

TEST REPORT

Applicant: MOBILETRON ELECTRONICS CO., LTD.
Address: 85, Sec.4, Chung-Ching Rd., Ta-Ya, Taichung City,
Taiwan 428
Equipment Type: TPMS sensor
Model Name: TX-A001 (refer section 2.3)
Brand Name: MORE SENSOR
FCC ID: ULZ-TXA001
Test Standard: 47 CFR Part 2.1091
KDB 447498 D04 v01
Sample Arrival Date N/A
Test Date: N/A
Date of Issue: Dec. 24, 2025

ISSUED BY:

Shanghai Tejet Communications Technology Co., Ltd. Testing Center.



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(Laboratory Manager)

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Dec. 19, 2025</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Dec. 24, 2025</u>	<u>The report added an explanation that the EUT be unable to transmit at 315MHz and 433.92MHz simultaneously, The original report invalid.</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Address	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China

1.2 Test Location

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Location	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1352. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 29671.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	MOBILETRON ELECTRONICS CO., LTD.
Address	85,Sec.4, Chung-Ching Rd.,Ta-Ya,Taichung City, Taiwan 428

2.2 Manufacturer Information

Manufacturer	MOBILETRON ELECTRONICS CO., LTD.
Address	85,Sec.4, Chung-Ching Rd.,Ta-Ya,Taichung City, Taiwan 428

2.3 General Description for Equipment under Test (EUT)

EUT Name	TPMS sensor
Model Name Under Test	TX-A001
Series Model Name	TX-A001-1, TX-A001-BL, TX-A001-1BL, TX-A001-2BL, TX-A002, TX-A002-BL, TX-A101, TX-A102, TX-A003, TX-A003-1, TX-A004, TX-A003EU, TX-A003EU-1, TX-A004EU, WP002R-B, WP002A-B, WP003AB, TX-A105, TX-A105EU-1, TX-A106
Description of Model name differentiation	The differences among the series models only lie in the color of the casing, the style of the valve nozzle, and the position of the locking mechanism. The other electronic materials, antennas, and casing materials are all the same (This information is provided by the Customer.)
Hardware Version	TX-V003/4 Rev.A
Software Version	882304
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	Other: 315MHz, 433.92MHz
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	315MHz, 433.92MHz
Frequency Range	315MHz
	433.92MHz
Antenna Type	Loop Antenna
Exposure Category	General Population/Uncontrolled Exposure
Product Type	Mobile Device
Note: The EUT is unable to transmit at 315MHz and 433.92MHz simultaneously.	

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1091	Radiofrequency radiation exposure evaluation: mobile devices
2	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01

4 DEVICE CATEGORY AND LEVELS LIMITS

Mobile Devices:

CFR Title 47 §2.1091(b)

For purposes of this section, 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 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

FCC KDB 447498 D04 General RF Exposure Guidance v01 Limit

Evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP_{20cm} in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i. e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
300		39	65	88	110	129	148	166	184	201	217
450		22	44	67	89	112	135	158	180	203	226
835		9	25	44	66	90	116	145	175	207	240
1900		3	12	26	44	66	92	122	157	195	236
2450		3	10	22	38	59	83	111	143	179	219
3600		2	8	18	32	49	71	96	125	158	195
5800		1	6	14	25	40	58	80	106	136	169

According with FCC KDB 447498 D04, Appendix A, Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

When maximum available power each individual transmitting antenna within the same time averaging period is ≤ 1 mW, and the nearest parts of the antenna structures of the simultaneously operating transmitters are separated by at least 2 cm.

When the aggregate maximum available power of all transmitting antennas is ≤ 1 mW in the same time-averaging period.

5 ASSESSMENT RESULT

5.1 Output Power

Mode	315MHz
Field Strength (dBuV/m)	79.36
Conducted Power (dBm)	12.71
Antenna Gain (dBi)	-10
ERP(dBm)	0.56
Note: This report listed the worst case Field Strength value, please refer to RF test report No.BL-SZ25A0415-601 for more details.	

Mode	433.92MHz
Field Strength (dBuV/m)	80.16
Conducted Power (dBm)	13.51
Antenna Gain (dBi)	-10
ERP(dBm)	1.36
Note: This report listed the worst case Field Strength value, please refer to RF test report No.BL-SZ25A0415-602 for more details.	

5.2 Tune-up power

Mode	Conducted Power Range (dBm)	EIRP Range (dBm)	ERP Range (dBm)
315MHz	【12.00,14.00】	/	【-0.15,1.85】
433.92MHz	【13.00,15.00】	/	【0.85,2.85】
Note1: ERP= EIRP -2.15dB.			
Note2: According KDB 447498 D04, used the greater of maximum conducted power and ERP to compare with the threshold value Pth.			

5.3 RF Exposure Evaluation Result

Evolution mode	f(MHz)	Distance (cm)	Maximum power (dBm)	Maximum power (mW)	Threshold Power (mW)	Verdict
315MHz	315	20	14.00	25.12	642.60	Pass
433.92MHz	433.92	20	15.00	31.62	885.20	Pass

5.4 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.

Statement

1. The Testing Center guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
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--END OF REPORT--