



RF Exposure Evaluation

FOR

MaxNav Technology Ltd.

GNSS Receiver

Test Model: M8

Prepared for : MaxNav Technology Ltd.
Address : 3/F, Building 1, No. 400 Fangchun Road, Shanghai Pilot Free Trade Zone, China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
Address : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel : (+86)755-82591330
Fax : (+86)755-82591332
Web : www.LCS-cert.com
Mail : webmaster@LCS-cert.com

Date of receipt of test sample : April 29, 2026
Number of tested samples : 2
Sample No. : A260427036-1, A260427036-2
Serial number : Prototype
Date of Test : April 29, 2026 ~ June 05, 2026
Date of Report : June 08, 2026



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Tel: (+86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

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**RF Exposure Evaluation****Report Reference No.** : LCSA04276041EF**Date of Issue** : June 08, 2026**Testing Laboratory Name** : Shenzhen LCS Compliance Testing Laboratory Ltd.**Address** : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China**Testing Location/ Procedure** : Full application of Harmonised standards ■
Partial application of Harmonised standards □
Other standard testing method □**Applicant's Name** : MaxNav Technology Ltd.**Address** : 3/F, Building 1, No. 400 Fangchun Road, Shanghai Pilot Free Trade Zone, China**Test Specification****Standard** : FCC KDB publication 447498 D01 General RF Exposure Guidance v06
FCC CFR 47 part1 1.1310
FCC CFR 47 part2 2.1091**Test Report Form No** : TRF-4-E-214 A/0**TRF Originator** : Shenzhen LCS Compliance Testing Laboratory Ltd.**Master TRF** : Dated 2011-03**Shenzhen LCS Compliance Testing Laboratory Ltd. All rights reserved.**

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Test Item Description : GNSS Receiver**Trade Mark** : MaxNav**Test Model** : M8**Ratings** : Please Refer to Page 6**Result** : Pass**Compiled by:**

Diamond Lu/ Administrator

Supervised by:

Kevin Huang/ RF Manager

Approved by:

Gavin Liang/ Manager



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RF Exposure Evaluation

Test Report No. : LCSA04276041EF	<u>June 08, 2026</u> Date of issue
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Test Model.....	: M8
EUT.....	: GNSS Receiver
Applicant.....	: MaxNav Technology Ltd.
Address.....	: 3/F, Building 1, No. 400 Fangchun Road, Shanghai Pilot Free Trade Zone, China
Telephone.....	: /
Fax.....	: /
Manufacturer.....	: MaxNav Technology Ltd.
Address.....	: 3/F, Building 1, No. 400 Fangchun Road, Shanghai Pilot Free Trade Zone, China
Telephone.....	: /
Fax.....	: /
Factory.....	: MaxNav Technology Ltd.
Address.....	: 3/F, Building 1, No. 400 Fangchun Road, Shanghai Pilot Free Trade Zone, China
Telephone.....	: /
Fax.....	: /

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.



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Revision History

Report Version	Issue Date	Revision Content	Revised By
000	June 08, 2026	Initial Issue	---





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1. Product Information

EUT	: GNSS Receiver
Test Model	: M8
Ratings	: For EUT: Input: 5.0V $\pm$ 3.0A Battery: DC 7.2V, 4900mAh, 35.28Wh For Adapter: Input:100-240V~ 50/60Hz 0.5A Max Output:5.0V $\pm$ 3.0A or 9.0V $\pm$ 2.0A or 12.0V $\pm$ 1.5A
Hardware Version	: V1.1
Software Version	: V1.0.3.11
Bluetooth	:
Frequency Range	: 2402MHz~2480MHz
Channel Number	: 79 channels for Bluetooth V5.0 (DSS) 40 channels for Bluetooth V5.0 (DTS)
Channel Spacing	: 1MHz for Bluetooth V5.0 (DSS) 2MHz for Bluetooth V5.0 (DTS)
Modulation Type	: GFSK, $\pi/4$ -DQPSK, 8-DPSK for Bluetooth V5.0 (DSS) GFSK for Bluetooth V5.0 (DTS)
Bluetooth Version	: V5.0
Antenna Description	: Microstrip Antenna, 1.21dBi(Max.)
WIFI(2.4G Band)	:
Frequency Range	: 2412MHz~2462MHz
Channel Spacing	: 5MHz
Channel Number	: 11 Channels for 20MHz bandwidth (2412~2462MHz) 7 Channels for 40MHz bandwidth (2422~2452MHz)
Modulation Type	: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Description	: Microstrip Antenna, 1.21dBi(Max.)
WIFI(5.2G Band)	:
Frequency Range	: 5180MHz~5240MHz
Channel Number	: 4 Channels for 20MHz bandwidth(5180MHz~5240MHz) 2 channels for 40MHz bandwidth(5190MHz~5230MHz) 1 channels for 80MHz bandwidth(5210MHz)
Modulation Type	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Description	: Microstrip Antenna, 4.3dBi(Max.)
NFC	:
Operating Frequency	: 13.56MHz
Modulation Type	: ASK
Antenna Description	: Microstrip Antenna
GPS Function	: Support and only RX
UHF	: Support and only RX
Exposure category	General population/uncontrolled environment
EUT Type	Production Unit
Device Type	: Mobile Device

Note: For a more detailed antenna description, please refer to the antenna specifications or the antenna report provided by the customer.



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2. Evaluation Method

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is ≤ 1.0 . The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

3. Limit

3.1 Refer Evaluation Method

[ANSI C95.1-2019](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz

[FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06](#): Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

[FCC CFR 47 part1 1.1310](#): Radiofrequency radiation exposure limits.

[FCC CFR 47 part2 2.1091](#): Radiofrequency radiation exposure evaluation: mobile devices.

3.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
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

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Uncontrolled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 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

*=Plane-wave equivalent power density



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4. MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S=power density

P=power input to antenna

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

5. Conducted Power

[BT]

Mode	Channel	Frequency (MHz)	Peak Conducted Output Power (dBm)
GFSK	0	2402	7.41
	39	2441	7.0
	78	2480	7.36
$\pi/4$ DQPSK	0	2402	7.64
	39	2441	6.71
	78	2480	6.46
8DPSK	0	2402	7.93
	39	2441	6.96
	78	2480	6.86

[BLE]

Mode	Channel	Frequency (MHz)	Peak Conducted Output Power (dBm)
BLE 1M	0	2402	6.46
	19	2440	5.86
	39	2480	5.44

[2.4G WIFI]

Mode	Channel	Frequency (MHz)	Peak Conducted Output Power (dBm)
11B	1	2412	16.03
	6	2437	16.06
	11	2462	15.91
11G	1	2412	14.41
	6	2437	14.35
	11	2462	12.82
11N20 SISO	1	2412	10.22
	6	2437	10.02
	11	2462	9.96
11N40 SISO	3	2422	9.53
	6	2437	9.13
	9	2452	9.16



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[5.2G WIFI]

Mode	Channel	Frequency (MHz)	Max Conducted Power(dBm)
11A	36	5180	9.65
	40	5200	10.66
	48	5240	11.28
11N20 SISO	36	5180	9.59
	40	5200	10.43
	48	5240	11.01
11N40 SISO	38	5190	9.58
	46	5230	10.42
11AC20 SISO	36	5180	9.39
	40	5200	10.37
	48	5240	10.87
11AC40 SISO	38	5190	9.67
	46	5230	10.5
11AC80 SISO	42	5210	9.73

Test Procedure

TX frequency range: 13.56MHz, Limit: $824/13.56=60.77\text{V/m}$

Device category: Mobile device (Distance: 20cm)

Max. Field Strength: 42.77dBuV/m @3m

@20cm=@3m+40*log(3/0.2)= 89.81dBuV/m

For 13.56MHz: $89.81\text{dBuV/m}=10^{(89.81/20)}/10^6=0.031\text{V/m}< 60.77\text{V/m}$

6. Manufacturing Tolerance

[BT]

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	7.0	7.0	7.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
$\pi/4$ -DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	7.0	6.0	6.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
8DPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	7.0	6.0	6.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0

[BLE1M]

BT LE (Peak)			
Channel	Channel 0	Channel 19	Channel 39
Target (dBm)	6.0	5.0	5.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0



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[2.4G WIFI]

11B (Average)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	16.0	16.0	15.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11G (Average)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	14.0	14.0	12.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N20 (Average)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	10.0	10.0	9.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N40 (Average)			
Channel	Channel 3	Channel 6	Channel 9
Target (dBm)	9.0	9.0	9.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0

[5.2G WIFI]

11A (Average)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	9.0	10.0	11.0
Tolerance ±(dB)	1.0	1.0	1.0
11N20 (Average)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	9.0	10.0	11.0
Tolerance ±(dB)	1.0	1.0	1.0
11N40 (Average)			
Channel	Channel 38	Channel 46	
Target (dBm)	9.0	10.0	
Tolerance ±(dB)	1.0	1.0	
11AC20 (Average)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	9.0	10.0	10.0
Tolerance ±(dB)	1.0	1.0	1.0
11AC40 (Average)			
Channel	Channel 38	Channel 46	
Target (dBm)	9.0	10.0	
Tolerance ±(dB)	1.0	1.0	
11AC80 (Average)			
Channel	Channel 42		
Target (dBm)	9.0		
Tolerance ±(dB)	1.0		



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7. Measurement Results

7.1 Standalone MPE Evaluation

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, $r=20\text{cm}$, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

[BT]

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	MPE ratios ¹
	dBm	mW					
GFSK	8.0	5.0119	1.21	1.1015	0.0011	1.0000	0.0011
$\pi/4$ -DQPSK	8.0	3.9811	1.21	1.1015	0.0009	1.0000	0.0009
8-DPSK	8.0	3.9811	1.21	1.1015	0.0009	1.0000	0.0009

[BLE1M]

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	MPE ratios ¹
	dBm	mW					
GFSK	7.0	5.0119	1.21	1.3213	0.0013	1.0000	0.0013

[2.4G WIFI]

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	MPE ratios ¹
	dBm	mW					
IEEE 802.11b	17.0	50.1187	1.21	1.3213	0.0132	50.1187	0.0132
IEEE 802.11g	15.0	31.6228	1.21	1.3213	0.0083	31.6228	0.0083
IEEE 802.11n HT20	11.0	12.5893	1.21	1.3213	0.0033	12.5893	0.0033
IEEE 802.11n HT40	10.0	10.0000	1.21	1.3213	0.0026	10.0000	0.0026

[5.2G WIFI]

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	MPE ratios ¹
	dBm	mW					
IEEE 802.11a	12.0	15.8489	4.3	2.6915	0.0085	1.0000	0.0085
IEEE 802.11n HT20	12.0	15.8489	4.3	2.6915	0.0085	1.0000	0.0085
IEEE 802.11n HT40	11.0	12.5893	4.3	2.6915	0.0067	1.0000	0.0067
IEEE 802.11ac VHT20	11.0	12.5893	4.3	2.6915	0.0067	1.0000	0.0067
IEEE 802.11ac VHT40	11.0	12.5893	4.3	2.6915	0.0067	1.0000	0.0067
IEEE 802.11ac VHT80	10.0	10.0000	4.3	2.6915	0.0054	1.0000	0.0054

Remark:

1. Output power including tune-up tolerance;
2. Output power was adjust to duty cycle at 100% if measured duty cycle less than 98%;
3. MPE evaluate distance is 20cm from user manual provide by manufacturer.





7.2 Simultaneous Transmission MPE Evaluation

The sample support one BT&BLE&2.4GWLAN&5.2G WLAN, another one NFC antenna transmit antenna, so need consider simultaneous transmission; Bluetooth and WIFI cannot transmit simultaneously.

Simultaneous transmission MPE

According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations;

$$TER = \sum_{k=1}^{N_s} \left(\frac{SAR_k}{SAR_{lim}} \right) + \sum_{k=1}^{N_f} \left(\frac{MPE_{field,k}}{MPE_{field,lim}} \right)^2 + \sum_{k=1}^{N_{PD}} \left(\frac{MPE_{PD,k}}{MPE_{PD,lim}} \right)$$

$\sum$ of MPE ratios ≤ 1.0

Max MPE ratios1	NFC Ant Max MPE ratios	$\sum$ MPE ratios	Limit	Results
0.0132	0.0085	0.0217	1.000	Pass

8. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

9. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

Test Firm Registration Number: 254912.

10.Measurement Uncertainty

BT&BLE&2.4GWLAN&5.2GWLAN&NFC:

Test Item	Frequency Range	Uncertainty	Note
Output power	1GHz-40GHz	± 0.57 dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

-----THE END OF REPORT-----



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