Information Only Service Note

Supersedes:
N5181B-08A

N5181B X-Series MXG Analog Signal Generator

Serial Numbers: ALL

The Problem - Improper handling during removal and installing during A3 RF assembly boards potential for Heater and Unlock errors

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

[ ] Calibration Required	PRODUCT LINE: 15
X Calibration NOT Required	AUTHOR: PY

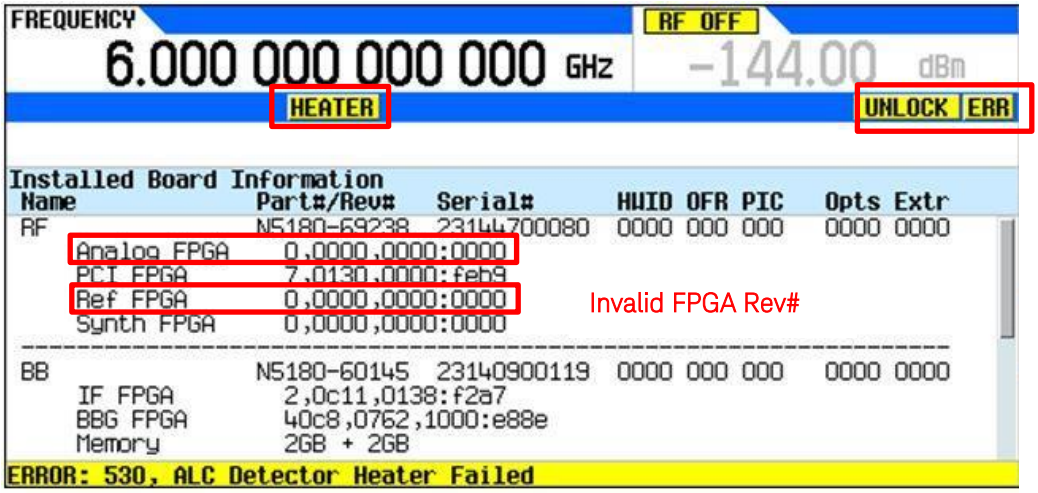
ADDITIONAL INFORMATION:

Situation:

The A3 RF Assemblies which are return to factory as DEF and DEFOA still having the Heater and Unlock errors.

Heater and Unlock errors are displayed on the Annunciators area. It can also include errors 619, FPGA revision is invalid. Do refer to Figure 1a and 1b for the details.

Figure 1a – Heater and Unlock Errors with Invalid FPGA Rev #



Or

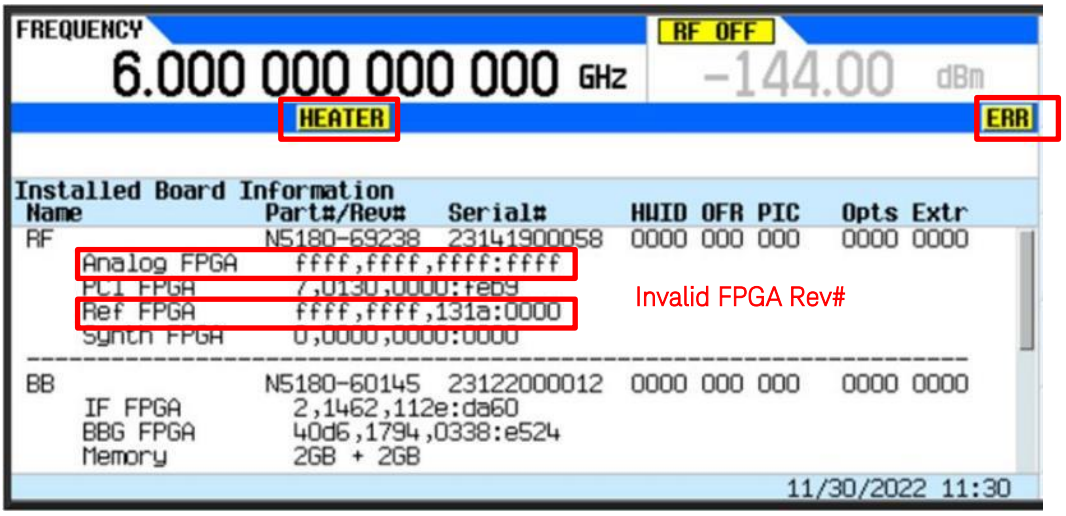
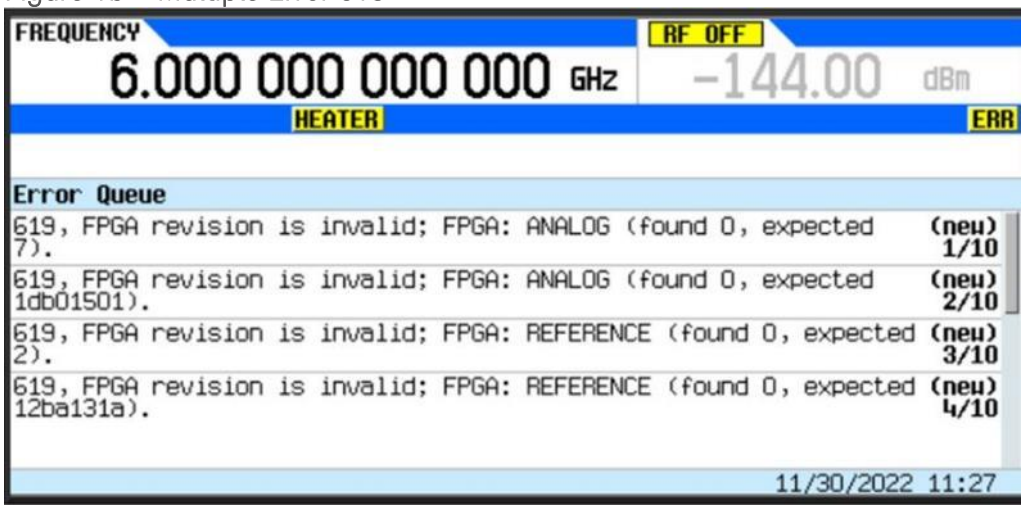
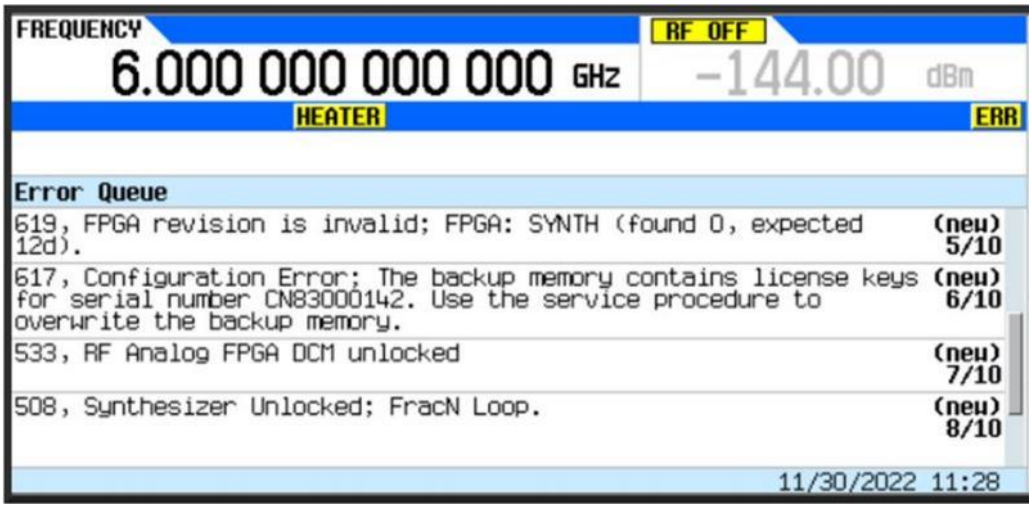


Figure 1b – Multiple Error 619





Solution/Action:

This Service Note is to emphasize on the proper handling of the A3 RF Assembly board, from removal of the assembly from the carton box, handling on the workbench to removal from instrument and the replacement procedure. The A3 RF Assembly DEF failure due to Heater issue is at 15%. The procedure mentioned below need to be adhere also when returning the DEF since the DEF will be repaired and stock to SLSC as refurbishment.

A. Removal from the carton box

Below figures 3 and 4 shows the correct and incorrect method to remove the A3 RF assembly board from the carton box.

Figure 3

Figure 4

B. While working with the board

Avoid tilting the board where components touches the workbench. This would give pressure on the PCA and potentially can damaged the PCA as well as the components in the area. Always lay the board flat on the workbench. Refer to Figure 5.

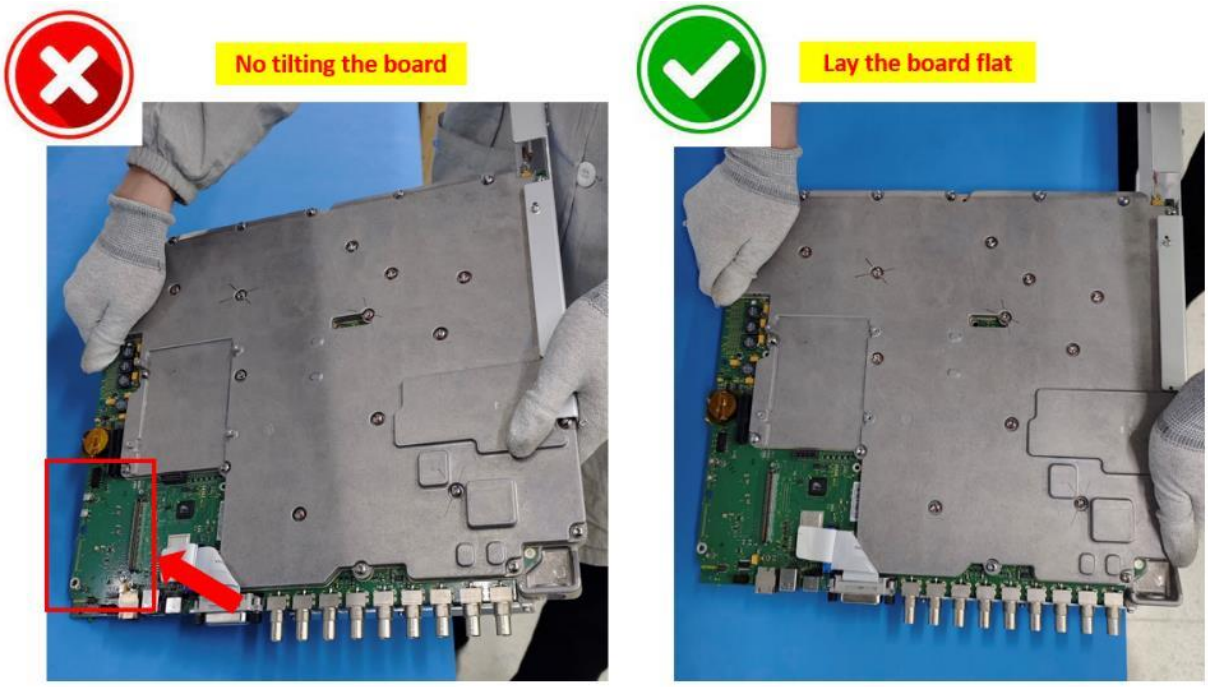


Figure 5

Figure 6 shows the correct and incorrect method of holding the board while removing and fixing the fixture.

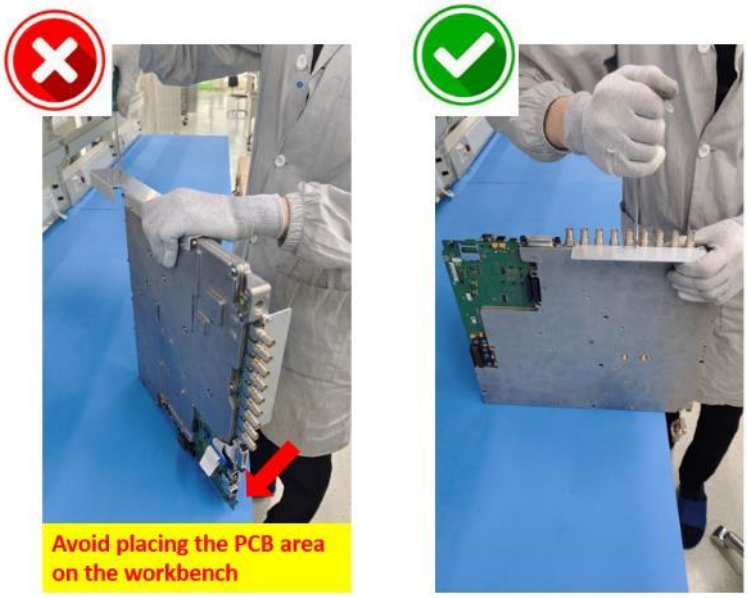


Figure 6

C. Removal from the instrument

Pry slots are provided on both sides of the A3 RF assembly to aid in removing of the board. Use a flat head (a wedge-shaped flat tip) screwdriver to loosen the board from the chassis as shown in Figure 7.

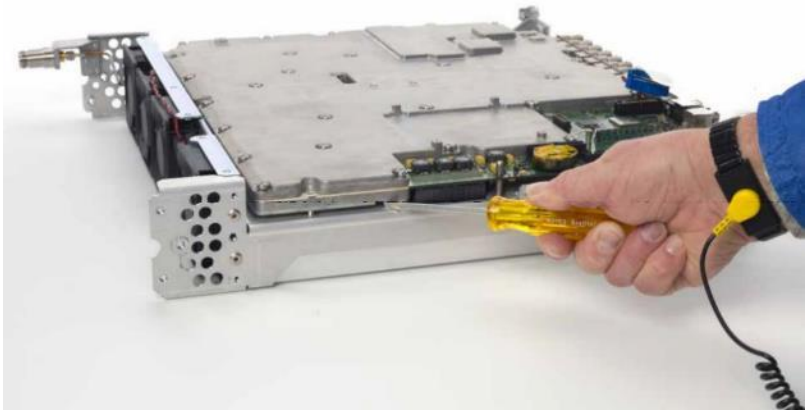


Figure 7

Figure 8 shows the correct and incorrect method of holding the board while removing and installing the board to the instrument.

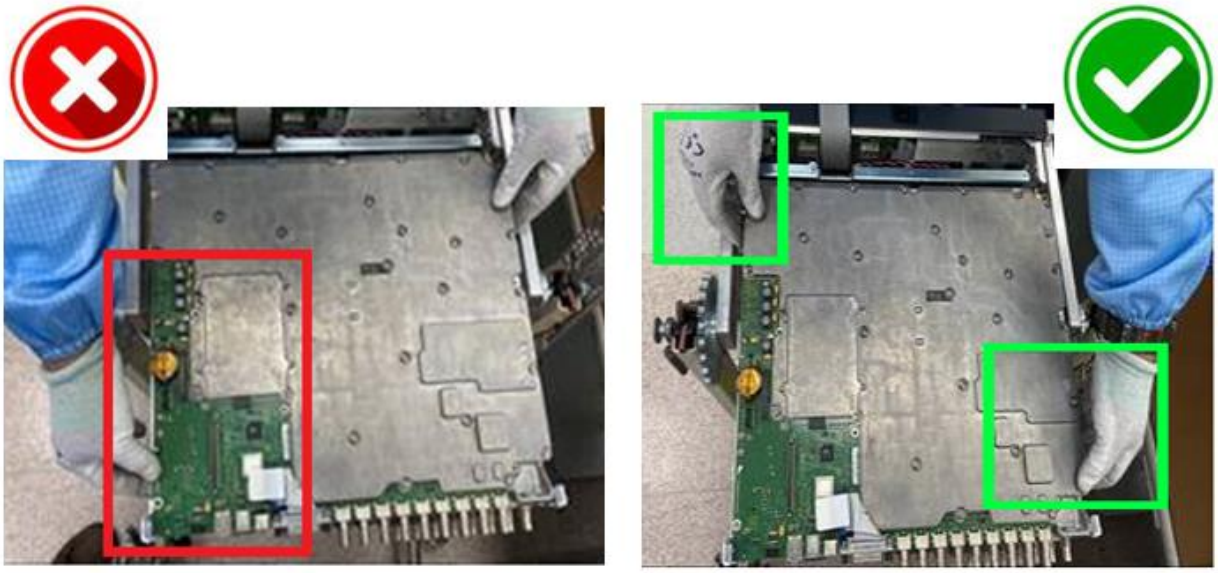


Figure 8

Another precaution is when removing and reinstalling back the screw (refer to Figure 9), it is not necessary to remove the ribbon cable to avoid re-attaching the ribbon cable back.

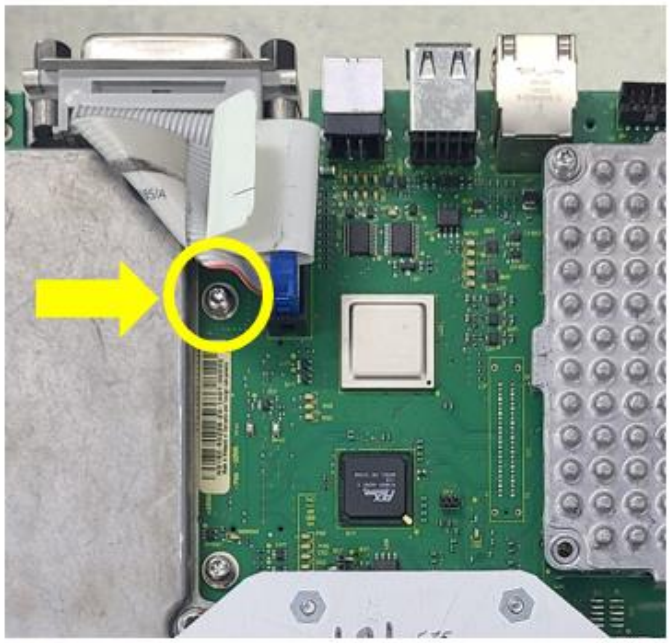


Figure 9

D. Returning DFF / DFFOA to SLSC warehouse

Refer to Figure 5 and 6 to re-install the bracket. Placed the board back into the ESD bag and return it back into the carton box. Referring to Figure 10, slot the bracket into the groove of the foam board. This is to ensure the board will be secure during shipment.

Figure 10

Figure 11 shows the shipment condition of the board if the bracket is not placed properly in the groove. The ESD packaging when placed properly will be securely inside the red foam. This will prevent the board damaged during shipping.

Figure 11

This service note is to complement the X-Series Signal Generator Service Guide (N5180-90059), Assembly Replacement Section for A3 RF assembly.

Revision History:

Date	Service Note Revision	Author	Reason for Change
13 Dec 2022	01	Petrina Yong	As Published
14 June 2023	02	Petrina Yong	Added more handling procedure
11 July 2024	03	Petrina Yong	Revise 'The Problem' statement for a better clarity and add handling procedure for returning DEF and DEFOA.