E5071B RF Network Analyzer, 300kHz to 8.5 GHz

Serial Numbers: JP1KKxxxx, MY421xxxx to MY42402845

When E5071B has the old step attenuator (33321-60059) and fails Internal Test at Step Attenuator Test Group, replace the old attenuator (33321-60059) by improved version (33321-60068), add additional cable and update firmware to 5.02 or later

Parts Required:
Option-214
Option-314/414 (with 1 ea of attenuator)
P/N   Description                             Qty.
33321-60068 ATTENUATOR PROGRAMMABLE 35DB 12GHZ 1
E5070-61698 FLAT CBL ASSY                     1
Option-314/414 (with 2 ea of attenuators)
P/N   Description                             Qty.
33321-60068 ATTENUATOR PROGRAMMABLE 35DB 12GHZ 2
E5070-61698 FLAT CBL ASSY                     2

ADMINISTRATIVE INFORMATION

SERVICES NOTE CLASSIFICATION:
MODIFICATION RECOMMENDED

ACTION CATEGORY:                      IMMEDIATELY
X ON SPECIFIED FAILURE
X AGREEABLE TIME

STANDARDS:
LABOR: 3.0 Hours

LOCATION CATEGORY:                    CUSTOMER INSTALLABLE
X SERVICE CENTER

SERVICE INVENTORY:                    RETURN
SCRAP
X SEE TEXT

USED PARTS:                           RETURN
X SCRAP
X SEE TEXT

AUTHOR: jm  PRODUCT LINE: WN

ADDITIONAL INFORMATION:
E507xB-06B are revised to E507xB-06C in sync with E507xB-12

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PRINTED IN U.S.A.

June 13, 2006
Situation:

E5071B fails Internal Test at Step Attenuator Test Group, due to the attenuator reliability.

Solution/Action:

When the attenuator (33321-60059) is defective, use new replacement attenuator (33321-60068) and cable (E5070-61698). Make sure that Firmware 5.02 or later is installed.

Detail Procedure

1. Do hardware modification: See next page according to the current option and attenuator combination.
2. Update its firmware to the latest one. (At least Rev A.05.02 or later is required). Do not forget to update Internal/External VBA programs at the same time. Refer to E5070B/E5071B Service manual appendix C for details. For the additional features that are added by this update, refer to the latest E5070B/E5071B user’s guide that is available in [http://www.agilent.com/find/enas](http://www.agilent.com/find/enas)
3. Do adjustment program. (Rev A.02.40 or later)
4. Do Internal test (InternalTest.vba Rev A05.00 or later), and External test (ExternalTest.vba Rev A.03.60 or later).
5. Do performance test (Rev A.02.30 or later)

Retrofit Time:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly Time:</td>
<td>1.5 hour</td>
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<tr>
<td>Adjustment Time:</td>
<td>0.5 hour</td>
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<tr>
<td>Performance Test Time:</td>
<td>1.0 hour</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Total Time:</strong></td>
<td>3.0 hour</td>
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Hardware Modification Procedure
For option 214 (2 port, with 1 ea of A7 attenuator), option 314 (3 port, with 1 ea of A7 attenuator) and option 414 (4 port, with 1 ea of A7 attenuator)

1. Disassemble the product. (Refer to E5070B/E5071B Service manual chapter 6 for details)
2. Make A7 step attenuator assembly by 33321-60068 (1ea), E5070-61698 (1ea), E5070-01213 (1ea), 0515-0372 (2ea) and E5070-61617 (1ea). E5070-61698 is the cable between 33321-60068 and E5070-61617. Scrap 33321-60059.
2-1. Scrap the flat cable that comes with the new attenuator (33321-60068).
2-2. Connect E5070-61698 to 33321-60068.

![Diagram](image)

Figure 1   Make A7 assembly (for option 213 and for option314/414 with 1 attenuator)
3. Install A7 assembly with 0515-0372 (2ea).

4. Connect the cable and clamp the cable with the clamper. Be careful to flat cable direction and its connectivity.

Figure 2  Install A7 attenuator assembly (1)

Figure 3  Install A7 attenuator assembly (2)
For option 314 (3 port, with 2 ea of A7 attenuator) and option 414 (4 port, with 2 ea of A7 attenuator)

1. Disassemble the product. (Refer to E5070B/E5071B Service manual chapter 6 for details)
2. Make A7 step attenuator assembly by 33321-60068 (2ea), E5070-61698 (2ea), E5070-01214 (1ea), 0515-0372 (4ea) and E5070-61618 (1ea). 2ea of E5070-61698 are the cable between 33321-60068 and E5070-61618. Scrap 33321-60059.

2-1. Scrap the flat cable that comes with the new attenuator (33321-60068).
2-2. Connect E5070-61698 to 33321-60068. (This is done twice)

Figure 4 Make A7 assembly (for option 314/414 with 2 attenuators)
3. Install A7 assembly with 0515-0372 (2ea).

Figure 5  Install A7 attenuator assembly (1)

4. Connect the cable and clamp the cable with the clamper. Be careful to flat cable direction and its connectivity.

Figure 6  Install A7 attenuator assembly (2)

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