66321D-09

S E R V I C E   N O T E

Supersedes:
NONE

66321D – Mobile Communication DC Source, 15V/3A with Battery Emulation. GPIB

Serial Numbers: MY43003480 – MY43005710   SG43003480 – SG43005710

Power-On Self test Errors, Auto reboot, Blank display. No output Communication errors. No communication when using the GPIB Interface.

Parts Required:

P/N	Description	Qty.
5067-5261	PCA ASSY TESTED GENERAL PURPOSE INTERFACE _ROM5182-9091	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	x ON SPECIFIED FAILURE [[]] AGREEABLE TIME	STANDARDS LABOR: 1.5 Hours	

LOCATION CATEGORY:	[[]] CUSTOMER INSTALLABLE
	[[]] ON-SITE
	x SERVICE CENTER
	[[]] CHANNEL PARTNER
		SERVICE [[]] RETURN
		INVENTORY: [[]] SCRAP
		               [[]] SEE TEXT
			USED [[]] RETURN
			PARTS: [[]] SCRAP
			             [[]] SEE TEXT

AVAILABILITY: PRODUCT'S SUPPORT LIFE		NO CHARGE AVAILABLE UNTIL: (12/01/2016)	
X Calibration Required [[]] Calibration NOT Required		PRODUCT LINE: sp AUTHOR: cp	
ADDITIONAL INFORMATION: There are two Solutions that can be used to repair this defect: 1. Remove and replace the entire interface assembly. Replacement of the interface assembly will require the instrument to be re-Initialized and re-calibrated. 2. Remove the EEPROM from the socket, than remove the socket from the printed circuit board. Re-solder the original EEPROM to the printed circuit board. If this is successfully done calibration & Initialization are not required			

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Situation:

When the EEPROM is installed in the PLCC SOCKET **(Circuit Reference** U205) on the Interface board if there is not a gas tight connection between the EEPROM pins and the socket pins an intermittent connection will occur.

The pin connections may not be reliable. Over time the pins may become intermittent which will cause the instrument to exhibit the defects described below.

Self test Errors 0 through 99 (sets Standard Event Status Register bit #3)

0 No error
1 Non-volatile RAM RD0 section checksum failed
2 Non-volatile RAM CONFIG section checksum failed
3 Non-volatile RAM CAL section checksum failed
4 Non-volatile RAM STATE section checksum failed
5 Non-volatile RST section checksum failed
10 RAM selftest
11 VDAC/IDAC selftest 1
12 VDAC/IDAC selftest 2
13 VDAC/IDAC selftest 3
14 VDAC/IDAC selftest 4
15 OVDAC selftest
80 Digital I/O selftest error

Solution/Action:

1. The problem can be solved by replacing the GPIB Interface assembly. See above for the tested interface P/N that is required to repair the instrument. The correct tested assembly for the specific model must be used when repairing a defective instrument.

2. This problem can also be solved by removing the socket (circuit reference U205) on the "A2" interface assembly and soldering the Original EEPROM directly to the Printed Circuit assembly

IMPORTANT information related to Solution No.2

It has been determined when removing the socket and soldering the EEPROM (circuit reference U205) directly on the interface assembly "A2" would be very difficult (See Picture below), even having the correct tools, removal of the socket and replacement of the EEPROM is very difficult and may cause additional quality and reliability issues.

CAUTION

The EEPROM may have bent and or dirty pins. Bent Pins and dirty pins will cause reliability problems. The EEPROM can be over heated and damaged during this procedure and will cause reliability problems. The EEPROM is a static sensitive device and can be damaged due to ESD.
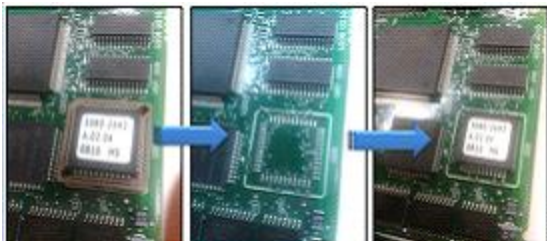
RE-INSTALLING THE PRODUCTS SERIAL NUMBER INTO THE ROM

After the removal and replacement of the "A2" interface assembly has been completed the serial number **must be** re-written to the EEROM. Initialization and calibrated of the instrument **must be** done!

After removal of the socket and directly soldering the Original EEPROM directly to the printed circuit board has been completed the serial number does **NOT** need to be re-written to the EEROM. Initialization and calibration is **NOT** required.

Procedure using VISA Assistant to re-write a serial number to the ROM.
  1.   **Select Formatted I/O Tab**
  2.   **Enter String to Print or Query**
      CAL:STAT 1   Click on the viPrintf soft button
      DIAG:SN "MY43000248"   Click on the viPrintf soft button
      CAL:SAVE   Click on the viPrintf soft button
      CAL:STAT 0   Click on the viPrintf soft button

Important Notes:
  - There is a space before the 1 in the CAL:STAT 1 command
  - There is a space before the 0 in the CAL:STAT 0 command

1. Turn off the instrument and wait 2 or 3 seconds turn the instrument on.
2. Check the serial number by using *IDN? IE: Agilent Technologies,66321D,MY43000248,A.03.01
3. Front Panel Check: 1. Power on unit, 2. Press the ADDRESS softkey, 3 Press up/down sofkeys until the SN is displayed SN: MY43000248

Disassembly Procedures
The following paragraphs provide instructions on how to disassemble various components of the dc source. Once disassembled, the components can be reassembled by performing the disassembly instructions in reverse order.
Figure 3-3 shows the location of the major components of the unit. Note that not all boards are included with every model. Figure 3-4 shows the location of the cables that interconnect all of the boards. This figure shows only the boards, not the chassis of the unit.

WARNING: SHOCK HAZARD. To avoid the possibility of personal injury, turn off ac power and disconnect the line cord before removing the top cover. Disconnect the GPIB cable and any loads, and remote sense leads before attempting disassembly.

CAUTION: Most of the attaching hardware is metric. Use of other types of fasteners will damage threaded inserts. Refer to the list of required tools when performing disassembly and replacement.

List of Required Tools
  a. 2PT Pozidriv screwdrivers.
  b. T10 and T15 Torx screwdrivers.
  c. Hex drivers: 7 mm for GPIB connector, 3/16" for RS-232 connector, 8 mm for toggle switch located on the back of Agilent 66311A and earlier 66311B units
  d. Long nose pliers.
  e. Antistatic wrist discharge strap.

Cover, Removal and Replacement
  a. Using a T15 Torx screwdriver, unscrew the two captive screws that hold the rear bezel on the unit.
  b. Remove the two screws from the bottom of the case.
  c. Slide the cover back until it clears the rear of the dc source.

A2 Interface Board, Removal and Replacement

To remove the Interface Board, proceed as follows:

a.   Remove the cover of the dc source as described under, "Cover Removal and Replacement."

b.   Remove the two 7 mm and two 3/16 inch hex screws that hold the GPIB and RS-232 connectors in place.

c.   Slide the board forward, lift up on the side of the board closest to the heat sink, and slide the board out.

d.   Place a piece of non-conducting material (stiff paper or cardboard) on top of the transformer, flip the interface board over, and place it on top of the non-conducting material.

e.   Unplug the 3-conductor cable from J206. Push down on the locking tab to release the connector.

f.   Unplug the ribbon cables. Note the position of the blue conductive side for reinstallation as shown in figure 3-4.

Release the cable by pulling out the end tabs as shown by the arrows in figure 3-5.

This modification should be done at an ESD (Electro Static Discharge) safe work area.