

RF EXPOSURE REPORT



Report No.:17021728-FCC-H1

Supersede Report No.: N/A

Applicant	Shenzhen Qi Ying Electronics Co.,Ltd		
Product Name	Clip Wireless Car Audio player		
Main Model	QY-BK02		
Test Standard	FCC 2.1093		
Test Date	December 20 to December 26, 2017		
Issue Date	January 09, 2018		
Test Result	☒ Pass ☐ Fail		
Equipment complied with the specification	☒		
Equipment did not comply with the specification	☐		
<i>Amos Xia</i>		<i>Deon Dai</i>	
Amos Xia Test Engineer		Deon Dai Engineer Reviewer	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only			

Issued by:

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

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

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1 Report Revision History

Report No.	Report Version	Description	Issue Date
17021728-FCC-H1	NONE	Original	January 09, 2018

2 Customer information

Applicant Name	Shenzhen Qi Ying Electronics Co.,Ltd
Applicant Add	Floor 2,Building D ,Quan Yuan Fa Industrial Zone,Guan Lan Road No.73,Long Hua District,Shenzhen City ,China
Manufacturer	Shenzhen Qi Ying Electronics Co.,Ltd
Manufacturer Add	Floor 2,Building D ,Quan Yuan Fa Industrial Zone,Guan Lan Road No.73,Long Hua District,Shenzhen City ,China

3 Test site information

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Address	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	694825
IC Test Site No.	4842B-1
Test Software	EZ_EMG

4 Equipment under Test (EUT) Information

Description of EUT:	Clip Wireless Car Audio player
Main Model:	QY-BK02
Serial Model:	N/A
Date EUT received:	December 18,2017
Test Date(s):	December 20 to December 26, 2017
Antenna Gain:	Bluetooth: 0 dBi
Output Power:	0.195 dBm
Type of Modulation:	Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK
RF Operating Frequency (ies):	Bluetooth: 2402-2480 MHz
Number of Channels:	Bluetooth: 79CH
Port:	N/A
Input Power:	DC 3.3-4.2V Battery:3.7V 1000mAh
Trade Name :	N/A
FCC ID:	2AOLJQY-BK02

5 FCC §2.1093 - RF Exposure

Standard Requirement:

According to §15.247 (i) and §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.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \left[\sqrt{f_{\text{GHz}}} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16} \text{ where}$$

- f_{GHz} is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

Test Result:

Type	Test mode	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)
Output power	GFSK	Low	2402	0.195	-1.5±2
		Mid	2441	-1.558	
		High	2480	-3.037	

One antennas are available for the EUT (BT antenna).

GFSK Mode:

The maximum average output power(turn-up power) in low channel of BT is 0.5 dBm=1.12mW

The calculation results= $1.12/5 \cdot \sqrt{2.402} = 0.35 < 3$

The maximum average output power(turn-up power) in middle channel of BT is 0.5 dBm=1.12mW

The calculation results= $1.12/5 \cdot \sqrt{2.441} = 0.35 < 3$

The maximum average output power(turn-up power) in high channel of BT is 0.5 dBm=1.12mW

The calculation results= $1.12/5 \cdot \sqrt{2.480} = 0.35 < 3$

Test Result: Pass

Note: Only show the worst data(GFSK Mode).