

APPLICATION CERTIFICATION

On Behalf of
Formation Limited

Weather Station
Model No.: STX7500

FCC ID: UU7DCRX4

Prepared for : Formation Limited
Address : Suit 915-918, 9/F Corporation Square, 8 Lam Lok St.
Kowloon Bay, Kowloon, Hong Kong

Prepared by : ACCURATE TECHNOLOGY CO. LTD
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Report Number : ATE20070809
Date of Test : April 05, 2007
Date of Report : April 12, 2007

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Test Report Certification

Applicant : Formation Limited
Manufacturer : Carrin Electronics Co., Ltd.
EUT Description : Weather Station
(A) MODEL NO.: STX7500
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: DC 6.0V (AA Battery ×4)

Measurement Procedure Used:

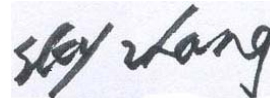
FCC Rules and Regulations Part 15 Subpart C Section 15.209: 2006 & ANSI 63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.209 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : April 05, 2007

Prepared by :



(Engineer)

Reviewer :



(Quality Manager)

Approved & Authorized Signer :



(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Weather Station

Model Number : STX7500

Memo : This device is a receiver

Power Supply : DC 6.0V(AA Battery ×4)

Applicant : Formation Limited
Address : Suit 915-918, 9/F Corporation Square, 8 Lam Lok St.
Kowloon Bay, Kowloon, Hong Kong

Manufacturer : Carrin Electronics Co., Ltd.
Address : Unit 2105-2106, Tower A, Regent Centre, 63 Wo Yi Hop Rd., Kwai Chung, N.T., Hong Kong

Date of sample received : April 02, 2007
Date of Test : April 05, 2007

1.2. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004
Accredited by FCC, May 10, 2004
The Certificate Registration Number is 253065
Accredited by Industry Canada, May 18, 2004
The Certificate Registration Number is IC 5077

Name of Firm : ACCURATE TECHNOLOGY CO. LTD
Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.
Science & Industry Park, Nanshan, Shenzhen, Guangdong
P.R. China

1.3. Measurement Uncertainty

Conducted emission expanded uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 4.12dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.31.2008
EMI Test Receiver	Rohde&Schwarz	ESI26	838786/013	01.24.2008
Bilog Antenna	Schwarzbeck	VULB9163	9163-194	03.31.2008
Bilog Antenna	Chase	CBL6112B	2591	01.24.2008
Horn Antenna	Rohde&Schwarz	HF906	100013	01.24.2008
Spectrum Analyzer	Anritsu	MS2651B	6200238856	03.31.2008
Pre-Amplifier	Agilent	8447D	2944A10619	03.31.2008

3. RADIATED EMISSION FOR FCC PART 15 SECTION 15.209(A)

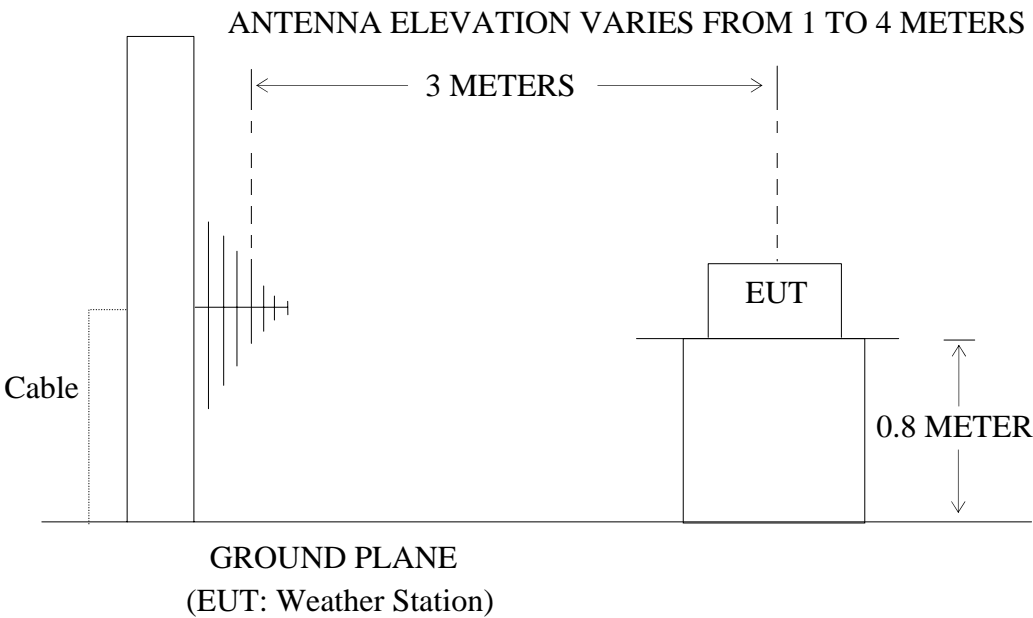
3.1. Block Diagram of Test Setup

3.1.1. Block diagram of connection between the EUT and simulators



(EUT: Weather Station)

3.1.2. Anechoic Chamber Test Setup Diagram



3.2. The Field Strength of Radiation Emission Measurement Limits

3.2.1. Radiation Emission Measurement Limits According to Section 15.209(a)

Frequency (MHz)	Limit,		The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBμV/m)	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	

Above 960	500	54	final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
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3.3.Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.3.1. Outdoor Sensor (EUT)

Model Number : STX7500
 Serial Number : N/A
 Manufacturer : Carrin Electronics Co., Ltd.

3.4.Operating Condition of EUT

3.4.1. Setup the EUT and simulator as shown as Section 3.1.

3.4.2. Turn on the power of all equipment.

3.4.3. Let the EUT work in measuring modes (RX) measure it.

3.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI 63.4 on radiated emission measurement.

The bandwidth of test receiver (R&S ESI26) is set at 120KHz in 30-1000MHz, and 1MHz in 1000-5000MHz.

The frequency range from 30MHz to 5000MHz is checked.

3.6. The Field Strength of Radiation Emission Measurement Results

PASS.

The frequency range 30MHz to 5000MHz is investigated.

Date of Test:	April 05, 2007	Temperature:	26°C
EUT:	Weather Station	Humidity:	57%
Model No.:	STX7500	Power Supply:	DC 6.0V(AA Battery ×4)
Test Mode:	RX	Test Engineer:	Andy

Below 1GHz:

Frequency (MHz)	Reading (dBμV/m)	Factor Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dBμV/m)	Polarization
	QP	(dB)	QP	QP	QP	
436.272	56.9	-16.1	40.8	46	5.2	Horizontal
872.348	44.9	-12.1	32.8	46	13.2	
436.476	49.8	-16.1	33.7	46	12.3	Vertical
867.184	44.5	-12.1	32.4	46	13.6	

Above 1GHz:

Frequency (MHz)	Reading (dBμV/m)		Factor Corr.	Result (dBμV/m)		Limit (dBμV/m)		Margin (dBμV/m)		Polarization
	AV	PEAK	(dB)	AV	PEAK	AV	PEAK	AV	PEAK	
1205.771	44.7	53.7	-7.6	37.1	46.1	54	74	16.9	27.9	Horizontal
1301.657	43.4	52.3	-7.2	36.2	45.1	54	74	17.8	28.9	
1193.511	46.5	56.1	-7.6	38.9	48.5	54	74	15.1	25.5	Vertical
1307.971	48.9	59.1	-7.2	41.7	51.9	54	74	12.3	22.1	

Note:

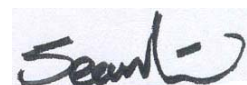
1. The spectral diagrams in appendix 1 display the measurement of peak values with corrected factors counted.

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

Reviewer :

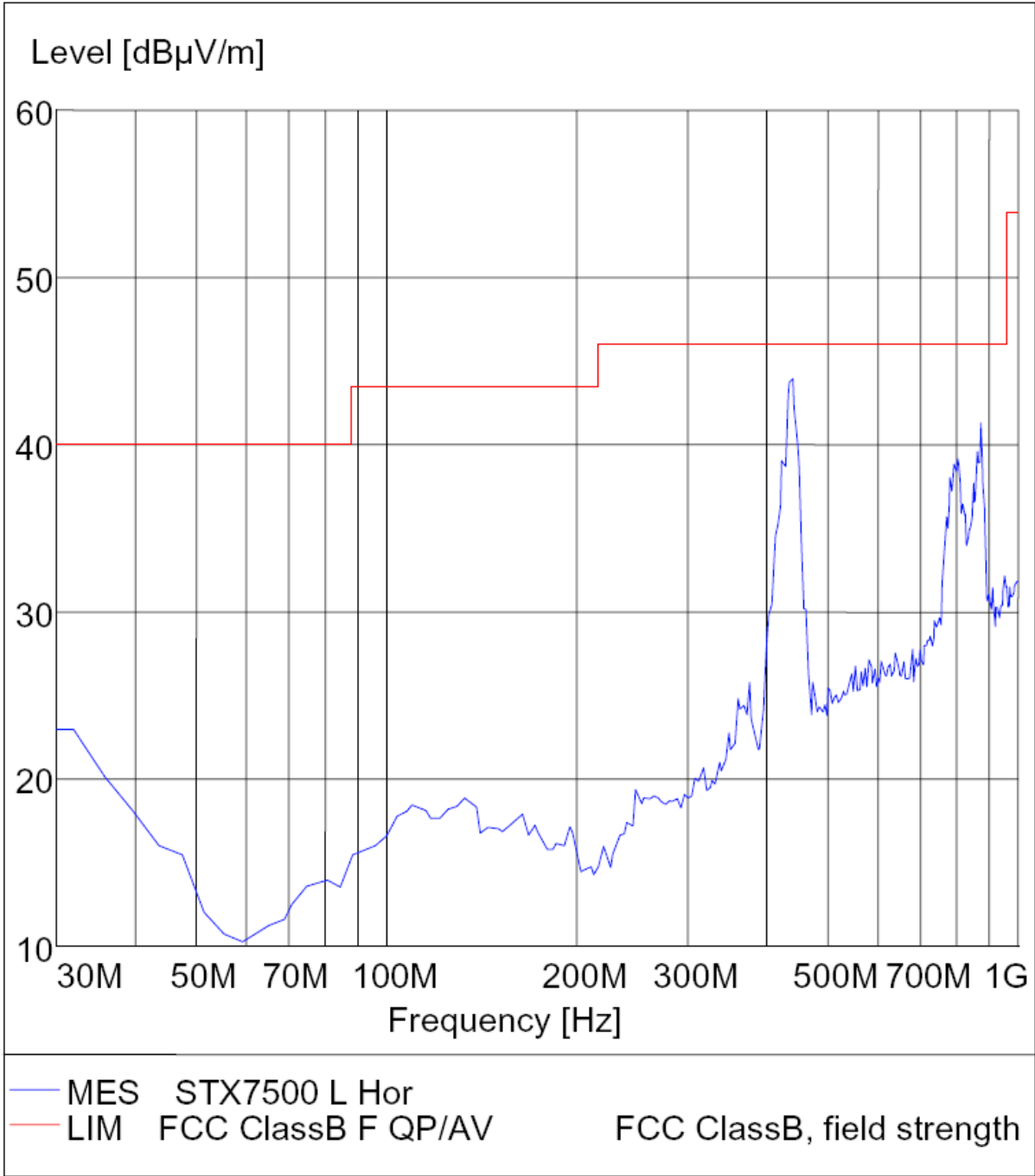


APPENDIX I (Test Curves)

Radiated Disturbance

FCC Part 15

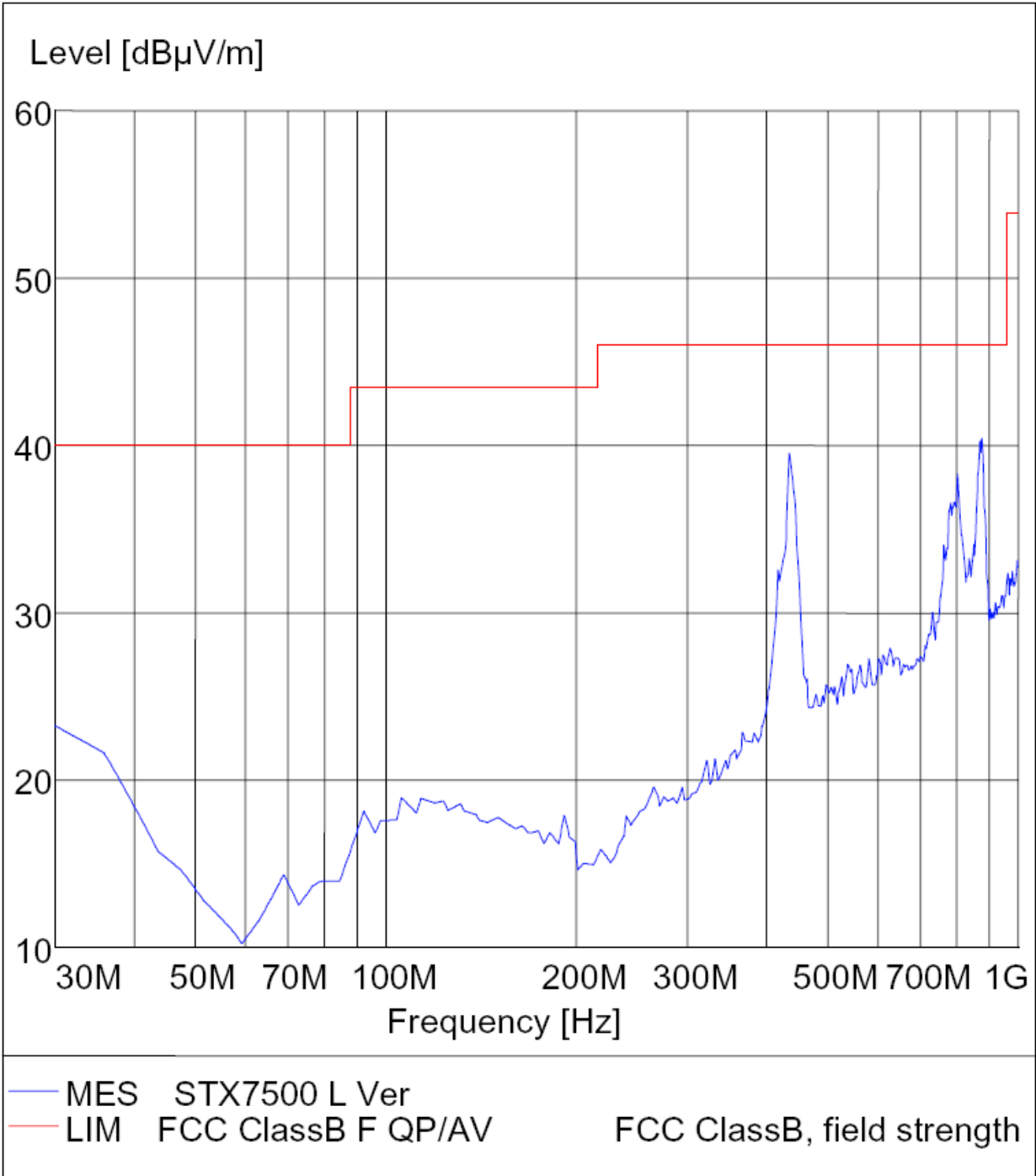
EUT: Weather Station M/N: STX7500
Manufacturer: Carrin Electronics Co., Ltd.
Operating Condition: RX
Test Site: ATC EMC Lab.SAC
Operator: Andy
Test Specification: Horizontal
Comment : DC 6.0V



Radiated Disturbance

FCC Part 15

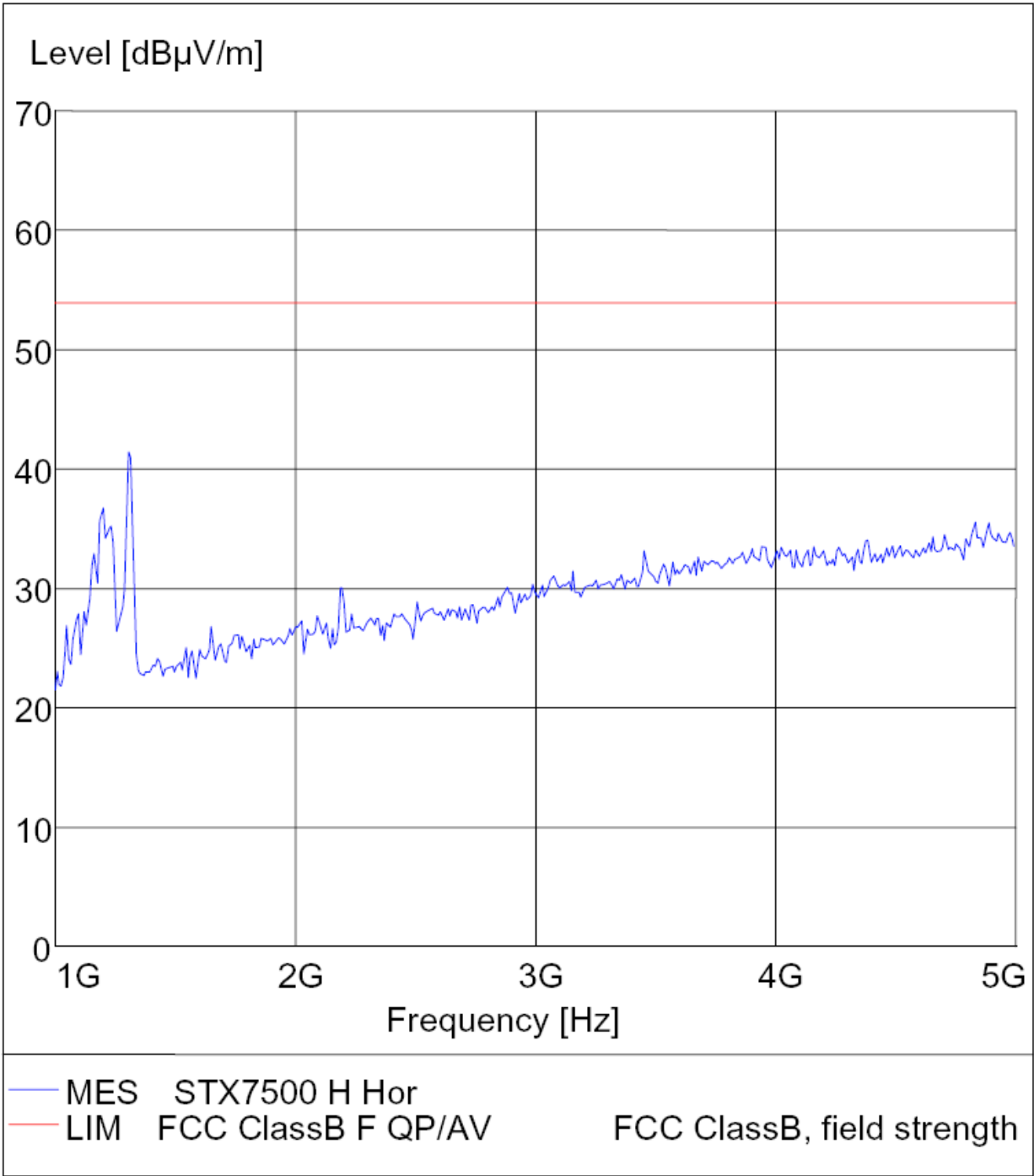
EUT: Weather Station M/N: STX7500
Manufacturer: Carrin Electronics Co., Ltd.
Operating Condition: RX
Test Site: ATC EMC Lab.SAC
Operator: Andy
Test Specification: Vertical
Comment : DC 6.0V



Radiated Disturbance

FCC Part 15

EUT: Weather Station M/N: STX7500
Manufacturer: Carrin Electronics Co., Ltd.
Operating Condition: RX
Test Site: ATC EMC Lab.SAC
Operator: Andy
Test Specification: Horizontal
Comment : DC 6.0V



Radiated Disturbance

FCC Part 15

EUT: Weather Station M/N: STX7500
Manufacturer: Carrin Electronics Co., Ltd.
Operating Condition: RX
Test Site: ATC EMC Lab.SAC
Operator: Andy
Test Specification: Vertical
Comment : DC 6.0V

