CLIP-SHIELD™ Conductive Extrusion with Mechanical Attachment

DESCRIPTION

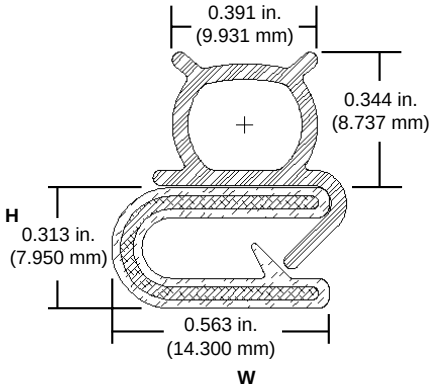
CLIP-SHIELD clip-on gaskets provide secure mechanical attachment of conductive elastomer gaskets for EMI shielding on electronic enclosures. This design replaces pressure sensitive adhesive tapes as a gasket attachment method. CLIP-SHIELD gaskets are ideally suited to small and large enclosure applications requiring both high levels of EMI shielding and resistance to the outdoor environment.

Standard CLIP-SHIELD gaskets consist of a Chomerics CHO-SEAL® conductive elastomer, which is adhesively attached to a flexible PVC/TPE-coated aluminum clip. Several CHO-SEAL conductive elastomer materials are available. These include S6305, which provides excellent shielding performance and environmental resistance, and 6370, which also is UL 94V-0 flammability rated.

These conductive elastomers can be co-extruded with a non-conductive silicone for added environmental protection.

FEATURES

- 55-120 dB shielding effectiveness from 200 MHz to 10 GHz
- Excellent resistance to heat, humidity, salt fog corrosion and rain (with silver aluminum or nickel graphite fillers)
- Choice of General Duty or UL 94V-0 rated versions
- High strength mechanical gasket attachment to the enclosure
- Easy manual installation
- Available in 90-degree corner splice
- 2 in. (50.8 mm) min. bend radius for curved surfaces to avoid splicing
- Clip sizes (H) from 0.06 in. (1.59 mm) to 0.5 in. (12.7 mm)
- Conductive elastomer extrusion widths (w) available to 0.75 in. (19.05 mm)
- Reliable, high strength bond between the elastomer gasket and PVC/TPE-coated clip



Typical CLIP-SHIELD Gasket Cross Section

BENEFITS

- Economical installation
- Single gasket design eliminates separate EMI and environmental seals
- Alternative attachment method to pressure sensitive adhesives (PSA)
- Global technical application support

OPTIMIZED GASKET SECTION

- A wide range of CHO-SEAL conductive materials are available
- Custom gasket cross sections can be designed to meet specific applications. Clip widths (W) can be designed to a maximum of 0.75 in. (19.05 mm)
- Co-extruded cross sections can be designed for extra environmental protection. CHO-SEAL conductive elastomers are extruded in parallel with a nonconductive silicone
- Clip sizes (H) are available to accommodate panel thicknesses from 0.06 in. (1.59 mm) to 0.50 in. (12.7mm)

Typical Part Number
19-24-XXXX(X)-ZZZZ(Z)
XXXX(X) Profile
ZZZZ(Z) Material
eg. 19-24-16966-S6305

All extruded conductive elastomers are available in CLIP-SHIELD. Contact Chomerics Application Department for assistance.

CLIP-SHIELD CONDUCTIVE EXTRUSION WITH MECHANICAL ATTACHMENT

Min. corner radius 2 in. (50.8 mm)

90-degree spliced corner

Shown below are the specifications of the two most commonly used materials.

CONDUCTIVE ELASTOMER SPECIFICATIONS			
	TEST PROCEDURE	**CHO-SEAL S6305**	**CHO-SEAL 6370**
Conductive Filler		Ni/C	Ni/C
Elastomer Binder		Silicone	Silicone
Volume Resistivity (ohm-cm, max)	CEPS-0002*	0.10	0.10
Volume Resistivity after Heat Aging, 150°C/48 hrs. (ohm-cm, max.)	CEPS-0002*	0.25	0.25
Hardness (Shore A, ±10)	ASTM D2240	65	60
Specific Gravity (±0.25)	ASTM D792	2.0	2.1
Tensile Strength psi (Mpa), min.	ASTM D624	200 (1.38)	150 (1.03)
Elongation (percent, min.)	ASTM D412	100	100
Compression Set, 70 hrs. @ 100°C (percent max.)	ASTM D395** Method B	40	6.3
Flammability	UL94	--	V-0 (wall >0.014 in./ 0.356 mm)
Low Temperature Flex TR10 (°C, min.)	ASTM D1329	-45	-45
Corrosion Resistance (weight loss mg)	CHO-TM-100*	35	35
Maximum Continuous Use Temperature (°C)		150	150
Shielding Effectiveness (dB)	CHO-TM-TP08*		
100 MHz (E field)		100	100
500 MHz (E field)		100	100
2 GHz (Plane Wave)		100	95
10 GHz (Plane Wave)		100	95

* Copies of CEPS-0002, CHO-TM-100 and CHO-TM-TP08 are available from Chomerics.

** Compression set is expressed as a percentage of deflection per ASTM D395 Method B, at 25% deflection. To determine percent recovery, subtract 1/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

CHOMERICS

Parker Seals

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