INTERLABORATORY COMPARISON OF THE ELECTROMAGNETIC EMISSION MEASUREMENTS USING FAR AND GTEM TEST SITES UP TO 1 GHz

ABSTRACT    Electromagnetic emission limiting is one of the basic requirements in the European Directive 2014/30/EU (EMC Directive). Manufacturers often use alternative methods of measurements to make preliminary verification of emission. This paper presents and analyzes problem with comparison between measurements in different test sites: FAR (Fully Anechoic Room) and GTEM (Gigahertz Transverse Electromagnetic cell). FAR is assumed as the reference and GTEM as the alternative method. There are results of measurements carried out in Electrotechnical Institute Gdansk Branch (FAR) and Satel Sp. z o.o. company (GTEM). It is concluded that the results from these two test sites cannot be easily compared or scaled but the measurement in the GTEM was more restrictive for the tested device in wider frequency range.

Keywords: electromagnetic field, emission measurement, electromagnetic compatibility