Specifications

Temperature Range: -54°C to +125°C
Soldering Temperature: 250° C, maximum
Soldering Time: Any heating operation to 250° C not to exceed 10 seconds with a maximum of three heating operations to 250° C

Material:
Brass, gold plated over nickel
Center Conductor: Kovar, gold plated over nickel
Dielectric: Corning 7070 glass

Figure 1. VP100BMS10 Shroud

Anritsu

VP Shroud to Microstrip Interface VP100BMS10

1. Tools and Materials

These tools and materials are needed to install the VP100BMS10 Shroud.

Name	Vendor and Model/Part Number
Cleaning Fluid	Isopropyl Alcohol
Rosin Flux	#1544- HT, Kester Co.
Solder, 80In/15Pb/5Ag, .5 mm diameter wire	Indium Co., Indalloy #2
Stereo Microscope .07-30X	Bausch & Lomb Stereo Zoom 4

2. Machining Dimensions

Machining dimensions for the shroud mounting hole are shown in Figures 2 and 3.

3. Installing the Shroud into the Housing

a. Pre-flux the shroud and the inner walls of the mounting hole. Flux may not be needed if soldering is done in a reducing atmosphere.

b. For a thick-wall housing place three to four solder washers on the shroud and place the shroud into the housing as shown in Figure 2.

c. For a thin-wall housing, place one or two solder washers over the shroud inside the housing as shown in Figure 3.

d. Place the housing on 250º C hot plate to flow the solder.

e. When the solder starts to melt, push the shroud into the housing so that the shroud flats are aligned with the housing slot.

f. Remove the housing from the hot plate keeping the shroud firmly pressed to the housing. Allow the assembly to cool at room temperature.

g. Clean with alcohol or an equivalent solvent for removing flux.

NOTE

Visually verify that there is good solder flow (without any pinholes or gaps) between the outer conductor and the wall of the housing. This will ensure that a hermetic seal is created for the shroud assembly.

4. Installing a Substrate on a Carrier Into the Housing

a. Cut the 0.5 mm indium solder wire into 1 mm (0.040 inch) long pieces.

NOTE

Solder preforms or pastes can be used in step 4a instead of solder wire (put them between the shroud step and the bottom of the substrate).

b. Place 1544 flux and the pre-cut indium solder wire pieces into the ground lip holes.

c. Place the substrate (0.25 mm – 10 mil thick) on top of the ground lip.

d. Install the mounting screws into the carrier and tighten them to the recommended torque for the screw size used, making sure the center pin is properly aligned with the circuit trace. The recommended gap between the substrate and the shroud is 0.05 mm and the gap between the ground lip and the carrier should be a minimum of 0.89 mm.

e. Place the housing on 165°C hot plate to flow the solder.

f. Remove housing from the hot plate and allow it to cool at room temperature.

g. Clean the assembly with alcohol to remove flux and visually inspect all solder joints.

h. Following the instructions included with the V110-1 Stress Relief Contact, install a contact onto the shroud center pin and attach the connecting tab to the circuit trace by soldering, parallel gap welding or with silver epoxy.

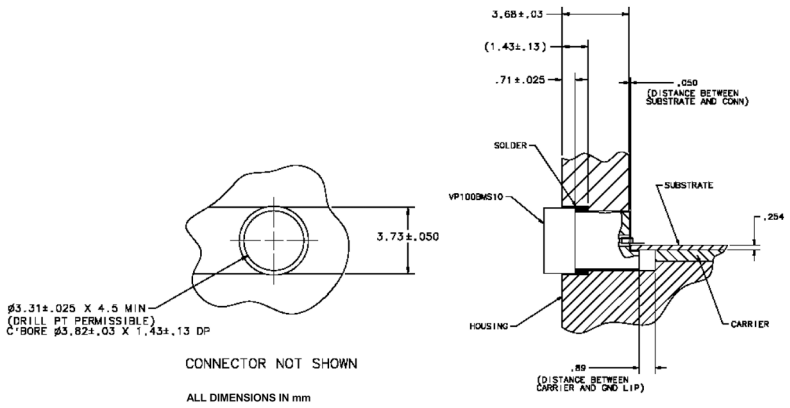

Figure 2. VP100BMS10 Mounting Hole Dimensions and Assembly for a Thick Wall Housing

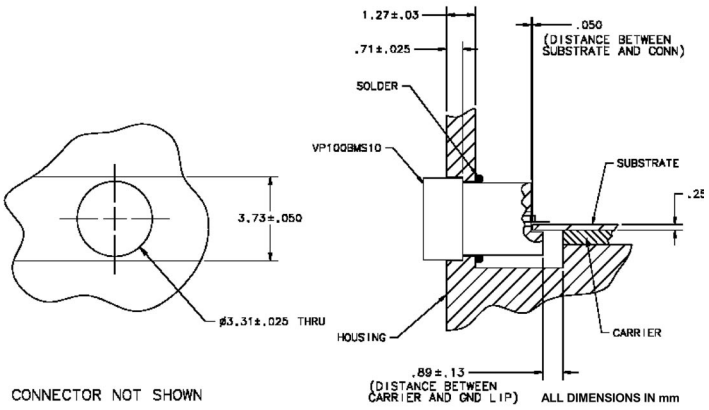

Figure 3. VP100BMS10 Mounting Hole Dimensions and Assembly for a Thin Wall Housing

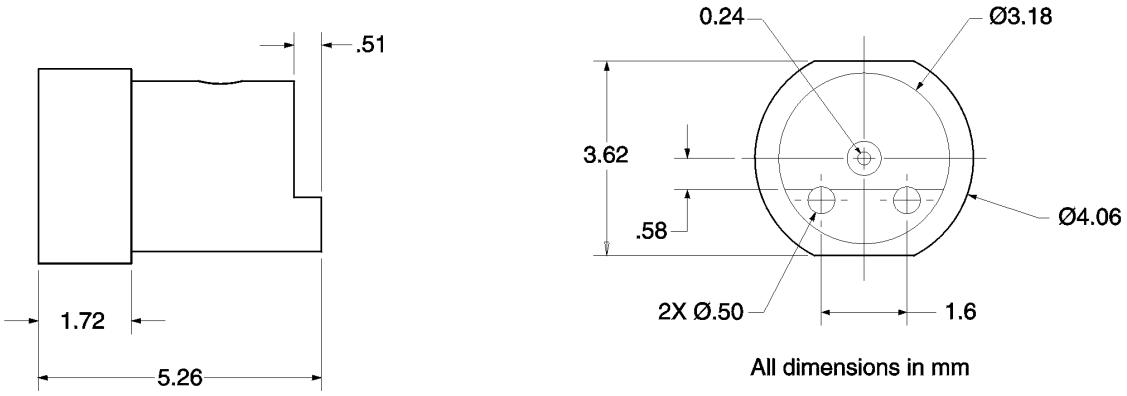

Figure 4. VP100BMS10 Outline Drawing

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