N8972A-04

S E R V I C E N O T E

Supersedes:
NONE

N8972A NFA Series Noise Figure Analyzer

Serial Numbers: [0000A00000 / 9999Z99999]

New Front End board changes instrument response and improves specs

Parts Required:

P/N	Description	Qty.
N8972-60014(kit for board N8972-60101)	Front End Assembly	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **INFORMATION ONLY**
AUTHOR: DM PRODUCT LINE: PLPN
ADDITIONAL INFORMATION:

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Agilent Technologies

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Situation:

The current RF Front End assembly N8972-60001 has been replaced by N8972-60014(kit for board N8972-60101). The new assembly alters the default Noise Figure response of the N8972A and improves some specifications. The most noticeable change is to the instruments own noise figure. The differences are shown below:

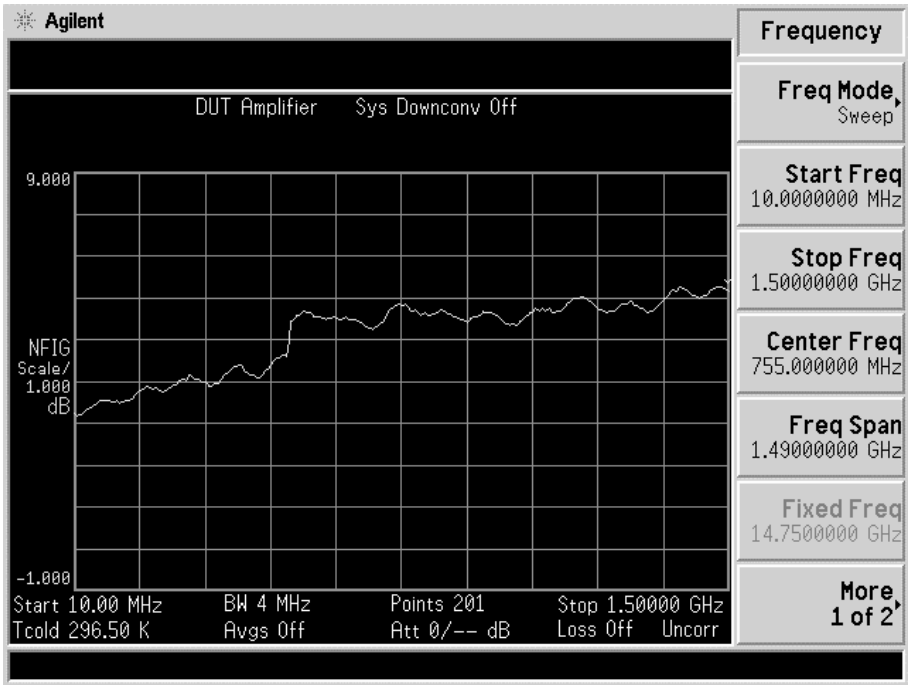

Figure 1 – Noise Figure Response with N8972-60001

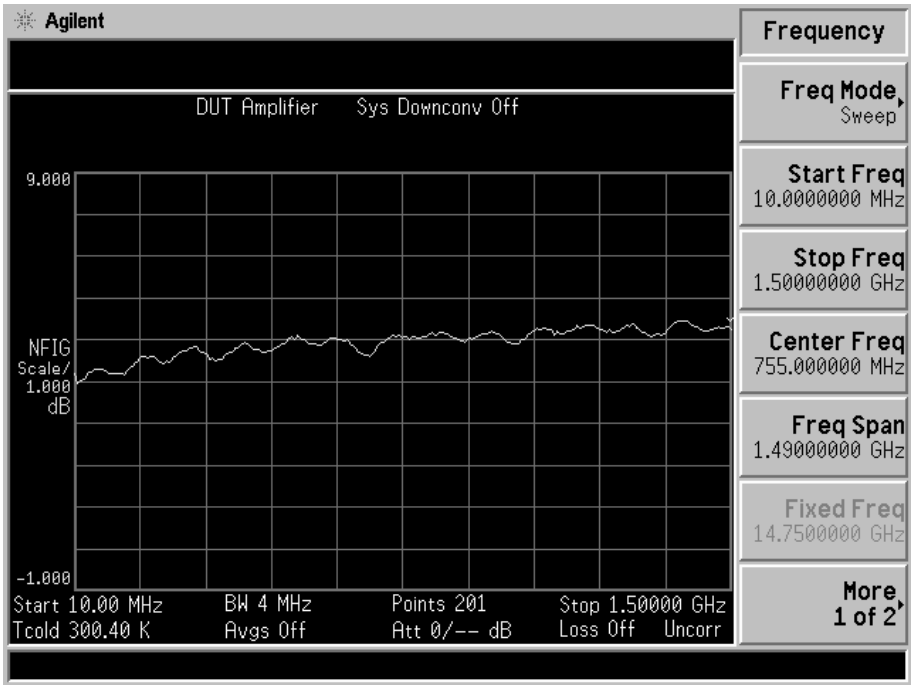

Figure 2 – Noise Figure Response with N8972-60014 (kit for board N8972-60101)

The instruments own noise figure spec with the N8972-60014 (kit for board N8972-60101) fitted is quoted as:

Noise Figure over a limited temperature range of 23^{o} C ± 3^{o} C = < 4.4 dB + (0.00117 * freq in MHz)

Comparing this with the previous spec gives:

Frequency	Current Spec	Instrument fitted with N8972-60101
10MHz	< 4.425dB	< 4.4dB
1.5GHz	< 7.925dB	< 6.12dB

VSWR:

Current Spec for instrument fitted with N8972-60001

10MHz to 500MHz: ≤ 1.6:1
500MHz to 1000MHz: ≤ 1.8:1
1000MHz to 1500MHz: ≤ 1.9:1

New spec for instrument fitted with N8972-60014 (kit for board N8972-60101)

10MHz to 500MHz: ≤ 1.5:1
500MHz to 1500MHz: ≤ 1.7:1

Solution/Action:

Firmware version A.01.12 (or newer) is required when fitting an instrument with N8972-60014(kit for board N8972-60101). The current version of the NFA calibration software (N2716A revision D.01.00) should not be used to test instrument noise figure or VSWR. A new version will be available early 2005 that will identify the new Front End assembly and test to the appropriate limits.