N9040B-04

Modification Recommended Service Note

Supersedes:
NONE

N9040B X-Series Signal Analyzer

Serial Numbers: See appendix

The Problem

Signal amplitude loss can occur above 3.6 GHz tuned frequency on option 544 (44 GHz) or option 550 (50 GHz) analyzers.

Parts Required:

NONE. Software update only.

ADMINISTRATIVE INFORMATION

ACTION CATEGORY:	[[]] ON SPECIFIED FAILURE [[X]] AGREEABLE TIME	STANDARDS LABOR: 0.5 Hours			
LOCATION CATEGORY:	X CUSTOMER INSTALLABLE [[]] ON-SITE (active On-site contract required) X SERVICE CENTER [X] CHANNEL PARTNERS	SERVICE INVENTORY:	[[]] RETURN [[]] SCRAP [[]] SEE TEXT	USED PARTS:	[[]] RETURN [[]] SCRAP [[]] SEE TEXT
AVAILABILITY: PRODUCT'S SUPPORT LIFE		NO CHARGE AVAILABLE UNTIL: 2-15-2022.			
	[[]] Calibration Required X Calibration NOT Required	PRODUCT LINE: 12 AUTHOR: BS			

ADDITIONAL INFORMATION:

Situation:
Calibration values on certain disk image versions causes the preselector filter used above 3.6 GHz to be swept too quickly and this will result in measured amplitude loss. The amount of loss will vary and depends on whether the Preselector Center routine was performed, the frequency span setting, and the Sweep Time Rules setting, where the default Sweep Time Rules setting is Normal, which allows faster sweeps than the Accuracy setting.

If you want to verify the problem, set up the analyzer as shown in this screen shot. A 25 GHz signal at -15 dBm is provided by a signal source. Notice the signal is distorted, and the amplitude is 5 dB lower than expected.

The issue only appears on instruments with upper frequency ranges of 44 GHz or 50 GHz, and with the serial number ranges shown below.

Solution/Action:
There are two possible courses of action.

Action 1.

1. Download and install instrument software A.28.07 or later. This software version ignores the calibration values on the instrument disk image that cause the issue.

2. Perform the built-in Characterize Preselector routine.
   Press **System** (the gear icon in the upper right portion of the instrument screen), **Alignments**, **Advanced**, **Characterize Preselector**.

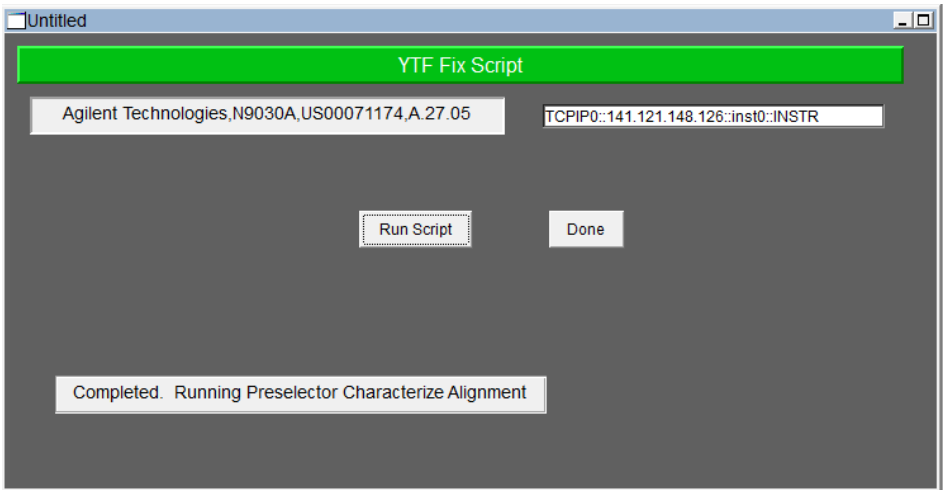
Instrument software is available at:
https://www.keysight.com/find/xseries_software

Action 2.
A utility is available if you have a PC that can remotely control the signal analyzer via LAN, GPIB or USB, and you can install the VEE run time engine on the PC. The utility will modify the calibration values on the analyzer's disk image and trigger the Characterize Preselector routine.
The instrument software does not need to be updated.

Download the utility from http://sa.support.keysight.com/XSA/YTF_util/YTF_Fix.vxe

The VEE runtime engine can be installed from:
https://www.keysight.com/main/software.jspx?ckey=2213956&id=2213956&lc=eng&cc=US

Carefully enter the instrument's VISA address into the upper right box and click Run Script.
For example, if an instrument is connected to a common LAN router with an external PC, then the VISA address would be in the format of: TCPIP0::192.168.0.2::inst0::INSTR, where 192.168.0.2 is the instrument's IP address.
The utility will complete the changes to the instrument's disk image and then perform the Characterize Preselector routine that takes a few minutes.



Revision History:

Date	Service Note Revision	Author	Reason for Change
15 Feb 2021	01	Bill Scharf	As Published

Appendix:

MY57213039	MY57213055	MY57213059	MY57213083	MY57213088	MY57213092
MY57213096	MY57213124	MY59490103	MY59490109	MY59490111	MY59490114
MY59490116	MY59490121	MY59491001	MY59491002	MY60080011	MY60080012
MY60080013	MY60080014	MY60080015	MY60080110	MY60080111	MY60080112
MY60080118	MY60080119	MY60080120	MY60080121	MY60080124	MY60080125
MY60080126	MY60080128	MY60080129	MY60080135	MY60080158	MY60080159
MY60080160	MY60080161	MY60080162	MY60080163	MY60080169	MY60080170
MY60080171	MY60080173	MY60080174	MY60080175	MY60080176	MY60080177
MY60080178	MY60080179	MY60080180	MY60080181	MY60080182	MY60080183
MY60080184	MY60080185	MY60080186	MY60080187	MY60080188	MY60080189
MY60080190	MY60080191	MY60080192	MY60080193	MY60080195	MY60080196
MY60080197	MY60080203	MY60080205	MY60080210	MY60080211	MY60080212
MY60080213	MY60080215	MY60080217	MY60080220	MY60080225	MY60080226
MY60080227	MY60080228	MY60080229	MY60080230	MY60080231	MY60080232
MY60080236	MY60080237	MY60080238	MY60080239	MY60080240	MY60080241
MY60080242	MY60080243	MY60080244	MY60080252	MY60080253	MY60080257
MY60080258	MY60080268	MY60080269	MY60080272	MY60080273	MY60080279
MY60080287	MY60080289	MY60080299	SG57213000	SG57213005	SG60080104
SG60080110	SG60080111	SG60080112			