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

Agilent Technologies

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.