

# SAFEGUARDS

SGS CONSUMER TESTING SERVICES

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## MODIFICATION OF EMC EMISSION REQUIREMENTS IN EUROPE (CISPR 14-1/EN 55014-1)

The international standardisation body IEC/CISPR has modified the requirements of CISPR 14-1 Edition 5.0 (2005-11) for household appliances, electrical tools and similar apparatus in 2008. These modifications have been published by CISPR in CISPR 14-1 Edition 5.0 Amendment 1 (2008-11)<sup>1</sup>.

CISPR 14-1 Edition 5.0 (2005-11) is published as European harmonized Standard EN 55014-1 (2006-12) under the EMC Directive<sup>2</sup> and will become mandatory for declaration of conformity beginning 1<sup>st</sup> of September 2009.

The Amendment 1 to CISPR 14-1 is published as EN 55014-1/A1 (2009-05-01) and already accepted by the European Commission as a "candidate harmonized standard"<sup>3</sup> but not yet published in the Official Journal of the European Union (OJEU 2009-06-05). This means it is not yet a harmonized standard.

The Dow<sup>4</sup> of the Amendment is 2012-05-01 and after that it is mandatory to apply this amendment. It will be most probably listed in the next list of harmonized standards under EMC directive in OJEU.



<sup>1</sup> In January 2009 CISPR has published a new version CISPR 14-1 Edition 5.1 (2009-02). This version combines CISPR 14-1 (2005-11), Corrigendum 1 (2009-01) and AMD 1 (2008-11)

<sup>2</sup> Directive 2004/108/EC

<sup>3</sup> Standard accepted for listing in the next OJEU

<sup>4</sup> Date of withdrawal of conflicting standards



The new amendment will bring changes and additions to the testing methods and limits.

Here is the summary of the main changes and additions:

**Radiated disturbances measurement in the frequency range 30 MHz to 1 000 MHz**, which was required only for toys in the previous edition, is now required for the followings:

- Mains operated appliance when Absorbing clamp measurement (30 MHz to 300 MHz) is not chosen in Manufacturer's choice,
- Battery-operated appliances (for example hand held tools), and
- Toys of certain category.

Radiated emissions are measured by using the testing methods OATS<sup>5</sup> or SAC<sup>6</sup> and the limits for those testing methods are not changed as before. In addition to those testing methods, testing method FAR<sup>7</sup> or TEM-Waveguide also may be used depending of the product. In the product standard, testing method using FAR is first time introduced for compliance measurement.

For the battery operated appliances radiated emission measurement from 30 to 1000 MHz have to be applied.

## DISTURBANCE POWER MEASUREMENT

For the disturbance power measurement a margin limit line is introduced. The margin limit from 0 to 10 dB is applied in the frequency range from 200 to 300 MHz. If the margin limit is not met then the radiated measurements 300 MHz to 1 000 MHz shall be conducted in addition. In this case both the absorbing clamp limit and the radiated emission limit shall be met.



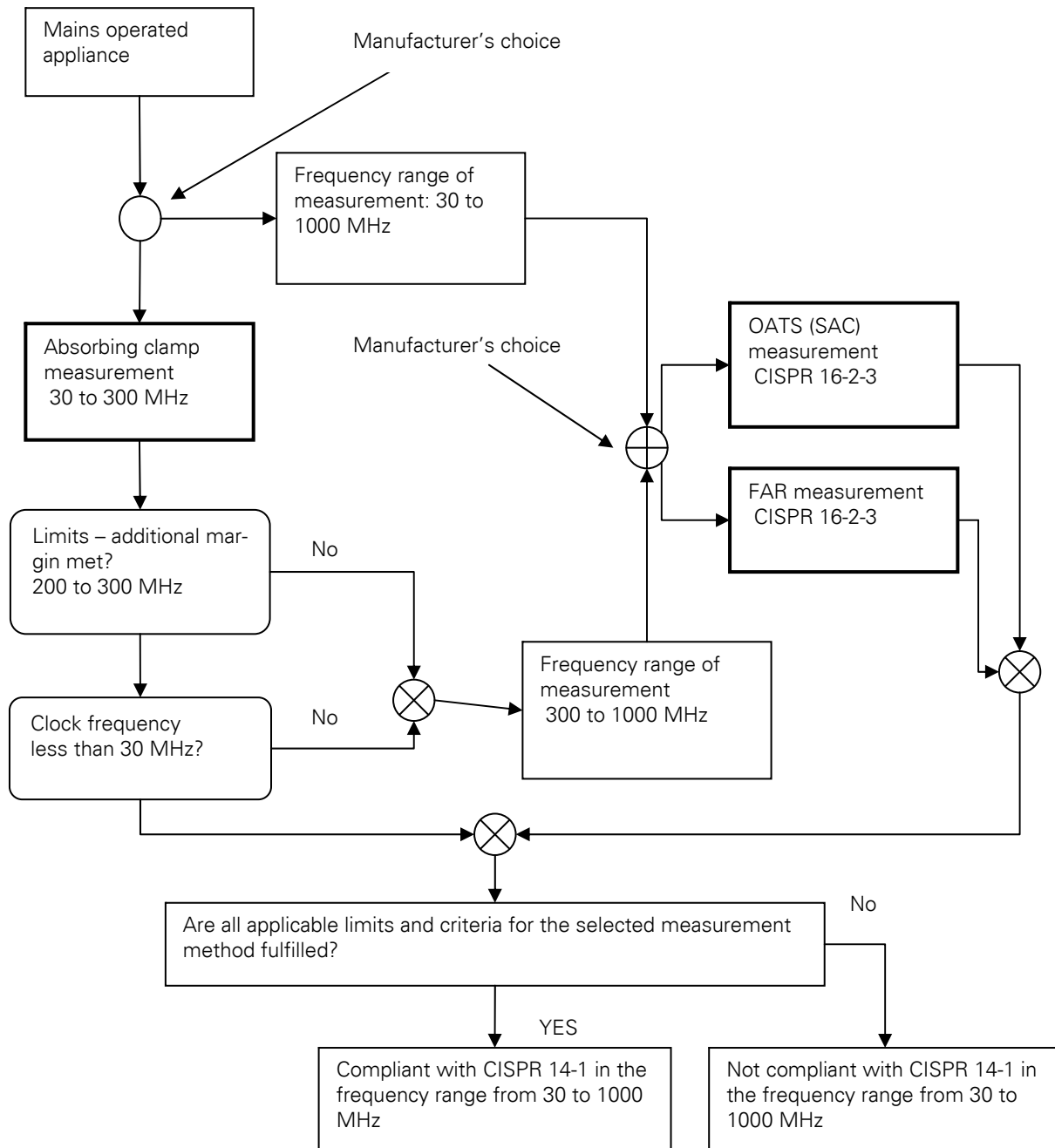
Throughout our global network of laboratories, we are able to provide a range of services on E&E products. Please do not hesitate to contact us for further information.

<sup>5</sup> OATS = Open Area Test Site

<sup>6</sup> SAC = Semi-Anechoic Chamber

<sup>7</sup> FAR = Fully Anechoic Room

**FLOW CHART FOR EMISSION TESTING OF MAINS OPERATED APPLIANCES**



**FOR ENQUIRIES:**

Global Competences Support Centre: [gqsc@sgs.com](mailto:gqsc@sgs.com)  
 Jari Merikari, Tel: +358 9 6963212 or [Jari.Merikari@sgs.com](mailto:Jari.Merikari@sgs.com)

Asia – Hong Kong. Tel: +852 2334 4481 Fax: +852 2144 7001 [mktg.hk@sgs.com](mailto:mktg.hk@sgs.com)  
 Australasia \_ Perth. Tel: +61 (0) 3 9790 3418 Fax: +61 (0) 3 9701 0988 [au.cts@sgs.com](mailto:au.cts@sgs.com)  
 Europe – London —UK. Tel: +44(0) 20 8991 3410 Fax: +44 (0) 20 8991 3417 [gb.cts.sales@sgs.com](mailto:gb.cts.sales@sgs.com)  
 Africa & Middle East – Turkey. Tel: +90 212 225 0024 Fax: +90 212 296 47 82 [sgs.turkey@sgs.com](mailto:sgs.turkey@sgs.com)  
 Americas – USA. Tel: +1 973 575 5252 Fax: +1 973 575 1193 [Marketing.CTS.US@sgs.com](mailto:Marketing.CTS.US@sgs.com)

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