FCC CERTIFICATION On Behalf of Lightcomm Technology Co., Ltd.

Roof Mount monitor with DVD Model No.: F902

FCC ID: XMFF902

Prepared for : Lightcomm Technology Co., Ltd.

Address : Rooms m207-8, Haleson Building, 1 Jubilee Street,

Central Hong Kong

Prepared by : Accurate Technology Co., Ltd.

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Report Number : ATE20091220
Date of Test : July 21-27, 2009
Date of Report : July 27, 2009

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APPENDIX I (TEST CURVES) (18 pages)

Test Report Certification

Applicant : Lightcomm Technology Co., Ltd.

Manufacturer : Huizhou Hengdu Electronics Co., Ltd.

EUT Description : Roof Mount monitor with DVD

(A) MODEL NO.:F902

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 12V

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.239 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 Section15.239 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:	July 21-27, 2009	
Prepared by :	stey Long	
	(Engineer)	
Approved & Authorized Signer:	Searle	
	(Manager)	

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : Roof Mount monitor with DVD

Model Number : F902

Power Supply : DC 12V

Operate Frequency : 88.1-91.1MHz (step 0.2MHz)

Applicant : Lightcomm Technology Co., Ltd.

Address : Rooms m207-8, Haleson Building, 1 Jubilee Street, Central

Hong Kong

Manufacturer : Huizhou Hengdu Electronics Co., Ltd.

Address : DIP South Area, Huiao Highway, Huizhou, Guangdong

China

Date of sample received: July 18, 2009

Date of Test : July 21-27, 2009

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 = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)

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	03.28.2010
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.28.2010
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.28.2010
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	03.30.2010
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2010
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.28.2010
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.19.2009
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.09.2009
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.28.2010
LISN	Schwarzbeck	NSLK8126	8126431	03.28.2010

3. SUMMARY OF TEST RESULTS

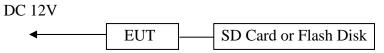
FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	N/A
Section 15.239(c) Section 15.209	Harmonics and Spurious Radiated Emission	Compliant
Section 15.239(b)	Fundamental Radiated Emission	Compliant
Section 15.239(a)	Occupied Bandwidth	Compliant
Section 15.239	Tuning Range	Compliant

Remark: "N/A" means "Not applicable".

4. HARMONICS AND SPURIOUS RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(C)

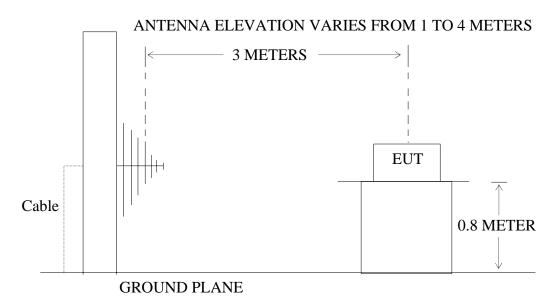
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators



(EUT: Roof Mount monitor with DVD)

4.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: Roof Mount monitor with DVD)

4.2. The Emission Limit for section 15.239(c)

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

Radiation Emission Measurement Limits According to Section 15.209

		Limit,		
Frequency (MHz)	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	
30 - 88	100	40	performed with Average detector.	
88 - 216	150	43.5	Except those frequency bands mention above, the	
216 - 960	200	46	final measurement for frequencies below 1000MHz is	
Above 960	500	54	performed with Quasi Peak detector.	

4.3. 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.

4.3.1.Roof Mount monitor with DVD (EUT)

Model Number : F902 Serial Number : N/A

Manufacturer : Huizhou Hengdu 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.
- 4.4.3. Let the EUT work in TX modes [Connect EUT use SD card and Flash Disk playing typical audio signal ('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-91.1MHz. We are select 88.1M, 89.7M, 91.1MHz TX frequency to transmit.

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.

The bandwidth of test receiver 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.

4.6. The Field Strength of Radiation Emission Measurement Results **PASS.**

The frequency range 30MHz to 1000MHz is investigated.

Date of Test: July 21, 2009

EUT: Roof Mount monitor with DVD Humidity: 50%

Model No.: F902

Test Mode: TX 88.1MHz with SD Card Test Engineer: Joe

Polarization	Frequency (MHz)	$\begin{array}{c} Reading(dB\mu V/m) \\ \\ QP \end{array}$	Factor Corr.(dB)	Result(dBµV/m) QP	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	26.10	14.49	40.59	43.50	-2.91
Horizontal	176.2060	23.82	15.76	39.58	43.50	-3.92
Horizontal	264.3080	24.61	18.66	43.27	46.00	-2.73
Vertical	142.5590	26.12	14.49	40.61	43.50	-2.89
Vertical	176.2060	24.20	15.76	39.96	43.50	-3.54
Vertical	264.3080	24.49	18.66	43.15	46.00	-2.85

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 88.1MHz with Flash DiskTest Engineer:Joe

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	Result(dBµV/m) QP	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	25.76	14.49	40.25	43.50	-3.25
Horizontal	176.2060	24.64	15.76	40.40	43.50	-3.10
Horizontal	264.3080	24.25	18.66	42.91	46.00	-3.09
Vertical	142.5590	26.21	14.49	40.70	43.50	-2.80
Vertical	176.2060	24.91	15.76	40.67	43.50	-2.83
Vertical	264.3080	24.21	18.66	42.87	46.00	-3.13

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 89.7MHz with SD CardTest Engineer:Joe

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	$\frac{Result(dB\mu V/m)}{QP}$	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	26.16	14.49	40.65	43.50	-2.85
Horizontal	179.4083	24.61	15.78	40.39	43.50	-3.11
Horizontal	269.1156	24.57	18.28	42.85	46.00	-3.15
Vertical	142.5590	26.20	14.49	40.69	43.50	-2.81
Vertical	179.4083	24.03	15.78	39.81	43.50	-3.69
Vertical	269.1156	24.76	18.28	43.04	46.00	-2.96

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 89.7MHz with Flash DiskTest Engineer:Joe

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	Result(dBµV/m) QP	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	26.01	14.49	40.50	43.50	-3.00
Horizontal	179.4083	24.52	15.78	40.30	43.50	-3.20
Horizontal	269.1156	24.61	18.28	42.89	46.00	-3.11
Vertical	142.5590	25.97	14.49	40.46	43.50	-3.04
Vertical	179.4083	24.82	15.78	40.60	43.50	-2.90
Vertical	269.1156	24.43	18.28	42.71	46.00	-3.29

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 91.1MHz with SD CardTest Engineer:Joe

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	$\frac{Result(dB\mu V/m)}{QP}$	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	26.00	14.49	40.49	43.50	-3.01
Horizontal	182.2100	24.14	15.89	40.03	43.50	-3.47
Horizontal	273.3160	24.13	18.25	42.38	46.00	-3.62
Vertical	142.5590	25.94	14.49	40.43	43.50	-3.07
Vertical	182.2100	23.82	15.84	39.66	43.50	-3.84
Vertical	273.3160	24.89	18.25	43.14	46.00	-2.86

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 91.1MHz with Flash DiskTest Engineer:Joe

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	Result(dBµV/m) QP	$\begin{array}{c} Limits(dB\mu V/m) \\ QP \end{array}$	Margin(dB) QP
Horizontal	142.5590	26.15	14.49	40.64	43.50	-2.86
Horizontal	182.2100	24.56	15.89	40.45	43.50	-3.05
Horizontal	273.3160	24.88	18.25	43.13	46.00	-2.87
Vertical	142.5590	26.08	14.49	40.57	43.50	-2.93
Vertical	182.2100	24.71	15.84	40.55	43.50	-2.95
Vertical	273.3160	24.50	18.25	42.75	46.00	-3.25

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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:

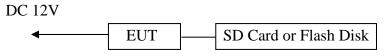
Result = Reading + Corrected Factor

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

5. FUNDAMENTAL RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(B)

5.1.Block Diagram of Test Setup

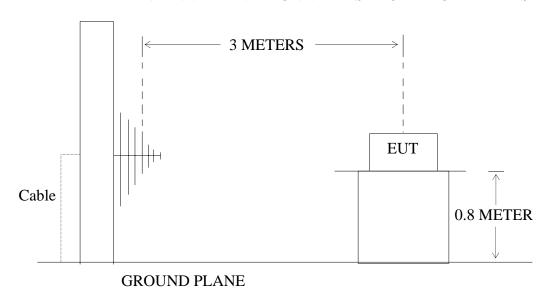
5.1.1.Block diagram of connection between the EUT and simulators



(EUT: Roof Mount monitor with DVD)

5.1.2.Semi-Anechoic Chamber Test Setup Diagram

ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS



(EUT: Roof Mount monitor with DVD)

5.2. The Emission Limit For Section 15.239(b)

5.2.1. 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.

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.Roof Mount monitor with DVD (EUT)

Model Number : F902 Serial Number : N/A

Manufacturer : Huizhou Hengdu Electronics 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 TX modes [Connect EUT use SD card and Flash Disk playing typical audio signal ('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-91.1MHz. We are select 88.1M, 89.7M, 91.1MHz TX frequency to transmit.

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 is set at 120kHz.

5.6. The Emission Measurement Result

PASS.

Date of Test:	July 21, 2009	Temperature:	25°C
EUT:	Roof Mount monitor with DVD	Humidity:	50%
Model No.:	F902	Power Supply:	DC 12V
Test Mode:	TX 88.1MHz with SD Card	Test Engineer:	Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(d	BμV/m)	Limit(d	BμV/m)	Marg	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
88.1040	31.11	32.46	13.75	44.86	46.21	48	68	-3.14	-21.79	Horizontal
88.1040	31.20	32.57	13.73	44.93	46.30	48	68	-3.07	-21.70	Vertical

Note:

- 1. Measurement was performed with modulated signal with average detector and peak detector.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 88.1MHz with Flash DiskTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(d	lBμV/m)	Limit(d	BμV/m)	Marg	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
88.1040	30.82	32.17	13.75	44.57	45.92	48	68	-3.43	-22.08	Horizontal
88.1040	31.22	32.58	13.73	44.95	46.31	48	68	-3.05	-21.69	Vertical

Note:

- 1. Measurement was performed with modulated signal with average detector and peak detector.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 89.7MHz with SD CardTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(dBµV/m)		Limit(d)	BμV/m)	Margi	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
89.7040	31.02	32.39	13.85	44.87	46.24	48	68	-3.13	-21.76	Horizontal
89.7040	31.40	32.79	13.65	45.05	46.44	48	68	-2.95	-21.56	Vertical

Note:

- 1. Measurement was performed with modulated signal with average detector and peak detector.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 89.7MHz with Flash DiskTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(d	lBμV/m)	Limit(d	BμV/m)	Marg	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
89.7040	30.79	32.17	13.85	44.64	46.02	48	68	-3.36	-21.98	Horizontal
89.7040	31.00	32.34	13.65	44.65	45.99	48	68	-3.35	-22.01	Vertical

Note:

- 1. Measurement was performed with modulated signal with average detector and peak detector.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 99.1MHz with SD CardTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(d	BμV/m)	Limit(d)	BμV/m)	Marg	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
91.1040	30.78	32.10	13.91	44.69	46.01	48	68	-3.31	-21.99	Horizontal
91.1040	30.90	32.26	13.68	44.58	45.94	48	68	-3.42	-22.06	Vertical

Note:

- 1. Measurement was performed with modulated signal with average detector and peak detector.
- 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

Date of Test:July 21, 2009Temperature:25°CEUT:Roof Mount monitor with DVDHumidity:50%Model No.:F902Power Supply:DC 12VTest Mode:TX 99.1MHz with Flash DiskTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor (dB)	Result(d	BμV/m)	Limit(d)	BμV/m)	Margi	in (dB)	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	Polarization
91.1040	30.82	32.19	13.91	44.73	46.10	48	68	-3.27	-21.90	Horizontal
91.1040	31.21	32.60	13.68	44.89	46.28	48	68	-3.11	-21.72	Vertical

Note:

1. Measurement was performed with modulated signal with average detector and peak detector.

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. OCCUPIED BANDWIDTH FOR FCC PART 15 SECTION

15.239(A)

6.1. The Requirement For Section 15.239(a)

6.1.1. 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.

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.Roof Mount monitor with DVD (EUT)

Model Number : F902 Serial Number : N/A

Manufacturer : Huizhou Hengdu Electronics Co., Ltd.

6.3. Operating Condition of EUT

- 6.3.1. Setup the EUT and simulator as shown as Section 5.1.
- 6.3.2. Turn on the power of all equipment.
- 6.3.3. Let the EUT work in TX modes [Connect EUT use SD card and Flash Disk playing typical audio signal ('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-91.1MHz. We are select 88.1M, 89.7M, 91.1MHz TX frequency to transmit.

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 EUT as normal operation. Playing typical audio signal (the volume control was set to maximum.)
- 6.4.3. Set EMI test receiver Center Frequency = fundamental frequency, RBW= 3kHz, VBW= 10kHz, Span=500kHz.
- 6.4.4. Set EMI test receiver Max hold. Mark peak, -26dB.

6.5.Test Result

The EUT does meet the FCC requirement.

FM Transmitter with SD card

FM 88.1MHz

-26dB bandwidth = 142.0kHz

FM 89.7MHz

-26dB bandwidth = 141.0kHz

FM 91.1MHz

-26dB bandwidth = 139.0kHz

FM Transmitter with Flash Disk

FM 88.1MHz

-26dB bandwidth = 144.0kHz

FM 89.7MHz

-26dB bandwidth = 137.0kHz

FM 91.1MHz

-26dB bandwidth = 148.0kHz

7. TUNING RANGE

7.1. The Requirement For Section 15.239

88-108MHz

7.2.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.

7.2.1. Roof Mount monitor with DVD (EUT)

Model Number : F902 Serial Number : N/A

Manufacturer : Lightcomm Technology Co., Ltd.

7.3. Operating Condition of EUT

- 7.3.1. Setup the EUT and simulator as shown as Section 5.1.
- 7.3.2. Turn on the power of all equipment.
- 7.3.3. Let the EUT work in TX modes [Connect EUT use SD card and Flash Disk playing typical audio signal ('Highway Blues' from sample music of windows XP) with maximum audio level] measure it. The transmit frequency are 88.1-91.1MHz. We are select 88.1M, 89.7M, 91.1MHz TX frequency to transmit.

7.4.Test Procedure

- 7.4.1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 7.4.2.Set the EUT working on the working frequency.
- 7.4.3. Set EMI test receiver center frequency = working frequency, RBW=3kHz, VBW= 10kHz, Span=500kHz.
- 7.4.4.Measuring the working frequency.
- 7.4.5. The working frequency should be inside 88-108MHz.

7.5.Test Result

The EUT does meet the FCC requirement.

FM Transmitter with SD Card

Low Frequency = 88.1040MHz	EUT LED display 88.1MHz
Mid Frequency = 89.7040MHz	EUT LED display 89.7MHz
High Frequency = 91.1040MHz	EUT LED display 91.1MHz

FM Transmitter with Flash Disk

Low Frequency = 88.1040 MHz	EUT LED display 88.1MHz
Mid Frequency = 89.7040MHz	EUT LED display 89.7MHz
High Frequency = 91.1040 MHz	EUT LED display 91.1MHz

The working frequency rang is from 88.1 to 91.1MHz.

APPENDIX I (Test Curves)



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 #2407 Standard: FCC PART 15 (FMT) Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 88.1MHz with SD Card

Model: F902

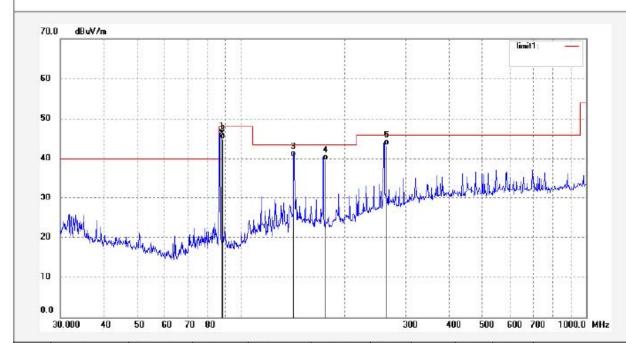
Manufacturer: Lightcomm Technology Co., Ltd.

ote: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 9/19/15

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	88.1040	32.46	13.75	46.21	68.00	-21.79	peak				
2	88.1040	31.11	13.75	44.86	48.00	-3.14	AVG				
3	142.5590	26.10	14.49	40.59	43.50	-2.91	QP				
4	176.2060	23.82	15.76	39.58	43.50	-3.92	QP		22	3	
5	264.3080	24.61	18.66	43.27	46.00	-2.73	QP	4			



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 #2408
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 88.1MHz with SD Card

Model: F902

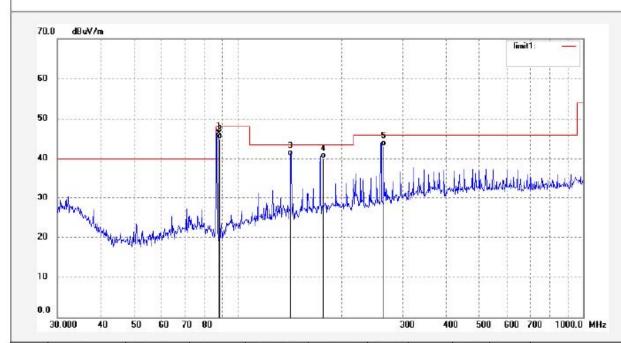
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

Date: 09/07/21/ Time: 9/21/32

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	88.1040	32.57	13.73	46.30	68.00	-21.70	peak				
2	88.1040	31.20	13.73	44.93	48.00	-3.07	AVG				
3	142.5590	26.12	14.49	40.61	43.50	-2.89	QP				
4	176.2060	24.20	15.76	39.96	43.50	-3.54	QP		22	3	
5	264.3080	24.49	18.66	43.15	46.00	-2.85	QP	4	0	-	



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 #2414
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: Roof mount monitor with DVD

Mode: TX 88.1MHz with Flash Disk

Model: F902

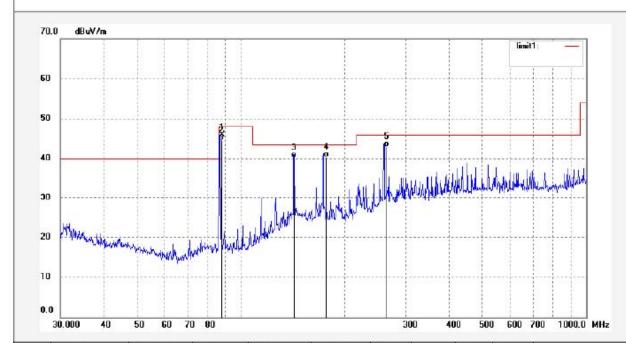
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 9/58/08

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	88.1040	32.17	13.75	45.92	68.00	-22.08	peak				
2	88.1040	30.82	13.75	44.57	48.00	-3.43	AVG				
3	142.5590	25.76	14.49	40.25	43.50	-3.25	QP				
4	176.2060	24.64	15.76	40.40	43.50	-3.10	QP			3	
5	264.3080	24.25	18.66	42.91	46.00	-3.09	QP	4		2	



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 #2413
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD

Mode: TX 88.1MHz with Flash Disk

Model: F902

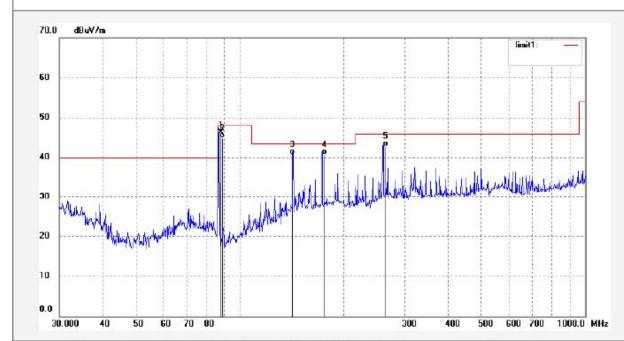
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

Date: 09/07/21/ Time: 9/54/16

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	88.1040	32.58	13.73	46.31	68.00	-21.69	peak			
2	88.1040	31.22	13.73	44.95	48.00	-3.05	AVG			5
3	142.5590	26.21	14.49	40.70	43.50	-2.80	QP			
4	176.2060	24.91	15.76	40.67	43.50	-2.83	QP	31	21	
5	264.3080	24.21	18.66	42.87	46.00	-3.13	QP			



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 #2410
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 89.7MHz with SD Card

Model: F902

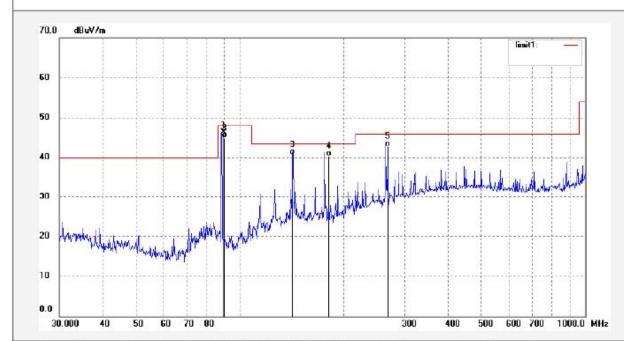
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 9/33/18

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	89.7040	32.39	13.85	46.24	68.00	-21.76	peak				
2	89.7040	31.02	13.85	44.87	48.00	-3.13	AVG				
3	142.5590	26.16	14.49	40.65	43.50	-2.85	QP				
4	179.4083	24.61	15.78	40.39	43.50	-3.11	QP		2.2		
5	269.1156	24.57	18.28	42.85	46.00	-3.15	QP	4	0	8	



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 #2409 Standard: FCC PART 15 (FMT) Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 89.7MHz with SD Card

Model: F902

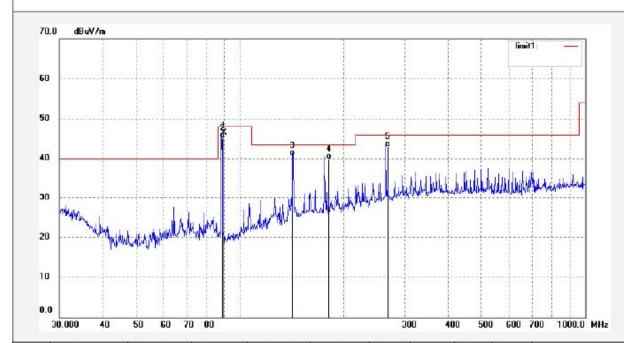
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

Date: 09/07/21/ Time: 9/32/33

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	89.7040	32.79	13.65	46.44	68.00	-21.56	peak			
2	89.7040	31.40	13.65	45.05	48.00	-2.95	AVG			5
3	142.5590	26.20	14.49	40.69	43.50	-2.81	QP			
4	179.4083	24.03	15.78	39.81	43.50	-3.69	QP	3	21	
5	269.1156	24.76	18.28	43.04	46.00	-2.96	QP	9	0	8



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 #2415
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD

Model: F902

Mode:

Manufacturer: Lightcomm Technology Co., Ltd.

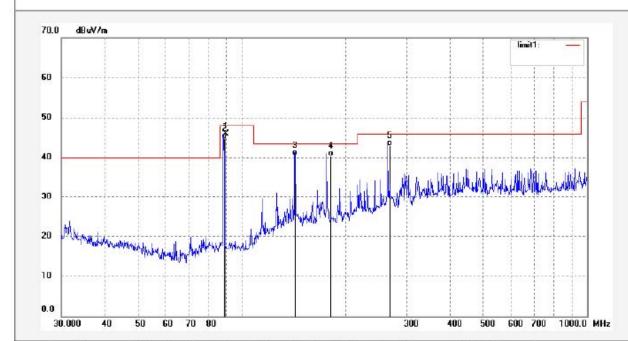
TX 89.7MHz with Flash Disk

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 10/00/37

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	89.7040	32.17	13.85	46.02	68.00	-21.98	peak			
2	89.7040	30.79	13.85	44.64	48.00	-3.36	AVG			
3	142.5590	26.01	14.49	40.50	43.50	-3.00	QP			
4	179.4083	24.52	15.78	40.30	43.50	-3.20	QP	3	22	
5	269.1156	24.61	18.28	42.89	46.00	-3.11	QP		0	9



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 #2416
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD

Mode: TX 89.7MHz with Flash Disk

Model: F902

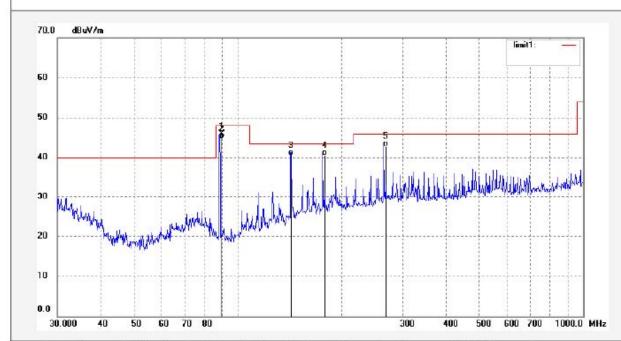
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

Date: 09/07/21/ Time: 10/02/24

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	89.7040	32.34	13.65	45.99	68.00	-22.01	peak				
2	89.7040	31.00	13.65	44.65	48.00	-3.35	AVG			8	
3	142.5590	25.97	14.49	40.46	43.50	-3.04	QP				
4	179.4083	24.82	15.78	40.60	43.50	-2.90	QP	3	22		
5	269.1156	24.43	18.28	42.71	46.00	-3.29	QP		0		



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 #2411
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 91.1MHz with SD Card

Model: F902

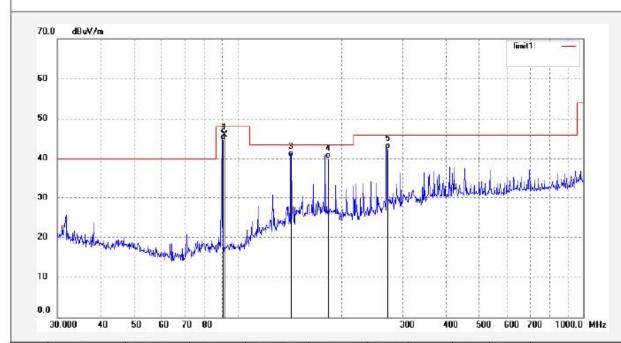
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 9/45/08

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	91.1040	32.10	13.91	46.01	68.00	-21.99	peak				
2	91.1040	30.78	13.91	44.69	48.00	-3.31	AVG				
3	142.5590	26.00	14.49	40.49	43.50	-3.01	QP				
4	182.2100	24.14	15.89	40.03	43.50	-3.47	QP		22	3	
5	273.3160	24.13	18.25	42.38	46.00	-3.62	QP	4		-	



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 #2412 Standard: FCC PART 15 (FMT) Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 91.1MHz with SD Card

Model: F902

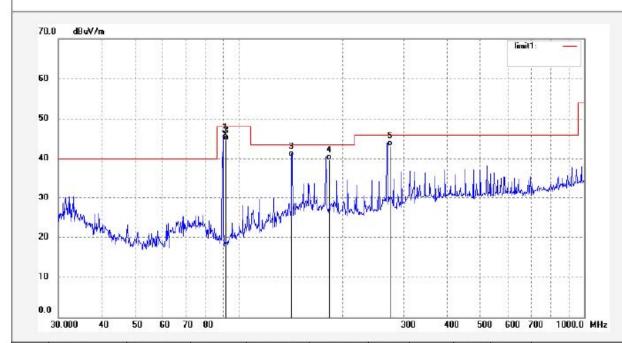
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

Date: 09/07/21/ Time: 9/50/12

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	91.1040	32.26	13.68	45.94	68.00	-22.06	peak				
2	91.1040	30.90	13.68	44.58	48.00	-3.42	AVG				_
3	142.5590	25.94	14.49	40.43	43.50	-3.07	QP				_
4	182.2100	23.82	15.84	39.66	43.50	-3.84	QP	3	22	13	
5	273.3160	24.89	18.25	43.14	46.00	-2.86	QP			7	_



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 #2418
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD
Mode: TX 91.1MHz with Flash Disk

Model: F902

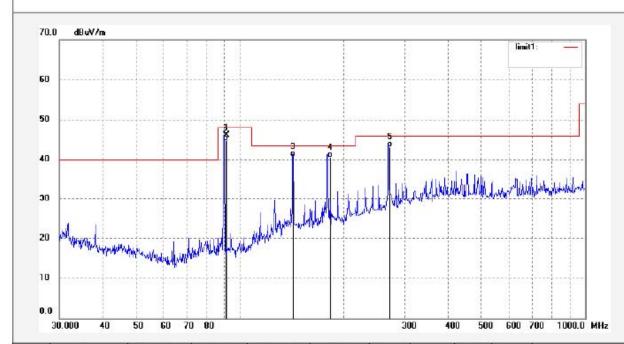
Manufacturer: Lightcomm Technology Co., Ltd.

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Horizontal Power Source: DC 12V

Date: 09/07/21/ Time: 10/07/26

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	91.1040	32.19	13.91	46.10	68.00	-21.90	peak				
2	91.1040	30.82	13.91	44.73	48.00	-3.27	AVG			55 55	
3	142.5590	26.15	14.49	40.64	43.50	-2.86	QP				
4	182.2100	24.56	15.89	40.45	43.50	-3.05	QP			130	
5	273.3160	24.88	18.25	43.13	46.00	-2.87	QP	4		2,	



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 #2417
Standard: FCC PART 15 (FMT)
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Roof mount monitor with DVD

Model: F902

Mode:

Manufacturer: Lightcomm Technology Co., Ltd.

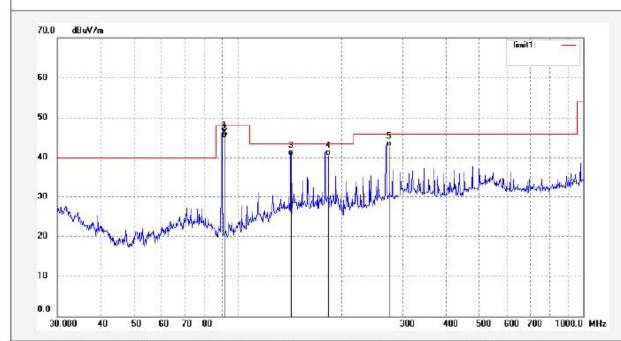
TX 91.1MHz with Flash Disk

Note: Sample No.:091065 Report No.:ATE20091220

Polarization: Vertical Power Source: DC 12V

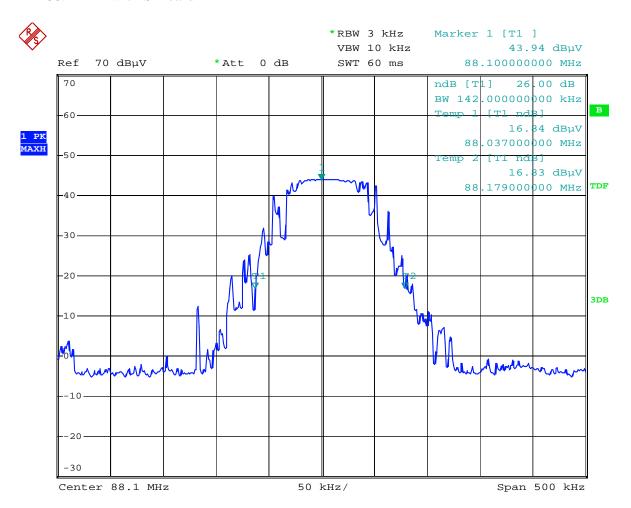
Date: 09/07/21/ Time: 10/06/23

Engineer Signature: Joe



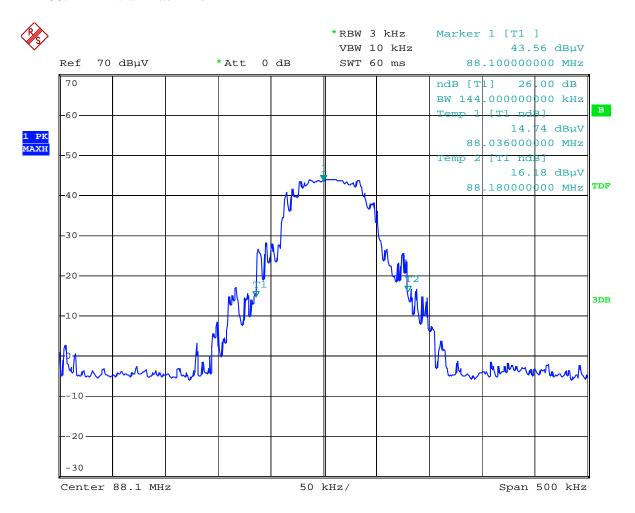
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	91.1040	32.60	13.68	46.28	68.00	-21.72	peak			
2	91.1040	31.21	13.68	44.89	48.00	-3.11	AVG			5
3	142.5590	26.08	14.49	40.57	43.50	-2.93	QP			
4	182.2100	24.71	15.84	40.55	43.50	-2.95	QP	31	21	
5	273.3160	24.50	18.25	42.75	46.00	-3.25	QP			

FM 88.1MHz with SD card



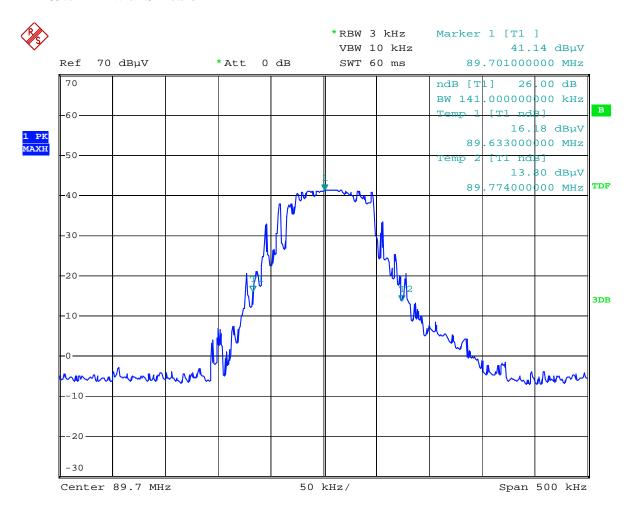
Date: 25.JUL.2009 10:49:31

FM 88.1MHz with Flash Disk



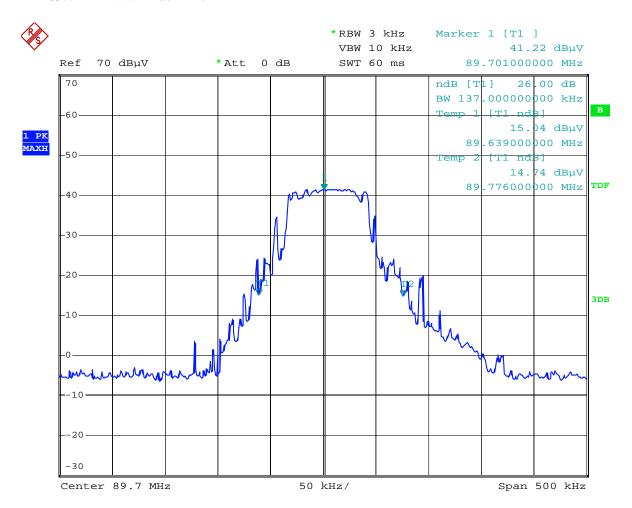
Date: 25.JUL.2009 10:47:21

FM 89.7MHz with SD card



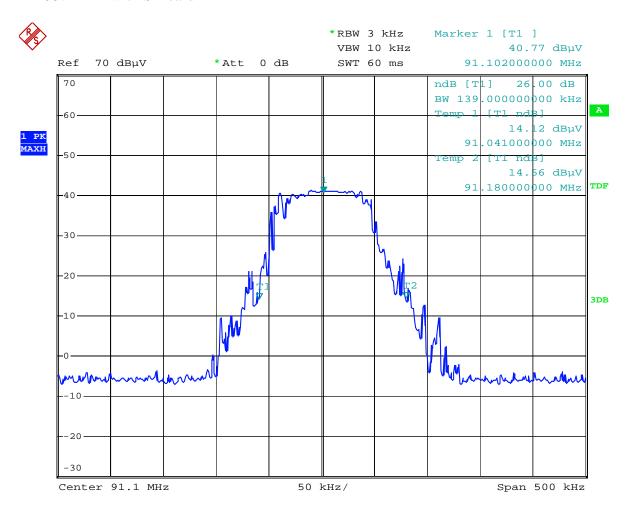
Date: 25.JUL.2009 10:53:27

FM 89.7MHz with Flash Disk



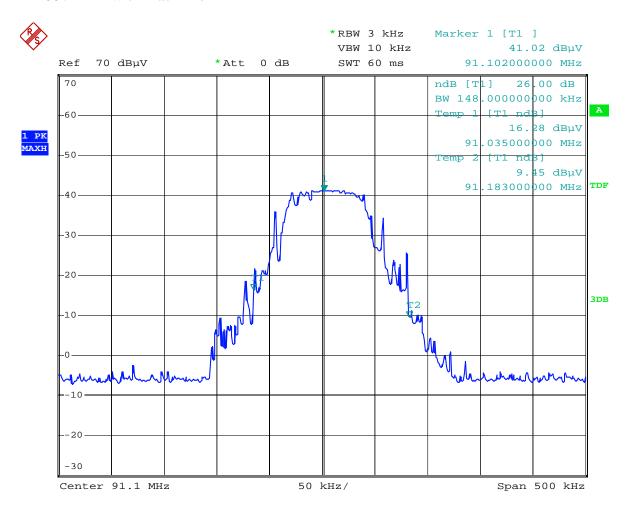
Date: 25.JUL.2009 10:51:58

FM 99.1MHz with SD card



Date: 27.JUL.2009 09:39:58

FM 99.1MHz with Flash Disk



Date: 27.JUL.2009 09:44:29