

JAPAN RADIO TEST REPORT

for

JDSOLUTION Co., Ltd.

Portable Emergency Speaker

Model Number: PES-AL01LE

Prepared for : JDSOLUTION Co., Ltd.

Address : #A-13F, Gabeul Great Valley, 32, Digital-ro 9-Gil,
Geumcheon-Gu, Seoul, Korea

Prepared by : Keyway Testing Technology (Guangdong) Co., Ltd.

Address : 21/F., Building 6, Dongyi Intelligent Equipment New Energy
Vehicle Park, No.30, Tangxia District, Dongshen Road,
Tangxia, Dongguan, Guangdong, China

Tel: 86-769-87182258

Fax: 86-769-87181058

Report No. : 2026033033869210-00

Date of Test : Nov. 03, 2025 ~ Mar. 26, 2026

Date of Report : Mar. 30, 2026

Keyway Testing Technology (Guangdong) Co., Ltd.

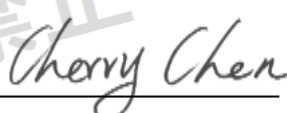
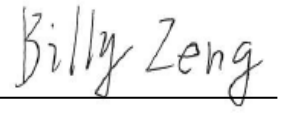
Applicant:	JDSOLUTION Co., Ltd.		
Address:	#A-13F, Gabeul Great Valley, 32, Digital-ro 9-Gil, Geumcheon-Gu, Seoul, Korea		
Manufacturer:	JDSOLUTION Co., Ltd.		
Address:	#A-13F, Gabeul Great Valley, 32, Digital-ro 9-Gil, Geumcheon-Gu, Seoul, Korea		
Factory :	JDSOLUTION Co., Ltd.		
Address:	#A-13F, Gabeul Great Valley, 32, Digital-ro 9-Gil, Geumcheon-Gu, Seoul, Korea		
E.U.T:	Portable Emergency Speaker		
Model Number:	PES-AL01LE		
Trade Name:	PES	Sample Number:	33000260378
Date of Receipt:	Nov. 03, 2025	Date of Test:	Nov. 03, 2025 ~ Mar. 26, 2026
Test Specification :	Article2 Paragraph 1, item 19 MIC Notice No.88 Appendix No.43		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
	Issue Date: Mar. 30, 2026		
Tested by:	Reviewed by:	Approved by:	
			
Cherry Chen / Engineer	Billy Zeng / Supervisor	Andy Gao / Manager	
Other Aspects:	None.		
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Keyway Testing Technology (Guangdong) Co., Ltd.			

TABLE OF CONTENTS

Test Report Declaration	Page
1. SUMMARY OF TEST RESULTS	5
1.1. TEST PROCEDURES ACCORDING TO THE TECHNICAL STANDARDS	5
1.2. TEST FACILITY	6
1.3. MEASUREMENT UNCERTAINTY	7
2. GENERAL INFORMATION	8
2.1. GENERAL DESCRIPTION OF EUT	8
2.2. DESCRIPTION OF TEST MODES	10
2.3. TEST CONDITIONS	10
2.4. TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	11
2.5. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
2.6. DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	12
2.7. EQUIPMENTS LIST FOR ALL TEST ITEMS	13
3. RF SHIELDING METHOD	14
4. TEST RESULT FOR BLUETOOTH	15
4.1. FREQUENCY ERROR	15
4.2. LIMIT	15
4.3. MEASURING INSTRUMENTS AND SETTING	15
4.4. TEST PROCEDURES	15
4.5. TEST SETUP LAYOUT	15
4.6. TEST RESULT	15
5. ANTENNA POWER	16
5.1. LIMIT	16
5.2. TEST PROCEDURES	16
5.3. TEST SETUP LAYOUT	16
5.4. EST DEVIATION	16
5.5. TEST RESULT	16
6. OCCUPIED BANDWITH (99%)	17
6.1. LIMIT	17
6.2. MEASURING INSTRUMENTS AND SETTING	17
6.3. TEST PROCEDURES	17
6.4. TEST SETUP LAYOUT	17
6.5. TEST DEVIATION	17

6.6. EUT OPERATION DURING TEST	17
6.7. TEST RESULT	17
7. UNWANTED EMISSION INTENSITY MEASUREMENT	18
7.1. LIMIT	18
7.2. MEASURING INSTRUMENTS AND SETTING	18
7.3. TEST PROCEDURES	18
7.4. TEST SETUP LAYOUT	19
7.5. TEST DEVIATION	19
7.6. TEST RESULT	19
8. DWELL TIME	20
8.1. LIMIT	20
8.2. MEASURING INSTRUMENTS AND SETTING	20
8.3. TEST PROCEDURES	20
8.4. TEST SETUP LAYOUT	20
8.5. TEST RESULT	20
9. IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT	21
9.1. LIMIT	21
9.2. MEASURING INSTRUMENTS AND SETTING	21
9.3. TEST PROCEDURES	21
9.4. TEST RESULT	21
10. HALF POWER BEAM ANGLE(RADIATION ANGLE OF ANTENNA)	22
11. INTERFERENCE PREVENTION FUNCTION	22
11.1 TEST SETUP	22
11.2 RADIO INTERFERENCE PREVENTION FUNCTION	22
12. EUT TEST PHOTO	23
13. EUT CONSTRUCTIONAL DETAILS	24

1. SUMMARY OF TEST RESULTS

1.1. TEST PROCEDURES ACCORDING TO THE TECHNICAL STANDARDS

Rule Section	Test Item	Result
Transmitter Parameters		
Article 49.20	Antenna Power	Pass
Article 49.20 & Article 14	Tolerances for Antenna Power	Pass
Article 5	Frequency Tolerance	Pass
Article 6	Occupied Bandwidth	Pass
Article 6	Spread Bandwidth	Only test
Article 49.20	Number of Carriers	N/A
Article 49.20	Dwell Time	Pass
Article 7	Spurious Emissions	Pass
Article 9.4	Interference prevention function	Pass
Article 49.20	Half power Beam Angle(Radiation angle of antenna)	N/A
Receiver Parameters		
Article 24	Secondary Radiated Emissions	Pass

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report
- (2) The section numbers in the form is belong to standard article 2-1-19
- (3) MIC Ordinance Regulating Radio Equipment Section 4.17 of Article 49.20
- (4) It is unnecessary to testing, when a E.I.R.P. is less than 6.91dBm/MHz.

1. 2. TEST FACILITY

Keyway Testing Technology (Guangdong) Co., Ltd.

Address: 21/F., Building 6, Dongyi Intelligent Equipment New Energy Vehicle Park, No.30, Tangxia District, Dongshen Road, Tangxia, Dongguan, Guangdong, China

Tel: 86-769-87182258

Fax: 86-769-87181058

Certificated by **CMA**

Registration No.: 202319016955

Date of registration: July 23, 2024

Certificated by **CNAS**

Registration No.: CNAS L5783

Date of registration: March 07, 2025

Certificated by **A2LA**

Certificate Number:7404.01

Valid To: March 31,2027

FCC Designation No.: CN1412

Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.

ISED (Company No.: 33959)

The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0186

Certificated by **VCCI**

Member No.3498

R-20091:966 Chamber 2 Below 1 G

G-20227:966 Chamber 2 above 1 G

C-20064:Conducted Emissions at Mains ports

T-20120:Conducted Emissions at Wired network port

Date of Valid until: Step. 19, 2027

Certificated by **Nemko**

Registration No.: ELA 814

Date of registration: September 25, 2024

Certificated by **UL**

Registration No.: 100567237

Date of registration: September 25, 2024

1.3. 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	$\pm 6 \times 10^{-7}$ MHz
Bandwidth	± 76 kHz
Dwell time	$\pm 2\%$
Total RF power, conducted	± 0.8 dB
Spurious emissions, conducted	± 0.8 dB
DC and low frequency voltages	$\pm 3\%$ V
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

2. GENERAL INFORMATION

2.1. GENERAL DESCRIPTION OF EUT

Equipment	Portable Emergency Speaker	
Model Name	PES-AL01LE	
Series Model:	N/A	
Model Difference:	N/A	
Product Description:	The EUT is a Portable Emergency Speaker	
	Operation Frequency:	2402~2480MHz
	Modulation Type:	FHSS
	Bit Rate of Transmitter:	GFSK+ π /4-DQPSK+8DPSK
	Number Of Channel:	79 CH
	Antenna Designation:	Please see Note 3.
	Antenna Gain(Peak):	2.50dBi
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
Channel List:	Please refer to the Note 2.	
Rated Voltage	DC 25V By Rechargeable lithium-ion battery	
	Input: AC 100-240~, 50/60Hz, 1.8A Output: DC 25.2V $\overline{\sim}$ 2A	
Battery Rating:	Model: 6S2P-35E	
	Charge Voltage: 25.0V	
	Rated Voltage: 21.6Vdc	
	Rated Capacity: 6700mAh	
Hardware Version	V1.0	
Software Version	V1.0	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

3. Table for Filed Antenna

ANT	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
1	N/A	2.4G FPCB ANT	FPCB antenna	2.50	N/A

2.2. DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	GFSK (CH00 CH39 CH78)
Mode 2	$\pi/4$ -DQPSK (CH00 CH39 CH78)
Mode 3	8DPSK (CH00 CH39 CH78)
Mode 4	Hopping
Mode 5	Single carrier

Final Test Mode	Description
Mode 1	GFSK(CH00 CH39 CH78)
Mode 2	$\pi/4$ -DQPSK (CH00 CH39 CH78)
Mode 3	8DPSK (CH00 CH39 CH78)
Mode 4	Hopping
Mode 5	Single carrier

2.3. TEST CONDITIONS

The BT module was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

Voltage Fluctuation Test		Normal Voltage	High Voltage + 10% of Normal Voltage	Low Voltage - 10% of Normal Voltage
Input Power		DC 25.1V	DC 27.61V	DC 22.59V
Module Voltage		DC 3.301V	DC 3.311V	DC 3.275V
Voltage error(%)	Result	Ref.level	0.3030	-0.7876

Note:

Voltage Variation (%)

= (Output high or Low Voltage - Output Normal Voltage)/ Output Normal Voltage* 100

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

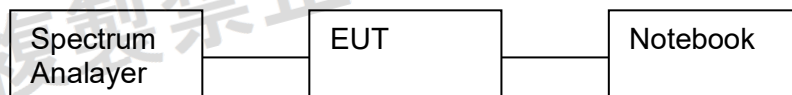
2. 4. TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Test software Version	FCC_assist_1.0.2.2		
Frequency	2402 MHz	2441 MHz	2480 MHz
Parameters	DEF	DEF	DEF

2. 5. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Mode :



2.6. DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Serial	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	Portable Emergency Speaker	PES	PES-AL01LE	N/A	EUT
E-2	Notebook	N/A	HLYL-WFQ9	DFMPM2072700 0687	AE1

Note: EUT short description is used to simplify the identification of the EUT in this test report.
AE1 is auxiliary equipment provided by the laboratory for testing purposes.

Note:

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

2.7. EQUIPMENTS LIST FOR ALL TEST ITEMS

Test Equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXG Signal Analyzer	Keysight	N9020A	MY56070279	Apr. 14, 2025	Apr. 13, 2026
2	Constant temperature and humidity box	/	GTH-800-40-1P	MAA9906-005	May 15, 2025	May 14, 2026
3	D.C. Power Supply	/	HDY-30030	US13H8251B	May 15, 2025	May 14, 2026
4	Power Meter	Agilent	E4418B	MY41294414	May 15, 2025	May 14, 2026
5	Power Sensor	Agilent	E9300A	MY41496069	May 15, 2025	May 14, 2026
6	RF SWITCH BOX	CSKJ	SMU-1003	SMU-1003	Apr. 14, 2025	Apr. 13, 2026
7	MXG Vector Signal Generator	Agilent	N5182A	MY50143410	Apr. 14, 2025	Apr. 13, 2026
8	MXG Analog Signal Generator	Agilent	N5181B	MY53050432	Apr. 14, 2025	Apr. 13, 2026
9	Comprehensive tester	R&S	CMW500	106288	Apr. 14, 2025	Apr. 13, 2026
10	Impedance Converter	SUNLIGHT	ST-5075	/	May 15, 2025	May 14, 2026
11	RF sma cable	Keysight	ULC-1m-SMSM+	1623	May 15, 2025	May 14, 2026
12	RF sma cable	Keysight	ULC-1m-SMSM+	1623	May 15, 2025	May 14, 2026
13	RF sma cable	Keysight	ULC-1.5FT-SMSM+	1623	May 15, 2025	May 14, 2026
14	RF sma cable	Keysight	ULC-1.5FT-SMSM+	1623	May 15, 2025	May 14, 2026
15	Coupler	Keysight	LPD4S-DC18	20210106022	May 15, 2025	May 14, 2026
16	Test Software	CSKJ	CS-305X	/	/	/

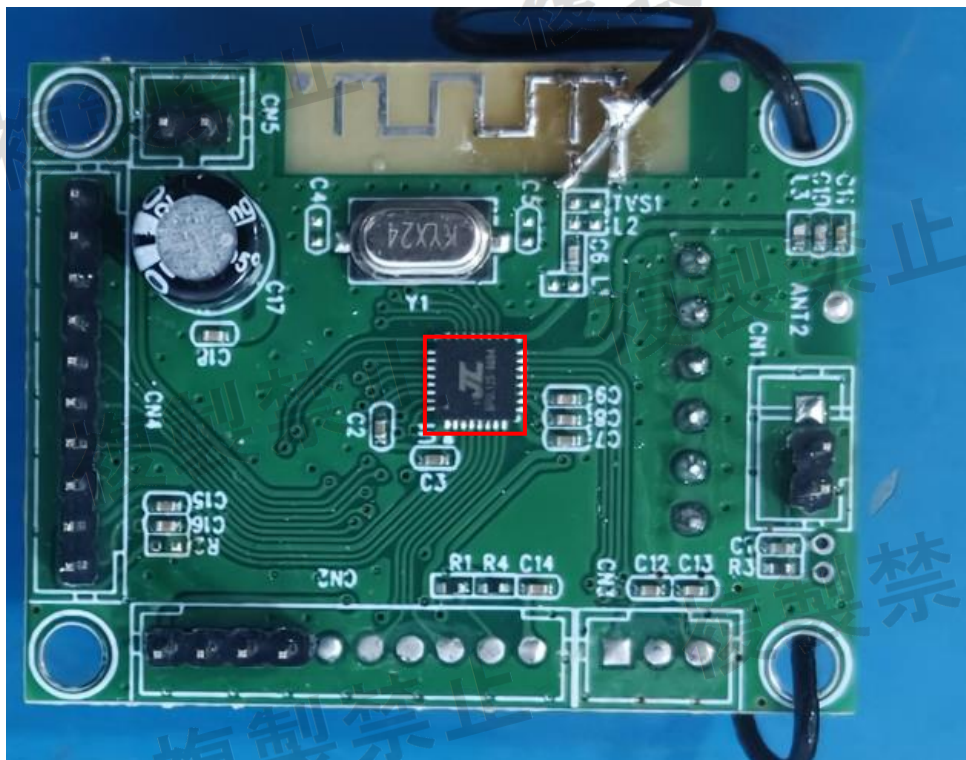
Other

Item	Name	Manufacturer	Model	Software version
1	RF test system	CSKJ	CS-305X	2024.4.20
2	RF communication test system	CSKJ	CS-305X	2024.4.20

NOTE:these equipments are Calibration by Guangzhou LiSai Metrology & Test Co., Ltd.
Calibration method:Article 24-2, Paragraph 4 of the Radio Act.

3. RF SHIELDING METHOD

We apply the product for Japan RF certification. The RF Module AC6966B is soldered to the U1 on the PCB; the RF Module has a terminal distance of 1mm and has 32 terminals, protect anybody to remove it easily.



4. TEST RESULT FOR BLUETOOTH

4.1. FREQUENCY ERROR

4.2. LIMIT

Item	Limits
Frequency Error	$\pm 50\text{ppm}$

4.3. MEASURING INSTRUMENTS AND SETTING

The following table is the setting of Spectrum Analyzer.

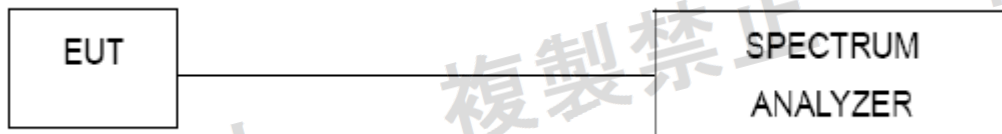
Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	10KHz/10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4. TEST PROCEDURES

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

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

4.5. TEST SETUP LAYOUT



4.6. TEST RESULT

Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

5. ANTENNA POWER

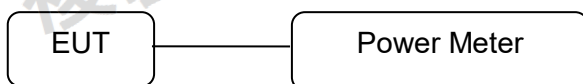
5.1. LIMIT

Item	Limits
Antenna Power Density	$\leq 3\text{mW/MHz}$ (FH form 2402 - 2480 MHz) $\leq 10\text{mW/MHz}$ (OFDM,DS from2400~2483.5MHz) $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)
Antenna Power Error	+20%(Base on manufacturer declare antenna power density)
EIRP	6.91dBm/MHz

5.2. TEST PROCEDURES

1. The EUT was directly connected to the power meter.
2. The EUT was set to frequency hopping mode.

5.3. TEST SETUP LAYOUT



5.4. EST DEVIATION

There is no deviation with the original standard.

5.5. TEST RESULT

Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

6. OCCUPIED BANDWITH (99%)

6.1. LIMIT

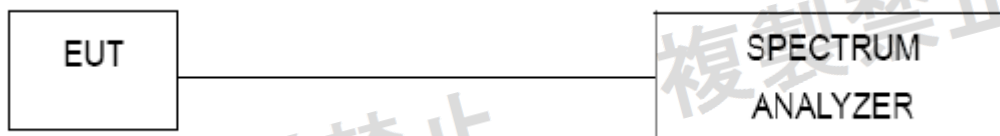
Item	Limits
Occupied Band Width:	FH 83.5MHz; OFDM,DS $\leq$ 26MHz; Others $\leq$ 26MHz

6.2. MEASURING INSTRUMENTS AND SETTING

6.3. TEST PROCEDURES

- Setting of SA is following as: RB: 1MHz / VB: 1MHz / SPAN: 100MHz / AT: 30dB Ref: 27.88dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).
- Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.

6.4. TEST SETUP LAYOUT



6.5. TEST DEVIATION

There is no deviation with the original standard.

6.6. EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

6.7. TEST RESULT

Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

7. UNWANTED EMISSION INTENSITY MEASUREMENT

7.1. LIMIT

Item	Limits
TX Spurious Emission	$\leq 2.5 \mu\text{W}/\text{MHz}$ ($30\text{MHz} \leq f \leq 1000\text{MHz}$)
	$\leq 2.5 \mu\text{W}/\text{MHz}$ ($1000\text{MHz} < f \leq 2387\text{MHz}$)
	$\leq 25 \mu\text{W}/\text{MHz}$ ($2387\text{MHz} < f \leq 2400\text{MHz}$)
	$\leq 25 \mu\text{W}/\text{MHz}$ ($2483.5\text{MHz} \leq f < 2496.5\text{MHz}$)
	$\leq 2.5 \mu\text{W}/\text{MHz}$ ($2496.5\text{MHz} \leq f < 12500\text{MHz}$)

7.2. MEASURING INSTRUMENTS AND SETTING

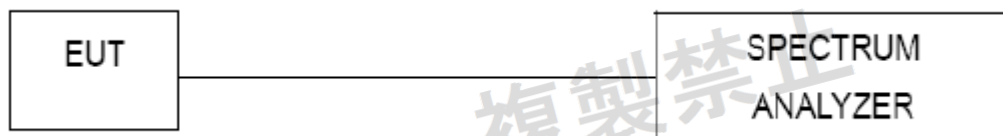
Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Below 1G	Above 1G
	Setting	Setting
Attenuation	Auto	Auto
RB / VB	100 kHz	1MHz
Detector	Peak	Peak
Trace	Max Hold	Max Hold
Sweep Time	Auto	Auto

7.3. TEST PROCEDURES

- EUT have transmitted the maximum modulation signal and fixed channelize.
- Setting of SA is following as: Below 1GHz RB:100KHz / VB:100KHz
Above 1GHz RB:1MHz / VB:1MHz / AT: 20dB Ref: Auto / Sweep time: Auto
Sweep Mode: Continuous sweep / Detect mode: Positive peak
Trace mode: Max hold
- Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than $2.5 \mu\text{W}/\text{MHz}$ (-26dBm/MHz).
- Setting of SA is following as 1000MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than $2.5 \mu\text{W}/\text{MHz}$ (-26dBm/MHz).
- SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than $25 \mu\text{W}/\text{MHz}$ (-16dBm/MHz).
- SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than $25 \mu\text{W}/\text{MHz}$ (-16dBm/MHz)
- SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than $2.5 \mu\text{W}/\text{MHz}$ (-26dBm/MHz)
- If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

7.4. TEST SETUP LAYOUT



7.5. TEST DEVIATION

There is no deviation with the original standard.

7.6. TEST RESULT

Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

8. DWELL TIME

8.1. LIMIT

Item	Limits
Hopping Freq. Dwell Time	$\leq 0.4 \text{ sec (In } 0.4 \text{ sec} \times \text{ spreading rate)}$

8.2. MEASURING INSTRUMENTS AND SETTING

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

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RB	1 MHz
VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep	Continuous

8.3. TEST PROCEDURES

- The transmitter output (antenna port) was connected to the spectrum analyzer
- Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
- Use a video trigger with the trigger level set to enable triggering only on full pulses.
- Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- Measure the maximum time duration of one single pulse.
- Set the EUT for DH5, DH3 and DH1 packet transmitting.
- Measure the maximum time duration of one single pulse.
- Dwell time = [spreading rate/79] x duty-cycle x 0.4 seconds. (to be determined for each mode, DH1, DH3, DH5)

8.4. TEST SETUP LAYOUT



8.5. TEST RESULT

Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

9. IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

9.1. LIMIT

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

9.2. MEASURING INSTRUMENTS AND SETTING

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

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

9.3. TEST PROCEDURES

- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) /
AT: 0dB / Ref: Auto / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW(-54dBm)
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW(-47dBm)
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

9.4. TEST RESULT

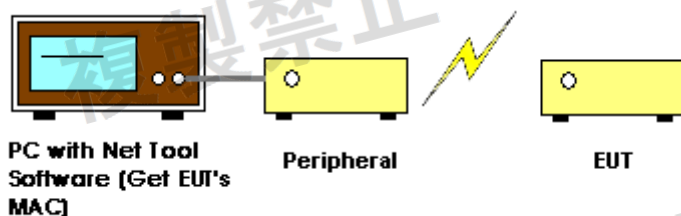
Please see the appendix III PES-AL01LE_MIC_Bluetooth_(Class Bluetooth)_Test data.

10. HALF POWER BEAM ANGLE(RADIATION ANGLE OF ANTENNA)

It is unnecessary to testing, when a E.I.R.P. is less than 6.91dbm/MHz.

11. INTERFERENCE PREVENTION FUNCTION

11.1 TEST SETUP



EUT MAC Address:C2:F1:43:F5:5A:6C

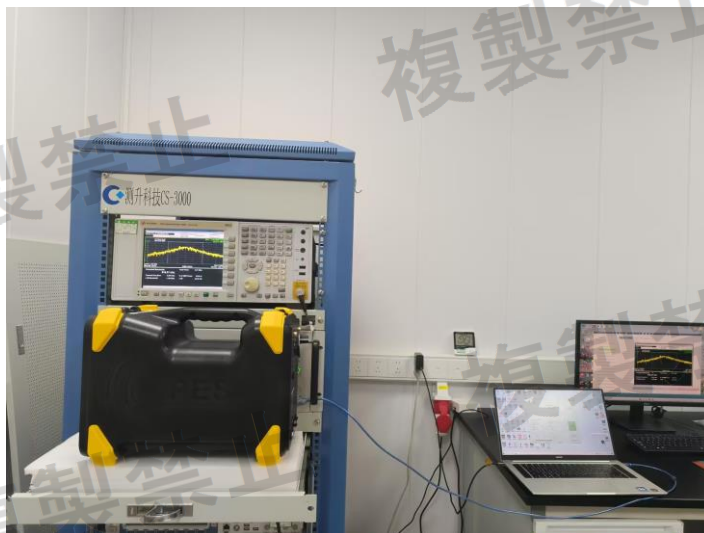
11.2 RADIO INTERFERENCE PREVENTION FUNCTION

	Normal voltage	High voltage	Low voltage
Result	OK	OK	OK

Result: Pass

12. EUT TEST PHOTO

Measurement Photos



13. EUT CONSTRUCTIONAL DETAILS

Please see the attachment for details.

the end of report