

S E R V I C E N O T E

SUPERSEDES: None

8563A Portable Spectrum Analyzer

Serial Numbers: 0000A00000 / 3133A00934

Duplicate Service Notes:

- 8560A-18
- 8561B-20
- 8562A-63
- 8562B-61
- 8563A-15

Eliminating 50KHz to 150KHz sidebands in instruments with TCXO

Parts Required:

P/N	Description	Qty.
1901-0539	Schottky Diode	1
0890-0096	Sleeve	1/4 inch

Situation:

Sidebands as high as -50dBc and ranging from 50KHz to 150 KHz from the displayed signal can occur in instruments with a Temperature Controlled Crystal Oscillator (TCXO). They occur when a strong external 10MHz reference is applied and are caused by an oscillation in the 10MHz Distribution Amplifier on the A15 RF assembly.

Continued

DATE: 01 October1993

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 0.5 Hour
LOCATION CATEGORY:	<input checked="" 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: GPB	ENTITY: 5300	AGILENT RESPONSIBLE UNTIL: 01 October 1993	
		ADDITIONAL INFORMATION:	

Solution/Action:

A logic low must be guaranteed at the input of A15U303C when the instrument is used in External Reference mode to prevent oscillation.

To accomplish this a Schottky diode needs to be installed with its anode to pin 5 of A15U303 and its cathode to the collector of A15Q301. Open the instrument and fold out the A15 assembly as described in the Service manual. Remove the top and bottom reference shields. The resistor will need to lay flat against the reverse side of the board to allow room for the shield. Trim the leads so that the anode can be soldered to the end of A15C315 nearest A15U304, and the cathode can be connected to the collector of A15Q301. (The collector lead is nearest A15R303 and R304.) Slip the insulation sleeving over the exposed parts of the leads, leaving enough room to make the solder connections. Solder the resistor leads in place.