

RF EXPOSURE REPORT

FOR

Applicant	:	HUIZHOU FORYOU GENERAL ELECTRONICS CO.,LTD.
Address	:	North Shangxia Road, Dongjiang Hi-tech Industry Park, Huizhou, Guangdong Province, 516005, P R China
Equipment under Test	:	Car Multimedia Player
Model No.	:	P3012G, P3012G-THA, P3012EG
Trade Mark	:	GWM,  长城汽车 Great Wall, 
FCC ID	:	2AEIN-P3012G
Manufacturer	:	Great Wall Motor Company Limited
Address	:	Great Wall Motors haver technology center, 2076 Chaoyang South Street, Baoding City, Hebei Province, China

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, <http://www.dgddt.com>

REPORT

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TEST REPORT DECLARE

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No:	DDT-Q20082508-3E7		
Date of Receipt:	Oct. 15, 2020	Date of Test:	Oct. 15, 2020 ~ Oct. 27, 2020

Prepared By:


Bobo Chen/Engineer

Approved By:


Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision history

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Oct. 27, 2020	

1. General information

1.1. Description of Equipment

EUT* Name	: Car Multimedia Player
Model Number	: P3012G, P3012G-THA, P3012EG
Model Differences	: All models are identical in circuit, electrical and mechanical, except for sales regions. Therefore the test was performed on the P3012G.
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 9.0V ~ 16.0V
Radio Specification	: Bluetooth V4.2
Operation Frequency	: 2402 MHz - 2480 MHz
Modulation	: GFSK, $\pi/4$ -DQPSK, 8DPSK
Data Rate	: 1 Mbps, 2 Mbps, 3 Mbps
Antenna Type	: FPC antenna, maximum PK gain: 2 dBi
Serial Number	: QCZ9LAABEP2008210032

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

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2. RF Exposure evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR 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.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. Calculation Method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation Result

Manufacturing Tolerance

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	5	5	5
Tolerance ±(dB)	2	2	2
π/4DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	5	5	5
Tolerance ±(dB)	2	2	2
8DPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	5	5	5
Tolerance ±(dB)	2	2	2

Estimation Result

Mode	F (GHz)	Distance (mm)	RF output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW /cm ²)	SAR Test Exclusion Threshold (mW/cm ²)	SAR Test Exclusion
			dBm	mW					
BDR	2.450	20	7	5.01	2	1.58	0.0016	1	Yes
EDR	2.450	20	7	5.01	2	1.58	0.0016	1	Yes

Note: The estimation distance is 20cm

Conclusion: The measurement results comply with the FCC Limit per 47 CFR 2.1091
for the uncontrolled RF Exposure of mobile device.

END OF REPORT