

E4419A-07B

S E R V I C E N O T E

Supersedes:
E4419A-07A

E4419A EPM Series Power Meter

Serial Numbers: GB0000000/GB9999999
US0000000/US9999999

Hardware Upgrade Information

To Be Performed By: Agilent-Qualified Personnel

Parts Required:

P/N	Description	Qty.
E4418-60021	EPM HW upgrade kit	1
11683A	Range calibrator	1
11730A	Power sensor cable	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
MODIFICATION AVAILABLE		
ACTION CATEGORY:	AGREEABLE TIME	<input checked="" type="checkbox"/> PERFORMANCE ENHANCEMENT <input type="checkbox"/> SERVICE / RELIABILITY ENHANCEMENT
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	AVAILABILITY: NOVEMBER 6, 2008
AUTHOR: CFL PRODUCT LINE: WC		
ADDITIONAL INFORMATION:		

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Situation:

E4418-80023 is no longer orderable. To make E4419A compatible with E9300 series power sensors, it requires new hardware P/N E4418-60007 and firmware version (A2.04.00 or above) to be fitted. These changes are required to allow the E9300 series power sensors to operate with the EPM "A" model power meters.

Solution/Action:

The new part allows the users to utilize the new E9300 series power sensors. These sensors are capable of performing the following:-

- Wide dynamic range measurement of all modulated signals.
- Accurate measurement of signals with high peak to average ratios.
- Flat calibration factors give accurate measurement of multi-tone signals.

INSTALLATION PROCEDURE**Measurement Board Replacement**

Replacing the old measurement board with new measurement assembly E4418-60003 requires removal of the power meter cover.

With the cover removed, the measurement board can be replaced. The power meter is then reassembled and the measurement path verified.

Outer Cover Removal

1. Ensure all power and sensor cables are disconnected from the power.

WARNING: The power meter contains potentially hazardous voltages.

2. By using a T15 screw driver, loosen the captive screws in the rear bezel and remove the power meter chassis from the cover.

Measurement Board Replacement

1. Unplug the old measurement board in Channel A and B, then replaced by E4418-60003. Slot in the E4418-60003 with care and ensure that the board is fully inserted.

Cover Replacement

1. Refit the power meter cover. Take extra care to avoid snagging any loose cables.
2. Replace rear bezel and using a T15 screw driver, tighten the captive screws. The assembly of the power meter is now complete.

POWER METER VERIFICATION

After performing the EEPROM upgrade, now ensure the power meter passes the Power On Self Test and Instrument Self Test.

1. Reconnect the power cord and switch the power meter on.
2. On the power meter, press **System/Inputs > More > Service > Self Test > Instrument Self Test**.
3. Verify all tests pass.
4. If any Measurement Assy tests fail, switch off the power meter and proceed as follow:
 - a. Remove the power cord and remove the cover as described in "Cover Replacement".
 - b. Ensure the EEPROM, flex circuit and measurement assemblies are correctly located.
 - c. Refit the cover and retest the power meter.
5. Press **Done** to exit the Instrument Self Test menu.
6. Verify the DSP Revision after the Instrument Self Test has passed. Press **System/Inputs > More > Service > Version** to check the DSP Revision of A.01.11 as shown below:

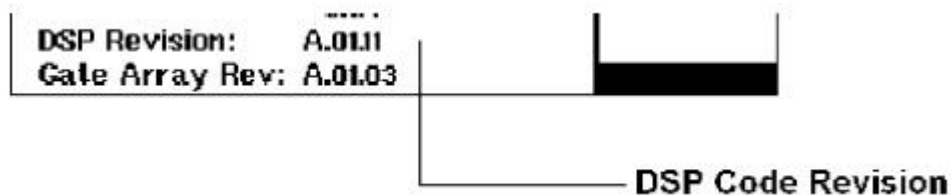


Figure 2: DSP Revision Check

7. Press **Done** to exit.

MEASUREMENT PATH VERIFICATION

Self Test

1. Reconnect the power cord and press to power up the power meter.
2. Ensure the power meter passes all the power-up self tests before proceeding.

Perform Zero Test and Instrument Accuracy Tests from the Service Guide P/N E4418-90059.

The retrofit and verification are now complete.

You should now install the latest instrument firmware. This can be achieved by accessing the following URL:

<http://www.home.agilent.com/agilent/facet.jspx?kt=1&cc=US&lc=eng&k=E4418B>

Scroll down to the “Technical Support” section and click on “Driver & Software”. Follow the on-screen instructions to perform the firmware upgrade.