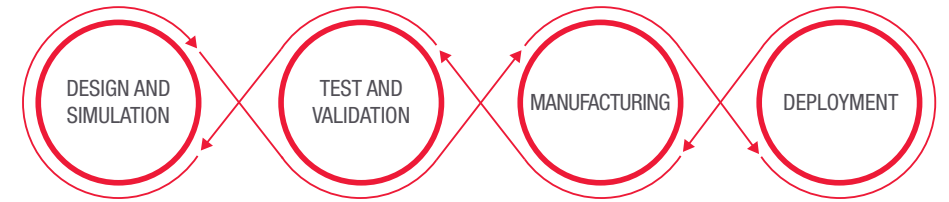


Lower Your MU

Measurement Uncertainty



Apply the science of measurement (metrology) to improve product quality across your life cycle.



What?

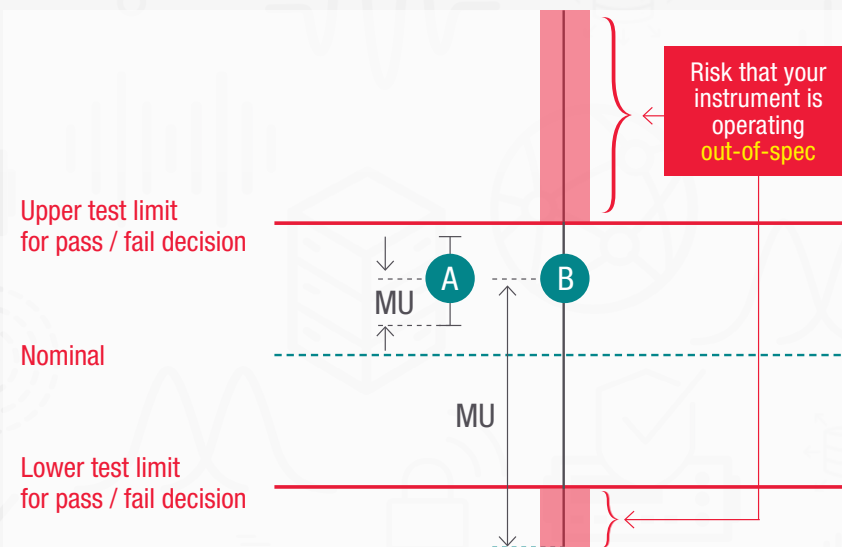
Measurement uncertainty (MU) impacts test results.

MU depicts the limits of error statistically. MU is also known as test system accuracy.

How confident are you when your test results pass that it is a true pass? For two identical measured values, A and B, with two MUs, the risk of operating out of spec is quite different. Which risk, A or B, do you want for measuring your device under test (DUT)?

Knowing the MU values of your test system is helpful when analyzing how to reduce the risk of operating out of spec.

Figure 1. Confidence levels of test results based on MU



Why care?

Lowering MU reduces your risk.

A simplified two-dimensional graph shows the four outcomes of test: false fail, false pass, true fail, and true pass. True value is along the x-axis and represents the DUT. The measured value is along the y-axis and represents the measurement result.

You can reduce MU in multiple ways:

- Use more modern instruments and components with lower Mus along the test system analog path.
- Reengineer the analog path based on the highest contributing sources of each test point's calculated MU.
- Calibrate your test equipment with more modern test equipment.

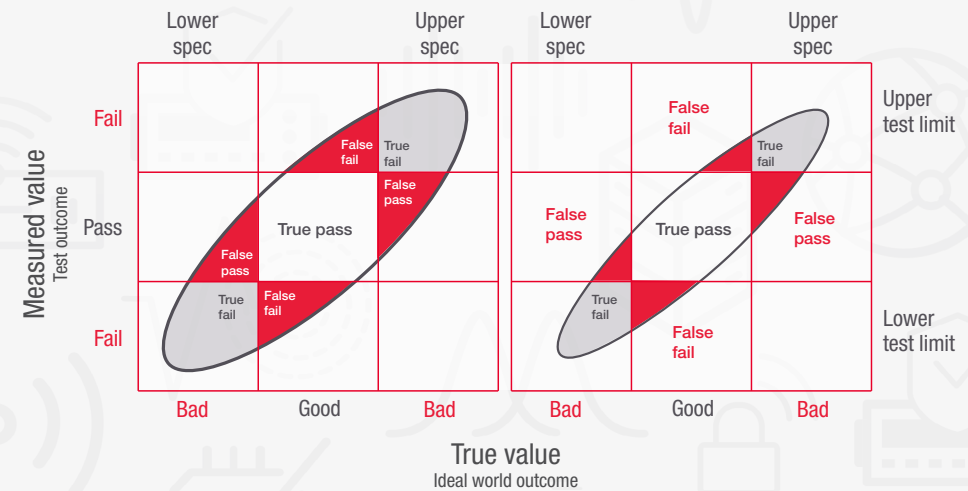


Figure 2. Reduce false pass and fail across two populations, one with a lower MU