Installation Note

Agilent 89410A Option AY5 Installation Kit



Agilent Technologies

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Introduction

This package contains the items necessary to install option AY5 "Precision Frequency Reference." Here is a list of items contained in this package:

- A85 Oven assembly (Agilent 89410-66585).
- Coax BNC-to-BNC Connector (Agilent 1250-1499).
- Short BNC-to-BNC Cable (Agilent 8120-2682).
- Twisted Double-wire Cable (Agilent 89410-61619).
- (6) M3.0x10 screws (Agilent 0515-0374).
- Option Label.

Equipment Required

- Agilent 89410A Service Guide.
- Agilent 89410A Installation and Verification Guide.
- Spectrum Analyzer.
- BNC-to-BNC cable.
- Oscilloscope.
- Frequency Standard.
- Frequency Synthesizer.
- Short T-10 Torx Screw Driver.
- Flat Edge Adjustment Tool.

Precautions

These installation instructions are for use by trained service personnel only. To avoid electrical shock, do not perform this installation unless you are qualified to do so.

WARNING: **The following installation procedure requires the instrument's top cover to be removed. Energy available at many points can, if contacted, result in serious personal injury.**

CAUTION: The following steps must be performed at a static protected site to prevent static discharge damage during the handling of the PC assembly.

Installation overview

Installing the precision frequency reference option requires installing the Agilent A85 Oven assembly near the power supply and performing the oven adjustments and tests. Here is the procedure:

1 Remove the top cover and power supply shield:

- Set the line switch to OFF and disconnect the power cord from the rear panel.
- Remove the top cover. See chapter 3, "Replacing Assemblies," in the *Agilent 89410A Service Guide*.
- Remove the power supply shield.

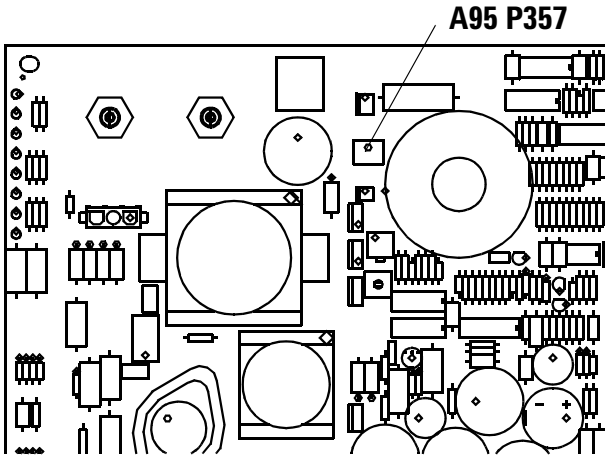


Figure 1. A95 Component Locator

2 Connect the short BNC cable and the oven power cable:

- Connect the short BNC-to-BNC cable to the inside of the OVEN REF OUT connector.
- Connect the twisted double-wire cable to A95 P357. Connect the white end of the wire to the white plug on the A95 Main Power Supply assembly. See Figure 1.

3 Install the A85 Oven assembly:

- Connect the short BNC-to-BNC cable to the A85 J1 "10 MHz OVEN OUTPUT."
- Position the A85 assembly on the standoffs which are connected to the analyzer's side panel.
- Use supplied screws to secure the A85 assembly to the standoffs using a short T-10 torx screw driver.
- Connect the twisted double-wire cable to A85 P2 "PWR IN."

Set the option configuration:

- Connect the instrument's power cord and set the line switch to ON.

- Press the following keys:
  [System Utility]
  [options setup]
  [hardware option config]
  1125
  [enter]
  [hardware option config]
  [proceed to option config]
  [Oven in].

CAUTION: The hardware option configuration keys can only be toggled 256 times. Do not indiscriminately toggle the keys. Options can not be added by merely selecting the option in the hardware option configuration menu. For example, toggling channel 2 to "in" will not add the second channel if the hardware is not installed. The BNC connectors for CHANNEL 2 and OVEN REF OUT are installed even if the hardware assemblies are not installed.

- Set the power switch to OFF.

The new assembly is now installed.

4 Check option installation:

- Set the power switch to ON.
- Press the following keys:
  [System Utility]
  [options setup].

The options configuration chart should indicate that option AY5 is installed.

Adjust and Test:

- Perform oven shutdown adjustment in chapter 2 of the *Agilent 89410A Service Guide*.
- Perform oven frequency adjustment in chapter 2 of the *Agilent 89410A Service Guide*.
- Perform the self test and frequency accuracy performance tests in chapter 2 of the *Agilent 89410A Installation and Verification Guide*.

CAUTION: The Agilent 89410A needs to be off for at least 8 hours before the oven shutdown adjustment is done. The adjustment must then be done within five minutes after power is applied to the instrument.

The Agilent 89410A must be warmed up for at least 48 hours before the oven frequency adjustment is made.

5 Attach the option label on the rear of the instrument near the serial number label.

NOTE: If the analyzer did not pass a performance test: Refer to chapter 1, “Troubleshooting the Analyzer,” in the *Agilent 89410A Service Guide*.

** For Agilent Internal Reference Only **

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