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Instructions

Tektronix

SD-14 Opt 01
Sampling Head

063-2011-01

First Printing: January 1994

Instrument Serial Numbers

Each instrument manufactured by Tektronix has a serial number on a panel insert or tag, or stamped on the chassis. The first letter in the serial number designates the country of manufacture. The last five digits of the serial number are assigned sequentially and are unique to each instrument. Those manufactured in the United States have six unique digits. The country of manufacture is identified as follows:

B010000	Tektronix, Inc., Beaverton, Oregon, USA
E200000	Tektronix United Kingdom, Ltd., London
J300000	Sony/Tektronix, Japan
H700000	Tektronix Holland, NV, Heerenveen, The Netherlands

Instruments manufactured for Tektronix by external vendors outside the United States are assigned a two digit alpha code to identify the country of manufacture (e.g., JP for Japan, HK for Hong Kong, IL for Israel, etc.).

Tektronix, Inc., P.O. Box 500, Beaverton, OR 97077

Printed in U.S.A.

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Product Description

The SD-14 Opt 01 is a variation on the standard SD-14 Probe Sampling Head, that features the following modifications.

- Probe tip length extended 0.040” (1.0mm)
- Ground barrel threaded 10-40 at top
- Additional custom accessories: Probe to etched circuit board (ECB) adapters, Probe to SMB adapters

The SD-14 Opt 01 is used with the 11801 family of Digital Sampling Oscilloscopes or the CSA803 family of Communications Signal Analyzers. The tip design will accommodate all of the standard accessories provided for the standard SD-14 4mm Probe Tip size.

For more information on the SD-14 Opt 01 that is not specific to this Mod, refer to the SD-14 User Manual (070-8286-01).

NOTE. *The Probe to ECB Adapter and the Probe to SMB Adapter can only be used with the SD-14 Opt 01 probes. Do not attempt to use them with the standard SD-14 probes.*

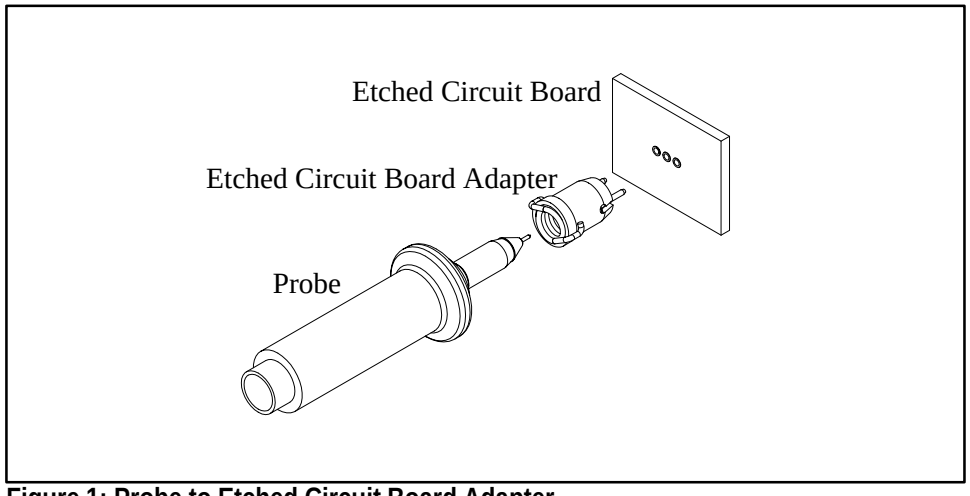


Figure 1: Probe to Etched Circuit Board Adapter

The Probe to Etched Circuit Board (ECB) Adapter is intended to provide a solid mating of the probe tip to a ground-signal-ground ECB pattern. Adjacent pin spacing is 0.075 (0.95mm). The center signal conductor of the probe protrudes

through this adapter and serves as the signal carrying member of the probe and adapter assembly.

The adapter is installed onto the probe tip by gently twisting it counter-clockwise while simultaneously pushing it onto the barrel until it stops. It may be removed by twisting it counter-clockwise while pulling it off.

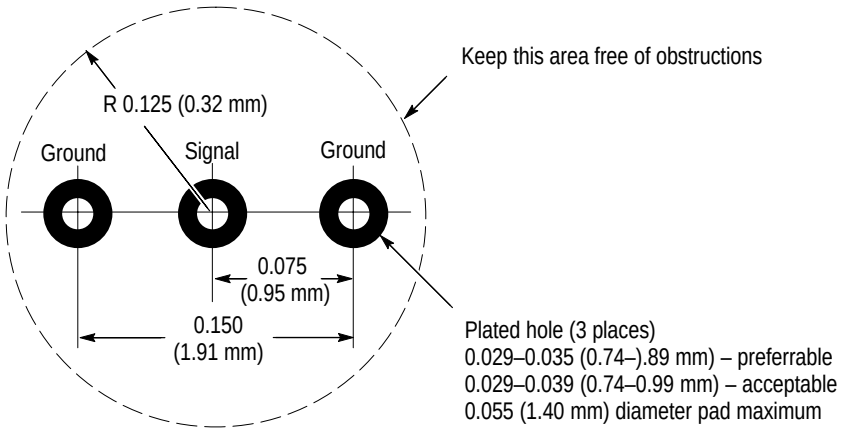


Figure 2: Required ECB Mating Pattern

To test an ECB pattern, align the ground-signal-ground leads to the hole pattern in the ECB, and gently push the probe straight into the ECB until it stops.

CAUTION. *To avoid damage to the probe tip,*

Do not apply excessive side force to the probe

Maintain the probe at a right angle (90 degree) to the ECB.

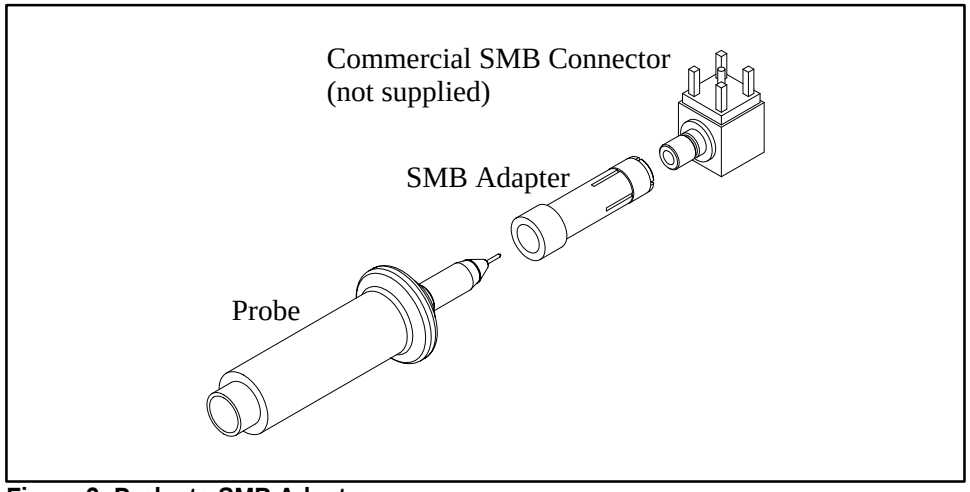


Figure 3: Probe to SMB Adapter

The Probe to SMB adapter is intended to provide a solid mating of the probe tip to an SMB jack coaxial connector. It is a coaxial adapter that is equipped with a probe socket on one side, and a SMB plug on the other side. One type of application is illustrated above, where a right angle SMB jack to ECB connector is used to mate the probe and the to the ECB.

The required ECB pattern depends on the type of SMB jack to ECB adapter used, as there are several available commercially. The following list should serve as a guideline to selecting the proper connector for your application:

Application	Manufacturer	Manufacturer's Part Number
Right angle ECB Mount	E. F. Johnson	131-1701-371
Straight ECB Mount	E. F. Johnson	131-3701-201
ECB End Launch (0.062 board)	E. F. Johnson	131-3701-801

Use care when placing right angle connectors with regard to both the direction the probe extends outward, and also the vertical clearance of the probe to the board. Many SMB right angle connectors are very low profile and do not allow the probe to extend over a usable area of the ECB.

The threaded adapter is installed onto the probe tip by gently twisting it clockwise onto the barrel until it stops. It may be remove by twisting it counter-clockwise. The SMB connection is then made by pushing the connectors together until a snap is felt.



CAUTION. *To avoid damage to the probe tip, thread the SMB adapter to the probe before making caonnection to the SMB connector. Likewise, disconnect the SMB before removing the SMB adapter from the probe.*

To disconnect the SMB connector, simply pull on the probe. The adapter will stay with the probe.



CAUTION. *Pull only on the probe body. Do not pull on the probe cable, as damage may result to the probe.*

Specifications

The specifications listed below pertain only to the addition of Opt 01 to the SD-14. Refer to the SD-14 User Manual (070-8286-01) for any information not listed here.

- Probe Input Impedance: 100K ohm typical
  0.550pF typical
- Field Replaceable Unit: 657-0097-50
- Standard Accessories: Probe Etched-Circuit-Board Adapter
  Replace with 020-2081-00
  (5 ea)
  Probe to SMB Adapter
  Replace with 020-2082-00
  (5 ea)



CAUTION. *The SD-14 User and Service Manuals call out the use of a Calibration Fixture, 013-0271-00. The SD-14 Opt 01 must be tested only with an updated version of this fixture, Part number 013-0271-01. The updated version of this fixture remains compatible with the standard SD-14.*

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