

S E R V I C E N O T E

SUPERSEDES: NONE

**E2225A/E8600A Calibration System Modules
E9114A Calibration System PISA12U Module**

Serial Numbers: DE38400101 - DE38400255
Exceptions: DE38400251 and DE38400252

PISA12U Fails at low temperatures.

To Be Performed By: Agilent-Qualified Personnel only.

Situation:

The PISA12U has been observed to fail at low temperatures, usually below 0 degrees centigrade, but up to 15 degrees centigrade. A failure is characterized by the following symptoms:

1. The PISA12U beeps.
2. The shutdown cycle is started, and the shutdown time is counted down on the display.
3. After elapse of the shutdown time, the PISA12U shuts down completely.
4. When the unit warms up again, it starts back up. Some units were completely dead.

Continued

DATE: March 1999

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 1.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input checked="" 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
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: PH	ENTITY: 4222	AGILENT RESPONSIBLE UNTIL: September 2002	
		ADDITIONAL INFORMATION:	



Solution / Action:

The failure is caused by a zener diode of the wrong type. The error is limited to the lot that had the wrong component inserted. Figure 1 shows the offending diodes. Replacing the diodes is not recommended. To solve the problem, the unit must be exchanged.

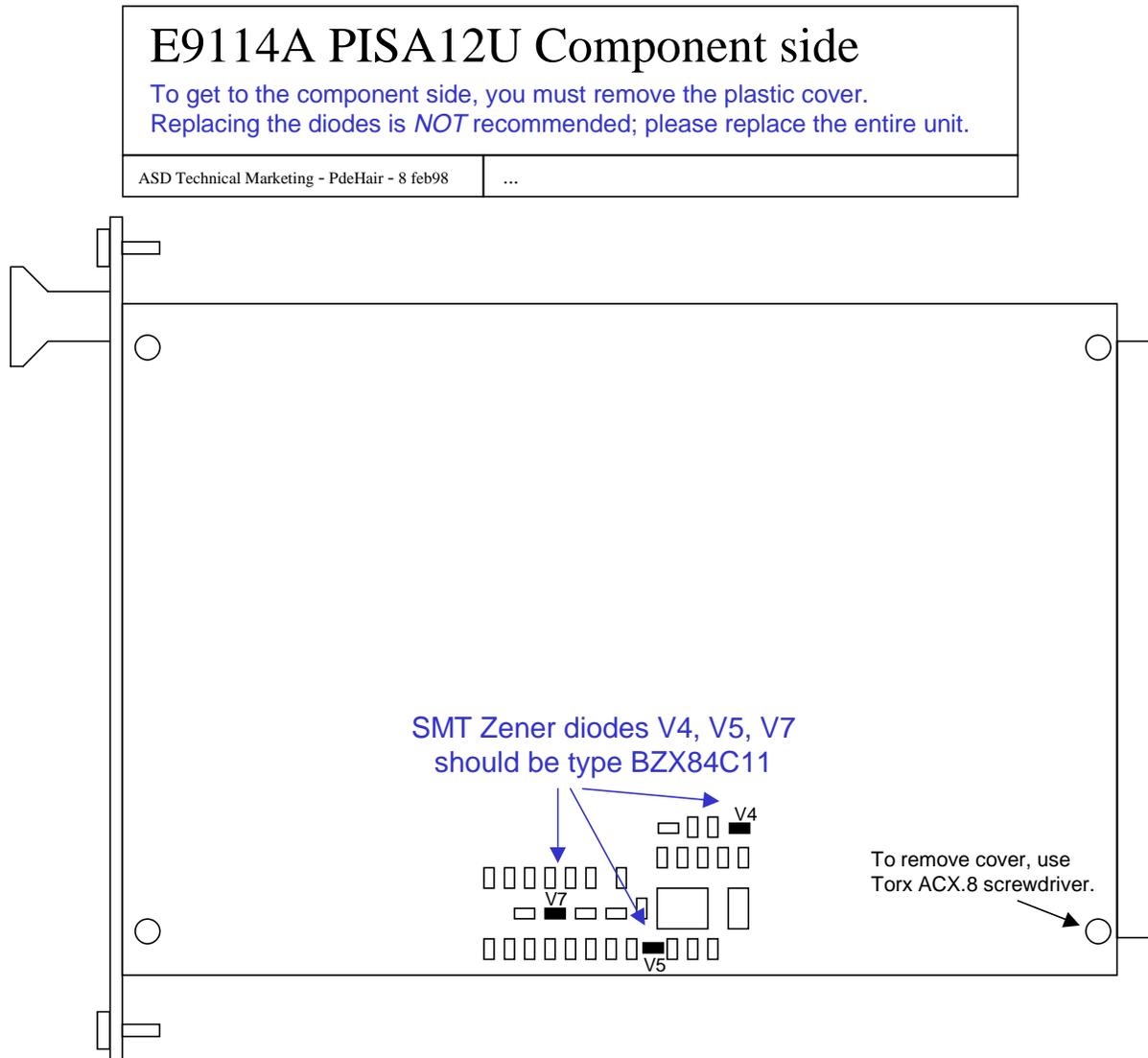


Figure 1. PISA12U Zener diodes responsible for failure.

Units are replaced on proven failure only. To test whether a unit is eligible for replacement, please perform the following test. To do the test, you will need to have a bottle of cold spray. Cold spray is available as an aerosol from most electronics shops. (It is also permissible to cool down the entire module if you have access to a climatic chamber.)

To test the PISA12U:

1. Remove the PISA12U from the MODAC, and put it on a bench. Please observe proper ESD precautions.
2. Apply the external 12V power source to the PISA12U.
3. Locate the cooling ribs marked with the arrow in Figure 2.
4. Turn the PISA12U on its side. A plastic cover covers the the solder side of the PCB. Bend out the cover directly under the cooling ribs (about the middle of the topside of the PCB).
5. Insert the nozzle of the aerosol into the gap and apply some cold spray.
6. If the unit beeps, and goes into shutdown mode (indicated by a number counting down on the display) it is defective. If it continues to operate normally, it is OK.

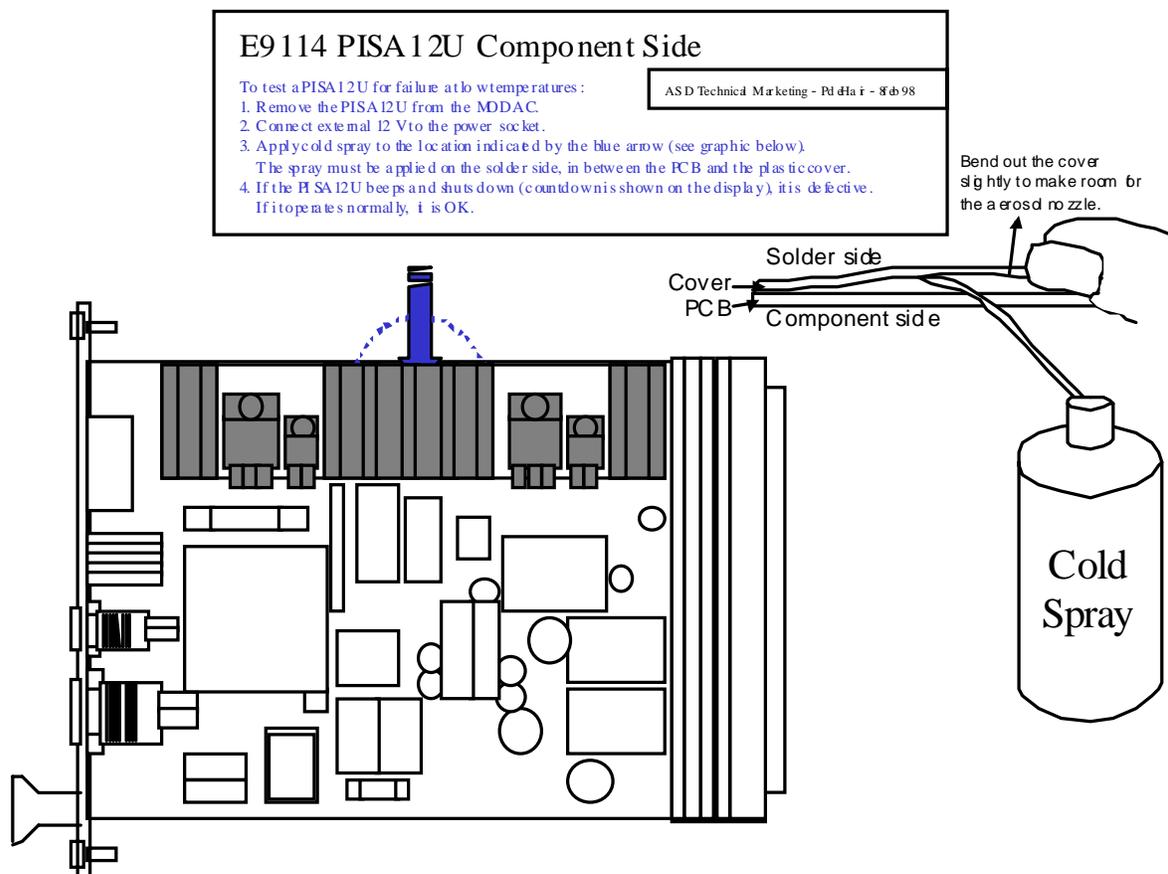


Figure 2. PISA12U Temperature test.