



# EMF TEST REPORT

Product Name: ATK GEM-8K Receiver N1

Model Number: ATK GEM-8K

FCC ID: 2BE9P-QKTHB2CSD

Issued For : Shenzhen Yizhita Technology Co., Ltd  
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Date of Issue: Nov. 10, 2025

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## TEST REPORT CERTIFICATION

**Applicant:** Shenzhen Yizhita Technology Co., Ltd  
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**Product Name:** ATK GEM-8K Receiver N1

**Trademark:** N/A

**Model Number:** ATK GEM-8K

**Sample Status:** Normal

| APPLICABLE STANDARDS                                                     |              |
|--------------------------------------------------------------------------|--------------|
| STANDARD                                                                 | TEST RESULTS |
| FCC 47 CFR §2.1093<br>KDB 447498 D01 General RF Exposure<br>Guidance v06 | PASS         |

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### **Revision History**

| Rev. | Issue Date    | Revisions     |
|------|---------------|---------------|
| 00   | Nov. 10, 2025 | Initial Issue |
|      |               |               |



## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

|                    |                        |              |
|--------------------|------------------------|--------------|
| Product Name:      | ATK GEM-8K Receiver N1 |              |
| Test Model Number: | ATK GEM-8K             |              |
| Series Number:     | N/A                    |              |
| Model Difference:  | N/A                    |              |
| Frequency Bands:   | 2.4G                   | 2403~2480MHz |
| Rating:            | Input: DC 5V 100mA     |              |
| Hardware Version:  | N/A                    |              |
| Software Version:  | N/A                    |              |

### 1.2 TEST LABORATORY

|                            |                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company Name:              | Shenzhen LGT Test Service Co., Ltd.                                                                                                                      |
| Address:                   | Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China |
| Accreditation Certificate: | FCC Registration No.: 746540                                                                                                                             |
|                            | CAB ID: CN0136                                                                                                                                           |



## 2. FCC 47CFR §2.1093 REQUIREMENT

### 2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in KDB 447498 D01 General RF Exposure Guidance v06 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

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

| MHz  | 5   | 10  | 15  | 20  | 25  | mm                                      |
|------|-----|-----|-----|-----|-----|-----------------------------------------|
| 150  | 39  | 77  | 116 | 155 | 194 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 27  | 55  | 82  | 110 | 137 |                                         |
| 450  | 22  | 45  | 67  | 89  | 112 |                                         |
| 835  | 16  | 33  | 49  | 66  | 82  |                                         |
| 900  | 16  | 32  | 47  | 63  | 79  |                                         |
| 1500 | 12  | 24  | 37  | 49  | 61  |                                         |
| 1900 | 11  | 22  | 33  | 44  | 54  |                                         |
| 2450 | 10  | 19  | 29  | 38  | 48  |                                         |
| 3600 | 8   | 16  | 24  | 32  | 40  |                                         |
| 5200 | 7   | 13  | 20  | 26  | 33  |                                         |
| 5400 | 6   | 13  | 19  | 26  | 32  |                                         |
| 5800 | 6   | 12  | 19  | 25  | 31  |                                         |
|      |     |     |     |     |     |                                         |
| MHz  | 30  | 35  | 40  | 45  | 50  | mm                                      |
| 150  | 232 | 271 | 310 | 349 | 387 | SAR Test<br>Exclusion<br>Threshold (mW) |
| 300  | 164 | 192 | 219 | 246 | 274 |                                         |
| 450  | 134 | 157 | 179 | 201 | 224 |                                         |
| 835  | 98  | 115 | 131 | 148 | 164 |                                         |
| 900  | 95  | 111 | 126 | 142 | 158 |                                         |
| 1500 | 73  | 86  | 98  | 110 | 122 |                                         |
| 1900 | 65  | 76  | 87  | 98  | 109 |                                         |
| 2450 | 57  | 67  | 77  | 86  | 96  |                                         |
| 3600 | 47  | 55  | 63  | 71  | 79  |                                         |
| 5200 | 39  | 46  | 53  | 59  | 66  |                                         |
| 5400 | 39  | 45  | 52  | 58  | 65  |                                         |
| 5800 | 37  | 44  | 50  | 56  | 62  |                                         |



The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where } f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz.}$$

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.



## 2.3 TEST RESULT

### Turn up Result

| Mode | Turn up Power |
|------|---------------|
| 2.4G | -1±1dBm       |

Worse case is as below:

Note: The maximum Equivalent Isotropic Radiated Power :  $94.8 \text{ dBuV/m} - 95.2 = -0.4 \text{ dBm}$  (refer to C63.10, section 10.3.9)

### The MPE result of worst mode:

| RF Function | Frequency (MHz) | Max Turn up Power (dBm) | Max Turn up Power (mW) | Estimated SAR | Limit | Ratio | Result |
|-------------|-----------------|-------------------------|------------------------|---------------|-------|-------|--------|
| 2.4G        | 2480            | 0.00                    | 1.00                   | 0.315         | 3     | 0.105 | Pass   |

### Note:

1. The Maximum Power Density is less than the limit, complies with the exemption requirements.

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