

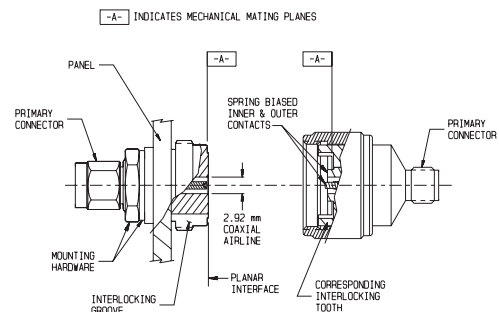
Planar Blind-Mate® Connectors

PLANAR CROWN® UNIVERSAL CONNECTOR SYSTEM

Models 7004A & 7005A

SMA; Type N; TNC; GPC-7; 3.5mm; SMK; 2.4mm

DC to 40.0 GHz



Features

The use of **PLANAR CROWN®** connectors on instruments, cables, components/accessories offers the manufacturer and user the following benefits.

Reduced Downtime - Damaged connectors can be replaced in seconds without any tools. Repair cost is minimized to that of a single connector. Recalibration, in most applications, is virtually eliminated due to closely matched phase, mechanical dimensions and insertion loss of the replaceable **PLANAR CROWN®** assemblies.

Versatility - Ability to select different connector types adds versatility to instruments, cables, systems and accessories. It offers the end user multiple connector options. Connector type and sex can be readily interchanged as dictated by the system/DUT, eliminating the need for adapters.

Superior Electrical Performance than would be obtained by additional adapters.

Simplified Network and Power Measurements on non-insertable devices.

Non-rotational Interface - Since the **PLANAR INTERFACE** has interlocking teeth, it eliminates unthreading of the connection when the Crown is subjected to a rotational torque. This feature is especially useful on coaxial cables where one end unthreads so easily when the cable is subjected to twisting or flexing.

Torque Independent Connection - A torque wrench is not required when mating the Crown to the bulkhead. A reasonable hand tightening of the coupling nut results in an excellent RF connection. This is achieved by having spring biased inner and outer contacts in the Crown connectors. Spring biasing ensures an intimate electrical contact at the **PLANAR INTERFACE**. A pilot diameter on the bulkhead guarantees excellent concentricity.

Axial Isolation of the Center Contact - Any excessive axial force on the Crown center contact is absorbed by the spring biasing at the Planar interface end.

Standardized Mounting Holes - All instrument panels can be fabricated with a standard 3/8" Dia. D-hole independent of the front panel connector type/sex. This eliminates changes in sheet metal design when different connector options are requested.

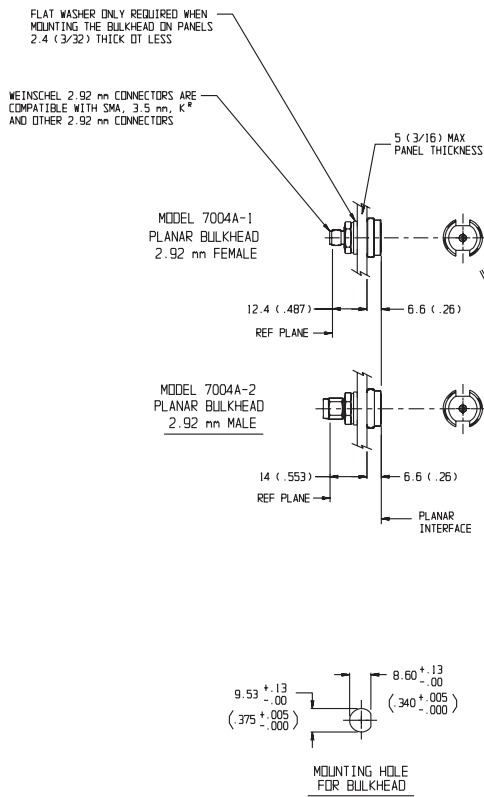
Description

The **PLANAR CROWN® UNIVERSAL CONNECTOR SYSTEM** is comprised of two connector halves/subassemblies which have a common mating interface referred to as the **PLANAR INTERFACE**. The first connector half is called the **PLANAR BULKHEAD** which readily mounts into instrument front panels, components and cables. One end of this bulkhead has a 2.92mm (SMK) male/female primary connector. The other end has a combination of grooves, external threads and a coaxial **PLANAR INTERFACE** with a 2.92mm (SMK) airline geometry. The bulkhead operates mode free beyond 40 GHz. The second connector half, called the **PLANAR CROWN®**, has a similar 2.92mm **PLANAR INTERFACE** on one end, with spring biased inner and outer contacts. It has corresponding projections which interlock with slots on the bulkhead and a coupling nut which secures the two connector halves, resulting in a non-rotational, torque independent electrical connection. The spring biased inner and outer contacts eliminate the need for specifying proof torque and no tools are required to mate or unmate or break the connection. The primary end of the **PLANAR CROWN®** is offered in a variety of primary coaxial connector configurations such as SMA, Type N, GPC-7, TNC, 3.5mm, 2.92mm (SMK) and 2.4mm (under development), thus providing an extremely versatile connector system wherein a connector can be replaced in a matter of seconds.

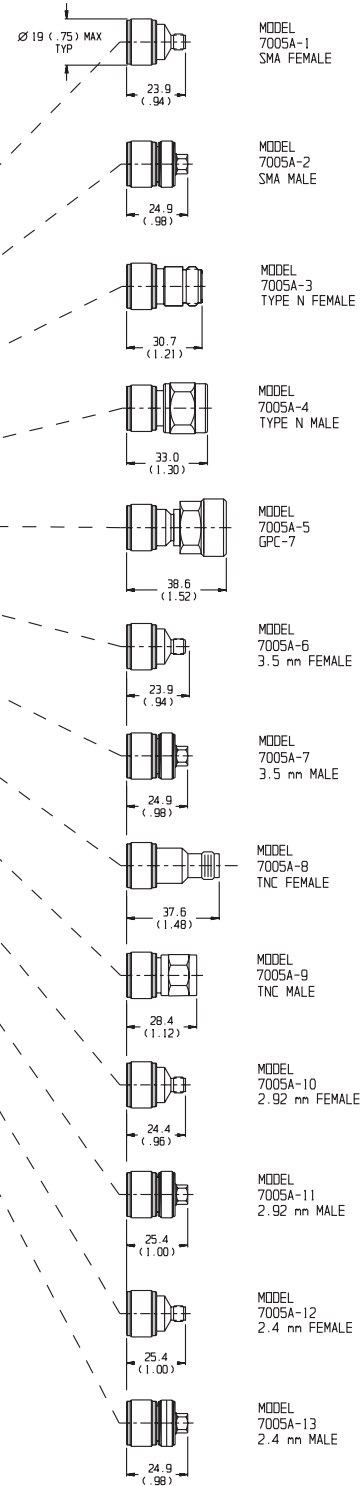
Planar Blind-Mate® Connectors Specifications

Specifications

PLANAR BULKHEAD CONNECTORS



PLANAR CROWN CONNECTORS



U.S. Patent No. 4,836,801
(Other U.S. and foreign patents pending)

NOTES: 1. All dimensions are given in mm (inches) and are nominal, unless otherwise specified.
2. K[®] is a registered trademark of the Wiltron 2.92mm connector

