Report No.: DDT-R17Q0628-12E1

Issued Date: Aug. 14, 2016

RF EXPOSURE REPORT

FOR

Applicant	**:**	Continental Automotive GmbH
Address	**:**	Philipsstrasse 1, 35576 Wetzlar, Germany
Equipment	**:**	Car Radio
Model No	**:**	TRD7412UBA-OR/CAT
Trade Mark	**:**	CAT
FCC ID	**:**	Y7O-TRD7412UBA
Manufacturer	**:**	Huizhou Foryou General Electronics Co., Ltd.
Address	**:**	North Shangxia Road, Dongjiang Hi-tech Industry Park, Huizhou, Guangdong Province, 516005,P R 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

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REPORT

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TEST REPORT DECLARE

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06, RSS-102 Issue 5, March 2015

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-R17Q0628-12E6		
Date of Receipt:	Jun. 28, 2017	**Date of Test:**	Jun. 28, 2017 ~ Aug. 5, 2017

Prepared By: ***Approved By:***

Leo Liu/Engineer ***Kevin Feng/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.

1. General information

1.1. Description of Equipment

EUT* Name	:	Car Radio
Model Number	:	TRD7412UBA-OR/CAT
EUT function description	:	Please reference user manual of this device
Power supply	:	DC 12V
Radio Specification	:	Bluetooth V2.1
Operation frequency	:	2402MHz -2480MHz
Modulation	:	GFSK, π/4 QPSK, 8-DPSK
Modulation Types	:	Frequency Hopping Spread Spectrum (FHSS) modulation.
Equipment type	:	Adaptive frequency hopping equipment.
Data rate	:	1Mbps, 2Mbps, 3Mbps
Antenna Type	:	Integrated antenna, maximum PK gain: 0 dBi
Sample Type	:	Series production

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. 2. Calculation Method

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

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. 3. Estimation Result

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm^2)	MPE Limit (mW/cm^2)
GFSK	2402	4.050	/	0	1	/	1
	2441	4.390	/	**0**	**1**	/	**1**
	2480	4.260	/	0	1	/	1
8-DPSK	2402	2.990	/	0	1	/	1
	2441	3.370	/	0	1	/	1
	2480	3.240	/	0	1	/	1
Max power	**2441**	**5.390**	**3.46**	**0**	**1**	**0.0006**	**1**
Note: The PK Output power including tune-up tolerance							

Note: The estimation distance is 20cm

Manufacturing tolerance is ±1dB

Conclusion: No SAR evaluation required since transmitter power is below FCC threshold

END OF REPORT