

# MEASUREMENT REPORT

## EN 300 328 V2.2.2 WLAN 802.11b/g/n

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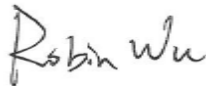
**Applicant:** Escape bv  
**Address:** Ter Heidelaan 50A, 3200 Aarschot, Belgium  
**Product:** Portable Indoor/Outdoor Wireless Speaker System  
**Model No.:** Escape P6 AIR  
**Brand Name:** ESCAPE  
**Standards:** EN 300 328 V2.2.2 (2019-07) Clause 4.3.2.9 & 4.3.2.10  
AS/NZS 4268: 2017 Clause 6.4 & 7.2  
**Result:** Complies  
**Test Date:** August 02 ~ 06, 2020

Reviewed By:



Kevin Guo

Approved By:



Robin Wu



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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## Revision History

Report No.	Version	Description	Issue Date	Note
2005RSU005-E2	Rev. 01	Initial Report	02-10-2021	Valid

Note: This device integrated a module which has been certified, this report only evaluated the “Transmitter Spurious Emissions” and “Receiver Spurious Emissions” test items.

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## 1. General Information

### 1.1. Applicant

Escape bv

Ter Heidelaan 50A, 3200 Aarschot, Belgium

### 1.2. Manufacturer

Escape bv

Ter Heidelaan 50A, 3200 Aarschot, Belgium

### 1.3. Testing Facility

<input checked="checked" type="checkbox"/>	<b>Test Site – MRT Suzhou Laboratory</b>
	<b>Laboratory Location (Suzhou - Wuzhong)</b> D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	<b>Laboratory Location (Suzhou - SIP)</b> 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.01 FCC: CN1166 VCCI: R-20025, G-20034, C-20020, T-20020
	CNAS: L10551 ISED: CN0001
<input type="checkbox"/>	<b>Test Site – MRT Shenzhen Laboratory</b>
	<b>Laboratory Location (Shenzhen)</b> 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.02 FCC: CN1284
	CNAS: L10551 ISED: CN0105
<input type="checkbox"/>	<b>Test Site – MRT Taiwan Laboratory</b>
	<b>Laboratory Location (Taiwan)</b> No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	<b>Laboratory Accreditations</b>
	TAF: L3261-190725 FCC: 291082, TW3261
	ISED: TW3261

#### 1.4. Feature of Equipment under Test

Product Name:	Portable Indoor/Outdoor Wireless Speaker System
Model No.:	Escape P6 AIR
Brand Name:	ESCAPE
Wi-Fi Specification:	802.11a/b/g/n/ac
Bluetooth Specification:	Bluetooth v4.0 (Single mode for BR/EDR)

#### 1.5. Product Specification Subjective to this Standard

Frequency Range:	802.11b/g/n-HT20: 2412 ~ 2472MHz 802.11n-HT40: 2422 ~ 2462MHz
Channel Number:	802.11b/g/n-HT20: 13 802.11n-HT40: 9
Type of Modulation:	802.11b: DSSS 802.11g/n: OFDM
Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps
Antenna Type:	PIFA Antenna
Antenna Gain:	3.00dBi

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: Above antenna information (antenna type and gain) was provided by applicant.

## 1.6. Operation Frequency / Channel List

### 802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	12	2467 MHz
13	2472 MHz	--	--	--	--

### 802.11n-HT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz

## 1.7. Standards Applicable for Testing

The EUT complies with the requirements of ETSI EN 300 328 V2.2.2 Clause 4.3.2.9 & 4.3.2.10 and AS/NZS 4268: 2017 Clause 6.4 & 7.2.

## 2. Test Configuration of Equipment under Test

### 2.1. Description of Test Mode

Test Mode
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n-HT20
Mode 4: Transmit by 802.11n-HT40
Mode 5: Receive by 802.11b
Mode 6: Receive by 802.11g
Mode 7: Receive by 802.11n-HT20
Mode 8: Receive by 802.11n-HT40

### 2.2. Test Software

The test utility software used during testing was “Tera term”, and the version was “V4.85”.

### 2.3. Test Environment Condition

Ambient Temperature	15°C ~ 35°C
Relative Humidity	20%RH ~ 75%RH

### 3. Test Summary

Clause (EN 300328)	Test Parameter	Result (Pass/Fail)	Remark
<b>Transmitter Parameter</b>			
4.3.2.9	Transmitter Spurious Emissions	Pass	--
<b>Receiver Parameters</b>			
4.3.2.10	Receiver Spurious Emissions	Pass	--
Note: For radiated spurious emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.			



## 4. Transmitter Unwanted Emissions in the Spurious Domain

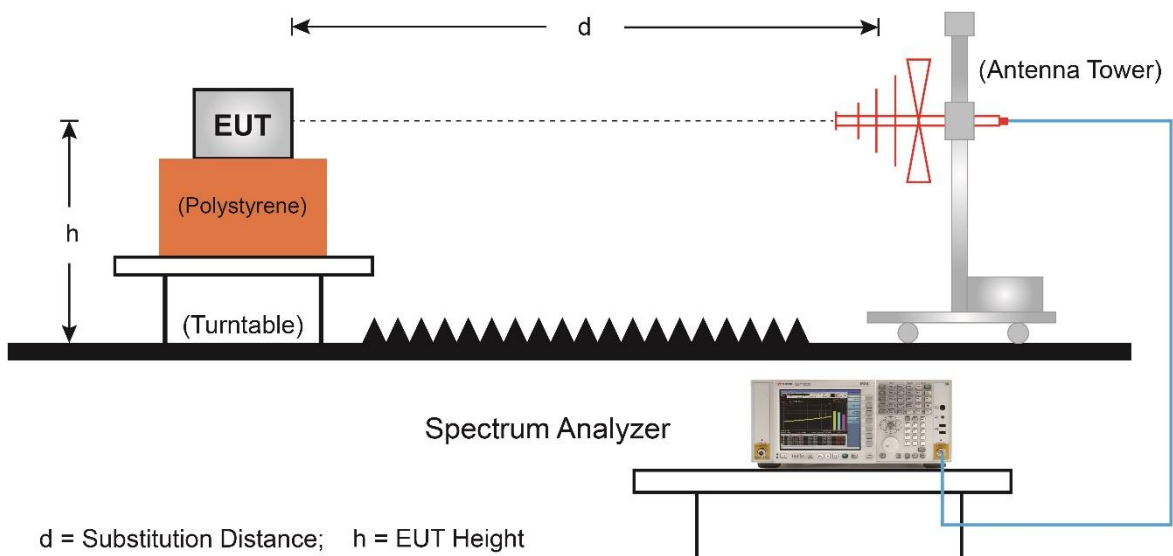
### 4.1. Limit

Transmitter Limits for Spurious Emissions		
Frequency Range	Maximum Power	Bandwidth
30 MHz to 47 MHz	-36dBm	100 kHz
47 MHz to 74 MHz	-54dBm	100 kHz
74 MHz to 87.5 MHz	-36dBm	100 kHz
87.5 MHz to 118 MHz	-54dBm	100 kHz
118 MHz to 174 MHz	-36dBm	100 kHz
174 MHz to 230 MHz	-54dBm	100 kHz
230 MHz to 470 MHz	-36dBm	100 kHz
470 MHz to 694 MHz	-54dBm	100 kHz
694 MHz to 1 GHz	-36dBm	100 kHz
1 GHz to 12.75 GHz	-30dBm	1 MHz

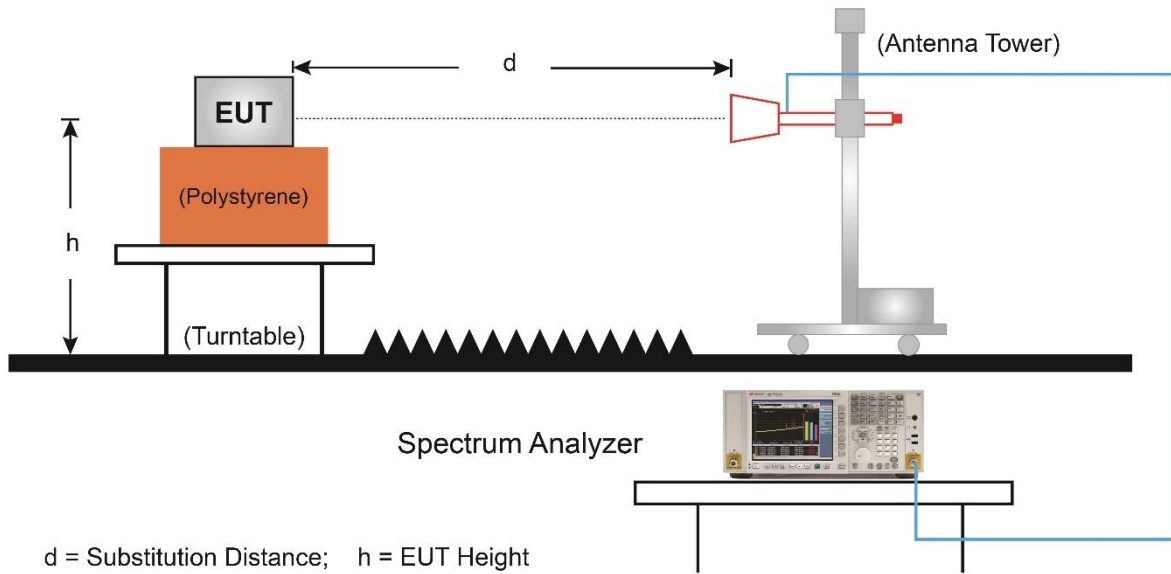
Note: These limits are e.r.p. for emissions up to 1GHz and e.i.r.p. for emissions above 1GHz.

### 4.2. Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 12.75GHz Test Setup:



**4.3. Test Procedure**

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.9.2.2.

#### 4.4. Test Result

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/02~2020/08/04	Test Mode	802.11b

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	73.7	-83.4	19.9	-63.5	-54.0	-9.5	Peak	Horizontal
	225.0	-84.5	24.4	-60.1	-54.0	-6.1	Peak	Horizontal
	60.1	-84.1	21.2	-62.9	-54.0	-8.9	Peak	Vertical
	111.0	-88.3	27.1	-61.2	-54.0	-7.2	Peak	Vertical
	3855.3	-54.3	2.0	-52.3	-30.0	-22.3	Peak	Horizontal
	5177.1	-52.0	3.4	-48.6	-30.0	-18.6	Peak	Horizontal
	4783.5	-52.0	3.2	-48.8	-30.0	-18.8	Peak	Vertical
	5582.5	-52.1	4.0	-48.1	-30.0	-18.1	Peak	Vertical
13	71.2	-85.8	20.3	-65.5	-54.0	-11.5	Peak	Horizontal
	516.0	-99.3	30.7	-68.6	-54.0	-14.6	Peak	Horizontal
	62.5	-84.0	21.8	-62.2	-54.0	-8.2	Peak	Vertical
	108.1	-90.9	27.8	-63.1	-54.0	-9.1	Peak	Vertical
	4701.3	-55.1	3.2	-51.9	-30.0	-21.9	Peak	Horizontal
	5488.5	-54.1	4.0	-50.1	-30.0	-20.1	Peak	Horizontal
	3191.4	-43.0	0.1	-42.9	-30.0	-12.9	Peak	Vertical
	3984.5	-54.0	2.1	-51.9	-30.0	-21.9	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/02~2020/08/04	Test Mode	802.11g

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	62.0	-86.5	21.0	-65.5	-54.0	-11.5	Peak	Horizontal
	516.0	-99.3	30.7	-68.6	-54.0	-14.6	Peak	Horizontal
	63.5	-84.7	21.8	-62.9	-54.0	-8.9	Peak	Vertical
	111.5	-87.3	26.9	-60.4	-54.0	-6.4	Peak	Vertical
	4325.3	-54.4	3.1	-51.3	-30.0	-21.3	Peak	Horizontal
	5188.9	-53.7	3.5	-50.2	-30.0	-20.2	Peak	Horizontal
	4654.3	-51.3	2.7	-48.6	-30.0	-18.6	Peak	Vertical
	6199.4	-54.9	4.6	-50.3	-30.0	-20.3	Peak	Vertical
13	64.0	-88.3	20.7	-67.6	-54.0	-13.6	Peak	Horizontal
	516.0	-99.5	30.7	-68.8	-54.0	-14.8	Peak	Horizontal
	73.7	-86.9	24.5	-62.4	-54.0	-8.4	Peak	Vertical
	109.1	-90.3	27.6	-62.7	-54.0	-8.7	Peak	Vertical
	4307.6	-54.8	2.9	-51.9	-30.0	-21.9	Peak	Horizontal
	5183.0	-52.1	3.5	-48.6	-30.0	-18.6	Peak	Horizontal
	4666.0	-51.4	2.6	-48.8	-30.0	-18.8	Peak	Vertical
	5177.1	-51.9	3.1	-48.8	-30.0	-18.8	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/02~2020/08/04	Test Mode	802.11n-HT20

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	64.0	-88.0	20.7	-67.3	-54.0	-13.3	Peak	Horizontal
	516.0	-99.8	30.7	-69.1	-54.0	-15.1	Peak	Horizontal
	62.5	-85.9	21.8	-64.1	-54.0	-10.1	Peak	Vertical
	516.0	-99.1	29.7	-69.4	-54.0	-15.4	Peak	Vertical
	4425.1	-54.7	2.7	-52.0	-30.0	-22.0	Peak	Horizontal
	5177.1	-53.4	3.4	-50.0	-30.0	-20.0	Peak	Horizontal
	3197.3	-47.9	0.1	-47.8	-30.0	-17.8	Peak	Vertical
	4789.4	-51.9	3.2	-48.7	-30.0	-18.7	Peak	Vertical
13	62.5	-88.8	20.9	-67.9	-54.0	-13.9	Peak	Horizontal
	516.0	-100.2	30.7	-69.5	-54.0	-15.5	Peak	Horizontal
	62.5	-82.3	21.8	-60.5	-54.0	-6.5	Peak	Vertical
	89.7	-95.6	33.9	-61.7	-54.0	-7.7	Peak	Vertical
	4372.3	-54.8	2.8	-52.0	-30.0	-22.0	Peak	Horizontal
	5171.3	-52.6	3.4	-49.2	-30.0	-19.2	Peak	Horizontal
	4372.3	-54.8	2.8	-52.0	-30.0	-22.0	Peak	Vertical
	5171.3	-52.6	3.4	-49.2	-30.0	-19.2	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/02~2020/08/04	Test Mode	802.11n-HT40

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
03	62.0	-87.4	21.0	-66.4	-54.0	-12.4	Peak	Horizontal
	72.7	-86.6	20.1	-66.5	-54.0	-12.5	Peak	Horizontal
	72.7	-86.2	24.2	-62.0	-54.0	-8.0	Peak	Vertical
	115.8	-86.7	26.0	-60.7	-54.0	-6.7	Peak	Vertical
	3855.3	-54.3	2.0	-52.3	-30.0	-22.3	Peak	Horizontal
	4577.9	-54.7	2.5	-52.2	-30.0	-22.2	Peak	Horizontal
	3191.4	-49.7	0.1	-49.6	-30.0	-19.6	Peak	Vertical
	3990.4	-52.5	2.0	-50.5	-30.0	-20.5	Peak	Vertical
11	62.0	-85.2	21.0	-64.2	-54.0	-10.2	Peak	Horizontal
	516.0	-99.4	30.7	-68.7	-54.0	-14.7	Peak	Horizontal
	62.5	-84.3	21.8	-62.5	-54.0	-8.5	Peak	Vertical
	89.2	-94.6	34.3	-60.3	-54.0	-6.3	Peak	Vertical
	5188.9	-54.5	3.5	-51.0	-30.0	-21.0	Peak	Horizontal
	6316.9	-55.4	4.7	-50.7	-30.0	-20.7	Peak	Horizontal
	3191.4	-49.2	0.1	-49.1	-30.0	-19.1	Peak	Vertical
	4654.3	-52.0	2.7	-49.3	-30.0	-19.3	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

## 5. Receiver Spurious Emissions

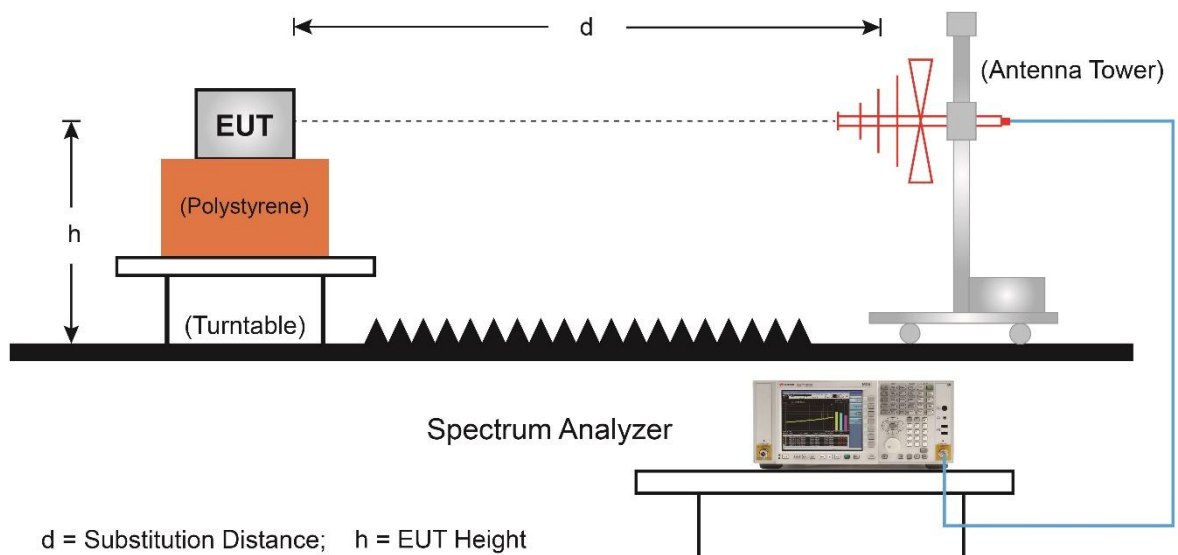
### 5.1. Limit

Spurious emissions limits for receivers		
Frequency Range	Maximum power	Measurement bandwidth
30 MHz to 1 GHz	-57dBm	100 kHz
1 GHz to 12.75 GHz	-47dBm	1 MHz

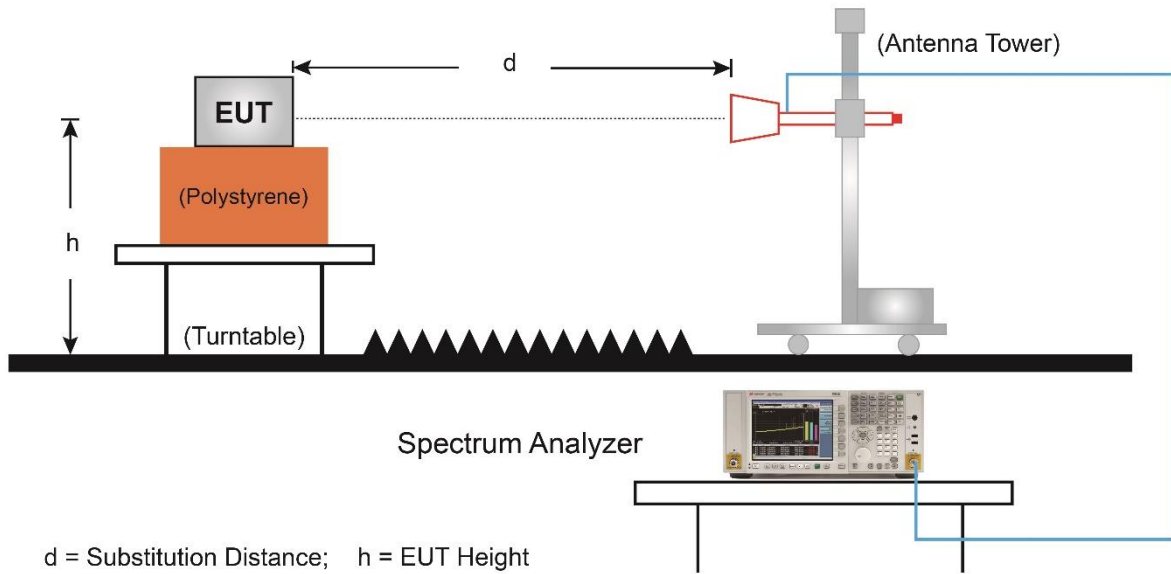
Note: These limits are e.r.p. for emissions up to 1GHz and e.i.r.p. for emissions above 1GHz.

### 5.2. Test Setup

30MHz ~ 1GHz Test Setup:



## 1GHz ~ 12.75GHz Test Setup:


**5.3. Test Procedure**

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.10.2.2.



#### 5.4. Test Result

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/04~2020/08/06	Test Mode	802.11b

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	74.6	-87.5	19.8	-67.7	-57.0	-10.7	Peak	Horizontal
	516.0	-100.4	30.7	-69.7	-57.0	-12.7	Peak	Horizontal
	63.0	-87.7	21.8	-65.9	-57.0	-8.9	Peak	Vertical
	258.4	-87.0	23.4	-63.6	-57.0	-6.6	Peak	Vertical
	1922.4	-48.0	-6.4	-54.4	-47.0	-7.4	Peak	Horizontal
	3849.4	-51.6	-1.4	-53.0	-47.0	-6.0	Peak	Horizontal
	1922.4	-48.8	-6.3	-55.1	-47.0	-8.1	Peak	Vertical
	2880.0	-50.8	-3.3	-54.1	-47.0	-7.1	Peak	Vertical
13	73.7	-88.6	19.9	-68.7	-57.0	-11.7	Peak	Horizontal
	720.2	-102.4	33.7	-68.7	-57.0	-11.7	Peak	Horizontal
	117.3	-89.8	25.8	-64.0	-57.0	-7.0	Peak	Vertical
	368.5	-89.5	26.5	-63.0	-57.0	-6.0	Peak	Vertical
	1922.4	-48.4	-6.4	-54.8	-47.0	-7.8	Peak	Horizontal
	3855.3	-51.7	-1.5	-53.2	-47.0	-6.2	Peak	Horizontal
	1922.4	-50.1	-6.3	-56.4	-47.0	-9.4	Peak	Vertical
	2880.0	-51.6	-3.3	-54.9	-47.0	-7.9	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/04~2020/08/06	Test Mode	802.11g

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	74.6	-88.6	19.8	-68.8	-57.0	-11.8	Peak	Horizontal
	516.0	-100.6	30.7	-69.9	-57.0	-12.9	Peak	Horizontal
	72.7	-87.7	24.2	-63.5	-57.0	-6.5	Peak	Vertical
	417.5	-95.6	27.5	-68.1	-57.0	-11.1	Peak	Vertical
	1922.4	-48.4	-6.4	-54.8	-47.0	-7.8	Peak	Horizontal
	3867.0	-52.2	-1.6	-53.8	-47.0	-6.8	Peak	Horizontal
	1922.4	-49.3	-6.3	-55.6	-47.0	-8.6	Peak	Vertical
	2880.0	-50.6	-3.3	-53.9	-47.0	-6.9	Peak	Vertical
13	73.2	-87.5	20.0	-67.5	-57.0	-10.5	Peak	Horizontal
	516.0	-101.1	30.7	-70.4	-57.0	-13.4	Peak	Horizontal
	73.2	-87.9	24.4	-63.5	-57.0	-6.5	Peak	Vertical
	417.5	-95.2	27.5	-67.7	-57.0	-10.7	Peak	Vertical
	1922.4	-48.0	-6.4	-54.4	-47.0	-7.4	Peak	Horizontal
	3849.4	-51.8	-1.4	-53.2	-47.0	-6.2	Peak	Horizontal
	1922.4	-49.5	-6.3	-55.8	-47.0	-8.8	Peak	Vertical
	2880.0	-50.6	-3.3	-53.9	-47.0	-6.9	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/04~2020/08/06	Test Mode	802.11n-HT20

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
01	74.1	-88.7	19.9	-68.8	-57.0	-11.8	Peak	Horizontal
	860.3	-101.7	34.3	-67.4	-57.0	-10.4	Peak	Horizontal
	66.4	-88.9	22.3	-66.6	-57.0	-9.6	Peak	Vertical
	288.0	-89.1	26.0	-63.1	-57.0	-6.1	Peak	Vertical
	1922.4	-48.2	-6.4	-54.6	-47.0	-7.6	Peak	Horizontal
	2880.0	-51.7	-3.3	-55.0	-47.0	-8.0	Peak	Horizontal
	1922.4	-49.4	-6.3	-55.7	-47.0	-8.7	Peak	Vertical
	2880.0	-50.3	-3.3	-53.6	-47.0	-6.6	Peak	Vertical
13	75.1	-90.0	19.7	-70.3	-57.0	-13.3	Peak	Horizontal
	516.0	-100.7	30.7	-70.0	-57.0	-13.0	Peak	Horizontal
	72.2	-88.4	23.9	-64.5	-57.0	-7.5	Peak	Vertical
	299.7	-89.0	26.0	-63.0	-57.0	-6.0	Peak	Vertical
	1922.4	-48.0	-6.4	-54.4	-47.0	-7.4	Peak	Horizontal
	2880.0	-51.6	-3.3	-54.9	-47.0	-7.9	Peak	Horizontal
	1922.4	-49.1	-6.3	-55.4	-47.0	-8.4	RMS	Vertical
	2880.0	-50.0	-3.3	-53.3	-47.0	-6.3	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Site	SIP-AC2	Test Engineer	Tyler Yuan
Test Date	2020/08/04~2020/08/06	Test Mode	802.11n-HT40

Channel	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
03	72.2	-88.8	20.2	-68.6	-57.0	-11.6	Peak	Horizontal
	860.3	-100.5	34.3	-66.2	-57.0	-9.2	Peak	Horizontal
	236.6	-87.4	21.6	-65.8	-57.0	-8.8	Peak	Vertical
	312.8	-90.1	25.7	-64.4	-57.0	-7.4	Peak	Vertical
	1922.4	-48.6	-6.4	-55.0	-47.0	-8.0	Peak	Horizontal
	3855.3	-51.7	-1.5	-53.2	-47.0	-6.2	Peak	Horizontal
	1922.4	-49.1	-6.3	-55.4	-47.0	-8.4	Peak	Vertical
	2880.0	-50.2	-3.3	-53.5	-47.0	-6.5	Peak	Vertical
11	74.6	-89.0	19.8	-69.2	-57.0	-12.2	Peak	Horizontal
	131.9	-92.6	20.7	-71.9	-57.0	-14.9	Peak	Horizontal
	72.7	-89.1	24.2	-64.9	-57.0	-7.9	Peak	Vertical
	240.0	-86.2	21.8	-64.4	-57.0	-7.4	Peak	Vertical
	1922.4	-48.3	-6.4	-54.7	-47.0	-7.7	Peak	Horizontal
	3849.4	-51.7	-1.4	-53.1	-47.0	-6.1	Peak	Horizontal
	1922.4	-49.4	-6.3	-55.7	-47.0	-8.7	Peak	Vertical
	2880.0	-50.8	-3.3	-54.1	-47.0	-7.1	Peak	Vertical

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

## 6. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Occupied Channel Bandwidth	5 %
RF output power, conducted	1,5 dB
Power Spectral Density, conducted	3 dB
Unwanted Emissions, conducted	3 dB
All emissions, radiated	6 dB
Temperature	3 °C
Supply voltages	3 %
Time	5 %

## 7. List of Measuring Instrument

### Transmitter Spurious Emissions and Receiver Spurious Emissions (WZ-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2022/01/04
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06558	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/08/08
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2021/09/27
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2021/11/14
Thermal Hygrometer	testo	608-H1	MRTSUE06403	1 year	2021/07/26
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2021/04/30

### Transmitter Spurious Emissions and Receiver Spurious Emissions (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2021/07/02
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2021/05/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2021/10/25
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2021/11/14
Thermal Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2021/12/08
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2021/04/30

### Transmitter Spurious Emissions and Receiver Spurious Emissions (SIP-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06645	1 year	2021/08/30
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2021/08/30
Preamplifier	EMCI	EMC051845S E	MRTSUE06600	1 year	2021/11/12
Thermal Hygrometer	testo	608-H1	MRTSUE06620	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2021/12/24

## Transmitter Spurious Emissions and Receiver Spurious Emissions (SIP-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
MXA Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2021/09/26
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06646	1 year	2021/08/30
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06648	1 year	2021/11/26
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06599	1 year	2021/11/26
Preamplifier	EMCI	EMC051845SE	MRTSUE06644	1 year	2021/11/12
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2021/10/13
Thermal Hygrometer	testo	608-H1	MRTSUE06624	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2021/12/24

## Transmitter Spurious Emissions and Receiver Spurious Emissions (SIP-AC3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06647	1 year	2021/08/08
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2021/09/13
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06598	1 year	2021/11/26
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2022/01/15
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2022/01/15
Thermal Hygrometer	testo	608-H1	MRTSUE06622	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2021/12/24

Software	Version	Function
EMI Software	V3	EMI Test Software

\_\_\_\_\_ The End \_\_\_\_\_

## **Appendix A - Test Setup Photograph**

Refer to "2005RSU005-ET" file.



## **Appendix B - EUT Photograph**

Refer to "2005RSU005-EE" file.