


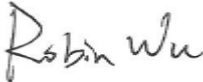
MEASUREMENT REPORT

EN 300 328 V2.2.2 Bluetooth

Applicant: Escape bv
Address: Ter Heidelaan 50a, 3200 Aarschot, Belgium
Product: Portable Indoor/Outdoor Wireless Speaker System
Model No.: Escape P6 BT
Brand Name: ESCAPE
Standards: EN 300 328 V2.2.2 (2019-07)
AS/NZS 4268: 2017
Result: Complies
Test Date: May 14, 2020 ~ January 08, 2021

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.

Revision History

Report No.	Version	Description	Issue Date	Note
2005RSU006-E1	Rev. 01	Initial Report	02-10-2021	Valid

CONTENTS

Description	Page
1. General Information	6
1.1. Applicant.....	6
1.2. Manufacturer	6
1.3. Testing Facility	6
1.4. Feature of Equipment under Test.....	7
1.5. Product Specification Subjective to this Report.....	7
1.6. Channel List	8
1.7. Application Form for Testing	9
1.8. Standards Applicable for Testing.....	10
2. Test Configuration of Equipment under Test	11
2.1. Test Mode	11
2.2. Test Software.....	11
2.3. Test Environment Condition	11
3. Test Summary	12
4. RF Output Power	13
4.1. Limit.....	13
4.2. Test Setup	13
4.3. Test Procedure	13
4.4. Test Result.....	14
5. Power Spectral Density.....	15
5.1. Limit.....	15
5.2. Test Setup	15
5.3. Test Procedure	15
5.4. Test Result.....	15
6. Duty Cycle, Tx-sequence, Tx-gap	16
6.1. Limit.....	16
6.2. Test Setup	16
6.3. Test Procedure	16
6.4. Test Result.....	16
7. Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	17
7.1. Limit.....	17
7.2. Test Setup	18
7.3. Test Procedure	18
7.4. Test Result.....	19
8. Hopping Frequency Separation	21

8.1.	Limit.....	21
8.2.	Test Setup	21
8.3.	Test Procedure	21
8.4.	Test Result.....	22
9.	Medium Utilization (MU) Factor	23
9.1.	Limit.....	23
9.2.	Test Setup	23
9.3.	Test Procedure	23
9.4.	Test Result.....	23
10.	Adaptivity.....	24
10.1.	Limit.....	24
10.2.	Test Setup	25
10.3.	Test Procedure	25
10.4.	Test Result.....	25
11.	Occupied Channel Bandwidth.....	26
11.1.	Limit.....	26
11.2.	Test Setup	26
11.3.	Test Procedure	26
11.4.	Test Result.....	27
12.	Transmitter Unwanted Emissions in the Out-of-Band Domain	29
12.1.	Limit.....	29
12.2.	Test Setup	29
12.3.	Test Procedure	29
12.4.	Test Result.....	30
13.	Transmitter Unwanted Emissions in the Spurious Domain.....	31
13.1.	Limit.....	31
13.2.	Test Setup	31
13.3.	Test Procedure	32
13.4.	Test Result.....	33
14.	Receiver Spurious Emissions	36
14.1.	Limit.....	36
14.2.	Test Setup	36
14.3.	Test Procedure	37
14.4.	Test Result.....	38
15.	Receiver Blocking	41
15.1.	Limit.....	41
15.2.	Test Setup	42

15.3. Test Procedure	42
15.4. Test Result.....	43
16. Measurement Uncertainty.....	45
17. List of Measuring Instrument	46
Appendix A - Test Setup Photograph	50
Appendix B - EUT Photograph.....	51

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="" type="checkbox"/>	<p>Test Site – MRT Suzhou Laboratory</p> <p>Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China</p> <p>Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China</p> <p>Laboratory Accreditations</p> <table border="0" style="width: 100%;"> <tr> <td>A2LA: 3628.01</td> <td>CNAS: L10551</td> </tr> <tr> <td>FCC: CN1166</td> <td>ISED: CN0001</td> </tr> <tr> <td colspan="2">VCCI: R-20025, G-20034, C-20020, T-20020</td> </tr> </table>	A2LA: 3628.01	CNAS: L10551	FCC: CN1166	ISED: CN0001	VCCI: R-20025, G-20034, C-20020, T-20020	
A2LA: 3628.01	CNAS: L10551						
FCC: CN1166	ISED: CN0001						
VCCI: R-20025, G-20034, C-20020, T-20020							
<input type="checkbox"/>	<p>Test Site – MRT Shenzhen Laboratory</p> <p>Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China</p> <p>Laboratory Accreditations</p> <table border="0" style="width: 100%;"> <tr> <td>A2LA: 3628.02</td> <td>CNAS: L10551</td> </tr> <tr> <td>FCC: CN1284</td> <td>ISED: CN0105</td> </tr> </table>	A2LA: 3628.02	CNAS: L10551	FCC: CN1284	ISED: CN0105		
A2LA: 3628.02	CNAS: L10551						
FCC: CN1284	ISED: CN0105						
<input type="checkbox"/>	<p>Test Site – MRT Taiwan Laboratory</p> <p>Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)</p> <p>Laboratory Accreditations</p> <table border="0" style="width: 100%;"> <tr> <td>TAF: L3261-190725</td> <td></td> </tr> <tr> <td>FCC: 291082, TW3261</td> <td>ISED: TW3261</td> </tr> </table>	TAF: L3261-190725		FCC: 291082, TW3261	ISED: TW3261		
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 BT
Brand Name:	ESCAPE
Bluetooth Version:	V5.0 (Single mode for BR/EDR)
Operating Temperature:	0 ~ 60°C
Product Voltage:	100-120/220-240V ~ 50/60Hz; 100W
Test Device Serial Number:	P6 BT 2004P0202F8C

1.5. Product Specification Subjective to this Report

Operating Frequency:	2402~2480MHz
Channel Number:	79
Channel Spacing:	1MHz
Type of modulation:	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate:	1Mbps (GFSK), 2Mbps (Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Type:	Omni Antenna
Antenna Gain:	2dBi

Note: Above antenna information is provided by applicant.

1.6. Channel List

For Bluetooth

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

1.7. Application Form for Testing

Modulation Type	
<input checked="" type="checkbox"/>	FHSS
<input type="checkbox"/>	other forms of modulation
Adaptivity Equipment	
<input type="checkbox"/>	Non-Adaptive Equipment:
	The maximum RF Output Power (e.i.r.p.): ... dBm
	The maximum (corresponding) Duty Cycle: ... %
<input checked="" type="checkbox"/>	Adaptive Equipment without the possibility to switch to a non-adaptive mode:
<input type="checkbox"/>	The equipment has implemented an LBT based DAA mechanism:
	<ul style="list-style-type: none"> ● In case of equipment using modulation different from FHSS:
	<input type="checkbox"/> The equipment is Frame Based equipment
	<input type="checkbox"/> The equipment is Load Based equipment
	<input type="checkbox"/> The equipment can switch dynamically between Frame Based and Load Based equipment
<input checked="" type="checkbox"/>	The equipment has implemented an non-LBT based DAA mechanism
<input type="checkbox"/>	The equipment can operate in more than one adaptive mode
<input type="checkbox"/>	Adaptive Equipment which can also operate in a non-adaptive mode
The Worst-Case Operational Mode for Each of The Following Tests	
<input checked="" type="checkbox"/>	RF Output Power: 3.26dBm
<input type="checkbox"/>	Power Spectral Density:
<input type="checkbox"/>	Duty cycle, Tx-Sequence, Tx-gap:
<input checked="" type="checkbox"/>	Dwell time, Minimum Frequency Occupation & Hopping Sequence: 60.42ms, 1, 95%
<input type="checkbox"/>	Medium Utilization:
<input type="checkbox"/>	Adaptivity:
<input checked="" type="checkbox"/>	Occupied Channel Bandwidth: 1.19MHz
<input checked="" type="checkbox"/>	Transmitter unwanted emissions in the OOB domain: -47.02dBm/MHz
<input checked="" type="checkbox"/>	Transmitter unwanted emissions in the spurious domain: -60.6dBm
<input checked="" type="checkbox"/>	Receiver spurious emissions: -65.6dBm
<input checked="" type="checkbox"/>	Receiver Blocking: 3.3%
Antenna Category	
<input checked="" type="checkbox"/>	Integral antenna (antenna permanently attached)
<input type="checkbox"/>	Temporary RF connector provided
<input checked="" type="checkbox"/>	No temporary RF connector provided
<input type="checkbox"/>	Dedicated antenna (equipment with antenna connector)

Device Type			
<input checked="" type="checkbox"/>	Stand-alone equipment		
<input type="checkbox"/>	Combined equipment		
<input type="checkbox"/>	Plug-in radio device		
<input type="checkbox"/>	Other		
Operating Conditions			
<input checked="" type="checkbox"/>	AC Mains AC Voltage Range: 100-120/220-240V	<input checked="" type="checkbox"/>	DC State DC Voltage: 16V 3.3A
Type of DC Source		<input type="checkbox"/> Internal DC supply <input type="checkbox"/> External power supply or AC/DC adapter <input checked="" type="checkbox"/> Battery	
<input checked="" type="checkbox"/>	Temperature Range: 0 ~ 60°C		
Geo-location Capability Supported by the Equipment			
<input type="checkbox"/>	Yes <input type="checkbox"/> The geographical location determined by the equipment is not accessible to the user.		
<input checked="" type="checkbox"/>	No		

1.8. Standards Applicable for Testing

The EUT complies with the requirements of ETSI EN 300 328 V2.2.2 and AS/NZS 4268: 2017.

2. Test Configuration of Equipment under Test

2.1. Test Mode

Test Mode
Mode 1: Transmit by DH5
Mode 2: Transmit by 2DH5
Mode 3: Transmit by 3DH5
Mode 4: Receive by DH5
Mode 5: Receive by 2DH5
Mode 6: Receive by 3DH5

2.2. Test Software

The test utility software used during testing was “BlueTest3”, and the version was “V2.6.9”.

2.3. Test Environment Condition

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

3. Test Summary

Clause (EN 300328)	Test Item	Result (Pass/Fail)	Remark
Transmitter Parameter			
4.3.1.2 4.3.2.2	RF Output Power	Pass	--
4.3.2.3	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Spectral Density	N/A	Only for equipment using wide band modulations
4.3.1.4 4.3.1.5	Hopping Frequency Requirements	Pass	--
4.3.1.8 4.3.2.7	Occupied Channel Bandwidth	Pass	--
4.3.1.9 4.3.2.8	Transmitter Unwanted Emissions in the Out-of-Band Domain	Pass	--
4.3.1.10 4.3.2.9	Transmitter Unwanted Emissions in the Spurious Domain	Pass	--
Receiver Parameter			
4.3.1.11 4.3.2.10	Receiver Spurious Emissions	Pass	--
4.3.1.12 4.3.2.11	Receiver Blocking	Pass	--
Adaptive Test Item			
4.3.1.7 4.3.2.6	Adaptivity	N/A	Only applicable for adaptive equipment output power >10dBm
Non-Adaptive Test Item			
4.3.1.3 4.3.2.4	Duty Cycle, Tx-Sequence, Tx-gap	N/A	Only applicable for non-adaptive equipment output power >10dBm
4.3.1.6 4.3.2.5	Medium Utilization (MU) Factor	N/A	
Geo-location Mechanism			
4.3.1.13 4.3.2.12	Geo-Location Capability	N/A	This device doesn't have geo-location capability.
<p>Note 1: The device belongs to adaptive equipment.</p> <p>Note 2: 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.</p> <p>Note 3: "N/A" means that the test item is not applicable, and the details refer to relevant section.</p>			

4. RF Output Power

4.1. Limit

For Adaptive Frequency Hopping Systems

The maximum RF output power for adaptive Frequency Hopping equipment shall be equal to or less than 20dBm.

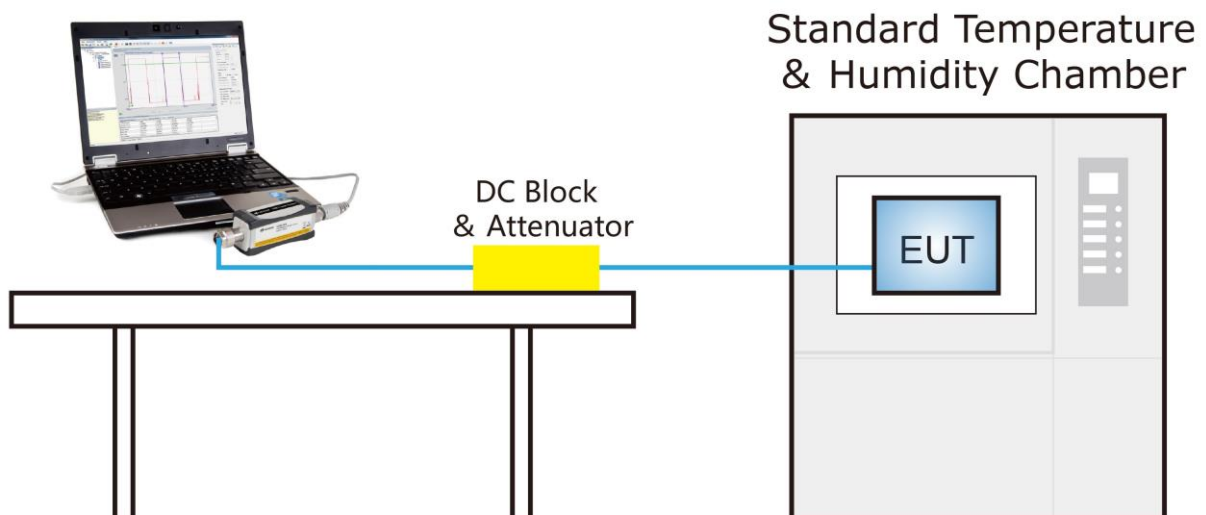
For Adaptive Wide Band Modulations Systems

The maximum RF output power for adaptive equipment using wide band modulations other than FHSS shall be equal to or less than 20dBm.

Test Conditions	Limit
Normal and Extreme Temperature Conditions	20 dBm (E.I.R.P)

4.2. Test Setup

Conducted Measurements



4.3. Test Procedure

1. Make the EUT transmit continuously.
2. Connect the power sensor to one of transmit ports, other ports connect with 50Ω impedance.
3. Use the software & trigger function to measure one burst (TX_{on} time) power and measure total 12 bursts power continuously, then add total power level and compute the average power level P₀ (dBm).

4.4. Test Result

Product	Portable Indoor/Outdoor Wireless Speaker System	Test Engineer	Dandy Li
Test Site	WZ-TR3	Test Date	2020/05/21

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Average Power (dBm)			Max EIRP Power (dBm)	Limit (dBm)	Result
				Normal	Extreme				
				25°C	0°C	60°C			
DH5	1	00 ~ 78	2402 ~ 2480	1.12	1.26	1.05	3.26	20	Pass
2DH5	2	00 ~ 78	2402 ~ 2480	-1.81	-1.67	-1.95	0.33	20	Pass
3DH5	3	00 ~ 78	2402 ~ 2480	-1.85	-1.73	-2.04	0.27	20	Pass

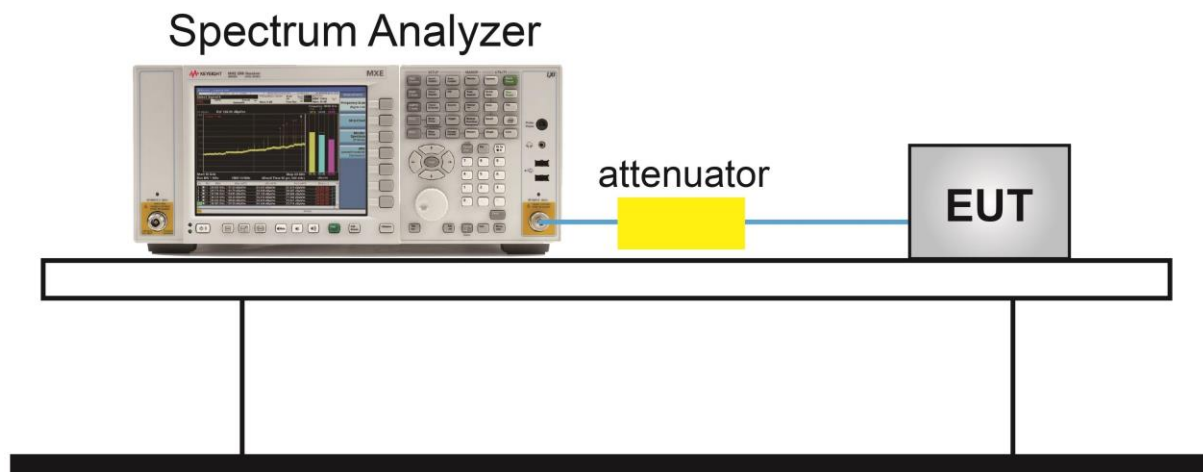
Note: Max EIRP Power (dBm) = Average Power (dBm) + Antenna Gain (dBi), Antenna Gain=2dBi.

5. Power Spectral Density

5.1. Limit

For equipment using wide band modulations other than FHSS, the maximum Power Spectral Density is limited to 10dBm per MHz.

5.2. Test Setup



5.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.3.2.1 (Option 1).

5.4. Test Result

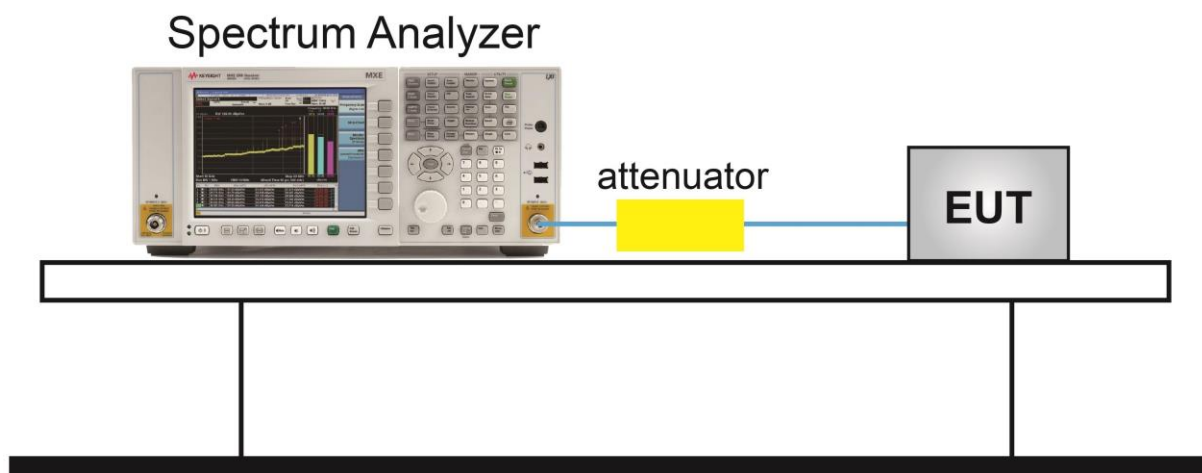
This requirement applies to all types of equipment using wide band modulations other than FHSS. So this item is not applicable.

6. Duty Cycle, Tx-sequence, Tx-gap

6.1. Limit

The Duty Cycle shall be equal to or less than the maximum value declared by the manufacturer. The Tx-sequence time shall be equal to or less than 10 ms. The minimum Tx-gap time following a Tx-sequence shall be equal to the duration of that proceeding Tx-sequence with a minimum of 3.5 ms.

6.2. Test Setup



6.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.2.2.1.3.

6.4. Test Result

These requirements apply to non-adaptive frequency hopping equipment or to adaptive frequency hopping equipment operating in a non-adaptive mode.

These requirements do not apply for equipment with a maximum declared RF Output power of less than 10dBm E.I.R.P. So this item is not applicable.

7. Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

7.1. Limit

For Non-Adaptive Frequency Hopping Systems

The Accumulated Transmit Time on any hopping frequency shall not be greater than 15 ms within any observation period of 15 ms multiplied by the minimum number of hopping frequencies (N) that have to be used.

In order for the equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options:

Option 1: Each hopping frequency of the hopping sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use.

Option 2: The occupation probability for each frequency shall be between $((1 / U) \times 25 \%)$ and 77 % where U is the number of hopping frequencies in use.

The hopping sequence(s) shall contain at least N hopping frequencies where N is either 5 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater.

For Adaptive Frequency Hopping Systems

Adaptive Frequency Hopping systems shall be capable of operating over a minimum of 70 % of the band specified 2400-2483.5MHz.

The Accumulated Transmit Time on any hopping frequency shall not be greater than 400 ms within any period of 400 ms multiplied by the minimum number of hopping frequencies (N) that have to be used.

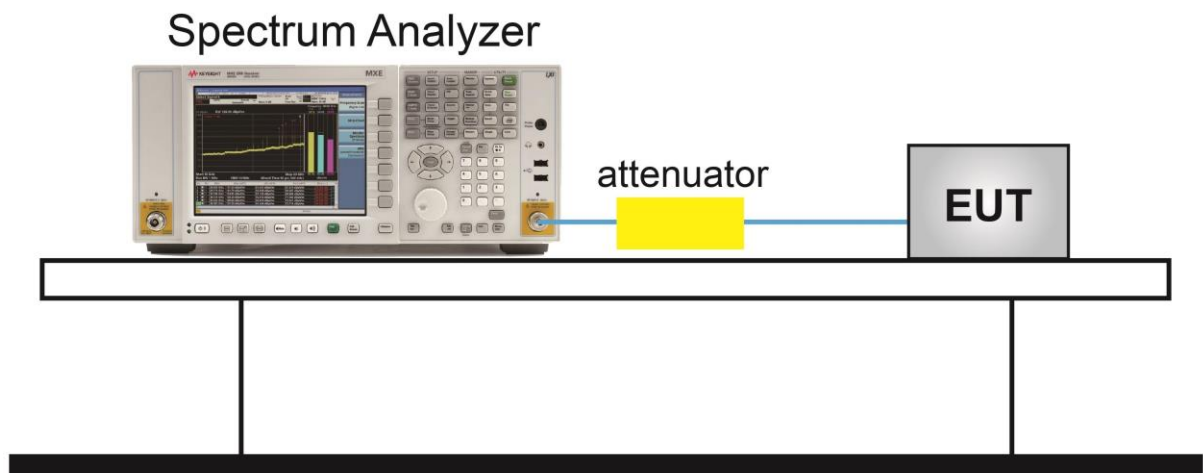
In order for the equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options:

Option 1: Each hopping frequency of the hopping sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use.

Option 2: The occupation probability for each frequency shall be between $((1 / U) \times 25 \%)$ and 77 % where U is the number of hopping frequencies in use.

The hopping sequence(s) shall contain at least N hopping frequencies at all times, where N is either 15 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater.

7.2. Test Setup



7.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.4.2.1.

7.4. Test Result

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/14		
Test Item	Accumulated Transmit Time		

Test Mode	Frequency (MHz)	Dwell Time per Hop (ms)	Number of Hops per Channel in a 6s Period	Maximum Dwell Time in a 6s Period (ms)	Limit (ms)
DH1	2402	0.38	61	23.00	≤ 400
	2480	0.38	61	23.12	≤ 400
DH3	2402	1.63	31	50.50	≤ 400
	2480	1.63	30	48.93	≤ 400
DH5	2402	2.88	20	57.56	≤ 400
	2480	2.88	21	60.42	≤ 400

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/14		
Test Item	Frequency Occupation		

Test Mode	Frequency (MHz)	Actual Hopping Number for Each Hopping Frequency within a Period	Limit
DH1	2402	2	≥ 1
	2480	1	≥ 1
DH3	2402	2	≥ 1
	2480	2	≥ 1
DH5	2402	3	≥ 1
	2480	3	≥ 1

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/14		
Test Item	Hopping Sequence		

Test Mode	Occupied Band	Limit	Channel Number	Limit
DH1	95%	$\geq 70\%$	79	≥ 15
DH3	95%	$\geq 70\%$	79	≥ 15
DH5	95%	$\geq 70\%$	79	≥ 15

Test Result	Pass
-------------	------

8. Hopping Frequency Separation

8.1. Limit

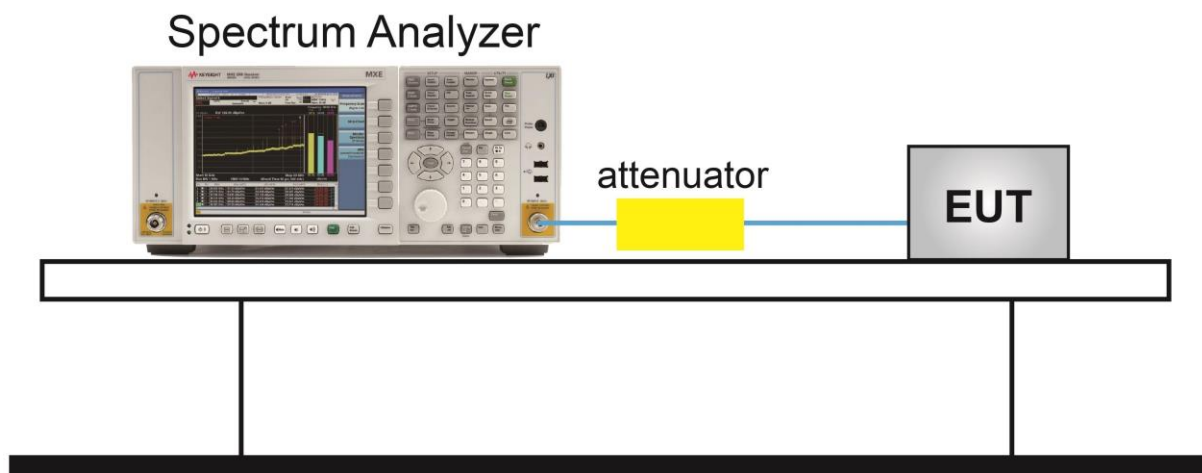
For Non-Adaptive Frequency Hopping Systems

The Hopping Frequency Separation shall be equal to or greater than the Occupied Channel Bandwidth, with a minimum separation of 100 kHz.

For Adaptive Frequency Hopping Systems

The minimum Hopping Frequency Separation shall be 100 kHz.

8.2. Test Setup



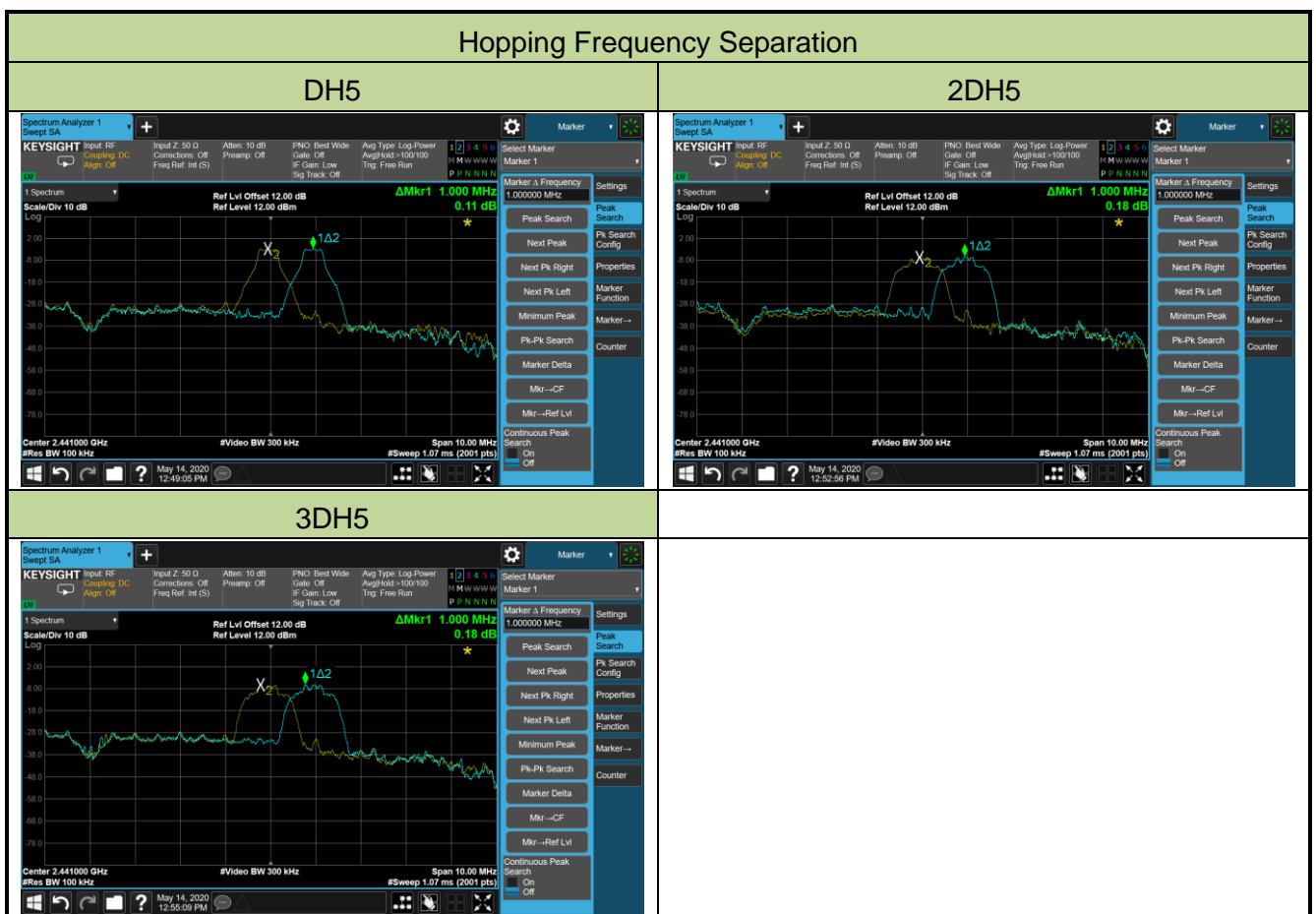
8.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.5.2.1 (Option 1).

8.4. Test Result

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/14		

Test Mode	Channel No.	Frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
DH5	39	2441	1.0	≥ 0.1	Pass
2DH5	39	2441	1.0	≥ 0.1	Pass
3DH5	39	2441	1.0	≥ 0.1	Pass

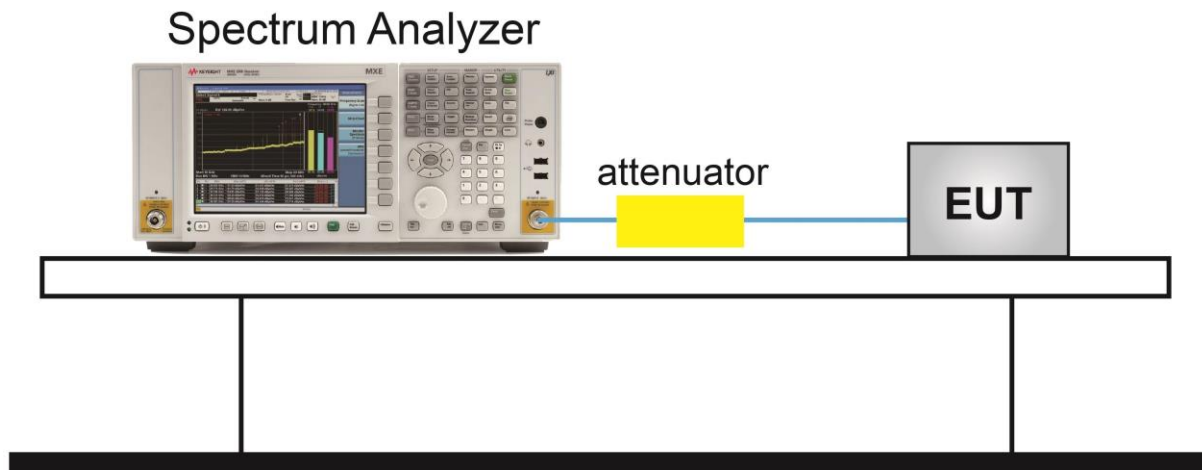


9. Medium Utilization (MU) Factor

9.1. Limit

The maximum Medium Utilization factor for non-adaptive Frequency Hopping equipment shall be 10 %.

9.2. Test Setup



9.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.2.2.1.4.

9.4. Test Result

This requirement does not apply to adaptive equipment unless operating in a non-adaptive mode. In addition, this requirement does not apply for equipment with a maximum declared RF Output power level of less than 10dBm E.I.R.P. or for equipment when operating in a mode where the RF Output power is less than 10dBm E.I.R.P. So this item is not applicable.

10. Adaptivity

10.1. Limit

LBT based Detect and Avoid (Load Based Equipment may implement an LBT based spectrum sharing mechanism as described in IEEE 802.11-2012 clauses 9, 10, 16, 17, 19 and 20 or in IEEE 802.15.4-2011, clauses 4, 5 and 8.)

Adaptivity Limit

The CCA observation time shall be not less than 18 us.

The Channel Occupancy Time shall be less than 13 ms.

The minimum idle period shall be not less than 18 us.

When adding the interference signal, the EUT shall stop transmissions on the current operating channel.

Short Control Signaling Transmissions Limit

Short Control Signaling Transmissions shall have a maximum ratio of 10% within an observation period of 50ms.

Adaptive equipment shall comply with the requirements in the presence of an unwanted Signal with characteristics as below.

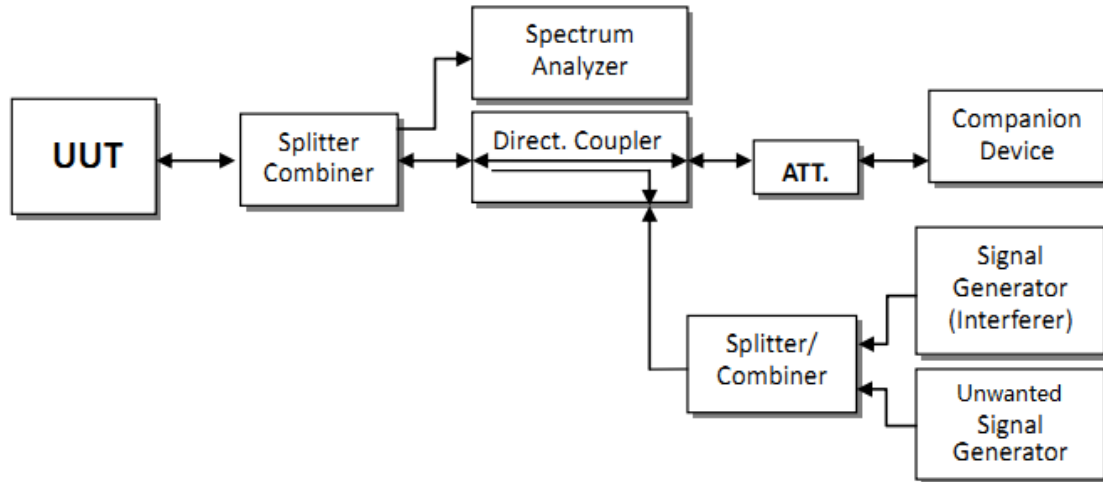
Unwanted Signal Parameters			
Wanted signal mean power from companion device (dBm)	Unwanted signal frequency (MHz)	Unwanted signal power (dBm)	Type of interfering signal
-30	2395 or 2488.5 (see note 1)	-35	CW

Note 1: The highest frequency shall be used for testing operating channels within the range 2400 MHz to 2442 MHz, while the lowest frequency shall be used for testing operating channels within the range 2442 MHz to 2483.5 MHz.

Note 2: The level specified is the level in front of the UUT antenna. In case of conducted measurements, this level has to be corrected by the actual antenna assembly gain.

With the interfering signal present, adding the unwanted signal, the EUT didn't resume any normal transmissions. When remove the interference and unwanted signal, the EUT was allowed to start transmissions again on this channel.

10.2. Test Setup



10.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.6.2.1.

10.4. Test Result

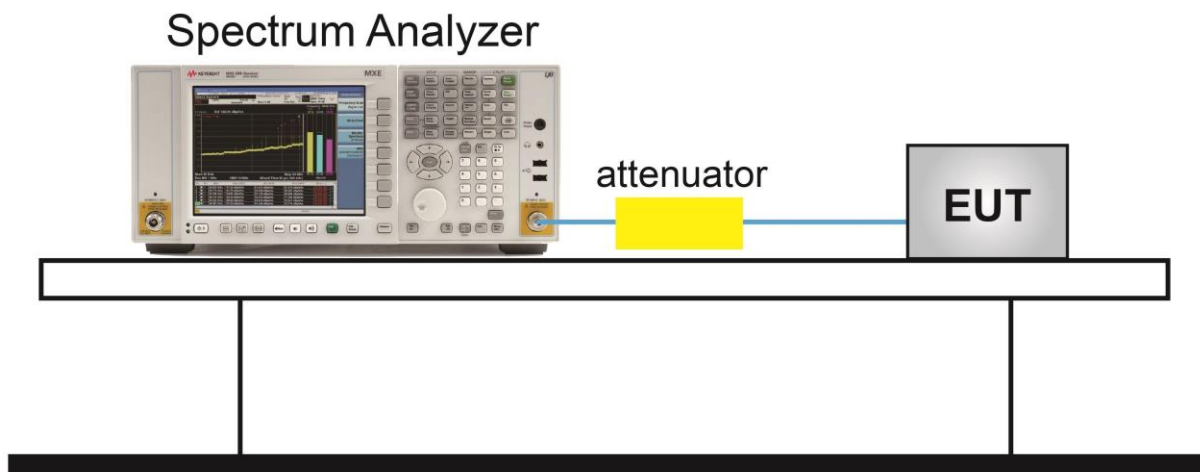
This requirement does not apply for equipment with a maximum declared RF Output power level of less than 10dBm E.I.R.P. or for equipment when operating in a mode where the RF Output power is less than 10dBm E.I.R.P. So this item is not applicable.

11. Occupied Channel Bandwidth

11.1. Limit

The Occupied Channel Bandwidth shall fall completely within the band given in 2.4GHz to 2.4835GHz.

11.2. Test Setup



11.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.7.2.1.

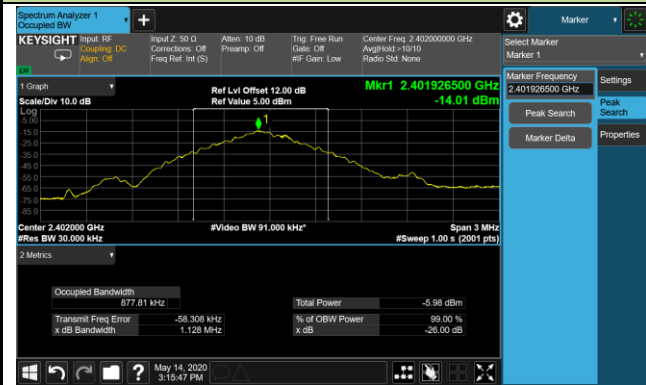
11.4. Test Result

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/14		

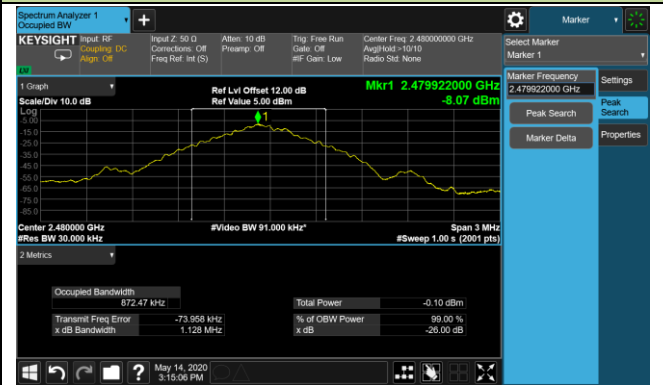
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Frequency Range (MHz)	Result
DH5	1	00	2402	0.88	2401.56	Pass
DH5	1	78	2480	0.87	2480.44	Pass
2DH5	2	00	2402	1.18	2401.41	Pass
2DH5	2	78	2480	1.18	2480.59	Pass
3DH5	3	00	2402	1.19	2401.40	Pass
3DH5	3	78	2480	1.19	2480.60	Pass

DH5 Occupied Channel Bandwidth

Channel 00 (2402MHz)

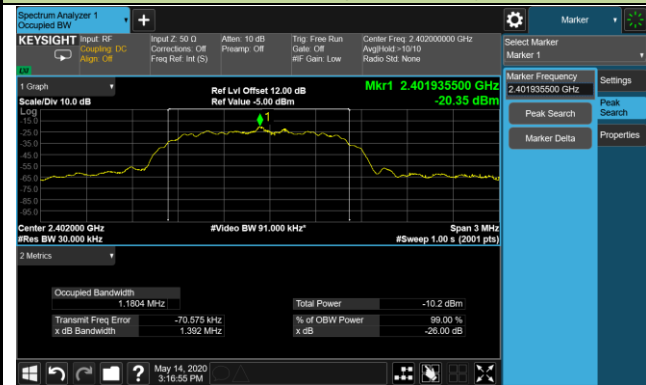


Channel 78 (2480MHz)



2DH5 Occupied Channel Bandwidth

Channel 00 (2402MHz)



Channel 78 (2480MHz)

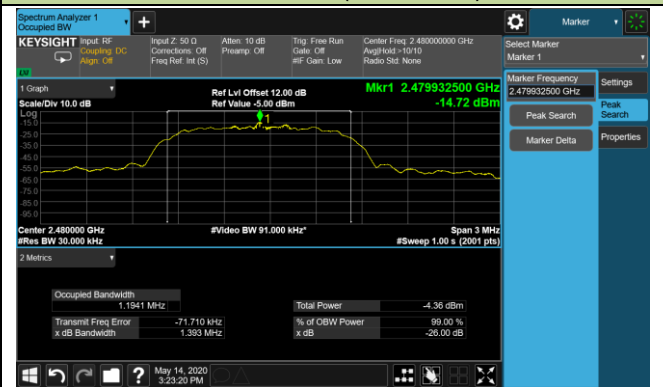


3DH5 Occupied Channel Bandwidth

Channel 00 (2402MHz)



Channel 78 (2480MHz)



12. Transmitter Unwanted Emissions in the Out-of-Band Domain

12.1. Limit

The transmitter unwanted emissions in the out-of-band domain but outside the allocated band, shall not exceed the values provided by the mask in figure.

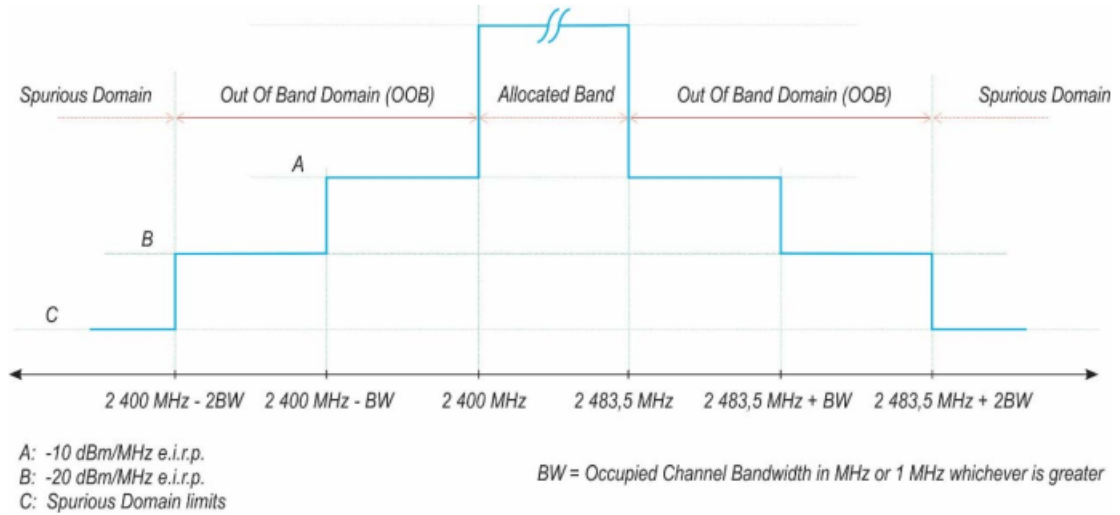
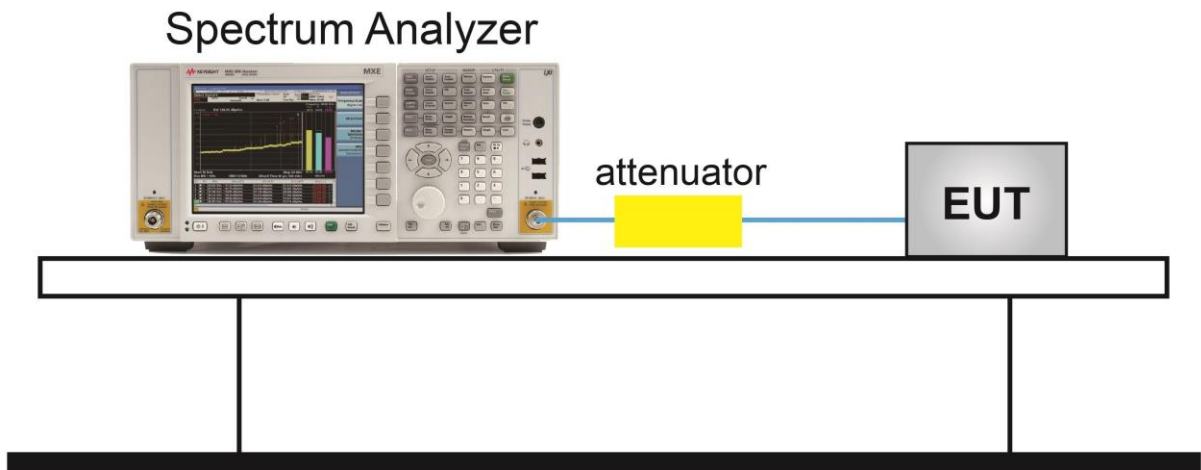


Figure: Transmit mask

12.2. Test Setup

Conducted Measurements



12.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.8.2.1.

12.4. Test Result

Test Site	WZ-TR3	Test Engineer	Dandy Li
Test Date	2020/05/21		
Test Mode	Hopping Mode		

Test Mode	Data Rate (Mbps)	Frequency Range (MHz)	Worst Level (dBm/MHz)	Total Worst Level (dBm/MHz)	Limit (dBm/MHz)	Result
DH5	1	2400-2BW ~ 2400-BW	-67.57	-65.57	-20	Pass
	1	2400-BW ~ 2400	-65.29	-63.29	-10	Pass
	1	2483.5 ~ 2483.5+BW	-67.15	-65.15	-10	Pass
	1	2483.5+BW ~ 2483.5+2BW	-67.52	-65.52	-20	Pass
2DH5	2	2400-2BW ~ 2400-BW	-67.15	-65.15	-20	Pass
	2	2400-BW ~ 2400	-61.60	-59.60	-10	Pass
	2	2483.5 ~ 2483.5+BW	-67.60	-65.60	-10	Pass
	2	2483.5+BW ~ 2483.5+2BW	68.28	70.28	-20	Pass
3DH5	3	2400-2BW ~ 2400-BW	-67.74	-65.74	-20	Pass
	3	2400-BW ~ 2400	-60.17	-58.17	-10	Pass
	3	2483.5 ~ 2483.5+BW	-49.04	-47.04	-10	Pass
	3	2483.5+BW ~ 2483.5+2BW	-49.02	-47.02	-20	Pass

Note: Total Worst Level (dBm/MHz) = Worst Level (dBm/MHz) + Antenna Gain (dBi), Antenna Gain = 2.00dBi.

13. Transmitter Unwanted Emissions in the Spurious Domain

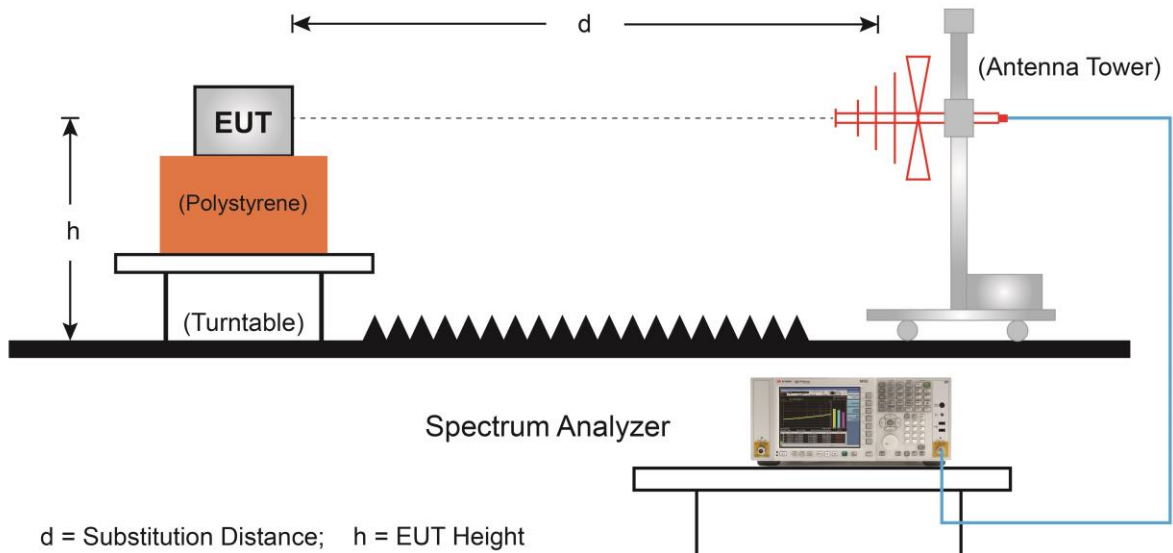
13.1. Limit

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

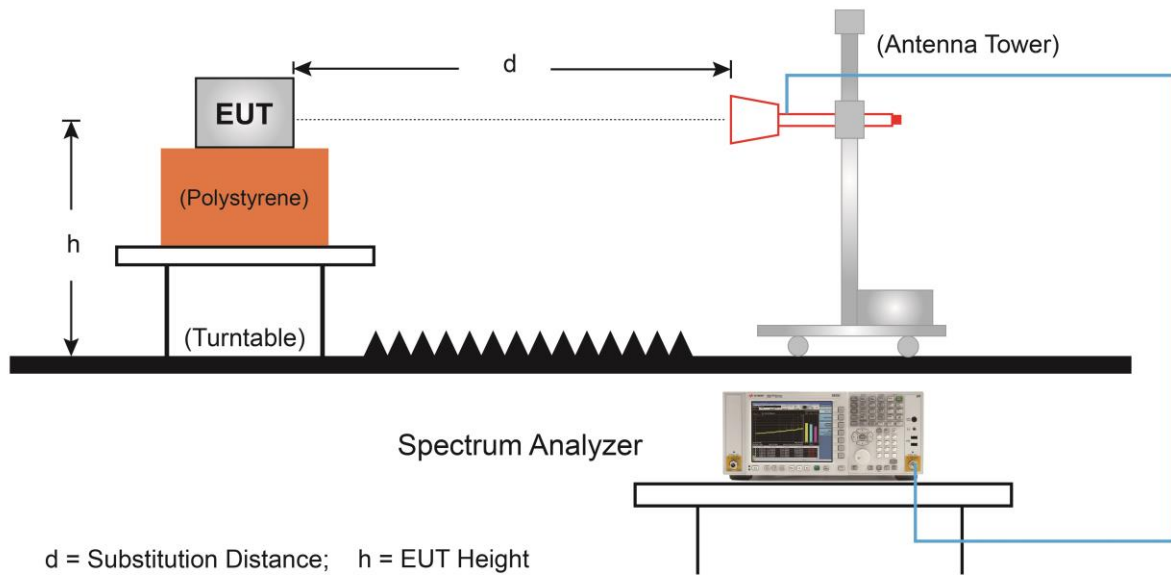
Note: These limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

13.2. Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 12.75GHz Test Setup:



13.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.9.2.2.

13.4. Test Result

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	60.0	-102.6	25.7	-76.9	-54.0	-22.9	RMS	Horizontal
	103.4	-101.3	19.0	-82.3	-54.0	-28.3	RMS	Horizontal
	54.3	-98.3	25.5	-72.8	-54.0	-18.8	RMS	Vertical
	98.9	-101.3	28.2	-73.1	-54.0	-19.1	RMS	Vertical
	4807.0	-65.3	17.0	-48.3	-30.0	-18.3	Peak	Horizontal
	10823.0	-70.0	28.3	-41.7	-30.0	-11.7	Peak	Horizontal
	6786.9	-68.5	20.4	-48.1	-30.0	-18.1	Peak	Vertical
	8984.1	-68.2	24.8	-43.4	-30.0	-13.4	Peak	Vertical
78	58.6	-86.3	25.6	-60.7	-54.0	-6.7	Peak	Horizontal
	101.3	-83.3	18.8	-64.5	-54.0	-10.5	Peak	Horizontal
	56.2	-103.0	25.9	-77.1	-54.0	-23.1	RMS	Vertical
	88.7	-98.2	31.1	-67.1	-54.0	-13.1	RMS	Vertical
	4959.8	-67.5	17.7	-49.8	-30.0	-19.8	Peak	Horizontal
	7439.0	-66.2	22.3	-43.9	-30.0	-13.9	Peak	Horizontal
	4959.8	-61.6	16.7	-44.9	-30.0	-14.9	Peak	Vertical
	7439.0	-65.2	22.3	-42.9	-30.0	-12.9	Peak	Vertical

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

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	2DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	55.3	-98.3	26.3	-72.0	-54.0	-18.0	RMS	Horizontal
	95.3	-95.3	18.8	-76.5	-54.0	-22.5	RMS	Horizontal
	90.3	-102.3	31.6	-70.7	-54.0	-16.7	RMS	Vertical
	100.3	-105.3	28.4	-76.9	-54.0	-22.9	RMS	Vertical
	4724.8	-67.9	16.9	-51.0	-30.0	-21.0	Peak	Horizontal
	7063.0	-68.8	21.9	-46.9	-30.0	-16.9	Peak	Horizontal
	4801.1	-67.0	16.4	-50.6	-30.0	-20.6	Peak	Vertical
	7897.3	-68.1	22.6	-45.5	-30.0	-15.5	Peak	Vertical
78	56.7	-102.3	25.8	-76.5	-54.0	-22.5	RMS	Horizontal
	91.1	-89.3	19.1	-70.2	-54.0	-16.2	RMS	Horizontal
	55.4	-98.3	25.8	-72.5	-54.0	-18.5	RMS	Vertical
	97.4	-102.3	28.0	-74.3	-54.0	-20.3	RMS	Vertical
	5030.3	-68.1	18.2	-49.9	-30.0	-19.9	Peak	Horizontal
	9665.6	-69.4	27.3	-42.1	-30.0	-12.1	Peak	Horizontal
	4959.8	-65.3	16.7	-48.6	-30.0	-18.6	Peak	Vertical
	7439.0	-68.6	22.3	-46.3	-30.0	-16.3	Peak	Vertical

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

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	3DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	98.4	-95.6	18.6	-77.0	-54.0	-23.0	RMS	Horizontal
	179.4	-102.3	28.2	-74.1	-54.0	-20.1	RMS	Horizontal
	47.3	-102.6	23.8	-78.8	-54.0	-24.8	RMS	Vertical
	98.3	-98.1	28.2	-69.9	-54.0	-15.9	RMS	Vertical
	5230.0	-54.7	17.6	-37.1	-30.0	-7.1	Peak	Horizontal
	7444.9	-67.7	22.2	-45.5	-30.0	-15.5	Peak	Horizontal
	4466.3	-68.5	15.5	-53.0	-30.0	-23.0	Peak	Vertical
	7068.9	-69.3	21.9	-47.4	-30.0	-17.4	Peak	Vertical
78	58.6	-86.2	25.6	-60.6	-54.0	-6.6	Peak	Horizontal
	106.3	-98.3	19.4	-78.9	-54.0	-24.9	RMS	Horizontal
	52.3	-98.3	25.3	-73.0	-54.0	-19.0	RMS	Vertical
	114.3	-102.3	31.9	-70.4	-54.0	-16.4	RMS	Vertical
	5065.5	-69.2	18.2	-51.0	-30.0	-21.0	Peak	Horizontal
	7533.0	-68.4	22.4	-46.0	-30.0	-16.0	Peak	Horizontal
	4959.8	-67.1	16.7	-50.4	-30.0	-20.4	Peak	Vertical
	10870.0	-69.0	28.8	-40.2	-30.0	-10.2	Peak	Vertical

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

14. Receiver Spurious Emissions

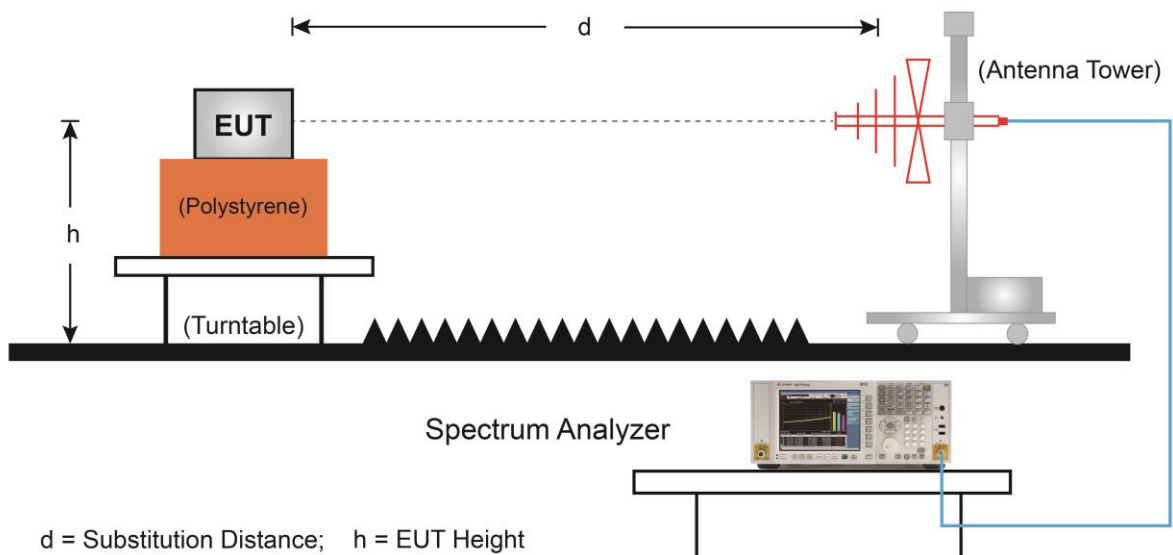
14.1. Limit

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

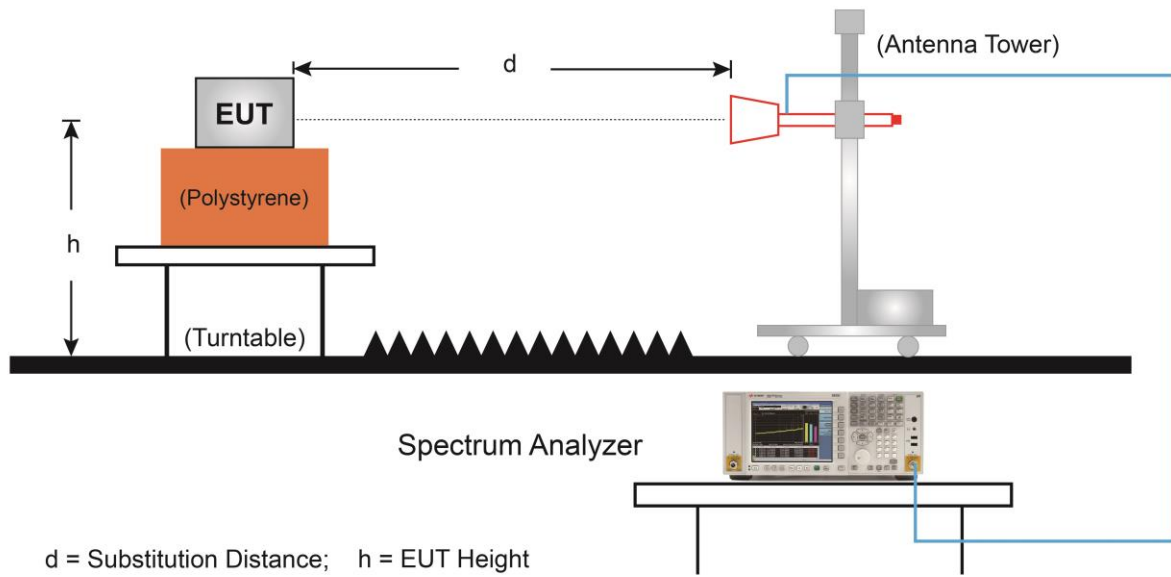
Note: These limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

14.2. Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 12.75GHz Test Setup:



14.3. Test Procedure

Refer to ETSI EN300 328 V2.2.2 (2019-07) Clause 5.4.10.2.2.

14.4. Test Result

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	92.2	-98.6	19.0	-79.6	-57.0	-22.6	RMS	Horizontal
	143.3	-99.6	26.3	-73.3	-57.0	-16.3	RMS	Horizontal
	72.2	-99.3	29.2	-70.1	-57.0	-13.1	RMS	Vertical
	85.3	-102.3	31.9	-70.4	-57.0	-13.4	RMS	Vertical
	3167.9	-55.5	-7.7	-63.2	-47.0	-16.2	Peak	Horizontal
	4689.5	-56.8	-4.9	-61.7	-47.0	-14.7	Peak	Horizontal
	2656.8	-47.1	-9.3	-56.4	-47.0	-9.4	Peak	Vertical
	5000.9	-56.3	-4.1	-60.4	-47.0	-13.4	Peak	Vertical
78	49.9	-102.7	28.1	-74.6	-57.0	-17.6	RMS	Horizontal
	91.1	-95.6	19.1	-76.5	-57.0	-19.5	RMS	Horizontal
	83.3	-105.0	31.4	-73.6	-57.0	-16.6	RMS	Vertical
	88.3	-102.3	31.1	-71.2	-57.0	-14.2	RMS	Vertical
	1904.8	-48.5	-12.3	-60.8	-47.0	-13.8	Peak	Horizontal
	6428.5	-57.1	0.0	-57.1	-47.0	-10.1	Peak	Horizontal
	2662.6	-48.4	-9.1	-57.5	-47.0	-10.5	Peak	Vertical
	4160.8	-56.0	-5.9	-61.9	-47.0	-14.9	Peak	Vertical

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

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	2DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	93.1	-95.3	18.9	-76.4	-57.0	-19.4	RMS	Horizontal
	101.7	-94.3	18.8	-75.5	-57.0	-18.5	RMS	Horizontal
	60.1	-95.6	24.8	-70.8	-57.0	-13.8	RMS	Vertical
	85.3	-95.3	31.9	-63.4	-57.0	-6.4	RMS	Vertical
	2457.0	-52.4	-9.9	-62.3	-47.0	-15.3	Peak	Horizontal
	4160.8	-56.0	-5.9	-61.9	-47.0	-14.9	Peak	Horizontal
	2662.6	-47.4	-9.1	-56.5	-47.0	-9.5	Peak	Vertical
	3708.4	-53.5	-6.9	-60.4	-47.0	-13.4	Peak	Vertical
78	60.3	-95.3	25.8	-69.5	-57.0	-12.5	RMS	Horizontal
	97.3	-99.6	18.6	-81.0	-57.0	-24.0	RMS	Horizontal
	47.6	-97.3	23.8	-73.5	-57.0	-16.5	RMS	Vertical
	84.3	-98.3	31.8	-66.5	-57.0	-9.5	RMS	Vertical
	3573.3	-56.2	-6.9	-63.1	-47.0	-16.1	Peak	Horizontal
	4419.3	-56.4	-5.3	-61.7	-47.0	-14.7	Peak	Horizontal
	1693.3	-43.7	-13.7	-57.4	-47.0	-10.4	Peak	Vertical
	3731.9	-53.6	-6.5	-60.1	-47.0	-13.1	Peak	Vertical

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

Test Site	WZ-AC1	Test Engineer	Antony Yang
Test Date	2021/01/08	Test Mode	3DH5

Channel No.	Frequency (MHz)	Reading Level (dBm)	Substitution Factor (dB)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarization
00	88.3	-89.5	19.6	-69.9	-57.0	-12.9	RMS	Horizontal
	143.3	-95.7	26.3	-69.4	-57.0	-12.4	RMS	Horizontal
	81.5	-98.3	32.5	-65.8	-57.0	-8.8	RMS	Vertical
	97.4	-98.2	28.0	-70.2	-57.0	-13.2	RMS	Vertical
	2415.9	-51.0	-9.6	-60.6	-47.0	-13.6	Peak	Horizontal
	4448.6	-56.1	-5.3	-61.4	-47.0	-14.4	Peak	Horizontal
	2662.6	-48.3	-9.1	-57.4	-47.0	-10.4	Peak	Vertical
	4507.4	-56.5	-5.0	-61.5	-47.0	-14.5	Peak	Vertical
78	60.3	-94.3	25.8	-68.5	-57.0	-11.5	RMS	Horizontal
	103.3	-95.3	19.0	-76.3	-57.0	-19.3	RMS	Horizontal
	51.3	-96.3	25.1	-71.2	-57.0	-14.2	RMS	Vertical
	86.3	-97.3	31.7	-65.6	-57.0	-8.6	RMS	Vertical
	3232.5	-56.3	-8.4	-64.7	-47.0	-17.7	Peak	Horizontal
	4507.4	-56.5	-5.0	-61.5	-47.0	-14.5	Peak	Horizontal
	1710.9	-45.5	-13.1	-58.6	-47.0	-11.6	Peak	Vertical
	2468.8	-49.2	-10.2	-59.4	-47.0	-12.4	Peak	Vertical

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

15. Receiver Blocking

15.1. Limit

For equipment that supports a PER or FER test to be performed, the minimum performance criterion shall be a PER or FER less than or equal to 10%. For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.

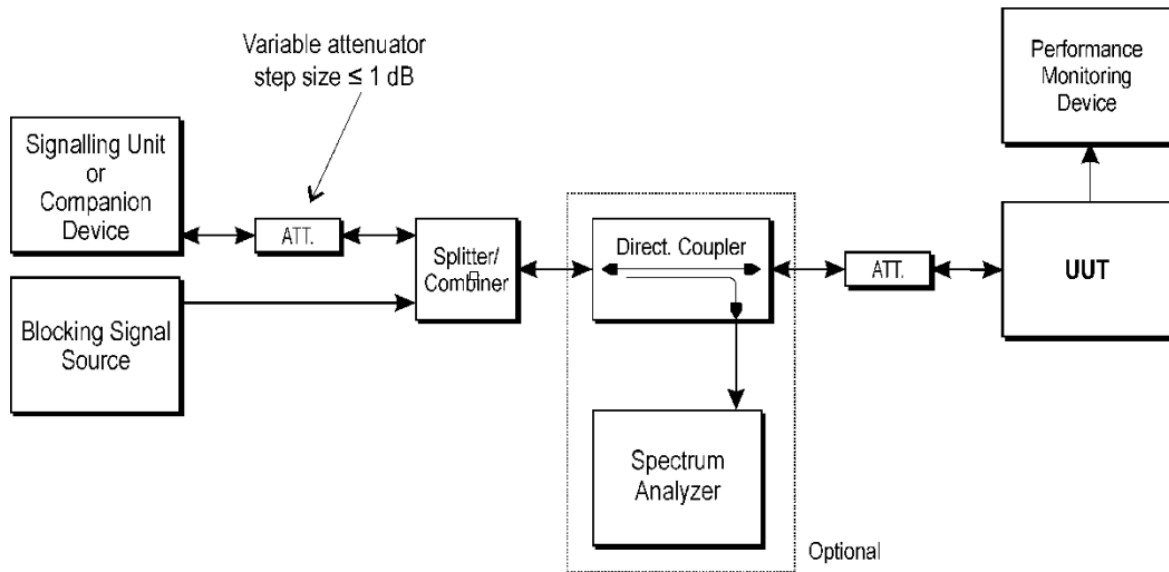
Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal
(-139dBm + 10*log ₁₀ (OCBW) + 10dB) or (-74dBm + 10dB) whichever is less (see note 2)	2380 2504 2300 2584	-34	CW

Note 1: OCBW is in Hz.

Note 1: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to $P_{MIN} + 26$ dB where P_{MIN} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

Note 3: The level specified is the level at the UUT receiver input assuming a 0dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured / positioned as recorded in clause 5.4.3.2.2.

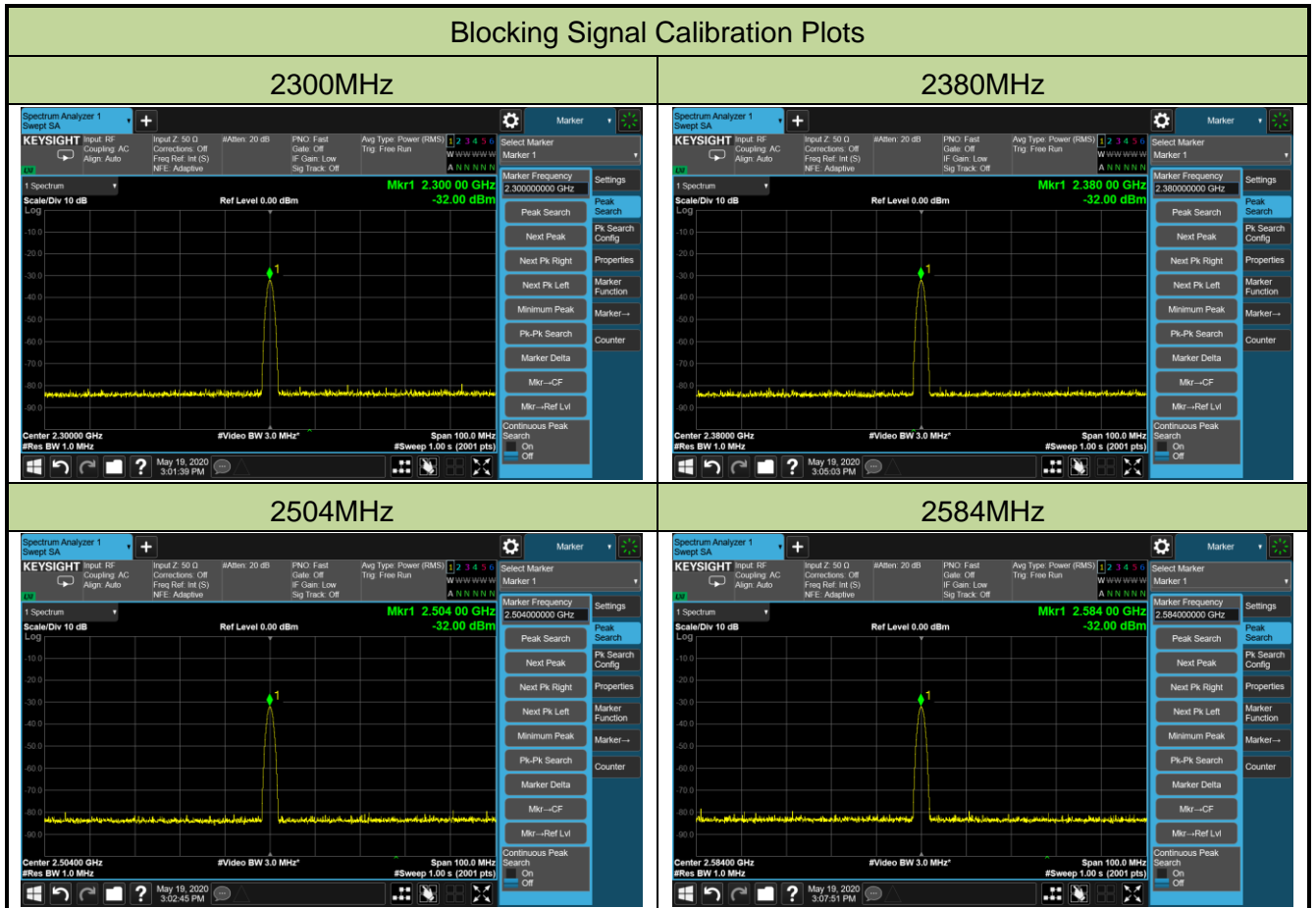
15.2. Test Setup



15.3. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.11.2.1.

15.4. Test Result



Note: This interference level has been included the antenna gain, antenna gain = 2dBi.

Test Site	WZ-SR4	Test Engineer	Amy Zhang
Test Date	2020/05/19		

Channel No.	Wanted Signal Mean Power from Companion Device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)	Type of Blocking Signal	PER Test Result (%)	PER Limit (%)	Result
DH1							
00	-67.71	2300	-32.0	CW	1.2	< 10	Pass
		2380	-32.0		0.5		Pass
78	-67.69	2504	-32.0	CW	0.1	< 10	Pass
		2584	-32.0		1.9		Pass
2DH1							
00	-66.39	2300	-32.0	CW	2.6	< 10	Pass
		2380	-32.0		3.3		Pass
78	-66.38	2504	-32.0	CW	3.1	< 10	Pass
		2584	-32.0		2.4		Pass

Note 1: The Wanted Signal Mean Power from Companion Device (dBm) = $-139\text{dBm} + 10 \cdot \log_{10}(\text{OCBW}) + 10$ or $(-74\text{ dBm} + 10\text{ dB})$ whichever is less.

Note 2: Blocking Signal Power (dBm) = $-34\text{ dBm} + \text{Antenna Gain (dBi)}$, Antenna Gain = 2.0dBi.

Note 3: We used the receiver category 2 to assess this item.

16. 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
Humidity	5 %
DC and Low Frequency Voltages	3 %
Time	5 %
Duty Cycle	5 %

17. 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 Pre-amplifier	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
Pre-amplifier	EMCI	EMC051845SE	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

Conducted Test Equipment (WZ-TR3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022/01/07
USB wideband power sensor	Agilent	U2021XA	MRTSUE06030	1 year	2021/10/22
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2021/06/11
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2021/06/11
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2021/10/22
Thermal Hygrometer	testo	608-H1	MRTSUE06401	1 year	2021/07/26

Conducted Test Equipment (SIP-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
USB wideband power sensor	Agilent	U2021XA	MRTSUE06595	1 year	2021/09/26
USB wideband power sensor	Agilent	U2021XA	MRTSUE06596	1 year	2021/09/26
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2021/03/31
Thermal Hygrometer	testo	622	MRTSUE06629	1 year	2021/11/25

Adaptivity (Channel Access Mechanism) (WZ-SR4)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022/01/07
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
Vector Signal Generator	Agilent	E4438C	MRTSUE06026	1 year	2021/10/22
MXG X-Series Microwave Analog Signal Generator	Keysight	N5183B	MRTSUE06197	1 year	2021/08/30
Thermal Hygrometer	testo	608-H1	MRTSUE06222	1 year	2021/10/25

Adaptivity (Channel Access Mechanism) (SIP-SR4)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
RF Signal Generator	Keysight	E8257D	MRTSUE06453	1 year	2021/07/02
Vector Signal Generator	R&S	SMU200A	MRTSUE06489	1 year	2021/03/05
Thermal Hygrometer	testo	622	MRTSUE06628	1 year	2021/11/25

Receiver Blocking (WZ-SR4)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022/01/07
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
Vector Signal Generator	R&S	SMBV100A	MRTSUE06279	1 year	2021/04/14
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Thermal Hygrometer	testo	608-H1	MRTSUE06222	1 year	2021/10/25

Receiver Blocking (SIP-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
Vector Signal Generator	R&S	SMU200A	MRTSUE06489	1 year	2021/03/05
RF Signal Generator	Keysight	E8257D	MRTSUE06453	1 year	2021/07/02
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Thermal Hygrometer	testo	622	MRTSUE06629	1 year	2021/11/25

Software	Version	Function
EMI Software	V3	EMI Test Software

_____ The End _____

Appendix A - Test Setup Photograph

Refer to "2005RSU006-ET" file.

Appendix B - EUT Photograph

Refer to "2005RSU006-EE" file.