



Q Microwave's Surface Mountable Packaging for RF Filters

Q Microwave offers all of our filter product in a variety of surface mountable packages. The type of package is determined by several factors, such as frequency, interfaces, application, etc. Q Microwave offers PWB SMT, Formed Lead, MicroStrip, &/or CoPlanar MicroStrip Packaging. This literature provides some general guidelines to help select the best solution.

sales@qmicrowave.com

PWB SMT Configuration

Typically used for filter applications up to 10 GHz. The Filter design can be Ceramic Resonator, Lumped Element, &/or Cavity/Compline.

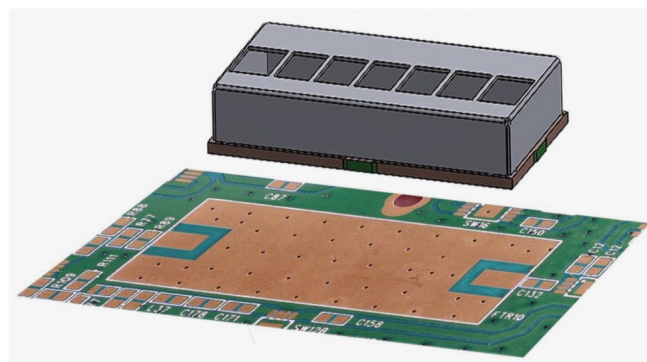
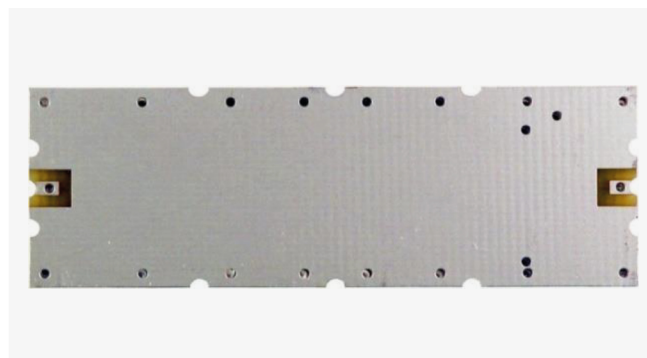
Filter performance is heavily dependent on the quality of the grounding as determined by the circuit layout & quality of attachment.

Q Microwave can work with your engineering to obtain maximum results.

Filter assembly utilizes high-temperature solder, allowing for reflow onto the next level assembly using Sn63 or similar low-temperature solders.

Typically built on Rogers 4003, 4350, or FR4 material and can be customized to match customer requirements.

Although packaging is non-hermetic, the filter is designed to withstand most PWB cleaning agents used during the typical manufacturing process.



US Based Facilities
Classified Test Capabilities

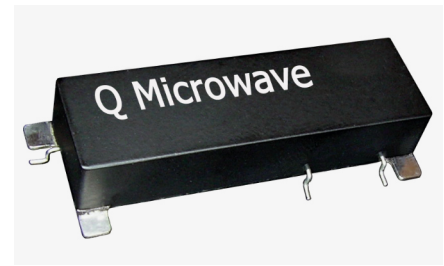


Formed Lead Configuration

This package configuration is applicable to Ceramic Resonator, Lumped Element, &/or Cavity / Combine filter designs, and is recommended for frequencies up to 6 GHz.

Q Microwave builds this product using high temperature solder within an aluminum, brass, or stainless steel package that is both EMI & hermetically sealed.

The formed leads can be either round or flat. Packages can be solder, epoxy, or mechanically attached to the mating board. The leads are then solder connected to the circuit trace.



MicroStrip Configuration

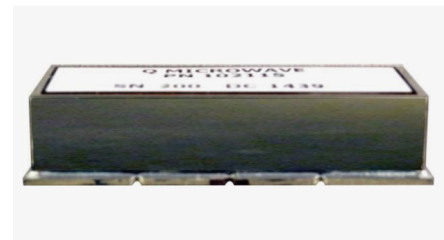
MicroStrip Interconnects are used to achieve higher RF performance, & work well for frequencies up to 20 GHz.

The MicroStrip interconnect geometry provides for lower loss & improved isolation, in a much smaller than typical package. It is perfectly suited for higher level integrated assembly modules.

Filter designs can be Ceramic Resonator, Lumped Element, &/or Cavity/Combine.

Packages can be solder or epoxy attached. Interconnection to this "drop-in" filter can be made via soldered ribbon, gap weld, or wire bond.

Q Microwave builds this product using high temperature solder in an aluminum or kovar package that is considered EMI sealed, but non-hermetic.



CoPlanar MicroStrip Configuration

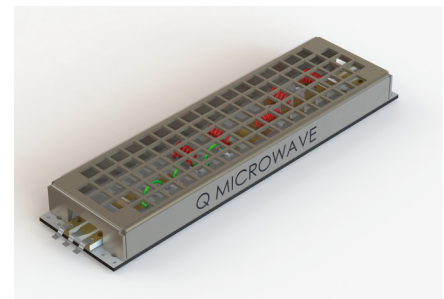
Higher performance at higher frequencies (up to 20 GHz) can be achieved using our CoPlanar Microstrip Packaging. It provides lower loss & improved isolation in a much smaller form factor. It is perfectly suited for higher level integrated assembly modules. Filter designs can be Ceramic Resonator, Lumped Element, &/or Cavity/Combine.

Q Microwave builds this unit using high temperature solder within an aluminum or kovar package that is considered EMI sealed, but non-hermetic.

The CoPlanar MicroStrip Inputs are provided with the "Signal" lead paralleled with "Ground" leads on both sides, providing enhanced isolation, & improved RF transitions.

Interconnection to this "drop-in" filter can be made via soldered ribbon, gap weld, &/or wire bond.

A Coplanar interface will provide the highest level of performance but unlike other packaging cannot be reflowed or pick and placed. This packaging style is recommended for frequencies over 8 GHz.



US Based Facilities
Classified Test Capabilities

