

RF Exposure Evaluation Report

Product : DEWALT Bluetooth Neckband Earphones
Trade mark : DEWALT
Model/Type reference : 190 2091 DW2, 190 2091, 190 2091 DW3, 190 2091 DWE, 190 2091XXX, DXMA1902091, DXMA1902091E
Serial Number : N/A
Report Number : EED32N80286902
FCC ID : 2ADH6-1902091B
Date of Issue : Jun. 04, 2021
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1093
KDB447498D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

E-filliate Incorporated

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Prepared by:

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1 Version

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3 General Information

3.1 Client Information

Applicant:	E-filiate Incorporated
Address of Applicant:	11321 White Rock Rd. Rancho Cordova, CA 95742, USA.
Manufacturer:	OBO PRO.2 INC
Address of Manufacturer:	No.28 Nanwaihuan Rd.,5th industry zone, Xiegang town,Dongguan city
Factory:	Concraft Precision Electronic (Baoying) Co., Ltd
Address of Factory:	No.188, Suzhong-North Rd., Baoying Country, Yanzhou City, Jiangsu Province, China

3.2 General Description of EUT

Product Name:	DEWALT Bluetooth Neckband Earphones
Model No.(EUT):	190 2091 DW2, 190 2091, 190 2091 DW3, 190 2091 DWE, 190 2091 XXX, DXMA1902091, DXMA1902091E
Test model:	190 2091 DW2
Trade Mark:	DEWALT
EUT Supports Radios application:	BT 5.0 Single module 2402MHz to 2480MHz

3.3 Product Specification subjective to this standard

Frequency Range:	BT 5.0 Single module 2402MHz to 2480MHz
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Test Software of EUT:	CSR 2.5.8
Test Power Grade:	Default
Antenna Type:	PCB antenna
Antenna Gain:	3dBi
Power Supply:	DC 3.7V
Max Conducted Peak Output Power:	4.25dBm The Max Conducted Peak Output Power data refer to the report EED32N80286901
Sample Received Date:	Apr. 28, 2021
Sample tested Date:	May. 14, 2021 to May. 21, 2021
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified. Model No.: 190 2091 DW2, 190 2091, 190 2091 DW3, 190 2091 DWE, 190 2091 XXX, DXMA1902091, DXMA1902091E. Only model 190 2091 DW2 was tested, The difference between each model is only for the product name is different, the color is different, the rest circuit principle, the internal structure, the PCB Layout and the safety key parts are the same.	

3.4 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

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

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.

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:

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

$f(\text{GHz})$ 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

4.1.2 EUT RF Exposure

The tune-up power is 4.0 dBm +/- 1.0dB, therefore the highest tune-up power is

4.5 dBm	(2.82 mW)	@ 2402 MHz
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When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

So,

$$(2.82\text{mW} / 5\text{mm}) * (2.480\text{GHz}^{0.5}) = 0.9$$

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] = 0.9 < 3.0.$

Therefore, standalone SAR measurements are not required for both head and body

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80286901 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***