



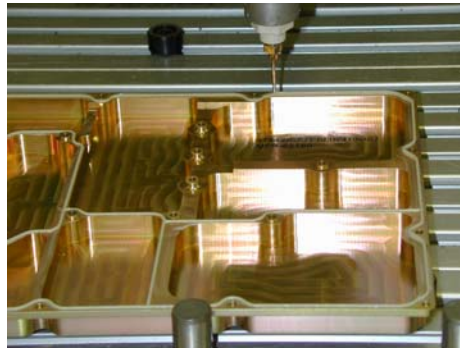
Application Note

Form-In-Place Gasket

Problem

Intricate EMI gasket needed to prevent interference from the external environment or within the system from impacting device performance.

Cybershield Solution



Form-in-place (FIP) gaskets can be designed and dispensed onto most metals as well as as-molded, plated and conductive painted plastics to provide EMI shielding, grounding and environmental gaskets. The typical conductive gasket is comprised of silicone with filler of silver plated copper, nickel or aluminum particles to provide the conductivity and EMI

shielding (typical volume resistivity of 0.002" ohms-cm and EMI shielding effectiveness of 85-120 dB at 500 MHz). The FIP gasket is custom designed to meet the requirements for the space, path and compression force. The gasket is dispensed using computer controlled robot that precisely locates the gasket onto specified locations of the part. The gasket can be one continuous path around the perimeter of the part to provide EMI shielding and/or environmental seal, or the gasket can be dispensed in intricate paths around numerous compartments to prevent cross talk between electronic components within the system. The gasket path can be easily changed by re-programming the robot in order to accommodate changes in requirements or design. The process is highly flexible and can quickly respond to changes in design and/or production rates. It is suitable for lot sizes of 1 to millions of units per year. Gaskets are single component material, dispensed at room temperature. The finished gasket has operating temperature range of -58 to 257°F (-50 to 125°C). The dispensed gasket offers low compression force, typical 1.5 Lbs/linear in. (0.27 Kg/cm) @ 0.022" (0.56 mm) height @ 20% deflection.

The dispensed gasket offer wide size range: Height: 0.015" to 0.090" (0.38 mm to 2.3 mm), Width: 0.018" to 0.125" (0.46 mm to 3.1 mm).



Conductive Gasket on Painted Plastic Housing



Conductive Gasket on Machined Metal Housing

For more information about this application, Cybershield capabilities and/or to review your application requirements for metallized plastic, contact Cybershield

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- Fabricate a full range of EMI shielding solutions – Electroless Plating and Conductive Paint
- Electroplating Copper, Nickel, Trivalent Chrome, including decorative plating on plastics and metal
- Offer engineering design assistance – plastic resin selection, metal coating specification and mechanical design recommendations
- Serve applications in volumes from 25 units per month to millions of units per month
- Provide extensive mechanical assembly services to its customers
- Manage entire supply chain, including plastic injection molding to provide customers with turnkey solutions, designed and manufactured to strict OEM requirements

EMI Shielding, ESD and Electroplated Coatings	Assembly Services
All-over & Selective Coverage Electroless Plating Copper, Nickel, Tin, Gold Electroplating Copper, Nickel, Trivalent Chrome Conductive Paint	Dispensed Gaskets (Conductive or Environmental) Insert Installation (Ultrasonic or Heat Staking) Decorative Paint Mechanical Assembly

Other Cybershield Plastic Metallization Systems



Plated Plastic
Router Chassis



Plated Plastic RF
Filter Housing



Plated Plastic
Shielded Connectors



Telecommunications
Faceplates