



MPE Report

Report No.: STS2511012H02

Issued for

Ainstein AI Inc

1421 Research Park Dr., Suite 2A Lawrence, Kansas, 66049,
United States

Product Name: K77 Mid/Long Range Radar

Brand Name: N/A

Model Name: K-77-G3-12,K-77-G3-24

Series Model(s): N/A

FCC ID: 2ATMB-K77G3C

Test Standards: 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**.....: Ainstein AI IncAddress: 1421 Research Park Dr., Suite 2A Lawrence, Kansas, 66049,
United States**Manufacturer's Name**.....: Muniu Technology (Shanghai) Co., Ltd.Address: Floor 2,Buliding12,No.14,Lane 258,Yinlong Road, Jiading District,
Shanghai City, 201814,China**Product Description**

Product Name.....: K77 Mid/Long Range Radar

Brand: N/A

Model Number: K-77-G3-12,K-77-G3-24

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.....: 04 Nov. 2025

Date (s) of performance of tests.....: 04 Nov. 2025~11 Dec. 2025

Date of Issue.....: 11 Dec. 2025

Test Result.....: **Pass**

Testing Engineer :

(Rain Liu)

Technical Manager :

(Skylar Li)

Authorized Signatory :

(Bovey Yang)





TABLE OF CONTENTS

1. GENERAL INFORMATION	5
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	5
2. FCC 47CFR §2.1091 REQUIREMENT	6
2.1 TEST STANDARDS	6
2.2 LIMIT	6
2.3 TEST RESULT	7



Rev.	Issue Date	Report No.	Effect Page	Contents
00	11 Dec. 2025	STS2511012H02	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	K77 Mid/Long Range Radar	
Brand	N/A	
Model Name	K-77-G3-12,K-77-G3-24	
Series Model(s)	N/A	
Model Difference	K-77-G3-12 supporting DC 12V and K-77-G3-24 supporting DC 24V, but the appearances, principles, and PCB hardware projects are all the same.	
Product Description	The EUT is K77 Mid/Long Range Radar	
	Operation Frequency	76-77GHz
	Modulation Type	FMCW
	Chirp Time	30 μ s
	Antenna Designation	Comb antenna array
	Antenna Gain(Peak)	15dBi
Power Rating	Input: DC12V or DC 24V	
Adapter	N/A	
Battery	N/A	
Hardware Version	V2.4	
Software Version	N/A	

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

Tune up

Mode	frequency	Maximum Output Power	Tune up tolerance	Max Tune up
	GHz	dBm	dBm	dBm
FMCW	76.6064	26.15	26±1	27

RF Function	Frequency (GHz)	Max Tune up (dBm)	Max Tune up (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
Radar	76.6064	27	501.187	0.0997	1	0.0997	Pass

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

2. ERP=EIRP-2.15

※※※※※END OF THE REPORT※※※※※