

E5100A/B-15

S E R V I C E N O T E

SUPERSEDES: NONE

E5100A/B Network Analyzer

Serial Number:

E5100A: JP1KC00101/JP2KC00396

E5100B: JP1KC00101/JP2KC00157

Modification to improve unstable phase trace in absolute measurement

To Be Performed By: HP-qualified personnel

Parts Required:

HP P/N	Qty.	Description
E5100-66537	1	A27 Synthesizer

Situation:

In absolute phase measurement mode, the phase trace data may be undulating and unstable when it should be linear and stable. This symptom may remarkably appear when the surrounding temperature of the unit is changing from very low temperature to normal temperature.

This problem is caused by A27 Synthesizer Board with HP part number E5100-66527.

Continued

DATE: August 1996

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 6.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> HP LOCATION	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
		USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	HP RESPONSIBLE UNTIL: August 1998	
AUTHOR: KI	ENTITY: 3355	ADDITIONAL INFORMATION:	

Solution/Action:

This problem can be fixed by A27 board replacement.

1. Remove the outer cover as follows.

1-1. Disconnect the power cable from the HP E5100A/B.

1-2. Remove the four rear feet.

1-3. Remove the four bottom feet.

1-4. Remove the two outer cover screws from the rear panel.

1-5. Remove the side strap.

1-6. Place the HP E5100A/B on some soft material with its front panel down.

Caution Be careful not to drop the inside body from the outer cover. Be careful not to damage the front panel (LCD display, connectors, etc.) when you put the HP E5100A/B on the soft material. A plastic cover (p/n 5959-8096) can be used as the HP E5100A/B's front protection cover for the outer cover removal.

1-7. Slide up the outer cover and remove it carefully.

1-8. Place the HP E5100A/B on the table with its bottom side down.

2. Remove the shield plate which covers the inside board assemblies.

3. Remove the old A27 board assembly (p/n E5100-66527) and install the new A27 board (p/n E5100-66537) in the same slot.

4. Reinstall the shield plate, outer cover, and other parts.

5. Perform the following adjustments:

a. VCXO Frequency Calibration

b. Source Correction

6. Perform the following performance tests: (All performance tests are required)

a. Frequency Range and Accuracy Test

b. Harmonics Test

c. Non-Harmonic Spurious Test

d. Phase Noise Test

e. Source Level Accuracy/Flatness Test

f. Source Power Linearity Test

g. Receiver Noise Level Test

h. Trace Noise Test

i. Residual Response Test

j. Input Crosstalk Test

k. Absolute Amplitude Accuracy Test

l. Dynamic Accuracy Test

m. Magnitude Ratio Frequency Response Test

n. Phase Frequency Response Test