Specifications

Soldering Temperature: 250° C, maximum

Figure 1. *VP100BCPW Shroud*

VP Shroud to Coplanar Waveguide Interface VP100BCPW

1. *Tools and Materials*

These tools and materials are needed to install the VP100BCPW Shroud. Equivalent tools may be used if the recommended tools are not available.

Name	Vendor and Model/Part Number
Solder, 80Au/20Sn, washer 3.76 OD, 3.21 ID, 0.13 thick	Indium Co., Indalloy#182 Anritsu 01-503
Solder, 80In/15Pb/5Ag, 0.5 mm dia. wire	Indium Co., Indalloy#2
Cleaning Fluid	Isopropyl Alcohol
Rosin Flux	#1544- HT Kester Co.
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. Flux the shroud and the inner walls of the mounting hole.

NOTE

Flux may not be needed if the 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 quickly at 3.5º C per second.

g. Clean the assembly 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 Into the Housing*

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

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

c. Place the preformed solder sheet onto the center trace of the substrate.

d. Place the substrate in the housing resting on a carrier (shim), making sure the trace aligns with the connector center pin.

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

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

g. Remove the carrier (shim).

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

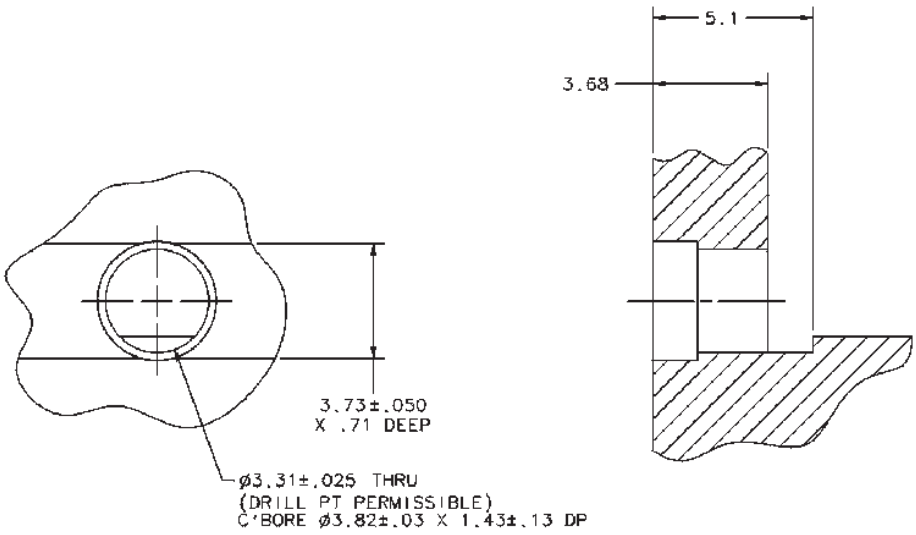

Figure 2. *VP100BCPW Mounting Hole Dimensions and Assembly Drawing for a Thick Wall Housing*

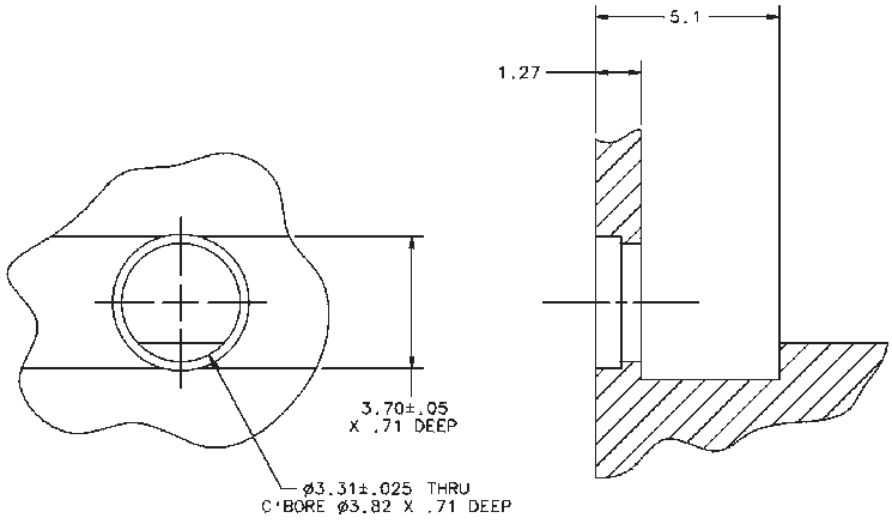

Figure 3. *VP100BCPW Mounting Hole Dimensions and Assembly Drawing for a Thin Wall Housing*

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