ACCREDITED
CERT #5473.03

No.:
TELECSZ2026-0004-RF1

TEST REPORT

NAME OF SAMPLE	:	**Smart Badge**
APPLICANT	:	**Shenzhou Zhiyun (Guangdong) Technology Co., Ltd.**
CLASSIFICATION OF TEST	:	**N/A**

CVC Testing Technology (Shenzhen) Co., Ltd.

複製禁止

Applicant	Shenzhou Zhiyun (Guangdong) Technology Co., Ltd.
Address	Room/Unit 02, 10th Floor, Unit 1, Building 2, No. 11 Guangpu Middle Road, Huangpu District, Guangzhou, China

Manufacturer	Shenzhou Zhiyun (Guangdong) Technology Co., Ltd.
Address	Room/Unit 02, 10th Floor, Unit 1, Building 2, No. 11 Guangpu Middle Road, Huangpu District, Guangzhou, China
Product Name	Smart Badge
Brand Name	Topsales
Model Name	ZY04
Additional Model	N/A
Date of Receipt.	May 03, 2026
Date of testing	May 03, 2026 ~ May 18, 2026
Sample No.	202605095808-1 for Conduction
Standard(s)	**Article 2 Paragraph 1 Item 19** **MIC Notice No.88 Appendix No.43**
CONCLUSION:	The equipment under test was found to comply with the requirements of the standard(s) applied. Seal of CVC **Issue Date:**May 18, 2026

Compiled by: Liang Jiatong	Reviewed by: Mo Xianbiao	Approved by: Dong Sanbi
Signature: Liang Jiatong	Signature: Mo Xianbiao	Signature:

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
TELECSZ2026-0004-RF1	Original release	May 18, 2026

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Item	Article 2 Section 1 Item 19 Reference	ARIB STD-T66 Reference	Report reference	Result
GENERAL PROVISIONS				
Frequency Tolerance	C	3.2 (4)	3.1	PASS
Occupied bandwidth	D	3.2 (7)	3.2/3.3	PASS
Spurious emissions	E	3.2 (6)	3.4	PASS
TRANSMITTING EQUIPMENT				
Antenna power	F	3.2 (1)	3.5	PASS
SAR	--	--	--	N/A
TRANSMITTING ANTENNA				
Type, configuration, etc. of transmitting antenna	--	--	2.6	PASS
Direction pattern of transmitting antenna	--	--	2.6	PASS
RECEIVING EQUIPMENT				
Spurious emissions of receiver	H	3.3 (1)	3.6	PASS
Refer to all articles for transmitting antenna	--	--	2.6	PASS
OPERATING FREQUENCY 2400 TO 2483.5MHz				
High Frequency/modulation section cannot be opened easily	--	3.7 (1)	2.5	PASS
Communication method	--	3.1 (1)	2.1	PASS
Modulation method	--	3.2 (1)a	2.1	PASS
Spread spectrum method	--	3.2 (1)a	2.1	Only for reported
Antenna power	--	3.2 (2)	3.5	PASS
Absolute gain of transmitting antenna	--	3.6 (2)	3.5	N/A(Note 4)
Angular width of principal radiation (AWPR)	--	3.6 (2)	/	N/A(Note 4)
Number of carriers within 1 MHz bandwidth in OFDM	--	3.2 (10)	/	PASS
Diffusion bandwidth	--	3.2 (8)	3.3	PASS
Spreading factor	--	3.2 (9)	3.3	Only for reported
Interference Prevention Function	--	3.4.1 (1)	3.8	PASS
Carrier Sense Capability-1	--	3.4.1 (3)	3.7	N/A(Note 2)
Carrier Sense Capability-2	--	3.4.1 (3)	3.7	N/A(Note 3)

Note:

Note1:N/A: In this whole report not applicable.

Note2:Not apply to this device, since EIRP does not require compensation through Antenna Power.

Note3:Apply for 802.11n40/802.11ax40 which the occupied bandwidth within 26MHz-40MHz

Note4:The transmitting antenna with its absolute gain less 12.14 dB

1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial Number	Cal. interval	Cal.Day	Cal. Due
Antenna Port Conducted Test (BT/WiFi)						
Spectrum Analyzer	R&S	FSV 30	CS030002	1 year	2026/4/23	2027/4/22
Spectrum Analyzer	R&S	FSVA 3044	CS030003	1 year	2025/10/22	2026/10/21
Analog signal Generator	R&S	SMB 100A	CS0300015	1 year	2026/3/13	2027/3/12
Vector signal Generator	R&S	SGT 100A	CS0300017	1 year	2026/3/13	2027/3/12
JS1120 Testing Software	Tonscend	V3.5.39	/	/	/	/
RF control unit(BT/WIFI)	Tonscend	JS0806-2-8CH	CS0300023	1 year	2026/4/23	2027/4/22
RF control unit(DTV)	Tonscend	JS0806-1	CS0300024	1 year	2026/4/23	2027/4/22
DC power supply	R&S	HMC8041-G	CS0300026	1 year	2025/04/23	2026/04/22
DC power supply	R&S	HMC8041-G	CS0300026	1 year	2026/5/21	2027/5/20
#3Shielding room	MORI	443	CS0300009	3 year	2023/05/17	2026/05/16
#3Shielding room	MORI	443	CS0300009	3 year	2026/05/17	2029/05/16
Power splitter	Anritsu	K240CPOWERDIVIDER	012334	1 year	2025/06/06	2026/06/05
Temperature and humidity meter	UNI-T	A10T	C193561457	1 year	2026/4/24	2027/4/23

☐ 1. Calibration conducted by the National Institute of Information and Communications Technology (NICT) in japan (hereinafter referred to as *NICT*) or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

☐ 2. Correction conducted pursuantto the provisions of Article 135 or Article 144 of the Measurement Act(Act No.51 of 1992)

■ 3. 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). The calibrations are traceable to CVC CHINA/Lisai Metrology/Saibao Metrology.

☐ 4. Calibration, etc. conducted by using measuning 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 from (2) to (4).

1.2 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab of CVC Testing Technology (Shenzhen) Co., Ltd.

Address: No. 1301-14&16, Guanguang Road, Xinlan Community, Guanlan Subdistrict, Longhua District, Shenzhen, Guangdong, China

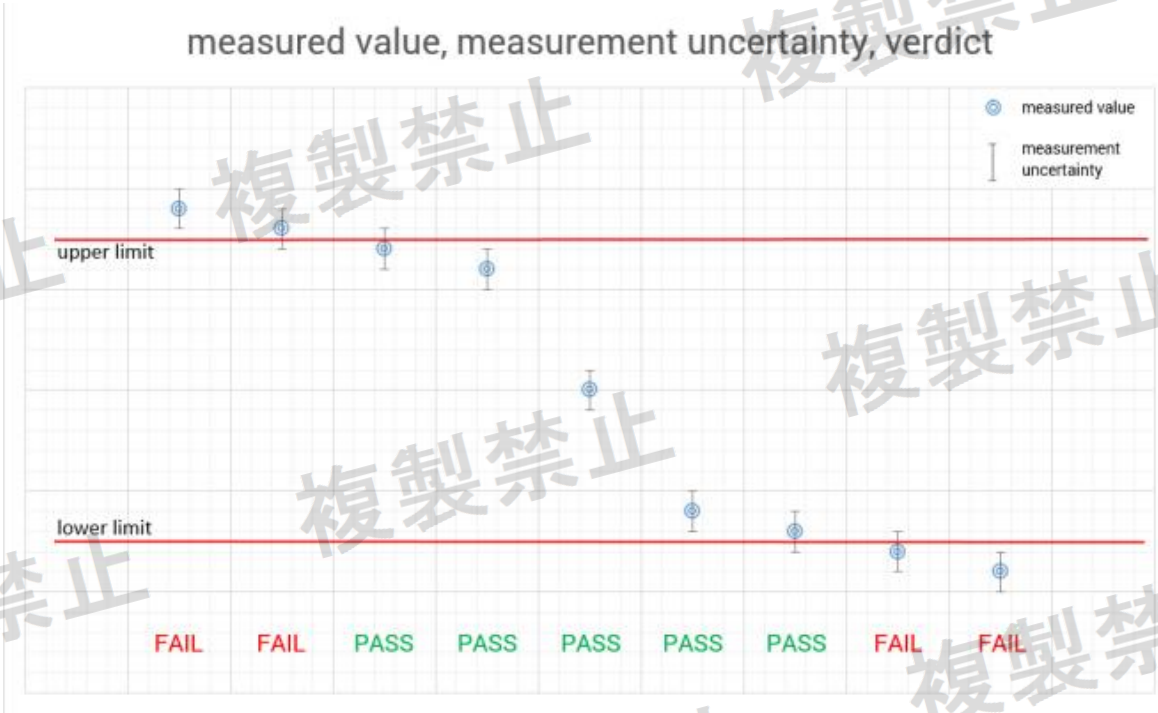
Post Code：518110 Tel：0755-23763060-8805
Fax：0755-23763060 E-mail：sz-kf@cvc.org.cn
IC(Test firm CAB identifier number：CN0137)
CNAS(Test firm designation number：L16091)

1.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Support Equipment		
1	Radio frequency	± 6.5 x 10^{-8}
2	Occupied Channel Bandwidth	± 1.86 %
3	RF output power, conducted	± 0.9 dB
4	Power Spectral Density	± 0.6 dB
5	Spurious emissions ,conducted	± 2.7 dB
6	Supply voltages	± 0.68 %
7	Time	± 0.19 %
8	Adjacent Channel Power	± 1.3 dB
Remark: 95% Confidence Levels, k=2.		

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed.
The measurement uncertainty is mentioned in this test report, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong.



2 GENERAL INFORMATION

2.1 GENERAL PRODUCT INFORMATION

PRODUCT NAME	Smart Badge
BRAND NAME	Topsales
MODEL NAME	ZY04
ADDITIONAL MODEL NAME	N/A
MODEL DIFFERENCES	N/A
POWER SUPPLY	1.DC 5V 0.5A for USB 2.Battery-powered DC 3.7V
TYPE OF EQUIPMENT	Data transmission equipment operating in the 2.4GHz
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM,OFDMA
OPERATING FREQUENCY	2412MHz ~ 2472MHz for 802.11b/g/n(HT20) 2402MHz ~ 2480MHz for BT-LE(1M&2M)
NUMBER OF CHANNEL	802.11b/g/n(HT20): 13 BT-LE(1M&2M): 39
RATED RF OUTPUT POWER DENSITY	See Remark 5
HARDWARE VERSION:	CM01_V07
SOFTWARE VERSION:	3.2.32
ANTENNA TYPE (Remark 4)	FPC Antenna, with -0.6 dBi gain
I/O PORTS	Refer to User's Manual

Remark:

1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.:TELECSZ2026-0004-EUT) for detailed product photo.
4. Since the above data and/or information is provided by the client, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
5. The RF output power as below table:

Mode	Rated output power density (mW/MHz)
802.11b	6
802.11g	1
802.11n(HT20)	1

Mode	Rated output power density (mW/MHz)
BT-LE(1M&2M)	1

2.2 DESCRIPTION OF ACCESSORIES

N/A

2.3 DESCRIPTION OF TEST CHANNELS

Operating frequency of each channel

2.4G WIFI					
802.11b/g/n(HT20)					
CHANNEL	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**
1	**2412**	6	2437	11	2462
2	2417	**7**	**2442**	12	2467
3	2422	8	2447	**13**	**2472**
4	2427	9	2452		
5	2432	10	2457		

BT-LE(1 Mbps/2Mbps)							
CHANNEL	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**
0	**2402**	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	**19**	**2440**	29	2460	**39**	**2480**

1. The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.
2. By means of test software which provided by manufacture, the power levels during the tests were set according to the following codes:

2.4G WIFI					
802.11b		**802.11g**		**802.11n(HT20)**	
FREQUENCY MHZ)	**POWER SETTING**	**FREQUENCY (MHZ)**	**POWER SETTING**	**FREQUENCY (MHZ)**	**POWER SETTING**
2412	0	**2412**	25	**2412**	25
2442	0	**2442**	25	**2442**	25
2472	0	**2472**	25	**2472**	25

BT-LE(1 Mbps/2Mbps)					
CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING
0	default	19	default	39	default

2.4 ENVIRONMENTAL CONDITIONS

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

Battery Voltage	Normal Voltage /NV	DC 3.7V
	Low Voltage /LV	DC 3.7V
	High Voltage /HV	DC 3.7V
RF Module Voltage	Normal Voltage /NV	DC 3.3V
	Low Voltage /LV	DC 3.3V
	High Voltage /HV	DC 3.3V
AC Voltage	Normal Voltage /NV	--
	Low Voltage /LV	--
	High Voltage /HV	--
Other	Normal Temperature/Tnor	25°C
	lative Humidity	55 %
	Air Pressure	989 hPa

Note: After checking the fluctuation of input voltage to the circuit of the radio part (excluding the power supply) of the equipment to be tested, the fluctuation less than +/- 1 % when input voltage from an external supply into the equipment fluctuates +/- 10%, therefore, the test is carried out only at the normal voltage.

2.5 ASSEMBLY

The RF circuits are located inside of the EUT. It won't be easy to be opened. Frequency Band, channels and modulation parameters are fixed inside the module. They cannot be edited or modified by end-user.

2.6 ANTENNA SPECIFICATIONS

2.6.1 ANTENNA GAIN

Modulation Mode	Ant.Tag	Ant. Type	Connector Type	Highest Peak Gain (dBi) 2.4GHz ~ 2.5GHz
2.4G WIFI/BLE	1	FPC Antenna	N/A	-0.6

2.6.2 ANTENNA PATTERN

Please refer to the attached file (Antenna report).

2.7 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

Article 2 Paragraph 1 Item 19

MIC Notice No.88 Appendix No.43

All test items have been performed and recorded as per the above standard

2.8 DESCRIPTION OF SUPPORT UNITS

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

Support Equipment					
NO	Description	Brand	Model No.	Serial Number	Supplied by
1	Laptop	HP	Zhan 66 Pro	N/A	Lab

Support Cable							
NO	Description	Quantity (Number)	Length (m)	Detachable (Yes/ No)	Shielded (Yes/ No)	Cores (Number)	Supplied by
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RF Test Cable			
NO	Description	Cabel loss(dB)	Supplied by
1	SMA-J	0.5	Applicant

The RF Test Cable is provided by the applicant, and the test results already include this parameter.

3 TEST TYPES AND RESULTS

3.1 FREQUENCY TOLERANCE MEASUREMENT

3.1.1 Limit

Tolerance of frequency shall be +/- 50ppm

3.1.2 Test setup

3.1.3 Test Procedure:

WLAN

Frequency: Test Frequency
Span: About twice the occupied frequency bandwidth
RBW: 100 kHz(Modulation OFF),
VBW: 100 kHz(Modulation OFF),
Sweep: Time Auto
Detector mode: peak
Trace mode Maxhold

BT-LE

Frequency: Test Frequency
Span: About twice the occupied frequency bandwidth
RBW: 10 kHz(Modulation OFF),
VBW: 10 kHz(Modulation OFF),
Sweep: Time Auto
Detector mode: peak
Trace mode Maxhold

3.1.4 Test results

Please refer Appendix

3.2 OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)

3.2.1 Limit

ITEM	LIMIT	REMARK
Occupied bandwidth	<26MHz	For BT-LE,802.11b, g, 802.11n (HT20)

3.2.2 Test setup

3.2.3 Test Procedure:

Frequency:Test Frequency
Span:From the allowable value prescribed in the facility regulations to about
RBW:3%or less of the allowable value prescribed in the equipment regulations
VBW:Same as RBW
Sweep point:>400 points
Sweep:Continuous sweep,Time Auto Processing count:>10 count
Detector mode: peak

3.2.4 Test results

Please refer Appendix

3.3 SPREADING BANDWIDTH MEASUREMENT (90% POWER BANDWIDTH)

3.3.1 Limits

ITEM	LIMIT	REMARK
SPREADING BANDWIDTH	Only for reported	(For DSSS, FHSS)
SPREADING FACTOR	Only for reported	Operating frequency 2400 to 2483.5MHz

3.3.2 Test setup

3.3.3 Test Procedure:

Spectrum Analyzer conditions:
Frequency: Test Frequency
RBW 300 kHz;
VBW 300 kHz
Sweep Time Auto
Detector mode Positive peak
Trace mode Max hold
OBW 90%

3.3.4 Test result

Please refer Appendix

3.4 SPURIOUS EMISSIONS FOR TRANSMITTER MEASUREMENT

3.4.1 Limits

Frequencies (MHz)	Limit	
(MHz)	uW	dBm
Operating frequency 2400 to 2483.5MHz		
2387 ≤ f ＜2400	≤25	≤-16
2483.5＜f ≤ 2496.5	≤25	≤-16
All other frequencies	≤2.5	≤-26

3.4.2 Test setup

3.4.3 Test Procedure:

Spectrum Analyzer conditions:
All spurious are measured from 30 MHz to 13 GHz by peak mode.

Frequency: 30 MHz – 2400 MHz , 2483.5 MHz –13 GHz
RBW 1 MHz (below 1GHz), 1 MHz (above 1GHz)
VBW 3 MHz (below 1GHz), 3 MHz (above 1GHz)
Sweep Time Auto
Detector mode Positive peak
Trace mode Max hold

3.4.4 Test result

Please refer Appendix

3.5 ANTENNA POWER MEASUREMENT

3.5.1 Limits

Modulation system	Frequency band used	Antenna power (max.)	EIRP (max)	
			Omni-directional case	Directional case
DS.OFDM (Narrow-Band)	2,400 – 2,4835 MHz	10mW/MHz	12.14 dBm/MHz (16.367 mW/MHz)	22.14 dBm/MHz (163.67 mW/MHz)
OFDM (Wide-Band)	2,400 – 2,4835 MHz	5mW/MHz	9.13dBm/MHz (8.18mW/MHz)	19.13dBm/MHz (81.84mW/MHz)
BT - LE	2,400 – 2,4835 MHz	10mW	12.14 dBm (16.367 mW)	22.14 dBm (163.67 mW)

Tolerance of antenna power shall be +20% (upper value)

According article 49.20 f(2)The angular width of the principal radiation in the horizontal and vertical planes of the transmitting antenna shall not exceed the value obtained by the following expression.
360/A degree
A represents the value determined by dividing an equivalent isotropically radiated Power by the value obtained by applying an antenna power with the mean power Of 10 mW to the transmitting antenna with its absolute gain being 2.14 dB, and shall be 1 when it is lower than 1

3.5.2 Test setup

WLAN test setup

BT-LE test setup

3.5.3 Test Procedure:

Spectrum Analyzer conditions:

Step 1:Frequency:Test Frequency
Span:About twice the occupied frequency bandwidth
RBW:1 MHz;VBW:1 MHz
Sweep point:>400 points
Sweep:Continuous sweep,Time Auto Detector mode:Positive peak
Indication mode Max hold

Step 2:Frequency:The frequency that gives the maximum power (searched frequency)
Span:0MHz
VBW:1 MHz
Sweep:Continuous sweep,Time Auto

3.5.4 Test result

Please refer Appendix

3.6 SPURIOUS EMISSIONS FOR RECEIVER

3.6.1 Limits

Frequencies (MHz)	Limit	
(MHz)	nW	dBm
Below 1GHz	≤4	≤-54
Above 1GHz	≤20	≤-47

3.6.2 Test setup

(EUT operate in multiple outputs:
The measurement was investigated worst chain and the worst chain was selected as representative test and add 10log(N), its data was recorded in this report.)

3.6.3 Test Procedure

Spectrum Analyzer conditions:
All spurious are measured from 30 MHz to 13 GHz by peak mode.

Frequency: 30 MHz – 2400 MHz , 2483.5 MHz –13 GHz
RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz)
VBW 300 kHz (30 – 1GHz) , 3 MHz (over 1GHz)
Sweep Time Auto
Detector mode Positive peak
Trace mode Max hold

3.6.4 Test result

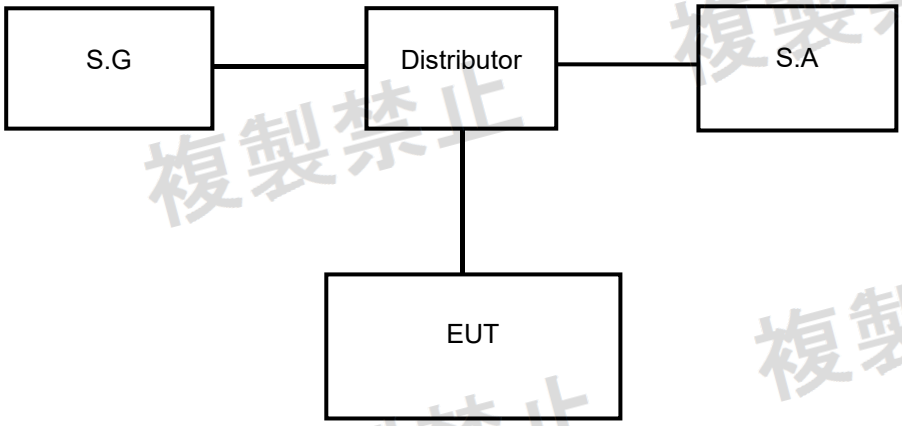
Please refer Appendix

3.7 CARRIER SENSE CAPABILITY

3.7.1 Limits

The radio equipment connected to telecommunication circuit equipment shall be equipped with a device which detects emissions radiated from another radio station and prevents interference, or a device which prevents interference by operation on a receive signal and a signal for diffusion for signal level detection.

3.7.2 Test setup



(EUT operate in multiple outputs: The measurement was performed by combiner.)

1. Turn the standard signal generator output OFF. Leave the equipment under test to be ready for transmission and verify the transmission with the spectrum analyzer.
2. Set the equipment under test to the receiving state.
3. Turn the standard signal generator ON and leave the equipment under test to be ready for transmission and verify with the spectrum analyzer that no transmission is being made.

3.7.3 Test result

Please refer Appendix

3.8 INTERFERENCE PREVENTION FUNCTION

3.8.1 Limits

Radio equipment used mainly on the same premises and automatically transmits or receives identification code

3.8.2 Test setup

3.8.3 Test Procedure:

Standard Requirement:
1) Measurement system diagram as shown above and test equipment keep transmitting identification code.
2) Condition of measuring instrument
(1) 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.
4) 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.

3.8.4 Test result

Please refer Appendix

4 PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Setup Photo).

5 PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos report and Internal Photos).

------ End of the Report ------

Important

(1) The test report is invalid without the official stamp of CVC;

(2) Any part photocopies of the test report are forbidden without the written permission from CVC;

(3) The test report is invalid without the signatures of tester, reviewer and approver;

(4) The test report is invalid if altered;

(5) Objections to the test report must be submitted to CVC within 15 days;

(6) Generally, commission test results apply to the samples as received. The sample information is provided by the customer and laboratory is not responsible for its authenticity;

(7) As for the test result “-” or “N” means “not applicable”, “/” means “not test”, “P” means “pass” and “F” means “fail”

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