Information Only Service Note

N5171B X-Series EXG Analog Signal Generator

Serial Numbers: ALL

The Problem – Installing a new A5 CPU Assembly during a repair requires firmware version B.01.75 or newer, and different thermal pad placement.

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

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

ADDITIONAL INFORMATION:

KEYSIGHT
TECHNOLOGIES

Situation:
Due to a lower level part obsolescence the A5 CPU assembly in the X–Series family of signal generators has recently changed.

While the part number for the A5 CPU assembly replacement kit has not changed (N5180-60427), the lower level board part number within this replacement kit has. This change can also be seen when the part number of the assembly is viewed on the **Installed Board Info** screen of the instrument.

A5 CPU Replacement Kit #	Old A5 CPU Part #	New A5 CPU Part #
N5180-60427	0960–2870	0960–3295

Until the supply of the old parts is consumed you may still receive the old A5 CPU assembly in the replacement kit. If this is the case, you can ignore the rest of this service note.

Solution/Action:
While this new A5 CPU assembly will function just the same as the previous version there are a couple of differences between the two that need to be considered when installing the new assembly. They are:

1) The placement and number of thermal pads used
2) The required firmware version

Thermal Pad
The new A5 CPU assembly requires only one thermal pad, while the old version required two. The placement of the single thermal pad for the new A5 CPU is as shown in Figure 1, and the placement of the two thermal pads for the old A5 CPU is as shown in Figure 2.
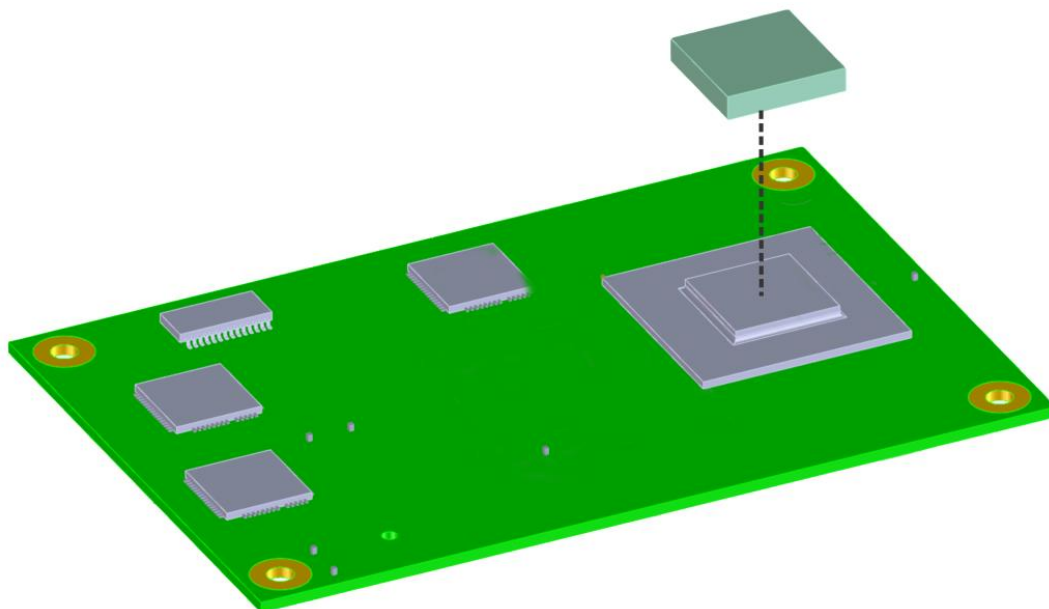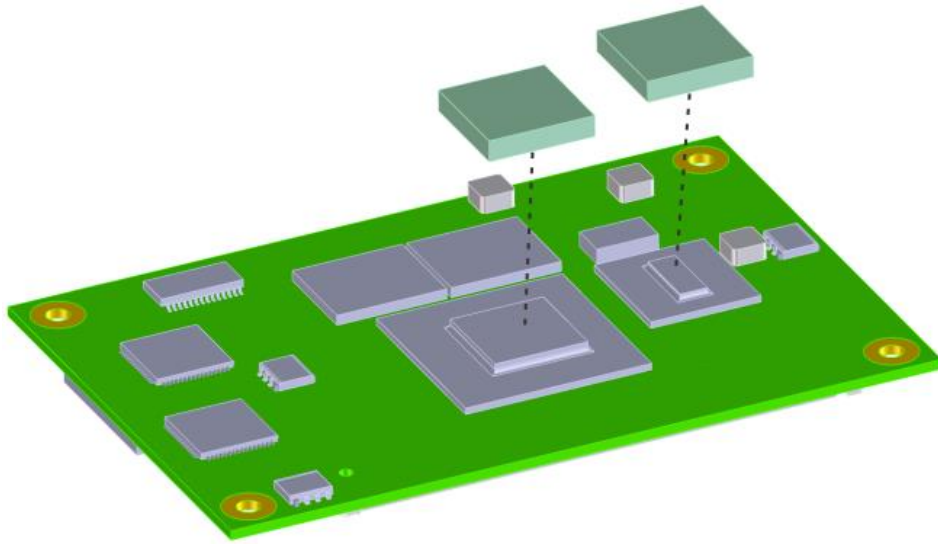
Figure 1 – NEW A5 CPU Thermal Pad Placement

Figure 2 – OLD A5 CPU Thermal Pad Placement

Replacement kits that contains the new A5 CPU assembly come with only one thermal pad.

Before installing a replacement A5 CPU assembly make sure that there are no old thermal pads stuck to the bottom of the A5MP1 CPU Heatsink from the previously installed A5 CPU assembly.

Required Firmware Version

The new A5 CPU assembly requires that the instrument firmware version be B.01.75 or newer. If the firmware requirement is not met the instrument will not have the correct drivers for the new assembly and it will not function properly.

The replacement A5 CPU assembly will come with firmware installed in it that will meet this requirement. However, the FPGA versions that are currently loaded in the other assemblies in the instrument may not be compatible with this version. Since the only way to update the FPGA code in the different assemblies is to install the instrument firmware, the firmware must always be loaded after a replacement A5 CPU assembly is installed, even if the same version is already in the A5 CPU.

The required firmware version can be download from http://www.keysight.com/find/ss_firmware

If any instrument error messages are observed prior to the firmware being installed, they can be ignored.

Revision History:

Date	Service Note Revision	Author	Reason for Change
11 Feb 2019	01	Mike Medley	As Published