FCC CERTIFICATION
On Behalf of
CITYGROW TECHNOLOGY CO., LTD.

ENERGY DISPLAY
Model No.: CG100EM

FCC ID: WSFCG100EM

Prepared for	:	CITYGROW TECHNOLOGY CO., LTD.
Address	:	Room 1404, 14/F, Block A, Hi-Tech, Industrial Centre, 5-21, Pak Tin Par Street, Tsuen Wan, N.T. Hong Kong
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Report Number	:	ATE20081896
Date of Test	:	October 8-10, 2008
Date of Report	:	October 10, 2008

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Description Page

Test Report Certification

Applicant	:	CITYGROW TECHNOLOGY CO., LTD.
Manufacturer	:	MEI HUA ELECTRONICS (HUIZHOU) LTD.
EUT Description	:	ENERGY DISPLAY
		(A) MODEL NO.: CG100EM
		(B) SERIAL NO.: N/A
		(C) POWER SUPPLY: DC 5V

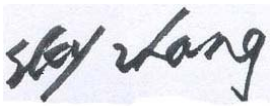
Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B: 2008
FCC Rules and Regulations Part 15 Subpart C Section 15.249: 2008
ANSI C63.4: 2003

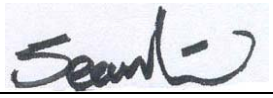
The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B and Subpart C Section15.249 limits. The measurement results are contained in this test report and 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 : October 8-10, 2008

Prepared by : 

(Engineer)

Approved & Authorized Signer : 

(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	ENERGY DISPLAY
Model Number	:	CG100EM
Power Supply	:	DC 5V
Operate Frequency	:	2.4GHz
AC/DC Adapter	:	Manufacturer: KINGS M/N: KSS05-050-1000U Input: AC 100-240V, 50/60Hz 150mA Output: DC 5.0V, 1000mA
PC Host	:	Manufacturer: DELL M/N: DCNE Serial No.: 6CQSC2X
LCD Monitor	:	Manufacturer: DELL M/N: E178FPc Serial No.: CN-OWR979-64180-83T-1CAC
keyboard	:	Manufacturer: DELL M/N: L100 Serial No.: CN0RH6566589083L05TX
Mouse	:	Manufacturer: DELL M/N: MOC5UO Serial No.: H0F03QDC
Printer	:	Manufacturer: Canon Model No.: BJC-1000SP
Applicant	:	CITYGROW TECHNOLOGY CO., LTD.
Address	:	Room 1404, 14/F, Block A, Hi-Tech, Industrial Centre, 5-21, Pak Tin Par Street, Tsuen Wan, N.T. Hong Kong
Manufacturer	:	MEI HUA ELECTRONICS (HUIZHOU) LTD.
Address	:	Jing Long Road, (Qingxi Section), Longmen, Huizhou Guangdong, China
Date of sample received	:	October 6, 2008
Date of Test	:	October 8-10, 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 (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, 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	CBLU1183540-01	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. SUMMARY OF TEST RESULTS

FCC Rules	**Description of Test**	**Result**
Section 15.107 Section 15.207	Conducted Emission	Compliant
Section 15.109 Section 15.209 Section 15.249(d)	Radiated Emission	Compliant
Section 15.249(a)	The fundamental field strength and the harmonics	Compliant
Section 15.249(d)	Band Edge	Compliant

4. CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A) & SECTION 15.107(A)

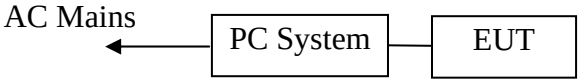
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators

4.1.1.1.For TX test mode:

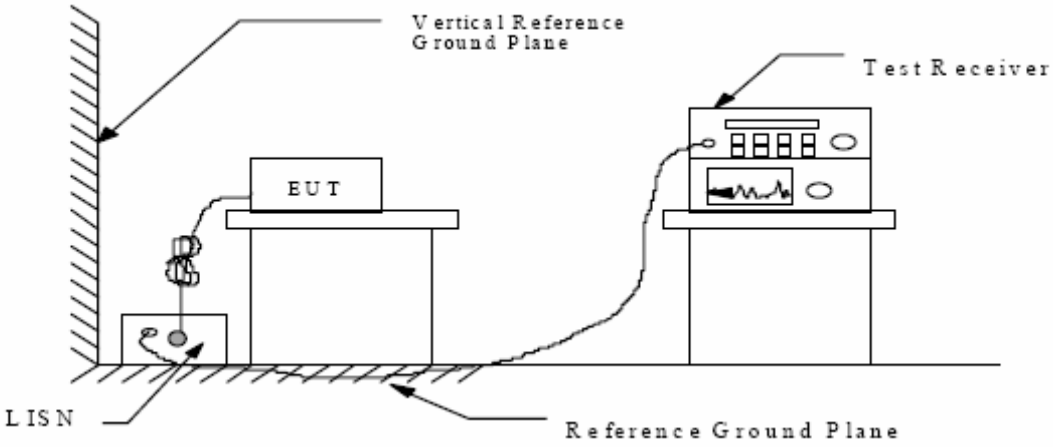
(EUT: ENERGY DISPLAY)

4.1.1.2.For Connect to PC test mode:



(EUT: ENERGY DISPLAY)

4.1.2.Shielding Room Test Setup Diagram



(EUT: ENERGY DISPLAY)

4.2.The Emission Limit

4.2.1.Conducted Emission Measurement Limits According to Section 15.207(a) & Section 15.107(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.

4.3.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.

4.3.1.ENERGY DISPLAY (EUT)

Model Number **:** CG100EM
Serial Number **:** N/A
Manufacturer **:** CITYGROW TECHNOLOGY 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.

4.4.3.Let the EUT work in TX mode measure it.

4.4.4.Let the EUT work in Connect to PC mode measure it.

4.5.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.

4.6. Power Line Conducted Emission Measurement Results

PASS.

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

Date of Test:	October 9, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	53%
			DC 5V (Adapter input)
Model No.:	CG100EM	Power Supply:	Adapter power: AC120V/60Hz
Test Mode:	TX	Test Engineer:	Joe

Test Line	Frequency MHz	Emission Level (dBμV)		Limits (dBμV)		Margin (dB)	
		QP	AV	QP	AV	QP	AV
Va	0.150	35.4	32.2	66.00	56.00	-30.60	-23.80
Va	0.240	34.8	29.0	62.10	52.10	-27.30	-23.10
Va	0.300	35.1	28.3	60.24	50.24	-25.14	-21.94
Va	1.500	36.7	27.8	56.00	46.00	-19.30	-18.20
Va	4.440	41.4	33.1	56.00	46.00	-14.60	-12.90
Va	5.660	41.3	33.0	60.00	50.00	-18.70	-17.00
Vb	0.150	39.1	35.7	66.00	56.00	-26.90	-20.30
Vb	0.240	38.4	32.3	62.10	52.10	-23.70	-19.80
Vb	0.305	39.6	31.7	60.11	50.11	-20.51	-18.41
Vb	0.675	38.0	30.5	56.00	46.00	-18.00	-15.50
Vb	4.450	44.9	36.8	56.00	46.00	-11.10	-9.20
Vb	5.650	45.2	37.4	60.00	50.00	-14.80	-12.60

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

Date of Test:	October 10, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	53%
			5V DC power by PC USB port
Model No.:	CG100EM	Power Supply:	PC power: AC120V/60Hz
Test Mode:	Connect to PC	Test Engineer:	Joe

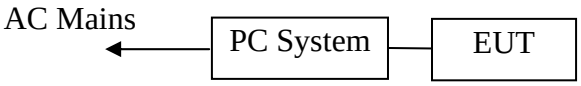
Test Line	Frequency MHz	Emission Level (dBμV)		Limits (dBμV)		Margin (dB)	
		QP	AV	QP	AV	QP	AV
Va	0.170	43.4	37.2	64.96	54.96	-21.56	-17.76
Va	0.190	46.5	40.0	64.04	54.04	-17.54	-14.04
Va	0.210	44.0	37.4	63.21	53.21	-19.21	-15.81
Va	0.630	37.6	30.2	56.00	46.00	-18.40	-15.80
Va	0.935	39.7	30.1	56.00	46.00	-16.30	-15.90
Va	26.400	36.3	29.1	60.00	50.00	-23.70	-20.90
Vb	0.170	43.1	36.5	64.96	54.96	-21.86	-18.46
Vb	0.190	45.9	38.2	64.04	54.04	-18.14	-15.84
Vb	0.210	43.3	36.4	63.21	53.21	-19.91	-16.81
Vb	0.610	37.6	30.0	56.00	46.00	-18.40	-16.00
Vb	0.935	39.5	30.1	56.00	46.00	-16.50	-15.90
Vb	26.525	37.2	28.6	60.00	50.00	-22.80	-21.40

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

5. RADIATED EMISSION FOR FCC PART 15 SECTION 15.109 (A)

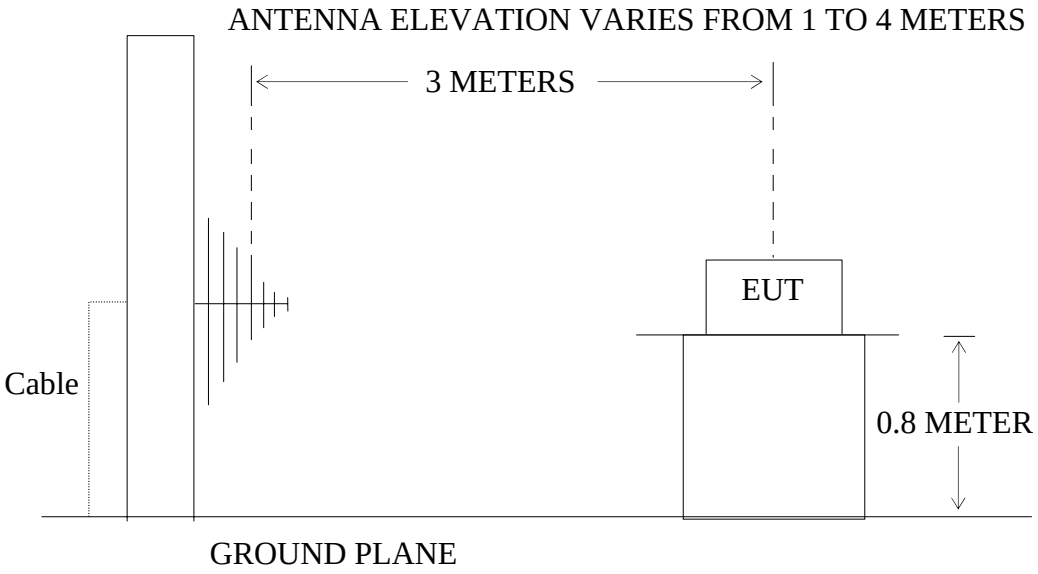
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators



(EUT: ENERGY DISPLAY)

5.1.2.Anechoic Chamber Test Setup Diagram



(EUT: ENERGY DISPLAY)

5.2.The Emission Limit For Section 15.109 (a)

5.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

Frequency (MHz)	Limit	
	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

5.3.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.

5.3.1. ENERGY DISPLAY (EUT)

Model Number : CG100EM
Serial Number : N/A
Manufacturer : CITYGROW TECHNOLOGY CO., LTD.

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3. Let the EUT work in Connect to PC mode measure it.

5.5. 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 ESI26) 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.

5.6. The Emission Measurement Result

PASS.

Date of Test:	October 10, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	52%
Model No.:	CG100EM	Power Supply:	5V DC power by PC USB port PC power: AC120V/60Hz
Test Mode:	Connect to PC	Test Engineer:	Joe

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
35.3867	12.16	18.60	30.76	40.00	-9.24	Vertical
71.2033	15.78	12.97	28.75	40.00	-11.25	
127.8865	14.15	14.97	29.12	43.50	-14.38	
196.8595	13.72	14.95	28.67	43.50	-14.83	
383.6960	12.61	21.67	34.28	46.00	-11.72	
431.0530	14.16	22.97	37.13	46.00	-8.87	
70.9535	14.62	12.95	27.57	40.00	-12.43	Horizontal
145.2994	13.60	14.48	28.08	43.50	-15.42	
165.2911	14.04	14.66	28.70	43.50	-14.80	
216.6196	15.25	15.59	30.84	46.00	-15.16	
237.4927	15.13	16.58	31.71	46.00	-14.29	
378.8480	12.07	21.53	33.60	46.00	-12.40	

The spectral diagrams in appendix I display the measurement of peak values.

Note:

1. The emission emitted by the EUT is too low to be measured except the emission listed above.

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:

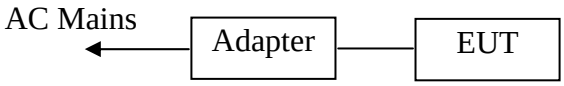
   Result = Reading + Corrected Factor

   Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

6. FUNDAMENTAL AND HARMONICS RADIATED EMISSION MEASURMENT

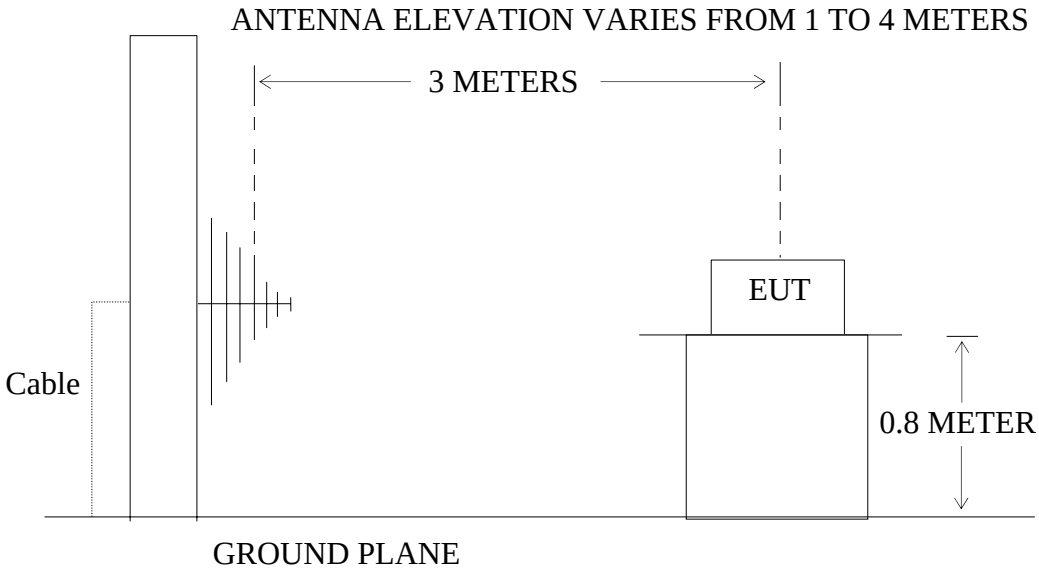
6.1.Block Diagram of Test Setup

6.1.1.Block diagram of connection between the EUT and simulators



(EUT: ENERGY DISPLAY)

6.1.2.Anechoic Chamber Test Setup Diagram



(EUT: ENERGY DISPLAY)

6.2.The Emission Limit

6.2.1.For intentional radiators, According to section 15.249(a), Operation within the frequency band of 2.4 to 2.4835GHz, The fundamental field strength shall not exceed 94 dBμV/m and the harmonics shall not exceed 54 dBμV/m.

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of harmonics (microvolts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

6.2.2.According to section 15.249(e), as shown in section 15.35(b), the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

6.3.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.

6.3.1. ENERGY DISPLAY (EUT)

Model Number : CG100EM
Serial Number : N/A
Manufacturer : CITYGROW TECHNOLOGY CO., LTD.

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it.

6.5. 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 ESI26) is set at 1MHz.

6.6. The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	October 9, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	52%
Model No.:	CG100EM	Power Supply:	DC 5V (Adapter input)
Test Mode:	TX	Test Engineer:	Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)		Factor(dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2440.000	88.34	96.51	-7.36	80.98	89.15	94	114	-13.02	-24.85	Vertical
2440.000	87.76	96.51	-7.36	80.40	89.15	94	114	-13.60	-24.85	Horizontal

Harmonics Radiated Emissions

Frequency	Reading(dBμV/m)		Factor(dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4880.002	46.27	52.94	0.13	46.40	53.07	54	74	-7.60	-20.93	Vertical
7320.006	45.08	51.49	3.24	48.32	54.73	54	74	-5.68	-19.27	
4880.002	45.51	53.38	0.13	45.64	53.51	54	74	-8.36	-20.49	Horizontal
7320.006	44.42	52.75	3.24	47.66	55.99	54	74	-6.34	-18.01	

The spectral diagrams in appendix I display the measurement of peak values.

Note:

1. The emission emitted by the EUT is too low to be measured except the emission listed above.
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:

   Result = Reading + Corrected Factor

   Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

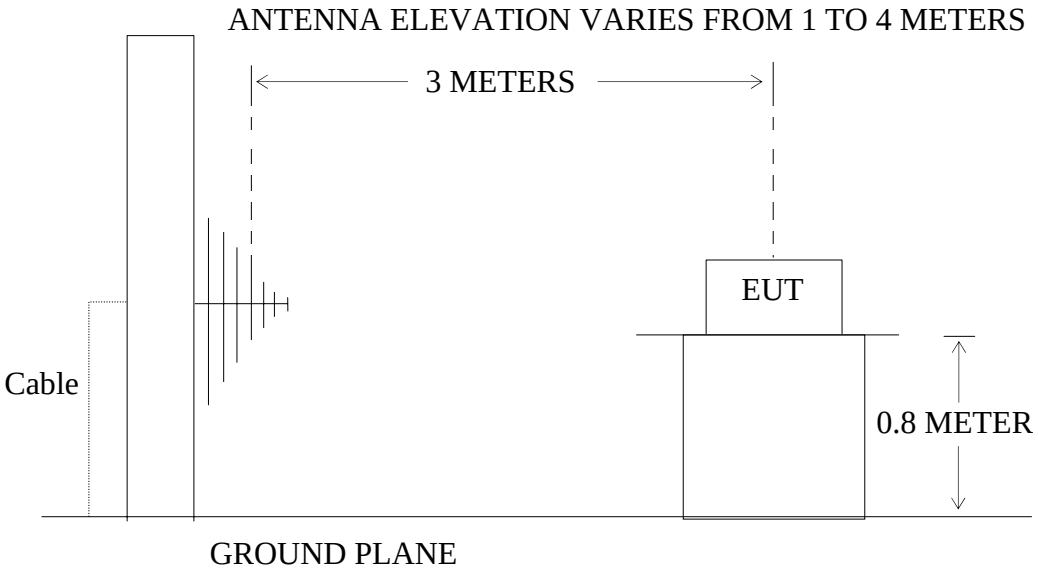
7. RADIATED EMISSION FOR FCC PART 15 SECTION 15.249(D)

7.1.Block Diagram of Test Setup

7.1.1.Block diagram of connection between the EUT and simulators

(EUT: ENERGY DISPLAY)

7.1.2.Anechoic Chamber Test Setup Diagram



(EUT: ENERGY DISPLAY)

7.2.The Emission Limit For Section 15.249(d)

7.2.1.Emission radiated outside of the specified frequency bands, except for harmonics, shall be comply with the general radiated emission limits in Section 15.209.

Radiation Emission Measurement Limits According to Section 15.209.

Frequency (MHz)	Limit		
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBμV/m)	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.
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	

7.3.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.

7.3.1. ENERGY DISPLAY (EUT)

Model Number : CG100EM
Serial Number : N/A
Manufacturer : CITYGROW TECHNOLOGY 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.

7.4.3. Let the EUT work in TX modes measure it.

7.5. 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 ESI26) is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 25000MHz is checked.

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.

7.6. The Emission Measurement Result

PASS.

Date of Test:	October 9, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	52%
Model No.:	CG100EM	Power Supply:	DC 5V (Adapter input)
Test Mode:	TX	Test Engineer:	Joe

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

1. Remark "- " means that the emission level is too low to be measured.
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:

   Result = Reading + Corrected Factor

   Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

8. BAND EDGES

8.1.The Requirement

8.1.1.Band Edge from 2400MHz to 2483.5MHz. Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

8.2.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.

8.2.1. ENERGY DISPLAY (EUT)

Model Number	**:**	CG100EM
Serial Number	**:**	N/A
Manufacturer	**:**	CITYGROW TECHNOLOGY CO., LTD.

8.3.Operating Condition of EUT

8.3.1.Setup the EUT and simulator as shown as Section 6.1.

8.3.2.Turn on the power of all equipment.

8.3.3. Let the EUT work in TX modes measure it.

8.4.Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
   RBW=1MHz, VBW=1MHz

8.5. The Measurement Result

Pass.

Date of Test:	October 9, 2008	Temperature:	25°C
EUT:	ENERGY DISPLAY	Humidity:	52%
Model No.:	CG100EM	Power Supply:	DC 5V (Adapter input)
Test Mode:	TX	Test Engineer:	Joe

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	
2397.070	49.91	58.28	-7.48	42.43	50.80	54	74	-11.57	-23.20	Vertical
2400.000	48.11	56.96	-7.46	40.65	49.50	54	74	-13.35	-24.50	
2483.500	47.63	55.57	-7.37	40.26	48.20	54	74	-13.74	-25.80	
2486.360	48.77	57.70	-7.39	41.38	50.31	54	74	-12.62	-23.69	
2392.113	47.53	57.17	-7.51	40.02	49.66	54	74	-13.98	-24.34	Horizontal
2400.000	47.56	57.40	-7.46	40.10	49.94	54	74	-13.90	-24.06	
2483.500	46.58	54.95	-7.37	39.21	47.58	54	74	-14.79	-26.42	
2487.953	46.55	54.80	-7.38	39.17	47.42	54	74	-14.83	-26.58	

The spectral diagrams in appendix I display the measurement of peak values.

Note:

1. The emission emitted by the EUT is too low to be measured except the emission listed above.
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:

   Result = Reading + Corrected Factor

   Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

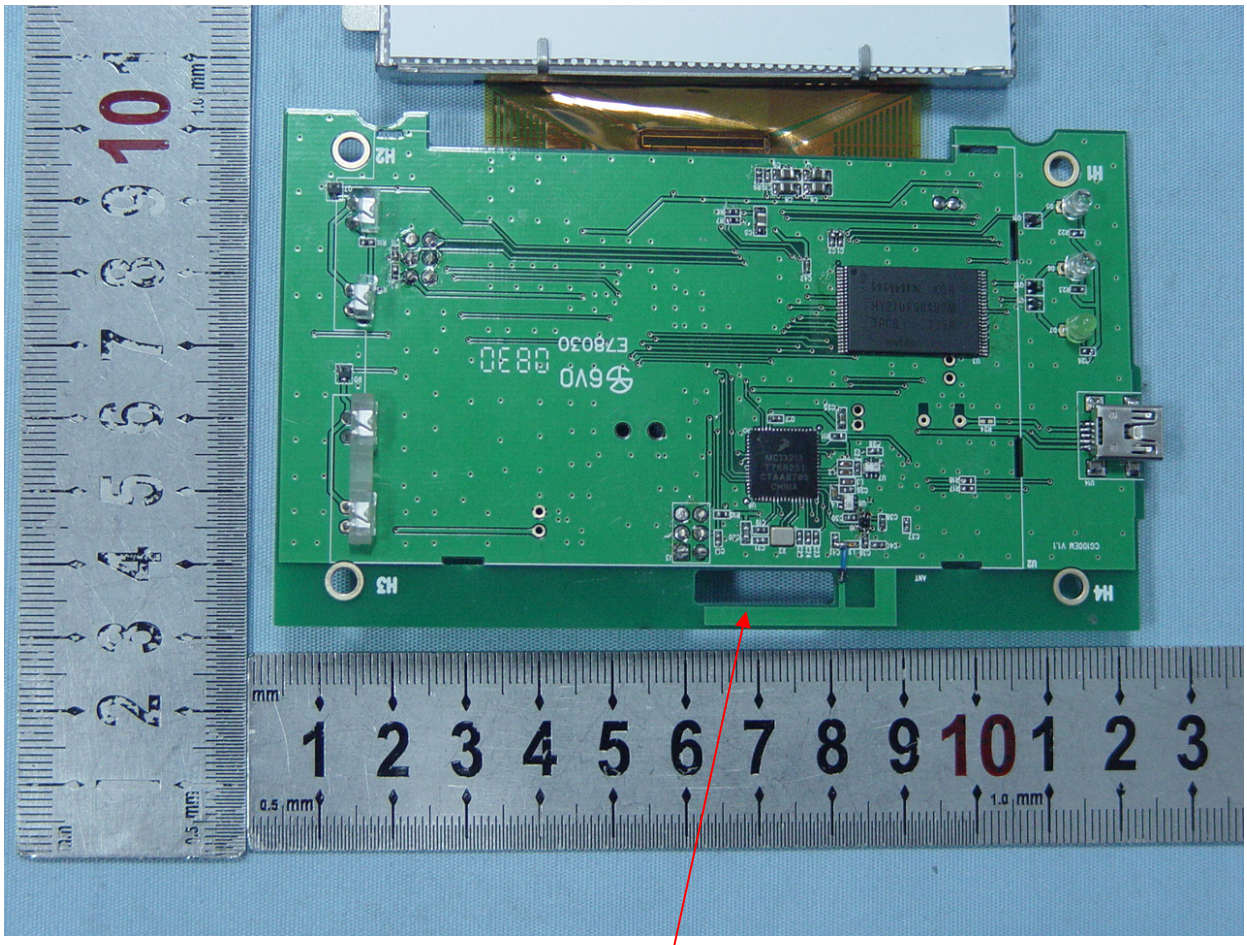
9. ANTENNA REQUIREMENT

9.1.The Requirement

9.1.1. According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2.Antenna Construction

The antenna is PCB Layout antenna, no consideration of replacement.



APPENDIX I
(Test Curves)

CONDUCTION EMISSION STANDARD FCC PART15

09. Oct 08 01:43

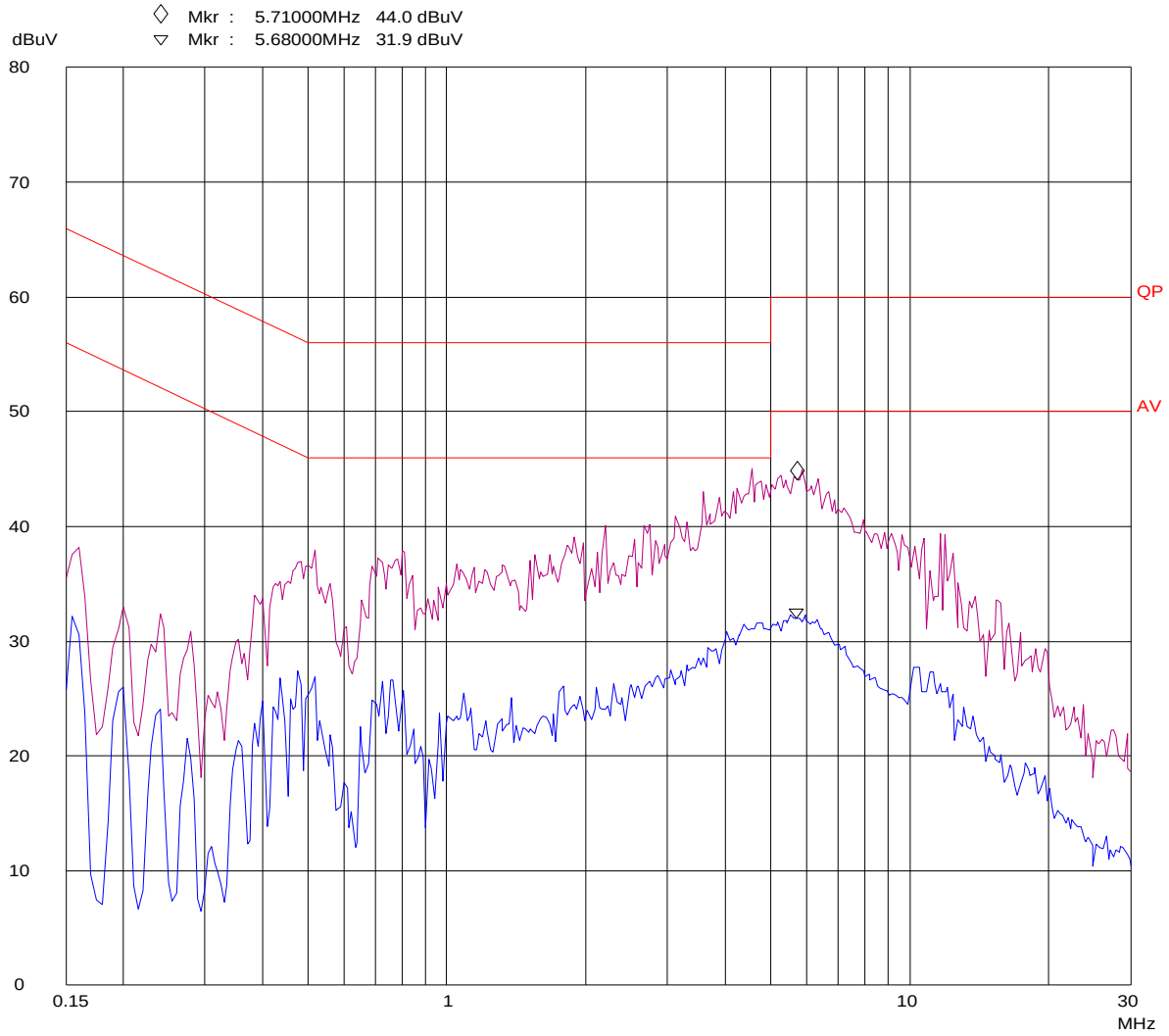
EUT:	ENERGY DISPLAY	M/N:CG100EM
Manuf:	CITYGROW	
Op Cond:	TX	
Operator:	Joe	
Test Spec:	Va 120V/60Hz	
Comment:	Tem25C Humi50%	
	Report No.:ATE20081896	

Scan Settings (3 Ranges)

Frequencies			Receiver Settings			
Start	Stop	Step	IF BW	Detector	M-Time	Atten Preamp
150k	2M	5k	9k	PK+AV	5ms AUTO LN	OFF
2M	10M	10k	9k	PK+AV	5ms 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 PART15

09. Oct 08 01:11

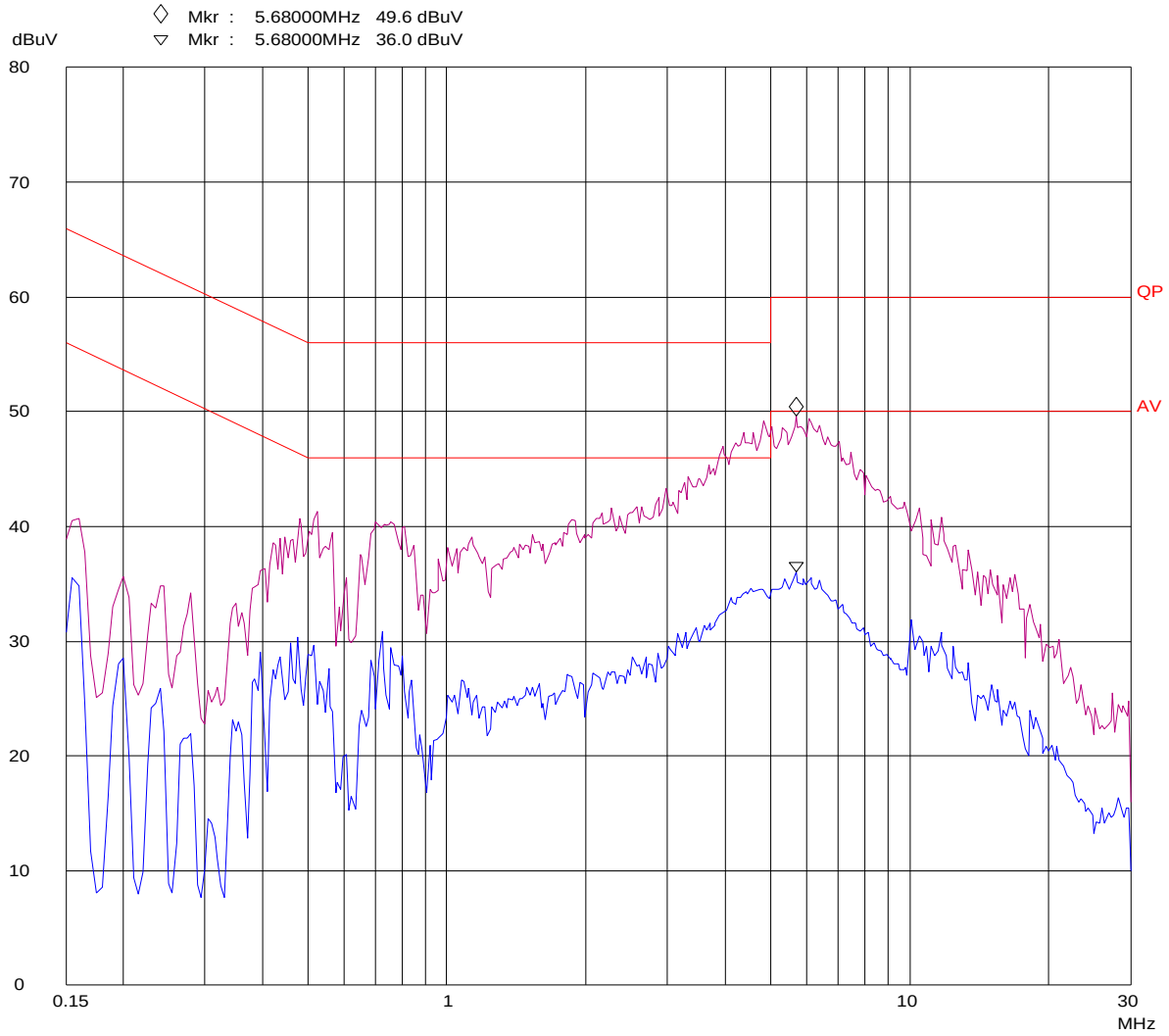
EUT: ENERGY DISPLAY M/N:CG100EM
Manuf: CITYGROW
Op Cond: TX
Operator: Joe
Test Spec: Vb 120V/60Hz
Comment: Tem25C Humi50%
Report No.:ATE20081896

Scan Settings (3 Ranges)

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	5ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	5ms	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 PART15

10. Oct 08 12:36

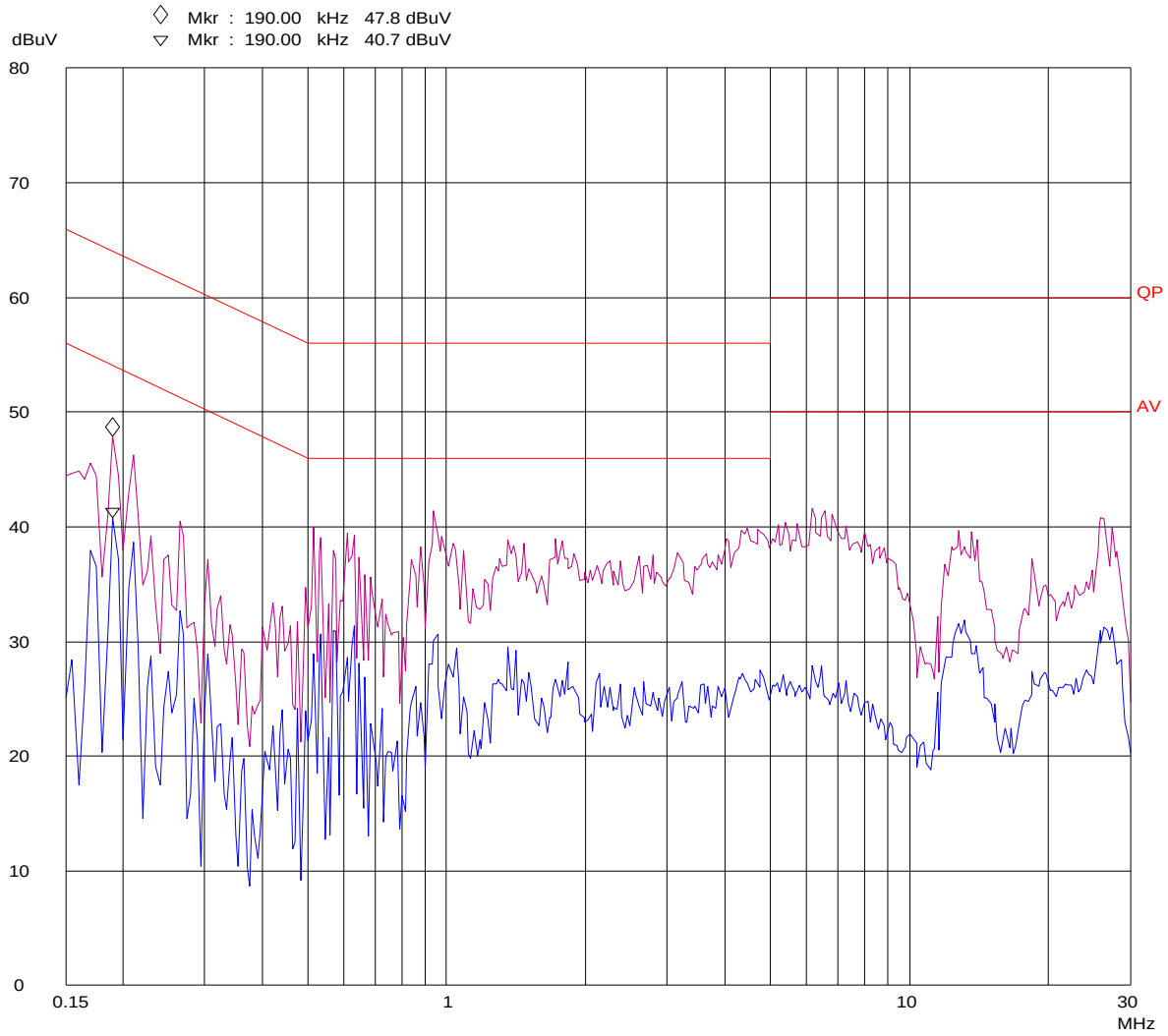
EUT:	ENERGY DISPLAY M/N:CG100EM
Manuf:	CITYGROW
Op Cond:	Connect to PC
Operator:	Joe
Test Spec:	Va 120V/60Hz
Comment:	Tem25C Humi50%
	Report No.:ATE20081896

Scan Settings (3 Ranges)

Frequencies			Receiver Settings			
Start	Stop	Step	IF BW	Detector	M-Time	Atten Preamp
150k	2M	5k	9k	PK+AV	5ms AUTO LN	OFF
2M	10M	10k	9k	PK+AV	5ms 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 PART15

10. Oct 08 12:30

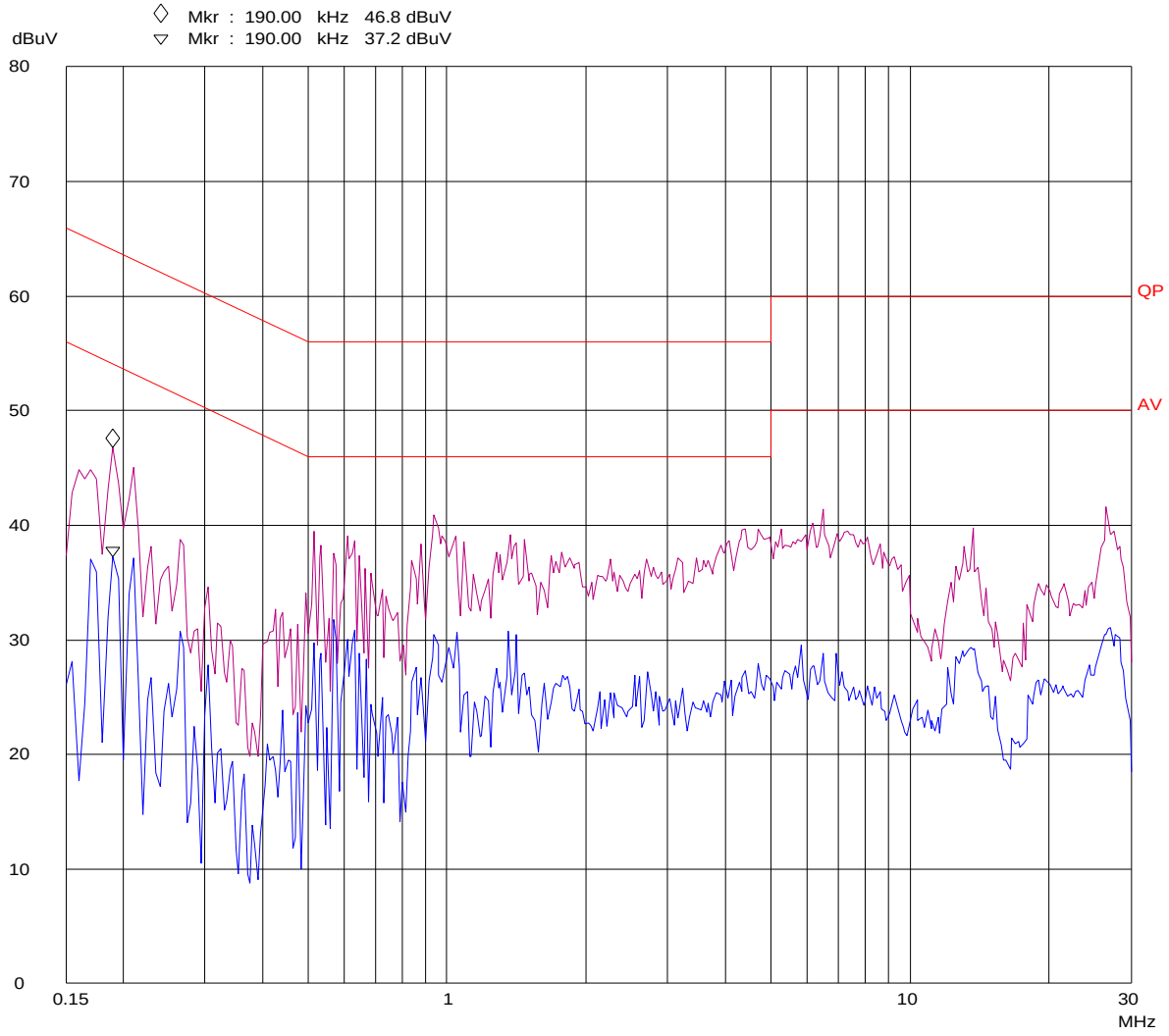
EUT: ENERGY DISPLAY M/N:CG100EM
Manuf: CITYGROW
Op Cond: Connect to PC
Operator: Joe
Test Spec: Vb 120V/60Hz
Comment: Tem25C Humi50%
Report No.:ATE20081896

Scan Settings (3 Ranges)

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



ACCURATE TECHNOLOGY CO., LTD.
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Site: 966 chamber
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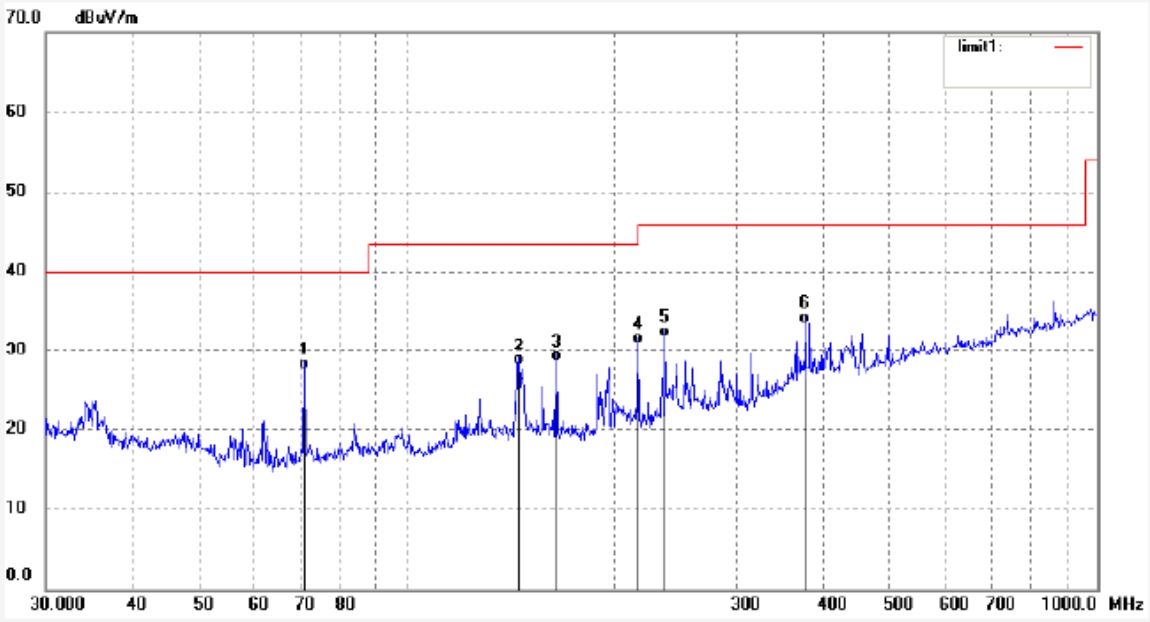
Fax:+86-0755-26503396

Job No.: RTTE #545
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: Connect to PC
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Horizontal
Power Source: DC 5V
Date: 08/10/10/
Time: 11/16/25
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	70.9535	14.62	12.95	27.57	40.00	-12.43	QP	
2	145.2994	13.60	14.48	28.08	43.50	-15.42	QP	
3	165.2911	14.04	14.66	28.70	43.50	-14.80	QP	
4	216.6196	15.25	15.59	30.84	46.00	-15.16	QP	
5	237.4927	15.13	16.58	31.71	46.00	-14.29	QP	
6	378.8480	12.07	21.53	33.60	46.00	-12.40	QP	

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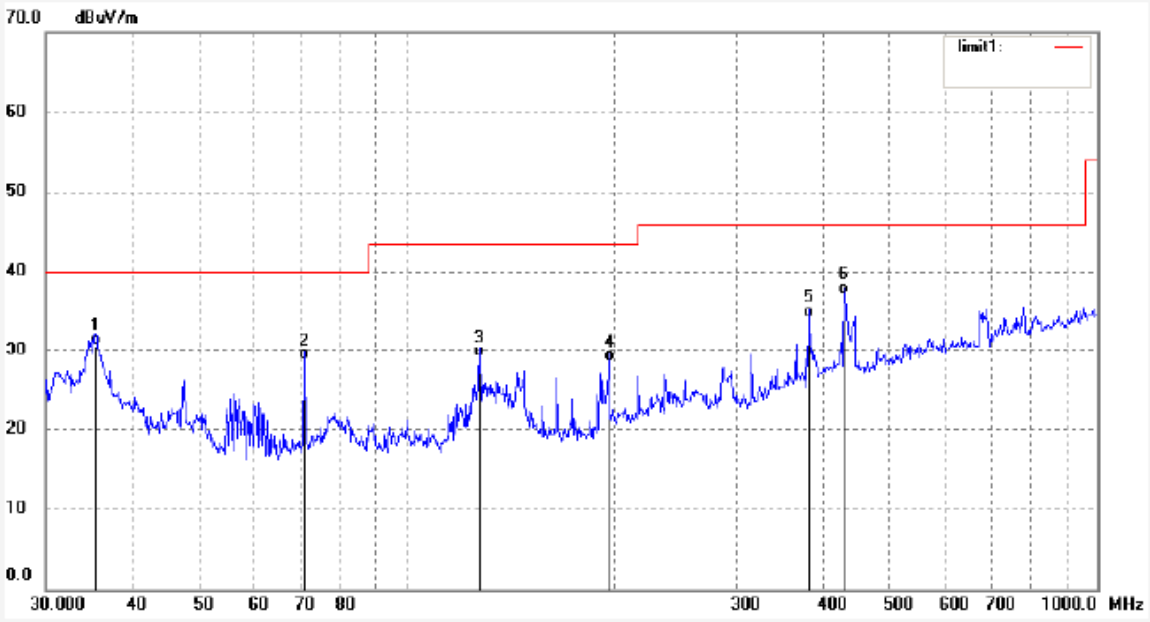
Fax:+86-0755-26503396

Job No.: RTTE #546
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: Connect to PC
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Vertical
Power Source: DC 5V
Date: 08/10/10/
Time: 11/19/06
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	35.3867	12.16	18.60	30.76	40.00	-9.24	QP	
2	71.2033	15.78	12.97	28.75	40.00	-11.25	QP	
3	127.8865	14.15	14.97	29.12	43.50	-14.38	QP	
4	196.8595	13.72	14.95	28.67	43.50	-14.83	QP	
5	383.6960	12.61	21.67	34.28	46.00	-11.72	QP	
6	431.0530	14.16	22.97	37.13	46.00	-8.87	QP	

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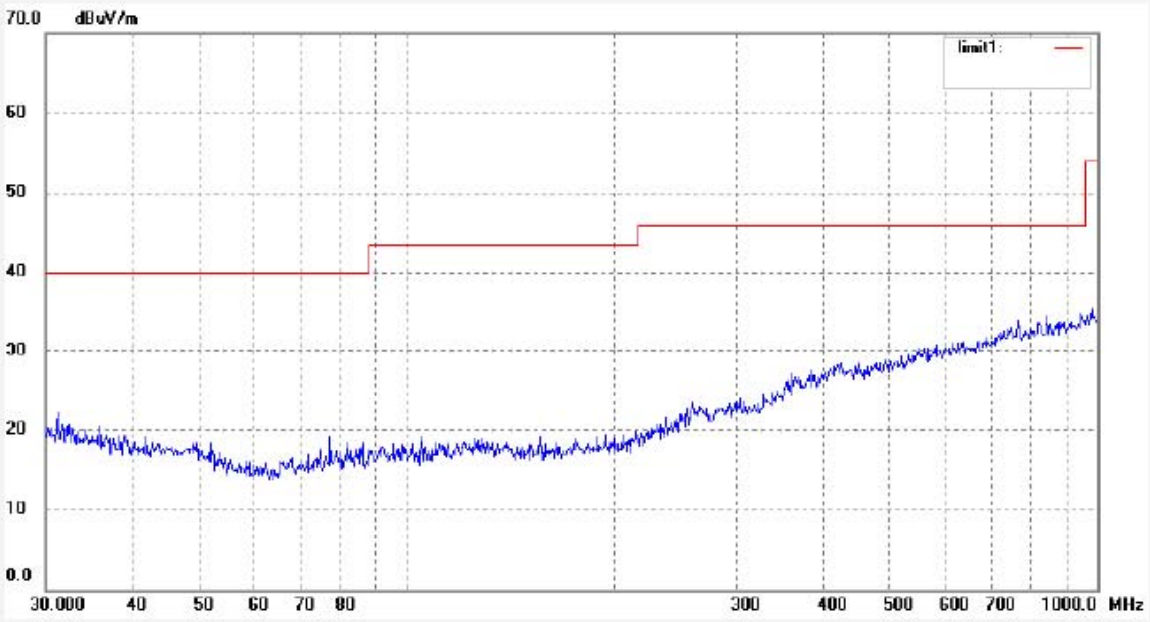
Job No.: RTTE #539	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 08/10/09/
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 5/59/46
EUT: ENERGY DISPLAY	Engineer Signature: Joe
Mode: TX	Distance: 3m
Model: CG100EM	
Manufacturer: CITYGROW	

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark

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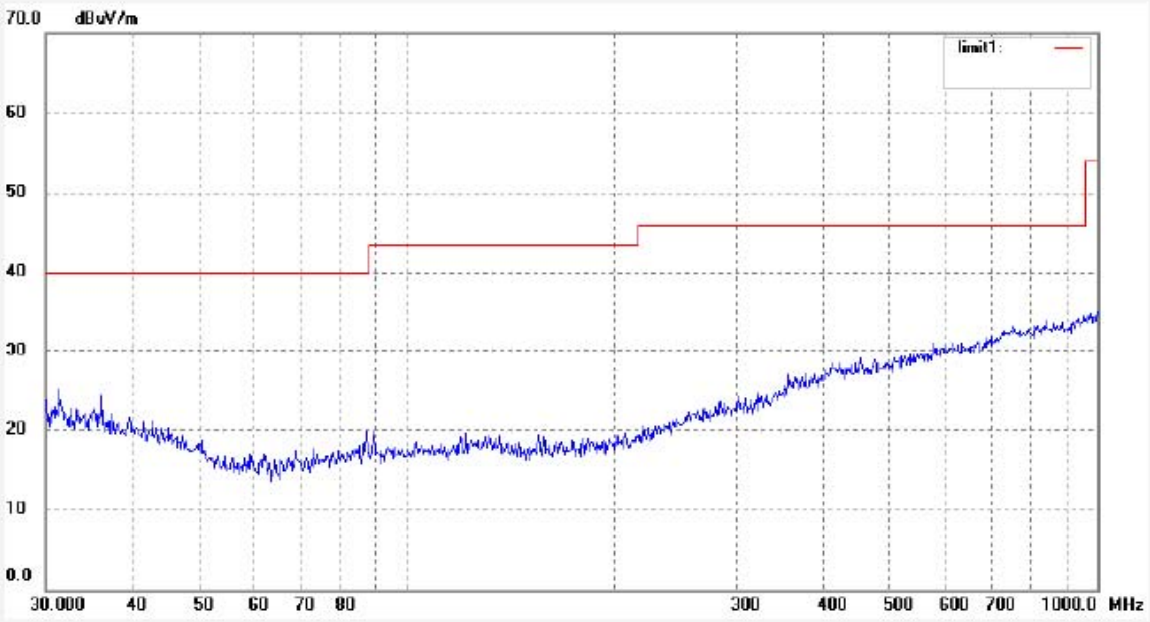
Job No.: RTTE #540	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 08/10/09/
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 5/58/46
EUT: ENERGY DISPLAY	Engineer Signature: Joe
Mode: TX	Distance: 3m
Model: CG100EM	
Manufacturer: CITYGROW	

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark

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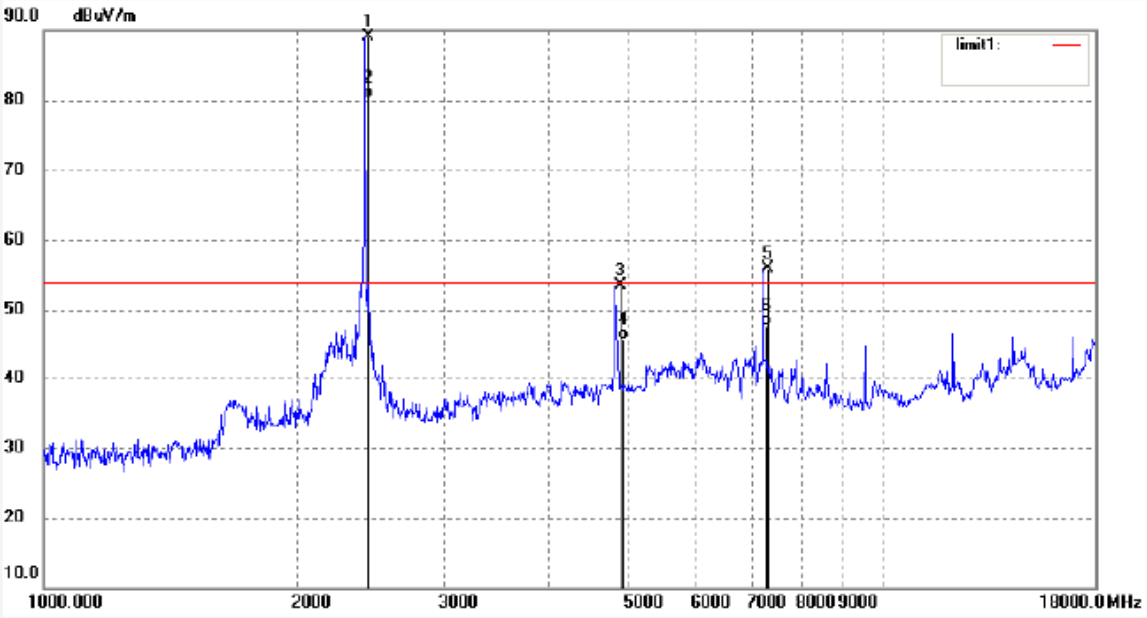
Job No.: RTTE #515
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: TX
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 08/10/09/
Time: 4/10/18
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2440.000	96.51	-7.36	89.15	114.00	-24.85	peak	
2	2440.000	87.76	-7.36	80.40	94.00	-13.60	AVG	
3	4880.002	53.38	0.13	53.51	74.00	-20.49	peak	
4	4880.002	45.51	0.13	45.64	54.00	-8.36	AVG	
5	7320.006	52.75	3.24	55.99	74.00	-18.01	peak	
6	7320.006	44.42	3.24	47.66	54.00	-6.34	AVG	

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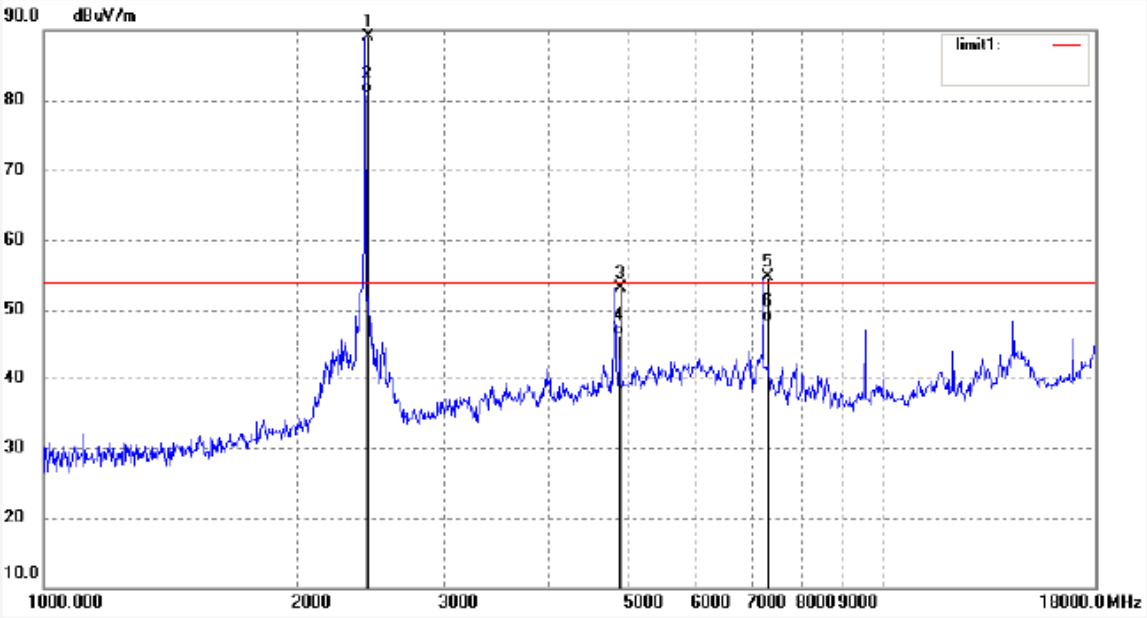
Fax:+86-0755-26503396

Job No.: RTTE #514
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: TX
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 08/10/09/
Time: 4/05/45
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2440.000	96.51	-7.36	89.15	114.00	-24.85	peak	
2	2440.000	88.34	-7.36	80.98	94.00	-13.02	AVG	
3	4880.002	52.94	0.13	53.07	74.00	-20.93	peak	
4	4880.002	46.27	0.13	46.40	54.00	-7.60	AVG	
5	7320.006	51.49	3.24	54.73	74.00	-19.27	peak	
6	7320.006	45.08	3.24	48.32	54.00	-5.68	AVG	

ACCURATE TECHNOLOGY CO., LTD.
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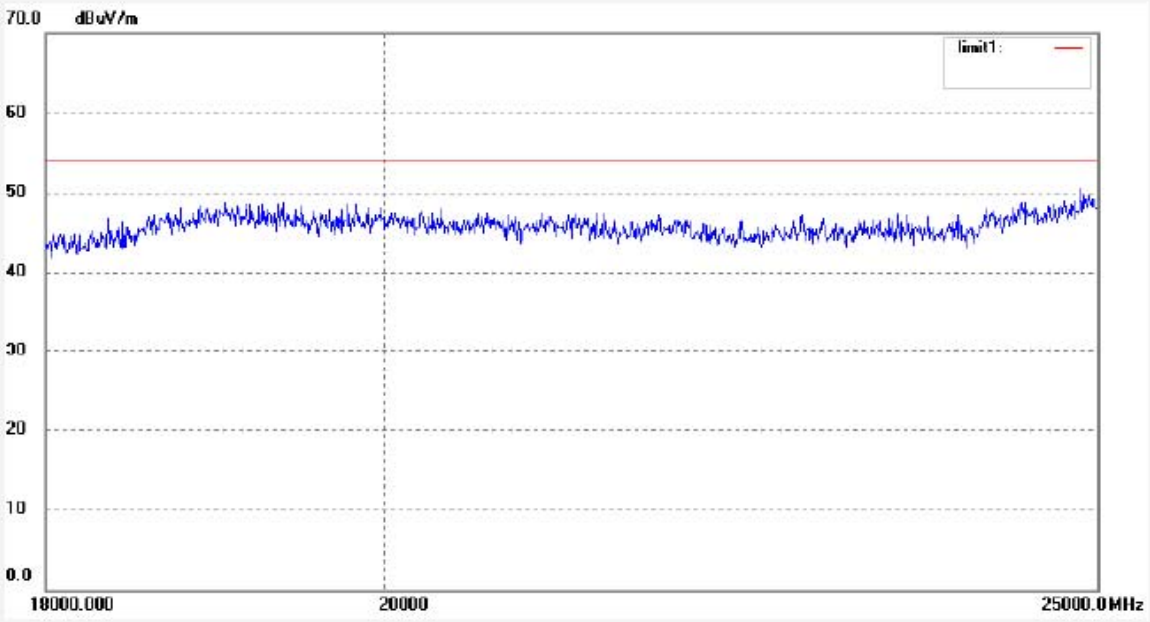
Fax:+86-0755-26503396

Job No.: RTTE #525	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 08/10/09/
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 5/02/16
EUT: ENERGY DISPLAY	Engineer Signature: Joe
Mode: TX	Distance: 3m
Model: CG100EM	
Manufacturer: CITYGROW	

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark

ACCURATE TECHNOLOGY CO., LTD.
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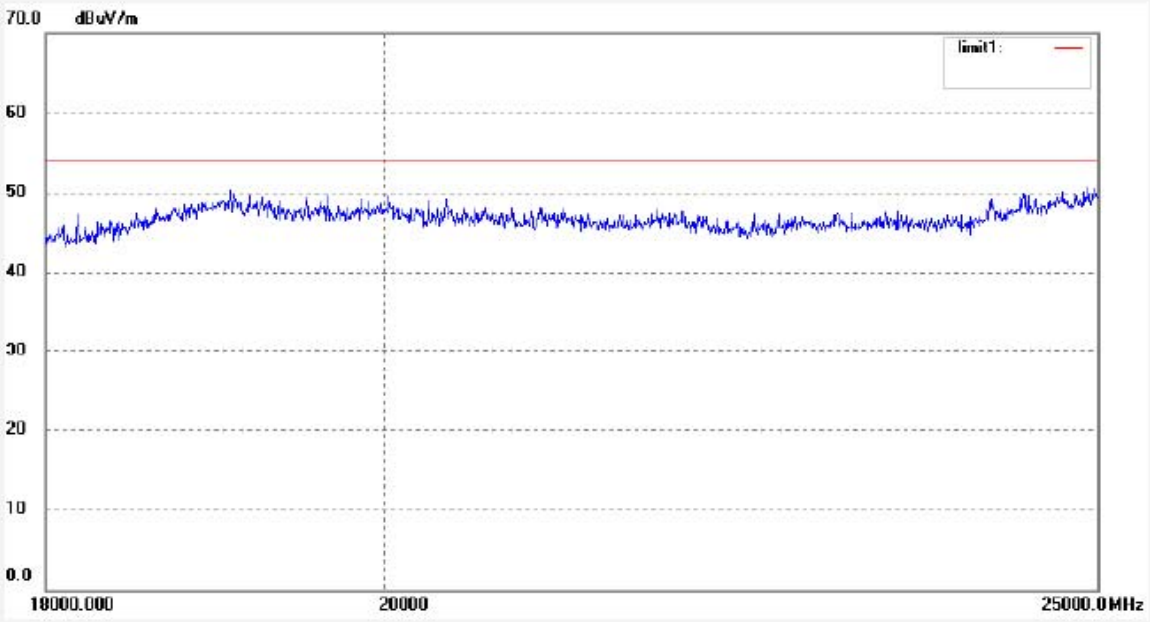
Fax:+86-0755-26503396

Job No.: RTTE #524	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 08/10/09/
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 5/01/13
EUT: ENERGY DISPLAY	Engineer Signature: Joe
Mode: TX	Distance: 3m
Model: CG100EM	
Manufacturer: CITYGROW	

Note: Report No.:ATE20081896



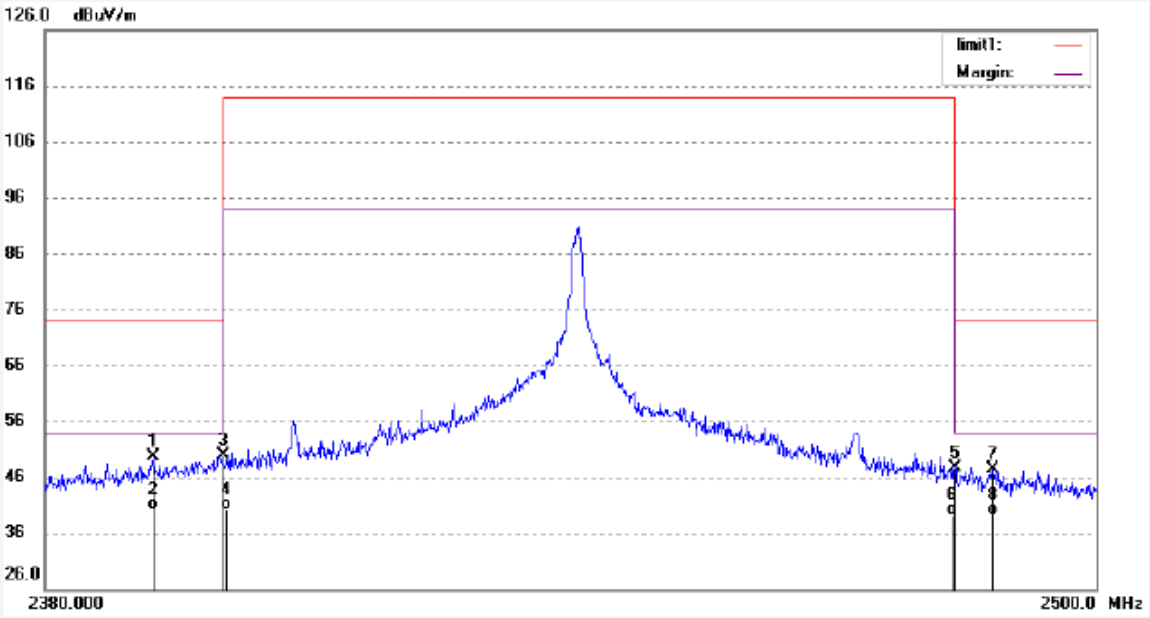
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark

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 #543
Standard: FCC Part 15 PEAK 2.4G
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: TX
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2008/10/09
Time: 13:15:01
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2392.113	57.17	-7.51	49.66	74.00	-24.34	peak	
2	2392.113	47.53	-7.51	40.02	54.00	-13.98	AVG	
3	2400.000	57.40	-7.46	49.94	74.00	-24.06	peak	
4	2400.000	47.56	-7.46	40.10	54.00	-13.90	AVG	
5	2483.500	54.95	-7.37	47.58	74.00	-26.42	peak	
6	2483.500	46.58	-7.37	39.21	54.00	-14.79	AVG	
7	2487.953	54.80	-7.38	47.42	74.00	-26.58	peak	
8	2487.953	46.55	-7.38	39.17	54.00	-14.83	AVG	

ACCURATE TECHNOLOGY CO., LTD.
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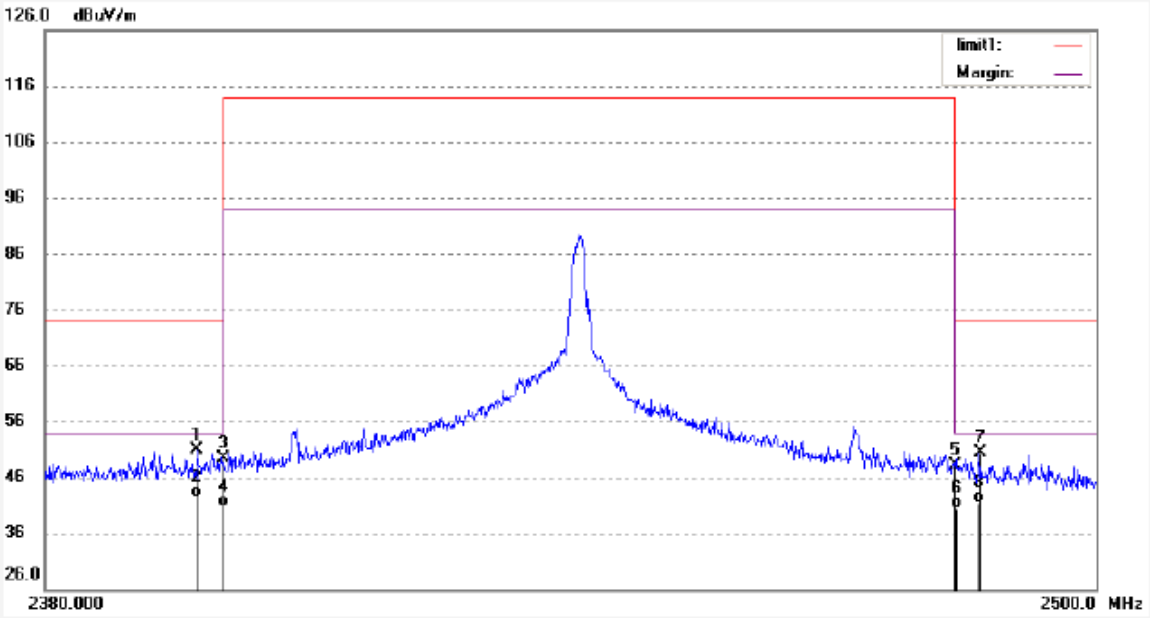
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #544
Standard: FCC Part 15 PEAK 2.4G
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: ENERGY DISPLAY
Mode: TX
Model: CG100EM
Manufacturer: CITYGROW

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2008/10/09
Time: 13:11:32
Engineer Signature: Joe
Distance: 3m

Note: Report No.:ATE20081896



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2397.070	58.28	-7.48	50.80	74.00	-23.20	peak	
2	2397.070	49.91	-7.48	42.43	54.00	-11.57	AVG	
3	2400.000	56.96	-7.46	49.50	74.00	-24.50	peak	
4	2400.000	48.11	-7.46	40.65	54.00	-13.35	AVG	
5	2483.500	55.57	-7.37	48.20	74.00	-25.80	peak	
6	2483.500	47.63	-7.37	40.26	54.00	-13.74	AVG	
7	2486.360	57.70	-7.39	50.31	74.00	-23.69	peak	
8	2486.360	48.77	-7.39	41.38	54.00	-12.62	AVG	