

APPLICATION CERTIFICATION FCC Part 15B

On Behalf of
DAZA Electronics Company

Fm transmitter
Model No.: F-208A(MSF11)

FCC ID: Z8VF-208A

Prepared for : DAZA Electronics Company
Address : Bldg G, Xinmusheng Low Carbon Industrial Park, NO.6
Xinmu Road Pinghu, Shenzhen, China

Prepared by : ACCURATE TECHNOLOGY CO. LTD
Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.
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Report Number : ATE20132276
Date of Test : October 25, 2013
Date of Report : October 29, 2013

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Test Report Certification

Applicant : DAZA Electronics Company
Manufacturer : DAZA Electronics Company
EUT Description : Fm transmitter
(A) MODEL NO.: F-208A(MSF11)
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: DC 12V (Power by Battery)

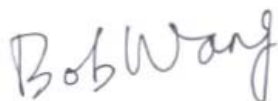
Measurement Procedure Used:


FCC Rules and Regulations Part 15 Subpart B
ANSI C63.4: 2009

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 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 25, 2013

Prepared by : 
(Engineer)

Approved & Authorized Signer : 
(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Fm transmitter
Model Number	:	F-208A(MSF11)
Power Supply	:	DC 12V (Power by Battery)
Highest operation frequency of the Charging mode	:	N/A
Applicant	:	DAZA Electronics Company
Address	:	Bldg G, Xinmusheng Low Carbon Industrial Park, NO.6 Xinmu Road Pinghu, Shenzhen, China
Manufacturer	:	DAZA Electronics Company
Address	:	Bldg. G, Xinmusheng Low Carbon Industrial Park, No. 6 Xinmu Road, Pinghu, Longgang District, Shenzhen ,China
Date of sample received	:	October 23, 2013
Date of Test	:	October 25, 2013

1.2.Accessory and Auxiliary Equipment

iPod	:	Manufacturer: Apple Model No.: A1199 S/N: 7M6369W3VQ5
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1.3. 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

1.4. 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 date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Feb. 6, 2013	Feb. 5, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Feb. 6, 2013	Feb. 5, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014
Battery	CSB	F2	HR1234W	--	--

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The modes are used: 1) On

3.2.Configuration and peripherals



(EUT: Fm transmitter)

4. TEST PROCEDURES AND RESULTS

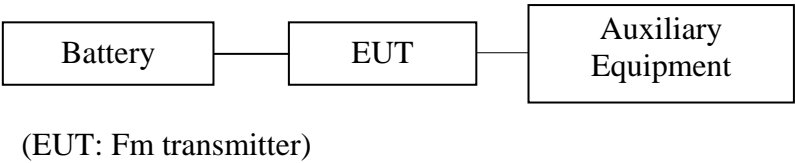
FCC Rules	Description of Test	Result
Section 15.107	Conducted Emission Test	N/A
Section 15.109	Radiated Emission Test	Compliant

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

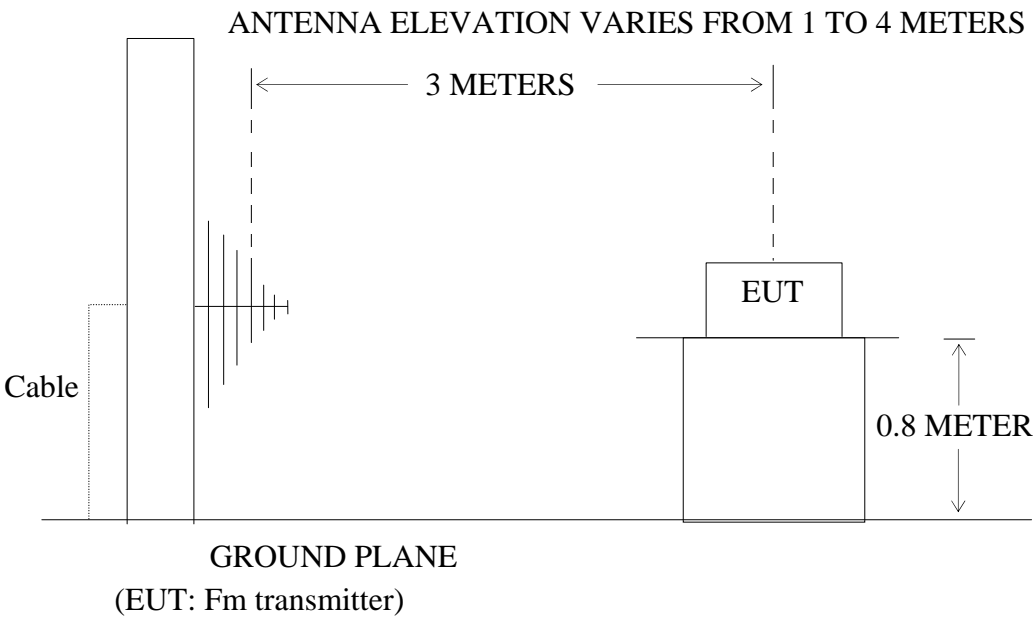
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators

5.1.1.1. For Charging



5.1.2. Semi-Anechoic Chamber Test Setup Diagram



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.Fm transmitter (EUT)

Model Number : F-208A(MSF11)
 Serial Number : N/A
 Manufacturer : DAZA Electronics Company

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 (On) 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: 2009 on radiated emission measurement.

The bandwidth of test receiver is set at 120kHz in 30-1000MHz and 1MHz in above 1000MHz.

The frequency range from 30MHz to 1000MHz is checked.

The highest frequency of the internal sources of the EUT is less than 108MHz;
The measurement shall only be made up to 1GHz.

5.6.The Emission Measurement Result

PASS.

Date of Test:	October 25, 2013	Temperature:	25°C
EUT:	Fm transmitter	Humidity:	50%
Model No.:	F-208A(MSF11)	Power Supply:	DC 12V
Test Mode:	On	Test Engineer:	PEI

Frequency: 30-1000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	295.4623	35.37	-9.37	26.00	46.00	-20.00	QP
	2	815.6352	32.03	0.26	32.29	46.00	-13.71	QP
	3	942.0180	34.55	1.97	36.52	46.00	-9.48	QP
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	34.1649	32.98	-10.33	22.65	40.00	-17.35	QP
	2	37.4329	33.95	-10.97	22.98	40.00	-17.02	QP
	3	39.1824	33.89	-11.36	22.53	40.00	-17.47	QP

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:

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

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

3. The spectral diagrams are attached as below display the measurement of peak values.


ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: RUCKY #504

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Fm transmitter

Mode: On

Model: F-208A(MSF11)

Manufacturer: DAZA

Polarization: Horizontal

Power Source: DC 12V

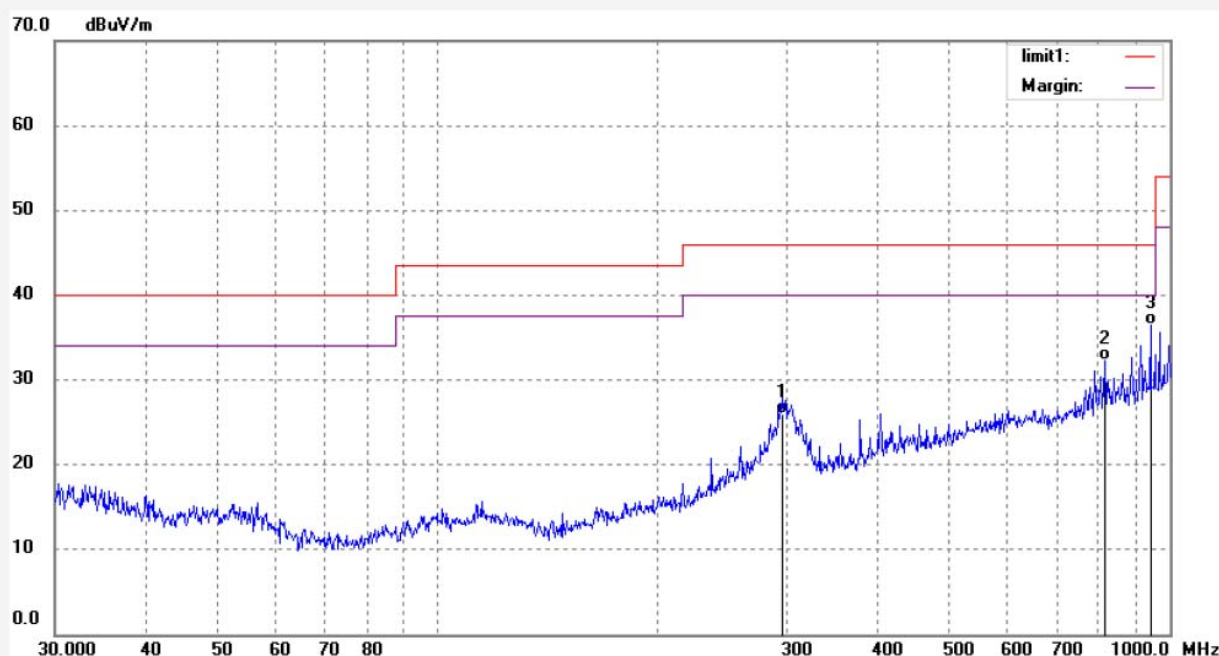
Date: 13/10/25/

Time: 9/37/56

Engineer Signature:

Distance: 3m

Note: Report No.:ATE20132276



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	295.4623	35.37	-9.37	26.00	46.00	-20.00	QP			
2	815.6352	32.03	0.26	32.29	46.00	-13.71	QP			
3	942.0180	34.55	1.97	36.52	46.00	-9.48	QP			



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RUCKY #505

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Fm transmitter

Mode: On

Model: F-208A(MSF11)

Manufacturer: DAZA

Polarization: Vertical

Power Source: DC 12V

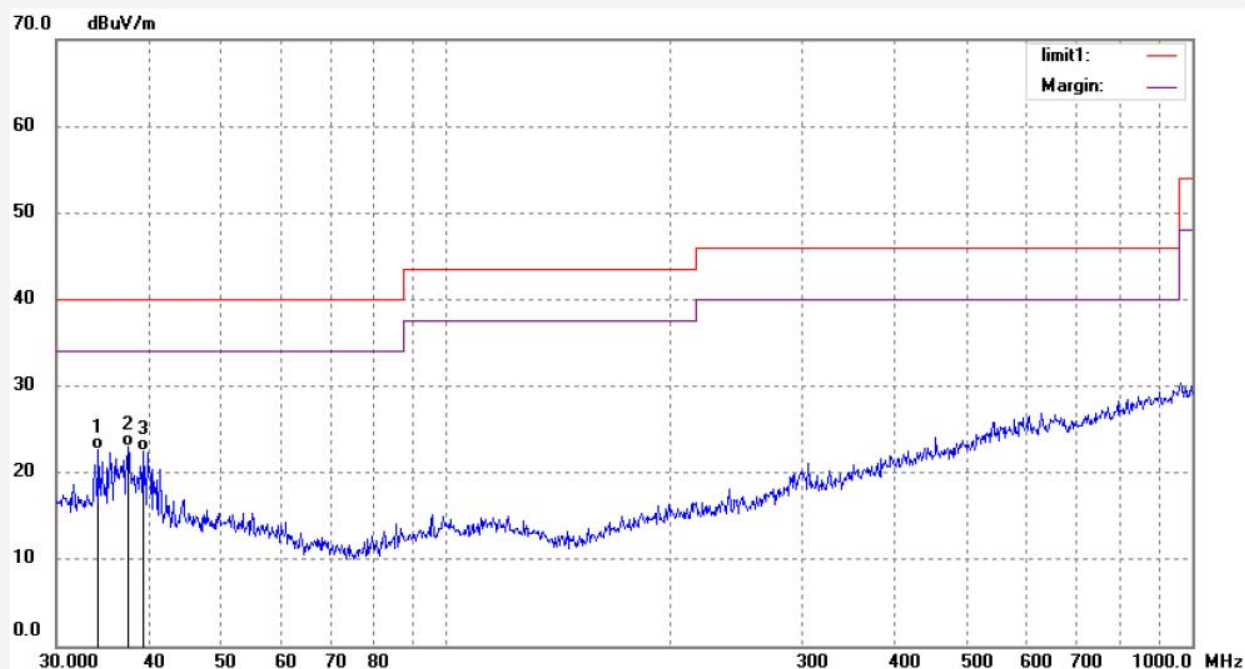
Date: 13/09/30/

Time: 9/40/34

Engineer Signature:

Distance: 3m

Note: Report No.:ATE20132276



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.1649	32.98	-10.33	22.65	40.00	-17.35	QP			
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