

S E R V I C E N O T E

Supersedes:
NONE

6813B AC Source/Analyzer

Serial Numbers: US38390001- US38399999, MY41000101- MY41001113, SG41000101- SG41000217

Due to an issue with a tin plated connector oxidizing, four PCA connector headers and a cable need to be changed to gold plating. Three of the connector headers are on the A7 Inverter PCA. The last connector header is on the A8 DSP PCA. The cable that needs to be changed goes from J646 on the A7 Inverter PCA to J746 on the A8 DSP PCA.

Parts Required:

P/N	Description	Qty.
1253-7410	4 pin connector header	3
1253-7460	3 pin connector header	1
5080-2699	cable	1
5081-4972	insulator	2

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	X ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS	LABOR: 1.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE X SERVICE CENTER <input type="checkbox"/> CHANNEL PARTNER	SERVICE INVENTORY: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP X SEE TEXT	USED PARTS: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP X SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: End of Support	
AUTHOR:	MC	PRODUCT LINE: SP	
ADDITIONAL INFORMATION:			

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Situation:

The tin plating on four PCA connector headers and one cable can potentially oxidize, causing contact resistance to increase. Higher contact resistance will cause a bias voltage on that is present on the connector header to sag. This low voltage can cause the unit to intermittently reset when it is below a certain threshold.

CAUTION: The AC Source has components that can be damaged by ESD (electrostatic discharge). Failure to observe standard antistatic practices can result in serious degradation of performance, even when an actual failure does not occur.

WARNING: Hazardous voltages exist within the ac power source chassis, at the output terminals, and at the analog programming terminals. Only qualified personnel who have been trained in working with high voltage power equipment are to service this unit. Before disassembling the unit, locate the 2 Red LEDs. You can observe the LEDs through the outer cover of the AC Source. Wait for the LEDs to extinguish before disassembling the unit.

Solution/Action:

If the unit has the B version of the A7 Inverter PCB, the four connector headers and the cable should be changed to the new gold plated parts. The PCB revision can be found listed on the lower right hand corner of the A7 Inverter PCA. It is easy to tell the gold plated parts from the tin plated parts by color. For reference, the pictures from the A7 Inverter PCA below are of the gold plated part and the pictures from the A8 DSP PCA are of the tin plated part.

The A7 Inverter PCA must be removed from the heat sink in order to do the modifications. The FET insulators should be disposed of and replaced with the new insulators (part number 5081-4972).

The first two connector headers are J638 and J646 on the A7 Inverter PCA. They need to be changed to the four pin connector, part number 1253-7410. These connectors should be fairly easy to de-solder.

Figure 1. A7 Inverter PCA Top View

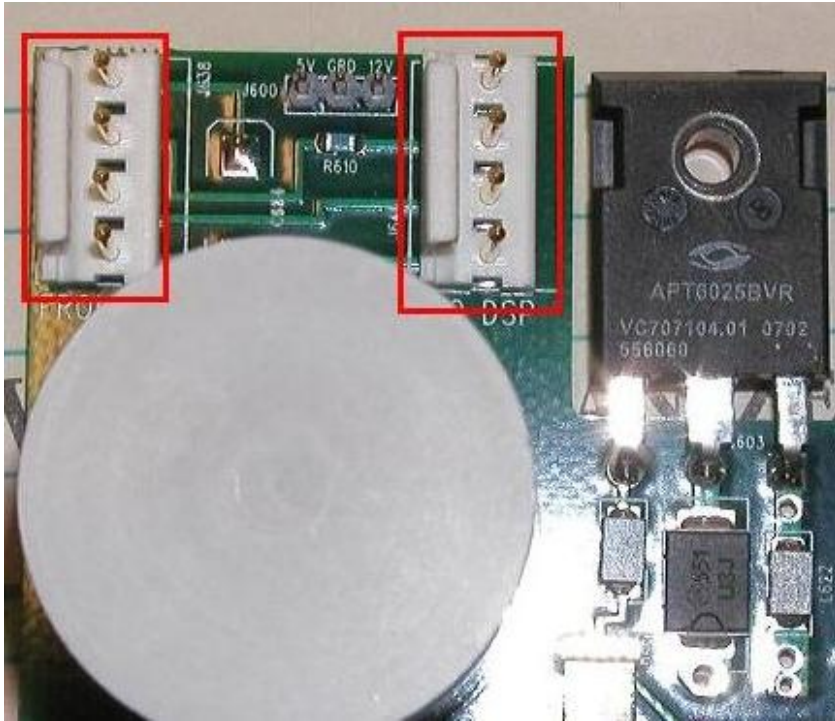
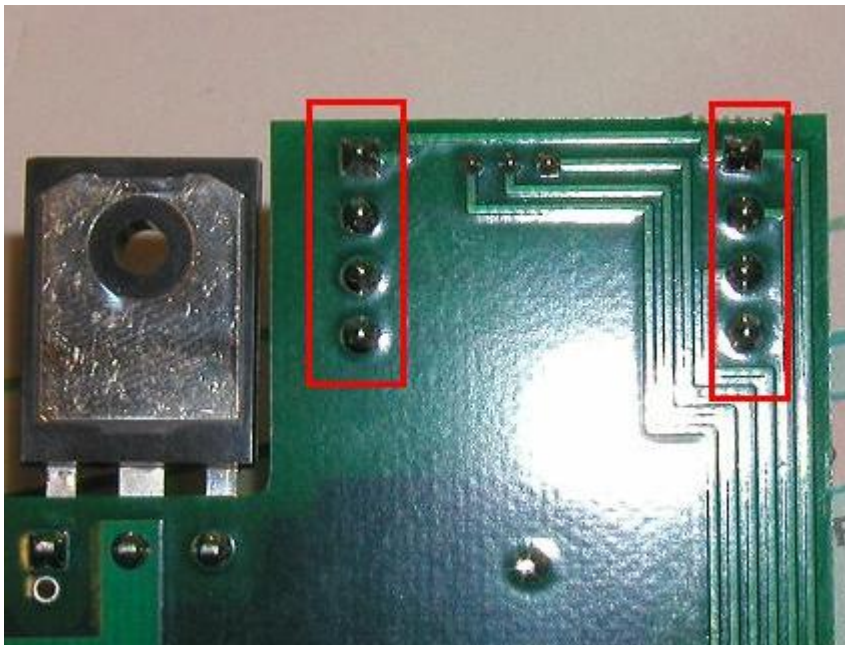


Figure 2. A7 Inverter PCA Bottom View



J628 on the A7 Inverter PCA also needs to be changed with part number 1253-7410. This should also be easy to de-solder.

Figure 3. A7 Inverter PCA Top View

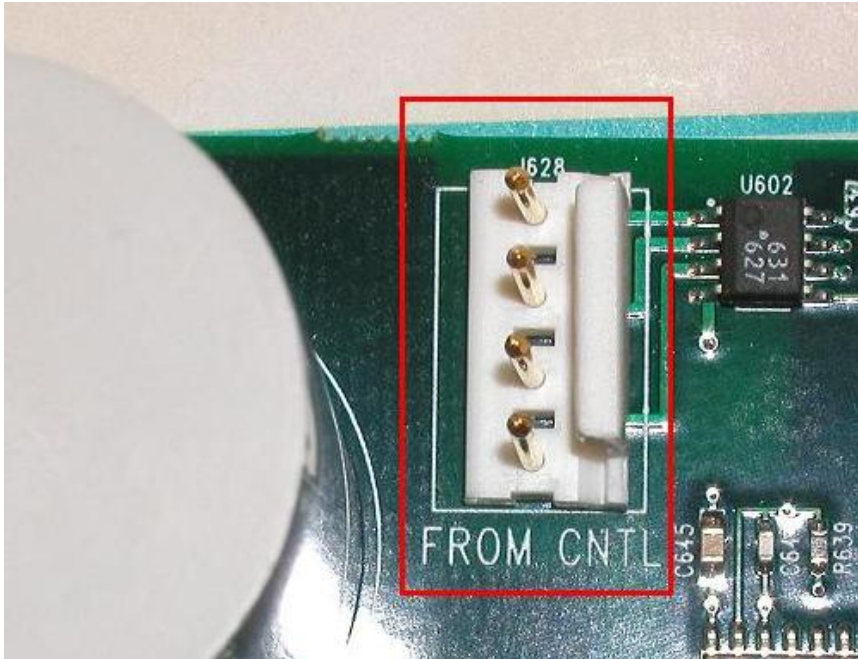
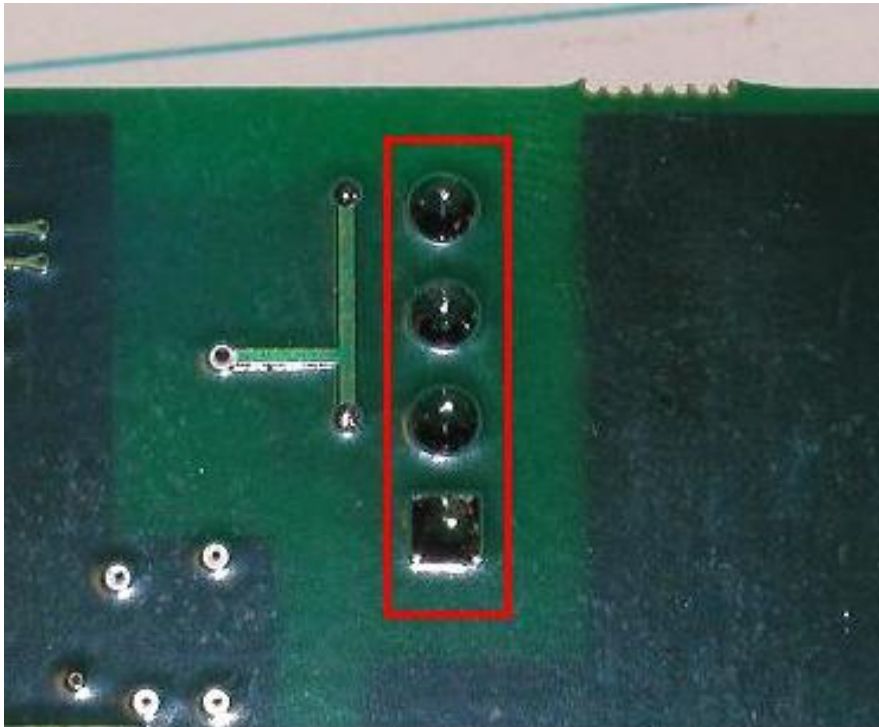


Figure 4. A7 Inverter PCA Bottom View



When installing the A7 Inverter PCA back onto the heat sink, be sure to use the new insulators (part number 5081-4972) and apply 10 inch pounds of torque to the screws that hold the FETs to the heat sink.

J721 on the A8 DSP assembly must also be changed. This is a three pin connector and should be changed to part number 1253-7460. This connector is hard to de-solder due to it being on top of a ground plane so extra care must be taken in order to avoid damaging the PCA. It is recommended to use solder wick instead of a de-soldering station.

Figure 5. A8 DSP PCA Top View

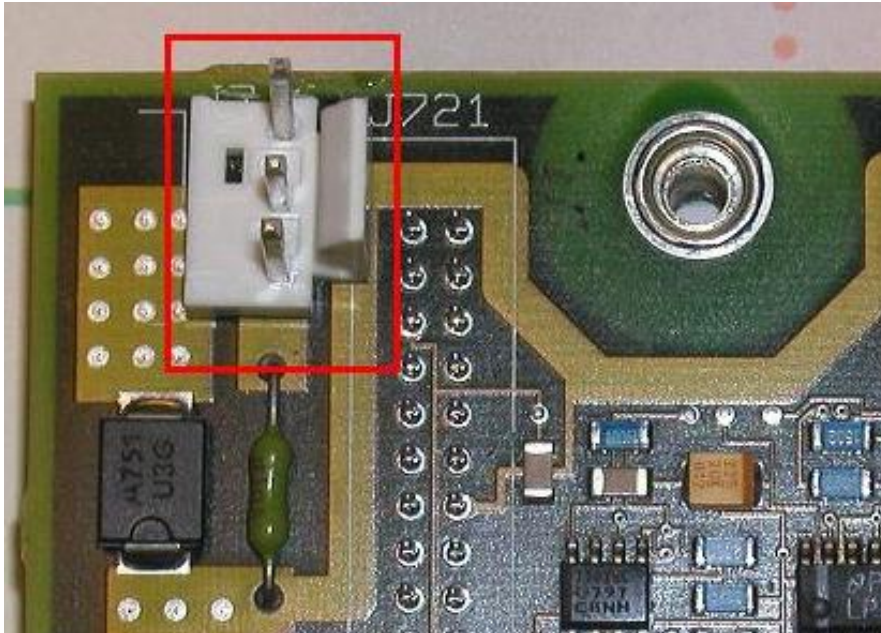
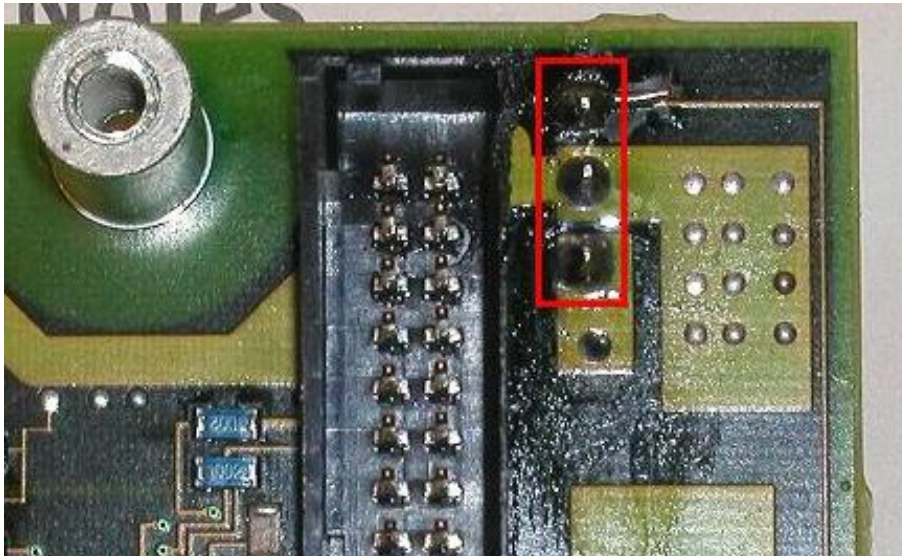


Figure 6. A8 DSP PCA Bottom View



The cable from the Inverter PCA to the DSP PCA must also be changed to a cable with gold plated connectors. The new cable part number is 5080-2699.

Testing Note

Once the Assembly is completed, please proceed to test the unit as per Agilent Technologies standards. No calibration is necessary.