# 86103A-02

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

Supersedes:
NONE

## 86105C

**Serial Numbers: [0000A00000 / 9999Z99999]**

Module calibration failures are not always caused by damaged samplers.

**Parts Required:**

| P/N | Description | Qty. |
|---|---|---|
| NONE | | |

It is possible to use a 54754A TDR module to help identify intermittent cables that cause intermittent module calibration failures in 5475xx, 8348xx and 861xxx modules. We have discovered a manufacturing defect in < 2% of the module strobe cables (W3, 83481-60007) screened.

To test for this cable defect, you need a TDR module, 54753/4A and a mating cable from the mainframe, 86100-60080.

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

**INFORMATION ONLY**

AUTHOR: bmh PRODUCT LINE: 8F

ADDITIONAL INFORMATION:



Agilent Technologies

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The sampling pulse comes from the Acquisition assembly in the mainframe through W16, W17 in the 86100C (86100-60080) to the bottom coax connector on the module which is part of W3, 83481-60007. This cable connects to the Pulse filter board A3, and then passes to the pulse filter, A2A6. A damaged spring contact on the A3 assembly can show the same symptoms. The pulse filter sharpens the sampling pulse that drives the samplers. 8348x modules have two coax cables, the top one is for the trigger signal.

The coax connector in the module floats so that it can mate with the rigidly held mainframe connector. Each time the module is inserted, this cable flexes.

1. Connect 86100-60080 to channel 1 on the TDR module, and select TDR mode. You will see a characteristic TDR step on screen.
2. Adjust the time base so that you can see the second step indicating the open at the end of the cable. (~ 1 nsec/div)
3. Place a marker in the center of the second rising edge. See fig 1 open cable.
4. Insert cable into bottom coax connector. While holding the connecter in the module, move the connector up and down. This will flex the cable in the module. If the cable is good, the new rising edge will be a little more than two nsec from the marker. See fig 2 good cable.
5. A bad cable will have the open close to the marker, and the trace will likely move between a good and bad cable signature as the cable is moved. See fig 3, 4 bad cables.

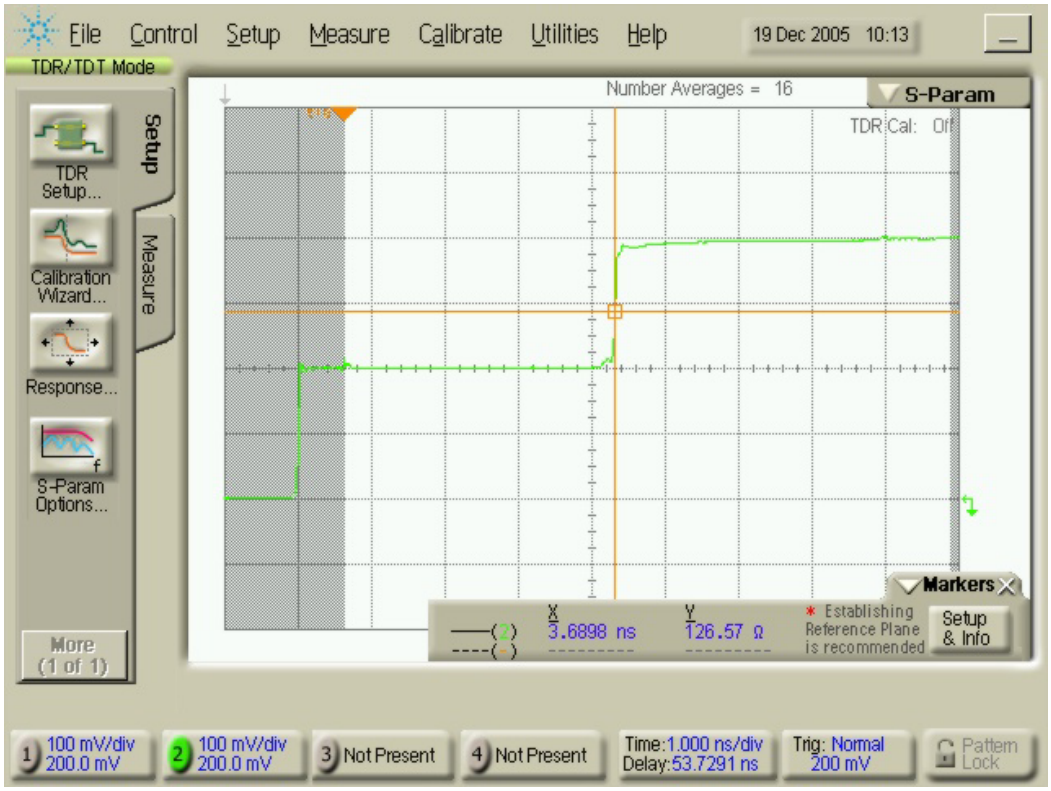

Fig 1. Open Cable

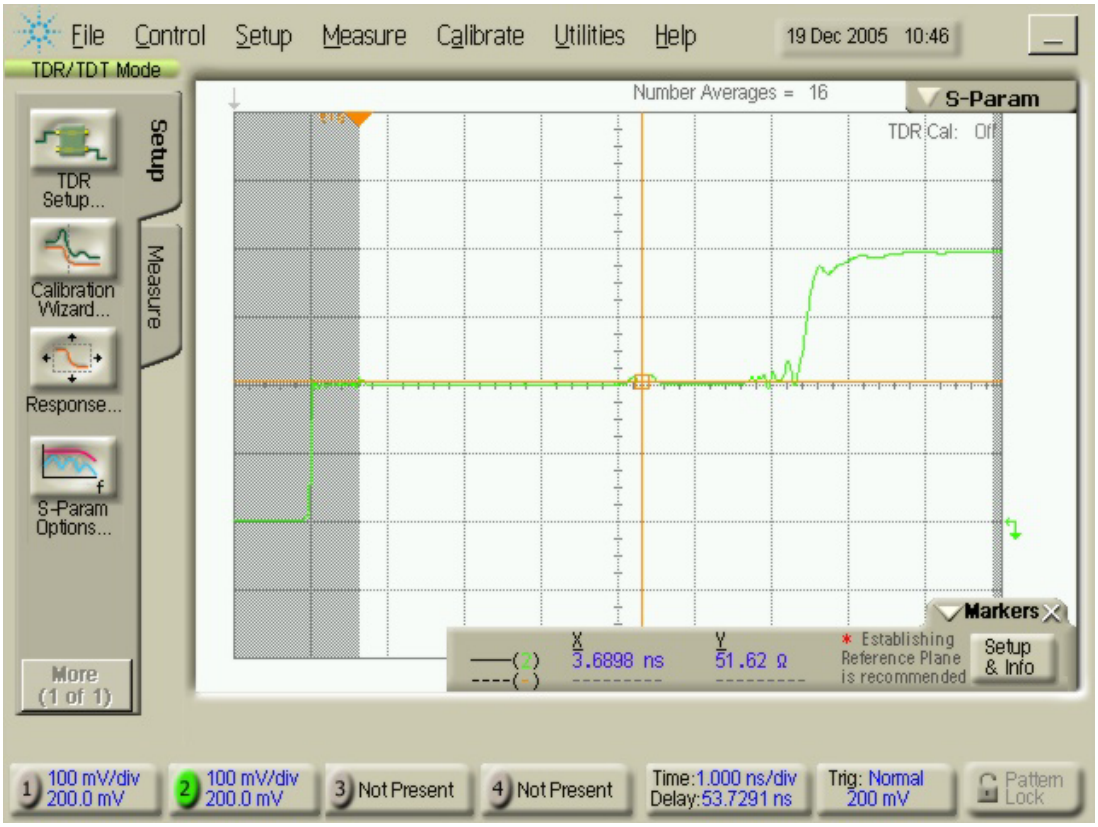


Fig. 2 Good Module Cable

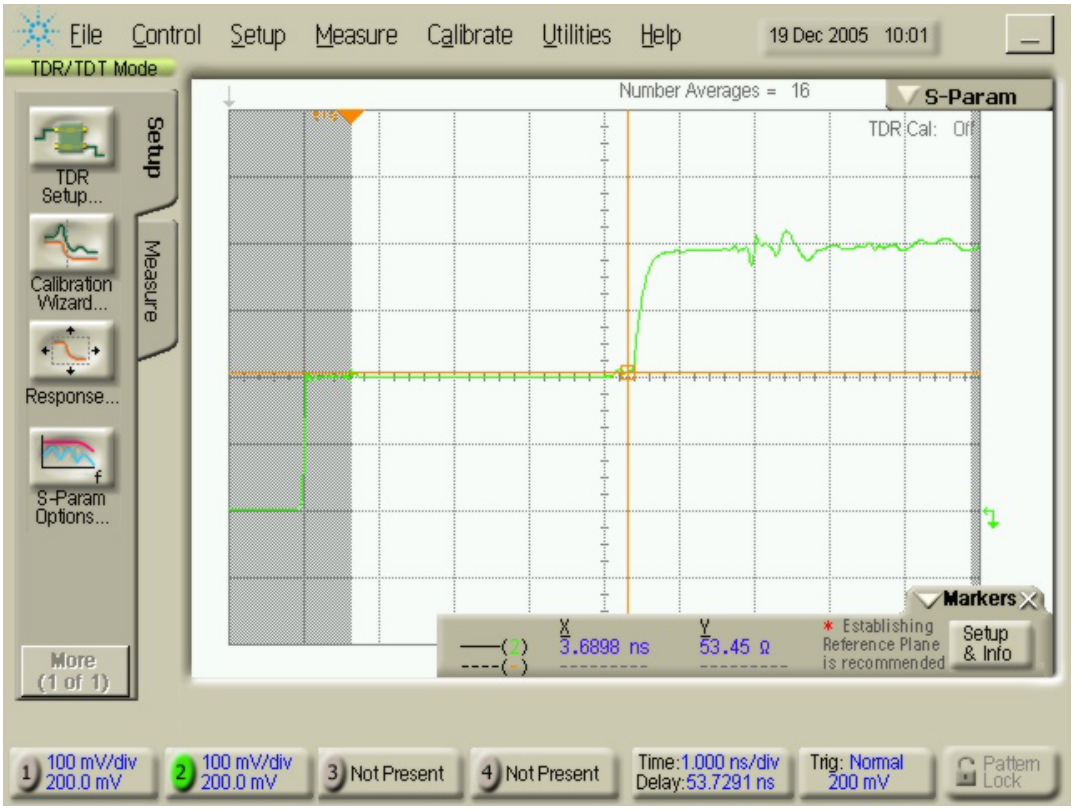


Fig 3 Bad Module Cable

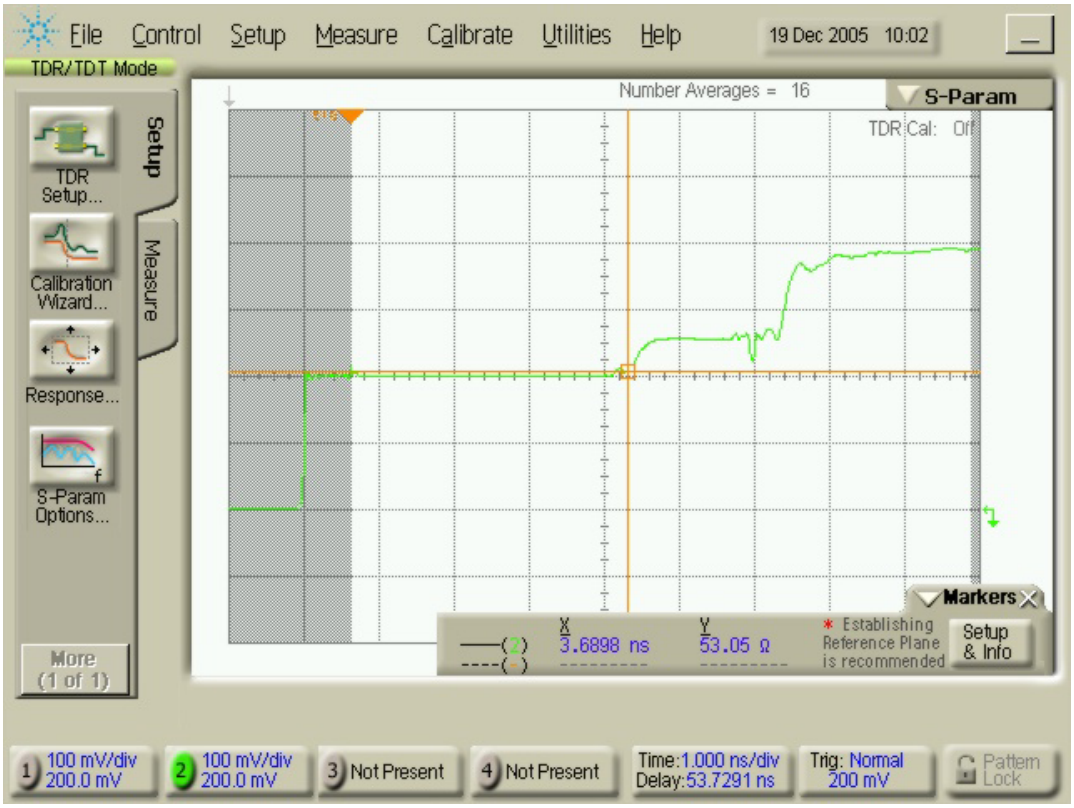


Fig 4. Intermittent Module Cable