



Radio Test Report

For

HK ELECHOUSE LIMITED

Test Standards: ETSI EN 300 330 V2.1.1 (2017-02)

Product Description: 13.56 MHz NFC/HF RFID Reader Module

Tested Model: ST25R3916B NFC Module

Brand Name: ELECHOUSE

Report No.: EBSZ2605060005E01-R1

Tested Date: 2026.05.06 ~ 2026.05.09

Issued Date: 2026.06.10

Prepared By: May Li
May Li Engineer

Approved By:

Jerry Liu
Jerry Liu Manager

Guangdong Eurber Testing Co., Ltd.
Room 401/402, Building A, Tangxi Zhigu, No.21, Xijing Road, Gushu, Xixiang
Subdistrict, Bao'an District, Shenzhen, Guangdong, China
www.eurber.com

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2026.06.10	Valid	Original



TABLE OF CONTENTS

REPORT REVISE RECORD	2
SUMMARY OF TEST RESULT	5
1. GENERAL DESCRIPTION	6
1.1 Applicant	6
1.2 Manufacturer	6
1.3 General Description of EUT	6
1.4 Support equipment List	7
1.5 Modification of EUT	7
1.6 Applied Standards	7
1.7 Extreme Test Condition	7
1.8 Address of the test laboratory	8
2. PERMITTED RANGE OF OPERATING FREQUENCIES	9
2.1 LIMIT	9
2.2 CONFIGURATION	9
2.3 TEST PROCEDURE	9
2.4 TEST RESULTS	9
3. OPERATING FREQUENCY RANGES	10
4. MODULATION BANDWIDTH	11
4.1 LIMIT	11
4.2 TEST CONFIGURATION	11
4.3 TEST PROCEDURE	11
4.4 TEST RESULTS	12
5. TRANSMITTER H-FIELD REQUIREMENTS	13
5.1 LIMIT	13
5.2 TEST CONFIGURATION	14
5.3 TEST PROCEDURE	15
5.4 TEST RESULTS	15
6. TRANSMITTER RF CARRIER CURRENT	16
6.1 LIMIT	16
6.2 TEST CONFIGURATION	16
6.3 TEST PROCEDURE	16
6.4 TEST RESULT	16
7. TRANSMITTER RADIATED E-FIELD	17
7.1 LIMIT	17
7.2 TEST CONFIGURATION	17

7.3	TEST PROCEDURE.....	18
7.4	TEST RESULT	18
8.	TRANSMITTER CONDUCTED SPURIOUS EMISSIONS	19
8.1	LIMIT.....	19
8.2	TEST CONFIGURATION	19
8.3	TEST PROCEDURE.....	20
8.4	TEST RESULT	20
9.	TRANSMITTER RADIATED SPURIOUS DOMAIN EMISSION	21
9.1	LIMIT.....	21
9.2	TEST CONFIGURATION	21
9.3	TEST PROCEDURE.....	22
9.4	TEST RESULT	22
10.	TRANSMITTER FREQUENCY STABILITY	26
10.1	LIMIT.....	26
10.2	TEST CONFIGURATION	26
10.3	TEST PROCEDURE.....	26
10.4	TEST RESULT	26
11.	RECEIVER SPURIOUS EMISSIONS	27
11.1	LIMIT.....	27
11.2	TEST CONFIGURATION	27
11.3	TEST PROCEDURE.....	27
11.4	TEST RESULT	27
12.	ADJACENT CHANNEL SELECTIVITY.....	28
12.1	LIMIT.....	28
12.2	TEST CONFIGURATION	28
12.3	TEST PROCEDURE.....	28
12.4	TEST RESULT	28
13.	RECEIVER BLOCKING OR DESENSITIZATION.....	29
13.1	LIMIT.....	29
13.2	TEST CONFIGURATION	29
13.3	TEST PROCEDURE.....	29
13.4	TEST RESULT	29
14.	UNCERTAINTY EVALUATION	30
15.	LIST OF MEASURING EQUIPMENT	31
16.	PHOTOS OF THE EUT.....	32

SUMMARY OF TEST RESULT

EN300 330 V2.1.1				
Test	Test Method	Limit / Severity	Applicable (Y/N)	Result
Permitted range of operating frequencies	Clause 6.2.2.2	Table 1	Y	PASS
Operating frequency ranges	Clause 6.2.2.2	Table 1	Y	PASS
Modulation bandwidth	Clause 6.2.3	Clause 4.3.3.3	Y	PASS
Transmitter H-field requirements	Clause 6.2.4	Clause 4.3.4.3	Y	PASS
Transmitter RF carrier current	Clause 6.2.5	Clause 4.3.5.3	N	N/A
Transmitter radiated E-field	Clause 6.2.6	Clause 4.3.6.3	N	N/A
Transmitter conducted spurious emissions	Clause 6.2.7	Clause 4.3.7.3	N	N/A
Transmitter radiated spurious domain emission limits < 30 MHz	Clause 6.2.8	Clause 4.3.8.3	Y	PASS
Transmitter radiated spurious domain emission limits > 30 MHz	Clause 6.2.9	Clause 4.3.9.3	Y	PASS
Transmitter Frequency stability	Clause 6.2.10	Clause 4.3.10.3	N	N/A
Receiver spurious emissions	Clause 6.2.8 & Clause 6.2.9	Clause 4.4.2.3	N	N/A
Adjacent channel selectivity	Clause 6.3.2	Clause 4.4.3.3	N	N/A
Receiver blocking or desensitization	Clause 6.3.3	Clause 4.4.4.3	N	N/A

Remark:

N/A: Not Applicable.

RF: In this whole report RF means Radio Frequency.

1. General Description

1.1 Applicant

HK ELECHOUSE LIMITED

Room A516, 5/F, Yik Lee Industrial Building 35 Tai Yau Street, San Po Kong, Kowloon
Hong Kong

1.2 Manufacturer

HK ELECHOUSE LIMITED

Room A516, 5/F, Yik Lee Industrial Building 35 Tai Yau Street, San Po Kong, Kowloon
Hong Kong

1.3 General Description of EUT

Product	13.56 MHz NFC/HF RFID Reader Module
Model NO.	ST25R3916B NFC Module
Additional NO.	ST25R3916 NFC Module
Difference Description	The ST25R3916B NFC Module and ST25R3916 NFC Module use the same PCB layout, antenna design, matching network design, power architecture, connector, software family, host interface, mechanical structure, operating frequency and intended NFC/HF RFID function. The only hardware difference is the NFC reader IC. The ST25R3916B NFC Module uses the ST25R3916B NFC reader IC, and the ST25R3916 NFC Module uses the ST25R3916 NFC reader IC. The previous ST25R3916 PCB appearance/version is not covered by this report and will be phased out.
Nominal Voltage	5 V DC via 7-pin connector, max. 500 mA, 2.5 W
MODULATION TYPE	ASK
OPERATING FREQUENCY	13.56 MHz
HW Version	N/A
SW Version	N/A
Sample Received Date	2026.05.06
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to note as below
Number of channels	/

NOTE:

1. The above EUT information is declared by manufacturer. The laboratory is not responsible for the

information provided by the manufacturer. For more detailed feature description, please refer to the manufacturer's specifications or user's manual.

2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. The ST25R3916B NFC Module was selected as the representative test model. Since the two listed models use the same PCB layout, antenna design, matching network design, power architecture, connector, software family, host interface, mechanical structure, operating frequency and intended NFC/HF RFID function, and differ only in the NFC reader IC, the RF test results of the representative model are considered applicable to both listed models.

1.4 Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate
Lenovo	Notebook	Xiaoxinchao5000	PF0QPQMH	DOC
N/A	Monitor	FT121M	XK-FT121M-20180110-016	DOC
/	/	/	/	/

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of **ETSI EN 300 330 V2.1.1 (2017-02)**

Note: All test items were verified and recorded according to the standards and without any deviation during the test.

1.7 Extreme Test Condition

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35°C
 - Humidity: 20-75 %
 - Atmospheric pressure:
 - 86-106 kPa Mains voltage
- 1) The extreme test voltage for equipment to be connected to an AC mains source shall be the nominal mains voltage $\pm 10\%$.
Lead-acid battery power sources used on vehicles
When radio equipment is intended for operation from the usual type of alternator fed
 - 2) lead-acid battery power source used on vehicles, then extreme test voltage shall be 1,3 and 0,9 times the nominal voltage of the battery (6 V, 12 V,

etc.). Power sources using other types of batteries

The Low extreme test voltages for equipment with power sources using the following types of battery shall be:

- 3) for the Leclanché or lithium type battery: 0,85 times the nominal voltage of the battery; for the mercury or nickel-cadmium type of battery: 0,9 times the nominal voltage of the battery.

In both cases, the High extreme test voltage shall be 1,15 times the nominal voltage of the battery.

Other power sources

- 4) For equipment using other power sources, or capable of being operated from a variety of power sources (primary or secondary), the extreme test voltages shall be those stated by the manufacturer and shall be recorded.

The follow condition is applicable

Normal Condition	NTNV	Temperature	25°C	Voltage	5.0Vdc
	LTHV	Temperature	0°C	Voltage	5.5Vdc
Extreme Condition	HTHV	Temperature	40°C	Voltage	5.5Vdc
	LTLV	Temperature	0°C	Voltage	4.5Vdc
	HTLV	Temperature	40°C	Voltage	4.5Vdc

1.8 Address of the test laboratory

Guangdong Eurber Testing Co., Ltd.

Room 401/402, Building A, Tangxi Zhigu, No.21, Xijing Road, Gushu, Xixiang

Subdistrict, Bao'an District, Shenzhen, Guangdong, China

www.eurber.com

Remark:

1.For other wireless features of this EUT, test report will be issued separately.

2.The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3.Receiver Category was declared by manufacturer

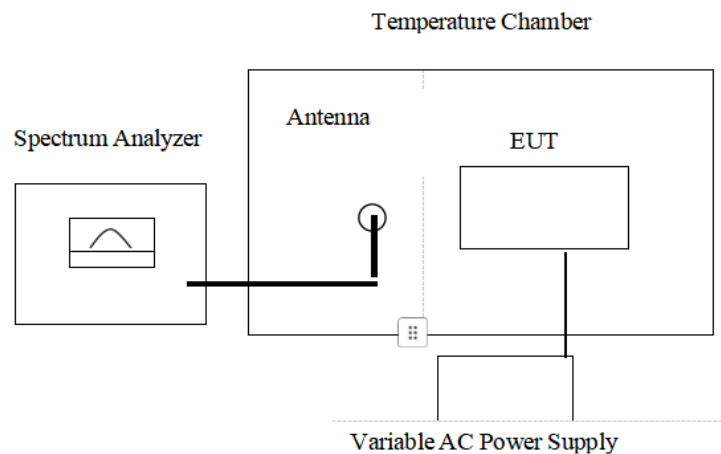
2. PERMITTED RANGE OF OPERATING FREQUENCIES

2.1 LIMIT

ETSI EN 300 330 (V.2.1.1) Sub-clause 4.3.1.3

The permitted range of operating frequencies used by the EUT shall be declared by the manufacturer. The permitted range of operating frequencies for intentional emissions shall be entirely within the frequency bands in table 1.

2.2 CONFIGURATION



2.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V.2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V.2.1.1) Sub-clause 6.2.2 for the measurement method.

2.4 TEST RESULTS

Test Conditions		Frequency Range				Verdict
		fL Channel (MHz)	fH Channel (MHz)	fL Limit (MHz)	fH Limit (MHz)	
Normal		13.556	13.564	13.553	13.567	PASS
Extreme	LTLV	13.556	13.565	13.553	13.567	
	LTHV	13.555	13.564	13.553	13.567	
	HTLV	13.555	13.565	13.553	13.567	
	HTHV	13.556	13.565	13.553	13.567	

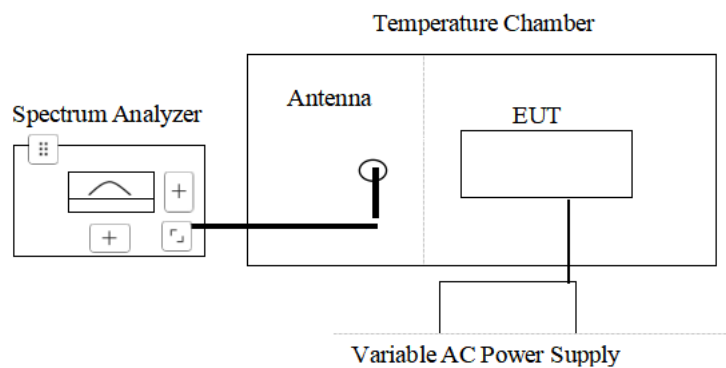
3. OPERATING FREQUENCY RANGES

3.1 LIMIT

ETSI EN 300 330 (V.2.1.1) Sub-clause 4.3.2.3

The operating frequency ranges for intentional emissions shall be entirely within the Frequency bands in table 1

3.1.1 TEST CONFIGURATION



3.1.2 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V.2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V.2.1.1) Sub-clause 6.2.2 for the measurement method.

3.1.3 Test result

Test Conditions		Frequency Range				Verdict
		fL Channel (MHz)	fH Channel (MHz)	fL Limit (MHz)	fH Limit (MHz)	
Normal		13.556	13.564	13.553	13.567	PASS
Extreme	LTLV	13.556	13.565	13.553	13.567	
	LTHV	13.555	13.564	13.553	13.567	
	HTLV	13.555	13.565	13.553	13.567	
	HTHV	13.556	13.565	13.553	13.567	

4. MODULATION BANDWIDTH

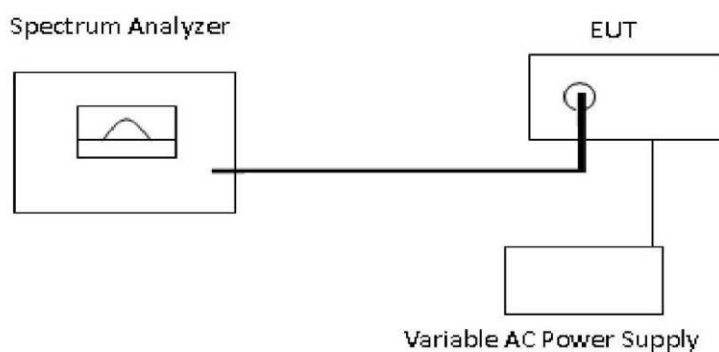
4.1 LIMIT

ETSI EN 300 330 (V2.1.1) Sub-clause 4.3.3.3

1. The radiated spectrum mask shall be declared by the manufacturer.
2. The modulation bandwidth shall be within the assigned frequency band see table 1 or $\pm 7,5\%$ of the carrier frequency whichever is the smallest. For RFID and EAS Systems, the modulation bandwidth shall be within the transmitter emission boundary of figures I.1, I.2, I.3 and I.4.

For further information, see CEPT/ERC/REC 70-03 [i.1] or ERC/ECC/CEPT Decisions as implemented through National Radio Interfaces (NRI) and additional NRI as relevant.

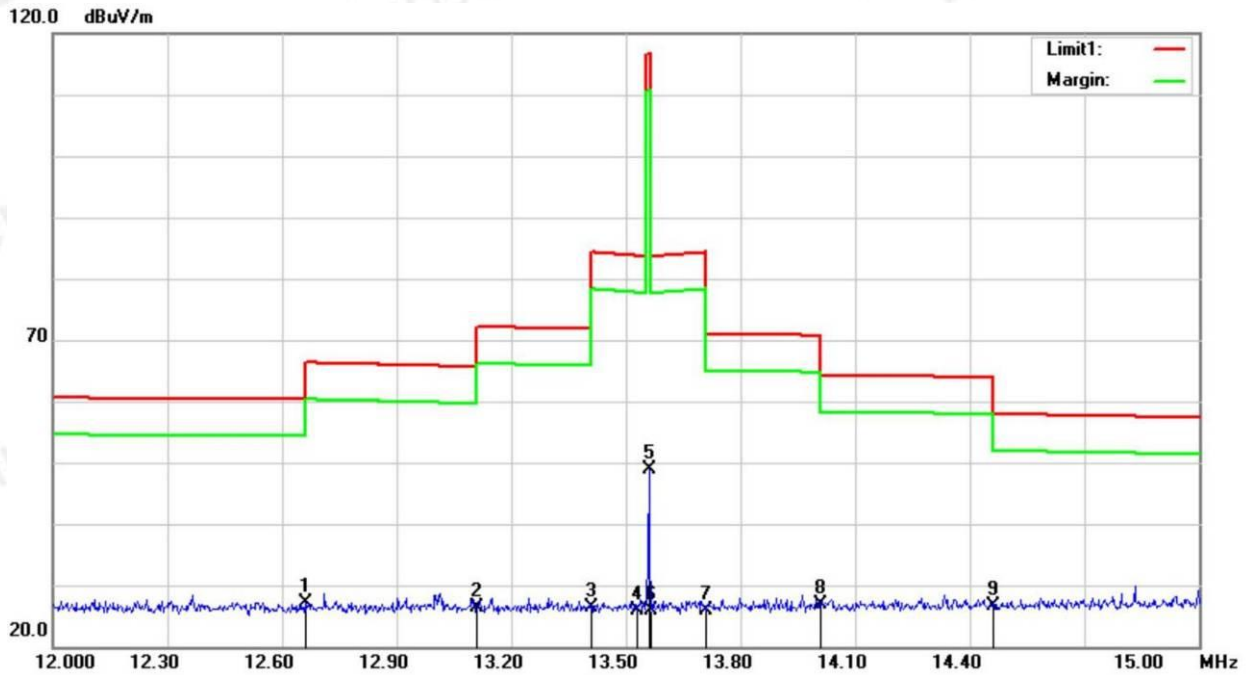
4.2 TEST CONFIGURATION



4.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.1&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.3 for the measurement method.

4.4 TEST RESULTS



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor (dB)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	12.66	6.43	20.79	27.22	-24.28	8.80	-33.08	peak
2	13.11	5.57	20.88	26.45	-25.05	14.10	-39.15	peak
3	13.41	5.31	20.95	26.26	-25.24	20.30	-45.54	peak
4	13.53	4.79	20.98	25.77	-25.73	32.21	-57.94	peak
5	13.56	27.83	20.98	48.81	-2.69	65.10	-67.79	peak
6	13.567	5	20.98	25.98	-25.52	32.10	-57.62	peak
7	13.71	4.93	21.02	25.95	-25.55	19.50	-45.05	peak
8	14.01	5.89	21.08	26.97	-24.53	12.70	-37.23	peak
9	14.46	5.41	21.18	26.59	-24.91	6.40	-31.31	peak

5. TRANSMITTER H-FIELD REQUIREMENTS

5.1 LIMIT

ETSI EN 300 330 (V2.1.1) Sub-clause 4.3.4.3

The frequency ranges and limits of the present document are shown in table 2. The limits are based on the European Commission Decision for SRDs [i.10], CEPT/ERC/REC 70-03 [i.1].

Frequency range (MHz)	H-field strength limit (Hf) dB A/m at 10 m or specified in mW e.r.p.
0,009 ≤ f < 0,090	72 descending 3 dB/oct above 0,03 MHz or according to note 1 (see note 5)
0,09 ≤ f < 0,119	42
0,119 ≤ f < 0,135	66 descending 3 dB/oct above 0,119 MHz or according to note 1 (see notes 3 and 5)
0,135 ≤ f < 0,140	42
0,140 ≤ f < 0,1485	37.7
0,1485 ≤ f < 30	-5 (see note 4)
0,315 ≤ f < 0,600	-5
3,155 ≤ f < 3,400	13.5
4,234	9 (see note 9)
4,516	7
7,400 ≤ f < 8,800	9
10,2 ≤ f < 11,00	9
12,5 ≤ f ≤ 20	-7
6,765 ≤ f ≤ 6,795	42 (see notes 3 and 7)
26,957 ≤ f ≤ 27,283	42 (see note 3)
13,410 ≤ f ≤ 13,553, 13,567 ≤ f ≤ 13,710	9 (see note 6)
13,110 ≤ f ≤ 13,410, 13,710 ≤ f ≤ 14,010	-3.5 (see note 6)
12,660 ≤ f ≤ 13,110, 14,010 ≤ f ≤ 14,460	-10 (see note 6)
11,810 ≤ f ≤ 12,660, 14,460 ≤ f ≤ 15,310	-16 (see note 6)
13,460 ≤ f ≤ 13,553, 13,567 ≤ f ≤ 13,660	27 (see note 6)
13,360 ≤ f ≤ 13,460, 13,660 ≤ f ≤ 13,760	Linear transition from 27 to -3,5 (see note 6)
13,110 ≤ f ≤ 13,360, 13,760 ≤ f ≤ 14,010	-3,5 (see note 6)
12,660 ≤ f ≤ 13,110, 14,010 ≤ f ≤ 14,460	-5 (see note 6)
13,553 ≤ f ≤ 13,567	42 (see note 3) or 60 (see notes 2 and 3)
27,095	42
26,995, 27,045, 27,095, 27,145, 27,195 (see note 8)	100 mW

For the frequency ranges 9 kHz to 135 kHz, the following additional restrictions apply to limits above 42 dB μ A/m:

- for loop coil antennas with an area $\geq 0,16$ m² this table and table B.1 with the antenna limitations apply;

NOTE 1: - for loop coil antennas with an area between 0,05 m² and 0,16 m² table B.1

applies with a correction factor. The limit is: table value + 10 \times log (area/0,16 m²);

- for loop coil antennas with an area < 0,05 m² the limit is 10 dB below table

B.1.

NOTE 2: For RFID (incl. NFC) and EAS applications only.

NOTE 3: Spectrum mask limit, see annex I.

NOTE 4: For further information see annex G.

Limit is 42 dB μ A/m for the following spot frequencies:

NOTE 5: 60 kHz \pm 250Hz, 66,6kHz \pm 750Hz, 75kHz \pm 250Hz, 77,5kHz \pm 250Hz, and 129.1kHz \pm 500Hz.

NOTE 6: Only in conjunction with spectrum mask, see annex I.

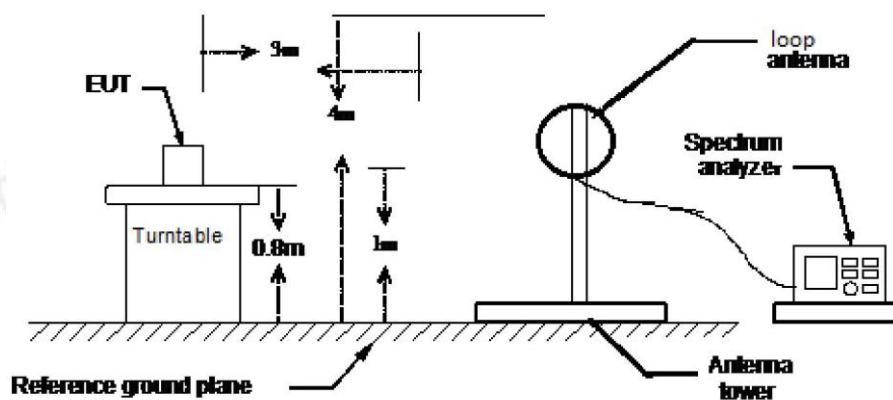
NOTE 7: The frequency range 6,765 MHz-6,795 MHz is not a harmonised ISM frequency band according article 5.138 of the ITU Radio Regulations [i.13].

NOTE 8: Center frequencies for channelized systems by using ≤ 10 kHz bandwidth.

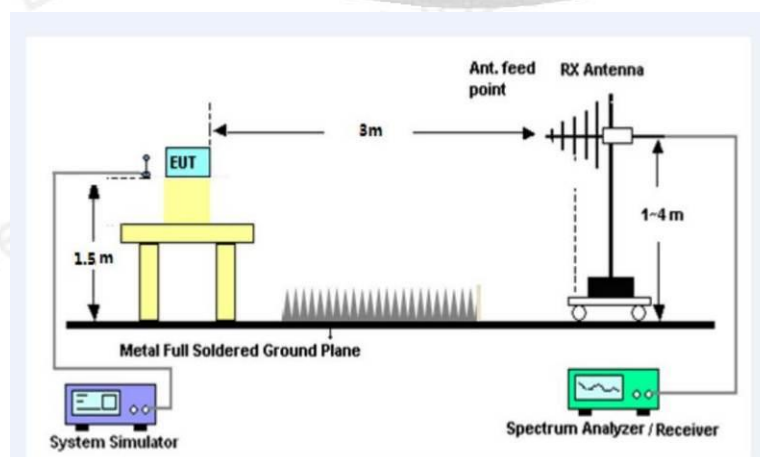
NOTE 9: The limit is valid in the range 984 kHz - 7 484 kHz for Transmitting only on receipt of a Balise /Eurobalise tele-powering signal from a train.

5.2 TEST CONFIGURATION

Below 30MHz



30MHz-1GHz

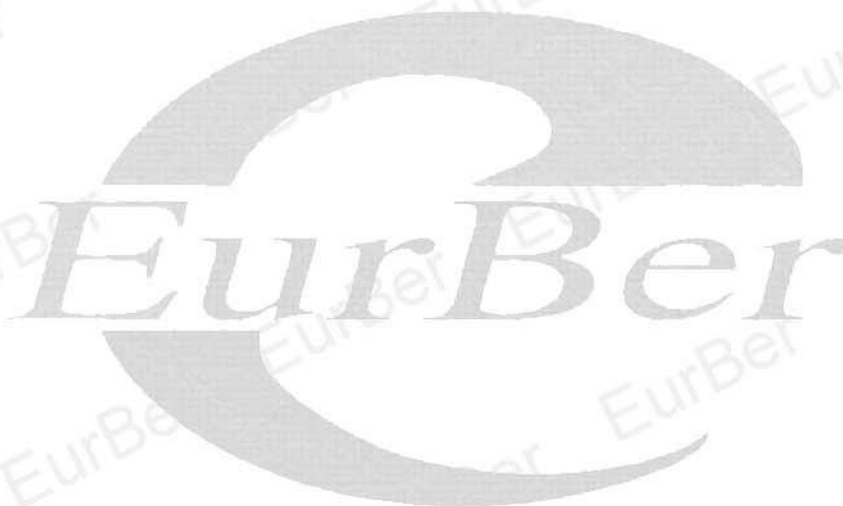


5.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.4 for the measurement method.

5.4 TEST RESULTS

Frequency	Corrected Amplitude	Corrected Amplitude	Limit	Margin
	H-field(3m)	H-field(10m)	(10m)	
MHz	dBμA/m	dBμA/m	dBμA/m	dB
13.56	-2.69	-25.79	42	-67.79
Remark:Annex F.2 ,H3m = H10m +C3(~23.1dB)				
Remark:Annex F.2 ,H10m = H3m -C3(~23.1dB)				



6. TRANSMITTER RF CARRIER CURRENT

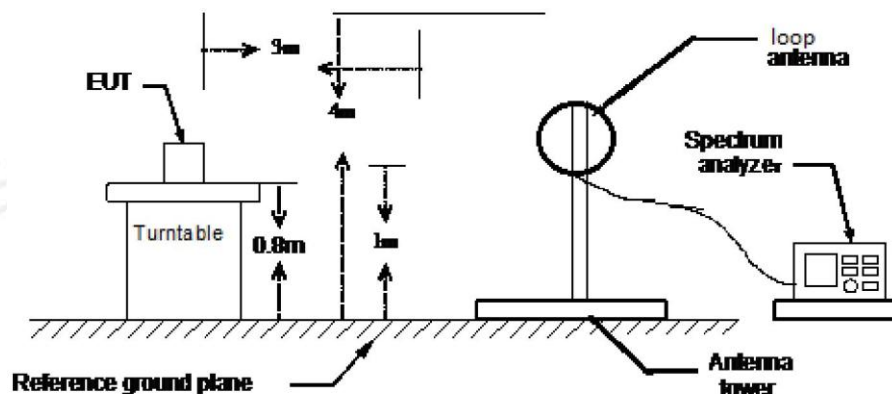
6.1 LIMIT

ETSI EN 300 330 (V2.1.1) Sub-clause 4.3.5.3

The limit for the RF carrier current multiplied with the antenna area for Product Class 3 Large size loop transmitters is given in table 3.

Frequency range (MHz)	RF carrier current \times antenna area, dBAm ²
$0,009 \leq f < 0,135$	40 descending 3 dB/oct above 30 kHz (see note)
NOTE: Limit is 10 dBAm ² for the following spot frequencies: 60kHz \pm 250Hz, 75kHz \pm 250Hz, 77,5kHz \pm 250Hz and 129,1kHz \pm 500Hz.	

6.2 TEST CONFIGURATION



6.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.5 for the measurement method.

6.4 TEST RESULT

Note: not applicable.

7. TRANSMITTER RADIATED E-FIELD

7.1 LIMIT

In the frequency range 9 kHz to 4,78 MHz, the limits of H_{ef} follow the H-fields limits, H_f , as given in clause 4.3.4.3, table 2 with an additional correction factor C. The factor given below is specific for a 10 m measuring distance.

The limit $H_{ef} = H_f + C$ where:

$C = 20 \times \log(f_c / 4,78 \times 10^6)$ dB;

and where:

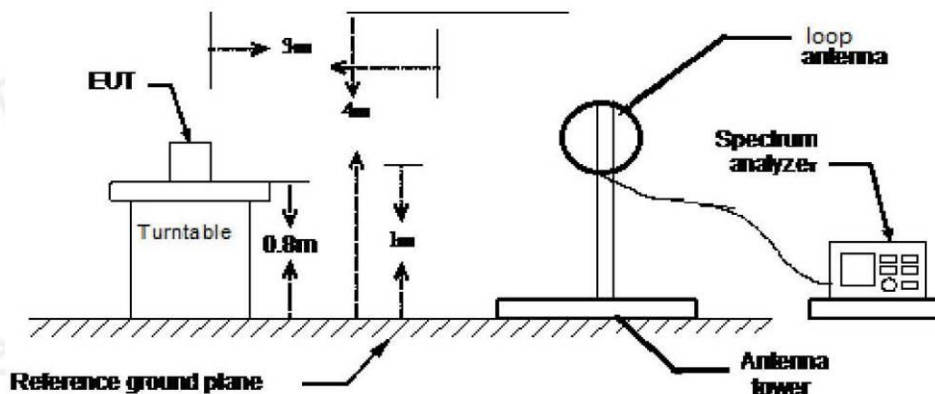
f_c is the carrier frequency in Hz.

For a graphical representation of the correction factor C see annex D.

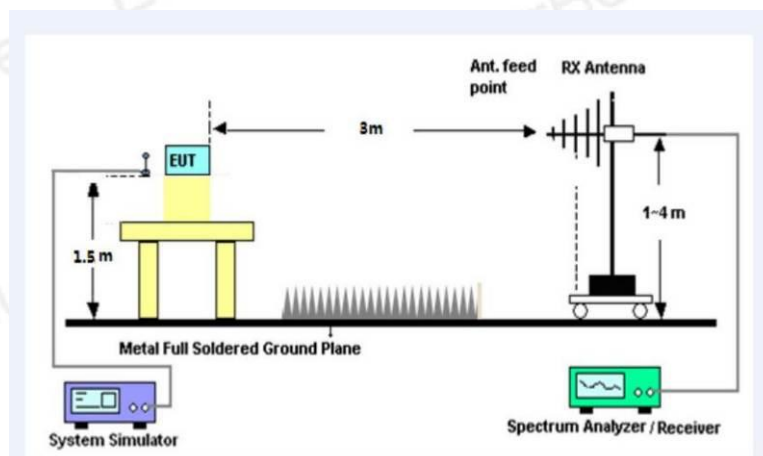
In the frequency range 4,78 MHz to 25 MHz limits are identical to the limits in clause 4.3.4.3, table 2, without any correction factor.

7.2 TEST CONFIGURATION

Below 30MHz



30MHz-1GHz

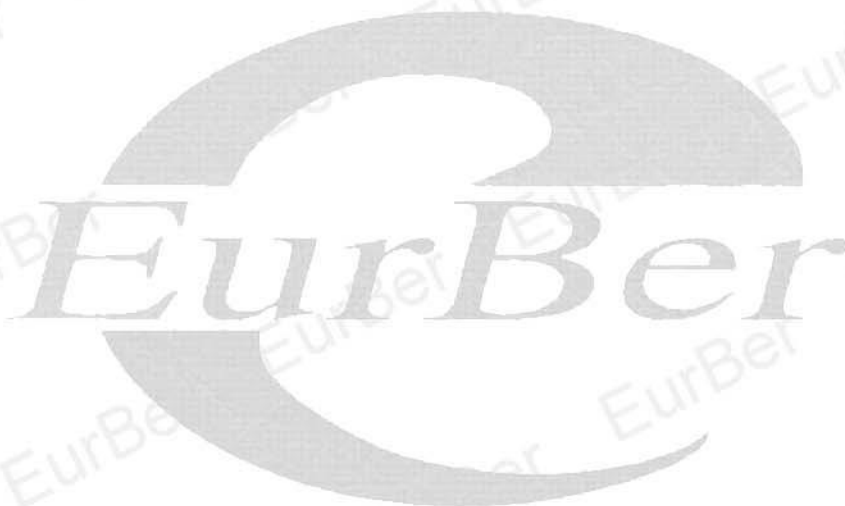


7.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.6 for the measurement method.

7.4 TEST RESULT

Note: not applicable.



8. TRANSMITTER CONDUCTED SPURIOUS EMISSIONS

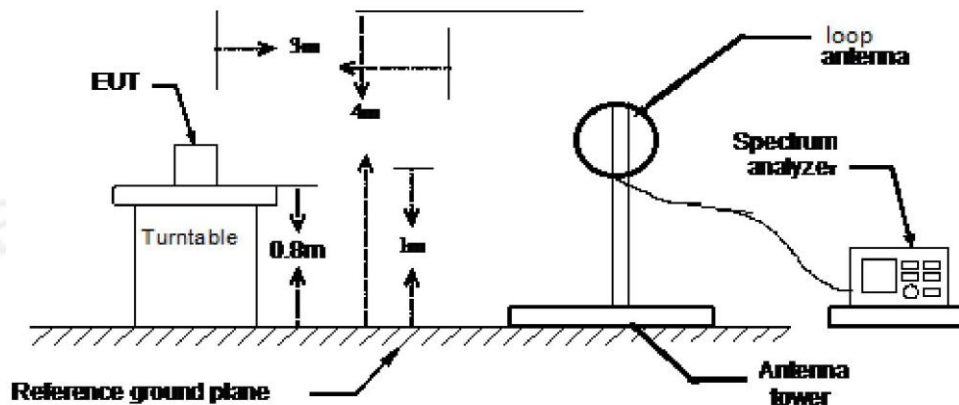
8.1 LIMIT

The limit for I_s will be derived from the below formula with the existing limits of H_c (see clause 4.3.4), H_s (see clause 4.3.8) and I_c (see clause 4.3.5).

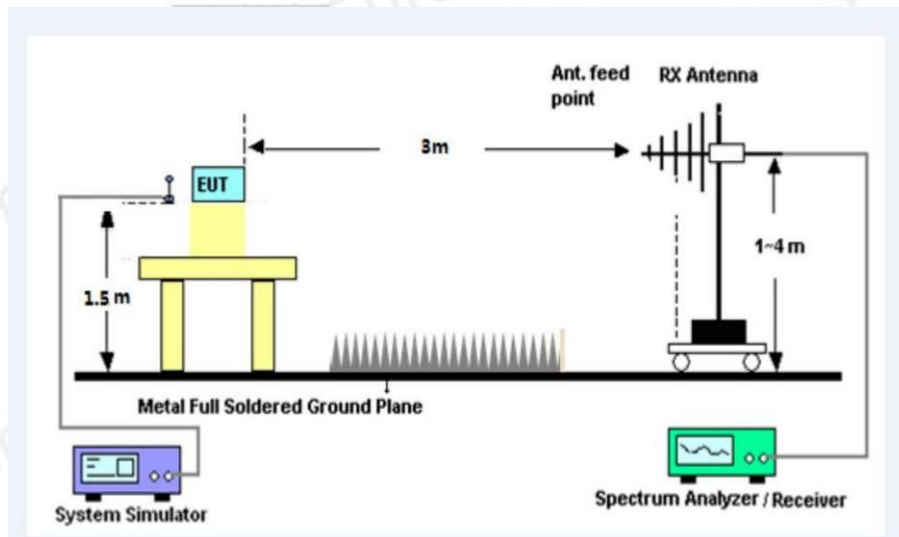
$$(I_c - I_s) = (H_c - H_s)$$

8.2 TEST CONFIGURATION

Below 30MHz



30MHz-1GHz

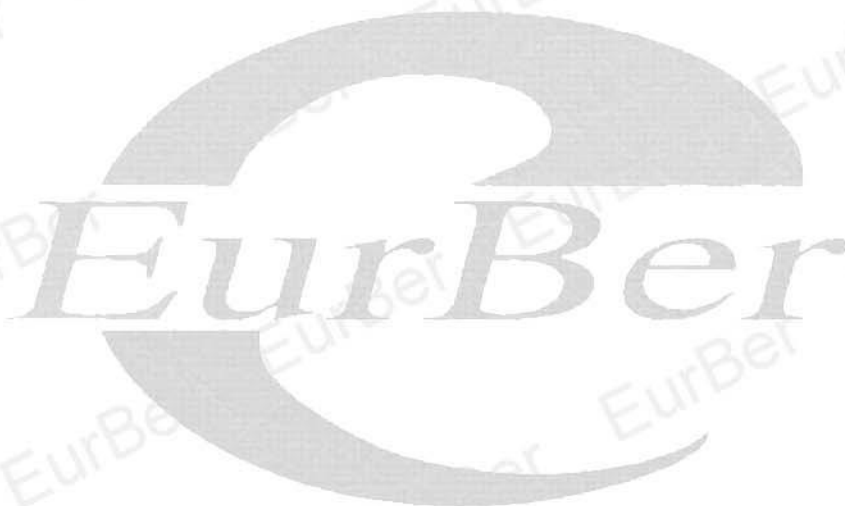


8.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.7 for the measurement method.

8.4 TEST RESULT

Note: not applicable.



9. TRANSMITTER RADIATED SPURIOUS DOMAIN EMISSION

9.1 LIMIT

ETSI EN 300 330 (V2.1.1) sub-clause 4.3.8.3/4.3.9.3 Limit below 30MHz

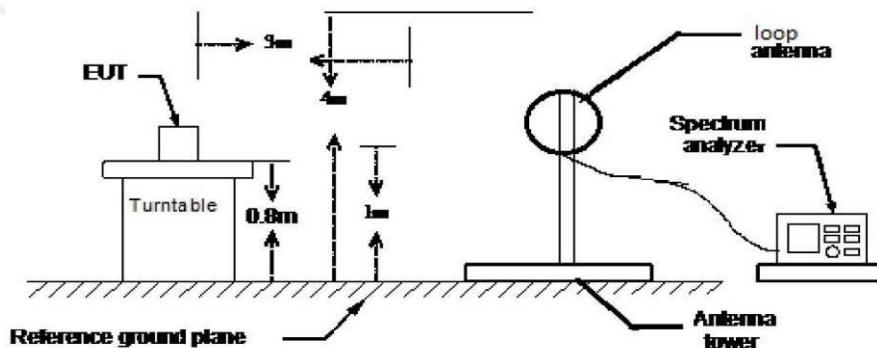
State	Frequency $9 \text{ kHz} \leq f < 10 \text{ MHz}$	Frequency $10 \text{ MHz} \leq f < 30 \text{ MHz}$
Operating	27 dB μ A/m at 9 kHz descending 3 dB/oct	-3,5 dB μ A/m
Standby	5,5 dB μ A/m at 9 kHz descending 3 dB/oct	-25 dB μ A/m

Limit above 30MHz

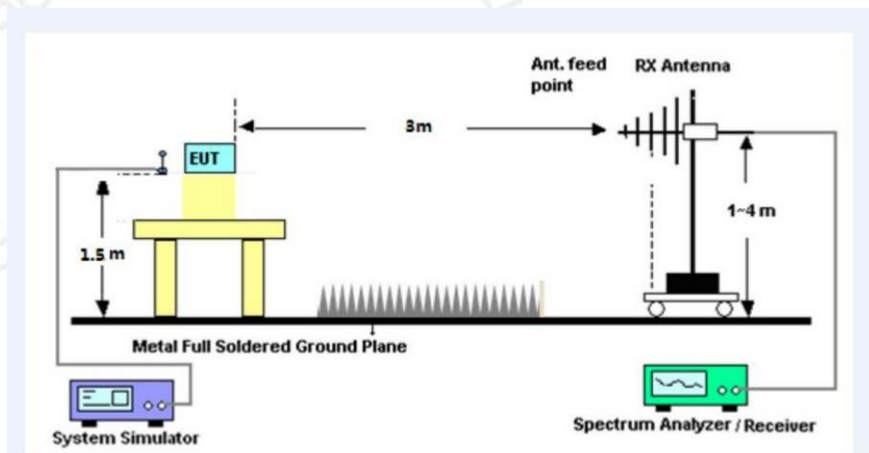
State	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies between 30 MHz to 1 000 MHz
Operating	4nW(-54dBm)	250nW(-36dBm)
Standby	2nW(-57dBm)	2nW(-57dBm)

9.2 TEST CONFIGURATION

Below 30MHz



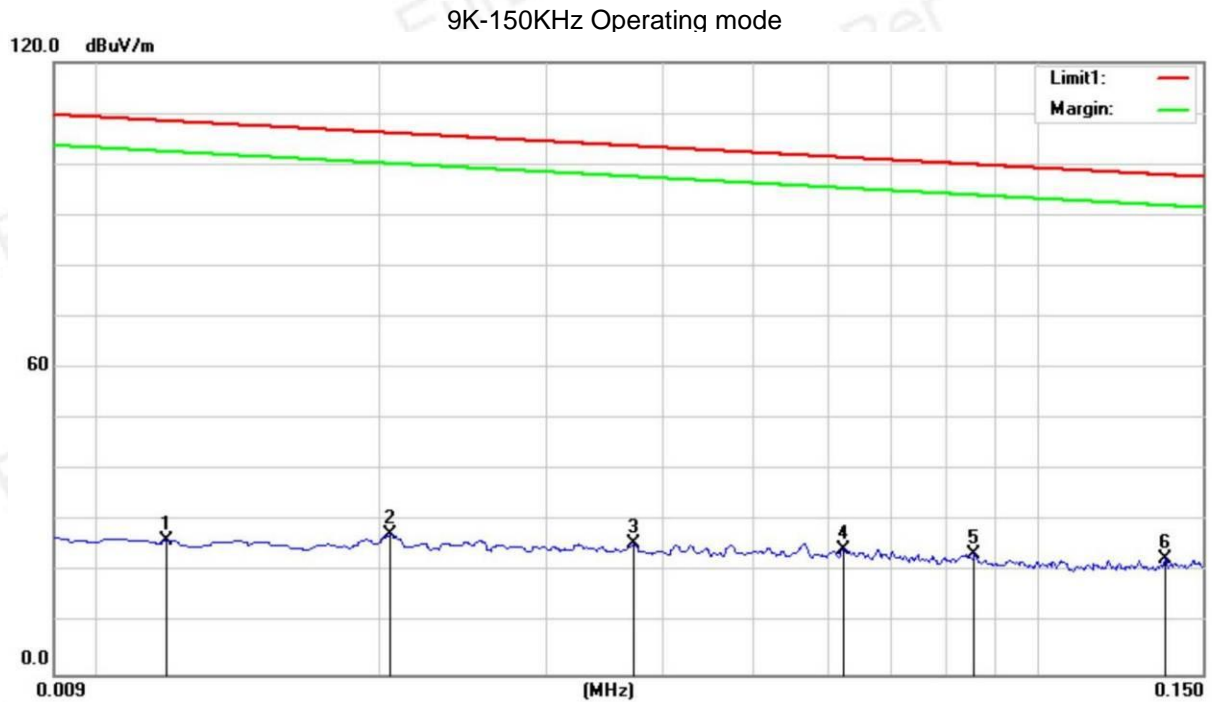
30MHz-1GHz



9.3 TEST PROCEDURE

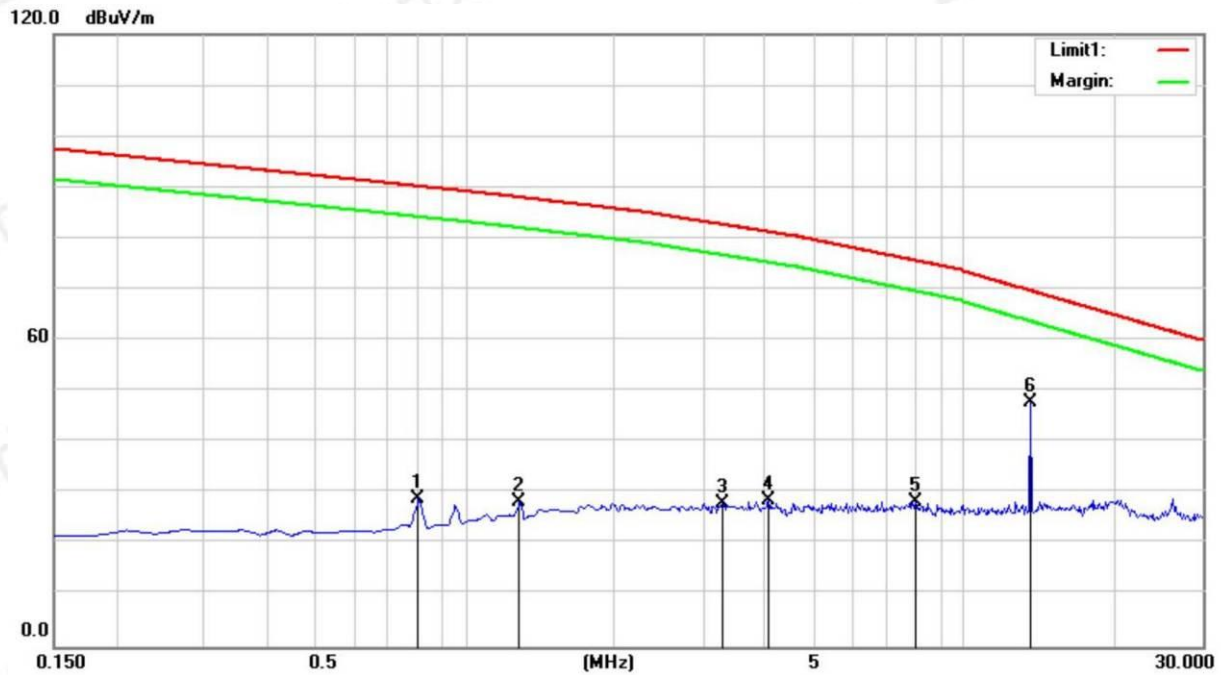
1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.8&6.2.9 for the measurement method.

9.4 TEST RESULT



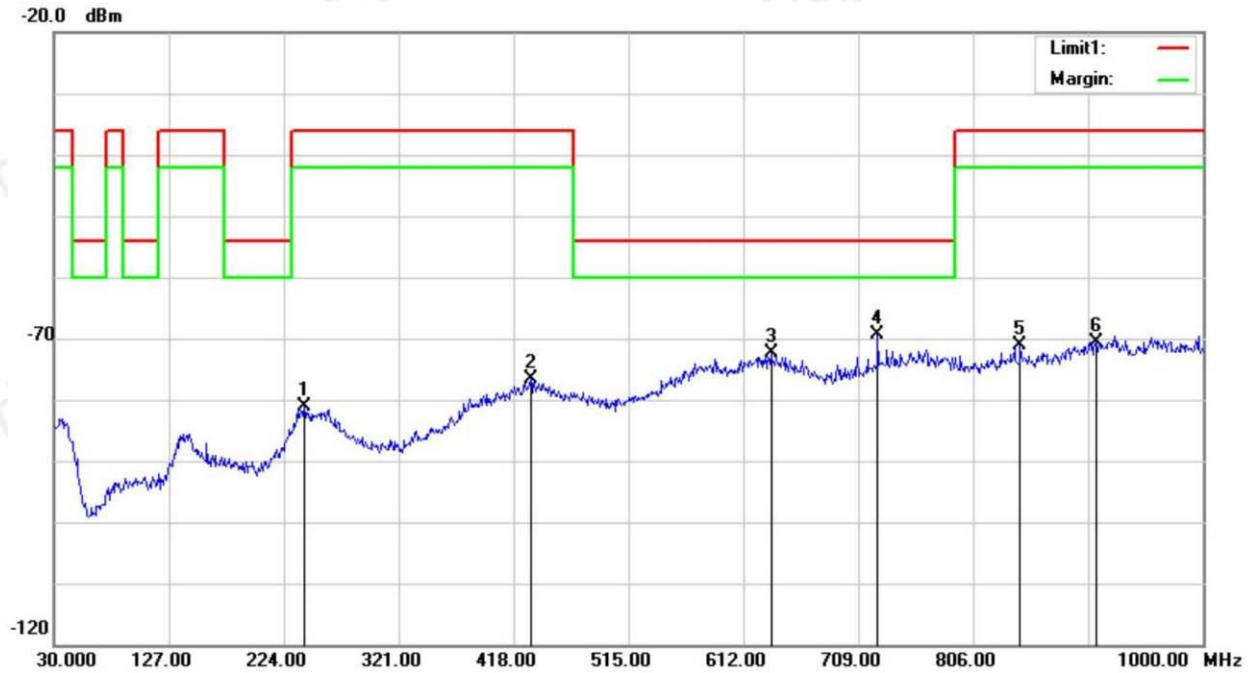
No.	Frequency (KHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	0.0119	6.79	19.51	26.3	-25.2	56.99	-82.19	peak
2	0.0205	7.24	20.09	27.33	-24.17	54.64	-78.81	peak
3	0.0372	5.87	19.76	25.63	-25.87	52.06	-77.93	peak
4	0.0623	5.42	19.16	24.58	-26.92	49.83	-76.75	peak
5	0.0858	5.17	18.28	23.45	-28.05	48.44	-76.49	peak
6	0.137	5.06	17.53	22.59	-28.91	46.42	-75.33	peak

150K-30MHz Operating mode



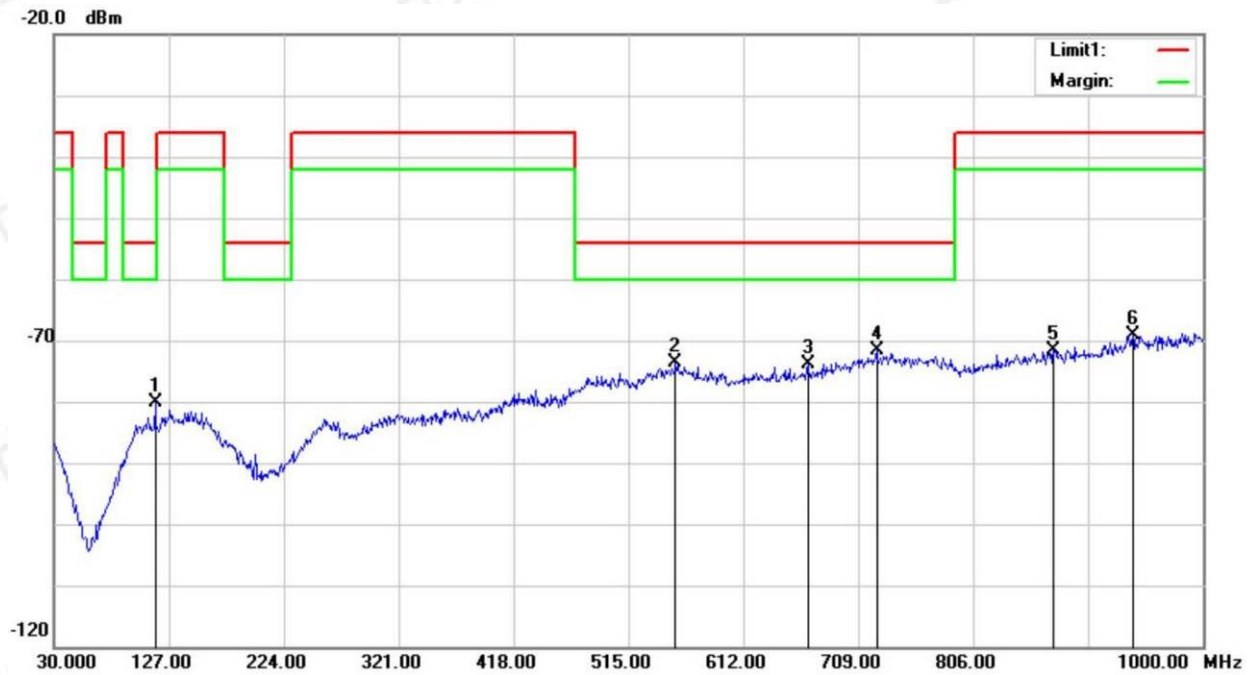
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	0.8067	8.76	20.28	29.04	-22.46	38.69	-61.15	peak
2	1.2843	8.22	20.26	28.48	-23.02	36.55	-59.57	peak
3	3.2843	7.86	20.19	28.05	-23.45	31.20	-54.65	peak
4	4.0603	8.25	20.41	28.66	-22.84	29.76	-52.60	peak
5	8.0006	8.03	20.32	28.35	-23.15	24.12	-47.27	peak
6	13.5526	26.93	20.98	47.91	-3.59	18.26	-21.85	peak

30MHz-1GHz Operating mode Horizontal



No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	241.4600	-78.09	-3.05	-81.14	-36.00	-45.14	peak
2	432.5500	-78.34	1.64	-76.70	-36.00	-40.70	peak
3	635.2800	-78.34	5.98	-72.36	-54.00	-18.36	peak
4	725.4900	-74.63	5.30	-69.33	-54.00	-15.33	peak
5	845.7700	-77.56	6.33	-71.23	-36.00	-35.23	peak
6	909.7900	-79.12	8.55	-70.57	-36.00	-34.57	peak

Vertical



No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	115.3600	-75.50	-4.68	-80.18	-54.00	-26.18	peak
2	554.7700	-78.57	4.91	-73.66	-54.00	-19.66	peak
3	666.3200	-78.29	4.40	-73.89	-54.00	-19.89	peak
4	724.5200	-78.68	6.96	-71.72	-54.00	-17.72	peak
5	873.9000	-78.83	7.30	-71.53	-36.00	-35.53	peak
6	940.8300	-78.53	9.52	-69.01	-36.00	-33.01	peak

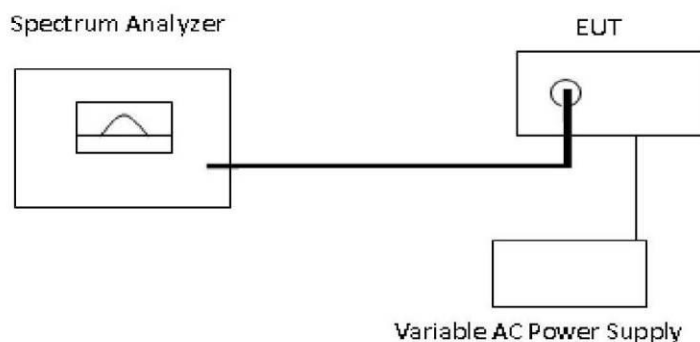
10. TRANSMITTER FREQUENCY STABILITY

10.1 LIMIT

The equipment shall either:

1. remain in the Operating Channel without exceeding any applicable limits (e.g. Duty Cycle); or
2. reduce its effective radiated power below the Spurious Emission limits without exceeding any applicable limits (e.g. Duty Cycle); or
3. shut down, (e.g. no emission above EMC levels).

10.2 TEST CONFIGURATION



10.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.10 for the measurement method.

10.4 TEST RESULT

Note: not applicable.

11. RECEIVER SPURIOUS EMISSIONS

11.1 LIMIT

ETSI EN 300 330 (V2.1.1) sub-clause 4.4.2.3

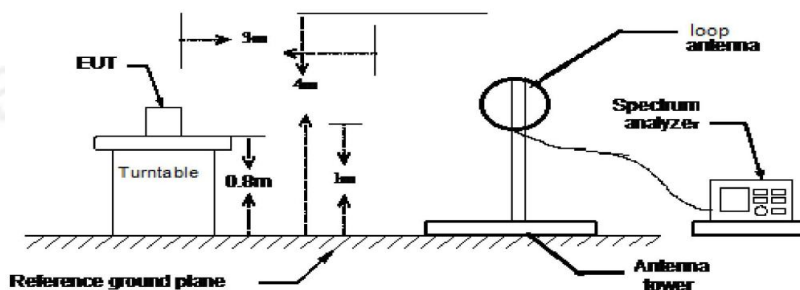
The spurious components below 30 MHz shall not exceed the generated H-field dB μ A/m values at 10 m according to table 8.

Frequency $9 \text{ kHz} \leq f < 10 \text{ MHz}$	Frequency $10 \text{ MHz} \leq f < 30 \text{ MHz}$
5,5 dB μ A/m at 9 kHz descending 3 dB/oct	-25 dB μ A/m

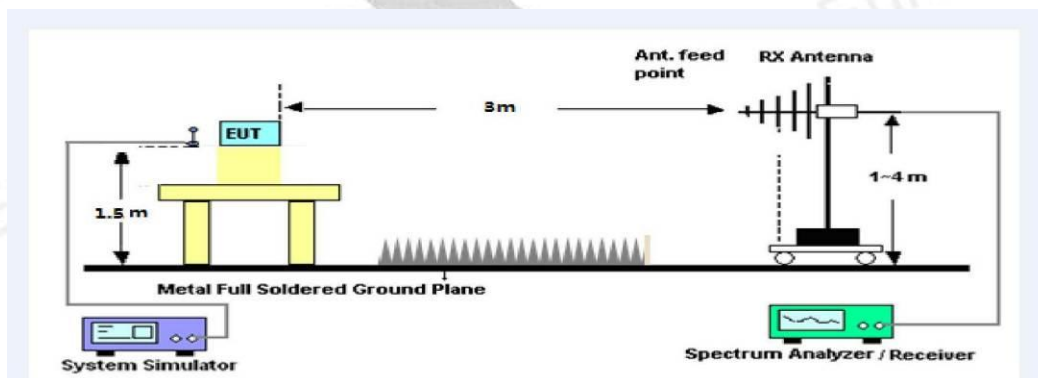
The spurious components above 30 MHz measured values shall not exceed 2 nW.

11.2 TEST CONFIGURATION

Below 30MHz



30MHz-1GHz



11.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.3.1 for the measurement method.

11.4 TEST RESULT

Note: not applicable.

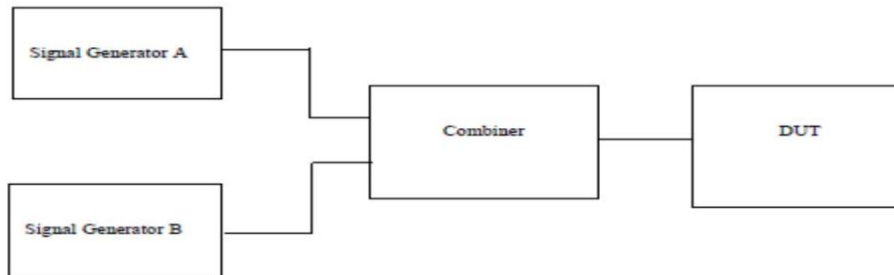
12. ADJACENT CHANNEL SELECTIVITY

12.1 LIMIT

The receiver selectivity of the equipment under specified conditions shall not be less than stated in table 9

Channel spacing \leq 25 kHz	Channel spacing $>$ 25 kHz
60dB	70dB

12.2 TEST CONFIGURATION



12.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.3.2 for the measurement method.

12.4 TEST RESULT

Note: the EUT do not belong to channelized systems, this test is not applicable

13. RECEIVER BLOCKING OR DESENSITIZATION

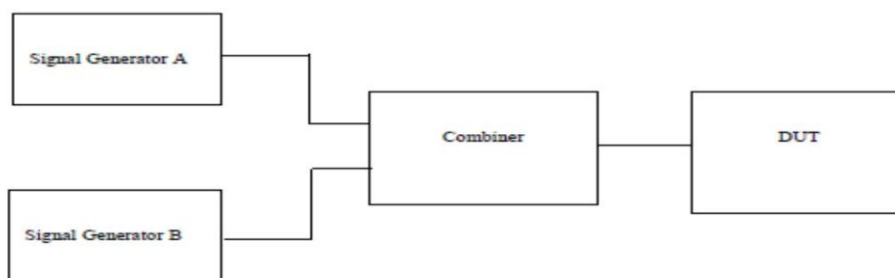
13.1 LIMIT

The blocking ratio, for any frequency within the specified ranges, shall not be less than the values given in table 10, except at frequencies on which spurious responses are found. The limit value is determined by a reference limit (Ref) multiplied by a correction factor depending of the appropriate receiver category

Generator B frequency offset, $ f_A - f_B $, either by a) or b) whichever is greater (see note 3)			Limit (dB)
a) per clause 7.4, indent a) $f_A < 500$ kHz		b) per clause 7.4, indent b) value of NB, see below	
$f_A < 500$ kHz	$f_A \geq 500$ kHz		
± 100 kHz	± 500 kHz	2	Reference Limit $\times 1/2$ (see note 2)
± 200 kHz	± 1 MHz	4	Reference Limit $\times 2/3$ (see note 2)
± 300 kHz	± 2 MHz	8	Reference Limit $\times 5/6$ (see note 2)
± 500 kHz	± 5 MHz	20	Reference Limit (see note 1)

NOTE 1: Reference limit (Ref) = 30 dB at 9 kHz increasing with 10 dB/decade to 65,2 dB at 30 MHz.
NOTE 2: The limit is a fractional dB value of the reference limit.
NOTE 3: Generator B frequencies below 9 kHz are not specified.

13.2 TEST CONFIGURATION



13.3 TEST PROCEDURE

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5&5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.3.3 for the measurement method.

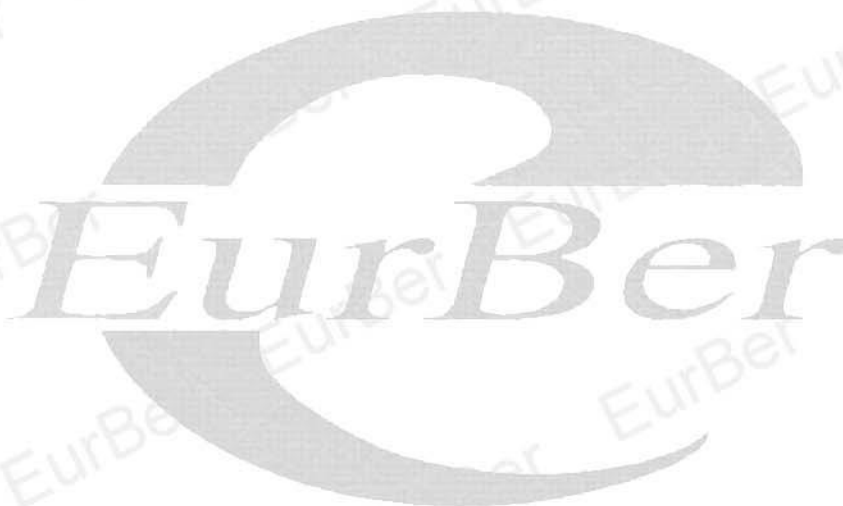
13.4 TEST RESULT

Note: not applicable.

14. Uncertainty Evaluation

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 1.197\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.896\text{dB}$
3	All emissions, radiated below 1GHz	$\pm 2.59\text{dB}$
4	All emissions, radiated 1GHz-18GHz	$\pm 3.32\text{dB}$
5	All emissions, radiated > 18G	$\pm 3.89\text{dB}$

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



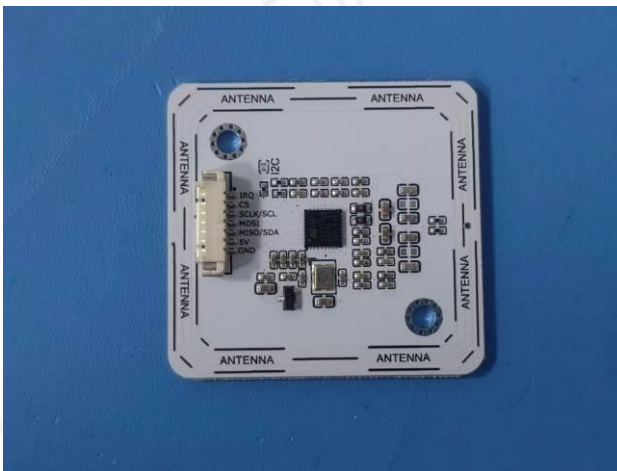
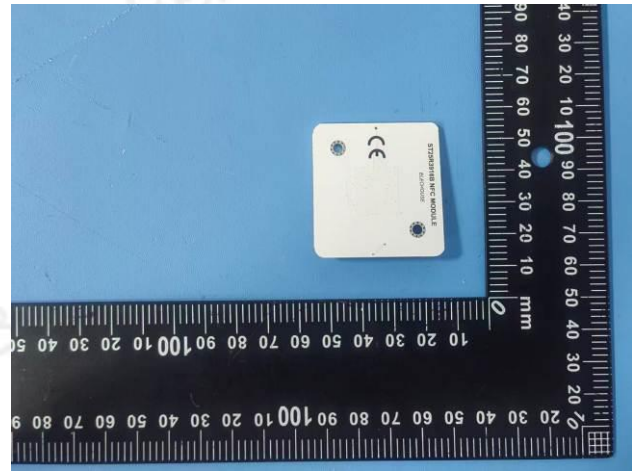
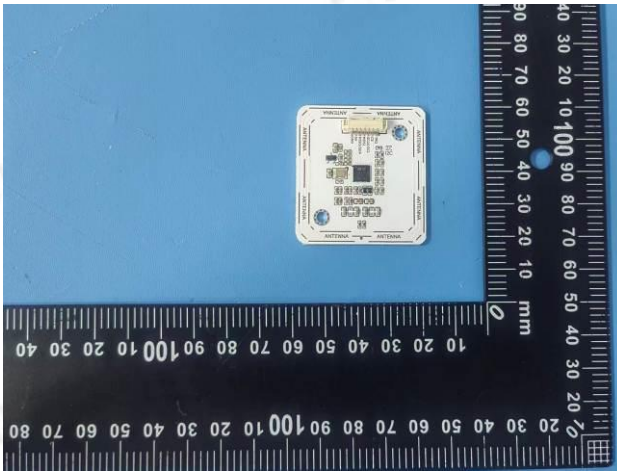
15. List of Measuring Equipment

RF Radiation Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2026.02.24	2027.02.23
Pre-Amplifier(0.1 M-3GHz)	EM	EM330	060665	2026.02.22	2027.02.21
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2026.02.22	2027.02.21
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Bilog Antenna	TESEQ	CBL6111D	34678	2026.02.22	2027.02.21
Active loop Antenna	ZHINAN	ZN30900C	16035	2026.02.25	2027.02.24
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	EM	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC Power Supply	Zhaoxin	RXN 605D	20R605D11010081	N/A	N/A
Signal Generator	Agilent	N5182A	MY46240556	2026.02.253	2027.02.21
Wireless Communications Test Set	R&S	CMW 500	117239	2026.02.25	2027.02.21
Temperature& Humidity test chamber	Safety test	AG80L	171200018	2026.02.22	2027.02.21
Attenuator	Agilent	8494B	DC-18G	2026.02.25	2027.02.24
Test SW	EMC Test Software	15.2.0.339			

Note:

1. Test equipment calibration is traceable to the procedure of ISO17025.
2. N/A: No Calibration Required.

16. Photos of the EUT



The photographs show the representative tested sample. The ST25R3916B NFC Module and ST25R3916 NFC Module use the same PCB layout, antenna design, matching network design, power architecture, connector, host interface, mechanical structure and intended use, and differ only in the NFC reader IC. The previous ST25R3916 PCB appearance/version is not covered.

-----End of the report-----