Test report No.: 2390776R-RFUSV01S-A

TEST REPORT

Product Name	Handy Skin Sensor 3
Trademark	SHISEIDO
Model and /or type reference	HSS3
FCC ID	2AO35-US565
Applicant´s name / address	MORITEX Corporation 1-3-3, Azamino Minami, Aoba-ku, Yokohama-shi, Kanagawa 225-0012, Japan
Manufacturer´s name	MORITEX Corporation
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Verdict Summary	IN COMPLIANCE
Documented By (Senior Project Specialist / Genie Chang)	Genie Chang
Tested By (Senior Engineer / Bill Lin)	Bill Lin
Approved By (Senior Engineer / Alan Chen)	Alan Chen
Date of Receipt	2023/09/26
Date of Issue	2023/12/25
Report Version	V1.0

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Appendix 1: EUT Test Photographs
Appendix 2: Product Photos-Please refer to the file: 2390776R-Product Photos

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

General conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Report No.	Version	Description	Issued Date
2390776R-RFUSV01S-A	V1.0	Initial issue of report.	2023/12/25

1. General Information

1.1. EUT Description

Product Name	Handy Skin Sensor 3
Trademark	SHISEIDO
Model and /or type reference	HSS3
EUT Rated Voltage	AC 100-240 V, 50-60 Hz (by adapter), DC 3.6 V (by battery)
EUT Test Voltage	AC 120 V/60 Hz (by adapter), DC 3.6 V (by battery)
Frequency Range	802.11b/g/n-20 MHz: 2412-2462 MHz
Number of Channels	802.11b/g/n-20 MHz: 11 CH
Data Rate	802.11b: 1-11 Mbps, 802.11g: 6-54 Mbps, 802.11n: up to 72.2 Mbps
Channel separation	802.11b/g/n: 5 MHz
Type of Modulation	802.11b: DSSS, DBPSK, DQPSK, CCK 802.11g/n: OFDM. BPSK, QPSK, 16QAM, 64QAM
Channel Control	Auto
RECHARGEABLE Li-ion BATTERY	Moritex Corporation / MMB/3120 DC 3.6 V
Sensor Stand	Moritex Corporation / HSS3 Stand
Type-C cable	Non-shielded, 1.5 m with one ferrite core bonded
AC Adapter	ADAPTER TECH., / ATS018T-W050V Input: AC 100-240 V~50-60 Hz 0.48 A Output: 5.0 V⎓3.0 A, 15.0 W Cable Out: Non-shielded, 1.5 m with one ferrite core bonded.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Redtop	HD2156	PCB	2.85 dBi for 2400 MHz

Note: The antenna of EUT is conforming to FCC 15.203.

The antenna gain as by the manufacturer provided.

802.11b/g/n-20 MHz Center Frequency of Each Channel:

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

Note:

1. The EUT is a Handy Skin Sensor 3 with a built-in WLAN transceiver, this report for 2.4 GHz WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test. The other channels are for reference only.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. DEKRA has evaluated each test mode. Only the worst case is shown in the report.
5. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
6. These tests are conducted on a sample for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode	Mode 1	Transmit (802.11b)
		Transmit (802.11g)
		Transmit (802.11n-20 MHz)
	Mode 2	Charge mode

1.2. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	Latitude 5501	9V4JL13	N/A

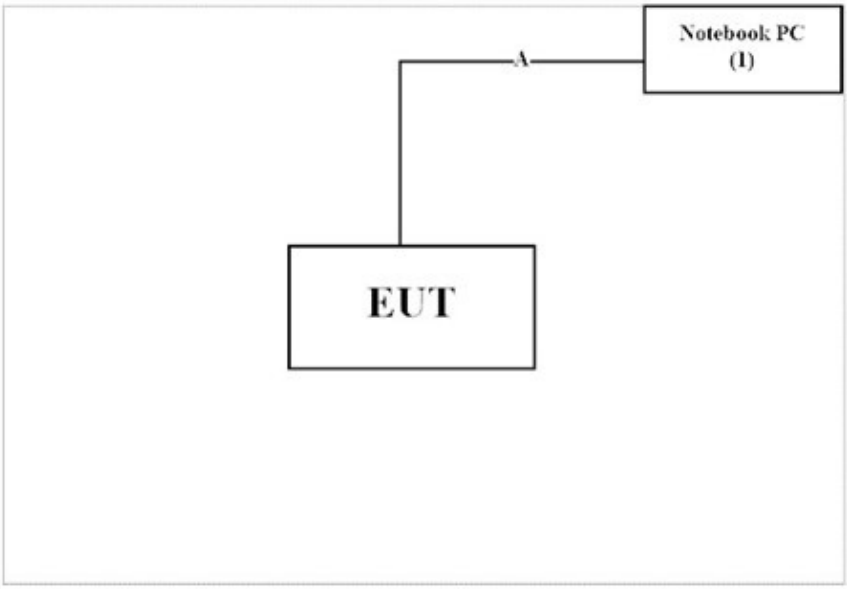
Cable Type		Cable Description
A	Type-C cable	Non-shielded, 1.5m, with one ferrite core bonded.

Charge mode

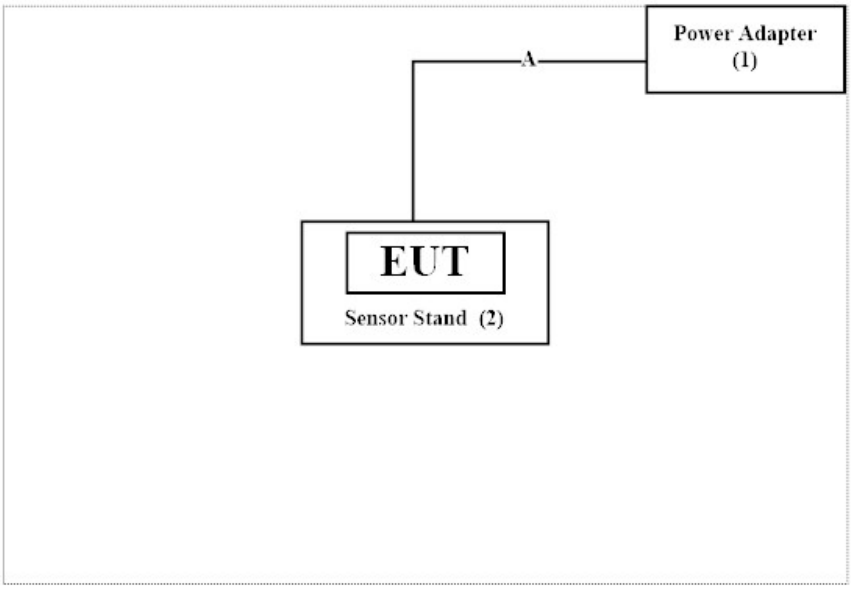
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	ADAPTER TECH.	ATS018T-W050V	N/A	N/A
2	Sensor Stand	Moritex Corporation	HSS3 Stand	N/A	N/A

Cable Type		Cable Description
A	Power Cable	Non-shielded, 1.5m, with one ferrite core bonded.

1.3. Configuration of Tested System



Charge mode



1.4. EUT Exercise Software

1	Setup the EUT as shown in Section 1.3.
2	Execute software “wl Version 6.37.32(TOB)(r410874-20210326-1)” on the Notebook PC.
3	Configure the test mode, the test channel, and the data rate.
4	Press “OK” to start the continuous transmit.
5	Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	17.9 °C
	Humidity (%RH)	10~90 %	59.0 %
Radiated Emission	Temperature (°C)	10~40 °C	21.7 °C
	Humidity (%RH)	10~90 %	67.4 %
Conductive	Temperature (°C)	10~40 °C	26.1 °C
	Humidity (%RH)	10~90 %	51.2 %

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

1.6. List of Test Item and Equipment

For Conduction Measurements / HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	EMI Test Receiver	R&S	ESR7	101601	2023/06/20	2024/06/19
V	Two-Line V-Network	R&S	ENV216	101306	2023/03/16	2024/03/15
V	Two-Line V-Network	R&S	ENV216	101307	2023/08/17	2024/08/16
V	Coaxial Cable	SUHNER	RG400_BNC	RF001	2023/01/10	2024/01/09

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103467	2023/05/30	2024/05/29
V	Spectrum Analyzer	KEYSIGHT	N9010A	MY53470892	2023/11/09	2024/11/08
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000539	2023/05/15	2024/05/14
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240002	2023/05/18	2024/05/17
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240003	2023/05/18	2024/05/17

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: RF Conducted Test Tools R3 V3.0.0.14.

For Radiated Measurements /HY-CB02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	49611	2023/02/21	2024/02/20
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0675	2023/08/09	2025/08/08
V	Horn Antenna	RF SPIN	DRH18-E	210503A18ES	2023/02/24	2024/02/23
V	Horn Antenna	Com-Power	AH-840	101100	2023/10/02	2025/10/01
V	Pre-Amplifier	SGH	SGH0301-9	20211007-8	2023/01/10	2024/01/09
V	Pre-Amplifier	SGH	SGH118-HS	20211102-2	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980285	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
V	Filter	MICRO TRONICS	BRM50702	G249	2023/01/05	2024/01/04
	Filter	MICRO TRONICS	BRM50716	G067	2023/01/05	2024/01/04
	WIFI 6E Filter	Marvelous Microwave Inc.	MFN-5925.7125.S1	C50002N	2023/01/05	2024/01/04
V	EMI Test Receiver	R&S	ESR3	102793	2023/12/11	2024/12/10
V	Spectrum Analyzer	R&S	FSV3044	101113	2023/02/04	2024/02/03
V	Coaxial Cable	SGH	HA800	GD20110223-2	2023/01/10	2024/01/09
V	Coaxial Cable	SGH	HA800	GD20110222-4		
V	Coaxial Cable	SGH	SGH18	202108-5		
V	Coaxial Cable	SGH	SGH18	202212-2	2023/11/27	2024/11/26

Note:
1. Bi-Log Antenna and Horn Antenna(AH-840) is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

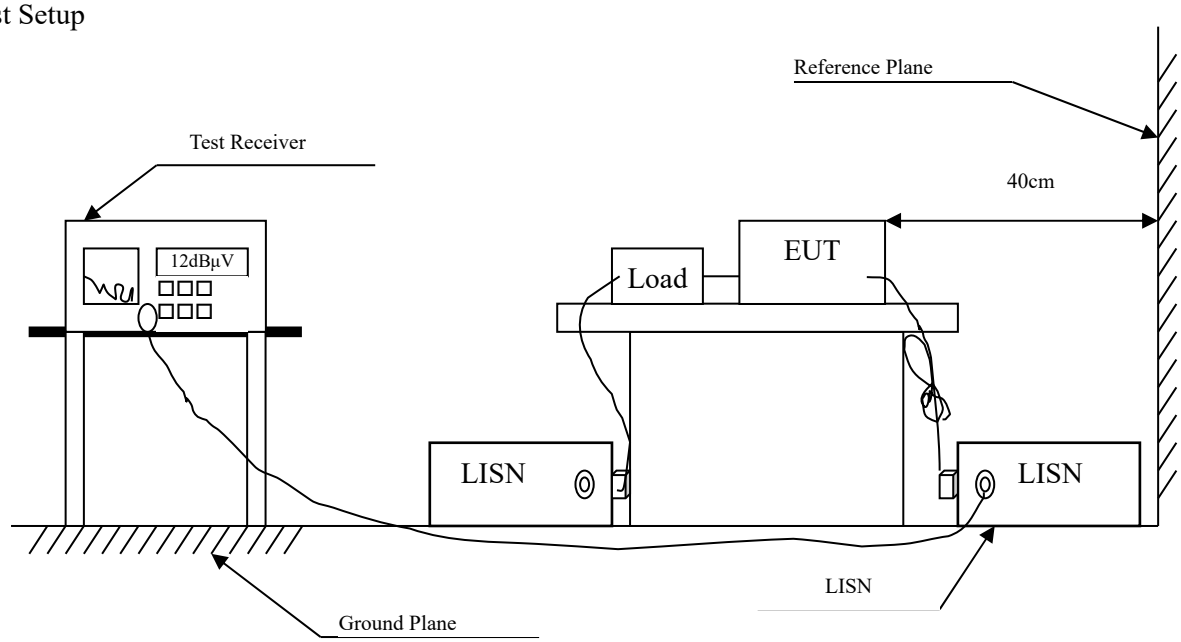
1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	**Uncertainty**
Conducted Emission	±3.50 dB
Peak Power Output	Spectrum Analyzer: ±2.14 dB Power Meter: ±1.05 dB
Radiated Emission	9 kHz~30 MHz: ±3.88 dB 30 MHz~1 GHz: ±4.42 dB 1 GHz~18 GHz: ±4.28 dB 18 GHz~40 GHz: ±3.90 dB
RF Antenna Conducted Test	±2.14 dB
Band Edge	For Radiated: 9 kHz~30 MHz: ±3.88 dB 30 MHz~1 GHz: ±4.42 dB 1 GHz~18 GHz: ±4.28 dB 18 GHz~40 GHz: ±3.90 dB For Conducted: ±2.14 dB
6dB Bandwidth	±1580.61 Hz
Power Density	±2.14 dB
Duty Cycle	±0.53 %

2. Conducted Emission

2.1. Test Setup



2.2. Limits

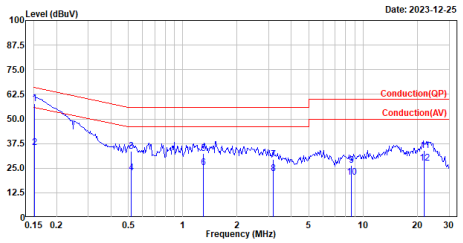
FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

2.4. Test Result of Conducted Emission

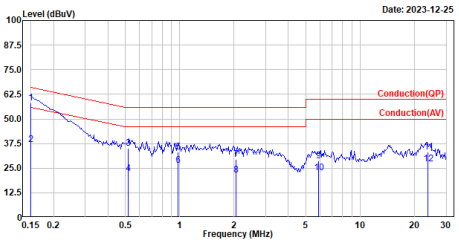
Site :HY-SR01
Condition :Line
Mode :n20_2437MHz_TX
test by :Neko



No.	Frequency MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	0.151	57.92	65.96	-8.04	48.24	9.68	QP
2	0.151	35.61	55.96	-20.35	25.93	9.68	Average
3	0.520	33.63	56.00	-22.37	23.95	9.68	QP
4	0.520	22.50	46.00	-23.50	12.82	9.68	Average
5	1.306	32.62	56.00	-23.38	22.87	9.75	QP
6	1.306	25.13	46.00	-20.87	15.38	9.75	Average
7	3.166	29.60	56.00	-26.40	19.38	10.22	QP
8	3.166	22.31	46.00	-23.69	12.09	10.22	Average
9	8.623	26.60	60.00	-33.40	15.79	10.81	QP
10	8.623	20.37	50.00	-29.63	9.56	10.81	Average
11	21.813	33.99	60.00	-26.01	23.36	10.63	QP
12	21.813	27.61	50.00	-22.39	16.98	10.63	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

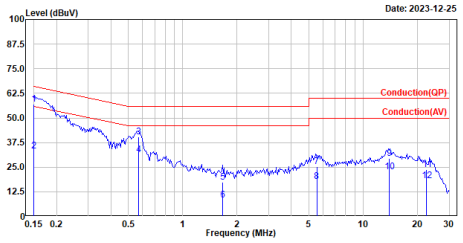
Site :HY-SR01
Condition :Neutral
Mode :n20_2437MHz_TX
test by :Neko



No.	Frequency MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	0.150	58.03	65.99	-7.96	48.37	9.66	QP
2	0.150	36.92	55.99	-19.07	27.26	9.66	Average
3	0.521	34.92	56.00	-21.08	25.26	9.66	QP
4	0.521	22.20	46.00	-23.80	12.54	9.66	Average
5	0.982	33.12	56.00	-22.88	23.42	9.70	QP
6	0.982	26.32	46.00	-19.68	16.62	9.70	Average
7	2.059	29.43	56.00	-26.57	19.61	9.82	QP
8	2.059	21.47	46.00	-24.53	11.65	9.82	Average
9	5.881	28.81	60.00	-31.19	17.99	10.82	QP
10	5.881	22.52	50.00	-27.48	11.70	10.82	Average
11	23.755	33.07	60.00	-26.93	22.36	10.71	QP
12	23.755	27.31	50.00	-22.69	16.60	10.71	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

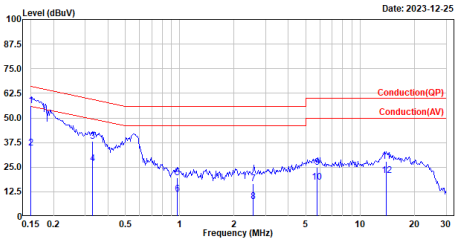
Site :HY-SR01
Condition :Line
Mode :Charge mode
test by :Neko



No.	Frequency MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	0.150	56.93	65.99	-9.06	47.25	9.68	QP
2	0.150	33.19	55.99	-22.80	23.51	9.68	Average
3	0.571	40.29	56.00	-15.71	30.61	9.68	QP
4	0.571	31.33	46.00	-14.67	21.65	9.68	Average
5	1.662	17.24	56.00	-38.76	7.45	9.79	QP
6	1.662	8.12	46.00	-37.88	-1.67	9.79	Average
7	5.530	25.27	60.00	-34.73	14.44	10.83	QP
8	5.530	17.68	50.00	-32.32	6.85	10.83	Average
9	13.911	29.57	60.00	-30.43	18.78	10.79	QP
10	13.911	22.63	50.00	-27.37	11.84	10.79	Average
11	22.474	23.83	60.00	-36.17	13.21	10.62	QP
12	22.474	18.10	50.00	-31.90	7.48	10.62	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

Site :HY-SR01
Condition :Neutral
Mode :Charge mode
test by :Neko



No.	Frequency MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	0.150	56.16	66.00	-9.84	46.50	9.66	QP
2	0.150	34.67	56.00	-21.33	25.01	9.66	Average
3	0.328	38.29	59.50	-21.21	28.63	9.66	QP
4	0.328	26.86	49.50	-22.64	17.20	9.66	Average
5	0.967	19.53	56.00	-36.47	9.83	9.70	QP
6	0.967	11.47	46.00	-34.53	1.77	9.70	Average
7	2.562	16.50	56.00	-39.50	6.51	9.99	QP
8	2.562	7.39	46.00	-38.61	-2.60	9.99	Average
9	5.745	24.76	60.00	-35.24	13.94	10.82	QP
10	5.745	17.54	50.00	-32.46	6.72	10.82	Average
11	13.933	28.09	60.00	-31.91	17.27	10.82	QP
12	13.933	20.81	50.00	-29.19	9.99	10.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

3. Maximum Power Output

3.1. Test Setup

3.2. Limits

The maximum peak power shall be less 1 Watt.

3.3. Test Procedure

The EUT was tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method. The maximum average conducted output power using C63.10:2013 Section 11.9.2.3 Measurement using a power meter (PM). (Measurement using a gated RF average-reading power meter).

3.4. Test Result of Peak Power Output

Product : Handy Skin Sensor 3
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11b)
Test Date : 2023/12/18

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Output Power (dBm)	Limit (dBm)	Result
01	2412	1	11.34	<30	Pass
06	2437	1	11.24	<30	Pass
11	2462	1	11.12	<30	Pass

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Peak Output Power (dBm)	Limit (dBm)	Result
01	2412	1	14.46	<30	Pass
06	2437	1	14.37	<30	Pass
11	2462	1	14.32	<30	Pass

Product : Handy Skin Sensor 3
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11g)
Test Date : 2023/12/18

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Output Power (dBm)	Limit (dBm)	Result
01	2412	6	10.94	<30	Pass
06	2437	6	11.00	<30	Pass
11	2462	6	11.05	<30	Pass

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Peak Output Power (dBm)	Limit (dBm)	Result
01	2412	6	19.68	<30	Pass
06	2437	6	19.74	<30	Pass
11	2462	6	19.85	<30	Pass

Product : Handy Skin Sensor 3
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11n-20 MHz)
Test Date : 2023/12/18

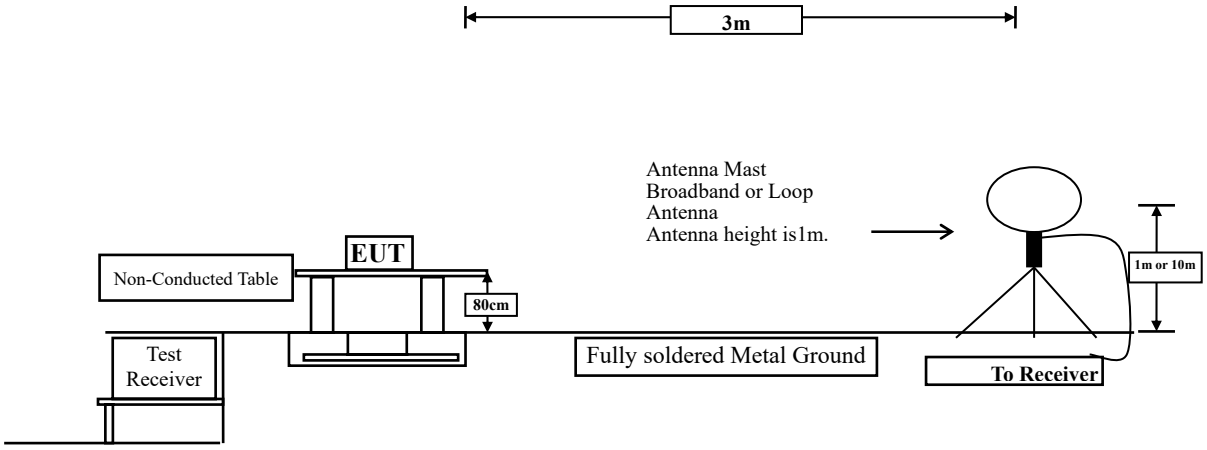
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Output Power (dBm)	Limit (dBm)	Result
01	2412	HT0	10.64	<30	Pass
06	2437	HT0	10.80	<30	Pass
11	2462	HT0	10.54	<30	Pass

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Peak Output Power (dBm)	Limit (dBm)	Result
01	2412	HT0	19.71	<30	Pass
06	2437	HT0	19.83	<30	Pass
11	2462	HT0	19.51	<30	Pass

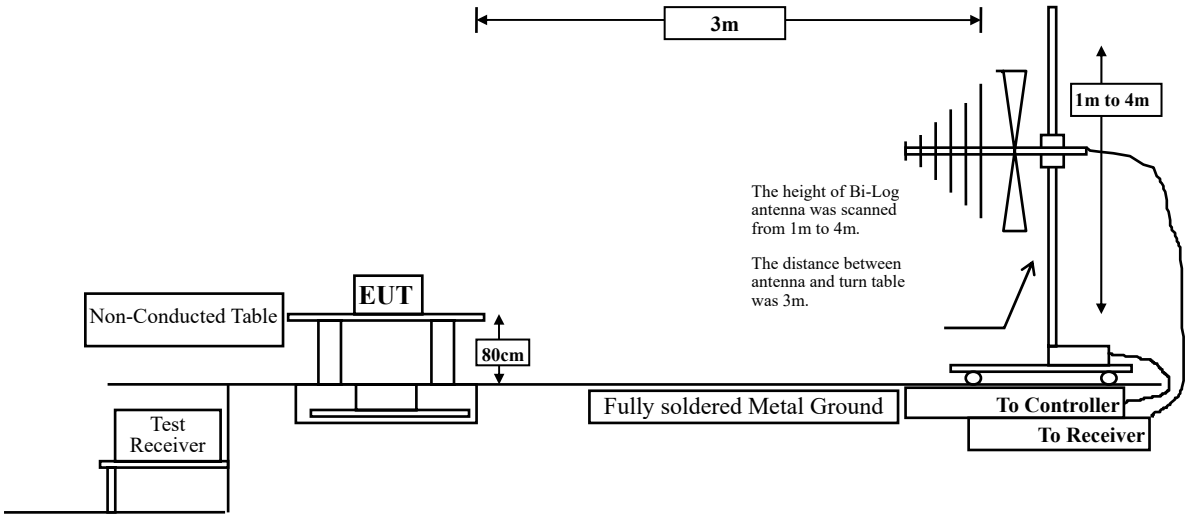
4. Radiated Emission

4.1. Test Setup

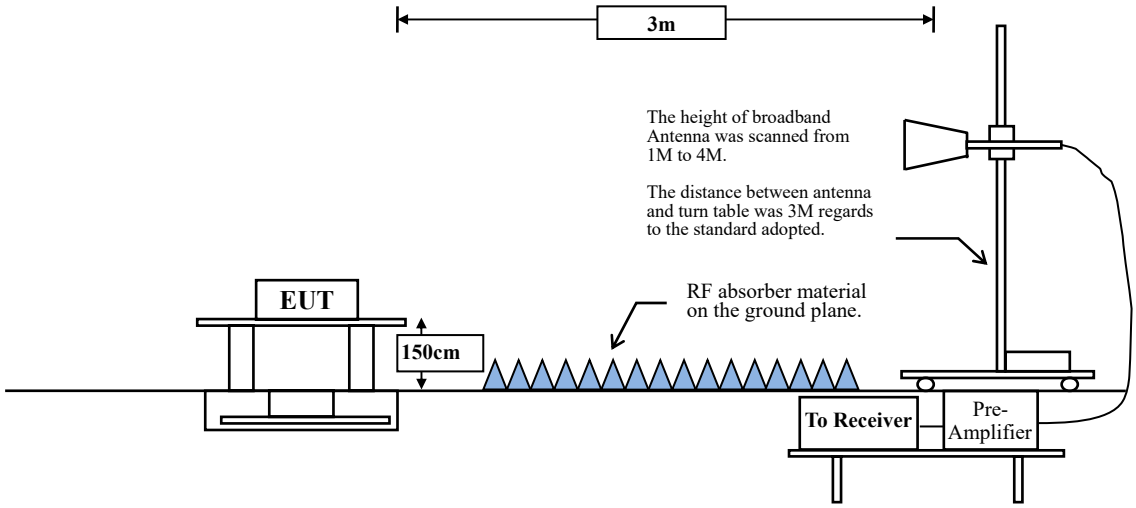
Radiated Emission Under 30 MHz



Radiated Emission Below 1 GHz



Radiated Emission Above 1 GHz



4.2. Limits

➢ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20 dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: 1. RF Voltage (dBμV) = 20 log RF Voltage (μV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.
Measuring the frequency range below 1 GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.
The turn table is rotated 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.
The resolution bandwidth below 30 MHz setting on the field strength meter is 9 kHz and 30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.
Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bilog antenna and above 1 GHz are made using Horn Antennas.
The measurement is divided into the Preliminary Measurement and the Final Measurement.
The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.
The measurement frequency range from 9 kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:
According to C63.10 Section 11.12.2.4 Peak measurement procedure.
RBW = as specified in Table 1.
VBW ≥ 3 x RBW.

Table 1 - RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

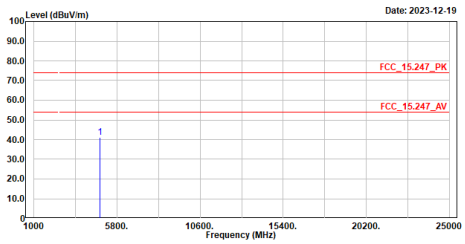
According to C63.10 Section 11.12.2.5 Average measurement procedure.
RBW = 1MHz.
VBW = 10Hz, when duty cycle ≥ 98 %
VBW ≥ 1/T, when duty cycle < 98 %
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11b	98.82	8.4000	119	10
802.11g	92.00	1.3800	725	1000
802.11n-20 MHz	91.55	1.3000	769	1000

Note: Duty Cycle Refer to Section 9.

4.4. Test Result of Radiated Emission

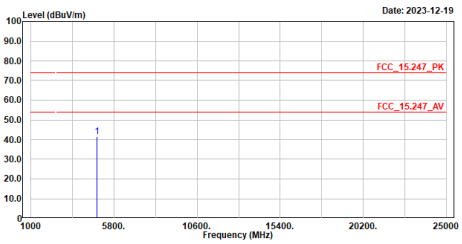
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.15	74.00	-32.85	46.59	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

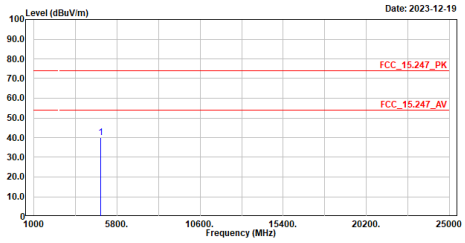
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.36	74.00	-32.64	46.80	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

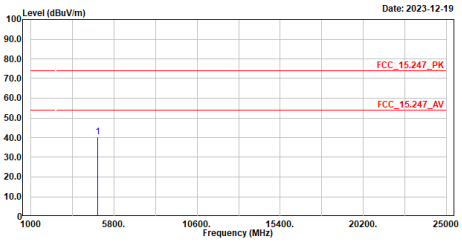
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_b_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	40.15	74.00	-33.85	45.61	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

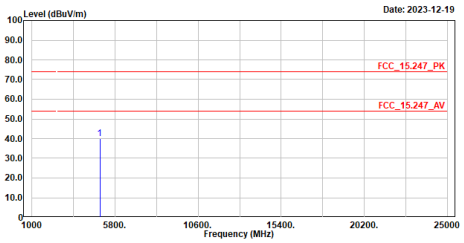
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_b_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	40.42	74.00	-33.58	45.88	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

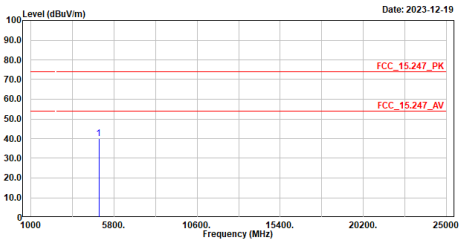
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	40.03	74.00	-33.97	45.44	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

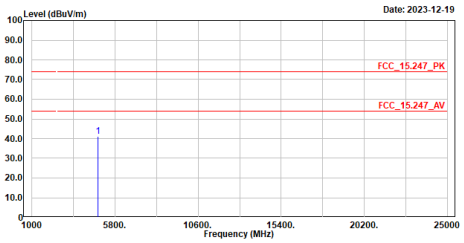
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	39.87	74.00	-34.13	45.28	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

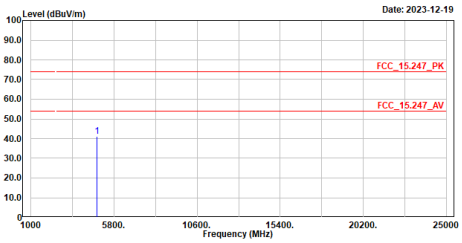
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.07	74.00	-32.93	46.51	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

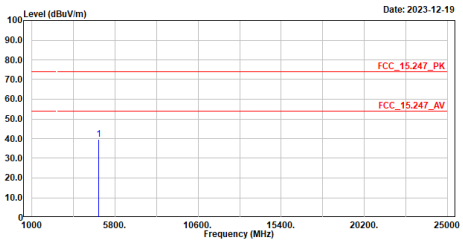
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.25	74.00	-32.75	46.69	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

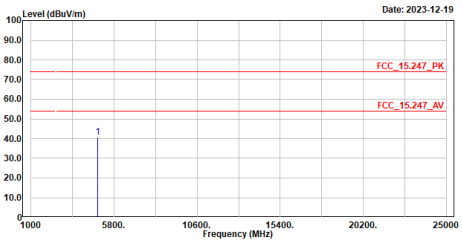
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_g_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	39.62	74.00	-34.38	45.08	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

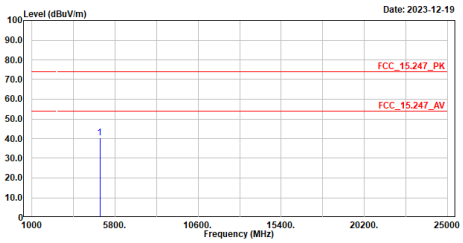
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_g_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	40.64	74.00	-33.36	46.10	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

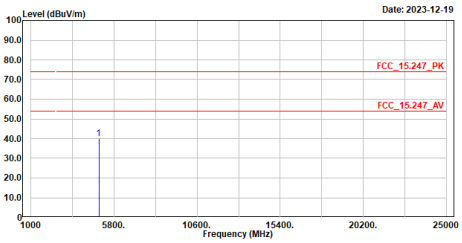
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	40.37	74.00	-33.63	45.78	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

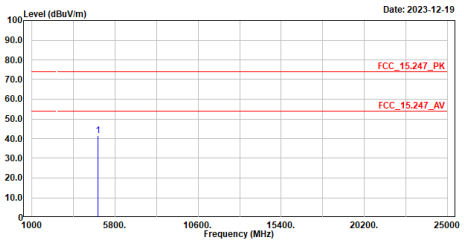
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	40.04	74.00	-33.96	45.45	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

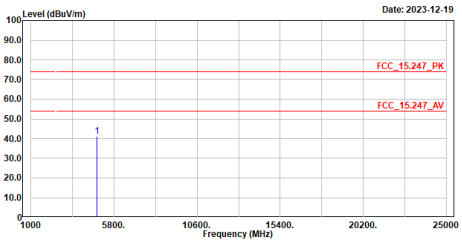
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.53	74.00	-32.47	46.97	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

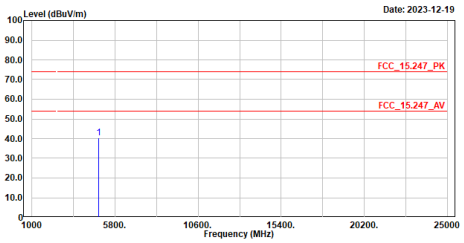
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4824.000	41.17	74.00	-32.83	46.61	-5.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

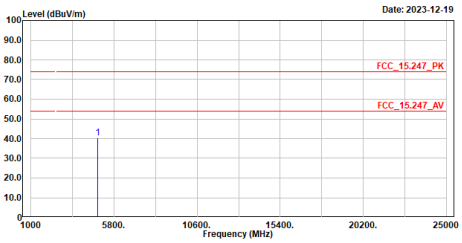
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_n20_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	40.29	74.00	-33.71	45.75	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

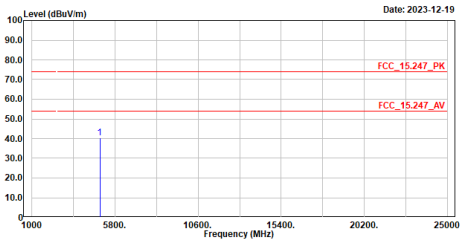
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_n20_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4874.000	40.33	74.00	-33.67	45.79	-5.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

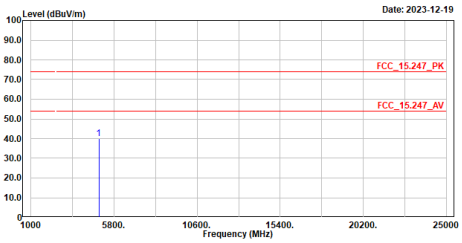
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_n20_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	40.32	74.00	-33.68	45.73	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

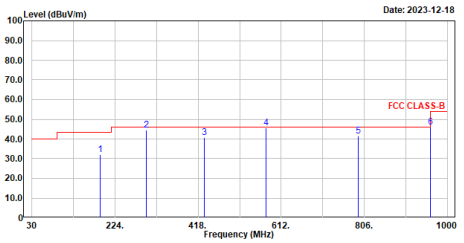
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_n20_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	4924.000	40.04	74.00	-33.96	45.45	-5.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

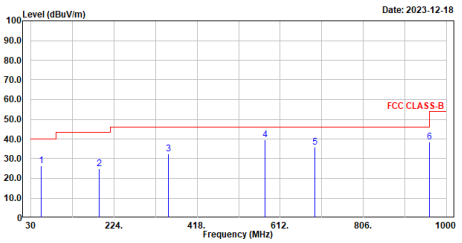
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_n20_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	188.983	32.16	43.50	-11.34	58.48	-26.32	QP
2	297.041	44.46	46.00	-1.54	67.74	-23.28	QP
3	432.065	40.62	46.00	-5.38	60.23	-19.61	QP
4	575.916	45.78	46.00	-0.22	62.17	-16.39	QP
5	792.129	41.41	46.00	-4.59	54.02	-12.61	QP
6	960.133	46.03	54.00	-7.97	56.78	-10.75	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

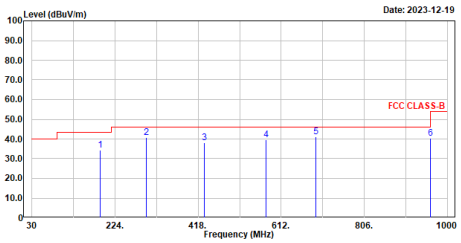
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_n20_2437MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	53.765	26.23	40.00	-13.77	49.84	-23.61	QP
2	188.983	24.76	43.50	-18.74	51.08	-26.32	QP
3	350.973	32.61	46.00	-13.39	54.69	-22.08	QP
4	576.110	39.49	46.00	-6.51	55.88	-16.39	QP
5	693.092	35.82	46.00	-10.18	50.32	-14.50	QP
6	960.133	38.67	54.00	-15.33	49.42	-10.75	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

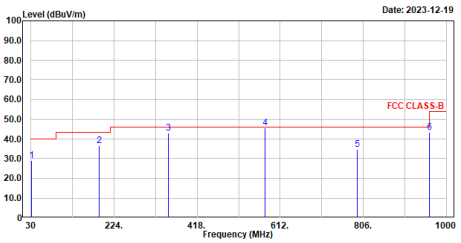
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :charge mode
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	188.983	34.51	43.50	-8.99	60.83	-26.32	QP
2	297.041	40.88	46.00	-5.12	64.16	-23.28	QP
3	432.065	38.12	46.00	-7.88	57.73	-19.61	QP
4	576.110	39.50	46.00	-6.50	55.89	-16.39	QP
5	693.092	41.22	46.00	-4.78	55.72	-14.50	QP
6	960.133	40.42	54.00	-13.58	51.17	-10.75	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB02
Condition :3m ,VERTICAL
mode :charge mode
Test by :Rock



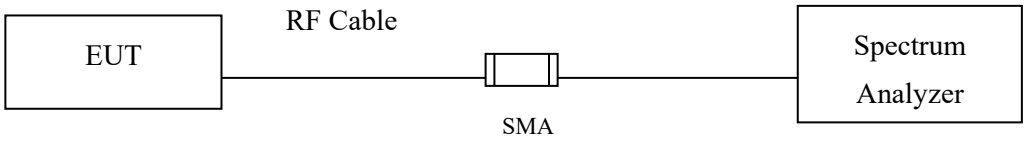
No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	30.873	29.09	40.00	-10.91	54.27	-25.18	QP
2	188.983	36.63	43.50	-6.87	62.95	-26.32	QP
3	350.973	43.17	46.00	-2.83	65.25	-22.08	QP
4	576.207	45.76	46.00	-0.24	62.14	-16.38	QP
5	792.129	34.90	46.00	-11.10	47.51	-12.61	QP
6	960.133	43.23	54.00	-10.77	53.98	-10.75	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

5. RF Antenna Conducted Test

5.1. Test Setup

RF antenna Conducted Measurement:



5.2. Limits

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 intentional radiator 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, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.3. Test Procedure

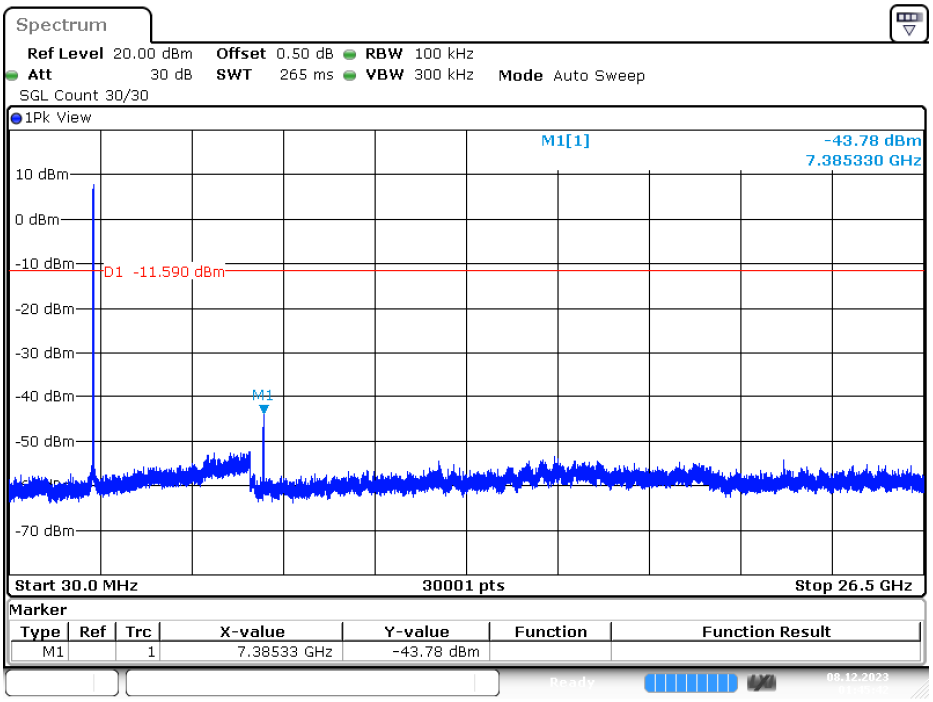
The EUT was tested according to C63.10:2013 Section 11.11 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.4. Test Result of RF Antenna Conducted Test

Product	:	Handy Skin Sensor 3
Test Item	:	RF antenna conducted test
Test Mode	:	Transmit (802.11b)
Test Date	:	2023/12/08

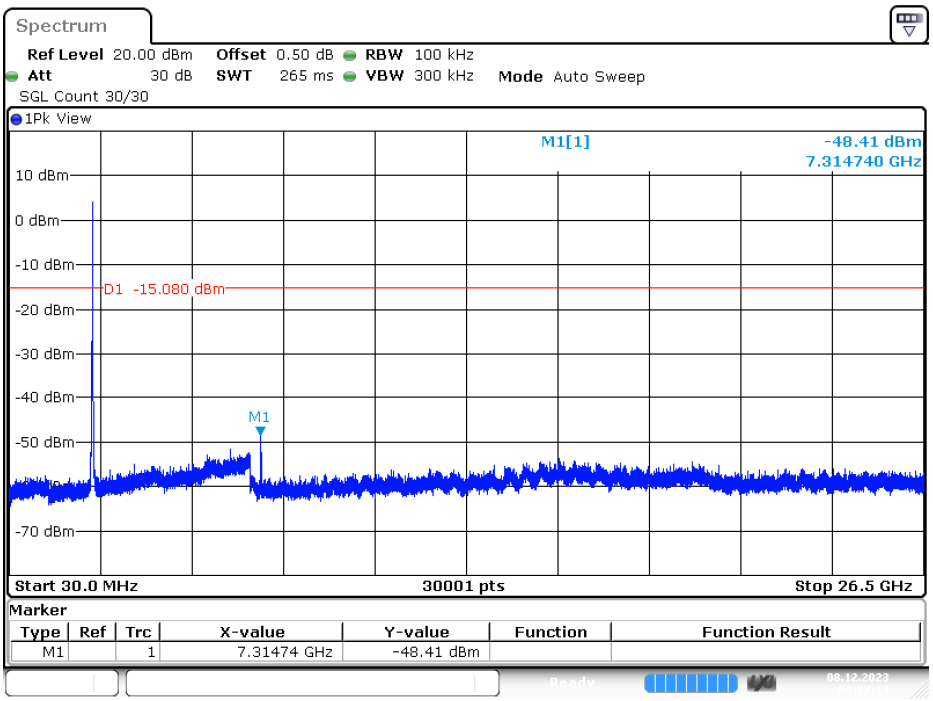
Channel 11



Date: 8.DEC.2023 01:45:42

Product	:	Handy Skin Sensor 3
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Transmit (802.11g)
Test Date	:	2023/12/08

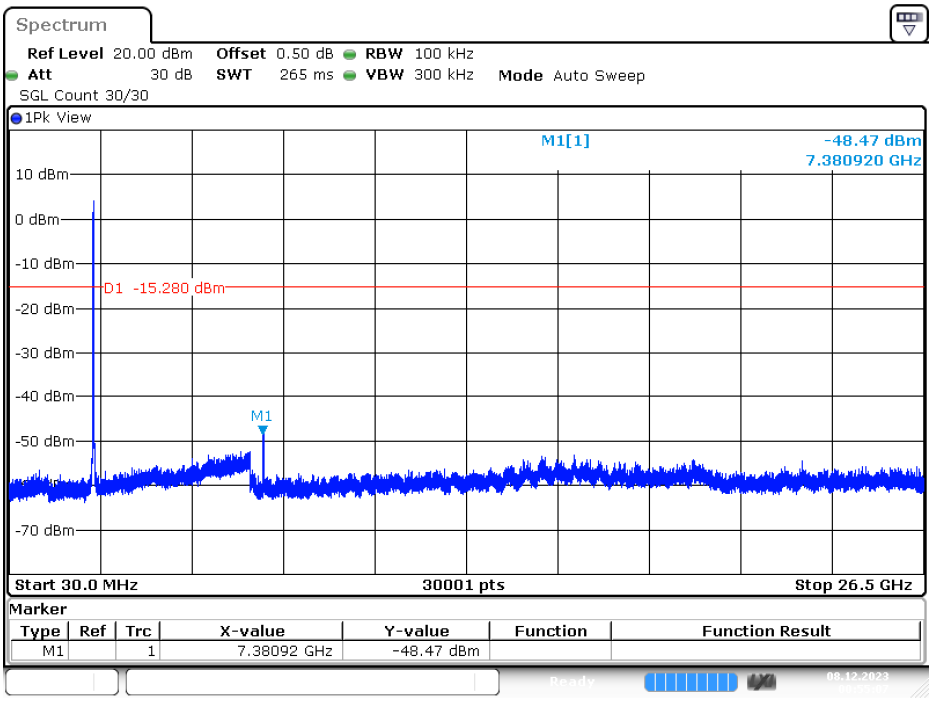
Channel 06



Date: 8.DEC.2023 00:37:14

Product	:	Handy Skin Sensor 3
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Transmit (802.11n-20 MHz)
Test Date	:	2023/12/08

Channel 11

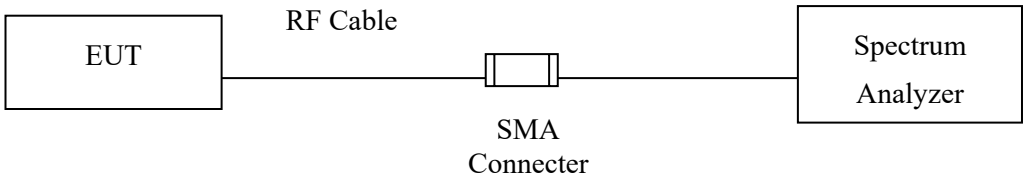


Date: 8.DEC.2023 00:55:07

6. Band Edge

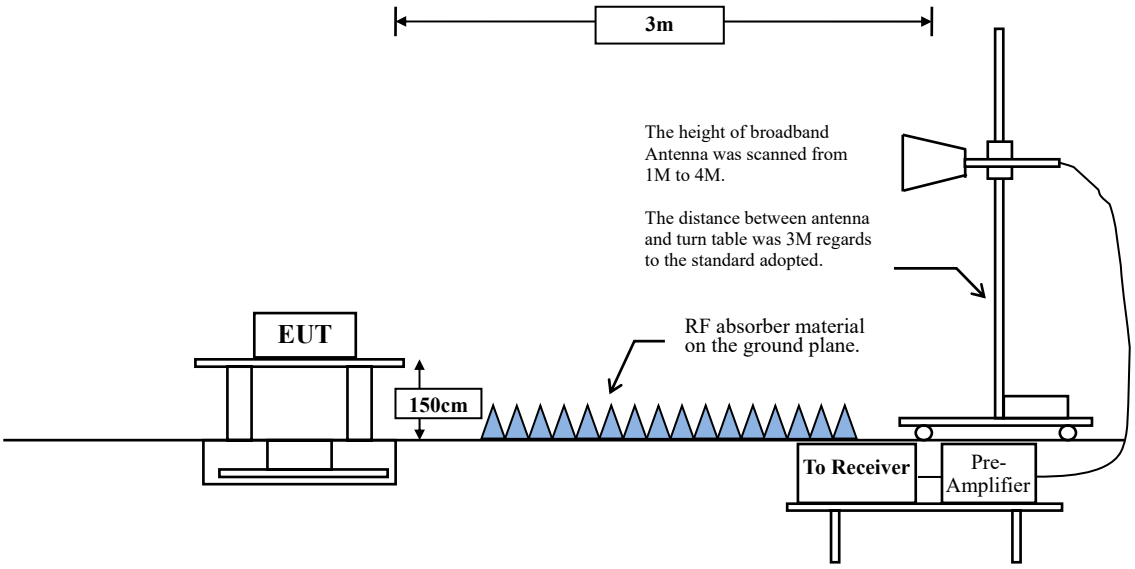
6.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1 GHz



6.2. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

RBW and VBW Parameter setting:
According to C63.10 Section 11.12.2.4 Peak measurement procedure.
RBW = as specified in Table 1.
VBW ≥ 3 x RBW.

Table 1 - RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

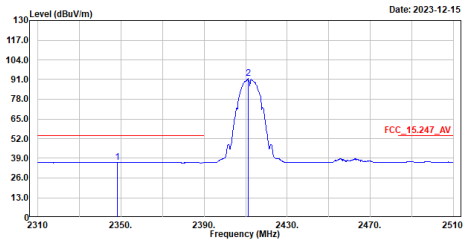
According to C63.10 Section 11.12.2.5 Average measurement procedure.
RBW = 1 MHz.
VBW = 10 Hz, when duty cycle ≥ 98 %
VBW ≥ 1/T, when duty cycle < 98 %
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11b	98.82	8.4000	119	10
802.11g	92.00	1.3800	725	1000
802.11n-20 MHz	91.55	1.3000	769	1000

Note: Duty Cycle Refer to Section 9.

6.4. Test Result of Band Edge

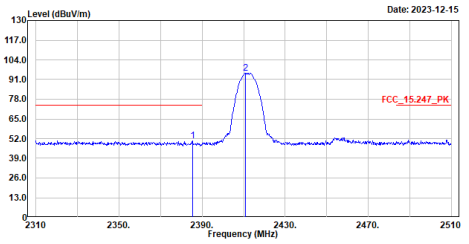
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2348.400	36.51	54.00	-17.49	29.45	7.06	Average
2	2411.200	91.52	------	------	84.77	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

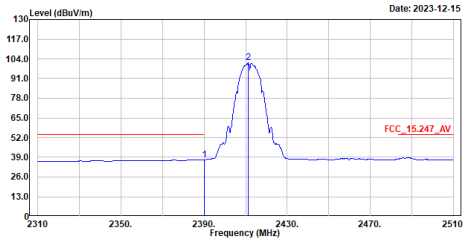
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2385.400	50.64	74.00	-23.36	43.81	6.83	Peak
2	2411.000	95.30	------	------	88.55	6.75	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

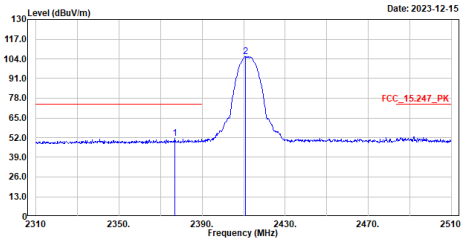
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2390.000	37.41	54.00	-16.59	30.61	6.80	Average
2	2411.200	101.46	------	------	94.71	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

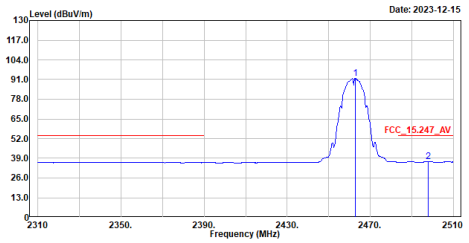
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_b_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2377.000	51.43	74.00	-22.57	44.55	6.88	Peak
2	2411.000	105.52	------	------	98.77	6.75	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

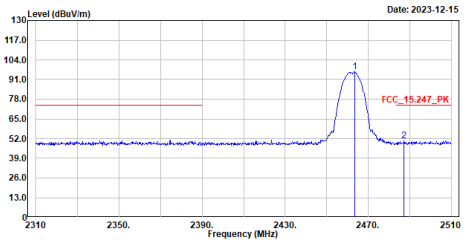
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	2462.800	91.90	------	------	85.02	6.88	Average
2	2497.800	36.69	54.00	-17.31	29.76	6.93	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

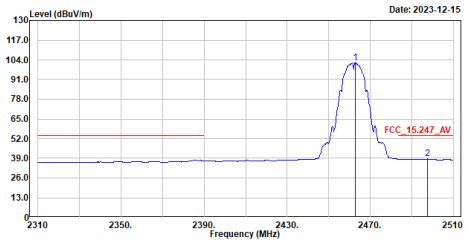
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	2463.400	95.94	------	------	89.06	6.88	Peak
2	2487.200	50.47	74.00	-23.53	43.57	6.90	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

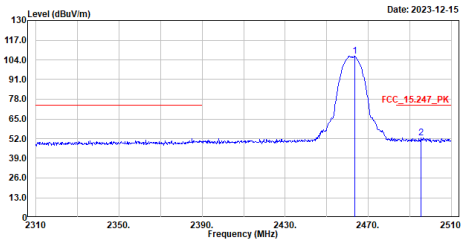
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	2462.800	102.27	------	------	95.39	6.88	Average
2	2497.400	38.55	54.00	-15.45	31.63	6.92	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

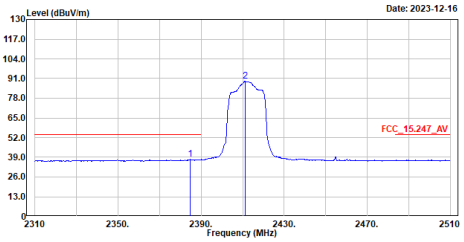
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_b_2462MHz
Test by :Rock



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1	2463.400	106.38	------	------	99.50	6.88	Peak
2	2495.400	52.73	74.00	-21.27	45.81	6.92	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

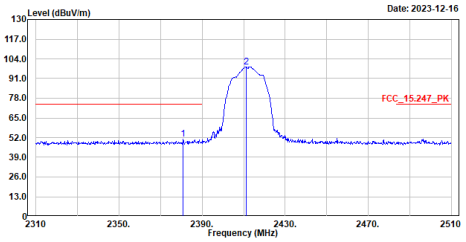
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2384.800	37.59	54.00	-16.41	30.76	6.83	Average
2	2411.200	89.27	------	------	82.52	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

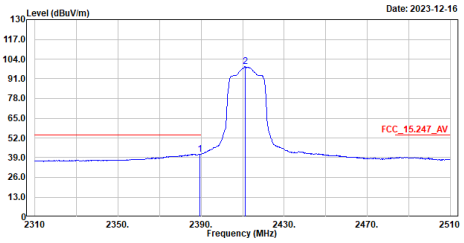
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2381.000	50.92	74.00	-23.08	44.07	6.85	Peak
2	2411.200	98.72	------	------	91.97	6.75	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

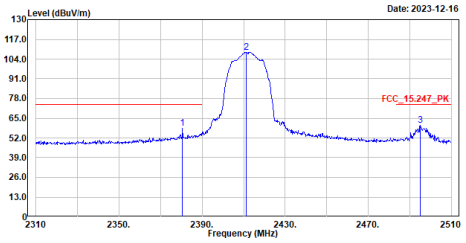
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2389.400	41.38	54.00	-12.62	34.59	6.79	Average
2	2411.200	99.07	------	------	92.32	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

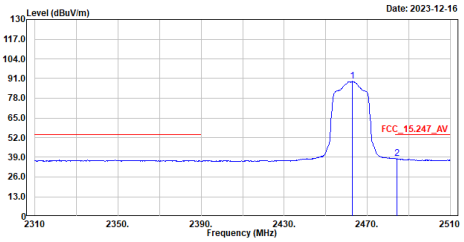
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_g_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2380.600	58.54	74.00	-15.46	51.68	6.86	Peak
2	2411.200	108.58	------	------	101.83	6.75	Peak
3	2495.200	60.43	74.00	-13.57	53.51	6.92	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

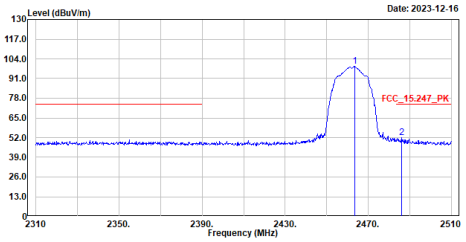
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2462.800	89.04	------	------	82.16	6.88	Average
2	2484.200	38.16	54.00	-15.84	31.25	6.91	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

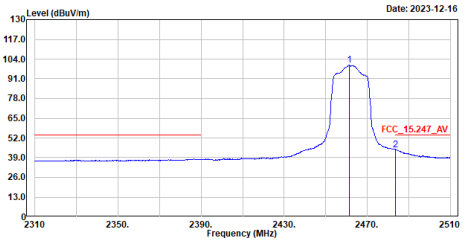
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2463.400	98.87	------	------	91.99	6.88	Peak
2	2486.000	51.94	74.00	-22.06	45.03	6.91	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

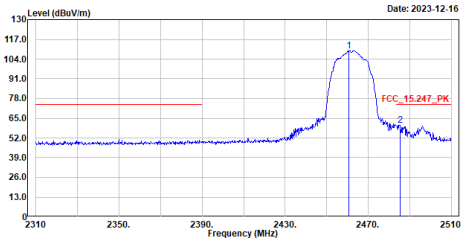
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2461.400	99.95	------	------	93.08	6.87	Average
2	2483.600	44.37	54.00	-9.63	37.46	6.91	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

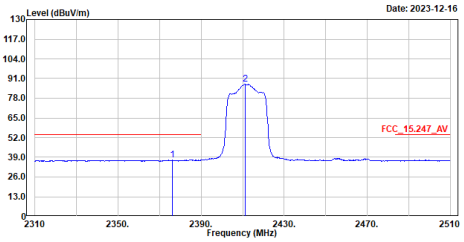
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_g_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2460.600	109.46	------	------	102.59	6.87	Peak
2	2485.400	60.42	74.00	-13.58	53.51	6.91	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

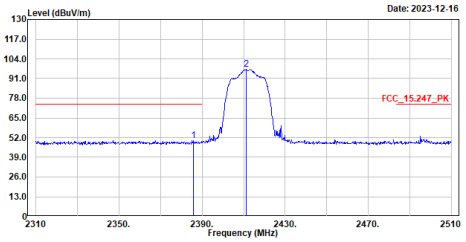
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2376.200	37.27	54.00	-16.73	30.38	6.89	Average
2	2411.200	87.33	------	------	80.58	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

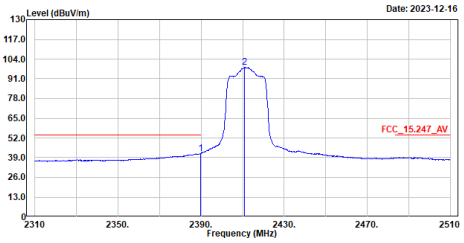
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2386.000	50.13	74.00	-23.87	43.31	6.82	Peak
2	2411.200	97.25	------	------	90.50	6.75	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

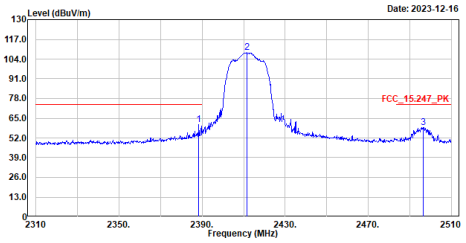
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2389.800	41.84	54.00	-12.16	35.04	6.80	Average
2	2411.000	98.58	------	------	91.83	6.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

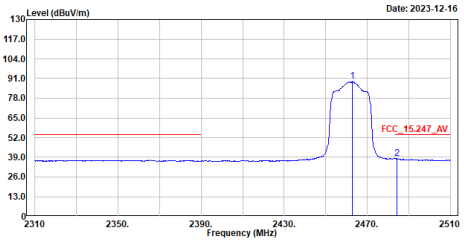
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_n20_2412MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2388.400	60.77	74.00	-13.23	53.97	6.80	Peak
2	2411.600	108.18	------	------	101.43	6.75	Peak
3	2496.400	59.04	74.00	-14.96	52.12	6.92	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

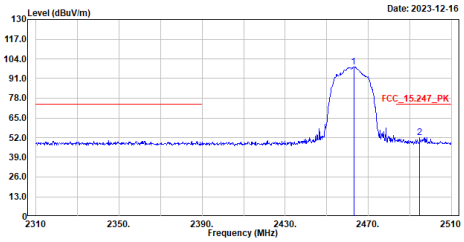
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_n20_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2462.800	89.05	------	------	82.17	6.88	Average
2	2484.200	38.26	54.00	-15.74	31.35	6.91	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

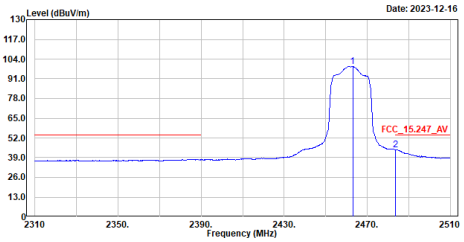
Site :HY-CB02
Condition :3m ,Horizontal
mode :TX_n20_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2463.000	98.75	------	------	91.87	6.88	Peak
2	2494.800	51.95	74.00	-22.05	45.03	6.92	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

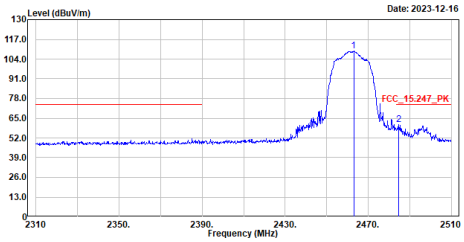
Site :HY-CB02
Condition :3m ,Vertical
mode :TX_n20_2462MHz
Test by :Rock



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2463.000	99.31	------	------	92.43	6.88	Average
2	2483.600	44.38	54.00	-9.62	37.47	6.91	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB02
Condition :3m ,Vertical
mode :TX_n20_2462MHz
Test by :Rock



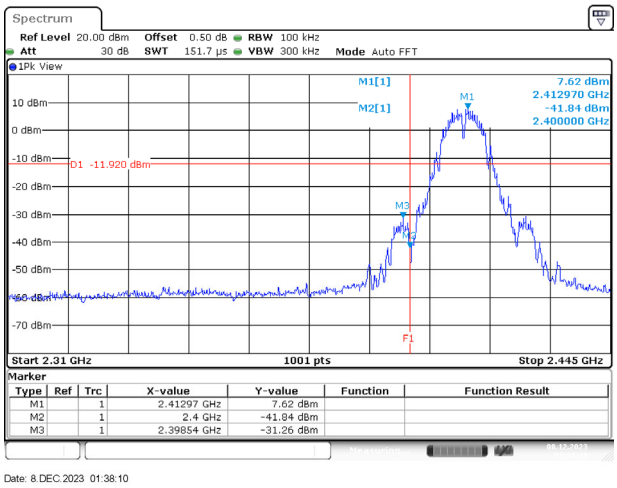
No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB/m	Remark
1	2463.000	109.19	------	------	102.31	6.88	Peak
2	2484.800	60.68	74.00	-13.32	53.77	6.91	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Handy Skin Sensor 3
Test Item : Band Edge
Test Mode : Transmit (802.11b)
Test Date : 2023/12/08

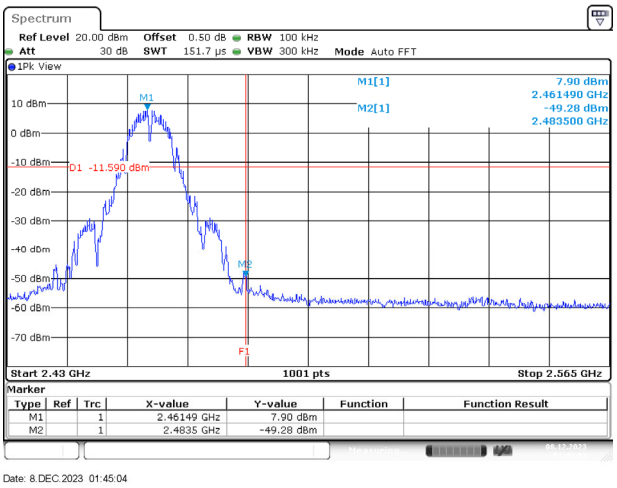
Measurement Level Δ (dB)	Result
> 20	PASS

Channel 01



Date: 8.DEC.2023 01:38:10

Channel 11

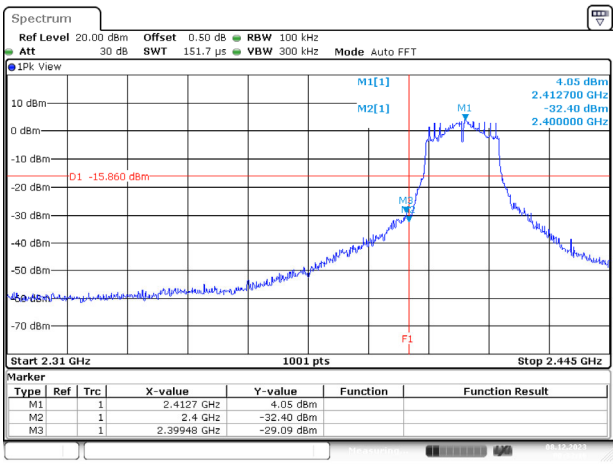


Date: 8.DEC.2023 01:45:04

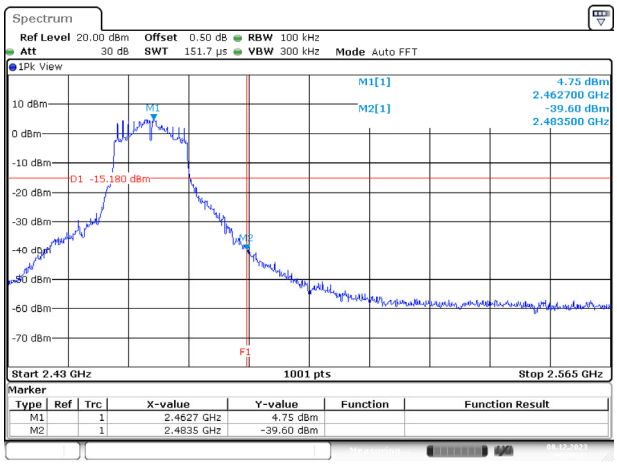
Product : Handy Skin Sensor 3
Test Item : Band Edge
Test Mode : Transmit (802.11g)
Test Date : 2023/12/08

Measurement Level Δ (dB)	Result
> 20	PASS

Channel 01



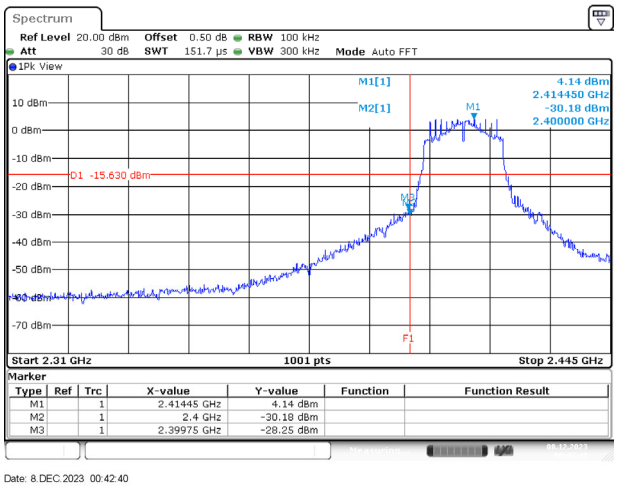
Channel 11



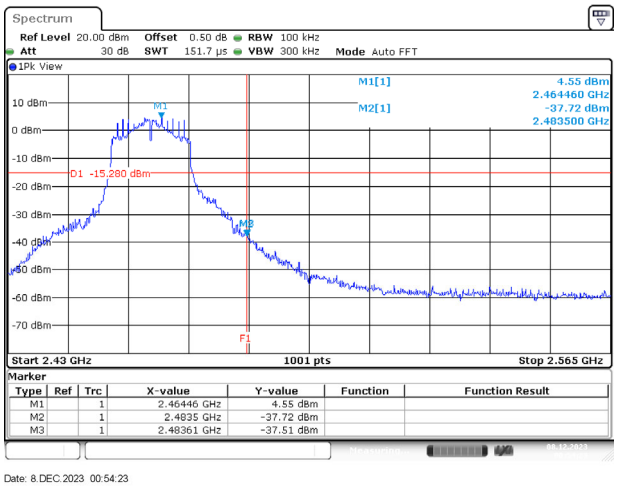
Product : Handy Skin Sensor 3
Test Item : Band Edge
Test Mode : Transmit (802.11n-20 MHz)
Test Date : 2023/12/08

Measurement Level Δ (dB)	Result
> 20	PASS

Channel 01

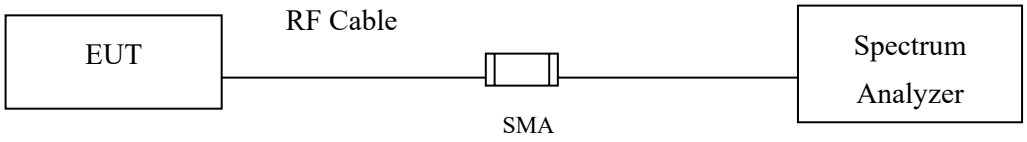


Channel 11



7. 6dB Bandwidth

7.1. Test Setup



7.2. Limits

The minimum bandwidth shall be at least 500 kHz.

7.3. Test Procedure

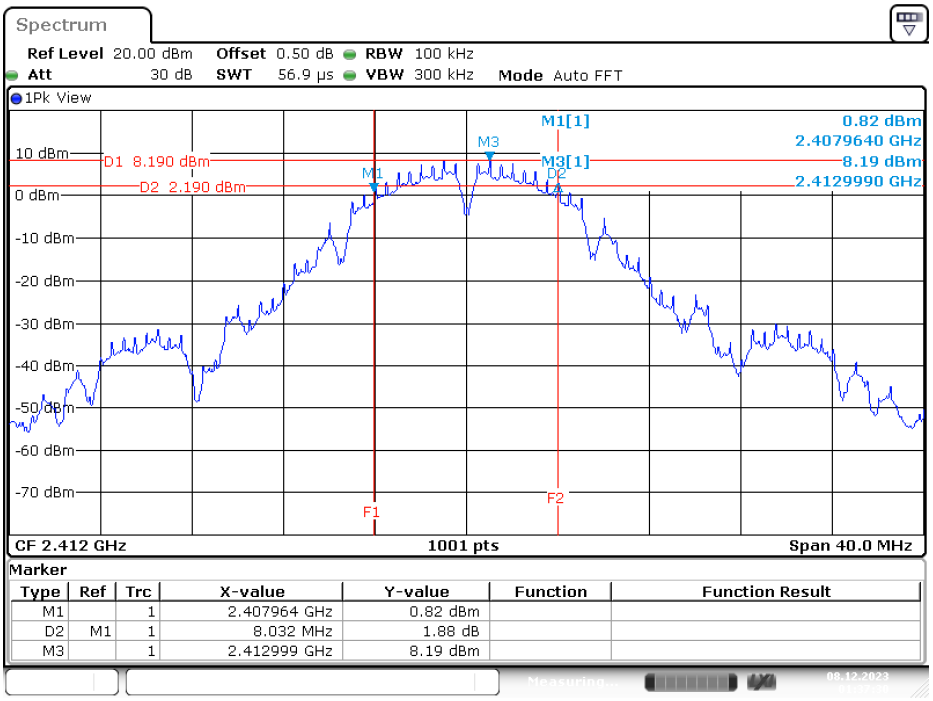
The EUT was tested according to ANSI C63.10 Section 11.8 for compliance to FCC 47CFR 15.247 requirements.

7.4. Test Result of 6dB Bandwidth

Product : Handy Skin Sensor 3
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11b)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	8032	>500	Pass
06	2437	8032	>500	Pass
11	2462	8032	>500	Pass

Channel 11

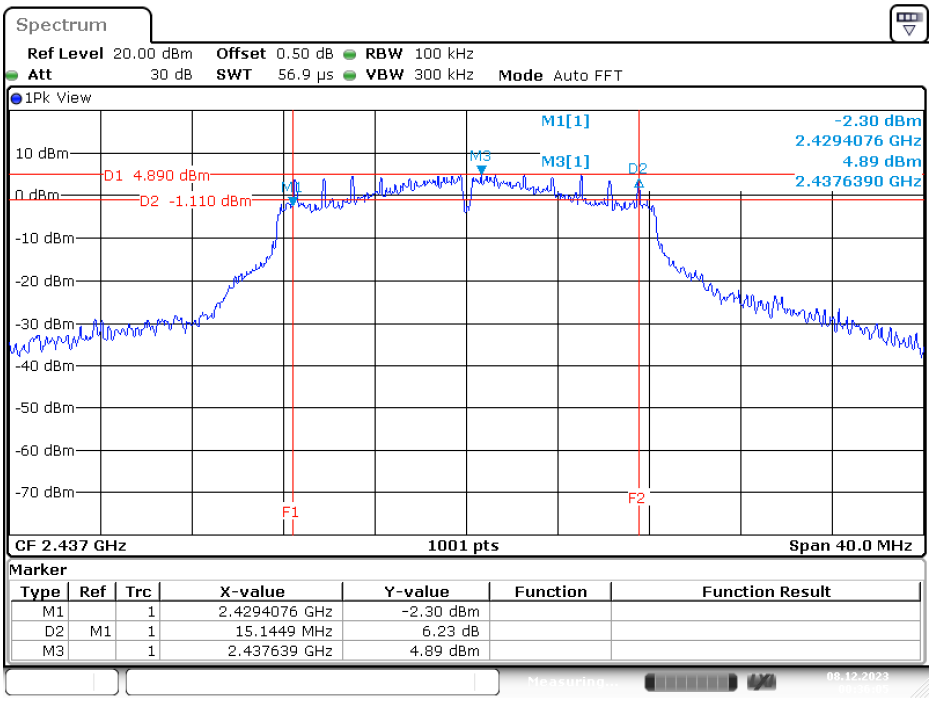


Date: 8.DEC.2023 01:37:31

Product : Handy Skin Sensor 3
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11g)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15465	>500	Pass
06	2437	15145	>500	Pass
11	2462	15145	>500	Pass

Channel 06

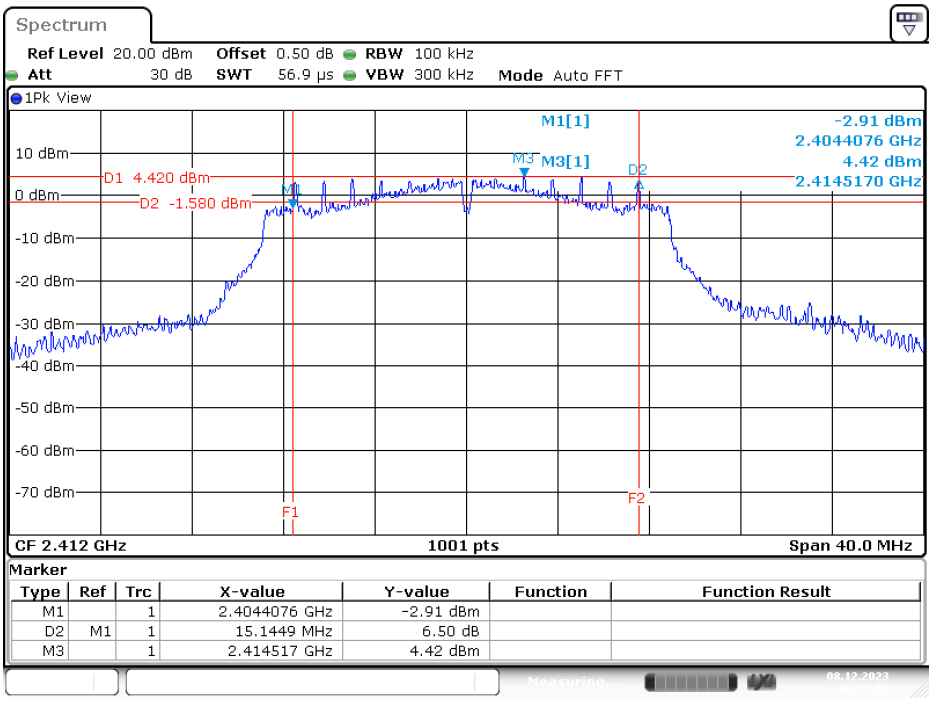


Date: 8.DEC.2023 00:36:05

Product : Handy Skin Sensor 3
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11n-20 MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15145	>500	Pass
06	2437	15145	>500	Pass
11	2462	15145	>500	Pass

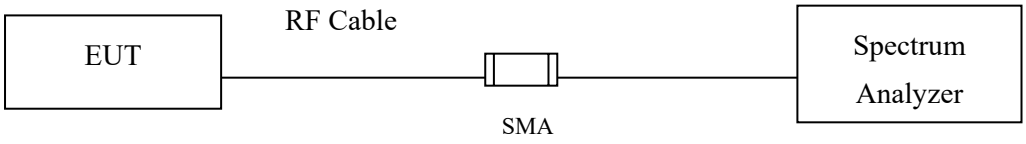
Channel 11



Date: 8.DEC.2023 00:42:01

8. Power Spectral Density

8.1. Test Setup



8.2. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3. Test Procedure

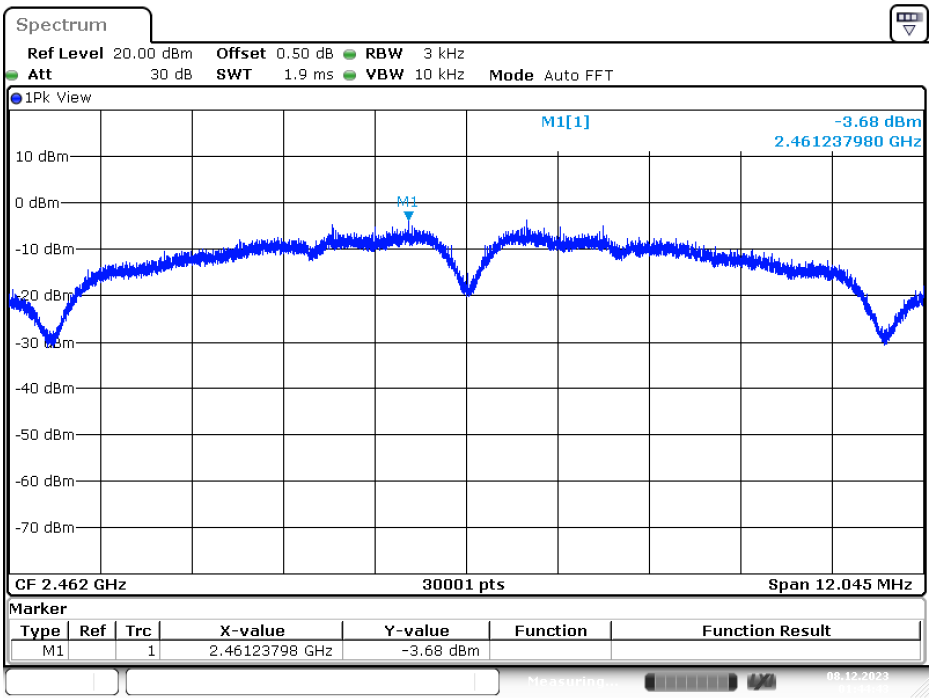
The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.
The maximum power spectral density using C63.10 Section 11.10.2 Method PKPSD (peak PSD)

8.4. Test Result of Power Density

Product : Handy Skin Sensor 3
Test Item : Power Spectral Density
Test Mode : Transmit (802.11b)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-3.920	8	Pass
06	2437	-3.770	8	Pass
11	2462	-3.680	8	Pass

Channel 11

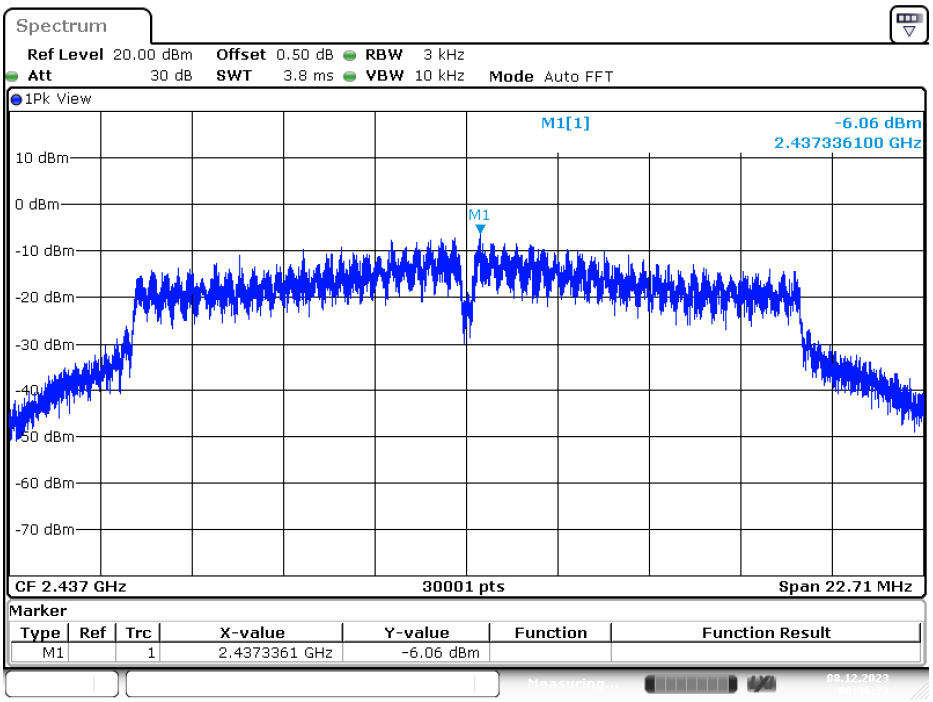


Date: 8.DEC.2023 01:44:43

Product : Handy Skin Sensor 3
Test Item : Power Spectral Density
Test Mode : Transmit (802.11g)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-6.890	8	Pass
06	2437	-6.060	8	Pass
11	2462	-6.090	8	Pass

Channel 06

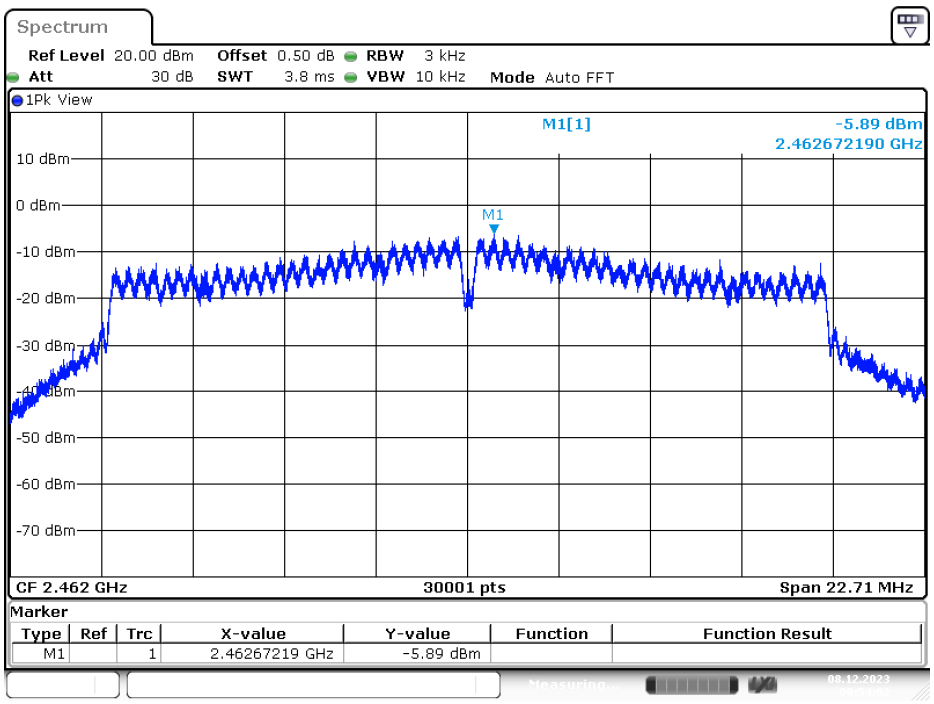


Date: 8.DEC.2023 00:36:24

Product : Handy Skin Sensor 3
Test Item : Power Density Data
Test Mode : Transmit (802.11n-20 MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-7.160	8	Pass
06	2437	-6.410	8	Pass
11	2462	-5.890	8	Pass

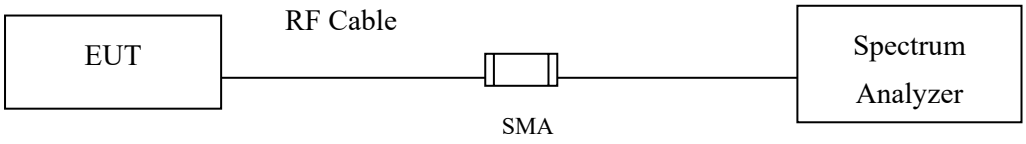
Channel 11



Date: 8.DEC.2023 00:54:03

9. Duty Cycle

9.1. Test Setup



9.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to ANSI C63.10 2013 for compliance to FCC 47CFR 15.247 requirements.

9.3. Test Result of Duty Cycle

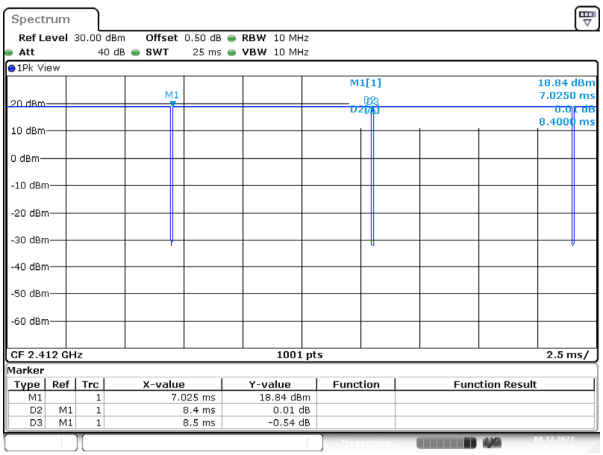
Product : Handy Skin Sensor 3
Test Item : Duty Cycle
Test Mode : Transmit

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)

Results:

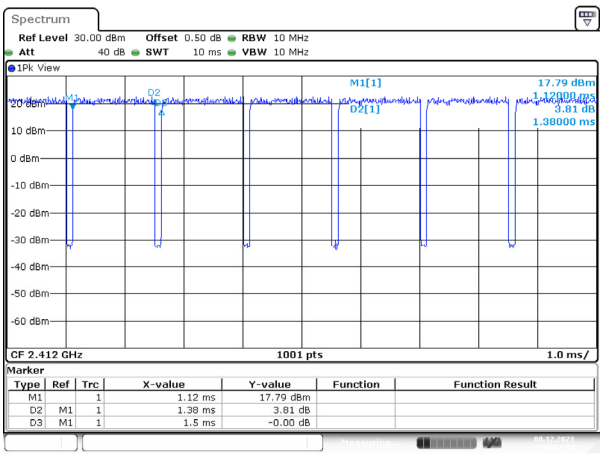
2.4 GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	8.4000	8.5000	98.82	0.05
802.11g	1.3800	1.5000	92.00	0.36
802.11n-20 MHz	1.3000	1.4200	91.55	0.38

802.11b



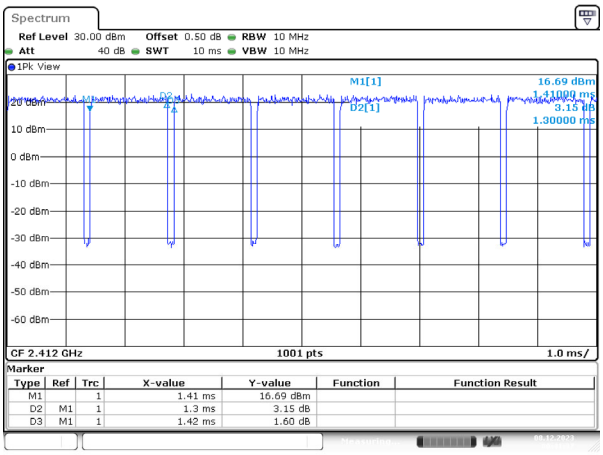
Date: 8.DEC.2023 01:37:01

802.11g



Date: 8.DEC.2023 00:32:12

802.11n-20 MHz



Date: 8.DEC.2023 00:41:37