RF Exposure Evaluation Report

Product	:	Receiver assembly
Trade mark	:	Kohler
Model/Type reference	:	1371930
Serial Number	:	N/A
Report Number	:	EED32L00366302
FCC ID	:	N82-KOHLER041
Date of Issue	:	Jan. 09, 2020
Test Standards	:	47 CFR Part 1.1307(2015) 47 CFR Part 1.1310(2015) KDB447498D01v06
Test result	:	PASS

Prepared for:

Kohler Co.

444 Highland Drive, Kohler, WI 53044 USA

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Tested By:	mark. chen.	Compiled by:	Sunlight Sun
	Mark chen		Sunlight Sun
Reviewed by:	Ware Xin	Approved by:	Sam Chuang
	Ware Xin		Sam Chuang
Date:	Jan. 09, 2020		Check No.:3096368193

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	Jan. 09, 2020	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	Kohler Co.
Address of Applicant:	444 Highland Drive, Kohler, WI 53044 USA
Manufacturer:	Kohler Co.
Address of Manufacturer:	444 Highland Drive, Kohler, WI 53044 USA
Factory:	VTech (Dongguan) Communications Ltd.
Address of Factory:	Xia Ling Bei Management Zone, Liaobu Town, Dongguan City , Guangdong province, China.

4.2 General Description of EUT

Product Name:	Receiver assembly
Model No.(EUT):	1371930
Trade Mark:	Kohler
EUT Supports Radios application	BT 4.2 Single mode, 2402MHz to 2480MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz				
Modulation Type:	GFSK				
Number of Channels:	40				
Test Power Grade:	Tx Power:5				
Test Software of EUT:	BlueNRG GUI				
Antenna Type:	Chip Antenna				
Antenna Specification	Bluetooth :	Antenna Gain :	2.00 dBi	(Numeric gain:	1.58)
Maximum tune up power	Bluetooth:	-2.00 dBm	(0.631 mW)		
Power Supply:	Battery	DC 1.5V*4 SIZE +AA			
Sample Received Date:	Dec. 03, 2019				
Sample tested Date:	Dec. 03, 2019 to Dec. 09, 2019				
The tested sample(s) and the sample information are provided by the client.					

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain
d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ **Equation 1**

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

Bluetooth:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
0	2402	0.666	1.58	20	0.0002	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00366301 for EUT external and internal photos.

*** End of Report ***