RADIO PERFORMANCE TEST REPORT

Test Report No. : **OT-236-RWD-034**

Reception No. : **2305001470**

Applicant : **MCNEX CO.,LTD**

Address : **MCNEX Tower, 13-39, Songdogwahak-ro 16 beon-gi Yeonsu-gu, Incheon, Korea**

Manufacturer : **MCNEX CO.,LTD**

Address : **MCNEX Tower, 13-39, Songdogwahak-ro 16 beon-gi Yeonsu-gu, Incheon, Korea**

Type of Equipment : **3CH Dashcam**

FCC ID. : **2ABC6-MD-7205**

Model Name : **MD-7205**

Multiple Model Name : **N/A**

Serial number : **N/A**

Total page of Report : **115 pages (including this page)**

Date of Incoming : **May 24, 2023**

Date of issue : **June 28, 2023**

SUMMARY

The equipment complies with the regulation; ***FCC PART 15 SUBPART C Section 15.247***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

Tested by	Reviewed by	Approved by
Soon-Ki, Choi / Prj. Engineer	Tae-Ho, Kim / Chief Engineer	Jae-Ho, Lee / Chief Engineer
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

CONTENTS

Page

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-236-RWD-034	June 28, 2023	Initial Release	All

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

1. VERIFICATION OF COMPLIANCE

Applicant : MCNEX CO.,LTD

Address : MCNEX Tower, 13-39, Songdogwahak-ro 16 beon-gi Yeonsu-gu, Incheon, Korea

Contact Person : SEUNG JUN RO / Senior Research Engineer

Telephone No. : +82-10-9274-1055

FCC ID : 2ABC6-MD-7205

Model Name : MD-7205

Brand Name : Momento / Firstech, LLC

Serial Number : N/A

Date : June 28, 2023

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	3CH Dashcam
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247 KDB 558074 D01 15.247 Meas Guidance v05r02
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (a) (2)	Minimum 6 dB Bandwidth	Met the Limit / PASS
15.247 (b) (3)	Maximum Peak Conducted Output Power	Met the Limit / PASS
15.247 (d)	100 kHz Bandwidth Outside the Frequency Band	Met the Limit / PASS
15.247 (d)	Radiated Emission which fall in the Restricted Band	Met the Limit / PASS
15.247 (e)	Peak Power Spectral Density	Met the Limit / PASS
15.209	Radiated Emission Limits	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247.

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

3. GENERAL INFORMATION

3.1 Product Description

The MCNEX CO.,LTD, Model MD-7205 (referred to as the EUT in this report) is a 3CH Dashcam. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	3CH Dashcam
Temperature Range	-20 °C ~ 60 °C
OPERATING FREQUENCY	2 412 MHz ~ 2 462 MHz (802.11b/g/n(HT20))
MODULATION TYPE	802.11b: DSSS Modulation(DBPSK/DQPSK/CCK) 802.11g/n(HT20): OFDM Modulation(BPSK/QPSK/16QAM/64QAM)
RF OUTPUT POWER	8.92 dBm(802.11b) 7.58 dBm(802.11g) 7.67 dBm(802.11n_HT20)
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	2.7 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	24 MHz, 26 MHz, 27 MHz
ELECTRICAL RATING	DC 12.0 V / DC 24.0 V

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board 1	MCNEX CO.,LTD	N/A	N/A
Main Board 2	MCNEX CO.,LTD	N/A	N/A
Power Board	MCNEX CO.,LTD	N/A	N/A
Camera Board	MCNEX CO.,LTD	N/A	N/A
Camera	N/A	N/A	N/A
Display	N/A	N/A	N/A
Microwave Sensor Modular	Ningbo Pdlux Electronic Technology Co.,LTD.	N/A	2AIWW-PD-V11-H

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
MD-7205	MCNEX CO.,LTD	3CH Dashcam (EUT)	-
HP Probook	HP	Notebook PC	EUT
PPP009L-E	LIE-ON TECHNOLOGY (CHANGZHOU)CO.,LTD.	AC Adapter	Notebook PC

5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at 2 412 MHz, 2 437 MHz, and 2 462 MHz to get a maximum emission levels from the EUT. The EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis, but the worst data was recorded in this report.

-. Channel List (WLAN 2.4 GHz)

Channel	Frequency[MHz]	Channel	Frequency[MHz]	Channel	Frequency[MHz]
1	2 412.00	6	2 437.00	11	2 462.00
2	2 417.00	7	2 442.00		
3	2 422.00	8	2 447.00		
4	2 427.00	9	2 452.00		
5	2 432.00	10	2 457.00		

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

-. Duty Cycle for WLAN 2.4 GHz

Band	TEST Mode	Data Rate	On Time (ms)	Total Time (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
WLAN 2.4 GHz	802.11 b	1	32.900	33.100	99.40	0.03
		2	16.512	16.768	98.47	0.07
		5.5	5.922	6.328	93.58	0.29
		11	3.081	3.354	91.86	0.37
	802.11 g	6	5.4755	5.9925	91.38	0.39
		9	3.654	3.942	92.70	0.33
		12	2.7375	3.075	89.03	0.51
		18	1.824	2.112	86.37	0.64
		24	1.3662	1.6566	82.48	0.84
		36	0.9168	1.2048	76.10	1.19
		48	0.6882	0.9768	70.46	1.53
		54	0.615	0.8938	68.81	1.63
	802.11 n(HT20)	MCS0	5.069	5.3465	94.81	0.24
		MCS1	2.541	2.835	89.63	0.48
		MCS2	1.712	2	85.60	0.68
		MCS3	1.2772	1.5686	81.43	0.90
		MCS4	0.8784	1.1592	75.78	1.21
		MCS5	0.6510	0.9424	69.08	1.61
		MCS6	0.5828	0.8742	66.67	1.77
		MCS7	0.530	0.8175	64.84	1.89

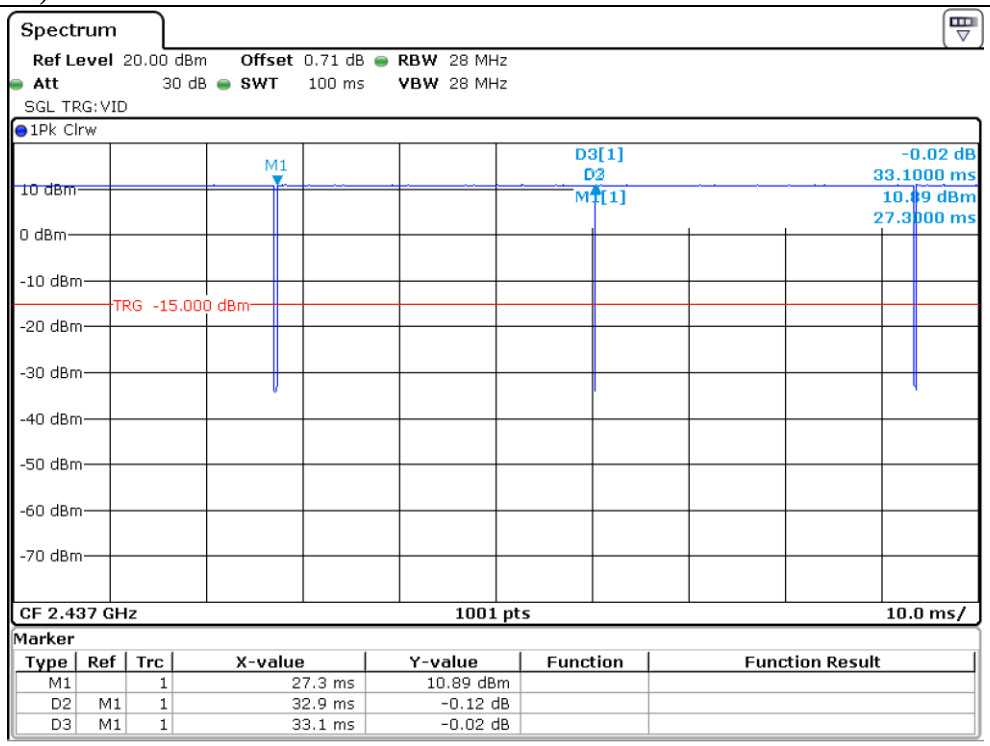
Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) * 100

Correction Factor : 10 * Log(1 / (Duty Cycle / 100)) \

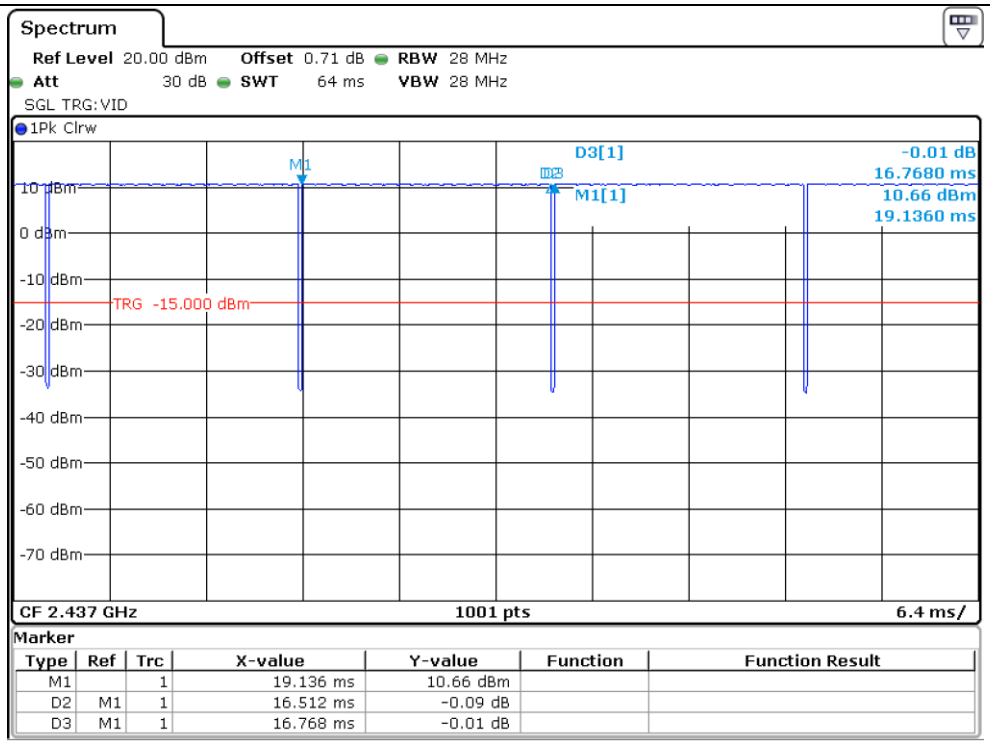
** Tested in maximum power control level

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

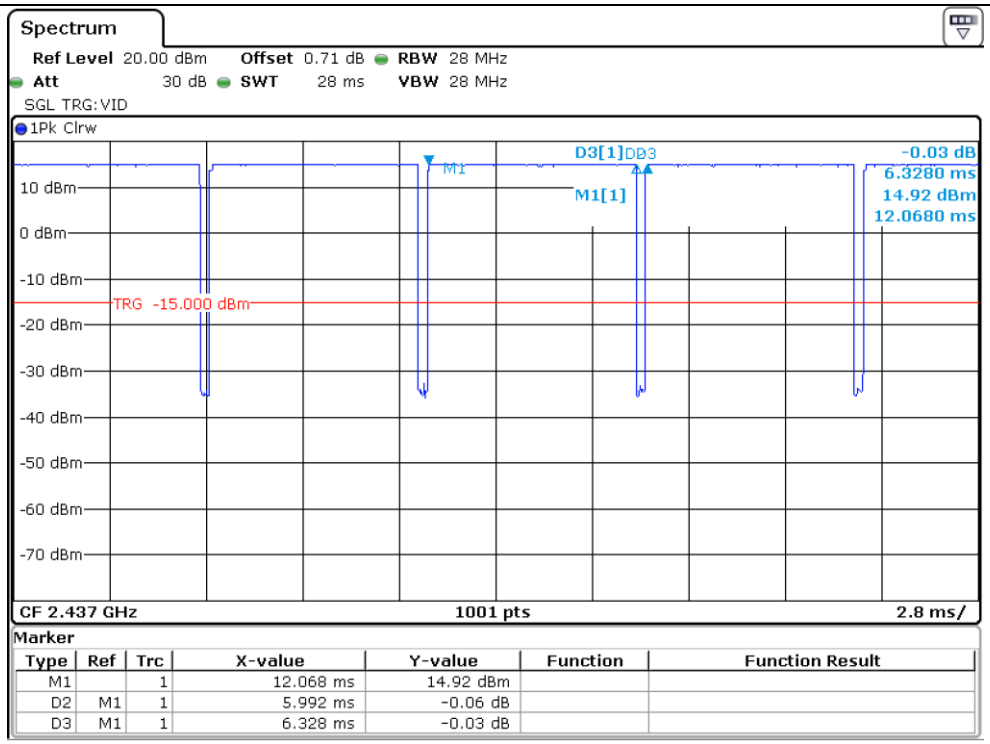
Test Plot (DC 12 V)



b mode_rate 1

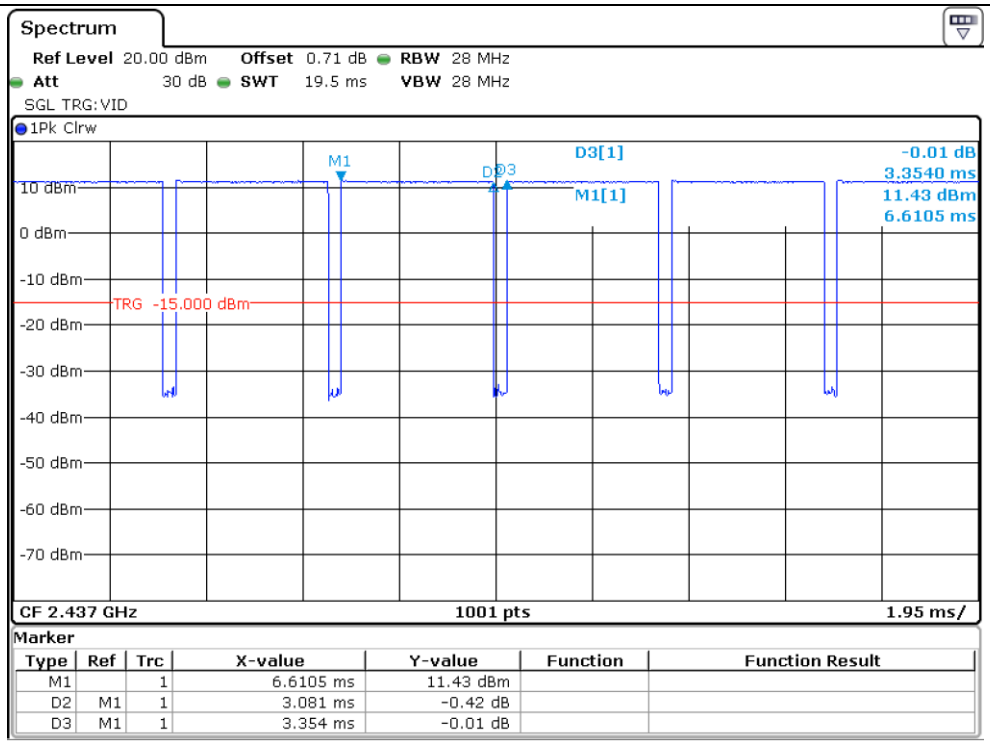


b mode_rate 2



Date: 1.JUN.2023 09:54:25

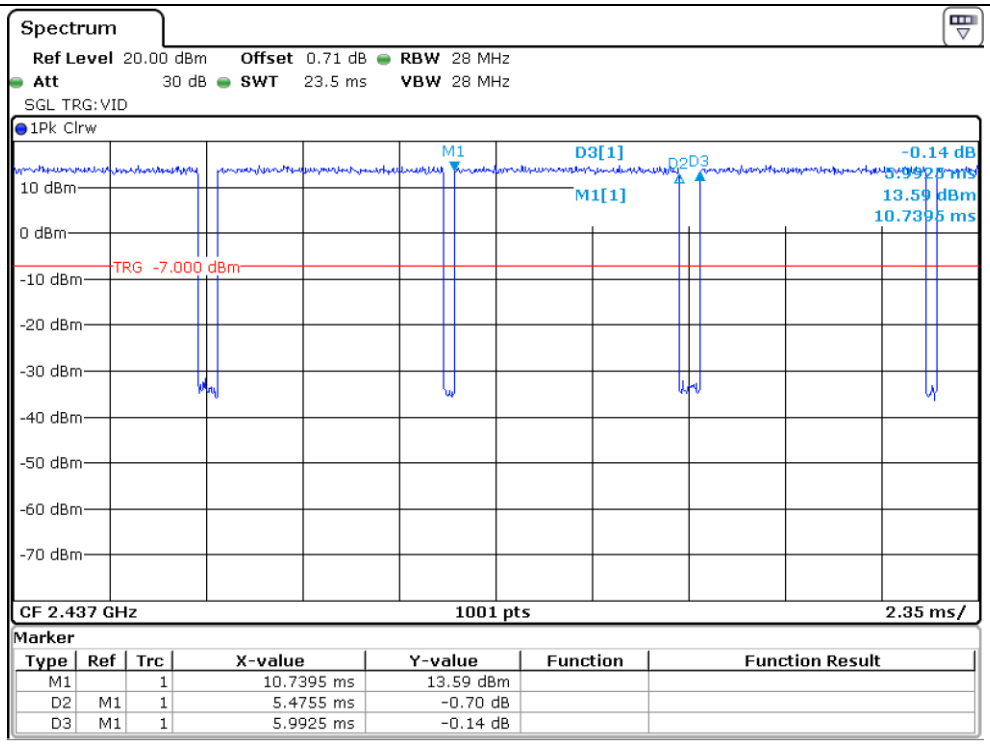
b mode_rate 5.5



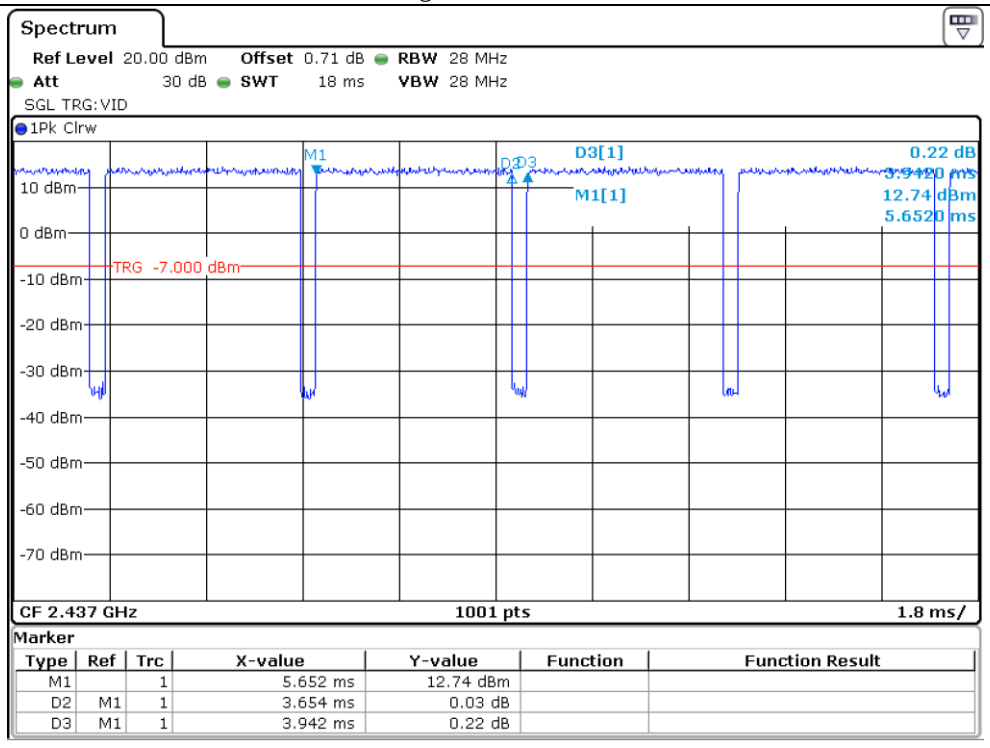
Date: 1.JUN.2023 09:55:22

b mode_rate 11

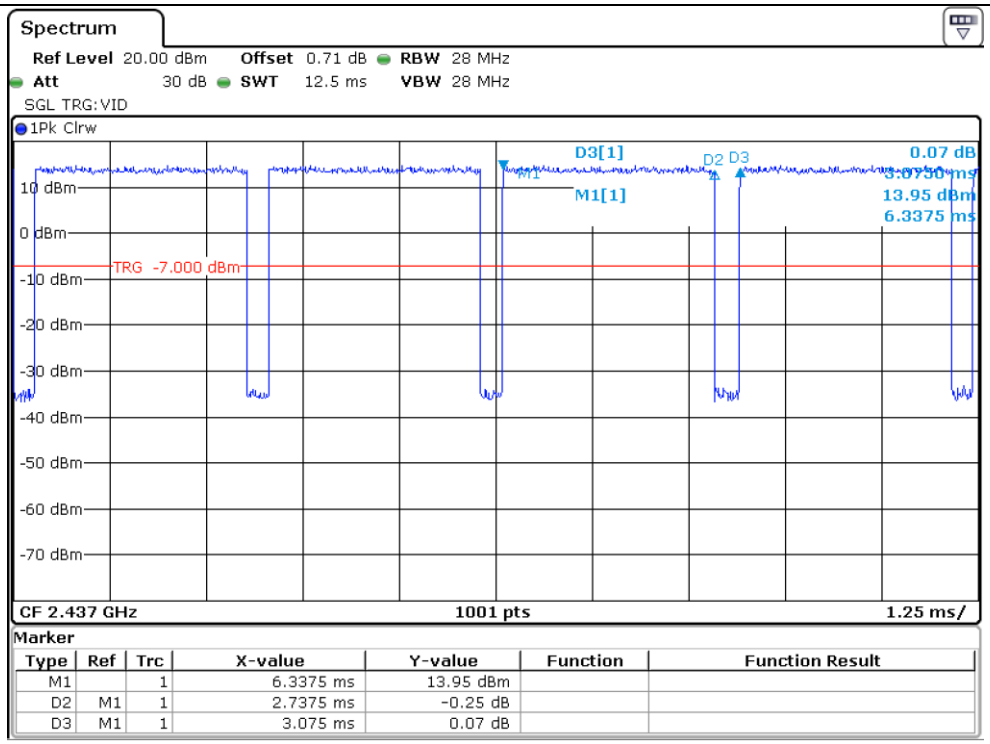
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



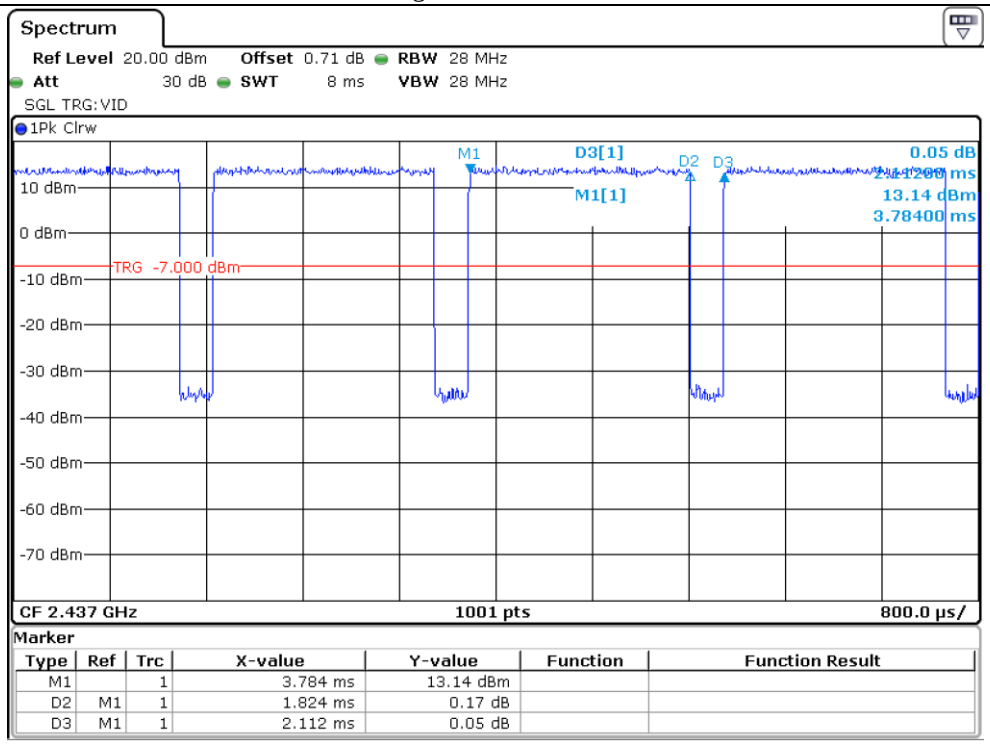
g mode_rate 6



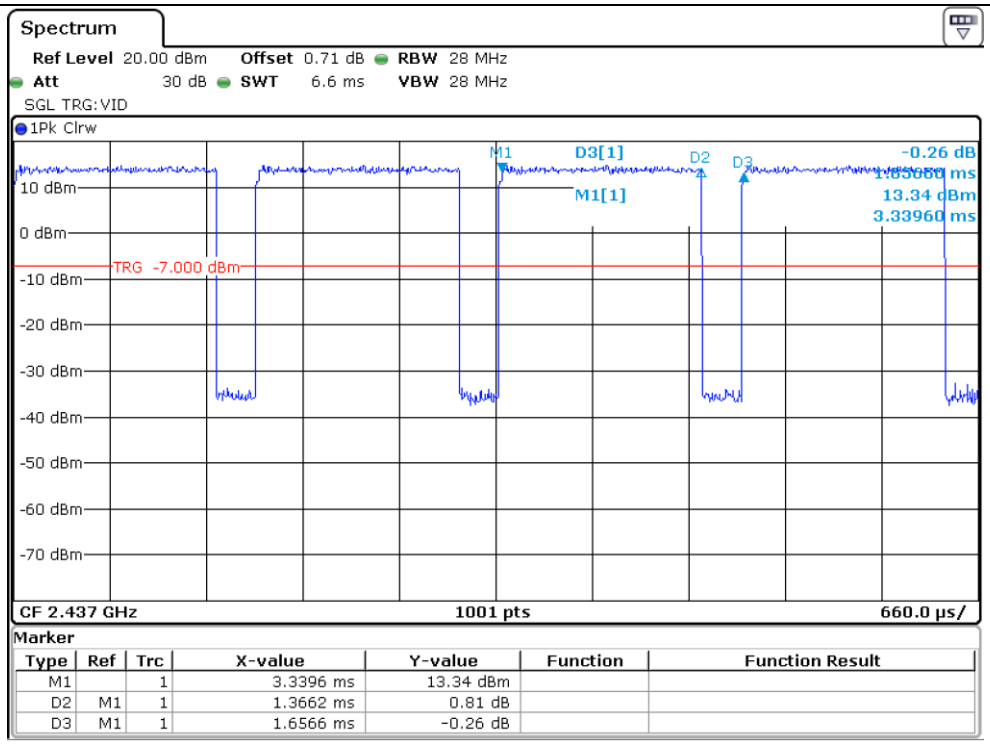
g mode_rate 9



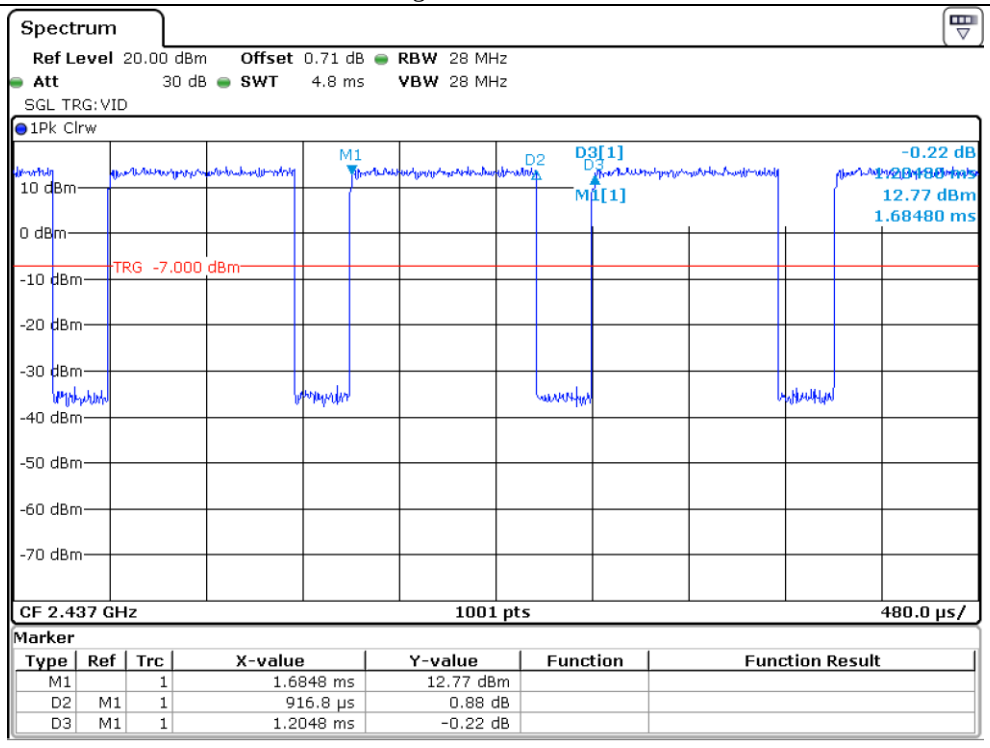
g mode_rate 12



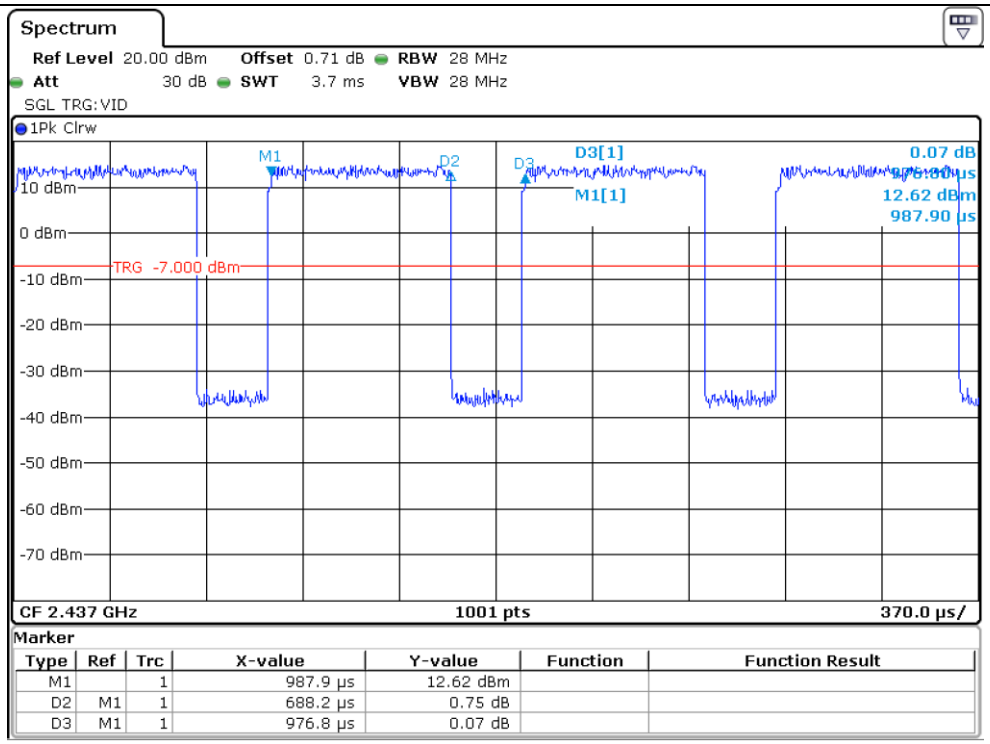
g mode_rate 18



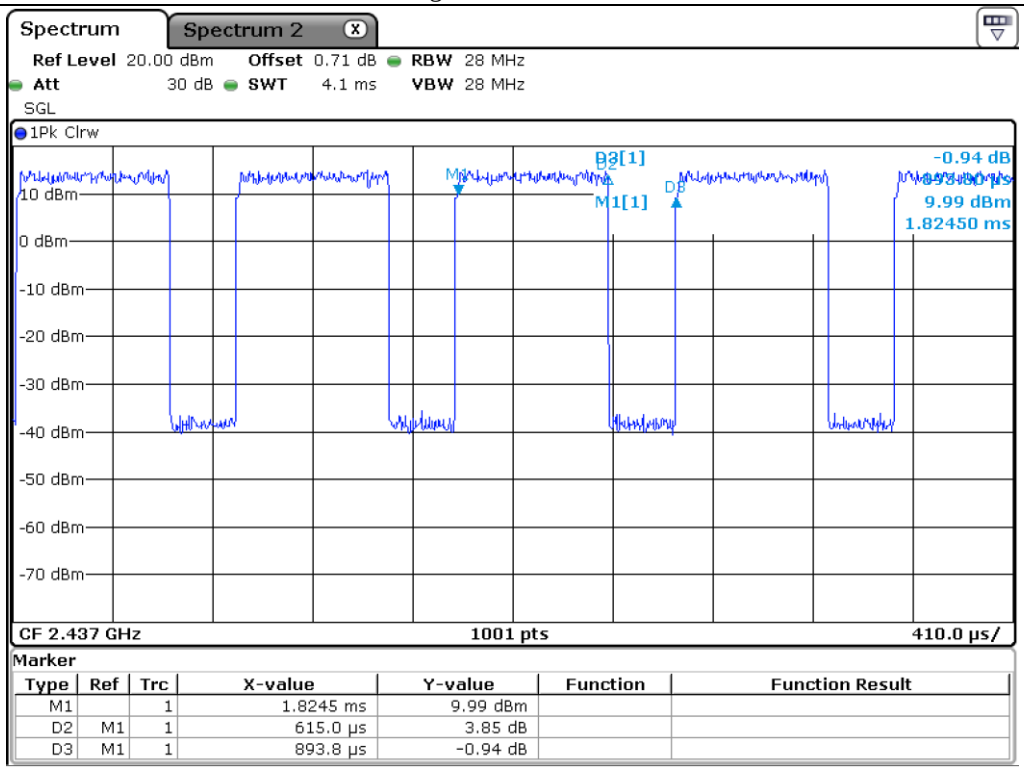
g mode_rate 24



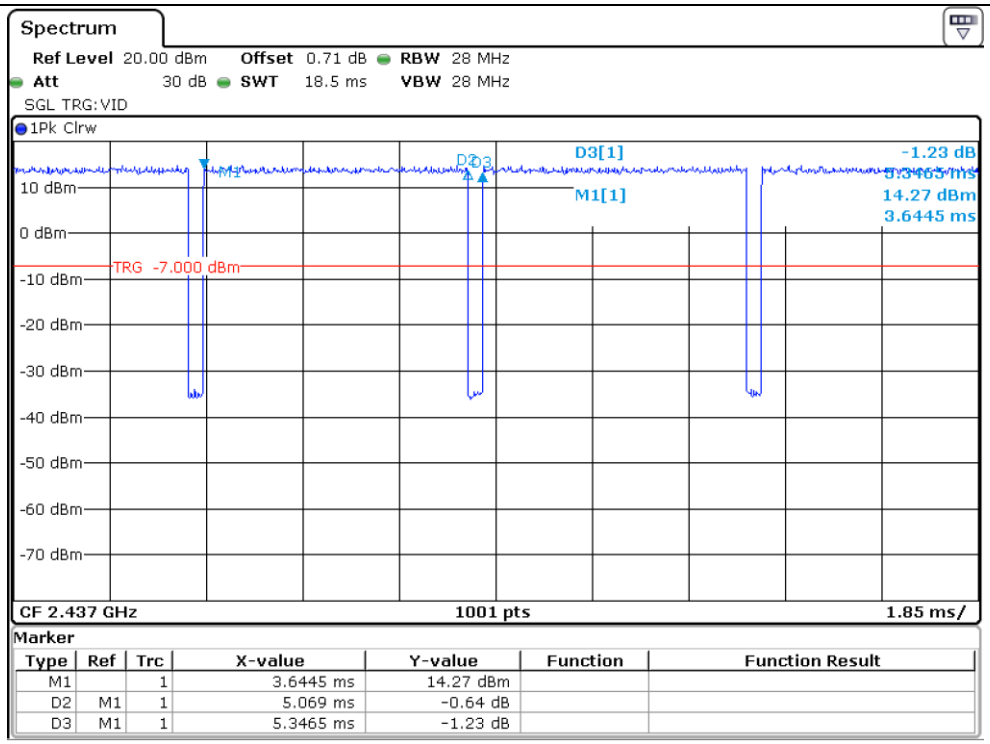
g mode_rate 36



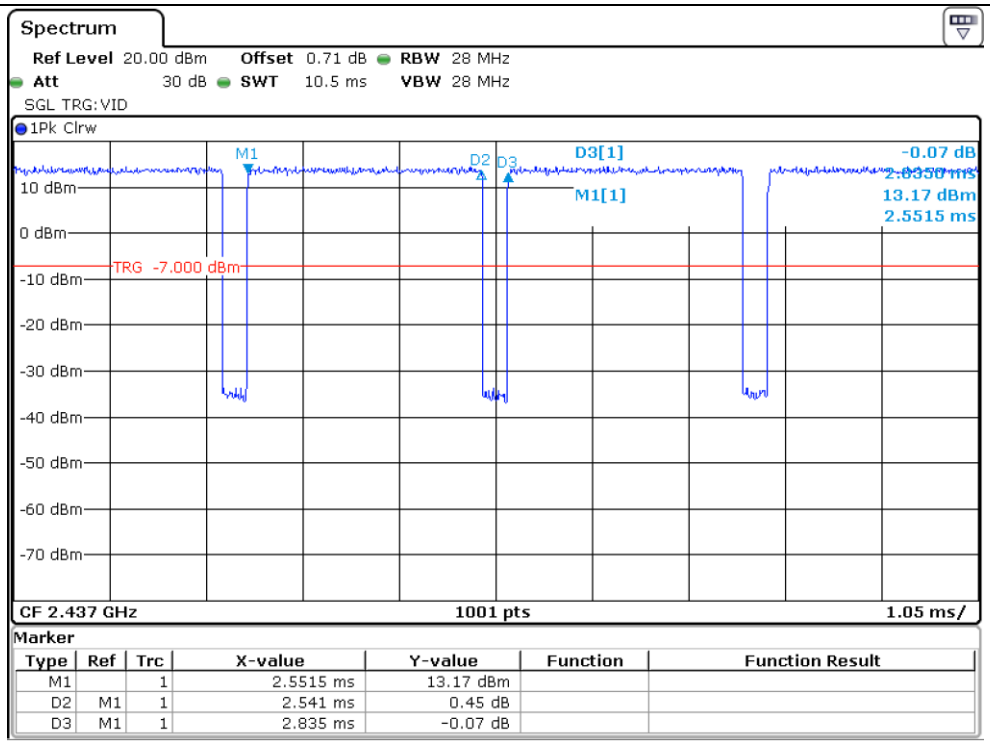
g mode_rate 48



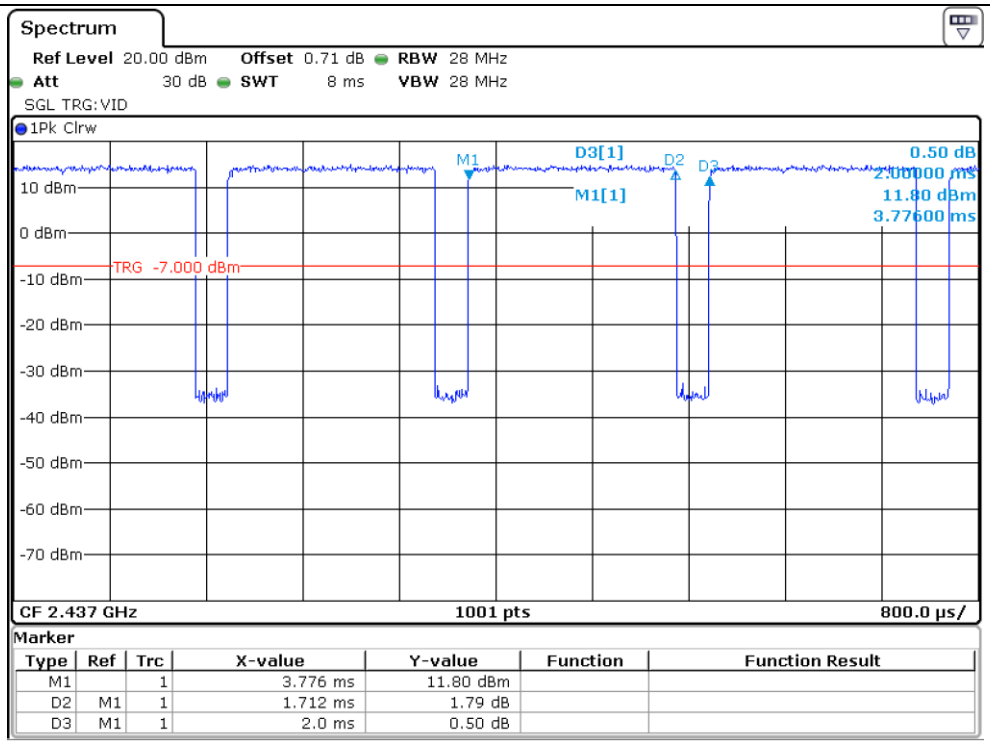
g mode_rate 54



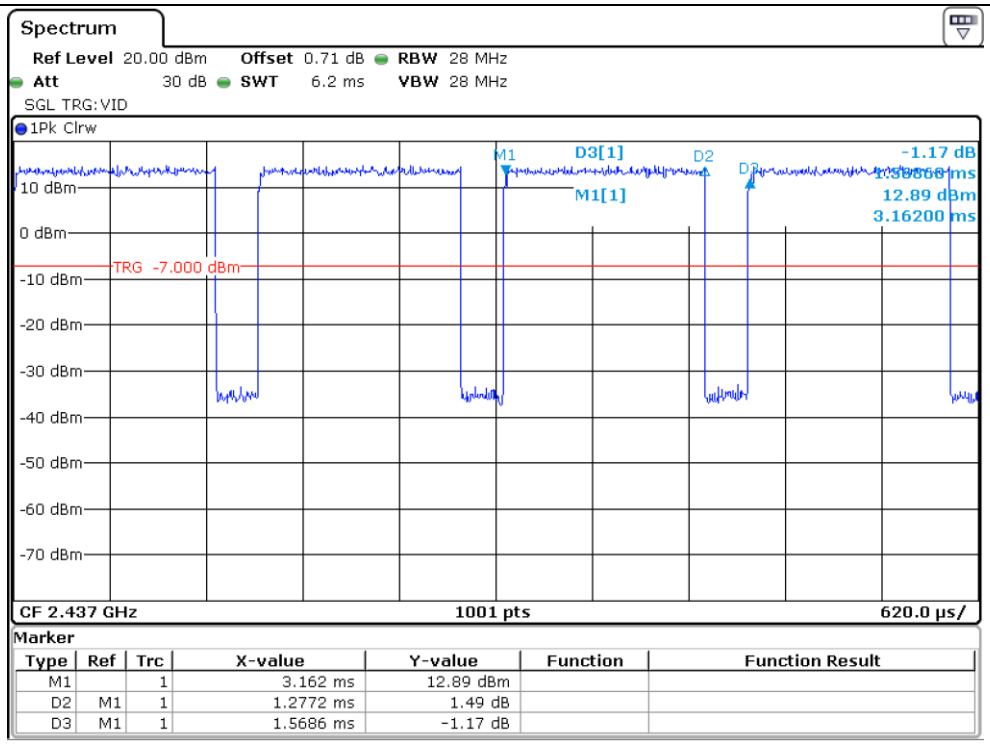
n20 mode_MCS0



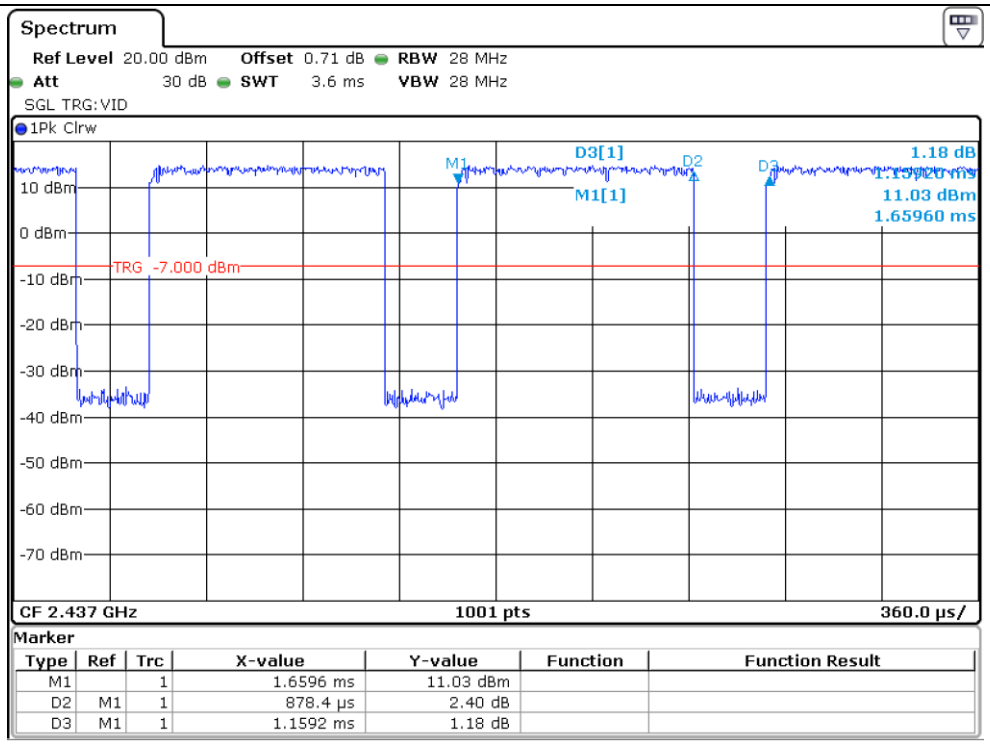
n20 mode_MCS1



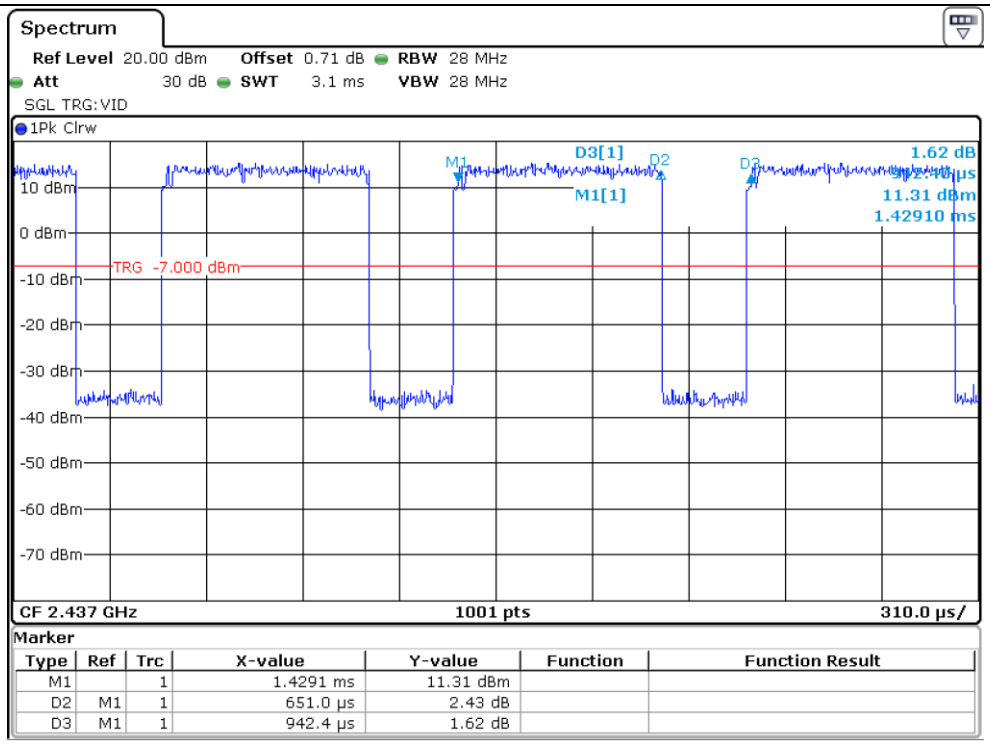
n20 mode_MCS2



n20 mode_MCS3

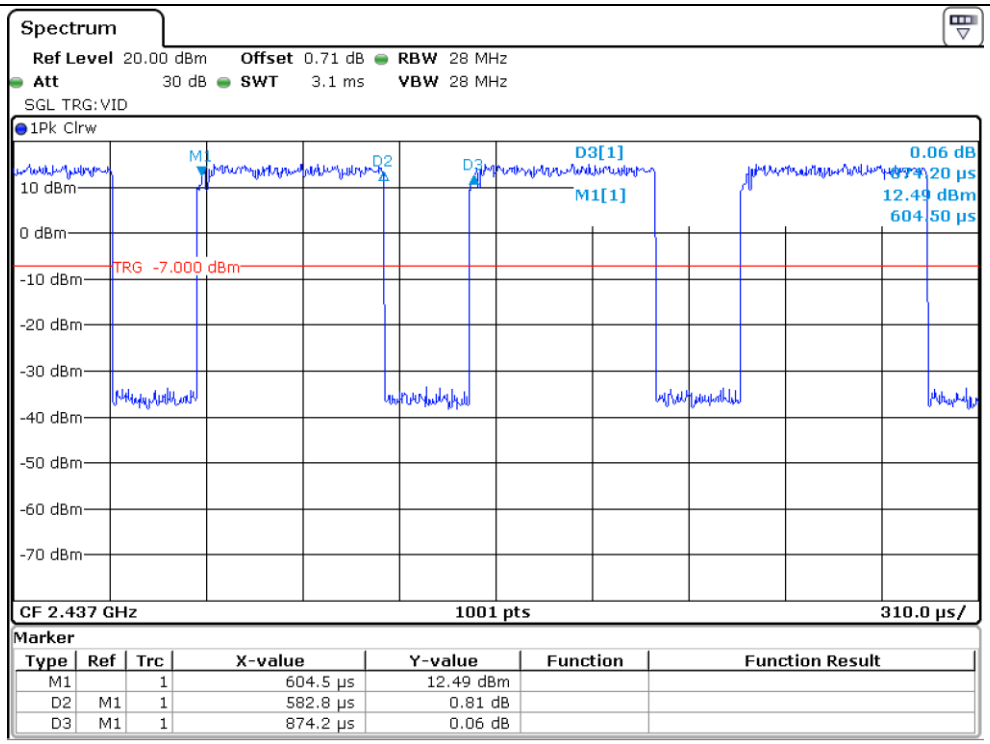


n20 mode_MCS4

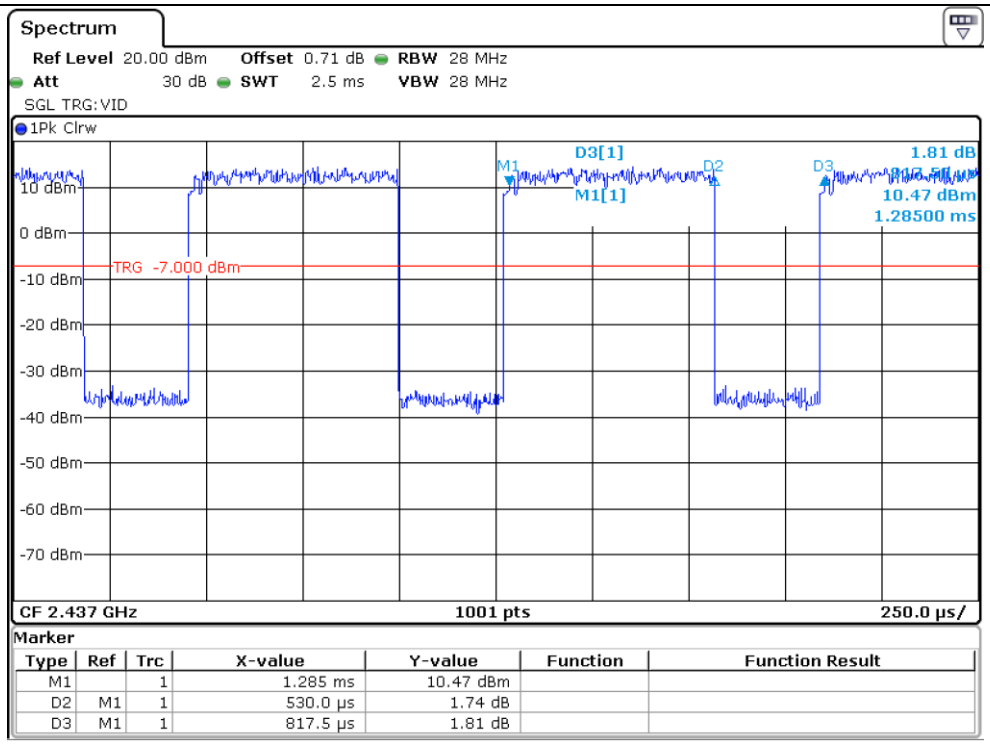


n20 mode_MCS5

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



n20 mode_MCS6



n20 mode_MCS7

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

5.4 Configuration of Test System

Line Conducted Test: The EUT was tested in the Transmitting mode. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The Chip Antenna is located on the main board of EUT. There is no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

7. MIMIMUM 6 dB BANDWIDTH

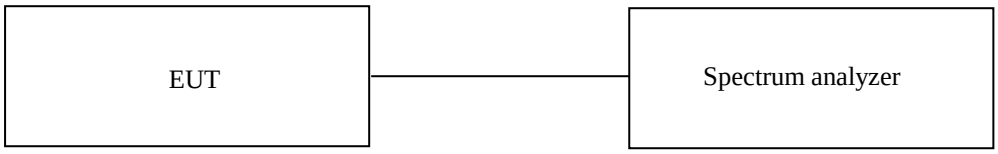
7.1 Operating environment

Temperature : 23°C

Relative humidity : 47 % R.H.

7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



7.3 Test Date

May 24, 2023 ~ June 05, 2023

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

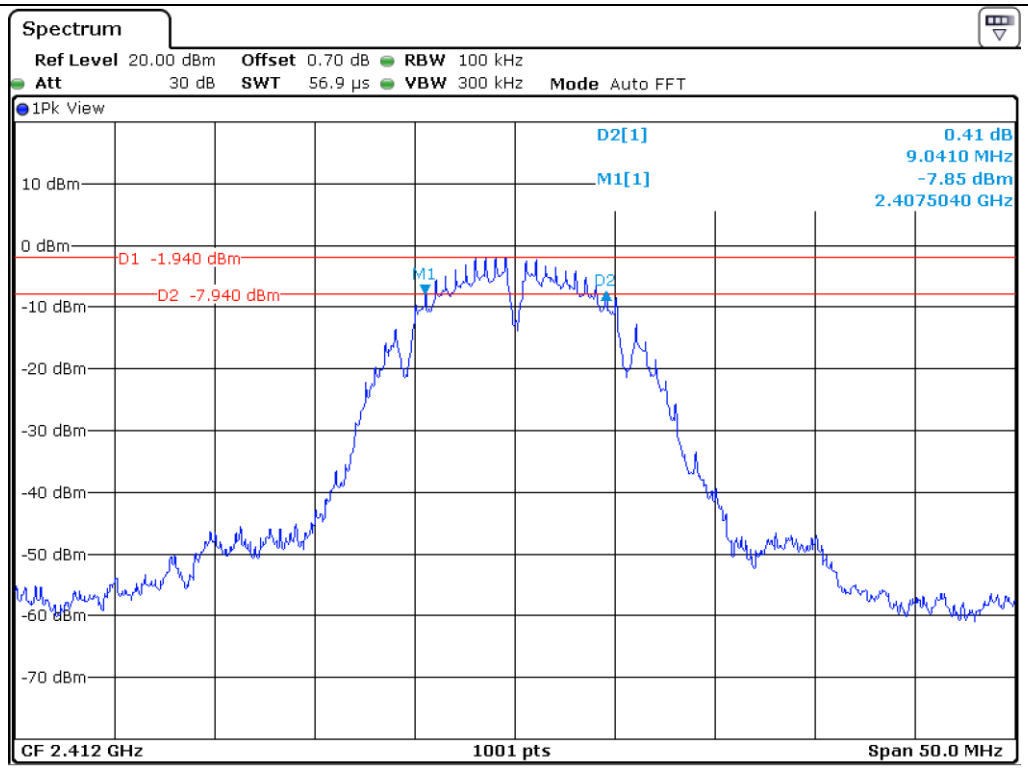
7.4 Test data for DC 12 V

7.4.1 Test data for 802.11b WLAN Mode

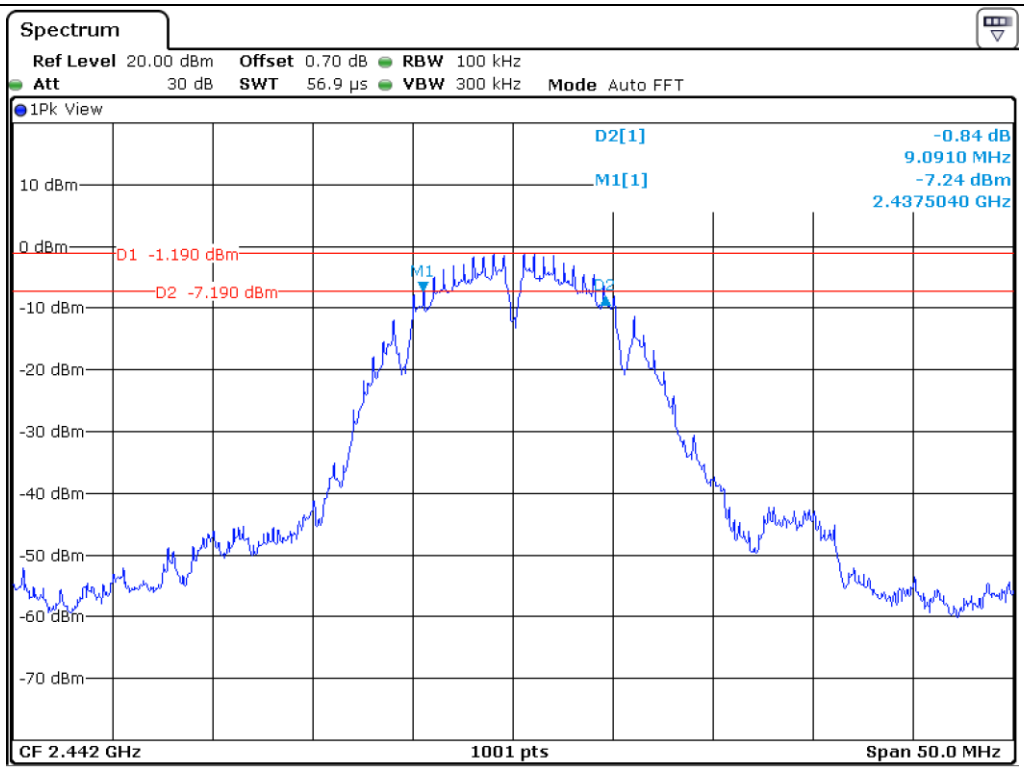
-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	9.04	0.50	8.54
Middle	2 437.00	9.09	0.50	8.59
High	2 462.00	9.09	0.50	8.59

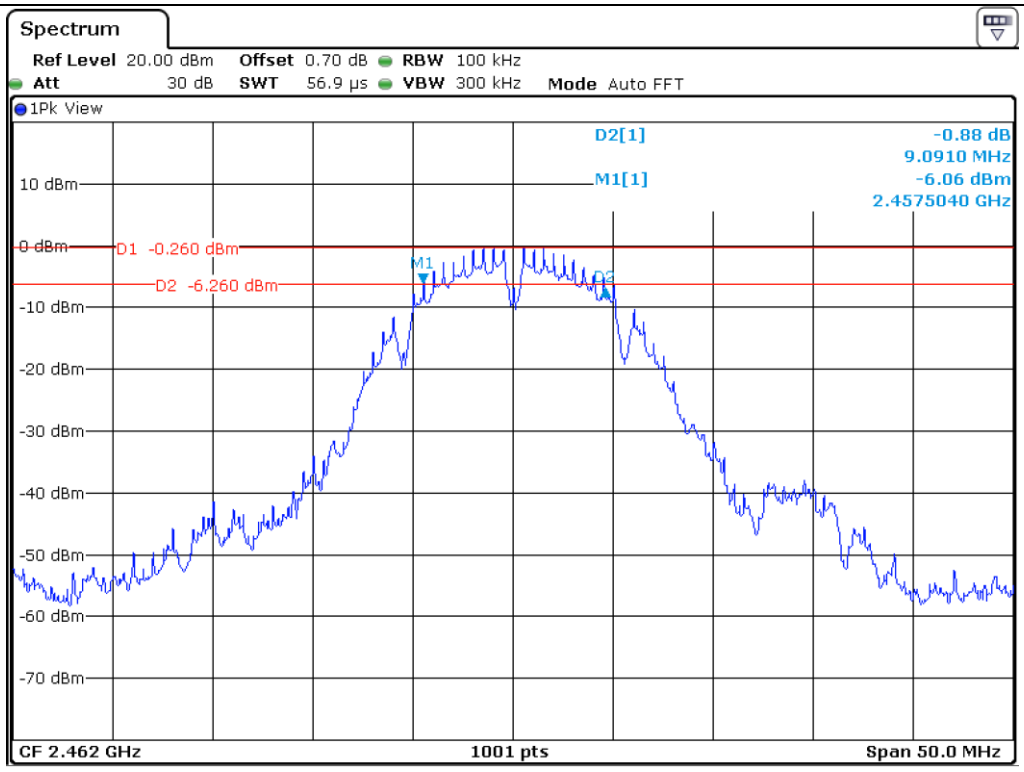
Remark. Margin = Measured Value - Limit



Low Channel



Middle Channel



High Channel

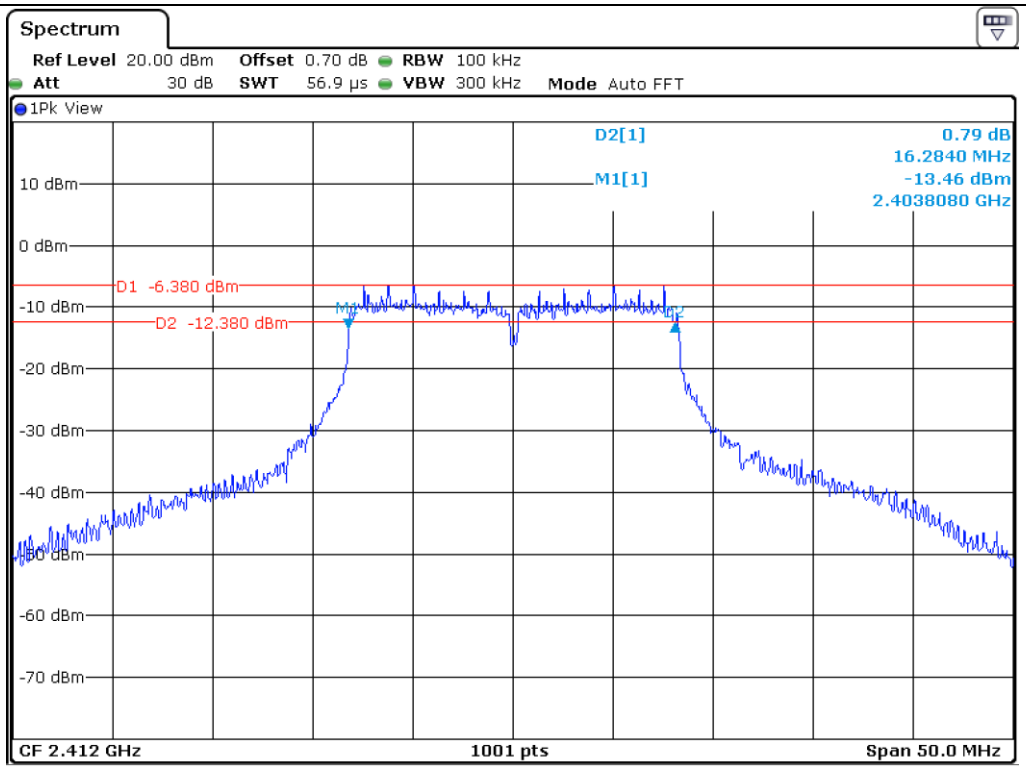
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

7.4.2 Test data for 802.11g WLAN Mode

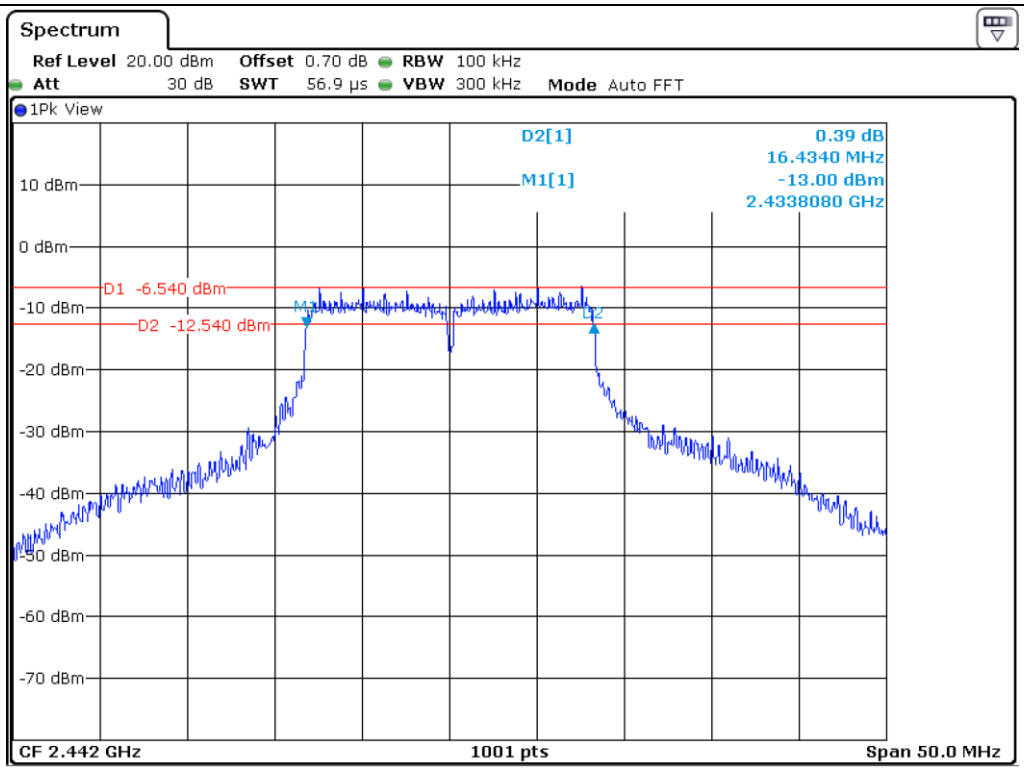
-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	16.28	0.50	15.78
Middle	2 437.00	16.43	0.50	15.93
High	2 462.00	16.48	0.50	15.98

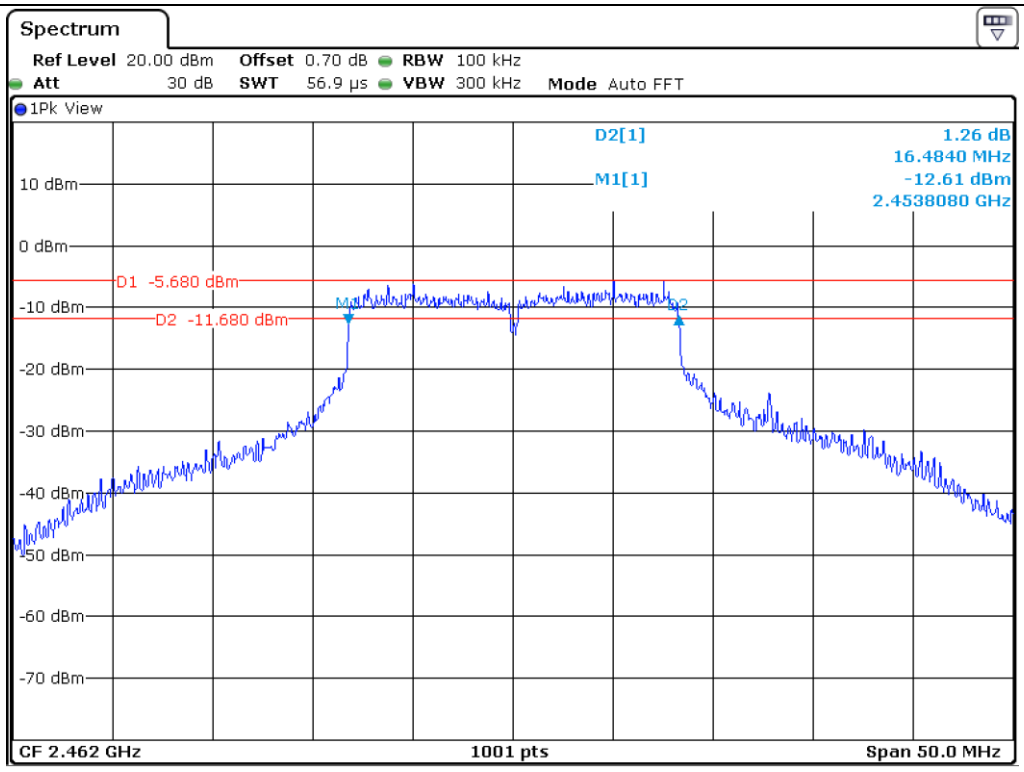
Remark. Margin = Measured Value – Limit



Low Channel



Middle Channel



High Channel

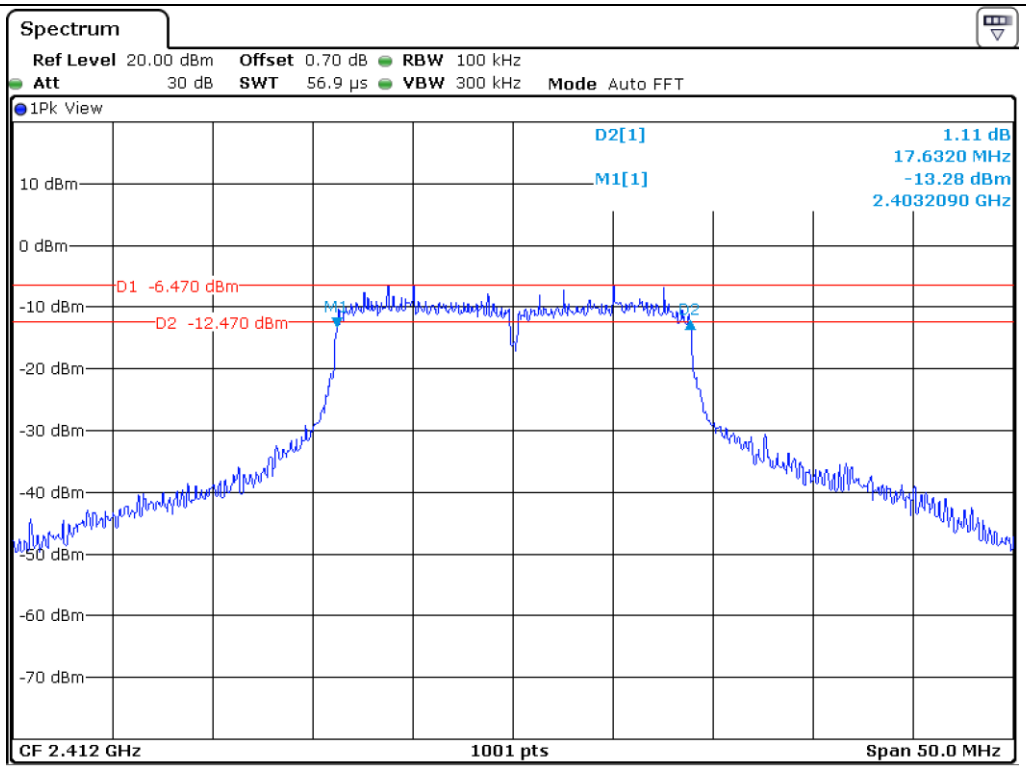
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

7.4.3 Test data for 802.11n_HT20 WLAN Mode

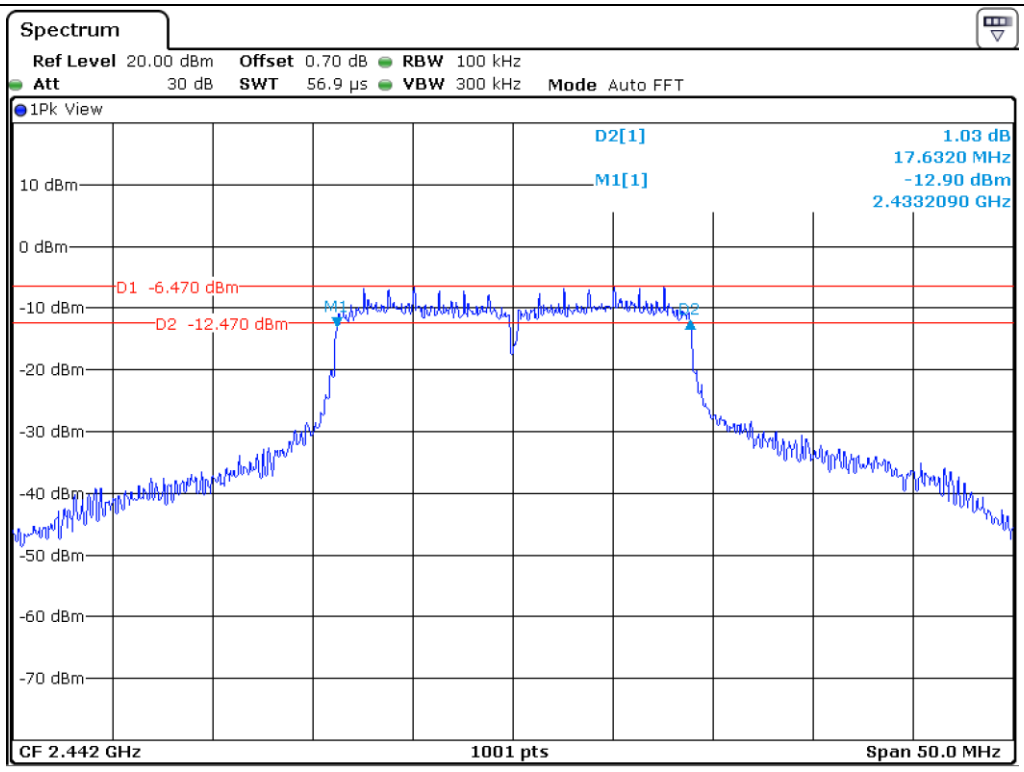
-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	17.63	0.50	17.13
Middle	2 437.00	17.63	0.50	17.13
High	2 462.00	17.53	0.50	17.13

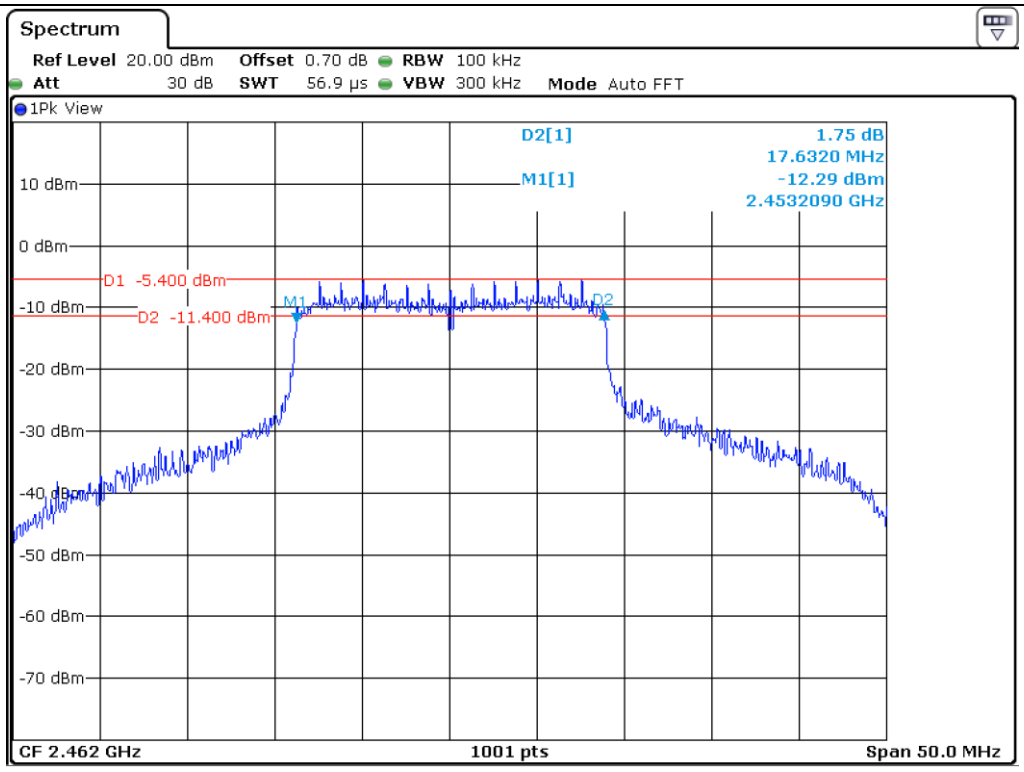
Remark. Margin = Measured Value – Limit



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

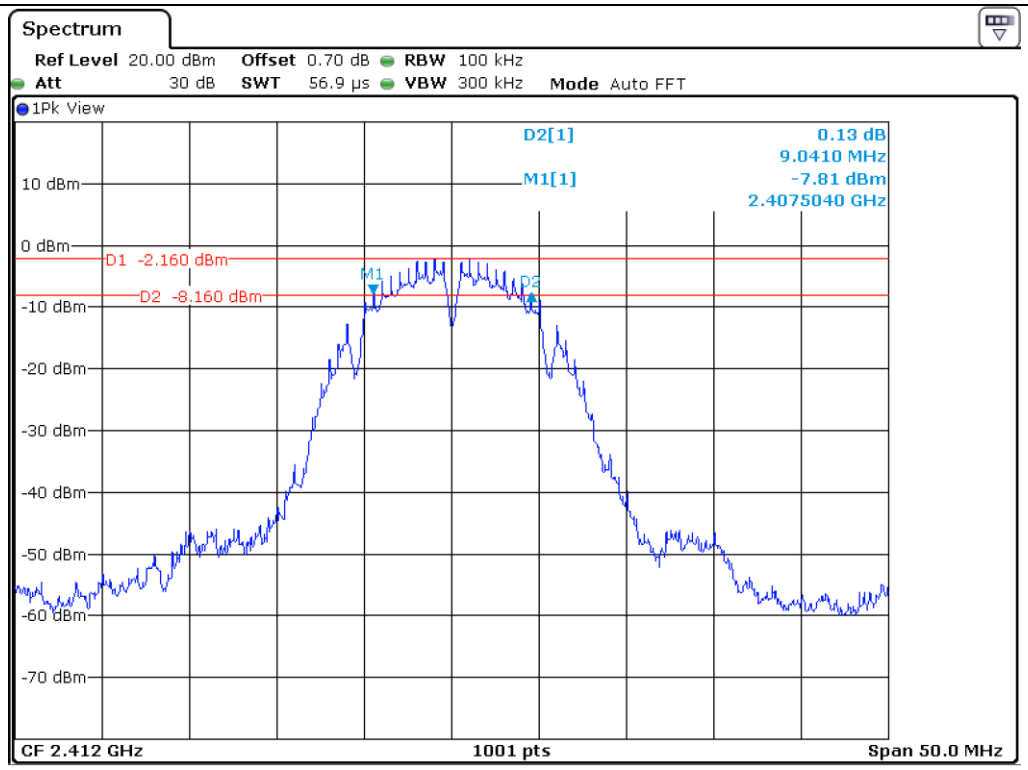
7.5 Test data for DC 24 V

7.5.1 Test data for 802.11b WLAN Mode

-. Test Result : Pass

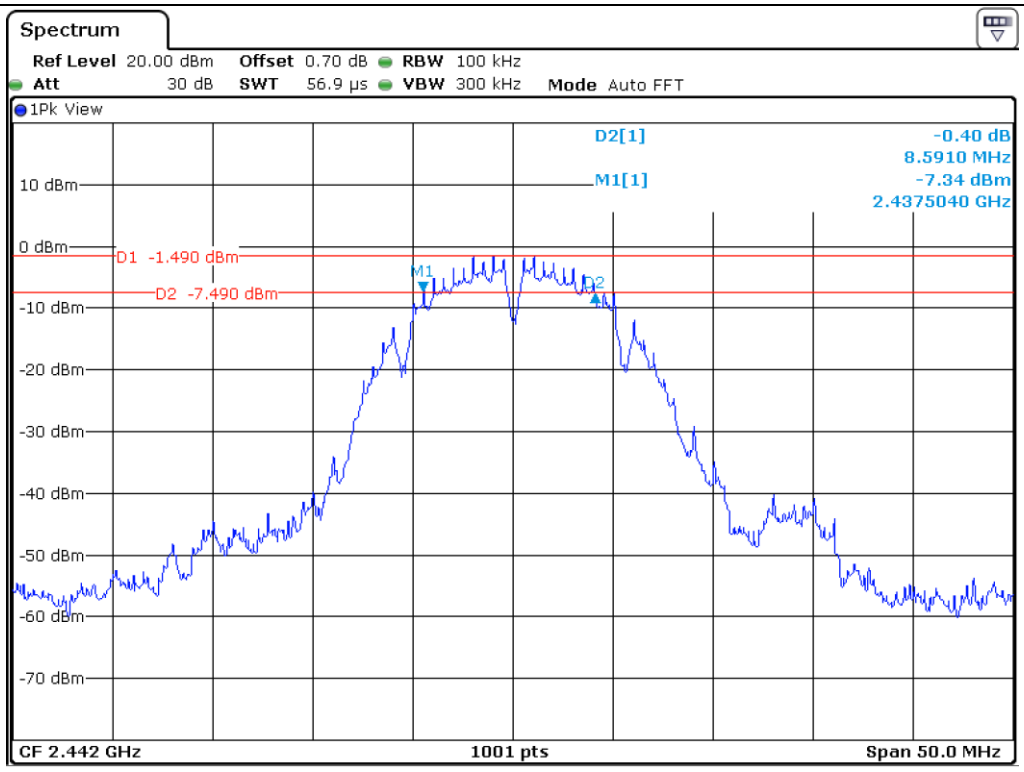
CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	9.04	0.50	8.54
Middle	2 437.00	8.59	0.50	8.09
High	2 462.00	9.04	0.50	8.54

Remark. Margin = Measured Value – Limit

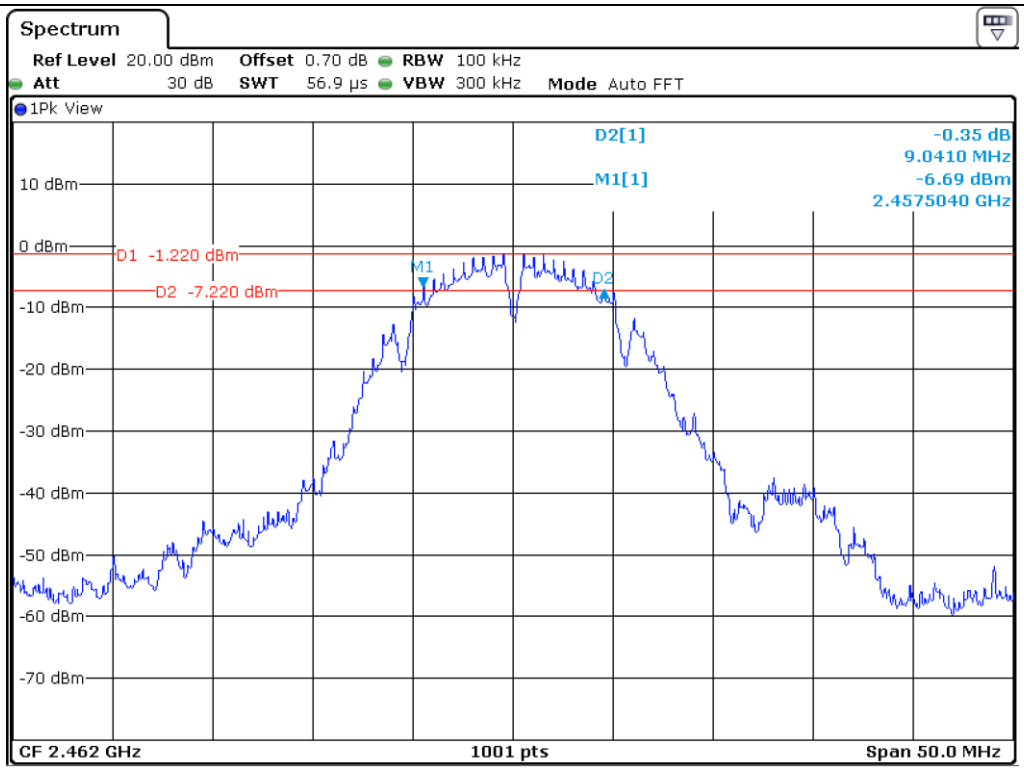


Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Middle Channel



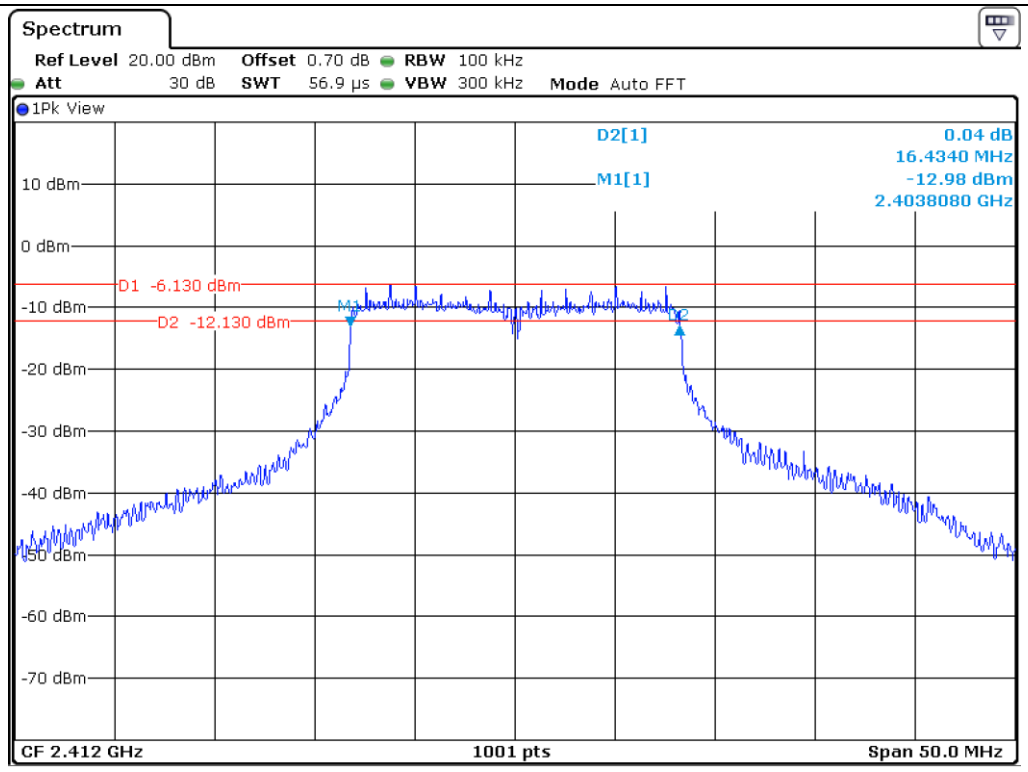
High Channel

7.5.2 Test data for 802.11g WLAN Mode

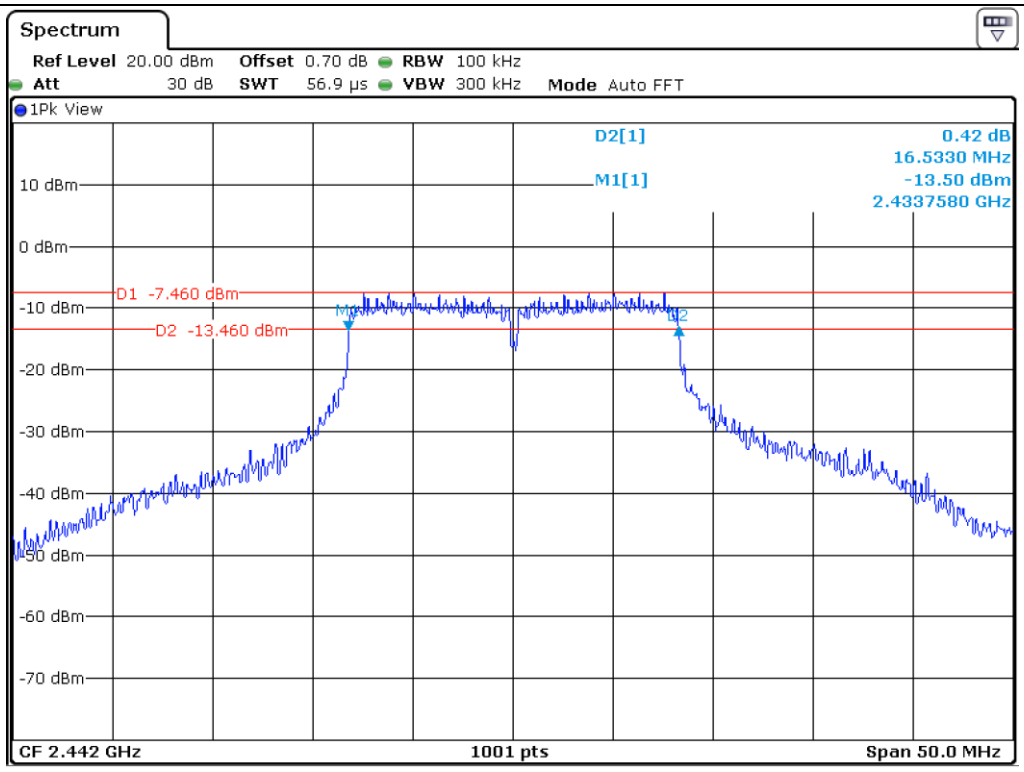
-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	16.43	0.50	15.93
Middle	2 437.00	16.53	0.50	16.03
High	2 462.00	16.48	0.50	15.98

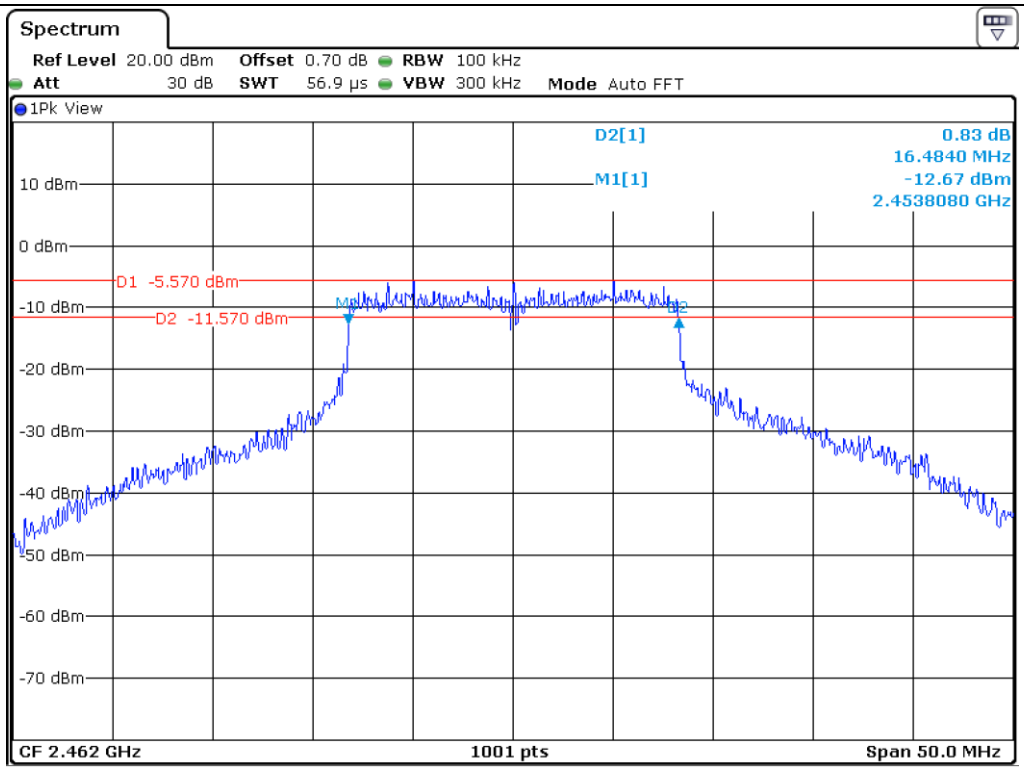
Remark. Margin = Measured Value – Limit



Low Channel



Middle Channel



High Channel

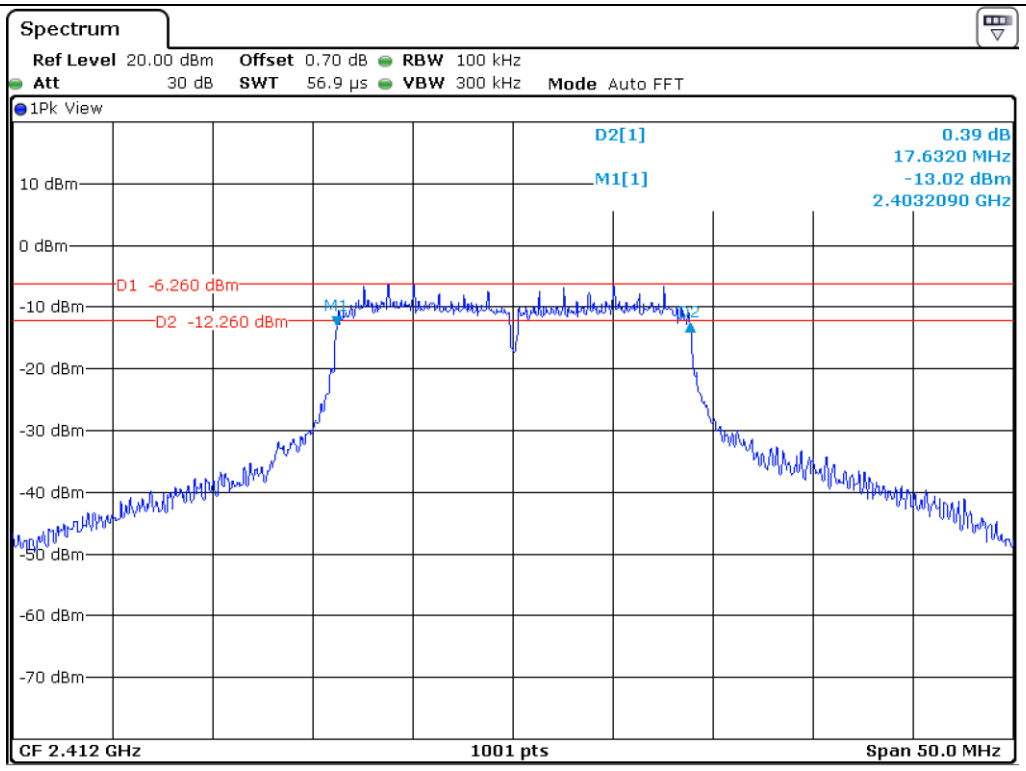
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

7.5.3 Test data for 802.11n_HT20 WLAN Mode

-. Test Result : Pass

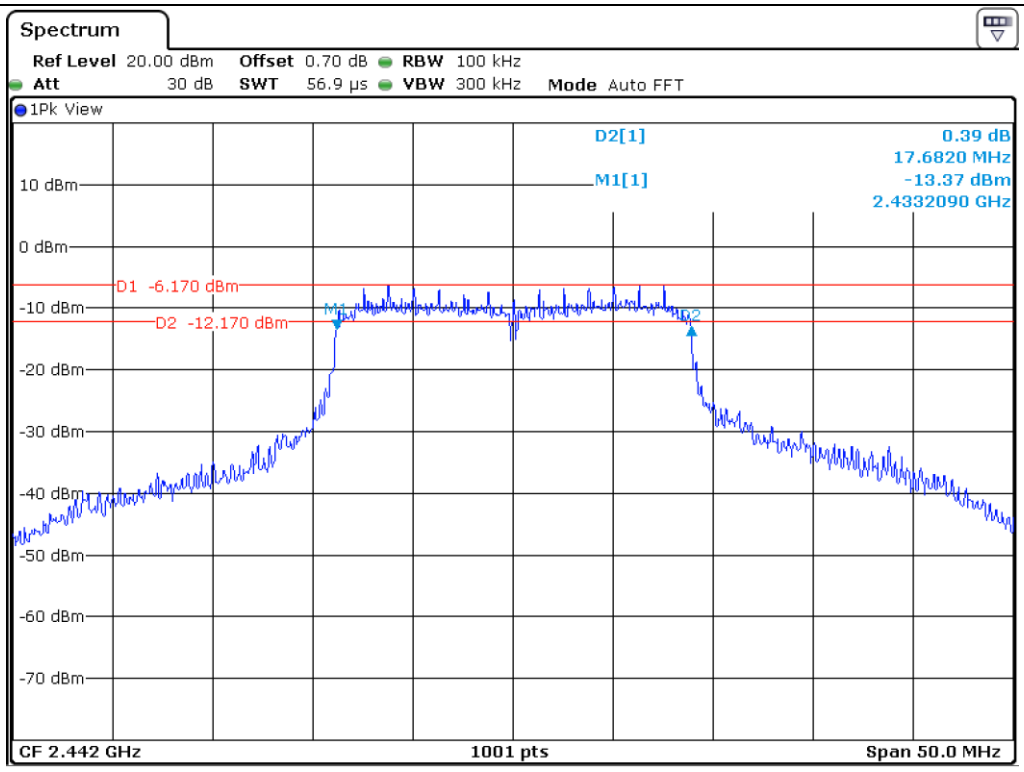
CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	LIMIT (MHz)	Margin (MHz)
Low	2 412.00	17.63	0.50	17.13
Middle	2 437.00	17.68	0.50	17.18
High	2 462.00	17.78	0.50	17.28

Remark. Margin = Measured Value – Limit

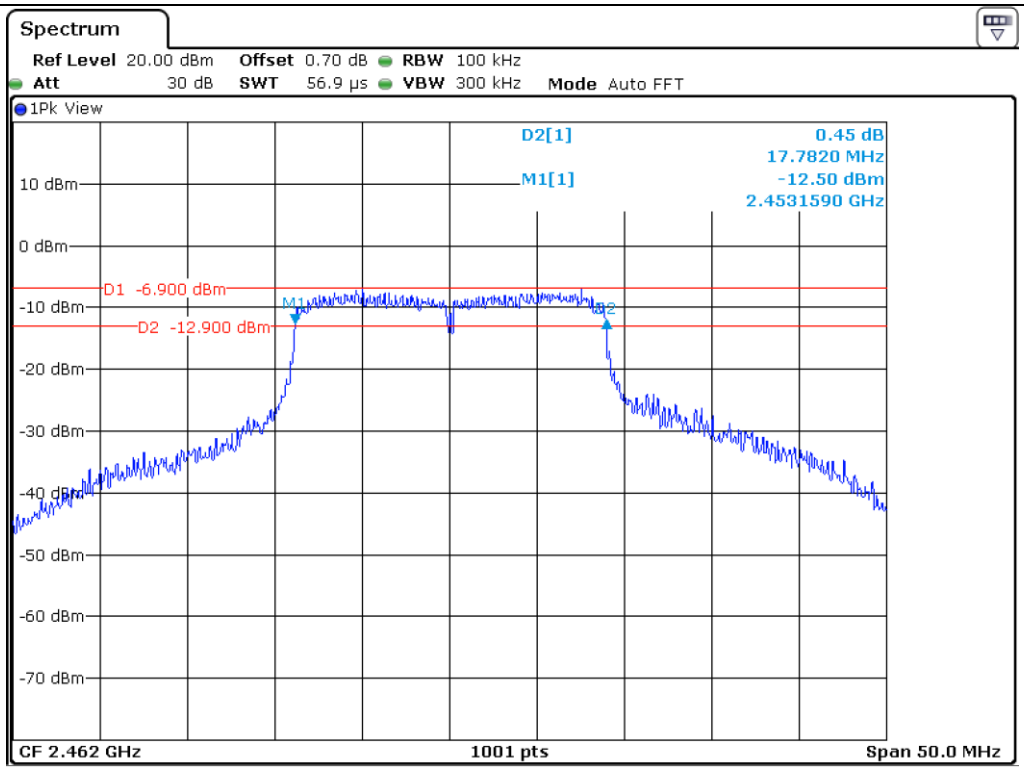


Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

8. MAXIMUM PEAK OUTPUT POWER

8.1 Operating environment

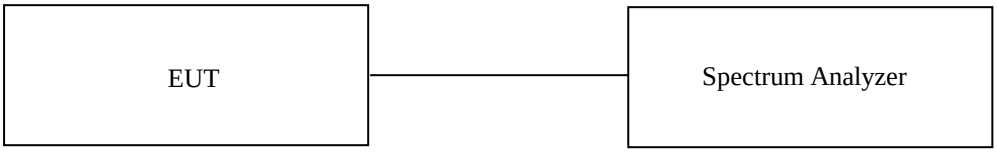
Temperature : 24 °C

Relative humidity : 47 % R.H.

8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth.



8.3 Test Date

May 24, 2023 ~ June 05, 2023

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

8.4 Test data for DC 12 V

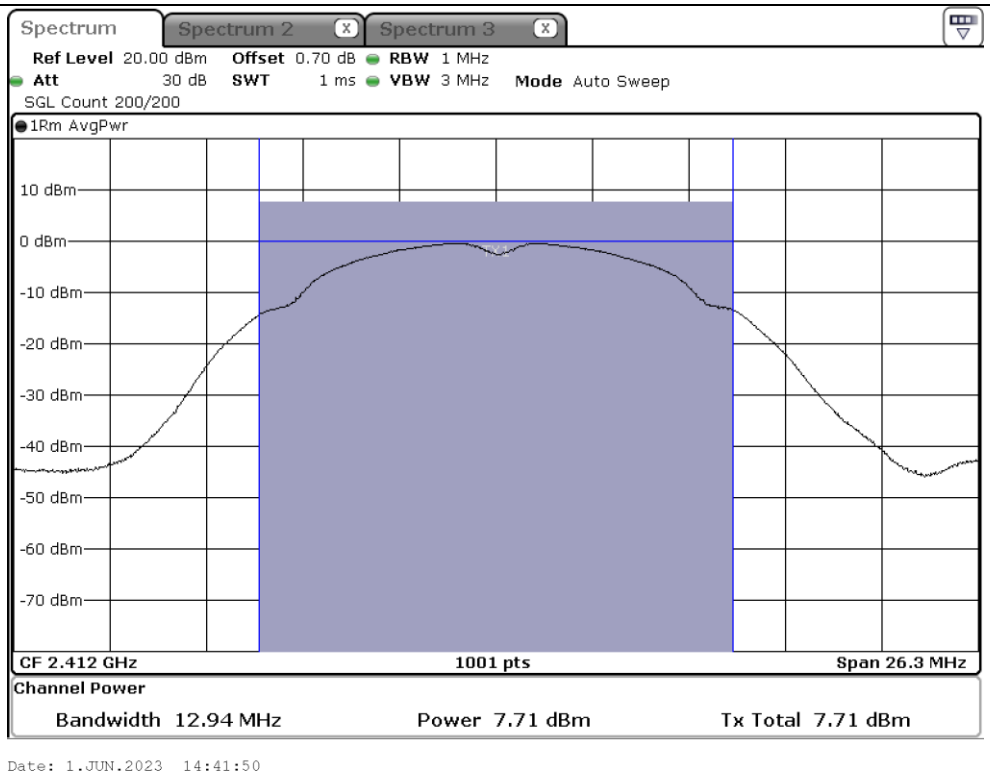
8.4.1 Test data for 802.11b WLAN Mode

-. Test Result : Pass

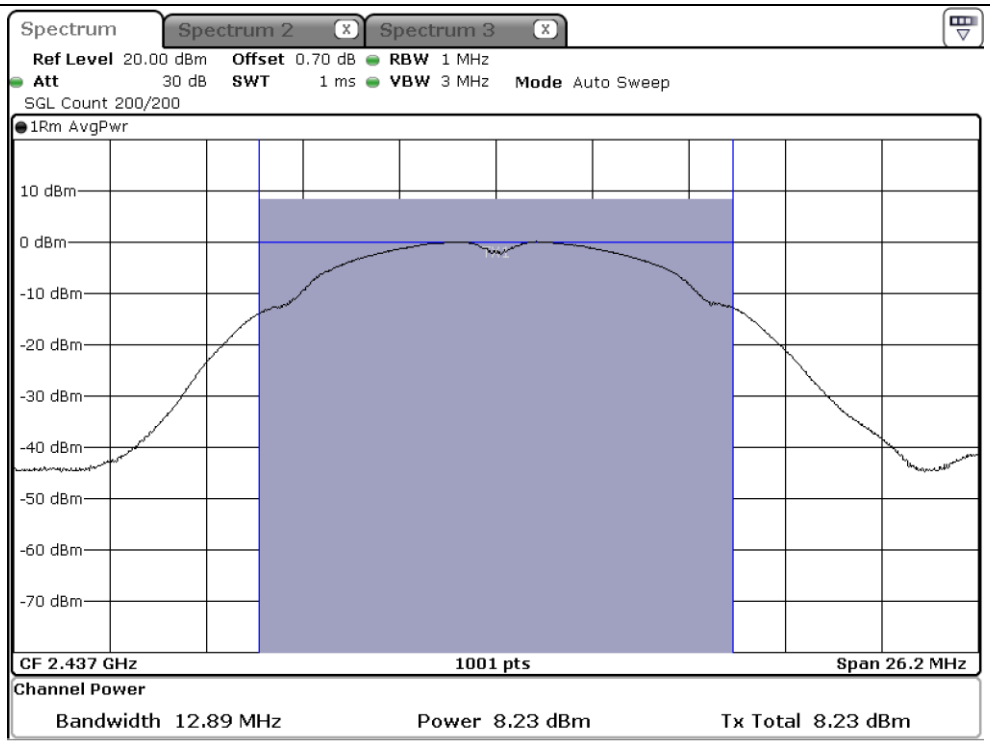
-. Duty Cycle : 99.40 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	7.71	0.03	7.74	30.00	22.26
MIDDLE	2 437.00	8.23	0.03	8.26	30.00	21.74
HIGH	2 462.00	8.89	0.03	8.92	30.00	21.08

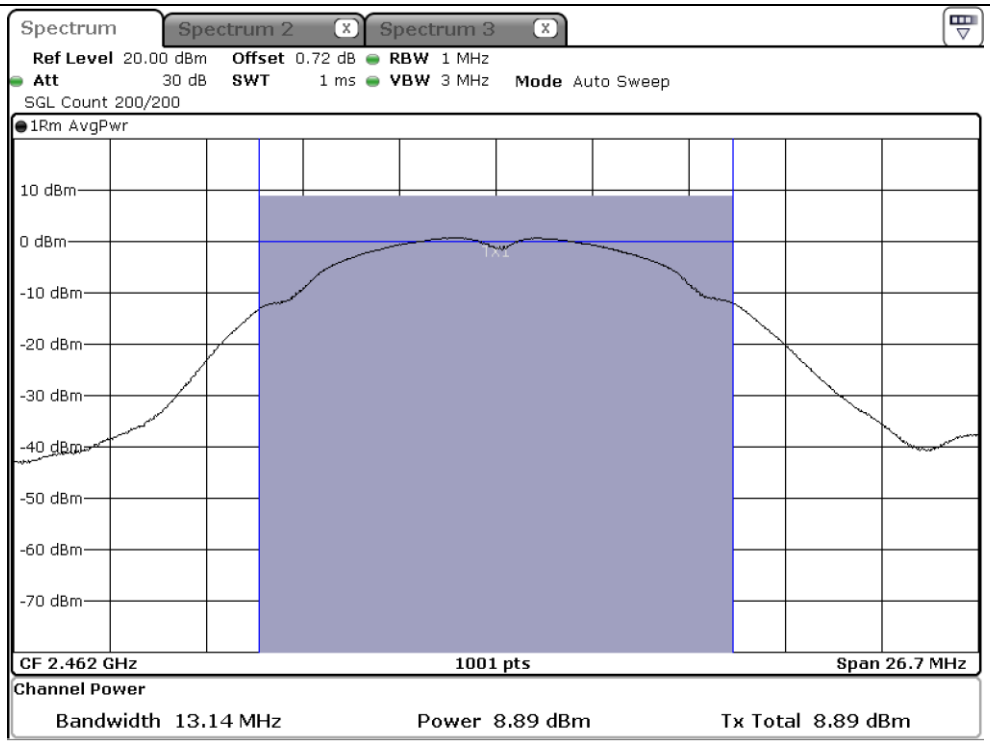
Remark. Margin = Limit – Result (=Measured Value + Duty Factor)



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

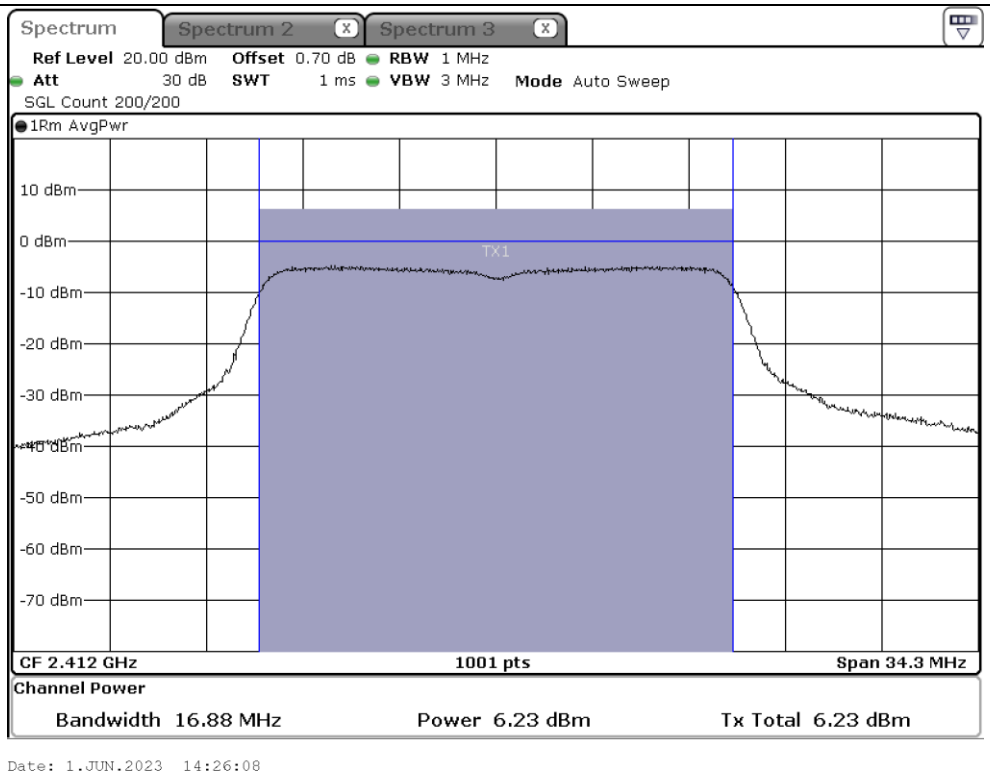
8.4.2 Test data for 802.11g WLAN Mode

-. Test Result : Pass

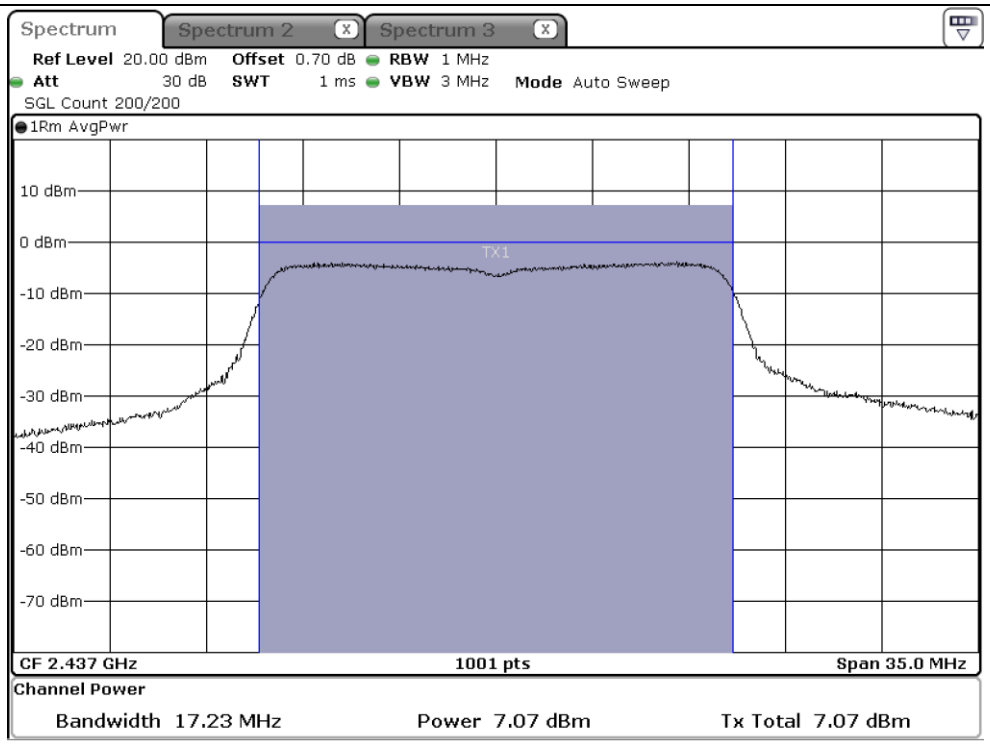
-. Duty Cycle : 91.38 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	6.23	0.39	6.43	30.00	23.57
MIDDLE	2 437.00	7.07	0.39	7.27	30.00	22.73
HIGH	2 462.00	7.38	0.39	7.58	30.00	22.42

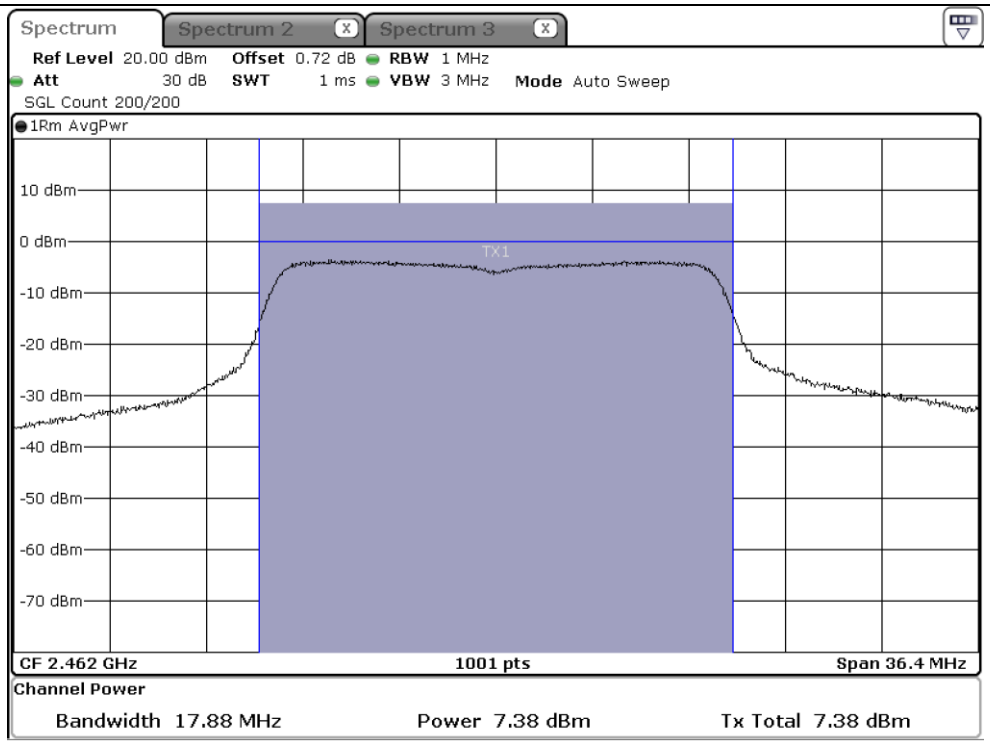
Remark. Margin = Limit – Result (=Measured Value + Duty Factor)



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

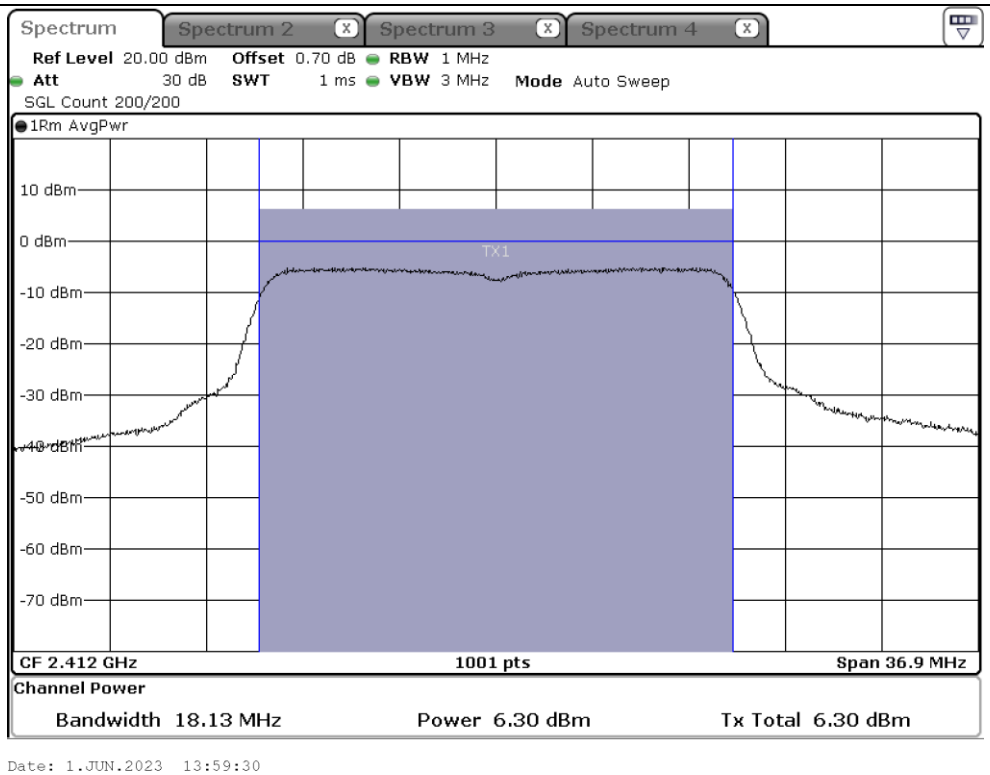
8.4.3 Test data for 802.11n_HT20 WLAN Mode

-. Test Result : Pass

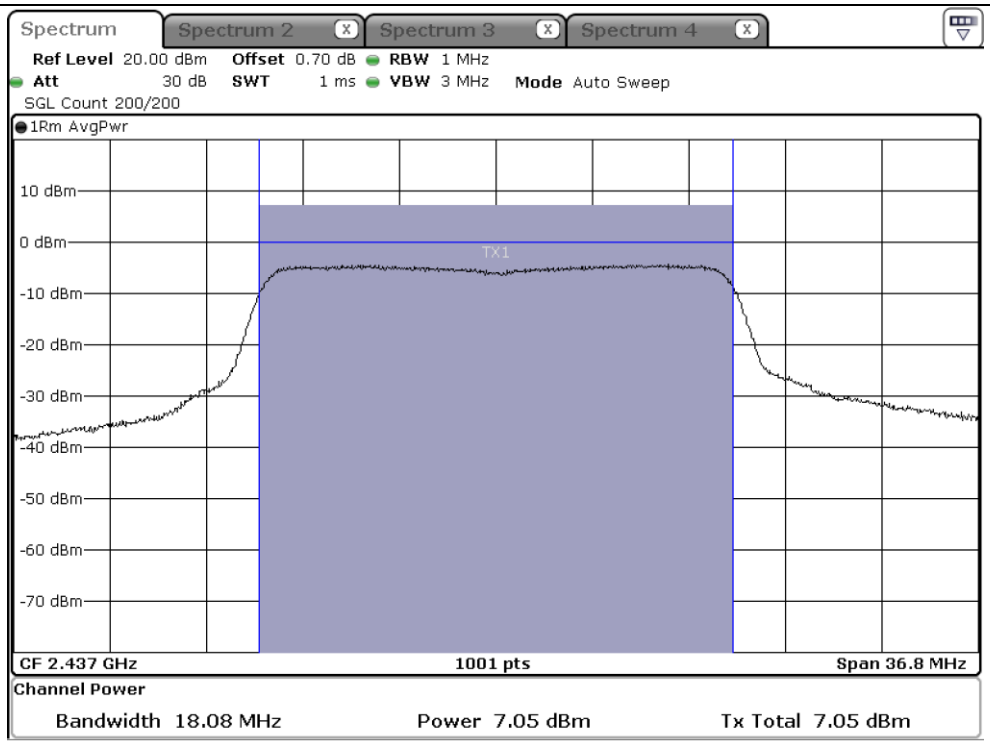
-. Duty Cycle : 94.81 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	6.30	0.24	6.54	30.00	23.46
MIDDLE	2 437.00	7.05	0.24	7.29	30.00	22.71
HIGH	2 462.00	7.43	0.24	7.67	30.00	22.33

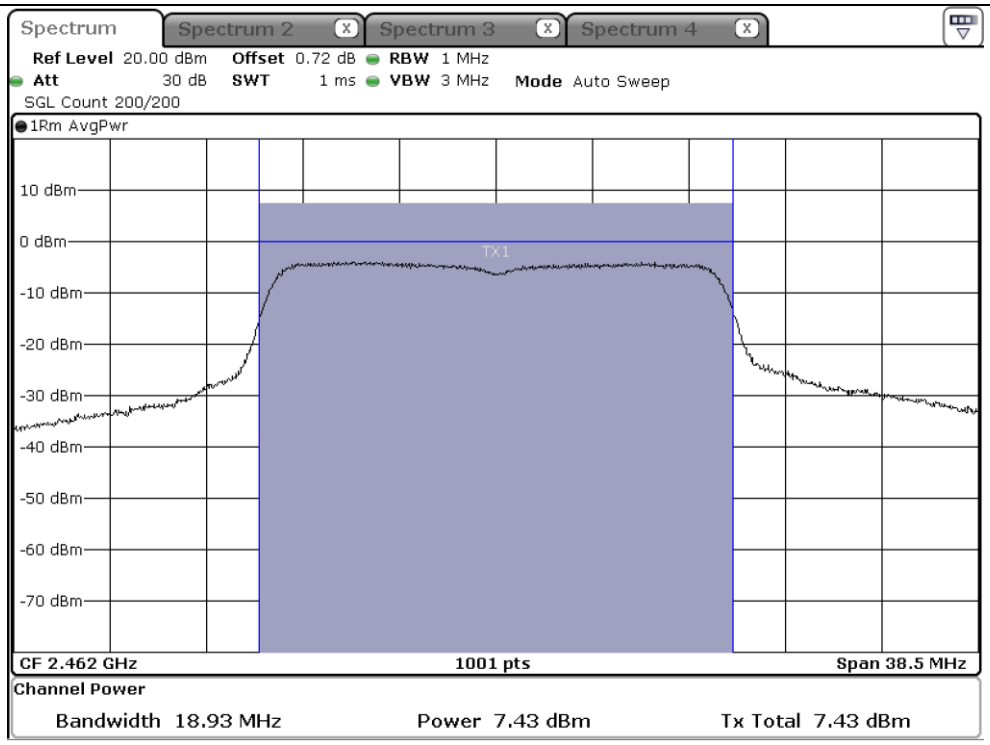
Remark. Margin = Limit – Result (=Measured Value + Duty Factor)



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

8.5 Test data for DC 24 V

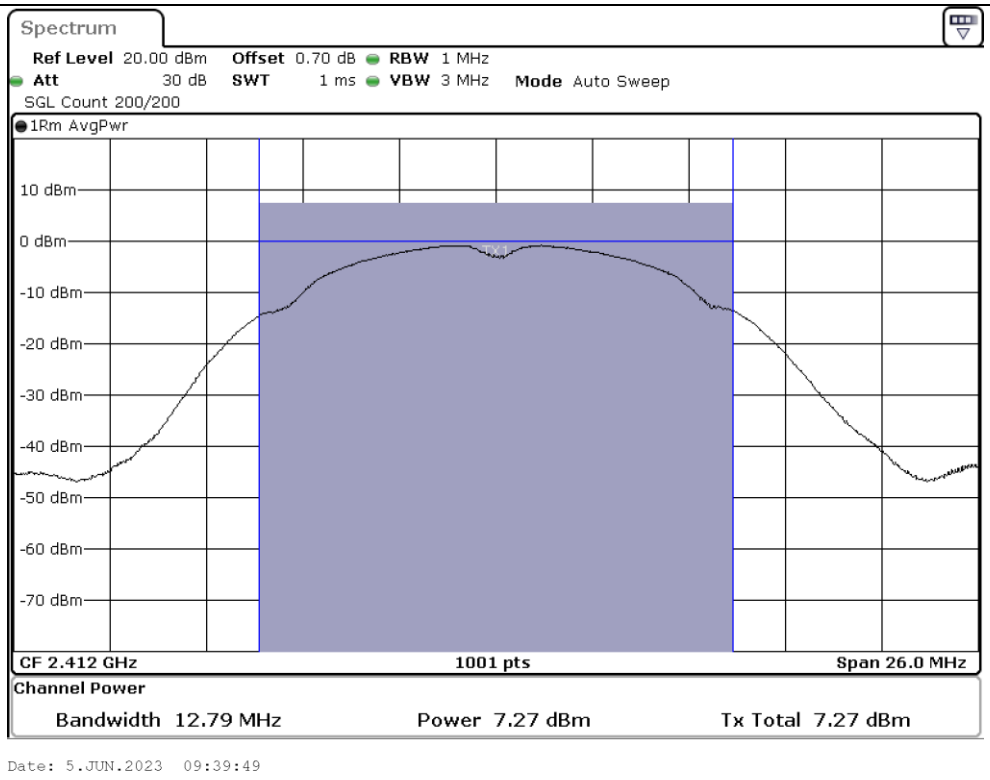
8.5.1 Test data for 802.11b WLAN Mode

-. Test Result : Pass

-. Duty Cycle : 99.40 %

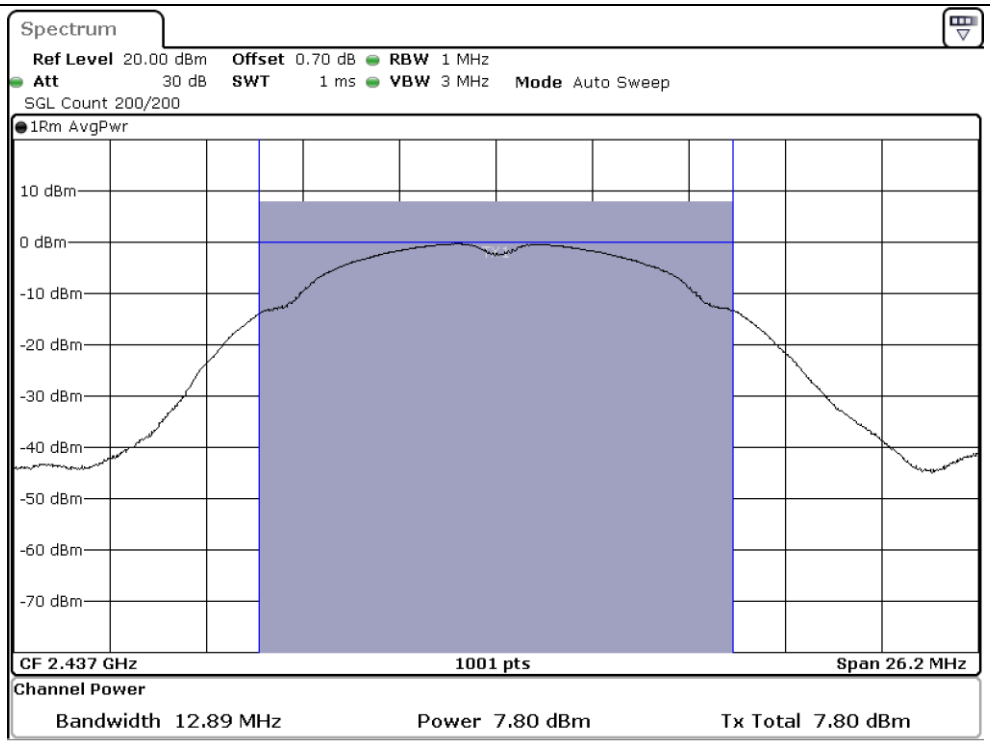
CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	7.27	0.03	7.30	30.00	22.70
MIDDLE	2 437.00	7.80	0.03	7.83	30.00	22.27
HIGH	2 462.00	8.21	0.03	8.24	30.00	21.76

Remark. Margin = Limit – Result (=Measured Value + Duty Factor)

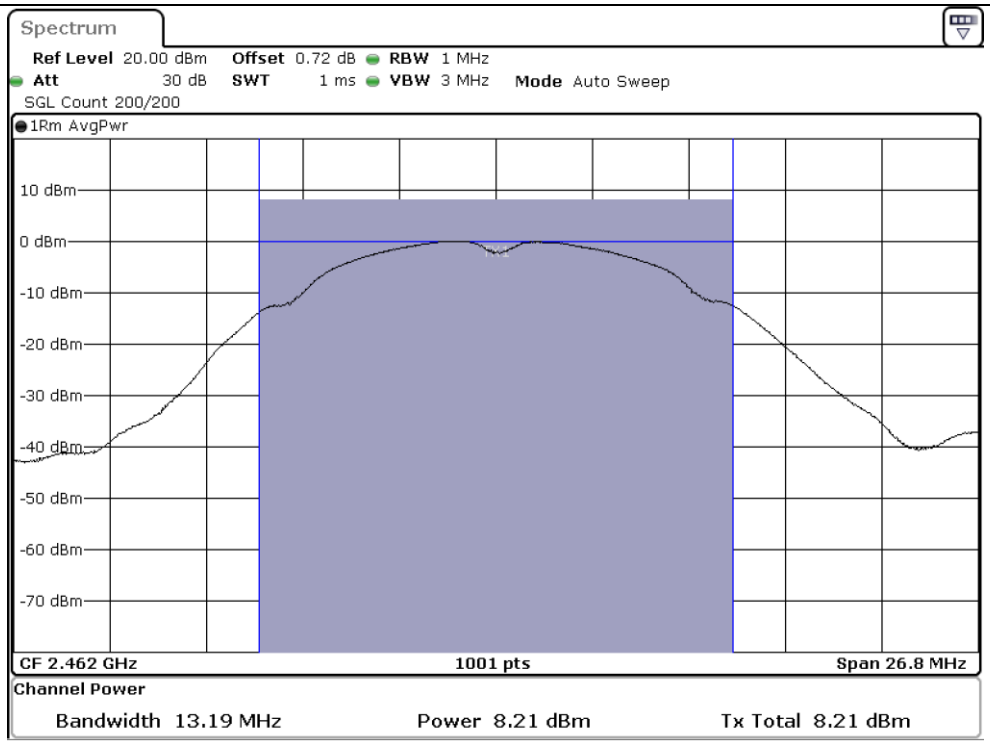


Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

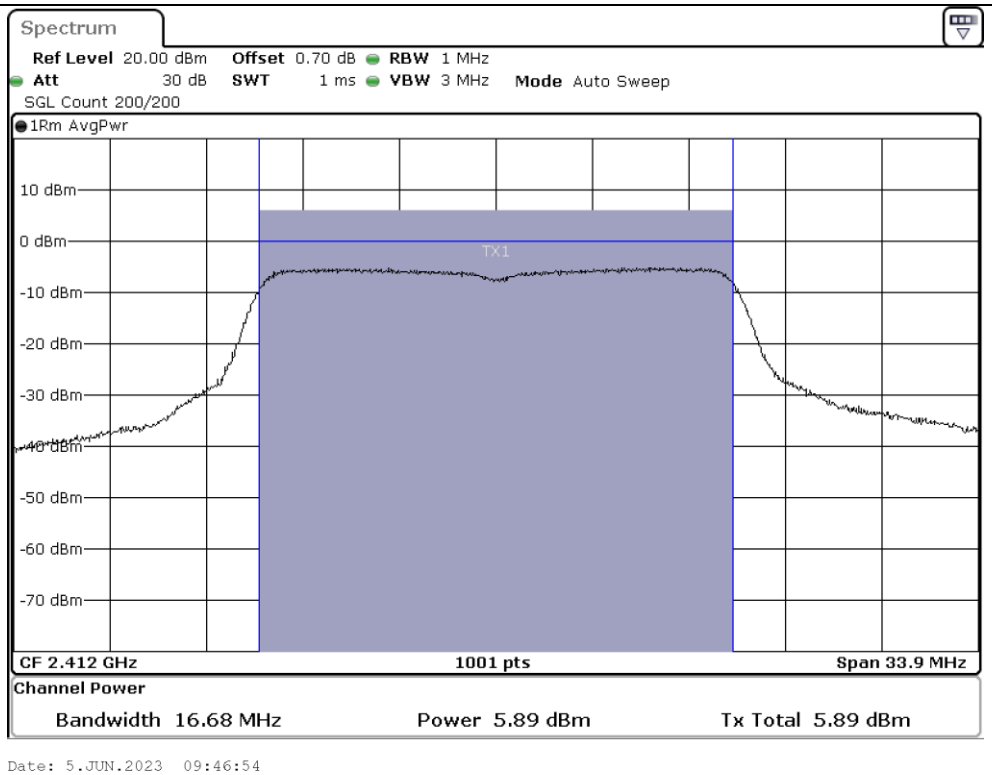
8.5.2 Test data for 802.11g WLAN Mode

-. Test Result : Pass

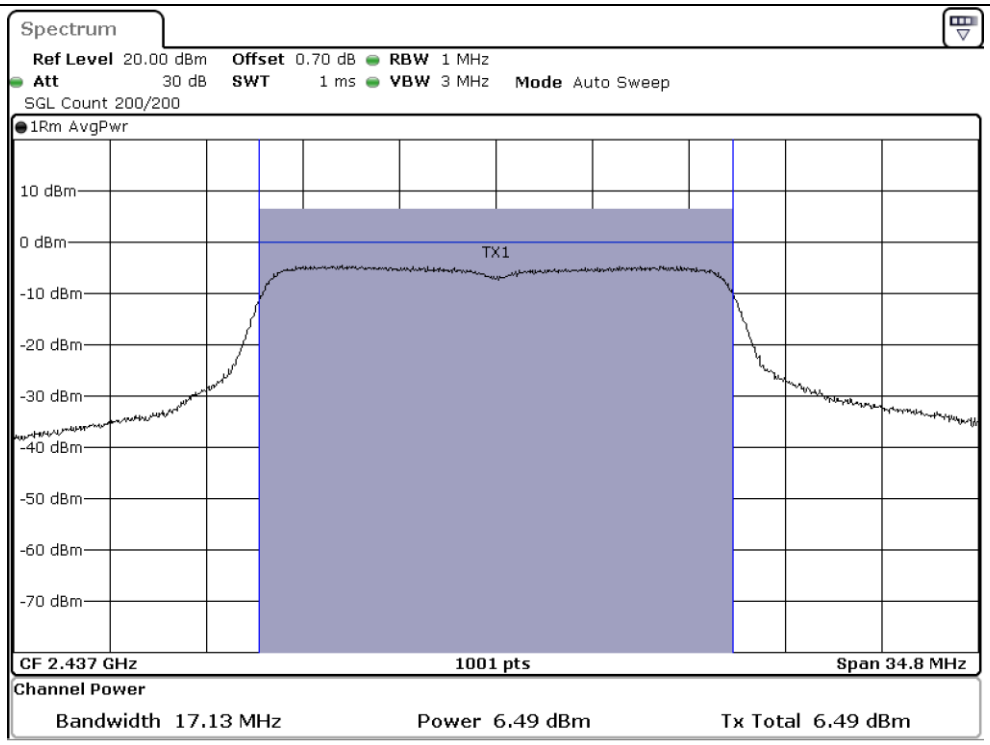
-. Duty Cycle : 91.37 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	5.89	0.39	6.28	30.00	23.72
MIDDLE	2 437.00	6.49	0.39	6.88	30.00	23.12
HIGH	2 462.00	6.76	0.39	7.15	30.00	22.85

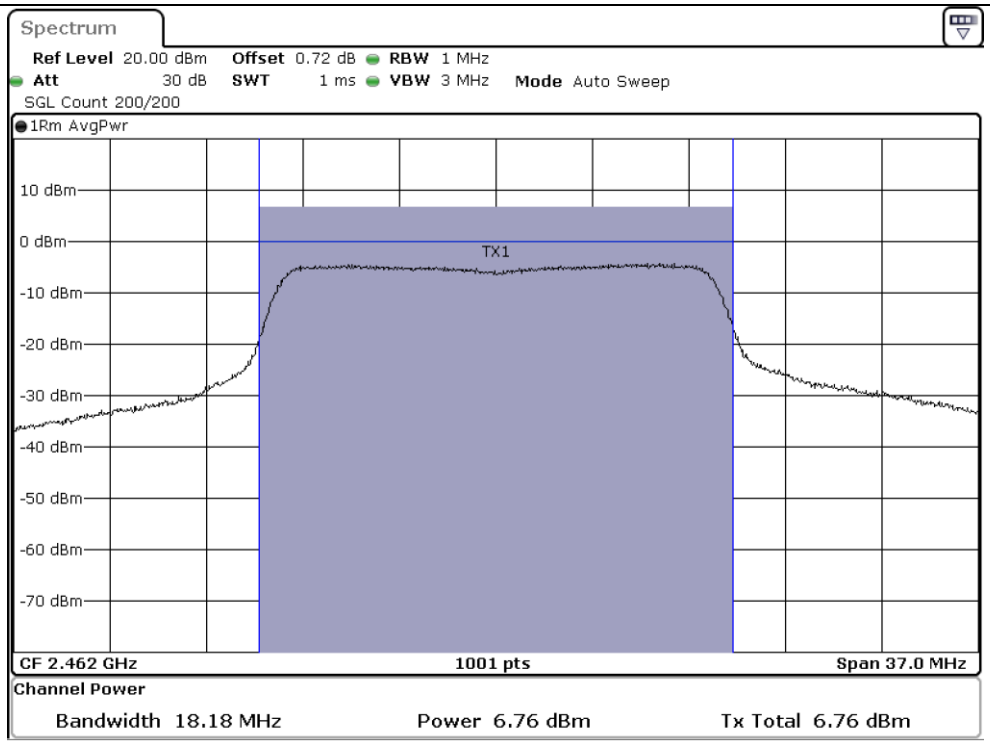
Remark. Margin = Limit – Result (=Measured Value + Duty Factor)



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

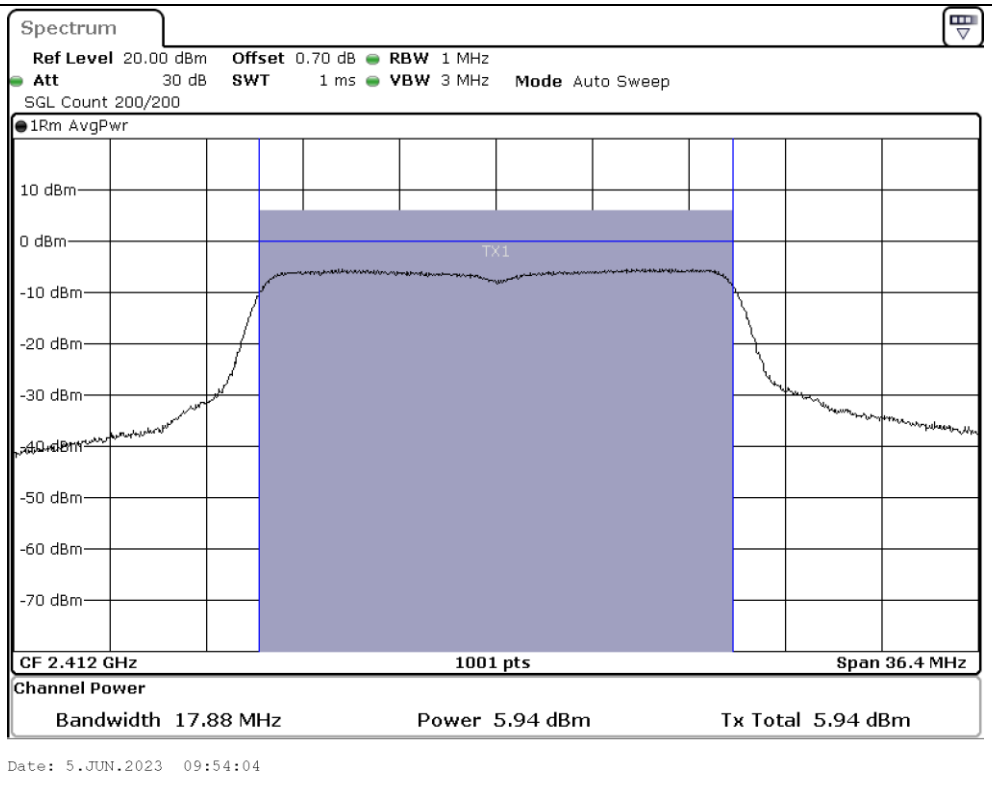
8.5.3 Test data for 802.11n_HT20 WLAN Mode

-. Test Result : Pass

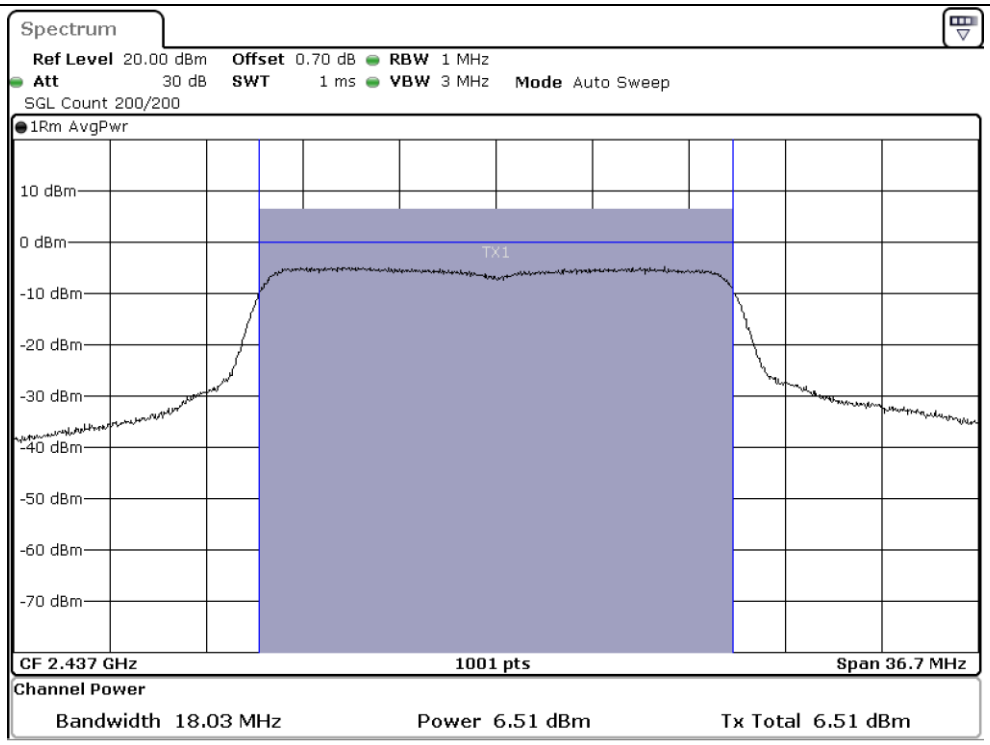
-. Duty Cycle : 94.81 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	RESULT (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 412.00	5.94	0.24	6.18	30.00	23.82
MIDDLE	2 437.00	6.51	0.24	6.75	30.00	23.25
HIGH	2 462.00	6.68	0.24	6.92	30.00	23.08

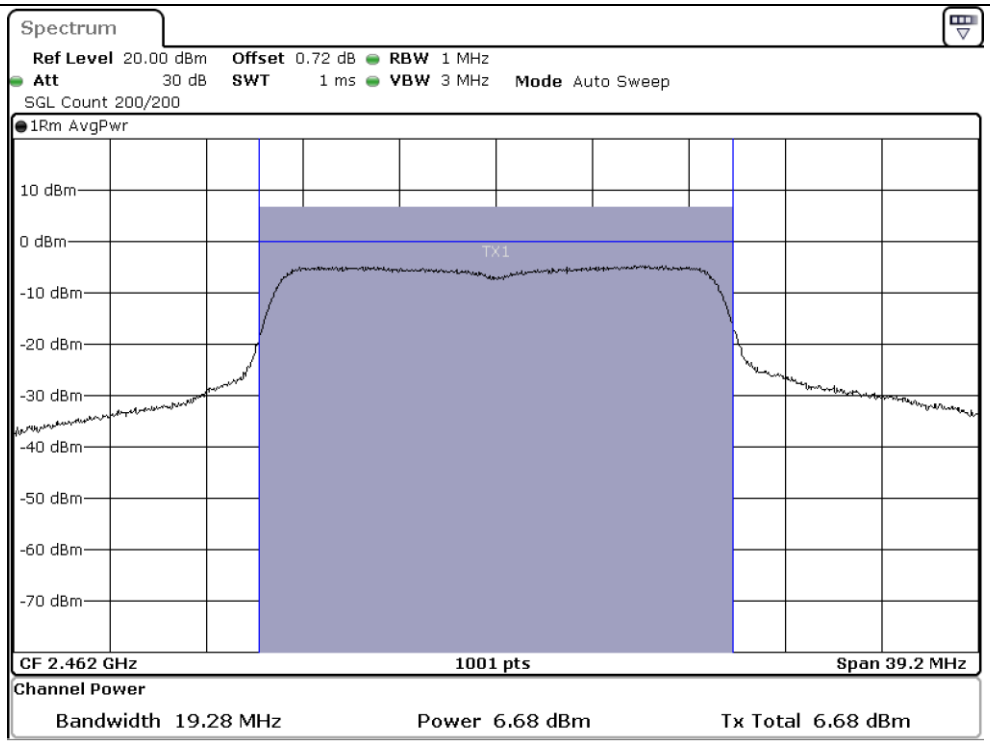
Remark. Margin = Limit – Result (=Measured Value + Duty Factor)



Low Channel



Middle Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

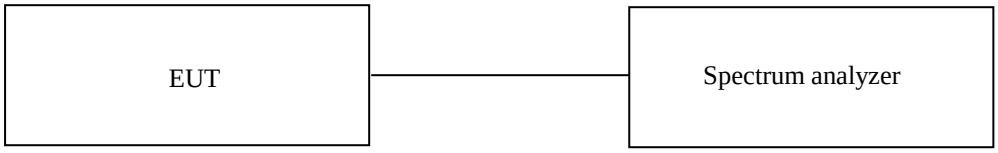
9.1 Operating environment

Temperature : 23 ℃

Relative humidity : 47 % R.H.

9.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz and video bandwidth is set to 300 kHz, and peak detection was used.



9.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m semi anechoic chamber. The EUT was placed on turntable approximately 1.5 m above the ground plane.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

9.4 Test Date

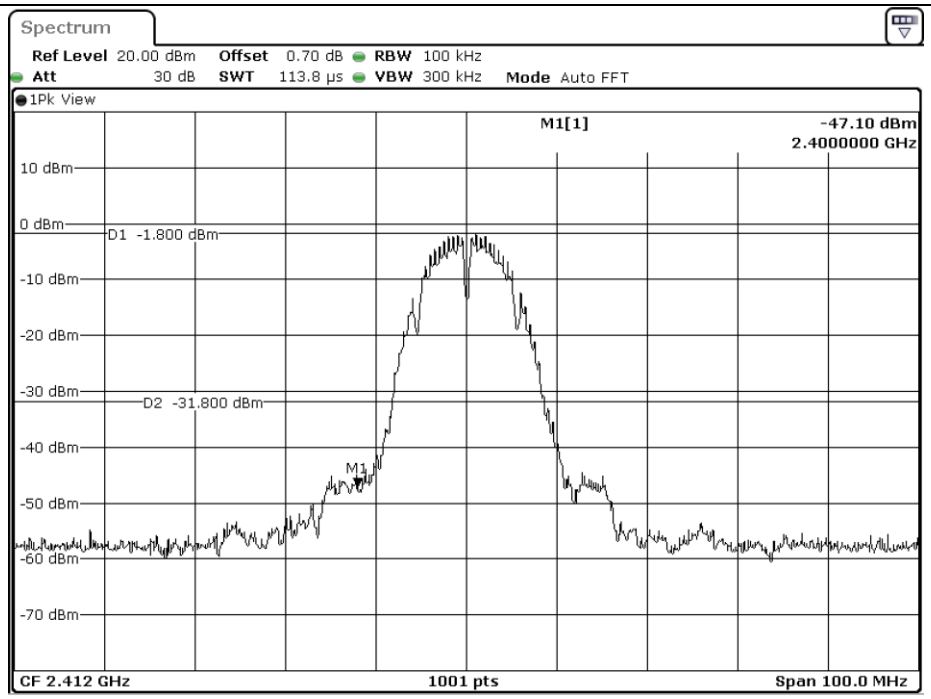
May 24, 2023 ~ June 05, 2023

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

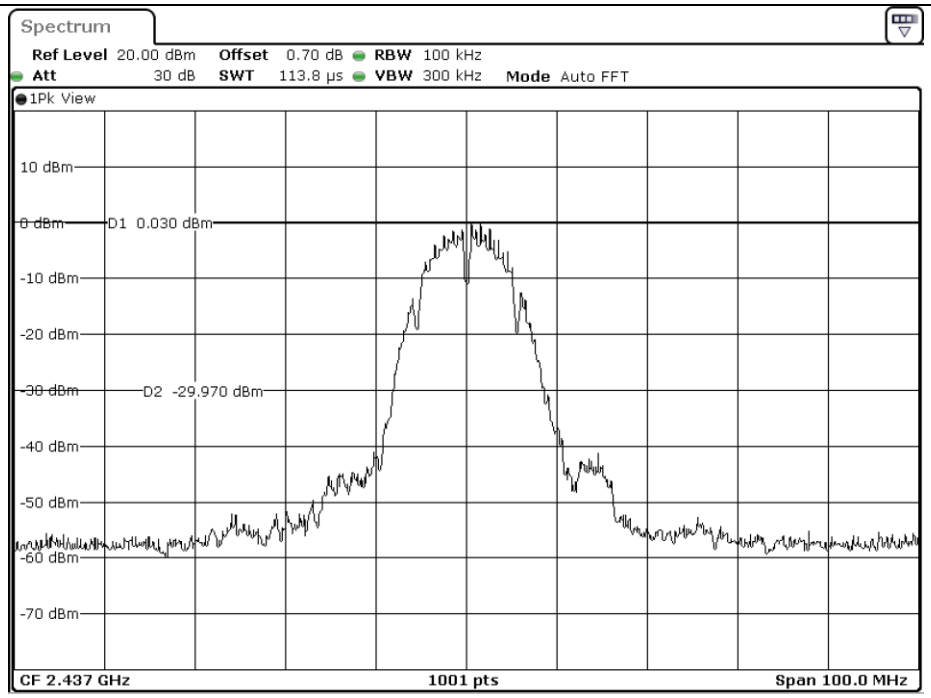
9.5 Test data for conducted emission

9.5.1 Test data for DC 12 V

9.5.1.1 Test data for 802.11b WLAN Mode

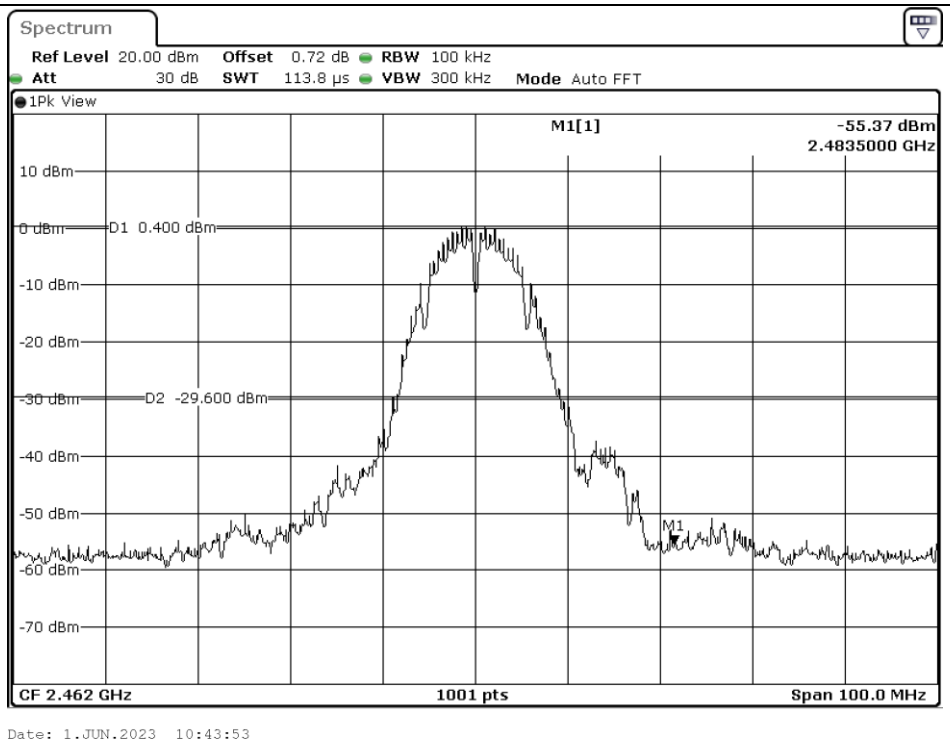


Low Channel

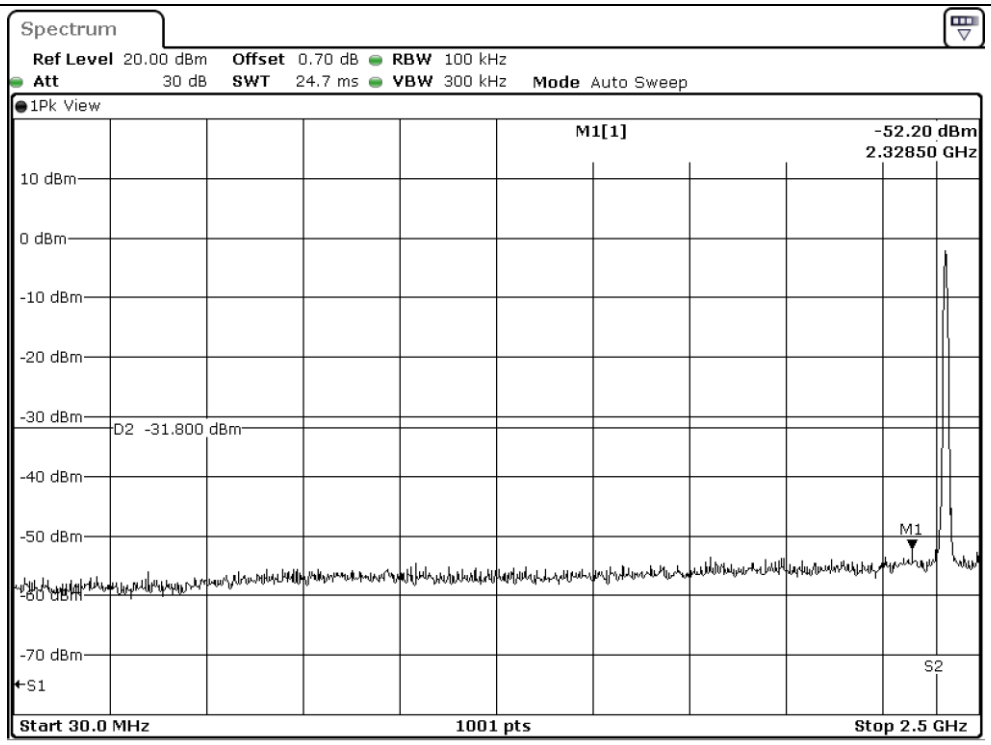


Middle Channel

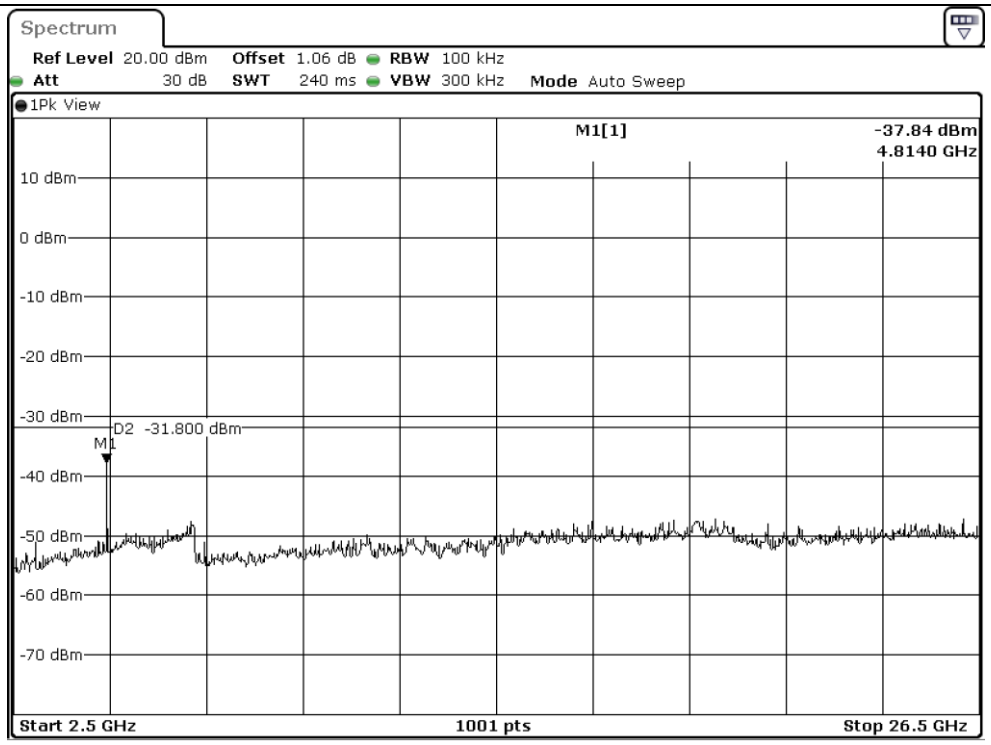
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel

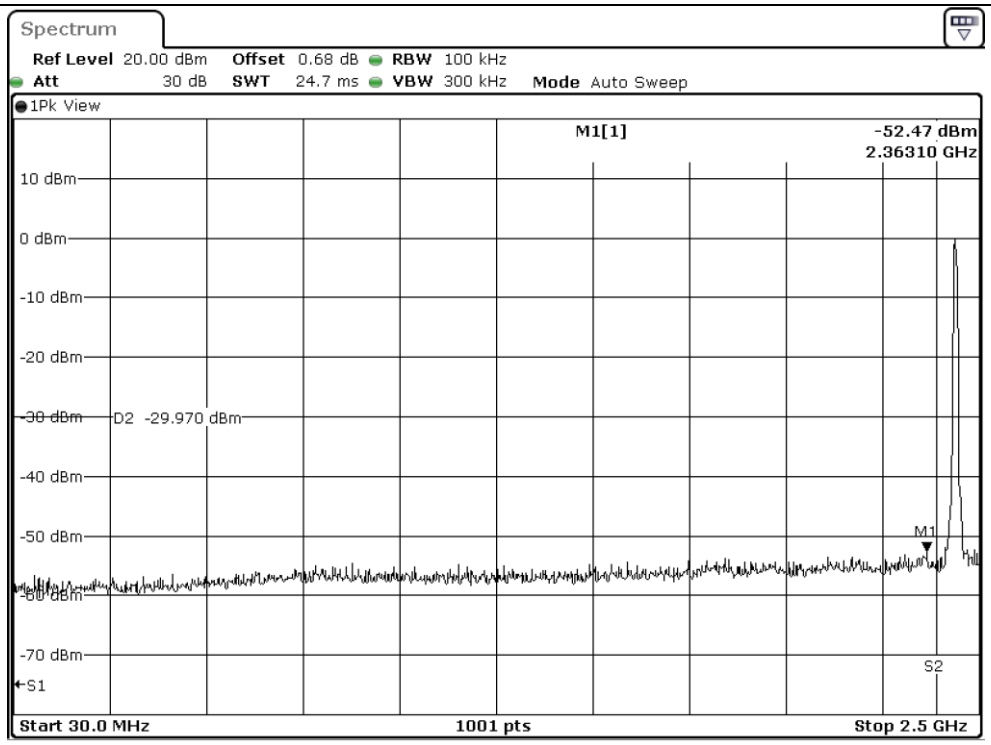


Low Channel



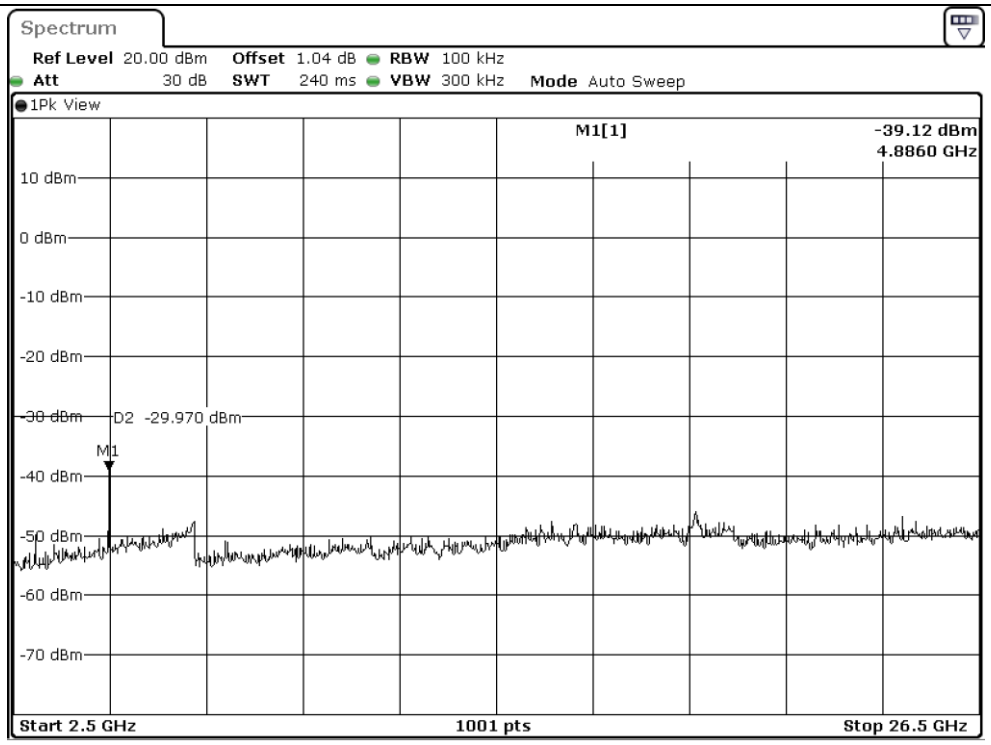
Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Date: 1.JUN.2023 10:41:55

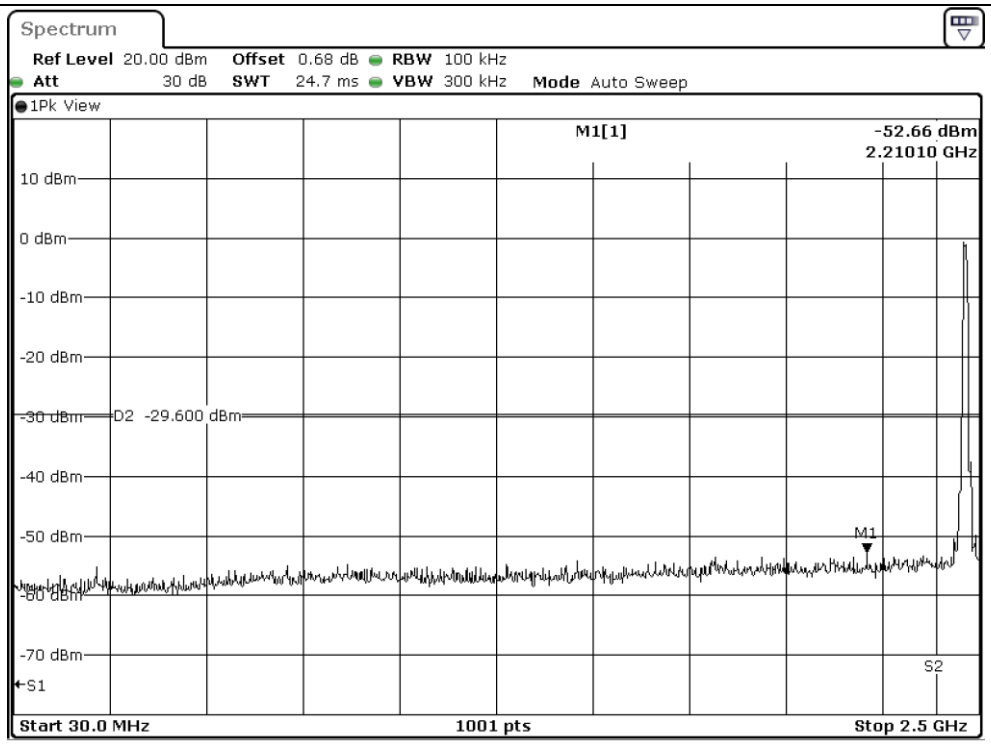
Middle Channel



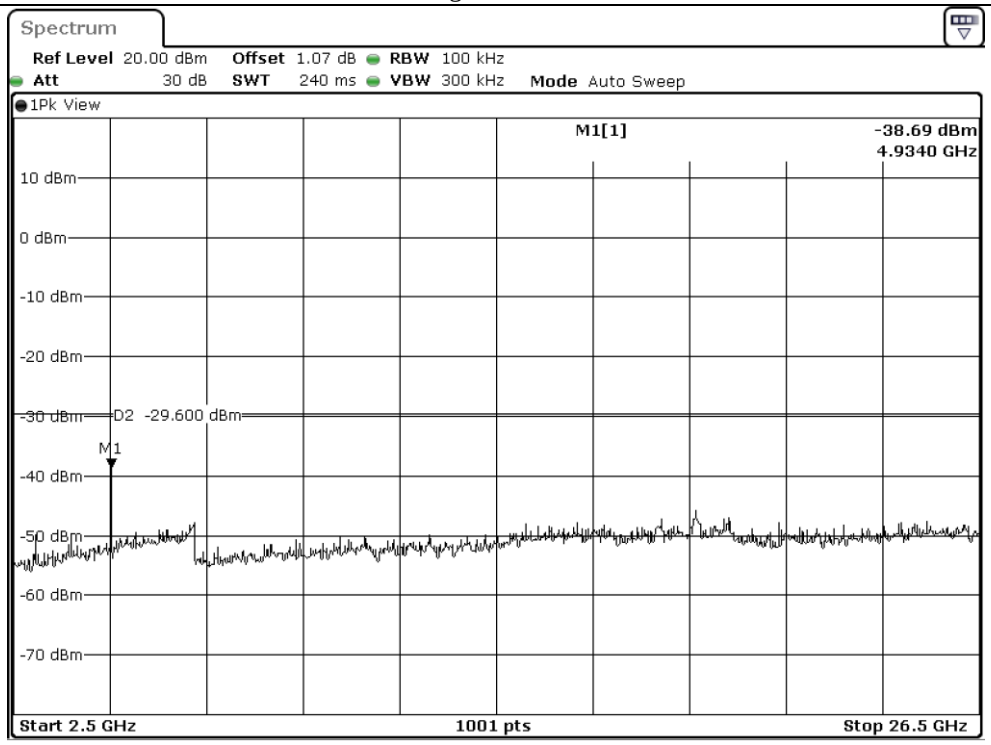
Date: 1.JUN.2023 10:42:00

Middle Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



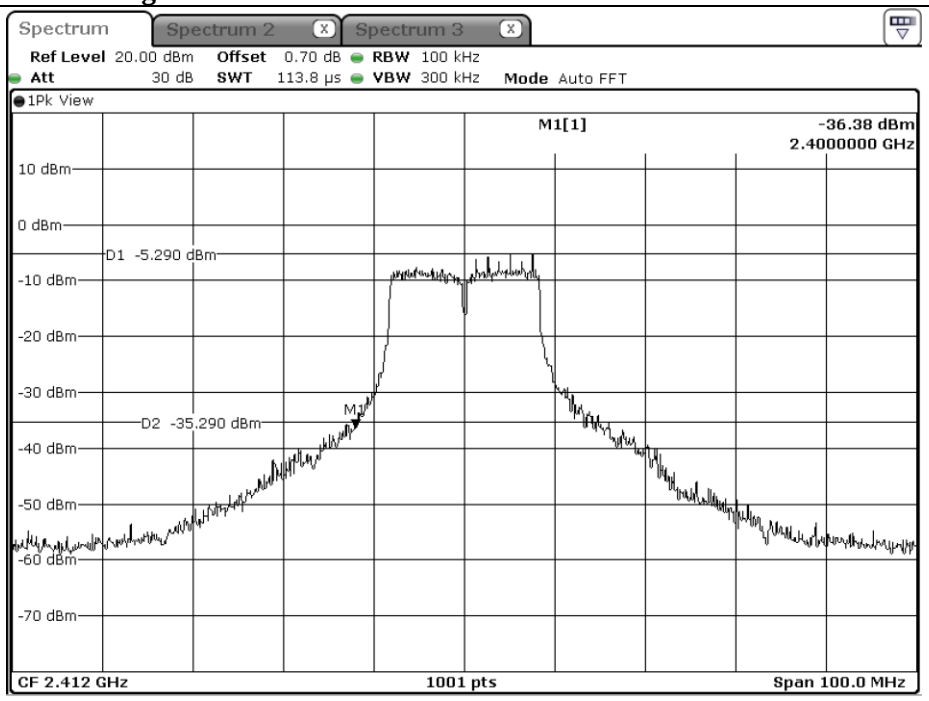
High Channel



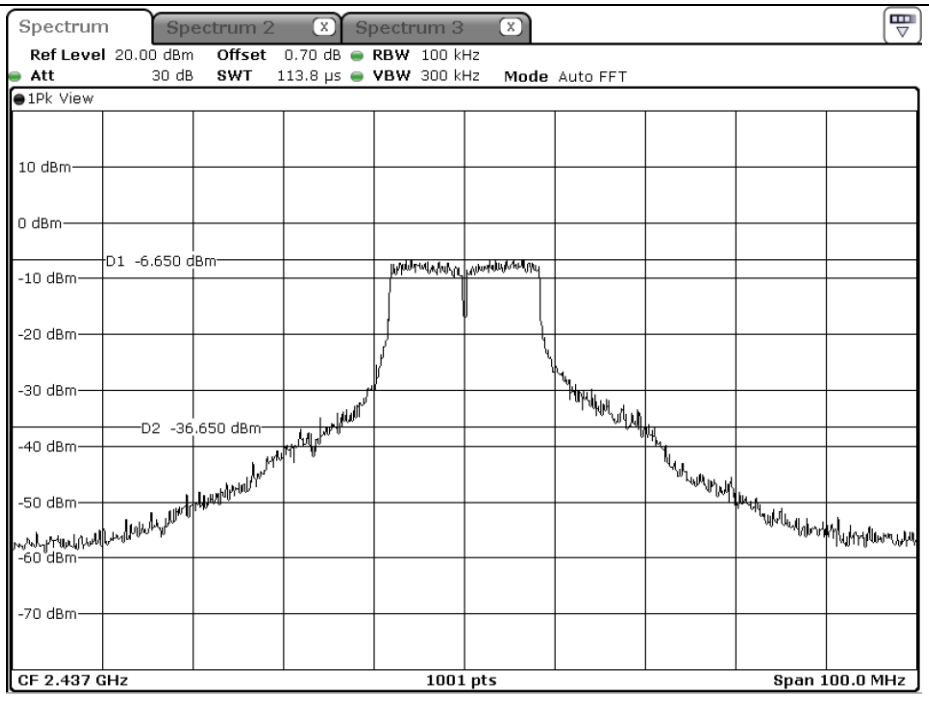
High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

9.5.1.2 Test data for 802.11g WLAN Mode

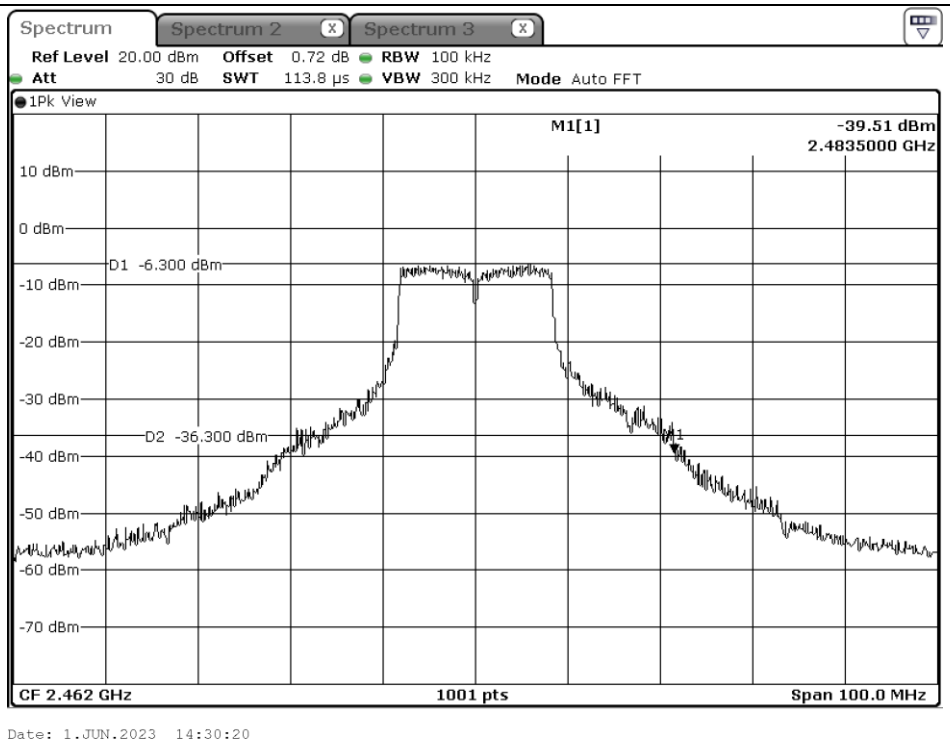


Low Channel

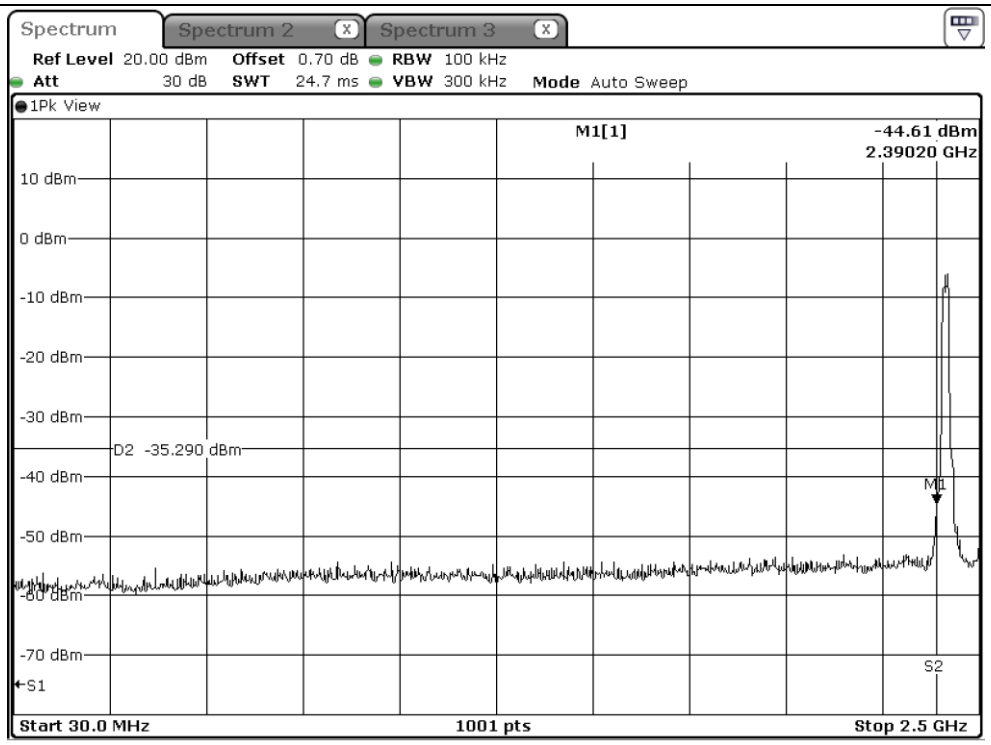


Middle Channel

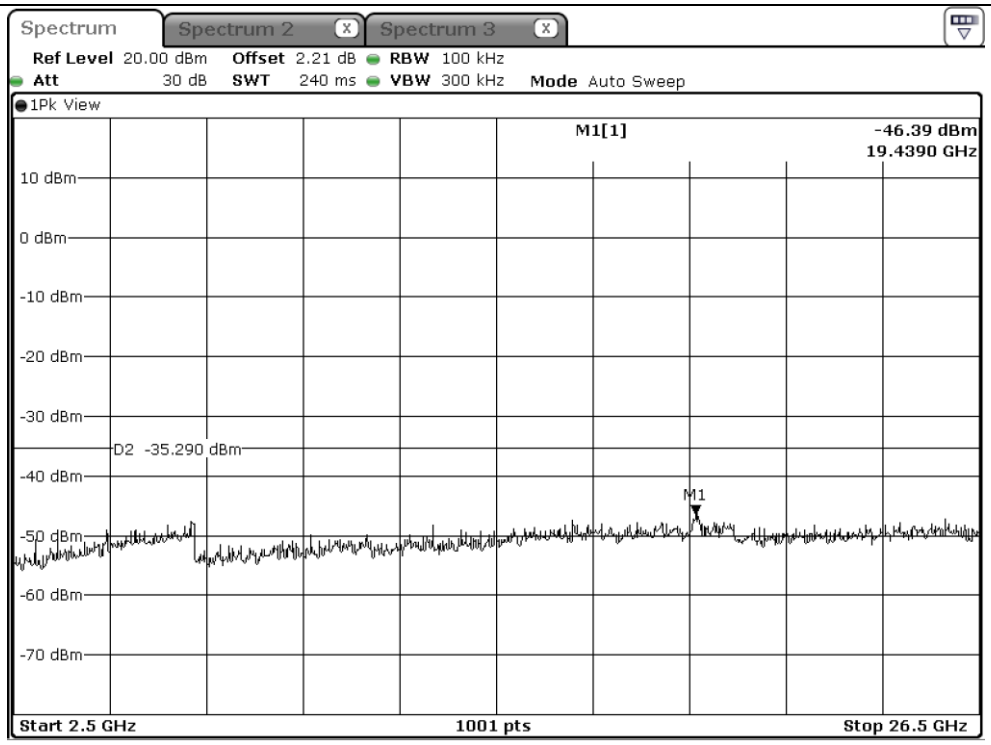
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel

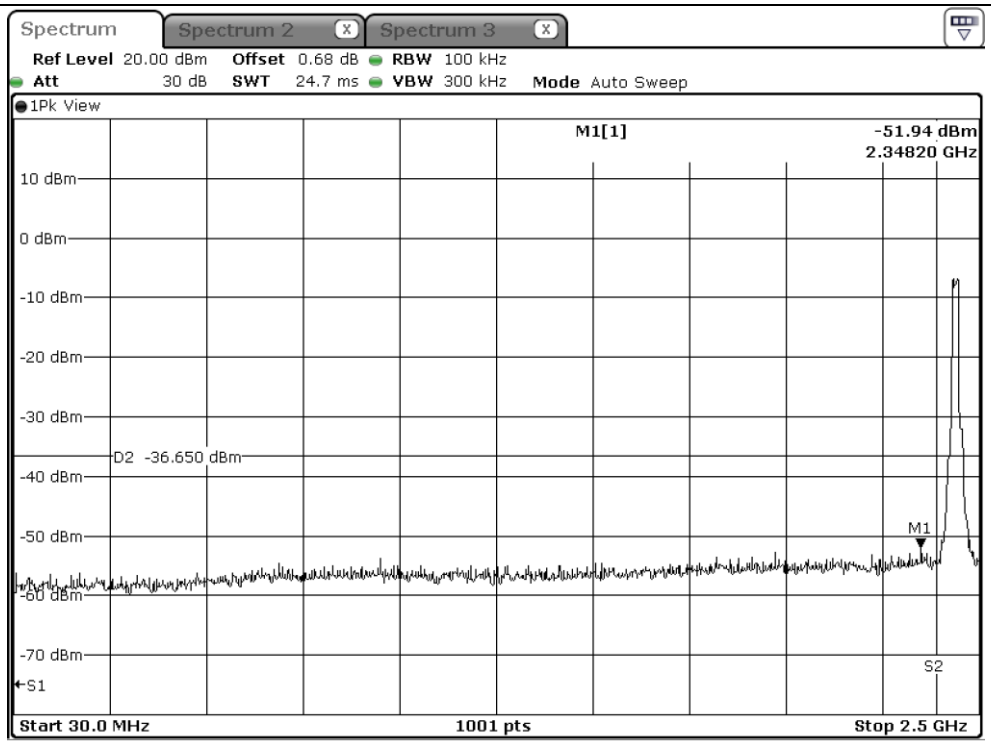


Low Channel

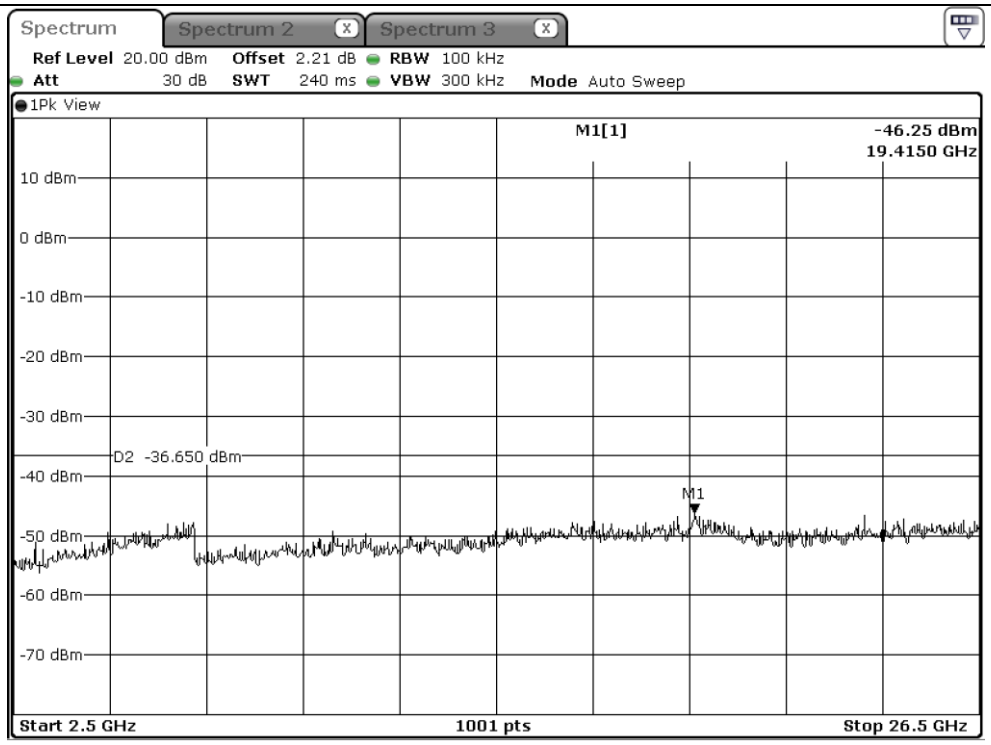


Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

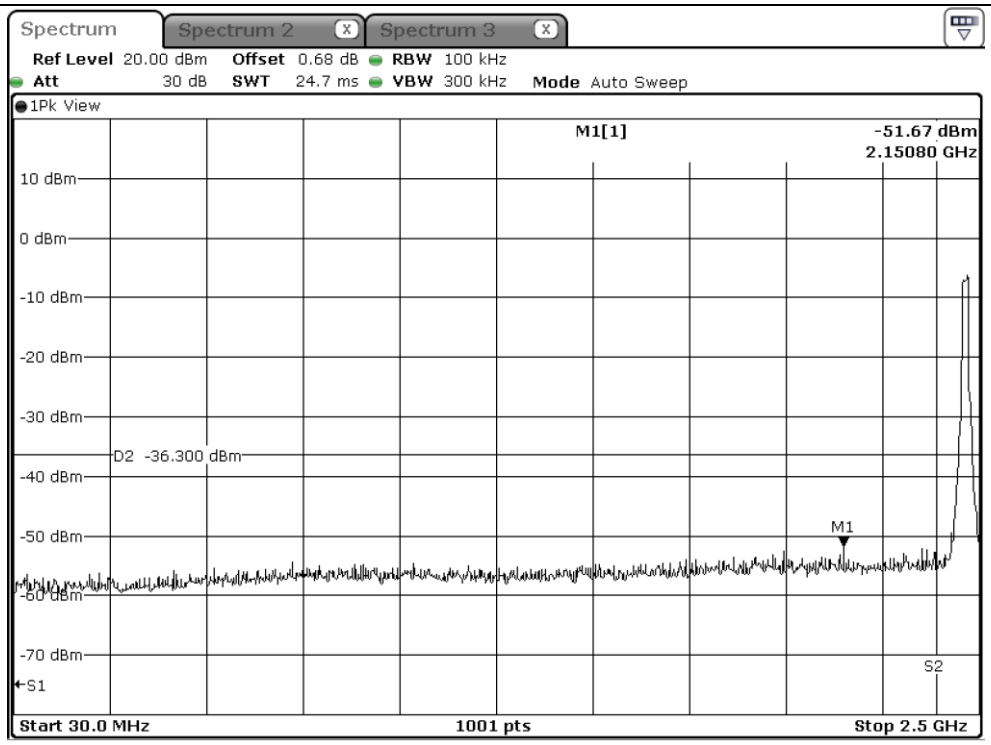


Middle Channel

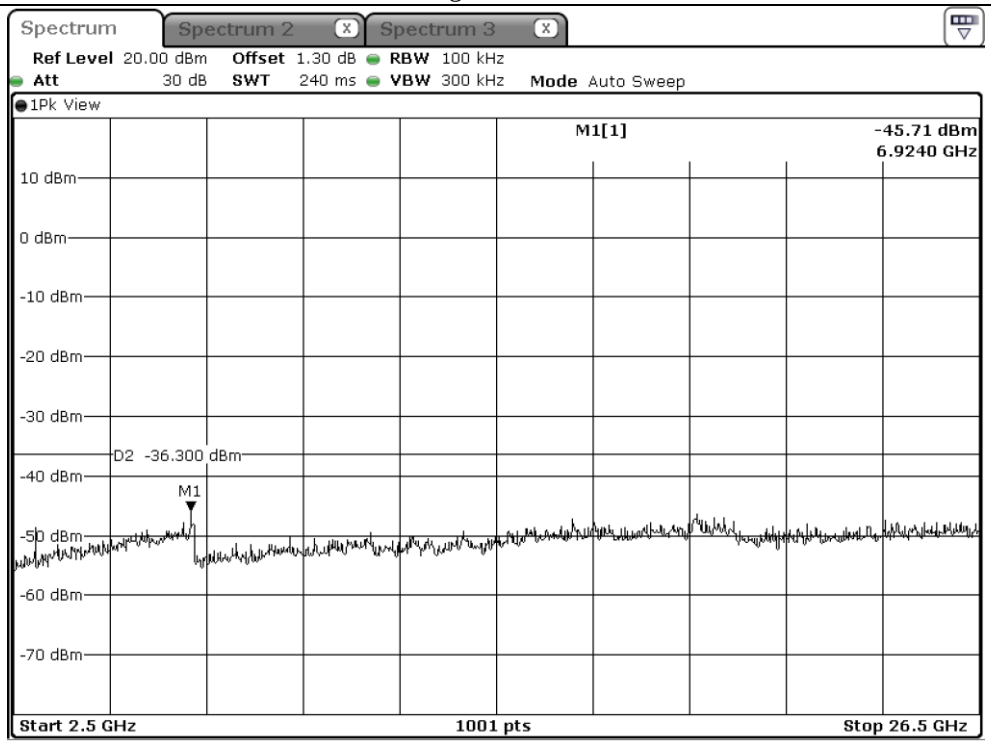


Middle Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



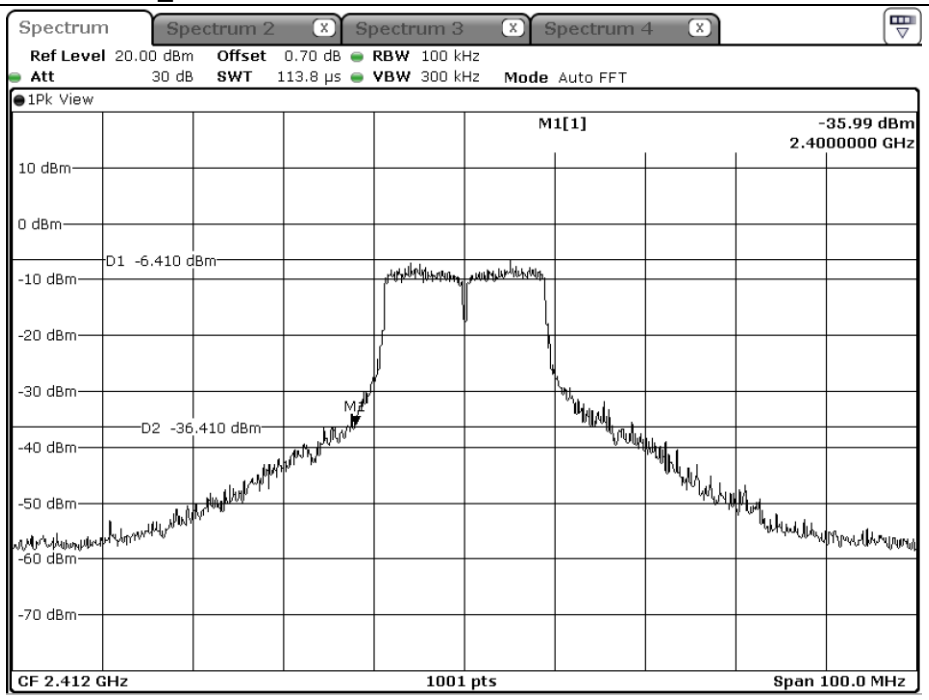
High Channel



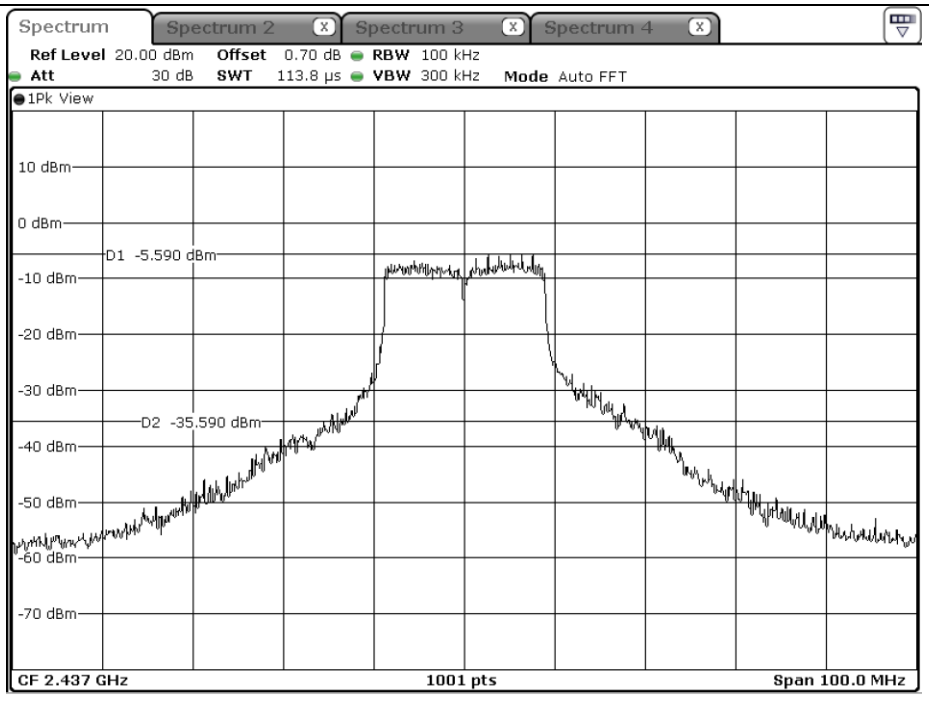
High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

9.5.1.3 Test data for 802.11n_HT20 WLAN Mode

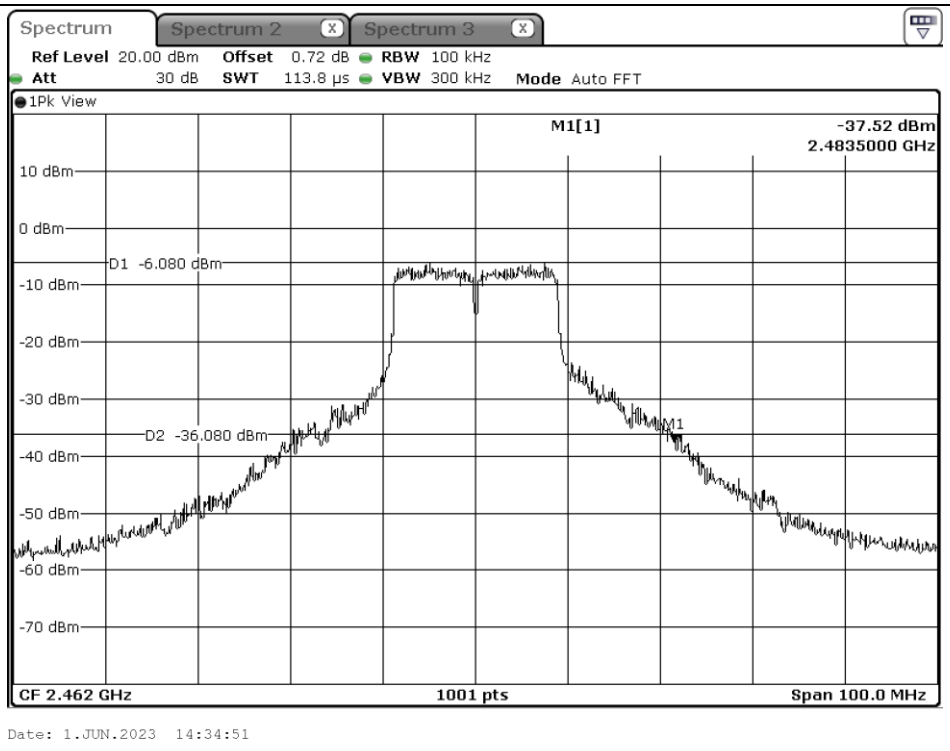


Low Channel

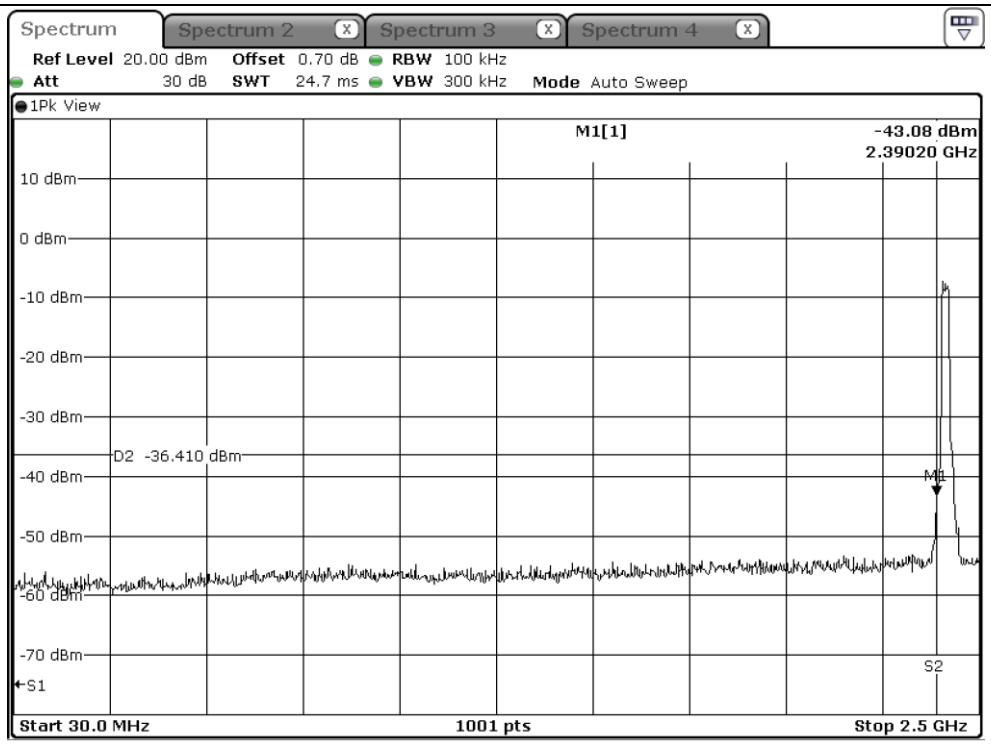


Middle Channel

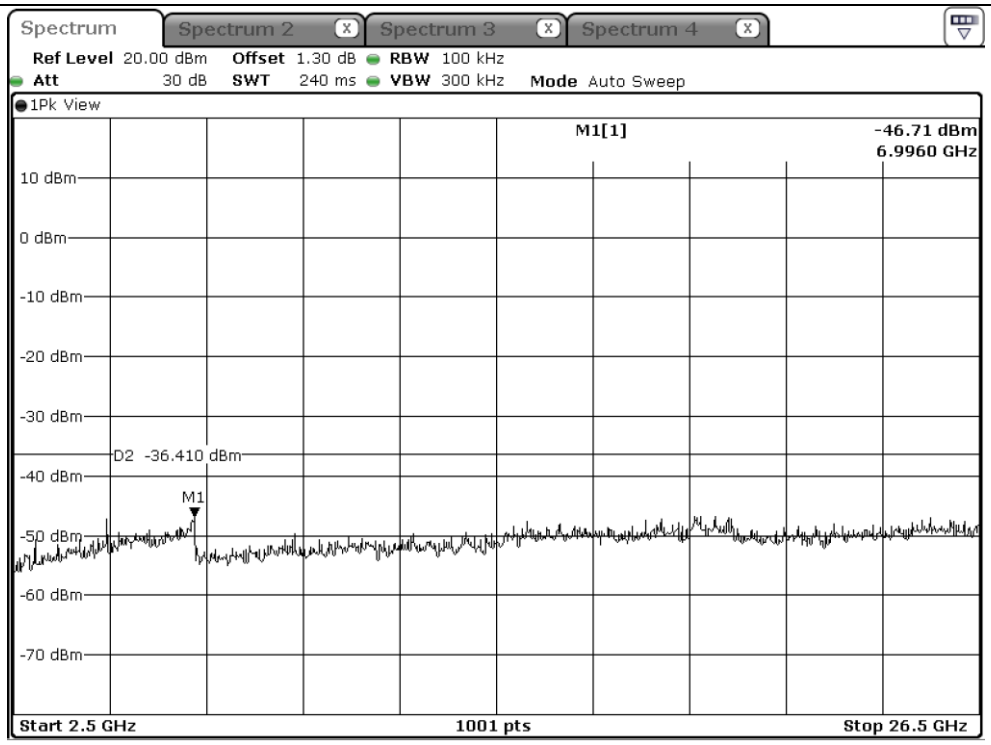
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel

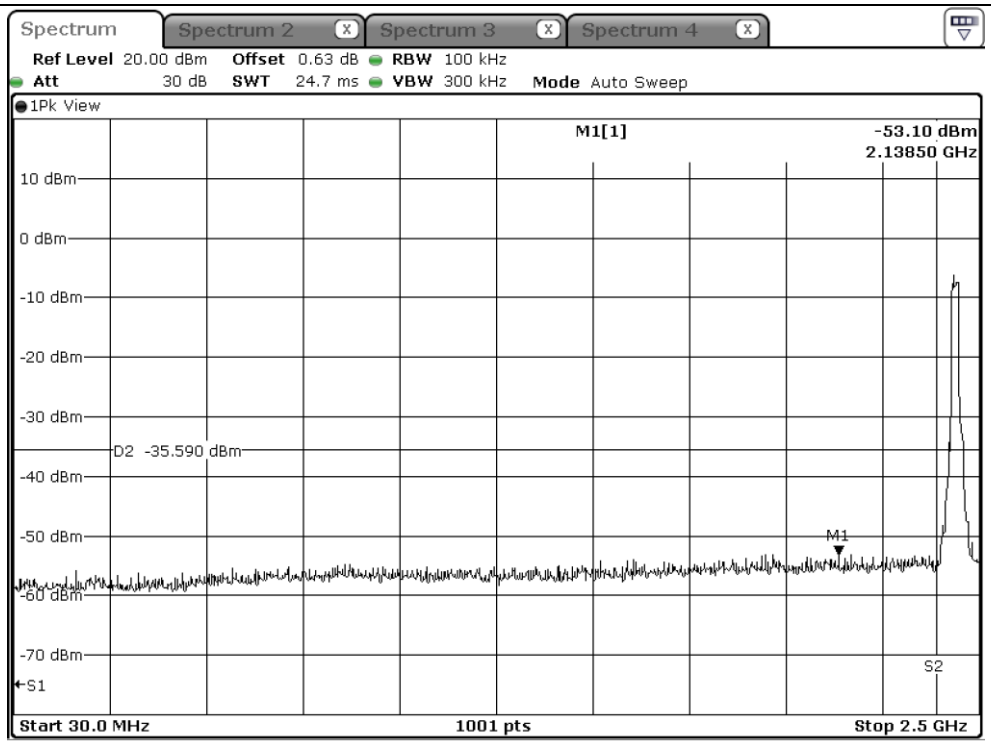


Low Channel

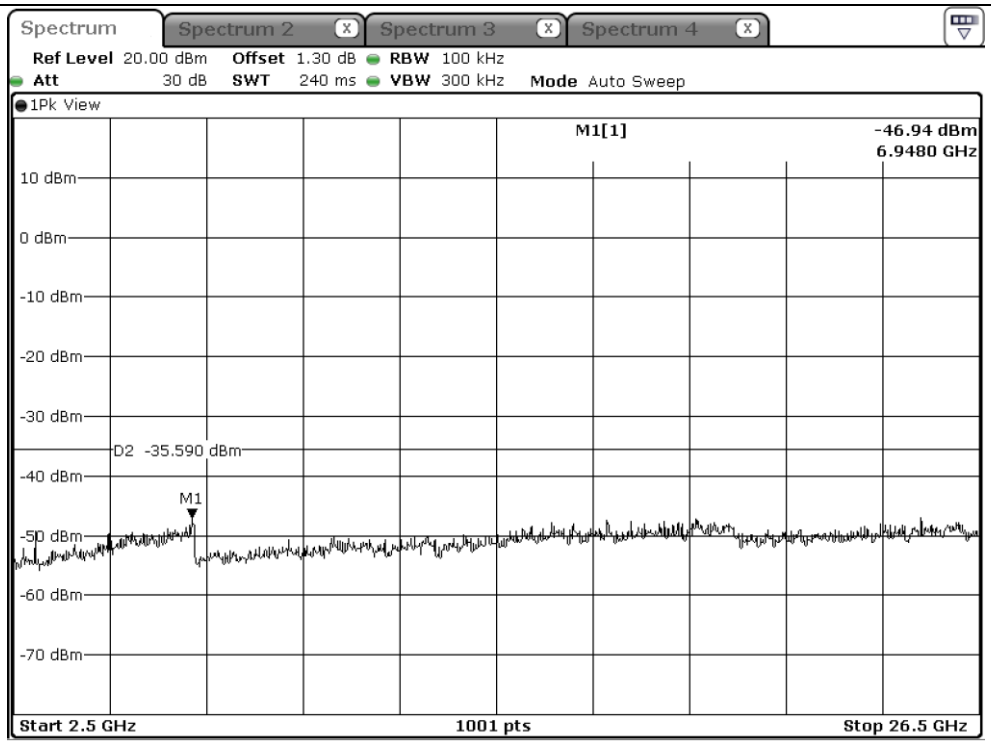


Low Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

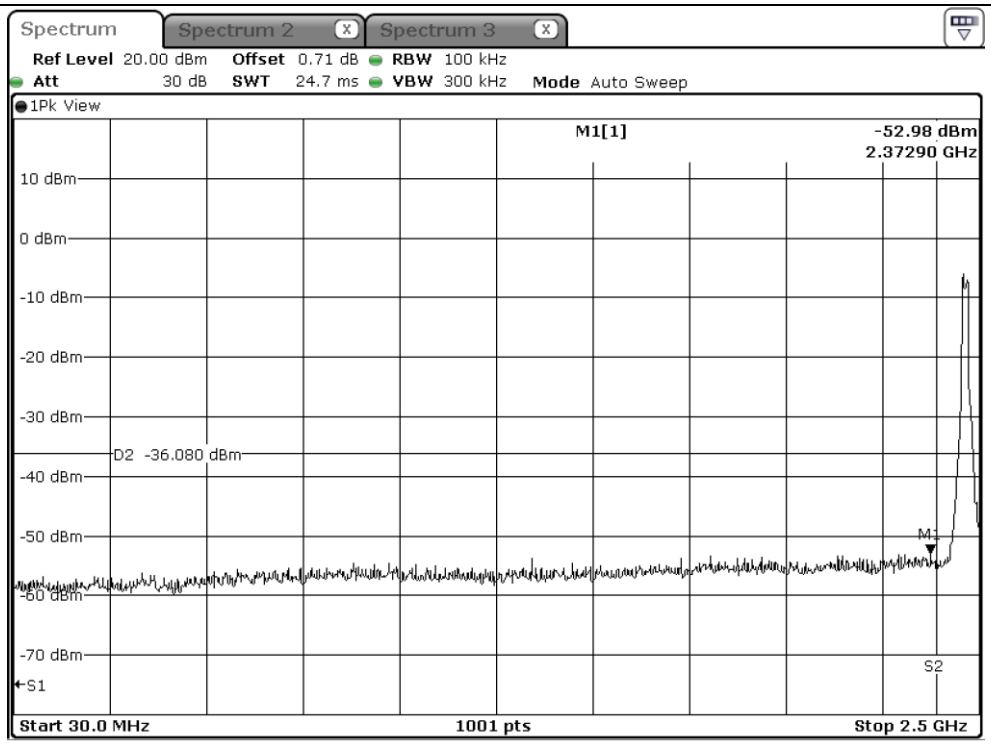


Middle Channel

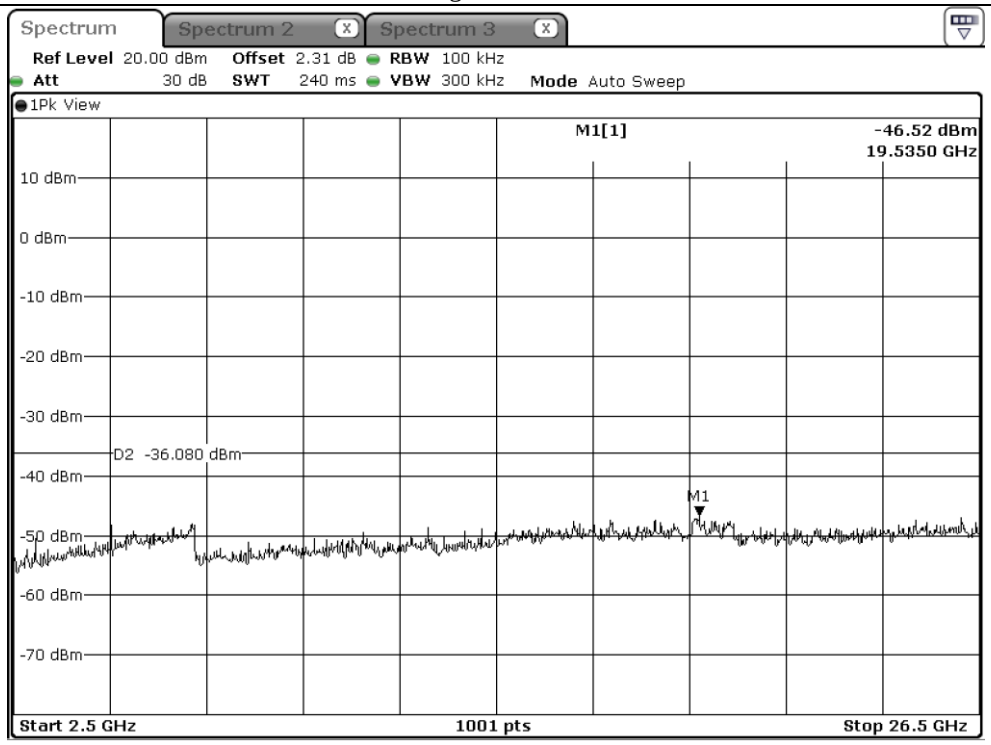


Middle Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel



High Channel

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)