

Shenzhen Geniatech INC., LTD

Enjoy TV

Main Model: ATV120SD

Serial Model: See P5

June 09, 2014

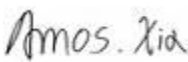
Report No.: 14020408-FCC-H1

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:

		
Amos Xia Compliance Engineer	Alex Liu Technical Manager	

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Test result presented in this test report is applicable to the representative sample only.**

RF Exposure Evaluation Report

To: FCC 2.1091: 2013

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Laboratory Introduction

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Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
Canada	EMC, RF/Wireless , Telecom
Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety

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1. EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programme was to demonstrate compliance of the Shenzhen Geniatech INC., LTD, Enjoy TV and model: ATV120SD against the current Stipulated Standards. The Enjoy TV has demonstrated compliance with the FCC 2.1091: 2013.

EUT Information

EUT Description	: Enjoy TV
Main Model	: ATV120SD
Serial Model	: ATV120B, ATV130, ATV181, ATV160, ATV100, PTV2000
Antenna Gain	: WIFI Antenna: 2dBi
Input Power	: Adapter: Model: FJ-SW0501500U Input: AC 100-240V 50/60Hz 0.35A Output: DC 5V 1500mA
Maximum Conducted Peak Power to Antenna	: 802.11b:15.71dBm 802.11g:20.28dBm 802.11n:18.43 dBm
Classification Per Stipulated Test Standard	: FCC 2.1091: 2013

Note: in this report, we choice the ATV120SD to test, and all these models are identical in interior structure, electrical circuits and component, except model name and enclosure color for marketing requirement.

2. TECHNICAL DETAILS

Purpose	Compliance testing of Enjoy TV with stipulated standard
Applicant / Client	Shenzhen Geniatech INC., LTD 18th F, GDC Building, No. 9 Gaoxin Middle 3rd Rd. Nanshan District, Shenzhen, China
Manufacturer	Shenzhen Geniatech INC., LTD 18th F, GDC Building, No. 9 Gaoxin Middle 3rd Rd. Nanshan District, Shenzhen, China
Laboratory performing the tests	SIEMIC (Nanjing-China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel: +86(25)86730128/86730129 Fax: +86(25)86730127 Email: China@siemic.com.cn
Test report reference number	14020408-FCC-H1
Date EUT received	May 12, 2014
Standard applied	FCC 2.1091: 2013
Dates of test	May 24 to June 09, 2014
No of Units	#1
Equipment Category	Spread Spectrum System/Device
Trade Name	N/A
RF Operating Frequency (ies)	WIFI: 802.11b/g/n: 2412-2462 MHz
Number of Channels	802.11b/g /n: 11CH
Modulation	CCK/OFDM
Port	SD Card Port, HDMI Port, USB Port, Power Port, Infrared Ray Port
FCC ID	ZJU0013181

3. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Note: base on different type antenna and their gain, the bellow result is the worst case.

802.11b:

Maximum peak output power at antenna input terminal: 15.71(dBm)
Maximum peak output power at antenna input terminal: 37.24 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical): 2 (dBi)
Antenna Gain (typical): 1.585 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.012 (mW/cm²)
MPE limit for general population exposure at prediction frequency: 1.0 (mW/cm²)

$0.012(\text{mW}/\text{cm}^2) < 1.0(\text{mW}/\text{cm}^2)$

802.11g:

Maximum peak output power at antenna input terminal: 20.28(dBm)
Maximum peak output power at antenna input terminal: 106.66 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.585 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.034 (mW/cm²)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm²)

$0.034(\text{mW}/\text{cm}^2) < 1.0(\text{mW}/\text{cm}^2)$

802.11n:

Maximum peak output power at antenna input terminal: 18.43(dBm)
Maximum peak output power at antenna input terminal: 69.66 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.585 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.022 (mW/cm²)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm²)

$0.022(\text{mW}/\text{cm}^2) < 1.0(\text{mW}/\text{cm}^2)$

Result: Pass