



N44xxy Test Set Calibration Policy Change

The Situation:

Agilent N44xxy test sets (commonly used with N1900 PLTS 4-Port systems) have required a return to Agilent calibration service. After a technical review, Agilent has made a change to this service.

What has been decided:

The calibration of the N44xxy two port extension test sets for use with the two port network analyzers has been halted and replaced with a functional test. N44xxy test set calibration is no longer required.

Why:

After a technical review, we found that both the N44xxy test sets and the VNA/test set combinations have only performance characteristics⁽¹⁾ and not specifications⁽²⁾. Instrumentation that does not have warranted specifications are not subject to an annual calibration.

Important note: The removal of a calibration service does not reduce the accuracy or validity of previous or current data taken with the VNA/test set combinations. The majority of the measurement uncertainty of the VNA/test set combination depends on the accuracy of the two port network analyzer as all VNA measurements, from 1-port to N-port, are traceable to 1-port and 2-port calibration standards. There is no such thing as a multiport primary standard. Multiport calibrations involve the measurements of combinations of 1-port and 2-port calibration standards. From these measurements, systematic errors of the multiport measurement system are computed and then used to perform multiport error correction. Calibration accuracy of multiport systems is established the same way as 2-port systems.

Next Steps:

Only the network analyzer portion of the VNA/test set combination will require an annual calibration, with no action necessary for the test sets unless they have failed. A functional test can verify proper performance of all microwave components within the test set.

Upon request, Agilent can provide operational limits for the test set only, which can be used to determine if the test set is functional or not. Agilent can also provide an updated summary of performance characteristics⁽¹⁾ for active VNA/test set combinations.

Due to customer requests, Agilent is working to develop performance characteristics⁽¹⁾ and/or specifications⁽²⁾ for the current offering of two port extension test sets and VNA/test set combinations.

Affected Models:

This document addresses systems that utilize test set model numbers:

* Denotes that this test set has been discontinued and is no longer available for purchase.

- N4419B
- N4420B
- N4421B
- N4421BH67
- N4413A (ATN-4111A)*⁽³⁾
- N4414A (ATN-4111B)*⁽⁴⁾
- N4415A (ATN-4111C)*⁽⁵⁾
- N4416A (ATN-4111D)*⁽⁴⁾
- N4417A*⁽⁵⁾
- N4418A (ATN-4112A)*⁽⁵⁾
- N4419A*⁽⁵⁾
- N4421A*⁽⁵⁾
- Z5623A-H20*⁽⁶⁾
- Z5623A-H40*⁽⁶⁾
- Z5623A-H50*⁽⁶⁾

- (1) A Performance Characteristic is a parameter that the product is expected to meet before it leaves the factory, but that is not verified in the field and is not covered by the product warranty.
- (2) A Specification is warranted performance. Specifications include guard bands to account for the expected statistical performance distribution, measurement uncertainties, and changes in performance due to environmental conditions.
- (3) Discontinued: 2/2004; Obsolete: 5/1/2007
- (4) Discontinued: 2/2004; Obsolete: 10/1/2008
- (5) Discontinued: 3/2004; Obsolete: 10/1/2008
- (6) Discontinued: 6/2003; Obsolete: 1/28/2005

If you have any questions regarding this document, please contact Agilent at <http://www.agilent.com/find/contactus>.



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