

CE Test Report

Report No: WD-RE-R-190581-B0

Product Name : Ultra Short Throw Outdoor Portable LED Projector
Model Name : MGFU
Applicant : Elite Screens Visual & Sound Co., Ltd.
Received Date : Aug. 29, 2019
Tested Date : Aug. 30, 2019 ~ Sep. 18, 2019
Applicable Standard : ETSI EN 300 328 V2.1.1



Wendell Industrial Co., Ltd
Wendell Electrical Testing Lab.

Caution:

This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment.

Please note that the measurement uncertainty are provided for informational purpose only and are not used in determining the Pass/Fail results.

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Test Report

Issued Date: September 18, 2019

Project No.: 19Q082903

Product Name	Ultra Short Throw Outdoor Portable LED Projector
Trade Name	MosaicGO™
Model Name	MGFU
Applicant	Elite Screens Visual & Sound Co., Ltd.
Manufacturer	Elite Screens Visual & Sound Co., Ltd.
EUT Rated Voltage	AC 100 ~ 240V / 50 or 60Hz , Battery 14.52V
EUT Test Voltage	AC 230V / 50Hz
EUT Supports Radios Application	Bluetooth BR/EDR
Applicable Standard	ETSI EN 300 328 V2.1.1
Test Result	Complied

Documented :



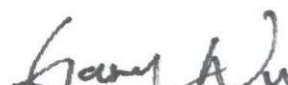
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(Project Manager / Gary Wu)

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Attachment 2: EUT Detailed Photographs		

Document Revision History

Report No.	Issue date	Description
WD-RE-R-190581-B0	September 18, 2019	Initial report

Summary of Test Result

Ref. Std. Clause	Test Items	Result
4.3.1.2	RF output power	Pass
4.3.1.3	Duty cycle, Tx-Sequence, Tx-gap	N/A
4.3.1.4	Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	Pass
4.3.1.5	Hopping Frequency Separation	Pass
4.3.1.6	Medium Utilization (MU) factor	N/A
4.3.1.7	Adaptivity	N/A
4.3.1.8	Occupied Channel Bandwidth	Pass
4.3.1.9	Transmitter unwanted emissions in the out-of-band domain	Pass
4.3.1.10	Transmitter unwanted emissions in the spurious domain	Pass
4.3.1.11	Receiver Spurious Emissions	Pass
4.3.1.12	Receiver Blocking	Pass
4.3.1.13	Geo-location Capability	N/A
N/A is an abbreviation for Not Applicable		

1 Generation Information

1.1 Applicant

Elite Screens Visual & Sound Co., Ltd.
3F., No. 88, Wugong Rd., Xinzhuang Dist., New Taipei City 242, Taiwan (R.O.C.)

1.2 Manufacturer

Elite Screens Visual & Sound Co., Ltd.
3F., No. 88, Wugong Rd., Xinzhuang Dist., New Taipei City 242, Taiwan (R.O.C.)

1.3 Description of Equipment under Test

Product Name	Ultra Short Throw Outdoor Portable LED Projector
Model No.	MGFU
Frequency Range	2402 ~ 2480 MHz
Number of Channels	79CH
Channel separation	1 MHz
Type of Modulation	GFSK(1Mbps) / $\pi/4$ DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Information	Refer to the table "Antenna List"
Category of equipment	☐ Non-Adaptive Equipment ☐ Adaptive Equipment with LBT based DAA (Frame Based Equipment) ☒ Adaptive Equipment with LBT based DAA (Load Based Equipment) ☐ Adaptive Equipment with Non-LBT based DAA
EUT Supports Radios Application	Bluetooth BR/EDR
EUT Rated Voltage	AC 100 ~ 240V / 50 or 60Hz , Battery 14.52V
EUT Test Voltage	AC 230V / 50Hz
Test Condition	Normal Temperature : 25 °C Extreme Temperature : 0 °C and 40 °C

The EUT uses following adapter.

Trade Name	EDACPOWER Electronics Co. ,Ltd
Model No.	EA11013M-1900
Input Power	AC 100-240V , 2.0A , 50-60Hz
Output Power	DC 19V / 6.31A
Power Line	Shielded, 1 Core, 1.2m

Antenna List

No.	Manufacturer	Model No.	Antenna Type	Peak Gain
1	N/A	N/A	Printed Antenna	4.85 dBi for 2.4 GHz

Channel List

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

Remark : Lowest channel = 2402MHz, Middle channel = 2441MHz, Highest channel = 2480MHz

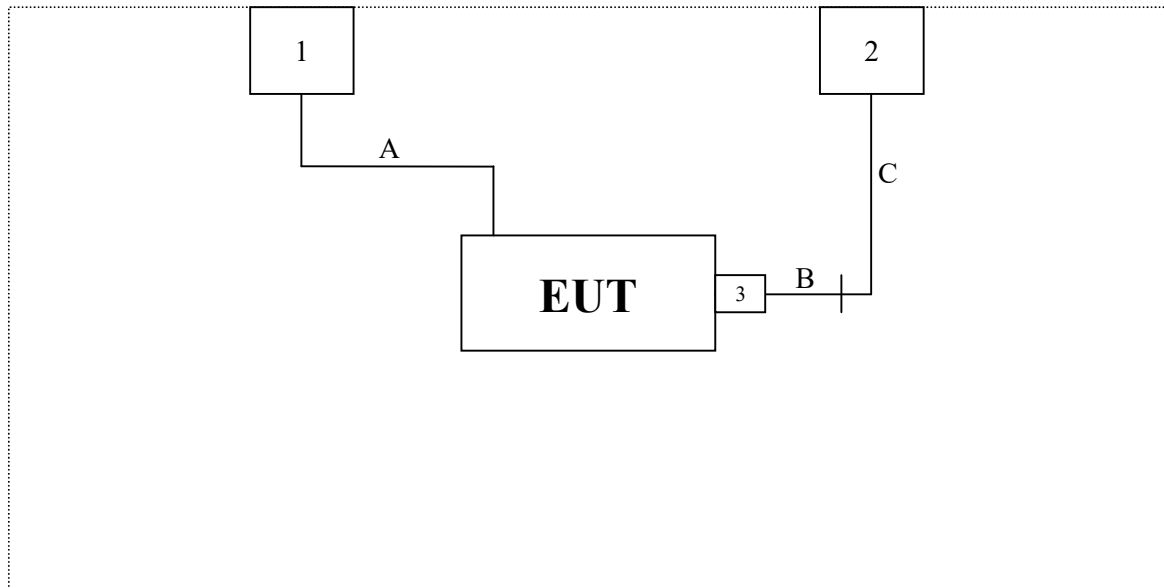
Test Mode

Mode 1 : Transmit (BT-1Mbps)
Mode 2 : Transmit (BT-3Mbps)
Mode 3 : Receiver (BT-1Mbps)
Mode 4 : Receiver (BT-3Mbps)

Note :

1. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
2. These tests are conducted on a sample for the purpose of demonstrating compliance of BT transmitter with Part ETSI EN 300 328 of spread spectrum devices.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the X axis worst case is shown in the report.

1.4 Configuration of Tested System



Test Table

1.5 EUT Exercise Software

1. Setup the EUT as shown in Section 1.4
2. Execute software "ISRT_Ver2.1.31.5011".
3. Configure the test mode, the test channel, and the data rate.
4. Press "OK" to start the continuous transmit.
5. Verify that the EUT works properly.

1.6 Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are :

No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Adapter	EDACPOWER Electronics Co. ,Ltd	EA11013M-1900	N/A	Shielded, 1 Core, 1.2m
2	Notebook PC	acer	N16Q1	NXVD4TA023742254707600	Non-shielded, 1 Core, 0.8m
3	Fixture	N/A	N/A	N/A	N/A

No.	Signal Cable Type	Signal cable Description
A	Power Cable	Non-shielded, 1 Core, 1.1m
B	Data Cable	Non-shielded, Non-Core, 0.5m
C	USB Cable	Non-shielded, Non-Core, 1.3m

1.7 Test Facility

Items	Required	Actual
Temperature (°C)	15-35	25
Humidity (% RH)	20-75	55
Barometric pressure (mbar)	860-1060	1001

Description : Accredited by TAF

Accredited Number : 2965

Issued by : Wendell Industrial Co., Ltd

Lab Address : 6F/6F-1, No.188, Baoqiao Rd., Xindian Dist.,
New Taipei City 23145, Taiwan R.O.C

Test Lab : Wendell Electrical Testing Lab.

Test Location : No.67-9, Shimen Rd., Tucheng Dist.,
New Taipei City 236, Taiwan R.O.C

1.8 Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated and shall correspond to an expansion factor (coverage factor) $k = 1.96$ or $k = 2$ (which provides confidence levels of respectively 95 % and 95, 45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). Principles for the calculation of measurement uncertainty are contained in ETSI TR 100 028-1 [i.15], in particular in Annex D of the ETSI TR 100 028-2 [i.11]

Measurement Project	Measurement Uncertainty	Limit
Occupied Channel Bandwidth	$\pm 3 \%$	$\pm 5 \%$
RF output power, conducted	$\pm 1.3 \text{ dB}$	$\pm 1.5 \text{ dB}$
Power Spectral Density, conducted	$\pm 1.34 \text{ dB}$	$\pm 3 \text{ dB}$
Unwanted Emissions, conducted	$\pm 2.4 \text{ dB}$	$\pm 3 \text{ dB}$
All Emissions, radiated	$\pm 5.8 \text{ dB}$	$\pm 6 \text{ dB}$
Temperature	$\pm 0.8 \text{ °C}$	$\pm 3 \text{ °C}$
Supply voltages	$\pm 1.7 \%$	$\pm 3 \%$
Time	$\pm 3 \%$	$\pm 5 \%$

Note: Please note that the measurement uncertainty are provided for informational purpose only and are not used in determining the Pass/Fail results.

1.9 List of Test Equipment

For Conducted measurements / RF Conducted Measurement Room

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
✓ Spectrum analyzer	Keysight	N9010A	MY54200737	2018/10/24	2019/10/23
✓ RF Vector Signal Generator	Keysight	N5171B	MY53051951	2018/10/25	2019/10/24
✓ RF Vector Signal Generator	Keysight	N5182B	MY53052599	2018/10/25	2019/10/24
✓ RF Power Switching box	HAN RUIN	HR-4PS191	TW5451086 TW5451087 TW5451088 TW5451089	2018/11/6	2019/11/5
✓ Cable	Marvelous Microwave Inc.	280280.LL266.300	20170805001	2018/10/28	2019/10/27
✓ Cable	Marvelous Microwave Inc.	280280.LL266.300	20170805002	2018/10/28	2019/10/27
✓ Multi-function attenuator	Theda	VASC6 EN300-328 Signal conditional kit	CT-9-060	2018/6/15	2019/6/14
✓ Temperature Chamber	TAICHY	MHK-225LK	1061121	2019/4/29	2020/4/28
✓ Wireless Connectivity Tester	R&S	CMW270	101307	2019/4/24	2020/4/23
✓ Attenuator	MVE	MVE2211-10	CT-9-056	2019/8/22	2020/8/21
✓ Attenuator	MVE	MVE2211-20	CT-9-057	2019/8/22	2020/8/21
✓ Attenuator	MVE	MVE2211-30	CT-9-058	2019/8/22	2020/8/21
✓ Power Divider	MVE	MVE8546	170826003	2019/8/22	2020/8/21
✓ Power Splitter	MVE	MVE8547	170302047	2019/8/28	2020/8/27
DC Power Supply	GW INSTEK	GPC-3060D	GER817636	2019/8/21	2020/8/20

Remark :

- (1) All equipments are calibrated every one year.
- (2) The test instruments marked with “✓” are used to measure the final test results.
- (3) Test Software version : Keysight ETSI.TestSystem V1.02.08

For Radiated measurements / 11x6x6 Fully Anechoic Room

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
✓	Spectrum analyzer	Keysight	N9010A	SG50420005	2018/10/12	2019/10/11
✓	Pre-Amplifier	EMCI	EMC003835B	980522	2018/10/12	2019/10/11
✓	Pre-Amplifier	EMCI	EMC051845SE	980525	2018/10/11	2019/10/10
✓	Pre-Amplifier	EMCI	EMC184045SE	980515	2018/10/10	2019/10/9
✓	RF Cable	EMCI	EMCCFD400-NM-NM-12000	170608	2018/10/11	2019/10/10
✓	RF Cable	EMCI	EMCCFD400-NM-NM-3000	170606	2018/10/11	2019/10/10
✓	RF Cable	EMCI	EMCCFD400-NM-NM-600	170602	2018/10/11	2019/10/10
✓	RF Cable	HUBER+SUHNER	SF102	MY2752/2	2018/10/11	2019/10/10
✓	RF Cable	Marvelous Microwave Inc.	280280.LL266.500	20170805001	2018/10/11	2019/10/10
✓	RF Cable	SMA(m)/SMA(m), L=2m, ~26.5GHz	280280.LL266.200	20170805001	2018/10/11	2019/10/10
✓	TRILOG super broad Antenna	Schwarzbeck	VULB 9168	VULB9168-699 & 699	2018/10/3	2019/10/2
✓	Horn Antenna	Schwarzbeck	BBHA 9120D	01791	2018/10/3	2019/10/2
✓	Horn Antenna	Schwarzbeck	BBHA 9170	793	2018/10/3	2019/10/2
✓	RF Vector Signal Generator	R&S	SMB 100A	180023	2018/10/25	2019/10/24
✓	RF Vector Signal Generator	Keysight	N5171B	MY53051951	2018/10/12	2019/10/11

Remark :

- (1) All equipments are calibrated every one year.
- (2) The test instruments marked with “✓” are used to measure the final test results.
- (3) Test Software version : FARAD EZ-EMC Ver.WD-03A1-1

2 Test Result

2.1 RF Output Power

2.1.1 Limit

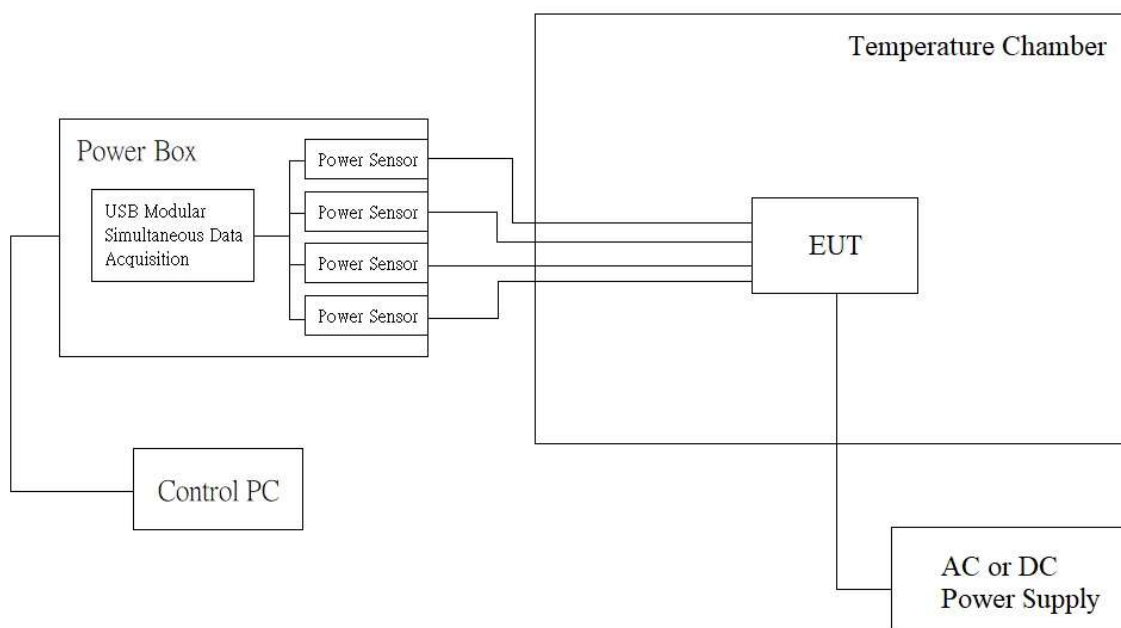
(1) For adaptive equipment :

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

(2) For non-adaptive equipment :

The maximum RF output power for non-adaptive equipment shall be declared by the manufacturer and shall not exceed 20 dBm.

2.1.2 Test Setup



2.1.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.2

2.1.4 Test Condition

Normal and extreme test condition

2.1.5 Test Result

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : RF Output Power
Test Mode : Mode 1 : Transmit (BT-1Mbps)
Test Methods : Conducted Measurement

Temperature (°C)	Channel	RF Output Power (dBm)	Limit (dBm)	Result
25	Hopping	5.11	≤ 20	Pass
40	Hopping	4.90	≤ 20	Pass
0	Hopping	5.40	≤ 20	Pass
Remark : (1) Antenna Gain : 4.85 dBi (2) RF Output Power = Conducted Measured Power + Antenna Gain				

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : RF Output Power
Test Mode : Mode 2 : Transmit (BT-3Mbps)
Test Methods : Conducted Measurement

Temperature (°C)	Channel	RF Output Power (dBm)	Limit (dBm)	Result
25	Hopping	3.83	≤ 20	Pass
40	Hopping	3.62	≤ 20	Pass
0	Hopping	4.12	≤ 20	Pass
Remark : (1) Antenna Gain : 4.85 dBi (2) RF Output Power = Conducted Measured Power + Antenna Gain				

2.2 Duty Cycle, Tx-sequence, Tx-gap

2.2.1 Limit

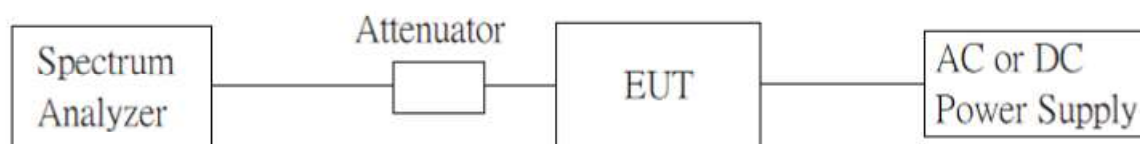
These requirements apply to non-adaptive equipment or to adaptive equipment when operating in a non-adaptive mode.

These requirements do not apply for equipment with a maximum declared RF Output power of less than 10 dBm E.I.R.P. or for equipment when operating in a mode where the RF Output power is less than 10 dBm E.I.R.P.

The Duty Cycle shall be equal to or less than the maximum value declared by the supplier.

The maximum Tx-sequence time shall be 5 ms while the minimum Tx-gap time shall be 5 ms.

2.2.2 Test Setup



2.2.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.2

2.2.4 Test Condition

Normal test conditions.

2.2.5 Test Result

This equipment does not operate in a non-adaptive mode, No applicable.

2.3 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

2.3.1 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. According to clause 4.3.1.5.3.1 the minimum Hopping Frequency Separation for non-adaptive equipment is equal to the Occupied Channel Bandwidth with a minimum of 100 kHz..

For adaptive frequency hopping systems :

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

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

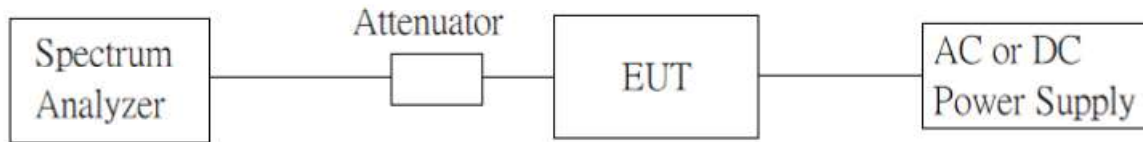
In order for the equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options:

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.

2.3.2 Test Setup



2.3.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.4

2.3.4 Test Condition

Normal test conditions.

2.3.5 Test Result

Product : Ultra Short Throw Outdoor Portable LED Projector

Test Item : Accumulated Transmit Time

Test Methods : Conducted Measurement

Packet	Measured Value (ms)	Limit (ms)	Result
1 Mbps-DH5	276.48	≤ 400	Pass
3 Mbps-DH5	282.24	≤ 400	Pass

Product : Ultra Short Throw Outdoor Portable LED Projector

Test Item : Minimum Frequency Occupation

Test Methods : Conducted Measurement

Packet	Dwell Time Per Hop.(ms)	4 x Dwell Time Per x N(ms)	Number of Hop in [4 x Dwell Time Per x N] (Counts)	Limit (Counts)	Result
1 Mbps-DH5	2.88	910.08	2	≥ 1	Pass
3 Mbps-DH5	2.88	910.08	1	≥ 1	Pass

Remark : N = Hopping frequency number

Product : Ultra Short Throw Outdoor Portable LED Projector

Test Item : Hopping Sequence

Test Methods : Conducted Measurement

Packet	Measured Value (Number of channel)	Limit (Number of channel)	Result
1 Mbps-DH5	79	≥ 15	Pass
3 Mbps-DH5	79	≥ 15	Pass

Packet	Measured Value (%)	Limit	Result
1 Mbps-DH5	95.57	≥ 70 % of the 2.4G band	Pass
3 Mbps-DH5	96.17	≥ 70 % of the 2.4G band	Pass

2.4 Hopping Frequency Separation

2.4.1 Limit

For non-adaptive frequency hopping equipment :

For non-adaptive Frequency Hopping equipment, the Hopping Frequency Separation shall be equal to or greater than the Occupied Channel Bandwidth (see clause 4.3.1.8), with a minimum separation of 100 kHz.

For equipment with a maximum declared RF Output power level of less than 10 dBm e.i.r.p. or for non-adaptive Frequency Hopping equipment operating in a mode where the RF Output power is less than 10 dBm e.i.r.p. only the minimum Hopping Frequency Separation of 100 kHz applies.

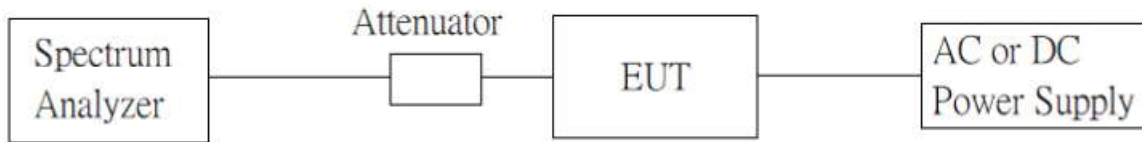
For adaptive frequency hopping equipment :

For adaptive Frequency Hopping equipment, the minimum Hopping Frequency Separation shall be 100 kHz.

Adaptive Frequency Hopping equipment that switched to a non-adaptive mode for one or more hopping frequencies because interference was detected on these hopping frequencies with a level above the threshold level defined in clause 4.3.1.7.2.2, point 5 or clause 4.3.1.7.3.2, point 5, is allowed to continue to operate with a minimum Hopping Frequency Separation of 100 kHz as long as the interference remains present on these hopping frequencies. The equipment shall continue to operate in an adaptive mode on other hopping frequencies.

Adaptive Frequency Hopping equipment which decided to operate in a non-adaptive mode on one or more hopping frequencies without the presence of interference, shall comply with the limit for Hopping Frequency Separation for non-adaptive equipment defined in clause 4.3.1.5.3.1 (first paragraph) for these hopping frequencies as well as with all other requirements applicable to non-adaptive frequency hopping equipment

2.4.1 Test Setup



2.4.2 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.5

2.4.3 Test Condition

Normal test conditions.

2.4.4 Test Result

Product : Ultra Short Throw Outdoor Portable LED Projector

Test Item : Hopping Frequency Separation

Test Mode : Mode 1 : Transmit (BT-1Mbps)

Test Methods : Conducted Measurement

Frequency (MHz)	Measurement Level (kHz)	Limit (kHz)	Result
2404	1000	≥ 100	Pass

Product : Ultra Short Throw Outdoor Portable LED Projector

Test Item : Hopping Frequency Separation

Test Mode : Mode 2 : Transmit (BT-3Mbps)

Test Methods : Conducted Measurement

Frequency (MHz)	Measurement Level (kHz)	Limit (kHz)	Result
2404	1000	≥ 100	Pass

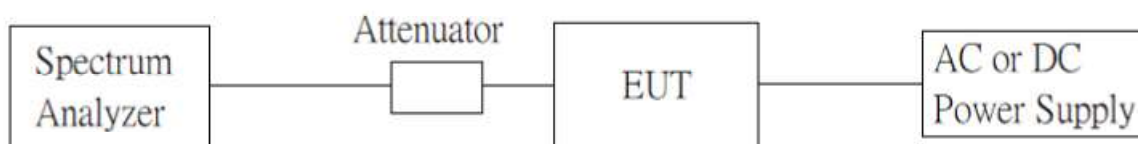
2.5 Medium Utilization (MU) factor

2.5.1 Limit

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 10 dBm e.i.r.p. or for equipment when operating in a mode where the RF Output power is less than 10 dBm e.i.r.p

For non-adaptive equipment using wide band modulations other than FHSS, the maximum Medium Utilization factor shall be 10 %.

2.5.2 Test Setup



2.5.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.2

2.5.4 Test Condition

Normal test conditions.

2.5.5 Test Result

This equipment does not operate in a non-adaptive mode, No applicable.

2.6 Adaptivity

2.6.1 Limit

This requirement does not apply for equipment with a maximum declared RF Output power level of less than 10 dBm e.i.r.p. or for equipment when operating in a mode where the RF Output power is less than 10 dBm e.i.r.p.

Adaptivity Limit
☐ LBT based Detect and Avoid (1) The CCA observation time shall be not less than 0,2 % of the Channel Occupancy Time with a minimum of 18 μ s (2) CCA observation time declared by the supplier; (3) The Channel Occupancy Time for a given hopping frequency, which starts immediately after a successful CCA, shall be less than 60 ms (4) Idle Period of minimum 5 % of the Channel Occupancy Time with a minimum of 100 μ s.; (5) Detection threshold level = $-70 \text{ dBm/MHz} + 10 \times \log_{10} (100 \text{ mW} / P_{\text{out}})$ (P_{out} in mW e.i.r.p.)
☐ Non-LBT based Detect and Avoid (1) The frequency shall remain unavailable for a minimum time equal to 1 second or 5 times the actual number of hopping frequencies in the current (adapted) channel map used by the equipment, multiplied with the Channel Occupancy Time whichever is the greater. (2) The Channel Occupancy Time for a given hopping frequency shall be less than 40 ms (3) Idle Period (no transmissions) of minimum 5 % of the Channel Occupancy Period with a minimum of 100 μ s (4) Detection threshold level = $-70 \text{ dBm/MHz} + 10 \times \log_{10} (100 \text{ mW} / P_{\text{out}})$ (P_{out} in mW e.i.r.p.).
☐ Short Control Signalling Transmissions : Short Control Signalling Transmissions shall have a maximum TxOn / (TxOn + TxOff) ratio of 10 % within any observation period of 50 ms.

Adaptive Frequency Hopping equipment shall comply with the requirements defined in clause 4.3.1.7.2 Adaptive Frequency Hopping using LBT based DAA or clause 4.3.1.7.3 Adaptive Frequency Hopping using other forms of DAA (non-LBT based) in the presence of a Unwanted signal with characteristics as provided in table as below:

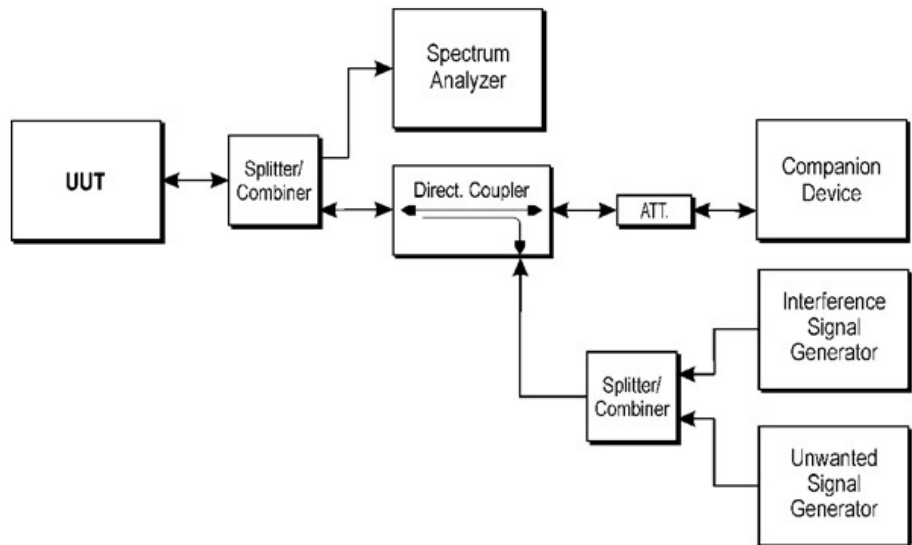
Adaptive Frequency Hopping using other forms of DAA (non-LBT based)

Wanted signal mean power From companion device (dBm)	Unwanted signal frequency (MHz)	Unwanted CW Signal power (dBm)
sufficient to maintain the link (see note 2)	2395 or 2488.5 (see note 1)	-35 (see note 2)
NOTE 1 : The highest frequency shall be used be 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. See clause 5.4.6.1.		
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.		

Adaptive Frequency Hopping using LBT based DAA

Wanted signal mean power From companion device (dBm)	Unwanted signal frequency (MHz)	Unwanted CW Signal power (dBm)
sufficient to maintain the link (see note 2)	2395 or 2488.5 (see note 1)	-35 (see note 3)
NOTE 1 : The highest frequency shall be used be 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. See clause 5.4.6.1.		
NOTE 2 : A typical value which can be used in most cases is -50dBm/MHz		
NOTE 3 : 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		

2.6.2 Test Setup



2.6.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.6

2.6.4 Test Condition

Normal test conditions.

2.6.5 Test Result

The RF Output power is less than 10dBm e.i.r.p., No applicable.

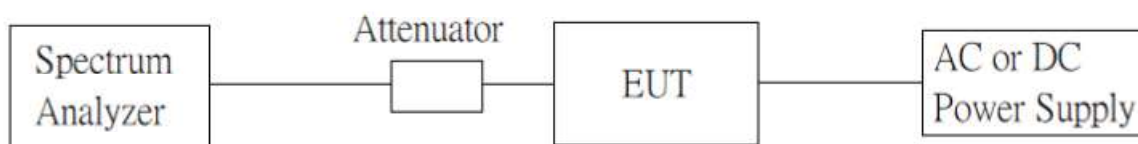
2.7 Occupied Channel Bandwidth

2.7.1 Limit

The Occupied Channel Bandwidth for each hopping frequency shall fall completely within the band given in 2400 ~ 2483.5MHz.

For non-adaptive Frequency Hopping equipment with e.i.r.p. greater than 10 dBm, the Occupied Channel Bandwidth for every occupied hopping frequency shall be equal to or less than the Nominal Channel Bandwidth declared by the manufacturer. This declared value shall not be greater than 5 MHz.

2.7.2 Test Setup



2.7.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.7

2.7.4 Test Condition

Normal test conditions.

2.7.5 Test Result

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : Occupied Channel Bandwidth
Test Mode : Mode 1 : Transmit (BT-1Mbps)
Test Methods : Conducted Measurement

Channel	Occupied Bandwidth (MHz)	Measured Frequency (MHz)		Limit (MHz)	Result
		Freq. Low	Freq. High		
Lowest	0.855	2401.57	--	≥ 2400.0	Pass
Highest	0.853	--	2480.42	≤ 2483.5	Pass

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : Occupied Channel Bandwidth
Test Mode : Mode 2 : Transmit (BT-3Mbps)
Test Methods : Conducted Measurement

Channel	Occupied Bandwidth (MHz)	Measured Frequency (MHz)		Limit (MHz)	Result
		Freq. Low	Freq. High		
Lowest	1.189	2401.40	--	≥ 2400.0	Pass
Highest	1.191	--	2480.59	≤ 2483.5	Pass

2.8 Transmitter unwanted emissions in the out-of-band domain

2.8.1 Limit

This requirement applies to all types of equipment using wide band modulations other than FHSS. 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 1.

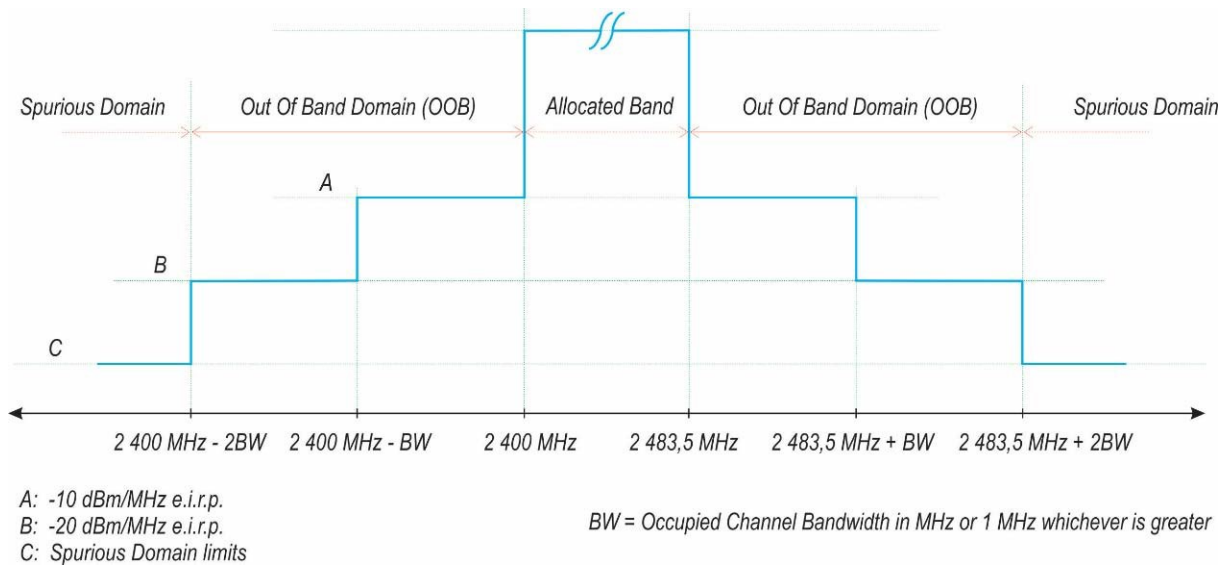
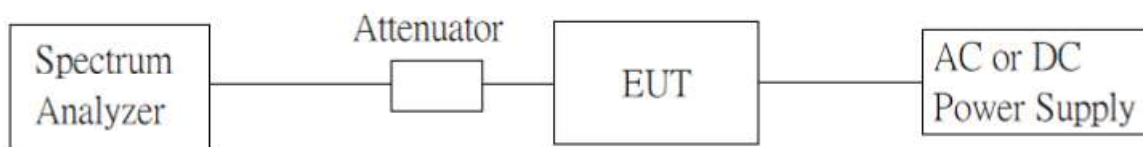


Figure 1 : Transmit mask

2.8.2 Test Setup



2.8.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.8

2.8.4 Test Condition

Normal test conditions.

2.8.5 Test Result

BT-1Mbps :

Channel	Frequency (MHz)	Measured Values (dBm/MHz)	Limit (dBm/MHz)	Result
Lowest	2400-BW ~ 2400	-48.90	≤ -10	Pass
	2400-2BW ~ 2400-BW	-54.13	≤ -20	Pass
Highest	2483.5 ~ 2483.5+BW	-56.41	≤ -10	Pass
	2483.5+BW ~ 2483.5+2BW	-57.27	≤ -20	Pass

Remark : BW = Occupied Bandwidth in MHz or 1MHz whichever is greater.

BT-3Mbps :

Channel	Frequency (MHz)	Measured Values (dBm/MHz)	Limit (dBm/MHz)	Result
Lowest	2400-BW ~ 2400	-49.52	≤ -10	Pass
	2400-2BW ~ 2400-BW	-55.28	≤ -20	Pass
Highest	2483.5 ~ 2483.5+BW	-56.55	≤ -10	Pass
	2483.5+BW ~ 2483.5+2BW	-57.34	≤ -20	Pass

Remark : BW = Occupied Bandwidth in MHz or 1MHz whichever is greater.

2.9 Transmitter unwanted emissions in the spurious domain

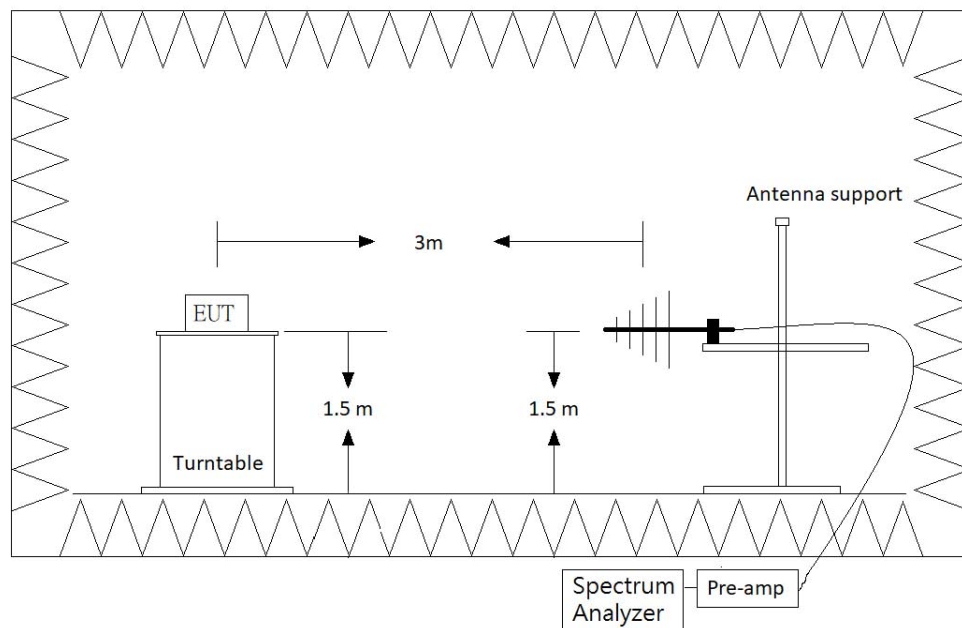
2.9.1 Limit

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

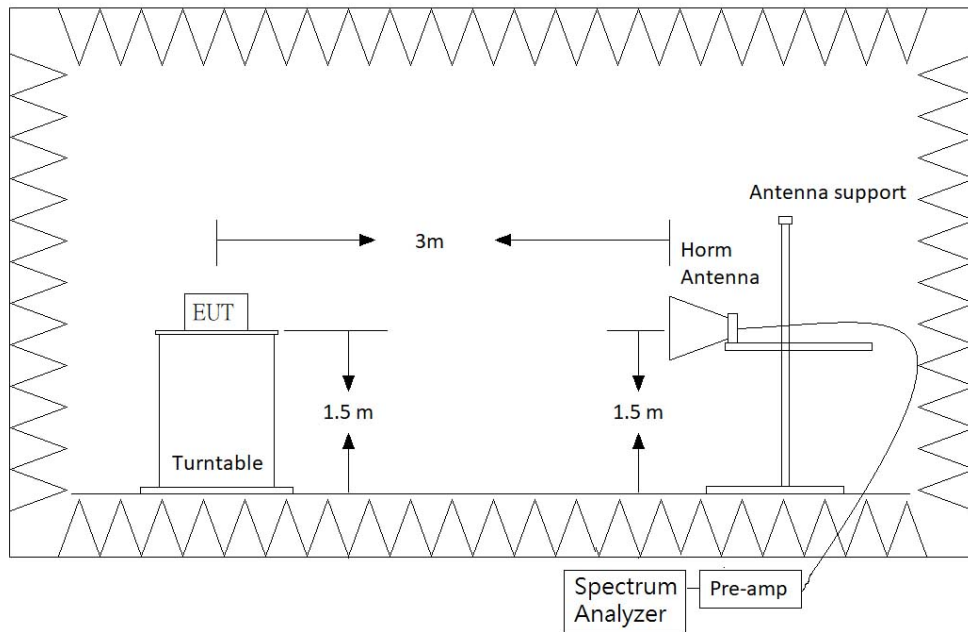
Transmitter limits for spurious emissions		
Frequency Range	Maximum power	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87.5 MHz	-36 dBm	100 kHz
87.5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 862 MHz	-54 dBm	100 kHz
862 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 12.75 GHz	-30 dBm	1 MHz

2.9.2 Test Setup

< Below 1GHz >



<Above 1GHz>



Remark : Actual measurement distance = 1.5 meters

2.9.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.9

2.9.4 Test Condition

Normal test conditions.

2.9.5 Test Result

The following tables for radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X axis) were recorded in this report.

Test Channel	
RF	BT-1Mbps / 3Mbps
Tx	Lowest (2402 MHz)
	Highest (2480 MHz)

Test Mode :	Mode 1 ; BT-1Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	71.7100	-58.35	-54.00	-4.35	AVG
2	84.3200	-47.58	-36.00	-11.58	peak
3	131.8500	-47.87	-36.00	-11.87	peak
4	324.8800	-55.02	-36.00	-19.02	peak
5	775.9300	-59.31	-54.00	-5.31	AVG
6	873.9000	-57.04	-36.00	-21.04	peak
7	4804.000	-37.21	-30.00	-7.21	peak
8	7206.000	-54.88	-30.00	-24.88	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 1 ; BT-1Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %

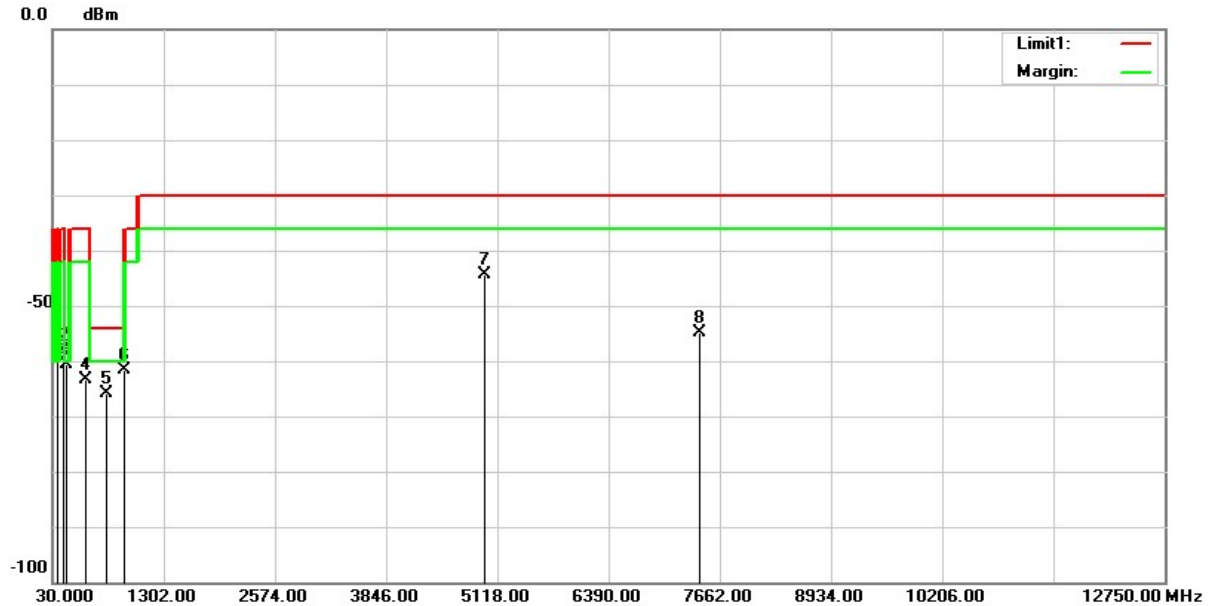


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	127.0000	-57.01	-36.00	-21.01	peak
2	227.8800	-62.59	-54.00	-8.59	peak
3	530.5200	-62.39	-54.00	-8.39	peak
4	615.8800	-59.89	-54.00	-5.89	AVG
5	849.6500	-60.81	-54.00	-6.81	peak
6	949.5600	-57.16	-36.00	-21.16	peak
7	4804.000	-50.40	-30.00	-20.40	peak
8	7206.000	-54.83	-30.00	-24.83	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 1 ; BT-1Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %

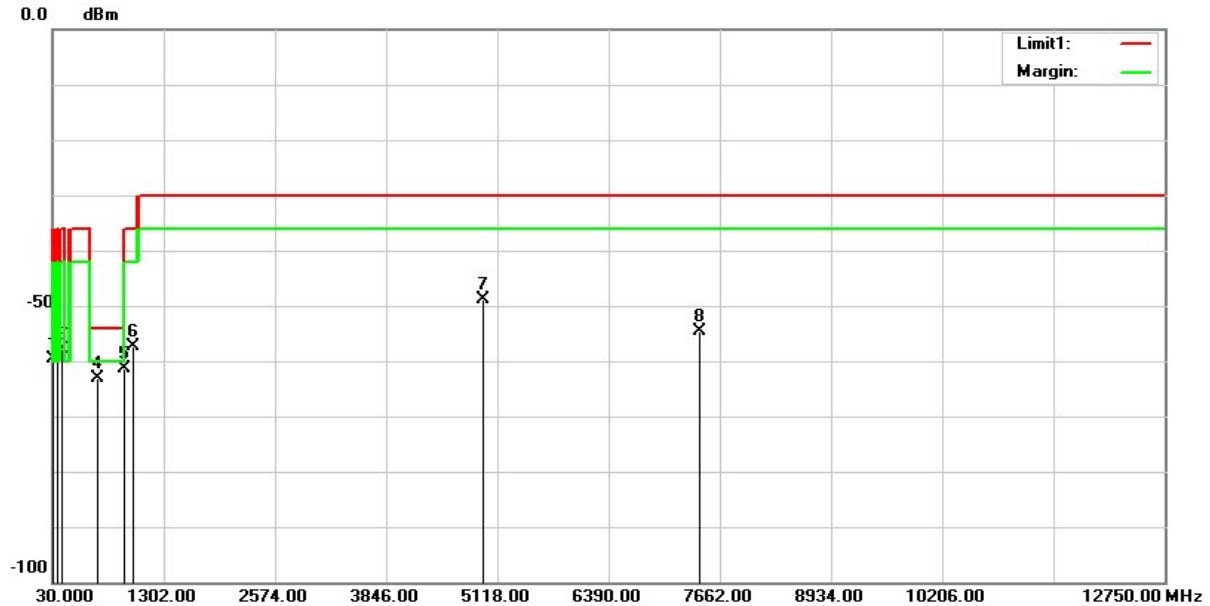


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	75.5900	-58.75	-36.00	-22.75	peak
2	148.3400	-58.03	-36.00	-22.03	peak
3	176.4700	-60.59	-54.00	-6.59	peak
4	410.2400	-63.40	-36.00	-27.40	peak
5	632.3700	-65.93	-54.00	-11.93	peak
6	849.6500	-61.52	-54.00	-7.52	peak
7	4959.750	-44.48	-30.00	-14.48	peak
8	7440.000	-54.93	-30.00	-24.93	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

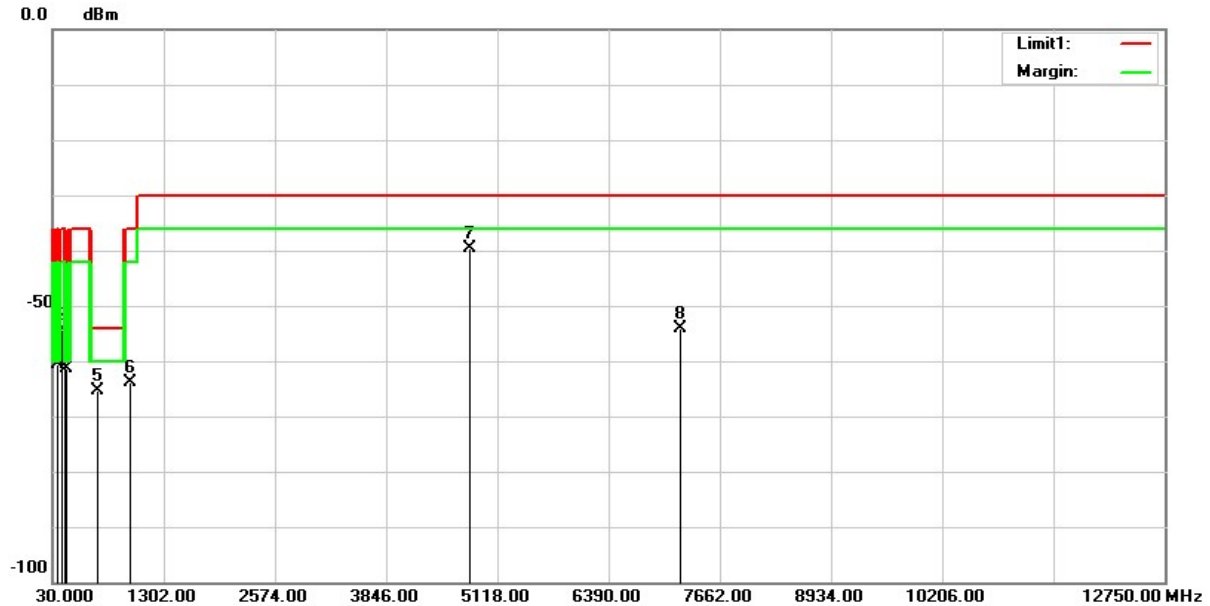
Test Mode :	Mode 1 ; BT-1Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %



Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 2 ; BT-3Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	74.6200	-60.69	-36.00	-24.69	peak
2	127.9700	-54.35	-36.00	-18.35	peak
3	159.9800	-59.80	-36.00	-23.80	peak
4	191.9900	-61.25	-54.00	-7.25	peak
5	532.4600	-65.37	-54.00	-11.37	peak
6	919.4900	-63.75	-36.00	-27.75	peak
7	4804.000	-39.68	-30.00	-9.68	peak
8	7206.000	-54.07	-30.00	-24.07	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 2 ; BT-3Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %

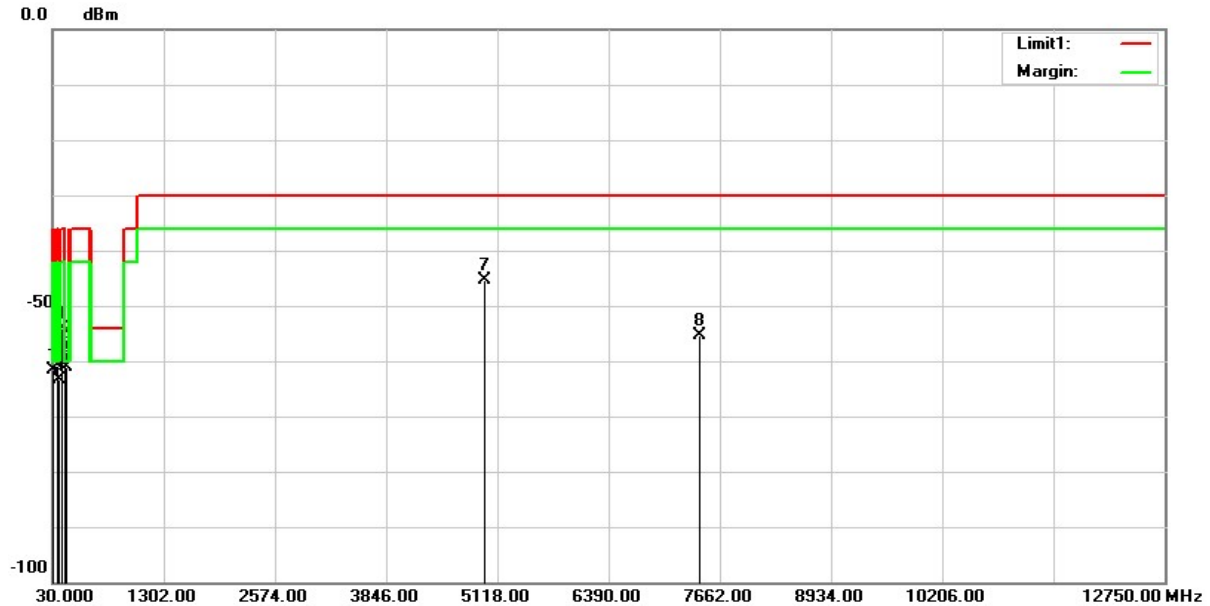


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	34.8500	-58.66	-36.00	-22.66	peak
2	74.6200	-61.20	-36.00	-25.20	peak
3	104.6900	-61.70	-54.00	-7.70	peak
4	127.9700	-53.95	-36.00	-17.95	peak
5	398.6000	-65.44	-36.00	-29.44	peak
6	533.4300	-65.16	-54.00	-11.16	peak
7	4804.000	-46.12	-30.00	-16.12	peak
8	7206.000	-53.41	-30.00	-23.41	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 2 ; BT-3Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	40.6700	-61.51	-36.00	-25.51	peak
2	74.6200	-60.96	-36.00	-24.96	peak
3	104.6900	-63.39	-54.00	-9.39	peak
4	127.9700	-54.20	-36.00	-18.20	peak
5	159.9800	-59.56	-36.00	-23.56	peak
6	191.9900	-61.19	-54.00	-7.19	peak
7	4959.750	-45.45	-30.00	-15.45	peak
8	7440.000	-55.27	-30.00	-25.27	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 2 ; BT-3Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	34.8500	-59.37	-36.00	-23.37	peak
2	74.6200	-61.08	-36.00	-25.08	peak
3	104.6900	-61.43	-54.00	-7.43	peak
4	127.9700	-54.11	-36.00	-18.11	peak
5	404.4200	-64.56	-36.00	-28.56	peak
6	532.4600	-63.41	-54.00	-9.41	peak
7	4960.000	-58.18	-30.00	-28.18	peak
8	7440.000	-53.72	-30.00	-23.72	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

2.10 Receiver Spurious Emissions

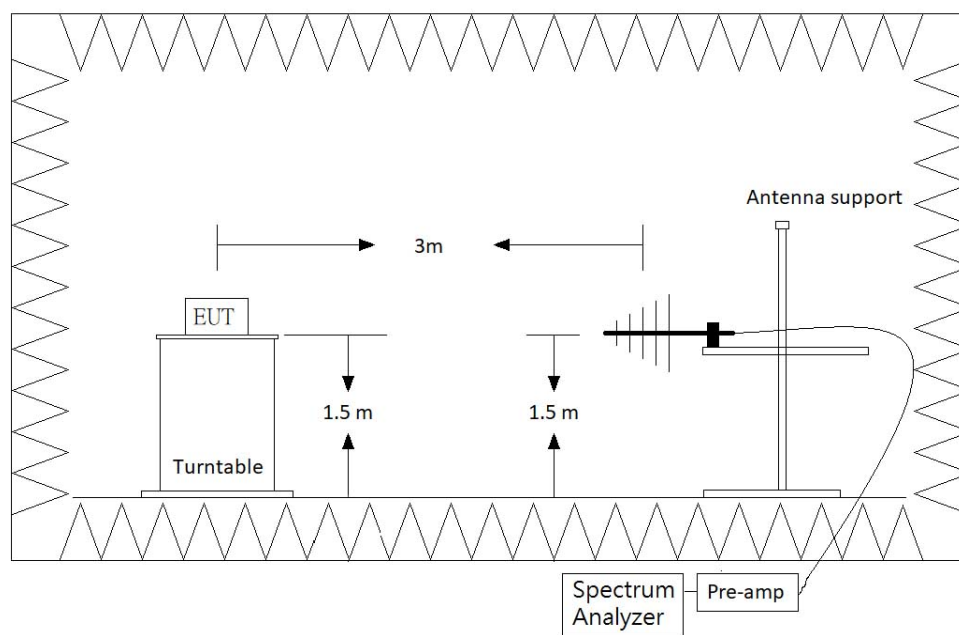
2.10.1 Limit

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

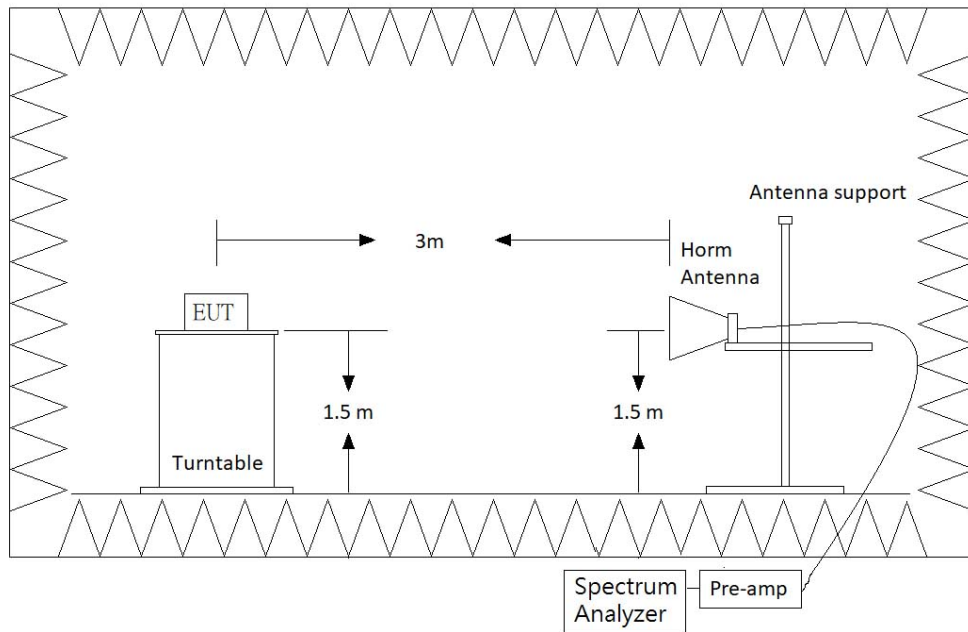
Transmitter limits for spurious emissions		
Frequency Range	Maximum power	Bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz
1 GHz to 12.75 GHz	-47 dBm	1 MHz

2.10.2 Test Setup

< Below 1GHz >



<Above 1GHz>



Remark : Actual measurement distance = 1.5 meters

2.10.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.10

2.10.4 Test Condition

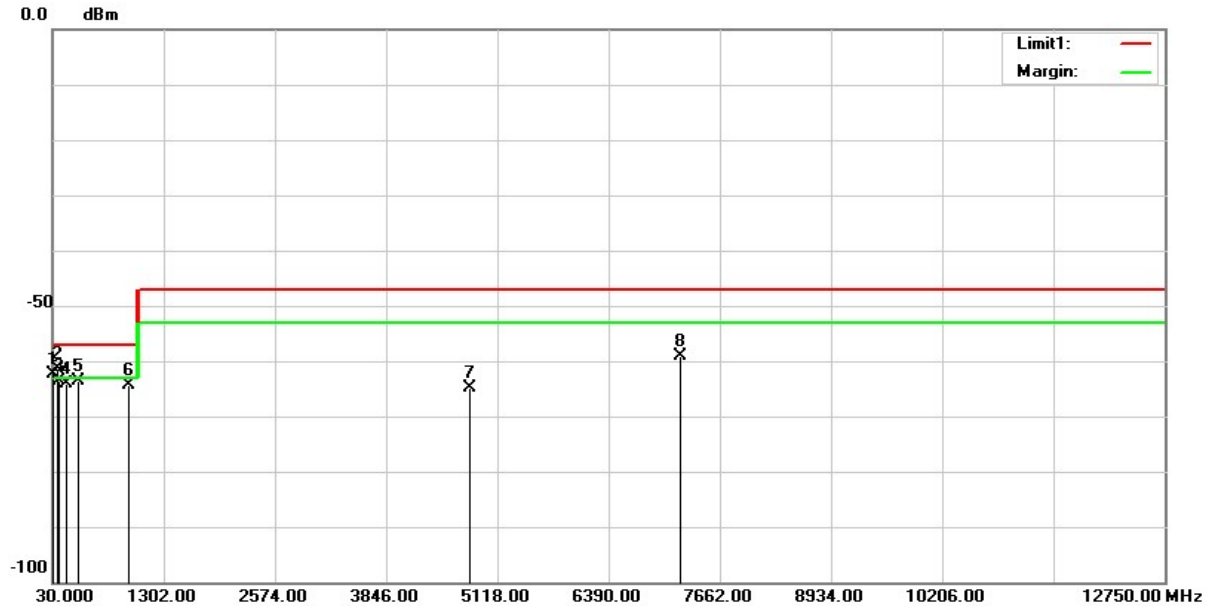
Normal test conditions.

2.10.5 Test Result

The following tables for radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X axis) were recorded in this report.

Test Channel	
RF	BT-1Mbps / 3Mbps
Rx	Lowest (2402 MHz)
	Highest (2480 MHz)

Test Mode :	Mode 3 ; BT-1Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %

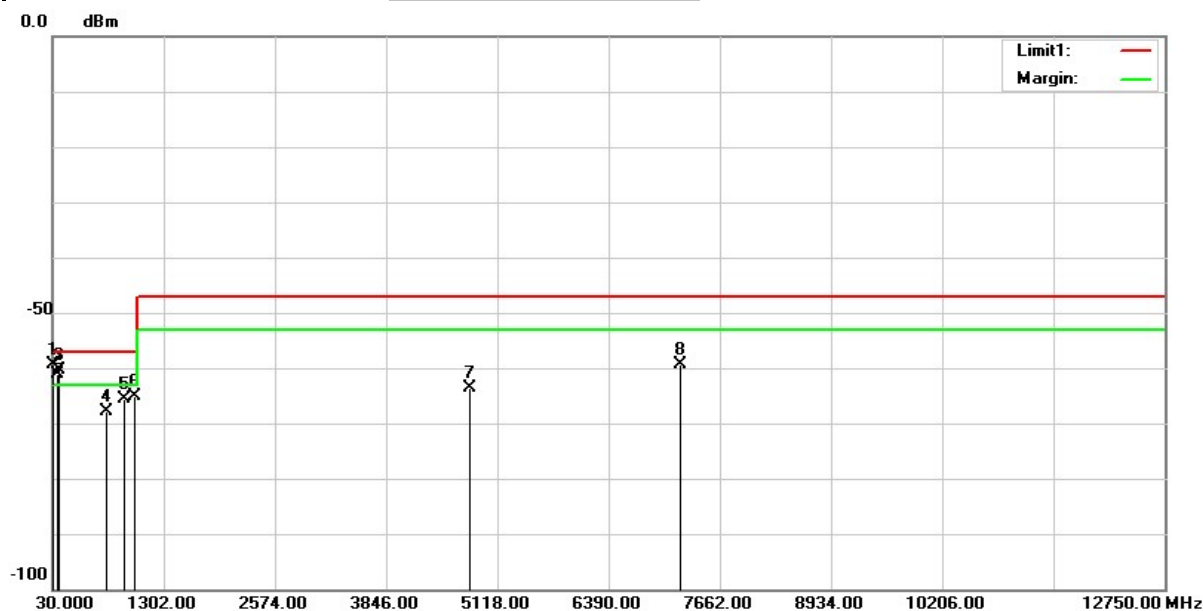


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	40.6700	-62.35	-57.00	-5.35	AVG
2	75.5900	-61.25	-57.00	-4.25	AVG
3	95.9600	-63.59	-57.00	-6.59	AVG
4	191.9900	-64.14	-57.00	-7.14	peak
5	320.0300	-63.70	-57.00	-6.70	peak
6	892.3300	-64.45	-57.00	-7.45	peak
7	4804.000	-64.77	-47.00	-17.77	peak
8	7206.000	-59.23	-47.00	-12.23	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 3 ; BT-1Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %

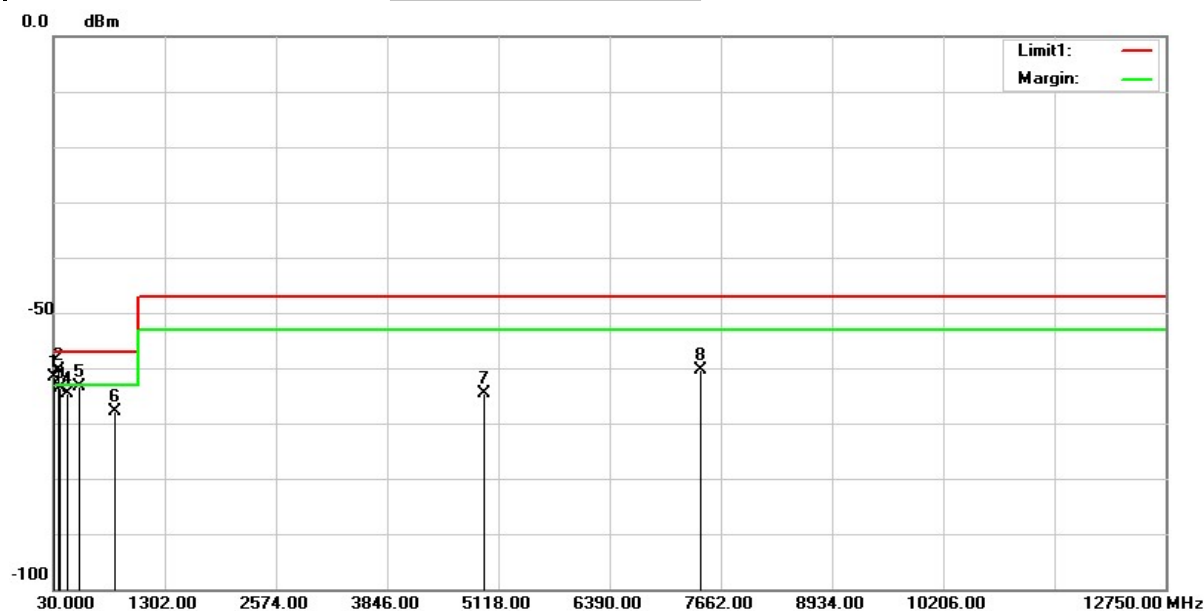


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	34.8500	-59.34	-57.00	-2.34	AVG
2	74.6200	-61.16	-57.00	-4.16	AVG
3	103.7200	-60.28	-57.00	-3.28	AVG
4	647.8900	-67.86	-57.00	-10.86	peak
5	851.5900	-65.66	-57.00	-8.66	peak
6	967.9900	-65.05	-57.00	-8.05	peak
7	4804.000	-63.74	-47.00	-16.74	peak
8	7206.000	-59.33	-47.00	-12.33	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 3 ; BT-1Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %

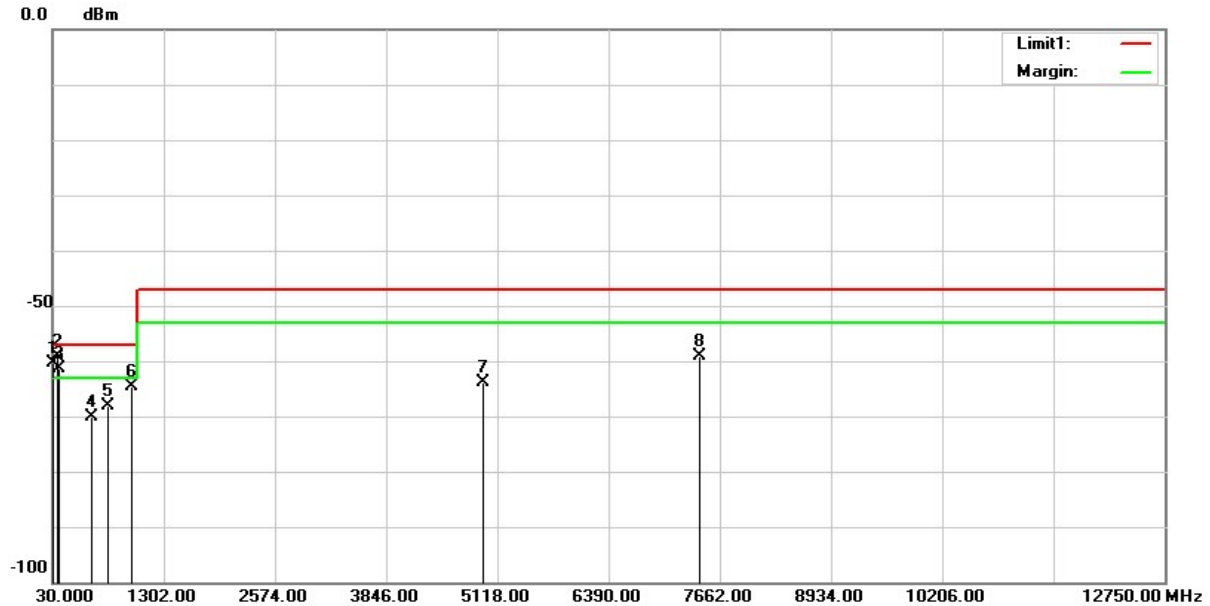


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	40.6700	-61.58	-57.00	-4.58	AVG
2	74.6200	-60.39	-57.00	-3.39	AVG
3	96.9300	-63.58	-57.00	-6.58	AVG
4	191.9900	-64.54	-57.00	-7.54	peak
5	320.0300	-63.43	-57.00	-6.43	peak
6	728.4000	-67.78	-57.00	-10.78	peak
7	4960.000	-64.64	-47.00	-17.64	peak
8	7440.000	-60.30	-47.00	-13.30	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 3 ; BT-1Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %

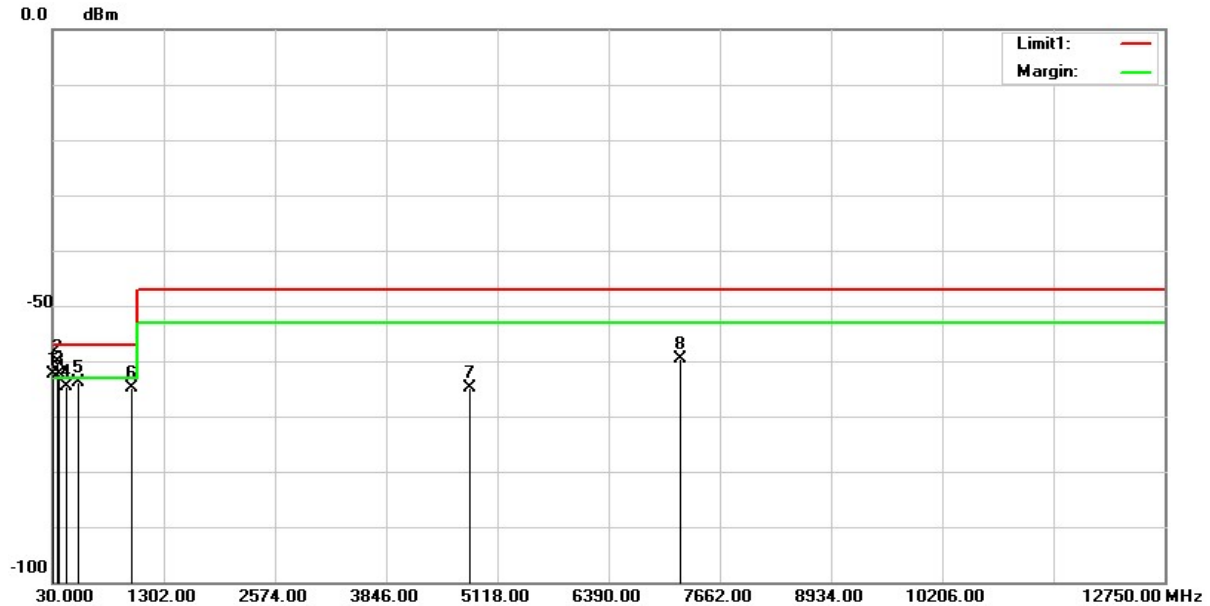


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	35.8200	-60.25	-57.00	-3.25	AVG
2	74.6200	-59.17	-57.00	-2.17	AVG
3	103.7200	-61.25	-57.00	-4.25	AVG
4	472.3200	-70.24	-57.00	-13.24	peak
5	661.4700	-68.10	-57.00	-11.10	peak
6	925.3100	-64.62	-57.00	-7.62	peak
7	4960.000	-63.93	-47.00	-16.93	peak
8	7440.000	-59.14	-47.00	-12.14	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 4 ; BT-3Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %

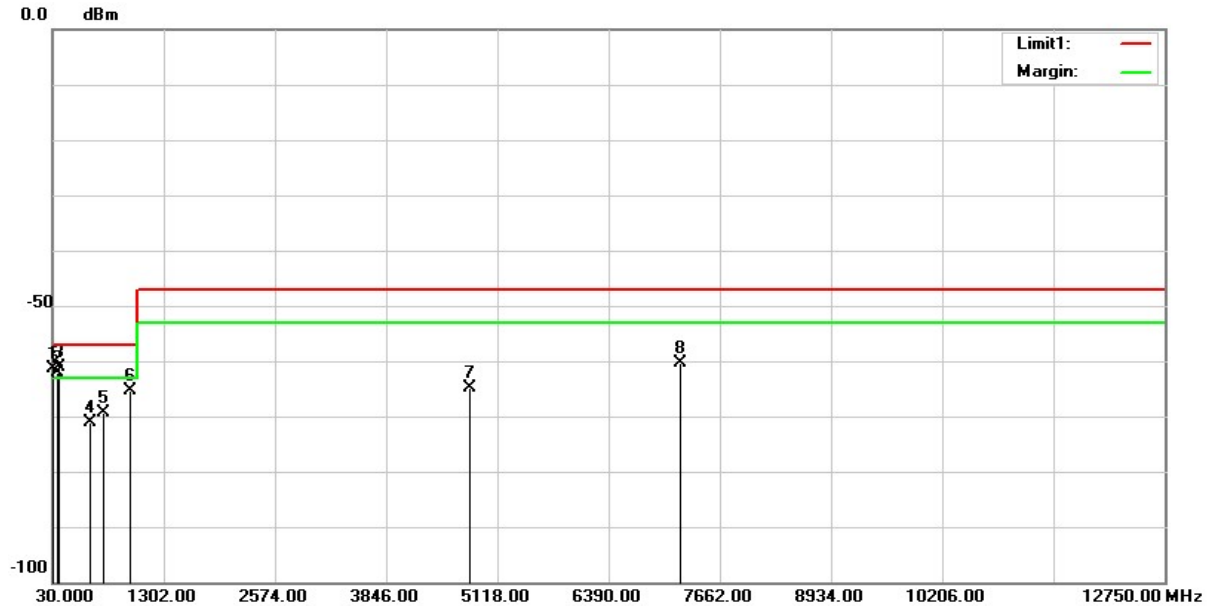


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	40.6700	-62.38	-57.00	-5.38	AVG
2	74.6200	-60.04	-57.00	-3.04	AVG
3	95.9600	-62.49	-57.00	-5.49	AVG
4	191.9900	-64.74	-57.00	-7.74	peak
5	320.0300	-63.92	-57.00	-6.92	peak
6	933.0700	-64.94	-57.00	-7.94	peak
7	4804.000	-64.98	-47.00	-17.98	peak
8	7206.000	-59.64	-47.00	-12.64	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 4 ; BT-3Mbps (2402MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %

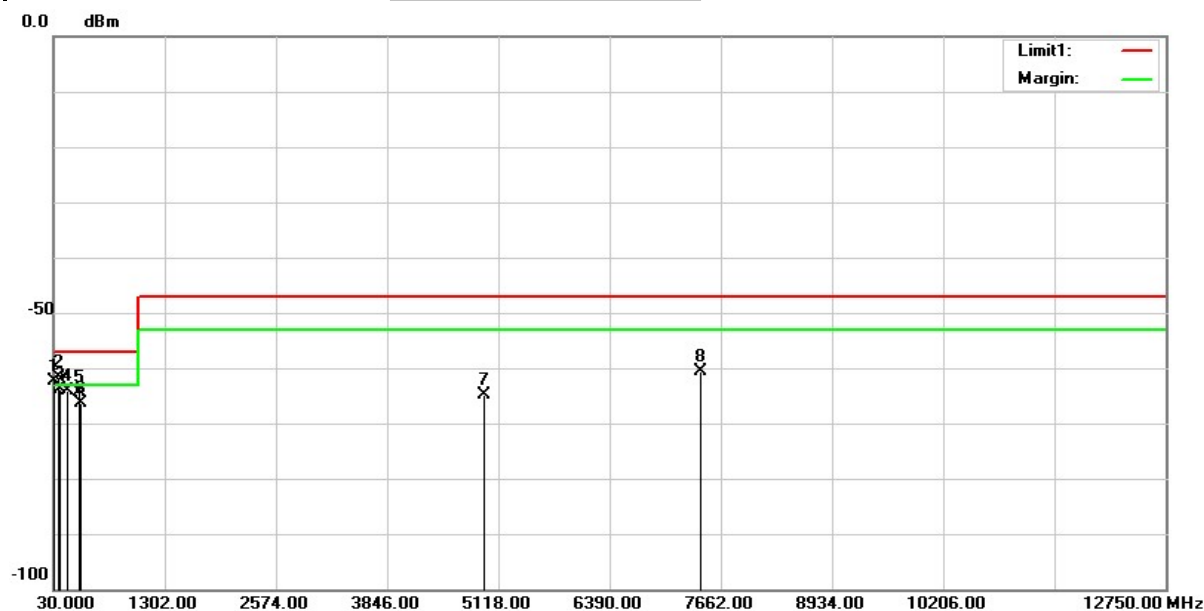


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	35.8200	-61.26	-57.00	-4.26	AVG
2	74.6200	-62.14	-57.00	-5.14	AVG
3	104.6900	-61.09	-57.00	-4.09	AVG
4	450.9800	-71.06	-57.00	-14.06	peak
5	611.0300	-69.25	-57.00	-12.25	peak
6	907.8500	-65.31	-57.00	-8.31	peak
7	4804.000	-64.97	-47.00	-17.97	peak
8	7206.000	-60.25	-47.00	-13.25	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 4 ; BT-3Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Horizontal	Relative Humidity :	55 %

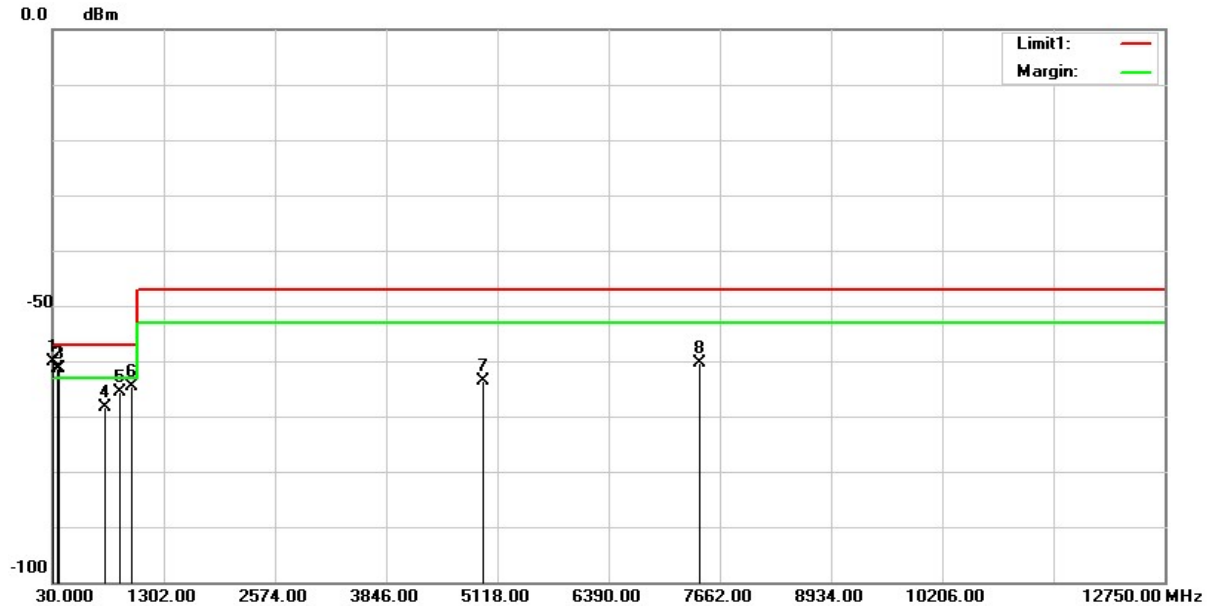


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	40.6700	-62.48	-57.00	-5.48	AVG
2	73.6500	-61.57	-57.00	-4.57	AVG
3	94.9900	-63.79	-57.00	-6.79	AVG
4	191.9900	-64.21	-57.00	-7.21	peak
5	320.0300	-64.34	-57.00	-7.34	peak
6	335.5500	-66.45	-57.00	-9.45	peak
7	4960.000	-64.83	-47.00	-17.83	peak
8	7440.000	-60.56	-47.00	-13.56	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

Test Mode :	Mode 4 ; BT-3Mbps (2480MHz)	Temperature :	25 °C
Polarization :	Vertical	Relative Humidity :	55 %



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	34.8500	-60.13	-57.00	-3.13	AVG
2	74.6200	-61.37	-57.00	-4.37	AVG
3	103.7200	-61.28	-57.00	-4.28	AVG
4	615.8800	-68.41	-57.00	-11.41	peak
5	793.3900	-65.63	-57.00	-8.63	peak
6	927.2500	-64.70	-57.00	-7.70	peak
7	4960.000	-63.67	-47.00	-16.67	peak
8	7440.000	-60.28	-47.00	-13.28	peak

Remark :

- (1) Margin Level = Result Value – Limit Value
- (2) The other emission levels were very low against the limit

2.11 Receiver Blocking

2.11.1 Limit

The minimum performance criterion shall be a PER of less than or equal to 10 %. The manufacturer may declare alternative performance criteria as long as that is appropriate for the intended use of the equipment

Receiver Category 1 :

Adaptive equipment with a maximum RF output power greater than 10 dBm e.i.r.p. shall be considered as receiver

Wanted signal mean power From companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{\min} + 6\text{dB}$	2380 2503.5	-53	CW
$P_{\min} + 6\text{dB}$	2300 2330 2360	-47	CW
$P_{\min} + 6\text{dB}$	2523.5 2553.5 2583.5 2613.5 2643.5 2673.5	-47	CW
Note 1 : $P_{\min}$ is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.2.11.3 in the absence of any blocking signal. Note 2 : The level specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.			

Receiver Category 2 :

Non-adaptive equipment with a Medium Utilization (MU) factor greater than 1 % and less than or equal to 10 % or adaptive equipment with a maximum RF output power of 10 dBm e.i.r.p. shall be considered as receiver category 2 equipment.

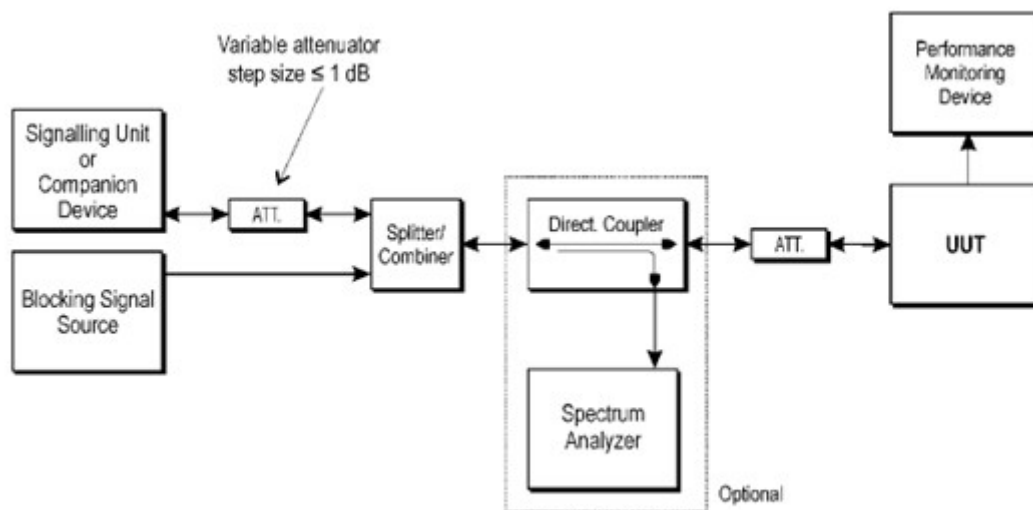
Wanted signal mean power From companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{\min} + 6\text{dB}$	2380 2503.5	-57	CW
$P_{\min} + 6\text{dB}$	2300 2583.5	-47	CW
Note 1 : $P_{\min}$ is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.2.11.3 in the absence of any blocking signal. Note 2 : The level specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.			

Receiver Category 3 :

Non-adaptive equipment with a maximum Medium Utilization (MU) factor of 1 % or adaptive equipment with a maximum RF output power of 0 dBm e.i.r.p. shall be considered as receiver category 3 equipment.

Wanted signal mean power From companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{\min} + 12\text{dB}$	2380 2503.5	-57	CW
$P_{\min} + 12\text{dB}$	2300 2583.5	-47	CW
Note 1 : $P_{\min}$ is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.2.11.3 in the absence of any blocking signal. Note 2 : The level specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.			

2.11.2 Test setup



2.11.3 Test Procedure

Refer to ETSI EN 300 328 V2.1.1 Clause 5.4.11

2.11.4 Test Condition

Normal test conditions.

2.11.5 Test Result

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : Receiver Blocking
Test Mode : Mode 1 : Transmit (BT-1Mbps)
Test Methods : Conducted Measurement

Wanted signal mean power from companion device (dBm)	Blocking signal Frequency (MHz)	Blocking signal Power (dBm)	PER (%)	PER Limit (%)	Result
Pmin + 6dB	2380	-52.15	4.61	≤ 10	Pass
	2503.5		2.37	≤ 10	Pass
Pmin + 6dB	2300	-42.15	2.83	≤ 10	Pass
	2503.5		3.29	≤ 10	Pass
(1) The resulting level for the wanted signal at the input of the UUT is Pmin. Pmin = -57.5 dBm					
(2) Antenna Gain = 4.85 dBi					
(3) The actual Blocking signal Power = Blocking signal Power + Antenna Gain					

Product : Ultra Short Throw Outdoor Portable LED Projector
Test Item : Receiver Blocking
Test Mode : Mode 2 : Transmit (BT-3Mbps)
Test Methods : Conducted Measurement

Wanted signal mean power from companion device (dBm)	Blocking signal Frequency (MHz)	Blocking signal Power (dBm)	PER (%)	PER Limit (%)	Result
Pmin + 6dB	2380	-52.15	0.00	≤ 10	Pass
	2503.5		0.00	≤ 10	Pass
Pmin + 6dB	2300	-42.15	0.00	≤ 10	Pass
	2503.5		0.00	≤ 10	Pass
(1) The resulting level for the wanted signal at the input of the UUT is Pmin. Pmin = -54.5 dBm					
(2) Antenna Gain = 4.85 dBi					
(3) The actual Blocking signal Power = Blocking signal Power + Antenna Gain					

2.12 Geo-location capability

2.12.1 Requirements

The geographical location determined by the equipment as defined in ETSI EN 300 328 V2.1.1 clause 4.3.2.12.2 shall not be accessible to the user.

2.12.2 Test Result

The Geo-location function is declared by the manufacturer.

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