

CALIBRATION CERTIFICATE



Asset ID



12345

Work Order



2020000000

Certificate Number: 2020000000

Asset ID 12345
Manufacturer Agilent Technologies
Model Number AGIL-34401A
Serial Number ABC123
Description 6.5 Digit Digital Multimeter

Calibration Date 10/22/2019
Due Date 10/22/2020
Temperature C° 24.77
Humidity 36.9
Procedure Agilent 34401A: (1 year) VER IEEE /5522A

Customer Name: Customer ABC
Customer Address: 123 Test Equipment St. San Diego, CA
Comments: 12345

This Calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), radiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval of Advanced Test Equipment Corporation (ATEC).

The calibration has been completed in accordance with ATEC's Active Use Calibration System. This calibration conforms to the requirements of ISO/IEC 17025:2017 and ANSI/NCCL Z540-1-1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, $\mu\text{V}/\text{V}$, etc.) Descriptions such as $\mu\text{A}/\text{A}$, $\mu\text{V}/\text{V}$, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as ppm or parts-per-million and described the results in that column, unless otherwise noted by units symbols. Where applicable, the expanded uncertainty of measurement at time of test is given in the following pages. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, such that the confidence level approximates 95%.

This Calibration certificate may contain data that is not covered by the A2LA Scope of Accreditation. Unaccredited material, where applicable is indicated by an asterisk (*) or confined to clearly marked sections.

Decision Rule Applied:

The decision rule for determining compliance with the calibration requirements is based on a binary decision rule, utilizing simple acceptance,

and rejection criteria as per the ASME B89.7.3.1-2001 (R2011). This rule does not factor in measurement uncertainty.

Acceptance zone: Calibration results that fall within the defined limits ($\leq$ high limit and $\geq$ low limit) are deemed "In Tolerance".

Rejection zone: Calibration results exceeding the high limit or falling below the low limit are deemed "Out of Tolerance (OOT)".

For repeated measurements of the same characteristic, a single result outside the acceptance zone will cause the test to be identified as Out of tolerance (OOT).

This decision rule is applied in all conformity statements, such as "In Tolerance" or "Out of Tolerance", and conforms to the guidelines set forth by ASME B89.7.3.1-2001 (R2011).

The Test uncertainty Ratio (TUR) is typically $\geq 1:1$ unless otherwise noted. When a TUR falls below 1:1, the laboratory will perform an additional risk assessment to evaluate the impact of uncertainty on the conformity of measurement results. This risk assessment is conducted before finalizing any conformity decisions.

Standards Used

Model	Manufacturer	Serial	Asset ID	Due Date
FLUK-5520A	Fluke	BCD234	23456	7/26/2020

Calibrated by: Technician AB

Approved by: Quality AB