

Keysight Technologies

# InfiniiMax Probes Impact on Lead-Free (ROHS) Compliance

Application Note



Unlocking Measurement Insights

Some Keysight Technologies, Inc. InfiniiMax oscilloscope probe heads are intended for soldering to the device under test. These include the following:

- E2677A differential solder-in probe head
- E2679A single-ended solder-in probe head
- N5381A 12-GHz differential solder-in probe head
- N5425A ZIF probe head (with either the N5426A ZIF tip or the N5451A long-wire ZIF tip)

In addition, the Keysight E2678A differential socketed probe head is supplied with resistors that may be soldered to the device under test.

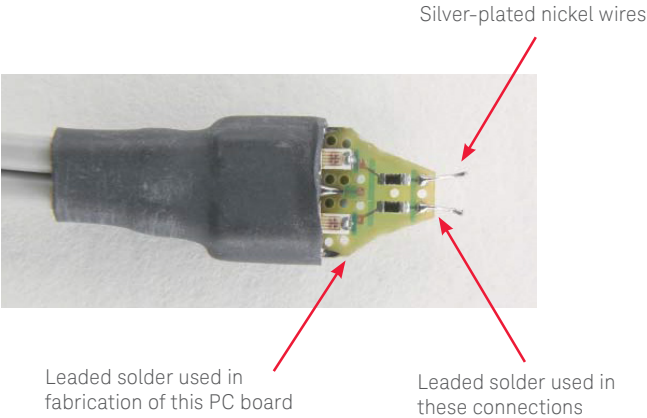


Figure 1. N5381A 12-GHz InfiniiMax solder-in probe head

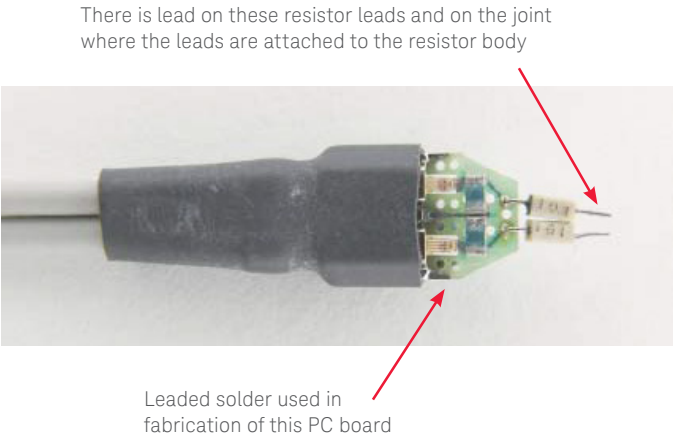


Figure 2. E2677A 8-GHz solder-in InfiniiMax probe head

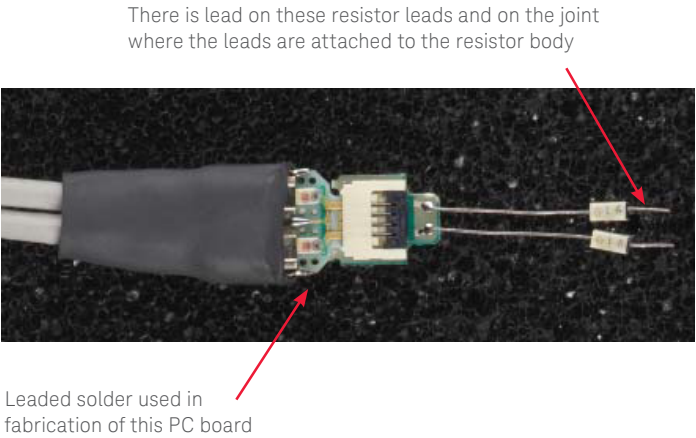
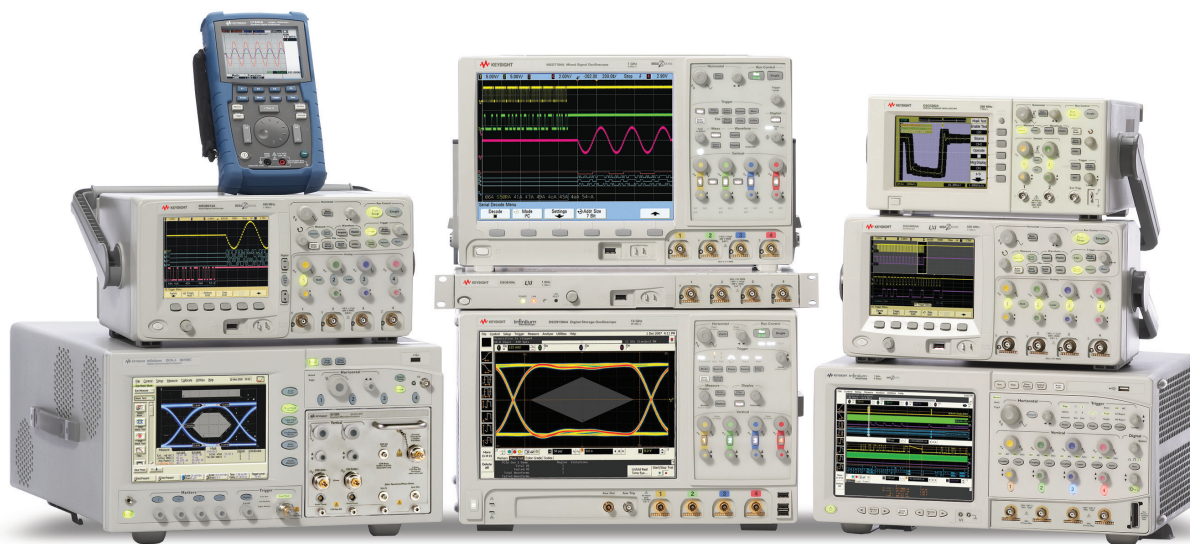


Figure 3. Long-wire ZIF tip with probe head

N5425A	There is lead on the leads of both the N5426A ZIF tip and the N5451A long-wire ZIF tip and on the resistors, so users must be aware of the potential for lead contamination when soldering these to their circuits.
E2677A, E2678A, and E2679A	There is lead on the leads of the E2677A, E2679A, and on the resistors supplied with the E2678A, so users must be aware of the potential for lead contamination when soldering these to their circuits.
N5381A	The wires on the N5381A that attach to the device under test are silver-nickel plated. They are soldered to the PC board in the probe head with tin-lead solder. If excessive heat is used to solder the wires to the device under test, lead could wick from the probe head to the device under test. Excessive heating could also degrade the solder joints where the wires attach to the probe head PC board.
Note on repairing probe heads	The E2677A and N5381A are assembled using tin-lead solder. If the wires or resistors that connect to the device under test break, the user can replace them. Replacement wire or resistors are included for this purpose. These repairs should be done using tin-lead solder. When making these repairs, avoid using soldering tools that will be used in a lead-free environment.



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(BP-04-23-15)



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Published in USA, July 31, 2014  
5989-5179EN  
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