

# 1 RADIATED EMISSIONS (RECEIVER)

# 1.1 Preliminary radiated emission measurement (9 kHz to 1 GHz)

Ambient temperature	21 °C		Relative humidity	38 %
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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: The cable of the EUT is running vertically to the false floor. For detail information

of test set-up and the cable guide refer to the pictures in annex A of this test

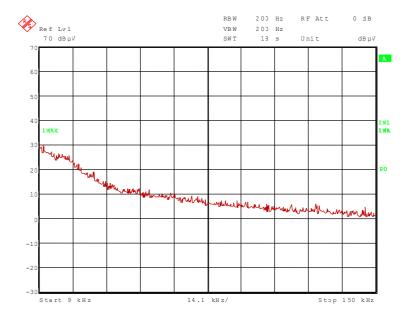
report.

Test record: All results are shown in the following. The method of measurement is described

in subclause 5.7.1 of the test report.

Supply voltage: During all measurements the EUT was supplied with 12.0 V DC.

#### 110734 36.wmf: Spurious emissions from 9 kHz to 150 kHz (operation mode 5):



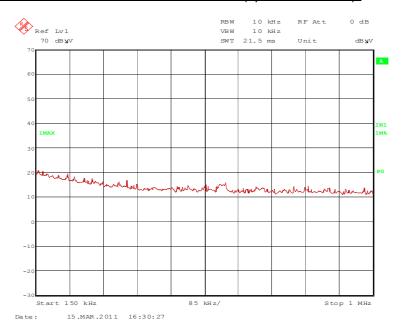
#### TEST EQUIPMENT USED FOR THE TEST:

29, 31 - 35, 43, 55

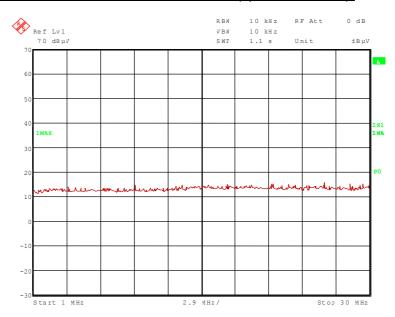
Test engineer: Thomas KÜHN Report Number: F110734E2, 2<sup>nd</sup> version
Date of issue: 13 April 2012 Order Number: F110734E2, 2<sup>nd</sup> version
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110734 37.wmf: Spurious emissions from 150 kHz to 1 MHz (operation mode 5):



110734 38.wmf: Spurious emissions from 1 MHz to 30 MHz (operation mode 5):



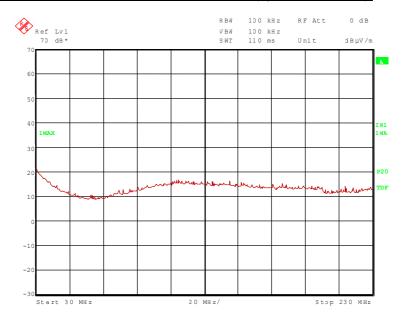
No significant frequencies above the noise floor of the system were found during the preliminary radiated emission test, so no measurements were carried out on the outdoor test site.

 Test engineer:
 Thomas KÜHN
 Report Number:
 F110734E2, 2<sup>nd</sup> version

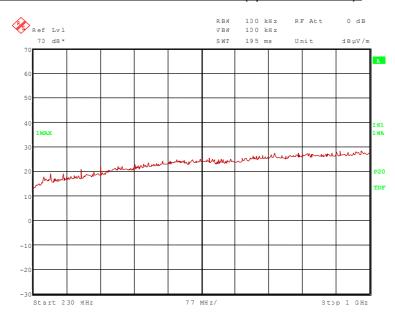
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#### 110734 39.wmf: Spurious emissions from 30 MHz to 230 MHz (operation mode 5):



#### 110734\_40.wmf: Spurious emissions from 230 MHz to 1 GHz (operation mode 5):



No significant frequencies above the noise floor of the system were found during the preliminary radiated emission test, so no measurements were carried out on the open area test site.

 Test engineer:
 Thomas KÜHN
 Report Number:
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# 1.2 Preliminary radiated emission measurement (1 GHz to 12.5 GHz)

Ambient temperature	21 °C	Relative humidity	38 %
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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: The cable of the EUT is running vertically to the false floor. For detail information

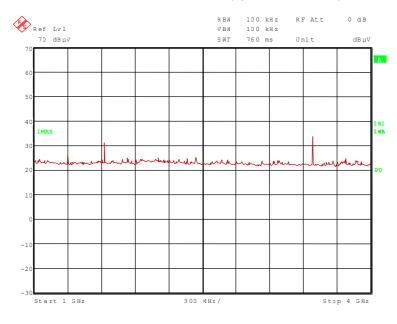
of test set-up and the cable guide refer to the pictures in annex A of this test

report.

Test record: All results are shown in the following.

Supply voltage: During all measurements the EUT was supplied with 12.0 V DC.

### 110734\_35.wmf: Spurious emissions from 1 GHz to 4 GHz (operation mode 5):

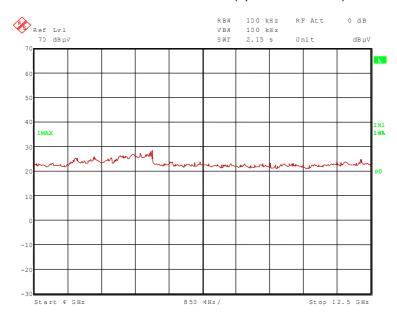


 Test engineer:
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#### 110734 34.wmf: Spurious emissions from 4 GHz 12.5 GHz (operation mode 5):



The following frequencies were found during the preliminary radiated emission measurement:

- 1.628 GHz and 3.482 GHz.

These frequencies have to be measured in a final measurement. The result is presented in the following.

TEST EQUIPMENT USED FOR THE TEST:

29, 31 - 34, 36, 44, 49

 Test engineer:
 Thomas KÜHN
 Report Number:
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# 1.3 Final radiated emission measurement (1 GHz to 12.5 GHz)

Ambient temperature	21 °C	Relative humidity	38 %
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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: The cable of the EUT is running vertically to the false floor. For detail information

of test set-up and the cable guide refer to the pictures in annex A of this test

report.

Test record: All results are shown in the following. The method of measurement is described

in subclause 5.2.1 of the test report.

Supply voltage: During all measurements the EUT was supplied with 12.0 V DC.

Remark: Where not otherwise stated the test was carried out in test mode 5 of the EUT.

#### Result measured with the peak detector:

Frequency	Corr.	Limit	Margin	Readings	Antenna	Preamp	Cable	Height	Pol.
	value				factor		loss		
GHz	dBµV/m	dBµV/m	dB	dBµV	1/m	dB	dB	cm	
1.628	37.6	74.0	36.4	35.6	25.4	26.5	3.1	150	Vert.
3.482	45.8	74.0	28.2	36.5	31.1	26.3	4.5	150	Vert.
Measurement uncertainty			+2.2 dB / -3.6 dB						

#### Result measured with the average detector:

Frequency	Corr. value	Limit	Margin	Readings	Antenna factor	Preamp	Cable loss	Height	Pol.
GHz	dBµV/m	dBµV/m	dB	dΒμV	1/m	dB	dB	cm	
1.628	29.5	54.0	24.5	27.5	25.4	26.5	3.1	150	Vert.
3.482	37.3	54.0	16.7	28.0	31.1	26.3	4.5	150	Vert.
Measurement uncertainty			+2.2 dB / -3.6 dB						

Test result: Passed

TEST EQUIPMENT USED FOR THE TEST:

29, 31 - 34, 36, 44, 49

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Date of issue: 13 April 2012 Order Number: F110734E2, 2<sup>nd</sup> version
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