

# **N1024A TDR Calibration Kit**

## **User's Guide**



**Agilent Technologies**

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**Safety Symbols.****CAUTION**

Caution denotes a hazard. It calls attention to a procedure which, if not correctly performed or adhered to, could result in damage to or destruction of the product. Do not proceed beyond a caution sign until the indicated conditions are fully understood and met.

**WARNING**

Warning denotes a hazard. It calls attention to a procedure which, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a warning sign until the indicated conditions are fully understood and met.

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## Introduction

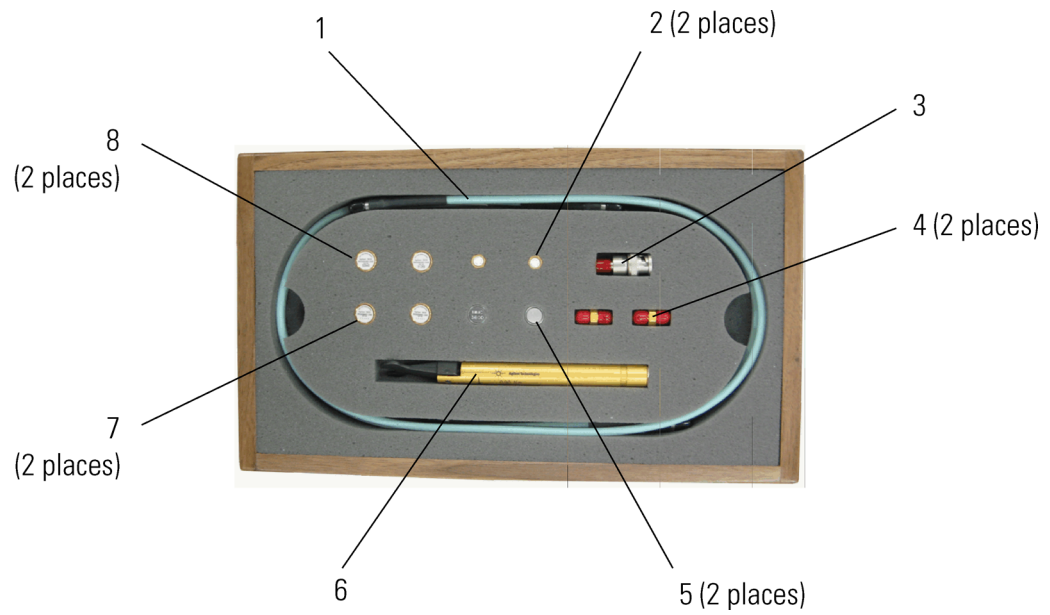
The Agilent N1024A TDR calibration kit provides high-quality cables, adapters, and terminations that are needed to calibrate TDR and TDT measurements with the 86100-series wide-bandwidth oscilloscopes. When you receive this kit, check the following items:

- ❑ Inspect the shipping container and kit for damage. Keep the shipping container and cushioning material until you have inspected the contents of the shipment for completeness and have checked the kit mechanically and electrically.
- ❑ Locate the shipping list. Verify that you have received all of the items listed.
- ❑ Refer to [Figure 1 on page 4](#) for a list of the contents of the N1024A TDR calibration kit.

To contact Agilent Technologies for technical assistance, contact your local Agilent Call Center.

- In the Americas, call 1 (800) 829-4444
- In other regions, visit <http://www.agilent.com/find/assist>

Before returning an instrument for service, you must first call the Call Center at 1 (800) 829-4444.

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Part ID	Description	Qty	Part Number
1	Coaxial Cable, 1m long	4	8120-4948
2	3.5 mm Short (m)	2	1250-1834
3	BNC Adapter. BNC (m) to SMA (f)	1	1250-1700
4	3.5 mm Adapter. 3.5 mm (f) - (f)	2	5061-5311
5	SMA Short (f)	2	0960-0055
6	Torque Wrench	1	8710-1765
7	3.5 mm Termination (f)	2	902D
8	3.5 mm Termination (m)	2	902C

**Figure 1. TDR Calibration Kit Parts Identification**

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## Connector Care

Advances in measurement capabilities make connectors and connection techniques more important than ever. Observing simple precautions can ensure accurate and reliable measurements.

### ***Handling and storage***

- Keep connectors clean
- Extend sleeve or connector nut
- Use plastic endcaps during storage
- Do not touch mating plane surfaces
- Do not set connectors contact-end down

### ***Visual inspection***

- Inspect all connectors carefully before every connection
- Look for metal particles, scratches, and dents
- Do not use damaged connectors

### ***Cleaning***

- Clean with compressed air first
- Clean the connector threads
- Do not use abrasives
- Do not get liquid onto the plastic support beads

### ***Making connections***

- Align connectors carefully
- Make preliminary connection lightly
- To tighten, turn connector nut only
- Do not apply bending force to connection
- Do not over tighten preliminary connection
- Do not twist or screw in connectors
- Use a torque wrench, and do not tighten past the "break" point of the torque wrench

### ***Using Connector Savers***

Connector savers are useful in prolonging instrument life and ensuring better quality measurements. Refer to the 86100C's online help for a list of commonly used connector savers.

### ***3.5 mm and SMA Connectors***

Precision 3.5 mm microwave connectors are compatible with an SMA connector within its specification. Due to the variable quality of the SMA connector, mating with an SMA can sometimes cause severe damage to the 3.5 mm connector. You can use SMA connectors if special care is taken when mating the connectors, and all connectors are undamaged and clean. Before each use, check the mechanical dimensions of all connectors with a connector gauge to make sure that the center conductors are positioned correctly.

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### **CAUTION**

A male SMA connector pin that is too long can smash or break the delicate fingers on the precision 3.5 mm female connector.

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**CAUTION**

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Some precision 3.5 mm female connector fingers are very tight and can pull the center pin of their mates out past specifications when the connectors are disconnected. If such a male pin is inserted into a female connector, it can cause considerable damage by pushing the female center conductor back too far. Be aware of this possibility and check all connectors before mating them again.

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## Returning the N1024A to Agilent

In the unlikely event that the kit is defective or incomplete, the section tells you how to package the kit for return to an Agilent Technologies service office. If the kit is still under warranty, it will be repaired under the terms of the warranty. If the kit is no longer under warranty, Agilent will notify you of the cost of the repair after examining the kit. When a kit is returned to an Agilent service office, it must be adequately packaged. Please notify the service office before returning your kit.

### *Preparing the kit for shipping*

- 1** Write a complete reason for returning the kit and attach it to the instrument. Include any specific performance details related to the problem.
- 2** Pack the kit. Use original packaging or comparable. Original materials are available through any Agilent office. Or, follow these recommendations:
  - Use a double-walled, corrugated cardboard carton of 159 kg (350 lb) test strength. The carton must allow approximately 7 cm (3 inches) on all sides of the kit for packing material and be strong enough to accommodate the weight of the kit.
  - Surround the kit with approximately 7 cm (3 inches) of packing material, to protect the kit and prevent it from moving in the carton. If packing foam is not available, the best alternative is S.D-240 Air Cap™ from Sealed Air Corporation (Commerce, California 90001). Air Cap looks like a plastic sheet filled with air bubbles. Use the pink (antistatic) Air Cap™ to reduce static electricity. Wrapping the kit several times in this material will protect the kit and prevent it from moving in the carton.
- 3** Seal the carton with strong nylon adhesive tape.
- 4** Mark the carton "FRAGILE, HANDLE WITH CARE".
- 5** Retain copies of all shipping papers.

Manufacturing Part Number  
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