

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25070042-H**

FCC ID..... : **2BQ5N-ZYLODENT**

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Date of issue..... : **Jul.04,2025**

Representative Laboratory Name.: **Shenzhen Most Technology Service Co., Ltd.**

Address..... : No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name..... : **Zylo3D Inc.**

Address..... : 1007 Orange St, Wilmington, DE 19801, United States

Test specification/ Standard..... : **47 CFR Part 1.1307; 47 CFR Part 1.1310**
KDB447498D01 General RF Exposure Guidance v06

TRF Originator..... : Shenzhen Most Technology Service Co., Ltd.

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Test item description..... : ZyloDent

Trade Mark..... : Zylo3D

Model/Type reference..... : ZyloDent 1.0

Listed Models : N/A

Modulation Type..... : b: DSSS
a/g/ac: OFDM

Operation Frequency..... : From 5180MHz-5240MHz; 5745MHz-5825MHz
From 2412MHz~2462MHz

Hardware Version..... : 2.7.0

Software Version..... : 1.32.0

Rating..... : 100 - 120V AC, 50/60 Hz, 700W

Result..... : **PASS**

TEST REPORT

Equipment under Test : ZyloDent

Model /Type : ZyloDent 1.0

Listed Models : N/A

Remark : N/A

Applicant : **Zylo3D Inc.**

Address : 1007 Orange St,Wilmington,DE 19801,United States

Manufacturer : **Zylo3D Inc.**

Address : 1007 Orange St,Wilmington,DE 19801,United States

Test Result:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.07.04	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 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.

2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$ Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	7.26	7.26 ± 1	8.26
Middle(2437MHz)	7.53	7.53 ± 1	8.53
Highest(2462MHz)	7.73	7.73 ± 1	8.73

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	7.52	7.52 ± 1	8.52
Middle(2437MHz)	6.76	6.76 ± 1	7.76
Highest(2462MHz)	6.01	6.01 ± 1	7.01

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	7.54	7.54 ± 1	8.54
Middle(2437MHz)	7.25	7.25 ± 1	8.25
Highest(2462MHz)	6.62	6.62 ± 1	7.62

WIFI 2.4G

Worst case: 802.11b						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Highest(2462MHz)	8.73	7.46	3.5	0.0033	1.0	Pass

Note: 1) Refer to report MTEB25070042-R1 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (7.46 \cdot 2.24) / (4 \cdot 3.1416 \cdot 20^2) = 0.0033$

WIFI 5G
U-NII 1

Test channel		Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
				(dBm)
IEEE 802.11a	5180	12.717	12.717±1	13.717
	5200	11.905	11.905±1	12.905
	5240	12.256	12.256±1	13.256
IEEE 802.11ac_20	5180	10.380	10.380±1	11.38
	5200	11.653	11.653±1	12.653
	5240	11.083	11.083±1	12.083
IEEE 802.11ac_40	5190	7.844	7.844±1	8.844
	5230	12.013	12.013±1	13.013
IEEE 802.11ac_80	5210	4.273	4.273±1	5.273

Worst case: IEEE 802.11a						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
5180MHz	13.717	23.53	0.2	0.0053	1.0	Pass

Note: 1) Refer to report MTEB25070042-R2 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (25.53 * 1.05) / (4 * 3.1416 * 20^2) = 0.0053$

U-NII 3

Test channel		Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
				(dBm)
IEEE 802.11a	5745	12.945	12.945±1	13.945
	5785	10.058	10.058±1	11.058
	5825	8.965	8.965±1	9.965
IEEE 802.11ac_20	5745	9.602	9.602±1	10.602
	5785	10.732	10.732±1	11.732
	5825	8.663	8.663±1	9.663
IEEE 802.11ac_40	5755	8.654	8.654±1	9.654
	5795	8.917	8.917±1	9.917
IEEE 802.11ac_80	5775	6.070	6.070±1	7.07

Worst case: IEEE 802.11a						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
5745MHz	13.945	24.80	0.2	0.0051	1.0	Pass

Note: 1) Refer to report MTEB25070042-R2 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (24.80 \cdot 1.05) / (4 \cdot 3.1416 \cdot 20^2) = 0.0051$

.....**THE END OF REPORT**.....