



Report No.: 25CST090034M01

TEST REPORT

Applicant: WINTEN CO.,LTD.
Address of Applicant: 201, EchoBldg2-45-8 Higashi-ikebukuro, Toshima-ku, Tokyo, japan
Manufacturer : Zhuhai Bigway Electronics Co.,Ltd.
Address of Manufacturer : Guangtai Electronics, Room 401, 4th Floor, Building 7, Wanqu International Industrial Park, No.2988, Zhufeng Avenue, Qianwu Town, Doumen District. Zhuhai City, Guangdong Province
Factory : Zhuhai Bigway Electronics Co.,Ltd.
Address of Factory: Guangtai Electronics,Room 401, 4th Floor, Building 7, Wanqu International Industrial Park, No.2988, Zhufeng Avenue, Qianwu Town, Doumen District. Zhuhai City, Guangdong Province
Equipment Under Test (EUT)
Product Name: WIRELESS HDMI Transmitter and Receiver
Model No.: WTHL-WIFI4K-BK,WTHL-WIFI4K-BK-XX / XX= BK, BL, WH, RD, SL
Trademark: WINTEN
Applicable standards: Article 2, Paragraph 1, Item 19-3
MIC Notice No.88 Annex 1
MIC Notice No.88 Annex 45
Date of sample receipt: Sep. 15, 2025
Date of Test: Sep. 15-Oct. 09 2025
Date of report issued: Oct. 10 2025
Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Frank Cheng
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.



2 Version

Report No.: 25CST090034M01

Version No.	Date	Description
00	Oct. 10 2025	Original

Prepared By:

Li Jun

Date:

Oct. 10 2025

Project Engineer

Check By:

Tongli

Date:

Oct. 10 2025

Reviewer



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4 Test Summary

Test Item	Result
RF shielding method	Pass
Frequency Error	Pass
Antenna Power	Pass
99% Occupied bandwidth	Pass
Adjacent Channel Power Tolerance	Pass
Out of Band Leakage Power	Pass
Burst Length Measurement	Pass
Spurious Emissions Intensity	Pass
Secondary radiated emissions	Pass
Interference Prevention Function	Pass
Carrier Sense capability	Pass
Dynamic Frequency Selection	Pass Note 1
Number of carrier	Pass Note 2

Pass: The EUT complies with the carrier sense capability and radio interference prevention capability.

Note: 1 .This device is a slave device, the frequency and transmission is controlled by master.

2 .This device has more than 1 subcarrier in 1MHz, compliances with the requirement



5 General Information

5.1 General Description of EUT

Product Name:	WIRELESS HDMI Transmitter and Receiver
Model No.:	WTHL-WIFI4K-BK,WTHL-WIFI4K-BK-XX / XX= BK, BL, WH, RD, SL
Test Model:	WTHL-WIFI4K-BK
Model difference:	All the models of the products have the same appearance, circuit layout and hardware. The only difference lies in the model.
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	5500MHz-5720MHz for 802.11a/802.11n(HT20)/802.11ac(VHT20); 5510MHz-5710MHz for 802.11n(HT40)/802.11ac(VHT40);
Channel numbers:	12 channels for 802.11a/802.11n(HT20)/802.11ac(VHT20) 6 channels for 802.11n(HT40)/802.11ac(VHT40)
Rated power:	802.11a: W56: 1.50mW/MHz 802.11n20: W56: 1.40mW/MHz 802.11n40: W56: 0.79mW/MHz 802.11ac20:W56: 1.60mW/MHz 802.11ac40:W56: 1.00mW/MHz
EUT Type:	Slave Device
Antenna Specification:	Integral antenna
Antenna Gain:	2.12 dBi
Power supply:	DC 5V



Operation Frequency List WIFI on 5G Band:

Operating band	20MHz		40MHz		80MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
W56 (5470MHz-5725MHz)	100	5500	102	5510	-	-
	104	5520				
	108	5540	110	5550		
	112	5560			-	-
	116	5580	118	5590		
	120	5600				
	124	5620	126	5630	-	-
	128	5640				
	132	5660	134	5670		
	136	5680			-	-
	140	5700	142	5710		
	144	5720				

Note: Test performed at the lowest/middle/highest frequencies selected in the list above for EUT supported while working on specified mode.



5.2 Test condition

Note: The EUT has its own voltage regulator principle from TLV62569, 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.

External power supply	RF IC power supply	Deviation from normal	Deviation
Normal voltage:DC 5.0V	3.3V	-	-
High voltage: DC 5.5V	3.3V	-	-
Low voltage: DC 4.5V	3.3V	-	-
External power supply			
Temperature:	25 °C		
Humidity:	52%		
Atmospheric Pressure	1010mbar		

5.3 Test Location

All tests were performed at:

Shenzhen CST Testing Co., Ltd

Address: Room 530、531, Block A, Huafeng Internet Creative Park, No. 107 Gonghe Industrial Road, Xixiang Street, Baoan District, Shenzhen, China. 518101

Tel: 0755-27907627

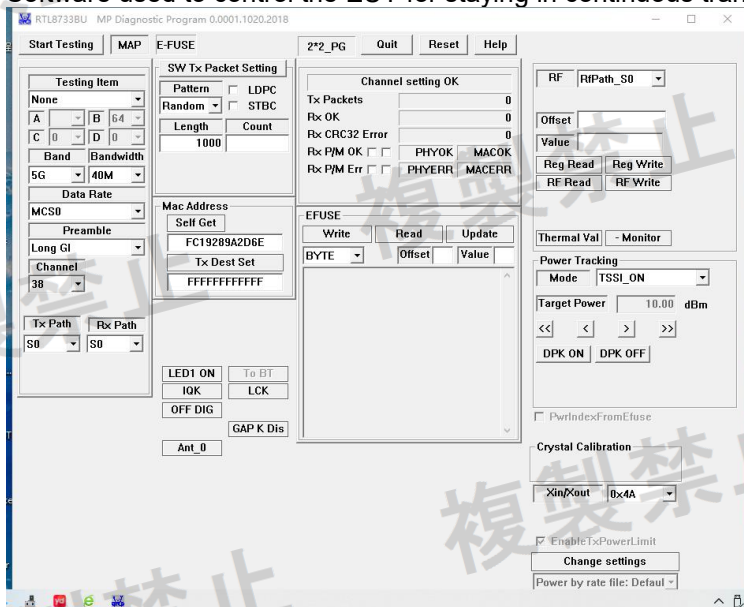
Fax: 0755-27907627

5.4 Other Information Requested by the Customer

None.

5.5 Test mode

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





5.6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Radio Test Software	TST	V2	CST210	Oct. 15, 2024	Oct. 14, 2025
2	TST PASS RF control box V2	TST	V2	CST210	Oct. 15, 2024	Oct. 14, 2025
3	Power measuring unit	TST	V2	CST210	Oct. 15, 2024	Oct. 14, 2025
4	Automatic path switching module	TST	V2	CST210	Oct. 15, 2024	Oct. 14, 2025
5	Spectrum Analyzer	Agilent	N9020A	CST001	Oct. 15, 2024	Oct. 14, 2025
6	Signal Generator	Agilent	N5182A	CST211	Oct. 15, 2024	Oct. 14, 2025
7	Signal Generator	Agilent	N5181A	CST212	Oct. 15, 2024	Oct. 14, 2025
8	UNIVERSAL RADIO COMMUNICATION TESTER	Rohde & Schwarz	CMW200	CST002	Oct. 15, 2024	Oct. 14, 2025
9	Splitter	Agilent	11636B	CST213	Oct. 15, 2024	Oct. 14, 2025
10	Power Attenuator	BTI	30dB/250W	CST216	Oct. 15, 2024	Oct. 14, 2025
11	Power Attenuator	BTI	20dB	CST217	Oct. 15, 2024	Oct. 14, 2025
12	D.C. Power Supply	Gwinstek	GPC-3060D	CST018	Oct. 15, 2024	Oct. 14, 2025
13	Coaxial Cable	CST	N/A	CST219	Oct. 15, 2024	Oct. 14, 2025
14	Coaxial Cable	CST	N/A	CST220	Oct. 15, 2024	Oct. 14, 2025
15	Coaxial cable	CST	N/A	CST222	Oct. 15, 2024	Oct. 14, 2025
16	Coaxial Cable	CST	N/A	CST223	Oct. 15, 2024	Oct. 14, 2025
17	Temperature and humidity box	ATOINSTRUMENT	ATH-2254-CP	CST026	Oct. 15, 2024	Oct. 14, 2025
18	Temperature and humidity meter	GEMLEAD	STH130	CST042	Oct. 15, 2024	Oct. 14, 2025
19	Digital oscilloscope	Tektronix	TDS3032B	B031533	Oct. 15, 2024	Oct. 14, 2025

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.



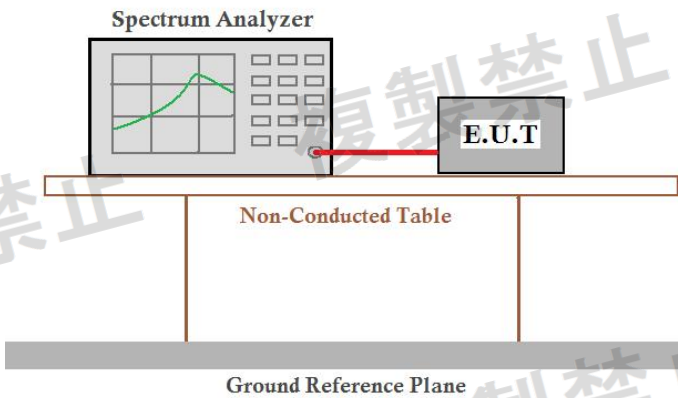
5.7 Measurement uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal).

Parameter	Uncertainty
RF frequency	$\pm 6 \times 10^{-7}$
Total RF power, conducted	$\pm 0.8\text{dB}$
Spurious emissions, conducted	$\pm 0.8\text{dB}$
DC and low frequency voltages	$\pm 3\%$
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

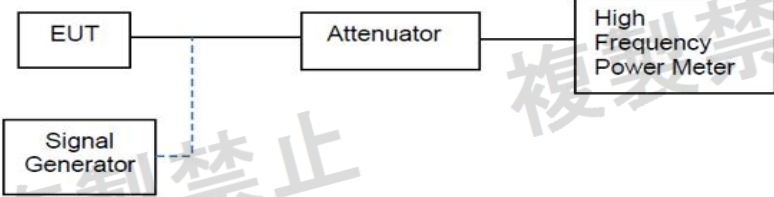
6 Test results and Measurement Data

6.1 Frequency Error

Test condition:	Without modulation, continuously transmitting
Spectrum set:	Test Frequency: test channel, RBW=10kHz, VBW=10kHz, Span=1MHz, Sweep time=Auto, Detector mode=Positive peak
Limit:	±20ppm
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a cable. The setup is placed on a Non-Conducted Table, which is positioned above a Ground Reference Plane.
Test Instruments:	Refer to section 5.6 for details
Test results:	Pass

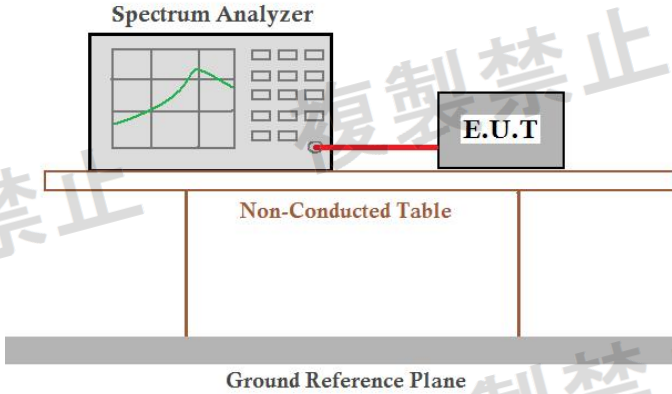
Measurement Data: The detailed test data see Appendix I

6.2 Output Power and Output Power Tolerance

Test condition:	Test diffusion code and modulate with standard coding test signal					
Spectrum set:	a) The EUT is connected to the input port of the high frequency power meter through the attenuator and the transmit frequency is set. b) Remove the EUT and put the replacing signal generator (SG). Set the signal generator (SG) at same frequency and transmit on, the set SG output power at Pt to give the equivalent output level of "E". c) Calculate antenna power density by the formula below $PD = Pt + 10 \cdot \log(1/x)$. x: The duty cycle of the EUT in continuously transmitting mode Pt: Output power of the SG d) Antenna Power Error is definition that actual measure antenna power tolerance between +50% to -50% power range that base on manufacturer declare the conducted power density.					
Rating power:	802.11a: W56: 1.50mW/MHz 802.11n20: W56: 1.40mW/MHz 802.11n40: W56: 0.79mW/MHz 802.11ac20: W56: 1.60mW/MHz 802.11ac40: W56: 1.00mW/MHz					
Maximum EIRP:	4.57mW/MHz					
Limit:	W56	Antenna Power	DSSS, etc	OFDM	OFDM	OFDM
			10mW/MHz	10mW/MHz	5mW/MHz	2.5mW/MHz
		Antenna power Tolerance	+50%, -50%			
		EIRP	50mW/MHz: with TPC 25mW/MHz: without TPC	25mW/MHz: with TPC 12.5mW/MHz: without TPC	12.5mW/MHz: with TPC 6.25mW/MHz: without TPC	6.25mW/MHz: with TPC 3.125mW/MHz: without TPC
Test setup:						
Test Instruments:	Refer to section 5.6 for details					
Test results:	Pass					

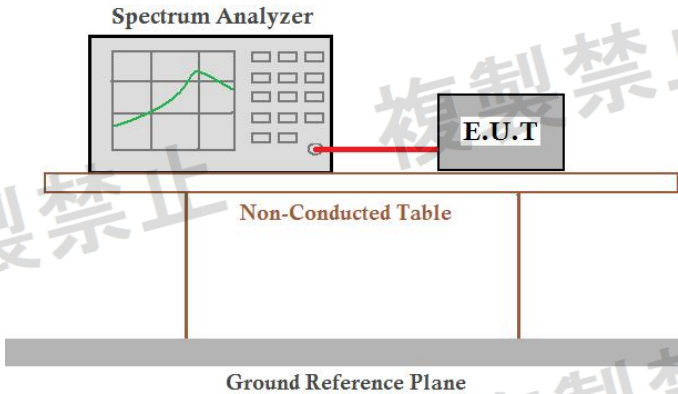
Measurement Data: The detailed test data see Appendix I

6.3 Occupied Bandwidth (99%)

Test condition:	Test diffusion code and modulate with standard coding test signal
Spectrum set:	Test Frequency: test channel, RBW=VBW=100kHz, Span=40/80MHz, Sweep time=Auto, Detector mode=Positive peak
Limit:	≤18MHz(20MHz Mode DSSS,etc.); ≤20MHz(20MHz Mode OFDM); ≤40MHz(40MHz Mode OFDM);
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a cable. The setup is placed on a Non-Conducted Table, which is positioned above a Ground Reference Plane.
Test Instruments:	Refer to section 5.6 for details
Test mode:	Transmitting mode
Test results:	Pass

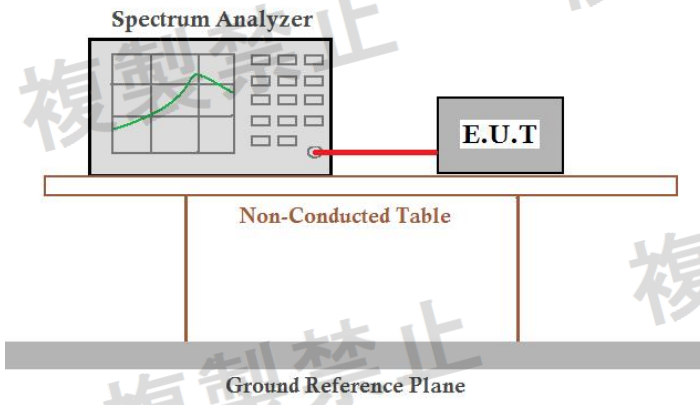
Measurement Data: The detailed test data see Appendix I

6.4 Adjacent Channel Power Tolerance

Test condition:	Test diffusion code and modulate with standard coding test signal				
Spectrum set:	Test Frequency: test channel, RBW=VBW=300kHz, Span=120/240/480MHz, Detector mode=RMS, Sweep time=auto				
Limit:	20MHz system		40MHz system	80MHz system	160MHz system
	DSSS, etc	OFDM	OFDM	OFDM	OFDM
	$F_c \pm 20\text{MHz} \pm 10\text{MHz}$ BW: -25dBc	$F_c \pm 20\text{MHz} \pm 10\text{MHz}$ BW: -25dBc	$F_c \pm 40\text{MHz} \pm 20\text{MHz}$ BW: -25dBc	--	--
	$F_c \pm 40\text{MHz} \pm 10\text{MHz}$ BW: -40dBc	$F_c \pm 40\text{MHz} \pm 10\text{MHz}$ BW: -40dBc	$F_c \pm 80\text{MHz} \pm 20\text{MHz}$ BW: -40dBc		
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. The E.U.T. is placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.				
Test Instruments:	Refer to section 5.6 for details				
Test results:	Pass				

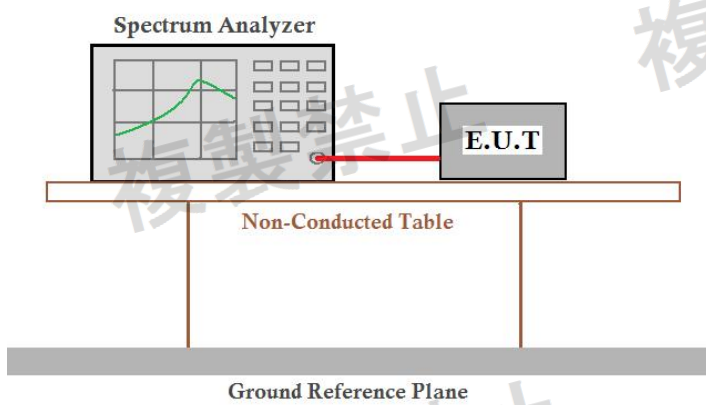
Measurement data: The detailed test data see Appendix I

6.5 Out of Band Leakage Power

Test condition:	Test diffusion code and modulate with standard coding test signal															
Spectrum set:	Spectrum Condition: Step 1: • Frequency: include each specified frequency range • RBW: 1 MHz • VBW: 1 MHz • Span: Wide enough to cover the complete power envelope of the signal of the UUT. • Detector: Peak • Trace Mode: Max Hold Step 2: When the trace is complete, find the peak value of the power envelope and record the frequency. Step 3: Make the following changes to the settings of the spectrum analyzer: • Centre Frequency: Equal to the frequency recorded in step 2. • Span: 0 Hz • RBW: 1 MHz • VBW: 1 MHz • Detector: RMS • Trace Mode: Clear Write															
Limit:	W56	<table><tr><th colspan="2">20MHz system</th></tr><tr><th>DSSS, etc.</th><th>OFDM</th></tr><tr><td>5470MHz or less: 12.5μW/MHz</td><td>5460MHz or less: 2.5μW/MHz</td></tr><tr><td>5730MHz or more: 12.5μW/MHz</td><td>5460-5470MHz: 12.5μW/MHz</td></tr><tr><td></td><td>5745-5765MHz: 12.5μW/MHz</td></tr><tr><td></td><td>Over 5765MHz: 2.5μW/MHz</td></tr></table>	20MHz system		DSSS, etc.	OFDM	5470MHz or less: 12.5μW/MHz	5460MHz or less: 2.5μW/MHz	5730MHz or more: 12.5μW/MHz	5460-5470MHz: 12.5μW/MHz		5745-5765MHz: 12.5μW/MHz		Over 5765MHz: 2.5μW/MHz		
20MHz system																
DSSS, etc.	OFDM															
5470MHz or less: 12.5μW/MHz	5460MHz or less: 2.5μW/MHz															
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	Over 5765MHz: 2.5μW/MHz															
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40MHz system	80MHz system															
5460MHz or less: 12.5μW/MHz	5460MHz or less: 12.5μW/MHz															
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5770MHz or more: 12.5μW/MHz	5469.5-5470MHz: 51.2μW/MHz															
	5770MHz or more: 12.5μW/MHz															
Test setup:	Spectrum Analyzer 															
Test Instruments:	Refer to section 5.6 for details															
Test results:	Pass															

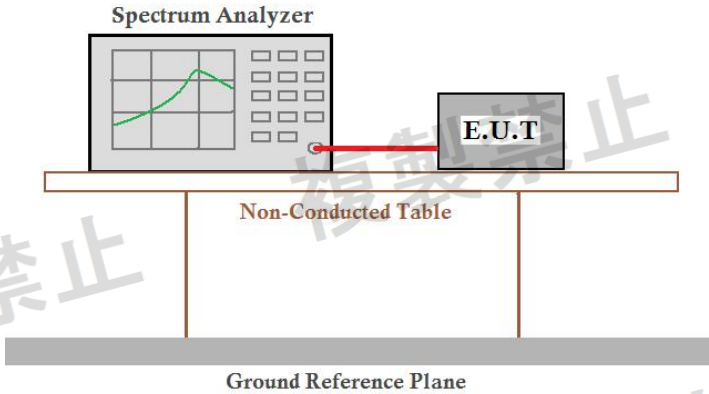
Measurement data: The detailed test data see Appendix I

6.6 Spurious emission intensity

Test condition:	Test diffusion code and modulate with standard coding test signal																						
Measurement procedure:	Step 1 All spurious are measured from 30MHz to 26GHz by peak mode. Step 2 If the value measured by Step1 is 3dB or less to the limit, measure in average mode.																						
Spectrum set:	Test Frequency: test channel, Below 1GHz: RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Positive peak Above 1GHz: RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Positive peak																						
Limit:	W56: <table border="1"> <thead> <tr> <th colspan="2">20MHz system</th> </tr> <tr> <th>DSSS, etc.</th> <th>OFDM</th> </tr> </thead> <tbody> <tr> <td>5,470 MHz or less : 12.5 uW/MHz</td> <td>5,460 MHz or less : 2.5 uW/MHz</td> </tr> <tr> <td></td> <td>5,460 - 5,470 MHz : 12.5 uW/MHz</td> </tr> <tr> <td>5,730 MHz or more : 12.5 uW/MHz</td> <td>5,745 - 5,765 MHz : 12.5 uW/MHz</td> </tr> <tr> <td></td> <td>Over 5,765 MHz : 2.5 uW/MHz</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>40MHz system</th> <th>80MHz system</th> </tr> </thead> <tbody> <tr> <td>5,460 MHz or less : 12.5 uW/MHz</td> <td>5,460 MHz or less : 12.5 uW/MHz</td> </tr> <tr> <td>5,460 - 5,470 MHz : 50 uW/MHz</td> <td>5,460 - 5,469.5 MHz : 50 uW/MHz</td> </tr> <tr> <td>5,770 MHz or more : 12.5 uW/MHz</td> <td>5,469.5 - 5,470 MHz : 51.2 uW/MHz</td> </tr> <tr> <td></td> <td>5,770 MHz or more : 12.5 uW/MHz</td> </tr> </tbody> </table>	20MHz system		DSSS, etc.	OFDM	5,470 MHz or less : 12.5 uW/MHz	5,460 MHz or less : 2.5 uW/MHz		5,460 - 5,470 MHz : 12.5 uW/MHz	5,730 MHz or more : 12.5 uW/MHz	5,745 - 5,765 MHz : 12.5 uW/MHz		Over 5,765 MHz : 2.5 uW/MHz	40MHz system	80MHz system	5,460 MHz or less : 12.5 uW/MHz	5,460 MHz or less : 12.5 uW/MHz	5,460 - 5,470 MHz : 50 uW/MHz	5,460 - 5,469.5 MHz : 50 uW/MHz	5,770 MHz or more : 12.5 uW/MHz	5,469.5 - 5,470 MHz : 51.2 uW/MHz		5,770 MHz or more : 12.5 uW/MHz
20MHz system																							
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5,770 MHz or more : 12.5 uW/MHz	5,469.5 - 5,470 MHz : 51.2 uW/MHz																						
	5,770 MHz or more : 12.5 uW/MHz																						
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an Equipment Under Test (E.U.T.). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.																						
Test Instruments:	Refer to section 5.6 for details																						
Test results:	Pass																						

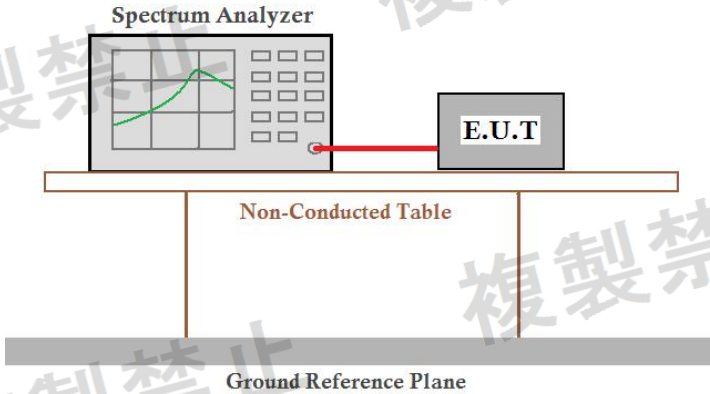
Measurement data: The detailed test data see Appendix I

6.7 Burst Length Measurement

Test condition:	Test diffusion code and modulate with standard coding test signal
Spectrum set:	Test Frequency: test channel, RBW=VBW=10MHz, Span=Zero, Detector mode= Positive Peak, Sweep mode=Single Sweep, sweep time= more than burst length
Limit:	≤8ms
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.6 for details
Test results:	Pass

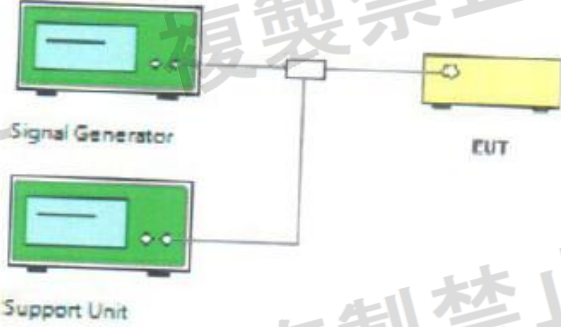
Measurement data: The detailed test data see Appendix I

6.8 Secondary radiated emissions

Test condition:	Receiving mode
Measurement procedure:	Step 1 All spurious are measured from 30MHz to 26.5GHz by peak mode. Step 2 If the value measured by Step1 is 3dB or less to the limit, measure in average mode.
Spectrum set:	Step 1: Test Frequency: test channel, Below 1GHz, RBW=VBW=100kHz; Above 1GHz, RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Positive peak Step 2: Test Frequency: spurious frequency Test Frequency: test channel, Below 1GHz, RBW=VBW=100kHz; Above 1GHz, RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Sample, Span=0Hz
Limit:	Below 1GHz: 4.0nW or less Above 1GHz: 20nW or less
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.
Test Instruments:	Refer to section 5.6 for details
Test results:	Pass

Measurement data: The detailed test data see Appendix I

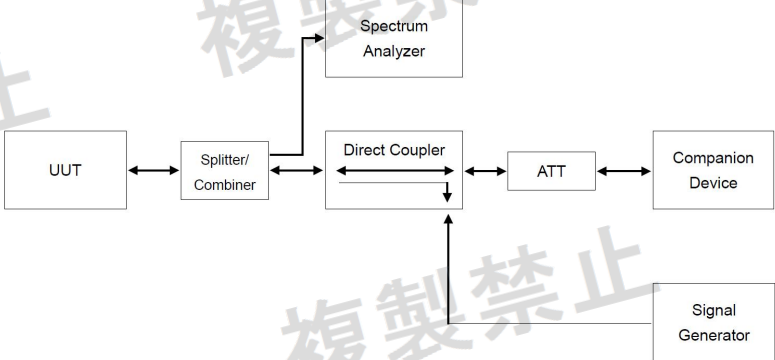
6.9 Interference Prevention Function

Test condition:	Test diffusion code and modulate with standard coding test signal
Test setup:	 The diagram illustrates the test setup. A Signal Generator (green box) and a Support Unit (green box) are connected to an EUT (yellow box). The Signal Generator is connected to the Support Unit, and the Support Unit is connected to the EUT.
Test Procedures:	1. The EUT continuous connected with support unit. 2. Signal generator transmitted interference signal to the EUT. 3. Check the EUT must be automatic cessation of transmitting
Test Instruments:	Refer to section 5.8 for details
Test results:	Pass Transmitter: The transmitting mode (the identification code is more than 48 bits) of EUT is on normal operating, the interference prevention function is good. Receiver: The transmitting mode of EUT is on normal operating, the interference prevention function is good.

Measurement data:

Identification function:	Good
MAC address :	FC:19:28:9A:2D:6E

6.10 Carrier Sense Capability

Test condition:	Test diffusion code and modulate with standard coding test signal
Test setup:	 The diagram illustrates the test setup for Carrier Sense Capability. It shows a UUT (Unit Under Test) connected to a Splitter/Combiner. The Splitter/Combiner is connected to a Direct Coupler. The Direct Coupler is connected to a Spectrum Analyzer, an ATT (Attenuator), and a Companion Device. A Signal Generator is also connected to the Direct Coupler.
Test Procedures:	- In the case that the EUT has the function of automatically transmitting the identification code; - Transmit the predetermined identification codes form EUT. - Check the transmitted identification codes with the demodulator. - In the case of receiving the identification code; - Transmit the predetermined identification codes form the counter part - Check if communication is normal - Transmit the signals other than predetermined ID codes form the counter part. - Check if the EUT stops the transmission or if it displays that identification codes are different from the predetermined ones.
Test Instruments:	Refer to section 5.8 for details
Test results:	Pass Transmitter: The transmitting mode of EUT is on normal operating, the interference prevention function is good Receiver: The transmitting mode of EUT is on normal operating, the interference prevention function is good

Remark: conducted carrier sense function with test procedure annex table No.45 and confirmed the result was good.

6.11 Construction Protection Confirmation

Limit

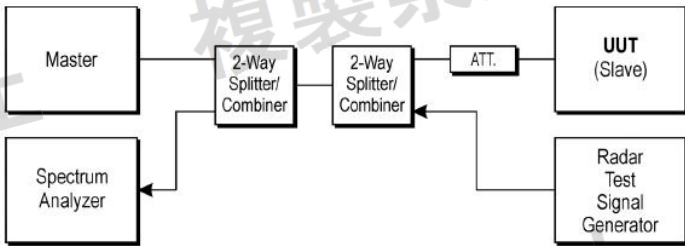
The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.

Confirmation Method

All the high-frequency components and modulation parts are protected by the casing, which is tightly fastened by ultrasonic pressing.



6.12 Dynamic Frequency Selection

Test condition:																																																																												
Test setup:																																																																												
Requirement	Parameters and applicability of DFS requirement <table><tr><th rowspan="2">Parameter</th><th rowspan="2">Value</th><th colspan="2">Operational Mode</th></tr><tr><th>Master</th><th>Slave</th></tr><tr><td>Non-Occupancy period</td><td>Minimum 30 minutes</td><td>-</td><td>Not requirement</td></tr><tr><td>Channel Availability Check Time</td><td>60 Seconds</td><td>-</td><td>Not requirement</td></tr><tr><td>Channel Move Time</td><td>10 Seconds</td><td>-</td><td>✓</td></tr><tr><td>Channel Closing Transmission Time</td><td>260ms</td><td>-</td><td>✓</td></tr></table> W56 Un-modulated pulse radio wave <table><tr><th colspan="4">The radio wave which a radar transmits *Un-modulated pulse</th><th rowspan="2">Detection probability</th></tr><tr><th>Classification</th><th>Pulse width</th><th>Repetition frequency</th><th>The number of continuous pulses</th></tr><tr><td>1</td><td>0.5 μs</td><td>720 Hz</td><td>18</td><td>60% or more</td></tr><tr><td>2</td><td>1 μs</td><td>700 Hz</td><td>18</td><td>60% or more</td></tr><tr><td>3</td><td>2.0 μs</td><td>250 Hz</td><td>18</td><td>60% or more</td></tr><tr><td>4</td><td>1 μs ≤ X ≤ 5 μs ("1μs"or"width which added the integral multiple of 1μs to 1μs")</td><td>4,347Hz ≤ X ≤ 6,667Hz (arbitrary frequency of 1)</td><td>23 ≤ X ≤ 29 (arbitrary integer of 1)</td><td>60% or more</td></tr><tr><td>5</td><td>6 μs ≤ X ≤ 10 μs ("6μs"or"width which added the integral multiple of 1μs to 6μs")</td><td>2,000Hz ≤ X ≤ 5,000Hz (arbitrary frequency of 1)</td><td>16 ≤ X ≤ 18 (arbitrary integer of 1)</td><td>60% or more</td></tr><tr><td>6</td><td>11 μs ≤ X ≤ 20 μs ("11μs"or"width which added the integral multiple of 1μs to 11μs")</td><td>2,000Hz ≤ X ≤ 5,000Hz (arbitrary frequency of 1)</td><td>12 ≤ X ≤ 16 (arbitrary integer of 1)</td><td>60% or more</td></tr></table> *1 In the transmission of the 17% of maximum signal access speed (an error correction and a control signal are not included), when the master station is transmitting to the slave station. *2 The average value of the "detection probability" for every classification of the radio wave which a radar transmits shall be "80% or more". W56 modulated pulse (Chirp radar) <table><tr><th colspan="4">The radio wave which a radar transmits *Modulated pulse (Chirp radar)</th><th rowspan="2">Detection probability *</th></tr><tr><th>Classification</th><th>Pulse width</th><th>Repetition frequency</th><th>The number of continuous pulses</th></tr><tr><td>1</td><td>50 μs ≤ X ≤ 100 μs ("50μs"or"width which added the integral multiple of 1μs to 50μs")</td><td>500Hz ≤ X ≤ 1,000Hz (arbitrary frequency of 1)</td><td>1 ≤ X ≤ 3 (arbitrary integer of 1)</td><td>80% or more</td></tr></table> *1 In the transmission of the 17% of maximum signal access speed (an error correction and a control signal are not included), when the master station is transmitting to the slave station. *2 A mass of the number of continuous pulses (burst) shall be radiated for 12 seconds. *3 Chirp width : 5MHz ≤ X ≤ 20MHz ("5MHz" or "frequency width which added the integral multiple of 1MHz to 5MHz") In this case, "chirp width" is arbitrary to each burst, "chirp width" in the same burst shall be an equal thing. *4 Number of burst : 8 ≤ X ≤ 20 (arbitrary integer), Burst interval : Time which divided 12 seconds by the number of burst. *5 When there are two or more pulses within the burst of 1, the pulse width shall be an equal thing. *6 When there are two or more pulses within the burst of 1, the "repetition frequency" must not have relevance between the "repetition frequency" of the pulse of 1, and the "repetition frequency" of the pulse of next 1. W56 modulated pulse (hopping radar)	Parameter	Value	Operational Mode		Master	Slave	Non-Occupancy period	Minimum 30 minutes	-	Not requirement	Channel Availability Check Time	60 Seconds	-	Not requirement	Channel Move Time	10 Seconds	-	✓	Channel Closing Transmission Time	260ms	-	✓	The radio wave which a radar transmits *Un-modulated pulse				Detection probability	Classification	Pulse width	Repetition frequency	The number of continuous pulses	1	0.5 μs	720 Hz	18	60% or more	2	1 μs	700 Hz	18	60% or more	3	2.0 μs	250 Hz	18	60% or more	4	1 μs ≤ X ≤ 5 μs ("1μs"or"width which added the integral multiple of 1μs to 1μs")	4,347Hz ≤ X ≤ 6,667Hz (arbitrary frequency of 1)	23 ≤ X ≤ 29 (arbitrary integer of 1)	60% or more	5	6 μs ≤ X ≤ 10 μs ("6μs"or"width which added the integral multiple of 1μs to 6μs")	2,000Hz ≤ X ≤ 5,000Hz (arbitrary frequency of 1)	16 ≤ X ≤ 18 (arbitrary integer of 1)	60% or more	6	11 μs ≤ X ≤ 20 μs ("11μs"or"width which added the integral multiple of 1μs to 11μs")	2,000Hz ≤ X ≤ 5,000Hz (arbitrary frequency of 1)	12 ≤ X ≤ 16 (arbitrary integer of 1)	60% or more	The radio wave which a radar transmits *Modulated pulse (Chirp radar)				Detection probability *	Classification	Pulse width	Repetition frequency	The number of continuous pulses	1	50 μs ≤ X ≤ 100 μs ("50μs"or"width which added the integral multiple of 1μs to 50μs")	500Hz ≤ X ≤ 1,000Hz (arbitrary frequency of 1)	1 ≤ X ≤ 3 (arbitrary integer of 1)	80% or more
Parameter	Value			Operational Mode																																																																								
		Master	Slave																																																																									
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	The radio wave which a radar transmits "Modulated pulse (hopping radar)"										
	Classification	Pulse width	Repetition frequency	Number of pulses in a burst of 1	Detection probability *						
	1	1 μs	3000 Hz	9	70% or more						
	*1 In the transmission of the 17% of maximum signal access speed (an error correction and a control signal are not included), when the master station is transmitting to the slave station.										
	*2 Burst : One mass of the number of continuous pulses										
*3 Hopping frequency : 5,250MHz ≤ X ≤ 5724MHz ("5250MHz" or "the arbitrary frequency which added the integral multiple of 1MHz to 5250MHz")											
*4 Switching interval of the hopping frequency : "3ms", Total switching interval of the all hopping frequency : "300ms"											
*5 Burst interval : "3 ms"											
DFS Detection Thresholds											
<table><tr><td>Maximum E. I. R. P.</td><td>Received power (average)</td></tr><tr><td>less than 0.2W</td><td>-62dBm</td></tr><tr><td>0.2W or more</td><td>-64dBm</td></tr></table>						Maximum E. I. R. P.	Received power (average)	less than 0.2W	-62dBm	0.2W or more	-64dBm
Maximum E. I. R. P.	Received power (average)										
less than 0.2W	-62dBm										
0.2W or more	-64dBm										
Test Procedures:	A spectrum analyzer is used as a monitor to verify that the UUT has vacated the Channel within the (Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and Channel move. It is also used to monitor UUT transmissions during the Channel Availability Check Time. (i) Confirming available channels A. Set the standard signal generator to be in non-transmission state. B. Set EUT to be in state of available channel checking by initializing EUT and confirm with the spectrum analyzer that EUT does not radiate emissions. C. In a time slot selected randomly from the time period of available channel checking, set the standard signal input generator to be in transmission state and apply quasi radar pulses at the prescribed level to EUT. D. Confirm with the spectrum analyzer that EUT does not radiate emissions when quasi radar pulses are input to EUT. E. Repeat Steps A to D four times and record each time whether EUT radiates emissions or not. If EUT does not radiate emissions, assume that a quasi radar pulse has been detected and find how many times it has been detected. (ii) Monitoring of operating channel A. Set the standard signal generator to be in non-transmission state. B. Set EUT to be in state of operating channel monitoring by initializing it and transmit waves at the test frequency. C. Establish communications with the external test device. D. Set the standard signal generator to be in transmission state and apply quasi radar pulses at the prescribed input level to EUT. E. Confirm with the spectrum analyzer that EUT stops radiating emissions when quasi radar pulses are input to EUT. F. Repeat Steps A to E 20 times and record each time whether EUT radiates emissions or not. If EUT does not radiate emissions, assume that a quasi radar pulse has been detected and find how many times it has been detected.										
Radar Waveform Calibration	A Spectrum analyzers replace the Master device in the TEST CONFIGURATION to measure the test signal level for each radar type. During this process there were no transmissions by either the Master or Client Device. Peak detection was utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The signal generator amplitude was set so that the power level measured at the spectrum analyzer was -62dBm.										



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Test Instruments:	Refer to section 5.8 for details
Test results:	Pass Transmitter: The transmitting mode (the identification code is more than 48 bits) of EUT is on normal operating, the interference prevention function is good. Receiver: The transmitting mode of EUT is on normal operating, the interference prevention function is good.

Note: The manufacturer declared the EUT is slaver device.



7 Test Setup Photo

Reference to the **Appendix Setup photo** for details

8 EUT Constructional Details

Reference to the **Appendix External Photos** and **Appendix Internal Photos** for details

-----End-----