

Anritsu

K Connector[®] Microstrip to K Female Sparkplug Connector Part Numbers: K102F/K102F-HT

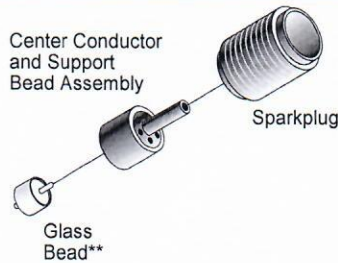


Figure 1. Sparkplug Connector (** not supplied)

1. Tools And Materials

The following tools and materials are needed to install the K102F/K102F-HT Flange Mount Connector in a mounting hole on a housing. Equivalent tools may be used if the recommended tools are not available.

Name	Vendor and Model/Part Number
Hot Plate	H2155, Micro Hot Plate, Thermolyne, Baxter Scientific Products
Step Drill Kit	01-104 or 01-108 Anritsu Co.
Torquing Tool	01-105A Anritsu Co.
Support Bead Holding Fixture	01-103 Anritsu Co.
Solder, 62% tin, 0.50 mm diameter rosin core	SN62 Kester Co. or AuSn
Rosin Flux	135, Kester Co.
Cleaning Fluid	isopropyl alcohol

2. Machining Dimensions

Machining dimensions for the mounting hole required for installation of the microstrip to K female flange mount connector are provided in Figure 5 on the reverse side.

CAUTION

The four holes shown in Note 2 of Figure 5 must be concentric within ± 0.038 mm. If they are not, connector performance will be degraded. To make this required concentricity easier to achieve, custom-made drill-bit kits, Models 01-104 and 01-108, are available from Anritsu.

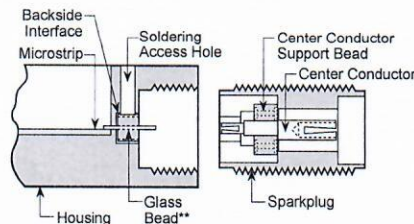


Figure 2. K Connector Sparkplug Assembly

3. Fabrication Instructions

Fabrication instructions for the sparkplug connector assembly are provided below. Figures 1 and 2 identify the connector parts. Refer to these figures while performing the following steps.

- Install the microstrip into the housing. Refer to Figure 3 for dimensional tolerances around the glass bead.
- Set the hot plate to $200^{\circ} \pm 10^{\circ}\text{C}$ for SN62, or $310^{\circ} \pm 10^{\circ}\text{C}$ for AuSn solder.
- Flux the glass bead and insert it, long-end first, into the 01-103 Glass Bead Holding Fixture (Figure 4).

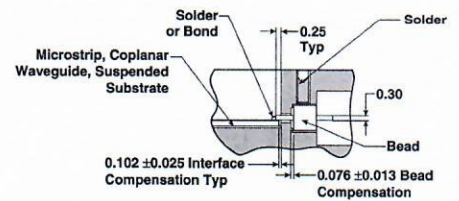


Figure 3. Glass Bead Installation

- d. Using the holding fixture to handle the bead, screw the bead into the mounting hole opening until the center conductor protrudes through the backside interface and contacts the microstrip.
- e. Insert a length of solder into the soldering access hole and cut it flush with the top of the hole.
- f. Place the device on the hot plate and leave it there for approximately 15 seconds after the solder melts.
- g. Remove the device from the hot plate and allow it to cool.
- h. Bond or solder the center conductor to the microstrip. Use a minimum amount of solder.
- i. Remove the glass support bead holding fixture, and clean the device to remove any flux residue.

CAUTION

Avoid cleaning fluids containing halogenated and aromatic hydrocarbons (Freon®). These compounds may soften or dissolve the PPO/Teflon bead material in the center pin support bead.

- j. Screw the sparkplug assembly into the tapped mounting hole and torque to 1.7 to 2.0 N-meter using the 01-105A Torquing Tool Kit.

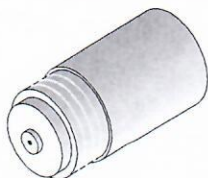
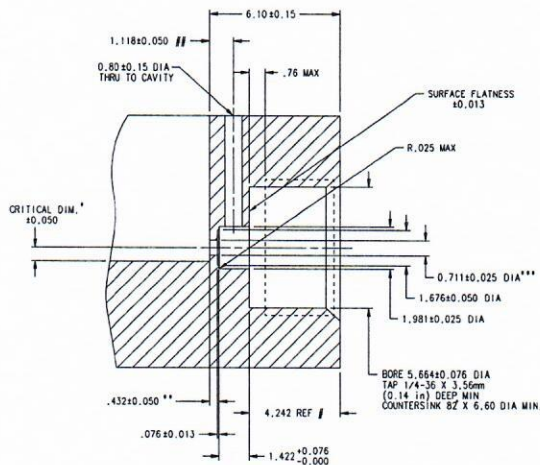


Figure 4. 01-103 Glass Bead Holding Fixture



NOTES.

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THE CONCENTRICITY OF THE 1.676, 1.981, AND 5.654 DIA HOLES TO THE 0.711 DIA HOLE IS CRITICAL AND MUST BE HELD WITHIN ± 0.030mm.
3. WITH THE MODEL 01-104 DRILL KIT, ALL OF THE REQUIRED CONCENTRIC HOLES CAN BE MACHINED AT THE SAME TIME USING A SINGLE BIT.
 - * DIMENSION IS 0.152 (PIN RADIUS)
 - ** SUBSTRATE
 - ** SOLDER THICKNESS
 - ** DIMENSION IS 0.869 ± 0.050mm IF SLIDING CONTACTS ARE USED.
 - ** DIMENSION IS 0.838 ± 0.025mm IF SLIDING CONTACTS ARE USED.
 - ** DIMENSION IS 3.785mm IF SLIDING CONTACTS ARE USED.
 - ** DIMENSION IS 1.575 ± 0.050mm IF SLIDING CONTACTS ARE USED.

Figure 5. Machining Dimensions for the Sparkplug Connector Mounting Hole

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