



Customer Agreement on ISO/IEC 17025:2017 Calibration Decision Rule

This form is used to capture the agreed upon decision rule for “in-tolerance” or “out-of-tolerance” determination in respect to Tektronix Calibration Laboratories activity. The decision rule agreement here will be used on all current and future calibration activities. If there are any future changes to the agreed upon decision rule, Tektronix must be notified in writing and a modified document stating the new decision rule documented. If an alternate decision rule is required in replacement of utilizing the options noted below, that rule must be clearly written and provided in support of this document.

Please check **one** of the options below to indicate the decision rule to be used by Tektronix for ISO/IEC 17025 accredited or compliant calibrations.

Commercial Default Decision Rule

I agree to Decision Rule #1 when declaring “in-tolerance” or “out-of-tolerance” condition(s) on all ISO/IEC 17025 accredited commercial calibrations performed by Tektronix Calibration Laboratories unless a decision rule is specified in the calibration or test method. With this decision rule, an “in-tolerance” or “out-of-tolerance” condition is determined by Simple Acceptance, acceptance limit is the same as the tolerance limit, as defined in ILAC-G8:09/2019 *Guidelines on Decision Rules and Statements of Conformity*. The test uncertainty ratio (TUR) shall be greater than 4:1 whenever attainable, although never less than 1:1. When a measurement result for the device under test (DUT) is declared “in-tolerance”, the measured value(s) will fall within the acceptance limits and the uncertainty of the measured value will be reported.

Factory Decision Rule, Optional for Commercial

I agree to Decision Rule #2 for Factory ISO/IEC 17025 accredited or compliant calibrations
 For Commercial calibrations, I request and agree to Decision Rule #2 unless a decision rule is specified in the calibration or test method.

Decision Rule #2’s method of an “in-tolerance” or “out-of-tolerance” determination is based on guard banded acceptance limits where the tolerance limits may be reduced by the measurement uncertainty, as defined in ILAC-G8:09/2019 *Guidelines on Decision Rules and Statements of Conformity*, Non-Binary Statement with Guard Band. The test uncertainty ratio (TUR) shall be greater than 4:1 whenever attainable, although never less than 1:1.

- a) If the measurement result and the associated uncertainty range are within the acceptance limits, the measured value will be declared “in-tolerance”.
- b) If the measurement result falls outside the guard band acceptance limits but within the tolerance limits, the acceptance to specification is indeterminate and is labeled Pass* or “as read” and the actual value with uncertainties are provided for customer evaluation.
- c) If the measurement result falls outside the tolerance limits and the associated uncertainty range extends into the tolerance limits, the acceptance to specification is indeterminate and is labeled Fail* or “as read” and the actual value with uncertainties are provided for customer evaluation.
- d) If the measurement result and the associated uncertainty range falls outside the tolerance limit, the measured value will be declared “out-of-tolerance”.
- e) The device-under-test overall “as-found” and “as-left” conditions are determined on Pass and Fail results only.

Noted exception: Keithley-Solon OEM Default Decision Rule 2 is based on guard banded Acceptance Limits, AL , to result in a $PFA \leq 2\%$. The rule is $AL = \sqrt{TL^2 - U^2}$ where TL is the Tolerance Limit and U is the Expanded Uncertainty (ILAC G8 09-2019 APPENDIX B, Example 3).



I have provided an alternate decision rule in writing¹.

Account Name and Number: _____ Date: _____

Name of person authorizing Decision Rule: _____

Signature: _____

Tektronix Internal Use Only:

Reviewed and accepted by: _____ Date: _____

Record Stored in: _____

Note¹: Commercial Multi-Brand Customer specified decision rules will be evaluated and may incur different pricing.