



TEST REPORT

Applicant:	Xiamen	Milesight	IoT	Co., Ltd.
-------------------	--------	-----------	-----	-----------

Address: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China

FCC ID: 2AYHY-VS135LORA

Product Name: Ultra ToF People Counter

Standard(s): 47 CFR Part 15, Subpart C(15.247) ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR240102703-00B

Date Of Issue: 2024/3/6

Reviewed By: Calvin Chen

Title: RF Engineer **Approved By:** Sun Zhong

Calvin Ohen Sun 2hong

Title: Manager

Test Laboratory: China Certification ICT Co., Ltd (Dongguan) No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China Tel: +86-769-82016888

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk " \star ".

CONTENTS

DOCUMENT REVISION HISTORY	5
1. GENERAL INFORMATION	6
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	6
1.2 DESCRIPTION OF TEST CONFIGURATION	8
1.2.1 EUT Operation Condition:1.2.2 Support Equipment List and Details1.2.3 Support Cable List and Details	8
1.2.4 Block Diagram of Test Setup 1.3 MEASUREMENT UNCERTAINTY	9
2. SUMMARY OF TEST RESULTS	11
3. REQUIREMENTS AND TEST PROCEDURES	
3.1 AC LINE CONDUCTED EMISSIONS	
 3.1.1 Applicable Standard	
3.2 RADIATION SPURIOUS EMISSIONS	
 3.2.1 Applicable Standard	
3.3.1 Applicable Standard	
3.3.2 EUT Setup 3.3.3 Test Procedure	
3.4 MAXIMUM CONDUCTED OUTPUT POWER:	
 3.4.1 Applicable Standard	
 3.5.1 Applicable Standard 3.5.2 EUT Setup	
3.6.1 Applicable Standard	
3.6.2 EUT Setup	21
3.6.3 Test Procedure	
3.7.1 EUT Setup	
3.7.2 Test Procedure	

Page 3 of 55

3.8 ANTENNA REQUIREMENT	22
3.8.1 Applicable Standard 3.8.2 Judgment	22 22
4. Test DATA AND RESULTS	
4.1 AC LINE CONDUCTED EMISSIONS	23
4.2 RADIATION SPURIOUS EMISSIONS	26
4.3 6 DB EMISSION BANDWIDTH:	45
4.4 MAXIMUM CONDUCTED OUTPUT POWER:	47
4.5 MAXIMUM POWER SPECTRAL DENSITY:	49
4.6 100 kHz Bandwidth of Frequency Band Edge:	51
4.7 DUTY CYCLE:	53
5. EUT PHOTOGRAPHS	54
6. TEST SETUP PHOTOGRAPHS	55

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR240102703-00B	Original Report	2024/3/6

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Ultra ToF People Counter	
EUT Model: VS135-915M		
Multiple Models:	NF135-915M,VS135-9M,NF135-9M,VS135,NF135	
Operation Frequency:	903-926.9 MHz	
Maximum Peak Output Power (Conducted):	14.92dBm	
Modulation Type: CSS		
Rated Input Voltage: DC 12V From Adapter		
Serial Number: 2GJV_2 (For RF Conducted Test) 2GJV 1 (For CE/RE Test)		
EUT Received Date:	2024/1/10	
EUT Received Status: Good		
Note: The Multiple models are electrically identical with the test model. Please refer to the declaration letter for more detail, which was provided by manufacturer.		

Operation Frequency Detail:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	903	9	923.3
2	904.6	10	923.9
3	906.2	11	924.5
4	907.8	12	925.1
5	909.4	13	925.7
6	911	14	926.3
7	912.6	15	926.9
8			/
Per section 15.31(m), the below frequencies were perform		ned the test as below:	
Test Channel			equency MHz)
Lowest		903	
Middle		(914.2
Highest		(926.9

Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
РСВ	50	902-928MHz	-0.35dBi
The Method of §15.203 Compli	ance:		
\boxtimes Antenna was permanently attached to the unit.			
Antenna use a unique type of connector to attach to the EUT.			
Unit was professionally installed, and installer shall be responsible for verifying that the correct			
antenna is employed with the unit.			

Accessory Information:

Accessory Description	Manufacturer	Model	Parameters	
Adapter	SHENZHEN FUJIA APPLIANCE CO.,LTD.	FJ-SW126G1202000U	Input: 100-240V,50/60Hz ,0.6A Max Output: 12.0V ,2.0A	

0

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

Lora-DTS

1.2.1 ECT Operation Condition.				
EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.			
Equipment Modifications:	No			
EUT Exercise Software:	SecureCRT			
The software was provided by mar the manufacturer ▲ :	The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer \blacktriangle :			
Test Modes	Power Level Setting			
Test Widdes	Lowest	Middle	Highest	

0

1.2.2 Support Equipment List and Details

Manufacturer	Description Model		Serial Number
/	/	/	/

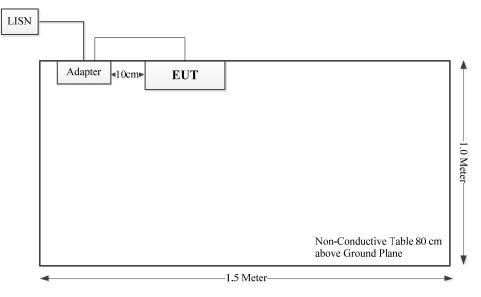
0

1.2.3 Support Cable List and Details

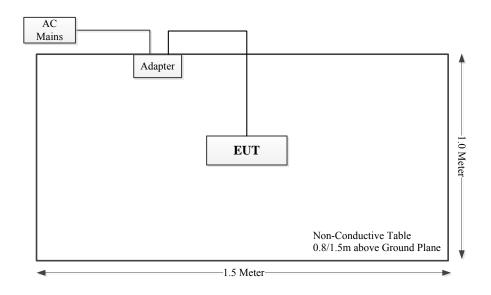
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	То
DC Cable	No	No	1	Adapter	EUT

1.2.4 Block Diagram of Test Setup

AC Line Conducted Emissions :



Radiation Spurious Emissions:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
	9k~30MHz:4.12dB, 30M~200MHz: 4.15 dB,200M~1GHz: 5.61
Unwanted Emissions, radiated	dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,
	18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Unwanted Emissions, conducted	±1.26 dB
Temperature	±1℃
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 0.4\%$
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a)	AC line conducted emissions	Compliant
§15.205, §15.209, §15.247(d)	Radiated Spurious emissions	Compliant
§15.247 (a)(2)	6 dB Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.247(e)	Power Spectral Density	Compliant
§15.203	Antenna Requirement	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBµV)		
Frequency of emission (MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

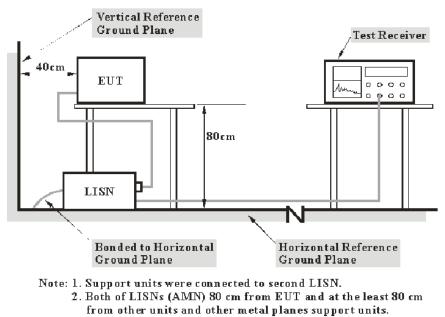
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 $\mu H/50$ ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 EUT Setup



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

3.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W	
150 kHz – 30 MHz	9 kHz	

3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the reported for each of the current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductor, or the six highest emissions may be reported over all the current-carrying conductors.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit - Result

3.2 Radiation Spurious Emissions

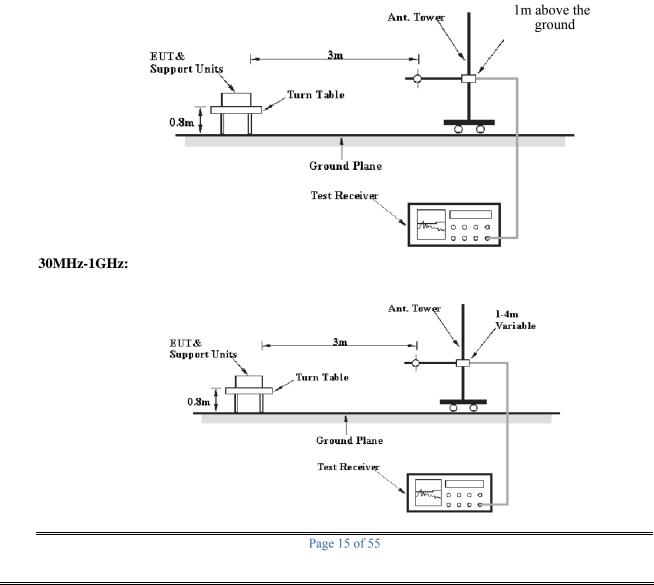
3.2.1 Applicable Standard

FCC §15.247 (d);

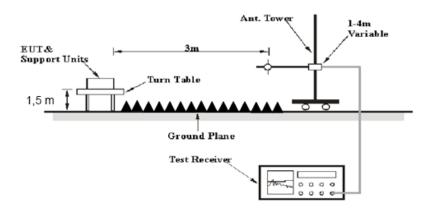
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

3.2.2 EUT Setup

9 kHz-30MHz:



Above 1GHz:



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 10 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9 kHz -1000 MHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	/	/	200 Hz	QP/AV
9 KHZ - 130 KHZ	300 Hz	1 kHz	/	РК
150 Jula 20 Mila	/	/	9 kHz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	/	РК
30 MHz – 1000 MHz	/	/	120 kHz	QP
50 MITZ – 1000 MITZ	100 kHz	300 kHz	/	РК

1GHz-25GHz:

Measurement	Duty cycle	RBW	Video B/W
РК	Any	1MHz	3 MHz
417	>98%	1MHz	10 Hz
AV	<98%	1MHz	≥1/T

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9–90 kHz, 110–490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

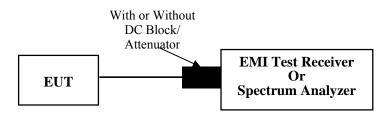
3.3 6 dB Emission Bandwidth:

3.3.1 Applicable Standard

FCC §15.247 (a)(2)

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.3.2 EUT Setup



3.3.3 Test Procedure

According to ANSI C63.10-2013 Section 11.8

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times RBW$.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

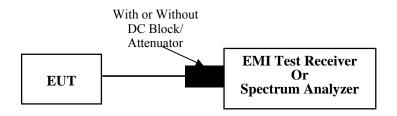
3.4 Maximum Conducted Output Power:

3.4.1 Applicable Standard

FCC §15.247 (b)(3)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.1

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW \geq DTS bandwidth.

b) Set VBW $\geq [3 \times RBW]$.

c) Set span $\geq [3 \times \text{RBW}]$.

d) Sweep time = auto couple.

e) Detector = peak.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use peak marker function to determine the peak amplitude level.

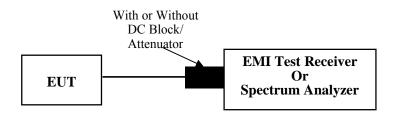
3.5 Maximum power spectral density:

3.5.1 Applicable Standard

FCC §15.247 (e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.5.2 EUT Setup



3.5.3 Test Procedure

According to ANSI C63.10-2013 Section 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.

b) Set the span to 1.5 times the DTS bandwidth.

c) Set the RBW to 3 kHz \leq RBW \leq 100 kHz.

d) Set the VBW \geq [3×RBW].

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum amplitude level within the RBW.

j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

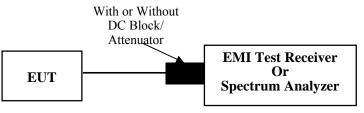
3.6 100 kHz Bandwidth of Frequency Band Edge:

3.6.1 Applicable Standard

FCC §15.247 (d);

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

3.6.2 EUT Setup



3.6.3 Test Procedure

According to ANSI C63.10-2013 Section 11.11

a) Set the center frequency and span to encompass frequency range to be measured.

b) Set the RBW = 100 kHz.

c) Set the VBW \geq [3 × RBW].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

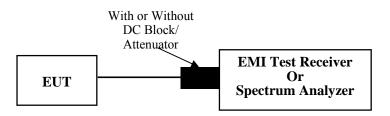
g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

3.7 Duty Cycle:

3.7.1 EUT Setup



3.7.2 Test Procedure

According to ANSI C63.10-2013 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

1) Set the center frequency of the instrument to the center frequency of the transmission.

2) Set $RBW \ge OBW$ if possible; otherwise, set RBW to the largest available value.

3) Set VBW \geq RBW. Set detector = peak or average.

4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \le 16.7 \mu s$.)

3.8 Antenna Requirement

3.8.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.8.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

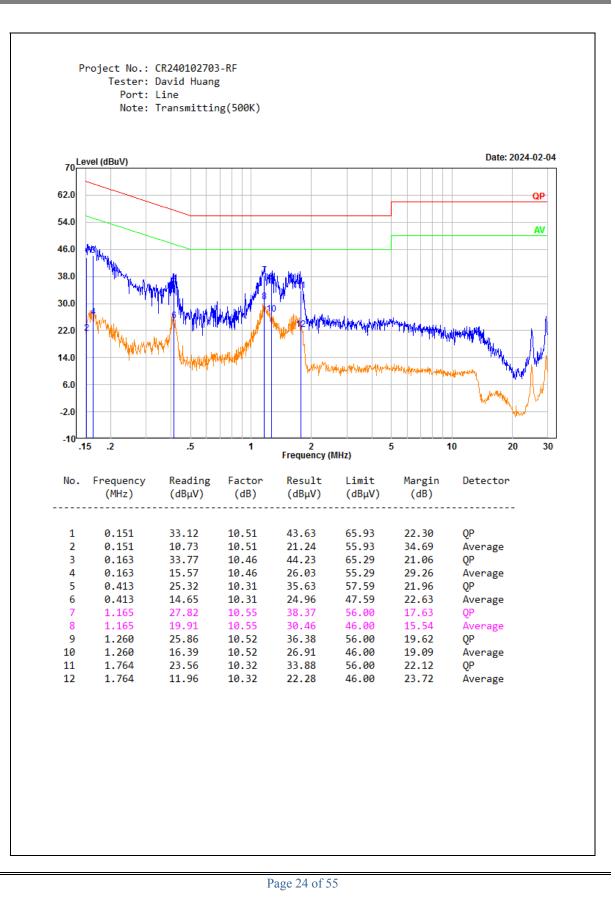
Serial Number:	2GJV_1	Test Date:	2024/2/4
Test Site:	CE	Test Mode:	Transmitting(maximum output power mode, low channel)
Tester:	David Huang	Test Result:	Pass

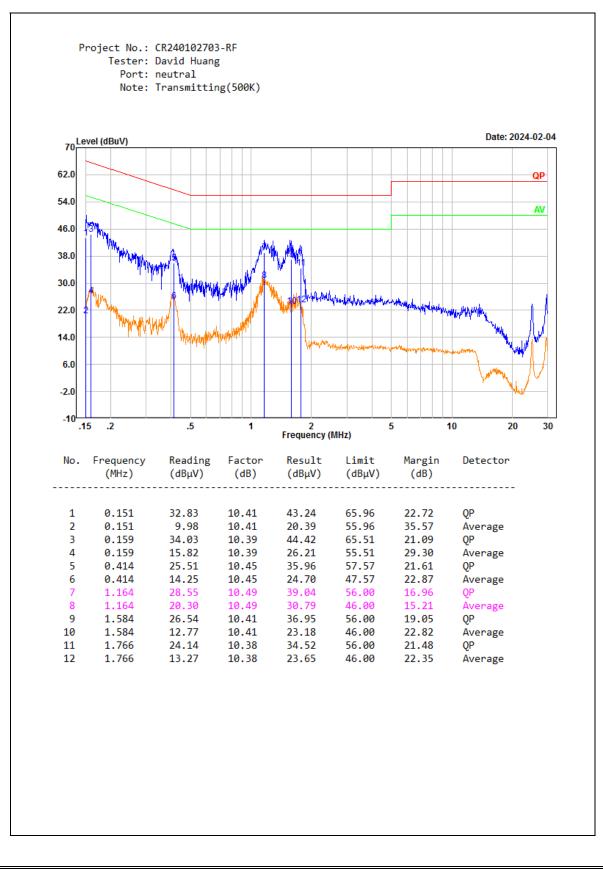
Environmental Conditions:

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/3/31	2024/3/30
R&S	EMI Test Receiver	ESR3	102726	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/8/6	2024/8/5
Audix	Test Software	E3	190306 (V9)	N/A	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).





4.2 Radiation Spurious Emissions

Serial Number:	2GJV_1	Test Date:	2024/2/18
Test Site:	966-2,966-1	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

Environmental Conditions:						
Temperature: (°C)	22.2~22.8	Relative Humidity: (%)	54	ATM Pressure: (kPa)	100.9	

Test Equipment List and Details:

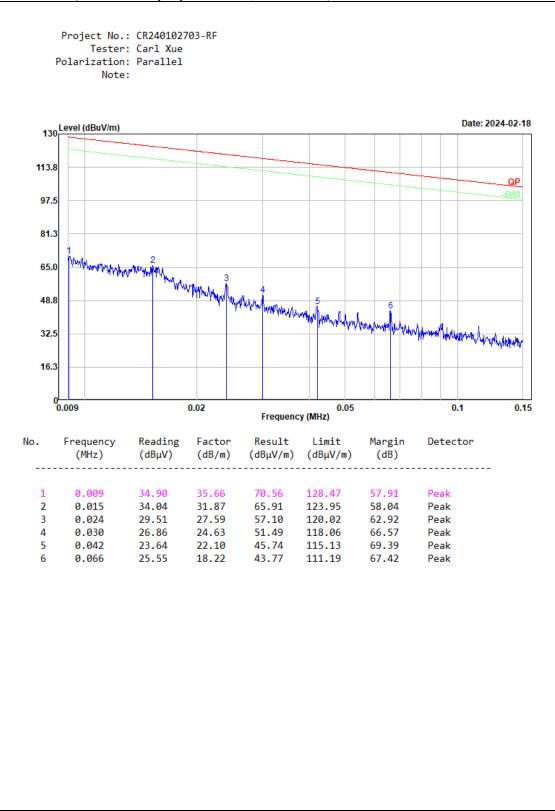
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2023/12/1	2026/11/30
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Audix	Test Software	E3	201021 (V9)	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	9912-5985	2023/12/6	2026/12/5
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200- 70U300	217423-008	2024/1/15	2025/1/14
MICRO-COAX	Coaxial Cable	UFA210A-1-2362- 300300	235780-001	2024/1/15	2025/1/14
A.H	Preamplifier	PAM-0118P	628	2024/1/15	2025/1/14

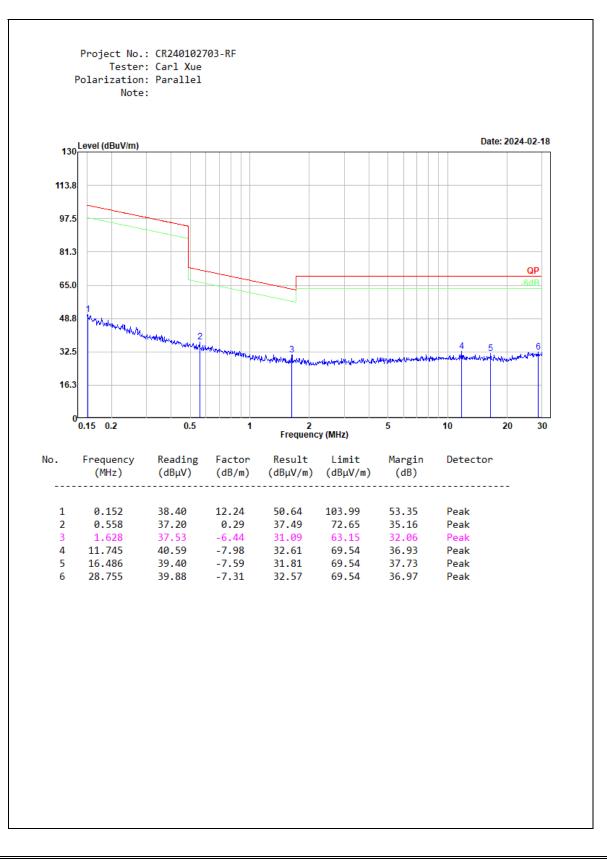
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

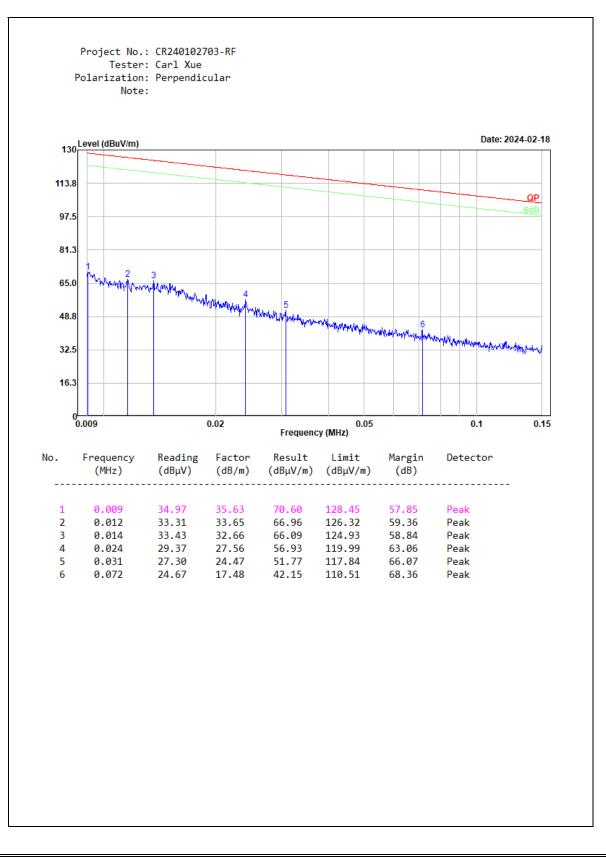
Test Data:

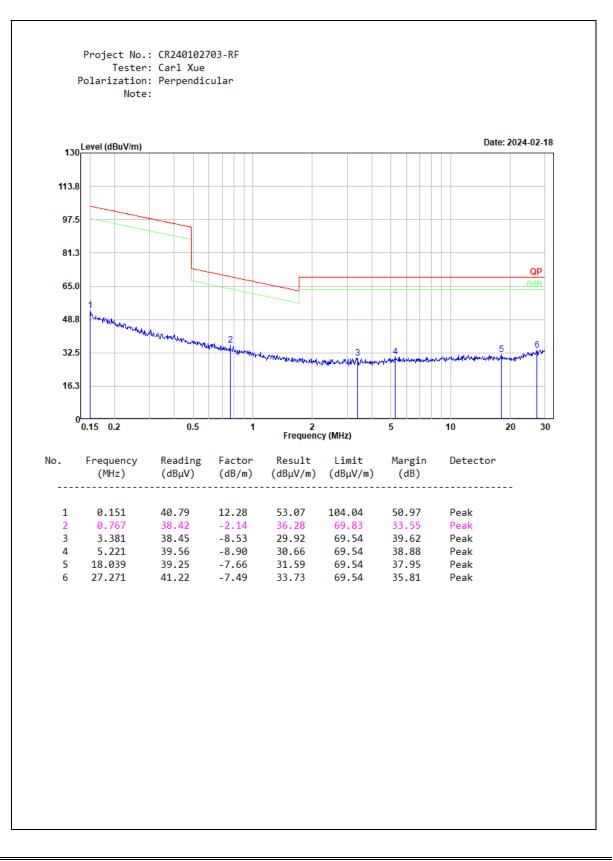
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

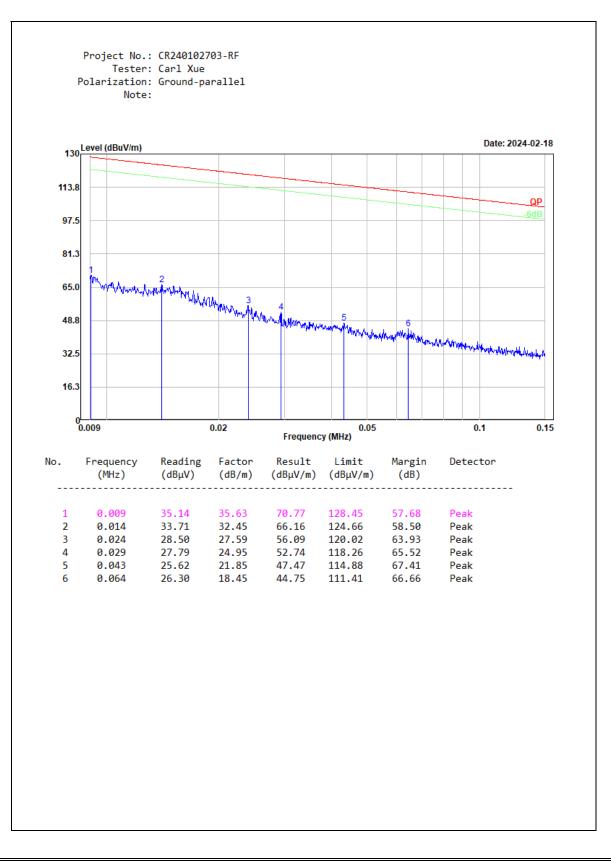
1) 9kHz-30MHz(maximum output power mode, low channel):

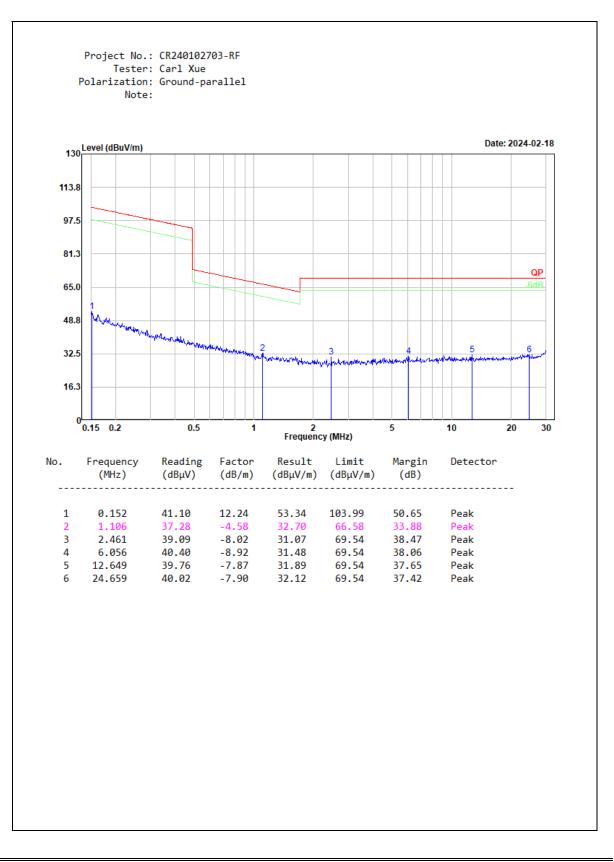






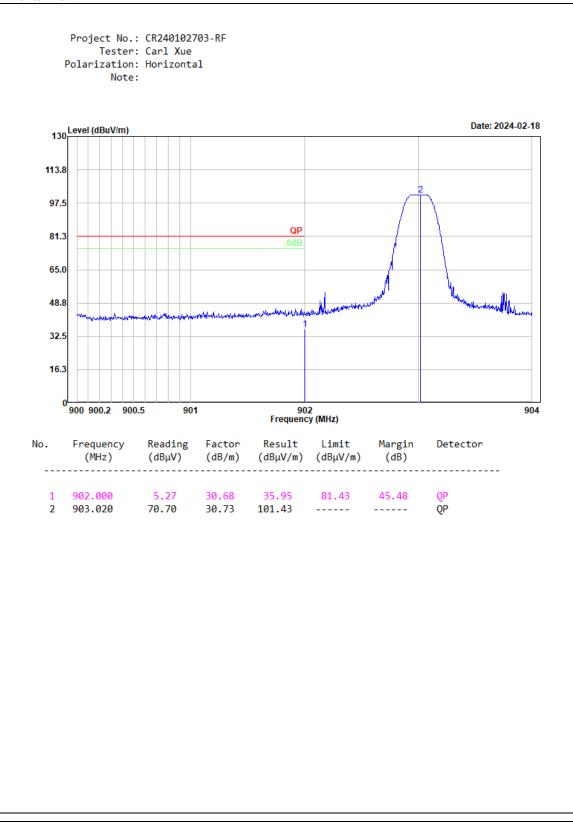




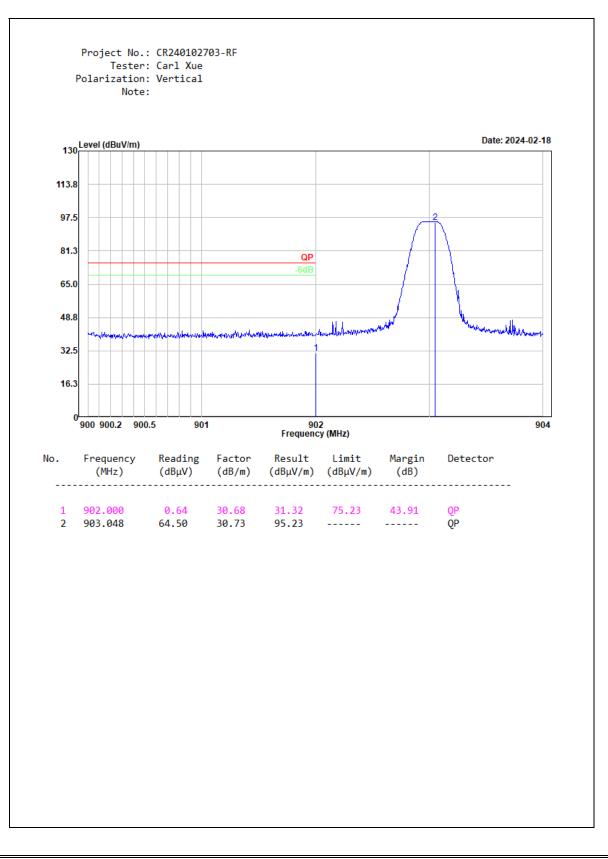


Report No.: CR240102703-00B

2) Band edge test plots: Low channel:



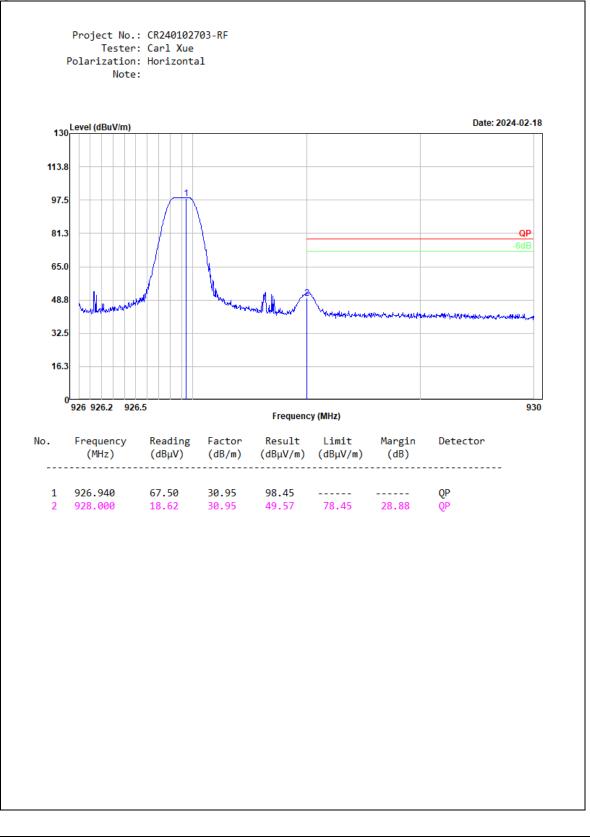
Report No.: CR240102703-00B

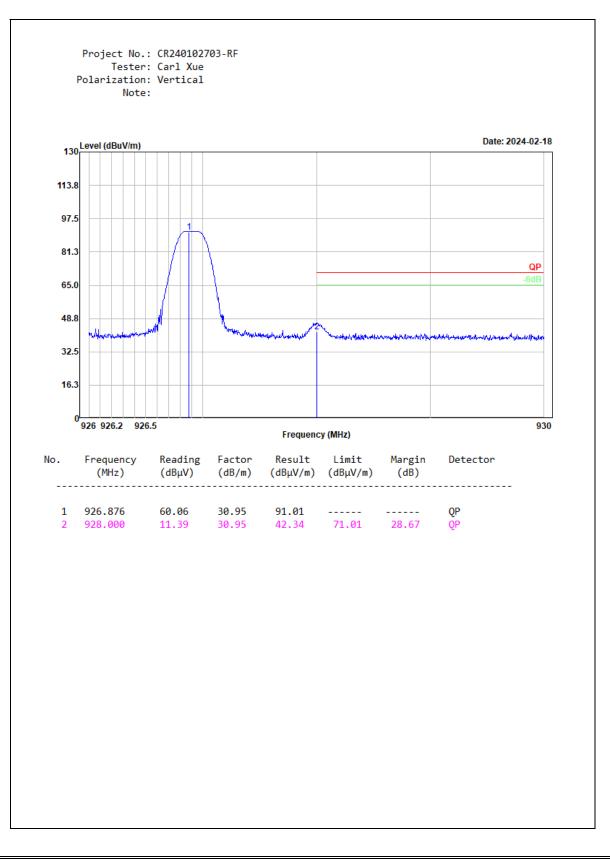


Page 34 of 55

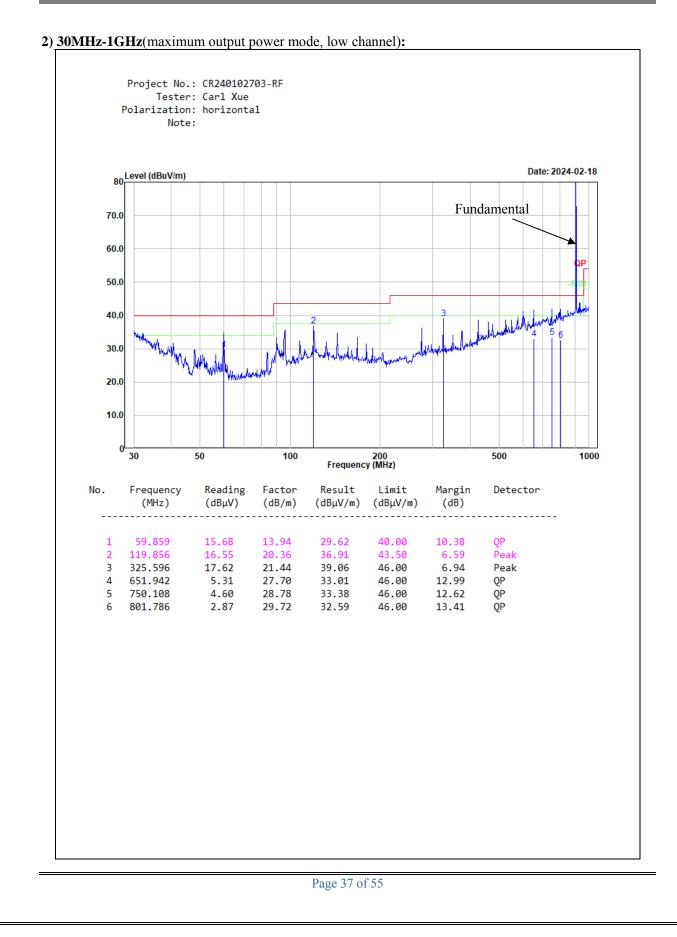
Report No.: CR240102703-00B

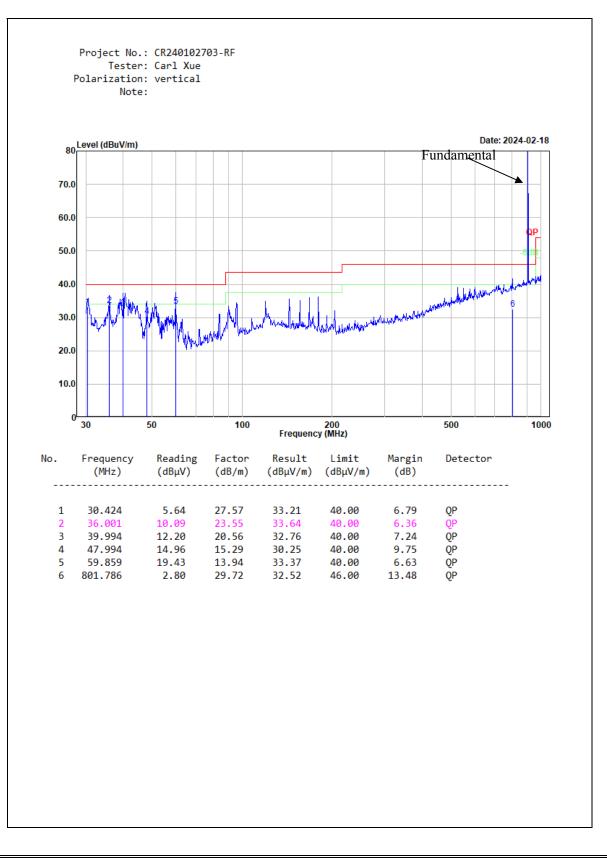
High Channel:





Report No.: CR240102703-00B





Report No.: CR240102703-00B

3) 1-10GHz:

	Rece	eiver	Dalan	Feeter	Desult	Timit	Manain
Frequency (MHz)	Reading (dBµV)	Detector	Polar Factor (H/V) (dB/m)		Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		Low C	Channel:	903	MHz		
1806.000	61.25	РК	Н	-13.97	47.28	74.00	26.72
1806.000	56.69	AV	Н	-13.97	42.72	54.00	11.28
1806.000	60.23	РК	V	-13.97	46.26	74.00	27.74
1806.000	55.20	AV	V	-13.97	41.23	54.00	12.77
2709.000	56.16	РК	Н	-11.12	45.04	74.00	28.96
2709.000	51.12	AV	Н	-11.12	40.00	54.00	14.00
2709.000	64.13	РК	V	-11.12	53.01	74.00	20.99
2709.000	59.33	AV	V	-11.12	48.21	54.00	5.79
3612.000	56.19	РК	Н	-8.03	48.16	74.00	25.84
3612.000	51.45	AV	Н	-8.03	43.42	54.00	10.58
3612.000	56.10	РК	V	-8.03	48.07	74.00	25.93
3612.000	51.78	AV	V	-8.03	43.75	54.00	10.25
4515.000	49.68	РК	Н	-6.53	43.15	74.00	30.85
4515.000	45.22	AV	Н	-6.53	38.69	54.00	15.31
4515.000	52.09	РК	V	-6.53	45.56	74.00	28.44
4515.000	47.63	AV	V	-6.53	41.10	54.00	12.90

F	Rece	eiver	Dalar	Feeter	Desult	T invit	Manain
Frequency (MHz)	Reading (dBµV)	Detector	Polar (H/V)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		Middle (Channel:	914.2	MHz		
1828.400	57.22	РК	Н	-13.79	43.43	74.00	30.57
1828.400	52.31	AV	Н	-13.79	38.52	54.00	15.48
1828.400	62.34	РК	V	-13.79	48.55	74.00	25.45
1828.400	57.55	AV	V	-13.79	43.76	54.00	10.24
2742.600	65.15	РК	Н	-11.06	54.09	74.00	19.91
2742.600	60.33	AV	Н	-11.06	49.27	54.00	4.73
2742.600	67.23	РК	V	-11.06	56.17	74.00	17.83
2742.600	62.22	AV	V	-11.06	51.16	54.00	2.84
3656.800	49.32	РК	Н	-7.60	41.72	74.00	32.28
3656.800	45.22	AV	Н	-7.60	37.62	54.00	16.38
3656.800	48.69	РК	V	-7.60	41.09	74.00	32.91
3656.800	44.12	AV	V	-7.60	36.52	54.00	17.48
4571.000	48.65	РК	Н	-6.49	42.16	74.00	31.84
4571.000	43.26	AV	Н	-6.49	36.77	54.00	17.23
4571.000	49.87	РК	V	-6.49	43.38	74.00	30.62
4571.000	44.32	AV	V	-6.49	37.83	54.00	16.17

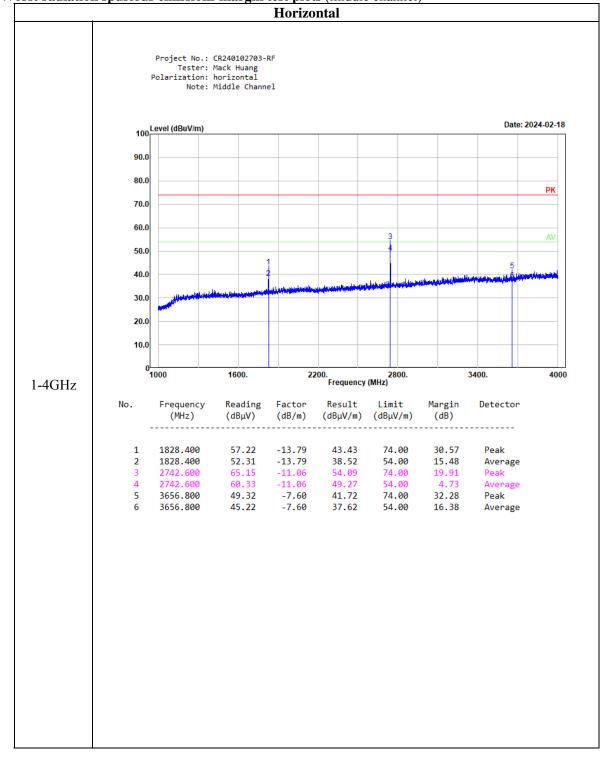
Page 39 of 55

Report No.: CR240102703-00B

	Rece	eiver	D 1				
Frequency (MHz)	Reading (dBµV)	Detector	Polar (H/V)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		High C	Channel:	926.9	MHz		
1853.800	58.27	РК	Н	-13.60	44.67	74.00	29.33
1853.800	53.36	AV	Н	-13.60	39.76	54.00	14.24
1853.800	57.01	РК	V	-13.60	43.41	74.00	30.59
1853.800	52.20	AV	V	-13.60	38.60	54.00	15.40
2780.700	50.20	РК	Н	-10.95	39.25	74.00	34.75
2780.700	45.55	AV	Н	-10.95	34.60	54.00	19.40
2780.700	55.98	РК	V	-10.95	45.03	74.00	28.97
2780.700	50.47	AV	V	-10.95	39.52	54.00	14.48
3707.600	48.62	РК	Н	-7.06	41.56	74.00	32.44
3707.600	43.21	AV	Н	-7.06	36.15	54.00	17.85
3707.600	49.23	РК	V	-7.06	42.17	74.00	31.83
3707.600	44.19	AV	V	-7.06	37.13	54.00	16.87
4634.500	47.58	РК	Н	-6.14	41.44	74.00	32.56
4634.500	43.32	AV	Н	-6.14	37.18	54.00	16.82
4634.500	51.60	РК	V	-6.14	45.46	74.00	28.54
4634.500	46.66	AV	V	-6.14	40.52	54.00	13.48

Report No.: CR240102703-00B

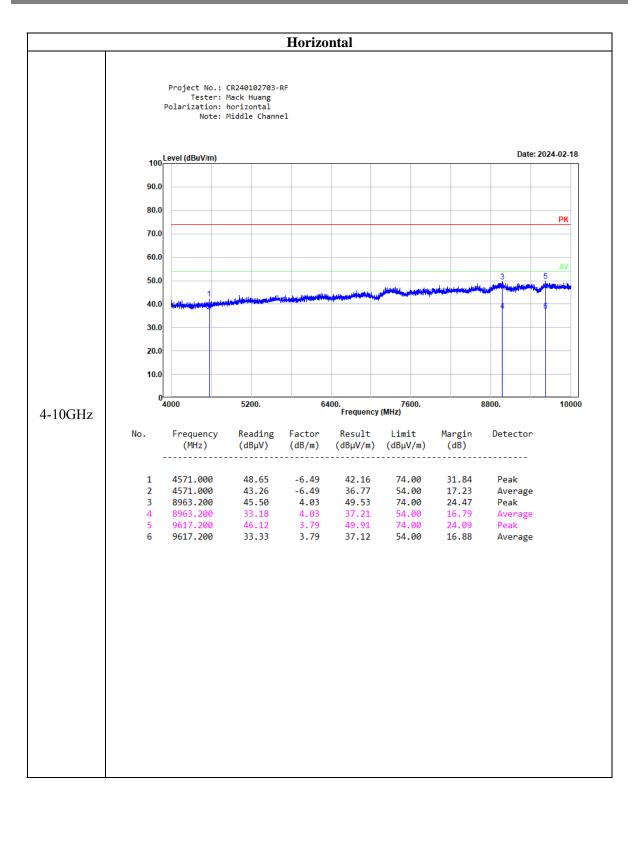
China Certification ICT Co., Ltd (Dongguan)

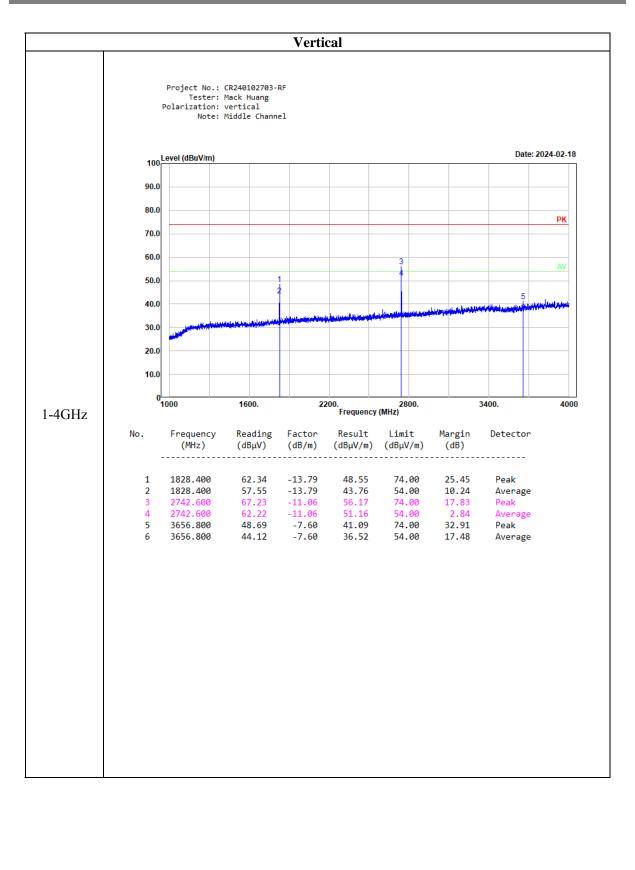


Worst radiation spurious emissions margin test plots (middle channel)

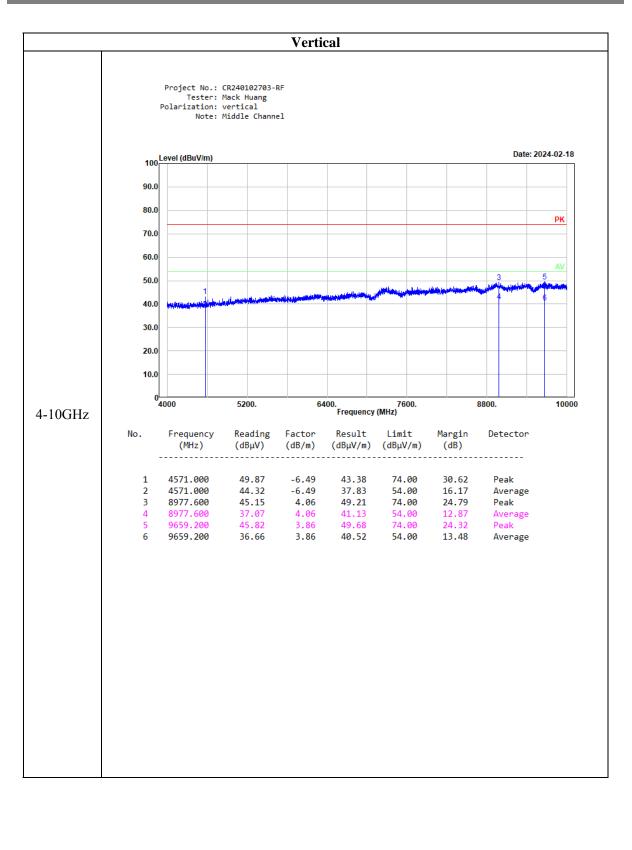
Report No.: CR240102703-00B

China Certification ICT Co., Ltd (Dongguan)





Page 43 of 55



Page 44 of 55

4.3 6 dB Emission Bandwidth:

Serial Number:	2GJV_2	Test Date:	2024/2/28
Test Site:	RF	Test Mode:	Transmitting
Tester:	Chin	Test Result:	Pass

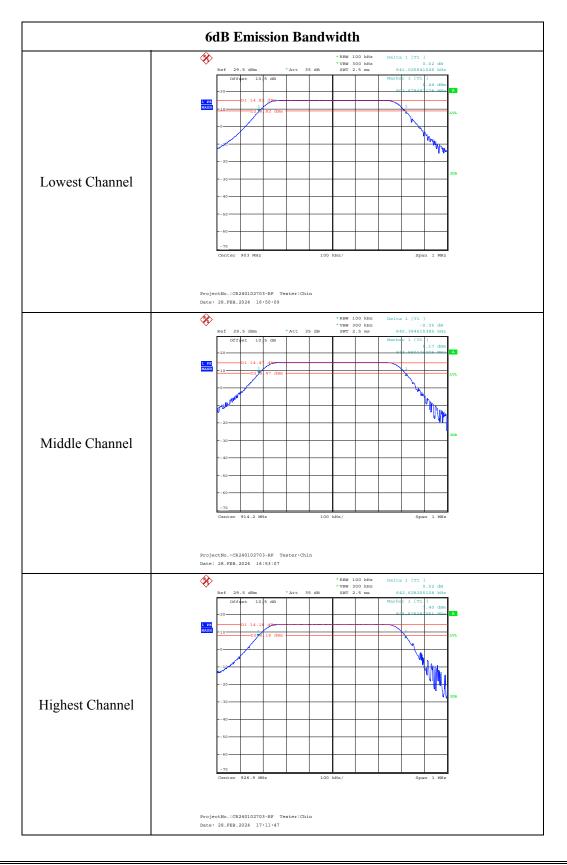
Environmental	Conditions:				
Temperature: (℃)	23.2	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Channel	Test Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
Lowest	903	0.641	≥0.5
Middle	914.2	0.64	≥0.5
Highest	926.9	0.643	≥0.5



Page 46 of 55

4.4 Maximum Conducted Output Power:

Serial Number:	2GJV_2	Test Date:	2024/2/28
Test Site:	RF	Test Mode:	Transmitting
Tester:	Chin	Test Result:	Pass

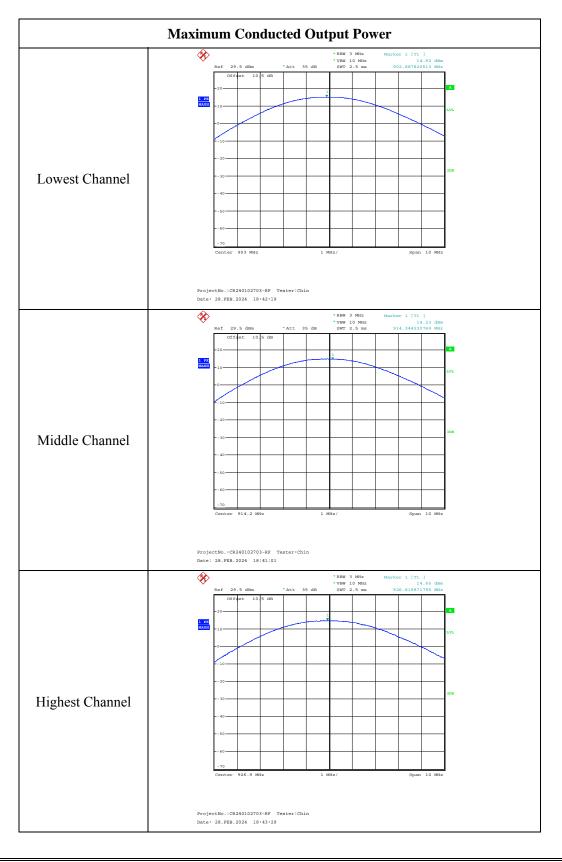
Environmental Conditions:							
Temperature: (°C)	23.2	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1		

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2022/7/15	2023/7/14
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK- 18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Channel	Test Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)	Limit (dBm)
Lowest	903	14.92	≤30
Middle	914.2	14.23	≤30
Highest	926.9	14.65	≤30



Page 48 of 55

4.5 Maximum power spectral density:

Serial Number:	2GJV_2	Test Date:	2024/2/29
Test Site:	RF	Test Mode:	Transmitting
Tester:	Chin	Test Result:	Pass

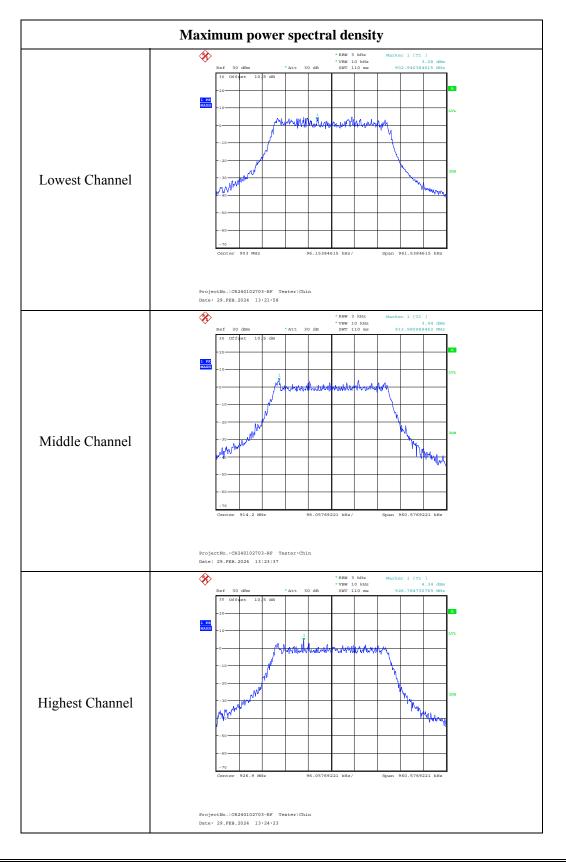
Environmental Conditions:						
Temperature: (°C)	23.8	Relative Humidity: (%)	53	ATM Pressure: (kPa)	102.1	

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Channel	Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Lowest	903	3.08	≤8.00
Middle	914.2	3.44	≤8.00
Highest	926.9	4.34	≤8.00



Page 50 of 55

4.6 100 kHz Bandwidth of Frequency Band Edge:

Serial Number:	2GJV_2	Test Date:	2024/2/28
Test Site:	RF	Test Mode:	Transmitting
Tester:	Chin	Test Result:	Pass

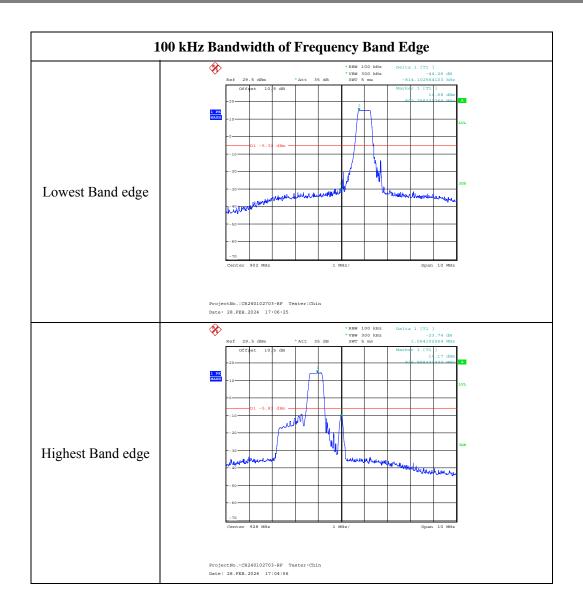
Environmental Conditions:						
Temperature: (°C)	23.2	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1	

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK- 18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Report No.: CR240102703-00B



4.7 Duty Cycle:

Serial Number:	2GJV_2	Test Date:	2024/2/28
Test Site:	RF	Test Mode:	Transmitting
Tester:	Chin	Test Result:	N/A

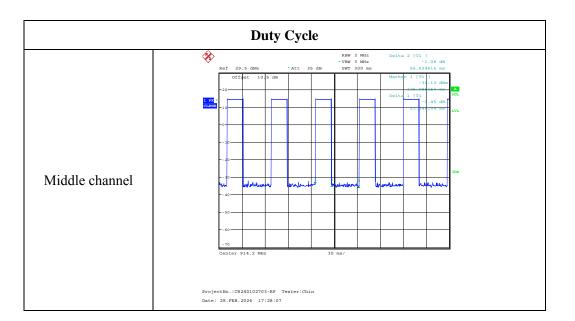
	Environmental Conditions:						
ſ	Temperature: (°C)	23.2	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1	

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK- 18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Frequency	Ton	Ton+off	Duty cycle	1/T	VBW Setting
(MHz)	(ms)	(ms)	(%)	(Hz)	(kHz)
914.2	21.346	56.635	37.69	47	0.05



5. EUT PHOTOGRAPHS

Please refer to the attachment CR240102703-EXP EUT EXTERNAL PHOTOGRAPHS and CR240102703-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR240102703-00B-TSP TEST SETUP PHOTOGRAPHS.

===== END OF REPORT =====