

FCC CERTIFICATION
On Behalf of
SHENZHEN KINGSUN ENTERPRISES CO., LTD.

WIRELESS FM TRANSMITTER
Model No.: CA-292

FCC ID: UYFCA292

Prepared for : SHENZHEN KINGSUN ENTERPRISES CO., LTD.
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Report Number : ATE20081542
Date of Test : August 15 - September 2, 2008
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Test Report Certification

Applicant : SHENZHEN KINGSUN ENTERPRISES CO., LTD.
Manufacturer : SHENZHEN OKKAIDO ELECTRONICS CO., LTD.
EUT Description : WIRELESS FM TRANSMITTER
(A) MODEL NO.:CA-292
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: DC 12V (Powered by Car battery)
or DC 3V (Powered by “AAA” batteries 2×)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.239: 2007 & 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 15.239 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 : August 15 - September 2, 2008

Prepared by : 
(Engineer)

Approved & Authorized Signer : 
(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : WIRELESS FM TRANSMITTER
 Model Number : CA-292

Power Supply : DC 12V (Powered by Car battery)
 or DC 3V (Powered by “AAA” batteries 2×)

Operate Frequency : 88.1M-88.9MHz (step 0.2MHz)

iPod 60G : Manufacturer: Apple
 M/N: A1136
 S/N: 2Z6500GBSZA

Applicant : SHENZHEN KINGSUN ENTERPRISES CO., LTD.
 Address : 25F, CEC Information Building, Xinwen Rd., Shenzhen
 Guangdong, P.R. China

Manufacturer : SHENZHEN OKKAIDO ELECTRONICS CO., LTD.
 Address : A Building, Zhenxing Industrial Park, Jiangjun Road
 Qiuchang Town, Huiyang District, Huizhou City
 Guangdong, P.R. China

Date of sample received : August 12, 2008
 Date of Test : August 15 - September 2, 2008

1.2. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC
 The Registration Number is 752051

Listed by Industry Canada
 The Registration Number is 5077A-2

Accredited by China National Accreditation Committee
 for Laboratories
 The Certificate Registration Number is L3193

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

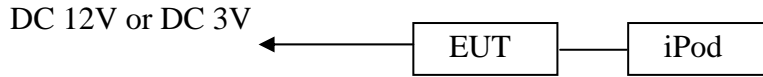
Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.29.2009
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.29.2009
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.29.2009
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	03.31.2009
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2009
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.29.2009
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.20.2008
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.10.2008
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.29.2009
LISN	Schwarzbeck	NLSK8126	8126431	03.29.2009

3. RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(C)

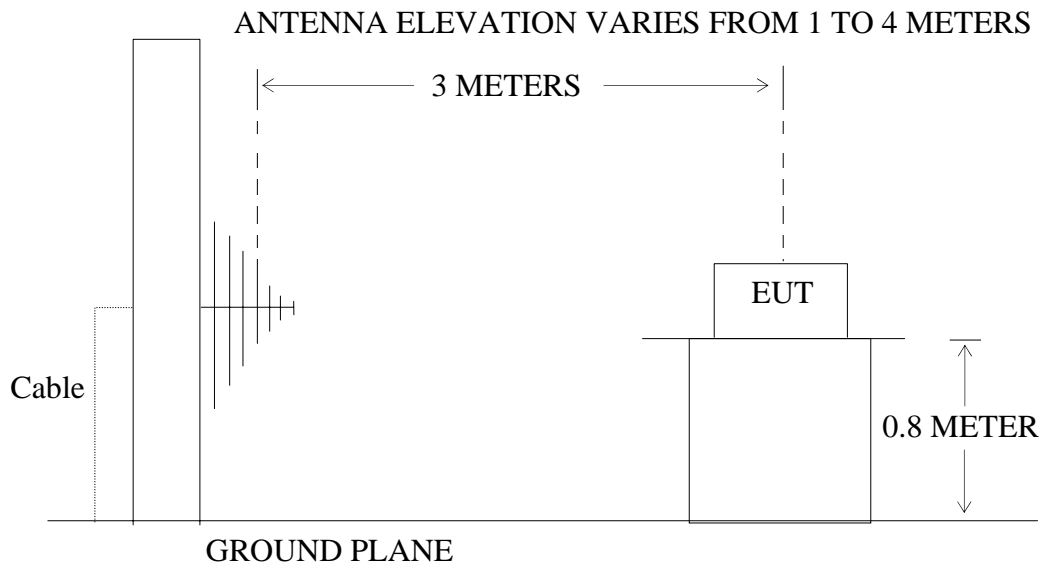
3.1. Block Diagram of Test Setup

3.1.1. Block diagram of connection between the EUT and simulators



(EUT: WIRELESS FM TRANSMITTER)

3.1.2. Anechoic Chamber Test Setup Diagram



(EUT: WIRELESS FM TRANSMITTER)

3.2.The Emission Limit for section 15.239(c)

3.2.1 The field strength of any emissions radiated on any frequency outside of the specified 200kHz band shall not exceed the general radiated emission limits in section 15.209

Radiation Emission Measurement Limits According to Section 15.209

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 final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dB μ V/m)	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	

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. WIRELESS FM TRANSMITTER (EUT)

Model Number : CA-292
 Serial Number : N/A
 Manufacturer : SHENZHEN OKKAIDO 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. FM Transmitter powered by DC 12V.

3.4.3. Let the EUT work in TX modes [Connect EUT audio input 3.5mm jack to iPod headphone jack and ipod playing typical audio signal('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-88.9MHz. We are select 88.1M, 88.5M, 88.9MHz TX frequency to transmitted.

3.4.4. Turn on the power of all equipment. FM Transmitter powered by DC 3V.

3.4.5. Repeat 3.4.3.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. So the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

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 bilog 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 interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 120KHz in 30-1000MHz. The frequency range from 30MHz to 1000MHz is checked. The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

3.6. The Field Strength of Radiation Emission Measurement Results

PASS.

The frequency range 30MHz to 1100MHz is investigated.

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.1MHz</u>	Test Engineer:	<u>Feng</u>

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBμV/m) QP	Margin(dB) QP
Horizontal	176.2162	24.69	14.76	39.45	43.50	-4.05
Horizontal	232.6690	16.01	16.38	32.39	46.00	-13.61
Horizontal	264.3241	19.55	18.66	38.21	46.00	-7.79
Horizontal	352.4323	16.62	20.95	37.57	46.00	-8.43
Horizontal	792.9724	11.16	27.90	39.06	46.00	-6.94
Vertical	176.2162	25.08	14.76	39.84	43.50	-3.66
Vertical	232.6690	14.08	16.38	30.46	46.00	-15.54
Vertical	264.3241	20.66	18.66	39.32	46.00	-6.68
Vertical	616.7567	12.14	25.96	38.10	46.00	-7.90

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.5MHz</u>	Test Engineer:	<u>Feng</u>

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor Corr.(dB)	Result(dBμV/m)	Limits(dBμV/m)	Margin(dB)
		QP		QP		
Horizontal	177.0163	23.43	14.76	38.19	43.50	-5.31
Horizontal	232.6690	15.55	16.38	31.93	46.00	-14.07
Horizontal	265.5242	20.60	18.63	39.23	46.00	-6.77
Horizontal	354.0321	16.72	21.05	37.77	46.00	-8.23
Horizontal	796.5727	10.21	27.87	38.08	46.00	-7.92
Vertical	177.0163	26.29	14.76	41.05	43.50	-2.45
Vertical	232.6690	13.83	16.38	30.21	46.00	-15.79
Vertical	265.5242	21.33	18.63	39.96	46.00	-6.04
Vertical	619.5564	11.81	26.05	37.86	46.00	-8.14

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.9MHz</u>	Test Engineer:	<u>Feng</u>

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor Corr.(dB)	Result(dBμV/m)	Limits(dBμV/m)	Margin(dB)
		QP		QP	QP	QP
Horizontal	177.8163	23.53	14.77	38.30	43.50	-5.20
Horizontal	232.6690	15.00	16.38	31.38	46.00	-14.62
Horizontal	266.7242	18.04	18.50	36.54	46.00	-9.46
Horizontal	800.1725	11.78	27.86	39.64	46.00	-6.36
Vertical	177.8163	26.15	14.77	40.92	43.50	-2.58
Vertical	232.6690	14.13	16.38	30.51	46.00	-15.49
Vertical	266.7242	21.70	18.50	40.20	46.00	-5.80
Vertical	622.3564	13.47	26.06	39.53	46.00	-6.47

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test: August 15, 2008 Temperature: 25°C
 EUT: WIRELESS FM TRANSMITTER Humidity: 53%
 Model No.: CA-292 Power Supply: DC 3V
(Powered by "AAA" battery 2×)
 Test Mode: TX 88.1MHz Test Engineer: Feng

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBμV/m) QP	Margin(dB) QP
Horizontal	176.2162	22.54	14.76	37.30	43.50	-6.20
Horizontal	239.3017	15.87	16.72	32.59	46.00	-13.41
Horizontal	264.3241	18.08	18.66	36.74	46.00	-9.26
Horizontal	352.4323	15.45	20.95	36.40	46.00	-9.60
Horizontal	792.9724	11.47	27.90	39.37	46.00	-6.63
Vertical	176.2162	19.98	14.76	34.74	43.50	-8.76
Vertical	264.3241	14.82	18.66	33.48	46.00	-12.52
Vertical	616.7567	8.80	25.96	34.76	46.00	-11.24
Vertical	792.9724	8.07	27.90	35.97	46.00	-10.03

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test: August 15, 2008 Temperature: 25°C
 EUT: WIRELESS FM TRANSMITTER Humidity: 53%
 Model No.: CA-292 Power Supply: DC 3V
(Powered by "AAA" battery 2×)
 Test Mode: TX 88.5MHz Test Engineer: Feng

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBμV/m) QP	Margin(dB) QP
Horizontal	177.0163	20.48	14.76	35.24	43.50	-8.26
Horizontal	239.3017	16.09	16.72	32.81	46.00	-13.19
Horizontal	265.5242	17.03	18.63	35.66	46.00	-10.34
Horizontal	619.5564	11.51	26.05	37.56	46.00	-8.44
Horizontal	796.5727	11.92	27.87	39.79	46.00	-6.21
Vertical	177.0163	17.93	14.76	32.69	43.50	-10.81
Vertical	265.5242	12.90	18.63	31.53	46.00	-14.47
Vertical	619.5564	9.11	26.05	35.16	46.00	-10.84
Vertical	796.5727	7.54	27.87	35.41	46.00	-10.59

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test: August 15, 2008 Temperature: 25°C
 EUT: WIRELESS FM TRANSMITTER Humidity: 53%
 Model No.: CA-292 Power Supply: DC 3V
(Powered by "AAA" battery 2×)
 Test Mode: TX 88.9MHz Test Engineer: Feng

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBμV/m) QP	Margin(dB) QP
Horizontal	177.8163	22.21	14.77	36.98	43.50	-6.52
Horizontal	239.3017	16.18	16.72	32.90	46.00	-13.10
Horizontal	266.7242	20.02	18.50	38.52	46.00	-7.48
Horizontal	355.6323	15.47	21.13	36.60	46.00	-9.40
Horizontal	800.1725	11.49	27.86	39.35	46.00	-6.65
Vertical	177.8163	19.11	14.77	33.88	43.50	-9.62
Vertical	266.7242	14.22	18.50	32.72	46.00	-13.28
Vertical	622.3564	9.62	26.06	35.68	46.00	-10.32

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

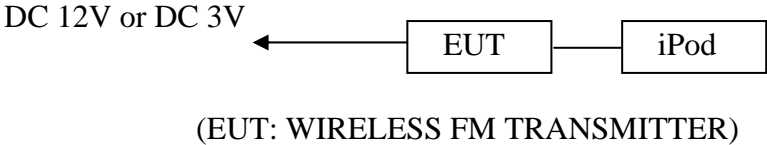
$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

4. FUNDAMENTAL RADIATED EMISSION FOR FCC PART 15

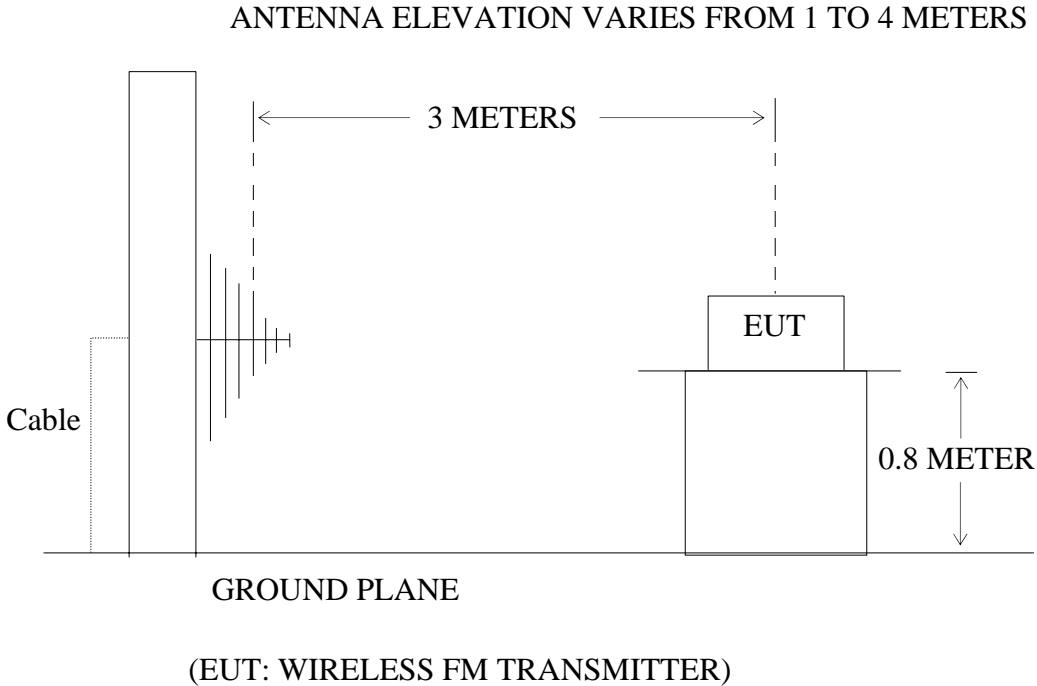
SECTION 15.239(B)

4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



4.1.2. Anechoic Chamber Test Setup Diagram



4.2. The Emission Limit For Section 15.239(b)

4.2.1. The field strength of any emission within the permitted 200kHz band shall not exceed 250microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.

4.3.EUT Configuration on Measurement

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

4.3.1.WIRELESS FM TRANSMITTER (EUT)

Model Number : CA-292
 Serial Number : N/A
 Manufacturer : SHENZHEN OKKAIDO ELECTRONICS CO., LTD.

4.4.Operating Condition of EUT

4.4.1.Setup the EUT and simulator as shown as Section 4.1.

4.4.2.Turn on the power of all equipment. FM Transmitter powered by DC 12V.

4.4.3. Let the EUT work in TX modes [Connect EUT audio input 3.5mm jack to iPod headphone jack and ipod playing typical audio signal('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-88.9MHz. We are select 88.1M, 88.5M, 88.9MHz TX frequency to transmitted.

4.4.4. Turn on the power of all equipment. FM Transmitter powered by DC 3V.

4.4.5. Repeat 4.4.3.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. So the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

4.5.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 bilog 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 interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

4.6.The Emission Measurement Result

PASS.

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.1MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.1080	27.92	30.18	12.47	40.39	42.65	48	68	-7.61	-25.35	Horizontal
88.1080	33.29	35.70	12.47	45.76	48.17	48	68	-2.24	-19.83	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.5MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.5082	26.56	29.88	12.50	39.06	42.38	48	68	-8.94	-25.62	Horizontal
88.5082	32.86	35.35	12.50	45.36	47.85	48	68	-2.64	-20.15	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 12V (Powered by Car battery)</u>
Test Mode:	<u>TX 88.9MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.9081	28.79	31.08	12.54	41.33	43.62	48	68	-6.67	-24.38	Horizontal
88.9081	32.66	34.87	12.54	45.20	47.41	48	68	-2.80	-20.59	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 3V</u> <u>(Powered by “AAA” battery 2×)</u>
Test Mode:	<u>TX 88.1MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.1080	24.06	26.64	12.47	36.53	39.11	48	68	-11.47	-28.89	Horizontal
88.1080	21.55	24.15	12.47	34.02	36.62	48	68	-13.98	-31.38	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 3V</u> <u>(Powered by “AAA” battery 2×)</u>
Test Mode:	<u>TX 88.5MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.5082	23.28	25.53	12.50	35.78	38.03	48	68	-12.22	-29.97	Horizontal
88.5082	20.06	22.34	12.50	32.56	34.84	48	68	-15.44	-33.16	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

Date of Test:	<u>August 15, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>WIRELESS FM TRANSMITTER</u>	Humidity:	<u>53%</u>
Model No.:	<u>CA-292</u>	Power Supply:	<u>DC 3V</u> <u>(Powered by “AAA” battery 2×)</u>
Test Mode:	<u>TX 88.9MHz</u>	Test Engineer:	<u>Feng</u>

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin (dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.9081	24.32	26.57	12.54	36.86	39.11	48	68	-11.14	-28.89	Horizontal
88.9081	21.37	24.06	12.54	33.91	36.60	48	68	-14.09	-31.40	Vertical

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

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

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

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

5. OCCUPIED BANDWIDTH FOR FCC PART 15 SECTION

15.239(A)

5.1.The Requirement For Section 15.239(a)

- 5.1.1. Emission from the device shall be confined within a band 200kHz wide centered on the operating frequency. The 200kHz band shall lie wholly within the frequency range of 88-108MHz.

5.2.EUT Configuration on Measurement

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

5.2.1. WIRELESS FM TRANSMITTER (EUT)

Model Number : CA-292
 Serial Number : N/A
 Manufacturer : SHENZHEN OKKAIDO ELECTRONICS CO., LTD.

5.3.Operating Condition of EUT

- 5.3.1. Setup the EUT and simulator as shown as Section 4.1.
- 5.3.2. Turn on the power of all equipment. FM Transmitter powered by DC 12V.
- 5.3.3. Let the EUT work in TX modes [Connect EUT audio input 3.5mm jack to iPod headphone jack and ipod playing typical audio signal('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-88.9MHz. We are select 88.1M, 88.5M, 88.9MHz TX frequency to transmitted.
- 5.3.4. Turn on the power of all equipment. FM Transmitter powered by DC 3V.
- 5.3.5. Repeat 5.3.3.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. So the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

5.4.Test Procedure

- 5.4.1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 5.4.2. Set EUT as normal operation. Playing typical audio signal(the volume control of iPod was set to maximum.)
- 5.4.3. Set EMI test receiver Center Frequency = fundamental frequency, RBW= 3kHz, VBW= 10kHz, Span=500kHz.
- 5.4.4. Set EMI test receiver Max hold. Mark peak, -26dB.

5.5. Test Result

The EUT does meet the FCC requirement.

Input signal : play typical audio signal('Highway Blues' from sample music of windows XP)

FM Transmitter powered by DC 12V:

FM 88.1MHz
-26dB bandwidth = 135.0kHz

FM 88.5 MHz
-26dB bandwidth = 131.0kHz

FM 107.9 MHz
-26dB bandwidth = 145.5kHz

FM Transmitter powered by DC 3V:

FM 88.1MHz
-26dB bandwidth = 102.5kHz

FM 98.1 MHz
-26dB bandwidth = 103.0kHz

FM 107.9 MHz
-26dB bandwidth = 104.5kHz

6. TUNING RANGE

6.1.The Requirement For Section 15.239

88-108MHz

6.2.EUT Configuration on Measurement

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

6.2.1. WIRELESS FM TRANSMITTER (EUT)

Model Number : CA-292
Serial Number : N/A
Manufacturer : SHENZHEN KINGSUN ENTERPRISES CO., LTD.

6.3.Operating Condition of EUT

6.3.1.Setup the EUT and simulator as shown as Section 4.1.

6.3.2.Turn on the power of all equipment. FM Transmitter powered by DC 12V.

6.3.3. Let the EUT work in TX modes (unmodulated carrier).. The transmit frequency are 88.1-88.9MHz. We are select 88.1M, 88.5M, 88.9MHz TX frequency to transmitted.

6.3.4. Turn on the power of all equipment. FM Transmitter powered by DC 3V.

6.3.5. Repeat 6.3.3.

6.4.Test Procedure

6.4.1. The EUT was placed on a turn table which is 0.8m above ground plane.

6.4.2. Set the EUT working on the working frequency.

6.4.3. Set EMI test receiver center frequency = working frequency, RBW=3kHz, VBW= 10kHz, Span=500kHz.

6.4.4. Measuring the working frequency.

6.4.5. The working frequency should be inside 88-108MHz.

6.5. Test Result

The EUT does meet the FCC requirement.

FM Transmitter powered by DC 12V:

Low Frequency = 88.1080MHz	EUT LED display 88.1MHz
Mid Frequency = 88.5080MHz	EUT LED display 88.5MHz
High Frequency = 88.9080MHz	EUT LED display 88.9MHz

FM Transmitter powered by DC 3V:

Low Frequency = 88.1080MHz	EUT LED display 88.1MHz
Mid Frequency = 88.5080MHz	EUT LED display 88.5MHz
High Frequency = 88.9080MHz	EUT LED display 88.9MHz

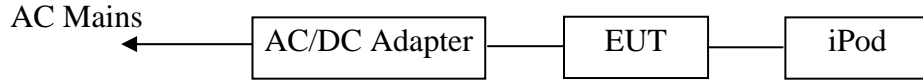
The working frequency rang is from 88.1 to 88.9MHz.

7. CONDUCTED EMISSION FOR FCC PART 15 SECTION

15.207(A)

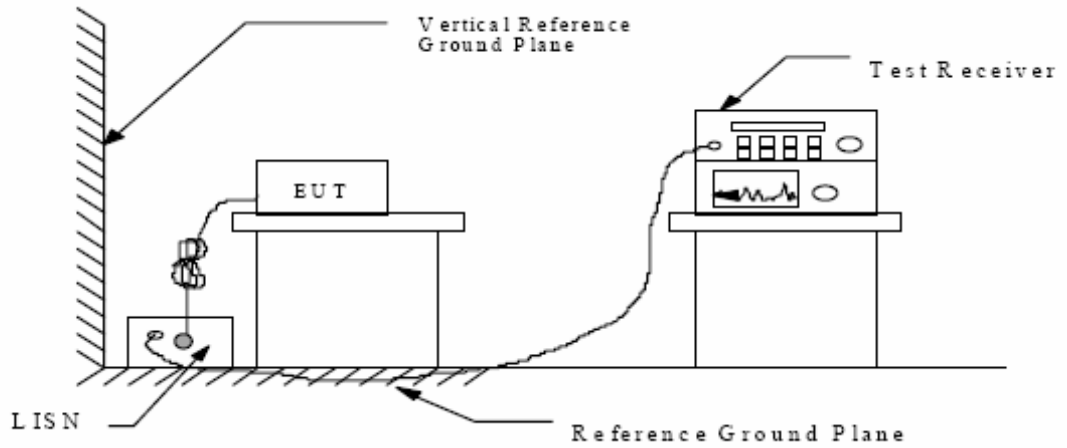
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and simulators



(EUT: WIRELESS FM TRANSMITTER)

7.1.2. Shielding Room Test Setup Diagram



(EUT: WIRELESS FM TRANSMITTER)

7.2. The Emission Limit For Section 15.207(a)

7.2.1. Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

7.3. Configuration of EUT on Measurement

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

7.3.1. WIRELESS FM TRANSMITTER (EUT)

Model Number : CA-292
Serial Number : N/A
Manufacturer : SHENZHEN KINGSUN ENTERPRISES CO., LTD.

7.4. Operating Condition of EUT

7.4.1. Setup the EUT and simulator as shown as Section 7.1.

7.4.2. Turn on the power of all equipment. FM Transmitter powered by AC/DC Adapter.

7.4.3. Let the EUT work in TX modes [Connect EUT audio input 3.5mm jack to iPod headphone jack and ipod playing typical audio signal('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-88.9MHz. We are select 88.1M, 88.5M, 88.9MHz TX frequency to transmitted.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. So the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

7.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

All the scanning waveforms are attached in Appendix I.

7.6. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

All emissions are more than 20 dB below the limit. The spectral diagrams are attached in appendix I.

APPENDIX I (Test Curves)



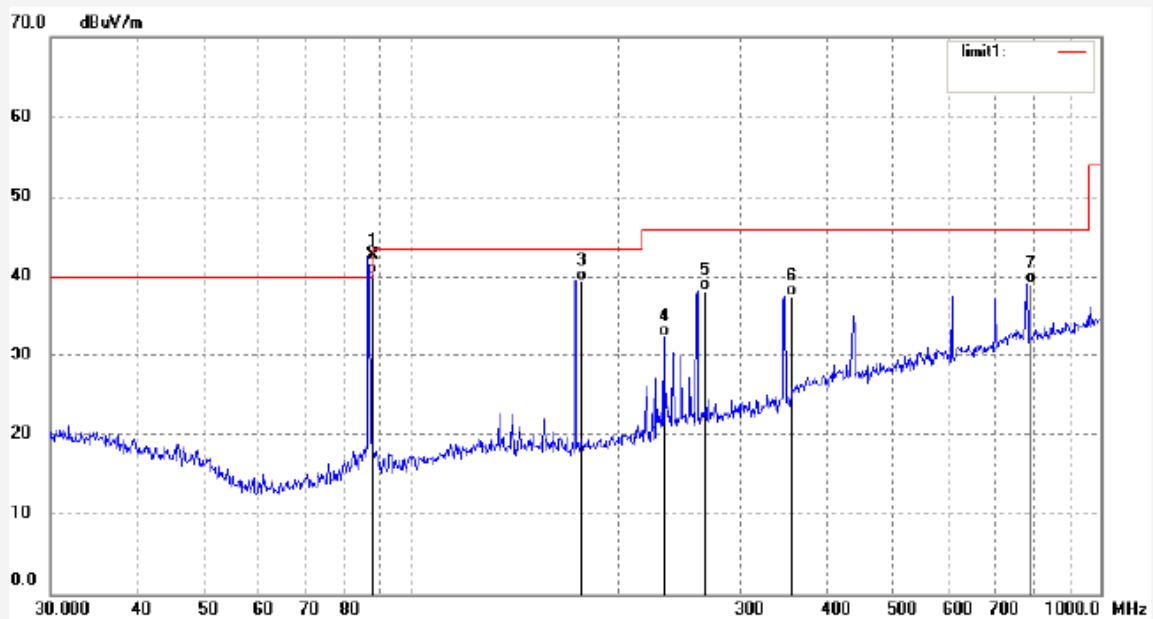
ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
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Job No.: RTTE #270 Standard: FCC Class B 3M Radiated Test item: Radiation Test Temp.(C)/Hum.(%) 25 C / 53 % EUT: WIRELESS FM TRANSMITTER Mode: TX 88.1MHz Model: CA-292 Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	Polarization: Horizontal Power Source: DC 12V Date: 2008/08/15 Time: 11:07:04 Engineer Signature: Distance: 3m
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Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.1080	30.18	12.47	42.65	68.00	-25.35	peak	
2	88.1080	27.92	12.47	40.39	48.00	-7.61	AVG	
3	176.2162	24.69	14.76	39.45	43.50	-4.05	QP	
4	232.6690	16.01	16.38	32.39	46.00	-13.61	QP	
5	264.3241	19.55	18.66	38.21	46.00	-7.79	QP	
6	352.4323	16.62	20.95	37.57	46.00	-8.43	QP	
7	792.9724	11.16	27.90	39.06	46.00	-6.94	QP	



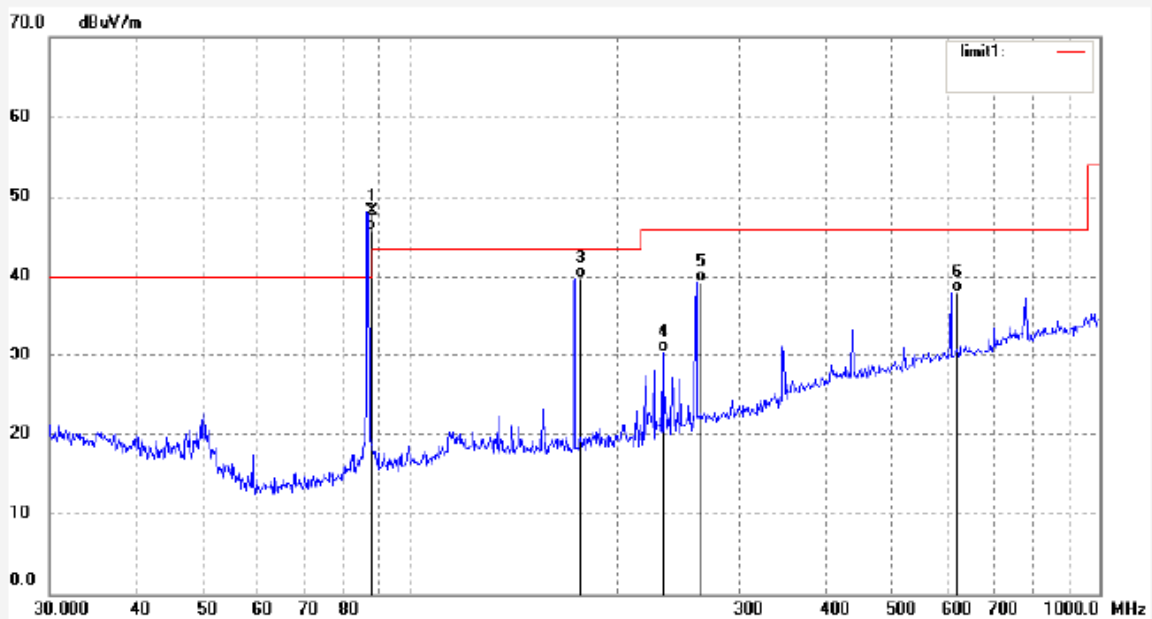
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Site: 966 chamber
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Job No.: RTTE #271	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 11:09:04
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.1MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.1080	35.70	12.47	48.17	68.00	-19.83	peak	
2	88.1080	33.29	12.47	45.76	48.00	-2.24	AVG	
3	176.2162	25.08	14.76	39.84	43.50	-3.66	QP	
4	232.6690	14.08	16.38	30.46	46.00	-15.54	QP	
5	264.3241	20.66	18.66	39.32	46.00	-6.68	QP	
6	616.7567	12.14	25.96	38.10	46.00	-7.90	QP	



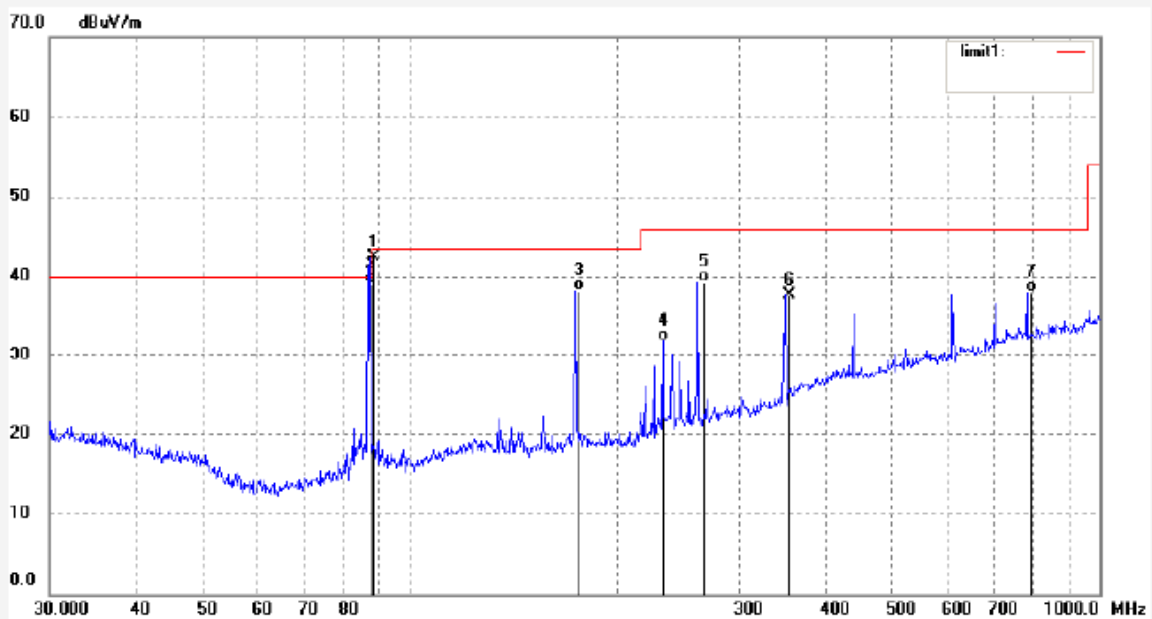
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Site: 966 chamber
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Job No.: RTTE #273	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 11:13:40
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.5MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.5082	29.88	12.50	42.38	68.00	-25.62	peak	
2	88.5082	26.56	12.50	39.06	48.00	-8.94	AVG	
3	177.0163	23.43	14.76	38.19	43.50	-5.31	QP	
4	232.6690	15.55	16.38	31.93	46.00	-14.07	QP	
5	265.5242	20.60	18.63	39.23	46.00	-6.77	QP	
6	354.0321	16.72	21.05	37.77	46.00	-8.23	peak	
7	796.5727	10.21	27.87	38.08	46.00	-7.92	QP	



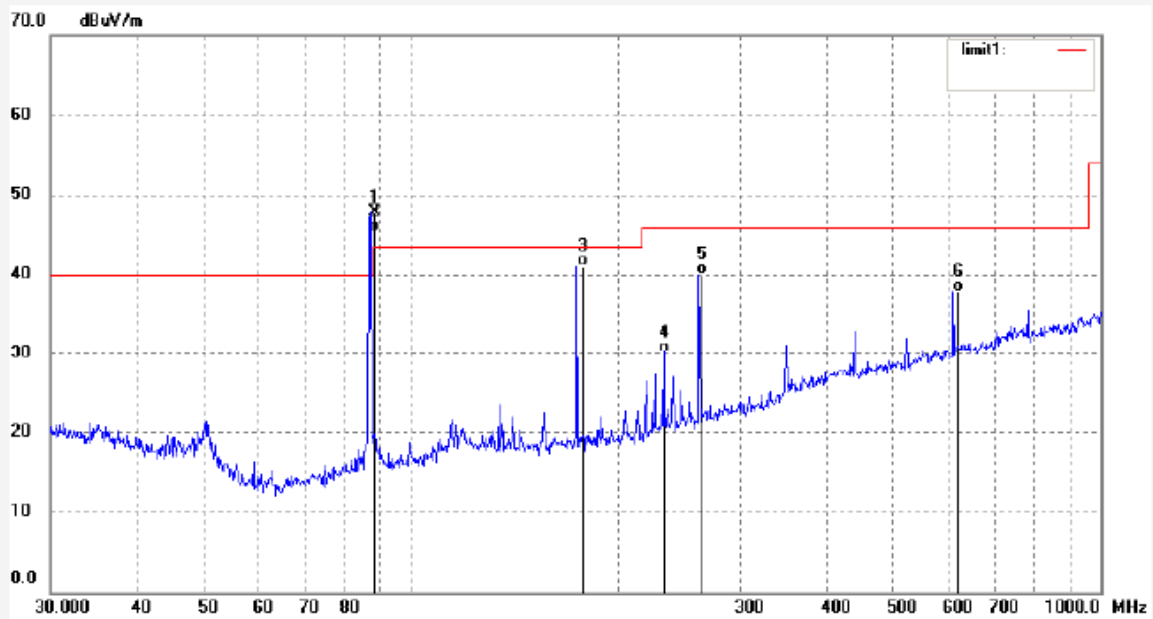
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Site: 966 chamber
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Job No.: RTTE #272	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 11:11:47
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.5MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.5082	35.35	12.50	47.85	68.00	-20.15	peak	
2	88.5082	32.86	12.50	45.36	48.00	-2.64	AVG	
3	177.0163	26.29	14.76	41.05	43.50	-2.45	QP	
4	232.6690	13.83	16.38	30.21	46.00	-15.79	QP	
5	265.5242	21.33	18.63	39.96	46.00	-6.04	QP	
6	619.5564	11.81	26.05	37.86	46.00	-8.14	QP	



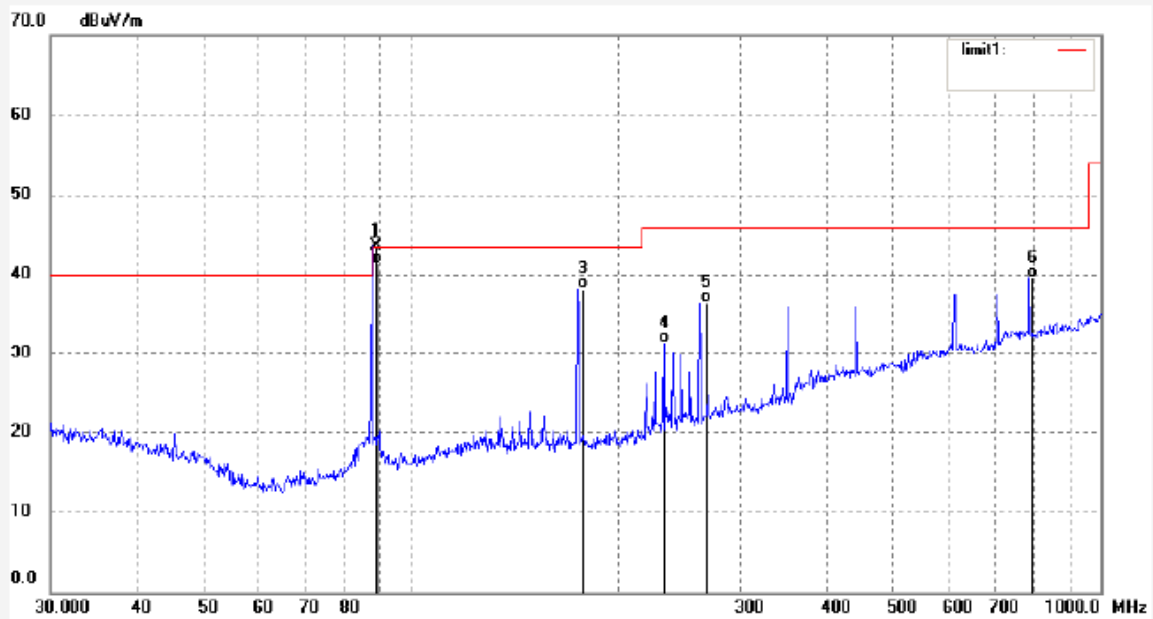
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Site: 966 chamber
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Fax:+86-0755-26503396

Job No.: RTTE #274	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 11:16:46
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.9MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.9081	31.08	12.54	43.62	68.00	-24.38	peak	
2	88.9081	28.79	12.54	41.33	48.00	-6.67	AVG	
3	177.8163	23.53	14.77	38.30	43.50	-5.20	QP	
4	232.6690	15.00	16.38	31.38	46.00	-14.62	QP	
5	266.7242	18.04	18.50	36.54	46.00	-9.46	QP	
6	800.1725	11.78	27.86	39.64	46.00	-6.36	QP	



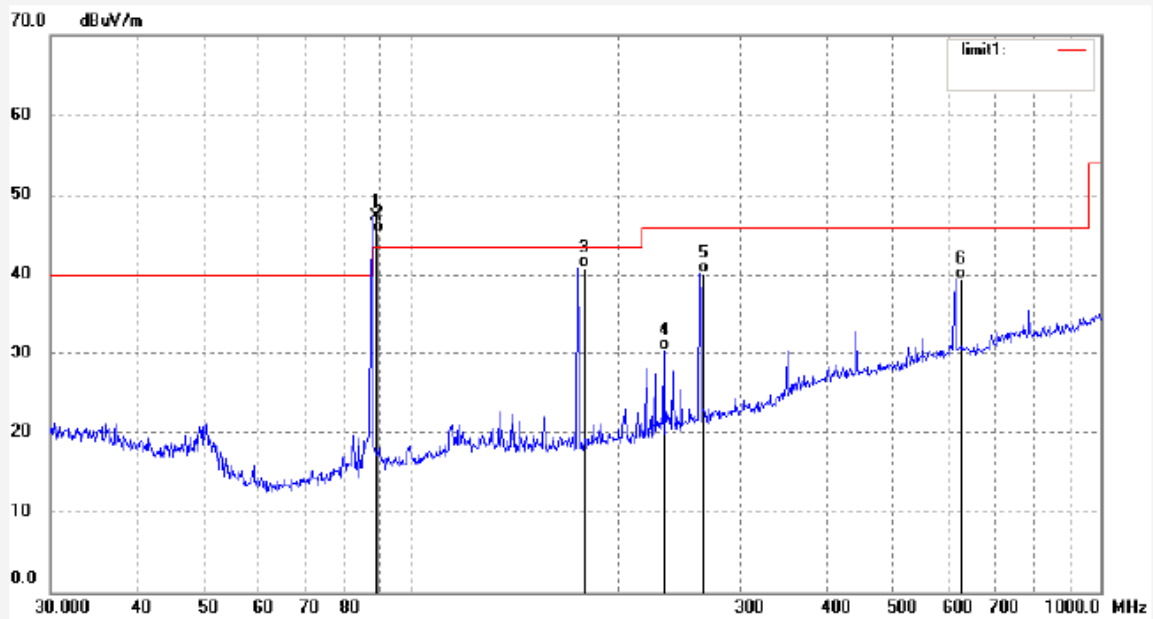
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Site: 966 chamber
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Job No.: RTTE #275	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 11:18:45
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.9MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.9081	34.87	12.54	47.41	68.00	-20.59	peak	
2	88.9081	32.66	12.54	45.20	48.00	-2.80	AVG	
3	177.8163	26.15	14.77	40.92	43.50	-2.58	QP	
4	232.6690	14.13	16.38	30.51	46.00	-15.49	QP	
5	266.7242	21.70	18.50	40.20	46.00	-5.80	QP	
6	622.3564	13.47	26.06	39.53	46.00	-6.47	QP	



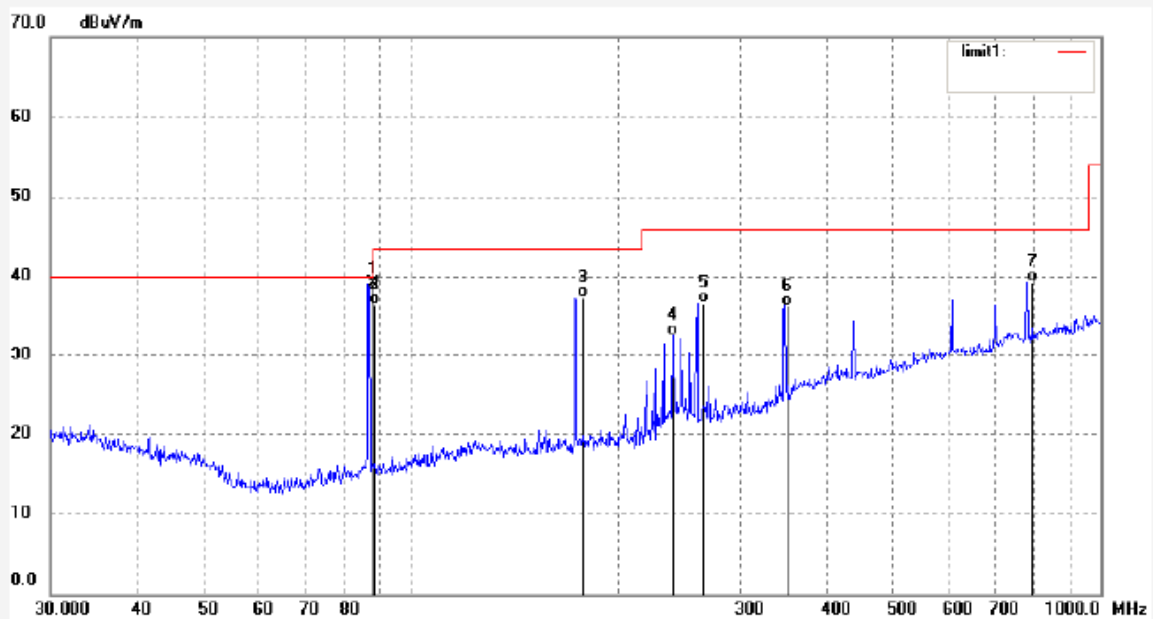
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
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Job No.: RTTE #264	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:21:45
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.1MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.1080	26.64	12.47	39.11	68.00	-28.89	peak	
2	88.1080	24.06	12.47	36.53	48.00	-11.47	AVG	
3	176.2162	22.54	14.76	37.30	43.50	-6.20	QP	
4	239.3017	15.87	16.72	32.59	46.00	-13.41	QP	
5	264.3241	18.08	18.66	36.74	46.00	-9.26	QP	
6	352.4323	15.45	20.95	36.40	46.00	-9.60	QP	
7	792.9724	11.47	27.90	39.37	46.00	-6.63	QP	



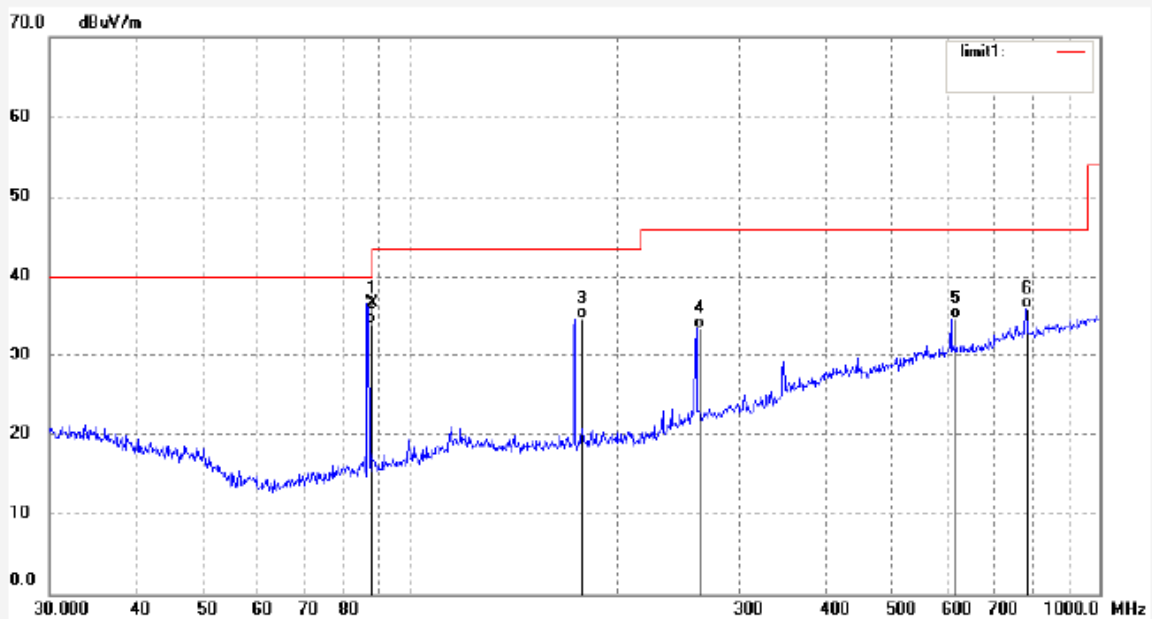
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
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Job No.: RTTE #265	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:29:21
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.1MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.1080	24.15	12.47	36.62	68.00	-31.38	peak	
2	88.1080	21.55	12.47	34.02	48.00	-13.98	AVG	
3	176.2162	19.98	14.76	34.74	43.50	-8.76	QP	
4	264.3241	14.82	18.66	33.48	46.00	-12.52	QP	
5	616.7567	8.80	25.96	34.76	46.00	-11.24	QP	
6	792.9724	8.07	27.90	35.97	46.00	-10.03	QP	



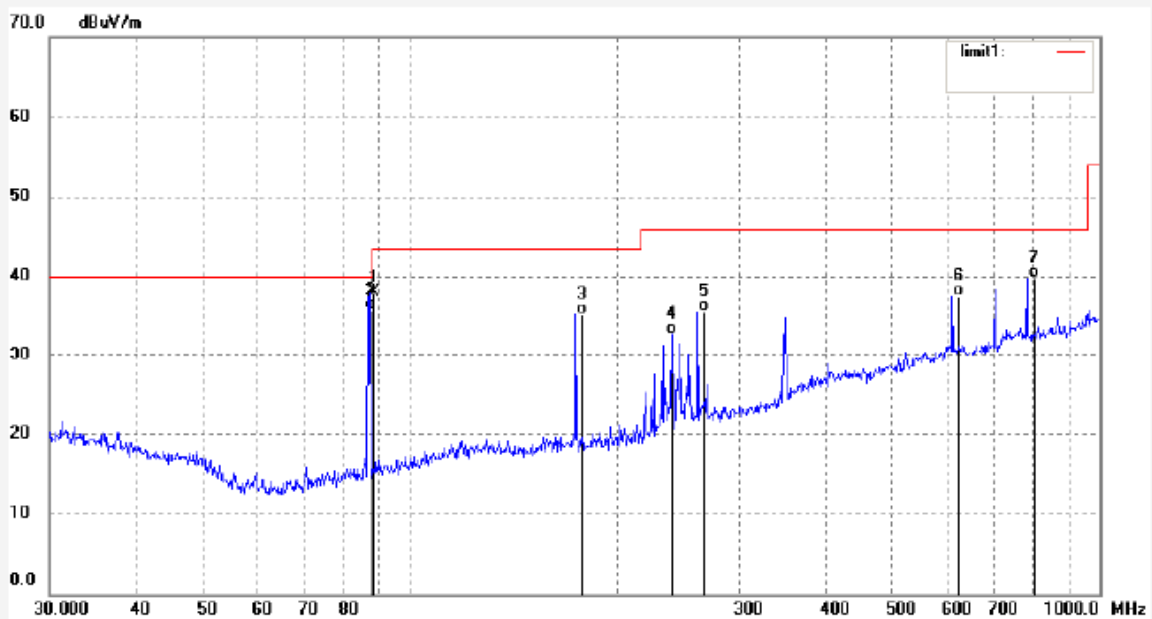
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #266	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:46:29
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.5MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.5082	25.53	12.50	38.03	68.00	-29.97	peak	
2	88.5082	23.28	12.50	35.78	48.00	-12.22	AVG	
3	177.0163	20.48	14.76	35.24	43.50	-8.26	QP	
4	239.3017	16.09	16.72	32.81	46.00	-13.19	QP	
5	265.5242	17.03	18.63	35.66	46.00	-10.34	QP	
6	619.5564	11.51	26.05	37.56	46.00	-8.44	QP	
7	796.5727	11.92	27.87	39.79	46.00	-6.21	QP	



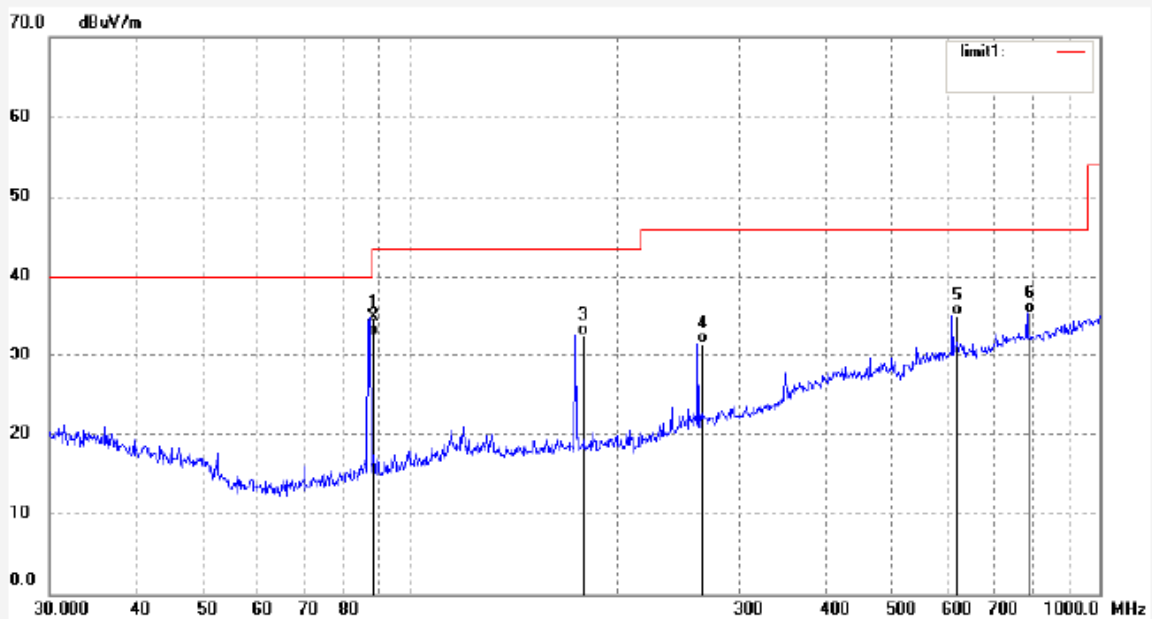
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #267	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:48:27
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.5MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.5082	22.34	12.50	34.84	68.00	-33.16	peak	
2	88.5082	20.06	12.50	32.56	48.00	-15.44	AVG	
3	177.0163	17.93	14.76	32.69	43.50	-10.81	QP	
4	265.5242	12.90	18.63	31.53	46.00	-14.47	QP	
5	619.5564	9.11	26.05	35.16	46.00	-10.84	QP	
6	796.5727	7.54	27.87	35.41	46.00	-10.59	QP	



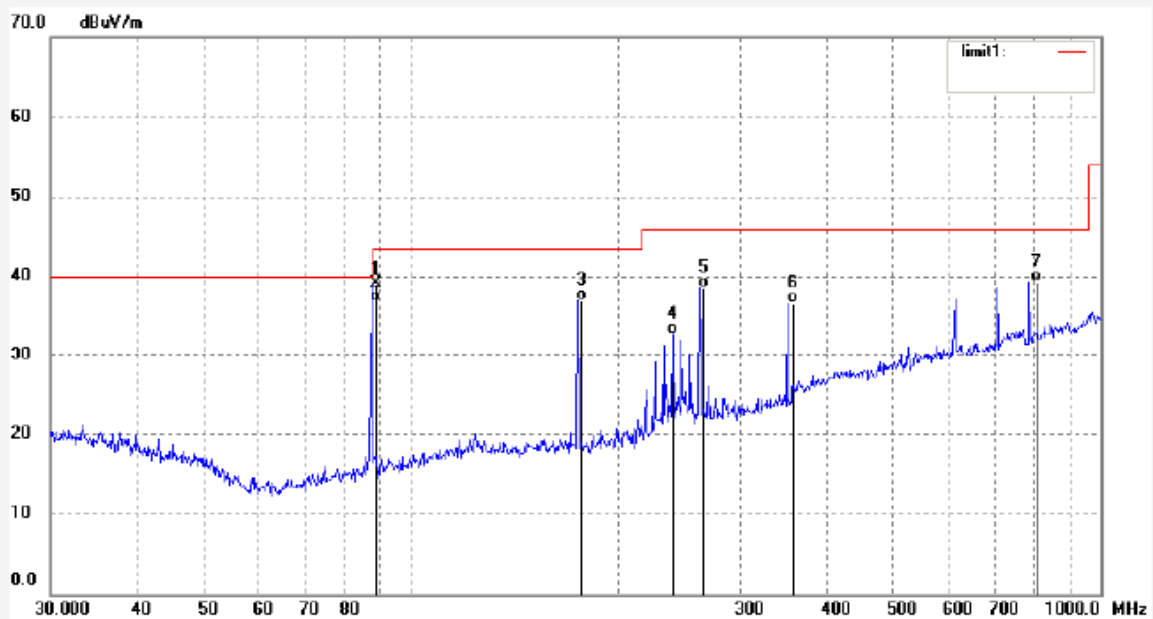
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #269	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:54:08
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.9MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.9081	26.57	12.54	39.11	68.00	-28.89	peak	
2	88.9081	24.32	12.54	36.86	48.00	-11.14	AVG	
3	177.8163	22.21	14.77	36.98	43.50	-6.52	QP	
4	239.3017	16.18	16.72	32.90	46.00	-13.10	QP	
5	266.7242	20.02	18.50	38.52	46.00	-7.48	QP	
6	355.6323	15.47	21.13	36.60	46.00	-9.40	QP	
7	800.1725	11.49	27.86	39.35	46.00	-6.65	QP	



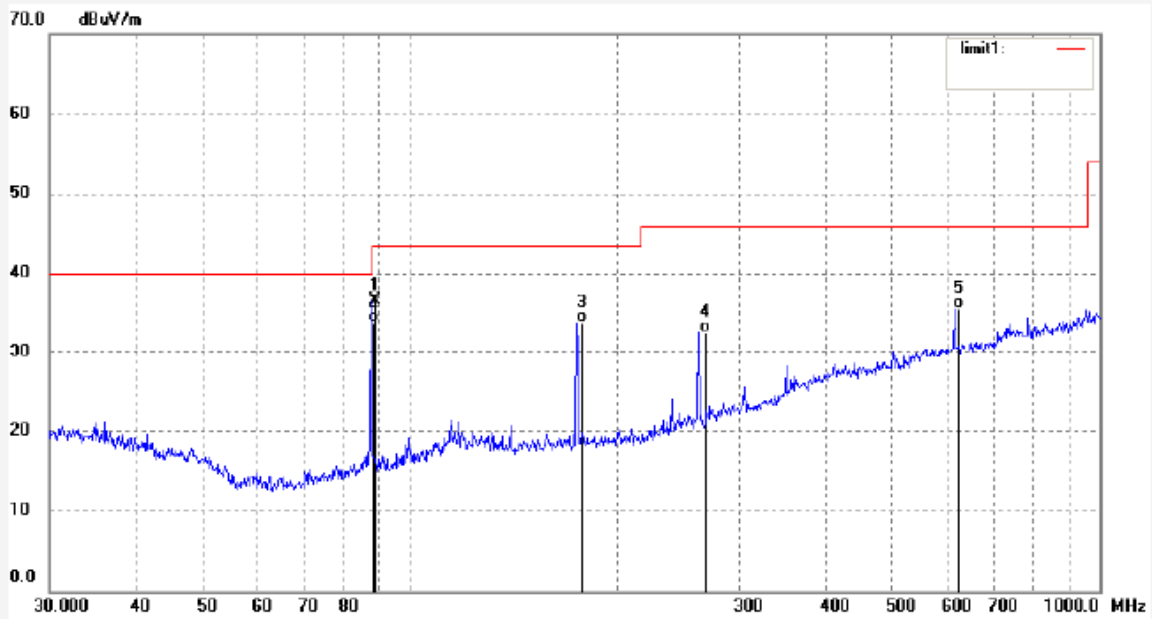
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #268	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2008/08/15
Temp.(C)/Hum.(%) 25 C / 53 %	Time: 10:51:26
EUT: WIRELESS FM TRANSMITTER	Engineer Signature:
Mode: TX 88.9MHz	Distance: 3m
Model: CA-292	
Manufacturer: SHENZHEN KINGSUN ENTERPRISES CO., LTD.	

Note: Sample No.:083111 Report No.:ATE20081542

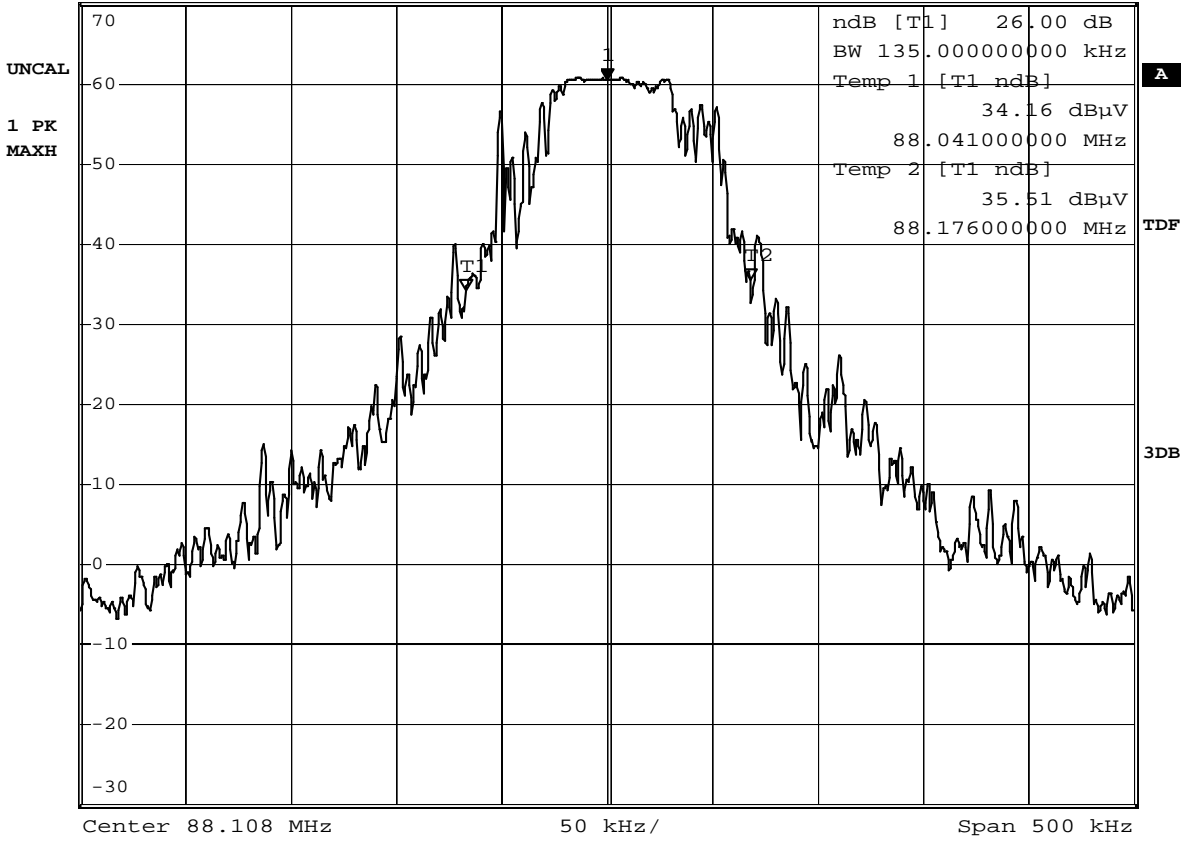


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	88.9081	24.06	12.54	36.60	68.00	-31.40	peak	
2	88.9081	21.37	12.54	33.91	48.00	-14.09	AVG	
3	177.8163	19.11	14.77	33.88	43.50	-9.62	QP	
4	266.7242	14.22	18.50	32.72	46.00	-13.28	QP	
5	622.3564	9.62	26.06	35.68	46.00	-10.32	QP	

FM Transmitter powered by DC 12V, TX 88.1MHz



Ref 70 dB μ V *Att 0 dB *RBW 3 kHz Marker 1 [T1] 60.39 dB μ V
*VBW 10 kHz 88.10800000 MHz
*SWT 50 ms

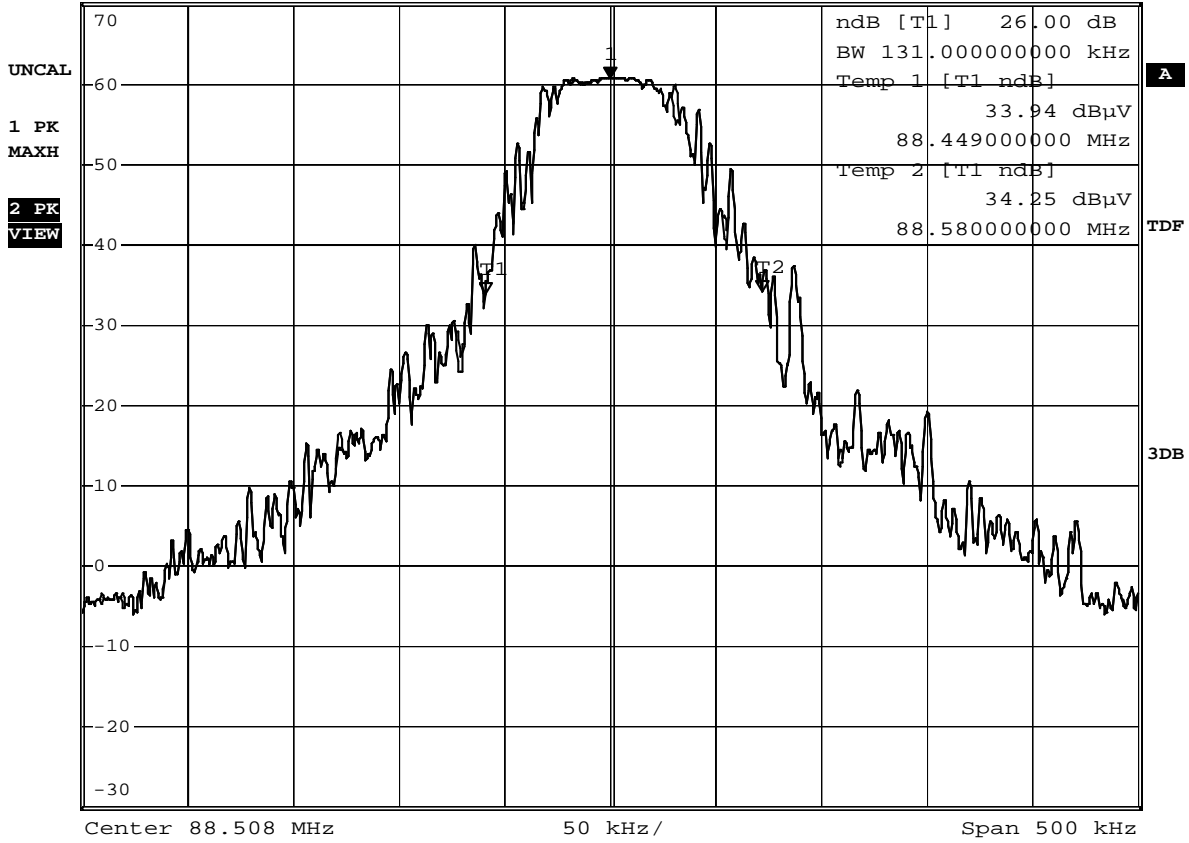


Date: 15.AUG.2008 15:06:39

FM Transmitter powered by DC 12V, TX 88.5MHz

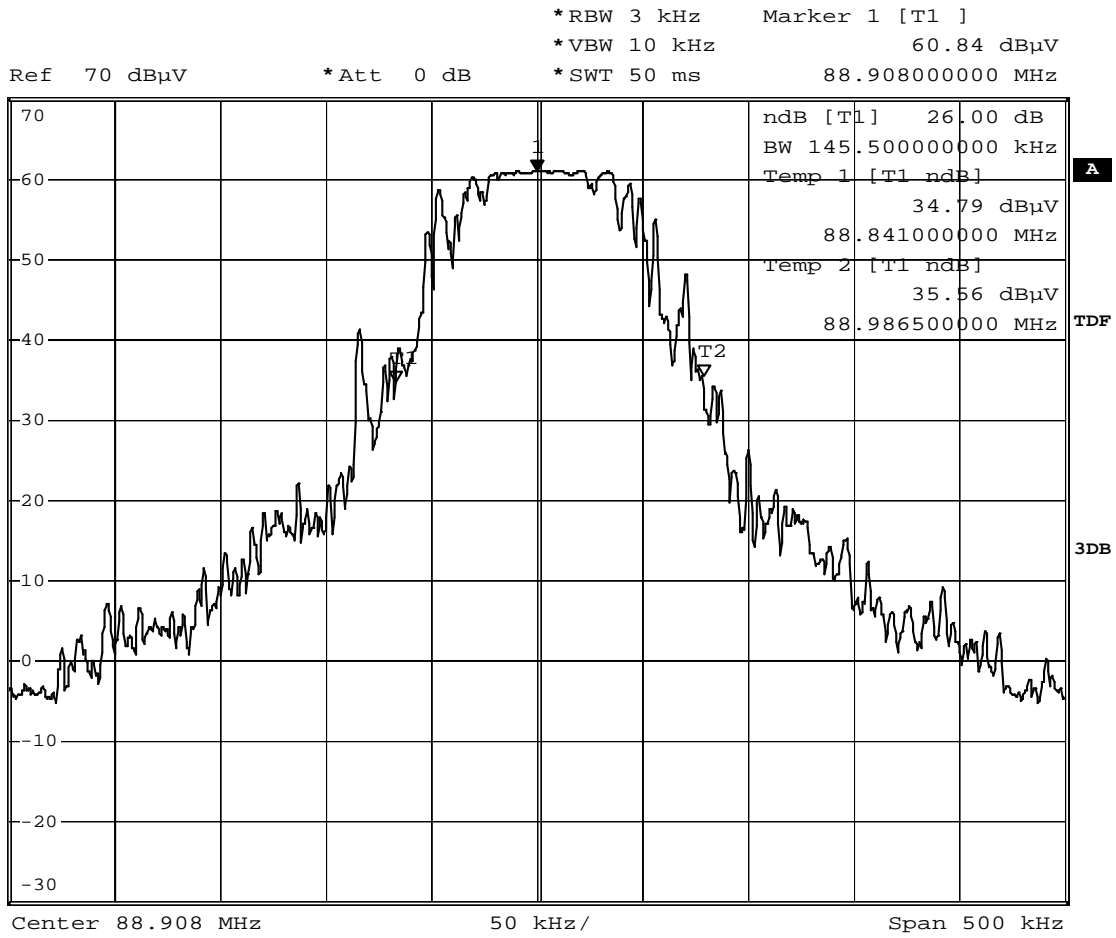


Ref 70 dB μ V *Att 0 dB *RBW 3 kHz Marker 1 [T1] 60.67 dB μ V
*VBW 10 kHz 88.50800000 MHz
*SWT 50 ms



Date: 15.AUG.2008 15:13:10

FM Transmitter powered by DC 12V, TX 88.9MHz

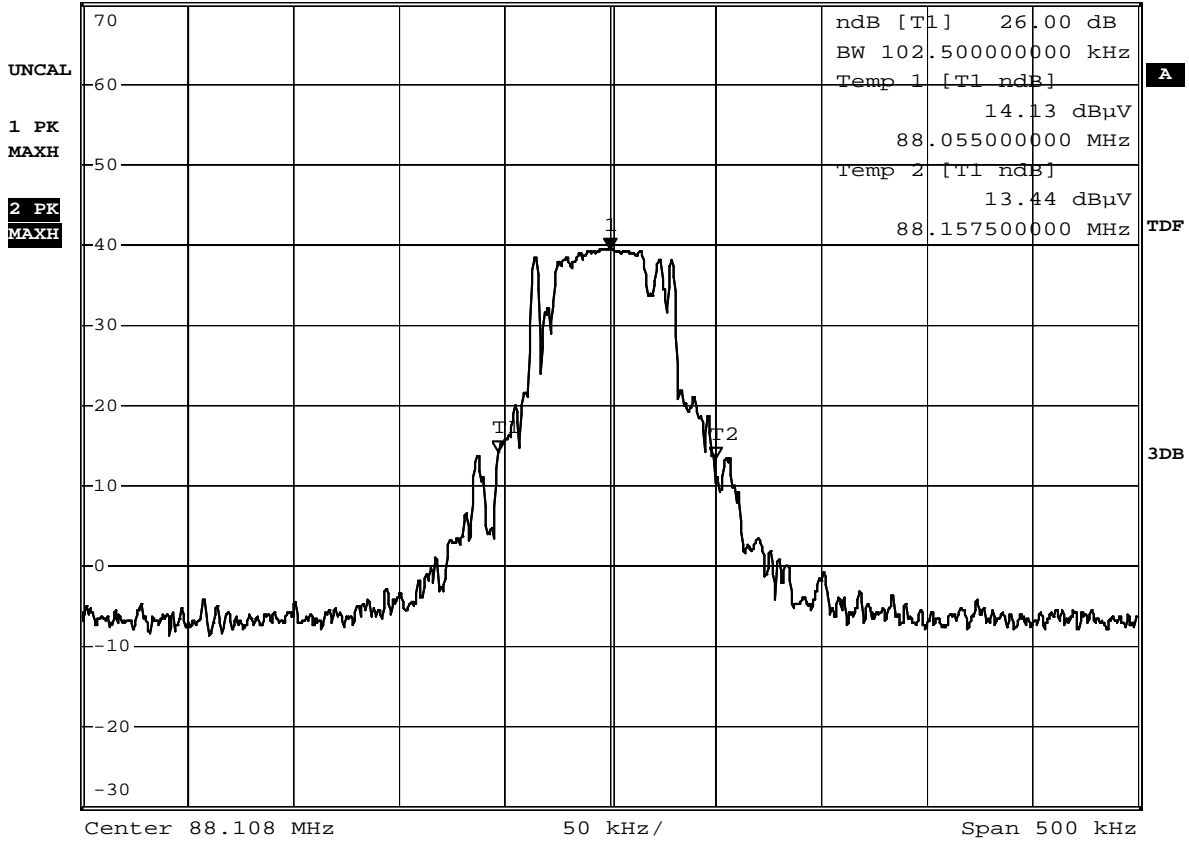


Date: 15.AUG.2008 15:17:16

FM Transmitter powered by DC 3V, TX 88.1MHz



Ref 70 dB μ V *Att 0 dB *RBW 3 kHz Marker 1 [T1] 39.44 dB μ V
*VBW 10 kHz 88.10800000 MHz
*SWT 50 ms

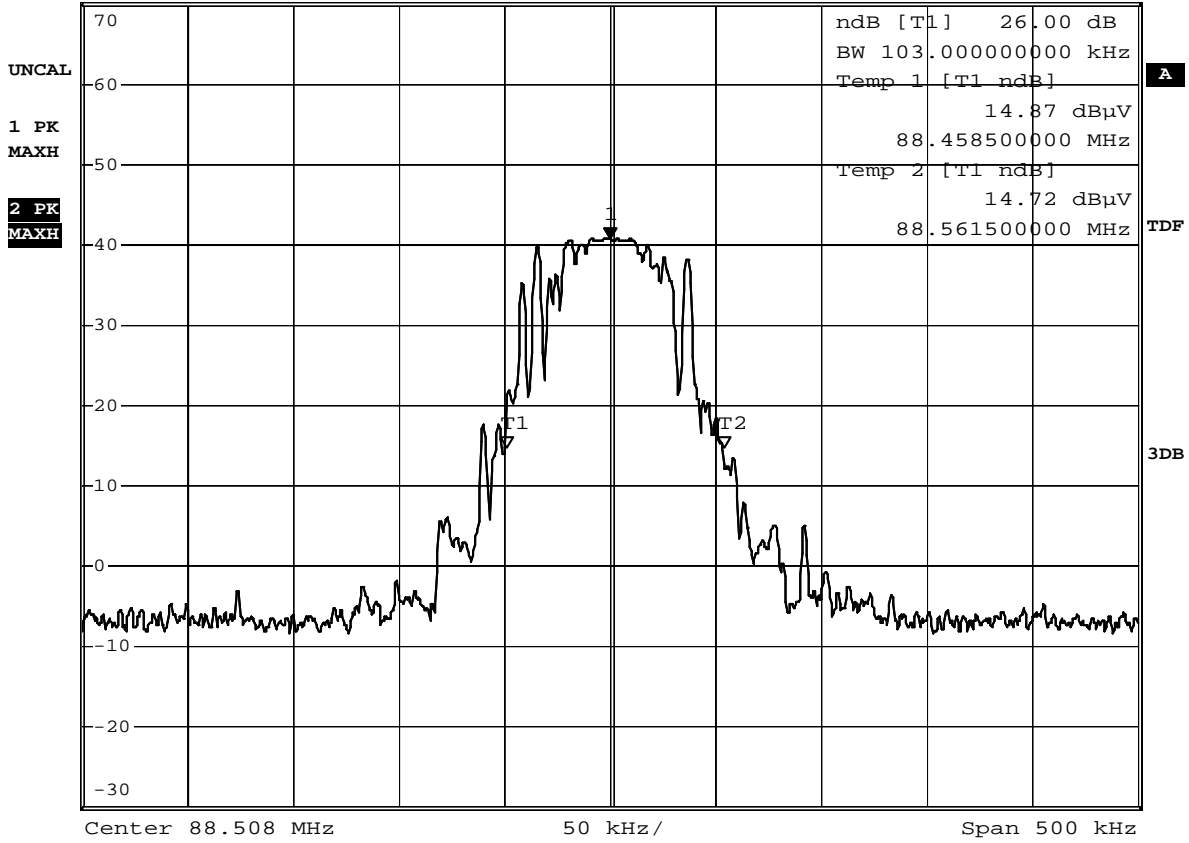


Date: 19.AUG.2008 11:26:47

FM Transmitter powered by DC 3V, TX 88.5MHz



Ref 70 dB μ V *Att 0 dB *RBW 3 kHz Marker 1 [T1] 40.66 dB μ V
*VBW 10 kHz 88.50800000 MHz
*SWT 50 ms



Date: 19.AUG.2008 11:44:02

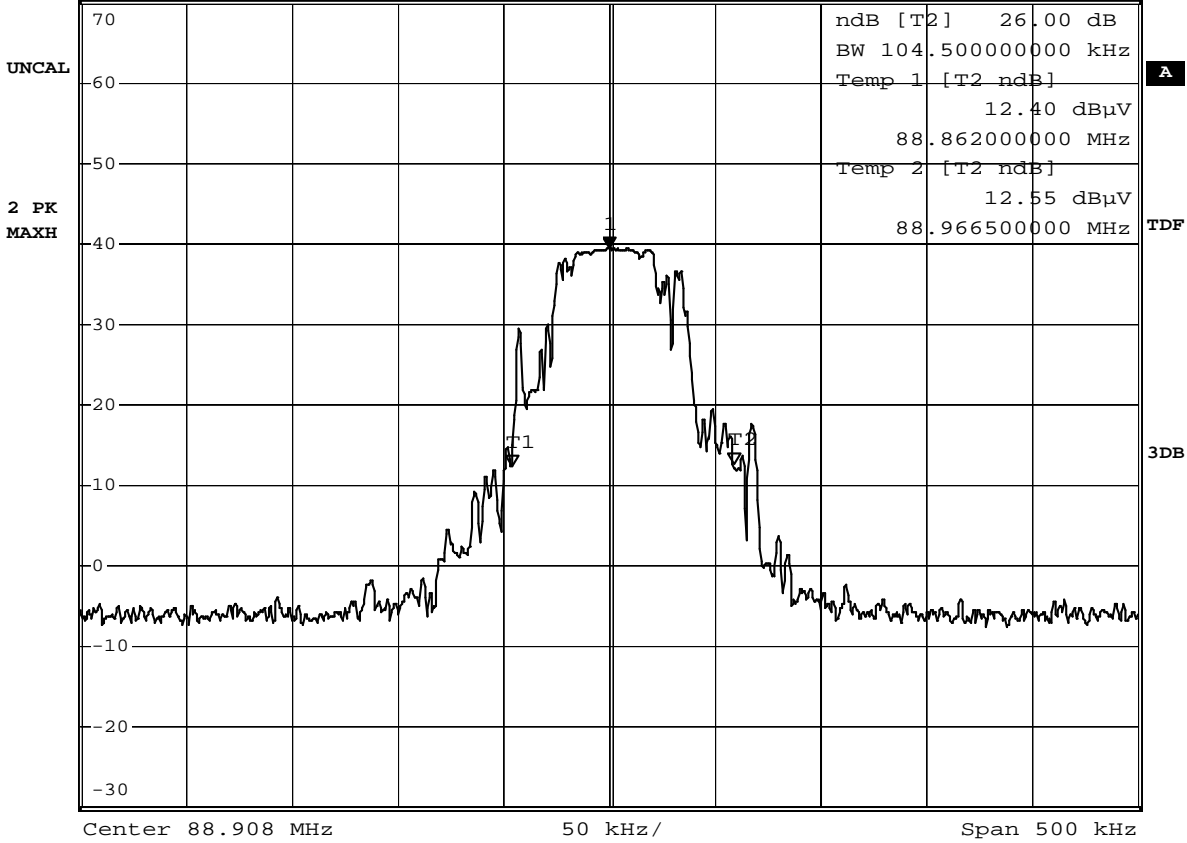
FM Transmitter powered by DC 3V, TX 88.9MHz



*RBW 3 kHz Marker 1 [T2]
*VBW 10 kHz 39.35 dBμV
*SWT 50 ms 88.908000000 MHz

Ref 70 dBμV

*Att 0 dB



Date: 19.AUG.2008 13:46:05

CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 08:52

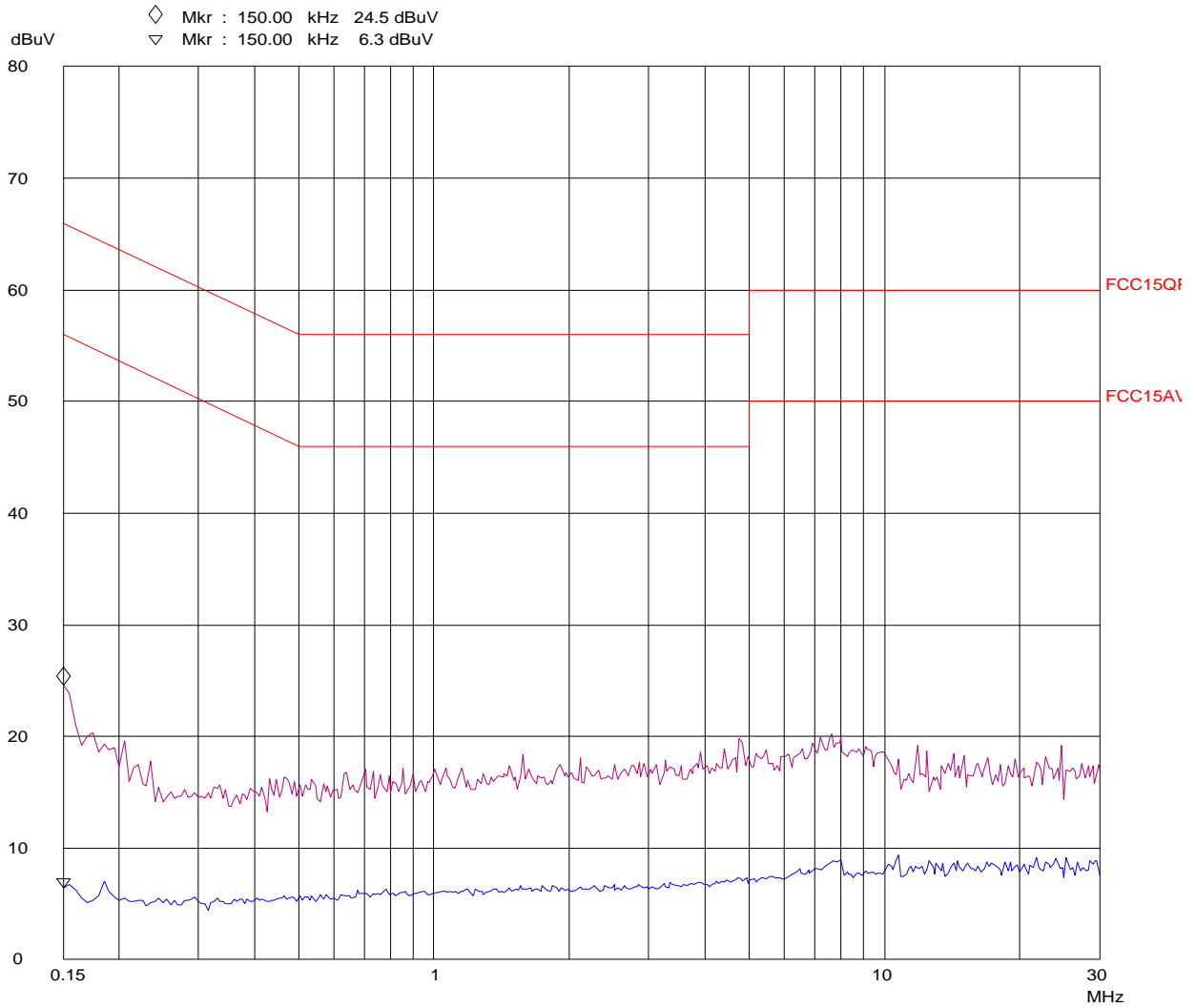
EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.1MHz
Operator: Feng
Test Spec: Va 120V/60Hz
Comment: Tem26°C Humi50%
Report No.:ATE20081542 Sample No.:083111

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac



CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 08:59

EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.1MHz
Operator: Feng
Test Spec: Vb 120V/60Hz
Comment: Tem26 C Humi50%
Report No.:ATE20081542 Sample No.:083111

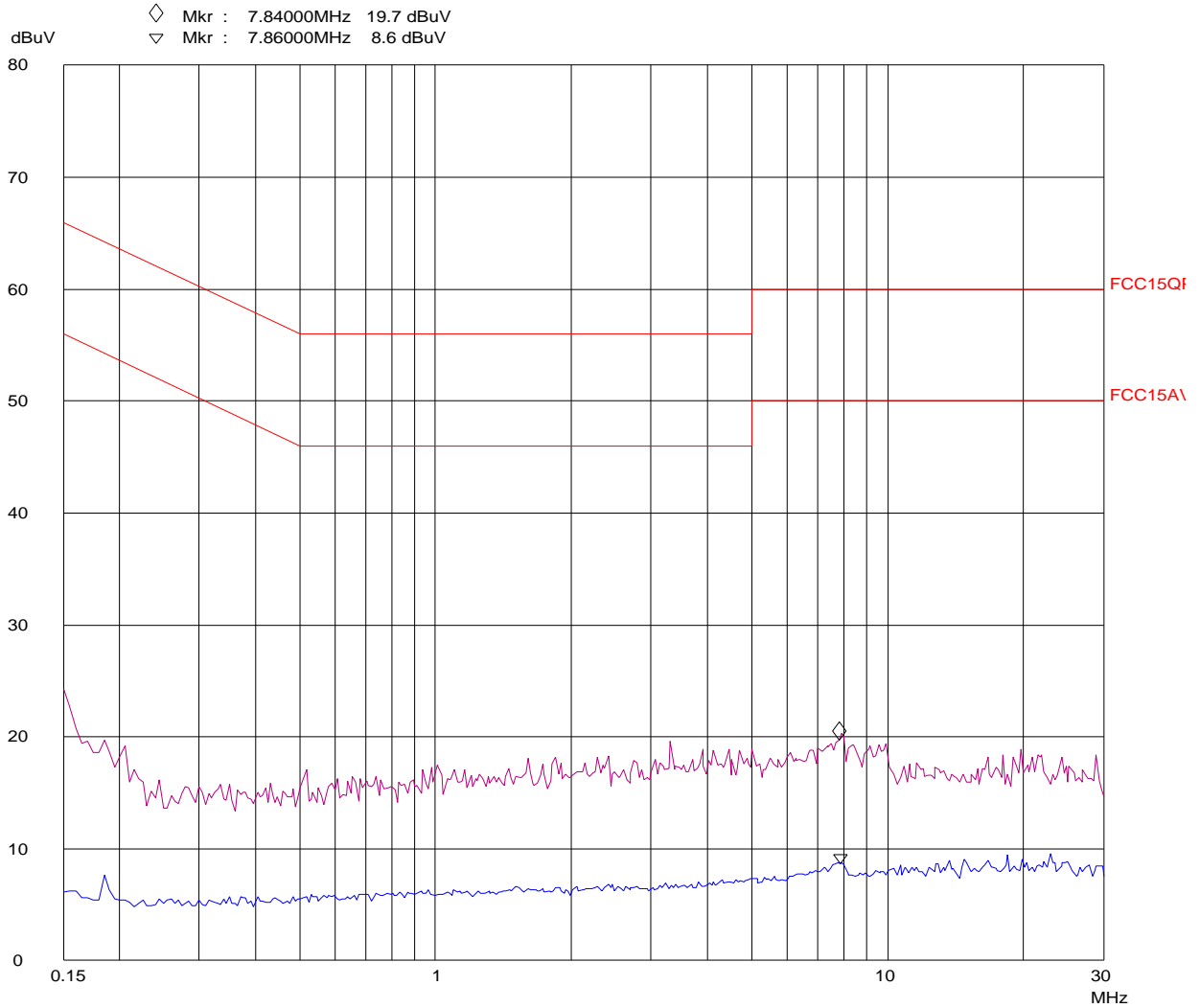
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac



CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 09:15

EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.5MHz
Operator: Feng
Test Spec: Va 120V/60Hz
Comment: Tem26 C Humi50%
Report No.:ATE20081542 Sample No.:083111

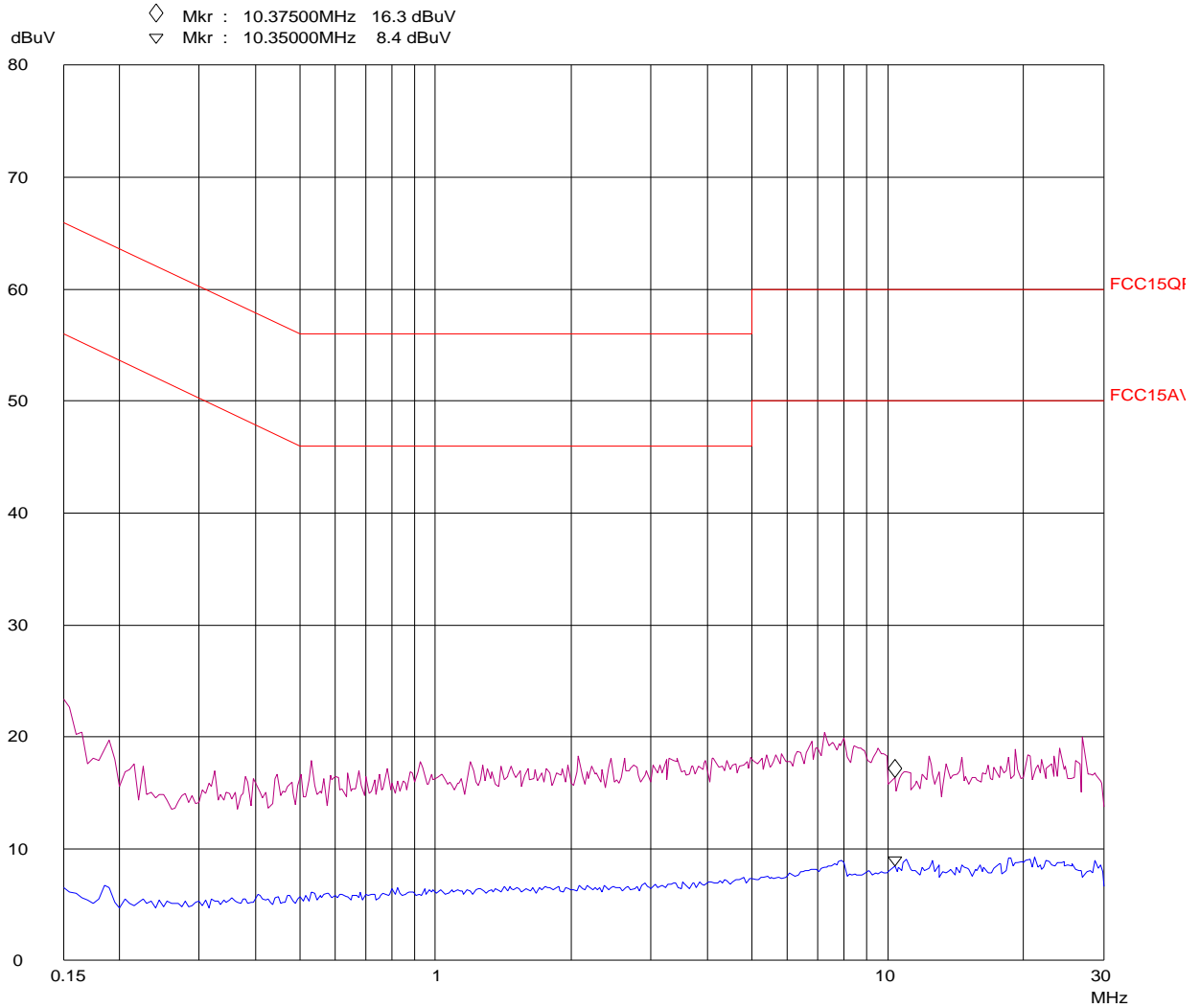
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO LN	OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO LN	OFF

Final Measurement: x QP / + AV

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac



CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 09:06

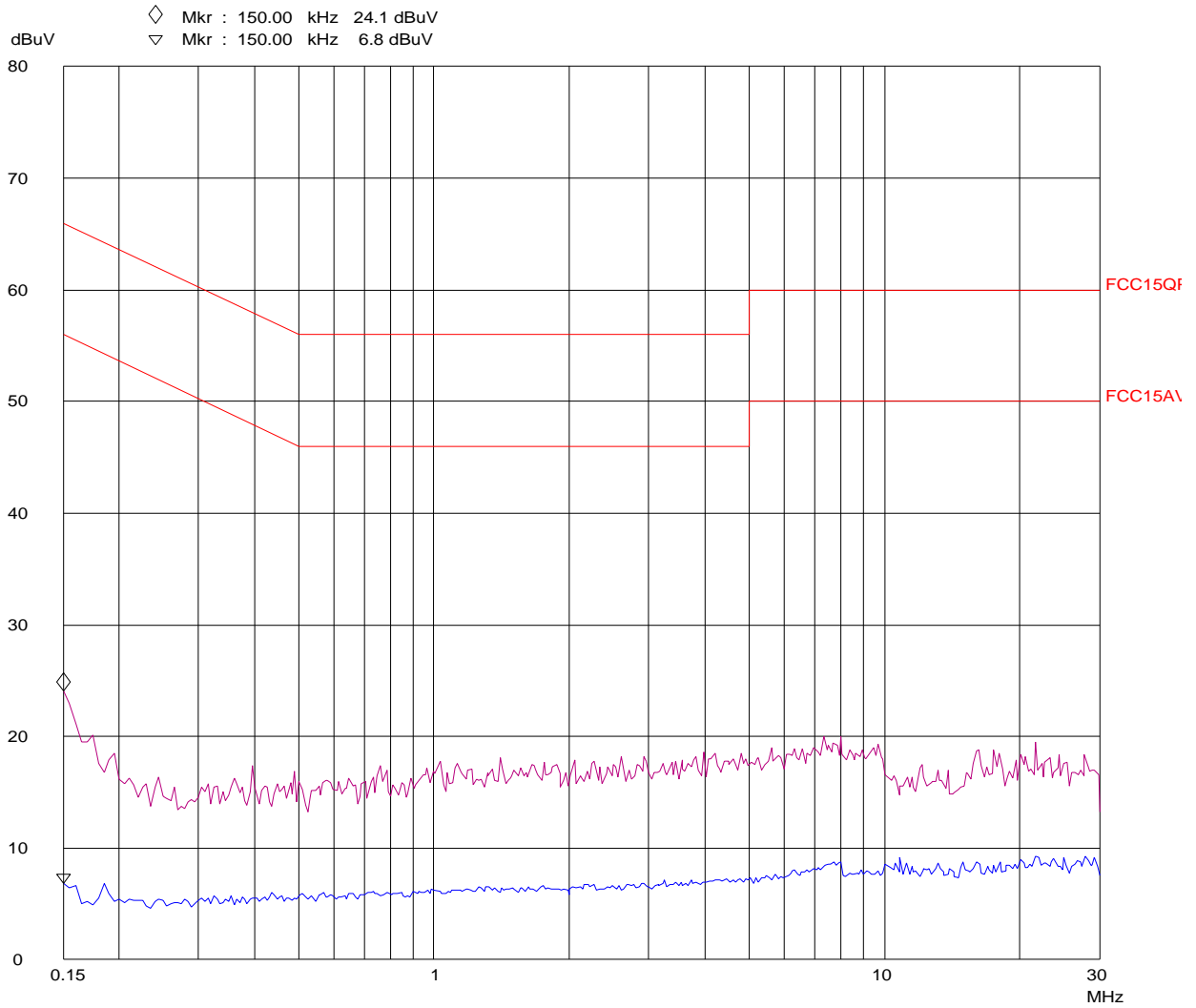
EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.5MHz
Operator: Feng
Test Spec: Vb 120V/60Hz
Comment: Tem26°C Humi50%
Report No.:ATE20081542 Sample No.:083111

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac



CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 09:20

EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.9MHz
Operator: Feng
Test Spec: Va 120V/60Hz
Comment: Tem26 C Humi50%
Report No.:ATE20081542 Sample No.:083111

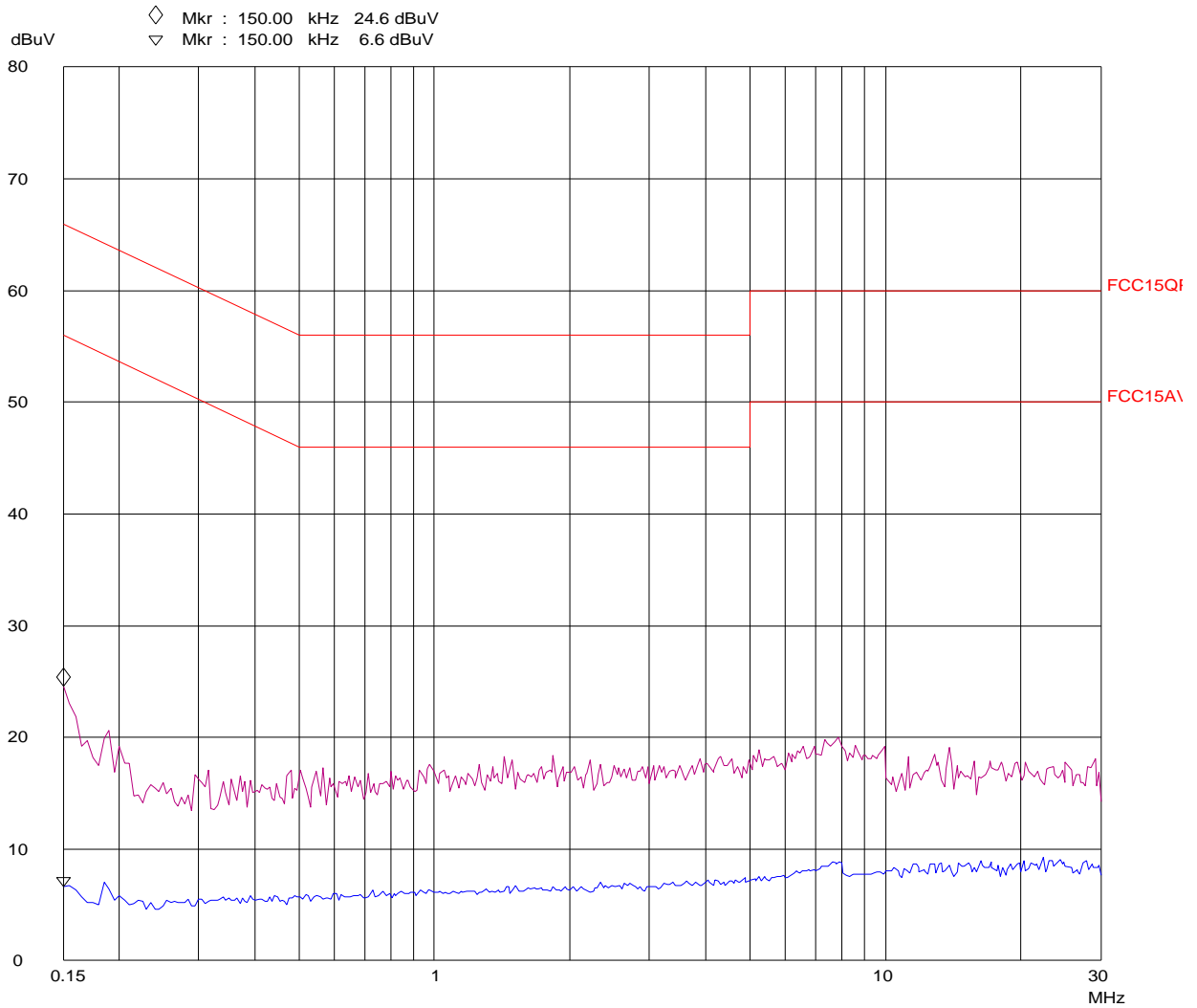
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac



CONDUCTION EMISSION STANDARD FCC Part15B

02. Sep 08 09:26

EUT: WIRELESS FM TRANSMITTER M/N:CA-292
Manuf: KINGSUN
Op Cond: TX 88.9MHz
Operator: Feng
Test Spec: Vb 120V/60Hz
Comment: Tem26°C Humi50%
Report No.:ATE20081542 Sample No.:083111

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 9k 30M confac

