

EMC TEST LAB

EMC Tests - Decision rules formulation (according to ISO 17025, pp. 7.1.3)

For emission measurements:

In CISPR 25 (see CISPR 25:2021, Ch 4.1.3), the typical measurement uncertainty was taken into account when setting the tolerance limits; therefore, the acceptance limit (AL) coincides with the tolerance limit (TL).

The CISPR 25 standard provides standard measurement uncertainty values for each measurement method (U_{CISPR25}). The laboratory documents own measurement uncertainty values, based on available calibration data (U_{lab}). The U_{lab} value is documented in corresponding test reports.

This establishes the following decision rule for the laboratory:

If U_{lab} is less than or equal U_{CISPR25} (the U_{lab} is documented in corresponding test report for each method), then it is assumed that:

- that the requirements are met if none of the measured emission levels exceed the limit;
- that the requirements are not met if any of the measured emission levels exceed the limit.

If U_{lab} is greater than U_{CISPR25} , then it is assumed that:

- that the requirements are met if none of the measured emission levels, increased by $(U_{\text{lab}} - U_{\text{CISPR25}})$, exceed the limit;
- that the requirements are not met if any of the measured emission levels, increased by $(U_{\text{lab}} - U_{\text{CISPR25}})$, exceed the limit.

For immunity measurements:

A decision rule for immunity testing cannot be specified. Only the observed interferences can be compared with the defined evaluation criteria.