

CHO-BUTTON™ EMI Grounding Contacts

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CHO-BUTTON grounding contacts provide a reliable RF bond between metallic parts of an enclosure (side panels-to-frame, door-to-frame, etc.). When spaced at 4 to 8 inch intervals, the shielding effectiveness obtained is greater than 40 dB for emissions below 200 MHz. This level of shielding is normally adequate to meet commercial EMI specifications for digital devices operating below 50 MHz.

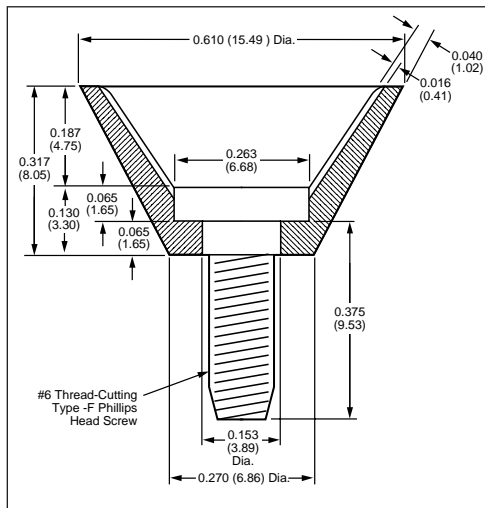
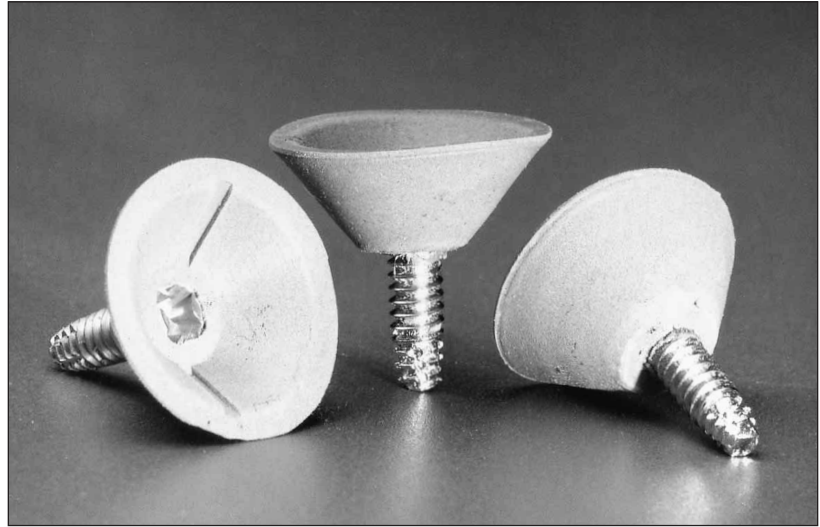


Figure 1 Standard Dimensions for CHO-BUTTON Grounding Contacts *inch (mm)*

They are molded from Chomerics' highly conductive CHO-SEAL® silicone elastomers, and provide an alternative to continuous conductive gasketing in flange joints. CHO-BUTTON contacts will deflect 30% (0.094 inch or 2.38 mm) under approximately 3 pounds (1.4 kg) of closure force.

Product Features

- Easily installed with integral thread-cutting screw
- Design of button cross section and excellent resilience/flexibility of CHO-SEAL elastomer allow conformability to wide joint gap tolerances
- Highly conductive CHO-SEAL material (5×10^{-3} ohm-cm) results in low contact resistance even under low closure pressure



- Provides more than 40 dB shielding effectiveness between 20 MHz and 200 MHz when spaced 8 inches (20.3 cm) apart (and even better shielding at closer spacing)
- Will not oxidize or increase significantly in resistance over time
- Cannot be over-torqued (positive stop)

Application Notes

1. The retention hole should be deburred and slightly countersunk for best long-term results. For CHO-BUTTON P/N 86-10-A617-1215, the diameter of the retention hole should be 0.118 inch (3.0 mm), and a minimum of 0.375 inch (9.53 mm) deep if not a through-hole.
2. The surface against which the button mates must remain conductive over the life of the equip-

ment. If flanges are painted with non-conductive coatings, proper care must be taken to mask and electrically stabilize the contact points. Bare steel or aluminum will not remain sufficiently conductive over time. Flange treatments (such as MIL-C-5541 Class 3 chromate conversion) or pressure-sensitive tin-plated copper flange tapes (such as Chomerics' CHO-MASK II Foil Tape) are effective ways to provide long-term electrical stability of flange contact points.

Ordering Procedure

Dimensions for the standard CHO-BUTTON grounding contact are shown in Figure 1. The part number is 86-10-A617-1215. For custom sizes consult with our Applications Engineering Department.

Table 1

TYPICAL PROPERTIES	
Shielding Effectiveness (30-22 MHz)	>40 dB
Contract Resistance:	
@ 5% deflection	25 mOhm
@ 10% deflection	<10 mOhm
@ 40% deflection	<10 mOhm
@ 50% deflection	<10 mOhm
Current Capacity (5 minute test)	30 amps
Conductive Elastomer Filler	Silver-plated metallic particles