

JAPAN MIC RF TEST REPORT

Applicant	:	Xiaomi Communications Co., Ltd.
Address	:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, 100085, China
Equipment under Test	:	Smart Camera
Model No.	:	MBC340, MBC34
Trade Mark	:	Xiaomi
Manufacturer	:	Xiaomi Communications Co., Ltd.
Address	:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, 100085, China
Report No.	:	LS-R25122508-1F03
Issue Date	:	Jan. 16, 2026

LabSure Testing Services (Tianjin) Co., Ltd.



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Test Report Declare

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Standard: MIC Article 2, Paragraph 1, Item 19-3.

Test method: DSPR-5GHz 帯小電力データ通信システムの試験方法.

We Declare:

The equipment described above is tested and assessed by LabSure Testing Services (Tianjin) Co., Ltd. and in the configuration assessed the equipment complied with the standards specified above. The tested and assessed results are contained in this test report and LabSure Testing Services (Tianjin) Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these assessments.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above standards.

Report No.:	LS-R25122508-1F03		
Date of Receipt:	Dec. 31, 2025	Date of Test:	Dec. 31, 2025 ~ Jan. 16, 2026

Prepared By:

Sunny Zhang

Sunny Zhang/Engineer

Approved By:

Aaron Zhang

Aaron Zhang/Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of LabSure Testing Services (Tianjin) Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jan. 16, 2026	

1. Summary of test results

TEST PARAMETER	STANDARD	METHOD	RESULTS
Frequency Tolerance	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Occupied Bandwidth	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Unwanted Emission Intensity	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Antenna Power Error	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Adjacent Channel Emission Power	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Secondary Radiated Emissions	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Transmission Burst Length	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Carrier Sensing	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Dynamic Frequency Selection (DFS) for 5.3GHz	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Dynamic Frequency Selection (DFS) for 5.6GHz	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Transmitting Rate	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
Interference prevention function	MIC Article 2, Paragraph 1, Item 19-3	DSPR-5GHz 帯小電力データ通信システムの試験方法	PASS
N/A is an abbreviation for Not Applicable.			

2. General test information

2.1. Description of EUT

EUT* Name	: Smart Camera
Test Model Number	: MBC340
EUT function description	: Please reference user manual of this device
Power supply	: DC 5V by AC/DC adapter
Radio Specification	: 5 GHz Band Wideband Low-power Data Communications System
Operation frequency	: IEEE 802.11a: 5180MHz-5320MHz, 5500MHz-5700MHz IEEE 802.11n HT20: 5180MHz-5320MHz, 5500MHz-5700MHz IEEE 802.11n HT40: 5190MHz-5310MHz, 5510MHz-5670MHz IEEE 802.11ac VHT20: 5180MHz-5320MHz, 5500MHz-5700MHz IEEE 802.11ac VHT40: 5190MHz-5310MHz, 5510MHz-5670MHz IEEE 802.11ax HE20: 5180MHz-5320MHz, 5500MHz-5700MHz IEEE 802.11ax HE40: 5190MHz-5310MHz, 5510MHz-5670MHz
Modulation	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	: IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: MCS0~MCS7 IEEE 802.11ac: MCS0~MCS9 IEEE 802.11ax: MCS0~MCS11
Antenna Type	: PIFA Antenna, maximum PK gain: W52: 2.66 dBi W53: 2.66 dBi W56: 4.09 dBi

Note 1: EUT is the ab. of equipment under test.

Note 2: EUT is not support TPC.

Note 3: AX mode only supports full RU.

Note 4: The all models have the same Antenna shape, circuit diagram and RF module, only difference is model number declared by manufacturer.

2.2. Accessories of EUT

Description of Accessories	Trade mark	Model number	Manufacturer	Other
Adapter	Mi	A319-050200 U-US2	Shenzhen AMC Technology Co., Ltd.	Input: AC100-240V~50/60Hz 0.3A, Output: DC 5V 2A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN:
Notebook	Lenovo Beijing Co. Ltd.	ThinkPad	FCC/CE	TP00067A

2.4. Block diagram of EUT configuration for test

DC 5V by ac adapter

EUT

Test software: Putty.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

Note: all possible configurations have been investigation, according the operation mechanism of equipment, the final test mode shows as below table:

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	Data rate (Mbps)	Channel	Frequency
	ANT1	(See Note)		(MHz)
IEEE 802.11a	14	6	CH36	5180
	14	6	CH40	5200
	14	6	CH48	5240
	14	6	CH52	5260
	14	6	CH56	5300
	14	6	CH64	5320
	14	6	CH100	5500
	14	6	CH120	5600
	14	6	CH140	5700
IEEE 802.11n HT20	14	MCS 0	CH36	5180
	14	MCS 0	CH40	5200
	14	MCS 0	CH48	5240
	14	MCS 0	CH52	5260
	14	MCS 0	CH56	5300
	14	MCS 0	CH64	5320
	14	MCS 0	CH100	5500
	14	MCS 0	CH120	5600
	14	MCS 0	CH140	5700
IEEE 802.11n HT40	14	MCS 0	CH38	5190
	14	MCS 0	CH46	5230
	14	MCS 0	CH54	5270
	14	MCS 0	CH62	5310
	14	MCS 0	CH102	5510
	14	MCS 0	CH118	5590
	14	MCS 0	CH134	5670
IEEE 802.11ac VHT20	14	MCS 0	CH36	5180
	14	MCS 0	CH40	5200
	14	MCS 0	CH48	5240
	14	MCS 0	CH52	5260
	14	MCS 0	CH56	5300
	14	MCS 0	CH64	5320
	14	MCS 0	CH100	5500
	14	MCS 0	CH120	5600
	14	MCS 0	CH140	5700
IEEE 802.11ac VHT40	14	MCS 0	CH38	5190
	14	MCS 0	CH46	5230
	14	MCS 0	CH54	5270
	14	MCS 0	CH62	5310
	14	MCS 0	CH102	5510

IEEE 802.11ax HE20	14	MCS 0	CH118	5590
	14	MCS 0	CH134	5670
	14	MCS 0	CH36	5180
	14	MCS 0	CH40	5200
	14	MCS 0	CH48	5240
	14	MCS 0	CH52	5260
	14	MCS 0	CH56	5300
	14	MCS 0	CH64	5320
	14	MCS 0	CH100	5500
	14	MCS 0	CH120	5600
	14	MCS 0	CH140	5700
	14	MCS 0	CH38	5190
IEEE 802.11ax HE40	14	MCS 0	CH46	5230
	14	MCS 0	CH54	5270
	14	MCS 0	CH62	5310
	14	MCS 0	CH102	5510
	14	MCS 0	CH118	5590
	14	MCS 0	CH134	5670
	14	MCS 0	CH134	5670

All modes were tested, the worst case was recorded in this report.

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

/	Normal Conditions
Temperature range	20-28°C
Humidity range	45-75%
Pressure range	86-106kPa
Power supply	AC 100.0V (When the input voltage to equipment fluctuated $\pm 10\%$, the RF unit circuit voltage fluctuation under 1%, therefore all test performed on the rated voltage for equipment.)

The measurement result of the voltage fluctuation at RF circuit when AC 100V +/- 10%.		
Input voltage		RF module voltage
+10% of rate voltage	AC 110V	DC 3.30 V
Rate voltage	AC 100.0V	DC 3.30 V
-10% of rate voltage	AC 90V	DC 3.30 V

2.6. Deviations of test standard

No Deviation.

2.7. Test laboratory

LabSure Testing Services (Tianjin) Co., Ltd.

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NVLAP (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

CNAS (China National Accreditation Service for Conformity Assessment) CODE: L13402

FCC Designation Number: CN5004; FCC Test Firm Registration Number: 368676

ISED (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

VCCI Facility Registration Number: C-20089, T-20093, R-20125, G-20122

2.8. Measurement uncertainty

Test Item	Uncertainty
Occupied Channel Bandwidth	$\pm 0.14\%$
Uncertainty for radio frequency	1×10^{-7}
RF Output power, conducted	$\pm 0.12\text{dB}$
Power Spectral Density, Conducted	$\pm 0.12\text{dB}$
Unwanted Emissions, Conducted	$\pm 0.52\text{dB}$
Temperature	$\pm 1^\circ\text{C}$
Humidity	$\pm 1\%$
DC and Low frequency voltage	$\pm 0.5\%$
Time	$\pm 0.46\%$
Duty Cycle	$\pm 0.46\%$

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

3. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval	Calibration body
RF Connected Test (MWRFTest Measurement System)						
PXA Signal Analyzer	Keysight	N9030B	MY56320639	2025/02/20	1 Year	GRGTEST
PXA Signal Analyzer	Keysight	N9010A	MY53281492	2025/02/20	1 Year	GRGTEST
Power Sensor	Keysight	U2021XA	MY59150007	2025/02/20	1 Year	GRGTEST
MXG Vector Signal Generator	Keysight	N5182A	MY50143288	2025/02/20	1 Year	GRGTEST
DC Power Supply	inSTEK	PSP-2010	EN122317	2025/02/03	1 Year	GRGTEST
Digital multimeters	FLUKE	15B Pro	59823530WS	2025/03/11	1 Year	GRGTEST
Test Software	MWRFTest	MTS8310	V03	N/A	N/A	N/A

Remarks:

(a) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No.51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

(d) Calibration, etc conducted by using measuring instruments and other equipment listed in the right column of appended table No.3, which shall have been given any type of calibration, etc listed above form (a) to (c).

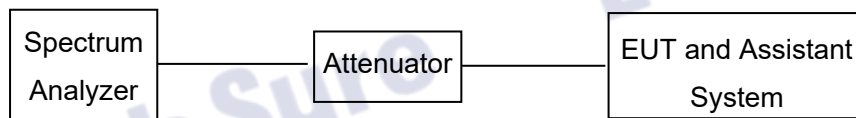
Form JRL Article 24-2, paragraph 4, item 2.

4. Frequency Tolerance

4.1. Limit

+/- 20×10^{-6} or less (20ppm)

4.2. Block diagram of test setup



4.3. Test Procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Centre Frequency: The center frequency of the channel under test.

Resolution BW: 10 kHz.

Video BW: 10 kHz.

Span: 1MHz.

Detector: Peak.

Trace Mode: Max Hold.

(2) When the trace is complete, find the peak value of the power envelope and record the frequency.

4.4. Test result

Pass

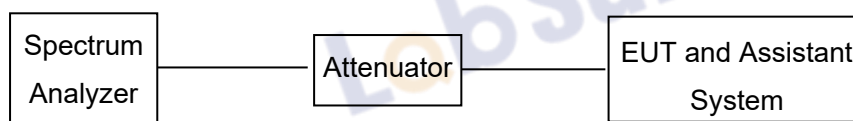
Please find the detailed data in APPENDIXES-5G WiFi-MIC.

5. Occupied Frequency Bandwidth

5.1. Limit

5.2GHz band	
Occupied Bandwidth	Limit
20MHz system (DSSS)	18MHz or less
20MHz system (OFDM)	20MHz or less
40MHz system	40MHz or less
80MHz system	80MHz or less
5.3GHz band	
Occupied Bandwidth	Limit
20MHz system (DSSS)	18MHz or less
20MHz system (OFDM)	20MHz or less
40MHz system	40MHz or less
80MHz system	80MHz or less
160MHz system	160MHz or less
5.6GHz band	
Occupied Bandwidth	Limit
20MHz system (DSSS)	18MHz or less
20MHz system (OFDM)	20MHz or less
40MHz system	40MHz or less
80MHz system	80MHz or less
160MHz system	160MHz or less

5.2. Block diagram of test setup



5.3. Test Procedure

- Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:
 Centre Frequency: The center frequency of the channel under test.
 Resolution BW: 300 kHz
 Video BW: 300 kHz
 Span: Wide enough to cover the complete power envelope of the signal of the EUT.
 Detector: Peak.
 Trace Mode: Max Hold.
- When the trace is complete, measure the occupied bandwidth (99% bandwidth) with spectrum analyzer's bandwidth measure function.

5.4. Test result

Pass

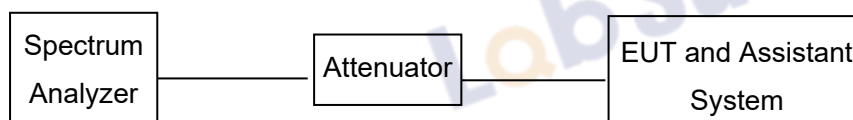
Please find the detailed data in APPENDIXES-5G WiFi-MIC.

6. Antenna Power and Antenna Power Tolerance

6.1. Limit

Frequency Band	Occupied Bandwidth	Antenna Power	E.R.I.P	Antenna Power Tolerance
W52	20MHz system	10mw/MHz	10mw/MHz	+20%, -80%
	40MHz system	5mw/MHz	5mw/MHz	+20%, -80%
	80MHz system	2.5mw/MHz	2.5mw/MHz	+20%, -80%
	160MHz system	1.25mw/MHz	1.25mw/MHz	+20%, -80%
	80MHz + 80MHz system (Not adjacent band)	1.25mw/MHz	1.25mw/MHz	+20%, -80%
W53	20MHz system	10mw/MHz	10mw/MHz: with TPC 5mw/MHz: without TPC	+20%, -80%
	40MHz system	5mw/MHz	5mw/MHz: with TPC 2.5mw/MHz: without TPC	+20%, -80%
	80MHz system	2.5mw/MHz	2.5mw/MHz: with TPC 1.25mw/MHz: without TPC	+20%, -80%
	160MHz system	1.25mw/MHz	1.25mw/MHz: with TPC 0.625mw/MHz: without TPC	+20%, -80%
	80MHz + 80MHz system (Not adjacent band)	1.25mw/MHz	1.25mw/MHz: with TPC 0.625mw/MHz: without TPC	+20%, -80%
W56	20MHz system	10mw/MHz	50mw/MHz: with TPC 25mw/MHz: without TPC	+50%, -50%
	40MHz system	5mw/MHz	25mw/MHz: with TPC 12.5mw/MHz: without TPC	+50%, -50%
	80MHz system	2.5mw/MHz	12.5mw/MHz: with TPC 6.25mw/MHz: without TPC	+50%, -50%
	160MHz system	1.25mw/MHz	6.25mw/MHz: with TPC 3.125mw/MHz: without TPC	+50%, -50%
	80MHz + 80MHz system (Not adjacent band)	1.25mw/MHz	1.25mw/MHz: with TPC 0.625mw/MHz: without TPC	+50%, -50%

6.2. Block diagram of test setup



6.3. Test Procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Setup 1:

Centre Frequency: The center frequency of the channel under test.

Resolution BW: 1MHz

Video BW: 1 MHz

Span: Wide enough to cover the complete power envelope of the signal of the EUT.

Detector: Peak.

Trace Mode: Max Hold.

Find the frequency of maximum RF level.

Setup 2:

Centre Frequency: frequency of maximum RF level.

Resolution BW: 1MHz

Video BW: 1 MHz

Span: 0Hz.

Detector: RMS.

Trace: Average.

Trace Mode: Max Hold.

Note: The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.

6.4. Test result

Pass

Please find the detailed data in APPENDIXES-5G WiFi-MIC.

7. Adjacent Channel Emission Power

7.1. Limit

DSSS system:

For occupied bandwidth of 18MHz system:

Channel power of $\pm 9\text{MHz}$

Frequency offset = 20MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 40MHz, limit: $\leq -40\text{dBc}$

OFDM system:

For occupied bandwidth of 20MHz system:

Channel power of $\pm 10\text{MHz}$

Frequency offset = 20MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 40MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of 40MHz system:

Channel power of $\pm 20\text{MHz}$

Frequency offset = 40MHz, Limit: $\leq -25\text{dBc}$

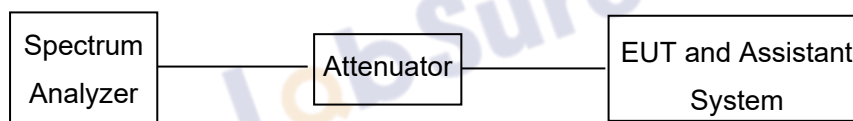
Frequency offset = 80MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of over 80MHz and 80MHz + 80MHz (Not adjacent band) system:

Channel power of $\pm 40\text{MHz}$

Frequency offset = 80MHz, Limit: $\leq -25\text{dBc}$

7.2. Block diagram of test setup



7.3. Test Procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Centre Frequency: The center frequency of the channel under test.

Resolution BW: 300kHz.

Video BW: 300kHz.

Detector: Peak.

Trace Mode: Max Hold.

Note: The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.

7.4. Test result

Pass

Please find the detailed data in APPENDIXES-5G WiFi-MIC.

8. Transmitter Spurious Emissions

8.1. Limit

For 5.2G band, 5.3G band and 5.6G band.

W52			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 ~ 20 MHz		
5,142 MHz or less : 2.5 μ W/MHz	5,142 MHz or less : 2.5 μ W/MHz	5,141.6 MHz or less : 2.5 μ W/MHz	5,123.2 MHz or less : 2.5 μ W/MHz
5,142 ~ 5,150 MHz : 15 μ W/MHz	5,142 ~ 5,150 MHz : 15 μ W/MHz	5,141.6 ~ 5,150 MHz : 15 μ W/MHz	5,123.2 ~ 5,150 MHz : 15 μ W/MHz
	5,250 ~ 5,250.2 MHz : $10^{1-(8/3)(f-5.25)}$ mW/MHz		
5,250 ~ 5,251 MHz : $10^{1-(f-5.25)}$ mW/MHz	5,250.2 ~ 5,251 MHz : $10^{1-(f-5.25)}$ mW/MHz	5,250 ~ 5,251 MHz : $10^{-(f-5.25)+\log(1/2)}$ mW/MHz	5,250 ~ 5,251 MHz : $10^{-(f-4.9)+\log(1/4)}$ mW/MHz
5,251 ~ 5,260 MHz : $10^{-1-(8/90)(f-5.25)}$ mW/MHz	5,251 ~ 5,260 MHz : $10^{-1-(8/90)(f-5.25)}$ mW/MHz	5,251 ~ 5,270 MHz : $10^{-(8/90)(f-5.25)-1+\log(1/2)}$ mW/MHz	5,251 ~ 5,290 MHz : $10^{-(8/90)(f-4.9)-1+\log(1/4)}$ mW/MHz
5,260 ~ 5,266.7 MHz : $10^{-1.8-(6/90)(f-5.26)}$ mW/MHz	5,260 ~ 5,266.7 MHz : $10^{-1.8-(6/90)(f-5.26)}$ mW/MHz	5,270 ~ 5,278.4 MHz : $10^{-(3/30)(f-4.9)-1.8+\log(1/2)}$ mW/MHz	5,290 ~ 5,296.7 MHz : $10^{-(3/100)(f-4.9)-1.8+\log(1/4)}$ mW/MHz
5,266.7 MHz or more : 2.5 μ W/MHz	5,266.7 MHz or more : 2.5 μ W/MHz	5,278.4 MHz or more : 2.5 μ W/MHz	5,296.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

W53			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 ~ 20 MHz		
5,233.3 MHz or less : 2.5 μ W/MHz	5,233.3 MHz or less : 2.5 μ W/MHz	5,221.6 MHz or less : 2.5 μ W/MHz	5,203.3 MHz or less : 2.5 μ W/MHz
5,233.3 ~ 5,240 MHz : $10^{-1.8-(6/90)(f-5.23)}$ mW/MHz	5,233.3 ~ 5,240 MHz : $10^{-1.8-(6/90)(f-5.23)}$ mW/MHz	5,221.6 ~ 5,230 MHz : $10^{-(8/90)(f-4.9)-1.8+\log(1/2)}$ mW/MHz	5,203.3 ~ 5,210 MHz : $10^{-(8/100)(f-4.9)-1.8+\log(1/4)}$ mW/MHz
5,240 ~ 5,249 MHz : $10^{-1-(8/90)(f-5.24)}$ mW/MHz	5,240 ~ 5,249 MHz : $10^{-1-(8/90)(f-5.24)}$ mW/MHz	5,230 ~ 5,249 MHz : $10^{-(8/90)(f-5.21)-1+\log(1/2)}$ mW/MHz	5,210 ~ 5,249 MHz : $10^{-(8/990)(f-4.9)-1+\log(1/4)}$ mW/MHz
5,249 ~ 5,250 MHz : $10^{1-(f-5.24)}$ mW/MHz	5,249 ~ 5,249.8 MHz : $10^{1-(f-5.24)}$ mW/MHz	5,249 ~ 5,250 MHz : $10^{1-(f-5.24)+\log(1/2)}$ mW/MHz	5,249 ~ 5,250 MHz : $10^{1-(f-4.9)+\log(1/4)}$ mW/MHz
5,250 ~ 5,250.2 MHz : $10^{1-(8/3)(f-5.25)}$ mW/MHz	5,249.8 ~ 5,250 MHz : $10^{1-(8/3)(f-5.25)}$ mW/MHz	5,350 ~ 5,358.4 MHz : 15 μ W/MHz	5,350 ~ 5,376.8 MHz : 15 μ W/MHz
5,350 MHz or more : 2.5 μ W/MHz	5,350 MHz or more : 2.5 μ W/MHz	5,358.4 MHz or more : 2.5 μ W/MHz	5,376.8 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5260 (MHz)	f = MHz, Difference from 5260 (MHz)	f = MHz, Difference from 5270 (MHz)	f = MHz, Difference from 5290 (MHz)

W56			
20MHz system		40MHz system	80MHz system
DSSS, etc.	OFDM		
5,470 MHz or less : 12.5 μ W/MHz	5,460 MHz or less : 2.5 μ W/MHz	5,460 MHz or less : 12.5 μ W/MHz	5,460 MHz or less : 12.5 μ W/MHz
	5,460 ~ 5,470 MHz : 12.5 μ W/MHz	5,460 ~ 5,470 MHz : 50 μ W/MHz	5,460 ~ 5,469.5 MHz : 50 μ W/MHz
5,730 MHz or more : 12.5 μ W/MHz	5,745 ~ 5,765 MHz : 12.5 μ W/MHz	5,770 MHz or more : 12.5 μ W/MHz	5,469.5 ~ 5,470 MHz : 51.2 μ W/MHz
	Over 5,765 MHz : 2.5 μ W/MHz		5,770 MHz or more : 12.5 μ W/MHz

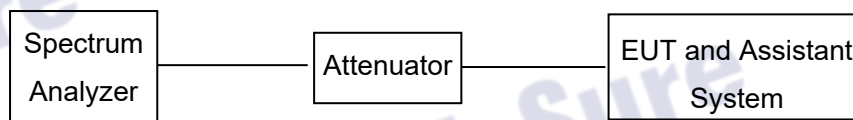
W52 + W53	W56
160MHz system	
5,099.6 MHz or less : 2.5 μ W/MHz	5,419.6 MHz or less : 12.5 μ W/MHz
5,099.6 ~ 5,150 MHz : 15 μ W/MHz	5,419.6 ~ 5,470 MHz : 50 μ W/MHz
5,350 ~ 5,400.4 MHz : 15 μ W/MHz	5,725 MHz or more : 12.5 μ W/MHz
5,400.4 MHz or more : 2.5 μ W/MHz	

* A rated value is defined by the E.I.R.P. .

* Measurement range: 30MHz to 26GHz

The limit is converted to dBm was show in test result table.

8.2. Block diagram of test setup



8.3. Test Procedure

- Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator. The antenna gain was set in to Spectrum Analyzer as offset.
- Set the spectrum analyzer as below, sweep the frequency, and search for unwanted emissions.
 - Resolution BW: 1 MHz
 - Video BW: Same with Resolution BW
 - Detector: Peak
 - Trace Mode: Max. Hold
- All the emissions from 30MHz to 26GHz were measured and record.
- If spurious emissions are greater than [limit -3dB], In order to increase the accuracy of the frequency of the spectrum analyzer, the sweep frequency width is gradually narrowed to 100MHz, 10MHz, the frequency of the unnecessary firing is determined accurately, the

spectrum shell be set as step (5) or (6).

- (5) The settings of the spectrometer when measuring the intensity of unwanted emission in the spurious area are as follows:

Centre Frequency: frequency of measured in (3).

Resolution BW: 1MHz

Video BW: 1 MHz

Span: 0Hz

Sweep Time: Minimum time during which measurement accuracy guaranteed (for burst wave, the duration of one burst per sample)

Sweep Point: Over 400 points

Detector: RMS.

Sweep mode: Single

- (6) The settings of the spectrometer when measuring the intensity of unwanted emission outside of the spurious area are as follows:

Centre Frequency: frequency of measured in (3).

Resolution BW: 1MHz

Video BW: 1 MHz

Span: 0Hz

Sweep Time: Minimum time during which measurement accuracy guaranteed (for burst wave, the duration of one burst per sample)

Sweep Point: Over 400 points

Detector: RMS.

Sweep mode: Continuous sweep

- (7) The average value of the amplitude of the Spurious (in the case of burst waves, burst power function of spectrum was used for test the average value in each) determined, the measured value shall be the result.

- (8) If there are multiple antennas, it is measured at each antenna.

8.4. Test result

Pass

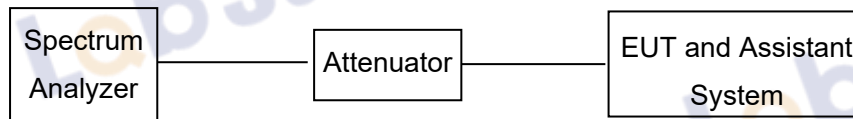
Please find the detailed data in APPENDIXES-5G WiFi-MIC.

9. Secondary Radiated Emissions

9.1. Limit

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4 nW (-54dBm) or less at a frequency below 1 GHz and 20 nW (-47dBm) or less at a frequency of 1 GHz or higher as measured using the circuit.

9.2. Block diagram of test setup



9.3. Test Procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator.
- (2) Set the spectrum analyzer as below, search for the maximum amplitude of the secondary unwanted emissions.

Resolution BW: 100kHz for frequency below 1GHz and 1MHz for frequency above 1GHz.

Video BW: Same with Resolution BW

Detector: Peak

Trace Mode: Max. Hold

- (3) All the emissions from 30MHz to 26GHz were measured and record.
- (4) If the searched value is 1/10 or less of the allowable value specified in the Equipment Regulations, the searched value shall be the measured value.
- (5) If the searched value exceeds 1/10 of the allowable value specified in the equipment regulations, the frequency sweep width is gradually narrowed to about 10 times the resolution bandwidth in order to improve the setting accuracy of the center frequency of the spectrum analyzer. Then, measure the secondary emission frequency, set the spectrum analyzer as below, perform averaging, and measure the secondary emission power.

Centre Frequency: frequency of measured in (3).

Resolution BW: 1MHz

Video BW: 1 MHz

Span: 0Hz.

Detector: RMS.

Sweep mode: Single

- (6) If there are multiple antennas, it is measured at each antenna.

9.4. Test result

Pass

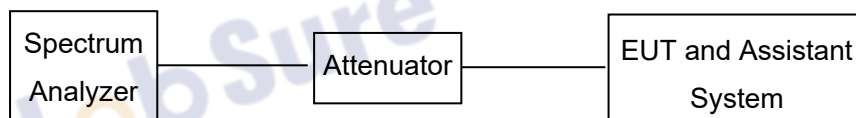
Please find the detailed data in APPENDIXES-5G WiFi-MIC.

10. Burst Length of Transmission

10.1. Limit

Burst length $\leq 8\text{ms}$

10.2. Block diagram of test setup



10.3. Test Procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Centre Frequency: The center frequency of the channel under test.

Resolution BW: 1MHz

Video BW: 1 MHz

Span: 0Hz.

Detector: Peak.

Trace Mode: Max Hold.

Note: The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.

10.4. Test result

Pass

Please find the detailed data in APPENDIXES-5G WiFi-MIC.

11. Carrier Sense Measurement

11.1. Limit

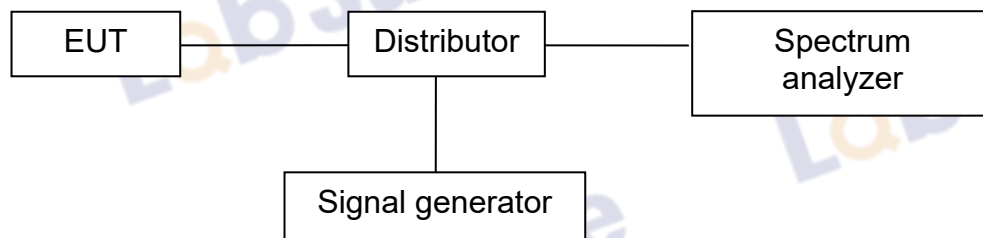
1. Carrier sensing function shall be as follows:

When radio equipment receives a radio wave transmitted from a radio station other than the partner station under communications and the field strength at direction of the maximum gain of the reception antenna exceeds 100 mV/m, the radio equipment shall not transmit radio wave at the same frequency as that of the radio channel being used.

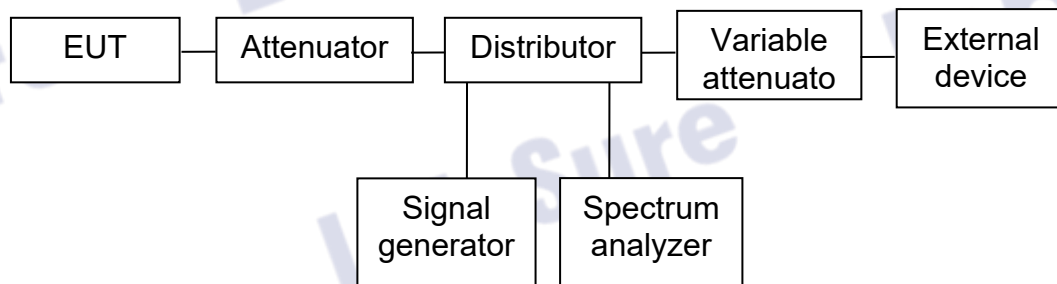
2. Radio equipment shall start the transmission after carrier sensing. However, the carrier sensing may be omitted in case that its transmission and reception are controlled by the other radio station or radio equipment restarts its transmission within 4 milliseconds after carrier sensing.

11.2. Block diagram of test setup

For the test without external test device



For the test using an external test device



11.3. Measuring Equipment Conditions

Set the standard signal generator as follow:

Carrier frequency: Center of reception frequency band of the EUT

Output level: A level giving the field strength of 100 mV/m at antenna input terminal of the EUT.

Note: When the carrier sense of the EUT does not function by unmodulated carrier signal at the center frequency, detune the frequency or modulate the carrier as appropriate.

Set the spectrum analyzer as follow:

Carrier frequency: Center of reception frequency band to be used

Frequency sweep width: 50 MHz

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Approximately same as the resolution bandwidth.

Y-axis scale: 10 dB/Div

Trigger condition: Free run

Detection mode: Positive peak

The external test device shall be able to make a line connection with the EUT. Radio equipment that can communicate with the EUT may be used instead of the external test device.

11.4. Conditions of Equipment under Test

At first, set the EUT to reception state after setting to test frequency and test spreading code.

When using an external test device, make a line connection between the EUT and the external test device.

11.5. Test Procedure

For the test without external device:

Turn off the output of the standard signal generator, set the EUT to transmission state and confirm using the spectrum analyzer that the EUT is transmitting radio wave.

Set the EUT to reception state.

Turn on the output of the standard signal generator set the EUT to transmission state and confirm using the spectrum analyzer that the EUT does not transmit radio wave.

For the test using external test device:

Turn off the output of the standard signal generator.

Make a line connection between the EUT and the external test device and confirm using the spectrum analyzer that the EUT is transmitting a test frequency signal.

Set the EUT to reception state.

Turn on the output of the standard signal generator, switch the EUT to transmission state and confirm using the spectrum analyzer that the EUT does not transmit radio wave.

11.6. Test Result

Other condition

(1) When the carrier sense function test was performed with set the output of a standard signal generator as a modulated wave, the carrier sense function of the equipment should work also in the modulation used for other radio equipment not only by the modulation used for apparatus but the same frequency band.

(2) The carrier sense level (Pcs) applied to the antenna input unit of a test equipment is carried out as the following formula.

$$Pcs = \frac{G \lambda^2}{480 \pi^2} \times E^2$$

Pcs: Career sense level added to the antenna input unit (W)

E: Field intensity (V/m)

G: The true value of receiving antenna absolute gain (times)

λ : The wavelength of carrier frequency (m)

Limit level (Pcs) is calculate by below formula

$Pcs [dBm] = 22.79 - 20 \cdot \log(f_{MHz}) + \text{Antenna Gain of EUT}$

Test result: The unit does meet the requirements.

Pass

Please find the detailed data in APPENDIXES-5G WiFi-MIC.

12. DFS Frequency selection function

12.1. limit

For Master station:

Support band	Parameter	Value
W53/56	Channel Availability Check Time	$\geq$ 60 seconds
	Channel Move Time	$\leq$ 10 seconds
	Non-Occupancy Period	$\geq$ 30 minutes
	Channel Closing Transmission time	$\leq$ 260 milliseconds

For Slave station:

EUT is able to be controlled by a master station to select the transmitting frequency, to transmit and to stop automatically.

12.2. DFS detection thresholds

Maximum Transmit Power (E.I.R.P)	Output Level ^{Note} (E.I.R.P)
< 0.2 watt	-62 dBm
≥ 0.2 watt	-64 dBm

Note: This is the level at the input of the receiver assuming a 0dBi receive antenna.

12.3. Radar waveform calibration procedure:

- (1) The following equipment setup was used to calibrate the conducted radar waveform.
- (2) A vector signal generator was utilized to establish the test signal level for radar types.
- (3) A 50 Ω load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master, during this process there were no transmissions by either the Master or Client Device.
- (4) The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 1 MHz.
- (5) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was -62dBm (or -64dBm) + Monitor Antenna Gain.
- (6) Capture the spectrum analyzer plots on short pulse radar waveform.

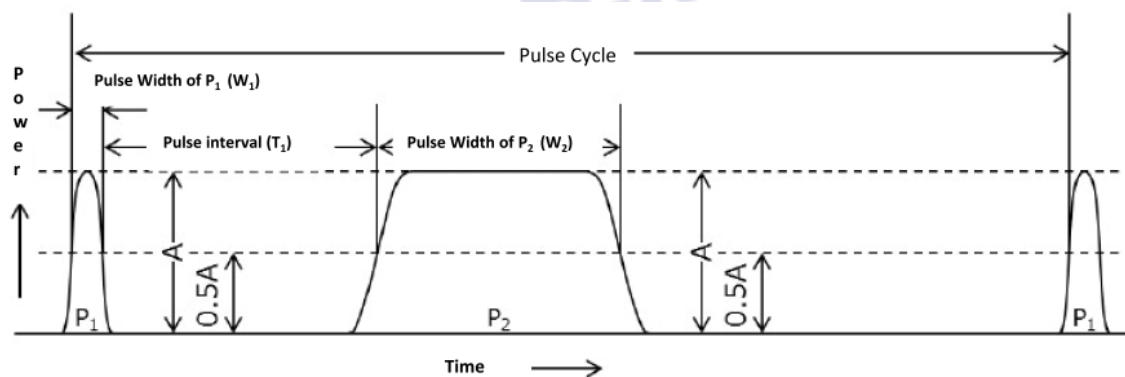
12.4. Parameters of radar test waveforms

For W53 Band:

Classification	Pulse Width (μsec)		Repetition frequency (Hz)		Number of Pulses	Radar Detection Probability
	minimum value	maximum value	minimum value	maximum value		
1	0.5	5	200	1000	10	$\geq 60\%$
2	0.5	15	200	1600	15	$\geq 60\%$
3	0.5	5	200	1000	"Repetition frequency $\times 0.026$ " (Round up to less than 1), or "22", whichever is larger, or "30", whichever is smaller	$\geq 60\%$
4	0.5	15	200	1600	"Repetition frequency $\times 0.026$ " (Round up to less than 1), or "22", whichever is larger, or "30", whichever is smaller	$\geq 60\%$
5	0.5	1.5	1114	1118	30	$\geq 60\%$
6	0.5	1.5	928	932	25	$\geq 60\%$
7	0.5	1.5	886	890	24	$\geq 60\%$
8	0.5	1.5	738	742	20	$\geq 60\%$

Note 1: The detection probability is the total transmission time in any 100ms from the master station radio equipment (connection method is limited to carrier sense multiple access type) to the slave station radio equipment. It refers to the case of performing transmission of 30ms or more.

Note 2: In this table, "pulse width" is the pulse width of P_1 " W_1 " in the following figure, and "repetition frequency" is the reciprocal of the pulse cycle in the following figure. Also, the pulse width and frequency are any one value between the minimum value and the maximum value.



Note 3 In this figure, "A" indicates the maximum power of P_1 and P_2 , and the shift width of frequency (hereinafter referred to as "chirp width") for performing linear frequency modulation during the pulse period, the pulse interval of P_1 " T_1 ". The difference between the pulse width of P_2 " W_2 " and the pulse width of P_1 " W_1 " and the pulse width of P_2 " W_2 " and the pulse width of P_1 " W_1 " multiplied by the repetition frequency (hereinafter referred to as "duty ratio") are as follows: about.

In addition, each pulse interval and each pulse width are made into the rise time of each pulse which makes electric power 0.5A base point, and the fall time of each pulse.

(1) Classification 3 or 4

Chirp width	Range of $\pm 0.5\text{MHz}$ to 1.0MHz
Pulse interval of P1: T1	$70\mu\text{s}$ or more
Pulse width of P2: W2	$20\mu\text{s}$ or more, $110\mu\text{s}$ or less
The difference between the pulse width of P1 and the pulse width of P2 by the following equation $IW2 - W1$	$15\mu\text{s}$ or more
Duty ratio	Less than 10%

(2) Classification 5 ~ 8

Chirp width	Range of $\pm 0.5\text{MHz}$ to 1.0MHz
Pulse interval of P1: T1	$50\mu\text{s}$ or more
Pulse width of P2: W2	$28.5\mu\text{s}$ or more, $33.6\mu\text{s}$ or less

For W56 Band:

The radio wave which a radar transmits *Un-modulated pulse

Classification	Pulse Width (μsec)	Repetition frequency (Hz)	Number of Pulses	Radar Detection Probability
1	0.5	720	18	$\geq 60\%$
2	1	700	18	$\geq 60\%$
3	2.0	250	18	$\geq 60\%$
4	1-5	4347-6667	23-29	$\geq 60\%$
5	6-10	2000-5000	16-18	$\geq 60\%$
6	11-20	2000-5000	12-16	$\geq 60\%$
Aggregate (Radar Types 1-6)				$\geq 80\%$

*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".

The radio wave which a radar transmits *Modulated pulse (Chirp radar)

Classification	Pulse Width (μsec)	Repetition frequency (Hz)	Number of Pulses	Radar Detection Probability
1	50-100	500-1000	1-3	$\geq 80\%$

*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: $5\text{MHz} \leq X \leq 20\text{MHz}$ ("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: $8 \leq X \leq 20$ (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.

The radio wave which a radar transmits *Modulated pulse (hopping radar)

Classification	Pulse Width (μ sec)	Repetition frequency (Hz)	Number of Pulses	Radar Detection Probability
1	1	3000	9	$\geq 70\%$

*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: $5,250\text{MHz} \leq X \leq 5724\text{MHz}$ ("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"

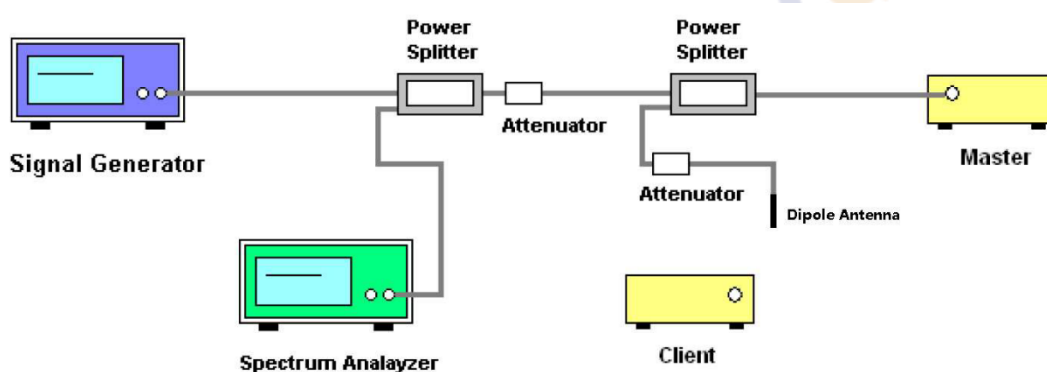
12.5. Statistical test procedure

- (1) Operate signal generator at non-transmitting mode.
- (2) The EUT is initialization and in channel in-service monitoring status, Emission could be transmitted.
- (3) Set the communication load conditions for EUT so that the transmission speed for signals that do not include error correction and control signals may amount to 50% of the maximum signal transmission speed for radio equipment, and establish communications with the external test device.
- (4) Set the standard signal generator to be in transmission state and apply radar pulses at the level -62dBm (or -64dBm) + Monitor Antenna Gain generated on the operating channel to EUT.
- (5) Confirm with the spectrum analyzer that EUT stops radiating emissions when quasi radar pulses are input to EUT.
- (6) Repeat Steps (1) to (5) 20 times and record each time whether EUT radiates emissions or not. If EUT does not radiate emissions, assume that a radar pulse has been detected and

find how many times it has been detected. The measurement operation, however, shall be terminated when a radar pulse has been detected 16 times.

- (7) If the number of occurrences of quasi radar signal detection is 11 to 16 in Step(6), repeat Steps (1) to (5) 20 times and record each time whether EUT radiates emissions or not. if EUT does not radiate emissions, assume that a radar pulse has been detected and find the number of occurrences of radar pulse detection by adding the value in (6) and the one in this step.

12.6. Test setup



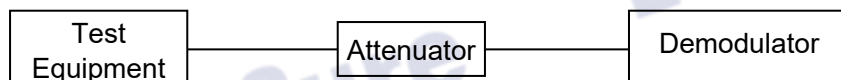
12.7. Test result

PASS. EUT is controlled by a master station to select the transmitting frequency, to transmit and to stop automatically.

13. Interference prevention function

13.1. Measurement system diagram

1) When transmitting identification code



2) Condition of measuring instrument

Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.

3) Condition of test equipment the mode of normal use.

13.2. Measuring operation procedure

1) When test equipment has the function to transmit identification code automatically:

A) Transmit the predetermined identification code from test equipment.

B) Confirm the transmitted identification code by demodulator.

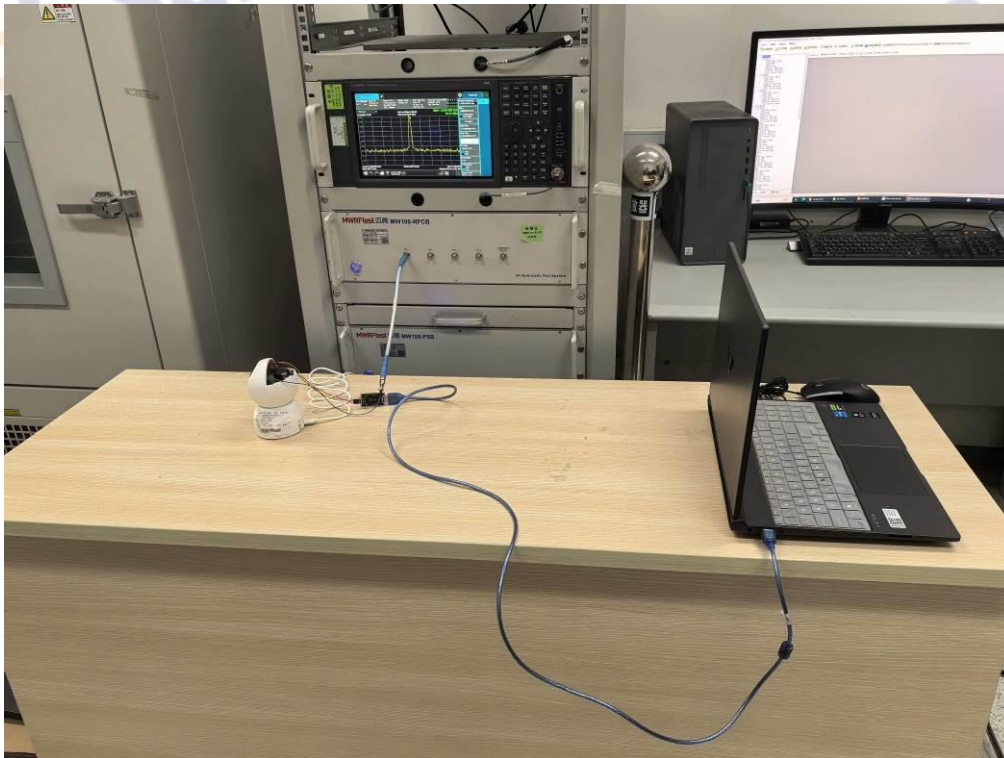
MAC address: BC:AD:AE:DC:71:47

13.3. Test result: The unit does meet the requirements (Good).

Test result: The unit does meet the requirements.

Pass

14. Test Setup Photograph



15. Photos of the EUT

Please find the photos of EUT in APPENDIXES-Photos.

END OF REPORT