

ANNEX E SPURIOUS EMISSIONS WITHOUT HOUSING

1 Final radiated emission measurement (30 MHz to 1 GHz)

Ambient temperature	20 °C		Relative humidity	50 %
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Position of EUT: The EUT was set-up on a non-conducting table of a height of 0.8 m. The distance

between EUT and antenna was 3 m.

Cable guide: No cable was connected to the EUT. For detail information of test set-up refer to

the photographs in annex A of this test report.

Test record: EUT without housing, all results are shown in the following.

Supply voltage: During all measurements the EUT was supplied by a new internal battery.

The results of the standard subsequent measurement on the open area test site are indicated in the table below. The limits as well as the measured results (levels) refer to the above mentioned standard while taking account of the specified requirements for a 3 m measuring distance.

The measurement time with the peak detector is 1 second.

Result measured with the peak detector and corrected to average:

Spurious emissions outside restricted bands												
Frequency	Result	Limit	Margin	Readings	Correction factor	Antenna factor	Cable loss	Height	Azimuth	Pol.	Position	
MHz	dBµV/m	dBµV/m	dB	dΒμV	dB	dB/m	dB	cm	deg			
433.653	78.4	80.8	2.4	67.4	-7.8	16.4	2.4	111.0	271.0	Vert.	2	
477.205	9.8	60.8	51.0	-1.7	-7.8	16.9	2.4	209.0	1.0	Vert.	2	
867.306	60.6	60.8	0.2	42.8	-7.8	22.2	3.4	111.0	46.0	Vert	2	
Me	easurement	uncertainty			+2.2 dB / -3.6 dB							

The test results were calculated with the following formula:

Result [dBμV/m] = reading [dBμV] + cable loss [dB] + antenna factor [dB/m] + correction factor [dB].

Test: Passed

TEST EQUIPMENT USED FOR THE TEST:

14 - 20

 Test engineer:
 Thomas KÜHN
 Report Number:
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ANNEX E SPURIOUS EMISSIONS WITHOUT HOUSING

2 Final radiated emission measurement (1 GHz to 4.5 GHz)

Ambient temperature 20 °C Relative humidity 57 %

Position of EUT: The EUT was set-up on a non-conducting table of a height of 0.8 m. The distance

between EUT and antenna was 3 m.

Cable guide: No cable was connected to the EUT. For detail information of test set-up refer to

the photographs in annex A of this test report.

Test record: EUT without housing, all results are shown in the following.

Supply voltage: During all measurements the EUT was supplied by a new internal battery.

Resolution bandwidth: For all measurements a resolution bandwidth of 1 MHz was used.

Result measured with the peak detector:

Frequency	Corr. value	Limit	Margin	Readings	Antenna factor	Preamp	Cable loss	Height	Pol.	Restr. Band	Position	
GHz	dBµV/m	dBµV/m	dB	dΒμV	1/m	dB	dB	cm		Dana		
1300.959	49.3	74.0	24.7	48.1	25.0	26.5	2.7	150	Hor.	Yes	1	
1734.612	57.1	74.0	16.9	53.9	26.6	26.5	3.1	150	Vert.	No	2	
2168.265	40.9	74.0	33.1	36.2	27.7	26.5	3.5	150	Vert.	No	3	
2601.918	47.2	74.0	26.8	41.1	28.6	26.4	3.9	150	Vert.	No	3	
3035.571	42.7	74.0	31.3	34.5	30.3	26.4	4.3	150	Vert.	No	3	
3469.224	44.2	74.0	29.8	35.0	31.1	26.3	4.4	150	Vert.	No	3	
3902.877	42.7	74.0	31.3	31.3	32.8	26.1	4.7	150	Hor.	Yes	1	
4336.530	42.1	74.0	31.9	31.0	32.0	25.9	5.0	150	Hor.	Yes	1	
	Measurement uncertainty					+2.2 dB / -3.6 dB						

Result measured with the peak detector and converted to average:

Frequency	Corr. value	Limit	Margin	Readings	Corr. factor	Antenna factor	Preamp	Cable	Height	Pol.	Restr. Band	Position
GHz	dBµV/m	dBµV/m	dB	dΒμV		1/m	dB	dB	cm			
1300.959	41.5	54.0	12.5	48.1	-7.8	25.0	26.5	2.7	150	Hor.	Yes	1
1734.612	49.3	60.8	11.5	53.9	-7.8	26.6	26.5	3.1	150	Vert.	No	2
2168.265	33.1	60.8	27.7	36.2	-7.8	27.7	26.5	3.5	150	Vert.	No	3
2601.918	39.4	60.8	21.4	41.1	-7.8	28.6	26.4	3.9	150	Vert.	No	3
3035.571	34.9	60.8	25.9	34.5	-7.8	30.3	26.4	4.3	150	Vert.	No	3
3469.224	36.4	60.8	24.4	35.0	-7.8	31.1	26.3	4.4	150	Vert.	No	3
3902.877	34.9	54.0	19.1	31.3	-7.8	32.8	26.1	4.7	150	Hor.	Yes	1
4336.530	34.3	54.0	19.7	31.0	-7.8	32.0	25.9	5.0	150	Hor.	Yes	1
Measurement uncertainty					+2.2 dB / -3.6 dB							

The test results were calculated with the following formula:

Result [dB μ V/m] = reading [dB μ V] + cable loss [dB] + antenna factor [dB/m] – preamp. [dB] + correction factor [dB]

Test: Passed

TEST EQUIPMENT USED FOR THE TEST:

29, 31 - 34, 36, 73, 143

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