

S E R V I C E N O T E

SUPERSEDES: 5314A-05

5314A Universal Counter

Serial Numbers: 0000A00000 / 2536A99999

Modification to fix “Dead Zone” problem

To Be Performed By: Agilent-Qualified Personnel

Parts Required:

P/N	Qty.	Description
05314-60004	1	A4 TCXO Board Assembly
1901-0040	1	A1CR4 Diode
0380-0013	1	Spacer (1 inch)
2360-0115	1	6-32 x 3/8 inch Screw
2360-0219	1	6-32 x 1-3/8 inch Screw
2420-0001	2	6-32 Nut

Problem Identification:

5314As without option 001 with serial prefix below 2536A may exhibit a “Dead Zone” at input signals of 10 MHz +/- 20 Hz. Input frequencies between 9.999980 and 10.000020 MHz result in display readings of exactly 10.000000 MHz. Serial prefixes above 2536A do not exhibit this problem.

Continued

DATE: 30 May 1991

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 Hour
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 checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: MD	ENTITY: 0200	AGILENT RESPONSIBLE UNTIL: June 1993	
		ADDITIONAL INFORMATION:	

Technical Information:

The problem occurs because the input signal is routed close in proximity to the timebase. When the input signal is 10 MHz +/- 20 Hz, it is injected onto the timebase causing resonance and phaselock to occur. Because the timebase frequency is momentarily equivalent to the input signal frequency, the resulting display is 10.000000 MHz.

Solution/Action:

The most cost-effective and reliable solution is to install TCXO option 001. By installing option 001, the timebase is now removed from the input signal area and can no longer be affected by it.

Refer to pages 2-4 through 2-6 of the 5314A Operating and Service Manual, P/N 05314-90011, for option 001 installation instructions.