AM 375kHz Transmitter

Test Setup Photos

Pages extracted from Test Report No. 14681

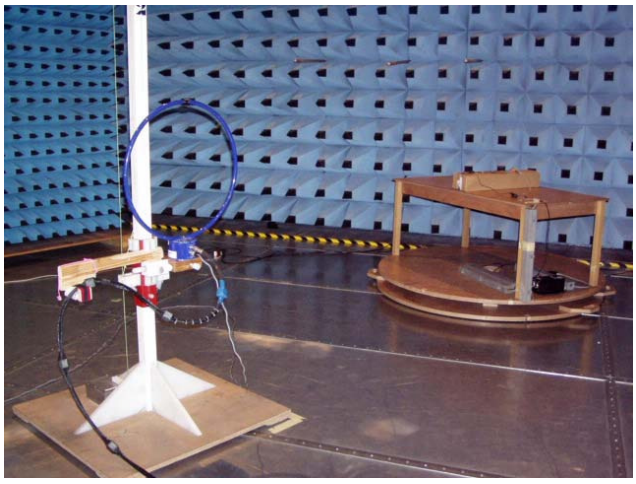
Emission Tests

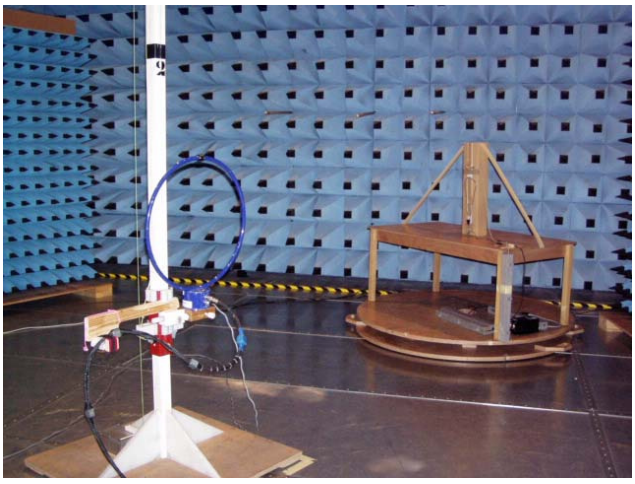
6.1 Radiated emission - Magnetic field

Test site:	☐ anechoic chamber (ferrites)		☐ open test site	
	☒ anechoic chamber (foam)		☐	
Meas. distance:	☒ 3 m	☐ 10 m	☐ 30 m	☐ ..... m
Meas. uncertainty:	± 2.8 dB (10 m)			
Position of EUT:	*0.8 m* (height above floor of equipment under test)			

Measuring method: The magnetic disturbance radiated by the equipment under test is measured using a spectrum analyser and a wide band magnetic antenna. The center of the antenna is placed at 1 m of height, first in the direction of the apparatus under test, then at 90° to the apparatus and if required also horizontally. If possible the turning table is operated through 360° during the measurement. The recording is carried out taking into account the maximum value of the disturbance appearing during the functioning of the apparaturs under test. The peak values are recorded continuously on a graph. The values exceeding the limits are remeasured using a measuring receiver.

Test set-up:





Remarks:

- *The limit does not apply to the intentional signal at 375 kHz.*
- *Limit values expressed in dBµA/m (factor used = 377 Ω = -51.5 dB = free-space wave impedance) and transformed to a measuring distance of 3m (factor used = 40 dB/decade) if necessary*
  e.g.: for f = 9kHz the limit is 2400/9µV/m at 300 m;
  $20 \log_{10}$ (2400/9µV/m) – $20 \log_{10}$ (377 Ω) + $40 \log_{10}$ (300m/3m)= 77 dBµA/m at 3m

  for f = 30MHz the limit is 30µV/m at 30 m;
  $20 \log_{10}$ (30µV/m) – $20 \log_{10}$ (377Ω) + $40 \log_{10}$ (30m/3m)= 18 dBµA/m at 3m

Test equipment:

Spectrum analyser	☐ 88-14	☐ 90-26	☐ 94-24	☐ 02-06	☐ 03-45	☒ 03-57
Receiver	☐ 85-12	☐ 90-11	☐ 94-34	☐ 04-28	☐	
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☐ 05-59	☐ 05-62	☐ 05-87
Antenna (typ: magnetic)	☒ 90-25	☐ 90-28	☐ 99-32	☐		
.....	.....					

Result:	**☒ pass**	**☐ fail**	**☐ not applicable**	**☐ not tested**

6.2 Radiated electromagnetic field

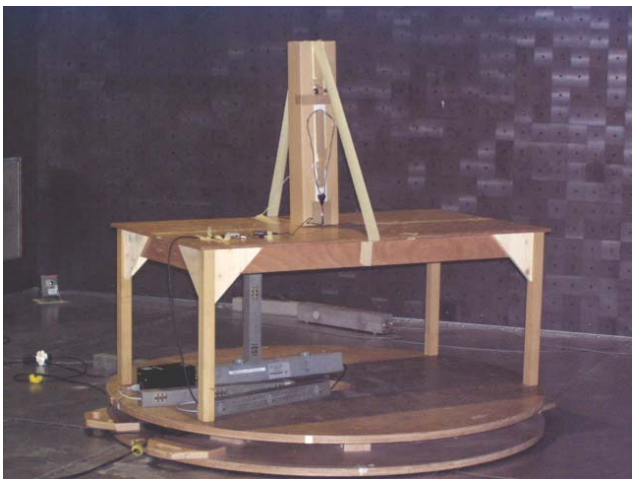
Test site:	☐ anechoic chamber (foam)	☐ open test site		
	☒ anechoic chamber (ferrites)	☐		
Distance:	☐ 30 m	☒ 10 m	☐ 3 m	☐ .....

Position of EUT: *0.8 m* (height of the equipment under test above floor)

Meas. uncertainty: ± 6 dB (30 - 300 MHz) / ± 5.4 dB (300 - 1000 MHz)

Test method: The electromagnetic disturbance radiated by the equipment is measured using a spectrum analyser and a wide band antenna. The antenna is moved from 1 to 4 m in height successively with horizontal and vertical polarisations. The turning table is operated through 360° during the measurements. The recordings are carried out taking into account the maximum value of all the disturbances appearing while the apparatus is under test. The peak values are recorded continuously on the graph. The values exceeding a limit are remeasured manually using a receiver.

Test set-up:



Remarks: - - -

Test equipment:

Spectrum analyser	☐ 88-14	☐ 90-26	☐ 94-24	☐ 02-06	☒ 03-45	☐ 03-57
Receiver	☐ 85-04	☐ 90-43	☒ 94-35			
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☒ 05-59	☐ 05-62	
Antenna (biconical)	☐ 82-02	☐ 87-05	☐ 87-16	☐ 91-05	☐ 94-37	
Antenna (log-per)	☐ 88-20	☐ 90-30	☐ 91-35	☐ 94-64		
Antenna (bilog)	☒ 94-03	☐ 05-38	☐			
Antenna (horn)	☐ 90-24	☐ 90-29	☐ 98-12	☐ 98-13	☐	
.....	.....					

Result: ☒ **pass** ☐ **fail** ☐ **not applicable** ☐ **not tested**