Keysight Technologies
Using InfiniiMax Probes with Test Equipment other than Infiniium Oscilloscopes

Configuration Guide

Introduction

The benefits of the Keysight Technologies, Inc. award-winning InfiniiMax probes are not restricted to Keysight Infiniium oscilloscopes. A variety of accessories are available that allow you to use InfiniiMax probes with other test equipment, for example spectrum analyzers. Benefits of InfiniiMax probes include:

– Wide bandwidth (up to 12-GHz)
– Flat frequency response up to specified bandwidth
– Very low reactive circuit loading
– Differential or single-ended measurements
– Accessories to adapt to any probing challenge without compromising performance

This guide will walk you through the steps to configure an InfiniiMax probing system to meet your specific needs.

Step 1   Select an InfiniiMax probe amplifier
Step 2   Select probe heads and accessories
Step 3   The rest of the package

Step 1

Select an InfiniiMax probe amplifier

Table 1. Available InfiniiMax probe amplifiers

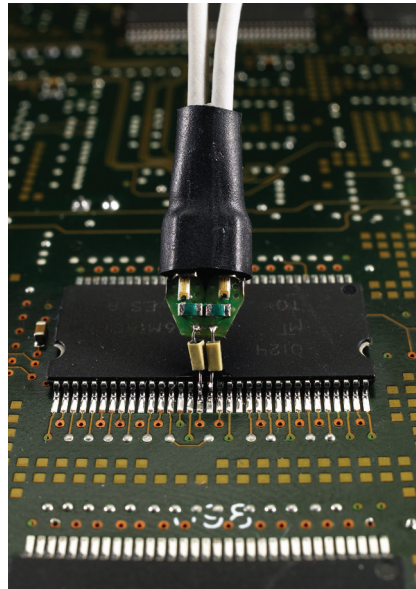| Amplifier model number	Bandwidth
1130A	1.5 Ghz
1131A	3.5 Ghz
1132A	5 Ghz
1134A	6 Ghz
1168A	10 Ghz
1169A	12 Ghz

Step 2

Select probe heads and accessories

The minimum configuration required for a complete probing solution is a probe amplifier and a probe head.

Solder-in probe heads are ideal for hands-off access to fine-pitch components in high-density electronics. Solder-in probe heads are available to support bandwidths up to 12-GHz.
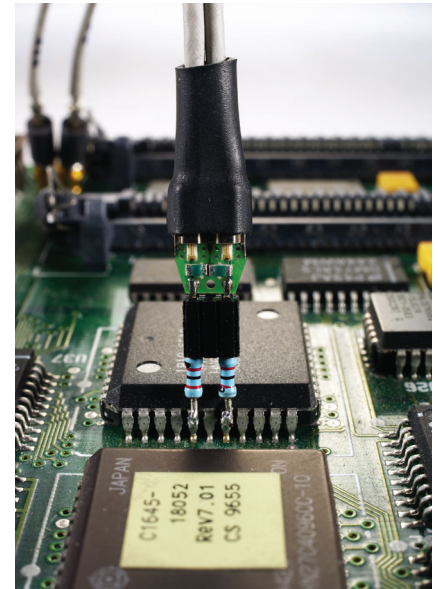
Socketed probe heads make it easy to move probes to various test points for hands-off probing. Socketed probe heads support measurement bandwidth up to 8-Ghz.

Hand-held browser probe heads make hand-held probing easy with variable tip spacing and Z-axis compliance. The E2675A hand-held browser supports measurements up to 6-GHz. The N5382A hand-held microbrowser supports measurements up to 12-GHz.
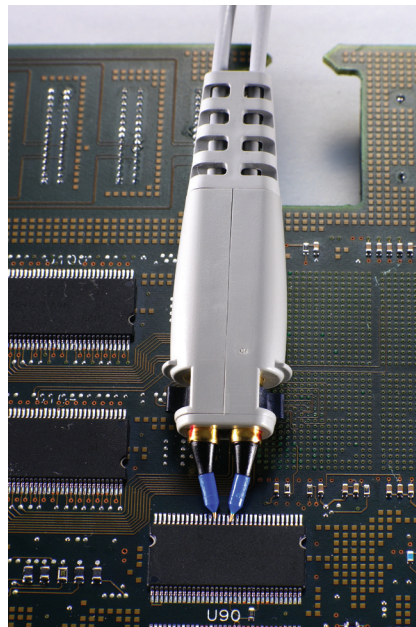
Dual-SMA probe heads enable differential measurements up to 12-GHz on coax while requiring only one channel of the measuring instrument. This is the only solution for differential coaxial measurements on spectrum analyzers.

Solder-in probe head

E2678A socketed probe head

E2675A handheld browser probe head

Dual SMA probe head

Figure 1. InfiniiMax probe heads

Table 2. Available probing accessories

Available probing accessories
E2668A connectivity kit for single-ended measurements. Includes one single-ended browser probe head, one single-ended solder-in probe head, and one socketed probe head, with all necessary accessories.
E2669A connectivity kit for differential measurements. Includes one differential browser probe head, four differential solder-in probe heads, and two socketed probe heads, with all necessary accessories.
E2675A differential browser probe head and accessories
E2676A single-ended browser probe head and accessories
E2677A differential solder-in probe head and accessories
E2678A differential/single-ended socketed probe head and accessories
E2679A single-ended solder-in probe head and accessories
E2695A 7-GHz dual differential SMA probe head
N5381A 12-GHz differential solder-in probe head [1]
N5382A 12-GHz differential browser probe head [1]
N5380A 12-GHz dual differential SMA probe head [1]
N5425A ZIF probe head [2]

1. These heads are for use with the 1168A 10-GHz and 1169A 12-GHz probe amplifiers. They are designed to deliver full-bandwidth (10 or 12 GHz) measurement bandwidth to the probe tip.
2. Can be used with either the N5426A ZIF tip or the N5451A long-wire ZIF tip
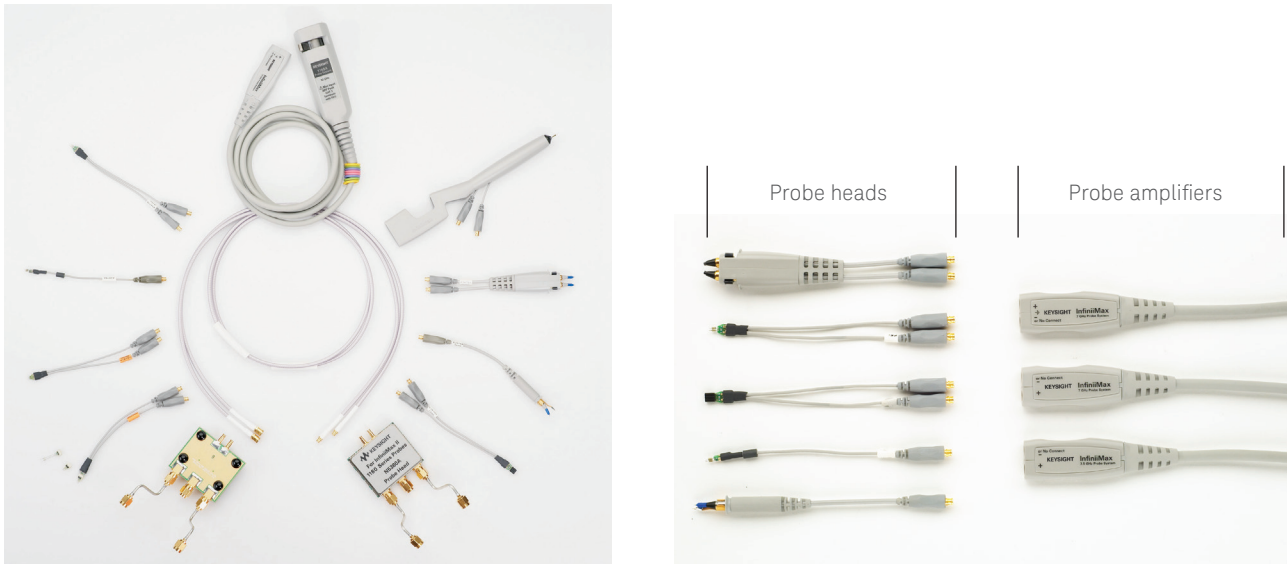

Figure 2. InfiniiMax probe heads combine with probe amplifiers for a flexible probing system.

Step 3

The rest of the package

Order one each of the following items:

– N1022B probe adapter
– N1022-60014 3.5 mm NMD to type N adapter
– 1143A probe power supply with option 001, 1.5 m extension cable

The 1143A probe power supply will support two InfiniiMax probes. If you need dual probes for two channel measurements, you can order two probes with accessories, two of each adapter listed above, and one power supply.

Figure 3 shows how to assemble all the components into a general-purpose probing solution.
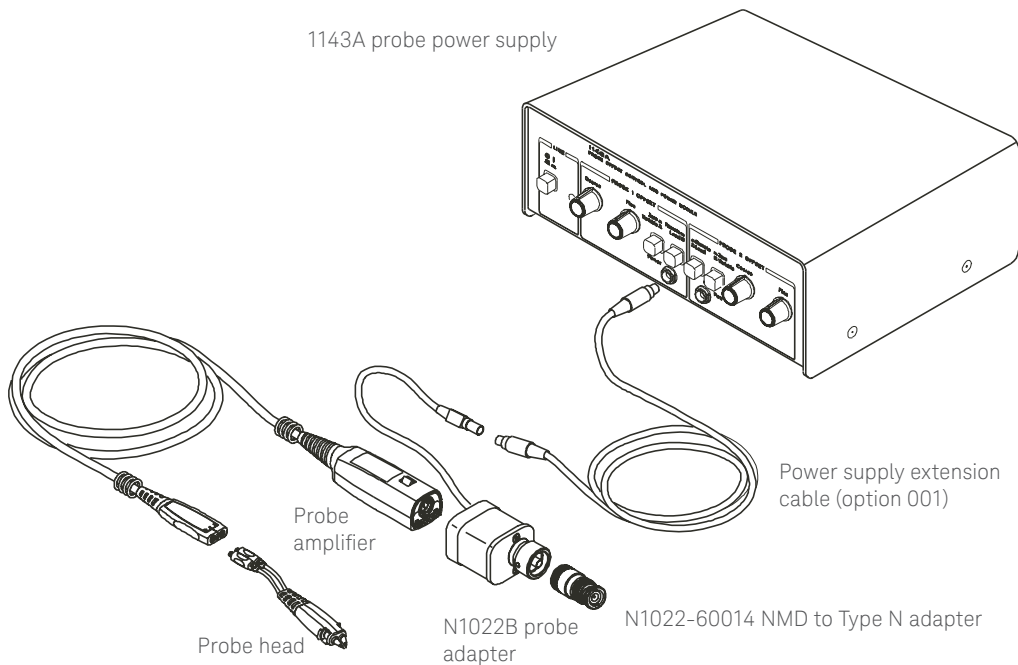

1143A probe power supply

Power supply extension cable (option 001)

Probe amplifier

N1022-60014 NMD to Type N adapter

Probe head

N1022B probe adapter

Figure 3. A complete InfiniiMax general-purpose probing system

Table 3. Probe amplifiers

Key characteristics and ordering information		
Probe amplifier model	Bandwidth[1]	Gain
1130A	1.5 GHz	0.1
1131A	3.5 GHz	0.1
1132A	5 GHz	0.1
1134A	7 GHz	0.1
1168A	10 Ghz	0.345
1169A	12 Ghz	0.345

1. The system bandwidth depends on the combination of probe amplifier and probe head. The band-
    width of any given combination will be the lower of the probe amplifier bandwidth from Table 2 and
    the probe head bandwidth from Table 3.

Table 4. Probe heads

Model number	Description	Bandwidth
E2675A	differential browser probe head and accessories	6 GHz
E2676A	single-ended browser probe head and accessories	5.5 GHz
E2677A	differential solder-in probe head and accessories	7 Ghz
E2678A	differential/single-ended socketed probe head and accessories	7 Ghz
E2679A	single-ended solder-in probe head and accessories	5.2 GHz
E2695A	7-GHz dual differential SMA probe head	7 GHz
N5380A	12-GHz dual differential SMA probe head	12 Ghz
N5381A	12-GHz differential solder-in probe head	12 GHz
N5382A	12-GHz differential browser probe head	12 Ghz
N5425A with N5426A ZIF tip	ZIF probe head with ZIF tip	10 GHz[1] 12 GHz[2]
N5425A with N5451A long-wire ZIF tip	ZIF probe head with long-wire ZIF tip	9.9 GHz[3] 5 GHz[4]

1. with 1168A probe amplifier
2. with 1169A probe amplifier
3. with resistor length of 7 mm and 0 ° span
4. with resistor length of 11 mm and 0 ° span

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