

## S E R V I C E N O T E

SUPERSEDES: None

**8751A Network Analyzer**

**Serial Numbers:** 0000J00000 / 3146J00696  
0000A00000/3146A00212

Duplicate Service Notes: None

**Modification to fix unexptected spurious problem.****To Be Performed By:** Agilent-Qualified Personnel**Parts Required:**

Part No.	Qty	Description
1901-0050	1	Diode
0757-0280	1	Resistor 1K
0698-3444	1	Resistor 316
9100-3548	1	Inductor 470 NH
1854-1073	1	Transistor
0160-4832	1	Capacitor 0.01 UF
0698-3441	1	Resistor 215

*Continued*

DATE: 15 April 1995

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:					
<b>MODIFICATION RECOMMENDED</b>					
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	Labor 2.0 hrs		
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input 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	RESPONSIBLE UNTIL: 15 April 1995			
AUTHOR: MT	ENTITY: 3355	ADDITIONAL INFORMATION:			

**Situation:**

The 8751A may show the unexpected spurious response due to the parasitic oscillation of the source signal.

**Solution:**

This is caused by the breakdown of A3Q2 transistor. This symptom can be confirmed using the following procedures:

1. Set the 8751A as follows:  
CENTER --> 500 MHz  
SPAN --> 0 Hz
2. Connect the Spectrum Analyzer to the 8751A's "RF OUT", and observe the signal with 1 MHz frequency span.
3. Connect the Signal Generator to "EXT REF IN" on the rear panel. Set the Signal Generator to 10 MHz.
4. Change the frequency of Signal Generator from 9.9998 MHz to 10.0002 MHz. Observe the 8751A's output signal using the Spectrum Analyzer. If a spurious is observed, the A3Q2 transistor is broken.

**Action:**

Modify the A3 board with referring the following procedures:

1. Turn the 8751A off. Remove the top cover and the shield plate.
2. Remove the A3 board.
3. Modify the A3 board with referring Figure 1:
  - a. Replace the A3Q2 transistor (P/N 1854-1073) with the new one.
  - b. Replace the R3 resistor. 464 ohm --> 1 kohm (P/N 0757-0280)
  - c. Replace the R6 resistor. 464 ohm --> 316 ohm (P/N 0698-3444)
  - d. Replace the L2 inductor. 680 nH --> 470 nH (P/N 9100-3548)
  - e. Replace the location of C5 (0.01 uF, P/N 0160-4832) and R19 (215 ohm, P/N 0698-3441).
  - f. Add the diode (P/N 1901-0050) with referring Figure 1.
4. Perform the following adjustments:  
100 MHz VCXO Frequency  
Fractional N Osc Spurious  
1st IF Offset Osc Frequency  
LF power linearity
5. Reinstall the A3 board.

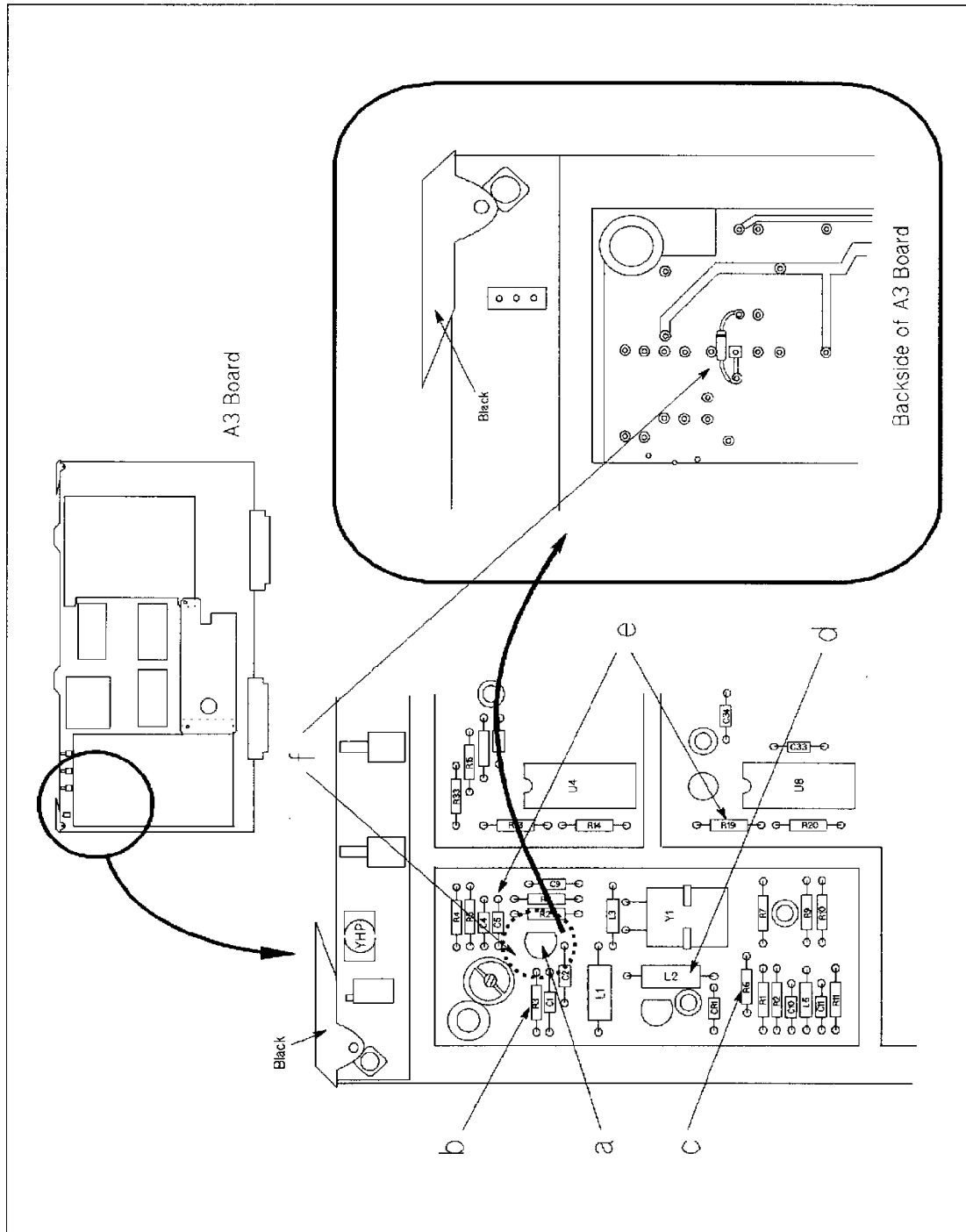


Figure 1. A3 Board Modification