

MODIFICATION RECOMMENDED

E4416A-16

S E R V I C E N O T E

Supersedes:
NONE

E4416A EPM-P Single Channel Power Meter

Serial Numbers: From MY45101000 to MY50001041 & SG45100200 to SG50000141

Overload Failure in W-CDMA & HSDPA Signal Measurement when RF Input Exceeds -1dBm

Parts Required:

P/N	Description	Qty.
E4416-60004	MEASUREMENT ASSEMBLY	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS	LABOR: 1 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER <input type="checkbox"/> CHANNEL PARTNER	SERVICE INVENTORY: <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT	USED PARTS: <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: 31 ST September 2012	
AUTHOR:	LCW	PRODUCT LINE: WC	
ADDITIONAL INFORMATION:			

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Situation:

1. When the E4416A is used with the E9320-series peak and average power sensors under the 'W-CDMA' preset mode, and when the RF power source to the power sensor exceeds -1dBm, the E4416A will display an 'Overload' error as shown in the diagram below:



Figure 1: Power Meter's Display in Overload Condition

2. This problem is caused by a flip-flop amplifier component from a specific supplier that carries the part number: 1820-6473 this supplier's component is used on the E4416-60004. Only boards build with this supplier's 1820-6472 component will exhibit this issue.
3. The following test steps shows how the 'overload' error can be reproduced:
 - a) Power On the E4416A
 - b) Connect the E9320 Series peak & average power sensor to the E4416A
 - c) Perform zeroing & calibration for the power sensor
 - d) Preset the E4416A to W-CDMA mode
 - e) Connect the power sensor to a signal generator
 - f) Set the signal generator to output W-CDMA or HSDPA signal with starting RF power level at -10dBm
 - g) Turn ON "RF Output" of the signal generator
 - h) Increase the RF input power with 1dBm step
 - i) The overload failure will be noticed once the RF power level above -1dBm

Solution/Action:

1. Customer can contact Agilent’s Customer Contact Center (CCC) to return the unit to Agilent’s Service Center for rework if this symptom is observed.
2. Agilent’s Service Center will replace the affected measurement board (E4416-60004) with a new measurement board that is build with a good 1820-6472 (component locator U45) to resolve this symptom.
3. Prior to board replacement, Agilent’s Service Center will need to visually reconfirm measurement board from the customer’s unit is indeed build with the defective part. The defective part can be visually differentiated form the markings on the component, as shown below:

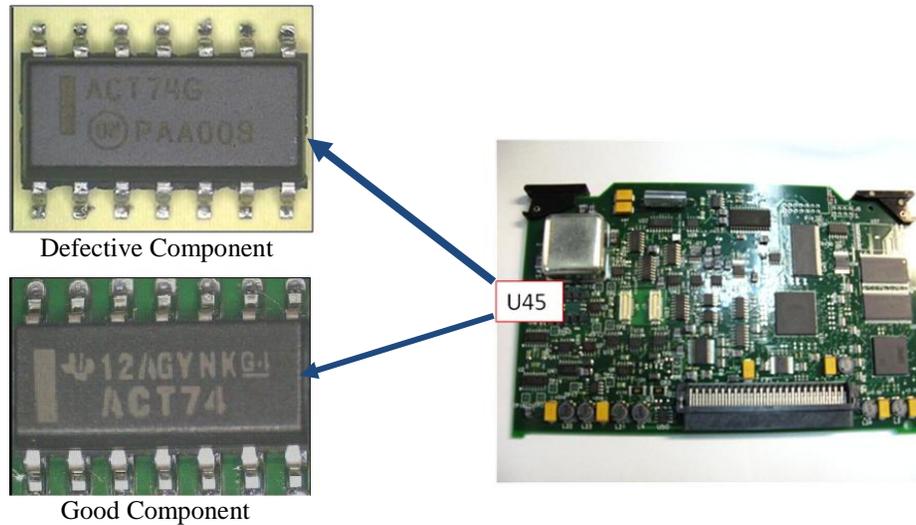


Figure 2: Defective Component Checking (1820-6472) on Measurement Board (E4416-60004)

4. After replacing the measurement board that uses the good 1820-6472 component, follow the procedured below to perform verification on the power meter:
 - a) Power ON the E4416A
 - b) Perform “Self Test” from the front panel of the E4416A to ensure all tests passed
 - c) Perform the verification test with the STE 9000 calibration software to ensure the accuracy of the E4416A. The following are the required tests in STE 9000 and it’s test duration:

REF (MP name)	TEST	RUN TIME
Interpretor_mp	INITIAL SETUP	1 min
Zero_input_mp	ZERO CHANNEL A	2 min
Zero_input_mp	ZERO CHANNEL B	2 min
Norm_accy_mp	NORMAL INSTR. ACCURACY A	4 min
Norm_accy_mp	NORMAL INSTR. ACCURACY B	4 min
Instr_accy_mp	INSTR. ACCY A	3 min
Instr_accy_mp	INSTR. ACCY B	3 min

- d) Perform the W-CDMA or HSDPA signal measurement with input power above -1dBm using the E4416A and E9320 series peak & average power meter to assure that the overload condition will not occur.

5. The estimated repair time for this rework will take around 1hour.