



# TEST REPORT

Report Number.....: **ZKT-251126L28095E-1**

Date of Test.....: Dec. 09, 2025-Jul. 10, 2026

Date of issue.....: Jul. 10, 2026

Total number of pages.....: 27

Test Result .....: PASS

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**

Address .....: 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name .....: **Autel Robotics Co., Ltd.**

Address .....: Unit 29-24, 9-Meter Commercial Platform, Fund Town, 128 Guiwan 5th Road, Nanshan Subdistrict, Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone, Shenzhen, Guangdong, 518000, China

Manufacturer's name .....: **Autel Robotics Co., Ltd.**

Address .....: Unit 29-24, 9-Meter Commercial Platform, Fund Town, 128 Guiwan 5th Road, Nanshan Subdistrict, Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone, Shenzhen, Guangdong, 518000, China

Factory's 1 name .....: **Autel Robotics Co., Ltd.Guangming Branch**

Address .....: Electronic plant east side 701, West 701 Building 3, Yanxiang Technology Industrial Park, Gaoxin Road, Dongzhou Community, Guangming Street, Guangming District, Shenzhen City, Guangdong Province, P.R. China

Factory's 2 name.....: **AUTEL ROBOTICS VIETNAM COMPANY LIMITED**

Address .....: Factory A, Lot IN3-11\*B VSIP HaiPhong Urban, Industrial and Service Area, Dinh Vu - Cat Hai Economic Zone, Lap Le Commune, Thuy Nguyen District, Hai Phong City, Vietnam

## Test specification:

Standard.....: Article 2 paragraph 1 of item 19-2-2

MIC Notice No.88 Annex 1

MIC Notice No.88 Annex 43

Test procedure.....: /

Non-standard test method .....: N/A

Test Report Form No.....: TRF-EL-151\_V0

Test Report Form(s) Originator.....: ZKT Testing

Master TRF .....: Dated: 2020-01-06



This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the Telec requirements. And it is applicable only to the tested sample identified in the report.

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**Product name**..... : Dragonfish Repeater

**Trademark** ..... : AUTEL ROBOTICS

**Model/Type reference**..... : DFRP

adapter information:

MODEL:ADS-110DL-19-1190090G

INPUT:100-240V~50/60Hz.Max1.5A

**Ratings**..... : OUTPUT:DC19.0V 4.74A, 90.06W

Rechargeable Li-ion Battery:

Rated Voltage: 11,07 Vd.c.

Rated Capacity: 9000 mAh



Testing procedure and testing location:

Testing Laboratory.....: Shenzhen ZKT Technology Co., Ltd.

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Tested by (name + signature).....: Jim Liu

*Jim Liu*

Reviewer (name + signature).....: Jackson Fang

*Jackson Fang*

Approved (name + signature).....: Lake Xie





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## 1. VERSION

| Report No.          | Version | Description             | Approved      |
|---------------------|---------|-------------------------|---------------|
| ZKT-251126L28095E-1 | Rev.01  | Initial issue of report | Jul. 10, 2026 |
|                     |         |                         |               |
|                     |         |                         |               |



## 2. TSUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| MIC Notice No.88 Appendix No.43 Article 2 Paragraph 1 Item 19-2-2 |                                                                |             |
|-------------------------------------------------------------------|----------------------------------------------------------------|-------------|
| Clause                                                            | Test Item                                                      | Result      |
| /                                                                 | Construction Protection Confirmation                           | Pass        |
| 3                                                                 | Frequency Error                                                | Pass        |
| 6                                                                 | Antenna Output Power and Output Power Tolerance                | Pass        |
| 9                                                                 | 99% Occupied bandwidth                                         | Pass        |
| 9                                                                 | Spread spectrum bandwidth                                      | Pass        |
| 5                                                                 | Transmitter Spurious Emissions and Unwanted Emission Intensity | Pass        |
| 7                                                                 | Secondary radiated emissions                                   | Pass        |
| 14                                                                | Interference Prevention Function                               | Pass        |
| 8                                                                 | Carrier Sense Capability                                       | Pass        |
| 12                                                                | Transmission Antenna Gain                                      | N/A Note 2  |
| 13                                                                | Transmission Radiation Angle Width(3dB Beam width)             | N/A Note 2  |
| /                                                                 | Number of carrier                                              | Pass Note 3 |
| 4                                                                 | Spread factor                                                  | Pass        |

Notes:

1. The product uses the complies with the carrier sense capability and radio interference prevention capability.in 2.4G Customization
2. EIRP does not exceed 12.14dBm/MHz
3. This device has more than 1 subcarrier in 1MHz, compliances with the requirement.



## 2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.  
Add.: 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street,  
Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225  
Designation Number: CN1299  
IC Registered No.: 27033  
China Registered No.: CNAS L11527

## 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

| No. | Item                          | Uncertainty         |
|-----|-------------------------------|---------------------|
| 1   | Conducted Emission Test       | $\pm 3.2\text{dB}$  |
| 2   | Radiated Emission Test        | $\pm 4.7\text{dB}$  |
| 3   | RF power, conducted           | $\pm 0.16\text{dB}$ |
| 4   | Spurious emissions, conducted | $\pm 0.21\text{dB}$ |
| 5   | All emissions, radiated(<1G)  | $\pm 4.68\text{dB}$ |
| 6   | All emissions, radiated(>1G)  | $\pm 5.0\text{dB}$  |
| 7   | frequency error ppm           | $\pm 0.5\text{ppm}$ |



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Designation    | Dragonfish Repeater                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Model Name             | DFRP                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hardware Version:      | V4                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Software Version:      | V1.0.3.45                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Modulation Type        | QPSK, 16QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Operation Frequency    | 1.4MHz: 2403.5MHz~2475.5MHz<br>3MHz: 2404.5MHz~2474.5MHz<br>5MHz: 2405.5MHz~2473.5MHz<br>10MHz: 2407.5MHz~2471.5MHz<br>20MHz: 2412.5MHz~2462.5MHz                                                                                                                                                                                                                                                                                                                              |
| Channel No.            | 1.4MHz: 73channels,<br>3MHz: 71channels,<br>5MHz: 69channels,<br>10MHz: 65channels,<br>20MHz: 51channels                                                                                                                                                                                                                                                                                                                                                                       |
| Channel space          | 1MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Rated power:           | Modele 1<br>1.4MHz: QPSK: 1.5mW/MHz, 16QAM: 1.5mW/MHz<br>3MHz: QPSK: 1.1mW/MHz, 16QAM: 1.1mW/MHz<br>5MHz: QPSK: 1.3mW/MHz, 16QAM: 1.2mW/MHz<br>10MHz: QPSK: 1.2mW/MHz, 16QAM: 1.1mW/MHz<br>20MHz: QPSK: 1.2mW/MHz, 16QAM: 1.1mW/MHz<br><br>Modele 2<br>1.4MHz: QPSK: 4.0mW/MHz, 16QAM: 4.0mW/MHz<br>3MHz: QPSK: 4.0mW/MHz, 16QAM: 4.0mW/MHz<br>5MHz: QPSK: 4.2mW/MHz, 16QAM: 4.2mW/MHz<br>10MHz: QPSK: 4.2mW/MHz, 16QAM: 4.2mW/MHz<br>20MHz: QPSK: 4.2mW/MHz, 16QAM: 4.2mW/MHz |
| Antenna Specification: | Main antenna: Directional Image transmission antenna<br>Secondary antenna: Fibre-glassImage transmission antenna                                                                                                                                                                                                                                                                                                                                                               |
| Antenna Gain:          | Module 1<br>Main antenna: Directional Image transmission antenna<br>ANT1: 9.74 dBi<br>ANT2: 9.74 dBi<br><br>Module 2<br>Secondary antenna: Fibre-glassImage transmission antenna<br>ANT1: 4.66 dBi<br>ANT2: 4.66 dBi                                                                                                                                                                                                                                                           |
| Power supply:          | Adapter information:<br>MODEL: ADS-110DL-19-1190090G<br>INPUT: 100-240V~50/60Hz. Max 1.5A<br>OUTPUT: DC 19.0V 4.74A, 90.06W<br>Rechargeable Li-ion Battery:<br>Rated Voltage: 11.07 Vd.c.<br>Rated Capacity: 9000 mAh                                                                                                                                                                                                                                                          |



1.4MHz: 73channels

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1       | 2403.5         | 36      | 2439.5         |
| 2       | 2404.5         | .....   | .....          |
| .....   | .....          | .....   | .....          |
| .....   | .....          | 72      | 2474.5         |
| 35      | 2438.5         | 73      | 2475.5         |

3MHz: 71channels

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1       | 2404.5         | 36      | 2439.5         |
| 2       | 2405.5         | .....   | .....          |
| .....   | .....          | .....   | .....          |
| .....   | .....          | 70      | 2473.5         |
| 35      | 2438.5         | 71      | 2474.5         |

5MHz: 69channels

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1       | 2405.5         | 36      | 2440.5         |
| 2       | 2406.5         | .....   | .....          |
| .....   | .....          | .....   | .....          |
| .....   | .....          | 69      | 2473.5         |
| 35      | 2439.5         |         |                |

10MHz: 65channels

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1       | 2407.5         | 33      | 2439.5         |
| 2       | 2408.5         | .....   | .....          |
| .....   | .....          | .....   | .....          |
| .....   | .....          | 64      | 2470.5         |
| 32      | 2438.5         | 65      | 2471.5         |

20MHz:51channels

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1       | 2412.5         | 26      | 2437.5         |
| 2       | 2413.5         | .....   | .....          |
| .....   | .....          | .....   | .....          |
| .....   | .....          | 50      | 2461.5         |
| 25      | 2436.5         | 51      | 2462.5         |



| Bandwidth | Frequency(MHz) |                |                 |
|-----------|----------------|----------------|-----------------|
|           | Lowest channel | Middle channel | Highest channel |
| 1.4MHz    | 2403.5         | 2439.5         | 2475.5          |
| 3MHz      | 2404.5         | 2439.5         | 2474.5          |
| 5MHz      | 2405.5         | 2439.5         | 2473.5          |
| 10MHz     | 2407.5         | 2439.5         | 2471.5          |
| 20MHz     | 2412.5         | 2437.5         | 2462.5          |



### 3.2 Description of test modes

Software use to control the EUT for staying in continuous transmitting and receiving mode is programmed.

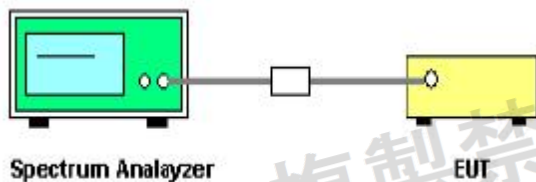
The screenshot displays the RRL6.0.0\_VCOM software interface. The top section contains mode selection dropdowns: 'MODE' (set to TD-LTE TX), 'Aux MODE' (set to WCDMA MODE), and 'Classical Interface'. Below these are 'Input' and 'Output Information' sections. The 'Input' section includes fields for 'Band' (MC BAND X), 'Freq' (2403.5), 'EARFCN' (24035), 'Band Width' (1.4MHz), 'TX Frame Num' (1), 'Antenna' (A), 'TxData Type' (Modulating sign), 'Modulation' (QPSK), 'Start Power' (30), and 'End power' (30). The 'Output Information' section includes 'TS Power Data Path', 'Download status' (0 to 100), 'Read Temperature', 'Download TX Data', and a 'START TX' button. The bottom section contains 'PASW Item' fields for TD-LTE TX\_SW\_Open(HEX), TD-LTE TX\_SW\_Close(HEX), TD-LTE PA\_Open(HEX), and TD-LTE PA\_Close(HEX), along with 'PASW Valid' and 'Data Path' fields. A status bar at the bottom shows a hex dump: 88 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00.



### 3.3 TEST CONDITIONS

| Supply Voltage                                                                                                                                                                                                                                                                                                                             |                     |                                              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------|---------------|
|                                                                                                                                                                                                                                                                                                                                            | Input Voltage (Vdc) | Voltage at the input of the RF Circuit (Vdc) | Tolerance (%) |
| Normal                                                                                                                                                                                                                                                                                                                                     | 19.0                | 12                                           |               |
| +10%                                                                                                                                                                                                                                                                                                                                       | 20.9                | 12                                           | 0             |
| -10%                                                                                                                                                                                                                                                                                                                                       | 17.1                | 12                                           | 0             |
| Others                                                                                                                                                                                                                                                                                                                                     |                     |                                              |               |
| Temperature (°C)                                                                                                                                                                                                                                                                                                                           | 23                  |                                              |               |
| Relative humidity                                                                                                                                                                                                                                                                                                                          | 51 %                |                                              |               |
| ATM Pressure:                                                                                                                                                                                                                                                                                                                              | 1019 mbar           |                                              |               |
| Note: The EUT has its own voltage regulator principle from RT9058-33GX, the output voltage of the chip is 3.3V and the fluctuation of power supply to the RF circuit of EUT is equal to or less than +/- 1%. So exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations. |                     |                                              |               |

### 3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED





### 3.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment           | Mfr/Brand         | Model/Type No. | Series No. | Note |
|------|---------------------|-------------------|----------------|------------|------|
| E-1  | Dragonfish Repeater | AUTEL<br>ROBOTICS | DFRP           | N/A        | EUT  |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
|      |               |              |        |      |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



### 3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

| Item | Equipment                         | Manufacturer   | Type No.        | Serial No.        | Last calibration | Calibrated until |
|------|-----------------------------------|----------------|-----------------|-------------------|------------------|------------------|
| 1    | Spectrum Analyzer (9kHz-26.5GHz)  | KEYSIGHT       | 9020A           | MY55370835        | Nov. 02, 2025    | Nov. 01, 2026    |
| 2    | EMI Test Receiver (9kHz-7GHz)     | R&S            | ESC17           | 100969            | Nov. 02, 2025    | Nov. 01, 2026    |
| 3    | Bilog Antenna (30MHz-1500MHz)     | Schwarzbeck    | VULB9168        | N/A               | Nov. 13, 2025    | Nov. 12, 2026    |
| 4    | Horn Antenna (1GHz-18GHz)         | Agilent        | AH-118          | 071145            | Nov. 13, 2025    | Nov. 12, 2026    |
| 5    | Horn Antenna (15GHz-40GHz)        | A.H.System     | SAS-574         | 588               | Nov. 13, 2025    | Nov. 12, 2026    |
| 6    | Amplifier (30-1000MHz)            | EM Electronics | EM330 Amplifier | 60747             | Nov. 02, 2025    | Nov. 01, 2026    |
| 7    | Amplifier (1GHz-26.5GHz)          | HuiPu          | 8449B           | 3008A00315        | Nov. 02, 2025    | Nov. 01, 2026    |
| 8    | Loop Antenna                      | TESEQ          | HLA6121         | 58357             | Nov. 02, 2025    | Nov. 01, 2026    |
| 9    | Test Cable                        | N/A            | RF-01           | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 10   | Test Cable                        | N/A            | RF-02           | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 11   | Test Cable                        | N/A            | RF-03           | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 12   | Wideband Radio Communication Test | R&S            | CMW500          | 106504            | Nov. 02, 2025    | Nov. 01, 2026    |
| 13   | ESG Signal Generator              | Agilent        | E4421B          | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 14   | Signal Generator                  | Agilent        | N5182A          | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 15   | D.C. Power Supply                 | LongWei        | TPR-6405D       | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 16   | EMC Software                      | Frad           | EZ-EMC          | Ver.EMC-CON 3A1.1 | \                | \                |
| 17   | MWRF Power Meter Test system      | MW             | MW100-RFCB      | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |
| 18   | Digital oscilloscope              | Tektronix      | TDS3032B        | N/A               | Nov. 02, 2025    | Nov. 01, 2026    |

All of the instruments are calibrated by CEPREI Calibration and Testing Center.

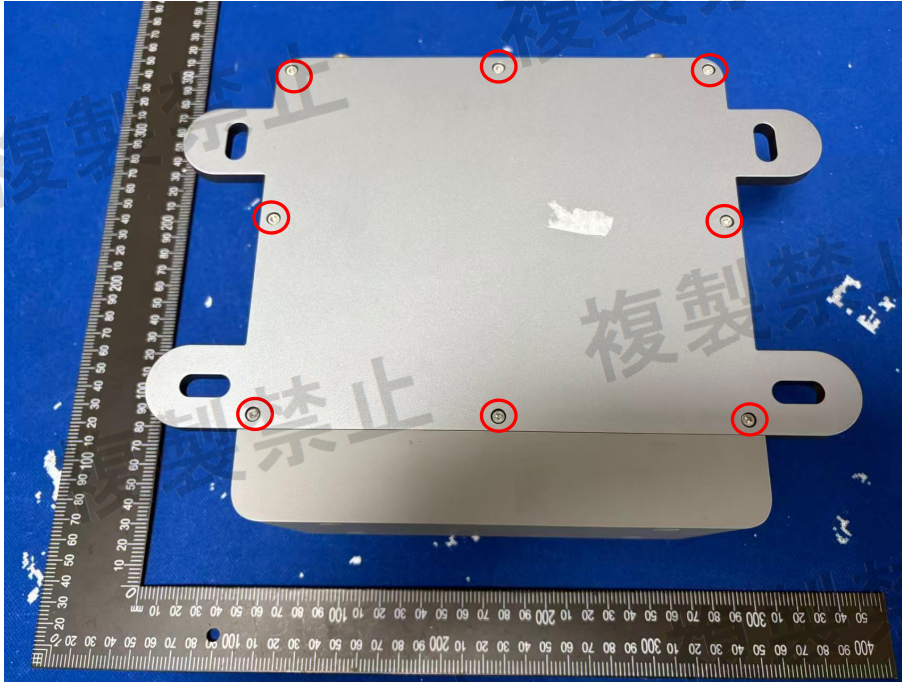
- ☐ (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.
- ☒ (c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.



#### 4. RF SHIELDING METHOD

Enclosure:

It is protected by the casing and is fastened with hexagonal screws. Please refer to the relevant pictures of EUT.





## 5.TEST RESULTS

### 5.1 FREQUENCY ERROR

| Item            | Limits |
|-----------------|--------|
| Frequency Error | ±50ppm |

#### 5.1.2 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of Spectrum Analyzer.

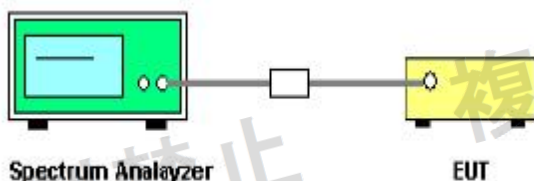
| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 10KHz    |
| Span               | 1MHz     |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

#### 5.1.3 TEST PROCEDURES

- (1)In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
- (2)In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
- (3)In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
- (4)In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

#### 5.1.4 TEST SETUP LAYOUT





### 5.1.5 EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

**Measurement Data:** The detailed test data see Appendix I



## 5.2 OCCUPIED BANDWIDTH & Spread Bandwidth

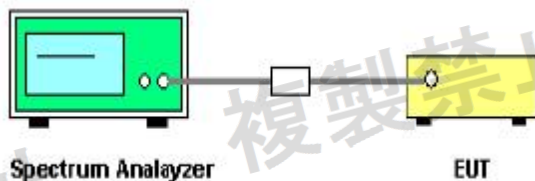
### 5.2.1 LIMIT

| Item                 | Limits                  |
|----------------------|-------------------------|
| Occupied Band Width: | 26MHz or less           |
| Spreading Bandwidth: | $\geq 500$ kHz (FH, DS) |

### 5.2.2 TEST PROCEDURES

Test Frequency: test channel,  
RBW=VBW=300kHz, Span=3 BW,  
Sweep time=Auto, Detector mode=Positive peak

### 5.2.3 TEST SETUP LAYOUT



### 5.2.4 TEST DEVIATION

There is no deviation with the original standard.

### 5.2.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

**Measurement Data:** The detailed test data see Appendix I



### 5.3 UNWANTED EMISSION INTENSITY MEASUREMENT

#### 5.3.1 LIMIT

| Item                 | Limits                                                                                                                                                             |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TX Spurious Emission | 30MHz - 2387MHz ; 2.5μW/MHz or less<br>2387MHz – 2400MHz ; 25μW/MHz or less<br>2483.5MHz – 2496.5MHz ; 25μW/MHz or less<br>2496.5MHz – 12.5GHz ; 2.5μW/MHz or less |

#### 5.3.2 MEASURING INSTRUMENTS AND SETTING

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

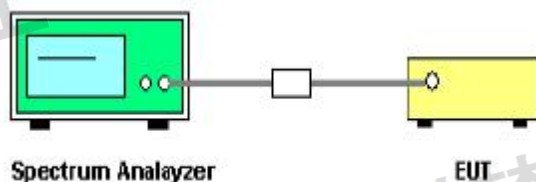
| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 1 MHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |



### 5.3.3 TEST PROCEDURES

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: Below 1GHz RB:1MHz / VB:1MHz  
Above 1GHz RB:1MHz / VB:1MHz / AT: 10dB Ref: 0dBm / Sweep time: Auto  
Sweep Mode: Continuous sweep / Detect mode: Positive peak  
Trace mode: Max hold
3. Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu$ W.
4. Setting of SA is following as 1000MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu$ W.
5. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25 $\mu$ W.
6. SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 $\mu$ W
7. SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu$ W
8. Measure side band spurious as follows: For 2.4GHz band: 2374MHz~2400MHz and 2483.5MHz~2496.5MHz, 2496.5MHz~12.5GHz RBW = VBW = 1MHz,
9. If the Result\_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result\_Value.

### 5.3.4 TEST SETUP LAYOUT



### 5.3.5 TEST DEVIATION

There is no deviation with the original standard.

### 5.3.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

**Measurement Data:** The detailed test data see Appendix I



## 5.4 ANTENNA POWER ERROR MEASUREMENT

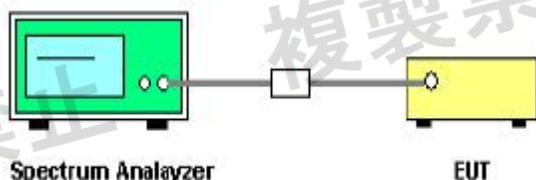
### 5.4.1 LIMIT

| Item                  | Limits                                                    |
|-----------------------|-----------------------------------------------------------|
| Antenna Power Density | 10mW/MHz                                                  |
| EIRP Power Density    | $\leq 12.14\text{-}22.14\text{dBm/MHz}$ (DSSS,OFDM)       |
| Antenna Power Error   | +20% (Base on manufacturer declare antenna power density) |

### 5.4.2 TEST PROCEDURES

1. Search Frequency of Peak Power  
Test Frequency: test channel,  
RBW=1M,VBW=3M, Span=2BW, Sweep time=Auto, Detector mode =Positive peak,Sweep time=Auto,Sweep Type:Continue
2. Measure of average burst power  
Test Frequency: frequency of peak power  
RBW=1M,VBW=1M, Span=0Hz, Detector mode =RMS,Sweep time=Auto,Sweep Type:Single  
Antenna power= average burst power

### 5.4.3 TEST SETUP LAYOUT



### 5.4.4 EST DEVIATION

There is no deviation with the original standard.

### 5.4.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

**Measurement Data:** The detailed test data see Appendix I



## 5.5 IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

### 5.5.1 LIMIT

| Item                  | Limits                                      |
|-----------------------|---------------------------------------------|
| RX Spurious Emission: | $\leq 4\text{nW}$ ( $f < 1\text{GHz}$ )     |
|                       | $\leq 20\text{nW}$ ( $1\text{GHz} \leq f$ ) |

### 5.5.2 MEASURING INSTRUMENTS AND SETTING

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

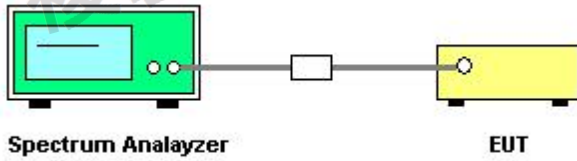
| Spectrum Parameter | Setting                                                        |
|--------------------|----------------------------------------------------------------|
| Attenuation        | Auto                                                           |
| RB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| VB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| Detector           | Peak                                                           |
| Trace              | Max Hold                                                       |
| Sweep Time         | Auto                                                           |

### 5.5.3 TEST PROCEDURES

1. EUT have the continuous reception mode and fixed only one channelize.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1MHz (above 1GHz emissions) / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for  $f < 1\text{GHz}$ , 2nW for  $f \geq 1\text{GHz}$ ), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.



#### 5.5.4 TEST SETUP LAYOUT



#### 5.5.6 TEST DEVIATION

There is no deviation with the original standard.

#### 5.5.7 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously reception mode.

#### 5.5.8 TEST RESULT

**Measurement Data:** The detailed test data see Appendix I



## 5.6 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------|
| Measurement procedure: | <p>(1) The radio equipment with automatic transmitting function of identification code</p> <p>a) Transmit the assigned identification code from the radio equipment.</p> <p>b) Confirm the identification code received by the demodulator.</p> <p>(2) The radio equipment with automatic receiving function of identification code</p> <p>a) Transmit the assigned identification code from the opposite equipment.</p> <p>b) Confirm that the usual communication is available.</p> <p>c) Transmit the identification code distinct from the assigned one from the opposite equipment.</p> <p>d) Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.</p> |                          |             |
| Test setup:            | Radio equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dummyload<br>Attenuator) | Demodulator |
| Test Instruments:      | Refer to section 3.6 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |             |
| Test results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |             |

Measurement data:

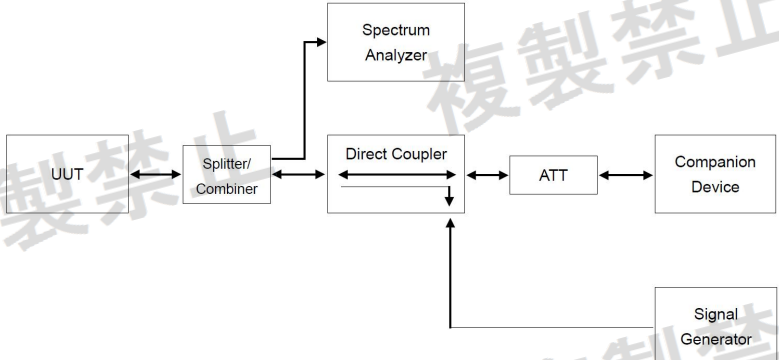
|                          |                   |
|--------------------------|-------------------|
| Identification function: | Good              |
| MAC address :            | 00:00:95:26:13:1A |

1 . In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes form EUT. b. Check the transmitted identification codes with the demodulator.

2 .In the case of receiving the identification code: a. Transmit the predetermined identification codes form the counterpart. b. Check if communication is normal. c. Transmit the signals other than predetermined ID codes form the counterpart. d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.



### 5.7 Carrier Sense Capability

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Limit:                 | Stop transmission for interference signal level above 100mV/m (or level at $22.79+Gr-20*\log(f)[dBm]$ )<br>f: indicated frequency in MHz<br>Gr: indicated the antenna gain in dBi                                                                                                                                                                                                                                                                                                                                                            |           |
| Spectrum set:          | Attenuation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Auto      |
|                        | RBW/VBW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1MHz/1MHz |
|                        | Span                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0Hz       |
|                        | Sweep time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10s       |
|                        | Detector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Peak      |
|                        | Trigger mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Free Run  |
| Measurement procedure: | <p>SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG. Then turn off the RF signal of SG.</p> <p>EUT have transmitted the maximum modulation signal and fixed channelize.</p> <p>Set the Spectrum per the above form.</p> <p>SG RF signal on, and adjust the signal level until the EUT stop transmission at the tested frequency. Record the signal level.</p> <p>EUT shall be stop the transmission and SG RF signal off. Then EUT will be continuously transmitted signal.</p> |           |
| Test setup:            |  <pre>graph LR     UUT[UUT] &lt;--&gt; SC[Splitter/Combiner]     SC --&gt; SA[Spectrum Analyzer]     SC --&gt; DC[Direct Coupler]     DC &lt;--&gt; ATT[ATT]     ATT &lt;--&gt; CD[Companion Device]     SG[Signal Generator] --&gt; DC</pre>                                                                                                                                                                                                            |           |
| Test Instruments:      | Refer to section 3.6 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| Test results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |



## 6. EUT TEST PHOTO

Reference to the appendix **Testup PHOTOS** for details.

## 7. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix **External & Internal PHOTOS** for details.

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