

# Certificate of Calibration



ANSI/NCSL Z540.1-1994 (R2002)

Certificate Number 1-14080212692-1

<b>Model Number</b>	909E	<b>Customer</b>	Keysight Technologies Inc
<b>Manufacturer</b>	Keysight Technologies Inc		10090 Foothills Blvd
<b>Description</b>	Coaxial termination, dc-3 GHz		ROSEVILLE CA 95747
<b>Serial Number</b>	51564		United States
<b>Customer Asset No.</b>	909E51564		
<b>Date of Calibration</b>	4 Mar 2021	<b>Location of Calibration</b>	Keysight Technologies Inc.
<b>Procedure</b>	MCKT-50360001-A.04.00		10090 Foothills Blvd.
<b>Temperature</b>	(23 ± 1) °C		Roseville CA 95747-7102
<b>Humidity</b>	(45 ± 10) %RH		UNITED STATES

This certifies that the equipment has been calibrated using applicable Keysight Technologies procedures and in compliance with ANSI/NCSL Z540.1-1994 (R2002). The quality management system is registered to ISO 9001:2015.

#### As Received Conditions

The measured values of the equipment were observed in specification at the points tested.

#### Action Taken

- No corrective actions were necessary.

#### As Completed Conditions

The measured values of the equipment were observed in specification at the points tested.

Uncertainties are calculated at a 95% confidence interval with a coverage factor of 2 ( $k=2$ ). When not specifically called out in the measurement report, a Test Uncertainty Ratio (TUR) of 4:1 can be assumed.

#### Remarks or Special Requirements

This calibration report shall not be reproduced, except in full. The documented results relate to the equipment calibrated only.

The test limits stated in the report correspond to the published specifications of the equipment, at the points tested. This calibration report may refer to equipment manufactured by HP, Agilent and Keysight as being manufactured by Keysight Technologies.

Based on the customer's request, the next calibration is due on 4 Mar 2022.

Keysight Technologies Inc  
10090 Foothills Blvd.  
Roseville CA 95747-7102  
UNITED STATES

A handwritten signature in black ink, appearing to read "Wes Fischbach".

Wes Fischbach Roseville Serv. Cntr. Mgr.

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## Traceability Information

Technician ID 00284802

Measurements are traceable to the International System of Units (SI) via national metrology institutes ([www.keysight.com/find/NMI](http://www.keysight.com/find/NMI)) that are signatories to the CIPM Mutual Recognition Arrangement.

## Calibration Equipment Used

<u>Model Number</u>	<u>Model Description</u>	<u>Equipment ID</u>	<u>Cal Due Date</u>	<u>Certificate Number</u>
ET36409	Type N 75 Ohm ET Calibration Kit	ET364095SR22	21 Jul 2021	1-12660643914-1
N5225A	10 MHz to 50 GHz PNA network analyzer	N5225A51345	12 Feb 2023	1-13945163456-1

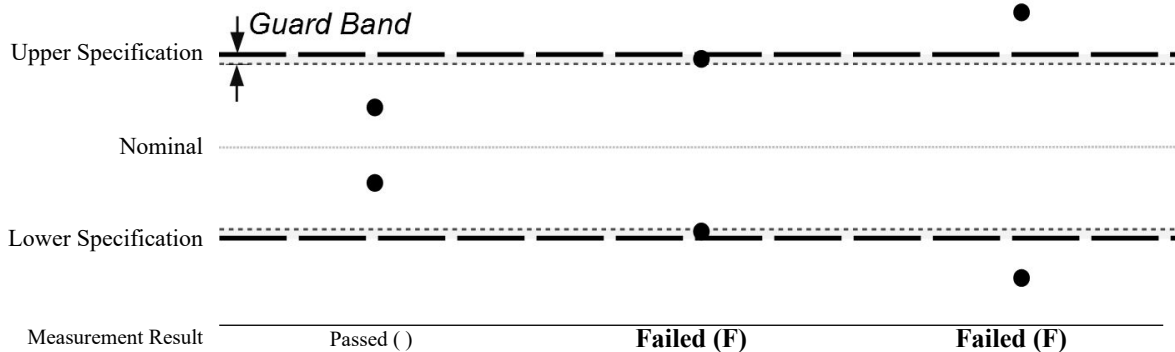
**Model Number** 909E  
**Serial Number** 51564  
**Test Date** 4 Mar 2021  
**Technician ID** 00284802  
**Test Program Name** Mechanical Cal Kit Tool, 5036-0001  
**Test Program Version** A.04.00  
**Test Executive** Mechanical Cal Kit Tool, A.04.00

### Calibration Equipment Used

Model Number	Serial Number	Equipment ID	Cal Due Date
AGT ET36409	5SR22	ET364095SR22	21 Jul 2021
KTI N5225A	MY51451345	N5225A51345	12 Feb 2023

### Measurement results are reported as:

- Passed ( ) - The measured values of the equipment were observed in specification at the points tested. Additionally, all of the measured values were within the acceptance limit (guard band) established for this service.
- Failed (F) - One or more measured values of the equipment were observed out of specification at the points tested.



( ) This result is indicated on the measurement report as a blank space in the column labeled "Status" or "Sts".  
 Note: For more information on the level of risk such as false accept and false reject and statistical assumptions of these statements of conformity, please visit: [www.keysight.com/find/decisionrules](http://www.keysight.com/find/decisionrules).

*The guard band ensures that the probability of false acceptance does not exceed 2% as per the Handbook for the Application of ANSI/ Z540.3:2006, compliance method 6.*

## Calibration Test Results Summary

<u>Test Name</u>	<u>As Received Status</u>
S11 Return Loss	Passed

## Tested Configuration

Unit Configuration

Module	Model	Serial
Type N-75 75 ohm Male Lowband Load	00909-60019	51564

## S11 Return Loss

**Passed**

Model/Part No: 00909-60019, Serial Number: 51564

 Model Description: Type N-75 75 ohm Male Lowband Load  
 Return Loss

Frequency	Measured	Max Accept -Max Spec-	Uncert.	Status
0.045 GHz	-68.54 dB	-47.55 dB -46.00 dB	6.2 dB	
0.050 GHz	-67.02 dB	-47.40 dB -46.00 dB	5.6 dB	
0.100 GHz	-61.73 dB	-47.28 dB -46.00 dB	5.1 dB	
0.130 GHz	-59.71 dB	-47.23 dB -46.00 dB	4.9 dB	
0.200 GHz	-57.28 dB	-47.10 dB -46.00 dB	4.4 dB	
0.400 GHz	-55.88 dB	-46.98 dB -46.00 dB	3.9 dB	
0.600 GHz	-56.87 dB	-47.05 dB -46.00 dB	4.2 dB	
0.800 GHz	-56.95 dB	-47.05 dB -46.00 dB	4.2 dB	
1.000 GHz	-55.44 dB	-46.93 dB -46.00 dB	3.7 dB	
1.300 GHz	-52.90 dB	-46.73 dB -46.00 dB	2.9 dB	
1.600 GHz	-51.09 dB	-46.60 dB -46.00 dB	2.4 dB	
2.000 GHz	-48.64 dB	-46.48 dB -46.00 dB	1.9 dB	
2.300 GHz	-47.04 dB	-40.45 dB -40.00 dB	1.8 dB	
2.600 GHz	-45.23 dB	-40.38 dB -40.00 dB	1.5 dB	
3.000 GHz	-42.93 dB	-40.30 dB -40.00 dB	1.2 dB	