

SAFETY – IMPLEMENTED DURING NORMAL COURSE
OF PROVIDING SUPPORT

N5542A-01-S

S E R V I C E N O T E

Supersedes:
None

N2X (Router Tester 900) Chassis

Serial Numbers: MY44304401 to MY47304401

WARNING

Potential power supply failure due to component lead length.

To Be Performed By: Agilent-Qualified Personnel

Parts Required:

P/N	Description	Qty.
E7900-64800	Power Supply Unit – Ampere	2

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
SAFETY			
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	SERVICE INVENTORY: X RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT	USED PARTS: X RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	ALWAYS	NO CHARGE AVAILABLE UNTIL: ALWAYS	
AUTHOR: [HS]	PRODUCT LINE: [PL2M]		
ADDITIONAL INFORMATION:			

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Situation:

A fault was discovered during HiPot¹ testing at Agilent's production line for this product. Some PSU's were found to be failing HiPot tests.

Analysis showed that some through-hole components did not have their leads trimmed to the proper length (they were too long), and as a result of vibration testing done after OEM HiPot tests, or shock/vibration in transit, the extended leads were piercing the insulation barrier between the mains powered components, and the PSU metalwork.

The potential for injury is that mains power could be shorting to the PSU metalwork (and in turn to the product chassis). This short may occur in the circuit before the PSU fuse, and if the product is connected to mains electricity without a protective earth conductor (foreseeable misuse) then the chassis may become 'live'. In the event that such a situation does occur, it is likely that the current drawn by the broken circuit would be enough to 'trip' the fuse which should be fitted to the main electrical supply's distribution board.

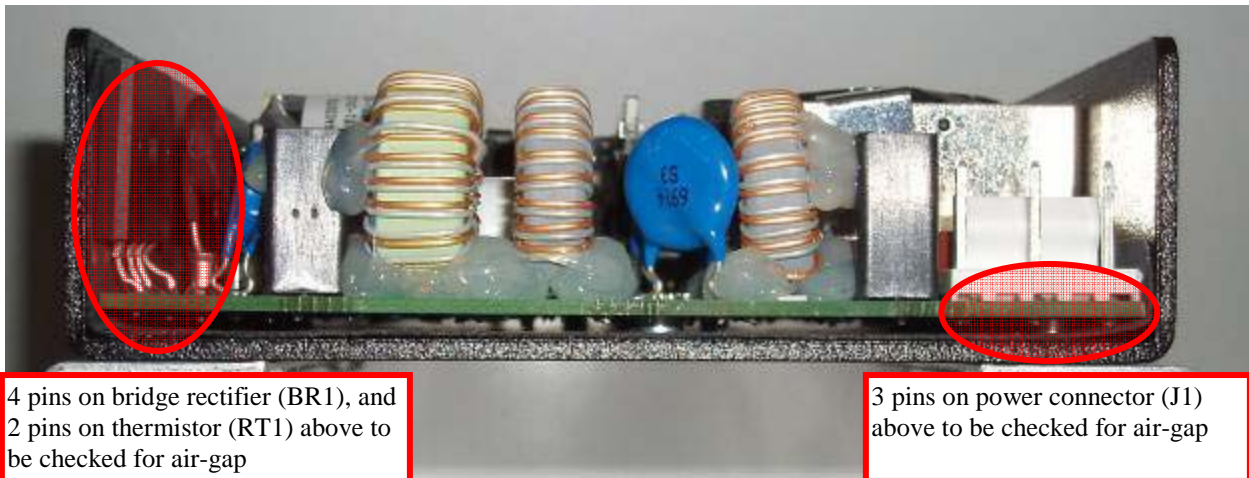
Solution/Action:

On all chassis which are returned to Agilent for repair/calibration service, please perform the following check and replace parts as necessary –

Remove the power supply modules from the chassis as per the instructions in the service manual which can be downloaded from the following URL –

http://dnd.business.agilent.com/field/postsales/routertester/servmans/E7900A_Service_Manual.pdf

Check the power supply through-hole components as shown below to ensure that there is an air gap between the component leads highlighted and the insulation situated between the metalwork and PCB.



4 pins on bridge rectifier (BR1), and 2 pins on thermistor (RT1) above to be checked for air-gap

3 pins on power connector (J1) above to be checked for air-gap

If there is an air-gap, the power supply can be re-fitted to the chassis and returned to the customer after being tested in accordance with the procedures outlined in the above mentioned service manual.

If there is *not* an air gap, then the power supply should be replaced by a new one – part number E7900-64800 – and the defective one should be returned to SPO for credit return to the division manufacturing organisation.

¹ Hipot is a term given to a class of electrical safety testing instruments which are used to verify electrical insulation in cables, wired assemblies, PCB's, electric motors etc. Under normal conditions, an electrical device will produce a minimal amount of leakage current due to the voltages and internal capacitance present within the product. Due to variations in production processes however, the insulation in a product can break down, resulting in excessive leakage current flow. A Hipot test checks for any breakdown and subsequent excessive leakage current.