

TEST REPORT

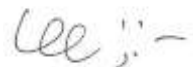
FCC SAR Exclusion Report for TRC-1120
Certification

APPLICANT
Ohsung Electronics Co., Ltd.

REPORT NO.
HCT-SR-2409-FC001

DATE OF ISSUE
September 04, 2024

Tested by
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Accredited by KOLAS, Republic of KOREA

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Applicant **Ohsung Electronics Co., Ltd.**
335-4, Sanho-daero, Gumi-si, Gyeongsangbuk-do, Republic of Korea

EUT Type Remote Controller
Model Name TRC-1120

FCC ID OZ5URCTRC1120

Location of Test Permanent Testing Lab On Site Testing Lab
(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA)

Maximum Output Power 2.4 GHz WiFi : 7.9 dBm, 5 GHz WiFi: 7.9 dBm

Modulation type CCK/DSSS/OFDM/GFSK

FCC Classification Digital Transmission System (DTS),
Unlicensed National Information Infrastructure((NII),
FCC Part 15 Spread Spectrum Transmitter

FCC Rule Part(s) 47CFR §2.1093

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	September 04, 2024	Initial Release

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.

(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

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1. EUT DESCRIPTION

Model Name		TRC-1120
EUT Type		Remote Controller
Power Supply		DC 3.70 V
Frequency Range	2.4 GHz WiFi	2.4 GHz WiFi 2 412 MHz – 2 462 MHz
	5 GHz WiFi	UNII 1 (5 180 MHz ~ 5 240 MHz) UNII-2A (5 260 MHz ~ 5 320 MHz) UNII-2C (5 500 MHz ~ 5 720 MHz) UNII 3: (5 745 MHz ~ 5 825 MHz)
Max. RF Output Power	2.4 GHz WiFi	Max. Average Conducted Power 6.9 dBm +/-1 dB = 7.9 dBm
	5 GHz WiFi	Max. Average Conducted Power 6.9 dBm +/-1 dB = 7.9 dBm
Modulation Type	2.4 GHz WiFi	CCK/DSSS: 802.11b OFDM: 802.11g, 802.11n(HT20)
	5 GHz WiFi	5 GHz WiFi :OFDM: 802.11a, 802.11n, 802.11ac
2.4 GHz Number of Channels		2.4 GHz WiFi :11 Channels
5 GHz Channel Bandwidth		20 MHz, 40 MHz, 80 MHz
Straddle Channel, TDWR Band		Supported
Antenna Specification		Antenna type: Internal FPCB
		Peak. Antenna gain
		2.4 GHz WiFi: 1.82 dBi
		UNII 1: 2.28 dBi
		UNII-2A: 2.24 dBi
		UNII-2C: 1.85 dBi
		UNII 3: 2.33 dBi
EUT Serial Number (Conducted)		00:1F:B8:52:00:2E

2. TEST METHODOLOGY

2.1 FCC

Limb SAR and Body SAR Test Exclusions Applied _2.4 GHz WiFi, 5 GHz WiFi

Since this product is a remote control product, it is used by most users in the hand, so Limb SAR standard is applied. In addition, since this product is capable of voice recognition by the user, an exception evaluation is applied at a distance of 10 mm from the Body SAR.

According to the FCC KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

$$\frac{\text{Max Power of Channel(mW)}}{\text{Test Separation Distance (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 3.0 \text{ For 1g SAR, } 7.5. \text{ for 10g SAR}$$

where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

1. 2.4 GHz WiFi Calculation Result:

Tx frequency range: 2 412 MHz ~ 2 462 MHz

Limb SAR Consideration Min. test separation distance: 5 mm

Body SAR Consideration Min. test separation distance: 10 mm

Maximum Output Power: 7.9 dBm (6.17 mW)

The Highest RF channel frequency: 2 462 MHz

For Body SAR Exclusion

Mode	Frequency	Maximum Allowed Power	Separation Distance	≤ 3.0 for 1 g SAR
	[MHz]	[mW]	[mm]	
2.4 GHz WiFi	2 462	6.17	5	1.94

For Limb SAR exclusion

Mode	Frequency	Maximum Allowed Power	Separation Distance	≤ 7.5 for 10 g SAR
	[MHz]	[mW]	[mm]	
2.4 GHz WiFi	2 462	6.17	5	1.94

2. 5 GHz WiFi Calculation Result:

Tx frequency range: 5 180 MHz ~ 5 825 MHz

Limb SAR Consideration Min. test separation distance: 5 mm

Body SAR Consideration Min. test separation distance: 10 mm

Maximum Output Power: 7.9 dBm (6.17 mW)

The Highest RF channel frequency: 5 825 MHz

For Body SAR Exclusion

Mode	Frequency	Maximum Allowed Power	Separation Distance	≤ 3.0 for 1 g SAR
	[MHz]	[mW]	[mm]	
5 GHz WiFi	5 825	6.17	5	2.98

For Limb SAR exclusion

Mode	Frequency	Maximum Allowed Power	Separation Distance	≤ 7.5 for 10 g SAR
	[MHz]	[mW]	[mm]	
5 GHz WiFi	5 825	6.17	5	2.98

Calculation Result:

Based on the maximum output power of 2.4 GHz WiFi, 5 GHz WiFi and antenna to use separation distance, 2.4 GHz WiFi, 5 GHz WiFi Limb SAR and Body SAR were not required.