

Installation Note

**Agilent 8590-Series Analyzers
Resolution Bandwidth Replacement Kit
08590-60421**



Part Number 08590-90325 Supersedes: 08590-90321

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Resolution Bandwidth Replacement Kit

Products Affected:	Agilent 8590 L/C/E/EM Series and 8594Q
Serial Numbers:	US00000000/US99999999 UK00000000/UK99999999 0000A00000/9999A99999 0000U00000/9999U99999
To Be Performed By:	(X) Agilent Technologies Service Center (X) Personnel Qualified by Agilent (X) Customer
Estimated Installation Time:	0.5 Hour
Estimated Verification Time:	1.0 Hour

Purpose

This kit provides both the A11 and A13 bandwidth filter boards. Since the crystals loaded onto these boards are a matched set, replace both the A11 and A13 bandwidth filter boards with the boards provided in this kit. Failure to do this may cause the filters to drift at higher temperatures. This installation note describes how to install, test, and adjust the bandwidth filter boards.

Installation Kit, 08590-60421, Parts List

Quantity	Part Number	Description
1	08590-60331	Bandwidth filters replacement board set (A11 and A13)
2	5002-0671	Bandwidth Cover (not supplied, may be needed)
1	5002-0672	RF support bracket (not supplied, may be needed)
3	0515-0372	Machine screw, 3.0 mm x 8 Torx (for RF support bracket)
3	3050-0893	Flat washer, 4.0 mm (for RF support bracket)
4	0757-0442	10 k Ω resistors (for R22 and R53 replacement, not supplied)
1	08590-90325	Installation Note

Procedure

WARNING Before you disassemble the instrument, turn the power switch OFF and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Instrument Cover Removal

1. Disconnect the spectrum analyzer from the ac power.
2. Remove any adapters or cables connected to the front and rear panels.

CAUTION To prevent damage to the front frame, use a soft cloth or towel between the work surface and the front frame in the following step.

3. Carefully place the analyzer on the work surface with the front frame facing down.
4. Remove the four screws and washers attaching the instrument cover to the rear frame.
5. Unscrew, but do not remove, the four rear-foot screws, using a 4-mm hex wrench.
6. Pull the instrument cover off towards the rear of the analyzer.

Replacement of Bandwidth Filters

Remove the A11 and A13 bandwidth filter boards from the IF section and replace them with the boards supplied in this kit.

NOTE The bandwidth boards in this kit are direct replacements for Agilent part number 5062-8236. To replace the 08590-60158 bandwidth boards, you must replace R22 and R53 on the new bandwidth boards with the 10 k Ω resistors not supplied in this kit. See Figure 1 for the location of R22 and R53. Order (4) 10 k Ω resistors, part number 0757-0442 if applicable.

The boards are labelled, A11 and A13. Be sure to insert the correct board in the correct slot to guarantee log fidelity performance.

About the New Covers and RF Bracket

New covers and a new RF bracket are only necessary on older 8590 series analyzers. The new covers may be required with the new bandwidth boards because some adjustment locations have been changed. You no longer have to place the bandwidth board on an extender to adjust the LC Dip (C17 and C47). Another improvement is that the same short set (5062-4855) is now used for both the crystal and LC adjustments, and the results are more accurate.

The earlier RF bracket has a conflict with the access for the adjustments on the new bandwidth board in the A11 slot. Therefore, a new RF bracket may be required and is not included in this kit.

Tests

After the boards have been installed and the covers have been secured, turn on the analyzer and let it warm up for 30 minutes. Perform the Cal Freq and Amptd self-test routine to assure that the bandwidths will meet the self-test limits. When the self-test routine is done, press **Cal Store**.

Adjustments

Adjustments to the bandwidth filter boards should not be necessary. The boards are fully adjusted and tested as a matched set before they are shipped. If for any reason adjustments are required, follow the procedures in the service guide for the analyzer. The Crystal and LC Bandwidth Filter Adjustment procedure is located in the chapter entitled “*Making Adjustments*.”

Instrument Cover Replacement

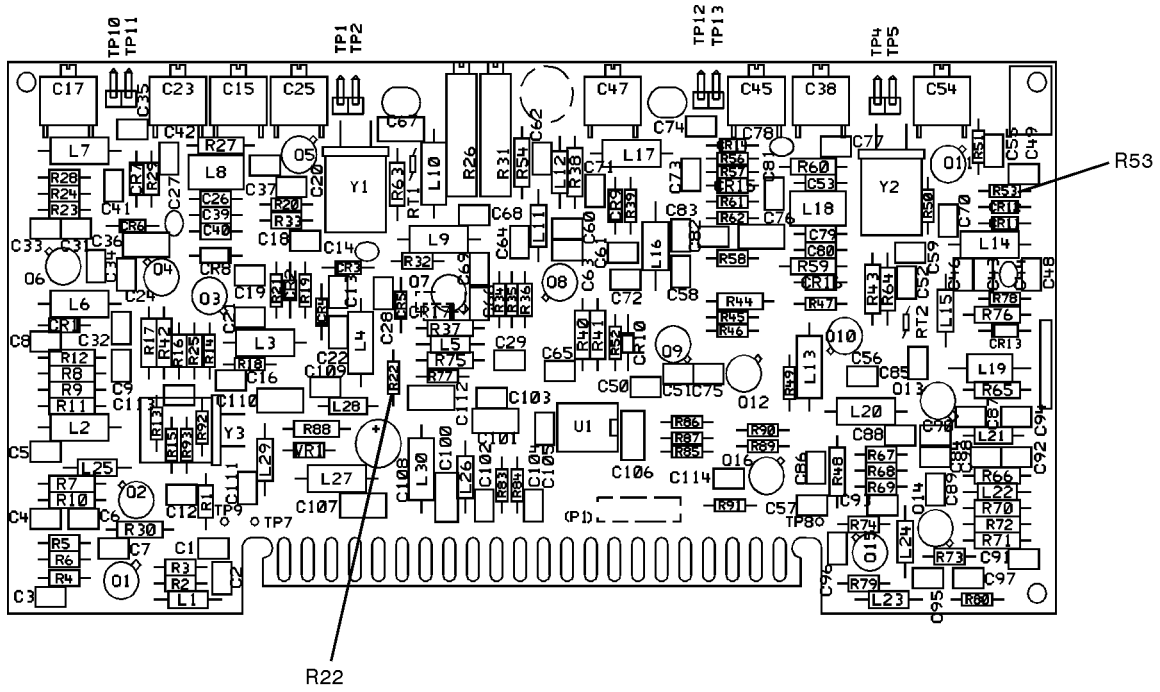
1. Disconnect the analyzer from the ac power.

CAUTION To prevent damage when replacing the instrument cover, remember the following:

- o Place a soft cloth or towel between the work surface and the front frame.
 - o Ensure that cables do not bind between the instrument cover and the internal assemblies.
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2. Carefully place the analyzer on the work surface with the front frame facing down.
3. Replace the instrument cover, ensuring that the seam on the cover is toward the bottom of the instrument.
4. Fit the leading edge of the cover completely into the slot on the back of the front-frame assembly. The cover should fit snugly against the EMI gasket in the slot.
5. Tighten the 4 rear-feet screws with a 4-mm hex wrench.
6. Replace the 4 screws and washers attaching the cover to the rear frame.

Figure 1. Location of Resistors R22 and R53



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