

S E R V I C E N O T E

SUPERSEDES: NONE

8360 Series Synthesized Sweeper**Serial numbers:**

This service note effects instruments with serial numbers below the serial numbers listed.

83620A - 0000A00000 / 3420A02333
 83620B - 0000A00000 / 3614A00258
 83622A - 0000A00000 / 3420A00368
 83622B - 0000A00000 / 3614A00118
 83623A - 0000A00000 / 3420A01381
 83623B - 0000A00000 / 3614A00209
 83623L - 0000A00000 / 3614A00127
 83624A - 0000A00000 / 3420A00382
 83624B - 0000A00000 / 3614A00122
 83630A - 0000A00000 / 3420A00872
 83630B - 0000A00000 / 3614A00178
 83630L - 0000A00000 / 3614A00136
 83640A - 0000A00000 / 3420A01198
 83640B - 0000A00000 / 3614A00185
 83640L - 0000A00000 / 3614A00151
 83650A - 0000A00000 / 3420A00715
 83650B - 0000A00000 / 3614A00159
 83650L - 0000A00000 / 3614A00128

Continued

DATE: January 1997

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:		STANDARDS:	
☐ IMMEDIATELY ☒ ON SPECIFIED FAILURE ☐ AGREEABLE TIME		LABOR 1.0 Hours	
LOCATION CATEGORY:		SERVICE INVENTORY:	USED PARTS:
☐ CUSTOMER INSTALLABLE ☐ ON-SITE ☒ SERVICE CENTER		☐ RETURN ☐ SCRAP ☒ SEE TEXT	☒ RETURN ☐ SCRAP ☐ SEE TEXT
AVAILABILITY:		AGILENT RESPONSIBLE UNTIL:	
PRODUCT'S SUPPORT LIFE		January 1999	
AUTHOR: DM		ADDITIONAL INFORMATION:	
ENTITY: 5320			

Duplicated Service Notes:

83620A-02
83620B-02
83622A-02
83622B-02
83623A-02
83623B-02
83623L-02
83624A-02
83624B-02
83630A-03
83630B-02
83630L-02
83640A-02
83640B-02
83640L-02
83650A-03
83650B-02
83650L-02

Situation:

An oscillation has been discovered on a few A38 Dual Modulators (5086-7602). The oscillations appear as a crossing spur between 16 GHz and 19 GHz above the specified spur level. The spur is a single sideband spur that moves in the opposite direction as the carrier. The spur is offset from the carrier between 0 to 200 MHz. The amount of offset changes the same amount the carrier frequency is tuned.

A small number of dual modulators have this problem. When the problem first occurred is not know. When the oscillation is present it occurs between 0 and 15 degrees C. In a very few cases the oscillation have occurred at room temperature. Our analysis indicates this is not a reliability problem and the oscillation will not get worse with time. Dual modulators are used in standalone models only.

Solution/Action:

This problem is difficult to verify. When the oscillation occurs at room temperature there is a chance to observe the spur. When the oscillation occurs below room temperature, it is next to impossible to observe the spur unless the instrument's temperature can be lowered to 0 degrees C. When the symptoms match those described and the problem occurs below room temperature, the recommendation is to spend up to 1 hour troubleshooting the problem at room temperature if the temperature can not be lowered, and if the problem can not be verified, replace the A38 Dual Modulator.

To verify the problem, set the source and analyzer to the following settings.

Source:

Frequency: 16 GHz CW
Power Level: -10 dBm, attenuator uncoupled so
ALC is at -10 dBm
Frequency step size: 10 MHz

Analyzer:

Span : 200 MHz
Resolution Bandwidth: 300 KHz
Video Bandwidth: 30 KHz
Center Frequency: 16 GHz
Sweep Time: 2 sec.

Step the source's frequency up in 10 MHz steps, observing the noise floor for spurs. Periodically the signal analyzer center frequency will need to be changed to keep the waveform centered.