

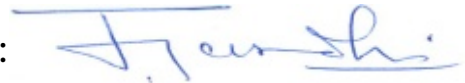
NCC RADIO TEST REPORT

Product name	好啦機器人HolaBot
Applicant	深圳市普渡科技有限公司
Manufacture	深圳市普渡科技有限公司
Rating(s)	DC29V from adapter or DC25.55V from battery
Trademark	Pudu
Model and/or type reference	HL100
Standard	LP0002:2018
Test Result	PASS

Date of receipt : 11-02-2020

Date of Issue : 11-30-2020

signature :



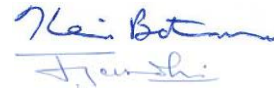
NCC RADIO TEST REPORT

Report Reference No.: M201118N2-02

Compiled by (+ signature) Kevin Bothmann

Approved by (+ signature) Jay Gandhi

Date of issue: 2020-11-30



Applicant's name: 深圳市普渡科技有限公司

Address: 深圳市南山區粵海街道科技園社區科發路 10 號維用大廈 301

Manufacture's Name: 深圳市普渡科技有限公司

Address: 深圳市南山區粵海街道科技園社區科發路 10 號維用大廈 301

Test specification:

Standard: LP0002: 2018

Test procedure: EIA 603、ANSI、FCC/47 CFR/2.1046、2.1047、2.1049、2.1051、2.1053 and 2.1055

Non-standard test method: N/A

Test item description

Product name: 好啦機器人 HolaBot

Trademark: Pudu

Model and/or type reference: HL100

Rating(s): DC29V from adapter or DC25.55V from battery

Testing Laboratory information:

Testing Laboratory Name: Electro Magnetic Test, Inc.

Address: 1547 Plymouth Street, Mountain View, CA 94043

CAB Identifier Number: US0036

Tel: (650) 965-4000

Fax: (650) 965-3000

E-mail: jgandhi@emtlabs.com

Testing:

Date of receipt of test item: Nov. 02, 2020

Date (s) of performance of tests: Nov. 02~ Nov. 30, 2020

Date of Issue: Nov. 30, 2020

Test Result: Pass

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Electro Magnetic Test, Inc., which is an independent testing and consulting firm. The test report is based on testing performed Electro Magnetic Test, Inc. personnel according to the measurement procedure described in the test specification given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Federal Government.

Electro Magnetic Test, Inc. is recognized by the following agencies for performing EMI/EMC testing:

COUNTRY	AGENCY	IDENTIFYING #
USA	Federal Communications Commission (FCC) (EMT's test site is recognized by the FCC)	Registration Number: 90576
USA, Canada, Taiwan, Australia/New Zealand, European Community	National Voluntary Lab Accreditation Program (NVLAP) (EMT is accredited by NVLAP. A copy of the NVLAP Scope Of Accreditation is available upon request.)	Lab Code: 200147-0
Canada	Industry Canada	File No.: IC 2804
Japan	Voluntary Control Council For Interference (VCCI)	A-0118
	Open Field Test Site "A"	-
	Mains Conducted Emissions Test Site "A"	-
	Telecom Conducted Emissions Test Site "A"	-
	3 Meter Semi-Anechoic Chamber Site "E"	-
	3 Meter Semi-Anechoic Chamber Site "E" (1GHz – 6GHz)	-
	Mains Conducted Emissions Test Site "E"	-
	Telecom Conducted Emissions Test Site "E"	-
Korea	Ministry of Information and Communication's Radio Research Laboratory (RRL) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (A copy of the Scope Of Accreditation is available upon request)	US0036
Taiwan	Bureau Of Standards, Metrology and Inspection (BSMI)	Reference Number: SL2-IN-E-1024
Australia / New Zealand	Australian Communications Authority (AUSTEL)	*

*These agencies do not issue an identifying number to test labs.

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1 . SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

LP0002 : 2018			
Standard Section	Test Item	Judgment	Remark
4.7.4.5/2.3	Conducted Emission	PASS	None
4.7.4/2.8	Radiated Spurious Emission	PASS	None
4.7.3.3	Peak Output Power	PASS	None
4.7.5	Occupied Bandwidth	PASS	None
4.7.3.3	Power Density	PASS	None
4.7.4/2.8	Restricted Bands	PASS	None
4.7.4/2.8	ANTENNA CONDUCTED SPURIOUS EMISSION	PASS	None
4.7.8	Antenna Requirement	PASS	None

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	1.38dB
2	Radiated Emission Test	3.17dB
3	RF power,conducted	0.16dB
4	Spurious emissions,conducted	0.21dB
5	All emissions,radiated(<1G)	4.68dB
6	All emissions,radiated(>1G)	4.89dB

2 . GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	好啦機器人HolaBot	
Trade Name	Pudu	
Model Name	HL100	
Serial Model Name	N/A	
Product Description	The EUT is a 好啦機器人HolaBot.	
	Operation Frequency:	5725 ~ 5850 MHz
	Modulation Type:	802.11a/n (HT20/HT40) : OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ac(VHT20/VHT40/VHT80) : OFDM (QPSK/BPSK/16QAM/64QAM/256QAM)
	Bit Rate of Transmitter	802.11a:54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: at most 433.3 Mbps
	Number Of Channel	802.11a/n/ac(20MHz):5CH 802.11n/ac(40MHz):3CH 802.11ac(80MHz):1CH
	Output Power:	802.11a: 12.86dBm 802.11n 20: 15.05dBm 802.11n 40: 14.45dBm 802.11ac 20: 14.79dBm 802.11ac 40: 14.42dBm 802.11ac 80: 14.02dBm
	Antenna Designation:	Please see Note 3.
	Antenna Gain(Peak)	Please see Note 3.
Channel List	Please refer to the Note 2.	
Power Rating	DC29V from adapter or DC25.55V from battery	
Model difference	Only model name different, Others are exactly the same.	

Note:

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

2.
5GHz

802.11a/ ac/n 20 MHz Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11ac/n 40MHz Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	155	5775	159	5795	-	-

802.11ac 80MHz Carrier Frequency Channel	
Channel	Frequency (MHz)
155	5775

3.

Table for Filed Antenna

Ant	Manufacture's	Model Name	Antenna Type	Connector	Gain (dBi)
1	Shenzhen eyebook Technology Co., Ltd	PJ0003_Ant0003	PCB Antenna	N/A	3.5 dBi
2	Shenzhen eyebook Technology Co., Ltd	PJ0003_Ant0004	PCB Antenna	N/A	3.5 dBi

Note: For MIMO mode: Directional gain=GANT +10log(N)dBi =6.51dBi .

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description (All rate)
Mode 1	802.11a /n/ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n-ac40 CH 151 / CH 159
Mode 3	802.11AC80 MHz CH 155
Mode 4	Link Mode
Mode 5	RX

For Conducted Emission	
Final Test Mode	Description
Mode 4	Link Mode

For Radiated Emission	
Final Test Mode	Description (worst-case)
Mode 1	802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	802.11n40 CH 151 / CH 159
Mode 3	802.11ac80 MHz CH 155
Mode 5	RX

Note:

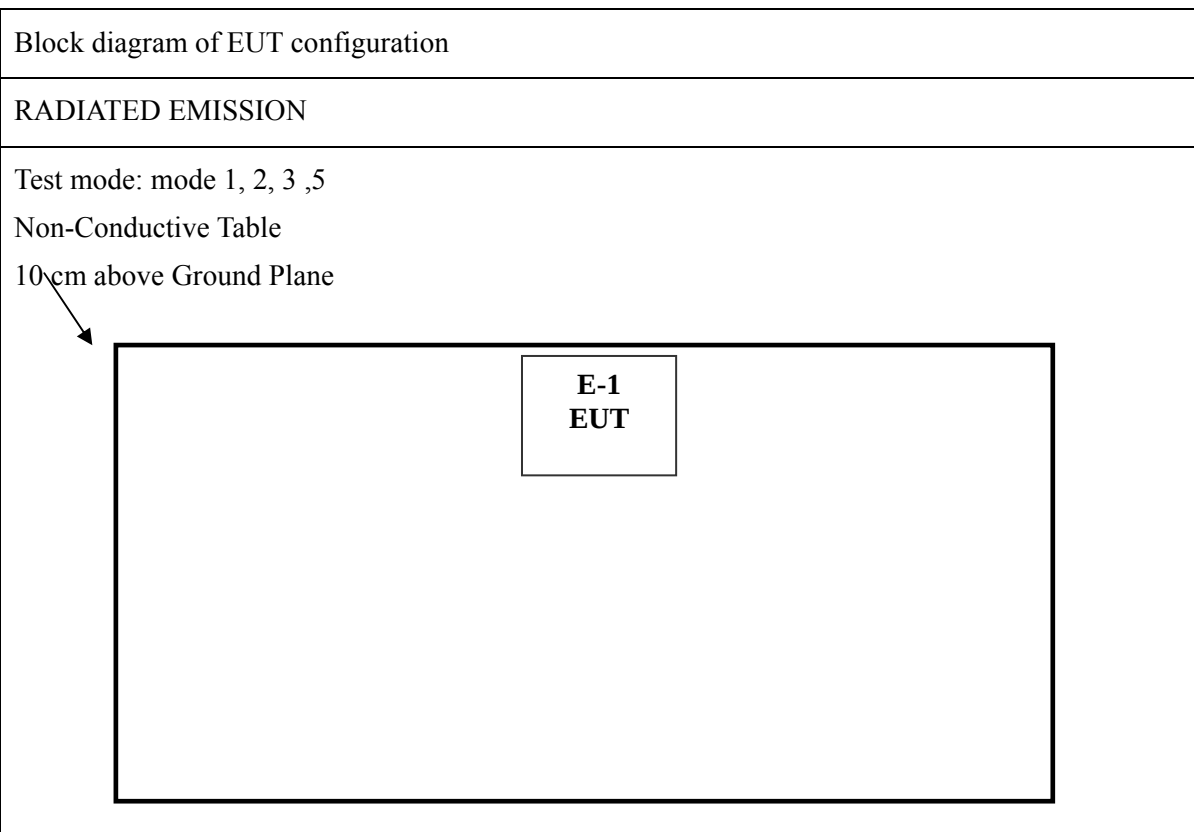
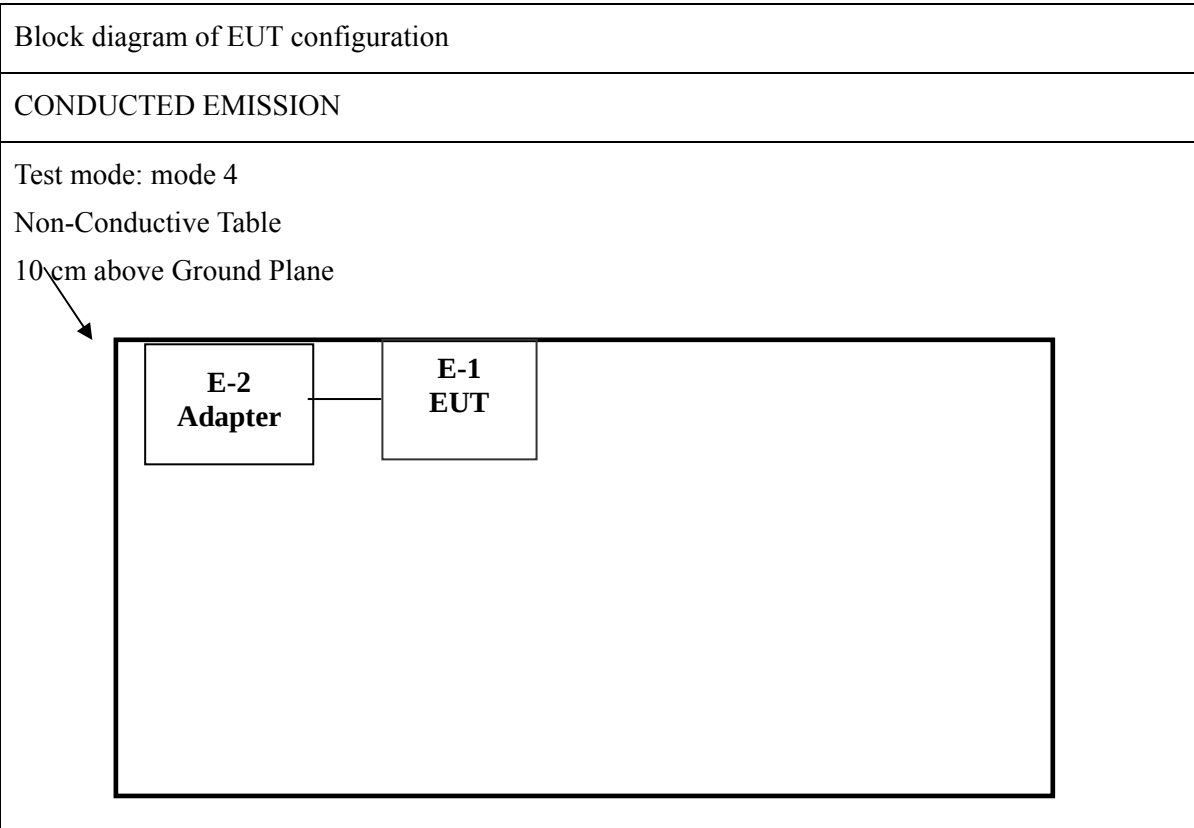
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) Pretest IEEE 802.11ac20/40/80 mode, The worst data is IEEE 802.11ac 80 mode, only shown IEEE 802.11ac 80 data.

AP6356S	Test software Version	V5.4	Test program:	Ampak RF Test Tool
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Mode	Power setting
802.11 a/n/ac	15

1. The monitor is connected to HDMI port, Open the RFTesTool software in the monitor.
2. WIFI TEST: Click Wifi and the color will turn blue to success.
3. Click **FUNCTIONS** to enter test mode, Select the MODULATION.
4. Select the channel and click Start.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	好啦機器人 HolaBot	Pudu	HL100	N/A	N/A	EUT
E-2	Battery Charger	東莞市福洋電子 有限公司	FY29008000	N/A	N/A	EUT

Item	Equipment	Mfr/Brand	Model/Type No.	Note
1	Removable Battery	Pudu	RB01	EUT
2	Radar 1#	YDLIDAR	G7	EUT
3	Radar 2#	YDLIDAR	TG30	EUT
4	Radar 3#	SLAMTEC	S1	EUT
5	Display Screen 1#	Shenzhen eyebook Technology Co., Ltd	PB101GGJ5119QT001	EUT
6	Display Screen 2#	Shenzhen eyebook Technology Co., Ltd	10.1 InchWUXGA	EUT
7	RJ45 Line	UGREEN	11268-3m	Test Accessory*

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” or “with ferrite core”; “NO” means “unshielded” or “without ferrite core”
- (4) “*”: In this report, the applicant did not provide the accompanying accessories with the equipment. The accessories were provided by the laboratory (or the applicant) and inspected simultaneously.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Equipment Type	Manu-facturer	Model Number	Serial Number	Cal. Date	CAL. CYCLE
Spectrum Analyzer	Hewlett Packard	8566B	3013A07296	April 29, 2020	1 Year
RF Preselector	Hewlett Packard	85685A	3010A01157	April 29, 2020	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650	2521A00584	April 29, 2020	1 Year
Preamplifier	Com Power	PA-102	1482	April 29, 2020	1 Year
RF Attenuator	Mini-Circuits	CAT-10	Asset #1000	December 8, 2019	1 Year
LISN	Com Power	LI-200	12012	September 09, 2020	1 Year
LISN	Com Power	LI-200	12214	September 09, 2020	1 Year
LISN	Com Power	LI-200	1767	September 09, 2020	1 Year
LISN	Com Power	LI-200	1768	September 09, 2020	1 Year
Biconical Antenna	Com Power	AB-100	01557	December 29, 2019	1 Year
Log Periodic Antenna	Com Power	AL-100	16037	December 22, 2019	1 Year
Horn Antenna	Com Power	AHA-118	711054	December 22, 2019	1 Year
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Dell, Inc.	DHS	DNSV641	N/A	N/A
Printer	Hewlett Packard	C8124A	CN39B2234T	N/A	N/A
Plotter	Hewlett Packard	7470A	2308A96499	N/A	N/A

EMI Test Equipment (Continued)

Equipment Type	Manu-facturer	Model Number	Serial Number	Cal. Date	CAL. CYCLE
EMI Receiver	Rohde & Schwarz	ESU40	100127	June 12, 2020	1 Year
BiConiLog Antenna	ETS-Lindgren	3142D	00102183	August 14, 2020	1 Year
Horn Antenna	ETS-Lindgren	3117	00109294	May 6, 2020	1 Year
Preamplifier	Rohde & Schwarz	TS-PR18	100056	June 12, 2020	1 Year
Antenna Mast	ETS-Lindgren	2175	00095727	N/A	N/A
Turntable	ETS-Lindgren	2187-3.0	00118231	N/A	N/A
Computer	Acer	Aspire 8930	85100050123	N/A	N/A
Multi-Function Controller	ETS-Lindgren	2090	00102270	N/A	N/A
Loop Antenna	ARA	PLA-1030/B	1029	May 19, 2020	1 Year

3 . EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

POWER LINE CONDUCTED EMISSION Limits

(Frequency Range 150kHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP0002
0.50 -5.0			56.00	46.00	LP0002
5.0 -30.0			60.00	50.00	LP0002

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

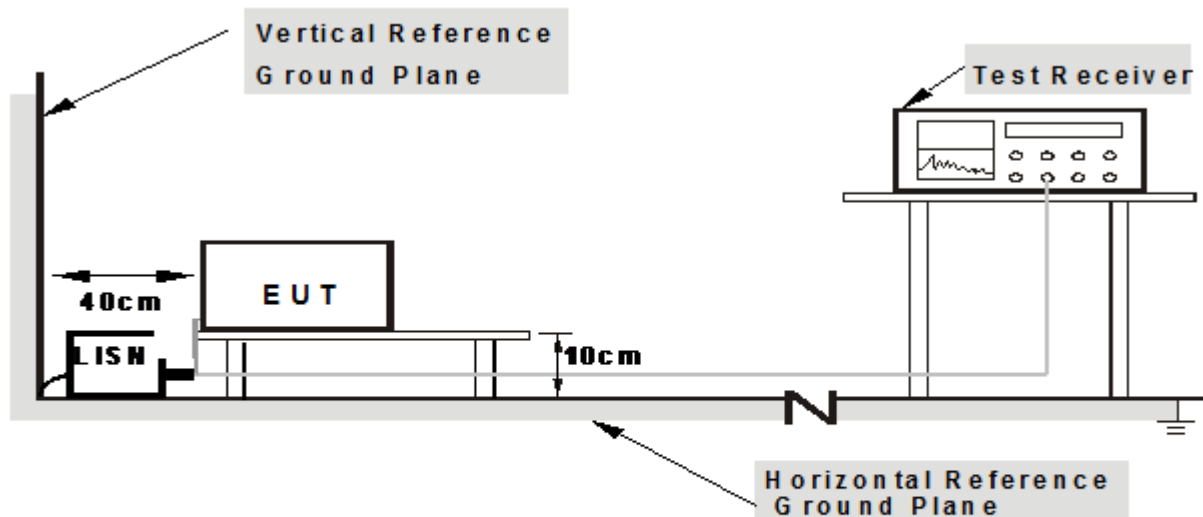
TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

DEVIATION FROM TEST STANDARD

No deviation

TEST SETUP

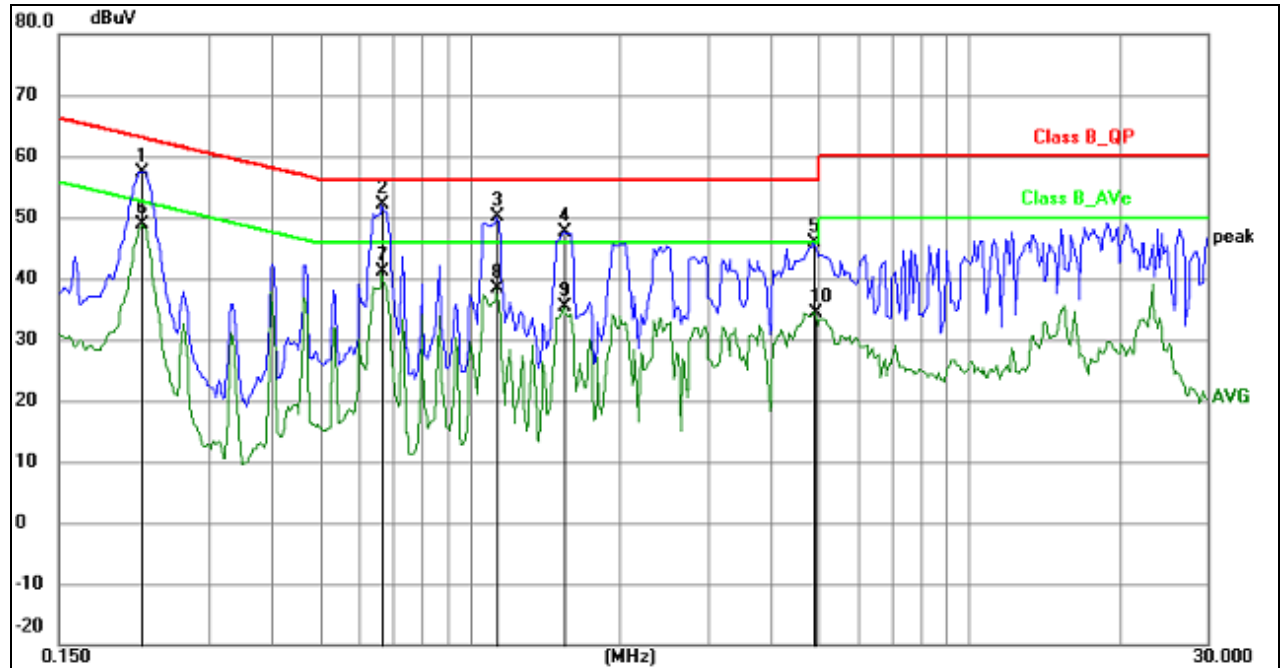


Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

TEST RESULTS

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-11-12
Test Mode :	Mode 4 (worst case)	Phase :	L
Test Voltage :	AC 110V/60Hz for Adapter		

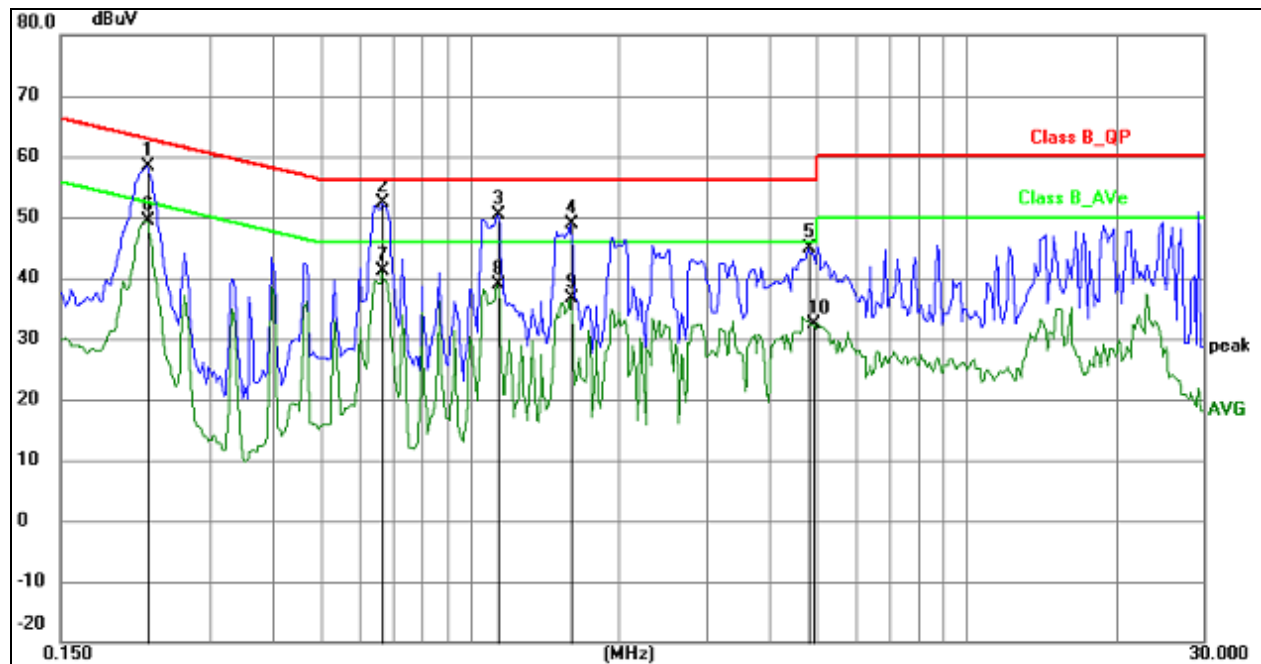


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss + Pulse limit.
3. '*' means the worst case

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2202	47.62	9.75	57.37	62.81	-5.44	peak	P
2	0.6648	42.28	9.78	52.06	56.00	-3.94	peak	P
3	1.1328	40.36	9.79	50.15	56.00	-5.85	peak	P
4	1.5384	37.95	9.80	47.75	56.00	-8.25	peak	P
5	4.8915	35.91	9.93	45.84	56.00	-10.16	peak	P
6	0.2202	39.03	9.75	48.78	52.81	-4.03	AVG	P
7	0.6648	31.25	9.78	41.03	46.00	-4.97	AVG	P
8	1.1328	28.50	9.79	38.29	46.00	-7.71	AVG	P
9	1.5384	25.70	9.80	35.50	46.00	-10.50	AVG	P
10	4.8997	24.39	9.93	34.32	46.00	-11.68	AVG	P

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-11-12
Test Mode :	Mode 4 (worst case)	Phase :	N
Test Voltage :	AC 110V/60Hz for Adapter		



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss + Pulse limit.
3. '*' means the worst case

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2241	48.60	9.75	58.35	62.67	-4.32	peak	P
2	0.6648	42.49	9.78	52.27	56.00	-3.73	peak	P
3	1.1367	40.48	9.79	50.27	56.00	-5.73	peak	P
4	1.6007	39.07	9.80	48.87	56.00	-7.13	peak	P
5	4.8174	34.84	9.92	44.76	56.00	-11.24	peak	P
6	0.2241	39.55	9.75	49.30	52.67	-3.37	AVG	P
7	0.6648	31.35	9.78	41.13	46.00	-4.87	AVG	P
8	1.1367	29.15	9.79	38.94	46.00	-7.06	AVG	P
9	1.6007	26.86	9.80	36.66	46.00	-9.34	AVG	P
10	4.9071	22.53	9.93	32.46	46.00	-13.54	AVG	P

3.2 RADIATED EMISSION MEASUREMENT

Radiated Emission Limits (Frequency Range 9kHz-1000MHz)
20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 2.7, then the 2.8 limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to LP0002.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

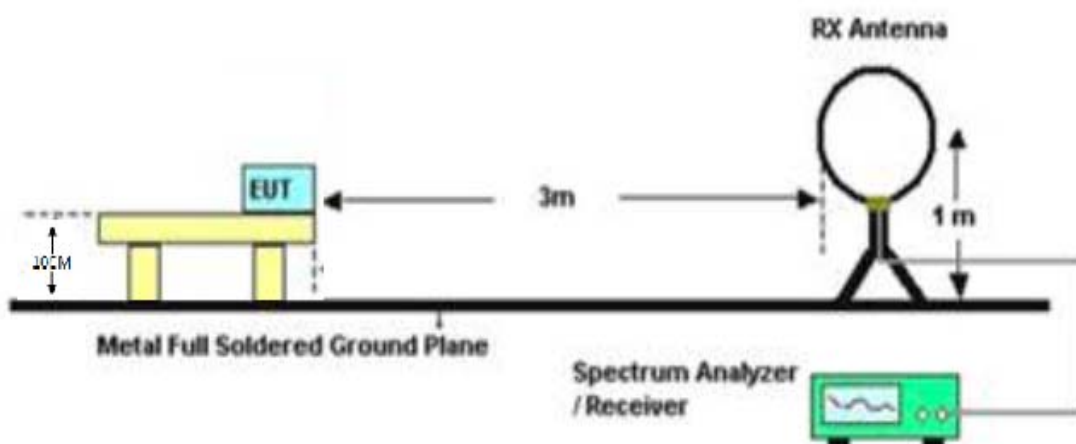
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

TEST PROCEDURE

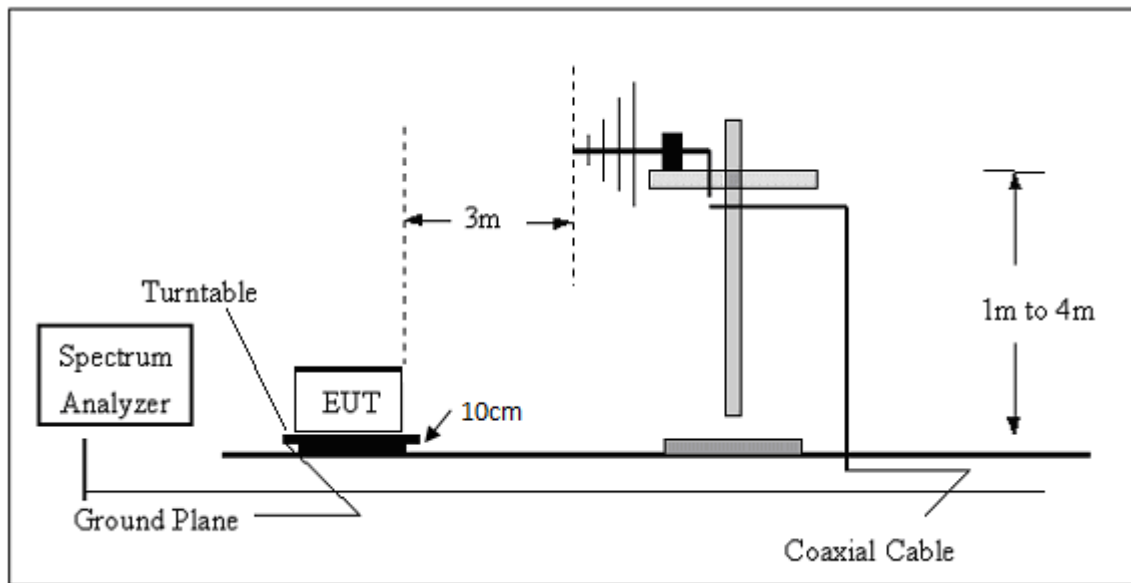
- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 or 1.5 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP

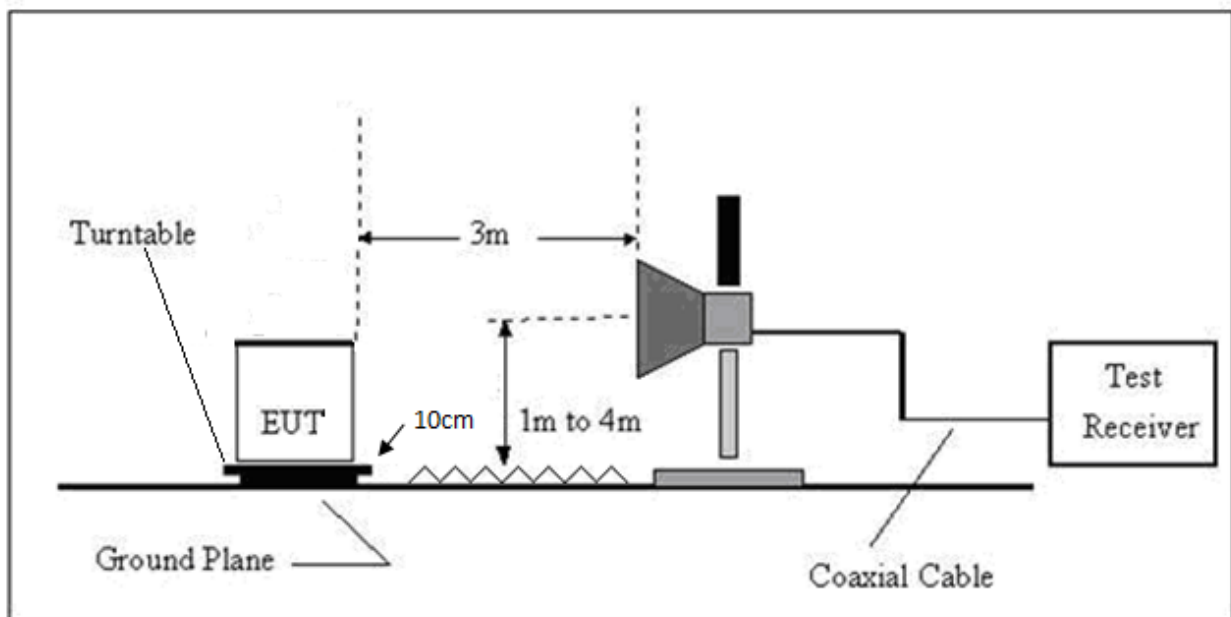
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

TEST RESULTS (BETWEEN 9kHz – 30 MHz)

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-11-12
Test Mode :	TX 802.11b :Rate 1Mbps (worst case)	Polarization :	--
Test Power :	DC25.55V from battery		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

NOTE:

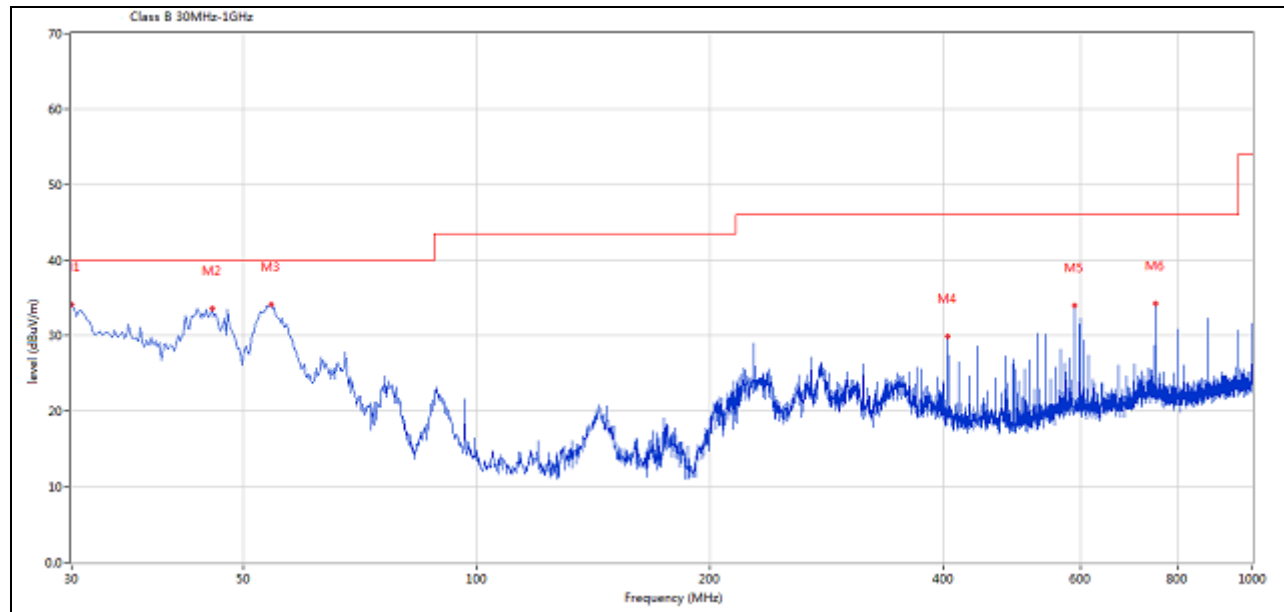
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.

TEST RESULTS (Between 30 – 1000 MHz)

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20) (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

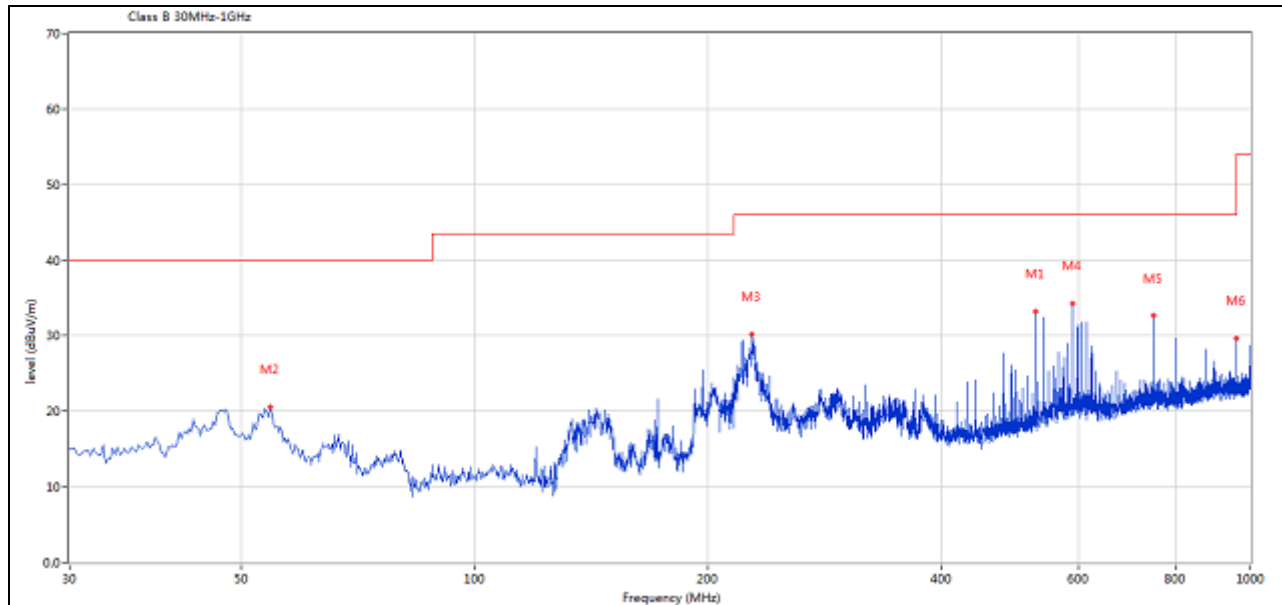


Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1	30.000	34.17	-14.19	40.0	-5.83	Peak	Vertical	Pass
2	45.516	33.60	-11.39	40.0	-6.40	Peak	Vertical	Pass
3	54.244	34.15	-11.60	40.0	-5.85	Peak	Vertical	Pass
4	405.054	29.97	-8.63	46.0	-16.03	Peak	Vertical	Pass
5	589.793	34.04	-5.08	46.0	-11.96	Peak	Vertical	Pass
6	750.045	34.24	-3.43	46.0	-11.76	Peak	Vertical	Pass

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20) (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

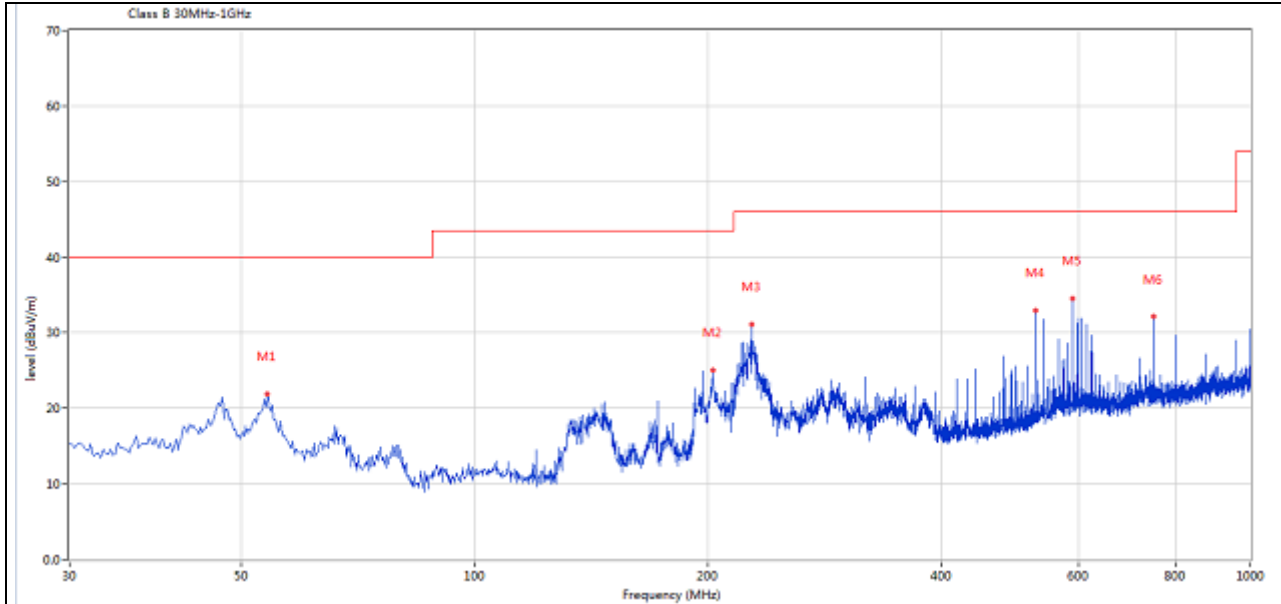


Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1	527.971	33.24	-6.62	46.0	-12.76	Peak	Horizontal	Pass
2	54.486	20.62	-11.66	40.0	-19.38	Peak	Horizontal	Pass
3	227.831	30.25	-12.78	46.0	-15.75	Peak	Horizontal	Pass
4	589.793	34.24	-5.08	46.0	-11.76	Peak	Horizontal	Pass
5	750.045	32.63	-3.43	46.0	-13.37	Peak	Horizontal	Pass
6	959.998	29.71	-1.63	46.0	-16.29	Peak	Horizontal	Pass

EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-11-12
Test Mode :	RX	Polarization :	Horizontal
Test Power :	DC25.55V from battery		

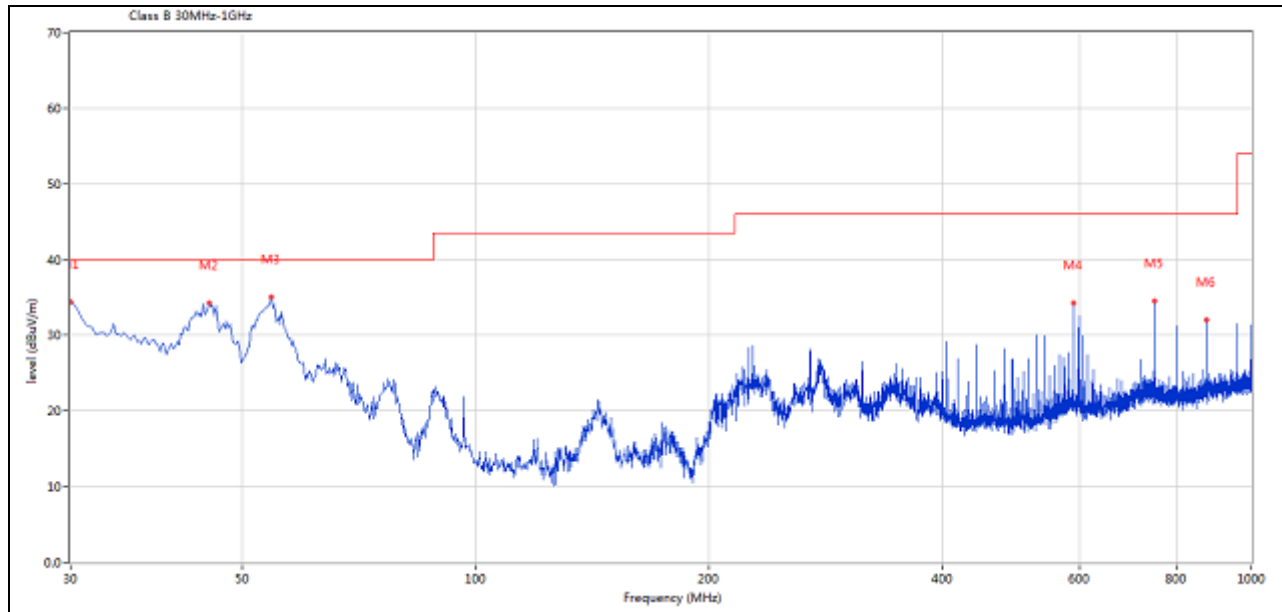


Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1	54.001	21.87	-11.54	40.0	-18.13	Peak	Horizontal	Pass
2	202.617	25.05	-13.40	43.5	-18.45	Peak	Horizontal	Pass
3	227.588	31.13	-12.79	46.0	-14.87	Peak	Horizontal	Pass
4	527.971	32.93	-6.62	46.0	-13.07	Peak	Horizontal	Pass
5	589.793	34.56	-5.08	46.0	-11.44	Peak	Horizontal	Pass
6	750.045	32.10	-3.43	46.0	-13.90	Peak	Horizontal	Pass

EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-11-12
Test Mode :	RX	Polarization :	Vertical
Test Power :	DC25.55V from battery		



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

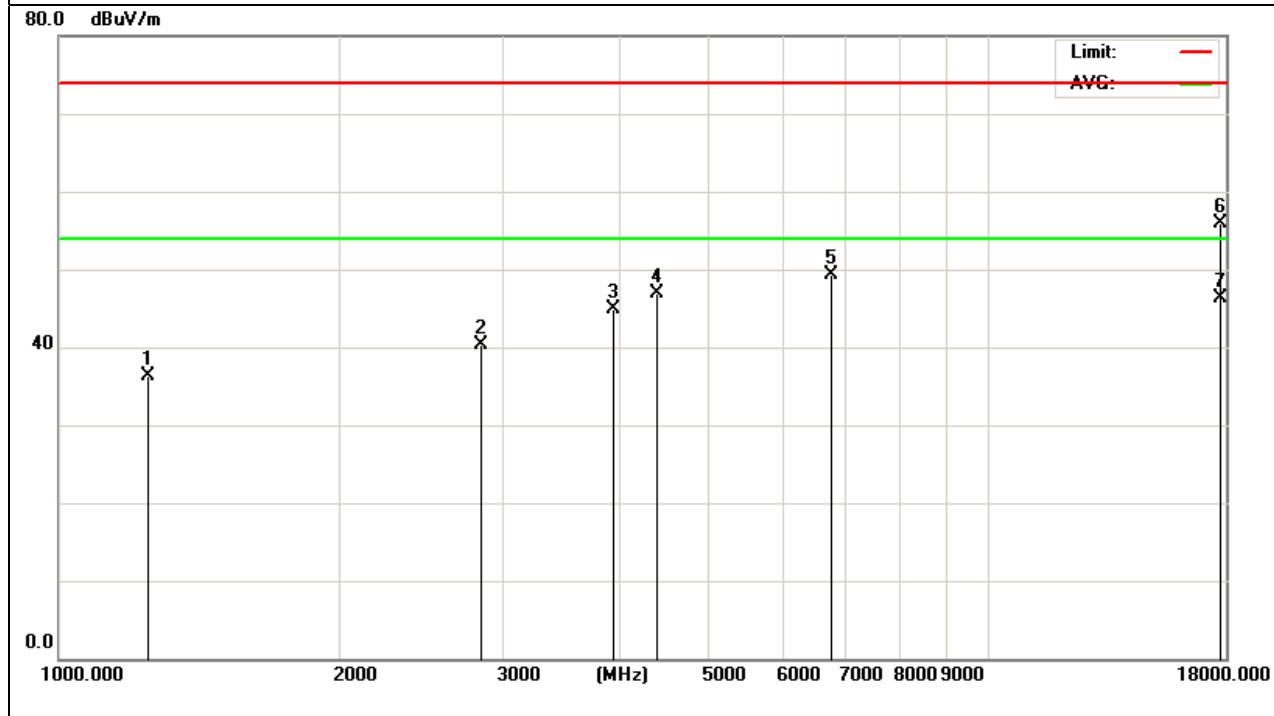
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1	30.000	34.43	-14.19	40.0	-5.57	Peak	Vertical	Pass
2	45.274	34.28	-11.40	40.0	-5.72	Peak	Vertical	Pass
3	54.486	35.13	-11.66	40.0	-4.87	Peak	Vertical	Pass
4	589.793	34.25	-5.08	46.0	-11.75	Peak	Vertical	Pass
5	750.045	34.50	-3.43	46.0	-11.50	Peak	Vertical	Pass
6	875.144	32.02	-2.17	46.0	-13.98	Peak	Vertical	Pass

3.2.5 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)-Low Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1245.579	47.02	-10.47	36.55	74.00	-37.45	peak
2843.338	42.93	-2.64	40.29	74.00	-33.71	peak
3939.162	41.77	3.4	45.17	74.00	-28.83	peak
4391.057	42.85	4.51	47.36	74.00	-26.64	peak
6768.893	43.11	6.03	49.14	74.00	-24.86	peak
17723.776	31.24	24.87	56.11	74.00	-17.89	peak
17723.776	21.59	24.87	46.46	54.00	-7.54	AVG

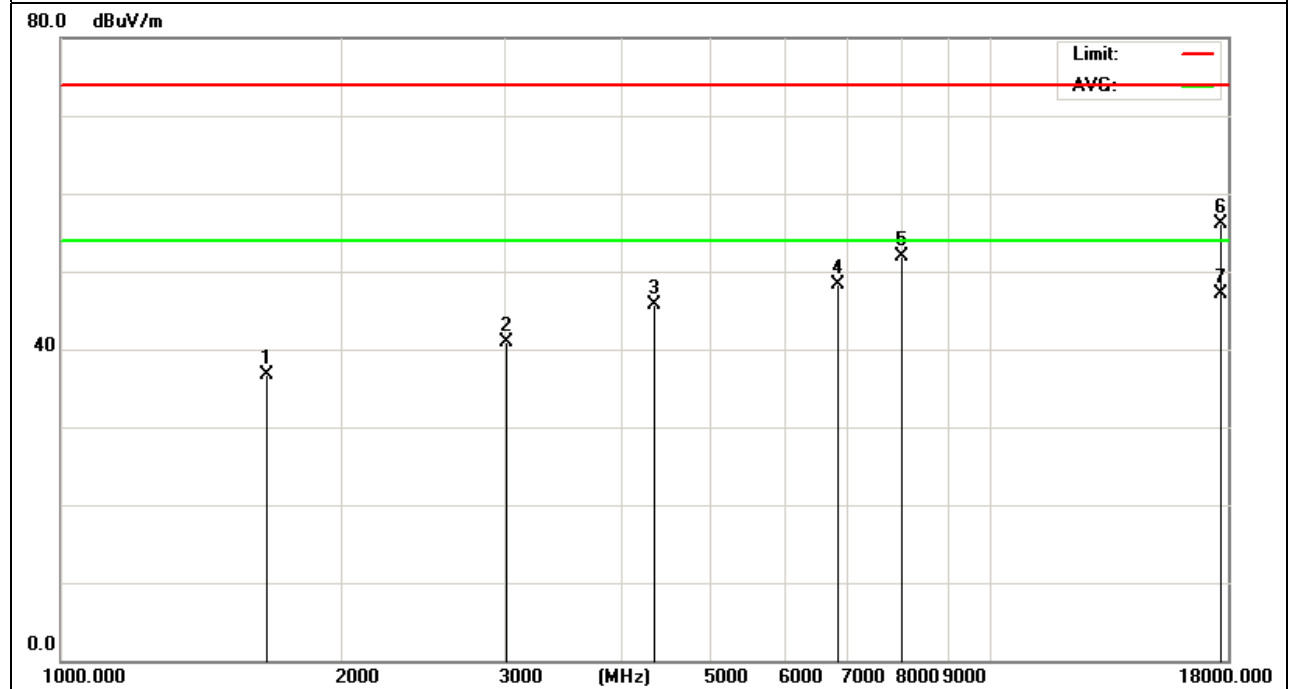
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)-Low Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1660.532	46.74	-9.73	37.01	74.00	-36.99	peak
3016.775	42.59	-1.65	40.94	74.00	-33.06	peak
4353.859	41.97	4.44	46.41	74.00	-27.59	peak
6840.339	42.51	6.08	48.59	74.00	-25.41	peak
8011.521	41.33	10.4	51.73	74.00	-22.27	peak
17658.004	31.47	24.92	56.39	74.00	-17.61	peak
17658.004	22.64	24.92	47.56	54.00	-6.44	AVG

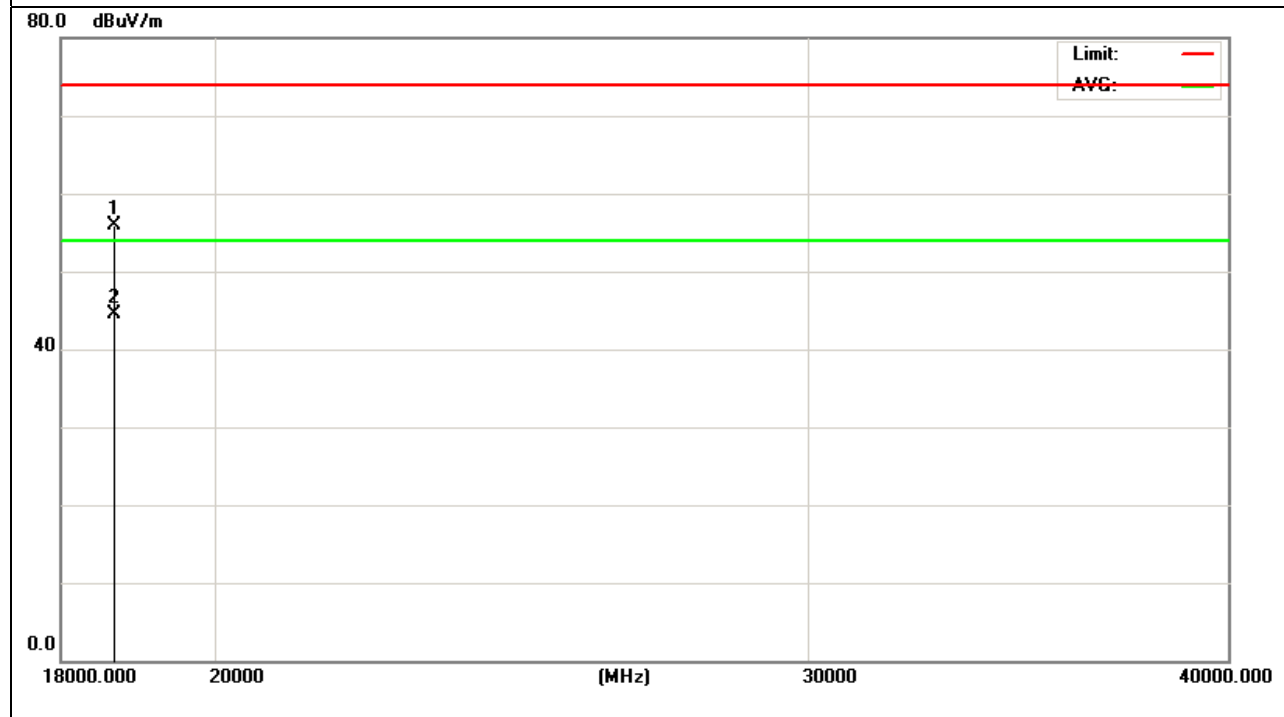
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)-Low Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18665.000	42.75	13.29	56.04	74.00	-17.96	peak
18665.000	31.31	13.29	44.60	54.00	-9.40	AVG

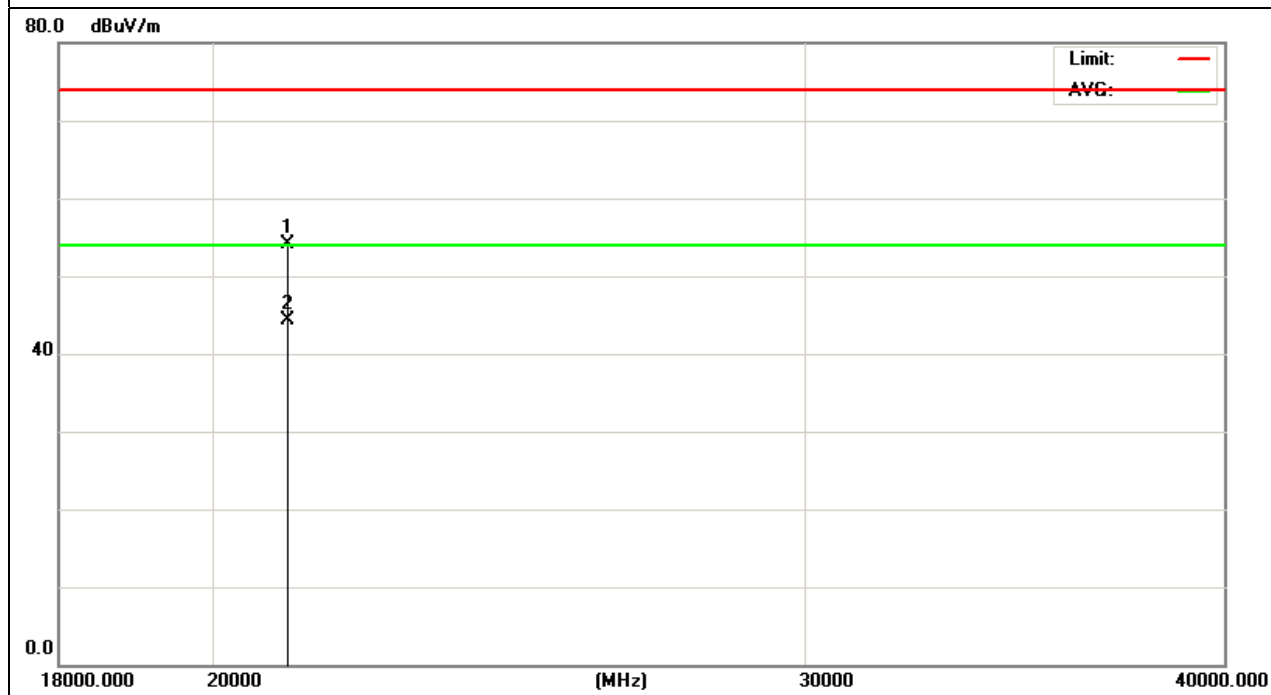
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)-Low Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
21057.000	37.51	16.84	54.35	74.00	-19.65	peak
21057.000	27.27	16.84	44.11	54.00	-9.89	AVG

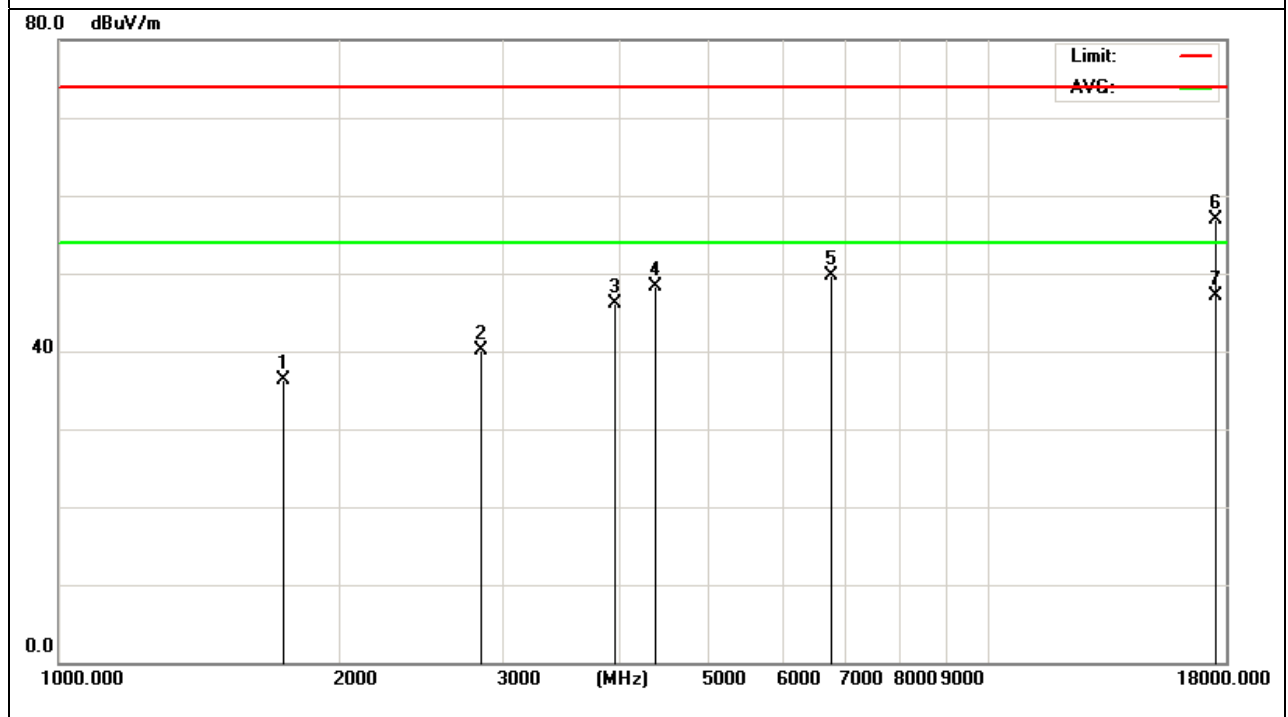
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)-Mid Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1746.577	45.91	-9.49	36.42	74.00	-37.58	peak
2841.006	42.88	-2.66	40.22	74.00	-33.78	peak
3948.674	43.05	3.47	46.52	74.00	-27.48	peak
4377.048	43.99	4.49	48.48	74.00	-25.52	peak
6775.479	43.82	6.04	49.86	74.00	-24.14	peak
17514.292	32.06	25.03	57.09	74.00	-16.91	peak
17514.292	22.38	25.03	47.41	54.00	-6.59	AVG

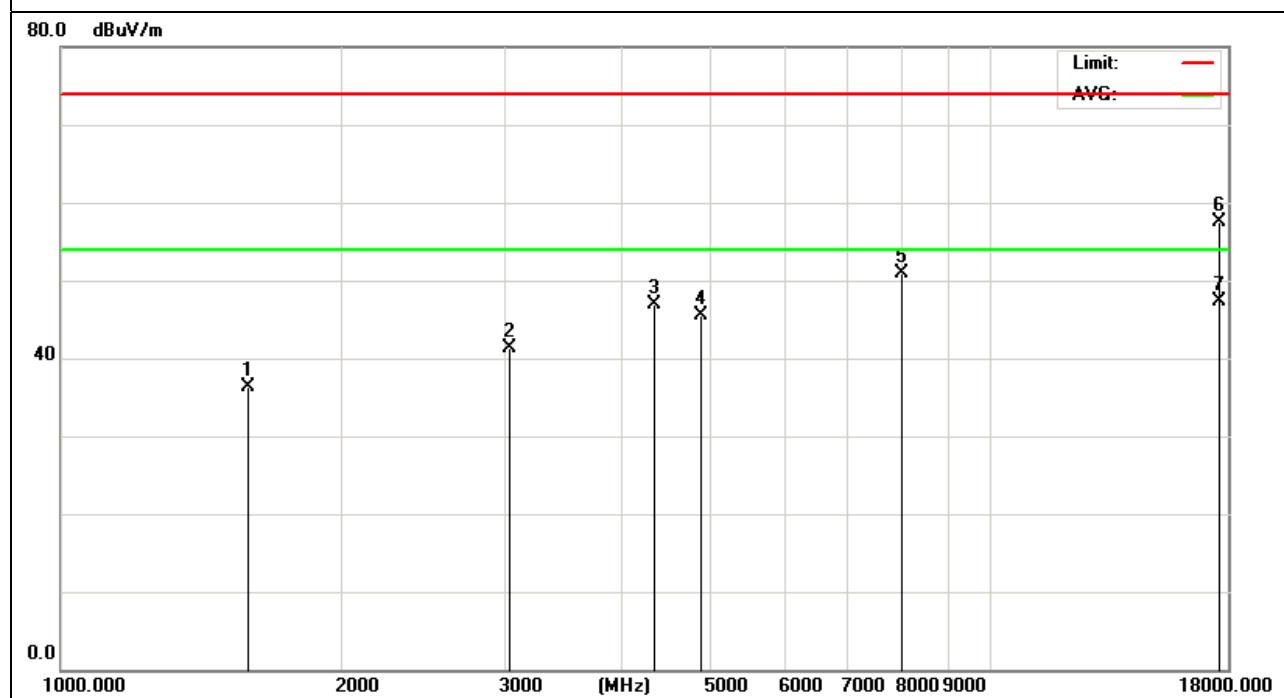
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)-Mid Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1588.886	46.84	-9.89	36.95	74.00	-37.05	peak
3024.824	42.73	-1.62	41.11	74.00	-32.89	peak
4345.924	43.05	4.42	47.47	74.00	-26.53	peak
4864.005	40.18	5.13	45.31	74.00	-28.69	peak
8016.234	40.57	10.4	50.97	74.00	-23.03	peak
17551.112	32.76	25	57.76	74.00	-16.24	peak
17551.112	22.81	25	47.81	54.00	-6.19	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)-Mid Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19962.000	39.77	15.21	54.98	74.00	-19.02	peak
19962.000	29.58	15.21	44.79	54.00	-9.21	AVG

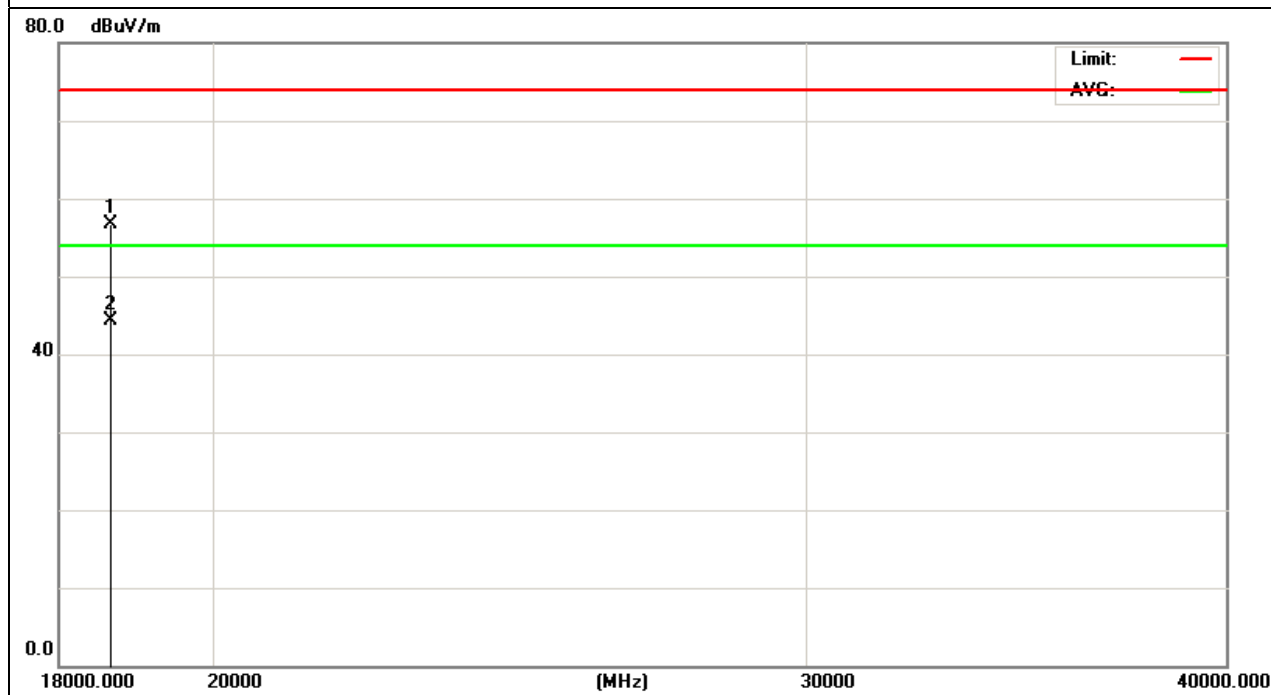
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)-Mid Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18656.000	43.49	13.27	56.76	74.00	-17.24	peak
18656.000	31.24	13.27	44.51	54.00	-9.49	AVG

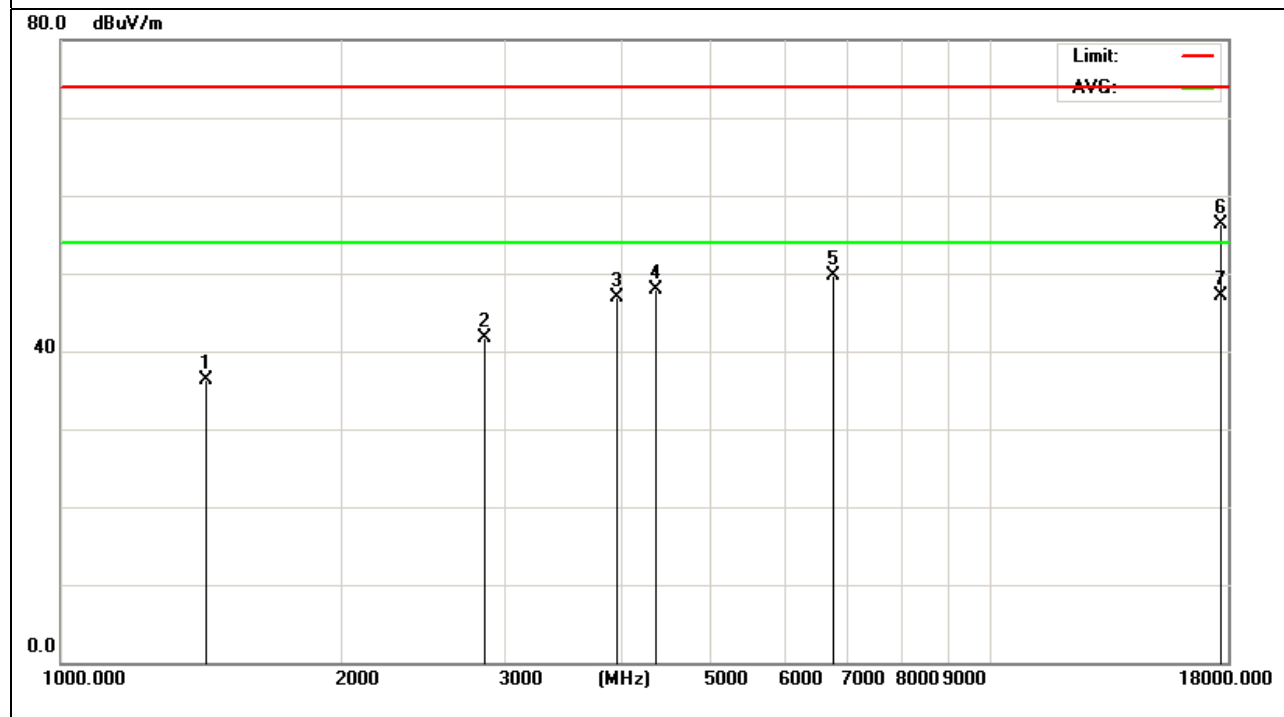
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)- High Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1433.024	46.51	-10.14	36.37	74.00	-37.63	peak
2854.514	44.72	-2.59	42.13	74.00	-31.87	peak
3955.003	43.85	3.51	47.36	74.00	-26.64	peak
4359.781	43.44	4.45	47.89	74.00	-26.11	peak
6771.554	43.72	6.03	49.75	74.00	-24.25	peak
17681.228	31.51	24.91	56.42	74.00	-17.58	peak
17681.228	22.47	24.91	47.38	54.00	-6.62	AVG

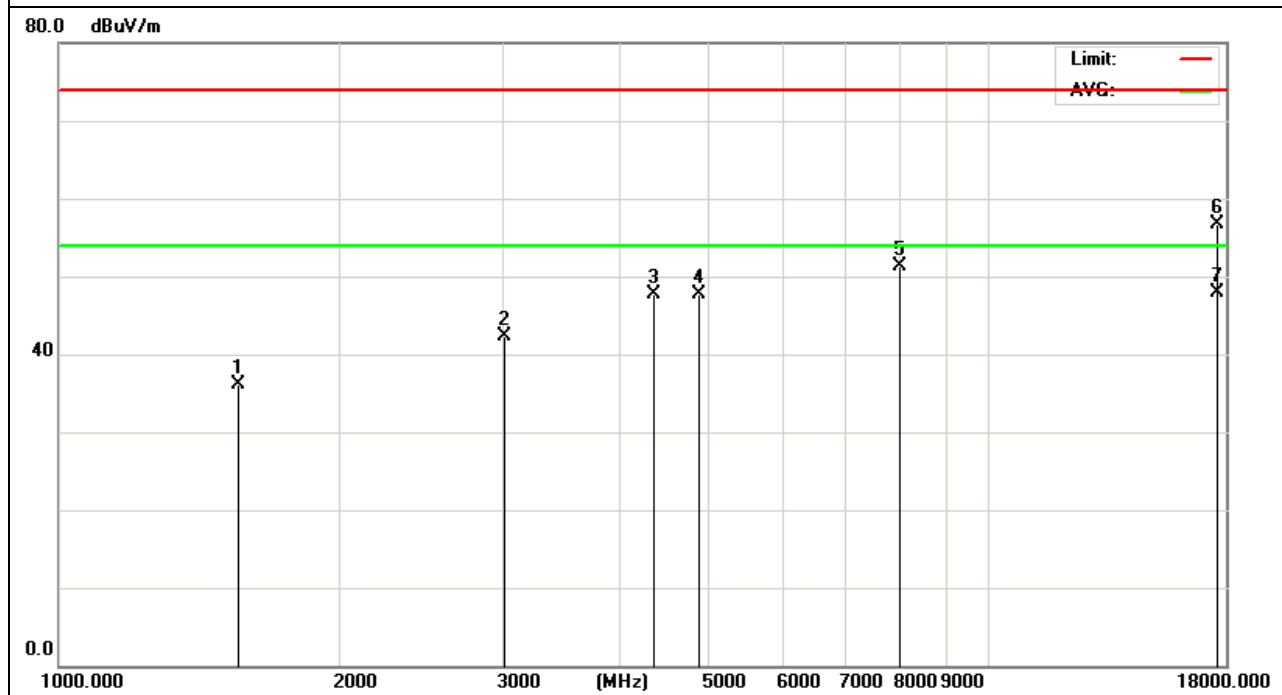
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)- High Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1557.779	45.91	-9.87	36.04	74.00	-37.96	peak
3014.662	44.08	-1.64	42.44	74.00	-31.56	peak
4361.158	43.39	4.46	47.85	74.00	-26.15	peak
4861.358	42.93	5.12	48.05	74.00	-25.95	peak
8005.031	40.77	10.38	51.15	74.00	-22.85	peak
17540.687	31.51	25.00	56.51	74.00	-17.49	peak
17540.687	22.67	25.00	47.67	54.00	-6.33	AVG

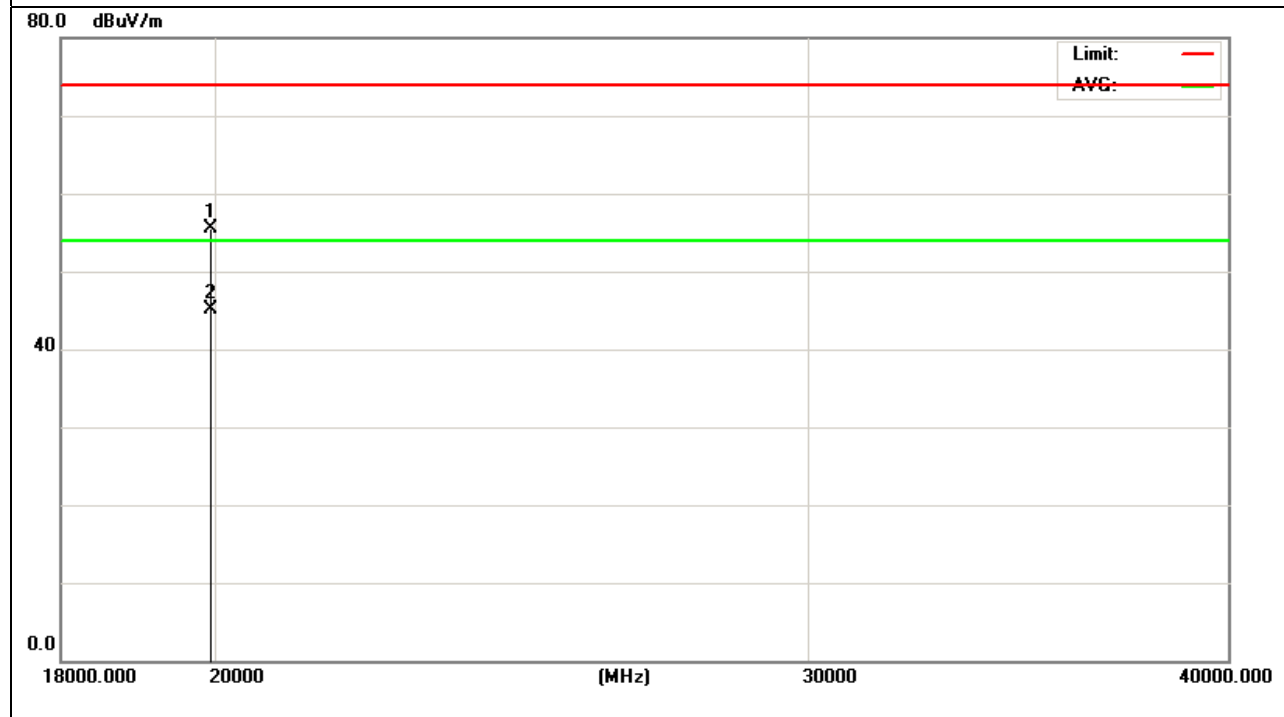
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11a(20)- High Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19946.000	40.57	15.19	55.76	74.00	-18.24	peak
19946.000	29.94	15.19	45.13	54.00	-8.87	AVG

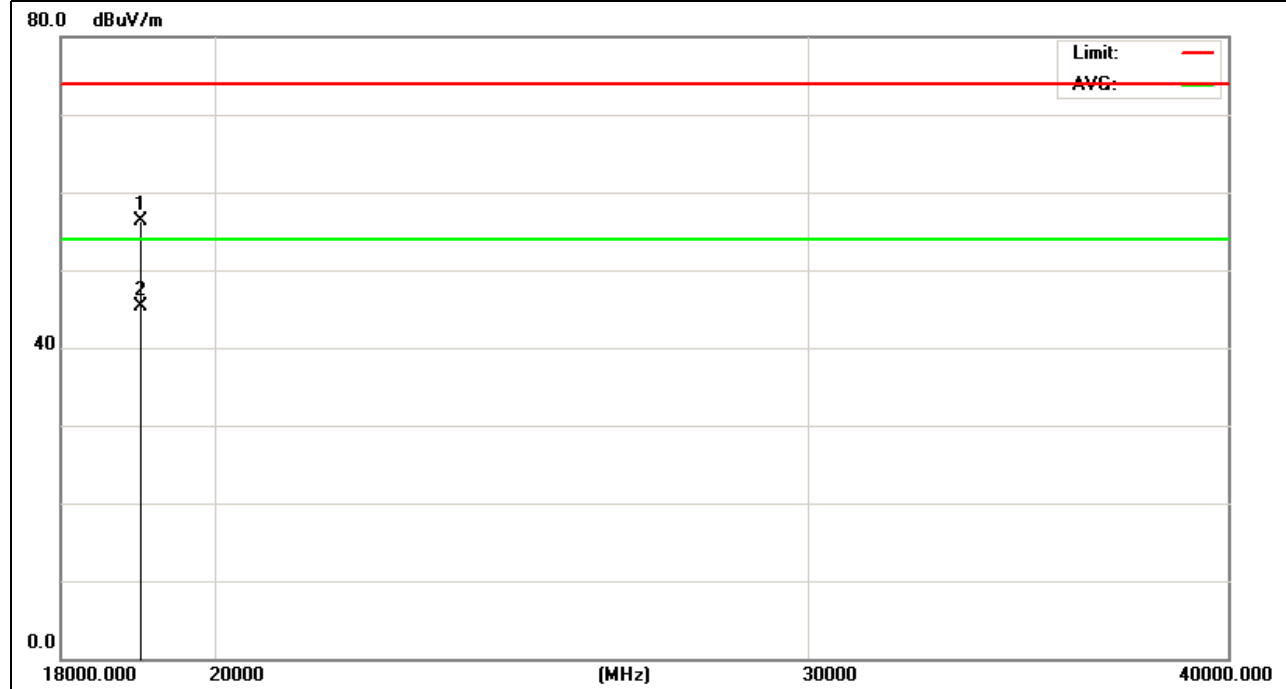
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11a(20)- High Channel (worst case)	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18994.000	42.82	13.77	56.59	74.00	-17.41	peak
18994.000	31.67	13.77	45.44	54.00	-8.56	AVG

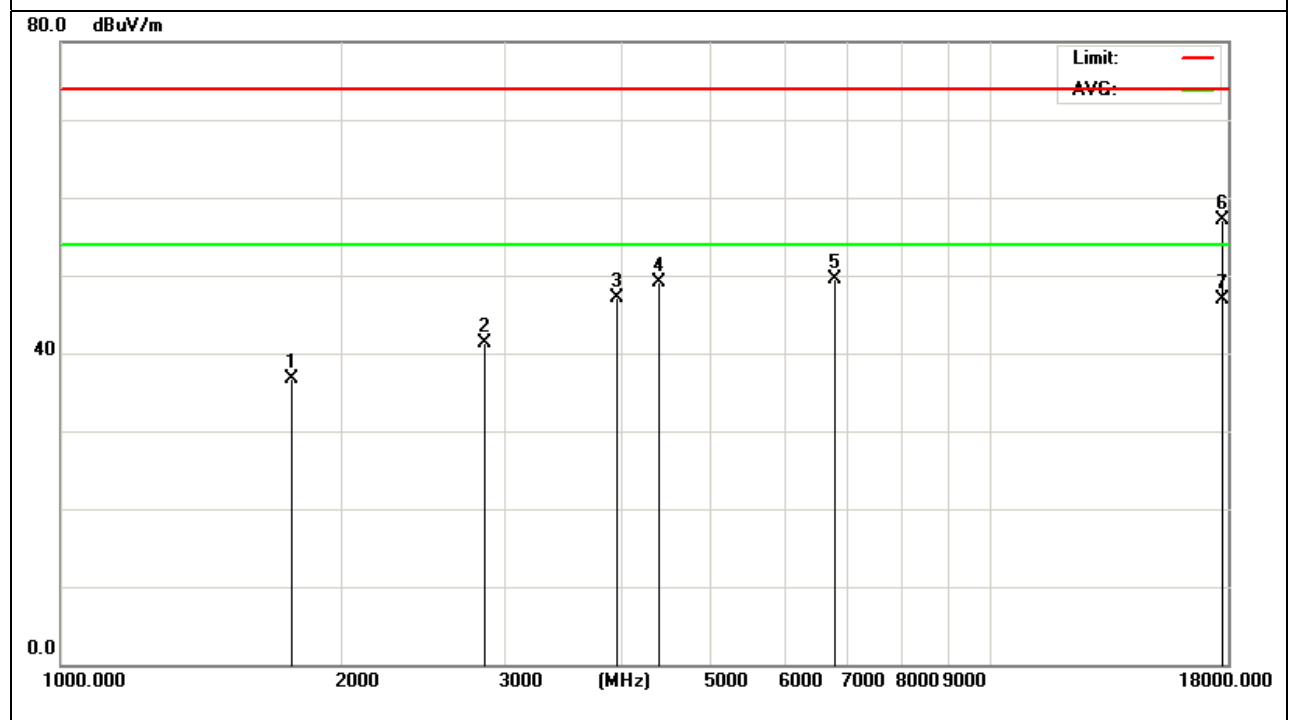
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1771.236	46.52	-9.43	37.09	74.00	-36.91	peak
2853.697	43.57	-2.59	40.98	74.00	-33.02	peak
3954.215	43.82	3.50	47.32	74.00	-26.68	peak
4381.058	44.68	4.49	49.17	74.00	-24.83	peak
6777.724	43.55	6.03	49.58	74.00	-24.42	peak
17701.528	32.19	24.89	57.08	74.00	-16.92	peak
17701.528	22.35	24.89	47.24	54.00	-6.76	AVG

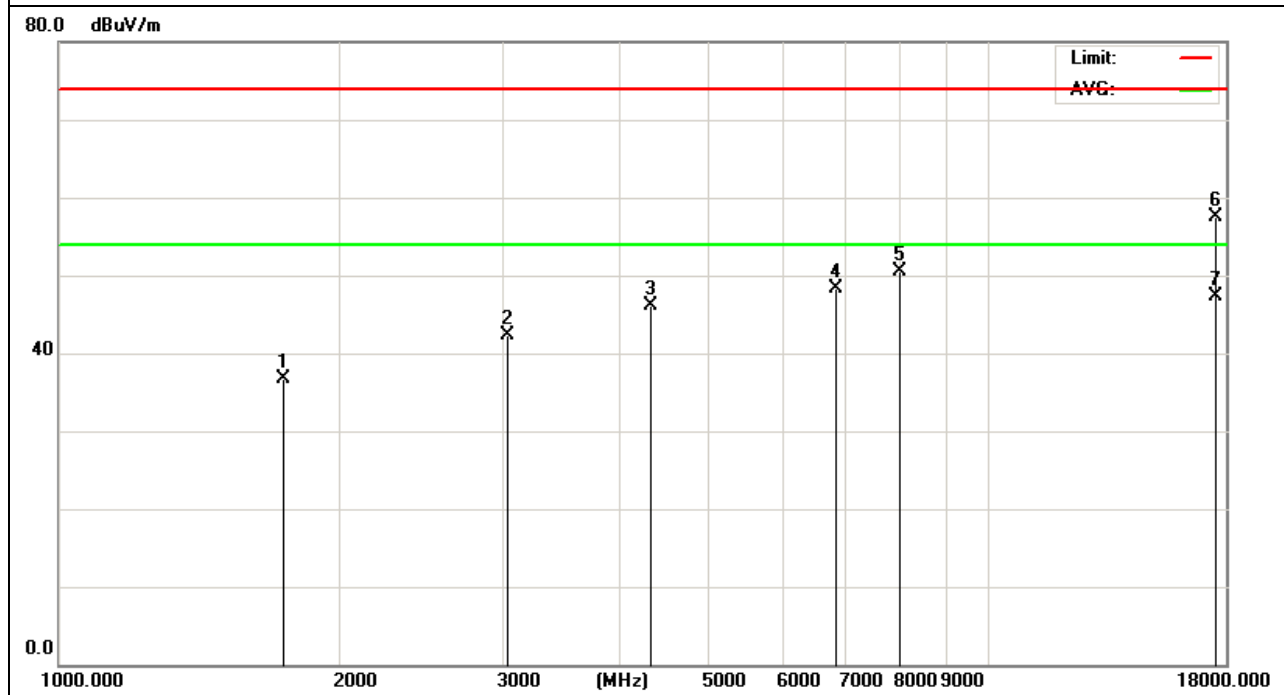
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1741.059	46.59	-9.51	37.08	74.00	-36.92	peak
3026.232	43.63	-1.62	42.01	74.00	-31.99	peak
4321.587	41.73	4.38	46.11	74.00	-27.89	peak
6849.356	42.51	6.08	48.59	74.00	-25.41	peak
8014.154	40.43	10.40	50.83	74.00	-23.17	peak
17519.522	32.62	25.03	57.65	74.00	-16.35	peak
17519.522	22.05	25.03	47.08	54.00	-6.92	AVG

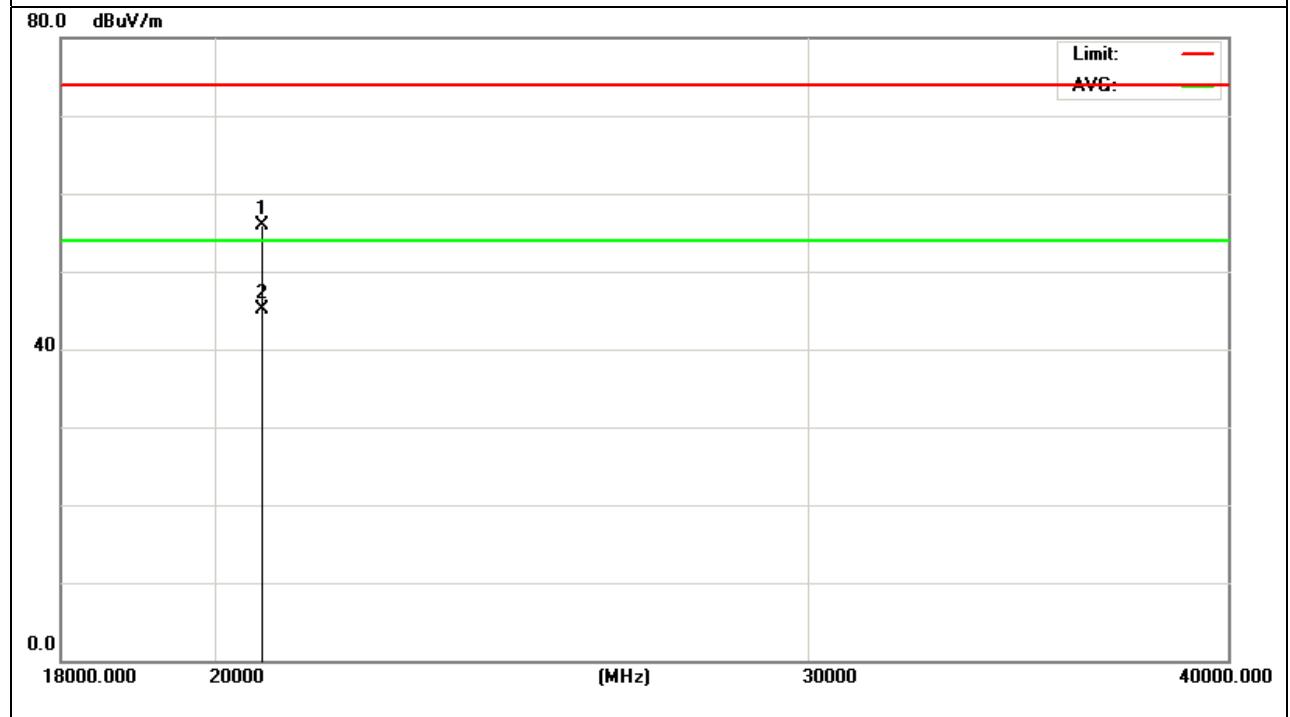
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20660.000	39.13	16.25	55.38	74.00	-18.62	peak
20660.000	29.23	16.25	45.48	54.00	-8.52	AVG

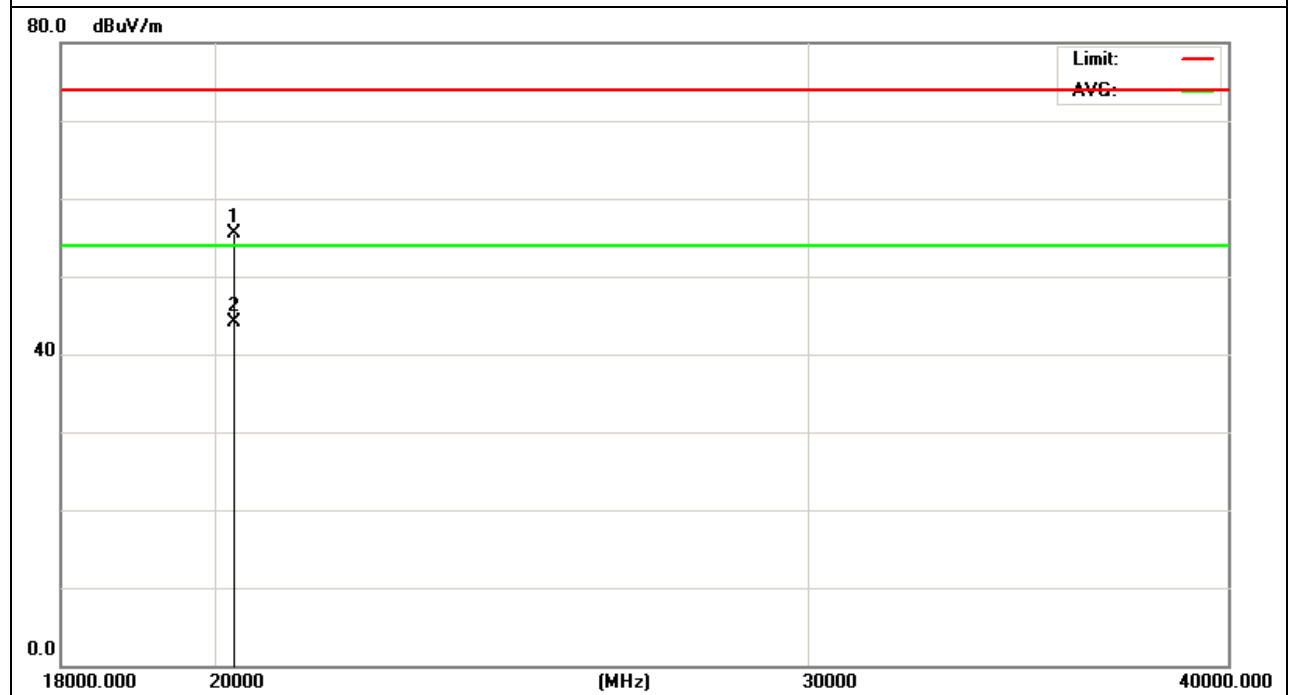
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20258.000	39.42	15.65	55.07	74.00	-18.93	peak
20258.000	28.59	15.65	44.24	54.00	-9.76	AVG

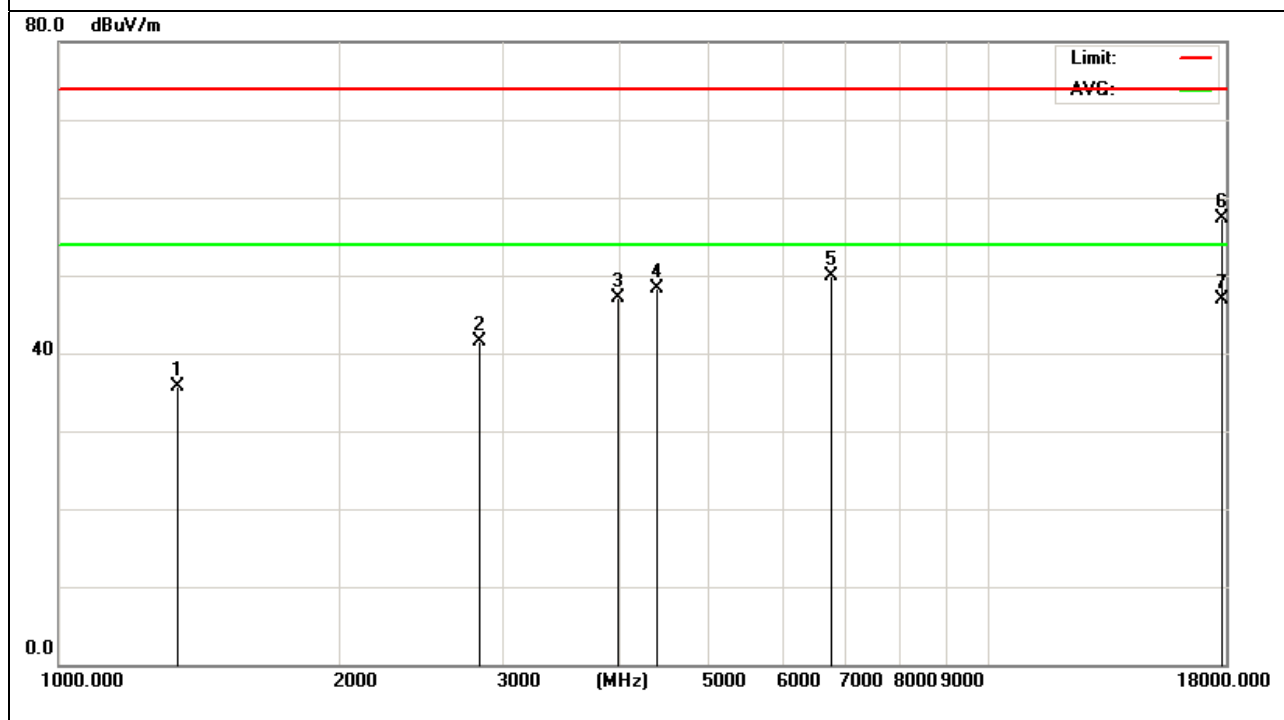
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- Mid Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1340.599	46.53	-10.30	36.23	74.00	-37.77	peak
2836.223	44.05	-2.67	41.38	74.00	-32.62	peak
3990.874	43.68	3.77	47.45	74.00	-26.55	peak
4395.647	43.92	4.53	48.45	74.00	-25.55	peak
6761.341	44.26	6.02	50.28	74.00	-23.72	peak
17800.226	32.89	24.82	57.71	74.00	-16.29	peak
17800.226	22.23	24.82	47.05	54.00	-6.95	AVG

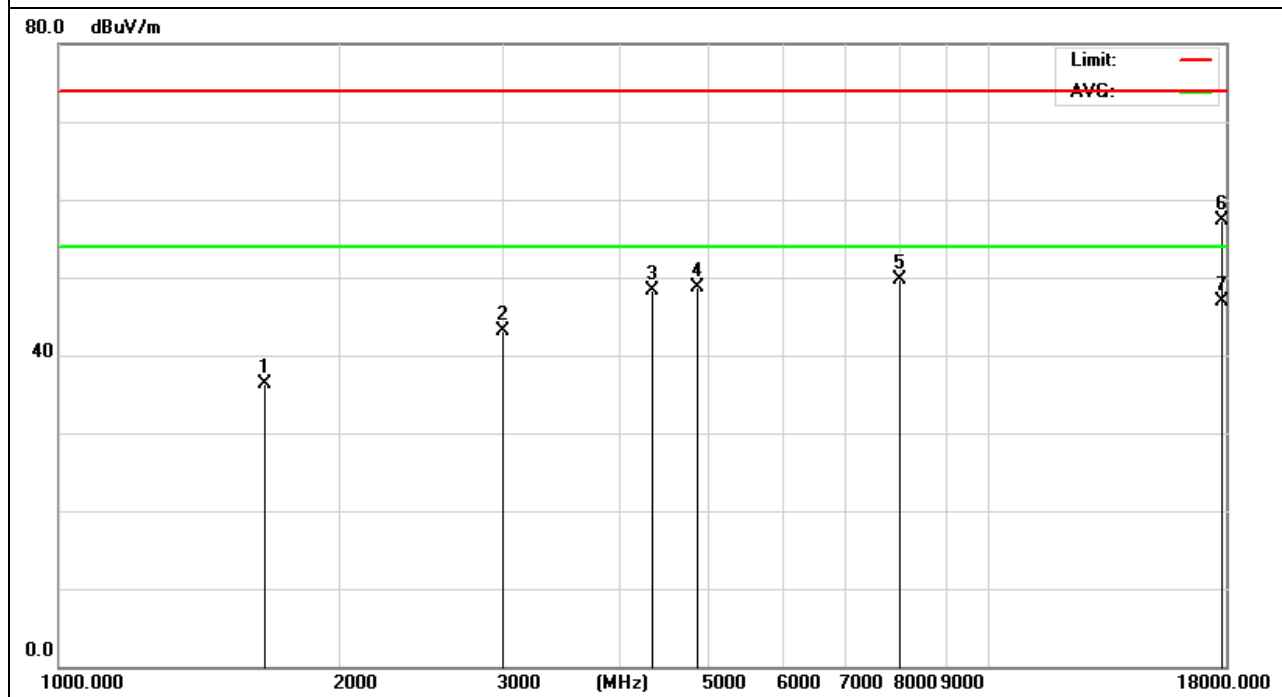
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- Mid Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1661.003	46.84	-9.73	37.11	74.00	-36.89	peak
3001.834	44.92	-1.68	43.24	74.00	-30.76	peak
4350.947	44.01	4.43	48.44	74.00	-25.56	peak
4857.771	44.05	5.12	49.17	74.00	-24.83	peak
8030.523	39.76	10.41	50.17	74.00	-23.83	peak
17803.996	32.71	24.82	57.53	74.00	-16.47	peak
17803.996	22.23	24.82	47.05	54.00	-6.95	AVG

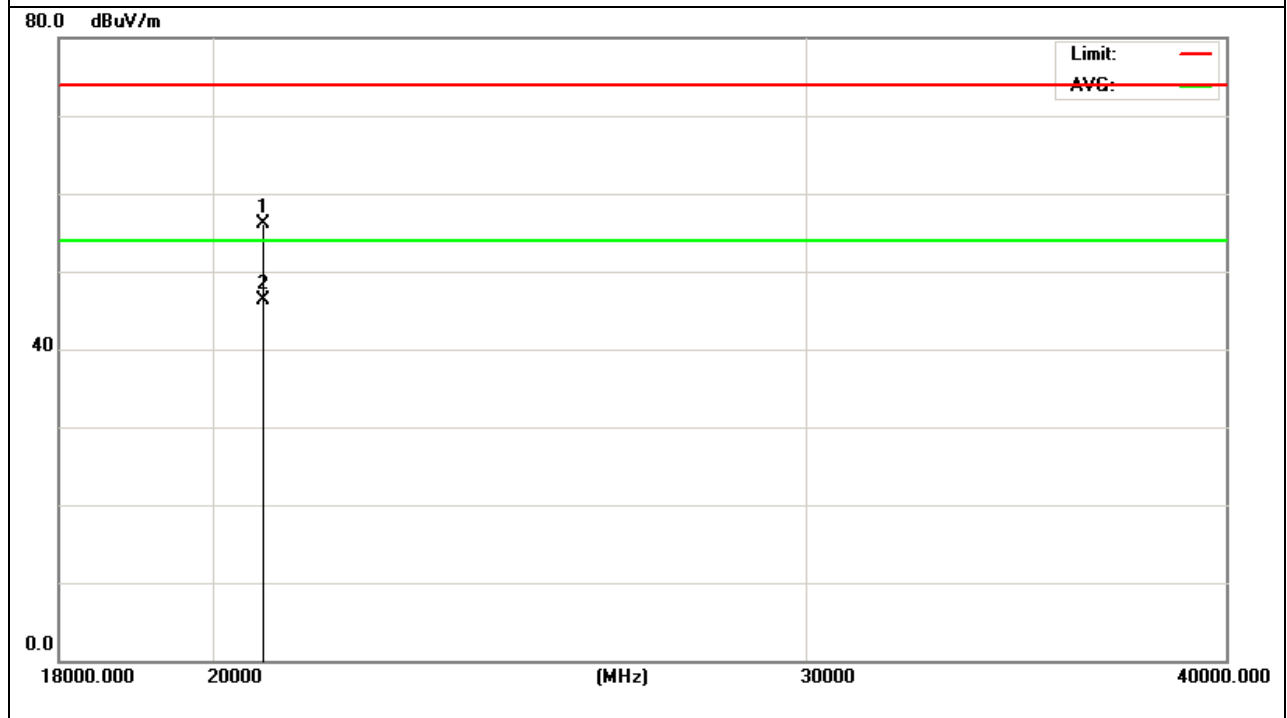
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- Mid Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20695.000	40.13	16.29	56.42	74.00	-17.58	peak
20695.000	30.88	16.29	47.17	54.00	-6.83	AVG

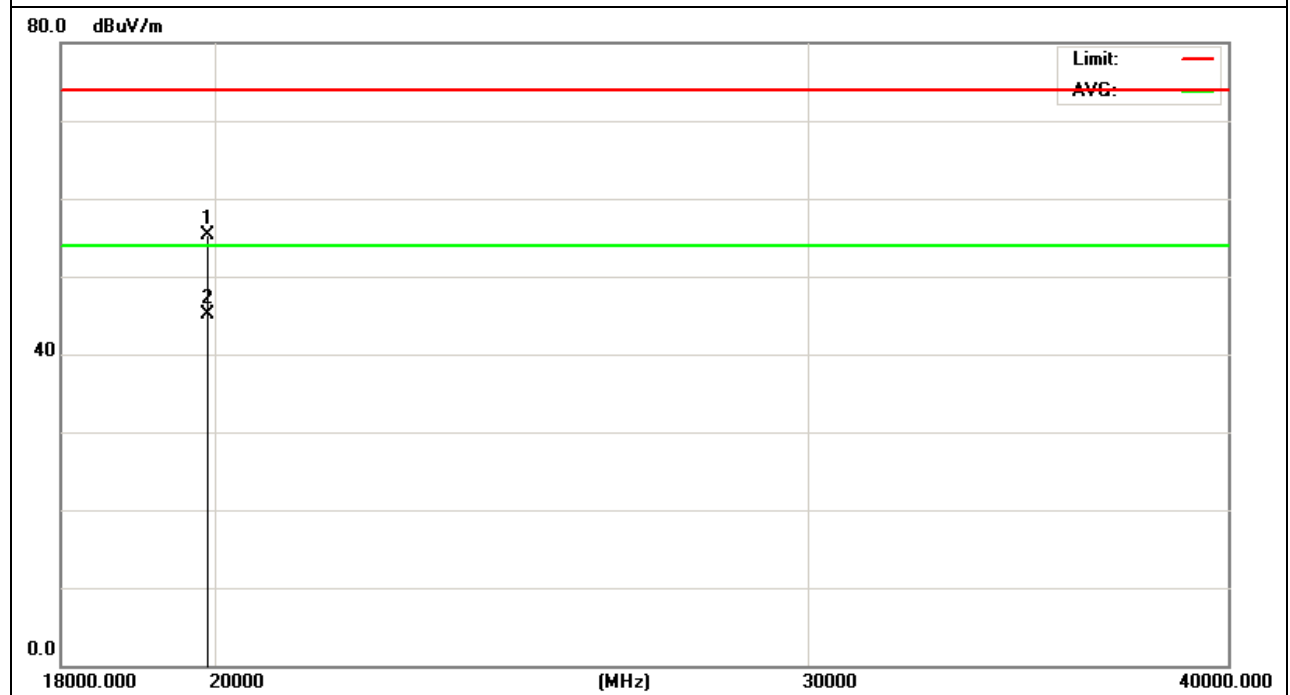
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- Mid Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19899.000	40.32	15.11	55.43	74.00	-18.57	peak
19899.000	30.21	15.11	45.32	54.00	-8.68	AVG

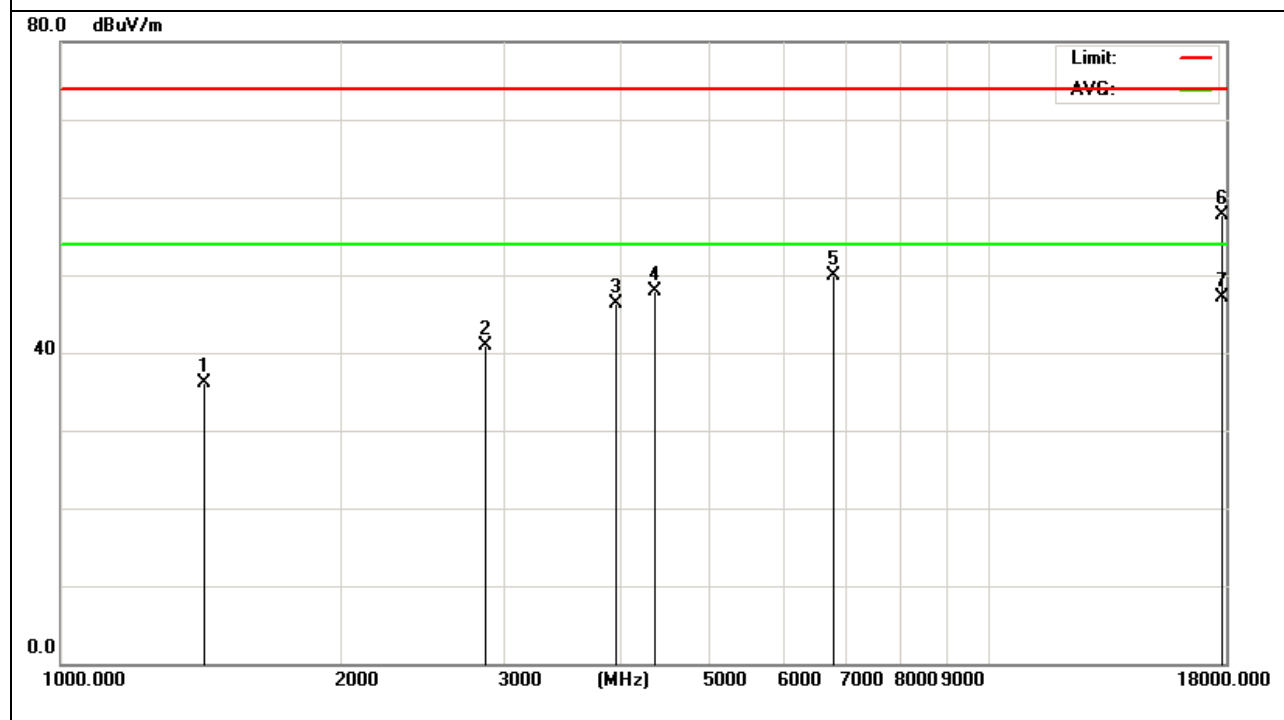
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1425.553	47.02	-10.2	36.82	74.00	-37.18	peak
2854.214	43.35	-2.58	40.77	74.00	-33.23	peak
3955.006	42.98	3.51	46.49	74.00	-27.51	peak
4363.135	43.56	4.46	48.02	74.00	-25.98	peak
6777.667	44.06	6.03	50.09	74.00	-23.91	peak
17761.552	33.11	24.85	57.96	74.00	-16.04	peak
17761.552	22.16	24.85	47.01	54.00	-6.99	AVG

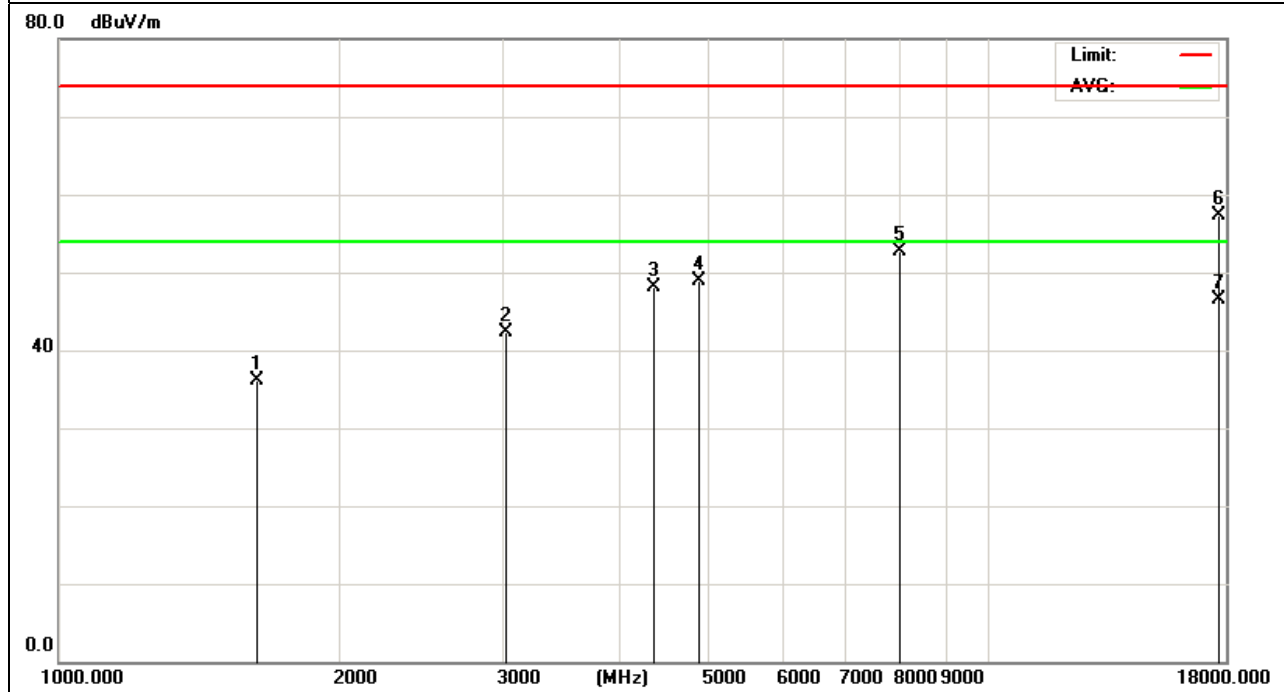
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1631.116	46.23	-9.81	36.42	74.00	-37.58	peak
3022.258	43.95	-1.62	42.33	74.00	-31.67	peak
4356.897	43.84	4.45	48.29	74.00	-25.71	peak
4862.003	44.03	5.13	49.16	74.00	-24.84	peak
8031.024	42.76	10.43	53.19	74.00	-20.81	peak
17685.886	32.16	24.9	57.06	74.00	-16.94	peak
17685.886	21.83	24.9	46.73	54.00	-7.27	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(20)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20550.000	40.07	16.09	56.16	74.00	-17.84	peak
20550.000	30.86	16.09	46.95	54.00	-7.05	AVG

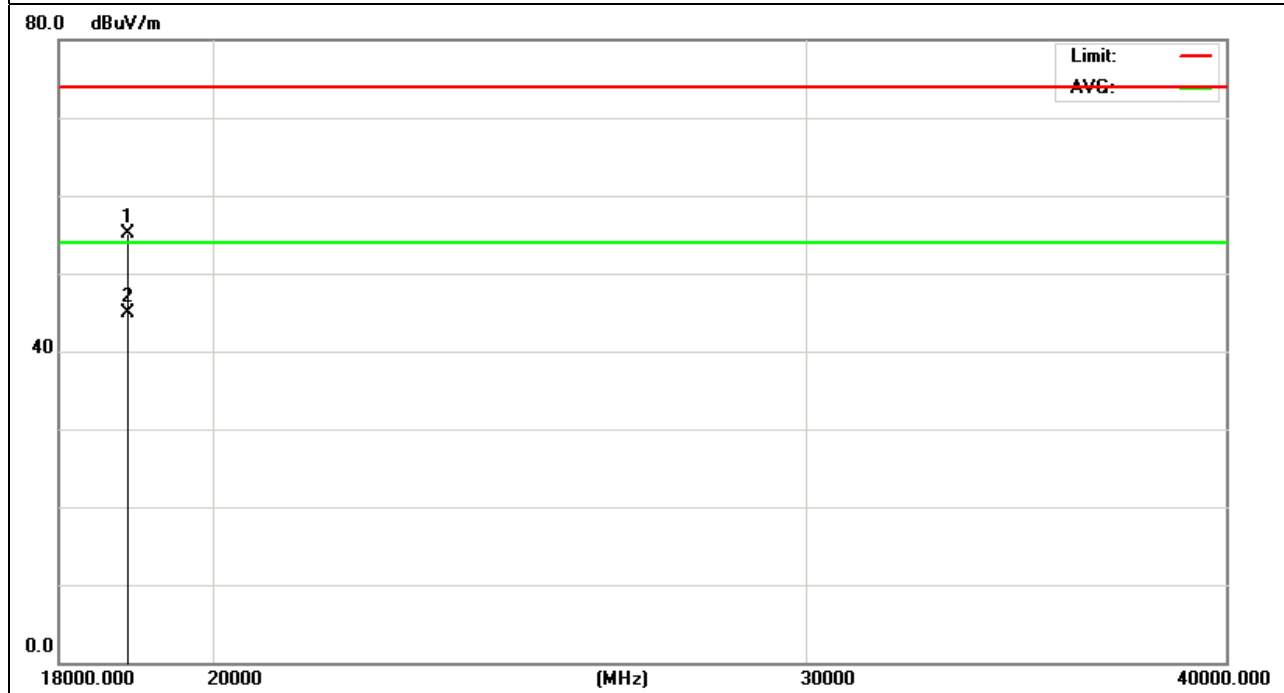
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(20)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18862.000	41.21	13.58	54.79	74.00	-19.21	peak
18862.000	31.93	13.58	45.51	54.00	-8.49	AVG

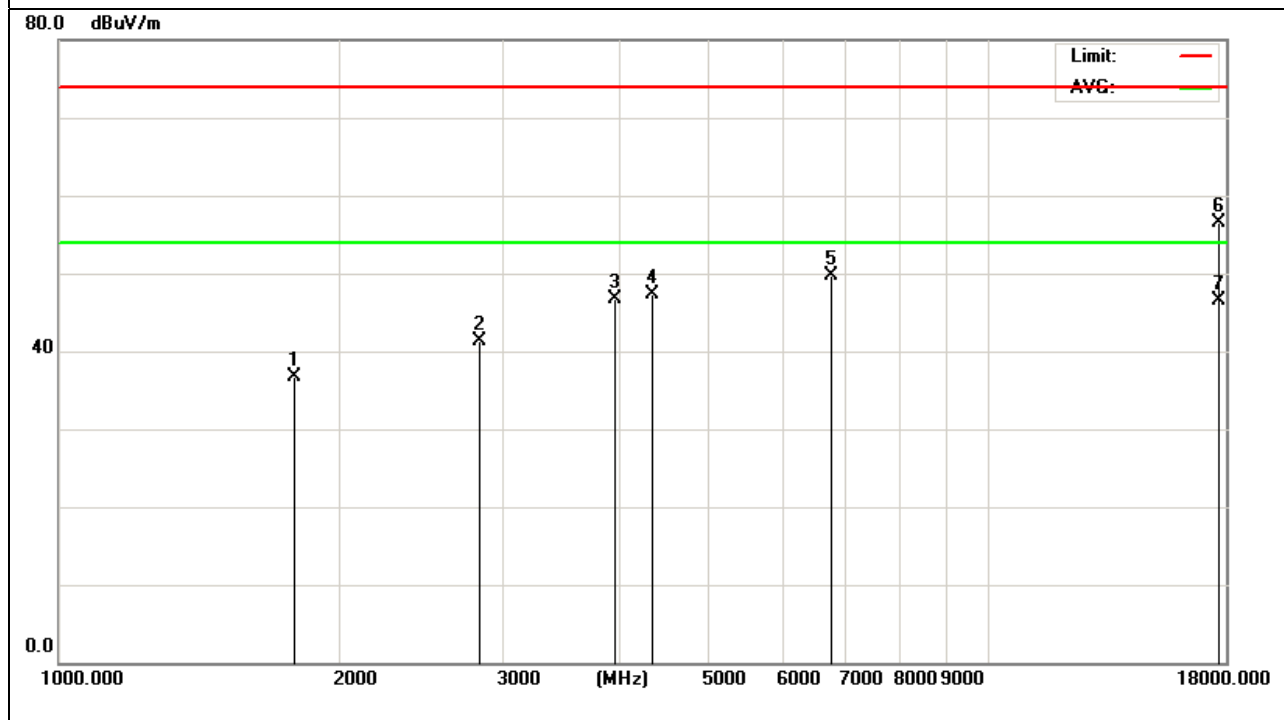
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(40)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1791.256	46.72	-9.37	37.35	74.00	-36.65	peak
2834.663	43.86	-2.67	41.19	74.00	-32.81	peak
3951.237	43.57	3.47	47.04	74.00	-26.96	peak
4336.745	43.22	4.4	47.62	74.00	-26.38	peak
6767.848	43.81	6.03	49.84	74.00	-24.16	peak
17651.589	31.92	24.93	56.85	74.00	-17.15	peak
17651.589	21.71	24.93	46.64	54.00	-7.36	AVG

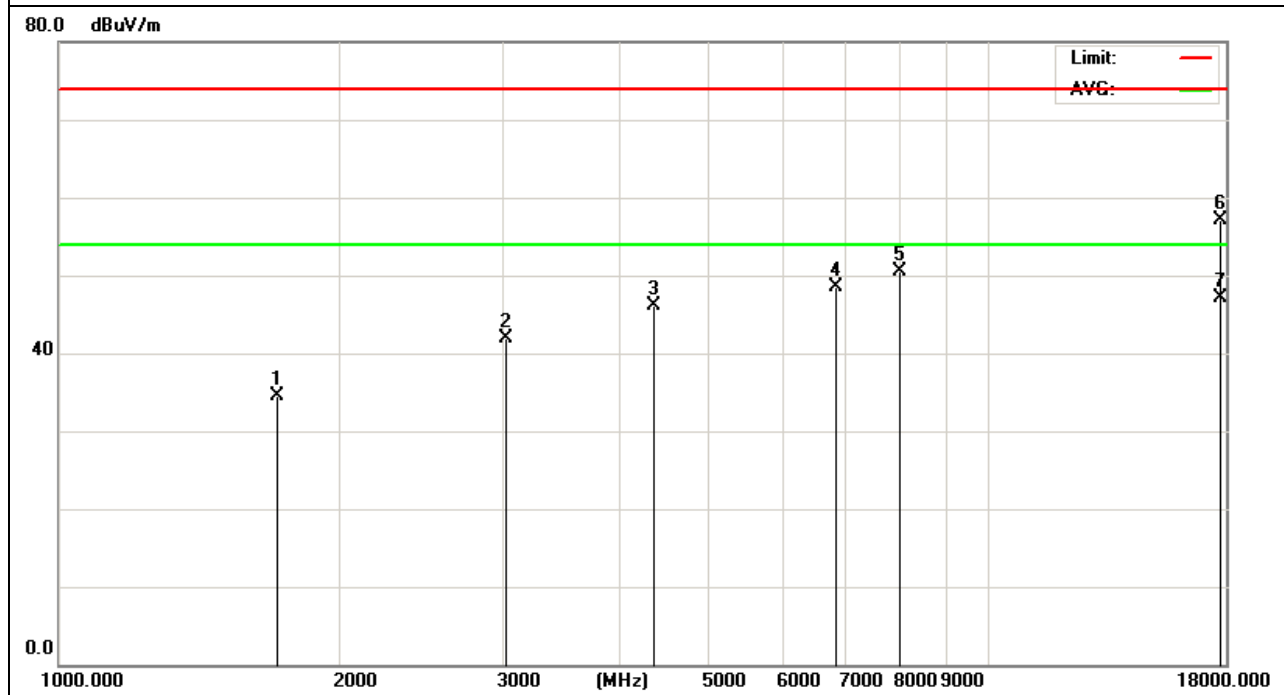
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(40)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1711.115	44.33	-9.59	34.74	74.00	-39.26	peak
3019.287	43.86	-1.63	42.23	74.00	-31.77	peak
4360.864	41.99	4.46	46.45	74.00	-27.55	peak
6852.465	42.62	6.09	48.71	74.00	-25.29	peak
8030.555	40.35	10.41	50.76	74.00	-23.24	peak
17722.884	32.51	24.88	57.39	74.00	-16.61	peak
17722.884	22.55	24.88	47.43	54.00	-6.57	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(40)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18841.000	41.34	13.55	54.89	74.00	-19.11	peak
18841.000	31.94	13.55	45.49	54.00	-8.51	AVG

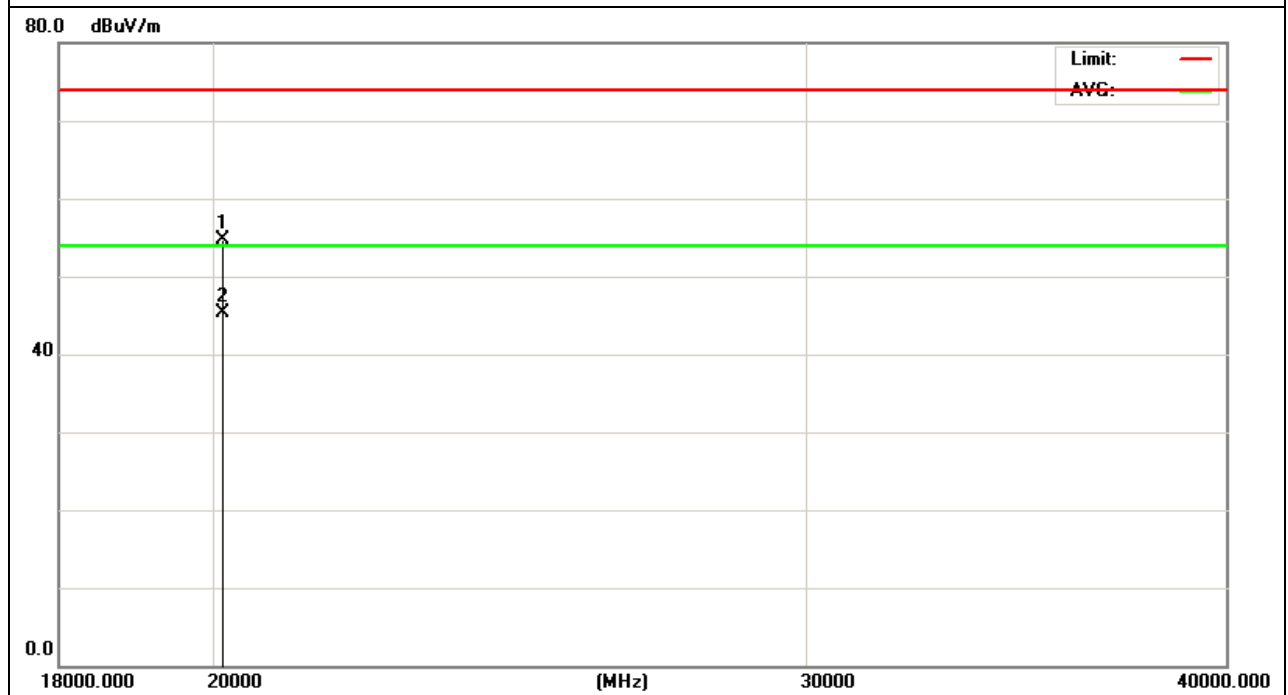
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(40)- Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20143.000	39.31	15.48	54.79	74.00	-19.21	peak
20143.000	29.92	15.48	45.40	54.00	-8.60	AVG

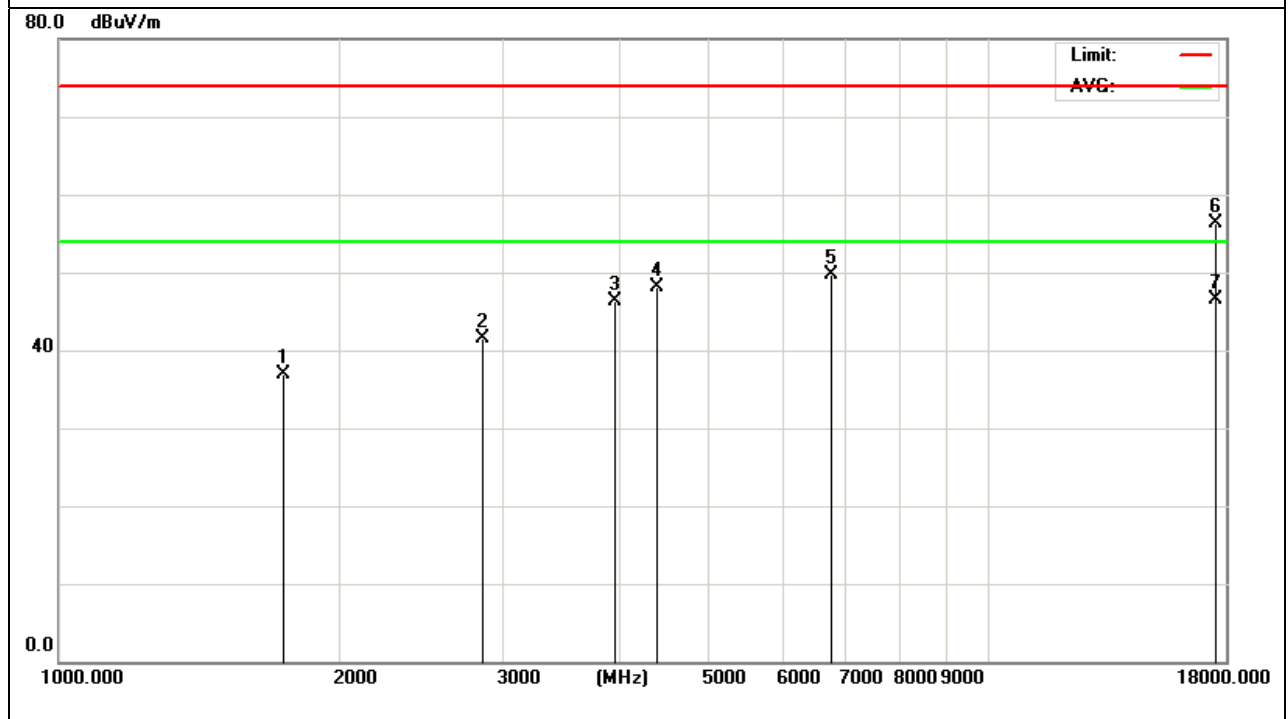
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(40)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1740.885	47.01	-9.52	37.49	74.00	-36.51	peak
2851.234	44.57	-2.61	41.96	74.00	-32.04	peak
3949.957	43.14	3.47	46.61	74.00	-27.39	peak
4398.552	43.58	4.53	48.11	74.00	-25.89	peak
6757.029	43.13	6.02	49.15	74.00	-24.85	peak
17499.834	31.69	25.03	56.72	74.00	-17.28	peak
17499.834	21.16	25.03	46.19	54.00	-7.81	AVG

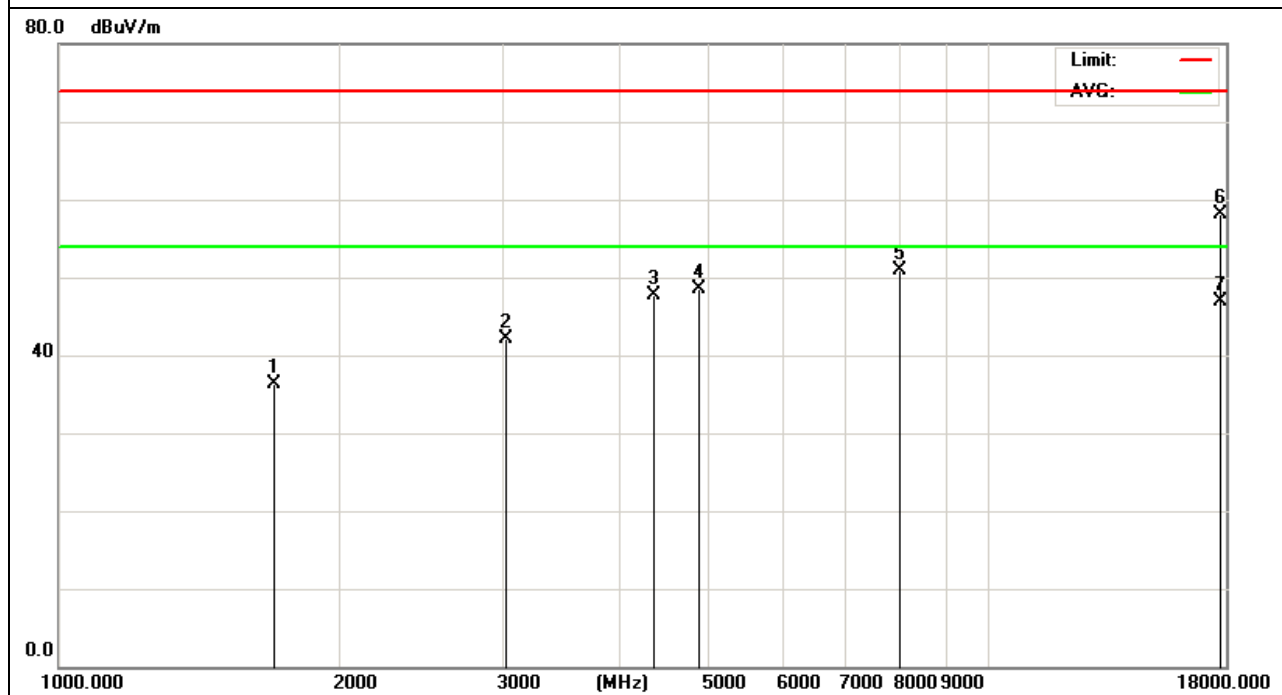
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(40)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1700.557	46.12	-9.63	36.49	74.00	-37.51	peak
3017.465	43.99	-1.64	42.35	74.00	-31.65	peak
4355.847	43.52	4.45	47.97	74.00	-26.03	peak
4861.013	43.66	5.12	48.78	74.00	-25.22	peak
8029.987	40.75	10.41	51.16	74.00	-22.84	peak
17696.568	33.36	24.89	58.25	74.00	-15.75	peak
17696.568	22.12	24.89	47.01	54.00	-6.99	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11n(40)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20220.000	40.01	15.6	55.61	74.00	-18.39	peak
20220.000	30.26	15.6	45.86	54.00	-8.14	AVG

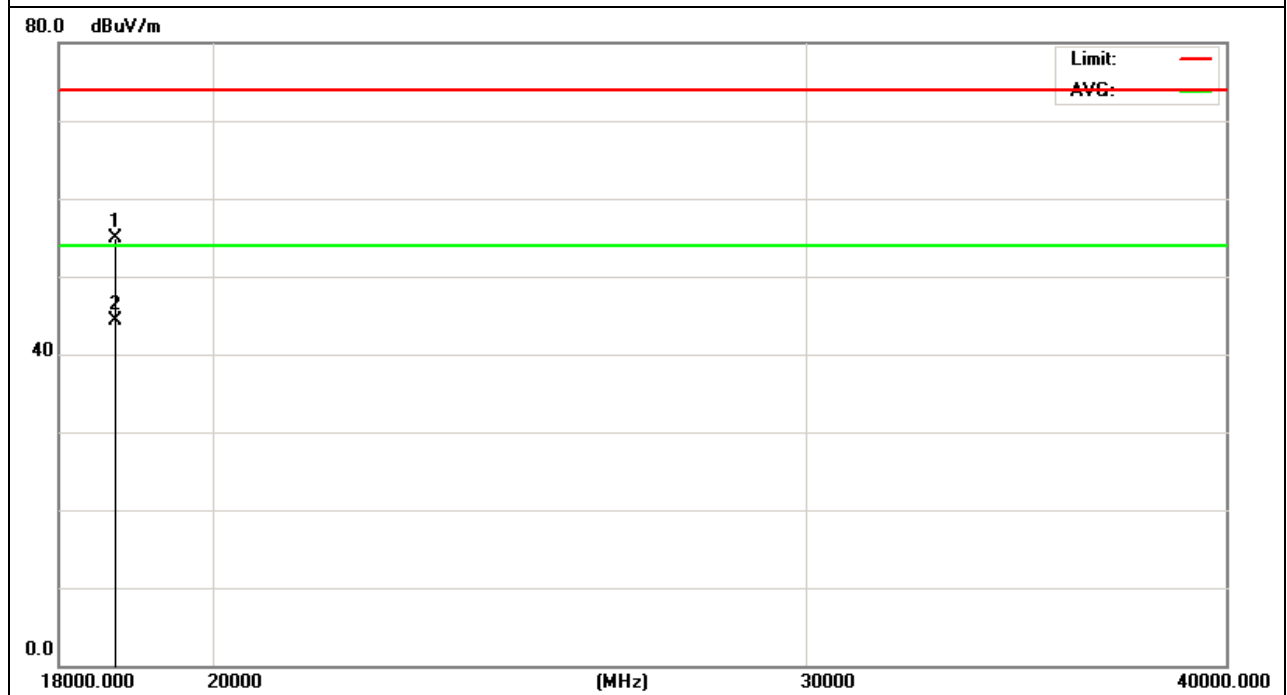
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11n(40)- High Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18690.000	41.43	13.32	54.75	74.00	-19.25	peak
18690.000	31.03	13.32	44.35	54.00	-9.65	AVG

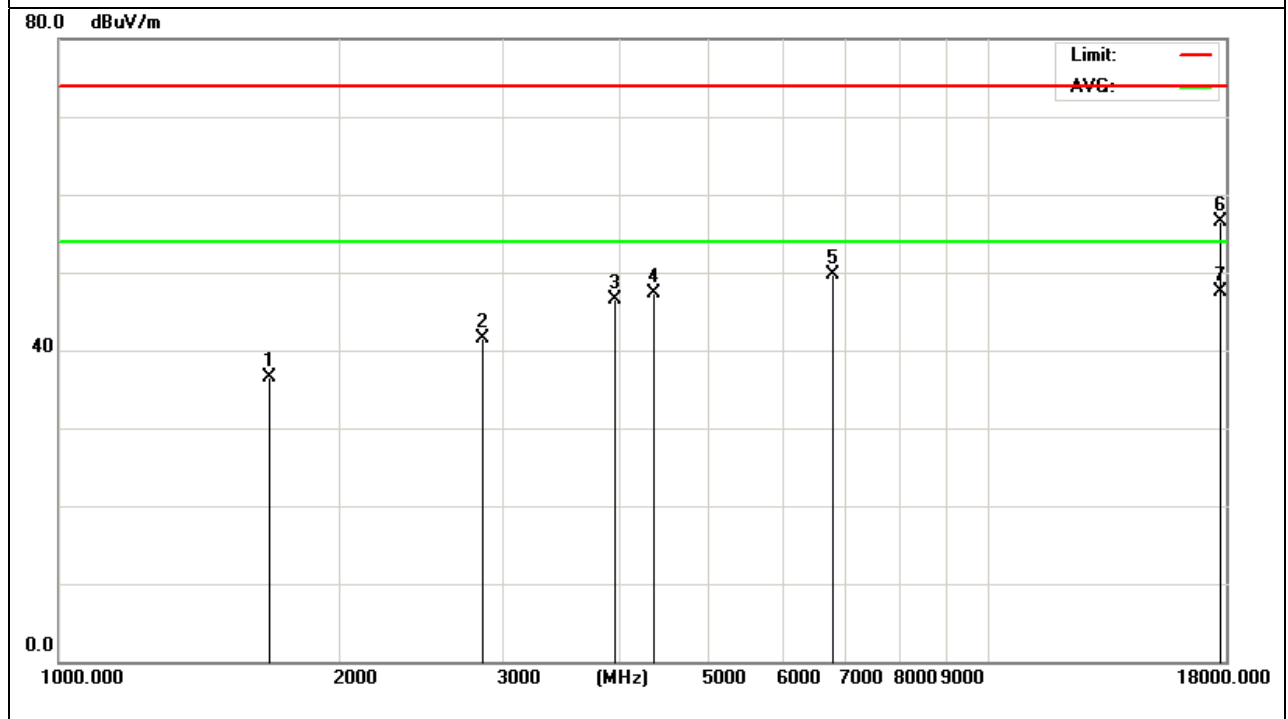
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11ac(80)-Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1687.564	46.57	-9.67	36.9	74.00	-37.1	peak
2849.886	44.33	-2.61	41.72	74.00	-32.28	peak
3963.587	43.29	3.58	46.87	74.00	-27.13	peak
4364.689	42.56	4.46	47.02	74.00	-26.98	peak
6787.462	43.15	6.04	49.19	74.00	-24.81	peak
17695.135	31.73	24.89	56.62	74.00	-17.38	peak
17695.135	22.41	24.89	47.30	54.00	-6.70	AVG

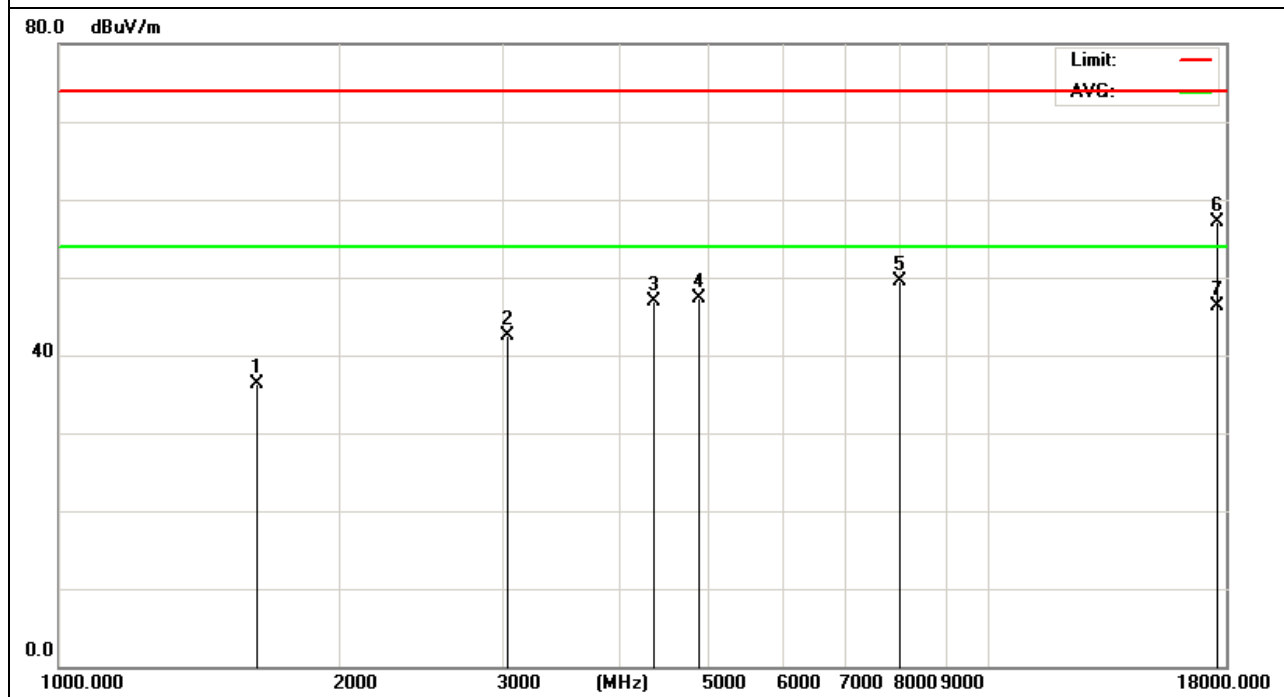
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11ac(80)-Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1631.116	46.12	-9.81	36.31	74.00	-37.69	peak
3029.854	44.29	-1.61	42.68	74.00	-31.32	peak
4353.336	42.77	4.45	47.22	74.00	-26.78	peak
4860.841	42.59	5.12	47.71	74.00	-26.29	peak
8017.774	39.67	10.4	50.07	74.00	-23.93	peak
17619.684	32.82	24.95	57.77	74.00	-16.23	peak
17619.684	21.53	24.95	46.48	54.00	-7.52	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Mode :	TX 802.11ac(80)-Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20560.000	40.23	16.1	56.33	74.00	-17.67	peak
20560.000	29.87	16.1	45.97	54.00	-8.03	AVG

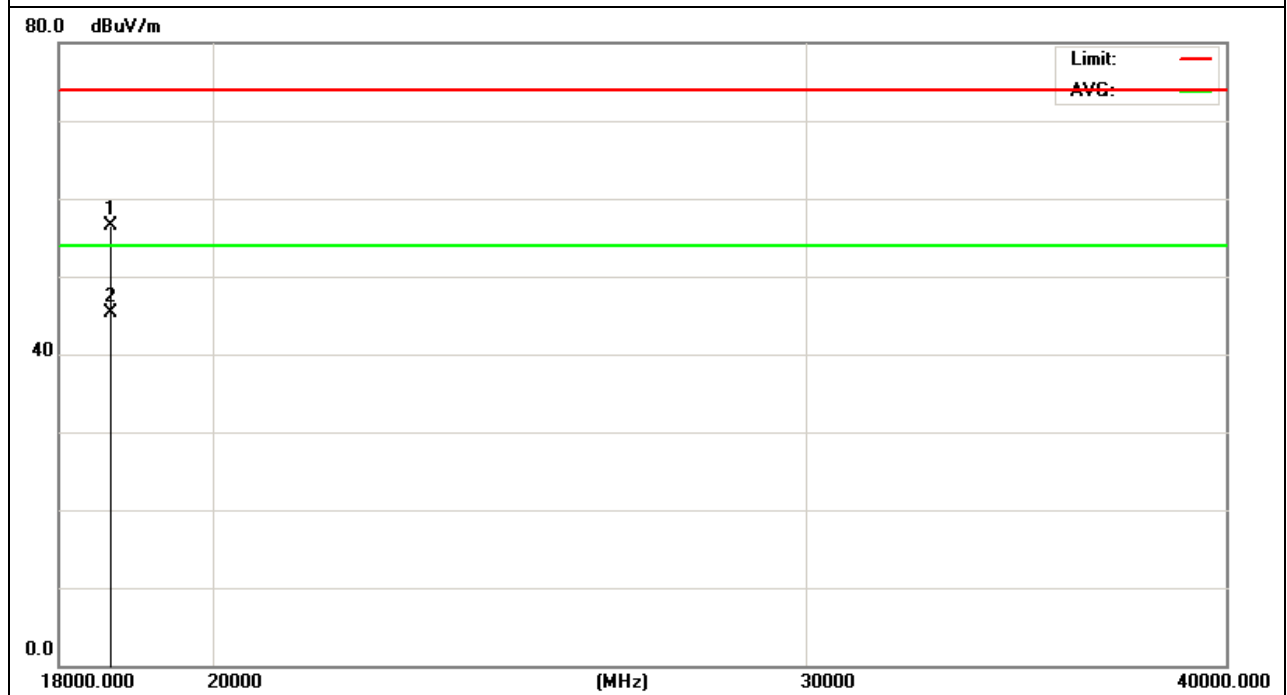
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name. :	HL100
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Polarization :	Vertical
Test Mode :	TX 802.11ac(80)-Low Channel	Test Voltage :	DC25.55V from battery
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18640.000	43.37	13.25	56.62	74.00	-17.38	peak
18640.000	32.23	13.25	45.48	54.00	-8.52	AVG

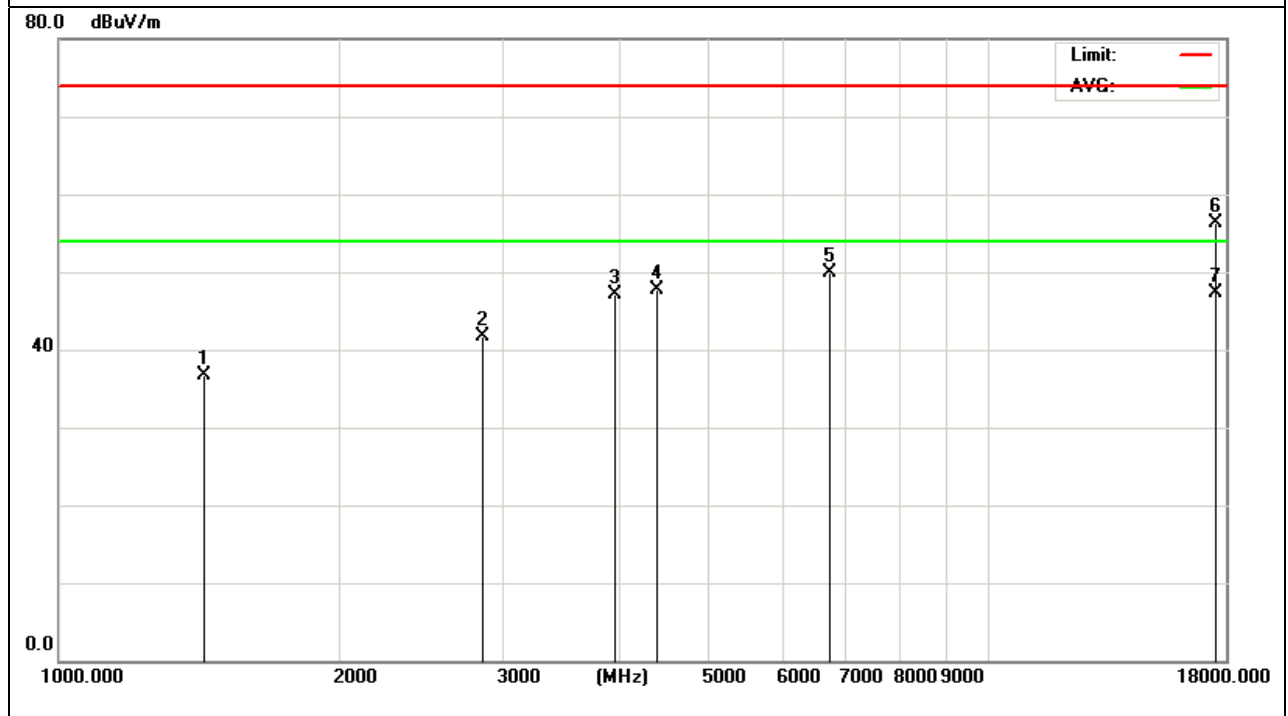
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-04-23
Test Mode :	RX	Polarization :	Horizontal
Measurement Distance	3 m	Frequency Range	1GHz to 40GHz
Test Power :	DC25.55V from battery		
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1429.957	47.13	-10.17	36.96	74.00	-37.04	peak
2853.486	44.22	-2.59	41.63	74.00	-32.37	peak
3950.187	43.89	3.48	47.37	74.00	-26.63	peak
4395.559	43.49	4.52	48.01	74.00	-25.99	peak
6755.487	44.02	6.02	50.04	74.00	-23.96	peak
17514.925	31.79	25.02	56.81	74.00	-17.19	peak
17514.925	22.17	25.02	47.19	54.00	-6.81	AVG

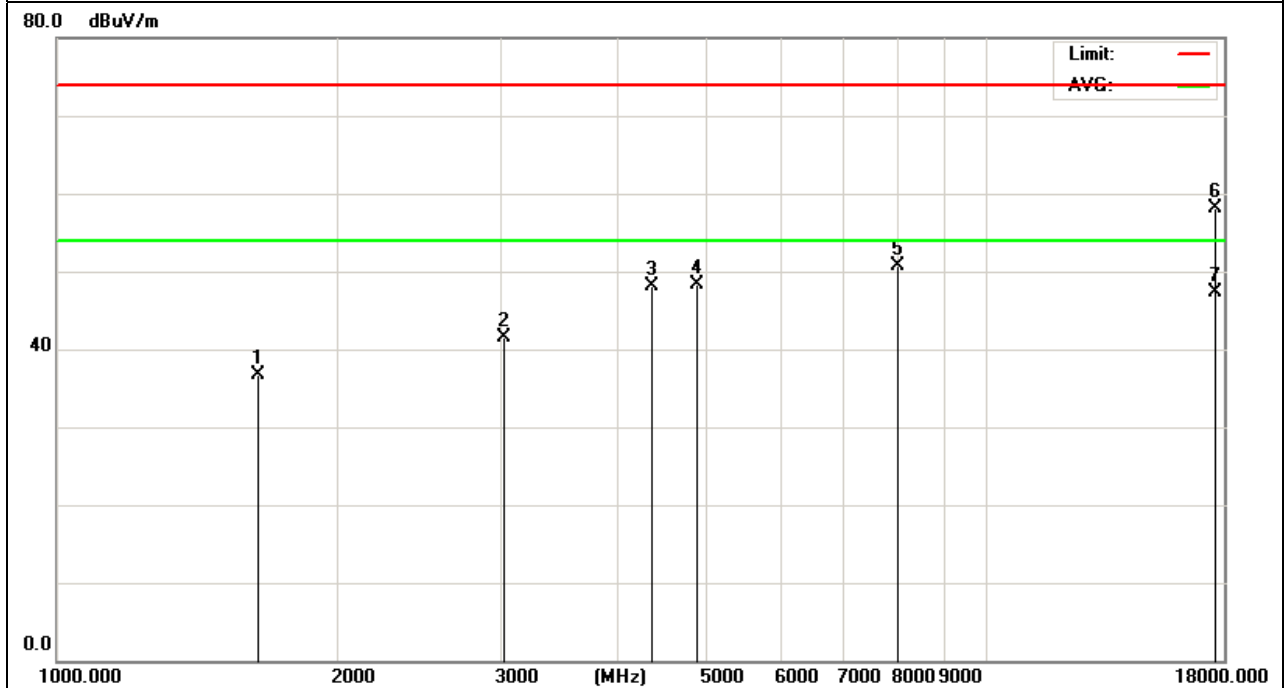
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-04-23
Test Mode :	RX	Polarization :	Vertical
Measurement Distance	3 m	Frequency Range	1GHz to 40GHz
Test Power :	DC25.55V from battery		
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1641.026	46.81	-9.79	37.02	74.00	-36.98	peak
3022.589	43.26	-1.62	41.64	74.00	-32.36	peak
4363.335	43.77	4.46	48.23	74.00	-25.77	peak
4865.847	43.36	5.13	48.49	74.00	-25.51	peak
8036.123	40.46	10.43	50.89	74.00	-23.11	peak
17590.002	33.28	24.97	58.25	74.00	-15.75	peak
17590.002	22.21	24.97	47.18	54.00	-6.82	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-04-23
Test Mode :	RX	Polarization :	Horizontal
Measurement Distance	3 m	Frequency Range	1GHz to 40GHz
Test Power :	DC25.55V from battery		
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19659.000	39.65	14.76	54.41	74.00	-19.59	peak
19659.000	30.07	14.76	44.83	54.00	-9.17	AVG

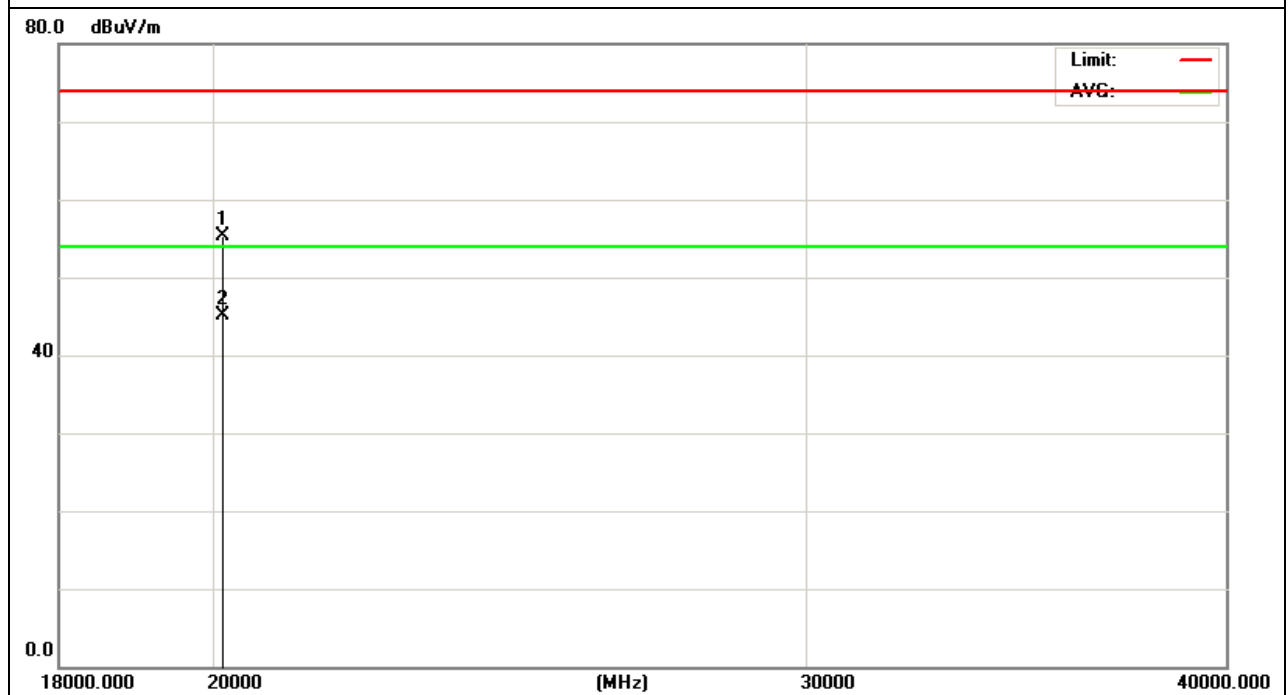
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-04-23
Test Mode :	RX	Polarization :	Vertical
Measurement Distance	3 m	Frequency Range	1GHz to 40GHz
Test Power :	DC25.55V from battery		
Test Date :	2020-11-12		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20112.000	39.77	15.43	55.20	74.00	-18.80	peak
20112.000	29.86	15.43	45.29	54.00	-8.71	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Note: 10~25GHz any other emissions at least have 20dB margin. No recording in the test report

TEST RESULTS (Restricted Bands Requirements)

Because the mentioned conditions the Fundamental Frequency Range was far away from the restricted bands in the table published in 15.205, the test is not applicable.

4 . OCCUPIED BANDWIDTH TEST

4.1 Applied procedures / limit

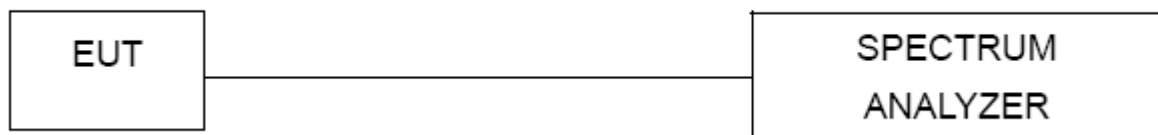
LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.7.5	Bandwidth	$\geq 500\text{kHz}$ (6dB bandwidth)	5725-5825	PASS

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	$>$ Measurement Bandwidth or Channel Separation
RB	100 kHz (6dB Bandwidth) / 100 kHz (Channel Separation)
VB	300 kHz (6dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 100kHz, VBW=300kHz, Sweep time = Auto.

4.3 TEST SETUP



4.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.5 TEST RESULTS

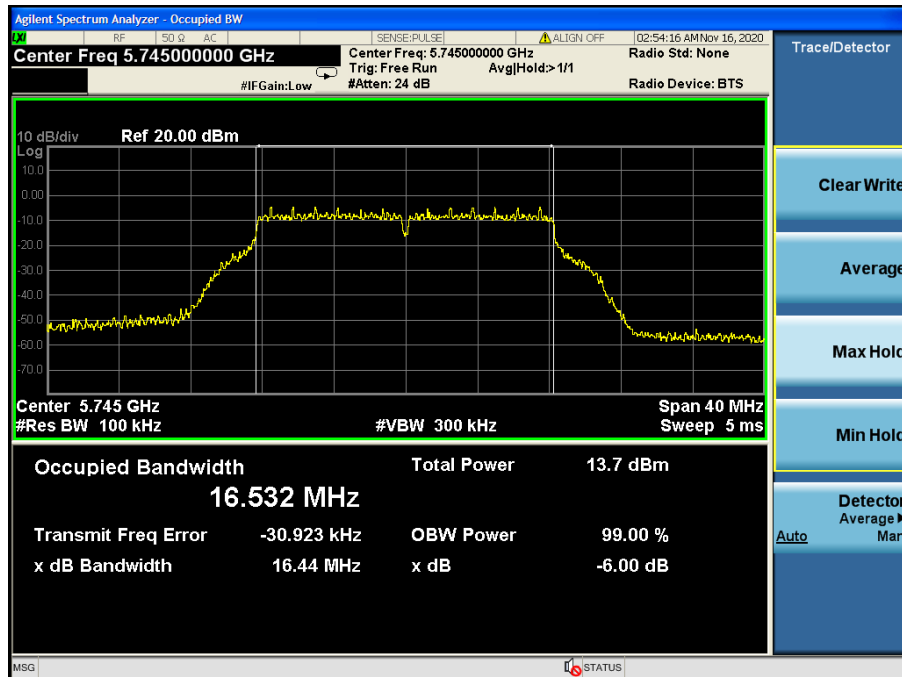
ANT 1(2) Represent the value of antenna 1 and 2, The worst data is 1 Antenna a ,only shown
Antenna 1 Plot

EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX a Mode(5G) /CH149, CH157, CH165		
Test Date :	2020-11-16		

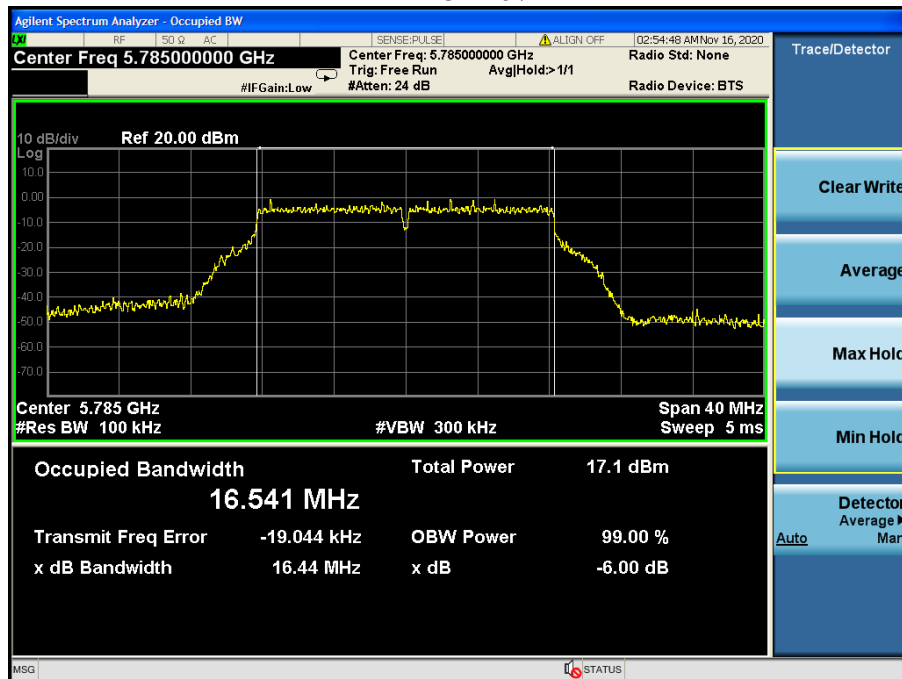
Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 149	5745	16.44	16.17	$\cong 500$	Pass
CH 157	5785	16.44	16.13	$\cong 500$	Pass
CH 165	5825	16.41	16.10	$\cong 500$	Pass

6dB bandwidth

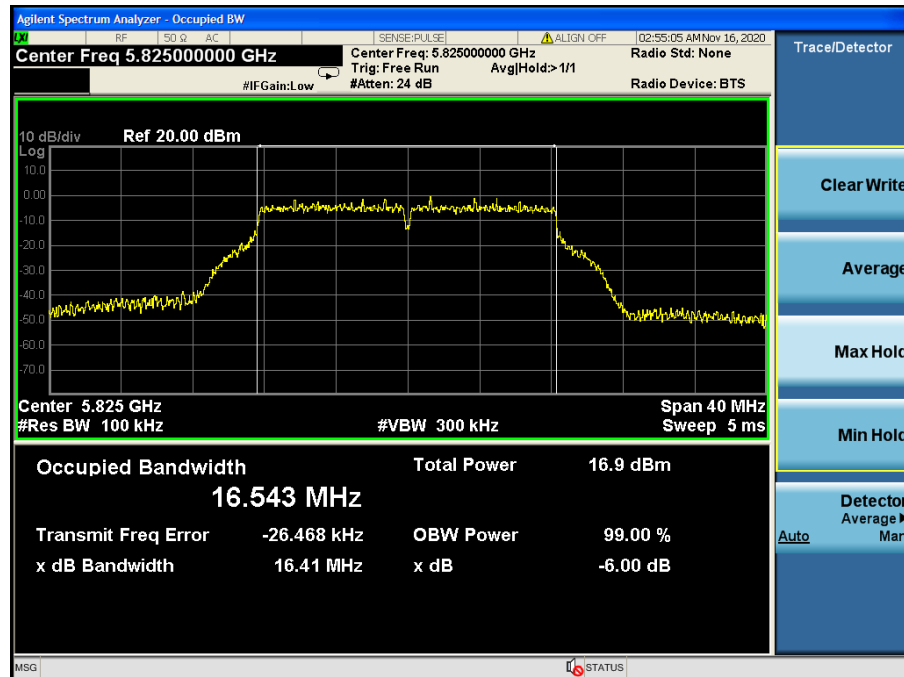
TX CH 149



TX CH 157



CH165

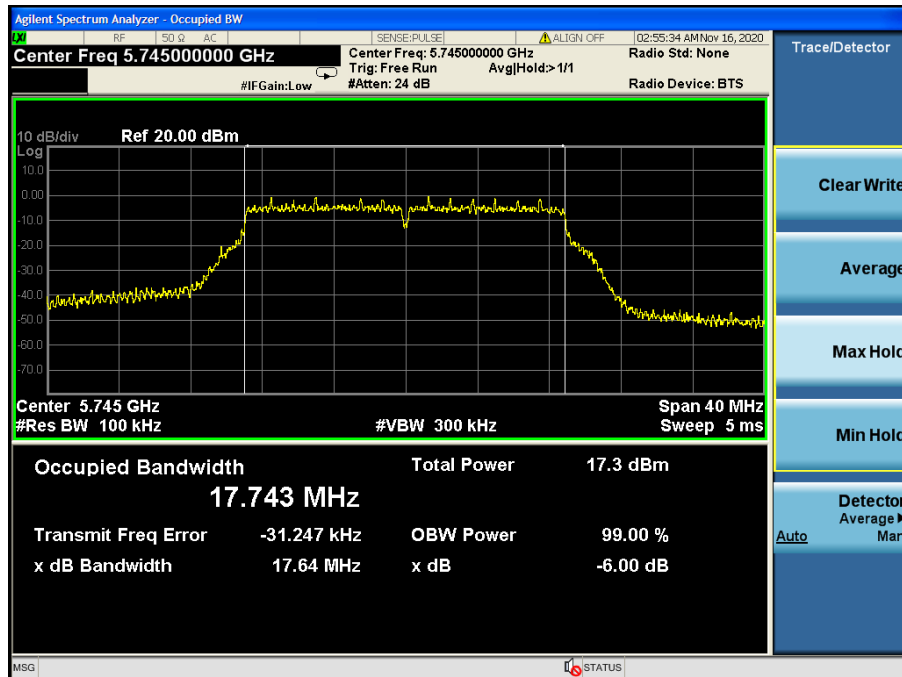


EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX n(20) Mode(5G) /CH149, CH157, CH165		
Test Date :	2020-11-16		

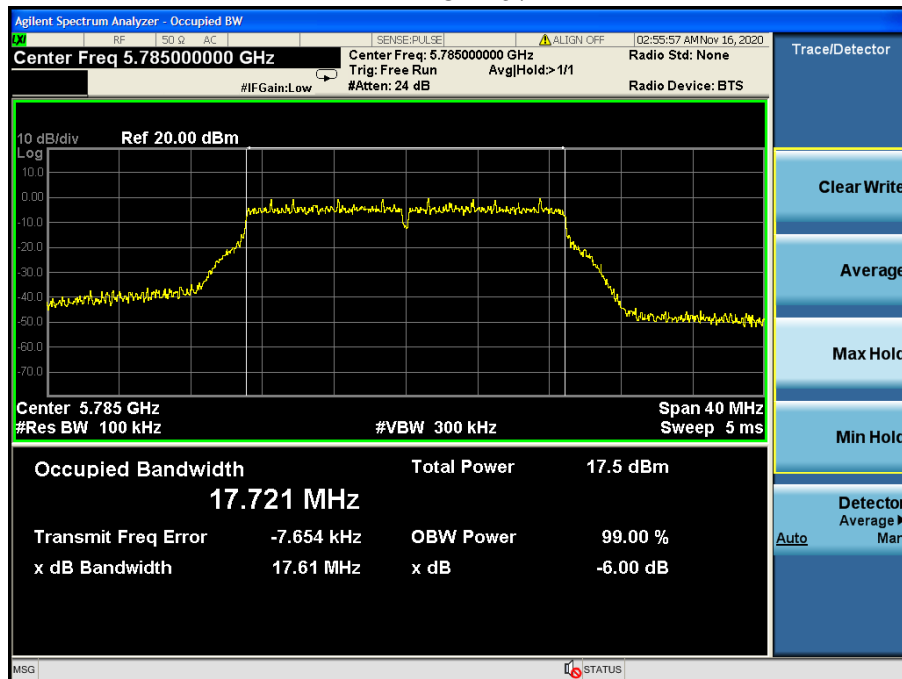
Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 149	5745	17.64	17.31	$\cong 500$	Pass
CH 157	5785	17.61	17.37	$\cong 500$	Pass
CH 165	5825	17.62	17.32	$\cong 500$	Pass

6dB bandwidth

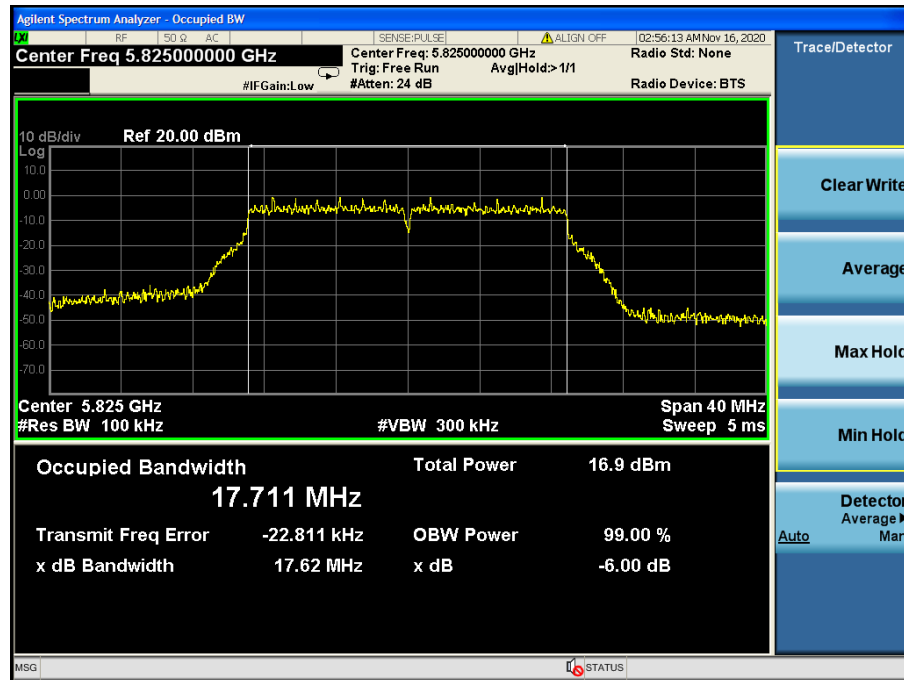
TX CH 149



TX CH 157



CH165

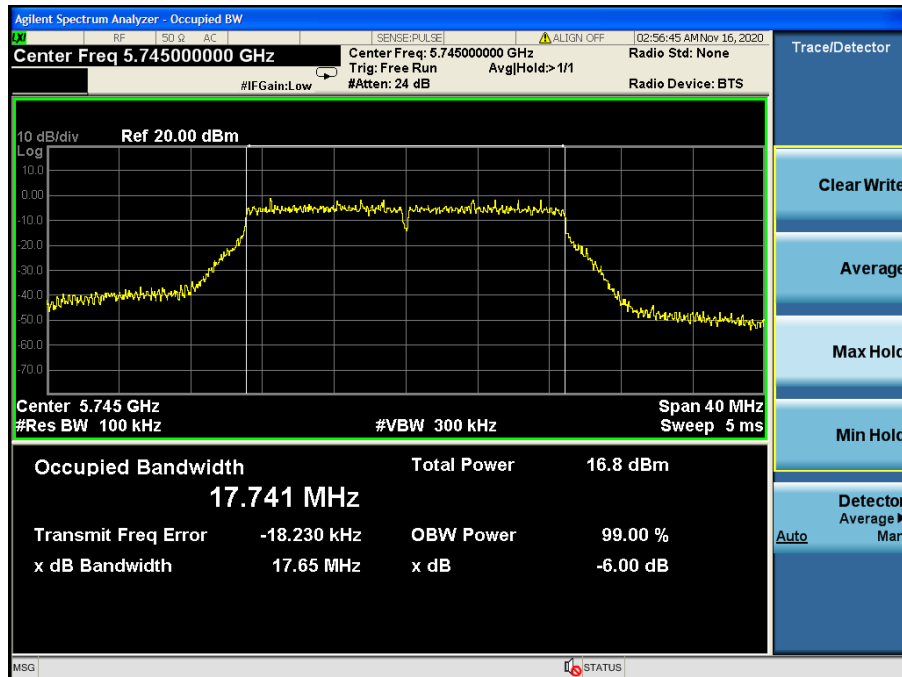


EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX ac(20) Mode(5G) /CH149, CH157, CH165		
Test Date :	2020-11-16		

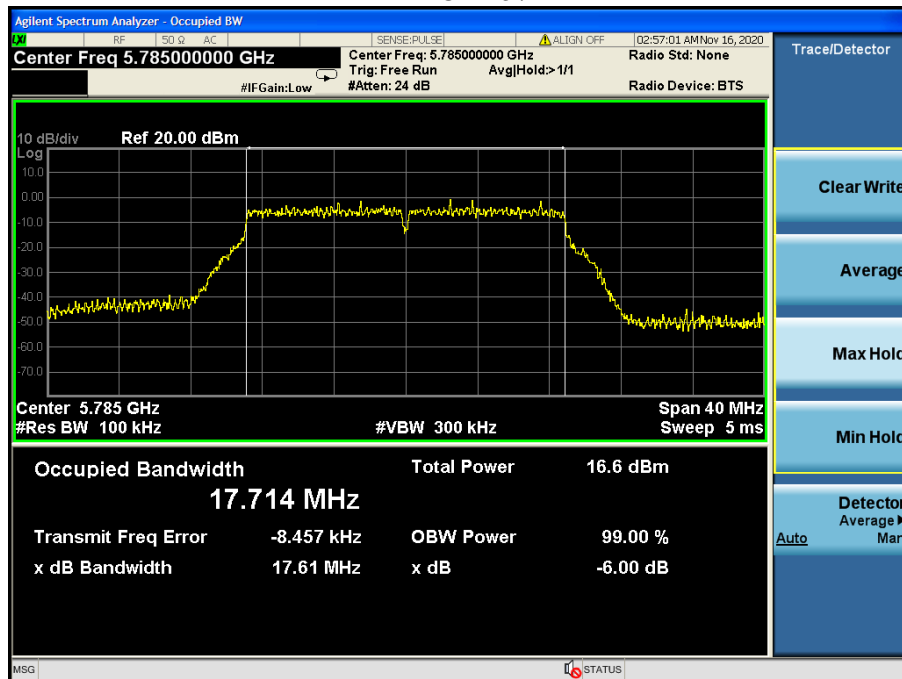
Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 149	5745	17.65	17.32	$\cong 500$	Pass
CH 157	5785	17.61	17.29	$\cong 500$	Pass
CH 165	5825	17.61	17.31	$\cong 500$	Pass

6dB bandwidth

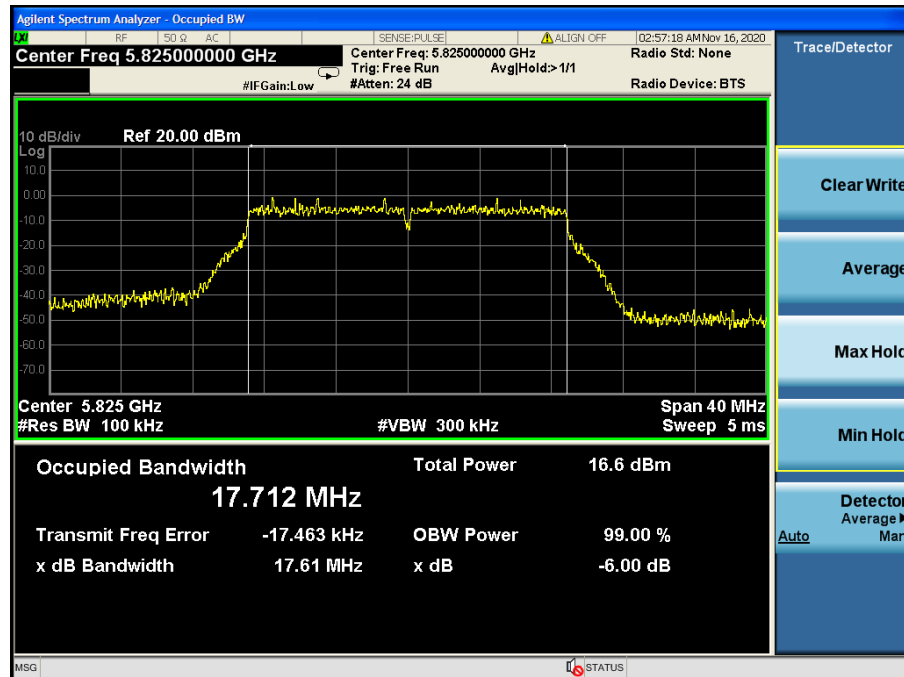
TX CH 149



TX CH 157



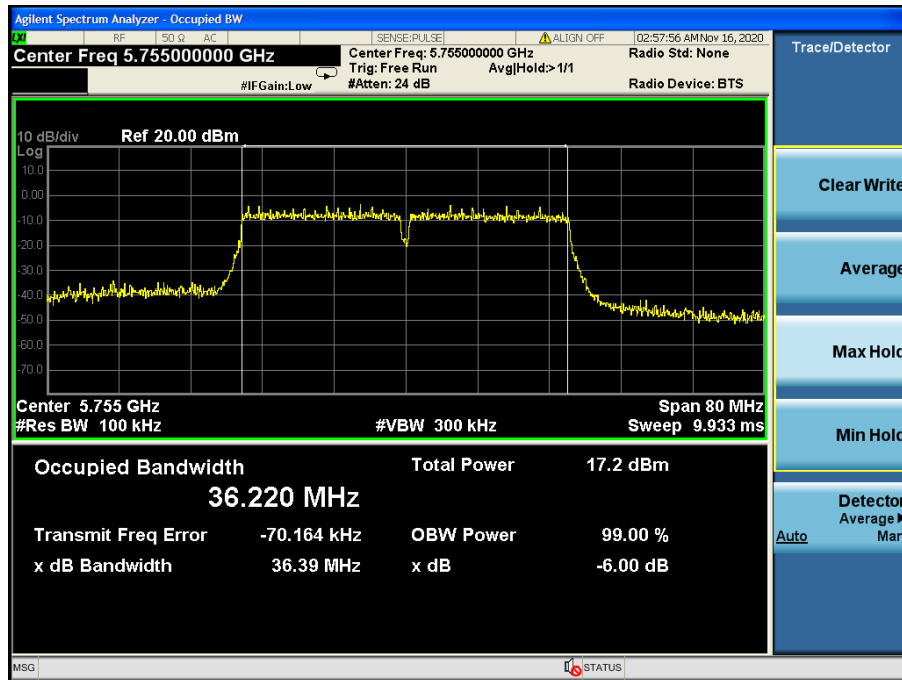
CH165



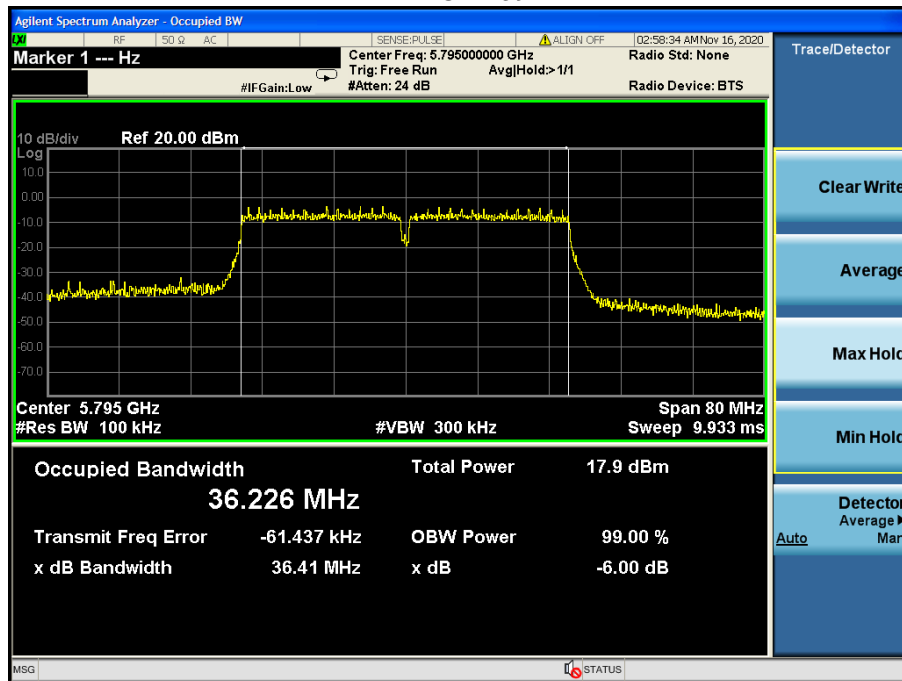
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX n40 Mode(5G) /CH151, CH159		
Test Date :	2020-11-16		

Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 151	5755	36.39	35.85	≥ 500	Pass
CH 159	5795	36.41	36.11	≥ 500	Pass

6dB bandwidth TX CH 151



TX CH 159

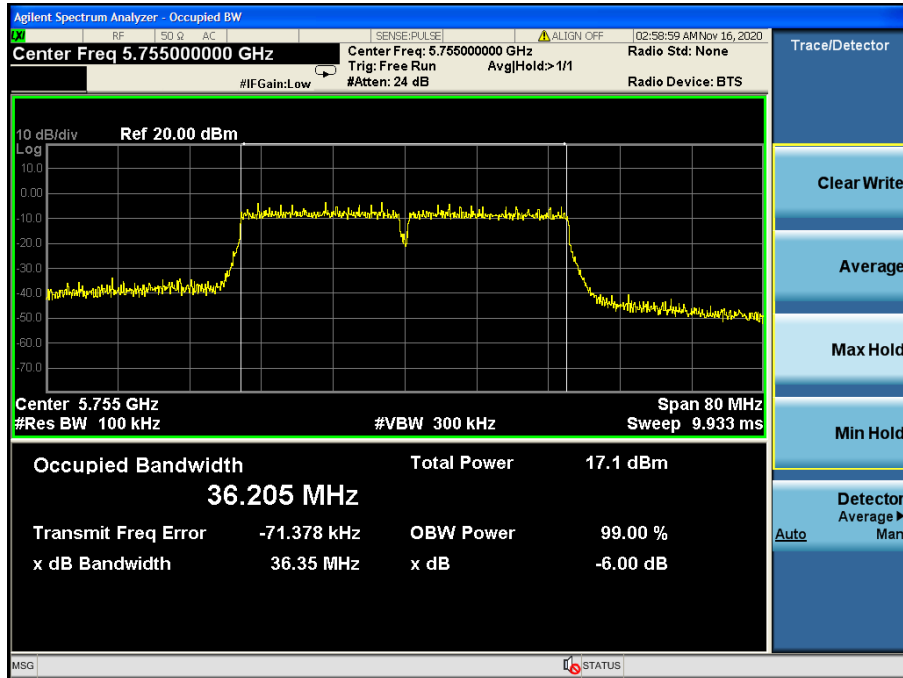


EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX ac40 Mode(5G) /CH151, CH159		
Test Date :	2020-11-16		

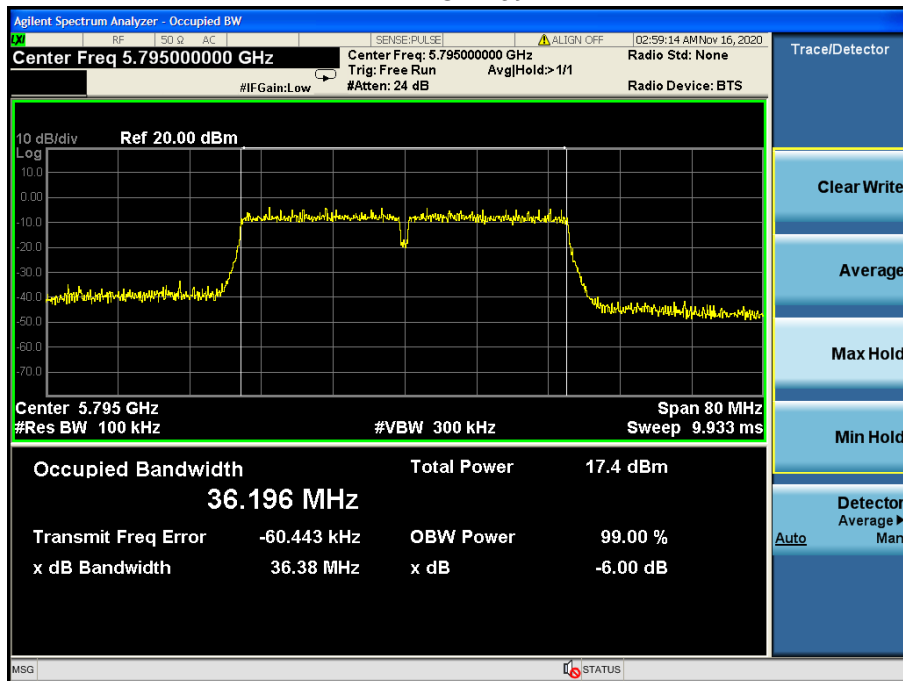
Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 151	5755	36.35	36.30	≥ 500	Pass
CH 159	5795	36.38	36.28	≥ 500	Pass

6dB bandwidth

TX CH 151



TX CH 159

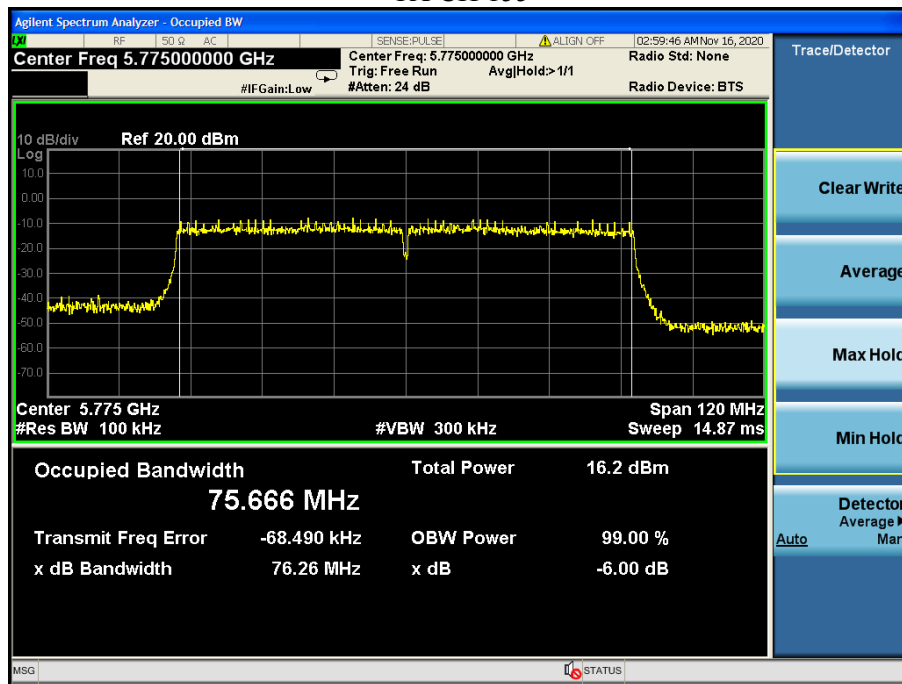


EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX AC(80) Mode(5G) /CH155		
Test Date :	2020-11-16		

Test Channel	Frequency	6dB Bandwidth (MHz) Antenna 1	6dB Bandwidth (MHz) Antenna 2	Limit (kHz)	Result
CH 155	5775	76.26	75.86	≥ 500	Pass

6dB bandwidth

TX CH 155



5 . POWER DENSITY

5.1 Applied procedures / limit

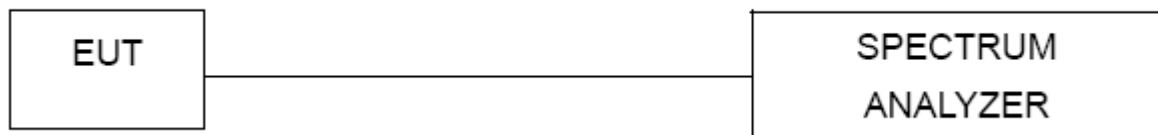
LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.7.3.3	Power density	30dBm	5725-5850	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	3 kHz
VB	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 3kHz, VBW=10kHz.

5.3 TEST SETUP



5.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.5 TEST RESULTS

ANT 1(2) Represent the value of antenna 1 and 2, The worst data is 1 Antenna a ,only shown
Antenna 1 Plot

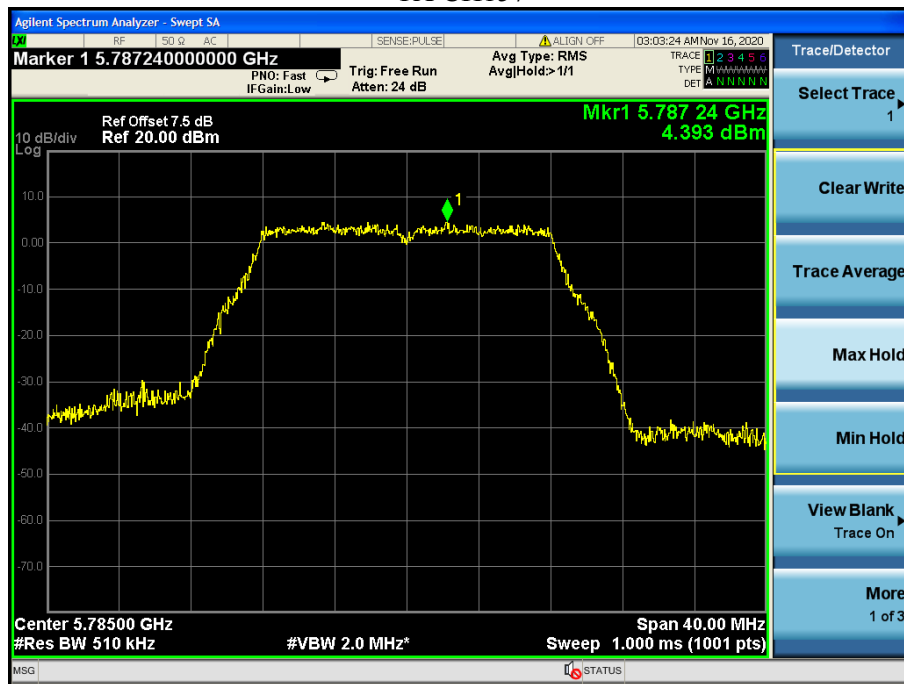
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX 802.11a/n20/n40/ac80		
Test Date :	2020-11-16		

Test Mode	Test Channel	Frequency	Power Density (MHz) ANT 1	Power Density (MHz) ANT 2	Total Power Density (MHz)	Limit (dBm)	Result
802.11a (5.725GHz-5.85GHz) Data rate 6Mbps	CH 149	5745	4.694	4.115	--	30	Pass
	CH 157	5785	4.393	4.136	--	30	Pass
	CH 165	5825	4.422	4.170	--	30	Pass
802.11n(20M) (5.725GHz-5.85GHz) Data rate 13Mbps	CH 149	5745	4.409	4.058	7.25	29.49	Pass
	CH 157	5785	4.510	4.007	7.28	29.49	Pass
	CH 165	5825	3.898	3.224	6.58	29.49	Pass
802.11ac(20M) (5.725GHz-5.85GHz) Data rate 13Mbps	CH 149	5745	3.593	3.159	6.39	29.49	Pass
	CH 157	5785	3.859	3.287	6.59	29.49	Pass
	CH 165	5825	4.128	3.651	6.91	29.49	Pass
802.11n(40M) (5.725GHz-5.85GHz) Data rate 27Mbps	CH 151	5755	2.282	1.856	5.08	29.49	Pass
	CH 159	5795	1.929	1.472	4.72	29.49	Pass
802.11ac(40M) (5.725GHz-5.85GHz) Data rate 27Mbps	CH 151	5755	2.224	1.855	5.05	29.49	Pass
	CH 159	5795	1.744	1.365	4.57	29.49	Pass
802.11ac(80M) (5.725GHz-5.85GHz) Data rate 58.6Mbps	CH 155	5775	-1.227	-1.884	1.47	29.49	Pass

802.11a (5.725GHz-5.85GHz) TX CH149

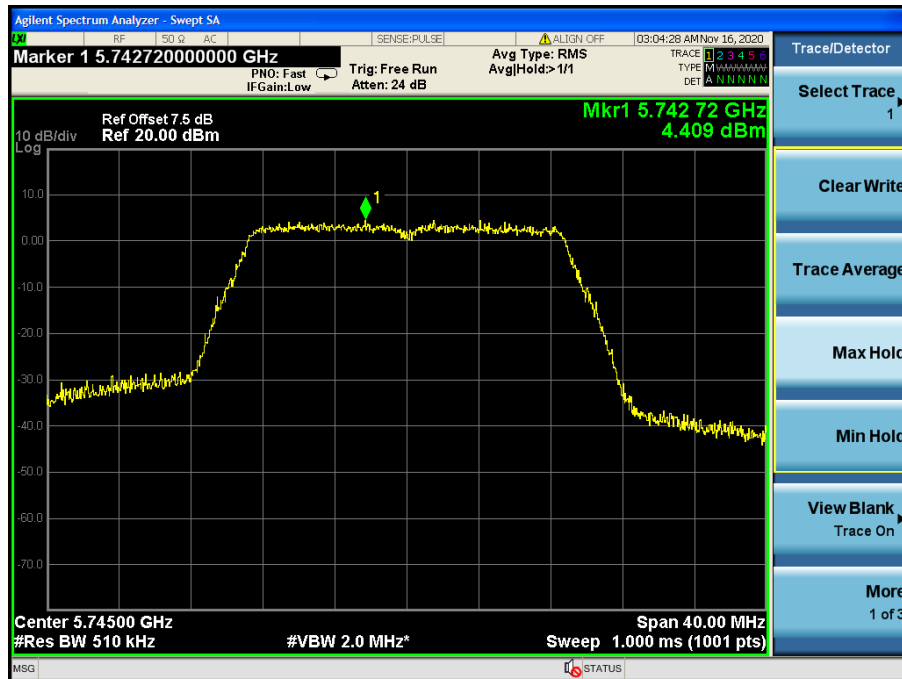


TX CH157

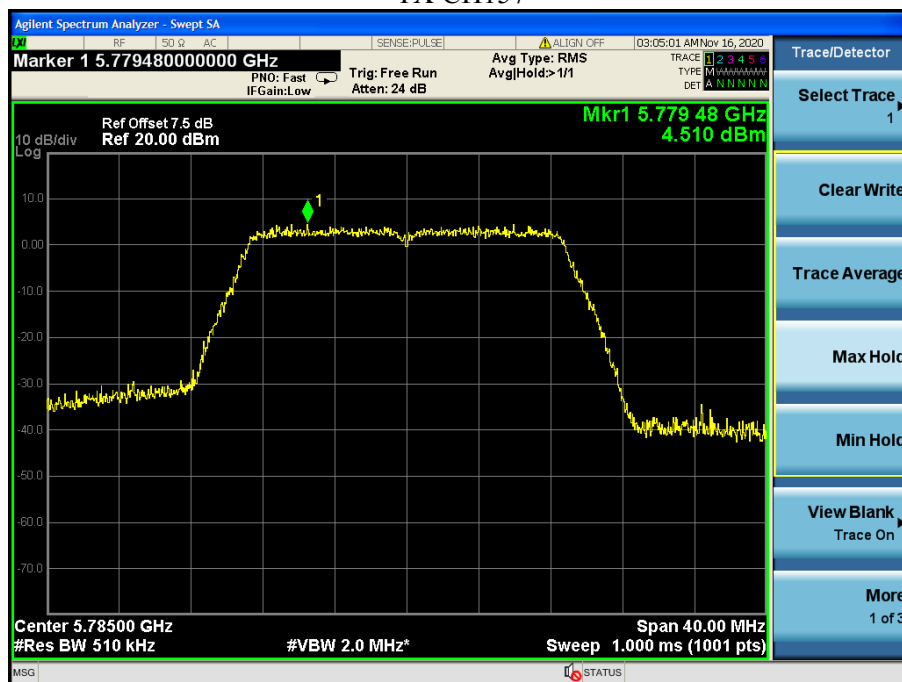


TX CH165



802.11n(20M) (5.725GHz-5.85GHz)
TX CH149

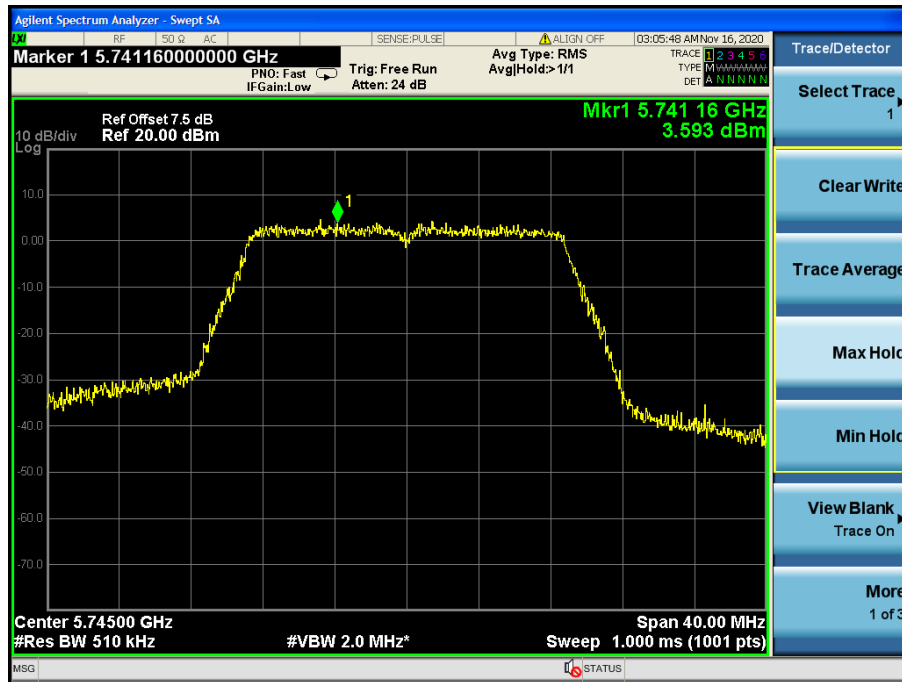
TX CH157



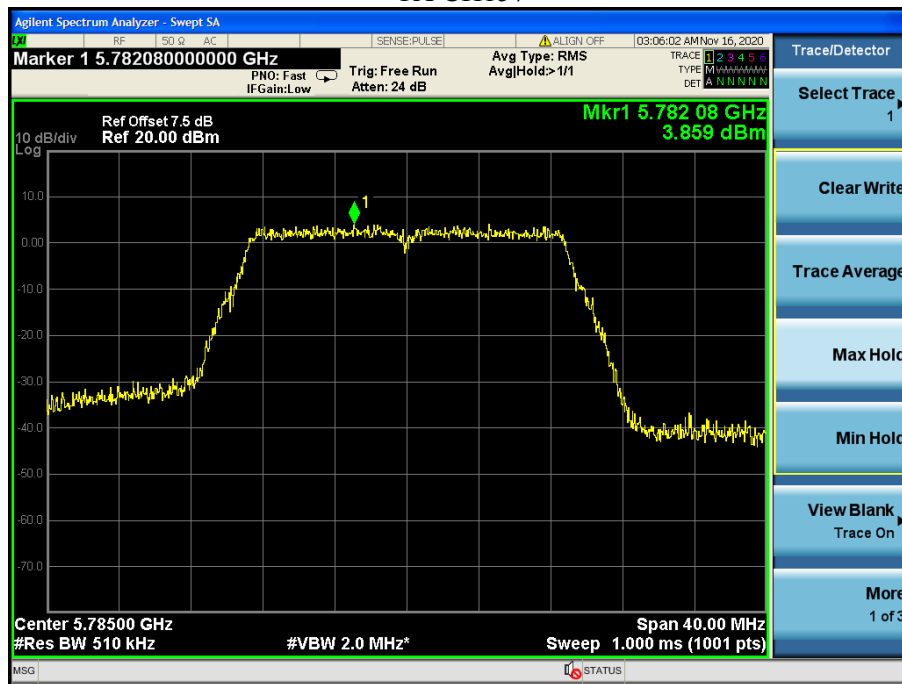
TX CH165



802.11ac(5.725GHz-5.85GHz) TX CH149



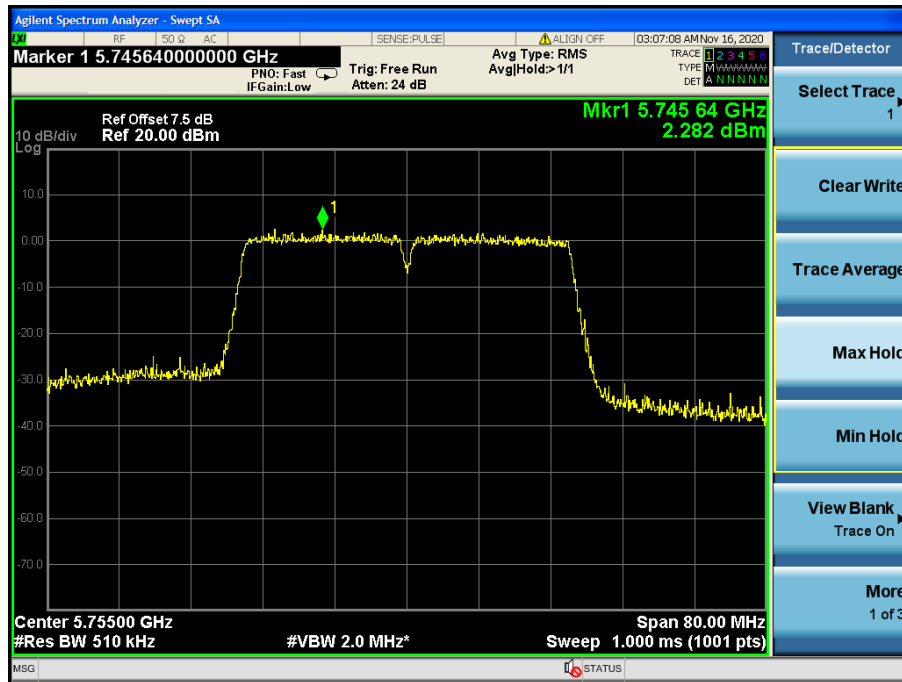
TX CH157



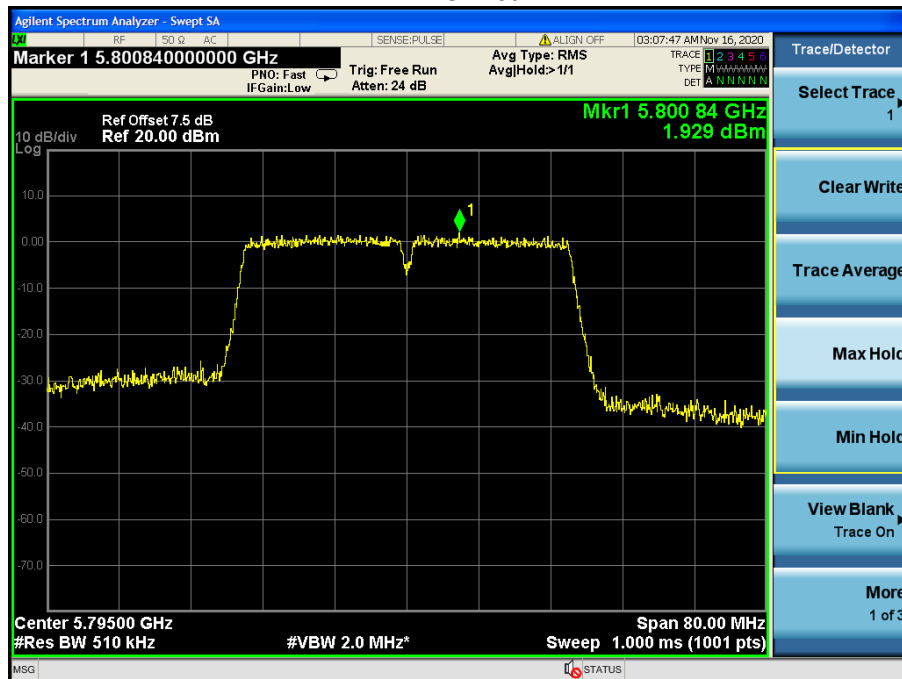
TX CH165



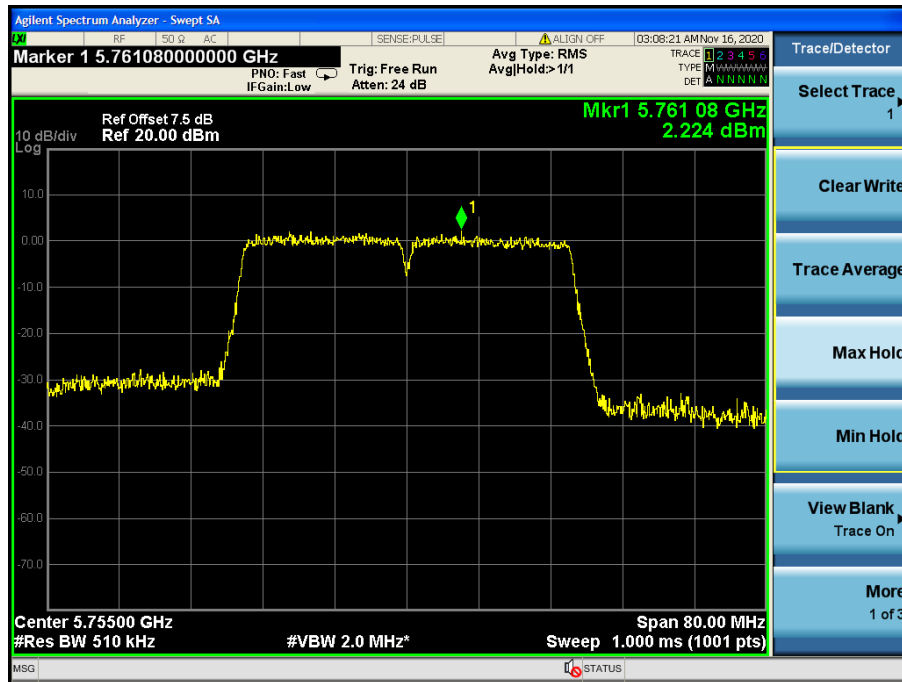
802.11n(40M) (5.725GHz-5.85GHz)
TX CH151



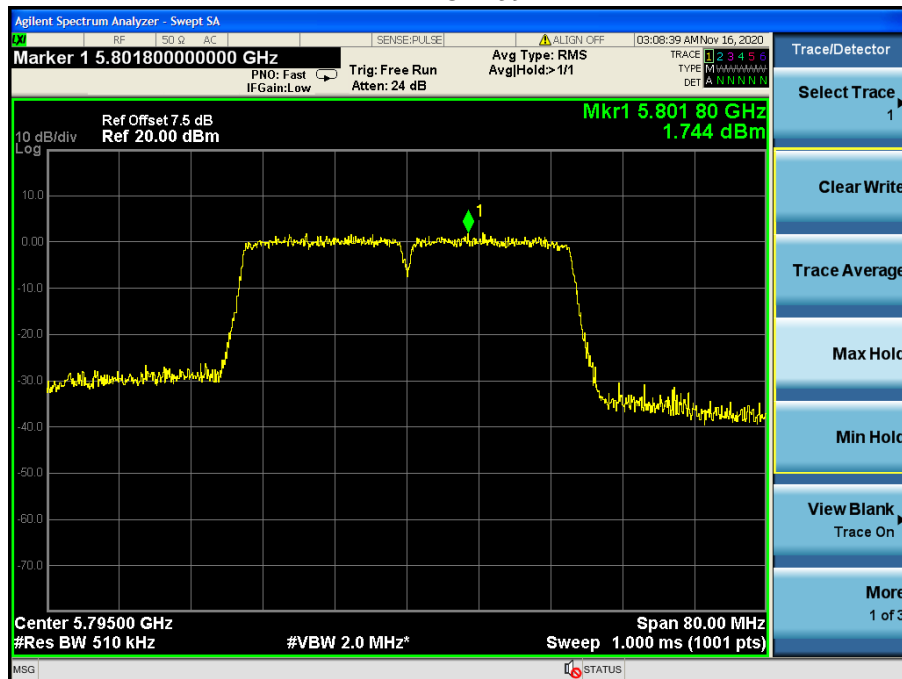
TX CH159



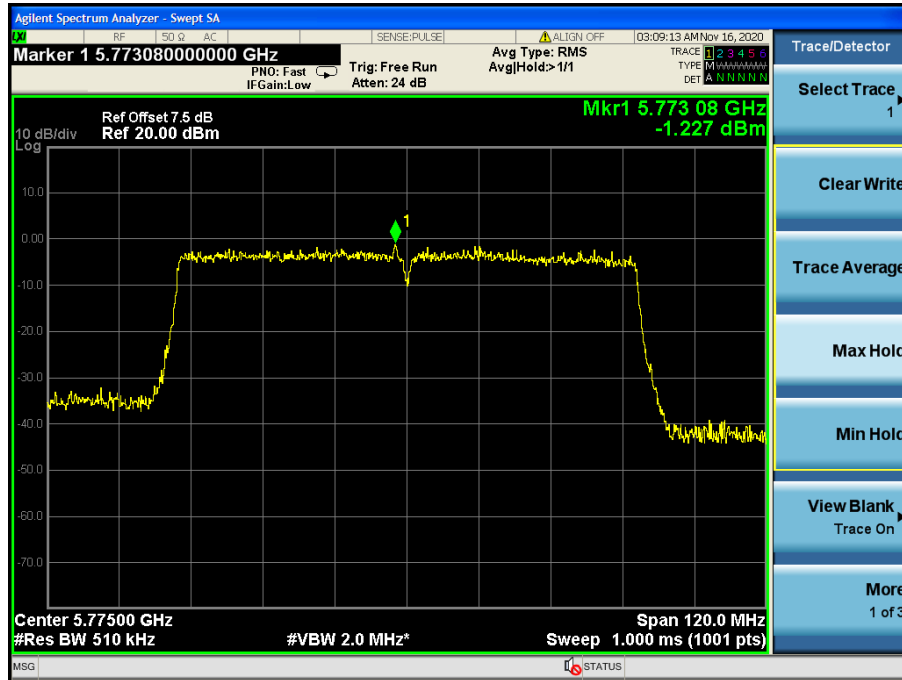
802.11ac(40M) (5.725GHz-5.85GHz)
TX CH151



TX CH159



802.11ac(80M) (5.725GHz-5.85GHz)
TX CH155



6 . OUTPUT POWER TEST

6.1 Applied procedures / limit

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.7.3.3	Peak Output Power	1 watt (30dBm)	5725-5850	PASS

6.2 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	TX 802.11a/n20/n40/ac80(5G) Mode		
Test Date :	2020-11-16		

Test Channel	Frequency (MHz)	Maximum output power. Antenna port			LIMIT dBm
		Output Power 1 (dBm)	Output Power 2 (dBm)	Total Power (dBm)	
TX 802.11a Mode					
CH149	5745	12.86	11.75	/	30
CH157	5785	12.71	11.83	/	30
CH165	5825	12.33	11.71	/	30
TX 802.11 n20 Mode					
CH149	5745	12.14	11.93	15.05	29.49
CH157	5785	11.98	11.70	14.85	29.49
CH165	5825	11.84	11.69	14.78	29.49
TX 802.11 ac20 Mode					
CH149	5745	11.62	11.26	14.45	29.49
CH157	5785	11.37	11.13	14.26	29.49
CH165	5825	11.26	11.06	14.17	29.49
TX 802.11 n40 Mode					
CH151	5755	12.00	11.55	14.79	29.49
CH159	5795	11.63	11.19	14.43	29.49
TX 802.11 ac40 Mode					
CH151	5755	11.57	11.24	14.42	29.49
CH159	5795	11.26	11.05	14.17	29.49
TX 802.11 ac80 Mode					
CH155	5775	11.07	10.95	14.02	29.49

7 . ANTENNA CONDUCTED SPURIOUS EMISSION

Applied procedures / limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in Section 2.8.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 kHz /100 kHz for Peak

7.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 1000kHz, VBW=1000kHz, Sweep time = Auto.

7.3 TEST SETUP



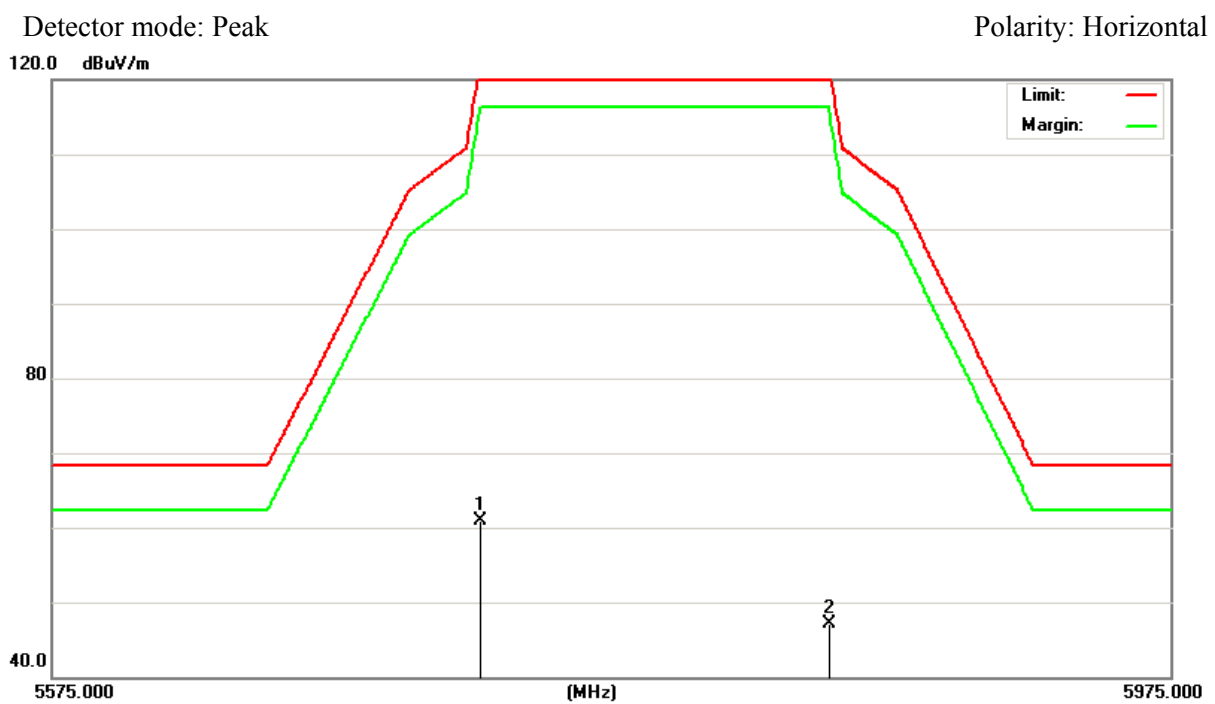
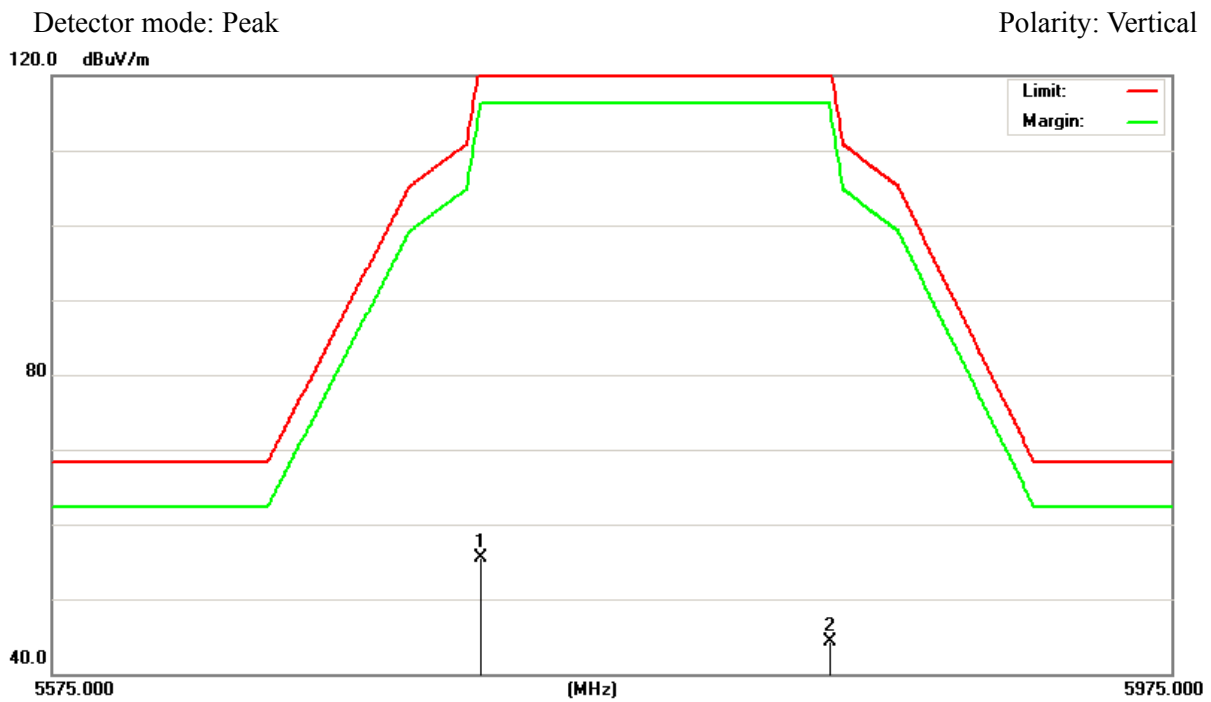
7.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.5 TEST RESULTS

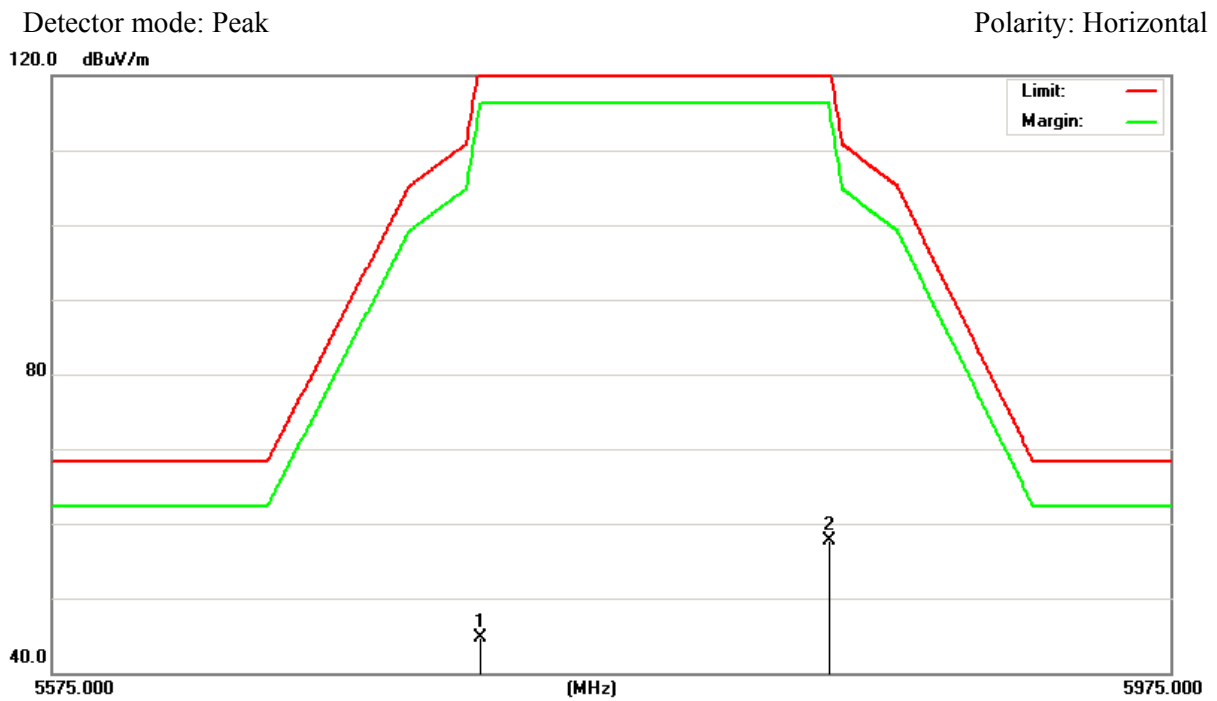
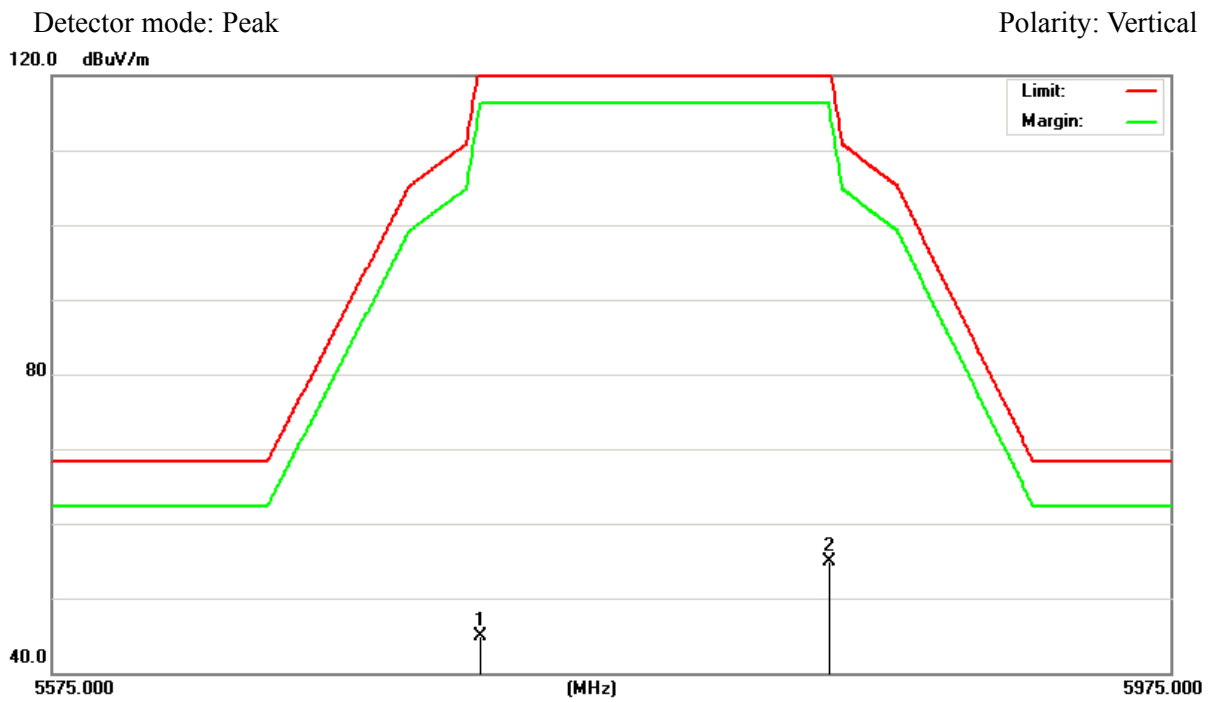
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11a		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	52.37	3.95	56.32	122.20	CH 149
5850.000	V	40.45	3.96	44.41	122.20	CH 149
5725.000	H	56.31	3.95	60.26	122.20	CH 149
5850.000	H	43.89	3.96	47.85	122.20	CH 149



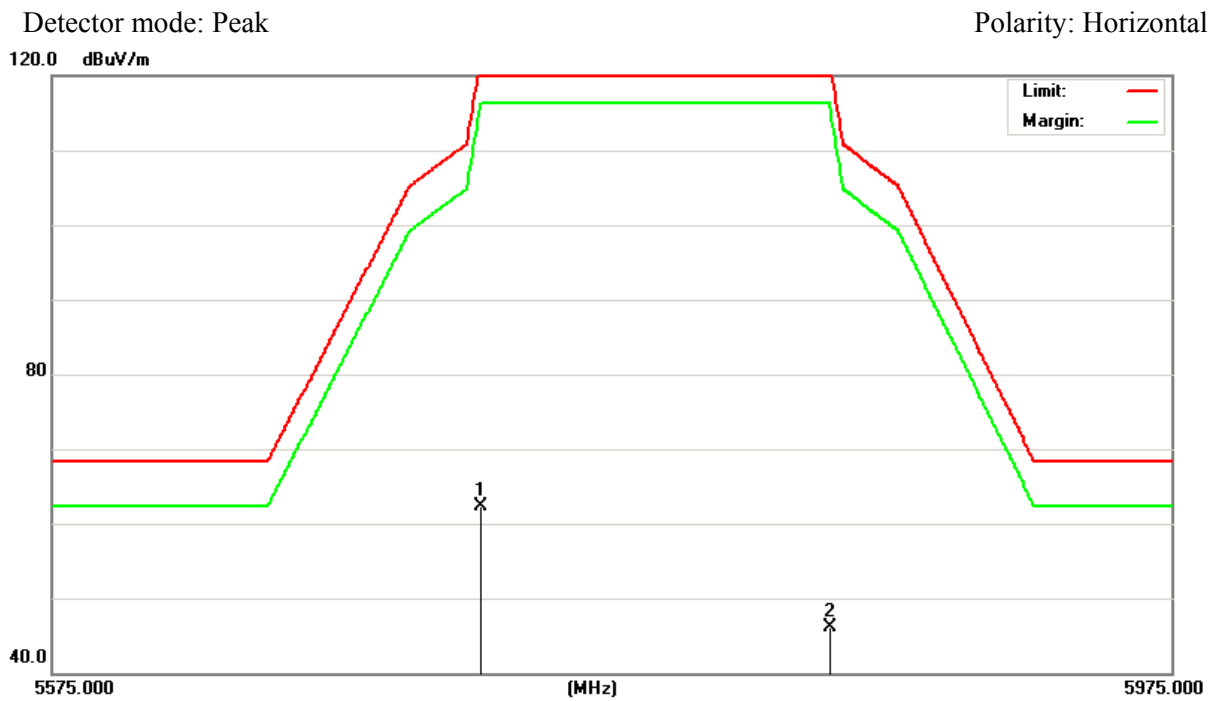
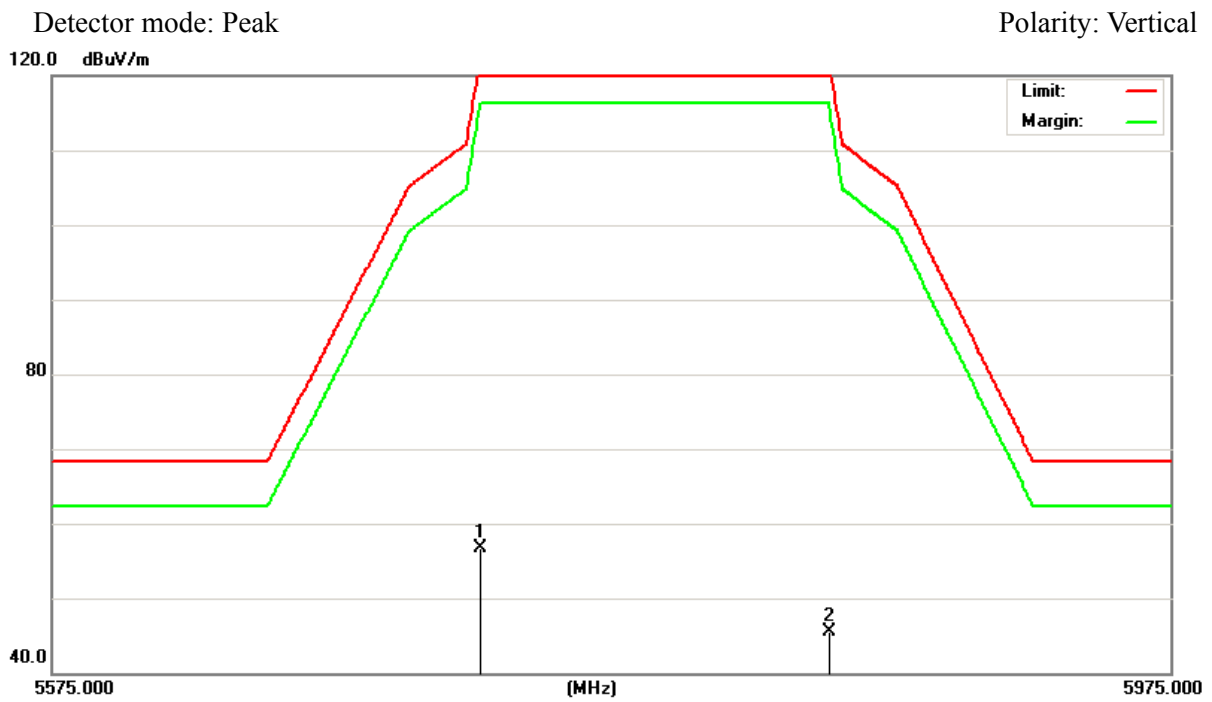
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11a		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuV)	Ant/CF (dB)	Act (dBuV/m)	Limit (dBuV/m)	Note
5725.000	V	40.54	3.95	44.49	122.20	CH 165
5850.000	V	51.77	3.96	55.73	122.20	CH 165
5725.000	H	40.96	3.95	44.91	122.20	CH 165
5850.000	H	55.07	3.96	59.03	122.20	CH 165



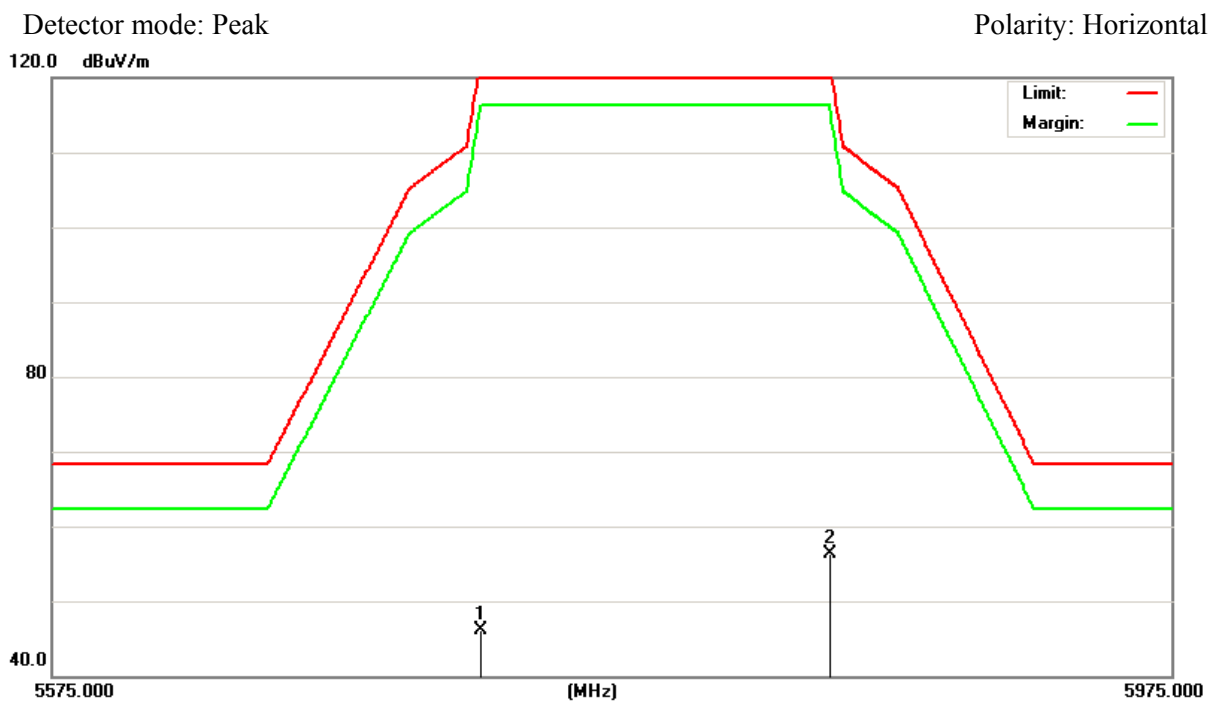
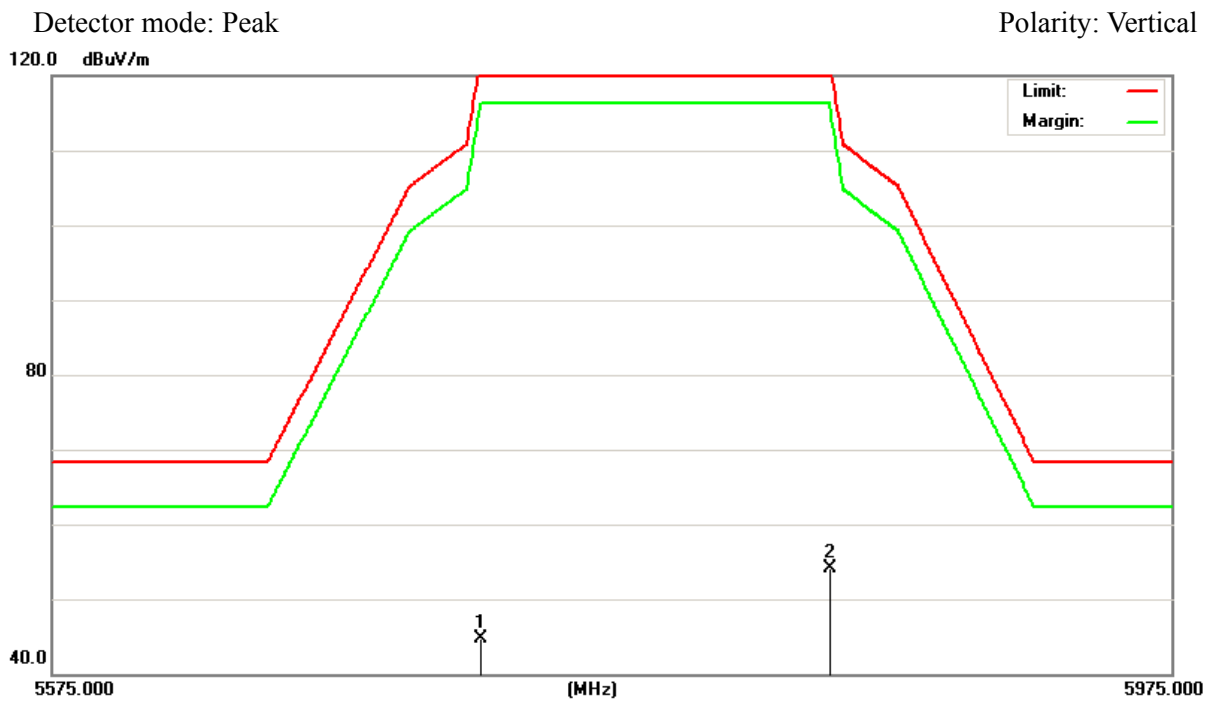
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11n20(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	54.02	3.95	57.97	122.20	CH 149
5850.000	V	41.69	3.96	45.65	122.20	CH 149
5725.000	H	59.03	3.95	62.98	122.20	CH 149
5850.000	H	43.63	3.96	47.59	122.20	CH 149



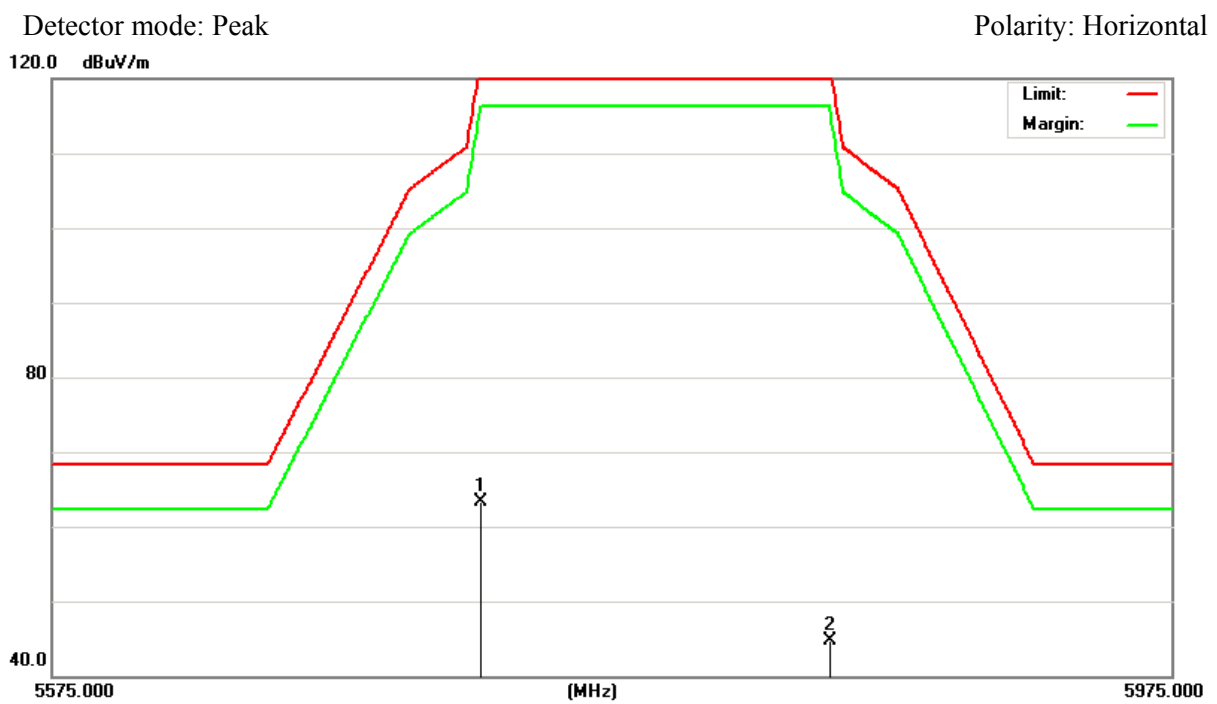
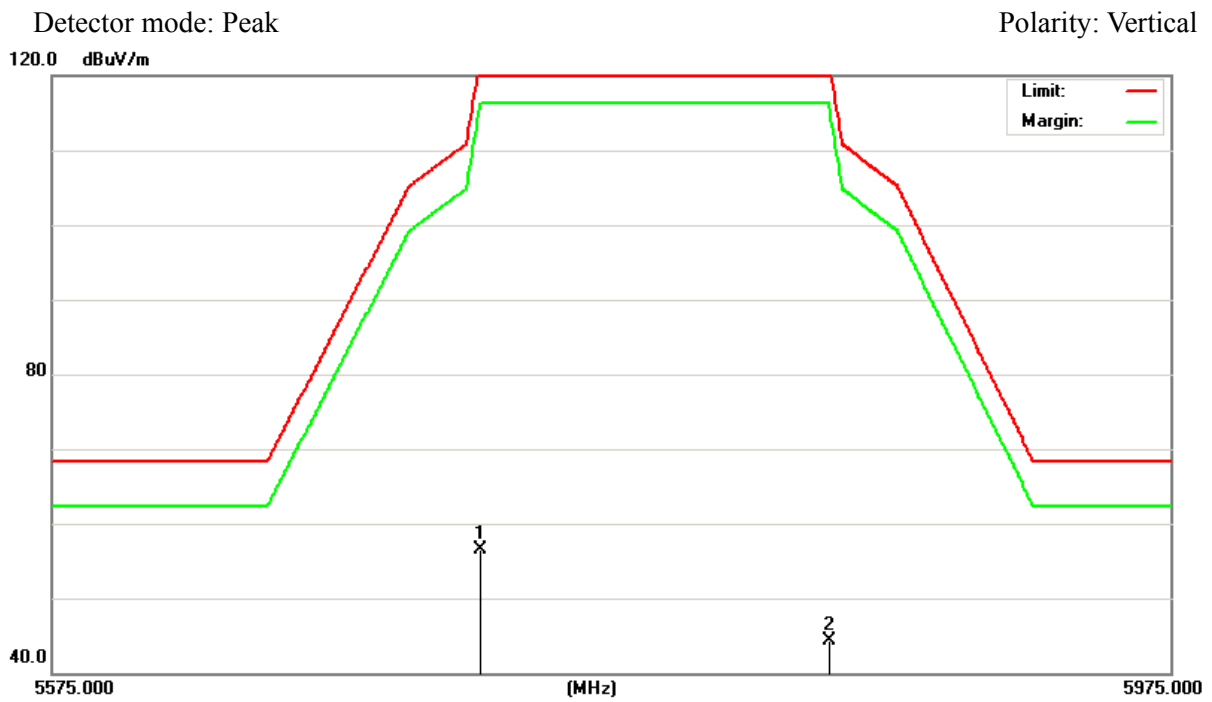
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11n20(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	40.52	3.95	44.47	122.20	CH 165
5850.000	V	50.35	3.96	54.31	122.20	CH 165
5725.000	H	42.72	3.95	46.67	122.20	CH 165
5850.000	H	52.93	3.96	56.89	122.20	CH 165



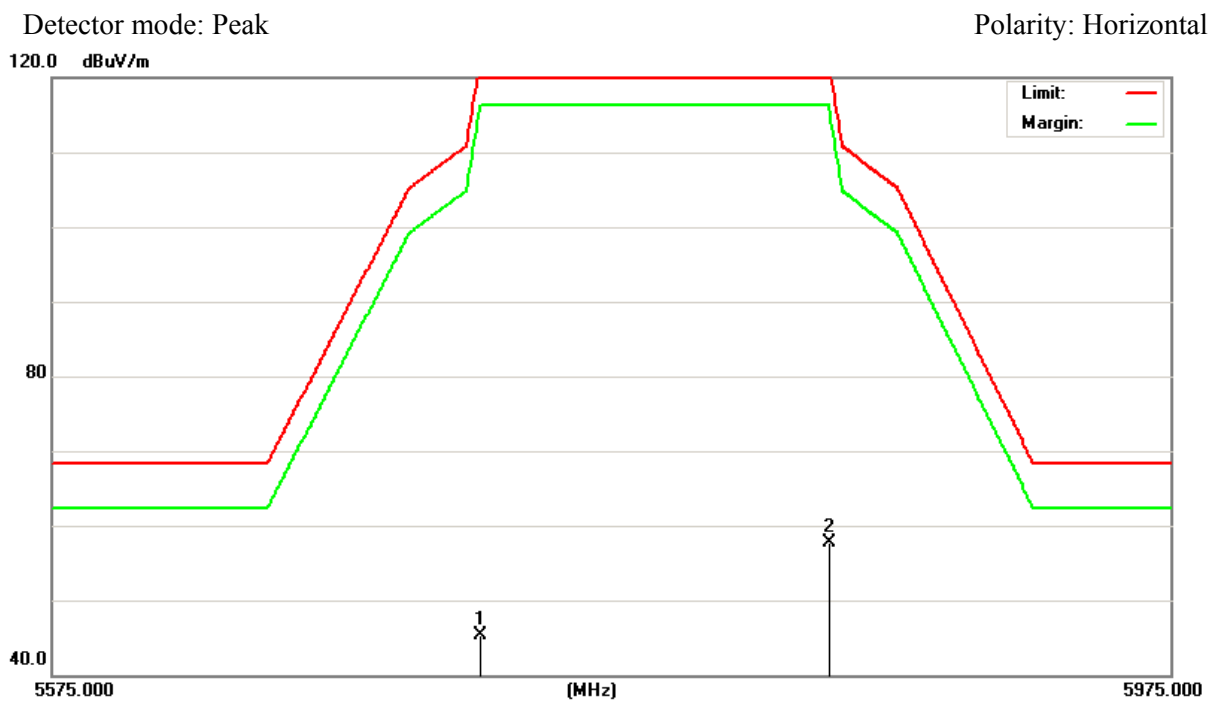
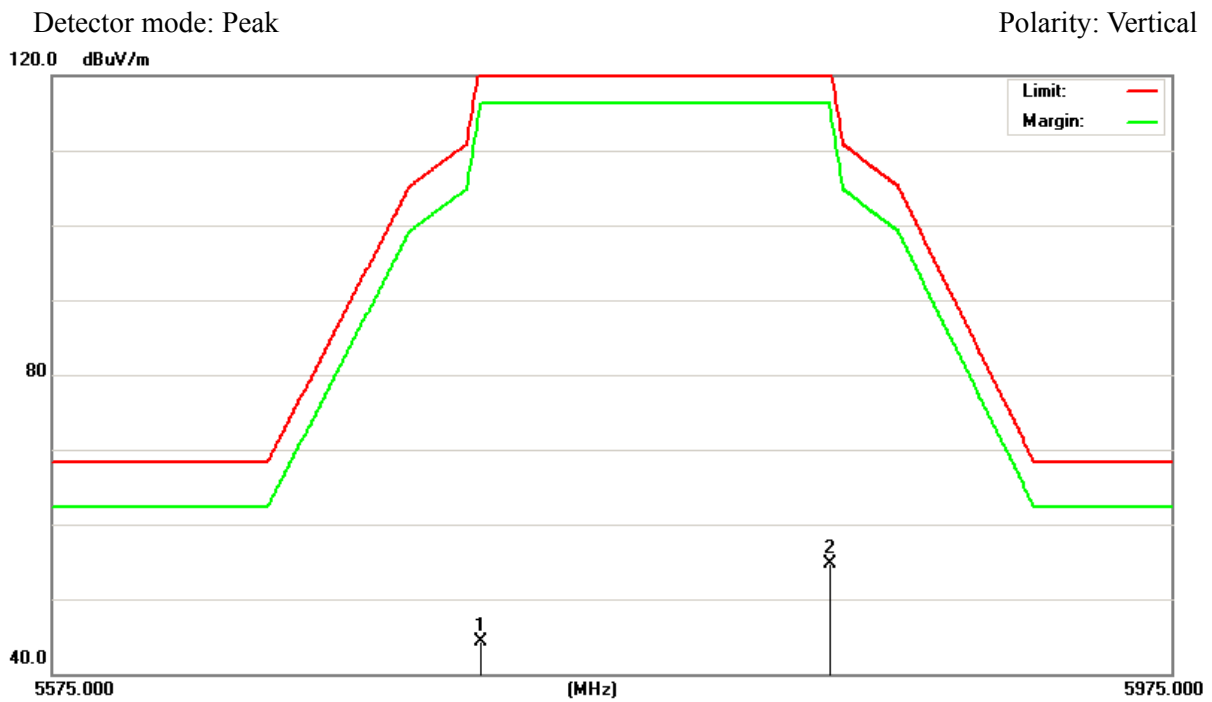
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11ac20(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	53.46	3.95	57.41	122.20	CH 149
5850.000	V	40.15	3.96	44.11	122.20	CH 149
5725.000	H	60.27	3.95	64.22	122.20	CH 149
5850.000	H	40.71	3.96	44.67	122.20	CH 149



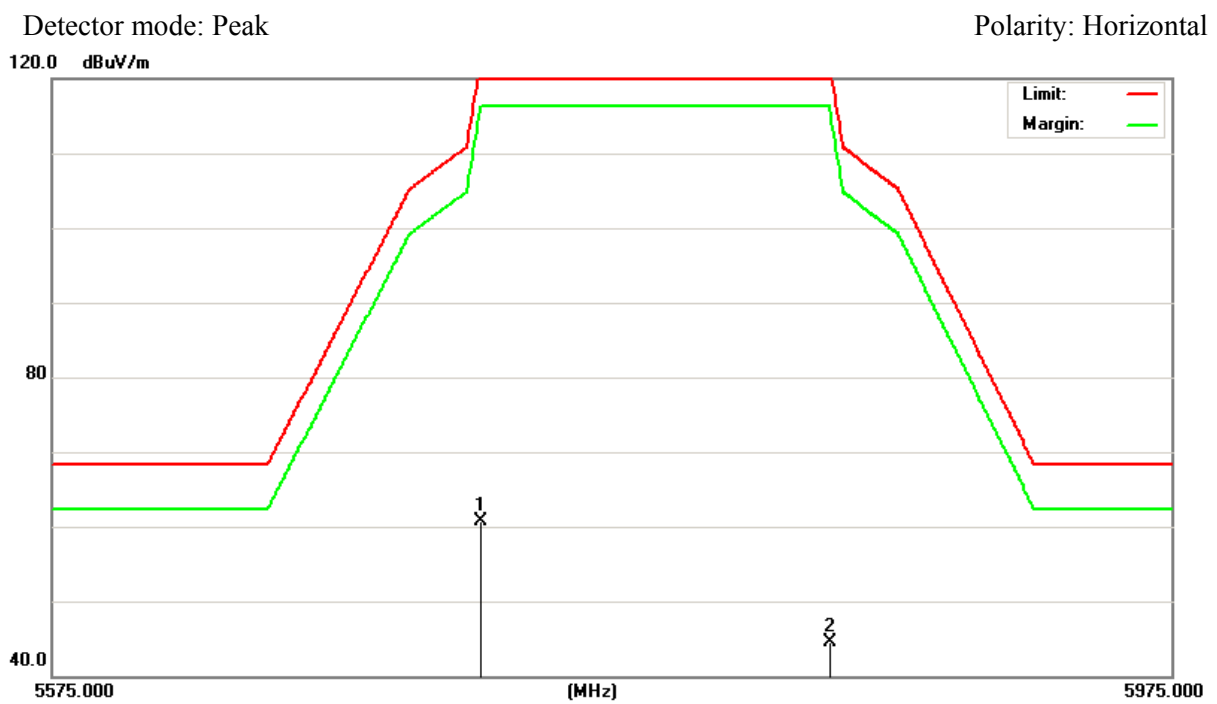
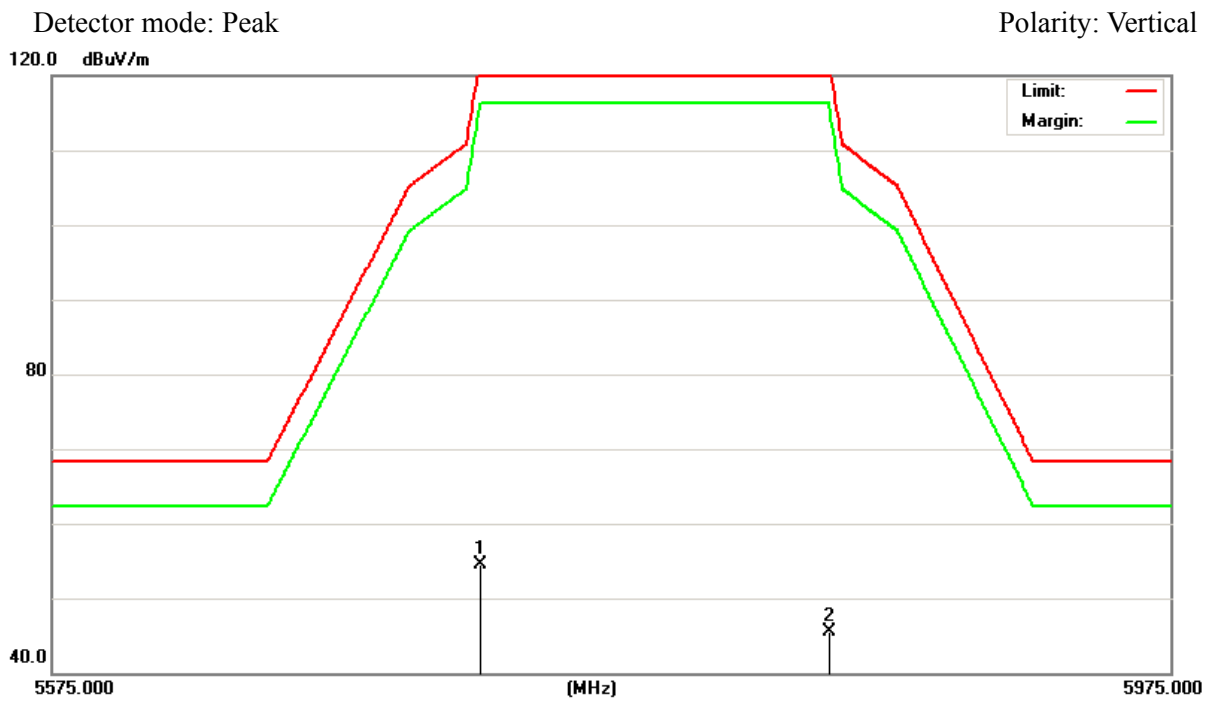
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11ac20(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	40.53	3.95	44.48	122.20	CH 165
5850.000	V	51.99	3.96	55.95	122.20	CH 165
5725.000	H	42.82	3.95	46.77	122.20	CH 165
5850.000	H	54.73	3.96	58.69	122.20	CH 165



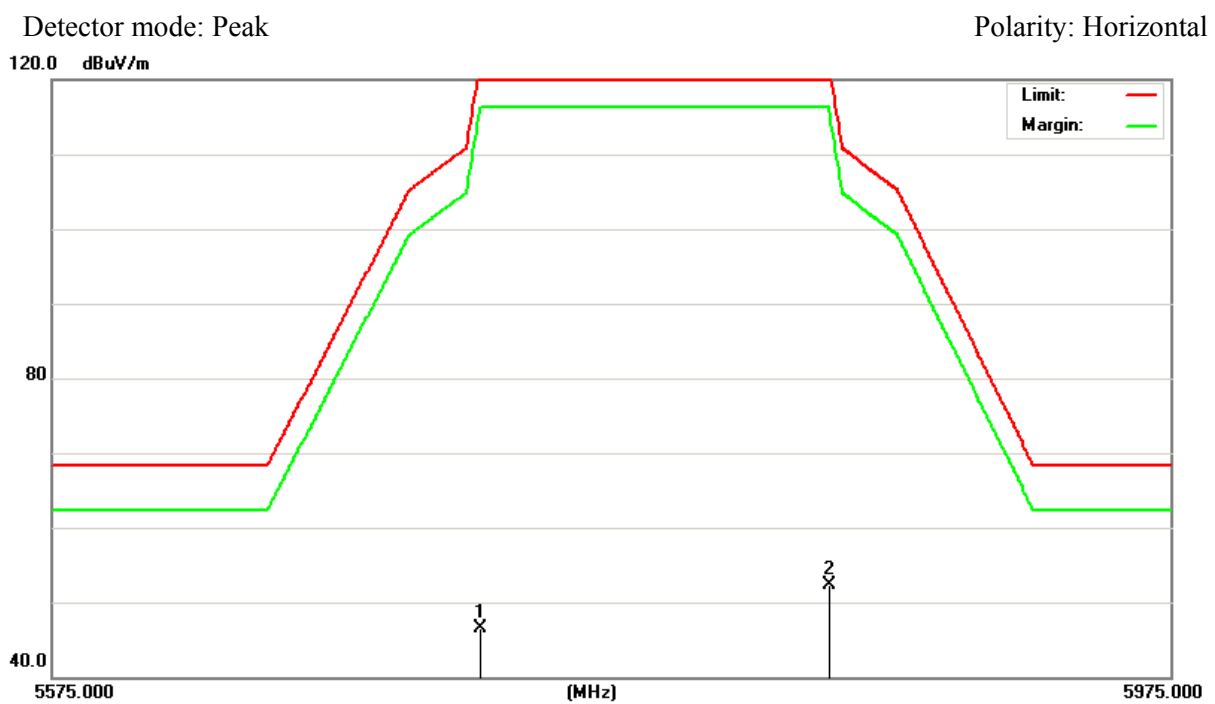
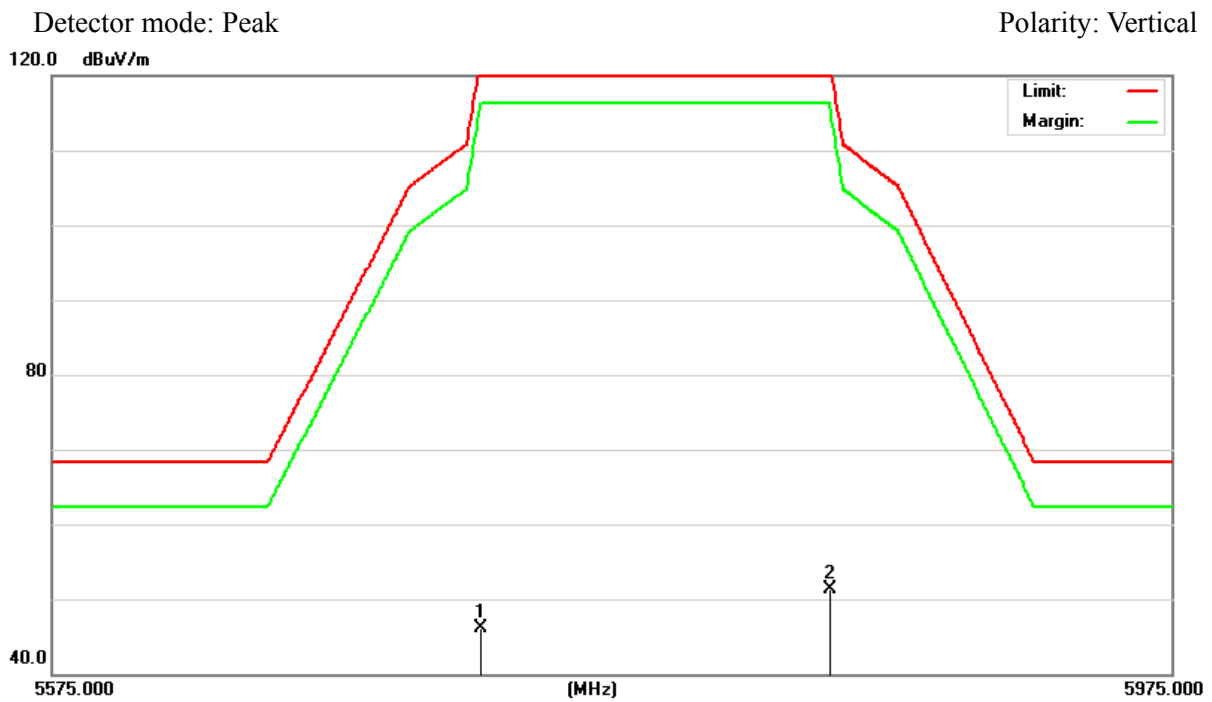
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11n40(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	51.12	3.95	55.07	122.20	CH 151
5850.000	V	41.36	3.96	45.32	122.20	CH 151
5725.000	H	57.02	3.95	60.97	122.20	CH 151
5850.000	H	40.59	3.96	44.55	122.20	CH 151



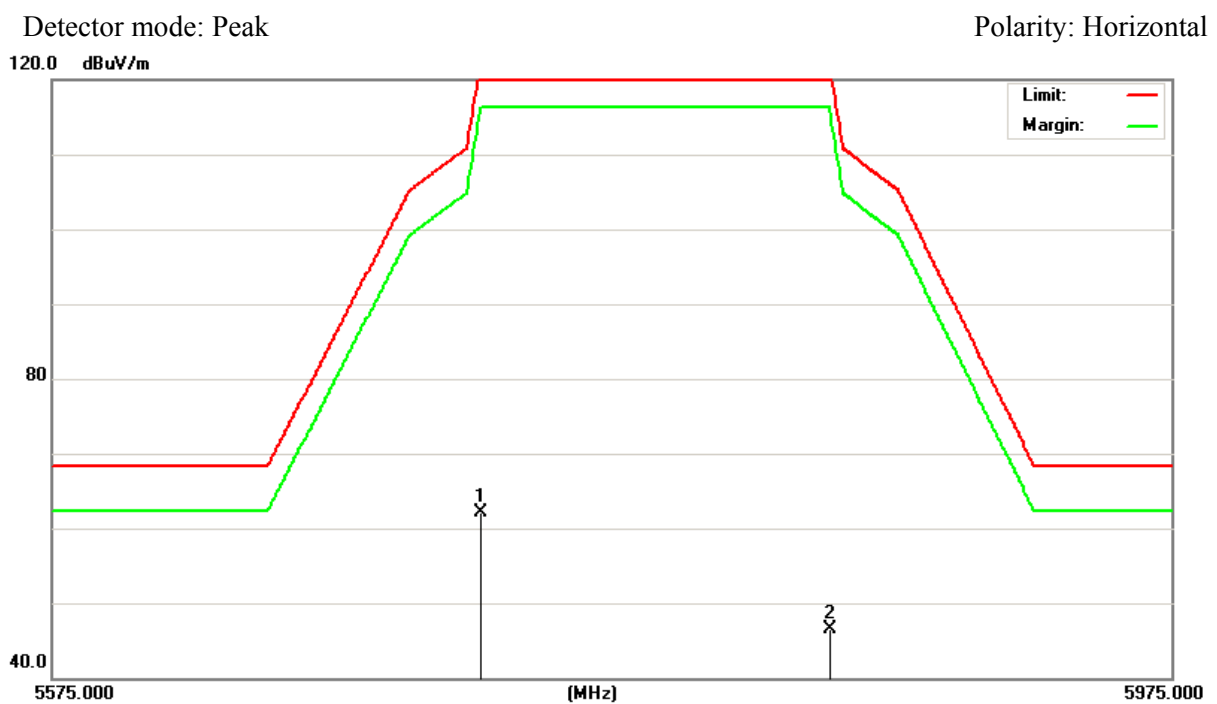
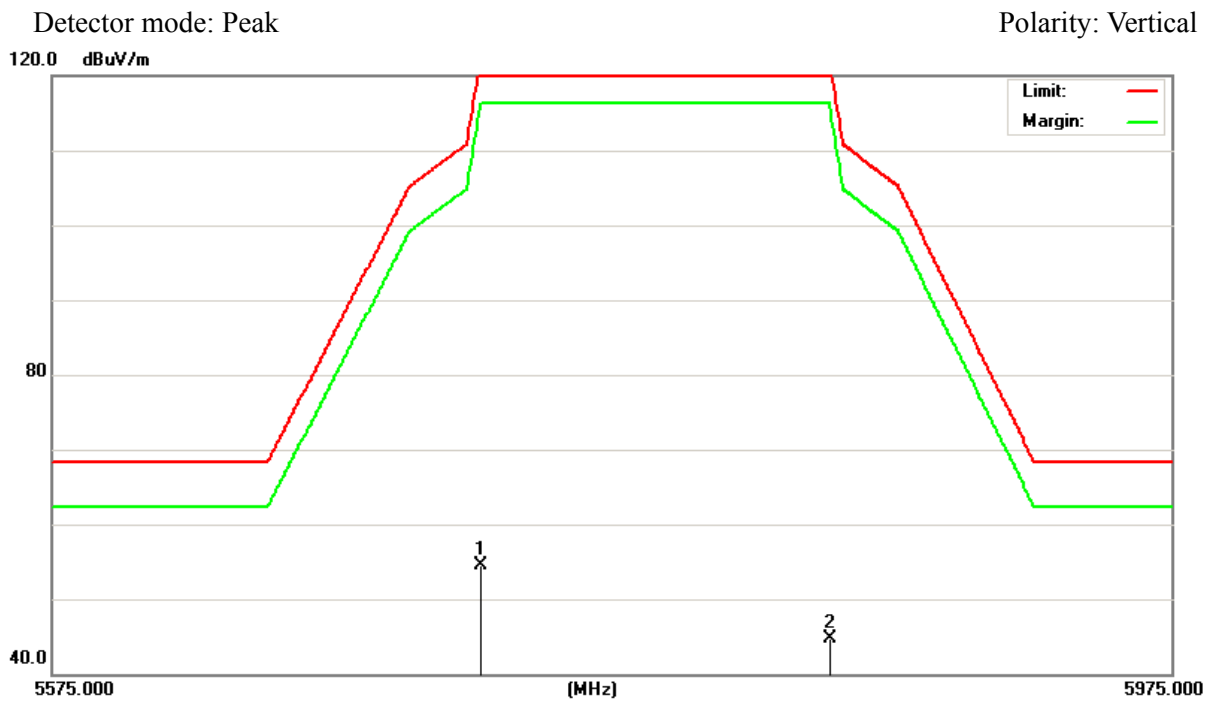
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11n40(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	41.86	3.95	45.81	122.20	CH 159
5850.000	V	47.92	3.96	51.88	122.20	CH 159
5725.000	H	43.04	3.95	46.99	122.20	CH 159
5850.000	H	48.93	3.96	52.89	122.20	CH 159



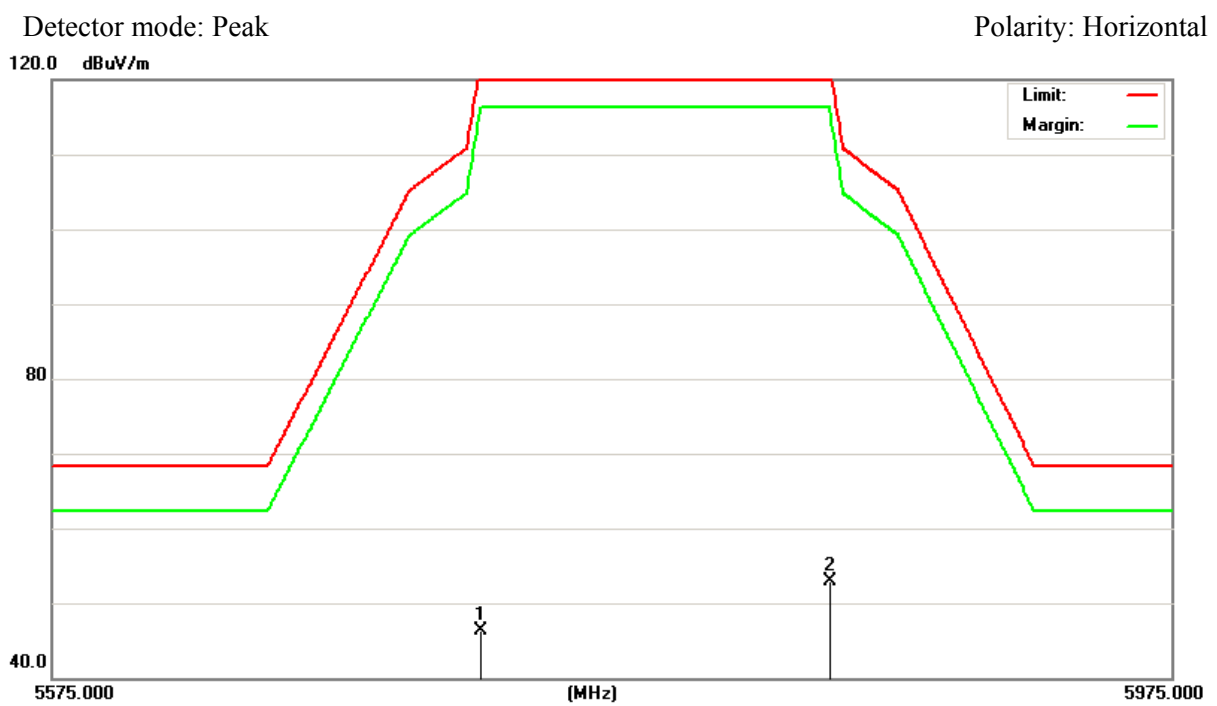
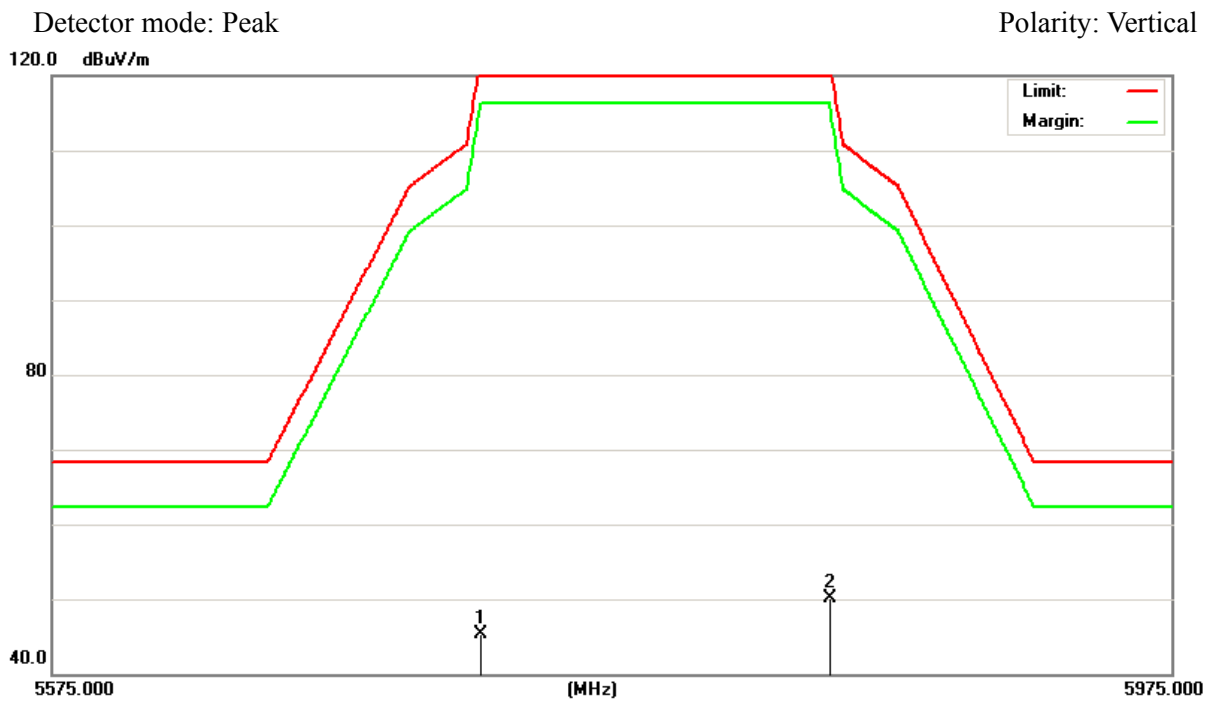
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11ac40(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	51.72	3.95	55.67	122.20	CH 149
5850.000	V	41.16	3.96	45.12	122.20	CH 149
5725.000	H	58.11	3.95	62.06	122.20	CH 149
5850.000	H	43.42	3.96	47.38	122.20	CH 149



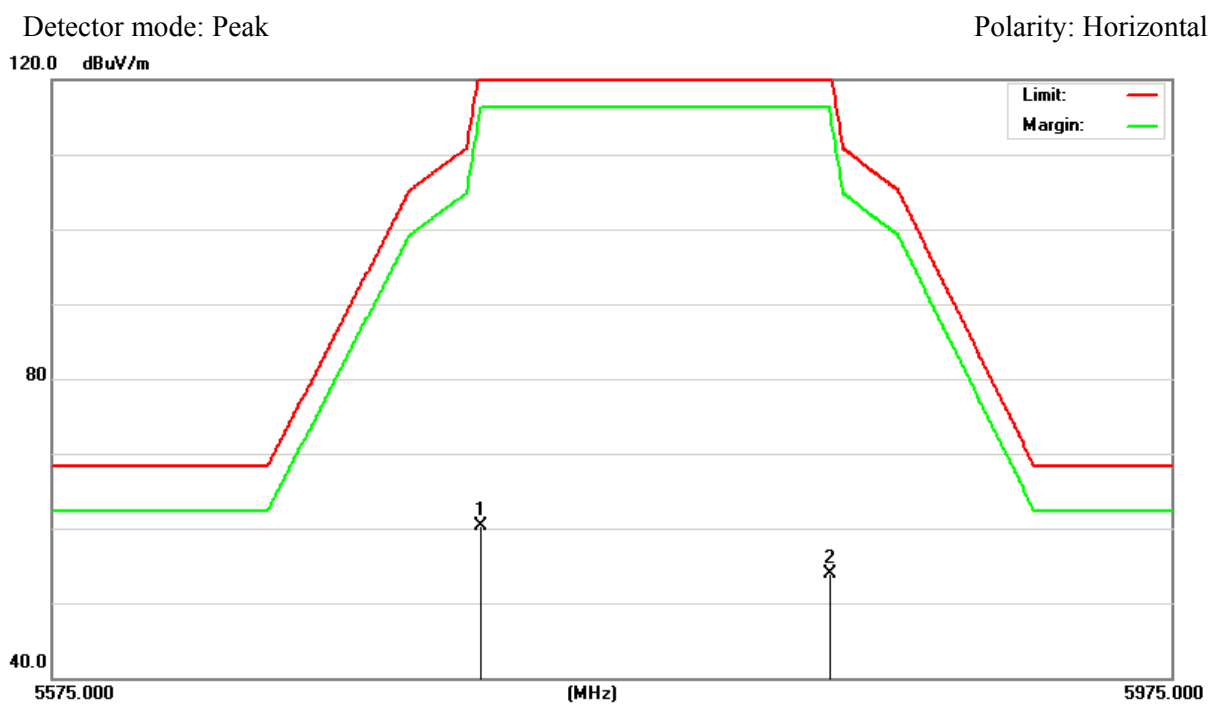
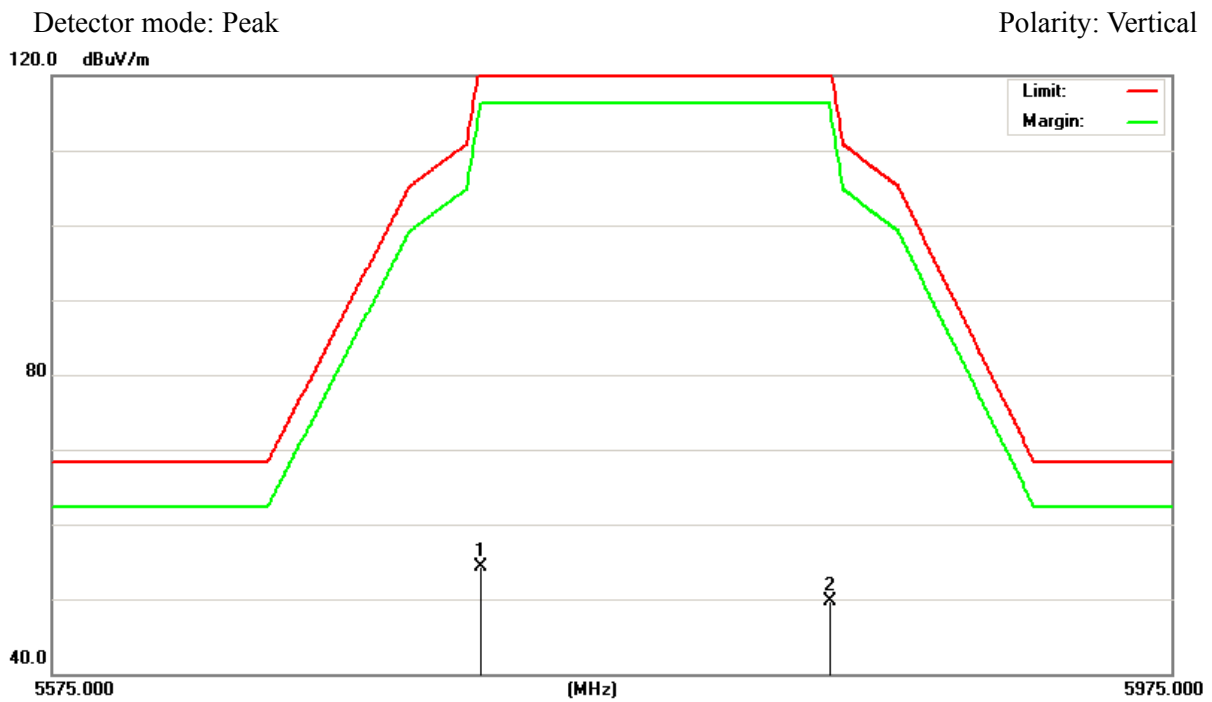
EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11ac40(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	41.22	3.95	45.17	122.20	CH 159
5850.000	V	46.75	3.96	50.71	122.20	CH 159
5725.000	H	42.63	3.95	46.58	122.20	CH 159
5850.000	H	49.99	3.96	53.95	122.20	CH 159



EUT :	好啦機器人 HolaBot	Model Name :	HL100
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1010 hPa	Test Voltage :	DC25.55V from battery
Test Mode :	802.11 AC80(5G)		
Test Date :	2020-11-16		
Note :	In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.		

Freq. (MHz)	Ant.Pol. H/V	Reading (dBuv)	Ant/CF (dB)	Act (dBuv/m)	Limit (dBuv/m)	Note
5725.000	V	50.86	3.95	54.81	122.20	CH 155
5850.000	V	45.89	3.96	49.85	122.20	CH 155
5725.000	H	56.57	3.95	60.52	122.20	CH 155
5850.000	H	50.11	3.96	54.07	122.20	CH 155



8. ANTENNA REQUIREMENT

8.1 Standard requirement

3.10.1 requirement: Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

8.2 EUT Antenna

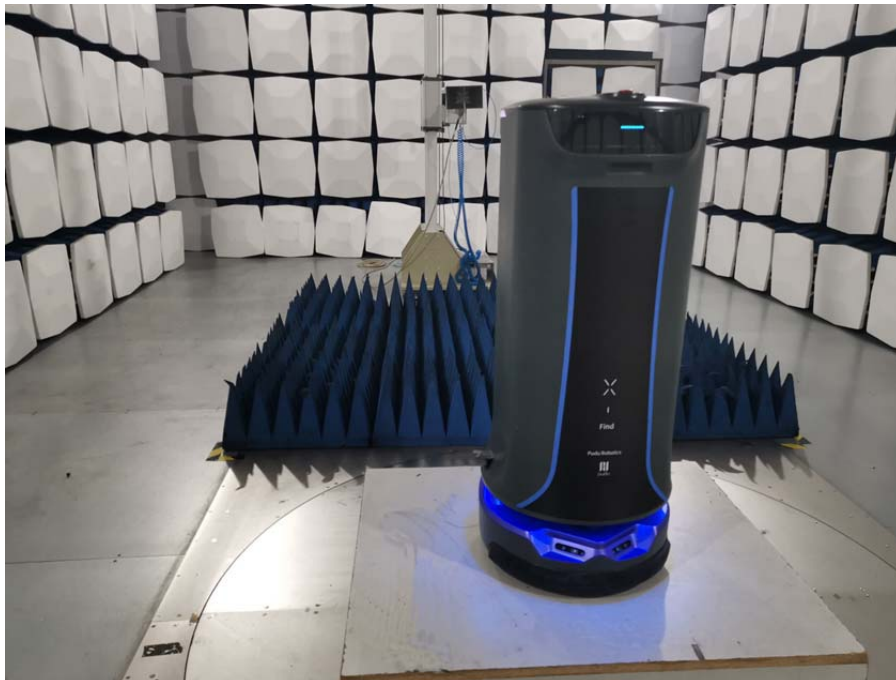
The antenna is PCB Antenna and no consideration of replacement. Antenna max. gain refer to page 9.

9. EUT TEST PHOTO

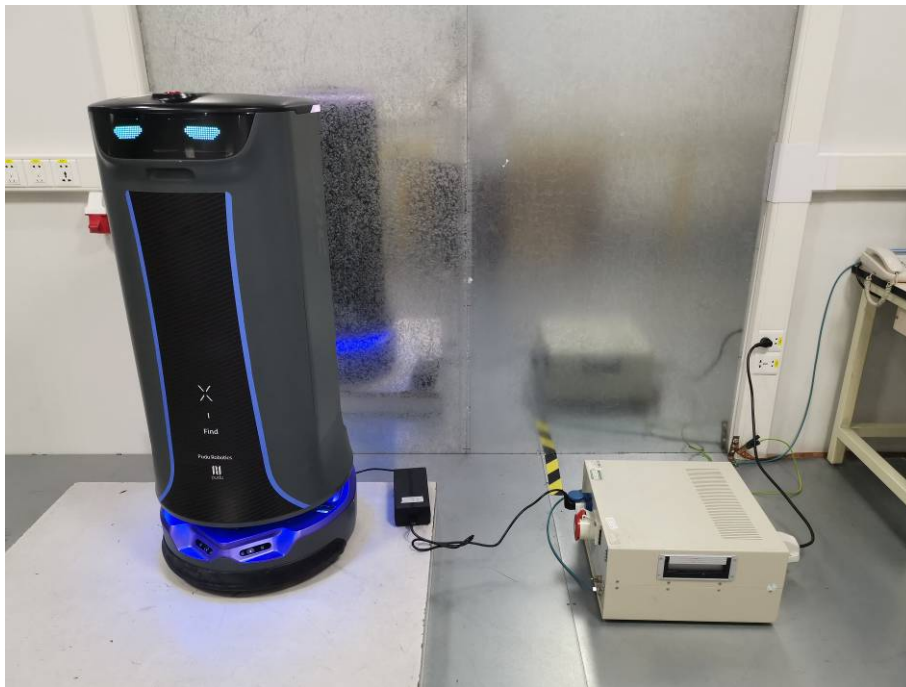
Radiated Measurement Photos
30MHz-1GHz



Radiated Measurement Photos
Above 1GHz



Conducted Measurement Photos



10 . APPENDIX-Photographs of EUT Constructional Details

Please refer to report APPENDIX.

**** End of Report ****