



Report No.: SZEM190401254602

Page: 1 of 7

SAR Evaluation Report

Application No.: SZEM1904012546CR
Applicant: Hextronik Limited
Address of Applicant: Office A1, 20th Floor, MG Tower, 133 Hoi Bun Road, Kowloon, Hong Kong 00852
Manufacturer: Hextronik Limited
Address of Manufacturer: Rm A1, 20/F. MG Tower, 133 Hoi Bun Road, Kowloon, Hong Kong
Factory: Dongguan Flysky RC Model Technology Co., Ltd
Address of Factory: West building 3, Huangjinyuan Ind Park, Qiaoli North Gate, Changping Town, Dongguan, China
Equipment Under Test (EUT):
EUT Name: OrangeRx TX10i 10ch DSMX radio Mode 1 EU,
 OrangeRx TX10i 10ch DSMX radio Mode 2 EU,
 OrangeRx TX10i 10ch DSM2 radio Mode 1 International,
 OrangeRx TX10i 10ch DSM2 radio Mode 2 International,
 OrangeRX T6i 2.4GHZ DSM2 DSMX 6CH Transmitter
Model No.: 9171001398-0, 9171001399-0, 9171001400-0, 9171001401-0, 9171001327-0, 9171001328-0, 9171001329-0, 9171001330-0 ♣
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark: OrangeRx
FCC ID: 2AOCYI6X00
Standards: 47 CFR Part 1.1307
 47 CFR Part 2.1093
 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2019-04-09
Date of Test: 2019-04-13 to 2019-05-09
Date of Issue: 2019-05-13

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
 EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
 Shenzhen Branch EMC Laboratory

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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2 Version

<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2019-05-13		Original

Authorized for issue by:			
			
		<hr/> Harry Wu /Project Engineer	
			
		<hr/> Eric Fu /Reviewer	



3 Contents

	Page
1 COVER PAGE	1
2 VERSION	2
3 CONTENTS	3
4 GENERAL INFORMATION	4
4.1 GENERAL DESCRIPTION OF EUT	4
4.2 TEST LOCATION	5
4.3 TEST FACILITY	5
4.4 DEVIATION FROM STANDARDS	6
4.5 ABNORMALITIES FROM STANDARD CONDITIONS	6
4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER	6
5 SAR EVALUATION	7
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT	7
5.1.1 Standard Requirement	7
5.1.2 Limits	7
5.1.3 EUT RF Exposure	7-8



4 General Information

4.1 General Description of EUT

Power supply:	DC 6.0V (4 x 1.5V "AA" batteries)
Operation Frequency:	2404-2480MHz
Modulation Type:	GFSK
Number of Channels:	77
Channel Spacing:	1MHz
Antenna Type:	Integral Antenna
Antenna Gain:	Antenna 1: 2dBi, Antenna 2: 2dBi Two antennas can not synchronous transmission.

Remark for report SZEM190401254602:

Model No.: 9171001398-0, 9171001399-0, 9171001400-0, 9171001401-0, 9171001327-0, 9171001328-0, 9171001329-0, 9171001330-0

Only the model 9171001398-0 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with only difference on:

- 1, The appearance color is changed from orange to gray;
2. Control channels are changed from 6 to 10;
3. Potentiometer assembly seat is changed to hall total seat;
4. A 4PIN terminal seat is added.



4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.





4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

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:

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

$f(\text{GHz})$ 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

5.1.3 EUT RF Exposure

The Max Averaged output power is 9.20 dBm on the lowest channel 2.404 GHz
 9.20 dBm logarithmic terms convert to numeric result is nearly 8.32 mW

According to the formula. calculate the test exclusion thresholds:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

General RF Exposure = $(8.32 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.404 \text{ GHz}} = 2.58$ (1)

SAR requirement:

$S = 3.0$ (2)

$(1) < (2)$

So the SAR report is not required.

Remark: Max Averaged output power is included the tune-up tolerance.

- End of the Report -

