RF EXPOSURE REPORT

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Report No.: 15020854-FCC-H1
Supersede Report No.: N/A

Applicant	FrSky Electronic Co., Ltd.
Product Name	Digital Telemetry Radio System
Main Model	TARANIS X9E
Test Standard	FCC 2.1093
Test Date	September 11 to October 15, 2015
Issue Date	October 16, 2015
Test Result	☑ **Pass** ☐ **Fail**
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Deon Dai	Herve Idoko	
Deon Dai **Test Engineer**	**Herve Idoko** **Checked By**	

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Test result presented in this test report is applicable to the tested sample only

Issued by:
SIEMIC (Nanjing-China) Laboratories
2-1 Longcang Avenue Yuhua Economic and
Technology Development Park, Nanjing, China
Tel:+86(25)86730128/86730129 Fax:+86(25)86730127 Email: China@siemic.com.cn

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
15020854-FCC-H1	NONE	Original	October 16, 2015

2 Customer information

Applicant Name	FrSky Electronic Co., Ltd.
Applicant Add	No.100 Jinxi Road ,Wuxi,Jiangsu,China
Manufacturer	FrSky Electronic Co., Ltd.
Manufacturer Add	No.100 Jinxi Road ,Wuxi,Jiangsu,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.	986914
IC Test Site No.	4842B-1
Test Software	Labview of SIEMIC version 1.0

4 Equipment under Test (EUT) Information

Description of EUT:	Digital Telemetry Radio System
Main Model:	TARANIS X9E
Serial Model:	N/A
Date EUT received:	August 17, 2015
Test Date(s):	September 11 to October 15, 2015
Antenna Gain:	2 dBi
Type of Modulation:	2-FSK
RF Operating Frequency (ies):	2405-2474 MHz(TX/RX)
Number of Channels:	47CH
Port:	Power Port, USB Port
Input Power:	SWITCHING ADAPTER: Model: PSEA180050U Input: 100-240V; 50/60Hz; 0.25A Output:18.0Vdc; 0.5A Battery: Ni-MH AA2000mAh 3.6V
Trade Name :	Frsky
FCC ID:	XYFX90209EK

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:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[16] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- 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*

diatance is ≤50mm, a distance of 50mm 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	2-FSK	Low	2405	18.738	18±1
		Mid	2441	18.102	
		High	2474	17.273	

One antenna is available for the EUT (2.4G antenna).

2.4G Mode:

The maximum average output power(turn-up power) in low channel of 2.4G is 19 dBm=79.43mW

The calculation results= 79.43/50*√ 2.405= 2.47< 3

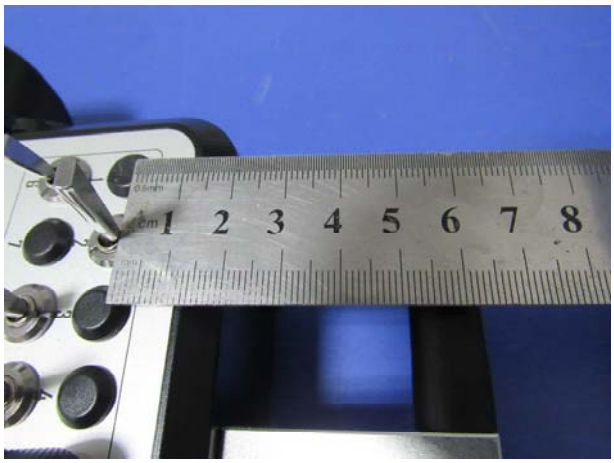
The maximum average output power(turn-up power) in middle channel of 2.4G is 19 dBm=79.43mW

The calculation results= 79.43/50*√ 2.441= 2.48< 3

The maximum average output power(turn-up power) in high channel of 2.4G is 19 dBm=79.43mW

The calculation results= 79.43/50*√ 2.474= 2.50< 3

Test Result: Pass



The distance of antenna to user