

MODIFICATION RECOMMENDED –
CORRECTS MANUFACTURING OR DESIGN DEFECTS

SN-1730B -01

S E R V I C E N O T E

Supersedes:
None

1730B 1/2G Fibre Channel SAN Tester

Serial Numbers: [MY42331504/ MY43201502]

- **Surface mount resistor designated R484 is the wrong value and can lead to system hangs, crashes or report of disparity errors.**
- **Surface mount capacitor designated C592 MAY have the wrong value and can lead to system hangs and crashes**

To Be Performed By: Agilent qualified personnel.

Parts Required:

P/N	Description	Qty.
0699-3911	Surface Mount Resistor 26.1ohms	1
0180-4976	Surface Mount Capacitor 470uF 6V	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	X IMMEDIATELY <input type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR: 0.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: MH	PRODUCT LINE: 1A	AGILENT RESPONSIBLE UNTIL:	
ADDITIONAL INFORMATION:			

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Situation:

1730B has four 1/2G ports per module. Problem is seen only when 3 or 4 ports are generating traffic. Certain commands or data can cause long streams of “1’s” to be generated by FPGAs. This causes a reference voltage to creep up. Change in reference voltage causes clocking problems for FPGAs. An example case is when FPGA’s generate numerous LIPs (LIP is a Fibre Channel command). LIPs are encoded as “F7’s”. The FPGA will generate numerous F7’s, which cause this voltage creep problem. This happens prior to a SERDES that does 8b/10b decoding. Three different symptoms may be rendered:

- 1) System may hang
- 2) System may crash reporting an error with port 3. (e.g. error with port 10x/3).
- 3) System may indicate disparity errors in products statistic window.

Solution/Action:**Repair Steps**

Resistor R484 (see picture below) needs to be changed **from** PN-0699-3926 (121 ohms) **to** PN 0699-3911 (26.1ohms).

Visually inspect Capacitor C592 (see picture below). If value on capacitor is 476, then the capacitor needs to be changed **to** PN 0180-4976. Capacitor polarity must be respected. If the value on capacitor is 477, the capacitor does NOT need to be changed.

The “front” of the 1730B module is defined as the side with optical connectors. See Diagram 1

- 1) Remove resistor and replace it with 0699-3911. (see Diagram 2) One side of this resistor is connected to a power plane, so soldering the replacement resistor can be problematic. Inspect solder connections thoroughly to ensure a solid connection. You may want to re-flow the solder after the resistor is initially soldered down. You may have to use a higher -than -typical wattage solder tip to re-flow the solder.
- 2) Test for a good solder joint measuring the resistance between the replaced resistors front lead (that is the lead facing the front of the board) and the positive side of the capacitor directly next to the resistor. (Same capacitor referenced above). It should read about 26 ohms.
- 3) If capacitor needs to be changed, replace it with 0180-4976. The brown bar on the capacitor is oriented towards the “back” side of the board (see picture)
Inspect solder connections thoroughly to ensure a solid connection. You may want to re-flow the solder after the capacitor is initially soldered down.
- 4) Attach Service Note Sticker . See Diagram 3

Repair logistics

Parts Availability : The resistors, capacitors and the sticker will be directly sent by the DND division to the local service centers.

For Brocade communications in San Jose and Cisco/Andiamo in San Jose repair will be performed on site. Other customers will mail their unit into the repair center. During the shipping and repair time, the Agilent factory will provide a loaner unit. Coordination and delivery of the loaner units will be handled by the factory and field.

Diagram 1:

1730B 1/2G FC SAN Tester. Note general location of resistor and capacitor.

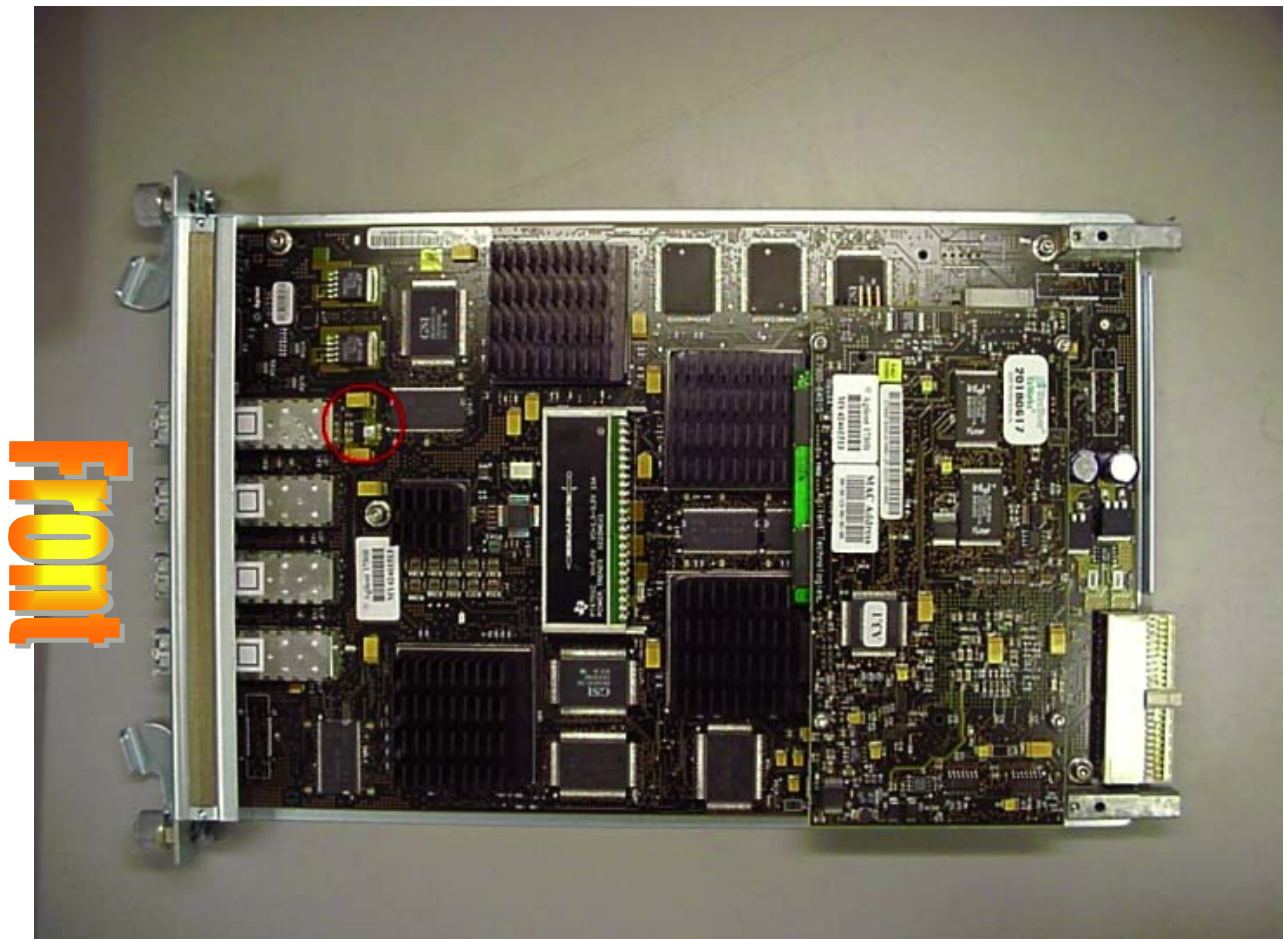


Diagram 2:

Exploded view of resistor and capacitor location. Reference red circle in diagram 1.

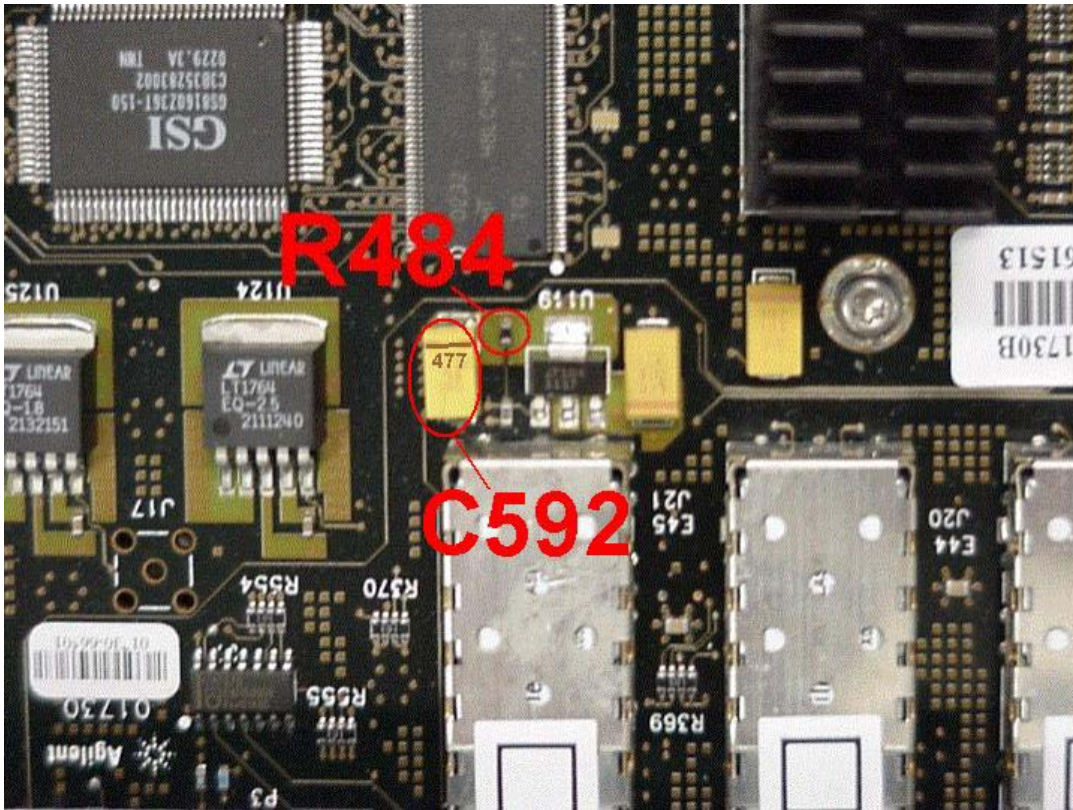
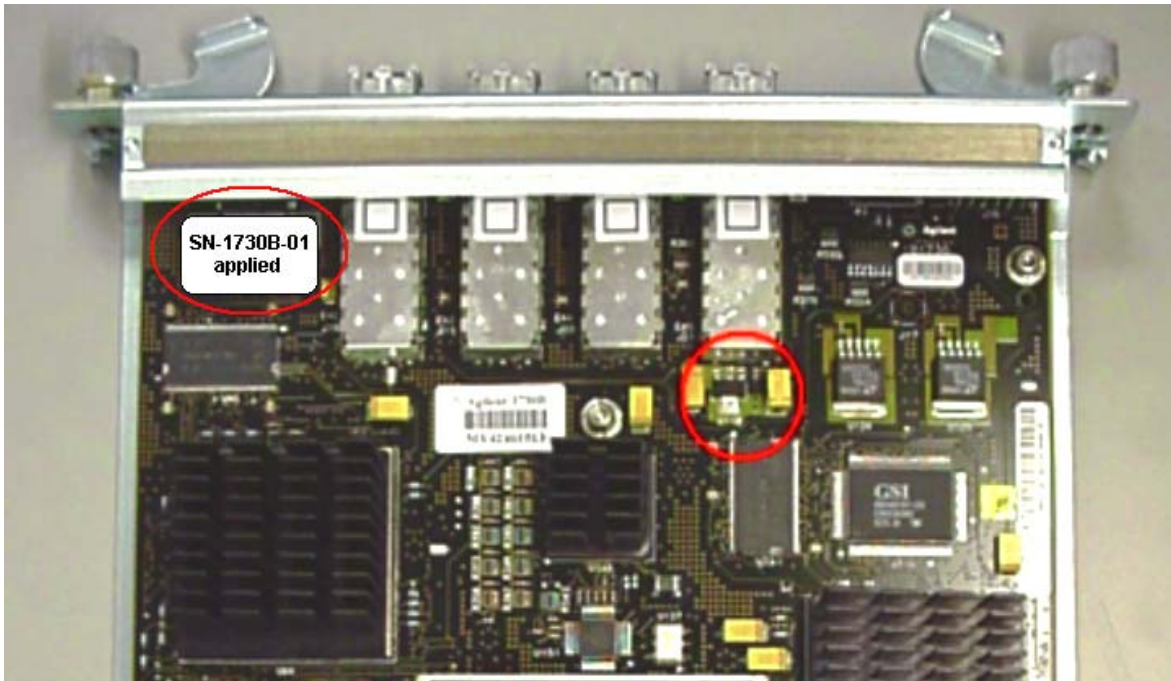


Diagram 3

Sticker location



Verification

After upgrading the module, the verification of proper module operation needs to be done according to the instructions provided in the **Agilent 1730A/B San Tester Service Guide**, *Chapter 11 (Quicktest verification)*.

The verification process requires a E7900A frame , a SAN Tester Controller E7891A/B/C option 120, and 2 Fibre Channel Optical Cables.

The module will be sent back to customer after verification is completed.