

Interpretation Sheet 1

EN 55014-2:1997

English version

Foreword

This Interpretation Sheet to the European Standard EN 55014-2:1997 was prepared by the Interpretation Panel of the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC). The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC on 2005-07-16.

Clause 8 Conditions during testing

Subclause 8.4: "The tests concerning e.m. fields and current injection are carried out during the scan time while, at random, the selected modes of the EUT are set into operation. In addition, tests are performed at five selected spot frequencies, each for up to 3 min at the selected modes of operation."

Question:

What are the five selected spot frequencies and what is a reasonable minimum amount of testing required to ensure that a sufficient level of immunity can be assured ?

Interpretation:

The suggested spot frequencies for current injection are 0,15 MHz, 20 MHz, 40 MHz, 60 MHz and 80 MHz. and for e.m. fields are 80 MHz, 230 MHz, 460 MHz, 690 MHz and 1 000 MHz.

The operating modes of an EUT need to be identified and then the modes, which are likely to achieve maximum susceptibility, should be fully subjected to the interference phenomena.

EXAMPLE For a washing machine one full cycle might be all that is required. The motor, the heating element and the solenoids are of themselves largely immune to EMI but the microprocessor or other control circuitry is not. By subjecting a washing machine, while it is running a full cycle, to both e.m. fields and current injection the immunity of the microprocessor or other control circuitry is tested and only one mode is required.

Other EUTs might require more than one mode of operation, but as long as the modes of operation are properly considered and selected then a sufficient level of immunity can be assured.

Validity:

This interpretation remains valid until an amendment or updated standard dealing with this issue is published by CENELEC.

April 2007