

NCC RADIO TEST REPORT

Product name	Wireless Bluetooth Headset
Applicant	WINGCREATIVE INTEGRATION CO.,LTD.
Manufacture	SHENZHEN WFB CREATIVE DESIGN CO.,LTD
Rating(s)	DC5V from adapter or DC3.7V from battery
Trademark	Wingcreative
Model and/or type reference	pili-sanrio
Standard	LP0002:2020
Test Result	Pass

Date of receipt : 06-11-2021

Signature :

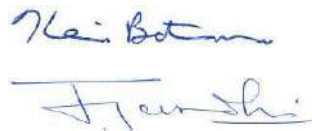
Date of Issue : 06-25-2021



NCC RADIO TEST REPORT**Report Reference No.** M210625N3-1

Compiled by (+ signature) Kevin Bothmann

Approved by (+ signature) Jay Gandhi



Date of issue 2021-06-25

Applicant's name WINGCREATIVE INTEGRATION CO.,LTD.Address Rm. 1, 9F., No. 6, Sec. 6, Zhongxiao E. Rd., Nangang Dist., Taipei City
115025, Taiwan (R.O.C.)**Manufacture's Name** SHENZHEN WFB CREATIVE DESIGN CO.,LTDAddress # 215, Fumin Road, Longxiindustrial, Longgang Distric, Shenzhen,
518116**Test specification:**

Standard LP0002: 2020

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 Wireless Bluetooth Headset

Trademark Wingcreative

Model and/or type reference pili-sanrio

Rating(s) DC5V from adapter or DC3.7V from battery

Testing Laboratory information

Testing Laboratory Name Electro Magnetic Test, Inc.

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Testing

Date of receipt of test item June 11, 2021

Date (s) of performance of tests June 11~ June 17, 2021

Date of Issue June 25, 2021

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)	See Below
	Open Field Test Site "A"	R-589
	Mains Conducted Emissions Test Site "A"	C-604
	Telecom Conducted Emissions Test Site "A"	T-1655
	3 Meter Semi-Anechoic Chamber Site "E"	R-3227
	3 Meter Semi-Anechoic Chamber Site "E" (1GHz – 6GHz)	G-219
	Mains Conducted Emissions Test Site "E"	C-35793
	Telecom Conducted Emissions Test Site "E"	T-1715
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 : 2020			
Standard Section	Test Item	Judgment	Remark
3.3	Conducted Emission	PASS	None
4.10.1.5/3.6	Radiated Spurious Emission	PASS	None
4.10.1.2	Peak Output Power	PASS	None
4.10.1.6	Occupied Bandwidth	PASS	None
4.10.1.6	Hopping Channel Separation	PASS	None
4.10.1.6	Number of Hopping Frequency	PASS	None
4.10.1.6	Dwell Time	PASS	None
4.10.1.5/3.6	Restricted Bands	PASS	None
4.10.1.3	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	Wireless Bluetooth Headset	
Trade Name	Wingcreative	
Model Name	pili-sanrio	
Serial Model Name	N/A	
Model Difference	N/A	
Product Description	The EUT is a Wireless Bluetooth Headset	
	Operation Frequency:	2402~2480 MHz
	Modulation Type:	GFSK(1Mbps) Π/4 DQPSK(2Mbps) 8QPSKA(3Mbps)
	Number Of Channel	79 CH
	Antenna Designation:	Please see Note 3.
	Antenna Gain(Peak)	1.15dBi
	Output Power:	1Mbps Mode: 6.915 dBm (Max.) 2Mbps Mode: 6.695 dBm (Max.) 3Mbps Mode: 6.646 dBm(Max.)
Channel List	Please refer to the Note 2.	
Power Rating	DC5V from adapter or DC3.7V from battery	
Connecting I/O Port(s)	Please refer to the User's Manual	
Products Covered	N/A	
EUT Modification(s)	N/A	
Model difference	N/A	

Note:

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

2.

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

3.

Table for Filed Antenna

	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	RAIN	RANT3216F245 C03	Chip antenna	N/A	1.24 dBi

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	1Mbps
Mode 2	2Mbps
Mode 3	3Mbps
Mode 4	RX
Mode 5	CHARGE

For Conducted Emission	
Final Test Mode	Description
Mode 1	CH00 /CH39 /CH78
Mode 5	CHARGE

For Radiated Emission	
Final Test Mode	Description
Mode 1	CH00 /CH39 /CH78
Mode 3	CH00 /CH39 /CH78
Mode 4	RX
Mode 5	CHARGE

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) For all tests the worst-case was selected as the table above, the data of the worst-case is shown in the report.
- (3) The highest internal source of the EUT is less than 108MHz in charging mode.

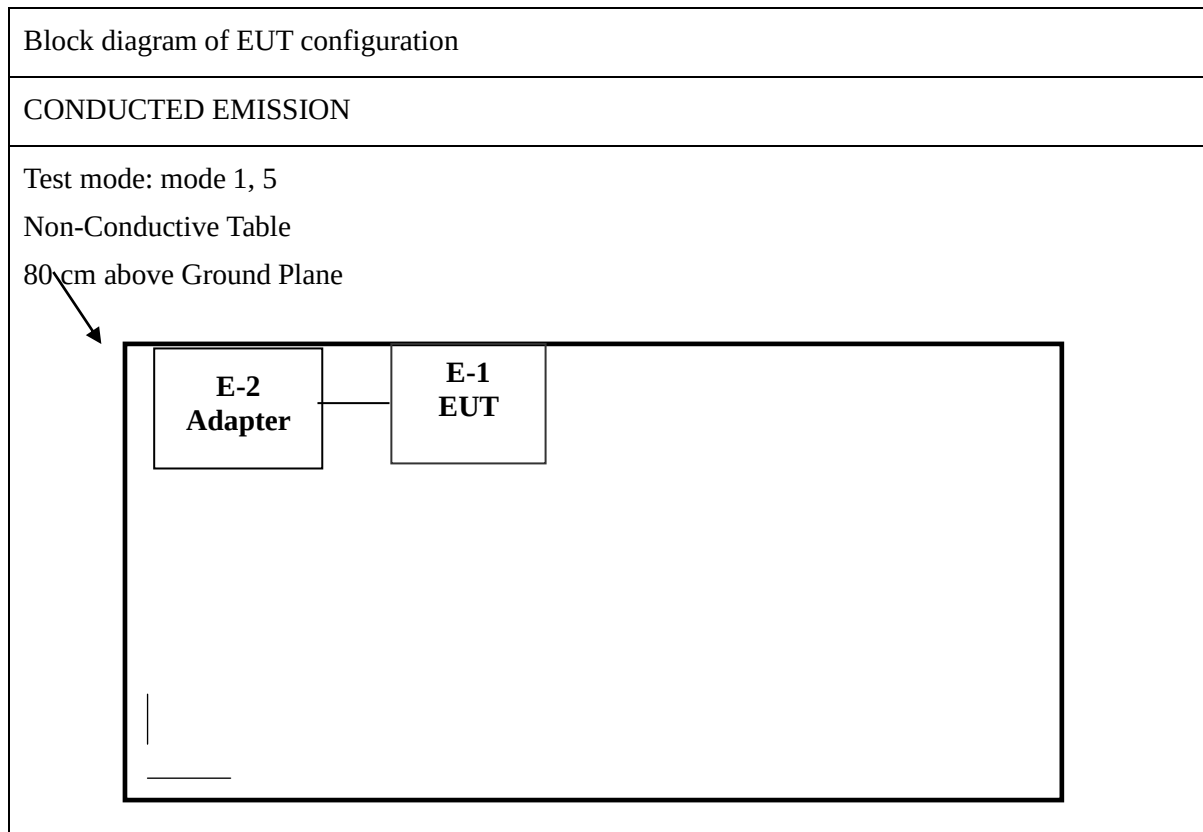
2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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

Power Set	6		
Test software Version	V2.1.2	Test program:	adb
Frequency	2402 MHz	2441 MHz	2480 MHz
Parameters(1Mbps)	Default	Default	Default
Parameters(3Mbps)	Default	Default	Default

1. Plug the ebook into the data line to connect to the computer, open the CMD command program ;
2. When testing BT, you need to turn on the BT of the ebook ;
3. Enter the following three instructions one by one : “adb root” , “adb shell” , “cd system” .
4. Then according to the content of the need to test, input the corresponding instructions can be tested.

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



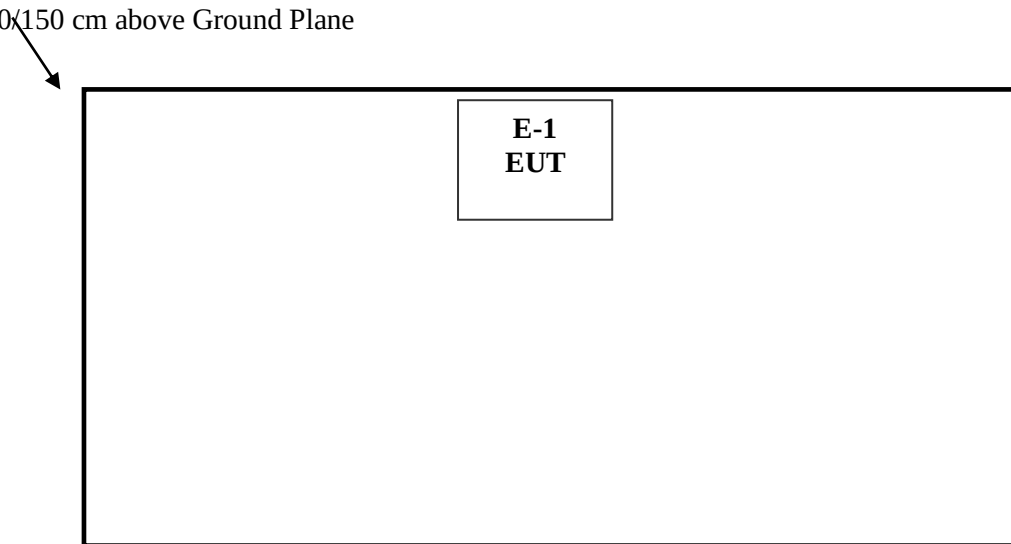
Block diagram of EUT configuration

RADIATED EMISSION

Test mode: mode 1, 3 ,4

Non-Conductive Table

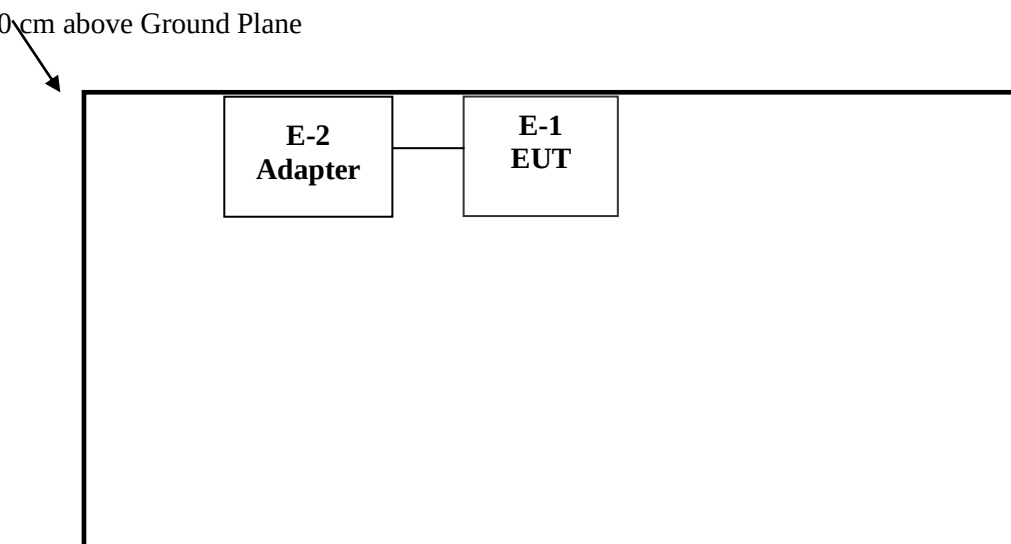
80/150 cm above Ground Plane



Test mode: mode 5

Non-Conductive Table

80 cm above Ground Plane



2.5 DESCRIPTION OF SUPPORT UNITS

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	Wireless Bluetooth Headset	Wingcreative	pili-sanrio	N/A	N/A	EUT
E-2	Adapter	SALCOMP	G1001	N/A	N/A	Test Accessory*
E-3	充電盒	Wingcreative	pili-sanrio	N/A	N/A	EUT

Item	Equipment	Mfr/Brand	Model/Type No.	Note
1	USB Line	HUAWEI	M20	Test Accessory* Line length: 1.0m
2	Rechargeable Li-ion Battery(耳機電池 L)	Lijian	Li-ion Polymer battery 602030 50mAh	EUT
3	Rechargeable Li-ion Battery(耳機電池 R)	Lijian	Li-ion Polymer battery 602030 50mAh	EUT
4	Rechargeable Li-ion Battery(充電盒)	Lijian	Li-ion Polymer battery 602030 300mAh	EUT
5	USB TO TTL	FTDI	FT232BL	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.

2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Spectrum Analyzer	Keysight	N9020A	MY53300466	April 29, 2021	1 Year
RF Preselector	Hewlett Packard	85685A	3010A01157	April 29, 2021	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650	2521A00584	April 29, 2021	1 Year
Preamplifier	Com Power	PA-102	1482	April 29, 2021	1 Year
RF Attenuator	Mini-Circuits	CAT-10	Asset #1000	December 08, 2020	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, 2020	1 Year
Log Periodic Antenna	Com Power	AL-100	16037	December 22, 2020	1 Year
Horn Antenna	Com Power	AHA-118	711054	December 22, 2020	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

EMI Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
EMI Receiver	Rohde & Schwarz	ESU40	100127	June 12, 2021	1 Year
BiConiLog Antenna	ETS-Lindgren	3142D	00102183	August 13, 2020	1 Year
Horn Antenna (1GHz-18GHz)	ETS-Lindgren	3117	00109294	May 6, 2021	1 Year
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170242	May 6, 2021	1 Year
Preamplifier	Rohde & Schwarz	TS-PR18	100056	June 12, 2021	1 Year
Pre-Amplifier	Agilent	8449B	3008A00409	June 12, 2021	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, 2021	1 Year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 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

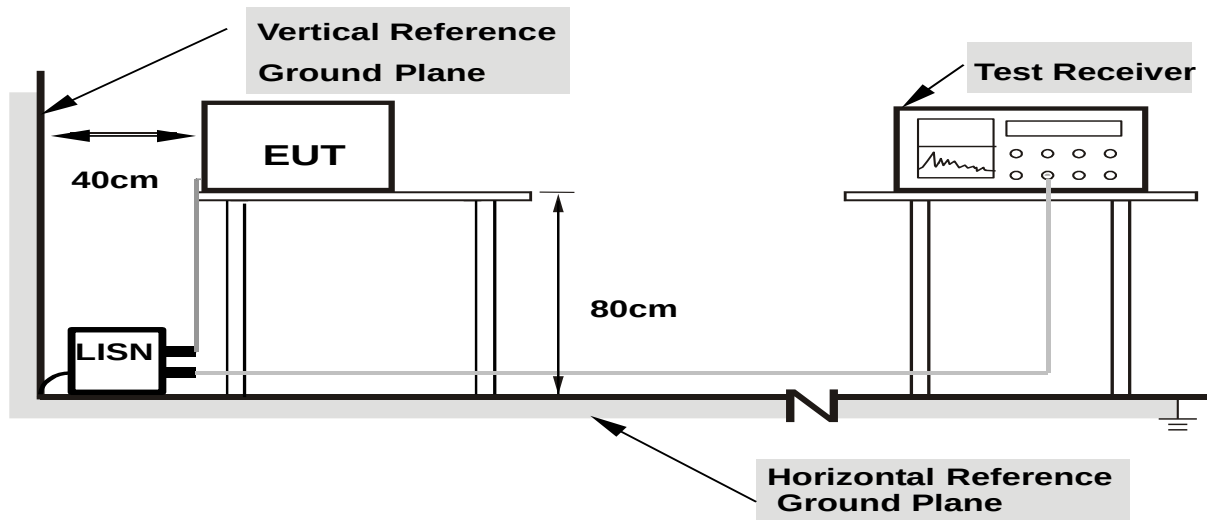
3.1.2 TEST PROCEDURE

- 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.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP

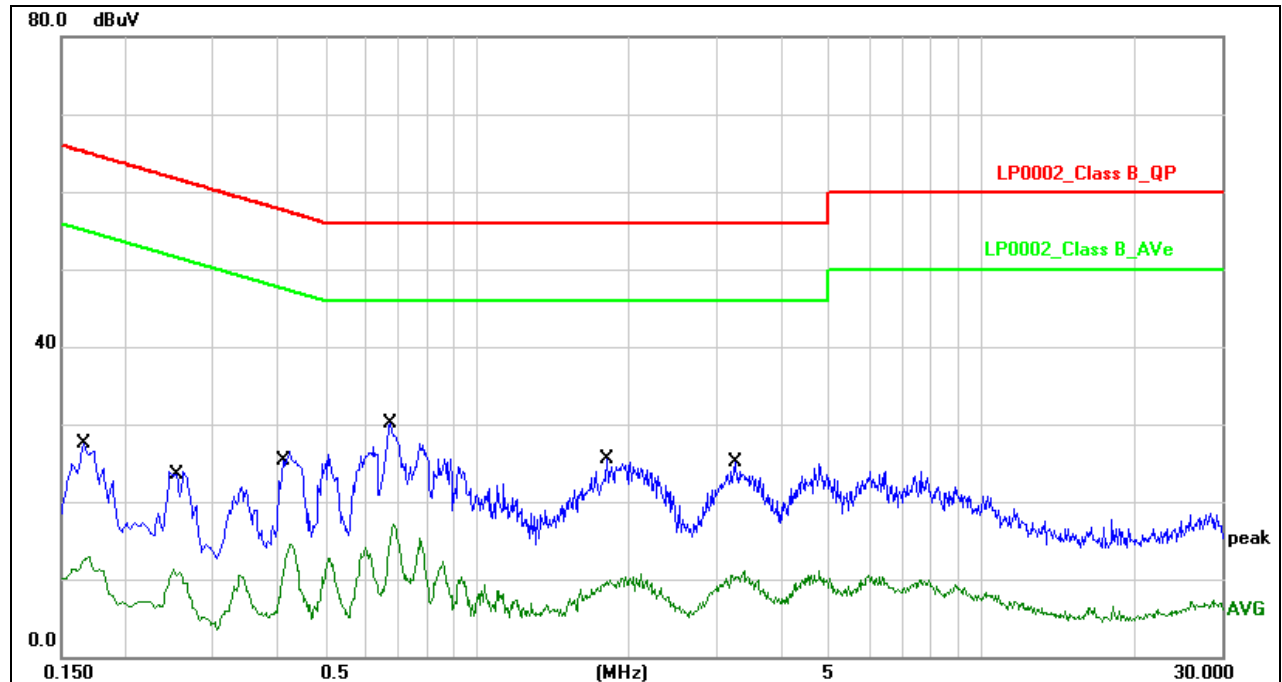


Note: 1.Support units were connected to second LISN.

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

3.1.5 TEST RESULTS

EUT :	Wireless Bluetooth Headset	Model Name. :	pili-sanrio
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Phase :	L
Test Voltage :	AC 110V/60Hz for Adapter		

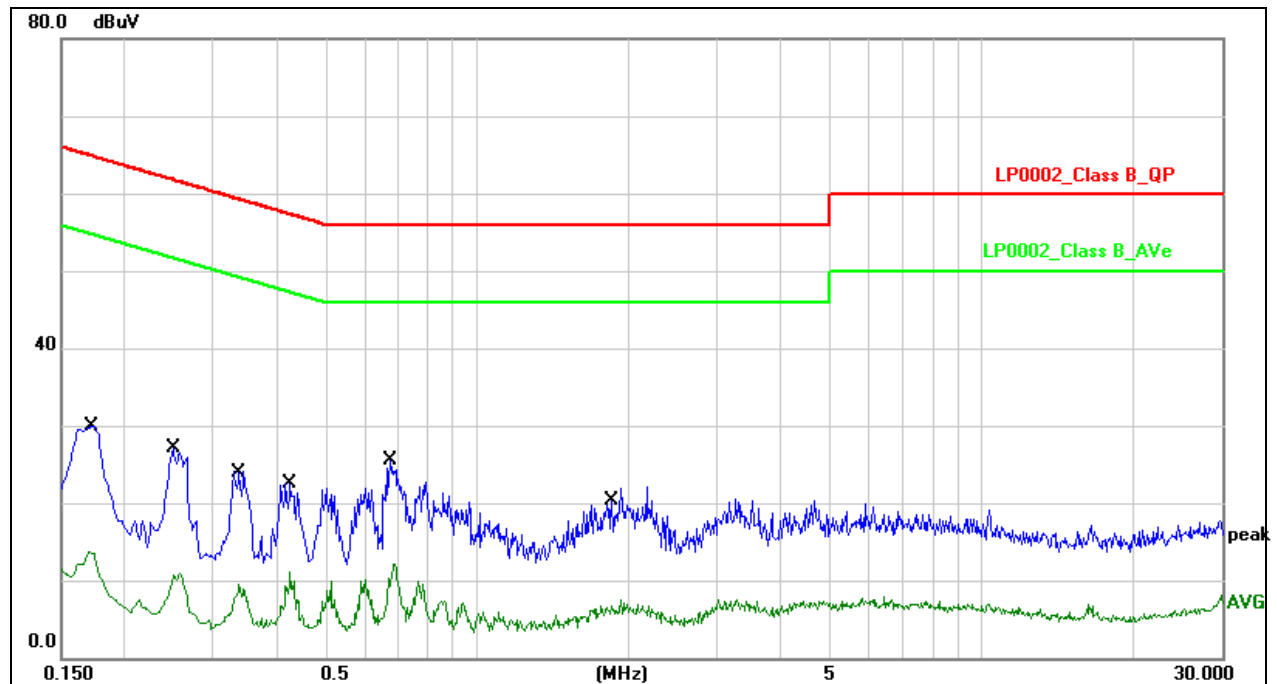


Remark:

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

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1677	17.09	9.66	26.75	65.07	-38.32	QP	
2	0.1677	3.33	9.66	12.99	55.07	-42.08	AVG	
3	0.2508	14.19	9.65	23.84	61.73	-37.89	QP	
4	0.2508	1.57	9.65	11.22	51.73	-40.51	AVG	
5	0.4140	15.65	9.67	25.32	57.57	-32.25	QP	
6	0.4140	4.90	9.67	14.57	47.57	-33.00	AVG	
7 *	0.6740	20.50	9.68	30.18	56.00	-25.82	QP	
8	0.6740	7.35	9.68	17.03	46.00	-28.97	AVG	
9	1.8100	15.83	9.71	25.54	56.00	-30.46	QP	
10	1.8100	0.13	9.71	9.84	46.00	-36.16	AVG	
11	3.2180	15.33	9.72	25.05	56.00	-30.95	QP	
12	3.2180	0.79	9.72	10.51	46.00	-35.49	AVG	

EUT :	Wireless Bluetooth Headset	Model Name. :	pili-sanrio
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Phase :	N
Test Voltage :	AC 110V/60Hz for Adapter		

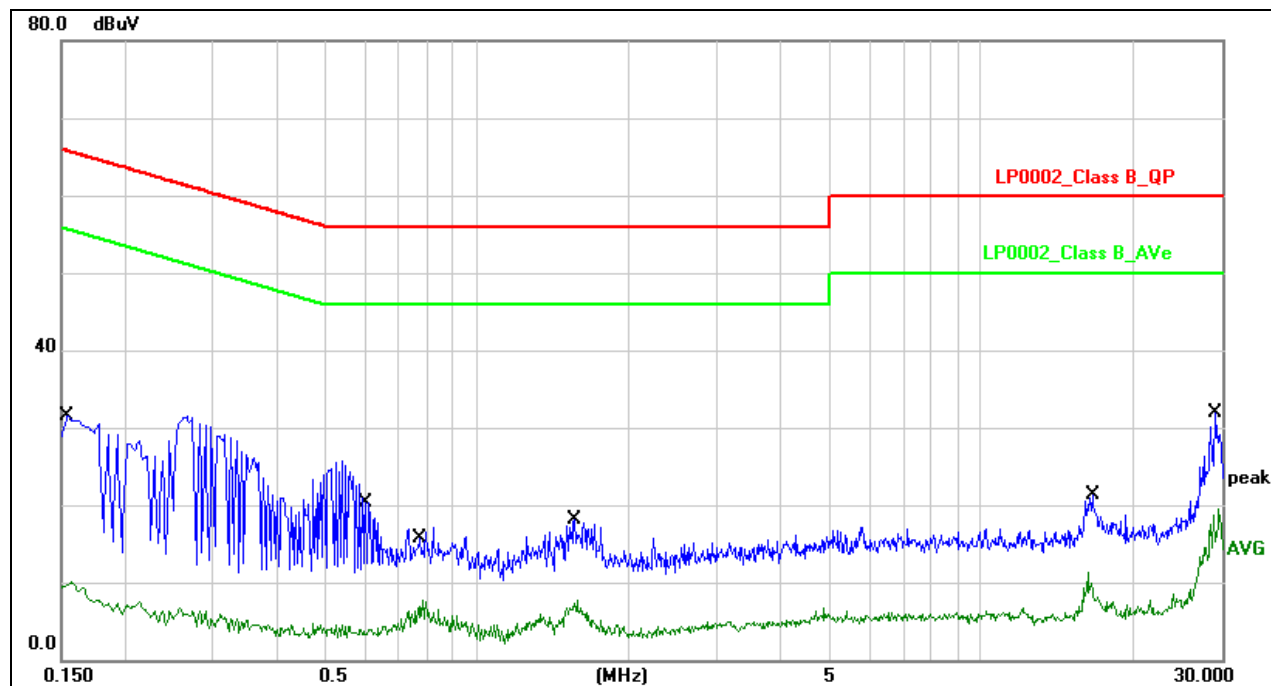


Remark:

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

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1700	20.04	9.70	29.74	64.96	-35.22	QP	
2	0.1700	3.93	9.70	13.63	54.96	-41.33	AVG	
3	0.2500	17.36	9.64	27.00	61.75	-34.75	QP	
4	0.2500	1.27	9.64	10.91	51.75	-40.84	AVG	
5	0.3379	14.48	9.65	24.13	59.25	-35.12	QP	
6	0.3379	-0.20	9.65	9.45	49.25	-39.80	AVG	
7	0.4260	12.87	9.67	22.54	57.33	-34.79	QP	
8	0.4260	1.35	9.67	11.02	47.33	-36.31	AVG	
9 *	0.6740	15.75	9.67	25.42	56.00	-30.58	QP	
10	0.6740	2.51	9.67	12.18	46.00	-33.82	AVG	
11	1.8580	10.62	9.71	20.33	56.00	-35.67	QP	
12	1.8580	-2.29	9.71	7.42	46.00	-38.58	AVG	

EUT :	Wireless Bluetooth Headset	Model Name. :	pili-sanrio
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2021-06-15
Test Mode :	Mode 5	Phase :	L
Test Voltage :	AC 110V/60Hz for Adapter		

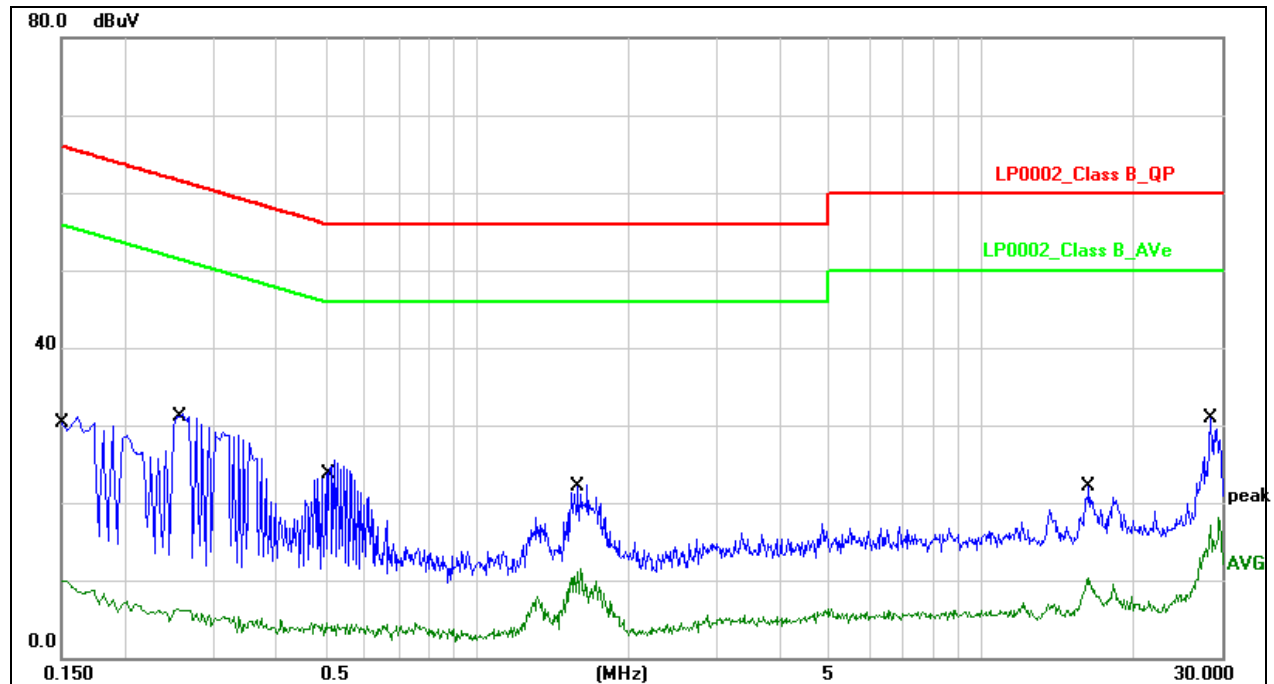


Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1539	21.86	9.73	31.59	65.78	-34.19	QP	
2		0.1539	0.28	9.73	10.01	55.78	-45.77	AVG	
3		0.6020	10.72	9.67	20.39	56.00	-35.61	QP	
4		0.6020	-5.09	9.67	4.58	46.00	-41.42	AVG	
5		0.7820	7.41	9.68	17.09	56.00	-38.91	QP	
6		0.7820	-2.01	9.68	7.67	46.00	-38.33	AVG	
7		1.5660	8.46	9.71	18.17	56.00	-37.83	QP	
8		1.5660	-2.07	9.71	7.64	46.00	-38.36	AVG	
9		16.6580	11.25	9.95	21.20	60.00	-38.80	QP	
10		16.6580	1.27	9.95	11.22	50.00	-38.78	AVG	
11	*	29.1540	21.72	10.08	31.80	60.00	-28.20	QP	
12		29.1540	9.44	10.08	19.52	50.00	-30.48	AVG	

EUT :	Wireless Bluetooth Headset	Model Name. :	pili-sanrio
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2021-06-15
Test Mode :	Mode 5	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. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1500	21.32	9.74	31.06	65.99	-34.93	QP	
2	0.1500	0.16	9.74	9.90	55.99	-46.09	AVG	
3	0.2540	21.87	9.64	31.51	61.62	-30.11	QP	
4	0.2540	-3.43	9.64	6.21	51.62	-45.41	AVG	
5	0.5020	15.78	9.68	25.46	56.00	-30.54	QP	
6	0.5020	-5.11	9.68	4.57	46.00	-41.43	AVG	
7	1.6019	12.58	9.71	22.29	56.00	-33.71	QP	
8	1.6019	1.76	9.71	11.47	46.00	-34.53	AVG	
9	16.2260	12.07	9.94	22.01	60.00	-37.99	QP	
10	16.2260	0.35	9.94	10.29	50.00	-39.71	AVG	
11 *	28.5340	20.83	10.08	30.91	60.00	-29.09	QP	
12	28.5340	7.95	10.08	18.03	50.00	-31.97	AVG	

Test result: The unit does meet the NCC requirements.

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 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 3.5, then the 3.6 limit in the table below has to be followed.

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	LIMITS (at 3M)	
	PEAK	AVERAGE
Above 1000	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)

Frequency measurement range:

- 1, The spectrum shall be measured from the lowest radio frequency signal generated in the device (without going below 9 kHz), and the upper limit of the measurement range shall be decided according to the maximum operating frequency.
 - 1.1 Maximum operating frequency less than 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
 - 1.2 Maximum operating frequency between 10 GHz~30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
 - 1.3 Maximum operating frequency over 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.
- 2 Particular attention should be paid to harmonics and subharmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency. Radiation at the frequencies of multiplier stages should also be checked.

Spectrum Parameter		Setting	
Attenuation		Auto	
Start Frequency		1000 MHz	
Stop Frequency		10th carrier harmonic	
Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3MHz
AV	≥98%	1MHz	10Hz
	< 98%	1MHz	1/T

NOTE: KDB 558074 Zero-Span Spectrum Analyzer Method

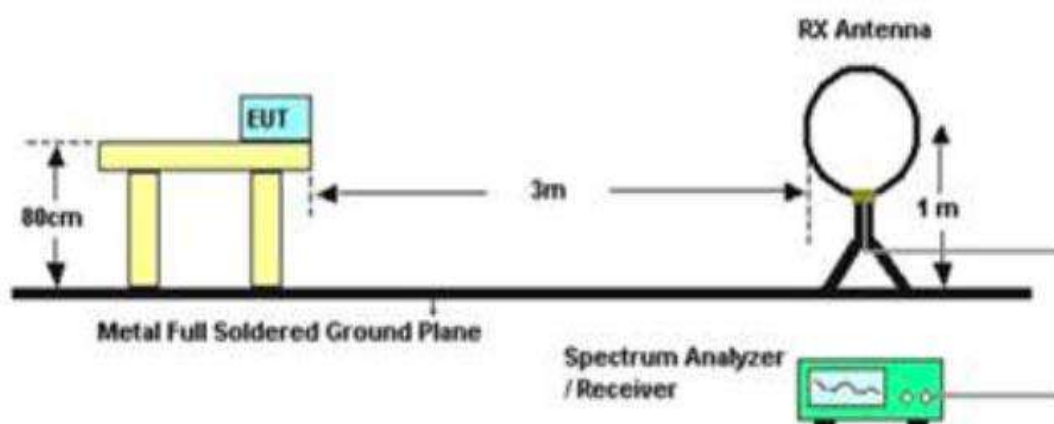
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

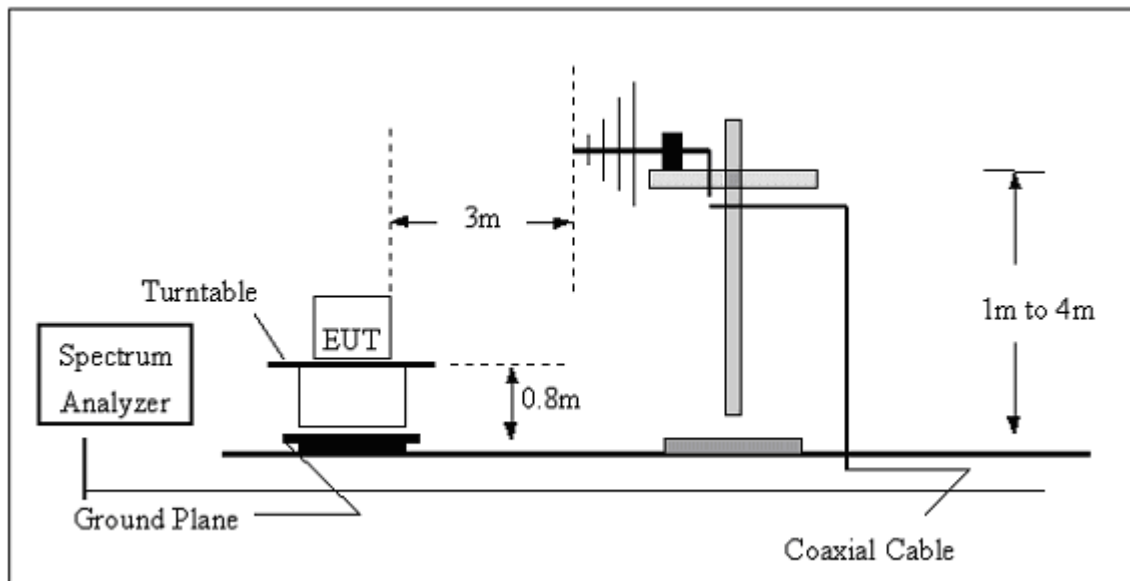
- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters (For frequencies above 1GHz, table 1.5 meters) above the ground at a 3 meter 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.

3.2.3 TEST SETUP

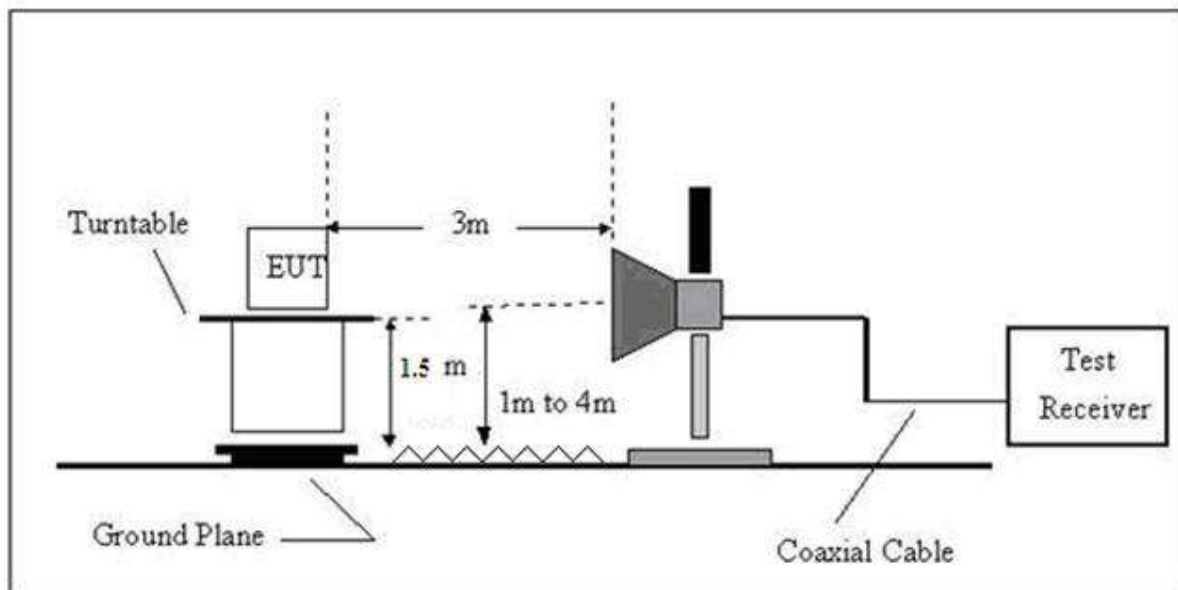
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.4 EUT OPERATING CONDITIONS

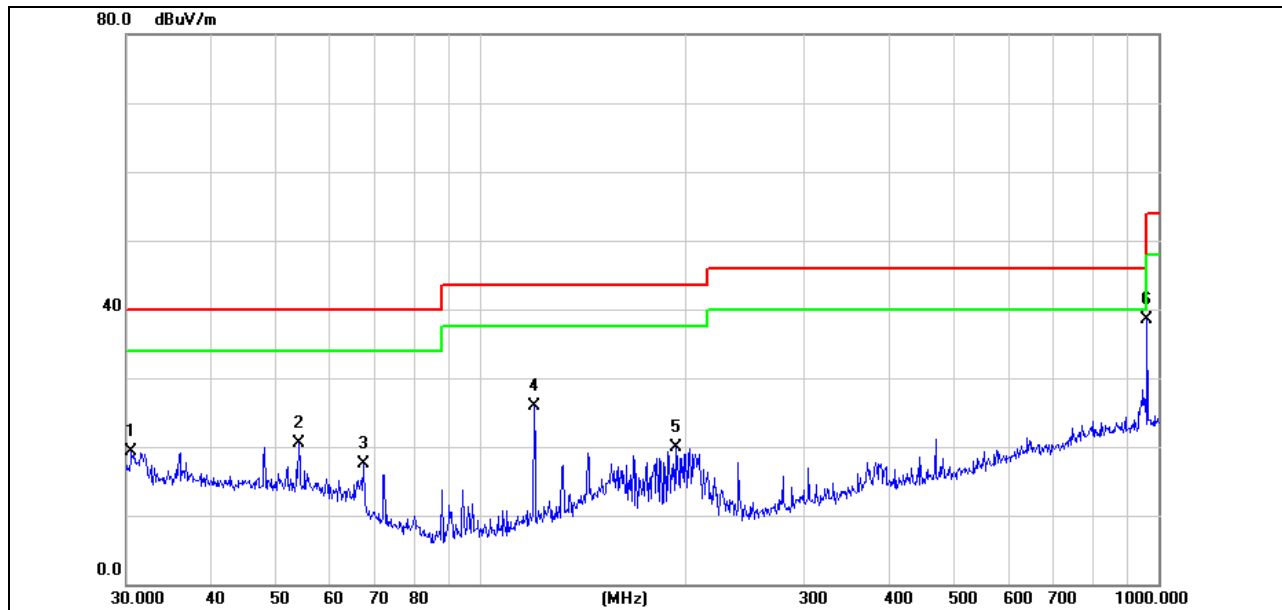
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 TEST RESULTS (BLOW 30 MHZ)

There is no detected blow 30MHz

3.2.6 TEST RESULTS (BETWEEN30 – 1000 MHZ)

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

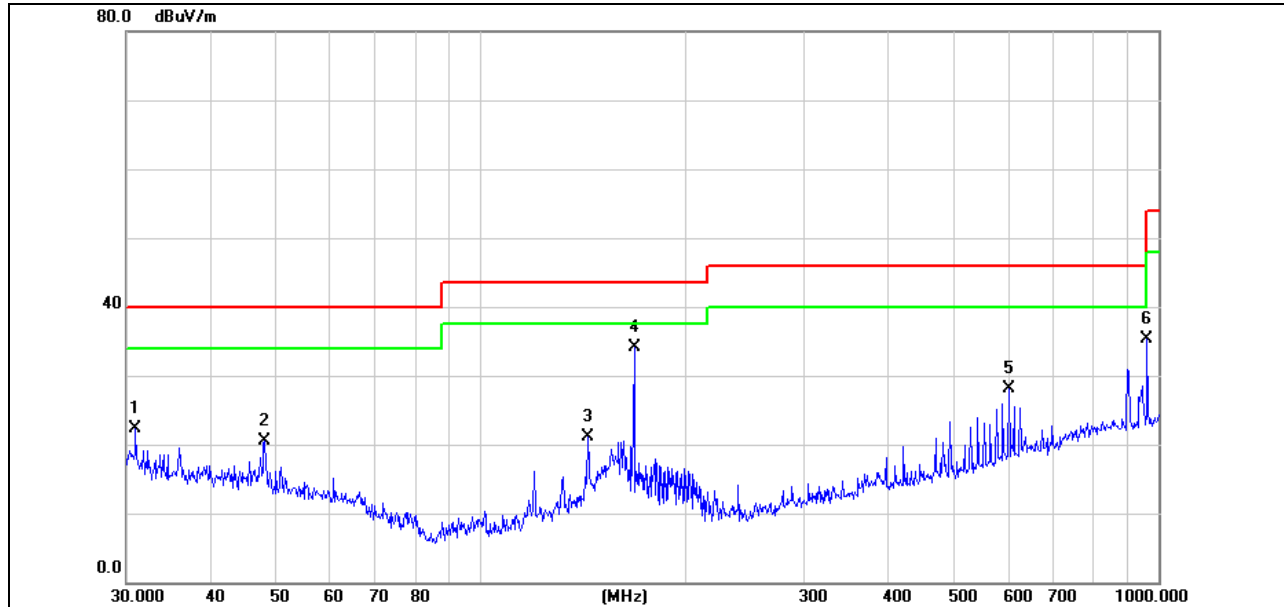


Remark:

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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		30.5306	27.48	-8.08	19.40	40.00	-20.60	QP
2		53.8818	31.37	-10.93	20.44	40.00	-19.56	QP
3		67.2022	30.82	-13.41	17.41	40.00	-22.59	QP
4		119.8556	40.58	-14.72	25.86	43.50	-17.64	QP
5		193.7728	35.66	-15.81	19.85	43.50	-23.65	QP
6	*	962.1623	38.91	-0.42	38.49	54.00	-15.51	QP

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

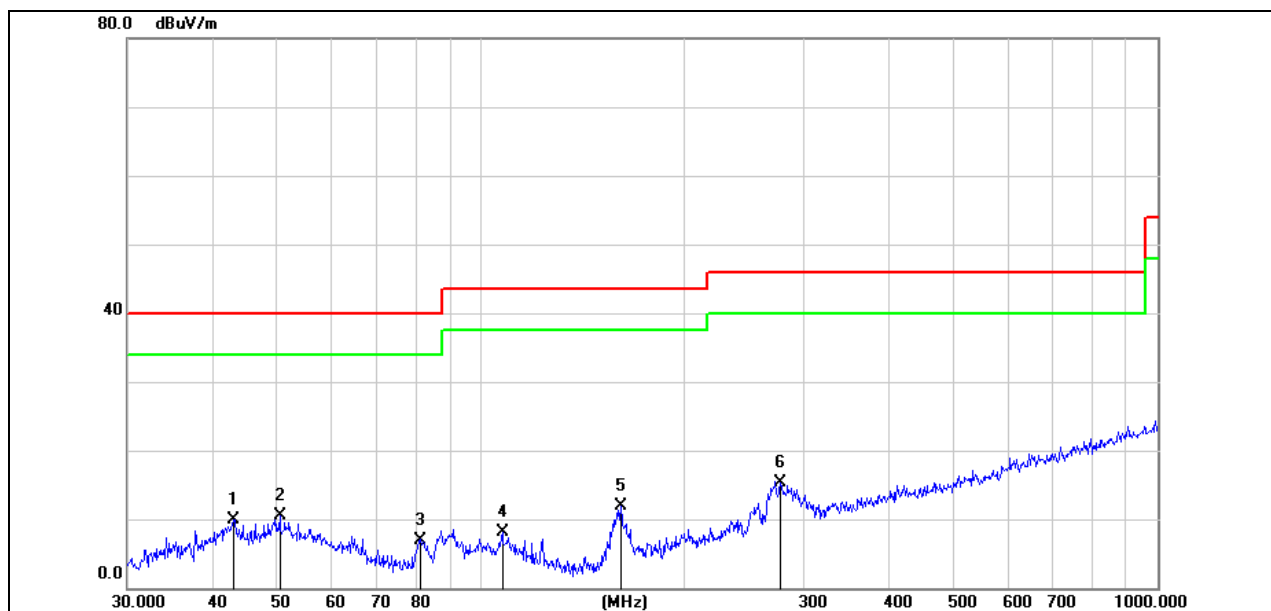


Remark:

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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		30.9619	30.42	-8.15	22.27	40.00	-17.73	QP
2		47.9940	30.41	-9.96	20.45	40.00	-19.55	QP
3		143.8295	34.24	-13.18	21.06	43.50	-22.44	QP
4	*	168.4138	47.44	-13.36	34.08	43.50	-9.42	QP
5		601.4265	33.82	-5.66	28.16	46.00	-17.84	QP
6		962.1623	35.76	-0.42	35.34	54.00	-18.66	QP

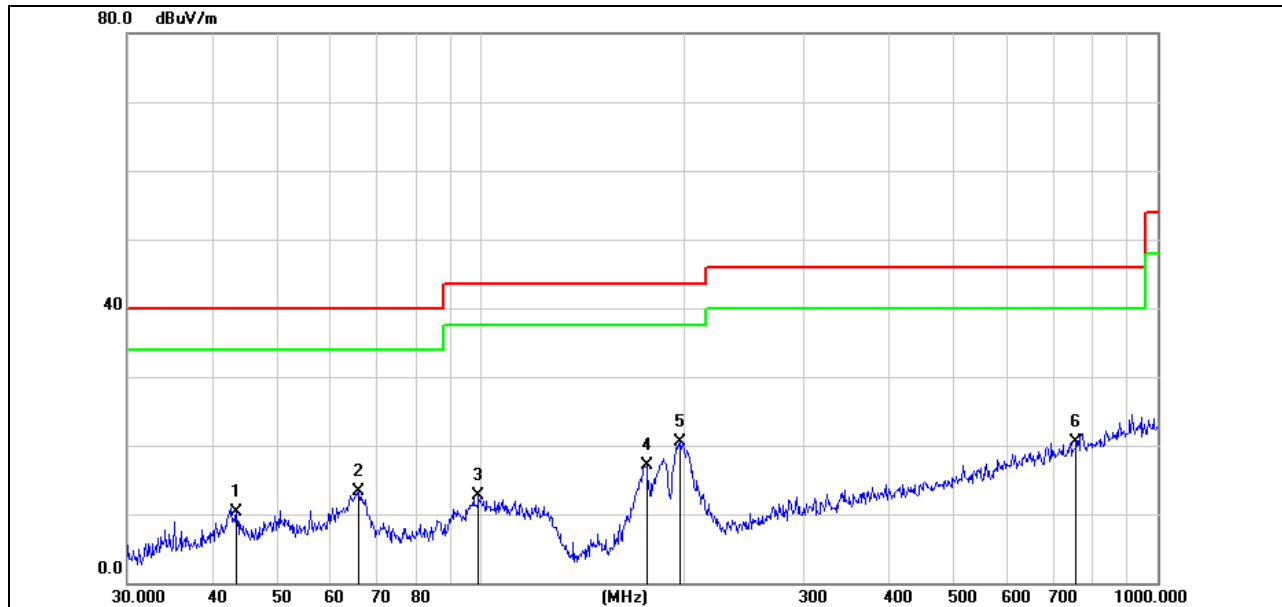
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX	Polarization :	Vertical
Test Power :	DC3.7V from battery		



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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		43.0505	24.83	-14.93	9.90	40.00	-30.10	QP
2	*	50.4089	25.37	-14.77	10.60	40.00	-29.40	QP
3		81.2117	27.46	-20.46	7.00	40.00	-33.00	QP
4		107.5101	24.42	-16.31	8.11	43.50	-35.39	QP
5		160.9089	30.82	-18.95	11.87	43.50	-31.63	QP
6		277.0935	28.05	-12.82	15.23	46.00	-30.77	QP

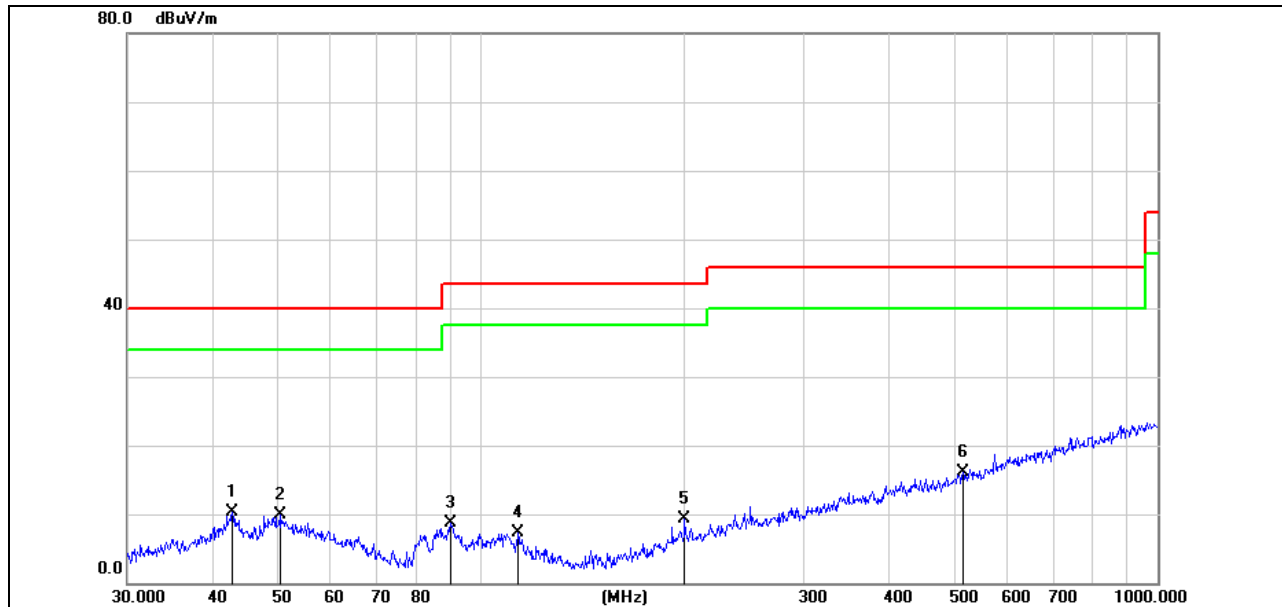
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX	Polarization :	Horizontal
Test Power :	DC3.7V from battery		



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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		43.5057	25.19	-14.91	10.28	40.00	-29.72	QP
2		66.0342	30.37	-17.16	13.21	40.00	-26.79	QP
3		99.1797	29.46	-16.72	12.74	43.50	-30.76	QP
4		175.6516	35.20	-18.15	17.05	43.50	-26.45	QP
5	*	197.2001	36.46	-15.87	20.59	43.50	-22.91	QP
6		758.0408	22.24	-1.66	20.58	46.00	-25.42	QP

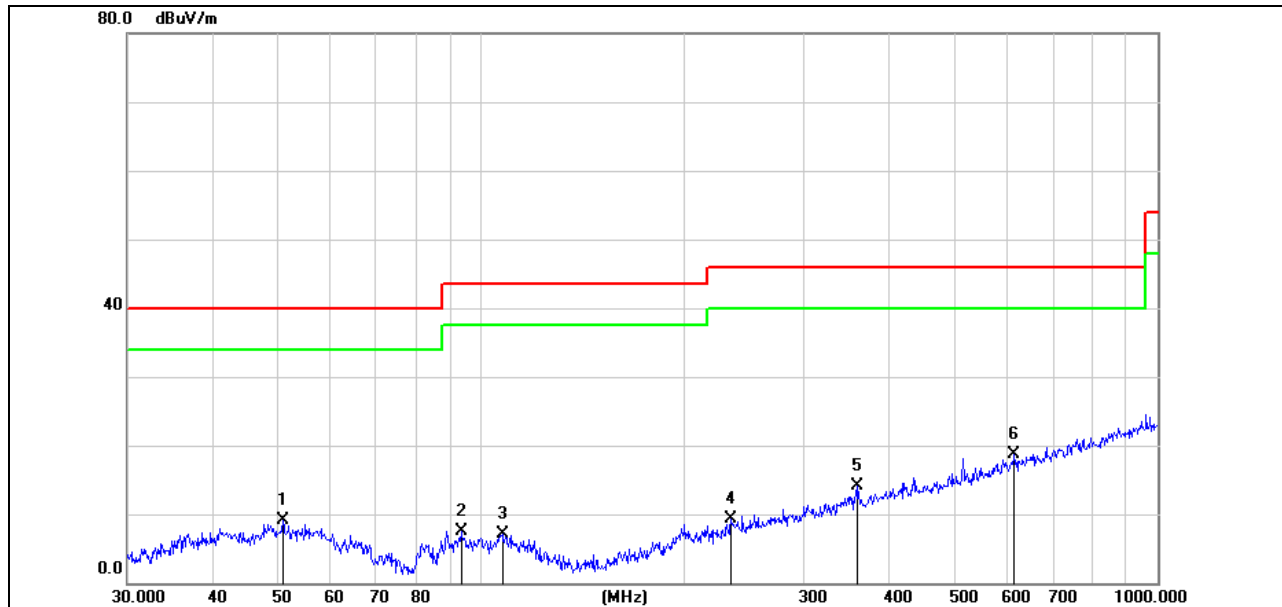
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	Mode 5	Polarization :	Vertical
Test Power :	DC5V from adapter		



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	42.8998	25.26	-14.95	10.31	40.00	-29.69	QP
2		50.4089	24.64	-14.77	9.87	40.00	-30.13	QP
3		90.2205	26.84	-18.13	8.71	43.50	-34.79	QP
4		113.3163	24.33	-16.97	7.36	43.50	-36.14	QP
5		199.9856	24.98	-15.63	9.35	43.50	-34.15	QP
6		515.4374	22.83	-6.81	16.02	46.00	-29.98	QP

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	Mode 5	Polarization :	Horizontal
Test Power :	DC5V from adapter		



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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		50.9420	23.78	-14.76	9.02	40.00	-30.98	QP
2		93.4402	25.06	-17.46	7.60	43.50	-35.90	QP
3		107.5101	23.41	-16.31	7.10	43.50	-36.40	QP
4		234.1684	23.70	-14.37	9.33	46.00	-36.67	QP
5		360.4477	24.49	-10.40	14.09	46.00	-31.91	QP
6	*	614.2142	22.99	-4.35	18.64	46.00	-27.36	QP

Test result: The unit does meet the NCC requirements.

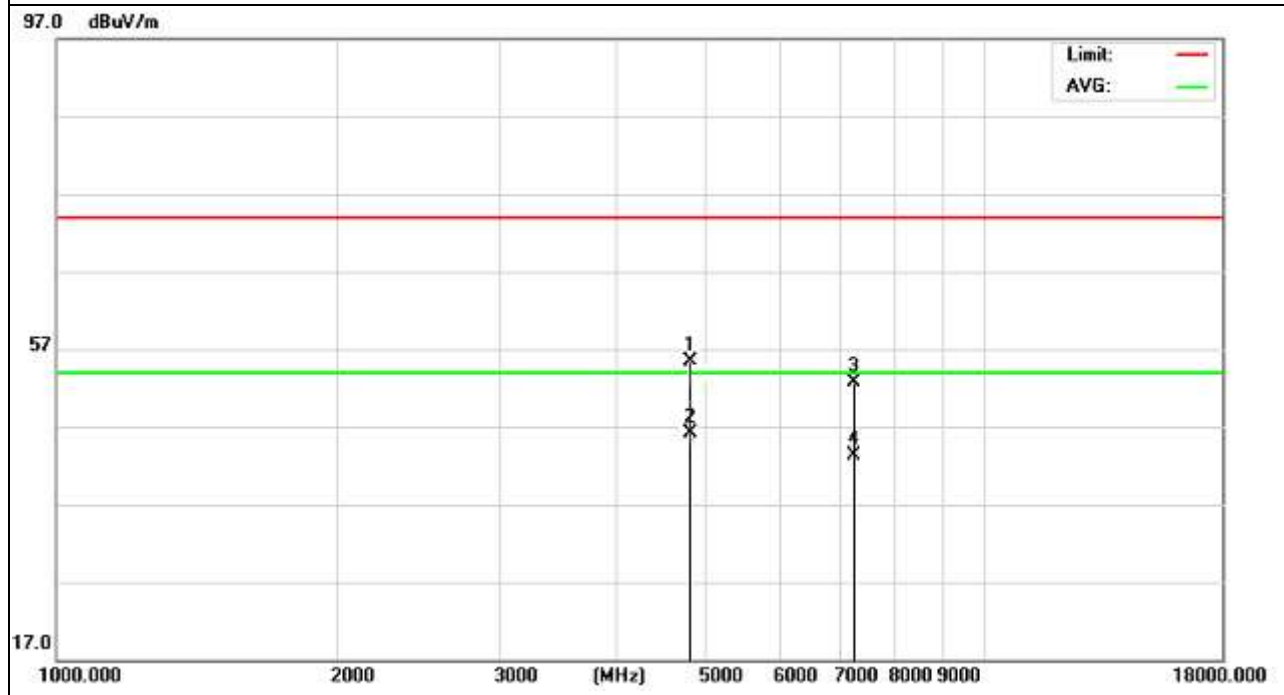
3.2.7 TEST RESULTS (FRENQUENCY RANGE 1000-25000 MHZ)

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4804.000	50.72	5.06	55.78	74.00	-18.22	peak
4804.000	41.41	5.06	46.47	54.00	-7.53	AVG
7206.000	46.20	7.03	53.23	74.00	-20.77	peak
7206.000	38.77	7.03	45.80	54.00	-8.20	AVG

Remark:

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

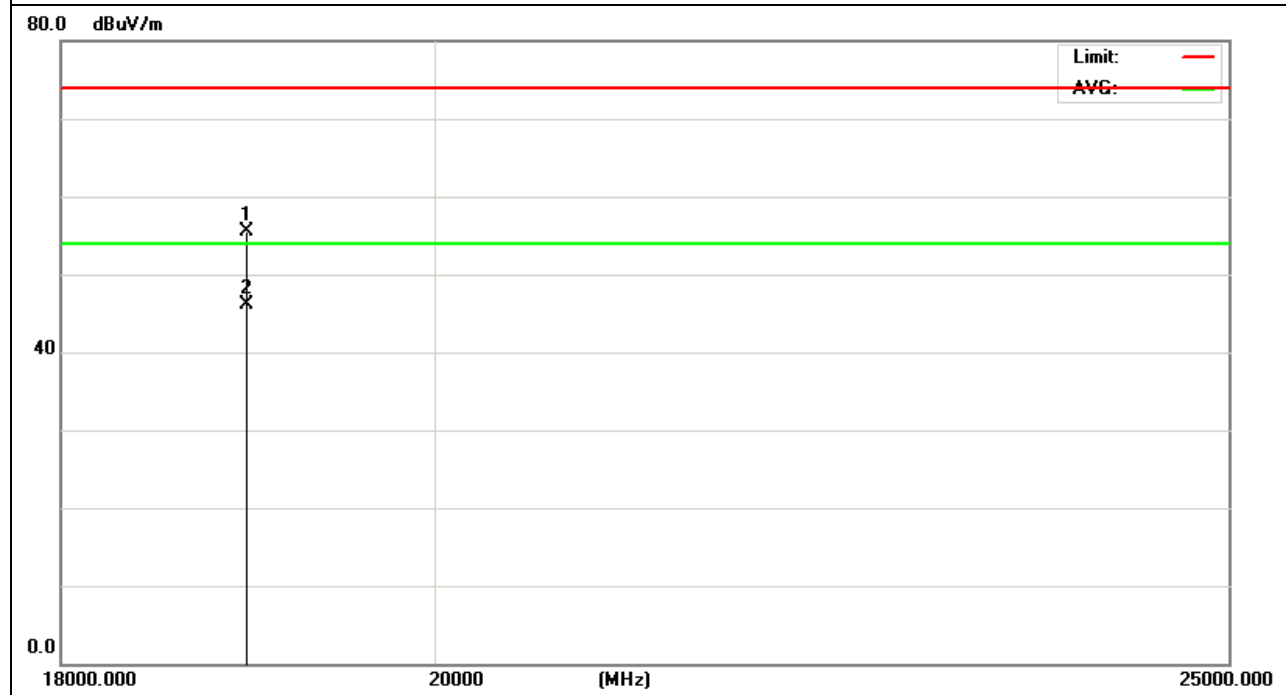


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18965.000	38.76	16.37	55.13	74.00	-18.87	
18965.000	30.13	16.37	46.50	54.00	-7.50	AVG

Remark:

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



EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4804.000	52.41	5.06	57.47	74.00	-16.53	peak
4804.000	43.36	5.06	48.42	54.00	-5.58	AVG
7206.000	46.82	7.03	53.85	74.00	-20.15	peak
7206.000	38.18	7.03	45.21	54.00	-8.79	AVG

Remark:

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

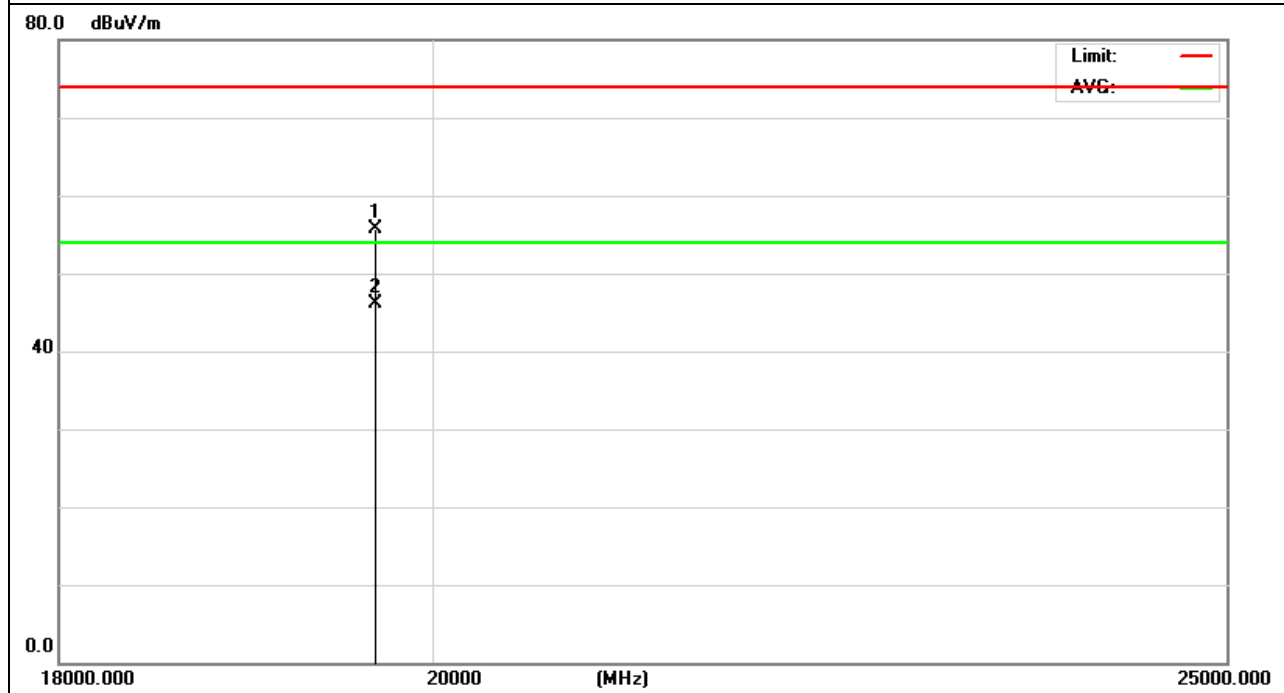


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19677.000	38.92	16.53	55.45	74.00	-18.55	peak
19677.000	29.11	16.53	45.64	54.00	-8.36	AVG

Remark:

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

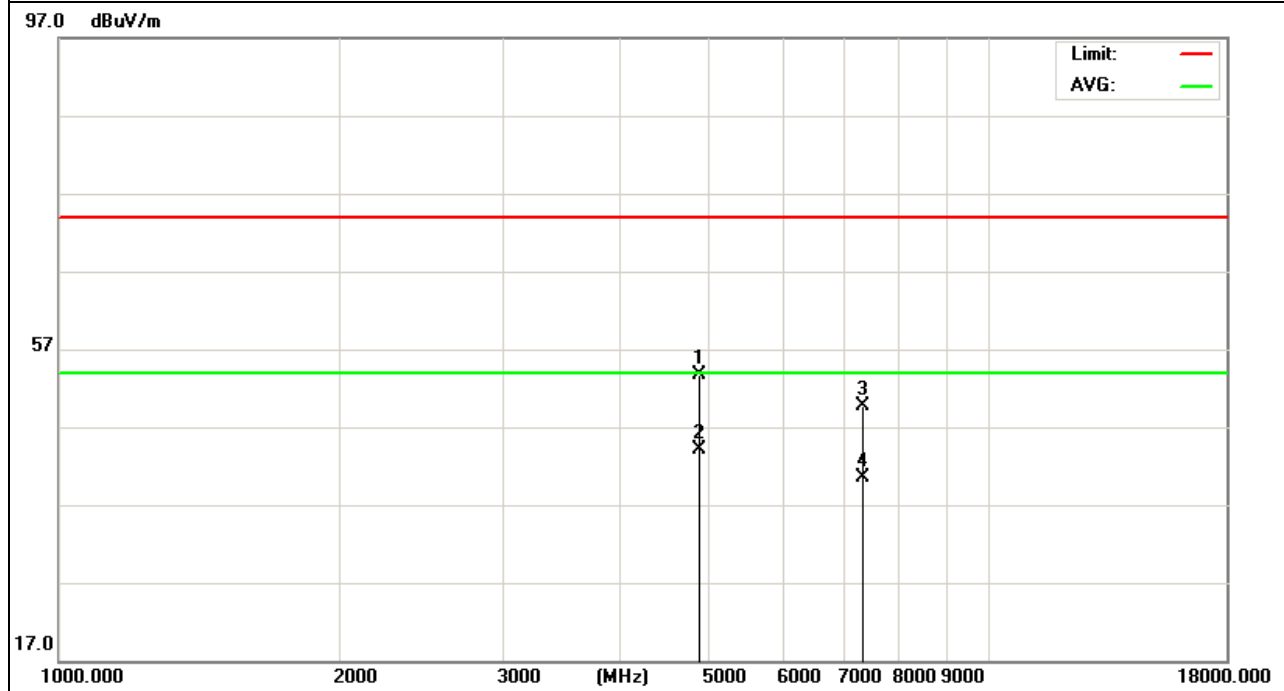


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4882.000	48.33	5.14	53.47	74.00	-20.53	peak
4882.000	38.90	5.14	44.04	54.00	-9.96	AVG
7323.000	41.91	7.54	49.45	74.00	-24.55	peak
7323.000	32.49	7.54	40.03	54.00	-13.97	AVG

Remark:

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

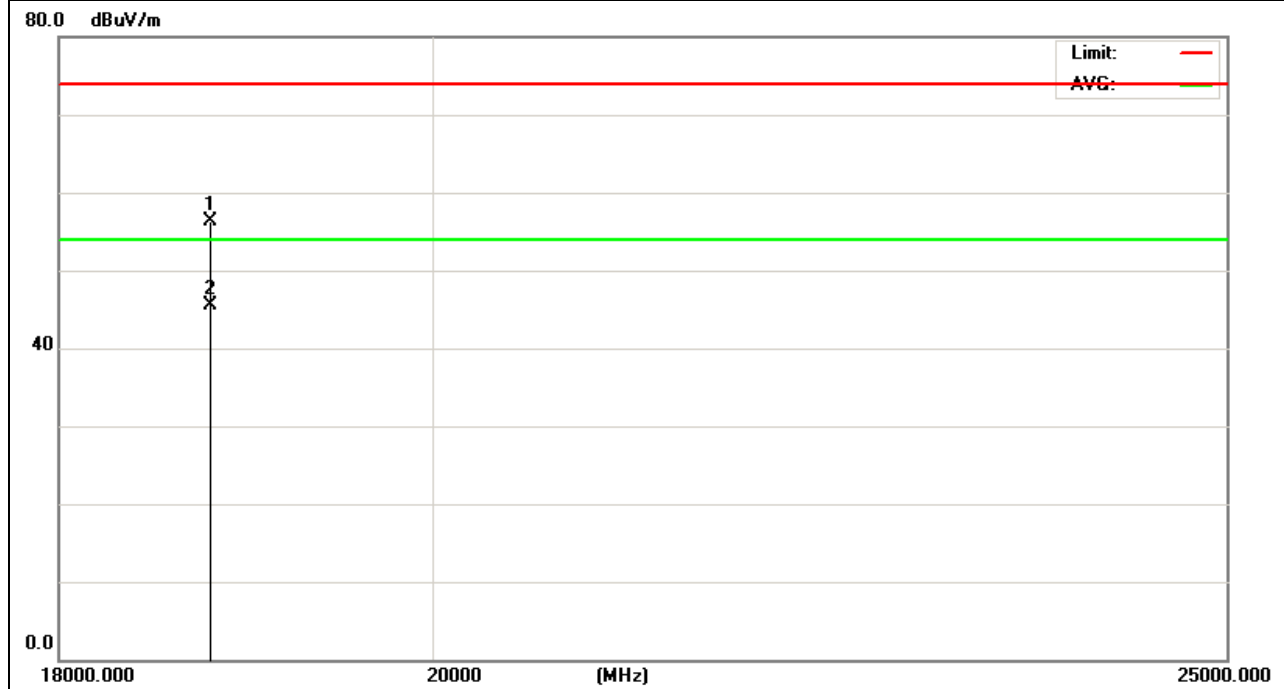


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18789.000	39.95	16.20	56.15	74.00	-17.85	peak
18789.000	29.16	16.20	45.36	54.00	-8.64	AVG

Remark:

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

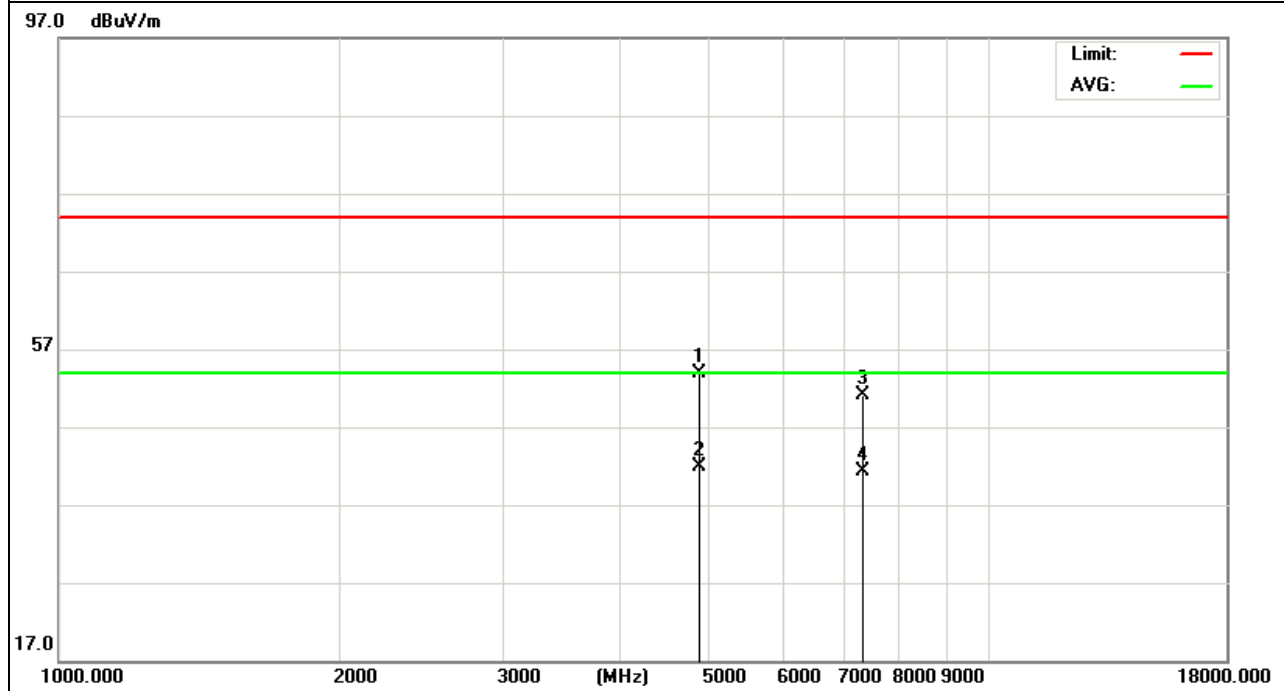


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4882.000	49.17	5.14	54.31	74.00	-19.69	peak
4882.000	37.07	5.14	42.21	54.00	-11.79	AVG
7323.000	43.95	7.54	51.49	74.00	-22.51	peak
7323.000	34.06	7.54	41.60	54.00	-12.40	AVG

Remark:

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

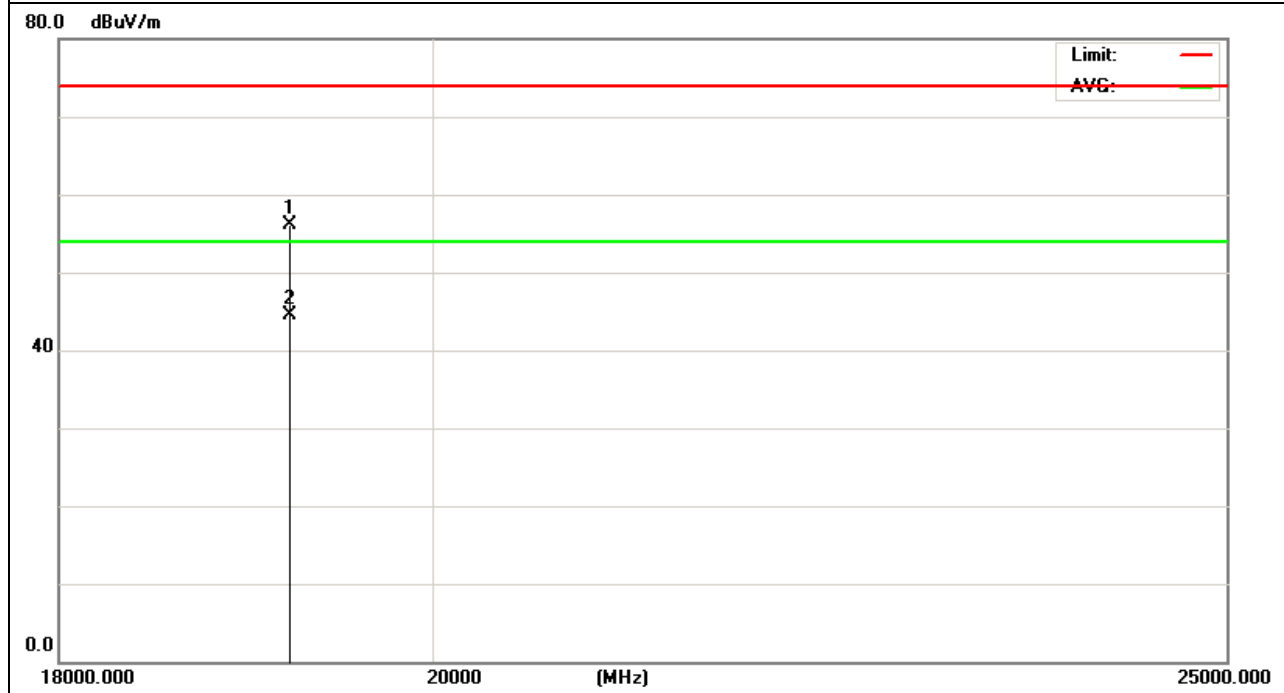


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19205.000	39.85	16.44	56.29	74.00	-17.71	peak
19205.000	29.07	16.44	45.51	54.00	-8.49	AVG

Remark:

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

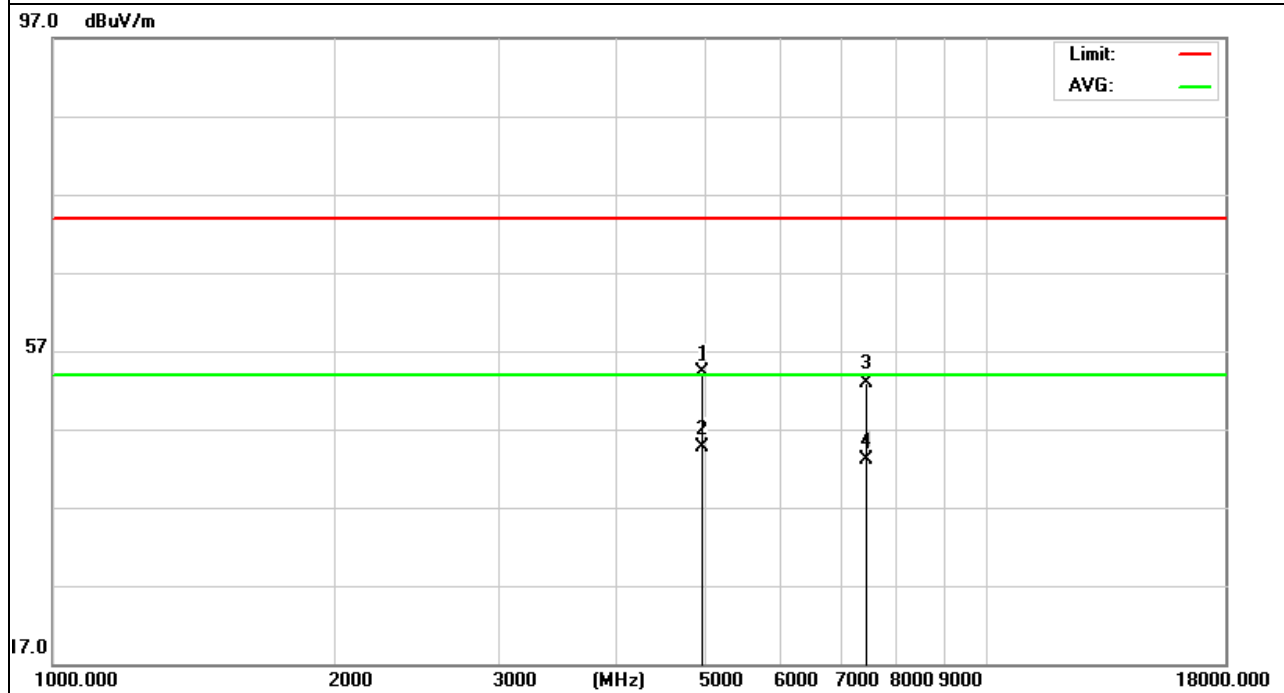


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4960.000	48.75	5.22	53.97	74.00	-20.03	peak
4960.000	39.80	5.22	45.02	54.00	-8.98	AVG
7440.000	44.72	8.06	52.78	74.00	-21.22	peak
7440.000	34.68	8.06	42.74	54.00	-11.26	AVG

Remark:

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

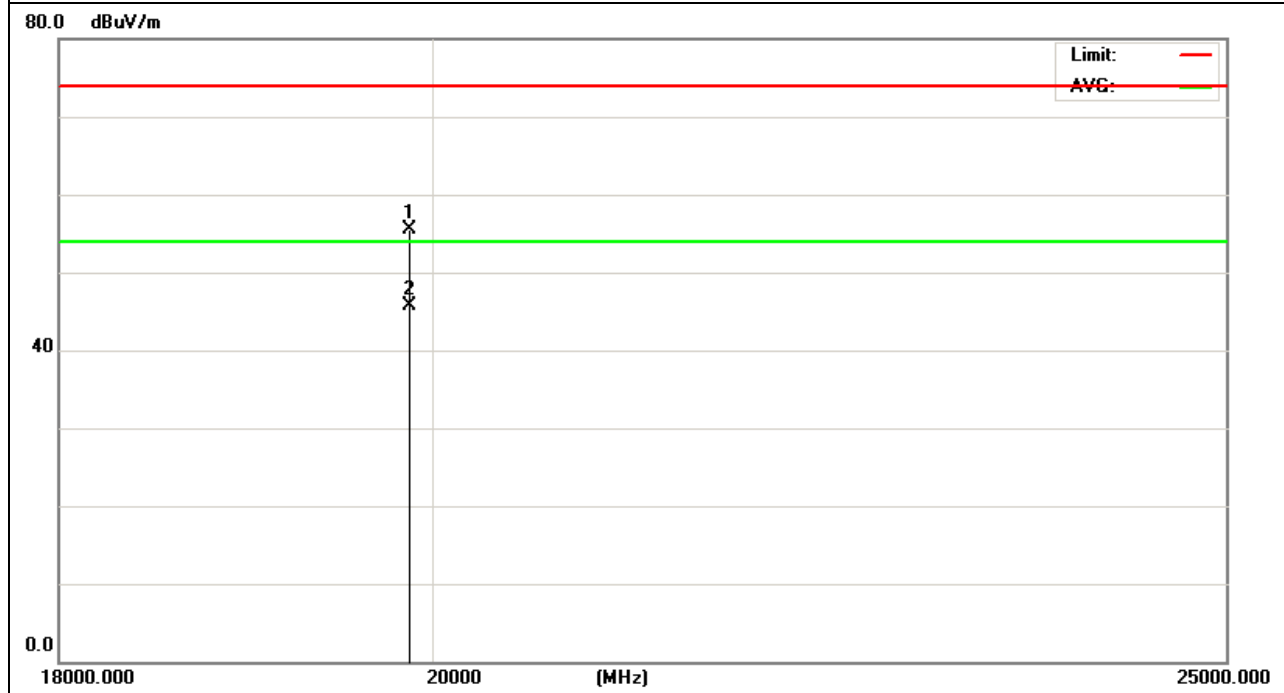


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (1Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19866.000	38.85	16.57	55.42	74.00	-18.58	
19866.000	30.07	16.57	46.64	54.00	-7.36	AVG

Remark:

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

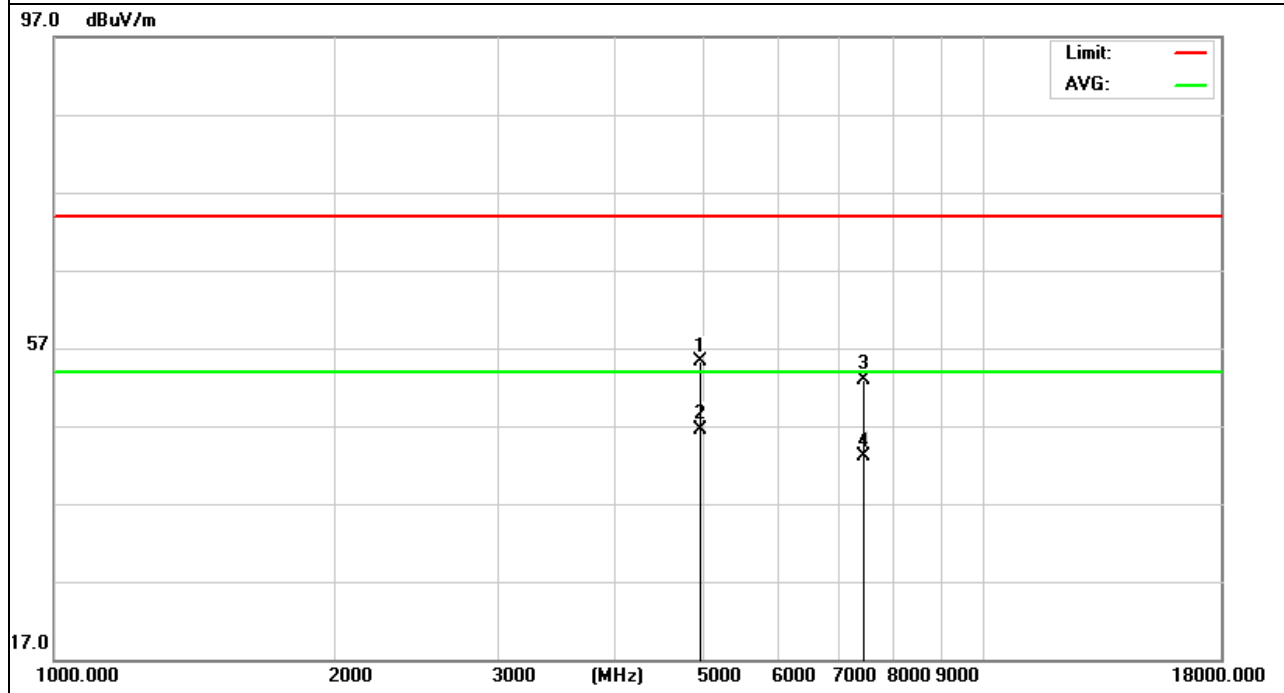


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4960.000	50.65	5.22	55.87	74.00	-18.13	peak
4960.000	41.17	5.22	46.39	54.00	-7.61	AVG
7440.000	45.32	8.06	53.38	74.00	-20.62	peak
7440.000	35.62	8.06	43.68	54.00	-10.32	AVG

Remark:

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

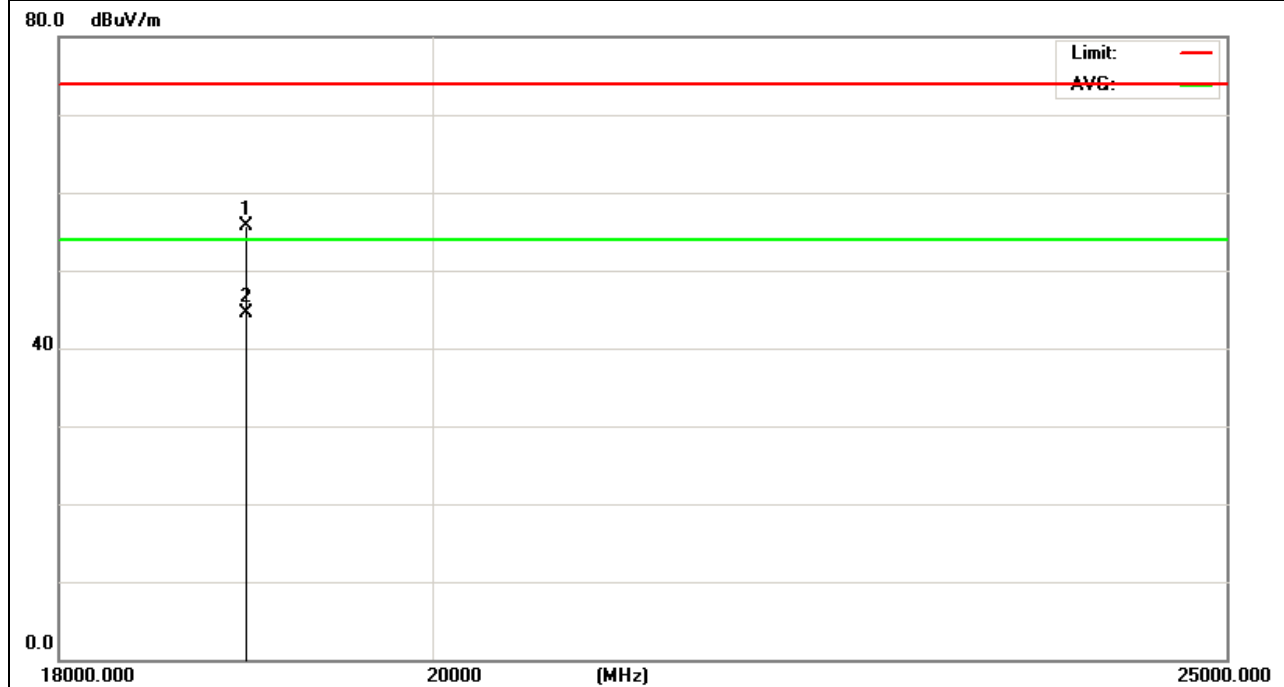


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (1Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18975.000	39.57	16.39	55.96	74.00	-18.04	
18975.000	28.26	16.39	44.65	54.00	-9.35	AVG

Remark:

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

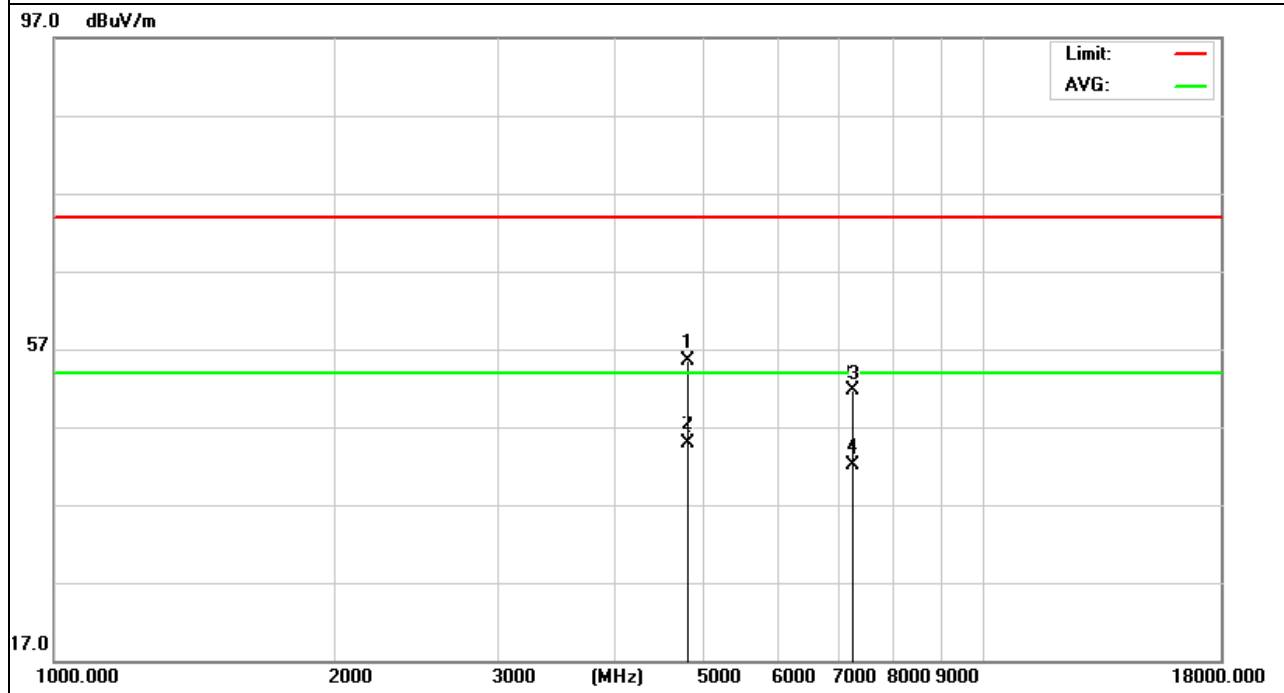


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4804.000	50.82	5.06	55.88	74.00	-18.12	peak
4804.000	40.32	5.06	45.38	54.00	-8.62	AVG
7206.000	44.71	7.03	51.74	74.00	-22.26	peak
7206.000	35.01	7.03	42.04	54.00	-11.96	AVG

Remark:

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

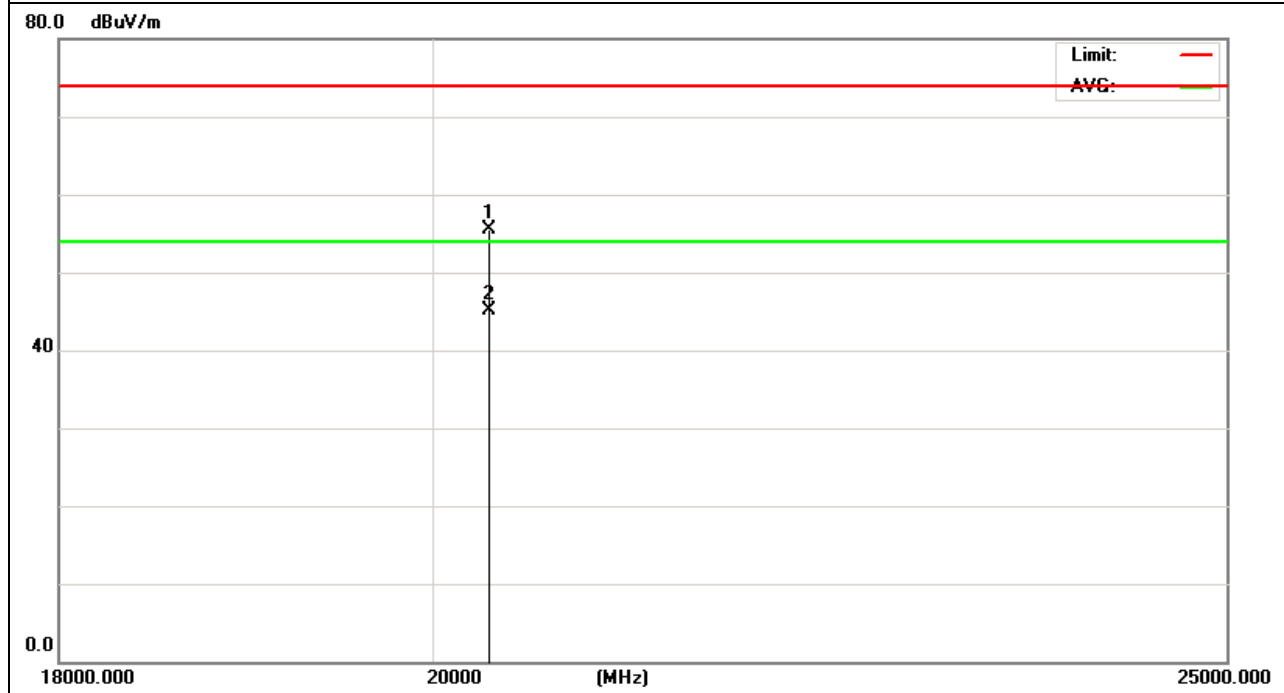


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20320.000	39.16	16.67	55.83	74.00	-18.17	
20320.000	29.03	16.67	45.70	54.00	-8.30	AVG

Remark:

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

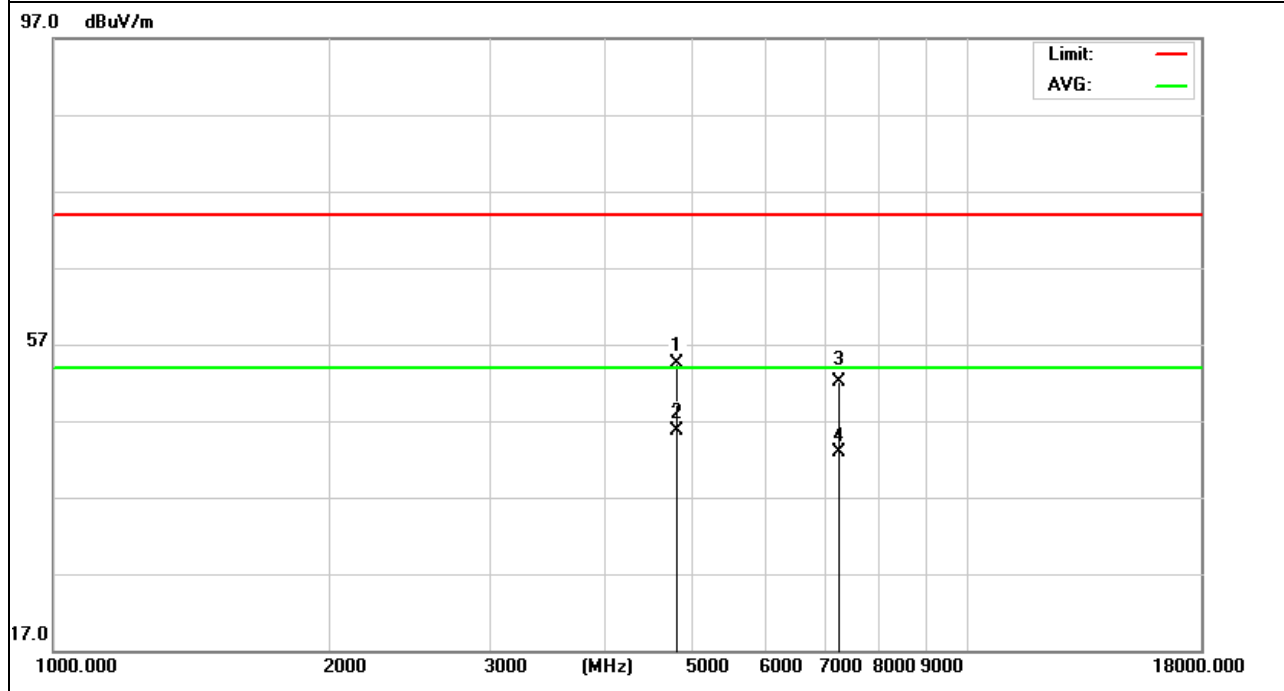


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4804.000	49.42	5.06	54.48	74.00	-19.52	peak
4804.000	40.52	5.06	45.58	54.00	-8.42	AVG
7206.000	45.08	7.03	52.11	74.00	-21.89	peak
7206.000	35.39	7.03	42.42	54.00	-11.58	AVG

Remark:

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

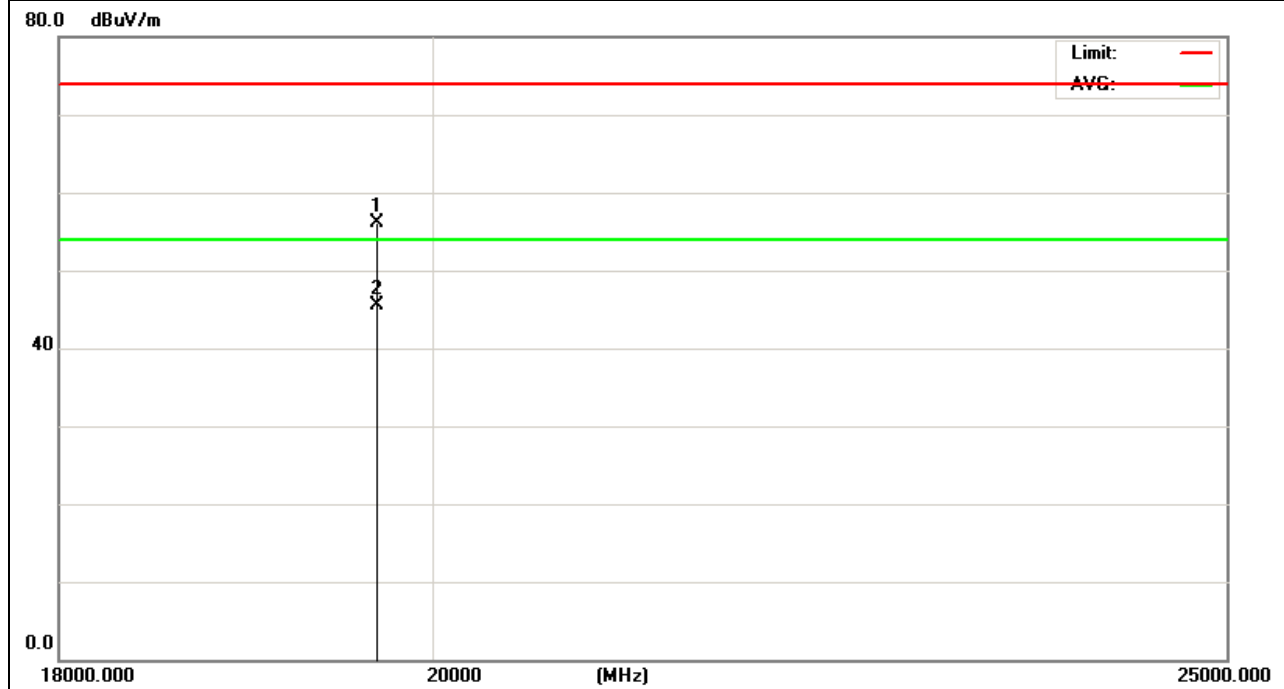


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2402MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19682.000	39.29	16.53	55.82	74.00	-18.18	
19682.000	29.16	16.53	45.69	54.00	-8.31	AVG

Remark:

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

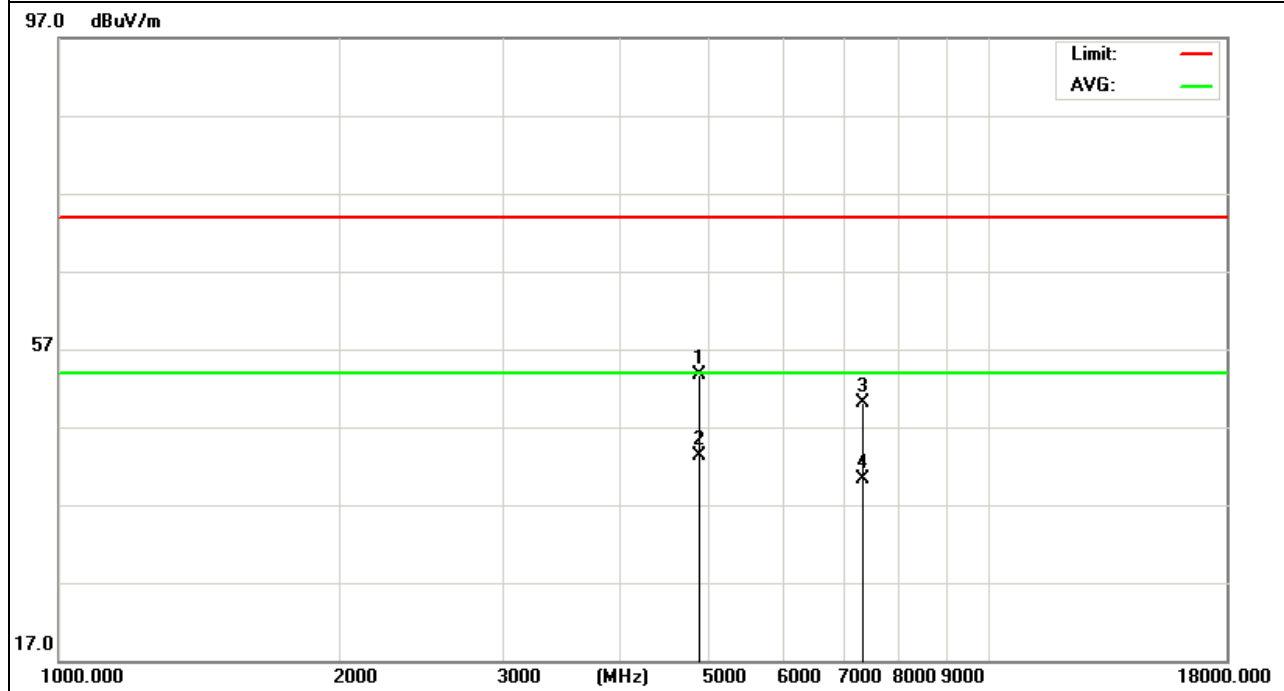


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4882.000	48.24	5.14	53.38	74.00	-20.62	peak
4882.000	37.19	5.14	42.33	54.00	-11.67	AVG
7323.000	42.38	7.54	49.92	74.00	-24.08	peak
7323.000	32.45	7.54	39.99	54.00	-14.01	AVG

Remark:

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

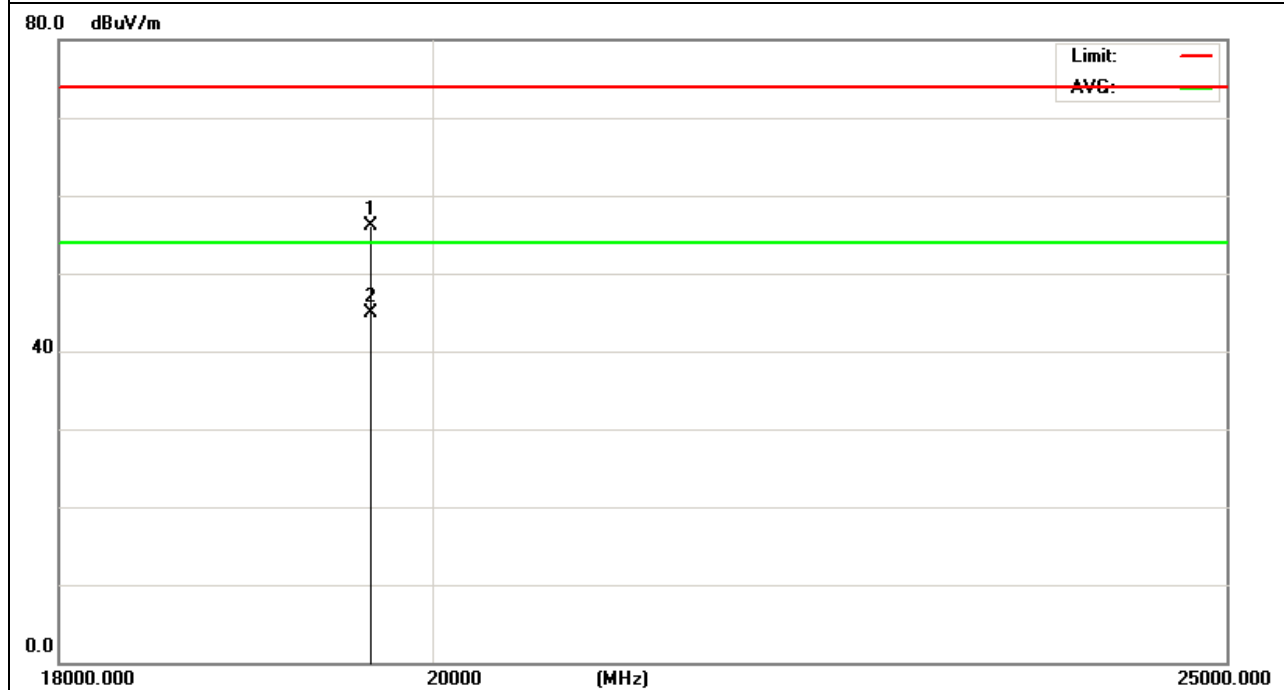


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
19649.000	39.24	16.53	55.77	74.00	-18.23	
19649.000	28.36	16.53	44.89	54.00	-9.11	AVG

Remark:

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

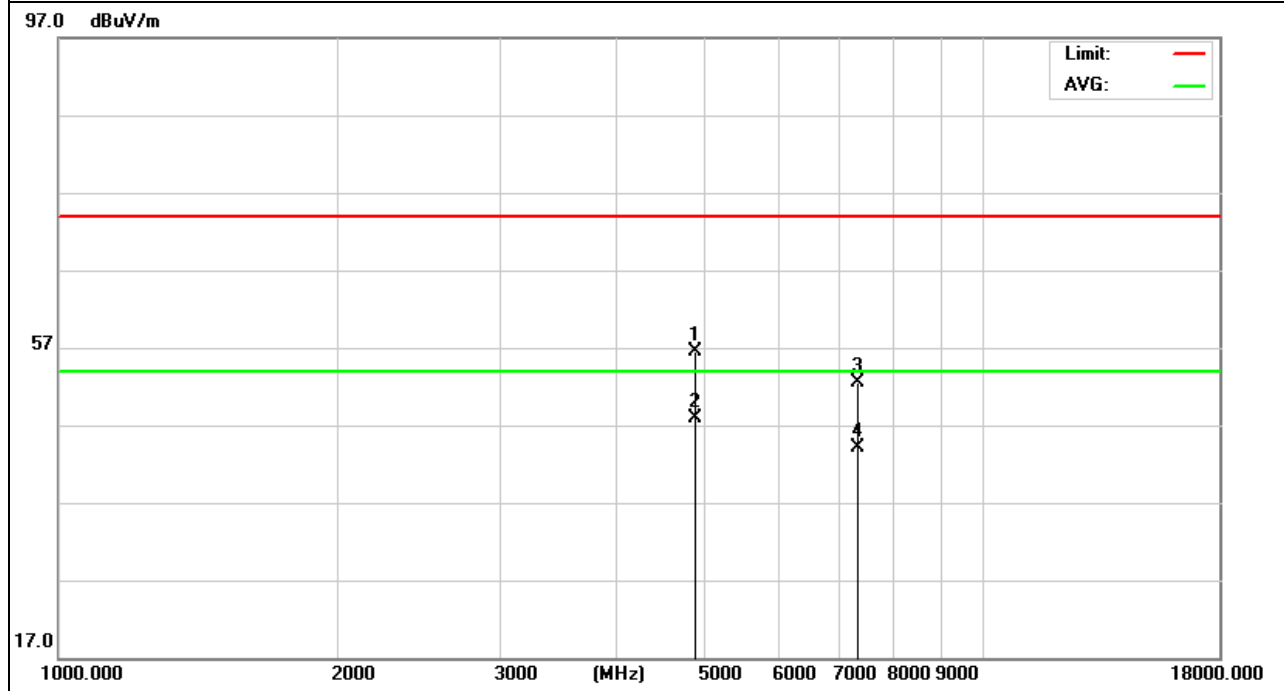


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4882.000	51.21	5.14	56.35	74.00	-17.65	peak
4882.000	42.63	5.14	47.77	54.00	-6.23	AVG
7323.000	44.26	7.54	51.80	74.00	-22.20	peak
7323.000	36.49	7.54	44.03	54.00	-9.97	AVG

Remark:

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

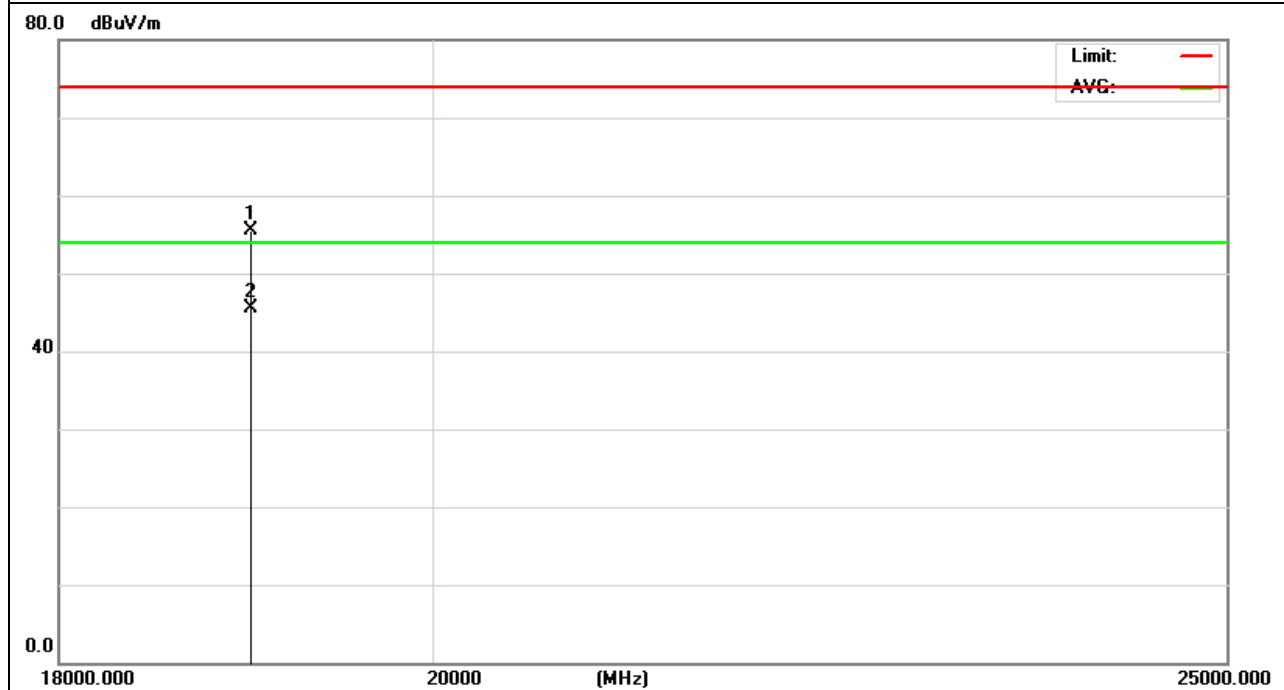


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2441MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18997.000	39.25	16.41	55.66	74.00	-18.34	peak
18997.000	29.41	16.41	45.82	54.00	-8.18	AVG

Remark:

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

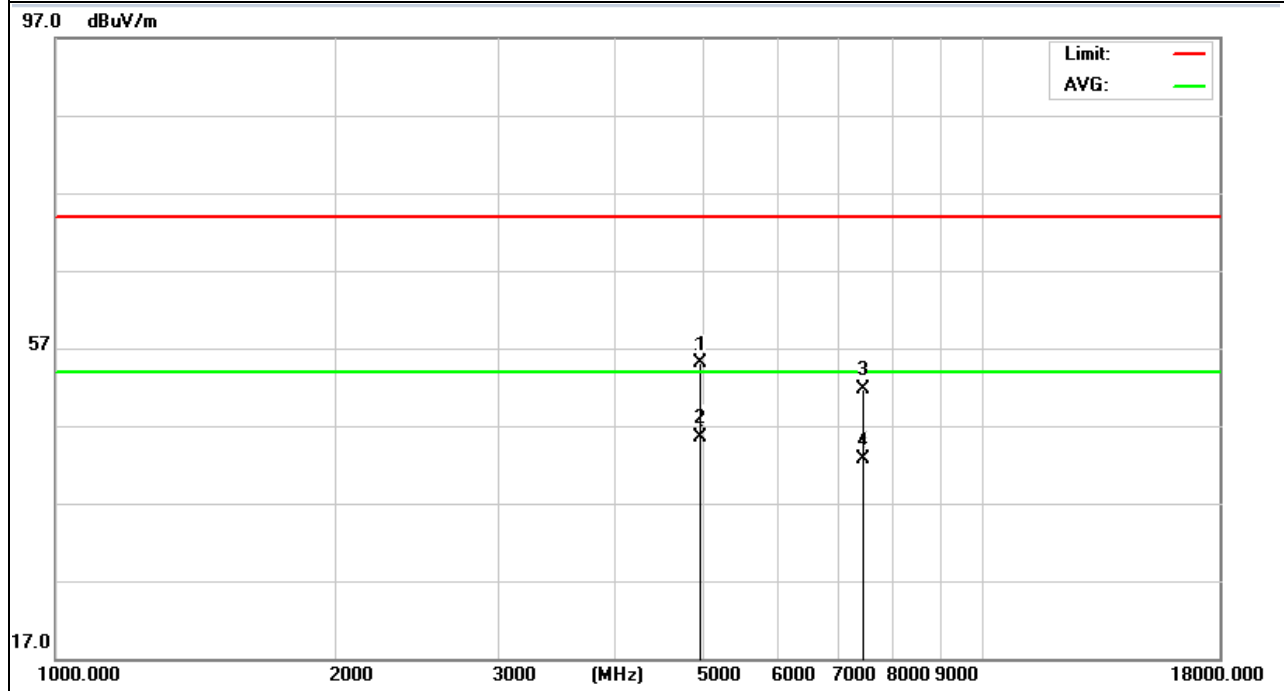


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4960.000	49.75	5.22	54.97	74.00	-19.03	peak
4960.000	40.95	5.22	46.17	54.00	-7.83	AVG
7440.000	43.10	8.06	51.16	74.00	-22.84	peak
7440.000	34.71	8.06	42.77	54.00	-11.23	AVG

Remark:

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

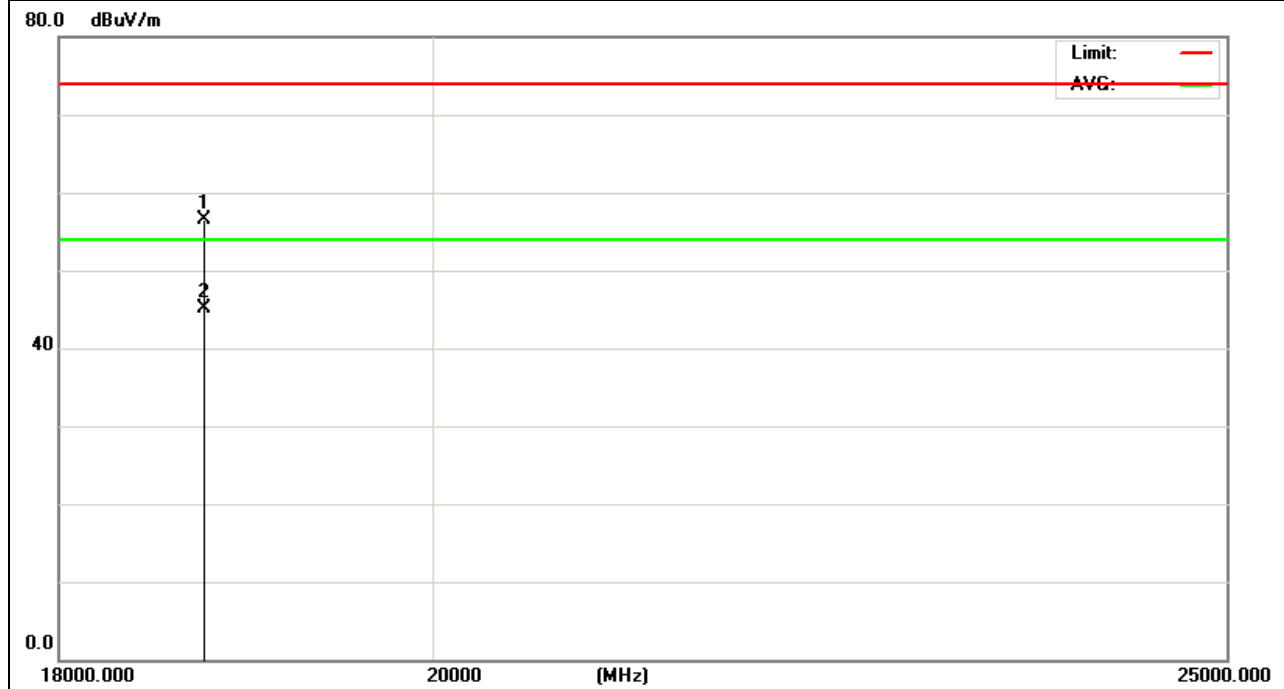


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (3Mbps-worst case)	Polarization :	Horizontal
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18747.000	40.20	16.15	56.35	74.00	-17.65	peak
18747.000	29.17	16.15	45.32	54.00	-8.68	AVG

Remark:

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

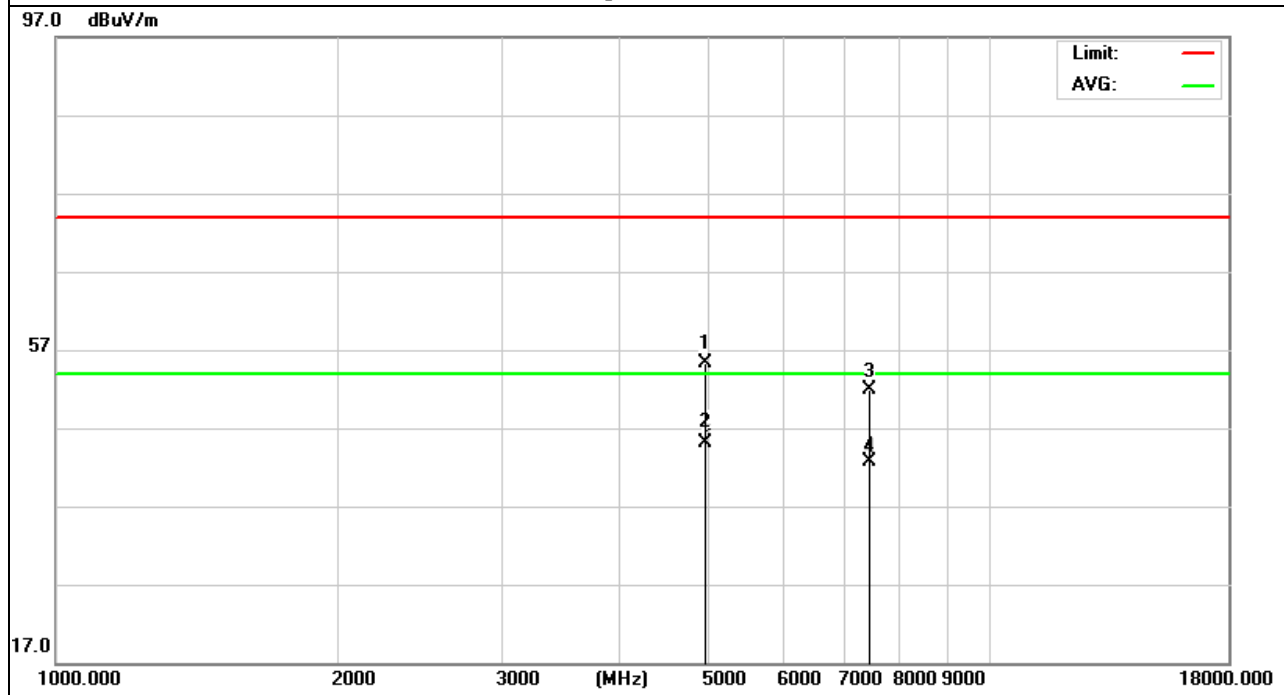


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4960.000	49.90	5.22	55.12	74.00	-18.88	peak
4960.000	39.26	5.22	44.48	54.00	-9.52	AVG
7440.000	43.28	8.06	51.34	74.00	-22.66	peak
7440.000	34.73	8.06	42.79	54.00	-11.21	AVG

Remark:

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



EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	TX 2480MHz (3Mbps-worst case)	Polarization :	Vertical
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
20014.000	40.08	16.61	56.69	74.00	-17.31	peak
20014.000	27.86	16.61	44.47	54.00	-9.53	AVG

Remark:

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



Remark:

All the modes had been tested, but only the worst data recorded in the report.

In frequency ranges 1~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report.

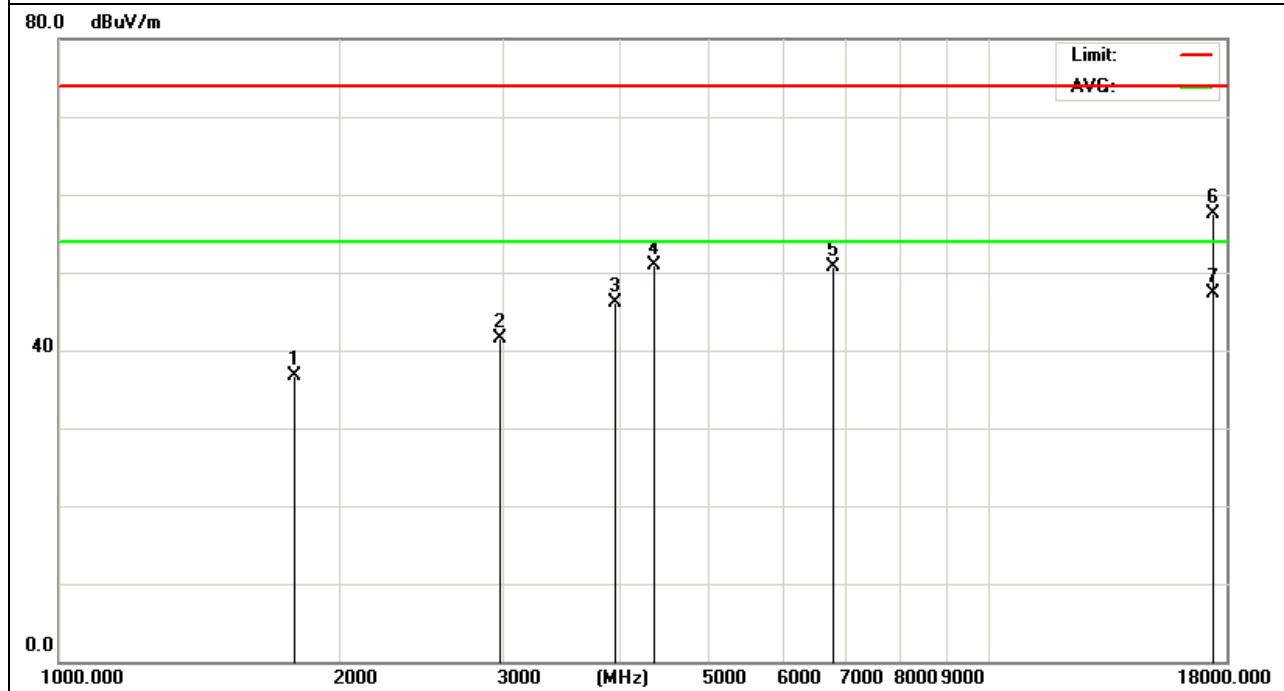
Test result: The unit does meet the NCC requirements.

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX (worst case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1766.413	45.84	-9.37	36.47	74.00	-37.53	peak
2954.215	43.09	-1.85	41.24	74.00	-32.76	peak
3971.650	42.38	3.53	45.91	74.00	-28.09	peak
4351.273	46.06	4.46	50.52	74.00	-23.48	peak
6784.688	44.52	6.04	50.56	74.00	-23.44	peak
17400.158	32.18	24.91	57.09	74.00	-16.91	peak
17400.158	21.78	24.91	46.69	54.00	-7.31	AVG

Remark:

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

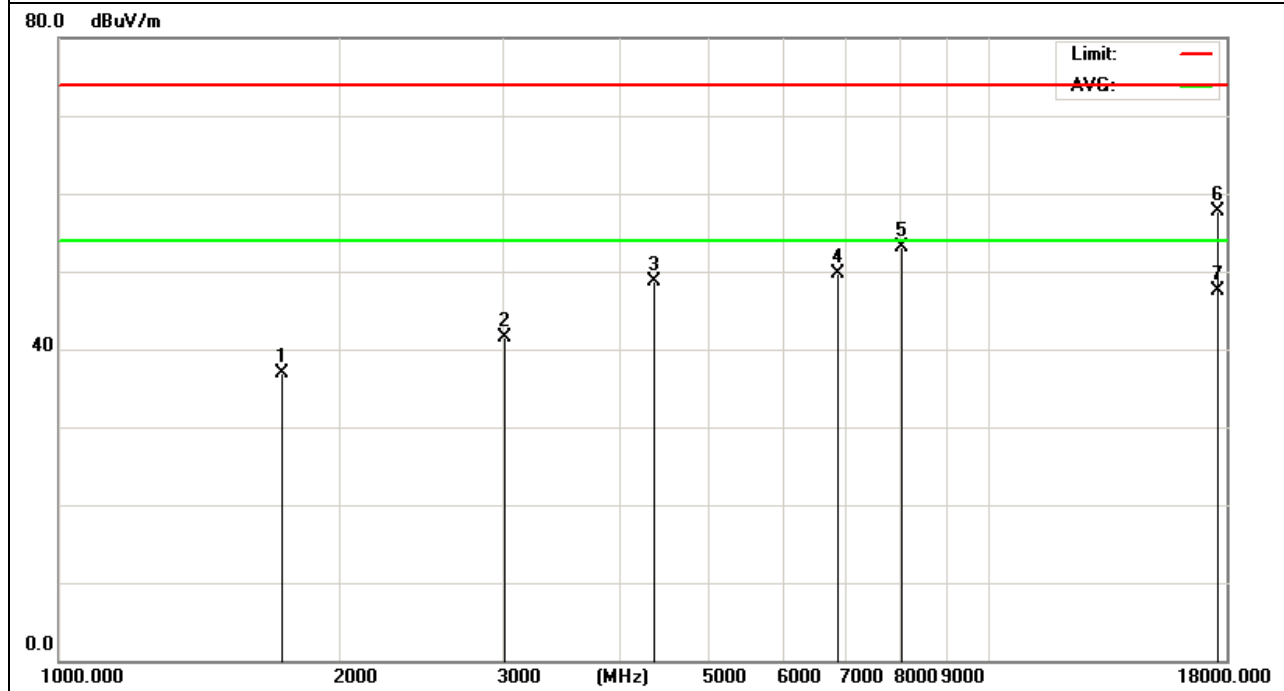


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX (worst case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC3.7V from battery		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1760.724	46.15	-9.52	36.63	74.00	-37.37	peak
3018.335	42.84	-1.64	41.20	74.00	-32.80	peak
4365.026	44.01	4.46	48.47	74.00	-25.53	peak
6871.357	43.72	6.10	49.82	74.00	-24.18	peak
8043.998	42.46	10.44	52.90	74.00	-21.10	peak
17650.172	32.40	24.94	57.34	74.00	-16.66	peak
17650.172	22.29	24.94	47.23	54.00	-6.77	AVG

Remark:

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

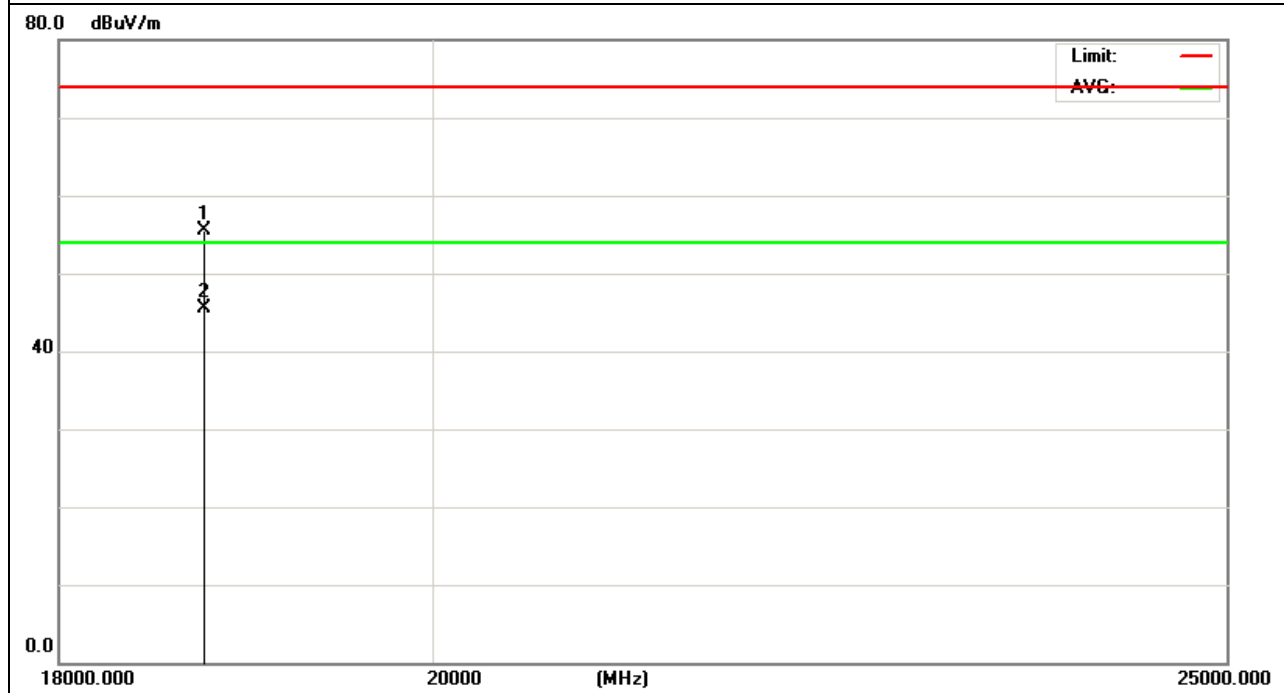


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX (worst case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC3.7V from battery		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
18784.500	40.11	16.15	56.26	74.00	-17.74	peak
18784.500	30.08	16.15	46.23	54.00	-7.77	AVG

Remark:

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

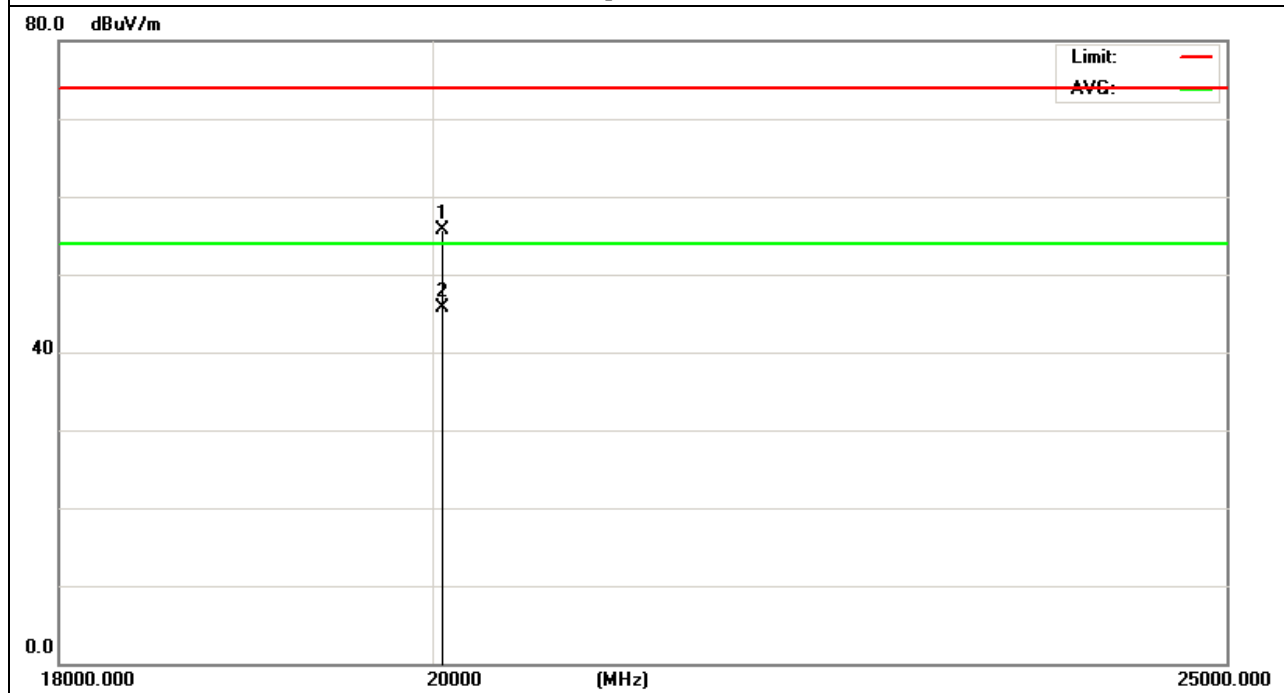


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-06-15
Test Mode :	RX (worst case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC3.7V from battery		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20050.000	38.27	16.61	54.88	74.00	-19.12	peak
20050.000	29.14	16.61	45.75	54.00	-8.25	AVG

Remark:

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



Remark:

All the modes had been tested, but only the worst data recorded in the report.

No any other emissions detected which are tested to compliance with the limit. No recording in the test report.

Test result: The unit does meet the NCC requirements.

3.2.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

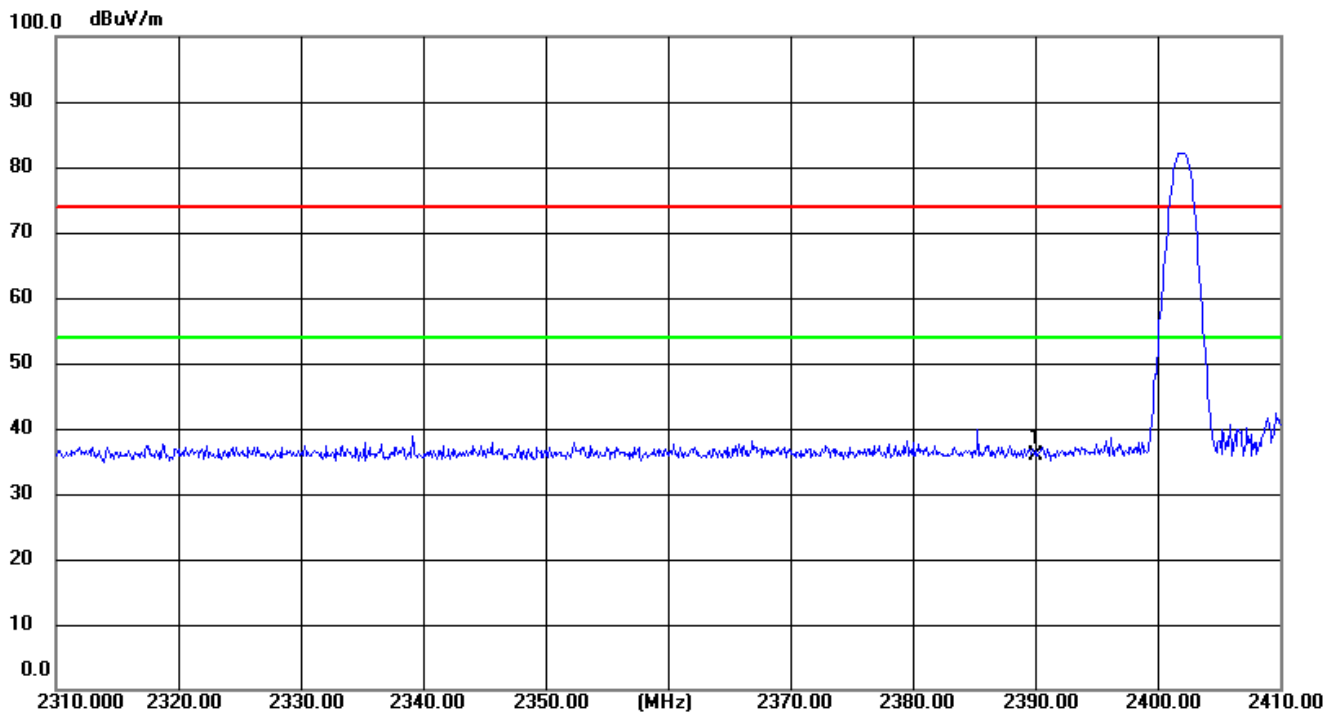
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	TX 2402MHz/2480MHz (1Mbps)		
Test Date :	2021-06-15		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz. 3. The data of 2390MHz and 2483.5MHz was the worst.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant/CF CF(dB)	Act		Limit		Note
		Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)	
2390.00	H	41.71	--	-5.79	35.92	--	74.00	54.00	CH00
2390.00	V	41.65	--	-5.79	35.86	--	74.00	54.00	CH00
2483.50	H	41.48	--	-4.98	36.50	--	74.00	54.00	CH78
2483.50	V	41.30	--	-4.98	36.32	--	74.00	54.00	CH78

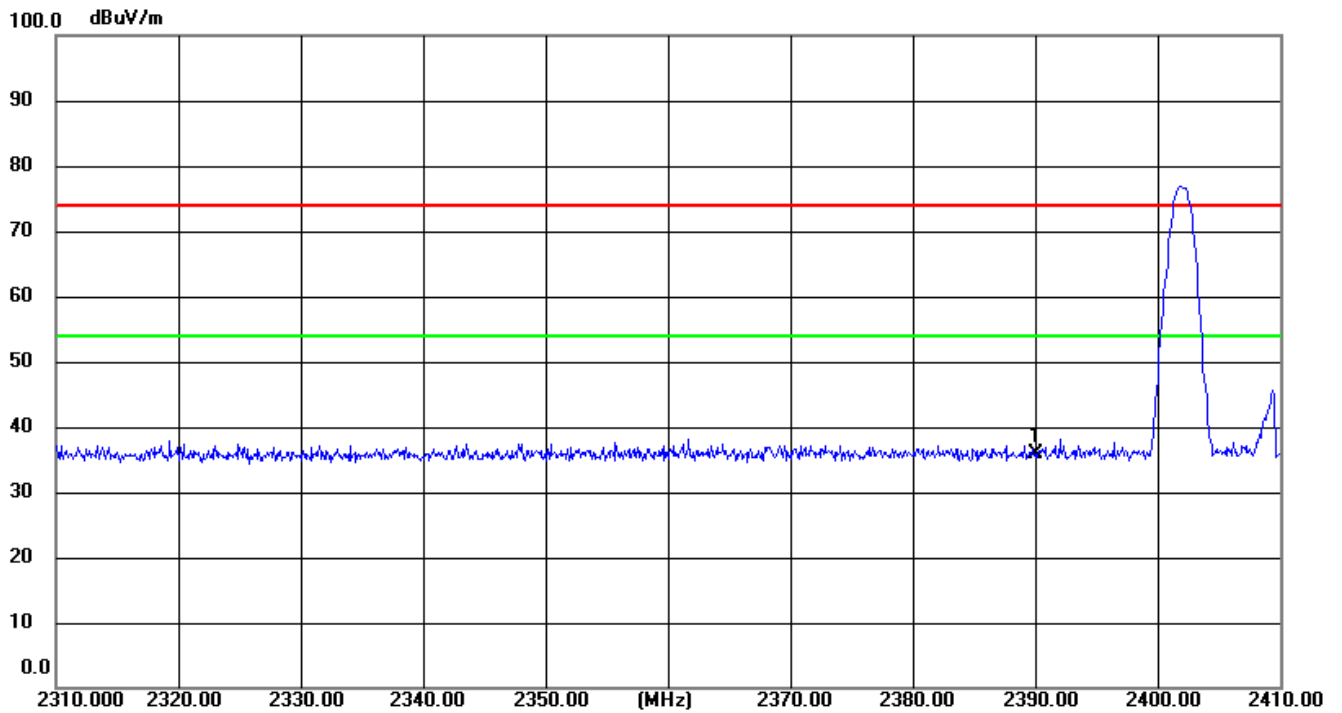
Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode
- (2) EUT Orthogonal Axis :
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (4) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

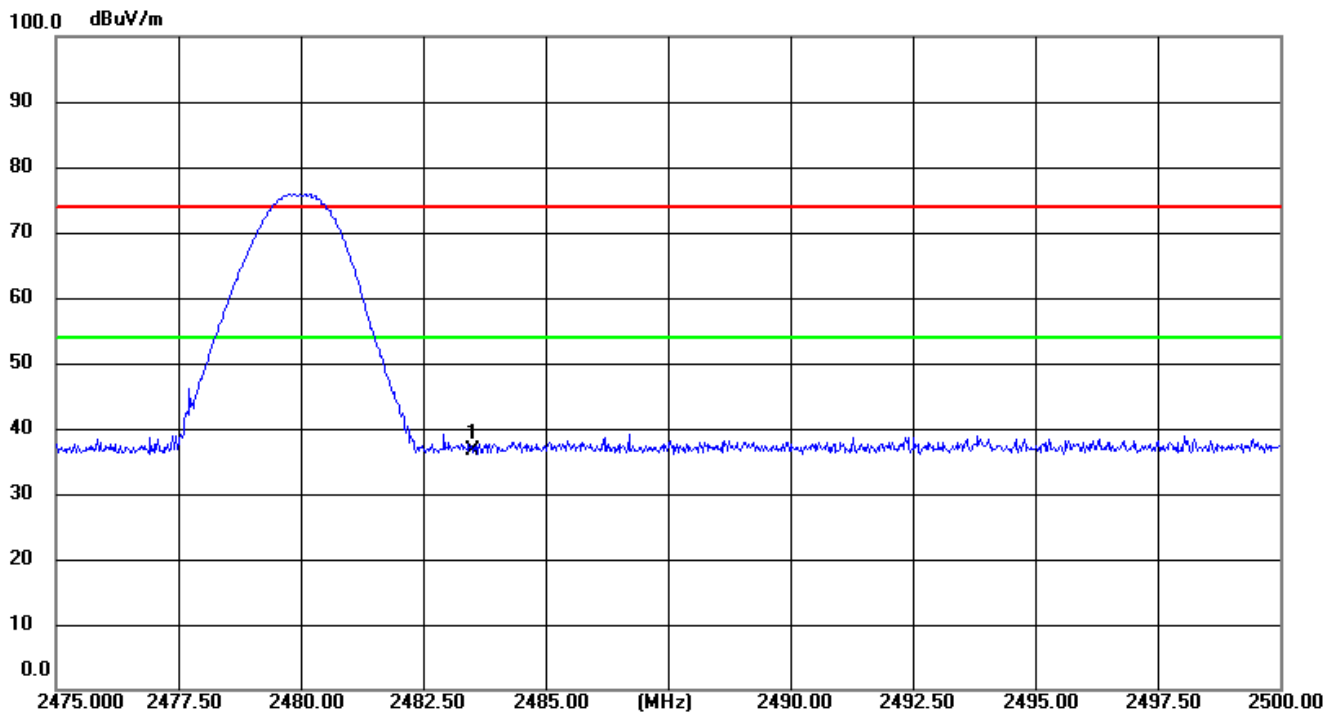
Horizontal



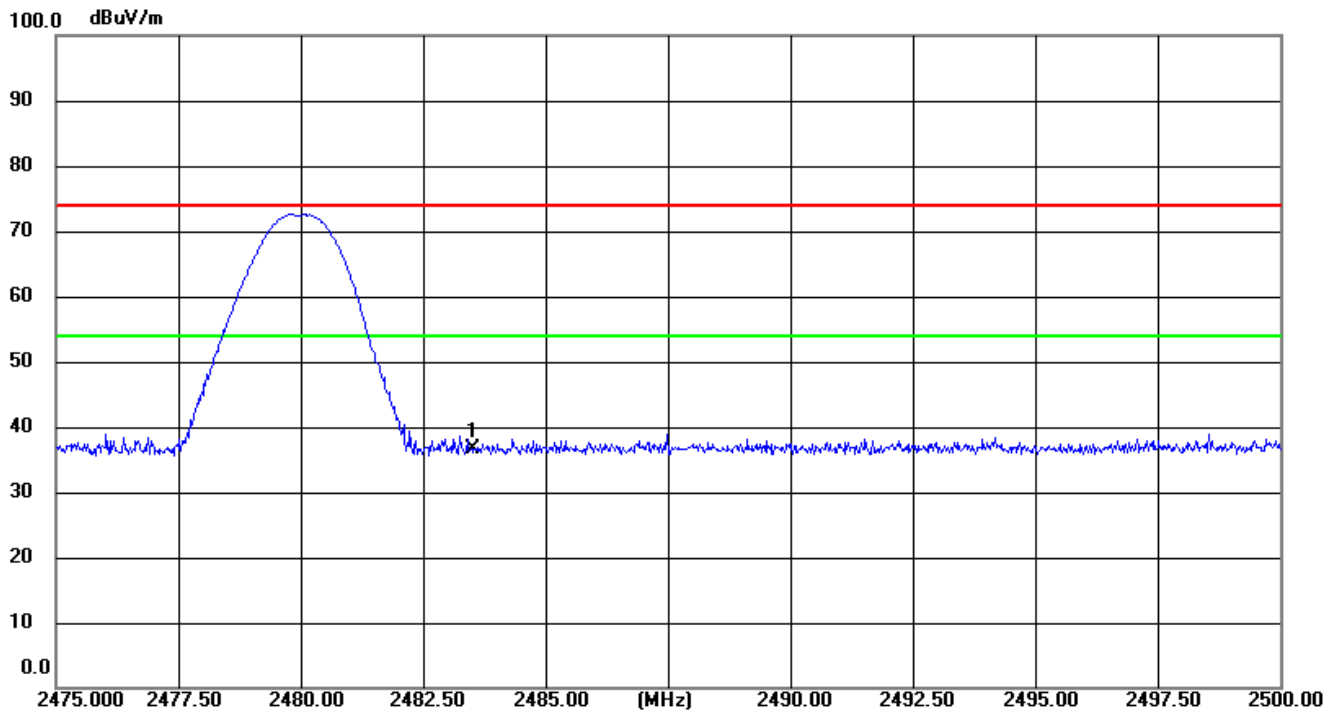
Vertical



Horizontal



Vertical



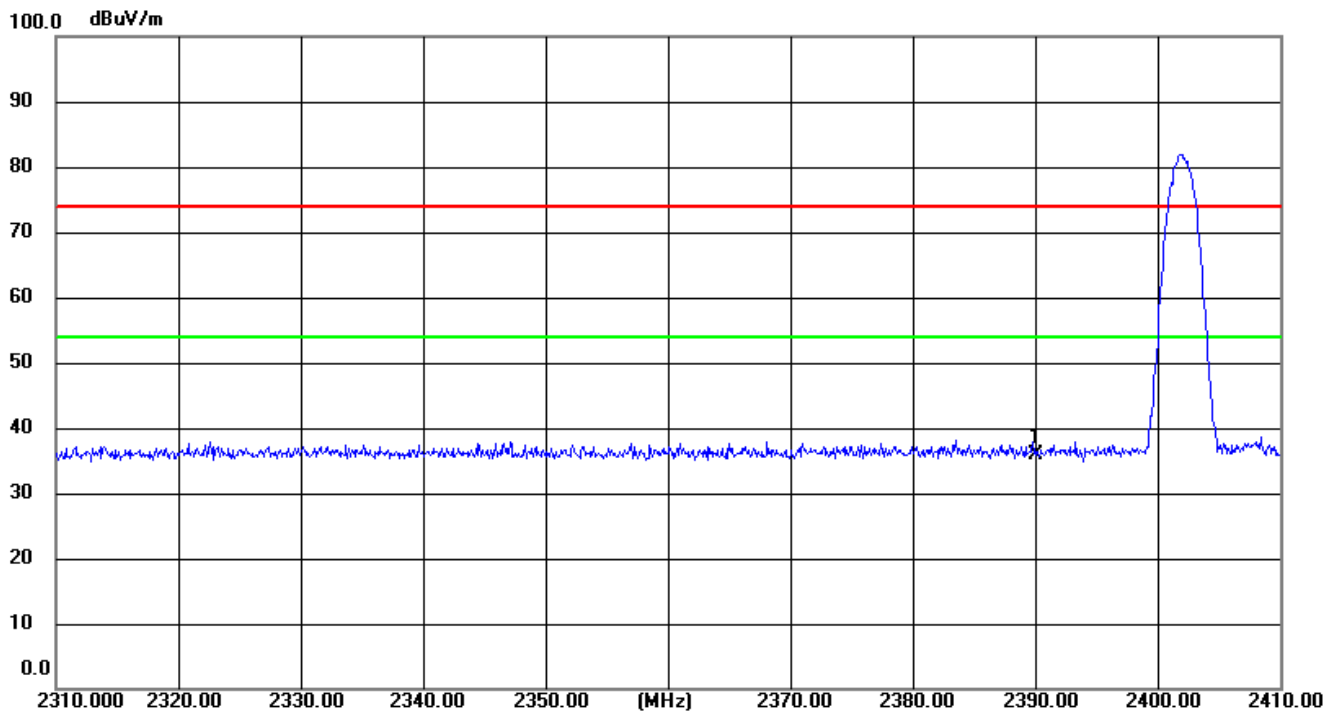
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	24°C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	TX 2402MHz/2480MHz (3Mbps)		
Test Date :	2021-06-15		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz. 3. The data of 2390MHz and 2483.5MHz was the worst.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant/CF CF(dB)	Act		Limit		Note
		Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)	
2390.00	H	41.58	--	-5.79	35.79	--	74.00	54.00	CH00
2390.00	V	41.77	--	-5.79	35.98	--	74.00	54.00	CH00
2483.50	H	42.86	--	-4.98	37.88	--	74.00	54.00	CH78
2483.50	V	42.53	--	-4.98	37.55	--	74.00	54.00	CH78

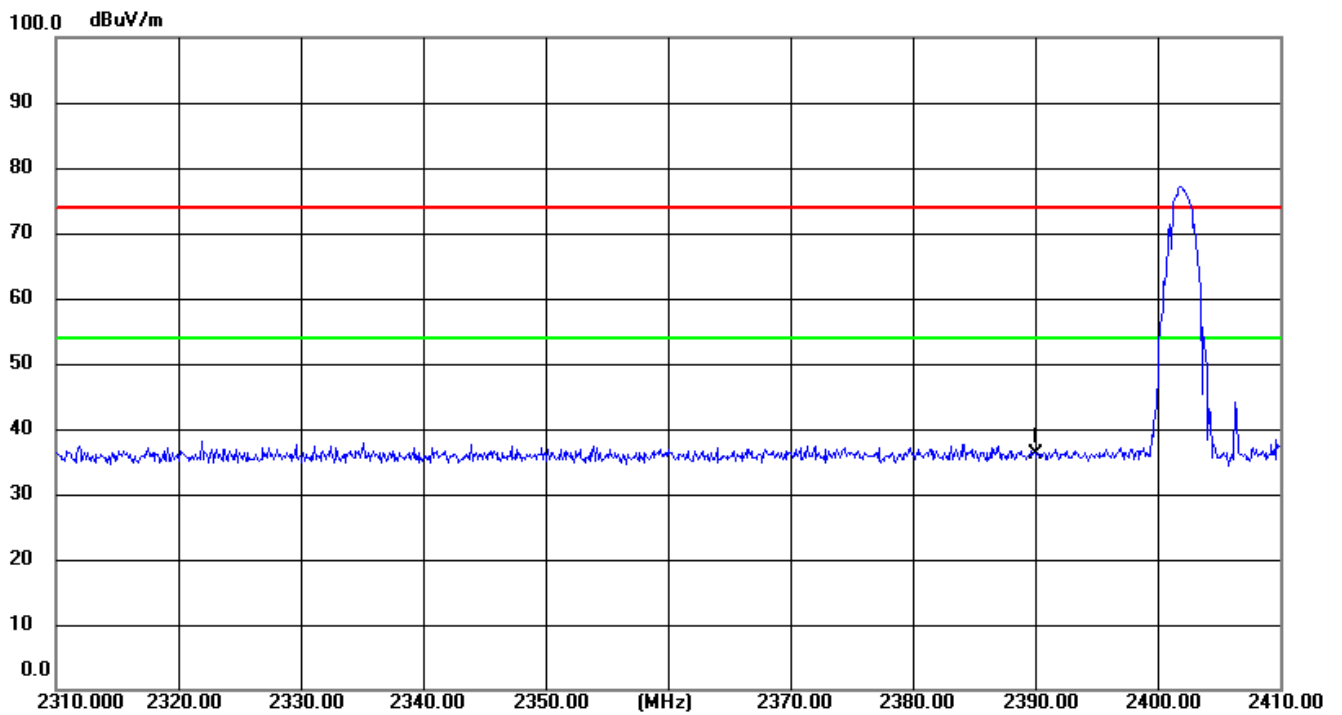
Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode
- (2) EUT Orthogonal Axis :
“X” - denotes Laid on Table ; ”Y” - denotes Vertical Stand ; ”Z” - denotes Side Stand
- (3) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (4) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

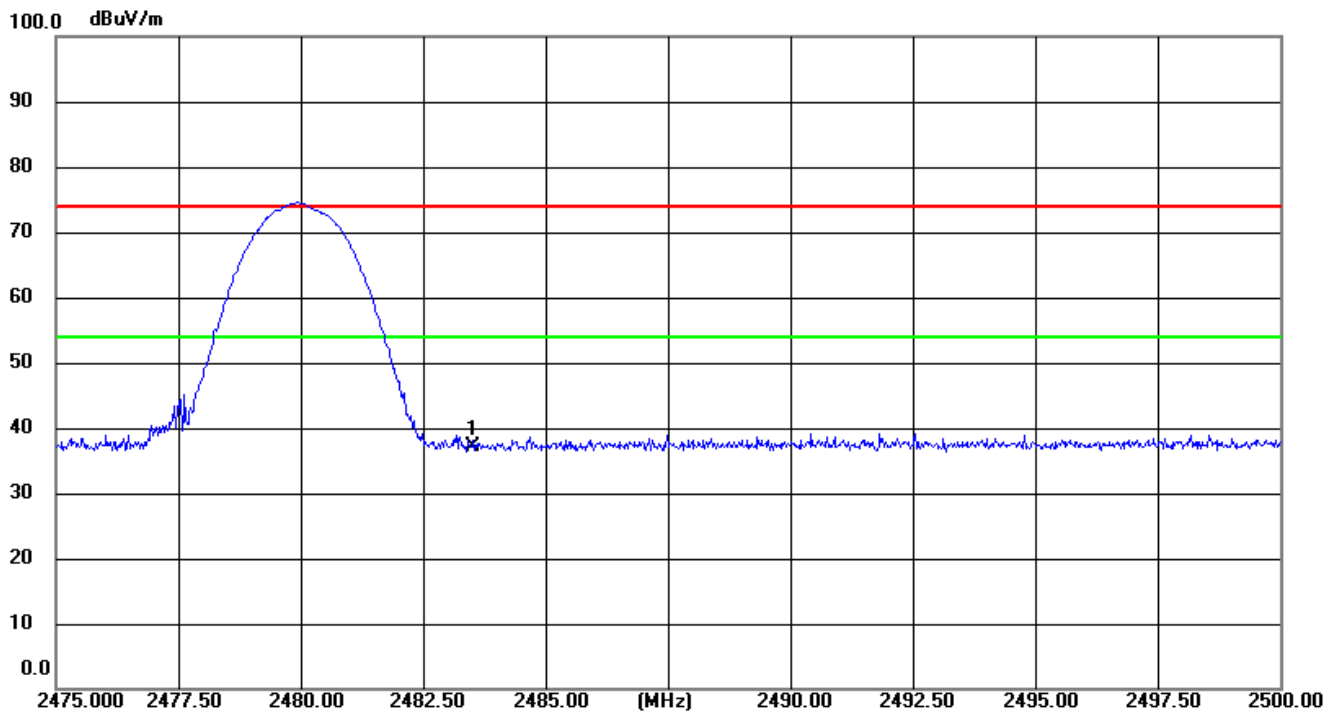
Horizontal



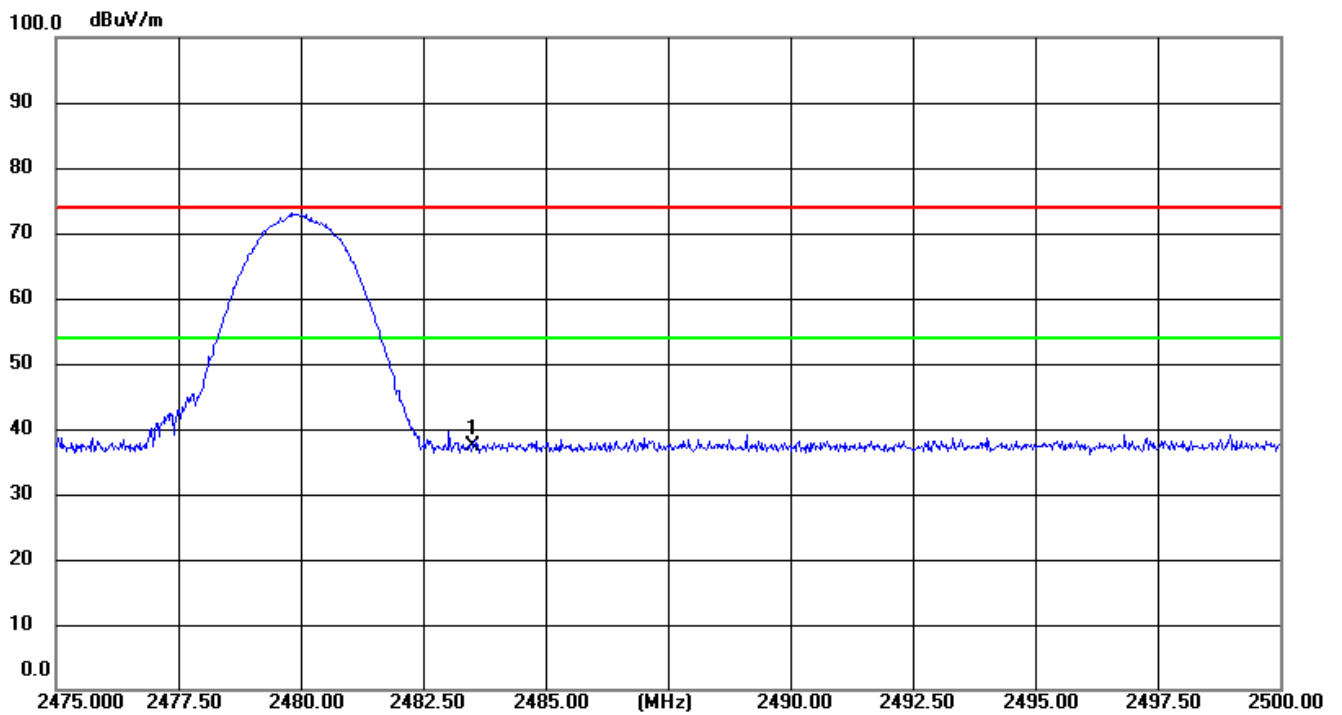
Vertical



Horizontal



Vertical



Test result: The unit does meet the NCC requirements.

4. OCCUPIED BANDWIDTH TEST

4.1 APPLIED PROCEDURES / LIMIT

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.10.1(6.1.1)	Bandwidth	N/A	2402-2480	PASS

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	wide enough to capture the peaks of two adjacent channels.
RB	30 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.1.1 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= 30KHz, VBW=100KHz, Sweep time = Auto, Span=3MHz.

4.1.2 TEST SETUP



4.1.3 EUT OPERATION CONDITIONS

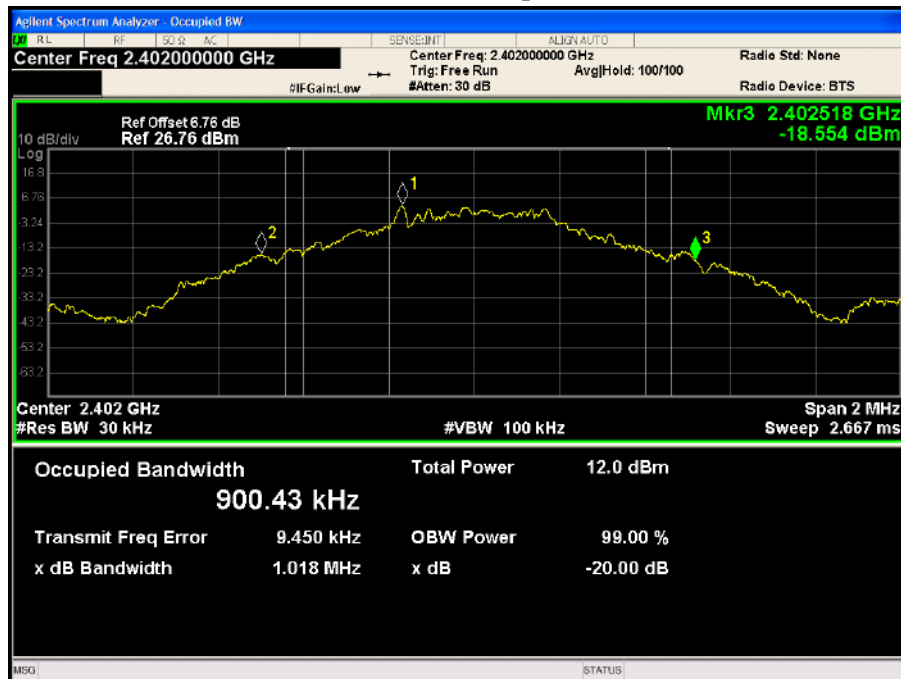
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.4 TEST RESULTS

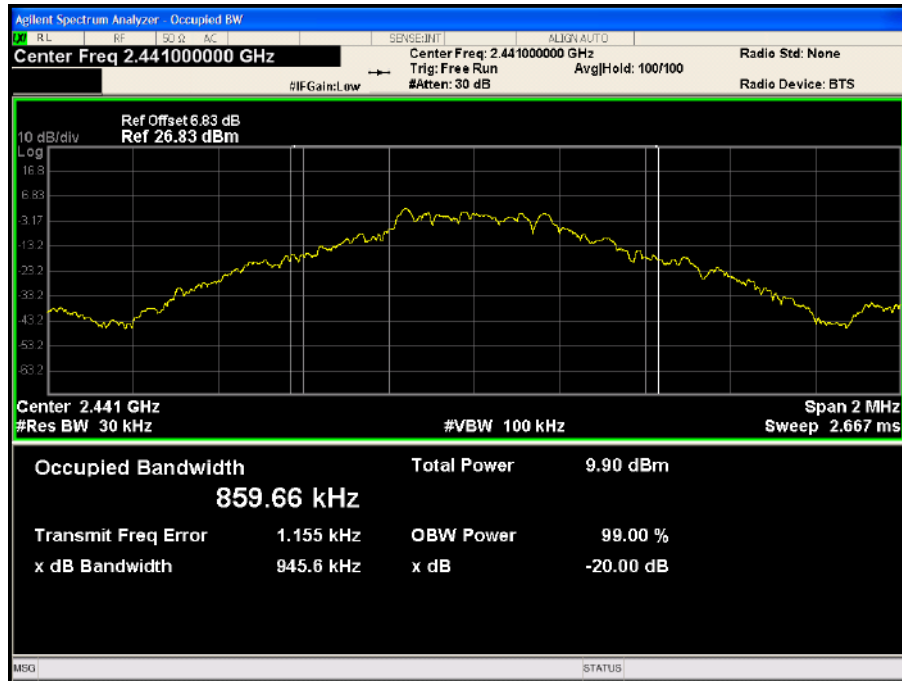
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH39 /CH78 (1Mbps Mode)		
Test Date :	2021-06-16		

Frequency	20dB Bandwidth (KHz)	Result
2402 MHz	1.018	Pass
2441 MHz	0.946	Pass
2480 MHz	0.998	Pass

CH 00-1Mbps



CH 39-1Mbps



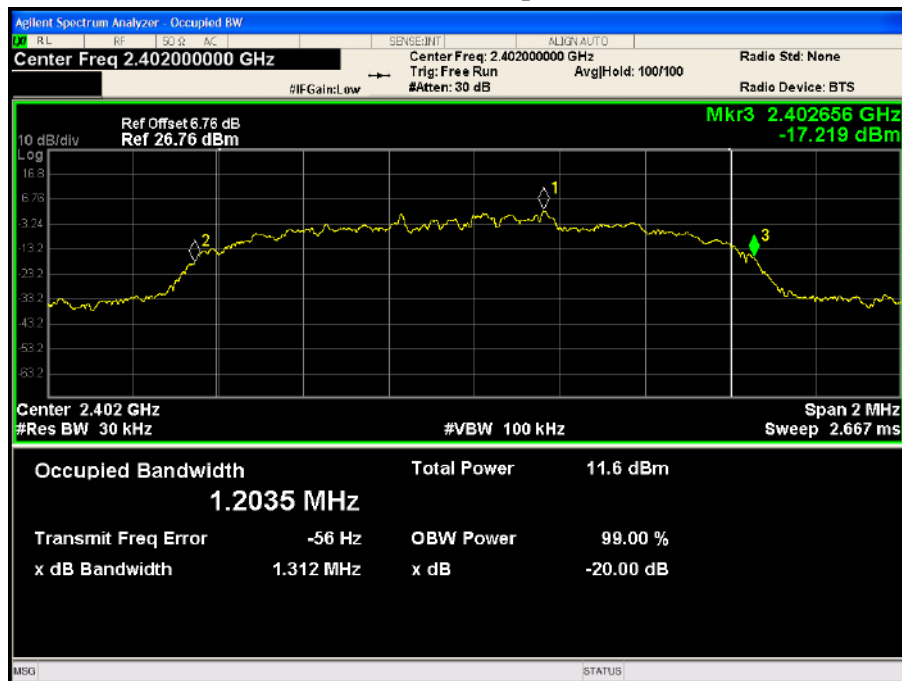
CH 78-1Mbps



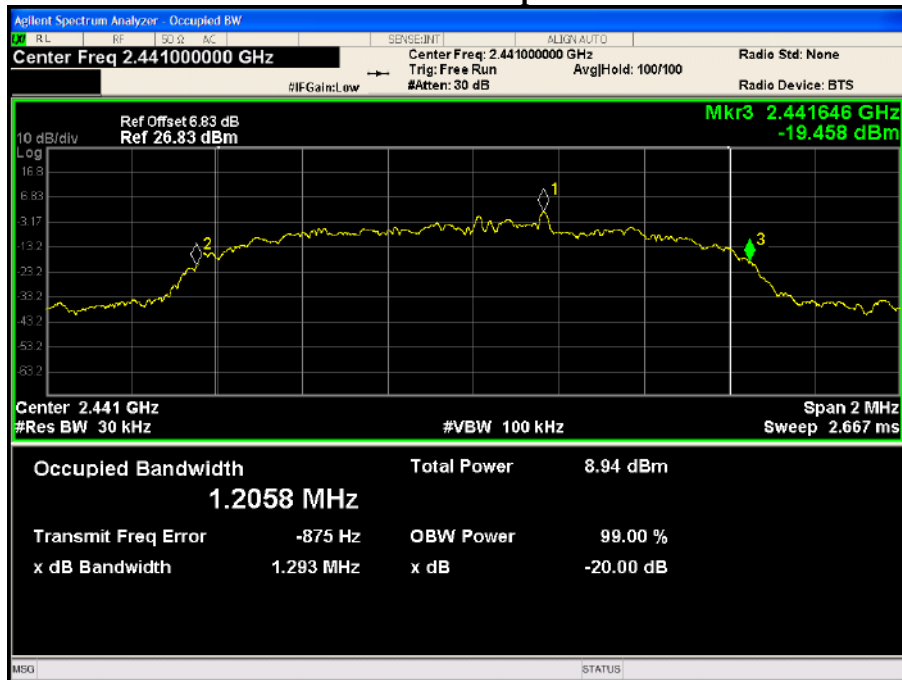
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH39 /CH78 (3Mbps Mode)		
Test Date :	2021-06-16		

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	1.312	Pass
2441 MHz	1.293	Pass
2480 MHz	1.321	Pass

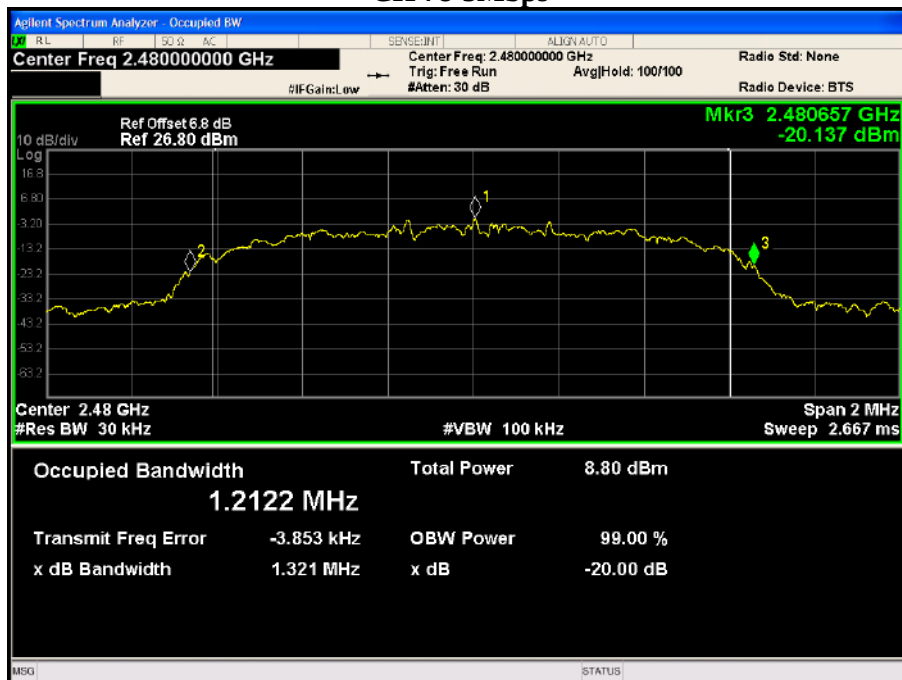
CH 00-3Mbps



CH 39-3Mbps



CH 78-3Mbps



5. NUMBER OF HOPPING CHANNEL

5.1 APPLIED PROCEDURES / LIMIT

LP0002			
Section	Test Item	Frequency Range (MHz)	Result
4.10.1(6.1.1)	Number of Hopping Channel	2400-2483.5	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	the frequency band of operation
RB	300kHz
VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.1.1 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= 300kHz, VBW=1 MHz, Sweep time = Auto.

5.1.2 TEST SETUP

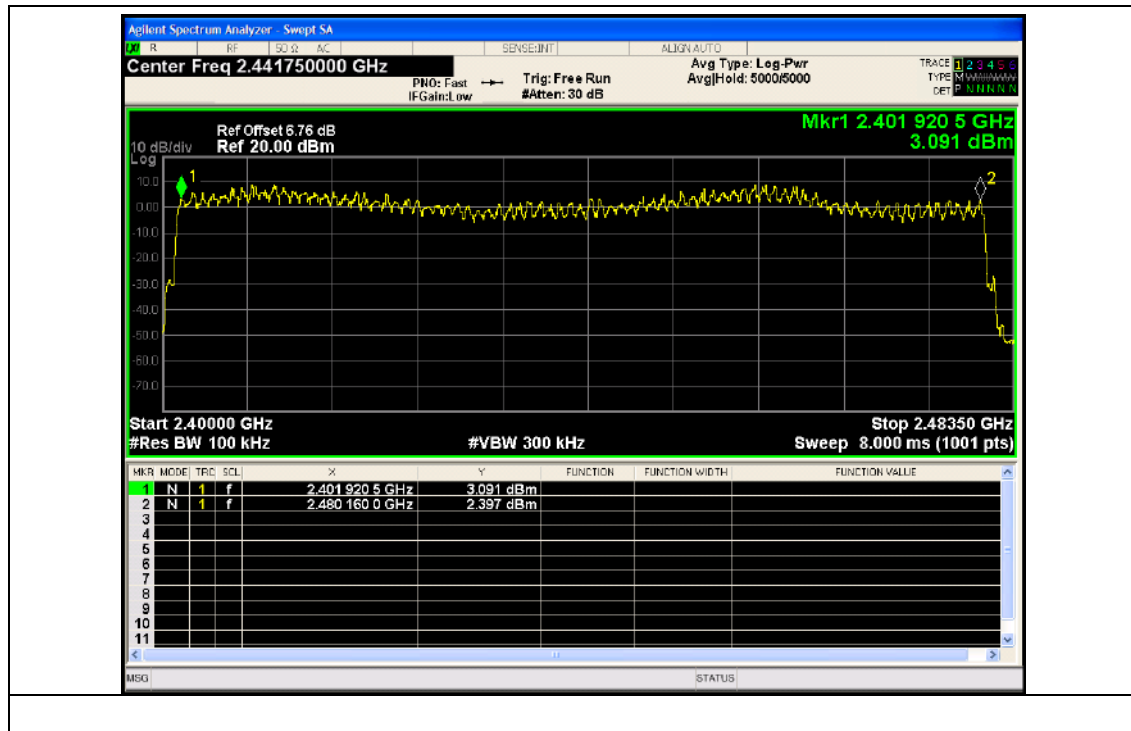


5.1.3 EUT OPERATION CONDITIONS

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.

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	Hopping Mode –3Mbps mode		
Test Date :	2021-06-16		

Number of Hopping Channel	79
---------------------------	----



6. AVERAGE TIME OF OCCUPANCY

6.1 APPLIED PROCEDURES / LIMIT

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.10.1(6.1.2)	Average Time of Occupancy	0.4sec	2400-2483.5	PASS

6.1.1 TEST PROCEDURE

- The transmitter output (antenna port) was connected to the spectrum analyzer
- Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
- Use a video trigger with the trigger level set to enable triggering only on full pulses.
- Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- Measure the maximum time duration of one single pulse.
- Set the EUT for DH5, DH3 and DH1 packet transmitting.
- Measure the maximum time duration of one single pulse.
- DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times $3.37 \times 31.6 = 106.6$ within 31.6 seconds.
- DH3 Packet permit maximum $1600 / 79 / 4 = 5.06$ hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds.
- DH1 Packet permit maximum $1600 / 79 / 2 = 10.12$ hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds.

6.1.2 TEST SETUP



6.1.3 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.

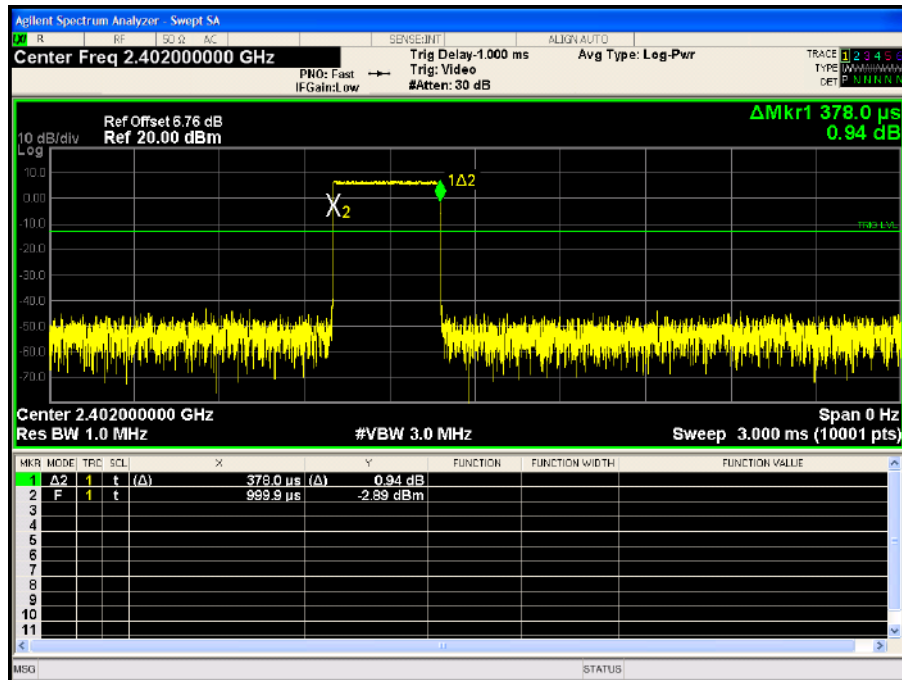
6.1.4 TEST RESULTS

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00-DH1/DH3/DH5 (1Mbps Mode)		
Test Date :	2021-06-16		

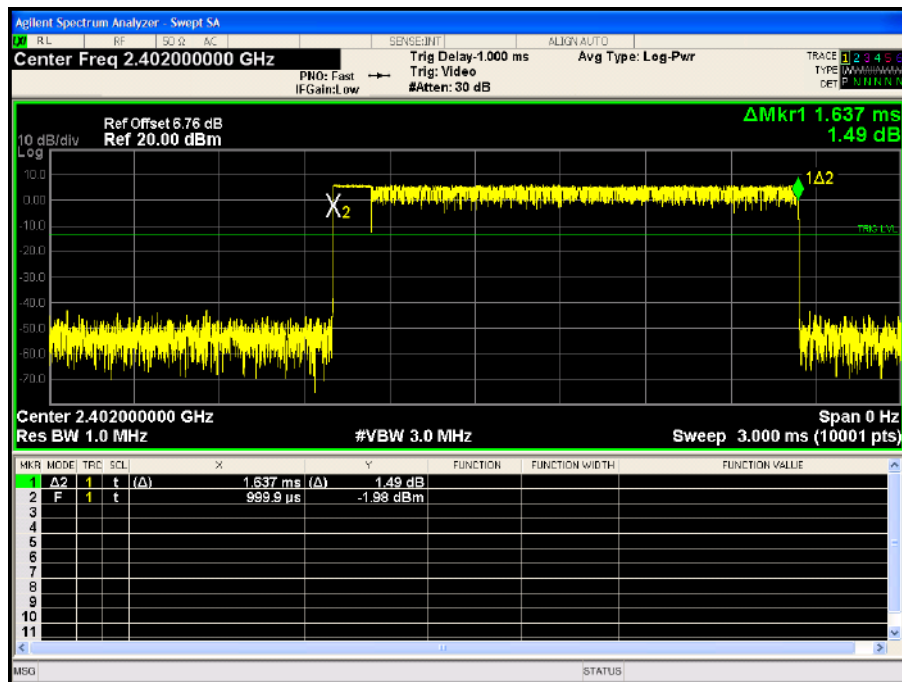
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.378	0.121	0.4000
DH3	2402 MHz	1.637	0.262	0.4000
DH5	2402 MHz	2.888	0.308	0.4000

Data Packet	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
DH1	0.368	1.250	0.294	29.44	5.311	2.717

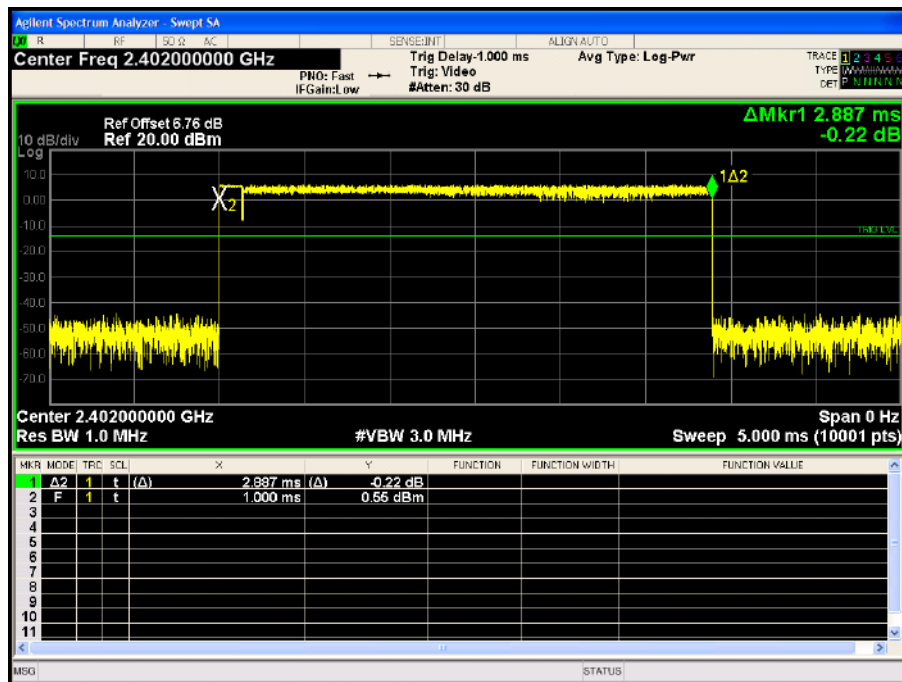
CH 00- DH1



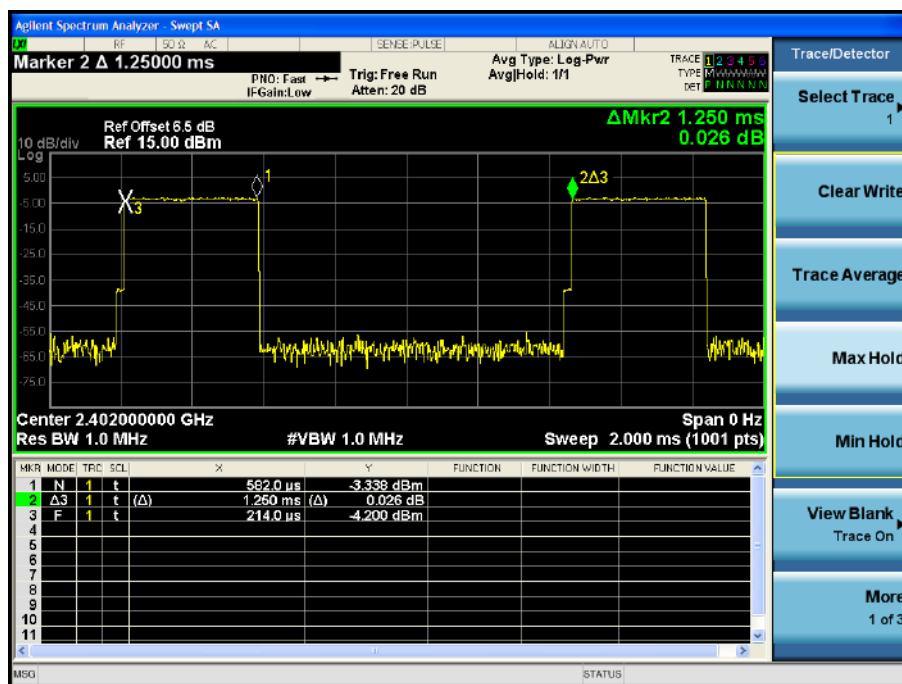
CH 00- DH3



CH 00- DH5



CH 00- DH1

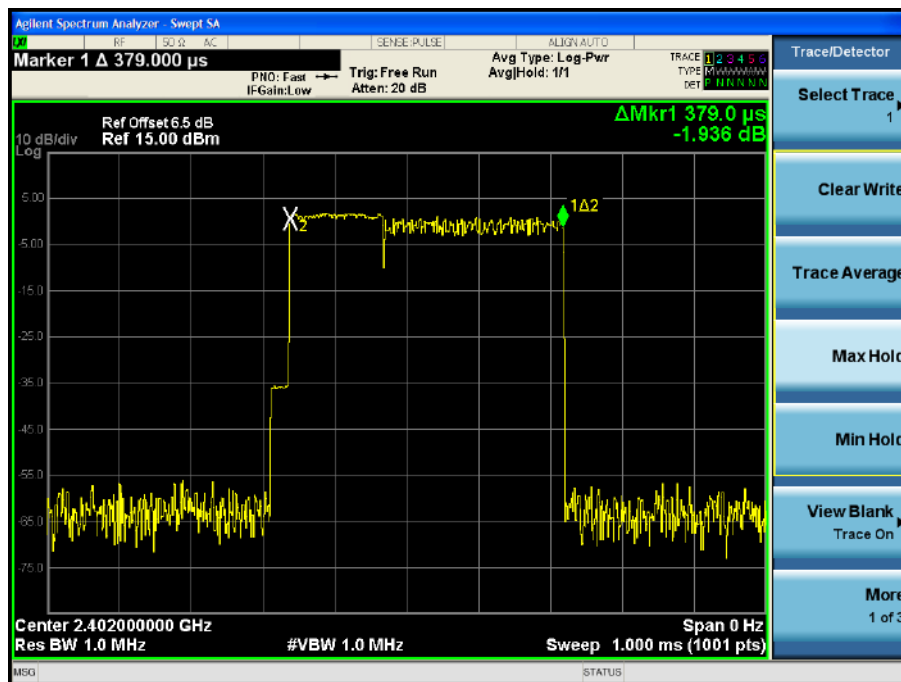


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00-DH1/DH3/DH5 (3Mbps Mode)		
Test Date :	2021-06-16		

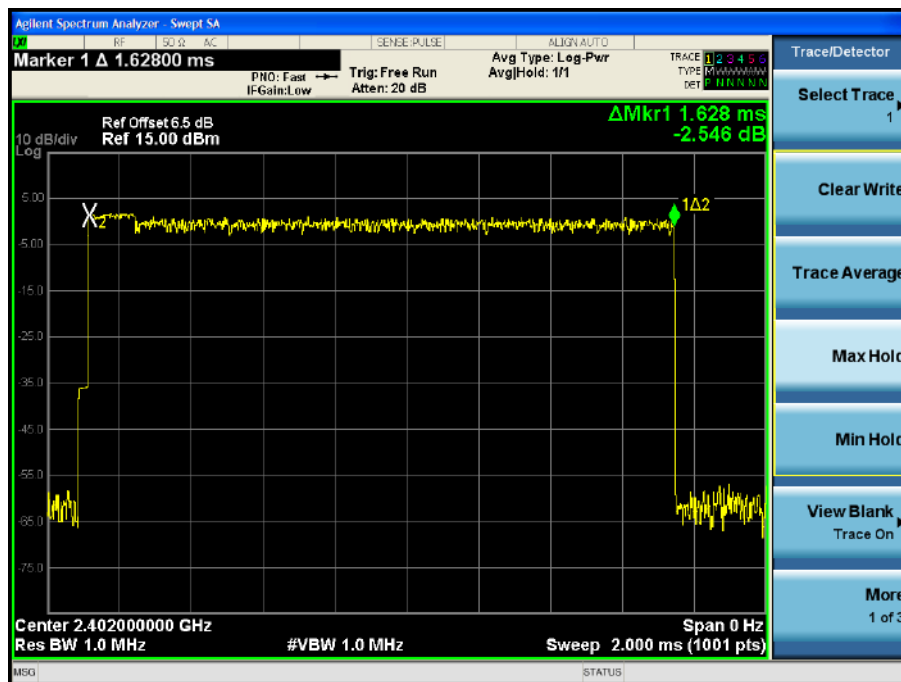
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.379	0.121	0.4000
DH3	2402 MHz	1.628	0.260	0.4000
DH5	2402 MHz	2.880	0.307	0.4000

Data Packet	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
DH1	0.374	1.250	0.299	29.92	5.240	2.674

CH 00- DH1



CH 00- DH3



Agilent Spectrum Analyzer - Swept SA

Marker 1 Δ 2.8800 ms

Ref Offset 6.5 dB
Ref 15.00 dBm

10 dB/div
Log

Center 2.402000000 GHz
Res BW 1.0 MHz
Sweep 5.000 ms (1001 pts)

Msg: MSG

Trace/Detector: Select Trace

Clear Write

Trace Average

Max Hold

Min Hold

View Blank Trace On

More 1 of 3

Agilent Spectrum Analyzer - Sweep SA

Marker 2 Δ 1.2500 ms

Ref Offset 6.5 dB
Ref 15.00 dBm

Δ Mkr2 1.250 ms
-0.072 dB

Center 2.402000000 GHz
Res BW 1.0 MHz
Sweep 2.000 ms (1001 pts)

MKR	MODE	TRG	SCN	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	539.0 μ s	-5.125 dBm			
2	Δ 3	1	t	1.260 ms (Δ)	-0.072 dB			
3	F	1	t	164.0 μ s	-3.077 dBm			

7. HOPPING CHANNEL SEPARATION MEASUREMENT

7.1 APPLIED PROCEDURES / LIMIT

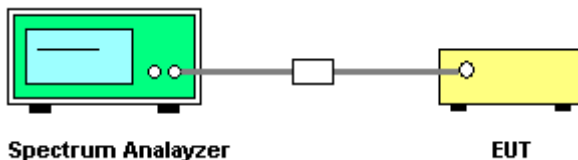
Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 1MHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.1.1 TEST PROCEDURE

- The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- The resolution bandwidth of 300 kHz and the video bandwidth of 1MHz were utilised for channel separation measurement.

7.1.2 TEST SETUP



7.1.3 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.4 TEST RESULTS

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH39 /CH78 (1Mbps Mode)		
Test Date :	2021-06-16		

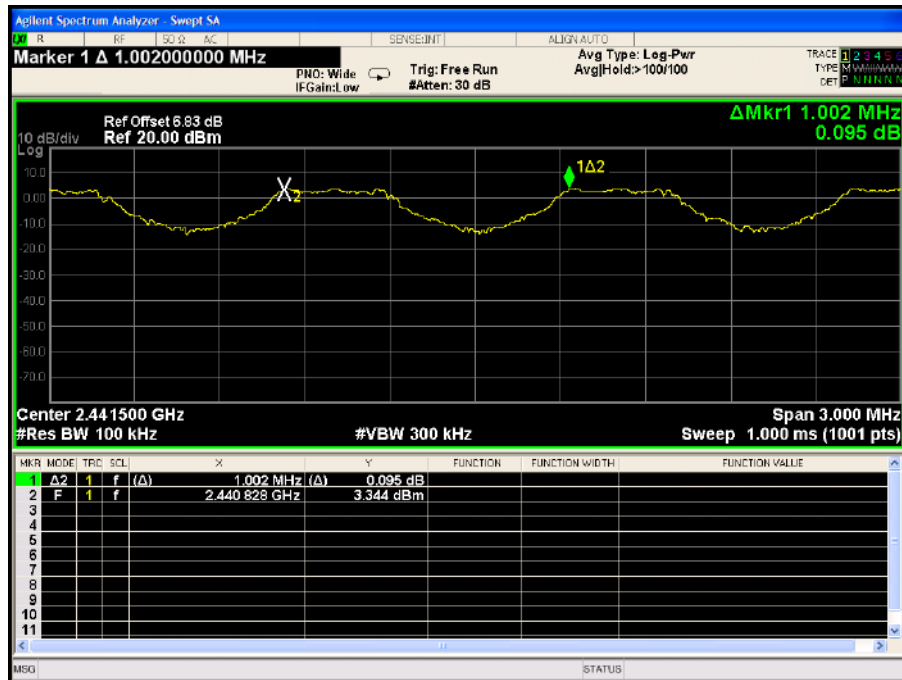
Frequency	Ch. Separation (KHz)	Limit 2/3(20dB bandwidth) (kHz)	Result
2402 MHz	1002	678.67	PASS
2441 MHz	1002	630.67	PASS
2480 MHz	1002	665.33	PASS

Ch. Separation >2/3(20dB bandwidth)

CH 00-1Mbps



CH 39-1Mbps



CH 78-1Mbps



EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH39 /CH78 (3Mbps Mode)		
Test Date :	2021-06-16		

Frequency	Ch. Separation (KHz)	Limit 2/3(20dB bandwidth) (KHz)	Result
2402 MHz	1002	874.67	PASS
2441 MHz	999	862.00	PASS
2480 MHz	996	880.67	PASS

Ch. Separation >2/3(20dB bandwidth)

CH 00-3Mbps





8. PEAK OUTPUT POWER TEST

8.1 APPLIED PROCEDURES / LIMIT

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.10.1(2)	Peak Output Power	0.125 watt or 21dBm	2400-2483.5	PASS

8.1.1 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=1.5MHz, VBW= 1.5MHz, Span= Approximately five times the 20 dB bandwidth , Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



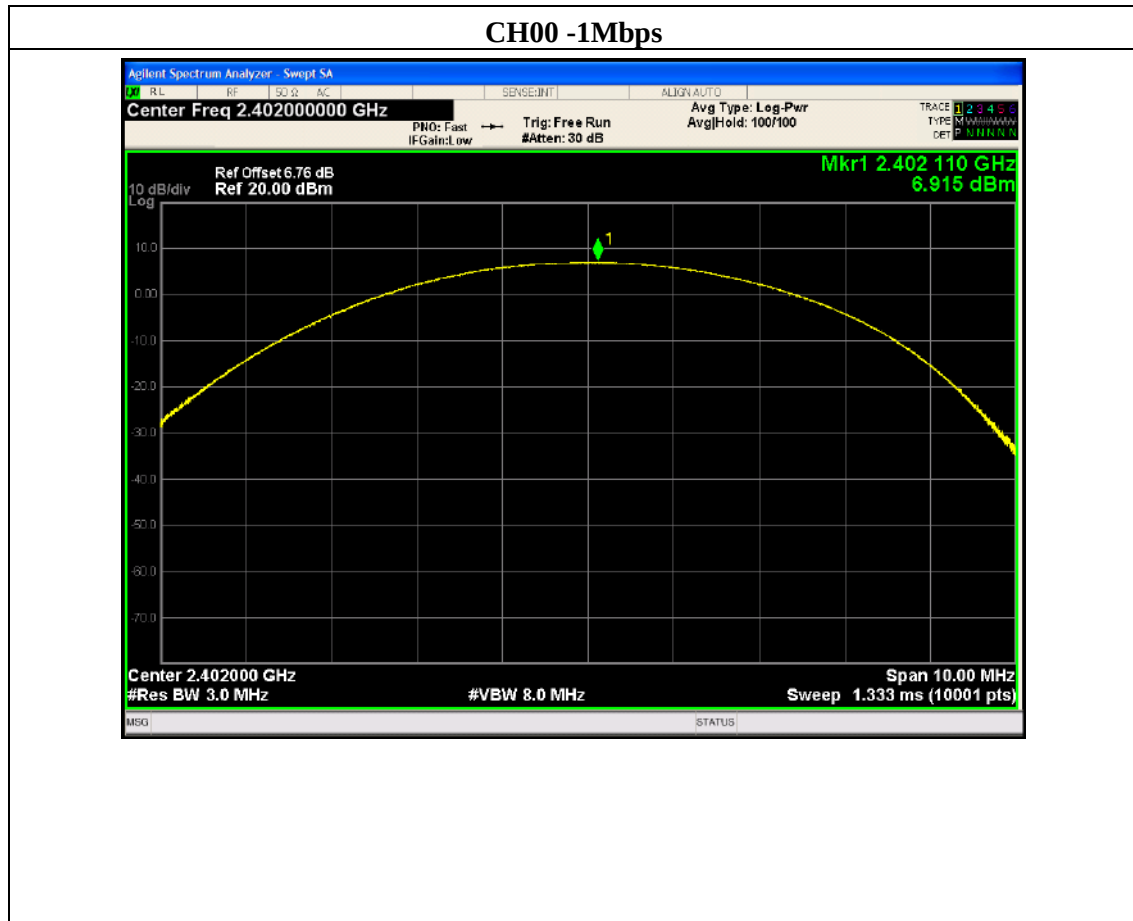
8.1.4 EUT OPERATION CONDITIONS

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.

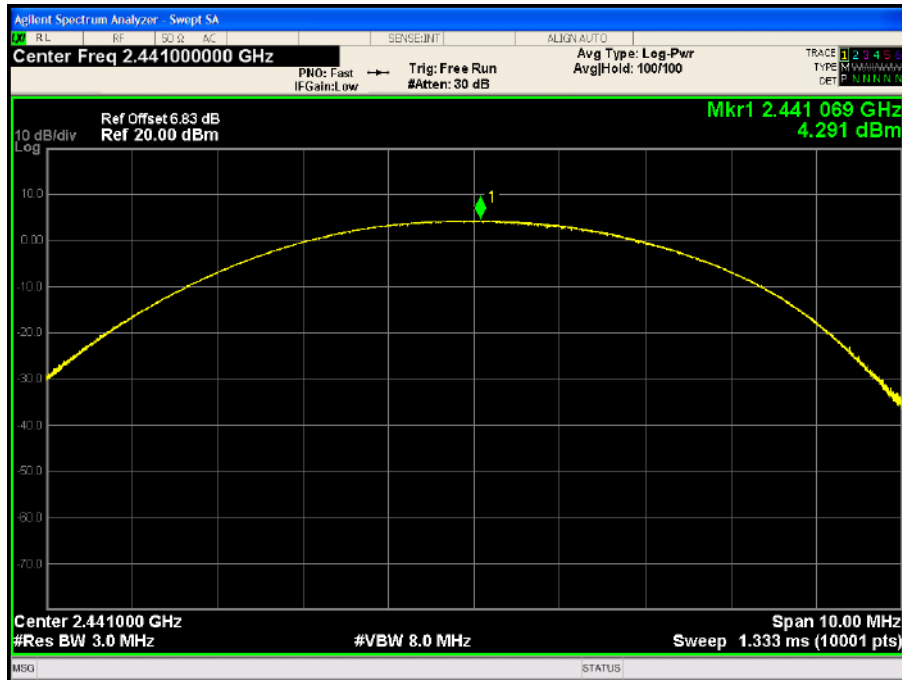
8.1.5 TEST RESULTS

EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00/ CH39 /CH78 (1Mbps Mode)		
Test Date :	2021-06-16		

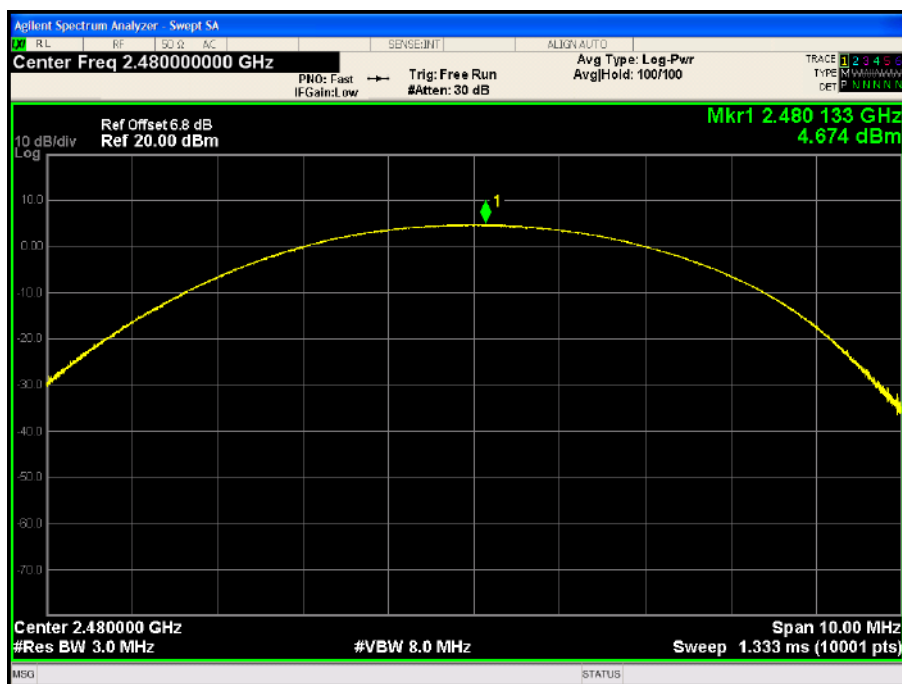
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	6.915	21	0.125
2441	4.291	21	0.125
2480	4.674	21	0.125



CH39 -1Mbps

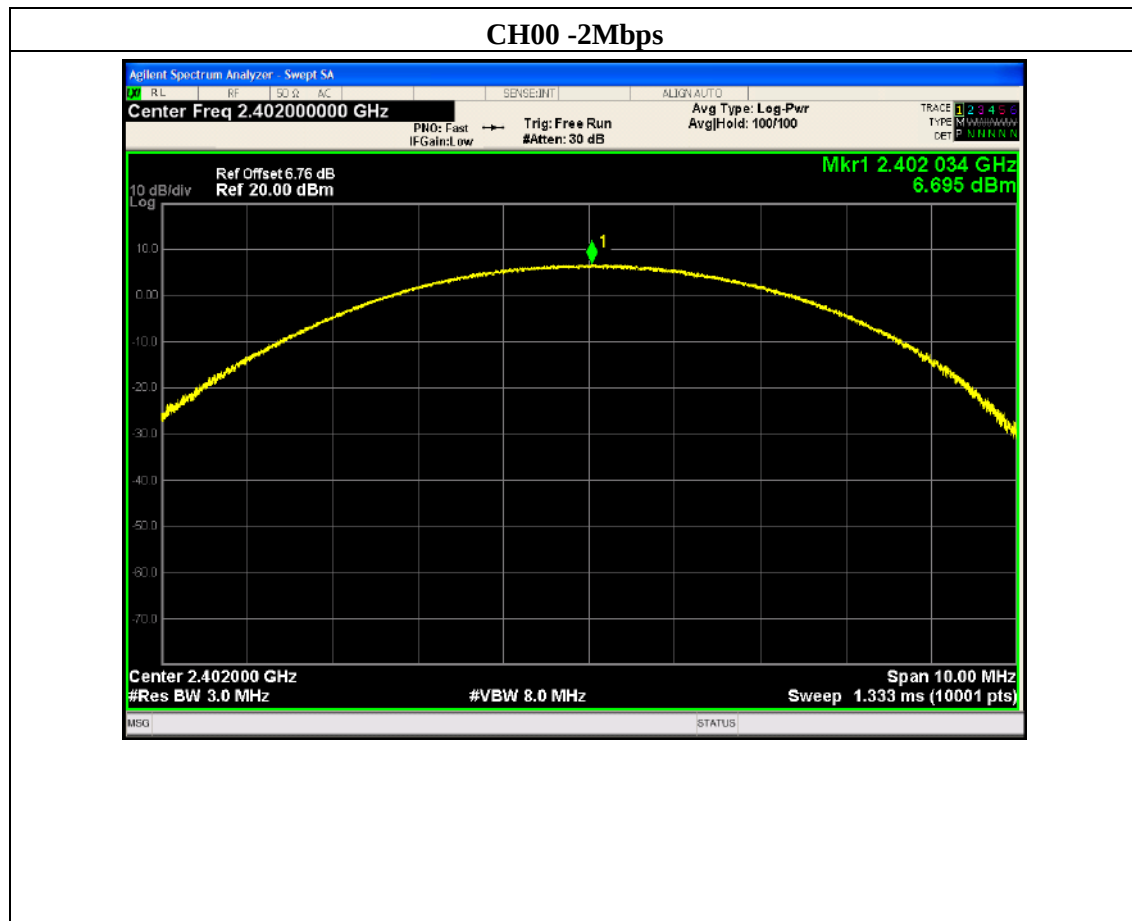


CH78 -1Mbps

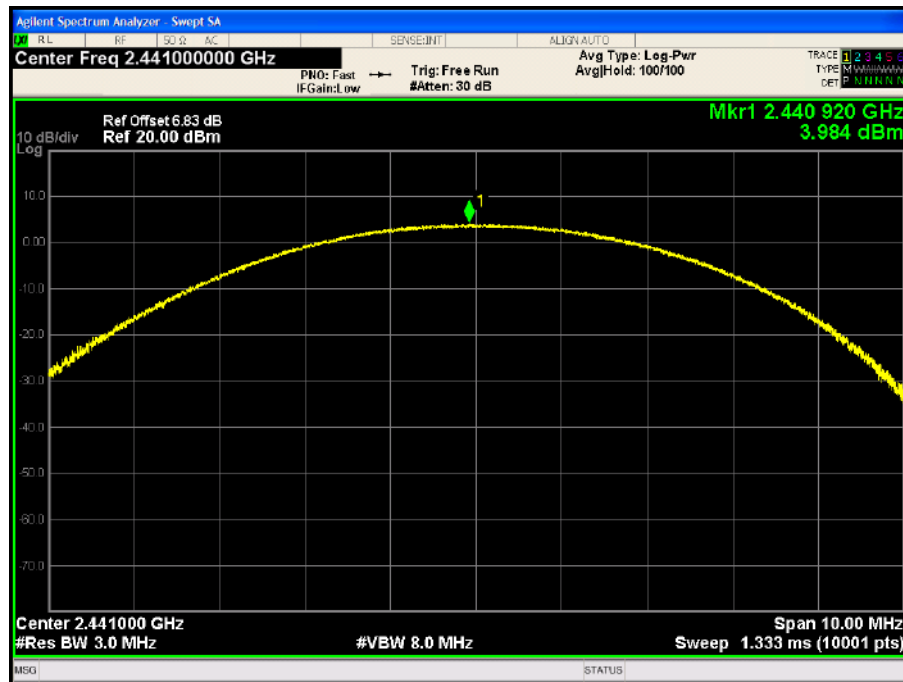


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00/ CH39 /CH78 (2Mbps Mode)		
Test Date :	2021-06-16		

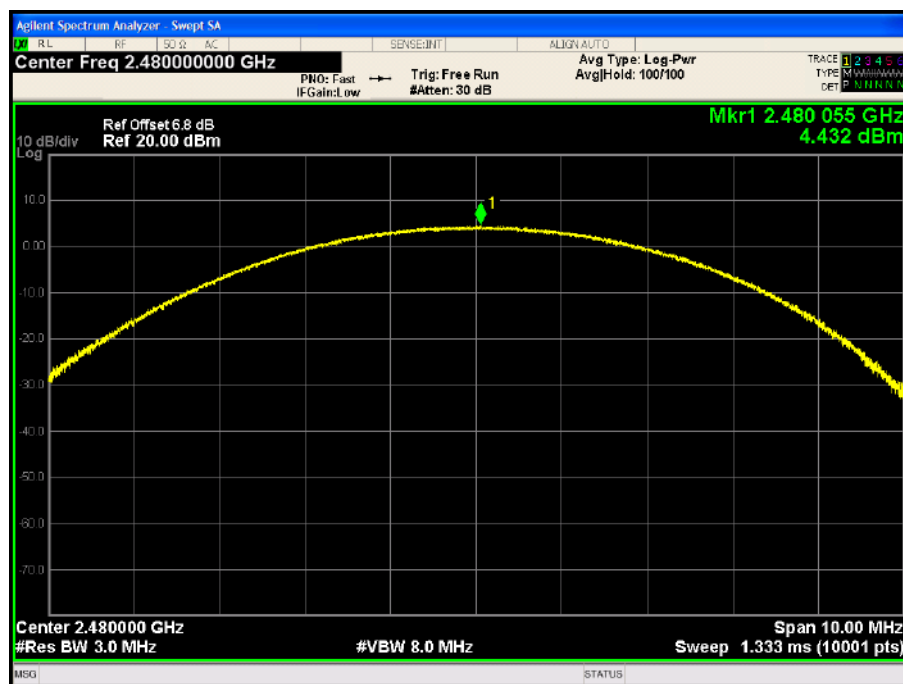
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	6.695	21	0.125
2441	3.984	21	0.125
2480	4.432	21	0.125



CH39 -2Mbps

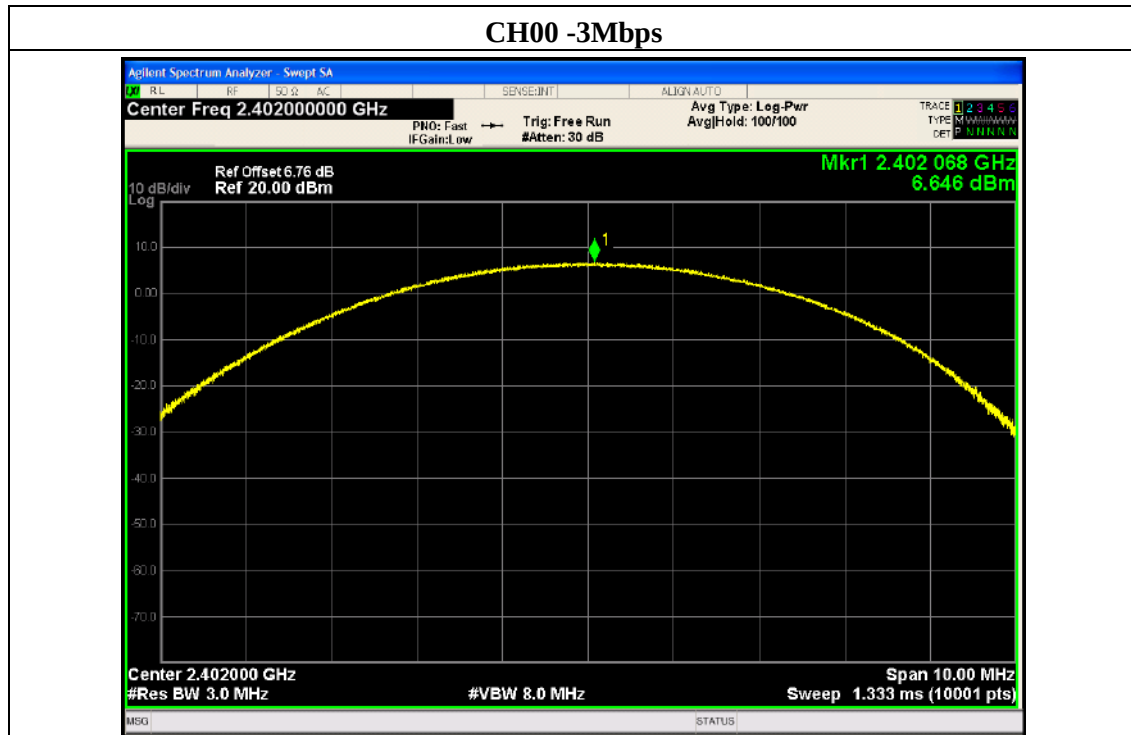


CH78 -2Mbps

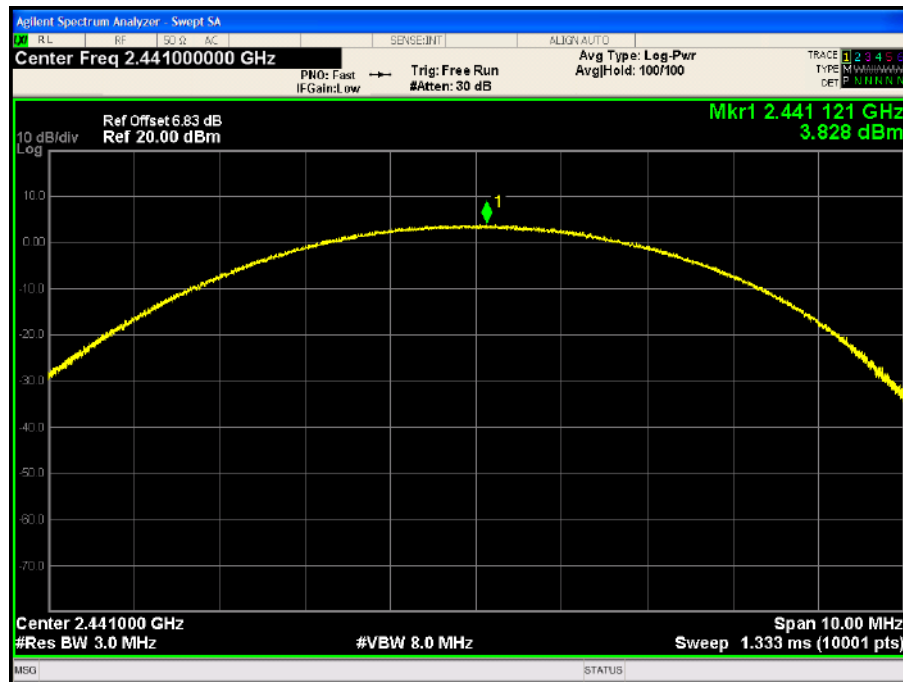


EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00/ CH39 /CH78 (3Mbps Mode)		
Test Date :	2021-06-16		

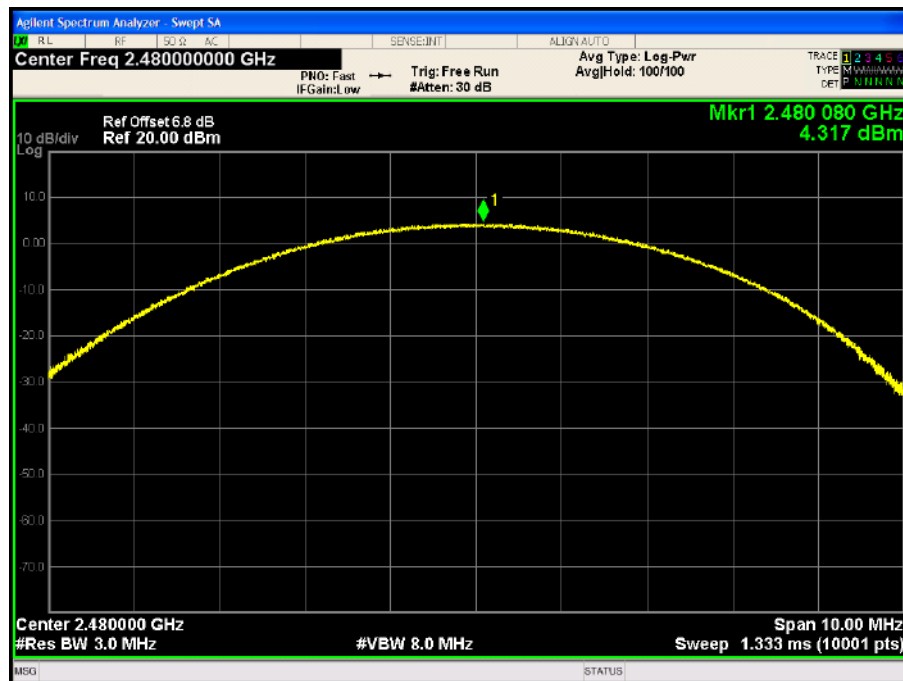
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	6.646	21	0.125
2441	3.828	21	0.125
2480	4.317	21	0.125



CH39 -3Mbps



CH78 -3Mbps



9. ANTENNA CONDUCTED SPURIOUS EMISSION

9.1 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 3.6.

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

9.1.1 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.

9.1.2 TEST SETUP



9.1.3 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.

9.1.4 TEST RESULTS

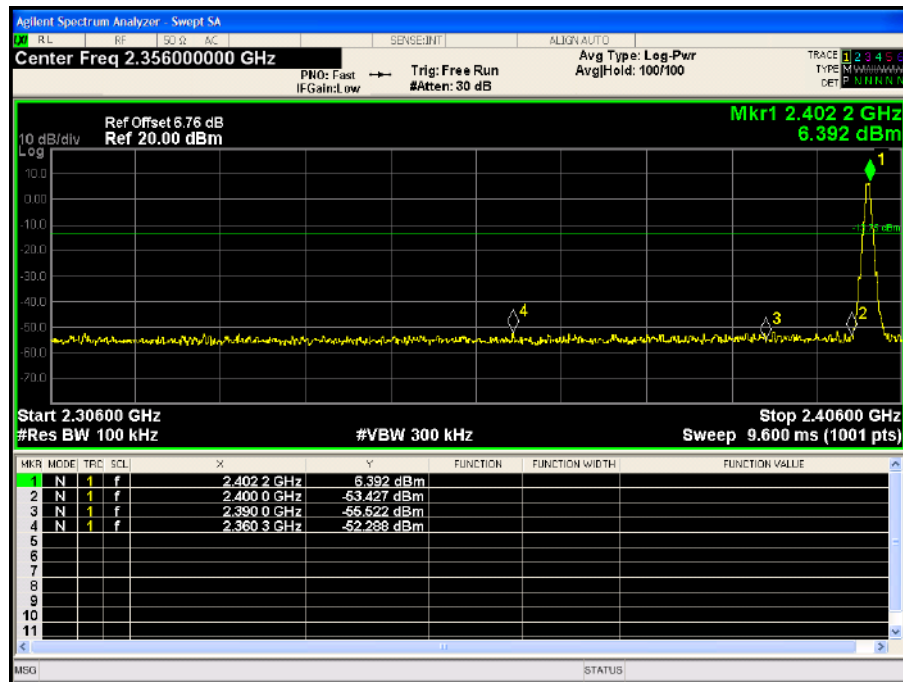
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH78 (1Mbps)		
Test Date :	2021-06-16		

in any 100kHz bandwidth outside the low frequency band	in any 300 kHz bandwidth outside the high frequency band
Pass	Pass
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 300kHz bandwidth within the band that contains the highest level of the desired power.	

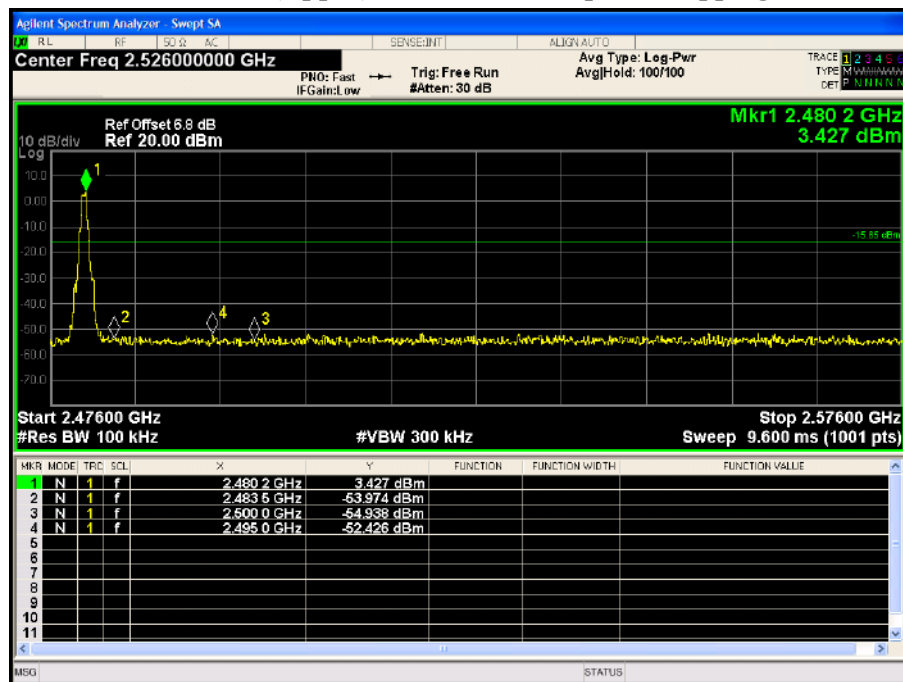
Remark :

- (1) Hopping enabled and disabled have evaluated, and the worst data was reported

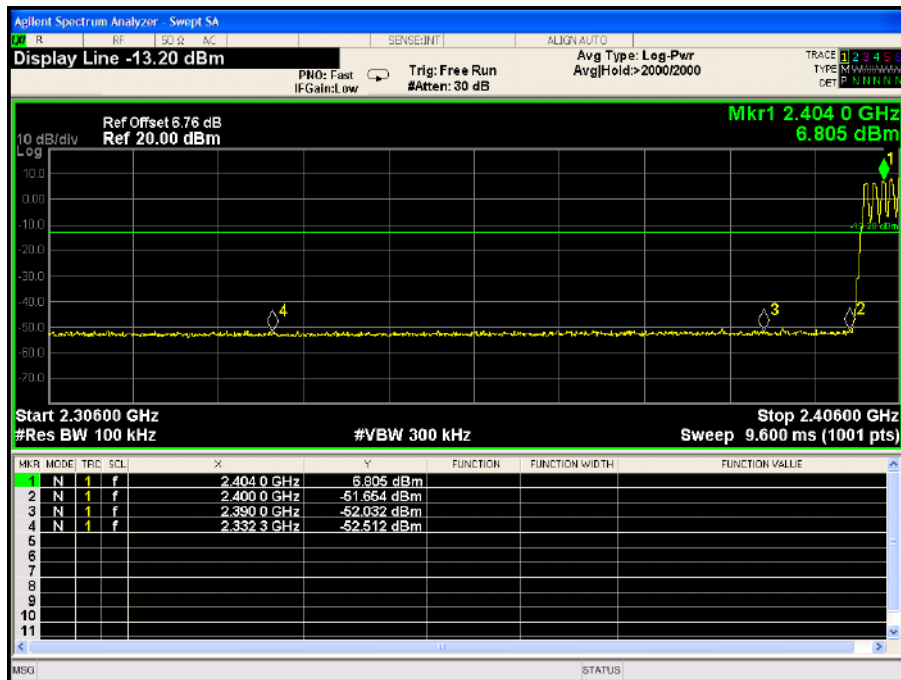
CH00 (Lower) Data rate 1Mbps-No-hopping



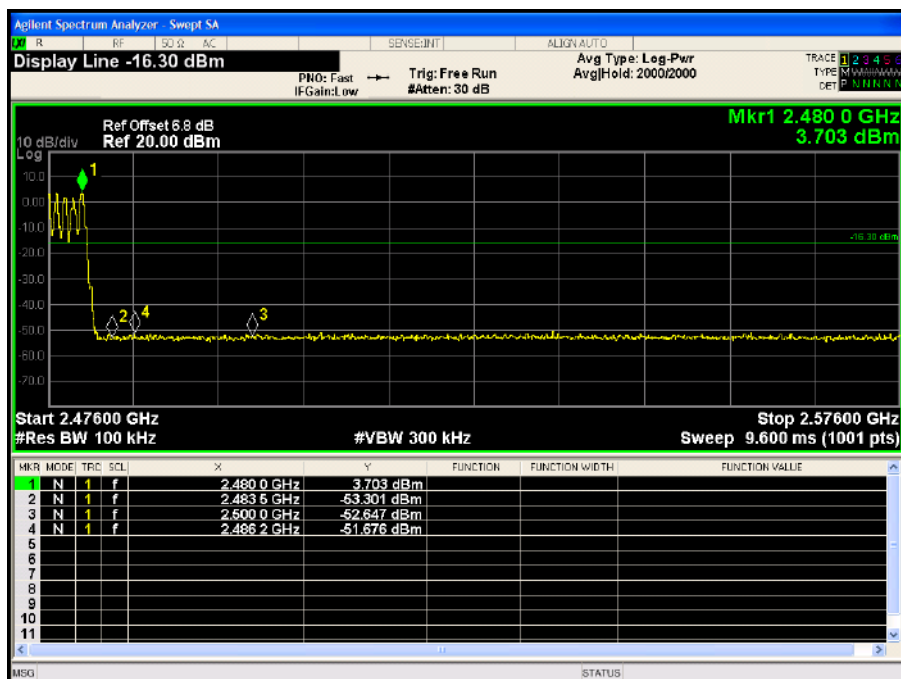
CH 78 (Upper) Data rate 1Mbps-No-hopping



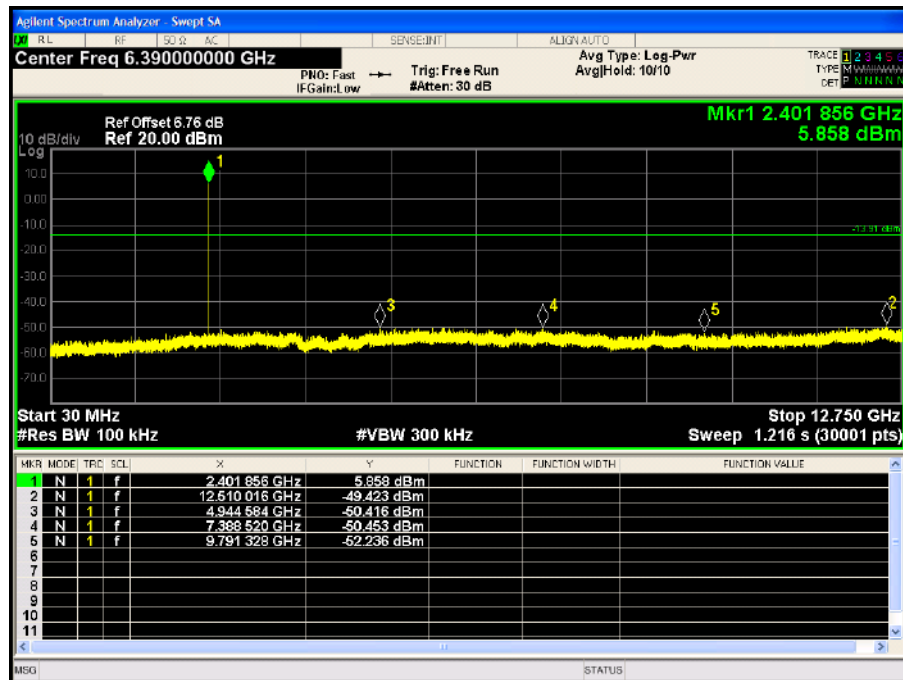
CH00 (Lower) Data rate 1Mbps-hopping



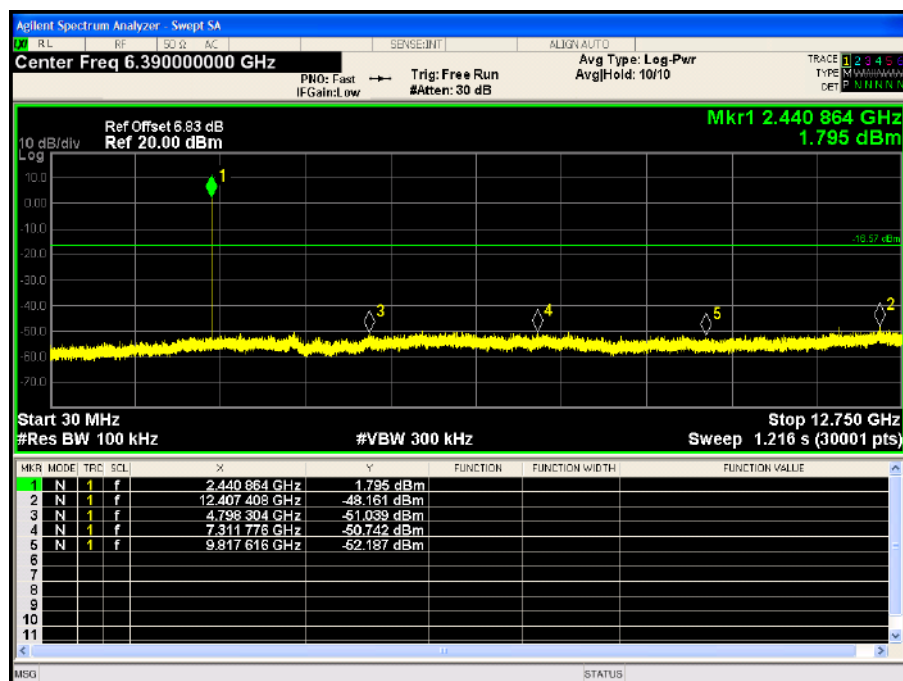
CH 78 (Upper) Data rate 1Mbps-hopping



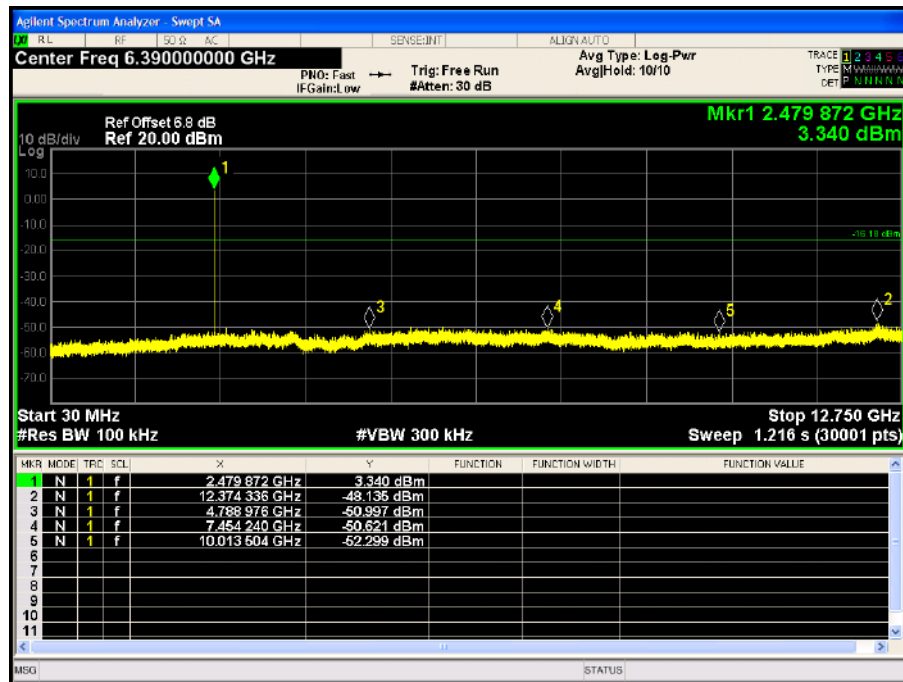
CH01



CH39



CH78



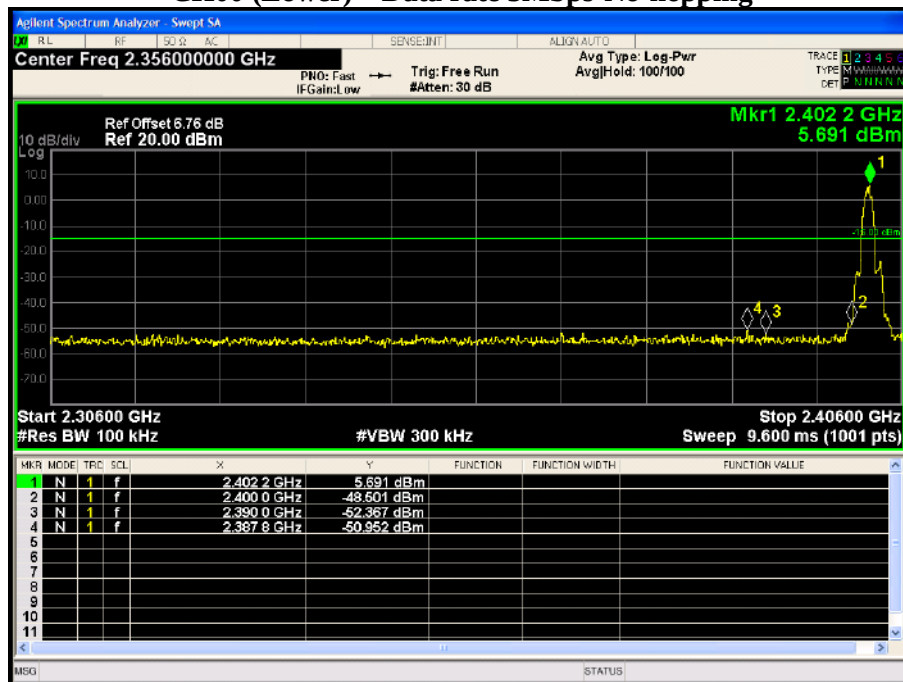
EUT :	Wireless Bluetooth Headset	Model Name :	pili-sanrio
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC3.7V from battery
Test Mode :	CH00 / CH78 (3Mbps)		
Test Date :	2021-06-16		

in any 100kHz bandwidth outside the low frequency band	in any 100 kHz bandwidth outside the high frequency band
Pass	Pass
Result	
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.	

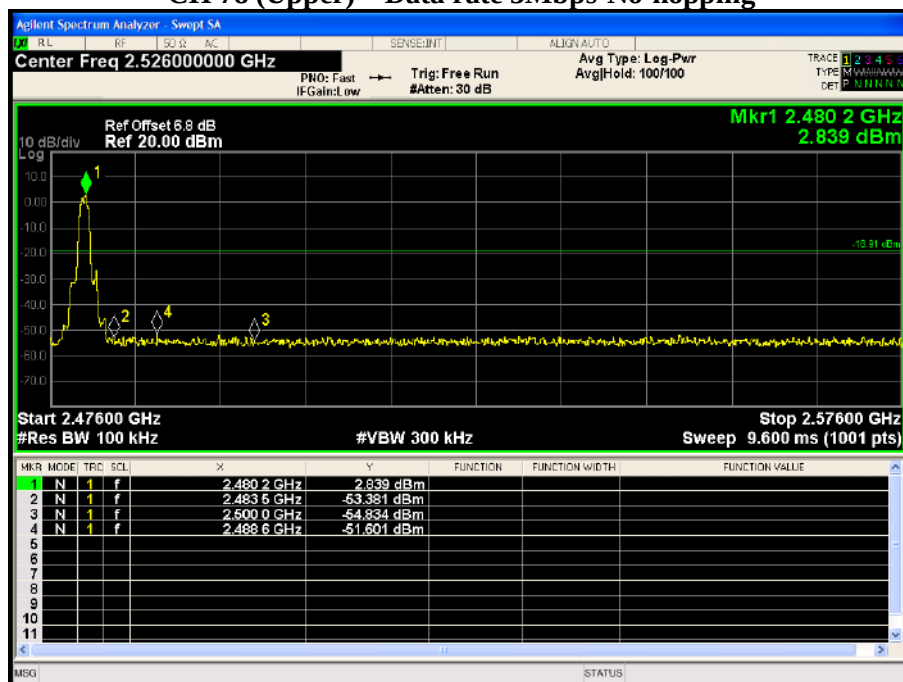
Remark :

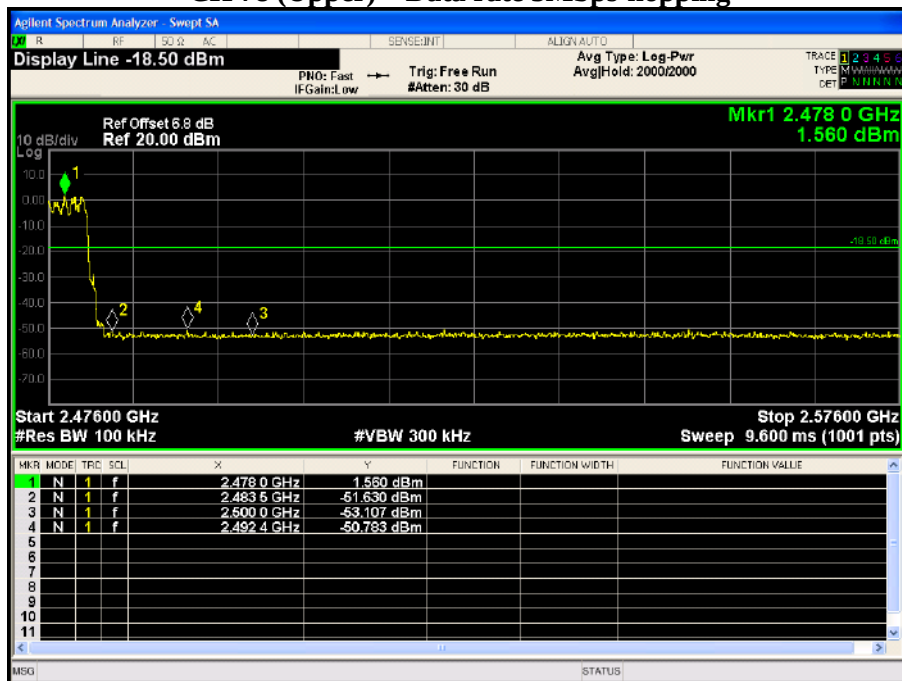
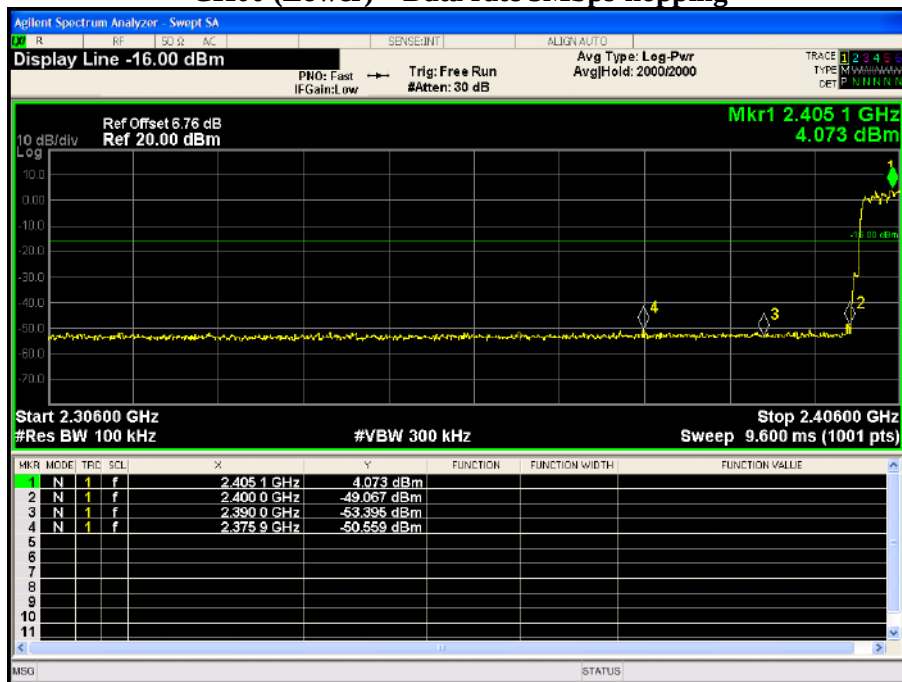
- (1) Hopping enabled and disabled have evaluated, and the worst data was reported

CH00 (Lower) Data rate 3Mbps-No-hopping

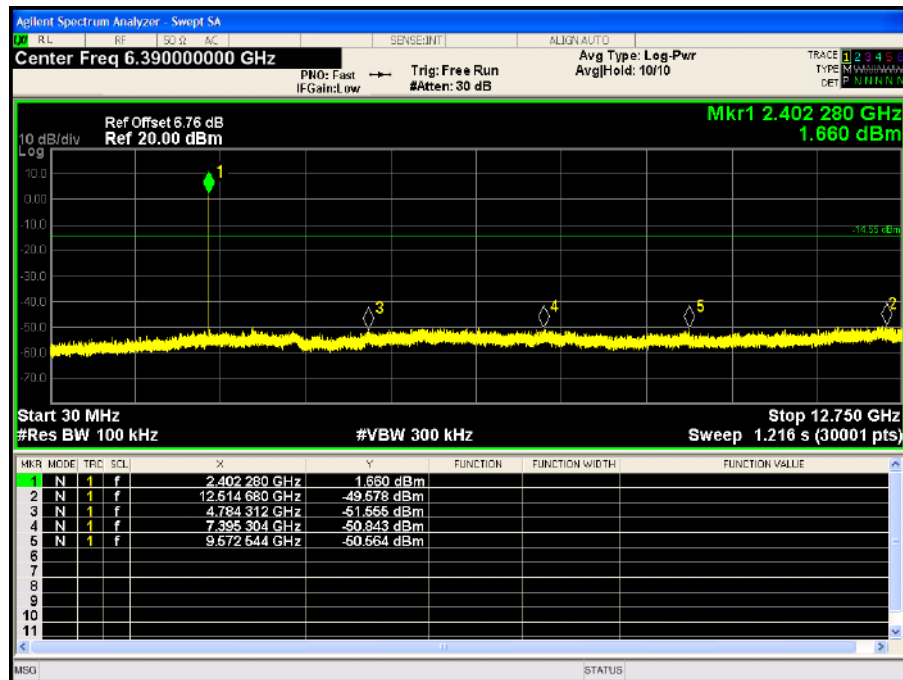


CH 78 (Upper) Data rate 3Mbps-No-hopping

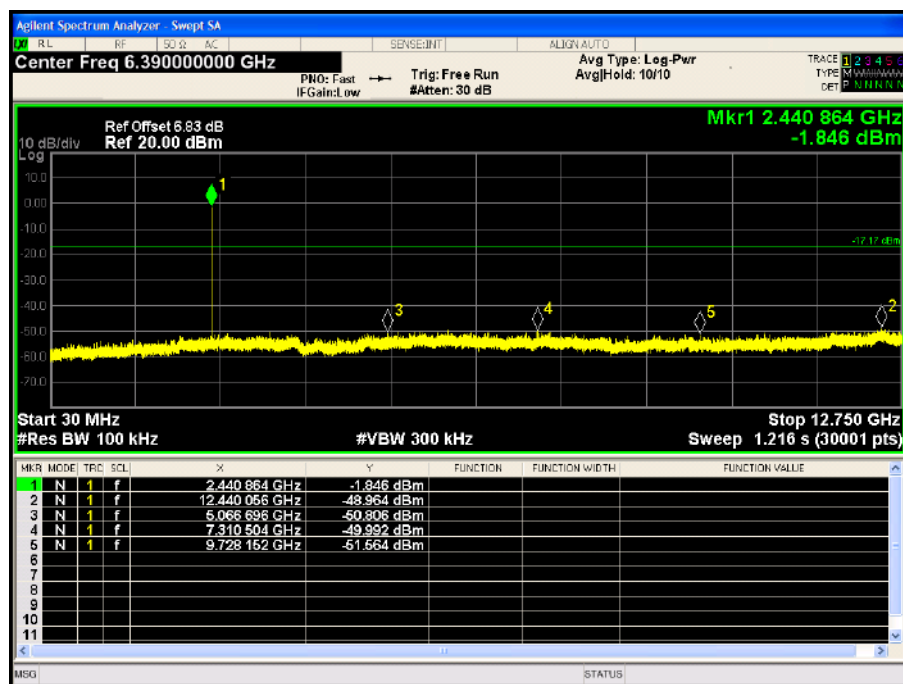




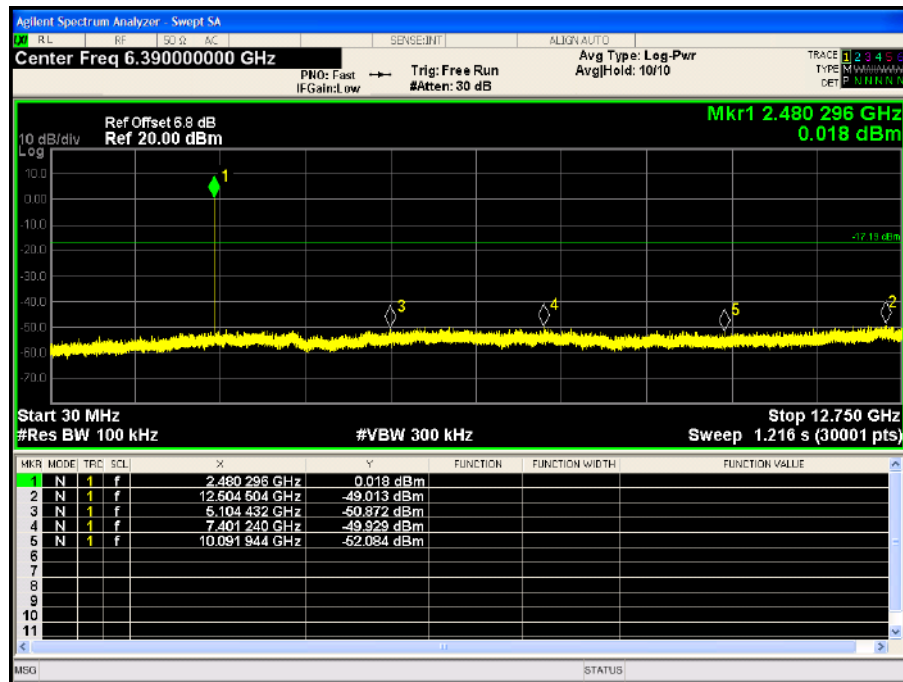
CH01



CH39



CH78



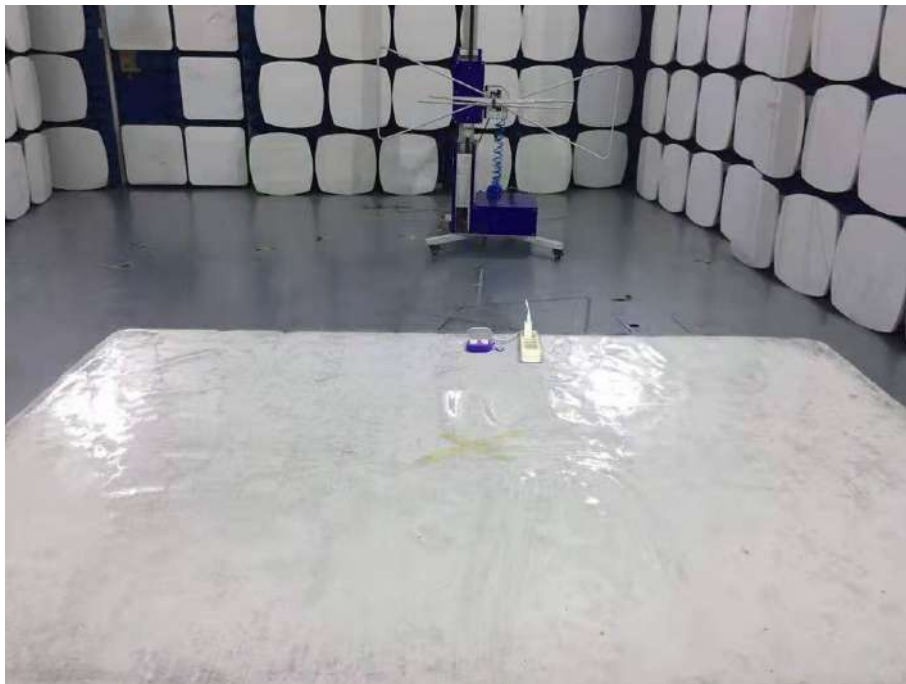
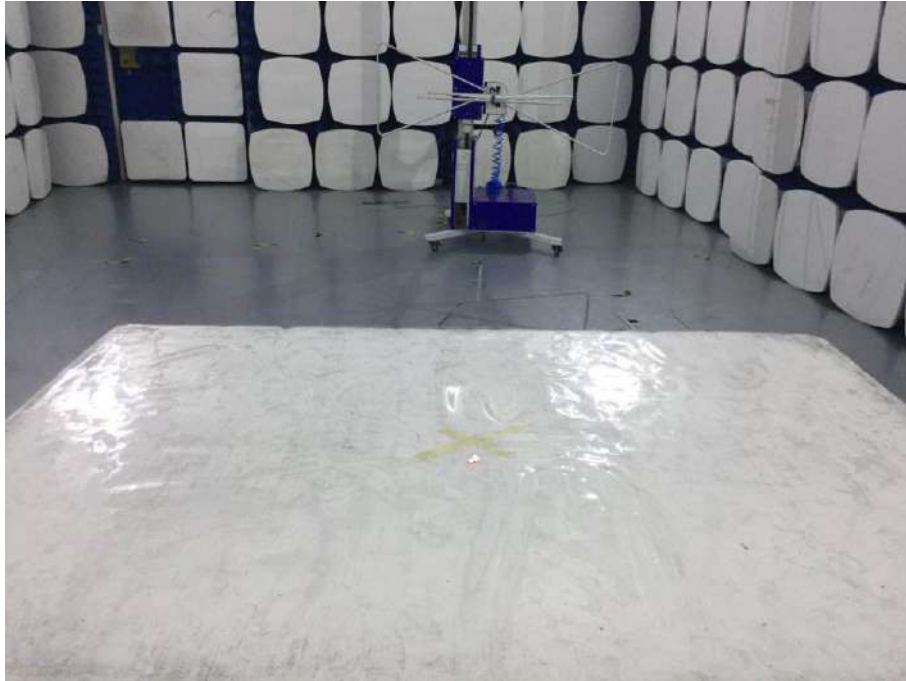
10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

4.10.3.1.1 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.

10.2 EUT ANTENNA

The antenna is a Chip antenna and no consideration of replacement. Antenna max gain is 1.24dBi from 2.4GHz to 2.5GHz.

11. EUT TEST PHOTO**Radiated Measurement Photos
30MHz-1GHz**

**Radiated Measurement Photos
Above 1GHz**



Conducted Measurement Photos



****End of the report****