

Radio Test Report

Report No.: STS2405101H02

Issued for

DZS Inc.

5700 Tennyson Parkway Plano TX 75024 United States Of
America

Product Name: Optical Network Terminal (ONT)

Brand Name: DZS

Model Name: 2466GN

Series Model(s): N/A

FCC ID: PJZ2466GN

Test Standard: FCC 47CFR §2.1091

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

**TEST REPORT**

Applicant's Name: DZS Inc.
Address: 5700 Tennyson Parkway Plano TX 75024 United States Of America
Manufacturer's Name: DZS Inc.
Address: 5700 Tennyson Parkway Plano TX 75024 United States Of America
Factory 1: Bowei Technology Co., Ltd
Address 1: 2F, Building 2, No. 306 Gushui Road, Haining Economic Development Zone, Haining, Jiaxing City, Zhejiang, China.
Factory 2: BLUEWAY VINA CO.,LTD
Address 2: Lot CN17,Van Trung In, Vietyen Dist, Bacgiang Pro Vietnam.

Product Description

Product Name: Optical Network Terminal (ONT)
Brand Name: DZS
Model Name: 2466GN
Series Model(s): N/A

Test Standards: FCC 47CFR §2.1091
447498 D01 Interim General RF Exposure Guidance v06

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Date of Test

Date of receipt of test item: 23 May 2024
Date (s) of performance of tests: 23 May 2024 ~ 03 June 2024
Date of Issue: 03 June 2024
Test Result: **Pass**

Testing Engineer :

(Aaron Bu)

Technical Manager :

(Chris Chen)

Authorized Signatory :

(Bovey Yang)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	03 June 2024	STS2405101H02	ALL	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Optical Network Terminal (ONT)	
Brand Name	DZS	
Model Name	2466GN	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is Optical Network Terminal (ONT)	
	Operation Frequency:	2.4G WLAN 802.11b/g/n/ac/ax(20MHz): 2412~2462MHz 802.11n/ac/ax(40MHz):2422~2452MHz Hz 5.2GWLAN: IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.180GHz-5.240GHz IEEE 802.11n(HT40)/ac(VHT40)/ax(HE40): 5.190GHz-5.230GHz IEEE 802.11ac(VHT80)/ax(HE80):5.210GHz IEEE 802.11 ac(VHT160)/ax(HE160): 5.250GHz 5.3GWLAN: IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.260GHz-5.320GHz IEEE 802.11 n(HT40)/ac(VHT40)/ax(HE40): 5.270GHz-5.310GHz IEEE 802.11ac(VHT80)/ax(HE80): 5.290GHz 5.6G WLAN: IEEE 802.11a/ n(HT20)/ac(VHT20) /ax(HE20): 5.500GHz-5.700GHz IEEE 802.11 n(HT40)/ac(VHT40)/ax(HE40): 5.510GHz-5.670GHz IEEE 802.11ac(VHT80)/ax(HE80): 5.530GHz-5.610GHz IEEE 802.11 ac(VHT160)/ax(HE160): 5.570GHz 5.8G WLAN: IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.745GHz-5.825GHz IEEE 802.11a/ n(HT40)/ac(VHT40)/ax(HE40): 5.755GHz-5.795GHz IEEE 802.11ac(VHT80)/ax(HE80):5.775GHz



	Modulation Type:	2.4G WLAN: 802.11b: DBPSK, DQPSK, CCK 802.11g: BPSK, QPSK, 16/64-QAM 802.11n: BPSK, QPSK, 16/64-QAM 802.11ac: BPSK, QPSK, 16/64/256-QAM 802.11ax: BPSK, QPSK, 16/64/256/1024-QAM 5G/5.8G WLAN: 802.11a(OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11n(OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11ac(OFDM): BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM 802.11ax(OFDM, OFDMA): BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Antenna gain:	2.4G WLAN ANT 1: 2.81 dBi ANT 2: 2.18 dBi MIMO: 5.51 dBi 5.2G WLAN: ANT 1: 2.85 dBi ANT 2: 2.85 dBi MIMO: 5.86 dBi 5.3G WLAN: ANT 1: 2.77 dBi ANT 2: 2.77 dBi MIMO: 5.78 dBi 5.6G WLAN: ANT 1: 2.56 dBi ANT 2: 2.56 dBi MIMO: 5.57 dBi 5.8G WLAN: ANT 1: 2.78 dBi ANT 2: 2.78 dBi MIMO: 5.79 dBi
	Antenna Designation:	internal antenna
Adapter	Model 1: RD1202000-C55-154MG Input: 100-240V AC, 50/60Hz, 1.0A MAX Output: DC12V 2A Model 2: TPA289-24120-US Input: 100-240V AC, 50/60Hz, 0.7A Output: DC 12 V, 2A	
Hardware Version	V2.0	
Software Version	znid-13723	

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f ²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f ²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

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 the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 TEST RESULT

Turn up

Mode	Detector	Turn up Power
2.4G WIFI	AV	25±1dBm
5G WIFI	AV	25±1dBm

Protocol	Fre. (GHz)	Separation distance (cm)	Max Turn up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
2.4G WIFI	2.462	20	26	2.81	28.81	760.326	0.1513	1	0.151	Pass
5G WIFI	5.795	20	26	2.78	25.78	378.443	0.0753	1	0.075	Pass

Multiple transmission:

2.4G WIFI +5G WIFI=0.1513 +0.0753=0.2266<1

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

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