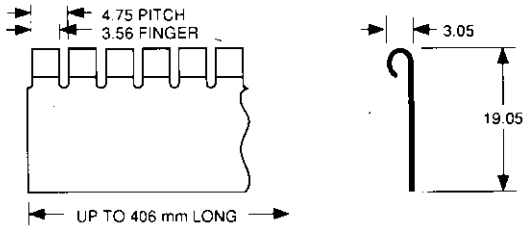


ECP 0675

CYLINDRICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .13 mm thick



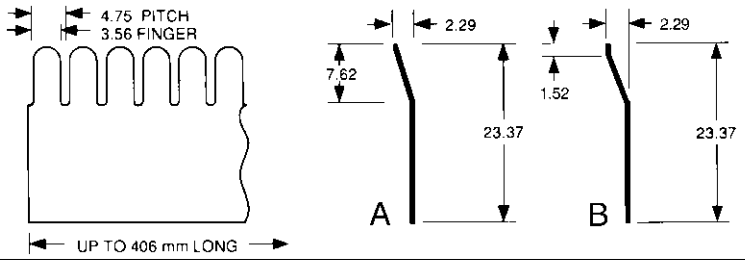
ECP 0670A or B

CYLINDRICAL RADIUS

Performance Range

	25% Compression-50% Compression		
Standard 0.13 Thk.	4 kg/m	to	9 kg/m

Material: beryllium copper – .13 mm thick



Special Mounting

TBA Protective Solutions
EMI SHIELDING

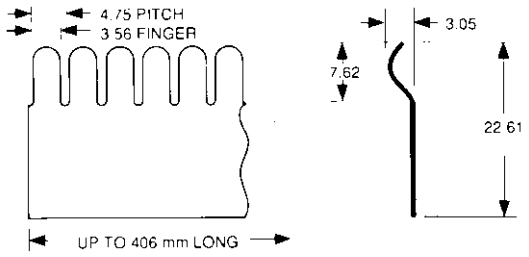
ECP 0673

CYLINDRICAL RADIUS

Performance Range

	25% Compression-50% Compression		
Standard 0.13 Thk.	12 kg/m	to	55 kg/m

Material: beryllium copper – .13 mm thick



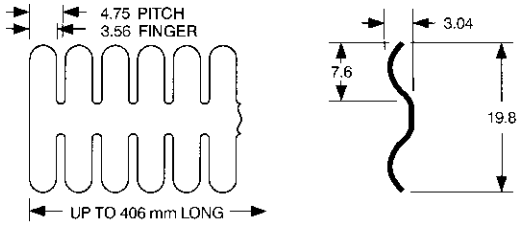
ECP 0677

CYLINDRICAL RADIUS

Performance Range

	25% Compression-50% Compression		
Standard 0.13 Thk.	25 kg/m	to	109 kg/m

Material: beryllium copper – .08 mm thick

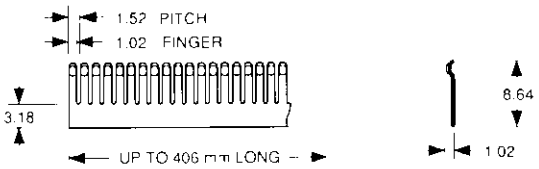


ECP 0660

SPHERICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .10 mm thick

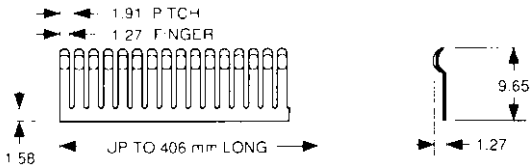


ECP 0661

SPHERICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .16 mm thick

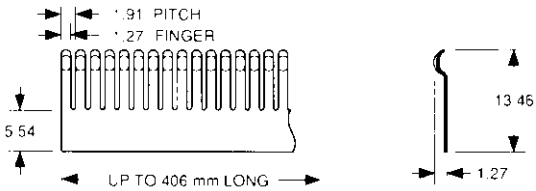


ECP 0663

SPHERICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .16 mm thick

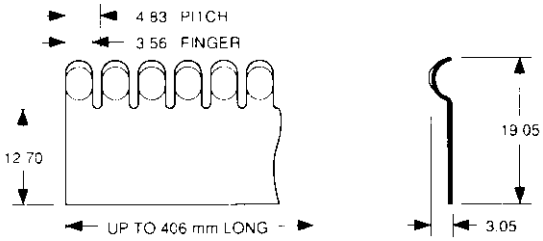


ECP 0664

SPHERICAL RADIUS

Elastic performance data available for specific customer gap requirements. Consult factory.

Material: beryllium copper – .13 mm thick

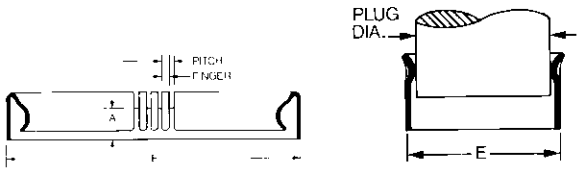


Contact Rings

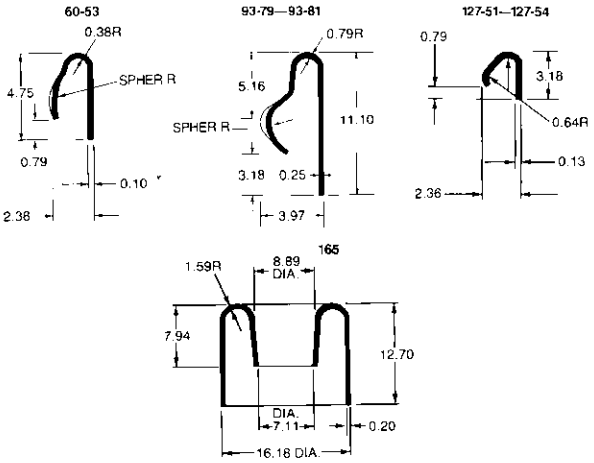
TBA Protective Solutions
EMI SHIELDING

The contact rings shown here are fabricated from finger stock. These rings can be formed in any diameter containing an integral number of fingers, down to the minimum diameter to which that particular strip can be curled. This limit is spelled out in the tables of specifications under “MIN OD”.

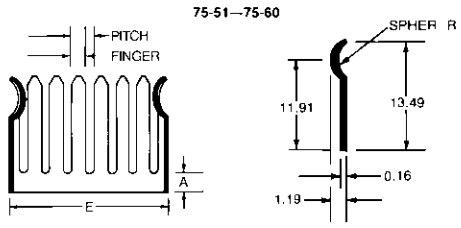
Another specification of importance in the case of contact rings is indicated on the table as dimension “E”, the “recommended mounting dimension”. This figure provides for the proper amount of compression against the “plug” to assure a good contact. It should be added that many variations of these rings are possible. Full information on custom forming is available on request.



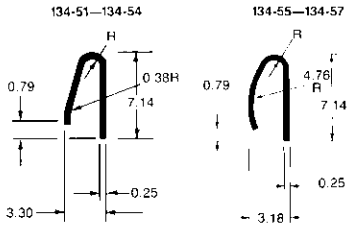
Cat. No.	Pitch	Finger	Fingers ± 1	Plug Dia.	Dim. E	Dim. A	Min. O.D.
60-53	1.52	1.02	63	26.98	30.71	3.18	12.70
93-80	2.36	2.58	41	25.40	31.57	7.93	24.77
93-79	2.36	1.58	33	19.05	25.22	7.93	24.77
93-81	2.36	1.58	45	28.58	34.75	7.93	24.77
127-51	3.23	1.96	16	12.29	16.49	2.36	16.49
127-52	3.23	1.96	22	18.64	23.01	2.36	16.49
127-53	3.23	1.96	28	24.99	29.36	2.36	16.49
127-54	3.23	1.96	31	27.58	31.75	2.36	16.49
165	4.19	3.56	12	8.89	16.18	6.35	16.18



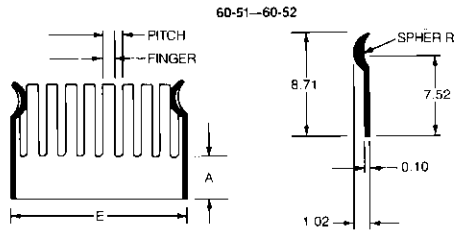
Cat. No.	Pitch	Finger	Fingers ± 1	Plug Dia.	Dim. E	Dim. A	Min. O.D.
75-51	1.91	1.27	12	6.35	7.44	1.58	5.0
75-52	1.91	1.27	18	9.53	11.05	1.58	5.0
75-53	1.91	1.27	23	12.70	14.05	1.58	5.0
75-54	1.91	1.27	28	15.88	17.20	1.58	5.0
75-55	1.91	1.27	33	19.05	20.22	5.54	5.0
75-56	1.91	1.27	39	22.23	23.80	5.54	5.0
75-57	1.91	1.27	44	25.40	26.82	5.54	5.0
75-58	1.91	1.27	54	31.75	32.92	5.54	5.0
75-59	1.91	1.27	65	38.10	39.45	5.54	5.0
75-60	1.91	1.27	86	50.80	52.25	5.54	5.0



Cat. No.	Pitch	Finger	Fingers ± 1	Plug Dia.	Dim. E	Dim. A	Min. O.D.
134-51	3.40	2.31	20	17.04	22.23	5.92	17.78
134-52	3.40	2.31	23	20.22	25.40	5.92	17.78
134-53	3.40	2.31	28	25.78	30.94	5.92	17.78
134-54	3.40	2.31	37	34.93	40.08	5.92	17.78
134-55	3.40	2.31	20	17.04	22.23	5.92	17.78
134-56	3.40	2.31	23	20.22	25.40	5.92	17.78
134-57	3.40	2.31	28	25.78	30.94	5.92	17.78



Cat. No.	Pitch	Finger	Fingers ± 1	Plug Dia.	Dim. E	Dim. A	Min. O.D.
60-51	1.52	1.02	21	9.53	10.36	3.18	4.39
60-52	1.52	1.02	28	12.70	13.56	3.18	4.39



ALL DIMENSIONS IN MILLIMETRES

RFI/EMI Shielding "V" Series

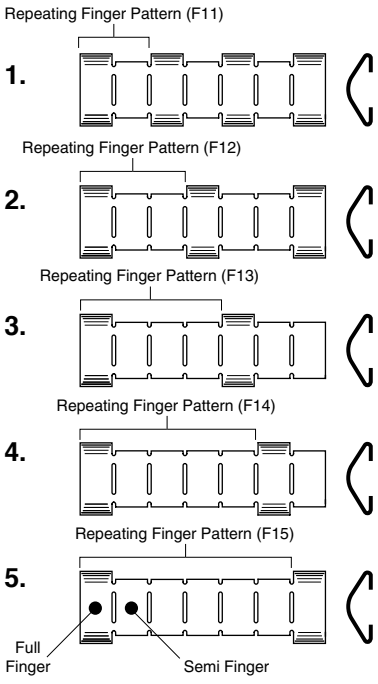
VARIABLE SNAP-ON GASKETS

TBA Protective Solutions
EMI SHIELDING

- Snap into slots
- For gaps as small as 0.5mm
- Fewer slots improve shielding effectiveness
- Easy and secure installation
- Ideal for bidirectional applications
- 100db attenuation
- 3 standard profiles with 5 slot patterns
- Low compression force
- High durability
- In stock for immediate delivery

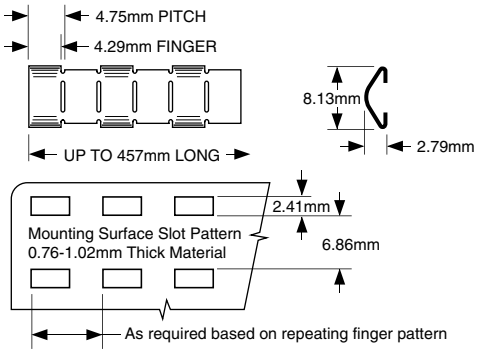
MOUNTING SLOT PATTERNS

"V" Series Snap-on gaskets are offered in three standard profiles, each with the five variable finger (or slot) patterns shown below.* Strips may be supplied to any full- or semi-finger increment.



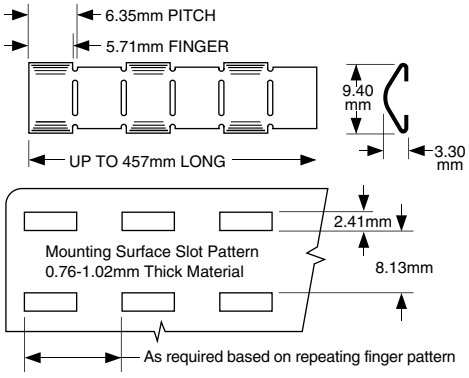
ECP612VFXx (Shown with pattern F11)

Standard 0.09mm Thick
"LC" Style 0.05mm Thick



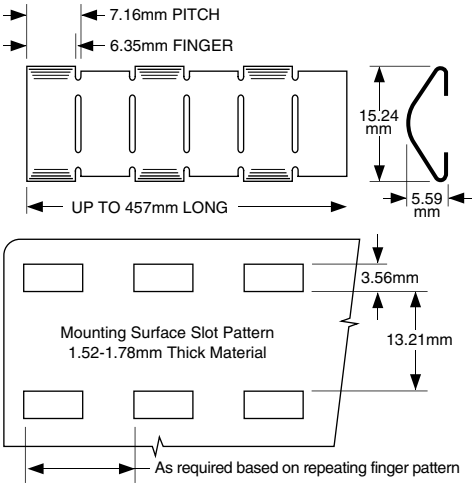
ECP613VFXx (Shown with pattern F11)

Standard 0.05mm Thick



ECP614VFXx (Shown with pattern F11)

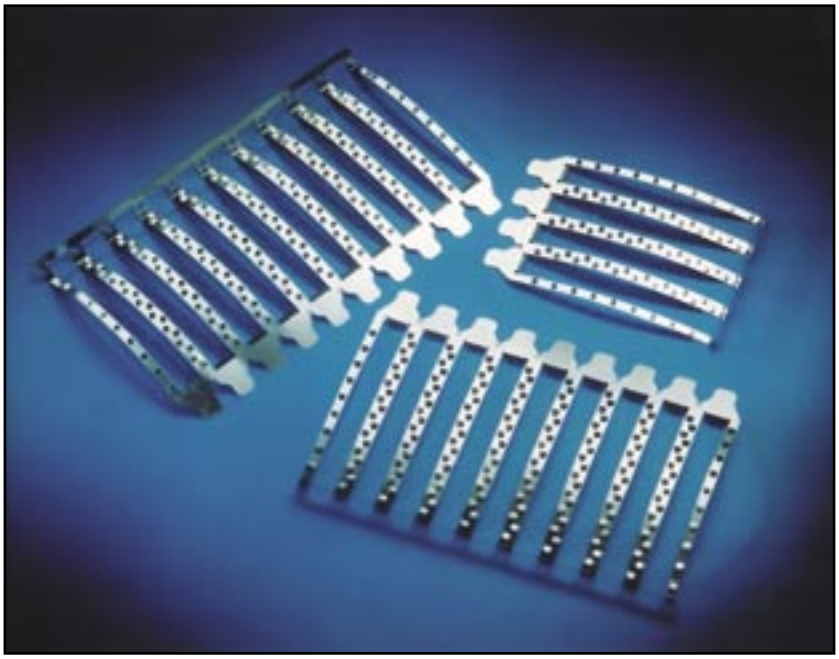
Standard 0.09mm Thick
"LC" Style 0.05mm Thick



CARD CAGE SHIELDING

TBA Protective Solutions
EMI SHIELDING

TBA-PS's new card cage shields are designed to provide contact between the card cage and the I/O slot brackets for optimum EMI/ RFI shielding effectiveness



Produced from 0.076mm stainless steel

19 contact fingers per slot

Contact fingers to static side, facing the card cage portion of the chassis allowing easy insertion of add-in cards without snagging.

Multiple slot configuration. 1-10 slots without tooling

Available as standard items 1-10 slots

TBA
Protective Solutions

Unit 3, Transpennine Trading Estate,
Gorrells Way, Rochdale OL11 2PX

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