

RF Exposure Estimation

1. Introduction

Applicant:	Changzhou Yooksmart Innovation Co., Ltd.
Address:	Building 6C,Jintong International Industrial Park,Changzhou,Jiangsu,213167 China
FCC ID:	2A9IA-ST-16-02
Product:	Wireless Remote Control
Model No.:	ST-16-02
Reference RF report #	6128625069501, 6128625069601

2. 447498 D04 Interim General RF Exposure Guidance v01 B.2 Blanket 1 mW Blanket Exemption

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance. The 1 mW blanket exemption applies at separation distances less than 0.5 cm, including where there is no separation. This exemption shall not be used in conjunction with other exemption criteria other than those for multiple RF sources in paragraph § 1.1307(b)(3)(ii)(A). The 1 mW exemption is independent of service type and covers the full range of 100 kHz to 100 GHz, but it shall not be used in conjunction with other exemption criteria or in devices with higher-power transmitters operating in the same time-averaging period. Exposure from such higher-power transmitters would invalidate the underlying assumption that exposure from the lower-power transmitter is the only contributor to SAR in the relevant volume of tissue.

3. RF Exposure Evaluation

Per the test report included herein, for 433.92MHz

According to C63.10-2020 Annex G

$$\text{EIRP} = p_t \times g_t = (E \times d)^2 / 30 \quad (\text{G.1})$$

where

p_t is the transmitter output power in watts

g_t is the numeric gain of the transmitting antenna (dimensionless)

E is the electric field strength in V/m

d is the measurement distance in meters (m)

$$\text{ERP} = \text{EIRP} / 1.64 = (E \times d)^2 / (30 \times 1.64) = (E \times d)^2 / 49.2 \quad (\text{G.2})$$

Transmitter output power for 433.92MHz Function

Field Strength (E _{Meas}):	92.14(dBuV/m)=0.0405V/m (f=433.92 MHz)
Measurement Distance(d _{Meas}):	3 (m)
ERP (W):	0.0003W
ERP (mW):	0.3mW



Per the test report included herein, for 2480MHz

According to C63.10-2020 Annex G
$$\text{EIRP} = p_t \times g_t = (E \times d)^2 / 30 \tag{G.1}$$

where
p_t is the transmitter output power in watts
g_t is the numeric gain of the transmitting antenna (dimensionless)
E is the electric field strength in V/m
d is the measurement distance in meters (m)

$$\text{ERP} = \text{EIRP} / 1.64 = (E \times d)^2 / (30 \times 1.64) = (E \times d)^2 / 49.2 \tag{G.2}$$

Transmitter output power for 2480MHz Function

Field Strength (EMeas):	80.22(dBuV/m)=0.0103V/m (f=2480 MHz)
Measurement Distance(dMeas):	3 (m)
ERP (W):	0.000019W
ERP (mW):	0.019mW

We used the maximum ERP/EIRP to perform RF exposure exemption evaluation.

	Evaluation method	Exempt Limit (mW)	Verdict
■	Blanket 1 mW Blanket Exemption	1mW	Yes
□	MPE-based Exemption (ERP)	7mW (ERP)	N/A
□	SAR-based Exemption (Pth)	3060mW	N/A

Remark: The device does not support simultaneous.
So, the device is qualified for SAR test exemption, the exemption report is in lieu of the SAR report.

-TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

Hui Tong

Hui TONG
Reviewer Engineer

Date: 2025-12-25



Prepared by:

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Jiaxi XU
Test Engineer

Date: 2025-12-25

-----End of Test Report-----