



# **Q MICROWAVE, INC.**

*ISO 9001 / AS 9100 Certified Supplier*

## **Introducing 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.

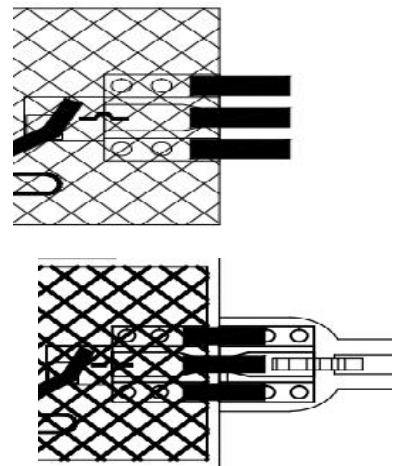
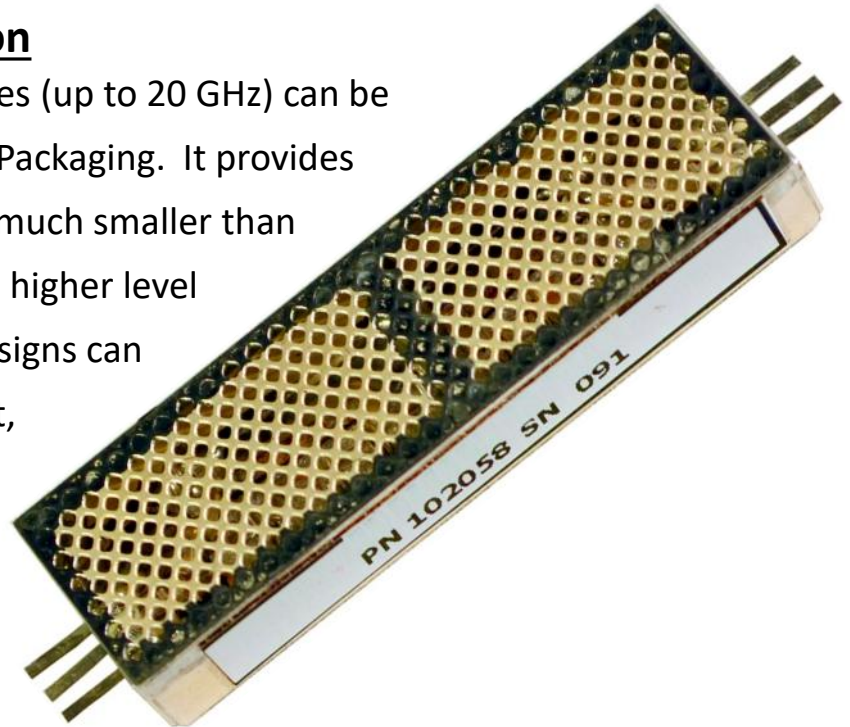
### **CoPlanar MicroStrip Configuration**

Higher performance at higher frequencies (up to 20 GHz) can be achieved using our CoPlanar Microstrip Packaging. It 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.

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.



**Ph# 619-258-7322**

**[www.qmicrowave.com](http://www.qmicrowave.com)**



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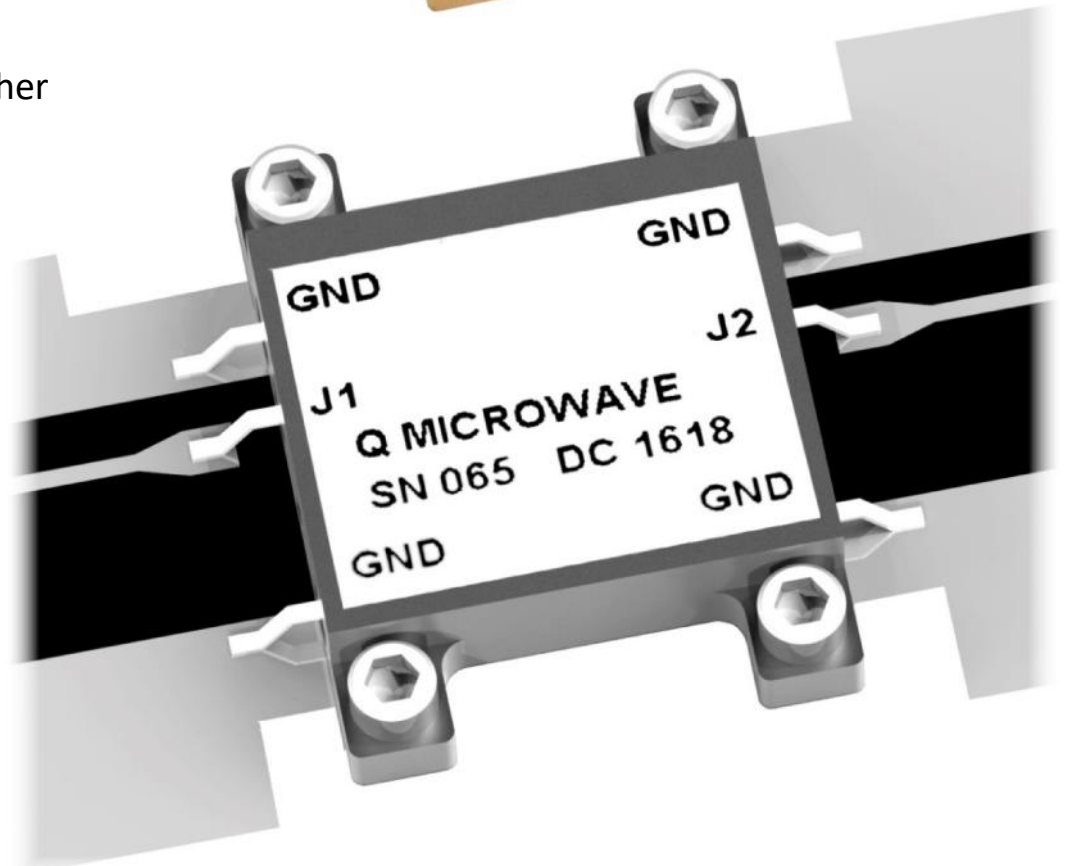
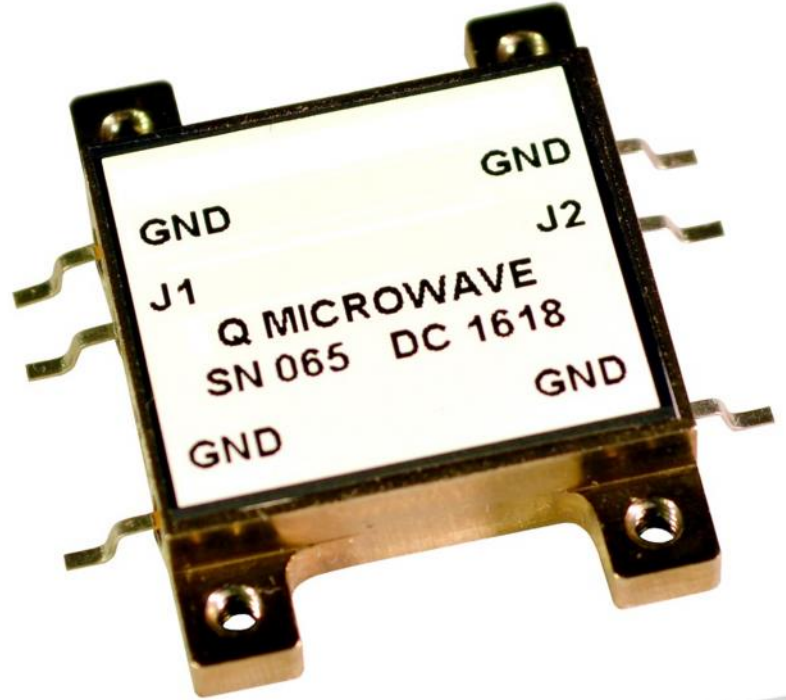
## Formed Lead Configuration

This package configuration is applicable to Ceramic Resonator, Lumped Element, &/or Cavity / Combine filter designs, at 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.





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## **MicroStrip Configuration**

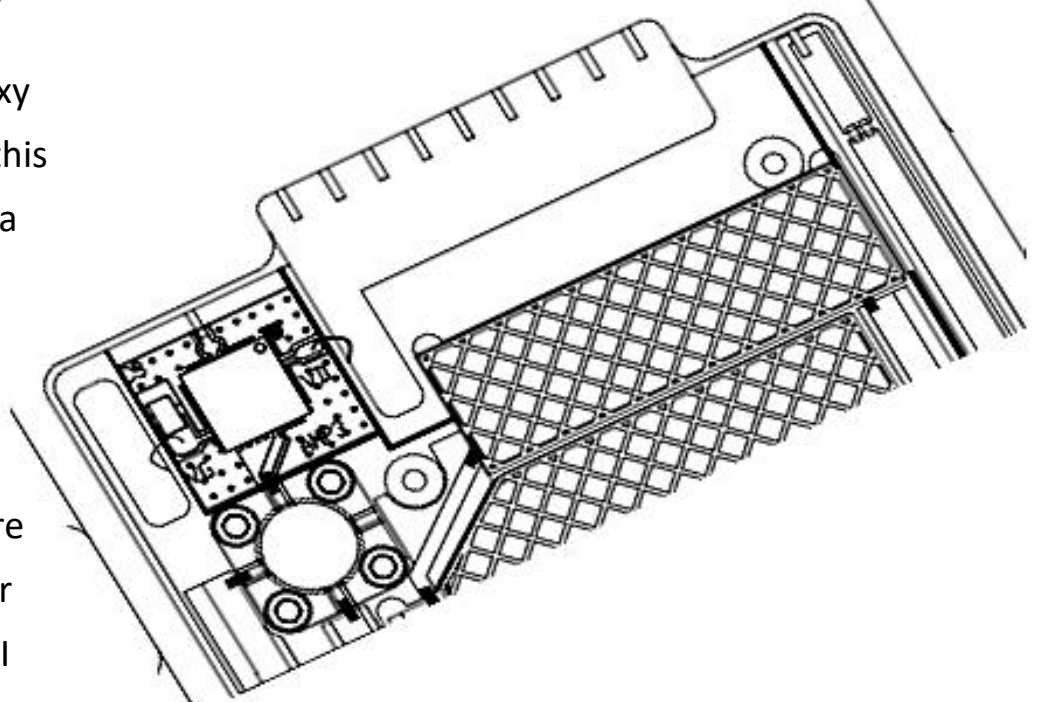
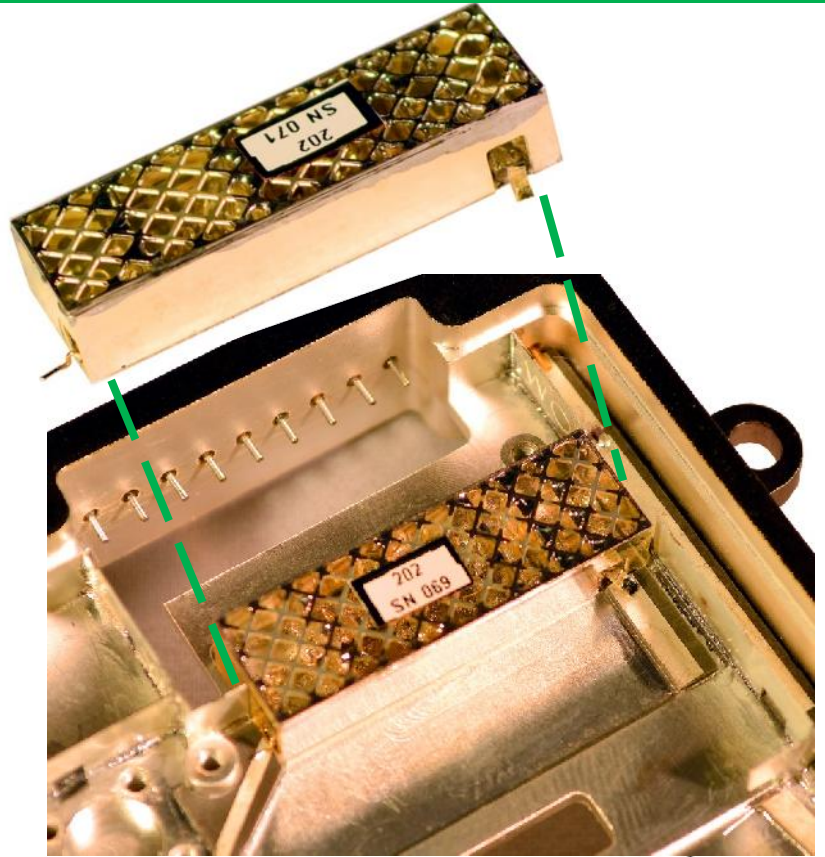
MicroStrip Interconnects are used to achieve higher RF performance, & work well for frequencies up to 20 GHz.

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.





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## PWB SMT Configuration

Typically used for filter applications up to 6 GHz. The Filter design can be Ceramic Resonator, Lumped Element, &/or Cavity / Combine.

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.

This filter assembly uses a high temperature solder on a polyimide or FR4 board, and is EMI shielded.

This package design is intended to be installed on your PWB using Sn63 or other low temperature solders. The package is non-hermetic, but the filter is designed to withstand most PWB cleaning agents.

