

French Proposal on ISO/WD 11452-2

French experts would like to submit some proposals to improve ISO 11452-2 on the following items:

- Field uniformity
- Antenna position (facing center of harness or facing DUT)
- DUT irradiation

1 Field uniformity

There is a field uniformity requirement in ISO 11451-2 for vehicle test when there is no requirement in ISO 11452-2 for component test. It seems necessary to add such requirement in order to achieve better reproducibility between different test lab.

French proposal:

To add a new paragraph after 8.3.2 for field uniformity:

"8.3.2 field uniformity

Above 200 MHz, the field uniformity at two points, at 0,25 m on each side of the calibration point (centre of harness for frequency below 1 000 MHz and centre of DUT for frequencies above 1 000 MHz) shall not be less than [50] % of the nominal field strength (relative to the calibration point) for at least 80 % of the test frequency points. The field uniformity requirement shall be fulfilled separately for each polarization. For existing facilities where the field uniformity requirement cannot be met, this shall be stated in the test report. The user shall also ensure good reproducibility of the measurement."

If the French proposal on antenna position (2) is accepted then the new paragraph for field uniformity shall be :

"8.3.2 field uniformity

From 200 MHz to 800 MHz, the field uniformity at two points, at 0,25 m on each side of the calibration point (centre of harness) shall not be less than 50 % of the nominal field strength (relative to the calibration point) for at least 80 % of the test frequency points. The field uniformity requirement shall be fulfilled separately for each polarization. For existing facilities where the field uniformity requirement cannot be met, this shall be stated in the test report. The user shall also ensure good reproducibility of the measurement.

Above 400 MHz, the field uniformity at two points, at 0,25 m on each side of the calibration point (centre of DUT) shall not be less than [50] % of the nominal field strength (relative to the calibration point) for at least 80 % of the test frequency points. The field uniformity requirement shall be fulfilled separately for each polarization. For existing facilities where the field uniformity requirement cannot be met, this shall be stated in the test report. The user shall also ensure good reproducibility of the measurement."

2 Antenna position

Presently in ISO 11452-2, the antenna position shall be change from harness to DUT at 1 GHz. French experts consider that the change should be done at a lower frequency (to allow to consider the fact that coupling on DUT can occur at lower frequencies) and that a frequency recovery (test with antenna facing harness and facing DUT) is necessary.

French proposal:

Modify in clause 7.6 and 7.2.3 (which should be renumbered 7.7.3) :

" The phase centre of the antenna for frequencies from 80 MHz to 1 000 MHz shall be in line with the centre of the longitudinal part (1 500 mm length) of the wiring harness.

The phase centre of the antenna for frequencies above 1 000 MHz shall be in line with the DUT."

By

" The test shall be performed for the two following configurations:

- from 80 MHz to 800 MHz with the phase centre of the antenna in front with the centre of the longitudinal part (1 500 mm length) of the wiring harness.
- above 400 MHz with the phase centre of the antenna in front of the DUT."

And update the Figures 1 to 12 consequently.

Modify in clause 8.3.2 :

" Place the electrical phase centre of the field probe (150 ± 10) mm above the ground plane and at a distance of (100 ± 10) mm from the front edge of the ground plane.

- For frequencies of from 80 MHz to 1 000 MHz, the phase centre of the field probe shall be in line with the centre of the longitudinal part (1 500 mm length) of the wiring harness position.
- For frequencies above 1 000 MHz, the phase centre of the field probe shall be in line with the DUT position."

By

" Place the electrical phase centre of the field probe (150 ± 10) mm above the ground plane and at a distance of (100 ± 10) mm from the front edge of the ground plane. The field calibration shall be performed for the two following configurations:

- For frequencies of from 80 MHz to 800 MHz, the phase centre of the field probe shall be in line with the centre of the longitudinal part (1 500 mm length) of the wiring harness position.
- For frequencies above 400 MHz, the phase centre of the field probe shall be in line with the DUT position."

3 DUT irradiation

Presently in ISO 11452-2, it is stated in clause 8.1 that " The orientation(s) of the DUT for radiated immunity tests shall be defined in the test plan.". French experts consider that when the antenna is facing the DUT, at least 3 DUT orientation shall be tested when using ISO 11452-2 test method instead of ISO 11452-11.

French proposal:

Replace in clause 8.1 :

" The orientation(s) of the DUT for radiated immunity tests shall be defined in the test plan."

By:

" For the test performed with the antenna facing the harness, the orientation(s) of the DUT for radiated immunity tests shall be defined in the test plan.

For the test performed with the antenna facing the DUT, the radiated immunity tests shall be performed for at least 3 orthogonal orientations which shall be define in the test plan."