

FCC RF Exposure Test Report

Report No. : SAR260429B001

Applicant : VEGA GRIESHABER KG

Address : AM HOHENSTEIN 113
77761 SCHILTACH, GEMRANY

Product : DISPLAY AND ADJUSTMENT MODULE

FCC ID : O6QDAC1

Brand : XCOM

Model No. : XCOM D, XCOM S, XCOM B

Standards : FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06

Sample Received Date : Apr. 27, 2026

Date of Testing : Apr. 27, 2026

Test Lab : The FCC Site Registration No. is 646781; The Designation No. is CN1429.

Issued By : Boomwave Test (Shenzhen) Co., Ltd.

Address : Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm,
Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

CERTIFICATION: The above equipment have been tested by **Boomwave Test (Shenzhen) Co., Ltd.** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by A2LA or any government agencies.

Prepared By :

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(Jiawei Tu / Engineer)

Approved By :

Simon Wang
(Simon Wang/Manager)

Boomwave Test (Shenzhen) Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. Without written approval of Boomwave Test (Shenzhen) Co., Ltd., the test report shall not be reproduced except in full.



FCC RF Exposure Test Report

TABLE OF CONTENTS

RELEASE CONTROL RECORD	3
1. DESCRIPTION OF EQUIPMENT UNDER TEST	4
2. MPE(MAXIMUM PERMISSIBLE EXPOSURE) ASSESSMENT	5
2.1 INTRODUCTION.....	5
2.2 RF RADIATION EXPOSURE LIMITS.....	5
2.3 MPE ASSESSMENT METHOD.....	6
2.4 MPE CALCULATION FOR STANDALONE OPERATIONS.....	6
3. INFORMATION ON THE TESTING LABORATORIES.....	8



Release Control Record

Report No.	Reason for Change	Date Issued
SAR260429B001	Original release	May. 22, 2026

FCC RF Exposure Test Report

1. Description of Equipment Under Test

EUT Type	Display and adjustment module
Brand Name	XCOM
Model Name	XCOM D, XCOM S, XCOM B
Tx Frequency Bands (Unit: MHz)	BLE: 2402 ~ 2480
Uplink Modulations	BLE : GFSK
HW VERSION	Rev. 0.6.0
SW VERSION	Rev. 0.4.1
Antenna Type	PCB Antenna
EUT Stage	Production Unit

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.
2. Differences between the three models:
Version "D" is the fully assembled XCOM with full functionality, version "S" is a status display with optional communication and version "B" is for Bluetooth communication only.
All three options use the same PCB but use different PCB assembly options.
Version "D" uses the fully assembled PCB, versions "S" and "B" are only partially populated.
The basic enclosure for the XCOM uses the same parts, the main difference is that the glass on top of the XCOM is printed in different colors depending on the version and only Version "D" has a display mounted beneath the glass.

FCC RF Exposure Test Report

2. MPE(Maximum Permissible Exposure) Assessment

2.1 Introduction

According to 47 CFR §2.1091, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitting antenna and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 cm separation requirement. The limits to be used for MPE evaluation are specified in §1.1310. All unlicensed personal communications service (PCS) devices and unlicensed NII devices shall be subject to the limits for general population/uncontrolled exposure.

2.2 RF Radiation Exposure Limits

According to 47 CFR §1.1310, the criteria listed in below table shall be used to evaluate the environmental impact of human exposure to RF radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093.

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (min)
(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 – 100000	-	-	5	6
(B) Limits for General Population / Uncontrolled Exposures				
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 – 100000	-	-	1.0	30

Limits for maximum permissible exposure (MPE)

Notes:

- f = frequency in MHz
- Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided they are made aware of the potential for exposure.
- General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

FCC RF Exposure Test Report

2.3 MPE Assessment Method

Calculations can be made to predict RF field strength and power density levels around typical RF sources. For example, in the case of a single radiating antenna, a prediction for power density in the far-field of the antenna can be made by use of the general Equations below. This equation is generally accurate in the far-field of an antenna but will over-predict power density in the near field, where they could be used for making a "worst case" or conservative prediction.

$$\text{Power Density (S)} = \frac{PG}{4\pi R^2} = \frac{\text{EIRP}}{4\pi R^2}$$

Where

S = Power Density, unit in mW/cm²

P = Power input to the antenna, unit in mW

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna, unit in cm

EIRP = Effective isotropically radiated power

2.4 MPE Calculation for Standalone Operations

The manufacturer expects that the radiated component of this device will not close to the human body during normal usage and the warning statement was also stated in the user instruction. Since the transmitting antenna will be kept at least 20 cm away from the human body, the MPE level is calculated based on this condition and the result is listed in below table.

FCC RF Exposure Test Report

CALCULATION FOR MAXIMUM E.I.R.P

Band	Maximum EIRP (dBm)	Maximum EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit	DUT Model	Result (PASS / FAIL)
Bluetooth LE	8.4	6.918	0.001	1.000	0.001	XCOM D	Pass
Bluetooth LE	8.5	7.079	0.001	1.000	0.001		Pass
Bluetooth LE	8.2	6.607	0.001	1.000	0.001		Pass
Bluetooth LE	8.7	7.413	0.001	1.000	0.001	XCOM S	Pass
Bluetooth LE	8.5	7.079	0.001	1.000	0.001		Pass
Bluetooth LE	8.7	7.413	0.001	1.000	0.001		Pass
Bluetooth LE	8.6	7.244	0.001	1.000	0.001	XCOM B	Pass
Bluetooth LE	8.6	7.244	0.001	1.000	0.001		Pass
Bluetooth LE	8.7	7.413	0.001	1.000	0.001		Pass

3. Information on the Testing Laboratories

We, Boomwave Test (Shenzhen) co., Ltd., were founded in 2025 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Boomwave Test (Shenzhen) Co., Ltd.

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