

S E R V I C E N O T E

SUPERSEDES: None

E1420A VXibus Universal Counter

Serial Numbers: 0000A00000 / 3110A00292

Modification to Correct Rise/Fall Time Performance Test Field Failures

The following units have already been modified:

3110A00149	3110A00235
3110A00150	3110A00239
3110A00181	3110A00241
3110A00182	3110A00244
3110A00187	3110A00245
3110A00194	3110A00247 through 3110A00249
3110A00195	3110A00257 through 3110A00260
3110A00200	3110A00262 through 3110A00278
3110A00216	3110A00282
3110A00231	3110A00287 through 3110A00292
3110A00233	

To Be Performed By: Agilent-Qualified Personnel

Parts Required: 53310-69002 Restored A2 Input Assembly, STD or 53310-69004 Restored A2 Input Assembly, Option 030.

Continued

DATE: 15 January 1992

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 1.5 Hours
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 checked="" type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AUTHOR: MDM	ENTITY: 0200	AGILENT RESPONSIBLE UNTIL: 15 January 1994	
		ADDITIONAL INFORMATION:	

Situation:

Approximately one out of three E1420As may fail to rise/fall time portion of the Auto Measurement Sensitivity, Range and Accuracy Test in the Performance Test procedures, page 2-28 of manual part number E1420-90004 or page C-30 of manual part number E1420-90001.

E1420As that fail this test can still make the measurement as outlined in the procedure, but the measurements are not within tolerance and are unstable. Units that pass can make readings within the specified tolerance and are stable.

Solution:

Two capacitor value changes to the A2 Input Assembly peak detection circuitry along with a specification change solved the problem. The E1420A detects the peaks of the input signal and sets the trigger levels to the 10% and 90% for the rise/fall time measurement. This is tested with a square wave, which has overshoot. If the peaks are detected at the peak of the overshoot, the trigger levels are set above the expected 10% and 90% points resulting in incorrect readings in the 15 nanosecond range. The changed capacitor values compensate for the overshoot.

In addition, the minimum amplitude specification for the rise/fall time measurement has been changed from the 500 mVp-p to 750mVp-p. This change does affect the performance test procedures for the rise/fall time test, and a Change Sheet has already been generated. The change instructs the user to use an amplitude of 750 mVp-p instead of 500mVp-p.

Required Action "On Failure Only":

Only units that fail this test and fall within the specified serial number range should have the A2 Input Assembly replaced as per listed above. Use part number 53310-69002 for standard units and part number 53310-69004 for option 030 units.

Send the old A2 assembly back through the exchange program per normal procedures. The assemblies will be tested and modified as necessary and sent back into the pipeline.

The stock of new and restored A2 assemblies at SMO and PCI have already been modified with the capacitor changes.